Chapter 10: Transportation

A. INTRODUCTION

This chapter assesses the proposed project's potential impact on traffic and parking facilities in the vicinity of the project site. This ~~draft~~ Final Supplemental Environmental Impact Statement (SEIS) updates changes in background conditions since the 2001 *FEIS* and assesses whether any changed background conditions and the differences in program elements between the proposed development program and those assessed in the 2001 *FEIS* for the project block would result in any significant adverse impacts on transportation that were not previously identified in the 2001 *FEIS* findings.

The primary vehicle routes to and from the proposed project are expected to be Twelfth Avenue/Route 9A, West End/Eleventh Avenue, and Amsterdam/Tenth Avenue, with local access via West 57th and West 58th Streets. Pedestrian activity is presently relatively light on sidewalks immediately adjacent to the project block.

The proposed actions are being requested to facilitate the applicant's proposed project, in which it intends to build approximately 1.1 million gsf on the project block consisting of approximately 850,000 gsf of residential space (up to 863 residential units, including up to 151 affordable units, or 20 percent of the units on projected development site 1); approximately 80,000 gsf of commercial office; 62,000 gsf of retail; 28,000 gsf of community facility space; and 285 additional accessory parking spaces. The proposed actions would result in the construction of a new building on the western and midblock portions of the project block (Lots 1, 5, 14, 19, p/o 36, and 43, collectively, projected development site 1), a one to two story midblock community facility building (also located on projected development site 1), the conversion of the mini-storage facility to residential use (p/o Lot 36, projected development site 2), and the creation of new retail space in the existing Helena apartment building (see Figure 1-4). Trip generation analyses were performed based on the proposed project comprising both projected development sites 1 and 2, the community facility building and the additional retail in The Helena building. The community facility space is being analyzed as medical office to represent the highest possible vehicle demand.

As shown later in this chapter, transit trips would fall below 200 trips per hour during the weekday AM and PM peak hours. Therefore, a detailed transit analysis is not warranted. The transit trips are above 200 in the Saturday midday period, but as the background is typically much lower during this period, a transit analysis for this period is not warranted. In addition, there are three bus lines that serve the project site, and the nearest subway station at Columbus Circle includes multiple entrances and five subway lines to distribute the project generated demand. However, the number of pedestrian trips does exceed 200 trips per hour. Therefore, pedestrian analysis was conducted in the immediate vicinity of the proposed project.

PRINCIPAL CONCLUSIONS

The effects of the proposed project on area traffic and parking conditions were analyzed during the weekday AM, weekday midday, weekday PM, and Saturday midday peak periods. When compared to the future without the proposed project, the traffic analysis found that the proposed project would generate 24, 21, and 73 vehicles per hour (vph), in the weekday AM, weekday midday, and Saturday midday peak hours respectively, and would create a negative 35 vehicles per hour in the weekday PM peak hour. Further, the differences between the traffic circulation plans of the future with/without the proposed project creates somewhat different travel patterns. However, the increased travel demand and rerouting of traffic would not result in any significant impacts at the analyzed intersections. By comparison, the 2001 *FEIS* determined that demand generated by the then-analyzed commercial scenario would result in significant adverse traffic impacts at a total of two intersections in the weekday AM peak hour, two in the weekday midday peak hour, and six in the weekday PM peak hour. A number of operational changes to the study area street system were proposed to mitigate these impacts in the 2001 *FEIS.*

The parking analysis found that the proposed project would generate a peak parking demand of 385 spaces during the weekday peak period, including the existing demand from The Helena building. That demand would be accommodated within the proposed project's 285-space accessory parking garage and the existing 100-space accessory parking garage in The Helena residential building. As with the findings in the 2001 *FEIS,* the proposed project would not result in any significant adverse parking impacts.

The pedestrian analysis found that the proposed project would generate an incremental increase between the future with/without the proposed project of 247, -295, 225, and 394 pedestrian trips, which include pedestrians walking to and from the subway and bus, during the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours respectively. As the number of pedestrians within the study area is relatively light during existing conditions, the incremental increase of pedestrians in the study area would not cause impacts on the adjacent sidewalks, crosswalks or corners. As with the findings in the 2001 *FEIS,* the proposed project would not result in any significant adverse pedestrian impacts.

B. SUMMARY OF 2001 FEIS FINDINGS

VEHICULAR TRAFFIC

The analysis of vehicular traffic in the 2001 *FEIS* examined the potential for impacts in a study area extending from West 53rd Street on the south to West 66th Street on the north, and from Eighth Avenue on the east to Twelfth Avenue on the west. Two project scenarios were assessed in the 2001 *FEIS*, one comprising primarily commercial space (Scenario A) and one with a mix of office and residential space (Scenario B). Scenario A was analyzed as the worst-case condition with respect to transportation, as it was forecast to generate a higher level of travel demand than Scenario B. As noted above, only The Helena residential building has been constructed to date.

The future with the proposed project scenario traffic analysis in the 2001 *FEIS* assumed construction of a new two-way, 40-foot-wide service drive connecting West 57th and West 58th Streets through the project block, providing direct access to the then proposed project's western building for drop-offs and to a proposed parking garage. It was also assumed that the West 58th Street roadbed would be widened from 34 to 38 feet, with two-way operation maintained between Eleventh and Twelfth Avenues, and that all curb cuts serving the then proposed project

would be located on this block (with the exception of the service drive on West 57th Street). This proposed street configuration was expected to allow immediate access from Route 9A to all driveways for arriving traffic, and allow all exiting traffic immediate access to northbound Route 9A (via two-way West 58th Street to the West 59th Street highway underpass). It was also expected to provide a continuous circulation route for taxis headed to and from the project site. In addition, it was assumed that the then proposed project would provide a two-vehicle electric bus circulator running eastbound from the service drive along West 58th Street to the 59th Street-Columbus Circle subway station, and returning to the project site via West 57th Street.

Based on the projected vehicular demand generated by Scenario A, the 2001 *FEIS* analysis determined that project-generated demand would result in significant adverse traffic impacts at a total of two intersections in the weekday AM peak hour, two in the weekday midday peak hour, and six in the weekday PM peak hour. A number of operational changes to the study area street system were therefore proposed to mitigate these impacts. These mitigation measures included parking regulation and lane configuration changes at two affected intersections, and changes in signalization at five affected intersections.

PARKING

The analysis of parking conditions in the 2001 *FEIS* assumed that approximately 638 parking spaces would be provided on the project block in two public parking garages, sufficient to accommodate all of the proposed project's peak demand of 571 spaces in the midday. No significant adverse parking impacts were therefore identified.

PEDESTRIANS

The analysis of pedestrian conditions in the 2001 *FEIS* assumed that project-generated pedestrian demand would be distributed along several corridors providing access to the project block, but would be primarily concentrated on Eleventh Avenue and on West 57th Street adjacent to the project site. Given the negligible pedestrian flows on these sidewalks projected for the future without the proposed project, no significant adverse pedestrian impacts were anticipated.

C. ANALYTICAL FRAMEWORK

As discussed in Chapter 1, "Project Description," the analyses in this SEIS compare conditions in the future without the proposed project to conditions in the future with the proposed project. The future without the proposed project in all technical areas assumes that none of the discretionary actions now being sought by the applicant are approved. Absent those approvals, it is assumed that development on the projected development sites would be within the envelope of the development analyzed in the 2001 *FEIS*, but with a commercial building containing approximately 331,300 gsf of office use, 67,500 gsf of retail use and 239 public parking spaces on projected development site 1. (Absent the approvals, there would be no change in the assumed development of projected development site 2—the existing mini-storage building would remain). The assumption regarding projected development site 1 is based on the fact that the applicant has applied for a building permit for such a building (the permitted building). The permitted building can be constructed under the land use approvals granted in 2001 without further discretionary approvals or actions. It would be smaller than that which is permitted under current zoning, and, accordingly, assuming that development on projected development site 1 as a basis for comparing the impacts of the proposed project to the future without the proposed project is more conservative than using the more fully built out development scenario that was analyzed in the 2001 *FEIS*.

D. METHODOLOGY

The study area selected for the traffic analysis for the proposed project is shown in **Figure 10-1**. The study area was selected to encompass those roadways and other facilities most likely to be used by the majority of incremental persons and vehicles traveling to and from the proposed project. Under 2012 *CEQR Technical Manual* criteria, intersections at which a proposed action would generate a net increase of 50 or more vehicles per hour (vph) in one or more peak hours are typically analyzed for potential significant adverse impacts. Based on an initial screening assessment, a total of two signalized intersections were selected for analysis as locations where the net increase in vehicle trips generated by the proposed project are expected to exceed this threshold in one or more peak hours. The study area is bounded on the north by West 58th Street, on the south by West 57th Street, on the east by Eleventh Avenue, and on the west by Twelfth Avenue/Route 9A. The two intersections within the study area were analyzed for vehicular traffic during four time periods—the weekday AM (8–9 AM), weekday midday (12–1 PM), weekday PM (5–6 PM), and Saturday midday (1–2 PM) peak hours.

This chapter begins by describing in detail existing conditions in the year 2011 for traffic, parking, and pedestrians in the study area. The 2015 conditions in the future without the proposed project are then determined, including additional transportation-system demand and changes in the roadways, parking systems, and pedestrians expected by 2015. The future with the proposed project analyzes the increase in travel demand resulting from the proposed project along with the street circulation changes that would be made in connection with the proposed project and adds these changes to the future without the proposed project. Significant impacts, if any, from project-generated demands are then identified. As noted above, there would be no significant traffic or parking impacts associated with the proposed project.

E. EXISTING CONDITIONS

Existing 2011 traffic conditions in the study area were developed from data primarily collected in September 2008 and March 2009 for the *Riverside Center SEIS* at the two intersections that comprise the study area. This data collection included turning movement counts and vehicle classification counts. The volumes were grown at a rate of 0.25 percent per year to represent 2011 conditions, as per the 2012 *CEQR Technical Manual*. **Figure 10-2** shows the resultant traffic volumes for 2011 existing conditions during the weekday AM, midday, PM, and Saturday midday peak hours, respectively.

VEHICULAR TRAFFIC

The study area is typical of the Manhattan grid, composed of major north-south avenues and principal as well as minor east-west cross-streets.

