# ES EXECUTIVE SUMMARY

## ES.1 Introduction

The Federal Transit Administration (FTA), in cooperation with the Metropolitan Transportation Authority (MTA), MTA Capital Construction, and MTA New York City Transit (MTA/NYCT), propose to construct and operate the South Ferry Terminal Project to improve access to and from Lower Manhattan. This Environmental Assessment (EA) for the South Ferry Terminal Project has been prepared by MTA/NYCT and the FTA, in conjunction with MTA's request for FTA funding of this project. The purpose of this EA is to provide FTA and MTA/NYCT with sufficient information and public and agency input on the proposed project's impacts on the human and natural environments to make determinations and decisions on the project.

## ES.2 Project Background

The South Ferry Terminal Project is one of three currently identified priority projects meant to address the urgent need for the rebuilding and development of comprehensive transit improvements in Lower Manhattan in response to the events of September 11, 2001. The two other priority projects are the Permanent World Trade Center (WTC) Port Authority Trans-Hudson (PATH) Terminal, sponsored by Port Authority of New York and New Jersey (PANYNJ) and the Fulton Street Transit Center, sponsored by the MTA/NYCT. These priority projects were formally identified by New York Governor George Pataki as the "Lower Manhattan Transportation Recovery Projects" through a coordinated process conducted in late 2002 and early 2003 by the Transportation Working Group, a group of local decision makers including the State of New York, the City of New York, MTA, PANYNJ, and the Lower Manhattan Development Corporation (LMDC). On February 27, 2003, U.S. Transportation Secretary Norman Y. Mineta announced the selection of these projects as a group of nationally recognized transportation projects designated to receive high-level attention under President Bush's September 18, 2002 Executive Order 13274, *Environmental Stewardship and Transportation Infrastructure Project Review* (see Appendix A). This designation as priority projects is intended to help expedite the rebuilding of the transportation system damaged in the terrorist attacks as the projects advance through the National Environmental Policy Act (NEPA) review process. The transportation recovery projects are being undertaken with $4.55 billion in federal funding.

In addition to causing tremendous loss of life, the events of September 11, 2001 caused serious disruption to the economy, infrastructure and quality of life, and have made travel to and from Lower Manhattan difficult and time consuming. To successfully support revitalization of Lower Manhattan, improvements to transit facilities are not only needed to restore transportation functionality, but to accommodate the range of changes that September 11 has triggered in the broader context of Lower Manhattan's recovery. This includes the redevelopment of the World Trade Center site, anticipated increases in visitor activity, and shifts in land use from commercial to residential. Improvements to

Lower Manhattan's existing transportation facilities will not only improve visitor experiences, but will also substantially raise the quality of life for the area's residents and workers. These advances are important to retaining and developing Lower Manhattan's commercial base.

The South Ferry Subway Station is the southernmost station of the MTA/NYCT 1 9 subway lines. These lines serve the full length of the west side of Manhattan, between South Ferry and the 242nd Street Station in the Bronx. The 1 9 Cortlandt Street Station in the WTC site was destroyed in the September 11 attack, along with portions of the subway line north and south of the station (between Barclay and Liberty Streets). This destruction resulted in the suspension of subway service on the 1 9 line to all stations south of the Chambers Street Station after September 11, 2001. The suspension of the 1 9 service also affected the 2 3 service. Due to the inability to turn 7th Avenue corridor local train service at the South Ferry Station, all 1 local service was extended to Brooklyn, all 2 service operated as a local between 96th Street and Chambers Street, and all 3 service was terminated at 14th Street. This resulted in a loss of capacity in Brooklyn, and a much slower trip for most 2 3 customers. To make the 1 9 service in Lower Manhattan operational as quickly as possible, MTA/NYCT rebuilt the damaged section of the line in its original alignment; service on the 1 9 line to South Ferry was restored in September, 2002. With this rebuilding, MTA/NYCT made a commitment to address the sub-standard operation and physical arrangement of the South Ferry Station because of its importance to overall transportation system connectivity in Lower Manhattan.

Because of its position as a key intermodal point, as well as a stepping off point to numerous important commercial and cultural destinations in Lower Manhattan, addressing the deficiencies of the existing South Ferry Station is integral to improving the functionality of the area's transportation infrastructure, thereby supporting Lower Manhattan's full economic recovery. Improvements are also needed to enhance line reliability, which will be required to meet the increased demand anticipated with the recovery and growth in Lower Manhattan. For these reasons the South Ferry Terminal Project has been identified as one of the priority transportation improvements in Lower Manhattan. Figure 1 in Chapter 1 shows the project's location.

