West Harlem Rezoning EIS
CHAPTER 11: TRANSPORTATION

A. INTRODUCTION

This chapter of the EIS describes the transportation characteristics and potential impacts associated with the Proposed Action, which involves zoning map and text amendments for an approximately 90 block area in the West Harlem neighborhood of Manhattan Community District 9. The rezoning area is generally bounded by West 155th Street on the north, West 126th Street on the south, Edgecombe, Bradhurst and Convent Avenues on the east and Riverside Drive on the west (see Figure 11-1). As described in detail in other sections of this EIS, the proposed rezoning would allow for the addition of affordable housing and mixed-use development with bulk controls that reflect the existing character and scale in the West Harlem area.

Typically, CEQR assessments of large area-wide zoning proposals not associated with specific development projects assume an approximately 10-year build period. This is the time frame that can be reasonably predicted into the foreseeable future without engaging in highly speculative projections. Thus, the transportation analyses in this EIS address a development program that could reasonably be constructed by 2021, referred to as the reasonable worst case development scenario (RWCDS). As discussed in Chapter 1, "Project Description," a total of four reasonable worst case development scenarios are considered in this EIS, each of which includes a total of 24 projected development, conversion, or enlargement sites, including two sites with alternate scenarios. In addition, there are 16 potential development sites, which are considered less likely to be developed in the next decade. The locations of the 24 projected development sites are shown in Figure 11-1 and their anticipated uses are listed in Table 1-3 in Chapter 1.

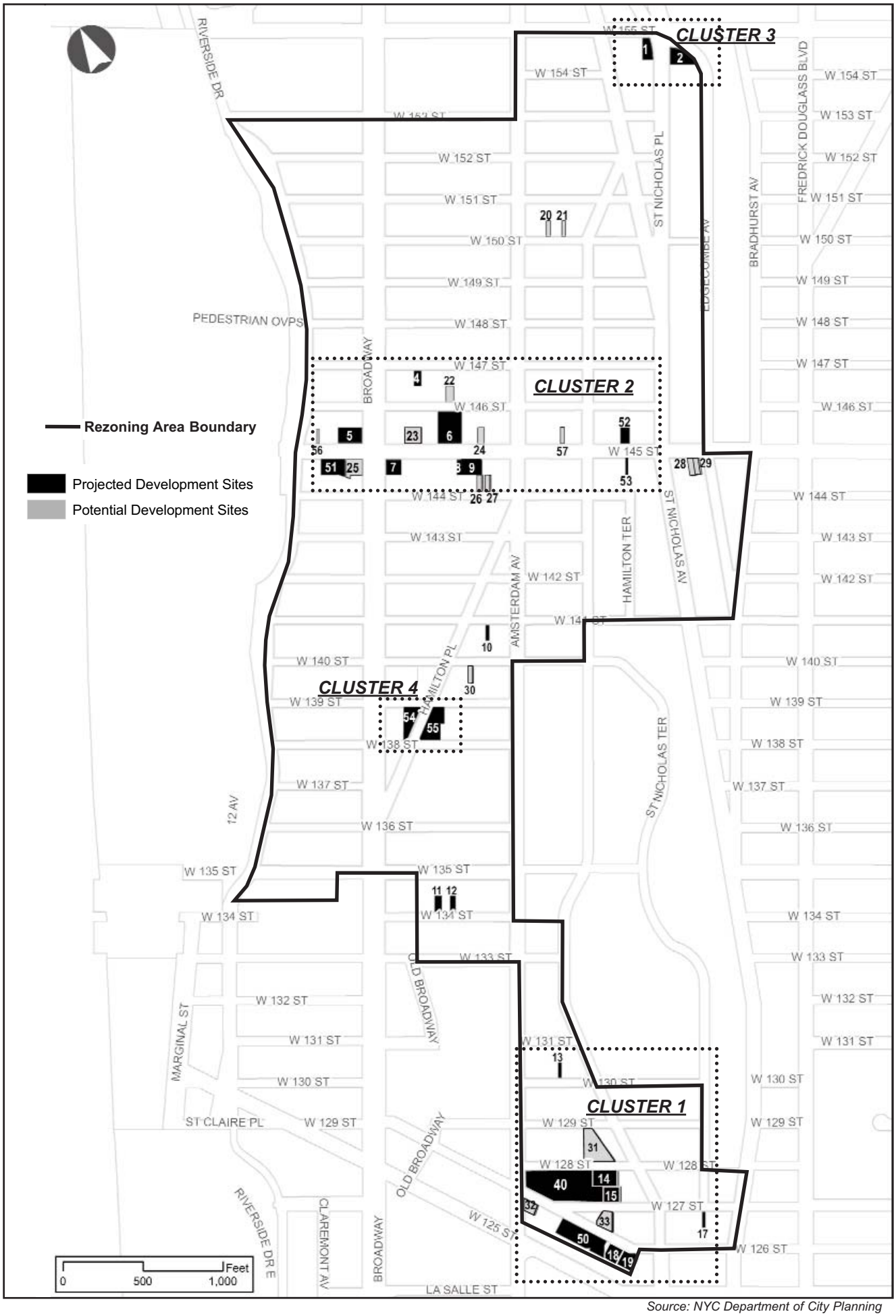
As discussed in more detail below, based on a comparison of the travel demand that would be generated by the four alternate reasonable worst case development scenarios, Scenario 3 was selected for analysis of potential significant adverse transportation impacts. It is estimated that this scenario would result in a net increase of 499 dwelling units, 41,596 square feet (sf) of local retail space, 82,756 sf of destination retail space, 80,854 sf of office and other commercial space, and 157,383 sf of community facility space. The transportation analyses consider vehicle as well as transit and pedestrian trips, and also parking supply and demand changes related to this RWCDS.

As also discussed later in this chapter, the large rezoning area combined with the modest changes in density results in relatively small changes in transportation characteristics, except in those areas where the projected development sites are concentrated. As shown in Figure 11-1, the only appreciable concentration of development density occurs at the southern edge of the rezoning area, generally between West 128th and West 126th Streets east of Amsterdam Avenue, and therefore the transportation impact analyses in this chapter focus on this development cluster along West 126th Street (referred to as "Cluster 1").

This chapter describes in detail the existing transportation conditions in proximity to the rezoning area. Future conditions in the year 2021 without the Proposed Action (the No-Action condition) are then determined, including additional transportation-system demand and any changes expected by the year 2021. The increase in travel demand resulting from the Proposed Action is then projected and added to the No-Action condition to develop the 2021 future with the Proposed Action (the With-Action condition). Significant adverse impacts from project-generated trips are then identified, and described in

Figure 11-1

RWCDS Projected and Potential Development Sites



Source: NYC Department of City Planning

detail. Where impacts are identified, Chapter 18, "Mitigation" addresses practicable measures to address these impacts.

B. PRINCIPAL CONCLUSIONS

Traffic

Weekday AM, midday and PM and Saturday midday peak hour traffic conditions under Scenario 3 (the RWCDS for the transportation analyses) were evaluated at a total of eleven intersections generally located in proximity to the West 125th Street, West 126th Street, West 127th Street and West 128th Street corridors at the southern edge of the rezoning area where development density (and therefore travel demand) associated with the Proposed Action would be most concentrated.

The traffic impact analysis indicates that there would be the potential for significant adverse impacts at four intersections in each of the weekday AM and PM peak hours, and two in each of the weekday midday and Saturday midday peak hours, as outlined below. Chapter 18, "Mitigation," discusses measures that would fully mitigate all of these significant adverse traffic impacts.

Weekday AM Peak Hour

- West 125th Street and Amsterdam Avenue – southbound through-right movement;
- West 126th Street and Amsterdam Avenue – westbound through-right movement;
- West 126th Street and Morningside Avenue – westbound approach; and
- West 127th Street and Morningside/Convent Avenues – westbound approach.

Weekday Midday Peak Hour

- West 126th Street and Morningside Avenue – westbound approach; and
- West 127th Street and Morningside/Convent Avenues – westbound approach.

Weekday PM Peak Hour

- West 125th Street and St. Nicholas Avenue – northbound through movement;
- West 126th Street and Amsterdam Avenue – westbound through-right movement;
- West 126th Street and Morningside Avenue – westbound approach; and
- West 127th Street and Morningside/Convent Avenues – westbound approach.

Saturday Midday Peak Hour

- West 125th Street and St. Nicholas Avenue – northbound and southbound left-through movements;
- West 126th Street and Morningside Avenue – westbound approach.

Transit

The Proposed Action would not result in any significant adverse transit impacts with respect to subways and buses.

Subway

Based on the locations and development densities of projected development sites under RWCDS 3, only the 125th Street IND station on St. Nicholas Avenue is expected to experience more than 200 project-generated trips in either of the weekday AM or PM commuter peak hours and would therefore have the potential to experience significant adverse impacts under *CEQR Technical Manual* criteria. The results of the analysis of future conditions with the Proposed Action indicate that all stairways and fare arrays at this station that are likely to be used by project-generated demand would continue to operate at acceptable levels of service in both the AM and PM peak hours in the With-Action condition. The Proposed Action would therefore not result in significant adverse impacts at the 125th Street IND subway station.

Bus

The proposed rezoning area is served by ten NYC Transit local bus routes that connect the area with other parts of Manhattan and three routes that connect Manhattan with the Bronx. It is estimated that all of the projected development sites within the proposed rezoning area would generate a combined total of 157 and 313 new bus trips in the weekday AM and PM peak hours, respectively. As these trips would be widely dispersed throughout the study area and distributed among a total of 13 bus routes, it is unlikely that any one route would experience 50 or more trips in one direction in any peak hour. Therefore, the Proposed Action is not expected to result in any significant adverse impacts to bus transit services based on *CEQR Technical Manual* criteria.

Pedestrians

The Proposed Action would not result in any significant adverse impacts to sidewalks, corner reservoir areas or crosswalks. Pedestrian trips generated by the Proposed Action are expected to be widely distributed due to the dispersed locations of the projected development sites within the proposed rezoning area. It is anticipated, however, that pedestrian trips would be most concentrated along corridors connecting projected development sites in the southern portion of the rezoning area to nearby subway station entrances, bus stops and outlying parking garages. A total of seven sidewalks, 14 corner reservoir areas and seven crosswalks along the West 126th Street and West 127th Street corridors, as well as on West 125th Street at Broadway, were selected for analysis as they would experience 200 or more project-generated trips in one or more peak hours. The results of the analysis of future conditions with the Proposed Action indicate that all analyzed sidewalks, corner reservoir areas and crosswalks would continue to operate at acceptable levels of service in the weekday AM, midday, PM and Saturday midday peak hours in the With-Action condition.

Vehicular and Pedestrian Safety Evaluation

Three intersections in proximity to projected development sites along the West 126th Street and West 128th Street corridors (where most project-generated demand would be concentrated) experienced five or more pedestrian and/or bicyclist injury crashes in one or more years from 2008 through 2010 and are therefore considered high accident locations. These locations, all of which are along West 125th Street, include the intersections with Adam Clayton Powell Jr. Boulevard, St. Nicholas Avenue and Amsterdam Avenue.

Under Scenario 3 (the RWCDS for the transportation analyses), the Proposed Action would increase vehicle trips through these high accident locations by one to four percent in each peak hour. New pedestrians using crosswalks at each intersection would total from 45 to 249 per hour (an average of one to four pedestrians per minute).

All three high accident intersections have already been equipped with high visibility crosswalks on some or all approaches. In addition, it is anticipated that the eastbound and westbound left-turn movements on West 125th Street will be prohibited (except for buses) at all three locations in the No-Action condition as mitigation for the 125th Street Rezoning and Related Actions project. As crashes involving pedestrians often involve conflicts with turning vehicles, this measure will substantially reduce the numbers of turning vehicles at each location, thereby reducing the potential for vehicle/pedestrian and vehicle/bicycle conflicts.

Parking

The Proposed Action would not result in significant adverse parking impacts during the peak weekday midday and overnight periods for parking demand. The greatest increases in new parking demand under the Proposed Action would occur in the vicinity of projected development site Cluster 1, which would generate a demand for 121 parking spaces during the weekday overnight period and 347 spaces in the weekday midday. It is anticipated that the development at Cluster 1 would include a total of approximately 129 spaces of accessory parking on-site, sufficient to accommodate all project-generated parking demand during the weekday overnight period. In the weekday midday period, approximately 218 spaces of project-generated parking demand would need to be accommodated at off-street public parking facilities in the vicinity. As sufficient parking capacity to accommodate this demand would be available at facilities within a ½-mile radius, the Proposed Action would not result in a parking shortfall, and there would be no significant adverse parking impacts under *CEQR Technical Manual* criteria. However, off-street public parking facilities in the vicinity of Cluster 1 would be operating near capacity (97 percent utilization) in the weekday midday in the future with the Proposed Action.

C. PRELIMINARY ANALYSIS METHODOLOGY

The *CEQR Technical Manual* describes a two-level screening procedure for the preparation of a "preliminary analysis" to determine if quantified operational analyses of transportation conditions are warranted. As discussed below, the preliminary analysis begins with a trip generation (Level 1) analysis to estimate the numbers of person and vehicle trips attributable to the proposed project. According to the *CEQR Technical Manual*, 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 to be performed to estimate the incremental trips that could be incurred at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the proposed project would generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a sidewalk, corner area or crosswalk, then further quantified operational analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, parking, and vehicular and pedestrian safety.

D. LEVEL 1 SCREENING ASSESSMENT

A Level 1 trip generation screening assessment was conducted to estimate the numbers of person and vehicle trips by mode expected to be generated by the Proposed Action during the weekday AM, midday, PM and Saturday midday peak hours for each of the four alternate reasonable worst case development scenarios. These estimates were then compared to the *CEQR Technical Manual* analysis thresholds to determine if a Level 2 screening and/or quantified operational analyses may be warranted. As described below, this trip generation assessment concluded that Scenario 3 would be the overall worst-case

development scenario for the evaluation of potential transportation-related impacts. The travel demand assumptions used for the assessment are discussed below along with a summary comparison of the travel demand that would be generated by each of the four reasonable worst case development scenarios considered. A detailed travel demand forecast is then provided for Scenario 3.

Background

As discussed in Chapter 1, "Project Description," a total of four reasonable worst case development scenarios are considered in this EIS, each of which includes a total of 24 projected development, conversion, or enlargement sites, including two sites with alternate scenarios. These 24 sites, the locations of which are shown in Figure 11-1, are those judged most likely to be developed by 2021. Table 11-1 compares the future development anticipated with and without the Proposed Action for each of the four alternate development scenarios and the net incremental change associated with each. (Additional data on the development programs associated with each scenario is provided in Table 1-3 in Chapter 1.) As shown in Table 11-1, Scenario 3, the RWCDS selected for analysis of potential significant adverse transportation impacts, would result in an estimated net increase of 499 dwelling units, 124,352 square feet (sf) of retail space (41,596 square feet of local retail space and 82,756 sf of destination retail space), 80,854 sf of office and other commercial space, and 157,383 sf of community facility space. The transportation planning factors used to forecast the travel demand generated by all four development scenarios are discussed below.

TABLE 11-1
Total Net Change in Land Uses on Projected Development Sites Under RWCDS 1-4

	Dwelling Units	Retail (sf)*	Office/Other Commercial (sf)	Community Facility (sf)
Scenario 1				
No-Action	567	45,888	399,655	319,804
With-Action	911	170,240	480,509	596,650
Net Increment	344	124,352	80,854	276,846
Scenario 2				
No-Action	567	45,888	399,655	319,804
With-Action	981	194,723	415,541	566,625
Net Increment	414	148,835	15,886	246,821
Scenario 3				
No-Action	567	45,888	399,655	319,804
With-Action	1,066	170,240	480,509	477,187
Net Increment	499	124,352	80,854	157,383
Scenario 4				
No-Action	567	45,888	399,655	319,804
With-Action	1,136	194,723	415,541	447,162
Net Increment	569	148,835	15,886	127,358

*Includes both local retail and destination retail.

Transportation Planning Factors

Table 11-2 shows the transportation planning factors used for the travel demand forecast generated by the four alternate RWCDS in the weekday AM, midday, and PM and Saturday midday peak hours. These include trip generation rates, temporal and directional distributions, mode choice factors, vehicle occupancies and truck trip factors for office, residential, retail and community facility uses. The factors in Table 11-2 were based on accepted *City Environmental Quality Review (CEQR) Technical Manual* guidelines, data from the 2000 U.S. Census, and data from other EISs for projects on the west side of Manhatttan, including the 2008 *125th Street Corridor Rezoning and Related Actions FEIS*, the 2007 *Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development FEIS*, and the 2004 *No. 7 Subway Extension – Hudson Yards Rezoning and Development Program FGEIS*.

Office

The forecast of travel demand from office development was based on the trip rates and temporal distribution cited in the *CEQR Technical Manual*. Modal and directional splits and vehicle occupancies were determined based upon 2000 Census reverse journey-to-work data and data from the *125th Street Corridor Rezoning and Related Actions FEIS*.

Residential

The forecast of travel demand from projected residential development was based on trip rate and temporal distribution data cited in the *CEQR Technical Manual*. The residential modal split reflects journey-to-work data from the 2000 Census. Although residential-based trips in the weekday and Saturday midday periods would likely be more local in nature than in the commuter peak hours (and therefore have a higher walk share, for example), the modal split based on census journey-to-work data is conservatively assumed for these periods for analysis purposes.

Destination Retail

For the purposes of the travel demand forecast, any site with a net increase of greater than 10,000 sf of retail space is assumed to be destination retail. As shown in Table 11-2, trip generation rates and temporal distributions for destination retail uses were based on data from the *CEQR Technical Manual*, while modal splits, vehicle occupancy and directional distributions were based on data from the *125th Street Corridor Rezoning and Related Actions FEIS*.

Local Retail

It is anticipated that the local ("or neighborhood") retail uses developed under both the No-Action and With-Action scenarios would attract trips primarily from the residential and worker populations on-site and in surrounding neighborhoods. It is therefore anticipated that the majority of these trips would be via the walk mode and would not represent the addition of considerable numbers of new discrete trips to the study area street and transit systems. For the purposes of the travel demand forecast, it is assumed that 83 percent of local retail trips would be walk-only trips based on data from the *125th Street Corridor Rezoning and Related Actions FEIS*. Trip generation rates and temporal and directional distributions were also based on data from this source and from the *CEQR Technical Manual*.

TABLE 11-2
Transportation Planning Factors

Land Use:	Office		Residential		Destination Retail		Local Retail		Community Facility (Office)		Community Facility (Recreation)		Community Facility (Dormitory)		Community Facility (Museum)	
Trip Generation:	(1)		(1)		(1)		(1)		(1)		(4)		(5)		(1)	
Weekday	18		8.075		78.2		205		18		44.7		4		27	
Saturday	3.9		9.6		92.5		240		3.9		26.6		4		20.6	
	per 1,000 sf		per DU		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		per Unit		per 1,000 sf	
Temporal Distribution:	(1)		(1)		(1)		(1)		(4)		(4)		(1,5)		(1)	
AM (8-9)	12.0%		10.0%		3.0%		3.0%		12.0%		5.8%		9.1%		1.0%	
MD (12-1)	15.0%		5.0%		9.0%		19.0%		15.0%		7.4%		4.7%		16.0%	
PM (5-6)	14.0%		11.0%		9.0%		10.0%		14.0%		7.6%		10.7%		13.0%	
Sat MD (1-2)	17.0%		8.0%		11.0%		10.0%		17.0%		10.0%		8.0%		17.0%	
	(3)		(2)		(4)		(4)		(3,4)		(4)		(5)		(6)	
Modal Splits:	AM/PM/SAT	MD	AM/MD/PM/SAT		AM/MD/PM/SAT		AM/MD/PM/SAT		AM/PM/SAT	MD	AM/MD/PM/SAT		AM/MD/PM/SAT		AM/MD/PM	SAT
Auto	38.7%	5.0%	16.7%		9.0%		2.0%		38.7%	5.0%	4.0%		12.0%		12.0%	14.0%
Taxi	1.9%	5.0%	2.0%		14.5%		3.0%		1.9%	5.0%	9.0%		3.0%		10.0%	10.0%
Subway	32.1%	10.0%	56.7%		21.5%		6.0%		32.1%	10.0%	12.0%		41.5%		7.0%	7.0%
Bus	11.9%	5.0%	14.6%		20.0%		6.0%		11.9%	5.0%	5.0%		14.5%		29.0%	29.0%
Walk/Other	15.4%	75.0%	10.0%		35.0%		83.0%		15.4%	75.0%	70.0%		29.0%		42.0%	40.0%
	100.0%	100.0%	100.0%		100.0%		100.0%		100.0%	100.0%	100.0%		100.0%		100.0%	100.0%
	(4)		(4)		(4)		(4)		(4)		(4)		(5)		(6)	
In/Out Splits:	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
AM (8-9)	95%	5%	16%	84%	50%	50%	50%	50%	95%	5%	66%	34%	20%	80%	50%	50%
MD (12-1)	48%	52%	50%	50%	50%	50%	50%	50%	48%	52%	58%	42%	51%	49%	63%	37%
PM (5-6)	15%	85%	67%	33%	50%	50%	50%	50%	15%	85%	34%	66%	65%	35%	52%	48%
Sat MD (1-2)	60%	40%	53%	47%	50%	50%	50%	50%	60%	40%	58%	42%	51%	49%	63%	37%
Vehicle Occupancy:	(3,4)		(3,4)		(4)		(4)		(3,4)		(4)		(5)		(6)	
Auto	1.14		1.26		2.00		2.00		1.14		1.40		1.20		2.34	
Taxi	1.40		1.40		2.00		2.00		1.40		1.40		1.20		1.90	
Truck Trip Generation:	(1)		(1)		(1)		(1)		(4)		(4)		(1,5)		(6)	
	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday
	0.32	0.01	0.06	0.02	0.35	0.04	0.35	0.04	0.32	0.01	0.04	0.01	0.03	0.01	0.05	0.01
	per 1,000 sf		per DU		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf	
	(1)		(1)		(1)		(1)		(4)		(4)		(1,5)		(6)	
AM (8-9)	10.0%		12.2%		8.0%		8.0%		10.0%		7.7%		9.7%		9.6%	
MD (12-1)	11.0%		9.0%		11.0%		11.0%		11.0%		11.0%		9.1%		11.0%	
PM (5-6)	2.0%		2.0%		2.0%		2.0%		2.0%		2.0%		5.1%		1.0%	
Sat MD (1-2)	11.0%		9.0%		11.0%		11.0%		11.0%		11.0%		11.0%		11.0%	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
All Peak Hours	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Notes :

(1) Source: *CEQR Technical Manual*.

(2) Based on 2000 US Census Journey-to-Work Data for Manhattan Tracts 213.01, 213.02, 217.01, 217.02, 219, 221.01, 221.02, 223.01, 223.02, 224, 225, 226, 227.01, 227.02, 229, 231.01, 231.02, 233, 235.01, 235.02 and 237.

(3) Based on 2000 US Census Reverse Journey-to-Work Data (see above for tracts).

(4) *125th Street Corridor Rezoning and Related Actions FEIS*, February 2008.

(5) *Manhattanville in WestHarlem Rezoning and Academic Mixed-Use Development FEIS*, 2007.

(6) *No. 7 Subway Extension- Hudson Yard Rezoning and Development Program FGEIS*, 2004.

Community Facility

Table 11-3 shows the specific types of community facility uses that would be developed on various projected development sites under the four alternate RWCDS. These would include community facility-related office uses as well as recreation, dormitory and museum uses. As shown in Table 11-2, the factors used to forecast travel demand from these uses were developed from a variety of sources, including the *CEQR Technical Manual*, 2000 Census data and several EISs for other projects in Manhattan.

TABLE 11-3
Net Change in Community Facility Uses on
Projected Development Sites Under the RWCDS

Site	Office (sf)	Recreation (sf)	Museum (sf)	Dormitory (sf) / (DU)	Total (sf)
6a	----	----	----	(65,355) / (99)	(65,355)
6b	----	----	----	(184,819) / (279)	(184,819)
14	35,363	----	----	----	35,363
15		----	----	60,532 / 91	60,532
18	34,473	----	----	----	34,473
40a	56,837	56,837	56,837	----	170,511
40b	46,828	46,828	46,828	----	140,484
50	33,039	33,039	----	----	66,078
51	(11,923)		----	----	(11,923)
52	(1,881)	----	----	----	(1,881)
53	(941)	----	----	----	(941)
54	----	(4,400)	----	----	(4,400)
55	(5,610)	----	----	----	(5,610)

Source: NYCDCP

Travel Demand Forecast

Table 11-4 summarizes the results of the travel demand forecasts for the four reasonable worst case development scenarios based on the factors shown in Table 11-2 and discussed above. The data in Table 11-4 compare the net incremental increase (versus the No-Action condition) in the numbers of peak hour person and vehicle trips that would be generated by each scenario in 2021 with implementation of the Proposed Action. As shown in Table 11-4, on weekdays, Scenario 3 would generate the greatest incremental increase in daily person trips (25,021 in and out combined) as well as vehicle trips (3,636). Weekday peak hour vehicle trips (in and out combined) under this scenario would total 295, 299 and 414 in the AM, midday and PM peak hours, respectively. (Vehicle trips include auto and truck trips, and trips by taxi which have been balanced to reflect that some taxis arrive or depart empty.) Scenario 3 would also generate the greatest incremental increase in transit trips during the peak weekday AM and PM commuter periods, with 413 subway trips and 157 bus trips in the AM and 563 subway trips and 313 bus trips in the PM.

TABLE 11-4
Comparison of Travel Demand Under RWCDS 1 - 4

	Peak Hour												Weekday		Saturday	
	AM			Midday			PM			Saturday Midday						
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	Total Daily Person Trips	Total Daily Vehicle Trips (1)	Total Daily Person Trips	Total Daily Vehicle Trips (1)
Scenario 1																
Total Person Trips	808	535	1,343	1,521	1,411	2,932	1,054	1,402	2,456	1,212	1,067	2,279				
Auto Trips	172	60	232	84	75	159	105	219	324	111	90	201				
Taxi Trips	41	30	71	99	88	187	70	85	155	92	79	171				
Subway Trips	195	174	369	185	174	359	228	290	518	223	197	420	24,248	3,539	21,597	2,619
Bus Trips	85	64	149	159	137	296	139	167	306	159	137	296				
Walk-Only Trips	315	207	522	994	937	1,931	512	641	1,153	627	564	1,191				
Vehicle Trips (1)	193	93	286	152	149	301	152	253	405	157	143	300				
Scenario 2																
Total Person Trips	667	587	1,254	1,453	1,355	2,808	1,102	1,286	2,388	1,266	1,145	2,411				
Auto Trips	116	67	183	81	74	155	103	162	265	110	94	204				
Taxi Trips	41	33	74	100	90	190	77	88	165	99	90	189				
Subway Trips	151	200	351	192	182	374	254	261	515	247	223	470	24,181	3,435	23,203	2,886
Bus Trips	71	74	145	160	143	303	148	157	305	172	154	326				
Walk-Only Trips	288	213	501	920	866	1,786	520	618	1,138	638	584	1,222				
Vehicle Trips (1)	142	97	239	148	145	293	155	207	362	161	151	312				
Scenario 3																
Total Person Trips	815	587	1,402	1,535	1,425	2,960	1,096	1,419	2,515	1,245	1,094	2,339				
Auto Trips	174	71	245	87	78	165	115	223	338	118	95	213				
Taxi Trips	41	30	71	99	88	187	70	85	155	92	80	172				
Subway Trips	201	212	413	196	185	381	259	304	563	246	217	463	25,021	3,636	22,607	2,755
Bus Trips	86	71	157	161	139	300	144	169	313	165	141	306				
Walk-Only Trips	313	203	516	992	935	1,927	508	638	1,146	624	561	1,185				
Vehicle Trips (1)	194	101	295	151	148	299	159	255	414	164	148	312				

TABLE 11-4 (continued)
Comparison of Travel Demand Under RWCDS 1 - 4

	Peak Hour												Weekday		Saturday	
	AM			Midday			PM			Saturday Midday						
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	Total Daily Person Trips	Total Daily Vehicle Trips (1)	Total Daily Person Trips	Total Daily Vehicle Trips (1)
Scenario 4																
Total Person Trips	673	638	1,311	1,466	1,368	2,834	1,143	1,304	2,447	1,298	1,170	2,468				
Auto Trips	117	77	194	84	77	161	113	167	280	117	99	216				
Taxi Trips	41	33	74	99	89	188	77	88	165	100	90	190				
Subway Trips	157	238	395	203	193	396	285	275	560	269	242	511	24,955	3,532	24,213	3,021
Bus Trips	72	81	153	162	145	307	153	159	312	177	158	335				
Walk-Only Trips	286	209	495	918	864	1,782	515	615	1,130	635	581	1,216				
Vehicle Trips (1)	143	105	248	149	146	295	161	209	370	169	157	326				

(1) Vehicle trips include auto, truck and balanced taxi trips.

On Saturdays, Scenario 4 would generate the greatest incremental increase in daily person trips (24,213 compared to 22,607 for Scenario 3) and vehicle trips (3,021 compared to 2,755 for Scenario 3). However, the incremental increase in total peak hour vehicle trips during the Saturday midday (326) would only amount to 14 additional trips compared to the 312 vehicle trips that would be generated under Scenario 3. Therefore, based on the travel demand forecast data presented in Table 11-4, Scenario 3 (RWCDS 3) was selected as the reasonable worst case development scenario for the transportation analyses.

Table 11-5 shows the incremental net change in peak hour person trips and vehicle trips for RWCDS 3. As shown in Table 11-5, RWCDS 3 would generate a net total of 1,399, 2,962, 2,514 and 2,345 person trips in the weekday AM, midday, PM and Saturday midday peak hours, respectively. Trips by subway would total 413, 381, 563 and 463 during these periods, respectively, while bus trips would total 157, 300, 313 and 306 respectively. Vehicle trips (auto, taxi and truck trips combined) would total 295, 299, 414 and 312 during the weekday AM, midday, PM and Saturday midday peak hours, respectively. Since these numbers of peak hour trips would exceed the *CEQR Technical Manual* analysis thresholds for vehicular traffic, transit and pedestrians, a Level 2 screening assessment was undertaken to identify specific locations where additional detailed analyses may be warranted.

E. LEVEL 2 SCREENING ASSESSMENT

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

As shown in Figure 11-1, there are a total of 24 projected development sites in the proposed rezoning area, generally concentrated in four specific geographic areas. Therefore, for transportation analysis purposes, a majority of the sites have been aggregated into the following four "clusters:"

Cluster 1: Sites 13, 14, 15, 17, 18, 19, 40a and 50

Cluster 2: Sites 4, 5, 6b, 7, 8, 9, 51, 52 and 53

Cluster 3: Sites 1 and 2

Cluster 4: Sites 54 and 55

Sites 10, 11 and 12 are considered "outliers" because they are relatively small sites that are not located in proximity to any of the clusters identified above.

