WORLD TRADE CENTER CAMPUS SECURITY PLAN

DRAFT
SCOPE OF WORK FOR AN ENVIRONMENTAL IMPACT STATEMENT

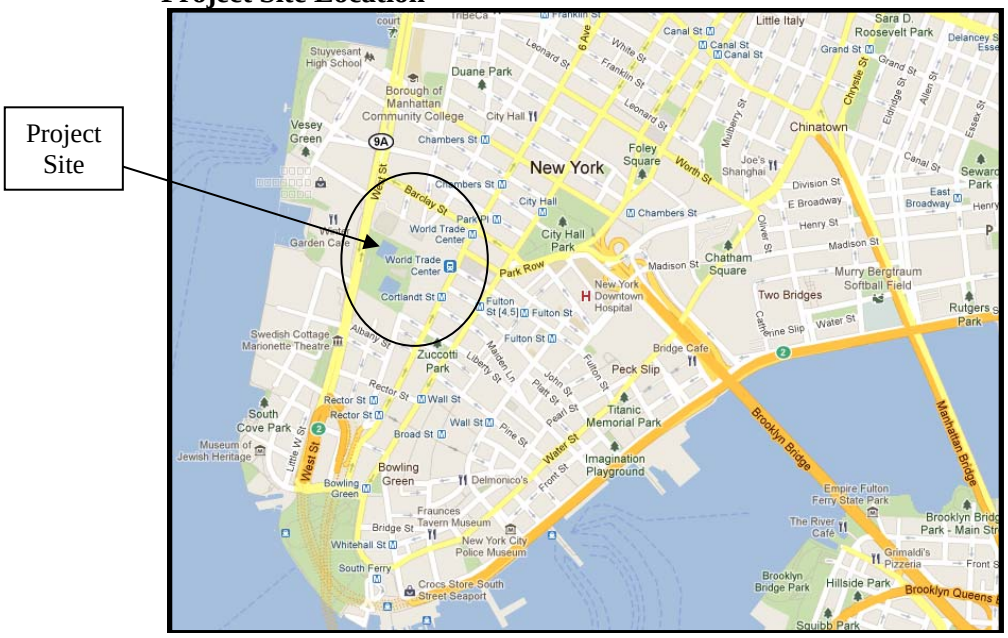
CEQR NO. 12NYP001M

February 2, 2012

A. INTRODUCTION

This draft scope of work outlines the technical areas to be analyzed in the preparation of an Environmental Impact Statement (EIS) for the World Trade Center (WTC) Campus Security Plan project. The Applicant, the New York City Police Department (NYPD), proposes to implement a comprehensive Campus Security Plan for the 16-acre WTC Site in Manhattan Community District 1 (the "Proposed Action") in collaboration with other New York City agencies, the Port Authority of New York and New Jersey (PANYNJ) and other WTC stakeholders. Figure 1 shows the site location.

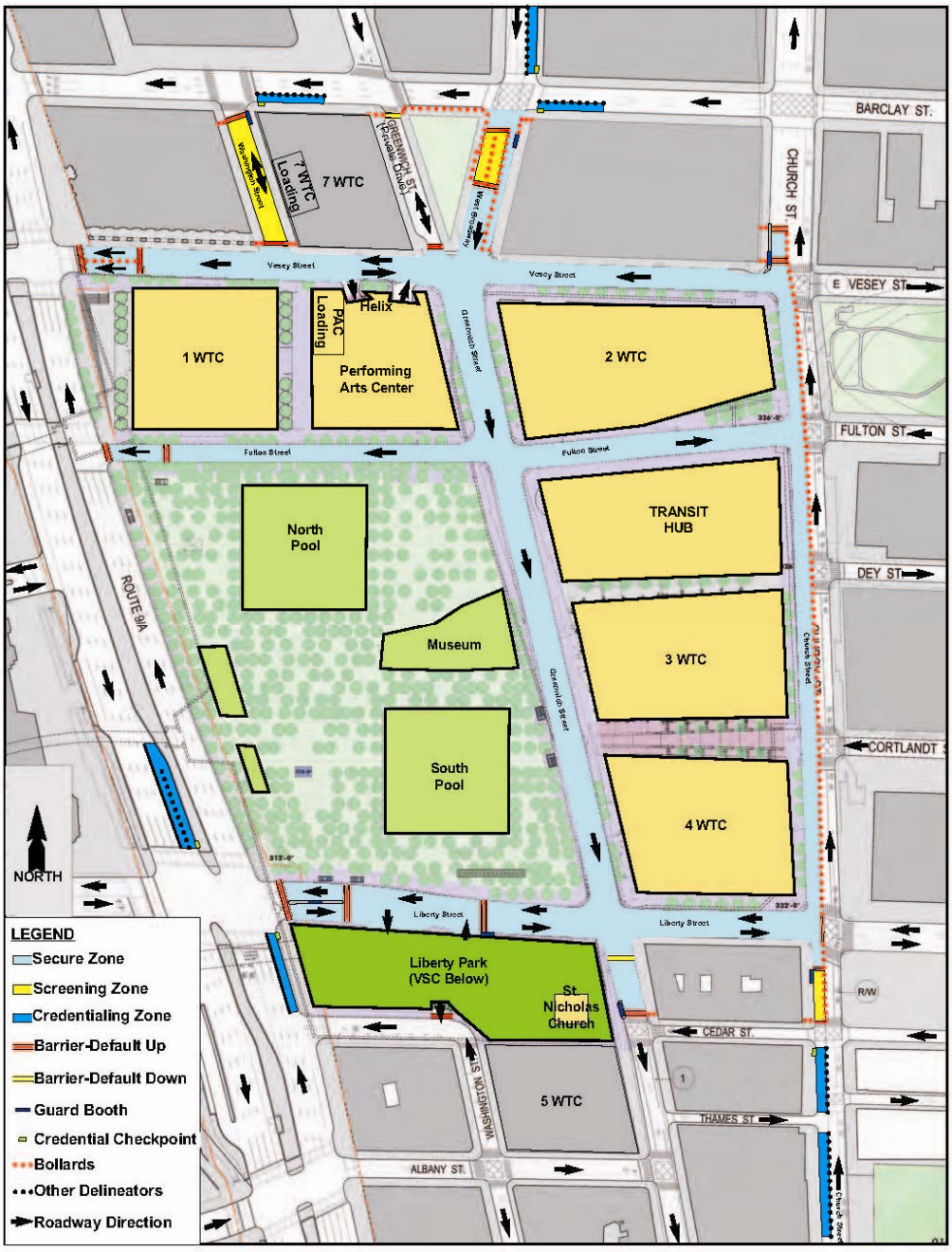
Figure 1:
Project Site Location



As shown in Figure 2 the Proposed Action is the implementation of a comprehensive perimeter vehicle security plan for the WTC Site (the "Campus Security Plan") to protect against vehicle-borne explosive devices while ensuring an open environment that is hospitable to remembrance, culture, and commerce. The Campus Security Plan bars unscreened vehicles from entering the Site and certain areas at the perimeter of the site and creates stand-off distances to guard against the risk of progressive collapse of buildings and other catastrophic damage to persons and property. A vehicle seeking to enter restricted areas would be subject to credentialing to determine whether entry is authorized and screening to ensure that the vehicle does not contain dangerous material. The creation of a Trusted Access Program (TAP), in which tenants, car services, taxis and delivery vans could enroll, is envisioned to expedite vehicle entry.

The Vehicular Security Center (VSC) planned in conjunction with the World Trade Center development controls access to the WTC Site's underground traffic network, loading docks and parking areas. All vehicles parking (including those for tenants or visitors) or making deliveries at the site would be processed and screened at the VSC. As it is anticipated that demand for on-site delivery, tour bus and private occupancy vehicle parking will be considerable, it is expected that a management strategy including scheduling of tour buses and truck deliveries will be developed to ensure orderly and efficient operations.

Figure 2:
Proposed Campus Security Plan



Source: NYPD

The Project Area includes all streets, sidewalks and buildings that would be directly affected by the installation of the Site's security infrastructure. This area is generally bounded by Barclay, West, Thames and Church streets. Under the proposed Campus Security Plan four vehicular access points are located at: Washington Street/Barclay Street; West Broadway/Barclay Street; Church Street/Liberty Street; and Liberty Street/West Street. The secure perimeter would consist of various types of vehicle interdiction devices, which would include static barriers (such as bollards or walls) and operable barriers to allow vehicle access, all under NYPD control. The NYPD has created conceptual plans for the design and location of the proposed security infrastructure, which is discussed in more detail in Section C, below.

B. REQUIRED APPROVALS AND REVIEW PROCEDURES

The Proposed Action is subject to review under the City Environmental Quality Review (CEQR) process because it has the potential to result in adverse environmental impacts, and the NYPD will be the lead agency. The EIS will include review and analysis of all relevant impact categories identified in the *CEQR Technical Manual.* The EIS will contain a description and analysis of the Proposed Action and its environmental setting; the environmental impacts of the Proposed Action, including its short and long term effects, and typical associated environmental effects; identification of any significant adverse environmental effects that can be avoided through incorporation of corrective measures; a discussion of alternatives to the Proposed Action; the identification of any irreversible and irretrievable commitments of resources that would be involved in the Proposed Action should it be implemented; and a description of any necessary mitigation measures proposed to minimize significant adverse environmental impacts.

Additionally, the Proposed Action may require or involve, among others, the following agency notifications, actions, permits and/or approvals or expertise:

Federal

- Department of Homeland Security (DHS) / Federal Emergency Management Agency (FEMA) – possible funding for all or a portion of the proposed Campus Security Plan
- Advisory Council on Historic Preservation (ACHP) – review under Section 106 of the National Historic Preservation Act
- Federal Highway Administration (FHWA) – review of proposed changes within the West Street/Route 9A right of way
- Federal Transit Administration (FTA) – review of proposed changes within the West Street/Route 9A right of way

Bi-State

- Port Authority of New York and New Jersey (PANYNJ) – possible plan funding and/or implementation

State

- New York State Department of State (NYSDOS) – Coastal Zone Consistency determination for certain federal activities
- New York State Historic Preservation Office (SHPO)
- New York State Department of Transportation (SDOT)
- New York State Metropolitan Transportation Authority (MTA)

New York City

- New York City Mayor's Office of Environmental Coordination

- New York City Department of Transportation (NYCDOT) – review of proposed geometric changes, street direction changes, and security elements, as well as construction permits
- New York City Planning Commission acting as the New York City Coastal Commission – Coastal Zone Consistency review
- New York City Department of Environmental Projection

City Environmental Quality Review (CEQR) and Scoping

The Proposed Action requires environmental review under the City Environmental Quality Review (CEQR) procedures. An Environmental Assessment Statement (EAS) was completed on February 8, 2012. The NYPD, acting as lead agency, has determined that the Proposed Action requires the preparation of an EIS.

The CEQR scoping process is intended to focus the EIS on those issues that are most pertinent to the Proposed Action. The process at the same time allows other agencies and the public a voice in framing the scope of the EIS. This scoping document sets forth the analyses and methodologies which will be utilized to prepare the EIS. During the period for scoping, those interested in reviewing the draft scope may do so and give their comments to the lead agency. The public, involved and interested agencies, Manhattan Community Board 1, and elected officials, are all invited to comment on the draft scope, either in writing or orally, at a public scoping meeting to be held on **Wednesday, March 14, 2012** from **4:00 PM to 8:00 PM** at **the New York City Department of City Planning in Spector Hall**. City Planning is located at 22 Reade Street, New York, NY 10007. Comments received during the draft scope's public hearing, and written comments received up to 10 days [until **Monday, March 26, 2012**] after the hearing will be considered and incorporated as appropriate into a final scope of work. The lead agency will oversee preparation of a final EIS scope, which incorporates all relevant comments made on the draft scope and revises the extent or methodologies of the studies, as appropriate, in response to comments made during scoping. The draft EIS (DEIS) will be prepared in accordance with the final Scope of Work for an EIS.

Once the lead agency is satisfied that the DEIS is complete, the document will be made available for public review and comment. A public hearing will be held on the DEIS to afford all interested parties the opportunity to submit oral and written comments. The record will remain open for a minimum of 10 days after the public hearing to allow additional written comments on the DEIS. At the close of the public review period, a Final EIS (FEIS) will be prepared that will incorporate and respond to all substantive comments made on the DEIS, along with any revisions to the technical analysis necessary to respond to those comments. The FEIS will then be used by the decision makers to evaluate CEQR findings, which address project impacts and proposed mitigation measures, before deciding whether and how to proceed with the discretionary actions.

C. DESCRIPTION OF PROPOSED ACTION

Background and Existing Conditions

The Lower Manhattan Development Corporation (LMDC) issued a Master Plan for the redevelopment of the WTC Site (LMDC Master Plan) in September 2003 which included the September 11th Memorial, the PATH HUB, the Performing Arts Center (PAC), and commercial office towers. As the Lead Agency and responsible entity for the U.S. Department of Housing and Urban Development (HUD) and in cooperation with the PANYNJ, the LMDC prepared a Generic Environmental Impact Statement (GEIS) under the National Environmental Policy Act (NEPA), the New York State Environmental Quality Review Act

(SEQRA), and CEQR to examine a range of potential impacts stemming from the LMDC Master Plan. A Record of Decision and Findings Statement was adopted by LMDC in June, 2004.

As shown in Table 1, the development program contemplated under the LMDC Master Plan provided for the construction of a Memorial and a 50,000 square-foot Memorial Center, up to 10 million square feet of office space in five towers, up to 1.03 million square feet of retail space (including 30,000 sf of restaurant/café uses), a hotel with up to 800 rooms and up to 150,000 square feet of conference space, a 2,200-seat performance space, up to 240,000 square feet of cultural facilities, and an underground parking garage for office tenants with 1,200 to 1,400 parking spaces. Also present on the project site (but not included as part of the proposed project) would be a permanent WTC terminal for Port Authority Trans-Hudson (PATH) trains to New Jersey (the "Transit Hub").

Table 1
Comparison of Current WTC Development Program with 2004 FGEIS

Project Component	2004 FGEIS Program (2015 Build Year)	Current Estimated Program (As of November 2011)	Net Change
Office	10 million sf	8.5 million sf	(1.5 million sf)
Retail (including restaurant/café uses)	1.03 million sf	622,000 sf	(408,000 sf)
Hotel/Conference Space	800 rooms/150,000 sf	0 rooms/0 sf	(800 rooms/150,000 sf)
Memorial Center	50,000 sf	50,000 sf	0 sf
Performing Arts Center	2,200 seats	1,000 seats	(1,200 seats)
Cultural Facilities	240,000 sf	0 sf	(240,000 sf)
Parking Spaces	1,200-1,400 spaces	approx. 400	(approx. 800 – 1,000)

Notes:
1. Memorial included in both programs.
2. The total office square footage under the Current WTC Program heading reflects the removal of Tower 5 from the total. As described below, it is expected that Tower 5 would be developed after the 2019 analysis year for this project.

