

**A. INTRODUCTION**

The preceding chapters of this Environmental Impact Statement (EIS) discuss the potential for significant adverse impacts to result from the Proposed Action. Where such potential significant adverse impacts have been identified—in the areas of hazardous materials, traffic, and transit and pedestrians—measures have been examined to minimize or eliminate the anticipated impacts. These mitigation measures are discussed below.

**B. HAZARDOUS MATERIALS**

Subsurface investigations have confirmed that historic and current uses of the Project Site and adjacent and surrounding properties have resulted in soil, groundwater, and methane impacts. Therefore, the entire Project Site has some potential for the presence of subsurface hazardous materials. The fill has levels of metals, SVOCs, and VOCs consistent with urban historic fill. The proposed construction (of buildings, roads, utilities) would disturb and remove some of this fill. Because of the depth of groundwater, dewatering is not anticipated, but, if required, would be in accordance with New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System State Pollutant Discharge Elimination System (SPDES) permit requirements. Any remaining fill would be isolated by the slabs/foundations of the proposed buildings, roads, sidewalks or other paved areas or, in areas where impervious cover is not proposed and there is not currently two feet of clean cover material, by at least two feet of clean cover material.

In order to prevent potential risks and thereby avoid the potential for significant adverse impacts related to hazardous materials, the Proposed Project would include appropriate health and safety and remedial measures (conducted in compliance with all applicable laws and regulations and conforming to appropriate engineering practice) that would govern both soil disturbance activities and subsequent construction at the site.

These measures would include the development of a Remedial Action Plan (RAP) and environmental Health and Safety Plan (HASP) for soil disturbance that would include detailed procedures for managing both known contamination issues (e.g., fill) and any unexpectedly encountered contamination issues. When the project design has progressed sufficiently to determine the areas of proposed soil disturbance and details of foundation construction (with sufficient additional soil, soil gas and/or groundwater testing both to characterize the materials that would be disturbed and to design the required methane gas venting systems), the RAP and HASP would be sent to New York City Department of Environmental Protection (NYCDEP) for review and approval. The HASP would include procedures for avoiding the generation of dust that could affect the surrounding community as well as any monitoring necessary to ensure that no such impacts would occur. The RAP would include design and installation of methane gas venting systems in all new buildings and would ensure that in areas not otherwise capped by buildings, pavements, or other impervious materials that surface soil (at least two feet deep)

meets applicable guideline requirements for their respective, commercial, or residential uses. All work would be performed in accordance with applicable city, state, and federal requirements.

Prior to site excavation, a construction-specific HASP would be prepared to address both the known contamination issues (based on the previous studies) and contingency items (e.g., finding unexpected petroleum storage tanks or petroleum-contaminated soil). The HASP would describe in detail the health and safety procedures to minimize exposure of hazardous materials to workers and the public. The hazards across the Project Site would be evaluated by determining the subsurface contaminants of concern and their chemical and physical characteristics. Health hazards would be considered within the potential exposure associated with the work to be performed. The HASP would be developed in accordance with United States Occupational Safety and Health Administration (OSHA) regulations and guidelines and is expected to include the elements described below:

- Appropriate personnel would be designated to ensure that all requirements of the HASP are implemented, including an on-site Site Safety Officer (SSO). The SSO would be responsible for coordinating and reporting all health and safety activities and would have completed a 40-hour training course, supervisory training, and updated annual refresher courses that meet OSHA requirements codified in 29 Code of Federal Regulations (CFR) Part 1910. The SSO would have stop-work authorization, which they would execute on their determination of an imminent safety hazard, emergency situation, or other potentially dangerous situation. If the SSO were to be absent from the site, they would designate a suitably qualified replacement familiar with the HASP.
- The HASP would require that on-site personnel are qualified and have received the required training. All those entering the work area while intrusive activities were being performed would receive mandatory instruction regarding the potential hazards to health and safety. Any construction worker in a hazardous materials area would be required to be 40-hour OSHA trained. All construction personnel upon entering the site would attend a mandatory training meeting to:
  - Inform workers of the potential hazards they may encounter;
  - Provide the knowledge and skills necessary for workers to perform the work with minimal risk to health and safety;
  - Inform workers of the purpose and limitations of safety equipment; and,
  - Ensure that workers can safely avoid or escape from emergencies.

Each member of the construction crew would be instructed in these objectives before they would go onto the site. The SSO or other suitably trained individuals would be responsible for conducting the training program. Others who enter the site would have to be accompanied by a suitably trained construction worker.

- The HASP would include contingency response plans. All excavation would be continuously monitored for the presence of buried tanks, drums or other containers; along with sludges or soil that show evidence of potential contamination, such as discoloration, staining, or odors. The HASP would include a table of action levels for the particular monitoring equipment (photoionization) detector and particulate monitor) and contingencies if these action levels are exceeded. If any of these are detected, excavation in the area would be halted, and appropriate personnel would be notified, including the SSO. The affected area would be cordoned off and no further work would be performed at that location until the appropriate contingency response plan described in the HASP was implemented. All contingency response actions would be carried out in accordance with special contingency health and safety procedures.

- To prevent the potential off-site transport of dust, dust control measures would be implemented during all earth-disturbing operations. Water would be available on-site for sprinkling/wetting to suppress dust in dry weather or as necessary. Water would also be available to suppress dust on haul roads, to wet equipment and excavation faces, and would be sprayed on buckets during excavation and dumping. All haul trucks would have tarp covers, and dust or mud would be removed from tires before leaving the site. Vehicle speeds would be limited on the Project Site.

Soil gas sampling identified methane at many locations within the Project Site. As such, all project components would include precautionary measures (such as sub-slab and active venting) which would be in place during building construction and would be operational prior to occupancy.

The LDA between HPD and Gateway Center Properties Phase II, LLC and Nehemiah Housing Development Fund Co., Inc. would include provisions related to hazardous materials mitigation. In connection with the disposition of City-owned property to the developers, a restrictive declaration would be recorded to restrict future use and/or development to a manner which is consistent with the hazardous materials mitigation systems. The provisions of the restrictive declaration would be designed to control land use and ensure long term maintenance and operations of engineering controls, which are part of the hazardous material mitigation systems. The restrictive declaration is a covenant, which binds the present owners, and all successors, and serves as notice to any future owner of the conditions and restrictions that are continuously binding on the land.

The SCA is an Involved Agency and would be responsible for the design and construction of the school facility on Block 4449. Under the terms of its enabling legislation, the SCA must comply with the requirements of SEQRA. Therefore, the SCA would conduct a Phase II Environmental Site Investigation to confirm subsurface conditions. Based on the findings of the Phase II Environmental Site Investigation, the SCA would develop management plans (e.g., soil management plan, groundwater management plan, construction HASP, etc.) to address any hazardous materials that may be encountered during construction of the school. The management plans prepared by the SCA would be separate from the RAP and HASP described above, but would include equally stringent requirements. At a minimum, the design of the new school would include a vapor barrier and an active sub-slab depressurization system (SSDS) to prevent potential migration of organic vapors and methane into the proposed school building. Additionally, for areas of the school where exposed soils may exist (i.e., landscaped areas), a twenty-four (24) inch thick layer of certified-clean fill would be placed over the soils.

## **C. TRAFFIC AND PARKING**

The Proposed Project would result in significant adverse impacts on traffic conditions at intersections in the primary and secondary traffic study areas and along a section of the Shore Parkway near the Project Site. The sections that follow identify traffic improvements needed at each location in order to mitigate traffic impacts.

Of the 46 locations analyzed in the 2011 Build condition, significant impacts would occur at 10 intersections during the weekday AM peak hour, 10 intersections during the weekday midday peak hour, 12 intersections during the weekday PM peak hour, 14 intersections during the Saturday midday peak hour, and 16 intersections during the Saturday PM peak hour. In the 2013 Build condition, significant impacts would occur at 12 intersections during the weekday AM peak hour, 10 intersections during the weekday midday peak hour, 14 intersections during the weekday PM peak hour, 15 intersections during the Saturday midday peak hour, and 19 intersections during the Saturday PM peak hour. Approximately half of the impacted

intersections are located along heavily trafficked corridors within the secondary study area and experience high delays in the existing baseline conditions. These secondary study area intersections would be significantly impacted in the Build condition, even though most of the project-generated traffic would not use these intersections.

Detailed evaluation of mitigation measures indicates that significant adverse impacts would be fully mitigated at all but six (three to four locations per time period) locations by standard traffic engineering improvements such as installation of traffic signals, signal phasing and timing modifications, parking prohibitions, and lane restriping. These modifications represent standard traffic capacity improvements that have been proposed and implemented to mitigate anticipated traffic impacts for numerous projects in New York City. Table 22-1 provides a summary of the number of intersections at which significant impacts can be fully mitigated or where significant impacts cannot be mitigated at all or can be partially mitigated.

**Table 22-1**  
**Summary of Significant Adverse Traffic Impact Locations**

Intersections	2011 Build Condition					2013 Build Condition				
	Weekday			Saturday		Weekday			Saturday	
	AM	Midday	PM	Midday	PM	AM	Midday	PM	Midday	PM
No Significant Impact	36	36	34	32	30	34	36	32	31	27
Fully Mitigated Impact	7	6	9	10	10	8	7	11	11	14
Partially Mitigated Impact	1	2	1	1	2	0	2	0	1	1
Unmitigated Impact	2	2	2	3	4	4	1	3	3	4

Significant traffic impacts at the intersection of Pennsylvania Avenue and Atlantic Avenue (located within the secondary study area) would be unmitigatable during all peak hours analyzed for both the 2011 and 2013 Build conditions. An intersection is considered unmitigatable if standard improvements would not be able to mitigate any of the impacted movements. At the intersection of Flatlands Avenue and Pennsylvania Avenue (located on the border of the primary study area), significant traffic impacts would be partially mitigatable during the weekday midday peak hour and unmitigatable for all other 2011 and 2013 Build condition peak hours. Partial mitigation occurs when some but not all of the significantly impacted movements in a time period are mitigated. Significant traffic impacts at the intersection of Linden Boulevard and Pennsylvania Avenue (located on the border of the primary study area) would be partially mitigatable during the weekday AM and PM peak hours for the 2011 Build condition and for the weekday midday peak hour for the 2013 Build condition, and would be unmitigatable for the remaining 2011 and 2013 Build condition peak hours. At the intersection of Flatlands Avenue and Rockaway Parkway (located within the secondary study area), significant traffic impacts would be partially mitigatable during the Saturday midday and PM peak hours for both the 2011 and 2013 Build conditions, and unmitigatable during the weekday AM peak hour for the 2013 Build condition. At the intersection of Linden Boulevard and Rockaway Avenue (located within the secondary study area), significant traffic impacts would be fully mitigatable during all peak hours for the 2011 and 2013 Build conditions, except the 2011 weekday midday peak hour during which it would be partially mitigated. Significant traffic impacts at the intersection of Linden Boulevard and Kings Highway and Remsen Avenue (located within the secondary study area) would be partially mitigatable during the Saturday PM peak hour for the 2011 Build condition, and would be fully mitigatable during all other peak hours for the 2011 and 2013 Build conditions. Further details are provided in the remainder of this section.