Eleventh Avenue, which runs from 14th Street (where it continues south as West Street) to West 59th Street (where it continues north as West End Avenue, is a 70 foot wide, two-way arterial with two lanes in each direction, plus parking. Parking is typically restricted, especially southbound in the AM peak hour and northbound in the PM peak. The avenue provides left-turn lanes at most intersections south of West 66th Street. Two-way traffic volumes between West 57th and West 58th Streets range from 1,174 vph to 1,834 vph, with the heaviest traffic coming in the AM peak hour. The M57 bus operates along Eleventh Avenue north of West 57th Street and the M31 bus operates along Eleventh Avenue south of West 57th Street. Eleventh Avenue runs from Battery Place in Battery Park City to West 107th Street and Broadway on the Upper

Figure 10-1
Project Site Location and Street Network

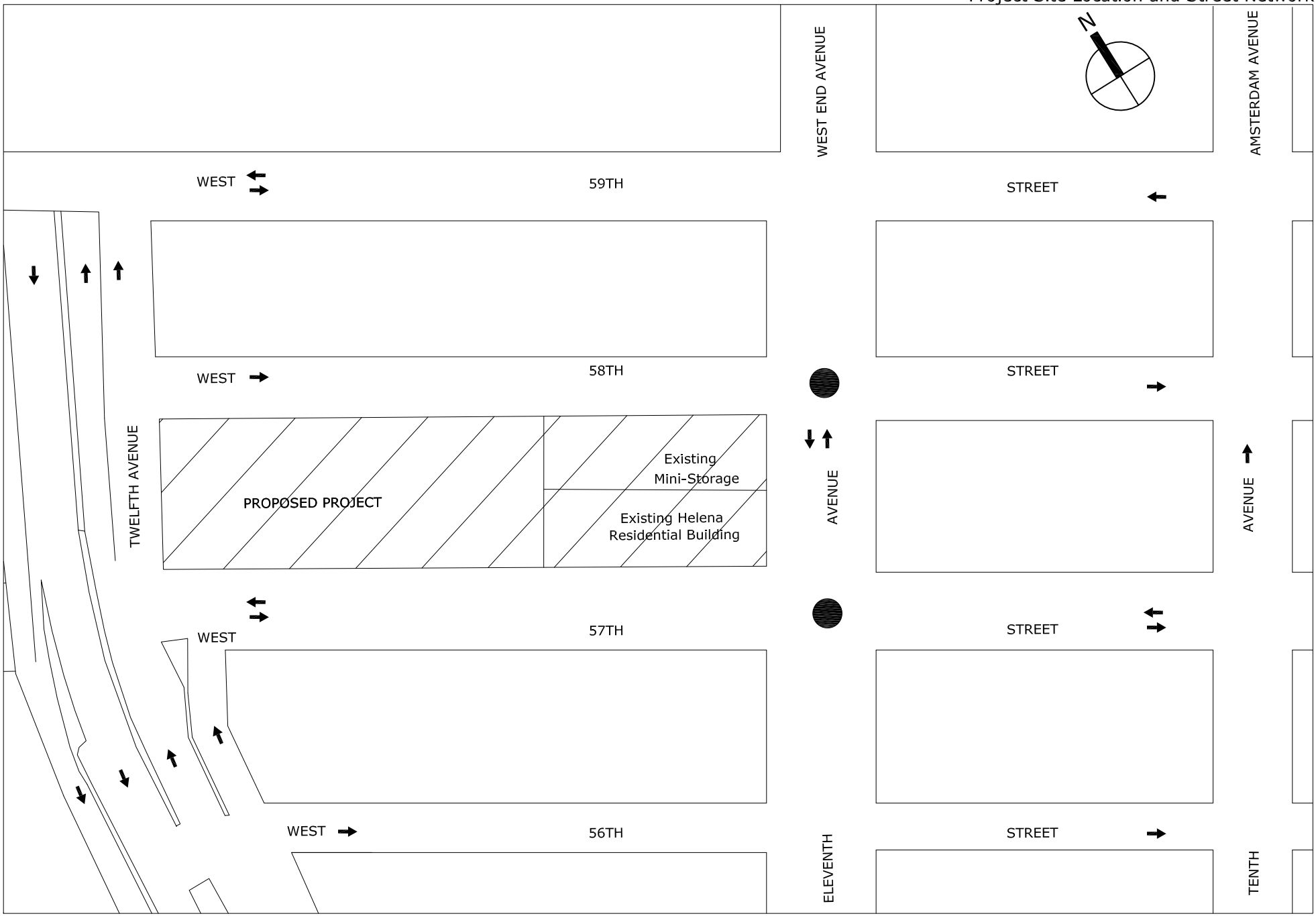
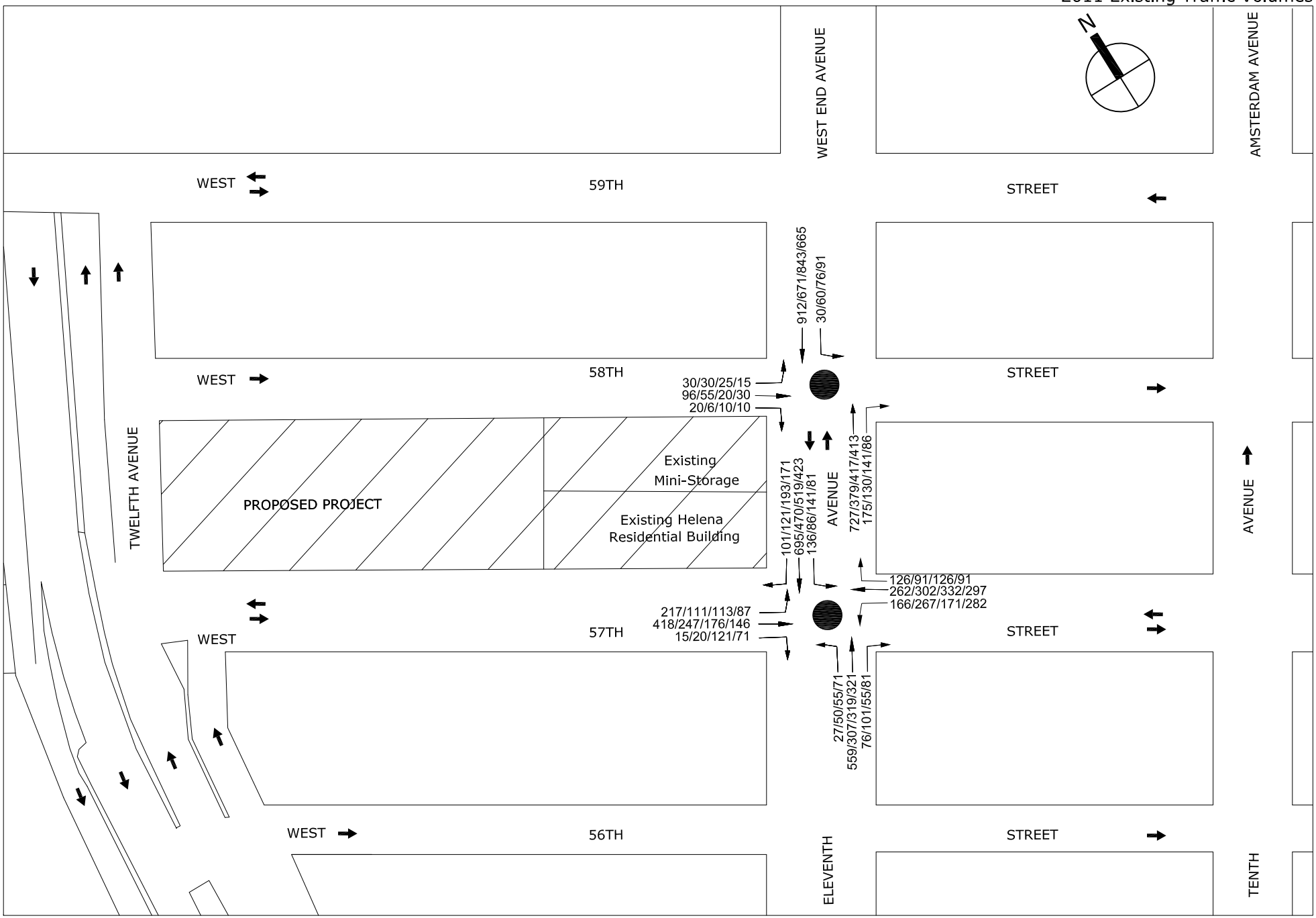


Figure 10-2
2011 Existing Traffic Volumes



West Side. Eleventh Avenue is referred to as West Street from Battery Place to Gansevoort Street and as West End Avenue from West 59th Street to West 107th Street. New York Route 9A follows Eleventh Avenue south of West 22nd Street.

West 57th Street to the south of the project block is a principal east-west cross street within the study area. It is approximately 60 feet wide with two travel lanes in each direction and parking on both sides of the street except at intersection approaches where there is a left turn bay. It runs from Twelfth Avenue to Sutton Place and carries between 843 vph and 1,184 vph through the study area. The M57 and M31 buses operate along 57th Street.

West 58th Street to the north of the project block is a local one-way eastbound cross street within the study area. It is approximately 34 feet wide with one travel lane and parking along both sides of the street, but parking is typically restricted to vehicles with special plates due to facilities such as the John Jay College of Criminal Justice and St. Luke's Hospital.

Twelfth Avenue to the west of the project block acts as a service road for Route 9A. It mostly serves vehicles making a U-turn at West 59th Street to access facilities on southbound Route 9A such as the ship terminals, although it does serve some local traffic, including buses that would lay over on West 59th Street between Eleventh and Twelfth Avenues.

CAPACITY ANALYSIS

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

The HCM methodology 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, to F, which represents long delays and congestion. Generally, congestion and poor service are characterized by both LOS E and F. **Table 10-1** defines the LOS/delay relationship for the HCM methodology for signalized intersections.

The methodology also provides a volume-to-capacity (v/c) ratio for intersection traffic movements. A ratio of under 0.85 is generally considered to represent non-congested conditions in Manhattan, whereas above this value, congestion increases. At a v/c ratio of between 0.95 and 1.00, near-capacity conditions are reached and delays can become substantial. Ratios of greater than 1.05 indicate saturated conditions with queuing.

Table 10-1
Intersection Level of Service Criteria

Level of Service (LOS)	Average Delay per Vehicle (seconds)	
	Signalized Intersections	Unsignalized Intersections
A	≤10	0 – 10
B	> 10 - 20	> 10 – 15
C	> 20 - 35	> 15 – 25
D	> 35 - 55	> 25 – 35
E	>55 - 80	> 35 – 50
F	> 80	> 50

Source: *2000 Highway Capacity Manual.*

Table 10-2 shows the results of the capacity analysis at the two study area intersections analyzed in the four peak hours for the existing conditions. The table highlights (with an asterisk *) those intersection movements that operate at LOS E or F and/or have a high v/c ratio (generally 0.90 and above), and are therefore considered to be congested. **Table 10-2** shows that none of the study area intersections have one or more congested movements in any of the analyzed peak hours.

PARKING

The Helena residential building on the southeast corner of the project block has an existing 100-space accessory garage which operates at or near capacity. There is also a 19-space accessory parking lot for the mini-storage site on the northeast corner of the project block. The proposed project would have 285 accessory parking spaces in a garage on 58th Street in addition to the existing 100 space garage in The Helena residential building, for a total of 385 parking spaces. Since the parking capacity is expected to meet demand in the future with the proposed project, the analysis of off-street parking facilities within a ¼-mile radius of the project site is unnecessary.

PEDESTRIANS

STUDY AREA

At present, pedestrian activity is relatively light at the sidewalks, crosswalks, and street corners immediately adjacent to the project block. This reflects the project site's location near the western edge of the Manhattan street grid and the absence of major pedestrian traffic generators such as a subway station or a school in the immediate vicinity. New pedestrian trips generated by the proposed project are expected to be most concentrated along West 58th Street, which would be the most direct route between the project site and the 59th Street-Columbus Circle subway station, and West 57th Street, which is a major crosstown thoroughfare. The analysis of pedestrian conditions therefore focuses on sidewalks, crosswalks and corner areas on the project block along Eleventh Avenue, as follows. The pedestrian analysis was slightly expanded from the 2001 *FEIS* to include crosswalks and corners in addition to the adjacent sidewalks.