As shown in Table 1, a somewhat smaller development program is now contemplated for the WTC Site than was assessed in the 2004 FGEIS. This smaller program still includes the construction of a Memorial and a 50,000 square-foot Memorial Center, but the amount of office space has been reduced to 8.5 million square feet, retail space (including restaurant/café uses) has been reduced to 622,000 square feet, the performance space has been reduced to a 1,000-seat performing arts center, and there are expected to be up to 400 underground parking spaces for office-tenant autos and 80 for tour buses compared to 1,200 to 1,400 parking spaces under the original program. The program no longer includes a hotel component and 240,000 square feet of additional cultural facilities.

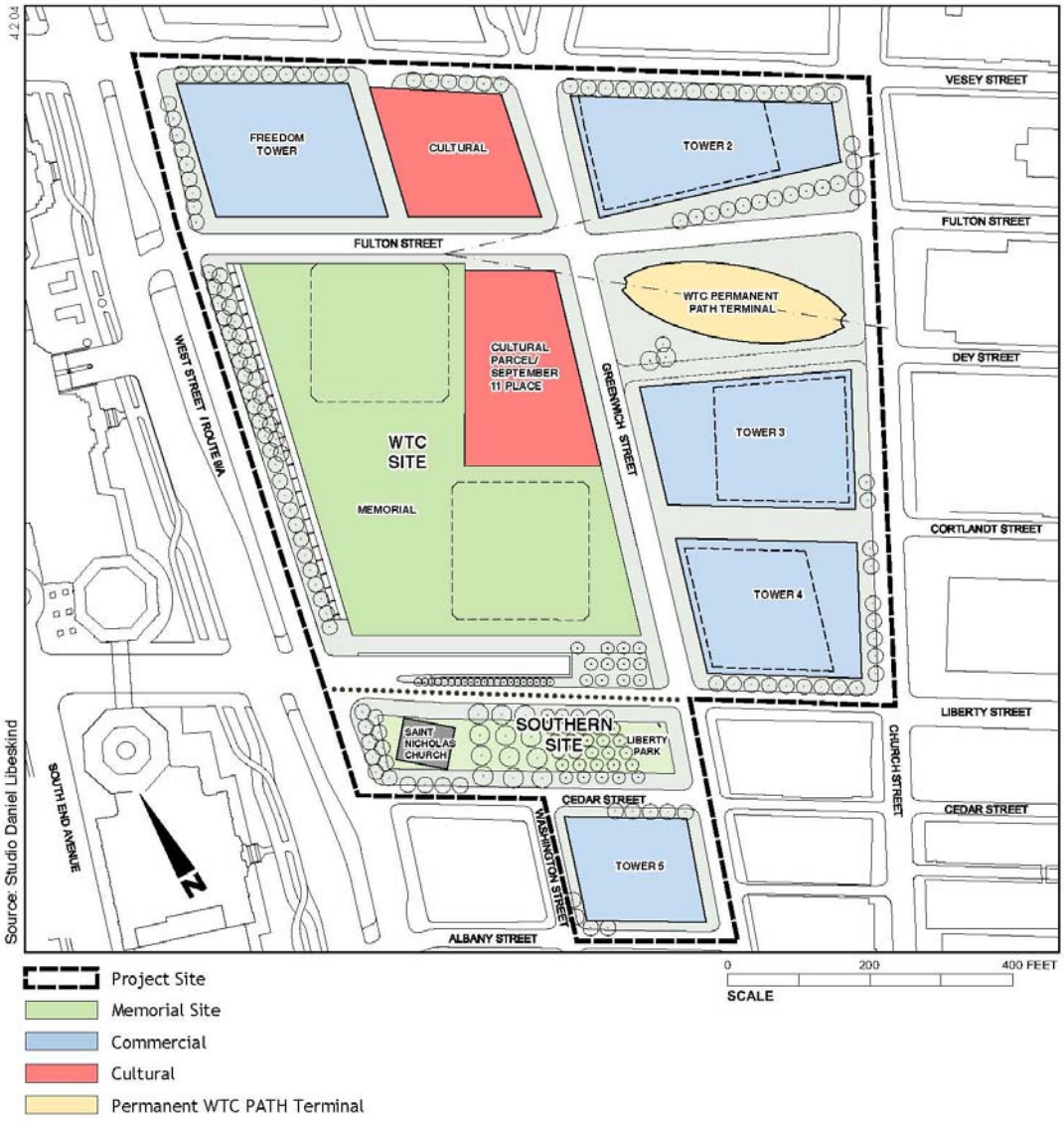
LMDC Master Plan and Envisioned Vehicular Circulation
The proposed street configuration under the LMDC Master Plan included extending Fulton Street east-west through the site and Greenwich Street north-south through the site. Within the site, Fulton Street would operate one-way westbound and Greenwich Street would operate one-way southbound, and it was stated in the FEIS that both streets might be restricted or closed to traffic from time to time. The Southern Site (the area that currently includes the planned VSC and WTC 5) would be reconfigured to open Cedar Street between Washington and West Streets and close Washington Street between Liberty and Cedar Streets. Cedar Street would operate one-way westbound, with all traffic northbound on Washington Street turning left onto Cedar Street to West Street/Route 9A.

As shown in Figure 3, the new sections of Fulton and Greenwich Streets would divide the project site into four quadrants. The Memorial, Visitor Center and Museum would occupy the southwest quadrant, while

the tallest of five proposed towers (Tower 1/the Freedom Tower) and the PAC would occupy the northwest quadrant. Three additional towers and the PATH HUB Terminal would occupy the two eastern quadrants while the fifth tower and the VSC would be located at the south end of the site.

Under the LMDC Master Plan, it was assumed that tour buses would stop to discharge and pick up passengers along the west side of Greenwich Street, and that these buses would park in a below-grade parking area which they would enter at the VSC via a ramp on Liberty Street east of West Street/Route 9A. Trucks en route to below-grade service levels on the WTC Site were also assumed to enter at the VSC via this ramp, while autos belonging to building tenants would be allowed to enter and exit the 1,200-space below-grade parking areas via a ramp on the south side of Vesey Street at Washington Street. All vehicle types could exit the on-site service and parking areas via the Liberty Street or Vesey Street ramps, or via an exit ramp onto the northbound West Street/Route 9A median.

Figure 3:
WTC Site Plan



Source: LMDC.
Available online:
http://www.renewnyc.com/content/pdfs/eis/04-12-2004/vol1/01%20Project%20Description.pdf

Subsequent planning actions on the site have resulted in updates to the building program and site plan. The most relevant and notable change for the purposes of the Proposed Action is the evolution of the plans for the VSC and on-site circulation. The amended plan relocated the entrance ramp to the VSC from the north side of Liberty Street to the south side of Liberty Street. Operation of Liberty Street was also modified from the originally proposed one-way eastbound flow to two-way operation between West Street/Route 9A and Church Street.

Current World Trade Center Site Development Program

As described above, the development program for the WTC Site has evolved since the 2004 FGEIS was released. As the PANYNJ and the City of New York worked with stakeholders and lessees to implement the approved plan for the WTC Site, certain adjustments and refinements were made based on aesthetics, commercial viability, cost, technical, security, and practical considerations.

Construction continues throughout the WTC Site and in the immediate vicinity of the Site. Construction of 7 World Trade Center (7 WTC) has been completed and the building is now fully leased. The National September 11th Memorial Plaza opened to the public in September 2011. The National September 11th Museum is expected to open in early 2013. Towers 1 and 4 are expected to be completed in 2013, with occupancy anticipated in 2014. At this time, no completion date has been established for Towers 2 and 3. Tower 2 is expected to be constructed to grade in 2012, with no current plans to continue the above-grade construction. Tower 3 is expected to be completed to the podium level in 2015 and would then be occupied by retail tenants. The PAC is expected to be completed and operational in 2019, and the PATH HUB is expected to be opened for use in 2015. For the purposes of this EIS, it is assumed that all on-site building programs (along with required infrastructure, including streets) will be completed and fully occupied by 2019.

As no building program or schedule has been established for Tower 5, this site will not be included in the analysis as a No-Action development. Tower 5 would likely be developed at an indefinite time in the future only after Tower 2 and Tower 3 are fully constructed, with substantial tenant occupancy or commitments.

Vehicular circulation studied under the 2004 FGEIS assumed free flow traffic throughout the entire WTC Site. However, current plans (as shown on the most recent version of the PANYNJ Master Plan (Version 10.0) include a secure zone around Tower 1, with controlled access along Fulton Street and Vesey Street west of Greenwich Street and at the intersection of Washington Street and Vesey Street. Additionally, as Greenwich Street from Barclay Street to Vesey Street is a privately owned street and not a mapped City street, it is expected that vehicular access will be limited for use by 7 World Trade Center tenant and visitor vehicles.

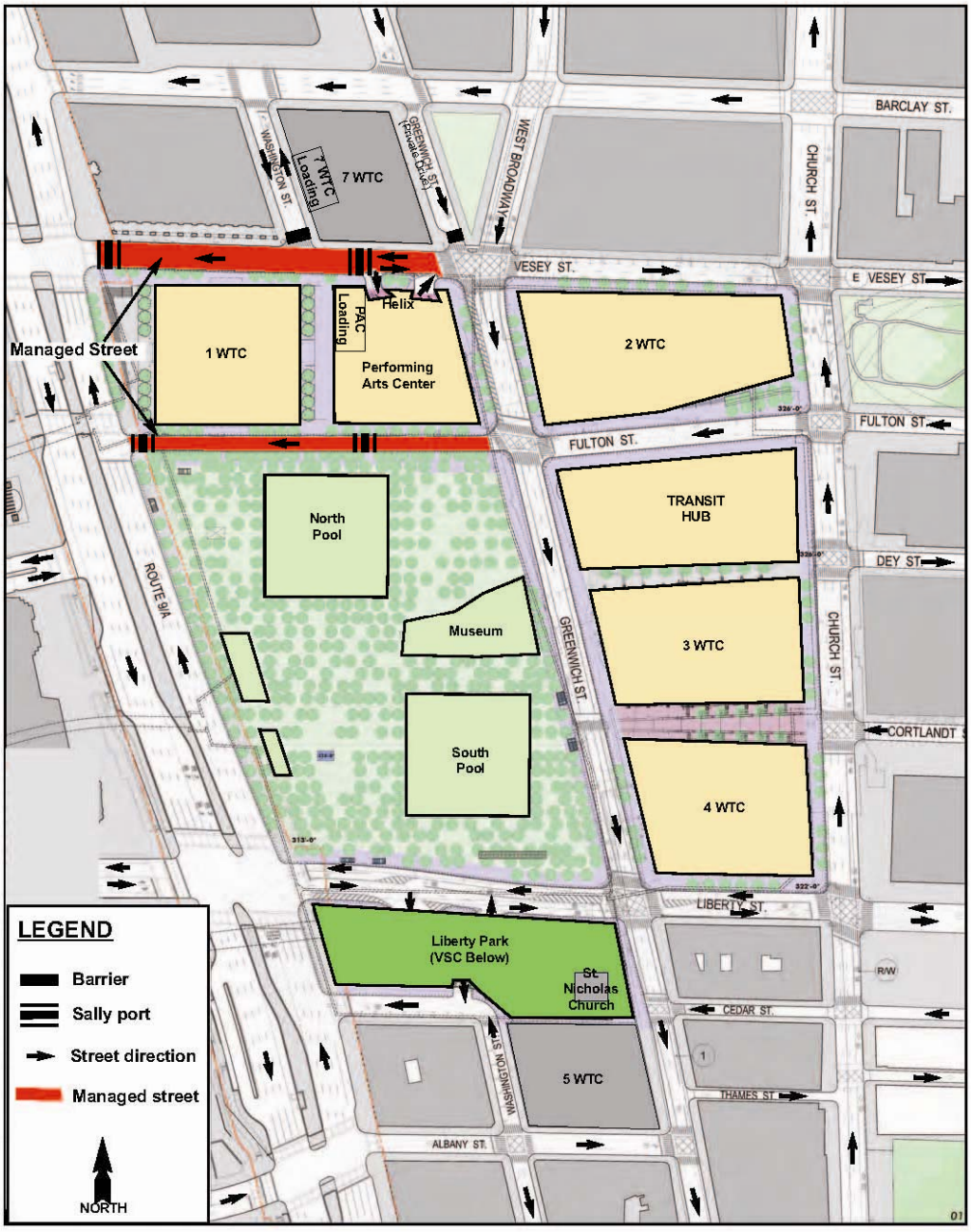
Traffic flow pursuant to the current PANYNJ Master Plan (Version 10.0) would be as shown in Figure 4 and as described below:

1. Washington Street from Barclay Street to Vesey Street would operate with two-way flow. Access control is proposed at the intersection with Vesey Street. Use of this street is expected to remain primarily for loading activities related to 7 WTC.

2. Greenwich Street from Barclay Street to Vesey Street would operate with flow one-way southbound. As indicated above, this section of Greenwich Street is not a mapped City street. Therefore, this segment of Greenwich Street is expected to operate as a private driveway for 7 WTC, primarily serving livery vehicles.

3. Greenwich Street from Vesey Street to Albany Street would operate with one-way southbound traffic flow. Tour bus loading and unloading could occur adjacent to the Memorial on the west side of Greenwich Street. No security controls are proposed for this section of Greenwich Street.

Figure 4:
PANYNJ Master Plan (Version 10.0)



Source: PANYNJ

4. West Broadway south of Barclay Street would continue to operate with one-way southbound traffic flow.

5. Vesey Street from Church Street to Greenwich Street would accommodate one-way eastbound traffic flow and would operate with no security controls. Between Greenwich and Washington

Streets, Vesey Street would operate as a two-way corridor. From Washington Street to West Street/Route 9A, Vesey Street would operate as a one-way westbound corridor. The PANYNJ Master Plan proposes to introduce a secure zone with controlled vehicle access along Vesey Street (Greenwich to West Streets) and Washington Street (at Vesey Street).

6. Fulton Street within the WTC Site would operate as a one-way westbound street. From Church Street to Greenwich Street, the traffic flow would operate without any security controls. West of Greenwich Street, the PANYNJ Master Plan proposes to introduce a secure zone with controlled vehicle access.

7. Liberty Street from Church Street to West Street/Route 9A would accommodate two-way traffic flow. Primary vehicular access to and from the VSC would be on Liberty Street.

