

4478R

1995
Hartgen

REPORT OF ARCHEOLOGICAL POTENTIAL

GOETHALS BRIDGE EXPANSION STATEN ISLAND BRIDGES PROGRAM RICHMOND COUNTY, NEW YORK AND UNION COUNTY, NEW JERSEY

Prepared by:

HARTGEN ARCHEOLOGICAL ASSOCIATES, INC.
CERTIFIED WBE/DBE
331 NORTH GREENBUSH ROAD
TROY, NEW YORK 12180
PHONE: (518)283-0534
FAX: (518)283-6276

RECEIVED
ENVIRONMENTAL REVIEW

MAY 17 1995

LANDMARKS PRESERVATION
COMMISSION

Submitted to:

PARSONS BRINCKERHOFF
ONE PENN PLAZA
NEW YORK, NEW YORK 10119

non-CEQR

USF

March 1995

447 BR

721

TABLE OF CONTENTS

Figure List	iii
Acknowledgments	v
Executive Summary	vi
Introduction	1
Environmental Summary	1
Existing Conditions	3
Prehistoric and Historic Resources	3
Documentary Research	13
Historic Overview	21
Summary of Archeological Potential	36
Potential Impacts to Archeological Resources	36
Overview of Potential Sites Along Each Bridge Alternative	42
Construction Activities and Impacts	47
Summary	48
References	50
Map List	55

Appendix I: New York State Museum Site File Correspondence

Appendix II: New Jersey State Museum Site File Correspondence

FIGURES

Figure 1: Project Location	2
Figure 2: Project Area with Areas of Potential Archeological Sensitivity	4
Figure 3: Photo Angles	5
Figure 4: View to E/SE of bridge and lawn around electrical substation	6
Figure 5: View to SE from Bayway Road bridge over I-95	6
Figure 6: View to SE from Front Street	7
Figure 7: View to SE along road parallel to bridge	7
Figure 8: View to SE along road parallel to bridge	8
Figure 9: View to E of New Jersey side of bridge across I-95	8
Figure 10: View to NE of Mariner's Harbor paved areas	9
Figure 11: View to SE of Old Place Road	9
Figure 12: View to NE of filled area and bridge tollgate	10
Figure 13: View to NW of vicinity of mill and miller's house	10
Figure 14: View to SE of vicinity of mill on Old Place Creek	11
Figure 15: View to NE of tidal marsh along south side of bridge	11
Figure 16: Skinner's 1909 Map	12
Figure 17: Reported Sites in Vicinity of Project Area	15 & 16
Figure 18: Locations of Previous Cultural Resource Surveys	17
Figure 19: Old Place Prehistoric and Historic Cultural Resources	19
Figure 20: 1780 Map of Staten Island	22
Figure 21: Revolutionary War Map of Staten Island	23
Figure 22: 1850 Sidney Map of Staten Island	24
Figure 23: 1859 Walling Map of Staten Island	25
Figure 24: 1860 Grover & Baker Map of Staten Island	26
Figure 25: 1874 Beers Atlas of Staten Island	27
Figure 26: 1884 Colton Map of Staten Island	28
Figure 27: 1887 Beers Map of Staten Island	29
Figure 28: 1895 Robinson Atlas of the Borough of Richmond	30
Figure 29: 1900/1909 USGS Staten Island 15' Quadrangle	31
Figure 30: 1917 Sanborn Map of Staten Island	32
Figure 31: 1937 Sanborn Map of Staten Island	33
Figure 32: 1937-1951 Sanborn Map of Staten Island	34
Figure 33: 1924 photograph of Rev. Kinney house	35
Figure 34: 1924 photograph of unidentified house on Old Place Road	35
Figure 35: 1917 photograph of unidentified house on Old Place Neck	37
Figure 36: 1917 photograph of unidentified house on Old Place Neck	38
Figure 37: 1890 etching from Harper's Weekly of unidentified house on Old Place Road	39
Figure 38: 1893 photograph of Old Place Mill	39
Figure 39: 1890 etching from Harper's Weekly of Old Place Mill	40

Figure 40: View to NW interior of wooded area north of Goethals Bridge	40
Figure 41: Map of Pleistocene Shoreline (circa 10,000 years BP)	41
Figure 42: Areas of Potential Archeological Sensitivity and Potential Impact	43
Figure 43: Northern Alternative Pier Locations	45
Figure 44: Southern Alternative Pier Locations	46

ACKNOWLEDGMENTS

The primary author of this report was Thomas R. Jamison, Ph.D. Karen S. Hartgen served as Principal Investigator and editor. The site visit, photodocumentation, and documentary research were carried out by Dr. Jamison in October 1994. John Tomkins prepared some of the figures for the report. Many people at Parsons Brinckerhoff helped to improve this report in many ways. In particular, Susan Roux provided skillful coordination of the various aspects of the report preparation. We wish to thank the following institutions and agencies for their help in obtaining the information presented here: The Staten Island Institute of Arts and Sciences (SIIAS); the St. George Library (Staten Island); the New York City Landmarks Preservation Commission (NYCLPC); the New Jersey State Library; the New Jersey Historic Preservation Office; the New Jersey State Museum; the New York State Museum; the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP); the New York State Library; and the Manuscripts and Archives Section of the New York State Library.

EXECUTIVE SUMMARY

As part of the Staten Island Bridges Program, a Stage I cultural resources survey was conducted for the proposed expansion of Goethals Bridge, Staten Island, New York and Elizabeth, New Jersey.

Documentary research was carried out at the New York State Museum (NYSM), the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP), the New York State Library, the Manuscripts and Archives Section of the New York State Library, the Staten Island Institute of Arts and Sciences (SIAS), the St. George Library (Staten Island), the New York City Landmarks Preservation Commission (NYCLPC), the New Jersey State Library, the New Jersey Historic Preservation Office, and the New Jersey State Museum.

Based on the project area location and characteristics, as well as reports of several sites in the vicinity of the project, the Goethals Bridge expansion is considered highly sensitive to the presence of prehistoric and historic archeological remains. This high sensitivity is focused on the Staten Island end of the bridge where numerous prehistoric and early historic sites have been reported in the vicinity of the project area. These sites include prehistoric sites ranging in date from the Paleoindian to the Contact period (Appendix I). The archeological sensitivity on the New Jersey side is not well documented and needs further investigation (Appendix II). There is much greater disturbance on the New Jersey side that may have destroyed most archeological contexts. The project area includes areas settled as early as the late 17th century and is in the vicinity of Revolutionary War encampments and skirmishes.

Since the beginning of the 20th century, significant development has taken place in the vicinity of the project area. Most of the development of this portion of Staten Island and New Jersey is industrial and shipping related. However, sections of the project area are (1) free of development or (2) were filled and archeological sites may, thus, have been protected. Thus, there may be prehistoric and historic archeological resources within either the north or south alternatives that need to be identified, assessed for National Register eligibility, and impacts to them mitigated. Archeological deposits could be impacted, depending upon their location and integrity. Bridge piers would disturb the soil in restricted areas down to bedrock. Grading, paving, and other construction activities could also disturb archeological deposits, unless they are built on clean fill that would protect the deposits.

Potential National Register eligible prehistoric and historic archeological sites within the project area must be identified for proper avoidance or mitigation. The approach and methodology for testing to further investigate the preservation of remains and to avoid and/or mitigate any effects to possible archeological deposits will be determined in consultation with the New York State Historic Preservation Officer.

INTRODUCTION

This report describes the archeological and historical sensitivity of the area of the proposed expansion of Goethals Bridge in Staten Island, New York and Elizabeth, New Jersey. The proposed project is located at Goethals Bridge where Route 278 crosses the Arthur Kill between Old Place, Staten Island, New York and Elizabeth, New Jersey (Figure 1). The project is intended to allow for increased traffic flow through expansion from the current four to six lanes of traffic. This goal is proposed to be accomplished by construction of a second bridge slightly north or south of the currently operating Goethals Bridge. Each span would be designed for three lanes of traffic with potential for expansion to four lanes. The area of impact will be approximately 9000 feet long, running from the toll gate at the east end of the present bridge to Interchange 13 at the west end of the bridge. In width, the project impact will be no more than one-tenth of a mile to either side of the existing bridge.

In October 1994, during a site visit to the Goethals Bridge and the surrounding area, photographs were taken, maps were checked, and disturbance was assessed throughout the project area. In addition, archival materials in several institutions were examined and reproduced when allowed. The institutions and agencies visited included the Staten Island Institute of Arts and Sciences (SIIAS), the St. George Library (Staten Island), the New York City Landmarks Preservation Commission (NYCLPC), the New Jersey State Library, the New Jersey Historic Preservation Office, and the New Jersey State Museum. Earlier the New York State Museum (NYSM), the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP), the New York State Library, and the Manuscripts and Archives Section of the New York State Library were visited in the Albany area.

