

8.4 SOCIOECONOMIC CONDITIONS

8.4.1 Introduction

Following the methodology described in Section 3.4 “Socioeconomic Conditions” of Chapter 3, “Impact Methodologies,” this Section evaluates whether the construction and operation of the E. 54th Street/Second Avenue Shaft Site would result in adverse socioeconomic impacts. Potential socioeconomic impacts include direct and indirect displacement. According to the *CEQR Technical Manual* (2001), direct displacement is the involuntary displacement of residents, employees, and businesses from the site of a proposed action, while indirect displacement is the involuntary displacement of residents, employees, or businesses due to changes in living conditions or costs that could potentially result from the project.

The E. 54th Street/Second Avenue Shaft Site is located within City streets and sidewalks and, therefore, would not result in the direct displacement of businesses or residents. Within the construction area for the project, there is an enclosed sidewalk café area that is part of a restaurant (Lenny’s). Although the sidewalk café area would be removed, the business would not be directly displaced.

Therefore, this Section focuses on potential indirect displacement due to, for example, noise, vibration, and traffic and pedestrian circulation impacts resulting from the project. As discussed in the technical chapters of the EIS, construction of the shaft at the E. 54th Street/Second Avenue Shaft Site has the potential to result in potential significant noise impacts on nearby residents and businesses. Noise effects would be most noticeable to certain residents and businesses located along E. 54th Street between First Avenue and the midblock to Third Avenue and along Second Avenue between E. 53rd and E. 55th Streets. Therefore, the assessment focuses on those residents and businesses within the affected area.

In addition to the Shaft Site itself, this alternative would include construction of a water main connection that would travel from the site along Second Avenue to 55th and 56th Street where it would continue to Third Avenue. There would be no direct displacement from these potential water main connections, which would be located in the street. In addition, as described in the technical impact assessments of this Chapter, there are no potential significant adverse impacts associated with this water main construction. Therefore, there would be no indirect displacement effects.

Another potential socioeconomic effect could result from the cost to construct the project that would be borne by water and sewer ratepayers. This Section evaluates whether these construction costs would have the potential to result in the indirect displacement of residential water and sewer users.

8.4.2 Existing Conditions

Residents and Businesses in the Vicinity of the E. 54th Street/Second Avenue Shaft Site

As discussed in the Section 8.2, “Land Use and Community Facilities, Zoning, and Public Policy,” the E. 54th Street/Second Avenue Shaft Site is located in a densely populated residential neighborhood with a high ground floor retail presence. As described in Section 4.3, “Open Space,” in Chapter 4, “Preferred Shaft Site,” according to Census 2000, approximately 16,000 people live in the area generally extending from E. 54th to E. 59th Streets, east of Third Avenue. An additional 7,000 people live in the area between E. 49th and E. 54th Streets, between First and Third Avenues (Census Tract 98). The residences and businesses that face the site also face onto a high trafficked corridor that includes Second Avenue and E. 54th Street. The residential buildings include both high rise apartment buildings and walk-up apartment buildings along E. 54th Street and along Second Avenue.

Retail shops and other businesses are located at the ground floor of these residences and in standalone buildings. Immediately adjacent to the Shaft Site on the northeast corner of E. 54th Street and Second Avenue is a restaurant with an enclosed sidewalk café area. Other businesses located on the east side of Second Avenue, between E. 54th and E. 55th Streets include two restaurants, dry cleaners, a salon, and a bank. On the west side of Second Avenue between E. 54th and E. 55th Streets are a nail salon and spa, dry cleaners, art dealer, pet store, and pizza shop. Businesses located on the west side of Second Avenue between E. 54th and E. 53rd Streets include a fitness club, located diagonally across from the Shaft Site, and several restaurants to the south. Businesses located on the east side of Second Avenue between E. 54th and E. 53rd Streets include several shops and service establishments (e.g., dry cleaners, wine store, and optician), an ice cream store, and restaurants.

The north and south sides of E. 54th Street between Second and First Avenues are residential to approximately midblock. Several businesses and institutions are located between the midblock and First Avenue, including a laundry and vitamin store on the north side of E. 54th Street, and a doctor’s office, dry cleaners, cabinetry store, tailors, a playhouse/theatre school, the East 54th Street Recreation Center, and a deli located on the corner of First Avenue.

