Final Scope of Work for the Draft Environmental Impact Statement CEQR NO. 05DEP010M For the Proposed Shaft 33B To City Tunnel No. 3, Stage 2 – Manhattan Leg

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FINAL SCOPE OF WORK
FOR THE DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE PROPOSED SHAFT 33B
TO CITY TUNNEL NO. 3, STAGE 2 - MANHATTAN LEG

FOREWORD

On April 8, 2005, the New York City Department of Environmental Protection (NYCDEP or Department), acting as the Lead Agency, publicly distributed a Draft Scope of Work (DSOW) for the preparation of a Draft Environmental Impact Statement (Draft EIS) for the proposed Shaft 33B project. A formal Public Hearing was held on May 9, 2005 to accept comments on the DSOW. Additional written comments were received during the public comment period, which officially ended on May 19, 2005. Following the close of the public comment period, the Department accepted comments from concerned members of the public until July 6, 2005 in order to accommodate requests for additional time to review the DSOW.

In addition to the formal public hearing, meetings were held with Manhattan Community Board 8 on April 18, 2005 and Manhattan Community Board 6 on May 25, 2005 and June 29, 2005 to present and explain the proposed Shaft 33B project and the environmental review process. The purpose of these meetings was to provide the forum within which the community could address their concerns directly to the Department and receive clarification about the proposed project and responses to their comments and questions. The local community has emphasized their concerns on various issues, including potential quality of life impacts and the siting of Shaft 33B. The Department is committed to keeping the many interested members of the public informed throughout the planning process for the project and will coordinate through the local Community Boards. For up to date information, please check the Department's website at www.nyc.gov/dep. The Department's website currently contains the Draft Scope of Work, the Final Scope of Work (FSOW), the presentation that NYCDEP made to Community Board 6 on June 29, 2005 and will soon contain a "Frequently Asked Questions" specific to the Shaft 33B project and the Draft EIS when it is published in Fall 2005. Information on City Tunnel No. 3 Stage 2 is also available on the website.

It must be stressed that the proposed project is not at final design, relevant information is still being collected and many factors still need to be considered. Currently, the Department is providing the community with the best available information, however; this information will be adjusted and be reflective of new information as it becomes available to the Department. The relative advantages and disadvantages of the sites under consideration will be adjusted to reflect the outcome of the environmental impact analyses. The Draft EIS will provide full disclosure of all advantages, disadvantages, and pertinent environmental issues, at the preferred site and the alternative sites, as appropriate, to provide a true and thorough comparison of the potential for significant impacts to occur at each location.

This FSOW includes clarifications and additional discussion regarding several of the issues emphasized at the Community Board meetings, including the advantages and disadvantages of

the alternate sites, the costs associated with each alternative, the length and duration of water main construction, and blasting at the Shaft 33B Site. In addition, a "Response to Comments" section is included as Attachment A and addresses those comments that were received during the DSOW comment period. Many of the comments provided on the DSOW also reflect concerns raised by the community at the Community Board meetings and thus some responses provided do further illuminate issues that were discussed at the meetings.

The Department will make every effort to be responsive to the concerns of the community throughout the environmental review process and will present thorough environmental analyses of the proposed project in the Draft EIS. The Draft EIS will allow the public an opportunity to review the proposed project in more detail and will provide an additional opportunity for the public to comment on the proposed project.

A. PROJECT IDENTIFICATION AND CEQR PROCEDURES

NYCDEP is proposing to construct a water supply shaft, Shaft 33B, on the upper east side of Manhattan. The proposed preferred site for Shaft 33B is on E. 59th Street and First Avenue, adjacent to the Queensboro Bridge. Shaft 33B will be the last shaft to be sited for the City Tunnel No. 3 project that is currently under construction. As a water supply shaft, Shaft 33B will connect City Tunnel No. 3 to the water distribution system on the Upper East Side of Manhattan. The siting of the shaft in this location will address the water supply pressure problems within this area and will provide redundancy to the existing water supply system. City Tunnel No. 3 is being constructed in part to facilitate inspection and repair of City Tunnel No. 1, which was activated in 1917 and has been in continuous operation for almost 90 years. Before the inspection of City Tunnel No. 1 can begin, City Tunnel No. 3 must be activated.

Construction of Shaft 33B is subject to environmental review pursuant to New York City's Environmental Quality Review (CEQR) process as set forth in Executive Order 91 of 1977 and its amendments creating the Rules of Procedure for CEQR, adopted by the City Planning Commission on June 26, 1991 and revised in October 2001 as well as the State Environmental Quality Review Act (SEQRA) (Section 8-0113, Article 8 of the Environmental Conservation Law) as set forth in 6NYCRR Part 617. On April 8, 2005, NYCDEP, acting as the lead agency publicly distributed a Draft Scope of Work (DSOW) for the preparation of the Draft EIS for the proposed Shaft 33B project. The Draft EIS will allow close examination of the potential environmental impacts associated with construction of the shaft and assessment of alternative sites for the proposed shaft. The Draft EIS will also allow the Department to work closely with the community to disclose issues and address concerns about this complex and important project prior to making final decisions on siting the proposed Shaft 33B project at E. 59th Street and First Avenue.

This FSOW sets forth the analyses and methodologies to be used in the preparation of the Draft EIS. Distribution of the DSOW was intended to initiate the public review process that will continue throughout the environmental review and decision-making process. This FSOW is being issued to address comments received during the public review and includes updates and additional review tasks, as may be appropriate, that were requested by the public. Attachment A

"Response to Comments" provides responses to comments received by NYCDEP via regular mail, email and at the public scoping hearing held on May 9, 2005. The formal closure of the public comment period was May 19, 2005, however, in order to accommodate the requests for additional time to review the DSOW, NYCDEP accepted comments from concerned members of the public until July 6, 2005.

Based on this Final Scope of Work, a Draft EIS will be prepared, certified as complete, and circulated for public review. A public comment hearing will be scheduled with a period for submitting written comments on the Draft EIS. This comment period will be followed by the preparation and circulation of the Final EIS, which will include written responses to address public comments made on the Draft EIS.

B. PROJECT DESCRIPTION

NEW YORK CITY WATER SUPPLY SYSTEM

New York City supplies water to its consumers from three primary sources: the Croton, the Catskill, and the Delaware Watersheds. Water flows by gravity from upland storage reservoirs to balancing reservoirs in Westchester County (Hillview Reservoir; Catskill/Delaware System) and in the City of New York (Jerome Park Reservoir; Croton System) and then to the City through City Tunnels No. 1, 2, City Tunnel No. 3, Stage 1 and the New Croton Aqueduct. City Tunnel No. 1 extends from the Hillview Reservoir in Westchester County through the Bronx and Manhattan, and into Brooklyn. City Tunnel No. 2 extends from Hillview Reservoir through the Bronx and into Queens and Brooklyn. These tunnels are connected to the consumers through the distribution system, which consists of a network of water mains (pipes) of various sizes (see Figures 1 and 2).

PROJECT HISTORY AND HISTORY OF WATER TUNNEL NO. 3

The New York City Board of Water Supply (Water Board) first conceived of the idea to construct City Tunnel No. 3 in 1954 in order to unwater (drain), inspect, and rehabilitate City Tunnels No. 1 and No. 2 while maintaining water deliveries at adequate flows and pressures, and to provide for increased water demands within the City. City Tunnels No. 1 and No. 2 have been in service since 1914 and 1917 respectively. In 1978, the Water Board was merged into the New York City Department of Environmental Protection (NYCDEP), who thereafter assumed responsibility for the planning and implementation of City Tunnel No. 3.

Design and construction of City Tunnel No. 3 was planned in stages. Stage 1 of City Tunnel No. 3 extends from the Hillview Reservoir in Yonkers through the Bronx, Upper Manhattan, and into Queens. As construction of Stage 1 progressed, the Water Board issued a 1973 Report to the Board of Estimate[1], which outlined the planning, design, and construction of Stage 2. This report recommended the consolidation of Stages 2 and 3 due to the "pressing need" for delivery

[1] The Board of Estimate, which was comprised of the Mayor, the Borough Presidents, the Comptroller and the President of the City Council, controlled budget and land use within the City for almost a century. The Board of Estimate was eliminated in 1990.

Source:
New York City Department of Environmental Protection. January, 2005 (http://www.nyc.gov/html/dep/html/wsmaps.html)

	NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION CITY WATER TUNNEL NO. 3, STAGE 2 SHAFT 33B NEW YORK CITY WATER SUPPLY SYSTEM	JUNE 2005 FIGURE 1

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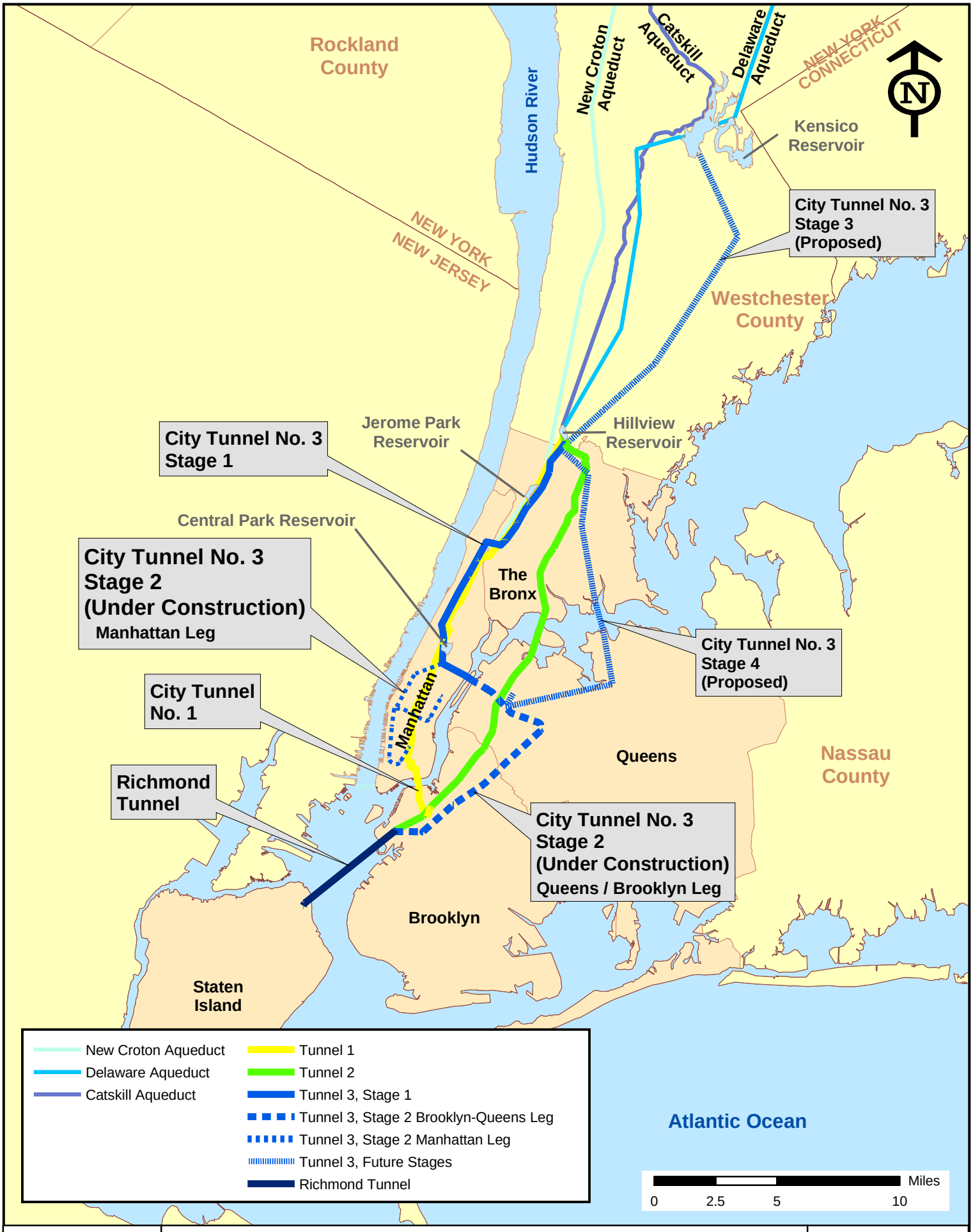


NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
NEW YORK CITY WATER SUPPLY TUNNEL SYSTEM

JUNE 2005

FIGURE 2

Map Document: (S:\Projects\2175158\GIS_Figures\Shaft_33B\EIS_Field_Work\DEP_Tunnel_Sections.mxd)

capacities of water to the Boroughs of Manhattan, Queens, and Brooklyn. Stage 2 is planned as two tunnel sections to be constructed simultaneously, one to be located in Manhattan and the other to be located in Queens and Brooklyn.

The plan for Stage 2 of City Tunnel No. 3 was approved by the Board of Estimate on July 19, 1973. In the ensuing two decades following this approval, impediments arose (e.g., the City's financial crisis in the 1970's) causing serious delays in the implementation of the Board of Estimate directive. To offset this long delay, an intensive effort is now under way to ensure that City Tunnel No. 3, Stage 2 will be completed as quickly as possible.

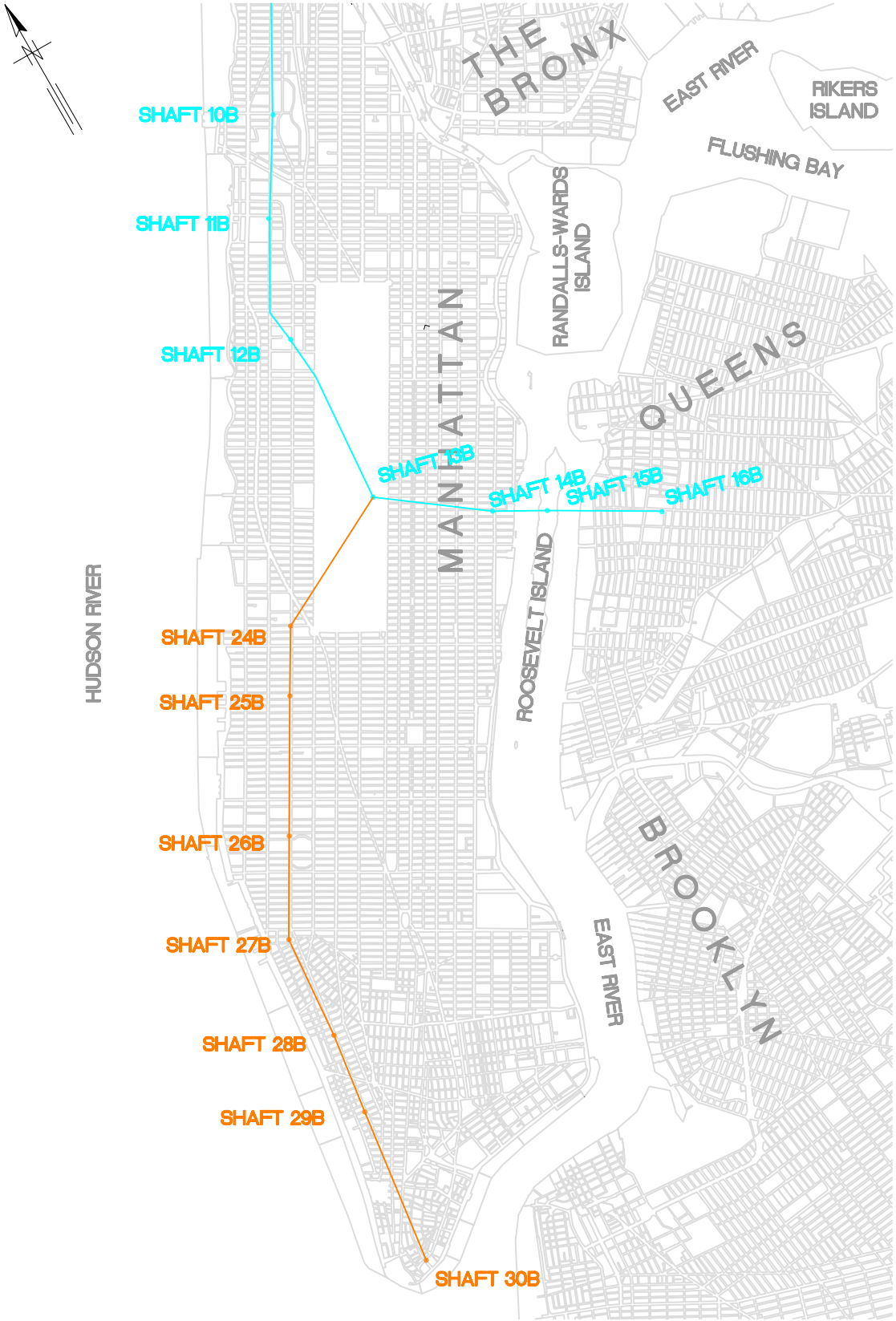
The configuration of the Manhattan Leg of Stage 2 of City Tunnel No. 3 has changed over time (see Figures 3 and 4). Originally planned as a six-mile extension from Central Park to the south end of Manhattan, the configuration was revised in the 1990's in order to enhance service to the east side of Manhattan.

By 1999, the revised configuration was intended to form a nearly continuous loop around the southern part of Manhattan below Central Park. However, the configuration was changed once again to include two spurs. The main branch of the tunnel generally runs down the west side of Manhattan, loops back north just south of City Hall and terminates in the vicinity of West Fourth Street near the Bowery. The second branch of the tunnel extends eastward from 10th Avenue to Shaft 32B at E. 35th Street and Second Avenue and would terminate at the proposed Shaft 33B site at E. 59th Street and First Avenue (see Figure 4). Shaft 33B would be one of ten water supply shafts along the Stage 2, Manhattan Leg**.** Shaft 33B is the final shaft to be sited.

PURPOSE AND NEED FOR SHAFT 33B

Shaft 33B is primarily intended to address issues related to lack of redundant water supply and water pressure problems in the area where it would be located. In addition, as part of the overall plan for City Tunnel No. 3, Stage 2 Manhattan Leg it is intended to be located such that there would be no service disruptions or dramatic changes in pressure when City Tunnel No. 3, Stage 2 Manhattan Leg comes on-line and replaces service from City Tunnel No. 1. City Tunnel No. 1 has been in continuous service for over 90 years and is in need of maintenance and rehabilitation. Rehabilitation would not occur until City Tunnel No. 3 is capable of providing a redundant water supply source to this area of Manhattan. In this context, the term, "source", refers to a water supply mechanism that ties in to the distribution system serving a particular geographic area referred to as a "pressure zone". For example, a source feeding a distribution area would include a large trunk main (supplied by a shaft) connected to one of the major distribution tunnels (City Tunnel No. 1 or 2). The distribution system in the City is divided into pressure zones that are defined by ground elevation (see Figure 5). Shaft 33B is intended to serve primarily the Middle Intermediate Pressure Zone (MIPZ) in Manhattan, which is bounded roughly by Tenth Avenue to the west, the East River to the east, 54th Street to the north and 34th Street to the south.

In each pressure zone, NYCDEP has an ultimate goal of establishing three sources of supply; protecting against the potential simultaneous occurrence of having one source of supply shut down for repairs while a break occurs in another source of supply. In this event, a third source of supply is needed to continue operations during repair of the other two sources of supply.



COLOR LEGEND

CITY TUNNEL NO. 3 STAGE 1 (1999)

CITY TUNNEL NO. 3 STAGE 2 (1973)

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION	NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION TUNNEL 3 STAGE 2 MANHATTAN SHAFT 33B	STAGE 2 MANHATTAN HISTORICAL ALIGNMENT	JUNE 2005 FIGURE 3

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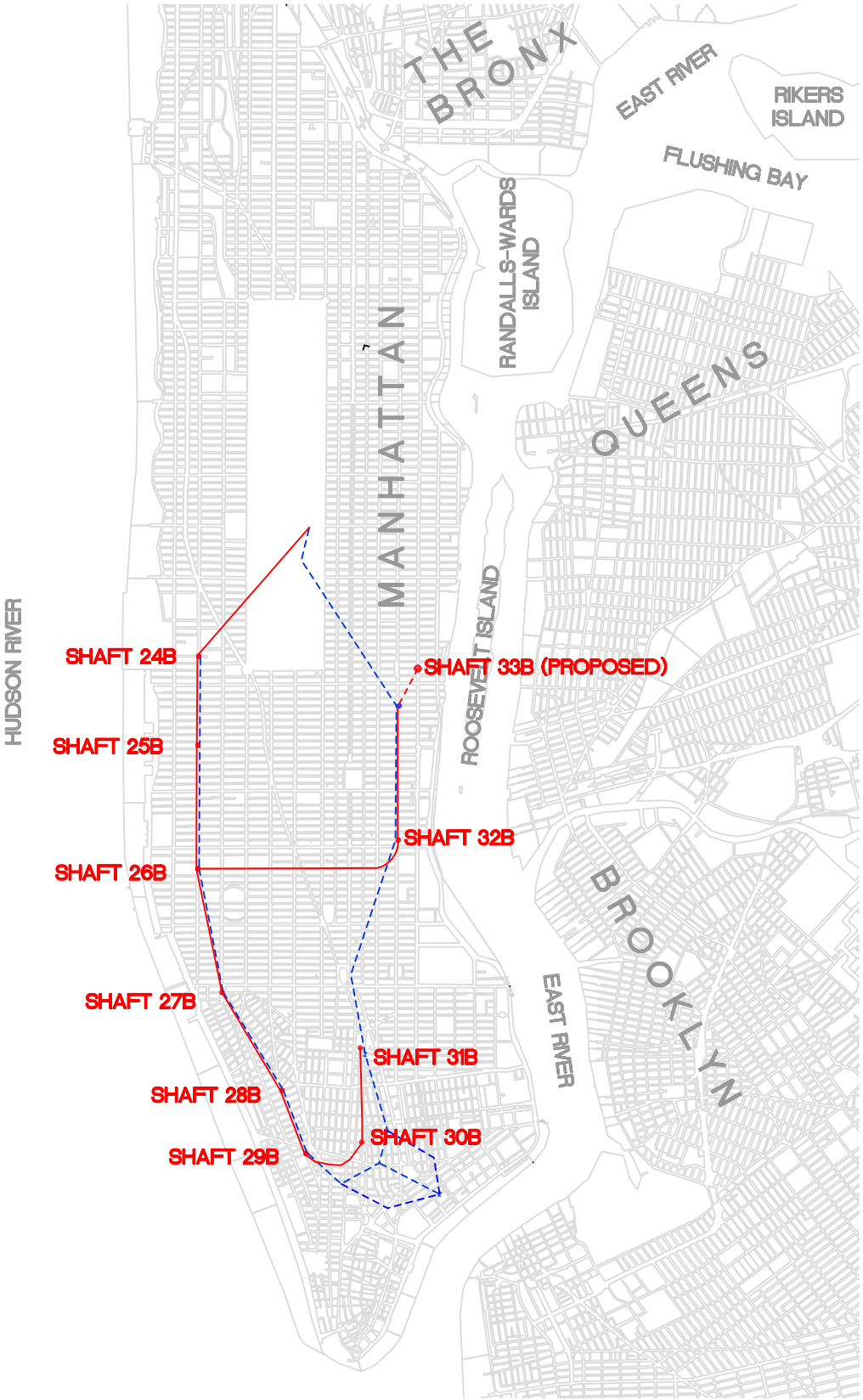

COLOR LEGEND

CITY TUNNEL NO. 3 STAGE 2 (1999)

CITY TUNNEL NO. 3 STAGE 2 (current)

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION

TUNNEL 3 STAGE 2 MANHATTAN
SHAFT 33B

STAGE 2 MANHATTAN ALIGNMENT PROGRESSION

JUNE 2005

FIGURE 4

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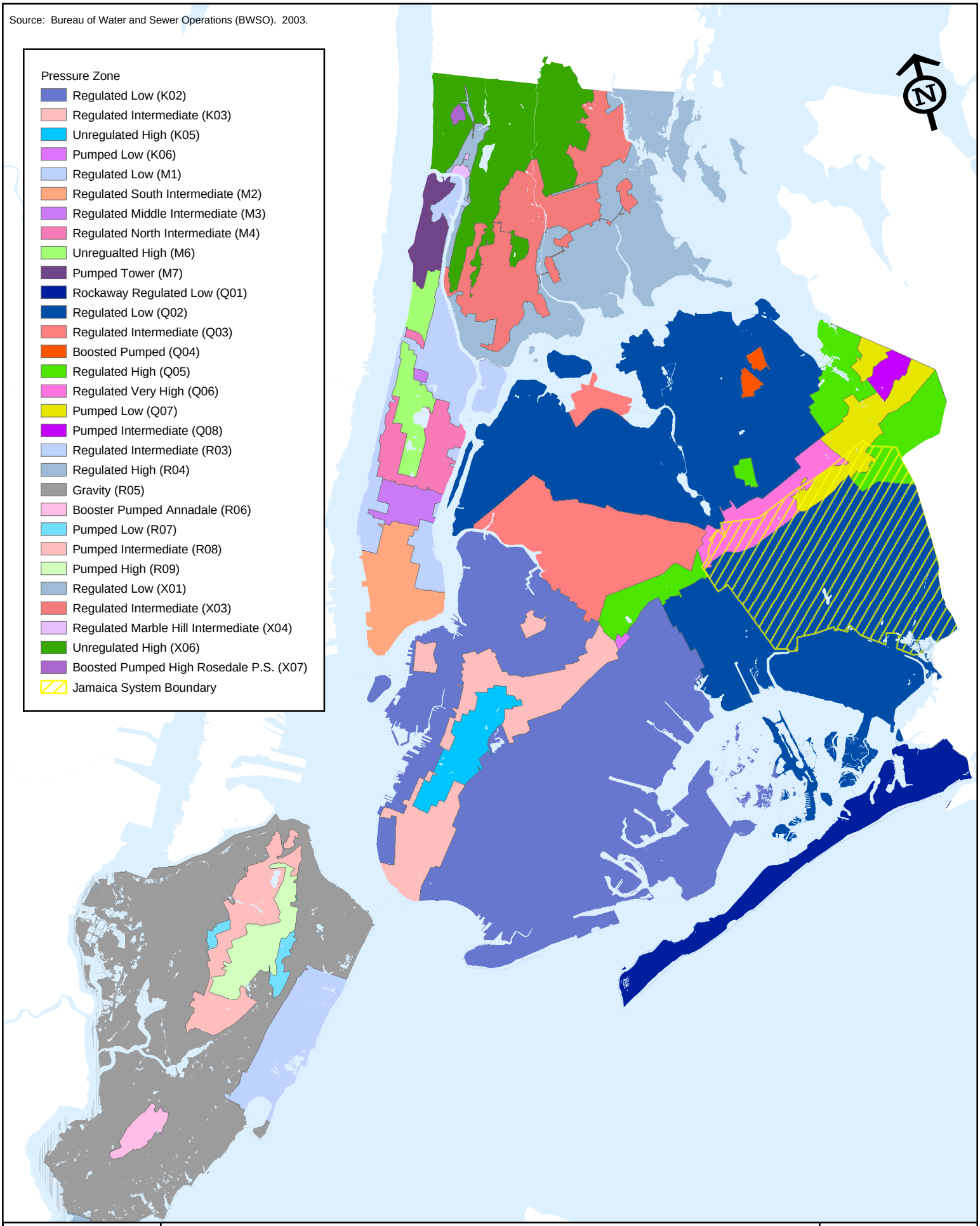
Source: Bureau of Water and Sewer Operations (BWSO). 2003.



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NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
PRESSURE ZONES

JUNE 2005

FIGURE 5

Currently, Water Tunnel No. 1 feeds into the MIPZ through five regulators[2]. When more than one of these regulators is out of service, low water pressure is experienced at buildings in the MIPZ. The problem is exacerbated east of Park Avenue because of the limited number and size of water mains that cross the Metro North Railroad lines under Park Avenue. An additional purpose of constructing Shaft 33B is to improve pressure reliability within this zone, which affects water supply needs such as fire-fighting capabilities. Location of the shaft in the northern portion of the MIPZ also provides redundant water supply capacity for the Northern Intermediate Pressure Zone (NIPZ). The NIPZ spans the width of Manhattan and flanks Central Park along the Upper East and Upper West Sides. Its northern boundary is at approximately 102nd Street and its southern boundary is 54th Street.

The MIPZ and NIPZ have very high water consumption rates as compared with the rest of the City. According to NYCDEP estimates of the approximate water usage for different areas of the City, the average water consumption in the MIPZ is 30 million gallons per day (MGD) per square mile (sq. mi). For comparison, this is approximately six times higher than water usage in the Bronx (the Borough with the second highest water usage per square mile). Shaft 33B is necessary to provide City Tunnel No. 3 water to this area to accommodate the high water demand. In the event Shaft 33B could not be constructed in the area, approximately forty blocks of water main construction would be required to ensure sufficient water supply capability in the Midtown/ Upper East Side areas of Manhattan.

SITE SELECTION

Study Area

NYCDEP evaluated a number of sites in the vicinity of the eastern portion of the MIPZ between E. 50th Street and E. 61st Street where Shaft 33B could be located to meet its intended purpose. Locating Shaft 33B in this area serves two critical water supply objectives. Locating the shaft in the eastern portion of the MIPZ (east of Park Avenue) addresses the pressure concerns that this area experiences when more than one existing regulator is out of service. Siting the shaft near the northern border of the zone serves the MIPZ and provides redundancy to the NIPZ by connecting to the distribution system at a boundary valve on Third Avenue between E. 55th Street and E. 56th Street. Furthermore, while Shaft 33B could be located at a greater distance from the MIPZ, the tie-in location to the distribution system would not change. As a result, sites located further from the MIPZ would experience greater costs and potential traffic and noise impacts associated with the greater length of water main construction needed to connect to the distribution system. For this reason, NYCDEP has restricted the review of available sites to those sites that are proximal to the northern portion of the MIPZ.

[2] A regulator is a type of valve that maintains a constant discharge pressure into the distribution system.