Tables 11-6 and 11-7 summarize the net incremental change in peak hour person trips and vehicle trips, respectively, that would be generated under RWCDS 3 by each of the four projected development site clusters along with the three outlier sites. (Detailed demand forecasts for each of the four projected development site clusters and the three outlier sites are provided in Tables A-5 through A-11 included in the Transportation Planning Assumptions technical memorandum provided in Appendix E.) As shown in Table 11-6, Cluster 1 (comprised of development sites in the vicinity of West 126th and West 128th streets) would generate a net total of 1,127, 1,926, 1,834 and 1,515 person trips in the weekday AM, midday, PM and Saturday midday peak hours, respectively. As shown in Table 11-7, vehicle trips (auto, taxi and truck trips combined) generated by Cluster 1 would total 268, 246, 370 and 244 during these periods, respectively. Overall, it is estimated that this development cluster would account for approximately 65 percent to 80 percent of the total person trips and 76 percent

TABLE 11-5
Travel Demand Forecast for RWCDS 3

Land Use:		Office		Residential		Destination Retail		Local Retail		Community Facility (Office)		Community Facility (Recreation)		Community Facility (Dormitory)		Community Facility (Museum)		Total		
Size/Units:		80,854	gsf	499	DU	82,755	gsf	41,595	gsf	104,884	gsf	119,949	gsf	-124,287 -188	gsf Units	56,837	gsf			
Peak Hour Person Trips:																				
	AM (8-9)	175		403		146		192		227		311		-68		15		1,399		
	MD (12-1)	218		201		437		1,215		283		397		-35		246		2,962		
	PM (5-6)	204		443		437		640		264		407		-80		199		2,514		
	Sat MD (1-2)	54		383		632		749		70		319		-60		199		2,345		
Person Trips:		**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**Total**
AM	**Auto**	64	3	11	57	7	7	2	2	83	4	8	4	-2	-7	1	1	174	71	245
	Taxi	3	0	1	7	11	11	3	3	4	0	18	10	0	-2	1	1	41	30	71
	Subway	53	3	37	192	16	16	6	6	69	4	25	13	-6	-23	1	1	201	212	413
	Bus	20	1	9	49	15	15	6	6	26	1	10	5	-2	-8	2	2	86	71	157
	Walk/Other	26	1	6	34	25	25	80	80	33	2	144	74	-4	-16	3	3	313	203	516
	Total	166	8	64	339	74	74	97	97	215	11	205	106	-14	-56	8	8	815	587	1,402
MD	**Auto**	5	6	17	17	20	20	12	12	7	7	9	7	-2	-2	19	11	87	78	165
	Taxi	5	6	2	2	32	32	18	18	7	7	21	15	-1	-1	15	9	99	88	187
	Subway	10	11	57	57	47	47	36	36	14	15	28	20	-7	-7	11	6	196	185	381
	Bus	5	6	15	15	44	44	36	36	7	7	12	8	-3	-3	45	26	161	139	300
	Walk/Other	79	85	10	10	76	76	504	504	102	110	161	117	-5	-5	65	38	992	935	1,927
	Total	104	114	101	101	219	219	606	606	137	146	231	167	-18	-18	155	90	1,535	1,425	2,960
PM	**Auto**	12	67	50	24	20	20	6	6	15	87	6	11	-6	-3	12	11	115	223	338
	Taxi	1	3	6	3	32	32	10	10	1	4	12	24	-2	-1	10	10	70	85	155
	Subway	10	56	168	83	47	47	19	19	13	72	17	32	-22	-12	7	7	259	304	563
	Bus	4	21	43	21	44	44	19	19	5	27	7	13	-8	-4	30	28	144	169	313
	Walk/Other	5	27	30	15	76	76	265	265	6	35	97	188	-15	-8	44	40	508	638	1,146
	Total	32	174	297	146	219	219	319	319	40	225	139	268	-53	-28	103	96	1,096	1,419	2,515
Sat MD	**Auto**	12	8	34	30	28	28	7	7	16	11	7	5	-4	-4	18	10	118	95	213
	Taxi	1	0	4	4	46	46	11	11	1	1	17	12	-1	-1	13	7	92	80	172
	Subway	10	7	115	102	68	68	22	22	13	9	22	16	-13	-12	9	5	246	217	463
	Bus	4	3	30	26	63	63	22	22	5	3	9	7	-4	-4	36	21	165	141	306
	Walk/Other	5	3	20	18	111	111	311	311	6	4	130	94	-9	-9	50	29	624	561	1,185
	Total	32	21	203	180	316	316	373	373	41	28	185	134	-31	-30	126	72	1,245	1,094	2,339
Vehicle Trips :		**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**Total**
AM	**Auto (Total)**	56	3	9	45	4	4	1	1	73	4	6	3	-2	-6	0	0	147	54	201
	Taxi	2	0	1	5	6	6	2	2	3	0	13	7	0	-2	1	1	28	19	---
	Taxi Balanced	2	2	5	5	11	11	3	3	3	3	17	17	-2	-2	2	2	40	40	80
	Truck	1	1	2	2	1	1	1	1	2	2	0	0	0	0	0	0	7	7	13
	Total	59	6	16	52	16	16	5	5	78	9	23	20	-4	-8	2	2	194	101	295
MD	**Auto (Total)**	4	5	13	13	10	10	6	6	6	6	6	5	-2	-2	8	5	51	48	99
	Taxi	4	4	1	1	16	16	9	9	5	5	15	11	-1	-1	8	5	57	50	---
	Taxi Balanced	7	7	2	2	28	28	16	16	9	9	23	23	-2	-2	11	11	93	93	186
	Truck	1	1	1	1	2	2	1	1	2	2	0	0	0	0	0	0	7	7	14
	Total	12	13	16	16	40	40	23	23	17	17	29	28	-4	-4	19	16	151	148	299
PM	**Auto (Total)**	11	59	40	19	10	10	3	3	13	76	4	8	-5	-3	5	5	81	177	258
	Taxi	1	2	4	2	16	16	5	5	1	3	9	17	-2	-1	5	5	39	49	---
	Taxi Balanced	3	3	5	5	29	29	9	9	4	4	23	23	-3	-3	9	9	78	78	156
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	14	62	45	24	39	39	12	12	17	80	27	31	-8	-6	14	14	159	255	414
Sat MD	**Auto (Total)**	11	7	27	24	14	14	4	4	14	10	5	4	-3	-3	8	4	80	64	144
	Taxi	1	0	3	3	23	23	6	6	1	1	12	9	-1	-1	7	4	52	45	---
	Taxi Balanced	1	1	5	5	39	39	10	10	2	2	18	18	-2	-2	10	10	84	84	168
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	12	8	32	29	53	53	14	14	16	12	23	22	-5	-5	18	14	164	148	312

Total Vehicle Trips	**In**	**Out**	**Total**
AM (8-9)	**194**	**101**	**295**
MD (12-1)	**151**	**148**	**299**
PM (5-6)	**159**	**255**	**414**
Sat MD (1-2)	**164**	**148**	**312**

Notes:
25% linked-trip credit applied to destination and local retail uses.

TABLE 11-6
Net Incremental Person Trips Generated by
Projected Development Site Clusters Under RWCDS 3

	AM	Midday	PM	Saturday Midday
Cluster 1	1,127	1,926	1,834	1,515
Cluster 2	154	525	353	423
Cluster 3	91	246	197	237
Cluster 4	23	263	125	165
Site 10	2	1	2	2
Site 11	2	1	2	2
Site 12	2	1	2	2
Total	1,401	2,963	2,515	2,346

TABLE 11-7
Net Incremental Vehicle Trips Generated by
Projected Development Site Clusters Under RWCDS 3

	AM	Midday	PM	Saturday Midday
Cluster 1	268	246	370	244
Cluster 2	25	39	34	43
Cluster 3	13	24	22	28
Cluster 4	-2	8	-1	6
Site 10	0	0	0	0
Site 11	0	0	0	0
Site 12	0	0	0	0
Total	304	317	425	321

Note: The sum of peak hour vehicle trips by cluster may differ slightly from the numbers shown in Table 11-4 due to rounding and the balancing of taxis on a cluster by cluster basis.

to 88 percent of the total vehicle trips generated by RWCDS 3. Clusters 2, 3 and 4 would each generate 43 or fewer vehicle trips in any peak hour, and these trips would be widely dispersed along the street network in the central and northern portions of the rezoning area. Lastly, as also shown in Table 11-7, given their relatively small development programs (i.e., two dwelling units each), outlier projected development sites 10, 11 and 12 are not expected to generate an appreciable number of vehicle trips in any peak hour.

Traffic

The assignments of auto and taxi trips were based on the locations of individual projected development sites (or groups of development sites) within each cluster, the locations of off-street public parking garages that would likely be used by project-generated auto trips, and the anticipated origins and destinations of vehicle trips associated with the different uses projected for each site (e.g., commercial, residential, etc.). Project-generated auto trips not accommodated in proposed on-site parking garages were assigned to nearby off-street public parking facilities based on the proximity of these facilities to projected development sites and the amount of available parking capacity in the No-Action condition. The origins/destinations of residential and non-retail commercial trips were determined based upon 2000 Census journey-to-work and reverse journey-to-work data, respectively. Retail trip origins/destinations were based on population density in proximity to the rezoning area.

Truck trips en route to and from each cluster were assigned based on the most direct paths to and from designated local and through truck routes. Local truck routes in the vicinity of the rezoning area include Broadway, Amsterdam Avenue, West 145th Street and West 125th Street.

Figure 11-2 shows the assignment of vehicle trips (including auto, taxi and truck trips) generated by all projected development sites under RWCDS 3 during the weekday AM, midday and PM and Saturday midday peak hours. As shown in Figure 11-2, action-generated vehicle trips would be most concentrated in the vicinity of Cluster 1 which would generate the majority of new travel demand under RWCDS 3. The maximum number of vehicles through any one intersection in any peak hour is expected to be approximately 188 vehicles at the intersection of West 126th Street and Amsterdam Avenue in the PM peak hour. Overall, as shown in Figure 11-2, action-generated traffic is expected to exceed the 50-trip *CEQR Technical Manual* analysis threshold at a total of 11 intersections (10 signalized and one unsignalized) along the West 125th Street, West 126th Street, West 127th Street and West 128th Street corridors in one or more peak hours. Therefore, based on this Level 2 screening assessment, these 11 intersections have been selected for detailed analysis.

Transit

Subway

Subway Stations

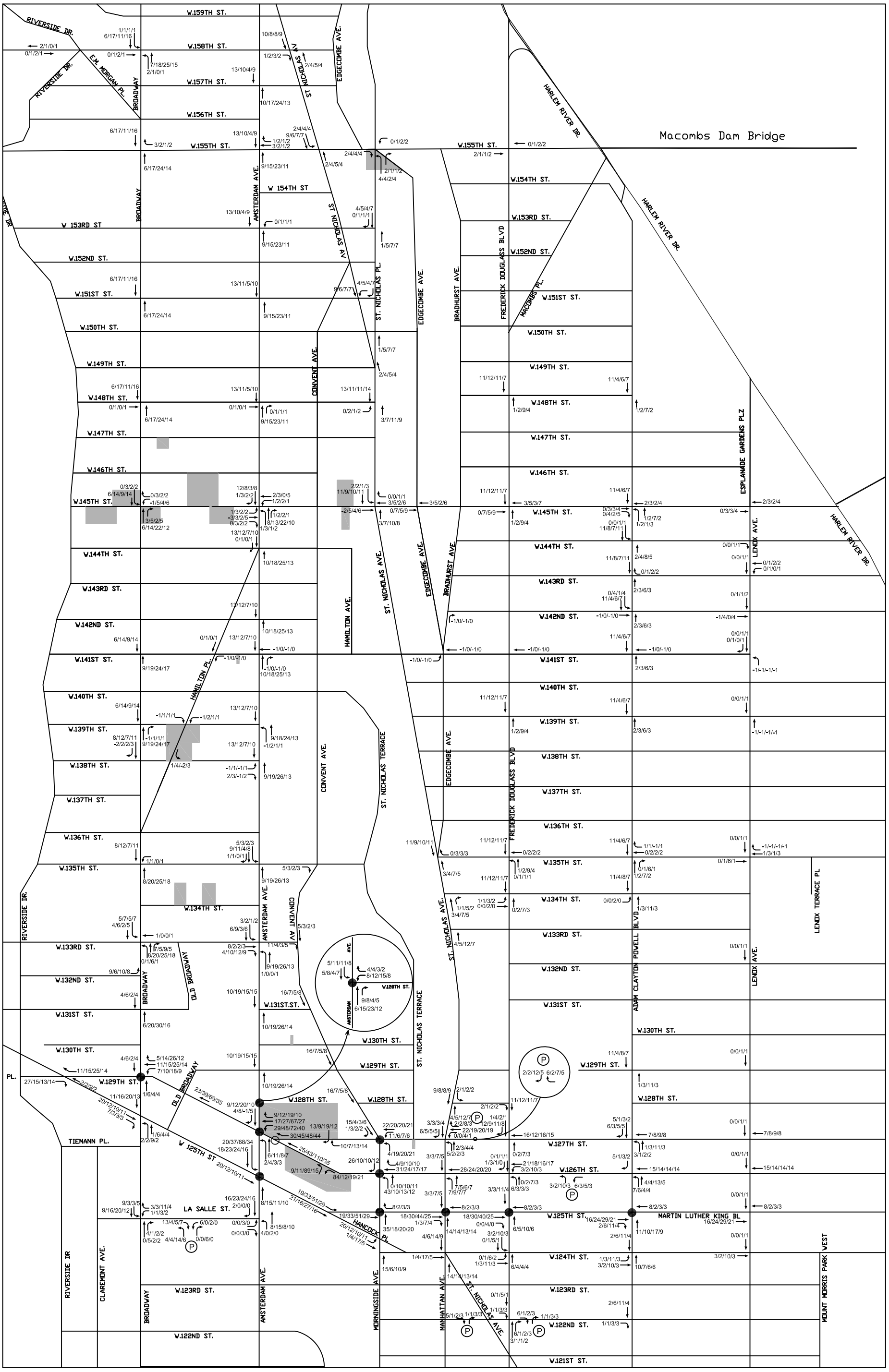
There are a total of eight subway stations located in proximity to the rezoning area. As shown in Figure 11-3, these include four IND stations along St. Nicholas Avenue including express stops at West 125th Street and West 145th Street (served by A, B, C and D trains), and local stops at West 135th Street (B, C) and West 155th Street (C); three IRT stations along Broadway at West 125th Street, West 137th Street-City College and West 145th Street (all served by No. 1 trains); and an IND station at West 155th Street and Eighth Avenue (served by B and D trains).

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

Table 11-8 shows the forecast of weekday AM and PM peak hour transit trips for the clusters of projected development sites. (Transit analyses typically focus on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the subway and bus systems is usually highest.) As shown in Table 11-8, it is estimated that under RWCDS 3, projected development sites in Cluster 1 would generate a total of 317 and 428 new subway trips in the weekday AM and PM peak hours, respectively. The remaining clusters and outlying development sites would each generate 83 or fewer new subway trips in any peak hour, and these trips are expected to occur at different subway stations than those serving Cluster 1. Therefore, only the two subway stations in proximity to Cluster 1 – the IND station at St. Nicholas Avenue and West 125th Street and the IRT station at Broadway at West 125th Street – would potentially experience an increase of 200 or more peak hour trips as a result of the Proposed Action.

To determine if both of these subway stations would require detailed analysis, the subway trips generated by Cluster 1 were assigned to each based on proximity to station entrances and existing ridership patterns for the subway routes serving each station. Based on 2010 turnstile registration data, it was estimated that

Figure 11-2
Project Increment Peak Hour Traffic Volumes Under RWCDS 3



Legend:

- Analyzed Signalized Intersection
- Analyzed Unsignalized Intersection
- 21/16/27/16 = AM/MD/PM/Sat MD
- Projected Development Site
- Public Parking Facility

Rezoning Area Subway and Bus Services

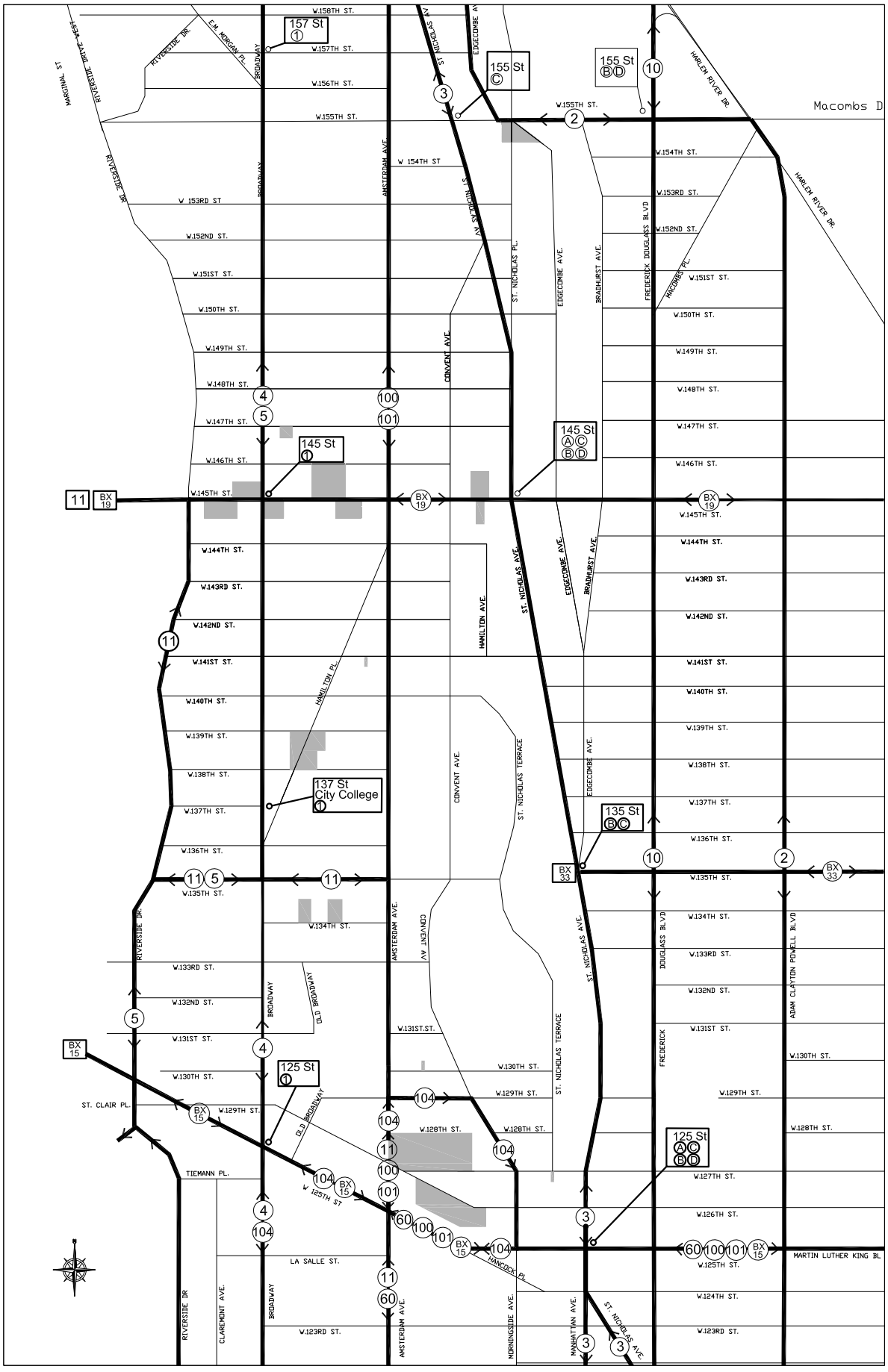


TABLE 11-8
Net Incremental Transit Trips Generated
by Projected Development Sites Under RWCDS 3

	Subway		Bus	
	AM	**PM**	**AM**	**PM**
Cluster 1	317	428	126	245
Cluster 2	59	83	17	36
Cluster 3	34	49	12	26
Cluster 4	-3	3	1	9
Site 10	1	1	0	0
Site 11	1	1	0	0
Site 12	1	1	0	0
Total	410	566	156	316

Note: The sum of peak hour subway trips by cluster may differ slightly from the totals shown in Table 11-4 due to rounding.

approximately 77 percent of all the subway trips generated by Cluster 1 would use the IND station at St. Nicholas Avenue, while 23 percent would use the IRT local stop on Broadway. As shown in Table 11-9, based on this assignment, only the 125th Street IND station on St. Nicholas Avenue is expected to experience more than 200 action-generated trips, with approximately 244 trips in the AM peak hour and 330 in the PM peak hour. The 125th Street IRT station at Broadway would experience 73 and 98 trips during these peak hours, respectively. Therefore, based on this Level 2 screening assessment, the analysis of conditions at subway stations serving the rezoning area will focus on street stairs and fare arrays at the 125th Street IND station at St. Nicholas Avenue that are expected to be used by project-generated trips in the AM and PM peak hours.

TABLE 11-9
Project Increment Subway Trip Assignment by Station
Under RWCDS 3 - Cluster 1

Subway Station	AM Peak Hour	PM Peak Hour
West 125th Street & St. Nicholas Avenue (A, B, C, D)	244	330
West 125th Street & Broadway (1)	73	98
Total	317	428

Subway Line Haul

The proposed rezoning area is served by a total of five NYC Transit subway routes, including A and D express and B and C local services along the IND Eighth Avenue Line, and No. 1 local service on the IRT Broadway/Seventh Avenue Line. According to the general thresholds used by the MTA and specified in the *CEQR Technical Manual*, a detailed analysis of subway line haul conditions is generally not required if a Proposed Action is projected to result in fewer than 200 peak hour trips being assigned to a single route (in one direction), as this level of new demand is considered unlikely to result in significant adverse impacts. As shown in Table 11-8, it is estimated that all of the projected development sites within the proposed rezoning area would generate a combined total of 410 and 566 new subway trips in the weekday AM and PM peak hours, respectively. As these trips would be distributed among a total of five subway

routes, it is unlikely that any one route would experience 200 or more trips in one direction in any peak hour. Therefore, the Proposed Action is not expected to result in any significant adverse impacts to subway line haul conditions based on *CEQR Technical Manual* criteria, and a detailed analysis is not warranted.

Bus

The proposed rezoning area is served by ten NYC Transit local bus routes that connect the area with other parts of Manhattan. As shown in Figure 11-3, these include the M2, M3, M4, M5, M10, M11, M60, M100, M101 and M104 routes. The rezoning area is also served by three NYC Transit local bus routes that connect Manhattan with the Bronx – the Bx6, Bx15 and Bx19.

According to the general thresholds used by the MTA and specified in the *CEQR Technical Manual*, a detailed analysis of bus conditions is generally not required if a Proposed Action is projected to result in fewer than 50 peak hour trips being assigned to a single bus line (in one direction), as this level of new demand is considered unlikely to result in significant adverse impacts. As shown in Table 11-8, it is estimated that all of the projected development sites within the proposed rezoning area would generate a combined total of 156 and 316 new bus trips in the weekday AM and PM peak hours, respectively. As these trips would be widely dispersed throughout the study area and distributed among all 13 bus routes serving the projected development sites, it is not anticipated that any one route would experience 50 or more trips in one direction in any peak hour. (A bus trip assignment is provided in the Transportation Planning Factors Technical Memorandum included in Appendix E.) Consequently, the Proposed Action is not expected to result in any significant adverse impacts to bus transit services based on *CEQR Technical Manual* criteria, and a detailed bus analysis is not warranted. A qualitative description of bus services operating in proximity to the rezoning area is, however, provided in this EIS.

Pedestrians

According to *CEQR Technical Manual* criteria, projected pedestrian volume increases of less than 200 pedestrians per hour at any pedestrian element would not typically be considered a significant impact, since that level of increase would not generally be noticeable and therefore would not require further analysis. As shown in Table 11-10, the maximum number of pedestrian trips generated by projected development site clusters 2, 3 and 4 in any one peak hour (including walk-only trips and walk trips to area subway stations and bus stops), is expected to total 479, 218 and 253, respectively. (Pedestrian trips generated by the three outlier sites are expected to be negligible.) However these trips would be widely dispersed among the sidewalks and crosswalks in proximity to each of the projected development sites within each of these clusters, and the total number of new trips at any one sidewalk or crosswalk in any peak hour is not expected to exceed the 200-trip *CEQR Technical Manual* analysis threshold.

By contrast, a substantially greater number of pedestrian trips is expected to be generated by Cluster 1, with a total of approximately 846 in the AM peak hour, 1,662 in the midday, 1,410 in the PM, and 1,217 during the Saturday midday. Although these pedestrian trips would be dispersed throughout the portion of the rezoning area encompassing Cluster 1, concentrations would likely occur along corridors connecting this cluster to bus routes and the two subway stations in the vicinity. Figure 11-4 shows the assignment of project increment pedestrian trips to area sidewalks and crosswalks in the weekday and Saturday peak hours. Subway and bus trips were assigned to the most direct routes between these transit services and projected development sites, while walk-only trips to/from projected development sites were assumed to be distributed throughout the area. Pedestrian trips en route between Cluster 1 and off-street public parking garages in the vicinity are also reflected in the volumes shown in Figure 11-4. Based on this

Peak Hour Project Increment Sidewalk and Crosswalk Volumes for RWCDS 3 - Cluster 1

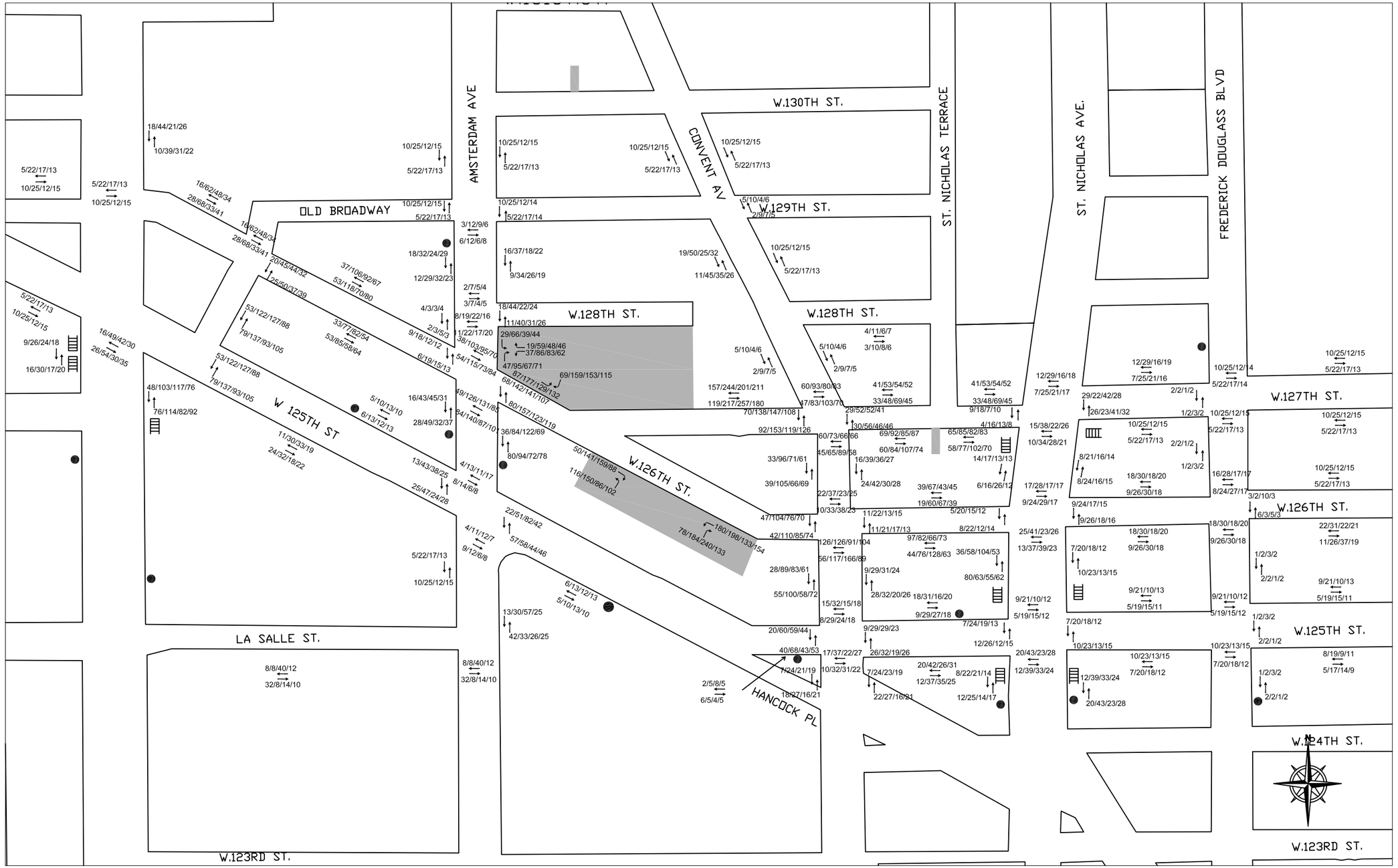


TABLE 11-10
Net Incremental Pedestrian and Transit Trips Generated by Projected Development Sites Under RWCDS 3

	AM	Midday	PM	Saturday Midday
Cluster 1	846	1,662	1,410	1,217
Cluster 2	127	479	312	373
Cluster 3	78	218	174	204
Cluster 4	26	253	127	159
Site 10	1	0	1	0
Site 11	1	0	1	0
Site 12	1	0	1	0
Total	1,080	2,612	2,026	1,983

assignment, a total of seven sidewalks, 14 corner reservoir areas and seven crosswalks were identified where project-generated pedestrian trips are expected to exceed the 200-trip *CEQR Technical Manual* analysis threshold in one or more peak hours. As shown in Figure 11-4, these pedestrian elements are generally located along the West 126th Street and West 127th Street corridors, as well as along West 125th Street near Broadway. Therefore, based on the results of this Level 2 screening assessment, a quantitative pedestrian impact analysis will be conducted focusing on these seven sidewalks, 14 corner areas and seven crosswalks, which are shown in Figure 11-5.

Parking

As a quantitative traffic analysis is necessary based on the Level 1 and Level 2 screening assessments, analyses of on-street (curbside) and off-street parking conditions are also provided. These analyses focus on the existing and future parking supply and demand in proximity to projected development site Cluster 1, which would generate the majority of the new vehicle trips and parking demand resulting from the Proposed Action.

F. TRANSPORTATION ANALYSES METHODOLOGIES

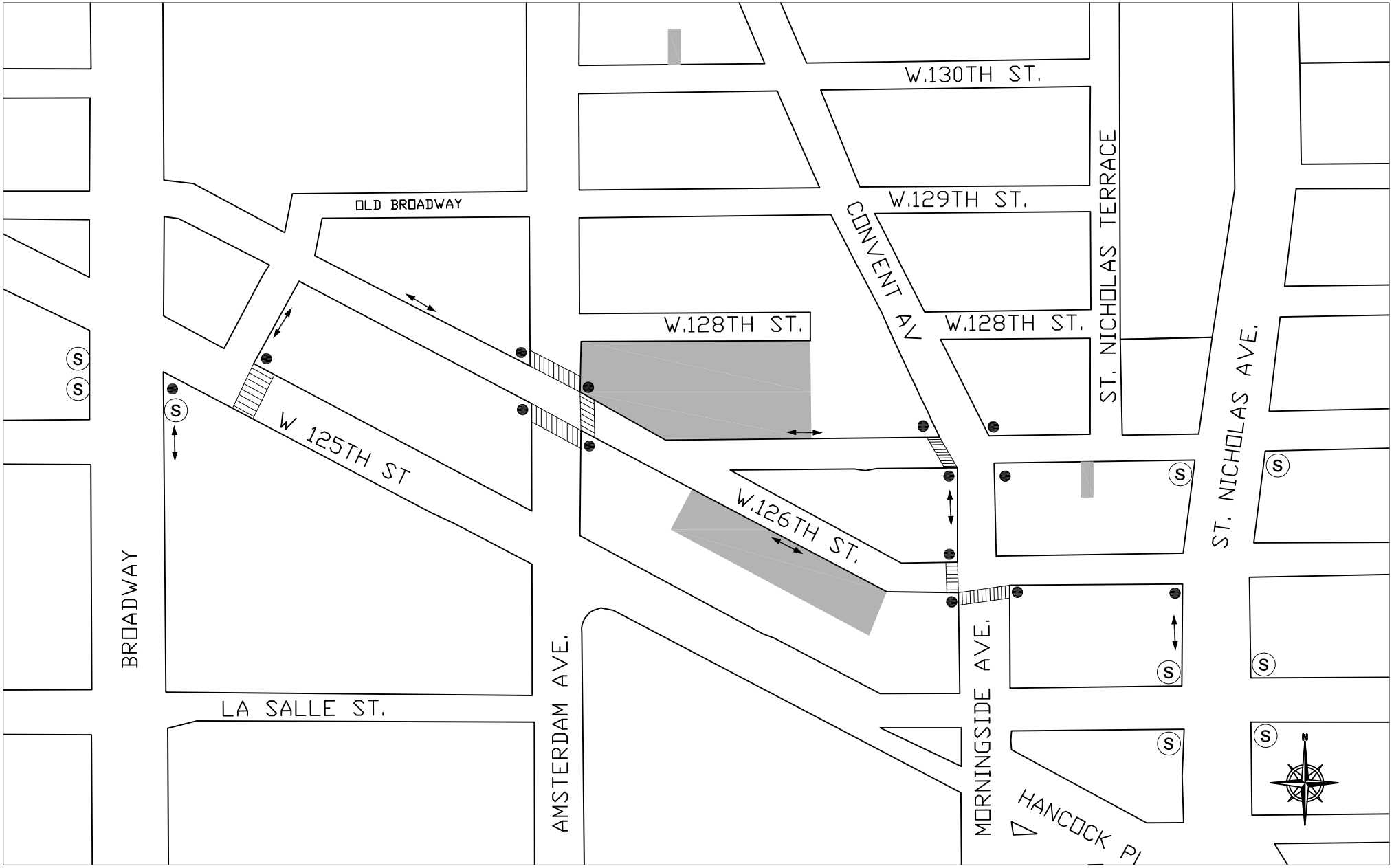
Traffic

Analysis Methodology

To establish the existing conditions traffic network for the study area, manual turning movement, vehicle classification, and automatic traffic recorder (ATR) counts, along with speed and delay surveys, were conducted during the weekday AM, midday and PM and Saturday midday peak periods in May 2011. Field surveys of parking regulations, lane configurations, and other physical and operational characteristics of the street network were also undertaken in May 2011. Current signal timing plans for signalized intersections within the study area were obtained from the New York City Department of Transportation (NYCDOT). Surveys of on-street and off-street public parking capacity and utilization were also conducted in May 2011.

