

## **A. INTRODUCTION**

As described in Chapter 1, “Project Description,” the Proposed Project would result in the construction of a mixed-use development with residential, community facility space, and retail space on the block east of Eleventh Avenue, between West 44th and West 45th Streets in Manhattan. This chapter assesses the potential impacts resulting from the Proposed Actions on transit and pedestrian facilities in the vicinity of the Proposed Project Site.

## **PRINCIPAL CONCLUSIONS**

The Proposed Actions would generate approximately 1,717, 1,789, and 1,426 person trips during the weekday AM, midday, and PM peak hours, respectively. These trips would include 296, 194, and 343 subway trips, 184, 138, and 204 bus trips, and 1,071, 1,327, and 708 walk only trips over the same time periods. The analysis results show that overlaying these trips onto the future baseline transportation network would not result in significant adverse impacts to subway station control areas or stairways, nor would they result in any significant adverse bus or pedestrian impacts. Nonetheless, because the proposed expansion of the existing school on the Project Site would also result in a change in the school’s pedestrian access, school safety measures additional to those in place currently were recommended for implementation. As part of the Proposed Project, the SCA will implement the measures to enhance pedestrian safety for school children. With the measures included as part of the Proposed Project, no significant adverse impacts would result.

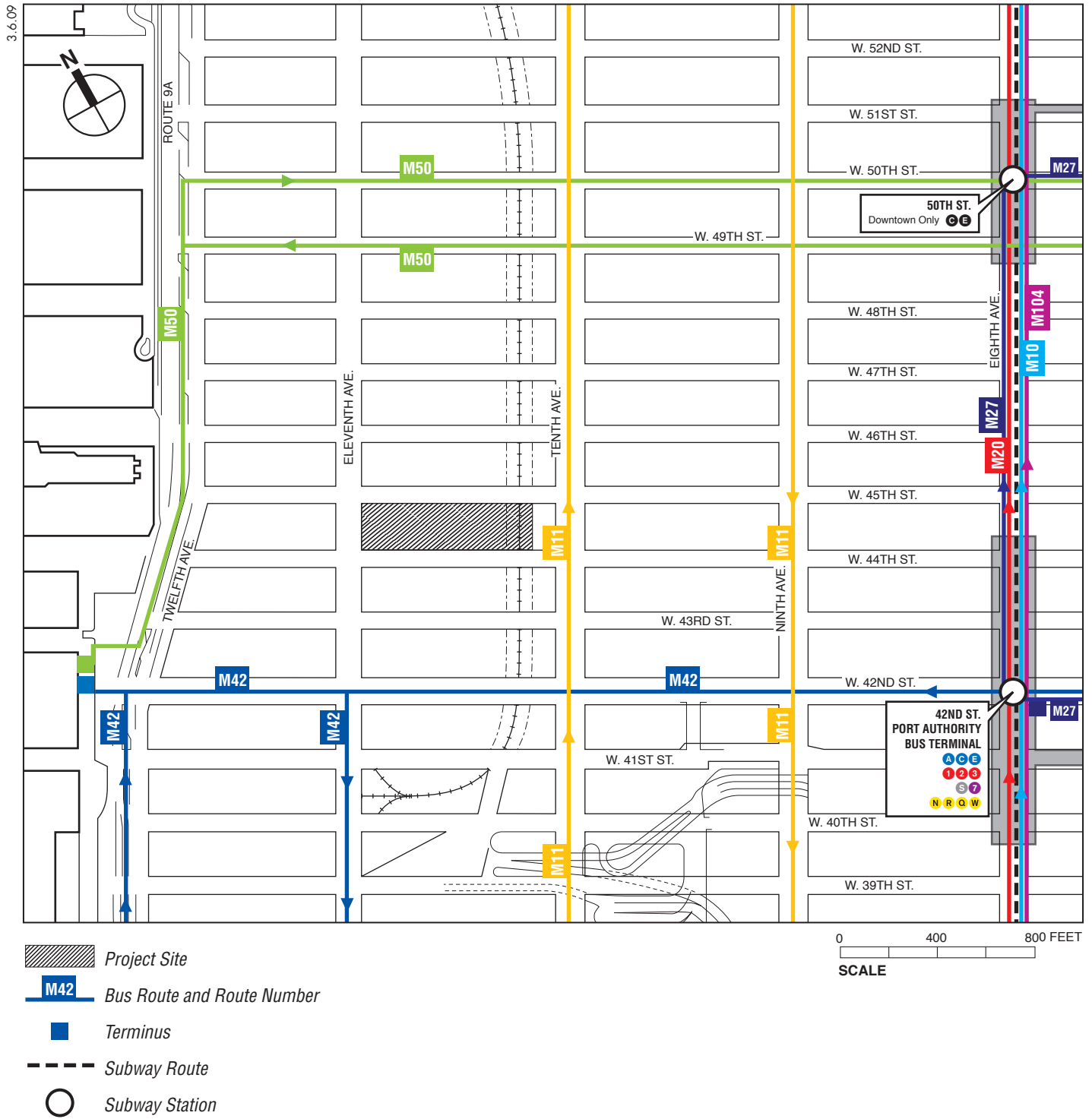
## **B. METHODOLOGY**

Travel demand projections, as detailed in Chapter 15, “Traffic and Parking,” were developed to identify the transportation elements likely to be affected by the Proposed Actions. Because the number of peak hour transit and pedestrian trips generated by the Proposed Actions would exceed the 200-trip-per-hour threshold specified in the 2001 *City Environmental Quality Review* (CEQR) *Technical Manual*, quantified transit and pedestrian analyses are required.

## **TRANSIT AND PEDESTRIAN STUDY AREAS**

Mass transit options serving the project area and the surrounding neighborhood, as depicted in **Figure 16-1**, include the New York City Transit (NYCT) A, C, E, 1, 2, 3, 7, N, Q, R, S, and W subway lines and the M10, M11, M20, M27, M42, M50, and M104 bus routes. The transit analyses include quantified assessments of the control area and circulation elements at the 42nd Street-Port Authority Bus Terminal Subway Station, which provides a sub-grade transfer to the 42nd Street-Times Square Subway Station; the analysis control area and stairways are located at Eighth Avenue and West 44th Street.

The evaluation of pedestrian flow includes the analysis of the sidewalks, corner reservoirs, and crosswalks along West 44th and West 45th Streets at Eighth, Ninth, Tenth, and Eleventh



## Study Area Transit Network

Figure 16-1

## **West 44th Street and Eleventh Avenue Rezoning**

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Avenues. These pedestrian analysis locations are shown in **Figure 16-2. Appendix B** contains figures depicting the existing, No Build, and Build peak 15-minute pedestrian volumes at these locations.

### *SUBWAY SERVICE*

#### *Eighth Avenue (A/C/E) Line*

The A and C train routes operate primarily along Central Park West and Eighth Avenue in Manhattan, with the A train serving express stops. Both trains operate between Upper Manhattan and southeastern Queens, with the C train terminating at Euclid Avenue and the A train continuing to the Rockaways. The E train provides service between Jamaica Center in Queens and Lower Manhattan. The E train primarily operates along Eighth Avenue in Manhattan, serving local stops.

#### *Seventh Avenue (1/2/3) Line*

The No. 1 route, which serves local stops primarily along Broadway and Seventh Avenue in Manhattan, operates between Van Cortlandt Park in the Bronx and South Ferry in Manhattan.

The No. 2 route, which serves express stops primarily along Broadway and Seventh Avenue in Manhattan, operates between Wakefield-241st Street in the Bronx and Flatbush Avenue in Brooklyn.

The No. 3 route, which serves express stops primarily along Lenox, Broadway and Seventh Avenue in Manhattan, operates between Harlem-148th Street in Manhattan and New Lots Avenue in Brooklyn.

#### *Flushing (7) Line*

The No. 7 route operates between Main Street-Flushing in Queens and 42nd Street-Time Square in Manhattan. It operates local at all times and provides express service in the peak direction in Queens during weekday daytime hours.