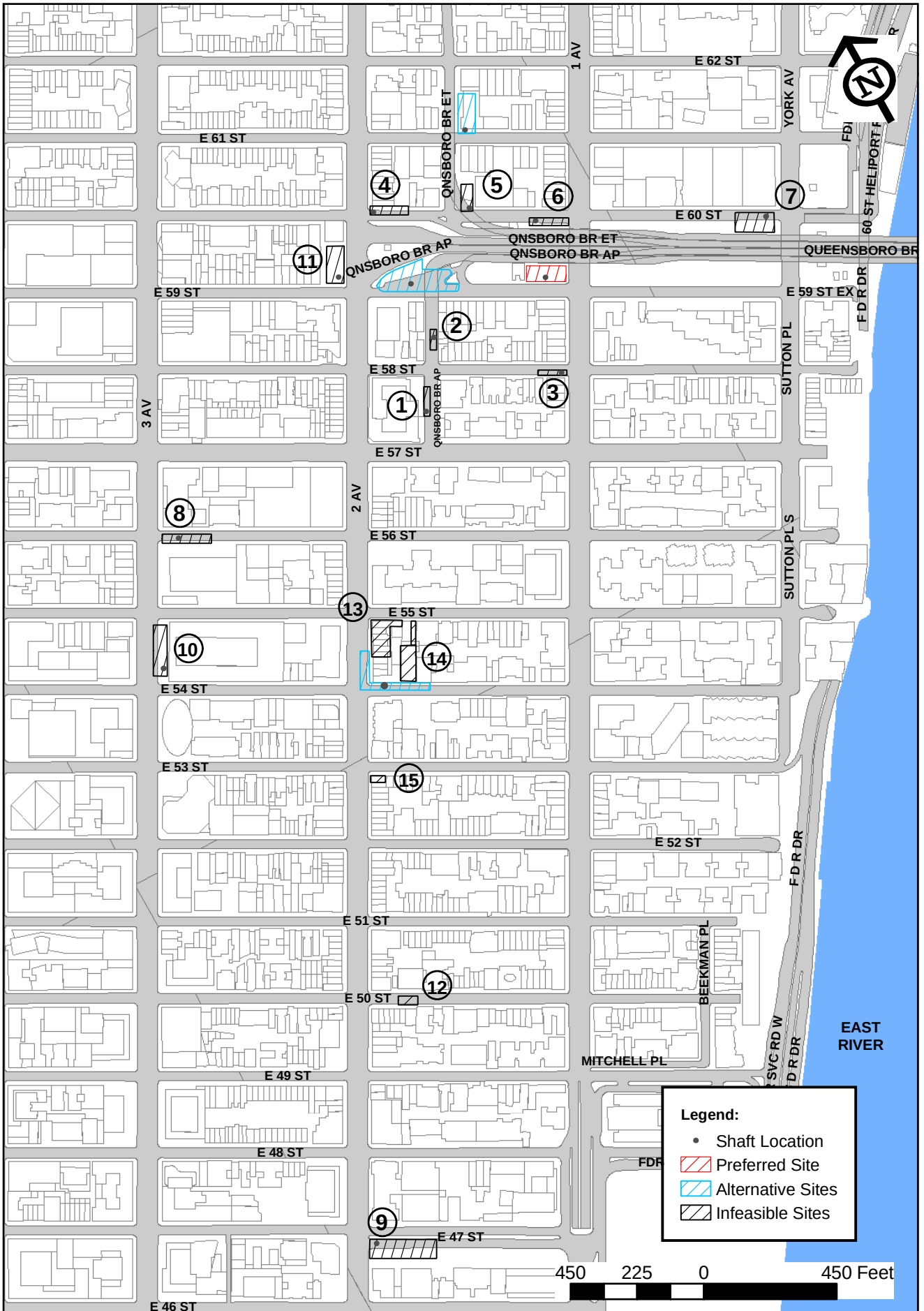
Site Screening Process

Introduction

Nineteen locations were considered by NYCDEP for the proposed Shaft 33B project (See Figure 6). Each site was evaluated to determine whether construction of the shaft would be feasible at that location (see Figure 6 for approximate locations of the nineteen sites evaluated). Four sites were considered to be potentially feasible locations for the proposed Shaft 33B including sites located at E. 59th Street and First Avenue; E. 54th Street and Second Avenue; E. 61st Street between First and Second Avenue; and E. 59th Street and Second Avenue. As discussed below under "Infeasible Sites", fifteen sites were disqualified from further consideration for a variety of reasons. Following the determination of which sites offered feasible opportunities for shaft construction, preliminary assessments of site specific characteristics at each available site were conducted to evaluate the advantages and disadvantages of the sites. This assessment included a preliminary review of engineering and environmental considerations. It must be emphasized that the advantages, or disadvantages, of these four sites for consideration in the Draft EIS are not equal among the sites. The Draft EIS will further assess these advantages and disadvantages in detail in order to present the best and worst features of the sites and provide the decision-makers with a balanced perspective of the issues at each site. NYCDEP's goal in the final selection of the shaft location is to minimize potential impacts while maximizing efficiency during the construction period and configuring the shaft to operate at optimal capacity.

The continuation of the site planning and design processes, which will occur in concert with the environmental review process, will provide more information to NYCDEP regarding the details of construction of Shaft 33B at each site. It should noted that the information presented in the Draft and Final Scope of Work represents NYCDEP's preliminary evaluation of what construction of Shaft 33B at the preferred and alternatives sites could entail. Final site and construction plans have not been prepared for any site and it is common for projects to be modified or refined during the progression from preliminary to final design as more detail becomes available and other City agencies provide input on the project on issues from their area of expertise (for example, it is standard practice for the Landmarks Preservation Commission and the New York City Department of Transportation (NYCDOT) to provide comments on the plans for proposed projects). It is also likely that as the planning/ design processes continue, additional advantages and/ or disadvantages at each feasible site could be discovered. The Draft EIS will provide full disclosure of all advantages, disadvantages, and pertinent environmental issues, at the preferred site and the alternative sites, as appropriate, to provide a true and thorough comparison of the potential for significant impacts to occur at each location. The ultimate goal of NYCDEP is to successfully construct the Shaft 33B project in a manner that achieves the Department's water supply goals and balances engineering, environmental, social and economic considerations. NYCDEP will work diligently with other City agencies and the public to prepare the plan that accomplishes this goal.

Source:
Department of Information Technology and Telecommunications (DoITT). NYC Landbase, 2000.



	NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION CITY WATER TUNNEL NO. 3, STAGE 2 SHAFT 33B ALTERNATIVE SITE LOCATIONS	JUNE 2005 FIGURE 6

Map Document: (S:\Projects\2175158\GIS_Figures\Shaft_33B\EIS_Field_Work\DEP_All_Sites.mxd)
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Feasible Sites

A preliminary comparative analysis was conducted to assess the advantages and disadvantages of the feasible sites. NYCDEP has identified the site at northwest corner of the intersection of E. 59th Street and First Avenue as the preferred site for Shaft 33B generally because the advantages of this site are more attractive and the disadvantages are more manageable as compared with the other feasible sites. These advantages and disadvantages will be subjected to further detailed analysis in the Draft EIS. The following is an overview of the advantages and disadvantages for each feasible alternative site that NYCDEP considered in identifying the preferred site for Shaft 33B.

The primary subject and purpose of the Draft EIS will be to provide a discussion of the potential environmental impacts associated with the construction and operation of the proposed Shaft 33B project at the E. 59th Street and First Avenue site. The three feasible alternative sites identified will be assessed at a level of detail that allows a comparative assessment of the engineering and environmental issues related to each of the alternatives.

E. 59th Street at First Avenue – The Preferred Site

Of the four potentially feasible sites, the site located at the northwest corner of the intersection of E. 59th Street and First Avenue was identified as the preferred site. This site has been identified as the preferred site based on a comparative review of the potential advantages and disadvantages of the construction of Shaft 33B at each feasible location. The preferred site is located on Block 1434 Lot 1 at E. 59th Street and First Avenue in Manhattan and is adjacent to the NYCDOT Queensboro Bridge Engineer's office, and a multi-use area that is commonly referred to as "Honey Locusts Park" but is also used for bridge maintenance and staging activities (the multi-use area) (See Figure 7). The size of the site is approximately 9,200 square feet.

Advantages

This site has several desirable characteristics as compared to the other feasible sites. The advantages of this site include the following:

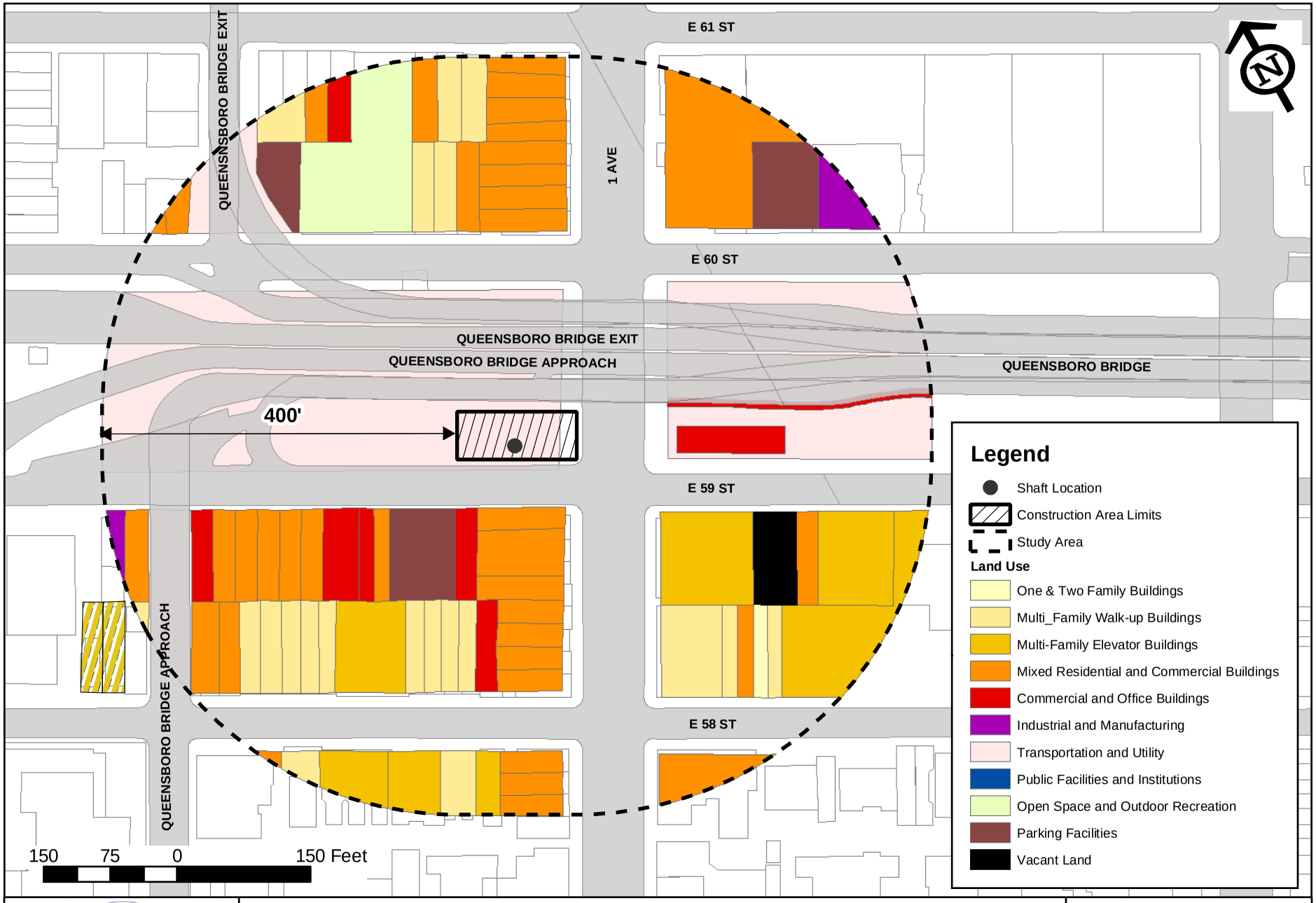
- The site has the best configuration of all the site options for construction because access to the sites is available from three sides and a rectangular shape, which is efficient for construction, is available;

- The parcel is City-owned and is located within a mapped street (sidewalk);

- There is sufficient area for two risers[3] in the shaft which is desirable because it provides redundant supply capability within the shaft itself. Providing redundancy within the City Tunnel No. 3 Stage 2 shafts is NYCDEP's preferred design standard for all of the shafts

[3] Risers are pipes that deliver water from the tunnel through the shaft to the surface.

Source:-
City of New York Department of City Planning (DCP). Primary Land Use Tax Lot Output (PLUTO) data files, December, 2004. Department of Information Technology and Telecommunications (DoITT). NYC Landbase, 2000. Field verified and/or updated: 22nd and 23rd December, 2004.



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NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY TUNNEL NO. 3, STAGE 2
SHAFT 33B E. 59TH STREET AND FIRST AVENUE
LAND USE

JUNE 2005

FIGURE 7

that are planned or under construction in association with City Tunnel No.3 Stage 2. Most Manhattan Leg shafts have two risers while most of the City Tunnel No. 3, Stage 2-Brooklyn Queens Leg shafts have four risers. Two risers make the shaft a more reliable water supply mechanism. Providing the most reliable water supply infrastructure possible to serve the needs of the City is of the highest priority to NYCDEP.

- Limited blasting is required due to the depth of the overburden (because blasting would begin at a depth of approximately 23 feet);

- The nearest residential receptor is approximately 75 feet from the shaft center which provides the greatest distance from potential construction impacts of any of the sites;

- Maximum noise attenuation is achievable at the site due to the available space and configuration and the lack of immediately adjacent inhabited structures; and,

- Under the current plan and site configuration, lane closures would not be required with the exceptions of a one-month period when the western lane on First Avenue would be closed between E. 59th Street and E. 60th Street for constructing the water mains and connecting them to the shaft and for limited time periods when closure of a lane on either E. 59th Street or First Avenue for connections to existing infrastructure in the street would be required.

Disadvantages

- This site is located approximately eight blocks from the primary water main connection point, located between E. 55th and E. 56th Streets and Third Avenue. Future water main construction is anticipated to run from the site down First Avenue and across E. 55th and E. 56th Streets to Third Avenue. This construction would take approximately 41 months and would necessitate lane closures on First Avenue which is an important northbound traffic corridor in Manhattan;

- Water main connections would have to cross Con Edison's oil-o-static lines[4] located beneath First Avenue and E. 59th Street which requires more complicated construction procedures to install the water mains;

- The site is currently used by the NYCDOT for vehicle parking, which would be displaced during construction and construction may interfere with current operations of the NYCDOT facilities located under the Queensboro Bridge; and,

- Under the current plan and site configuration, a portion (approximately 1,800 square feet) of the multi-use area would be needed during construction for staging purposes for a

[4] Oil-o-static lines are bundled high voltage transmission lines that are contained in a steel pipe filled with oil. The oil helps to dissipate heat that is generated as energy (electricity) is transmitted through the lines.

temporary period of approximately 23 months. Two Honey Locust trees would be removed as part the construction activities.

E. 54th Street and Second Avenue

This site has an L shaped configuration and is located in the street and sidewalk area on the east side of Second Avenue and the north side of E. 54th Street between Second and First Avenues (see Figure 8). Surrounding structures include residential and commercial uses. The size of the site is approximately 8,500 square feet.

Advantages

- Of the feasible sites, this site is the closest to the primary water main connection point, and would therefore require the least amount of water main construction in the future. Future water main construction would run approximately four blocks from the site up Second Avenue, across E. 55th and E. 56th Streets to Third Avenue. This construction would take almost half of the duration of water main construction for the preferred site and represents the shortest duration required for water main construction of all available sites.;

- This is the southern-most alternative site, and therefore requires the least tunnel excavation resulting in cost savings associated with tunnel excavation;

- The geology of the site is favorable for shaft construction, because there is a very shallow depth to bedrock. Therefore, excavation support would not be required around the shaft to hold back soil during construction;

- The site is located completely within City property; and,

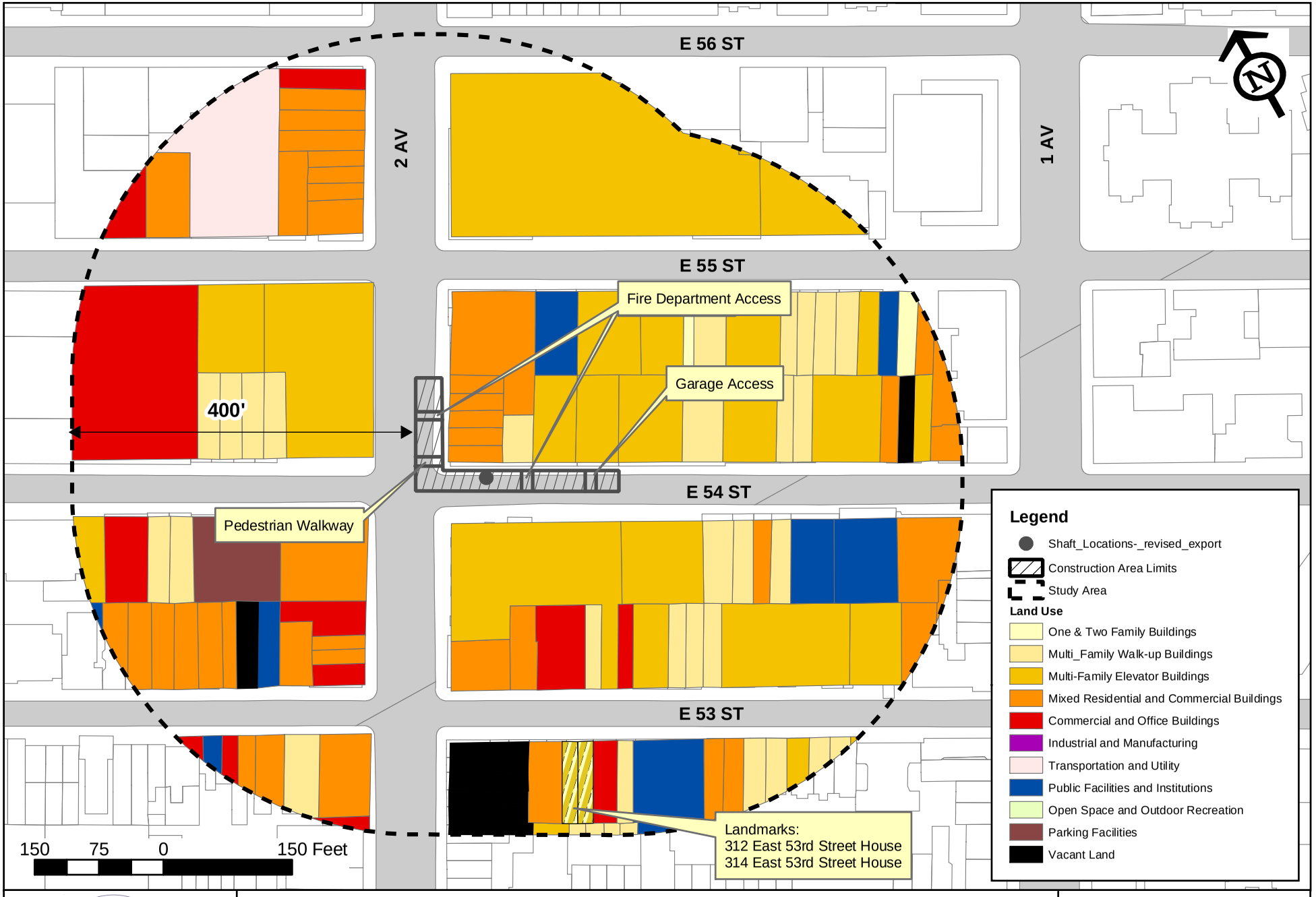
- Limited utilities within the street bed would need to be relocated for shaft construction at this site.

Disadvantages

- External restrictions created a constrained, irregular L-shaped, non-contiguous configuration (with a fire lane and pedestrian crossings that break up the site). In addition, a new private garage, recently constructed, has its only ingress/ egress point through the site, providing yet another division of the site; this garage entrance would require constant monitoring during the construction period which may disrupt activities on the site;

- An existing structure (an enclosed dining area associated with Lenny's Diner) that encroaches onto City-owned sidewalk on the northeast corner of the intersection would have to be removed. Access to the remaining portion of the restaurant would be

Source:- City of New York Department of City Planning (DCP). Primary Land Use Tax Lot Output (PLUTO) data files, December, 2004. Department of Information Technology and Telecommunications (DoITT). NYC Landbase, 2000. Field verified and/or updated: 22nd and 23rd December, 2004.



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NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY TUNNEL NO. 3, STAGE 2
SHAFT 33B E. 54TH STREET AND SECOND AVENUE
LAND USE

JUNE 2005

FIGURE 8

maintained. Removal of the structure would potentially affect the construction schedule and cause excavated material to be trucked from the site instead of from Shaft 26B.

- Due to the shallow bedrock conditions and the close proximity of sensitive receptors, construction techniques at the site would be somewhat different than those used at other sites. Thus, the duration of construction at this site is anticipated to be approximately 9 months longer and potential noise impacts more severe than other sites;

- Access to northern residences on E. 54th Street and businesses on Second Avenue would be constrained during the 61-month construction period;

- Only a single shaft riser could be provided due to site size constraints. This limits redundancy within the shaft and is not consistent with NYCDEP's preferred design for City Water Tunnel No. 3 Stage 2- Manhattan Leg shafts; and,

- Construction at this site would require closure of one parking lane and one traffic lane on Second Avenue for construction staging, and one parking lane and one traffic lane on E. 54th Street. Four traffic lanes could remain open on Second Avenue and one traffic lane could remain open on E. 54th Street. Additionally, pedestrian traffic accessing businesses on the east side of Second Avenue would be limited to a 7-foot walkway between E. 54th and E. 55th Streets. Street closures on E. 54th may also be required for relocation of existing infrastructure in the street.

E. 61st Street between First and Second Avenues

This site is located on the northern side of E. 61st Street, between First and Second Avenues (see Figure 9). It is located on Block 1436, Lot 0013, which is a vacant lot owned by the Archdiocese of New York. The property is adjacent to the off-ramp of the Queensboro Bridge, a residential structure owned by the Archdiocese, a pre-school and offices. The size of the site is approximately 9,000 square feet.

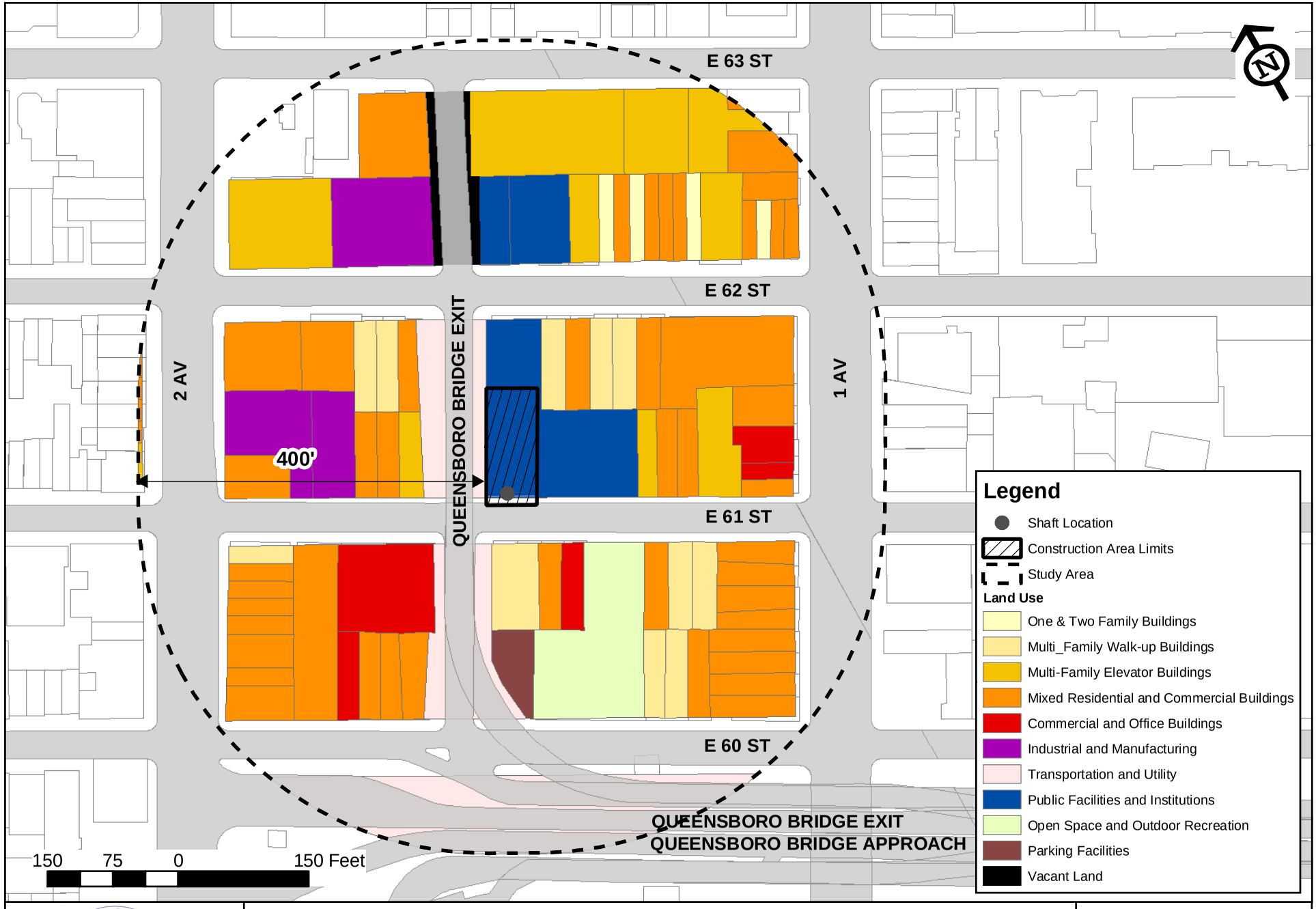
Advantages

- A primary advantage of this site is that, except for a one-month period during the shaft construction when the northern lane on E. 61st Street would be closed adjacent to the site for water main construction leaving the site and for limited time periods when closure of a lane on E. 61st Street for connections to existing infrastructure in the street would be required. No other lane closures would be required for construction of the shaft itself.

- Limited blasting is required due to the depth of the overburden (because blasting would begin at a depth of approximately 19 feet).

- This site could accommodate two risers in the shaft which would provide redundant supply capability within the shaft itself. As discussed above under E. 59th Street and First

Source:- City of New York Department of City Planning (DCP). Primary Land Use Tax Lot Output (PLUTO) data files, December, 2004. Department of Information Technology and Telecommunications (DoITT). NYC Landbase, 2000. Field verified and/or updated: 22nd and 23rd December, 2004.



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NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY TUNNEL NO. 3, STAGE 2
SHAFT 33B E. 61ST STREET BETWEEN FIRST AND SECOND AVENUES
LAND USE

JUNE 2005

FIGURE 9

Avenue, providing redundancy within the shaft itself is an important objective for the NYCDEP; and,

- The potential for noise attenuation exists at the site due to the available space and configuration.

Disadvantages

- A primary disadvantage of this site is the distance from the site to the primary water main connection point, between E. 55th and E. 56th Streets and Third Avenue. Water main connections would run approximately 11 blocks, going east on E. 61st Street, down First Avenue and across E. 55th and E. 56th Streets to Third Avenue. This construction would take longer than at the preferred site and would necessitate lane closures on First Avenue which is an important northbound traffic corridor in Manhattan;

- The site would need to be acquired from the Archdiocese. The Archdiocese has not been receptive to NYCDEP's acquisition or use of the site. The site acquisition process would potentially affect the construction schedule and cause excavated material to be trucked from the site instead of from Shaft 26B;

- Water main connections would have to cross Con Edison's oil-o-static lines located beneath First Avenue and E. 59th Street which could complicate the construction procedures utilized to install the water mains; and,

- Sensitive receptors are within 50 feet of the shaft center. As a result, construction techniques at the site could be restricted somewhat from those used at other sites. This could lengthen the duration of shaft construction.

E. 59th Street and Second Avenue

This site is located in a portion of the street and sidewalk area on the northern side of E. 59th Street, and encroaches onto a plaza area adjacent to the on ramp to the Queensboro Bridge (see Figure 10). Surrounding structures include residential and commercial uses. The size of the site is approximately 15,000 square feet.

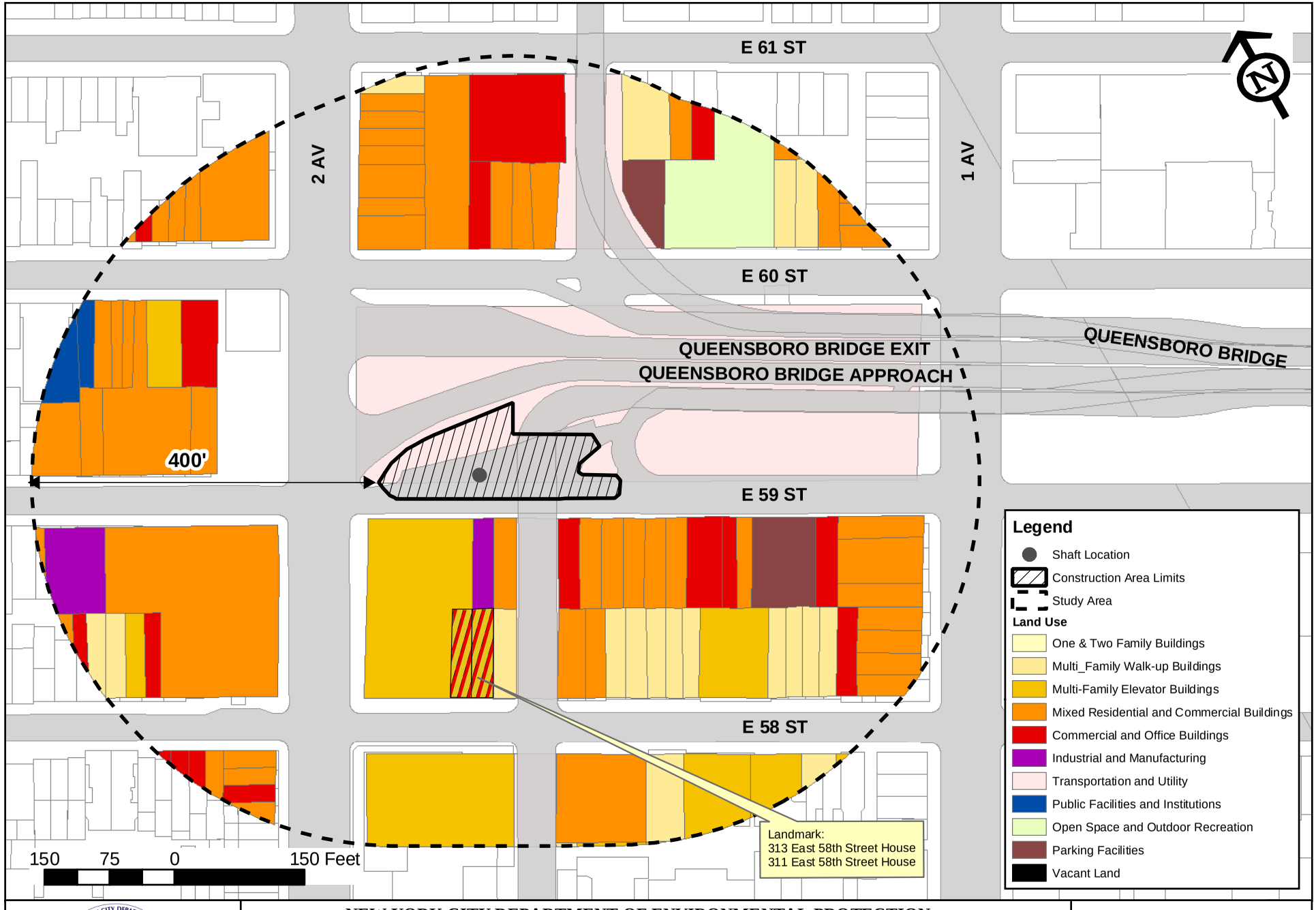
Advantages

- The site is owned by the City and located within a mapped street (sidewalk);

- Limited blasting is required due to the depth of the overburden (because blasting would begin at a depth of approximately 25 feet);

- The potential for noise attenuation exists at the site due to the available space and configuration.

Source:- City of New York Department of City Planning (DCP). Primary Land Use Tax Lot Output (PLUTO) data files, December, 2004. Department of Information Technology and Telecommunications (DoITT). NYC Landbase, 2000. Field verified and/or updated: 22nd and 23rd December, 2004.



NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY TUNNEL NO. 3, STAGE 2
SHAFT 33B E. 59TH STREET AND SECOND AVENUE
LAND USE

JUNE 2005

FIGURE 10

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Disadvantages

- A primary disadvantage of this site is the distance from the site to the primary water main connection point, between E. 55th and E. 56th Streets and Third Avenue. Water main connections would run approximately 9 blocks, going east on E. 59th Street, down First Avenue and west on E. 55th and E. 56th Streets to Third Avenue. This construction would take longer than at the preferred site and would necessitate lane closures on First Avenue which is an important northbound traffic corridor in Manhattan;

- There is a very high density of utilities that would need to be relocated, including a sensitive Con Edison oil-o-static line and its associated chamber. Relocation of the lines would potentially affect the construction schedule and cause excavated material to be trucked from the site instead of from Shaft 26B;

- Water main connections would have to cross Con Edison's oil-o-static lines located beneath First Avenue and E. 59th Street which could complicate the construction procedures utilized to install the water mains;

- The site configuration is non-contiguous with part of the site located under the Queensboro Bridge access ramp;

- Under the current plan and site configuration, construction at this site would require the extension of the existing lane closure on E. 59th Street west toward Second Avenue, resulting in one available traffic lane for the entire length of the block (currently there are two lanes at the western-most end of the block).

- Sensitive receptors exist within 50 feet of the shaft center. As a result, construction techniques at the site could be restricted somewhat from those used at other sites. This could lengthen the duration of shaft construction; and,

- Only one shaft riser could be constructed at this site due to the site configuration and utilities proximal to the shaft footprint. This limits redundancy within the shaft and is not consistent with NYCDEP's preferred design for City Water Tunnel No. 3 Stage 2-Manhattan Leg shafts.

Infeasible Sites

As previously described, NYCDEP evaluated a number of sites in the vicinity of the eastern portion of the MIPZ between E. 50th Street and E. 61st Street where Shaft 33B could be located to meet its intended purpose. Nineteen locations were considered by NYCDEP for the proposed

Shaft 33B project (See Figure 6). Each site was evaluated to determine whether construction of the shaft would be feasible at that location. Sites were determined to be infeasible if one of the following conditions applied:

- The site would require condemnation of active private property. The notable exception to this is that NYCDEP does consider condemnation of active surface parking lots or vacant lots since there are no site occupants.

- The site would require closing an entire street or avenue for construction of the shaft. If options exist that would avoid complete closures, as is the case for the Shaft 33B project, NYCDEP would not propose complete street closures.

- The site configuration would not accommodate the required space needed for construction of the shaft. A minimum site width of at least 39 feet (assuming excavation support is required) and a length of between 175-200 feet are necessary to accommodate shaft construction, as well as to provide room for maneuverability of equipment such as a crane. The site width, 39 feet, is necessary to accommodate excavation of the distribution chamber (which has a 26-foot width) and a 5-foot workspace on either side for the construction crews to build the concrete formwork, strip the formwork, and waterproof the structure. The remaining three feet is taken by the width of the excavation support system on either side of the excavation. The site length is necessary to achieve a minimal construction staging area.

Based on the initial evaluation of each site, fifteen sites were disqualified from further consideration for siting Shaft 33B for a variety of reasons. The reasons construction of the shaft at these sites would be infeasible are provided below. All dimensions are approximate.

Queensboro Bridge Approach between E. 57th and E. 58th Streets

This site is a rectangular site located on the western side of the Queensboro Bridge Approach between E. 57th Street and E. 58th Street. (Figure 6, Site 1)

This site is not considered to be feasible because the 39-foot site width necessary for construction could not be achieved without the complete closure of the Queensboro Bridge Upper Level Approach and/or the condemnation of actively used private property. The Queensboro Bridge Upper Roadway Approach is 45 feet in width and does not have any sidewalks. In order to maintain a single lane of traffic, private property including a multi-family residential structure adjacent and to the west of the site would have to be acquired or condemned in order to widen the available area.

Queensboro Bridge Approach north of E. 58th Street

This site is a rectangular site located on the eastern side of the Queensboro Bridge Approach, north of E. 58th Street. (Figure 6, Site 2)

This site is not considered to be feasible because the 39-foot site width necessary for construction could not be achieved without the complete closure of the Queensboro Bridge Upper Level Approach. The Approach is 45 feet in width and does not have any sidewalks. In order to maintain a single lane of traffic, private property including an adjacent mixed-use residential/commercial building to the east of the site and an adjacent multi-family residential walk-up building to the west of the site would have to be acquired or condemned in order to widen the available area.

E. 58th Street at First Avenue

This site is a rectangular site located on the eastern side of the E. 58th Street block between First and Second Avenues (Figure 6, Site 3).

This site is not considered to be feasible because the 39-foot site width necessary for construction could not be achieved without the complete closure of E. 58th Street. The street is 34 feet wide and the sidewalks (including curbs) on the north and south are each 12.5 feet wide, or a total of 59 feet from the façade of the buildings on the north side of the E. 58th Street to the façade of the buildings on the south side of the street. Maintaining a traffic lane would require a total of 64 feet. Therefore, private property consisting of adjacent mixed use residential/commercial buildings to the north and south of the site would have to be acquired or condemned on either side of E. 58th Street in order to widen the available area.

E. 60th Street at Second Avenue

This site is a rectangular site located on the western side of the E. 60th Street block between First and Second Avenues (Figure 6, Site 4).

This site is not considered to be feasible because the 39-foot site width necessary for construction could not be achieved without the complete closure of E. 60th Street. The street is 34 feet wide and the sidewalk (including the curb) on the north and south side of E. 60th Street are 13 feet and 10 feet, respectively, for a total of 57 feet. The Queensboro Bridge is located on the south side of the street. In order to maintain a single lane of traffic, a total of 64 feet would be needed. Therefore, private property including an adjacent restaurant, mixed-use residential/commercial buildings, multi-family residential structures, and a commercial office building to the north of the site would have to be acquired or condemned in order to widen the available area.

E. 60th Street between First and Second Avenues

This site is located on the north side of E. 60th Street on the east side of the exit ramp from the Lower Level of the Queensboro Bridge (Figure 6, Site 5). The site is directly underneath the Queensboro Bridge access ramp, and is not considered to be feasible because there is insufficient clearance between the lower girders of the access ramp and grade to allow movement of the cranes necessary for construction of the shaft.

E. 60th Street at First Avenue

This site is a rectangular site located on the eastern side of the E. 60th Street block between First and Second Avenues (Figure 6, Site 6).

This site is not considered to be feasible because the 39-foot site width necessary for construction could not be achieved without the complete closure of E. 60th Street. The street is 42 feet wide, and the sidewalks (including curbs) on the north and south are both 13 feet wide. The total width, from the façade of the buildings on the north side of the street to the Queensboro Bridge abutment on the south side of the street, is 68 feet. A bicycle lane, separated by a curb, also runs along the south side of the street. In order to maintain a single lane of traffic and accommodate a setback area from the bridge abutment, a total of 71 feet would be needed. Therefore, private property including adjacent mixed-use residential/commercial buildings would have to be acquired or condemned on the north side of E. 60th Street in order to widen the available area.

E. 60th Street at York Avenue

This site is a rectangular site located on the eastern side of the E. 60th Street block between First and York Avenues (Figure 6, Site 7).

This site is not considered to be feasible as a shaft construction site either in the street or under the Queensboro Bridge. In the street, the 39-foot site width necessary for construction could not be achieved without the complete closure of E. 60th Street. The street is 34 feet wide, and the sidewalks (including curbs) on the north and south sides of E. 60th Street are 14 feet and 13 feet, respectively. The total width, from the façade of the buildings on the north side of the street to the façade of the buildings on the south side of the street, is 61 feet. In order to maintain a single lane of traffic, a total of 64 feet would be needed. Therefore, private property including a parking garage on the north side of E. 60th Street would have to be acquired or condemned in order to widen the available area.

In order to build the shaft under the Queensboro Bridge, private property, including a private tennis facility would have to be acquired or condemned.

E. 56th Street at Third Avenue

This site is a rectangular site located on the western side of the E. 56th Street block between Second and Third Avenues (Figure 6, Site 8).

This site is not considered to be feasible because the 39-foot site width necessary for construction would require the complete closure of E. 56th Street. The street is 34 feet wide and the sidewalk (including the curb) on the north side of the street is 14 feet. Planters and stairs are located adjacent to the building line on the south side of the street, permitting a 13-foot wide sidewalk. The total width from the façade of the buildings on the north side of the street to the north edge of the planters on the south side of the street is 61 feet. In order to maintain a single lane of traffic, a total of 64 feet would be needed. Therefore, private property including an

adjacent underground parking garage, adjacent commercial office buildings, and adjacent residential structures would have to be acquired or condemned on the north and south sides of E. 56th Street in order to widen the available area.

E. 47th Street at Second Avenue

This site is located near the Dag Hammarskjold Plaza on the southeast corner of the intersection of E. 47th Street and Second Avenue, near the United Nations. The New York City Police Department has indicated that development of this site would compromise access to a major emergency route for the United Nations. As a result, the site is not considered to be appropriate for a shaft construction. (Figure 6, Site 9)

Third Avenue at E. 54th Street

This site is a rectangular site located on the east side of Third Avenue at E. 54th Street. (Figure 6, Site 10)

This site is not considered to be feasible because the 39-foot site width necessary for construction could not be achieved without extending into the street and affecting at least four lanes on Third Avenue. Lane closure of this magnitude and for an extended period of time on an avenue would not be practical.

On the east side of Third Avenue, the distance from the edge of the building's basement to the curb is approximately 15 feet. To accommodate the basement foundation footings, a 10-foot lane could not be utilized for construction. Therefore, the total width available on the east sidewalk is five feet. A total of 44 feet would be needed at this site to provide barriers between the construction area and pedestrians and traffic. Therefore, 39 feet would extend into Third Avenue, affecting the parking lane and at a minimum two traffic lanes (potentially three lanes).

Second Avenue at E. 59th Street

This site is a rectangular site located on the northwest corner of the intersection of Second Avenue and E. 59th Street. (Figure 6, Site 11)

Although an acceptably sized and configured construction staging area could be achievable at this site, it is not considered to be feasible because the location would interfere with an existing subway tube and the proposed Second Avenue Subway. Specifically, the shaft would have to be constructed adjacent to an existing subway tube that connects Queens and Manhattan. In the future, construction of the proposed Second Avenue Subway would come in close proximity to the water supply shaft. This construction could compromise shaft integrity and would not be appropriate. In addition, vibration associated with drilling and blasting (or subway operation) adjacent to the riser piping could damage the piping or concrete refill.

Second Avenue at E. 50th Street

This site is a rectangular site located on the eastern side of the E. 50th Street block between First and Second Avenues (Figure 6, Site 12).

This site is not considered to be feasible because the 39-foot site width necessary for construction could not be achieved without the complete closure of E. 50th Street. The street is 34 feet wide and the sidewalk (including curbs) on the north is 13 feet wide, and the sidewalk on the south is 13 feet wide, for a total of 60 feet from the façade of the buildings on the north side of the E. 50th Street to the façade of the buildings on the south side of the street. Maintaining a traffic lane would require a total of 64 feet. Therefore, private property consisting of adjacent mixed use residential/commercial buildings to the north and south of the site would have to be acquired or condemned on either side of E. 50th Street in order to widen the available area.

Second Avenue at E. 55th Street

The site is a rectangular site located on the southeast corner of E. 55th Street and Second Avenue. NYCDEP identified this privately held undeveloped site as a feasible site for shaft construction. The site was subsequently acquired by a private developer and is now the site of the Milan Condominiums. Construction of the Milan Condominiums will be complete in 2006. (Figure 6, Site 13)

E. 54th and E. 55th Streets East of Second Avenue

The site is a rectangular site located between E. 54th Street and E. 55th Street just east of Second Avenue. NYCDEP identified this privately held undeveloped site as a feasible site for shaft construction. However, the site was acquired by a developer. Construction of the appurtenant structures including a parking garage associated with the Milan Condominiums will be complete in 2006. (Figure 6, Site 14)

Second Avenue at E. 53rd Street

The site is a rectangular site located on the southeast corner of E. 53rd Street and Second Avenue. In 2000, NYCDEP identified this privately held undeveloped lot as a feasible site for Shaft construction. The site was subsequently privately acquired and is currently being developed. (Figure 6, Site 15)

DETAILED PROJECT DESCRIPTION

Overview

The proposed Shaft 33B project consists of two distinct yet functionally related components that are required in order to incorporate the shaft into NYCDEP's water distribution system; the first component is the construction and operation of the shaft itself and the second is the construction and operation of the water mains that would connect the shaft to the existing water distribution

system. Construction of the shaft and water mains is expected to occur over an approximately five year period, as shown in Table 1, based on a reasonable worst-case scenario. The shaft construction would occur in two phases over a 52-month period which includes an eight (8) month inactive period. The work occurring during each phase is discussed below. Phase III, water main construction, would occur in approximately 13 segments over an estimated 41-month period. The beginning of the water main construction would overlap with a portion of the shaft construction. Table 1 provides information about the anticipated phases of construction, their duration and construction activities associated with each phase.

Before Shaft 33B and the water mains could be incorporated into the City's distribution system, the shaft would go through an activation procedure that would include cleaning and disinfecting the shaft to ensure its acceptability for water supply purposes. Once constructed, neither the shaft nor the water mains would have significant surface features, and thus their operation would be anticipated to have a minimal appreciable effect on the area where they are proposed to be constructed.

Shaft Description

NYCDEP proposes to construct a vertical water supply shaft, Shaft 33B, on Block 1434 Lot 1 at E. 59th Street and First Avenue in Manhattan, adjacent to the NYCDOT Queensboro Bridge Engineer's Office, and adjacent to a multi-use area under the jurisdiction of the NYCDOT. Block 1434 Lot 1 in its entirety is under the jurisdiction of the NYCDOT however, the New York City Department of City Wide Administrate Services'[5] (NYCDCAS) records indicate that the New York City Department of Sanitation (NYCDOS) and the New York City Department of Parks and Recreation (NYCDPR) also use the property. Thus, the parcel currently supports several municipal uses.

Once constructed, the shaft would be an unmanned, underground facility capable of conveying water from Tunnel No. 3 to the surface distribution system that serves Manhattan residents.

City Tunnel No. 3 is currently under construction and the Tunnel would be extended to meet the proposed Shaft 33B Site when the environmental review process is completed and a decision is made regarding the location of the shaft. The extension of the Tunnel to the location of Shaft 33B would require the condemnation of subsurface easements along the Tunnel's route. The construction of the City Tunnel No. 3 occurs between 300 to 600 feet below the ground surface. Construction so far underground would not create the potential for environmental impacts along the Tunnel's route.

[5] NYCDCAS is the administrative arm of the New York City government and is responsible for supporting all City agencies which provide services to the public. One of the official duties of DCAS is the administration of the City's real estate.

TABLE 1

ANTICIPATED CONSTRUCTION PHASE DURATION AND WORK TO BE PERFORMED

Shaft Site		
Phase I. Shaft and Distribution Chamber	27	• Site preparation • Excavation of overburden[1], installation of excavation support, work slab • Drill pilot hole[2] and raise bore[3] the shaft • Excavation of distribution chamber[4] • Slashing[5]/lining the shaft • Installation of riser piping • Construct distribution chamber
Contracting and Equipment Procurement	*8*	• *Site secured and inactive*
Phase II. Equipment Installation	17	• Installation of distribution pipes and valves • Completion of riser/distribution chambers • Installation of yard piping[6] • Construction of regulator and valve chambers • Clean-up • Restore site
Off-Site Water Main Connections		
Phase III. Water Main Connections [7]	41	• Excavate trench • Relocate/protect utilities • Lay bedding/pipe • Backfill • Temporary pave

Notes:

1) Overburden refers to soil located above the bedrock.
2) The pilot hole is a small (12-inch) preliminary hole drilled from the ground surface to Tunnel No. 3 which is used to locate the center of the shaft.
3) The raise bore machine is a large, low-torque drill operated by an electric motor that drills the pilot hole down to the tunnel with a small drill head, and the larger 10-foot diameter shaft from the tunnel up to the surface.
4) The distribution chamber is located approximately 3 feet below grade, at the top of the shaft. Maintenance workers can access the chamber to operate the riser valves.
5) Slashing refers to expanding the diameter of the shaft by blasting rock.
6) Yard piping refers to underground piping which runs from the shaft to the edge of the property.
7) Water main connections would be constructed in segments in First Avenue and E. 55th and E. 56th Street as described below.

Detailed design of Shaft 33B would occur following completion of the Draft EIS; the conceptual design information that is presented here represents a reasonable worst-case construction plan for impact assessment purposes (e.g., it is possible that the shaft would be somewhat shallower resulting in less excavation, or construction could take a shorter period of time). The shaft consists of two major components: a cylindrical hole over 450 feet deep (referred to as the shaft) constructed primarily in the bedrock which contains the risers, covered by a distribution

chamber[6] constructed in the soil (see Figure 11). The shaft would be approximately 25 feet in diameter at the top, stepping down gradually as it approaches the bottom. The distribution chamber would be approximately 62 feet x 31 feet x 25 feet in size and would be designed to be located about three feet below grade with the entrance to the chamber provided through two hatchways (approximately three feet x five feet in size) at ground elevation. A 10-foot high by 14-inch diameter air vent would be located on the site or adjacent sidewalk to provide air into the shaft for maintenance workers (see Figure 12). In addition, up to two standard (3-foot high by 6-inch diameter) air release hydrants could be provided on the site or the adjacent sidewalk for blow-off from the piping. Air release hydrants would be used initially to activate the yard piping and then, in approximately 12 month intervals, to reactivate the yard piping following routine valve and pipe testing[7]. During the activation and reactivation sequences, the valves would be used to release the air in the yard pipes while they are filling with water. When air relief hydrants are located near the sidewalk, they are also used by the NYC Fire Department (FDNY) for firefighting purposes.

Shaft Site Construction

As shown in Table 1, construction of the Proposed Action would occur in three phases. The Phases are further broken down into four separate stages identified by the construction tasks occurring on the site during the 52-month construction period. Phase I of construction would include three stages and would have a duration of approximately 27 months during which construction of the shaft and distribution chamber would occur. Following these construction stages, there would be an 8-month period during which the site would be secured and inactive while specialized equipment is ordered. The fourth stage of construction (or Phase II) would have a duration of approximately 17 months and consist of equipment installation in the shaft and chamber and construction of regulators and valve chambers. Activities associated with these stages are described below. The temporary aboveground area of disturbance during construction activities for Shaft 33B would vary depending on the on-site activities that were occurring. Figures 13 and 14 show the conceptual construction staging area during different stages of construction. NYCDEP may consider alternative site configurations in the Draft EIS in order to optimize use of the site.

The construction phasing assumed for analysis in the Draft EIS represents a reasonable worst-case scenario based on previous construction requirements for shaft construction. The phasing at the Shaft 33B site represents a two-shift construction schedule, from 7 a.m. to 3 p.m. and 3 p.m. to 11 p.m. The majority of heavy work would occur during the first shift, however for analysis purposes, the reasonable worst-case assumes an equal amount of activity during the two shifts. A third (night) shift would occur during a three-month period of underground raise-bore activity, which would require limited surface activity to monitor the raise bore machine. Each stage is described in greater detail below.

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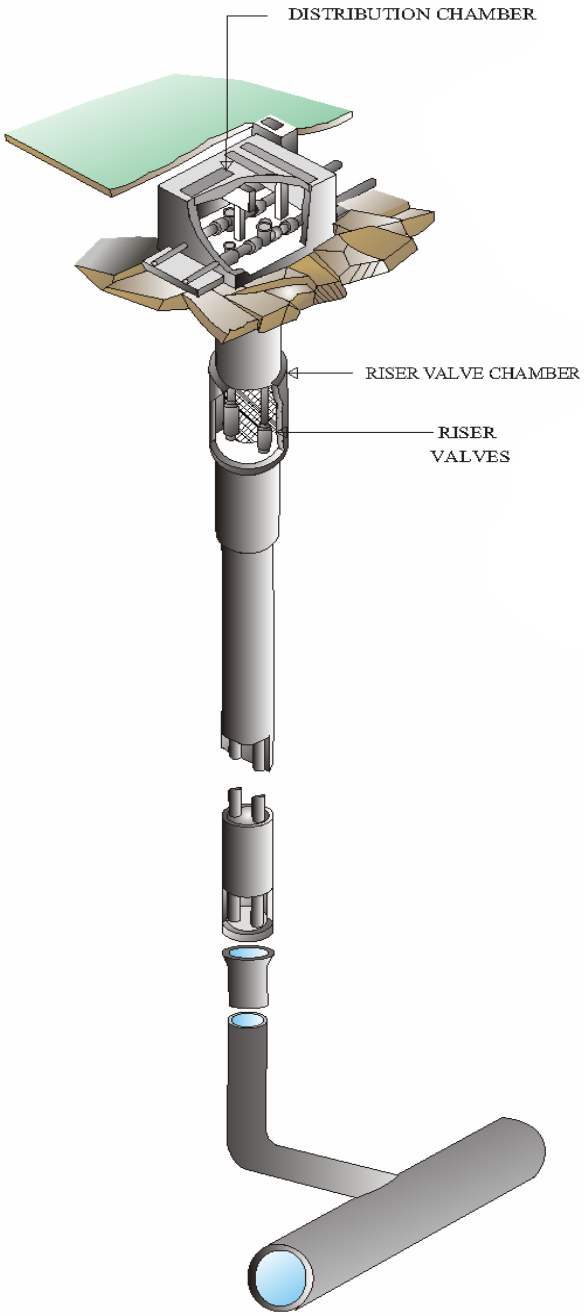
[6] A distribution chamber is a subsurface vault or chamber that houses the valves that control the flow of water from risers into the trunk main system.

[7] After the air is fully released from the pipes, water is then released so that the pipes can be "flushed". This operation typically lasts for less than one day.



TWO RISERS

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
SHAFT PROFILE

JUNE 2005

FIGURE 11

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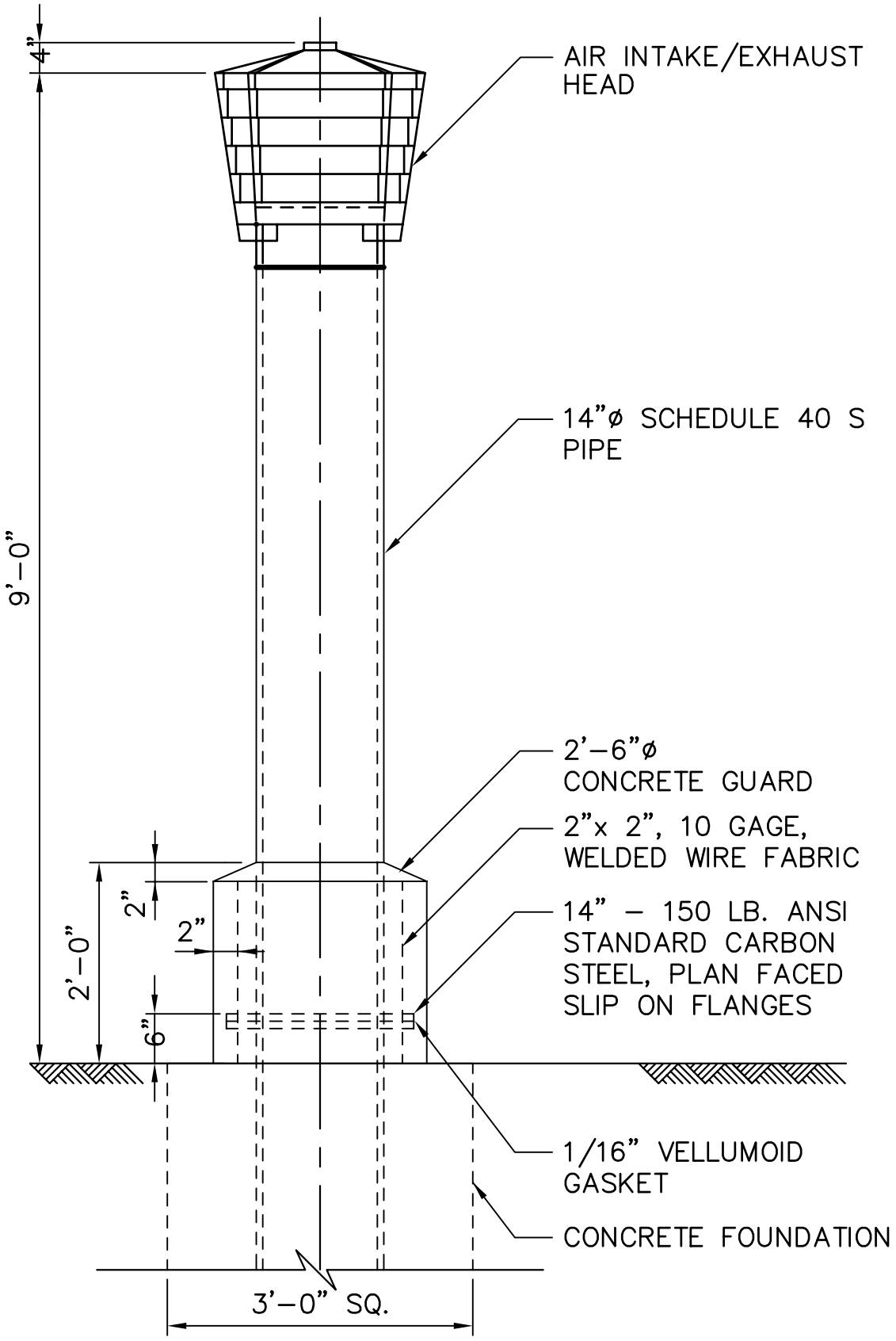

NOT TO SCALE

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION	NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION TUNNEL 3 STAGE 2 MANHATTAN SHAFT 33B	AIR VENT	JUNE 2005 FIGURE 12

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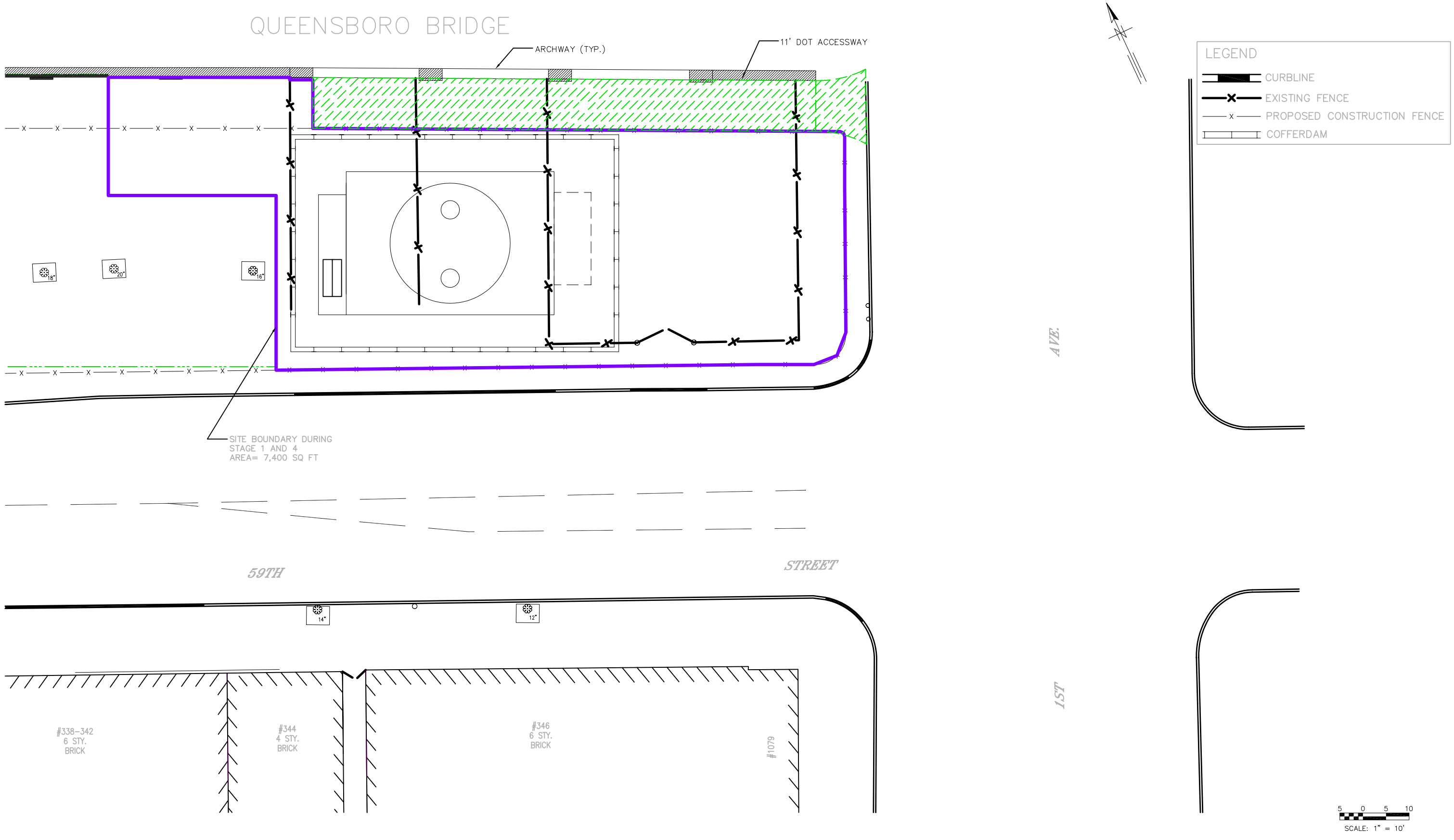

NEW YORK CITY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
MANHATTAN LEG
TUNNEL NO. 3, STAGE 2

E. 59TH STREET AND FIRST AVENUE
CONCEPTUAL SITE LAYOUT
STAGE 1 AND 4

JUNE 2005

FIGURE 13

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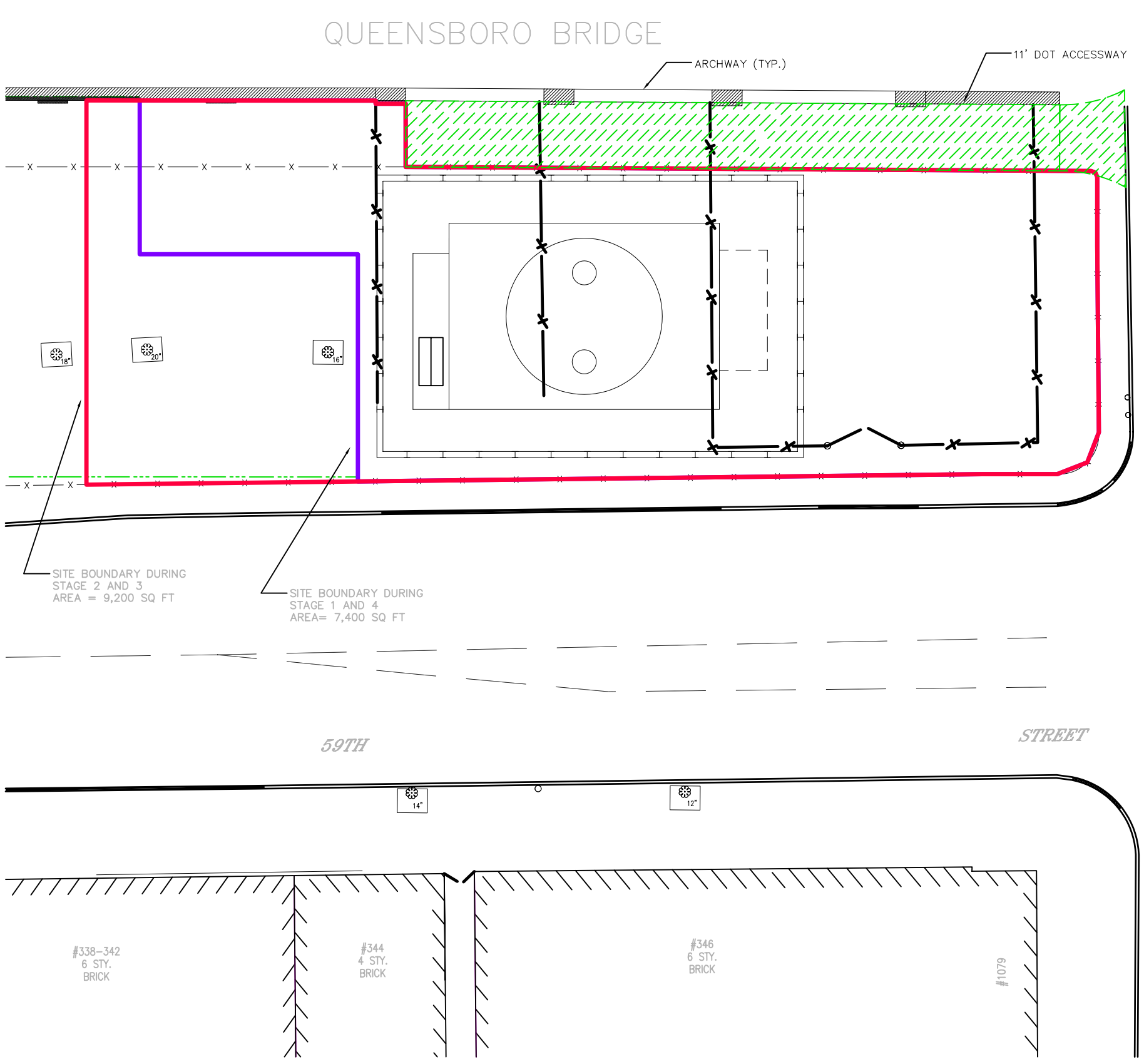