The traffic analysis examines conditions in the weekday AM and PM peak hours when commuter travel demand from the reasonable worst case development scenario's residential components is expected to be greatest. The weekday midday and Saturday midday peak hours are also analyzed as these periods would

Figure 11-5
Pedestrian Analysis Locations



Legend:

Analyzed Corner | Analyzed Sldewalk | Analyzed Crosswalk | (S) Subway Station Entrance | Projected Development Site Cluster 1

experience the highest amount of demand from the retail and community facility components. Based on existing peak traffic volumes along major corridors in the study area, the peak hours selected for the weekday analyses are 7:45-8:45 AM, 1-2 PM and 4:45-5:45 PM. The Saturday analysis focuses on the 1-2 PM peak hour.

The capacity analyses at study area intersections are based on the methodology presented in the *Highway Capacity Manual (HCM) Software HCS+ Version 5.4*. Traffic data required for these analyses include the hourly volumes on each approach and various other physical and operational characteristics. Signal timing plans for signalized intersections were obtained from the New York City Department of Transportation (NYCDOT). Field inventories were conducted to document the physical layout, lane markings, curbside parking regulations, and other relevant characteristics needed for the analysis.

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

For unsignalized intersections, the HCM methodology generally assumes that major street traffic is not affected by minor street flows. Left turns from the major street are assumed to be affected by the opposing, or oncoming major street flow. Minor street traffic is obviously affected by all conflicting movements. Similar to signalized intersections, the HCM methodology expresses the quality of flow at unsignalized intersections in terms of LOS based on the amount of delay that a driver experiences. This relationship differs somewhat from the criteria used for signalized intersections, primarily because drivers expect different levels of performance from the two different kinds of transportation facilities. For unsignalized intersections, levels of service range from A, with minimal delay (10 seconds or less per vehicle), to F, which represents long delays (over 50 seconds per vehicle).

Table 11-11 shows the LOS/delay relationship for signalized and unsignalized intersections using the HCM methodology. Levels of service A, B, and C generally represent highly favorable to fair levels of traffic flow. At LOS D, the influence of congestion becomes noticeable. LOS E is considered to be the limit of acceptable delay, and LOS F is considered to be unacceptable to most drivers. In this study, a signalized lane grouping operating at LOS E or F or a v/c ratio of 0.90 or above is identified as congested. For unsignalized intersections, a movement with LOS E or F is also identified as congested.

TABLE 11-11
Intersection Level of Service Criteria

Level of Service (LOS)	Average Delay per Vehicle (seconds)	
	Signalized Intersections	**Unsignalized Intersections**
A	less than 10.1	less than 10.1
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	greater than 80.0	greater than 50.0

Source: *2000 Highway Capacity Manual.*

Significant Impact Criteria

The identification of significant adverse traffic impacts at analyzed intersections is based on criteria presented in the *CEQR Technical Manual*. According to *CEQR Technical Manual* criteria, if a lane group under the With-Action condition is within LOS A, B or C, or marginally acceptable LOS D (average control delay less than or equal to 45.0 seconds/vehicle for signalized intersections and 30.0 seconds/vehicle for unsignalized intersections), the impact is not considered significant. If the lane group LOS deteriorates from LOS A, B, or C in the No-Action condition to worse than mid-LOS D (i.e., delay greater than 45 seconds/vehicle at signalized intersections or 30 seconds/vehicle at unsignalized intersections) or to LOS E or F under the With-Action condition, then a significant traffic impact has occurred. For a lane group operating at LOS D under the No-Action condition, an increase of five or more seconds is considered significant if the With-Action delay exceeds mid-LOS D. For a lane group operating at LOS E under the No-Action condition, an increase in projected delay of 4.0 or more seconds is considered significant, and for a lane group operating at LOS F under the No-Action condition, an increase in projected delay of 3.0 or more seconds is considered significant.

The same criteria apply to both signalized and unsignalized intersections, however, for the minor street at an unsignalized intersection to trigger significant impacts, 90 passenger-car equivalents (PCEs) must be identified in the future With-Action condition in any peak hour.

Transit

Subway

Analysis Methodology

To determine existing conditions at analyzed subway station elements, subway ridership data were collected at the 125th Street IND station at St Nicholas Avenue in February 2012. The methodology for assessing subway station pedestrian circulation elements (stairs, escalators, and passageways) and fare control elements (regular turnstiles, high entry/exit turnstiles [HEETS], and high exit turnstiles) compares existing and projected pedestrian volumes with the element's design capacity to yield a volume-to-capacity (v/c) ratio. All analyses reflect pedestrian flow volumes over a 15-minute interval during each peak hour. Based on existing pedestrian volumes, the peak hours selected for the analysis of subway station conditions are 7:45-8:45 AM and 5-6 PM. (As noted previously, transit analyses typically focus on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the subway and bus systems is usually highest.)

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

By contrast with stairways and passageways, under *CEQR Technical Manual* guidelines, the capacity of an escalator or turnstile is determined based on only two factors: the NYC Transit guideline capacity for a

15-minute interval and a surging factor of up to 25 percent. Table 11-12 shows the *CEQR Technical Manual* level of service criteria for all subway station elements. As shown in Table 11-12, six levels of service are defined with letters A through F. LOS A is representative of free flow conditions without pedestrian conflicts and LOS F depicts severe congestion and queuing.

TABLE 11-12
Level of Service Criteria for Subway Station Elements

LOS	Description	V/C Ratio
A	Free Flow	≤ 0.5
B	Fluid Flow	≤ 3
C	Fluid, somewhat restricted	≤ 6
D	Crowded, walking speed restricted	≤ 11
E	Congested, some shuffling and queuing	≤ 18
F	Severely congested, queued	> 18

Source: *CEQR Technical Manual*

Significant Impact Criteria

The *CEQR Technical Manual* identifies a significant impact for stairways and passageways in terms of the minimum width increment threshold (WIT) based on the minimum amount of additional capacity that would be required to restore conditions to either their No-Action v/c ratio or to a v/c ratio of 1.00 (LOS C/D), whichever is greater. Stairways that are substantially degraded in level of service or which experience the formation of extensive queues are classified as significantly impacted. Significant adverse stairway or passageway impacts are typically considered to have occurred once the thresholds shown in Table 11-13 are reached or exceeded.

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

TABLE 11-13
Significant Impact Thresholds for Stairways and Passageways

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

Source: *CEQR Technical Manual*

Bus

As discussed above, the Proposed Action is not expected to result in any significant adverse impacts to bus transit services based on *CEQR Technical Manual* guidelines, and a detailed bus analysis is not provided in this EIS.

Pedestrians

Analysis Methodology

Data on peak period pedestrian flow volumes were collected along analyzed sidewalks, corner areas and crosswalks in the vicinity of Cluster 1 in February 2012. Peak hours were determined by comparing rolling hourly averages, and the highest 15-minute volumes within the selected peak hours were used for analysis. Based on existing peak pedestrian volumes along major corridors in the study area, the peak hours selected for the weekday analyses are 7:45-8:45 AM, 12:45-1:45 PM and 5-6 PM. The 12:45-1:45 PM midday peak hour was also assumed for the Saturday analysis.

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

LOS standards are based on the average area available per pedestrian during the analysis period, typically expressed as a 15-minute peak period. LOS grades from A to F are assigned, with LOS A representative of free flow conditions without pedestrian conflicts and LOS F depicting significant capacity limitations and inconvenience. Table 11-14 defines the LOS criteria for pedestrian crosswalk/corner area and sidewalk conditions, as based on the *Highway Capacity Manual* methodology.

TABLE 11-14
Pedestrian Crosswalk/Corner Area and Sidewalk Levels of Service Descriptions

LOS	Crosswalk/Corner	Crosswalk/Corner Area Criteria (sf/ped)	Non-Platoon Sidewalk Criteria (pmf)	Platoon Sidewalk Criteria (pmf)
A	(Unrestricted)	≥ 60	≤ 5	≤ 0.5
B	(Slightly Restricted)	≥ 40	≤ 7	≤ 3
C	(Restricted but fluid)	≥ 24	≤ 10	≤ 6
D	(Restricted, necessary to continuously alter walking stride and direction)	≥ 15	≤ 15	≤ 11
E	(Severely restricted)	≥ 8	≤ 23	≤ 18
F	(Forward progress only by shuffling; no reverse movement possible)	≤ 8	> 23	> 18

Notes: Based on average conditions for 15 minutes
sf/ped – square feet of area per pedestrian
pmf – pedestrians per minute per foot of effective sidewalk width
Source: *2000 Highway Capacity Manual*

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

Impact Criteria

Sidewalks

For areas of Manhattan outside of the Central Business District (which is typically defined as the area south of 60th Street), *CEQR Technical Manual* criteria define a significant adverse sidewalk impact to have occurred under platoon conditions if the average pedestrian flow rate under the No-Action condition is less than 3.5 pedestrians/minute/foot (pmf) of effective sidewalk width, and the average flow rate under the With-Action condition is greater than 6.0 pmf (LOS D or worse). If the average flow rate under the With-Action condition is less than or equal to 6.0 pmf (LOS C or better), the impact should not be considered significant. If the No-Action pedestrian flow rate is between 3.5 and 19 pmf, an increase in average flow rate under the With Action condition should be considered significant based on Table 11-15, which shows a sliding-scale that identifies what increase is considered a significant impact for a given flow rate. If the increase in average pedestrian flow rate is less than the value shown in Table 11-15**,** the impact should not be considered significant. If the average pedestrian flow rate under the No-Action

TABLE 11-15
Significant Impact Criteria for Sidewalks with Platooned Flow in a Non-CBD Location

No-Action Condition Pedestrian Flow (pmf)	With-Action Condition Pedestrian Flow Increment to be Considered a Significant Impact (pmf)
< 3.5	With Action Condition > 6.0
3.5 to 3.8	Increment ≥ 2.6
3.9 to 4.6	Increment ≥ 2.5
4.7 to 5.4	Increment ≥ 2.4
5.5 to 6.2	Increment ≥ 2.3
6.3 to 7.0	Increment ≥ 2.2
7.1 to 7.8	Increment ≥ 2.1
7.9 to 8.6	Increment ≥ 2.0
8.7 to 9.4	Increment ≥ 1.9
9.5 to 10.2	Increment ≥ 1.8
10.3 to 11.0	Increment ≥ 1.7
11.1 to 11.8	Increment ≥ 1.6
11.9 to 12.6	Increment ≥ 1.5
12.7 to 13.4	Increment ≥ 1.4
13.5 to 14.2	Increment ≥ 1.3
14.3 to 15.0	Increment ≥ 1.2
15.1 to 15.8	Increment ≥ 1.1
15.9 to 16.6	Increment ≥ 1.0
16.7 to 17.4	Increment ≥ 0.9
17.5 to 18.2	Increment ≥ 0.8
18.3 to 19.0	Increment ≥ 0.7
> 19.0	Increment ≥ 0.6

Source: *CEQR Technical Manual*

condition is greater than 19 pmf, then an increase in pedestrian flow rate greater than or equal to 0.6 pmf should be considered significant.

Corner Areas and Crosswalks

For non-CBD areas of Manhattan, *CEQR Technical Manual* criteria define a significant adverse corner area or crosswalk impact to have occurred if the average pedestrian space under the No-Action condition is greater than 26.6 square feet/pedestrian (sf/ped) and, under the With-Action condition, the average pedestrian space decreases to 24 sf/ped or less (LOS D or worse). If the pedestrian space under the With-Action condition is greater than 24 sf/ped (LOS C or better), the impact should not be considered significant. If the average pedestrian space under the No-Action condition is between 5.1 and 26.6 sf/ped, a decrease in pedestrian space under the With-Action condition should be considered significant based on Table 11-16 which shows a sliding-scale that identifies what decrease in pedestrian space is considered a significant impact for a given amount of pedestrian space in the No-Action condition. If the decrease in pedestrian space is less than the value in Table 11-16, the impact is not considered significant. If the average pedestrian space under the No-Action condition is less than 5.1 sf/ped, then a decrease in pedestrian space greater than or equal to 0.2 sf/ped should be considered significant.

TABLE 11-16
Significant Impact Criteria for Corners and Crosswalks in a Non-CBD Location

No-Action Condition Pedestrian Space (sf/ped)			With-Action Condition Pedestrian Space Reduction to be Considered a Significant Impact (sf/ped)
> 26.6			With Action Condition ≤ 24.0
25.8	to	26.6	Reduction ≥ 2.6
24.9	to	25.7	Reduction ≥ 2.5
24.0	to	24.8	Reduction ≥ 2.4
23.1	to	23.9	Reduction ≥ 2.3
22.2	to	23.0	Reduction ≥ 2.2
21.3	to	22.1	Reduction ≥ 2.1
20.4	to	21.2	Reduction ≥ 2.0
19.5	to	20.3	Reduction ≥ 1.9
18.6	to	19.4	Reduction ≥ 1.8
17.7	to	18.5	Reduction ≥ 1.7
16.8	to	17.6	Reduction ≥ 1.6
15.9	to	16.7	Reduction ≥ 1.5
15.0	to	15.8	Reduction ≥ 1.4
14.1	to	14.9	Reduction ≥ 1.3
13.2	to	14.0	Reduction ≥ 1.2
12.3	to	13.1	Reduction ≥ 1.1
11.4	to	12.2	Reduction ≥ 1.0
10.5	to	11.3	Reduction ≥ 0.9
9.6	to	10.4	Reduction ≥ 0.8
8.7	to	9.5	Reduction ≥ 0.7
7.8	to	8.6	Reduction ≥ 0.6
6.9	to	7.7	Reduction ≥ 0.5
6.0	to	6.8	Reduction ≥ 0.4
5.1	to	5.9	Reduction ≥ 0.3
< 5.1			Reduction ≥ 0.2

Source: *CEQR Technical Manual*

Pedestrian and Vehicular Safety Evaluation

Under *CEQR Technical Manual* guidelines, an evaluation of vehicular and pedestrian safety is needed for locations within the traffic and pedestrian study areas that have been identified as high accident locations. These are defined as locations where 48 or more total reportable and non-reportable crashes or five or more pedestrian/bicyclist injury crashes have occurred in any consecutive 12 months of the most recent three-year period for which data are available. For these locations, accident trends would be identified to determine whether projected vehicular and pedestrian traffic would further impact safety, or whether existing unsafe conditions could adversely impact the flow of the projected new trips. The determination of potential significant safety impacts depends on the type of area where the project site is located, traffic volumes, accident types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety should be identified and coordinated with NYCDOT.

Parking

Analysis Methodology

The parking analysis identifies the supply of off-street public parking in proximity to a project site and the extent to which it is utilized under existing conditions and conditions in the future both with and without a proposed action. It takes into consideration anticipated changes in area parking supply and demand, and then compares project-generated parking demand with future availability to determine if a parking shortfall is likely to result. The displacement of existing parking capacity attributable to the proposed action is also considered. Typically, the analysis encompasses those facilities -- public parking lots and garages and on-street curb spaces – which vehicular traffic destined for the project site would likely utilize. A ¼-mile radius around a project site is generally assumed as the distance that someone driving to the site would be willing to walk. If, however, the analysis identifies a shortfall in parking within the ¼-mile study area, the study area could sometimes be extended to ½-mile to identify additional parking supply.

As discussed in Section J, "Parking," initial data on off-street and on-street parking utilization indicated that there is relatively limited capacity available to accommodate additional demand within roughly ¼-mile of Cluster 1 under RWCDS 3. The off-street public parking analysis study area was therefore expanded to a ½-mile radius to reflect the fact that some project-generated parking demand would likely occur at parking facilities further than ¼-mile from the project site, as well as to provide data to facilitate the assignment of project-generated auto trips to off-site parking.

Impact Criteria

For proposed projects located in Manhattan or other CBD areas, such as the South Bronx, Flushing, Jamaica, Long Island City/Astoria, Downtown Brooklyn, and Greenpoint/Williamsburg, the inability of a proposed project or the surrounding area to accommodate the project's future parking demands is considered a parking shortfall, but is generally not considered significant due to the magnitude of available alternative modes of transportation. For other areas in New York City, a parking shortfall that exceeds more than half the available on-street and off-street parking spaces within ¼-mile of the project site may be considered significant. Additional factors to be considered in determining whether such a shortfall is significant include: the availability and extent of transit in the area and the proximity of the project to such transit; aspects of the project that may be considered trip reduction or travel demand management (TDM) measures; the travel modes of customers of area commercial businesses; and patterns of automobile usage by area residents. In some cases, if there is adequate parking supply within

½-mile of the project site, the projected parking shortfall may also not necessarily be considered significant.

G. TRAFFIC

Existing Conditions

Study Area Street Network

As shown in Figure 11-1, the rezoning area street system consists of urban arterials connecting with an irregular grid network of West Harlem's local streets. The east-west local grid is discontinuous between West 130th and West 141st Streets, while the north-south arterial grid is generally continuous throughout the area. Principal arterials within and in the immediate vicinity of the rezoning area include West 155th Street to the north, Riverside Drive to the west, West 125th Street to the south, and Edgecombe Avenue to the east, as well as Broadway and Amsterdam Avenue. As discussed above in Section E, "Level 2 Screening Assessment," the traffic study area includes a total of 11 intersections (10 signalized and one unsignalized) along the West 125th Street, West 126th Street, West 127th Street and West 128th Street corridors at the southern end of the rezoning area that were selected for analysis based on the anticipated numbers of new project-generated vehicle trips. Figures 11-6 through 11-9 show existing 2011 peak hour traffic volumes on the study area street network during the weekday AM, midday, PM and Saturday midday peak hours, respectively. The following describes the primary roadways within this study area.

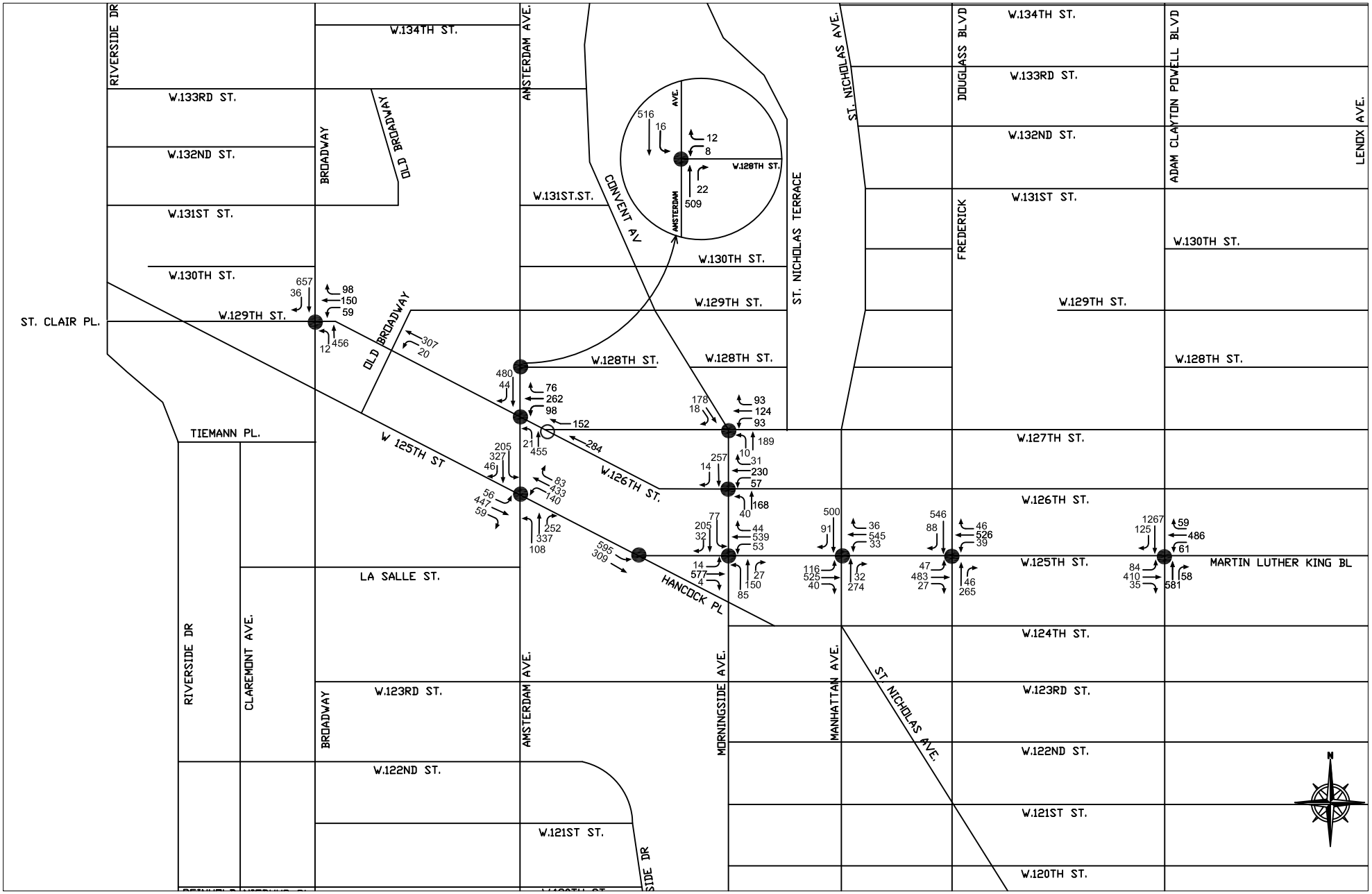
North-South Avenues

The westernmost north-south arterial in the traffic study area is **Broadway**, which operates two-way, with two to three travel lanes in each direction plus curbside parking/loading. Exclusive left-turn lanes are typically provided at major intersections, and the roadway is bisected in each direction by support columns for the elevated subway structure carrying NYC Transit's Broadway Line (No. 1 trains). NYC Transit's M4 and M104 buses operate along Broadway through the study area, and it is also a designated local truck route. Two-way peak hour volumes along Broadway at West 125th Street typically range from 1,186 to 1,530 vehicles per hour (vph).

Paralleling Broadway to the east is two-way **Amsterdam Avenue**. It typically operates with two travel lanes and curbside parking/loading in each direction and carries two-way peak hour volumes ranging from 1,086 to 1,428 vph. Within the study area it is a designated local truck route and is used by NYC Transit M11, M60, M100, M101 and M104 buses. Continuing east, the next north-south arterial is two-way **Morningside Avenue**. To the south of West 126th Street, Morningside Avenue typically operates with two travel lanes in each direction with parking/loading along each curb. North of West 126th Street, Morningside Avenue narrows to one travel lane in each direction plus curbside parking/loading. North of West 127th Street the roadway continues as Convent Avenue. NYC Transit M104 buses traverse Morningside Avenue in the southbound direction from West 129th Street to West 125th Street. Two-way peak hour volumes along Morningside Avenue at West 125th Street typically range from 430 to 470 vph.

St. Nicholas Avenue is a two-way roadway that approaches the study area from the southeast on a diagonal alignment until intersecting Manhattan Avenue at West 124th Street where it continues on an alignment generally parallel to the other north-south avenues in the study area. It typically operates with one travel lane and a bicycle lane in each direction plus parking/loading along both curbs. Two-way peak

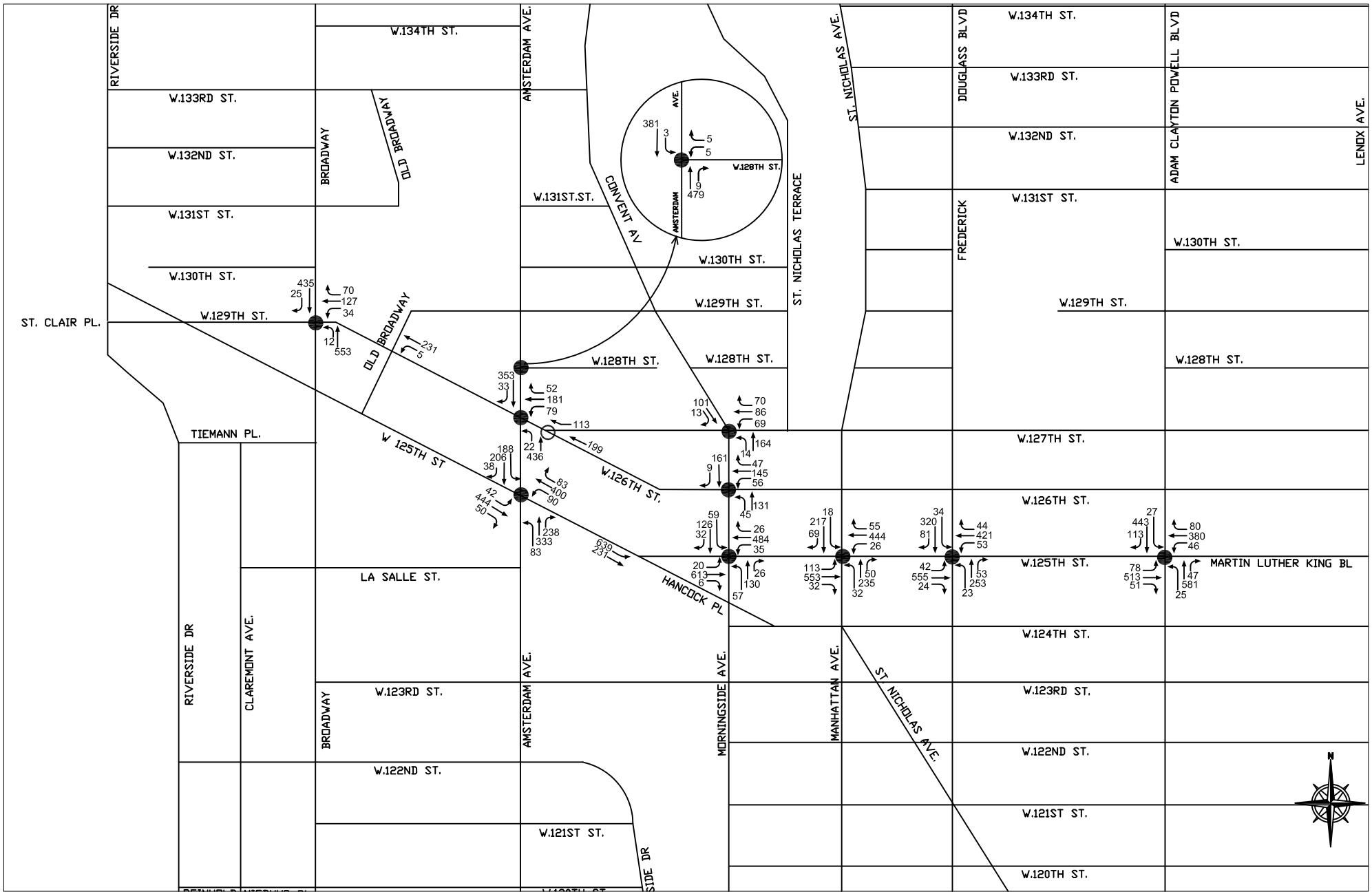
Figure 11-6
Existing Weekday AM Peak Hour Traffic Volumes



Legend:

- Analyzed Signalized Intersection
- Analyzed Unsignalized Intersection

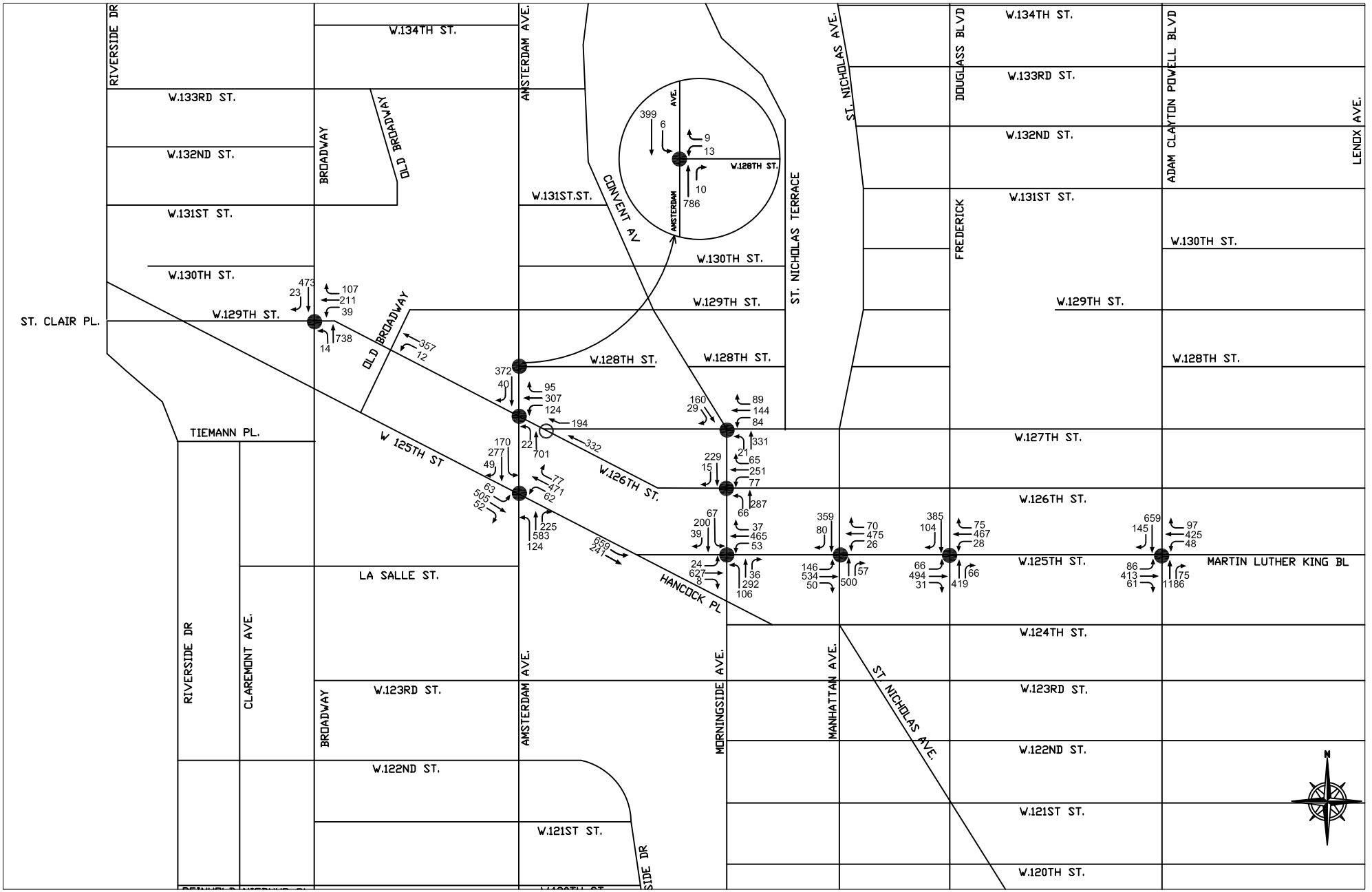
Figure 11-7
Existing Weekday Midday Peak Hour Traffic Volumes



Legend:

- Analyzed Signalized Intersection
- Analyzed Unsignalized Intersection

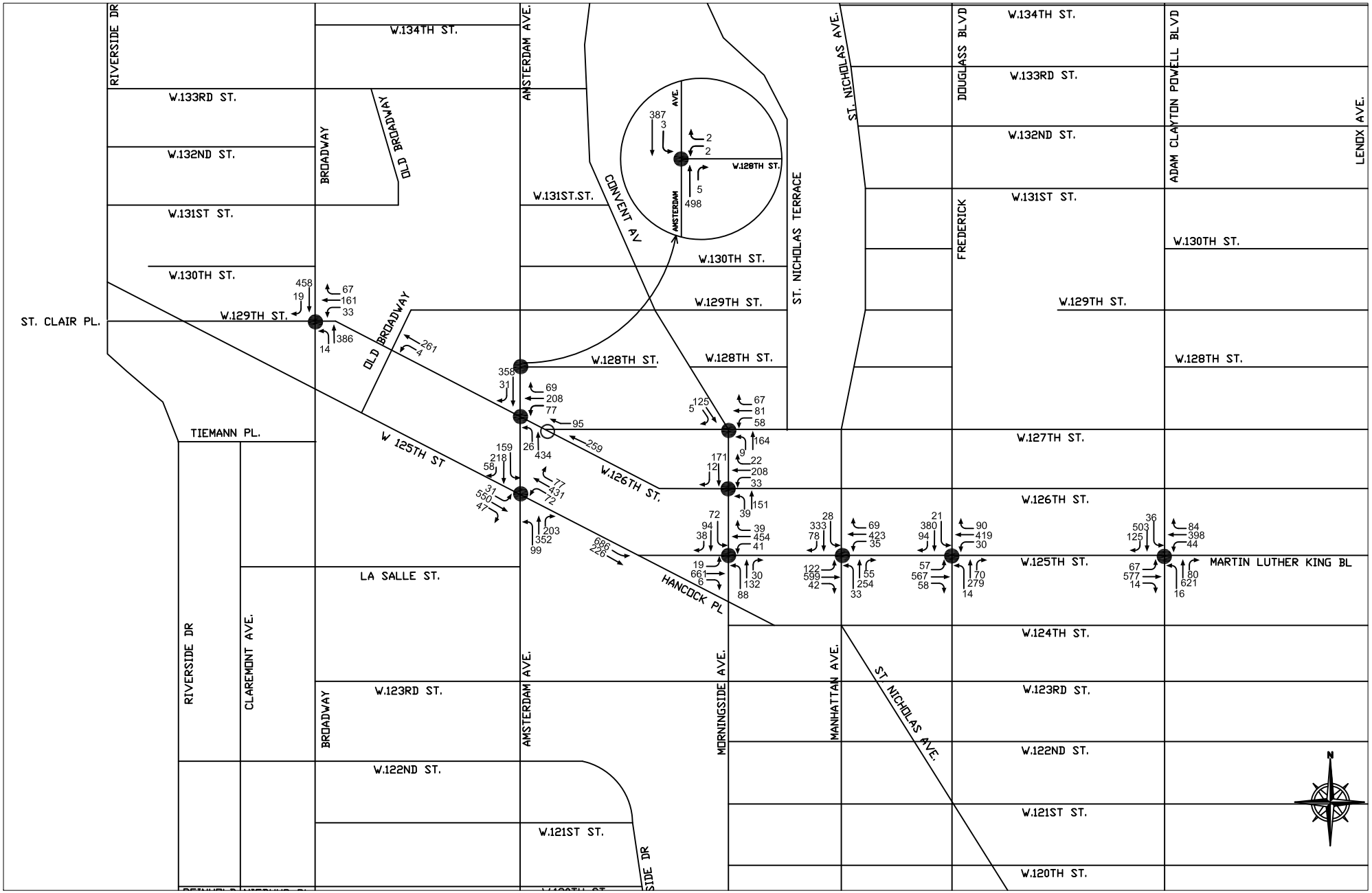
Figure 11-8
Existing Weekday PM Peak Hour Traffic Volumes



Legend:

- Analyzed Signalized Intersection
- Analyzed Unsignalized Intersection

Figure 11-9
Existing Saturday Midday Peak Hour Traffic Volumes



Legend:

- Analyzed Signalized Intersection
- Analyzed Unsignalized Intersection

hour traffic volumes on St. Nicholas Avenue typically range from 621 to 996 vph at West 125th Street, and NYC Transit M103 buses traverse street in both directions within the study area.

