

4.4 SOCIOECONOMIC CONDITIONS

4.4.1 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 preferred Shaft Site would result in adverse socioeconomic impacts. Potential socioeconomic impacts include direct and indirect displacement. According to the *CEQR Technical Manual*, 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 preferred Shaft Site is located on City-owned property and, therefore, would not result in the direct displacement of businesses or residents. 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 preferred Shaft Site has the potential to result in significant noise impacts on nearby residents and businesses. With the exception of blasting, noise effects would be most noticeable to residents and businesses that face the Shaft Site. Blasting effects would not be highly noticeable at receptors located beyond this immediate area, particularly after the first four months of blasting; these effects are considered short term and temporary. Therefore, the assessment focuses on those residents and businesses facing the site.

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.

4.4.2 Existing Conditions

Residents and Businesses in the Vicinity of the Preferred Shaft Site

As discussed in the Section 4.2, “Land Use and Community Facilities, Zoning, and Public Policy,” the preferred 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,” according to Census 2000, a total of nearly 27,000 people live within approximately ¼ mile of the alternative Shaft Site, in the area generally extending from E. 54th to E. 64th Streets, east of Third Avenue. The residences and businesses that face the site also face onto a high trafficked corridor that includes the Queensboro Bridge, E. 59th Street, and First Avenue. The residential buildings include several walk-up apartment buildings and a high rise building located on the southeast corner of E. 59th Street and First Avenue.

Retail shops, restaurants, offices, and other businesses are located at the ground floor of these residences and beneath the Bridge across First Avenue from the Site. On the south side of E. 59th Street, between First Avenue and the Queensboro Bridge on-ramp, there is a concentration of home decorating businesses and businesses that serve local residents. Businesses include a restaurant on the corner of First Avenue, clothing store, locksmith, jewelry store, parking garage, three home furnishing stores, offices, kitchen and bath store, fitness club, dry cleaners, and chandelier store. Diagonally across from the Shaft Site, on the southeast corner of First Avenue and E. 59th Street, is a 16-story residential building with a restaurant located on the ground floor. Further east on E. 59th Street is a five-story residential building with a dry cleaner located on the ground floor. On the east side of First Avenue, under the Bridge, is the retail complex referred to as Bridgemarket, with a home furnishing store, a supermarket, and a caterer/restaurant.

Water and Sewer Rates

This Section summarizes the current water rate structure for City customers of the New York City Water Supply System. This information is used to assess the potential socioeconomic indirect displacement effects from increased water rates due to the construction of Shaft 33B at the preferred Shaft Site and the associated water main connection.

Financing Mechanisms for New York City Department of Environmental Protection (NYCDEP) Capital Improvements

The New York City Water and Sewer System is financially self-sustaining; i.e., the costs of paying for system costs and operations are supported by water and sewer charges. Costs (operating expenses and debt service on the bonds issued to finance capital infrastructure improvements) are estimated annually for the entire system and water and sewer rates are adjusted accordingly to provide annual operating revenues sufficient to cover the costs and maintain debt service coverage of at least 115 percent. Therefore, residential, commercial, and industrial users of the water supply system would pay for the capital and operating costs of the project through their water charges.

There are two primary sources of financing available to fund the construction of NYCDEP capital improvement projects: (1) the New York City Municipal Water Finance Authority (“Authority”), and (2) the New York State Drinking Water Revolving Fund Program (SRF).

The Authority is authorized to issue bonds to fund the construction of capital improvement projects. The bonds are payable solely from, and secured by, a pledge of gross revenues from the New York City Water Board. Fixed Rate Water and Sewer System revenue bonds issued by the Authority currently carry an interest rate of approximately five percent, and are typically repaid over a period of 30 years. The variable rate bonds issued by the Authority have recently been yielding approximately one percent. Capital improvement projects with multi-year construction schedules, such as the proposed project, are financed with Authority bonds issued about four times per year in amounts necessary to cover the anticipated construction cost in any given year.