One Shore Parkway segment would experience significant impacts during the weekday PM peak hour in 2011 and two segments would experience significant impacts in the same hour in 2013 based on the density of traffic criteria established in recent years but which are not contained in the most recent version of the *New York City Environmental Quality Review (CEQR) Technical Manual*. During the Saturday PM peak hour, three segments in the 2011 Build condition and all segments except one (the westbound Shore Parkway between the on-ramp and off-ramp) in the 2013 Build condition would be impacted. Although these impacts would be unmitigatable, the reduction of speeds for the significantly impacted segments would be in the range of 0.5 mph to 3.7 mph and would be generally unnoticeable to motorists.

Figures 22-1a through 22-10b provide an overview of the intersections that are fully mitigated, partially mitigated or unmitigatable during the weekday AM, midday, PM, Saturday midday, and Saturday PM peak hours. A detailed description of these measures is provided below for 2011 and 2013 conditions. Additional analysis details are provided in Appendix E, “Traffic Technical Appendix,” of this EIS.

Implementation of the traffic engineering improvements described below would require the approval of the New York City Department of Transportation (NYCDOT). Coordination would be undertaken with NYCDOT to implement these proposed mitigation measures.

## **2011 MITIGATION**

### **ERSKINE STREET AND BELT PARKWAY WESTBOUND RAMPS**

The intersection of Erskine Street and the Belt Parkway westbound ramps would be significantly impacted during the Saturday PM peak hour and would be fully mitigated by modifying the signal timings.







### **ERSKINE STREET AND GATEWAY DRIVE**

The intersection of Erskine Street and Gateway Drive would be significantly impacted during the Saturday midday and PM peak hours. The impacts would be mitigated by shifting the northbound Erskine Street approach median eight feet to the east, increasing the width of the median from 4 feet to 6.5 feet, and restriping the approach to a new configuration of two 10-foot wide exclusive left turn lanes, one 14-foot wide shared through-right lane, and three southbound receiving lanes (each 10 feet in width), while maintaining the existing bike lanes. It would also be necessary to restripe the southbound Erskine Street approach as one 10-foot-wide exclusive left turn lane, one 11.5-foot-wide through lane, one 12-foot-wide through lane and one 12.5-foot-wide shared through-right lane. These geometric changes would mitigate impacts in the Saturday midday peak hour and would be in place for all conditions, but would not mitigate impacts in the Saturday PM peak hour.

### **ERSKINE STREET AND GATEWAY PLAZA**

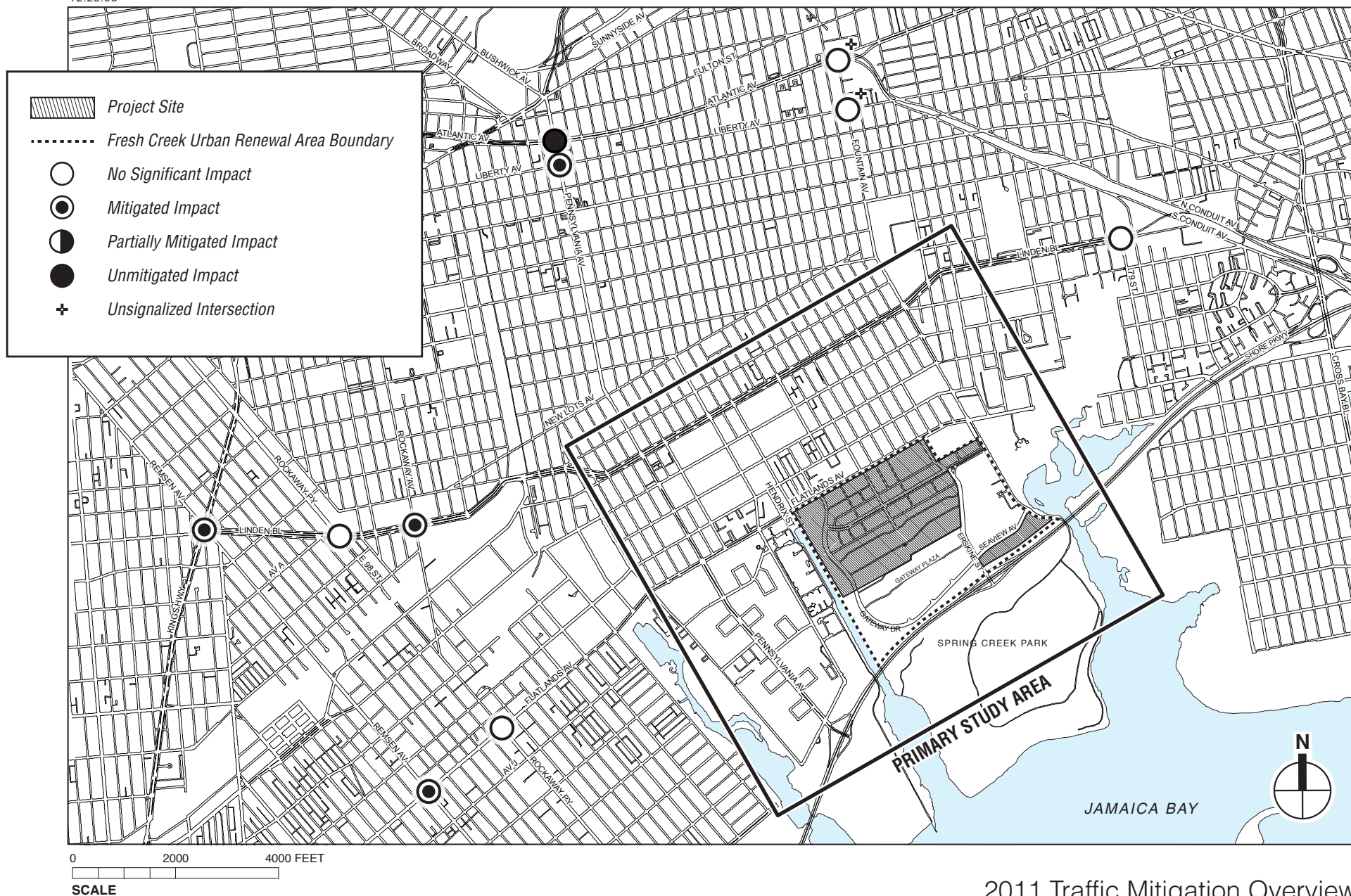
The intersection of Erskine Street and Gateway Plaza would be significantly impacted during the Saturday PM peak hour and could be mitigated via the following physical changes that would be in place for all five traffic analysis peak hours: 1) reducing the width of the median along the southbound approach from 20.5 feet to 10 feet and restriping the approach as two 11-foot-wide through lanes and one 12.5-foot-wide shared through-right lane; and 2) reducing the width of the median along the receiving side of the intersection from 15 feet to 8 feet and restriping the receiving lanes with three 10-foot-wide receiving lanes.



-  *Project Site*
-  *Fresh Creek Urban Renewal Area Boundary*
-  *No Significant Impact*
-  *Mitigated Impact*
-  *Partially Mitigated Impact*
-  *Unmitigated Impact*
-  *Unsignalized Intersection*








0 1000 2000 FEET  
SCALE

2011 Traffic Mitigation Overview  
Weekday AM Peak  
Primary Study Area  
**Figure 22-1a**



2011 Traffic Mitigation Overview  
Weekday AM Peak  
Secondary Study Area  
**Figure 22-1b**

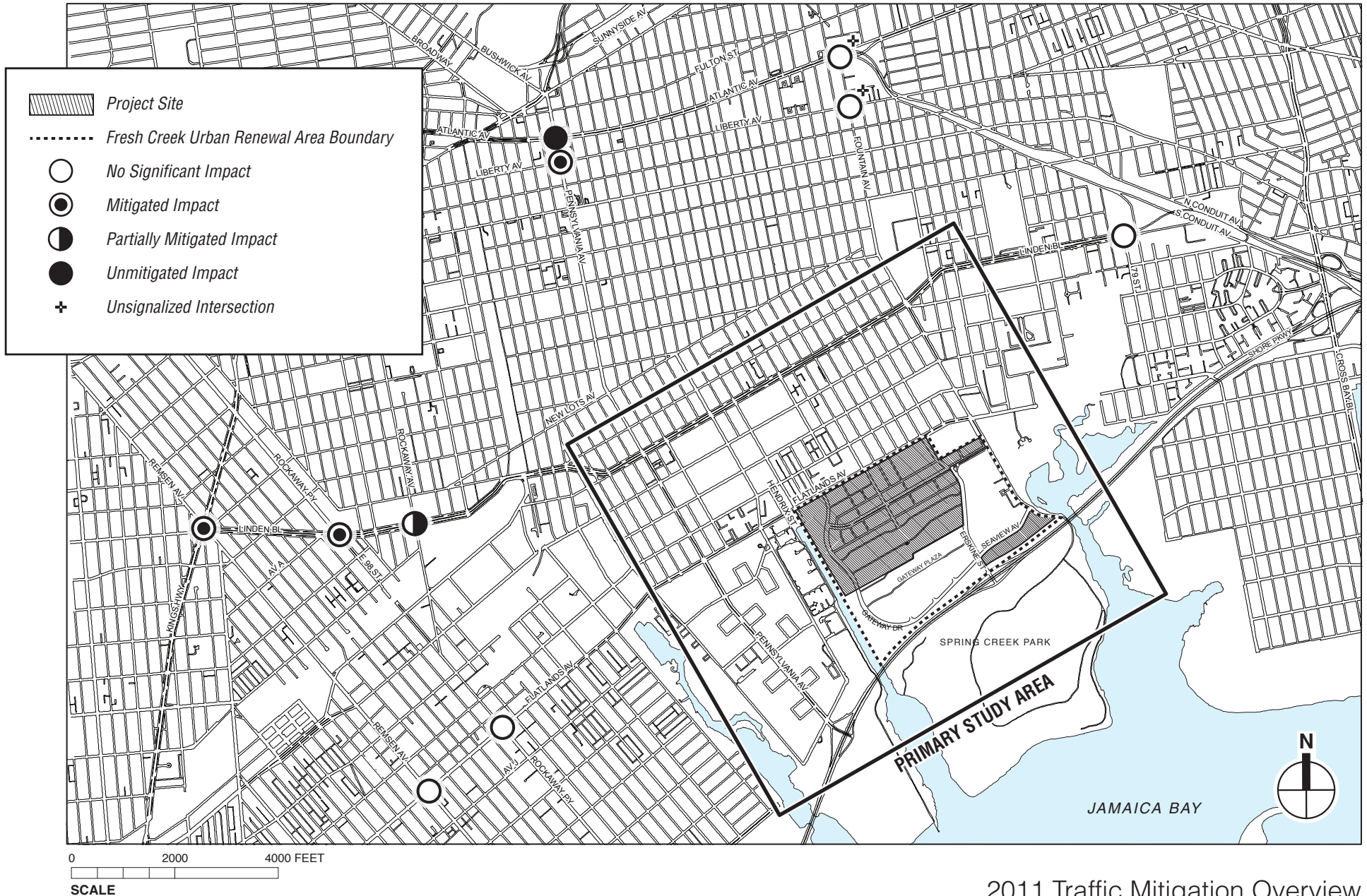


-  *Project Site*
-  *Fresh Creek Urban Renewal Area Boundary*
-  *No Significant Impact*
-  *Mitigated Impact*
-  *Partially Mitigated Impact*
-  *Unmitigated Impact*
-  *Unsignalized Intersection*