Purpose and Need for the Proposed Action

On February 26, 1993 an explosive device was detonated in the underground public parking garage beneath the WTC. The attack resulted in several deaths and more than 1,000 injuries, along with hundreds of millions of dollars of damage. PANYNJ subsequently implemented an extensive upgrade plan, with a focus on life safety and security. Less than a decade later, on September 11, 2001, the WTC was again attacked, resulting in the loss of nearly 2,800 lives and the destruction of the entire WTC complex.

Now that the WTC Site is being rebuilt, new consideration is being given to increase on-site security. The proposed Campus Security Plan would protect against vehicle-borne explosive devices while ensuring an open environment that is hospitable to remembrance, culture, and commerce. The Campus Security Plan bars unscreened vehicles from entering the Site and certain areas at the perimeter of the site and creates stand-off distances to guard against the risk of progressive collapse of buildings and other catastrophic damage to persons and property. A vehicle seeking to enter restricted areas would be subject to credentialing to determine whether entry is authorized and screening to ensure that the vehicle does not contain dangerous material. The creation of a TAP, in which tenants, car services, taxis and delivery vans could enroll, is envisioned to expedite vehicle entry.

The Proposed Action was developed after careful consideration of the LMDC Master Plan and the subsequent design of the commercial towers planned for the WTC Site. The LMDC Master Plan included the National September 11th Memorial, the PATH HUB, the PAC, and commercial office towers (WTC towers 1 through 5).

The Proposed Action

The Proposed Action is a physical and operations security infrastructure overlay that would be incorporated into the WTC District streetscapes that are currently under construction. Primary features of the Proposed Action include entry/exit security checkpoints and a secure lane on Church Street between Cedar Street and Vesey Street.

As it is unlikely that the planned WTC street network would be completely open and accessible prior to the full build-out of the PAC, 2 World Trade Center and 3 World Trade Center, it is expected that the proposed Campus Security Plan could not be fully implemented prior to 2019. As such, 2019 has been selected as the analysis year for the environmental analyses in the EIS.

The Proposed Action would not alter the building program that is currently planned for the site. Instead, the intent of the Proposed Action is to manage vehicular traffic to and through the site. The proposed Campus Security Plan would create a secure perimeter around the WTC Site through a combination of security measures, including bollards and similar static barriers, as well as a system of operable vehicle

barriers. NYPD personnel would screen all vehicles entering the site in sally ports (secure, controlled entryways) using mechanical and manual inspection processes.

The Proposed Action would modify the vehicular access and traffic flow patterns considered in the 2004 WTC Memorial and Redevelopment Plan FGEIS. As shown in Figure 2, a secure zone is proposed to provide limited vehicular access on the following streets:

- Greenwich Street from Vesey Street to Cedar Street;
- West Broadway from Barclay Street to Vesey Street;
- Washington Street from Barclay Street to Vesey Street;
- Vesey Street from Church Street to West Street/Route 9A;
- Fulton Street from Church Street to West Street/Route 9A; and
- Liberty Street from Church Street to West Street/Route 9A.

Additionally, the Trinity Place/Church Street corridor[1] would be divided by a raised median with bollards, from Cedar Street to just north of Vesey Street. It is anticipated that to the east of the median the street would remain open to general traffic with two northbound moving lanes, while two additional moving lanes to the west of the median would be located within the security perimeter and would be accessible only to screened vehicles.

As indicated above, the most recent PANYNJ Master Plan intends to create a secure zone around 1 WTC by securing and restricting access to Vesey Street and Fulton Street between Greenwich Street and West Street/Route 9A. As such, these street segments would be managed streets irrespective of the Proposed Action. Additionally, it is expected that Greenwich Street from Barclay Street to Vesey Street would be limited for use by 7 WTC tenants only under No-Action conditions; therefore, this section of Greenwich Street would be a controlled access street irrespective of the Proposed Action.

All vehicles seeking access to the WTC Site would be subject to screening and vehicle operators would be required to provide credentials prior to being granted access to the interior of the WTC Site. Credentialing zones are proposed at the following locations:

- On West Broadway between Barclay Street and Park Place;
- On Barclay Street in the southern-most lane at the westbound approach to West Broadway;
- On Barclay Street in the southern-most lane at the westbound approach to Washington Street;
- On Church Street in the western-most lane at the northbound approach to Thames Street and Cedar Street;
- On West Street/Route 9A in the eastern-most lane at the northbound approach to Liberty Street; and
- On West Street/Route 9A in the two southbound left turn lanes at the southbound approach to Liberty Street.

The proposed security sequence for entry consists of three zones: approach zones, credentialing and authorization zones, and screening zones. Approach areas would vary in size, detail and security elements installed depending on the anticipated vehicle volumes and the roadway geometry leading to the security station. The main function of these areas would be to alert vehicles that they are approaching a secure zone and, where possible, to re-direct traffic that does not need to be credentialed.

Credentialing and authorization zones would vary in size by location. The primary function of these zones is to check credentials before allowing vehicles to enter the screening area.

[1] Trinity Place becomes Church Street north of Liberty Street.

Screening areas would include the visual and physical inspection of vehicles. The physical design of screening areas would vary slightly, depending on the anticipated primary users of each specific screening zone. For example, screening areas that would be expected to have high bus or delivery vehicle volumes would be sized to fit these vehicle types, with larger sally ports. Security booths at each sally port would house barrier controls, data systems and other equipment. They will be designed to meet these operational requirements while having the smallest possible footprint to minimize potential pedestrian conflicts.

Exit security stations would manage all traffic exiting the WTC Site. The dimensions of sally ports at exits would vary in size based on their location and the size of the primary vehicle type expected to use them.

Credentialed vehicles, including tour buses, black cars, and delivery vehicles, would be permitted access into the Site. All private vehicles with prior authorization to park on-site would access the VSC from the east or west via Liberty Street. It is anticipated that tour buses with passengers en route to the 9/11 Memorial would unload along the north curb of Liberty Street west of Greenwich Street, as well as along the west curb of Greenwich Street adjacent to the Memorial Center. There are likely to be several locations designated for loading tour buses, possibly including the east curb of West Street/Route 9A immediately north of Liberty Street. Parking is provided for buses below-grade on-site with access through the VSC. It is anticipated that all deliveries would be scheduled. Incoming delivery vehicles would be directed to the dedicated loading area for the appropriate building – through the VSC and below-grade road network, following additional screening.

For preliminary planning purposes it is assumed that 25 percent of for-hire vehicles (mostly black cars) would enter the WTC Site, while the remainder (mostly yellow cabs) would drop-off/pick-up on the periphery streets outside the security perimeter.

Construction of the Proposed Action may require the relocation of utilities in some areas. The appropriate agencies or utility companies would be contacted prior to construction. Areas of potential utility conflicts will be identified. Utilities in these areas would either be relocated or alternate designs would be proposed to avoid conflicts.

With or without the Proposed Action, it is unlikely that the planned WTC street network would be completely constructed and accessible prior to 2019. As such, 2019 has been selected as the analysis year for the environmental analyses in the EIS. It is anticipated that the security measures associated with the Proposed Action would be implemented in phases through 2019, based on the need to accommodate construction activities at the WTC Site, the progress of development and the security needs of the tenants as new buildings are completed and occupied. Prior to the installation of the permanent security measures, it is likely that some interim measures would be installed to provide security while construction of adjacent WTC buildings and on-site streets and infrastructure is on-going. The specific phasing of the proposed security measures would be determined once the future construction schedule for development at the WTC Site becomes more defined.

D. ANALYSIS FRAMEWORK

The Future Without the Proposed Action (No-Action Condition)

In the 2019 scenario without the Proposed Action (No-Action), it is anticipated that the WTC Site would be fully developed. As described above, Tower 5 is not expected to be developed during this timeframe. At this time Towers 2 and 3 are anticipated to be fully constructed and occupied before construction of Tower 5 commences. Further, no building program has been established for the Tower 5 site.

As shown in Figure 4, the current No-Action site plan for the WTC Site includes the development of a Vehicular Security Center on the south side of Liberty Street east of West Street/Route 9A. All autos and tour buses en route to below-grade parking at the WTC Site would undergo screening at this facility, as would trucks en route to below-grade loading areas for Towers 1 through 4. The entrance to the VSC would be located on the south side of Liberty Street, whereas the LMDC FGEIS contemplated an entrance to below-grade parking located on the north side of Liberty Street. All vehicles would exit onto Liberty Street, primarily westbound to West Street/Route 9A. While there would continue to be an entrance/exit ramp on Vesey Street (referred to as the "Helix"), current plans call for it to be used primarily for emergency access. There are expected to be a total of up to 400 parking spaces for autos and 80 spaces for tour buses located in below-grade facilities on the WTC Site.

As shown in Figure 4, under the current No-Action site plan, Greenwich Street would operate one-way southbound and Fulton Street would operate one-way westbound through the project site. Vesey Street would be reopened to traffic from Greenwich Street to Church Street; however, the section of Vesey Street from Greenwich Street to West Street/Route 9A would be a managed street. Vesey Street would operate one-way eastbound to the east of Greenwich Street, two-way between Greenwich and Washington Streets, and one-way westbound to the west of Washington Street. West Broadway between Barclay and Vesey Streets would remain open to southbound through-traffic, providing access to Greenwich Street through the project site. However, it is anticipated that the segment of Greenwich Street between Barclay and Vesey Streets, which is a privately-owned street, would be closed to through traffic and would primarily serve as access to the adjacent 7 World Trade Center building as at present. The parallel segment of Washington Street would operate two-way.

At the south end of the WTC Site, Liberty Street would be reopened to traffic between Church Street and West Street/Route 9A, and would operate two-way. Unlike the street configuration analyzed in the LMDC FGEIS, current plans now call for Cedar Street to remain closed between Greenwich and Washington Streets. Washington Street would remain closed between Cedar and Liberty Streets, and all traffic northbound on Washington Street would turn westbound onto Cedar Street to reach West Street/Route 9A. As shown in Figure 4, a secondary exit from the VSC onto Cedar Street would be provided for those vehicles allowed entry into the facility in error.

The current No-Action site plan and vehicle circulation system also incorporates limited security measures identified by PANYNJ subsequent to publication of the LMDC FGEIS in 2004. Under these measures, which were identified as the design of the 1 World Trade Center tower became more defined, both Vesey Street and Fulton Street would function as "managed streets" west of Greenwich Street. This would be achieved through the installation of retractable barriers and sally ports on Vesey, Fulton and Washington Streets to restrict vehicular access. Each sally port would consist of a guard booth controlling a set of two retractable barriers with sufficient space between them to accommodate a motor vehicle. In operation, the first barrier would be lowered to permit a single vehicle to enter, and then raised to prevent entry by following vehicles. After completing a screening process, the second barrier would be lowered to allow the vehicle to exit. As shown in Figure 4, two sally ports would be located on Fulton Street, one immediately east of West Street/Route 9A and the second west of Greenwich Street. Two sally ports would also be located on Vesey Street, one immediately to the east of West Street/Route 9A and a second west of Greenwich Street. An additional retractable barrier would be installed on the Washington Street approach to Vesey Street that would be raised in the default condition, and lowered only as needed to permit entry by authorized vehicles.

Under the No-Action circulation plan, there would be unrestricted vehicular access along Greenwich Street through the WTC Site. Autos and trucks destined for the below-grade parking or loading docks at the WTC would have unrestricted access to the VSC via Liberty Street, while trucks en route to the loading docks at the PAC would likely have to pass through the barriers on Washington Street and/or

Vesey Street. Tour buses are expected to drop off passengers destined for the 9/11 Memorial on the west side of Greenwich Street or on Liberty Street west of Greenwich Street before proceeding to the VSC via Liberty Street. They would then be expected to exit the VSC onto eastbound Liberty Street, northbound Church Street and westbound Fulton Street to return to Greenwich Street to retrieve their passengers. Taxi and black (livery) car pick-up/drop-off activity would likely occur along both curbs of Greenwich Street as well as along both sides of Church Street. While black cars would also be expected to traverse the sally ports along Fulton and Vesey Streets to access 1 World Trade Center, taxis would be less likely to do so, and would be expected to pick-up/drop-off along nearby unrestricted streets such as Greenwich Street and West Street/Route 9A (if permitted by the prevailing curbside regulations).

As noted above, there are now expected to be up to approximately 400 underground parking spaces for office-tenant autos and 80 for tour buses at the WTC Site compared to 1,200 to 1,400 parking spaces under the original program analyzed in the LMDC FGEIS. It is therefore anticipated that under the current WTC development program, some of the parking demand generated by WTC office tenants as well as all of the parking demand generated by other uses at the WTC Site would be distributed among off-street public parking facilities on the periphery. Many of these autos would therefore not actually enter the WTC Site nor traverse intersections within its boundaries.

In addition to the planned WTC build-out, Lower Manhattan is expected to experience moderate growth in commercial office, retail, residential, hotel and community facility uses by 2019. The EIS will document the developments that are planned within the area and include these in the analysis of the No-Action condition.

The Future With the Proposed Action (With-Action Condition)

As described above, the Proposed Action would control vehicular access to and traffic movement to and within the WTC Site. This would be accomplished through the creation of a secure perimeter around the WTC Site that is intended to prevent unscreened vehicles from driving within close proximity to the 9/11 Memorial Plaza and Museum building, commercial towers, and transportation facilities on the WTC Site. Therefore, selected portions of streets in and around the WTC Site are proposed to be restricted access streets that would be closed to general vehicular traffic. Implementation of the Proposed Action would involve installation and utilization of security infrastructure in the immediate vicinity of the WTC Site. Vehicles destined for the WTC seeking entry onto these streets would be subject to credentialing to determine whether entry to the campus should be permitted, and then screening to confirm that these vehicles pose no threat.

Figure 2 shows a conceptual plan developed by the NYPD for the design and location of the security infrastructure that would be installed under the Proposed Action. The Project Area includes all streets and sidewalks that would be directly affected by the installation of this security infrastructure. As shown in Figure 2, the Project Area is generally bounded by Barclay Street and Park Place on the north, Thames Street on the south, Trinity Place/Church Street on the east and West Street/Route 9A on the west. The perimeter of the WTC Site would be secured through the installation of various types of vehicle interdiction devices under the control of the NYPD. These could include bollards and traffic lane delineators, as well as a system of retractable vehicle barriers. Screening of all vehicles entering the WTC Site would utilize both mechanical and manual processes, and would be facilitated through the use of sally ports which, as described previously, would consist of a guard booth controlling a set of two retractable barriers with sufficient space between them to accommodate a motor vehicle undergoing screening. An additional booth would be installed at each credentialing location. It is anticipated that the sizes of the booths and any ancillary structures will be developed as project design advances.

Overall, as shown in Figure 2, it is anticipated that sally ports would be installed at a total of eight locations on the perimeter of the Site to provide entry and/or egress. Two would function as entry sally

ports, four as exit sally ports and two would be used by both entering and exiting vehicles. The following describes the security infrastructure and traffic changes that would be implemented under the Proposed Action.