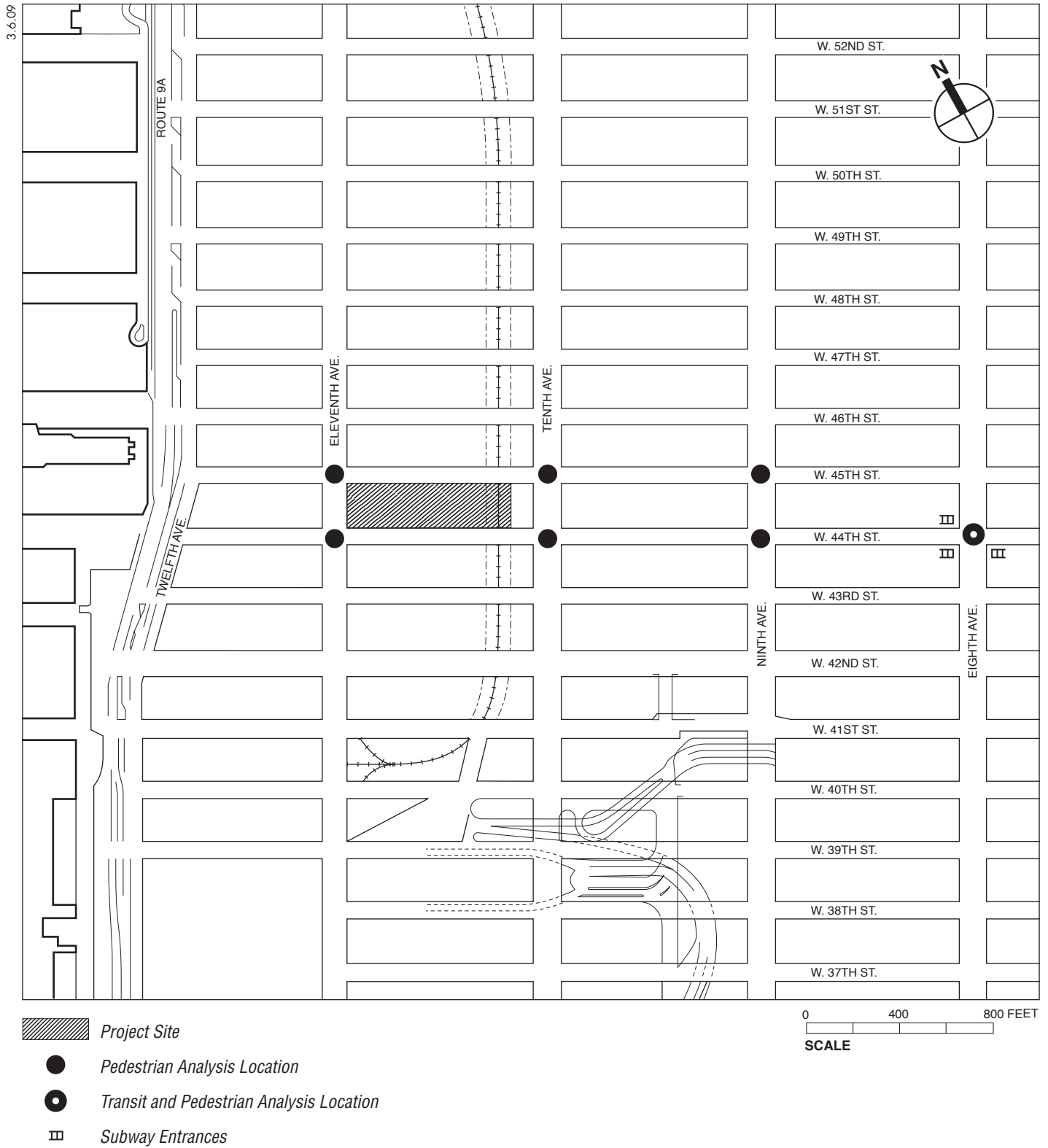
#### *Broadway (N/Q/R/W) Line*

The N route operates between Astoria-Ditmars Boulevard in Queens and Coney Island-Stillwell Avenue in Brooklyn. In Manhattan, it provides express service along Broadway. In Brooklyn, it operates primarily along 4th Avenue and runs through Borough Park to Gravesend. In Queens, it provides local service between Queensboro Plaza and Ditmars Boulevard in Astoria.

The Q route operates between 57th Street-Seventh Avenue in Manhattan and Coney Island-Stillwell Avenue in Brooklyn. In Manhattan, the Q train operates express from 57th Street via Broadway to Canal Street, cross into Brooklyn via Manhattan Bridge, then operate local to and from Stillwell Avenue.

The R route operates between Forest Hills-71st Avenue in Queens and Bay Ridge-95th Street in Brooklyn. In Manhattan, it provides local service along Broadway. In Queens, it provides local service along Queens Boulevard and Broadway. In Brooklyn, the R train provides local service along 4th Avenue.

The W route operates, weekdays only, between Astoria-Ditmars Boulevard in Queens and Whitehall Street in Manhattan. In Manhattan, it provides local service along Broadway and Seventh Avenue. In Queens, it provides local service between Queensboro Plaza and Ditmars Boulevard in Astoria.



## Transit and Pedestrian Analysis Locations

Figure 16-2

### 42nd Street (S) Shuttle

The 42nd Street Shuttle, S train, operates in Manhattan between the Grand Central and Times Square stations. It provides a free transfer between 4, 5, 6, and 7 service at the Grand Central-42nd Street Station and A, C, E, N, Q, R, W, 1, 2, 3, and 7 service at the Times Square-42nd Street Station.

The travel demand estimates detailed in Chapter 15, “Traffic and Parking,” show that there would be 296, 194, and 343 projected incremental subway trips resulting from the Proposed Actions during the weekday AM, weekday midday, and weekday PM peak hours, respectively. These trips would be distributed among the 12 subway lines described above. With numerous subway lines providing connections to the rest of the city, these project-generated peak hour subway trips are expected to result in fewer than five incremental riders per subway car. Therefore, in accordance with criteria set forth in the *CEQR Technical Manual*, a quantified subway line haul analysis is not required and the Proposed Actions would not have the potential to result in significant adverse subway line haul impacts.

All of the project-generated subway trips would access the NYCT subway system via the 42nd Street-Port Authority Bus Terminal and Times Square-42nd Street Subway Stations. These trips were split between the two stations based on the proximity of the stations and the number of subway lines available at each station. The two stations are also connected via a long underground passageway between Seventh and Eighth Avenues. The majority of project-generated subway trips traversing the 42nd Street-Port Authority Bus Terminal station would be made through the Eighth Avenue and West 44th Street control area. Because relatively few project-generated subway trips would be made through the other control areas, only the Eighth Avenue and West 44th Street control area elements were analyzed. The street-level stairways connecting to this control area were also analyzed.

### BUS SERVICE

**Table 16-1** provides a summary of the NYCT local bus routes and their weekday frequencies of operation. All of these routes use standard buses with a guideline capacity of 54 passengers per bus.

**Table 16-1**  
**Local Bus Routes Serving the Study Area**

Bus Route	Start Point	End Point	Routing	Scheduled Bus Service (Headway in Minutes)		
				AM	Midday	PM
M10	Harlem Douglass Blvd/ W.159th St	Penn Station/ 8th Ave/ W. 31st St	Douglass Blvd/ Broadway/ 7th Ave/8th Avenue	9	10	10
M11	Bethune/Hudson Street	W.145th St/ Riverside Dr	Amsterdam & Columbus Avenue	10	7	9
M20	Lincoln Center/ Broadway/ W. 63rd Street	Battery Park City/ Battery Place	7th Ave & Broadway	10	18	18
M27	East Midtown	West Midtown	Via 49th & 50th Street	9	11	11
M42	Javits Center/ W.35th Street	East Midtown/ E. 41th Street	Via 42nd Street	5	7	7
M50	East Midtown	West Midtown	Via 49th & 50th Street	8	7	5
M104	Harlem	Murray Hill	Broadway & 42nd Street	7	6	6
<b>Sources:</b> New York City Transit, Manhattan Bus Timetable (2007/2008).						

As shown in Chapter 15, “Traffic and Parking,” the incremental bus trips associated with the Proposed Actions, 162, 116, and 204 during the AM, midday, and PM peak hours, respectively, distributed among the seven bus routes in the area, would be below the CEQR threshold to

## West 44th Street and Eleventh Avenue Rezoning

warrant a quantified bus line haul analysis. Therefore, the Proposed Actions would not have the potential to result in significant bus line haul impacts.

### PEDESTRIAN ELEMENTS

The pedestrian study area considers the sidewalks, corner reservoirs, and crosswalks that would be most affected by new trips generated by the Proposed Actions, including those along routes leading to/from the study area subway stations. The resultant pedestrian study area includes seven signalized intersections and their connecting sidewalks, as listed below.

- Eighth Avenue & West 44th Street;
- Ninth Avenue & West 44th Street;
- Ninth Avenue & West 45th Street;
- Tenth Avenue & West 44th Street;
- Tenth Avenue & West 45th Street;
- Eleventh Avenue & West 44th Street; and
- Eleventh Avenue & West 45th Street.

### OPERATIONAL ANALYSIS METHODOLOGY

#### SUBWAY STATION ELEMENTS

To assess subway stairway operations, the user volume is compared to the element's design capacity, resulting in a volume-to-capacity (v/c) ratio. For stairways, the design capacity considers the effective width of a tread, which accounts for railings or other obstructions, the friction between upward and downward patrons, and the average area required for circulation. For control area elements, capacity is measured by the number of an element and the New York City Transit (NYCT) optimum capacity per element. For both stairways and control area elements, volumes and capacities are presented for 15-minute intervals.

The estimated v/c ratio is compared to NYCT criteria to determine a level of service (LOS) for the operation of an element. This v/c ratio is also commonly referred to as V/SVCD, where SVCD is the service volume at LOS C/D. **Table 16-2** shows the LOS and corresponding v/c ratios for subway station elements.

**Table 16-2**  
**Level of Service Criteria for Subway Station Elements**

LOS	V/C Ratio	
	Stairways	Turnstiles/Gates
A	0.00 to 0.45	0.00 to 0.20
B	0.45 to 0.70	0.20 to 0.40
C	0.70 to 1.00	0.40 to 0.60
D	1.00 to 1.33	0.60 to 0.80
E	1.33 to 1.67	0.80 to 1.00
F	1.67 or Greater	Greater than 1.00
<b>Source:</b> New York City Mayor's Office of Environmental Coordination, <i>CEQR Technical Manual</i> (December 2001).		

For stairways, at LOS A and B, there is sufficient area to allow pedestrians to freely select their walking speed and bypass slower pedestrians. When cross and reverse flow movement exists, only minor conflicts may occur. At LOS C, movement is fluid although somewhat restricted.

While there is sufficient room for standing without personal contact, circulation through queuing areas may require adjustments to walking speed. At LOS D, walking speed is restricted and reduced. Reverse and cross flow movement is severely restricted because of congestion and the difficult passage of slower moving pedestrians. At LOS E and F, walking speed is restricted. There is also insufficient area to bypass others, and opposing movement is difficult. Often, forward progress is achievable only through shuffling, with queues forming.

The determination of significant impacts for station elements varies based on their type and use. For stairways, impacts are considered significant based on the minimum amount of additional capacity, which would mitigate the location to its No Build or LOS C/D operating conditions. For a location with a Build LOS D, a widening of six inches or more needed to restore future No Build or LOS C/D conditions is considered significant; for a Build LOS E condition, a widening of three inches or more is considered significant; and for a Build LOS F condition, a widening of 1 inch or more is considered significant. For turnstiles, service gates, and escalators, an increase in volume that results in a v/c ratio of greater than 1.00 may be considered significant, since a value of 1.00 represents the design capacity of the element.

### *PEDESTRIAN OPERATIONS*

The adequacy of the study area's sidewalks, crosswalks, and corner reservoir capacities in relation to the demand imposed on them was assessed using the methodologies presented in the 2000 *Highway Capacity Manual* (HCM 2000). Sidewalks were analyzed in terms of pedestrian flow. The calculation of the average pedestrians per foot per minute (PFM) of effective walkway width is the basis for Level of Service (LOS) analysis. However, due to the tendency of pedestrians to move in congregated groups, a platoon factor (+4 PFM) is applied in the calculation of pedestrian flow to more accurately estimate the dynamics of walking. This procedure generally results in a LOS one level poorer than the average flow.

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

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

Crosswalk LOS is also a function of time and space. Similar to the street corner analysis, crosswalk conditions are first expressed as a measurement of the available area (the crosswalk width multiplied by the width of the street) and the permitted crossing time. This measure is expressed in square feet per minute. The average time required for a pedestrian to cross the street is calculated based on the width of the street and an assumed walking speed. The ratio of time-space available in the crosswalk to the average crossing time is the LOS measurement of available square feet per pedestrian. The LOS analysis also accounts for vehicular turning movements that traverse the crosswalk.

