

# One Police Plaza Security Plan EIS

## CHAPTER 11: MITIGATION

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### A. INTRODUCTION

The preceding chapters of the EIS discuss the significant adverse impacts that have resulted from the action. Where such impacts have been identified – in the areas of traffic, urban design, noise, and transit and pedestrians – measures are examined to minimize or eliminate the anticipated impacts. These mitigation measures are discussed below.

### B. URBAN DESIGN

As discussed in Chapter 5, "Urban Design and Visual Resources," the action has caused significant adverse urban design impacts. The closure of public streets and the addition of the security elements has introduced a forbidding and unaesthetic quality to the area. The action has created a disconnect between the security zone area and the surrounding neighborhood. The temporary quality of the security elements has created a haphazard, inconsistent look that does not fit with the existing urban design context. This alteration of streetscape elements has resulted in a significant adverse impact on urban design.

The *CEQR Technical Manual* states that "mitigation for impacts related to streetscape elements would involve changing those elements that are incompatible."

The City could mitigate the urban design impacts caused by the action by enhancing the streetscape within the security zone, particularly along Park Row, to create a more aesthetic, inviting and pedestrian-friendly environment. The Lower Manhattan Development Corporation (LMDC) issued a report in 2004 entitled *Chinatown Access and Circulation Study* which included recommendations for improving Park Row. These recommendations are intended to address the closure of Park Row by making City-owned areas more pedestrian-friendly and aesthetically pleasing. Some of these recommendations relating to streetscape improvements include the following:

- Reduce most of Park Row's right-of-way to two lanes, one in each direction.
- Realign the northern end of Park Row to conform to the Chatham Square reconfiguration (see Traffic mitigation measures below).
- Install a landscaped esplanade along Park Row, including attractive paving, trees, shrubs, planters, etc.

- Install improved street fixtures, including benches, lighting, and barriers. Attractive trash receptacles may be placed at appropriate locations away from security sensitive areas.
- Improve pedestrian wayfinding signage along Park Row and other routes through the area.

Coordination with NYPD and the U.S. Marshals Service regarding security measures for the Police Headquarters building and the federal court buildings would be required. The implementation of this plan would significantly improve the streetscape of the security zone thereby enhancing the urban design. In addition, although the action has not resulted in indirect socioeconomic impacts, these streetscape enhancements would improve pedestrian conditions which may increase the number of patrons to study area businesses. While it is expected that these mitigation measures would fully mitigate urban design impacts caused by the action they should be reassessed when the Chatham Square reconfiguration is complete and the Park Row improvements are in place (see below).

## C. TRAFFIC

As discussed in Chapter 7, "Traffic and Parking" and shown in Table 7-7, the number of vehicles being diverted as a result of the action diversions has resulted in significant adverse traffic impacts at 4 signalized intersections in one or more peak periods. A traffic mitigation plan was therefore developed to address these impacts. The paragraphs below discuss the measures that would be included in the traffic mitigation plan, and the effects of these measures on each of the impacted intersections. Table 11-1 summarizes the measures contained in the mitigation plan.

According to the *CEQR Technical Manual*, a significant traffic impact is considered mitigated if measures implemented return projected future conditions to what they would be if a proposed action were not in place, or to acceptable levels. For a No-Action level of service (LOS) D, E or F, mitigating back to the No-Action condition is required; for No-Action LOS A, B or C, mitigating to mid-LOS D is required (45 seconds of delay for signalized intersections, and 30 seconds of delay for unsignalized intersections). Table 11-2 shows the effectiveness of the proposed traffic mitigation measures during the weekday AM, midday and PM peak periods based on these criteria. As shown in the table, these measures fully mitigate the traffic impacts due to this action, with the exception of the intersection of Robert F. Wagner Sr. Place and Pearl Street.

**TABLE 11-1**  
**Proposed Traffic Mitigation Measures**

Intersection	Approach	Period	Build Signal Timing (Seconds) (1)	Mitigation Signal Timing (Seconds) (1)	One Police Plaza Proposed Mitigation Measures  Description of Mitigation
Chatham Square (N-S) @ Worth Street (E-W)	NB Only NB/SB EB/WB	AM/MD/PM		20/20/10 35/35/42 35/35/38	Reconfigure Chatham Square Intersection into two signalized intersections and pedestrian plazas (see Figure 11-1)
Mott Street/Park Row (N-S) @ Worth Street (E-W)	NB/SB EB/WB	AM/MD/PM		35/35/35 55/55/55	
Pearl Street (N-S) @ Frankfort Street (E-W)	NB/SB EB/WB	AM/MD/PM	59/59/59 31/31/31	58/59/59 32/31/31	Modify the striping of the Frankfort Street approach to provide 1 L, 1LT and 1R lane configuration on the EB approach. Transfer 2 sec of green time from the NB/SB to EB/WB in all peak hours.

