

3.8 Transportation

3.8.1 Introduction

This chapter has been prepared following the guidance of *City Environmental Quality Review (CEQR) Technical Manual* and the methodologies that define transportation impact assessments. The chapter examines the potential effects of the Proposed Project on a number of transportation elements as well as plazas and paths, which are not specifically addressed by the *CEQR Technical Manual*.

The transportation analyses reflected in this chapter were based on the 60 percent design drawings provided by the design build team in May 2024. In June 2024, refinements to the design drawings were made at two locations analyzed in this chapter: the west sidewalk of Greenwich Street between Franklin Street and North Moore Street and the south sidewalk of North Moore Street between Route 9A/West Street and Greenwich Street. The refined sidewalk plans were evaluated and determined to either provide the same or improved conditions as presented in this chapter. Along the west sidewalk of Greenwich Street between Franklin Street and North Moore Street, the flood barrier structure would end approximately 50 feet south of the corner of North Moore Street instead of midblock between Franklin Street and North Moore Street. The reduced length of the flood barrier structure would not affect the sidewalk pedestrian analysis which relies on the narrowest point along the sidewalk that would still be presented by the flood barrier structure just south of the corner. Along the south sidewalk of North Moore Street between Route 9A/West Street and Greenwich Street, the curb between the flood barrier structure and westbound travel lanes would be moved north to widen the sidewalk as compared to the analyses presented in this chapter. Another benefit of widening the sidewalk would be the reduction of the two excessively wide 16-foot travel lanes on the westbound approach of North Moore Street and Route 9A/West Street; these would be right-sized to provide two standard width 11-foot travel lanes. Travel lanes that are 16-feet wide do not add a noticeable amount of traffic capacity compared to standard 11-foot lane widths at urban signalized intersections and have a detrimental effect on pedestrian, bicycle, and vehicular safety because they encourage speeding since they give the appearance of a high-speed suburban roadway. The widened sidewalk would show improved pedestrian conditions compared to what is presented in this chapter. However, there would be no significant impact on pedestrian operations according to the findings of this chapter, and the widened sidewalk would not change those findings.

3.8.2 Principal Conclusions

Using *CEQR Technical Manual* guidance, it was determined that the Proposed Project would not generate any new trips; therefore, no analysis of the effects of operational trips on transportation systems was necessary and the operational phase analysis focused on the introduction of the proposed flood barrier structure into existing pedestrian elements and shared pedestrian and bicycle facilities in the Project Area. The proposed flood barrier structure would not reduce traffic capacity, displace any on-street parking, or reduce the width of the two-way bikeway along Route 9A/West Street. As part of this assessment, user data was collected, and analyses of potential impacts were performed where the Proposed Project would narrow pedestrian and bicycle pathways. This was conducted for pedestrian elements at several locations in Reach 1 including North Moore and Harrison Streets and along Route 9A/West Street. These

assessments were also conducted for shared pedestrian and bicycle facilities in Reaches 4 through 7 including in the vicinity of the Lily Pond, Pumphouse Park, Gateway Plaza, and the street ends at West Thames and Albany Streets as well as in the vicinity of South Cove. The Proposed Project would not adversely impact pedestrian and bicycle shared facilities in Reaches 2 and 3. Based on these detailed analyses, it was concluded that the Proposed Project would not result in any significant adverse impacts on pedestrian elements or shared pedestrian and bicycle facilities.

3.8.3 Screening Assessment

3.8.3.1 CEQR Technical Manual Guidelines

As defined in the *CEQR Technical Manual*, a two-tiered screening analysis is undertaken to determine whether a quantified traffic, transit, ferry, pedestrian, or parking analysis is warranted. The methodology begins with the preparation of a trip generation analysis to determine the volume of person and vehicle trips associated with the Proposed Project.

Since the Proposed Project would not generate new person trips or divert person or vehicle trips, no impact assessment of incremental trip increases is necessary for this operational phase analysis. (For an assessment of these impacts during construction see Chapter 3.11, “Construction”). However, as detailed below, the completion of the Proposed Project would narrow operating widths at four pedestrian elements. Therefore, they have been selected for detailed analysis of potential impacts that is presented below.

3.8.3.2 Detailed Assessment

Upon completion, the Proposed Project would result in somewhat reduced operating widths at nine pedestrian elements (six sidewalks and three corner reservoir areas) that are the focus of this quantified analysis, and the selected analysis locations are shown in **Figure 3.8-1**. Corner reservoir areas are queue storage areas on street corners controlled by pedestrian signals. These elements are all in Reach 1 and include:

- Harrison Street north sidewalk between Route 9A/West Street and Greenwich Street;
- Route 9A/West Street east sidewalk between Harrison Street and Chambers Street;
- Harrison Street south sidewalk between Route 9A/West Street and Greenwich Street;
- Route 9A/West Street east sidewalk between North Moore Street and Harrison Street;
- North Moore Street south sidewalk between Route 9A/West Street and Greenwich Street;
- Greenwich Street west sidewalk between North Moore Street and Franklin Street;
- Greenwich Street and North Moore Street southwest corner reservoir area;
- Harrison Street and Route 9A/West Street northeast corner reservoir area; and
- Harrison Street and Route 9A/West Street southeast corner reservoir area.



Corner



Sidewalk

0 400 FEET

Pedestrian Analysis Locations

Figure 3.8-1

The Proposed Project would not narrow any shared pedestrian and bicycle facilities on or within paths, plazas, or park areas in Reaches 2 and 3. In Reaches 4 through 7, the Proposed Project would narrow pathways for pedestrians and bicycles not defined in the *CEQR Technical Manual* as warranting detailed analysis; however, for those pathways, a narrative discussion of the potential effects of the Proposed Project on existing pedestrian and bicycle activity is provided below.

