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2008

**PHASE IA CULTURAL RESOURCE
RECONNAISSANCE AND DOCUMENTARY
STUDY**

**STATEN ISLAND BIKE PATHS
FOREST HILL ROAD TO ST. PATRICK'S
PLACE**

**RICHMOND
RICHMOND COUNTY
STATEN ISLAND
NEW YORK**

MAY 13, 2008

CRCG # 06-213-01

Matthew S. Tomaso, M.A., R.P.A., Principal Investigator



CRCG

CULTURAL RESOURCE
CONSULTING GROUP

Historic Preservation & Archaeology

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***Prepared for:
City of New York Parks and Recreation
The Arsenal
Central Park
New York, NY 10021***

***Prepared by:
Cultural Resource Consulting Group
415 Cleveland Avenue
Highland Park, NJ 08904***

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1.0 INTRODUCTION

1.1 Purpose of Study

The purpose of this Phase IA Archaeological Reconnaissance is to provide information about known and possible archaeological properties within the area of potential effects (APE) to New York City Parks and Recreation (NYCP&R), the New York City Landmarks Preservation Commission (NYCLPC) and New York Office of Parks Recreation and Historic Preservation (NYOPRHP) for several proposed segments of bike paths in the area of historic Richmond and La Tourette golf course, Richmond County, Staten Island, New York (Figure 1). This study establishes whether any previously identified historic properties exist within the project's area of potential effects, investigates the potential existence of previously unidentified historic properties, and discusses the archaeological sensitivity of the project in consideration of these findings. Documentary research methods recommended by NYCLPC and NYOPRHP and an in-field reconnaissance conducted by a fully qualified Senior Archaeologist were employed to conduct this study.

Although the proposed bike path project is not currently being reviewed under Section 106 of the National Historic Preservation Act (36 CFR Part 800), terminology defined by this law is used throughout this report for the sake of consistency with other similar projects.

A historic property is defined as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places" (36 CFR 800.16 [l], amended 2004). The area of potential effects is defined as "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist" (36 CFR 800.16[d], amended 2004).

Historic architectural resources were identified in an effort to assess the archaeological sensitivity of the project area, but no historic architectural survey was conducted as part of this study. The study's findings and recommendations are limited to potential archaeological resources and archaeological sensitivities.

The criteria of significance adopted for this study are those described in the National Register of Historic Places, as applied by the NYCLPC (2002).

1.2 Summary of the Scope of Work , Permits, Funding, and Applicable Regulations

Summary Scope

This Phase IA study is not intended to definitively establish the presence or absence of previously unidentified historic properties; rather, it indicates the likelihood that they exist, inventories any previously identified historic properties, and provides recommendations for or against additional investigation.

Funding

The project is funded by New York City Parks and Recreation.

Applicable Regulations

The following is paraphrased from the NYCLPC's published guidelines.

The City Environmental Quality Review (CEQR) (Executive Order No. 91 of 1977), requires city agencies to assess, disclose, and mitigate the environmental impacts, including impacts to historic resources, of their projects. This includes projects requiring discretionary action by a city agency.

Pursuant to local New York City law (the "landmarks law") the LPC is a regulatory agency (New York City Charter Sections 3020 *et seq.*, Administrative Code of the City of New York Sections 25-301 *et seq.*, and 63 Rules of the City of New York Sections 1-01 *et seq.*) for projects involving historic resources (buildings, structures, sites, or objects that can provide important information about the past) and is consulted by other city and state agencies.

The State Environmental Quality Review Act (SEQRA) (EL 8-0101 *et seq.*) of 1975 requires that all state and local governmental agencies assess the environmental effects, including impacts to historic resources, of certain discretionary actions. Projects receiving state funding are covered by this law. NYORPHP reviews these projects. The NYCLPC may also be consulted.

1.3 Study Administration

Applicant: City of New York Parks and Recreation
The Arsenal
Central Park
New York, New York 10021

Cultural Resource Consultant: Cultural Resource Consulting Group
415 Cleveland Avenue
Highland Park, New Jersey
PH: 732-247-8880
FX: 732-247-2888

1.4 Subject Property

The subject property is depicted in Figures 1 and 2. It consists of several connected linear alignments adjacent to Forest Hill Road, Old Mill Road, Clarke Avenue and St. Patrick's Avenue, as well as wooded segments within the La Tourette Golf Course property and the now abandoned western portion of Old Mill Road in Richmond, New York. The segments which together comprise the subject property are identified in Figure 2 and described individually and in greater detail below.

1.5 Area of Potential Effects

The area of potential effects (A.P.E.) is:

The geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

To determine the area of potential effects the full scope of the intended project must be understood. The area of potential effects (A.P.E.) includes all areas affected by the end result of the development as well as during the construction of the project. Determining the area of potential effects should take into consideration visual effects, auditory effects, direct and indirect effects, beneficial as well as adverse effects, physical effects, and changes in the way the land or historic properties are used. A project may have a single area of potential effects that includes all these effects, or may generate multiple areas of potential effects, one each for visual effects, direct effects, etc., which may or may not overlap.

The area of potential effects for archaeological resources is where the proposed project would cause changes in the character or use of historic properties of this type, if any exist. For the current project, this corresponds to areas where construction would cause ground disturbance (see Figures 1 and 2).

A set of plans are provided as an attachment. These plans help to describe the horizontal and vertical dimensions of the A.P.E. Landscape changes throughout the segments vary from slight up-grades with added fill to deeper construction of dry wells. Most portions of the paths will involve less than 6 inches of net vertical disturbance.

1.6 Public Participation

A number of parties could have a consultative role in a project such as this. These parties can include State and Tribal Historic Preservation Officers, Indian tribes, representatives of local governments, applicants for Federal assistance, permits, licenses and other approvals, and certain individuals and organizations who have demonstrated an interest in the undertaking. Though more interested and consulting parties may be revealed in the course of this investigation, the following are currently identified as interested parties for this project:

Historic Richmondtown / Staten Island Historical Society
441 Clarke Avenue
Staten Island, NY 10306
(718) 351-1611
<http://www.historicrichmondtown.org/>

Contacted by email on 2/3 and 2/4/08 and in person 2/14/08.

Joan Geismar, Ph.D.
President, Professional Archaeologists of New York City
40 East 83rd St.
New York, NY 10028
(212) 734-6512
jgeis@aol.com

Contacted by email on 2/3/08. Dr. Geismar responded on 2/4/08. Her reply is presented in Appendix C.

Ralph Solecki, Ph.D.
r.solecki@att.net

Contacted by email on 2/4/08. Dr. Solecki responded on 2/5/08. His reply is included in Appendix C.

Adena Long
Executive Director
Staten Island Greenbelt Conservancy
(718)667-2165
Adena.Long@parks.nyc.gov

Contacted by telephone on 2/4/08. Ms. Long recommended that CRCG contact the Staten Island Historical Society, Staten Island Museum, American Golf Corporation and Dr. Alan Benimoff of the College of Staten Island.

American Golf Corporation
(718)667-1879

Contacted by telephone on 2/4/08. American Golf Corporation was contacted in an effort to ascertain whether any recent landscape changes may have affected the areas of the proposed bike paths within the La Tourette property. No recent alterations appear to have taken place in the affected areas.

Ed Psaff, General Manager
C. J. Valerio, Assistant Manager
La Tourette Golf Course
(718)351-1889

Contacted by telephone on 2/4/08. CRCG's call was not returned.

In the course of this investigation, CRCG contacted those listed above in order to discuss preliminary project findings and to solicit information concerning project area archaeological sensitivities.

1.7 Dates the Study Was Conducted

Background Research for this project was conducted at NYOPRHP by a research assistant in early December, 2007, under the supervision of the Principal Investigator. The Principal Investigator and Project Historian conducted additional background research at various repositories in late December of 2007, January and February of 2008. The project area was visited by the Principal Investigator on January 30, 2008.

The repositories consulted for this Phase IA investigation are listed in Section 2.1

1.8 Study Conditions and Constraints

There were no constraints to this study.

1.9 Acknowledgments and Citation

Cultural Resource Consulting Group thanks the following individuals for their assistance with this study:

Gabriela Keller, NYCP&R

Joan Geismar, Ph.D.

Ralph Solecki, Ph.D.

Adena Long, Staten Island Greenbelt Conservancy

Carlotta DeFillo, Librarian, Staten Island Historical Society

The investigation was conducted by the following CRCC staff members:

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The report was written by Matthew S. Tomaso and Catherine Bull with contributions by Sean McHugh and Kristian Eshelman, and illustrated by Sean McHugh and Matthew S. Tomaso.

This report can be cited as:

Tomaso, Matthew S. and Catherine Bull

2008 Phase IA Archaeological Reconnaissance and Documentary Study: Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place, Richmond, Richmond County, Staten Island, New York. Prepared by Cultural Resource Consulting Group for New York City Parks and Recreation, New York, New York.

1.11 Location of Report Copies

Copies of the report will be on file at the offices of New York City Parks and Recreation, the New York Office of Parks Recreation and Historic Preservation, the New York Landmarks Preservation Commission and CRCC.

CRCC also recommends distribution of this report to the Staten Island Historical Society.

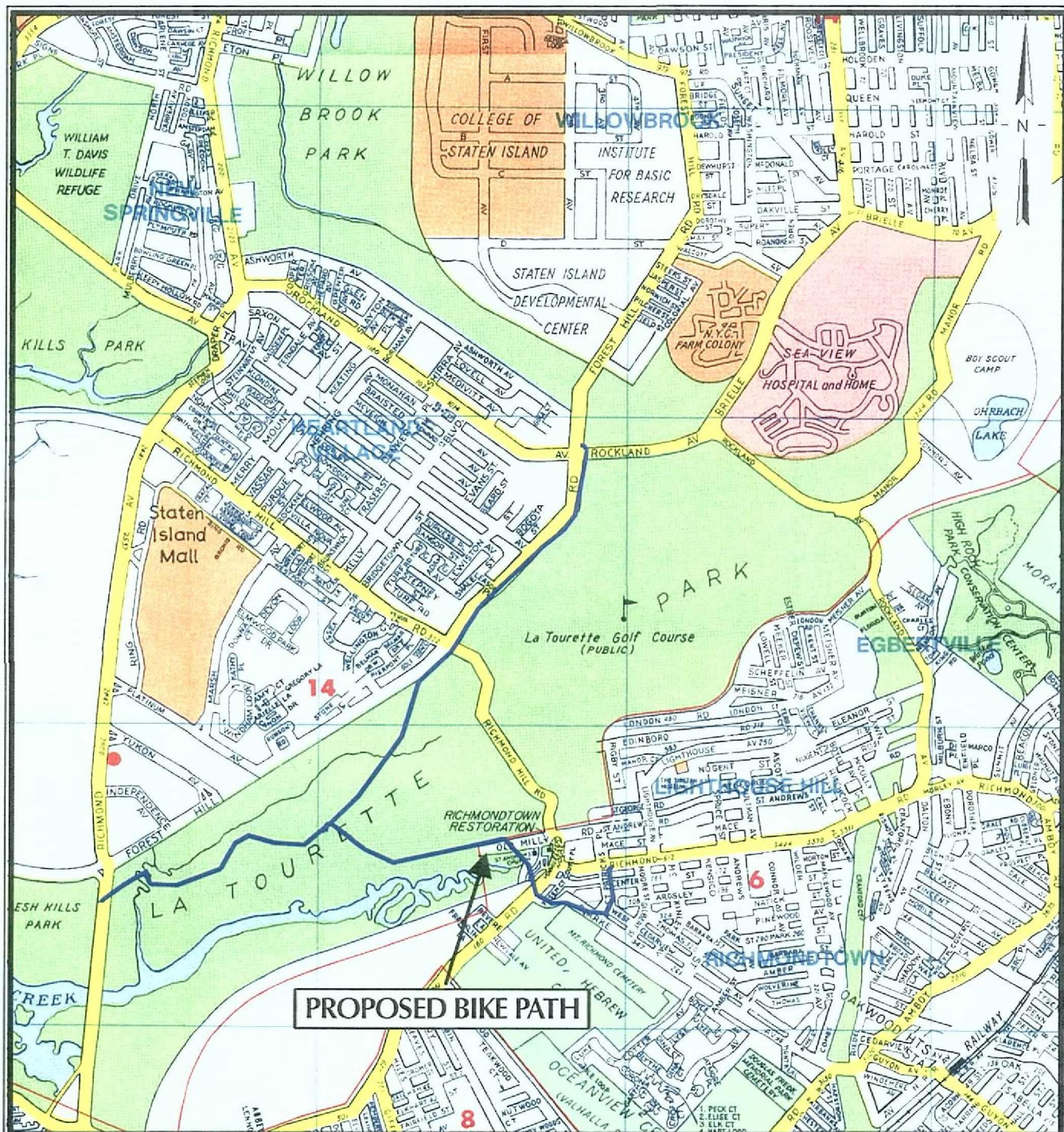


Figure 1: 1997 Hagstrom's Road Map of Staten Island, City of New York, New York.

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Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.



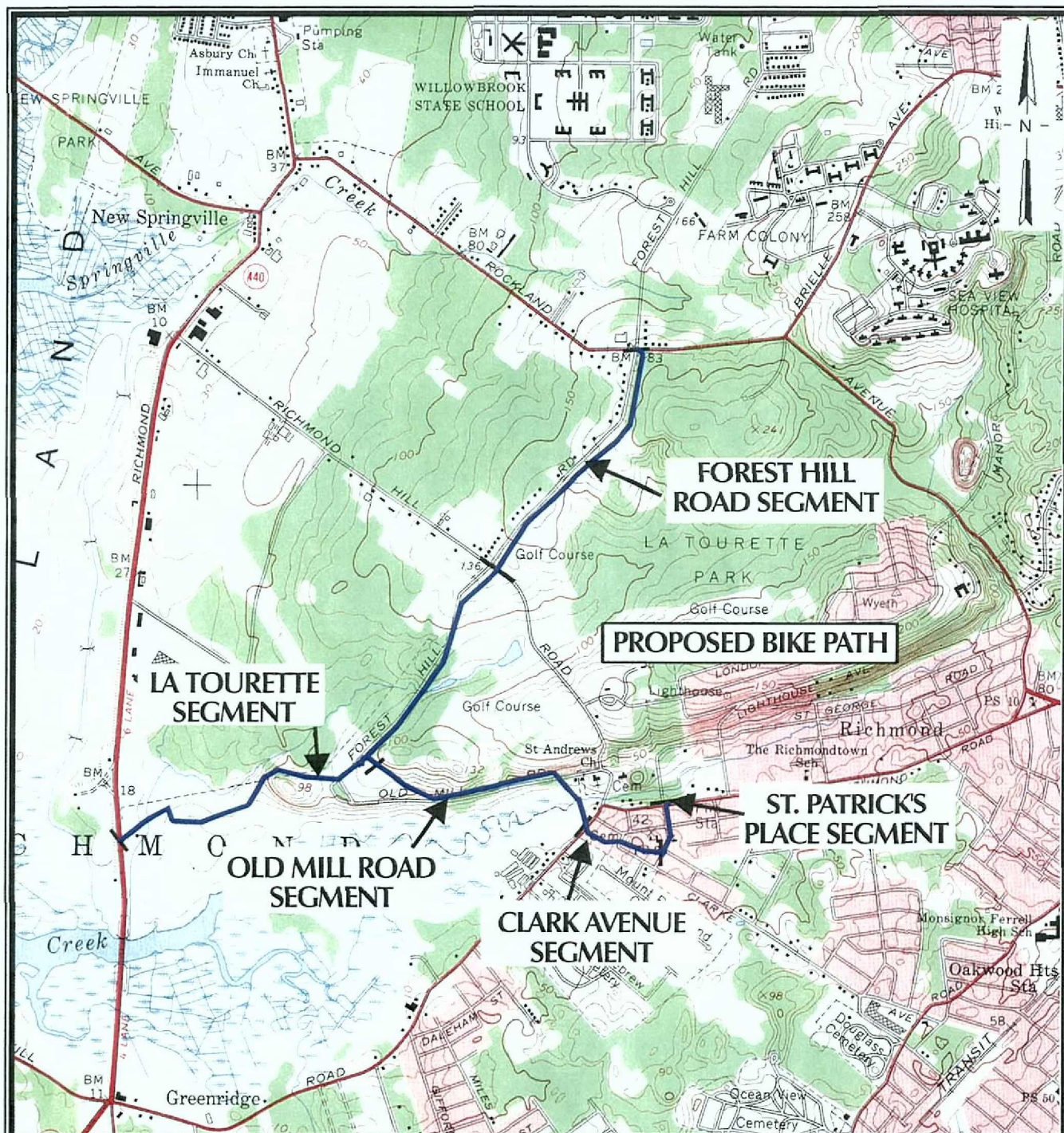


Figure 2: USGS 7.5' Quadrangle: Arthur Kill, N. Y. - N. J. 1966. Showing bike path segments.

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FEET

Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.



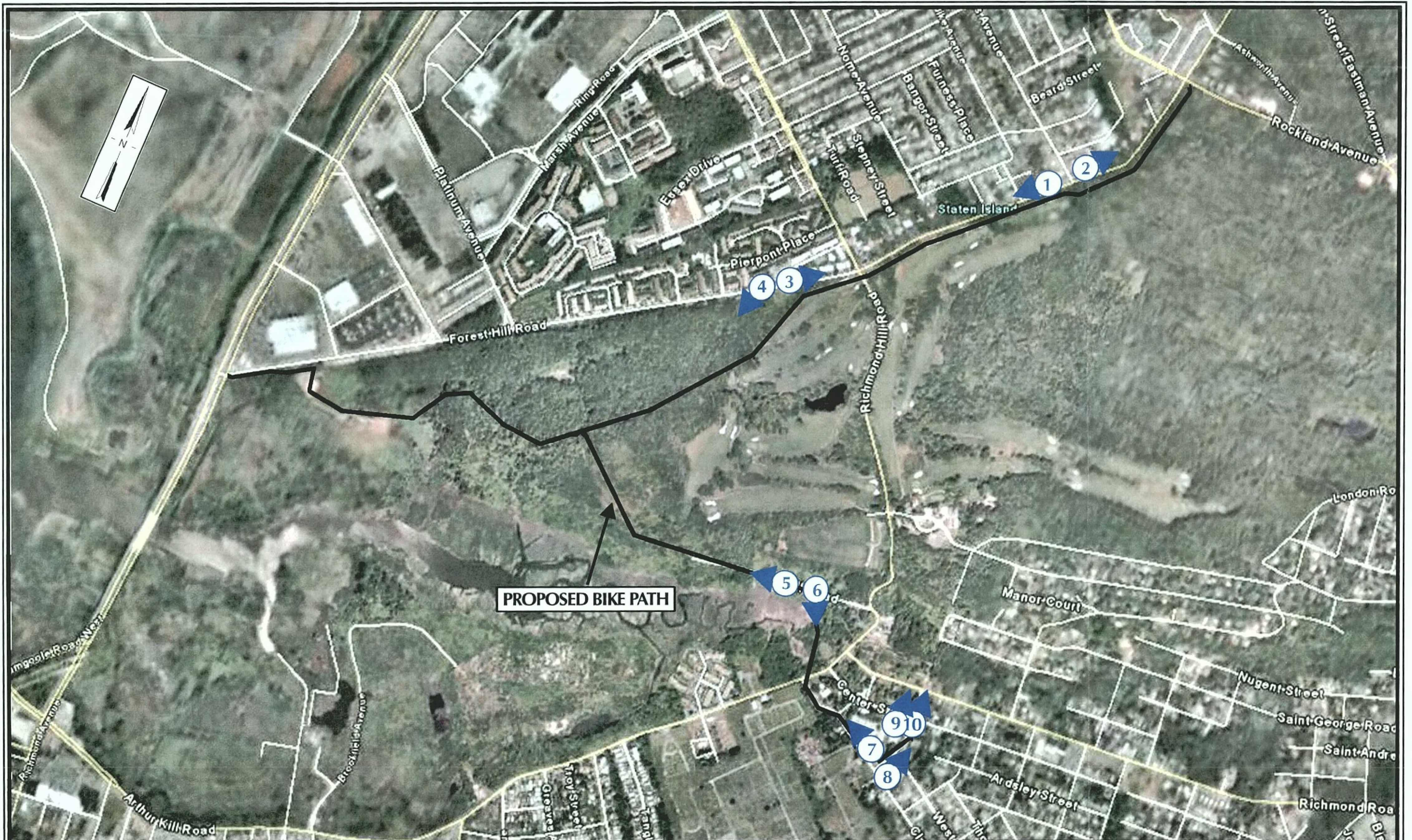


Figure 3: Aerial photograph showing the location of the proposed bike path and photo angles Source: Google Earth 2007.

Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.



2.0 BACKGROUND RESEARCH

2.1 Methods

Researchers systematically reviewed background materials and conducted site inspections to search for previously identified historic properties within the study area, and to evaluate the potential of the study area to contain previously unidentified historic properties. Archives that were visited or consulted include:

- New York Office of Parks, Recreation and Historic Preservation
- New York State Museum
- Staten Island Historical Society / Historic Richmondtown Library
- Alexander Library, Rutgers University, New Jersey

The potential for Native American use of the study area was assessed through a review of historical and environmental literature as well as state-sponsored surveys and site records available at these repositories. Other sources included any cultural resource management reports on projects in the project vicinity.

Prior historic-period land use was researched primarily through a review of historic maps, local histories, and cited secondary sources. Also consulted were the NYOPRHP files on properties determined eligible for listing in the State and National Registers of Historic Places and local landmarks lists and maps.

The project area was visited by a Senior Archaeologist on January 30, 2008. Site inspection focused on determining the general disposition of the subject property, locating surface indications that would suggest the presence of previously unidentified archaeological resources, and assessing the effects of previous development, if any. Surface reconnaissance involved the inspection of any existing aboveground architectural features, topographic anomalies, areas of obvious ground disturbance, areas with clear surfaces, and erosional features. Aerial photographs, historic maps, and maps of previously recorded historic and prehistoric properties were consulted prior to the site visit in order to assist in the preparation of this report.

2.2 Environment

Geology

The Atlantic coast of North America exhibits diverse environmental settings. Five major physiographic provinces are recognized, based on geological formations, soils, and landforms. From the northwest to the southeast, these are The Ridge and Valley, Highlands, Piedmont, Inner Coastal Plain, and Outer Coastal Plain. Each of these regions contains a variety of habitats which have proven valuable to prehistoric and historic populations.

Geologically, Staten Island is within the coastal plain physiographic province. Although there is considerable variability in bedrock and surficial sediments within the coastal plain, its geologic history is fairly consistent in the northern Mid-Atlantic. The supercontinent Pangaea rifted apart around 250 million years ago, separating the continents that now lie in the eastern and western hemispheres. As Europe and Asia separated from North America, normal faults occurred all along the rift in what is now eastern North America. These blocks dropped downward, creating large sedimentary basins which have since formed eastern North America's major river drainages, and have been filling up with sediment since the beginning of the Cenozoic about 65 million years ago. The northern Mid-Atlantic coastal plain, including southern New Jersey and southeastern New York are all part of the Newark Sedimentary Basin (U.S. Geologic Survey 2003).

In most places, the Newark Basin consists of thick surficial clastic deposits overlying Triassic and Jurassic sandstones and basalts resulting from these Mesozoic rifts and Tertiary sedimentary rocks. The particular case of Staten Island differs geologically from most of the coastal plain in a few respects. Staten Island is underlain by older Serpentinite bedrock, a metamorphic product of Paleozoic age. More importantly, however, its surficial sediments are almost entirely glacial in origin and generally date to the Pleistocene (ca. 1.8 million years ago to the present) (Bemimoff and Ohan 2003).

From an archaeological point of view, the coastal plain's geologic history is very important. Since the coastal plain is almost entirely dominated by depositional environments, sites of prehistoric human activity are very likely to be well preserved in place. Historically, the thick accumulations of easily quarried glacially derived sediments have been important in the industrial history of many coastal plain towns and cities. Finally, portions of the coastal plain include large, meandering river basins which have served as the basis of the region's ecology and human settlement.

The Richmond Hills, with which this report is somewhat concerned (Forest Hill Road, La Tourette and Old Mill Road Bike Path Segments) are remnant moraine deposits of Pleistocene Age. As such, they have been in high relief throughout the entire time of potential human occupation of Staten Island, and may have provided good vantage points for prehistoric hunters. Similarly, the fresh water sources (Main Creek, Richmond Creek and

other unnamed tributaries of the Arthur Kill) are also likely to have been available near the Clarke Avenue, Old Mill Road, La Tourette and St. Patrick's Segments.

Fresh Water Sources

Water sources provide the basis of ecological diversity, as they attract and support a complex and productive system of relations between a wide variety of economically important floral and faunal communities, including many animals and plants which have been used as food sources and raw materials for tools and clothing throughout prehistoric and more recent times. Water was also, through early colonial times, a principal medium of transportation.

The subject property varies from 213 feet above mean sea level (FAMSL) in the northern portion of Forest Hill Road to 1 FAMSL (western end of Old Mill Road segment). Average elevation is 32 FAMSL. Despite the elevation range, average slope across the proposed bike path segments is under 8 percent. The bike path segments referred to in this report are depicted in Figure 2.

The Old Mill Road segment and the southern portions of the La Tourette segment are between 10 and 4,000 feet distant from a west-northwest flowing tributary of the Arthur Kill which is a reliable fresh water source. The Forest Hill Road segment, which ranges from about 100 FAMSL to 213 FAMSL, is between 4,000 feet and a mile and a half northeast of the same tributary. The Clarke Road segment (15-39 FAMSL) is 4,700 feet to 1.1 miles east of the tributary. The St. Patrick's Segment is between 1.1 and 1.3 miles east of the tributary, and has an elevation range between 0 and 37 FAMSL. Portions of all of the segments except Forest Hill Road are within the Arthur Kill watershed and adjacent or very close to perennial tributaries.

In prehistoric times, the marshes of the headwaters, and the tributaries themselves, would have attracted game and biotic communities important to Native American subsistence. Consequently, from a hydrological perspective, the Old Mill Road, Clarke Avenue, St. Patrick's Place, and La Tourette segments have high prehistoric archaeological sensitivity, while the Forest Hill Road segment is moderately sensitive.

Soils

Staten Island is included in the area of a large-scale soil survey revision being undertaken throughout the greater metropolitan area of New York. At this time, only general information concerning soil associations based on reconnaissance-level findings has been made available (New York City Soil Survey Staff 2004) (Figure 4). Table 1 summarizes soils within the subject property based on these findings.

Table 1. Soils Within the Subject Property

Complex	Percentage (Overall)	Segments Involved	Summary Description
Wethersfield-Ludlow-Wilbraham 0-8% Slopes	40	Forest Hill Road Old Mill Road La Tourette	Mostly undisturbed till plains Poorly to well-drained Frequently occurs in Woodlands.
Wethersfield-Ludlow 8-15% Slopes	25	Forest Hill Road La Tourette	Mostly undisturbed till plain Moderately well-drained to well-drained Frequently occurs in Woodlands.
Wethersfield-Forest Hill-Pavement & Buildings 0-8% Slopes	20	Clarke Ave St. Patrick's Place	Disturbed till plains and anthropogenic soils 15-49% covered by impervious pavement or buildings.
Ludlow-Wilbraham 0-8% Slopes	10	La Tourette Old Mill Road	Mostly undisturbed till plains and moraines Poorly to moderately well-drained Frequently occurs in Woodlands.
Wotalf-Todthill-Cheshire 15-50% slopes	5	Old Mill Road	Bedrock-controlled slopes and outcrops modified by glacial action Moderately deep to deep tills overlying serpentine Frequently occurs in Woodlands.

As Table 1 attests, most of the soils involved included in the subject property originated in undisturbed glacial till and have variable drainage characteristics. Soils within the St. Patrick's Place and Clarke Avenue segments involve a great deal of impervious cover and anthropogenic deposits resulting from the historic development of Richmondtown, while most of the other segments include undisturbed woodland soils. The anthropogenic component of the Clarke Avenue and St. Patrick's Place soils can not be evaluated at this level of analysis, however, and for various reasons, will require further examination.

In general, these are productive to moderately productive soils which are suitable for cultivation. Prehistorically, they may have supported forest resources attractive to Native American populations.

Information regarding soils can also be used to estimate the probable depth of deposition within the time frame of human habitation for an area (ca. 12,000 years ago to the present). In this area, the topsoil (A horizon) and subsoil (B horizon) are generally assumed to represent accumulation and subsequent soil formation from the time before potential human occupation to the present. It is possible, however, given the glacial origin of most of Staten Island's parent sediments (C horizon), that artifacts may be present below the lower boundary of the B horizon.