## Signalized Intersections

### *Pearl Street/Robert F. Wagner Sr. Place*

At this intersection, the action has resulted in impacts to the westbound Robert F. Wagner Sr. Place left-turn movement in the AM peak hour and the eastbound approach in the midday peak hour. Measures were therefore evaluated to address these impacts. However, signal timing adjustments to return this approach to its No-Action condition would be impractical as they would result in new or worsened impacts on other approaches and a reduction in pedestrian crossing times. Increasing capacity of roadways through changes to curbside regulations or modifications to lane striping was also found to be ineffective, as was widening the approach to achieve an additional lane. The action's impact to westbound Robert F. Wagner Sr. Place left-turn movement and eastbound at Pearl Street in the AM and midday peak hours, respectively, would therefore remain unmitigated.

### *Pearl Street/Frankfort Street*

Traffic diverted by the action has impacted eastbound Frankfort Street left-turn movement in the AM, midday, and PM peak hours. To address all of the peak hour impacts, it is proposed to re-stripe the eastbound approach to accommodate an exclusive left-turn lane, a through-left-turn lane, and an exclusive right-turn lane. Each of these lanes would be 9 feet in width. In addition, a total of 2 seconds were transferred from the northbound/southbound Pearl Street signal to the Frankfort Street phase. As shown in Table 11-2a, during the AM peak hour this measure would reduce delay on the eastbound left-turn approach to 65.1 seconds as compared to 69.7 seconds in the No-Action, returning the LOS back to E fully mitigating the AM impact at this approach.

Under the mitigation measures, the MD peak hour impact, the eastbound left-turn approach would operate under an approach delay of 56.8 seconds (LOS E) as compared to the No-Action delay of 59.1 seconds (LOS E). During the PM peak hour, the proposed mitigation would result in a delay of 65.6 seconds for the eastbound left-turn approach. Compared with the No-Action delay of 67.3 seconds, the impact becomes fully mitigated and the LOS returns to E. Also, the delay for the eastbound through-right-turn approach becomes 43.0 seconds compared to 50.7 seconds under the No-Action. The level of service at this approach would return to D, fully mitigating the impact due to the action.