3.8.4 Transportation Analysis Methodologies

As stated above, the Proposed Project warrants detailed transportation analysis only for effects of new structures on pedestrian operations at four pedestrian elements. To address this impact, the adequacy of the Study Area's sidewalk and corner reservoir capacities is evaluated based on the methodologies presented in the *2010 Highway Capacity Manual (HCM)* and the procedures detailed in the *CEQR Technical Manual*.

The primary performance measure for sidewalks and walkways is pedestrian space, expressed as square feet per pedestrian (SFP), which is an indicator of the quality of pedestrian movement and comfort. The calculation of the sidewalk SFP is based on the pedestrian volumes by direction, the effective sidewalk or walkway width, and average walking speed. The SFP forms the basis for sidewalk levels of service (LOS) analysis.

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

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

The LOS standards for sidewalks and corner reservoirs are summarized in **Table 3.8-1**. The *CEQR Technical Manual*-specified acceptable LOS in Central Business District (CBD) areas is mid-LOS D or better (minimum of 31.5 SFP for sidewalks; minimum of 19.5 SFP for corners and crosswalks), which includes the Proposed Project's Study Area.

Table 3.8-1
Level of Service Criteria for Pedestrian Elements

LOS	Sidewalks	Corner Reservoirs
A	≥ 530.1 SFP	≥ 60.1 SFP
B	90.1 – 530.0 SFP	40.1 – 60.0 SFP
C	40.1 – 90.0 SFP	24.1 – 40.0 SFP
D	23.1 – 40.0 SFP	15.1 – 24.0 SFP
E	11.1 – 23.0 SFP	8.1 – 15.0 SFP
F	≤ 11.0 SFP	≤ 8.0 SFP
Note: SFP = square feet per pedestrian		
Source: New York City Mayor's Office of Environmental Coordination, <i>CEQR Technical Manual</i> , 2021.		

3.8.4.1 Significant Impact Criteria

Determining significant pedestrian impacts considers the level of predicted decrease in pedestrian space between the No Action and Proposed Action conditions. For different pedestrian elements, flow conditions, and area types, the *CEQR Technical Manual* procedure for assessing these impacts corresponds with various sliding-scale formulas, as further detailed below.

Sidewalks

The sliding-scale formula for determining sidewalk impacts is $Y \geq X/(9.5 - 0.321)$, where Y is the decrease in pedestrian space in SFP and X is the No Action pedestrian space in SFP. Since a decrease in pedestrian space within acceptable levels would not constitute a significant impact, these formulas would apply only if the With Action pedestrian space falls short of mid-LOS D in CBD areas or LOS C in non-CBD areas. **Table 3.8-2** summarizes the sliding scale guidance provided by the *CEQR Technical Manual* for determining potential significant sidewalk impacts.

Corner Reservoirs

The determination of significant corner impacts is also based on a sliding scale using the following formula: $Y \geq X/9.0 - 0.31$, where Y is the decrease in pedestrian space in SFP and X is the No Action pedestrian space in SFP. Since a decrease in pedestrian space within acceptable levels would not constitute a significant impact, this formula would apply only if the Proposed Action pedestrian space falls short of mid-LOS D in CBD areas or LOS C in non-CBD areas. **Table 3.8-3** summarizes the sliding scale guidance provided by the *CEQR Technical Manual* for determining potential significant corner reservoir impacts.

Table 3.8-2
Significant Impact Guidance for Sidewalks

Sliding Scale Formula: $Y = X/9.5 - 0.321$			
Non-CBD Areas		CBD Areas	
No Action Pedestrian Space (X, SFP)	Proposed Action Pedestrian Space Reduction (Y, SFP)	No Action Pedestrian Space (X, SFP)	Proposed Action Pedestrian Space Reduction (Y, SFP)
≥ 44.3	Proposed Action Condition ≤ 40.0		
43.5 to 44.2	≥ 4.3	—	—
42.5 to 43.4	≥ 4.2	—	—
41.6 to 42.4	≥ 4.1	—	—
40.6 to 41.5	≥ 4.0	—	—
39.7 to 40.5	≥ 3.9	—	—
38.7 to 39.6	≥ 3.8	—	—
37.8 to 38.6	≥ 3.7	—	—
36.8 to 37.7	≥ 3.6	—	—
35.9 to 36.7	≥ 3.5	—	—
34.9 to 35.8	≥ 3.4	≥ 34.7	Proposed Action Condition ≤ 31.4
34.0 to 34.8	≥ 3.3	34.0 to 34.6	≥ 3.3
33.0 to 33.9	≥ 3.2	33.0 to 33.9	≥ 3.2
32.1 to 32.9	≥ 3.1	32.1 to 32.9	≥ 3.1
31.1 to 32.0	≥ 3.0	31.1 to 32.0	≥ 3.0
30.2 to 31.0	≥ 2.9	30.2 to 31.0	≥ 2.9
29.2 to 30.1	≥ 2.8	29.2 to 30.1	≥ 2.8
28.3 to 29.1	≥ 2.7	28.3 to 29.1	≥ 2.7
27.3 to 28.2	≥ 2.6	27.3 to 28.2	≥ 2.6
26.4 to 27.2	≥ 2.5	26.4 to 27.2	≥ 2.5
25.4 to 26.3	≥ 2.4	25.4 to 26.3	≥ 2.4
24.5 to 25.3	≥ 2.3	24.5 to 25.3	≥ 2.3
23.5 to 24.4	≥ 2.2	23.5 to 24.4	≥ 2.2
22.6 to 23.4	≥ 2.1	22.6 to 23.4	≥ 2.1
21.6 to 22.5	≥ 2.0	21.6 to 22.5	≥ 2.0
20.7 to 21.5	≥ 1.9	20.7 to 21.5	≥ 1.9
19.7 to 20.6	≥ 1.8	19.7 to 20.6	≥ 1.8
18.8 to 19.6	≥ 1.7	18.8 to 19.6	≥ 1.7
17.8 to 18.7	≥ 1.6	17.8 to 18.7	≥ 1.6
16.9 to 17.7	≥ 1.5	16.9 to 17.7	≥ 1.5
15.9 to 16.8	≥ 1.4	15.9 to 16.8	≥ 1.4
15.0 to 15.8	≥ 1.3	15.0 to 15.8	≥ 1.3
14.0 to 14.9	≥ 1.2	14.0 to 14.9	≥ 1.2
13.1 to 13.9	≥ 1.1	13.1 to 13.9	≥ 1.1
12.1 to 13.0	≥ 1.0	12.1 to 13.0	≥ 1.0
11.2 to 12.0	≥ 0.9	11.2 to 12.0	≥ 0.9
10.2 to 11.1	≥ 0.8	10.2 to 11.1	≥ 0.8
9.3 to 10.1	≥ 0.7	9.3 to 10.1	≥ 0.7
8.3 to 9.2	≥ 0.6	8.3 to 9.2	≥ 0.6
7.4 to 8.2	≥ 0.5	7.4 to 8.2	≥ 0.5
6.4 to 7.3	≥ 0.4	6.4 to 7.3	≥ 0.4
< 6.3	≥ 0.3	< 6.3	≥ 0.3