TRINITY PLACE/CHURCH STREET
As shown in Figure 2, the Trinity Place/Church Street corridor[2] would be divided by a raised median with bollards, from Cedar Street to just north of Vesey Street. It is anticipated that to the east of the median the street would remain open to general traffic with two northbound moving lanes, while the two moving lanes to the west of the median would be located within the security perimeter and would be accessible only to screened vehicles. A security station with an entry-only sally port for tour buses en route to the Memorial as well as POVs and for-hire vehicles would be located on Trinity Place just north of Cedar Street. Credentialing zones for the sally port on Trinity Place would be delineated along the west curb south of Cedar and Thames Streets. A second sally port would be located on Church Street just north of Vesey Street to serve as an egress point for all vehicle types exiting onto northbound Church Street from the WTC Site.

WEST BROADWAY/GREENWICH STREET
Southbound West Broadway would function as an entrance to the WTC Site for for-hire vehicles and POVs arriving from the north. As shown in Figure 2, a security station with an entry sally port would be installed on West Broadway between Barclay and Vesey Streets, and credentialing zones would be located along the east curb of West Broadway north of Barclay Street, and along the south curb of Barclay Street east of West Broadway. Bollards would be used to delineate a single travel lane along the east curb adjacent to the sally port but outside of the secure perimeter in order to maintain access to the adjacent U.S. Post Office building. (Postal vehicles would enter the building at the south end of the block and utilize an internal roadway to exit the facility onto West Broadway near Barclay Street.)

GREENWICH STREET
Greenwich Street between Barclay and Vesey Streets is a private street and is expected to remain closed to through traffic. Retractable barriers at the north end of the block (default down) and the south end of the block (default up) would allow vehicular access to the adjacent 7 World Trade Center building, but not into the secure zone. (As noted above, West Broadway would provide the primary access to the segment of southbound Greenwich Street traversing the WTC Site.) At the south end of the WTC Site, a sally port would be located on Greenwich Street approaching Cedar Street to provide egress for fire trucks stationed at an adjacent fire station for Engine Company 10 and Ladder Company 10 ("Ten House") as well as for POVs and for-hire vehicles.

WASHINGTON STREET
The security station at Washington Street between Barclay and Vesey streets would serve as an entrance and exit point for trucks en route to and from the Performing Arts Center's loading dock on Vesey Street and as an entrance for POVs and for-hire vehicles in the event of congestion at the security station at West Broadway. Trucks would also use this sally port to access the adjacent 7 World Trade Center loading dock. As daily PAC loading demand is anticipated to be minimal with most of the deliveries expected during off-peak periods, occasional use of this entry for POVs and for-hire vehicles is not expected to be problematic. A credentialing zone would be delineated along the south curb of Barclay Street east of Washington Street.

VESEY STREET
As shown in Figure 2, under the Proposed Action the block of Vesey Street from Church Street to West Broadway would be converted from eastbound to westbound operation. Vesey Street would continue to operate two-way between Greenwich and Washington Streets and one-way westbound between

[2] Trinity Place becomes Church Street north of Liberty Street.

Washington Street and West Street/Route 9A. Vesey Street would remain one-way eastbound east of Church Street and vehicles would not be able to travel from the managed corridor on the west side of Church Street onto eastbound Vesey Street. Pedestrian access across Church Street at Vesey Street would be maintained. A security station with a two-lane exit-only sally port would be installed on Vesey Street approaching West Street/Route 9A. A sidewalk extension along the north side of the roadway would likely be installed to accommodate the security booth at this location.

FULTON STREET
Under the Proposed Action, the block of Fulton Street between Greenwich and Church Streets would be converted from one-way westbound to one-way eastbound operation to facilitate drop-off and pick-up activity at the adjacent 2 World Trade Center and the Transit Hub. The segment of Fulton Street west of Greenwich Street would remain one-way westbound as would Fulton Street east of Church Street. There would be no vehicular access on Fulton Street across the raised median and bollards along Church Street, although pedestrian access would be maintained. A security station with a one-lane exit sally port would be installed on Fulton Street approaching West Street/Route 9A, and a sidewalk extension would likely be installed along the north side of the roadway to accommodate the security booth at this location.

LIBERTY STREET
As shown in Figure 2, under the Proposed Action two-way operation would continue on Liberty Street, and it would function as the primary point of access and egress for the Vehicular Security Center. Access to the VSC would be controlled by a security station and entry/exit sally port on Liberty Street east of West Street/Route 9A. Credentialing zones for this sally port would be delineated along the two easternmost lanes of southbound West Street/Route 9A north of Liberty Street, and along the northbound curb lane south of Liberty Street. Vehicles already within the secure perimeter (tour buses, for example) would also be able to enter the VSC from the east on Liberty Street, although access would be controlled by a retractable barrier located immediately to the east of the VSC entrance/exit. Most vehicles departing the VSC would exit onto westbound Liberty Street to reach West Street/Route 9A. (A secondary exit would be provided on Cedar Street west of Washington Street to be used primarily in the event that a vehicle was allowed to enter the Liberty Street in error from the credentialing zone on Route 9A.) Another retractable barrier would be located on Liberty Street in-line with the Church Street median and would be used to facilitate access/egress by fire trucks stationed at the nearby Ten House.

Under the Proposed Action, it is anticipated that tour buses with passengers en route to the 9/11 Memorial may unload along the north curb of Liberty Street west of Greenwich Street, and/or along the west curb of Greenwich Street adjacent to the Memorial Center. As is the case under the current circulation plan, it is also likely that there would continue to be several locations designated for loading tour buses, possibly including the east curb of Route 9A immediately north of Liberty Street.

CEDAR STREET
Under both the No-Action and With-Action conditions, Cedar Street would be eliminated between Greenwich and Washington Streets, with the segment to the west operating one-way westbound as an outlet to West Street/Route 9A for northbound Washington Street. As noted above, a secondary exit from the VSC would be provided on Cedar Street west of Washington Street to be used primarily in the event that a vehicle was allowed to enter the Liberty Street in error from the credentialing zone on Route 9A. The segment of Cedar Street between Greenwich Street and Church Street would also continue to operate one-way westbound under the Proposed Action.

BARCLAY STREET
As noted above, under the Proposed Action two credentialing zones would be established along the south curb of Barclay Street. One would be located immediately to the east of the security station on West Broadway, and the second would be located immediately to the east of the security station on Washington Street.

Operational controls such as bus reservations and the scheduling of deliveries are expected to be implemented under both the No-Action and With-Action conditions.

The EIS document will analyze the Proposed Action for all technical areas of concern related to the Campus Security Plan. As the No-Action condition includes the full development of the WTC Site, no new buildings are associated with the Campus Security Plan. Only security-related elements and the proposed modifications to the street network are considered as part of the Proposed Action.

E. PROPOSED SCOPE OF WORK FOR THE EIS

As the Proposed Action would affect various areas of environmental concern and was found to have the potential for significant adverse impacts, pursuant to the EAS and Positive Declaration, an EIS will be prepared for the Proposed Action. The EIS will analyze the Proposed Action for all technical areas of concern.

The EIS will be prepared in conformance with all applicable laws and regulations, including SEQRA (Article 8 of the New York State Environmental Conservation Law) and its implementing regulations found at 6 NYCRR Part 617, New York City Executive Order No. 91 of 1977, as amended, and the Rules of Procedure for CEQR, found at Title 62, Chapter 5 of the Rules of the City of New York. The EIS will follow the guidance of the *CEQR Technical Manual*, dated May 2010, and will contain:

- A description of the Proposed Action and its environmental setting;
- A statement of the environmental impacts of the Proposed Action, including its short- and long-term effects and typical associated environmental effects;
- An identification of any adverse environmental effects that cannot be avoided if the Proposed Action is implemented;
- A discussion of reasonable alternatives to the Proposed Action;
- An identification of irreversible and irretrievable commitments of resources that would be involved in the Proposed Action should it be implemented; and
- A description of mitigation proposed to eliminate or minimize any significant adverse environmental impacts.

The EIS will analyze the Proposed Action for all technical areas of concern. Based on the preliminary screening assessments outlined in the 2010 *CEQR Technical Manual* and detailed in the EAS document, the following environmental areas would not require detailed analysis in the EIS: open space, shadows, natural resources, water and sewer infrastructure, solid waste and sanitation services, and energy. It should be noted however that as a greenhouse gas (GHG) emissions analysis will be provided in the EIS, pursuant to *CEQR Technical Manual* guidelines the Proposed Action's energy consumption will be calculated and provided in the EIS.

The specific technical areas to be included in the EIS, as well as their respective tasks, are described below.

TASK 1. PROJECT DESCRIPTION

The first chapter of the EIS introduces the reader to the Proposed Action and sets the context in which to assess impacts. The chapter contains a description of the Proposed Action: its location; the background and/or history of the project; a statement of the purpose and need; key planning considerations that have

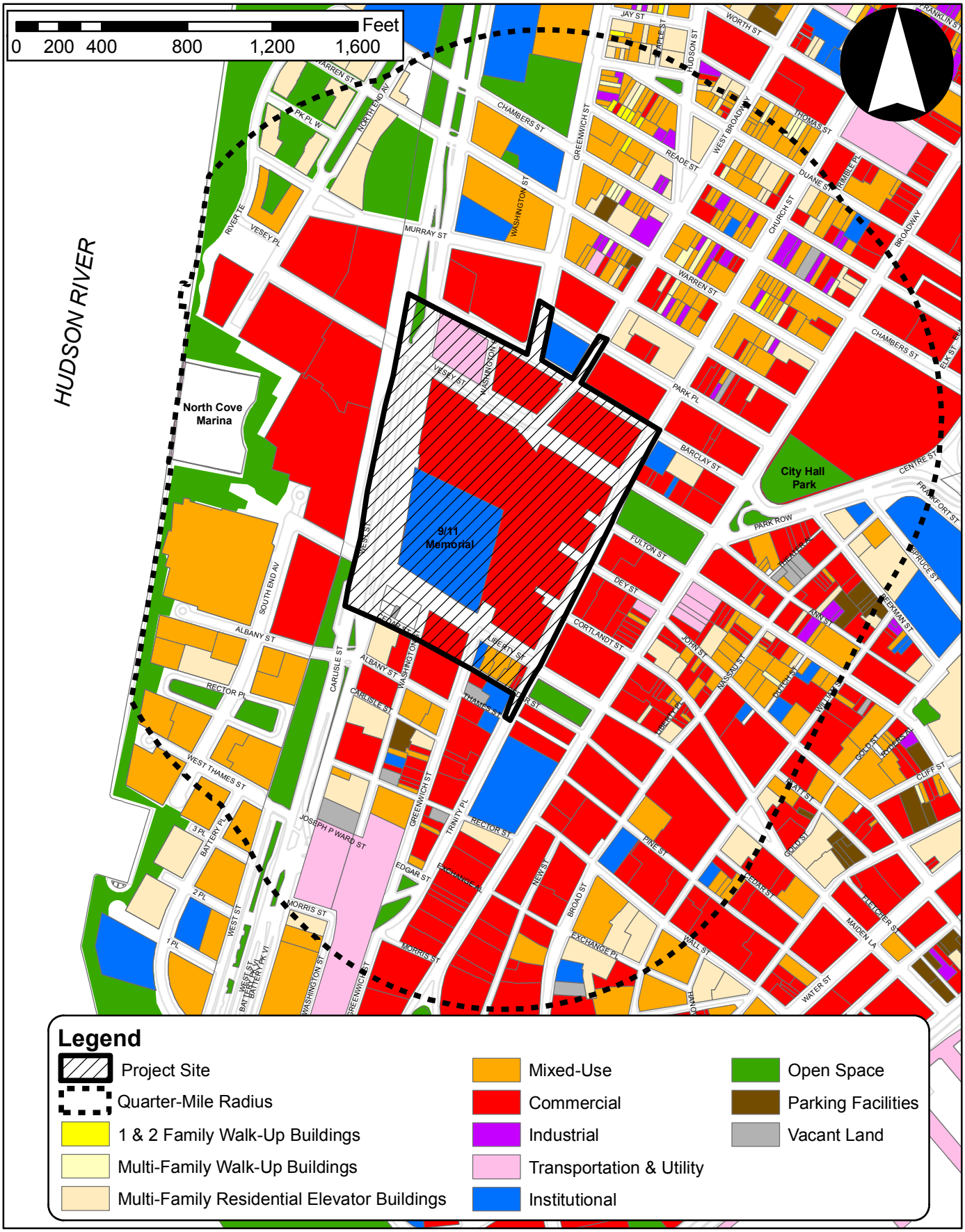
shaped the current proposal; a detailed description of the Proposed Action; and discussion of the approvals required, procedures to be followed, and the role of the EIS in the process. This chapter is the key to understanding the Proposed Action and its impact, and gives the public and decision-makers a base from which to evaluate the Proposed Action.

In addition, the project description chapter will present the planning background and rationale for the actions being proposed and summarize the reasonable worst-case development scenario for analysis in the EIS. The section on approval procedures will explain the review process, its timing, and the public hearings that are planned. The role of the EIS as a full-disclosure document to aid in decision-making will be identified.

TASK 2. LAND USE, ZONING, AND PUBLIC POLICY

This chapter will analyze the potential impacts of the Proposed Action on land use, zoning, and public policy, pursuant to the methodologies presented in the *2010 CEQR Technical Manual*. The primary land use study area will consist of the WTC Site and the immediate area, where the potential effects of the Proposed Action would be directly experienced (reflecting the Campus Security Plan). The secondary land use study area would include the neighboring areas within a quarter-mile boundary from the WTC Site, as shown in Figure 2-1, which could experience indirect impacts. Subtasks will include the following:

- Provide a brief development history of the WTC Site and surrounding study area.
- Provide a description of land use, zoning, and public policy in the study areas discussed above. Recent trends in the study area will be noted. Other public policies that apply to the study area will also be described, including: the Special Lower Manhattan District; the Special Tribeca Mixed-Use District; the Alliance for Downtown New York, 421g Program, the Washington Street Urban Renewal Area (WSURA), the Brooklyn Bridge Southeast Urban Renewal Area, Hudson River Park Trust, Battery Park City Authority, and the Local Waterfront Revitalization Program (LWRP). The City's sustainability/PlaNYC policies will also be discussed.
- Based on field surveys and prior studies, identify, describe, and graphically portray predominant land use patterns for the balance of the study areas. Describe recent land use trends in the study areas and identify major factors influencing land use trends.
- Describe and map existing zoning and recent zoning actions in the study areas.
- Prepare a list of future development projects in the study areas that are expected to be constructed by the 2019 analysis year and may influence future land use trends. Also, identify pending zoning actions or other public policy actions that could affect land use patterns and trends in the study areas. Based on these planned projects and initiatives, assess future land use and zoning conditions without the Proposed Action (No-Action condition).
- Discuss the Proposed Action's potential effects related to issues of compatibility with surrounding land use, the consistency with zoning and other public policies, and the effect of the Proposed Action on ongoing development trends and conditions in the study areas.
- The project is located in the New York City Coastal Zone, and therefore, it will be assessed for its consistency with the city's LWRP. The analysis will assess, for those relevant policies identified on the project's Consistency Assessment Form (provided as Appendix A to the EAS), the consistency of the Proposed Action and resultant projected development with the WRP policies.
- If necessary, mitigation measures to avoid or reduce potential significant adverse land use, zoning, and/or public policy impacts will be identified.



