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2006

## Archaeological Assessment

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### Con Edison Proposed Feeder Line - Proposed Parkview Area Substation

Manhattan and Bronx, New York

Prepared for:

Consolidated Edison Company of New York, Inc.

Prepared by AKRF, Inc.

440 Park Avenue South

New York, New York 10016

August 11, 2006

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ENVIRONMENTAL REVIEW

OCT 18 2006

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## Executive Summary

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### A. INTRODUCTION

AKRF, Inc has been retained by Consolidated Edison Company of New York (ConEd) to provide an archaeological overview of a proposed 138 Kv solid dielectric feeder system (the "Feeder Line"). The feeder lines would run for approximately 2.5 miles between ConEd's Mott Haven and proposed Parkview Substations. The Mott Haven Substation, which is currently being constructed, is located on a lot in the Bronx bounded by Bruckner Boulevard to the east, Southern Boulevard to the west, and East 144th Street to the north (Bronx Block 2599, Lot 5). The proposed Parkview Area Substation, which would be constructed as part of this project, is located at 1901 Park Avenue in Manhattan, on the western portion of the block bounded by East 130th Street on the north, East 129th Street to the south, Park Avenue to the west, and Lexington Avenue to the east (Manhattan Block 1778, Lot 1). A total of four feeders in two duct banks, utilizing two separate routes, would be installed. The Area of Potential Effect (APE)—which includes these two routes—is described below (see Figure 2).

Route 1 would include two feeder lines running from the Mott Haven Substation south to Southern Boulevard Avenue. These would turn west on East 141st Street, south along Cypress Avenue, west along East 135th Street, south along Brook Avenue, west on East 134th Street, and south on Brown Place before entering the Harlem River Yards. Finally, they would turn west on the north side of the north concrete pad overrun and travel across the Harlem River to Manhattan. On the Manhattan side, Route 1 would exit the Harlem River and travel along East 128th Street. The feeders would turn north at Lexington Avenue and then continue west along East 129th Street to the proposed Parkview Substation.

Route 2 would also include two feeder lines running from the Mott Haven Substation. These would travel southwest along the Bruckner Expressway East Service Road before turning east on 138th Street, south on Willow Avenue, and west on East 132nd Street. They would continue under the elevated Triborough Bridge approach and before entering Harlem River Yard. They would then turn west on the south side of the southern concrete overrun and extend across the Harlem River. On the Manhattan Side, Route 2 would exit the Harlem River and continue down East 127th Street before turning south on Second Avenue, west on East 126th Street, north on Park Avenue, and east on East 130th Street where it would connect to the proposed Parkview Substation.

The exact locations of the feeder ducts within the streets are not known at this time. Generally, utilities are installed along the edge of the roadway, but interference with existing utilities, such as water lines, may dictate the exact location of the new underground feeders.

ConEd has determined that to relieve project overloads from electric load growth in upper Manhattan, a new area substation is required to serve the East Harlem section of Manhattan. The substation would be constructed as-of-right under the applicable zoning. The proposed substation would have an area of approximately 24,000 square feet. The site is fully occupied by

a six-story building formerly containing a storage facility. According to a 1911 Sanborn Fire Insurance Map, and as verified by Con Ed personnel who have conducted a thorough walk-through, the building has a basement that fully covers the site. It is expected that construction of the basement would have disturbed any archaeological resources, had any been present.

An 1891 Bromley Atlas (See **Figure 10**) shows that two small wooden structures and one small brick building occupied a portion of the site at that time. At least one of the wooden buildings was a stable or shed. There is a remote possibility that a privy or privies were located behind the brick building but it is likely that they were severely impacted or destroyed by deep basement construction for the c.1910 building. Therefore, no significant adverse impacts to archaeological resources are expected. However, this site will be taken into consideration in this review. Research conducted for a limited Phase 1 Environmental Assessment for the substation site conducted by GEI Consultants, Inc in April 2005 indicated that the site building was constructed around 1910 and had been used for the manufacturing of fabricated steel, electronic appliances and components, plastics, crayons, and toys.

Con Ed will construct an outlet system consisting of new manholes and a conduit system immediately adjacent to the Proposed Area substation. From these new manholes, the distribution feeders will be connected to the existing distribution system in the vicinity of the Proposed Area Substation. These feeders will then be further extended into the load area utilizing spare ducts where available or laying new ducts where spare ducts are not available. The construction of the outlet system and the laying of the new ducts will require street excavation.

Construction for this project is scheduled to begin on November 3, 2006. Given the time restraints and large extent of the project area, this archaeological assessment of the proposed feeder line includes:

- The identification of known and inventoried archaeological sites in the vicinity of the project site and
- A review of historic maps to:
  - a. Identify changes in topographical features through time,
  - b. Document historic development along the feeder line, especially development that occurred prior to construction of the streetbeds, and
  - c. Assess, how, if any, the trajectories of the streets may have been altered through time.

Because it is expected that the proposed feeder lines will be placed into existing ducts within the streets, a detailed review of prior disturbance in the streetbeds, such as reviewing the locations of utilities has not been undertaken. However, potentially sensitive areas have been identified and mapped (see **Figure 3**). These sensitive areas include the locations where ornamental gardens or historic structures were located in areas which have since become the streets through which the Feeder Line will pass.

The goal of this Archaeological Assessment is to determine the likelihood that potential archaeological resources within the APE have survived the destructive forces associated with Harlem River currents, utility installation, street cutting, and railroad construction. As part of the background research for this study, published and unpublished resources were consulted at various repositories of information, including the Main Research Branch of the New York Public Library (including the Local History and Map Divisions), digital map galleries, and the

Landmarks Preservation Commission. This research included the analysis of secondary sources—including historic texts and maps—and primary sources—including tax photographs, newspaper articles, and soil boring records. A search was also conducted at LPC to determine if prehistoric or historic sites had been reported or if cultural resource investigations had been conducted within one-half mile of the project area.

It should be noted that because the project area is restricted, for the most part, to currently existing streetbeds, various sources of documentary data normally accessed when studying building lots, such as real estate and personal tax records, city directories, census materials, etc., were not consulted. Furthermore, because the exact location of the feeder lines cannot yet be determined, this project focused on the entire street area, as opposed to specific sections of the roadbeds.

## **B. PRECONTACT RESOURCES**

For many parts of the project area, the original topographic setting, i.e. marshland, was atypical of Native American habitation sites and therefore would not be considered to be archaeologically sensitive. In addition, due to the intense amount of development in the region, including landfilling, dredging, and the construction of railroads, streets, highways, bridges, and structures, it is highly unlikely that any Native American archaeological materials would be found in the area.

However, it should be noted that two Native American villages did exist within or near the project area: Conykeekst, on Manhattan near 125th Street at the Harlem River shore, and "Ranachqua," in the Bronx, along Cypress Avenue also near the shore. The former is to the southeast of the project area. The latter, while it once contained human interments, is in an area which has been severely disturbed by 19th and 20th century development. Previous archaeological reports have determined that there are no traces of this site, or of any prehistoric cultural materials throughout the Bronx project area (Boesch 1996, Energy and Environmental Analysts 1981).

## **C. HISTORIC RESOURCES**

With respect to lower Manhattan, the Harlem and Bronx areas of the project site experienced gentrification at a relatively late date. While the area was not entirely unoccupied, it did not experience substantial numbers of inhabitants until a series of railroad installations beginning in the 1840s made daily travel between the city and the outer areas a possibility. While most development occurred after streets had already been cut, there were several instances where structures were located in the direct path of roads which had yet to be constructed (**Figure 3**). However, due to the impact of landfilling, dredging, and the construction of railroads, subways, streets, highways, bridges, and structures, it is highly unlikely that any historic archaeological materials would be found in the area.

## **D. RECOMMENDATIONS**

Due to the fact that most work is being conducted in the street beds in preexisting ducts to a depth of 5 feet and that the entire project area has been severely impacted, we have concluded that there is little likelihood that subsurface archaeological resources, should they exist, would be impacted by the proposed construction. Therefore this report concludes that there are

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NO ADVERSE EFFECTS to subsurface prehistoric or historic archaeological resources in the project area. \*



**A. PROJECT OVERVIEW**

AKRF, Inc has been retained by the Consolidated Edison Company of New York (ConEd) to provide an archaeological overview of a proposed 138 Kv solid dielectric feeder system ("Feeder Line"). The Feeder Line would run for approximately 2.5 miles between ConEd's Mott Haven and proposed Parkview Substations. The Mott Haven Substation, which is currently being constructed, is located on a lot in the Bronx bounded by Bruckner Boulevard to the east, Southern Boulevard to the west, and East 144th Street to the north (Bronx Block 2599, Lot 5). The proposed Parkview Area Substation, which would be constructed as part of this project, is located at 1901 Park Avenue in Manhattan, on the western portion of the block bounded by East 130th Street on the north, East 129th Street to the south, Park Avenue to the west, and Lexington Avenue to the east (Manhattan Block 1778, Lot 1). A total of four feeders in two duct banks, utilizing two separate routes, would be installed. The Area of Potential Effect (APE)—which includes these two routes—is described below (see Figure 2).

Route 1 would include two feeder lines running from the Mott Haven Substation south to Southern Boulevard Avenue. These would turn west on East 141st Street, south along Cypress Avenue, west along East 135th Street, south along Brook Avenue, west on East 134th Street, and south on Brown Place before entering the Harlem River Yards. Finally, they would turn west on the north side of the north concrete pad overrun and travel across the Harlem River to Manhattan. On the Manhattan side, Route 1 would exit the Harlem River and travel along East 128th Street. The feeders would turn north at Lexington Avenue and then continue west along East 129th Street to the proposed Parkview Substation.

Route 2 would also include two feeder lines running from the Mott Haven Substation. These would travel southwest along the Bruckner Expressway East Service Road before turning east on 138th Street, south on Willow Avenue, and west on East 132nd Street. They would continue under the elevated Triborough Bridge approach and before entering Harlem River Yard. They would then turn west on the south side of the southern concrete overrun and extend across the Harlem River. On the Manhattan Side, Route 2 would exit the Harlem River and continue down East 127th Street before turning south on Second Avenue, west on East 126th Street, north on Park Avenue, and east on East 130th Street where it would connect to the proposed Parkview Substation.

The exact locations of the feeder ducts within the streets are not known at this time. Generally, utilities are installed along the edge of the roadway, but interference with existing utilities, such as water lines, may dictate the exact location of the new underground feeders.

Con Edison has determined that to relieve project overloads from electric load growth in upper Manhattan, a new area substation is required to serve the East Harlem section of Manhattan. The substation would be constructed as-of-right under the applicable zoning. The proposed substation would have an area of approximately 24,000 square feet. The site is fully occupied by

a six-story building formerly containing a storage facility. According to a 1911 Sanborn Fire Insurance Map, and as verified by Con Ed personnel who have conducted a thorough walk-through, the building has a basement that fully covers the site. It is expected that construction of the basement would have disturbed any archaeological resources, had any been present.

An 1891 Bromley Atlas (see **Figure 10**) shows that two small wooden structures and one small brick building occupied a portion of the site at that time. At least one of the wooden buildings was a stable or shed. There is a remote possibility that a privy or privies were located behind the brick building but it is likely that they were severely impacted or destroyed by deep basement construction for the c.1910 building. Therefore, no significant adverse impacts to archaeological resources are expected. However, this site will be taken into consideration in this review. Research conducted for a limited Phase 1 Environmental Assessment for the substation site conducted by GEI Consultants, Inc in April 2005 indicated that the site building was constructed around 1910 and had been used for the manufacturing of fabricated steel, electronic appliances and components, plastics, crayons, and toys.

Con Ed will also construct an outlet system consisting of new manholes and a conduit system immediately adjacent to the proposed Parkview substation. From these new manholes, the distribution feeders will be connected to the existing distribution system in the vicinity of the proposed substation. These feeders will then be further extended into the load area utilizing spare ducts where available or laying new ducts where spare ducts are not available. The construction of the outlet system and the laying of the new ducts will require street excavation.

Construction for this project is scheduled to begin in early November, 2006. Given the time constraints, the large extent of the project area, and that most of the proposed construction activity will occur within existing ducts or at the same depth as other utilities, this archaeological overview of the proposed feeder lines is restricted to:

- The identification of known and inventoried archaeological sites in the vicinity of the project site; and
- A review of historic maps to:
  - a. Identify changes in topographical features through time;
  - b. Document historic development along the feeder line, especially development that occurred prior to construction of the streetbeds; and
  - c. Assess, how, if any, the trajectories of the streets may have been altered through time.

Because it is expected that the proposed feeder lines will be placed into existing ducts within the streets, a detailed review of prior disturbance in the streetbeds, such as reviewing the locations of utilities has not been undertaken. However, potentially sensitive areas have been identified and mapped (see **Figure 3**). These sensitive areas include the locations where ornamental gardens or historic structures were located in areas which have since become the streets through which the Feeder Line will pass.

## **B. RESEARCH GOALS AND METHODOLOGY**

The goal of this Archaeological Assessment is to determine the likelihood that potential archaeological resources within the APE have survived the destructive forces associated with Harlem River currents, utility installation, street cutting, and railroad construction. As part of the background research for this study, published and unpublished resources were consulted at

various repositories of information, including the Main Research Branch of the New York Public Library (including the Local History and Map Divisions), digital map galleries, and the New York City Landmarks Preservation Commission (LPC). This research included the analysis of secondary sources—including historic texts and maps—and primary sources—including tax photographs, newspaper articles, and soil boring records. A file search was conducted at LPC to determine if prehistoric or historic sites had been reported or if cultural resource investigations had been conducted within one-half mile of the project area.

It should be noted that because the project area is, for the most part, restricted to currently existing streetbeds, various sources of documentary data normally accessed when studying building lots, such as real estate and personal tax records, city directories, census materials, etc., were not consulted. Furthermore, because the exact location of the feeder lines cannot yet be determined, this project is focused on the entire street area, as opposed to specific sections of the roadbeds. \*

**A. GEOLOGY AND TOPOGRAPHY**

Both Manhattan and the Bronx are found within a geographic bedrock region known as the Manhattan Prong of the New England (Upland) Physiographic Province. This region is composed of heavily metamorphic and sedimentary rock (including quartzite, dolomitic marble, marble, schist, and gneiss) which dates to the Cambrian and Ordovician ages. These hard rocks, which are oriented northeast-southwest, are interspersed with softer Inwood marble (New York State Office for Technology [NYSOT], 2004). The bedrock slopes downward from north to south, and has been found to be approximately 100 feet below the earth's surface at the southern end of Manhattan.

There are a number of deposits which overlay the bedrock region, but nearly all of Manhattan, including the project area, is covered by anywhere from 3 to 164 feet of glacial till (NYSOT, 2004). These deposits were left behind by massive glaciers of up to 1,000 feet thick that retreated from the area towards the end of the Pleistocene. There were four major glaciations that affected the region until roughly 12,000 years ago when the Wisconsin period—the last glacial period—came to an end. The glacial movements also brought about the creation of hundreds of sand hills, or kames, some of which were nearly one hundred feet tall. These hills were contrasted by many small streams, rivers, and lakes that were fed by the glacial runoff. In the Bronx, such hills “run north-south, directing local creeks and streams towards outlets along the Harlem River and the Bronx Kill” (Historical Perspectives 2004: 3). As temperatures increased and this runoff ceased, these small water courses evolved into swamps and marshlands punctuated with brooks and streams which drained them out into the river.

Manhattan, as the first European settlers found it in the early 17th century, was a land of clean, clear water and abundant wildlife. Manhattan had a much narrower and more irregular shape in the days before systematic landfilling created the regimented shoreline of piers and promenades that we see today. The waters surrounding the island produced more than 50 percent of the world's oysters.

Manhattan and the Bronx are separated by the Harlem River, a misnomer describing the tidal strait which connects the Hudson and East Rivers (Columbia University Historic Preservation Program 2003). Before the extensive landfilling which redefined the shores of both Manhattan and the Bronx, the parts of the project area which bordered the Harlem River were composed of marshy tracts and small water courses. The natural course of the river itself was much wider.

The original shoreline of Manhattan is visible on the 1891 Bromley Atlas (Figure 10) and the shoreline of the Bronx on the 1893 Bromley Atlas (Figures 11-14). As seen on most early maps, the shores of both boroughs were bordered by thick marshy tracts which were intercut with small brooks and streams. Other isolated marshy patches dotted the landscape. A small pond was located in Manhattan, near the southeast corner of today's 125th Street and Third Avenue. The portion of Manhattan near the project area was not particularly hilly, although it is to the

northeast of a small cluster of hills, one of which, "Mount Morris," was located along what has since become Park Avenue, between 120th and 125th Streets. In the Bronx, the area was relatively low-lying as well, although it did slope to the west (Energy and Environmental Analysts, Inc 1981). The Harlem River was shallow and at low tide could be crossed on foot (Ibid).

Both natural forces and the actions of humans have permanently changed the geographic setting of the project area. A portion of the project area was once located under the Harlem River and Bronx Kills. It was human intervention, through landfilling and bridge construction, which transformed the area into fast land and closed the gap between the island of Manhattan and mainland Bronx.

## **B. CURRENT CONDITIONS**

The Harlem River has been narrowed over the past two centuries through the creation of made land along the shores of both Manhattan and the Bronx. Along both shores, all marshland, streams, and ponds have been filled in, creating additional fast land.