Notes: SFP = square feet per pedestrian; Y = decrease in pedestrian space in SFP; X = No Action pedestrian space in SFP.
Sources: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual*.

Table 3.8-3
Significant Impact Guidance for Corners

Sliding Scale Formula: $Y^3 X/9.0-0.31$			
Non-CBD Areas		CBD Areas	
No Action Pedestrian Space (X, SFP)	Proposed Action Pedestrian Space Reduction (Y, SFP)	No Action Pedestrian Space (X, SFP)	Proposed Action Pedestrian Space Reduction (Y, SFP)
≥ 26.6	Proposed Action Condition ≤ 24.0		
25.8 to 26.5	≥ 2.6	—	—
24.9 to 25.7	≥ 2.5	—	—
24.0 to 24.8	≥ 2.4	—	—
23.1 to 23.9	≥ 2.3	—	—
22.2 to 23.0	≥ 2.2	≥ 21.5	Proposed Action Condition ≤ 19.4
21.3 to 22.1	≥ 2.1	21.3 to 21.4	≥ 2.1
20.4 to 21.2	≥ 2.0	20.4 to 21.2	≥ 2.0
19.5 to 20.3	≥ 1.9	19.5 to 20.3	≥ 1.9
18.6 to 19.4	≥ 1.8	18.6 to 19.4	≥ 1.8
17.7 to 18.5	≥ 1.7	17.7 to 18.5	≥ 1.7
16.8 to 17.6	≥ 1.6	16.8 to 17.6	≥ 1.6
15.9 to 16.7	≥ 1.5	15.9 to 16.7	≥ 1.5
15.0 to 15.8	≥ 1.4	15.0 to 15.8	≥ 1.4
14.1 to 14.9	≥ 1.3	14.1 to 14.9	≥ 1.3
13.2 to 14.0	≥ 1.2	13.2 to 14.0	≥ 1.2
12.3 to 13.1	≥ 1.1	12.3 to 13.1	≥ 1.1
11.4 to 12.2	≥ 1.0	11.4 to 12.2	≥ 1.0
10.5 to 11.3	≥ 0.9	10.5 to 11.3	≥ 0.9
9.6 to 10.4	≥ 0.8	9.6 to 10.4	≥ 0.8
8.7 to 9.5	≥ 0.7	8.7 to 9.5	≥ 0.7
7.8 to 8.6	≥ 0.6	7.8 to 8.6	≥ 0.6
6.9 to 7.7	≥ 0.5	6.9 to 7.7	≥ 0.5
6.0 to 6.8	≥ 0.4	6.0 to 6.8	≥ 0.4
5.1 to 5.9	≥ 0.3	5.1 to 5.9	≥ 0.3
≤ 5.0	≥ 0.2	≤ 5.0	≥ 0.2

Notes: SFP = square feet per pedestrian; Y = decrease in pedestrian space in SFP; X = No Action pedestrian space in SFP
Sources: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual*

3.8.5 Detailed Pedestrian Operation Analyses

3.8.5.1 Existing Conditions

Project Area

As described in greater detail in Chapter 1.0, "Project Description," the Proposed Project Area is comprised of 7 design reaches. Reach 1 includes the project segments along Greenwich Street, North Moore Street, the westernmost segment of Harrison Street, and Route 9A/West Street; the balance of the Project Area is in Battery Park City and includes segments along the Battery Park City Esplanade, Rockefeller Park, and North and South Coves.

Pedestrian Operations

As part of this analysis, pedestrian volume data were collected in June 2023 in accordance with procedures outlined in the *CEQR Technical Manual* during the weekday hours from 7:00 AM to 10:00 AM, 11:00 AM to 2:00 PM, and 4:00 PM to 7:00 PM and Saturday hours from 12:00 PM to 5:00 PM. Based on the data collected during the respective peak periods the highest peak hour pedestrian volumes observed were from 8:00 AM to 9:00 AM, 12:00 PM to 1:00 PM, and 5:00 PM to 6:00 PM for weekday and 12:00 PM to 1:00 PM for Saturday. These peak hour volumes were used for the analysis.

The existing peak hour pedestrian volumes are shown in **Figures 3.8-2 through 3.8-5**. As shown in **Tables 3.8-4 and 3.8-5**, the analysis locations currently operate at favorable LOS A and B.