## ES.3 Project Purpose and Need

The September 11 attacks destroyed critical portions of the Lower Manhattan transportation system, compounding existing deficiencies and jeopardizing the area's sustainability as a Central Business District, emerging residential area, and key tourist destination. Rebuilding the Lower Manhattan transportation network – restoring service, eliminating deficiencies, and anticipating future needs – is a critical basis for its successful neighborhood revitalization. As identified above, the function of the South Ferry Station as a key intermodal point, and its proximity to numerous important commercial, historic, and cultural destinations in Lower Manhattan, make its improvement integral to this revitalization process. In order for the South Ferry Station to realize its potential for contributing to the revitalization of Lower Manhattan and the

region, its existing functional and operational deficiencies need to be addressed, and its connectivity with other transit services and the street network need to be improved. Figure 2 in Chapter 1 shows the existing station configuration, and Figure 5 in Chapter 1 shows the conceptual site plan for the Proposed Action.

The purpose of the South Ferry Terminal Project is to replace the existing substandard station with a new terminal that addresses the functional and operational deficiencies of the existing station. The development of a new terminal in this location would reduce congestion at the existing subway access and platform, improve the overall experience of transit users, improve safety, provide full Americans with Disabilities Act (ADA) - compliant access for passengers, and enhance intermodal pedestrian connectivity to the ⓃⓇ subway lines and the Whitehall Ferry Terminal. In doing so, the project would address the need for improved access to Lower Manhattan in support of economic recovery and growth.

The South Ferry Terminal Project as currently conceived represents not only a much-needed enhancement of a key downtown transit facility, but also forms an important node within the larger context of the regeneration of Lower Manhattan. In combination, the operational improvements on the ❶❾ line and the customer egress improvements resulting from the new South Ferry Terminal would save some customers as much as six minutes, and all customers would benefit from an average of almost four minutes of time savings per trip. Total travel time savings is estimated to exceed 365,000 hours per year.

## ES.4 Coordination with Other Lower Manhattan Projects

Ongoing and effective coordination with other Lower Manhattan projects is an important aspect of the management of the South Ferry Terminal Project. Since shortly after September 11, 2001, MTA/NYCT has participated in ongoing special coordination with other project sponsors in Lower Manhattan, initially through the offices of New York City Department of Transportation (NYCDOT). Additional working group sessions were held during the spring, summer and fall of 2003 with New York State Department of Transportation (NYSDOT), PANYNJ, LMDC, NYCDOT and others to develop and refine the approach and methodologies for cumulative effects analysis, described in Chapter 2 of this EA. All of the projects are sharing information such as background data, schedules, construction plans (methods and phasing), and monitoring data. This multi-agency coordination will continue through the completion of project construction. Documentation of this coordination is provided in Appendices E and G.

For the South Ferry Terminal Project, special coordination efforts are underway for Battery Place, Battery Park, and Peter Minuit Plaza. For the work on Battery Place, MTA/NYCT is coordinating with NYSDOT and NYCDOT to ensure maintenance and protection of traffic and that the work is phased to eliminate rework. For the work in Battery Park, MTA/NYCT is coordinating with the New York City Department of Parks and Recreation (NYCDPR), The Battery Conservancy, New York City Economic Development Corporation (NYCEDC), and National Park Service to ensure that park

access, safety, and security is maintained, and that restoration work is consistent with the Master Plan for Battery Park.

## ES.5 Description of the Proposed Action

The South Ferry Terminal Project includes three general components: Tunnel bellmouth and fan plant; approach tunnels; and new terminal. Figure 6 in Chapter 1 shows schematic diagrams of the Proposed Action. The new terminal and associated improvements would be located under Peter Minuit Plaza, which is owned by the City of New York and located at the tip of Lower Manhattan. The tunnel bellmouth would be located underneath the intersection of Greenwich Street and Battery Place, and the fan plant would be located underneath Battery Place just west of its intersection with State Street. The approach tunnel would be located underneath the eastern edge of Battery Park. The total length of the project is approximately 1,700 linear feet. The project corridor is bordered by State Street and Whitehall Street to the east; Whitehall Ferry Terminal and the Coast Guard Station to the southwest; residential and office buildings along Battery Place to the north; the Brooklyn Battery Tunnel tubes, Battery Park Underpass and Castle Clinton National Monument to the west; and New York Harbor to the south.