The project area is currently crossed by three bridges: one extending along Third Avenue from Manhattan into the Bronx 93rd Avenue Bridge), another linking Manhattan's First Avenue with Willis Avenue in the Bronx (Willis Avenue Bridge), and the last extending east from Manhattan's 125th Street to Randalls Island where it makes a ninety degree turn and continues north through the Bronx' Cypress Avenue (Triborough Bridge). A major highway, the Harlem River Drive, runs along the Harlem River on the Manhattan side while Amtrak and Harlem River Railroad lines run along the Bronx side. The Harlem River Rail Yard also occupies most of the southern portion of the Bronx APE while the Major Deegan and Bruckner Expressways bisect it.

The area of the proposed Parkview substation in Manhattan is currently occupied by a six story building used for storage. The building has a basement which fully covers the site. No other standing buildings are in the path of either feeder route. On the Manhattan side, the two feeder line routes travel through a park along the shore of the Harlem River. For all other portions of the APE, the feeder line routes travel directly through currently existing streetbeds. \*

**A. INTRODUCTION**

Archaeologists have divided the time between the arrival of the first humans in northeastern North America and the arrival of Europeans more than 10,000 years later into three prehistoric periods: Paleo-Indian (11,000-10,000 BP), Archaic (10,000-2,700 BP), and Woodland (2,700 BP-AD 1500). These divisions are based on certain changes in environmental conditions, technological advancements, and cultural adaptations, which are observable in the archaeological record.

**B. PALEO-INDIAN PERIOD (11,000-10,000 BP)**

Due to an extended glacial period that left the Northeast blanketed in thick ice sheets for thousands of years, the area was not inhabited by humans until the Paleo-Indian period began around 11,000 years ago. As temperatures increased, a variety of flora and fauna spread through the region, which had been marked with tall sand hills and low-lying lakes and wetlands—the last remnants of the retreating glaciers. These new occupants included human populations referred to as Paleo-Indians, the forbearers of the Delaware—also called the Lenape Indians—who would inhabit the land in later years.

At this time, large open forests of spruce, fir, pine, and other trees expanded across the Northeast, interspersed with open meadows and marshland. Oak, hickory, and other hardwood trees eventually became important to the area's ecology as well. A wide variety of animal life could also be found, including mammoth, mastodon, caribou, musk ox, moose, fox, beaver, hare, and many kinds of marine animals.

The Paleo-Indians most likely exploited all the different resources provided by their environment. It has been suggested that they did not actively hunt the large mammals that roamed about the region (mammoths, mastodons, etc.), but, instead, hunted and trapped the smaller animals and supplemented their diet with fish and gathered plants (Cantwell and Wall 2001).

There was a very distinct Paleo-Indian style of lithic technology, typified by fluted points. These were elaborately detailed stone points that would have been used for a variety of functions, most notably for hunting. They were often made of high-quality imported chert, but were also known to have been crafted from local materials. Other stone tools manufactured at this time included knives, scrapers, drills, and graters. Wood, ivory, and other materials were also used for the manufacture of composite tools, such as hunting spears.

Archaeological evidence indicates that the Paleo-Indians were likely highly mobile hunters and gatherers. They lived in small groups of fewer than 50 individuals (Dincauze 2000) and did not maintain permanent campsites. In addition, most of the Paleo-Indian sites that have been investigated were located near water sources.



It is because of the close proximity of Paleo-Indian sites to the coastline that so few of them have been preserved in the New York City area. As the glaciers continued to melt, sea levels rose and much of what was once adjacent to the water line became submerged. In fact, only one Paleo-Indian site has been discovered in the entire New York City area—that of Port Mobil, on Staten Island. This location has yielded nothing more than a collection of fluted points and other stone tools characteristic of the period.

### **C. ARCHAIC PERIOD (10,000-2,700 BP)**

At the beginning of the Archaic period around 10,000 BP, the climate changes which began during the Paleo-Indian period continued to re-shape the environment of the Northeast. The Archaic has been sub-divided into three sections, based on trends identified in the archaeological record, which reflect not only the ecological transformations that occurred during the Archaic, but the cultural changes as well. These have been termed the Early Archaic (8,000-6,000 BP), the Middle Archaic (6,000-3,700 BP) and the Late Archaic (3,700-2,700 BP). The Late Archaic is sometimes further divided to include the Terminal Archaic period (3,000-2,700 BP).

The environmental transformations included the continued post-glacial warming trend, the extension of hardwood forests, and a decrease in glacial runoff which resulted in the creation of lakes and other small bodies of water. There was a subsequent migration of new animal and plant species into the area, while the herds of large mammals traveled north, eventually dying out. The new surroundings attracted smaller animals, such as rabbit, turkey, waterfowl, and white-tailed deer.

As the Archaic progressed and the number of plant and animal species inhabiting the area increased, the size of the human population did as well. In general, Archaic Native American sites were most often located near water sources. The abundance of food resources allowed them to occupy individual sites on a permanent or semi-permanent basis, unlike their nomadic Paleo-Indian predecessors. These individuals migrated on a seasonal basis within specific territories and consistently returned to and reoccupied the same sites.

The arrival of new food sources allowed the native human population to expand their subsistence strategies, but at the same time forced them to develop different technologies that would allow such resources to be exploited. Perhaps the most important of these developments was the advent of fishing technology, which occurred during the Middle Archaic in response to an increasing dependence on the area's marine resources. The new technology included stone hooks and net sinkers. In addition, the influx of nut- and seed-bearing foliage resulted in the development of stone mortars and pestles as well as stone axes to process plant material.

In order to successfully hunt the smaller game animals that had established themselves in the region, narrower spear points and knives were manufactured, along with weighted spear throwers. Domestic technology was advanced as well, with the development of a wider variety of hide scrapers and, later in the period, the origin of bowls made from steatite or soapstone. Tools continued to be crafted from foreign materials, indicating that there was consistent trade among Archaic Native American groups from various regions in North America throughout the Archaic.

Due in part to rising sea levels and the rapid development of the area, few Early Archaic sites have been identified in New York City. Most of these have been located on Staten Island, including Ward's Point, Richmond Hill, the H. F. Hollowell site, and the Old Place site. Sites

such as these tend to be deep and stratified and have yielded stone tools related to cooking, woodworking, and hide processing (Cantwell and Wall 2001).

There are also a few Middle Archaic sites in the region. The majority of these tend to consist of large shell middens, which could be found by major water courses such as the Hudson River, although stone points have also been found. These sites were in great danger of obliteration because of their proximity to the shrinking coastlines.

Unlike the Early and Middle periods, several Late Archaic sites have been found in the New York City area. Two notable sites, Tubby Hook and Inwood, are located at the northern end of the island of Manhattan, to the northwest of the APE. Both sites contain large shell middens, while the Inwood site also features rock shelters which were inhabited by Archaic populations. Both sites were continuously occupied for several thousand years.

In addition, many Terminal Archaic sites from all across the city have provided examples of the Orient culture, which is characterized by its long fishtail stone points and soapstone bowls. Although there are extremely elaborate Orient burial sites on eastern Long Island, none have been identified in the immediate vicinity of New York City.

#### **D. WOODLAND PERIOD (2,700 BP-AD 1500)**

The Woodland period represents a cultural revolution of sorts for the Northeast. During this time, Native Americans completely altered their way of life, focusing on a settled, agricultural lifestyle rather than one of nomadic hunting and gathering. Social rituals also begin to become visible in the archaeological record at this time. There have been many elaborate human and canine burial sites identified from this period. The first evidence of smoking has also been found—stone pipes have been uncovered at Woodland sites—and it was at this time that pottery began to be produced.

In general, there was a greater emphasis placed on composite tools during the Woodland period. While stone scrapers, knives, and hammerstones were still in use, there was an increased use of bone, shell, and wood in tool making. Furthermore, the development of bows and arrows revolutionized hunting practices. Fishing continued to be important to the local economy and wooden boats and bone hooks were often utilized (Historical Perspectives, Inc., 2005). Many tools continued to be made from imported materials, indicating that the trade networks established thousands of years earlier were still being maintained.

Pottery was introduced into Native American society early in the Woodland period and by the time of European contact in the 1500s, well-crafted and elaborately decorated pottery was being manufactured. Like the Archaic period, archaeologists have divided the Woodland period into Early, Middle, and Late sections, which differ mostly based on the style of pottery which was produced at that time. Woodland pottery had simple beginnings; the first examples were coil pots with pointed bases, which were made with grit temper. These were replaced during the Middle Woodland period by shell-tempered vessels bearing a variety of stamped and imprinted decorations. As the period drew to a close, the decorative aspect of the pottery was further augmented with the addition of intricate ornamental rims (Louis Berger Group 2004).

While Woodland-era sites across North America indicate that there was an overall shift toward full-time agriculture and permanently settled villages, sites in New York City indicate that the Native Americans there continued to hunt and forage on a part-time basis only. This was most likely due to the incredibly diverse environmental niches that could be found across the region throughout the Woodland period (Cantwell and Wall 2001, Grumet 1995). Nevertheless,

Woodland societies were considerably more sedentary than were their predecessors. There was, however, some farming of maize, beans, squash, and tobacco. The development of pottery, increasingly complex burial sites, and the presence of domesticated dogs are all consistent with sedentary societies, which have a close association with a particular territory or piece of land.

There have not been many extensive Woodland period archaeological sites identified in Manhattan. Artifacts such as pottery sherds, pipes, and stone flakes have been recovered from sites in Lower Manhattan, including the Broad Financial Center, Barclay's Bank, and 175 Water Street sites (South Street Seaport Museum artifact inventories). However, most of these artifacts were found in landfill deposits or disturbed contexts. In addition, many Woodland period sites have been investigated in the outer boroughs, including the Bronx, Brooklyn, and Queens.

In Staten Island, an extremely large and complex burial site, later dubbed "Burial Ridge," was discovered at Ward's Point. Woodland sites, like those of the Paleo-Indian and Archaic periods, were usually found alongside water courses. They were constantly occupied, although there was still some seasonal migration that may have left them unoccupied for brief periods throughout the year.

In the Bronx, within the project area, a Late Woodland-Early Contact period habitation site named "Ranachqua" was identified at Cypress Avenue between 133rd and what was formerly 130th Streets. The exact location of this site is unclear, however, as much of the area below 133rd Street was marshland and firmer terrain was created by landfilling, centuries after the Woodland Period ended. The site reportedly contained shell middens, hearths, and human interments (Bolton 1975). It was excavated by Carver and Bolton in the early 20th century and has since been filled in. The Triborough Bridge approach road now occupies the site (Boesch 1996). Grumet (1981) also identified this site and his map labels the entire area below today's East 161st Street, west of the Bronx River, as being part of *Ranachqua*, which means "the end place." He also mentions that it was most likely the location of Jonas Bronck's property, after whom the Bronx was named (1981: 43). Several Native American trails were associated with this site, including one which was maintained by European and American settlers, who called it "Morrisania and Fordham Road" (Jenkins 1912). While this road appears to align with the Edward L. Grant Highway to the north, it does not correlate to any roads within the southwestern section of the Bronx.

## **E. CONTACT PERIOD (AD 1500-1700)**

The Woodland period ended with the arrival of the first Europeans in the early 1500s. The Delaware Indians who occupied the New York region at that time spoke a dialect now referred to as Munsee. The natives of Manhattan have been traditionally referred to as the Manates or Manhattan Indians, but those who lived in the APE (both the northern portion of Manhattan and all of the Bronx) are known as the Wiechquaesgeck Indians (Grumet 1981, Cantwell and Wall 2001). In general, the Munsee lived in villages consisting of multiple longhouses and practiced some farming, but subsisted mostly on food resources obtained by hunting, gathering, and fishing (Grumet 1995).

With the introduction of European culture into the indigenous society, the way of life once maintained by the Native Americans was thoroughly and rapidly altered. European guns, glass beads, and alcohol soon became incorporated into the Native American economy, while European diseases brought about the demise of huge portions of the population.

Native Americans at first maintained the village sites they had established near water sources. As their trade with European settlers intensified, they became increasingly sedentary. However, as the European population grew and they required more land, the relationship between the two groups soured. Fierce wars broke out between the Dutch and the Indians. Having greater firepower, the Dutch quickly forced the Indians out of the region.

There are several Contact period archaeological sites that have been identified in New York City, including the Kaeser, Throgs Neck, and Old Ferry Point sites in the Bronx, however, these sites are very far from the project area. There is also the Ryder's Pond site in Brooklyn, and Ward's Point on Staten Island (Grumet 1995).

## **F. PRE-CONTACT RESOURCE SENSITIVITY WITHIN THE PROJECT AREA**

### **HARLEM RIVER**

As stated above, the earliest Native American habitation sites were located along the coastlines in the vicinity of fresh water sources. However, these sites were extremely vulnerable to being destroyed by the rising sea levels that accompanied the glacial retreats of the Paleo-Indian period. It is possible, therefore, that during the earlier periods of Native American occupation, the land which now lays at the bottom of the Harlem River was once inhabitable and may have been home to some Native American populations.

However, there is little chance that any remnants of Native American occupation of land which has since become inundated by the Harlem River would still be present today. Thousands of years of tidal movements would have washed any cultural materials far away from their original resting spots. Even if such remains were recovered, it is highly unlikely that they would still be in their original, undisturbed contexts.

The obliteration of cultural remains caused by the flow of the River would have been further augmented by the frequent dredging which was undertaken in order to make the shallow Harlem River deep enough to accommodate the area's shipping needs (Historical Perspectives, Inc., 2004). This dredging would also have disturbed the river bottom to the extent that even if cultural remains were found, there is little chance that they would be *in situ*.

Furthermore, disturbance associated with landfilling, bridge, road, and railroad construction along the shores of the Harlem River would also have disturbed or completely eliminated any potential prehistoric resources. Several borings taken to the north of the Manhattan APE, within the Harlem River Drive and running parallel to the River itself, reveal disturbance (brick, concrete, and wood remains) at depths of 4 to 8 feet. In some cases these deposits were found below the water table, which was approximately 6 to 7 feet below ground surface in most of the boring samples. Therefore, it can be surmised that due to tidal action, dredging, and landfill creation, no prehistoric resources remain within the APE between the original shorelines of both Manhattan and the Bronx (Figures 10-12).

### **MANHATTAN**

Previous archaeological studies which have concentrated on areas near the APE have concluded that it is highly unlikely that any pre-contact cultural material currently exists in this section of Manhattan (Historical Perspectives, Inc., 2004). Due to the intense development which has taken

place in and near the APE since the time of European contact, there is very little chance that prehistoric artifacts have survived.

The new marshland created by the cessation of glacial runoff was not conducive to the Native American way of life and was most often not home to their habitation sites. The Viele map of 1865 (**Figure 8**) shows that a great deal of the northern end of Manhattan was composed of marshland. However, most of the APE in Manhattan is depicted as meadowland and included a small pond which may have been a source of fresh water. Therefore, it is possible that Native American groups inhabited this area during some point in history, especially during the Paleo-Indian period, at which time the area might not have been marshy.

Maps provided in Grumet's *Native American Place Names in New York City* (1981:68) indicate that there was some Native American occupation close to the project area. These maps indicate that a Native American habitation site was located to the southeast of the APE, along the Harlem River just south of 125th Street. This is very close to the pond which is depicted on several maps (**Figures 5 and 8**) as having been located near today's 125th Street between 2nd and Third Avenues, outside of the APE. According to Grumet, this village was situated between two converging trails. To the west of these trails was a "planting area and old field" which extended above 125th Street, possibly overlapping with the southern portion of the APE. Because agriculture was not widely practiced by Native Americans until the Woodland period, it can be deduced that the sites identified by Grumet may be of the Woodland era.

Several Native American archaeological sites have been discovered at the northern tip of Manhattan, including some along the shores of the Harlem River (**Table III-1**). It is quite easy for pre-contact cultural material to be destroyed by both natural and artificial forces. With the high level of development which has occurred in the APE for the construction of roads, highways, bridges, railroad lines, and below-ground utilities, it is probable that most pre-contact cultural material has been destroyed.

## **BRONX**

Similar to the portions of the APE within Manhattan and the Harlem River, the Bronx APE has a low to moderate potential for yielding pre-contact cultural material. The coast along the Harlem River was composed of marshy tracts. It is possible that Native Americans exploited the marshes for their food resources but it is highly unlikely that marshes would have been utilized for long-term habitation. Furthermore, this area would have experienced significant disturbance due to landfilling activities which ultimately brought the southern shore of the Bronx almost into contact with neighboring Randall's Island-as well as the construction of railroad lines south of 132nd Street. The construction of the Bruckner Expressway, which bisects the project area, would also have caused a great amount of disturbance to the site.

The portions of the Bronx APE closest to the Harlem River were composed of marshland (**Figures 5, 6, and 8**). Although at least 3 small water courses extended between the fast land and the marshes, the area in general is uncharacteristic of Native American habitation sites because of the dense layer of marshland which separated the river and dry land.

