A. INTRODUCTION AND METHODOLOGY

This chapter examines the potential for impacts related to contaminated materials at the project site, which includes four lots on 50th Street (Block 1285, Lots 43-46; 44-50 East 50th Street), the underground connector tunnel from the facility to the passenger concourse, and, potentially, one lot on 49th Street (Block 1285, part of Lot 36; 45 East 49th Street). It discusses the soil and groundwater conditions at these locations, considers the potential impacts to worker safety, public health, and the environment, and identifies measures to be employed by the project to address any potential impacts.

A preliminary site assessment (Phase I) was conducted in October 2003 for the lots on 50th Street and the location of the underground connector tunnel. The Phase I assessment employed a three-part investigation—current and historical land use review, contaminated materials database and records research, and site reconnaissance—to determine the potential for the presence of contaminated materials on or below the site as well as the need for further detailed subsurface site investigations (Phase II). Appendix G, "Hazardous Materials," provides the regulatory database search results.

The review of past and current land use included research to determine the past uses on or adjacent to the site. The research involved examining historic maps (Sanborn real estate atlases) for industrial and other uses that historically could have resulted in contamination of underlying soil. Federal and state database records were reviewed—including listings of hazardous materials spills, petroleum storage facilities, and state and federally listed hazardous waste sites—to determine the regulatory status of each site and its adjacent properties. The assessment included a site field reconnaissance from public rights-of-way. Access to the interior of the structures currently standing on the project site was not available.

B. EXISTING CONDITIONS

Currently, the four 50th Street buildings on the project site contain retail stores, restaurants, an office, and a residence, except for Lot 44 (48 East 50th Street), which is vacant. The additional lot included in one of the project alternatives on 49th Street is occupied by a single building housing a combination bank and internet café. In addition, the project site includes a 125-foot-long portion of the 50th Street streetbed, extending from the western edge of the project site eastward until the existing exterior wall (bulkhead) of the Grand Central Terminal trainshed below. The site is in a commercial area and is bordered by two large commercial office buildings.

The preliminary site assessment indicated that Columbia College formerly occupied the project block and project site circa 1890. The Columbia College structures were demolished and four five- and six-story row house structures on 49th and 50th Street were constructed circa 1910. Two of these structures remain on the project site. The five-story row house located on Lot 44

(48 East 50th Street) was demolished and a five-story row house was constructed in its place in 1958. Similarly, the five-story row house at 45 East 49th Street was demolished and replaced by a modern commercial building in 1958. Since 1910, the structures on the site have been occupied by apartments, offices, and retail stores.

No vent pipes or fill caps were noted to be associated with these structures at the time of inspection. Although there is no indication that aboveground or underground storage tanks are present on the project site (i.e., no tanks were registered with New York Sate and no evidence of tanks, such as vent pipes or fill caps, was noted during site reconnaissance), it is possible that tanks exist on the site.

The review of federal and state databases identified aboveground storage tanks, active and closed spill listings, and hazardous waste generators listed for the structures adjacent to the project site. It is unlikely that releases from aboveground storage tanks or hazardous materials generators in these structures have significantly affected soil and/or groundwater conditions on the project site.

C. ALTERNATIVE A (NO ACTION ALTERNATIVE)

In Alternative A, the no action alternative, the buildings on the project site are likely to remain. No changes or new uses are expected at the project site that would affect hazardous materials.

Alternative A would have required excavation of 49th and 50th Streets for construction of the new below-ground ventilation plant. Based on the site history, review of regulatory databases, and site reconnaissance, no potential significant hazardous materials impacts are anticipated during soil disturbance activities. However, it is possible that contaminated soil and/or groundwater may be identified. If these materials are identified, they would be addressed in project-specific plans set forth in the project's Final Design documents, as discussed in more detail below in the discussion of Alternative B.

D. PROBABLE IMPACTS OF THE BUILD ALTERNATIVES

ALTERNATIVE B (50TH STREET FACILITY WITHOUT THROUGH DRIVE)

The presence of hazardous or contaminated materials threatens human health only when exposure to those materials can occur. In areas where contamination exists, disturbance of soil and groundwater can provide an exposure pathway for the contaminants to workers and the public. During construction, excavation and disturbance of soil and rock would be required for construction of the facility and connector tunnel, which would be constructed using cut-and-cover and controlled blasting.

This alternative would provide a 50th Street facility containing a loading dock, a cooling tower, ventilation equipment, electrical substations and emergency generators for the East Side Access Project. The four existing buildings on the facility site would be demolished. The 50th Street facility would include a deep basement (50 feet below grade) and a shaft connecting to the connector tunnel, located at approximately 200 feet below grade. Bedrock is located approximately 8 feet below grade. Existing fill and soil beneath the site would be removed during construction activities. In addition, the street bed would be disturbed along 50th Street, between the project site and Park Avenue, as cut-and-cover construction and controlled blasting would be used to build the connector tunnel to the new passenger concourse.