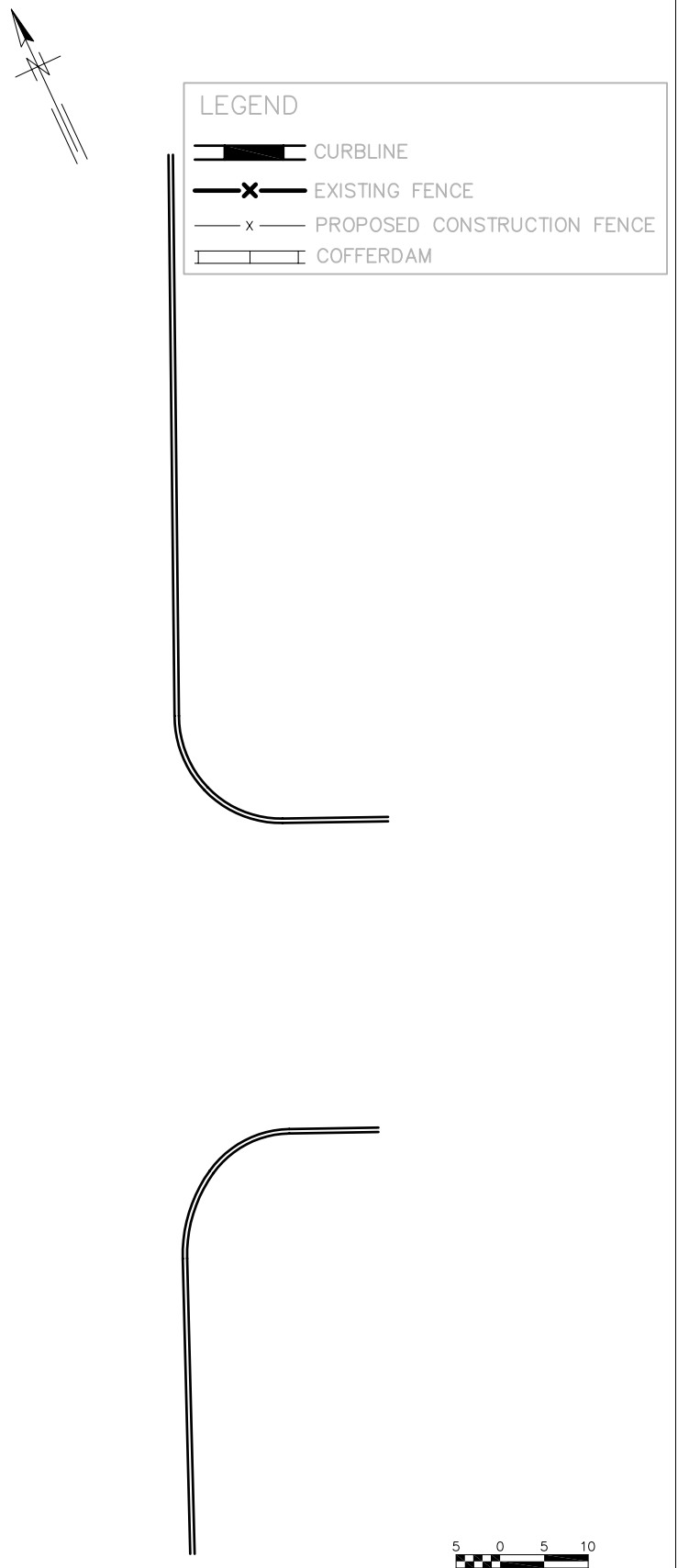

NEW YORK CITY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
MANHATTAN LEG
TUNNEL NO. 3, STAGE 2

E. 59TH STREET AND FIRST AVENUE
CONCEPTUAL SITE LAYOUT
STAGE 2 AND 3

JUNE 2005

FIGURE 14

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The first stage of construction, lasting four months, would consist of preparing the site for construction. The activities required during this stage could be accommodated by an approximately 7,400 square foot staging area and thus would not encroach into the multi-use area (see Figure 13). The second stage of construction would have a duration of 11 months and consist of drilling, widening and lining the shaft. The third stage of construction would have a duration of 12 months and consist of installation of the riser piping and construction of the distribution chamber. Also during this stage, existing bridge piers in the vicinity of the shaft would be extended to protect the shaft from future bridge expansion activities if this should ever be necessary. The shape, size, and alignment of the new piers would match the existing piers; however, the new piers would have increased strength due to heavy steel reinforcement. The piers would have a step-up shape, with a 7 foot x 7 foot x 5 foot high base and a 4 foot x 4 foot x 2 foot top. A total of 10 piers could be required. During stages two and three, the construction area, including staging, of approximately 9,200 square feet would be required. This area would encroach into a portion of the adjacent multi-use area (see Figure 14). Upon completion of this phase, this area would no longer be utilized for staging activities and would be restored in consultation with the NYCDPR and NYCDOT. The fourth stage of construction would consist of equipment installation, construction of regulators and valve chambers and site restoration, and would require an area of 7,400 square feet for 17 months. An equipment procurement phase would occur prior to equipment installation during which time the site would be inactive for an eight month period. Therefore, the total period of construction at the shaft site from beginning to end would be 52 months.

Before construction begins, the site would be enclosed with secure concrete barriers and fencing. During site preparation, electric power would be brought to the site through a small-diameter hole drilled down to the tunnel. The power would be brought from another site through the tunnel and to the surface at the Shaft Site. After construction is completed, the fencing and barriers would be removed and then the site restored. During construction, 24-hour security would be provided at the construction site. Primary excavation stages include the following:

Soil excavation – A conventional excavation method would be used. Overburden material would be excavated and removed from the site by truck.

Rock excavation – Shaft 33B would be excavated through bedrock using a combination of raise boring and slashing/blasting. A raise bore machine is a type of subsurface drill that is raised from the underground tunnel to the surface in order to create a large enough hole for workers to enter. The procedure for raise boring is described below. Following the raise boring, workers can then enter the shaft to widen it by blasting. The contractor might elect to or be required to excavate the distribution chamber prior to shaft excavation.

The construction procedure for raise boring is as follows:

- A pilot hole would be drilled from the top of rock to the bottom of the shaft. Modern survey techniques would be used to establish proper alignment of the pilot hole within established tolerances.

- After the pilot hole has been drilled, a reaming head (a large-diameter drill head) would then be placed below the hole in the previously excavated water supply tunnel and the shaft would be excavated to the required diameter by reaming[8].

- The upper diameter shaft in rock would then be enlarged to the required diameter by blasting and trimming. Workers would drill holes in the sides of the shaft, insert explosives and blast the rock that would then fall to the bottom into the tunnel.

- Excavated rock material would be removed through the tunnel to the existing Shaft 26B Construction Site at Tenth Avenue and 30th Street.

A detailed description of the conceptual construction procedures, the equipment use and locations, and the potential significant adverse impacts associated with the construction period will be provided in the Draft EIS.

Following construction activities, the site would be returned to a condition equivalent to its original condition except for the two relatively small flush mounted hatchways providing entrance to the shaft, the small (10-foot high by 14-inch diameter) air vent located on the site or sidewalk and up to two air release hydrants. The multi-use area would be restored following the completion of staging activities within that area's boundaries.

Water Main Construction

The final phase of project construction would be the construction of the water mains from the Shaft Site to the existing trunk main distribution system located between E. 55th and E. 56th Streets on Third Avenue. The NYC Department of Design and Construction[9] (NYCDDC) would construct the water mains according to a plan provided by NYCDEP. The construction sequencing, route and methods of this construction are not typically defined by NYCDEP, but by NYCDDC, which is the agency that implements the design and construction of water mains in the City's streets. NYCDDC determines the construction timing and final routing according to conditions that exist at the time of construction. This approach provides the City with a mechanism to coordinate, under one agency's purview, the wide range of work proposed by city agencies that occurs within the City's streets with the intent to minimize the need for reoccurring disruption to the streets.

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[8] "Reaming" is the process by which the drill head bores through the rock from below.

[9] NYCDDC is the agency charged with the design and construction of much of the City-sponsored construction projects occurring within City streets and sidewalks. For example, NYCDDC receives capital project information from both NYCDEP and NYCDOT and reviews the agencies' capital programs to determine which of their projects need to be coordinated and/or constructed concurrently. Thus, for agency project's proposed in a particular street segment or area, NYCDDC would prepare a project that combines the sewer/ water main work of NYCDEP with street reconstruction work of NYCDOT in to one construction contract so that the street would only be disrupted and local residents disturbed once for municipal purposes. This approach to street construction coordination provides cost savings to the City of New York by avoiding the costs of closing the same street repeatedly and benefits City residents by minimizing street disturbance.

Construction methods generally follow standard practices, which will be described in detail in the Draft EIS. Since the final route and timing of the water main construction has not yet been determined, NYCDEP has developed a reasonable worst-case scenario for the conceptual water main plan that NYCDEP would send to NYCDDC for a water main connection route to support the assessment of potential impacts associated with water main construction. NYCDEP would not propose that the water mains be constructed down E. 57th, E. 58th or E. 59th Streets in order to avoid the most heavily congested access areas to the Queensboro Bridge.

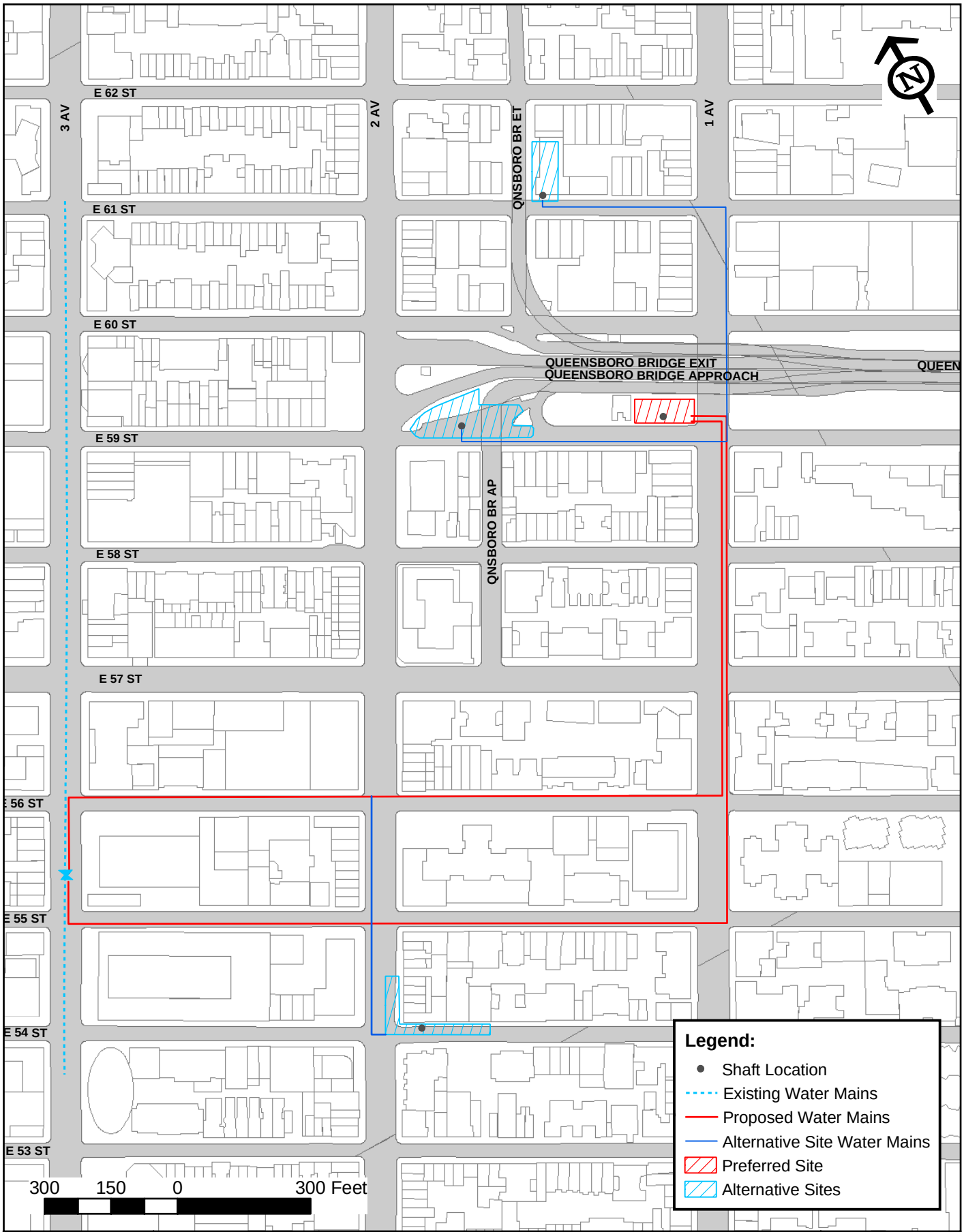
The reasonable worst-case water main connections route would travel out of the Shaft Site at E. 59th Street and First Avenue and go south down First Avenue and across E. 55th and E. 56th Streets to Third Avenue (See Figure 15). In addition, the Draft EIS will review an alternate water main route that would go east out of the Shaft Site on E. 59th Street to Sutton Place then south via Sutton Place to E. 55th and E. 56th Streets where the water mains would turn west and cross to Third Avenue (See Figure 16). The conceptual routes will be representative of the construction routes for water main connections from the alternative shaft sites to be studied in the Draft EIS as well.

This assessment methodology was developed in order to avoid studying every conceivable water main route because that would be an unnecessary expenditure of resources and time and would likely produce duplicate results. The environmental consequences associated with the use of these routes and the proposed water main construction activity that would occur along them would be considered representative of potential environmental consequences that could result along other potential water main routes (e.g., traffic and noise along other possible water main connection routes in the Study Area would be similar).

It is assumed that the construction of the water mains would occur prior to activation of NYC Water Tunnel No. 3, Stage 2 Manhattan Leg. Activation is projected to occur in 2012. Water main construction is expected to take approximately 41 months to accomplish and is assumed to begin in January 2008. The analysis year for the water main construction is assumed to be 2008; the first full year in which the water main construction would occur. The EIS will assess the water main connections as a component of the proposed project, keeping in mind that these potential environmental impacts would not occur on-site, but in the vicinity of the Shaft 33B site.

The reasonable worst-case scenario identified for study in the Draft EIS will be connecting Shaft 33B to the distribution system using two 48" water mains. Based on historical NYCDDC water main "cut-and-cover" construction practices, the water main is constructed in segments so that the entire construction route is not disrupted simultaneously. The construction sequencing generally entails construction in two non-adjacent City blocks simultaneously with intersections constructed separately. Cross streets are generally constructed one block at a time with intersections constructed separately. Based on reasonable worst-case construction assumptions that were developed in discussion with NYCDDC and water main construction contractors, each block of construction is assumed to take approximately 12 weeks to complete and each

Source:
Department of Information Technology and Telecommunications (DoITT). NYC Landbase, 2000.



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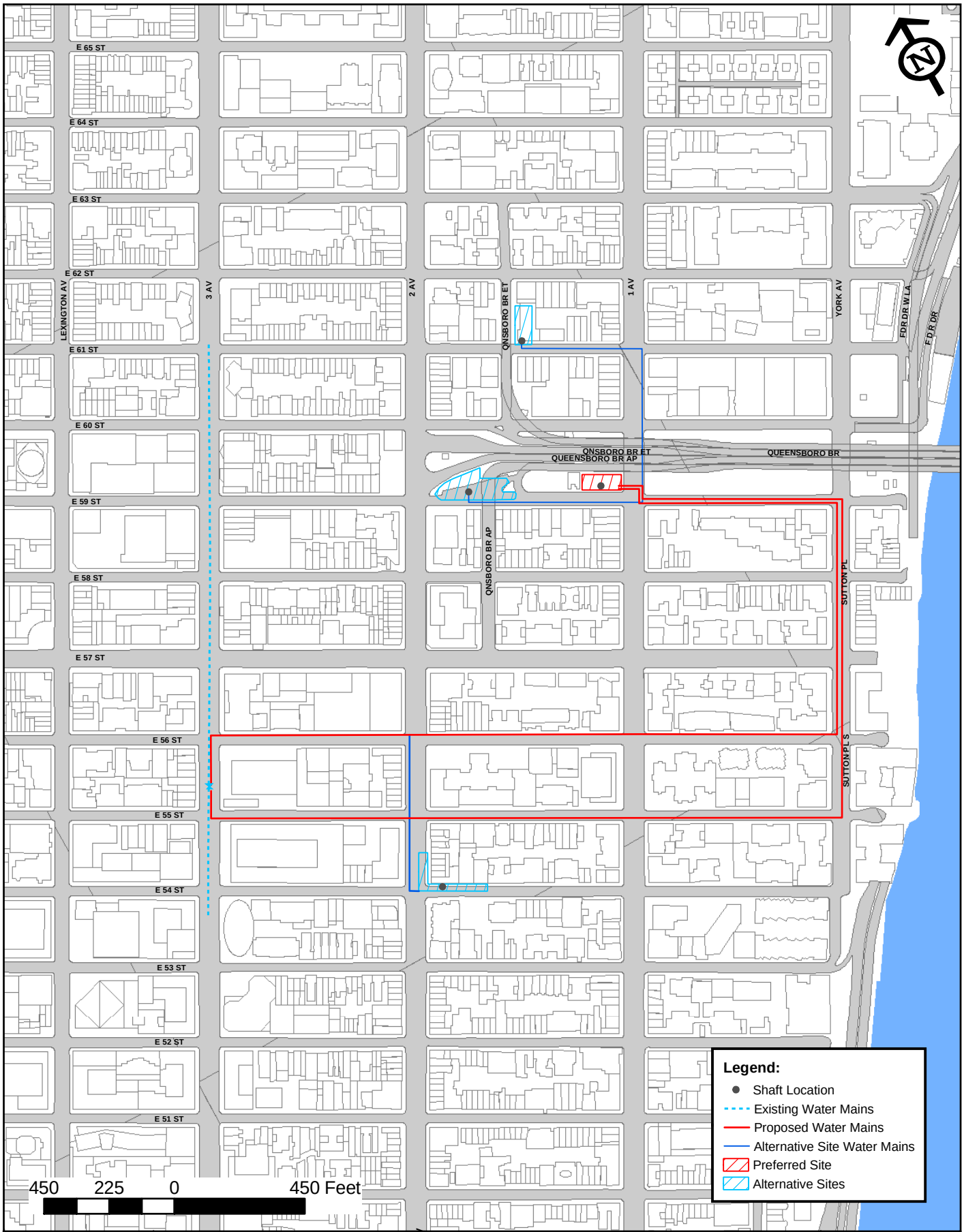
NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
WATER MAIN CONNECTIONS

JUNE 2005

FIGURE 15

Source: Department of Information Technology and Telecommunications (DoITT). NYC Landbase, 2000.



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NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
ALTERNATE WATER MAIN CONNECTIONS ROUTE

JUNE 2005

FIGURE 16

intersection is assumed to take approximately 10 weeks to complete[10]. Therefore, based on the reasonable worst-case route being assumed for construction of the water main connections from the Shaft 33B Site to the existing distribution infrastructure located on Third Avenue, a total of nine blocks and nine intersections would be disrupted and the reasonable worst-case construction period anticipated is approximately 41 months. This schedule assumes no water main construction would occur during "black-out dates" which are typically imposed by NYCDOT in this area of Manhattan. The black out dates include the period between Thanksgiving and the New Year. This timeframe assumes that some non-adjacent water main construction could overlap and some utility relocation within the water main trench could occur at the time of the water mains construction.

A detailed environmental impact methodology has been developed to assess the potential impacts that could occur during construction of the water main connections. Construction of each segment of the water main connections would occur in a similar fashion and would only require closing specific street segments for a temporary period of time. The reasonable worst-case assessment methodology is described in detail in this scope of work.

Activation

Once construction of the shaft and water mains has been completed, an activation procedure must be implemented prior to system operation. Activation of Shaft 33B would likely occur at the same time as the activation for City Tunnel No. 3, Stage 2 Manhattan Leg. Since the NYCDEP has not initiated the design of the activation process for the City Tunnel No. 3, Stage 2 Manhattan Leg, detailed procedures to activate the Tunnel have not been developed at this time. However, the procedures used during activation of City Tunnel No. 3, Stage 1 will be used to assess activation procedures that would likely be utilized to activate City Tunnel No. 3, Stage 2 in the Draft EIS. An environmental review for the activation of City Tunnel No. 3, Stage 2 Manhattan Leg would occur prior to a decision being made to proceed with this work and to support the permit applications NYCDEP will file with the New York State Department of Environmental Conservation (NYSDEC) (including a State Pollutant Discharge Elimination System Permit) and the New York State Department of Health (NYSDOH).

The conceptual activation procedure for Shaft 33B would consist of three separate steps: shaft filling, shaft flushing and shaft disinfection. Initially, the shaft would be filled with water from City Water Tunnel No. 3. As the shaft fills with water, air in the shaft would be released through the above-ground air release hydrants. These activities would be contained within the shaft, and would last approximately three to five days. During the flushing step, water from the existing surface distribution system would be allowed to flow into the shaft (so that the water is flowing "in reverse") and into the Tunnel below. This step would also be contained within the shaft, and would last approximately three to five days. During the disinfection step, the shaft would be filled with chlorinated water from the Tunnel below. Chlorinated water from the Tunnel would flow through the shaft and would be discharged from the air release hydrants to the local sewer

[10] The time frame referenced does not include potential major utility relocation but is a very conservative estimate of the duration of water main construction that would account for minor utility locations along the route of the water mains.

system until the required chlorine residual was achieved within the shaft. If necessary, pre-treatment of the chlorinated water, prior to discharge to the local sewer system, may be required. This would be accomplished by providing a small 10-cubic yard mixing tank that would be located at the Shaft 33B site. Once the required chlorine residual was achieved, the chlorinated water would be held in the shaft for a minimum of 24 hours, and then it would flow back into the Tunnel and would be discharged at the Tunnel discharge point. The first two steps would require two workers to be at the Shaft Site, the final step would require four workers, and would last approximately three to five days. Treatment of chlorinated water at the Shaft Site would require a maximum of one delivery of sodium bisulfite per day (sodium bisulfite is used to dechlorinate the treated water prior to discharge) for a period of approximately 3 to 5 days. An additional truck trip would be required to deliver and to remove the 10-cubic yard mixing tank from the site.

The Draft EIS will disclose all relevant and appropriate components of the proposed project. Conceptual details, layouts and construction methods for the proposed shaft and water main connections will be described in as much detail as is known or reasonably speculated. The conceptual project construction schedule, funding sources, and other relevant details also will be provided.

Regulatory Approvals

The Draft EIS will include a discussion of approvals and public review processes that may be needed to implement the proposed Shaft 33B project. Potential approvals that may be required for construction and operation of the shaft and water mains include:

- New York State Environmental Facilities Corporation State Environmental Review Process (State Revolving Loan Fund) Certification
- New York City Fire Department Blasting Permits
- New York City Department of Transportation Construction Activity Permits
- New York City Department of Transportation Sidewalk Construction Permits
- New York City Department of Transportation Street Opening Permits
- New York City Landmarks Preservation Commission review
- New York City Department of Parks and Recreation approval for construction activities within the multi use area,
- New York City Transit Authority Surface Transit Operations Division Approval for potential temporary bus stop relocation
- New York City Department of Environmental Protection Tunneling Permit
- New York City Department of Environmental Protection Sewer Discharge Permit
- Memorandum of Understanding entered into by the NYCDEP and the NYCDOT outlining the terms and agreements associated with NYCDEP's usage of NYCDOT property

C. EIS METHODOLODY

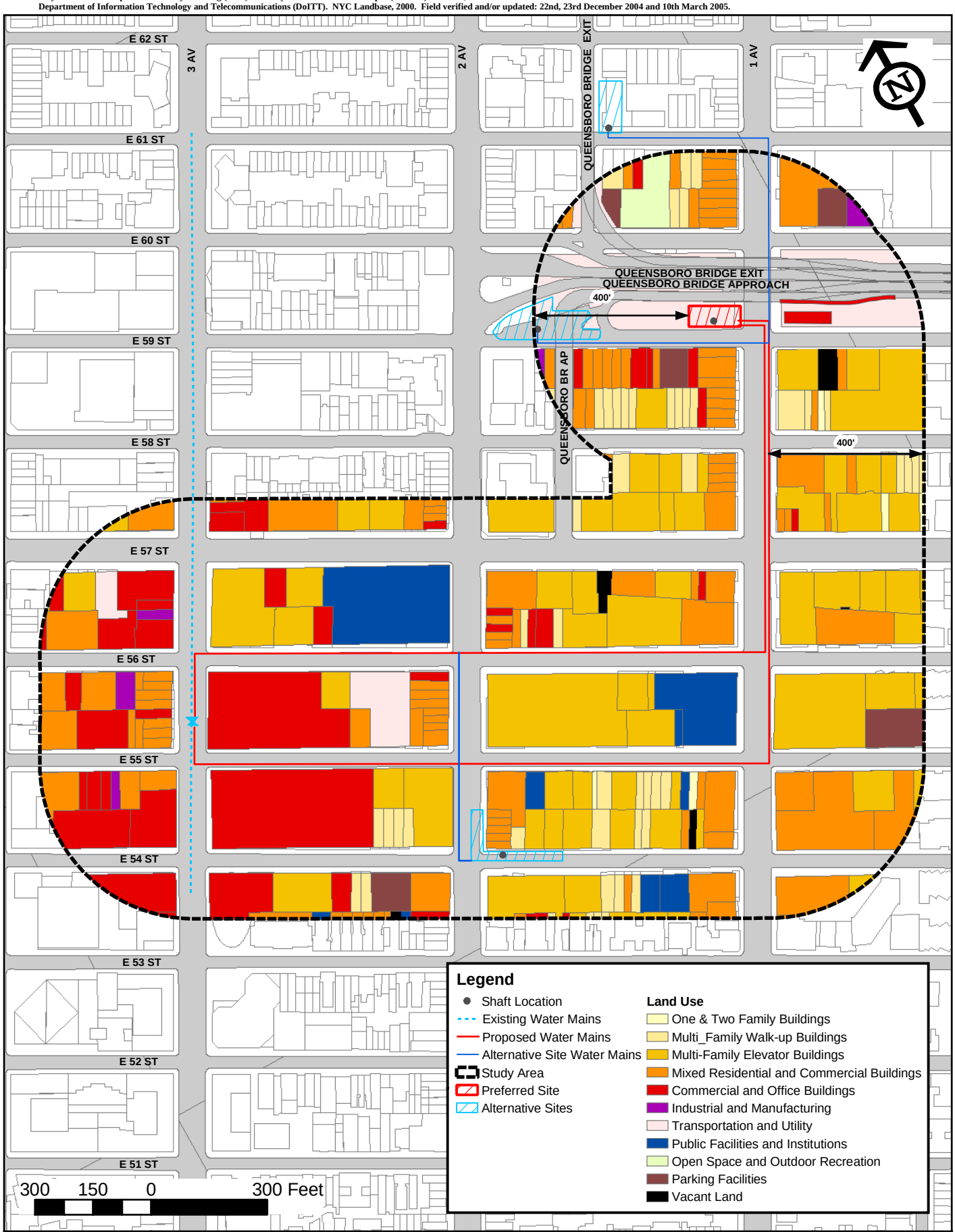
The primary purpose of the Draft EIS is to provide a discussion of the potential environmental impacts associated with the construction and operation of the proposed Shaft 33B project at the E. 59th Street and First Avenue site. The three feasible alternative sites described above will be assessed at a level of detail that allows a comparative assessment of the engineering and environmental issues related to each of the alternative sites. For each impact category where the proposed project results in a potentially significant adverse impact, the alternative sites will be evaluated at the same level of detail as the evaluation of the preferred alternative in order to determine if an alternative to the proposed project exists that would not result in such potential impacts.

As previously described, there are no permanent aboveground facilities associated with the shaft or water mains other than a 10-foot high by 14-inch diameter air vent and up to two (three-foot high by six-inch diameter) air release hydrants. In addition, the facilities are not manned and would only be accessed and inspected on a weekly basis on average. Therefore the primary issues requiring analysis as part of the environmental review of this project are issues associated with construction impacts. Off-site impacts associated with construction of the water main connections also will be assessed in the Draft EIS. Potential environmental impacts associated with the operation of the water main connections would be de minimis (i.e., too small to have a demonstrable impact) as they consist solely of distribution system piping and related subsurface maintenance structures (such as regulators and chambers). The Draft EIS will disclose the relevant operation and maintenance procedures associated with the operation water mains.

The Draft EIS will present discussions of the key impact categories associated with on-site construction of the shaft at the preferred site and off-site construction of the water main connection routes. Operational or permanent impacts will be addressed where appropriate. Where an assessment of operational or permanent impacts will not occur because it is not necessary, the reasons will be provided. The following is a description of the methodologies to be used in analyzing the potential environmental impacts of the proposed project. Each detailed impact analysis will provide information on existing conditions, and construction-related impacts. The Draft EIS will provide analysis of potential construction impacts of the proposed shaft construction during the year 2008, the year that peak construction activities are anticipated to occur. Although construction timing of the water main connections is not determined by NYCDEP, but by NYCDDC, construction will be assumed to occur in a time frame that would meet the NYCDEP goal of activation of Tunnel No. 3, Stage 2 Manhattan Leg by 2012. Based on this assumption, it will be assumed for analysis purposes that the first full year of water main construction would occur in 2008. The Study Area encompasses a 400-foot radius around the site and the water main route (Figure 17). If the analyses indicate a need to expand the Study Areas, a larger Study Area would be considered, as needed.

In order to achieve NYCDEP objectives, the shaft would become operational during the year 2012, when Tunnel No. 3, Stage 2 Manhattan Leg is scheduled to be activated. Therefore, the analysis year for operational conditions with the project is assumed to be 2012. This year will be used in discussions concerning the future with the project. Where appropriate, preliminary screening procedures (in accordance with the *CEQR Technical Manual* (2001)) will be used to

Source:- City of New York Department of City Planning (DCP). Primary Land Use Tax Lot Output (PLUTO) data files, December 2004.
Department of Information Technology and Telecommunications (DoITT). NYC Landbase, 2000. Field verified and/or updated: 22nd, 23rd December 2004 and 10th March 2005.