Most (85%) of the soils on the subject property are variants of the Wethersfield series. This series has a relatively deep profile (New York City Soil Survey Staff 2004) with a shallow A horizon (0-3 inches) and a deeper but weakly developed zonated B horizon (Bw1/Bw2, 3-27 inches).

A Ludlow series variant composes about 10% of the subject property. This is classified as a very deep soil, with the C horizon extending to an average depth of 65 inches. However, the A and B horizons are usually limited to the uppermost 26 inches.

Approximately five percent of the subject property involves a relatively deep variant of the Wotalf series. The series description indicates that Wotalf soils are shallow; however, the variant included in the Old Mill Road segment tends to be deeper than the type section for the series. Wotalf soils are generally limited to 17 inches of surficial sedimentation overlying serpentine bedrock.

Since most of the ground disturbance planned for the bike paths is limited to the uppermost foot of the profiles, it is unlikely that the earliest sites present in Wethersfield and Ludlow soils will be affected, if they exist. A subsurface testing program would be required to determine the sensitivity of early sites (if any) within the Wotalf series.

Soil chemistry affects the likelihood of preservation of any artifacts or other materials left behind by human populations. Acidic soils are much less likely to preserve organic artifacts

(e.g., bone, shell, wood), leaving behind inorganic solid materials (e.g., stone and ceramics). The portions of a soil's profile which is seasonally inundated by ground water (usually the C horizon and lower B horizon) will also be affected by chemical weathering. Typically, seasonal groundwater fluctuations oxidize iron and other readily oxidized materials (e.g., rust, copper patina).

All three of the soil series discussed above tend to be slightly alkaline to acidic, with varying depths to the top of the seasonally high water table. Long-term preservation of organic materials in these soils is unlikely, and the probability of severe oxidation among metallic artifacts can not be reliably assessed.

Solecki (1989) discusses recent earth-moving activities in the general area of the La Tourette, Forest Hill Road and Old Mill Road segments which may have had serious effects on the soils present within these areas. However, since no archaeological testing was performed as part of this study, it is difficult to ascertain the extent to which the A.P.E. has been altered below the surface.

Slopes

Human populations generally do not settle on land which exhibits slopes greater than 10%, and tend to prefer slopes of less than 5% when they are available. The La Tourette segment's southern 1/3rd contains slopes in excess of ten percent, but these sloping areas are limited to a couple hundred feet. Most of the subject property north and west of the Old Mill Road Segment exhibits slope in the range of 3-8%. The Old Mill Road, Clarke Avenue and St. Patrick's segments have average slopes under 4%.

Slope and access to freshwater are both factors in the establishment of prehistoric and historic settlements. The location of historic Richmondtown appears to have been affected by these considerations, and the location of the revolutionary era Richmond Redoubt used slope and elevation to offer a strategic vantage point with clear views of the New Jersey shore and lower areas in southern Staten Island.

Summary Environmental Conclusions

The physical area of potential effects for the following proposed bike path segments has hydrological, ecological, geomorphological and pedological characteristics which would have made it attractive to both prehistoric and historic human populations and relatively little clear evidence of recent subsurface disturbance. Soils described as disturbed in published soil surveys (Clarke Avenue and St. Patrick's Place) include an anthropogenic component which, very likely, is an historic period archaeological deposit. Other soil

disturbances discussed by Solecki (1989) may affect the bike path segments but are not clearly associated with these locations. Due to the relatively shallow depth of disturbance planned for the bike paths, the archaeological sensitivity for intact prehistoric sites in all of the segments except Old Mill Road is considered to be from low to moderate on the basis of environmental factors. The presence of historic period fills within the Clarke Avenue, Old Mill Road and St. Patrick's Place Segments suggests that these segments have high sensitivity for potential historic archaeological sites. Their absence on the La Tourette and Forest Hill Road Segments and the distance from fresh water for these segments suggests that they have, respectively, low-moderate and low historic archaeological sensitivity.

Table 2 summarizes the archaeological sensitivities of each segment solely on the basis of environmental factors. The history of each segment affects sensitivity assessments and will result in greatly modified sensitivities to be presented in subsequent sections of this report.

Table 2. Archaeological Sensitivities Based Solely on Environmental Factors

Segment	Prehistoric	Historic	Overall
Clarke Avenue	Moderate	High	Moderate-High
Forest Hill Road	Low	Low	Low
La Tourette	Low-Moderate	Low-Moderate	Low-Moderate
Old Mill Road	Moderate	High	Moderate-High
St. Patrick's Place	Low-Moderate	High	Moderate-High

2.3 Historical Background

This section presents information gathered from historical documents directly or indirectly related to the history of the subject property. Historical documents such as maps and census records have two primary functions in assessments of archaeological sensitivity - they may help to determine the likelihood that an historic archaeological site will be affected by a proposed project and they may give some indication of the potential significance of an anticipated site location. Although historical documentation such as sewer and utility emplacement records and historic maps may also help to determine the likelihood that a pre-existing site has been disturbed through, for example, historic foundation construction or agriculture, the inferences involved in such reasoning are very indirect and not very reliable without verification through subsurface testing.

In summary, the primary purposes of this section are (in order of diminishing reliability) to:

- Evaluate the likelihood that historic period sites exist within the A.P.E.
- Provide a preliminary assessment concerning the potential significance of any anticipated sites
- Provide a very preliminary assessment of the probability that any anticipated sites may be found to be substantially intact

The linear arrangement of the area of potential effects, and the fact that it will involve several properties which have already been subjected to cultural resource investigations over the last 30 years, indicated that a comprehensive review of all primary documents pertaining to the several-mile-long proposed bicycle path route would be unnecessary. Significant properties which are already listed on the National Register, as New York City Landmarks, and as National Historic Landmarks are, therefore, identified, but not discussed at length. Nevertheless, these cultural resources play an important role in the determination of archaeological sensitivity. Historically significant buildings which remain in their original location adjacent to the A.P.E. raise significant concerns, while those which have been moved, but still retain their significance, do not.

NYCLPC's (2002) guidelines state that the sources listed in Table 3 should be consulted for this level of study. For the reasons stated above and in Table 3, CRCG has deferred examination of some documentary materials until additional archaeological investigation can be conducted in order to determine whether or not the anticipated historic sites actually exist within the A.P.E. Recommendations for additional research associated with NYCLPC's list of recommended source materials are made in Section 5 of this report and should be made more explicit in any forthcoming work plan.

Historic maps reviewed for information on 19th-century land use of the subject property include the 1853 Colton & Colton *Map of the Country Thirty Three Miles Around the City of New York*, the 1860 H. F. Walling *Map of the City of New York and Its Environs from Actual*

Surveys, the 1874 Beers *Atlas of Staten Island, Richmond County, New York*, the 1887 *Map of the City of New York and Its Vicinity from Actual Surveys*, and the 1891 and 1898 USGS 15' Staten Island, N.Y. quadrangle maps. Additional maps were found in the 1989 Baugher et al. report including the 1777 British Army Map, *Richmond*; the 1781 Taylor and Skinner *Map of Staten Island*; the 1859 Walling *Map of Staten Island, New York* (Richmondtown Inset); Sanborn *Map of Staten Island, New York* for the years 1878, 1885 updated to 1891, 1898, 1898 updated to 1911, 1926, 1935, and 1968; the 1887 Beers *Atlas of Richmond County, Staten Island, New York*; the 1898 Robinson *Atlas of Borough of Richmond*; 1907 Robinson *Atlas of Borough of Richmond*; and the 1917 Bromley *Atlas of the Borough of Richmond*.

Also consulted were census and utility records (Appendix D).

Table 3. NYCLPC Recommended Sources

Source	Consulted ?	Comment/Result
Historic Sanborn Maps	Yes	See below
Archaeological Reports	Yes	See Section 3.1
Historic Maps and Atlases	Yes	See below
Building Records	No	There are no standing structures in the A.P.E. No building records exist for the historic properties thought to have been within the A.P.E.
Publications on Local History	Yes	See below
Public Utilities Records	Yes	See Appendix D.
Soil Borings and WPA Rockline Data Maps	No	See Section 2.2 above
NYOPRHP Archaeological Sensitivity Maps	Yes	See Section 3.0
Census Records	Yes	See below
Conveyance Records	No	See Section 5
Tax Assessments	No	See Section 5
Deeds and Titles	No	See Section 5
Street Directories	No	See Section 5
Historic Diaries	No	See Section 5
Oral History/Informants	Yes	See Sections 1.1 and 2
Historic Photographs	Yes	See below
Church Records	No	See Section 5
Wills and Probates	No	See Section 5

Summary History - Richmondtown

European settlement of Staten Island began in 1639. Economic activity focused on agriculture and fishing, particularly oyster harvesting, and ferries supported the resident population by providing links to the Manhattan market. Other ferries linked Staten Island with Long Island and Perth Amboy. Shipbuilding was also undertaken by the island's earliest inhabitants. Breweries, brickworks, and other industries took advantage of the ready access to materials and markets. Through the 19th century, the region's growing industrialization attracted a substantial immigrant population. In 1910, Staten Island's foreign-born residents comprised 30% of the total population (Eisenstadt and Moss 2005:1457).

Construction of the B & O Railroad bridge, the Goethals Bridge, the Outerbridge Crossing, and the Bayonne Bridge in the late 1920s and early 1930s led to significant suburban development. The Verrazano-Narrows Bridge, the Staten Island Expressway and the West Shore Expressway contributed to another wave of expansion in the last quarter of the 20th century. Between 1960 and 2000, the Borough's population nearly doubled from 221,991 to 443,728 (Eisenstadt and Moss 2005:1457).

The bike path segments discussed in this report mostly occur in and around Richmondtown.

The first settlers of the Richmondtown area arrived around 1680. The town was reportedly known as Cocclestown for the heaps of cockles (oyster and clam shells) left by the Indians. The central location was chosen by the Dutch Reformed Church, whose members built a meeting house and home for the lay minister and teacher. During the Revolutionary War, British troops were stationed at the village. The c. 1777 British Army Map shows concentrated development at the intersection of what are now known as Richmond Road and Arthur Kill Road (Figure 5).

As transportation improved in the early and mid-19th century, Staten Island developed as a retreat for wealthy Manhattan residents. Richmondtown functioned as the county seat and a commercial center for the region and grew with related activity. However, train lines bypassed the village, and in 1898, Staten Island became a borough of New York City and the county government moved to St. George. While the shore towns developed with industry and trade, Richmondtown and the surrounding area retained a quiet, rural atmosphere into the 20th century.

Founded in 1856, the Staten Island Historical Society began the restoration of Richmondtown during the economic depression of the 1930s. With the help of WPA grants, the former County Clerk's and Surrogate's Office was converted into a museum and the Voorlezer's House was restored. The Society envisioned the continuation of the village as a museum, and contracted with the City of New York in the 1950s for the maintenance and development of the village (Historic Richmondtown 2008).

Clarke Avenue Segment

Clarke Avenue is located on the southern margin of what is now known as historic Richmondtown, but has been the site of some early historic development in the area.

Detailed maps (Figures 5-16) of the Richmondtown area were found in the 1989 Baugher et al. report, Staten Island Historical Society and Rutgers University Libraries.

The 1859 Walling map (Figure 6) shows Richmondtown as a small village. Clarke Avenue does not follow its current route south of the Reformed Dutch Church Parsonage to the intersection with Arthur Kill Road. The County Clerk and Surrogates Office appears to lie along the route of the proposed bike path. No other buildings appear on the southwest side of Clarke Avenue. On the east side of present-day St. Patrick's Place, the route passes the "Daniel Stevens" (Stephens-Prier) house.

By 1874 (Figure 7), Richmondtown (including the Old Mill Road, Clarke Avenue and St. Patrick's Place Segments) appears to be more densely developed than it had been previously (compare Figures 5-8). The parsonage of the Reformed Dutch church is depicted at this time.

The 1878 Sanborn map shows one dwelling on the south side of Court House Road (Clarke Avenue) (Figure 8). The 1887 Beers atlas depicts the residence of Mrs. Reilly on Clarke Avenue (Figure 9). The house north of St. Patrick's church is identified as the rectory. J. E. Prier is the owner of the house at this time. By 1891, two additional dwellings have been constructed, as has St. Patrick's Church (Figure 10). Another dwelling is seen north of the church and the Stephens-Prier house is depicted. The property formerly owned by the Dutch Reformed Church is owned by Mr. Flake. The 1898 Robinson atlas map shows that the Dutch Reformed Church has been demolished but the parsonage and the W. L. Flake house are located on the property (Figure 11). Houses located on the south side of Clark Avenue are owned by Mrs. Reiley, G. Lambert, and L. Seaver. The 1907 map shows no changes (Figure 12). By 1917, additional houses have been constructed along Clark Avenue and St. Patrick's Place to the south of the church (Figure 13).

On the 1926 Sanborn map, five dwellings are shown along the south side of Clarke Avenue (Figure 14). Mount Richmond Cemetery lies near the intersection of Clarke and St. Patrick's. Although the cemetery first appears on the 1926 Sanborn map, it was founded in 1909 to provide graves for the New York City indigent Jewish community (Hebrew Free Burial Association 2008). The 1935 Sanborn map shows no changes to this portion of the proposed route (Figure 15). The 1968 Sanborn map shows one of the dwellings on the south side of Clarke Avenue has been demolished (Figure 16).

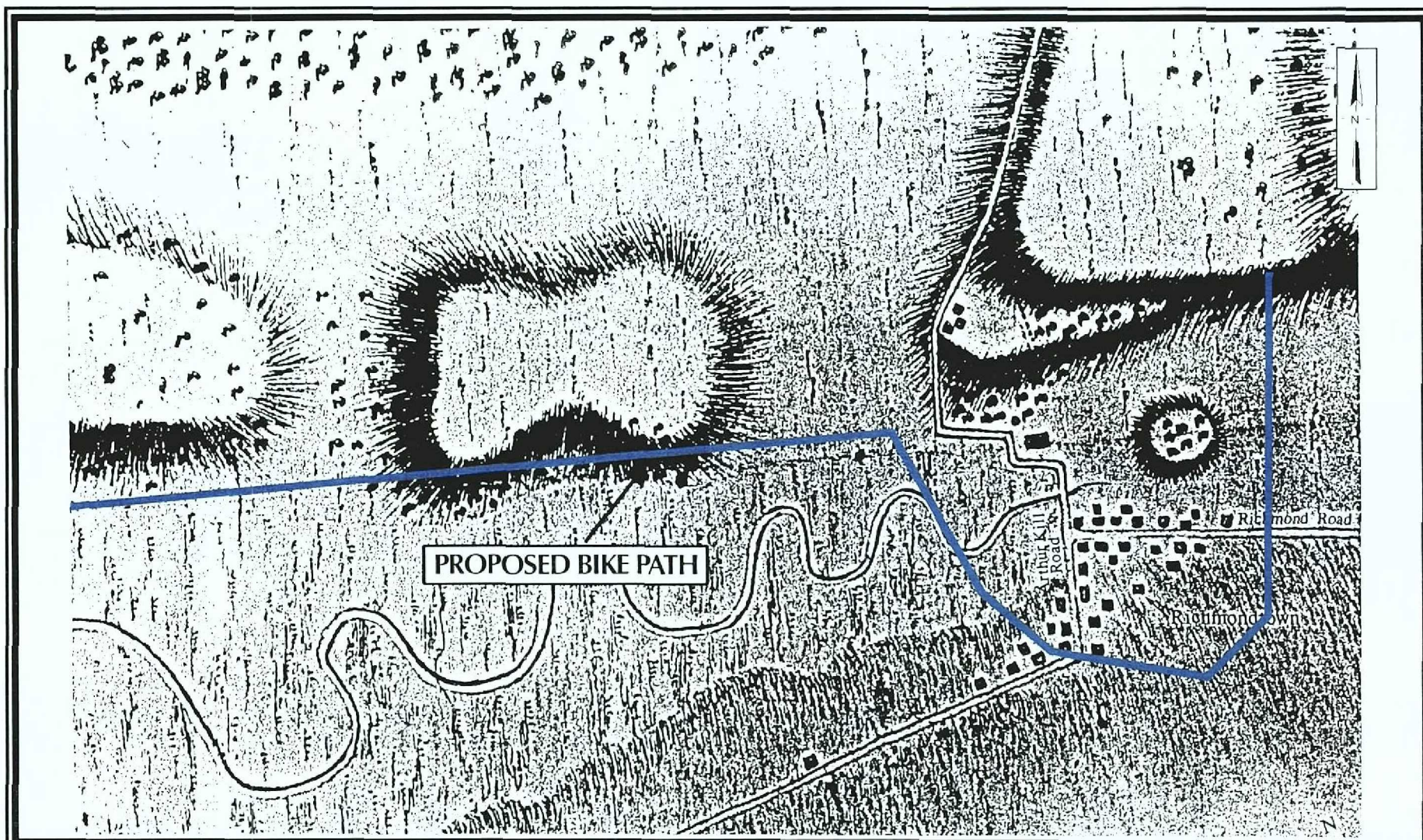


Figure 5: Ca. 1777 British Army Map, *Richmond*. Scale and location are approximate.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
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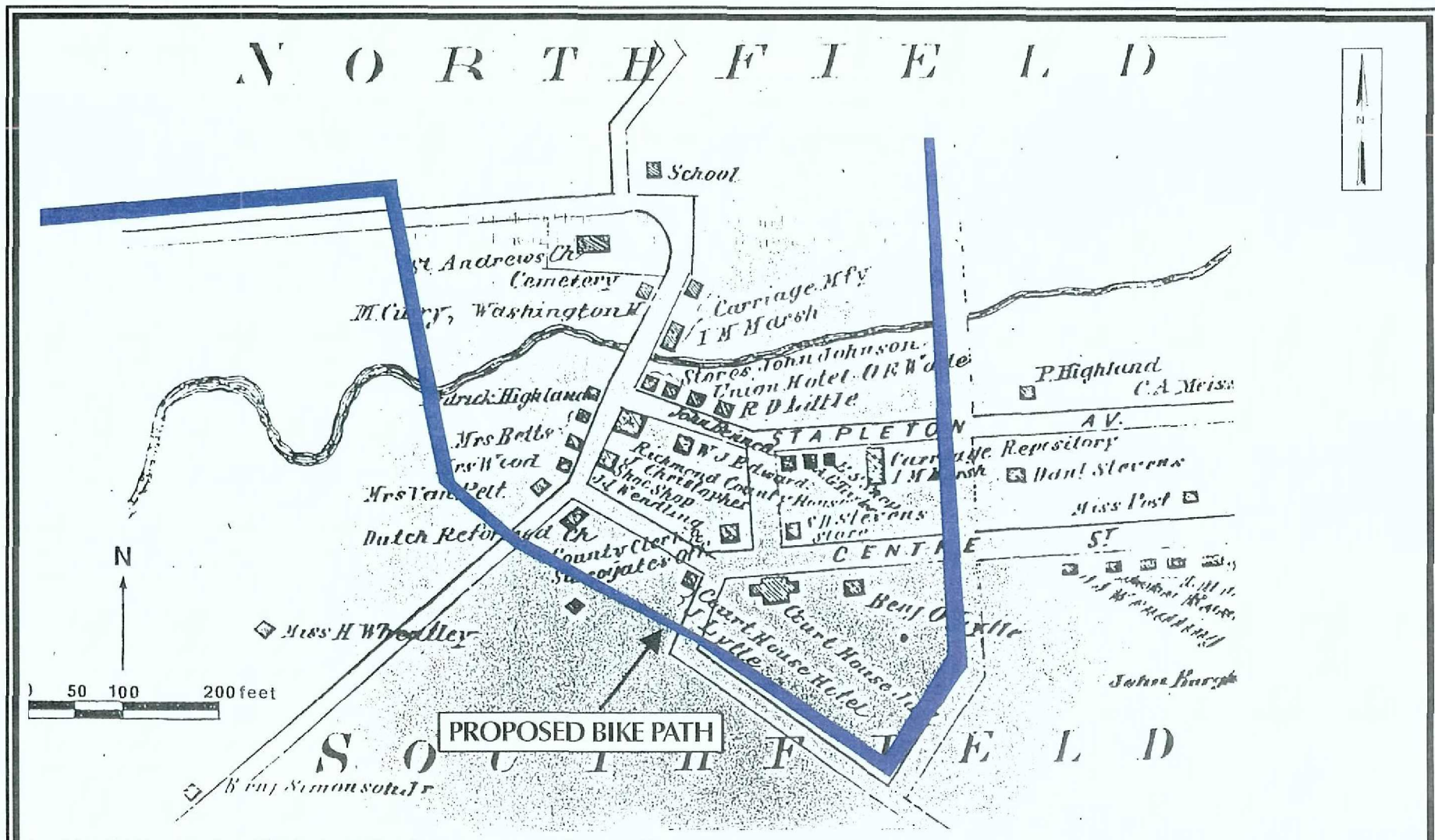


Figure 6: 1859 H. F. Walling, Map of Staten Island, New York (Richmondtown Inset). Scale and location are approximate.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
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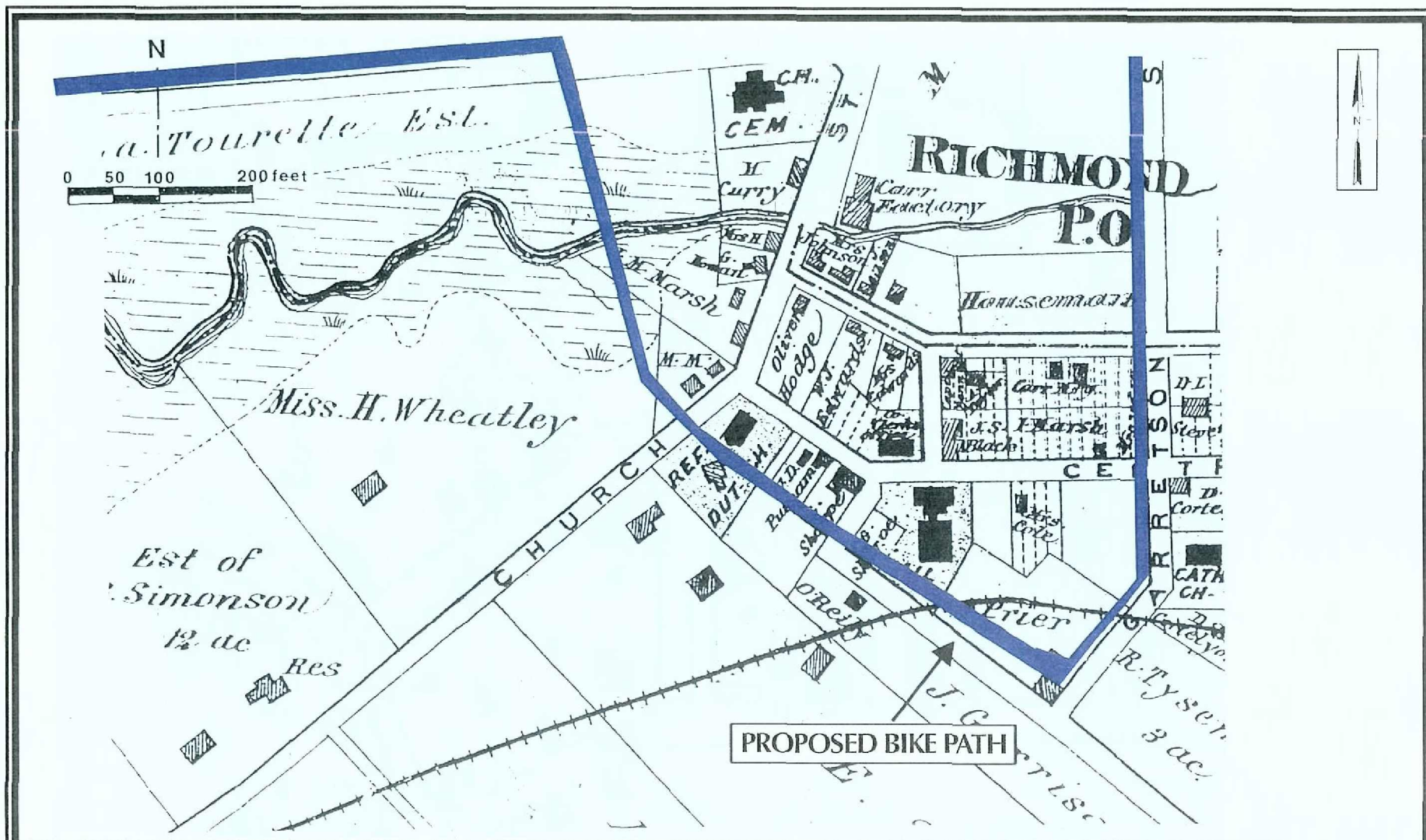


Figure 7: 1874 F. W. Beers, *Atlas of Richmond County, Staten Island, New York*. Scale and location are approximate.

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Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.



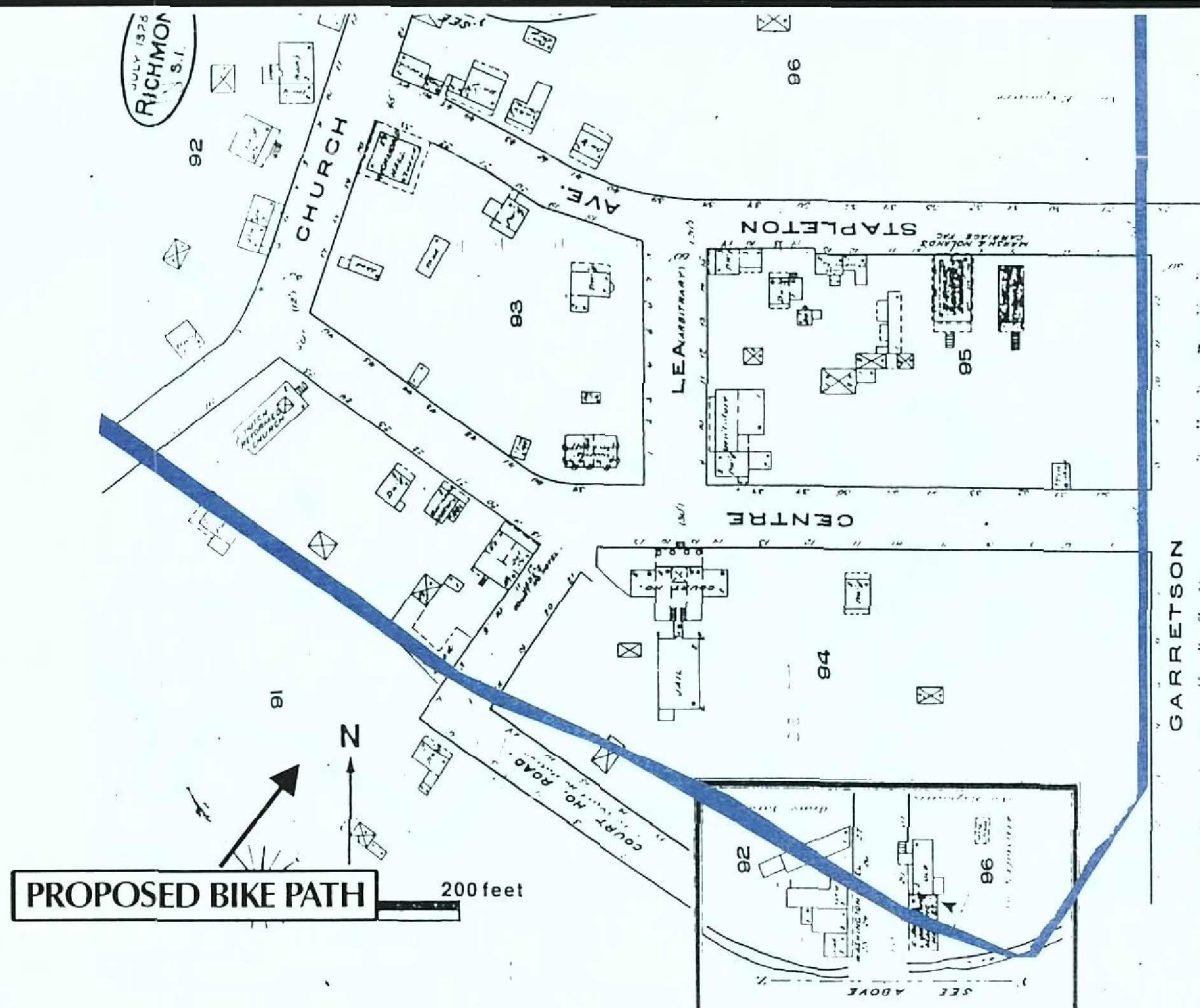


Figure 7:14 Insurance Map of Staten Island, New York, by Sanborn Map and Publishing

Figure 8: 1878 Sanborn Fire Insurance Map of the Borough of Richmond, City of New York.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
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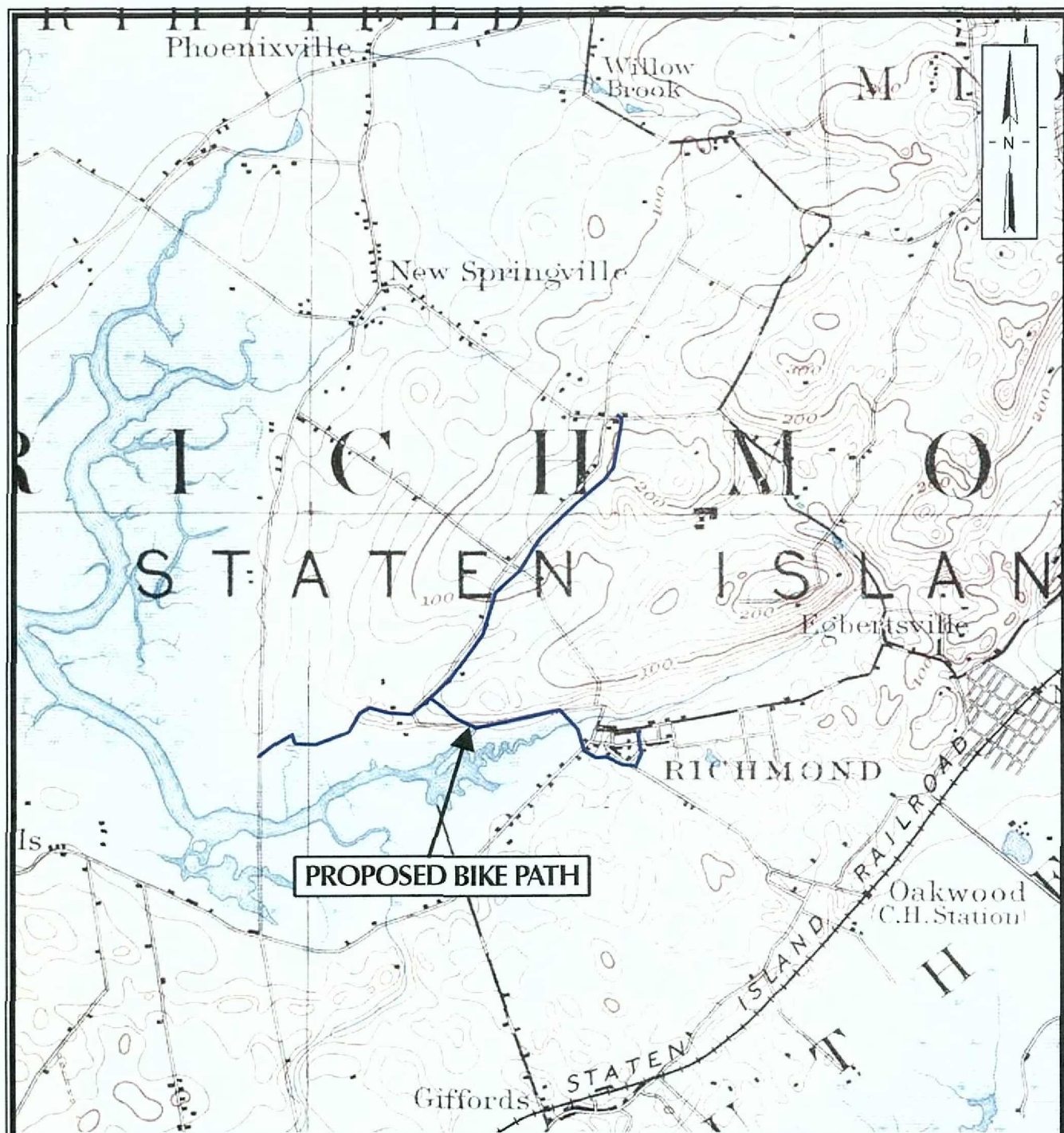


Figure 9: 1891 USGS 15' Quadrangle: Staten Island, N. Y.