0 1000 2000 FEET  
SCALE







2011 Traffic Mitigation Overview  
Weekday Midday Peak  
Primary Study Area  
**Figure 22-2a**





2011 Traffic Mitigation Overview  
 Weekday Midday Peak  
 Secondary Study Area  
**Figure 22-2b**









-  *Project Site*
-  *Fresh Creek Urban Renewal Area Boundary*
-  *No Significant Impact*
-  *Mitigated Impact*
-  *Partially Mitigated Impact*
-  *Unmitigated Impact*
-  *Unsignalized Intersection*

0 1000 2000 FEET  
SCALE





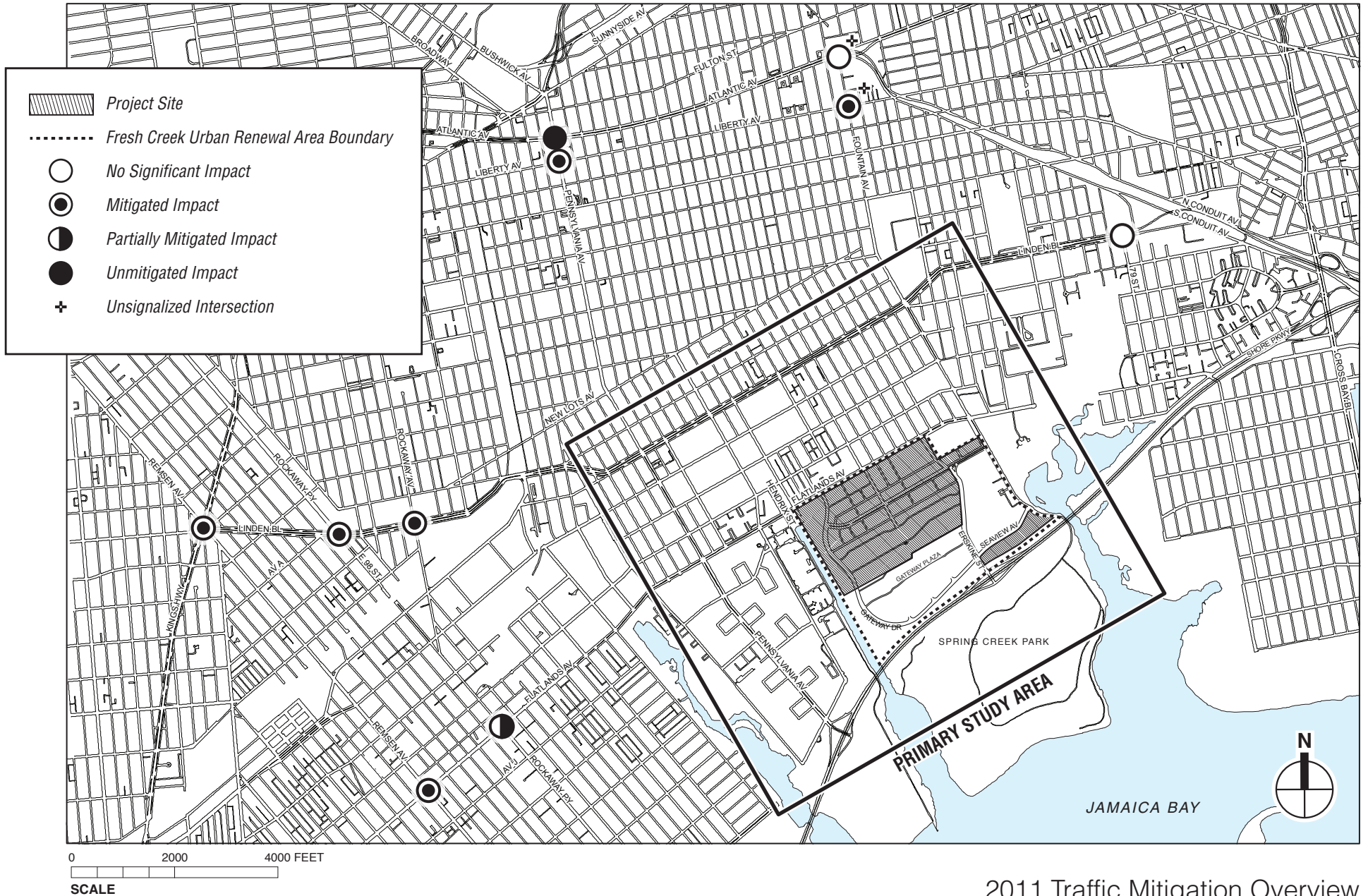


-  *Project Site*
-  *Fresh Creek Urban Renewal Area Boundary*
-  *No Significant Impact*
-  *Mitigated Impact*
-  *Partially Mitigated Impact*
-  *Unmitigated Impact*
-  *Unsignalized Intersection*

0 1000 2000 FEET  
SCALE







2011 Traffic Mitigation Overview  
Saturday Midday Peak  
Primary Study Area  
**Figure 22-4a**





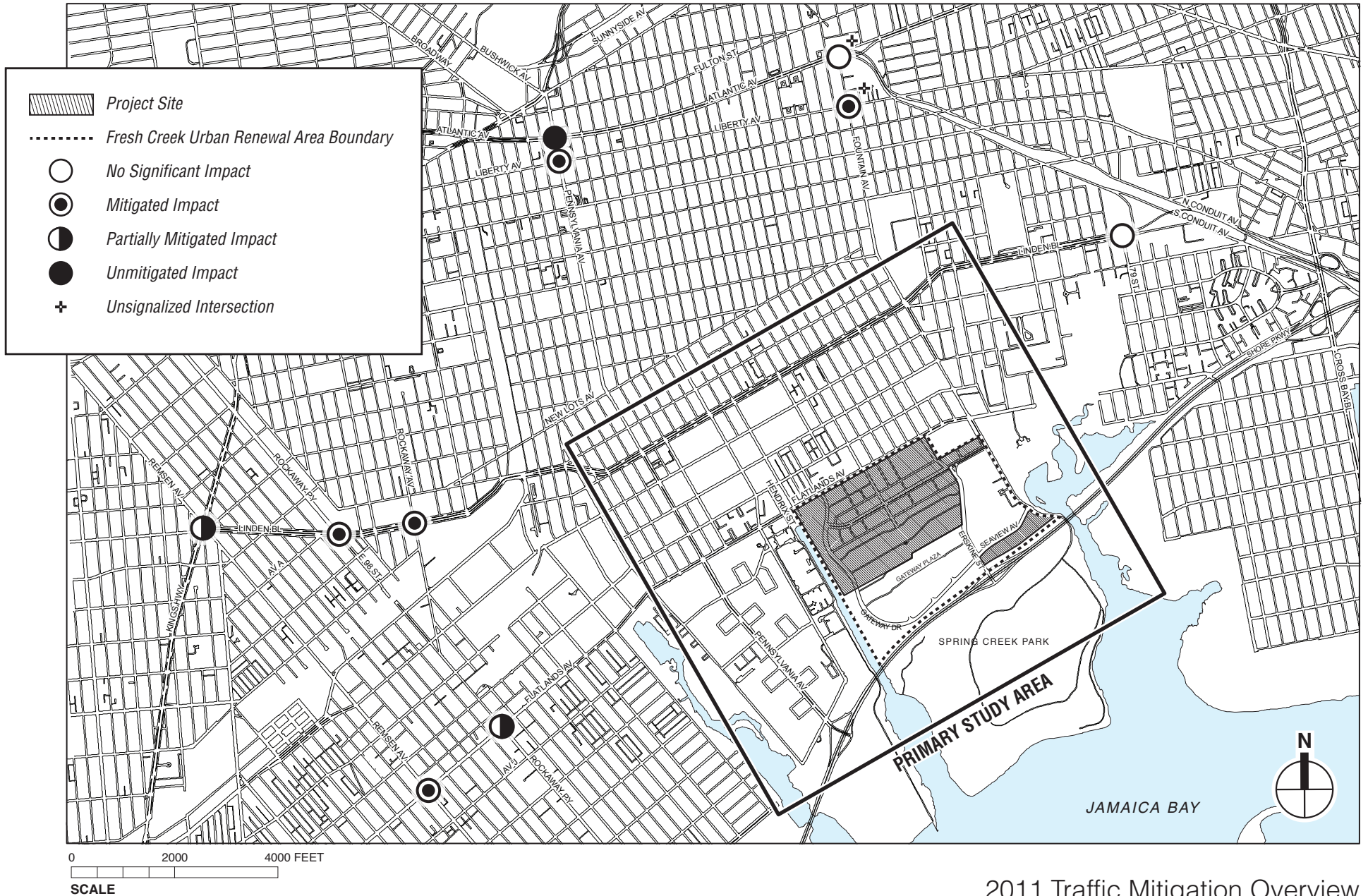
2011 Traffic Mitigation Overview  
 Saturday Middy Peak  
 Secondary Study Area  
**Figure 22-4b**



-  *Project Site*
-  *Fresh Creek Urban Renewal Area Boundary*
-  *No Significant Impact*
-  *Mitigated Impact*
-  *Partially Mitigated Impact*
-  *Unmitigated Impact*
-  *Unsignalized Intersection*