Map Document: (S:\Projects\2175158\GIS_Figures\Shaft_33B\EIS_Field_Work\New Study Area\PLUTO04\LandUse (FSOW).mxd)
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NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
STUDY AREA- LAND USE

JUNE 2005

FIGURE 17

determine the potential for significant adverse impacts and the need for detailed analysis for the operational assessment of the Shaft.

As described in the April 8, 2005 Environmental Assessment Statement (EAS), certain impact categories are not anticipated to result in potential significant adverse impacts and thus will not be subject to detailed analyses in the Draft EIS. Qualitative discussions of these issues will be provided. These impact categories include:

- Shadows
- Natural Resources
- Water Resources
- Waterfront Revitalization
- Solid Waste and Sanitation

PROPOSED PROJECT

A complete description of the proposed project, including construction phasing, equipment usage, and staging and any enduring aspects of the proposed project will be provided. The purpose and need for the project, a discussion of the role of the environmental review process, and identification of required project permits and approvals will also be included.

LAND USE, ZONING, PUBLIC POLICY, NEIGHBORHOOD CHARACTER AND COMMUNITY FACILITIES

Land use, zoning, neighborhood character, community facilities and public policies will be described for the Shaft Site and Study Area. In accordance with the *CEQR Technical Manual*, the primary Study Area for the land use, zoning, neighborhood character and community facilities assessment will encompass a 400-foot radius around the site and the area of water main construction (see Figures 7 and 17). If the analyses in other technical areas indicate a need to expand the Study Area, a larger Study Area would be considered, as needed.

The land use and zoning description will give an inventory of the land uses and zoning districts in the Study Area. The primary purpose of this discussion is to provide the basis for analysis of potential impacts to residences, businesses or other land uses in the Study Area, primarily during construction.

All land use information compiled and mapped will be obtained primarily from published data, supplemented with field surveys, street maps, and topographic maps. Published data includes land use and zoning maps from the New York City Department of City Planning; Sanborn Maps; and aerial photographs.

The Draft EIS will provide a description of the neighborhood character in the Study Area as a basis for discussion of potential impacts, such as noise or traffic that could potentially occur during construction. The presence of community facilities such as schools, libraries, community centers and senior citizens centers within the Study Area also will be identified.

Specific tasks include:

- Characterize land use patterns, demographic characteristics and zoning in the Study Area. Predominant land use types will be identified in the surrounding Study Area. The location of the nearest residential uses will be identified.

- Other features that contribute significantly to defining the character of the Study Area will be discussed. This would include major public buildings, commercial streets, or unique land uses.

- Existing public policies potentially affecting the project area will be researched, e.g., Urban Renewal Plans, and Draft 197(a) Plans for Manhattan Community Boards 6 and 8. The consistency of the Proposed Action with these plans and policies will be evaluated.

- Planned projects or potential changes in public policies will be identified to determine changes or trends that may occur in land use or to the underlying character of the Study Area in the future without the proposed project.

- Changes in land use, neighborhood character and community facilities of the Study Area that may be reasonably expected to occur as a result of construction of the proposed shaft will be described.

- Changes in land use, neighborhood character and community facilities of the Study Area that may be reasonably expected to occur as a result of activation or operation of the proposed shaft will be described.

- Changes in land use, neighborhood character and community facilities of the Study Area that may be reasonably expected to occur as a result of construction of the water main connections will be described. No changes would be expected to occur as a result of operation of the water mains.

SOCIOECONOMIC CONDITIONS

As stated in the *CEQR Technical Manual*, a socioeconomic assessment should be conducted if an action may be reasonably expected to create substantial socioeconomic changes within the area affected by the proposed action that would not be expected in the Future Without the Proposed Action. This is exemplified by the following situations: an action that would displace residents to the extent that the socioeconomic profile of the neighborhood would change substantially; an action that would displace a substantial number of businesses or an unusually important business or institution; or an action that would result in substantial new development that is markedly different from the existing uses and could lead to indirect displacement. Additional SEQRA screening thresholds exist for some actions that involve construction of residential or office complexes above a certain size, actions that may affect the real estate market in the area, or actions that could adversely affect economic conditions specific to a certain industry. No increase in population or displacement within the Study Area would result from the

project. No permanent increase in employment is expected to occur as a result of construction of Shaft 33B and the water main connections. Implementation of the proposed project would not provide additional water supply or result in any secondary growth in the Study Area.

Although no permanent changes to the underlying socioeconomic character of the Study Area would be anticipated to occur as a result of the construction and operation of the Proposed Action, the Draft EIS will consider the potential for the construction at the preferred site to impact the socioeconomic character of the surrounding area. This assessment would consist of reviewing the potential implications that the construction period could have on surrounding local businesses and residences by considering potential traffic, noise and air quality changes that may occur as a result of the Shaft 33B construction at the preferred site.

Construction of Shaft 33B is estimated to cost approximately $50 million. Construction of the water main connections is estimated to cost approximately $8 million. The City finances construction of water supply infrastructure through the New York City Municipal Water Finance Authority (Authority) and/or the New York State Revolving Fund Program (SRF). The Authority is authorized to issue bonds to fund the construction of capital improvement projects. The SRF (based on United States Environmental Protection Agency and State matching grants) makes available to municipalities low cost financing for capital improvement projects.

This analysis will address the potential impacts on water and sewer rates to City residents. The maximum annual payment related to the construction and operation of the proposed shaft and water main connections will be calculated. The projected increases in water and sewer charges will be presented. The allocation of costs related to the Proposed Action will be based on the existing allocation of costs associated with maintaining and improving the City's water system.

Specific tasks for the water and sewer rates analysis includes:

- Collect information on the current water rate structure for New York City customers using information provided from recent revenue bond filings that outline the City's water and sewer capital plan and revenue program and a history of water and sewer rates for New York City customers.

- Average annual water and sewer bills for residential households in New York City will be calculated based on current rates for water and sewer usage as applied to an estimated usage of 100,000 gallons per household per year.

- Projected capital expenditures, excluding the Proposed Action, through the year 2012 will be used to provide a basis for estimating City water and sewer rates per household in the Future Without the Proposed Action. Increases in the average annual water and sewer bills for residential households in the absence of the Proposed Action will be calculated based on the rate of increase resulting from the City's other proposed capital expenditures.

- Annual cost increases in the year 2012 to individual households as a result of implementation of the Proposed Action will be calculated using the anticipated rate for

water and sewer service for City residents, as applied to an estimated usage of 100,000 gallons per household per year. The anticipated percentage increase in monthly costs due to the implementation of the Proposed Action will be presented.

- The calculated increase in water rates will be compared in absolute and percentage terms to estimated household incomes of low income water users in the year 2012 to determine the burden of rate increases.

URBAN DESIGN/VISUAL CHARACTER

The proposed project is not expected to result in significant urban design or visual character impacts. The only permanent aboveground structures that would be constructed for the proposed project are a 10-foot by 14-inch diameter air vent located at curbside that would provide fresh air to the distribution chamber for routine maintenance/inspection and up to two standard (3-foot high by 6-inch diameter) air release hydrants that would be provided on the site or sidewalk.

Tasks include:

- Any significant visual resources immediately adjacent to the site will be identified. This assessment involves the identification of significant scenic and aesthetic resources within the viewing area of the proposed project, such as: properties listed on or eligible for inclusion on the National or State Register of Historic Places; State Parks; Urban Cultural Parks; National Park System, Recreation Areas, and Scenic Areas of Statewide Significance.
- If such resources are identified, then an assessment of the potential for impacts to these resources during construction would be performed.
- A conceptual rendering of the fencing and/or noise barrier from the viewpoint of adjacent structures will be developed.
- Potential visual impacts from site lighting, plumes, and visual equipment at the site on the Queensboro Bridge and nearby sensitive receptors will be evaluated.
- Potential visual impacts associated with activation or operation of the shaft, including the permanent air vent and air release hydrants located on the site or sidewalk will be described.
- Sidewalk trees along the water main route will be inventoried and the potential removal will be assessed.
- Potential visual impacts associated with construction of the water mains will be described. Potentially adverse significant permanent visual impacts are not expected to occur as a result of construction of the water mains.

OPEN SPACE

The proposed project would require approximately 1,800 square feet of the multi-use area to be utilized for a period of 23 months. The open space analysis will be conducted in a conservative manner. The Draft EIS will include an assessment of the potential impacts that could result from the temporary use of this property because the multi-use area is used as open space by the public in addition to the other municipal uses it supports. Tasks for the open space assessment include:

- Identify additional publicly accessible open space areas (both publicly and privately owned) within a 400' radius of the site. Published maps will be researched and this data will be supplemented by field surveys, to ensure that all appropriate spaces are included in the analysis.

- Assess temporary direct displacement impacts that would occur from use of the area during shaft construction.

- Assess the potential for direct impacts to open space based on increased noise levels, traffic or air quality emissions based on the area of impact and the utilization of the open space based on user surveys.

- Conduct user surveys of potentially impacted open space areas and other surrounding potentially impacted open space areas to determine the level of impact. Potential impacts will be evaluated based on usage rates of those areas. User surveys of potentially impacted areas would be conducted to determine usage rates during the times of impact. Although construction-related noise is expected to be generated during weekdays, the possibility exists that water main construction could occur on weekends therefore weekday and weekend surveys would be used to determine the level of potential impact.

- Potential direct impacts on open space uses for staging during construction would be based on user surveys conducted during both the weekdays and the weekends at the multi-use area because a portion of this area would be inaccessible during those times. User surveys of open space areas located directly adjacent to water main construction also would be conducted. Water main construction would occur in the street and sidewalk areas. Therefore, no direct displacement impacts would occur during water main construction. Potential direct noise or air quality impacts that could occur during water main construction will be evaluated in the Draft EIS. The period of time that these impacts could occur at one open space receptor would not exceed a 12 week duration. Therefore, these impacts would be of a short duration and weekday user surveys will be used to assess impacts that could occur during weekday or weekend construction activities.

- User surveys would be conducted for one-hour increments during morning, mid-day, afternoon and evening hours, and would occur in warm and cold weather conditions. User surveys may include interview of observed users of the open space, and would be designed to answer the following questions:

- Who is using the open space?
- How many users are using the open space?
- How is the space being used?
- How long do the users stay?

- If potential significant adverse impacts were identified, an assessment would be conducted to determine which users would be impacted, the duration of the impact, and the availability of similar un-impacted open space within walking distance (1/4 mile) to accommodate similar uses during the period of impact. In the event that only a portion of the available park or open space would be impacted, the ability of the remaining, un-impacted open space area to fulfill the nature of the use will be evaluated. In the event that a significant number of users would be redirected to another available open space resource in the immediate vicinity, increased utilization of those open spaces will be evaluated in a similar manner.

- A qualitative discussion of the potential for indirect impacts to the public and private open spaces based on increased usage of these areas due to shaft construction in the Study Area will be provided. Since there will be a limited number of workers (a maximum of 20 at the peak of construction) at this site for the four year construction period, significant adverse impacts resulting from increased usage of publicly accessible open spaces are not anticipated.

- An assessment of the potential for direct impacts to open space based on increased noise levels, traffic or air quality emissions during construction of the water mains will be provided.

- Activation or operation of the shaft and operation of the water mains will not result in a potential significant adverse impact to open space. This will be described in detail in the Draft EIS.

TRAFFIC, PUBLIC TRANSPORTATION, PEDESTRIAN MOVEMENT AND PARKING

Shaft Site

The proposed project is not expected to result in significant permanent traffic or transportation impacts. The water supply shaft and distribution chamber would be constructed below grade and would not be manned. Periodic inspections and/or maintenance would occur on a weekly basis although some weeks may require more or less frequent visits. Therefore, the project would not generate additional traffic and there would be no permanent change to traffic or parking.

An assessment of construction-related traffic will be prepared to assess the effect that construction of Shaft 33B would have in the vicinity of the Shaft Site. A detailed quantitative traffic analysis will be performed to identify the effects of the construction, using the methodology provided in the *CEQR Technical Manual*. This analysis will identify the relative

duration of construction activities, (focusing on peak construction conditions) and will quantitatively assess the potential effects of the anticipated construction-related traffic (from workers and trucks) at selected key Study Area intersections. Existing traffic conditions will be evaluated. Construction traffic and any required changes in traffic patterns will be analyzed to determine the effects on the traffic systems. In addition, changes in public transportation routes, pedestrian traffic and the available parking areas surrounding the site that could occur as a result of construction activities will be identified and evaluated. Specific tasks include:

- Traffic turning movements, vehicle classifications, and automatic traffic recorder (ATR) counts will be collected at selected study intersections. These will be supplemented by any available field data collected in the area for other projects. Traffic counts have been performed on First Avenue from E. 54th to E. 61st Streets, at Second Avenue and E. 59th Street and at Sutton Place and E. 59th Street.

- Existing baseline (2004) traffic volumes (based on traffic counts) and volume to capacity (v/c) ratios will be developed for the key analysis intersections in the traffic Study Area for the weekday AM, Midday and PM peak hours.

- Existing v/c ratios and level-of-service (LOS) for the key Study Area intersections will be developed using the 2000 Highway Capacity Software (HCS) Version 4.1.e. Intersections to be analyzed include First Avenue from E. 56th to E. 61st Streets and Second Avenue at E. 59th Street (see Figure 18).

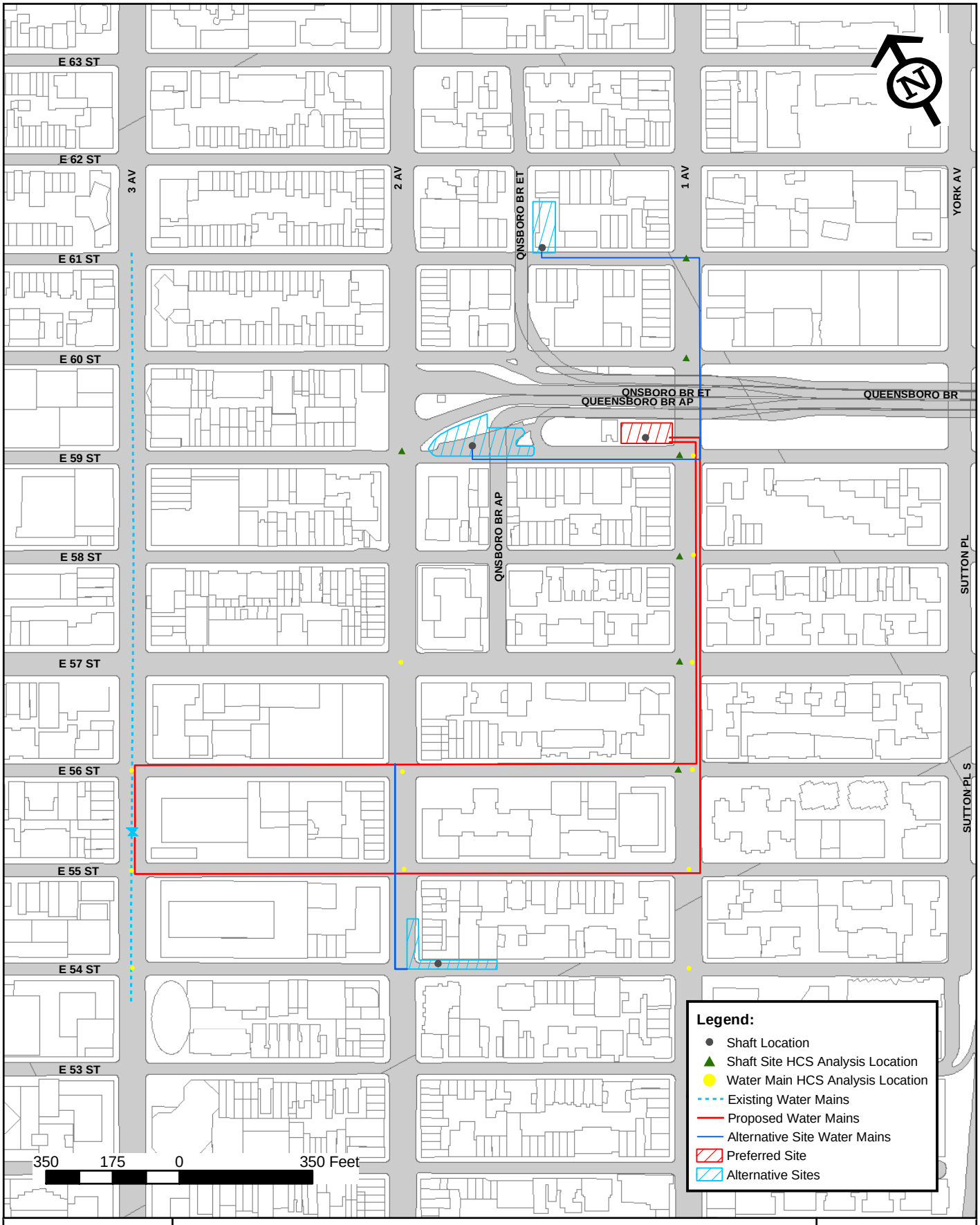
- Traffic volumes, v/c ratios and LOS at the Study Area intersections for the peak hour analysis periods for future conditions without the proposed project will be developed. Future traffic impacts will be estimated using baseline 2004 volume information and adding incremental increases in traffic from any substantial discrete projects and an overall growth factor for the area (as suggested in the *CEQR Technical Manual*). The resulting "No Action" information will be presented for the peak hour analysis periods.

- Potential construction traffic impacts will be identified using the 2000 Highway Capacity Software (HCS) Version 4.1.e. Project generated construction-related trips will be assigned to the network for the AM, Midday and PM analysis periods. The impact on queuing lengths, v/c ratios and LOS will be evaluated and potential problem intersections identified. Queue length will be predicted using the Highway Capacity Manual (HCM) methodology based on volume, delay and lane closures.

- Parking conditions will be analyzed. This will include a survey of the existing parking supply within a two block radius of the project site and an estimate of parking demand generated by construction worker vehicles. Locations in the area where parking can be accommodated will be described.

- Mitigation measures will be identified if potential significant adverse impacts are identified. Mitigation for any construction-related traffic impacts identified could likely include signal timing and phasing modifications, and/or the revision of on-street parking and standing regulations.

Source:
Department of Information Technology and Telecommunications (DoITT). NYC Landbase, 2000.



NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
KEY STUDY AREA INTERSECTIONS

JUNE 2005

FIGURE 18

Map Document: (S:\Projects\2175158\GIS_Figures\Shaft_33B\EIS_Field_Work\Watermain_Connections_HCS_Analysis.mxd)
5/5/2005 -- 9:16:47 AM

- Pedestrian counts will be taken in sidewalk areas adjacent to the site for areas of potential impacts to pedestrian movement. Potential impacts to pedestrian movement as a result of construction activities will be evaluated.

- Potential traffic impacts associated with activation and operation of the shaft, including vehicle trips to and from the site for maintenance activities will be qualitatively described.

- As part of the above analysis, NYCDOT accident data will be reviewed to identify high-accident locations and the extent to which vehicular and pedestrian exposure to accidents may be reasonable expected to increase as a result of the proposed action will be qualitatively assessed.

- Potential relocation of bus stops in the Study Area will be identified and potential impacts on bus service/stops will be qualitatively assessed.

- Cumulative impacts associated with potential concurrent construction of the shaft and water mains will be evaluated.

Water Main Connections

- Traffic impacts from the construction of the water main connections would be assessed following a methodology similar to that proposed for the construction of Shaft 33B above. This assessment will be performed using HCS. Project generated construction related trips will be assigned to the network for the AM, Midday and PM analysis periods. The impact on queuing lengths, v/c ratios and LOS will be evaluated and potential problem intersections identified.

- Morning, midday, and evening traffic operational analyses will be conducted under existing and proposed conditions for weekday and weekend periods to analyze the effects that construction of the water main connections would have on traffic. In the event existing weekend traffic data show lower traffic levels than weekday traffic, the weekday traffic data would be used to evaluate reasonable worst-case traffic impacts from water main construction from potential weekend work. If night work were required by NYCDOT, additional analyses would be conducted.

- Traffic counts have been taken at intersections on E. 54th, E. 55th, and E. 56th Streets from Sutton Place to Third Avenue; on First Avenue from E. 54th to E. 61st Streets; on Sutton Place from E. 54th to E. 59th Streets; on Second Avenue from E. 54th to E. 57th Streets and from E. 59th to E. 61st Streets; on Third Avenue from E. 53rd to E. 56th Streets; the Queensboro Bridge approach at E. 57th and E. 59th Streets; and the Queensboro Bridge exit at E. 60th and E. 61st Streets. Intersections that would be analyzed include: First Avenue from E. 54th to E. 59th Streets, Second Avenue from E. 55th to E. 57th Streets, and Third Avenue from E. 54th to E. 56th Streets (see Figure 18).

- If potential significant adverse impacts were identified, mitigation measures (such as diversion of traffic and deployment of traffic enforcement agents to alleviate traffic conditions during peak hours) would be evaluated under future conditions.

- Potential relocation of bus stops in the Study Area will be identified and potential impacts on bus service/stops will be qualitatively assessed.

- Pedestrian counts will be taken in areas that support significant pedestrian activity such as sidewalk areas near subway stations, schools, or hospitals that could be affected by construction activities. A detailed pedestrian impact assessment would be performed using the *2000 Highway Capacity Manual*.

- Parking conditions along the water main route(s) will be analyzed. This will include a survey of the existing parking supply along the water main route and an estimate of parking demand generated by construction worker vehicles. Locations in the area where parking can be accommodated will be described. The net loss of parking anticipated as a result of the proposed project will be disclosed.

- Cumulative impacts associated with concurrent construction of the shaft and water mains will be evaluated.

Existing traffic, parking and pedestrian count data will be provided in an appendix in the Draft EIS.

NOISE

Shaft Site

The proposed project, when operational, is not expected to result in significant permanent noise impacts. The shaft and distribution chamber are located entirely underground and do not generate noise.

Noise sources during construction include construction equipment (stationary sources) and construction related vehicles (mobile sources). The effect of construction activities depends on the type and quantity of construction equipment utilized as well as the distance from the construction site to the receptor. The following methodology will be used to assess noise impacts during construction:

- Ambient noise monitoring will be conducted using Type I and II sound level meters. These meters will include Rion NL-21/31/32 Precision Sound Level Meters (or similar) and Bruel & Kjaer 2236 and 2238 Precision Sound Level Meters. All sound level meters will be calibrated before and after each series of readings.

- Noise monitoring will include both continuous and short-term noise measurements. A minimum of three continuous monitoring locations and one short-term monitoring location will be taken adjacent to the site.

- Continuous noise monitoring will be performed between 7 a.m. and 11 p.m. on weekdays for a minimum of two days. No noise monitoring will occur during holidays. Noise monitoring may occur on Mondays and Fridays. The noise data will be logged during 30-minute periods and will include the noise levels for the statistical sound level descriptors L_{MAX}, L_{MIN}, L_{10}, L_{50}, L_{90} and L_{EQ}.

- Short-term noise monitoring data will be 30 minutes in duration (to coincide with the continuous monitoring logged data periods) and will measure the same statistical sound level descriptors. These measurements will be taken on two days overlapping the continuous noise monitoring. A minimum of two short-term noise measurements will be taken for each time period between 7 a.m. to 3 p.m. and 3 p.m. to 11 p.m. This will result in a minimum of eight noise measurements over the two days.

- The minimum hourly average noise levels will be calculated for each survey location for the time periods of 7 a.m. to 6 p.m. and 6 p.m. to 11 p.m. to represent the existing conditions.

- Construction noise impacts will be estimated using the CadnaA noise model or other mathematical equivalent to calculate the A-weighted equivalent noise levels at receptor locations up to 1,500 feet of the footprint of the principal phases of construction at the Shaft 33B Site, depending on the extent of the impacted area. Several scenarios will be run for the different stages of construction, if warranted. Input files will be prepared to define on-site construction equipment noise sources, digitized area drawings, and selected sensitive receptor locations.

- The use of manufacturer's data, textbook data, published industry standard noise data (i.e., the *CEQR Technical Manual*) will be used as input for the noise model.

- Elevations and dimensions of all nearby buildings and structures up to 1,500 feet of the shaft location will be calculated as needed and digitally input into the CadnaA model or other mathematical equivalent.

- According to the *CEQR Technical Manua*l, a detailed Passenger Car Equivalents (PCEs) analysis is required if a doubling of existing PCEs is expected during any hour as a result of the project. Due to the existing high volumes of traffic in this area of Manhattan, a doubling of PCEs during any hour is not likely. Since a doubling of PCEs is not expected to occur, a mobile source noise analysis is not warranted.

- The A-weighted equivalent construction noise levels (stationary) will be added to the measured existing baseline noise levels, and then be compared with the measured existing baseline noise levels and the impact threshold guidelines and incremental increase guidelines published in the *CEQR Technical Manual*.

- Mitigation measures will be identified if potential significant adverse impacts are identified. Mitigation for any construction-related noise impacts identified could likely include equipment maintenance and monitoring programs, placement of noise attenuation walls, decking of the entire site, or construction of enclosures for specific noise generating equipment. The effectiveness of the proposed mitigation would be determined.

- Potential noise impacts associated with activation and operation of the shaft including activities requiring access to the shaft will be qualitatively described.

- Cumulative impacts associated with potential concurrent construction of the shaft and water mains will be evaluated.

Water Main Connections

The noise impact assessment will evaluate the effect of construction equipment noise on sensitive receptors adjacent to the construction activities along the street. Due to the existing high volumes of traffic in this area of Manhattan and low construction generated traffic, a doubling of PCEs during any hour would not occur as a result of construction activities and a mobile source noise impact assessment is not required.

- Because the same construction activity (and equipment use) occurs along the route of the water main construction, noise sources during construction of the water mains will be estimated for a representative construction segment. The construction area is a narrow corridor that extends along a City block or intersection.

- Mid-block receptors will be modeled for each segment of construction, with the loudest equipment located nearest the receptor and remaining equipment equally distributed within the remainder of the corridor along the block.

- The lowest representative ambient measurements from representative blocks and intersections will be used to assess reasonable worst-case incremental noise impacts.

- Construction noise impacts will be estimated using the CadnaA noise model or other mathematical equivalent to calculate the A-weighted equivalent noise levels at receptor locations. Receptors will be selected at mid-block for each of three blocks: the active construction segment, one block north of the active segment and one block south of the active segment.

- Input files will be prepared to define construction equipment noise sources, digitized area drawings, and selected sensitive receptor locations.

- The use of manufacturer's data, textbook data, and published industry standard noise data (i.e., the *CEQR Technical Manual*) will be used as input for the noise model.

- Elevations and dimensions of receptor buildings will be calculated as needed and digitally input into the CadnaA model or other mathematical equivalent. Contributions of construction noise will be calculated along façade elevations.

- The A-weighted equivalent construction noise levels will be added to the measured existing baseline weekday or weekend noise levels, and then be compared with the measured existing baseline noise levels and the impact guidance published in the *CEQR Technical Manual* to determine if potential significant impacts from noise are anticipated to occur.

- Cumulative impacts associated with the potential concurrent construction of the shaft and water mains will be evaluated.

Ambient noise logs, equipment assumptions and noise isopleth data will be provided in an appendix of the Draft EIS.

VIBRATION

Blasting is regulated by a NYCDEP Tunnel Construction Permit and by the FDNY. The FDNY issues one-day permits for blasting. Blasting would be expected to occur for roughly eight months and would not occur at the ground surface, but would begin at a depth of approximately 23 feet. Blasting would begin using minimal charges and would be increased incrementally to ensure protection of the adjacent structures and meet the contractual NYCDEP vibration limits. Based on blasting procedures that have been required at other Shaft Sites within Manhattan, it is expected that there would be two or three blasts per day. The Draft EIS will describe blasting procedures in detail. Permit requirements that outline blasting notification protocols that the contractor must adhere to will also be discussed. Potential impacts from vibration will be qualitatively analyzed. Any structures adjacent to the site that would be considered at risk from vibration impacts will be identified and appropriate protective measures will be evaluated.

The NYCDEP requires that the impacts of all construction activities be limited by specific vibration restrictions. The normal industry standard for vibration is 2.0 inches per second (ips) peak particle velocity at the closest structure; this standard was established by the United States Bureau of Mines to prevent structural damage. However, where the most stringent protection is required, NYCDEP specifies a vibration limit of 0.5 ips, which is ten times more restrictive than 2.0 ips (on the logarithmic scale). A limit of 0.5 ips is normally associated with protection of surrounding historic structures that are susceptible to cosmetic cracks in fragile plaster. The following tasks will be conducted for the vibration impact assessment:

- Identify all historic structures within 400 feet of the site;

- Conduct a condition survey of sensitive structures adjacent to the site;

- Assess the potential for vibration impact based on the condition of surrounding structures as compared with industry standards for vibration;

- In the event that the potential for significant vibration impacts to surrounding structures exists, then mitigation measures would be identified. Such mitigation measures could include monitoring of cracks in surrounding structures as well as setting up multiple continuous vibration monitors surrounding the site;

- There are no potential vibrational impacts associated with activation or operation of the shaft or water mains due to the lack of any moving parts or equipment. This will be described further in the Draft EIS; and,

- Because no blasting would occur during water main construction, potential significant adverse vibration impacts would not be expected to occur during construction of the water main connections and a detailed vibration analysis is not warranted.

AIR QUALITY

Shaft Site

The proposed project is not expected to result in significant permanent air quality impacts. There would be no air emissions from the aboveground vent. The vent would provide air to the shaft for periodic inspection or maintenance activities.

Stationary Construction Sources

Potential impacts during construction will be evaluated based on the number and types of emissions-producing construction equipment to be located at the site. The air quality analysis for construction impacts will consider emissions from fuel-burning equipment and motor vehicles on-site as well as fugitive dust from on-site activities.

The analysis will be performed as follows:

- The activities and equipment proposed for each step in the construction sequence will be reviewed to determine the scenario with the greatest amount of equipment and activity operating on site. This scenario will represent the worst-case scenario utilized for further analysis;

- The emissions of the equipment will be determined with specific manufacturer's emission data, if available, or with U.S. Environmental Protection Agency's (USEPA) NON-ROAD emission model. Fugitive emissions will be calculated based on EPA's *AP42, Compilation of Air Pollutant Emission Factors*.

- ISCST3, a USEPA-approved dispersion model will be used to predict maximum air quality concentrations, and will be run for each source of carbon monoxide (CO), particulate matter (PM_{10} and $PM_{2.5}$), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) in the selected construction scenario to determine maximum short-term (1-hour, 3-hour, 8-hour, and 24-hour) and annual impacts. Designated ground-level and elevated receptors

in the vicinity of the site will be placed in accordance with USEPA guidelines. In addition, there will be a 1-kilometer by 1-kilometer Cartesian receptor grid centered on the site at intervals of 25-meter spacing. The dispersion modeling analysis will be performed using the most recent and available five-year meteorological dataset, 1999-2003, from LaGuardia Airport, NY (surface air) with upper air data from Brookhaven National Laboratory in Upton, NY.

- Where appropriate, the background concentrations will be obtained from the nearest representative NYSDEC monitoring stations, and will be added to the predicted concentrations for comparison to the impact criteria. For example, the 8-hour CO background will be added to the 8-hour CO modeled concentration for comparison to the 8-hour CO NAAQS.

- In addition, NYCDEP is currently employing interim guidance criteria for evaluating the potential $PM_{2.5}$ impacts from NYCDEP projects under CEQR. $PM_{2.5}$ impacts will be compared to the interim guidance criteria for determining the potential for significant adverse impacts;

- Activation and operation of the shaft would not result in the use of any pollutant-emitting equipment and as a result will not have any air emissions. Therefore, activation and operation of the shaft would not have a potential significant adverse impact on air quality and will be discussed only qualitatively; and,

- Cumulative impacts associated with the potential concurrent construction of the shaft and water mains will be evaluated.