The new terminal would consist of two general levels: the upper level would house fare control mezzanines, electrical and mechanical facilities, and other MTA/NYCT uses; the lower level would contain two transit tracks serving a single island platform. The terminal would have three surface entry/exit locations: two within the reconfigured Peter Minuit Plaza and one on the State Street sidewalk adjacent to the eastern edge of Battery Park. In addition, a direct connection will be made between the southernmost mezzanine of the new terminal and the south mezzanine of the nearby (N)(R) line station at Whitehall Street. The elevator access to the terminal would be located with the entrance facility nearest to the Whitehall Ferry Terminal.

The South Ferry Terminal Project is expected to be in construction from late 2004 to the end of 2007, with the peak construction activity occurring within a 12-month period between 2005 and 2006. The project would be constructed in components, as described above. The work that would occur from mid-2006 to the end of 2007 is finishing work to the terminal, tunnels, and bellmouth/fan plant, all of which will occur below ground and have limited access requirements to the surface.

## ES.6 Alternatives Considered

With the (1)(9) subway line damaged and out of service south of Chambers Street as a result of the WTC attacks of September 11, 2001, MTA/NYCT began to study alternatives to restoring the service that went beyond simply rebuilding the damaged sections. The service shutdown, along with the planning effort already underway for the area, provided an opportunity to examine new ideas for transit access and improvements. With the uncertainty around redevelopment of the WTC site, MTA/NYCT underwent a planning process which included three broad categories of alternatives. These included:

1) repairing the damaged 1 9 tunnel, with limited improvements at the existing South Ferry Station; 2) repairing the damaged tunnel, with a new terminal at South Ferry; and 3) relocating the 1 9 alignment to West Street, with a new terminal at South Ferry. The preliminary screening process eliminated several alternatives due to site constraints and construction complexity.

As part of the project planning process, alternative courses of action are considered to compare their characteristics, benefits, and relative environmental impacts. Potential impacts to the human and natural environment influenced the development of alternatives for the South Ferry Terminal Project. As identified above, the purpose of the project is to replace the existing South Ferry Subway Station with a new terminal facility to address functional and operational problems with the station; to better integrate the station with other transportation facilities in the vicinity; to improve reliability, provide safer and simpler access, and better integrate the station with other transportation facilities in the vicinity; and achieve ADA compliance, all while minimizing impacts to resources. Several alternatives were considered by MTA/NYCT for the South Ferry Terminal Project, including seven Build Alternatives and the No Build Alternative. The alternatives were evaluated based on their technical complexity, potential for impacts to Battery Park and other local area resources, and ability to meet the project's goal and objectives. These alternatives, described and graphically represented in greater detail in Chapter 3 of the EA, are listed below:

- Platform Extension Alternative
- Three-Track Terminal in Battery Park
- Terminal Inside Existing 1 9 Loop
- Water Street Terminal
- South Street Terminal
- Whitehall Street Terminal
- Two-Track Terminal in Peter Minuit Plaza (Proposed Action)

Table ES-1 at the end of this Executive Summary provides a summary comparison of the alternatives' ability to meet the project's goal and objectives. As shown in the table, each of the first seven alternatives described failed to either resolve the functional and operational deficiencies of the existing station, did not facilitate intermodal connectivity, or they all proved to be technically complex and difficult to build. In addition, the Proposed Action is the only prudent and feasible alternative that minimizes impacts to Battery Park, which is one of the goals of the project. Although the Proposed Action would have temporary construction impacts, substantial advance planning has been utilized to minimize those impacts. The Proposed Action also includes no entry/exit features in the park. The Proposed Action was therefore selected because it has the features necessary to address the functional and operational deficiencies of the existing station, and to fulfill the purpose and need of the project.

## ES.7 Approvals, Permits, and Coordination Required

This EA has been prepared by MTA/NYCT and the FTA. The FTA is the funding entity for the project; thus it is the Lead Agency for the NEPA environmental review process. The EA has been prepared in accordance with regulations for implementing NEPA as issued by the FTA (49 CFR Part 662 and 23 CFR Part 771) in conformance with the regulations of the Council on Environmental Quality (CEQ) (40 CFR Parts 1500 – 1508).

As documented in this EA, the Proposed Action would comply with all applicable federal regulations and standards. Table ES-2 at the end of this Executive Summary provides a list of the approvals, permits, and coordination required for the project.