0 1000 2000 FEET  
SCALE





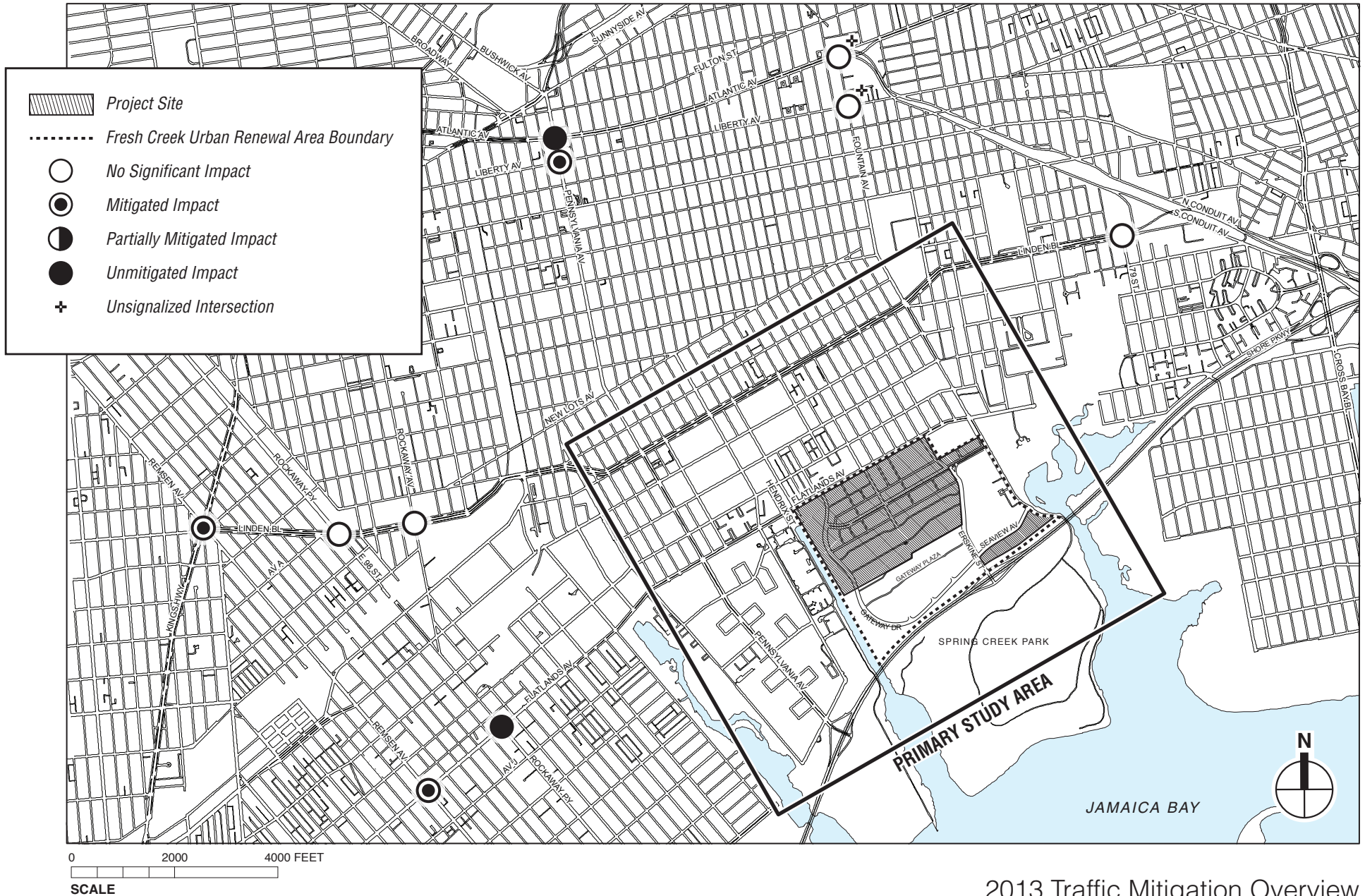
2011 Traffic Mitigation Overview  
 Saturday PM Peak  
 Secondary Study Area  
**Figure 22-5b**



-  *Project Site*
-  *Fresh Creek Urban Renewal Area Boundary*
-  *No Significant Impact*
-  *Mitigated Impact*
-  *Partially Mitigated Impact*
-  *Unmitigated Impact*
-  *Unsignalized Intersection*







0 1000 2000 FEET  
SCALE





2013 Traffic Mitigation Overview  
 Weekday AM Peak  
 Secondary Study Area  
**Figure 22-6b**

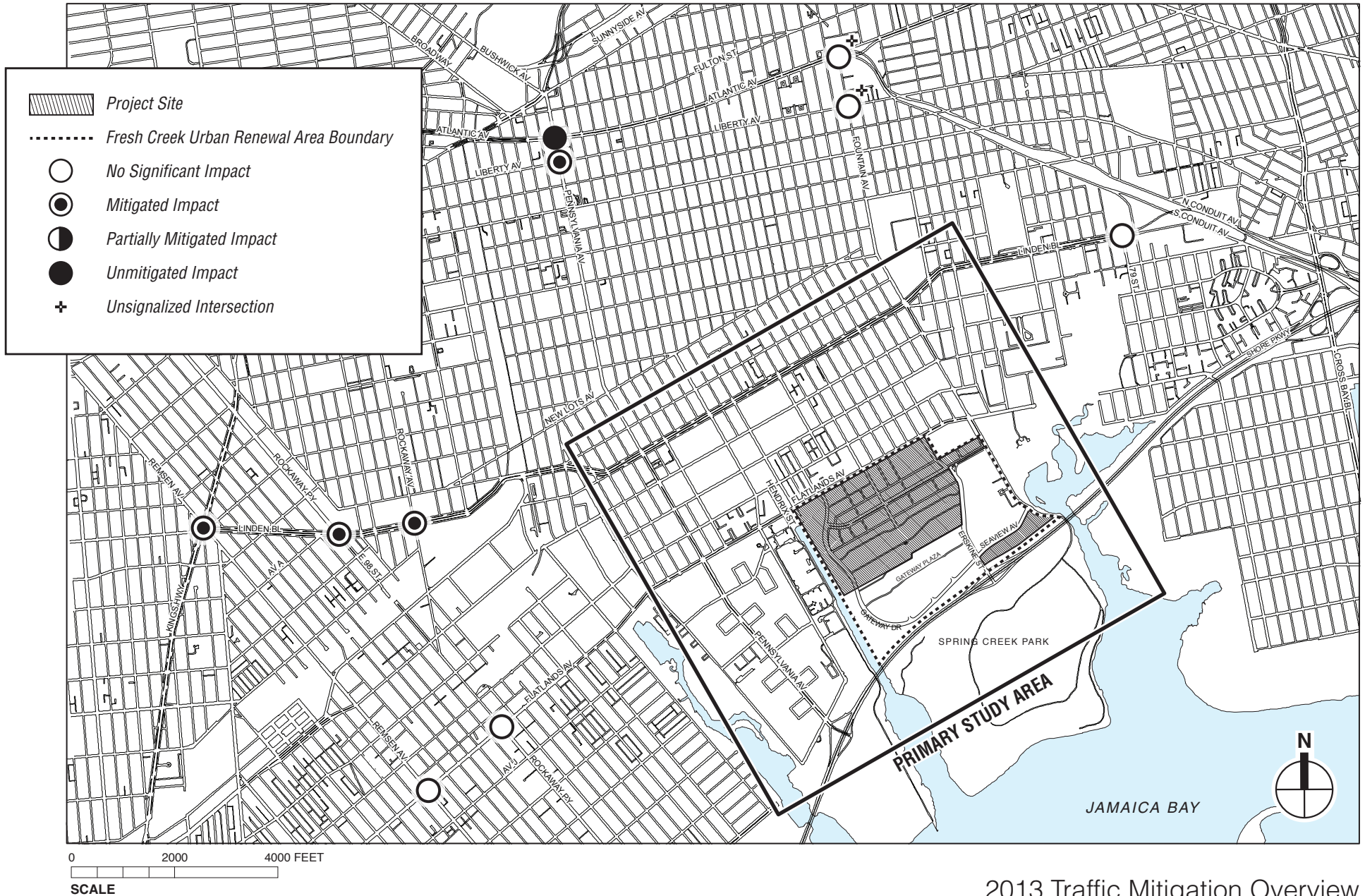


-  *Project Site*
-  *Fresh Creek Urban Renewal Area Boundary*
-  *No Significant Impact*
-  *Mitigated Impact*
-  *Partially Mitigated Impact*
-  *Unmitigated Impact*
-  *Unsignalized Intersection*

0 1000 2000 FEET  
SCALE







2013 Traffic Mitigation Overview  
Weekday Midday Peak  
Primary Study Area  
**Figure 22-7a**





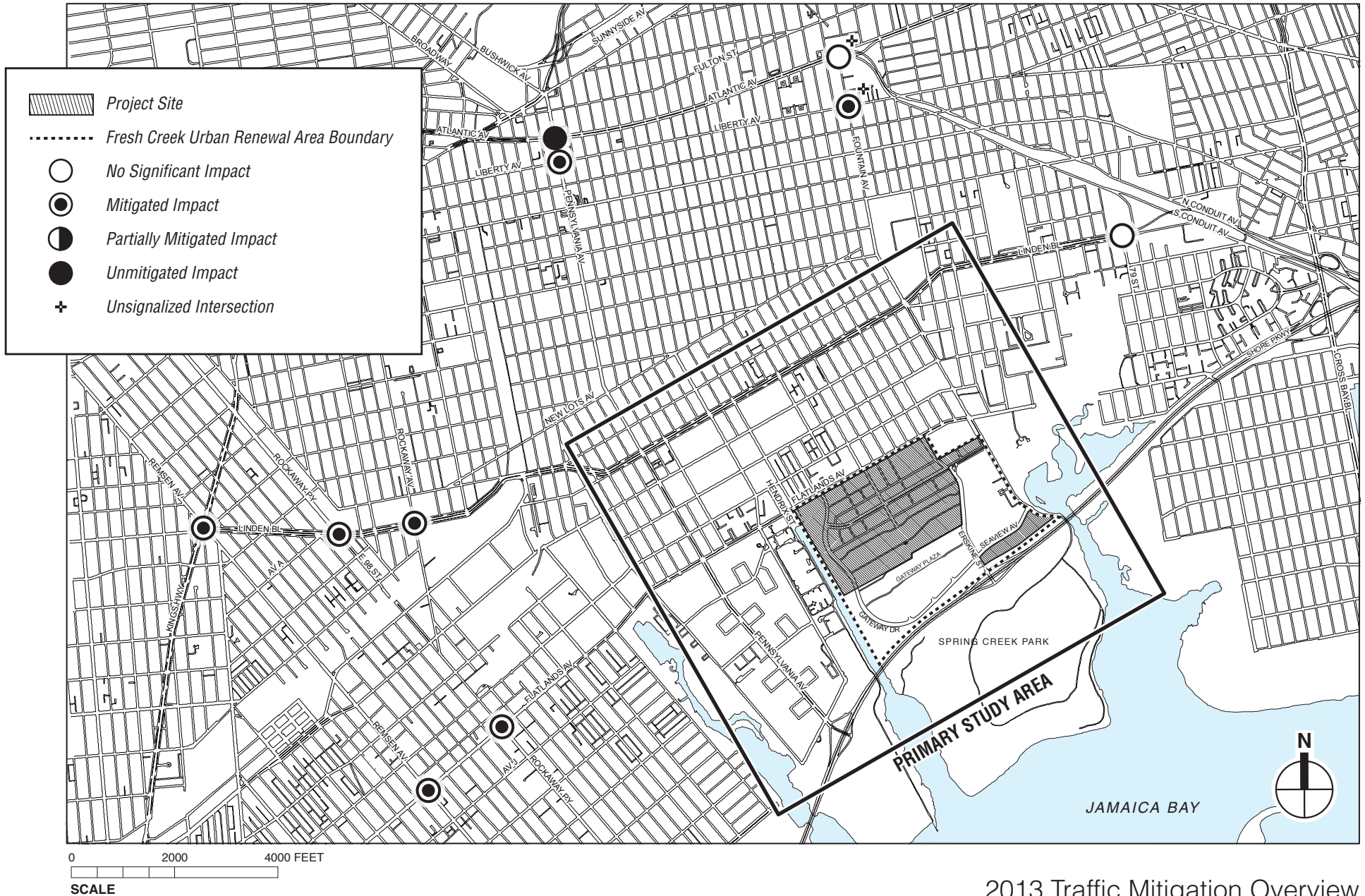
2013 Traffic Mitigation Overview  
 Weekday Midday Peak  
 Secondary Study Area  
**Figure 22-7b**