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Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.



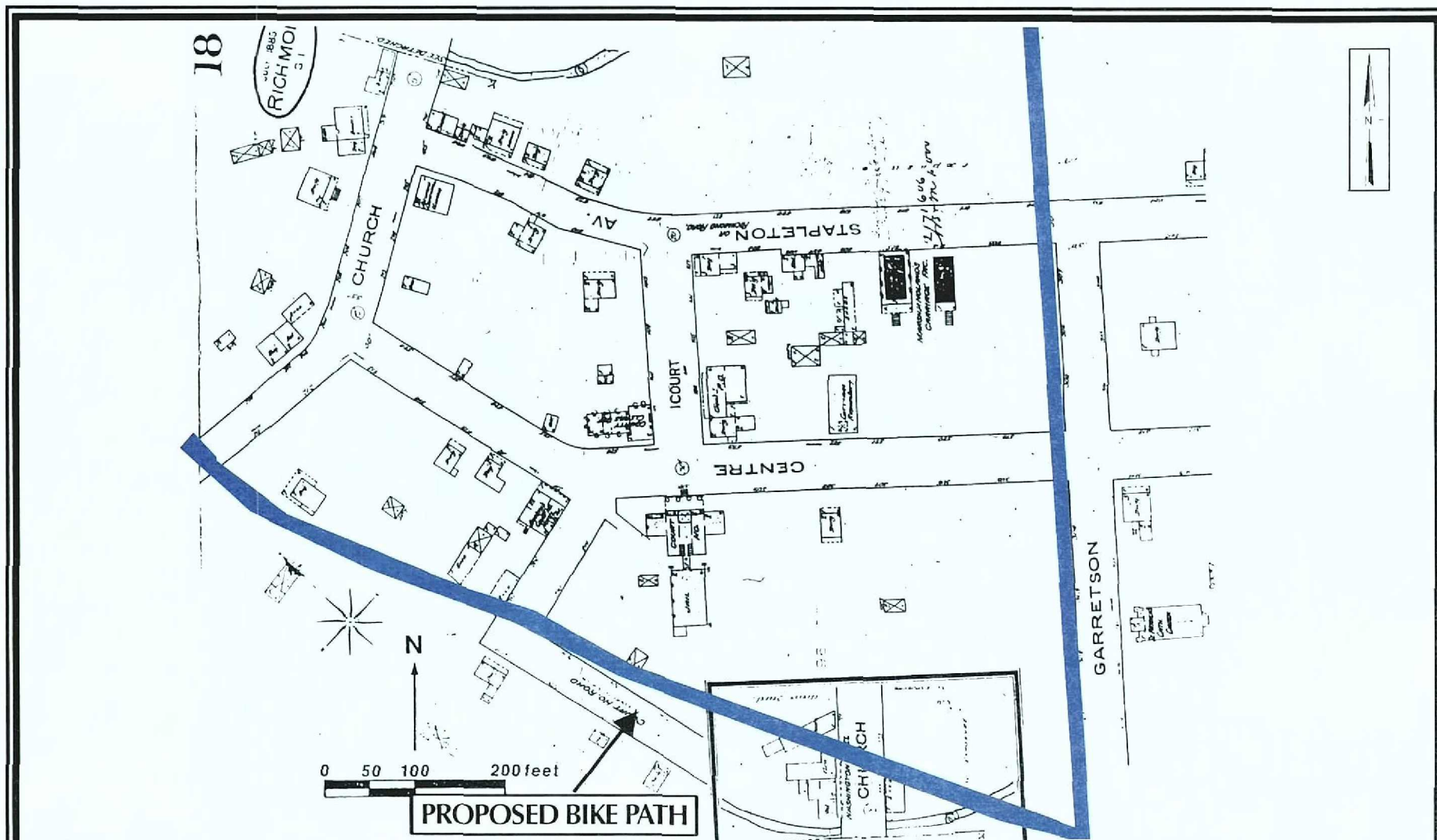


Figure 10: 1885 Sanborn Fire Insurance Map of Staten Island New York. Updated 1891.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.



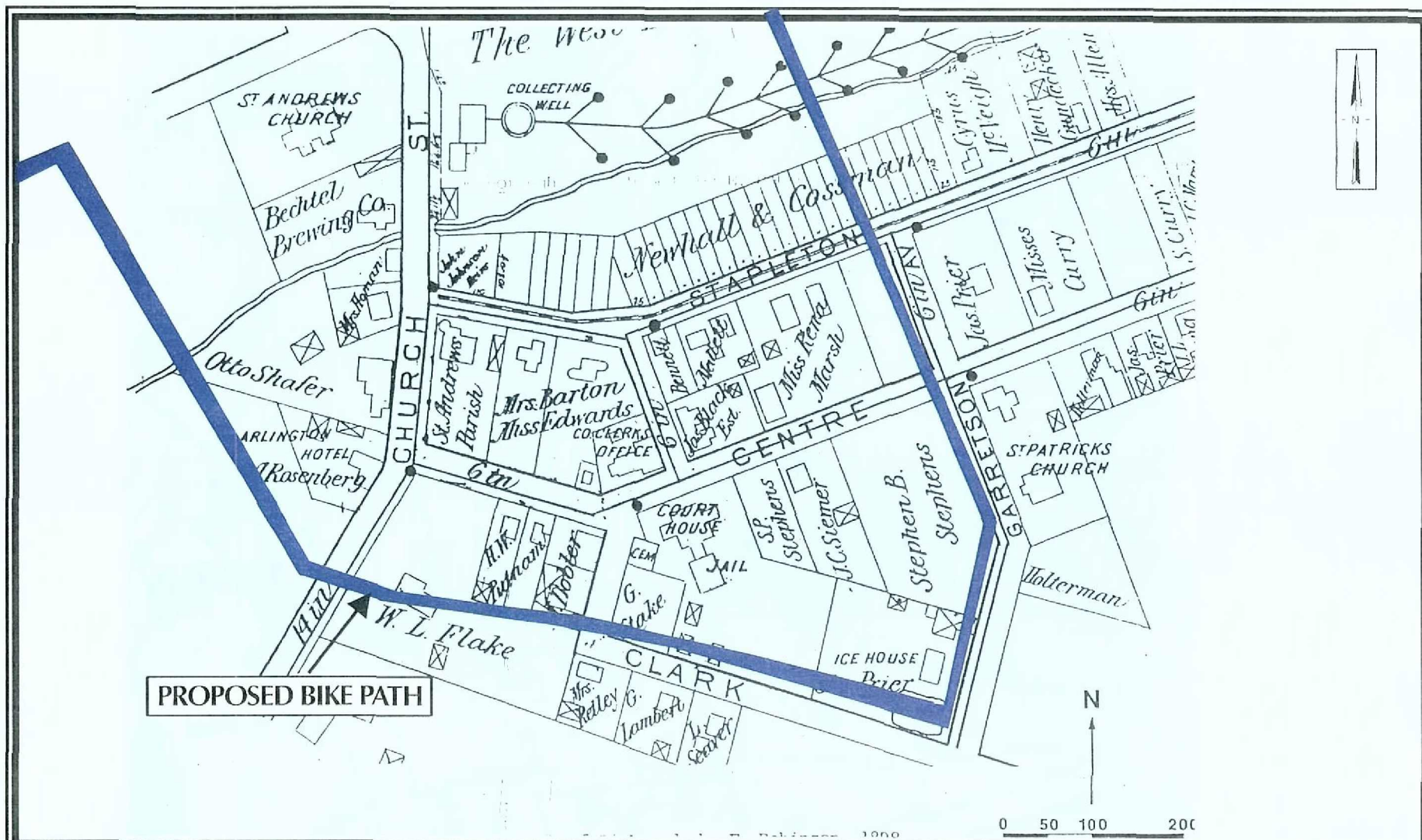


Figure 11: 1898 E. Robinson, *Atlas of Borough of Richmond*. Scale and location are approximate.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.



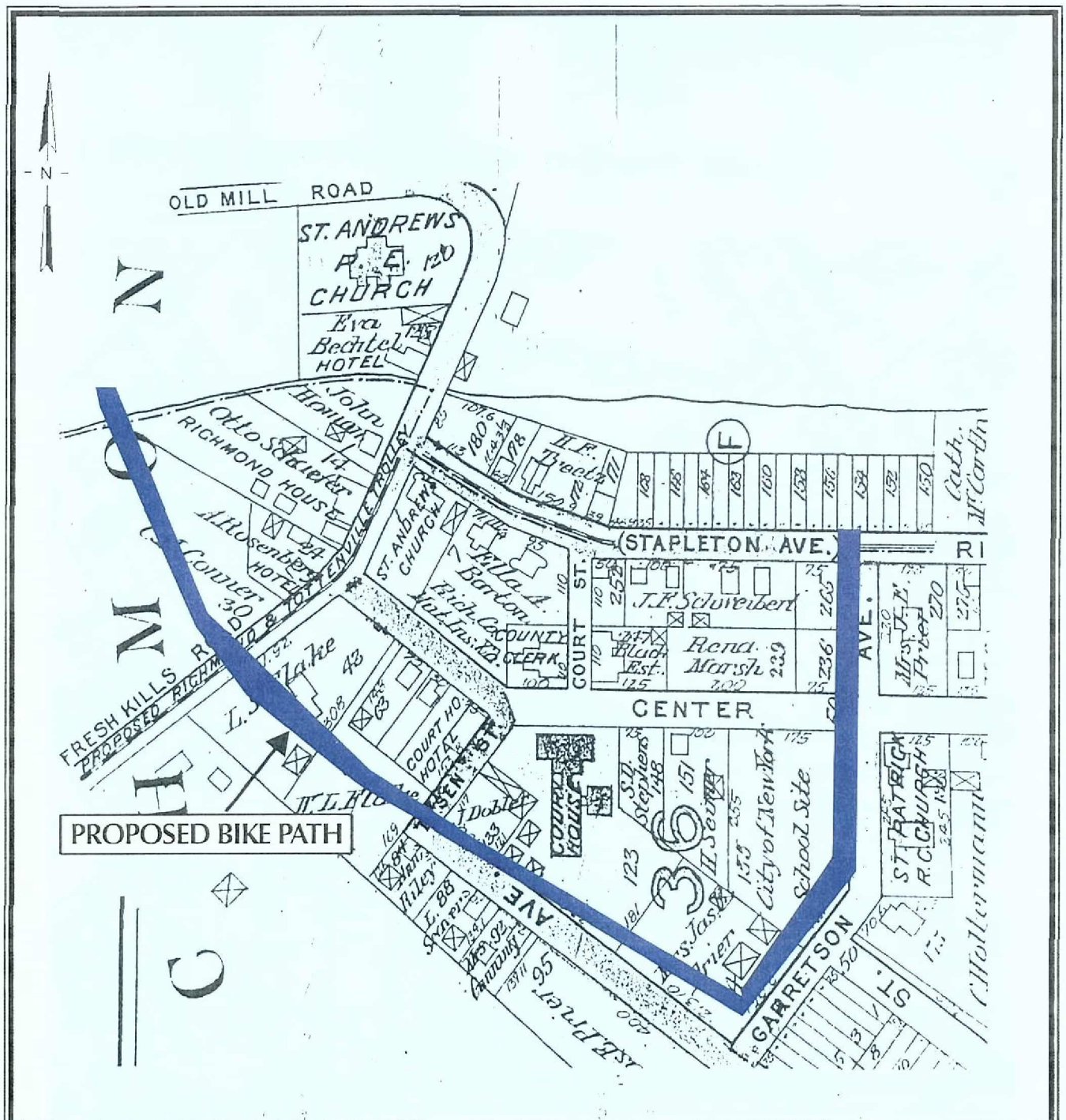


Figure 12: 1907 E. Robinson, *Atlas of the Borough of Richmond*. Scale and location are approximate.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.



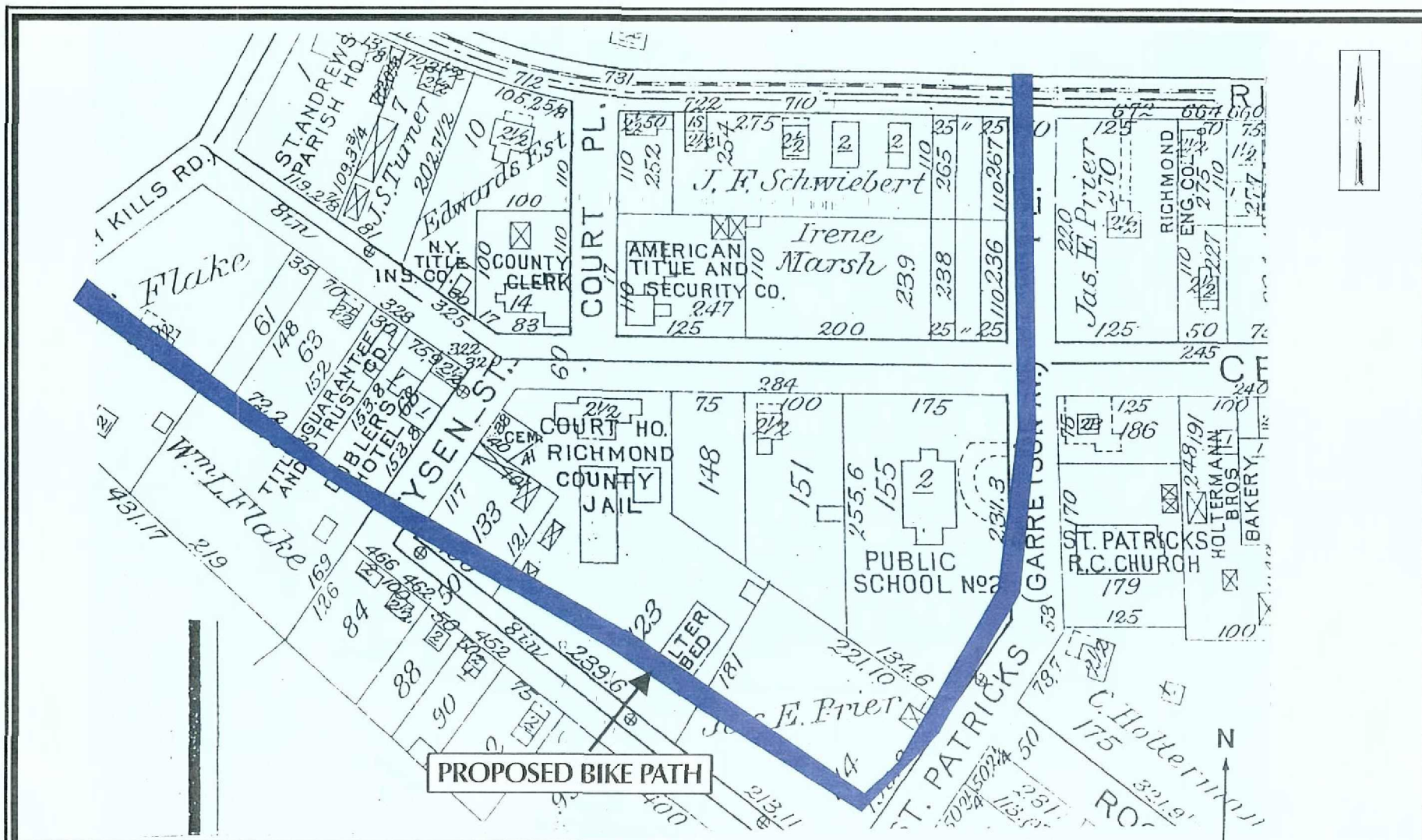


Figure 13: 1917 Bromley, *Atlas of the Borough of Richmond East* section. Scale and location are approximate.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
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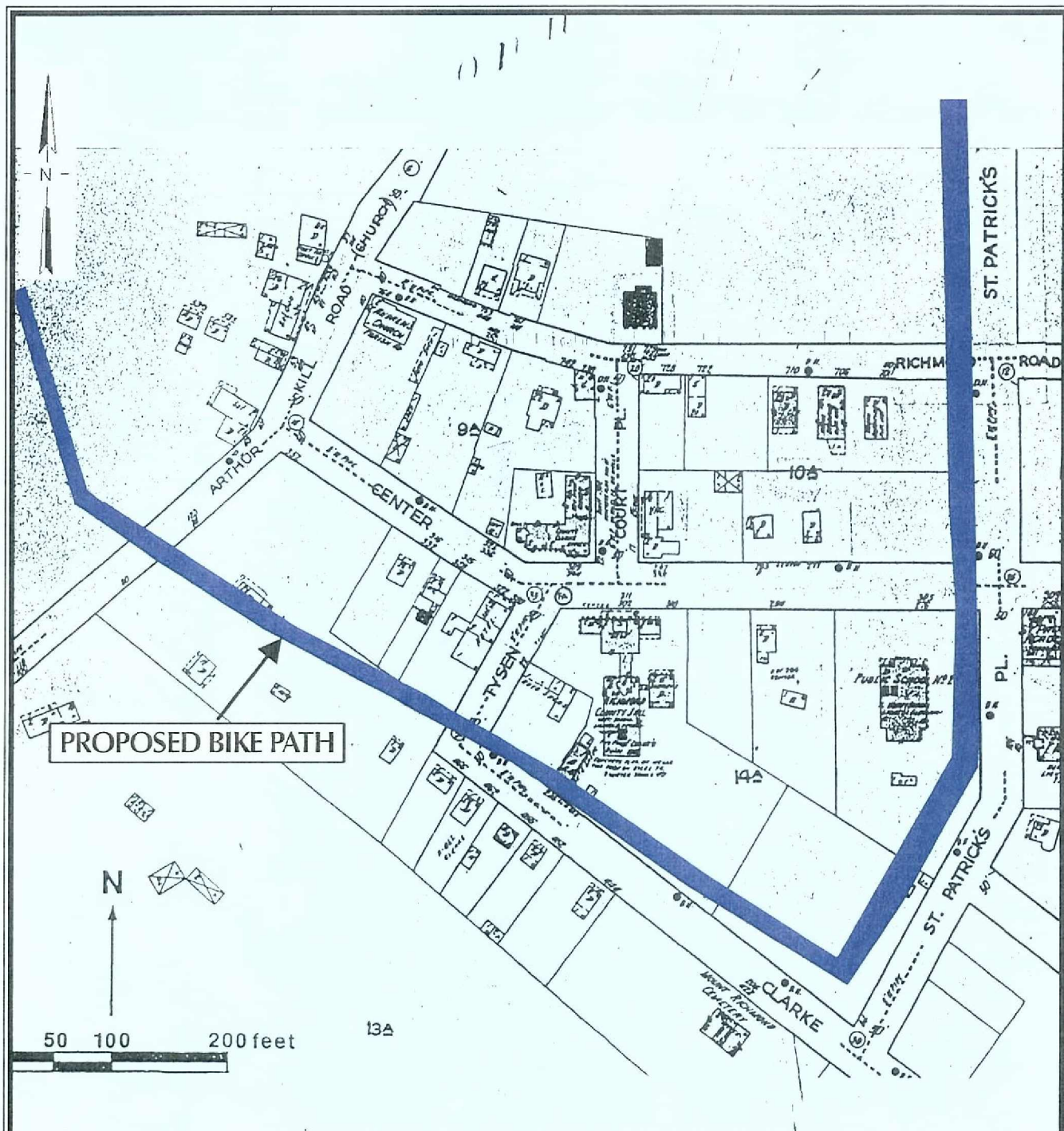


Figure 14: 1926 Sanborn Fire Insurance Map of Staten Island New York.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
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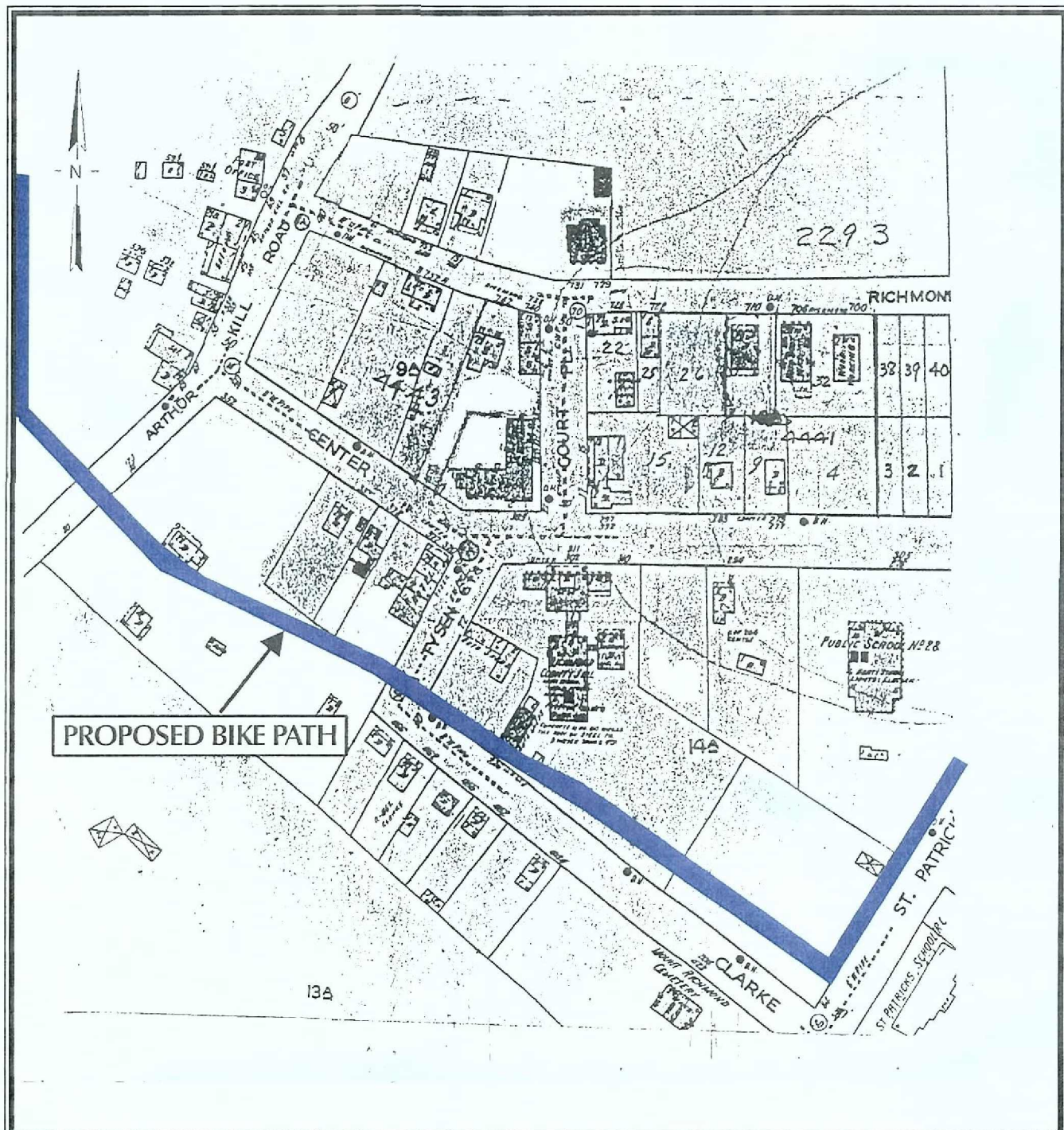


Figure 15: 1935 Sanborn Fire Insurance Map of Staten Island New York.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
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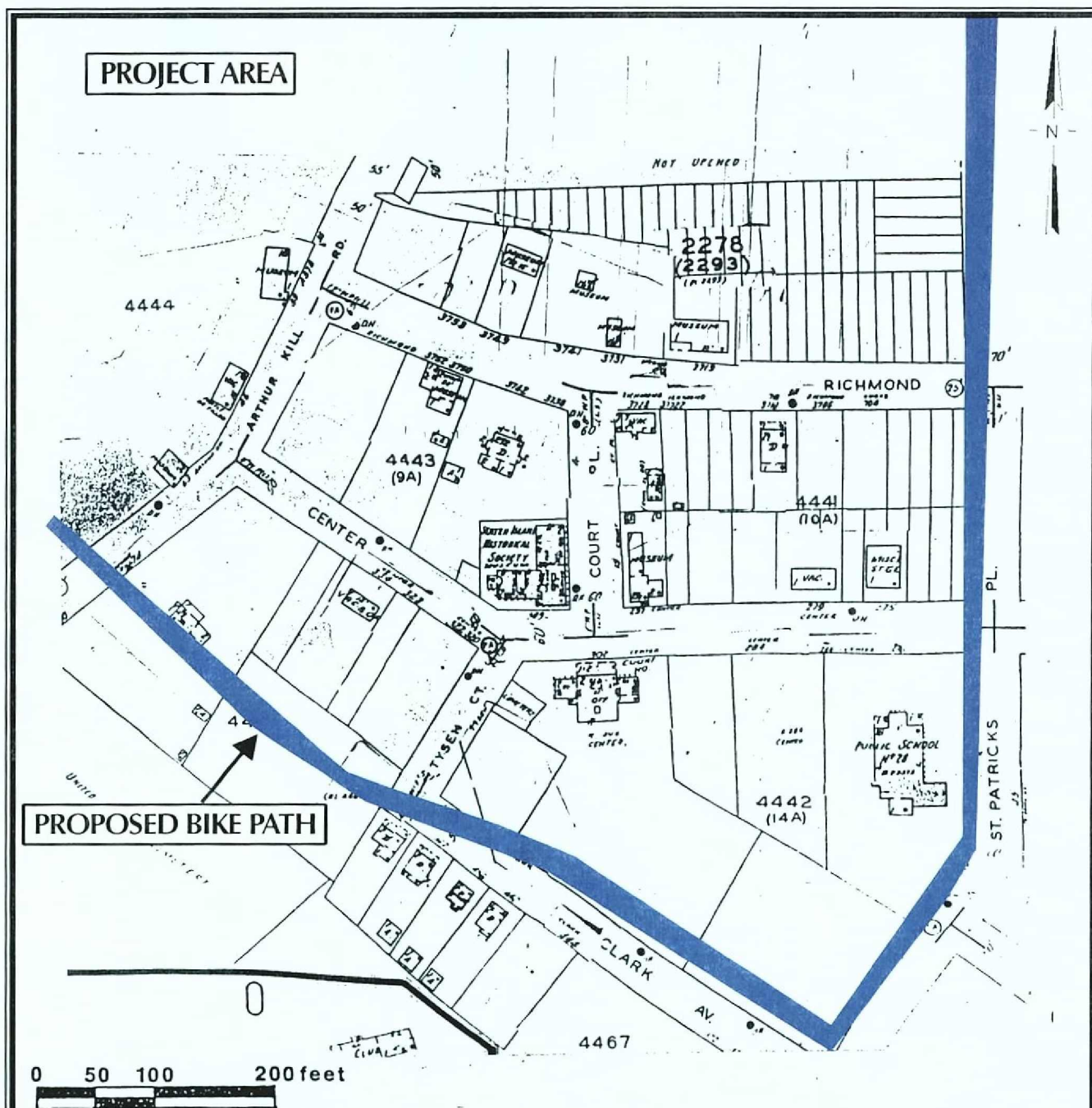


Figure 7:27 Insurance Map of Staten Island, New York, by Sanborn Map

Figure 16: 1968 Sanborn Fire Insurance Map of Staten Island New York.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
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Forest Hill Road Segment

The 1853 Colton & Colton map (Figure 17) shows sparse settlement within the Forest Hill Road study area. During Richmondtown's early history of development, this hilly area functioned as an agricultural hinterland, producing food for the town and other settlements concentrated in the lowlands. Prior to 1853, development in Richmondtown was not highly concentrated.