New York State makes financing available to municipalities around the state for capital improvement projects related to drinking water. The state receives an annual grant from the U.S.

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Environmental Protection Agency (USEPA) that provides seed money for construction of facilities related to drinking water. Under a matching fund provision, the state is required to contribute an amount equal to 20 percent of the grant as additional funding. The state invests the seed money, and uses the proceeds to subsidize the interest rate on bonds that it issues through the SRF to finance municipal projects. Municipalities repay the proceeds of the SRF bonds to the state, thus creating a “revolving fund” that can be used for future projects. Rates vary; however, a recent SRF financing provided a yield of 4.57 percent for a repayment period of 20 years. After giving effect to the 33 percent interest rate subsidy available on drinking water projects, the net cost to the City for SRF financing on this particular maturity issue is 3.06 percent. Wastewater-related projects, including improvements to wastewater treatment plants in the watershed, are eligible for SRF loans for a term of 30 years. As with some municipal bonds, the SRF program includes funding for several water projects from around the state in a single bond issue.

The proceeds of bonds are typically used to finance the cost of the capital improvement program, to fund certain reserves and to pay costs of issuance, including the premium for bond insurance.

Total Debt Service Payable from Current Revenues

Major investments have been made in the City’s water and sewer infrastructure since the 19th century. Some ongoing capital improvement projects include: (1) the Water Quality Preservation Program, which provides for improvements to the upstate watersheds, and includes a land acquisition program and the upgrade of non-City owned wastewater treatment plants; (2) the construction of portions of the City Tunnel No. 3; (3) trunk distribution and main replacement; and (4) wastewater treatment plant upgrades and construction.

It is anticipated that New York City Water Board will make debt service payments in the amount of \$843.5 million in the current FY 2006. After giving effect to prior year surplus carried forward, net FY2006 debt service payments are anticipated to be \$722.3 million. Debt service would be paid from current water and sewer user payments, interest earnings, and miscellaneous revenues.

Existing Rates for City Customers

There are approximately 824,000 water and sewer accounts in the City, the vast majority of which receive both water and sewer service. Approximately 752,000 of the accounts are metered accounts, and annual charges are calculated on actual water usage. Sewer charges are computed as a percentage of water charges. The remaining 72,000 accounts are flat rate accounts and charges are assessed based on building type, the number of housing units in the building, and the number of water-using fixtures in the building. In addition, certain institutions are exempt from payment of water and sewer charges, including religious institutions, certain educational and charitable institutions, homes for the aged, hospitals, and other nonprofit or charitable corporations. There are approximately 4,000 accounts that are entirely or partially exempt from water and sewer charges. In FY 2005, water and sewer payments for City customers were approximately \$1.744 billion. There are 12 major categories of water and sewer system customers. Approximately 80 percent of the user payments that support the water and sewer system come from residential customers. The water rate for City customers effective in 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.

4.4.3 Future Conditions Without the Project

Residents and Businesses in the Vicinity of the Preferred Shaft Site

As discussed in Section 4.2, “Land Use and Community Facilities, Zoning and Public Policy,” there are no proposals or planned residential or commercial projects in the areas that face the project site in the “Future Without the Project.” Therefore, conditions would be expected to be comparable to those currently existing in the immediate vicinity of the preferred Shaft Site.

Water and Sewer Rates

The New York City Water Board forecasts system-wide revenues and expenses for a 5-year period. The forecast includes an estimate of the annual revenues that would be collected through water and sewer user payments, as well as an estimate of the annual debt service required to amortize bonds issued to fund previous capital improvement projects and future expenditures scheduled under the City’s Capital Improvement Program.

The most recent forecast covers FY 2006 to FY 2010. In this base case, total water and sewer payments from New York City residential, commercial, institutional, and industrial customers are projected to increase from \$1.883 billion in FY 2006 to \$2.466 billion in FY 2010. This corresponds to an increase per City customer household, assuming household usage of 100,000 gallons per year (gpy), from \$571 in FY 2006 to \$775 in FY 2010.