SIDEWALKS

- South sidewalk of West 58th Street between Twelfth and Eleventh Avenues
- North sidewalk of West 57th Street between Twelfth and Eleventh Avenues
- West sidewalk of Eleventh Avenue between West 57th and West 58th Streets

STREET CORNERS

- Southwest corner of West 58th Street and Eleventh Avenue
- Northwest corner of West 57th Street and Eleventh Avenue

CROSSWALKS

- South and west crosswalks at West 58th Street and Eleventh Avenue
- North and west crosswalks at West 57th Street and Eleventh Avenue

Table 10-2
2011 Existing Traffic Levels of Service

	LANE GROUP	AM PEAK HOUR V/C RATIO	AM PEAK HOUR Delay (sec.)	AM PEAK HOUR LOS	MD PEAK HOUR V/C RATIO	MD PEAK HOUR Delay (sec.)	MD PEAK HOUR LOS	PM PEAK HOUR V/C RATIO	PM PEAK HOUR Delay (sec.)	PM PEAK HOUR LOS	Sat MD PEAK HOUR V/C RATIO	Sat MD PEAK HOUR Delay (sec.)	Sat MD PEAK HOUR LOS
West 58th Street (E-W) @	EB-LTR	0.30	23.0	C	0.18	21.4	C	0.12	20.7	C	0.12	20.6	C
Eleventh Avenue (N-S)	NB-TR	0.53	13.8	B	0.29	11.5	B	0.31	11.6	B	0.29	11.4	B
	SB-L	0.19	12.1	B	0.20	11.7	B	0.27	12.8	B	0.32	13.7	B
	SB-T	0.70	17.0	B	0.49	13.8	B	0.62	15.6	B	0.48	13.7	B
West 57th Street (E-W) @	EB-L	0.77	37.2	D	0.41	19.7	B	0.44	20.6	C	0.30	17.8	B
Eleventh Avenue (N-S)	EB-TR	0.60	29.3	C	0.36	26.0	C	0.48	28.0	C	0.31	25.4	C
	WB-L	0.62	24.7	C	0.84	41.0	D	0.54	23.6	C	0.84	40.1	D
	WB-TR	0.57	29.2	C	0.55	28.4	C	0.64	30.4	C	0.54	28.2	C
	NB-L	0.17	17.0	B	0.23	17.7	B	0.31	20.1	C	0.33	20.0	B
	NB-TR	0.55	19.8	B	0.36	17.4	B	0.33	16.9	B	0.36	17.3	B
	SB-L	0.68	31.1	C	0.31	18.5	B	0.48	21.7	C	0.29	18.0	B
	SB-TR	0.73	23.2	C	0.56	20.2	C	0.68	22.5	C	0.57	20.5	C

Notes:

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

L-Left, T-Through, R-Right, Dfl-Analysis considers a Defacto Left Lane on this approach

V/C Ratio - Volume to Capacity Ratio, sec. - Seconds

LOS - Level of Service

Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.4)

ANALYSIS METHODOLOGY

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. 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 10-3** defines the LOS criteria for pedestrian sidewalk conditions, and **Table 10-4** defines the LOS criteria for pedestrian crosswalk/corner area conditions, as based on the *Highway Capacity Manual* methodology.

Table 10-3
Sidewalk Level of Service Criteria

Level of Service (LOS)	Average Delay per Vehicle (pmf)	
	Average Flow	Platoon-Adjusted Flow
A	≤ 5	≤ 0.5
B	> 5 - 7	> 0.5 - 3
C	> 7 - 10	> 3 - 6
D	> 10 - 15	> 6 - 11
E	> 15 - 23	> 11 - 18
F	> 23	> 18

Source: *2000 Highway Capacity Manual.*

Table 10-4
Corner and Crosswalk Level of Service Criteria

Level of Service (LOS)	Average Pedestrian Space (ft^2/pedestrian)
A	> 60
B	> 40 - 60
C	> 24 - 40
D	> 15 - 24
E	> 8 - 15
F	≤ 8

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.

Tables 10-5 and 10-6 show the results of the pedestrian analysis at the existing sidewalks and corners/crosswalks, respectively. The tables show that all of the sidewalks, corners, and crosswalks analyzed have a Level of Service of A under existing conditions.

TRANSIT

The nearest subway station to the proposed project is the 59th Street-Columbus Circle station, which serves the IND Eighth Avenue Line (A,B,C, and D trains) and the IRT Broadway-Seventh Avenue Line (1 train).

Bus routes that stop within the area include the M11 which runs uptown on Tenth and Amsterdam Avenues to Riverbank State Park and downtown on Columbus and Ninth Avenues to Abingdon Square in the West Village, the M31 which runs crosstown on 57th Street and uptown on York Avenue to East 92nd Street, and the M57 which runs crosstown on 57th Street and uptown on Eleventh and West End Avenues to West 72nd Street. Express bus routes serving the area include the X12 and X42 buses to Mariner's Harbor, the X14 bus to Port Richmond, and the X30 bus to Sunnyside, Staten Island.

As shown in **Table 10-13** (see section G), the proposed project is expected to generate an incremental change over the future without the proposed project of 37, 149, 6, and 280 subway trips in the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours respectively. As per the 2012 *CEQR Technical Manual*, with fewer than 200 subway trips in the AM and PM commuting peak periods it is unlikely that the proposed project would result in any significant subway impacts and therefore further analysis is not provided in this EIS. In addition, the proposed project's increment also generates fewer than 200 bus trips in any of the peak hours and therefore no further analysis is warranted as impacts are unlikely.

F. THE FUTURE WITHOUT THE PROPOSED PROJECT

In order to determine the conditions of the 2015 future without the proposed project, traffic due to the major development projects (taking into account any project associated mitigation) listed in Chapter 2, "Land Use, Zoning, and Public Policy," along with an annual background growth rate of 0.25 percent per year for the first five years and 0.125 percent per year thereafter. As the future with the proposed project year is less than five years after the existing year, only the growth rate of 0.25 percent per year was used. In addition to the list of future without the proposed project site developments in Chapter 2, "Land Use, Zoning, and Public Policy," the traffic demand from the Western Rail Yard Project was included in the traffic analysis as a future without the proposed project site. Further, under the future without the proposed project on the project block, the applicant has filed an application for a building permit with the New York City Department of Buildings (DOB) for a new building (the permitted building) on the mid- and western portions of the block pursuant to existing zoning and approvals for the site. Under this application, the mid- and western portions of the block would be developed with approximately 331,300 gsf of office use; 67,500 gsf of retail uses; and 239 public parking spaces. Subsequent to that filing, the applicant determined it would not construct new below-grade parking at the site, and amended the application to include only the 239 space above grade public parking garage permitted under the existing special permits.

Table 10-5
2011 Existing Sidewalk Conditions

Intersection	Location		Effective Width (ft)	Existing Peak 15-Minute Volumes				Flow Rate (per/min/ft)				Average Flow Level of Service				Platoon-Adjusted Level of Service			
				AM	MD	PM	Sat MD	AM	MD	PM	Sat MD	AM	MD	PM	Sat MD	AM	MD	PM	Sat MD
West 58th Street (South Side) btw Eleventh and Twelfth Avenues	South	EB		3	3	2	4												
		WB		3	4	2	5												
		Total	6.5	6	7	4	9	0.1	0.1	0.0	0.1	A	A	A	A	A	A	A	A
West 57th Street (North Side) btw Eleventh and Twelfth Avenues	North	EB		41	18	22	31												
		WB		13	33	49	31												
		Total	11.5	54	51	71	62	0.3	0.3	0.4	0.4	A	A	A	A	A	A	A	A
Eleventh Avenue (West Side) btw West 57th and West 58th Streets	West	EB		15	24	28	19												
		WB		31	23	23	25												
		Total	8.0	46	47	51	44	0.4	0.4	0.4	0.4	A	A	A	A	A	A	A	A

Table 10-6
2011 Existing Corner and Crosswalk Conditions

Corners

Intersection	Corner	Curb Radii (feet)	Existing Peak 15-Minute Volumes AM	MD	PM	SAT MD	Average Pedestrian Space (sq-ft/ped) AM	MD	PM	SAT MD	Existing Level of Service AM	MD	PM	SAT MD
West 58th Street and Eleventh Avenue	SW	15	3	5	1	4	508.6	616.2	525.1	553.1	A	A	A	A
West 57th Street and Eleventh Avenue	NW	21	8	9	13	16	398.0	389.0	347.7	461.2	A	A	A	A

Crosswalks

Intersection	Crosswalk	Direction	Existing Peak 15-Minute Volumes AM	MD	PM	SAT MD	Average Pedestrian Space (sq-ft/ped) AM	MD	PM	SAT MD	Existing Level of Service AM	MD	PM	SAT MD
		EB	10	5	5	7								
		WB	3	4	8	7								
West 58th Street and Eleventh Avenue	South	Total	13	9	13	14	620.3	906.7	624.5	579.6	A	A	A	A
		NB	17	18	27	16								
		SB	31	21	21	25								
	West	Total	48	39	48	41	255.7	317.1	255.7	301.1	A	A	A	A
		EB	33	21	21	22								
		WB	13	33	43	23								
West 57th Street and Eleventh Avenue	North	Total	46	54	64	45	155.9	136.6	111.0	164.7	A	A	A	A
		EB	19	26	31	16								
		WB	39	27	22	21								
	West	Total	58	53	53	37	190.4	206.6	198.1	290.1	A	A	A	A

VEHICULAR TRAFFIC

Traffic forecasts were made for each of the four peak hours analyzed, and **Figure 10-3** shows the anticipated weekday AM, midday, PM, and Saturday midday peak hour traffic volumes in the study area for 2015 future without the proposed project. Capacity analyses were then prepared for each intersection. **Table 10-7** shows the result of these analyses. The table shows that with 2015 future without the proposed project, the westbound left turn of West 57th Street and Eleventh Avenue would experience congestion during the Midday and Saturday Peak Hours, as compared to none under the 2011 existing conditions. During the weekday midday and Saturday midday peak hour, the westbound left movement at West 57th Street and Eleventh Avenue, operates at an LOS D with a delay greater than 45.0 seconds under the future without the proposed project, but with v/c ratios of 0.92 and 0.90, respectively.

PARKING

In the 2015 future without the proposed project, a new accessory 239-space public facility would be built in the permitted building with access on West 58th Street. Combined with the existing 100 space accessory parking garage in The Helena residential building, there will be a total of 339 spaces on-site. **Tables 10-8 and 10-9** shows the weekday and weekend 24 hour accumulation for both the existing on-site 100 space accessory garage and the permitted building's 239 space public parking garage together. As shown in the tables, both garages would be able to handle the demand from the residential building during the weekday AM period, weekday PM period, and Saturday midday period. However, during the weekday midday period, nine vehicles would not be able to enter the garage.

PEDESTRIANS

In the 2015 future without the proposed project, all pedestrian volumes were grown at a rate of 0.25 percent per year for four years, as per the 2012 *CEQR Technical Manual*. In addition, the increments from the 2015 future without the proposed project and future with the proposed project increments for Riverside Center Buildings 2 and 5 which come up the west side of West End Avenue were added onto the sidewalks and crosswalks on Eleventh Avenue, assuming the worst-case scenario. Finally, the increments for the permitted building were added, which were based off of the sum of the total person trips using buses, the subway, who walked, or who used any mode of transportation other than auto or taxi.