Water and Sewer Rates

Information on the current water rate structure for City customers of the New York City Water Supply System and available funding mechanisms for capital projects is discussed in Section 4.4, “Socioeconomic Conditions,” of Chapter 4, “Preferred Shaft Site.” This information is used to assess the potential socioeconomic indirect displacement effects from increased water rates due to the construction of Shaft 33B and the associated water main connection.

The water rate for City customers effective in Fiscal Year (FY) 2006 is \$1.65 per hundred cubic feet (ccf). Charges for sewer service are assessed at 159 percent of water charges. For a typical single family customer using 100,000 gallons per year, this represents a combined annual water and sewer charge of \$571. The actual annual charge for any specific customer will be proportionally more or less depending on actual usage.

8.4.3 Future Conditions Without the Project

Residents and Businesses in the Vicinity of the E. 54th Street/Second Avenue Shaft Site

As described in Section 8.2, “Land Use and Community Facilities, Zoning, and Public Policy,” a new, 147-unit high-rise apartment building is currently under construction at 310 E. 53rd Street, on the southeast corner of Second Avenue and another residential building planned for the west side of Second Avenue and E. 53rd Street. There are no other proposals or planned residential or commercial projects in the areas along E. 54th Street between First Avenue and the midblock to Third Avenue and along Second Avenue between E. 53rd and E. 55th Streets in the Future Without the Project. Therefore, conditions would be expected to be comparable to those currently existing in the vicinity of the E. 54th Street/Second Avenue Shaft Site.

Water and Sewer Rates

Information on the projected water and sewer payments is provided in Section 4.4, “Socioeconomic Conditions,” of Chapter 4, “Preferred Shaft Site.” Water rates per household, assuming a household usage of 100,000 gallons per year (gpy), would increase from \$571 in FY 2006 to \$775 in FY 2010. For the lowest income group in New York City, current water and sewer costs account for 4.5 percent and would increase to 4.8 percent of annual household income in the Future Without the Project.

8.4.4 Future Conditions With the Project

Residents and Businesses in the Vicinity of the E. 54th Street/Second Avenue Shaft Site

Construction

Certain residents and businesses in the area of the E. 54th Street/Second Avenue Shaft Site would experience significant noise impacts, and at times, noticeable, but intermittent vibration effects during shaft construction. Noise effects would be most noticeable to certain residents and businesses located along E. 54th Street midblock to First Avenue and midblock to Third Avenue and along Second Avenue between E. 53rd and E. 55th Streets. As discussed in Sections 8.12, “Noise,” and 8.13, “Vibration,” NYCDEP will put numerous protective measures in place to minimize and/or prevent both noise and vibration effects. Due to the very close proximity of the residences and restaurant (Lenny’s) to the site, as close as 11 feet from the edge of the shaft chamber, and because the bedrock is only 3 feet from the surface, blasting would likely not occur until a substantial distance below the top of bedrock was reached. To excavate to this distance, alternative techniques including hydraulic splitting would be employed to minimize the potential for any inadvertent damage to nearby structures. This would likely be necessary to achieve the 0.5 inches per second (ips) threshold established by NYCDEP to protect more fragile structures, or against cosmetic/architectural damage. These measures would add several months to the construction schedule at this Shaft Site.

As described in Section 8.1, depending on the construction schedule for the project at this site, different construction techniques (either the raise bore method or the surface excavation method)

would need to be utilized for shaft construction. Under the surface excavation method, blasting would occur over a 15 month period, as compared to the six month period for the raise bore method. If surface excavation were to be used, the peak hour noise levels during Stage 2 generated by construction equipment would be comparable because similar types of equipment would be used, but the equipment would be used for a greater number of hours and the duration of noise impacts would be longer on a given day. In addition, noise levels would be expected to be somewhat higher due to the higher level of construction activity associated with moving rock at the surface, rather than below ground.

The noise levels and vibration levels from blasting and other construction activities will be highly noticeable and, at times, intrusive and annoying to residents, business owners, and customers of local businesses in the vicinity of this Shaft Site. Due to the close proximity of the site to the adjacent building facades, only a 10 foot wall can be constructed, which would not reduce noise levels for sensitive receptors (e.g., residents) above street level. This wall could largely hide from public view, and reduce light and views from three restaurants (including Lenny's), dry cleaners, and salon. The wall would not block views from the residences above.