World Trade Center Campus Security Plan EAS **Figure 2-1**

Land Use Map

TASK 3. SOCIOECONOMIC CONDITIONS

The socioeconomic character of an area includes its population, housing, and economic activity. Socioeconomic changes may occur when a project directly or indirectly changes any of these elements. Although socioeconomic changes may not result in impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area. This chapter will assess the Proposed Action's potential effects on the socioeconomic character of the study area, which is expected to conform to the quarter-mile land use study area described in Task 2.

Pursuant to Section 310 of Chapter 5 of the *2010 CEQR Technical Manual,* the socioeconomic study area boundaries are expected to be similar to those of the land use study area, and will be dependent on the size and characteristics of the Proposed Action. A socioeconomic assessment seeks to assess the potential to change socioeconomic character relative to the study area population.

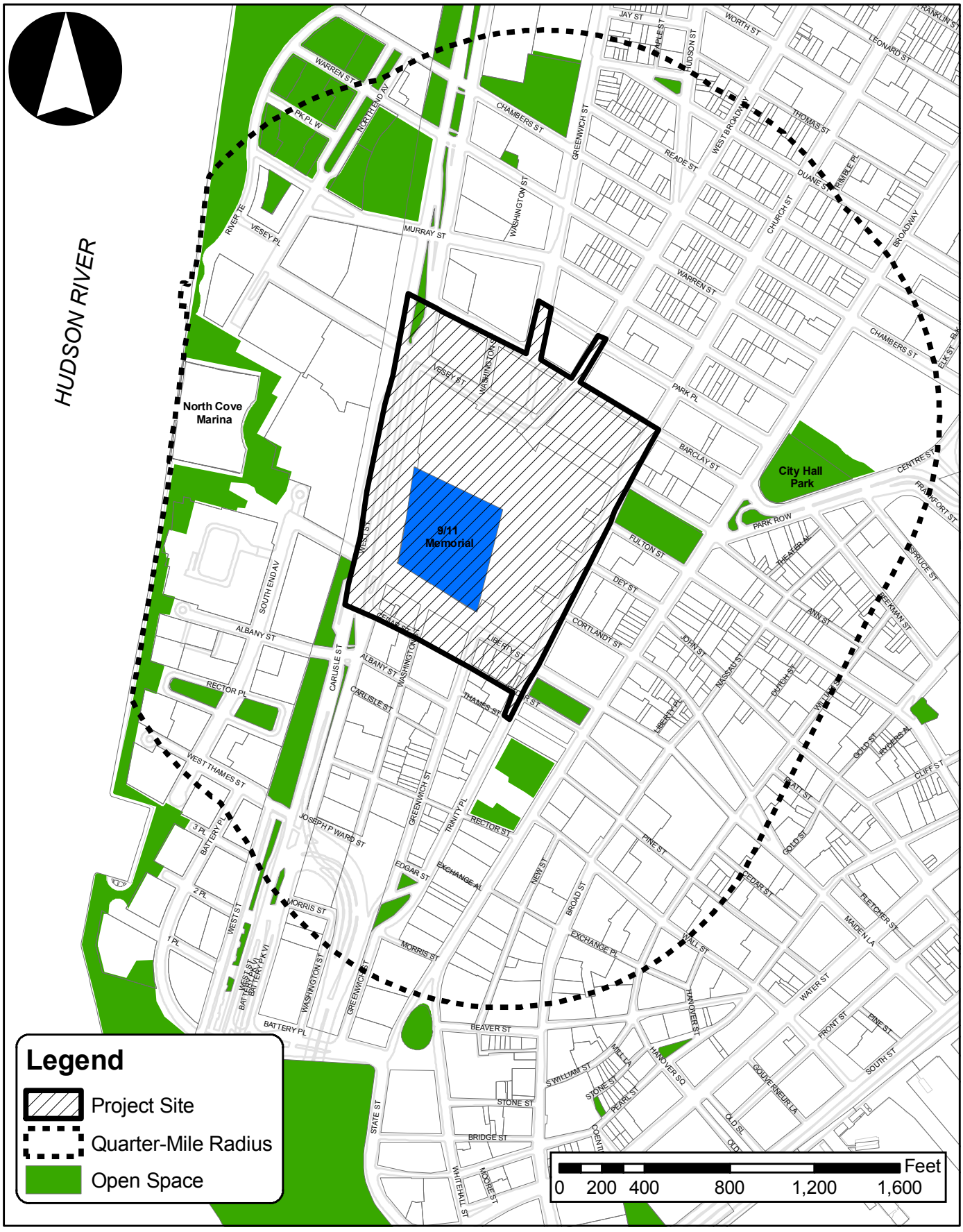
Pursuant to the *2010 CEQR Technical Manual*, the five principal issues of concern with respect to socioeconomic conditions are whether a proposed action would result in significant adverse impacts due to: (1) direct residential displacement; (2) direct business and institutional displacement; (3) indirect residential displacement; (4) indirect business and institutional displacement; and (5) adverse effects on specific industries. As detailed below, the Proposed Action warrants an assessment of socioeconomic conditions with respect to one of these principal issues of concern—indirect business and institutional displacement. Due to the unique nature of this Proposed Action, only indirect displacement warrants additional study.

According to the *2010 CEQR Technical Manual*, indirect displacement (also known as secondary displacement) is the involuntary displacement of residents, businesses, or employees that results from a change in socioeconomic conditions created by the proposed project. While the Proposed Action is not identified in the CEQR Technical Manual as a typical action that could result in indirect displacement, the EIS will provide an analysis of the areas where proposed security measures may decrease accessibility or potentially create other hardships for adjacent businesses.

This chapter will examine the effects of the project on socioeconomic conditions in the study area. The analysis will provide a quantitative assessment of potential socioeconomic changes associated with the action. It will focus on: 1) existing businesses that may be indirectly affected by the implementation of the security plan; and 2) potential effects on conditions in the real estate market in the area.

The Campus Security Plan involves installation of security infrastructure which would eliminate non-screened, public vehicular traffic from the roadways adjacent to and within the WTC Site. Most of these roadways are closed under existing conditions due to construction work at the WTC Site. Potential effects of the street closure on existing businesses along these roadways will be evaluated. The analysis will also consider the effects that the presence of security screening infrastructure such as operable barriers and pre-screening areas may have upon businesses in the surrounding area, including along Church Street adjacent to and south of the WTC Site, as well as along Barclay Street, West Broadway and Washington Street north of the WTC Site and Greenwich Street from Liberty Street to Cedar Street and Cedar Street from Greenwich Street to Trinity Place.

Vehicles traveling to businesses near and within the secure zone (for example, delivery trucks, limousines, private autos, or access-a-ride vans) would be subject to screening. The effects of this screening process on existing businesses, including the planned WTC businesses will be considered.



World Trade Center Campus Security Plan

Figure 3-1

Socioeconomic Conditions Primary and Secondary Study Areas

Subtasks for detailed analysis would include:

- Describe economic activity in the project area under Existing Conditions (using the most recently available data and studies), including the number and types of businesses and institutions and employment by key sectors, including within the secure zone, adjacent to the proposed screening infrastructure and queuing areas, and within a quarter-mile of the secure zone.
- Describe the physical characteristics of the residential, commercial, and institutional buildings in the project area and in the surrounding study area, including the general size of the structures, configurations, condition, and accessibility. Determine the approximate vacancy rate and rent levels for buildings in the study area.
- Estimate net new residential, employment and other economic activity in the study area under the No-Action scenario. The analysis will evaluate the potential effects of the Proposed Action on the proposed WTC buildings (i.e. the businesses located within the proposed secure zone) and contrast that with the anticipated conditions in the future without the Proposed Action.
- Evaluate the effects of restriction on accessibility, if any, in terms of residential or business displacement, employment changes, and adverse effects on the real estate market. Account for those residents, businesses, institutions, or industries within the study area that could be displaced or affected by the security plan and estimate whether such changes could affect the overall City economy. Figure 3-1 shows the primary and secondary study areas for the analysis of Socioeconomic Conditions.

TASK 4. COMMUNITY FACILITIES

The Proposed Action would not result in the direct displacement of any existing community facilities or services. The Port Authority Police Department and NYPD will have personnel located within the WTC Site. The NYPD will be responsible for staffing the proposed secured access points at the perimeter of the Site. It is anticipated that the Proposed Action would affect access to and from Engine Company 10, Ladder 10 ("Ten House") and ambulance access to the WTC Site. As such, FDNY and ambulance response times will also be evaluated for potential service impacts. Therefore the Proposed Action will be analyzed for its potential to result in significant adverse direct impacts on existing community facilities or services.

The EIS will identify and locate the relevant local police precinct and fire stations serving the project area, and describe service conditions, highlighting particular constraints. Additionally, the EIS will assess the potential for the Proposed Action to result in impacts on police, fire and ambulatory services in and around the WTC Site. This would be a function of changes in traffic circulation and access related to the Proposed Action, and any effect the Proposed Action may have on the ability to deliver these services. Assessment of impacts will require coordination with the Police and Fire Departments.

The demand for community facilities and services is directly related to the type and size of the new population generated by development resulting from the Proposed Action. As the Proposed Action is a security plan with no associated residential population, and approximately 30 NYPD officers per shift associated with the security screening areas, no additional community facility services would be required as a result of the Proposed Action. The analysis of community facilities will consider the potential for significant adverse impacts resulting from the proposed security measures, including active barriers that are located near Engine Company 10, Ladder 10 ("Ten House"), located at 124 Liberty Street and ambulance access to and from the WTC Site. According to *CEQR Technical Manual* guidelines and as presented in the EAS document, this proposed development would not trigger a detailed analysis of schools, libraries, publicly funded day care centers, health care facilities or police service. However, fire services and ambulance services will be evaluated.

Fire Protection / Ambulance Services / Access to Emergency Services

According to the *CEQR Technical Manual*, detailed community facilities analyses are often conducted for individual facilities that may be affected by a project. If the proposed project would displace or alter a community facility (i.e. direct effect), it is expected that the affected agency may conduct its own assessment to determine the impact of the proposed project on its facility and its constituents. The CEQR analysis will be coordinated with the affected agency's assessment. Based on how the Proposed Action would change the affected facility, the EIS will determine the extent to which service would be disrupted or precluded. If disruption of service would place additional demand on other nearby facilities, it may be appropriate to examine the indirect effects on those facilities caused by the initial direct impact. Details will be provided in the EIS that address plans to accommodate emergency response vehicle access into and out of the site. Additionally, the EIS will provide an assessment of private vehicle access to local hospitals with consideration of the proposed street configuration.

TASK 5. HISTORIC AND CULTURAL RESOURCES

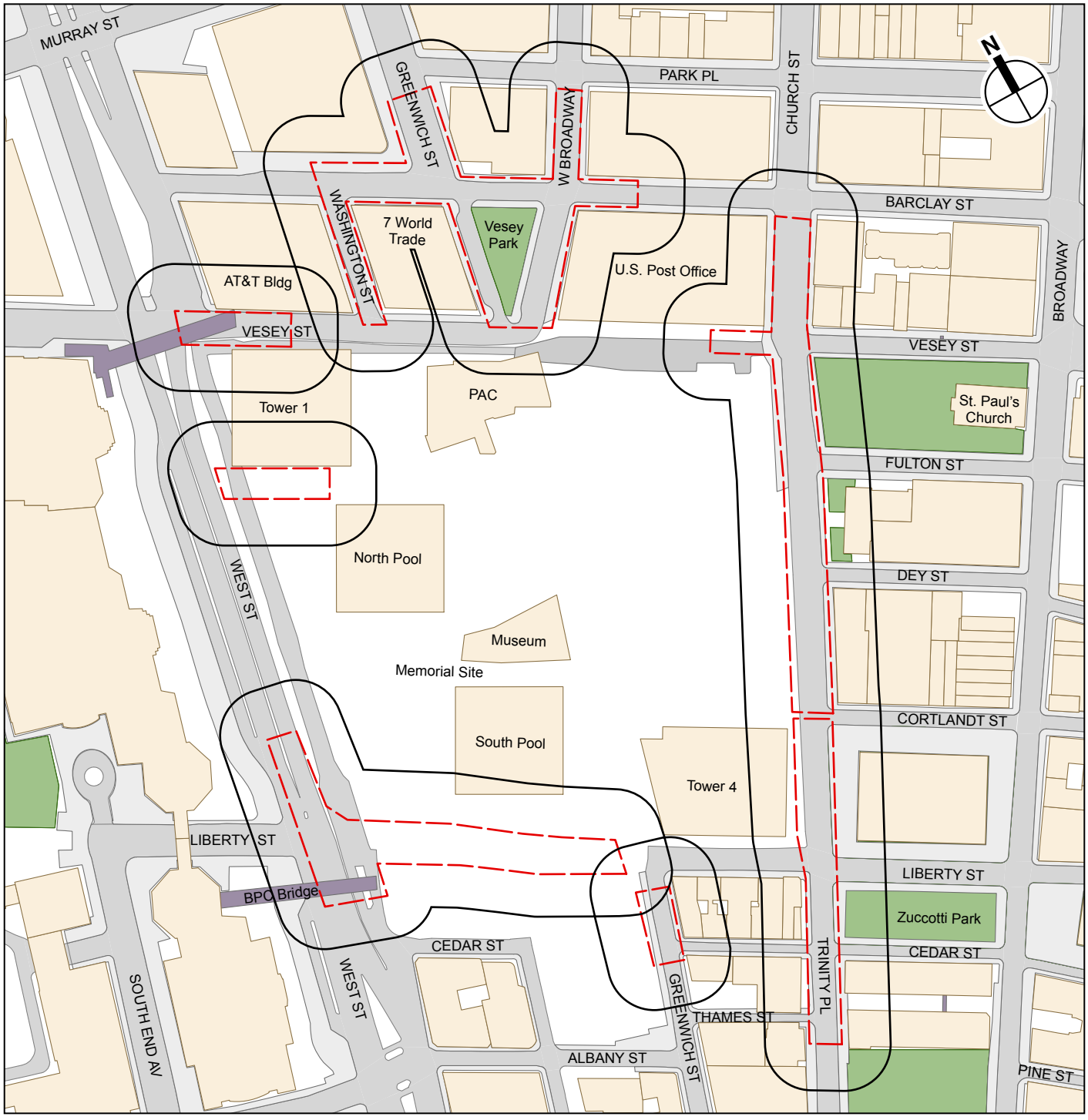
Historic and cultural resources include both archaeological and architectural resources. The *CEQR Technical Manual* identifies historic and cultural resources as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. Historic and cultural resources include designated New York City Landmarks (NYCLs) and Historic Districts; properties calendared for consideration as NYCLs by the New York City Landmarks Preservation Commission (LPC) or determined eligible for NYCL designation (NYCL-eligible); properties listed on the State and National Register of Historic Places (S/NR) or formally determined eligible for S/NR listing (S/NR-eligible), or properties contained within a S/NR listed or eligible district; properties recommended by the New York State Board for listing on the S/NR; National Historic Landmarks (NHLs); and potential historic resources (i.e., properties not identified by one of the programs listed above, but that appear to meet their eligibility requirements).