The villages of Richmond and Springville were established by 1853 (Figure 17), and a few residences were located along Arthur Kill Road southwest of Richmond village. The 1860 Walling map (Figure 18) shows that much of the area traversed by the proposed line of the bicycle path is divided into large parcels associated with only a few individuals. Samuel Decker, Joseph Edwards, and J. A. Decker appear as the principal landowners in the northern and western portions of the corridor (Forest Hill Road and La Tourette Segments). The Samuel Decker house is the only building that appears to be within or adjacent to the Forest Hill Road segment.

The 1850 US Census of population lists Samuel Decker (64) as a farmer with real estate valued at \$5,000. He lived with his wife Elizabeth and son Sylvanus, who was a boatman. In 1860, Samuel had \$8,000 in real estate and \$1,300 in personal wealth. Sylvanus was listed as a farm laborer. The census makes note of a vacant house in proximity to the Decker house. This reference probably corresponds to the second Decker house shown on the east side of the road on the 1860 map (Figure 18). By 1870, it appears that Sylvanus had acquired the family farm. In this year, Sylvanus lived with his wife Henrietta and two children. His farm was valued at \$8,000 and he had \$4,000 in personal wealth (US Bureau of the Census).

The 1874 Beers map (Figure 19) provides a clearer depiction of historic property boundaries. On this map, the proposed path parallels Forest Hill Road between the Samuel Decker estate and the J. Simonson property and then turns south to bisect a portion of the La Tourette estate. The Samuel Decker property is depicted on the southeast side of Forest Hill Road, and is within the Forest Hill Road Segment A.P.E.

The 1887 map (Figure 20) shows few changes in comparison with the 1874 map (Figure 21). Samuel Decker and Joseph Edwards are shown as owners of lands that comprise the northern portion of the proposed route along what is now Forest Hills Road; the Samuel Decker house is the only one depicted in this section. Joseph Edwards is listed in the 1860 and 1870 censuses as a tailor. In 1860, his real estate is valued at \$1,000.

The area experienced few changes in the last half of the 19th century. By 1898, the Decker house (Forest Hill Road Segment) appears to have been demolished and no other buildings are depicted adjacent to the proposed route (Figure 21).

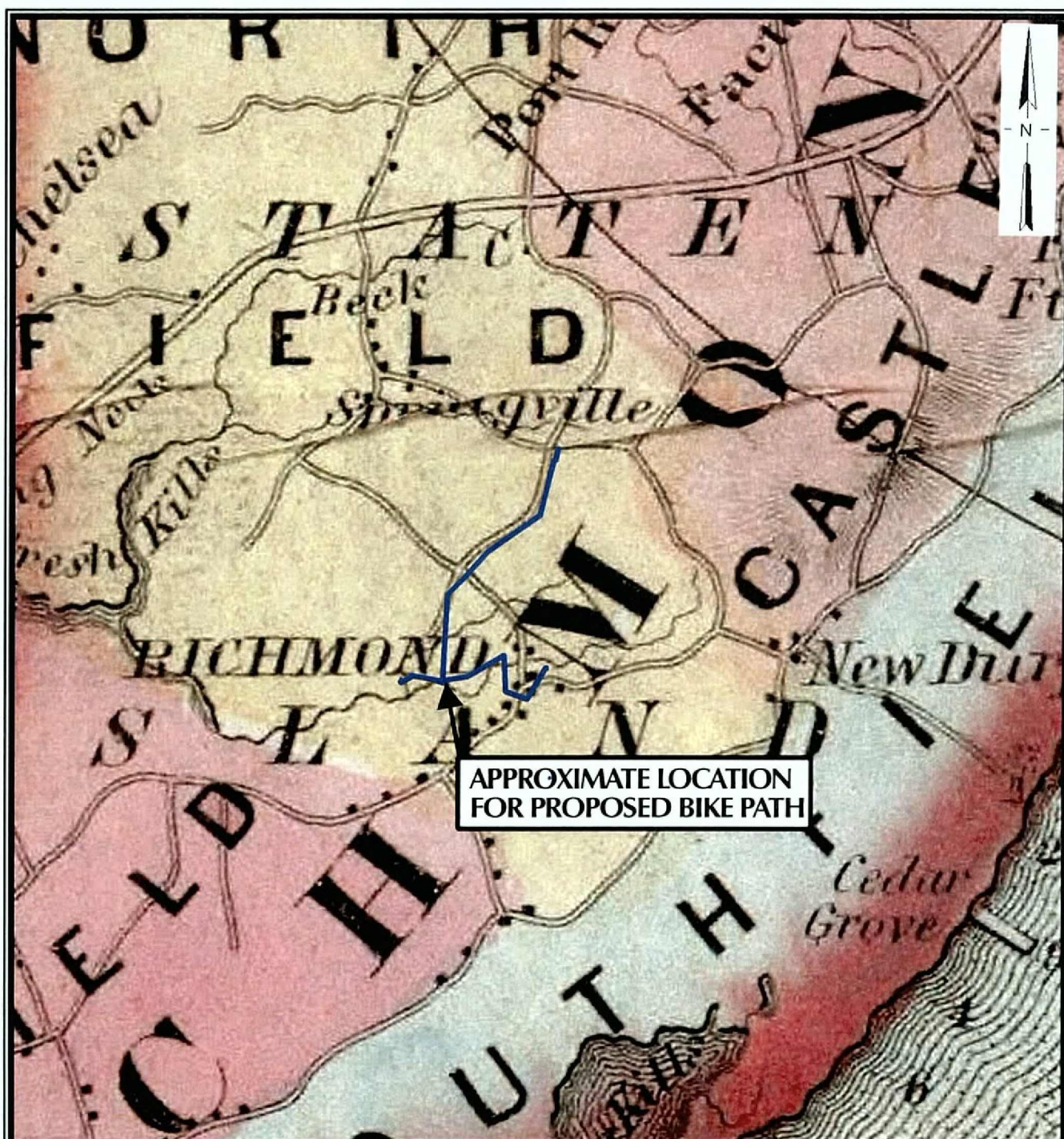


Figure 17: 1853 J. H. Colton & G. W. Colton, *Map of the Country Thirty Three Miles Around the City of New York*. Scale and location are approximate.

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Figure 18: 1860 H. F. Walling, Map of the City of New York and Its Environs from Actual Surveys. Scale and location are approximate.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
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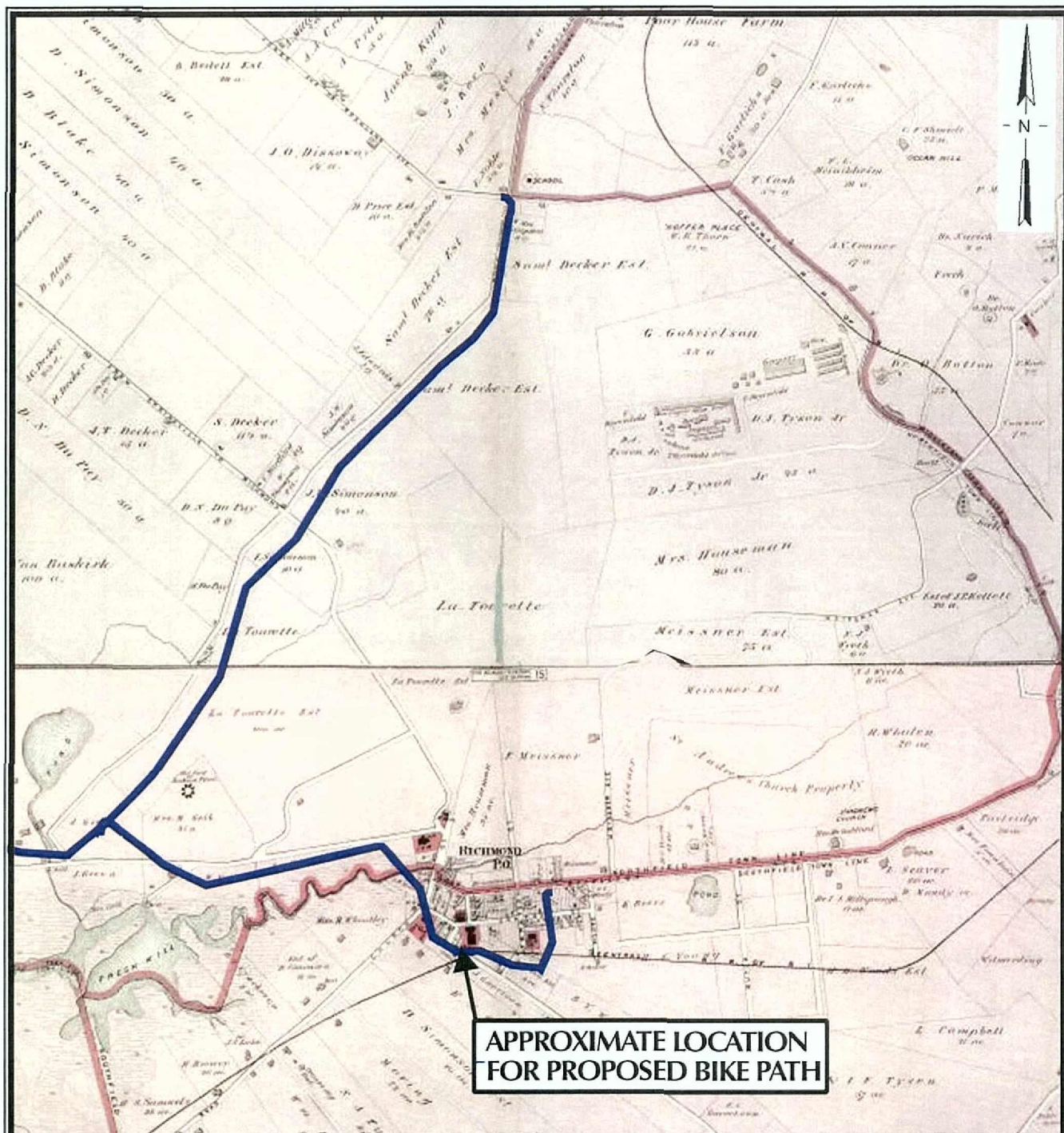


Figure 19: 1874 F. W. Beers, *Atlas of Staten Island, Richmond County, New York*. Scale and location are approximate.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
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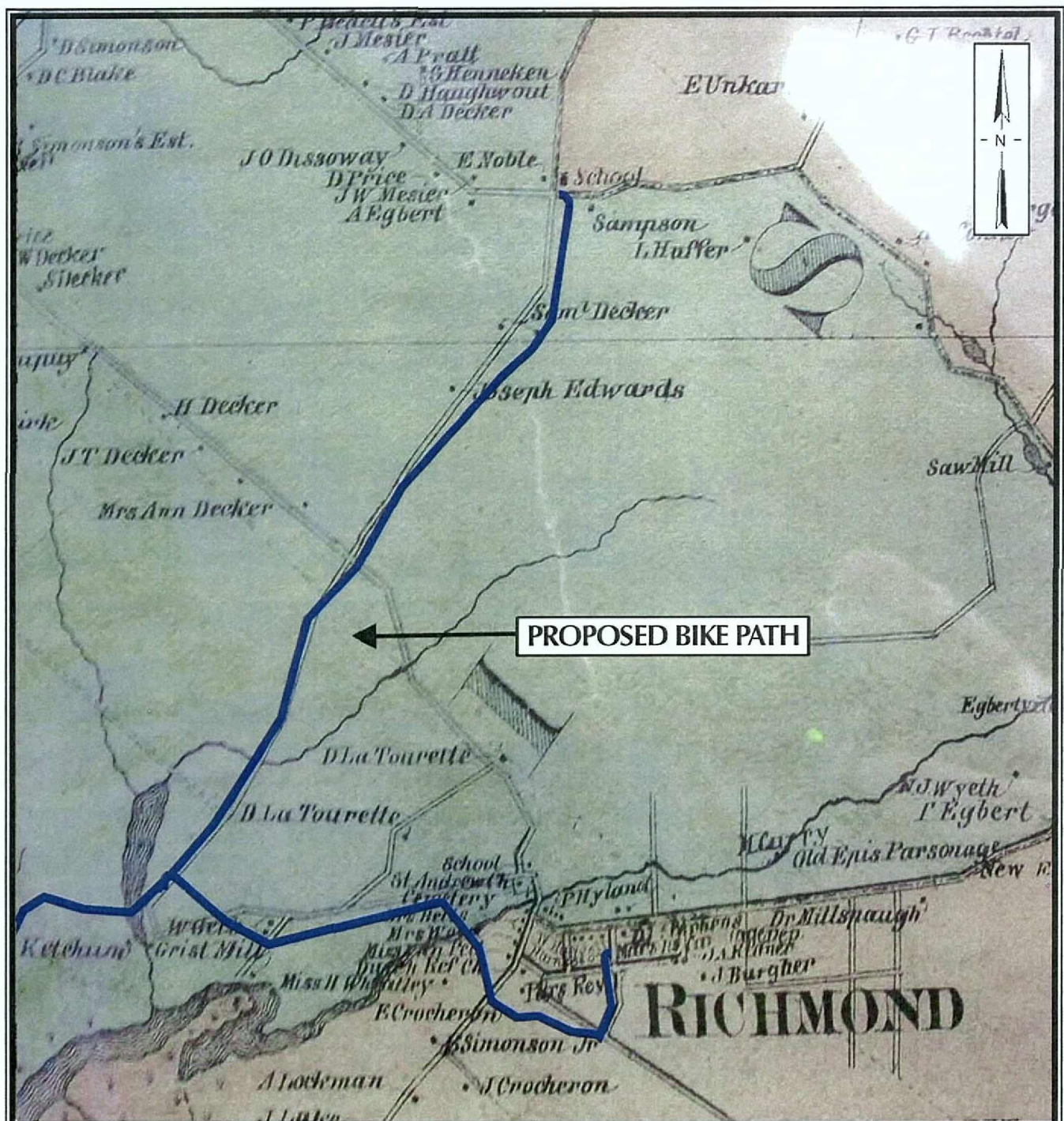
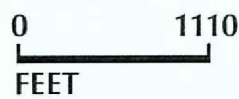


Figure 20: 1887 H. F. Walling, *Map of the City of New York and Its Environs from Actual Surveys*. Scale and location are approximate.



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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
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Figure 21: 1898 USGS 15' Quadrangle: Staten Island, N. Y.

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Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
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La Tourette Segment

In 1777, British General Howe consolidated troops involved in the New Jersey campaign of the American Revolutionary War at the Richmond Redoubt (Ward 1952: 328). The Redoubt was used thereafter as a staging area and temporary encampment for British troops fighting throughout New Jersey and the surrounding areas (Mays 1999: 285) (Figure 22).

In 1977, archaeologist Dr. Ralph Solecki identified the location of the Richmond Redoubt and several additional historic and prehistoric sites, some of which may include portions of the La Tourette and Old Mill Road Segments. The results of his research are summarized in Section 3 of this report.

The LaTourette Segment of the proposed path traverses the historic location of the David LaTourette farmstead, first established in 1830 (Figure 19). Jean La Tourette, predecessor of the family on Staten Island, purchased 175 acres at the foot of Richmond Hill in 1697. Family fortunes expanded when David La Tourette married Ann Crocheron and the couple was given considerable land on Richmond Hill. The couple built a house c. 1836 and the property was turned to truck farming with produce selling locally and in New York markets (Bergdoll 1981b:8-1). David La Tourette appears in the 1850 US Population Census as a farmer, aged 64, with \$18,000 in real estate. His household included his wife, Ann, four children, ages 13 to 21, and two house servants. By 1860, his real estate had increased in value to \$30,000 and his personal worth is \$10,000. His son Richard is listed as an assistant farmer (US Bureau of the Census). The property was known as one of the finest farms on Staten Island (Bergdoll 1981b; New York City Parks & Recreation 2008). The La Tourette estate appears on the 1887 map (Figure 20) in the same location. The house was placed on the National Register of Historic Places in 1982.

The La Tourette farm continued operating until 1910 and was sold to the City of New York in 1928. A nine-hole golf course was built by the New York City Parks Department and opened the following year (O'Brien and Jost 2001). The La Tourette House serves as the clubhouse for the golf course. The entire 550-acre property was transferred to the Division of Parks and Recreation in 1955. The 1966 USGS Map (Figure 2) shows the proposed path traversing golf courses that have been constructed as part of the development of La Tourette Park. It is unclear to what extent this early golf course development may have affected any archaeological deposits within the heavily wooded proposed bike path alignment.

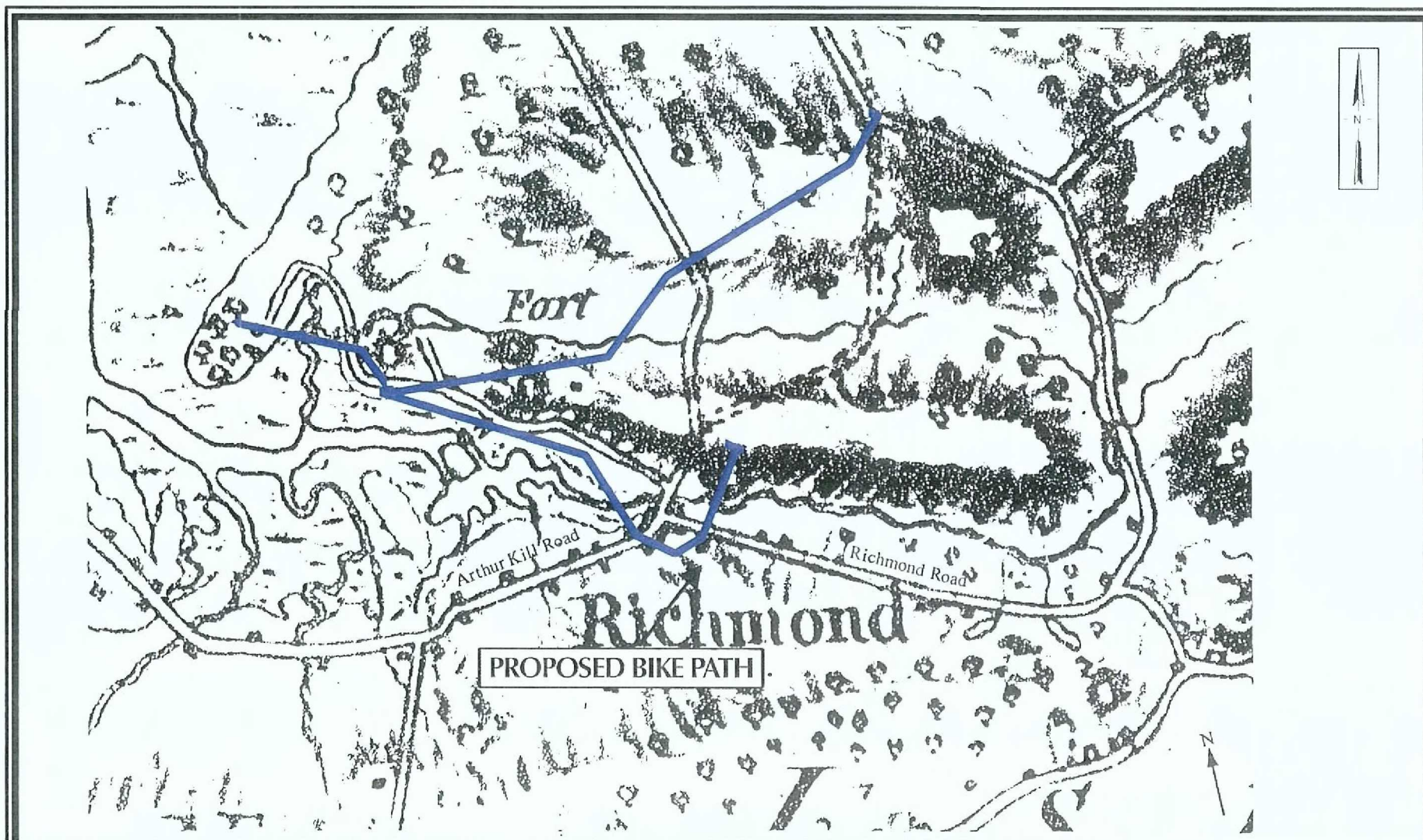


Figure 22: Ca. 1781 Taylor and Skinner, *Map of Staten Island*. Location is approximate.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
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Old Mill Road Segment

The Old Mill Road Segment lies within an area which may have been important for the historical development of Richmondtown and the Richmond Redoubt. Many of the early- to mid-19th-century maps consulted for this study do not accurately depict historical development in Richmondtown (Figures 17 through 20), but others are more representative. The potential involvement of archaeological resources associated with the British Richmond Redoubt involved in the Revolutionary War is discussed in Section 3 of this report.

A portion of the proposed route passes close to a former grist mill site. The mill was originally built around 1760 by John and Joseph Wood on land owned by their father, Stephen Wood, a tanner. This tide mill was powered by Richmond Creek (a tributary to the Arthur Kill) which, at the time, was wide and deep enough to accommodate a 40-ton vessel at the mill site. Through the winter of 1777, a British gunboat was frozen in the pond, with its guns guarding the fort on the hill. The mill site became the town dock and expedited the shipping of grain to market. When it was sold in 1774, the property was described as a new gristmill with two pair of stones, and a new dwelling-house with about forty acres of land. Before the next sale in 1786, the property was owned by Jonathan Lewis and by his executors following his death in 1785. When advertised the mill is referred to as "Commonly known by the name of Beadle's Mills." The mill may have been owned or operated by members of the Bedell family in the preceding decade. From 1786-1796, Lewis Ryerss owned the mill. Although he had advertised the property for sale in 1793, he is named as the owner when a road was built from St. Andrews Church to the landing in 1795. In 1799, when the road was built between the mill and the top of the hill, the mill was referred to as "Crocheron's Mill." John Crocheron made improvements to the mill including an additional run of stone. Two stones ground superfine flour and the third was used for "grinding corn and rye for the country, and to sell out of the mill." A new house was apparently built by Crocheron. The associated farm comprised four acres of vegetables for market and the rest in apple and pear orchards. The property appears to have been owned by members of the Crocheron family through the mid-19th century. It is referred to as Crocheron's Mill or Geib's Mill from 1850-1887 (McMillen 1962:14-16).

An advertisement for sale of the grist mill was printed in a local paper in 1857 (Morris 1900). William H. Geib apparently responded to the ad; the mill is identified as the W. Geib Grist Mill on the 1860 and 1887 maps. In the 1860 US census of population, Geib was identified as a farmer, age 41, living with his wife Margaret (26), a cook, a house maid, and two farm laborers. His real estate is valued at \$8,000 and his personal wealth is set at \$750. In 1870, he is identified as a miller and farmer living with his wife, three children, and a servant. He owns real estate valued at \$30,000 and personal wealth valued at \$1,000 (US Bureau of the Census). The mill was torn down in 1920 (McMillen 1962:16).

Another mill was erected in the mid-18th century to the west of the tide mill. Built by Joseph

Bedell or his son John, the mill was initially powered by a stream. To create a more constant water supply, they dammed the stream and created a mill pond. This grist mill remained in the Bedell family until 1828. At this time, the description of the site included a carding machine. Members of the Crocheron family operated the mill until the 1840s when Philip Ketchum purchased the property. This mill was demolished sometime before 1900.

Six historic photographs of the Geib-Wood-Crocheron Mill complex were located at the SIHS library. It is not clear from these photographs whether or not any of the buildings depicted are within the Old Mill Road segment, but it is worth noting that all of the structures depicted appear to be directly adjacent to Old Mill Road. The mill complex was demolished some time before 1921, and its remains were still visible on the surface as of 1940. Photocopies of the photographs are presented in Appendix E.

Today, the Old Mill Road Segment of the proposed bike path passes a two-story house located at 40 Old Mill Road to the west of the Church of St. Andrew. Dating from the early 19th century, the building has recently served as the church rectory. Known as the Bedell House, the residence was constructed in 1830 on Center Street. A wing was added to the house in 1946. The house was moved to its present location in 1959, in preparation for the Richmondtown Restoration, and has since served as the church rectory. It is unlikely that any significant archaeological deposits related to St. Andrew's rectory will be found near its recently established location adjacent to the proposed bike path.

The nearby Church of St. Andrew, originally built in 1713, serves the oldest Episcopal congregation on Staten Island. The church was the site of a skirmish in the Revolutionary War. The structure suffered two fires in the 19th century and the present church, completed in 1872, incorporates remnants of the original building (Bergdoll 1981:7-1). The Church of St. Andrew, including the Bedell House, was placed on the National Register of Historic Places in 1982. Although St Andrew's is located more than 200 feet from the proposed bike path alignment, it is possible that archaeological evidence related to its history may be affected by the proposed bike path's construction. Specifically, evidence of the two fires and the revolutionary war skirmish may be present.

As of 1898 (Figure 21) Old Mill Road was no longer an active thoroughfare.

As the proposed route turns southeast toward Clarke Avenue, the route passes the rear yards of four buildings that have landmark status as part of Historic Richmondtown. The 1898 Sanborn map updated to 1911 shows the configuration of buildings at the intersection of Fresh Kills Road (now Arthur Kill Road) and Center Street (Figure 23). Figure 24 (1917 Sanborn) shows no structures in immediate proximity to this segment of the route in 1917. The Treasure House was built c. 1700 by Samuel Grasset, a tanner and leather worker. Additions were made by subsequent owners who engaged in various occupations such as shoemaker, innkeeper, stone mason, and coach trimmer (NYCLPC 1969).

Two of the buildings were moved to this location to serve as part of the Richmondtown Restoration. The Christopher House, built c. 1720, served as the farmhouse of Joseph Christopher in Willowbrook, and the Boehm House, built c. 1750, was the home of educator Henry Boehm in Greenridge (NYCLPC 1969). Since these buildings were moved to their present location, they do not affect the archaeological sensitivity of the proposed bike path segment.