ENVIRONMENTAL SUMMARY

On the east (Staten Island) end of the bridge the tidal marshlands are less than 10 feet above sea level. On the west (New Jersey) side, the area is slightly higher, although much of that area has been filled and raised artificially 10 to 20 feet above sea level. The bedrock geology of the project area is the Brunswick Formation consisting of sandstone, conglomerate, siltstone, and mudstone (Fisher, Isachsen, and Rickard 1970). Soils overlying the bedrock consist of sand and clay as well as varying amounts of 18th to 20th century fill. The project area drains to the Arthur Kill on both the east and west sides. On the east end, the low elevation of parts of the area makes for poorly drained soils with frequent tidal inundation.

The vegetation in the vicinity of the project area was originally of the Appalachian Oak Forest, dominated by white and red oak (Kuchler 1964). Presently, the vegetation in most of the project area is low secondary growth. Especially low-lying sections contain a variety of wetland species. It has been reported that there has been substantial inland movement of wetland vegetation during

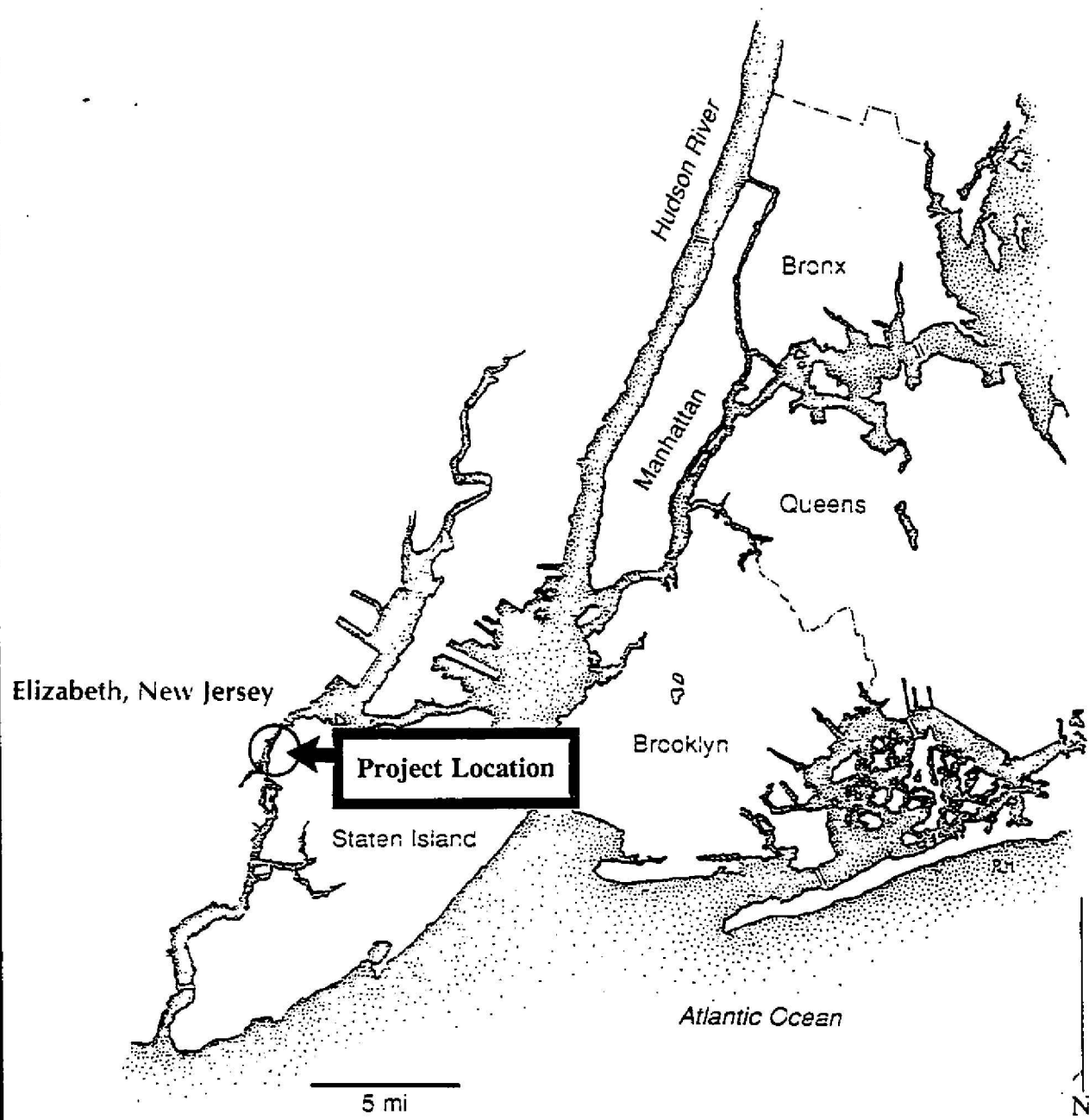


FIGURE 1
Project Location
(from Lenik 1992)

the 20th century (Payne and Baumgardt 1986:II-8). This comment suggests that sites in the area that once may have been on dry ground may now be in saturated wetland deposits (Boesch 1994:17-22).

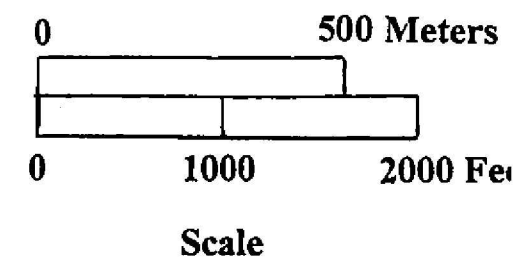
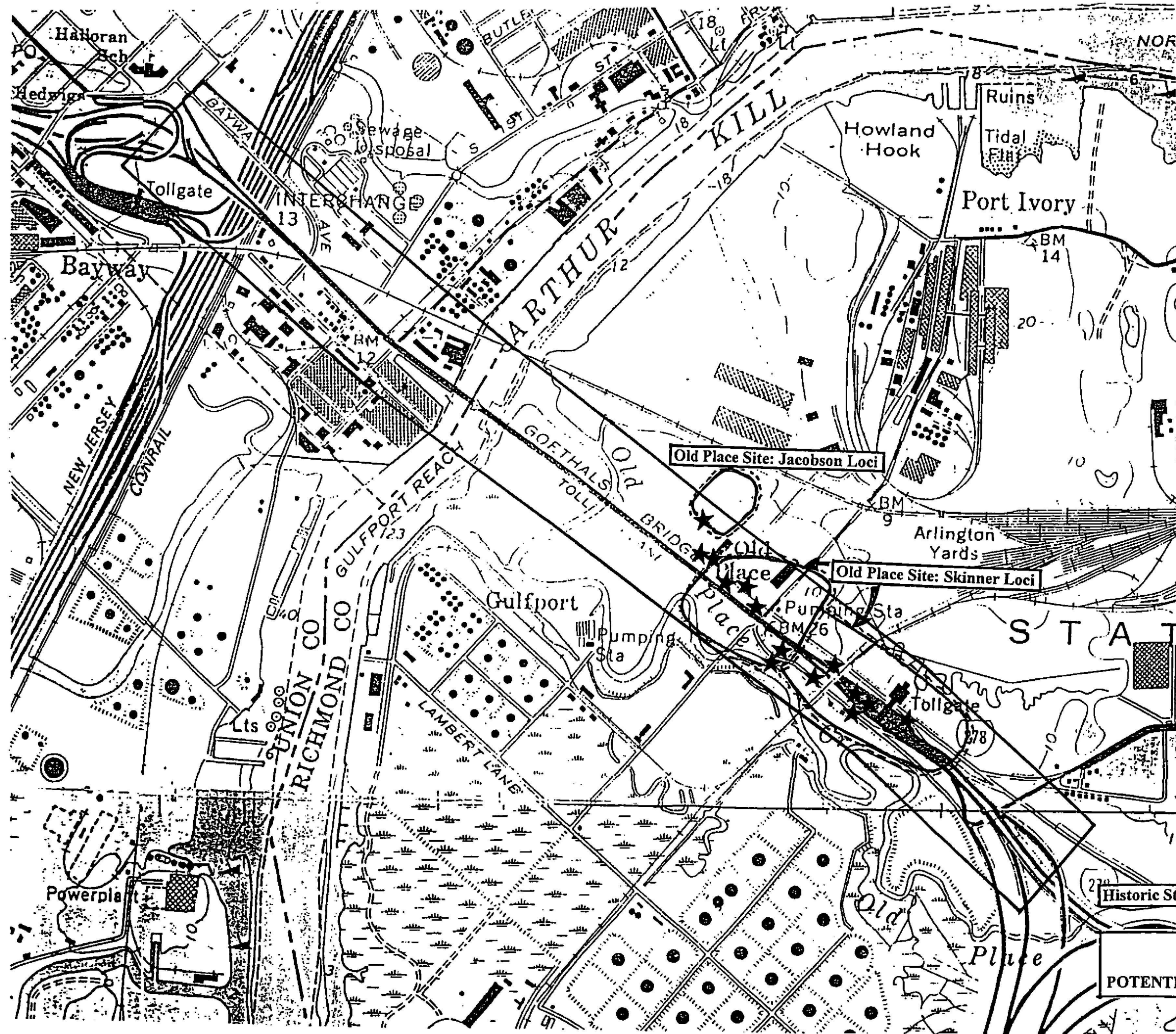
EXISTING CONDITIONS

The project area consists of a one-tenth mile-wide strip on either side of the existing bridge for a total width of 1056 feet (Figure 2). On the New York side, there has been much less alteration to the area of the proposed alternatives than on the New Jersey side. In New Jersey, the project area is characterized by extensive filling and construction with only a few small patches of open space that may retain undisturbed archeological contexts (Figures 4 through 9; Figure 3 shows photo locations). The New York end of the project area was originally lower in elevation than the New Jersey end and, although there has been some construction in the past 30 years, much of the area remains relatively undisturbed with paving or filling comprising most of the disturbance (Figures 10 to 13). Potential sites may have been disturbed, through compaction, by these processes. The limited disturbance in this vicinity is in part due to its low elevation and marshy character, making much of it unfit for major construction (Figures 14 and 15). However, lack of development on the New York side of the project area is also partly due to the lack of deep water in the Arthur Kill at the mouth of Old Place Creek. The deep water on the New Jersey side of the Arthur Kill allowed for development of that side as a shipping and manufacturing location.