According to the *CEQR Technical Manual*, a historic and cultural resources assessment is required if a project has the potential to affect archaeological and/or architectural resources. The project site includes security checkpoints located within and adjacent to the approximately 16-acre WTC Site, a National Register-eligible architectural resource. The archaeological resources areas of potential effect (APEs) for the proposed project will be the areas of planned construction and disturbance—each security checkpoint location and the associated vehicle interdiction devices around the security perimeter. To account for both the potential for impacts to architectural resources due to construction activities at each of the security checkpoint locations and the project's potential visual and/or contextual impacts on nearby architectural resources, the architectural resources areas APEs are defined as the areas within 90 feet of each security checkpoint location. Within the architectural resources APEs are several architectural resources, including, but not limited to, the Barclay-Vesey (Verizon) Building at 140 West Street (S/NR, NYCL), St. Paul's Chapel and Graveyard at Broadway and Fulton Street (NHL, S/NR, NYCL), and 90 West Street (S/NR, NYCL).

The analysis of historic resources will be undertaken in consultation with the SHPO and the LPC and will be prepared in accordance with Section 106 of the National Historic Preservation Act of 1966 and coordinated through the NEPA process.

Archaeological Resources

Since the proposed project would entail in-ground disturbance, it is necessary to analyze the potential impacts of the proposed project on archaeological resources. LPC and SHPO will be contacted regarding



Project Location Map
Figure 5-1

each security checkpoint location's potential for archaeological sensitivity. If LPC and/or SHPO determines that a security checkpoint location or locations may be sensitive for archaeological resources, the following work will be undertaken:

- Prepare a Phase 1A Archaeological Assessment for LPC and SHPO review. The Phase 1A Archaeological Assessment will identify the potential for areas identified by LPC and/or SHPO as requiring further study to contain pre-contact-period and/or historic-period archaeological resources. Qualitatively discuss any impacts on potential archaeological resources that are expected in the future without the proposed project.
- Describe the proposed project and the potential impact it could have on archaeological resources through subsurface disturbance.

If applicable, develop measures to avoid, minimize, or mitigate any adverse impacts on archaeological resources in consultation with LPC and SHPO.

Architectural Resources

The following tasks will be undertaken as part of the architectural resources analysis:

- Describe and map architectural resources on the project site and within the 90-foot APEs around each security checkpoint location.
- Within each 90-foot APE, map and briefly describe known architectural resources. Each 90-foot APE for architectural resources is shown on Figure 5-1. Longer contextual views available beyond the 90-foot APEs will also be considered, as appropriate.
- Conduct a field survey of each 90-foot APE to identify any potential architectural resources that could be affected by the proposed project. Potential architectural resources comprise properties that appear to meet the eligibility criteria for NYCL designation and/or S/NR listing. Map and briefly describe any potential architectural resources.
- Qualitatively discuss any impacts on architectural resources that are expected in the future without the proposed project as a result of other expected development projects.
- Describe the proposed project and any additional potential development and the impact it would have on the architectural resources in the APE around each security checkpoint location. Assess the project's potential for indirect impacts on any known or potential architectural resources, including visual and contextual impacts.

If applicable, develop measures to avoid, minimize, or mitigate any adverse impacts on architectural resources in consultation with LPC.

TASK 6. URBAN DESIGN/VISUAL RESOURCES

A preliminary analysis of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning, including the following: 1) projects that permit the modification of yard, height, and setback requirements; and 2) projects that result in an increase in built floor area beyond what would be allowed 'as-of-right' or in the future without the Proposed Action. CEQR stipulates a detailed analysis for projects that would potentially obstruct view corridors, compete with icons in the skyline, or would result in substantial alterations to the streetscape of the neighborhood by noticeably changing the scale of buildings.

As the Proposed Action would introduce new security elements (including bollards, security booths, and related security devices) within the public right-of-way, a preliminary assessment of urban design and visual resources will be provided in the EIS.

As defined in Chapter 10, Section 310 of the *CEQR Technical Manual*, the urban design study area will be the same as that used for the land use analysis (delineated by a quarter-mile radius from the site). For visual resources, the view corridors within the study area from which such resources are publicly viewable should be identified. The assessment will be based on *CEQR Technical Manual* methodologies for a preliminary assessment, and include the following:

- Based on field visits, describe the project site and the urban design and visual resources of the areas where security elements are proposed and the adjacent study area, using text, photographs and other graphic material as necessary to identify critical features, use, bulk, form, and scale.
- In coordination with the land use task, describe the changes expected in the urban design and visual character of the study area due to planned development projects in the future without the Proposed Action (No-Action condition), including the WTC Site.
- Describe the potential changes that could occur in the urban design character of the study area as a result of the Proposed Action (With-Action condition). Photographs and/or other graphic material will be utilized, where applicable, to assess the potential effects on urban design and visual resources, including views of/to resources of visual or historic significance (landmark structures, historic districts, parks, etc.).
- The analysis would describe the potential changes that could occur to urban design and visual resources in the future with the Proposed Action, in comparison to the No-Action condition, focusing on the changes that could negatively affect a pedestrian's experience of the area. If necessary, mitigation measures to avoid or reduce potential significant adverse impacts will be identified.

TASK 7. HAZARDOUS MATERIALS

The EIS will address the potential presence of hazardous materials on the project site. It will summarize conditions on the sites based on an Environmental Site Assessment (ESA) and reports on subsurface investigations. Data will be obtained and reviewed to assess whether subsurface disturbance required for the installation of security equipment would result in pathways of exposure to hazardous materials. Such materials may be identified based on current or historical activities on or near the Project Site that may have resulted in contamination by substances or wastes. Of particular concern may be utility conduits that could involve asbestos or hazardous metals.

The EIS analysis will consist of the following tasks:

- A site reconnaissance to note activities of potential concern or obvious areas of concern related to soil and/or groundwater contamination on site and at adjacent properties.
- Review of readily available historical information regarding past site usage to assess the potential for contamination. Historical information, which will be reviewed if available during the project schedule, may include historic Sanborn Fire Insurance Maps, historic aerial photographs, historic City Directories and historic topographic maps.
- State and local agency review will be limited to a database search and review to determine potential environmental sites that may impact areas of subsurface disturbance

A Phase I Report will be completed in accordance with ASTM 1527-05. The Phase I report will include information regarding:

- Narrative description of completed activities;
- Description of the areas where subsurface disturbance is proposed and adjacent areas;
- General history and use of the project site(s);
- Hazardous substances and wastes identified within and near the project site(s);
- Current and former areas of recognized environmental concerns within and near the project site(s), including documentation of the recovery and remediation efforts for the WTC Site;
- Proposed response actions for those areas of recognized environmental concerns identified;
- A brief discussion, when necessary, of any prior site investigations and remedial measures along the alignment;
- Scaled site maps, photographs, tabulated data summaries and other supporting information as appropriate.

The results and recommendations of the Phase 1 Environmental Site Assessment will be documented in the EIS.

Based on the construction activities that would be undertaken, a Phase 2 Environmental Site Investigation is not anticipated as part of the EIS. However, if required, a Phase 2 analysis will be prepared and summarized in the EIS.

TASK 8. TRANSPORTATION

The Proposed Action is the implementation of a Campus Security Plan for the World Trade Center and would not introduce any new land uses. Therefore, it is not expected to directly generate new travel demand to and from the project site. However, the implementation of new security measures, such as restrictions on vehicular access to streets in and around the site would alter traffic patterns, as well as pedestrian space and circulation at selected locations. Therefore, the transportation studies will be a major focus of the EIS, with emphasis on three principal issues: (1) the effects on traffic flow due to redirected or diverted vehicle trips and the relocation of curbside pick-up/drop-off activity resulting from new restrictions on access to streets within or adjacent to the WTC Site; (2) the effects on pedestrian flow along selected sidewalks and crosswalks due to the installation of guard and equipment booths, bollards and other security-related measures; and (3) the potential effects on bus services utilizing streets affected by the new security measures (primarily Church Street).

It is also possible that the restrictions on vehicular access resulting from the proposed Campus Security Plan may potentially induce changes in modal split (i.e., from the auto and taxi modes to transit) for persons en route to and from the World Trade Center and its environs. The result may be a reduction in vehicle trips and a commensurate increase in person trips by transit. (It should be noted, however, that any increase in transit trips would likely be relatively small in the context of the overall demand on the PATH system and the numerous subway, bus and ferry routes serving the World Trade Center Site). For this EIS, the transportation analyses will take a conservative approach with respect to identifying potential significant adverse traffic impacts, and not assume any reduction in vehicular travel demand as a result of the Proposed Action.

As discussed above, a 2019 analysis year will be assumed for the No-Action and With-Action analyses in this EIS. The traffic network assumed to be in place in the absence of the Proposed Action will reflect the most current plans for the study area street system as well as the limited security measures currently planned for implementation at the WTC Site by the PANYNJ. (Under these measures, both Vesey Street and Fulton Street would function as “managed streets” west of Greenwich Street. This would be achieved through the installation of retractable barriers and sally ports on Vesey, Fulton and Washington Streets to restrict vehicular access.) In addition, the No-Action baseline condition for the transportation analyses

will incorporate the anticipated travel demand from the full build-out of Towers 1 through 4, the Memorial, the Transit Hub and the Performing Arts Center at the World Trade Center site; as well as general background growth and demand from other anticipated developments in the vicinity. As it is anticipated that Tower 5 at the WTC Site would be built subsequent to the completion of Towers 1 through 4, and as a development program and Build year for Tower 5 remain undefined, travel demand from this building located south of Liberty Street will not be included in the 2019 No-Action baseline condition.

It should also be noted that development on the World Trade Center site will include a below-grade Vehicular Security Center (VSC) on the south side of Liberty Street east of West Street/Route 9A. Autos and tour buses en route to below-grade parking at the WTC Site would undergo screening at this facility, as would trucks en route to below-grade loading areas for Towers 1 through 4. The proposed Campus Security Plan would affect how vehicles access the VSC, and this will be reflected in the traffic assignments for the No-Action and With-Action conditions.

The following provides a scope of work for the EIS transportation studies, including analyses of traffic, transit, pedestrians and parking.

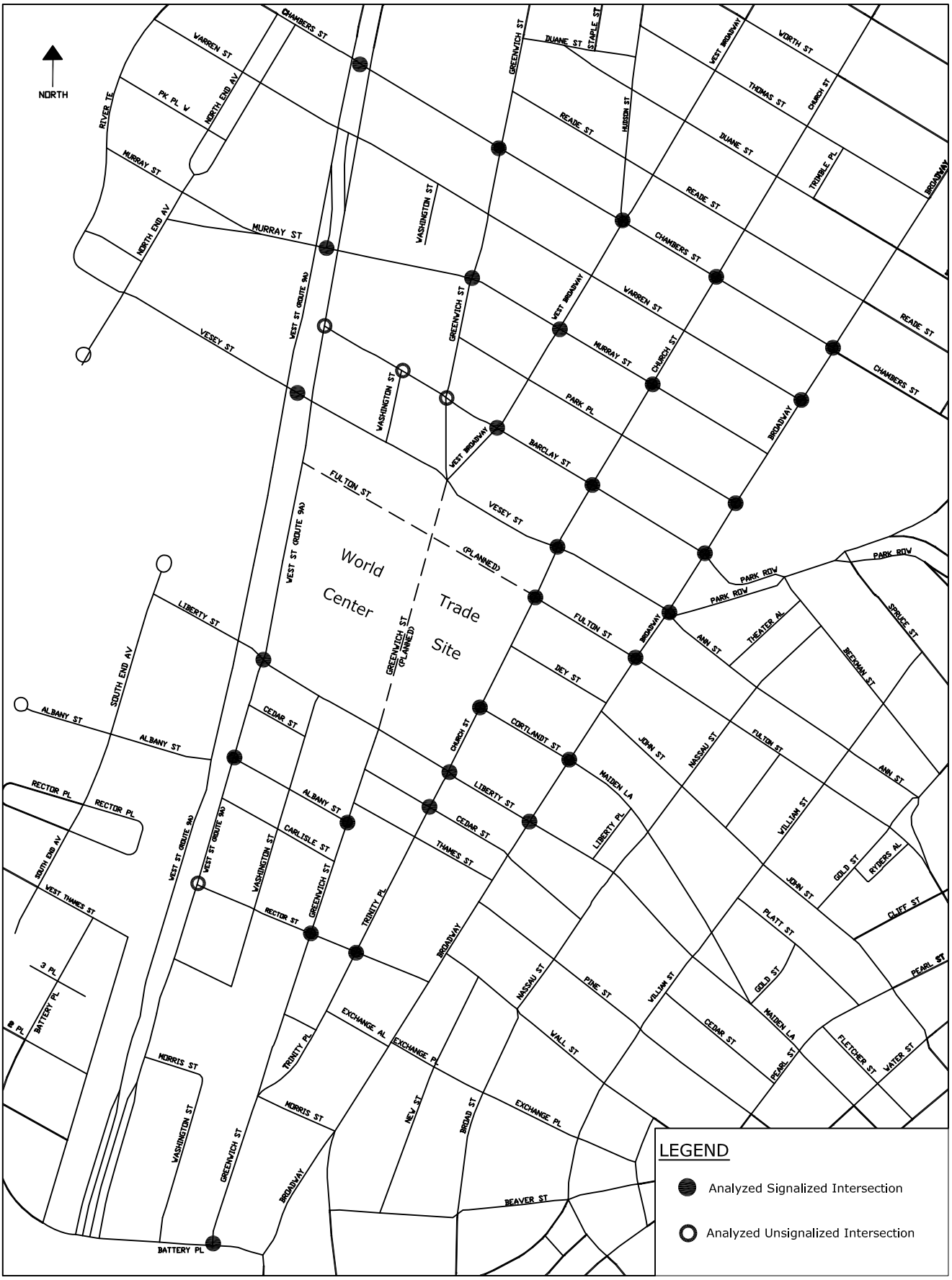
Traffic

The EIS will provide a detailed traffic analysis focusing on those street network intersections where physical changes associated with the proposed Campus Security Plan would directly affect throughput capacity, as well as those intersections that are expected to experience the greatest net increase in diverted vehicle trips as a result of the Proposed Action. Locations where security measures might potentially result in vehicle queuing (i.e., at credentialing and screening zones) would also be a focus of the analysis. With respect to Action-induced changes in traffic volumes, the specific intersections to be included in the traffic study area will be determined based upon 2010 *CEQR Technical Manual* criteria in consultation with NYCDOT. The traffic analysis will focus on three weekday peak periods when overall travel demand in the vicinity of the WTC Site is expected to be greatest; specifically, the weekday AM and PM commuter peak hours as well as the weekday midday, a peak period for tour bus arrivals and lunchtime activity in the Financial District. Given the predominantly commercial nature of lower Manhattan in the vicinity of the WTC Site as well as the development planned for the site, there is typically less traffic and overall travel demand in the area on weekends than on weekdays. However, it is recognized that there may also be somewhat less capacity on the street network as there tend to be fewer restrictions on parking and lower levels of enforcement on weekends than on weekdays. In addition, tourist activity is often greater on weekends, and tour buses and large groups of pedestrians associated with this activity can impede turning movements. Therefore, key intersections in the immediate vicinity of the WTC site will also be analyzed for a Saturday midday peak hour.