The Voorlezer's House, built c. 1695 by the Dutch Reformed Congregation, served as a church, school, and residence for the lay minister and teacher (called the Voorlezer) until 1701 and remained a private residence until 1936. The oldest known elementary school building in the country, the structure is a National Historic Landmark (NYCLPC 1969). Since the bike path segment near this house does not present clear evidence of recent disturbance, its sensitivity for historic archaeology must be considered very high.

St. Patrick's Place Segment

St. Patrick's Place was constructed by at least 1860 (Figure 18) and appears on the 1874 map as Carretson Street (Figure 19). In 1874, the street is shown as extending north of Stapleton Avenue (now Richmond Avenue). Sometime between 1887 (Figure 9) and 1891 (Figure 10), the extension was closed and remained so through 1917. By 1926, the road was known as St. Patrick's Place and the extension was again open (Figure 14). Richmond has expanded to the east along Richmond Road by this time, and St. Patrick's Place appears to be fairly close to the geographic center of the settlement.

As the proposed bike path turns north along St. Patrick's Place, the route passes St. Patrick's Church, built c. 1862 to serve Richmondtown's Roman Catholic congregation. This building is a New York City Landmark. The bike path will pass near the church's front yard. This yard has not been used as a burial ground, but may contain archaeological deposits associated with the church or the property's previous use. However, the bike path in this segment as proposed will run on existing pavement and no ground disturbance is planned.

A New York City Landmark, the Stephens-Prier House, built c. 1857, lies to the north of the Church (Figure 18). The building was the residence of Daniel Lake Stephens and Stephen D. Stephens and was sold to James Prier in 1886. It is now home to the administrative offices of the Staten Island Historical Society (Historic Richmondtown 2008). The 1935 Sanborn map shows the newly constructed St. Patrick's School at the northeast corner of St. Patrick's Place and Clarke Ave. In 1968, the extension of St. Patrick's Place remains open.

In the 20th century, Richmondtown remained a small village as can be seen on the 1935 map (Figure 15). The 1968 Sanborn map shows the efforts of the Staten Island Historical Society toward the creation of a historical museum (Figure 15). Buildings were moved to Richmondtown and others were relocated from the village core to form a coherent picture of the development of a Staten Island village (Figure 25).

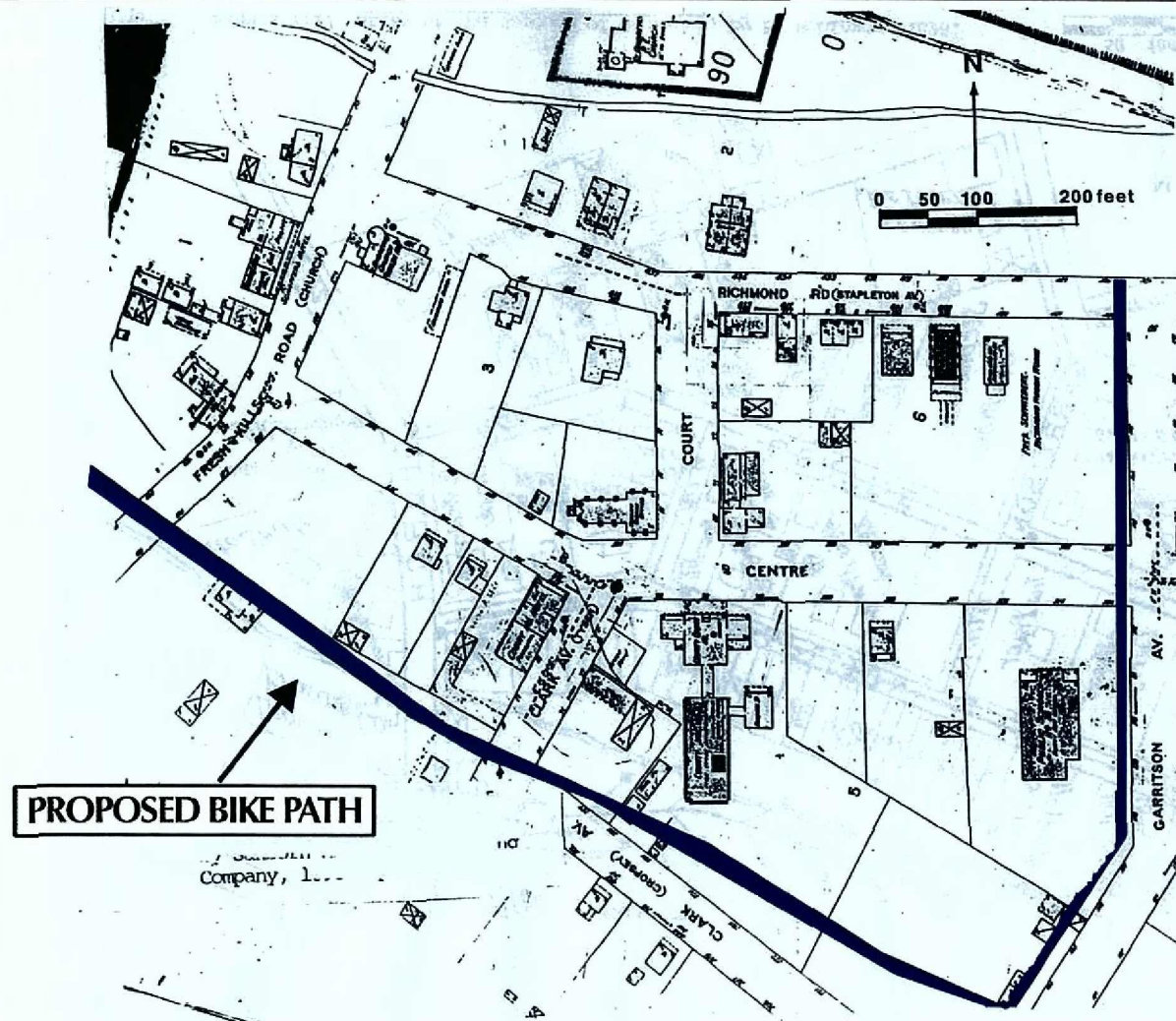


Figure 23: 1898 Sanborn Fire Insurance Map of the Borough of Richmond, City of New York. Updated in 1911.

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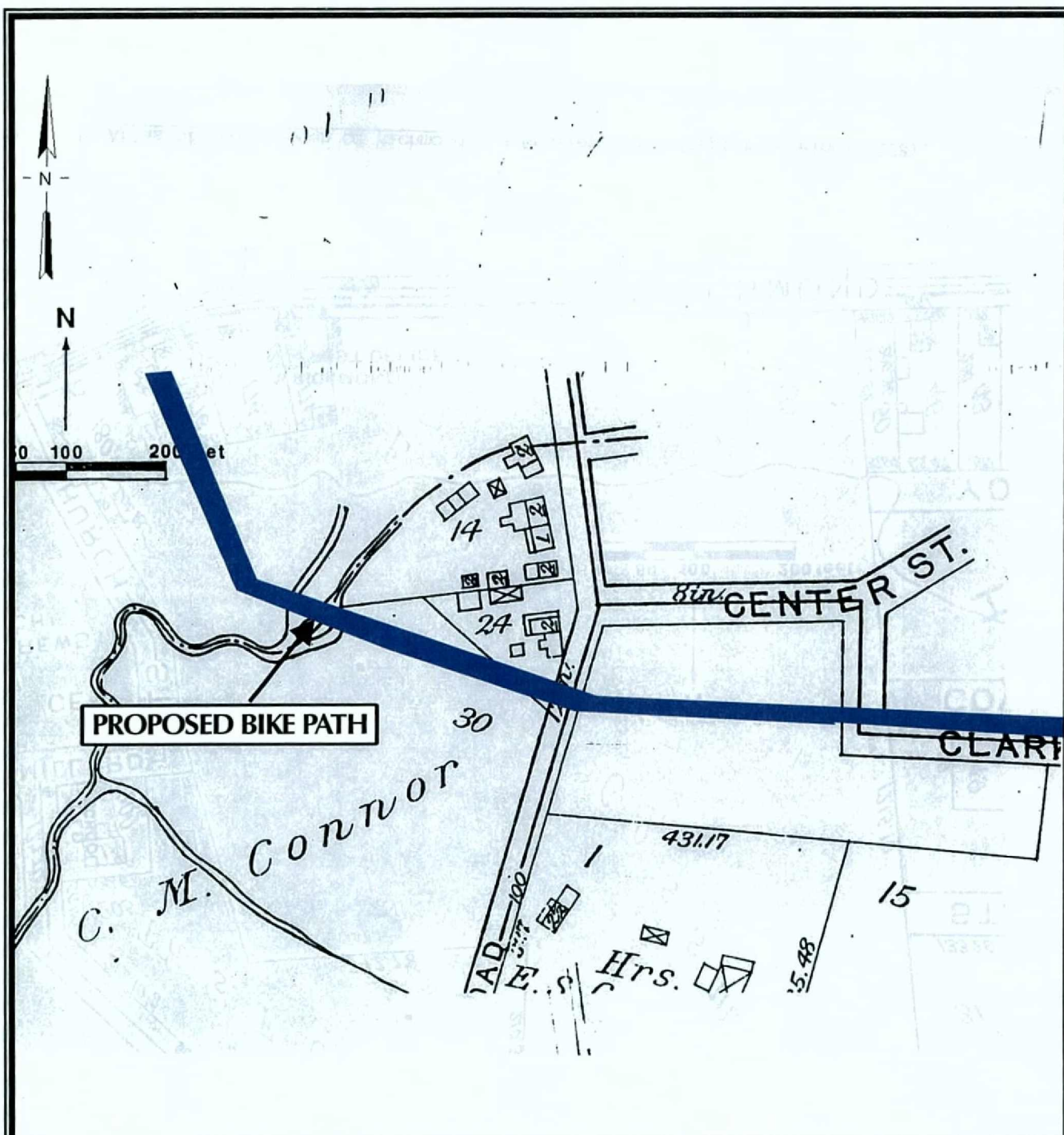


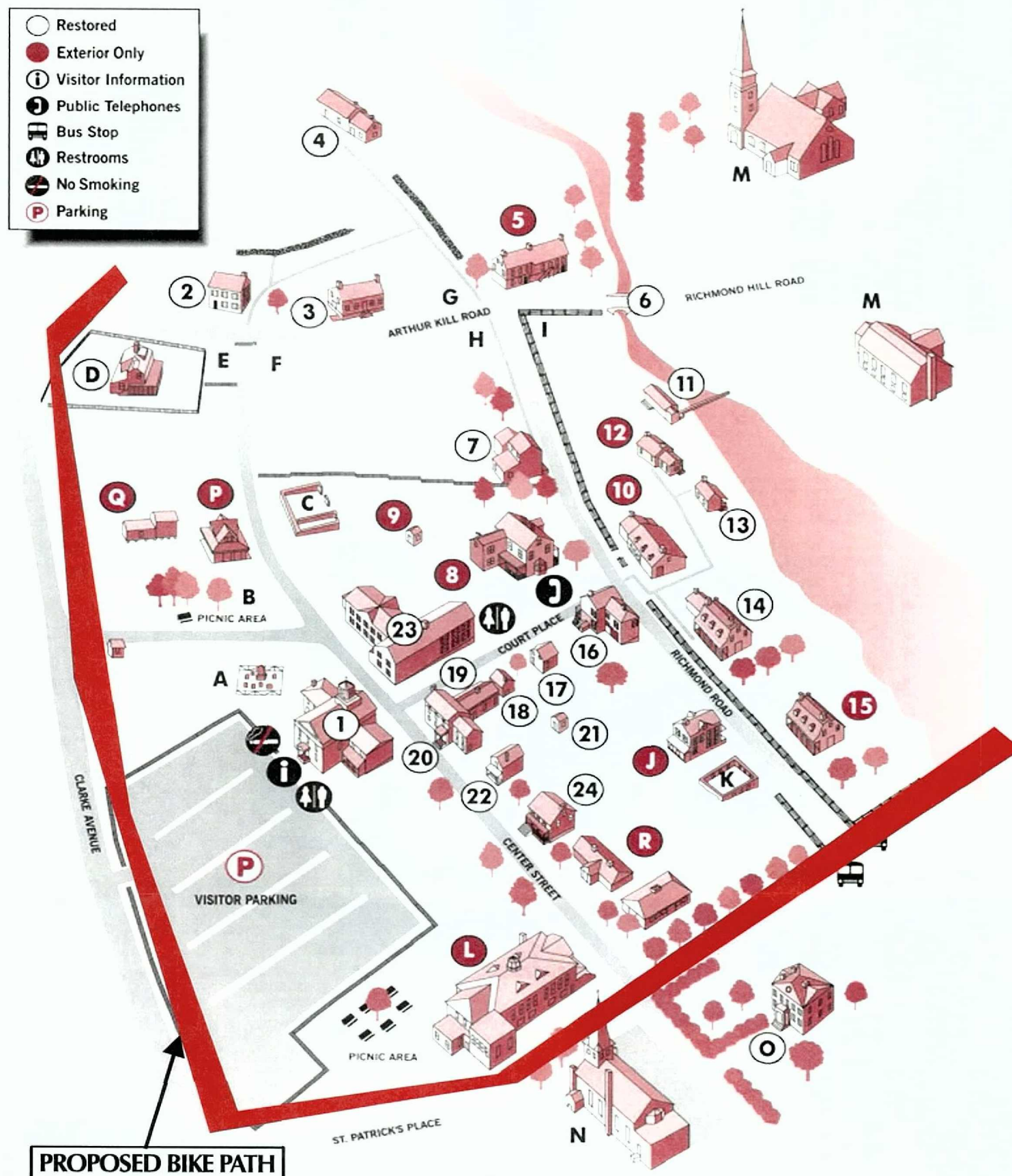
Figure 24: 1917 Bromley, *Atlas of the Borough of Richmond West* section. Scale and location are approximate.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
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- Restored
- Exterior Only
- i Visitor Information
- ☎ Public Telephones
- 🚌 Bus Stop
- 🚻 Restrooms
- 🚭 No Smoking
- P Parking



- (1) 3rd County Courthouse 1837
- (2) Voorlezer's House c.1695
- (3) Boehm House, c.1750; Addition c.1840
- (4) Christopher House c.1720; addition c.1730
- (5) Treasure House c.1700; additions c.1740, 1790, 1860
- (6) Town Bridge, 1845
- (7) Guyon Store/Tavern c.1819; addition c.1835
- (8) Edwards-Barton House 1869
- (9) Outhouse c.1865
- (10) Britton Cottage c.1670; additions c.1755, 1765, 1800
- (11) Dunn's Mill & Mill Pond Reconstruction
- (12) Kruser-Finley House c.1790; additions c.1820, 1850
- (13) Basket Maker's House c.1810
- (14) Guyon-Lake-Tysen House c.1740; kitchen addition 1820s
- (15) Crocheron House c.1819
- (16) Bennett House c.1839; addition c.1854
- (17) Carpenter Shop Reconstruction
- (18) Eltingville Store/Print Shop c.1860
- (19) General Store c.1840, with later additions
- (20) Stephens-Black House c.1838; addition between 1839 and 1853
- (21) Outhouse c.1860
- (22) Colon Store/Tinsmith Shop c.1841 and 1850
- (23) Historical Museum 1848, additions 1885 and 1911
- (24) Henry Seaman Cottage, c. 1836

- (A) Rezeau-Van Pelt Family Cemetery
- (B) Site of Court House Hotel c.1858
- (C) Barn Foundation
- (D) Parsonage 1855
- (E) Site of Reformed Dutch Church c.1769 and 1808
- (F) Site of First County Jail c.1710
- (G) Site of Second County Courthouse 1793-94
- (H) Site of Town Pond, Richmond County Hall c. 1826,
- (I) Site of Government Buildings, 1700s -1800s
- (J) Schwiebert House c.1910
- (K) Site of Carriage and Wagon Manufactory 1858-1945
- (L) Public School 28 1907
- (M) Church Property of St. Andrew c.1872
- (N) St. Patrick's Church c.1860
- (O) Stephens-Prier House c.1857
- (P) New Dorp Railroad Station c.1888
- (Q) Annadale Store and Railroad Station c.1850 and 1860
- (R) Maintenance Sheds

Figure 25: Historic Richmond Town Map and Visitor Guide showing the location of the proposed bike path.
Source: <http://www.historicrichmondtown.org>.

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**Phase IA Archaeological Reconnaissance and Documentary Study
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Richmond, Richmond County, Staten Island, New York.**



Documentary Research Summary Conclusions

Documentary historical sources relevant to this study do not provide reasons to lower or raise the sensitivity of any of the proposed bike path segments for prehistoric sites since it is not clear that any of the segments have been extensively disturbed in historic times. Consequently, no modification of these sensitivity assessments is made in Table 4.

An analysis of historic maps and other documentary sources indicates that several portions of the subject property may contain historic period archaeological resources. Table 4 reflects these concerns.

Table 4. Archaeological Sensitivities Based on Combined Documentary Evidence and Environmental Factors

Segment	Prehistoric	Historic	Overall
Clarke Avenue	Moderate	High	Moderate-High
Forest Hill Road	Low	Moderate-High	Moderate
La Tourette	Low-Moderate	Very High	Moderate-High
Old Mill Road	Moderate	High	High
St. Patrick's Place	Low-Moderate	High	Moderate-High

3.0 PREVIOUSLY IDENTIFIED ARCHAEOLOGICAL RESOURCES

This section examines the distribution of previously conducted archaeological studies and known archaeological resources within a mile of the subject property. Research on Staten Island's prehistoric past and historical archaeology is nicely summarized in Baugher et al. (1989), Ritchie (1980) and Solecki (1977, 1989). The reader is directed to these sources for general synthetic analysis of the archaeology of Staten Island. This report focuses solely on what is known and may be known about archaeological sites within or near the proposed bike path segments.

With the exception of a few hundred feet within the northernmost quarter-mile of the Forest Hill Road Segment, the entire proposed route for the bicycle paths lies within NYOPRHP-identified archaeological sensitivity zones. Reported archaeological resources associated with the Old Mill Road and St. Patrick's Place segments account for this. However, as discussed above, the historic maps and environmental sources summarized above further suggest an overall moderate to high level of sensitivity of the project area for both reported and previously undocumented archaeological resources.

3.1 Previous Studies

The first archaeological studies involving the general area of the Richmond Hills and Richmondtown were those of pioneering archaeologist and Staten Island resident Alanson Skinner (1909). Skinner identified several sites in the general area and provided cursory descriptions of artifacts he found. Reginald Bolton (1922) later opined that these sites may have been connected by an important prehistoric trail in the area of contemporary Richmondtown.

CRCC located one report (Historical Perspectives Inc 2004) on file at NYOPRHP which reported on an archaeological investigation (Phase IB) within a mile of the subject property. Additionally, site inventory forms from several additional studies were found, and NYOPRHP's on-line database was consulted for information on other previous investigations and known sites (site information is presented in Section 3.2).

Historical Perspectives Inc's Phase IB Archaeological Investigation was conducted on behalf of the New York City School Construction Authority in 2004 on the proposed I.S. 43R School Site west of Forest Hill Road and south of Richmond Hill Road. The investigation area was located several hundred feet west of the Forest Hill Road and La Tourette segments of the proposed bike paths. Despite the testing area's high sensitivity for archaeological resources, no prehistoric artifacts were recovered and the historic materials encountered were not interpreted to represent a potentially significant site. No further archaeological investigation was recommended.

Several additional sites were recorded on NYOPRHP site files by Dr. Ralph Solecki and Mr. R. Wiggins. These are discussed in Section 3.2 below. The nature of Mr. Wiggins's investigation is unknown, but the Solecki investigation was identified as a Phase I survey for the Oakwood Beach Pollution Control Project (Solecki 1977). The resulting report was located at the SIHS library in Richmondtown and is discussed further below. Solecki later published a summary of the results of his study (Solecki 1989), which contains an excellent review of both avocational and professional contributions to our understanding of prehistory and historical archaeology in the general area.

The Staten Island Historical Society Library provided an archaeological sensitivity study concerning Historic Richmondtown's rehabilitation (Baugher et al. 1989). This document discussed archaeological sensitivities outside of Richmondtown's core which are directly relevant to one of the bike path's segments. Baugher et al. (1989) assigned high sensitivity to an area including most, if not all, of the Old Mill Road segment, and offered comments on the archaeological potential of a few other locations associated with the proposed bike paths. Additional information concerning this report and its findings is presented in section 3.2 below.

It is worth noting that the two professionally conducted studies directly relevant to the proposed bike path locations (Solecki 1977 and Baugher et al. 1989) did not include subsurface testing and, consequently could not conclusively evaluate the location, context, archaeological integrity and significance of the sites discussed.

3.2 Previously Identified Archaeological Sites

Reports on previously conducted archaeological investigations within a one-mile radius of the subject property were reviewed. This research permits development of a context within which to interpret the findings of this report and allows additional estimation of the archaeological sensitivity of the area of potential effects. Since none of these sites have been professionally evaluated, their belowground vertical and horizontal boundaries, integrity, and eligibility for listing on the National Register of Historic Places are unknown.

Table 5 summarizes reported archaeological resources within a mile of the subject property; see Figure 26 for approximate locations. It is worth noting that several of the forms on file at NYOPRHP and NYSM for these resources were incomplete or missing at the time of CRCC's research trip.

Table 5. Reported Archaeological Resources within a Mile of the A.P.E.

Site Number	Site Name	Description	Location	NRHP Eligibility
A085-01-0001	Richmondtown Pond Archaeological Site	Former location of a 17th and 18th century mill pond, filled with soil and artifacts from 17th – 19th centuries.	NE corner of Richmond Street and Richmond Hill Road. Unknown distance west of St. Patrick's Place Segment near Richmond Road intersection.	Unknown. R. Wiggins (1968) believes it is eligible.
A085-01-0002	Whitlock Brothers Concrete Block Factory Site	Aboveground foundation remains	On or adjacent to central portion of Old Mill Road segment	Not evaluated (Solecki 1977). Baugher et al. (1989) suggest that it is potentially significant
A085-01-0109	Richmond Hill Site	Archaic prehistoric site complex consisting of three sites, one of which is reportedly destroyed (Solecki 1977, 1989)	West end of Old Mill Road. Possibly adjacent to or including portions of this segment.	Partly destroyed. Not evaluated (Solecki 1977, see also Bolton 1922, Ritchie and Funk 1973, Anderson 1976 and Baugher et al. 1989)
A085-01-0112	Burial Hill	Historic cemetery, with possible prehistoric site associated	Top of Ketchum's Hill, approximately 150' west of Old Mill Road segment's western terminus	Not evaluated (Solecki 1977)
A085-01-0113	Old Fort Richmond Redoubt	Revolutionary War Era Fort	Old Mill Road, just east of Forest Hill Road. On La Tourette Golf Course, just east of and possibly on La Tourette segment and north of Old Mill Road segment. Partially destroyed (Solecki 1977, 1989)	Not evaluated (Solecki 1977).
A085-01-0114	Ketchum's Mill (A.K.A. Bedell – Ketchum Mill)	19th century foundation and raceway remains, reported artifacts.	Potentially bisected by La Tourette segment, possibly on or adjacent to Old Mill Road.	Partly destroyed. Not evaluated (Solecki 1977). See also Baugher et al. (1989)
NYSM 4616	Unnamed (NYSM 4616; ACP Rich 26)	Large prehistoric camp.	Westernmost portion of Old Mill Road segment, and large area west of Forest Hill Road	Unknown. No site form or report

Site Number	Site Name	Description	Location	NRHP Eligibility
NYSM 8499	Unnamed (NYSM 8499)	None available	Equidistant between intersection of Forest Hill and Richmond Hill Roads and northern terminus of St. Patrick's Place segment.	Unknown. No site form or report
NYSM 8321	Unnamed (NYSM 8321)	None available	Very large site along southern bank of Richmond Creek, within one quarter mile of Old Mill Road Segment	Unknown. No site form or report
NYSM 4600	Unnamed (NYSM 4600)	Alleged Contact Period Native American Burials and artifacts	Springville along Springville (Corson's) Creek, about 1 mile northeast of northern end of Forest Hill Road segment	Unknown. No site form or report.
N.A.	Wood's et al. Mill Site	18th-19th century grist mill site, with intact aboveground features	Old Mill Road Segment	Significant to Richmondtown (Baughen et al. 1989)

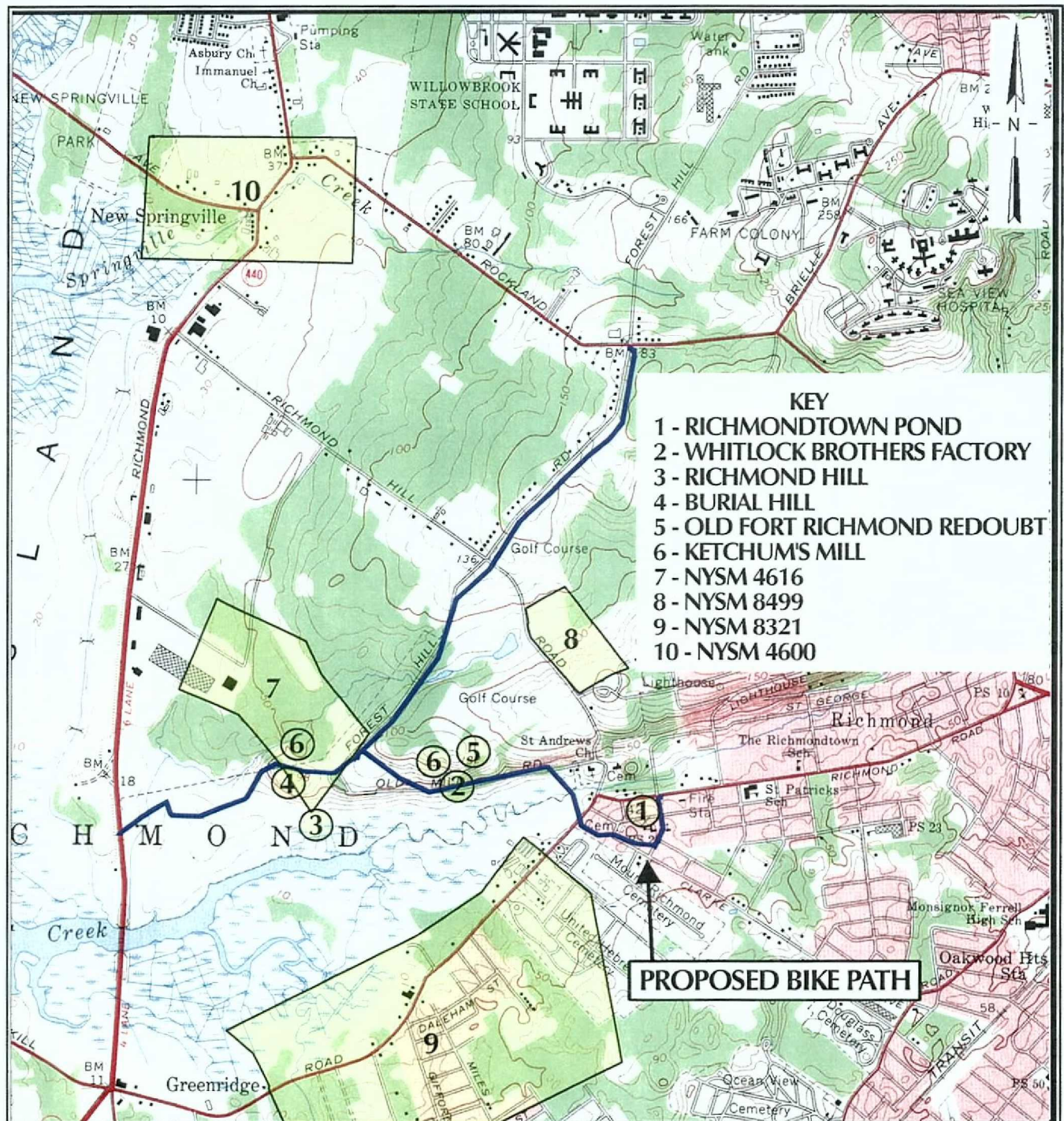


Figure 26: USGS 7.5' Quadrangle: Arthur Kill, N. Y. - N. J. 1966. showing locations of known archaeological sites.

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Forest Hill Road Segment

No professional archaeological field testing programs have been conducted on the reported Richmond Redoubt and NYSM 4616 Prehistoric Sites. Consequently, the boundaries of these sites are not known and may include the portions of the Forest Hill Road Segment.

No archaeological site associated with the 19th-century Decker property (See Section 3.1) has been reported. Since this property has never been professionally surveyed and does not appear to have been extensively disturbed, it remains possible that intact archaeological deposits may be found.

Although the Forest Hill Road segment retains the least favorable environmental characteristics for prehistoric settlement within the A.P.E., the reported presence of a large prehistoric site on or adjacent to it (NYSM 4616) and two others associated with Native American occupation (NYSM 4600, NYSM 8321) nearby suggests that it is more sensitive than indicated by environmental data.