One of two key arterials along the eastern portion of the study area is **Frederick Douglas Boulevard (Eighth Avenue)**, which operates two-way with two travel lanes plus curbside parking/loading in each direction. Two-way peak hour traffic volumes on Frederick Douglass Boulevard typically range from 764 to 974 vph at West 125th Street, and NYC Transit M10 buses operate along the street in both directions. The second key north-south arterial in the eastern portion of the study area is **Adam Clayton Powell Jr. Boulevard (Seventh Avenue)** which operates two-way with three moving lanes plus curbside parking/loading in each direction and typically carries two-way volumes ranging from 1,236 to 2,065 vph at West 125th Street. The northbound and southbound lanes are separated by a planted median. The street is a designated local truck route and it is traversed by NYC Transit M2 buses in each direction.

East-West Cross Streets

The east-west street system in the study area is generally discontinuous with the exception of West 125th Street and West 126th Street. The major river to river east-west corridor is **West 125th Street (Dr. Martin Luther King Jr. Boulevard)**, which operates two-way, typically with two moving lanes plus curbside parking/loading in each direction. The street is a major retail corridor characterized by heavy pedestrian activity (especially east of Morningside Avenue), and a signalized midblock pedestrian crossing is provided between Frederick Douglass and Adam Clayton Powell Jr. boulevards. West 125th Street is a designated local truck route and within the study area it is traversed by NYC Transit Bx15, M60, M100, M101 and M104 buses. Two-way peak hour volumes at Amsterdam Avenue typically range from 1,109 to 1,230 vph.

One block north is **West 126th Street** which is one-way westbound. Although it operates as a local street, generally with one to two moving lanes plus curbside parking/loading, is also functions as a parallel diversion route to West 125th Street. Peak hour traffic volumes typically range from 248 to 393 vph approaching Morningside Avenue. Between Amsterdam Avenue and Broadway, there is perpendicular curbside parking of police vehicles due to the presence of the NYPD's 26th Precinct station house. West 126th Street ends at Broadway opposite West 129th Street. The next cross street to the north is **West 127th Street** which also operates one-way westbound, generally with one moving lane plus curbside parking/loading. Peak hour traffic volumes approaching Morningside Avenue typically range from 206 to 317 vph. Perpendicular curbside parking is present along the north curb between Adam Clayton Powell Jr. Boulevard and Frederick Douglas Boulevard adjacent to the St. Nicholas Houses public housing project. West 127th Street ends to the east of Amsterdam Avenue where it intersects West 126th Street.

Intersection Capacity Analysis

Table 11-17 provides an overview of the levels of service that characterize existing "overall" intersection conditions during the weekday AM, midday, PM and Saturday midday peak hours. The overall level of service of an intersection represents a weighted average of the individual traffic movements' levels of service. "Overall" LOS E or F indicates that serious congestion exists – either one specific traffic movement at the intersection has severe delays or two or more traffic movements at the intersection are at LOS E or F with substantial delays. As shown in Table 11-17, no analyzed intersections currently operate at LOS E or F in any peak hour. Two intersections operate at a marginally acceptable LOS D in the weekday AM peak hour, one each in the weekday and Saturday midday peak hours and four in the PM peak hour. Three individual traffic movements out of the approximately 48 such movements analyzed are at LOS E or F in the AM peak hour, none in the midday, six in the PM and one in the Saturday midday.

TABLE 11-17
Existing Intersection Level of Service Summary

	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Midday Peak Hour
Overall LOS A/B/C	9	10	7	10
Overall LOS D	2	1	4	1
Overall LOS E	0	0	0	0
Overall LOS F	0	0	0	0
No. of movements at LOS E or F of approximately 45 movements analyzed	3	0	6	1

Table 11-18 shows the volume-to-capacity ratios, delays and levels of service by movement at each analyzed intersection in each peak hour, and identifies those movements that are considered congested in one or more peak hours (i.e., movements operating at LOS E or F and/or with a high v/c ratio—0.90 and above). These congested locations are discussed in more detail below.

West 125th Street at Amsterdam Avenue

As shown in Table 11-18, the eastbound through-right movement on West 125th Street is operating at or near capacity in the weekday AM and PM and Saturday midday peak hours with v/c ratios of 0.92, 0.95 (LOS E) and 1.05 (LOS F) during these periods, respectively. The northbound through-right movement is also operating at capacity (LOS E and a v/c ratio of 1.05) in the PM peak hour, as is the southbound through-right movement in the AM peak hour (LOS F, 1.05 v/c ratio).

West 125th Street at St. Nicholas Avenue

Eastbound West 125th Street is congested in both the weekday PM and Saturday midday peak hours (v/c ratios of 0.97 and 0.93, respectively). The southbound through movement is operating at capacity in the weekday AM peak period (LOS F and a v/c ratio of 1.05), as is the northbound through movement in the PM peak hour (LOS E, 1.04 v/c ratio). It should be noted that both the northbound and southbound left-turn movements on St. Nicholas Avenue are prohibited at this intersection during the weekday AM and PM peak periods.

West 125th Street at Frederick Douglass Boulevard

The eastbound and westbound West 125th Street approaches to Frederick Douglass Boulevard are both congested in the AM peak hour (0.92 and 0.93 v/c ratios, respectively); the eastbound approach is also operating at capacity in the PM peak hour (LOS E, 1.01 v/c ratio).

West 125th Street at Adam Clayton Powell Jr. Boulevard

Eastbound West 125th Street is congested in the weekday midday peak hour approaching Adam Clayton Powell Jr. Boulevard (0.91 v/c ratio).

TABLE 11-18
Existing Conditions Level of Service Analysis

		AM Peak Hour				Midday Peak Hour				PM Peak Hour				Saturday Midday Peak hour			
Intersection	Lane Group	V/C Ratio	Delay (seconds)	LOS		V/C Ratio	Delay (seconds)	LOS		V/C Ratio	Delay (seconds)	LOS		V/C Ratio	Delay (seconds)	LOS	
West 125th Street (E-W) @	EB-L	0.21	22.9	C		0.15	21.1	C		0.23	24.6	C		0.12	21.4	C	
Amsterdam Ave (N-S)	EB-TR	0.92	53.8	D	*	0.85	45.3	D		0.95	58.3	E	*	1.05	82.9	F	*
	WB-L	0.61	39.4	D		0.39	29.1	C		0.27	27.2	C		0.33	30.8	C	
	WB-T	0.63	33.2	C		0.59	32.0	C		0.69	34.5	C		0.66	33.9	C	
	WB-R	0.44	34.1	C		0.43	33.5	C		0.40	32.6	C		0.42	33.2	C	
	NB-L	0.38	28.0	C		0.24	19.0	B		0.37	24.9	C		0.29	20.8	C	
	NB-TR	0.86	41.5	D		0.84	39.1	D		1.05	75.1	E	*	0.79	35.6	D	
	SB-L	0.73	41.7	D		0.64	35.6	D		0.63	41.0	D		0.49	28.8	C	
	SB-TR	1.05	89.8	F	*	0.69	36.6	D		0.87	50.6	D		0.74	38.9	D	
West 125th Street (E-W) @	EB-LTR	0.49	13.9	B		0.51	14.2	B		0.53	14.6	B		0.57	15.2	B	
Morningside/Convent Ave (N-S)	WB-LTR	0.60	16.3	B		0.50	14.2	B		0.54	15.1	B		0.53	14.9	B	
	NB-LTR	0.46	25.4	C		0.35	23.3	C		0.73	32.8	C		0.46	25.2	C	
	SB-LTR	0.52	26.2	C		0.39	23.9	C		0.53	26.6	C		0.39	24.1	C	
West 125th Street (E-W) @	EB-LTR	0.84	26.8	C		0.86	28.5	C		0.97	44.4	D	*	0.93	35.3	D	*
St. Nicholas Ave (N-S)	WB-LTR	0.59	16.0	B		0.55	15.4	B		0.60	16.2	B		0.56	15.5	B	
	NB-T	0.59	29.1	C	NB-LT	0.67	32.7	C	NB-T	1.04	78.8	E	*	NB-LT	0.78	40.2	D
	NB-R	0.11	20.9	C	NB-R	0.21	22.7	C	NB-R	0.23	23.0	C		NB-R	0.23	22.8	C
	SB-T	1.05	81.9	F	* SB-LT	0.54	28.1	C	SB-T	0.79	38.3	D		SB-LT	0.83	42.5	D
	SB-R	0.35	25.4	F	SB-R	0.27	23.5	C	SB-R	0.34	25.4	C		SB-R	0.30	24.1	C
West 125th Street (E-W) @	EB-LTR	0.92	46.8	D	*	0.75	25.4	C		1.01	66.9	E	*	0.80	27.5	C	
Federick Douglass Blvd (N-S)	WB-LTR	0.93	47.1	D	*	0.69	23.4	C		0.84	36.9	D		0.65	21.7	C	
	NB-TR	0.31	16.9	B						0.50	19.5	B					
	NB-LTR					0.52	26.1	C						0.54	26.5	C	
	SB-T	0.50	19.2	B						0.33	16.9	B					
	SB-LT					0.47	24.9	C						0.50	25.3	C	
	SB-R	0.21	16.3	B		0.32	24.5	C		0.28	17.7	B		0.36	25.5	C	
West 125th Street (E-W) @	EB-LTR	0.81	31.0	C		0.91	40.1	D	*	0.80	30.2	C		0.81	29.9	C	
Adam Clayton Powell Jr. Blvd (N-S)	WB-LTR	0.78	28.5	C		0.65	23.6	C		0.70	24.8	C		0.66	23.4	C	
	NB-TR	0.43	18.0	B													
	NB-LTR					0.49	18.9	B						0.47	18.6	B	
	NB-T									0.68	21.9	C					
	NB-R									0.17	15.8	B					
	SB-T	0.72	22.9	C		0.31	16.6	B		0.36	17.1	B		0.36	17.2	B	
	SB-R	0.29	17.6	B		0.28	17.4	B		0.32	18.0	B		0.30	17.6	B	
West 126th Street (W) @	WB-LT	0.44	20.3	C		0.32	18.2	B		0.45	20.3	C		0.36	18.8	B	
Broadway (N-S)	WB-R	0.21	16.8	B		0.14	16.0	B		0.20	16.6	B		0.13	15.8	B	
	NB-LT	0.34	16.9	B		0.34	17.0	B		0.50	19.0	B		0.27	16.2	B	
	SB-TR	0.62	21.5	C		0.42	18.0	B		0.42	18.1	B		0.41	17.9	B	
West 126th Street (W) @	WB-L	0.26	20.2	C		0.20	19.2	B		0.31	20.9	C		0.19	19.1	B	
Amsterdam Ave (N-S)	WB-TR	0.79	36.2	D		0.53	25.0	C		0.86	42.6	D		0.61	27.7	C	
	NB-LT	0.48	16.3	B		0.46	16.0	B		0.63	18.8	B		0.45	15.8	B	
	SB-TR	0.49	16.3	B		0.34	14.4	B		0.37	14.7	B		0.31	13.9	B	
West 126th Street (W) @	WB-LTR	0.85	49.1	D		0.64	35.1	D		1.03	82.4	F	*	0.66	35.7	D	
Morningside Ave (N-S)	NB-L	0.10	8.1	A		0.10	8.0	A		0.16	8.7	A		0.09	8.0	A	
	NB-T	0.23	9.0	A		0.19	8.6	A		0.40	11.0	B		0.23	9.0	A	
	SB-TR	0.41	11.1	B		0.28	9.5	A		0.36	10.5	B		0.30	9.7	A	
West 127th Street (W) @	WB-LTR	0.92	62.1	E	*	0.68	37.8	D		0.98	73.2	E	*	0.58	33.5	C	
Morningside/Convent Ave (N-S)	NB-LT	0.28	9.5	A		0.26	9.3	A		0.51	12.6	B		0.26	9.3	A	
	SB-TR	0.28	9.5	A		0.18	8.5	A		0.27	9.4	A		0.20	8.7	A	
West 128th Street (E-W) @	WB-LR	0.08	26.7	C		0.04	26.2	C		0.08	26.7	C		0.01	25.9	C	
Amsterdam Ave (N-S)	NB-TR	0.36	8.0	A		0.33	7.8	A		0.49	9.4	A		0.33	7.7	A	
	SB-LT	0.40	8.4	A		0.27	7.3	A		0.27	7.3	A		0.25	7.1	A	
West 127th Street (W) @ 126th Street (N) (Unsignalized Two-Way Stop)	SB-R	0.23	11.6	B		0.16	10.3	B		0.32	13.0	B		0.14	10.5	B	

Notes:
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, Dfl-Analysis considers a defacto left-turn lane on this approach
V/C ratio - volume to capacity ratio
LOS - level of service
* - Denotes a congested movement (LOS E or F, or V/C ratio greater than or equal to 0.9)

West 126th Street at Morningside Avenue

Westbound West 126th Street is operating at capacity (LOS F, 1.03 v/c ratio) in the weekday PM peak hour approaching Morningside Avenue.

West 127th Street at Morningside Avenue/Convent Avenue

Westbound West 127th Street is congested in the weekday AM peak hour approaching Morningside Avenue/Convent Avenue (LOS E, 0.92 v/c ratio) and operating close to capacity in the PM peak hour (LOS E, 0.98 v/c ratio).

The Future Without the Proposed Action (No-Action)

Between 2011 and 2021, it is expected that traffic and parking demands in the study area will increase due to long-term background growth as well as development that could occur pursuant to existing zoning. Development on projected development sites (all clusters) is expected to add a net total of approximately 314 dwelling units, 55,564 square feet of office space, and 15,938 square feet of local retail space. There would also be a net increase of 223,749 square feet of community facility space including office (12,270 square feet), recreation (26,660 square) and dormitory space (184,819 square feet). Approximately 35,600 square feet of existing destination retail space would be displaced by this new development.

In order to forecast the future condition without the Proposed Action (the No-Action condition), travel demand from development on projected development sites was included, along with demand from the principal development projects anticipated to occur by 2021 in the vicinity of the rezoning area. As shown in Table 11-19, these include Phase I of the Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development[1], the West 155th Street Rezoning, Community Academy of the Heights School, New Harlem Children's Zone Charter School and New Affordable Housing at St. Nicholas Houses, and the 125th Street Corridor Rezoning and Related Actions (Expanded Arts Bonus Alternative), all of which are located within ½-mile of the rezoning area.

The locations of the development projects considered for the transportation analyses are shown in Figure 2-7 in Chapter 2, "Land Use, Zoning and Public Policy." As shown in Table 11-19, the analysis of No-Action conditions incorporates the travel demand from a total of 3,007 dwelling units, 677,606 square feet of office/commercial space, 1,109,005 square feet of community facility space, 285,814 square feet of retail space, 94,221 square feet of arts/performance space and 17,457 square feet of hotel space associated with these discrete development projects. Lastly, annual background growth rates of 0.25 percent per year for years one through five and 0.125 percent per year for years five through ten were applied to existing travel demand for the 2011 to 2021 period. This background growth rate is applied to account for smaller projects and general increases in travel demand not attributable to specific development projects in proximity to the rezoning area.

[1] Current plans for the Manhattanville Phase I development differ from the Phase I program analyzed in the 2007 *Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development FEIS* as they include the replacement of Building Site 7 (containing academic space and university housing) with Building Site 6 (containing academic research space), increasing total Phase I development square footage by approximately 8.5 percent. The travel demand attributed to Manhattanville Phase I in the No-Action transportation analyses has therefore been increased by 8.5 percent compared to the Phase I forecast analyzed in the 2007 FEIS to account for this change in this No-Action project's development program.

TABLE 11-19
Discrete Developments Included in the No-Action Transportation Analyses

Name	Dwelling Units	Office/ Commercial (sf)	Community Facility (sf)	Retail (sf)	Arts/ Performance (sf)	Hotel
Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development[1]	99	---	1,042,990	---	---	---
West 155th Street Rezoning	472	---	---	54,069	---	---
Community Academy of the Heights School		---	77,000	---	---	---
New Harlem Children's Zone Charter School and New Affordable Housing at St. Nicholas Houses	200	---	100,000	---	---	---
125th Street Corridor Rezoning and Related Actions[2] (Expanded Arts Bonus Alternative)	2,236	677,606	(110,985)	231,745	94,221	17,457
Total Development	**3,007**	**677,606**	**1,109,005**	**285,814**	**94,221**	**17,457**

Notes:
[1]Based on current Phase I development program.
[2]Based on Expanded Arts Bonus Alternative.

Changes to the Study Area Street Network

In addition to anticipated increases in traffic demand, the analysis of future No-Action traffic conditions also reflects anticipated changes to the study area street system due to the implementation of mitigation measures associated with various No-Action development projects. These include changes to signal timings and curbside parking regulations associated with various projects. The analysis also reflects a prohibition on eastbound and westbound left-turn movements (with the exception of buses) at intersections along West 125th Street from 7 AM to 7 PM, Monday through Saturday as part of the traffic mitigation plan for the 125th Street Corridor Rezoning and Related Actions project.

It should be noted that the traffic signal plan at the intersection of West 125th Street and Amsterdam Avenue currently operates with four phases, including an eastbound/westbound exclusive left-turn phase. Although the planned left-turn prohibition along 125th Street would reduce the volume of vehicles making this movement to a relatively small number of buses (including approximately eight to ten eastbound M104 buses and eight westbound M60 buses in each analyzed peak hour), no commensurate change to the signal timing at this intersection was proposed in the *125th Street Corridor Rezoning and Related Actions FEIS.* For the purposes of the No-Action and With-Action traffic analyses, it is therefore assumed that the signal timing plan at the West 125th Street and Amsterdam Avenue intersection would be optimized in the analyzed peak periods through the elimination of the eastbound/westbound left-turn signal phase and the reallocation of green time (approximately 13 seconds) to the remaining three phases. This would be consistent with other intersections along the West 125th Street corridor where buses would

be allowed to make eastbound or westbound left-turns under a permitted phase under the mitigation plan for the 125th Street Corridor Rezoning and Related Actions project.

Intersection Capacity Analysis

Figures 11-10 through 11-13 show the expected No-Action weekday AM, midday, PM and Saturday midday peak hour traffic volumes at analyzed intersections within the study area, while Table 11-20 shows a summary comparison of intersection levels of service for existing and future No-Action conditions. As shown in Table 11-20, in the weekday AM peak hour, no analyzed intersections would operate at LOS E or LOS F and three will operate at a marginally acceptable LOS D in the No-Action condition. This compares to two intersections operating at LOS D and none at LOS E or LOS F under existing conditions. Four individual traffic movements out of the approximately 48 such movements analyzed would operate at LOS E or F in the AM peak hour in the No-Action compared to three under existing conditions.

In the weekday midday peak hour, no analyzed intersections would operate at LOS D, E or F in the No-Action condition compared to one intersection operating at LOS D under existing conditions. None of the approximately 48 individual traffic movements analyzed would operate at LOS E or F in the midday peak hour in the No-Action, unchanged from existing conditions.

TABLE 11-20
Intersection Level of Service Summary Comparison
Existing vs. No-Action Conditions

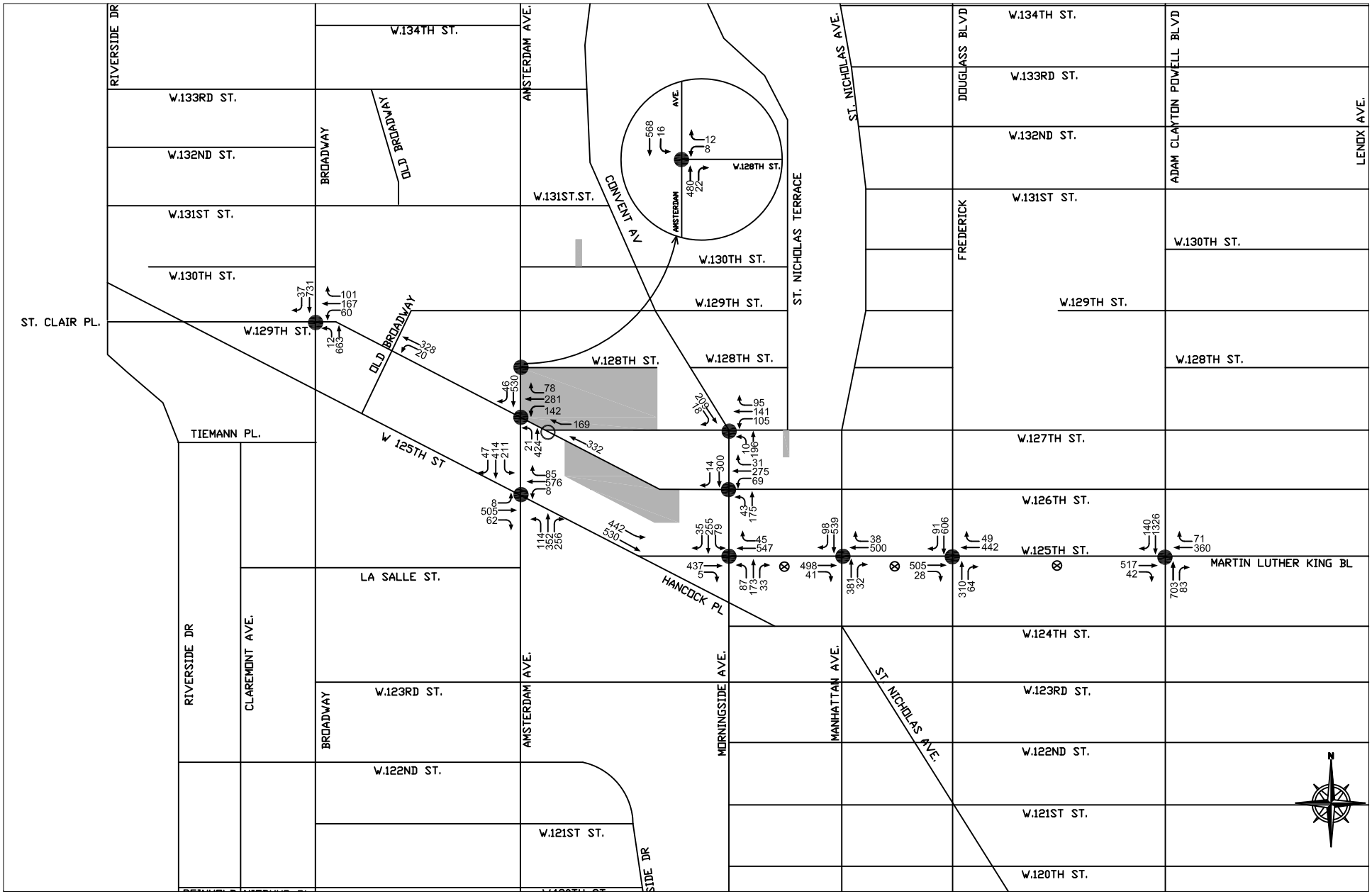
	Existing				No-Action			
	AM	**Midday**	**PM**	**Saturday Midday**	**AM**	**Midday**	**PM**	**Saturday Midday**
Overall LOS A/B/C	9	10	7	10	8	11	7	11
Overall LOS D	2	1	4	1	3	0	3	0
Overall LOS E	0	0	0	0	0	0	1	0
Overall LOS F	0	0	0	0	0	0	0	0
No. of movements at LOS E or F (of approx. 45 movements analyzed)	3	0	6	1	4	0	5	0

In the weekday PM peak hour, one analyzed intersection would operate at LOS E, none at LOS F and three at a marginally acceptable LOS D in the No-Action condition. This compares to no intersections operating at LOS E or F and four at LOS D in the PM under existing conditions. Five individual traffic movements out of the approximately 48 such movements analyzed would operate at LOS E or F in the PM peak hour in the No-Action compared to six under existing conditions. (The improvement in the number of movements operating at LOS E or F from the existing to the No-Action condition is attributed to the implementation of traffic mitigation measures associated with No-Action developments.)

Lastly, in the Saturday midday peak hour, no analyzed intersections would operate at LOS D, E or F in the No-Action condition, compared to one at LOS D under existing conditions. No individual traffic movements of the approximately 48 such movements analyzed would operate at LOS E or F in the Saturday midday peak hour in the No-Action compared to one under existing conditions.

Table 11-21 shows the volume-to-capacity ratios, delays and levels of service by movement at each analyzed intersection in each peak hour in the No-Action condition, and identifies those movements that are considered congested in one or more peak hours. As shown in Table 11-21, with continued growth in

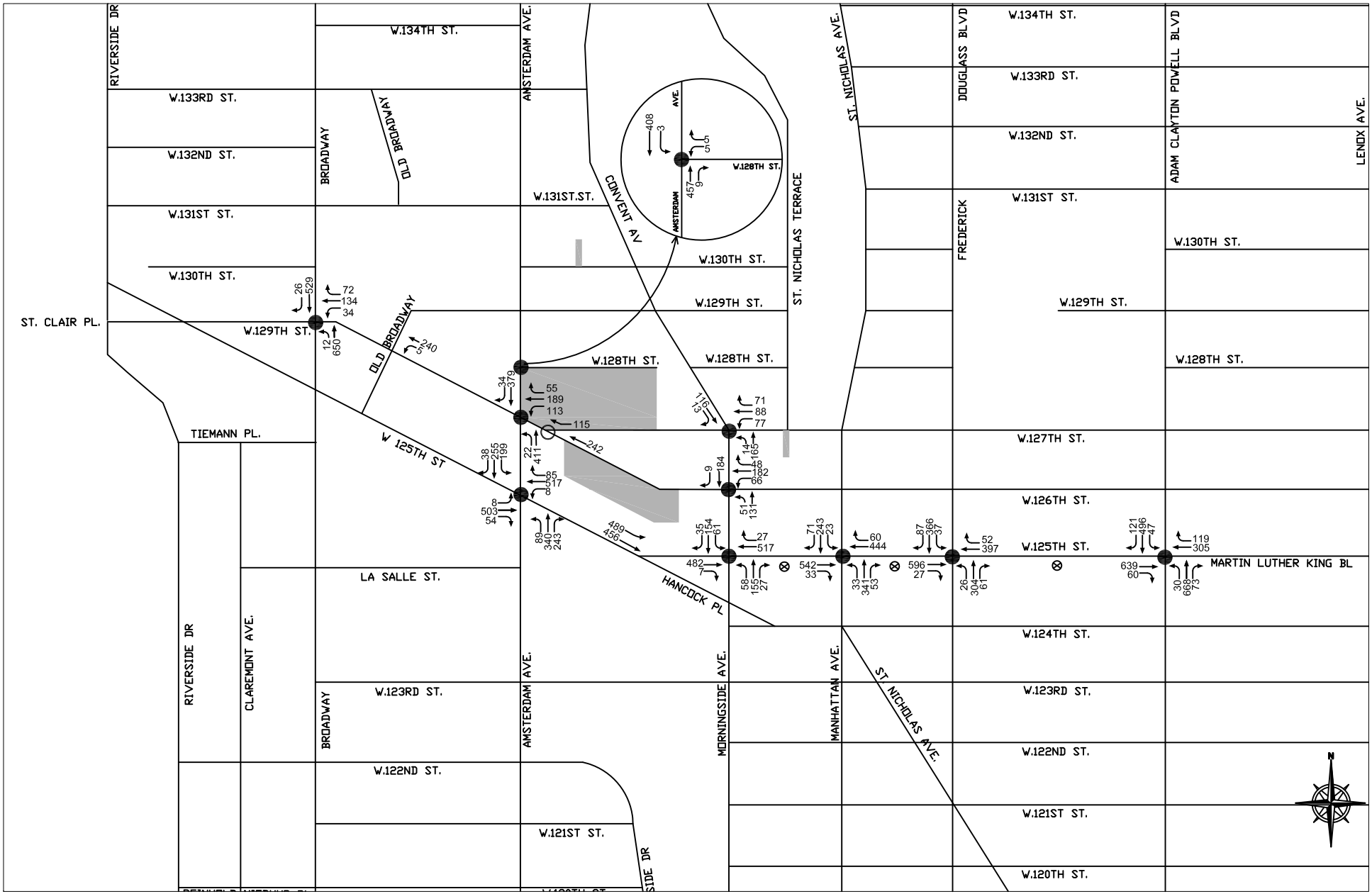
Figure 11-10
No-Action Weekday AM Peak Hour Traffic Volumes



Legend:

- Analyzed Signallzed Intersectlon
- Analyzed Unsignalized Intersection
- Projected Development Slte Cluster 1
- Origin/ Destination Node for 125th Street Corridor Rezoning Traffic Increment