### *Chatham Square/Worth Street*

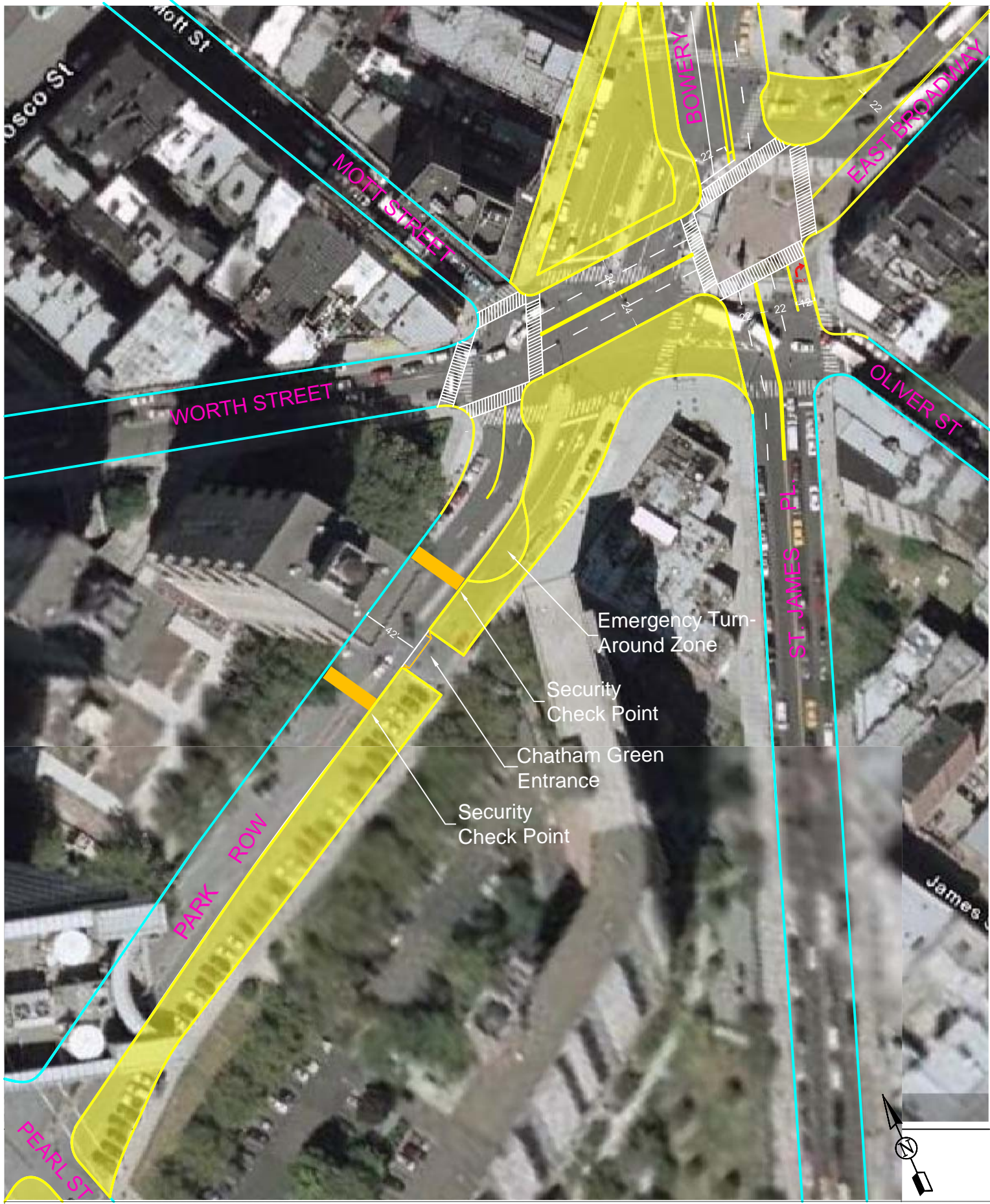
Traffic diverted by the action has impacted the right-turn movement of southbound Chatham Square and the right-turn movement of westbound St. James Place in all three peak hours. In addition, the eastbound Worth Street left-turn movement is shown to be impacted in all three peak hours while the Mott Street approach was impacted in the PM Peak hour. To address these impacts it is proposed to entirely redesign Chatham Square to recognize the closure of Park Row as a through

artery and to maintain functionality of this location. The design creates two separate intersections at Chatham Square. As shown in Figure 11-1, the western intersection would consist of Mott Street and Park Row as the north-south approaches with Worth Street as the east-west street. The eastern intersection would be designed with Bowery and St. James Place serving as the north-south alignment corridor with East Broadway and Worth Street as the east-west streets. The Bowery and St. James Place would be aligned to form a continuous north-south corridor while East Broadway would be realigned to intersect where Bowery and St. James Place would meet.

Joining the two intersections would be a 48' wide Worth Street, while Park Row would be redesigned (narrowed) to have one 21' travelway in each direction. However, the north end of Park Row would be slightly more narrow with a width of 36' (see Figure 11-1). The proposed width of Park Row would accommodate and allow for movement of emergency vehicles within the security zone. The redesign would also include a jug-handle turnaround with a 60' diameter for emergency vehicle turnaround as well as for vehicles that are not authorized to enter the security zone (see Figure 11-1). The jug-handle turnaround could be designed with elements such as attractive pavers so that it would fit with the proposed urban design components. Through the realignment of Bowery, a new plaza area would be created on the northwest corner of Worth Street and Bowery. Similarly, plaza areas would be created on the northeast corner of East Broadway and Bowery and along the southern side of Worth Street between the two proposed intersections. A redesigned intersection would replace right turns from St. James Place to northbound Chatham Square with a through movement and a right turn lane to East Broadway. Figure 11-2 shows the resulting traffic volumes at the reconfigured Chatham Square area.