## ES.8 Potential Environmental Impacts of the Proposed Action

The environmental impact analysis approach for the South Ferry Terminal Project incorporates and is consistent with the Environmental Analysis Framework for the Federal Transportation Recovery Projects (Framework), of which the South Ferry Terminal Project is a part (see Appendix D). As described in Chapter 2, the Framework was developed by the following group of governmental entities involved with recovery in Lower Manhattan: FTA, Federal Highway Administration (FHWA), MTA/NYCT, PANYNJ, NYSDOT, LMDC, the Office of the New York City Council, and the New York City Planning Commission. The Framework has been agreed to and supported by these entities, and will be used in connection with each of their proposed Federal Transportation Recovery Projects. The Framework consists of the following components:

- Green Design, Green Construction, and Sustainability Principles
- Construction Environmental Protection Plan
- Public Involvement and Governmental Entities Coordination Plan
- Baseline Assessment of Resources and Coordinated Cumulative Effects Analysis Approach

In accepting the Environmental Analysis Framework, the project sponsors also adopted common Environmental Performance Commitments (EPCs) intended to be incorporated into project planning, design and construction documents and contracts. EPCs are standards and measures adopted by individual project sponsors that would contribute to lowering the potential of the sponsor's project for adverse environmental impacts, and lessen the potential for each project to contribute to overall adverse cumulative effects in Lower Manhattan. This approach recognizes that improvement of access to Lower Manhattan in support of economic recovery and resumed growth may cause short-term impacts before all potential benefits of improved public transportation on the Lower Manhattan environment and economy are realized. To minimize the burden on the environment when improving access to Lower Manhattan, EPCs would be incorporated into the implementation of each project.

The impact assessment analyzes the project in three analysis years: 1) A peak construction year of 2005/2006; 2) Initial operation in early 2008; and 3) Full or long-term operation in 2025.

The following is a summary of the Proposed Action's potential impacts to the environment.

Land Acquisition and Displacement

The project would require the alienation and acquisition of approximately 0.07 acre of mapped parkland for permanent surface penetrations associated with the terminal (three entry/exit facilities and a vent structure). The project would also require various temporary construction easements and permanent subsurface easements for the placement of underground facilities in Peter Minuit Plaza and Battery Park. The use of these resources is considered in the Section 4(f) Evaluation prepared for the project, which appears at the end of this volume of the EA. A Section 4(f) Evaluation is required if a federally funded transportation project requires the use of a publicly owned park, recreation area, wildlife or waterfowl refuge area, or any significant historic site. There would be no temporary or permanent displacements of residences or businesses.

Public Open Space

A portion of the project (approach tunnel) would be constructed using primarily cut and cover methods within the eastern edge of Battery Park. The anticipated construction period for this component of the project is approximately nine months. Although areas of the park would require closure during the anticipated nine-month construction period, MTA/NYCT is working closely with The Battery Conservancy and NYCDPR to ensure that public access to the park is maintained. Construction would occur in only the northeast corner of the park, affecting entrance to the park from the existing path at the corner of State Street and Battery Place; the remainder of the park would not be affected. Walkways would be maintained over the excavation to the extent possible. Battery Park is approximately 23 acres in area. The proposed construction zone in the park would be approximately one acre, representing less than five percent of the total park area. Appropriate signage for alternative access to the park and its facilities would be provided in this location. MTA/NYCT is actively coordinating with other projects in and around Battery Park during planning to ensure that disruption and impacts to the park are minimized. MTA/NYCT is also working with NYCDPR to identify approaches and project features that can be incorporated into the project design and construction methods to address construction-related impacts to Battery Park.

Peter Minuit Plaza, which consists of five small traffic islands and is currently used for construction staging for the Whitehall Ferry Terminal renovation project, would also be affected by terminal construction. The temporary construction zone would be approximately 1.8 acres. The Plaza would be fully reconstructed following completion of the terminal, in accordance with the Whitehall Ferry Terminal renovation plan.

As noted above, MTA/NYCT has prepared a Section 4(f) Evaluation for use of Section 4(f) resources, including Peter Minuit Plaza, Battery Park, and historic and archaeological

resources. In addition, Battery Park received a federal grant in 1981 under the United States Department of Interior Land and Water Conservation Fund Act (LWCFA). Section 6(f) of the LWCFA prohibits the conversion of a park that has received LWCFA funding to a non-recreational use without the prior consent of the Secretary of the Department of the Interior. MTA/NYCT is in consultation with the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) regarding the temporary construction period in Battery Park and the permanent use of a portion of the sidewalk between the eastern edge of Battery Park and State Street (the sidewalk in this location is park of Battery Park) for one of the terminal's entry/exit points.

