

**ADDENDUM
TO THE PHASE IA HISTORIC RESOURCES ASSESSMENT
OF THE PROPOSED CITY TUNNEL NUMBER 3, STAGE 2
MANHATTAN LEG, SHAFT 33B PROJECT AREA,
BOROUGH OF MANHATTAN, NEW YORK CITY, NEW YORK**

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TABLE OF CONTENTS

	Page
MANAGEMENT SUMMARY	i
1.0 INTRODUCTION	1
1.1 Area of Potential Effect for the Reasonable Worst Case Water Main Connection Scenario for the City Tunnel Number 3, Shaft 33 Project	3
1.2 Previously Conducted Archaeological Investigations Within the Water Main Route Vicinity	4
1.3 Methodology	4
2.0 DOCUMENTARY RESEARCH AND ASSESSMENT OF ARCHAEOLOGICAL SENSITIVITY	5
2.1 Native American Period Context	5
2.1.1 Native American Period Archaeological Sites	5
2.2 Historic Period Context.....	6
2.2.1 Occupational History of the Water Main Route	6
3.0 HISTORIC PERIOD ARCHITECTURAL RESOURCES – REASONABLE WORST CASE WATER MAIN CONNECTION SCENARIO	8
3.1 New York State / National Registers of Historic Places and New York City Landmark Structures	8
3.2 Properties Considered Eligible for Listing on the New York State / National Registers of Historic Places	8
4.0 ARCHAEOLOGICAL SENSITIVITY OF THE REASONABLE WORST CASE WATER MAIN CONNECTION SCENARIO	11
4.1 Native American Period Sensitivity of the Water Main Route.....	11
4.2. Historic Period Sensitivity of the Water Main Route	12
4.3 Assessment of Impacts to Historic Period Architectural Resources.....	13
5.0 CONCLUSIONS AND RECOMMENDATIONS	14
5.1 Archaeological Resources	14
5.2 Historic Period Architectural Resources.....	14
6.0 REFERENCES CITED	15

FIGURES:

- Figure 1 – Proposed Water Main Route – Project Area Region
- Figure 2 – Location of the Water Main Route
- Figure 3 – First Avenue Portion of the Water Main Route - View is to the North
- Figure 4 – E. 56th Street Portion of the Water Main Route – View is to the East
- Figure 5 – E. 55th Street Portion of the Water Main Route – View is to the East
- Figure 6 – Third Avenue and E. 55th Street; View is to the Northwest Along Third Avenue
- Figure 7 – Third Avenue and E. 55th Street; View is to the South Along Third Avenue
- Figure 8 – Portion of the New York City Landmarks Preservation Commission Prehistoric Sites Sensitivity Map that Includes the Water Main Route
- Figure 9 - 1851 Dripps Map
- Figure 10 – 1836 Colton Map
- Figure 11 – 1866 United States Coast Survey Map

TABLE:

- Table 1 – Historic Period Architectural Resources Within the 400-Foot Study Area for The Reasonable Worst Case Water Main Connection Scenario

APPENDIX:

- Appendix A: Location of Project Area Photographs Included as Figures 3 – 7 of this Report

MANAGEMENT SUMMARY

The portion of the reasonable worst case water main connection scenario extending along First Avenue between E. 59th and E. 55th Streets and along E. 55th and E. 56th Streets between First and Second Avenues, is within the general area identified as containing traces of Native American occupation in the archaeological site files of the New York State Museum (NYSM Site Number 4061). In addition, the portions of the water main route extending along Third Avenue and along 55th Street between Second and Third Avenues are within an area identified as sensitive for prehistoric sites by the 1980 New York City Landmarks Preservation Commission (NYCLPC) sensitivity model.

Although the portion of the water main route east of Second Avenue is within the general area of NYSM archaeological Site Number 4061, research undertaken for this investigation suggests that the pre-development topography of this section of the water main route did not possess characteristics (i.e., high ground in proximity to a fresh water course or overlooking small coves and inlets along the East River) indicative of a high potential for Native American occupation and use. Accordingly, the section of the water main route east of Second Avenue is not considered to be sensitive for the presence of Native American and/or prehistoric archaeological sites.

Even if Native American sites formerly were located within the discussed portion of the reasonable worst case water main connection scenario, local roadway construction and utility installation likely has disturbed the area to such an extent that intact Native American sites are unlikely to be present.

The portion of the water main route that extends between Second and Third Avenues extends across the former site of a hill. The fresh water stream that emptied into the East River at Turtle Bay formerly flowed just southwest of the hill. Although the general location of the former landform is west of the general area of sensitivity identified by NYSM Site Number 4061, its southern portion, which includes the Third Avenue and 55th Street west of Second Avenue sections of the water main connections route, falls within an area identified as sensitive by the 1980 NYCLPC prehistoric sites sensitivity model. Accordingly, prior to development, the portion of the reasonable worst case water main route at Third Avenue and along 55th Street west of Second Avenue likely would have possessed topographic characteristics that would have made the location attractive to Native Americans. The portion of the water main route extending along E. 56th Street west of Second Avenue crosses a section of the former hill that was further removed from the stream. Accordingly, this section of the water main route has limited prehistoric archaeological sensitivity.

Even if Native American sites were present on the hill formerly situated west of Second Avenue across which the reasonable worst case water main connection scenario may pass, nineteenth and twentieth century construction and utility installation likely destroyed or extensively disturbed them.

Accordingly, no portion of the Area of Potential Effect (APE) for the reasonable worst case water main connection scenario is considered sensitive for the presence of Native American sites.

By the mid-nineteenth century, two dwellings, and their former yards, were located at the northeast corner of what is now First Avenue and E. 57th Street and in the middle of First Avenue, midway between E. 56th and E. 55th Streets within the vicinity of the APE for the reasonable worst case water main connection scenario. Although construction of First Avenue and the subsequent installation of utilities in this area would have affected any archaeological resources present, it is possible that the lower or truncated portions of wells, cisterns, and privies associated with the mid-nineteenth century occupations may remain within the project's APE.

The base of pillars associated with the elevated train ("El") that was constructed along Second and Third Avenues by 1880, however, may be present within the portions of the APE along those roadways and may have historic value.

Archaeological monitoring of the water main trench excavations should be undertaken for the portion of the water main route that extends along First Avenue between E. 55th and E. 57th Streets. Any domestic-type of archaeological feature encountered should be investigated following consultation with NYCLPC.

In addition, any supporting pillars associated with the El (ca. 1880) that are identified along the Second and Third Avenue portions of the water main route should be appropriately recorded.

Seven (7) Historic period architectural resources are located within the 400-foot Study Area established for the reasonable worst case water main connection scenario (see Table 1). These include the Queensboro Bridge, the only structure in the Study Area listed on the New York State and National Registers of Historic Places and six (6) properties that are considered eligible for listing on the Registers. The eligible properties are: 225 – 227 E. 53rd Street; 229 – 235 E. 53rd Street; and 237 and 241 East 53rd Street.

Adverse impacts related to the identified Historic period architecture resources located within the 400-foot Study Area reasonable worst case water main scenario are not anticipated to occur. Therefore, further evaluations of them or the development of plans to avoid such impacts are not warranted as part of the proposed project.

1.0 INTRODUCTION¹

This report presents the results of a Phase IA Archaeological Assessment of the reasonable worst case water main connection route for the proposed City Tunnel Number 3, Stage 2 Manhattan Leg, Shaft 33B project, located in the Borough of Manhattan, New York City, New York (Figures 1 and 2). The reasonable worst case water main connection route extends south along the east side of First Avenue from the preferred Shaft 33B Site at E. 59th Street and First Avenue to E. 55th Street. Cross-town connections extend from First to Third Avenues along E. 55th and E. 56th Streets with the water main route extending along the south side of E. 55th Street and the north side of E. 56th Street. At Third Avenue, the water main route extends southward from 56th Street and northward from 55th Street for about a half block, joining an existing water main trunk line (Figures 2 - 7).