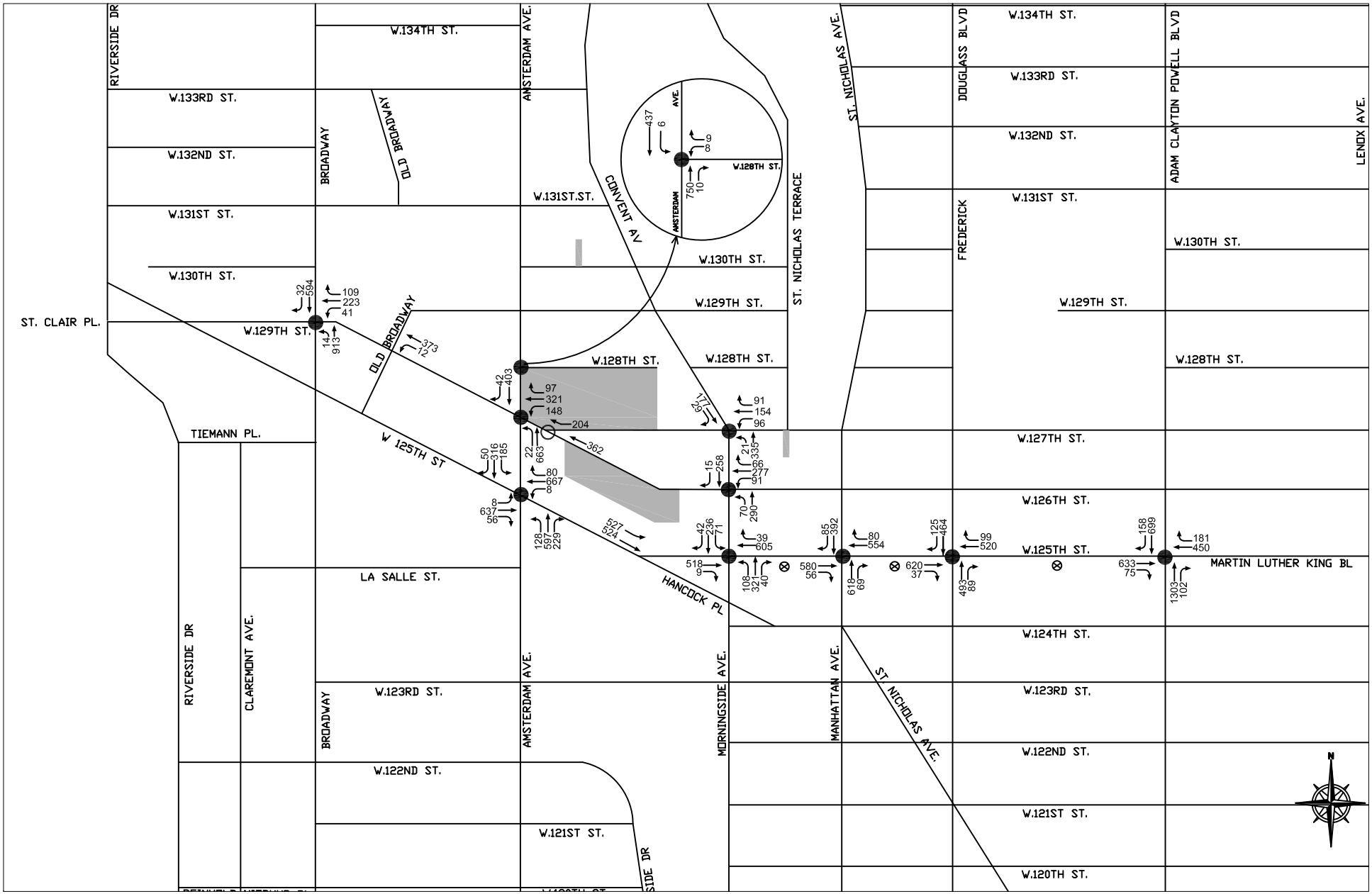
Figure 11-11
No-Action Weekday Midday Peak Hour Traffic Volumes



Legend:

- Analyzed Signallzed Intersectlon
- Analyzed Unsignalized Intersection
- Projected Development Slte Cluster 1
- Origin/ Destination Node for 125th Street Corridor Rezoning Traffic Increment

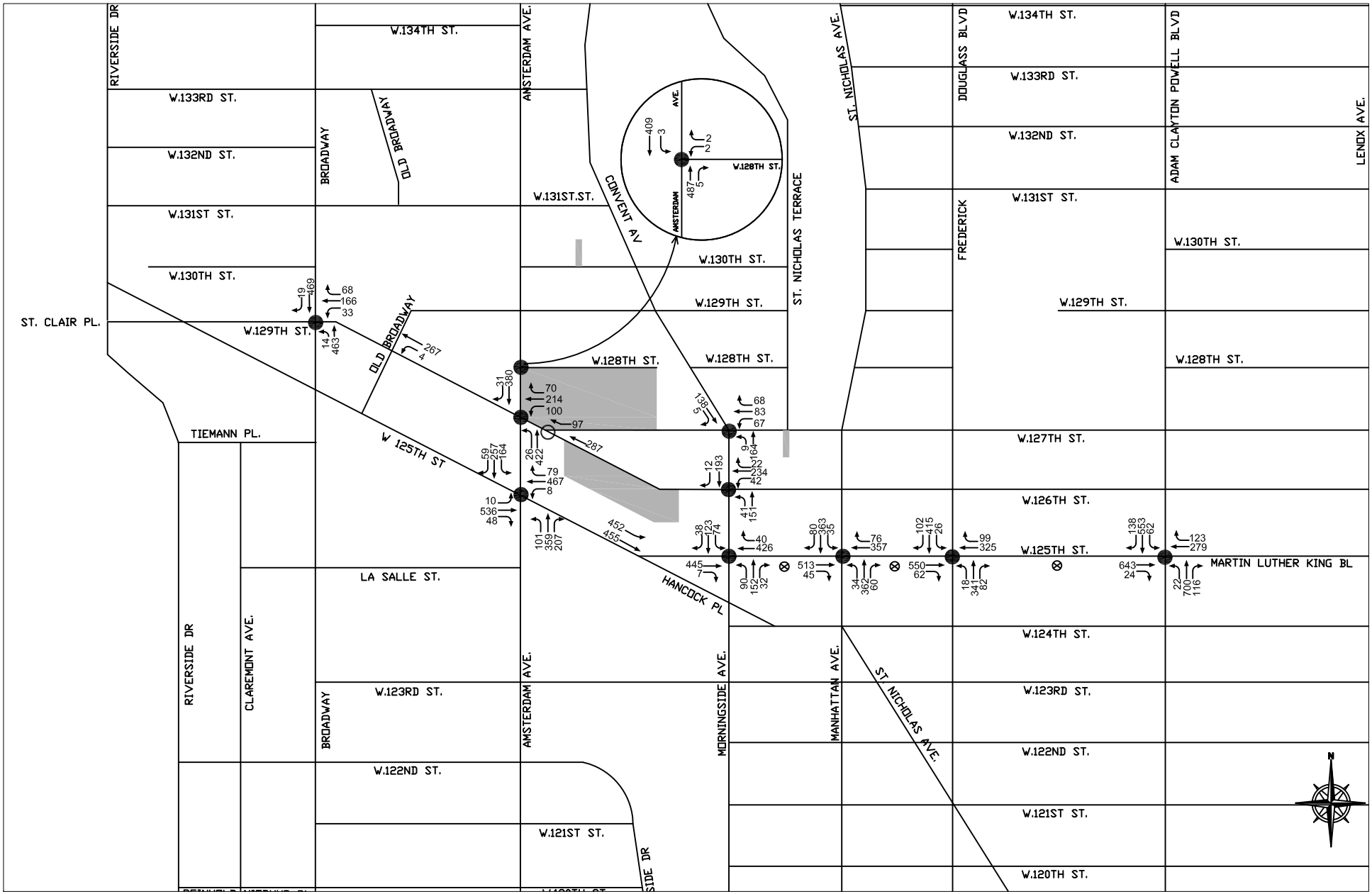
Figure 11-12
No-Action Weekday PM Peak Hour Traffic Volumes



Legend:

- Analyzed Signallzed Intersectlon
- Analyzed Unsignalized Intersection
- Projected Development Slte Cluster 1
- ⊗ Origin/ Destination Node for 125th Street Corridor Rezoning Traffic Increment

Figure 11-13
No-Action Saturday Midday Peak Hour Traffic Volumes



Legend:

- Analyzed Signallzed Intersectlon
- Analyzed Unsignalized Intersection
- Projected Development Slte Cluster 1
- Origin/ Destination Node for 125th Street Corridor Rezoning Traffic Increment

TABLE 11-21
No-Action Level of Service Analysis

		AM PEAK HOUR								MIDDAY PEAK HOUR							
		EXISTING				NO-ACTION				EXISTING				NO-ACTION			
Intersection	LANE GROUP	V/C Ratio	Delay (seconds)	LOS		V/C Ratio	Delay (seconds)	LOS		V/C Ratio	Delay (seconds)	LOS		V/C Ratio	Delay (seconds)	LOS	
West 125th Street (E-W) @	EB-L	0.21	22.9	C		0.11	25.0	C		0.15	21.1	C		0.11	25.0	C	
Amsterdam Ave (N-S)	EB-TR	0.92	53.8	D	*	0.88	43.9	D		0.85	45.3	D		0.82	38.7	D	
	WB-L	0.61	39.4	D		0.11	25.0	C		0.39	29.1	C		0.11	25.0	C	
	WB-T	0.63	33.2	C		0.72	32.7	C		0.59	32.0	C		0.65	30.5	C	
	WB-R	0.44	34.1	C		0.39	28.9	C		0.43	33.5	C		0.38	28.5	C	
	NB-L	0.38	28.0	C		0.35	23.7	C		0.24	19.0	B		0.24	14.4	B	
	NB-TR	0.86	41.5	D		0.75	29.4	C		0.84	39.1	D		0.75	29.6	C	
	SB-L	0.73	41.7	D		0.60	27.5	C		0.64	35.6	D		0.56	25.5	C	
	SB-TR	1.05	89.8	F	*	1.10	100.5	F	*	0.69	36.6	D		0.69	31.4	C	
West 125th Street (E-W) @	EB-LTR	0.49	13.9	B		EB-TR 0.36	13.9	B		0.51	14.2	B		EB-TR 0.36	12.3	B	
Morningside/Convent Ave (N-S)	WB-LTR	0.60	16.3	B		WB-TR 0.51	15.9	B		0.50	14.2	B		WB-TR 0.43	13.2	B	
	NB-LTR	0.46	25.4	C		0.48	23.6	C		0.35	23.3	C		0.39	23.9	C	
	SB-LTR	0.52	26.2	C		0.55	24.7	C		0.39	23.9	C		0.45	24.8	C	
West 125th Street (E-W) @	EB-LTR	0.84	26.8	C		EB-TR 0.49	15.7	B		0.86	28.5	C		EB-TR 0.55	17.5	B	
St. Nicholas Ave (N-S)	WB-LTR	0.59	16.0	B		WB-TR 0.49	15.8	B		0.55	15.4	B		WB-TR 0.52	17.1	B	
	NB-T	0.59	29.1	C		0.77	34.2	C	NB-LT	0.67	32.7	C		NB-LT 0.81	37.5	D	
	NB-R	0.11	20.9	C		0.11	18.8	B	NB-R	0.21	22.7	C		NB-R 0.21	19.9	B	
	SB-T	1.05	81.9	F	*	1.03	73.9	E	* SB-LT	0.54	28.1	C		SB-LT 0.56	25.6	C	
	SB-R	0.35	25.4	C		0.36	23.3	C	SB-R	0.27	23.5	C		SB-R 0.26	20.7	C	
West 125th Street (E-W) @	EB-LTR	0.92	46.8	D	*	EB-TR 0.67	26.7	C		0.75	25.4	C		EB-TR 0.66	21.7	C	
Federick Douglass Blvd (N-S)	WB-LTR	0.93	47.1	D	*	WB-TR 0.62	25.4	C		0.69	23.4	C		WB-TR 0.49	18.2	B	
	NB-TR	0.31	16.9	B		0.40	19.2	B									
	NB-LTR									0.52	26.1	C		0.61	28.4	C	
	SB-T	0.50	19.2	B		0.58	22.0	C									
	SB-LT									0.47	24.9	C		0.54	26.2	C	
	SB-R	0.21	16.3	B		0.23	17.7	B		0.32	24.5	C		0.34	24.9	C	
West 125th Street (E-W) @	EB-LTR	0.81	31.0	C		EB-TR 0.61	21.8	C		0.91	40.1	D	*	EB-TR 0.79	27.6	C	
Adam Clayton Powell Jr Blvd (N-S)	WB-LTR	0.78	28.5	C		WB-TR 0.48	19.3	B		0.65	23.6	C		WB-TR 0.51	19.9	B	
	NB-TR	0.43	18.0	B		0.54	19.5	B									
	NB-LTR									0.49	18.9	B		0.59	20.6	C	
	SB-T	0.72	22.9	C		0.75	23.8	C		0.31	16.6	B		0.39	17.6	B	
	SB-R	0.29	17.6	B		0.30	17.6	B		0.28	17.4	B		0.29	17.6	B	
West 126th Street (W) @	WB-LT	0.44	20.3	C		0.48	21.1	C		0.32	18.2	B		0.33	18.5	B	
Broadway (N-S)	WB-R	0.21	16.8	B		0.25	17.4	B		0.14	16.0	B		0.18	16.5	B	
	NB-LT	0.34	16.9	B		0.48	18.8	B		0.34	17.0	B		0.45	18.3	B	
	SB-TR	0.62	21.5	C		0.70	23.4	C		0.42	18.0	B		0.51	19.4	B	
West 126th Street (W) @	WB-L	0.26	20.2	C		0.47	25.2	C		0.20	19.2	B		0.39	23.3	C	
Amsterdam Ave (N-S)	WB-TR	0.79	36.2	D		0.87	44.7	D		0.53	25.0	C		0.59	26.9	C	
	NB-LT	0.48	16.3	B		0.45	15.9	B		0.46	16.0	B		0.43	15.6	B	
	SB-TR	0.49	16.3	B		0.53	17.0	B		0.34	14.4	B		0.37	14.6	B	
West 126th Street (W) @	WB-LTR	0.85	49.1	D		1.05	92.2	F	*	0.64	35.1	D		0.83	48.2	D	
Morningside Ave (N-S)	NB-L	0.10	8.1	A		0.12	8.3	A		0.10	8.0	A		0.12	8.3	A	
	NB-T	0.23	9.0	A		0.24	9.1	A		0.19	8.6	A		0.19	8.6	A	
	SB-TR	0.41	11.1	B		0.47	12.1	B		0.28	9.5	A		0.32	10.0	A	
West 127th Street (W) @	WB-LTR	0.92	62.1	E	*	1.09	105.0	F	*	0.68	37.8	D		0.80	47.7	D	
Morningside/Convent Ave (N-S)	NB-LT	0.28	9.5	A		0.29	9.6	A		0.26	9.3	A		0.26	9.4	A	
	SB-TR	0.28	9.5	A		0.32	9.9	A		0.18	8.5	A		0.20	8.7	A	
West 128th Street (E-W) @	WB-LR	0.08	26.7	C		0.08	26.8	C		0.04	26.2	C		0.04	26.2	C	
Amsterdam Ave (N-S)	NB-TR	0.36	8.0	A		0.34	7.9	A		0.33	7.8	A		0.31	7.6	A	
	SB-LT	0.40	8.4	A		0.44	8.8	A		0.27	7.3	A		0.29	7.5	A	
West 127th Street (W) @ 126th Street (N) (Unsignalized Two-Way Stop)	SB-R	0.23	11.6	B		0.28	12.5	B		0.16	10.3	B		0.17	10.8	B	

Notes:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, Dfl-Analysis considers a defacto left-turn lane on this approach

V/C ratio - volume to capacity ratio

LOS - level of service

* - Denotes a congested movement (LOS E or F, or V/C ratio greater than or equal to 0.9)

TABLE 11-21 (continued)
No-Action Level of Service Analysis

		PM PEAK HOUR								SATURDAY MIDDAY PEAK HOUR							
		EXISTING				NO-ACTION				EXISTING				NO-ACTION			
Intersection	LANE GROUP	V/C Ratio	Delay (seconds)	LOS		V/C Ratio	Delay (seconds)	LOS			V/C Ratio	Delay (seconds)	LOS		V/C Ratio	Delay (seconds)	LOS	
West 125th Street (E-W) @	EB-L	0.23	24.6	C		0.11	25.0	C			0.12	21.4	C		0.14	25.9	C	
Amsterdam Ave (N-S)	EB-TR	0.95	58.3	E	*	1.01	65.8	E	*		1.05	82.9	F	*	0.89	45.1	D	
	WB-L	0.27	27.2	C		0.11	25.0	C			0.33	30.8	C		0.11	25.0	C	
	WB-T	0.69	34.5	C		0.83	37.7	D			0.66	33.9	C		0.61	29.6	C	
	WB-R	0.40	32.6	C		0.37	28.4	C			0.42	33.2	C		0.36	28.0	C	
	NB-L	0.37	24.9	C		0.32	18.4	B			0.29	20.8	C		0.24	14.8	B	
	NB-TR	1.05	75.1	E	*	0.91	40.0	D	*		0.79	35.6	D		0.66	26.2	C	
	SB-L	0.63	41.0	D		0.56	30.9	C			0.49	28.8	C		0.40	19.0	B	
	SB-TR	0.87	50.6	D		0.81	38.4	D			0.74	38.9	D		0.69	30.9	C	
West 125th Street (E-W) @	EB-LTR	0.53	14.6	B		EB-TR 0.39	12.6	B			0.57	15.2	B		EB-TR 0.35	12.2	B	
Morningside/Convent Ave (N-S)	WB-LTR	0.54	15.1	B		WB-TR 0.51	14.3	B			0.53	14.9	B		WB-TR 0.39	12.7	B	
	NB-LTR	0.73	32.8	C		0.82	37.9	D			0.46	25.2	C		0.51	26.2	C	
	SB-LTR	0.53	26.6	C		0.62	29.0	C			0.39	24.1	C		0.44	25.0	C	
West 125th Street (E-W) @	EB-LTR	0.97	44.4	D	*	EB-TR 0.59	18.3	B			0.93	35.3	D	*	EB-TR 0.52	16.7	B	
St. Nicholas Ave (N-S)	WB-LTR	0.60	16.2	B		WB-TR 0.64	19.5	B			0.56	15.5	B		WB-TR 0.44	15.7	B	
	NB-T	1.04	78.8	E	*	1.13	107.7	F	*	NB-LT	0.78	40.2	D		NB-LT 0.91	49.8	D	*
	NB-R	0.23	23.0	C		0.25	20.6	C		NB-R	0.23	22.8	C		NB-R 0.22	20.0	B	
	SB-T	0.79	38.3	D		0.76	33.1	C		SB-LT	0.83	42.5	D		SB-LT 0.92	52.0	D	*
	SB-R	0.34	25.4	C		0.33	22.2	C		SB-R	0.30	24.1	C		SB-R 0.29	21.2	C	
West 125th Street (E-W) @	EB-LTR	1.01	66.9	E	*	EB-TR 0.75	27.9	C			0.80	27.5	C		EB-TR 0.60	20.3	C	
Federick Douglass Blvd (N-S)	WB-LTR	0.84	36.9	D		WB-TR 0.74	27.6	C			0.65	21.7	C		WB-TR 0.47	17.8	B	
	NB-TR	0.50	19.5	B		0.68	26.0	C										
	NB-LTR										0.54	26.5	C		0.66	29.6	C	
	SB-T	0.33	16.9	B		0.44	20.8	C										
	SB-LT										0.50	25.3	C		0.55	26.4	C	
	SB-R	0.28	17.7	B		0.39	22.4	C			0.36	25.5	C		0.38	26.0	C	
West 125th Street (E-W) @	EB-LTR	0.80	30.2	C		EB-TR 0.75	25.8	C			0.81	29.9	C		EB-TR 0.67	23.1	C	
Adam Clayton Powell Jr Blvd (N-S)	WB-LTR	0.70	24.8	C		WB-TR 0.73	25.6	C			0.66	23.4	C		WB-TR 0.48	19.3	B	
	NB-TR																	
	NB-LTR										0.47	18.6	B		0.57	20.1	C	
	NB-T	0.68	21.9	C		0.75	23.6	C										
	NB-R	0.17	15.8	B		0.27	17.4	B										
	SB-T	0.36	17.1	B		0.39	17.4	B			0.36	17.2	B		0.45	18.4	B	
	SB-R	0.32	18.0	B		0.35	18.5	B			0.30	17.6	B		0.32	18.0	B	
West 126th Street (W) @	WB-LT	0.45	20.3	C		0.48	20.9	C			0.36	18.8	B		0.37	19.0	B	
Broadway (N-S)	WB-R	0.20	16.6	B		0.23	17.0	B			0.13	15.8	B		0.13	15.8	B	
	NB-LT	0.50	19.0	B		0.62	20.9	C			0.27	16.2	B		0.32	16.7	B	
	SB-TR	0.42	18.1	B		0.54	20.0	B			0.41	17.9	B		0.42	18.0	B	
West 126th Street (W) @	WB-L	0.31	20.9	C		0.48	25.4	C			0.19	19.1	B		0.25	20.1	C	
Amsterdam Ave (N-S)	WB-TR	0.86	42.6	D		0.95	57.8	E	*		0.61	27.7	C		0.63	28.4	C	
	NB-LT	0.63	18.8	B		0.60	18.2	B			0.45	15.8	B		0.44	15.7	B	
	SB-TR	0.37	14.7	B		0.40	15.0	B			0.31	13.9	B		0.33	14.1	B	
West 126th Street (W) @	WB-LTR	1.03	82.4	F	*	1.24	158.5	F	*		0.66	35.7	D		0.75	40.7	D	
Morningside Ave (N-S)	NB-L	0.16	8.7	A		0.18	9.0	A			0.09	8.0	A		0.10	8.1	A	
	NB-T	0.40	11.0	B		0.41	11.0	B			0.23	9.0	A		0.23	9.0	A	
	SB-TR	0.36	10.5	B		0.40	11.0	B			0.30	9.7	A		0.33	10.1	B	
West 127th Street (W) @	WB-LTR	0.98	73.2	E	*	1.15	126.8	F	*		0.58	33.5	C		0.63	35.2	D	
Morningside/Convent Ave (N-S)	NB-LT	0.51	12.6	B		0.51	12.8	B			0.26	9.3	A		0.26	9.3	A	
	SB-TR	0.27	9.4	A		0.29	9.6	A			0.20	8.7	A		0.22	8.9	A	
West 128th Street (E-W) @	WB-LR	0.08	26.7	C		0.06	26.5	C			0.01	25.9	C		0.01	25.9	C	
Amsterdam Ave (N-S)	NB-TR	0.49	9.4	A		0.47	9.1	A			0.33	7.7	A		0.32	7.7	A	
	SB-LT	0.27	7.3	A		0.30	7.5	A			0.25	7.1	A		0.26	7.2	A	
West 127th St (W) @ 126th Street (N) (Unsignalized Two-Way Stop)	SB-R	0.32	13.0	B		0.36	13.8	B			0.14	10.5	B		0.15	10.8	B	

Notes:
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, Dfl-Analysis considers a defacto left-turn lane on this approach
V/C ratio - volume to capacity ratio
LOS - level of service
* - Denotes a congested movement (LOS E or F, or V/C ratio greater than or equal to 0.9)

travel demand, some intersections that were congested under existing conditions would worsen, and there would be additional locations that would become congested in one or more peak hours by 2021. In addition, conditions would improve at several intersections as a result of mitigation measures associated with new developments. Of the 11 intersections analyzed, four would have one or more congested movements in the weekday AM peak hour (unchanged from existing conditions), none in the midday (one under existing conditions), five in the PM peak hour (unchanged from existing conditions) and one in the Saturday midday peak hour (two under existing conditions). Newly congested movements are discussed below.

West 125th Street at Amsterdam Avenue

As shown in Table 11-21, under the No-Action condition there would be no newly congested movements compared to existing conditions at the intersection of West 125th Street and Amsterdam Avenue. However, with the elimination of the eastbound/westbound left-turn signal phase in conjunction with the 125th Street Rezoning and Related Actions mitigation plan, and the optimization of the signal timing plan that this measure would allow, the eastbound through-right movement would no longer be congested in the weekday AM and Saturday midday peak hours.

West 125th Street at St. Nicholas Avenue

The northbound and southbound St. Nicholas Avenue approaches to West 125th Street would become newly congested in the Saturday midday peak hour. By contrast, mitigation associated with No-Action developments would eliminate the existing congestion on the eastbound approach in the PM and Saturday midday peak hours.

West 125th Street at Frederick Douglass Boulevard

Mitigation associated with No-Action developments would eliminate existing congestion on the westbound West 125th Street approach in the AM peak hour, and on the eastbound approach in both the AM and PM peak hours.

West 125th Street at Adam Clayton Powell Jr. Boulevard

Mitigation associated with No-Action developments would eliminate existing congestion on the eastbound West 125th Street approach in the weekday midday peak hour.

West 126th Street at Amsterdam Avenue

The westbound West 126th Street approach at Amsterdam Avenue would become newly congested in the weekday PM peak hour.

West 126th Street at Morningside Avenue

The westbound West 126th Street approach at Morningside Avenue would become newly congested in the weekday AM peak hour.

The Future With the Proposed Action (With-Action)

As discussed previously, Scenario 3, the RWCDS selected for analysis of potential significant adverse transportation impacts, would result in an estimated net increase of 499 dwelling units, 124,352 square

feet (sf) retail space (41,596 square feet of local retail space and 82,756 sf of destination retail space), 80,854 sf of office and other commercial space, and 157,383 sf of community facility space within the rezoning area. As discussed above in Section E, "Level 2 Screening Assessment," auto and taxi trips generated by this projected development were assigned to the study area street network based on the locations of individual projected development sites (or groups of development sites) within each cluster, the locations of off-street public parking garages that would likely be used by project-generated auto trips, and the anticipated origins and destinations of vehicle trips associated with the different uses projected for each site (e.g., commercial, residential, etc.). Truck trips were assigned based on the most direct paths to and from designated local and through truck routes. The assignment of project increment vehicle trips (including auto, taxi and truck trips) generated by all projected development sites under RWCDS 3 during the weekday AM, midday and PM and Saturday midday peak hours is shown in Figure 11-2.

Figures 11-14 through 11-17 show the weekday AM, midday, PM and Saturday midday peak hour traffic networks in the 2021 future with the Proposed Action. The volumes shown are the combination of the net incremental traffic generated by RWCDS 3 and the No-Action traffic network. No physical or operational changes to the study area street network are planned as part of the Proposed Action.

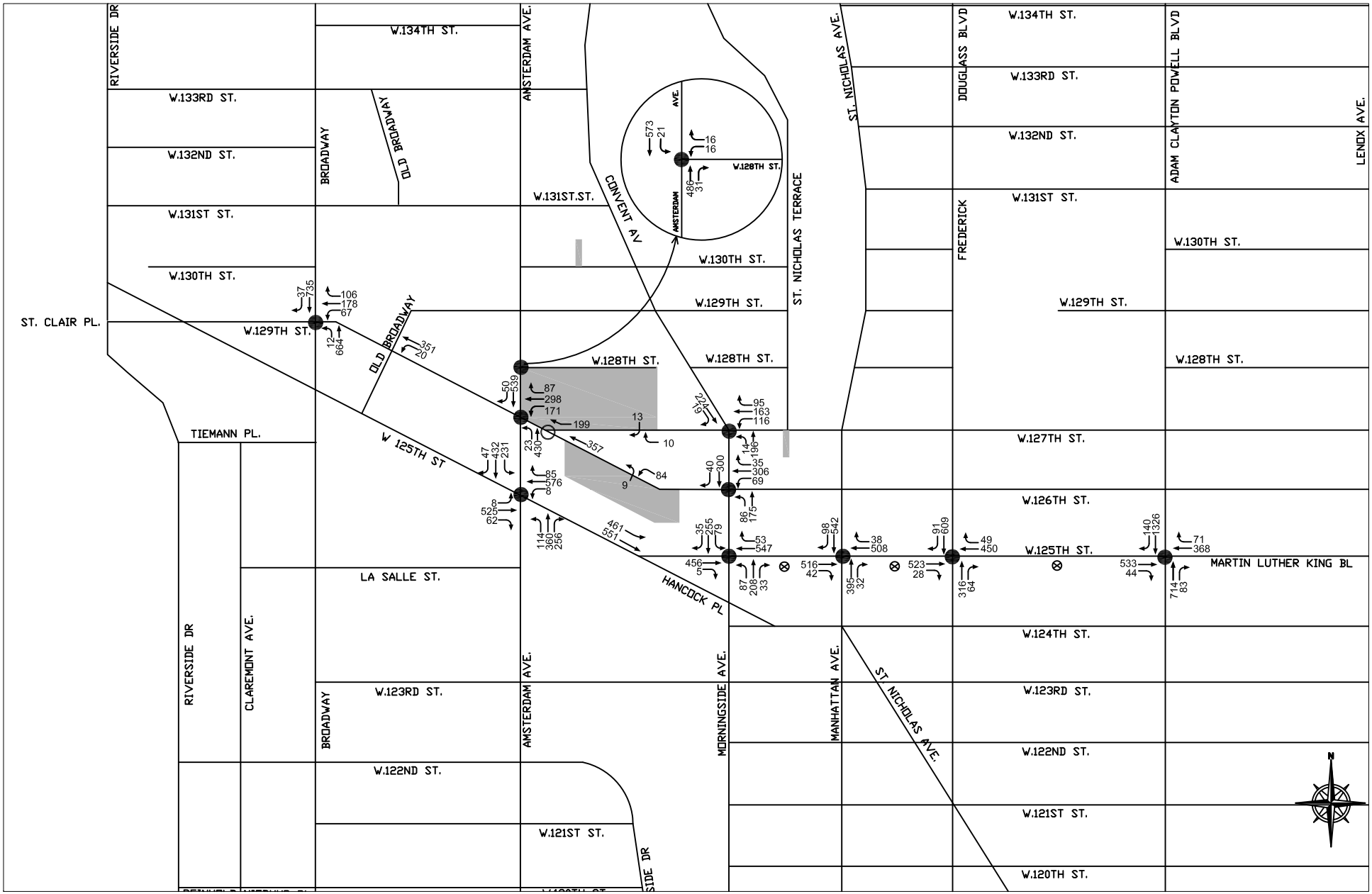
Table 11-22 shows a summary comparison of intersection levels of service for future No-Action and With-Action conditions, and an overview of the number of significant adverse traffic impacts that would be generated in the future with the Proposed Action based on the *CEQR Technical Manual* criteria discussed previously in Section F, "Transportation Analyses Methodologies." As shown in Table 11-22, in the weekday AM peak hour, the number of intersections that are projected to operate at overall LOS E or F would total two, versus none under the No-Action condition. Overall, four of the 11 analyzed intersections would have significant adverse impacts in the AM peak hour. The number of traffic movements projected to operate at LOS E or F in the AM would total five versus four in the No-Action.

TABLE 11-22
Intersection Level of Service Summary Comparison
No-Action vs. With-Action Conditions

	No-Action				With-Action			
	AM	Midday	PM	Saturday Midday	AM	Midday	PM	Saturday Midday
Overall LOS A/B/C	8	11	7	11	7	9	6	11
Overall LOS D	3	0	3	0	2	2	3	0
Overall LOS E	0	0	1	0	1	0	1	0
Overall LOS F	0	0	0	0	1	0	1	0
Number of intersections with significant impacts	---	---	---	---	4	4	4	3
Number of movements at LOS E or F (of approximately 45 movements analyzed)	4	0	5	0	5	2	5	2

In the weekday midday peak hour, no intersections are projected to operate at overall LOS E or F in the With-Action condition, unchanged from the No-Action condition. Overall, four of the 11 analyzed intersections would have significant adverse impacts in the weekday midday. The number of traffic movements projected to operate at LOS E or F in the midday would total two in the With-Action condition compared to none in the No-Action condition.

