

5.14 HAZARDOUS MATERIALS

5.14.1 Introduction

Following the methodology described in Section 3.14, “Hazardous Materials” of Chapter 3, “Impact Methodologies,” this Section evaluates whether the construction of the water main connection along either the First Avenue, Sutton Place, or E. 59th Street/E.61st Street route would create an increased potential exposure of the public or the environment to hazardous materials. These substances could include heavy metals, volatile and semivolatile organic compounds, methane, polychlorinated biphenyls (PCBs), and other substances deemed hazardous or toxic by the United States Environmental Protection Agency (USEPA) and/or New York State Department of Environmental Conservation (NYSDEC). Consistent with the guidance presented in the *CEQR Technical Manual*, the hazardous materials assessment evaluates whether past activities in the vicinity of the potential water main routes would have resulted in the presence of hazardous materials at the site. Such activities could include land uses known to require the use of such materials, the presence of leaking underground storage tanks, or a history of past spill activity.

A Phase I Environmental Site Assessment (ESA) was conducted in March 2005 (revised in December 2005) for the First Avenue and Sutton Place routes and in December 2005 for the E. 59th Street/E. 61st Street route to determine the potential for hazardous materials impacts as a result of construction of the water mains. The results of the Phase I ESAs are summarized in this Section. A Phase II ESA, which involves environmental testing of soil and groundwater in the areas of potential disturbance to determine the presence, type and levels of contaminants that may be present, was not conducted for the EIS, but will be conducted prior to in-ground construction along the water main route that is selected.

5.14.2 Existing Conditions

Current Conditions

The Phase I ESAs examined the areas around the three potential routes. The First Avenue route runs along First Avenue from E. 59th Street to E. 55th Street, and then continues along E. 55th and E. 56th Streets to Third Avenue. The Sutton Place route runs along Sutton Place instead of First Avenue. The E. 59th Street/E. 61st Street route runs along E. 59th and E. 61st Streets between First and Third Avenues. A more detailed description of each of the routes is provided in see Section 5.1, “Project Description.” The following conditions were observed during the preparation of the Phase I ESAs for the potential water main routes:

- The potential routes are paved with asphalt and are heavily traveled and often congested with traffic because of their proximity to the Queensboro Bridge.
- The area surrounding the potential routes consists of a wide range of ground level commercial establishments with residential units above, high-rise apartment buildings, open

space, parking garages and other retail and commercial establishments typical of New York City.

- The potential routes are also used daily by delivery vehicles providing a wide array of supplies to retail and residential establishments.

The potential routes are immediately adjacent to a number of heavily traveled roadways including the Queensboro Bridge. As a result, historic deposition of lead from vehicle exhausts is likely to have occurred at the site. In this area, it is also common to find historic fill that contains contaminants such as polycyclic aromatic hydrocarbons (PAHs) from coal ash or other sources of fill material.

Adjacent and Vicinity Land Uses

The potential First Avenue route and E. 59th Street/E. 61st Street route are located in a mixed business, commercial, residential and public transportation area. Occupied commercial space along the potential routes consists predominantly of small retail businesses at ground level with residential space above. Along the E. 59th Street/E. 61st Street route, commercial space also includes storage facilities and large commercial establishments. The Sutton Place route is located in a residential area, except for the E. 59th Street portion of the Sutton Place route, which is also bordered by commercial uses and the Queensboro Bridge.

Geology/Hydrogeology

Recent geotechnical borings at the preferred Shaft 33B Site located at the north end of the water main routes are likely representative of conditions along the length of the water main route. The recent borings show that bedrock was encountered at approximately 22 feet below ground level. Groundwater was encountered from 10 to 15 feet below grade and the general direction of groundwater flow was from west to east towards the East River. Based on topographic maps of the area, the overland flow of water (i.e. storm water and environmental releases) would also flow in a west to east direction.

Records Search

A listing of Federal and State environmental enforcement sites in the area of the First Avenue and Sutton Place routes was obtained. A listing of sites was also obtained for the E. 59th Street/E. 61st Street route area. The search was conducted to evaluate past and present activities involving hazardous materials on and in the vicinity of the routes. The database search identified incident locations or facilities where hazardous materials may be present and are either known to have been released to the environment (e.g. spills, leaks) or may be sources of future releases.