**Table 16-3** shows the LOS standards for sidewalks, corner reservoirs, and crosswalks.

**Table 16-3**

**Level of Service Criteria for Pedestrian Elements**

LOS	Sidewalks	Corner Reservoirs and Crosswalks
A	5 PFM or less	60 SFP or More
B	5 to 7 PFM	40 to 60 SFP
C	7 to 10 PFM	24 to 40 SFP
D	10 to 15 PFM	15 to 24 SFP
E	15 to 23 PFM	8 to 15 SFP
F	More than 23 PFM	Less than 8 SFP
<b>Notes:</b> PFM = pedestrians per foot per minute. SFP = square feet per pedestrian. <b>Source:</b> New York City Mayor's Office of Environmental Coordination, <i>City Environmental Quality Review Technical Manual</i> (December 2001).		

The *CEQR Technical Manual* specifies that a LOS D condition or better is considered reasonable for sidewalks, corner reservoirs, and crosswalks within the Manhattan Central Business District (CBD), which includes the study area for this project. For crosswalks and corner reservoirs, a LOS D condition requires a minimum of 15 SFP. For sidewalks, a LOS D condition requires a maximum of 15 PFM.

For areas akin to the study area, project-related sidewalk impacts are considered significant and require examination of mitigation if there is an increase of 2 PFM over No Build conditions that are characterized by flow rates greater than 15 PFM (LOS D). For corners and crosswalks, a decrease of 1 SFP under the Build condition when the No Build condition has an average occupancy of less than 15 SFP (LOS D) is considered significant. However, if there is less than a 200-person increase at a location within the peak hour, any impact is not considered significant, since such increases would not typically be perceptible.

## C. EXISTING CONDITIONS

Existing transit and pedestrian levels are based on field surveys conducted in November 2008. The surveys were conducted during the selected analysis periods of weekday 7:00 to 10:00 AM, 12:00 to 2:00 PM, and 4:00 to 7:00 PM. These hours represent the peak periods of transit and pedestrian activities in the study area. Transit analyses were conducted for the weekday AM and PM peak periods while pedestrian analyses were conducted for the weekday AM, midday, and PM peak periods.

### SUBWAY STATION OPERATIONS

The five two-way turnstiles at the N-60 control area and the three street-level stairways located at the northwest, southeast, and southwest corners of Eighth Avenue and West 44th Street, collectively providing access to the 42nd Street-Port Authority Bus Terminal Subway Station, were selected for analysis. As summarized in **Tables 16-4** and **16-5**, the station's control area elements and street-level stairways, respectively, currently operate at acceptable LOS A or B during both the AM and PM peak periods.



**Table 16-4**

**2008 Existing Conditions: Subway Station Control Area Analysis**

N-60 Control Area	Quantity	15-Minute Pedestrian Volumes		15-Minute SVCD Capacity	V/SVCD ratio	LOS
		In	Out			
Weekday AM Peak Period						
Two-Way Turnstiles	5	228	182	2400	0.17	A
Weekday PM Peak Period						
Two-Way Turnstiles	5	252	293	2400	0.23	B
<b>Note:</b> Capacities were calculated based on rates presented in the New York City Transit, <i>Station Planning and Design Guidelines</i> (January 2001), in accordance with the <i>CEQR Technical Manual</i> .						

**Table 16-5**

**2008 Existing Conditions: Subway Station Stairway Analysis**

Street-Level Stairways	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes		Friction Factor	15-Minute SVCD Capacity	V/SVCD Ratio	LOS
			Up	Down				
Weekday AM Peak Period								
Southeast Corner- S12	4.5	3.5	7	147	0.80	420	0.37	A
Northwest Corner- S13	4.5	3.5	158	58	0.80	420	0.51	B
Southwest Corner- S14	4.5	3.5	17	23	0.90	473	0.08	A
Weekday PM Peak Period								
Southeast Corner- S12	4.5	3.5	119	66	0.80	420	0.39	A
Northwest Corner- S13	4.5	3.5	142	145	0.90	473	0.61	B
Southwest Corner- S14	4.5	3.5	32	41	0.90	473	0.15	A
<b>Notes:</b> Capacities were calculated based on rates presented in the New York City Transit, <i>Station Planning and Design Guidelines</i> (January 2001), in accordance with the <i>CEQR Technical Manual</i> . Due to construction of a new hotel project on the southwest corner of the intersection, access to the S-14 stairway has been restricted, resulting in a shift of pedestrian volumes to the S-13 stairway.								

## STREET-LEVEL PEDESTRIAN OPERATIONS

The study area sidewalks, corner reservoirs, and crosswalks were assessed for the weekday AM, midday, and PM peak periods. Existing peak 15-minute volumes were developed from the 2008 survey data. As shown in **Tables 16-6 through 16-10**, all analysis locations operate at acceptable LOS D or better during the analysis peak periods, with the exception of the east crosswalk at Eighth Avenue and West 44th Street, which currently operates at LOS E during both the midday and PM peak periods, at 8.2 and 14.2 SFP, respectively.

**Table 16-6**

**2008 Existing Conditions: Weekday AM Peak Period Sidewalk Analysis**

Location	Sidewalk	Effective Width (feet)	15-Minute Two-Way Volume	Average		Platoon	
				PFM	LOS	PFM	LOS
8th Avenue between W.44th Street & W.45th Street	East	10.0	470	3.1	A	7.1	C
	West	8.3	472	3.8	A	7.8	C
W.44th Street between 8th Avenue & 7th Avenue	North	8.8	297	2.3	A	6.3	B
	South	8.0	397	3.3	A	7.3	C
W.44th Street between 9th Avenue & 8th Avenue	North	9.0	212	1.6	A	5.6	B
	South	8.0	28	0.2	A	4.2	A
8th Avenue between W.44th Street & W.43rd Street	East	10.5	761	4.8	A	8.8	C
	West	10.0	459	3.1	A	7.1	C
W.44th Street between 9th Avenue & 8th Avenue	North	6.3	173	1.8	A	5.8	B
	South	6.3	73	0.8	A	4.8	A
9th Avenue between W.45th Street & 44th Street	East	8.0	256	2.1	A	6.1	B
	West	10	191	1.3	A	5.3	B
W.44th Street between 9th Avenue & 10th Avenue	North	6.0	84	0.9	A	4.9	A
	South	2.0	49	1.6	A	5.6	B
9th Avenue between W.43rd Street & 44th Street	East	8.5	235	1.8	A	5.8	B
	West	11	219	1.3	A	5.3	B
9th Avenue between W.45th Street & W.46th Street	East	10	250	1.7	A	5.7	B
	West	9.5	159	1.1	A	5.1	B
W.45th Street between 9th Avenue & 8th Avenue	North	5.0	173	2.3	A	6.3	B
	South	4.6	41	0.6	A	4.6	A
W.45th Street between 9th Avenue & 10th Avenue	North	3.5	36	0.7	A	4.7	A
	South	6.0	71	0.8	A	4.8	A
10th Avenue between W.45th Street & W.44th Street	East	8.0	145	1.2	A	5.2	B
	West	20.0	122	0.4	A	4.4	A
W.44th Street between 10th Avenue & 11th Avenue	North	7.5	7	0.1	A	4.1	A
	South	6.0	20	0.2	A	4.2	A
10th Avenue between W.43rd Street & W.44th Street	East	6.0	129	1.4	A	5.4	B
	West	9.0	119	0.9	A	4.9	A
10th Avenue between W.45th Street & W.46th Street	East	12.5	89	0.5	A	4.5	A
	West	11.0	107	0.6	A	4.6	A
W.45th Street between 11th Avenue & 10th Avenue	North	9.0	44	0.3	A	4.3	A
	South	8.0	249	2.1	A	6.1	B
11th Avenue between W.45th Street & W.44th Street	East	9.0	46	0.3	A	4.3	A
	West	9.0	15	0.1	A	4.1	A
W.44th Street between 11th Avenue & Route 9A	North	7.0	10	0.1	A	4.1	A
	South	5.0	4	0.1	A	4.1	A
11th Avenue between W.44th Street & 43rd Street	East	9.0	23	0.2	A	4.2	A
	West	6.0	25	0.3	A	4.3	A
11th Avenue between W.46th Street & W.45th Street	East	12.0	82	0.5	A	4.5	A
	West	9.0	30	0.2	A	4.2	A
W.45th Street between 11th Avenue & Route 9A	North	11.0	15	0.1	A	4.1	A
	South	7.0	7	0.1	A	4.1	A

**Note:** PFM = pedestrians per foot per minute

**Table 16-7**

**2008 Existing Conditions: Weekday Midday Peak Period Sidewalk Analysis**

Location	Sidewalk	Effective Width (feet)	15-Minute Two-Way Volume	Average		Platoon	
				PFM	LOS	PFM	LOS
8th Avenue between W.44th Street & W.45th Street	East	10.0	711	4.7	A	8.7	C
	West	8.3	429	3.4	A	7.4	C
W.44th Street between 8th Avenue & 7th Avenue	North	8.8	246	1.9	A	5.9	B
	South	8.0	409	3.4	A	7.4	C
W.44th Street between 9th Avenue & 8th Avenue	North	9.0	277	2.1	A	6.1	B
	South	8.0	57	0.5	A	4.5	A
8th Avenue between W.44th Street & W.43rd Street	East	10.5	735	4.7	A	8.7	C
	West	10.0	457	3.0	A	7.0	C
W.44th Street between 9th Avenue & 8th Avenue	North	6.3	184	1.9	A	5.9	B
	South	6.3	120	1.3	A	5.3	B
9th Avenue between W.45th Street & 44th Street	East	8.0	329	2.7	A	6.7	B
	West	10	158	1.1	A	5.1	B
W.44th Street between 9th Avenue & 10th Avenue	North	6.0	71	0.8	A	4.8	A
	South	2.0	52	1.7	A	5.7	B
9th Avenue between W.43rd Street & 44th Street	East	8.5	266	2.1	A	6.1	B
	West	11	243	1.5	A	5.5	B
9th Avenue between W.45th Street & W.46th Street	East	10	318	2.1	A	6.1	B
	West	9.5	195	1.4	A	5.4	B
W.45th Street between 9th Avenue & 8th Avenue	North	5.0	115	1.5	A	5.5	B
	South	4.6	115	1.7	A	5.7	B
W.45th Street between 9th Avenue & 10th Avenue	North	3.5	57	1.1	A	5.1	B
	South	6.0	74	0.8	A	4.8	A
10th Avenue between W.45th Street & W.44th Street	East	8.0	139	1.2	A	5.2	B
	West	20.0	52	0.2	A	4.2	A
W.44th Street between 10th Avenue & 11th Avenue	North	7.5	16	0.1	A	4.1	A
	South	6.0	9	0.1	A	4.1	A
10th Avenue between W.43rd Street & W.44th Street	East	6.0	127	1.4	A	5.4	B
	West	9.0	38	0.3	A	4.3	A
10th Avenue between W.45th Street & W.46th Street	East	12.5	88	0.5	A	4.5	A
	West	11.0	92	0.6	A	4.6	A
W.45th Street between 11th Avenue & 10th Avenue	North	9.0	41	0.3	A	4.3	A
	South	8.0	46	0.4	A	4.4	A
11th Avenue between W.45th Street & W.44th Street	East	9.0	14	0.1	A	4.1	A
	West	9.0	14	0.1	A	4.1	A
W.44th Street between 11th Avenue & Route 9A	North	7.0	13	0.1	A	4.1	A
	South	5.0	4	0.1	A	4.1	A
11th Avenue between W.44th Street & 43rd Street	East	9.0	29	0.2	A	4.2	A
	West	6.0	5	0.1	A	4.1	A
11th Avenue between W.46th Street & W.45th Street	East	12.0	47	0.3	A	4.3	A
	West	9.0	24	0.2	A	4.2	A
W.45th Street between 11th Avenue & Route 9A	North	11.0	38	0.2	A	4.2	A
	South	7.0	12	0.1	A	4.1	A