Mobile Construction Sources

The CEQR screening threshold for mobile construction sources would be applied to determine the need for a detailed mobile-source air quality analysis. In the event a detailed mobile source impact analysis is needed, the following methodology would be used to assess the potential effects that these impacts could have on air quality:

- The mobile source modeling methodology will follow the general modeling methods described in the *CEQR Technical Manual.* The primary pollutants of concern for mobile sources are carbon monoxide (CO), and particulate matter ($PM_{2.5}$ and PM_{10});

- The emissions of CO and PM will be determined using the MOBILE6.2 vehicle emission factors model. The vehicle classification will be based on information developed as part of the traffic study. The emission factors determined from MOBILE6.2 will then be incorporated into the dispersion model, CAL3QHC(R);

- The dispersion modeling will utilize CAL3QHC(R) using the most recent and available five-year meteorological dataset, 1999-2003 from LaGuardia Airport. The modeling will follow procedures detailed in *USEPA's Guideline for Modeling Carbon Monoxide*

from Roadway Intersections (USEPA, 1992) and *Addendum to the User's Guide to CAL3QHC Version 2.0* (USEPA, 1995).

- Peak hour traffic volumes for each approach and departure lane will be used for intersection analysis. For each intersection modeled, the approach and departure links will be modeled for 1,000 feet from the intersection;

- Receptors will be placed along the sidewalks on all four corners of the intersection, at mid-sidewalk, and extended at least 100 feet from the corners. If the receptors are located within the mixing zone, the mixing zone will be narrowed so that the receptors are 1 foot from the edge of the mixing zone. Any adjacent bus stops will also be included in the list of receptors;

- Intersections most impacted by the construction, based on the results of the traffic analysis, will be selected for analysis. The intersections will be used to represent a reasonable worst-case assessment for all the intersections that may be impacted by construction activities. For the intersections analyzed, detailed roadway geometry, combined with traffic information such as turning movements, traffic volume, average vehicle speeds, and signal timing will be input into the model;

- The analysis will estimate the effects of construction (future with the construction activities and future without the construction activities). The mobile source impacts will be combined with stationary source impacts, as appropriate. The total concentration will be compared to the impact criteria;

- CO impact levels will be compared to the de minimis criteria that define a significant mobile source impact;

- In addition, NYCDEP is currently employing interim guidance criteria for evaluating the potential $PM_{2.5}$ impacts from NYCDEP projects under CEQR. $PM_{2.5}$ impacts will be compared to the interim guidance criteria for determining the potential for significant adverse impacts;

- For the PM_{10} analysis, the 24-hour and annual background PM_{10} concentration will be added to the 24-hour and annual modeled concentration to determine total PM_{10} concentrations at receptor sites for comparison to the 24-hour and annual PM_{10} ambient air quality standards;

- Cumulative impacts associated with the potential concurrent construction of the shaft and water mains will be evaluated.

Back up calculations and data will be presented in an appendix in the Draft EIS.

Water Main Connections

Stationary Construction Sources

Construction of the water main connections include a number of activities, such as excavation and materials handling. An analysis will be performed as follows to determine the air quality impacts of these stationary source impacts following a methodology similar to that proposed for the construction of Shaft 33B:

- Because the same construction activity (and equipment use) occurs along the route of the water main construction, air emissions during construction of the water mains will be estimated for a representative construction segment;

- The air quality analysis for construction impacts associated with the water main connections will be conducted in accordance with guidance provided in the *CEQR Technical Manual* following the same methodology described above for the Shaft Site;

- The analysis will consider emissions from on-site fuel-burning equipment and motor vehicles, as well as fugitive dust from on-site construction-related activities; and,

- The analysis includes the use of the approved dispersion models and modeling techniques and emission factors based on vendor-provided information and/or U. S. Environmental Protection Agency (USEPA) emission factors.

Mobile Construction Sources

The construction of the water main connections would require closure of traffic lanes during construction activities which could result in impacts to traffic patterns in the vicinity of the construction sites. A mobile source analysis will be performed to assess the potential effects that these impacts could have on air quality.

The mobile-source air quality analysis for construction impacts associated with the water main connections will be conducted in accordance with guidance provided in the *CEQR Technical Manual* following the same methodology described above for the Shaft Site.

Back up calculations and data will be presented in an appendix in the Draft EIS.

HISTORIC AND ARCHAEOLOGICAL RESOURCES

Analysis of the proposed project requires addressing its potential archaeological sensitivity and the potential impacts it may have on historic structures within the vicinity. The New York City Landmarks Preservation Commission (LPC) and New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) will be consulted to determine the potential for significant adverse impacts to historic properties as a result of construction of the shaft and water

main connections. Due to the degree of prior disturbance of the Shaft Site during construction of the Queensboro Bridge, the parcel is not expected to be archaeologically sensitive. A Phase IA Archeological and Historic Resources Assessment, performed in accordance with the guidelines and standards currently adopted by LPC and NYSOPRHP, will be conducted for the Draft EIS.

- Documentary research and pedestrian reconnaissance of the Study Area location will be performed. Research will be conducted at the LPC, New York City Archives, New York City Public Library, other appropriate New York City agencies/departments, and NYSOPRHP

- Based on the research, the prehistoric and historic contexts of the Study Area will be developed and the archaeological sensitivity of the Study Area assessed. Assessment of Native American period sensitivity will be based on the location of known archaeological sites reported in the literature as well as a consideration of the current and former topographic and physiographic characteristics of the sites. Research on the developmental history and assessment of the historic period sensitivity of the site will be based on analyses of late eighteenth to twentieth century maps. The extent to which past roadway construction (including the Queensboro Bridge) utility installations and other events would have affected the preservation of any archaeological resources potentially present within the Study Area will be determined.

- Locations within the Study Area determined to be archaeologically sensitive will be clearly indicated on a map. An assessment will be made to determine if construction of Shaft 33B and the water main connections would result in any potential impact to such resources.

- An evaluation of historic properties will be prepared to identify if the Study Area is entirely or in part within a national, New York State, and/or local historic building district and/or whether individual properties are listed on the National or New York State Registers of Historic Places or other local inventories.

- The locations of all national and State Register districts and individual properties, and all locally inventoried districts and individual properties, will be identified on a map. The Queensboro Bridge is listed on the National Register.

- Properties that appear eligible for LPC designation and/or listing on the State/National Register for architectural resources will be identified. Photographs of these properties will be provided in the Draft EIS and to the LPC. Locations of these properties will also be plotted onto a Sanborn map and the photographs keyed to the map.

- If the area shows sensitivity for historic and archaeological resources which could be potentially affected by the proposed project, further field investigations to assess the potential significance of the cultural resource would be undertaken in accordance with LPC standard procedures.

- If potential significant impacts to historic structures or archaeological resources within the Study Area are anticipated, mitigation measures would be developed in consultation with LPC. Mitigation measures could include recovery and documentation of archaeological resources, and vibration monitoring during construction activities.

- Potential impacts to historic structures, including the Queensboro Bridge, associated with activation and operation of the shaft will be described.

If completed at the time of publication, the Phase IA report will be provided as an appendix in the Draft EIS.

HAZARDOUS MATERIALS

No permanent hazardous material impacts would occur during operation of the shaft. Operation of the shaft would not require chemical use or that chemicals be stored on site. No treatment of drinking water would occur at the site.

The Shaft Site will be analyzed to determine the potential presence of contaminated soil or groundwater. Potential hazardous materials impacts will be evaluated for both the shaft and water main construction. Tasks include:

- Identify hazardous materials to be potentially utilized on-site during construction of the shaft and water main connections. These could include diesel fuel or other machine lubrication oils. No other chemicals are anticipated to be stored on-site during construction. Proper hazardous materials handling, transport and/ or storage procedures to be implemented during construction will be discussed.

- A Phase I Environmental Site Assessment (Phase I ESA) will be conducted for the Shaft Site and water main connections route to determine the potential for hazardous materials to have impacted soils in areas of excavation and determine the need for more detailed analysis. Relevant results of the Phase I ESA will be included in the Draft EIS.

- If the Phase I ESA presents the potential for hazardous materials to have impacted the soils that would be disturbed by the construction of the proposed action, a Phase II Subsurface Investigation (Phase II) for the Shaft Site will be conducted to characterize the subsurface soils in the project area. Relevant results of the Phase II testing will be presented in the Draft EIS. If required, a Phase II investigation along the water main route would be conducted prior to construction when the final design plans for the mains are known. Potential hazardous materials impacts that could occur and protective measures that would be implemented during construction of the water mains will be described in the Draft EIS.

- If necessary, a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) identifying appropriate recommended management practices would be prepared. If necessary, these measures would be implemented during construction to

protect the environment, construction workers and residents in the project area from impacted soils. These health and safety and management practices will be identified in the Draft EIS.

- Operation of the shaft and water mains will not require the use or storage of hazardous materials and as a result, operation of the shaft would not be expected to result in a significant adverse impact associated with hazardous materials.

- Identify hazardous materials that could potentially be utilized on-site during the shaft activation process. Proper hazardous materials handling, transport and/ or storage procedures to be implemented during construction will be discussed.

If completed at the time of publication, the full Phase I ESA, and as appropriate the Phase II, will be included as an appendix to the Draft EIS.

INFRASTRUCTURE AND ENERGY

No permanent change in energy use is expected as result of the proposed project. Any potential permanent re-routing of infrastructure will be described to the extent practicable. Tasks include:

- Evaluate the effects of providing temporary connections to power, water or other services during construction of the shaft and off-site water main connections based on the available capacity to provide such services;

- Where possible, identify required relocations of existing subsurface utilities;

- Identify and assess potential utility service disruptions from construction activities associated with the shaft and off-site water main connections; and,

- Potential impacts associated with activation and operation of the shaft, including energy usage associated with operation of the shaft will be qualitatively described. No potential impacts would occur during operation of the water mains.

PUBLIC HEALTH

The Draft EIS will include an assessment of the potential for health related impacts that could result from identified potential significant adverse impacts associated with traffic, air quality, noise or hazardous materials impacts. In the event that significant adverse impacts are identified that could result in public health impacts, potentially at-risk populations within the sphere of impact will be identified, appropriate exposure levels will be defined, and a comparison will be made to known public health guidelines in order to determine potential significant adverse impacts. Coordination with FDNY and NYPD will occur to ensure review of potential public safety impacts.

D. MITIGATION

Where potential significant adverse impacts are likely to occur, mitigation measures will be identified to alleviate or eliminate those significant adverse impacts to the extent practicable and feasible. These measures will be developed in coordination with relevant agencies, as required, and in accordance with the *CEQR Technical Manual*. A range of potential mitigation measures will be presented. Mitigation measures that require implementation by or approval from other agencies will be identified as such.

E. ALTERNATIVES

The Draft EIS will present several alternatives to the proposed project. The purpose of the alternatives analysis is to provide decision makers with a basis for comparing environmental conditions associated with the proposed project with environmental conditions associated with alternatives if these alternatives to the proposed project were to be pursued. Alternatives to be assessed in the Draft EIS include alternative shaft sites, a No Action Alternative, and a Water Main Alternative. An analysis of each alternative will be presented in the Alternatives chapter of the Draft EIS at a level of detail necessary to compare the alternative to the proposed project. A comparative analysis of the alternatives will be presented including a discussion of the advantages and disadvantages of each site. Where appropriate, detailed analysis performed in accordance with the methodologies presented above, would be performed for each of the proposed alternatives to determine the potential for significant adverse impacts to occur if shaft construction would occur at each alternative. The comparative analysis will consider how potential impacts associated with construction at each site may differ based on the environmental analyses in different technical areas e.g., traffic. Required permits and approvals for shaft construction at each site and for the water main alternative will be disclosed. Cost information for each alternative (including the water main alternative) will be included in the Draft EIS. Specifically, estimated costs of construction of the Shaft, City Tunnel No. 3 and water main connections associated with each alternative will be provided.

NO ACTION ALTERNATIVE

Environmental regulations require the consideration of a No Action Alternative in every EIS. In the event that the Shaft 33B project did not occur, then the Tunnel 3, Stage 2 Manhattan Leg west-east tunnel spur would terminate at Shaft 32B on E. 35th Street. The impacts associated with this alternative will be described in the Draft EIS. This alternative would not be chosen by the NYCDEP because it does not address the need for redundancy within the MIPZ, the pressure problems that currently exist in that area, or the need for adequate supply and pressure in the MIPZ and NIPZ when Tunnel No. 1 is taken off-line for rehabilitation.

ALTERNATIVE SITES

The three feasible alternative sites described in the Project Description above will be assessed at a level of detail that allows a comparative assessment of the engineering and environmental

issues related to each of the alternative sites. For each impact category where the proposed project results in a potentially significant adverse impact, the alternative sites will be evaluated at the same level of detail as the evaluation of the preferred alternative in order to determine if an alternative to the proposed project exists that would not result in such impacts.

A detailed description of each alternate site will be provided, and relevant details regarding the existing site conditions, ownership information, surrounding setting and any required information for a detailed impact assessment will be described. A discussion of construction impacts associated with water main connections from the alternative sites will be included.

For those categories where a potential significant adverse impact is identified at the preferred site, a detailed impact assessment will be provided for the alternative sites using the same methodology described for the preferred site. It is anticipated that the detailed impact assessments for the alternative sites may include:

- Socioeconomic Conditions
- Traffic
- Noise
- Air Quality
- Historic and Archeological Resources
- Hazardous Materials

WATER MAIN ALTERNATIVE

In addition to the alternate sites that were evaluated for the project, an alternative to shaft construction will be evaluated that would involve only the construction of water mains in the event that Shaft 33B had to be eliminated from the Department's water supply plans. In the event that Shaft 33B could not be constructed, NYCDEP would still need to provide an additional water supply source to this area. This alternative is identified as the "Water Main Alternative" for the purposes of this Draft EIS, and is described below.

Connecting two existing shafts that run through this area with water mains would provide another source of redundancy to the MIPZ in the absence of the construction of Shaft 33B. The Water Main Alternative would consist of constructing two 48" water mains from Shaft 14B on York Avenue between E. 77th and E. 78th Streets to Shaft 32B on E. 35th Street and Second Avenue (see Figure 19). At this time, the water main alternative is conceptual and it is not possible to determine the precise locations and block segments where the 48'' mains would be constructed as this is dependent on many factors and requires detailed designs and coordination with multiple agencies and utilities to ensure feasibility of proposed routes. Therefore, for the purposes of providing a reasonable worst-case impact analysis, the Draft EIS will analyze the potential for significant impacts to occur if the water main alternative were to be constructed down several lengths of First and Second Avenues. First and Second Avenues were chosen for review in the Draft EIS because they represent a logical and direct route between the two shafts and are important transportation corridors within Manhattan.

COLOR LEGEND

- WATER MAIN ALTERNATIVE
- CITY TUNNEL NO. 3 STAGE 2 (current)
- CITY TUNNEL NO. 3 STAGE 1

NEW YORK CITY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TUNNEL 3 STAGE 2 MANHATTAN
SHAFT 33B

POTENTIAL ROUTE OF
WATER MAIN ALTERNATIVE

JUNE 2005

FIGURE 19

File: \\queens\projects\2175158\Shaft 33B EIS\EIS Figures\AutoCadd\AutoCadd\STAGE2MANHATTAN-PORTRAIT-33B_Watermain.DWG

Construction of the main would use standard cut-and-cover construction techniques. The construction period would depend on the construction sequencing, but a construction sequence similar to that used for the water main connections would be developed. Maximum construction staging requirements during this period would generally take up to 24 feet. Based on a total of approximately 42 blocks of construction, it is anticipated that the project would take five to seven years of construction.

The construction techniques used to construct the water mains between Shafts 14B and 32B would be the same as those used throughout the City for water main connections. The NYCDDC would construct the water mains according to the plan provided by NYCDEP and would likely use a number of contracts to sequence the construction in a manner designed to execute the construction in as efficient a manner as possible while minimizing impacts on the neighborhoods in which the construction would occur. The construction sequence would depend on the final construction plan, but would likely include a number of construction contracts that would occur simultaneously in order to minimize the construction period. It is possible that up to five construction contractors would be engaged to implement the final plan.

The Water Main Alternative was not selected as the preferred alternative for the following reasons:

- A 42-block water main system would be less reliable than a tunnel/shaft system due to potential breakage; and
- A massive amount of street and utility work would be required over the 42 blocks of construction. It is anticipated that this work would be very disruptive.

Due to the linear nature of the construction, with potential short-term impacts associated with each construction segment, the methodology for the impact assessment will be different than that used for the Shaft 33B impact assessment. However, the same technical methods used for the traffic, air quality and noise assessments of the water main connections to the Shaft 33B site will be used for the assessment of the Water Main Alternative. Representative impacts will be assessed for reasonable worst-case segments of construction, and these assessments will then be used to describe longer term impacts that could occur down the length of the construction corridor in a more qualitative manner.

The water main alternative route presented in the Draft EIS is speculative and will be presented for comparison purposes. If the water main alternative were to be pursued by the Department, further design and evaluation of the route would be needed.

F. UNAVOIDABLE IMPACTS, AND IRRETRIEVABLE AND IRREVERSIBLE COMMITMENT OF RESOURCES

The proposed project may result in adverse impacts that are unavoidable. These unavoidable impacts will be specifically documented in the Draft EIS. The Draft EIS will also disclose the commitment of resources that the project may require which are irretrievable and adverse effects that are irreversible.

G. REGIONAL AND CUMULATIVE IMPACTS

Cumulative impacts are two or more individual effects on the environment that, when taken together, are significant or that compound or increase other environmental impacts. The impacts of other projects that may influence the area potentially impacted by the construction or operation of the shaft will be evaluated. The potential impact of this work will be considered by itself and also in combination with other projects proposed in the Study Area. For example, if another large project would be under construction at the same time in the same area, it could compound the adverse impacts to traffic (and other parameters) caused by the construction of the shaft. Cumulative and regional impacts will be addressed, as applicable, in each technical chapter.

H. EXECUTIVE SUMMARY

An Executive Summary of the findings reported in the Draft EIS will be prepared and presented at the beginning of the document. The Executive Summary will present any significant adverse impacts that were identified as well as potential mitigation measures.

A. INTRODUCTION

This Attachment to the Final Scope of Work (FSOW) for the Draft Environmental Impact Statement (Draft EIS) provides responses to the comments received on the April 8, 2005 Draft Scope of Work (DSOW) as prescribed by the City Environmental Quality Review (CEQR) Regulations. Public comments on the DSOW were made at a publicly-noticed hearing held May 9, 2005. Additional written comments and comments submitted via e-mail on the DSOW were received by the New York City Department of Environmental Protection (NYCDEP or Department) and are also responded to in this Attachment.

The formal closure of the public comment period was May 19, 2005, however, in order to accommodate the requests for additional time to review of the DSOW, NYCDEP accepted comments from concerned members of the public up until July 6, 2005. Section B of this Attachment lists the individuals who provided verbal and written comments on the DSOW. Section C summarizes and groups together similar comments, and provides responses to the comments by subject and/or technical area.

B. COMMENTORS

COMMENTORS AT THE PUBLIC SCOPING HEARING

1. Sandy Barry, East Sixties Neighborhood Association (ESNA)
2. Matthew Bondy
3. Gisele Bren
4. Carol Caver
5. Gregory Cranford (also provided written comments)
6. Pat Dickinson
7. Rita Friedman (also provided written comments)

8. Astrid Hagenguth (ESNA)
9. Barry Klein for Assembly Member Jonathan Bing
10. Jessica Lappin
11. Patrick McCandless for State Senator Liz Krueger
12. Peter McHugh (also provided written comments)
13. Meaghan O'Brien
14. Paul Sasseville
15. Judy Schneider (ESNA)
16. Barry Schneider (ESNA)
17. Jane Swanson for City Council Speaker Gifford Miller (also provided written comments)
18. J. Ronald Trost (30 Sutton Place Board of Directors- also provided written comments)

WRITTEN AND E-MAIL COMMENTS

19. Gary Ahlskog, Resident (345 E. 54th Street)[1]
20. Stephen Amis, Jr., M.D., Resident (300 E. 54th Street)[2]
21. Fred Arcaro, Chair, Public Safety, Environmental and Human Rights; and Carol A. Schacter, Chair (Manhattan Community Board Six)
22. Gloria Berliner, Resident (300 E. 54th Street)[2]
23. Pedro Bernardo, Resident (300 E. 54th Street)[2]
24. Linda C. Berry, Resident (300 E. 54th Street)[2]
25. Stuart Berry, Resident (300 E. 54th Street)[2]
26. Peter Biernacki, President (40 Sutton Place Condominium)
27. E.M. Bonfiglio, Resident (345 E. 54th Street)[1]

[1] All comments received from 345 E. 54th Street will be referred to as "Residents of 345 E. 54th Street" since the comments submitted from them were identical.
[2] All comments received from 300 E. 54th Street will be referred to as "Residents of 300 E. 54th Street" since the comments submitted from them were identical.

28. Marguerite Borchardt, Resident (345 E. 54th Street)[1]
29. Marguerite Borchardt, Resident (E. 54th Street)[1]
30. Heidi J. Braig, Resident (E. 54th Street)[1]
31. Martin R. Bring, Resident (300 E. 54th Street)
32. Jan Brody, Resident (300 E. 54th Street)[2]
33. Edward P. Ciafardini, Resident (300 E. 54th Street)[2]
34. Lynn R. Cohen, Resident (300 E. 54th Street)[2]
35. Jerome Cohen, Resident (300 E. 54th Street)[2]
36. T. Cohen, Resident (300 E. 54th Street)[2]
37. Connie Colas, Resident E (300 E. 54th Street)[2]
38. Gregory Cranford, Resident (300 E. 54th Street)[2]
39. JoAnne D'Amico, Resident (321 E. 54th Street)
40. Debra DiPaolo, Controller (The Terrence Conran Shop – May 24, 2005)
41. Debra DiPaolo, Controller (The Terrence Conran Shop – May 18, 2005)
42. William Donley, Resident (300 E. 54th Street)[2]
43. Kathy Dwyer, Resident (400 East 59th Street)
44. J. David Eliach, Resident (300 E. 54th Street)[2]
45. Joan Eliasoph M.D., Resident (300 E. 54th Street)[2]
46. Raffaele Esposito, Owner (Raffaele)
47. Jodi and Mark Essner, Residents (300 E. 54th Street)[2]
48. Louise Ferguson, Financial Controller (Guastavino's Inc. – May 18, 2005)
49. Louise Ferguson, Financial Controller (Guastavino's Inc. – May 25, 2005)
50. Louise Ferguson, Financial Controller (Guastavino's Inc. – May 26, 2005)
51. Arlene Flohr, Resident (300 E. 54th Street)[2]
52. Rita Friedman, Resident (300 E. 54th Street)

53. Diane Fromhartz, Resident (300 E. 54th Street)[2]
54. Manuel Campos Galvan, Resident (418 E. 59th Street)
55. Cora Glasser, Resident (300 E. 54th Street)[2]
56. Stephen C. Grill, Resident (300 E. 54th Street)[2]
57. R. Heisler, Sutton Owners Corporation (35 Sutton Place)
58. Charles and Marilyn Hunter, Resident (418 E. 59th Street)
59. Martha Horowitz, Resident (300 E. 54th Street)[2]
60. Robert and Bonnie Jacobs, Residents (300 E. 54th Street)[2]
61. Alejandra Jaramillo, Resident (418 E. 59th Street)
62. Hazel S. Kandall, Resident (400 East 59th Street)
63. Edward J. Kaniewski, Director of Real Estate Administration (The Great Atlantic & Pacific Tea Company, Inc.)
64. Rhoda Keller (ESNA)
65. George Keller (ESNA)
66. Felix H. Kent, Resident (300 E. 54th Street)[2]
67. Dawn Kenzer, Resident (300 E. 54th Street)[2]
68. B. Khoudari, Resident (300 E. 54th Street)[2]
69. Linda Kim, Owner (Sutton Nails)
70. Rachel Kneitil, Resident (345 E. 54th Street)[1]
71. Darius Kohan, Resident (300 E. 54th Street)[2]
72. Jeff Krevat, Resident (418 E. 59th Street)
73. Alec Konkola, Resident (345 E. 54th Street)[1]
74. Eileen L. Krueger, Resident (245 E. 54th Street)
75. Mr. and Mrs. Joseph La Feilita, Residents (300 E. 54th Street)[2]
76. Deborah A. Leitner, Resident (300 E. 54th Street)[2]

77. Anthony Leness (e-mail comments dated May 11, 2005)
78. Alfred Lerner, Resident (300 E. 54th Street)[2]
79. Alan Levine, Resident (300 E. 54th Street)[2]
80. Michelle Lim, General Manager, Fusha Cuisine
81. Eleanor Lowet, Resident (300 E. 54th Street)[2]
82. Priya Malhotra, Resident (300 E. 54th Street)[2]
83. Anthony Manning, President (40059 Owners Inc Board of Directors)
84. H. Mannix (ESNA)
85. Carol Marshall, Resident (300 E. 54th Street)[2]
86. R. McFarland (Brown Harris Steven's)
87. Peter McHugh (435 E. 57th Street)
88. Peter McNamara, Resident (300 E. 54th Street)[2]
89. Mary Kay Mead, Resident (345 E. 54th Street)[1]
90. Hon. Gifford Miller, Speaker (New York City Council)
91. Hon. Eva Moskowitz, Member (New York City Council)
92. Lauren Howard, Resident (425 E. 58th Street)
93. Judith Lee Mindlin, Resident (300 E. 54th Street)[2]
94. Leonard Newbill, Owner (Sutton Boutique and Shoe Repair)
95. Leonard Nolletti, Resident (300 E. 54th Street)[2]
96. Arthur S. Olick, President, (Connaught Tower Corporation)
97. Mrs. Selma Olick, Resident (300 E. 54th Street)[2]
98. Alan F. Packer, Resident (300 E. 54th Street)[2]
99. Edward Pappas, President, (321 Apartments Corporation)
100. Walter Pfaeffle (ESNA)
101. Emmanuel Plat, Vice President, (The Conron Shop)

102. Alina Pogrob, Resident (300 E. 54th Street)[2]
103. Honey Raider, President, Board of Directors (435 E. 57th Street Apts.)
104. Chandry Ramnani Resident (300 E. 54th Street)[2]
105. Phyllis Redmond, Resident (300 E. 54th Street)[2]
106. Resident (300 E. 54th Street)[2]
107. Resident (300 E. 54th Street)[2]
108. Resident (300 E. 54th Street)[2]
109. Resident (300 E. 54th Street)[2]
110. Resident (300 E. 54th Street)[2]
111. Resident (300 E. 54th Street)[2]
112. Residents (345 E. 54th Street)[1]
113. Jack H. Resnick (ESNA)
114. Howard Rifkin, Resident (300 E. 54th Street)[2]
115. Richard L. Ritchie, President (30 Sutton Place Corporation)
116. Sheila Rosenkranz, Resident (300 E. 54th Street) [2]
117. Celia and David Sachs, Residents (425 E. 58th Street)
118. Gina Santucci (New York City Landmarks Preservation Commission – April 25, 2005)
119. Gina Santucci (New York City Landmarks Preservation Commission – January 21, 2005)
120. Joseph D. Scalice, Owner (March Restaurant)
121. Mina K. Seeman, Resident (300 E. 54th Street) [2]
122. Hester Serafini, Resident (418 E. 59th Street)
123. Susan Shapiro, Resident (300 E. 54th Street) [2]
124. Barbara Shefsky, Resident (425 E. 58th Street)
125. Lynn Silberman (ESNA)
126. Kurt E. Skonberg, Resident (300 E. 54th Street)[2]

127. Guy I. Smiley, President (Sovereign Board of Directors)

128. Amanda Sutphin (New York City Landmarks Preservation Commission)

129. Ed Szizyglizski, Resident (300 E. 54th Street) [2]

130. S. Taneja, Resident (300 E. 54th Street) [2]

131. J. Ronald Trost (e-mail comments dated May 10, 2005; May 12, 2005; and May 13, 2005)

132. Heidi Vernejoul, Owner (Café Joul)

133. Madeline and Chester T. Vogel, Residents (300 E. 54th Street)[2]

134. Dina Walin, Resident (300 E. 54th Street)

135. Charles S. Warren/ Jacqueline Ludorf (New York City Manhattan Community Board 8)

136. Rosemary F. Weaver, President (25 Sutton Place Corporation)

137. Ellen Weiss, Resident (300 E. 54th Street) [2]

138. Merle and Jochen Witt Residents (425 E. 58th Street)

139. Hayley Xuereb, Resident (345 E. 54th Street)[1]

140. Andy Yeung, General Manager (AJA Asian Bistro and Lounge)

141. Saad Zouak, Resident (300 E. 54th Street) [2]

C. RESPONSE TO COMMENTS

PROJECT DESCRIPTION COMMENTS

Comment 1: How will rock be removed from the shaft? Will it be brought through the opening at E. 59th Street and First Avenue? (A. Leness)

Response: Excavation of overburden (soil) at the site would require the removal of soil to a depth of approximately 23 feet (the approximate top of bedrock at this site). A conventional excavation method would be used and the soil would be removed from the site by truck.

The subsequent rock excavation through bedrock would use a combination of raise boring and blasting. A raise bore machine is a type of subsurface drill that would be raised from City Tunnel No. 3 to the surface in order to create a large enough hole for workers to enter. As described in the DSOW, a pilot hole

would be drilled from the top of the rock level to the bottom of the shaft where it intersects the tunnel. With the raise bore machine positioned in the tunnel, a reaming head would then be placed below the pilot hole and the shaft would be excavated upwards to the required diameter to permit worker entry. The shaft would then be enlarged by blasting. Workers would enter from the surface and drill holes in the sides of the shaft, insert explosives and blast the rock that would then fall to the bottom of the shaft into the tunnel. This excavated rock material would be removed through the tunnel to the existing Shaft 26B Site at Tenth Avenue and 30th Street and then trucked offsite for disposal or reuse.

Comment 2: We operate the Food Emporium on the east side of Manhattan. The store is located at 401 E. 59th Street on a very prestigious and historic piece of property under the 59th Street Bridge. The store is located in the area identified as the preferred alternative site for this project. This location is unsuitable for several reasons and the project will have material negative environmental impacts. (E. Kaniewski)

Response: The Food Emporium at 401 E. 59th Street is included in the Shaft 33B Draft EIS Study Area. The Study Area is defined as a 400-foot radius around the construction site boundary and is the area used for analysis of potential impacts (e.g., land use and neighborhood character) that could occur as a result of the project. The Draft EIS will assess the environmental impacts of the project on this location as prescribed by CEQR.

Comment 3: The Queensboro Bridge is currently undergoing an extensive refurbishment that will last approximately six years. At previous community board meetings, it was made clear that the contractor hired to perform this work was using the northwest corner of E. 59th Street and First Avenue to conduct that project. Nobody has addressed this conflict in the use of the space. (P. Biernacki)

Response: The Department is coordinating with New York City Department of Transportation (NYCDOT) regarding the staging and construction of Shaft 33B in order to accommodate NYCDOT's ongoing use of the site for Bridge maintenance activities.