The EIS traffic analysis will make use of the Lower Manhattan Traffic Model (LMTM), a microsimulation model developed in the AIMSUN (version 6.1) platform that was built and calibrated to reflect conditions during the weekday AM and PM peak periods. The LMTM will be used for simulating traffic diversions as a result of modifications to the roadway network, including the opening of new street network linkages at the WTC Site in the No-Action condition and the implementation of additional security restrictions under the Proposed Action. As the LMTM has not been built or calibrated for the weekday midday peak period, it is anticipated that the AM and PM peak period diversion patterns will be adapted for the midday based on updated data to be collected in 2012. Although weekday midday traffic volumes may prove to be lower than in the AM and PM periods, the study area and analyzed intersections would be the same for all three weekday periods. A more limited study area will be analyzed for the Saturday midday focusing on key intersections in the immediate vicinity of the WTC Site that are the most likely to be affected by diverted trips and weekend demand from visitors to the 9/11 Memorial and Memorial Center.

The following outlines the anticipated scope of work for conducting the traffic impact analysis for the Proposed Action.

- In consultation with NYCDOT, select the specific peak hours for analysis and define a traffic study area consisting of intersections to be analyzed within the WTC Site and along streets leading to and from the area. The traffic analysis in the EIS will focus on the weekday AM, midday and PM peak periods and the Saturday midday peak period, with the specific peak hour in each period to be determined based on automatic traffic recorder (ATR) count data and data from the Lower Manhattan Traffic Model and other sources. A total of 34 intersections (30 signalized and four unsignalized) will be analyzed for the weekday peak hours based on proposed physical changes to the street network and the numbers of redirected or diverted vehicle trips anticipated at each intersection as a result of the Proposed Action. These intersections are shown in Figure 8-1 and include eight along Broadway, nine along Trinity Place/Church Street, six along Greenwich Street, seven along West Street/Route 9A, three on West Broadway and one on Washington Street. Additional intersections may be added pending NYCDOT review of the traffic modeling results. A subset of these intersections (likely totaling 10-15 locations) will be selected for analysis for the Saturday midday in consultation with NYCDOT.
- Conduct a count program for the traffic analysis locations that includes a mix of ATR machine counts and manual turning movement counts (TMCs), along with vehicle classification counts and travel time studies (speed runs using GPS loggers and floating car techniques) as support data for air quality and noise analyses. The manual turning movement and vehicle classification counts will be conducted concurrently with the ATR counts. A detailed plan for the traffic count program identifying ATR machine count locations as well as locations where 1-day or 3-day manual turning movement and vehicle classification counts will be performed will be submitted to NYCDOT for prior review. Where applicable, available information previously compiled for the LMTM and other recent studies in the vicinity of the WTC Site will be utilized, as appropriate.
- Inventory physical data for each analyzed intersection, including street widths, number of traffic lanes and lane widths, pavement markings, turn prohibitions, bicycle routes and parking regulations. Signal phasing and timing data for each signalized intersection included in the analysis will be obtained from NYCDOT. Data for those intersections that are currently inaccessible due to construction or are on streets that have not yet been built will be obtained from NYCDOT, PANYNJ and/or other agencies. Operational measures such as street direction changes and special striping, lane channelization and signal timing that may currently be in effect due to construction at the WTC Site and other locations (Chambers Street for example) will be identified.
- Determine existing traffic operating characteristics at each analyzed intersection including capacities, volume-to-capacity (v/c) ratios, average vehicle delays, and levels of service (LOS) per traffic movement, per intersection approach, and per overall intersection. The methodology of the *2000 Highway Capacity Manual* (HCS+, Version 5.5) will be used for the analysis.
- Based on data from the 2004 *WTC Memorial and Redevelopment Plan FGEIS* and other recent studies, Census data, and standard references including the 2010 *CEQR Technical Manual*, estimate the travel demand generated by the current development program for the World Trade Center site as well as demand from other significant developments planned in the vicinity by the 2019 analysis year. This will include daily and hourly person trips, and a modal distribution to estimate trips by auto, taxi, walking and the various transit modes serving the WTC Site (subway, PATH, bus and ferry). A truck trip generation forecast will also be prepared based on data from these sources and previous truck trip generation forecasts prepared by the PANYNJ.
- Compute future 2019 No-Action traffic volumes for the study area based on a background traffic growth rate of 0.25 percent per year for years one through five, and 0.125 percent per year for subsequent years as per 2010 *CEQR Technical Manual* criteria, along with demand from any other significant development projects expected to be completed in the future without the Proposed Action.



World Trade Center Campus Security Plan

Figure 8-1

Preliminary Traffic Analysis Locations

Using data from the Lower Manhattan Traffic Model, reassign traffic to new roadway links that will be present on the WTC Site in the 2019 No-Action condition (i.e., Greenwich, Fulton, Liberty and Vesey Streets). Security measures that would be implemented in the No-Action condition would be reflected in the network, as would mitigation measures accepted for all No-Action projects and other NYCDOT initiatives, as applicable. The elimination of temporary operational changes due to construction activity present in the Existing condition would also be reflected. Determine the No-Action v/c ratios, delays and levels of service for all analyzed intersections in the study area.

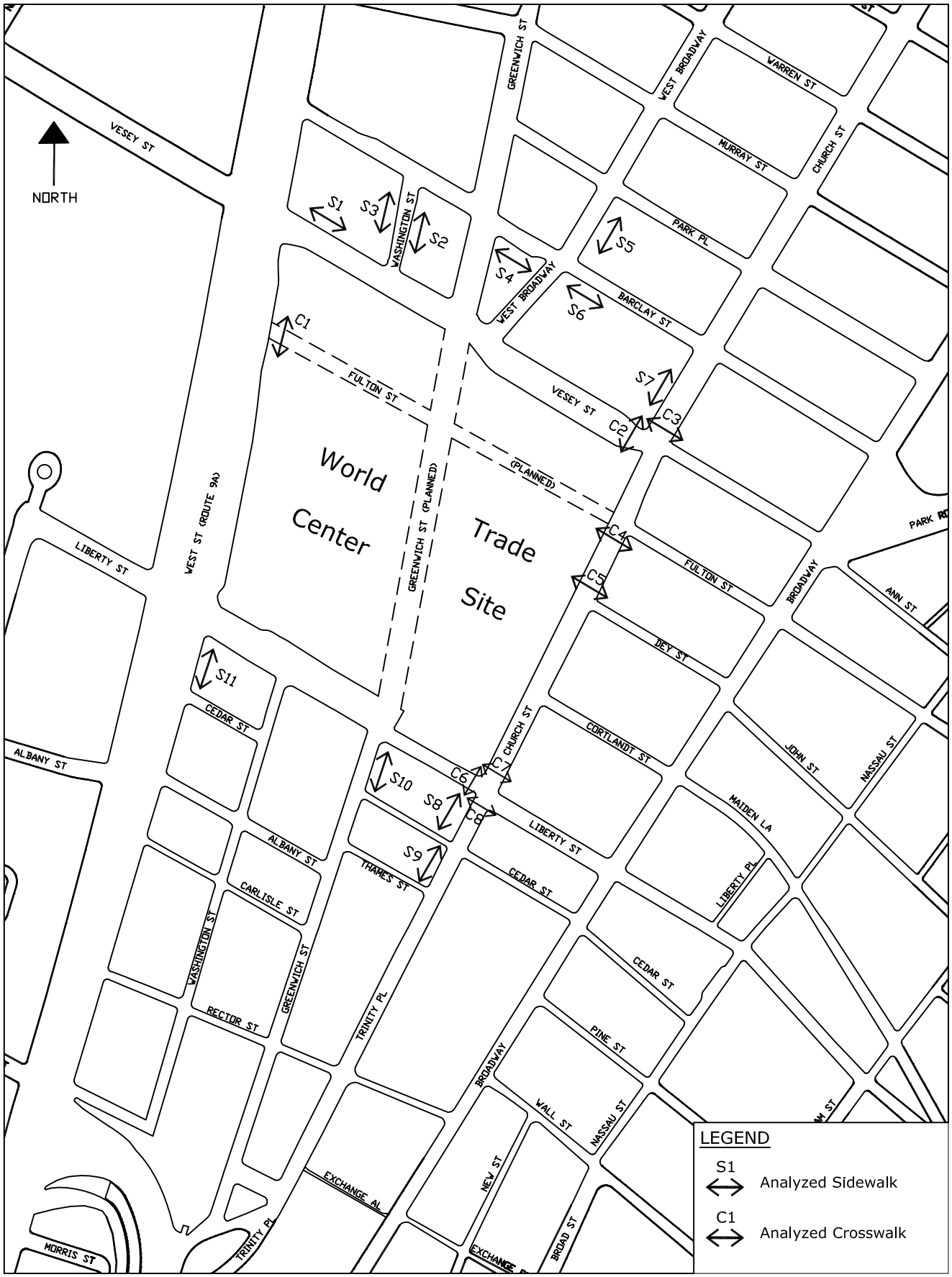
- Develop a 2019 With-Action street network reflecting implementation of the proposed Campus Security Plan. Action-related changes to the street network reflected in the analysis would include the installation of sally ports and barriers to restrict access to portions of West Broadway and Church, Fulton, Greenwich, Liberty, Vesey and Washington Streets; street direction changes; and the presence of curbside credentialing/authorization zones at various locations (as described in Section C, "Description of the Proposed Action"). Using data from the Lower Manhattan Traffic Model, reassign weekday AM, midday and PM and Saturday midday peak hour traffic destined to and through the WTC Site in 2019 to reflect the implementation of the proposed Campus Security Plan. Reassign vehicles destined to and from the WTC Site to the appropriate entry and exit portals based on type (i.e., autos, taxis/black cars, buses and trucks) and WTC origin/destination.
- Determine the resulting v/c ratios, delays, and LOS at analyzed intersections for the With-Action condition, and identify significant adverse traffic impacts in accordance with 2010 *CEQR Technical Manual* criteria. Localized network changes and problematic locations may be further assessed with respect to queuing and signal timing optimization using SYNCHRO or similar simulation.
- Perform detailed queuing analyses at the credentialing and screening zones to ensure vehicles waiting to enter the WTC Site can be accommodated within these proposed zones. Evaluate the potential for impact on the local traffic network.
- If any significant adverse traffic impacts are identified, develop and evaluate traffic improvements needed to mitigate these impacts, where practicable. Development of these measures will be coordinated with NYCDOT and other agencies as necessary. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

Transit

According to the general thresholds used by the Metropolitan Transportation Authority (MTA) and specified in the 2010 *CEQR Technical Manual*, detailed transit analyses are generally not required if a Proposed Action is projected to result in fewer than 200 peak hour rail or bus transit trips. If a proposed action would result in 50 or more bus trips being assigned to a single bus line (in one direction), or if it would result in an increase of 200 or more trips at a single subway station or on a single subway line, a detailed bus or subway analysis would be warranted.

The proposed Campus Security Plan would not result in the development of new land uses that would generate additional demand on the transit systems serving the project site; although, as discussed above, it is possible that the restrictions on vehicular access resulting from the Proposed Action may potentially induce changes in modal split (i.e., from the auto and taxi modes to transit) for persons en route to and from the World Trade Center and its environs. However, any potential increase in transit trips is expected to be relatively small in the context of the overall demand on the PATH system and the numerous subway, bus and ferry routes serving the site, and the numbers of such trips would be unlikely to exceed the *CEQR Technical Manual* analysis thresholds for either the rail or bus modes at any one rail transit station or bus route. As noted above, for this EIS the transportation analyses will take a conservative approach with respect to identifying potential significant adverse traffic impacts, and not assume any shift from vehicles to transit.

It should also be noted that much of the access between transit facilities and new and existing development in the vicinity of the WTC Site would occur below-grade and would not be directly affected


NORTH
VESEY ST
LIBERTY ST
WEST ST (ROUTE 9A)
ALBANY ST
CEDAR ST
RECTOR ST
CARLISLE ST
THAMES ST
TRINITY PL
MORRIS ST
EXCHANGE AL
NEW ST
BROAD ST
WALL ST
PINE ST
NASSAU ST
BROADWAY
CHURCH ST
GREENWICH ST
WASHINGTON ST
GREENWICH ST (PLANNED)
FULTON ST
(PLANNED)
VESEY ST
VEST BROADWAY
WARREN ST
MURRAY ST
PARK PL
BARCLAY ST
CORTLANDT ST
DEY ST
LIBERTY PL
MAIDEN LA
JOHN ST
ANN ST
PARK RO
World
Center
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S8
S9
S10
S11
C1
C2
C3
C4
C5
C6
C7
C8
LEGEND
S1
Analyzed Sidewalk
C1
Analyzed Crosswalk

by physical changes to the surface street network associated with the proposed Campus Security Plan. However, some of these changes may potentially affect transit bus services operating along these streets. For example, two lanes of Church Street, which is traversed by NYC Transit's M5 local bus service, approximately 13 MTA express bus routes and a number of other bus services operated by Academy, Suburban Transit and NJ Transit, would be incorporated into the secure area of the WTC Site through the installation of a median. The effect of this and other proposed street network changes on bus service operations will therefore be assessed in the EIS.