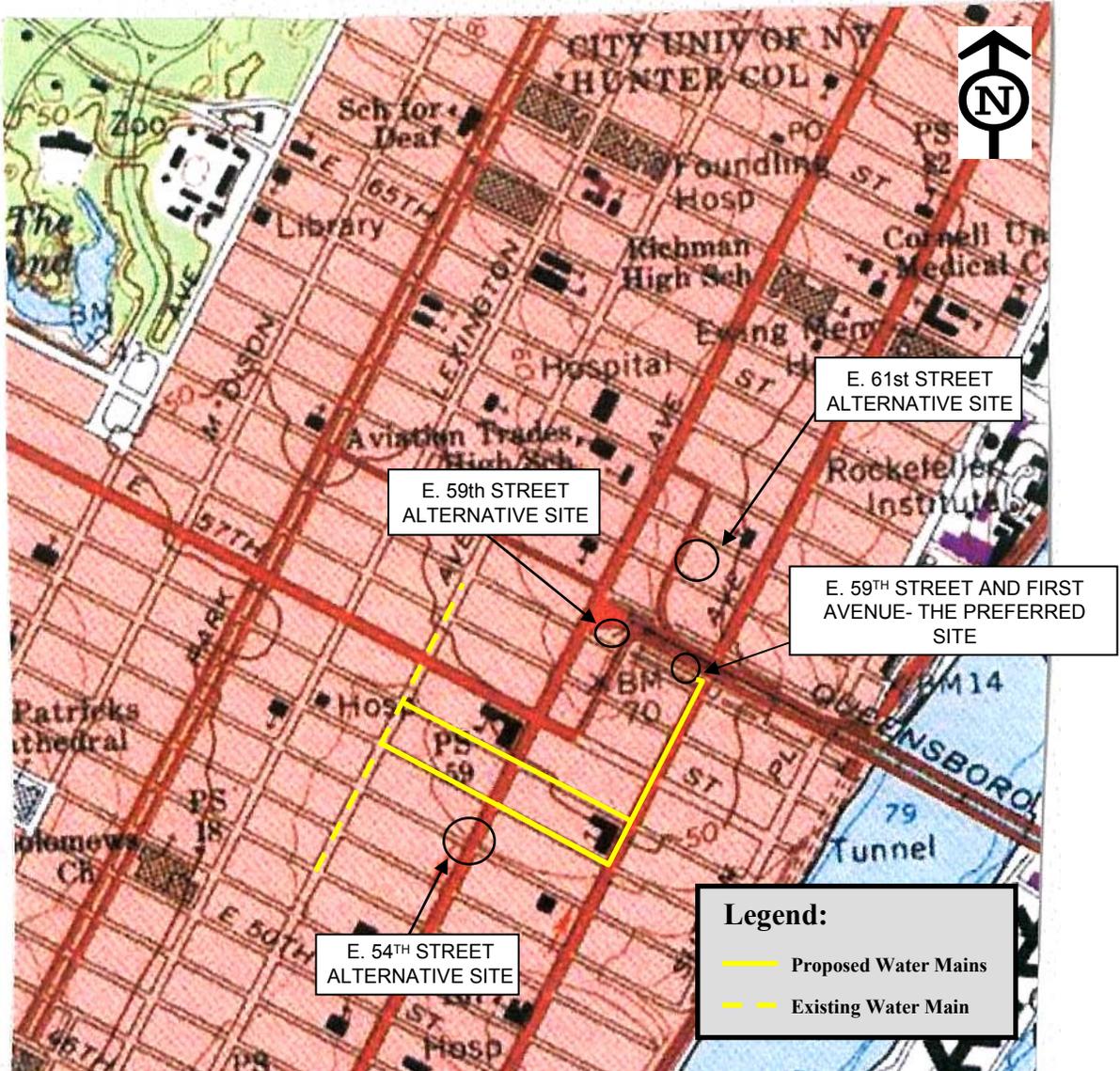
A previously conducted Phase IA Historic Resources Assessment (Malcolm Pirnie, Inc. 2005) evaluated the preferred Shaft 33B Site and three alternative shaft sites. The reasonable worst case water main connection route was added to the proposed project subsequent to completion of that study and accordingly, was not archaeologically evaluated as part of that work. The current report will serve as an addendum to the 2005 preferred Shaft 33B Site investigation.

The Phase IA Assessment was undertaken and this report prepared for the New York City Department of Environmental Protection (NYCDEP). The objectives of the study are to assess the likelihood that possibly significant archaeological resources are present along the water main route and its immediate vicinity and to recommend any necessary further investigations. Archaeological resources are the physical remains, usually buried, of past human activities and may include remains associated with Native American and Historic period activities. In addition to evaluating for the presence of archaeological sites, this Phase IA Assessment identified existing Historic period architectural resources currently recognized within a 400-foot radius of the reasonable worst case water main route.

Archaeological sites and Historic period architectural properties are classified in the New York City *CEQR Technical Manual* as historic resources. The *CEQR Technical Manual* identifies historic resources as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. This includes designated New York City Landmarks; properties calendared for consideration as landmarks by NYCLPC; properties listed on the New York State and National Registers of Historic Places or contained within a district listed on or formally determined eligible for listing on the Registers; properties determined to be eligible for listing on the Registers by the New York State Office of Parks, Recreation and Historic Preservation (NYS OPRHP); National Historic Landmarks; and properties not included in these categories but which nonetheless meet eligibility requirements for listing on the New York State and National Register Registers listing.

According to the *CEQR Technical Manual* guidelines, impacts related to historic resources must be considered on those parcels potentially affected by the proposed installation of the

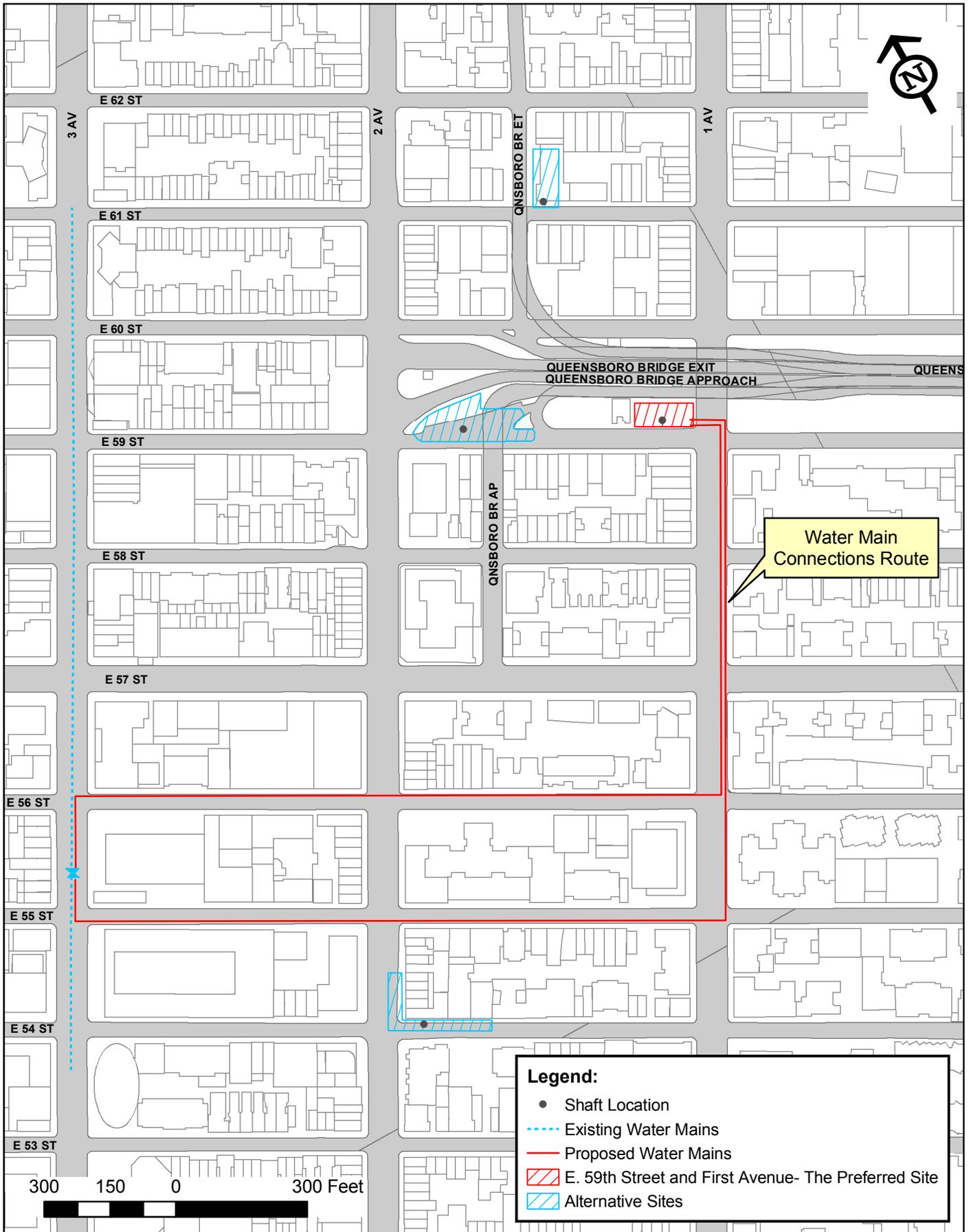
¹ Final water main route connections will be determined by the New York City Department Design and Construction and as such, this addendum provides an assessment of the potential routes and the associated archaeological and architectural resources.



NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
PROPOSED WATER MAIN ROUTE- PROJECT AREA REGION
BASE MAP SOURCE: UNITED STATES GEOLOGICAL SURVEY 1966
SCALE OF ORIGINAL: 1:24,000
CONTOUR INTERVAL: 10 FEET

SEPTEMBER 2005

FIGURE 1



Map Document: (S:\Projects\2175158\GIS_Figures\Shaft_33B\GIS_Field_Work\Watermain_Connections (Archaeological)\Addendum.mxd)
9/29/2005 - 3:56:29 PM



**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
LOCATION OF THE WATER MAIN ROUTE
SOURCE: MALCOLM PIRNIE, INC. 2005**

JUNE 2005

FIGURE 2



**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
FIRST AVENUE PORTION OF THE WATER MAIN ROUTE-
VIEW IS TO THE NORTH**

SEPTEMBER 2005

FIGURE 3



NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
E. 56TH STREET PORTION OF THE WATER MAIN ROUTE-
VIEW IS TO THE EAST

SEPTEMBER 2005

FIGURE 4





**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
E. 55TH STREET PORTION OF THE WATER MAIN ROUTE-
VIEW IS TO THE EAST**

SEPTEMBER 2005

FIGURE 5



NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
THIRD AVENUE AND E. 55TH STREET;
VIEW IS TO THE NORTHWEST ALONG THIRD AVENUE

SEPTEMBER 2005

FIGURE 6



**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
THIRD AVENUE AND E. 55TH STREET;
VIEW IS TO THE SOUTH ALONG THIRD AVENUE**

SEPTEMBER 2005

FIGURE 7

water mains. For archaeological resources, this study evaluates the reasonable worst case water main connection route and immediately surrounding locations where the proposed project could require ground disturbance for the possible presence of Native American and Historic period sites. For Historic period architectural resources, this study identifies all existing previously recognized historic structures present within the 400-foot Study Area for the reasonable worst case water main route. This distance is considered adequate by NYCLPC for the assessment of Historic period architectural resources in terms of physical, visual, and historical relationships.

The Phase IA assessment was undertaken as part of the environmental review for construction of Shaft 33B pursuant to New York City's Environmental Quality Review (CEQR) process and the New York State Environmental Quality Review Act (SEQRA; Section 8-0113, Article 8 of the Environmental Conservation Law). The assessment complies with Section 106 of the National Historic Preservation Act, the New York State Historic Preservation Act, SEQRA and CEQR. All work conducted for the Phase IA investigation was performed according to the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation, Federal Register, Volume 48, Number 190 and the guidelines and standards for cultural resource investigations currently adopted by the NYS OPRHP (2005; New York State Archaeological Council 1994, 2000) and the NYCLPC.

Section 106 of the National Preservation Act of 1966 and the New York State Historic Preservation Act of 1980 require federal and state agencies to assess the impacts on cultural resources that meet the eligibility criteria for inclusion on the New York State and National Registers of Historic Places of certain projects. Properties listed on or determined to be eligible for inclusion on the New York State and National Registers of Historic Places can include archaeological sites as well as historic period architectural resources. According to the criteria of eligibility for listing of properties on the National Register of Historic Places (United States Department of the Interior 1985:5-6):

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.

In order for a property to be designated a New York City Landmark under the current law it must be at least 30 years old and must possess a special character or special historical or aesthetic interest or value as part of the development, heritage, or cultural characteristics of the city, state, or nation. Four types of landmarks are recognized:

- Individual Landmarks - these consist of individual structures and range from rowhouses to bathhouses to mansions to skyscrapers to bridges;
- Interior Landmarks - these are building interiors that are customarily open or accessible to the public;
- Scenic Landmarks - these are city-owned parks or other landscape features; and,
- Historic Districts - these are areas of New York City that possess architectural and historical significance and a distinct sense of place.

1.1 Area of Potential Effect for the Reasonable Worst Case Water Main Connection Route for the City Tunnel Number 3, Shaft 33B Project

The reasonable worst case water main connection route extends southward along the east side of First Avenue from the preferred Shaft 33B Site at E. 59th Street and First Avenue to E. 55th Street. The water main route extends west from First to Third Avenues along E. 55th and E. 56th Streets passing along the south side of E. 55th Street and the north side of E. 56th Street. At Third Avenue, the water main route extends south from 56th Street and north from 55th Street for about a half block, joining an existing water main trunk line (Figure 2 - 7).

The width of the disrupted area depends on the size and number of water mains to be placed in the street. The minimum trench width required for placement of two (2) 48-inch water mains in the street would be 14 feet. This includes four feet of width for each main, plus two-foot-wide work spaces on either side of the two mains. A physical barrier, such as a portable “Jersey” barrier, with an approximately 2.5-foot-wide base, would be required next to the trench for safety purposes. During off-peak hours, an additional eight feet would likely be required to accommodate construction vehicles (e.g., unloading/loading of material on trucks). For construction of a single water main on an avenue or cross street, the minimum trench width required would be eight feet (four feet for the main and two feet of work space on either side of the main). A physical barrier, such as a portable “Jersey” barrier, with an approximately 2.5-foot-wide base, would be required next to the trench for safety purposes. During off-peak hours, eight feet would be utilized.

For archaeological resources, the area of potential effect (APE) for the reasonable worst case water main connection route includes locations along the water main route directly and indirectly impacted, or potentially impacted, by the construction. Areas directly affected are those where construction activities will disturb the ground to such an extent that any significant historic resources present would be destroyed or disturbed to the extent that the

resource would lose integrity to the degree that it would no longer be eligible for inclusion on the New York State and National Registers of Historic Places. Such construction related activities as excavations, grading, filling, placement of geotechnical borings, the installation of utilities, or paving, among others, would constitute direct impacts. Indirect impacts to a location also may destroy or disturb historic resources and could include construction equipment staging and storage areas or increased or improved access to a site. Project staging and storage areas for the reasonable worst case water main connection route would be located within ten feet of the water main installation trench along E. 55th and E. 56th Streets and First and Third Avenues. However, since the streets are paved and public access to the proposed work area would be controlled, it is unlikely that such indirect impacts to archaeological resources will occur as a result of the implementation of the project.

The APE for Historic period architectural resources consists of a 400-foot radius (i.e., Study Area) around the water main route. This distance is considered adequate by NYCLPC for the assessment of Historic period architectural resources in terms of physical, visual, and historical relationships.

1.2 Previously Conducted Archaeological Investigations Within the Water Main Route Vicinity

The Phase IA archaeological assessment (Historical Perspectives, Inc. 2003) of the proposed Second Avenue Subway route includes the sections of Second Avenue across which the water main's cross-town connections (E. 55th and E. 56th Streets) would extend. Those locations were not considered by the Historical Perspectives, Inc. report to be sensitive for Native American or Historic Period archaeological resources.

Other archaeological investigations were not identified by the research conducted for this assessment as having been previously undertaken within the Study Area for the reasonable worst case water main connection route.