Transportation and Pedestrian Circulation

The pedestrian circulation analysis indicates that all subway elements analyzed (existing South Ferry Station, new terminal, and Whitehall Street Station elements affected by the project) would operate at acceptable levels of service in all analysis years and for all peak hours analyzed. Since no permanent changes in traffic flow are anticipated with the project, nor would a substantial number of vehicular trips be generated by the completed project in 2008, a vehicular traffic analysis was not warranted.

To address potential traffic impacts during construction, MTA/NYCT has committed to the establishment of a Maintenance and Protection of Traffic (MPT) Plan that will accommodate traffic flow in each direction on Battery Place and State Street. The Plan will also permit continuous access for buses to Greenwich Street from Battery Place. Peter Minuit Plaza would be under construction in 2006 due to the South Ferry Terminal project. Pedestrian flow from the Staten Island Ferry through the construction and staging area in the Plaza would be maintained in a manner similar to the current scheme being used for the Whitehall Ferry Terminal reconstruction project. Based upon the analyses, the completion of the proposed project will not cause any adverse traffic or pedestrian impacts.

Construction of the project's bellmouth, which includes reconstruction of a few hundred feet of existing subway tunnel, would necessitate the use of General Orders (i.e., temporary suspension of and/or modifications to train service) on the 1 9 lines. Transit operations of the 4 5 line are not anticipated to be affected by project construction. Service interruptions would occur during nighttime hours and weekends when impacts to passengers are minimal, and would be conducted according to standard MTA/NYCT procedures. There would be no long term adverse effects to the 1 9 service.

Air Quality

The air quality analysis for the peak construction period of 2005/2006 indicates that the pollutant levels predicted for receptor locations within the South Ferry study area would not exceed any of the National Ambient Air Quality Standards (NAAQS) for carbon monoxide (CO), nitrogen dioxide ($NO_2$), particulate matter ($PM_{10}$), and sulfur dioxide ($SO_2$). These predicted concentrations represent the South Ferry Terminal Project in combination with the other major Lower Manhattan Recovery Projects, and incorporate the use of ultra low sulfur diesel fuel for construction vehicles, as committed to by MTA/NYCT and the other Lower Manhattan project sponsors.

The South Ferry Terminal Project would not generate nor induce new vehicular traffic. Therefore, the analysis of local mobile air pollutant sources from operation of the project is not warranted. The air tempering systems and ventilation plants associated with the project are not expected to generate substantial levels of emissions.

Noise and Vibration

Temporary construction noise associated with the project would exceed FTA thresholds at three of the five sensitive receptors identified (two parks and one church/rectory) in the South Ferry study area. One residential receptor (the rectory at the church) would be affected by construction noise; no other residential receptors would be affected. Incorporation of noise-related EPCs and noise specifications into project design and construction would reduce adverse noise impacts due to construction, in accordance with FTA criteria. Construction-related vibration would exceed FTA thresholds at one of the five receptors (the historic One Broadway Building). Vibration protection measures would be implemented through the Construction Environmental Protection Plan (CEPP) to limit vibrations to levels that would not cause structural damage to historic buildings.

Operational noise and vibration associated with the project is not expected to be above FTA thresholds. The design of the fan plants and ventilation shafts will consider all measures to reduce noise emission from the equipment. Noise from this equipment is expected to be masked by the background noise from street traffic and other background noise sources. The proposed approach tracks and terminal would be located underneath the existing loop approach and, thus, would be further away from adjacent buildings on Battery Place, Broadway, and State Street, and 400 feet or more from any identified historic structures. Therefore, the Proposed Action is not anticipated to result in an adverse change in vibration levels at adjacent sensitive receptors.

Because the project involves replacement of an existing subway station with a new terminal, and because these facilities are located below ground, the project would not result in an increase in vehicular traffic to surface streets. Therefore, increased traffic-related noise would not result from the project.

Archaeological and Historic Resources

The Proposed Action has the potential to affect historic archaeological resources during the construction period. An Archaeological Resource Management Plan (ARMP) will be implemented, and will describe the steps that will be taken to identify, evaluate and, if necessary, mitigate the potential disturbance of archaeological resources present in the project corridor. The ARMP has been prepared in consultation with the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP), and the New York City Landmarks Preservation Commission. The ARMP is referenced in the Programmatic Agreement (see Appendix B) to be executed among the FTA, MTA/NYCT and NYSOPRHP to address the treatment of archaeological and historic resources associated with the project.

The Proposed Action would also affect City-owned underground vaults associated with the International Mercantile Marine Building at One Broadway. Portions of the vaults

would be removed and reconstructed to accommodate construction of the tunnel bellmouth. Although this building is a designated historic structure in the National Register of Historic Places and a New York City Landmark, the underground vaults are not considered historic elements and NYSOPRHP has made a determination of no effect for the proposed work on the vaults.