As shown in Table 11-2b, under the mitigation measures proposed, all approaches will function at LOS D or better during all peak periods. For the intersection consisting of Bowery, St. James Place, Worth Street, and East Broadway, the intersection delay is 28.5 seconds (LOS C) during the AM peak hour, 29.0 seconds (LOS C) during the midday peak hour, and 37.0 seconds (LOS D) during the PM peak hour. The western intersection, including Mott Street, Park Row, and Worth Street, operates at an overall AM peak period delay of 15.1 seconds (LOS B), 15.1 seconds (LOS B) in the midday peak hour, and 14.0 seconds (LOS B) in the PM peak hour. These projected mitigation conditions fully address the project's traffic impact at Chatham Square while creating substantial new pedestrian and plaza space.

In summary, as shown in Tables 11-1 through 11-2, the proposed traffic mitigation plan would fully address all traffic impacts in all peak hours with the exception of Robert F. Wagner Sr. Place and Pearl Street. The reconfiguration of Chatham Square as well as all other traffic mitigation plans would be implemented by the New York City Department of Transportation and/or through the New York City Department of Design and Construction.



Legend:  
Curbline to Remain  
Future Curbline  
Landscaped Area

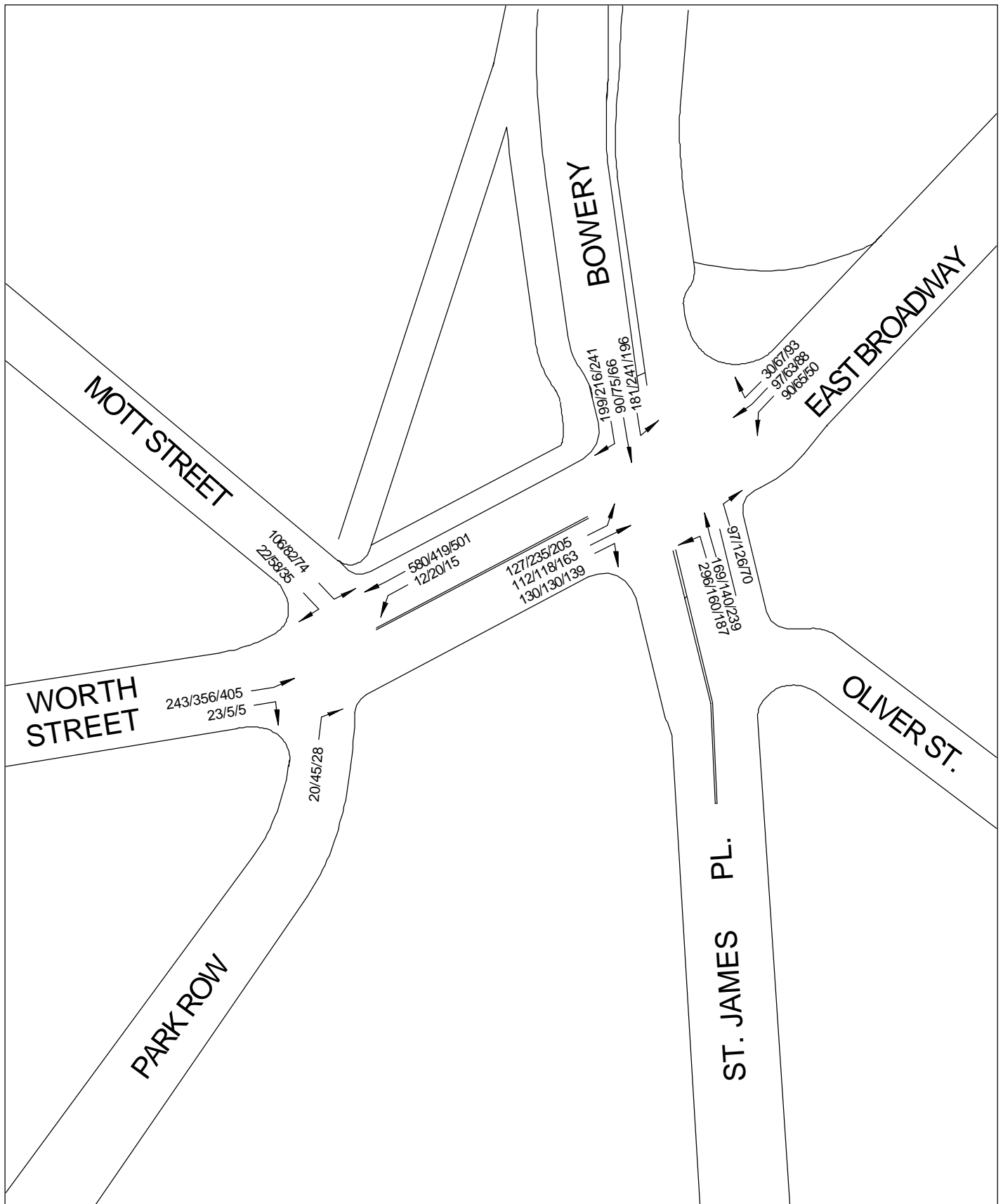




Table 11-2a: Mitigation

SIGNALIZED INTERSECTION	Lane Group	2006 No-Action AM Peak Hour			2006 Action AM Peak Hour			Mitigation AM			Lane Group	2006 No-Action Midday Peak Hour			2006 Action Midday Peak Hour			Mitigation MD			Lane Group	2006 No-Action PM Peak Hour			2006 Action PM Peak Hour			Mitigation PM															
		V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS		V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS		V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS													
Chatham Square (N-S) @ Worth Street (E-W)	NB-TR	0.28	21.9	C	0.03	20.3	C	See Table 11-2b			NB-TR	0.37	24.4	C	0.07	20.7	C	See Table 11-2b			NB-TR	0.41	24.9	C	0.04	20.4	C	See Table 11-2b															
	SB-L	1.00	95.1	F	0.89	66.4	E				SB-L	0.83	62.9	E	0.70	43.4	D				SB-L	0.75	53.9	D	0.57	35.5	D																
	SB-TR	0.93	63.8	E	0.98	76.3	E				SB-TR	0.98	77.1	E	1.01	86.7	F				SB-TR	0.96	68.8	E	1.03	86.9	F																
	EB-DefL	0.29	25.1	C	0.88	68.7	E				EB-DefL	0.46	27.4	C	0.90	59.1	E				EB-DefL	0.55	31.1	C	1.04	92.8	F																