PREHISTORIC AND HISTORIC RESOURCES

The prehistoric site of "Old Place" has been documented within the project area since the early 1900s. The first report on the site was published by Alanson Skinner (1909:8-9) and depicted as a large area running along the north side of Old Place Creek (Figure 2). It is unclear who conducted the work reported by Skinner, but he describes artifacts and features that appear to date to the Late Woodland and Contact periods. The features mentioned are "shell pits" and hearths spread over a wide area. Included in his listing of artifacts are Iroquoian-like pottery, a brass arrow point, gun flints, lead bullets, a pewter trade ring, kaolin pipe fragments, and a brass kettle fragment. The map accompanying Skinner's report (Figure 16) shows the site stretching along Old Place Creek with the densest area of occupation at the western end of the concentration. This concentration is bisected by Goethals Bridge, but remnants of the deposits are likely intact in some parts of the project area.

In the early 1960s Anderson and Sainz, two avocational archeologists on Staten Island, conducted excavations in the vicinity, however it is unclear exactly where their excavations were located. They reportedly recovered artifacts ranging at least from the Late Archaic through the Late Woodland. Primary diagnostic artifacts listed by Anderson include Perkiomen Broad, Susquehanna Broad, Bare Island, Snook-Kill, Poplar Island, Levanna, and bifurcated projectile points, Vinette I and Late Woodland ceramics (Anderson 1964).