The records search of government databases and the area reconnaissance identified several potential sources of contamination and spills within a 0.25 mile radius of the routes. Many of the sites were listed at addresses along the routes. The potential subsurface soils and groundwater contaminants identified in the environmental database search include the following:

- #2, #4, and # 6 fuel oil

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- Gasoline
- Diesel fuel
- Dielectric fluid (PCB content unknown)
- Transformer oil (PCB content unknown)

The search also identified other past and present licensed potential sources of contamination located along or within a 0.25-mile radius of the potential water main routes. For the First Avenue and Sutton Place routes, these past or current sources include:

- 381 reported spills, most of which were petroleum products;
- 247 regulated underground storage tanks or aboveground storage tanks;
- 29 leaking underground storage tanks;
- 29 Resource Conservation and Recovery Information Systems (RCRIS) Large Quantity Generators;
- 27 RCRIS Small Quantity Generators;
- 25 RCRIS Conditionally Exempt Small Quantity Generators;
- Four RCRIS Transporters;
- Two RCRIS Treatment, Storage, Disposal Facilities;
- 63 RCRIS Sites that are no longer regulated;
- One Toxic Release Inventory System (TRIS) site; and
- 30 incidences requiring an emergency response notification.

For the E. 59th Street/E.61st Street route, these past or current sources include:

- 400 reported spills, most of which were petroleum products;
- 138 regulated underground storage tanks or aboveground storage tanks;
- 31 RCRIS Large Quantity Generators;
- 26 RCRIS Small Quantity Generators;
- 19 RCRIS Conditionally Exempt Small Quantity Generators;
- Two RCRIS Treatment, Storage, Disposal Facilities;
- 59 RCRIS sites that are no longer regulated
- One TRIS site; and
- 29 incidences requiring an emergency response notification.

Sanborn/ Fire Insurance Maps

Sanborn Maps dating from 1892 to 2003 were reviewed and showed a mix of historic uses in the vicinity of the potential First Avenue, Sutton Place, and E. 59th Street/E. 61st Street water main routes. The relevant uses are described below.

In 1892, the area of the potential water main routes was a mix of low-rise residential, commercial, and industrial buildings accompanied by horse stables at various locations between the buildings. A few of the significant businesses located in the area included the following:

- A “marble works” was located on the east end of Block No.1330.
- A dog biscuit factory was located on the east end of Block No. 1330.
- A brewery encompassed Block No.1328, 1366, and 1367.
- A coal plant was located on Sutton Place between 57th and 56th Streets.
- A lumber yard covered most of Block No.1365.
- Another brewery was located on Block No.1349.
- A paper box factory was located on the west end of Block No.1346.
- A coffin factory was located on the east end of Block No.1346.
- A stone yard was located on the southwest corner of Block No. 1436.
- A coal yard was located on Block No. 1454.

By 1907, much of the land use along the potential water main routes remained the same—a mix of low-rise residential, commercial, and industrial buildings. Observations of the area expansion included the following:

- A brewery still encompassed Block Nos.1328, 1366, and 1367, with an additional now present in 1329.
- A paper box factory was still present on the west end of Block No.1346.
- A coffin factory was still present on the east end of Block No.1346.
- An automobile repair shop was located on Block No.1309.
- A “livery” repair shop was located on Block No.1308.
- Another automobile repair shop was located on Block No.1311.
- A wagon yard was located on the north side of Block No. 1332.
- A candy factory and hospital were located on Block No. 1435.
- A steam laundry and picture frame factory were located on the north side of Block No. 1531.

By 1951, the area has experienced a great deal of commercial and residential development. Industrial operations were no longer as prominent as they once were and high-rise buildings were being built. Prior maps show City Block No.1434 (bordered by E. 59th Street, E. 60th Street, First Avenue, and Second Avenue) consisting primarily of small, residential/commercial buildings.

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This block, as well as several small buildings on Block Nos. 1350 and 1351, was demolished to construct the Queensboro Bridge. Although the Queensboro Bridge was built in the early 1900's, Sanborn maps between 1907 and 1951 were not available to show the construction activity and changes in neighborhood characteristics resulting from the Bridge construction.