	EB-LTR				0.23	22.1	C				EB-LTR	0.23	22.1	C	EB-LTR	0.26	22.6				C	EB-LTR	0.26	22.6	C																		
	WB-LT										0.10	22.7	C	0.61	29.7	C	WB-LT				0.11	20.5	C	0.32	23.4	C	WB-LT					0.10	20.5	C	0.38	24.4	C						
	WB-R				0.60	35.8	D				0.93	65.1	E	WB-R	0.76	45.9	D				0.91	61.4	E	WB-R	0.66	35.7	D					1.04	92.8	F									
Mott Street (E-W)	EB-LTR	0.71	58.3	E	0.74	61.9	E				EB-LTR	0.87	78.6	E	0.88	80.9	F				EB-LTR	0.65	51.8	D	0.70	58.1	E																
	Pearl Street (N-S) @ Frankfort Street (E-W)	NB-DefL	0.62	14.2	B	0.83	44.9	D	NB-DefL	0.83	44.6	D	0.44	11.0	B	0.45	11.1	B	NB-LTR	0.47	12.5	B	NB-DefL	0.97	62.4	E	0.93	53.6	D	NB-DefL	0.97	64.3	E										
		NB-TR				0.60	14.6	B	NB-TR	0.63	16.4	B										NB-TR	0.52	12.3	B	0.52	12.3	B	NB-TR	0.54	13.8	B											
		NB-LTR				0.99	83.8	F	SB-LTR	0.66	15.3	B									SB-LTR	0.4	11.3	B	0.51	11.7	B	SB-LTR	0.53	13.1	B												
		SB-LTR										SB-LTR	0.35	9.8	A	0.39	10.1	B	SB-LTR		0.55	12.3	B	0.51	11.7	B	SB-LTR	0.53	13.1	B													
		EB-L				0.92	69.7	E	0.99	83.8	F	EB-L	0.92	65.1	E	0.96	72.0	E	EB-L	0.89	56.8	E	EB-L	0.92	67.3	E	0.99	84.1	F	EB-L	0.92	65.6	E										
		EB-TR				0.80	54.1	D	0.83	58.0	E	EB-TL	0.61	36.9	D	0.75	43.8	D	EB-TL	0.60	33.6	C	0.79	50.7	D	0.95	79.1	E	EB-TL	0.71	43.0	D											
WB-LTR		0.85				52.3	D	0.85	52.3	D	EB-R	0.15	23.7	C	EB-R	0.11	22.9	C	EB-LTR	0.79	50.7	D	0.95	79.1	E	EB-LTR	0.71	43.0	D														
WB-LTR	0.82		46.2	D	WB-LTR						0.11	24.0	C	0.12	24.1	C	WB-LTR	0.11	22.5	C	WB-LTR	0.16	24.6	C	0.32	26.7	C	WB-LTR	0.30	24.9	C												
Pearl Street (N-S) @ Robert F Wagner Sr. Place (E-W)	NB-LTR		0.63	24.0	C						0.70	26.0	C	0.74	29.1	C	NB-LTR	0.30	18.0	B	0.33	18.4	B	0.35	19.9	B	NB-LTR	0.30	17.9	B	0.32	18.2	B	0.32	18.2	B							
	SB-TR		0.53	22.1	C						0.38	19.0	B				SB-TR	0.33	18.5	B	0.37	19.0	B				SB-TR	0.37	18.8	B	0.38	19.0	B				SB-TR	0.37	19.1	B			
	EB-LTR		0.88	55.9	E						0.88	55.9	E				EB-LTR	0.71	43.6	D	0.83	52.9	D				EB-LTR	0.75	44.2	D	0.83	52.9	D				EB-LTR	1.04	88.7	F	1.04	88.7	F
	WB-L		0.79	44.3	D						1.05	86.1	F				WB-L	0.74	43.1	D	0.74	43.1	D				WB-L	0.59	37.9	D	0.58	37.2	D				WB-L	0.72	41.5	D	0.53	36.1	D
	WB-RT		0.12	31.1	C						0.12	31.1	C				WB-RT	0.05	30.2	C	0.05	30.2	C				WB-RT	0.33	34.4	C	0.34	31.2	C				WB-RT	0.04	30.0	C	0.04	30.0	C
	WB-R		0.31	16.2	B						0.28	15.7	B				WB-R	0.26	14.4	B	WB-R	0.29	15.9				B	0.29	15.9	B	WB-R	0.28	14.6				B	0.15	14.2	B	0.15	14.2	B