★ = Historic Structure Locations from 1874 Beers Map

FIGURE 2
PROJECT AREA WITH AREAS OF
POTENTIAL ARCHEOLOGICAL SENSITIVITY

USGS Elizabeth 1981 7.5' Quad
Arthurkill 1981 7.5' Quad

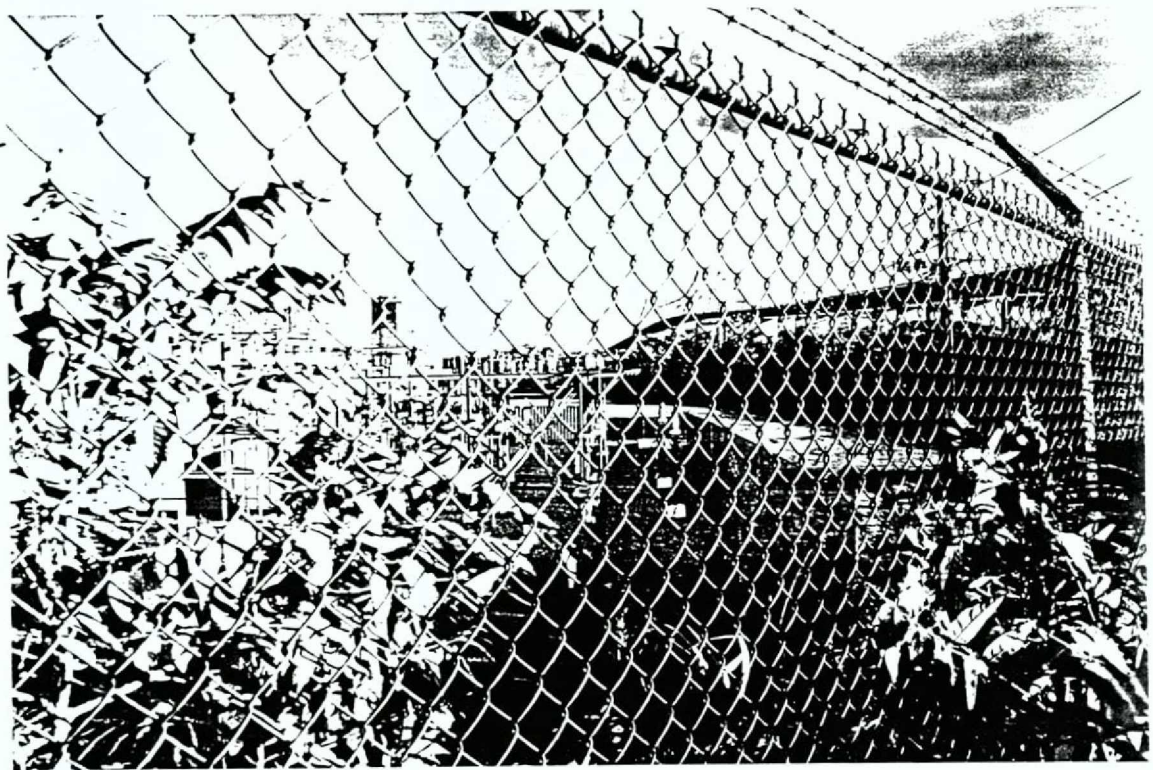


Figure 4: View to E/SE of bridge and lawn around electrical substation

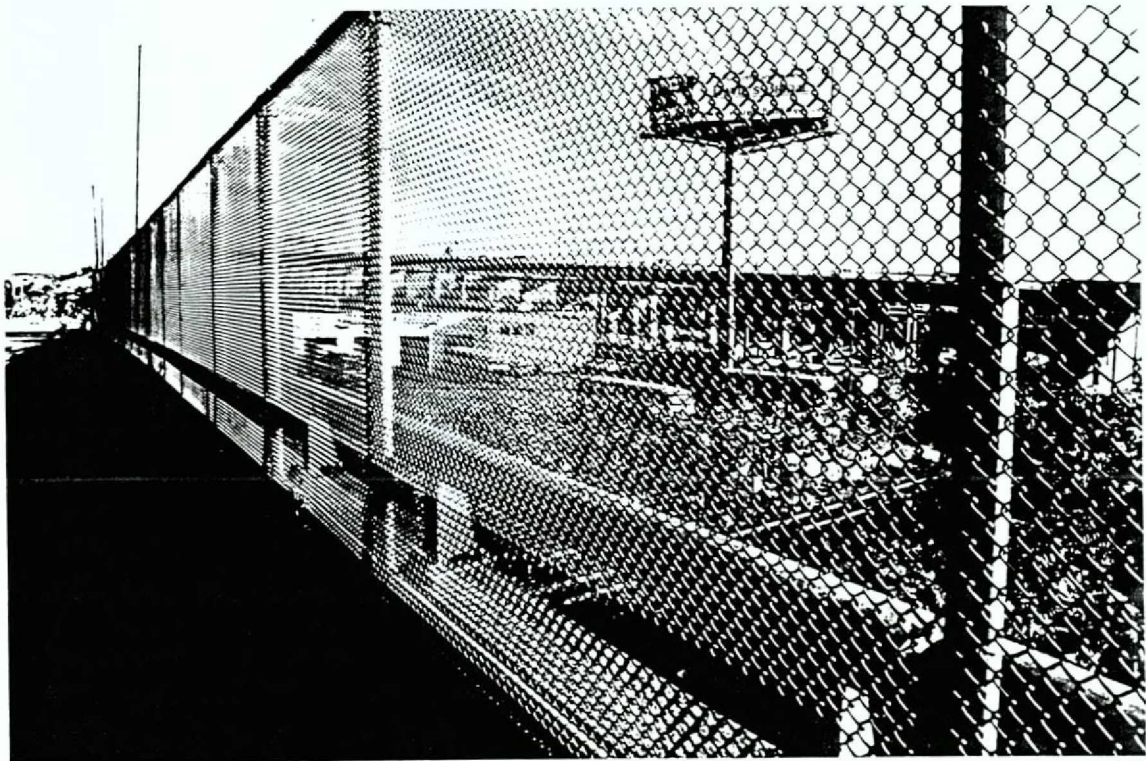


Figure 5: View to SE from Bayway Rd. bridge over I-95

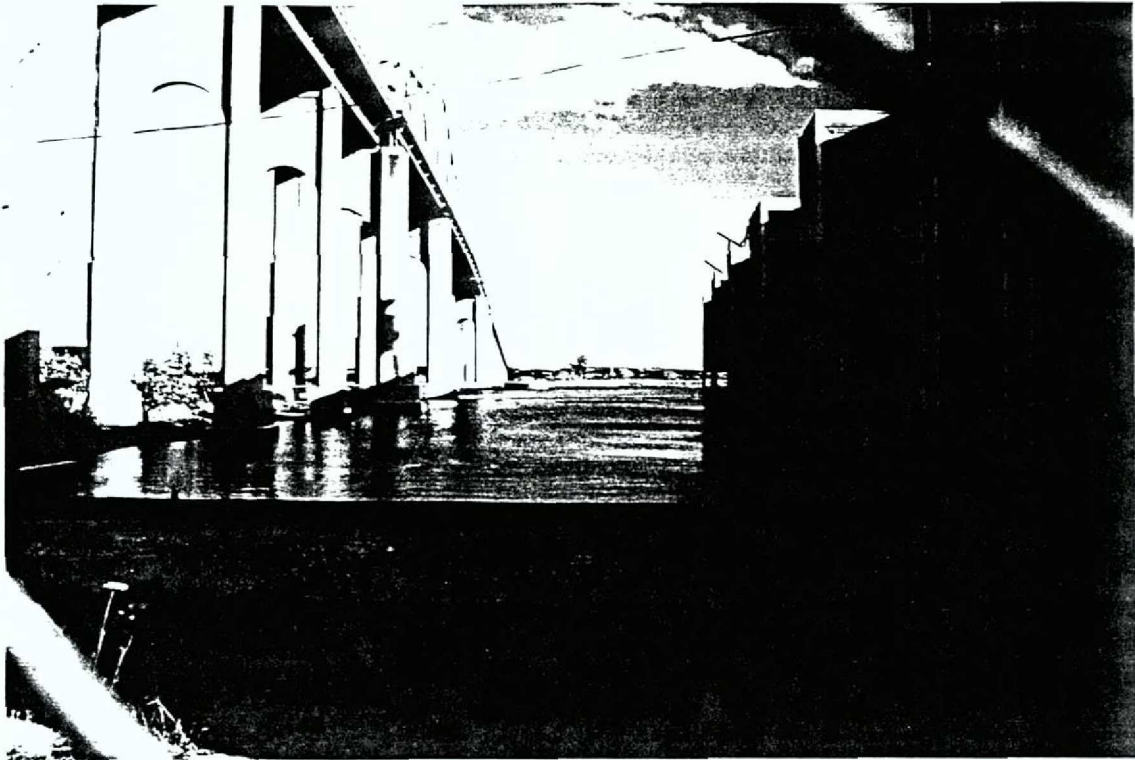


Figure 6:View to SE from Front St.