1.3 Methodology

The methodology employed to conduct the archaeological assessment of the reasonable worst case water main connection route and the identification of the Historic period architectural resources within its 400-foot Study Area was similar to that undertaken for the Phase IA investigation of the preferred Shaft 33B Site and alternative shaft sites (see Malcolm Pirnie, Inc. 2005:5-6).

2.0 DOCUMENTARY RESEARCH AND ASSESSMENT OF ARCHAEOLOGICAL SENSITIVITY

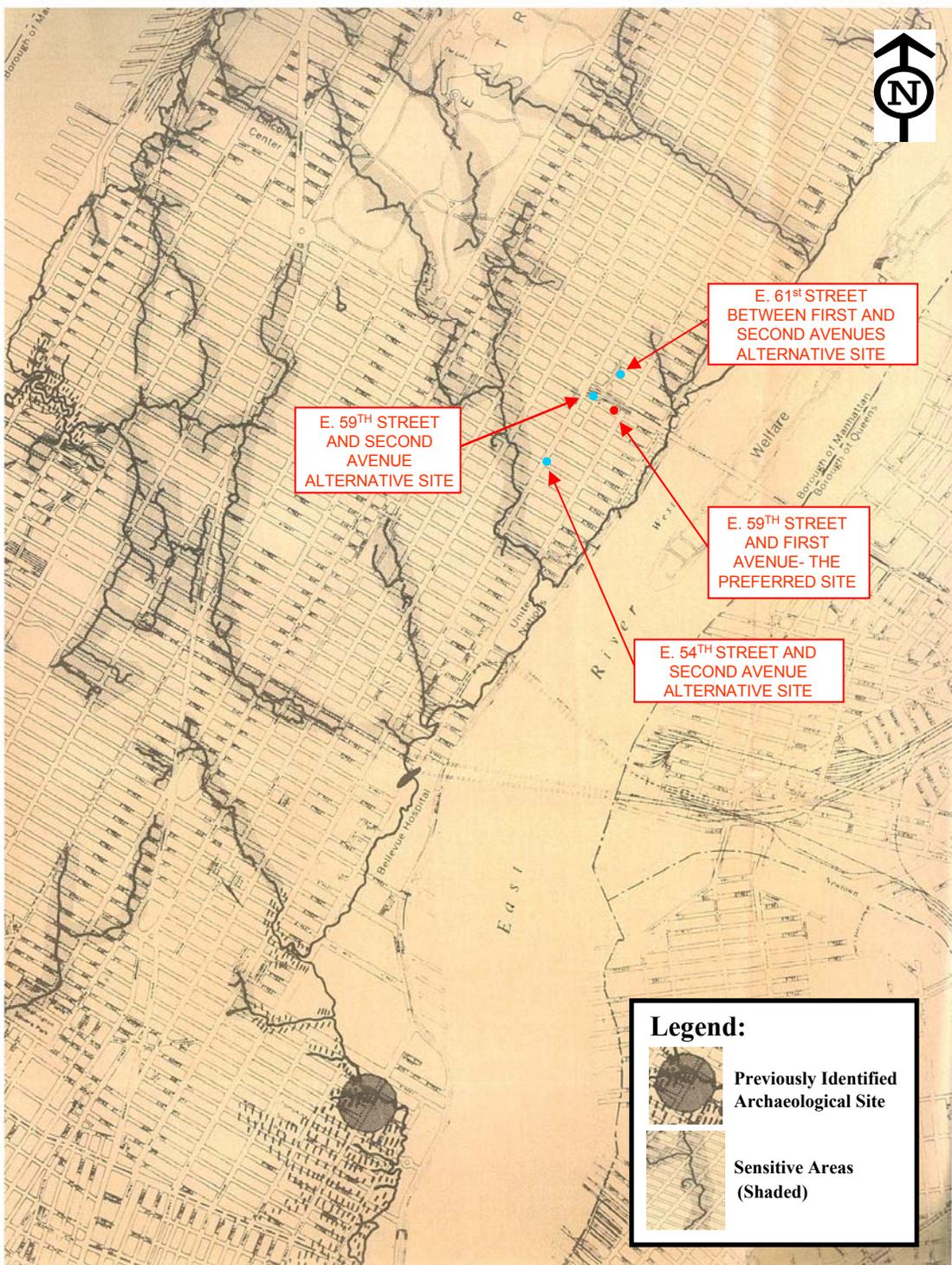
2.1 Native American Period Context

The discussion of environmental setting and Native American culture history and adaptations presented in the previously completed *Phase IA Historic Resources Assessment of the Proposed City Tunnel Number 3, Stage 2 Manhattan Leg, Shaft 33B Project Area* (Malcolm Pirnie, Inc. 2005:7-22) also is applicable for understanding the prehistoric and Euro-American Contact Period archaeological context of the reasonable worst case water main connection route.

2.1.1 Native American Period Archaeological Sites

One Native American archaeological site was previously identified within the water main route portion of the Study Area. The site, identified as site number 4061 in the archaeological site files of the NYSM, was described as consisting of “traces [Native American] of occupation” by the noted avocational archaeologist Arthur C. Parker in 1922. The NYSM archaeological site files currently are located at the New York State Historic Preservation Office (SHPO), part of the NYS OPRHP. Discussions with staff at SHPO and a review of that agency’s archaeological site files, which are a separate database than the NYSM files, did not indicate the presence of previously recorded archaeological sites along the water main route or within its Study Area. Likewise, discussion with staff at the NYCLPC, and a review of the archaeological site location information in the possession of that agency, did not indicate the presence of previously recorded archaeological sites along the water main route or within the Study Area. A map presenting the results of a prehistoric sites sensitivity model developed by NYCLPC in 1980 was identified at that agency and information recorded on it was included in this assessment (Figure 8). Additionally, staff at NYCLPC considers the archaeological sensitivity of the reasonable worst case water main connection route to be limited.

The NYSM’s files indicate the general area of sensitivity for the occupation identified by site number 4061 as extending between 45th and 70th Streets from the East River shoreline to Second Avenue, which includes the APE for the reasonable worst case water main connection route. NYSM files do not contain further information on the occupation, which may have dated to any of the Native American culture historic periods recognized for the New York City region (i.e., PaleoIndian, Archaic, Transitional, Woodland, and/or Euro-American Contact periods – see Malcolm Pirnie, Inc. 2005:10 - 21). Evidence of Native American activity in this area (45th to 70th Streets from the East River to Second Avenue) likely formerly consisted of a scatter of small camp sites located on raised ground in proximity to a fresh water source or along small coves or inlets of the East River. Unfortunately more precise and detailed information on the number, functional type, and locations of the occupations to which Parker refers is not included in the NYSM files nor is such information recorded in the literature he (Parker 1922) produced on the subject on which the NYSM’s information is based.



NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
PORTION OF THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION
PREHISTORIC SITES SENSITIVITY MAP THAT INCLUDES THE
WATER MAIN ROUTE
SOURCE: NEW YORK CITY LANDMARKS PRESERVATION COMMISSION 1980
SCALE OF ORIGINAL: 1:24,000