Under the Proposed Action, the existing South Ferry Station, which has been determined to be eligible for listing on both the State and National Registers of Historic Places, would be closed to the public immediately after the new South Ferry Terminal is opened for operations. Because the existing loop track and station would continue to function for train storage and lay-up, the existing station would be linked to the new terminal for passage of MTA/NYCT personnel only. This linkage would occur via a new door that would be installed at the eastern end of the platform underneath the existing entry/exit stairwell. MTA/NYCT would maintain and protect the historic elements of the station from damage. No modifications to historic elements are anticipated. Employees would enter the station as necessary to maintain the active loop tracks and to access storage areas. In addition, MTA/NYCT would offer special public access tours of the historic station in the future. The treatment of the existing station is also covered by the Programmatic Agreement described above.

Other Environmental Resource Categories

The Proposed Action does not have the potential for adverse effects on any of the other environmental resources categories evaluated in the EA.

Cumulative Effects

The cumulative effects analysis contained in Chapter 6 of the EA has been prepared in accordance with the FTA's *Approach to Cumulative Effects Analysis for the Lower Manhattan Recovery Effort* (see Appendix D). In a coordinated effort, the FTA, other federal partners, and local project sponsors identified five critical environmental factors as resources of concern for cumulative effects: air quality, access and circulation, noise and vibration, cultural and historic resources, and economic factors. The same three analysis years evaluated for the project were analyzed for cumulative effects (i.e., 2005/2006 peak construction, 2008 initial operation, and 2025 full or long term operation). The implementation of EPCs into the projects to reduce the potential for adverse impacts across projects also applies to the cumulative condition. Following are conclusions from the cumulative effects analysis from Chapter 6. Please refer to that chapter for more detail on the analysis.

*Air Quality* – The analysis shows that, cumulatively, pollutant concentrations would not exceed NAAQS and *de minimis* criteria for carbon monoxide (CO), nitrogen dioxide ($NO_2$), particulate matter ($PM_{10}$), and sulfur dioxide ($SO_2$). Whereas no regulatory standards exist for $PM_{2.5}$ emissions associated with construction, the analysis in this EA utilized the values referenced in New York State Department of Environmental Conservation (NYSDEC) Policy CP-33 as a context for analysis. Although elevated $PM_{2.5}$ levels were determined, these levels can be reduced through application of EPCs for use of ultra low sulfur diesel (ULSD) fuel and appropriate engine retrofit technology, and electrification for off-road

equipment. In addition to the EPCs already incorporated in the project, other measures would be investigated by MTA/NYCT in coordination with the FTA and the other project sponsors in the course of developing and constructing the project, e.g., in the event other technological advances are made, in an effort to further minimize the construction effects on air quality.

Operational emissions of the South Ferry Terminal would be insubstantial, and the project would not contribute to 2008 or 2025 operational air quality impacts. Operation of the South Ferry Terminal would provide improved transit access to Lower Manhattan, thereby supporting economic growth while reducing the potential environmental burden associated with the increase in traffic typically associated with such growth. The South Ferry Terminal would provide alternate non-polluting transportation options for residents, visitors, and workers.

*Access and Circulation* – The cumulative vehicular circulation analysis shows that construction-related traffic is not expected to adversely affect access and circulation in the vicinity of the South Ferry Terminal Project during the peak construction period. Implementation of the common EPCs would further improve access and circulation in the project vicinity. The cumulative pedestrian circulation analysis also shows that all subway elements associated with the project (South Ferry Station/Terminal and some at the Whitehall Street Subway Station) would operate at acceptable levels of service during the three analysis years and at all peak hours analyzed.

*Noise and Vibration* – The cumulative construction noise analysis indicates that none of the South Ferry receptors would be affected by noise from mobile sources (i.e., construction truck traffic). With regard to cumulative stationary construction noise and vibration, increases in noise and vibration levels associated with most of the other Lower Manhattan Recovery Projects would be minimal at the South Ferry site because of the distance (approximately 2,000 feet) and shielding of intervening buildings. Only the Route 9A project would overlap with the South Ferry project in terms of construction noise and vibration. As noted previously, MTA/NYCT is closely coordinating construction of the South Ferry Terminal Project with NYSDOT's Route 9A Battery Place segment, to minimize construction-related noise and vibration impacts. The analysis indicates that the same receptors that would be affected by the project alone would also be affected in the cumulative condition. Implementation of noise and vibration-related EPCs and noise specifications in the construction contract would reduce the adverse noise and vibration effects associated with construction. The project would not contribute to 2008 or 2025 operational noise or vibration impacts.