Not many prehistoric archaeological sites have been identified by the New York State Museum for this portion of the Bronx, although many have been identified for locations to the northwest (**Table III-1**). Only two were identified in a Landmarks Preservation Commission prehistoric sensitivity assessment compiled by Eugene Boesch (1996), a burial site more than ½ mile north



**Table III-1**  
**Select Native American Archaeological Sites Within ½ mile of the Project Area**

Site Name	Site Type	NYSM #	NYSOPRHP #	Location	Date	Source(s)
Conykeekst	Campsite	4064	-----	Manhattan shore of the Harlem River, near approached to the Triborough Bridge	Prehistoric	Arthur C. Parker (1920) (inventoried as ACP-NYRK)  Grumet (1981)
-----	Village	5475	-----	Manhattan; Broad area south of 133rd Street	Prehistoric	
Ranachqua	Village: middens, hearths, burials	4539 5474 5475	A005-01-0027 A005-01-0031	Bronx: Cypress Avenue between 130th and 133rd Streets	Late Woodland- Early contact	Boesch (1996)
-----	Traces of occupation	7248	-----	Manhattan shore of the Harlem River, in the vicinity of Park Avenue	Prehistoric	-----
-----	Fishing Place/ Traces of Occupation	-----	-----	Manhattan; Avenue A between East 120th and 121st Streets	Prehistoric	Riker (1904)  Bolton (1922)
Old Ferry Point	-----	-----	-----	Bronx	Historic	Grumet (1995)
<b>Sources:</b> Historical Perspectives (2004), (2005b), Grumet (1995), Cantwell and Wall (2001)						

of the APE, and the site of *Ranachqua*, described above. While the *Ranachqua* site did contain human burials, it is highly unlikely that either human or cultural remains could still be present within this portion of the project area.

The LPC survey notes that the village site was excavated in the early 20th century and that it "has been filled" (Boesch 1996: Appendix C, #31). The site has also suffered disturbance from the construction of the Triborough Bridge approach road and from more than a century of railroad construction and use. A 1981 letter from the New York State Department of Parks and Recreation to Energy and Environmental Analysts, Inc., concluded that the site "...may have been largely or completely destroyed by construction of the Triboro [sic] Bridge" (Energy and Environmental Analysts, Inc., 1981). Therefore, if any Native American materials or remains are



### Con Edison Proposed Feeder Line - Proposed Parkview Area Substation

still present at the site, they would have to be very deeply buried to have survived such disturbance. The proposed feeder lines which will run through the area would be placed in existing ducts at relatively shallow depths, so there is little chance that any prehistoric materials will be disturbed. If, for some reason, they are not placed in existing ducts, they will still be placed within the depths of existing utilities.

Boesch's report also indicates that areas of the Bronx south and west of the Major Deegan/Bruckner Expressway have a high potential for the recovery of Native American cultural materials. However, it also mentions that several previous cultural resource investigations in the area-including both Phase 1A documentary studies and Phase 1B archaeological investigations -- have determined that the area is too disturbed to yield and has not yielded any significant Native American cultural material (Boesch 1996). In conclusion, with the construction of the railroads and highways previously mentioned combined with the filling in of neighboring marshes and waterways, there is very little chance of finding remnants from the prehistoric age in this section of the Bronx. \*

## A. INTRODUCTION

While New Amsterdam flourished at the southern tip of Manhattan from its inception in the first half of the 17th century, the areas to the north remained relatively isolated. Small farms and communities were spread across the landscape, but population density continued to be low. Because the city of New York was largely confined to the southern tip of Manhattan during the 17th and 18th centuries, there are very few maps in existence which accurately depict northern Manhattan or the outer boroughs. The introduction of railroads into northern Manhattan and the southwest Bronx allowed the northern part of the Island to grow at a rapid pace. The first railroads were established in the 1840s and by the time the Interborough Rapid Transit subway lines entered the area at the turn of the 20th century, the last obstacles separating them from the city proper were removed. On January 1, 1874, New York City officially annexed the Bronx. The advent of the automobile, however, resulted in the decline of the railroad industry and the construction of highways and roads redefined the area once again (Columbia University Historical Preservation Program 2003).

## B. HISTORIC CONTEXT—MANHATTAN

One of the first maps to depict the New York region, Vinckeboon's "Manatus Map" of 1639 (Figure 4) shows—although not to scale—the entire APE. While it does not go into great detail, this map indicates that a Dutch *bouwerie*, or farm, entitled "Zeegendel," existed near the Manhattan portion of the project area. Kouwenhoven (1972) translates this name as "Valley of Blessing" and states that it was the farm of Jockem Pietersen Kuyster. The map's inaccuracy makes it difficult to determine the exact location of this farm, but Kouwenhoven places it north of present-day 124th Street, and east of Lexington Avenue (1972: 37), very close to the project area. Part of the farmland, if not the house itself, may have been located within the project area.

The next reasonably accurate map of northern Manhattan to be published was the Sauthier map of 1777 (not pictured). This map shows that the project area was composed mostly of meadows, with a marshy ridge bordering the Harlem River. It also shows that the two Indian trails mentioned in the previous chapter and depicted in Grumet (1981) had been turned into roads. One of these seems to follow the line of Saint Nicholas Avenue, but the other does not appear to have a modern corollary.

The Sauthier map also portrays the Harlem Reformed Dutch Church, which was located to the southeast of the project area. This church at one time included a cemetery at modern 126th Street and First Avenue, also outside of the APE. Other maps indicate that this cemetery was located along the original shoreline of the Harlem River near the southwest corner of what is now 126th Street and First Avenue. The cemetery does not reach 127th Street nor is it ever depicted as being adjacent to or within the project area (Historical Perspectives, Inc 2004b).

This map also includes a small cluster of structures located along the road which would become Saint Nicholas Avenue, but they appear to fall just outside the project area.<sup>1</sup> Like the Sauthier map, the Kitchin map of 1781 (not pictured) labels the area to the north of the APE "Snake Hill." However, the Kitchin map indicates that there was a Revolutionary War military barracks in the vicinity of the clustered structures shown on Sauthier's map. It is unclear if the structures represented by Sauthier and the military barracks on the Kitchin map are one and the same.

The 1782 British Headquarters Map (not pictured) is similar to the Sauthier map, except that it shows that more farms, structures, and roads had been laid out by that time. Again, it appears that these are outside of the project area.<sup>2</sup>

The Bridges' Plan (Figure 5)—which depicts the projected street grid designed and implemented by the City's Commissioners between 1807 and 1811—is the first to portray a street configuration which is nearly identical to today's layout. This map, which is considerably more accurate than all those mentioned previously, also shows a small pond or lake near the southeast corner of 125th Street and Third Avenue, outside the project area. This map also shows that several new buildings had been constructed throughout the area. Although these new structures were sparse in the vicinity of the project area, several buildings were in the direct path of the proposed feeder line routes. One of these was located in the roadbed of 128th Street just west of Third Avenue (in the path of Route 1) and another was located in the center of Second Avenue, midway between 127th and 126th Streets (in the path of Route 2). Four structures are shown in the area of Block 1778 where the proposed new substation will be constructed. One is isolated and is situated at an angle along the roadside near the block's midpoint. Half of this building extends into the roadbed of Park Avenue. The other three structures are clumped together slightly northeast of the first building. Labeled "Benson," these structures are partially located within the block, and extend all the way across the street to the northern border of 130th Street.

Two other structures were located in the roadbed of Third Avenue between 128th and 127th Streets, the northernmost of which is close to 126th Street, but do not appear to enter the project area. This is also true of a structure labeled "Phoenix," which borders on 127th Street between First and Second Avenues, but does not enter the roadbed.

The Bridges map also depicts four historic roads which, before being replaced by the current street grid, stretched across the APE. One of these roads was the Post Road which ran near Third Avenue and connected to the Harlem Bridge. This was a major artery which connected Manhattan to the Bronx throughout the colonial and early American periods.

By the time the Colton map of 1836 was published (Figure 6), the community within and around the APE had grown considerably. Many structures had been built alongside—but not within—the roads adjacent to the project area; on the southwest corners of Park Avenue and 129th Street and 128th Street and Third Avenue as well as along the north side of 126th Street between Park and Third Avenues.

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<sup>1</sup> The Bridges' Plan of 1807-1811 (Figure 5) shows former roads superimposed over the current street grid. Using that as a general guide, it appears that these structures were located south of 124th Street and West of Third Avenue, outside the project area.

<sup>2</sup> Using the same reasoning, these all appear to be located southeast of the project area.

In addition, there were four large ornamental gardens near the project area at this time, one located in the area bounded by 126th and 125th Streets and First and Second Avenues, another between 129th and 127th Streets and Second and Third Avenues. The proposed feeder lines will bisect both. The third garden was located between 127th and 125th Streets and Third and Park Avenues, outside the APE. The fourth garden was bounded by 129th and 132nd Streets, Park Avenue, and the approximate line of what would later become Lexington Avenue; covering the site of the proposed Parkview substation. This garden surrounds a structure which is angled across today's 130th Street east of Park Avenue. It is unclear if this structure enters the project area.

No other structures appear in the street beds, although trees are shown as obstructing the roadways in several locations throughout the project area. Two new churches had been constructed by this time, located in the area between the two proposed feeder lines. These were a Methodist church on the north side of 125th Street between Park and Third Avenues and an Episcopal church two blocks to the north, between 127th and 128th Streets. The latter is shown on the Colton map with what appears to be a church yard and possible tombstones around it. This does not appear as a cemetery on any subsequent maps, nor has any information been uncovered which indicates that a cemetery ever existed there at all, so this may be the result of a mistake on the part of the mapmaker. It is not in the direct path of either of the feeder lines, but Route 1 does run adjacent to its northern border along 128th Street.

Perhaps the most significant landscape alteration featured in this map is the installation of railroad tracks down the length of Park Avenue. The New York and Harlem Line ran from the northern end of Manhattan to City Hall. In 1832, construction began on the railroad's southern end and workers began to lay the iron double tracks which were "bolted not to wooden ties, but to foot-square granite blocks, which...rose several inches above the ground" (Burrows and Wallace 1999: 565). The tracks near the Harlem River were completed by 1837. The trains were powered by steam engines along the northern part of the route and by horses below 27th Street.

These railroad tracks appear on all subsequent historic maps and are labeled on current Sanborn insurance maps as "Elevated Structure of the NY Central and Hudson River RR Co." This remains to this day one of the city's major rail lines (**Figure 15-2**). Elevated trains became popular for their ability to transport people quickly as well as for the amount of space they saved. The Third Avenue elevated train extended south of 129th Street by 1878 and the Second Avenue line was open by 1880 (Burrows and Wallace 1999).

Dripps' map of 1851 (**Figure 7**) shows that the number of structures adjacent to the project area had increased significantly in the time since Colton's map was drawn. More structures were built along Park Avenue between 130th and 126th Streets and along both the north and south sides of 126th Street. 128th Street remained mostly undeveloped with the exception of a few structures built as a result of the redevelopment of one of the ornamental gardens that was once east of Third Avenue. The area was turning into a true community with the construction of churches, train depots, hotels, a jail, lumber yards, stables, and factories.

This map shows that the Episcopal Church, mentioned above, had been replaced by two churches - Saint Andrew's Church covering the western quarter of the block, and an unnamed Baptist church adjacent to it. The yard surrounding Saint Andrew's Church is shown on this map as being bordered by many trees, but neither church exhibits any evidence of a graveyard.

The Dripps map also portrays two structures angled across the southeast corner of 127th Street and Second Avenue. Portions of each building extend into the roadbeds on both Second Avenue

and 127th Street within the project area. There are no traces of a structure or garden in the vicinity of the proposed substation, which is depicted here as an empty lot adjacent to "United India Rubber Co.'s Mills." It is interesting to note that the footprint of a small, isolated marshy tract—portrayed in the 1865 Viele map (**Figure 8**)—which straddled 128th Street between Park and Third Avenues is visible in the layout of the lots east of the Baptist church.

This map also shows a significant amount of "made land" created by filling in sections of the Harlem River. No previous maps give any indication that landfilling along the river had taken place in the project area before that time. The 1836 Colton Map indicates that in addition to the Harlem Bridge, a dock was constructed at the end of a road (which no longer exists) at approximately 126th Street between First Avenue and Avenue A. However, the 1851 map does show that a wharf or pier was constructed in the middle of the block bounded by 129th and 128th Streets and Second and Third Avenues. A narrow, "jetty-like projection" (Historical Perspectives, Inc 2003) is also portrayed as jutting into the river north of 127th Street and East of Second Avenue.

No additional landfill was created by 1865, when the Viele map was published. This map does indicate, however, that several sewer lines had been installed which cross the project area in two places. One of these sewers ran down 129th Street between Fifth and Third Avenues. A portion of this line is in the path of feeder Route 1. The second sewer runs the length of Third Avenue. The projected paths of Routes 1 and 2 cross this line at 128th and 126th Streets, respectively.

Throughout the early to middle 19th century, the Harlem area of Manhattan continued to be sparsely occupied. The combination of the establishment of horsecar lines along Second and Third Avenues in the 1850s and Boss Tweed's rise to the top of the Tammany political machine brought about Harlem's rapid transformation into an industrial and residential area. Tweed, then Commissioner of the Department of Public Works, had sewer, water, and gas lines placed in a "new underground network as a coordinated, unified system, in sharp contrast to the downtown jumble" (Burrows and Wallace 1999: 930). Beginning in 1873, roads were cut through the area as well; avenues were all 100 feet wide and most streets were cut at a width of at least 50 feet. Major thoroughways were the same size as avenues (Burrows and Wallace 1999). This established a neat street grid complete with functioning utilities in the Harlem area. This pre-fabricated neighborhood brought in a substantial number of residents.

The sudden influx of people into the area prompted further development to accommodate Harlem's new population. The 1885 Robinson (not pictured) and 1891 Bromley Atlases (**Figure 10**) show that an extensive amount of landfilling had occurred by that time, pushing the entire Harlem River shoreline out by about one block. This map also shows that Block 1778, Lot 1, the site of the future Parkview substation, had been converted into lots and partially developed. Three structures occupied the block's southwestern corner at this time: a 1 story brick structure, a 2 story wooden barn or shed, and a one story wooden building.

Nearly all the lots surrounding the streets within the project area had been developed as well, although none of the structures extended into the roads. The only structures in the direct path of the feeder routes are those associated with the Knickerbocker Ice Company (only labeled as such in the Robinson Atlas) which occupied the eastern end of the block bounded by 127th and 128th Streets, Second Avenue, and the Harlem River.

The Bromley Atlas also indicates that 6 inch water lines and sewers had been installed in almost every street and 12 inch water mains and sewers in almost every avenue in the entire area. There were several exceptions, including a portion of Park Avenue, south of 129th Street which had a

6 inch water main and a section of 126th Street, for which a water pipe diameter was not given. It is assumed that this was a 6 inch pipe; however, 125th Street contained a 20 inch pipe in addition to a 6 inch pipe, so it is not entirely clear what the exact size of the 126th Street line was. As Lexington Avenue was cut later<sup>1</sup>, it did not contain a sewer line at that time and only had a single water line running south of 128th Street.

Throughout the 20th century, the area's growth continued. By 1924, Interborough Rapid Transit lines connected lower Manhattan with 125th Street. The line was connected to 149th Street in the Bronx later that same year (Columbia University Historic Preservation Program 2003). The area is still a major hub for subway transportation, and the 4 and 5 trains diverge from the 6 train at the 125th street stop along Lexington Avenue, sending two subway routes directly through the project area.

However, by the 1920s automobiles had been invented, and in 1922 the Harlem River Speedway was constructed. Once cars became increasingly popular, Harlem River Drive, a major highway traveling along the shore of the River, was constructed in 1957 (Columbia University Historic Preservation Program 2003). When coupled with the construction of the Triborough Bridge in the 1920s and 30s, upper Manhattan had become fully integrated into the extensive transportation network which enveloped the surrounding areas.

### C. HISTORIC CONTEXT—THE BRONX

Although he was not the first settler in the area, the first notable Bronx inhabitant was Jonas Bronck (c.1600-1643), for whom the borough was named. Bronck purchased a large tract of land from Native Americans in 1639. This tract encompassed all the land south of approximately 161st Street and west of the Bronx River. His home is depicted as number 43 on the Manatus Map of 1639 (Figure 4). Kouwenhoven places this homestead on Southern [Bruckner] Boulevard at Willis Avenue. Others have suggested that was south of the intersection of Willis Avenue and 132nd Street (Historical Perspectives 2004a). Another farm, labeled number 44, was that of Pieter Andriessen and was located to the east of Bronck's.

Bronck's descendents sold the property to Richard Morris, who built himself a new home near Bronck's original homestead (Historical Perspectives, Inc., 2004a). The Morris home appears on a map drawn in 1737<sup>2</sup> by Mark Tiddeman (not pictured). It appears that the original home was burned by British soldiers during the Revolutionary War (Historical Perspectives, Inc., 2004a), but a new one may have been built by 1789 (Energy and Environmental Analysts, Inc 1981). References have been made to the Morris family's cemetery being defaced by British soldiers during the Revolutionary War (Historical Perspectives, Inc., 2004a: 7). The location of this cemetery is unknown, and it is not clear if it was in the vicinity of the Morris family mansions, and therefore the project area. No other information about this cemetery could be identified.

The Bronx remained largely vacant throughout the city's early development. Although individual farms were scattered throughout the area, there were no real communities until the 19th century. Because of this, there are not many maps which portray the borough before that

<sup>1</sup> It was established to facilitate access to Grammercy Park in the 1830's (Burrows and Wallace 1999), but maps do not show it entering the project area until the later 19th century

<sup>2</sup> This date is questionable. The map is in the collection of the New York Public Library, which lists "1737?" as the date of creation.



time. Those that do are most often inaccurate. For example, the 1781 Kitchin map indicates that there were some structures located in the vicinity of the project area; although the map's poor scaling prevents these structures from being accurately located. They are, however, in roughly the same position as the Bronck and Morris homesteads as featured on other maps.

The Bridges' Plan of 1807-1811 (**Figure 5**), thoroughly recreates the landscape of Manhattan, but only depicts the Bronx in a limited capacity. The area is depicted as still having a marshy belt running across the Harlem River shore. Only two structures are labeled in the vicinity of the project area. The westernmost is labeled, "Col. Morris" and the easternmost, "Gov. Morris." These do not appear to be within the project area, although the feeder lines do pass nearby.