For the lowest income group in New York City, with an estimated 2004 average household income of \$12,664¹, current water and sewer costs account for 4.5 percent of annual income. The anticipated projected rate increases without the proposed project represent a 36 percent increase in water and sewer rates from FY 2006 to FY 2010. Assuming an inflation rate of 4 percent, household incomes of this lowest income group would also increase to \$16,024 by 2010. The projected increase in rates would raise water and sewer costs to 4.8 percent of annual household income in the Future Without the Project.

4.4.4 Future Conditions With the Project

This Section assesses potential indirect displacement effects to residents, businesses, and City water and sewer ratepayers from construction and operation of Shaft 33B at the preferred Shaft

¹ \$12,664 is the estimated median family income in 2004 in the lowest income tract in the City (of Tract 271.01 in the Kingsbridge area of the Bronx). This was selected as a representative low-income housing area for City water users. This income is based on a \$10,825 annual income from the 2000 U.S. Census data and inflated at 4 percent per year to 2004.

Site. There are no substantive differences between the base configuration and alternate site configuration with regard to socioeconomic impacts and, therefore, the assessments provided below would apply to both configurations.

Residents and Businesses in the Vicinity of the Preferred Shaft Site

Construction

Certain residents and businesses facing the Shaft Site would experience significant noise impacts, and at times, noticeable, but intermittent, vibration effects during shaft construction. As discussed in Sections 4.12, “Noise,” and 4.13, “Vibration,” NYCDEP will put numerous protective measures in place to minimize and/or prevent both noise and vibration effects.

The noise and vibration levels from blasting and other construction activities will be noticeable and, at times, intrusive and annoying to certain residents, business owners, and customers of local businesses across from the Shaft Site. However, they would not be expected to prevent the conduct of routine activities. The existing environment surrounding the Shaft Site is very noisy resulting from high traffic volumes associated with the Bridge. Therefore, retail and other businesses in the immediate area are accustomed to elevated noise levels and traffic congestion. These businesses include three restaurants, a clothing store, a locksmith, a jewelry store, a parking garage, several home furnishing (e.g., design, antique, lighting, etc) stores, a fitness club, and two cleaners. 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, the 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.

The construction activities would have no effect on pedestrian access to these uses. No other significant environmental impacts on these businesses or residents would occur. 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. It is very unlikely that businesses or residents would relocate from the area as a result of construction of the project. Overall, the effects of the proposed project are not 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.

A combined assessment of the socioeconomic effects of construction of Shaft 33B at the preferred Shaft Site and its water main connections is presented in Section 5.4, “Socioeconomic Conditions,” in Chapter 5, “Water Main Connections.”

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 4.1, “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 preferred Shaft Site would occur in four stages over a 52 month period (2006-2010) with an estimated cost of approximately \$71.5 million (all amounts are in 2005 dollars, assuming a 4 percent escalation in costs to the mid-point of construction). The water main connection along First Avenue from this Shaft Site would cost approximately \$9.5 million, with a combined shaft and water main cost of \$81 million, while the Sutton Place route would cost approximately \$14 million, with a combined shaft and water main cost of \$85.5 million. The cost to construct the water main connection along the E. 59th Street/E. 61st Street route would be lower. The cost estimate includes 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.

Potential Impacts on Residential Users

Financing the proposed project through Authority bonds would result in a repayment (or amortization) period of 30 years. For purposes of analysis we have assumed an interest rate of 6.34 percent. Actual interest rates and debt service costs will be subject to market conditions as and when such bonds are issued. Repayment begins in the first year of the bond issue.

The potential impacts of the proposed 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 \$0.05 in 2008, increase to a high of \$0.24 in 2014, and then decrease to \$0.16 in 2015 and each year thereafter for 20 years. The water main connection would add another approximately 20 percent to the shaft costs, or less than five cents.

To assess the impact these costs 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:

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- 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 City-wide 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 \$0.24 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 project. Therefore, the proposed project is not expected to result in potential significant adverse socioeconomic impacts on New York City residential water consumers.