**Note:** PFM = pedestrians per foot per minute

Table 16-8

2008 Existing Conditions: Weekday PM Peak Period Sidewalk Analysis

Location	Sidewalk	Effective Width (feet)	15-Minute Two-Way Volume	Average		Platoon	
				PFM	LOS	PFM	LOS
8th Avenue between W.44th Street & W.45th Street	East	10.0	660	4.4	A	8.4	C
	West	8.3	691	5.6	B	9.6	C
W.44th Street between 8th Avenue & 7th Avenue	North	8.8	205	1.6	A	5.6	B
	South	8.0	834	7.0	B	11.0	D
W.44th Street between 9th Avenue & 8th Avenue	North	9.0	340	2.5	A	6.5	B
	South	8.0	119	1.0	A	5.0	A
8th Avenue between W.44th Street & W.43rd Street	East	10.5	948	6.0	B	10.0	D
	West	10.0	736	4.9	A	8.9	C
W.44th Street between 9th Avenue & 8th Avenue	North	6.3	164	1.7	A	5.7	B
	South	6.3	131	1.4	A	5.4	B
9th Avenue between W.45th Street & 44th Street	East	8.0	445	3.7	A	7.7	C
	West	10	370	2.5	A	6.5	B
W.44th Street between 9th Avenue & 10th Avenue	North	6.0	101	1.1	A	5.1	B
	South	2.0	77	2.6	A	6.6	B
9th Avenue between W.43rd Street & 44th Street	East	8.5	386	3.0	A	7.0	C
	West	11	374	2.3	A	6.3	B
9th Avenue between W.45th Street & W.46th Street	East	10	432	2.9	A	6.9	B
	West	9.5	281	2.0	A	6.0	B
W.45th Street between 9th Avenue & 8th Avenue	North	5.0	104	1.4	A	5.4	B
	South	4.6	140	2.0	A	6.0	B
W.45th Street between 9th Avenue & 10th Avenue	North	3.5	55	1.0	A	5.0	B
	South	6.0	100	1.1	A	5.1	B
10th Avenue between W.45th Street & W.44th Street	East	8.0	149	1.2	A	5.2	B
	West	20.0	84	0.3	A	4.3	A
W.44th Street between 10th Avenue & 11th Avenue	North	7.5	27	0.2	A	4.2	A
	South	6.0	30	0.3	A	4.3	A
10th Avenue between W.43rd Street & W.44th Street	East	6.0	155	1.7	A	5.7	B
	West	9.0	58	0.4	A	4.4	A
10th Avenue between W.45th Street & W.46th Street	East	12.5	108	0.6	A	4.6	A
	West	11.0	102	0.6	A	4.6	A
W.45th Street between 11th Avenue & 10th Avenue	North	9.0	37	0.3	A	4.3	A
	South	8.0	140	1.2	A	5.2	B
11th Avenue between W.45th Street & W.44th Street	East	9.0	24	0.2	A	4.2	A
	West	9.0	16	0.1	A	4.1	A
W.44th Street between 11th Avenue & Route 9A	North	7.0	8	0.1	A	4.1	A
	South	5.0	1	0.0	A	4.0	A
11th Avenue between W.44th Street & 43rd Street	East	9.0	33	0.2	A	4.2	A
	West	6.0	24	0.3	A	4.3	A
11th Avenue between W.46th Street & W.45th Street	East	12.0	36	0.2	A	4.2	A
	West	9.0	58	0.4	A	4.4	A
W.45th Street between 11th Avenue & Route9A	North	11.0	21	0.1	A	4.1	A
	South	7.0	1	0.0	A	4.0	A

Note: PFM = pedestrians per foot per minute

**Table 16-9**

**2008 Existing Conditions: Weekday Peak Period Corner Reservoir Analysis**

Locations	Corner	AM Peak		Midday Peak		PM Peak	
		SFP	LOS	SFP	LOS	SFP	LOS
W.44th Street & 8th Avenue	Northeast	53.7	B	36.6	C	40.2	B
	Southeast	38.6	C	29.5	C	23.6	D
	Southwest	137.1	A	136.7	A	73.9	A
	Northwest	60.3	A	54.5	B	35.5	C
W.44th Street & 9th Avenue	Northeast	116.8	A	101.4	A	70.7	A
	Southeast	142.0	A	86.0	A	70.1	A
	Southwest	139.1	A	89.8	A	65.4	A
	Northwest	117.7	A	105.8	A	65.8	A
W.45th Street & 9th Avenue	Northeast	158.8	A	100.6	A	84.1	A
	Southeast	164.2	A	100.3	A	85.3	A
	Southwest	164.2	A	100.3	A	85.3	A
	Northwest	125.1	A	101.6	A	72.1	A
W.44th Street & 10th Avenue	Northeast	252.2	A	304.3	A	196.1	A
	Southeast	283.8	A	340.7	A	231.9	A
	Southwest	321.9	A	566.2	A	403.2	A
	Northwest	366.7	A	655.5	A	404.1	A
W.45th Street & 10th Avenue	Northeast	80.5	A	67.7	A	86.5	A
	Southeast	182.4	A	202.7	A	253.9	A
	Southwest	195.5	A	398.4	A	309.4	A
	Northwest	291.9	A	387.4	A	405.0	A
W.44th Street & 11th Avenue	Northeast	992.1	A	781.6	A	815.0	A
	Southeast	1111.0	A	1017.9	A	1806.3	A
	Southwest	1108.5	A	1658.2	A	1027.7	A
	Northwest	2076.1	A	3109.3	A	1138.6	A
W.45th Street & 11th Avenue	Northeast	727.3	A	375.2	A	352.3	A
	Southeast	1518.1	A	834.4	A	643.3	A
	Southwest	495.1	A	687.8	A	418.1	A
	Northwest	1113.2	A	790.1	A	580.5	A
<b>Note:</b> SFP = square feet per pedestrian							

Table 16-10

## 2008 Existing Conditions: Weekday Peak Period Crosswalk Analysis

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	With Conflicting Vehicles					
				AM Peak		Midday Peak		PM Peak	
				SFP	LOS	SFP	LOS	SFP	LOS
W.44th Street & 8th Avenue	North	69.0	13.0	43.0	B	38.3	C	32.9	C
	East	30.0	13.0	15.2	D	8.2	E	14.2	E
	South	70.0	13.0	96.9	A	84.7	A	30.8	C
	West	29.0	13.0	33.7	C	26.4	C	15.7	D
W.44th Street & 9th Avenue	North	69.0	13.0	95.1	A	122.3	A	67.9	A
	East	29.0	15.0	66.8	A	47.7	B	36.6	C
	South	69.0	12.0	150.4	A	69.2	A	57.3	B
	West	36.0	15.0	89.4	A	64.0	A	43.9	B
W.45th Street & 9th Avenue	North	69.0	13.0	192.1	A	88.4	A	98.1	A
	East	29.0	14.0	72.7	A	45.1	B	38.2	C
	South	70.0	13.0	160.2	A	116.0	A	87.9	A
	West	38.0	14.0	80.3	A	75.1	A	45.1	B
W.44th Street & 10th Avenue	North	60.0	14.0	373.4	A	487.4	A	241.3	A
	East	36.0	16.0	135.5	A	159.1	A	108.8	A
	South	60.0	14.0	222.6	A	318.8	A	243.4	A
	West	34.0	13.0	135.4	A	346.8	A	189.0	A
W.45th Street & 10th Avenue	North	60.0	13.0	242.4	A	191.6	A	359.2	A
	East	38.0	20.0	238.4	A	177.7	A	215.2	A
	South	60.0	13.0	71.0	A	144.9	A	150.6	A
	West	34.0	18.0	172.1	A	314.5	A	224.9	A
W.44th Street & 11th Avenue	North	70.0	11.0	1340.8	A	753.0	A	428.1	A
	East	33.0	15.0	703.4	A	674.1	A	1116.5	A
	South	70.0	13.0	874.1	A	663.2	A	2200.1	A
	West	35.0	15.0	1897.3	A	4970.6	A	1072.8	A
W.45th Street & 11th Avenue	North	70.0	13.0	651.1	A	222.7	A	168.0	A
	East	34.0	14.0	1061.3	A	562.3	A	441.3	A
	South	70.0	12.0	2776.2	A	2108.0	A	702.7	A
	West	31.0	15.0	900.8	A	1664.2	A	993.3	A

**Note:** SFP: = square feet per pedestrian

## D. THE FUTURE WITHOUT THE PROPOSED ACTIONS

Transit and pedestrian conditions in the future without the Proposed Actions were assessed to establish the baseline 2013 No Build scenario against which to evaluate the potential impacts of the Proposed Project. The No Build analyses incorporate background growth and the effects of other nearby development projects that would affect transit service and pedestrian movements in the study area.