The buildings labeled on the Bridges map as belonging to Colonel and Gouverneur Morris also appear unlabeled on the Colton map of 1836 (**Figure 6**). They are shown as having been surrounded by trees and ornamental gardens. Again, these do not appear to be within the project area, although the feeder lines do pass nearby. Another structure, surrounded by an elaborate garden, appears to the north, outside the project area.

The 1836 map also indicates that three streams ran through the area, two extending from the Harlem River and the third from the Harlem Kill, between the southern shore of the Bronx and the northern shore of Randalls Island. The third, known as Mill Brook, was the largest and connected to a small inlet that bisected the southwest Bronx. It is also depicted on the 1781 Kitchin map (not pictured) and the Beers Atlas of 1868 (**Figure 9**) in which it appears to extend very far inland.

Although by the first half of the 19th century, the populations of the other boroughs had grown significantly, the Bronx was still relatively isolated. By that time, the Harlem Bridge was accessible. It connected Manhattan's Third Avenue with the "Boston Turnpike" or "Colonel's Road to Boston." However, it was far enough from the city to be ineffective for daily travel. Nevertheless, with the establishment of railroad lines that connected the area to the city proper, the now-accessible Bronx quickly grew. A bridge was constructed in 1840 to allow the New York and Harlem Railroad to continue on through the Bronx towards White Plains and other locations in upstate New York and Connecticut (Burrows and Wallace 1999). This bridge, which is outside the project area, is depicted on the 1865 Viele map (**Figure 8**). The Railroad was open for business by 1842.

The railroad lines allowed for the Bronx' rapid growth to continue, something which is evident in the 1868 Beers Atlas (**Figure 9**). This map shows that a street grid very similar to the one that is found today had been laid out. In the vicinity of the project area, 130th through 140th Streets had been laid out between Lincoln and Saint Anne's Avenues. It is unclear however, which streets are real or proposed, as several are depicted as crossing through Mill Brook, which had not yet been filled in.

According to Beers' Atlas, the Mill Brook appears to be a still-active waterway, while the two smaller streams which had once been nearby had been filled in. However, another water course is depicted to the east of Mill Brook, next to a road named "Canal Avenue." It is unclear if this was a man-made canal or if it was simply a natural waterway that had not been recorded on previous maps. Canal Avenue appears to follow the line of today's Willow Avenue. If this is the case, then the "canal" was east of the project area, but arced towards it between 133rd and 131st Streets.

In addition, Beers' map shows that clusters of structures were constructed throughout the southwest Bronx. The land near the Morris' homes, which makes up a large portion of the

project area, was still fairly unoccupied, with only 12 structures (including one labeled, "Guvernueur Morris Res.") located south of 135th Street. Only one of these is clearly adjacent to the APE, on the northeast corner of 134th Street and Morris [possibly along the line of today's Brown or Brook] Avenue. None appear to be within the project area, although the feeder lines do pass nearby.

Another cluster of structures is located in a neighborhood labeled by Beers as "Wilton." There are approximately 18 structures almost entirely contained within the two blocks bounded by Saint Ann's Avenue, 138th Street, 136th Street, and Home [approximately along the line of Jackson] Avenue. One of these is a long building which covers about half of the block of 138th Street between the two avenues mentioned above. The projected path of feeder route 1 extends through this structure and possibly one or more of the others as well.

The map also shows two railroad lines, the New York and Harlem Railroad on the west and the Spuyten Duyvil and Port Morris (now the Port Morris branch of Metro North) running on the east. The latter, which was chartered in 1867 and constructed in 1872 (Historical Perspectives 2004a), runs very close to the location of the Mott Haven substation which is currently under construction. The bulk of the development, in terms of both structures and roads, occurs along or near these railroad lines. With the exception of the small portion noted above, no railroad lines entered the project area at this time.

Railroads continued to gain importance to this part of the Bronx throughout the 19th century. On an 1890 map of railroad lines (including steam, cable, and horse powered trains) from the collection of the New York Public Library (not pictured), many rail lines are shown connecting the various regions of the southwest Bronx. The most significant of these new additions was a massive depot constructed along the shore of the Harlem River, east of Lincoln Avenue and south of 132nd Street, for the New York, New Haven, and Hartford Railroad. A large number of interconnecting tracks for steam-powered lines merged into a single route along the line of what was 131st Street, just east of Willis Avenue. This line intersects the projected trajectories of both feeder lines west of Saint Anne's Avenue, and continues adjacent to the project area without entering it again. The depot is also crossed by the Second Avenue or Suburban Elevated Railroad which crosses into the Bronx over a bridge from Second Avenue and continues northward midway between Alexander and Willis Avenues. This line is intersected by the proposed feeder Route 1, but not Route 2.

Other rail lines which were constructed in and near the project area included two cable car lines, one of which ran across the Third Avenue Bridge from Manhattan and extended down Southern Boulevard to a point north of the APE and the other, which extended down 138th Street and entered the APE at the intersection of Cypress and Willow Aves. The former runs underneath the location of the Mott Haven substation, as does the Spuyten Duyvil line mentioned above. This triangular area was also the location of a small stream which led out to the Long Island Sound.

With the increased accessibility brought to the Bronx by these railroad installations, the area began to become fully populated towards the end of the 19th century. As shown in Robinson's 1885 atlas of New York City (not pictured), most of the southwest Bronx had been divided into blocks and lots. The blocks to the west of Saint Anne's Avenue do appear to be more developed than those to the east. Some landfilling had occurred as well. The shoreline was extended to add both dockspace outside the project area as well as additional space for the railroads within it. The Mill Brook was also partially filled in and had been contained within a sewer under Brook Avenue (Energy and Environmental Analysts, Inc 1981).

By this time, many structures were constructed alongside the streets which make up the routes of the proposed feeder lines. None of these structures entered the streets themselves, with a few notable exceptions. As several streets had not yet been established—this map shows them as proposed—some structures were located in their paths. The most intrusive of these is a T-shaped building, labeled “John J. Crane,” which extended into Trinity [now Cypress] Avenue between 138th Street and what would become 139th Street. Other structures existed along the line of Trinity Avenue between 138th and 136th Streets. The section of Willow Avenue between 138th and 136th Streets is shown as having been divided into lots, but no structures are shown there. Finally, feeder line Route 2 crosses through an area shown in this map as having been occupied by a long rectangular structure parallel to the shoreline.

The long rectangular structure is shown to have been replaced by two thin wooden platforms in the Bromley atlas of 1893 (Figure 11). This atlas, however, depicts only the 4 tracks associated with the Second Avenue rail line, and the tangle of rail lines which were part of the Harlem River Railroad is no longer apparent. It does, however, show that a station house and offices for the Harlem line were constructed, even though it does not show the railroad itself. While there are certainly fewer tracks running through the area currently, there have most likely always been railroad lines running through this portion of the Bronx.

The 1893 atlas does not indicate that a great deal of development had occurred since the publication of Robinson’s Atlas in 1885. Some additional landfilling had extended the shoreline south of 130th Street and east of Willis Avenue, causing a boat shop to become landlocked. This may represent projected development out to a previously defined bulkhead line, as the landfilling is not consistent amongst all the atlas’ plates. A few additional structures were constructed here and there along the boundaries of the project area, including three more structures in the projected line of Cypress Avenue between 138th and 136th Streets. Unlike the Robinson atlas, this map shows that Willow Avenue now extends through to 138th Street. In addition, although Trinity [Cypress] Avenue is shown as having been opened, the 2-story John J. Crane house is still depicted in the middle of the street.

After the Interborough Rapid Transit lines connected the Bronx and Manhattan in 1904, the Bronx continued to expand. The 6 train currently runs east-west from Third Avenue at 138th Street and then turns north to the east of Cypress Avenue. It therefore crosses through the northeast portion of the project area.

The advent of the automobile affected the Bronx just as much as it did Manhattan. The Major Deegan Expressway which runs along the western side of the Bronx was constructed in 1955 and extended in 1956 (Columbia University Historic Preservation Program 2003). The Triborough Bridge connects to this highway, in the center of the project area. These newest constructions ensured that, along with the continued use of the nearby railroad tracks, the portion of the Bronx which includes the APE would remain one of New York City’s most important transportation hubs.

## **D. CONFIGURATION OF STREETS**

A comparison of current Sanborn insurance maps with 19th century atlases and topographical maps<sup>1</sup> indicates that the street layout of both Manhattan and the Bronx has been relatively stable since the late 1800s. With several exceptions, most roads have remained unchanged for more

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<sup>1</sup> Road widths were not generally recorded on maps until this time.

than a century. It can be inferred, therefore, that because these roads were constructed relatively late and in a more uniform fashion (as compared to lower Manhattan), significant changes to the street grid might never have occurred.

In Manhattan, the biggest street alterations which affect the project area involve the cutting of Lexington Avenue and the expansion/contraction of roads to accommodate construction of the Triborough Bridge. Lexington Avenue was established as, and remains to this day, a 75 foot wide road. As mentioned previously, it was cut through the area between Park and Third Avenues in the mid to late 19th century. Since the 1891 Bromley Atlas was drawn, Second Avenue has been reduced from 100 to 75 feet, most likely due to the construction of the roads leading to the bridge. In addition, 128th Street was increased from 60 to 80 feet wide east of Third Avenue.

In the Bronx, all of the streets are the same sizes that they were in the late 19th century except for 134th and 135th Streets, which were both altered during construction of the Bruckner Expressway. While 134th Street was originally 60 feet wide—although there was some variation in the width as maps show that it measured 59.41 and 60.8 feet at different intersections—it currently measures between 45 and 80 feet. 135th Street was also 60 feet wide, but now measures between 60 and 65 feet. The Bruckner expressway, which was constructed between the two, has a current width of 250 feet.

Unlike Manhattan, the Bronx has had many former streets closed or redeveloped to allow for development related to railroad functions. Whereas today most of the roads running north-south in the Bronx (the avenues) do not extend past 132nd Street, at one time all of those west of and including Brook Avenue reached the shores of the Harlem River. The 1885 Robinson Atlas shows that a short street, Lewis Place, existed south of 132nd Street between Brook and St. Anne's Avenues. This street, as well as all the other roads south of 132nd and west of Brook Avenue, is marked by dashed lines. It is not clear if this is meant to indicate that the streets are proposed or that they had already been demolished. A similar technique is used on the 1893 Bromley Atlas to mark Gouveneur Place (Figure 12), which was located south of 132nd Street just east of St Anne's Avenue. Current maps show that no open roads currently run through the entire area south of 132nd Street.

## **E. HISTORIC ARCHAEOLOGICAL SENSITIVITY**

### **HARLEM RIVER**

The feeder lines will be installed at a minimum depth of 10 feet within the bed of the Harlem River. This study has indicated that no historic resources were located within the path of the proposed feeder lines in the river bed. In addition, the Office of Coast Survey, Automated Wreck and Obstruction Information System (<http://nauticalcharts.noaa.gov/hsd/hso-3.htm>) and the National Oceanic and Atmospheric Administration (NOAA) Nautical Chart 274-2 (1973) reported no submerged wrecks anywhere in the vicinity of the proposed feeder line construction work. Therefore we have concluded that there will be no adverse effects to historic resources in the river.

It is possible, however, that remnants of early to late 19th century bulkheads and landfill retaining devices might still be extant along the Bronx and Manhattan shorelines. The proposed feeder lines in these areas are expected to be installed in below grade ducts at a depth of approximately 5 feet. However, tidal action and extensive dredging in and around the river, as

well as the construction of rail yards and highway and bridge approach roads would likely have destroyed or severely impacted these resources. Therefore, it is not expected that this work will impact any historic resources that might once have been present along the Hudson River shoreline.

## **MANHATTAN**

Like its precontact resources, Manhattan's historic archaeological materials within the APE are most likely severely disturbed. The construction of railroad lines along all the major avenues as well as the installation of subways beneath Lexington Avenue and an elevated line along Park Avenue would have done significant damage to any cultural resources in the soils beneath. Furthermore, the rapid construction of streets—including the Triborough Bridge access roads and the Harlem River Drive—and installation of utilities that occurred in the area in the mid-1800s would also have impacted or destroyed the original contexts of any cultural resources which may have been found there.

Because the current street plan appears to have been consistently maintained for a significant amount of time, there is even less likelihood that significant cultural finds would be found within the streetbeds. However, there were several structures which were located directly in the streets (Figure 3).

While intensive disturbance has made finding building foundations/shaft features unlikely for most of the project area, some consideration must be made for areas which have historically seen little development. These are areas where structures intruded into the streets of Manhattan (Figure 3) within the APE:

1. The northeast corner of Second Avenue and 127th Street is currently the location of the Harlem River Park and Triborough Bridge access roads. In the 19th century, this area was covered with ornamental gardens and large structures. This is the one part of the Manhattan APE where the feeder lines do not run directly within the streetbeds. In their 2003 Phase 1A Documentary Study of the proposed Second Avenue subway line, Historical Perspectives, Inc noted that this area has the potential for yielding shaft features associated with the homes which once occupied the land. The 1891 Bromley Atlas (Figure 10) indicates that this block once contained several large wood structures. These are pictured on the 1885 Robinson Atlas (not illustrated) as part of the Knickerbocker Ice Factory and are designated as stables or sheds. As such, we have concluded that there is little likelihood that they had basements or associated shaft features. Therefore, it is not expected that any subsurface remains of these buildings would have remained.
2. Dripps' 1851 map shows two other structures located in the vicinity of today's Harlem River Park. These were located at the corner of Second Avenue and 127th Street, near the intersection of those streets and partially sitting in the streets—one structure in 127 St. and one in Second Avenue. It is possible that these small structures (Figures 3 and 7), located on the property of D.P. Ingraham, were barns or carriage houses associated with the much larger manse at the center of the property (outside the project area). Nevertheless, the possibility exists that the small structures were dwellings, and since the direction in which they were facing cannot be determined, it is possible that there were shaft features (privies, wells, cisterns) associated with these possible dwellings. These could have been located in what are the present-day streetbeds. By 1823, privy vaults were required to be at least five feet deep. Even in urban centers, where space was at a premium, privy vaults were rarely more than 10 feet in depth. Cisterns, built to hold collected rainwater and often close to the



rear of the residence, were not built at the same depths as wells. However it is not clear which is the front and which the rear of these structures. Since the proposed feeder lines will go into existing ducts at a depth of approximately 5 feet, it is likely that the tops of any shaft features, should they be extant, would have been severely impacted by previous utility work. Therefore we have concluded that there will be no adverse impacts to archaeological resources in this area due to the proposed construction work.

3. The site of the proposed Parkview Substation building is located in an area which in 1836 contained ornamental gardens and possible structures. These were replaced in the latter part of the century by 2 wooden structures (one was a 2-story barn or shed) and two brick structures of 1-story and 3-stories respectively. Although it is possible that shaft features were extant, the 20 century construction of the 6-story building—and its associated basement—would have severely impacted any shaft features (**Figure 15-1**). Therefore, we have concluded that the construction of the Parkview Substation will have no adverse effects on any archaeological resources.

## BRONX

Although the area south of 132nd Street was once home to the Bronck and Morris families, more than 150 years of railroad construction and related use would most likely have destroyed all remnants of those homes and their associated features, if any existed. Besides, the wildly speculative maps of the time period place these structures in different areas at different times. The odds that any of the structures associated with the Bronck or Morris Families was located in the project APE is extremely low.

The Bronx was sparsely populated for centuries with the bulk of its development occurring after the streets had already been laid out. However, several structures existed in areas that have since become streets (**Figure 3**). For example, a number of historic structures were located on present-day Cypress Avenue between E.136th and E. 139th Streets. However, the No. 6 subway line runs east-west across 138th Street to a point east of Cypress Avenue. Any extant building foundations or shaft features in these areas would have been destroyed by subway construction. In the area along Cypress Avenue roughly between E. 136 and E. 138th Streets, the structures consist of a 2-story wood building and a wooden barn or shed (**Figure 12**). North of 138th Street along the line of Cypress Avenue was the 2-story wooden building of John J. Crane. These buildings were probably demolished when Cypress Avenue was cut through sometime after 1893<sup>1</sup>. It is possible that building foundations or shaft features associated with the larger structure might have existed at one time but cutting and grading activities for the new street, coupled with the previous utility work and subway construction would have substantially impacted any archaeological resources.

Furthermore, Route 2 impacts the area near the former southern end of Alexander Avenue, along the shore of the Harlem River. This area was once the location of a wooden “coal bin” or shed, as depicted on the 1893 Bromley Atlas (**Figure 11**), used for railroad purposes. This structure would not have had a basement and therefore it is not expected that there would be any extant

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<sup>1</sup> The 1893 Bromley Atlas is somewhat confusing with regards to whether or not Cypress Avenue—then called Trinity Avenue—had been opened by that time. The map marks the road with a dashed line, but unlike other such roads, it is colored to resemble what the atlas’ legend refers to as an “open or confirmed street.”



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subsurface remains. This is especially true since it is in the location of the heavily disturbed railroad yards.

The construction of the Triborough Bridge access roads and the Major Deegan and Bruckner Expressways can also be assumed to have destroyed all potential cultural material along the trajectories of Cypress Avenue and 134th and 135th Streets west of Cypress.