Table 3.8-4
Existing Conditions: Sidewalk Analysis

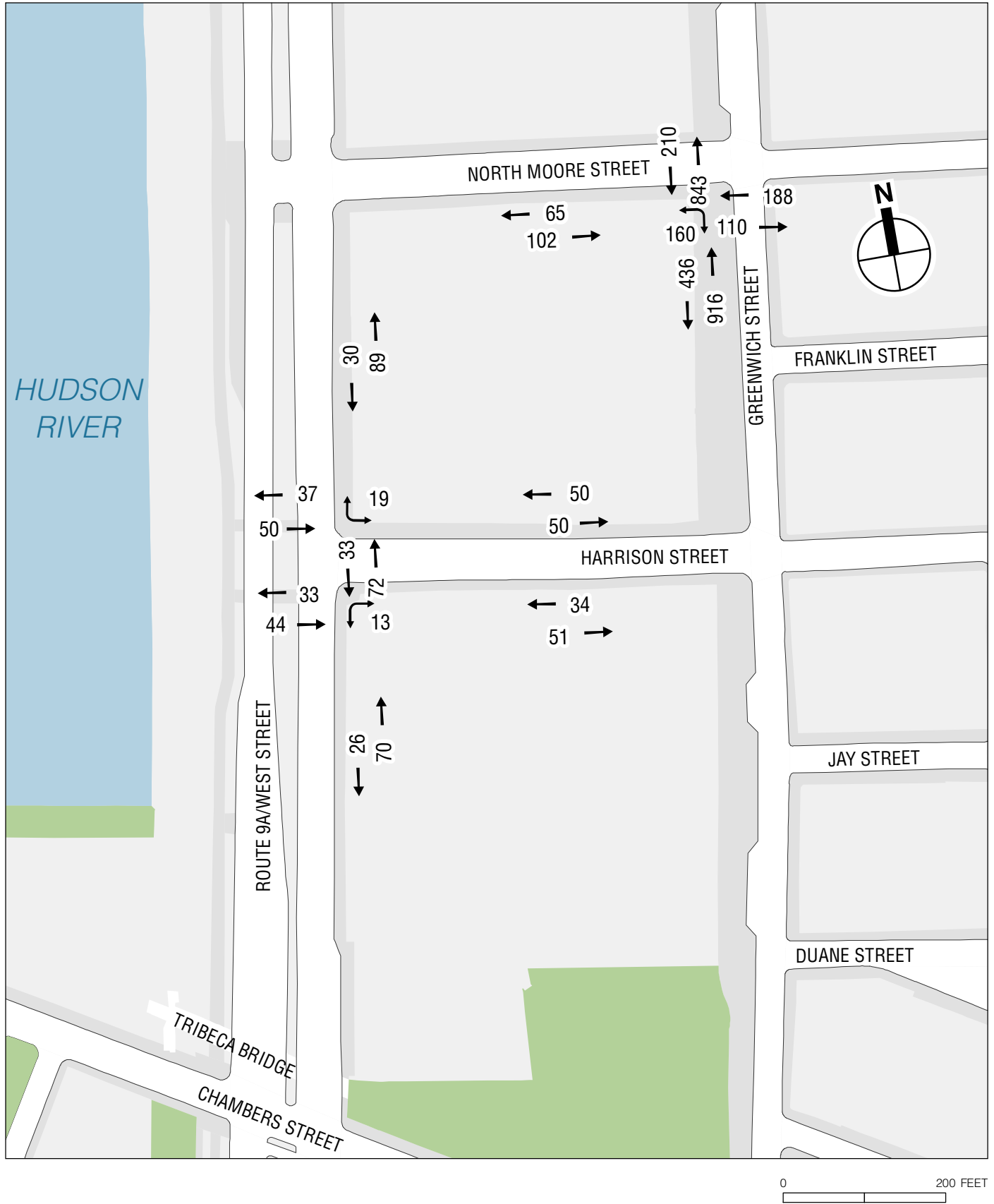
Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	Platoon LOS
Weekday AM Peak Hour						
Harrison Street between Route 9A/West Street and Greenwich Street	North	11.0	100	0.83	1320.0	A
Route 9A/West Street between Harrison Street and Chambers Street	East	15.5	96	0.77	1800.0	A
Harrison Street between Route 9A/West Street and Greenwich Street	South	4.0	85	0.79	533.2	A
Route 9A/West Street between North Moore Street and Harrison Street	East	8.5	119	0.66	679.9	A
North Moore Street between Route 9A/West Street and Greenwich Street	South	7.5	167	0.64	415.3	B
Greenwich Street between North Moore Street and Franklin Street	West	19.5	1352	0.78	160.3	B
Weekday Midday Peak Hour						
Harrison Street between Route 9A/West Street and Greenwich Street	North	11.0	107	0.74	1100.0	A
Route 9A/West Street between Harrison Street and Chambers Street	East	15.5	145	0.68	1052.8	A
Harrison Street between Route 9A/West Street and Greenwich Street	South	4.0	158	0.63	228.4	B
Route 9A/West Street between North Moore Street and Harrison Street	East	8.5	123	0.72	711.6	A
North Moore Street between Route 9A/West Street and Greenwich Street	South	7.5	228	0.69	325.2	B
Greenwich Street between North Moore Street and Franklin Street	West	19.5	976	0.84	240.4	B
Weekday PM Peak Hour						
Harrison Street between Route 9A/West Street and Greenwich Street	North	11.0	134	0.80	942.8	A
Route 9A/West Street between Harrison Street and Chambers Street	East	15.5	180	0.74	914.7	A
Harrison Street between Route 9A/West Street and Greenwich Street	South	4.0	141	0.73	299.9	B
Route 9A/West Street between North Moore Street and Harrison Street	East	8.5	171	0.84	599.9	A
North Moore Street between Route 9A/West Street and Greenwich Street	South	7.5	348	0.84	259.4	B
Greenwich Street between North Moore Street and Franklin Street	West	19.5	1256	0.88	197.0	B
Saturday Peak Hour						
Harrison Street between Route 9A/West Street and Greenwich Street	North	11.0	184	0.65	557.7	A
Route 9A/West Street between Harrison Street and Chambers Street	East	15.5	94	0.76	1800.0	A
Harrison Street between Route 9A/West Street and Greenwich Street	South	4.0	145	0.70	276.8	B
Route 9A/West Street between North Moore Street and Harrison Street	East	8.5	76	0.54	874.2	A
North Moore Street between Route 9A/West Street and Greenwich Street	South	7.5	327	0.72	238.8	B
Greenwich Street between North Moore Street and Franklin Street	West	19.5	481	0.75	437.5	B
Note: SFP = square feet per pedestrian.						