### TRANSIT AND PEDESTRIAN VOLUME PROJECTIONS

Future No Build peak hour transit and pedestrian levels were estimated by first applying a background growth of 0.5 percent per year (as recommended by the *CEQR Technical Manual*), projected to the 2013 analysis year, and then adding transit and pedestrian trips associated with planned projects that will occur independent of the Proposed Actions. A description of these projects is provided in Chapter 2, "Land Use, Zoning, and Public Policy." Trips generated by

these No Build projects were distributed throughout the transit and pedestrian networks to generate the 2013 No Build transit and pedestrian volumes for analyses.

### SUBWAY STATION OPERATIONS

The same subway station control area and street-level stairways analyzed for existing conditions were evaluated to determine how these elements would function in the 2013 future No Build. As noted in **Table 16-5**, the pathway to the S14 stairway, located at the southwest corner of Eighth Avenue and West 44th Street, was partially blocked due to construction, when existing data were collected, forcing some pedestrians west of Eighth Avenue to instead use the S13 stairway (northwest corner). To account for a more balanced flow under the No Build condition, one-third of existing pedestrian volumes from the S13 stairway were shifted to the S14 stairway for the No Build analyses. As shown in **Tables 16-11** and **16-12**, all subway station elements will continue to operate at acceptable LOS A or B during the AM and PM peak periods.

**Table 16-11**  
**2013 No Build Condition: Subway Station Control Area Analysis**

N-60 Control Area	Quantity	15-Minute Pedestrian Volumes		15-Minute SVCD Capacity	V/SVCD ratio	LOS
		In	Out			
Weekday AM Peak Period						
Two-Way Turnstiles	5	275	341	2400	0.26	B
Weekday PM Peak Period						
Two-Way Turnstiles	5	444	361	2400	0.34	B
<b>Note:</b> Capacities were calculated based on rates presented in the New York City Transit, <i>Station Planning and Design Guidelines</i> (January 2001), in accordance with the <i>CEQR Technical Manual</i> .						

**Table 16-12**  
**2013 No Build Condition: Subway Station Stairway Analysis**

Street-Level Stairways	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes		Friction Factor	15-Minute SVCD Capacity	V/SVCD Ratio	LOS
			Up	Down				
Weekday AM Peak Period								
Southeast Corner- S12	4.5	3.5	54	157	0.80	420	0.50	B
Northwest Corner- S13	4.5	3.5	181	55	0.80	420	0.56	B
Southwest Corner- S14	4.5	3.5	106	63	0.90	473	0.36	A
Weekday PM Peak Period								
Southeast Corner- S12	4.5	3.5	129	123	0.90	473	0.53	B
Northwest Corner- S13	4.5	3.5	117	186	0.90	473	0.64	B
Southwest Corner- S14	4.5	3.5	115	135	0.90	473	0.53	B
<b>Note:</b> Capacities were calculated based on rates presented in the New York City Transit, <i>Station Planning and Design Guidelines</i> (January 2001), in accordance with the <i>CEQR Technical Manual</i> .								

### STREET-LEVEL PEDESTRIAN OPERATIONS

The No Build peak period volumes were applied to the pedestrian analysis networks for the analysis of study area sidewalks, corner reservoirs, and crosswalks during the weekday AM, midday, and PM peak periods. As shown in **Tables 16-13** through **16-17**, all analyzed pedestrian elements will operate at acceptable levels during the analysis peak periods, with the exception of the east and west crosswalks at Eighth Avenue and West 44th Street.

Table 16-13

**2013 No Build Condition: Weekday AM Peak Period Sidewalk Analysis**

Location	Sidewalk	Effective Width (feet)	15-Minute Two-Way Volume	Average		Platoon	
				PFM	LOS	PFM	LOS
8th Avenue between W.44th Street & W.45th Street	East	10.0	596	4.0	A	8.0	C
	West	8.3	664	5.3	B	9.3	C
W.44th Street between 8th Avenue & 7th Avenue	North	8.8	305	2.3	A	6.3	B
	South	8.0	477	4.0	A	8.0	C
W.44th Street between 9th Avenue & 8th Avenue	North	9.0	313	2.3	A	6.3	B
	South	8.0	192	1.6	A	5.6	B
8th Avenue between W.44th Street & W.43rd Street	East	10.5	841	5.3	B	9.3	C
	West	10.0	553	3.7	A	7.7	C
W.44th Street between 9th Avenue & 8th Avenue	North	6.3	185	2.0	A	6.0	B
	South	6.3	102	1.1	A	5.1	B
9th Avenue between W.45th Street & 44th Street	East	8.0	301	2.5	A	6.5	B
	West	10	196	1.3	A	5.3	B
W.44th Street between 9th Avenue & 10th Avenue	North	6.0	98	1.1	A	5.1	B
	South	2.0	55	1.8	A	5.8	B
9th Avenue between W.43rd Street & 44th Street	East	8.5	281	2.2	A	6.2	B
	West	11	225	1.4	A	5.4	B
9th Avenue between W.45th Street & W.46th Street	East	10	291	1.9	A	5.9	B
	West	9.5	167	1.2	A	5.2	B
W.45th Street between 9th Avenue & 8th Avenue	North	5.0	189	2.5	A	6.5	B
	South	4.6	42	0.6	A	4.6	A
W.45th Street between 9th Avenue & 10th Avenue	North	3.5	41	0.8	A	4.8	A
	South	6.0	73	0.8	A	4.8	A
10th Avenue between W.45th Street & W.44th Street	East	8.0	206	1.7	A	5.7	B
	West	20.0	144	0.5	A	4.5	A
W.44th Street between 10th Avenue & 11th Avenue	North	7.5	7	0.1	A	4.1	A
	South	6.0	20	0.2	A	4.2	A
10th Avenue between W.43rd Street & W.44th Street	East	6.0	188	2.1	A	6.1	B
	West	9.0	130	1.0	A	5.0	A
10th Avenue between W.45th Street & W.46th Street	East	12.5	153	0.8	A	4.8	A
	West	11.0	128	0.3	A	4.8	A
W.45th Street between 11th Avenue & 10th Avenue	North	9.0	45	2.1	A	4.3	A
	South	8.0	255	0.4	A	6.1	B
11th Avenue between W.45th Street & W.44th Street	East	9.0	55	0.7	A	4.4	A
	West	9.0	97	0.1	A	4.7	A
W.44th Street between 11th Avenue & Route 9A	North	7.0	10	0.1	A	4.1	A
	South	5.0	4	0.2	A	4.1	A
11th Avenue between W.44th Street & 43rd Street	East	9.0	31	1.2	A	4.2	A
	West	6.0	107	0.5	A	5.2	B
11th Avenue between W.46th Street & W.45th Street	East	12.0	92	0.8	A	4.5	A
	West	9.0	112	0.1	A	4.8	A
W.45th Street between 11th Avenue & Route 9A	North	11.0	15	0.1	A	4.1	A
	South	7.0	7	0.1	A	4.1	A

**Note:** PFM = pedestrians per foot per minute



**Table 16-14**

**2013 No Build Condition: Weekday Midday Peak Period Sidewalk Analysis**

Location	Sidewalk	Effective Width (feet)	15-Minute Two-Way Volume	Average		Platoon	
				PFM	LOS	PFM	LOS
8th Avenue between W.44th Street & W.45th Street	East	10.0	993	6.6	B	10.6	D
	West	8.3	936	7.5	C	11.5	D
W.44th Street between 8th Avenue & 7th Avenue	North	8.8	252	1.9	A	5.9	B
	South	8.0	483	4.0	A	8.0	C
W.44th Street between 9th Avenue & 8th Avenue	North	9.0	315	2.3	A	6.3	B
	South	8.0	379	3.2	A	7.2	C
8th Avenue between W.44th Street & W.43rd Street	East	10.5	1005	6.4	B	10.4	D
	West	10.0	957	6.4	B	10.4	D
W.44th Street between 9th Avenue & 8th Avenue	North	6.3	196	2.1	A	6.1	B
	South	6.3	191	2.0	A	6.0	B
9th Avenue between W.45th Street & 44th Street	East	8.0	483	4.0	A	8.0	C
	West	10	165	1.1	A	5.1	B
W.44th Street between 9th Avenue & 10th Avenue	North	6.0	81	0.9	A	4.9	A
	South	2.0	66	2.2	A	6.2	B
9th Avenue between W.43rd Street & 44th Street	East	8.5	417	3.3	A	7.3	C
	West	11	249	1.5	A	5.5	B
9th Avenue between W.45th Street & W.46th Street	East	10	437	2.9	A	6.9	B
	West	9.5	202	1.4	A	5.4	B
W.45th Street between 9th Avenue & 8th Avenue	North	5.0	190	2.5	A	6.5	B
	South	4.6	118	1.7	A	5.7	B
W.45th Street between 9th Avenue & 10th Avenue	North	3.5	94	1.8	A	5.8	B
	South	6.0	76	0.8	A	4.8	A
10th Avenue between W.45th Street & W.44th Street	East	8.0	238	2.0	A	6.0	B
	West	20.0	73	0.2	A	4.2	A
W.44th Street between 10th Avenue & 11th Avenue	North	7.5	16	0.1	A	4.1	A
	South	6.0	9	0.1	A	4.1	A
10th Avenue between W.43rd Street & W.44th Street	East	6.0	215	2.4	A	6.4	B
	West	9.0	50	0.4	A	4.4	A
10th Avenue between W.45th Street & W.46th Street	East	12.5	219	1.2	A	5.2	B
	West	11.0	113	0.7	A	4.7	A
W.45th Street between 11th Avenue & 10th Avenue	North	9.0	42	0.3	A	4.3	A
	South	8.0	48	0.4	A	4.4	A
11th Avenue between W.45th Street & W.44th Street	East	9.0	25	0.2	A	4.2	A
	West	9.0	137	1.0	A	5.0	B
W.44th Street between 11th Avenue & Route 9A	North	7.0	13	0.1	A	4.1	A
	South	5.0	4	0.1	A	4.1	A
11th Avenue between W.44th Street & 43rd Street	East	9.0	40	0.3	A	4.3	A
	West	6.0	128	1.4	A	5.4	B
11th Avenue between W.46th Street & W.45th Street	East	12.0	60	0.3	A	4.3	A
	West	9.0	147	1.1	A	5.1	B
W.45th Street between 11th Avenue & Route 9A	North	11.0	39	0.2	A	4.2	A
	South	7.0	12	0.1	A	4.1	A