The high noise levels from the construction site would make several of the businesses directly adjacent to the site, especially the restaurants and salon, less attractive to customers, particularly during intense construction activities. In addition, while a 7-foot walkway would be maintained along the construction site on the east side of Second Avenue between E. 54th and E. 55th Street, many pedestrians, and therefore potential customers, may choose to avoid walking within the fenced area and next to the construction site. Although many existing restaurants and shops on Second Avenue have a stable customer base, the relative abundance of such business in the area may encourage customers to take their business elsewhere during periods when construction is most intense and when access and visibility are reduced. This combination of effects could substantially lower sales to the businesses located along the construction site on the east side of Second Avenue between E. 54th and E. 55th Streets for an extended duration.

Due to the close proximity of the Shaft Site to local businesses, and the combined effects of the project, there is a possibility that construction of Shaft 33B at this site could result in lower sales and eventual indirect displacement of one or several businesses located on the east side of Second Avenue directly adjacent to the construction zone for the Shaft Site. Such effects would be less likely to occur along the northern portions of the construction site because that portion of the site would be used for construction staging with minimal construction activity.

Businesses located on the west side of Second Avenue would be affected by the shaft construction and by construction of the venturi chambers (20 weeks). The location of the venturi chambers may be wholly within the streetbed, but could be located partially within the sidewalk. In either case, access to residences and stores would be maintained during the temporary 20-week venturi chamber construction period. Businesses on the west side of Second Avenue include a nail salon and spa, dry cleaners, art dealer, pet store, pizza shop, and fitness club. The noise from the construction site may make several of these businesses less attractive to customers, particularly during intense construction activities. In general, the businesses are either not highly dependent on the environment outside their businesses or are neighborhood-based

destinations and it is unlikely that customers would travel longer distances to do business that could, otherwise, be done in their neighborhoods.

South along Second Avenue, between E. 54th and E. 53rd Streets, businesses would be affected by potential noise impacts from the project. These include several restaurants, a fitness club, and local shops and service establishments. The noise from the construction site may make several of these businesses, especially the restaurants, less attractive to customers, particularly during intense construction activities. In general, these businesses are either not highly dependent on the environment outside their stores and would be minimally affected or are neighborhood-based destinations and it is unlikely that customers would change shopping habits or would travel longer distances to do business that could, otherwise, be done in their neighborhoods.

Other residents, businesses, and uses that are located further from the site would be expected to fare better. These include the businesses closer to First Avenue along E. 54th Street including the laundry and vitamin store, doctor's office, cleaners, cabinetry store, tailors, and a deli located on the corner of First Avenue.

Although local economic conditions in the immediate vicinity of the Shaft Site could decline somewhat during intense construction periods, the net effect on the area's economy would be negligible. There is a possibility that a small number of businesses directly adjacent to the Shaft Site that would be sensitive to the combined effects of the project would close. It is very unlikely that other businesses or residents would relocate from the area as a result of construction of the project. Except for the area directly adjacent to the Shaft Site, the effects of the proposed project would not be unlike the effects from other major construction in Manhattan that involves the use of heavy construction in close proximity to residential and commercial uses. Given the Shaft Site's location in a well-established neighborhood of Midtown Manhattan, large-scale neighborhood character or socioeconomic changes would not be expected to occur. Therefore, it is not anticipated that construction of Shaft 33B at this site would result in the potential for significant adverse socioeconomic effects during construction.

Operation

Once constructed, the shaft would not be very visible. Short-term maintenance and repair activities would routinely occur at the site, as discussed in Section 8.1, "Project Description." As discussed in the technical impact analyses in this Chapter, these activities would not result in long term adverse noise or other environmental impacts. Therefore, it is not anticipated that operation of the shaft would result in potential significant adverse socioeconomic impacts on residents and businesses.