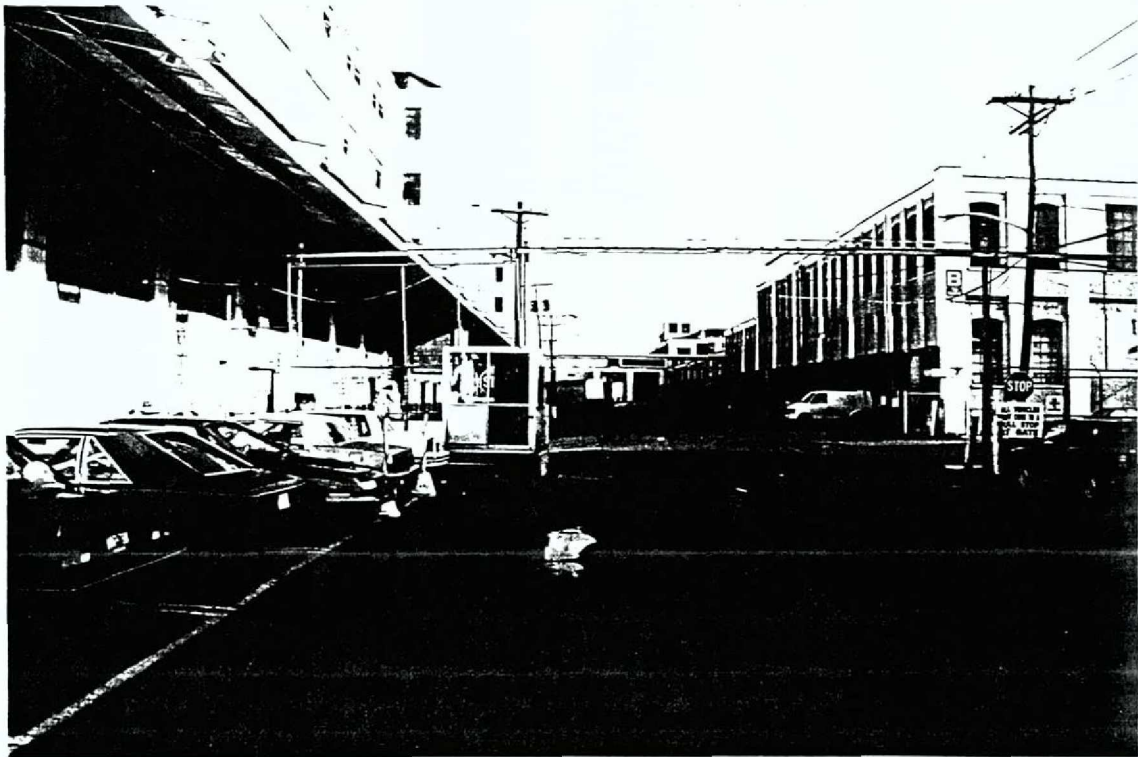


Figure 7:View to SE along road parallel to bridge

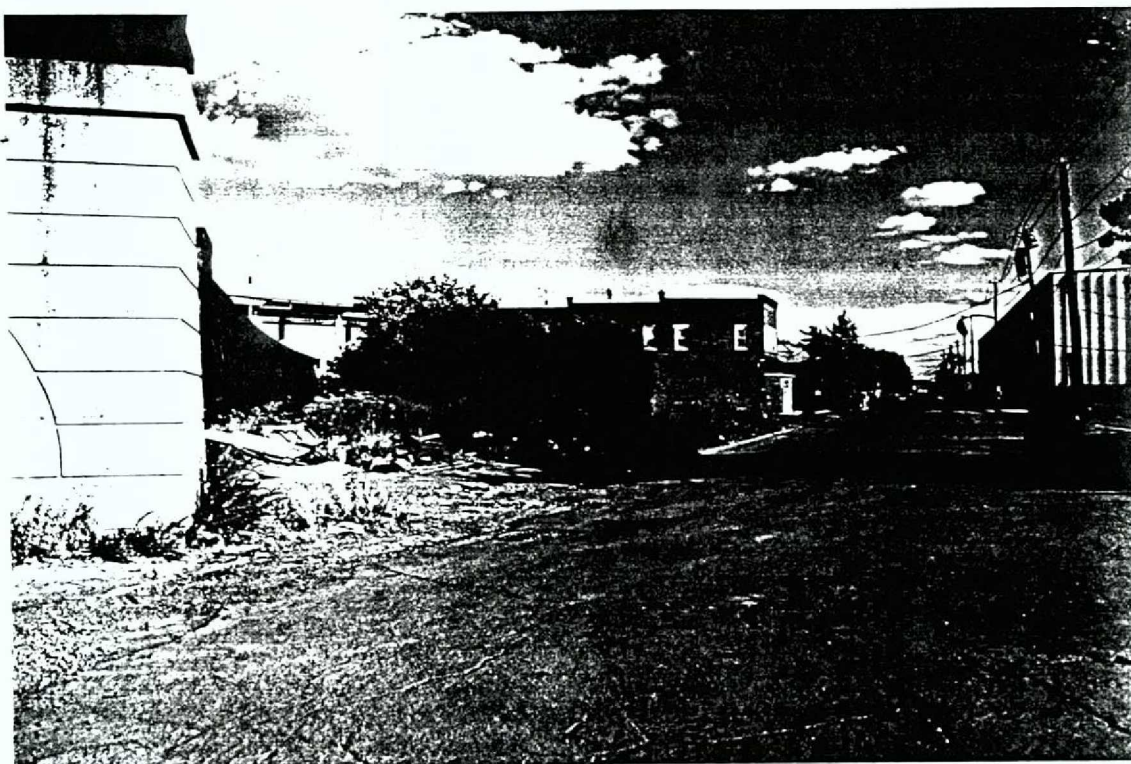


Figure 8: View to SE along road parallel to bridge

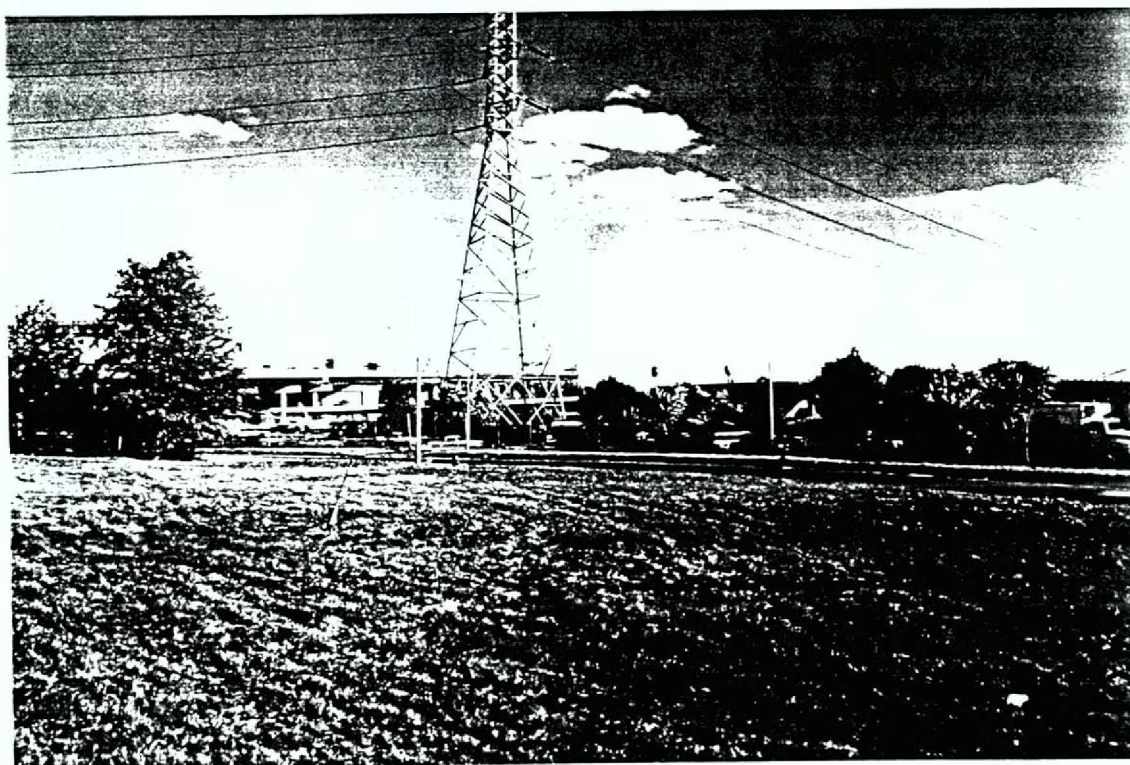


Figure 9: View to E of New Jersey side of bridge across I-95

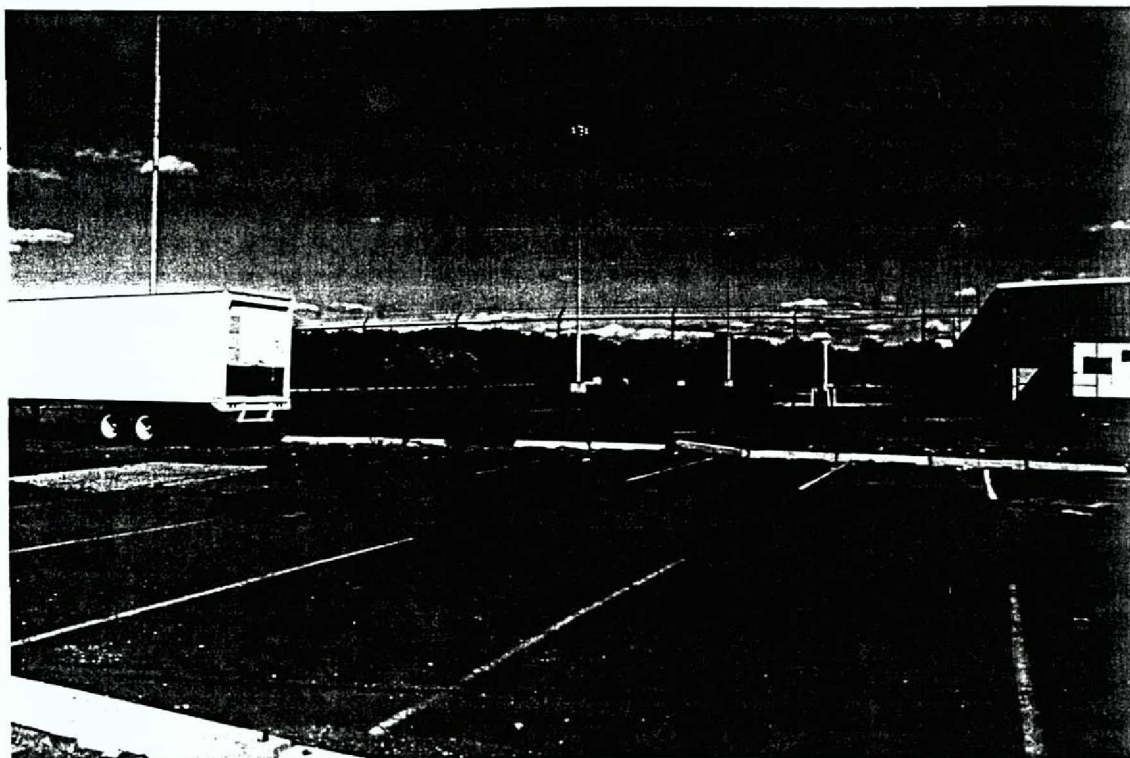


Figure 10: View to NE of Mariner's Harbor paved areas

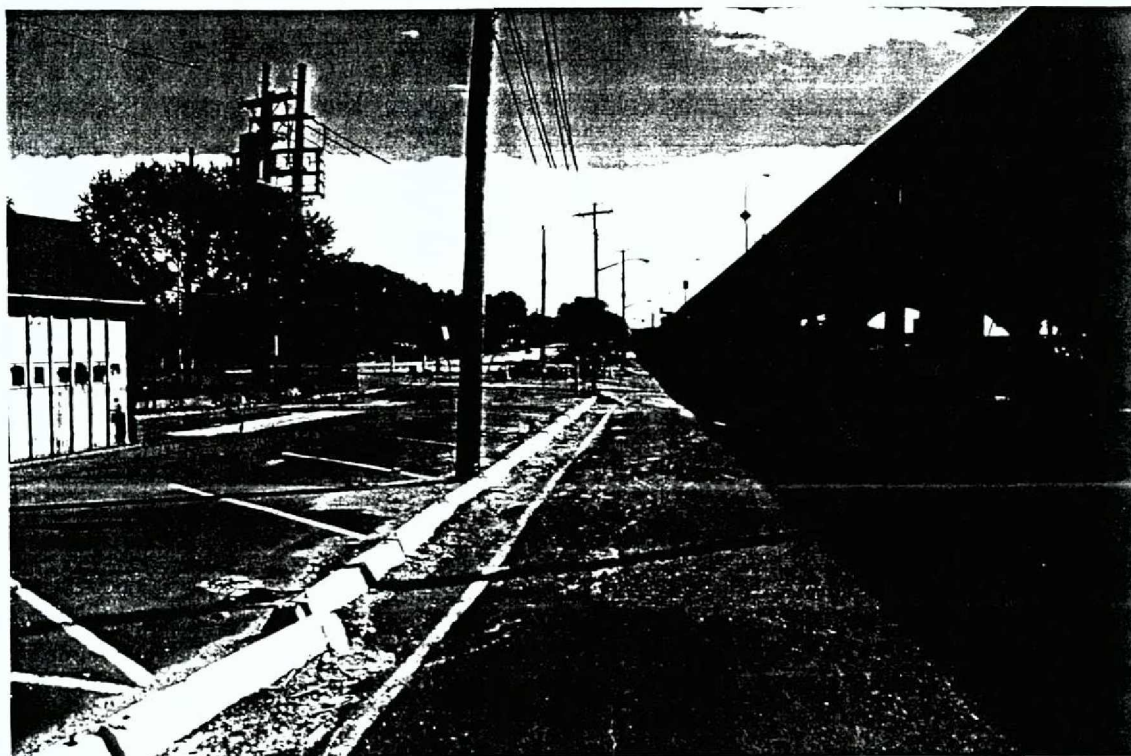


Figure 11: View to SE of Old Place Road

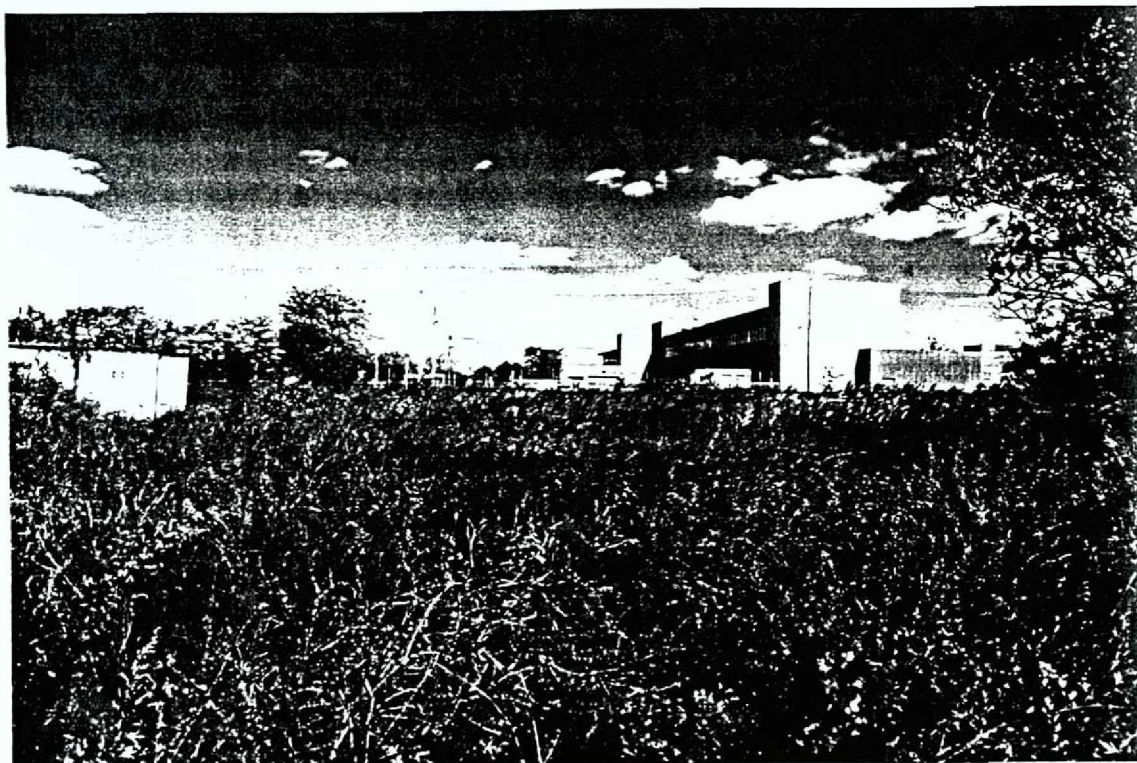


Figure 12:View to NE of filled area and bridge tollgate



Figure 13:View to NW of vicinity of mill and miller's house



Figure 14:View to SE of vicinity of mill on Old Place Creek



Figure 15:View to NE of tidal marsh along south side of bridge

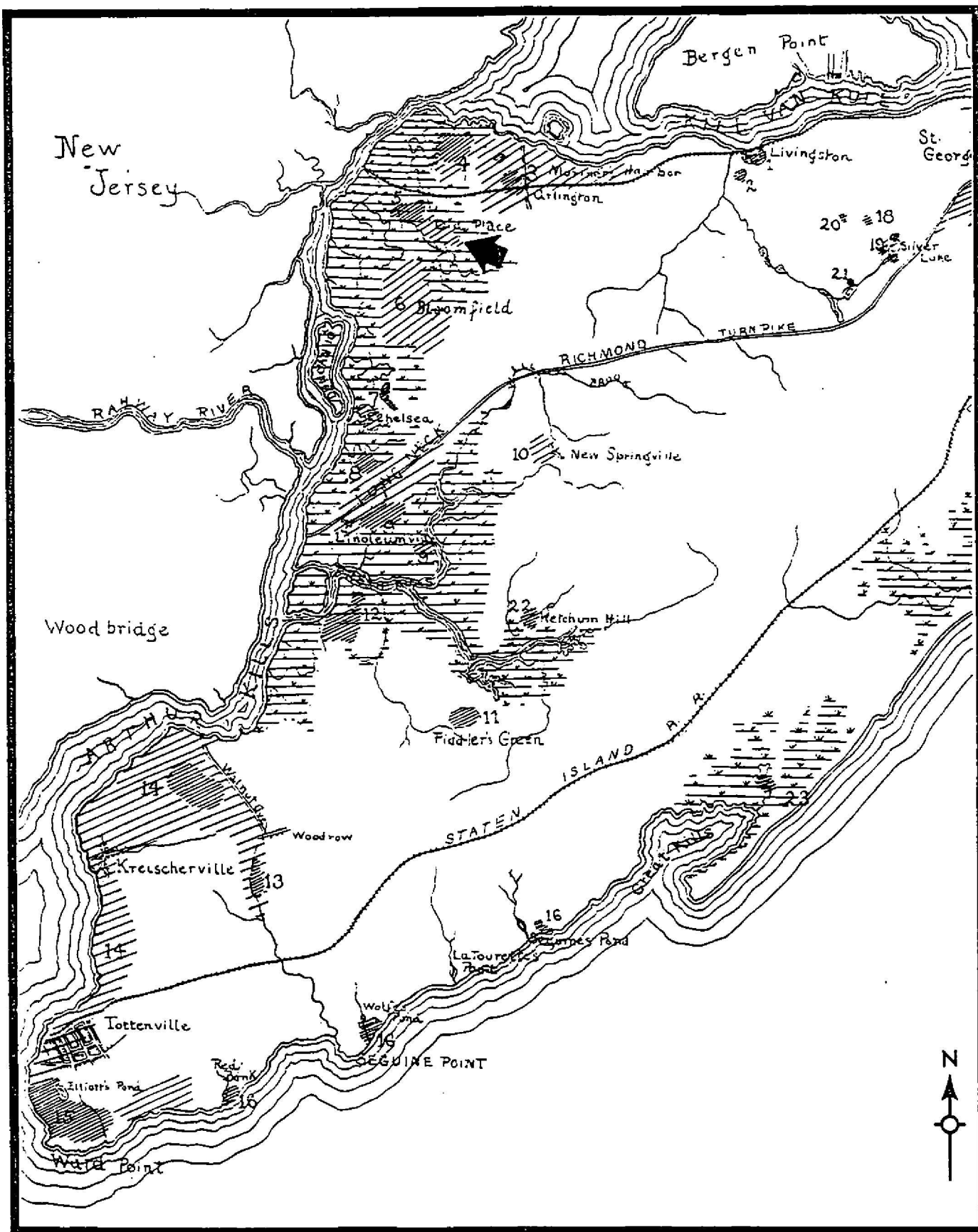


FIGURE 16
Skinner's 1909 Archeological
Map of Staten Island
(from Skinner 1909)

Also in the early 1960s, Jacobson conducted fieldwork in four areas (Locs A, B, E, and S) slightly to the west of Skinner's site (Figure 2), with Anderson and Sainz working in the vicinity at the same time (Jacobson 1963-64). Artifacts dating from the Archaic through the Woodland periods were recovered. Locus B, that falls within the project area, appears to have been stratified with the whole range of periods represented. One projectile point fragment recovered by Jacobson may be a Clovis point, however, it appears to have been reworked (Jacobson 1963-64:64).

The Old Place site appears to be a multicomponent site spread over a large portion of the project area. Suggestions of encroaching wetlands coincide nicely with the archeological materials recovered to indicate a sequence of occupation that shifted from west to east through time. Extension of this pattern into untested areas to the west indicates earlier Paleoindian loci, found to the south at Port Mobil (Kraft 1977b), may be located further to the west in the presently submerged soils along Old Place Creek closer to the Arthur Kill. Limited testing in this area by MAAR Associates recovered no cultural materials, but they did not investigate the saturated soils and excavated very few shovel tests (Payne and Baumgardt 1986).

DOCUMENTARY RESEARCH

The files of the New York State Museum (NYSM), the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP), the Staten Island Institute of Arts and Sciences (SIAS), the New York City Landmarks Preservation Commission (NYCLPC), the New Jersey Historic Preservation Office, and the New Jersey State Museum were examined for information on archeological sites within one mile of the project area (Figure 17). The New York State Museum, New York State Office of Parks, Recreation, and Historic Preservation, and the New Jersey Historic Preservation Office provided most of the following information.