-  *Project Site*
-  *Fresh Creek Urban Renewal Area Boundary*
-  *No Significant Impact*
-  *Mitigated Impact*
-  *Partially Mitigated Impact*
-  *Unmitigated Impact*
-  *Unsignalized Intersection*







0 1000 2000 FEET  
SCALE





2013 Traffic Mitigation Overview  
 Weekday PM Peak  
 Secondary Study Area  
**Figure 22-8b**

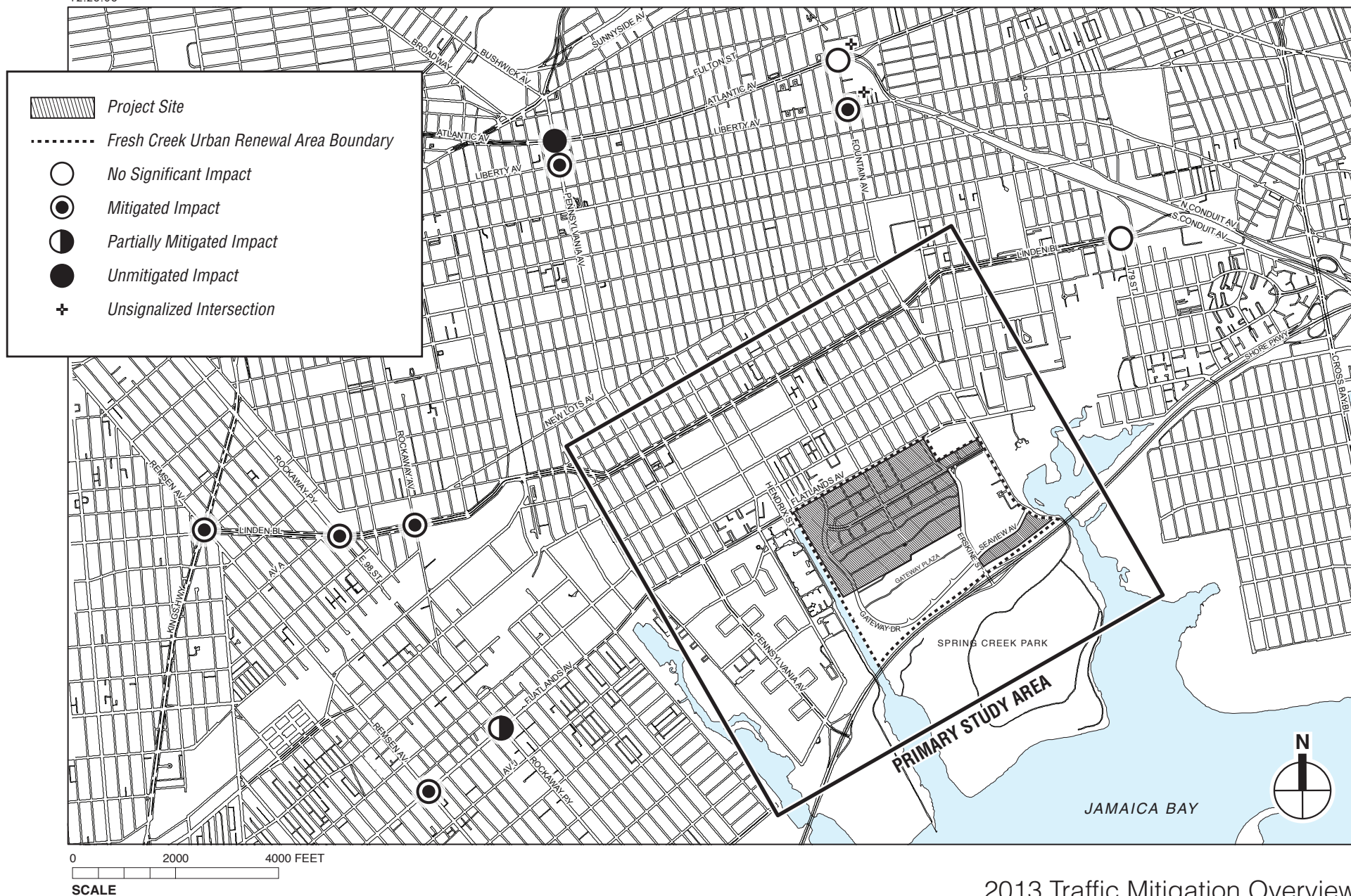


-  *Project Site*
-  *Fresh Creek Urban Renewal Area Boundary*
-  *No Significant Impact*
-  *Mitigated Impact*
-  *Partially Mitigated Impact*
-  *Unmitigated Impact*
-  *Unsignalized Intersection*

0 1000 2000 FEET  
SCALE








2013 Traffic Mitigation Overview  
Saturday Midday Peak  
Primary Study Area  
Figure 22-9a

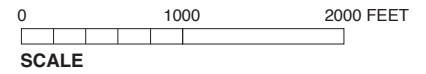




2013 Traffic Mitigation Overview  
Saturday Midday Peak  
Secondary Study Area  
**Figure 22-9b**

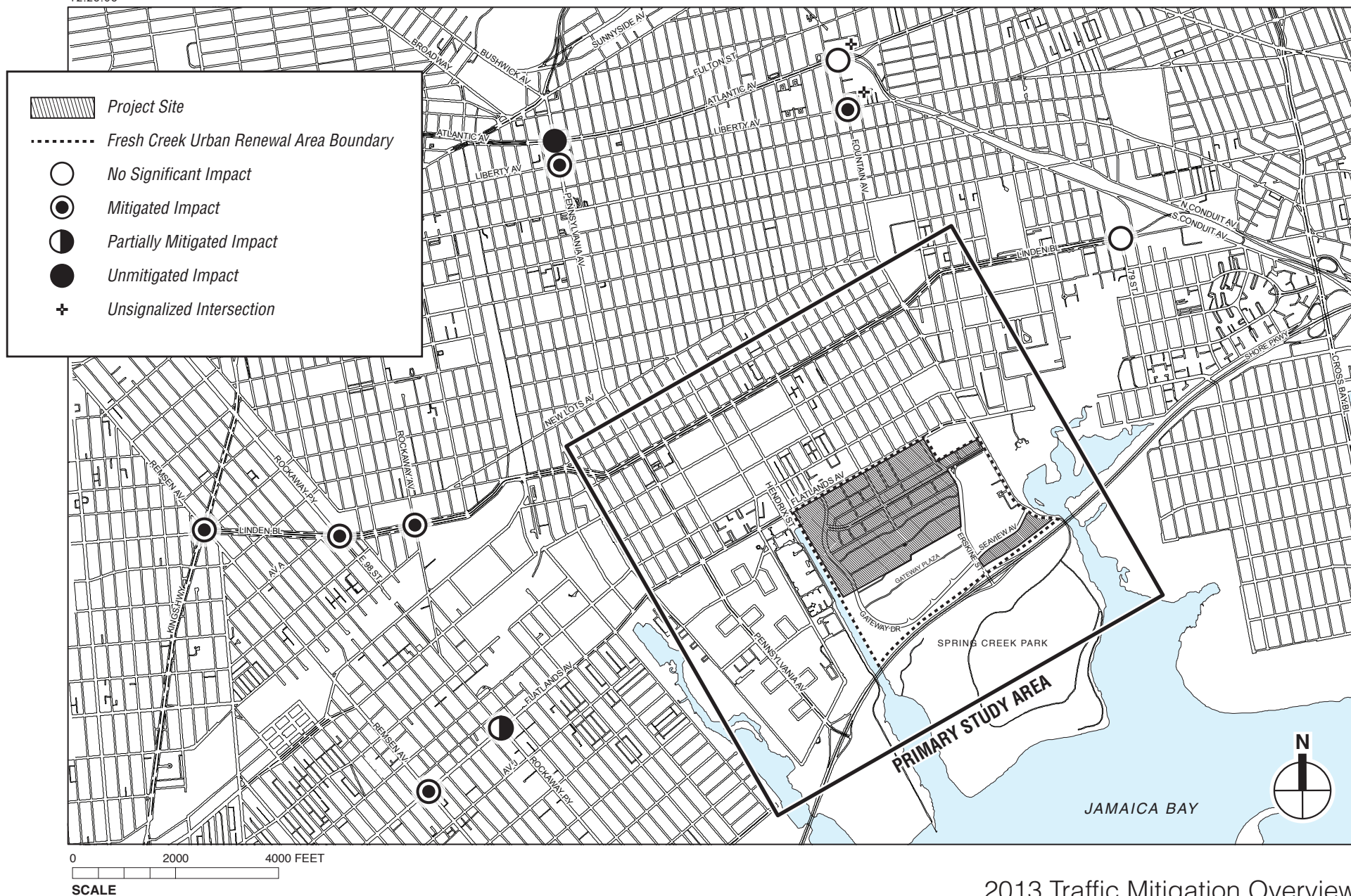


-  *Project Site*
-  *Fresh Creek Urban Renewal Area Boundary*
-  *No Significant Impact*
-  *Mitigated Impact*
-  *Partially Mitigated Impact*
-  *Unmitigated Impact*
-  *Unsignalized Intersection*



2013 Traffic Mitigation Overview  
 Saturday PM Peak  
 Primary Study Area  
**Figure 22-10a**





2013 Traffic Mitigation Overview  
Saturday PM Peak  
Secondary Study Area  
**Figure 22-10b**

### *FOUNTAIN AVENUE AND FLATLANDS AVENUE*

The physical changes that would be needed for all five traffic analysis peak hours include the following: 1) restriping the eastbound approach as one 12-foot-wide exclusive left turn lane, one 12-foot-wide through lane, and one 14-foot-wide shared through-right lane; and 2) removing curbside parking along the south side of the eastbound receiving side 150 feet downstream of the intersection, shifting the westbound approach centerline 10 feet to the south, tapered 150 feet upstream of the intersection, restriping the westbound approach as one 12-foot-wide exclusive left turn lane, one 12-foot-wide through lane and one 20.5-foot-wide shared through-right lane with curbside parking, and restriping the eastbound receiving side as one 12-foot-wide lane and one 13-foot-wide lane. Addition of an eastbound-left/westbound-left lead phase, and modifications to the signal timing plan would also be required to mitigate the significant impacts. Replacement of the existing mechanical signal controller with a computerized controller would be necessary to accommodate different signal timing plans for the different peak hours. Up to seven parking spaces would be lost due to parking restrictions.