Table 3.8-5
Existing Conditions: Corner Analysis

Location	Corner	Weekday AM Peak Hour		Weekday Midday Peak Hour		Weekday PM Peak Hour		Saturday Peak Hour	
		SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS
Route 9A/West Street and Harrison Street	Northeast	2386.4	A	2838.0	A	2381.4	A	2030.2	A
	Southeast	2409.9	A	2271.2	A	2375.3	A	1950.7	A
Greenwich Street and North Moore Street	Southwest	307.7	A	436.5	A	307.2	A	866.7	A
Note: SFP = square foot per pedestrian									

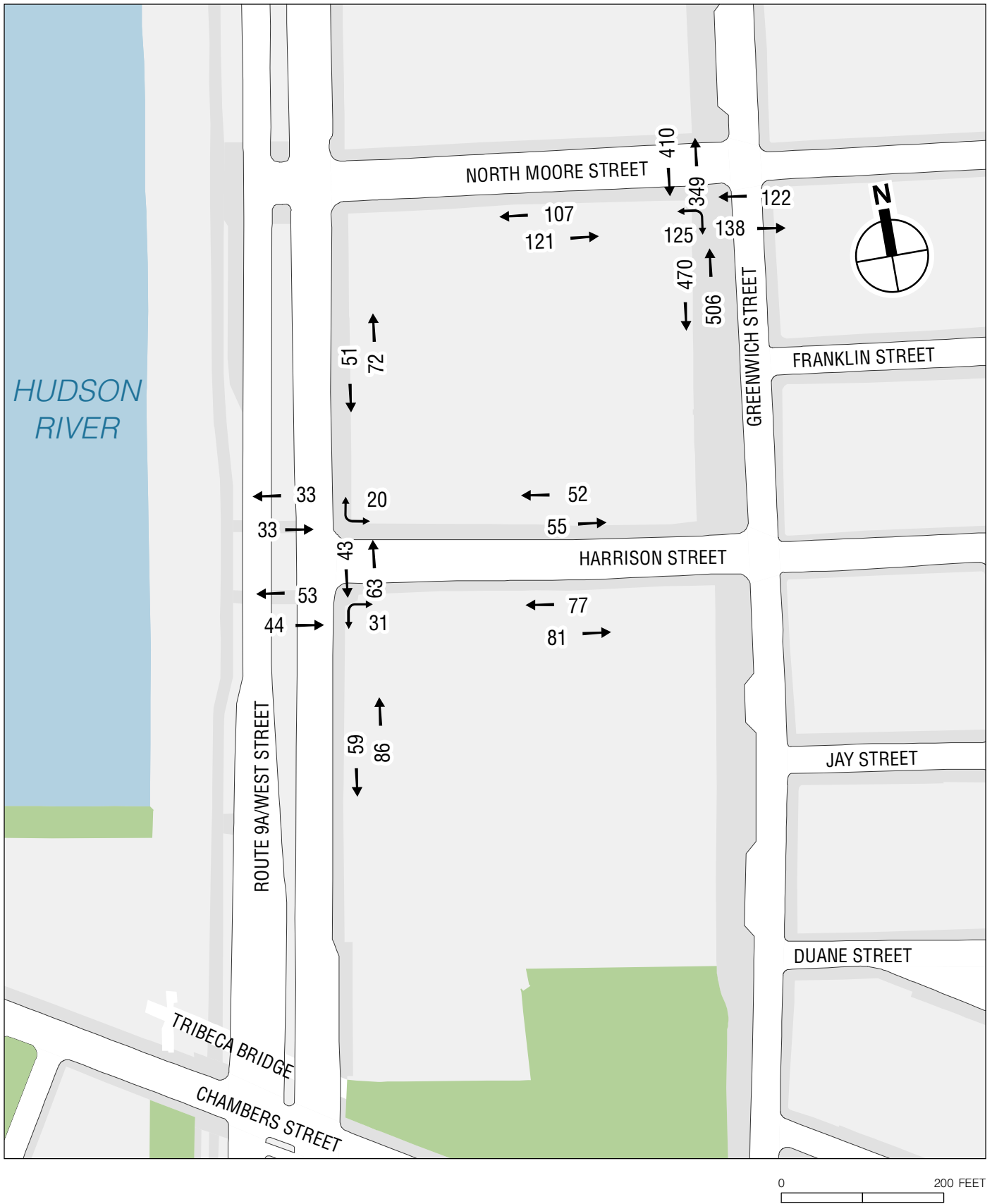
3.8.5.2 No Action Conditions

No Action condition pedestrian volumes were estimated by increasing existing pedestrian levels to reflect expected growth in overall travel through and within the study area. As per CEQR guidelines, an annual background growth rate of 0.25 percent was assumed for the first five years (2024 to 2028) and 0.125 percent was assumed for the following two years (2029 to 2030). Consistent with the methodology approved by DOT for the quantified construction analysis, an additional growth rate of 3.0 percent was also assumed to account for volume increases resulting from No Build projects within ¼ mile of the Project



Existing Pedestrian Volumes
Weekday AM Peak Hour

Figure 3.8-2



Existing Pedestrian Volumes
Weekday Midday Peak Hour

Figure 3.8-3



Existing Pedestrian Volumes
Weekday PM Peak Hour

Figure 3.8-4



Existing Pedestrian Volumes
Saturday Peak Hour

Figure 3.8-5

Area. These growth rates together represent a cumulative increase of 4.6 percent over existing conditions. As discussed above, the Proposed Project would not generate additional demand and the volumes would be the same in the 2030 No Action and Proposed Action conditions.