Due to the fact that most work is being conducted in the street beds in preexisting ducts to a depth of 5 feet, there is little likelihood that archaeological resources, should they exist, would be impacted by the proposed construction. Therefore this report concludes that there are NO ADVERSE AFFECTS to historic subsurface archaeological resources in the Bronx. \*

**A. INTRODUCTION**

As part of the development process, the preceding Archaeological Assessment was prepared according to New York Archaeological Council Standards (NYAC 2000). The project involves the installation of 138 Kv electrical feeder lines connecting the Consolidated Edison Company of New York's Mott Haven and proposed Parkview Substations. The Mott Haven Substation, which is currently being constructed, is located on a lot in the Bronx bounded by Bruckner Boulevard to the east, Southern Boulevard to the west, and East 144th Street to the north (Bronx Block 2599, Lot 5). The proposed Parkview Area Substation, which would be constructed as part of this project, is located at 1901 Park Avenue in Manhattan, on the western portion of the block bounded by East 130th Street on the north, East 129th Street to the south, Park Avenue to the west, and Lexington Avenue to the east (Manhattan Block 1778, Lot 1). A total of four feeders in two duct banks, utilizing two separate routes, would be installed.

The goal of this study was to identify known and inventoried archaeological sites in the vicinity of the project site and to review historic maps in order to identify changes in topographical features through time. It was also intended to document historic development along the feeder line routes, especially development that occurred prior to construction of the streetbeds or which might have altered the trajectories of the streets.

At the time of European contact, the project site was bisected by the Harlem River. It is possible that in the ancient past, when sea levels were much lower, the land which is currently under the River was exposed and may have been the site of Native American occupation. However, since the area has since become submerged, the acts of both man and nature would have destroyed any cultural remains left behind by those individuals.

In the later periods of the area's Native American occupation, the shores on either side of the River were characterized by thick tracts of marsh punctuated by small streams and brooks. While Native Americans probably would not have established habitation sites in the marshy areas, they very well may have occupied the neighboring meadows. Two such sites have been documented. One was a village site called "Conykeekst," situated along the Manhattan shore of the Harlem River south of 125th Street, outside of the project area. The other, "Ranachqua," a village site which at one time contained human interments, was located near Cypress Avenue between 130th and 133rd Street in the Bronx.

Both of those areas have suffered significant disturbance during the construction of railroads, the cutting of streets, the installation of underground utilities, and from the development associated with the city's urbanization. Furthermore, no previous archaeological studies in the area have discovered any pre-contact cultural material within the Bronx portion of the project area. Therefore, the project site is not sensitive for precontact period resources that would have research potential and which would meet the criteria necessary for inclusion on the National Register of Historic Places (NRHP). It is also unlikely that any potential Native American skeletal remains subject to the conditions of the Native American Graves Protection and

Repatriation Act (NAGPRA) would be impacted since the entire area has been severely disturbed by 19th and 20th century development.

Nor is there significant potential for recovering archaeological resources from the historic period. The area remained sparsely inhabited until the early 19th century, with only a collection of small farms, ornamental gardens, and scattered houses marking the landscape. In many instances, structures were constructed in areas which have since become streetbeds (Figure 3).

However, beginning in the 1840s, a series of railroad lines, including the New York and Harlem, Spuyten Duyvil and Port Morris, Second Avenue elevated, and Third Avenue elevated lines connected the Bronx and Harlem to lower Manhattan. This made possible a daily commute between lower Manhattan, where New York City was still restricted, with points northward. At the same time, the city government, in a bid to populate northern Manhattan, laid out streets complete with sewer, water, and gas utilities, creating instant neighborhoods. At this time, people began to flood into the area, and residential industrial buildings were constructed throughout the project area. As the population grew larger, public transportation in the form of steam, cable, and horse powered trains was augmented. In later years, the Interborough Rapid Transit (subway) lines were constructed in the area, disturbing massive tracts of land in a very short period of time.

In addition, the Harlem River was frequently dredged to provide a deep enough waterway to allow for the shipping industry to thrive in the area. The soils and sediments which were dredged from the river bottom were then used to fill in the marshes along the shore as well as to make land which extended the shoreline of both boroughs.

With the invention of the automobile and its subsequent popularity, major highways were also constructed. The Harlem River Drive was constructed along the shore of Manhattan while the Major Deegan and Bruckner Expressways were built in the Bronx. The Triborough Bridge, a massive undertaking which linked Manhattan, the Bronx, and Queens, was also constructed within the project area. The access roads for this bridge cover the area north of 127th Street and east of Second Avenue in Manhattan. However, this site, which is currently a park, was the location of 19th and 20th century structures. It has been suggested that this area may have archaeological potential for shaft features (privies, wells, cisterns) which may have been associated with those structures (Historical Perspectives, Inc 2003). However, we have concluded that there is little archaeological potential for subsurface features to have survived in this area of the ConEd APE.

There were many forces, both natural and artificial, which affected – and destroyed – much of the historical archaeological materials within the project area. Even those structures which may have been located in the streetbeds and which might have had shaft features associated with them at one time are probably highly disturbed. Furthermore, the proposed feeder lines are to be installed, when possible, within existing ducts. These ducts are located in areas that have already been disturbed, meaning that no additional archaeological resources would be impacted. The proposed Parkview Substation will replace the currently existing 6-story building on Block 1778, Lot 1. That building has a basement which covers the entire project site. The proposed structure will be smaller than the existing structure; therefore no additional excavation is expected in association with the proposed substation. Any prehistoric or historic resources would have already been disturbed during the construction of the initial basement. Therefore, the project is not expected to disturb any prehistoric or historic archaeological resources.

## B. RECOMMENDATIONS

For many parts of the project area, the original topographic setting, i.e. marshland, was atypical of Native American habitation sites and therefore would not be considered to be archaeologically sensitive. In addition, due to the intense amount of development in the region, including landfilling, dredging, and the construction of railroads, streets, highways, bridges, and structures, it is highly unlikely that any Native American archaeological materials would be found in the area.

Two Native American villages did exist within or near the project area: "Conykeekst" and "Ranachqua." The latter, while it once contained human interments, is in an area which has been severely disturbed by 19th and 20th century development. Previous archaeological reports have determined that there are no traces of this site, or of any prehistoric cultural materials throughout the Bronx project area (Boesch 1996, Energy and Environmental Analysts 1981).

With respect to lower Manhattan, the Harlem and Bronx areas of the project site underwent gentrification at a relatively late date. While most development occurred after streets had already been cut, there were several instances where structures were located in the direct path of roads which had yet to be constructed (**Figure 3**). However, due to the impact of landfilling, dredging, and the construction of railroads, streets, highways, bridges, and structures, it is highly unlikely that any historic archaeological materials would be found in the area.

Due to the fact that most work is being conducted in the street beds in preexisting ducts to a depth of 5 feet and that the entire project area has been severely disturbed, there is little likelihood that archaeological resources, should they exist, would be impacted by the proposed construction. **Therefore this report concludes that there are NO ADVERSE EFFECTS to subsurface pre-contact or historic archaeological resources in the project area. Therefore, no further study, research, or testing is recommended to evaluate the potential for precontact, nor is it necessary for historic archaeological sources.**

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- 1915-1927      *The Iconography of Manhattan Island, 1498-1909* Volumes I-VI. New York: Robert Dodd.

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U.S.G.S. Topographic Map, Central Park Quadrangle

Viele, Egbert Ludovicus

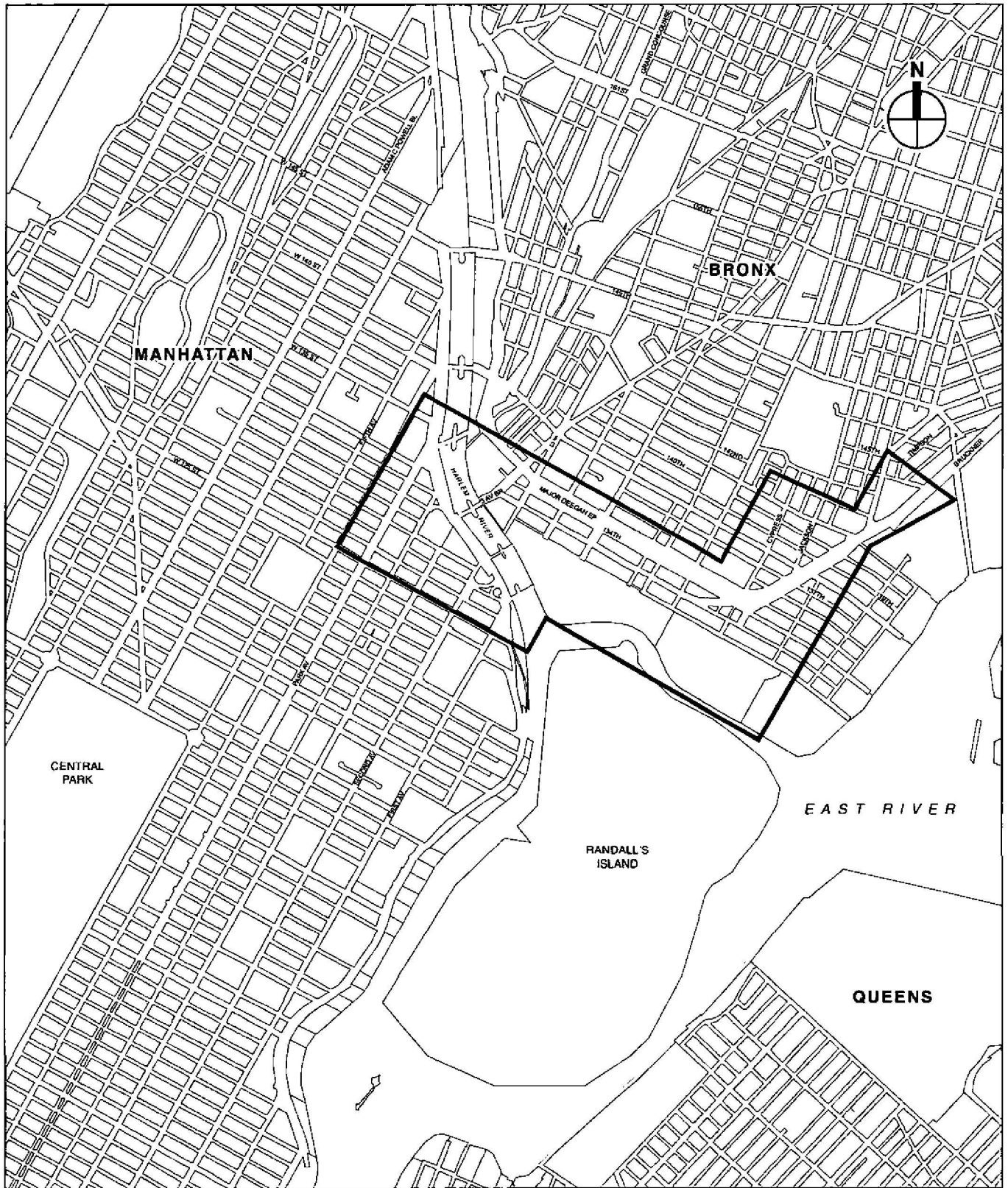
1865      *Sanitary & Topographical Map of the City and Island of New York.* [David Rumsey Digital Map Collection]

Vinckeboons, Joan

1639      *Manatvs gelegen op de Noot [sic] Rivier.* [The Manatus Map]. In the collection of the Library of Congress Geography and Map Division Washington, D.C.