**Note:** PFM = pedestrians per foot per minute

**Table 16-15**

**2013 No Build Condition: Weekday PM Peak Period Sidewalk Analysis**

Location	Sidewalk	Effective Width (feet)	15-Minute Two-Way Volume	Average		Platoon	
				PFM	LOS	PFM	LOS
8th Avenue between W.44th Street & W.45th Street	East	10.0	827	5.5	B	9.5	C
	West	8.3	969	7.8	C	11.8	D
W.44th Street between 8th Avenue & 7th Avenue	North	8.8	211	1.6	A	5.6	B
	South	8.0	950	7.9	C	11.9	D
W.44th Street between 9th Avenue & 8th Avenue	North	9.0	465	3.4	A	7.4	C
	South	8.0	404	3.4	A	7.4	C
8th Avenue between W.44th Street & W.43rd Street	East	10.5	1058	6.7	B	10.7	D
	West	10.0	906	6.0	B	10.0	D
W.44th Street between 9th Avenue & 8th Avenue	North	6.3	181	1.9	A	5.9	B
	South	6.3	183	1.9	A	5.9	B
9th Avenue between W.45th Street & 44th Street	East	8.0	526	4.4	A	8.4	C
	West	10	381	2.5	A	6.5	B
W.44th Street between 9th Avenue & 10th Avenue	North	6.0	121	1.3	A	5.3	B
	South	2.0	87	2.9	A	6.9	B
9th Avenue between W.43rd Street & 44th Street	East	8.5	465	3.6	A	7.6	C
	West	11	384	2.3	A	6.3	B
9th Avenue between W.45th Street & W.46th Street	East	10	505	3.4	A	7.4	C
	West	9.5	294	2.1	A	6.1	B
W.45th Street between 9th Avenue & 8th Avenue	North	5.0	127	1.7	A	5.7	B
	South	4.6	144	2.1	A	6.1	B
W.45th Street between 9th Avenue & 10th Avenue	North	3.5	64	1.2	A	5.2	B
	South	6.0	102	1.1	A	5.1	B
10th Avenue between W.45th Street & W.44th Street	East	8.0	247	2.1	A	6.1	B
	West	20.0	115	0.4	A	4.4	A
W.44th Street between 10th Avenue & 11th Avenue	North	7.5	27	0.2	A	4.2	A
	South	6.0	31	0.3	A	4.3	A
10th Avenue between W.43rd Street & W.44th Street	East	6.0	247	2.7	A	6.7	B
	West	9.0	72	0.5	A	4.5	A
10th Avenue between W.45th Street & W.46th Street	East	12.5	212	1.1	A	5.1	B
	West	11.0	133	0.8	A	4.8	A
W.45th Street between 11th Avenue & 10th Avenue	North	9.0	38	0.3	A	4.3	A
	South	8.0	144	1.2	A	5.2	B
11th Avenue between W.45th Street & W.44th Street	East	9.0	37	0.3	A	4.3	A
	West	9.0	145	1.1	A	5.1	B
W.44th Street between 11th Avenue & Route 9A	North	7.0	8	0.1	A	4.1	A
	South	5.0	1	0.0	A	4.0	A
11th Avenue between W.44th Street & 43rd Street	East	9.0	46	0.3	A	4.3	A
	West	6.0	153	1.7	A	5.7	B
11th Avenue between W.46th Street & W.45th Street	East	12.0	49	0.3	A	4.3	A
	West	9.0	188	1.4	A	5.4	B
W.45th Street between 11th Avenue & Route 9A	North	11.0	21	0.1	A	4.1	A
	South	7.0	1	0.0	A	4.0	A
<b>Note:</b> PFM = pedestrians per foot per minute							

**Table 16-16**

**2013 No Build Condition: Weekday Peak Period Corner Reservoir Analysis**

Locations	Corner	AM Peak		Midday Peak		PM Peak	
		SFP	LOS	SFP	LOS	SFP	LOS
W.44th Street & 8th Avenue	Northeast	45.9	B	27.3	C	33.1	C
	Southeast	32.0	C	20.7	D	19.9	D
	Southwest	100.7	A	56.7	B	55.4	B
	Northwest	45.7	B	27.8	C	26.7	C
W.44th Street & 9th Avenue	Northeast	98.6	A	70.3	A	58.5	B
	Southeast	116.9	A	59.3	B	58.1	B
	Southwest	132.3	A	82.6	A	61.7	A
	Northwest	109.2	A	98.6	A	61.1	A
W.45th Street & 9th Avenue	Northeast	131.7	A	66.7	A	69.3	A
	Southeast	139.2	A	71.2	A	72.5	A
	Southwest	139.2	A	71.2	A	72.5	A
	Northwest	117.4	A	86.1	A	67.9	A
W.44th Street & 10th Avenue	Northeast	178.4	A	176.3	A	127.7	A
	Southeast	203.2	A	196.9	A	153.7	A
	Southwest	298.9	A	489.4	A	359.6	A
	Northwest	310.6	A	509.8	A	318.4	A
W.45th Street & 10th Avenue	Northeast	55.4	B	37.0	C	48.0	B
	Southeast	140.0	A	133.9	A	157.5	A
	Southwest	177.2	A	336.4	A	254.9	A
	Northwest	254.9	A	325.5	A	320.0	A
W.44th Street & 11th Avenue	Northeast	796.7	A	622.1	A	631.8	A
	Southeast	914.3	A	806.6	A	1203.0	A
	Southwest	245.4	A	188.3	A	170.5	A
	Northwest	421.0	A	315.1	A	256.3	A
W.45th Street & 11th Avenue	Northeast	609.5	A	330.1	A	302.7	A
	Southeast	1112.5	A	653.7	A	513.9	A
	Southwest	97.8	A	76.6	A	68.2	A
	Northwest	317.0	A	212.9	A	184.9	A
<b>Note:</b> SFP = square feet per pedestrian							

**Table 16-17**

**2013 No Build Condition: Weekday Peak Period Crosswalk Analysis**

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	With Conflicting Vehicles					
				AM Peak		Midday Peak		PM Peak	
				SFP	LOS	SFP	LOS	SFP	LOS
W.44th Street & 8th Avenue	North	69.0	13.0	41.9	B	37.4	C	32.2	C
	East	30.0	13.0	12.0	E	5.6	F	11.4	E
	South	70.0	13.0	77.0	A	58.2	B	25.9	C
	West	29.0	13.0	25.4	C	9.4	E	11.4	E
W.44th Street & 9th Avenue	North	69.0	13.0	82.3	A	106.0	A	58.2	B
	East	29.0	15.0	53.4	B	29.3	C	29.2	C
	South	69.0	12.0	134.9	A	59.0	B	51.6	B
	West	36.0	15.0	86.6	A	61.3	A	42.4	B
W.45th Street & 9th Avenue	North	69.0	13.0	154.8	A	59.1	B	81.4	A
	East	29.0	14.0	58.8	B	28.7	C	30.9	C
	South	70.0	13.0	156.6	A	112.3	A	85.7	A
	West	38.0	14.0	78.4	A	73.0	A	43.3	B
W.44th Street & 10th Avenue	North	60.0	14.0	261.3	A	353.6	A	172.1	A
	East	36.0	16.0	83.8	A	77.7	A	64.1	A
	South	60.0	14.0	216.6	A	318.8	A	236.4	A
	West	34.0	13.0	122.0	A	262.4	A	158.5	A
W.45th Street & 10th Avenue	North	60.0	13.0	236.3	A	184.0	A	357.0	A
	East	38.0	20.0	140.8	A	96.2	A	108.4	A
	South	60.0	13.0	69.0	A	139.8	A	145.0	A
	West	34.0	18.0	142.5	A	233.0	A	164.1	A
W.44th Street & 11th Avenue	North	70.0	11.0	1340.8	A	753.0	A	428.1	A
	East	33.0	15.0	535.8	A	503.8	A	699.0	A
	South	70.0	13.0	872.0	A	658.8	A	2172.9	A
	West	35.0	15.0	221.2	A	188.5	A	156.4	A
W.45th Street & 11th Avenue	North	70.0	13.0	645.8	A	220.6	A	162.1	A
	East	34.0	14.0	656.2	A	417.4	A	333.9	A
	South	70.0	12.0	2776.2	A	2108.0	A	702.7	A
	West	31.0	15.0	137.0	A	132.9	A	121.8	A

**Note:** SFP = square feet per pedestrian

As shown in **Table 16-17** for the Eighth Avenue intersection with West 44th Street, the east crosswalk will operate at LOS E (12.0 SFP), LOS F (5.6 SFP), and LOS E (11.4 SFP) during the weekday AM, midday, and PM peak periods, respectively. The west crosswalk will operate at LOS E during both the weekday midday and PM peak periods, at 9.4 and 11.4 SFP, respectively.

## E. PROBABLE IMPACTS OF THE PROPOSED ACTIONS

The future with the Proposed Actions, or the Build scenario, would result in increased transit and pedestrian trips compared to the No Build scenario. This section describes the projected travel patterns of the project-generated trips and assesses their potential impacts on nearby transit and pedestrian facilities.

### TRIP DISTRIBUTION AND ASSIGNMENT

The Proposed Actions would generate 1,717, 1,789, and 1,426 person trips during the weekday AM, weekday midday, and weekday PM peak hours, respectively. These trips include 296, 194,

and 343 subway trips, 184, 138, and 204 bus trips and 1,071, 1,327, and 708 walk only trips over the same time periods.

Project-generated transit and pedestrian trips were assigned separately for each of the three components in the Build program: residential units, school, and local retail.

#### *TRANSIT TRIPS*

Project-generated subway trips were assigned to the 42nd street-Port Authority Bus Terminal and Times Square-42nd Street Subway Stations. Project-generated bus trips were assigned to the three available bus routes (M11, M42, and M50) nearest to the Project Site. Trips were split among the bus routes based on the proximity to the Project Site and frequency of service.