New York State Museum

The following prehistoric sites are listed with the New York State Museum (four of them are also listed at NYSOPRHP) within approximately 1 mile from the project area (Figure 17; source: NYSOPRHP and NYSM listings):

<u>NYSM#</u>	<u>OPRHP #</u>	<u>Site Identifier</u>	<u>Site Description</u>
728		Arlington Ave.	Traces of occupation
729	A085-01-0139	Arlington Place	Late Archaic, Early and Late Woodland and Transitional camps and possible villages
730	A085-01-0138	Arlington Station	Woodland and pos. Transitional; shell heaps and pits
731		Gerties Knoll	Traces of occupation
732		Goodrich Site	Early and Late Archaic, pos. Middle Archaic; projectile points
4593		ACP Rich-3	Traces of occupation; shell pits

4594		ACP Rich-4	Burial; refuse pits
4595		ACP Rich-5	Early Historic; village, possible camps, burials
4596		ACP Rich-6	Late Woodland, Historic, Iroquois
4630		ACP Rich no#	Camp
6976		ACP Rich no#	Village
7215	A085-01-2366	Old Place	Multicomponent camps
7216		ACP Rich no#	Traces of occupation
7324			possible Transitional
7321	A085-01-2364	Bowman's Brook	Traces; Milliken foundation
7811		ACP Rich no#	Camp

New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP)

The following historic sites are listed by NYSOPRHP:

<u>NYSOPRHP Site #</u>	<u>Site Identifier</u>	<u>Site Description</u>
A085-01-2365	Richmond Terrace	Pre-1845 domestic site
A085-01-2367	Whalen Trucking	1790 domestic site
A085-01-2368	Whalen Trucking; MAAR Loc. 11	Unidentified structure
A085-01-2369	Whalen Trucking; MAAR Loc. 13	1790 domestic site
A085-01-2370	Whalen Trucking; MAAR Loc. 14	1790 domestic site
A085-01-2371	Whalen Trucking; MAAR Loc. 15	Outbuilding
A085-01-2372	Whalen Trucking; MAAR Loc. 16	1790 domestic site
A085-01-2373	Whalen Trucking; MAAR Loc. 17	Unidentified structure
A085-01-2374	Tunissen's	1680 domestic site
A085-01-2375	Rev. Kinney Property	Revolutionary War battle site, burials; Native American cultural materials

State Register and National Registers

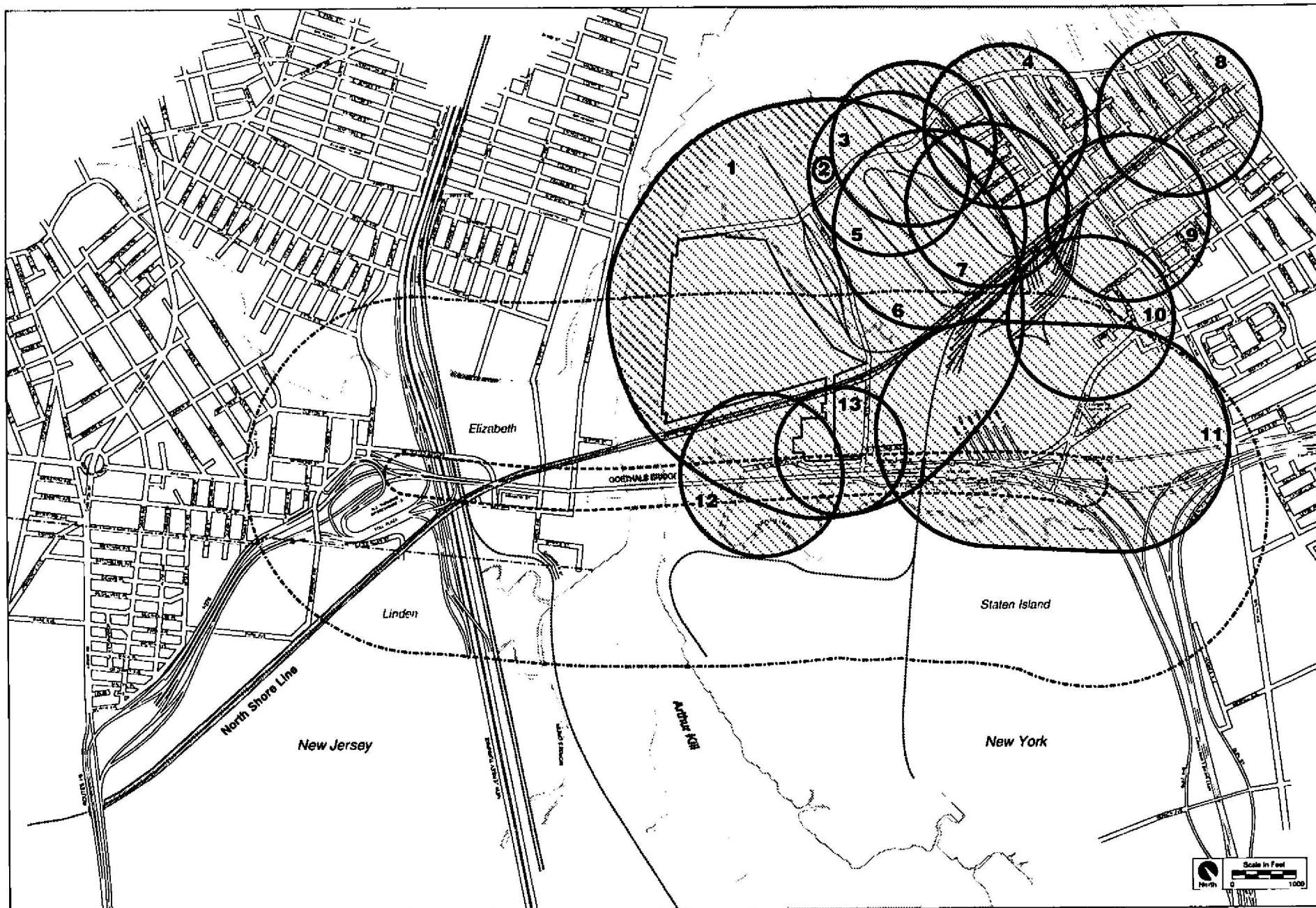
There are no archeological sites listed on the State or National Registers within one mile of the project area (Shaver 1993).

Previous Cultural Resource Surveys

Five cultural resource survey reports have examined parts of the project area (Figure 18).

New York Sites

The first is by MAAR Associates based on field work conducted on Staten Island in 1985 and 1986 (Payne and Baumgardt 1986). They list a total of 16 sites within the area of their investigation. Part



Legend

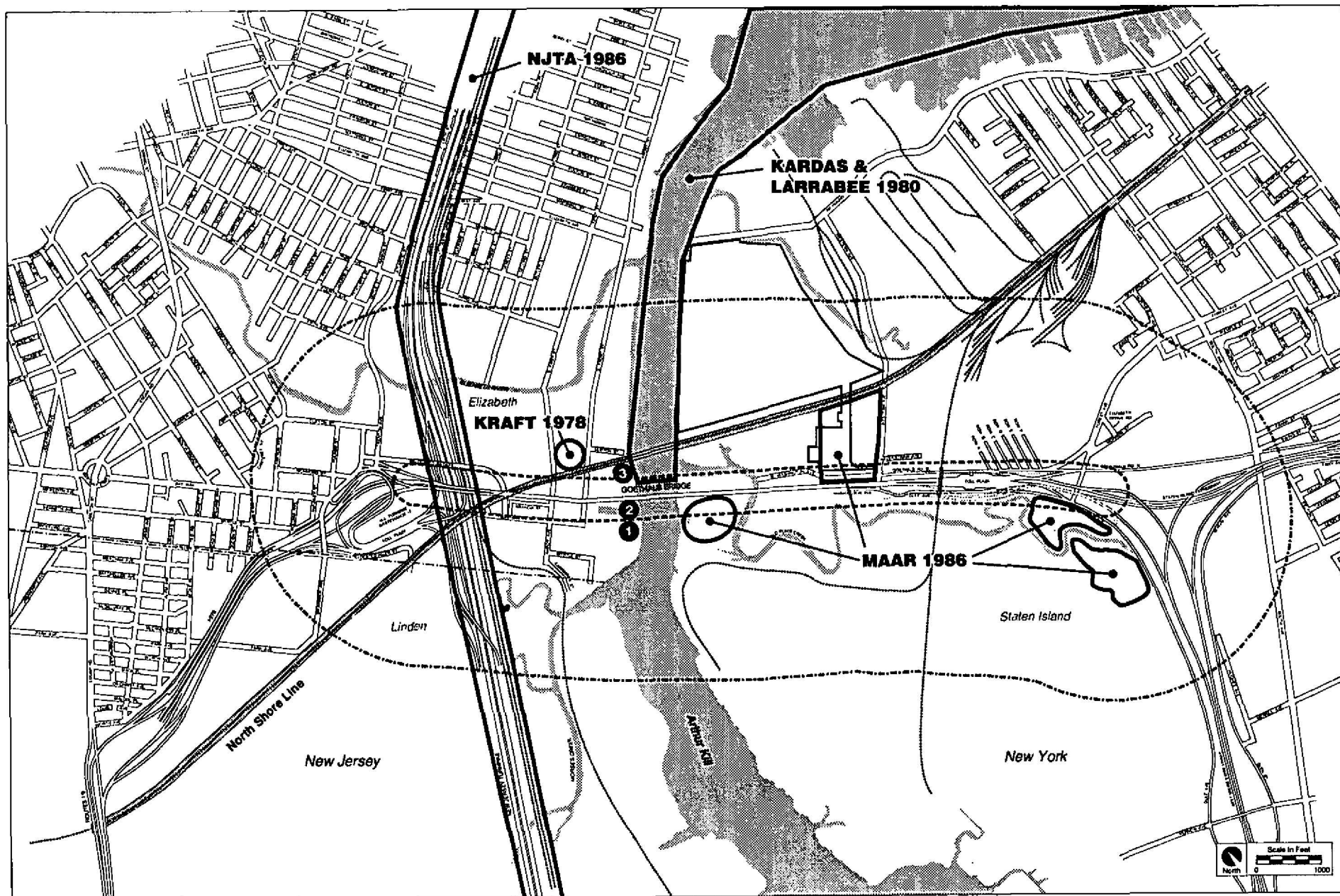
- Primary Study Area
- Secondary Study Area