\*

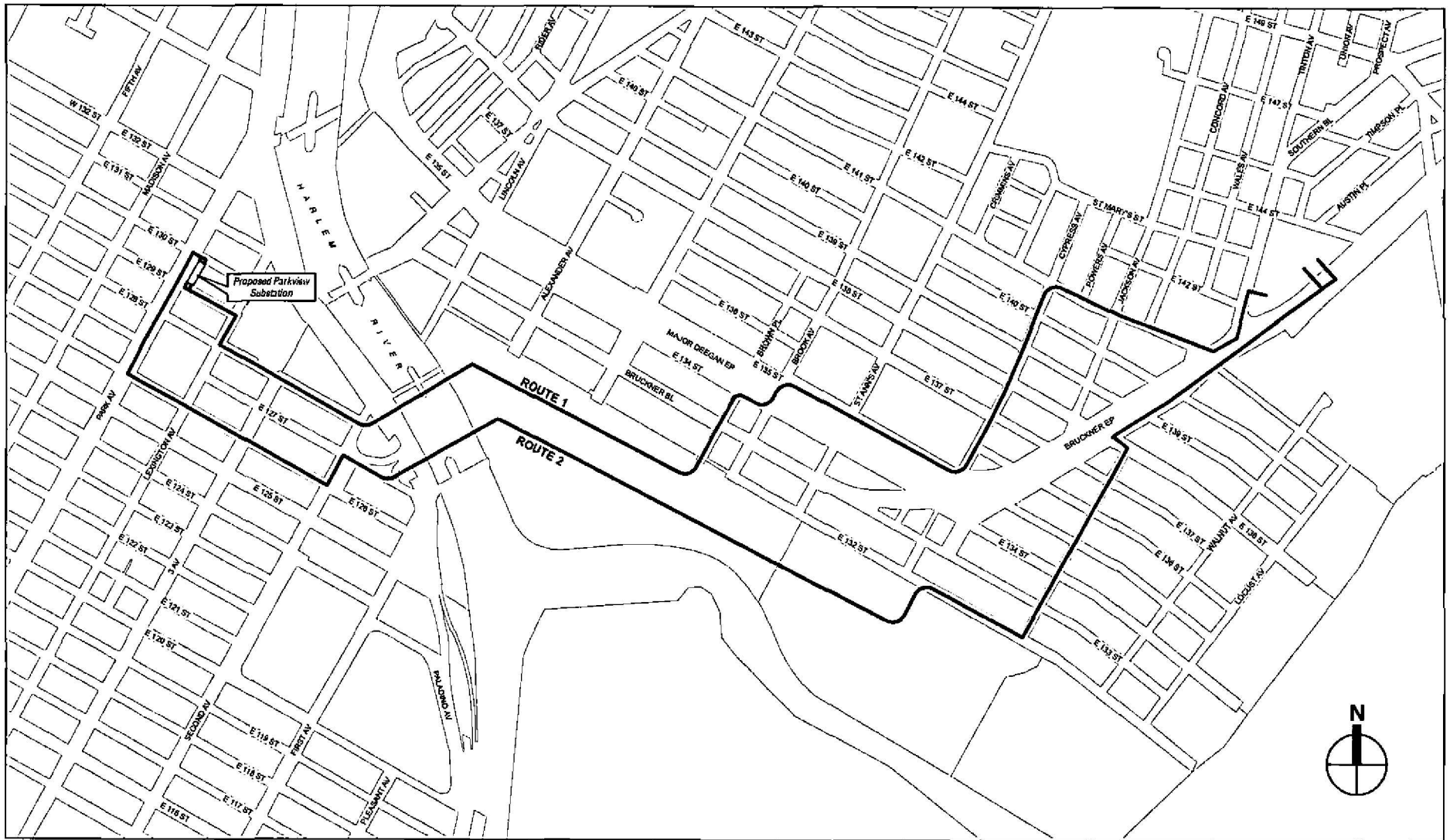
## Figures



— Project Area

0 1 MILE  
SCALE

Project Location  
USGS Central Park Quadrangle  
Figure 1

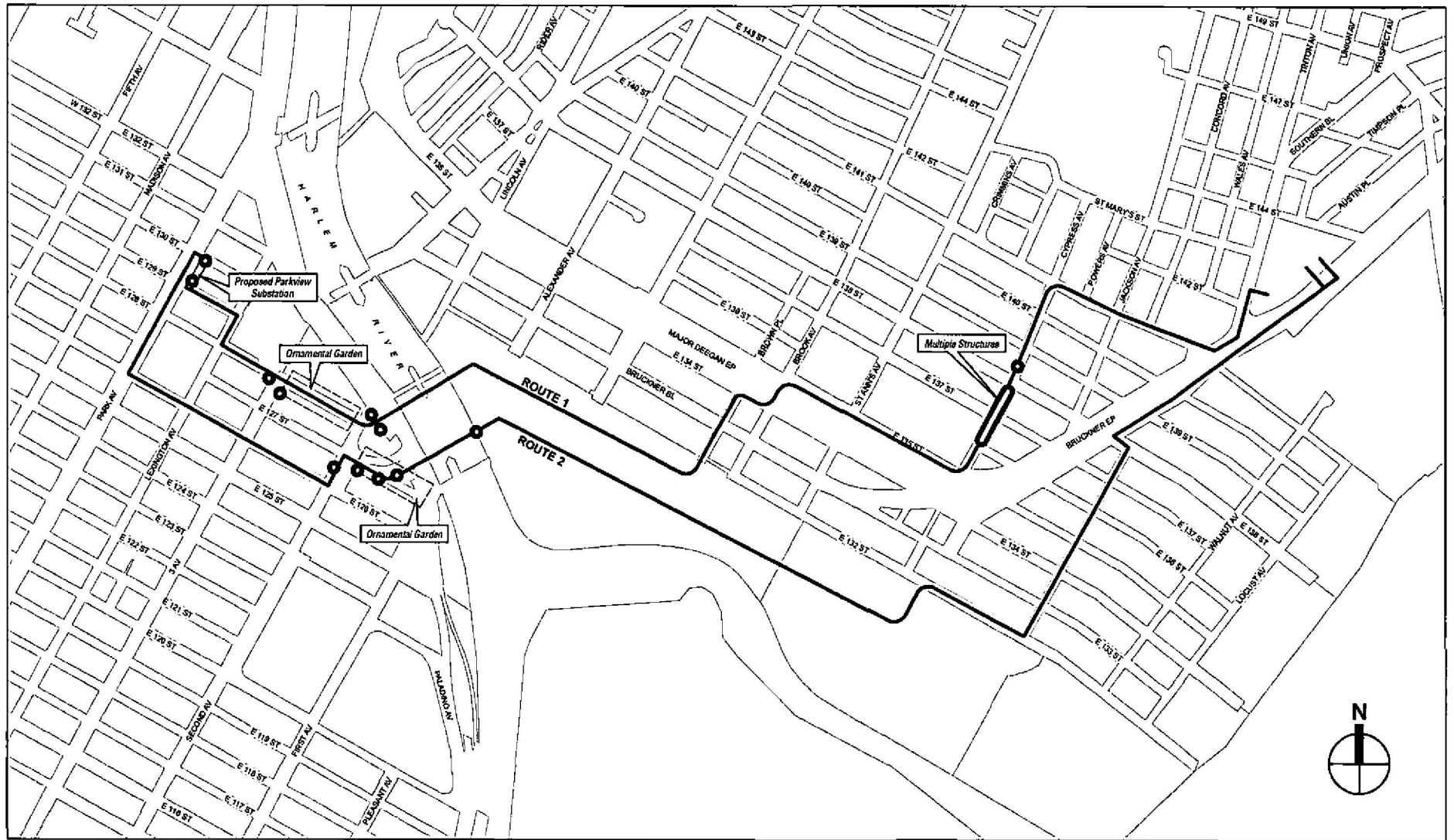


— Proposed Feeder Routes

0 400 1000 FEET  
SCALE

Location of proposed feeder routes and substation

Figure 2

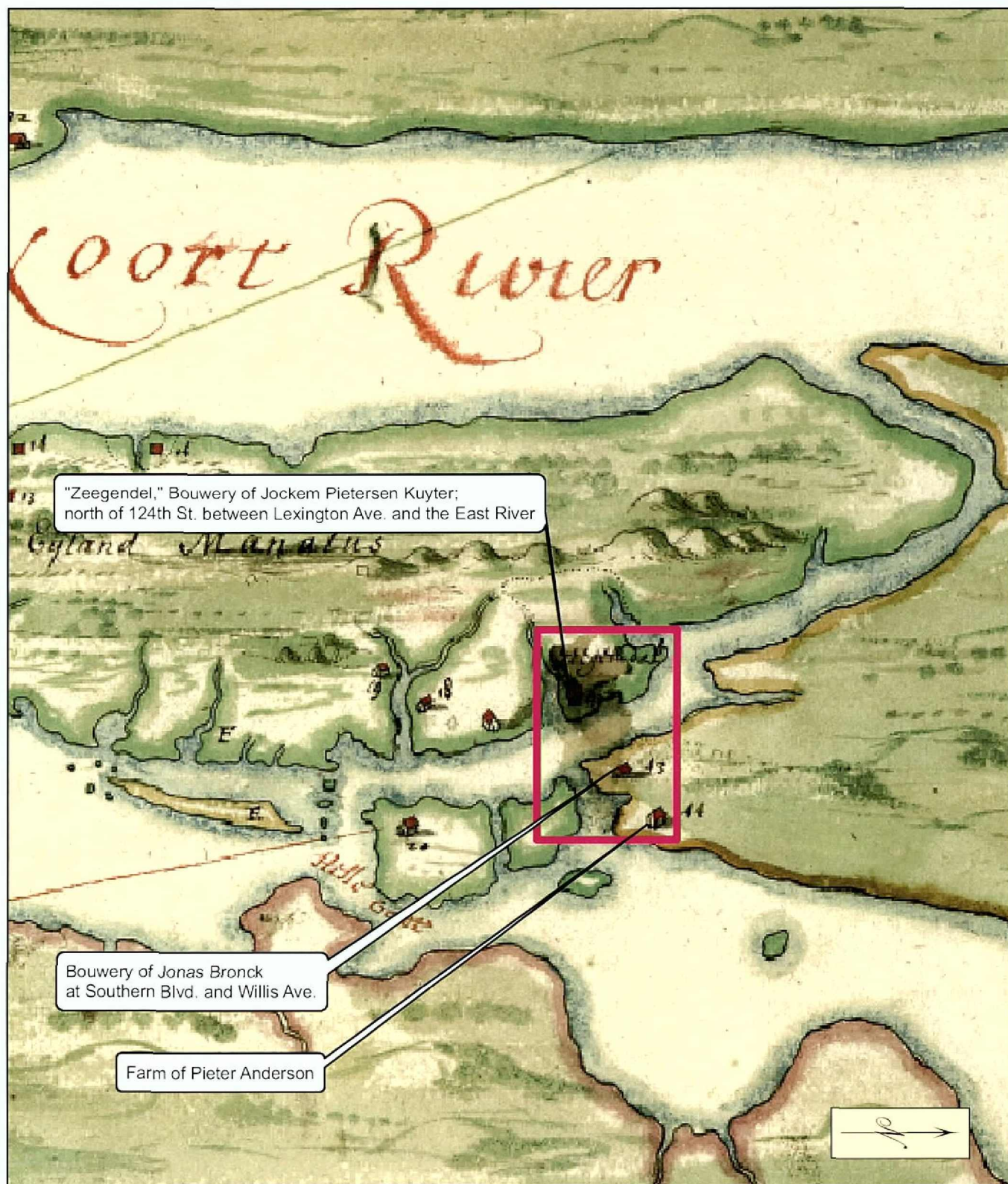


— Proposed Feeder Routes  
 ● Structures

0 400 1000 FEET  
 SCALE

Approximate locations of structures which at one time  
 may have entered the streetbed





Approximate boundaries of area of interest

**"The Manatus Map", 1639**

Figure 4



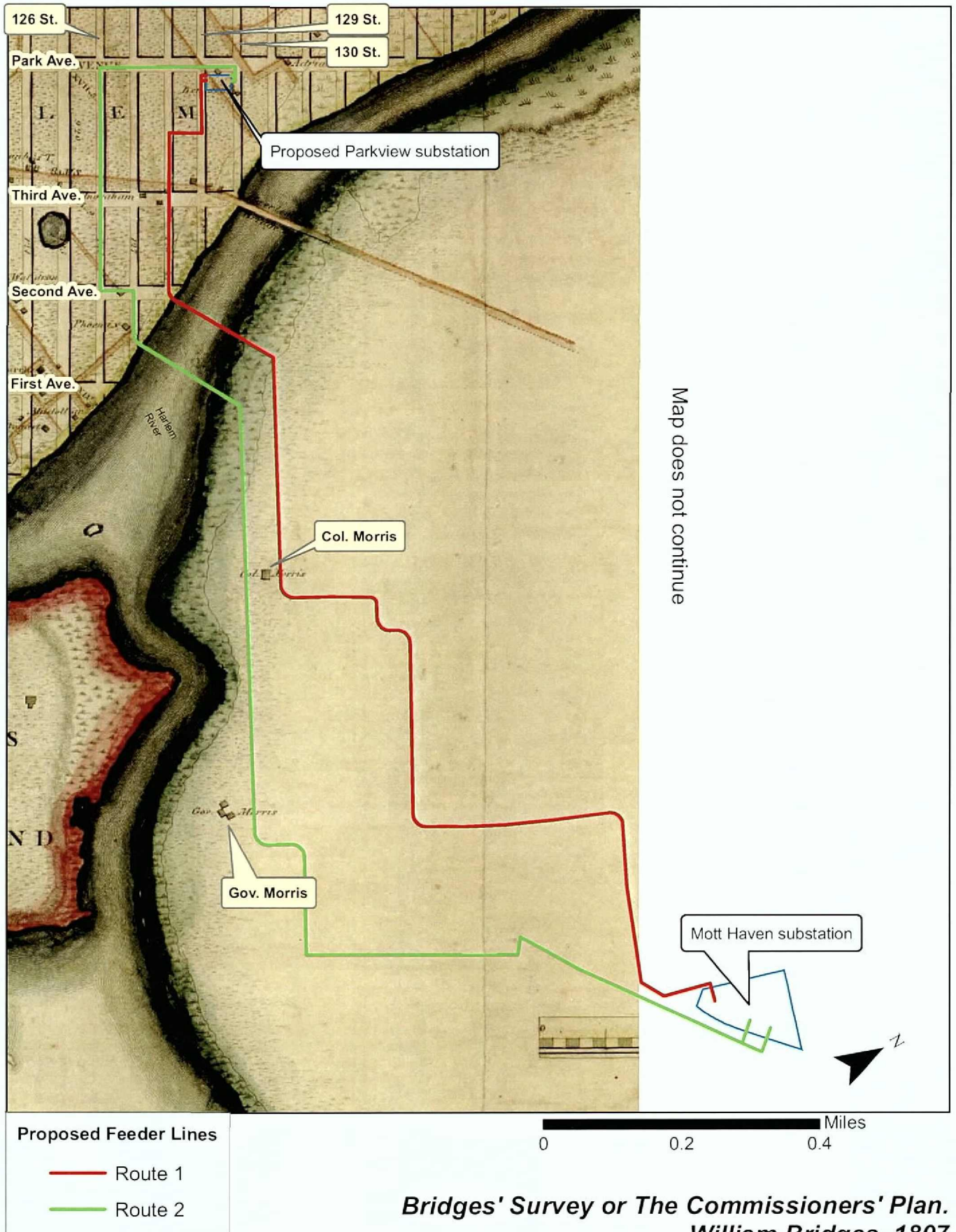
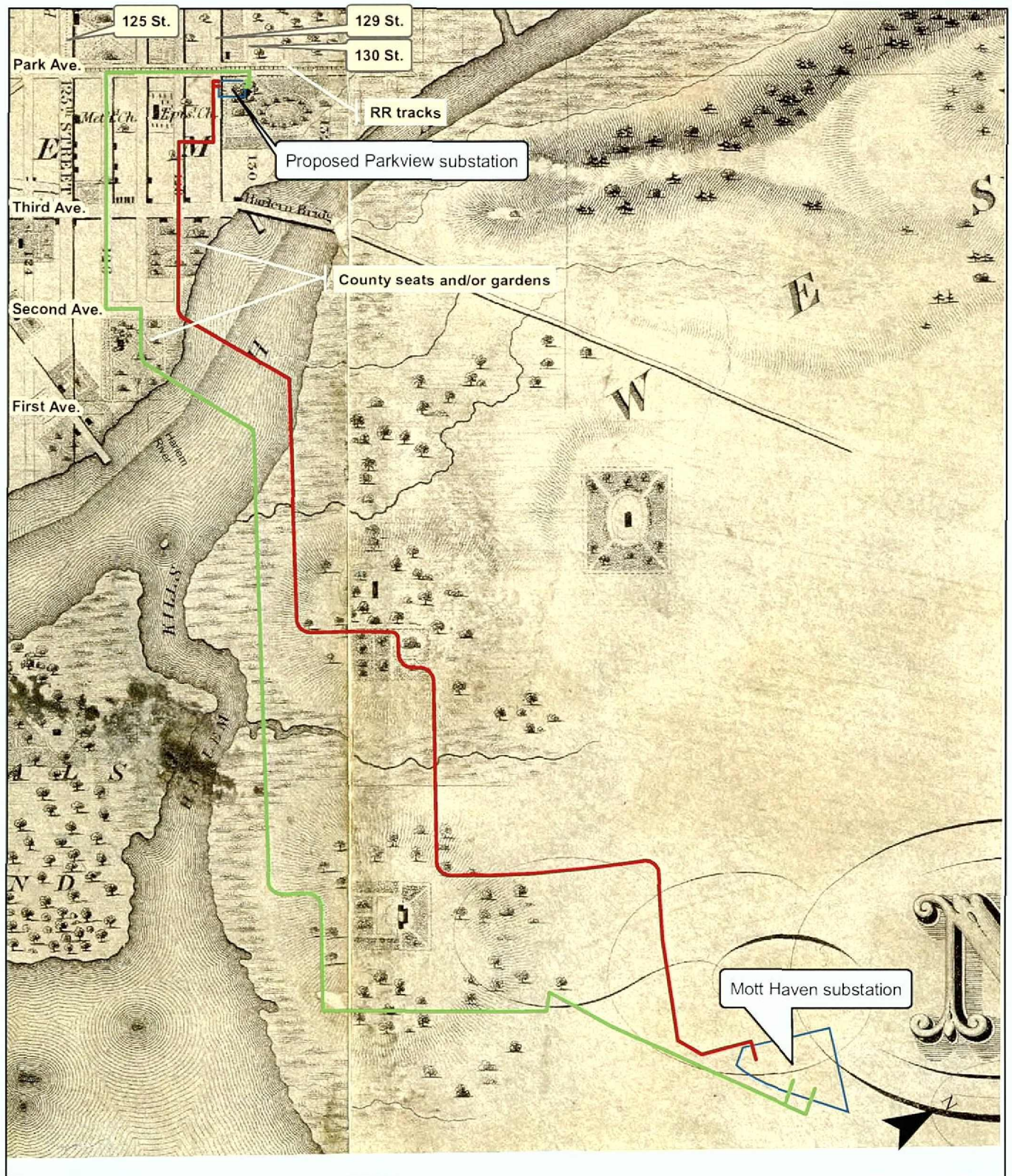


Figure 5

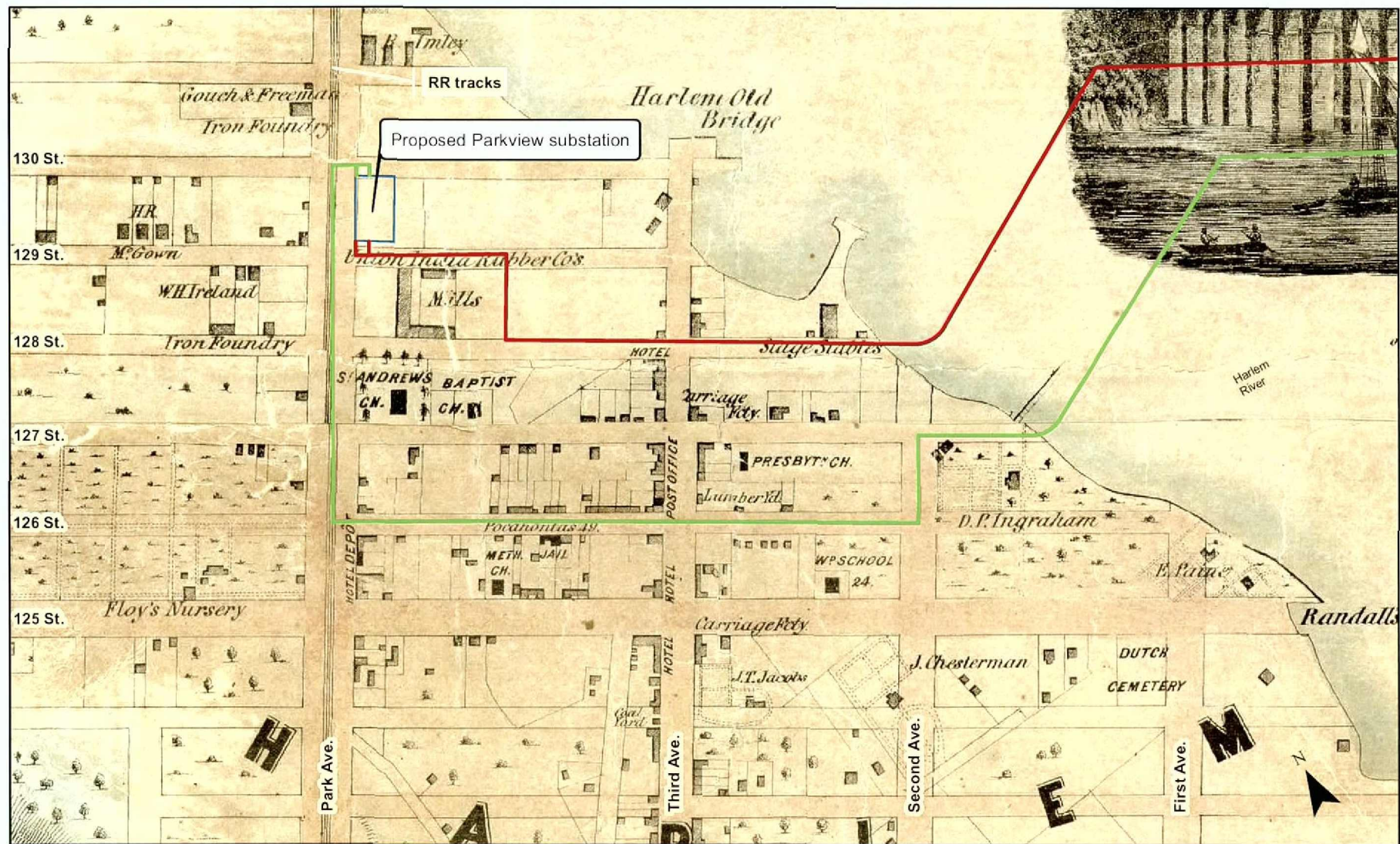




*Colton's Topographical Map of the City and County of New York and the Adjacent Country. 1836*

Figure 6





**Proposed Feeder Lines**

- Route 1
- Route 2

**Map of That Portion of the City and County of New York North of 50th St.  
 Surveyed & Drawn by R. A. Jones, C. E.  
 Published by M. Dripps. 1851**