#### *PEDESTRIAN TRIPS*

Pedestrian circulation would occur primarily along West 44th street and West 45th street, and along the Eighth, Ninth, Tenth and Eleventh Avenues. The following assumptions were used to assign the auto, transit, and walk-only pedestrian trips:

- Auto trips were assigned to on-site and off-site parking facilities. For the walk portion of these trips, all pedestrians for the residential component of the program were assumed to use the on-site parking facility and therefore would not add any additional walk trips to the analysis locations. However, pedestrians for the retail component of the project were assumed to utilize both on-site and off-site parking facilities. Pedestrians generated from off-site parking facilities were added to the analysis locations.
- Taxi trips were assigned to entrances of the various components of the program. For the retail component, all taxi drop-offs were assigned to the entrance on Eleventh Avenue while the residential component drop-offs were assigned to the entrances along West 44th and West 45th Streets between Tenth and Eleventh Avenues. Taxi drop-offs for school trips were assigned to the relocated school entrance on West 44th Street between Tenth and Eleventh Avenues.
- Travel paths between subway stations and the Project Site were developed to assign subway riders to the pedestrian analysis locations. Due to close proximity to the Project Site, the West 44th street entrances for the 42nd street-Port Authority Bus Terminal Station were allocated 70 percent of the project-generated subway riders while the remaining 30 percent were allocated to the other entrances on West 42nd Street.
- Travel paths between nearby bus stops and the Project Site were developed based on the proximity of the bus stops to the Project Site and frequency of service. The M11 and M42 routes were assumed to serve 90 percent of the project-generated bus riders while the M50 was assumed to serve the remaining 10 percent.
- Similarly, logical travel paths were developed for the assignment of walk only trips to the pedestrian analysis locations. Travel paths for walk trips were developed based on existing land-use characteristics, with 30 percent of all walk only trips assigned to the north of the Project Site, 30 percent to the south, 30 percent to the east, and the remaining 10 percent to the west.

## SUBWAY STATION OPERATIONS

The same subway station control area and vertical circulation elements analyzed for the existing and No Build conditions were evaluated for the Build condition. Project-generated subway trips were added to the 2013 No Build volumes to generate the 2013 Build volumes for the analysis of station operations. Although there would be some deterioration in service levels at certain station elements, as compared to the No Build condition, all subway station elements would operate at acceptable LOS C or better during the analysis peak periods, as shown in **Tables 16-18** and **16-19**. Therefore, the Proposed Actions would not result in any significant adverse subway impacts.

**Table 16-18**  
**2013 Build Condition: Subway Station Control Area Analysis**

N-60 Control Area	Quantity	15-Minute Pedestrian Volumes		15-Minute SVCD Capacity	V/SVCD ratio	LOS
		In	Out			
Weekday AM Peak Period						
Two-Way Turnstiles	5	321	352	2400	0.28	B
Weekday PM Peak Period						
Two-Way Turnstiles	5	465	407	2400	0.36	B
<b>Note:</b> Capacities were calculated based on rates presented in the New York City Transit, <i>Station Planning and Design Guidelines</i> (January 2001), in accordance with the <i>CEQR Technical Manual</i> .						

**Table 16-19**  
**2013 Build Condition: Subway Station Stairway Analysis**

Street-Level Stairways	Width (feet)	Effective Width (feet)	15-Minute Pedestrian Volumes		Friction Factor	15-Minute SVCD Capacity	V/SVCD Ratio	LOS
			Up	Down				
Weekday AM Peak Period								
Southeast Corner- S12	4.5	3.5	54	157	0.80	420	0.50	B
Northwest Corner- S13	4.5	3.5	189	88	0.80	420	0.66	B
Southwest Corner- S14	4.5	3.5	109	76	0.90	473	0.39	A
Weekday PM Peak Period								
Southeast Corner- S12	4.5	3.5	129	123	0.90	473	0.53	B
Northwest Corner- S13	4.5	3.5	150	201	0.90	473	0.74	C
Southwest Corner- S14	4.5	3.5	128	141	0.90	473	0.57	B
<b>Note:</b> Capacities were calculated based on rates presented in the New York City Transit, <i>Station Planning and Design Guidelines</i> (January 2001), in accordance with the <i>CEQR Technical Manual</i> .								

## STREET-LEVEL PEDESTRIAN OPERATIONS

Pedestrian trips associated with the Proposed Actions would result in increased volumes at the study area analysis locations. The Build condition analyses account for the distribution of project-generated trips overlaid onto the No Build pedestrian network's sidewalks, corner reservoirs, and crosswalks for the weekday AM, weekday midday, and weekday PM peak periods.

**Tables 16-20** through **16-24** present the future Build pedestrian analysis results. All pedestrian elements would continue to operate at acceptable LOS D or better in the 2013 Build condition, except for the east and west crosswalks at Eighth Avenue and West 44th Street. As with the No Build condition, the east crosswalk would continue to operate at LOS E (12.0 SFP), LOS F (5.6 SFP), and LOS E (11.4 SFP) during the weekday AM, midday, and PM peak periods, respectively, while the

west crosswalk would deteriorate within LOS E during the midday and PM peak periods, with average pedestrian space declining from 9.4 to 9.2 SFP and from 11.4 to 11.3 SFP, respectively. These decreases are within the CEQR impact threshold of 1 SFP. Therefore, the Proposed Actions in 2013 would not result in any significant adverse pedestrian impacts.

**Table 16-20**  
**2013 Build Condition: Weekday AM Peak Period Sidewalk Analysis**

Location	Sidewalk	Effective Width (feet)	15-Minute Two-Way Volume	Average		Platoon	
				PFM	LOS	PFM	LOS
8th Avenue between W.44th Street & W.45th Street	East	10.0	596	4.0	A	8.0	C
	West	8.3	664	5.3	B	9.3	C
W.44th Street between 8th Avenue & 7th Avenue	North	8.8	305	2.3	A	6.3	B
	South	8.0	477	4.0	A	8.0	C
W.44th Street between 9th Avenue & 8th Avenue	North	9.0	360	2.7	A	6.7	B
	South	8.0	208	1.7	A	5.7	B
8th Avenue between W.44th Street & W.43rd Street	East	10.5	841	5.3	B	9.3	C
	West	10.0	559	3.7	A	7.7	C
W.44th Street between 9th Avenue & 8th Avenue	North	6.3	232	2.5	A	6.5	B
	South	6.3	118	1.2	A	5.2	B
9th Avenue between W.45th Street & 44th Street	East	8.0	301	2.5	A	6.5	B
	West	10	286	1.9	A	5.9	B
W.44th Street between 9th Avenue & 10th Avenue	North	6.0	273	3.0	A	7.0	C
	South	2.0	55	1.8	A	5.8	B
9th Avenue between W.43rd Street & 44th Street	East	8.5	281	2.2	A	6.2	B
	West	11	300	1.8	A	5.8	B
9th Avenue between W.45th Street & W.46th Street	East	10	291	1.9	A	5.9	B
	West	9.5	242	1.7	A	5.7	B
W.45th Street between 9th Avenue & 8th Avenue	North	5.0	189	2.5	A	6.5	B
	South	4.6	48	0.7	A	4.7	A
W.45th Street between 9th Avenue & 10th Avenue	North	3.5	41	0.8	A	4.8	A
	South	6.0	118	1.3	A	5.3	B
10th Avenue between W.45th Street & W.44th Street	East	8.0	206	1.7	A	5.7	B
	West	20.0	224	0.7	A	4.7	A
W.44th Street between 10th Avenue & 11th Avenue	North	7.5	476	4.2	A	8.2	C
	South	6.0	20	0.2	A	4.2	A
10th Avenue between W.43rd Street & W.44th Street	East	6.0	188	2.1	A	6.1	B
	West	9.0	247	1.8	A	5.8	B
10th Avenue between W.45th Street & W.46th Street	East	12.5	174	0.9	A	4.9	A
	West	11.0	221	1.3	A	5.3	B
W.45th Street between 11th Avenue & 10th Avenue	North	9.0	45	0.3	A	4.3	A
	South	8.0	382	3.2	A	7.2	C
11th Avenue between W.45th Street & W.44th Street	East	9.0	100	0.7	A	4.7	A
	West	9.0	97	0.7	A	4.7	A
W.44th Street between 11th Avenue & Route 9A	North	7.0	16	0.2	A	4.2	A
	South	5.0	4	0.1	A	4.1	A
11th Avenue between W.44th Street & 43rd Street	East	9.0	92	0.7	A	4.7	A
	West	6.0	107	1.2	A	5.2	B
11th Avenue between W.46th Street & W.45th Street	East	12.0	135	0.8	A	4.8	A
	West	9.0	112	0.8	A	4.8	A
W.45th Street between 11th Avenue & Route 9A	North	11.0	21	0.1	A	4.1	A
	South	7.0	13	0.1	A	4.1	A

**Note:** PFM = pedestrians per foot per minute

Table 16-21

2013 Build Condition: Weekday Midday Peak Period Sidewalk Analysis

Location	Sidewalk	Effective Width (feet)	15-Minute Two-Way Volume	Average		Platoon	
				PFM	LOS	PFM	LOS
8th Avenue between W.44th Street & W.45th Street	East	10.0	993	6.6	B	10.6	D
	West	8.3	936	7.5	C	11.5	D
W.44th Street between 8th Avenue & 7th Avenue	North	8.8	252	1.9	A	5.9	B
	South	8.0	483	4.0	A	8.0	C
W.44th Street between 9th Avenue & 8th Avenue	North	9.0	351	2.6	A	6.6	B
	South	8.0	390	3.3	A	7.3	C
8th Avenue between W.44th Street & W.43rd Street	East	10.5	1005	6.4	B	10.4	D
	West	10.0	967	6.4	B	10.4	D
W.44th Street between 9th Avenue & 8th Avenue	North	6.3	232	2.5	A	6.5	B
	South	6.3	202	2.1	A	6.1	B
9th Avenue between W.45th Street & 44th Street	East	8.0	483	4.0	A	8.0	C
	West	10	242	1.6	A	5.6	B
W.44th Street between 9th Avenue & 10th Avenue	North	6.0	259	2.9	A	6.9	B
	South	2.0	66	2.2	A	6.2	B
9th Avenue between W.43rd Street & 44th Street	East	8.5	417	3.3	A	7.3	C
	West	11	331	2.0	A	6.0	B
9th Avenue between W.45th Street & W.46th Street	East	10	437	2.9	A	6.9	B
	West	9.5	284	2.0	A	6.0	B
W.45th Street between 9th Avenue & 8th Avenue	North	5.0	190	2.5	A	6.5	B
	South	4.6	128	1.9	A	5.9	B
W.45th Street between 9th Avenue & 10th Avenue	North	3.5	94	1.8	A	5.8	B
	South	6.0	120	1.3	A	5.3	B
10th Avenue between W.45th Street & W.44th Street	East	8.0	238	2.0	A	6.0	B
	West	20.0	145	0.5	A	4.5	A
W.44th Street between 10th Avenue & 11th Avenue	North	7.5	463	4.1	A	8.1	C
	South	6.0	9	0.1	A	4.1	A
10th Avenue between W.43rd Street & W.44th Street	East	6.0	215	2.4	A	6.4	B
	West	9.0	155	1.1	A	5.1	B
10th Avenue between W.45th Street & W.46th Street	East	12.5	235	1.3	A	5.3	B
	West	11.0	204	1.2	A	5.2	B
W.45th Street between 11th Avenue & 10th Avenue	North	9.0	42	0.3	A	4.3	A
	South	8.0	150	1.3	A	5.3	B
11th Avenue between W.45th Street & W.44th Street	East	9.0	221	1.6	A	5.6	B
	West	9.0	137	1.0	A	5.0	B
W.44th Street between 11th Avenue & Route 9A	North	7.0	17	0.2	A	4.2	A
	South	5.0	4	0.1	A	4.1	A
11th Avenue between W.44th Street & 43rd Street	East	9.0	129	1.0	A	5.0	A
	West	6.0	128	1.4	A	5.4	B
11th Avenue between W.46th Street & W.45th Street	East	12.0	132	0.7	A	4.7	A
	West	9.0	147	1.1	A	5.1	B
W.45th Street between 11th Avenue & Route9A	North	11.0	43	0.3	A	4.3	A
	South	7.0	16	0.2	A	4.2	A