As a result, the 2015 future without the proposed project pedestrian levels of service deteriorate to LOS B on all three analyzed sidewalks for platoon-adjusted flow in all four time periods; the pedestrian levels of service for the west crosswalk on Eleventh Avenue crossing West 57th Street deteriorates to LOS B in the weekday AM and weekday midday peak periods and to LOS C in the weekday PM and Saturday midday peak periods; the west crosswalk on Eleventh Avenue crossing West 58th Street deteriorates to LOS B in the weekday AM and weekday midday peak periods, to LOS D in the weekday PM peak period, and to LOS C in the Saturday midday peak period; and the north crosswalk on West 57th Street crossing Eleventh Avenue deteriorates to LOS B in the weekday midday peak period and to LOS C during the weekday PM peak period. All other levels of service remain at LOS A. **Tables 10-10 and 10-11** show the results of the pedestrian analysis.

Table 10-7

2015 Future Without the Proposed Project Traffic Levels of Service

	LANE GROUP	EXISTING AM PEAK HOUR			FUTURE WITHOUT THE PROPOSED PROJECT AM PEAK HOUR			EXISTING MD PEAK HOUR			FUTURE WITHOUT THE PROPOSED PROJECT MD PEAK HOUR			EXISTING PM PEAK HOUR			FUTURE WITHOUT THE PROPOSED PROJECT PM PEAK HOUR			EXISTING SAT MD PEAK HOUR			FUTURE WITHOUT THE PROPOSED PROJECT SAT MD PEAK HOUR			
		V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	
West 58th Street (E-W) @ Eleventh Avenue (N-S)	EB-LTR	0.30	23.0	C	0.36	23.9	C	0.18	21.4	C	0.33	23.4	C	0.12	20.7	C	0.46	26.1	C	0.12	20.6	C	0.26	22.5	C	
	NB-TR	0.53	13.8	B	0.57	14.4	B	0.29	11.5	B	0.33	11.8	B	0.31	11.6	B	0.35	11.9	B	0.29	11.4	B	0.33	11.7	B	
	SB-L	0.19	12.1	B	0.32	15.1	B	0.20	11.7	B	0.25	12.7	B	0.27	12.8	B	0.35	14.4	B	0.32	13.7	B	0.39	15.6	B	
	SB-T	0.70	17.0	B	0.78	19.2	B	0.49	13.8	B	0.54	14.6	B	0.62	15.6	B	0.68	16.9	B	0.48	13.7	B	0.54	14.5	B	
West 57th Street (E-W) @ Eleventh Avenue (N-S)	EB-L	0.77	37.2	D	0.85	47.3	D	0.41	19.7	B	0.43	20.6	C	0.44	20.6	C	0.47	21.8	C	0.30	17.8	B	0.33	18.5	B	
	EB-TR	0.60	29.3	C	0.69	31.3	C	0.36	26.0	C	0.42	26.8	C	0.48	28.0	C	0.55	29.3	C	0.31	25.4	C	0.36	26.0	C	
	WB-L	0.62	24.7	C	0.71	35.1	D	0.84	41.0	D	0.92	52.2	D	*	0.54	23.6	C	0.61	26.9	C	0.84	40.1	D	0.90	48.7	D	*
	WB-TR	0.57	29.2	C	0.68	31.8	C	0.55	28.4	C	0.62	29.8	C		0.64	30.4	C	0.72	32.6	C	0.54	28.2	C	0.62	29.7	C	
	NB-L	0.17	17.0	B	0.28	20.2	C	0.23	17.7	B	0.29	19.5	B		0.31	20.1	C	0.41	24.8	C	0.33	20.0	B	0.40	22.6	C	
	NB-TR	0.55	19.8	B	0.41	17.5	B	0.36	17.4	B	0.44	18.4	B		0.33	16.9	B	0.40	17.9	B	0.36	17.3	B	0.42	18.1	B	
	SB-L	0.68	31.1	C	0.77	37.2	D	0.31	18.5	B	0.41	21.0	C		0.48	21.7	C	0.65	28.2	C	0.29	18.0	B	0.40	20.6	C	
	SB-TR	0.73	23.2	C	0.83	26.7	C	0.56	20.2	C	0.65	22.0	C		0.68	22.5	C	0.79	26.0	C	0.57	20.5	C	0.66	22.3	C	

Notes:

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

L-Left, T-Through, R-Right, Dfl-Analysis considers a Defacto Left Lane on this approach

V/C Ratio - Volume to Capacity Ratio, sec. - Seconds

LOS - Level of Service

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

Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.4)

Table 10-8

Weekday Future Without the Proposed Project Parking Accumulation

	Destination Retail 67,505 gsf		Office 331,275 gsf		Mini Storage 98,414 gsf		Residential 597 du		Total Trips		Accumulation	Demand not Accomodated in 100-Space Accessory Garage or 239-Space Public Garage
	In	Out	In	Out	In	Out	In	Out	In	Out		
12-1 AM	0	0	0	0	0	0	1	1	1	1	155	0
1-2	0	0	0	0	0	0	1	1	1	1	155	0
2-3	0	0	0	0	0	0	1	1	1	1	155	0
3-4	0	0	0	0	0	0	1	1	1	1	155	0
4-5	0	0	0	0	0	0	1	1	1	1	155	0
5-6	0	0	0	0	0	0	1	4	1	4	152	0
6-7	1	0	11	0	0	0	4	12	16	12	156	0
7-8	1	1	53	1	1	0	4	13	59	15	200	0
8-9	5	3	128	7	12	13	7	35	152	58	294	0
9-10	8	2	64	13	4	2	7	11	83	28	349	10
10-11	10	5	31	23	9	5	7	13	57	46	360	21
11-12	11	8	8	22	8	8	8	11	35	49	346	7
12-1 PM	13	11	4	4	13	13	10	10	40	38	348	9
1-2	11	11	9	4	11	10	11	11	42	36	354	15
2-3	10	12	33	16	11	8	11	11	65	47	372	33
3-4	10	12	24	28	9	8	16	10	59	58	373	34
4-5	11	12	14	82	9	10	27	16	61	120	314	0
5-6	11	13	24	134	14	12	31	15	80	174	220	0
6-7	10	10	12	65	6	11	21	10	49	96	173	0
7-8	11	9	6	28	5	9	19	10	41	56	158	0
8-9	5	10	6	0	4	6	12	4	27	20	165	0
9-10	2	11	0	0	1	2	4	4	7	17	155	0
10-11	2	2	0	0	0	0	2	2	4	4	155	0
11-12	0	1	0	0	0	0	1	1	1	2	154	0

Sources: Destination Retail- ITE 7th Edition, Office & Residential - Pushkarev and Zuppan "Urban Space for Pedestrians", Mini Storage - West 57th Street Rezoning EIS

Table 10-9

Saturday Future Without the Proposed Project Parking Accumulation

	Destination Retail 67,505 gsf		Office 331,275 gsf		Mini Storage 98,414 gsf		Residential 597 du		Total Trips		Accumulation	Demand not Accomodated in 100-Space Accessory Garage or 239-Space Public Garage
	In	Out	In	Out	In	Out	In	Out	In	Out		
12-1 AM	0	0	0	0	0	0	1	1	1	1	155	0
1-2	0	0	0	0	0	0	1	1	1	1	155	0
2-3	0	0	0	0	0	0	1	1	1	1	155	0
3-4	0	0	0	0	0	0	1	1	1	1	155	0
4-5	0	0	0	0	0	0	1	1	1	1	155	0
5-6	0	0	0	0	0	0	2	4	2	4	153	0
6-7	1	0	2	0	0	0	4	15	7	15	145	0
7-8	1	1	12	0	0	0	5	22	18	23	140	0
8-9	7	3	28	1	9	9	5	30	49	43	146	0
9-10	10	4	14	3	3	1	7	20	34	28	152	0
10-11	16	8	7	5	6	3	8	20	37	36	153	0
11-12	20	13	2	5	6	6	8	17	36	41	148	0
12-1 PM	22	17	1	1	8	7	10	30	41	55	134	0
1-2	23	19	3	2	9	9	21	18	56	48	142	0
2-3	23	22	7	4	8	5	21	21	59	52	149	0
3-4	21	23	5	6	6	6	19	7	51	42	158	0
4-5	17	26	3	18	7	7	18	18	45	69	134	0
5-6	10	23	5	29	10	9	36	5	61	66	129	0
6-7	5	15	3	14	4	8	26	5	38	42	125	0
7-8	4	4	1	6	4	7	25	4	34	21	138	0
8-9	3	5	1	0	2	5	16	4	22	14	146	0
9-10	2	2	0	0	1	1	7	1	10	4	152	0
10-11	2	3	0	0	0	0	3	1	5	4	153	0
11-12	1	3	0	0	0	0	2	1	3	4	152	0

Sources: Destination Retail- ITE 7th Edition, Office & Residential - Pushkarev and Zuppan "Urban Space for Pedestrians", Mini Storage - West 57th Street Rezoning EIS

Table 10-10

2015 Future Without the Proposed Project Sidewalk Conditions

Intersection	Location		Effective Width (ft)	Future Without the Proposed Project Peak 15-Minute Volumes				Flow Rate (per/min/ft)				Average Flow Level of Service				Platoon-Adjusted Level of Service			
				AM	MD	PM	Sat MD	AM	MD	PM	Sat MD	AM	MD	PM	Sat MD	AM	MD	PM	Sat MD
West 58th Street (South Side) btw Eleventh and Twelfth Avenues	South	EB WB Total	6.5	137	186	191	118	1.4	1.9	2.0	1.2	A	A	A	A	B	B	B	B
West 57th Street (North Side) btw Eleventh and Twelfth Avenues	North	EB WB Total	11.5	126	221	185	163	0.7	1.3	1.1	0.9	A	A	A	A	B	B	B	B
Eleventh Avenue (West Side) btw West 57th and West 58th Streets	West	EB WB Total	8.0	166	154	281	280	1.4	1.3	2.3	2.3	A	A	A	A	B	B	B	B

Table 10-11

2015 Future Without the Proposed Project Corner and Crosswalk Conditions

Corners

Intersection	Corner	Curb Radii (feet)	Future Without the Proposed Project Peak 15-Minute Volumes				Average Pedestrian Space (sq-ft/ped)				Future Without the Proposed Project Level of Service			
			AM	MD	PM	SAT MD	AM	MD	PM	SAT MD	AM	MD	PM	SAT MD
West 58th Street and Eleventh Avenue	SW	15	6	10	7	9	100.8	90.7	62.2	80.6	A	A	A	A
West 57th Street and Eleventh Avenue	NW	21	15	11	22	18	148.7	118.9	93.8	102.0	A	A	A	A

Crosswalks

Intersection	Crosswalk	Direction	Future Without the Proposed Project Peak 15-Minute Volumes				Average Pedestrian Space (sq-ft/ped)				Future Without the Proposed Project Level of Service			
			AM	MD	PM	SAT MD	AM	MD	PM	SAT MD	AM	MD	PM	SAT MD
West 58th Street and Eleventh Avenue	South	EB	15	37	62	25	113.1	103.9	69.9	140.9	A	A	A	A
		WB	54	38	27	31								
		Total	69	75	89	56								
		NB	83	139	206	96								
		SB	156	112	170	232								
	West	Total	239	251	376	328	44.3	41.8	23.0	30.4	B	B	D	C
West 57th Street and Eleventh Avenue	North	EB	39	66	74	46	75.9	49.2	39.2	73.4	A	B	C	A
		WB	52	76	61	51								
		Total	91	142	135	97								
		EB	90	102	132	79								
		WB	96	103	169	212								
	West	Total	186	205	301	291	54.5	48.7	25.6	31.9	B	B	C	C

G. PROBABLE IMPACTS OF THE PROPOSED PROJECT

Trip generation analysis assumed the land usage for the proposed project. This includes 62,000 gsf of destination retail space, 863 residential units, 80,000 gsf of commercial office space, and 28,000 gsf of medical office space. In order to accommodate for the residential units, the existing mini-storage facility would be redeveloped as a residential building. In addition, the proposed project would have a 285-space accessory garage with access on West 58th Street. The existing 100-space accessory garage in The Helena residential building would operate similarly to the scenario with the future without the proposed project.