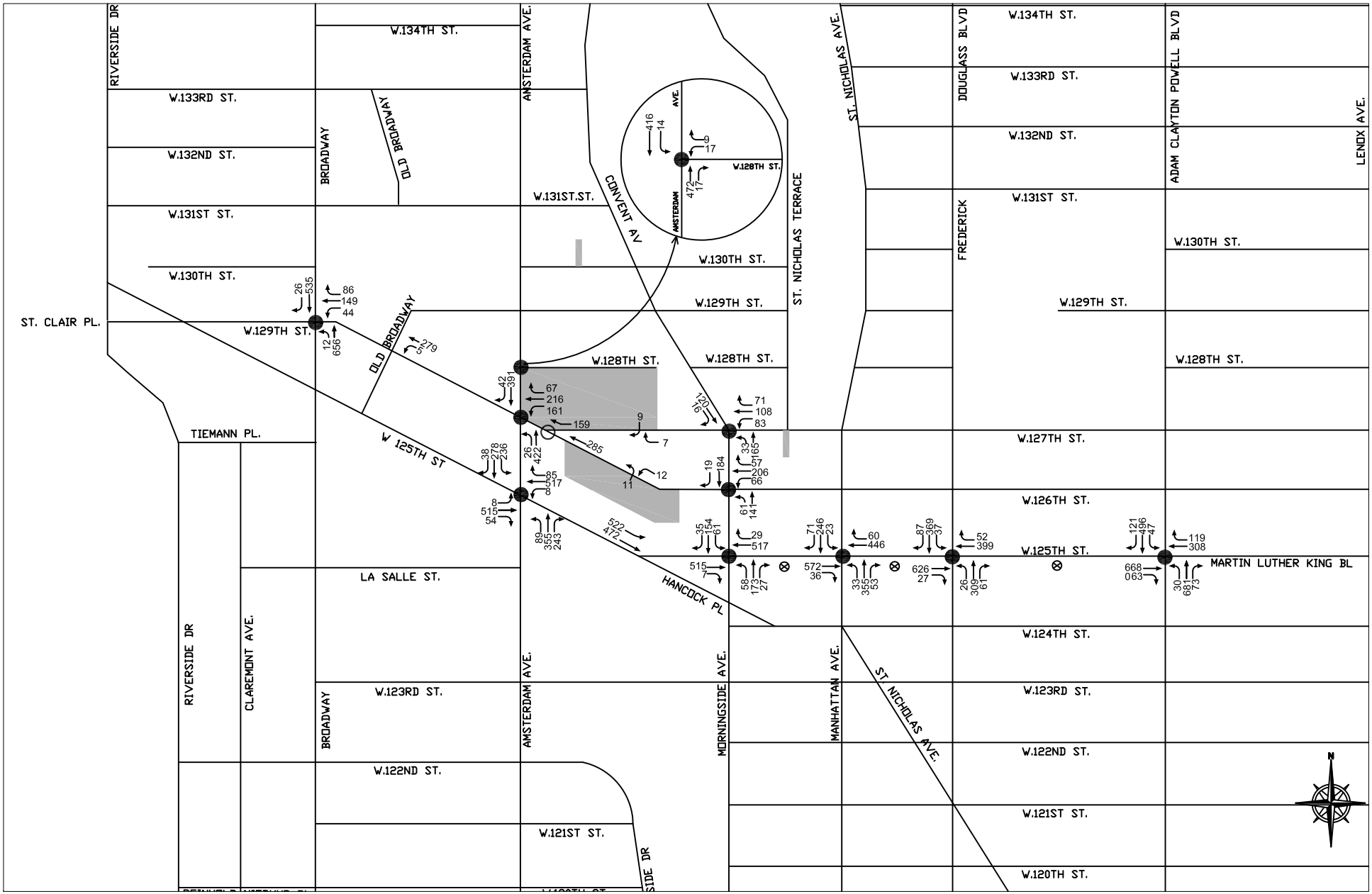
Figure 11-14
With-Action Weekday AM Peak Hour Traffic Volumes



Legend:

- Analyzed Signallzed Intersectlon
- Analyzed Unsignalized Intersection
- Projected Development Slte Cluster 1
- Origin/ Destination Node for 125th Street Corridor Rezoning Traffic Increment

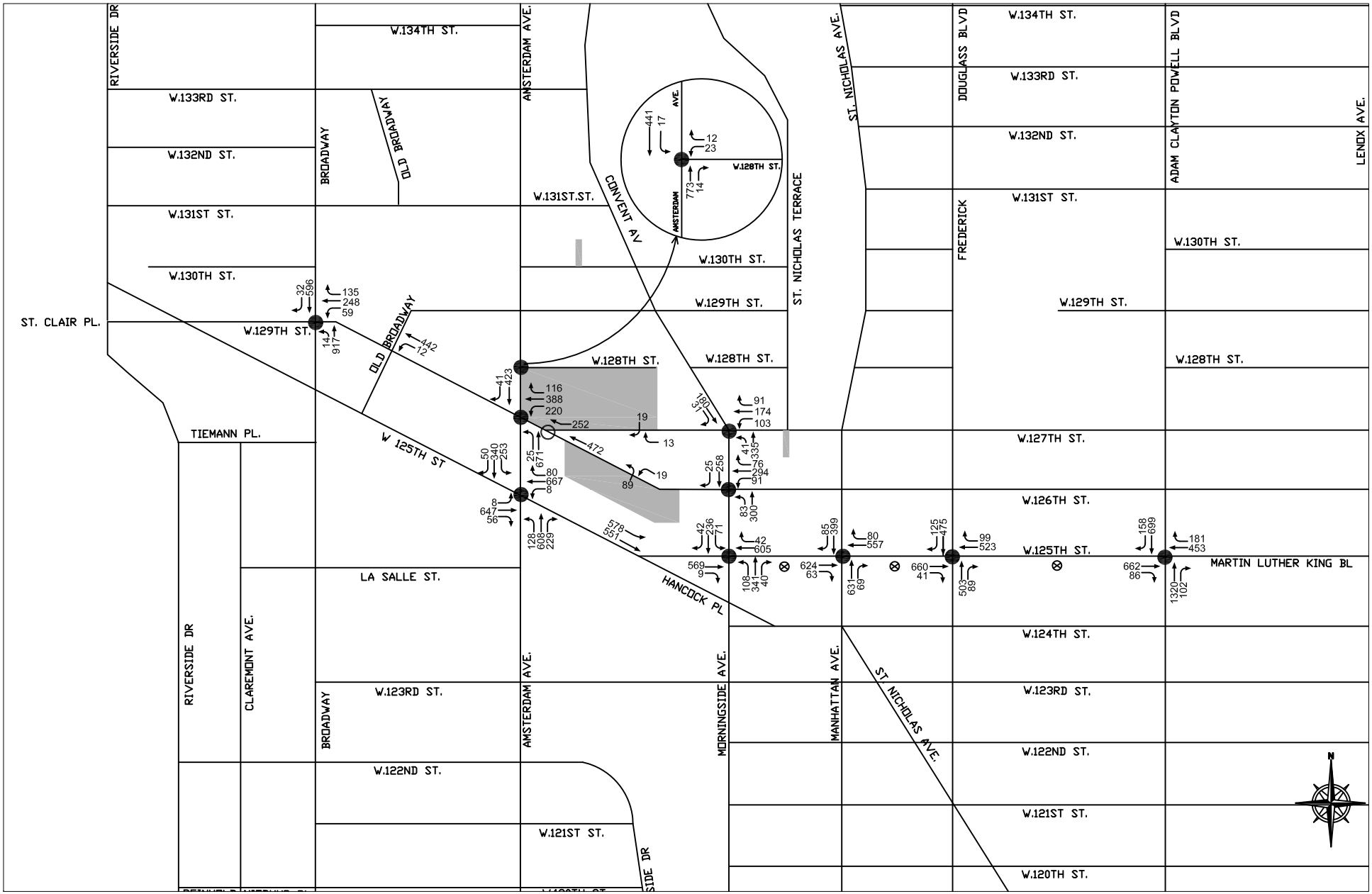
Figure 11-15
With-Action Weekday Midday Peak Hour Traffic Volumes



Legend:

- Analyzed Signallzed Intersectlon
- Analyzed Unsignalized Intersection
- Projected Development Slte Cluster 1
- Origin/ Destination Node for 125th Street Corridor Rezoning Traffic Increment

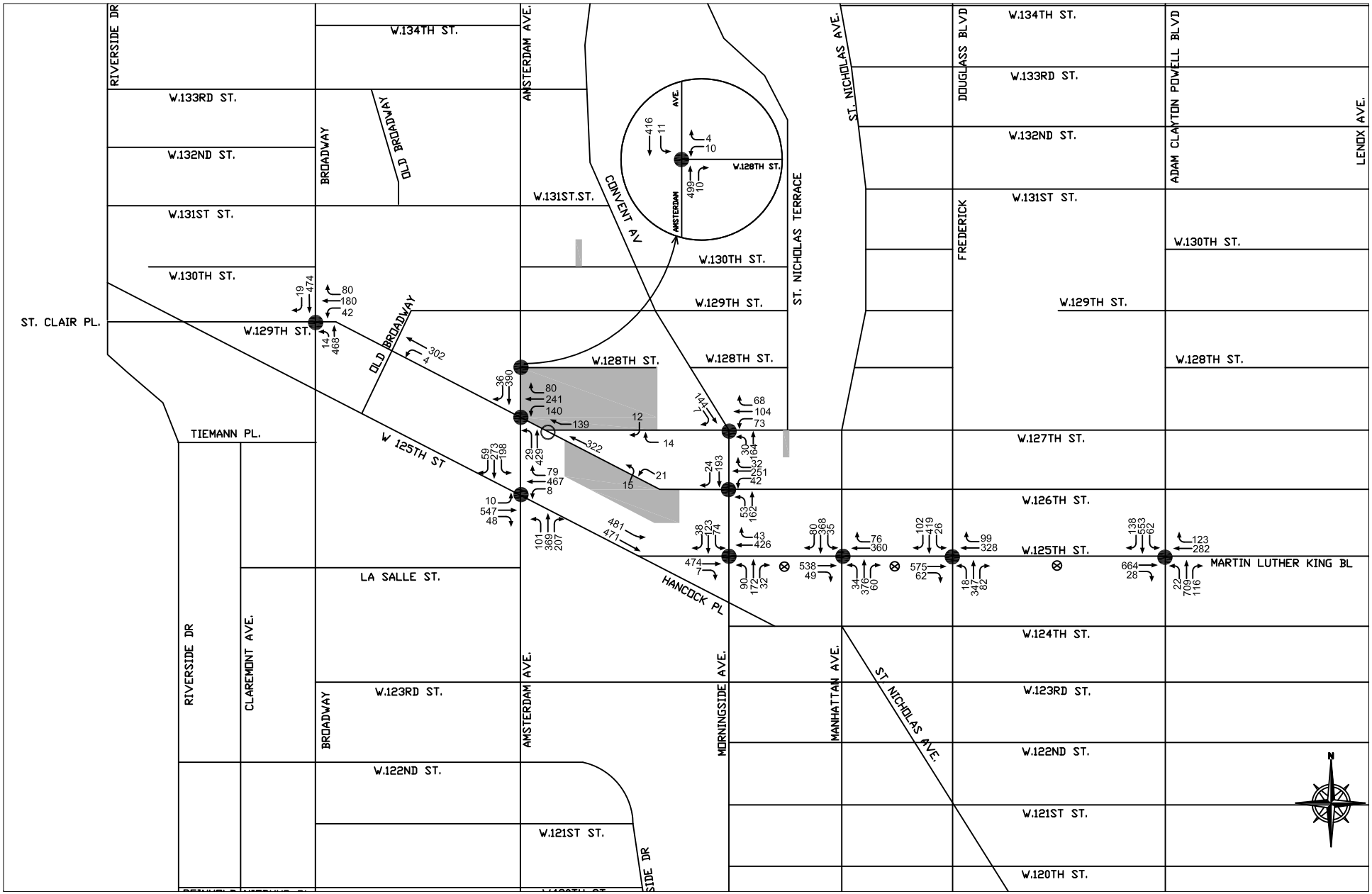
Figure 11-16
With-Action Weekday PM Peak Hour Traffic Volumes



Legend:

- Analyzed Signalized Intersection
- Analyzed Unsignalized Intersection
- Projected Development Site Cluster 1
- ⊗ Origin/ Destination Node for 125th Street Corridor Rezoning Traffic Increment

Figure 11-17
With-Action Saturday Midday Peak Hour Traffic Volumes



Legend:

- Analyzed Signalized Intersection
- Analyzed Unsignalized Intersection
- Projected Development Site Cluster 1
- ⊗ Origin/ Destination Node for 125th Street Corridor Rezoning Traffic Increment

In the weekday PM peak hour, the number of intersections that are projected to operate at overall LOS E or F would total two compared to one in the No-Action condition. Overall, four of the 11 analyzed intersections would have significant adverse impacts in the weekday PM. The number of traffic movements projected to operate at LOS E or F would remain at five.

Lastly, in the Saturday midday peak hour, no intersections are projected to operate at overall LOS E or F, the same as for the No-Action condition. Overall, three of the 11 analyzed intersections would have significant adverse impacts in the Saturday midday. The number of traffic movements projected to operate at LOS E or F would total two, compared to none in the No-Action condition.

As show in Table 11-23 and discussed below, one or more approaches or lane groups at a total of five analyzed intersections would be significantly adversely impacted in one or more peak hours with the Proposed Action. Potential measures to mitigate these significant adverse traffic impacts are discussed in Chapter 18, "Mitigation."

West 125th Street at Amsterdam Avenue

As shown in Table 11-23, the southbound through-right movement on Amsterdam Avenue would be significantly adversely impacted in the weekday AM peak hour. In the With-Action condition, this movement would operate at LOS F in the weekday AM with 117 seconds of delay, an increase of 16.5 seconds compared to the No-Action condition.

As noted previously, in the No-Action condition, eastbound and westbound left-turns at this intersection would be eliminated (with the exception of buses) as traffic mitigation for the 125th Street Corridor and Related Actions project. It was therefore assumed that in the No-Action condition the signal timing plan at the West 125th Street and Amsterdam Avenue intersection would be optimized through the elimination of the eastbound/westbound left-turn signal phase and the reallocation of green time to the remaining three phases. This would be consistent with other intersections along the West 125th Street corridor where buses would be allowed to make eastbound or westbound left-turns under a permitted phase under the mitigation plan for the 125th Street Corridor Rezoning and Related Actions project.

As discussed in Chapter 18, "Mitigation," the signficant adverse AM peak hour impact to the West 125th Street/Amsterdam Avenue intersection would be fully mitigated with a relatively minor change in signal timing. However, if the signal timing plan were not optimized in the No-Action condition as discussed previously, there would potentially be additional significant adverse impacts at this intersection that could not be as readily mitigated.

West 125th Street at St. Nicholas Avenue

The northbound approach on St. Nicholas Avenue would be significantly adversely impacted in the weekday PM and Saturday midday peak hours. In the With-Action condition, the through movement on this approach would operate at LOS F in the PM while the left-through movement would operate at LOS E in the Saturday midday, with116.2 and 57.2 seconds of delay during these periods, respectively. Increases in delay compared to the No-Action condition would total 8.5 seconds in the weekday PM and 7.4 seconds in the Saturday midday. In addition, the southbound left-through movement on St. Nicholas Avenue would also be impacted in the Saturday midday, operating at LOS E with 60.4 seconds of delay, an increase of 8.4 seconds compared to the No-Action condition.

TABLE 11-23
With-Action Level of Service Analysis

		AM PEAK HOUR							MIDDAY PEAK HOUR						
		NO-ACTION			WITH-ACTION				NO-ACTION			WITH-ACTION			
INTERSECTION	LANE GROUP	V/C Ratio	Delay (seconds)	LOS	V/C Ratio	Delay (seconds)	LOS		V/C Ratio	Delay (seconds)	LOS	V/C Ratio	Delay (seconds)	LOS	
West 125th Street (E-W) @	EB-L	0.11	25.0	C	0.11	25.0	C		0.11	25.0	C	0.11	25.0	C	
Amsterdam Ave (N-S)	EB-TR	0.88	43.9	D	0.91	47.5	D		0.82	38.7	D	0.84	40.0	D	
	WB-L	0.11	25.0	C	0.11	25.0	C		0.11	25.0	C	0.11	25.0	C	
	WB-T	0.72	32.7	C	0.72	32.7	C		0.65	30.5	C	0.65	30.5	C	
	WB-R	0.39	28.9	C	0.39	28.9	C		0.38	28.5	C	0.38	28.6	C	
	NB-L	0.35	23.7	C	0.36	25.0	C		0.24	14.4	B	0.24	15.3	B	
	NB-TR	0.75	29.4	C	0.76	30.3	C		0.75	29.6	C	0.77	30.5	C	
	SB-L	0.60	27.5	C	0.68	31.4	C		0.56	25.5	C	0.68	31.6	C	
	SB-TR	1.10	100.5	F	1.15	117.0	F	+	0.69	31.4	C	0.75	34.3	C	
West 125th Street (E-W) @	EB-TR	0.36	13.9	B	0.38	14.1	B		0.36	12.3	B	0.38	12.6	B	
Morningside/ Convent Ave (N-S)	WB-TR	0.51	15.9	B	0.52	16.1	B		0.43	13.2	B	0.44	13.2	B	
	NB-LTR	0.48	23.6	C	0.53	24.6	C		0.39	23.9	C	0.43	24.5	C	
	SB-LTR	0.55	24.7	C	0.56	25.1	C		0.45	24.8	C	0.46	25.2	C	
West 125th Street (E-W) @	EB-TR	0.49	15.7	B	0.50	16.0	B		0.55	17.5	B	0.59	18.2	B	
St. Nicholas Ave (N-S)	WB-TR	0.49	15.8	B	0.50	15.9	B		0.52	17.1	B	0.53	17.1	B	
	NB-T	0.77	34.2	C	0.80	36.1	D	NB-LT	0.81	37.5	D	NB-LT 0.84	40.3	D	
	NB-R	0.11	18.8	B	0.11	18.8	B	NB-R	0.21	19.9	B	NB-R 0.22	20.1	C	
	SB-T	1.03	73.9	E	1.04	75.4	E	SB-LT	0.56	25.6	C	SB-LT 0.56	25.8	C	
	SB-R	0.36	23.3	C	0.36	23.5	C	SB-R	0.26	20.7	C	SB-R 0.27	21.0	C	
West 125th Street (E-W) @	EB-TR	0.67	26.7	C	0.69	27.4	C		0.66	21.7	C	0.69	22.5	C	
Federick Douglass Blvd (N-S)	WB-TR	0.62	25.4	C	0.63	25.7	C		0.49	18.2	B	0.49	18.3	B	
	NB-TR	0.40	19.2	B	0.40	19.3	B								
	NB-LTR								0.61	28.4	C	0.62	28.6	C	
	SB-T	0.58	22.0	C	0.58	22.0	C								
	SB-LT								0.54	26.2	C	0.54	26.3	C	
	SB-R	0.23	17.7	B	0.23	17.7	B		0.34	24.9	C	0.34	24.9	C	
West 125th Street (E-W) @	EB-TR	0.61	21.8	C	0.63	22.3	C		0.79	27.6	C	0.82	29.7	C	
Adam Clayton Powell Jr Blvd (N-S)	WB-TR	0.48	19.3	B	0.49	19.4	B		0.51	19.9	B	0.51	20.0	B	
	NB-TR	0.54	19.5	B	0.54	19.6	B								
	NB-LTR								0.59	20.6	C	0.59	20.6	C	
	SB-T	0.75	23.8	C	0.75	23.8	C		0.39	17.6	B	0.39	17.6	B	
	SB-R	0.30	17.6	B	0.30	17.6	B		0.29	17.6	B	0.35	19.0	B	
West 126th Street (W) @	WB-LT	0.48	21.1	C	0.52	22.0	C		0.33	18.5	B	0.39	19.3	B	
Broadway (N-S)	WB-R	0.25	17.4	B	0.26	17.6	B		0.18	16.5	B	0.22	17.2	B	
	NB-LT	0.48	18.8	B	0.49	18.8	B		0.45	18.3	B	0.45	18.3	B	
	SB-TR	0.70	23.4	C	0.70	23.6	C		0.51	19.4	B	0.52	19.5	B	
West 126th Street (W) @	WB-L	0.47	25.2	C	0.60	30.2	C		0.39	23.3	C	0.59	29.9	C	
Amsterdam Ave (N-S)	WB-TR	0.87	44.7	D	0.95	57.8	E	+	0.59	26.9	C	0.69	31.0	C	
	NB-LT	0.45	15.9	B	0.46	16.0	B		0.43	15.6	B	0.45	16.0	B	
	SB-TR	0.53	17.0	B	0.55	17.3	B		0.37	14.6	B	0.39	14.9	B	
West 126th Street (W) @	WB-LTR	1.05	92.2	F	1.19	142.2	F	+	0.83	48.2	D	0.98	73.4	E	+
Morningside Ave (N-S)	NB-L	0.12	8.3	A	0.26	10.2	B		0.12	8.3	A	0.18	9.0	A	
	NB-T	0.24	9.1	A	0.24	9.1	A		0.19	8.6	A	0.20	8.7	A	
	SB-TR	0.47	12.1	B	0.53	13.2	B		0.32	10.0	A	0.34	10.3	B	
West 127th Street (W) @	WB-LTR	1.09	105.0	F	1.26	169.9	F	+	0.80	47.7	D	0.98	78.2	E	+
Morningside/Convent Ave (N-S)	NB-LT	0.29	9.6	A	0.30	9.8	A		0.26	9.4	A	0.32	10.0	B	
	SB-TR	0.32	9.9	A	0.35	10.3	B		0.20	8.7	A	0.22	8.9	A	
West 128th Street (E-W) @	WB-LR	0.08	26.8	C	0.12	27.3	C		0.04	26.2	C	0.09	26.9	C	
Amsterdam Ave (N-S)	NB-TR	0.34	7.9	A	0.35	8.0	A		0.31	7.6	A	0.33	7.8	A	
	SB-LT	0.44	8.8	A	0.45	9.0	A		0.29	7.5	A	0.31	7.6	A	
West 127th Street (W) @ 126th Street (N) (Unsignalized Two-way Stop)	SB-R	0.28	12.5	B	0.34	13.5	B		0.17	10.8	B	0.25	11.8	B	

Notes:
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, Dfl-Analysis considers a defacto left-turn lane on this approach
V/C ratio - volume to capacity ratio
LOS - level of service
+ - denotes an impacted movement

TABLE 11-23 (continued)
With-Action Level of Service Analysis

		PM PEAK HOUR							SATURDAY MIDDAY PEAK HOUR						
		NO-ACTION			WITH-ACTION				NO-ACTION			WITH-ACTION			
INTERSECTION	LANE GROUP	V/C Ratio	Delay (seconds)	LOS	V/C Ratio	Delay (seconds)	LOS		V/C Ratio	Delay (seconds)	LOS	V/C Ratio	Delay (seconds)	LOS	
West 125th Street (E-W) @	EB-L	0.11	25.0	C	0.11	25.0	C		0.14	25.9	C	0.14	25.9	C	
Amsterdam Ave (N-S)	EB-TR	1.01	65.8	E	1.02	69.7	E		0.89	45.1	D	0.91	47.0	D	
	WB-L	0.11	25.0	C	0.11	25.0	C		0.11	25.0	C	0.11	25.0	C	
	WB-T	0.83	37.7	D	0.83	37.7	D		0.61	29.6	C	0.61	29.6	C	
	WB-R	0.37	28.4	C	0.37	28.4	C		0.36	28.0	C	0.37	28.3	C	
	NB-L	0.32	18.4	B	0.34	19.8	B		0.24	14.8	B	0.27	16.0	B	
	NB-TR	0.91	40.0	D	0.93	43.5	D		0.66	26.2	C	0.71	28.0	C	
	SB-L	0.56	30.9	C	0.78	44.0	D		0.40	19.0	B	0.51	23.4	C	
	SB-TR	0.81	38.4	D	0.87	44.2	D		0.69	30.9	C	0.75	33.9	C	
West 125th Street (E-W) @	EB-TR	0.39	12.6	B	0.42	13.0	B		0.35	12.2	B	0.37	12.4	B	
Morningside/ Convent Ave (N-S)	WB-TR	0.51	14.3	B	0.52	14.3	B		0.39	12.7	B	0.40	12.8	B	
	NB-LTR	0.82	37.9	D	0.86	41.6	D		0.51	26.2	C	0.55	27.1	C	
	SB-LTR	0.62	29.0	C	0.64	29.8	C		0.44	25.0	C	0.46	25.5	C	
West 125th Street (E-W) @	EB-TR	0.59	18.3	B	0.65	19.5	B		0.52	16.7	B	0.55	17.3	B	
St. Nicholas Ave (N-S)	WB-TR	0.64	19.5	B	0.65	19.5	B		0.44	15.7	B	0.45	15.8	B	
	NB-T	1.13	107.7	F	1.16	116.2	F	+	NB-LT 0.91	49.8	D	NB-LT 0.95	57.2	E	+
	NB-R	0.25	20.6	C	0.25	20.7	C		NB-R 0.22	20.0	B	NB-R 0.23	20.2	C	
	SB-T	0.76	33.1	C	0.78	33.9	C		SB-LT 0.92	52.0	D	SB-LT 0.96	60.4	E	+
	SB-R	0.33	22.2	C	0.33	22.3	C		SB-R 0.29	21.2	C	SB-R 0.29	21.3	C	
West 125th Street (E-W) @	EB-TR	0.75	27.9	C	0.80	30.2	C		0.60	20.3	C	0.63	20.8	C	
Federick Douglass Blvd (N-S)	WB-TR	0.74	27.6	C	0.74	27.8	C		0.47	17.8	B	0.47	17.9	B	
	NB-TR	0.68	26.0	C	0.69	26.3	C								
	NB-LTR								0.66	29.6	C	0.67	29.8	C	
	SB-T	0.44	20.8	C	0.45	21.0	C								
	SB-LT								0.55	26.4	C	0.56	26.5	C	
	SB-R	0.39	22.4	C	0.39	22.4	C		0.38	26.0	C	0.38	26.0	C	
West 125th Street (E-W) @	EB-TR	0.75	25.8	C	0.79	27.8	C		0.67	23.1	C	0.70	23.9	C	
Adam Clayton Powell Jr Blvd (N-S)	WB-TR	0.73	25.6	C	0.74	25.7	C		0.48	19.3	B	0.48	19.3	B	
	NB-TR														
	NB-LTR								0.57	20.1	C	0.58	20.2	C	
	NB-T	0.75	23.6	C	0.76	23.9	C								
	NB-R	0.27	17.4	B	0.27	17.4	B								
	SB-T	0.39	17.4	B	0.39	17.4	B		0.45	18.4	B	0.45	18.4	B	
	SB-R	0.35	18.5	B	0.35	18.5	B		0.32	18.0	B	0.32	18.0	B	
West 126th Street (W) @	WB-LT	0.48	20.9	C	0.56	22.9	C		0.37	19.0	B	0.41	19.7	B	
Broadway (N-S)	WB-R	0.23	17.0	B	0.28	17.9	B		0.13	15.8	B	0.16	16.2	B	
	NB-LT	0.62	20.9	C	0.62	21.0	C		0.32	16.7	B	0.33	16.8	B	
	SB-TR	0.54	20.0	B	0.55	20.0	C		0.42	18.0	B	0.42	18.1	B	
West 126th Street (W) @	WB-L	0.48	25.4	C	0.75	38.4	D		0.25	20.1	C	0.42	23.6	C	
Amsterdam Ave (N-S)	WB-TR	0.95	57.8	E	1.15	117.5	F	+	0.63	28.4	C	0.74	33.3	C	
	NB-LT	0.60	18.2	B	0.61	18.5	B		0.44	15.7	B	0.46	15.9	B	
	SB-TR	0.40	15.0	B	0.42	15.3	B		0.33	14.1	B	0.34	14.3	B	
West 126th Street (W) @	WB-LTR	1.24	158.5	F	1.38	217.5	F	+	0.75	40.7	D	0.87	52.3	D	+
Morningside Ave (N-S)	NB-L	0.18	9.0	A	0.25	10.0	B		0.10	8.1	A	0.15	8.6	A	
	NB-T	0.41	11.0	B	0.42	11.2	B		0.23	9.0	A	0.24	9.1	A	
	SB-TR	0.40	11.0	B	0.43	11.5	B		0.33	10.1	B	0.36	10.5	B	
West 127th Street (W) @	WB-LTR	1.15	126.8	F	1.30	189.9	F	+	0.63	35.2	D	0.77	44.5	D	
Morningside/Convent Ave (N-S)	NB-LT	0.51	12.8	B	0.57	14.1	B		0.26	9.3	A	0.32	10.0	A	
	SB-TR	0.29	9.6	A	0.31	9.8	A		0.22	8.9	A	0.23	9.1	A	
West 128th Street (E-W) @	WB-LR	0.06	26.5	C	0.13	27.4	C		0.01	25.9	C	0.05	26.3	C	
Amsterdam Ave (N-S)	NB-TR	0.47	9.1	A	0.49	9.3	A		0.32	7.7	A	0.33	7.8	A	
	SB-LT	0.30	7.5	A	0.32	7.7	A		0.26	7.2	A	0.27	7.3	A	
West 127th Street (W) @ 126th Street (N) (Unsignalized Two-way Stop)	SB-R	0.36	13.8	B	0.52	18.7	C		0.15	10.8	B	0.22	11.6	B	

Notes:
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, Dfl-Analysis considers a defacto left-turn lane on this approach
V/C ratio - volume to capacity ratio
LOS - level of service
+ - denotes an impacted movement

West 126th Street at Amsterdam Avenue

The westbound West 126th Street through-right movement at Amsterdam Avenue would be significantly adversely impacted in the weekday AM and PM peak hours. In the With-Action condition, this movement would operate at LOS E in the AM and LOS F in the PM with 57.8 and 117.5 seconds of delay in these peak hours, respectively. Increases in delay compared to the No-Action condition would total 13.1 seconds in the AM and to 59.7 seconds in the PM.

West 126th Street at Morningside Avenue

The westbound West 126th Street approach to Morningside Avenue would be significantly adversely impacted in all four analyzed peak hours. In the With-Action condition, this movement would operate at LOS F in the AM and PM peak hours, LOS E in the weekday midday and LOS D in the Saturday midday with 142.2, 73.4, 217.5 and 52.3 seconds of delay in the AM, midday, PM and Saturday midday peak hours, respectively. Increases in delay compared to the No-Action condition would range from 11.6 seconds (in the Saturday midday) to 59 seconds (in the PM).

West 127th Street at Morningside Avenue/Convent Avenue

The westbound West 127th Street approach to the intersection with Morningside Avenue and Convent Avenue would be significantly adversely impacted in all but the Saturday midday peak hour. In the With-Action condition, this approach would operate at LOS F in the AM and PM peak hours and LOS E in the weekday midday, with 169.9, 189.9 and 78.2 seconds of delay during these periods, respectively. Increases in delay compared to the No-Action condition would range from 30.5 seconds (in the weekday midday) to 64.4 seconds (in the AM).

H. TRANSIT

Existing Condition

Subway

As shown in Figure 11-3 and discussed previously, there are a total of eight subway stations located in proximity to the rezoning area: four IND stations along St. Nicholas Avenue including express stops at West 125th Street and West 145th Street (served by A, B, C and D trains), and local stops at West 135th Street (B, C) and West 155th Street (C); three IRT stations along Broadway at West 125th Street, West 137th Street-City College and West 145th Street (allserved by No. 1 trains); and an IND station at West 155th Street and Eighth Avenue (served by B and D trains). As discussed in Section E, "Level 2 Screening Assessment," only at the 125th Street IND station on St. Nicholas Avenue are project-generated trips expected to exceed the 200-trip *CEQR Technical Manual* analysis threshold in either the weekday AM or PM peak hours. (Transit analyses typically focus on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the subway and bus systems is usually highest.) Therefore, the analysis of subway station conditions focuses on the street stairs and fare arrays at this station that are expected to be used by project-generated trips during these periods.

The 125th Street IND subway station, located below St. Nicholas Avenue at West 125th Street, is served by A and C trains providing express and local service, respectively, on the Eighth Avenue Line, and D and B trains providing express and local service, respectively, on the Sixth Avenue Line. The station consists of two mezzanines, one at West 125th Street and a second at West 127th Street, located above two

island platforms. Access to the platform level from the West 125th street mezzanine is controlled by fare array N-26 with eight turnstiles and a 24-hour token booth. As shown in Figure 11-18, four stairways provide access to the West 125th Street mezzanine from street level, one each at the northeast (S1), southeast (S2), northwest (S8) and southwest (S10) corners of the intersection of West 125th Street and St. Nicholas Avenue. An elevator located at the southwest corner of the intersection provides ADA-compliant access to this mezzanine. (Two elevators within the mezzanine's paid zone provide access to the platforms.)

Street-level access to the mezzanine at West 127th Street is provided by two stairs, located at the southeast (S5) and southwest (S6) corners of the intersection of West 127th Street and St. Nicholas Avenue. Access from this mezzanine to the platform level is controlled by fare array N-25K consisting of five turnstiles, one high entry/exit turnstile and two high revolving exit gates. There is no longer a token booth within this mezzanine.

Based on the locations of the projected development sites comprising Cluster 1, new subway demand generated by the Proposed Action is expected to use both mezzanines at the West 125th Street IND station, and be concentrated on stairs S6 and S8. These station elements are therefore analyzed for significant adverse impacts due to the Proposed Action. As shown in Tables 11-24 and 11-25, all analyzed street stairs and fare arrays currently operate at an acceptable LOS A with v/c ratios of 0.31 or less in both the AM and PM peak hours.

Bus

The proposed rezoning area is served by ten NYC Transit local bus routes that connect the area with other parts of Manhattan. As shown in Figure 11-3, these include the M2, M3, M4, M5, M10, M11, M60, M100, M101 and M104 routes. The rezoning area is also served by three NYC Transit local bus routes that connect Manhattan with the Bronx – the Bx6, Bx15 and Bx19.

As discussed in Section E, "Level 2 Screening Assessment," and shown in Table 11-8, it is estimated that all of the projected development sites (all clusters) within the proposed rezoning area would generate a total of 156 and 316 new bus trips in the weekday AM and PM peak hours, respectively. As these trips would be widely dispersed throughout the study area and distributed among all 13 bus routes serving the projected development sites, it is not anticipated that the number of trips added in one direction to any one route in any peak hour would meet or exceed the 50-trip *CEQR Technical Manual* analysis threshold. (A bus trip assignment is provided in the Transportation Planning Factors Technical Memorandum included in Appendix E.) Therefore, the Proposed Action is not expected to result in any significant adverse impacts to bus transit services based on *CEQR Technical Manual* criteria, and a detailed bus analysis is not warranted. A qualitative description of bus services operating in proximity to the rezoning area is provided below.