Pedestrians

According to 2010 *CEQR Technical Manual* criteria, projected pedestrian volume increases of less than 200 persons per hour at any pedestrian element (sidewalks, corner areas and crosswalks) would not typically be considered a significant impact, since that level of increase would not generally be noticeable and therefore would not require further analysis. Although the proposed Campus Security Plan would not directly generate new peak period pedestrian trips, it would alter pedestrian space at many locations as a result of the installation of guard and equipment booths, bollards and sidewalk extensions. The EIS will therefore include a quantitative pedestrian impact analysis focusing on affected sidewalks. A total of 19 locations (11 sidewalks and eight crosswalks) where pedestrian space or circulation would potentially be reduced due to installation of security equipment have been identified for analysis as shown in Figure 8-2. At each location where possible, pedestrian counts will be conducted and weekday AM, midday and PM and Saturday midday peak hour levels of service determined for the existing, No-Action and With-Action conditions using approved HCM methodologies. (Pedestrian volume estimates from the 2004 FGEIS and other studies will be used to support analysis at locations that do not currently exist or are affected by ongoing construction activity.) Where significant adverse impacts to pedestrian flow are identified, measures to mitigate these impacts will be developed to the extent practicable.

Vehicular and Pedestrian Safety

Traffic accidents involving injuries or fatalities to motor vehicle operators, pedestrians, and bicyclists will be researched and documented for key study area intersections, including those where substantial traffic diversions are likely to occur due to the Proposed Action. The potential for security measures and vehicle trip diversions associated with the proposed Campus Security Plan to have significant pedestrian and/or bicycle safety impacts will be assessed through a comparison of the future No-Action and future With-Action conditions.

Parking

The off-street parking supply at the WTC Site would total up to approximately 400 spaces for autos and 80 spaces for tour buses in a below-grade facility with access via the VSC. As there is relatively limited on-street parking in lower Manhattan, much of the WTC parking demand not accommodated on-site is expected to utilize off-street public parking facilities in the vicinity. As the proposed Campus Security Plan would not generate new parking demand nor directly affect the supply of off-street public parking, a quantitative analysis of off-street public parking conditions is not warranted for this EIS. The location, capacity and weekday AM and midday peak period utilization of off-street public parking facilities within one quarter-mile of the WTC Site would, however, be documented to facilitate the assignment of auto trips to the study area street network for the No-Action and With-Action conditions. Among the parking facilities included would be the Battery Parking Garage to the south of the WTC Site and facilities within Battery Park City to the west.

The Proposed Action would likely affect access to curbside space along streets where credentialing/authorization zones, sally ports, taxi stands, POV/livery pick-up and drop-off zones, relocated bus stops and other related measures would be implemented. Existing curbside parking

regulations will therefore be documented along streets within one quarter-mile of the WTC Site to the extent practicable given construction activity and street closures in the area, and the Proposed Action's potential effects to curbside access and the supply of on-street parking will be assessed.

TASK 9. AIR QUALITY

The Proposed Project would divert traffic (automobiles and trucks) from streets within and near the WTC Site to other area roadways. Furthermore, screening procedures may result in idling at locations where vehicle checks would be undertaken. While this would be expected to benefit air quality for receptors within the WTC Site, it may increase emissions in other areas of Lower Manhattan.

The number of project diverted vehicles will likely exceed the *CEQR Technical Manual* carbon monoxide (CO) analysis screening threshold of 170 vehicles in the peak hour at a number of locations within the study area. In addition, the projected number of diverted heavy-duty trucks or equivalent vehicles will likely exceed the applicable fine particulate matter ($PM_{2.5}$) screening thresholds in the 2010 *CEQR Technical Manual*. Therefore, a microscale analysis of CO and PM mobile source emissions at affected intersections is necessary. In addition, an assessment of nitrogen dioxide (NO_2) emissions from diverted vehicles will be performed based on available guidance. Detailed modeling analysis will focus on intersections along diversion routes and at other locations that could experience a significant increase in emissions due to delays and/or vehicle idling.

On a regional scale, the Proposed Project has some potential to increase vehicle miles traveled (VMT) as it would divert vehicle trips at various locations in Lower Manhattan. Relying on the projections of the Lower Manhattan travel demand model, the EIS will describe the potential impacts on regional air quality. It is not anticipated that a detailed regional assessment will be required, but any changes in emissions will be documented qualitatively based on the levels of diversions and the study area.

The following tasks will be performed as part of this task:

- Determine receptor locations for the CO and PM microscale analysis. Select critical locations in the study area based on data obtained from the traffic impact analysis.
- Gather existing air quality data. Collect and summarize existing ambient air quality data for the study area. Specifically, ambient air quality monitoring data published by the New York State Department of Environmental Conservation NYSDEC will be compiled for the analysis of existing and future conditions.
- Select dispersion model. Identify the appropriate dispersion model to be used in the microscale carbon monoxide analysis at each of the receptor sites previously identified. It is anticipated that the CAL3QHC dispersion model (Version 2) will be used for the CO microscale analysis and the CAL3QHCR model will be used for the PM analysis. For the CAL3QHCR analysis, five years of recent meteorological data from LaGuardia Airport and concurrent upper air data from Brookhaven, New York, will be used.
- Select emission calculation methodology and "worst-case" meteorological conditions. Compute vehicular cruise and idle emissions for the dispersion modeling using EPA's MOBILE6.2 model. Conservative meteorological conditions to be assumed in the dispersion modeling are a 1 meter per second wind speed, Class D stability and a 0.79 persistence factor. In addition, the CEQR Technical Manual recommended winter temperature of 50 degrees Fahrenheit for the Borough of Manhattan will be used as input to the model.
- Calculate CO concentrations. Calculate maximum 1- and 8-hour CO concentrations for each mobile source microscale receptor site for existing conditions, the future conditions without the project and the future conditions with the project. Maximum 24-hour PM_{10} and 24-hour and annual $PM_{2.5}$

concentrations will be determined for the future conditions without the project and the future conditions with the proposed project. CO and short-term PM concentrations will be determined for up to two peak periods. No field monitoring will be included as part of these analyses.

- An assessment of NO_2 emissions from project diverted vehicles will be performed based on available guidance.
- Conduct an analysis to determine whether federal conformity requirements under 40 CFR Part 93 are applicable to the proposed project.
- Compare existing and future levels with standards. Compare and determine compliance of future CO pollutant levels with and without the Preferred Alternative with the National Ambient Air Quality Standards (NAAQS). In addition, New York City's CO *de minimis* criteria will be employed to determine the impacts of the proposed project. Predicted PM_{10} concentrations with the proposed project will be compared to the NAAQS, and predicted project-generated increases of $PM_{2.5}$ will be compared with the CEQR criteria.

TASK 10. GREENHOUSE GAS ANALYSIS (GHG)

The potential diversion of automobile and truck trips from potential street closures to through traffic in Lower Manhattan may result in a modest increase in vehicle miles of travel in the New York Region. A qualitative discussion of the impacts of the Proposed Project on energy consumption and greenhouse gas emissions will be presented, relying on recent guidance from the *2010 CEQR Technical Manual*. The assessment will examine the consistency of the project with the PlaNYC greenhouse gas emission reduction goal.

TASK 11. NOISE

The diversion of vehicle volumes to alternative streets has the potential to result in perceptible increases in noise. Typically, a substantial increase is considered a doubling in passenger car equivalents (PCEs). The methodology outlined in the *2010 CEQR Technical Manual* will be followed. Consistent with this methodology, the noise analysis will consist of the following:

- Identify sites for quantified noise analysis based on the potential changes in traffic predicted by the traffic model.
- 20-minute measurements at each receptor location during typical weekday AM, midday, PM, and nighttime peak periods. Hourly L_{eq}, L_1, L_{10}, L_{50}, and L_{90} values will be recorded.
- Use The Noise Model (TNM) to calculate existing ambient noise levels for the six receptor sites.
- Predict future no build and build ambient noise levels using the TNM at the six receptor sites.
- Evaluate changes in ambient noise consistent with CEQR criteria.
- Characterize changes in noise levels and determine whether the proposed project (and associated traffic diversions) would result in significant adverse impacts based on CEQR criteria.

TASK 12. PUBLIC HEALTH

According to the *CEQR Technical Manual*, public health is the organized effort of society to protect and improve the health and well-being of the population through monitoring; assessment and surveillance; health promotion; prevention of disease, injury, disorder, disability and premature death; and reducing inequalities in health status. The goal of CEQR with respect to public health is to determine whether

adverse impacts on public health may occur as a result of a proposed project, and if so, to identify measures to mitigate such effects.

According to the guidelines of the *CEQR Technical Manual*, a public health assessment may be warranted if an unmitigated significant adverse impact is identified in other CEQR analysis areas, such as air quality, hazardous materials, or noise. If unmitigated significant adverse impacts are identified in any of these technical areas and the lead agency determines that a public health assessment is warranted, an analysis will be provided for the specific technical area or areas.

TASK 13. NEIGHBORHOOD CHARACTER

The character of a neighborhood is established by numerous factors, including land use patterns, the scale of its development, the design of its buildings, the presence of notable landmarks, and a variety of other physical features that include traffic and pedestrian patterns, noise etc. The area surrounding the project site is composed of office, retail, residential, cultural, and institutional uses.

The Proposed Action has the potential to alter certain constituent elements of the affected area's neighborhood character, urban design, socioeconomic conditions, and traffic levels, and therefore an analysis will be provided in the EIS. As suggested by the *CEQR Technical Manual*, the study area for neighborhood character will be coterminous with the quarter-mile land use study area (refer to Figure 2-1). The chapter will summarize changes that can be expected in the character of the neighborhood in the future without the Proposed Action (No-Action condition) as well as describing the Proposed Action's impacts on neighborhood character.

Subtasks will include:

- Based on the other EIS chapters, describe the predominant factors that contribute to defining the character of the neighborhood, including land use, zoning, and public policy; socioeconomic conditions; historic and cultural resources; urban design and visual resources; transportation; and noise.
- Summarize changes in the character of the neighborhood that can be expected in the future No-Action condition based on planned development projects, public policy initiatives, and planned public improvements, as applicable.
- Summarize changes in the character of the neighborhood that can be expected in the future With-Action condition and compare to the future No-Action condition. A qualitative assessment will be presented, which will include a description of the potential effects of the Proposed Action on neighborhood character.

TASK 14. CONSTRUCTION IMPACTS

Construction impacts, though temporary, can have a disruptive and noticeable effect on the adjacent community, as well as people passing through the area. Construction impacts are usually important when construction activity has the potential to affect transportation conditions, archaeological resources and the integrity of historic resources, community noise patterns, air quality conditions, and mitigation of hazardous materials. According to the *CEQR Technical Manual*, projects with overall construction periods lasting longer than two years and which are near to sensitive receptors should undergo a preliminary impact assessment. This chapter of the EIS will provide a preliminary impact assessment following the guidelines in the *CEQR Technical Manual.* The preliminary assessment will evaluate the duration and severity of the disruption or inconvenience to nearby sensitive receptors. If the preliminary

assessments indicate the potential for a significant impact during construction, a detailed construction impact analysis will be undertaken and reported in the EIS in accordance with guidelines contained in the *CEQR Technical Manual*. Technical areas to be assessed include the following:

- Transportation Systems. This assessment will qualitatively consider temporary losses in lanes, sidewalks, and other transportation services on the adjacent streets during construction, and identify the increase in vehicle trips from construction workers and equipment. If warranted under CEQR guidelines, a travel demand forecast for the construction period will be prepared.
- Air Quality. The construction air quality impact section will contain a qualitative discussion of both mobile air source emissions from construction equipment and worker and delivery vehicles, and fugitive dust emissions. It will discuss measures to reduce impacts.
- Noise Impacts. The construction noise impact section will contain a qualitative discussion of noise from construction activity.
- Hazardous Materials. In coordination with the work performed for hazardous materials, above, summarize actions to be taken during project construction to limit exposure of construction workers to potential contaminants.
- Socioeconomic Conditions. The EIS will consider whether construction conditions as a result of the Proposed Action would affect access to existing businesses, the potential consequences concerning their continued viability, and the potential effects of their loss, if any, on the character of the area.
- Historic and Cultural Resources: In coordination with the work performed for historic resources above, identify the potential for construction-period impacts, and summarize actions to be taken during project construction to protect adjacent historic resources from potential construction impacts.
- Neighborhood Character. This assessment will consider potential impacts during the construction period to the character of the surrounding neighborhood.
- Other Technical Areas. As appropriate, discuss the other areas of environmental assessment, including Land Use, Zoning and Public Policy, Open Space, Socioeconomic Conditions, Community Facilities, and Infrastructure, for potential construction-related impacts.

TASK 15. ENVIRONMENTAL JUSTICE

With respect to environmental justice, NEPA guidelines require that federal agencies consider and address adverse environmental effects of proposed federal projects on minority and low-income communities. Because of the possible involvement of several Federal departments or agencies in this action, environmental justice will be assessed in the EIS, in accordance with NEPA guidelines.

TASK 16. MITIGATION

Where significant adverse project impacts have been identified in Tasks 2 through 15, measures to mitigate those impacts will be described and analyzed. These measures will be developed and coordinated with the responsible City/State agencies as necessary, including LPC, NYCDOT, NYCDEP, MTA, PANYNJ and NYSDOT. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

TASK 17. ALTERNATIVES

The purpose of an alternatives section in an EIS is to examine feasible development options that would tend to reduce project-related impacts. The alternatives will be defined once the full extent of the

Proposed Action's impacts has been identified. The alternatives will include the No-Action Alternative and may include one or more alternatives that reduce any identified significant adverse impacts. The alternatives analysis will be qualitative, except where significant adverse impacts of the Proposed Action have been identified. The level of analysis provided will depend on an assessment of project impacts determined by the analysis connected with the appropriate tasks.

TASK 18. SUMMARY EIS CHAPTERS

In accordance with CEQR guidelines, the EIS will include the following three summary chapters, where appropriate to the Proposed Action:

- **Unavoidable Adverse Impacts** - which summarizes any significant adverse impacts that are unavoidable if the Proposed Action is implemented regardless of the mitigation employed (or if mitigation is not feasible).
- **Growth-Inducing Aspects of the Proposed Action** - which generally refer to "secondary" impacts of a Proposed Action that trigger further development.
- **Irreversible and Irretrievable Commitments of Resources** - which summarizes the Proposed Action and its impacts in terms of the loss of environmental resources (loss of vegetation, use of fossil fuels and materials for construction, etc.), both in the immediate future and in the long term.

TASK 19. EXECUTIVE SUMMARY

The executive summary will utilize relevant material from the body of the EIS to describe the Proposed Action, its environmental impacts, measures to mitigate those impacts, and alternatives to the Proposed Action. The executive summary will be written in enough detail to facilitate drafting of a notice of completion by the lead agency.