ACCESS AND CIRCULATION

The following section describes the pedestrian and vehicular access points that are proposed as part of the site plan (see Chapter 1, "Project Description"). The actual parking regulations surrounding the project site will be subject to NYCDOT approval. There would be no vehicular access to or egress from the project site on Eleventh or Twelfth Avenue.

WEST 57TH STREET

The southern frontage of the project site would include pedestrian access to the various retail and community facilities on the project block. In addition, a through-block drive with a 24-foot wide roadway operating one-way northbound between West 57th and West 58th Streets would be located approximately 500 feet from Twelfth Avenue. Pedestrian access to the proposed project's residential lobby and vehicular access to the existing 100-space accessory parking garage in The Helena residential building on the project block would be from this access drive. The existing curb cut to the accessory parking at The Helena residential building on West 57th Street would be eliminated.

WEST 58TH STREET

The northern frontage of the project site would provide pedestrian access to the various retail and community facilities on the project block. The through-block drive would exit onto West 58th Street, and the entrance-exit for the 285-space accessory garage would be located on West 58th Street. A loading dock would be provided on West 58th Street toward the western side of the block. In addition, West 58th Street between Eleventh Avenue and Twelfth Avenue has been converted to one way eastbound from two-way. Therefore, the proposed widening of the street from 34' to 38' in the 2001 *FEIS* is no longer necessary.

TRANSPORTATION PLANNING ASSUMPTION AND DEMAND FORECASTS

Table 10-12 shows the transportation planning assumptions used in the travel demand forecasts for the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours. The table provides the daily generation rates, mode choice, as well as hourly and directional patterns. These transportation planning assumptions were based on 2012 *CEQR Technical Manual* criteria, standard professional references, Census data, and recent surveys and studies that have been used in previous EASs and EISs for projects with similar uses and in the nearby neighborhoods of Clinton and West Midtown. **Table 10-13** provides the overall resulting net incremental trip generation for the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours for person trips for each mode of transportation and for vehicles trips for autos, taxis and trucks. This is the net incremental transportation demand over the future without the proposed project and is discussed in more detail below.

Table 10-12
Transportation Planning Assumptions
Future With the Proposed Project Scenario

Land Use:	**Destination Retail**		**Residential**		**Commercial Office**		**Medical Office**	
Size/Units:	62,000 gsf		863 DU		80,000 gsf		28,000 gsf	
Trip Generation:							(4)	
	(1)		(1)		(1)		Staff	Visitors
Weekday	78.2		8.075		18		10	33.6
Saturday	92.5		9.6		3.9		4.3	14.5
	per 1,000 sf		per DU		per 1,000 sf		per 1,000 sf	
Temporal Distribution:	(1)		(1)		(1)		(4)	
AM (8-9)	3.0%		10.0%		12.0%		24.0%	6.0%
MD (12-1)	9.0%		5.0%		15.0%		17.0%	9.0%
PM (5-6)	9.0%		11.0%		14.0%		24.0%	5.0%
SatMD (1-2)	11.0%		8.0%		17.0%		17.0%	9.0%
	(2)		(2)		(2)		(5)	(4)
Modal Splits:	AM/MD/PM	Sat	AM/MD/PM/SAT		AM/PM	MD/SAT	Staff	Visitor
Auto	10.0%	12.0%	10.8%		22.1%	2.0%	22.1%	25.0%
Taxi	15.0%	15.0%	4.1%		2.2%	3.0%	2.2%	25.0%
Subway	20.0%	18.0%	41.8%		56.6%	6.0%	56.6%	29.0%
Bus	20.0%	20.0%	14.7%		10.6%	6.0%	10.6%	11.0%
Walk/Other	35.0%	35.0%	28.6%		8.5%	83.0%	8.5%	10.0%
	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	100.0%
	(2)		(2)		(2,3)		(4)	
In/Out Splits:	In	Out	In	Out	In	Out	In	Out
AM (8-9)	61%	39%	16%	84%	95%	5%	94.0%	6.0%
MD (12-1)	55%	45%	50%	50%	48%	52%	50.0%	50.0%
PM (5-6)	47%	53%	67%	33%	15%	85%	12.0%	88.0%
SatMD (1-2)	55%	45%	53%	47%	60%	40%	50.0%	50.0%
Vehicle Occupancy:	(3)		(2)		(3)		(4)	
Auto	2.00		1.26		1.17		1.17	1.65
Taxi	2.00		1.40		1.40		1.40	1.20
Truck Trip Generation:	(1)		(1)		(1)			
	Weekday	Saturday	Weekday	Saturday	Weekday	Saturday	(4)	
	0.35	0.04	0.06	0.02	0.32	0.01	0.32	0.01
	per 1,000 sf		per DU		per 1,000 sf		per 1,000 sf	
	(1)		(1)		(1)		(4)	
AM (8-9)	8.0%		12.2%		10.0%		10.0%	
MD (12-1)	11.0%		9.0%		11.0%		11.0%	
PM (5-6)	2.0%		2.0%		2.0%		2.0%	
SatMD (1-2)	11.0%		9.0%		11.0%		11.0%	
	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%

Notes :

(1) 2010 CEQR Technical Manual

(2) Riverside Center FEIS.

(3) West 57th Street Rezoning FEIS, March 2001. Temporal distribution for Saturday midday based on weekday midday

(4) Based on 506 East 76th Stret Rezoning EIS, Table C-8.