Other observations of the area in 1951 included the following:

- The brewery encompassing Block Nos. 1328, 1366, 1367, and 1329 was no longer present, and had been replaced by other businesses. The presence of parking lots and garages can now be seen on Block 1328, 1351, 1366, and 1367.
- The buildings that covered the east ends of Block Nos. 1366 and 1365 were replaced with large parking lots.
- A service station was located on the northeast corner of Block No. 1435.

By 1976, mixed development of the area continued. The Queensboro Bridge exit running through the center of Block Nos. 1435, 1436, and 1437 was constructed, replacing several small buildings that were demolished to accommodate the exit ramp. Other observations of the area included the following:

- A City Department of Plants and Structures maintenance shop and a City Department of Street Cleaning garage were located under the Queensboro Bridge approach on Block No. 1434.
- Large apartment buildings were built on Block Nos.1367, 1366, and 1365. Several parking garages were also located on these blocks between the buildings.
- Block Nos. 1346, 1347, and 1348 were primarily covered by apartment buildings, parking garages, and a few small businesses.
- The New York Telephone Building was present on Block No. 1329.
- A U.S. Postal facility and parking garage comprised most of Block No.1328.
- City Corp. Center was present on Block No.1308.
- A subway station was present on Block No.1311.

By 1985, mixed development of the area continued. Observations of the area included the following:

- The small buildings at the east end of Block No.1327 were replaced with a large office building.
- “River Tower” was constructed in the center of Block No.1365.
- “Landmark” and a large parking garage were constructed on the west of Block No. 1351.

Between 1985 and 2003, no significant changes in land use had occurred along the potential water main routes.

The Phase I ESA for the potential First Avenue and Sutton Place water main routes and the Phase I ESA conducted for the E. 59th Street/E. 61st Street water main route conclude that the environmental database records indicate the potential for soil and groundwater contamination, based on sources in the vicinity (e.g., the history of spill records).

5.14.3 Future Conditions Without the Project

In the Future Without the Project, it is expected that soils would be left undisturbed in the street beds along the potential water main routes. Therefore, there would be no health or environmental concerns in terms of hazardous material exposure.

5.14.4 Future Conditions With the Project

Construction

During construction, subsurface soils would be excavated along the water main route. The subsurface soils and groundwater may contain contaminants resulting from a number of sources including deposition and infiltration, contamination from off-site sources, and from historic fill material commonly used throughout the City of New York. Therefore, a number of preventive measures will be implemented to minimize exposure to potentially contaminated soils and groundwater during construction as discussed below.

Based on the Phase I ESAs for the potential water main routes, the areas of potential excavation may contain suspected contaminated soils and groundwater. A Phase II ESA, which involves environmental testing of soil and groundwater in the areas of potential disturbance to determine the presence, type and levels of contaminants that may be present, will be conducted after a water main route is selected and prior to in-ground construction at the site. Based on the Phase I ESAs, the remedial measures are the same as those for the preferred Shaft Site (see Section 4.14, “Hazardous Materials,” in Chapter 4, “Preferred Shaft Site”) and include:

- Subsurface investigation to determine disposal requirements in accordance with a NYCDEP Bureau of Environmental Planning and Assessment (BEPA)-approved sampling plan;
- Soil removal and disposal off-site in accordance with all applicable Federal, State, and local regulations;
- Implementation of a NYCDEP BEPA-approved Construction Health and Safety Plan (CHASP);
- Implementation of a NYCDEP BEPA-approved Remedial Action Plan (RAP); and
- Testing and potential treatment of groundwater from dewatering activities to levels specified in applicable local and state permits.

During the final stage of construction, the site will be filled with certified clean fill that meets all NYSDEC recommended soil cleanup objectives in “Technical and Administrative Guidance Memorandum” (TAGM) #4046 and capped with an impervious surface.

With implementation of the measures discussed above and in Section 4.14, there would be no potential significant adverse hazardous materials impacts from construction of Shaft 33B and its water mains connections at the preferred Shaft Site.

Activation and Operation

Activation and operation of the water mains would not have the potential to cause hazardous materials impacts, as they are subsurface enclosed pipes and do not require the use of hazardous materials and therefore operation of the water mains is not addressed.