Figure 7



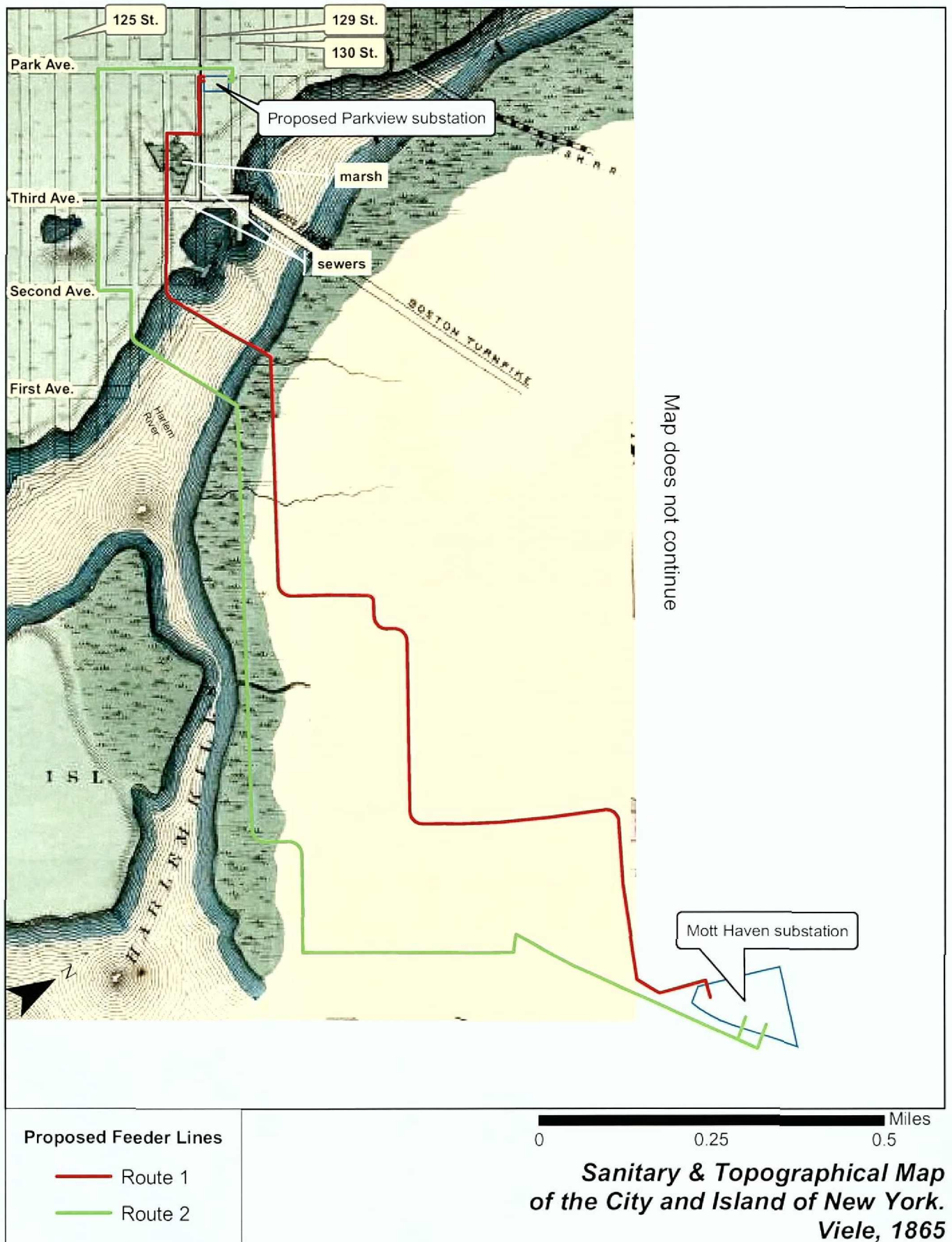
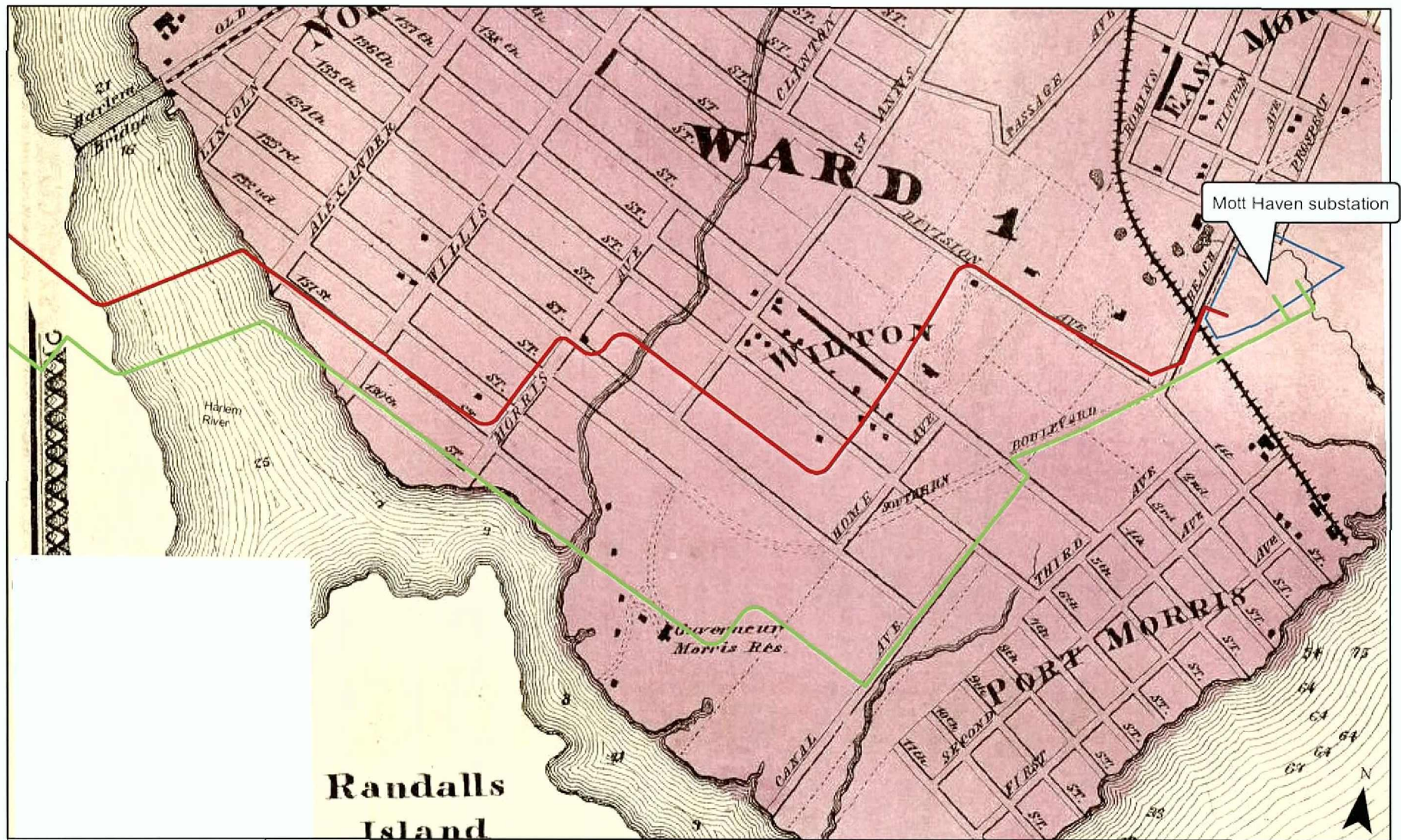


Figure 8





Mott Haven substation

Proposed Feeder Lines

— Route 1

— Route 2

*Atlas of New York and Vicinity, Plate 8*  
by F. W. Beers, 1868

Figure 9



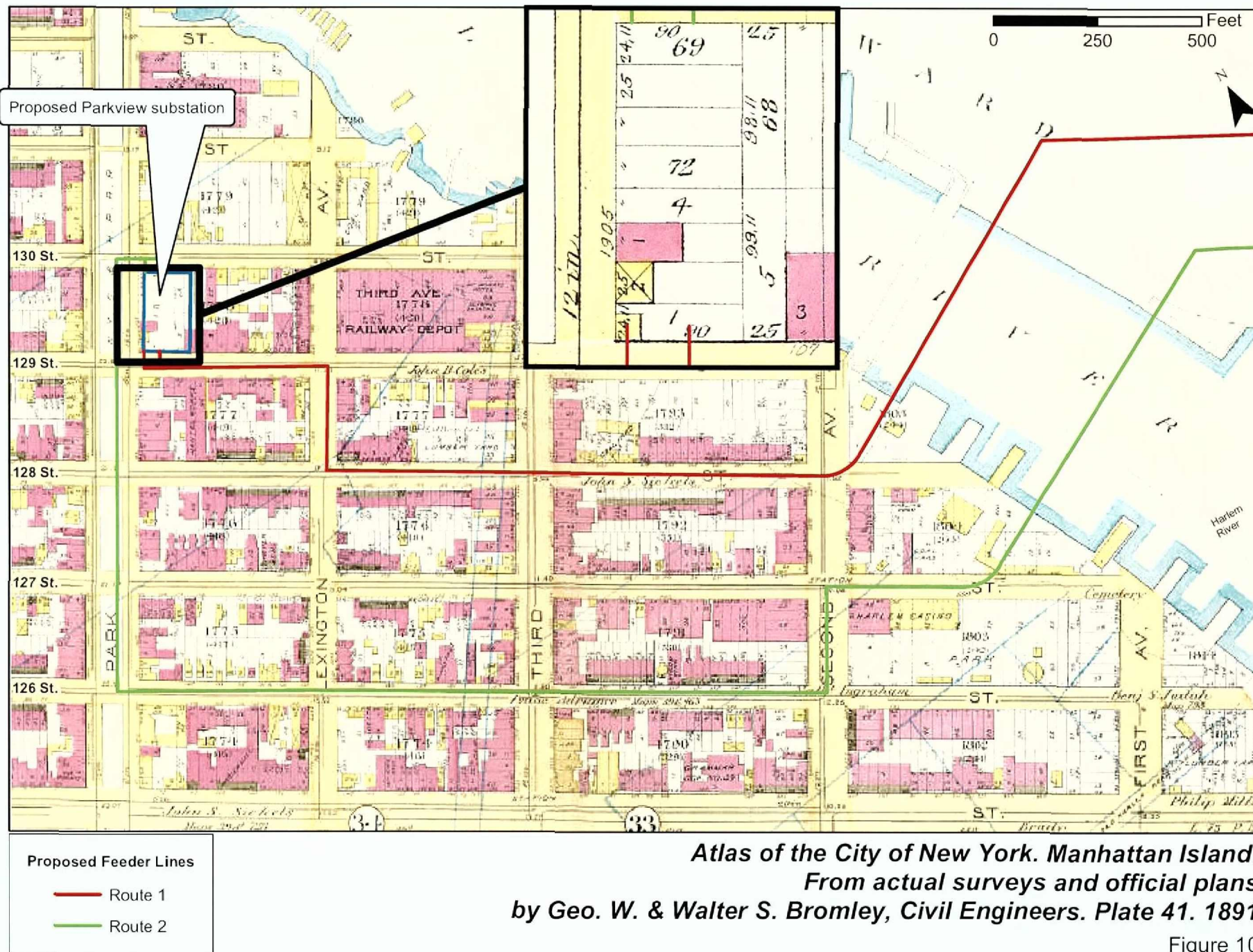
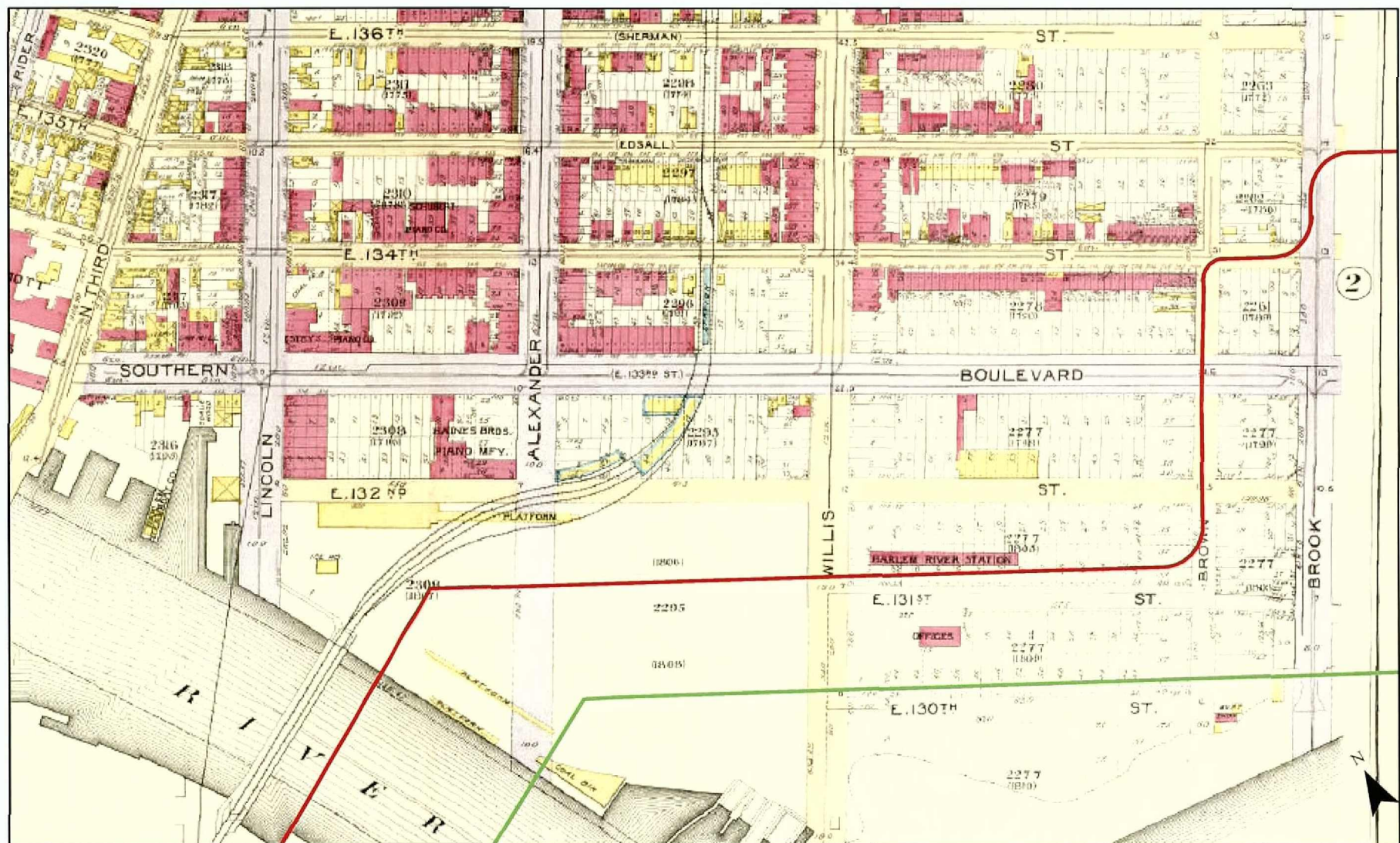


Figure 10





Proposed Feeder Lines

- Route 1
- Route 2

*Atlas of the City of New York. 23rd & 24th Wards.  
From actual surveys and official plans  
by Geo. W. & Walter S. Bromley, Civil Engineers. Plate 1. 1893*