Note: PFM = pedestrians per foot per minute



**Table 16-22**

**2013 Build Condition: Weekday PM Peak Period Sidewalk Analysis**

Location	Sidewalk	Effective Width (feet)	15-Minute Two-Way Volume	Average		Platoon	
				PFM	LOS	PFM	LOS
8th Avenue between W.44th Street & W.45th Street	East	10.0	827	5.5	B	9.5	C
	West	8.3	969	7.8	C	11.8	D
W.44th Street between 8th Avenue & 7th Avenue	North	8.8	211	1.6	A	5.6	B
	South	8.0	950	7.9	C	11.9	D
W.44th Street between 9th Avenue & 8th Avenue	North	9.0	520	3.9	A	7.9	C
	South	8.0	423	3.5	A	7.5	C
8th Avenue between W.44th Street & W.43rd Street	East	10.5	1058	6.7	B	10.7	D
	West	10.0	913	6.1	B	10.1	D
W.44th Street between 9th Avenue & 8th Avenue	North	6.3	236	2.5	A	6.5	B
	South	6.3	202	2.1	A	6.1	B
9th Avenue between W.45th Street & 44th Street	East	8.0	526	4.4	A	8.4	C
	West	10	413	2.8	A	6.8	B
W.44th Street between 9th Avenue & 10th Avenue	North	6.0	178	2.0	A	6.0	B
	South	2.0	87	2.9	A	6.9	B
9th Avenue between W.43rd Street & 44th Street	East	8.5	465	3.6	A	7.6	C
	West	11	398	2.4	A	6.4	B
9th Avenue between W.45th Street & W.46th Street	East	10	505	3.4	A	7.4	C
	West	9.5	308	2.2	A	6.2	B
W.45th Street between 9th Avenue & 8th Avenue	North	5.0	127	1.7	A	5.7	B
	South	4.6	151	2.2	A	6.2	B
W.45th Street between 9th Avenue & 10th Avenue	North	3.5	64	1.2	A	5.2	B
	South	6.0	155	1.7	A	5.7	B
10th Avenue between W.45th Street & W.44th Street	East	8.0	247	2.1	A	6.1	B
	West	20.0	134	0.4	A	4.4	A
W.44th Street between 10th Avenue & 11th Avenue	North	7.5	179	1.6	A	5.6	B
	South	6.0	31	0.3	A	4.3	A
10th Avenue between W.43rd Street & W.44th Street	East	6.0	247	2.7	A	6.7	B
	West	9.0	134	1.0	A	5.0	A
10th Avenue between W.45th Street & W.46th Street	East	12.5	238	1.3	A	5.3	B
	West	11.0	168	1.0	A	5.0	B
W.45th Street between 11th Avenue & 10th Avenue	North	9.0	38	0.3	A	4.3	A
	South	8.0	295	2.5	A	6.5	B
11th Avenue between W.45th Street & W.44th Street	East	9.0	64	0.5	A	4.5	A
	West	9.0	145	1.1	A	5.1	B
W.44th Street between 11th Avenue & Route 9A	North	7.0	15	0.1	A	4.1	A
	South	5.0	1	0.0	A	4.0	A
11th Avenue between W.44th Street & 43rd Street	East	9.0	82	0.6	A	4.6	A
	West	6.0	153	1.7	A	5.7	B
11th Avenue between W.46th Street & W.45th Street	East	12.0	64	0.4	A	4.4	A
	West	9.0	188	1.4	A	5.4	B
W.45th Street between 11th Avenue & Route 9A	North	11.0	28	0.2	A	4.2	A
	South	7.0	8	0.1	A	4.1	A

**Note:** PFM = pedestrians per foot per minute

Table 16-23

2013 Build Condition: Weekday Peak Period Corner Reservoir Analysis

Locations	Corner	AM Peak		Midday Peak		PM Peak	
		SFP	LOS	SFP	LOS	SFP	LOS
W.44th Street & 8th Avenue	Northeast	45.9	B	27.3	C	33.1	C
	Southeast	32.0	C	20.7	D	19.9	D
	Southwest	99.7	A	56.1	B	55.1	B
	Northwest	45.3	B	27.5	C	26.5	C
W.44th Street & 9th Avenue	Northeast	88.3	A	65.7	A	53.1	B
	Southeast	111.3	A	58.1	B	56.0	B
	Southwest	91.8	A	64.4	A	56.7	B
	Northwest	63.5	A	60.0	B	52.4	B
W.45th Street & 9th Avenue	Northeast	131.7	A	66.7	A	69.3	A
	Southeast	136.4	A	69.8	A	71.4	A
	Southwest	136.4	A	69.8	A	71.4	A
	Northwest	88.5	A	67.9	A	65.4	A
W.44th Street & 10th Avenue	Northeast	101.0	A	101.6	A	107.7	A
	Southeast	203.2	A	196.9	A	153.7	A
	Southwest	174.7	A	241.9	A	247.7	A
	Northwest	92.3	A	106.0	A	176.3	A
W.45th Street & 10th Avenue	Northeast	50.0	B	34.9	C	42.0	B
	Southeast	116.9	A	114.2	A	123.4	A
	Southwest	107.1	A	160.5	A	152.8	A
	Northwest	149.3	A	178.1	A	209.5	A
W.44th Street & 11th Avenue	Northeast	244.8	A	161.5	A	338.1	A
	Southeast	413.7	A	316.8	A	623.7	A
	Southwest	245.4	A	188.3	A	170.5	A
	Northwest	397.7	A	305.7	A	245.2	A
W.45th Street & 11th Avenue	Northeast	303.7	A	179.4	A	247.1	A
	Southeast	363.4	A	194.3	A	323.5	A
	Southwest	92.3	A	74.1	A	64.4	A
	Northwest	301.1	A	207.7	A	177.7	A

Note: SFP = square feet per pedestrian

**Table 16-24**

**2013 Build Condition: Weekday Peak Period Crosswalk Analysis**

Location	Crosswalk	Street Width (feet)	Crosswalk Width (feet)	With Conflicting Vehicles					
				AM Peak		Midday Peak		PM Peak	
				SFP	LOS	SFP	LOS	SFP	LOS
W.44th Street & 8th Avenue	North	69.0	13.0	41.9	B	37.4	C	32.2	C
	East	30.0	13.0	12.0	E	5.6	F	11.4	E
	South	70.0	13.0	77.0	A	58.2	B	25.9	C
	West	29.0	13.0	25.0	C	9.2	E	11.3	E
W.44th Street & 9th Avenue	North	69.0	13.0	56.2	B	73.6	A	42.4	B
	East	29.0	15.0	53.4	B	29.3	C	29.2	C
	South	69.0	12.0	105.5	A	54.0	B	45.2	B
	West	36.0	15.0	57.6	B	43.0	B	39.9	C
W.45th Street & 9th Avenue	North	69.0	13.0	154.8	A	59.1	B	81.4	A
	East	29.0	14.0	58.8	B	28.7	C	30.9	C
	South	70.0	13.0	138.5	A	96.9	A	79.0	A
	West	38.0	14.0	53.2	B	50.0	B	41.4	B
W.44th Street & 10th Avenue	North	60.0	14.0	50.2	B	51.1	B	91.9	A
	East	36.0	16.0	83.8	A	77.7	A	64.1	A
	South	60.0	14.0	216.6	A	318.8	A	236.4	A
	West	34.0	13.0	58.4	B	85.7	A	92.0	A
W.45th Street & 10th Avenue	North	60.0	13.0	168.9	A	148.6	A	206.1	A
	East	38.0	20.0	136.1	A	95.3	A	105.2	A
	South	60.0	13.0	47.6	B	76.4	A	68.4	A
	West	34.0	18.0	76.3	A	100.6	A	109.5	A
W.44th Street & 11th Avenue	North	70.0	11.0	721.4	A	501.1	A	284.2	A
	East	33.0	15.0	201.7	A	173.4	A	340.4	A
	South	70.0	13.0	872.0	A	658.8	A	2172.9	A
	West	35.0	15.0	221.2	A	188.5	A	156.4	A
W.45th Street & 11th Avenue	North	70.0	13.0	481.0	A	193.3	A	137.1	A
	East	34.0	14.0	213.1	A	153.2	A	260.8	A
	South	70.0	12.0	923.1	A	701.8	A	323.9	A
	West	31.0	15.0	137.0	A	132.9	A	123.3	A

**Note:** SFP = square feet per pedestrian

## SCHOOL SAFETY

The proposed expansion of the existing school on the Project Site would also result in a change in the school's pedestrian access. Currently, the main entrance to the school is located on West 45th Street, a westbound street, between Tenth and Eleventh Avenues. Under the Proposed Actions, this entrance would be relocated to West 44th Street, an eastbound street, between Tenth and Eleventh Avenues. An examination of the area's roadways revealed that several school safety measures are already in place to enhance safety along pedestrian paths for students. For example, most of the crosswalks at Tenth Avenue and West 44th Street, Tenth Avenue and West 45th Street, and Eleventh Avenue and West 45th Street are striped for school crossing. In addition, roadways approaching these intersections have "School X-ing" pavement markings. With the existing school entrance relocated to West 44th Street, it is recommended that the same safety treatments be implemented for the Eleventh Avenue and West 44th Street intersection. Specifically, "School X-ing" pavement markings are recommended for the Eleventh Avenue southbound and West 44th Street eastbound approaches to this intersection, and the east, west, and north crosswalks of this intersection are to be striped as school crosswalks. \*