Based on the site history, review of regulatory databases, and site reconnaissance, no potential significant hazardous materials impacts are anticipated during soil disturbance and rock excavation activities. However, it is possible that underground storage tanks and/or contaminated soil and/or groundwater may be identified. If these materials are identified, they would be addressed by project-specific hazardous materials plans incorporated in the Final Design documents. Prior to any environmental investigation or construction, a plan would be put in place to provide a protocol related to hazardous materials or chemicals that may be encountered in soil or groundwater. The plan would describe the requirements for handling, management, treatment, and disposal of contaminated materials encountered during construction. The protocols described in the hazardous material plan would be in accordance with relevant local, state, and federal regulations. The plan would identify minimum requirements for Health and Safety Plans (HASPs) to be submitted by each construction contractor prior to commencement of work at the site. The HASPs would comply with 29 CFR 1910.120 and would include health and safety requirements related to site-specific environmental conditions at the site.

If groundwater is encountered during excavation of the rock beneath the site, the groundwater would be removed. This process, known as "dewatering," is subject to city and state regulations that restrict the pumping of contaminated groundwater to rivers or sewers. The project specifications for dewatering would include testing and potential treatment, to ensure that regulatory levels—including those for the New York City Department of Environmental Protection (sewer) or the New York State Department of Environmental Conservation (NYSDEC) (water body) criteria—are not exceeded.

The subject buildings were likely constructed prior to 1910 and in 1958; therefore, lead-based paint and asbestos-containing materials (ACMs) may be present in the structures. Prior to any demolition activities with the potential to disturb suspect ACMs, an asbestos survey would be conducted. If these materials prove to contain asbestos, they would be properly removed and disposed of in accordance with all state and federal regulations. Any demolition activities with the potential to disturb lead-based paint would be performed in accordance with the applicable Occupational Safety and Health Administration regulation (OSHA 29 CFR 1926.62—*Lead Exposure in Construction*).

Because of the age of the buildings, fluorescent lights and lighting fixtures that may include polychlorinated biphenyl (PCB)-containing and/or mercury-containing components (including capacitors and potting compounds) may be present in the structures. Any disposal of such lights and/or lighting fixtures would be performed in accordance with applicable federal, state, and local regulations and guidelines, unless labeling or test data indicate that they do not contain mercury or PCBs.

Once construction activities are completed, remediation measures would address any remaining subsurface contaminated materials, and thus would eliminate the potential for adverse impacts during the operational phase of the proposed project. Approximately 6,000 to 8,000 gallons of diesel oil would be stored on site to fuel the emergency generators. The fuel tank would be installed and maintained in accordance with all applicable federal, state, and local regulations and guidelines. As described in Chapter 2, "Project Alternatives," the fuel tank would include containment to prevent leaks, be encased in reinforced concrete, be surrounded by a 3-hour rated fire wall, include fire suppression measures, and be located 50 feet below ground.

With implementation of the measures described above, no significant adverse contaminated materials impacts would occur.

ALTERNATIVE C (50TH STREET FACILITY WITH THROUGH DRIVE)

This alternative would require the same types of construction activities as Alternative B, described above, and would also house the fuel oil storage tank on-site. One additional building, at 45 East 49th Street, would be demolished to permit construction of the proposed through drive.

With implementation of the measures described above for Alternative B—including a site-specific hazardous materials plan during the construction period, and installation and maintenance of the proposed fuel oil storage tank in accordance with all applicable federal, state and local regulations—no significant adverse contaminated materials impacts would occur.

PREFERRED ALTERNATIVE D (50TH STREET FACILITY WITH THROUGH DRIVE AND PUBLIC OPEN SPACE)

Preferred Alternative D would require the same types of construction activities as Alternative C. In Preferred Alternative D, the fuel oil storage tank for the emergency generators would be located off-site, in the East Side Access concourse. As described in Chapter 2, "Project Alternatives," the fuel tank would be encased in reinforced concrete and surrounded by a 3-hour rated fire wall, and would include fire suppression measures and containment to prevent leaks.

With implementation of the measures described above for Alternatives B and C—including a site-specific hazardous materials plan during the construction period, and installation and maintenance of the proposed fuel oil storage tank in accordance with all applicable federal, state and local regulations—no significant adverse contaminated materials impacts would occur.

CONCLUSIONS

Based on the site history, review of regulatory databases, and site reconnaissance, no potential significant hazardous materials impacts are anticipated during soil disturbance and rock excavation activities for Alternative B, C, or Preferred Alternative D. If underground storage tanks, contaminated soil and/or groundwater, lead-based paint, asbestos-containing materials, polychlorinated biphenyls, or mercury-containing components are identified, they would be addressed by project-specific hazardous materials plans incorporated in the final design documents. If dewatering is required, testing and treatment prior to disposal to the sewer system or water body may be required. The project specifications for dewatering would include testing and potential treatment to ensure that regulatory levels are not exceeded. With these measures in place, no potential significant adverse hazardous materials impacts would occur with any of the build alternatives.

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