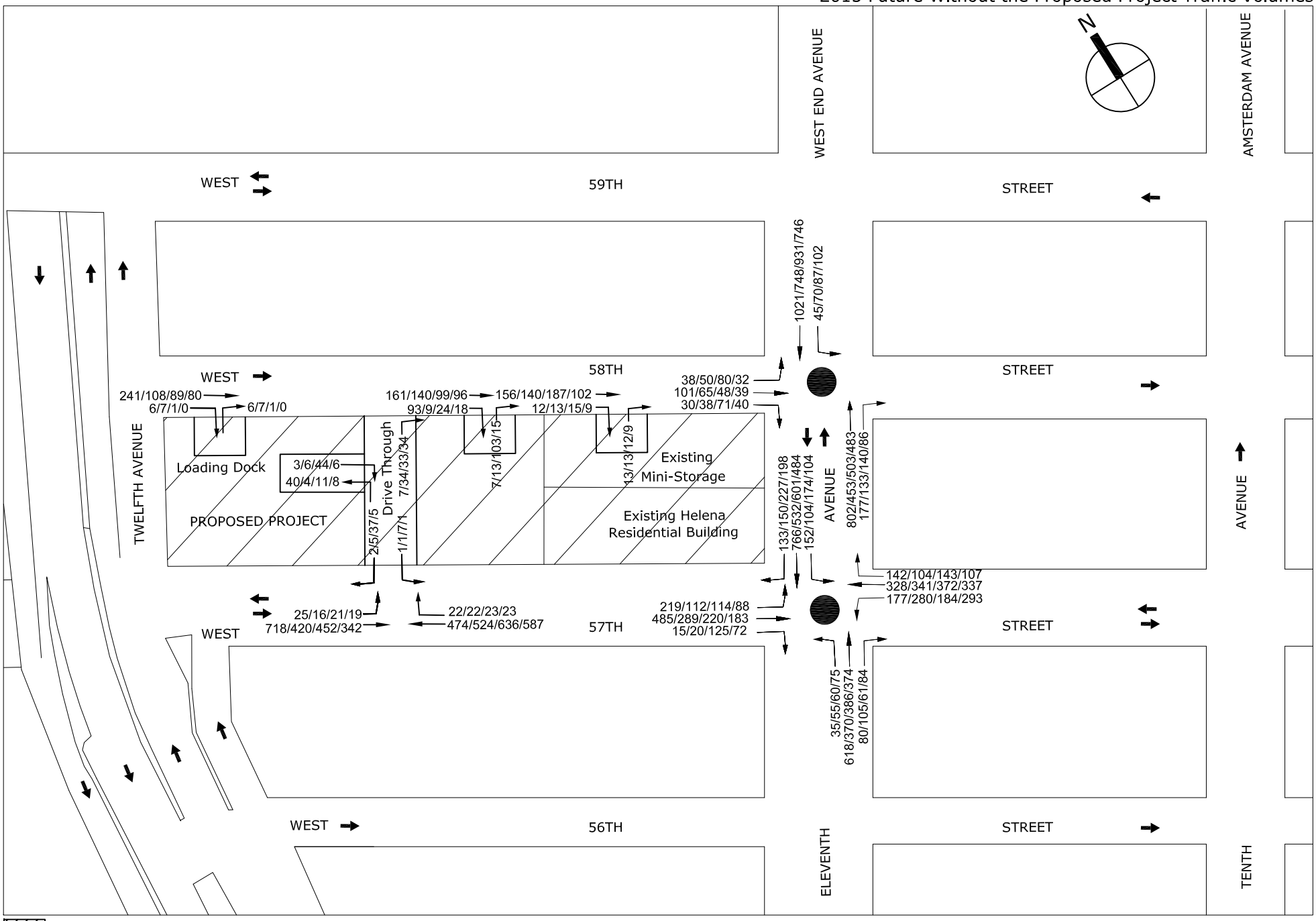
(5) 2000 Census Reverse Journey to Work

Table 10-13
Travel Demand Forecast
Future With the Proposed Project Scenario

		Future With the Proposed Project Program																
Land Use:		**Destination Retail**		**Residential**		**Commercial Office**		**Medical Office**				**Total Project Demand**		**Displaced Future Without the Proposed Project Trips & Existing Mini-Storage Trips**		**Net Project Increment**		
Size/Units:		62,000	gsf	863	DU	80,000	gsf	28,000	gsf									
								Staffs		Visitors								
Peak Hour Person Trips:																		
	AM (8-9)	145		697		173		67		56		1,139		926		213		
	MD (12-1)	436		348		216		48		86		1,135		1,423		-288		
	PM (5-6)	436		767		202		67		47		1,520		1,365		155		
	SatMD (1-2)	631		663		53		20		37		1,404		945		459		
Person Trips:																		
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM	**Auto**	9	6	12	63	36	2	14	1	13	1	84	73	184	40	-100	33	**-67**
	Taxi	13	9	5	24	4	0	1	0	13	1	36	34	29	10	7	24	**31**
	Subway	18	11	47	245	93	5	36	2	15	1	209	264	404	32	-195	232	**37**
	Bus	18	11	16	86	17	1	7	0	6	0	64	98	91	16	-27	82	**55**
	Walk/Ferry/Other	31	19	32	166	13	1	6	0	5	0	87	186	93	26	-6	161	**155**
	Total	89	56	112	584	163	9	64	3	52	3	480	655	801	124	-321	532	**211**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
MD	**Auto**	24	20	19	19	2	2	5	5	11	11	61	57	62	56	-1	1	**0**
	Taxi	36	29	7	7	3	3	1	1	11	11	58	51	52	46	6	5	**11**
	Subway	48	39	73	73	6	7	14	14	12	12	153	145	78	71	75	74	**149**
	Bus	48	39	26	26	6	7	3	3	5	5	88	80	78	71	10	9	**19**
	Walk/Ferry/Other	85	69	49	50	86	92	3	3	4	4	227	218	448	461	-221	-242	**-463**
	Total	241	196	174	175	103	111	26	26	43	43	587	551	718	705	-131	-153	**-284**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
PM	**Auto**	21	23	55	27	7	38	2	13	1	10	86	111	79	206	7	-95	**-88**
	Taxi	31	35	21	10	1	4	0	1	1	10	54	60	36	54	18	6	**24**
	Subway	41	46	215	106	17	97	5	33	2	12	280	294	116	452	164	-158	**6**
	Bus	41	46	75	37	3	18	1	6	1	5	121	112	58	125	63	-13	**50**
	Walk/Ferry/Other	72	82	146	72	3	15	1	6	2	5	224	180	88	148	136	33	**169**
	Total	206	232	512	252	31	172	9	59	7	42	765	757	377	985	388	-227	**161**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
SatMD	**Auto**	42	34	38	34	1	0	2	2	5	5	88	75	66	57	22	18	**40**
	Taxi	52	43	14	13	1	1	0	0	5	5	72	62	61	49	11	13	**24**
	Subway	62	51	147	130	2	1	7	6	6	5	224	193	76	61	148	132	**280**
	Bus	69	57	52	46	2	1	1	1	2	2	126	107	84	67	42	40	**82**
	Walk/Ferry/Other	120	99	100	89	24	18	1	1	2	2	247	209	242	182	5	27	**32**
	Total	345	284	351	312	30	21	11	10	20	19	757	646	529	416	228	230	**458**
Vehicle Trips :																		
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
AM	**Auto (Total)**	5	3	10	50	31	2	12	1	8	1	66	57	145	10	-79	47	-32
	Taxi	7	5	4	17	3	0	1	0	11	1	26	23	6	6			
	Taxi Balanced	4	4	19	19	3	3	1	1	11	11	38	38	9	9	29	29	58
	Truck	1	1	3	3	1	1	0	0			5	5	6	6	-1	-1	-2
	Total	10	8	32	72	35	6	13	2	19	12	109	100	160	25	-51	75	24
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
MD	**Auto (Total)**	12	10	15	15	2	2	4	4	7	7	40	38	35	32	5	6	11
	Taxi	18	15	5	5	2	2	1	1	9	9	35	32	29	26			
	Taxi Balanced	23	23	7	7	3	3	2	2	14	14	49	49	41	41	8	8	16
	Truck	1	1	2	2	1	1	0	0			4	4	7	7	-3	-3	-6
	Total	36	34	24	24	6	6	6	6	21	21	93	91	83	80	10	11	21
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
PM	**Auto (Total)**	11	12	44	21	6	32	2	11	1	6	64	82	50	159	14	-77	-63
	Taxi	16	18	15	7	1	3	0	1	1	8	33	37	19	30			
	Taxi Balanced	25	25	15	15	4	4	1	1	9	9	54	54	40	40	14	14	28
	Truck	0	0	1	1	0	0	0	0			1	1	1	1	0	0	0
	Total	36	37	60	37	10	36	3	12	10	15	119	137	91	200	28	-63	-35
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
Sat MD	**Auto (Total)**	21	17	30	27	1	0	2	2	3	3	57	49	35	30	22	19	41
	Taxi	26	22	10	9	1	1	0	0	4	4	41	36	32	25			
	Taxi Balanced	34	34	14	14	2	2	0	0	6	6	56	56	41	41	15	15	30
	Truck	0	0	1	1	0	0	0	0			1	1	0	0	1	1	2
	Total	55	51	45	42	3	2	2	2	9	9	114	106	76	71	38	35	73

Figure 10-3

2015 Future Without the Proposed Project Traffic Volumes



As indicated on **Table 10-12** and **Table 10-13**, the travel demand forecast indicates that during a typical weekday and Saturday the proposed project's development program would generate a project increment traffic of approximately 24 new vehicle trips per hour (vph) during the weekday AM peak hour, 21 new vph during the weekday midday peak hour, a loss of 35 vph during the PM peak hour, and 73 new vph during the Saturday midday peak hour. However, as noted, the drive-thru connecting West 57th and West 58th Streets would be shifted east (as compared to the drive-thru in the permitted building) and would be one-way northbound (as compared to two-way in the permitted building). Therefore, there would also be diverted traffic under the future with the proposed project based on the new traffic circulation pattern.

VEHICLE TRIP ASSIGNMENT AND CAPACITY ANALYSIS

Figure 10-4 provides the peak hour assignment percentages of project traffic in the study area periphery. From these study area portals, project-generated traffic demand was assigned via the most direct routes to/from the proposed project. Auto trips were then assigned to the proposed project via the through-block drive or the accessory parking garage along West 58th Street. Taxi trips were assigned via the project block's faces on West 58th or West 57th Street or via the through-block drive (which includes the existing 100-space accessory parking garage entrance). Truck trips were assigned via local truck routes to the loading facility on West 58th Street. **Figure 10-4** also shows the incremental peak hour traffic assignment to the future with the proposed project study area roadway network, while **Figure 10-5** shows the overall future with the proposed project traffic volumes during the weekday AM, midday, PM, and Saturday midday peak hours, respectively.

Capacity and level of service analyses were performed for the study area intersections using the future with the proposed project peak hour traffic volumes. Based on the thresholds established for signalized intersections in the 2012 *CEQR Technical Manual*, if a future without the proposed project LOS of A, B, or C deteriorates to an unacceptable LOS D, E, or F under the future with the proposed project, then a significant impact is deemed to have occurred. The 2012 *CEQR Technical Manual* further states that a future without the proposed project LOS A, B, or C that operates at LOS D under the future with the proposed project, mitigation to (mid-LOS D) or less, is not considered an impact for the purposes of this analysis. For a future without the proposed project LOS D, and an increase of future with the proposed project delay by 5 or more seconds is considered a significant impact. For a future without the proposed project LOS E, the threshold is a 4 second increase in future with the proposed project delay, and for a future without the proposed project LOS F, a 3 second increase in future with the proposed project delay is usually considered significant. However, if a future without the proposed project LOS F condition has a future without the proposed project delay in excess of 120 seconds, an increase in future with the proposed project delay of more than 1 second is considered a significant impact.

Table 10-14 compares the 2015 future without the proposed project and future with the proposed project operating conditions for the two analysis intersections. Based on the above criteria, **Table 10-14** would identify, with an asterisk and shading (*), any intersections experiencing significant impacts during the four analyzed peak hours. As shown in the table, significant adverse traffic impacts would not occur at either intersection during any time period analyzed. Therefore, no traffic mitigation measures are needed.

Table 10-14

2015 Future With the Proposed Project Traffic Levels of Service

	LANE GROUP	FUTURE WITHOUT THE PROPOSED PROJECT AM PEAK HOUR			FUTURE WITH THE PROPOSED PROJECT AM PEAK HOUR			FUTURE WITHOUT THE PROPOSED PROJECT MD PEAK HOUR			FUTURE WITH THE PROPOSED PROJECT MD PEAK HOUR			FUTURE WITHOUT THE PROPOSED PROJECT PM PEAK HOUR			FUTURE WITH THE PROPOSED PROJECT PM PEAK HOUR			FUTURE WITHOUT THE PROPOSED PROJECT SAT MD PEAK HOUR			FUTURE WITH THE PROPOSED PROJECT SAT MD PEAK HOUR		
		V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS
West 58th Street (E-W) @ Eleventh Avenue (N-S)	EB-LTR	0.36	23.9	C	0.51	27.0	C	0.33	23.4	C	0.36	24.0	C	0.46	26.1	C	0.41	25.2	C	0.26	22.5	C	0.36	24.1	C
	NB-TR	0.57	14.4	B	0.57	14.4	B	0.33	11.8	B	0.33	11.8	B	0.35	11.9	B	0.35	11.9	B	0.33	11.7	B	0.33	11.7	B
	SB-L	0.32	15.1	B	0.32	15.1	B	0.25	12.7	B	0.25	12.7	B	0.35	14.4	B	0.35	14.4	B	0.39	15.6	B	0.39	15.6	B
	SB-TR	0.78	19.2	B	0.77	18.9	B	0.54	14.6	B	0.54	14.6	B	0.68	16.9	B	0.68	16.9	B	0.54	14.5	B	0.54	14.6	B
West 57th Street (E-W) @ Eleventh Avenue (N-S)	EB-L	0.85	47.3	D	0.84	45.8	D	0.43	20.6	C	0.43	20.6	C	0.47	21.8	C	0.48	21.9	C	0.33	18.5	B	0.33	18.5	B
	EB-TR	0.69	31.3	C	0.69	31.3	C	0.42	26.8	C	0.42	26.7	C	0.55	29.3	C	0.54	29.0	C	0.36	26.0	C	0.36	26.0	C
	WB-L	0.71	35.1	D	0.71	35.1	D	0.92	52.2	D	0.92	52.2	D	0.61	26.9	C	0.61	26.6	C	0.90	48.7	D	0.90	48.2	D
	WB-TR	0.68	31.8	C	0.67	31.4	C	0.62	29.8	C	0.62	29.8	C	0.72	32.6	C	0.73	32.8	C	0.62	29.7	C	0.63	29.8	C
	NB-L	0.28	20.2	C	0.27	20.1	C	0.29	19.5	B	0.29	19.5	B	0.41	24.8	C	0.42	25.2	C	0.40	22.6	C	0.42	23.5	C
	NB-TR	0.41	17.5	B	0.41	17.5	B	0.44	18.4	B	0.44	18.4	B	0.40	17.9	B	0.40	17.9	B	0.42	18.1	B	0.42	18.1	B
	SB-L	0.77	37.2	D	0.78	38.0	D	0.41	21.0	C	0.40	20.7	C	0.65	28.2	C	0.60	26.1	C	0.40	20.6	C	0.39	20.3	C
	SB-TR	0.83	26.7	C	0.85	27.6	C	0.65	22.0	C	0.66	22.3	C	0.79	26.0	C	0.81	26.7	C	0.66	22.3	C	0.68	23.0	C

Notes:

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

L-Left, T-Through, R-Right, Dfl-Analysis considers a Defacto Left Lane on this approach

V/C Ratio - Volume to Capacity Ratio, sec. - Seconds

LOS - Level of Service

Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.4)