SEPTEMBER 2005
FIGURE 8

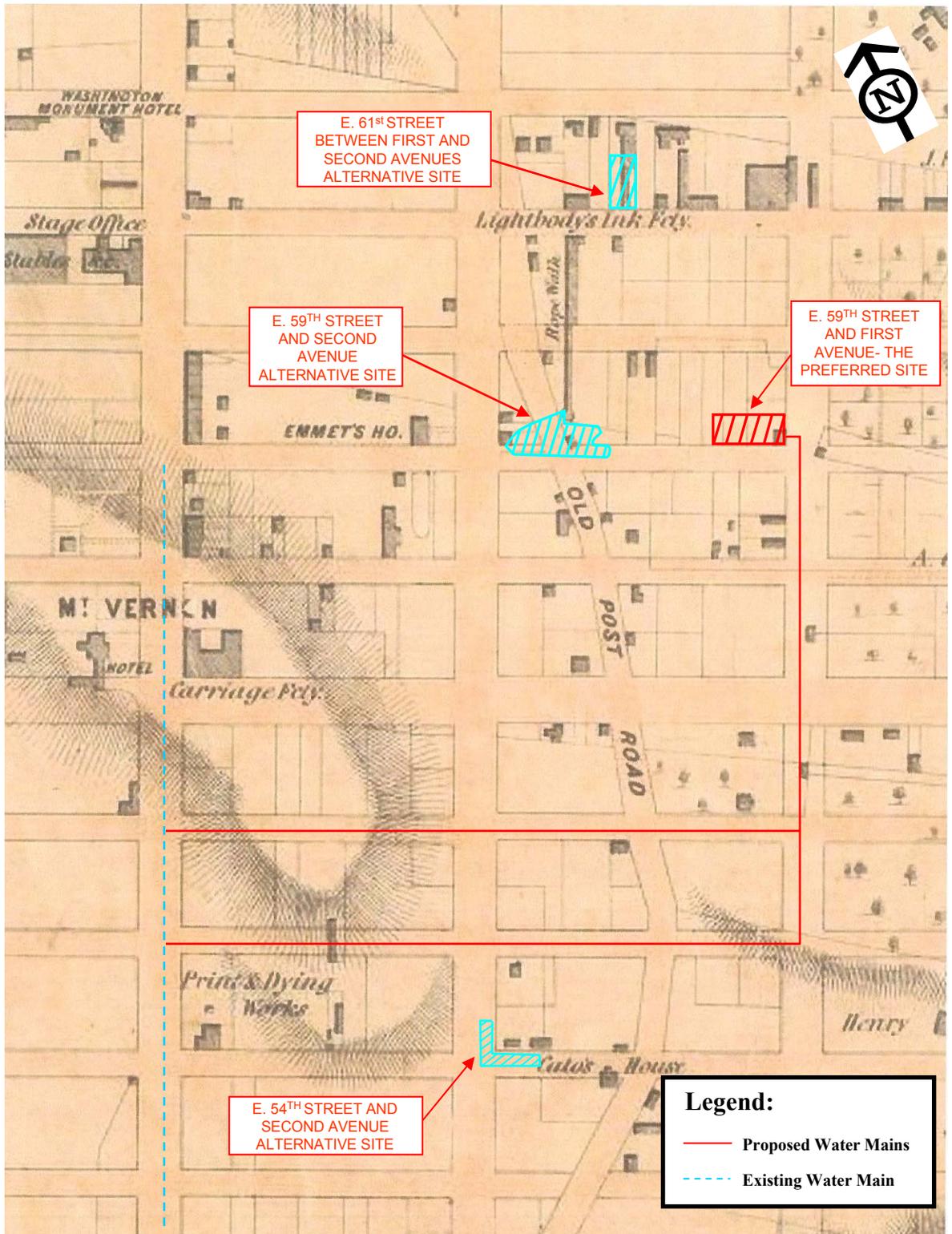
That the general area identified by Parker contained “traces of [Native American] occupation” is not surprising given the cartographic research undertaken for this investigation (see below), which indicated that two freshwater streams flowed through the area and were bordered by knolls, hills, and other areas of high ground. The larger of the two streams emptied into the East River in the vicinity of 49th Street at Turtle Bay, while the second joined the river between 61st and 62nd Streets. Areas of raised ground in proximity to these watercourses would have been attractive for Native Americans engaged in subsistence and other pursuits, serving as the locations of campsites. Archaeologists have traditionally considered such areas of high ground in proximity to water sources as sensitive for the presence of Native American sites. The prehistoric site sensitivity model developed by the NYCLPC in 1980 (Figure 8), mentioned previously in this section, identified the former routes of these two fresh water streams and their immediately adjoining areas as generally sensitive locations for Native American sites. However, the archaeological sensitivity of specific locations within the area identified by the NYSM as constituting site number 4061 (i.e., 45th to 70th Streets between the East River and Second Avenue), and within the locations identified by the NYCLPC model, is predicated on local current and former topographic conditions and the extent of sub-surface disturbance that has occur there as a result of nineteenth and twentieth century development.

2.2 Historic Period Context

The discussions of Euro-American history and the nature of archaeological sites dating to the Historic period presented in the previously completed *Phase IA Historic Resources Assessment of the Proposed City Tunnel Number 3, Stage 2 Manhattan Leg, Shaft 33B Project Area* (Malcolm Pirnie, Inc. 2005:7-22) also is applicable for understanding the Historic period context of the reasonable worst case water main connection route.

2.2.1 Occupational History of the Water Main Route

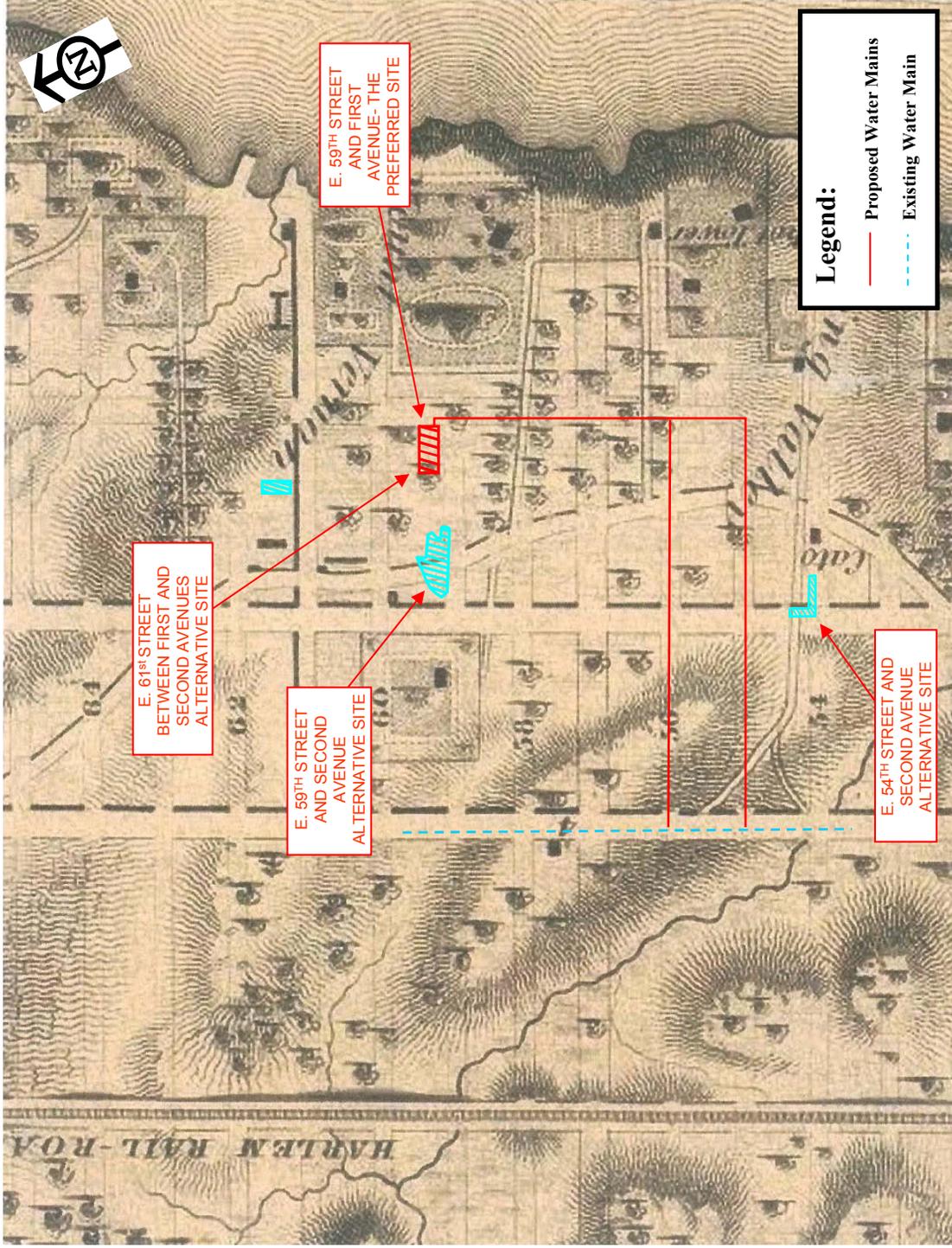
Two structures were located along the water main route as of 1851, according to the Dripps map of that year (Figure 9). These are the only Historic period buildings that were identified during the course of this study as situated within the APE for the reasonable worst case water main connection route. One of the structures is shown on the map as located at the northeastern corner of First Avenue and 57th Street while the second structure is located in the middle of First Avenue, midway between 56th and 55th Streets. The buildings are not depicted on the 1836 Colton map, nor is First Avenue, indicating that they, and the roadway, were constructed sometime after that date (Figure 10). The depiction of First Avenue with the buildings along it may suggest that the roadway had not actually been constructed as of 1851 but only planned. The depiction on the Dripps map of other structures, as well as trees, along other portions of First Avenue in midtown also supports this conjecture. Accordingly, the 1851 map may suggest that the buildings along First Avenue, within the water main route, had recently been or were soon to be demolished as part of the construction of that thoroughfare. Whether the buildings were commercial or residential establishments was not determined by the research undertaken for this study. Since municipal water was not present along First Avenue until after 1851, the buildings would have been constructed with associated privies, wells, and/or cisterns. These archaeological features most likely would have been located within the former backyards of these structures, now also part of First Avenue.



NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
1851 DRIPPS MAP
SCALE OF ORIGINAL: 1 INCH = 3,520 FEET

SEPTEMBER 2005

FIGURE 9



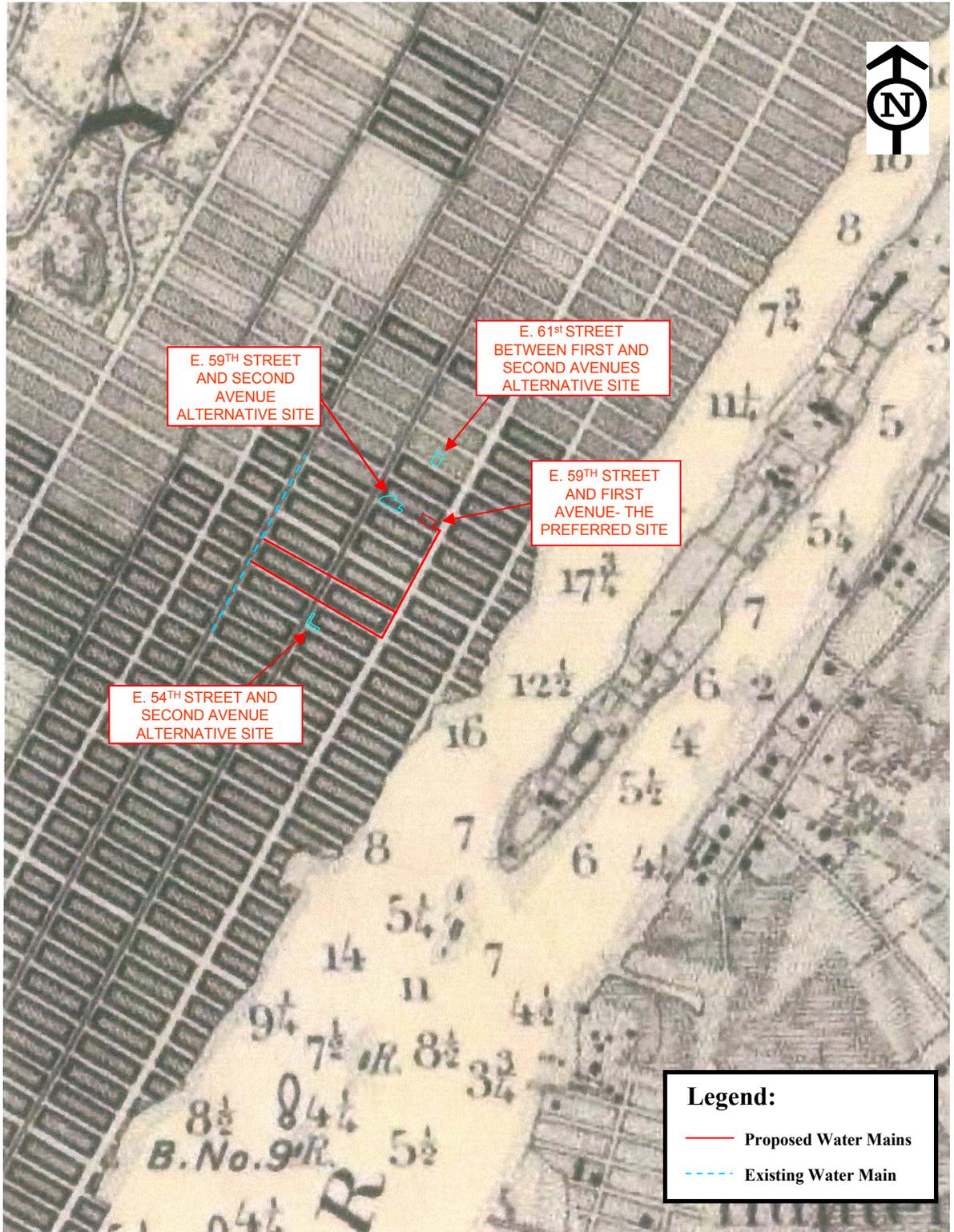
NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
1836 COLTON MAP
SCALE OF ORIGINAL: 1 INCH= 6,500 FEET

SEPTEMBER 2005

FIGURE 10

By 1866, according to the United States Coastal Survey map of that year (Figure 11), First Avenue and E. 55th and 56th Streets had been constructed. Third Avenue had been constructed earlier, soon after 1815 (Stokes 1928).

By 1880, the EI had been constructed along Third Avenue, as well as Second, Sixth, and Ninth Avenues, contributing to the growth of New York City's midtown neighborhoods.



NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
1866 UNITED STATES COAST SURVEY MAP
SCALE OF ORIGINAL: 1:80,000

SEPTEMBER 2005

FIGURE 11

3.0 HISTORIC PERIOD ARCHITECTURAL RESOURCES –REASONABLE WORST CASE WATER MAIN CONNECTION ROUTE

This section discusses seven previously recognized Historic period architectural resources that are located within the 400-foot Study Area (Table 1) for the water main route. These properties have been listed or are considered eligible for listing on the New York State and National Registers of Historic Places or are designated New York City Historic Landmarks by the NYCLPC.

3.1 New York State/National Registers of Historic Places and New York City Landmark Structures

The research undertaken for this assessment determined that the Queensboro Bridge is the only structure within the water main route portion of the Study Area that is listed on the New York State and National Registers of Historic Places. It is a designated New York City Historic Landmark. A brief description of the Queensboro Bridge has been presented in the previously completed Phase IA Historic Resources Assessment of the Proposed City Tunnel Number 3, Stage 2 Manhattan Leg, Shaft 33B Project Area (Malcolm Pirnie, Inc. 2005: 32-33).

3.2 Properties Considered Eligible for Listing on the New York State/National Registers of Historic Places

The research undertaken for this assessment identified six buildings that have been determined to be eligible for listing on the New York State and National Registers of Historic Places within a 400-foot radius of the reasonable worst case water main route route. These dwellings are located at: 225-227 E. 53rd Street; 229-235 E. 53rd Street; and 237 and 241 E. 53rd Street (Historical Perspectives, Inc. 2003; Table 1). These properties are briefly described below.

225-227 E. 53rd Street

The property is a six-story brick tenement designed by Sass and Smallheiser that was built in a Renaissance Revival style in 1902 with its construction dating to 1902-1903. It is an intact example of an early 20th century residential building constructed in midtown Manhattan. According to Cooney and Riddle (2002c), the building is:

Set on a rusticated stone base, the brick façade of the upper floors is divided into a mezzanine, three primary stories, and an attic story. The windows of the second-floor mezzanine are arched with banded architraves and heavy key stones with volutes. The rectangular windows on the third through fifth floors are differentiated into two flanking pairs and four central bays. The two flanking pairs of windows have molded architraves, bracketed sills, and elaborate projecting keystones. The central windows have no architraves, plain sills, and lintels composed of voussoirs and scrolled

keystones. Pilasters set on a bracket sill frame the attic story, which is capped with a bracketed, projecting cornice. On the ground floor, there is an entrance porch, raised on a low stoop, with two granite Corinthian columns and two stone pilasters supporting an entablature.