Notably, Solecki (1977) suggests that the hill associated with this segment could have been used in prehistoric times to monitor the movement of game animals or enemies since it is considerably more elevated than the surrounding countryside. CRCC agrees with this assessment. The area was used historically in a similar manner by British forces engaged in the Revolutionary War and stationed at Fort Richmond. Furthermore, since the extent and significance of subsurface deposits related to the Revolutionary War-era Fort Richmond are unknown, it is possible that components of this site are located near the proposed bike path segment. However, since no ground alteration is planned, these components will not be disturbed.

La Tourette Segment

Solecki (1977, 1989) discusses an Early Archaic and possibly Paleoindian site located and test-excavated by avocational archaeologist Albert Anderson in the 1970s. The site's location is described as the west side of Ketchum's Hill, but could extend into the La Tourette and Old Mill Road Segments. A radiocarbon date of 5,505 years before the present (1950) was obtained on a charred wood sample from this stratified site. Since no site records related to some of the sites in the general area which are presented in Table 5 were found at NYSM and NYOPRHP, it is not possible to determine whether this site has been reported. In 1977, Solecki found that the known portion of this site was endangered by a planned housing development, and that "bulldozers were already at work" (Solecki 1989: 6).

The Ketchum's Mill Site is the location of an early mill associated with Richmondtown for which Old Mill Road was apparently named. It may extend into the Old Mill Road segment. Solecki (1989:6) suggests that the site has been completely destroyed, but Baugher et al. (1989) appear to disagree. Since the site has not been professionally surveyed and its vertical and horizontal boundaries are not known, it is not possible to assess its significance, disposition or sensitivity with respect to the proposed bike paths.

Solecki (1977, 1989) describes surficial evidence of the Revolutionary War-era Fort Redoubt which he observed in 1977 on La Tourette Golf Course. He also indicates that a small portion of the site was tested by two avocational members of the Staten Island Historical Society, who found British military buttons and other artifacts below the surface. Unfortunately, no map of these excavations has been found and no report was issued. Since the La Tourette Golf Course has not been substantially modified in this area since its design in the early 20th century, it is unlikely that the archaeological site inferred by Solecki's information has been extensively damaged.

The La Tourette segment may be near or on a portion of the Richmond Redoubt. Since the Redoubt has not been surveyed, its boundaries are not currently known. Additionally, the Ketchum's Mill Site may be near this segment, and several of the prehistoric sites discussed above are at least fairly close by. These factors suggest that the La Tourette Segment's general area may be more archaeologically sensitive than the environmental factors and documentary record indicate.

As stated above, the dimensions of these sites have not been firmly established through archaeological survey, so it is impossible to reliably determine their proximity to the proposed bike paths.

Old Mill Road Segment

Most of the potential archaeological resources discussed above are on, adjacent to, or near the proposed Old Mill Road segment. The segment is particularly sensitive because, if ground disturbance were planned, it could potentially affect the Richmond Hill Prehistoric Site and NYSM 4616, the Richmond Hill Redoubt and Ketchum's Mill Site. See also Section 4 below.

Solecki (1989) discussed another site studied by Anderson on the southwest slope of Burial Hill, west of the Old Mill Road Segment. This site produced a radiocarbon date of 9,360 years before the present (1950) (Ritchie and Funk 1973:53-55) and yielded artifacts which appear to date to the Early Archaic. According to one of Solecki's informants, the area of this site that was investigated by Anderson (1976) has been destroyed (Solecki 1989). Since the site can not be reliably connected with any of those recorded at NYSM and NYOPRHP, and has neither been mapped nor surveyed, it is not possible to accurately assess the integrity

and disposition of this site, nor its location with respect to the proposed bike paths.

Skinner (1909:10) very briefly discusses a Native American site located in Greenridge, southwest of the Old Mill Road segment, near the historic location of the Richmond Plank Road. It is possible that this site is connected with the Bedell House, which is described by Solecki (1989) as a favorite meeting ground for historic period Native Americans in the area. None of the sites in Table 5 appear to be related to this site, and it is not clear what the association between this location and Ketchum's Mill is (Baugher et al. 1989), however, it is worth noting that Native American artifacts have been found in substantial abundance by avocational archaeologists in the Ketchum's Mill site area (Baugher et al. 1989; Solecki 1989).

Located at the now-abandoned west end of Old Mill Road, the Richmond Hill Site (A085-01-0109) has been discussed in several publications and CRM reports. The site was initially reported by Skinner (1909) and was the subject of an avocational investigation conducted by Anderson (1976). Anderson concluded that this was, in fact, a complex composed of three prehistoric sites near Ketchum Hill. Although Anderson (1976) reported that most of the artifacts he found were located on the surface, the small number of test pits he excavated may not have sufficiently characterized its belowground component, if any. The site complex has never been professionally surveyed or tested and its boundaries are unknown despite the fact that it repeatedly appears in scholarly publications concerning Staten Island archaeology.

Baugher et al. (1989:36) state that an avocational archaeologist found a broken stone axe south of the St. Andrew's rectory prior to 1988. Although no known prehistoric site is associated with this location, it is very likely that one exists.

Based on the evidence presented in Baugher et al.'s report, CRCC's independent research, and CRCC's site visit, CRCC concurs with the historical archaeological sensitivity assessments provided in Baugher et al.'s 1989 report for the Old Mill Road area. No clear evidence of extensive disturbance since 1989 has been presented for this area, so it is possible that the reported sites remain intact.

Clarke Road Segment

The Richmondtown Pond Archaeological Site appears to be north of this segment. However, this site has never been professionally tested, so its actual boundaries are not known. It is possible that the segment is located on, adjacent to, or near the site. Given this possibility, the historic archaeological sensitivity of the Clarke Road segment is slightly higher than previously suggested. See also Section 4 below.

St. Patrick's Place Segment

The Richmondtown Pond Archaeological Site is located on, adjacent to, or near this segment. This strongly suggests that the southern portion of the segment is highly sensitive for historic archaeology. See also Section 4 below.

4.0 POTENTIAL FOR PREVIOUSLY UNIDENTIFIED ARCHAEOLOGICAL SITES

In addition to the reviewing studies discussed above, the Principal Investigator conducted a site visit including all of the bike path segments in order to further assess the likelihood that intact archaeological sites or features might be found within the A.P.E. This section reviews the results of the site visit and then combines them with the sensitivity assessments developed above to finalize CRCC's opinions regarding the archaeological sensitivities of each segment.

4.1 Results of the Site Visit

Forest Hill Road Segment

The Forest Hill Road Segment (Figure 2, Photographs 1, 2 and 3) is within La Tourette Park east of and adjacent to Forest Hill Road. It runs from Rockland Avenue in the north to a point about 500 feet southwest of Forest Hill Road's intersection with Richmond Hill Road, where the bike path continues as the La Tourette segment.

This segment is comprised of a lightly wooded, undeveloped, portion of the La Tourette property. No prehistoric or historic artifacts were found on the surface of the A.P.E., and, with the exception of the street crossings, no clear indication of subsurface disturbance was seen.

It remains likely that this segment will contain archaeological evidence related to the Decker House. Since the Decker family were relatively early settlers in the area, it is also possible that an intact archaeological site related to their occupation may be considered significant under National Register Criterion D.

Since no clear evidence of extensive disturbance of the proposed bike path route is presented by the literature reviewed for this report and since none was seen during the site visit, it is possible that any prehistoric or historic sites which may be located on this route remain intact.

The site visit results, in short, did not alter CRCC's assessment of the archaeological sensitivity of the Forest Hill Road A.P.E.

La Tourette Segment

Photograph 4 depicts the north end of the La Tourette Segment, where it meets the Forest

Hill Road Segment, about 500 feet south of the Forest Hill Road – Richmond Hill Road intersection. Most of the segment (the northern portion) will follow an existing path/road over an existing old bridge/culvert in La Tourette Park; most of the southern section will follow an existing trail which will be widened. Groundcover presented visibility problems in the southern end of the segment during the site visit, but no artifacts or features were observed. Evidence of disturbance increased to the south as the segment approached the Old Mill Road segment, but was limited to patches of ground which appear to have been cleared of vegetation within the last 50 years or so.

The Ketchum's Mill and Fort Richmond Sites are on or adjacent to the segment, but it is impossible to determine whether or not either will be on or near the proposed bike path segment since the exact locations and dimensions of subsurface archaeological deposits are not known. Both sites are very likely to be considered historically significant.

It is unclear whether any of the subsurface disturbance that has occurred in this area has reduced the archaeological integrity of any sites located on this segment.

Old Mill Road Segment

The Old Mill Road Segment runs from a point near the center of the La Tourette Segment east to the paved portion of Old Mill Road near the St. Andrew's rectory property (Photograph 5). As it approaches the rectory property, the segment bends to the south, crossing Richmond Creek south of the rectory (Photograph 6) and joining the Clarke Avenue Segment along Clarke Avenue. Most of the segment parallels the modal trajectory of the creek channel. The creek in this area is a relatively shallow meandering channel running west-southwest and adjacent to the relatively steep slopes of Richmond Hill to the north. Vegetative cover is variable throughout the segment, but is dominated by secondary thicket, patches of phragmites and light woodlands.

Despite the history of land use outlined above and in Solecki (1977), the Old Mill Road Segment does not present clear evidence of extensive disturbance. The former roadbed has been revegetated but can be followed. The Ketchum's Mill site is within sight-distance of the A.P.E. but it is uncertain whether subterranean portions of this site extend into the A.P.E.

The easternmost portion of the Old Mill Road segment runs through the rear yards of a few 19th- and 18th-century buildings which are local landmarks within Old Richmondtown. The closest known historic properties are the Christopher and Voorlezer Houses. The Christopher House was moved to this location as part of Historic Richmondtown's restoration efforts in the late 20th century. In addition to its local recognition, the Voorlezer House is listed on the National Register and is also a National Historic Landmark. It is likely that its rear yard contains archaeological deposits related to this building's historically significant occupations. However, no surficial indications of the anticipated deposits were

noted during the site visit.

Based on the location of the St. Andrew's Rectory between the proposed segment and the cemetery associated with St. Andrew's Church, it is very unlikely that any graves associated with this early church will be affected by the proposed bike path construction.

No evidence of any of the other sites listed in Table 5 was observed. No artifacts greater than 50 years of age were found during the site visit.

Nevertheless, on the basis of the background research discussed above, CRCC concludes that this entire segment is highly sensitive for both prehistoric and historic sites.

Clarke Avenue Segment

The Clarke Avenue segment proceeds from its connection with the Old Mill Road Segment southeast along Clarke Avenue to its intersection with St. Patrick's Place (Photograph 7). It crosses the front yards of a few 19th-century buildings along the west side of Clarke Avenue, and passes the Staten Island Historical Society's museum near the intersection of Clarke Avenue and St. Patrick's Place.

No clear evidence of subsurface disturbance was seen on this segment, although it is adjacent to a modern sewer road.

No artifacts greater than 50 years of age were found during the site visit.

CRCC's site visit neither increased nor decreased the sensitivity assessments offered by background research.

St. Patrick's Place Segment

The St. Patrick's Place segment begins at the corner of Clarke Avenue and St. Patrick's Place (Photograph 8) and extends north into the La Tourette Park property north of Richmond Road (Photograph 9). It crosses in front of St. Patrick's Church (ca. 1860) and passes the Stephens-Prier House, both of which are local landmarks (Photograph 10). The path will be placed on existing road in this segment, and only signage will be installed.

North of Richmond Road, the portion of St. Patrick's Place in which the proposed bike path segment terminates is now closed to vehicular traffic. Pavement, however, is still visible (Photograph 10). Historically, this segment connected St. Patrick's Place with Richmond Hill Road. The pathway is already in place north of Richmond Road, having been installed by

NJDEP as part of an earlier project (Gabriella Keller, memo to Matthew Tomaso dated 4/29/08).

No artifacts greater than 50 years of age were found during the site visit and no clear evidence of extensive disturbance was noted. The site visit has not affected CRCG's assessment of this segment's archaeological sensitivity.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on information provided in sections 3 and 4 of this report, the archaeological sensitivity assessments for both prehistoric and historic sites for all five segments have been upgraded (see Figure 27).

Table 6. Final Archaeological Sensitivities of the Proposed Bike Path Segments

Segment	Prehistoric	Historic	Overall
Clarke Avenue	Moderate	High	Moderate-High
Forest Hill Road	Low	Moderate-High	Moderate
La Tourette	Moderate	Very High	Moderate-High
Old Mill Road	High	Very High	High
St. Patrick's Place	Low-Moderate	Very High	Moderate-High

The New York City Parks & Recreation Department has stated that any ground disturbance caused by creation of the proposed bike path will be negligible and entirely superficial in nature (see Appendix F). Provided that the proposed actions are carried out in keeping with this statement, CRCG finds that there is likely to be no effect on archaeological resources. If the project is carried out as currently proposed without causing subsurface disturbance, no further study is recommended.

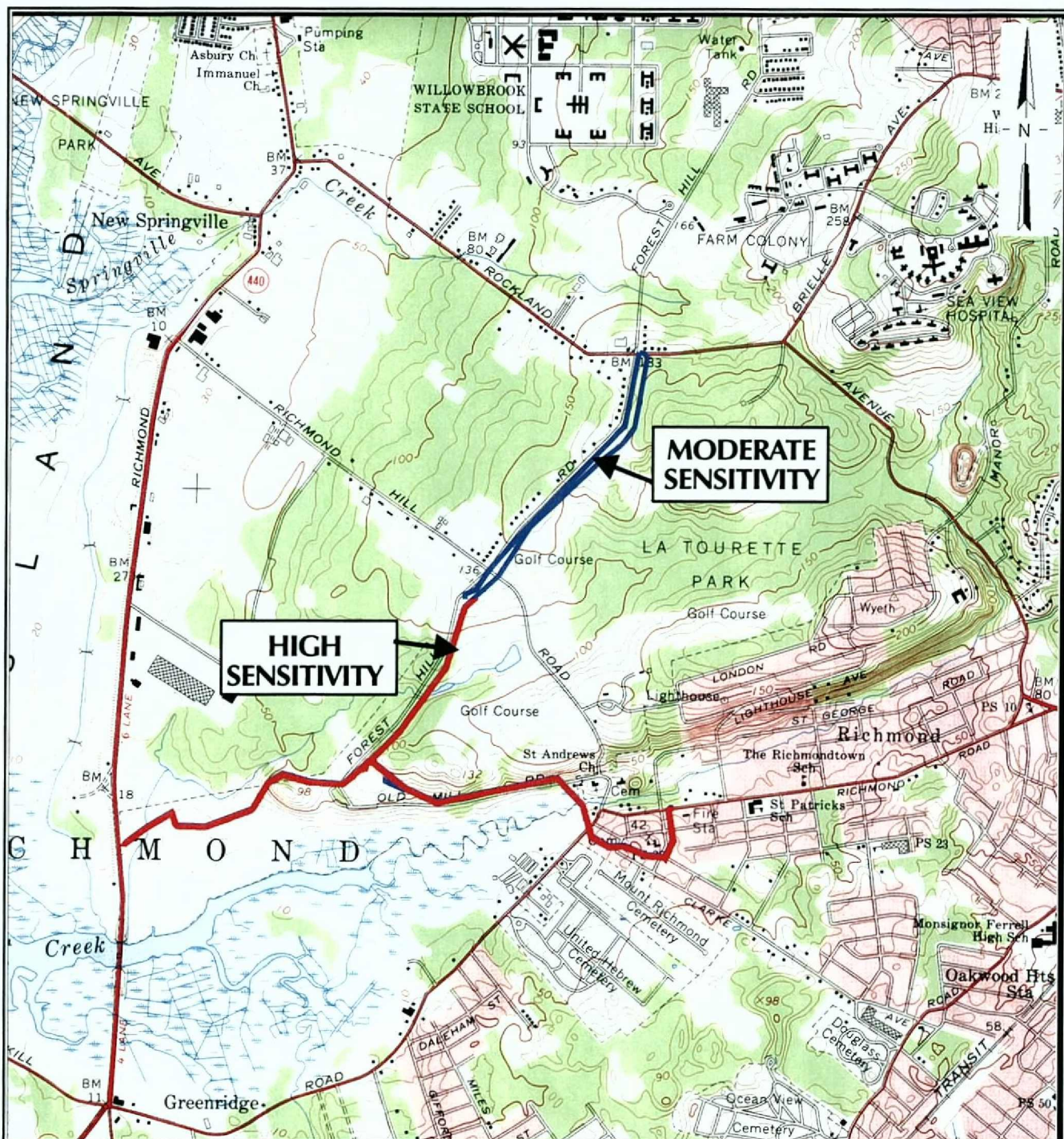


Figure 27: USGS 7.5' Quadrange: Arthur Kill, N. Y. - N. J. 1966, showing the areas of moderate and high archaeological sensitivity.

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Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.



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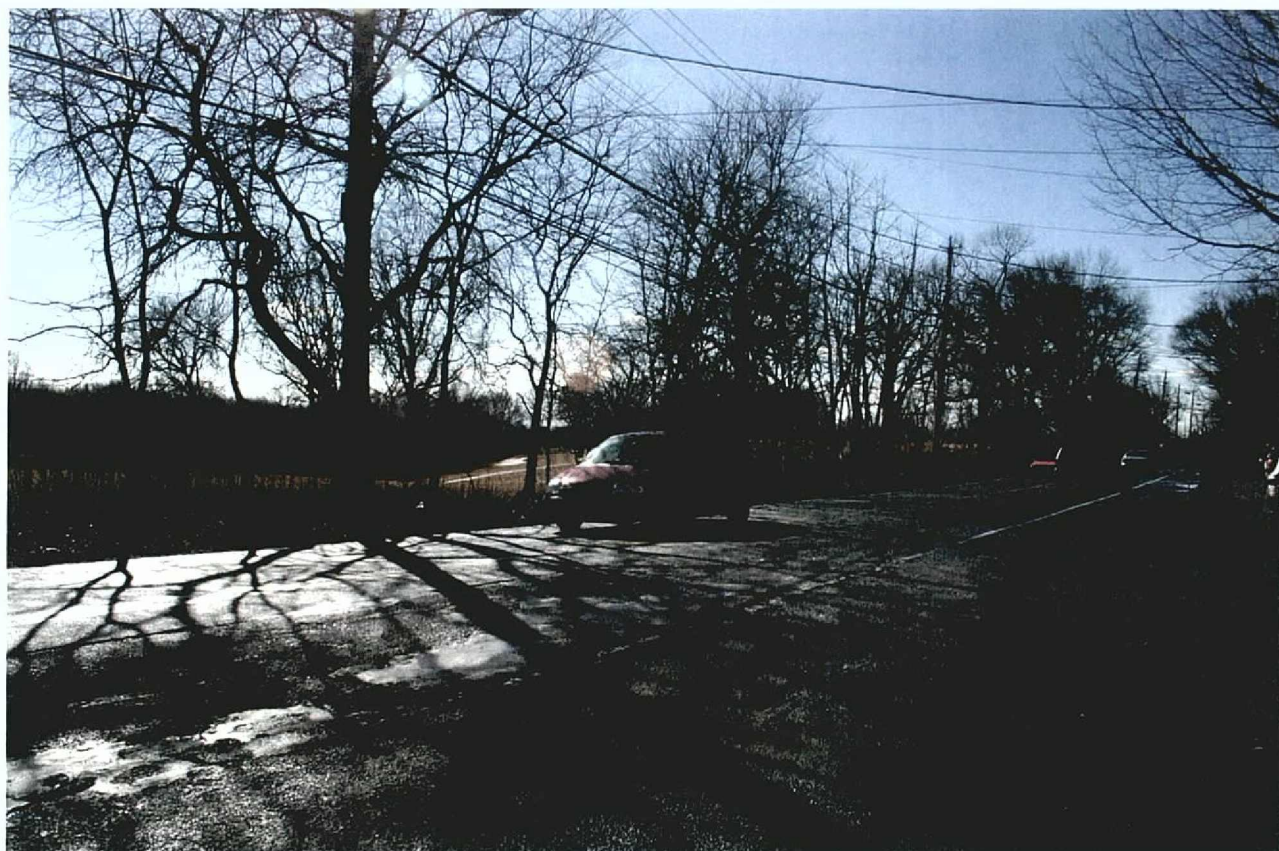
Staten Island Permitting and Connections

New York Office of Parks, Recreation and Historic Preservation

New York State Museum

Rutgers Library, New Brunswick, New Jersey

**APPENDIX A:
PHOTO PLATES**



Photograph 1: Northern Forest Hill Road Segment View South from Just South of Travis Avenue Intersection.

Date: 01/30/08
Photographer: M. Tomaso
Image 3989

**Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.**



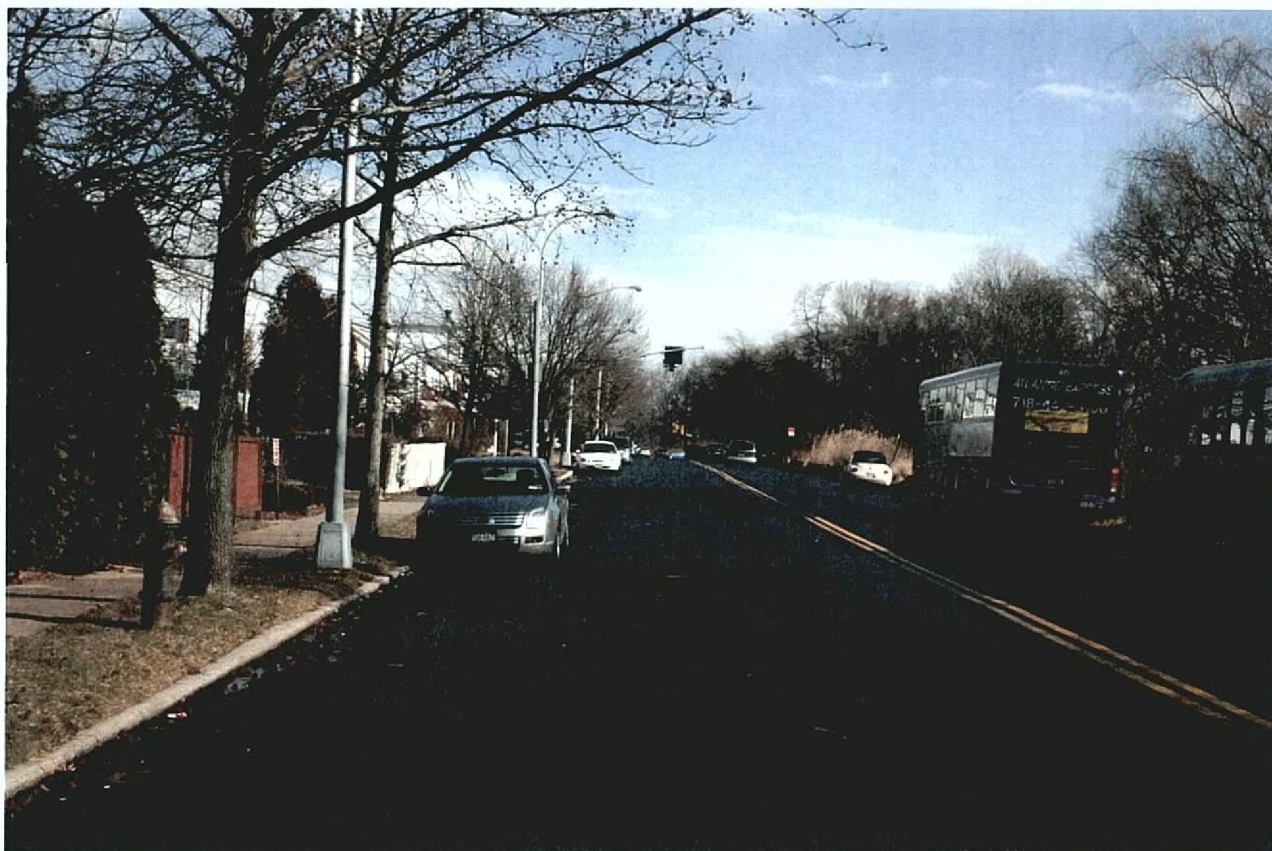


Photograph 2: Northern Forest Hill Road Segment View North from Just South of Travis Avenue Intersection.

Date: 01/30/08
Photographer: M. Tomaso
Image 3990

**Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.**





Photograph 3: South View of Forest Hill Road Segment, South of Forest Hill Road – Richmond Hill Road Intersection.

Date: 01/30/08
Photographer: M. Tomaso
Image 3986

**Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.**





Photograph 4: La Tourette Segment Looking Southeast from Forest Hill Road.

Date: 01/30/08
Photographer: M. Tomaso
Image 3988

**Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.**





Photograph 5: Existing Condition of Old Mill Road Segment, View West from St Francis' Rectory on Old Mill Road.

Date: 01/30/08
Photographer: M. Tomaso
Image 3966

**Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.**



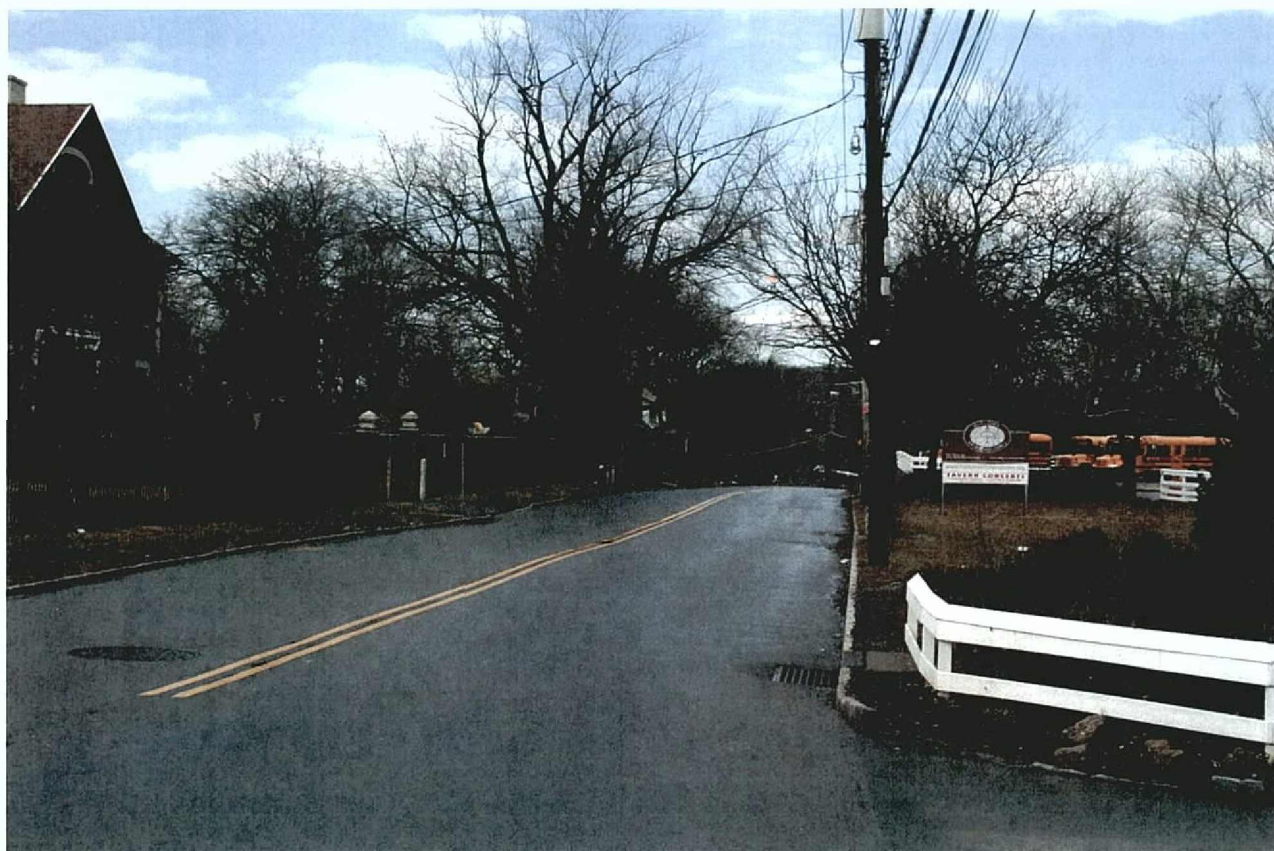


Photograph 6: Area behind St. Francis's Rectory through where Proposed Old Mill Road Segment Will Connect with Clarke Avenue Segment.