M2

The M2 provides daily service between a southern terminus at East 8th Street and Fourth Avenue in the East Village and a northern terminus at West 168th Street and Broadway in Washington Heights at all times. Limited-Stop service is provided during the day, and there is no M2 local service south of 110th Street when the M2 Limited is operating. M2 buses operate primarily along Adam Clayton Powell Jr. Boulevard and Fifth and Madison Avenues.

Figure 11-18

Subway Stations in Proximity to RWCDS 3 - Cluster 1

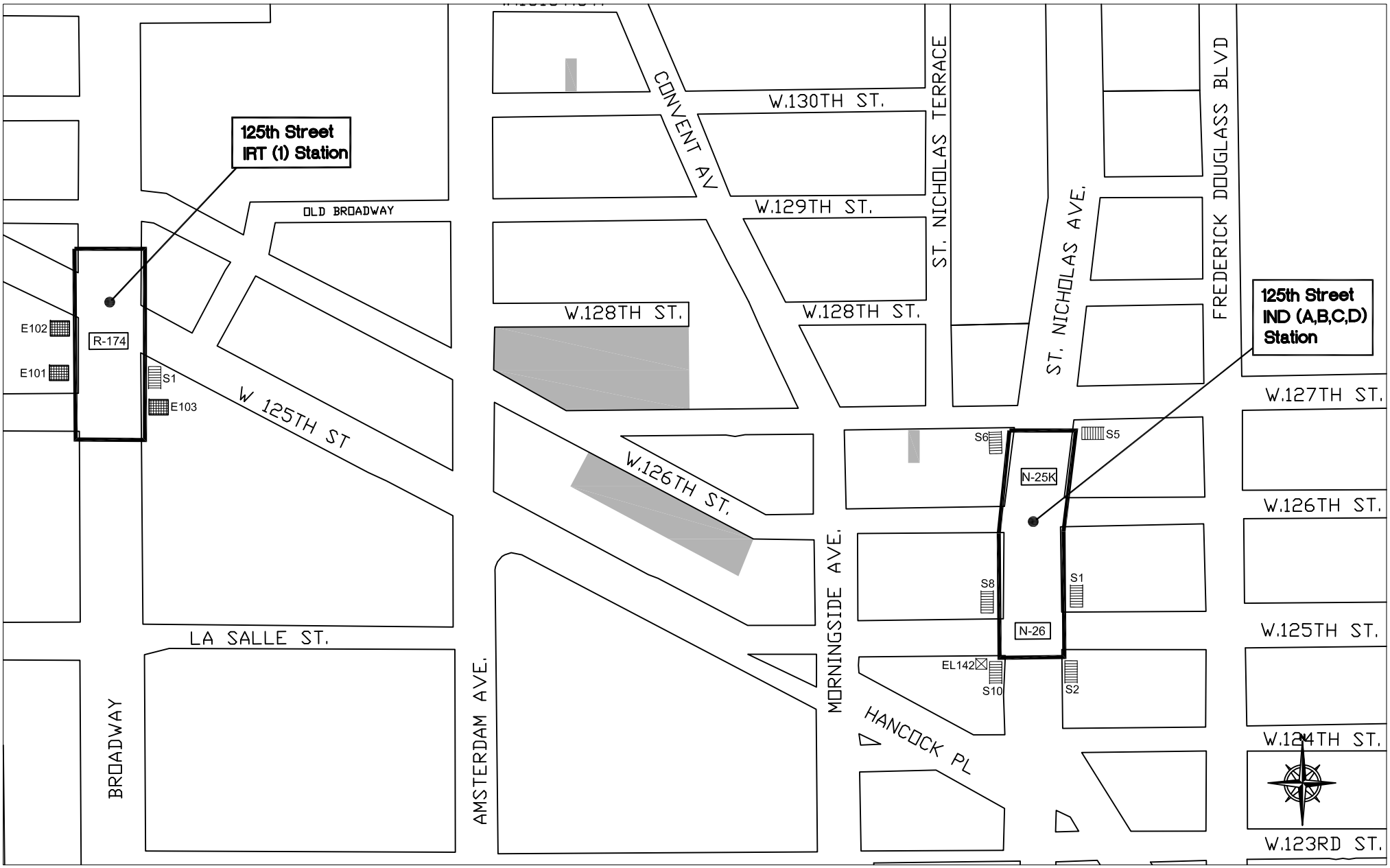


TABLE 11-24
Existing Conditions Stair Analysis
at the 125th Street (IND) Subway Station

Peak Period	Stairway	Width (ft.)	Effective Width (ft.)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
				Down	Up				
AM	S6	5.8	4.8	133	62	0.95	0.9	0.31	A
	S8	5.8	4.8	67	89	0.95	0.9	0.25	A
PM	S6	5.8	4.8	61	54	0.95	0.9	0.18	A
	S8	5.8	4.8	78	73	0.95	0.9	0.24	A

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
Surging factors only applied to exiting volumes.

TABLE 11-25
Existing Conditions Fare Control Area Analysis
at the 125th Street (IND) Subway Station

Peak Period	Fare Array	Control Element	Quantity	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
				In	Out				
AM	N-25K	Two-way Turnstile	5	280	99	0.9	0.9	0.16	A
		High Entry/Exit Turnstile	1						
		High Exit Turnstile	2						
	N-26	Two-way Turnstile	8	531	437	0.9	0.9	0.28	A
PM	N-25K	Two-way Turnstile	5	120	138	0.9	0.9	0.09	A
		High Entry/Exit Turnstile	1						
		High Exit Turnstile	2						
	N-26	Two-way Turnstile	8	583	510	0.9	0.9	0.31	A

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
Surging factors only applied to exiting volumes.

M3

The M3 provides daily service between a southern terminus at East 8th Street/Fourth Avenue in the East Village, and a northern terminus at West 193rd Street/St. Nicholas Avenue in Washington Heights, generally from 6 AM to midnight. This grid route operates primarily along St. Nicholas Avenue and Fifth and Madison Avenues.

M4

The M4 provides daily service between a southern terminus at West 32nd Street/Seventh Avenue (Penn Station) in Midtown, and a northern terminus at Fort Tryon Park in Washington Heights, generally from 5:30 AM to 11:30 PM. (M4 buses continue into Fort Tryon Park to the Cloisters Museum when the museum is open.) Limited stop service is provided in the peak direction during the weekday rush hours (southbound in the AM and northbound in the PM). M4 buses operate primarily along Fort Washington Avenue, Broadway, Central Park North, Fifth and Madison Avenues, and West 32nd and West 34th Streets.

M5

The M5 provides daily service between a southern terminus at Whitehall Street/South Street (South Ferry) at Battery Park, and a northern terminus at West 178th Street/Broadway in Washington Heights, generally from 6 AM to Midnight. Limited stop service is provided in the peak direction during the weekday rush hours (southbound in the AM and northbound in the PM), although all buses make all local stops along Riverside Drive in proximity to the rezoning area. M5 buses operate primarily along Broadway, Riverside Drive, Fifth and Sixth Avenues, and Church Street.

M10

The M10 provides daily service between a southern terminus at 57th Street/Broadway in West Midtown and a northern terminus at West 159th Street/Frederick Douglass Boulevard in Washington Heights, generally from 5:30 AM to 1:30 AM. This grid route operates primarily along Central Park West/Frederick Douglass Boulevard.

M11

The M11 provides daily service between a southern terminus at Bethune Street/Hudson Street (Abingdon Square) and a northern terminus at West 135th Street/Broadway in Hamilton Heights, generally from 5 AM to midnight. Extended service to Riverbank State Park at West 145th Street/Riverside Drive is offered when the park is open. This grid route operates primarily along Amsterdam/Tenth Avenues and Columbus/Ninth Avenues. In the vicinity of the proposed rezoning area, this route operates along Amsterdam Avenue.

M60

The M60 provides daily service between LaGuardia Airport in Queens and a Manhattan terminus at West 106th Street and Broadway, operating at all times. M60 buses operate to and from Queens via the Robert F. Kennedy Triborough Bridge, 125th Street, Amsterdam Avenue and Broadway.

M100

The M100 provides daily service between a southern terminus at East 125th Street/Second Avenue in East Harlem and a northern terminus at West 220th Street/Broadway in Inwood, generally from 5 AM to 1 AM. This grid route operates primarily along the 125th Street corridor, Amsterdam Avenue and Broadway.

M101

The M101 provides local service at all times between a northern terminus at West 193rd Street/Fort George Avenue in Washington Heights and a southern terminus at East 8th Street/Third Avenue in the East Village. Limited-stop service is provided between East 122nd Street and East 8th Street, generally from 6 AM to 9 PM on weekdays and 10 AM to 7 PM on weekends. This grid route operates primarily along Third Avenue and Lexington Avenues, the 125th Street corridor and Amsterdam Avenue.

M104

The M104 provides service at all times between a northern terminus at West 129th Street/Amsterdam Avenue in Harlem and a southern terminus at West 42nd Street/Eighth Avenue (Port Authority Bus Terminal) in Midtown. This route operates primarily along Broadway and Seventh and Eighth Avenues, as well as along West 125th Street between Broadway and Convent Avenue.

Bx6

The Bx6 provides daily service between a western terminus at West 158th Street/Riverside Drive in Washington Heights and an eastern terminus at Halleck Street/Ryawa Avenue (Fulton Fish Market) in the Hunts Point section of the Bronx, generally from 6 AM to 1 AM. Late night service operates between West 155th Street/Amsterdam Avenue and Halleck Street/Ryawa Avenue, generally between 1:30 AM and 5:30 AM. This route operates primarily along West 155th Street in Manhattan and East 161st Street, East 163rd Street, Hunts Point Avenue, and Halleck Street in the Bronx via the Macombs Dam Bridge.

Bx15

The Bx15 provides service at all times along the 125th Street corridor between Twelfth Avenue in Manhattan and Third Avenue/Fordham Road (Fordham Plaza) in the Bronx. Bronx-bound, Bx15 buses utilize the Willis Avenue Bridge to cross the Harlem River, while Manhattan-bound buses utilize the Third Avenue Bridge. In the Bronx, this route operates primarily along Third Avenue.

Bx19

The Bx19 provides daily service between a western terminus at West 145th Street/Broadway in Hamilton Heights and an eastern terminus at Bronx Park Road/Southern Boulevard (New York Botanical Garden) in the Bronx, generally from 7 AM to 1 AM. Some service terminates at East 149th Street/Southern Boulevard in the Longwood section of the Bronx, and service is extended into Riverbank State Park when the park is open. Late night service operates between West 145th Street/Broadway and Bronx Park Road/Southern Boulevard, generally between 1 AM and 7 AM. This route operates primarily along West 145th Street in Manhattan and East 149th Street and Southern Boulevard in the Bronx via the 145th Street Bridge.

The Future Without the Proposed Action (No-Action)

Subway

Estimates of peak hour trips at the 125th Street IND subway station in the No-Action condition were developed by applying the annual background growth rates recommended in the *CEQR Technical Manual* to existing volumes. An annual compounded background growth rate of 0.25 percent was applied for years 2012 to 2016, and an annual compounded background growth rate of 0.125 percent was applied for years 2017 to 2021. In addition, the future No-Action volumes reflect trips associated with No-Action development projects such as the 125th Street Corridor Rezoning and Related Actions. The No-Action peak 15-minute trip projections were then assigned to the analyzed subway station elements described above. It should be noted that no physical or operational changes are anticipated at the 125th Street IND subway station in the No-Action condition.

Tables 11-26 and 11-27 show the forecasted No-Action peak 15-minute volumes, v/c ratios and levels of service at analyzed stairways and fare arrays at the 125th Street IND subway station. As shown, in the No-Action condition all analyzed station elements will continue to operate at an acceptable LOS A in both the AM and PM peak hours with v/c ratios of 0.33 or less.

Bus

In the No-Action condition, demand on NYC Transit bus routes serving the rezoning area is expected to increase as a result of background growth and demand from new developments. As standard practice, NYC Transit routinely conducts periodic ridership counts and increases service where operationally warranted and fiscally feasible. It is therefore anticipated that bus service frequency would be increased to address any shortfalls in capacity in the No-Action condition.

The Future With the Proposed Action (With-Action)

Subway

As shown in Table 11-5 in Section D, "Level 1 Screening Assessment," RWCDS 3 would generate a net total of 413 and 563 new subway trips during the AM and PM peak hours, respectively. As shown in Tables 11-8 and 11-9 in Section E, "Level 2 Screening Assessment," 317 and 428 of these trips would be en route to and from Cluster 1 in the AM and PM, respectively, with 244 and 330, respectively, using the 125th Street IND station at St. Nicholas Avenue. These trips were assigned to analyzed stairways S6 and S8 and fare arrays N-25K and N-26 based on their proximity to the projected development sites comprising Cluster 1, and added to the No-Action volumes at these stations elements to generate the With-Action volumes.

The results of the analysis of future conditions with the Proposed Action at the 125th Street IND subway station are shown in Tables 11-28 and 11-29. As shown, all analyzed stairways and fare arrays would continue to operate at an acceptable LOS A or B with v/c ratios of 0.56 or less in both the AM and PM peak hours in the With-Action condition. The Proposed Action would therefore not result in significant adverse impacts at the 125th Street IND subway station under *CEQR Technical Manual* criteria.

TABLE 11-26
No-Action Conditions Stair Analysis
at the 125th Street (IND) Subway Station

Peak Period	Stairway	Width (ft.)	Effective Width (ft.)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
				Down	Up				
AM	S6	5.8	4.8	136	63	0.95	0.9	0.31	A
	S8	5.8	4.8	69	98	0.95	0.9	0.27	A
PM	S6	5.8	4.8	62	55	0.95	0.9	0.19	A
	S8	5.8	4.8	86	74	0.95	0.9	0.25	A

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
Surging factors only applied to exiting volumes.

TABLE 11-27
No-Action Conditions Fare Control Area Analysis
at the 125th Street (IND) Subway Station

Peak Period	Fare Array	Control Element	Quantity	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
				In	Out				
AM	N-25K	Two-way Turnstile	5	285	101	0.9	0.9	0.16	A
		High Entry/Exit Turnstile	1						
		High Exit Turnstile	2						
	N-26	Two-way Turnstile	8	571	463	0.9	0.9	0.30	A
PM	N-25K	Two-way Turnstile	5	122	141	0.9	0.9	0.09	A
		High Entry/Exit Turnstile	1						
		High Exit Turnstile	2						
	N-26	Two-way Turnstile	8	618	541	0.9	0.9	0.33	A

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
Surging factors only applied to exiting volumes.

TABLE 11-28
With-Action Conditions Stair Analysis
at the 125th Street (IND) Subway Station

Peak Period	Stairway	Width (ft.)	Effective Width (ft.)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
				Down	Up				
AM	S6	5.8	4.8	167	134	0.95	0.9	0.48	B
	S8	5.8	4.8	139	170	0.95	0.9	0.49	B
PM	S6	5.8	4.8	151	100	0.95	0.9	0.40	A
	S8	5.8	4.8	193	162	0.95	0.9	0.56	B

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
Surging factors only applied to exiting volumes.

TABLE 11-29
With-Action Conditions Fare Control Area Analysis
at the 125th Street (IND) Subway Station

Peak Period	Fare Array	Control Element	Quantity	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
				In	Out				
AM	N-25K	Two-way Turnstile	5	316	172	0.9	0.9	0.19	A
		High Entry/Exit Turnstile	1						
		High Exit Turnstile	2						
	N-26	Two-way Turnstile	8	641	535	0.9	0.9	0.34	A
PM	N-25K	Two-way Turnstile	5	211	186	0.9	0.9	0.15	A
		High Entry/Exit Turnstile	1						
		High Exit Turnstile	2						
	N-26	Two-way Turnstile	8	725	629	0.9	0.9	0.39	A

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
Surging factors only applied to exiting volumes.

Bus

Under *CEQR Technical Manual* criteria, a Proposed Action is considered unlikely to cause significant adverse bus impacts if it is projected to result in fewer than 50 peak hour trips being assigned to a single bus line (in one direction), as this level of new demand is considered unlikely to result in significant adverse impacts. As shown in Table 11-8 in Section E, "Level 2 Screening Assessment," it is estimated that all of the projected development sites within the proposed rezoning area would generate a net total of 156 and 316 new bus trips in the weekday AM and PM peak hours, respectively. As these trips would be widely dispersed throughout the study area and distributed among a total of 13 NYC Transit local bus routes, it is highly unlikely that any one route would experience 50 or more trips in one direction in any peak hour. Therefore, the Proposed Action is not expected to result in any significant adverse impacts to bus transit services based on *CEQR Technical Manual* criteria,

I. PEDESTRIANS

Existing Conditions

As shown in Figure 11-5 and discussed previously in Section E, "Level 2 Screening Assessment," a total of seven sidewalks, 14 corner reservoir areas and seven crosswalks where project-generated pedestrian trips are expected to exceed the 200-trip *CEQR Technical Manual* analysis threshold in one or more peak hours have been selected for analysis. These pedestrian elements are generally located along the West 126th Street and West 127th Street corridors, as well as on West 125th Street near Broadway. Existing peak 15-minute pedestrian flow volumes and levels of service along these sidewalks, corner areas and crosswalks during the weekday AM, midday, PM and Saturday midday peak hours are shown in Tables 11-30 through 11-32, respectively. As shown in Tables 11-30 through 11-32, all analyzed sidewalks, corner areas and crosswalks are currently operating at an uncongested LOS A or B in all analyzed peak hours.

The Future Without the Proposed Action (No-Action)

Estimates of peak hour trips on analyzed sidewalks, corner areas and crosswalks in the No-Action condition were developed by applying the annual background growth rates recommended in the *CEQR Technical Manual* to existing volumes. An annual compounded background growth rate of 0.25 percent was applied for years 2012 through 2016, and an annual compounded background growth rate of 0.125 percent was applied for years 2017 to 2021. In addition, the future No-Action volumes reflect trips associated with No-Action development projects such as the 125th Street Corridor Rezoning and Related Actions. The No-Action peak 15-minute trip projections were then assigned to the analyzed pedestrian facilities.

Tables 11-33 through 11-35 show the forecasted No-Action peak 15-minute pedestrian flow volumes and levels of service along these sidewalks, corner areas and crosswalks during the weekday AM, midday, PM and Saturday midday peak hours. As shown, all analyzed pedestrian facilities are projected to operate at an acceptable LOS C or better in all peak periods in the No-Action condition.

The Future With the Proposed Action (With-Action)

The Proposed Action would generate new pedestrian demand on analyzed sidewalks, corner areas and crosswalks by 2021. This new demand would include trips made solely by walking, as well as pedestrian trips en route to and from subway station entrances, bus stops and outlying off-street public parking

TABLE 11-30
Existing Conditions Sidewalk Analysis

No.	Location	Effective Width (feet)	Peak 15-Minute Volumes				Flow Rate (PMF)				Platoon-Adjusted Level of Service			
			AM	MD	PM	SMD	AM	MD	PM	SMD	AM	MD	PM	SMD
S1	Broadway between W.125th Street & Tiemann Place (East)	10.0	195	168	288	168	1.3	1.1	1.9	1.1	B	B	B	B
S2	Old Broadway between W.125th Street & W.126th Street (East)	12.5	51	50	43	50	0.3	0.3	0.2	0.3	A	A	A	A
S3	W.126th Street between Old Broadway & Amsterdam Ave (North)	9.5	16	6	19	6	0.1	<0.1	0.1	<0.1	A	A	A	A
S4	W.126th street between Amsterdam Ave & Morningside Ave (North)	8.5	49	74	42	74	0.4	0.6	0.3	0.6	A	B	A	B
S5	W.126th Street between Amsterdam Ave & Morningside Ave (South)	5.5	21	42	42	42	0.3	0.5	0.5	0.5	A	B	B	B
S6	Morningside Ave between W.126th Street & W.127th Street (West)	12.5	26	21	40	21	0.1	0.1	0.2	0.1	A	A	A	A
S7	St. Nicholas Ave between 125th Street & 126th Street (West)	13.5	96	137	130	137	0.5	0.7	0.6	0.7	A	B	B	B

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
PMF – persons per minute per foot of effective width.

TABLE 11-31
Existing Conditions Corner Analysis

No.	Intersection	Corner	SFP				Level of Service			
			AM	MD	PM	SMD	AM	MD	PM	SMD
C1	W.125th Street @ Broadway	Southeast	161.5	161.4	121.7	161.4	A	A	A	A
C2	W.125th Street @ Old Broadway	Northeast	288.7	302.8	225.3	302.8	A	A	A	A
C3	W.126th Street @ Amsterdam Ave	Northeast	427.3	394.2	466.1	394.2	A	A	A	A
C4	W.126th Street @ Amsterdam Ave	Northwest	429.9	502.8	341.9	502.8	A	A	A	A
C5	W.126th Street @ Amsterdam Ave	Southeast	377.2	430.6	375.7	430.6	A	A	A	A
C6	W.126th Street @ Amsterdam Ave	Southwest	407.0	441.5	357.1	441.5	A	A	A	A
C7	W.126th Street @ Morningside Ave	Northwest	460.7	521.0	474.3	521.0	A	A	A	A
C8	W.126th Street @ Morningside Ave	Southeast	620.4	770.0	510.8	770	A	A	A	A
C9	W.126th Street @ Morningside Ave	Southwest	260.8	362.1	240.2	362.1	A	A	A	A
C10	W.126th Street @ St. Nicholas Ave	Southwest	269.6	315.7	203.8	315.7	A	A	A	A
C11	W.127th Street @ Morningside Ave	Northwest	149.6	224.7	126.2	224.7	A	A	A	A
C12	W.127th Street @ Morningside Ave	Southeast	414.8	689.5	342.6	689.5	A	A	A	A
C13	W.127th Street @ Morningside Ave	Southwest	419.7	592.2	249.4	592.2	A	A	A	A
C14	W.127th Street @ Morningside Ave	Northeast	284.9	551.2	320.5	551.2	A	A	A	A

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
SFP – square feet per pedestrian.

TABLE 11-32
Existing Conditions Crosswalk Analysis

No.	Location	Crosswalk	Crosswalk Length (feet)	Crosswalk Width (feet)	Peak 15-Minute Volumes				SFP				Level of Service			
					AM	MD	PM	SMD	AM	MD	PM	SMD	AM	MD	PM	SMD
X1	W.125th Street @ Old Broadway	East	71	13	44	40	49	40	156.5	172.7	140.1	172.7	A	A	A	A
X2	W.126th Street @ Amsterdam Ave	North	72	11	29	26	29	26	314.9	356.6	311.5	353.3	A	A	A	A
X3	W.126th Street @ Amsterdam Ave	South	73	13	34	34	35	34	330.1	330.1	320.4	330.1	A	A	A	A
X4	W.126th Street @ Amsterdam Ave	East	43	18	63	51	55	51	337.5	419.6	388.3	419.6	A	A	A	A
X5	W.126th Street @ Morningside Ave	South	60	13	31	21	41	21	249.5	371.2	187.2	371.2	A	A	A	A
X6	W.126th Street @ Morningside Ave	West	34	12	39	25	38	25	428.3	677.2	439.6	676.0	A	A	A	A
X7	W.127th Street @ Morningside Ave	West	31	15	30	19	38	19	687.7	1,097.2	536.3	1102.9	A	A	A	A

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
SFP – square feet per pedestrian.

TABLE 11-33
No-Action Condition Sidewalk Analysis

No.	Location	Effective Width (feet)	Peak 15-Minute Volumes				Flow Rate (PMF)				Platoon-Adjusted Level of Service			
			AM	MD	PM	SMD	AM	MD	PM	SMD	AM	MD	PM	SMD
S1	Broadway between W.125th Street & Tiemann Place (East)	10.0	352	368	492	360	2.3	2.5	3.3	2.4	B	B	C	B
S2	Old Broadway between W.125th Street & W.126th Street (East)	12.5	96	125	104	118	0.5	0.7	0.6	0.6	B	B	B	B
S3	W.126th Street between Old Broadway & Amsterdam Ave (North)	9.5	80	119	107	112	0.6	0.8	0.8	0.8	B	B	B	B
S4	W.126th street between Amsterdam Ave & Morningside Ave (North)	8.5	93	138	99	138	0.7	1.1	0.8	1.1	B	B	B	B
S5	W.126th Street between Amsterdam Ave & Morningside Ave (South)	5.5	96	176	162	147	1.2	2.1	2.0	1.8	B	B	B	B
S6	Morningside Ave between W.126th Street & W.127th Street (West)	12.5	36	44	73	39	0.2	0.2	0.4	0.2	A	A	A	A
S7	St. Nicholas Ave between 125th Street & 126th Street (West)	13.5	115	153	154	149	0.6	0.8	0.8	0.7	B	B	B	B

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
PMF – persons per minute per foot of effective width.

TABLE 11-34
No-Action Condition Corner Analysis

No.	Intersection	Corner	SFP				Level of Service			
			AM	MD	PM	SMD	AM	MD	PM	SMD
C1	W.125th Street @ Broadway	Southeast	93.6	78.4	69.4	80.4	A	A	A	A
C2	W.125th Street @ Old Broadway	Northeast	234.2	205.1	166.2	216.3	A	A	A	A
C3	W.126th Street @ Amsterdam Ave	Northeast	248.0	157.5	202.8	165.9	A	A	A	A
C4	W.126th Street @ Amsterdam Ave	Northwest	253.5	202.1	188.4	212.0	A	A	A	A
C5	W.126th Street @ Amsterdam Ave	Southeast	195.2	127.3	145.5	141.2	A	A	A	A
C6	W.126th Street @ Amsterdam Ave	Southwest	229.1	148.7	167.4	158.6	A	A	A	A
C7	W.126th Street @ Morningside Ave	Northwest	305.9	228.5	239.0	256.8	A	A	A	A
C8	W.126th Street @ Morningside Ave	Southeast	370.6	355.1	292.8	420.5	A	A	A	A
C9	W.126th Street @ Morningside Ave	Southwest	135.5	126.7	106.3	163.2	A	A	A	A
C10	W.126th Street @ Manhattan Ave	Southwest	219.1	225.7	162.6	237.7	A	A	A	A
C11	W.127th Street @ Morningside Ave	Northwest	94.1	95.6	65.3	96.5	A	A	A	A
C12	W.127th Street @ Morningside Ave	Southeast	324.8	395.9	260.6	422.9	A	A	A	A
C13	W.127th Street @ Morningside Ave	Southwest	255.0	214.6	140.2	225.7	A	A	A	A
C14	W.127th Street @ Morningside Ave	Northeast	229.4	364.0	238.8	366.9	A	A	A	A

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
SFP – square feet per pedestrian.

TABLE 11-35
No-Action Condition Crosswalk Analysis

No.	Location	Crosswalk	Crosswalk Length (feet)	Crosswalk With (feet)	Peak 15-Minute Volumes				SFP				Level of Service			
					AM	MD	PM	SMD	AM	MD	PM	SMD	AM	MD	PM	SMD
X1	W.125th Street @ Old Broadway	East	71	13	49	77	71	69	140.1	87.4	95.2	98.1	A	A	A	A
X2	W.126th Street @ Amsterdam Ave	North	72	11	92	136	117	131	95	63.2	72.7	65.3	A	A	A	A
X3	W.126th Street @ Amsterdam Ave	South	73	13	99	175	144	160	109.2	59.3	73.3	65.4	A	B	A	A
X4	W.126th Street @ Amsterdam Ave	East	43	18	80	121	101	111	263.5	170.6	206.5	186.9	A	A	A	A
X5	W.126th Street @ Morningside Ave	South	60	13	84	91	111	74	88.4	81.1	65.5	101.1	A	A	A	A
X6	W.126th Street @ Morningside Ave	West	34	12	49	43	52	32	338.4	388.5	318.0	525.4	A	A	A	A
X7	W.127th Street @ Morningside Ave	West	31	15	40	47	68	45	512.5	435.6	294.0	457.9	A	A	A	A

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
SFP – square feet per pedestrian.

TABLE 11-36
With-Action Condition Sidewalk Analysis

No.	Location	Effective Width (feet)	Peak 15-Minute Volumes				Flow Rate (PMF)				Platoon-Adjusted Level of Service			
			AM	MD	PM	SMD	AM	MD	PM	SMD	AM	MD	PM	SMD
S1	Broadway between W.125th Street & Tiemann Place (East)	10.0	391	436	554	413	2.6	2.9	3.7	2.8	B	B	C	B
S2	Old Broadway between W.125th Street & W.126th Street (East)	12.5	137	206	173	178	0.7	1.1	0.9	0.9	B	B	B	B
S3	W.126th Street between Old Broadway & Amsterdam Ave (North)	9.5	108	189	158	158	0.8	1.3	1.1	1.1	B	B	B	B
S4	W.126th street between Amsterdam Ave & Morningside Ave (North)	8.5	179	282	242	260	1.4	2.2	1.9	2.0	B	B	B	B
S5	W.126th Street between Amsterdam Ave & Morningside Ave (South)	5.5	177	295	279	237	2.1	3.6	3.4	2.9	B	C	C	B
S6	Morningside Ave between W.126th Street & W.127th Street (West)	12.5	59	107	116	80	0.3	0.6	0.6	0.4	A	B	B	A
S7	St. Nicholas Ave between 125th Street & 126th Street (West)	13.5	151	191	204	185	0.7	0.9	1.0	0.9	B	B	B	B

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
PMF – persons per minute per foot of effective width.
***** Indicates a significant adverse impact.

TABLE 11-37
With-Action Condition Corner Analysis

No.	Intersection	Corner	SFP				Level of Service			
			AM	MD	PM	SMD	AM	MD	PM	SMD
C1	W.125th Street @ Broadway	Southeast	82.4	64.3	59.5	69.0	A	A	B	A
C2	W.125th Street @ Old Broadway	Northeast	179.0	133.1	120.0	152.0	A	A	A	A
C3	W.126th Street @ Amsterdam Ave	Northeast	177.7	101.1	126.8	116.3	A	A	A	A
C4	W.126th Street @ Amsterdam Ave	Northwest	207.9	141.7	144.1	161.8	A	A	A	A
C5	W.126th Street @ Amsterdam Ave	Southeast	129.8	76.5	88.1	92.3	A	A	A	A
C6	W.126th Street @ Amsterdam Ave	Southwest	186.4	112.8	130.4	128.1	A	A	A	A
C7	W.126th Street @ Morningside Ave	Northwest	228.3	141.1	158.3	175.4	A	A	A	A
C8	W.126th Street @ Morningside Ave	Southeast	249.6	214.9	191.8	263.7	A	A	A	A
C9	W.126th Street @ Morningside Ave	Southwest	81.4	59.0	55.2	80.2	A	B	B	A
C10	W.126th Street @ Manhattan Ave	Southwest	172.3	162.1	125.5	179.9	A	A	A	A
C11	W.127th Street @ Morningside Ave	Northwest	51.6	37.8	30.9	42.9	B	C	C	B
C12	W.127th Street @ Morningside Ave	Southeast	230.4	223.8	173.4	253.1	A	A	A	A
C13	W.127th Street @ Morningside Ave	Southwest	128.9	90.2	72.5	103.2	A	A	A	A
C14	W.127th Street @ Morningside Ave	Northeast	176.7	224.6	157.4	219.1	A	A	A	A

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
SFP – square feet per pedestrian.
***** Indicates a significant adverse impact.

TABLE 11-38
With-Action Condition Crosswalk Analysis

No.	Location	Crosswalk	Crosswalk Length (feet)	Crosswalk With (feet)	Peak 15-Minute Volumes				SFP				Level of Service			
					AM	MD	PM	SMD	AM	MD	PM	SMD	AM	MD	PM	SMD
X1	W.125th Street @ Old Broadway	East	71	13	91	158	140	130	73.3	40.4	46.1	50.0	A	B	B	B
X2	W.126th Street @ Amsterdam Ave	North	72	11	121	204	170	179	70.5	40.1	47.8	46.1	A	B	B	B
X3	W.126th Street @ Amsterdam Ave	South	73	13	140	258	212	219	75.5	38.5	48.0	46.3	A	C	B	B
X4	W.126th Street @ Amsterdam Ave	East	43	18	126	214	184	181	163.4	92.1	108.7	110.7	A	A	A	A
X5	W.126th Street @ Morningside Ave	South	60	13	141	167	191	135	50.5	41.8	35.9	52.9	B	B	C	B
X6	W.126th Street @ Morningside Ave	West	34	12	77	110	103	77	207.7	143.8	153.8	209.7	A	A	A	A
X7	W.127th Street @ Morningside Ave	West	31	15	91	139	151	118	218.0	138.9	125.7	166.6	A	A	A	A

Notes:
Methodology based on *CEQR Technical Manual* guidelines.
SFP – square feet per pedestrian.
***** Indicates a significant adverse impact.

garages. Pedestrian trips generated by the Proposed Action are expected to be widely distributed due to the dispersed locations of the projected development sites within the proposed rezoning area. It is anticipated, however, that pedestrian trips would be most concentrated along corridors connecting Cluster 1 to nearby subway station entrances, bus stops and outlying parking garages.