Based on the above growth rates, the 2030 No Action/Proposed Action volumes are shown in **Figures 3.8-6 through 3.8-9**. As also shown in **Tables 3.8-6 and 3.8-7**, in the No Action condition, all analysis locations will continue to operate at favorable LOS A and B.

Table 3.8-6
2030 No Action Conditions: Sidewalk Analysis

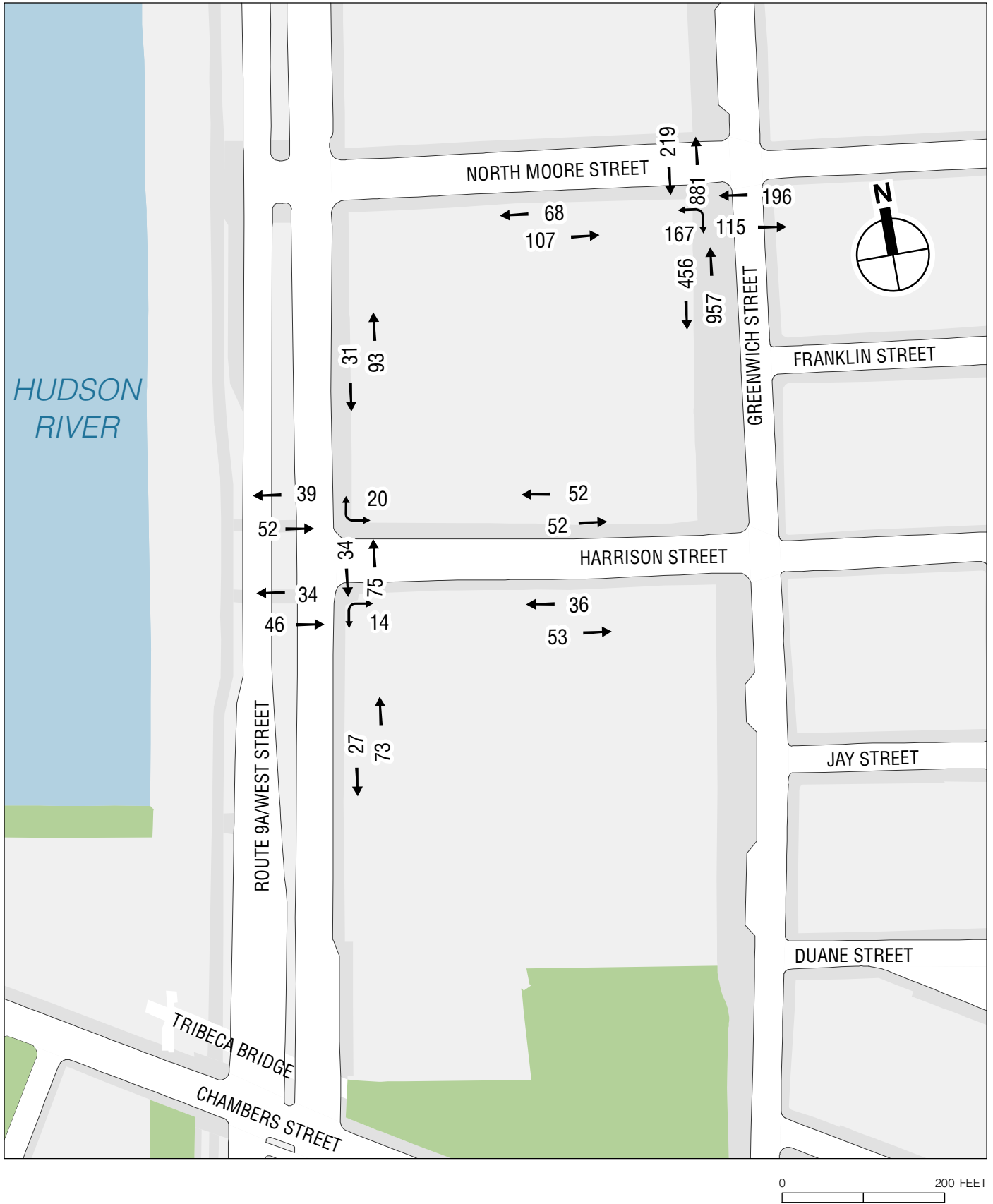
Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	Platoon LOS
Weekday AM Peak Hour						
Harrison Street between Route 9A/West Street and Greenwich Street	North	11.0	104	0.83	1269.2	A
Route 9A/West Street between Harrison Street and Chambers Street	East	15.5	100	0.77	1728.0	A
Harrison Street between Route 9A/West Street and Greenwich Street	South	4.0	89	0.79	509.3	B
Route 9A/West Street between North Moore Street and Harrison Street	East	8.5	124	0.66	652.5	A
North Moore Street between Route 9A/West Street and Greenwich Street	South	7.5	175	0.64	396.3	B
Greenwich Street between North Moore Street and Franklin Street	West	19.5	1413	0.78	153.4	B
Weekday Midday Peak Hour						
Harrison Street between Route 9A/West Street and Greenwich Street	North	11.0	111	0.74	1060.3	A
Route 9A/West Street between Harrison Street and Chambers Street	East	15.5	152	0.68	1004.3	A
Harrison Street between Route 9A/West Street and Greenwich Street	South	4.0	165	0.63	218.7	B
Route 9A/West Street between North Moore Street and Harrison Street	East	8.5	128	0.72	683.8	A
North Moore Street between Route 9A/West Street and Greenwich Street	South	7.5	238	0.69	311.5	B
Greenwich Street between North Moore Street and Franklin Street	West	19.5	1020	0.84	230.0	B
Weekday PM Peak Hour						
Harrison Street between Route 9A/West Street and Greenwich Street	North	11.0	140	0.80	902.4	A
Route 9A/West Street between Harrison Street and Chambers Street	East	15.5	188	0.74	875.8	A
Harrison Street between Route 9A/West Street and Greenwich Street	South	4.0	147	0.73	287.6	B
Route 9A/West Street between North Moore Street and Harrison Street	East	8.5	179	0.84	573.1	A
North Moore Street between Route 9A/West Street and Greenwich Street	South	7.5	364	0.84	248.0	B
Greenwich Street between North Moore Street and Franklin Street	West	19.5	1313	0.88	188.4	B
Saturday Peak Hour						
Harrison Street between Route 9A/West Street and Greenwich Street	North	11.0	192	0.65	534.4	A
Route 9A/West Street between Harrison Street and Chambers Street	East	15.5	99	0.76	1709.1	A
Harrison Street between Route 9A/West Street and Greenwich Street	South	4.0	152	0.70	264.0	B
Route 9A/West Street between North Moore Street and Harrison Street	East	8.5	80	0.54	830.5	A
North Moore Street between Route 9A/West Street and Greenwich Street	South	7.5	342	0.72	228.3	B
Greenwich Street between North Moore Street and Franklin Street	West	19.5	502	0.75	419.2	B
Note: SFP = square feet per pedestrian.						