### *FOUNTAIN AVENUE AND LIBERTY AVENUE*

In order to mitigate significant traffic impacts during the weekday PM, Saturday midday, and Saturday PM peak hours, it would be necessary to remove the curbside parking 120 feet upstream of the intersection along the east side of the southbound Fountain Avenue approach to gain an additional travel lane, and to restripe this approach to provide one 12-foot-wide exclusive left turn lane and one 18-foot-wide shared through-right lane with curbside parking. These geometric modifications would be in place for all time periods. Curbside parking along the west side of the southbound Fountain Avenue approach, 120 feet upstream of the intersection, would need to be to prohibited for the Saturday PM peak period to gain additional storage space for right turning vehicles. In the Saturday PM peak period, up to 11 parking spaces would be lost due to parking restrictions; up to five spaces would be lost in all other peak periods.

### *FLATLANDS AVENUE AND VAN SICLEN AVENUE*

Physical changes would be needed for all five of the traffic analysis peak hours, including the following: 1) removing the curbside parking 220 feet upstream of the intersection along the east side of the northbound Van Siclen Avenue approach (which would result in the loss of up to 10 parking spaces), shifting the northbound approach centerline three feet to the west, tapered 220 feet upstream of the intersection, and restriping the approach as one 10-foot-wide exclusive left turn lane, one 10-foot-wide through lane, and one 10-foot-wide exclusive right turn lane with one 24-foot-wide southbound receiving lane with parking; 2) shifting the southbound approach centerline 4.5 feet to the east, tapered 270 feet upstream of the intersection, and restriping the southbound approach to a new configuration with one 10-foot-wide exclusive left turn lane, and one 19.5-foot-wide shared through-right lane with curbside parking, with one 20-foot-wide northbound receiving lane; 3) removing the curbside parking 120 feet upstream of the intersection along the south side of eastbound Flatlands Avenue (which would result in the loss of up to six parking spaces), reducing the width of the eastbound approach median from 6.5 feet to 3.5 feet, and restriping the eastbound approach to maintain the 10-foot-wide exclusive left turn lane, and provide one 13-foot-wide through lane, one 12-foot-wide through lane, and one 10-foot-wide exclusive right turn lane; 4) removing the curbside parking 190 feet upstream of the intersection along the north side of the westbound Flatlands Avenue (which would result in the loss of up to nine parking spaces), restriping the Flatlands Avenue westbound approach as one 10-foot-wide exclusive left turn lane, one 12-foot-wide through lane, one 11-foot-wide through lane, and one 10-foot-wide exclusive

right turn lane; A new eastbound-left/westbound-left lead phase, as well as signal timing modifications, would also be necessary for all peak hour conditions. Replacement of the existing mechanical signal controller with a computerized controller would be necessary to accommodate different signal timing plans for the different peak hours.

#### *FLATLANDS AVENUE AND PENNSYLVANIA AVENUE*

This intersection would experience unmitigatable significant impacts during the weekday AM, PM, Saturday midday, and Saturday PM peak hours since it is a heavily trafficked location that already has several traffic movements operating at LOS E or F conditions even under existing and No Build conditions. Standard traffic engineering measures would only partially mitigate the significant impacts in the weekday midday peak hour. Traffic improvements that would achieve partial mitigation include signal timing modifications and restriping the Pennsylvania Avenue southbound approach as one 13-foot-wide exclusive left turn lane, two 10-foot-wide through lanes and one 10-foot-wide shared through-right lane.

#### *FLATLANDS AVENUE AND ROCKAWAY PARKWAY*

This intersection, which has limited capacity due to narrow lane widths, would experience significant impacts in the weekday PM, Saturday midday, and Saturday PM peak hours. The following geometric changes would fully mitigate the intersection in the weekday PM peak hour and partially mitigate the intersection in the Saturday midday and PM peak hours: removing the curbside parking 120 feet upstream of the southbound Rockaway Parkway approach to gain another travel lane, which would result in the loss of up to six parking spaces; and restriping the approach as one 10-foot-wide shared left-through lane and one 10-foot-wide shared through-right lane. Removal of the northbound lead phase, as well as signal timing modifications, would also be necessary for all peak hour conditions.

#### *FLATLANDS AVENUE AND REMSEN AVENUE*

To fully mitigate projected significant impacts, curbside parking would need to be removed 120 feet upstream of the intersection along the eastbound and westbound approaches and along the receiving sides of the intersection to accommodate additional moving lanes, resulting in a loss of up to 18 parking spaces. The eastbound and westbound approaches would need to be reconfigured by shifting the centerlines two feet to the north for the eastbound approach and to the south for the westbound approach, and by restriping the approaches to maintain the existing 8-foot-wide exclusive left turn lane, and to provide two 10-foot-wide through lanes, and one 10-foot-wide exclusive right turn lane. The eastbound and westbound receiving sides would need to be restriped with one 12-foot-lane and one 14-foot-lane each. In addition, the southbound Remsen Avenue approach exclusive left turn lane would need to be restriped from 10 feet to 11 feet by shifting the centerline one foot to the east tapered 150 feet upstream of the intersection. The southbound approach stop bar would be shifted 10 feet to the north. The receiving side of northbound Remsen Avenue would be restriped as one 12-foot-wide and the existing 14-foot-wide lane. These physical changes would be necessary to mitigate significant impacts in the weekday AM, PM, Saturday midday, and Saturday PM peak hours, but would be in place for all time periods. To fully mitigate all impacts, it would also be necessary to modify the signal timing plans for the weekday PM, Saturday midday, and Saturday PM peak hours to provide additional green time for north/south movements. Replacement of the existing mechanical signal controller with a computerized controller would be needed to accommodate different signal timing plans for the different peak hours.

### *LINDEN BOULEVARD AND FOUNTAIN AVENUE/LORING AVENUE*

Significant traffic impacts during all five peak hours could be mitigated by converting Loring Avenue into a one-way southbound street, which was proposed as a mitigation measure in the 1996 Plan and is necessary to mitigate the significant impacts of the Proposed Project, restriping Loring Avenue as two receiving lanes, and by modifying the signal phasing and timing plans to accommodate an eastbound-left/westbound-left lead phase in place of the existing eastbound lead phase. All traffic movements from northbound Loring Avenue have been assumed to divert through the intersections of Fountain Avenue and Stanley Avenue and Linden Boulevard and Euclid Avenue and are included in the mitigated condition level of service analyses for those intersections. The diverted traffic would cause significant impacts at the intersection of Linden Boulevard and Euclid Avenue during the three weekday peak hours, which are discussed below.

### *LINDEN BOULEVARD AND EUCLID AVENUE*

In the weekday peak hours, northbound Euclid Avenue would experience significant impacts because of the increase in volume from the Loring Avenue diversions. The impacts could be mitigated by modifying the signal timing and by prohibiting curbside parking 120 feet upstream of the northbound Euclid Avenue approach in the AM and PM peak periods to reduce friction from parking maneuvers. Up to six on-street parking spaces would be lost during these two peak periods.

### *LINDEN BOULEVARD AND PENNSYLVANIA AVENUE*

The proposed development would create unmitigatable impacts during the weekday midday, Saturday midday, and Saturday PM peak traffic analysis hours at this heavily trafficked location that already has several traffic movements operating at LOS E or F conditions even under existing and No Build conditions. In the weekday AM and PM peak hours, it would be possible to partially mitigate significant impacts. Traffic improvements that would achieve partial mitigation include: 1) restriping the northbound Pennsylvania Avenue approach as one 12.5-foot-wide exclusive left turn lane, two 11-foot-wide through lanes and one 10-foot-wide exclusive right turn lane; 2) removing curbside parking along the northbound Pennsylvania Avenue receiving side to allow for restriping; 3) shifting the southbound Pennsylvania Avenue approach centerline three feet to the east tapered 150 feet upstream of the intersection, maintaining the 9.5-foot-wide exclusive left turn lane, and restriping the other lanes to provide one 11-foot-wide through lane, one 12-foot-wide shared through-right lane, and two northbound receiving lanes (both 11 feet in width); 4) reducing the width of the eastbound Linden Boulevard service road approach median from seven feet to five feet, maintaining the 11.5-foot-wide exclusive left turn lane and restriping the other lanes to provide three 12-foot-wide through lanes; and 5) reducing the width of the westbound Linden Boulevard service road approach median from seven feet to five feet, maintaining the 10-foot-wide exclusive left turn lane and restriping the other lanes to provide three 12-foot-wide through lanes.

### *LINDEN BOULEVARD AND ROCKAWAY AVENUE*

Significant traffic impacts would be partially mitigatable during the weekday midday peak hour. Significant traffic impacts during all other peak hours could be mitigated by: 1) shifting the Rockaway Avenue southbound approach centerline two feet to the east, tapered 60 feet upstream of the intersection, and restriping the southbound approach as one 10-foot-wide exclusive right turn lane and one 12-foot-wide shared left-through lane, and reducing the northbound receiving lane width from 20 feet to 18 feet; 2) shifting the Rockaway Avenue northbound approach centerline two



feet to the west, tapered 60 feet upstream of the intersection, and restriping the northbound approach as one 12-foot-wide exclusive right turn lane and one 10-foot-wide shared left-through lane, and reducing the southbound receiving lane width from 20 feet to 18 feet. Signal timing modifications that would provide additional green time for north/south traffic movements and for eastbound and westbound left turns would also be necessary to fully mitigate all significant impacts.

#### *LINDEN BOULEVARD AND ROCKAWAY PARKWAY*

This intersection would not be significantly impacted during the weekday AM peak hour. Significant traffic impacts during all other peak hours would be mitigated by signal timing modifications that would provide additional green time for north/south traffic movements.

#### *LINDEN BOULEVARD AND REMSEN AVENUE AND KINGS HIGHWAY*

Several physical improvements would be needed to fully mitigate projected significant traffic impacts for all peak hours, except the Saturday PM peak hour during which it would be only partially mitigated. These physical changes include: 1) reducing the width of the northbound Kings Highway service road approach median from seven feet to five feet, and restriping the northbound service road approach to provide one 10-foot-wide through lane and maintaining the existing 10-foot-wide shared through-right lane; 2) reducing the width of the eastbound Linden Boulevard approach painted median from seven feet to two feet, restriping the approach to provide one 13-foot-wide through lane and one 14-foot-wide shared through-right lane, and restriping the westbound receiving side to provide two 10-foot-wide lanes; and 3) shifting the westbound Linden Boulevard mainline median two feet to the south, and reducing the width of this median from four feet to two feet, restriping the westbound mainline approach (for through traffic) as one 12-foot-wide shared left-through lane and one 14-foot-wide through lane, and restriping the eastbound mainline receiving side as two 11-foot-wide lanes.

#### *PENNSYLVANIA AVENUE AND LIBERTY AVENUE*

Geometric improvements needed to mitigate significant traffic impacts include: 1) removing curbside parking along the northbound Pennsylvania Avenue approach and receiving side 120 feet upstream and downstream of the intersection, resulting in the loss of up to 9 parking spaces; 2) restriping the northbound approach as one 14-foot-wide shared left-through lane, one 14-foot-wide shared through-right lane; 3) restriping the southbound approach as one 11-foot-wide shared left-through lane and one 18-foot-wide shared through-right lane; 4) restriping the northbound receiving as one 14-foot-wide and one 15-foot-wide receiving lane; 5) restriping the southbound receiving as one 11-foot-wide and one 19-foot-wide receiving lane. These improvements would be needed to mitigate significant traffic impacts in the weekday AM, midday, Saturday midday, and Saturday PM peak hours but would be in place for all conditions.