Figure 10-4

2015 Future With the Proposed Project Traffic Volume Increments

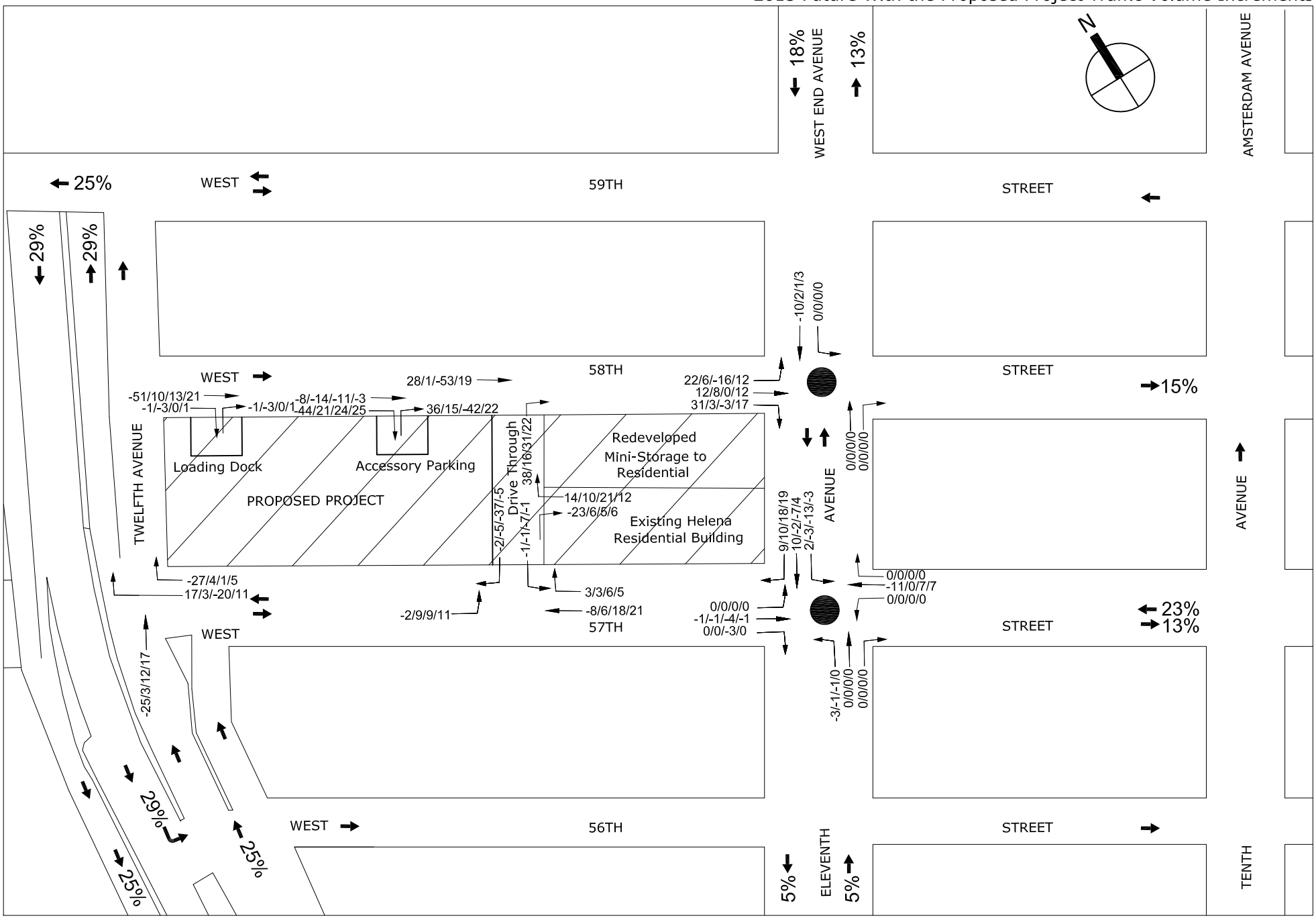
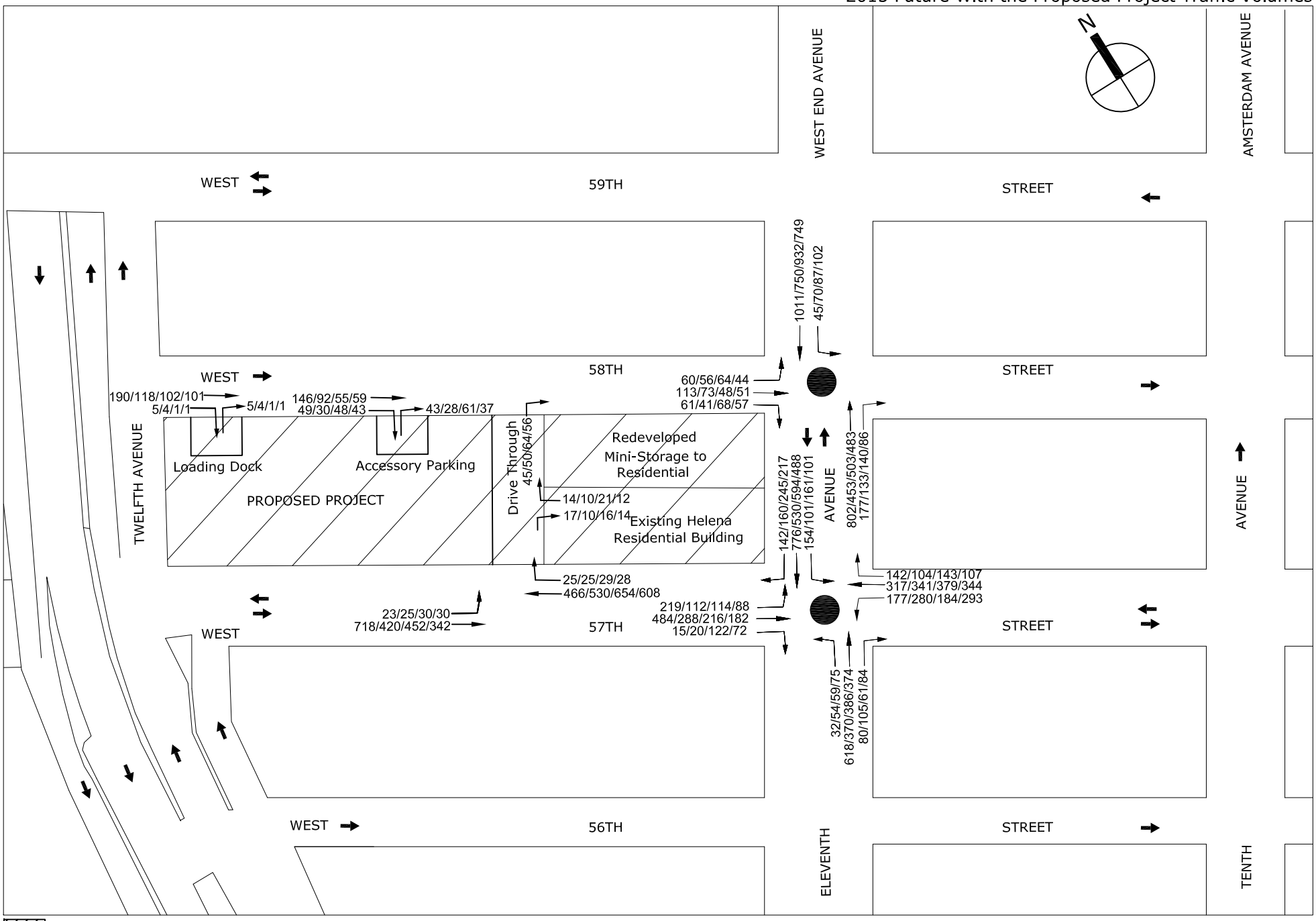


Figure 10-5

2015 Future With the Proposed Project Traffic Volumes



TRAFFIC SAFETY

The annual number of pedestrians and bicyclists injured or killed in motor vehicle accidents from 2008 through 2010 at study area intersections are shown in the table below, along with the total number of reportable and non-reportable accidents. Turning vehicles which fail to yield to pedestrians in crosswalks are cited as the most frequent cause of pedestrian injury or fatality. The *2012 CEQR Technical Manual* considers any intersection at which five or more pedestrians or cyclists are killed or injured in a 12 month period or at which 48 or more reportable or non-reportable accidents occur in a 12 month period as a high accident location. As shown, the intersection of West 57th Street and Eleventh Avenue was over 48 accidents in 2010. Based on this data, NYCDOT continues to advance traffic safety measures (including Safe Streets for Seniors) throughout the West Side and in 2011 made extensive changes to the lane configuration at the intersection of Eleventh Avenue and West 57th Street to decrease the number of accidents. Parking was eliminated at the West 57th Street westbound and eastbound approaches to add a designated left turn lane and two through lanes for both directions. As the proposed project will introduce a negligible amount of incremental traffic (less than 3 percent) during any peak hour, significant adverse safety impacts are unlikely.

		Total Accidents			Total Injuries			Total Pedestrians and Bicyclists Injured		
		2008	2009	2010	2008	2009	2010	2008	2009	2010
Eleventh Avenue At:	West 57th Street	35	21	50	13	6	11	1	4	5
	West 58th Street	4	5	5	0	0	0	0	0	0
Source: NYCDOT data										

PARKING

PARKING SUPPLY CHANGES

The proposed project would provide 285 additional parking spaces to accommodate accessory demand, creating a total of 385 accessory parking spaces on the project site. Overall, there is a net addition of 46 parking spaces when comparing the future without the proposed project public garage with the future with the proposed project accessory garage.

Tables 10-15 and 10-16 show the expected accessory parking demand and accumulation for a typical weekday and Saturday for each building, respectively. As shown in **Table 10-15**, the weekday accessory demand on-site (i.e., the parking demand from project-related uses) would peak at 385 spaces, or 100 percent utilized, during the weekday evening. **Table 10-16** also shows that on Saturday, the peak accessory accumulation would be at 380 spaces, or 98.7 percent utilized, during the overnight period. Accordingly, the proposed project would not have any impact on parking.