Table 3.8-7
2030 No Action Conditions: Corner Analysis

Location	Corner	Weekday AM Peak Hour		Weekday Midday Peak Hour		Weekday PM Peak Hour		Saturday Peak Hour	
		SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS
Route 9A/West Street and Harrison Street	Northeast	2288.5	A	2722.8	A	2275.2	A	1930.1	A
	Southeast	2312.4	A	2177.3	A	2265.4	A	1865.6	A
Greenwich Street and North Moore Street	Southwest	294.1	A	417.0	A	293.8	A	829.0	A
Note: SFP = square foot per pedestrian									

3.8.5.3 Proposed Action Conditions

The geometric changes with the Proposed Project at the four analysis locations include:



2030 No Action/With Action Pedestrian Volumes
Weekday AM Peak Hour



2030 No Action/With Action Pedestrian Volumes
Weekday Midday Peak Hour



2030 No Action/With Action Pedestrian Volumes
Weekday PM Peak Hour



2030 No Action/With Action Pedestrian Volumes
Saturday Peak Hour

- Reducing the narrowest width of the north sidewalk on Harrison Street between Route 9A/West Street and Greenwich Street from 14 feet to approximately 6.4 feet;
- Reducing the narrowest width of the east sidewalk on Route 9A/West Street between Harrison Street and Chambers Street from 19 feet to approximately 12 feet;
- Reducing the narrowest width of the south sidewalk on Harrison Street between Route 9A/West Street and Greenwich Street from 7 feet to approximately 6.2 feet;
- Reducing the narrowest width of the east sidewalk on Route 9A/West Street between North Moore Street and Harrison Street from 11 feet to approximately 7.6 feet;
- Reducing the narrowest width of the south sidewalk on North Moore Street between Route 9A/West Street and Greenwich Street from 10 feet to approximately 5.1 feet;
- Reducing the corner reservoir areas at the northeast corner of Harrison Street and Route 9A/West Street from 23 feet (width of the corner on Harrison Street) by 33.5 feet (width of the corner on Route 9A/West Street), to approximately 20.5 feet on Harrison Street by 17.5 feet on Route 9A/West Street);
- Reducing the corner reservoir area at the southeast corner of Harrison Street and Route 9A/West Street from 23 feet (width of the corner on Harrison Street) by 34 feet (width of the corner on Route 9A/West Street), to approximately 20 feet on Harrison Street by 21 feet on Route 9A/West Street; and
- Reducing the corner reservoir area at the southwest corner of Greenwich Street and North Moore Street from 16 feet (width of the corner on North Moore Street) by 45 feet (width of the corner on Greenwich Street), to approximately 13.9 feet on North Moore Street by 29.6 feet on Greenwich Street.

As shown in **Tables 3.8-8 and 3.8-9**, based on an assessment prepared in accordance with the above-described methodologies, in the Proposed Action condition all analyzed locations would continue to operate at a favorable LOS A and B. Therefore, it is concluded that the proposed project elements along North Moore Street, Greenwich Street, Route 9A/West Street, and Harrison Street would not result in any significant adverse pedestrian impacts.

Table 3.8-8
2030 Proposed Action Conditions: Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	Platoon LOS
Weekday AM Peak Hour						
Harrison Street between Route 9A/West Street and Greenwich Street	North	3.9	104	0.83	444.1	B
Route 9A/West Street between Harrison Street and Chambers Street	East	11.0	100	0.77	1226.3	A
Harrison Street between Route 9A/West Street and Greenwich Street	South	2.7	89	0.79	343.7	B
Route 9A/West Street between North Moore Street and Harrison Street	East	6.6	124	0.66	506.6	B
North Moore Street between Route 9A/West Street and Greenwich Street	South	2.6	175	0.64	137.6	B
Greenwich Street between North Moore Street and Franklin Street	West	15.6	1413	0.78	122.5	B
Weekday Midday Peak Hour						
Harrison Street between Route 9A/West Street and Greenwich Street	North	3.9	111	0.74	371.0	B
Route 9A/West Street between Harrison Street and Chambers Street	East	11.0	152	0.68	712.7	A
Harrison Street between Route 9A/West Street and Greenwich Street	South	2.7	165	0.63	147.4	B
Route 9A/West Street between North Moore Street and Harrison Street	East	6.6	128	0.72	530.9	A