NOTES:  
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound  
L-Left, T-Through, R-Right, DefL-Analysis considers a Defacto Left Lane on this approach .  
V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle  
LOS - Level of service  
\* -Denotes Congested Location in the 2005 No-Action Condition  
\* -Denotes Impacted Location in the 2005 With-Action Condition  
Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000 4.1f).



**Table 11-2b: Mitigation Results for Chatham Square**

SIGNALIZED INTERSECTION	Lane Group	Mitigation AM			Lane Group	Mitigation MD			Lane Group	Mitigation PM		
		V/C Ratio	Delay (sec/veh)	LOS		V/C Ratio	Delay (sec/veh)	LOS		V/C Ratio	Delay (sec/veh)	LOS
Worth Street (E-W) @ Park Row (NB)/Mott St (SB)	NB-LT	0.09	21.3	C	NB-LT	0.21	23.7	C	NB-LT	0.13	22.2	C
	SB-LR	0.53	31.8	C	SB-LR	0.56	32.9	C	SB-LR	0.44	28.8	C
	EB-TR	0.21	10.4	B	EB-TR	0.26	10.8	B	EB-TR	0.30	11.2	B
	WB-LT	0.48	13.4	B	WB-LT	0.36	11.9	B	WB-LT	0.42	12.6	B
Worth Street (E-W) @ St. James. Pl. (N-S)/ Bowery (N-S)	NB-DefL	0.58	19.8	B	NB-DefL	0.28	12.4	B	NB-DefL	0.57	22.3	C
	NB-T	0.40	25.6	C	NB-T	0.36	25.1	C	NB-T	0.45	21.7	C
	NB-R	0.27	23.6	C	NB-R	0.30	24.1	C	NB-R	0.25	19.5	B
	SB-DefL	0.63	34.8	C	SB-DefL	0.72	38.5	D	SB-DefL	0.80	45.9	D
	SB-TR	0.72	36.5	D	SB-TR	0.65	32.2	C	SB-TR	0.90	52.1	D
					EB-DefL	0.71	38.1	D				
	EB-LTR	0.55	27.5	C	EB-TR	0.51	27.7	C	EB-LTR	0.91	45.2	D
	WB-DefL	0.49	32.3	C								
	WB-TR	0.30	24.0	C	WB-TR	0.27	22.9	C	WB-LTR	0.45	24.3	C

**NOTES:**

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

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

V/C Ratio - Volume to Capacity Ratio, SEC/VEH - Seconds per vehicle

LOS - Level of service

\* -Denotes Congested Location in the 2005 No-Action Condition

\* -Denotes Impacted Location in the 2005 With-Action Condition

Analysis is based on the 2000 Highway Capacity Manual Methodology (HCS 2000 4.1f).