229-235 E. 53rd Street

Located on the north side of E. 53rd Street between Third and Second Avenues, these three identical, five-story brick apartment buildings are intact examples of early 20th century residential buildings. They were designed by the noted architect Charles Rentz in 1899 in a Renaissance Revival style and constructed by 1900. Rentz designed numerous buildings throughout Manhattan, some of which are included in the Greenwich Village Historic District and the Lower East Side Historic District.

Describing the 229-235 E. 53rd Street buildings in 2002, Cooney and Riddle (2002a), state that:

The ground floor of each has an entrance porch flanked by double-height storefront windows; set on low stoops, the porches have brownstone half columns supporting arched entablatures ornamented with floral keystones and scalloped pendentives, and the windows have thick brownstone enframements with floral keystones. On the upper floors, variations in the window surrounds provide a vertical rhythm to the facades and created a unified composition of the three structures. The second floor windows have thick, banded brownstone enframements capped with cornices. The brownstone lintels of the windows on the third and fourth floors are composed of voussoirs and keystones, but they are slightly different on each floor. The windows of the fifth floor are arched with brownstone keystones. A projecting cornice with brackets and an entablature of alternating relief panels and swags cap each building. Brownstone bands, decorative brick courses, and cornices tie the three buildings together. Ornamental iron fire escapes are attached to each façade. There are ground-floor and basement stores in each building. In front of 233 East 53rd Street, there are decorated, iron streetlights that appear to date to the early 20th century.

237-241 E. 53rd Street

George F. Pelham designed these two identical, six-story brick apartment buildings with stone trim, located on the north side of E. 53rd Street between Third and Second Avenues, in a Renaissance Revival style, in 1900. Pelham and his architectural firm were noted designers of apartment buildings during the late nineteenth and early twentieth century period. The buildings are intact examples of early twentieth century residential buildings. According to Cooney and Riddle (2002b), the structures are:

...tied together with cornices, stone string courses, and courses of decorative brickwork. Different window treatments create a vertical rhythm to the facades. Moving upward from the ground-floor storefront windows with stone architraves, the windows are surmounted with segmental pediments, triangular pediments, stone arches with keystones adorned with human heads, and stone entablatures, which are duplicated on the sixth floor. On the upper two floors, the wall surface consists of single and grouped pilasters with Corinthian capitals. On the fifth floor, brackets with bearded faces support the pilasters. Another ornamental feature are relief panels below the sixth-floor windows. Each building is capped with a cornice supported with heavy brackets. Pilasters supporting projecting stone entablatures form the entrance porch to each building. There are basement stores, and in front of each building at the basement entrances are iron streetlights that appear to date to the early 20th-century.

TABLE 1
Historic Period Architectural Resources within the 400-Foot Study Area for the Reasonable Worst Case Water Main Connection Route

Historic Property	S/NR Listed	S/NR Eligible	NYCLPC Designated
Queensboro Bridge	Yes	-	Yes
225-227 E. 53 rd Street - dwellings	No	Yes	No
229-235 East 53 rd St. – dwellings	No	Yes	No
237-241 East 53 rd St. - dwellings	No	Yes	No

4.0 ARCHAEOLOGICAL SENSITIVITY OF THE REASONABLE WORST CASE WATER MAIN CONNECTION ROUTE

This section assesses the archaeological sensitivity of the reasonable worst case water main connection scenario and provides recommendations for additional investigations, if warranted. This section also presents an assessment of potential project impacts related to identified Historic period architectural resources identified as located within the 400-foot Study Area established for the reasonable worst case water main connection route.

4.1 Native American Period Sensitivity of the Proposed Water Main Route

The portion of the water main route extending along First Avenue between E. 59th and E. 55th Streets and along E. 55th and E. 56th Streets between First and Second Avenues, is within the general area identified as containing traces of Native American occupation in the archaeological site files of the NYSM (Site Number 4061). In addition, the portions of the water main route extending along Third Avenue and along 55th Street between Second and Third Avenues are within an area identified as sensitive for prehistoric sites by the 1980 NYCLPC sensitivity model (Figure 8).

Although the portion of the water main connections route east of Second Avenue is within the general area of archaeological NYSM Site Number 4061, the cartographic research undertaken for this investigation suggest that the pre-development topography of this section of the reasonable worst case water main route did not possess characteristics (i.e., high ground in proximity to a fresh water course or over looking small coves and inlets along the East River) indicative of a high potential for Native American occupation and use. Accordingly, the section of the route east of Second Avenue is not considered to be sensitive for the presence of prehistoric archaeological sites. Although the research did indicate that a hill formerly was located along First Avenue just south of what is now E. 58th Street and extending to just north of E. 55th Street, a freshwater source was not located in its proximity. As a result, the landform would have been less attractive to Native Americans as a location for camp sites compared with other locations further to the north, south, west, and east.

Even if Native American sites formerly were located within the discussed portion of the water main route, local roadway construction likely has disturbed the area to such an extent that intact Native American sites are unlikely to be present. In addition, a review of steam, electric, gas, water, and sewer location information indicates that extensive portions of the reasonable worst case water main route have been further disturbed by installation of these utilities.

Another hill was located between Second and Third Avenues between E. 57th and E. 54th Streets, prior to the area's development. The portion of the water main route that extends between Second and Third Avenues extends across the site of the former hill. The freshwater stream that emptied into the East River at Turtle Bay, mentioned above, formerly flowed just southwest of the hill. Although the general location of the former landform is west of the general area of sensitivity identified by NYSM archaeological Site Number 4061, its southern portion, which includes the Third Avenue and 55th Street west of Second Avenue sections of

the water main route, falls within an area identified as sensitive by the 1980 NYCLPC prehistoric sites sensitivity model. Accordingly, prior to development, the portion of the reasonable worst case water main connection route at Third Avenue and along 55th Street west of Second Avenue likely would have possessed topographic characteristics (i.e., high ground in proximity to the freshwater course) that would have made the location attractive to Native Americans for the establishment of camp sites or other occupation sites. The portion of the water main route extending along E. 56th Street west of Second Avenue crosses a section of the former hill that was further removed from the stream. Accordingly, this section of the water main route is not considered to be archaeologically sensitive for the presence of Native American sites.

Even if Native American sites were present on the hill formerly situated west of Second Avenue across which the water main route will pass, nineteenth and twentieth century construction likely destroyed or extensively disturbed them. Construction of Third Avenue in midtown soon after 1815 likely resulted in the elimination of all or most of the hill that formerly occupied the area between E. 54th and E. 57th Streets (including the water main route) by grading and cutting, thereby disturbing or destroying any Native American site that may have been present. In addition, a review of steam, electric, gas, water, and sewer location information indicates that extensive portions of the water main route along Third Avenue and 55th and 56th Streets west of Second Avenue have been further disturbed by installation of these utilities.

Accordingly, as a result of construction of the local roadways and the installation of utilities, no portion of the APE for the water main route is considered to be sensitive for the presence of Native American sites.

4.2 Historic Period Sensitivity of the Water Main Route

Archaeological deposits and structural remains associated with the occupation of the structures indicated on the 1851 Dripps map at the northeastern corner of First Avenue and 57th Street and in the middle of First Avenue, midway between 56th and 55th Streets, within the water main route, likely were formerly present along what is now First Avenue. Grading and cutting of the local topography as part of the construction of that avenue, in particular the elimination of the hill that apparently was located along First Avenue just south of what is now 58th Street and extending to just north of 55th Street, likely would have impacted any archaeological deposits and structural remains associated with the structures that may have been present. In addition, a review of steam, electric, gas, water, and sewer location information indicates that extensive portions of First Avenue west of Second Avenue have been further disturbed by installation of these utilities. However, it is possible that the lower or truncated portions of any wells and/or privies that were associated with the two structures that were present may remain below the depth of disturbance caused by construction of First Avenue and the installation of utilities. The proposed depth of the water main connections trench along First Avenue, which is expected to be between ten and twelve feet may extend deep enough to encounter any such resources that may be present.