#### *PENNSYLVANIA AVENUE AND ATLANTIC AVENUE*

This intersection would experience unmitigatable significant impacts during all five time periods since it is a heavily trafficked location that already has several traffic movements operating at LOS E or F conditions even under existing and No Build conditions. Standard traffic engineering measures would not successfully mitigate the significant impacts at this location.

### 2013 MITIGATION

Geometric modifications used to mitigate the 2011 Build condition are carried through to mitigate the 2013 Build condition. Some locations required further geometric modifications or signal timing adjustments as described below.

#### ERSKINE STREET AND BELT PARKWAY EASTBOUND RAMPS

The intersection of Erskine Street and the Belt Parkway eastbound ramps would be significantly impacted during the Saturday PM peak hour and would be fully mitigated by modifying the signal timings.

#### ERSKINE STREET AND BELT PARKWAY WESTBOUND RAMPS

The mitigation measures proposed for the 2011 Build condition are sufficient to mitigate the 2013 Build condition.

#### ERSKINE STREET AND GATEWAY DRIVE

The mitigation measures needed for the 2011 Build condition are sufficient to mitigate the impacts during the weekday AM, PM and Saturday midday peak hours during the 2013 Build condition, but significant impacts in the Saturday PM peak period would be unmitigatable.

#### ERSKINE STREET AND GATEWAY PLAZA

The mitigation measures proposed for the 2011 Build condition are sufficient to mitigate the 2013 Build condition.

#### GATEWAY DRIVE AND DRIVEWAY TO BOULDER CREEK

The intersection of Gateway Drive and the driveway to the Boulder Creek restaurant would be significantly impacted during the Saturday PM peak hour and would be fully mitigated by modifying the signal timings.

#### FOUNTAIN AVENUE AND FLATLANDS AVENUE

The mitigation measures proposed for the 2011 Build condition are sufficient to mitigate the 2013 Build condition.

#### FOUNTAIN AVENUE AND LIBERTY AVENUE

The mitigation measures proposed for the 2011 Build condition are sufficient to mitigate the 2013 Build condition.

#### FLATLANDS AVENUE AND JEROME STREET

The intersection of Flatlands Avenue and Jerome Street would be significantly impacted during the Saturday PM peak hour and would be fully mitigated by modifying the signal timings.

#### FLATLANDS AVENUE AND VAN SICLEN AVENUE

The mitigation measures proposed for the 2011 Build condition are sufficient to mitigate the 2013 Build condition.

*FLATLANDS AVENUE AND PENNSYLVANIA AVENUE*

This intersection would experience unmitigatable significant impacts during the weekday AM, PM, Saturday midday, and Saturday PM peak hours in the 2013 Build condition. Standard traffic engineering measures would partially mitigate the significant impacts for the weekday midday peak hour. The mitigation measures proposed for the 2011 Build condition are also proposed for the 2013 Build condition.

*FLATLANDS AVENUE AND ROCKAWAY PARKWAY*

All physical changes described as part of the mitigation for the 2011 Build condition would be necessary under the 2013 Build condition. In addition, signal timing plans would need to be readjusted for the weekday PM, Saturday midday, and Saturday PM peak hours. Because of the intersection's limited capacity, standard traffic engineering measures would only partially mitigate the intersection in the Saturday midday and PM peak hours, and the intersection would be unmitigatable in the weekday AM peak hour.

*FLATLANDS AVENUE AND REMSEN AVENUE*

The mitigation measures proposed for the 2011 Build condition are sufficient to mitigate the 2013 Build condition.

*LINDEN BOULEVARD AND FOUNTAIN AVENUE/LORING AVENUE*

In addition to the conversion of Loring Avenue to a one-way southbound street proposed for the 2011 Build condition, several other geometric changes would be necessary to fully mitigate all significant impacts. Loring Avenue would need to be restriped as two receiving lanes. The Linden Boulevard eastbound mainline approach would need to be restriped as one 13-foot-wide exclusive left turn lane and three 10-foot-wide through lanes. The westbound mainline approach would need to be restriped as one 14-foot-wide exclusive left turn lane and three 10-foot-wide through lanes. Also, curbside parking would need to be prohibited 250 feet and 120 feet upstream of the intersection along the northbound and southbound Fountain Avenue approaches, respectively, to reduce friction from parking maneuvers in the weekday AM, PM, Saturday midday, and Saturday PM peak periods. Up to eight on-street parking spaces would be lost at this intersection during these three peak periods. In addition, it would be necessary to modify the signal phasing and timing plans for all peak periods analyzed to accommodate a westbound lead phase in place of the existing eastbound lead phase.

*LINDEN BOULEVARD AND EUCLID AVENUE*

The intersection of Linden Boulevard and Euclid Avenue would not experience any significant traffic impacts in the 2013 Build condition; therefore, no mitigation measures are necessary.

*LINDEN BOULEVARD AND ATKINS AVENUE*

Significant traffic impacts for the weekday AM peak hour could be mitigated by prohibiting curbside parking on the east and west side of the southbound Atkins Avenue approach 120 feet from the intersection (which would result in the loss of up to 10 parking spaces), and by signal timing modifications that would provide additional green time for southbound traffic movements.

### *LINDEN BOULEVARD AND PENNSYLVANIA AVENUE*

The geometric improvements for the 2013 Build condition are the same as those used to partially mitigate significant impacts during the 2011 Build condition. Although these measures would only partially mitigate the significant impacts in the weekday midday peak hour, the overall delays of the intersection would improve for all peak hour conditions.

### *LINDEN BOULEVARD AND ROCKAWAY AVENUE*

The geometric changes proposed for the 2011 Build condition would be sufficient to mitigate the impacts during the weekday PM peak hour, and further adjustments to the signal timing plans in addition to the geometric measures would be sufficient to mitigate the impacts during the weekday midday, Saturday midday, and Saturday PM peak hours in the 2013 Build condition.

### *LINDEN BOULEVARD AND ROCKAWAY PARKWAY*

No significant impacts would occur at the intersection of Linden Boulevard and Rockaway Parkway in the weekday AM peak hour. Similar to the 2011 Build condition, significant traffic impacts during the weekday midday, PM, Saturday midday, and Saturday PM peak hours could be mitigated by signal timing modifications that would provide additional green time for north/south traffic movements.

### *LINDEN BOULEVARD AND REMSEN AVENUE AND KINGS HIGHWAY*

All mitigation measures proposed for the 2011 Build condition are sufficient to mitigate the 2013 Build condition.

### *PENNSYLVANIA AVENUE AND LIBERTY AVENUE*

The mitigation measures proposed for the 2011 Build condition are sufficient to mitigate the 2013 Build condition.

### *PENNSYLVANIA AVENUE AND ATLANTIC AVENUE*

As previously described, this intersection would experience unmitigatable significant impacts during all five time periods since it is a heavily trafficked location that already has several traffic movements operating at LOS E or F conditions even under existing and No Build conditions. Standard traffic engineering measures would not successfully mitigate the significant impacts at this location.

## **AIR QUALITY ANALYSIS OF TRAFFIC MITIGATION MEASURES**

Since the proposed traffic mitigation measures described above would alter traffic conditions when compared to the future with the Proposed Project without mitigation, the localized air quality impacts with mitigation were modeled for the affected intersections. The results of this modeling analysis (performed in accordance with methodologies described in Chapter 18, “Air Quality”) indicated that carbon monoxide and particulate matter concentrations would not affect the conclusions in Chapter 18 (see Tables below for modeled concentrations). Therefore, it can be stated that no significant air quality impacts would occur as a result of the proposed traffic mitigation measures.

**Table 22-2**

**2011 Build with Mitigation Maximum Predicted 8-Hour CO Concentrations  
(parts per million)**

Site	Location	Time Period	Project Build 8-Hour Concentration (ppm)	Not-To-Exceed <i>De minimis</i> Criteria (ppm)
1	Flatlands Avenue and Pennsylvania Avenue	Weekday MD	4.2	6.3
		Weekday PM	4.4	6.5
		Saturday MD	4.0	6.3
		Saturday PM	4.2	6.4
2	Flatlands Avenue and Jerome Street	Weekday MD	3.7	6.3
		Weekday PM	3.7	6.3
		Saturday MD	4.0	6.4
		Saturday PM	4.2	6.4
3	Gateway Drive and Erskine Street	Weekday MD	3.5	6.0
		Weekday PM	3.7	6.2
		Saturday MD	3.9	6.2
		Saturday PM	4.4	6.3
<b>Notes:</b> This table is new to the FEIS. 8-hour CO standard is 9 ppm. An adjusted ambient background concentration of 2.0 ppm is included in the project Build values presented above.				

**Table 22-3**

**2011 Build with Mitigation Maximum Predicted  
24-Hour Average PM<sub>10</sub> Concentration**

Receptor Site	Location	24-Hour Concentration ( $\mu\text{g}/\text{m}^3$ ) <sup>1</sup>
1	Flatlands Avenue and Pennsylvania Avenue	70.52
<b>Notes:</b> This table is new to the FEIS. <sup>1</sup> 24-hour standard is 150 $\mu\text{g}/\text{m}^3$ . An ambient background concentration of 60 ppm is included in the No Build values presented above.		

**Table 22-4**

**2011 Build with Mitigation Maximum Predicted  
24-Hour Average PM<sub>2.5</sub> Concentrations**

Receptor Site	Location	24-Hour Concentration ( $\mu\text{g}/\text{m}^3$ )		
		No Build	Build	Increment
1	Flatlands Avenue and Pennsylvania Avenue	0.89	1.06	0.18
<b>Notes:</b> This table is new to the FEIS. The PM <sub>2.5</sub> interim guidance criterion for the 24 hour averaging period is 5 $\mu\text{g}/\text{m}^3$ .				

**Table 22-5**

**2011 Build with Mitigation Maximum Predicted  
Annual Average PM<sub>2.5</sub> Concentrations**

Receptor Site	Location	Annual Concentration ( $\mu\text{g}/\text{m}^3$ )		
		No Build	Build	Increment
1	Flatlands Avenue and Pennsylvania Avenue	0.13	0.15	0.02
<b>Notes:</b> This table is new to the FEIS. The PM <sub>2.5</sub> interim guidance criterion for the annual (neighborhood scale) analysis is 0.1 $\mu\text{g}/\text{m}^3$ .				

**Table 22-6**

**2013 Build with Mitigation Maximum Predicted 8-Hour CO Concentrations  
(parts per million)**

Site	Location	Time Period	Project Build 8-Hour Concentration (ppm)	Not-To-Exceed <i>De minimis</i> Criteria (ppm)
1	Flatlands Avenue and Pennsylvania Avenue	Weekday MD	4.0	6.3
		Weekday PM	4.4	6.6
		Saturday MD	4.1	6.3
		Saturday PM	4.4	6.5
2	Flatlands Avenue and Jerome Street	Weekday MD	3.5	6.4
		Weekday PM	3.6	6.6
		Saturday MD	3.9	6.7
		Saturday PM	4.2	6.7
3	Gateway Drive and Erskine Street	Weekday MD	3.5	6.1
		Weekday PM	3.8	6.2
		Saturday MD	4.1	6.2
		Saturday PM	4.4	6.3
<b>Notes:</b> This table is new to the FEIS. 8-hour CO standard is 9 ppm. An adjusted ambient background concentration of 2.0 ppm is included in the project Build values presented above.				