## D. TRANSIT AND PEDESTRIANS

### Bus Service

The results of the analysis of local bus conditions in the With-Action condition show that the street closures significantly impacted bus service. With the rerouting of the M103, M15, M9, B51, X25, X90, BM1, BM2, BM3, and BM4 bus routes, there have been substantial increases in overall travel time, which has resulted in significant adverse impacts on bus operations, especially in the AM peak hour and in the southbound direction for all peak hours.

In May 2005, the M103 bus returned to its original route via Park Row as a 90-day trial. The test was expanded in November 2005 when the M15 and B51 buses also returned to their original routes via Park Row to/from City Hall. Buses passing through the security zone along Park Row are stopped at the checkpoint momentarily which results in minimal delays in travel time. The re-introduction of the M15, M103, and B51 buses to Park Row would mitigate the increases in travel times these bus routes have experienced due to the action. The re-routing of the buses along Park Row has restored bus service within the area so that it is close to what it was in the baseline condition, prior to the streets being closed. As such, the re-routing of the buses along Park Row has therefore mitigated all bus service impacts. In addition, it should be noted that the proposed Chatham Square reconfiguration mitigation measure discussed above would not adversely impact bus service in the area.

### Pedestrians

The security plan has not generated any new pedestrian trips nor will it generate any pedestrian congestion on sidewalks. Pedestrian activity continues uninterrupted except for the immediate area around One Police Plaza that is closed to pedestrians. Traffic diversions associated with these vehicular restrictions have resulted in an increase in the numbers of vehicle turning movements at some crosswalks, while decreasing or eliminating all such movements at other crosswalks within the security zone. As discussed in Chapter 8, "Transit and Pedestrians," the results of the analysis of high accident locations indicate that the action may have created a high pedestrian accident location at the intersection of Worth Street and Broadway that was not identified as such a location in the year 2000 (as reported in the 2001 *CEQR Technical Manual*).

In coordination with DOT, it was determined that a leading pedestrian interval will be implemented at the intersection of Worth Street and Broadway to improve pedestrian conditions at this intersection. The leading pedestrian interval would change the signal phasing at this intersection that would allow for the pedestrian phase to begin before the green phase for motor vehicle traffic traversing east-west on Worth Street. This signal timing modification will allow pedestrians a head start to cross in the crosswalk of the intersection.

## E. NOISE

Project-generated increases in noise exceed the impact criterion of 3.0 dBA between two intersections during the peak AM period: 1) Worth Street at Baxter Street and 2) Worth Street at Mulberry Street. The projected noise level increases are 3.5 and 4.1 respectively, at the two intersections under With-Action conditions. Rerouting the M103, M15, and B51 bus routes back onto Park Row has been proposed as a mitigation measure. This would reduce the level of impact by about 0.4 dBA, with resulting noise level increments of 3.1 dBA at Worth Street at Baxter Street and 3.7 dBA at Worth Street at Mulberry Street. While this mitigation measures would reduce the impacts along Worth Street slightly, it would not eliminate them. No other method of mitigation is feasible. Due to the needs for pedestrian access and the distance between intersections, noise barriers would not be a feasible solution along these roadways. As mentioned previously, the peak AM hour is not a peak period for park utilization. Project-diverted traffic in the midday and PM peak hours would not cause noise level impacts. Portions of Chatham Towers and other residential buildings at the intersections of Worth/Baxter Streets and Worth/Mulberry Streets are affected by these noise increases. However, the overall noise levels would decrease with distance from Worth Street. Other than rerouting of traffic, no mitigation measures are feasible since the impacts occur outdoors, and noise barriers would not be considered practical or cost effective at these locations. Therefore, these impacts would remain unmitigated.