Table 3.8-8
2030 Proposed Action Conditions: Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	Platoon LOS
North Moore Street between Route 9A/West Street and Greenwich Street	South	2.6	238	0.69	108.0	B
Greenwich Street between North Moore Street and Franklin Street	West	15.6	1020	0.84	183.8	B
Weekday PM Peak Hour						
Harrison Street between Route 9A/West Street and Greenwich Street	North	3.9	140	0.80	315.7	B
Route 9A/West Street between Harrison Street and Chambers Street	East	11.0	188	0.74	621.5	A
Harrison Street between Route 9A/West Street and Greenwich Street	South	2.7	147	0.73	194.0	B
Route 9A/West Street between North Moore Street and Harrison Street	East	6.6	179	0.84	445.0	B
North Moore Street between Route 9A/West Street and Greenwich Street	South	2.6	364	0.84	85.9	C
Greenwich Street between North Moore Street and Franklin Street	West	15.6	1313	0.88	150.5	B
Saturday Peak Hour						
Harrison Street between Route 9A/West Street and Greenwich Street	North	3.9	192	0.65	186.8	B
Route 9A/West Street between Harrison Street and Chambers Street	East	11.0	99	0.76	1212.9	A
Harrison Street between Route 9A/West Street and Greenwich Street	South	2.7	152	0.70	178.1	B
Route 9A/West Street between North Moore Street and Harrison Street	East	6.6	80	0.54	644.8	A
North Moore Street between Route 9A/West Street and Greenwich Street	South	2.6	342	0.72	78.9	C
Greenwich Street between North Moore Street and Franklin Street	West	15.6	502	0.75	335.1	B
Note: SFP = square feet per pedestrian.						

Table 3.8-9
2030 Proposed Action Conditions: Corner Analysis

Location	Corner	Weekday AM Peak Hour		Weekday Midday Peak Hour		Weekday PM Peak Hour		Saturday Peak Hour	
		SFP	LOS	SFP	LOS	SFP	LOS	SFP	LOS
Route 9A/West Street and Harrison Street	Northeast	1000.5	A	1190.0	A	991.9	A	842.3	A
	Southeast	1179.4	A	1107.2	A	1155.3	A	948.8	A
Greenwich Street and North Moore Street	Southwest	154.7	A	224.0	A	157.3	A	449.3	A
Note: SFP = square foot per pedestrian									

3.8.6 Qualitative Consideration of Potential Effects to Reaches 4 to 7

For Reaches 4 to 7, a narrative discussion of the potential effects of the Proposed Project on pedestrian and bicycle activity is provided below. Pedestrian and bicycle count data were collected during the same time periods as those presented for Reach 1. The below discussions cite the highest peak hour pedestrian and bicycle volumes of the weekday AM, midday, PM, or Saturday peak hour time periods for data collected in June 2023. The conclusions are based on facilities operating at acceptable mid-LOS D or better conditions according to the 2010 HCM methodologies for walkways. This results when paths maintain a clear width of at least 9 feet and have volumes as high as approximately 1,420 pedestrians per hour. According to these conditions, LOS D or better would be maintained at all locations below where the Proposed Project would narrow shared pedestrian and bicycle facilities.

3.8.6.1 Reach 4

The pedestrian path to the east of Lily Pond handles approximately 240 pedestrians per hour. While the design proposes narrowing this path segment, a clear width of at least 9.4 feet is provided. The west entrance of Irish Hunger Memorial Plaza handles approximately 610 pedestrians per hour. While the design proposes narrowing this entrance, a clear width of at least 49 feet is provided. Therefore, it is

concluded that the Proposed Project would not result in any adverse impacts on pedestrian operations or safety in this reach.

3.8.6.2 Reach 5

The Pumphouse Park path handles approximately 1050 pedestrians and 50 bikes per hour. While the design proposes narrowing this path segment, a clear width of at least 22 feet is provided. The Battery Park Esplanade west of Belvedere Plaza handles approximately 510 pedestrians per hour. While the design proposes narrowing this path segment, a clear width of at least 24.6 feet is provided. Therefore, it is concluded that the Proposed Project would not result in any adverse impacts on pedestrian and bicycle operations or safety in this reach.

3.8.6.3 Reach 6

The Gateway Plaza paths handle approximately 680 pedestrians and 40 bikes per hour. While the design proposes narrowing this path segment, a clear width of at least 10 feet is provided. The path near the Rector Place entrance carries approximately 630 pedestrians and 40 bikes per hour. While the design also proposes narrowing this path segment, a clear width of at least 10 feet is provided. The path near the Regatta Condominium carries approximately 580 pedestrians and 40 bikes per hour. While the design proposes narrowing this path segment, a clear width of at least 10 feet is provided.

The plaza near the Rector Place entrance carries approximately 100 pedestrians per hour. While the design also proposes narrowing this plaza area, a clear width of at least 20 feet is provided. The plaza near the West Thames Street entrance carries approximately 80 pedestrians per hour. While the design also proposes narrowing this plaza area, a clear width of at least 30.8 feet is provided. Therefore, it is concluded that the Proposed Project would not result in any adverse impacts on pedestrian and bicycle operations or safety in this reach.

3.8.6.4 Reach 7

The North Edge paths carry approximately 440 pedestrians and 30 bikes per hour. While the design proposes narrowing this path segment, a clear width of at least 19.5 feet is provided. The Battery Park Esplanade south of the Regatta Condominium carries approximately 530 pedestrians per hour. While the design proposes narrowing this path segment, a clear width of at least 12.4 feet is provided. The plaza near the 2nd Place entrance carries approximately 590 pedestrians per hour. While the design also proposes narrowing this plaza area, a clear width of at least 24 feet is provided. The plaza near the 3rd Place entrance carries approximately 300 pedestrians per hour. While the design also proposes narrowing this plaza area, a clear width of at least 20 feet is provided. Therefore, it is concluded that the Proposed Project would not result in any adverse impacts on pedestrian and bicycle operations or safety in this reach.