*Cultural and Historic Resources* – None of the other Lower Manhattan Recovery Projects has the potential to affect the same cultural and historic resources that would be affected by the South Ferry Terminal Project, with the exception of NYSDOT's Route 9A Battery Place segment. Similarly, the South Ferry Project does not have the potential to affect the cultural resources that may be affected by other Lower Manhattan Recovery Projects, again with the exception of the Route 9A Battery Place segment. This is primarily due to the fact that the South Ferry project is geographically separate from the other projects

(i.e., approximately 2,000 feet south of the Fulton Street Transit Center and the World Trade Center Site). The other project with the potential for cumulative effects on cultural and historic resources is the Castle Clinton National Monument Redevelopment Project. The analysis provided in Chapter 6 indicates that the South Ferry Terminal Project, in combination with these other two projects, would not result in an adverse cumulative effect on cultural and historic resources. Implementation of EPCs, especially those involving coordination among projects to avoid or minimize interruption in access to cultural and historic sites, would effectively reduce the potential for direct and indirect cumulative impacts to these resources. Operation of the South Ferry Terminal in 2008 and 2025 would also not contribute to adverse cumulative impacts to cultural resources.

*Business and Economic Interests* – As indicated above, the Lower Manhattan Recovery Project with the most potential to have cumulative economic factors impacts with the South Ferry Terminal Project is the Battery Place segment of NYSDOT's Route 9A project; none of the other Lower Manhattan Recovery Projects has the potential to directly affect the local retail and other revenue-generating land uses that could be affected by the South Ferry Terminal Project. Similarly, the South Ferry Terminal Project does not have the potential to have cumulative construction-related economic impacts with the other Lower Manhattan Recovery Projects, with the exception of the southern segment of the Route 9A project. This is primarily due to the fact that the South Ferry Project is geographically separate from the other Lower Manhattan Recovery Projects.

To address the potential for cumulative construction impacts to adjacent properties, the construction plan for the Route 9A and South Ferry bellmouth and fan plant are being closely coordinated among NYSDOT, NYCDOT, and MTA/NYCT. It is projected that pedestrian and vehicular access along Battery Place, Greenwich Street, and Broadway in the vicinity of the projects will be maintained during construction. Therefore, it is not anticipated that commercial operations and public open space facilities along these streets would be adversely affected by cumulative construction activities. The projects will implement the EPC which requires appropriate signage for affected businesses and amenities to maintain their visibility, when obscured as a result of construction activities.

In 2008 and 2025, the terminal would improve transit connectivity for existing residents and employees of the area, as well as tourists, and would be operational in time to support the growth in population anticipated with residential developments and conversions and the recovery of employment with the completion of office buildings damaged or destroyed on 9/11, as well as the WTC site. Essentially all of the facilities associated with the proposed South Ferry Terminal Project would be located underground, except for entry/exit features, vent structures, and emergency hatches. None of these aboveground facilities would be located in areas that would have adverse permanent affects on surrounding commercial properties.