**Table 22-7**

**2013 Build with Mitigation Maximum Predicted 24-Hour  
Average PM<sub>10</sub> Concentrations**

Receptor Site	Location	24-Hour Concentration (µg/m <sup>3</sup> ) <sup>1</sup>
1	Flatlands Avenue and Pennsylvania Avenue	71.39
<b>Notes:</b> This table is new to the FEIS. <sup>1</sup> 24-hour standard is 150 µg/m <sup>3</sup> . An ambient background concentration of 60 ppm is included in the No Build values presented here.		

**Table 22-8**

**2013 Build with Mitigation Maximum Predicted  
24-Hour Average PM<sub>2.5</sub> Concentrations**

Receptor Site	Location	24-Hour Concentration (µg/m <sup>3</sup> )		
		No Build	Build	Increment
1	Flatlands Avenue and Pennsylvania Avenue	0.89	1.05	0.16
<b>Notes:</b> This table is new to the FEIS. The PM <sub>2.5</sub> interim guidance criterion for the 24 hour averaging period is 5 µg/m <sup>3</sup> .				

**Table 22-9**

**2013 Build with Mitigation Maximum Predicted  
Annual Average PM<sub>2.5</sub> Concentrations**

Receptor Site	Location	Annual Concentration (µg/m <sup>3</sup> )		
		No Build	Build	Increment
1	Flatlands Avenue and Pennsylvania Avenue	0.13	0.15	0.02
<b>Notes:</b> This table is new to the FEIS. The PM <sub>2.5</sub> interim guidance criterion for the annual (neighborhood scale) analysis is 0.1 µg/m <sup>3</sup> .				

## D. TRANSIT

New York City Transit (NYCT) defines a significant adverse impact for bus line-haul if project-generated trips would result in demand that would exceed capacity at the route's peak load point. It was assumed that NYCT would add buses in order to satisfy No Build demand for bus service. Based on these criteria, the Proposed Project would result in the following impacts on bus operations in the 2011 Build condition.

- The eastbound B6 Limited in the PM Peak hour;
- The westbound B6 Limited in the AM and PM peak hour;
- The northbound B13 in the AM peak hour;
- The southbound B13 in the PM peak hour;
- The northbound B83 in the AM peak hour;

The Proposed Project also would result in the following impacts on bus operations in the 2013 Build condition.

- The eastbound and westbound B6 Limited in the AM peak hour;
- The eastbound and westbound B6 Limited in the PM Peak hour;
- The northbound and southbound B13 in the AM peak hour;
- The northbound and southbound B13 in the PM peak hour;
- The northbound and southbound B83 in the AM peak hour;
- The northbound B83 in the PM peak hour;
- The northbound Q8 in the AM peak hour; and
- The southbound Q8 in the PM peak hour.

As shown in Table 22-10, these impacts would be fully mitigated with increased peak hour service on these routes. In 2011, the B6 Limited would require 4 additional westbound runs in the AM peak hour and 2 additional eastbound and westbound runs in the PM peak hour. Impacts on the B13 route would be fully mitigated with the addition of 2 northbound runs in the AM peak hour and 3 southbound runs in the PM peak hour. Impacts on the B83 route would be fully mitigated with the addition of 2 northbound runs in the AM peak hour.

In 2013, the B6 Limited would require 1 additional eastbound run and 6 additional westbound runs in the AM peak hour and 5 additional eastbound runs and 4 additional westbound runs in the PM peak hour. Impacts on the B13 route would require 4 additional northbound and 2 additional southbound runs in the AM peak hour and 1 additional northbound and 5 additional southbound runs in the PM peak hour. Impacts on the B83 route would be fully mitigated with the addition of 3 northbound and 2 southbound runs in the AM peak hour and 1 northbound run in the PM peak hour. Impacts on the Q8 route would be fully mitigated with the addition of 1 northbound run in the AM peak hour and 1 southbound run in the PM peak hour.

Implementation of these bus service improvements would require the approval of NYCT. Coordination would be undertaken with NYCT to implement these proposed mitigation measures.

**Table 22-10**

**2011 and 2013 Build and Build with Mitigation Conditions: Bus Line Haul at NYCT**  
**Maximum Load Points**

Analysis Year	Route	Peak Period	Direction	Build without Mitigation		Build with Mitigation		
				Buses Per Hour	Passengers per Bus	Buses per Hour	Passengers per Bus	Additional Buses
2011	B6 LTD	AM	Eastbound	9	40	NA	NA	NA
			Westbound	17	(65)	21	53	4
		PM	Eastbound	13	(63)	15	54	2
			Westbound	8	(62)	10	50	2
	B13	AM	Northbound	7	(65)	9	51	2
			Southbound	4	52	NA	NA	NA
		PM	Northbound	5	49	NA	NA	NA
			Southbound	6	(74)	9	49	3
	B83	AM	Northbound	11	(61)	13	52	2
			Southbound	6	47	NA	NA	NA
		PM	Northbound	6	46	NA	NA	NA
			Southbound	14	48	NA	NA	NA
2013	B6 LTD	AM	Eastbound	12	(56)	13	52	1
			Westbound	19	(71)	25	54	6
		PM	Eastbound	16	(69)	21	53	5
			Westbound	10	(72)	14	51	4
	B13	AM	Northbound	11	(73)	15	54	4
			Southbound	7	(66)	9	51	2
		PM	Northbound	6	(63)	7	54	1
			Southbound	10	(81)	15	54	5
	B83	AM	Northbound	13	(66)	16	54	3
			Southbound	9	(64)	11	52	2
		PM	Northbound	6	(56)	7	48	1
			Southbound	14	54	NA	NA	NA
	Q8	AM	Northbound	6	(59)	7	51	1
			Southbound	5	34	NA	NA	NA
		PM	Northbound	5	42	NA	NA	NA
			Southbound	6	(58)	7	49	1

**Note:** The B6 Local service does not operate in the vicinity of the Project Site. AP = average passengers per bus; maximum load ridership data provided by NYCT, March 2006. (#) = exceeds NYCT guideline capacity; denotes significant adverse impact

A component of the Proposed Project is a proposed bus layover facility, to be located in the parking area of the shopping center on the western side of the Project Site, adjacent to Gateway Drive. The facility would provide space for up to six buses to layover concurrently, and would include a canopy to shelter bus passengers while loading and unloading. Upon completion of the bus layover facility, bus routes that currently stop offsite or near the periphery of the site would be relocated to serve the Project Site directly.

## E. NOISE

The Proposed Project would place sensitive land uses (receptors) in areas with relatively high levels of ambient noise, which would result in significant adverse noise impacts. The *CEQR Technical Manual* recommends a maximum interior noise environment of 50 dBA L<sub>10(1)</sub> for commercial uses. For residential, day care, schools, and similar noise-sensitive uses, the *CEQR Technical Manual* recommends a maximum interior noise environment of 45 dBA L<sub>10(1)</sub>. As shown in Table 22-11, the highest level of attenuation required for the Proposed Project's



commercial uses would be 25 dBA, and the level of attenuation for residential and community facility uses would range from 20 to 35 dBA. With respect to commercial uses, 25 dBA of window-wall attenuation is typically provided as part of standard construction materials.

**Table 22-11**

**Minimum Building Attenuation Required to Comply with CEQR**

Parcel	Proposed Land Use	Governing Noise Site	L <sub>10(1)</sub> (dBA)	Required Building Attenuation (dBA)
3a	Residential	7	65.8	25
3b	Residential	4	61.5	20
3c	Residential	4	61.5	20
3d	Residential	4	61.5	20
3e	Residential	4	61.5	20
3f	Residential	3	78.0	35
4 a/b	Residential	3	78.0	35
6a	Residential	4	61.5	20
6b	Residential/Commercial	2	68.1	25
7a	Residential	4	61.5	20
7b	Residential/Commercial	2	68.1	25
7c	Residential	4	61.5	20
8a	Residential	7	65.8	25
8b	Residential	4	61.5	20
8c	Residential	4	61.5	20
8d	Residential	4	61.5	20
8e	Residential	7	65.8	30*
8f	Residential	4	61.5	30*
10	Residential	4	61.5	30*
12a	Residential	4	61.5	20
12b	Residential/Commercial	2	68.1	25
12c	Residential	4	61.5	20
12d	Residential/Commercial	2	68.1	30*
12e	Residential	4	61.5	20
14a	School	6	71.9	30
14b	Residential/Commercial	4	61.5	20
14c	Residential	2	68.1	25
15	Residential	6	71.9	30
16a	Residential/Commercial	4	61.5	20
16b	Residential	4	61.5	20
16c	Residential	2	68.1	25
18a	Residential	1	73.5	30
18b	Residential	1	73.5	30
19a	Residential	4	61.5	20
19b	Residential/Commercial	2	68.1	25
19c	Residential	4	61.5	20
20a	Residential/Commercial	2	68.1	30*
20b	Residential	4	61.5	30*
21	Residential	4	61.5	20
22a	Residential	4	61.5	20
22b	Residential	4	61.5	20
24	Residential	4	61.5	30*
26a	Day Care	1	73.5	30
27	Residential	4	61.5	30*
28	Residential	1	73.5	30*
29/30	Residential	5	67.6	25
31/32	Residential	5	67.6	25
33	Community/Public Facility	5	67.6	25
<b>Note:</b> *Parcels along the proposed parking lot would be provided with 30 dBA attenuation to account for parking lot operational noise.				

Window-wall attenuation is required for the Proposed Project's residential, commercial, and community facility uses. Window-wall attenuation measures, including alternate means of ventilation, would be incorporated into the LDA between HPD and Gateway Center Properties Phase II, LLC and Nehemiah Housing Development Fund Co., Inc. to ensure that the required level of attenuation is provided. To achieve up to 25 dBA of building attenuation, double glazed windows with good sealing properties as well as an alternate means of ventilation such as well-sealed window air conditioning, would be provided. To achieve 30 dBA of building attenuation, double glazed windows with good sealing properties as well as alternate means of ventilation such as well sealed through-the-wall air conditioning, would be provided; and to achieve 35 dBA of building attenuation, double glazed windows with good sealing properties as well as alternate ventilation such as central air conditioning, would be provided.

The SCA is an Involved Agency and would be responsible for the design and construction of the school facility on Block 4449. Under the terms of its enabling legislation, the SCA must comply with the requirements of SEQRA. Therefore, the SCA would incorporate the necessary level of attenuation into the design of the school facility. The SCA would install double glazed windows with good sealing properties, and ventilation would be provided through ducted systems. These window-wall attenuation measures would achieve between 30 and 35 dBA of attenuation. \*