Figure 11



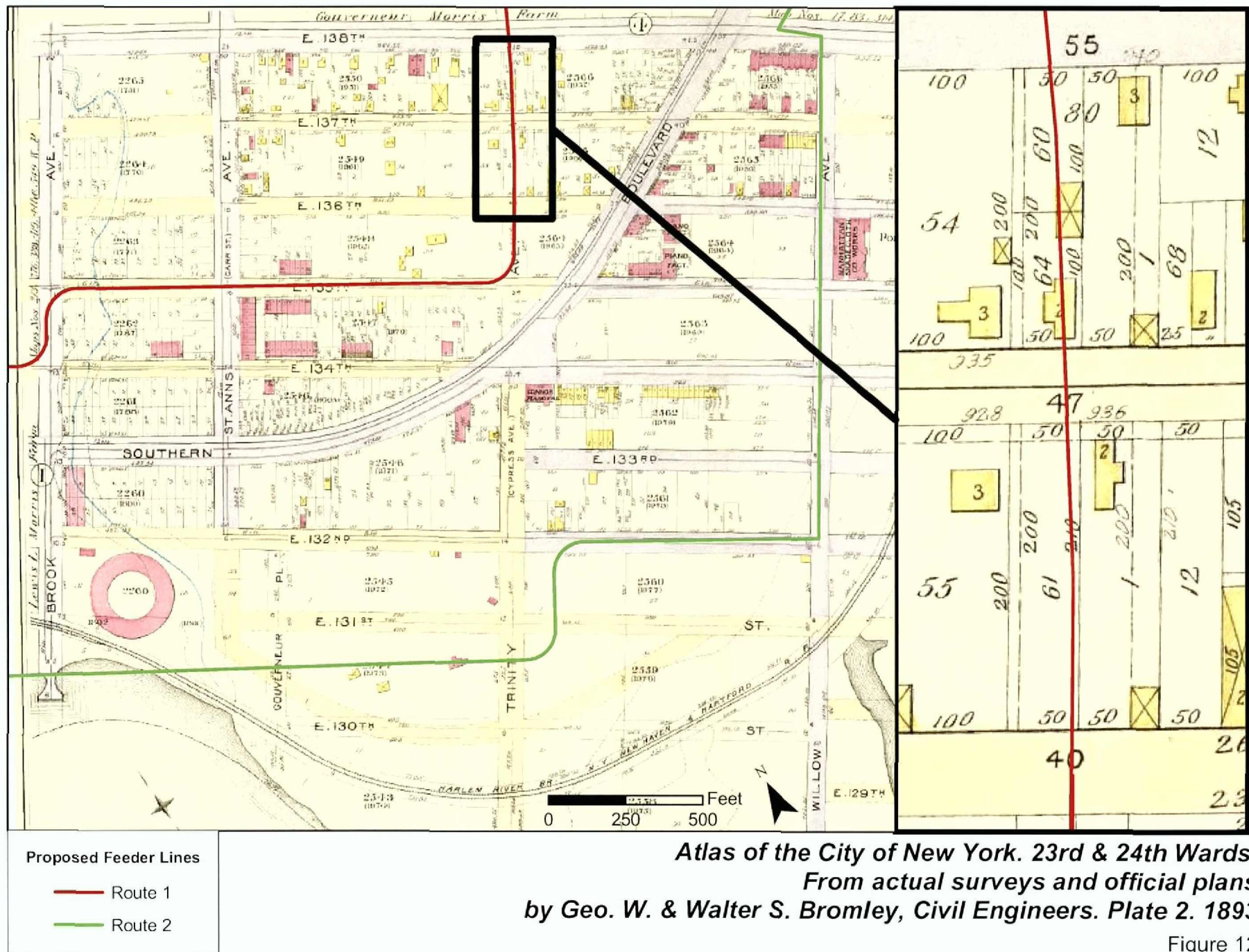
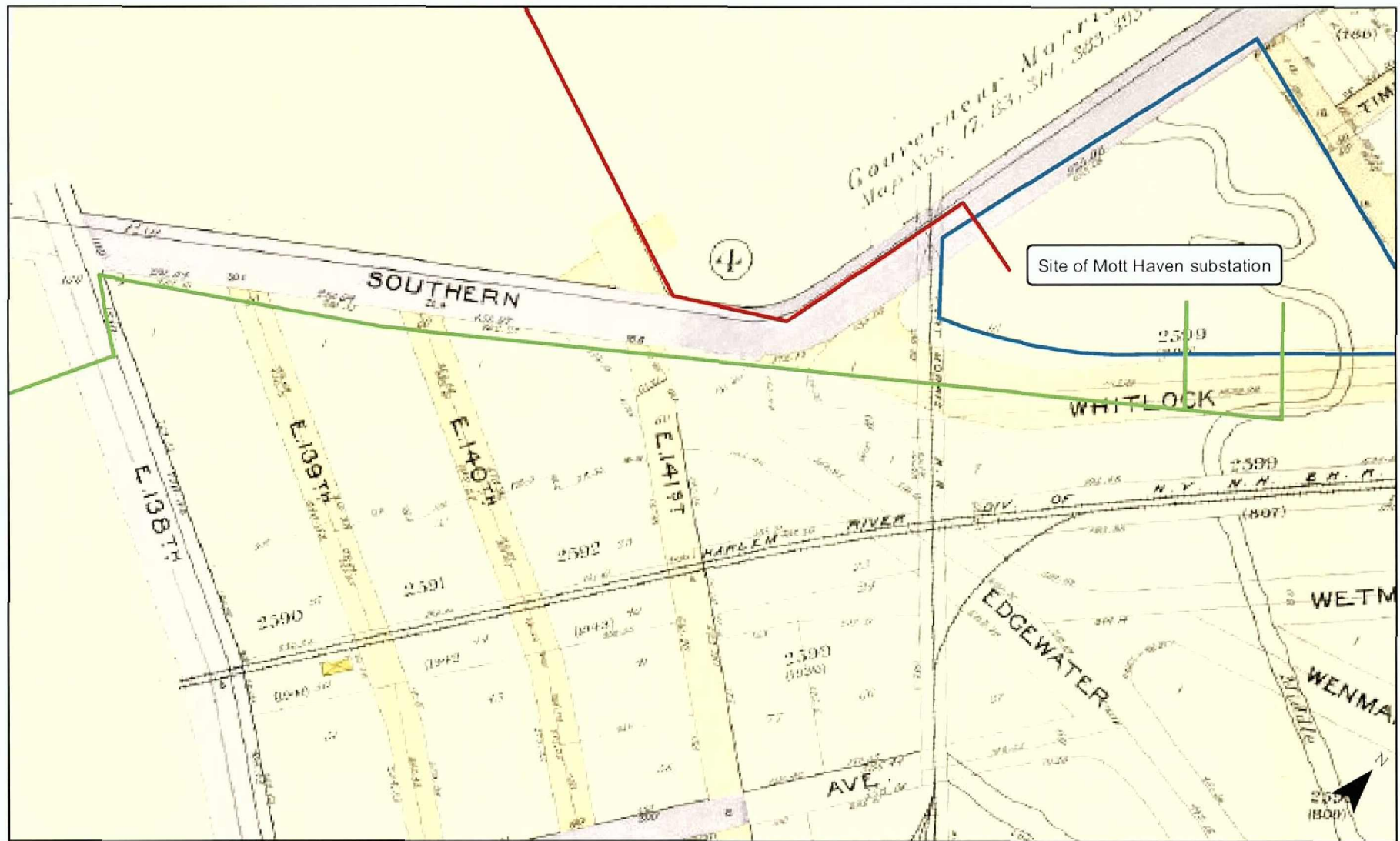


Figure 12



Proposed Feeder Lines

- Route 1
- Route 2

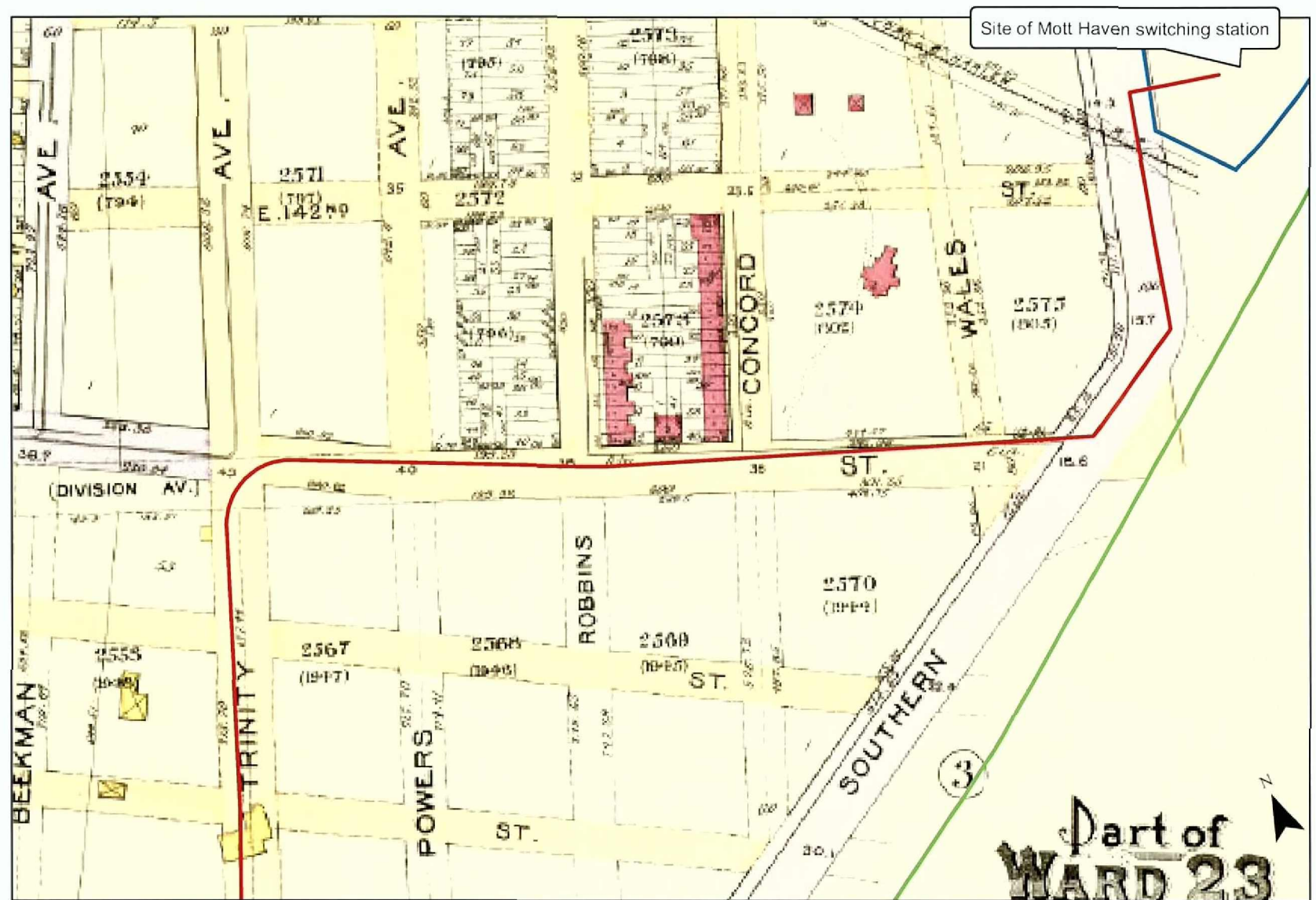
*Atlas of the City of New York. 23rd & 24th Wards.*

*From actual surveys and official plans*

*by Geo. W. & Walter S. Bromley, Civil Engineers. Plate 3. 1893*

Figure 13





Proposed Feeder Lines

- Route 1
- Route 2

0 250 500 Feet

Atlas of the City of New York. 23rd & 24th Wards.  
 From actual surveys and official plans  
 by Geo. W. & Walter S. Bromley, Civil Engineers. Plate 4. 1893

Figure 14



Building currently occupying site of proposed Parkview Substation

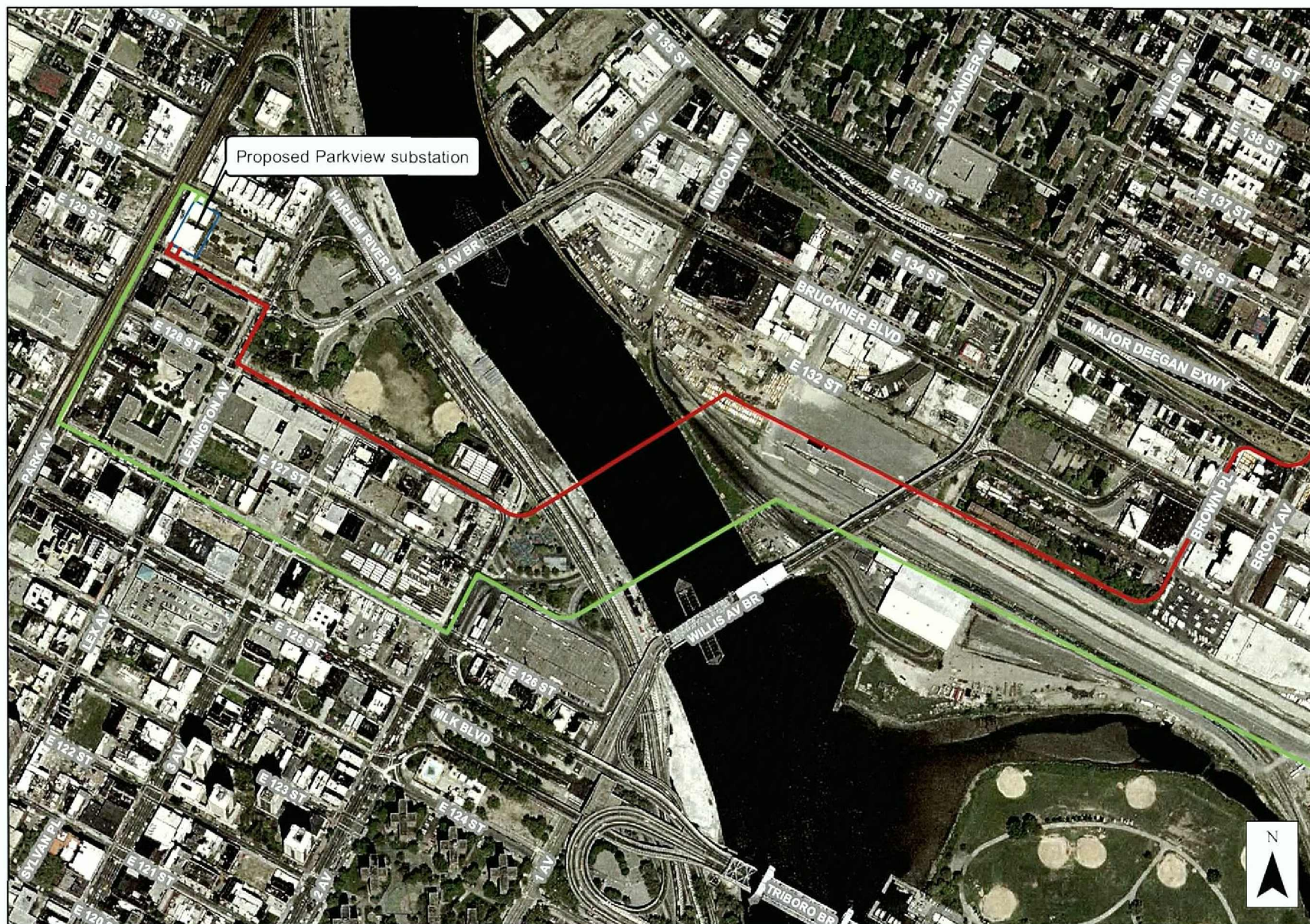
1



Park Avenue Viaduct. View north from East 128th Street

2





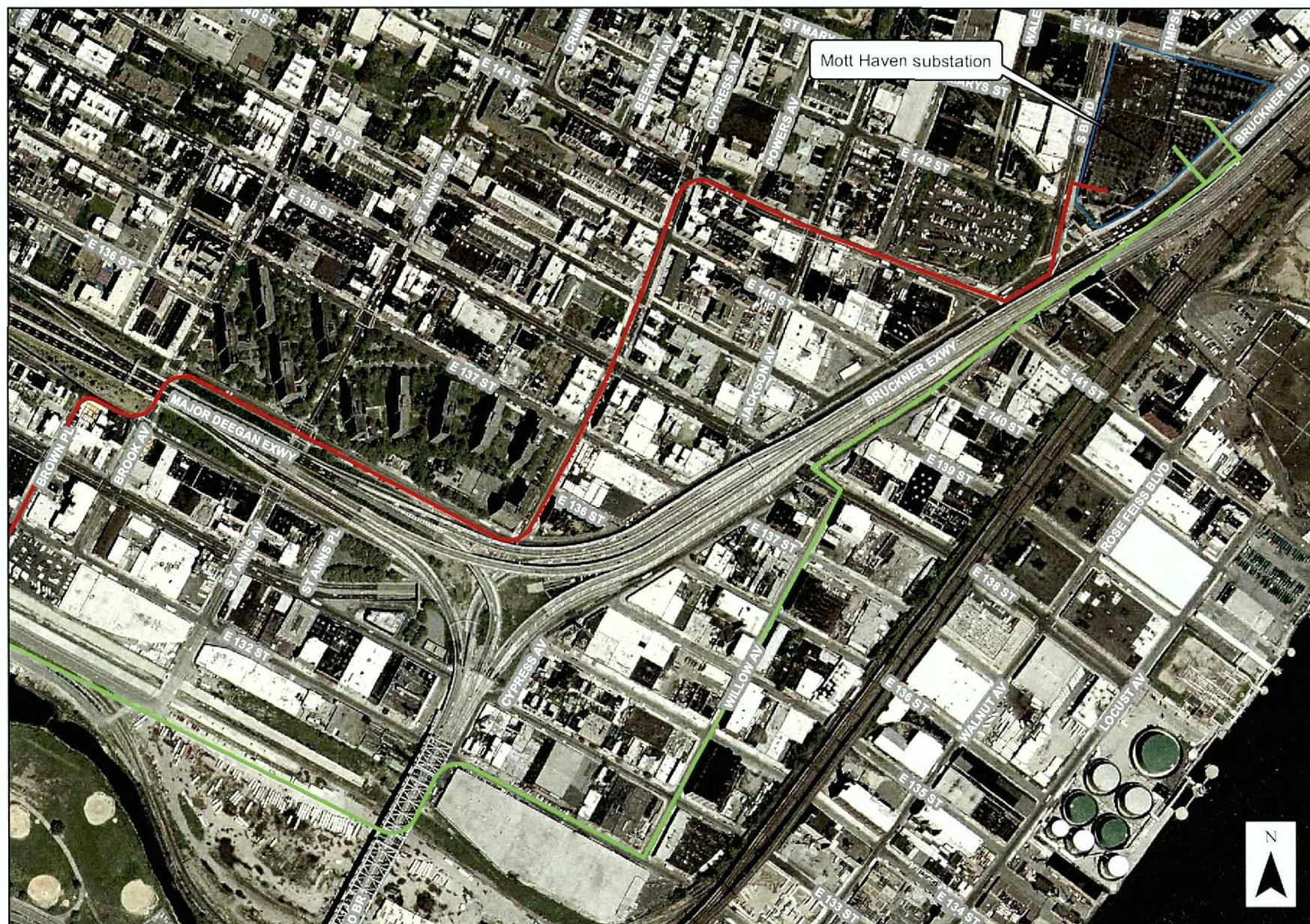
**Proposed feeder lines**

- Route 1
- Route 2

0 0.1 0.2  
Miles

Western Portion of Project Area  
Aerial Photograph - May 2002  
Figure 16





**Proposed feeder lines**

- Route 1
- Route 2

0 0.1 0.2  
Miles

Eastern Portion of Project Area  
Aerial Photograph - May 2002  
Figure 17