Water and Sewer Rates

Costs

Construction of Shaft 33B at the E. 54th Street/Second Avenue Shaft Site would occur in four stages over a 61 month period (2006–2011) with an estimated cost of approximately \$63 million (all amounts are in 2005 dollars, assuming a 4 percent escalation in costs to the mid-point of construction). Costs for the water main connection along Second Avenue and E. 55th and E. 56th Streets to Third Avenue would be \$5 million, with a combined shaft and water main cost of \$68

million. The lower costs for construction of this shaft are due to the fact that the Third Water Tunnel would not need to be extended to get to this site and the water main connection route to Third Avenue would be much shorter. There is the potential that at this site, the shaft would need to be constructed from the surface downward (the surface excavation method). Under this scenario, costs would be \$15 million higher, for a total cost of \$83 million. The cost estimates include construction costs, fees for engineering, and construction management. Operation and maintenance (O&M) costs would be approximately \$2 million per year beginning in the year 2012 when the shaft would be operational.

Probable Impacts on Residential Users

Financing the proposed project through New York City Municipal Water Finance Authority (“Authority”) bonds would result in a repayment (or amortization) period of 30 years at an interest rate of approximately 6.34 percent. Repayment begins in the first year of the bond issue. Annual debt service payments would begin in 2008 and reach the highest point in 2014.

The probable impacts of the project are assessed for residential users on the basis of an average annual water usage of 100,000 gallons per year (gpy) per household. The years 2008 to 2015 were used as the basis for the assessment since these are the years when the costs would be fully reflected in the debt service on the bonds issued to finance the capital costs and the largest rate increases due to the project would be incurred. The average monthly payment per household unit required to amortize the bonds (or portions of bonds) issued to fund the shaft and pay for O&M costs would begin at a low of roughly \$0.04 in 2008, increase to a high of \$0.21 in 2014, and then decrease to \$0.14 in 2015 and each year thereafter for 20 years. The water main connection would add another approximately 8 percent to these costs, while the surface excavation method would add approximately 24 percent, or less than \$0.05 in the peak years for each.

To assess the impact this cost would have on New York City water consumers, three indicators are typically reviewed – median monthly gross rent of renter occupied units, median monthly costs of owner-occupied units and annual income of low income residents. These indicators are as follows:

- The median monthly gross rent of renter occupied units in the five boroughs in 2000 ranged from \$620 in the Bronx to \$796 in Manhattan, with a citywide average of \$705.
- The median monthly costs of owner-occupied units in the five boroughs in 2000 (including mortgages, equity loans, real estate taxes, insurance, utilities (including water, electricity, and gas), heating fuel, condominium fees, mobile home fees, and other miscellaneous fees) were highest in Manhattan, \$3,615, and lowest in Staten Island, \$1,431, with a citywide average of \$1,562.
- The average household income for City customers in the lowest income block in New York City (Tract 271.01) is estimated to have been \$12,664 in 2004.

The additional monthly rate charge of approximately \$0.21 related to implementation of the project would be negligible to renters, home owners and low-income residents. Based on these costs, it is unlikely that renters or owners of residential units would relocate from the City as a result of the

proposed project. Therefore, the proposed project is not expected to result in potential significant adverse socioeconomic impacts on New York City residential water consumers.

Conclusions

Due to the close proximity of the Shaft Site to local businesses, and the combined effects of the project, there is a possibility that construction of Shaft 33B at this site could result in lower sales and eventual indirect displacement of one or several businesses located on the east side of Second Avenue directly adjacent to the construction zone for the Shaft Site. Construction would also be noticeable, and at times, intrusive and annoying to certain residents, business owners, and customers of local businesses elsewhere in the Study Area; however, the effects of construction would not be unlike the effects from other major construction in Manhattan. Overall, given the Shaft Site's location in a well-established neighborhood of Midtown Manhattan, large-scale neighborhood character or socioeconomic changes would not be expected to occur. Construction of the water mains would also not result in significant adverse impacts on local businesses, as construction would be of short duration in any one area (typically 12 weeks for the street segment and another 10 weeks for each intersection). With implementation of the traffic mitigation plan for the construction zone, the potential increase in traffic congestion along the selected water main route would not be anticipated to result in significant adverse impacts to nearby businesses. Nearby businesses would continue to receive and make deliveries, and customers would continue to be able to access the businesses. In terms of water and sewer rates, the additional monthly rate charge of \$0.21 would be negligible to renters, home owners, and low income residents. Overall, construction and operation of Shaft 33B at the alternative Shaft Site and the water mains would not result in significant adverse impacts on socioeconomic conditions.