**Table ES-1**
**Alternatives Summary Comparison**

| Alternative | EA Section | Will the alternative improve reliability and operational flexibility? | Will the alternative provide safer/simpler access? | Will the alternative facilitate intermodal connectivity, especially with Whitehall Ferry Terminal? | Will the alternative achieve ADA? | Will the alternative minimize temporary and permanent impacts? |
|---|---|---|---|---|---|---|
| No Build | 3.3.1 | No. Current deficiencies will continue and worsen with continued growth. | No. Would worsen with continued growth. | No. Pedestrian surges into station would worsen with continued growth. | No. | Somewhat. There would be ongoing operations/ maintenance work as station deteriorates (e.g. gap fillers, wheel grinding). |
| Platform Extension | 3.2.1.1 | No. Eliminates problems associated with curve, but no improvement in station operations or recovery time. | Yes. Eliminates gap fillers, multiple entrances. | Yes. Maintains proximity to Whitehall Ferry Terminal. | No. | No. Major impacts and permanent easements to Battery Park. |
| Three-Track Terminal in Battery Park | 3.2.1.2 | Yes. Eliminates operational and functional deficiencies. | Yes. Multiple entrances. | No. Located further from Whitehall Ferry Terminal than existing station; 460 feet away. | Yes. | No. Major impacts and easements to Battery Park. |
| Terminal Inside Existing 1 9 Loop | 3.2.1.3 | Yes. Eliminates operational and functional deficiencies. | Yes. Multiple entrances. | Yes. Close proximity to Whitehall Ferry Terminal. | Yes. | No. Difficult construction; penetrates bulkhead; permanent easement in Battery Park. |
| Water Street Terminal | 3.2.1.4 | Somewhat. Eliminates curve at station; however train must negotiate curve in approach. | Yes. Multiple entrances. | No. Far from Whitehall Ferry Terminal; 835 feet away. | No. | No. Station conflicts with N R and J M Z infrastructure. |
| South Street Terminal | 3.2.1.5 | Somewhat. Eliminates curve at station; however train must negotiate curve in approach. | Somewhat. Insufficient street level circulation capacity; single pedestrian sidewalk approach. | Somewhat. Located further from Whitehall Ferry Terminal than existing station; 285 feet away. | Yes. | No. Terminal is very deep (110'). Temporary easements to Battery Park. |
| Whitehall Street Terminal | 3.2.1.6 | Yes. Eliminates curve at station; however train must negotiate curve in approach. | Yes. Multiple entrances. | No. Located further from Whitehall Ferry Terminal than existing station; 600 feet away. | Yes. | No. Station approach tunnels conflict with 4 5 and 1 9 tunnels. |
| Two-Track Terminal in Peter Minuit Plaza. (Proposed Action) | 3.2.1.7 | Yes. Eliminates operational and functional deficiencies. | Yes. Multiple entrances. | Yes. Close proximity to Whitehall Ferry Terminal. | Yes. | Somewhat. Terminal can be built with temporary and minimal permanent impacts to Battery Park. Approach tunnels need to dive under 4 5 and 1 9 infrastructure. |

**Table ES-2**
**Approvals, Permits and Coordination Required**
**South Ferry Terminal Project***

| Approval/Permit/ Coordination | Resource Agency | Description |
|---|---|---|
| Parkland Use Permits | NYCDPR | Permit for construction in parkland (excavation, staging, etc.) |
| Parks MOU | NYCDPR | Agreement between NYCDPR and MTA/NYCT re temporary and permanent impacts to parks and for park use. |
| Parkland Alienation | NYC Council & NYS Legislature | Approval for temporary and permanent takings of parkland. Project requires Home Rule approval from NYC Council and the passage of legislation by NYS Legislature. |
| Section 4(f) Evaluation | USDOT/FTA | Finding that there is no prudent and feasible alternative to use of Section 4(f) resources, and that MTA/NYCT has considered all reasonable avoidance alternatives to minimize harm to Section 4(f) resources. |
| 6(f) L&WCF | NYSOPRHP/ NPS | Determination under Land & Water Conservation Fund Act, Section 6(f), regarding construction in Battery Park. |
| Historic Preservation Consultation | SHPO (NYSOPRHP) | Programmatic Agreement among SHPO, FTA and MTA/NYCT to show consultation process under Section 106 of NHPA. Applies to treatment of both archaeological resources and historic structures. |
| Coordination at Whitehall Ferry Terminal | NYCEDC | Required for coordination and assumption of part of NYCEDC's work by MTA/NYCT in Peter Minuit Plaza. MOU to be executed. |
| Coordination at Battery Place | NYCDOT & NYSDOT | Agreement necessary for coordination and assumption by MTA/NYCT of utilities relocation, street work. |
| Water Discharge (Construction) | NYCDEP or NYSDEC | During construction, this permit will allow Contractor to discharge the water from his activities after appropriate treatment, including dewatering of excavation, wheel washing. |
| Water Discharge (Operation), New or modification | NYCDEP or NYSDEC | During operation, this permit will allow MTA/NYCT to discharge the water from the terminal and tunnel. |
| SPDES (State Discharge Pollutant Elimination System) | NYSDEC | General permit for stormwater management for construction site over 1.0 acre. Covers erosion control, storage of materials, best practices to avoid releases. |
| Coastal Zone Management | NYSDOS | Determination of consistency from NYS Dept. of State that project is consistent with State and Local coastal zone policies. |
| MPT Plans | NYCDOT | Approvals for use of sidewalks and street lanes. |
| Easement at One Broadway | New York City | Approval required to use vaults at One Broadway for temporary construction easement. |
| Air Quality Conformity | ICG | Consultation with Interagency Consultation Group re AQ Conformity. Note: This project is exempt under Conformity Waiver which expires in Oct. 2005. |
| Interagency Coordination | All agency stakeholders | Ongoing coordination from planning through construction to minimize cumulative effects on Lower Manhattan. |

*See acronym list at end of EA for acronyms used in this table.