By 1880, the El had been constructed along Second and Third Avenues, contributing to the growth of midtown. Structural remains associated with the base of the El's supporting pillars may be present within the Second and Third Avenue portions of the water main route.

No other Historic period activities or events occurred within the APE of the proposed water main route, which may have resulted in the deposition of potentially significance archaeological deposits or structural remains there.

4.3 Assessment of Impacts to Historic Period Architectural Resources

As described in Section 3, seven Historic period architectural resources are located within the 400-foot Study Area established for the reasonable worst case water main connection route (see Table 1). These are the Queensboro Bridge, the only structure listed on the New York State and National Registers of Historic Places and six properties that are considered eligible for listing on the Registers. The six (6) eligible properties are: 225 – 227 E. 53rd Street; 229 – 235 E. 53rd Street; and 237 and 241 East 53rd Street.

Potential visual or aesthetic impacts to the identified architectural resources would not occur as a result of the proposed construction project. Project construction activities would not obstruct or otherwise impact the identified historic structures located along E. 53rd Street. Construction would be visible from the Queensboro Bridge, however, the construction activities would be of a temporary nature. Potential visual or aesthetic impacts caused by the proposed project to the identified Historic period architectural resources is addressed in detail in the Draft Environmental Impact Statement (EIS) being prepared for the Tunnel Number 3, Stage 2 Manhattan Leg, Shaft 33B project by NYCDEP.

Vibration related impacts to the identified Historic period structures are not expected to occur as a result of the water main installation. While the Queensboro Bridge is located in proximity to the water main route, vibration generated by excavations or shaft operational activities will not exceed acceptable levels. The remaining Historic period properties are located too far from the proposed water main route to be impacted by the anticipated level of vibration caused by implementation of the proposed project.

Potential vibration impacts caused by the proposed project to the identified Historic period architectural resources is addressed in detail in the Draft EIS currently being prepared for the Tunnel Number 3, Stage 2 Manhattan Leg, Shaft 33B project by NYCDEP.

No other impacts related to the seven Historic period structures area anticipated to occur as a result of the proposed project.

5.0 CONCLUSIONS AND RECOMMENDATIONS

This section provides a set of conclusions and recommendations based on the archaeological assessment of the reasonable worst case water main connection route.

5.1 Archaeological Resources

Native American Period Resources

The APE for the reasonable worst case water main connection route is not considered to be sensitive for the presence of Native American period archaeological sites. Accordingly, additional investigations to determine whether such resources are present are not warranted.

Historic Period Resources

By the mid-nineteenth century, dwellings and their former yards were located at the northeast corner of what is now First Avenue and E. 57th Street and in the middle of First Avenue, midway between E. 56th and E. 55th Streets within the vicinity of the APE for the water main route. Although construction of First Avenue and the subsequent installation of utilities there would have affected any archaeological resources present, it is possible that the lower or truncated portions of wells, cisterns, and privies associated with the mid-nineteenth century occupations may remain within the project's APE.

The base of pillars associated with the EI that was constructed along Second and Third Avenues by c. 1880, however, may be present within the portions of the APE along those roadways and may have historic value.

If this route is chosen, archaeological monitoring of the water main trench excavations should be undertaken for the portion of the route that extends on First Avenue between E. 55th and E. 57th Streets. Any domestic-type of archaeological features encountered should be investigated following consultation with NYCLPC.

In addition, any supporting pillar associated with the EI (ca 1880) that are identified along the Second Avenue and Third Avenue portions of the water main route should be appropriately recorded.

5.2 Historic Period Architectural Resources

Adverse impacts are not anticipated to occur to any of the seven identified Historic period architectural resources located within the 400-foot Study Area established for the reasonable worst case water main connection route as a result of the proposed project. Therefore, further evaluations of them, or the development of plans, to avoid such impacts are not warranted as part of the proposed project.

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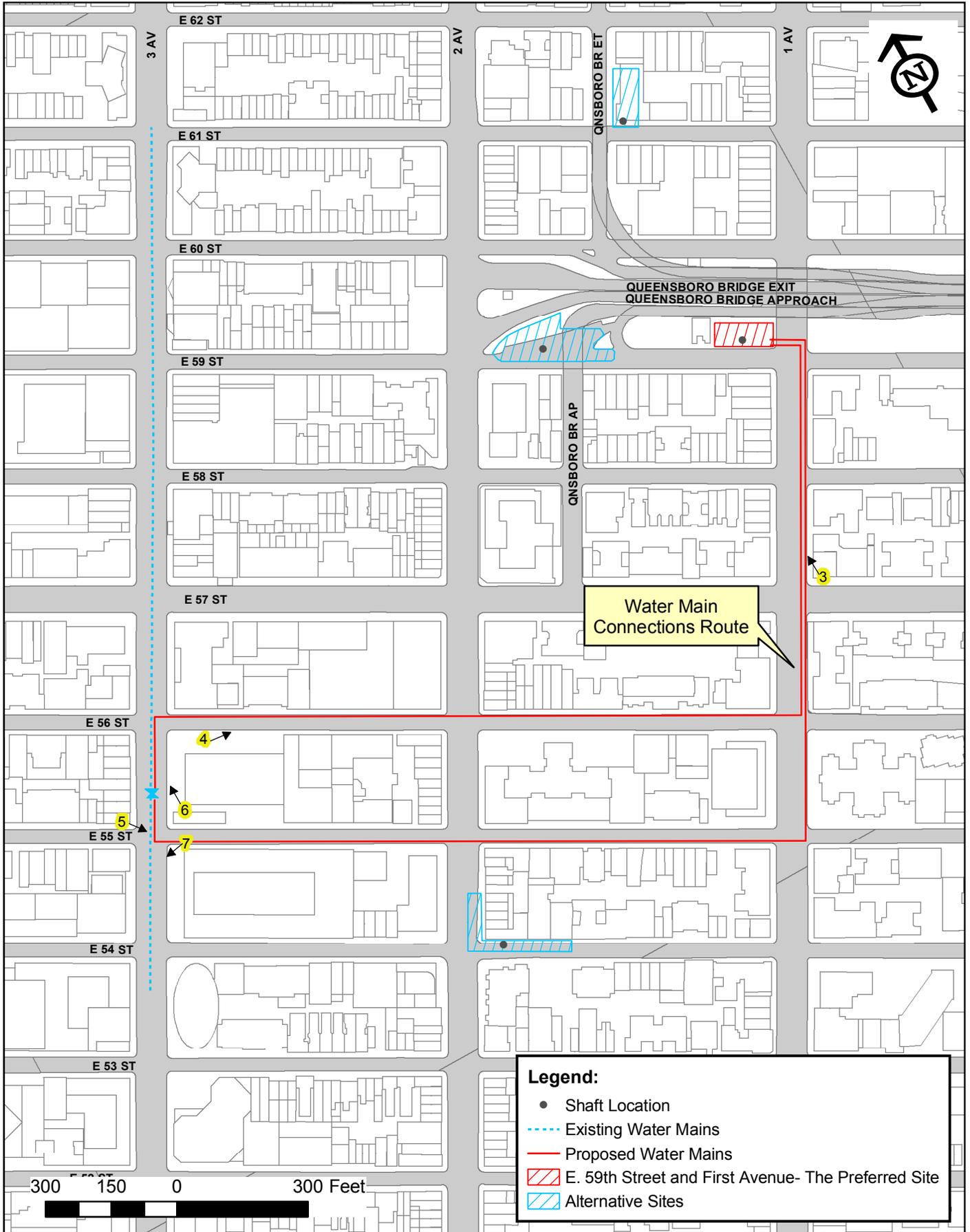
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Appendix A

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**Locations of Project Area Photographs Included as Figures 3-7
of this Report**



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**NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
CITY WATER TUNNEL NO. 3, STAGE 2
SHAFT 33B
LOCATION OF PROJECT AREA PHOTOGRAPHS INCLUDED
AS FIGURES 3-7 OF THIS REPORT**

**SEPTEMBER
2005**