Date: 01/30/08
Photographer: M. Tomaso
Image 3972

**Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.**





Photograph 7: Proposed Clarke Avenue Segment. View Northwest from Intersection of Clarke Avenue and St Patrick's Place

Date: 01/30/08
Photographer: M. Tomaso
Image 3981

**Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.**



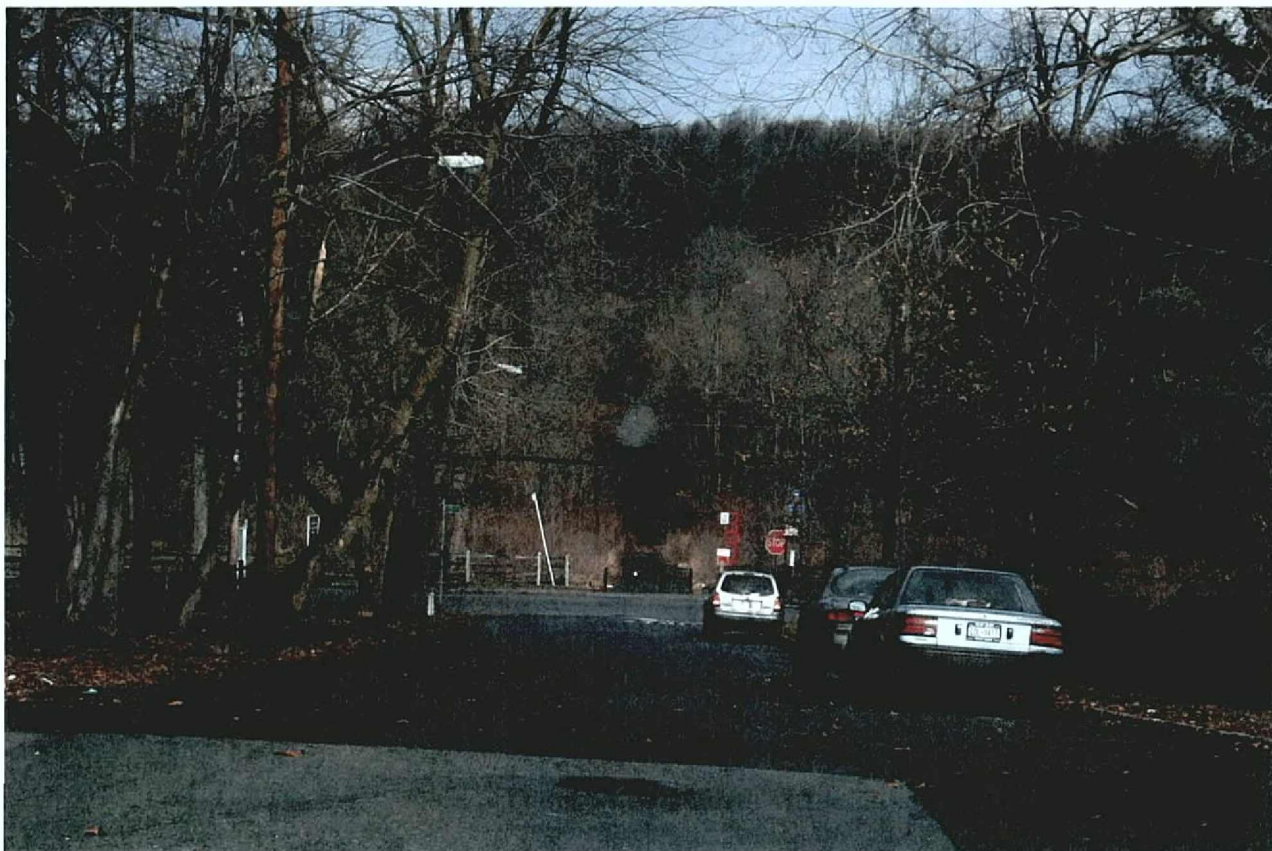


Photograph 8: Looking North along the St. Patrick's Segment from Intersection of Clarke Avenue and St. Patrick's Place.

Date: 01/30/08
Photographer: M. Tomaso
Image 3982

**Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.**





Photograph 9: North View of Northern End of St. Patrick's Segment.

Date: 01/30/08
Photographer: M. Tomaso
Image 3984

Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.





Photograph 10: Looking North along the St. Patrick's Segment from Intersection of St. Patrick's Place and West Cedarview Avenue.

Date: 01/30/08
 Photographer: M. Tomaso
 Image 3983

**Phase IA Archaeological Reconnaissance and Documentary Study
 Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
 Richmond, Richmond County, Staten Island, New York.**



**APPENDIX B:
INVESTIGATOR
QUALIFICATIONS**



Matthew S. Tomaso, R.P.A.

Title: Senior Archaeologist
*Meets Federal qualifications [36 CFR61]
for Archaeologist*

Education: Degree – Specialization – School

- Completed all coursework and comprehensive exams for Ph.D.
in Anthropology – University of Texas, Austin
- M.A. – 1995 – Anthropology – University of Texas, Austin
(Minor: Geography)
- B.A. – 1991 – Geography and Anthropology – University of Southern Maine

Years Experience: 20
With CRCG: 2

Overview of Expertise

- Broad knowledge of archaeological technique, method and theory and their application in research design.
- Extensive experience in interdisciplinary archaeology: geoarchaeology, sedimentology, soil science, geomorphology, geology and physical geography.
- Historic and prehistoric project experience in New Jersey, Maine, Texas, New York, Virginia, Belize (Central America), Nevis, and St. Kitts (West Indies).

Previous Relevant Experience

Center for Archaeological Studies (CFAS), Montclair State University (MSU)

Associate Director - Development and direction of educational and administrative initiatives in archaeological research and education, including Cultural Resource Management, Summer Field School, archaeology workshop program, field and lab projects, student and volunteer labor, information management and instruction of advanced undergraduates (1998 – 2005)

Director – Founded and directed CFAS' archaeological consulting and CRM Program. Responsible for start to finish direction on over 35 projects including Phases I – III. (2001-2005)

Montclair State University – Adjunct Faculty

Department of Earth and Environmental Science – Design and teaching courses on historical and physical geology, cultural ecology and human-environmental interaction (1999 – present)

Department of Anthropology – Start to finish direction of field schools, design and teaching of independent studies and internships on historical materials, lithic analysis, ceramics, archaeological field techniques and social theory (1995 – 2005)

Department of Classics and General Humanities – Design and teaching of courses and independent studies on Mediterranean archaeology, archaeological laboratory analysis, archaeological theory and the history of social thought (2000-2005).

Select Project Experience

Feltville Archaeological Project: – Director of several academic and regulatory compliance projects conducted at the National Register District of Feltville/Glenside Park (1999 – present)

K. Hovnanian – Maringoman Farms, Washingtonville, Orange County, New York

Phase IB/II Cultural Resource Investigation within a former 18th century farmstead of 90 acres, including a prehistoric site.

Edgewood Properties – Cascades, North Brunswick, Middlesex County, New Jersey Phase I/II investigation on a 77 acre proposed development, including a multicomponent archaeological site & 18th century farm house.

Sulphur Ghaut Site, Nevis, West Indies: Detailed analysis of prehistoric ceramics and subsistence remains as well as soils and sedimentology on this 2 square kilometer prehistoric village site.

DREAM Park– Schoor-DePalma/ Gloucester County, New Jersey Phase I Geomorphology & Cultural Resource Investigation of a historic cemetery and several archaeological sites within the area of a proposed 90 acre equestrian park.

**APPENDIX C:
PUBLIC PARTICIPATION**

Matthew Tomaso

From: JGeis@aol.com
Sent: Monday, February 04, 2008 2:30 PM
To: Matthew Tomaso
Subject: Re: Archaeological Background Study - La Tourette Park and Historic Richmond...

In a message dated 2/3/2008 10:31:36 AM Eastern Standard Time, mtomaso@crcg.net writes:

Are you aware of this proposed bike route and do you have any comments on its archaeological sensitivity that you may share with us?

Hi Matt:

No, I am not aware of the bike route project, etc. (good idea, though), but thank you for contacting me. Without knowing exactly where the bike route runs in relation to the various roadways, it's hard to speculate about potential sensitivity. If it's within the roadbed, I would imagine information about street utilities would be helpful.

I have always relied on Alanson Skinner's early work for potential Native American sensitivity (but I'm sure you know that, and it's among the OPRHP's resources). But I would also check for locations of now-gone historic-era features and any road location shifts, but I'm sure you would do that without me suggesting it.

Best,
Joan

Joan H. Gelsmar, Ph.D., LLC
212 734-6512
212 650 1521 Fax

40 East 83 Street
New York, NY 10028

Who's never won? Biggest Grammy Award surprises of all time on AOL Music.

2/8/2008

Matthew Tomaso

From: r.solecki@att.net
Sent: Tuesday, February 05, 2008 4:31 PM
To: Matthew Tomaso
Subject: Re: Archaeological / Documentary study near Fort Redoubt

Dear Prof. Tomaso,

Thanks for your query about Fort Redoubt and area. Under separate cover I will be sending you a copy of my paper which appeared in the Chesopiean 1998. I think I deposited a copy of my contract report with the Richmondtown Historical Society. One bibliographic item that has slipped my attention was Calver and Bolton, History Written with Pick and Shovel, 1950, The New-York Historical Societ (That title was posthumously given to the book by the editors). I would be interest in knowing what you find out. Ed Pratt of St. George may be of assistance, but I understand that he has medical problems. Anderson and Sainz (both deceased) have authored a number of papers on the area. With best wishes, Ralph Solecki

----- Original message from "Matthew Tomaso" <mtomaso@crcg.net>: -----

Dr. Solecki,

I am not sure you will remember me from the brief meeting we had at Montclair State University in the late 1990s when you came to talk about Shanidar and other projects. At the time, I was teaching in the department that your son Bill formerly taught for.

I hope you are well.

I am currently conducting a small background study involving La Tourette Park and a small portion of Richmondtown on behalf of NYC Parks.

I am aware of the work you did in this area for a pollution control project. A few of the sites you documented in the area of Fort Redoubt and Old Mill Road will be discussed, along with other reported sites and potentially historic properties documented at NYOPRHP. We have also been in contact with Historic Richmondtown and are trying to identify somebody at NYC Parks who can advise us on La Tourette Park's possible archaeological resources.

The proposed project involves construction of bicycle paths along very short segments of Clarke Ave, and longer segments along Forest Hill Road, St Patrick's Place and the abandoned portion of Old Mill

2/5/2008

Road in Richmondtown, as well as a medium-length segment through a wooded portion of La Tourette.

The propose construction is shallow and narrow – mostly limited to the right-of-ways for the roads and former roads (Old Mill). Although its effects will likely be minimal, we are leaning toward recommending that a Phase IB work plan be developed in consultation with the LPC in order to identify any potential archaeological issues.

Are you aware of this proposed bike route and do you have any comments on its archaeological sensitivity that you may share with us?

Also, do you have any information regarding what has happened in the Fort Redoubt area since you did your study?

Matthew S. Tomaso, M. A., R. P. A.

Senior Archaeologist, Project Manager, Principal Investigator

Cultural Resource Consulting Group - <http://www.crcg.net>

415 Cleveland Ave

Highland Park, NJ 08904

Office: (732)247-8880 ext. 30

Fax: (732)247-2888

Cell: (908)875-0345 or (908)625-5877

**APPENDIX D:
UTILITY RECORDS**



WATER MAIN DISTRIBUTION MAP
from GDS Goodatabase (JWS excluded)

LEGEND MAIN SIZE DIAMETER

2	14	36
4	16	42
6	18	48
8	20	54
10	24	60
12	30	72
		96

MAINS WITH C, S REFER TO MATERIAL OF CONCRETE, STEEL, RESPECTIVELY

12" 1994 (1324) (RED111) Pipe text refers to water main data. Size, year installed, record source, and contract respectively. Year installed "1850" is used as a default for water mains with an unknown year or no record of installation. When multiple mains exist, text "STACKED" above one another means the top text belongs to the top most main

12" Perpendicular Distance main from parallel curb. In this case 12"

COLOR *PRESSURE GRADIENTS MATERIAL YEAR

COLOR	PRESSURE GRADIENTS	MATERIAL	YEAR
001	001	UNKNOWN	1900 TO 1900
002	002	UNKNOWN	1901 TO 1901
003	003	UNKNOWN	1902 TO 1902
004	004	UNKNOWN	1903 TO 1903
005	005	UNKNOWN	1904 TO 1904
006	006	UNKNOWN	1905 TO 1905
007	007	UNKNOWN	1906 TO 1906
008	008	UNKNOWN	1907 TO 1907
009	009	UNKNOWN	1908 TO 1908
010	010	UNKNOWN	1909 TO 1909
011	011	UNKNOWN	1910 TO 1910
012	012	UNKNOWN	1911 TO 1911
013	013	UNKNOWN	1912 TO 1912
014	014	UNKNOWN	1913 TO 1913
015	015	UNKNOWN	1914 TO 1914
016	016	UNKNOWN	1915 TO 1915
017	017	UNKNOWN	1916 TO 1916
018	018	UNKNOWN	1917 TO 1917
019	019	UNKNOWN	1918 TO 1918
020	020	UNKNOWN	1919 TO 1919
021	021	UNKNOWN	1920 TO 1920
022	022	UNKNOWN	1921 TO 1921
023	023	UNKNOWN	1922 TO 1922
024	024	UNKNOWN	1923 TO 1923
025	025	UNKNOWN	1924 TO 1924
026	026	UNKNOWN	1925 TO 1925
027	027	UNKNOWN	1926 TO 1926
028	028	UNKNOWN	1927 TO 1927
029	029	UNKNOWN	1928 TO 1928
030	030	UNKNOWN	1929 TO 1929
031	031	UNKNOWN	1930 TO 1930
032	032	UNKNOWN	1931 TO 1931
033	033	UNKNOWN	1932 TO 1932
034	034	UNKNOWN	1933 TO 1933
035	035	UNKNOWN	1934 TO 1934
036	036	UNKNOWN	1935 TO 1935
037	037	UNKNOWN	1936 TO 1936
038	038	UNKNOWN	1937 TO 1937
039	039	UNKNOWN	1938 TO 1938
040	040	UNKNOWN	1939 TO 1939
041	041	UNKNOWN	1940 TO 1940
042	042	UNKNOWN	1941 TO 1941
043	043	UNKNOWN	1942 TO 1942
044	044	UNKNOWN	1943 TO 1943
045	045	UNKNOWN	1944 TO 1944
046	046	UNKNOWN	1945 TO 1945
047	047	UNKNOWN	1946 TO 1946
048	048	UNKNOWN	1947 TO 1947
049	049	UNKNOWN	1948 TO 1948
050	050	UNKNOWN	1949 TO 1949
051	051	UNKNOWN	1950 TO 1950
052	052	UNKNOWN	1951 TO 1951
053	053	UNKNOWN	1952 TO 1952
054	054	UNKNOWN	1953 TO 1953
055	055	UNKNOWN	1954 TO 1954
056	056	UNKNOWN	1955 TO 1955
057	057	UNKNOWN	1956 TO 1956
058	058	UNKNOWN	1957 TO 1957
059	059	UNKNOWN	1958 TO 1958
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066	066	UNKNOWN	1965 TO 1965
067	067	UNKNOWN	1966 TO 1966
068	068	UNKNOWN	1967 TO 1967
069	069	UNKNOWN	1968 TO 1968
070	070	UNKNOWN	1969 TO 1969
071	071	UNKNOWN	1970 TO 1970
072	072	UNKNOWN	1971 TO 1971
073	073	UNKNOWN	1972 TO 1972
074	074	UNKNOWN	1973 TO 1973
075	075	UNKNOWN	1974 TO 1974
076	076	UNKNOWN	1975 TO 1975
077	077	UNKNOWN	1976 TO 1976
078	078	UNKNOWN	1977 TO 1977
079	079	UNKNOWN	1978 TO 1978
080	080	UNKNOWN	1979 TO 1979
081	081	UNKNOWN	1980 TO 1980
082	082	UNKNOWN	1981 TO 1981
083	083	UNKNOWN	1982 TO 1982
084	084	UNKNOWN	1983 TO 1983
085	085	UNKNOWN	1984 TO 1984
086	086	UNKNOWN	1985 TO 1985
087	087	UNKNOWN	1986 TO 1986
088	088	UNKNOWN	1987 TO 1987
089	089	UNKNOWN	1988 TO 1988
090	090	UNKNOWN	1989 TO 1989
091	091	UNKNOWN	1990 TO 1990
092	092	UNKNOWN	1991 TO 1991
093	093	UNKNOWN	1992 TO 1992
094	094	UNKNOWN	1993 TO 1993
095	095	UNKNOWN	1994 TO 1994
096	096	UNKNOWN	1995 TO 1995
097	097	UNKNOWN	1996 TO 1996
098	098	UNKNOWN	1997 TO 1997
099	099	UNKNOWN	1998 TO 1998
100	100	UNKNOWN	1999 TO 1999
101	101	UNKNOWN	2000 TO 2000
102	102	UNKNOWN	2001 TO 2001
103	103	UNKNOWN	2002 TO 2002
104	104	UNKNOWN	2003 TO 2003
105	105	UNKNOWN	2004 TO 2004
106	106	UNKNOWN	2005 TO 2005
107	107	UNKNOWN	2006 TO 2006
108	108	UNKNOWN	2007 TO 2007
109	109	UNKNOWN	2008 TO 2008
110	110	UNKNOWN	2009 TO 2009
111	111	UNKNOWN	2010 TO 2010
112	112	UNKNOWN	2011 TO 2011
113	113	UNKNOWN	2012 TO 2012
114	114	UNKNOWN	2013 TO 2013
115	115	UNKNOWN	2014 TO 2014
116	116	UNKNOWN	2015 TO 2015
117	117	UNKNOWN	2016 TO 2016
118	118	UNKNOWN	2017 TO 2017
119	119	UNKNOWN	2018 TO 2018
120	120	UNKNOWN	2019 TO 2019
121	121	UNKNOWN	2020 TO 2020

SYMBOLS

— UPDATED MAINS CENTERLINE

Connections

- GAUG, <Null>
- CAP
- PLUG
- 3WAY
- 4WAY
- VENTURI
- REDUCER
- AIR VENT
- EXPANSION JOINT
- MANHOLE
- TRANSFORMER

VALVE

- Closed or Boundary butterfly
- Open Butterfly
- Open Check
- Closed or Boundary or Gate
- Open Gate

HYDRANTS

- BREAKAWAY
- STANDARD
- UNKNOWN

HYDRANT VALVE

CHECK

Along boundary valve prior to check is generally closed.

VALVE LOCATION

- 81234 - Valve ID #
- 12 SN - 12" south of north curb
- 15 EW - 15' east of west curb

HYDRANT DIMENSIONS

81234 denotes GDS # from previous map. 81234 - Hydrant ID #

81234 - Distance between hydrant appertences

Hydrant valve box may not be shown in its true relation to the hydrant branch. Refer to dimensions when available.

Not Updated See Record FC 1234

new mains installed which are not revised on this map.

See latest records. "FC" denotes field card #, "IN SVC" denotes in-service sheet.

Omissions, additions and corrections should be brought to the immediate attention of BWSO Mapping.

This map was created from the GDS database and was transformed into a seamless GIS database.

Original information comes from the latest PLOTTED GDS maps.

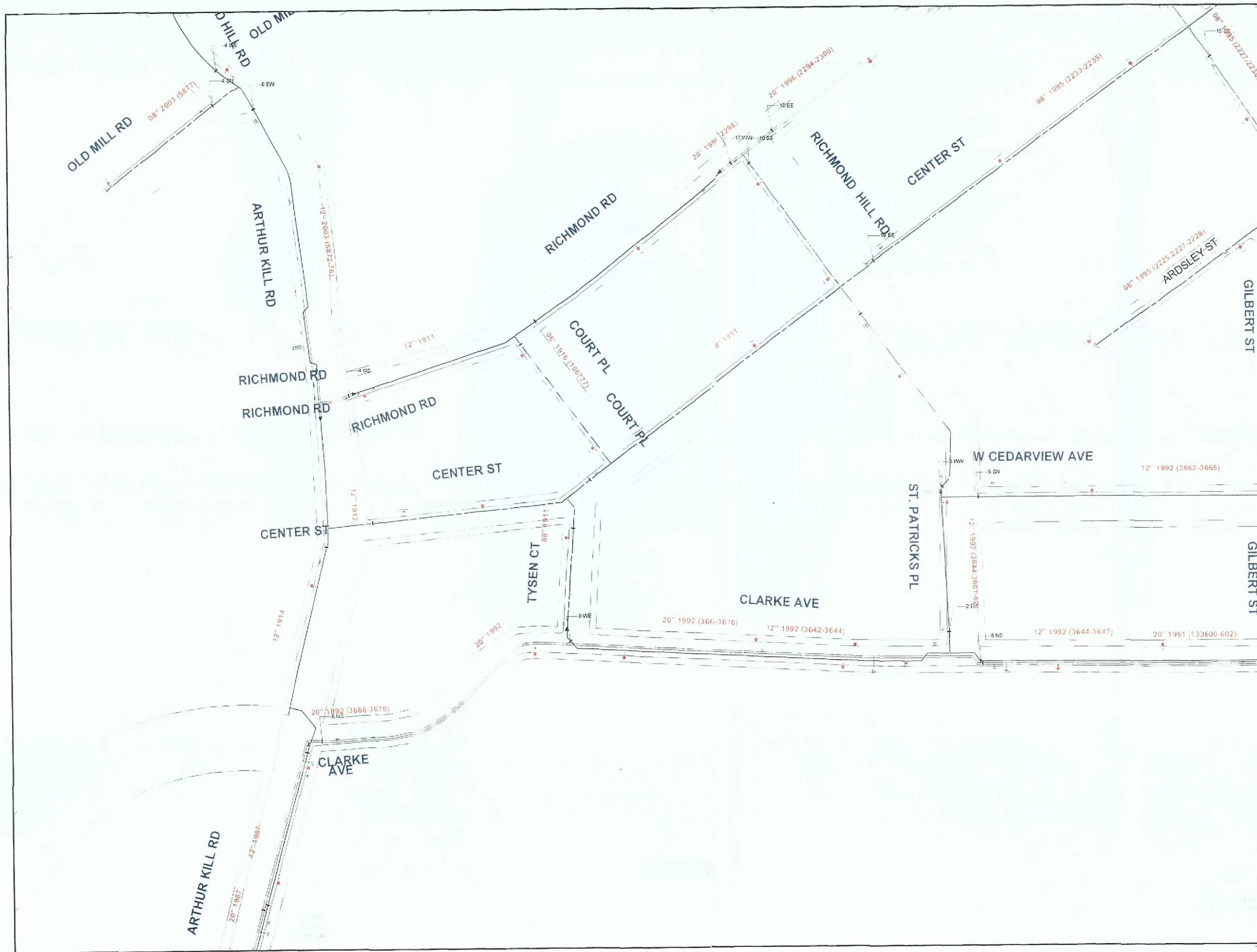
The topographical base map does NOT match that of the citywide planimetric.

THIS MAP WAS CREATED FROM INFORMATION CREATED IN GDS, PLOTTED IN THE START OF YEAR 2006.

CHECK WITH BWS MAPPING FOR LATEST CHANGES.

Map North Arrow

Map North Arrow
20 degrees from true north



WATER MAIN DISTRIBUTION MAP
from GDS Geodatabase (JWS excluded)

LEGEND MAIN SIZE DIAMETER

2	14	36
4	16	42
6	18	48
8	20	54
10	24	60
12	30	72
		96

MANHOLE WITH C.S. REFER TO MATERIAL OF CONCRETE, STEEL
RESPECTIVELY

12" 1984 (1224-1224) Pipe test refers to water main data. Size,
year installed, record source, and contrast respectively. Year installed "1856"
is used as a default for water mains with an unknown year
or no record of installation. When multiple mains exist just "STACKED" above
one another means the top text belongs to the top most main

Pressure in Pounds per Square Inch (PSI) is shown in the color key.