COMMUNITY COORDINATION COMMENTS

Comment 4: The designation of E. 59th Street and First Avenue as the preferred site location is the result of a flawed process that did not give residents surrounding the site adequate notice and opportunity to prepare an opposition. (R. Ritchie, R. Weaver, G. Smiley, R. Esposito, A. Yeung, H.Vernejoul, J. Scalice, L. Kim, L. Newbill, R. Heisler, M. Lim, A. Manning, R. McFarland, L. Ferguson, D. DiPaolo, B. Shevsky, C. Sacks, L. Howard)

Response: In late 2002, NYCDEP began coordinating with the local Community Boards

regarding the need for and potential locations of the proposed Shaft 33B. Over the past three years, NYCDEP has had several meetings with the Community Boards and local government officials to provide information on potential sites for Shaft 33B and has made a concerted effort to be responsive to concerns regarding the location of the shaft. NYCDEP will continue to coordinate with local Community Boards to address community concerns throughout the environmental review process. The NYCDEP identified the E. 59th Street and First Avenue Site as the preferred site because it has several advantages over the alternative sites. NYCDEP believes that there are engineering and design related advantages for constructing the shaft at this location. It is important to emphasize that no final decision has been made on the final location of Shaft 33B. The EIS will provide important information about the environmental consequences of the site to allow for an informed decision to be made. The EIS will provide the opportunity and the forum for additional community involvement in the decision-making process.

With respect to notification to the public for the Shaft 33B EIS, NYCDEP has and will continue to conduct the environmental review and public notifications in accordance with CEQR Rules of Procedure. As the first step in the environmental review process, on April 8, 2005 the NYCDEP publicly distributed the DSOW, the Environmental Assessment Statement (EAS) and the Positive Declaration for the Shaft 33B project which formally announced the preferred location for Shaft 33B. Also on April 8th, the NYCDEP published a Public Hearing and DSOW Notice (Public Notice) in the City Record. The Public Notice was also published in the New York Post and the New York Daily News on April 8th and April 10th and in the Our Town local paper in the April 21st and 28th editions. The Public Notice was also posted in the New York State Environmental Notice Bulletin in the April 13th edition The Public Notice was posted on NYCDEP's website on April 8th, and the DSOW, EAS and Positive Declaration were published on NYCDEP's website on April 12th. The Public Notice included a project description, the methods by which the DSOW, EAS and Positive Declaration could be obtained, the date, location and time of the DSOW Public Hearing and the date the official public comment period would close. The DSOW Public Hearing took place on May 9th at the New York Blood Center on E. 67th Street. In addition, to publicize the DSOW Public Hearing the Department posted flyers advertising the DSOW Public Hearing in the immediate vicinity of the preferred and each alternative site. Specifically, flyers were posted in the area between Sutton Place and Third Avenue, from E. 58th Street to E. 63rd Street, and from E. 52nd Street to E. 56th Street between First and Third Avenues.

The DSOW set forth the analyses and methodologies that NYCDEP will use to prepare the Draft EIS for Shaft 33B. The DSOW is not the Draft EIS. The preparation of the Draft EIS is underway and is not expected to be completed until Fall, 2005. In part, the Draft EIS is based on comments received on the DSOW and included in the FSOW. The FSOW will be used to guide the

preparation of the Draft EIS.

When the Draft EIS is completed, it will be published and sent to government agencies, local public officials and the public in accordance with the public review process defined in the CEQR regulations. A public hearing and public comment period will be held following publication of the Draft EIS, and a Final EIS including responses to public comments will then be published. Following the publication of the Final EIS, the Department will issue a set of Findings as prescribed by CEQR.

Prior to the DSOW Public Hearing, the Department met with Manhattan Community Board 8 (CB8) on April 18th to present the project. Community Boards are the organizations authorized to communicate with City agencies for proposed projects occurring within their Districts. City agencies coordinate with community boards which serve as advocates and service coordinators for the community/District. In addition, the Department met with Manhattan Community Board 6 (CB6) on May 26th and June 29th to present the Shaft 33B project.

Finally, it should be noted that the DSOW and FSOW identify NYCDEP's preference for the location of the shaft. The Department did not announce its final decision regarding the location of the shaft. A final decision regarding the location of Shaft 33B will be made in the Final EIS. The environmental review process is an opportunity for interested members of the community, local government officials, and community boards to comment on the proposed project and provide their comments and concerns so that they can be considered during the environmental review and NYCDEP's decision making process. NYCDEP is preparing an EIS for the proposed Shaft 33B precisely because it subjects the proposed Shaft 33B to the highest level of analysis and community participation.

Comment 5: NYCDEP should establish a Community Advisory Committee (CAC) and meet regularly with the community. (L. Krueger, G. Miller, B. Schneider) We urge DEP and its sister agencies to listen to and work closely with the surrounding community to ensure that questions raised regarding these issues be answered. (Residents of 300 E. 54th Street, J. Lappin)

Response: NYCDEP is undertaking an EIS process in order to allow the greatest level of public involvement in the environmental review process for this project. The Shaft 33B project will subjected to the highest level of analysis.

The EIS process includes two formal points where public review and comment opportunities are provided; the public hearing and comment period on the DSOW and the public hearing and comment period for the Draft EIS. In addition to these formal public comment opportunities, NYCDEP will continue to coordinate and meet with CB8 and CB6 to address the concerns of the surrounding residents during the environmental review process on an as

needed basis or at the Community Boards' request. At this time, NYCDEP believes that the project can be effectively coordinated through the Community Boards and will make every effort to be responsive to concerns of local residents as expressed to the Community Boards. The need for a Community Advisory Committee will be evaluated in the context of the overall communication activities as they evolve in the development of the project.

Comment 6: Can the DSOW comment period be extended? (J. Trost, L. Ferguson, D. DiPaolo)

Response: The comment period was extended to accommodate this and other such requests. All comments received by July 6th are addressed in this section.

Comment 7: A hotline for complaints must be established and circulated to neighboring residents and businesses, including the neighborhood associations and Community Boards. (B. Schneider)

Response: NYCDEP currently has a hotline for complaints. This number is (212) NEW-YORK or 212-639-9675 and is provided on the NYCDEP web site. Concerned individuals and residents can also call 311 to be forwarded to an appropriate unit within NYCDEP to register complaints.

SITE SELECTION COMMENTS

Comment 8: Did the DEP initially recommend E. 54th Street and Second Avenue as the preferred location? Is there a document that expresses that position and where can it be found? On what date did the DEP change its preliminary preference from E. 54th Street and Second Avenue to E. 59th Street and First Avenue? (J. Trost) The designation of 59th Street and First Avenue as the preferred site location is the result of a flawed process that is the result of inappropriate consideration of the advantages and disadvantages of the feasible sites. How E. 59th Street and First Avenue became the preferred site is unclear. (R. Ritchie, R. Weaver, G. Smiley, L. Ferguson, E. Plat, D. DiPaolo P. Biernacki; R. McFarland, K. Dwyer, H. Serafini, A. Jaramillo, M. Galvan) Alternative sites exist which should be considered. The draft EIS should be withdrawn and the DEP should select an alternative site without the major disadvantages of the current preferred site. We agree entirely with the opposition statement prepared by the 30 Sutton Place Corporation, which has been previously submitted. (R. Ritchie, R. Weaver, G. Smiley, R. Esposito, A. Yeung, H.Vernejoul, J. Scalice, L. Kim, L. Newbill, R. Heisler, M. Lim, A. Manning, R. McFarland, L. Howard, C. Sachs, B. Shefsky) The site should be returned to E. 54th Street and Second Avenue. (J. Krevat)

Response: The construction of Stage 2 of City Tunnel No. 3 and the associated water shafts is a project that started in 1991. Shaft 33B is the final shaft to be located

along the Tunnel. Three sites were initially considered prior to the E. 54th Street and Second Avenue site. These sites were located at: E. 55th Street at Second Avenue; between E. 54th Street and E. 55th Street east of Second Avenue; and E. 53rd Street at Second Avenue. Each of these sites was originally identified by NYCDEP as a preferred-candidate option, however, each has been subsequently acquired, and all three are now under development as private properties.

Following initial consideration of those sites, and prior to initiating the environmental review process, NYCDEP also considered locating Shaft 33B at E. 54th Street and Second Avenue. The E. 54th Street and Second Avenue site is no longer a desirable site due to several factors as described in the DSOW. The disadvantages include: 1) the revised site configuration as prescribed by the New York City Fire Department (FDNY) which makes the site extremely difficult to construct; 2) the requirement for pedestrian walkways that bisect the site also making the site very difficult to construct; and, 3) a need to maintain a private driveway for the Milan Condominiums that crosses the site.

At the time NYCDEP was in its preliminary planning for potentially siting the shaft at E. 54th Street and Second Avenue, the private driveway did not exist and the site was configured differently. The other reasons why E. 54th Street and Second Avenue is no longer the preferred location were discussed in the DSOW and are included in the FSOW.

Further, as described in the DSOW, NYCDEP evaluated nineteen potential sites as possible locations for Shaft 33B. In the screening of these sites, fifteen of the sites were determined to be infeasible, based primarily on three factors: 1) condemnation of active property would have been necessary; 2) an entire street or avenue would have had to be closed for construction purposes; and, 3) the site configuration could not accommodate the required space needed for shaft construction.

The four feasible locations for Shaft 33B were then reviewed to determine the potential engineering and environmental advantages and disadvantages. Based on the densely developed nature of the area where Shaft 33B must be located to meet its intended purpose, it was expected that each site would have some advantages and possibly some disadvantages. NYCDEP identified the preferred location based on a comparative review of the advantages and disadvantages at each of the potential sites and identified E. 59th and First Avenue as the preferred alternative based on this review.

The DSOW states that the Department's preferred site for Shaft 33B is E. 59th Street and First Avenue, but that NYCDEP has yet to make a final decision regarding the siting of the shaft. Based on public comments, the DSOW, as reflected in the FSOW, has been revised and will be used to guide and define

the nature and extent of the studies that will be conducted in developing the Shaft 33B Draft EIS.

The Draft EIS will give NYCDEP and the public a detailed analysis of the potential environmental impacts that may reasonably be expected to occur as a result of the construction of the proposed project. For each technical impact area where the preferred site has a potential for a significant adverse impact, a detailed analysis would be conducted at the alternative sites to determine if the construction impacts at those locations would alleviate or avoid potential significant adverse impacts. A comparative analysis of the alternative sites will be provided in the Draft EIS. In addition, for any potential significant adverse impact that is identified, practicable and feasible mitigation measures would be identified.

Comment 9: The site at E. 54th Street and Second Avenue is not a feasible alternative and should not be included in the Draft EIS. The construction materials and equipment would restrict vehicular access to the site in the event of a fire due to the site's insufficient size. In addition, traffic, quality of life and public safety would be impacted. E. 54th street would basically be closed during construction. The E. 54th Street alternative would create a dangerous long-term condition for the thousands of residents and businesses, educational and recreational institutions on E. 54th Street and Second Avenue; seriously impede traffic flow on two heavily used streets; create the greatest negative impacts on the neighborhood; and would be the most difficult construction site in which DEP's contractors can operate, making the construction period lengthier, more difficult, and more costly. The site does not meet the City's own selection criteria. (L. Krueger, J. Lappin, J. Bing, G. Miller, R. Friedman, P. Sasseville, G.. Cranford, M. Bondy, Residents of 300 E. 54th Street, Residents of 345 E. 54th Street, E. Pappas, A. Olick, E. Krueger, J. D'Amico) Additional disadvantages at the E. 54th Street and Second Avenue site exist and should warrant the removal of the site as a feasible alternative. These include that noise levels will be more severe at E. 54th Street, the irregularly shaped site will inhibit pedestrian traffic to nearby buildings, and using explosives in a highly populated residential area like E. 54th Street is extremely dangerous. (E. Krueger)

Response: The site at E. 54th Street and Second Avenue meets the feasibility requirements for construction as described in the DSOW, and will be included in the Draft EIS as an alternative to the preferred site. As with all of the feasible sites that will be included in the Draft EIS, an assessment of the potential impacts related to the concerns mentioned above will be evaluated to a level of detail that allows a reasonable comparison to the preferred site. All of the feasible sites that will be evaluated in the Draft EIS have both advantages and disadvantages when compared to the preferred site. As described in the DSOW, a more detailed description of the alternative sites and the preferred site will be included in the Draft EIS.

The construction area at the E. 54th Street and Second Avenue alternative site would not require E. 54th Street to be closed during construction. Although occasionally temporary street blockage may occur during movement of construction vehicles, an approximate 16-foot traffic lane and a 5-foot pedestrian walk way would be maintained during most construction activities.

Comment 10: Why was the feasible alternative site at E. 59th Street and Second Avenue not determined to be the preferred site? The lane that you say would have to close is already closed. (P. McHugh)

Response: The site at E. 59th Street and Second Avenue is a feasible alternative site and will be analyzed in the Draft EIS. The site at E. 59th Street and Second was not identified as the preferred site for reasons listed in the DSOW. As with the other three feasible sites for Shaft 33B, including the currently preferred site, the location at E. 59th Street and Second Avenue will be comparatively evaluated in the Draft EIS. The advantages and disadvantages of each site presented in the DSOW will be described in greater detail in the Draft EIS and environmental analyses will be presented for each CEQR technical area for which the preferred site may cause a potentially significant impact. For each alternate site, a detailed site plan will be included in the Draft EIS which will more clearly show the extent of the required lane closures at those sites.

While the lane closure at the E. 59th Street and Second Avenue site currently exists, it is expected that the existing lane closure would likely be extended further into E. 59th Street at Second Avenue if this site were selected. In addition, the lane would remain closed for the duration of Shaft 33B construction and future plans to restore it, if contemplated, would be delayed by this use. The Draft EIS will include a discussion of this issue. As described in the DSOW, one of the primary disadvantages of this site is that the Con Edison oil-o-static lines would have to be relocated.

Comment 11: There is a significant omission in the NYCDEP's description of the disadvantages associated with siting the project at the First Avenue and E. 59th Street site, now designated as the preferred site. Please consider the following: E. 59th Street westward from First Avenue is a dedicated single lane which serves as an entrance to the outbound lower roadway of the Queensboro Bridge; The E. 59th Street lane provides the only bridge access from the east and is heavily used by vehicles from York Avenue, First Avenue, and the FDR Drive exit at E. 61st Street. This route has become an effective part of an overall plan to reduce overwhelming traffic congestion, noise, and deterioration of neighborhood safety around the Bridge, a neighborhood that with few exceptions is residential and storefront. (P. McHugh)

Response: The entire Study Area for the construction of Shaft 33B is characterized by dense urban development with relatively heavy traffic conditions and thus potential traffic disruption is an issue for this project at each alternative site. Potential traffic disruption is one factor of many that are considered in the site

selection process.

Under the current site configuration, extensive street closures are not proposed or anticipated to occur as part of the proposed shaft construction at the preferred site. In addition, anticipated construction traffic generation is expected to be very low. While certain construction activities may disrupt traffic flow on E. 59th Street on isolated occasions, these events are anticipated to occur on an infrequent basis and be for a limited duration. NYCDEP would make every effort to ensure that measures are implemented to effectively manage construction to be the least disruptive operation practicable and would endeavor to maintain traffic at sufficient flows on E. 59th Street throughout the construction period. Therefore, NYCDEP anticipates that potential shaft construction impacts to traffic at the preferred site would be manageable and not a disadvantage. The potential impacts of the anticipated infrequent disturbances to E. 59th Street will be described in the Draft EIS.

The DSOW and FSOW outline the methodology that would be employed for the detailed traffic analysis that will be conducted as part of the Draft EIS. If potential significant adverse impacts were identified at the preferred site, traffic analysis at the alternative sites would be conducted at the same level of detail as the preferred site.

Construction of the water mains is, however, anticipated to result in lane closures. This was identified as a disadvantage of the preferred site and the alternative sites located at E. 59th Street and Second Avenue and E. 61st Street between First and Second Avenue in the DSOW because of the amount of construction required to connect the shaft to the primary connection point on Third Avenue.

Presently NYCDEP is not aware of the plan referred to above, however, public policy and plans applicable to the traffic study area will be researched as part of the Draft EIS and the proposed Shaft 33B's consistency with these plans will be assessed.

Comment 12: The advantages of putting the shaft site on E. 54th Street include that of all the feasible sites, this site is the closest to the primary water main connection point, and would therefore require the least amount of water main construction in the future. This is the southernmost alternative site and therefore requires the least tunnel excavation. The geology of the site is favorable for shaft construction because there is a very shallow depth to bedrock. That site is located completely within City property, and limited utilities within the street bed would need to be relocated for shaft construction at this site. The site at E. 59th Street and First Avenue is dangerous and significantly and unnecessarily will extend the construction project for several years. (M. O'Brien, L. Howard, B. Shefsky, C. Sachs)

Response: The possible shaft sites at E. 54th Street and Second Avenue and at E. 59th Street and First Avenue along with the other two feasible locations will continue to be comparatively evaluated throughout the EIS process. The Draft EIS will analyze and discuss the environmental and engineering issues of the four feasible sites. The characteristics listed above for the E. 54th Street and Second Avenue site are considered the advantages of that site and are presented in the DSOW and FSOW.

With regard to the comparative length of construction, it is anticipated that the schedule of construction activities at the Shaft Site at E. 59th Street and First Avenue would take less time than at the E. 54th Street and Second Avenue site because normal blasting procedures could be used at E. 59th Street and First Avenue. Due to the shallow bedrock conditions at the E. 54th Street and Second Avenue site, and the close proximity of sensitive receptors, it is anticipated that construction techniques there would be somewhat different than at the other sites and thus duration of construction at the E. 54th Street and Second Avenue site would be anticipated to be longer than at the other sites. It is correct, however, that the water main construction from the E. 59th Street and First Avenue location would take longer than the water main construction from the E. 54th Street and Second Avenue location. A conceptual construction schedule will be provided for each of the alternative sites in the Draft EIS.

NYCDEP consulted with the NYPD, FDNY and NYCDOT on various security and safety issues before selecting E. 59th Street and First Avenue as the preferred site for Shaft 33B.

Comment 13: The site is too close to the only entrance to the lower level of the Queensboro Bridge. (R. Trost) Anywhere on Second Avenue is really not a viable alternative, given the 59th Street Bridge and the traffic. (M. Bondy)

Response: As mentioned in response to Comment 11, the entire Study Area for the construction of Shaft 33B is characterized by dense urban development with relatively heavy traffic conditions and thus potential traffic disruption is an issue for this project at each alternative site. As described in the Purpose and Need section of the DSOW, a shaft must be located in this area in order to meet the water supply needs of the Middle Intermediate Pressure Zone (MIPZ) and all nineteen of the original possible shaft locations are in the northern portion of the MIPZ in this vicinity. The screening process and selection of feasible sites was presented in the DSOW to disclose the balancing of engineering requirements and environmental concerns that had to be considered to determine the preferred location of the proposed Shaft 33B. All of the four feasible sites have advantages and disadvantages. Based on the available information, it has been determined that at the preferred site at E. 59th Street and First Avenue, the advantages are generally more attractive than those of the other feasible sites and that the disadvantages are more manageable. To be more fully informed about the potential environmental

consequences, NYCDEP will conduct a detailed analysis of potential traffic impacts, as outlined in the DSOW and FSOW and which will be presented in the Draft EIS. Where potential significant adverse traffic impacts are identified, mitigation measures will be presented to alleviate potential impacts to the greatest extent practical as required by CEQR.

E. 59th Street is the entrance to the lower level outer roadway of the Queensboro Bridge only; it does not provide access to the main roadway of the lower level. The traffic analysis presented in the Draft EIS will assess if potential traffic impacts are anticipated in the vicinity of the Queensboro Bridge.

Comment 14: Our suggestions that other sites appear to be superior are based solely on our review of the April 8th draft EIS. In reviewing the DEP's view of the advantages and disadvantages of the four feasible sites (we do not comment on the not feasible sites or other potential feasible sites that have not been identified) certain factors are noteworthy:

- 54th and Second "is closest to the primary connection point, and would therefore require the least amount of water main construction in the future" Draft EIS dated April 8, 2005 EIS, p. 6;

- 54th and Second "requires the least tunnel excavation" and the geology of the site is favorable for shaft construction. EIS, p. 7;

- 54th and Second is on City property and limited utilities have to be moved. (Contrast the disadvantages of the preferred site with respect to the location of the utilities). EIS, p. 6;

- 61st Street between First and Second Avenues (61st Street) has all the advantages of the preferred site but, in addition, has no traffic congestion problems (the site is currently a vacant lot) and has less noise issues (no high rises in the immediate vicinity).;

- 61st Street has no apparent disadvantages different than the preferred site except that the property is not owned by the City. Apparently the DEP gave great weight to the fact that the Archdiocese "has not been receptive to NYCDEP's acquisition". EIS, p. 8.

In a telephone conversation with the DEP staff, 30 Sutton was advised that it would take 6 to 9 months to acquire the property through condemnation, a fact which 30 Sutton disputes. (R. Ritchie, R. Weaver, G. Smiley, R. Esposito, A. Yeung, H.Vernejoul, J. Scalice, L. Kim, L. Newbill, R. Heisler, M. Lim, A. Manning; R. McFarland, L. Howard, C. Sachs, B. Shevsky)

Response: First, the April 8th DSOW document is <u>not</u> the Draft EIS. The Draft EIS is not

expected to be ready for release until Fall 2005. The remaining four Shaft 33B candidate locations, including the ones at E. 54th Street and Second Avenue and at E. 61st Street between First and Second Avenues are considered to be feasible. The location at E. 59th Street and First Avenue is currently the preferred site of the four feasible alternatives, because the present level of analysis has revealed substantially more favorable than unfavorable conditions there. These sites will now be evaluated in the Draft EIS at a level of detail that will provide enough information to allow a comparison to the preferred site.

All four of the feasible locations for Shaft 33B will continue to be evaluated. It must be emphasized that the advantages and disadvantages of these sites are not equal. NYCDEP's goal in selecting the final preferred shaft location is to minimize potential impacts while maximizing efficiency during construction and designing the shaft to operate at optimal capacity.

Any private property purchase, such as the alternative site at E. 61st Street between First and Second Avenues, typically requires a relatively long-term negotiation period to close the acquisition. This can materially affect the construction schedule and thus, this characteristic of this site is considered a disadvantage. Furthermore, the acquisition of a property could require condemnation proceedings which are often very lengthy and acrimonious. It is NYCDEP preference, to the extent possible, to avoid condemnation of private property.

Comment 15: 30 Sutton requests that the DEP meet with representatives of 30 Sutton and walk the feasible sites (and any others that may be generated) during a period of rush hour traffic. (R. Ritchie, R. Weaver, G. Smiley, R. Esposito, A. Yeung, H.Vernejoul, J. Scalice, L. Kim, L. Newbill, R. Heisler, M. Lim, A. Manning, G. Miller; R. McFarland)

Response: The site locations and water main connections routes of all feasible alternatives are provided in the DSOW and will be described in detail in the Draft EIS. An in-depth traffic analysis will be conducted as part of the preparation of the Draft EIS that will involve traffic counts at peak rush hours. NYCDEP did honor the commentors' request for a meeting; on June 29th at the Sutton Place Synagogue on 225 East 51st Street, CB6 hosted a special public meeting where NYCDEP appeared to answer the local community's questions about Shaft 33B.

Comment 16: Since E. 54th Street and Second Avenue is one of the sites being considered as a potential location for Shaft 33B, although CB6 would prefer that it was not, the EIS should include an analysis of each site with the following parameters:

- Heights of buildings adjacent to and within 400 feet of the construction site(s).

- Number of residents living in buildings adjacent to and within 400 feet of construction site(s).

- Number of residents living on block(s) of construction site(s).

- Special uses, such as schools, theaters, recreation and meeting spaces on block(s) of construction site(s).

- Are any single-lane width segments (cattle-chutes) included during construction (i.e. where a stopped or stalled vehicle would deny access to the entire block)?

- Minimum width provided for fire vehicle with outriggers. Can another vehicle, emergency or otherwise, pass fire vehicles with outriggers fully extended?

- Are "narrow canyons" being created (i.e., alleyways between buildings and construction walls) which make pedestrians vulnerable?

- How will residents and businesses be accessed during construction via these buildings (such as people in wheelchairs)? What safety measures will be provided in the complicated construction site for the visually impaired?

- Nighttime shadow analysis (i.e., are there pockets of darkness that can conceal unsavory individuals?).

- Will DEP provide 24-hour security at its sites throughout the construction period?

- Length of curbside adjacent to buildings where emergency vehicles cannot pull up to the curb (include heights of buildings and number of residents & workers in those buildings).

- What types of explosives will be used during construction, schedule of blasting activities, storage and handling procedures for explosives, health and safety plan for workers and residents in proximity to site, emergency procedures for site and evacuation plan for residential building in proximity to blasting area.

- Traffic safety issues, such as: Are barricades in a moving lane of traffic? Will construction walls impair pedestrian visibility? Can trucks negotiate the turns around construction walls adequately?

- Evaluation reports from Fire Department, NYPD (esp. Emergency Service Unit) and utilities.

- Does wall proximate to buildings create flood hazards to basements? Similarly, will walls create flooding and icing conditions for pedestrians?

- How, will snow be removed from narrow canyons?

- Are there health risks from garbage piling up in narrow canyons?

- How will utility emergencies be handled in narrowed canyon? How will Con Ed respond to a gas leak?

In addition, a study should be made of each of the proposed sites to determine what impacts to fire protection and EMT services the proposed action would cause, as follows:

- Response time needed to set up overcoming the obstacles that a construction site would pose.

- Could the proposed site accommodate fire equipment such as a ladder truck to rescue people from burning buildings?

- Could the proposed site accommodate the full use of a ladder safely in accordance with New York City Fire Department's "Ladder Company Operation: Use Of Aerial Ladders" firefighting procedures volume 3 Book 2 dated March 15, 1997?

- A comparison should be made of all proposed sites in order to determine which site would pose the least safely risks to the residents near the construction site.

DEP should not confine its analysis to simply the construction of the shaft itself. It should do a full impact analysis on the community of the following:

- What would be the impacts of preparatory construction (i.e. test pits, shifting of utilities, tree removals, removals of appurtenances such as hydrants, manholes, signs, street lights, traffic signals etc.)?

- What would be the post-construction impacts of the shaft, installation of chamber room and all equipment, connections to city water main system, house attachments, and water interruptions?

- What will the post construction maintenance program be? What appurtenances, such as manhole and vent shafts, will be left on street or sidewalk and where? (CB6)

Response: The various issues raised above in Comment 16 will be taken into consideration, as part of the EIS effort as prescribed by CEQR. Issues which are beyond the scope of the environmental review will be brought to the attention of the appropriate entities.

The primary subject and purpose of the Draft EIS is to identify and disclose the potential for significant adverse impacts from the proposed action. When significant adverse impacts are predicted to occur, the Department will identify reasonable and feasible mitigation measures and compare the potential for impacts at the alternative sites. For example, as required under CEQR, detailed assessments for the feasible alternatives will be provided for those impact categories where the preferred alternative would have the potential to cause a significant adverse impact. All data used for the assessment of impacts will be presented in the Draft EIS.

The impact assessments will be conducted according to established CEQR guidelines for each impact category as presented in the *CEQR Technical Manual* and described in the DSOW and FSOW. All phases of construction, including site preparation, will be assessed in the Draft EIS. In addition, permanent facilities remaining on-site, and operational impacts of the Proposed Action will be assessed to the level of detail required to determine the potential for significant adverse impacts. Among the issues identified in Comment 16, the concerns related to fire protection will be addressed through discussions between NYCDEP and the FDNY at the preferred site. NYCDEP will work closely with the NYPD and FDNY regarding public safety issues.

Comment 17: On behalf of over 20 buildings containing over 2,500 units, we request that the Department not reissue its Scoping Document until its Traffic Study is completed and that the revised Scoping Document not select any preferred site. We also are at a loss why, after almost one month, the Department has not produced ANY document referred to in our FOIL request. (J. Trost)

Response: Please see the response to Comment 8. The NYCDEP identified the E. 59th Street and First Avenue Site as the preferred site because it has several advantages over the alternative sites. NYCDEP believes that there are engineering and design related advantages for constructing the shaft at this location. The DSOW and FSOW for the Draft EIS are not the appropriate context in which to present the results of the detailed technical analyses that will be conducted during preparation of the Draft EIS. Comparative analyses for the preferred site and the alternate sites and will be presented in the Draft EIS for each technical area in which the preferred site is considered to have potential significant adverse impacts. A final decision regarding the location

of Shaft 33B will be made in the Final EIS.

Pursuant to the Freedom of Information Law (FOIL), the Department is required to respond to all FOIL requests.

LAND USE, ZONING, AND PUBLIC POLICY COMMENTS

Comment 18: The Scope of Work should acknowledge the 197(a) plan for Manhattan Community Board Eight, which is about to be submitted to the Department of City Planning and assess the project's consistency with the plan. (CB8, J. Lappin, E. Moskowitz)

Response: Manhattan Community Board Eight's (CB8) 197(a) Plan is in draft form and has not been approved at this time. However, the Draft EIS will address the consistency of the Shaft 33B construction and operation with the information available in the draft 197(a) Plan.

Comment 19: We ask that the agency agree to mitigation requests. (G. Miller, J. Schneider, J. Bing, CB8, J. Lappin).

Response: The Draft EIS will assess, in detail, the potential environmental consequences associated with the proposed action at the preferred site. The Department is committed to identifying reasonable and feasible mitigation measures that would alleviate or avoid significant impacts where practicable and feasible as required under CEQR.

Comment 20: The community and local organizations request that after completion of the project that NYCDEP keep within the "Honey Locusts Park" extension area, all remaining equipment, such as the two hatchways, the 12' air vent, and the two hydrants. (B. Schneider, J. Schneider, G. Miller, CB8, J. Lappin)

Response: NYCDEP will consider this request during the design process. Because the preferred site is under NYCDOT jurisdiction, during the final design process, NYCDEP must also coordinate with NYCDOT to determine an acceptable location for the two access hatchways, the 10-foot high by 14-inch diameter air vent and the two air release hydrants. A reasonable worst-case location will be used for evaluation in the Draft EIS if the locations of these features have not been determined at the time of its release.

SOCIOECONOMIC CONDITIONS COMMENTS

Comment 21: Why is the fact that the private property has to be acquired given any weight in site selection? **(**J. Trost) The cost to acquire land on E. 61st Street from the church is too great. (M. Bondy)

Response: Both of these comments relate to the consideration of cost during site

selection. Costs are always evaluated and considered during the planning of the City's capital projects. In addition to the cost of private property purchase, relatively long-term negotiations to close an acquisition are not atypical and this can materially affect the construction schedule. As previously discussed, the acquisition of a property could require condemnation proceedings which are often very lengthy. NYCDEP considers City ownership of a property to be an advantage of a particular site.

Comment 22: How will the prices of apartments be affected by the construction and operation of the shaft and water mains? The project would compromise the property values of homes and businesses located in the vicinity of the site. (Residents of 300 E. 54th St., R. Friedman, J. Krevat) The selection of E. 59th Street and First Avenue as the preferred site would severely interfere with the finances of our business operation and other local establishments, affecting insurance premiums, public access, vendor delivery access, and maintenance costs. Blasting, traffic and noise impacts would create major problems and could affect our ability to serve our clients. Commercial establishments on First Avenue will lose business and patrons. Reduced business could increase the potential for job losses. (E. Plat, D. DiPaolo, H. Vernejoul, E. Kaniewski, L. Ferguson, M. Lim, L. Newbill, J. Scalice, A. Yeung, R. Esposito)

Response: Although no permanent changes to the underlying socio-economic character of the Study Area would be anticipated to occur as a result of the siting and operation of the proposed action, in response to these comments, the Draft EIS will consider the potential for the construction at the preferred site to impact the socio-economic character of the surrounding area. This assessment would consist of reviewing the potential implications that the construction period could have on surrounding local businesses and residences by considering potential traffic, noise and air quality changes that may occur as a result of the Shaft 33B construction at the preferred site. This impact assessment will be conducted to the level of detail appropriate for the project, according to the guidance in the *CEQR Technical Manual*. This review task has been included in the FSOW.