As shown in Table A-5 in the Transportation Planning Assumptions technical memorandum included in Appendix E, under RWCDS 3, Cluster 1 is expected to generate a net total of 403 walk-only trips in the AM peak hour, 1,178 in the midday, 737 in the PM and 681 in the Saturday midday peak hour. Trips generated by Cluster 1 en route to and from area subway stations and bus stops would also account for 443, 484, 673 and 536 new pedestrian trips during these peak hours, respectively. In addition, based on the assignment of project-generated auto trips, there would be an estimated 94, 42, 140 and 78 new pedestrian trips en route between Cluster 1 and outlying off-street public parking facilities. The assignment of these trips to the study area sidewalks, corner areas and crosswalks in each peak hour is shown in Figure 11-4 in Section E, Level 2 Screening Assessment." Based on the peak hour project-generated pedestrian trips presented in Figure 11-4, peak 15-minute incremental pedestrian volumes were developed by dividing the hourly incremental volumes by four and accounting for peaking characteristics within each peak hour. These pedestrian volumes were added to the projected No-Action volumes to generate the With-Action pedestrian volumes for analysis.

Tables 11-36 through 11-38 show the forecasted With-Action peak 15-minute pedestrian flow volumes and levels of service along analyzed sidewalks, corner areas and crosswalks during the weekday AM, midday, PM and Saturday midday peak hours. As shown, all analyzed pedestrian facilities are projected to operate at an acceptable LOS C or better in all peak periods in the With-Action condition. Therefore, under *CEQR Technical Manual* criteria, the Proposed Action would not result in any significant adverse pedestrian impacts.

J. VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

Under *CEQR Technical Manual* guidelines, an evaluation of vehicular and pedestrian safety is needed for locations within the traffic and pedestrian study areas that have been identified as high accident locations. These are defined as locations where 48 or more total reportable and non-reportable crashes or five or more pedestrian/bicyclist injury crashes have occurred in any consecutive 12 months of the most recent three-year period for which data are available. (Reportable accidents are defined as those involving injuries, fatalities, and/or $1,000 or more in property damage.)

Table 11-39 shows summary accident data for the years 2008 through 2010 that were obtained from the New York City Department of Transportation. This is the most recent three year period for which data are available. The table shows the total number of reportable and non-reportable crashes each year and the numbers of crashes each year involving pedestrians and cyclists at intersections in proximity to RWCDS 3, Cluster 1 where the majority of new vehicular and pedestrian trips would be concentrated. As shown in Table 11-39, no intersections were found to have experienced a total of 48 or more crashes in any one year. However, three intersections experienced five or more pedestrian and/or bicyclist injury crashes in one or more years and are therefore considered high accident locations. These locations, all of which are located along West 125th Street include the intersections with Adam Clayton Powell Jr. Boulevard (six pedestrian/bicyclist injury crashes in 2009), St. Nicholas Avenue (five pedestrian injury crashes in 2009), and Amsterdam Avenue (five pedestrian/bicyclist injury crashes in 2008, seven in 2009 and five in 2010). At all other locations in proximity to RWCDS 3, Cluster 1, the number of pedestrian/bicyclist injury crashes per year totaled four or fewer during the 2008 through 2010 period.

TABLE 11-39
Summary Motor Vehicle Accident Data 2008-2010

Intersection		Pedestrian Injury Accidents			Bicycle Injury Accidents			Total Pedestrian/Bicyclist Injury Accidents			Total Accidents (Reportable + Non-Reportable)		
		2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010
Adam Clayton Powell Blvd. at	W.124th Street	2	2	0	1	0	0	3	2	0	4	5	0
	W.125th Street	3	5	4	1	1	0	4	**6***	4	16	17	9
	W.126th Street	0	0	0	0	0	1	0	0	1	2	4	3
	W.127th Street	1	0	0	0	0	0	1	0	0	3	1	1
Frederick Douglass Blvd. at	W.124th Street	1	2	0	0	0	0	1	2	0	3	5	1
	W.125th Street	1	2	1	1	1	0	2	3	1	15	10	6
	W.126th Street	1	2	0	0	0	0	1	2	0	1	3	3
	W.127th Street	2	0	0	1	0	0	3	0	0	4	1	1
St. Nicholas Ave at	Manhattan Ave/ W.124th Street	2	0	0	0	0	0	2	0	0	3	2	5
	W.125th Street	0	5	1	0	0	2	0	**5***	3	6	14	7
	W.126th Street	1	0	0	0	0	0	1	0	0	4	1	1
	W.127th Street	2	1	1	2	0	0	4	1	1	4	2	4
Morningside Ave at	Hancock Place	0	0	1	1	0	0	1	0	1	2	1	1
	W.125th Street	0	0	2	0	2	2	0	2	4	5	8	10
	W.126th Street	2	0	0	0	0	0	2	0	0	3	0	1
Morningside/ Convent Aves at	W.127th Street	2	1	1	0	1	0	2	2	1	6	3	1
	W.128th Street	0	0	0	0	0	0	0	0	0	1	1	0
	W.129th Street	0	1	1	1	0	1	1	2	2	1	1	2
W.126th Street at	W.127th Street	0	0	0	0	0	0	0	0	0	1	0	0
Amsterdam Ave at	W.125th Street	4	5	4	1	2	1	**5***	**7***	**5***	13	15	19
	W.126th Street	1	0	2	0	1	0	1	1	2	5	6	4
	W.128th Street	0	0	0	0	0	0	0	0	0	3	1	1
	W.129th Street	0	1	0	0	0	0	0	1	0	3	2	1
Old Broadway at	W.125th Street	0	0	1	0	0	0	0	0	1	1	3	4
	W.126th Street	0	0	0	0	0	0	0	0	0	1	1	0
Broadway at	W.125th Street	2	3	2	0	1	1	2	4	3	9	18	13
	W.126th/W.129th Streets	0	0	0	0	1	0	0	1	0	4	5	7
W.125th Street at	W.129th Street/ St. Clair Pl.	0	0	0	0	0	0	0	0	0	1	3	2

Notes:
* Denotes five or more total pedestrian and/or bicycle injury accidents at an intersection in one year.
Source: NYCDOT data.

None of the three intersections identified as high accident locations (nor any within ½-mile of Cluster 1) are located within a designated Senior Pedestrian Focus Area (SPFA). On-street bicycle lanes have been striped along St. Nicholas Avenue and high visibility crosswalks have been installed on the West 125th Street approaches at all three intersections, as well as on the north-south approaches at both St. Nicholas Avenue and Adam Clayton Powell Jr. Boulevard.

At the intersection of West 125th Street and Adam Clayton Powell Jr. Boulevard, development associated with the Proposed Action is expected to increase both vehicle and pedestrian trips in each peak hour. As shown in Figure 11-2, under RWCDS 3, a total of approximately 37, 42, 60 and 37 vehicles would be added to this intersection in the weekday AM, midday and PM and Saturday midday peak hours, respectively. This would represent increases in vehicle trips of from 2.5 percent to 3.8 percent in each peak hour. In addition, an estimated 45, 86, 78 and 56 new pedestrians would traverse crosswalks at this intersection during these same peak hours.

The Proposed Action is also expected to increase both vehicle and pedestrian trips in each peak hour at the intersection of West 125th Street and St. Nicholas Avenue. As shown in Figure 11-2, under RWCDS 3, a total of approximately 44, 52, 74 and 51 vehicles would be added to this intersection in the weekday AM, midday and PM and Saturday midday peak hours, respectively. This would represent increases in vehicle trips of from 2.1 percent to 3.0 percent in each peak hour. In addition, up to an estimated 104, 227, 178 and 145 new pedestrians would traverse crosswalks this intersection during these same peak hours, respectively.

Lastly, at the intersection of West 125th Street and Amsterdam Avenue, which was a high accident location in every year from 2008 through 2010, development associated with RWCDS 3 would add a total of approximately 66, 87, 113 and 71 vehicles to this intersection in the weekday AM, midday and PM and Saturday midday peak hours, respectively. This would represent increases in vehicle trips of from 2.5 percent to 3.8 percent in each peak hour. In addition, an estimated 142, 249, 217 and 201 new pedestrians would traverse crosswalks at this intersection during these same peak hours, respectively.

As discussed above, all three of these intersections are considered high accident locations due to the numbers of pedestrian/bicyclist injury crashes that occurred in one or more years during the 2008 through 2010 period. Crashes involving pedestrians often involve conflicts with turning vehicles. It is therefore important to note that, in the No-Action condition, it is anticipated that the eastbound and westbound left-turn movements along West 125th Street will be prohibited (with the exception of buses) at each of these intersections under the traffic mitigation plan for the 125th Street Rezoning and Related Actions project. This No-Action mitigation measure will substantially reduce the numbers of turning vehicles at each location, thereby reducing the potential for vehicle/pedestrian and vehicle/bicycle conflicts.

K. PARKING

Existing Condition

Off-Street

Under *CEQR Technical Manual* guidelines, an analysis of off-street public parking conditions typically focuses on facilities (surface lots and garages) within a ¼-mile radius of a project site. Therefore, parking facilities within a roughly ¼-mile radius of the primary projected development sites in Cluster 1 were initially inventoried to determine their capacities and approximate utilization during the weekday midday (a period of peak commercial demand) and overnight (a measure of overnight residential demand). As shown in Table 11-40 and Figure 11-19, there are currently ten public parking facilities with a total of

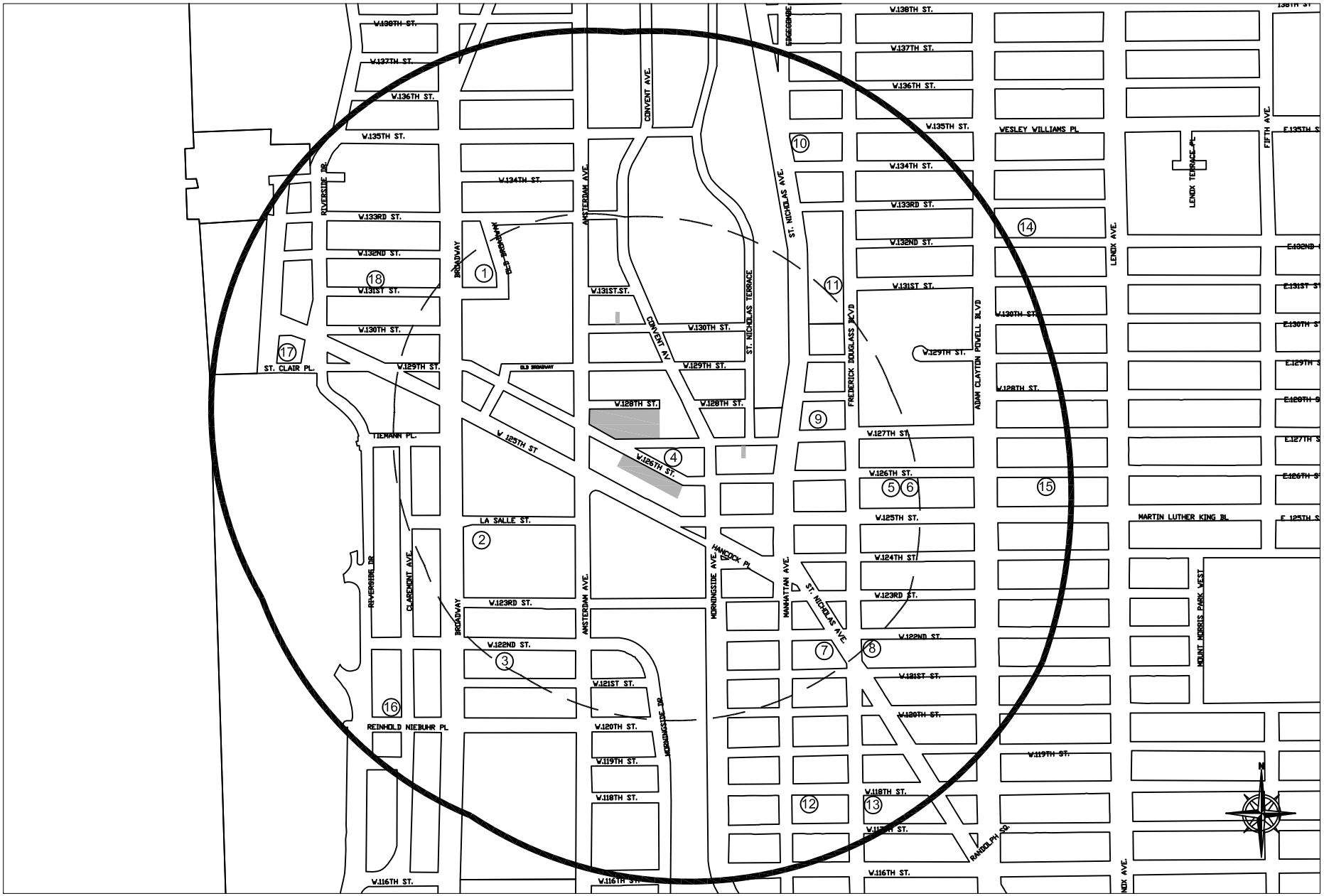
TABLE 11-40
Existing Utilization at Off-Street Public Parking Facilities Within ½-Mile of Cluster 1

Map No.	Garage Name	Address	License No.	Licensed Capacity	Weekday Midday			Weekday Overnight		
					Estimated Utilization		Available Capacity	Estimated Utilization		Available Capacity
					Spaces	Percent		Spaces	Percent	
1	3300 Broadway Operating Corp.	3270 Broadway	1330437	149	149	100%	0	(a)	(a)	(a)
2	Morningside Heights Housing Corp.	3100 Broadway	469448	291	262	90%	29	146	50%	145
3	GMC University Garage	532-538 W. 122nd Street	1313013	180	180	100%	0	180	100%	0
4	126th Street Parking Corp.	419 W.126th Street	1389043	36	29	80%	7	36	100%	0
5	NYC Design II	270 W.126th Street	1415838	159	143	90%	16	119	75%	40
6	IMPARK LLC	216 W.126th Street	1102349	60	54	90%	6	(b)	(b)	(b)
7	Magic Parking LLC	225 St. Nicholas Ave	1263702	160	120	75%	40	120	75%	40
8	2280 FDB LLC	265 W.122nd Street	1366652	70	56	80%	14	56	80%	14
9	Park 127th LLC	331 W.127th Street	1418326	115	23	20%	92	6	5%	92
11	FD 131st LLC	410 St. Nicholas Ave	1398116	56	56	100%	0	28	50%	28
¼-Mile Weekday Midday Total				**1,276**	**1,072**	**84%**	**204**	----	----	----
¼-Mile Weekday Overnight Total (c)				**1,067**	----	----	----	**708**	**66%**	**359**
10	DEB Parking LLC	300 W.135th Street	1205557	140	85	61%	55	120	86%	20
12	VMC Parking	316 W.118th Street	1263650	130	117	90%	13	65	50%	65
13	Park 117th LLC	279 W.117th Street	1312575	71	67	95%	4	39	55%	32
14	VFC Parking	161 W.132nd Street	1277435	135	128	95%	7	81	60%	54
15	Propark America New York LLC	121 W.125th Street	1368696	304	152	50%	152	213	70%	91
16	Claremont Parking Corp.	480 Riverside Drive	906438	200	180	90%	20	130	65%	70
17	Columbia Water Front LLC	69 St. Clair Place	1115799	70	70	100%	0	28	40%	42
18	VNI Facility Corp.	631-635 W.131st Street	1117939	100	100	100%	0	(a)	(a)	(a)
½-Mile Weekday Midday Total				**2,426**	**1,971**	**81%**	**455**	----	----	----
½-Mile Weekday Overnight Total (c)				**2,117**	----	----	----	**1,367**	**65%**	**750**

Notes:
(a) Garage operating hours from 6 AM to 12 midnight.
(b) Garage operating hours from 6 AM to 8 PM.
(c) Excludes facilities closed in the overnight period.

Figure 11-19

Off-Street Public Parking Facilities Within 1/2-Mile of RWCDS 3 - Cluster 1



Legend:

1/2-Mile Radius

1/4-Mile Radius

Projected Development Site Cluster 1

(1) Off-Street Public Parking Facility (see Table 11-39)

1,276 parking spaces within this ¼-mile radius. Eight of these facilities are open at all times and two are closed in the overnight period. Overall, these off-street public parking facilities were found to be 84 percent utilized (204 spaces available) in the weekday midday period and 66 percent utilized (359 spaces available) in the weekday overnight period.

Given the relatively limited amount of off-street public parking capacity currently available to accommodate new demand within ¼-mile of the primary projected development sites in Cluster 1, the off-street public parking analysis study area was therefore expanded to a ½-mile radius to reflect the fact that some project-generated parking demand would likely occur at more distant parking facilities, as well as to provide data to facilitate the assignment of project-generated auto trips to off-site parking. As shown in Table 11-40 and Figure 11-19, there are currently 18 public parking facilities with a total of 2,426 parking spaces within ½-mile of the primary development sites comprising Cluster 1. Fifteen of these facilities are open at all times and three are closed in the overnight period. Overall, these off-street public parking facilities were found to be 81 percent utilized (455 spaces available) in the weekday midday period and 65 percent utilized (750 spaces available) in the weekday overnight period.

On-Street

As shown in Figure 11-20 and Table 11-41, on-street parking in proximity to Cluster 1 is typically governed either by no standing regulations to facilitate traffic flow and provide for authorized vehicle parking, or by alternate-side-of-the-street parking regulations to facilitate street cleaning. Some one-hour and two-hour metered parking is present primarily along West 125th Street. As some of the parking restrictions are in effect only during daytime hours, there is generally more parking capacity available within the study area during the overnight period than there is during the daytime.

Accounting for street-cleaning and other curbside regulations, and curb cuts, fire hydrants and other obstructions to curbside parking, there are a total of approximately 2,217 legal on-street parking spaces within ¼-mile of the primary development sites comprising Cluster 1 during the weekday overnight period and 1,927 in the weekday midday. These include approximately 121 metered parking spaces. During the weekday overnight period, when residential parking demand is greatest, field observations indicate that on-street parking capacity is approximately 75 percent utilized, with approximately 545 curbside spaces available. In the weekday midday when commercial and community facility parking demand peaks, on-street parking capacity within ¼-mile of Cluster 1 is essentially fully utilized, with relatively few (approximately 51) curbside spaces available.

The Future Without the Proposed Action (No-Action)

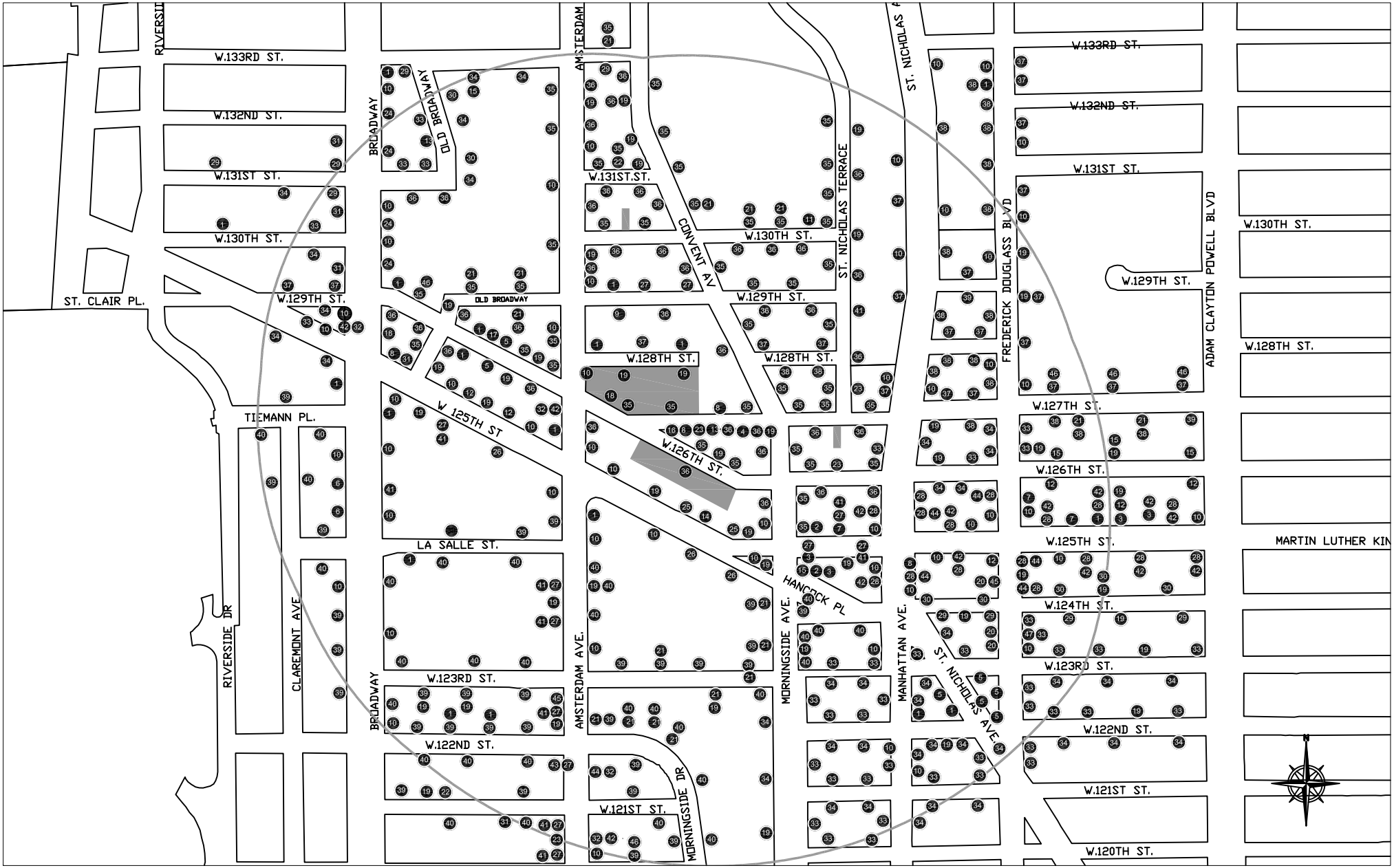
Off-Street

By 2021, demand at off-street public parking facilities in proximity to Cluster 1 is expected to increase as a result of development on projected development sites pursuant to existing zoning, other new developments, and general background growth. It is anticipated that the existing 304-space public parking facility at 121 West 125th Street (No. 15 in Table 11-40) would be displaced by new development incorporating a 196-space public parking garage under the 125th Street Corridor Rezoning and Related Actions project. An additional 919 spaces of new public parking capacity are also expected to be developed within approximately ½-mile of Cluster 1 as a result of this rezoning.

Overall, as shown in Table 11-42, public parking facilities within ½-mile of the primary development sites in Cluster 1 are expected to be approximately 90 percent utilized in the weekday midday and 58

Figure 11-20

Curbside Parking Regulations Within 1/4-Mile of RWCDS 3 - Cluster 1



Legend:

Projected Development Site Cluster 1

1 Parking Regulation

1/4 Mile Radius

TABLE 11-41
Curbside Parking Regulations Within ¼-Mile of RWCDS 3 – Cluster 1
(See Figure 11-20)

Map No.		Map No.	
No Standing		**No Parking**	
1.	Anytime	25.	8AM – 8:30AM, Mon & Thu
2.	Anytime Except Authorized Vehicles, Ambulance	26.	8AM – 8:30AM, Tue & Fri
3.	Anytime Except Authorized Vehicles, Ambulette	27.	8AM – 8:30AM, Except Sun
4.	Anytime Except Authorized Vehicles, MOC	28.	8AM – 9AM, Except Sun
5.	Anytime Except Authorized Vehicles, Police Department Vehicles	30.	8AM – 6PM, Except Sun
6.	Anytime Except Trucks Loading & Unloading	31.	8:30AM – 9AM, Mon & Thu
7.	Anytime Except Vehicles with NYP Plates	32.	8:30AM – 9AM, Except Sun
8.	Anytime, Taxi Stand	33.	8AM – 10AM, Mon & Thu
9.	Bus Layover Area	34.	8AM – 10AM, Tue & Fri
10.	Bus Stop	35.	9AM – 10:30AM, Mon & Thu
11.	Except Trucks Loading & Unloading, 7AM - 6PM	36.	9AM – 10:30AM, Tue & Fri
12.	Except Trucks Loading & Unloading, 7AM - 7PM, Mon – Fri	37.	9:30AM – 11AM, Mon & Thu
13.	Except Trucks Loading & Unloading, 7AM - 7PM, Except Sunday	38.	9:30AM – 11AM, Tue & Fri
14.	Fire Zone	39.	11AM – 12:30PM, Mon & Thu
15.	7AM – 7PM, Mon - Fri	40.	11AM – 12:30PM, Tue & Fri
16.	7AM – 7PM, Except Sun	**1-Hour Parking**	
17.	8AM – 5PM, Mon – Fri, Except Authorized Vehicles, Doctor's Vehicles Only	41.	8:30AM – 7PM, Except Sun
18.	8AM – 6PM, Mon – Fri, Except Authorized Vehicles, OMRDD	42.	9AM – 7PM, Except Sun
No Parking		**2-Hour Parking**	
19.	Anytime	43.	8:30AM – 7PM, Except Sun
20.	7AM – 10AM, Except Sun	44.	9AM – 7PM, Except Sun
21.	7AM – 4PM, School Days	45.	10AM – 7PM, Except
22.	7AM – 4PM, School Days, Except Faculty Vehicles	**Misc.**	
23.	7AM – 7PM, Except Sun	46.	Angle Parking
24.	7:30AM – 8AM, Tue & Fri	47.	No Standing, Hotel Loading Zone

TABLE 11-42
Summary of No-Action Off-Street Public Parking Conditions Within ½-Mile of Cluster 1

	Weekday Midday (spaces)	Weekday Overnight (spaces)
Capacity		
Existing Capacity	2,426	2,117
Capacity Displaced Due to No-Action Development (a)	(304)	(304)
New Capacity Provided in No-Action (b)	1,115	1,115
Total No-Action Capacity	3,237	2,928
Demand		
Existing Demand	1,971	1,367
Demand from Background Growth (c)	37	26
Projected Demand from No-Action Development on Cluster 1	111	8
Projected Demand from Other No-Action Developments (d)	803	298
Total No-Action Demand	2,922	1,699
Utilization		
No-Action Utilization	90%	58%
No-Action Available Capacity	315	1,229

Notes:
(a) Existing 304-space facility (No. 15) displaced by new development with a 196-space public parking garage under the 125th Street Corridor Rezoning and Related Actions.
(b) Total new capacity provided under the 125th Street Corridor Rezoning and Related Actions (includes Sub-Area 1 development sites in proximity to Cluster 1).
(c) An annual compounded background growth rate of 0.25 percent was applied for years 2012 through 2016, and an annual compounded background growth rate of 0.125 percent was applied for years 2017 to 2021.
(d) Includes projected demand from 125th Street Corridor Rezoning and Related Actions (Expanded Arts Bonus Alternative), and Manhattanville in West Harlem Rezoning and Academic Mixed-Use Development not accommodated in on-site accessory spaces.

percent utilized in the weekday overnight period in the No-Action condition. There would be approximately 315 spaces available in the weekday midday and 1,229 in the weekday overnight.

On-Street

Background growth and new developments in proximity to the rezoning area are also expected to increase demand for metered and non-metered curbside parking spaces in the No-Action condition. As discussed earlier in this chapter, based on existing curbside parking regulations, there are a total of approximately 2,217 legal on-street parking spaces within ¼-mile of the primary development sites in Cluster 1 during the weekday overnight period and 1,927 in the weekday midday. These spaces are expected to remain essentially fully utilized during the weekday midday, and experience increased utilization during the overnight period compared to the 75 percent during this period under existing conditions.

The Future With the Proposed Action (With-Action)

Off-Street

In the future with the Proposed Action, there would be no change to the supply of off-street public parking in the vicinity of the projected development site Cluster 1. Development under RWCDS 3 would,

however, generate new parking demand at these projected development sites. As shown in Table 11-43, during weekdays, the net increase in parking demand would total 121 spaces overnight and 347 spaces in the midday, and would peak at 353 spaces between 3 PM and 4 PM. Under RWCDS 3, a net total of approximately 129 accessory parking spaces would be developed on projected development sites to accommodate this demand. The total peak demand generated by the Proposed Project is therefore expected to exceed the supply of accessory parking developed under RWCDS 3 by approximately 218 spaces in the weekday midday period. There would be sufficient on-site parking capacity to accommodate all of the projected demand during the overnight period.

Typically, any project-generated parking demand not accommodated by accessory parking is assumed to utilize off-street public parking facilities in the vicinity. As shown in Table 11-44, in the future with the Proposed Action, off-street public parking facilities within ½-mile of the primary development sites in Cluster 1 would be operating at approximately 58 percent of capacity with an estimated 1,229 spaces available in the weekday overnight period, and 97 percent of capacity and 97 spaces available in the weekday midday. Therefore, as shown in Table 11-44, there would be sufficient parking capacity within ½-mile of the primary development sites in Cluster 1 to accommodate all project-generated demand not otherwise accommodated in on-site accessory facilities, and a parking shortfall is not expected. Consequently, the Proposed Action would not result in a significant adverse parking impact under *CEQR Technical Manual* criteria. It should be noted, however, that at a 97 percent utilization level, off-street public parking facilities in the vicinity of Cluster 1 would be operating near capacity in the weekday midday in the future with the Proposed Action.

On-Street

In the With-Action condition, on-street parking spaces in proximity to Cluster 1 are expected to remain essentially fully utilized during the weekday midday, with some capacity likely available to accommodate project demand in the weekday overnight period. However, as discussed above, there would be sufficient off-street public parking capacity within ½-mile of the primary development sites comprising Cluster 1 to accommodate all project-generated demand not otherwise accommodated in on-site accessory facilities, and a parking shortfall is not anticipated. However, both on-street and off-street parking would be operating essentially at capacity in the weekday midday period in the With-Action condition.

TABLE 11-43
Weekday Hourly Parking Accumulation for Projected Development on RWCDS 3 Cluster 1

Hour	Neighborhood Retail	Office	Residential	Destination Retail	Community Facility (Office)	Community Facility Recreation	Community Facility Dormitory	Community Facility Museum	Total Parking Accumulation
12-1 AM	0	0	101	0	0	0	20	0	121
1-2	0	0	101	0	0	0	20	0	121
2-3	0	0	101	0	0	0	20	0	121
3-4	0	0	101	0	0	0	20	0	121
4-5	0	0	101	0	0	0	20	0	121
5-6	0	0	99	0	0	0	20	0	119
6-7	0	4	94	0	7	0	19	0	124
7-8	0	21	89	0	42	2	18	0	172
8-9	0	65	73	0	125	5	16	0	284
9-10	0	84	70	4	159	3	16	1	337
10-11	0	85	66	7	159	1	16	4	338
11-12 PM	0	84	65	9	156	1	16	5	336
12-1	0	84	65	9	155	3	16	8	340
1-2	0	87	65	10	159	6	16	4	347
2-3	0	89	65	9	162	6	16	3	350
3-4	0	88	68	8	162	8	15	4	353
4-5	0	62	75	7	116	5	16	1	282
5-6	0	22	83	7	41	1	17	5	176
6-7	0	9	89	7	16	1	18	2	142
7-8	0	1	94	7	1	1	19	2	125
8-9	0	1	99	6	0	0	19	0	125
9-10	0	0	101	3	0	0	20	1	125
10-11	0	0	101	1	0	0	20	0	122
11-12	0	0	101	0	0	0	20	0	121

TABLE 11-44
Summary of With-Action Off-Street Public Parking Conditions Within ½-Mile of Cluster 1

	Weekday Midday (spaces)	Weekday Overnight (spaces)
Capacity		
No-Action Capacity	3,237	2,928
Public Parking Capacity Displaced by Proposed Action	0	0
New Public Parking Capacity Provided by Proposed Action	0	0
Total With-Action Public Parking Capacity	3,237	2,928
New Accessory Capacity Provided at Cluster 1(a)	129	129
Demand		
No-Action Demand	2,922	1,699
Total Projected Demand from Cluster 1	347	121
Projected Demand from Cluster 1 Not Accommodated in Accessory Garages	218	0
Total With-Action Demand at Off-Site Public Facilities	3,140	1,699
Utilization		
With-Action Utilization	97%	58%
With-Action Available Capacity	97	1,229

Notes:
(a) Includes 50 spaces on Site 50 and 79 spaces on Site 40.