COLOR	PRESSURE GRADIENTS	MATERIAL	YEAR
Blue	0.00 - 0.05	Cast Iron	1900-1910
Green	0.05 - 0.10	Cast Iron	1910-1920
Yellow	0.10 - 0.15	Cast Iron	1920-1930
Orange	0.15 - 0.20	Cast Iron	1930-1940
Red	0.20 - 0.25	Cast Iron	1940-1950
Pink	0.25 - 0.30	Cast Iron	1950-1960
Light Blue	0.30 - 0.35	Cast Iron	1960-1970
Light Green	0.35 - 0.40	Cast Iron	1970-1980
Light Yellow	0.40 - 0.45	Cast Iron	1980-1990
Light Orange	0.45 - 0.50	Cast Iron	1990-2000
Light Red	0.50 - 0.55	Cast Iron	2000-2010
Light Pink	0.55 - 0.60	Cast Iron	2010-2020
Light Blue	0.60 - 0.65	Cast Iron	2020-2030
Light Green	0.65 - 0.70	Cast Iron	2030-2040
Light Yellow	0.70 - 0.75	Cast Iron	2040-2050
Light Orange	0.75 - 0.80	Cast Iron	2050-2060
Light Red	0.80 - 0.85	Cast Iron	2060-2070
Light Pink	0.85 - 0.90	Cast Iron	2070-2080
Light Blue	0.90 - 0.95	Cast Iron	2080-2090
Light Green	0.95 - 1.00	Cast Iron	2090-2100
Light Yellow	1.00 - 1.05	Cast Iron	2100-2110
Light Orange	1.05 - 1.10	Cast Iron	2110-2120
Light Red	1.10 - 1.15	Cast Iron	2120-2130
Light Pink	1.15 - 1.20	Cast Iron	2130-2140
Light Blue	1.20 - 1.25	Cast Iron	2140-2150
Light Green	1.25 - 1.30	Cast Iron	2150-2160
Light Yellow	1.30 - 1.35	Cast Iron	2160-2170
Light Orange	1.35 - 1.40	Cast Iron	2170-2180
Light Red	1.40 - 1.45	Cast Iron	2180-2190
Light Pink	1.45 - 1.50	Cast Iron	2190-2200
Light Blue	1.50 - 1.55	Cast Iron	2200-2210
Light Green	1.55 - 1.60	Cast Iron	2210-2220
Light Yellow	1.60 - 1.65	Cast Iron	2220-2230
Light Orange	1.65 - 1.70	Cast Iron	2230-2240
Light Red	1.70 - 1.75	Cast Iron	2240-2250
Light Pink	1.75 - 1.80	Cast Iron	2250-2260
Light Blue	1.80 - 1.85	Cast Iron	2260-2270
Light Green	1.85 - 1.90	Cast Iron	2270-2280
Light Yellow	1.90 - 1.95	Cast Iron	2280-2290
Light Orange	1.95 - 2.00	Cast Iron	2290-2300
Light Red	2.00 - 2.05	Cast Iron	2300-2310
Light Pink	2.05 - 2.10	Cast Iron	2310-2320
Light Blue	2.10 - 2.15	Cast Iron	2320-2330
Light Green	2.15 - 2.20	Cast Iron	2330-2340
Light Yellow	2.20 - 2.25	Cast Iron	2340-2350
Light Orange	2.25 - 2.30	Cast Iron	2350-2360
Light Red	2.30 - 2.35	Cast Iron	2360-2370
Light Pink	2.35 - 2.40	Cast Iron	2370-2380
Light Blue	2.40 - 2.45	Cast Iron	2380-2390
Light Green	2.45 - 2.50	Cast Iron	2390-2400
Light Yellow	2.50 - 2.55	Cast Iron	2400-2410
Light Orange	2.55 - 2.60	Cast Iron	2410-2420
Light Red	2.60 - 2.65	Cast Iron	2420-2430
Light Pink	2.65 - 2.70	Cast Iron	2430-2440
Light Blue	2.70 - 2.75	Cast Iron	2440-2450
Light Green	2.75 - 2.80	Cast Iron	2450-2460
Light Yellow	2.80 - 2.85	Cast Iron	2460-2470
Light Orange	2.85 - 2.90	Cast Iron	2470-2480
Light Red	2.90 - 2.95	Cast Iron	2480-2490
Light Pink	2.95 - 3.00	Cast Iron	2490-2500
Light Blue	3.00 - 3.05	Cast Iron	2500-2510
Light Green	3.05 - 3.10	Cast Iron	2510-2520
Light Yellow	3.10 - 3.15	Cast Iron	2520-2530
Light Orange	3.15 - 3.20	Cast Iron	2530-2540
Light Red	3.20 - 3.25	Cast Iron	2540-2550
Light Pink	3.25 - 3.30	Cast Iron	2550-2560
Light Blue	3.30 - 3.35	Cast Iron	2560-2570
Light Green	3.35 - 3.40	Cast Iron	2570-2580
Light Yellow	3.40 - 3.45	Cast Iron	2580-2590
Light Orange	3.45 - 3.50	Cast Iron	2590-2600
Light Red	3.50 - 3.55	Cast Iron	2600-2610
Light Pink	3.55 - 3.60	Cast Iron	2610-2620
Light Blue	3.60 - 3.65	Cast Iron	2620-2630
Light Green	3.65 - 3.70	Cast Iron	2630-2640
Light Yellow	3.70 - 3.75	Cast Iron	2640-2650
Light Orange	3.75 - 3.80	Cast Iron	2650-2660
Light Red	3.80 - 3.85	Cast Iron	2660-2670
Light Pink	3.85 - 3.90	Cast Iron	2670-2680
Light Blue	3.90 - 3.95	Cast Iron	2680-2690
Light Green	3.95 - 4.00	Cast Iron	2690-2700
Light Yellow	4.00 - 4.05	Cast Iron	2700-2710
Light Orange	4.05 - 4.10	Cast Iron	2710-2720
Light Red	4.10 - 4.15	Cast Iron	2720-2730
Light Pink	4.15 - 4.20	Cast Iron	2730-2740
Light Blue	4.20 - 4.25	Cast Iron	2740-2750
Light Green	4.25 - 4.30	Cast Iron	2750-2760
Light Yellow	4.30 - 4.35	Cast Iron	2760-2770
Light Orange	4.35 - 4.40	Cast Iron	2770-2780
Light Red	4.40 - 4.45	Cast Iron	2780-2790
Light Pink	4.45 - 4.50	Cast Iron	2790-2800
Light Blue	4.50 - 4.55	Cast Iron	2800-2810
Light Green	4.55 - 4.60	Cast Iron	2810-2820
Light Yellow	4.60 - 4.65	Cast Iron	2820-2830
Light Orange	4.65 - 4.70	Cast Iron	2830-2840
Light Red	4.70 - 4.75	Cast Iron	2840-2850
Light Pink	4.75 - 4.80	Cast Iron	2850-2860
Light Blue	4.80 - 4.85	Cast Iron	2860-2870
Light Green	4.85 - 4.90	Cast Iron	2870-2880
Light Yellow	4.90 - 4.95	Cast Iron	2880-2890
Light Orange	4.95 - 5.00	Cast Iron	2890-2900
Light Red	5.00 - 5.05	Cast Iron	2900-2910
Light Pink	5.05 - 5.10	Cast Iron	2910-2920
Light Blue	5.10 - 5.15	Cast Iron	2920-2930
Light Green	5.15 - 5.20	Cast Iron	2930-2940
Light Yellow	5.20 - 5.25	Cast Iron	2940-2950
Light Orange	5.25 - 5.30	Cast Iron	2950-2960
Light Red	5.30 - 5.35	Cast Iron	2960-2970
Light Pink	5.35 - 5.40	Cast Iron	2970-2980
Light Blue	5.40 - 5.45	Cast Iron	2980-2990
Light Green	5.45 - 5.50	Cast Iron	2990-3000
Light Yellow	5.50 - 5.55	Cast Iron	3000-3010
Light Orange	5.55 - 5.60	Cast Iron	3010-3020
Light Red	5.60 - 5.65	Cast Iron	3020-3030
Light Pink	5.65 - 5.70	Cast Iron	3030-3040
Light Blue	5.70 - 5.75	Cast Iron	3040-3050
Light Green	5.75 - 5.80	Cast Iron	3050-3060
Light Yellow	5.80 - 5.85	Cast Iron	3060-3070
Light Orange	5.85 - 5.90	Cast Iron	3070-3080
Light Red	5.90 - 5.95	Cast Iron	3080-3090
Light Pink	5.95 - 6.00	Cast Iron	3090-3100
Light Blue	6.00 - 6.05	Cast Iron	3100-3110
Light Green	6.05 - 6.10	Cast Iron	3110-3120
Light Yellow	6.10 - 6.15	Cast Iron	3120-3130
Light Orange	6.15 - 6.20	Cast Iron	3130-3140
Light Red	6.20 - 6.25	Cast Iron	3140-3150
Light Pink	6.25 - 6.30	Cast Iron	3150-3160
Light Blue	6.30 - 6.35	Cast Iron	3160-3170
Light Green	6.35 - 6.40	Cast Iron	3170-3180
Light Yellow	6.40 - 6.45	Cast Iron	3180-3190
Light Orange	6.45 - 6.50	Cast Iron	3190-3200
Light Red	6.50 - 6.55	Cast Iron	3200-3210
Light Pink	6.55 - 6.60	Cast Iron	3210-3220
Light Blue	6.60 - 6.65	Cast Iron	3220-3230
Light Green	6.65 - 6.70	Cast Iron	3230-3240
Light Yellow	6.70 - 6.75	Cast Iron	3240-3250
Light Orange	6.75 - 6.80	Cast Iron	3250-3260
Light Red	6.80 - 6.85	Cast Iron	3260-3270
Light Pink	6.85 - 6.90	Cast Iron	3270-3280
Light Blue	6.90 - 6.95	Cast Iron	3280-3290
Light Green	6.95 - 7.00	Cast Iron	3290-3300
Light Yellow	7.00 - 7.05	Cast Iron	3300-3310
Light Orange	7.05 - 7.10	Cast Iron	3310-3320
Light Red	7.10 - 7.15	Cast Iron	3320-3330
Light Pink	7.15 - 7.20	Cast Iron	3330-3340
Light Blue	7.20 - 7.25	Cast Iron	3340-3350
Light Green	7.25 - 7.30	Cast Iron	3350-3360
Light Yellow	7.30 - 7.35	Cast Iron	3360-3370
Light Orange	7.35 - 7.40	Cast Iron	3370-3380
Light Red	7.40 - 7.45	Cast Iron	3380-3390
Light Pink	7.45 - 7.50	Cast Iron	3390-3400
Light Blue	7.50 - 7.55	Cast Iron	3400-3410
Light Green	7.55 - 7.60	Cast Iron	3410-3420
Light Yellow	7.60 - 7.65	Cast Iron	3420-3430
Light Orange	7.65 - 7.70	Cast Iron	3430-3440
Light Red	7.70 - 7.75	Cast Iron	3440-3450
Light Pink	7.75 - 7.80	Cast Iron	3450-3460
Light Blue	7.80 - 7.85	Cast Iron	3460-3470
Light Green	7.85 - 7.90	Cast Iron	3470-3480
Light Yellow	7.90 - 7.95	Cast Iron	3480-3490
Light Orange	7.95 - 8.00	Cast Iron	3490-3500
Light Red	8.00 - 8.05	Cast Iron	3500-3510
Light Pink	8.05 - 8.10	Cast Iron	3510-3520
Light Blue	8.10 - 8.15	Cast Iron	3520-3530
Light Green	8.15 - 8.20	Cast Iron	3530-3540
Light Yellow	8.20 - 8.25	Cast Iron	3540-3550
Light Orange	8.25 - 8.30	Cast Iron	3550-3560
Light Red	8.30 - 8.35	Cast Iron	3560-3570
Light Pink	8.35 - 8.40	Cast Iron	3570-3580
Light Blue	8.40 - 8.45	Cast Iron	3580-3590
Light Green	8.45 - 8.50	Cast Iron	3590-3600
Light Yellow	8.50 - 8.55	Cast Iron	3600-3610
Light Orange	8.55 - 8.60	Cast Iron	3610-3620
Light Red	8.60 - 8.65	Cast Iron	3620-3630
Light Pink	8.65 - 8.70	Cast Iron	3630-3640
Light Blue	8.70 - 8.75	Cast Iron	3640-3650
Light Green	8.75 - 8.80	Cast Iron	3650-3660
Light Yellow	8.80 - 8.85	Cast Iron	3660-3670
Light Orange	8.85 - 8.90	Cast Iron	3670-3680
Light Red	8.90 - 8.95	Cast Iron	3680-3690
Light Pink	8.95 - 9.00	Cast Iron	3690-3700
Light Blue	9.00 - 9.05	Cast Iron	3700-3710
Light Green	9.05 - 9.10	Cast Iron	3710-3720
Light Yellow	9.10 - 9.15	Cast Iron	3720-3730
Light Orange	9.15 - 9.20	Cast Iron	3730-3740
Light Red	9.20 - 9.25	Cast Iron	3740-3750
Light Pink	9.25 - 9.30	Cast Iron	3750-3760
Light Blue	9.30 - 9.35	Cast Iron	3760-3770
Light Green	9.35 - 9.40	Cast Iron	3770-3780
Light Yellow	9.40 - 9.45	Cast Iron	3780-3790
Light Orange	9.45 - 9.50	Cast Iron	3790-3800
Light Red	9.50 - 9.55	Cast Iron	3800-3810
Light Pink	9.55 - 9.60	Cast Iron	3810-3820
Light Blue	9.60 - 9.65	Cast Iron	3820-3830
Light Green	9.65 - 9.70	Cast Iron	3830-3840
Light Yellow	9.70 - 9.75	Cast Iron	3840-3850
Light Orange	9.75 - 9.80	Cast Iron	3850-3860
Light Red	9.80 - 9.85	Cast Iron	3860-3870
Light Pink	9.85 - 9.90	Cast Iron	3870-3880
Light Blue	9.90 - 9.95	Cast Iron	3880-3890
Light Green	9.95 - 10.00	Cast Iron	3890-3900
Light Yellow	10.00 - 10.05	Cast Iron	3900-3910
Light Orange	10.05 - 10.10	Cast Iron	3910-3920
Light Red	10.10 - 10.15	Cast Iron	3920-3930
Light Pink	10.15 - 10.20	Cast Iron	3930-3940
Light Blue	10.20 - 10.25	Cast Iron	3940-3950
Light Green	10.25 - 10.30	Cast Iron	3950-3960
Light Yellow	10.30 - 10.35	Cast Iron	3960-3970
Light Orange	10.35 - 10.40	Cast Iron	3970-3980
Light Red	10.40 - 10.45	Cast Iron	3980-3990
Light Pink	10.45 - 10.50	Cast Iron	3990-4000
Light Blue	10.50 - 10.55	Cast Iron	4000-4010
Light Green	10.55 - 10.60	Cast Iron	4010-4020
Light Yellow	10.60 - 10.65	Cast Iron	4020-4030
Light Orange	10.65 - 10.70	Cast Iron	4030-4040
Light Red	10.70 - 10.75	Cast Iron	4040-4050
Light Pink	10.75 - 10.80	Cast Iron	4050-4060
Light Blue	10.80 - 10.85	Cast Iron	4060-4070
Light Green	10.85 - 10.90	Cast Iron	4070-4080
Light Yellow	10.90 - 10.95	Cast Iron	4080-4090
Light Orange	10.95 - 11.00	Cast Iron	4090-4100
Light Red	11.00 - 11.05	Cast Iron	4100-4110
Light Pink	11.05 - 11.10	Cast Iron	4110-4120
Light Blue	11.10 - 11.15	Cast Iron	4120-4130
Light Green	11.15 - 11.20	Cast Iron	4130-4140
Light Yellow	11.20 - 11.25	Cast Iron	4140-4150
Light Orange	11.25 - 11.30	Cast Iron	4150-4160
Light Red	11.30 - 11.35	Cast Iron	4160-4170
Light Pink	11.35 - 11.40	Cast Iron	4170-4180
Light Blue	11.40 - 11.45	Cast Iron	4180-4190
Light Green	11.45 - 11.50	Cast Iron	4190-4200
Light Yellow	11.50 - 11.55	Cast Iron	4200-4210
Light Orange	11.55 - 11.60	Cast Iron	4210-4220
Light Red	11.60 - 11.65	Cast Iron	4220-4230
Light Pink	11.65 - 11.70	Cast Iron	4230-4240
Light Blue	11.70 - 11.75	Cast Iron	4240-4250
Light Green	11.75 - 11.80	Cast Iron	4250-4260
Light Yellow	11.80 - 11.85	Cast Iron	4260-4270
Light Orange	11.85 - 11.90	Cast Iron	4270-4280
Light Red	11.90 - 11.95	Cast Iron	4280-4290
Light Pink	11.95 - 12.00	Cast Iron	4290-4300
Light Blue	12.00 - 12.05	Cast Iron	4300-4310
Light Green	12.05 - 12.10	Cast Iron	4310-4320
Light Yellow	12.10 - 12.15	Cast Iron	4320-4330
Light Orange	12.15 - 12.20	Cast Iron	4330-4340
Light Red	12.20 - 12.25	Cast Iron	4340-4350
Light Pink	12.25 - 12.30	Cast Iron	4350-4360
Light Blue	12.30 - 12.35	Cast Iron	4360-4370
Light Green			

CEMETERY

K-40

CLARK

5725-2
(1937)
2510-12
CB 3056

HEBREW FREE BURIAL ASSN.

CEMETERY

AVE.

K-30

K-31

31

CT.

COTTER

AVE.

CORONA

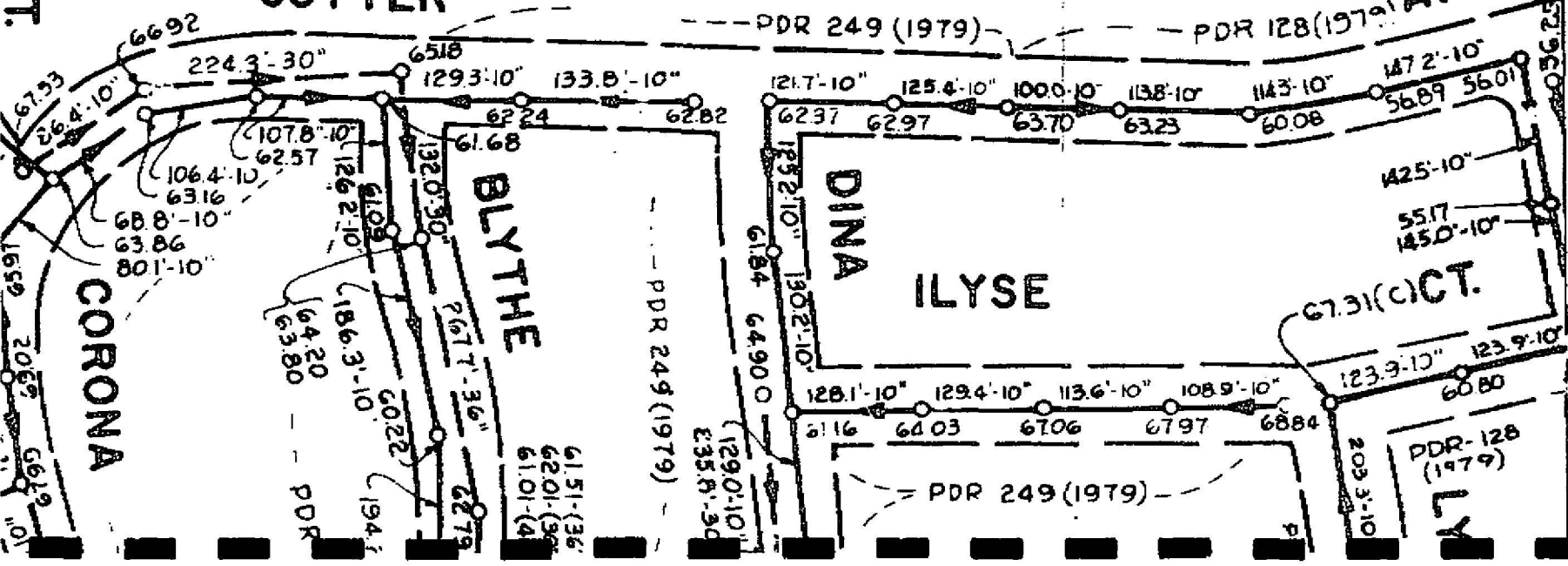
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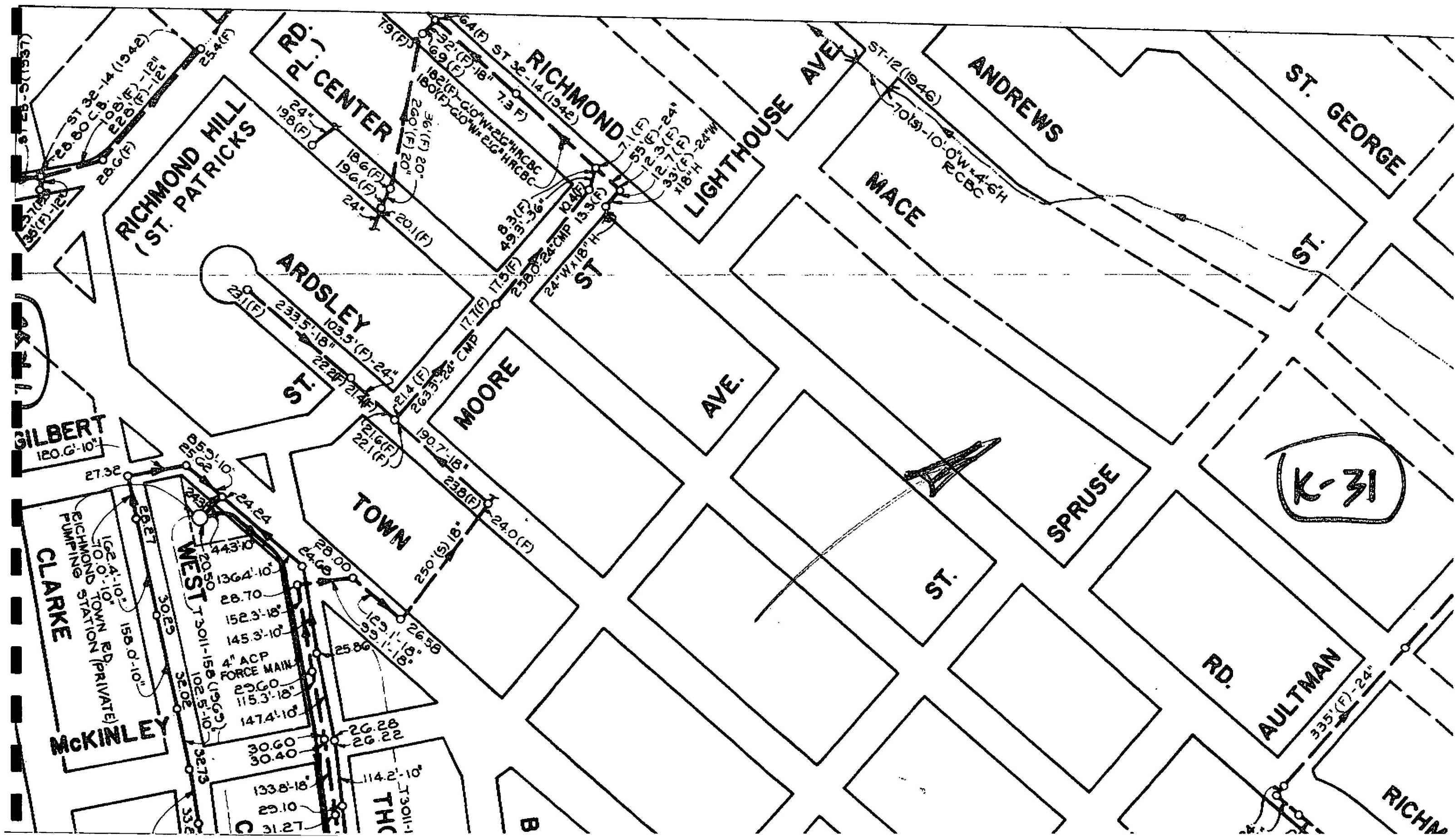
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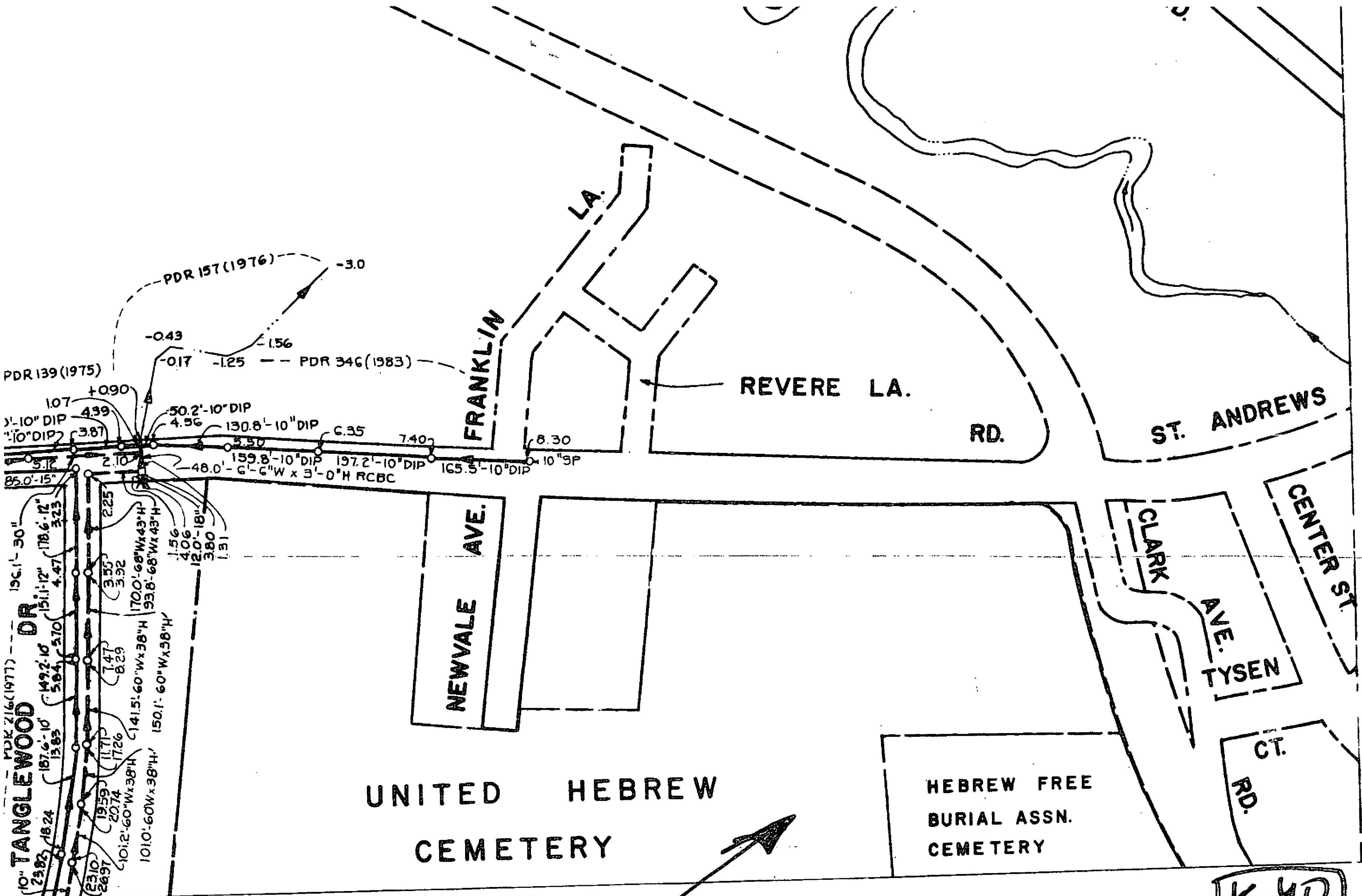
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PDR-128
(1979)







K-41

K-40

UPDATED: OCTOBER 1984

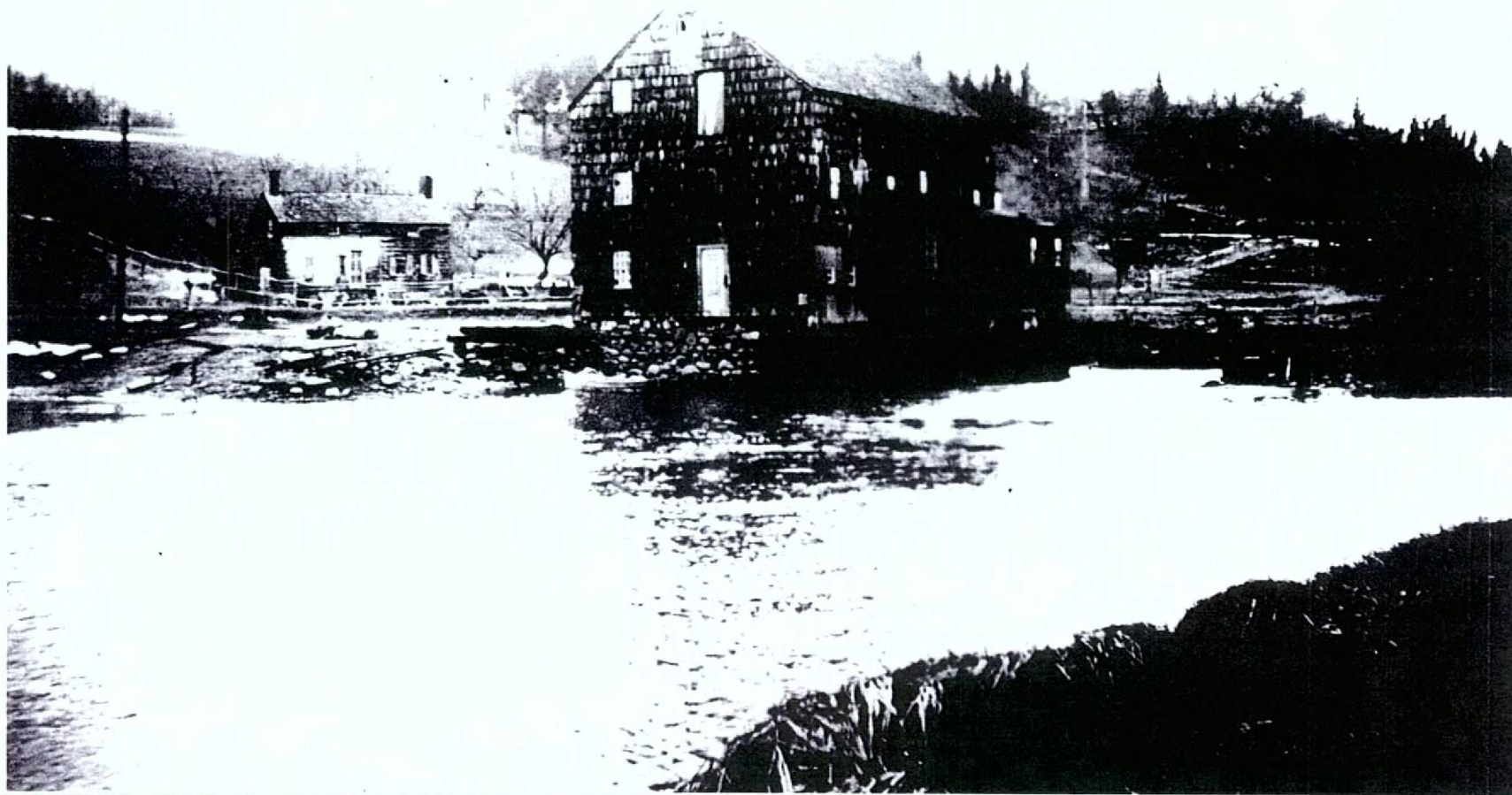
**APPENDIX E:
HISTORIC PHOTOGRAPHS
OF MILL COMPLEX**



1898 view of fields and buildings along Old Mill Road, including tide mill and Wood and Crocheron houses.
Source: Staten Island Historical Society.

Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.

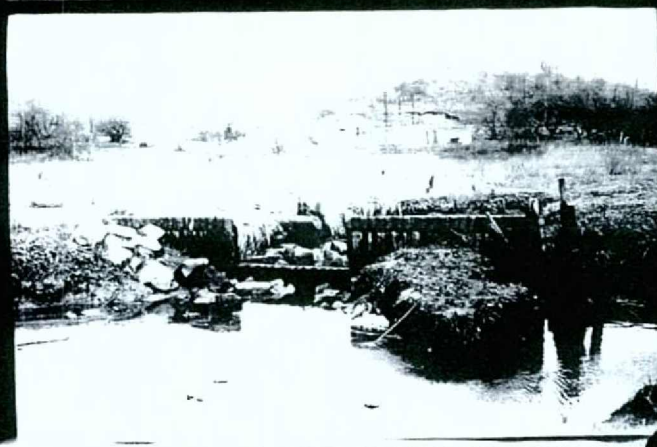




1899 View of the Geib-Wood-Crocheron Mill. Source: Staten Island Historical Society.

Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.





Ca. 1940 views of the Geib-Wood-Crocheron Mill site. Source: Staten Island Historical Society.

Phase IA Archaeological Reconnaissance and Documentary Study
Staten Island Bike Paths – Forest Hill Road to St. Patrick's Place
Richmond, Richmond County, Staten Island, New York.



**APPENDIX F:
PROJECT
CORRESPONDENCE**