PEDESTRIANS

IMPACT CRITERIA

For areas of Manhattan in the Central Business District, the 2012 *CEQR Technical Manual* criteria define a significant adverse sidewalk impact to have occurred if the average pedestrian flow rate under the future without the proposed project is less than 6.4 pedestrians/min/foot

Table 10-15
Weekday Future With the Proposed Project Parking Accumulation

	Destination Retail		Residential		Office		Medical Center		Total Trips		Accumulation
	62,000	gsf	1,460	du	80,000	gsf	28,000	gsf			
	In	Out	In	Out	In	Out	In	Out	In	Out	
12-1 AM	0	0	2	2	0	0	0	0	2	2	380
1-2	0	0	2	2	0	0	0	0	2	2	380
2-3	0	0	2	2	0	0	0	0	2	2	380
3-4	0	0	2	2	0	0	0	0	2	2	380
4-5	0	0	2	2	0	0	0	0	2	2	380
5-6	0	0	3	10	0	0	0	0	3	10	373
6-7	1	0	9	30	3	0	0	0	13	30	356
7-8	1	1	10	31	13	0	1	0	25	32	349
8-9	5	3	16	85	31	2	20	2	72	92	329
9-10	7	1	18	28	15	3	16	17	56	49	336
10-11	9	5	18	32	7	6	11	13	45	56	325
11-12	10	7	19	27	2	5	18	17	49	56	318
12-1 PM	12	10	25	25	2	2	11	11	50	48	320
1-2	11	10	26	26	2	1	6	5	45	42	323
2-3	10	11	27	26	8	4	3	4	48	45	326
3-4	9	11	39	23	6	7	3	3	57	44	339
4-5	10	11	65	38	3	20	3	3	81	72	348
5-6	11	12	75	37	6	32	3	17	95	98	345
6-7	10	9	51	26	3	16	3	3	67	54	358
7-8	10	9	46	26	2	7	0	3	58	45	371
8-9	3	8	29	11	1	0	0	0	33	19	385
9-10	2	11	9	7	1	0	0	0	12	18	379
10-11	1	2	6	5	0	0	0	0	7	7	379
11-12	0	1	5	3	0	0	0	0	5	4	380

Sources: Destination Retail- ITE 7th Edition, Office & Residential - Pushkarev and Zuppan "Urban Space for Pedestrians"

Table 10-16
Saturday Future With the Proposed Project Parking Accumulation

	Destination Retail		Residential		Office		Medical Center		Total Trips		Accumulation
	62,000	gsf	1,460	du	80,000	gsf	28,000	gsf			
	In	Out	In	Out	In	Out	In	Out	In	Out	
12-1 AM	0	0	2	2	0	0	0	0	2	2	380
1-2	0	0	2	2	0	0	0	0	2	2	380
2-3	0	0	2	2	0	0	0	0	2	2	380
3-4	0	0	2	2	0	0	0	0	2	2	380
4-5	0	0	2	2	0	0	0	0	2	2	380
5-6	0	0	4	11	0	0	0	0	4	11	373
6-7	1	0	10	36	0	0	0	0	11	36	348
7-8	1	1	13	55	0	0	1	0	15	56	307
8-9	6	3	13	72	0	0	10	1	29	76	260
9-10	9	3	17	48	0	0	7	8	33	59	234
10-11	16	7	17	48	0	0	5	6	38	61	211
11-12	19	12	20	42	0	0	6	5	45	59	197
12-1 PM	21	15	25	72	0	0	5	4	51	91	157
1-2	21	17	51	45	1	0	5	5	78	67	168
2-3	21	20	52	51	0	0	1	2	74	73	169
3-4	19	21	46	17	0	0	1	1	66	39	196
4-5	16	24	43	43	0	0	1	1	60	68	188
5-6	9	21	88	12	0	1	1	8	98	42	244
6-7	5	14	63	13	0	0	0	1	68	28	284
7-8	3	4	60	9	0	0	0	1	63	14	333
8-9	2	4	40	9	0	0	0	0	42	13	362
9-10	2	2	16	3	0	0	0	0	18	5	375
10-11	1	3	8	3	0	0	0	0	9	6	378
11-12	1	2	5	2	0	0	0	0	6	4	380

Sources: Destination Retail- ITE 7th Edition, Office & Residential - Pushkarev and Zuppan "Urban Space for Pedestrians"

(PMF) and the average flow rate under the future with the proposed project is greater than 8.5 PMF (mid-LOS D or worse). If the average flow rate under the future with the proposed project is less than or equal to 8.5 PMF (better than mid-LOS D), the impact should not be considered significant. If the future without the proposed project pedestrian flow rate is between 6.4 and 19.0 PMF, an increase in average flow rate under the future with the proposed project should be considered significant using **Table 10-17**, which shows the 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 from **Table 10-17**, the impact is not considered significant. If the average pedestrian flow rate under the future without the proposed project is greater than 19.0 PMF, then an increase in pedestrian flow rate greater than or equal to 0.6 PMF would be considered significant. For areas of Manhattan in the Central Business District, 2012 *CEQR Technical Manual* criteria define a significant adverse impact to have occurred if the average pedestrian space under the future without the proposed project is greater than 21.5 square feet/pedestrian and, under the future with the proposed project, the average pedestrian space decreases to 19.5 square feet/pedestrian or less (mid-LOS D or worse). If the pedestrian space under the future with the proposed project is greater than 19.5 square feet/pedestrian (better than mid-LOS D), the impact should not be considered significant.

If the average pedestrian space under the future without the proposed project is between 5.1 and 21.5 square feet/pedestrian, a decrease in pedestrian space under the future with the proposed project should be considered significant using **Table 10-17**. If the decrease in pedestrian space is less than the value calculated from the formula, or **Table 10-17**, the impact should not be considered significant.

In the 2015 future with the proposed project, the pedestrian trips were generated using the same methodology as the auto, taxi, and truck trips. The pedestrian increments were based off of the sum of the total person trips using buses, the subway, who walked, or who used any mode of transportation other than auto or taxi. In addition, the 2001 *FEIS* included a discussion of a possible shuttle bus to take subway riders to and from the Columbus Circle station, but it didn't include any credit in the pedestrian analysis. Whether or not this occurs in the future with the proposed project, the pedestrian analysis also does not include any credit for pedestrians that might take a shuttle bus to and from the subway station at Columbus Circle.

As shown in **Table 10-13**, the proposed project would generate 37, 149, 6, and 280 subway trips during the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours respectively, would generate 55, 19, 50, and 82 bus trips during the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours respectively, and would generate 155, 169, and 32 walk-only trips in the weekday AM, weekday PM, and Saturday midday peak hours, and would displace 463 walk-only trips during the weekday midday peak hour.

Subway trips were assigned to the 59th Street-Columbus Circle subway station at Eighth Avenue and Broadway, serving the 1, A, B, C, and D trains. Bus trips were assigned to bus stops on Eleventh Avenue serving the M57 and M31 bus southbound, to bus stops on West 57th Street serving the M57 and M31 buses eastbound, and to bus stops on Ninth and Tenth Avenues serving the M11 bus. Forty five percent of all walk-only trips were assigned to the north and south of the project block, with about ten percent being assigned west toward Twelfth Avenue.

A pedestrian analysis was conducted under the future with the proposed project and the pedestrian LOS would deteriorate minimally. The northeast corner of West 58th Street and Eleventh Avenue would deteriorate to LOS B in the weekday PM peak hour, the west crosswalk on Eleventh Avenue crossing West 58th Street would deteriorate to LOS C in the weekday AM

Table 10-17

Significant Pedestrian Impact Criteria in CBD District

Sidewalks (Platooned Flow)	
Future Without the Proposed Project Scenario Pedestrian Flow (ped/min/ft)	**Future With the Proposed Project Scenario Pedestrian Flow Increment to be Considered a Significant Impact (ped/min/ft)**
< 6.4	With Action Condition > 8.5
6.4 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: *2012 CEQR Technical Manual*

Corners and Crosswalks	
Future Without the Proposed Project Scenario Pedestrian Space (square feet/ped)	**Future With the Proposed Project Scenario Pedestrian Space Reduction to be Considered a Significant Impact (square feet/ped)**
>21.5	With Action Condition ≤ 19.5
21.3 to 21.5	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

peak hour, the south crosswalk on West 58th Street crossing Eleventh Avenue would deteriorate to LOS B in the weekday PM peak hour, and the north crosswalk on West 57th Street crossing Eleventh Avenue would deteriorate to LOS B during the Saturday midday peak hour. The remainder of the study locations would not deteriorate from the 2015 future without the proposed project. As such, no pedestrian impacts are expected. **Tables 10-18 and 10-19** show the results of the pedestrian analysis.

H. CONCLUSION

The proposed project is on a block surrounded by Twelfth Avenue to the west, Eleventh Avenue to the east, West 57th Street to the south, and West 58th Street to the north. Traffic analysis was conducted at the intersections of West 58th Street and Eleventh Avenue and West 57th Street and Eleventh Avenue, and pedestrian analysis was conducted on the sidewalks on the project block, the corners on the project block facing Eleventh Avenue, and in the crosswalks that connect to these corners. As a result of these analyses, no significant impacts were found. The study found that the existing 100 space accessory garage in The Helena residential building as well as the proposed 285 space accessory garage are adequate to address the parking demand for the proposed project. Because the number of subway and bus trips falls below the threshold of 200 trips in either the weekday AM or PM peak period as provided in the 2012 *CEQR Technical Manual*, no transit impacts are likely and therefore no transit analysis was conducted. As a result of the analyses, no mitigation is required for transportation. ✷

Table 10-18
2015 Future With the Proposed Project Sidewalk Conditions

Intersection	Location		Effective Width (ft)	Future With the Proposed Project Peak 15-Minute Increments				Future With the Proposed Project Peak 15-Minute Volumes				Flow Rate (per/min/ft)				Average Flow Level of Service				Platoon-Adjusted Level of Service			
				AM	MD	PM	Sat MD	AM	MD	PM	Sat MD	AM	MD	PM	Sat MD	AM	MD	PM	Sat MD	AM	MD	PM	Sat MD
West 58th Street (South Side) btw Eleventh and Twelfth Avenues	South	EB WB Total	6.5	37	-27	31	79	174	159	222	197	1.8	1.6	2.3	2.0	A	A	A	A	B	B	B	B
West 57th Street (North Side) btw Eleventh and Twelfth Avenues	North	EB WB Total	11.5	35	-50	34	43	161	171	219	206	0.9	1.0	1.3	1.2	A	A	A	A	B	B	B	B
Eleventh Avenue (West Side) btw West 57th and West 58th Streets	West	EB WB Total	8.0	3	3	1	7	169	157	282	287	1.4	1.3	2.4	2.4	A	A	A	A	B	B	B	B

Table 10-19

2015 Future With the Proposed Project Corner and Crosswalk Conditions

Corners

Intersection	Corner	Curb Radii (feet)	Future With the Proposed Project Peak 15-Minute Increments				Future With the Proposed Project Peak 15-Minute Volumes				Future With the Proposed Project (sq-ft/ped)				Future With the Proposed Project Level of Service			
			AM	MD	PM	Sat MD	AM	MD	PM	Sat MD	AM	MD	PM	SAT MD	AM	MD	PM	SAT MD
West 58th Street and Eleventh Avenue	SW	15	3	1	1	3	9	11	8	12	86.1	99.4	59.0	63.9	A	A	B	A
West 57th Street and Eleventh Avenue	NW	21	1	3	0	4	16	14	22	22	127.1	132.3	87.9	90.0	A	A	A	A

Crosswalks

Intersection	Crosswalk	Direction	Future With the Proposed Project Peak 15-Minute Increments				Future With the Proposed Project Peak 15-Minute Volumes				Future With the Proposed Project (sq-ft/ped)				Future With the Proposed Project Level of Service			
			AM	MD	PM	Sat MD	AM	MD	PM	Sat MD	AM	MD	PM	SAT MD	AM	MD	PM	SAT MD
West 58th Street and Eleventh Avenue	South	EB	34	-4	-15	16	49	33	47	41	92.3	112.2	58.1	81.7	A	A	B	A
		WB	-22	-3	27	19	32	35	54	50								
		Total	13	-6	12	34	81	68	101	91								
		NB	53	-12	-21	24	136	127	185	120								
		SB	-31	-9	39	24	125	103	209	256								
	West	Total	22	-21	18	48	261	230	394	376	40.0	46.4	21.7	25.6	C	B	D	C
West 57th Street and Eleventh Avenue	North	EB	36	-11	-9	15	75	55	65	61	61.1	58.3	34.6	56.2	A	B	C	B
		WB	-15	-10	26	13	37	66	87	64								
		Total	21	-21	16	28	112	121	152	125								
		EB	-4	2	9	7	86	104	141	86								
		WB	21	-16	1	7	117	87	170	219								
	West	Total	17	-14	10	13	203	191	311	305	49.1	52.2	24.2	29.7	B	B	C	C