NEIGHBORHOOD CHARACTER COMMENTS

Comment 23: The construction at that site will have a direct impact on the quiet enjoyment of an otherwise remarkable neighborhood. (R. Ritchie, R. Weaver, G. Smiley, R. Esposito, A. Yeung, H.Vernejoul, J. Scalice, L. Kim, L. Newbill, R. Heisler, M. Lim, A. Manning, R. McFarland) The extended schedule for the project's construction, which will apparently occur over several years, will be out of character with the neighborhood. Construction noise and disrupted traffic patterns can be expected, possibly resulting in permanent detrimental changes to the neighborhood. (E. Kaniewski, H. Kandall, H. Raider, K. Dwyer) A six-year construction duration is an extended period of time for construction and will have a very serious impact on the quality of life in this neighborhood. (G.

Miller, J. Trost, H. Vernejoul, H. Serafini, J. Krevat, E. Moskowitz, A. Jaramillo, M. Galvan)

Response: The construction of Shaft 33B itself at E. 59th Street and First Avenue would total approximately 52 months, or four years and four months. Construction of the associated water main connections would take approximately 41 months, but because the construction of the water mains would overlap with the shaft construction period, the total project construction duration would be approximately five years. The DSOW was incorrect by stating that the total estimated project construction duration was six years. The FSOW has been revised accordingly.

NYCDEP acknowledges that construction activity could be intrusive and a potential nuisance to surrounding neighborhoods and NYCDEP will study the potential for significant adverse impacts to occur. As described in the DSOW and FSOW, the Draft EIS will provide a description of the neighborhood character in the study area as a basis for discussion of potential impacts. If potential significant noise or traffic impacts are identified, the Draft EIS will propose the implementation of reasonable and feasible mitigation measures to alleviate those impacts where practicable and feasible. Potential changes in neighborhood character that may reasonably be expected to occur as a result of the Proposed Action will be identified and described.

HISTORIC RESOURCES COMMENTS

Comment 24: The New York City Landmarks Preservation Commission (NYCLPC) is in receipt of the draft scope of work for the EIS dated 4/8/05. The text is acceptable for architectural resources with the addition of the following text: "Properties that appear eligible for NYCLPC designation and/or listing on the State/National Register will be identified, and the photographs provided. Locations of these properties will also be plotted onto a Sanborn map and the photographs keyed to the map". (G. Santucci)

Response: This comment is acknowledged and has been added to the FSOW and will be incorporated into the "Historic Resources" section of the Draft EIS.

Comment 25: For archaeological resources only: The NYCLPC notes that an archaeological documentary study will be prepared for the EIS which will consider whether or not the project is likely to impact potentially significant archaeological resources during construction of the shaft and any of the alternative areas. The NYCLPC concurs with this methodology. Please submit the report for review once it has been completed. (A. Sutphin)

Response: This comment is acknowledged and the report will be submitted to the NYCLPC when it is completed.

Comment 26: The NYCLPC is in receipt of radius diagrams for four alternatives sites. Comments are as follows. Within the radius of these sites: 312 and 314 E. 53 St. houses, NYCLPC and S/NR listed; 311 and 313 E. 58 St. houses; and the approach to the Queensboro Bridge, all NYCLPC designated and S/NR listed. (G. Santucci)

Response: This information is acknowledged and will be included in the analysis pertaining to the "Historic Resources" section of the Draft EIS.

INFRASTRUCTURE COMMENTS

Comment 27: Operational facilities for the entire Bridgemarket space is located below ground level and any interruption of power, telephone, cables, steam and water which may well result from the type of construction proposed, create serious concerns to the operation of our business. (E. Plat, D. DiPaolo)

Response: Standard utility relocation or avoidance procedures would be included in the overall construction planning for the project. Potential interruptions of utility service and procedures for managing this potential disruption during construction will be described in the Draft EIS.

NOISE AND AIR QUALITY COMMENTS

Comment 28: DEP must maximize noise attenuation measures. (L. Krueger).

Response: Potential noise impacts during construction will be analyzed in detail in the preparation of the Draft EIS as described in the DSOW and FSOW. In the event that potential significant adverse noise impacts are identified, practicable mitigation would be identified and implemented as is feasible.

The shaft and distribution chamber are located entirely underground and would not generate noise during operation.

Comment 29: The community is concerned about 24-hour construction of your raised bore machinery, noise and vibrations even though there will be noise attenuation. (J. Schneider)

Response: During shaft construction, it is anticipated that there would be a single period of approximately three months where overnight construction activities would be required. These activities would occur during the use of the raise bore machine and would require two or three workers on-site to operate it. The motor that drives the raise bore machine would be positioned at the top of the exposed bedrock surface (approximately 23 feet below the surface of the site). This motor turns very slowly and does not generate significant noise. The potential noise impacts produced by this motor during the three-month overnight construction work will be assessed in detail in the Draft EIS. Raise

bore construction must occur on a 24 hour basis because engineering needs dictate the continuous operation of the raise bore to ensure its momentum through the rock.

Comment 30: How will impacts related to construction noise, dust and debris be addressed? Advance notice of blasting must be given to affected residents and businesses. (B. Schneider)

Response: The Draft EIS will address the potential impacts of construction noise, fugitive dust and debris removal in detail. If potential significant adverse impacts were identified, mitigation measures would be evaluated to minimize and/or control these impacts. Standard construction practices to control fugitive dust, remove debris and attenuate noise levels would be required of the construction contractor and these will be explained in the Draft EIS. In addition, blasting protocols that would be required in the NYCDEP tunneling permit, including public safety and notification requirements, will be disclosed in the Draft EIS.

Comment 31: Noise and air pollution, as a result of the construction, is a major concern for us. (L. Ferguson, M. Witt, H. Kandall, E. Platt, D. DiPaolo) Some of our major concerns include noise pollution outside and inside the premises (we have 33,000 sq. ft. underground facility adjacent to the site) and its affect on our customers. (E. Plat, D. DiPaolo)

Response: The operation of the proposed project would not be expected to result in significant permanent noise or air quality impacts. The shaft, distribution chamber and water mains would all be located underground and would not generate either noise or air emissions. There would be no air emissions from the above ground air vent associated with shaft.

Potential air quality and noise impacts from construction equipment including hauling and delivery trucks will be analyzed in detail in the Draft EIS.

Comment 32: The community is concerned about potential air quality issues (M. Witt). How and how often will the community be advised of the results of the monitoring? (J. Schneider)

Response: Potential air quality impacts during construction will be evaluated in the Draft EIS. As described in the DSOW and FSOW, the air quality analysis will consider emissions from fuel-burning construction equipment and motor vehicles on-site as well as fugitive dust from on-site activities and their potential to impact sensitive receptors identified around the shaft location. The air quality analysis uses data from existing New York State Department of Environmental Conservation (NYSDEC) monitoring stations in New York City. According to standard U.S. Environmental Protection Agency and NYSDEC approved methodology, the data from these stations is sufficient to provide the background data needed for the air impact analysis. Therefore,

additional monitors would not be necessary for the impact assessment. In the event that potential significant adverse air quality impacts were identified in the Draft EIS, feasible mitigation measures would be explored and then implemented during construction to alleviate or avoid potential air quality impacts to the maximum extent practicable.

There would be no air emissions from the aboveground vent associated with the shaft once it is completed.

OPEN SPACE COMMENTS

Comment 33: The community will be deprived of a south-facing plaza for six years. (B. Schneider, A. Hagenguth, P. McHugh, M. Bondy) DEP should commit to appropriate mitigation measures to compensate for the community's temporary loss of park space and commit to the restoration of Honey Locusts Park. (L. Krueger, J. Bing, J. Lappin, S. Barry, R. Keller, G. Keller, L. Silberman, W. Pfaeffle, H. Mannix, J. Resnick, G.. Bren, B. Schneider, J. Schneider, A. Hagenguth, P. McHugh, M. Bondy, C. Caver, P. Dickinson, CB8, G. Miller, E. Moskowitz)

Response: As per the preliminary design and construction plans for the preferred site, during shaft construction, only a 1,800 square-foot portion of the plaza referred to above (which encompasses approximately 13, 000 square feet) would be used by NYCDEP as a staging area for approximately 23-months. With NYCDOT's concurrence, restoration of the area would occur directly after this period. Access to and use of the remaining 11,200 square feet would continue to be available for the entire construction period provided that the NYCDOT does not need to utilize the area for their on-going Queensboro Bridge maintenance projects. The potential impacts on the portion of the area that would be used for staging as well as impacts to the users of the area that will remain publicly accessible during the construction period will be evaluated in detail in the Draft EIS.

The preferred site is under the jurisdiction of NYCDOT; NYCDEP will coordinate with the NYCDOT and the New York City Department of Parks and Recreation (NYCDPR) to identify appropriate enhancements for the property in response to the community's request.

TRAFFIC AND PARKING COMMENTS

Comment 34: The community is requesting that construction workers not park illegally around the bridge area or on the preferred site. (J. Schneider)

Response: Workers involved in the construction of the project would not be permitted to park their vehicles illegally.

Comment 35: How will existing and construction traffic conditions, including water main construction on First Avenue be assessed? (J. Schneider)

Response: A detailed assessment of construction-related traffic impacts will be conducted and presented in the Draft EIS in accordance with the detailed methodology described in the DSOW and FSOW. Existing traffic conditions will be evaluated. The detailed impact analysis of potential traffic effects will assess the different phases of construction. Construction traffic and any required changes in traffic patterns will be analyzed to determine the effects on traffic conditions. The analyses would be conducted for the weekday morning, midday and PM peak hours for the Study Area.

In the event that potential significant adverse traffic impacts were identified, appropriate mitigation measures would be evaluated to minimize impacts to the extent practicable as required under CEQR.

Comment 36: Will traffic control agents be provided or required in your final contract for the entire time that you will be at the site? Will they be discussed in the Draft EIS? How will the provision of traffic control agents be enforced at the site? (J. Schneider) Will flagmen be provided during the construction period in order to direct construction truck traffic? (B. Schneider) How can enforcement agents be required to do anything to prevent traffic and congestion impacts? (P. McHugh)

Response: The construction contractor will be required to provide traffic management measures and staffing as they relate to construction at the Shaft Site. Traffic management of construction truck movements related to the site ingress and egress would be required in the construction contract specifications. Traffic control agents are considered to be a benefit and an effective means of calming traffic congestion. If potential significant adverse traffic impacts are identified, the Draft EIS will evaluate a range of mitigation measures that could be implemented to alleviate the significant potential traffic impacts. Examples of typical mitigation measures for potential significant traffic impacts include lane re-striping, the use of traffic control agents, improved signage, and modified signal timing. Practicable and feasible mitigation measures identified in the Draft EIS and will be included in the Shaft 33B contract specifications.

Further, all construction that occurs on City streets requires the approval of the NYCDOT Office of Construction Mitigation and Coordination (OCMC). During the water main design process, New York City Department of Design and Construction (NYCDDC) coordinate with OCMC to develop appropriate traffic stipulations for the specific location of construction. These measures are then included within the contract specifications for the project.

Comment 37: The proposal claims "no lane closures" for First Avenue at E. 59th Street. We believe construction activities will spill into the street. Where will

construction and other necessary vehicles and equipment go? (P. McHugh, B. Schneider)

Response: The preliminary site plan and size of the preferred site is sufficient to accommodate materials storage and equipment staging while maintaining the traffic lanes on E. 59th Street. However, construction activities would intrude in to the street on certain occasions. For example, there would be a relatively brief lane closure on First Avenue at the eastern edge of the site. This would occur when the western lane on First Avenue would be closed between E. 59th Street and E. 60th Street for new water main construction leaving the site, and would last for approximately one month. In addition, permanent water, sewer and electric connections would be made to existing infrastructure in either E. 59th Street or First Avenue. This would require closure of one traffic lane for approximately two days on either street. Similar disturbances to adjacent streets for these types of activities are anticipated at the alternatives sites as well. NYCDEP would endeavor to maintain traffic at sufficient flows on E. 59th Street throughout the construction period. Mitigation measures would be implemented if potential significant traffic impacts are predicted in the Draft EIS.

Comment 38: We're concerned about the traffic congestion caused by truck queuing and general traffic congestion in the Queensboro Bridge area. With all the construction, traffic, and pedestrian activity in the vicinity of the Queensboro Bridge what kind of impacts will truck queuing create? What kind of mitigation will be provided for this? Where will the trucks queue? (J. Trost, P. McHugh, B. Schneider)

Response: No queuing of Shaft 33B related construction trucks will be permitted near the site. The detailed traffic impact assessment in the Draft EIS will address potential impacts related to construction activities including additional truck traffic to and from the site. Project-generated construction trips will be evaluated in the morning, midday and afternoon timeframes. The impact on volume to capacity ratios and levels-of-service will be evaluated and possible problem intersections will be identified. In the event that potential significant adverse traffic impacts were identified, appropriate mitigation measures would be evaluated to minimize impacts to the extent practicable as required under CEQR.

Comment 39: The area around the preferred site is crowded, confusing, and dangerous for drivers and pedestrians. Operation of the shaft and water mains will create more traffic and pedestrian impacts. How will the DEP address and mitigate traffic and pedestrian impacts in the area during operation of the shaft and water mains? (P. McHugh, C. Caver, H. Raider, H. Kandall)

Response: During normal shaft and water main operations no traffic or pedestrian impacts are anticipated. The shaft is unmanned but would be visited by NYCDEP operations and maintenance staff an average of once per week. The

operations and maintenance procedures associated with the water mains are diminus as the mains are not accessed on a regular basis. The operational condition for the shaft and water mains will be assessed in the Draft EIS.

Comment 40: The signage around the Queensboro Bridge is confusing and difficult for drivers, what can be done to address this matter? (C. Caver)

Response: Improved signage is one possible mitigation measure to alleviate potential significant adverse traffic impacts and will be evaluated in the Draft EIS if necessary.

Comment 41: When are you going to take the traffic counts? (P. McHugh)

Response: Traffic counts and related data such as turning movements and vehicle classifications have been completed. The FSOW has been updated to include the list of the intersections in the vicinity of the preferred and alternative sites and the water main route where traffic data was collected. Traffic counts were collected during morning, midday and evening peak hours during the months of November 2004 and April 2005. The data collection effort conducted to support the EIS traffic analyses was extensive and included the areas around all of the feasible sites to be analyzed.

Comment 42: The NYCDEP should include a morning and evening rush hour traffic comparison of E. 59th Street and First Avenue and E. 61st Street between First and Second Avenues. (G. Miller)

Response: For each impact category where the proposed project results in a potentially significant adverse impact, the alternative sites will be evaluated at the same level of detail as the evaluation of the preferred alternative in order to determine if an alternative to the proposed project exists that would not result in such potential impacts.

Comment 43: The Department will require the construction of a cofferdam to hold back soil and to support its construction because the earth at the preferred site is greater than 22 feet deep. What will be the traffic implications of the cofferdam on the eastbound lane on E. 59th Street? (M. O'Brien)

Response: Excavation support in the form of a cofferdam or other structures would be entirely accommodated within the boundary of the shaft construction site as per the preliminary construction plan described in the DSOW and FSOW.

Comment 44: Should the NYCDDC decide to run to the west of E. 59th Street it would completely disturb what is already a difficult traffic situation at E. 59th and Second Avenue for at least 12 to 18 months. (M. O'Brien) Provisions must be made to ensure safe and efficient driving conditions if a lane is to be closed on E. 59th Street, west of First Avenue due to construction. (B. Schneider)

Response: The same analysis methodology would be employed to assess potential

impacts from any potential street closures associated with the proposed project and practicable and feasible mitigation measures appropriate for each specific location would be developed and implemented if the analyses indicated a potential significant adverse impact could occur. This assessment will include issues such as pedestrian safety and potential vehicular delay. Every effort would be made to maintain traffic at sufficient flows on E. 59th Street (and any other street potentially disturbed by construction) throughout the construction period. At this time, knowledge of the conceptual construction procedures that would be implemented at the preferred site indicates that while certain construction activities may disrupt traffic flow on E. 59th Street on isolated occasions, these events would occur on a relatively infrequent basis and would be for a limited duration.

There are currently no plans to utilize E. 59th Street west of the preferred site for water main construction. As described in the FSOW, the methodology employed to assess the traffic impacts of the construction of the water mains assumes a reasonable worst-case water main connection route. The route selected for this assessment would travel out of the Shaft Site at E. 59th Street and First Avenue and go south down First Avenue and across E. 55th and E. 56th Streets to Third Avenue. In addition, the Draft EIS will review an alternate water main route that would go east out of the Shaft Site on E. 59th Street to Sutton Place then south via Sutton Place to E. 55th and E. 56th Streets where the water mains would turn west and cross to Third Avenue (Please see FSOW Figure 17). The conceptual routes will be representative of the construction routes for water main connections from the alternative shaft sites to be studied in the Draft EIS as well.

The reasonable worst-case assessment methodology was developed in order to avoid studying every conceivable water main route. The environmental consequences associated with the use of these routes and the proposed water main construction activity that would occur along them would be considered representative of potential environmental consequences that could result along other potential water main routes (e.g., traffic and noise along other possible water main connection routes in the Study Area would be similar).

Comment 45: Six years of construction generated traffic problems is simply unimaginable. The traffic impacts will be extensive. (J. Trost; P. McHugh, M. Witt, H. Raider, H. Kandall, C. Hunter, H. Serafini, A. Jaramillo, M. Galvan)

Response: Construction at the Shaft 33B at E. 59th Street and First Avenue is anticipated to last for approximately 52-months. The construction of water main connections is anticipated to have a duration of approximately 41 months. Because the construction of the water mains would overlap with the shaft construction period in order to meet the Department's goal for activation of City Tunnel No. 3, Stage 2 Manhattan Leg in 2012, the total project construction duration would be approximately five years. As part of the detailed traffic impact analysis that will be presented in the Draft EIS, the

effects on traffic volumes, volume to capacity ratios and levels-of-service will be evaluated during peak hour periods.

Comment 46: Will buses be relocated from their de facto layover site on E. 59th Street and First Avenue, north of E. 59th Street, during construction and after? (B. Schneider)

Response: If access to the construction site would be obstructed by the presence of these buses, it is anticipated that the flagmen or traffic control agents employed by the contractor would address the issue.

Comment 47: As vehicles travel north on First Avenue and face delays at the construction site, it is likely that E. 58th Street would be used as a thoroughfare for those turning east to access the FDR Drive. This would present an increase in traffic and pose a significant danger to the numerous children and older residents living on that block. (G. Smiley, A. Manning) Exasperating the horrendous traffic congestion will create safety hazards as well. (K. Dwyer, A. Jaramillo, M. Galvan)

Response: The Draft EIS will analyze traffic flow conditions during the weekday peak hours. Where traffic volumes exceed capacity during construction, mitigation measures will be evaluated in conjunction with NYCDOT. To the degree that feasible mitigation measures do not fully accommodate traffic flow, estimates of diverted flows will be made, the likely routes identified, and the effect of any temporary diversion assessed in the Draft EIS.

As part of the traffic analysis, NYCDOT accident data will be reviewed to identify high-accident locations and the extent to which vehicular and pedestrian exposure to accidents may be reasonable expected to increase as a result of the proposed action will be qualitatively assessed.

Comment 48: The intersection of E. 59th Street and First Avenue is an extremely busy and congested intersection. If Shaft 33B is constructed on the preferred site it will impede traffic entering the Queensboro Bridge on the lower level and will result in monumental traffic congestion. (H. Raider, H. Kandall, K. Dwyer) The project will result in even more massive traffic congestion extending on E. 59th Street west to Second Avenue, east to York/Sutton Place, south to E. 57th Street, and north to 63rd Street, with egress and ingress of the Bridge and FDR severely affected (R. Ritchie, R. Weaver, G. Smiley, R. Esposito, A. Yeung, H.Vernejoul, J. Scalice, L. Kim, L. Newbill, R. Heisler, M. Lim, A. Manning, G. Miller; R. McFarland, L. Howard, C. Sachs, B. Shefsky, H. Serafini). Due to the nature of vehicular traffic, which depends intrinsically on certain combinations of speed and flow, stoppages can have effects far beyond the immediate area. (P. McHugh, written comments, K. Dwyer) Access for deliveries to and from our business is a major concern (D. DiPaolo) Stopping traffic on the bridge for 30 minutes during blasting will cause traffic mayhem. (M. Witt, B. Shefsky, K. Dwyer).

Response: A detailed assessment of construction-related traffic impacts will be conducted and presented in the Draft EIS. Existing traffic conditions will be evaluated. Construction traffic and any potential changes in traffic patterns will be analyzed to determine the effects on traffic conditions. Changes in public transportation routes, pedestrian traffic, and the available parking areas surrounding the shaft site and the water main connections route will be evaluated. The detailed traffic study will be presented in the Draft EIS prior to a final decision being made on the location of Shaft 33B. The data collection effort conducted to support the Draft EIS traffic analyses was extensive and provides detailed information on existing traffic conditions on which to base an assessment of the potential impacts of the proposed project. The Draft EIS traffic analyses will be responsive to the range of concerns provided during the DSOW public comment period that are within the scope of CEQR. In the event that potential significant adverse traffic impacts were identified, appropriate mitigation measures would be evaluated to minimize impacts to the extent practicable as required under CEQR regulations.

The proposed project would not be expected to result in significant permanent traffic or transportation impacts during operation. The Shaft Site would operate unmanned and there would be no permanent change to traffic or parking.

Regarding blasting, street or Bridge closures of 30 minutes are not anticipated to occur based on preliminary discussions with FDNY. FDNY and NYCDOT would determine the need for traffic stoppages during blasting. The Draft EIS will describe blasting procedures in detail.

Comment 49: It seems inevitable that traffic tie-ups resulting from the Shaft 33B project would slow down the access of emergency vehicles headed north on First Avenue to New York Hospital and other medical facilities in the area. (G. Smiley, A. Manning)

Response: The detailed traffic analysis will indicate the extent to which levels of service for all vehicles, including emergency vehicles, are substantially impacted during construction of the shaft and water main connections. In the event significant adverse traffic impacts are identified, reasonable and practicable mitigation measures would be identified to address those impacts.

TRANSIT AND PEDESTRIAN

Comment 50: DEP must coordinate with the MTA to ensure that water main construction does not adversely affect or unnecessarily delay any pilot of Bus Rapid Transit on First Avenue and Second Avenue. (L. Krueger, G. Miller, J. Schneider, CB8, J. Lappin) Community Board 8M requests NYCDEP work with the MTA so as not to delay the implementation of the proposed Bus Transit project. (CB8, J. Lappin, E. Moskowitz)

Response: The Draft EIS will evaluate the consistency of the project with proposed public programs, such as the MTA Bus Rapid Transit (BRT) Pilot Program to the extent practicable. The MTA's bus rapid transit study is being conducted in two separate phases and is currently underway. The duration of the first phase of the bus rapid transit study commenced in September 2004 and is anticipated to be completed in Autumn 2005. The first phase comprises the identification of corridors in the five boroughs that have BRT potential and the screening and evaluation of candidate corridors. The second phase is expected to occur from 2006 through the end of 2007 and would consist of the preparation and development of detailed plans for the five highest priority corridors.

Comment 51: What will be the impact of the proposed construction on pedestrian patterns? (J. Schneider) Foot traffic will be bottlenecked. (L. Kim)

Response: The proposed project would not permanently change pedestrian movement patterns. As described in the DSOW, potential impacts to pedestrian traffic during the construction period will be analyzed in detail in the Draft EIS. Pedestrian counts have been collected on sidewalk areas adjacent to the Shaft Site and potential impacts to pedestrian movements will be assessed. Similarly, pedestrian counts have been collected along the water main connections route in places that support substantial pedestrian activity such as sidewalks near subway stations, schools or hospitals that could be affected by construction. A detailed pedestrian impact assessment related to the construction will be included in the Draft EIS.

Comment 52: We fear that there will be a tremendous amount of truck traffic to facilitate the removal of dirt from the project site. In turn, this will create pedestrian hazards. (L. Kim)

Response: The majority of excavated material at the Shaft Site would be removed through the underground tunnel and from a shaft on the west side of Manhattan. Some excavated soil would be removed from the Shaft 33B Site and would be trucked from the site. The truck traffic associated with the construction would be a maximum of five trucks in the peak hour. The proposed project would not permanently change pedestrian movement patterns. As described in the DSOW, potential impacts to pedestrian traffic during the construction period will be analyzed in detail in the Draft EIS.

Pedestrian counts will be taken on sidewalk areas adjacent to the shaft site and potential impacts to pedestrian movements will be assessed.

VIBRATION/ BLASTING COMMENTS

Comment 53: The impact of vibrations from drilling and blasting is also a major concern – our restaurant structure is built beneath the 59th Street Bridge and consists of fragile, large glass windows and original bridge ceiling tiles and columns – both which may be affected by any large vibrations caused by drilling. (L. Ferguson, E. Plat, D. DiPaolo) Additional information (location of drilling area, possibility of blasting, and additional new construction) regarding the proposed site directly adjacent to the Bridge is required in order to complete the review. (G. Santucci) How will blasting be regulated during the construction period? (M. O'Brien) Some of our major concerns include health and safety issues of our employees due to the intended blasting and underground construction proposed for this project. (E. Plat, D. DiPaolo)

Response: Blasting is strictly regulated by a NYCDEP Tunnel Construction Permit and by the FDNY. Blasting would be expected to occur for roughly eight months and would not occur at the ground surface, but would begin at a depth of approximately 23 feet. The Draft EIS will describe blasting procedures and will assess potential impacts from vibration. Blast charge levels would be regulated to prevent adverse effects on nearby structures.

The NYCDEP requires that the impacts of all construction activities be limited by specific vibration restrictions. NYCDEP specifies a vibration limit which is ten times more restrictive than the standard set by the U.S. Bureau of Mines to prevent structural damage. Potential impacts from vibration will be qualitatively analyzed in the Draft EIS. Any structures adjacent to the site that would be considered at risk from vibration impacts will be identified and appropriate protective measures evaluated. There are no potential vibration impacts associated with activation or operation of the shaft or water mains.

Blasting would begin using minimal charges and would be increased incrementally to ensure protection of the adjacent structures and meet the contractual NYCDEP vibration limitations. Based on blasting procedures that have been required at other shaft sites within Manhattan, it is expected that there would be two or three blasts per day. There would be advanced communication and warnings to the surrounding community and all appropriate safety precautions would be required to be taken by the construction contractor.

ENVIRONMENTAL ASSESSMENT STATEMENT COMMENTS

Comment 54: Question 3 of the EAS, Present Land Use: Although 14 Honey Locusts Park is

not mapped parkland, it has been used as such for many years and the question arises should you be going to Albany to seek alienation legislation. (J. Schneider)

Response: It is not anticipated that alienation legislation would be required. The subject area commonly referred to as 14 Honey Locusts Park, is not mapped parkland and has never been dedicated as either a State or City park. Moreover, according to the official property records of the City, the area is currently under the jurisdiction of the NYCDOT. The fact that some documents make reference to this area as Honey Locusts "Park" does not alter the status of the property and does not convert the area into parkland. Moreover, there has been no implied dedication of the area as a park. While the area may have been used from time to time as open space, that use does not, in and of itself give rise to its designation as parkland. Rather, the use of the area as open space was and is incidental to its primary use for bridge maintenance and rehabilitation activities by the NYCDOT and is essential to NYCDOT's ongoing bridge maintenance program. The NYCDPR does not have direct jurisdiction over the Honey Locust area and except for some trees, the area has not been improved with any park-like attributes i.e., there are no benches, fountains, recreational equipment etc. Since this area has not been expressly or impliedly dedicated as a City or State park, no alienation legislation is required.

Comment 55: Question 6 of the EAS, Current Users: This response just mentions the Queensboro Bridge engineers' office and does not mention parkland/residents of the community. That is the use for that space. (J. Schneider)

Response: NYCDEP does recognize that the multi-use area is used as an open space resource by residents of the community in addition to the other municipal uses that it supports; this was an unintentional omission from the EAS.

Comment 56: Question 21 of the EAS: Land uses within a quarter of a mile do not include mapped parkland such as Tramway Park or 24 Sycamores Park, and they are within a quarter of a mile. (J. Schneider)

Response: Comment noted. The open space analysis will include discussions of these parks as may be applicable.

Comment 57: Question 18 of the EAS, Water Mains: This section speaks of an alternate route for the water mains running down Sutton Place, yet the rest of the document talks about a 400-foot radius around the site in the area of the water mains construction as shown on your Figure 18, which clearly would rule out any consideration of Sutton Place, which you list as an alternate possibility on Page 18. (J. Schneider)

Response: The Draft EIS will review an alternate water main connections route that would go east to Sutton Place then south via Sutton Place to E. 55th and E. 56th

Streets and then west to Third Avenue. This alternative water main connections route is being evaluated for comparison to the First Avenue route because it provides an alternative for comparison that is considered to result in less potentially significant traffic impacts, although NYCDEP is fully aware that this may result in greater noise impacts. The Sutton Place route is included for comparison purposes and is not favored by NYCDEP.

Comment 58: The DSOW document said there would be ten workers at the site. Tonight and at the Community Board meeting you've talked about 15 workers at the site. So the question is how many workers will there really be at the site? (J. Schneider)

Response: The exact number of workers at the site in different phases of construction and implementation will vary depending on the nature of the work required and the methods employed. In the Draft EIS, the estimated number of workers on-site at different stages will be more clearly defined. However, it is anticipated that the reasonable worst-case number of workers on site during construction would be a maximum of 20. This correction will be reflected in the FSOW and Draft EIS.

ENERGY COMMENTS

Comment 59: Will Con Edison's high voltage oil-o-static line that runs east to west on E. 59th Street be affected or relocated due to construction of the shaft or the water main connections? Con Edison estimates that it would take greater than one year to move these lines. This would create the danger of a loss of power. (M. O'Brien, M. Witt, B. Shefsky, H. Serafini, A. Jaramillo, M. Galvan)

Response: It is not anticipated that Con Edison's oil-o-static lines would be relocated or affected due to construction at the preferred site. Every precaution would be taken in order to ensure the safety, stability, and uninterrupted service of the oil-o-static lines. The Draft EIS will include an assessment of potential impacts to utilities and other infrastructure during construction of the shaft.

Because the water main construction would not occur for several years and because the site for Shaft 33B has not yet been selected, it is not possible at this time to initiate a design of the water main construction that would be necessary to provide NYCDEP with very specific and detailed information with respect to potential utility relocation. However, NYCDEP has performed preliminary investigations into the existing subsurface utilities along the water main route and the Draft EIS will describe the potential for and nature of the potential utility relocation that may occur as a result of the water main construction. The water main construction leaving the preferred site would have to cross Con Edison's oil-o-static lines and as described in the DSOW, this requires more complex construction procedures to install the mains. However, this crossing would not require the relocation of the lines.

PUBLIC SAFETY COMMENTS

Comment 60: How will emergency, terrorist, or hazardous situations be managed at the preferred site? The area around First Avenue and E. 59th Street could become a target for terrorist activity. (M. O'Brien, L. Howard, B. Shefsky, C. Sachs, H. Serafini, A. Jaramillo, M. Galvan) The Department of Homeland Security already monitors the Bridge, and there is little doubt that a construction site would add an extra burden to already stretched resources. (G. Smiley, A. Manning)

Response: NYCDEP has coordinated with the NYPD and will consider coordination with other public agencies regarding potential vulnerability and security risks. The NYCDEP has its own dedicated police force that would monitor construction at this site.

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