Source: NYSOPRHP and NYSM Listings

Figure 17
Reported Sites in Vicinity of Study Area
 Staten Island Bridges Program
 United States Coast Guard

FIGURE 17 LEGEND: REPORTED SITES IN VICINITY OF PROJECT AREA
(Source: NYSOPRHP and NYSM listings)

<u>Ref#</u>	<u>NYSOPRHP#</u>	<u>NYSM#</u>	<u>SITE NAME</u>	<u>DESCRIPTION</u>
1		4595	ACP Rich-5	Village, camps?, burials; Historic
2	A085-01-2365		Richmond Terrace	Pre-1845 dwelling site
3		731	Gerties Knoll	Traces of occupation
4		728	Arlington Ave.	Traces of occupation
5		4630	ACP Rich no#	Camp
6	A085-01-2364	7321	Bowman's Brook	Camp
7	A085-01-0139	729	Arlington Place	Camp, village?, Archaic, Woodland
8		4593	ACP Rich-3	Traces of occupation; "shell pits"
9	A085-01-0138	730	Arlington Station	"Shell pits"; Woodland
10		732	Goodrich	Traces; Archaic
11		7216	ACP Rich no#	Traces of occupation
12	A085-01-2366	7215	Old Place	Multi-component camps
13	A085-01-2367		MAAR Loc. 10	1790 domestic site
	A085-01-2368		MAAR Loc. 11	Unidentified structure
	A085-01-2369		MAAR Loc. 13	1790 domestic site
	A085-01-2370		MAAR Loc. 14	1790 domestic site
	A085-01-2371		MAAR Loc. 15	Outbuilding
	A085-01-2372		MAAR Loc. 16	1790 domestic site
	A085-01-2373		MAAR Loc. 17	Unidentified structure
	A085-01-2374		Tunissen's House	1680 domestic site
	A085-01-2375		Kinney Property	1790s battle site; Native American cultural materials



Legend

- ① W.A. Clark Wire Co. (Phelps Dodge)
- ② Bowker Fertilizer Co.
- ③ Borne-Sormyser, Inc.

- Primary Study Area
- Secondary Study Area

Source: Kardas & Larrabee, 1980

Figure 18

Locations of Previous Cultural Resource Surveys

Staten Island Bridges Program
United States Coast Guard

of their focus was the Howland Hook vicinity, but they also conducted testing to the north and south of Goethals Bridge.

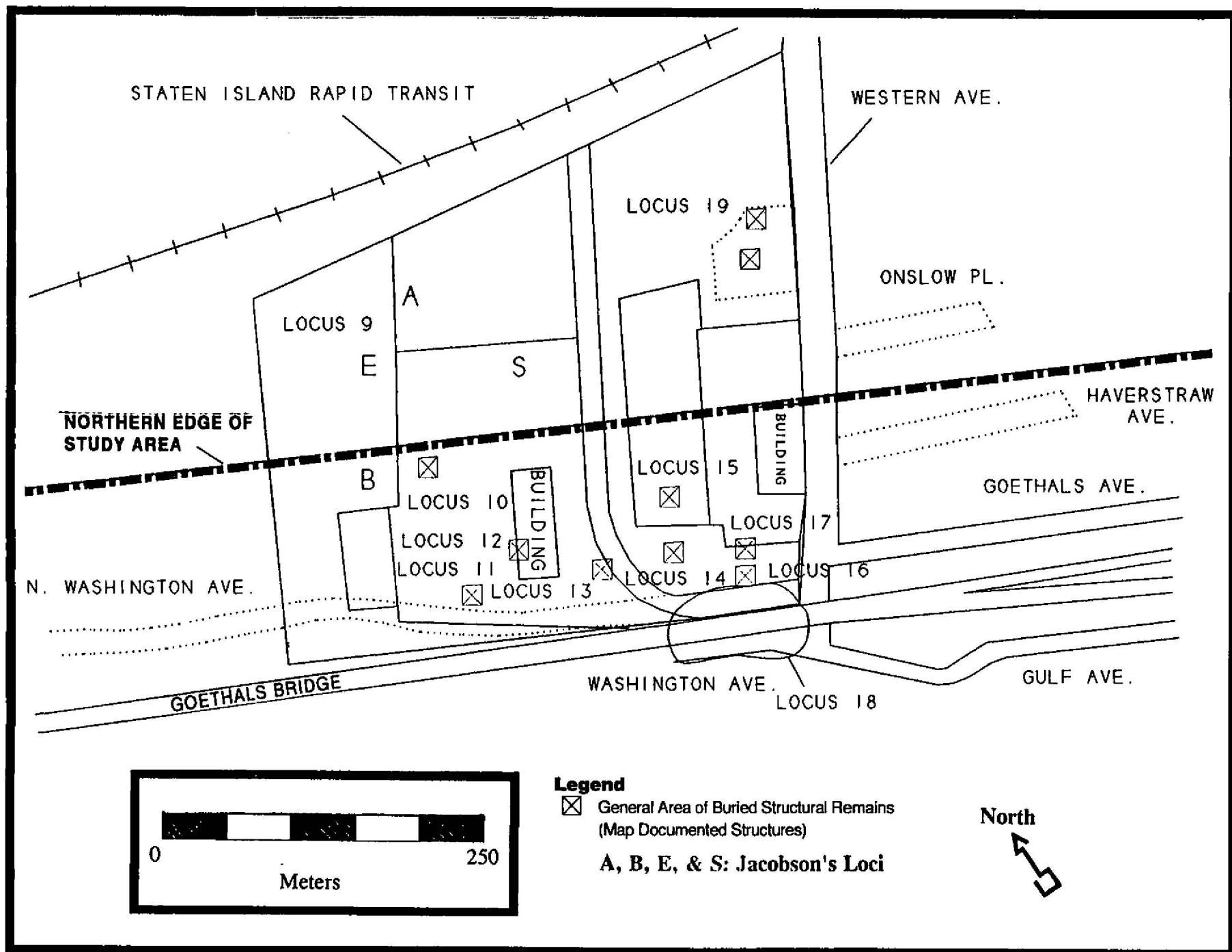
To the north of the bridge, one prehistoric (MAAR Locus 9; the location of Jacobson's excavations) and several historic archeological sites were identified through historic documentary research. The historic sites include one house site predating 1800 (MAAR Locus 10), an unidentified structure associated with either the pre-1800 house or the next site (Locus 11), a circa 1900 structure site possibly associated with the New York Terminal and Transit Co. (Locus 12), a pre-1800 house site identified with George Bowman who owned much of the land in the area at the time (Locus 13), a pre-1800 house site identified as the W. J. Halsey house (Locus 14), an outbuilding associated with the Halsey house (Locus 15), a pre-1800 house site identified as the M. T. Jones house (Locus 16), an unidentified structure site possibly associated with the Jones house (Locus 17), the circa 1680 Tunissen house site the first residence in Old Place (Locus 18), and the site of Revolutionary War skirmishes in November 1777 and a late 19th century house site of the Rev. James C. Kinney (Locus 19). All but the last site seem to be located within the project area right-of-way (Figure 19).

Old Place, the one prehistoric site on the north side of the bridge, has not been extensively reported, but excavations and collections have been made of prehistoric deposits in the vicinity by Skinner (1909), Anderson (1964), and Jacobson (1963-64) (Figure 2). MAAR Associates conducted some testing in the area and located what they consider to be this site investigated by the earlier archeologists (Locus 9). They describe the site as being covered with asphalt and crushed rock, but also exhibiting signs of extensive pot-hunting. Nevertheless, they were able to place two shovel tests that recovered prehistoric materials. In these locations they identified a buried topsoil and collected prehistoric artifacts from that topsoil and below to a depth of 3 feet (Payne and Baumgardt 1986).

Although the Old Place site has been examined, the boundaries have not been defined (Payne and Baumgardt 1986:II-13). According to Payne and Baumgardt's description (*ibid*:II-13), the site could extend over 1200 feet east to west on the north and south sides of the bridge. Their investigations suggest the site may in fact be a complex of sites spread over a wide area with many different temporal and spatial components present. They identify artifacts from the site as representing the Early Archaic through the Late Woodland periods. Skinner's work identified Contact period deposits (Skinner 1909:8-9). The MAAR work included a few shovel tests south of the bridge along Old Place Creek. These tests recovered no cultural materials. However, the high water content of the soils may have prevented thorough examination of the soils and adequate depth of excavation in these areas.

The second survey report, by Louis Berger & Associates (1992), briefly reviews the existing literature on the prehistory and history of the project area. The report agrees with Payne and Baumgardt in identifying Old Place as a significant prehistoric site in the bridge vicinity, although, curiously, the report does not identify it as a "known cultural resource" (Berger 1992:IV-82). In addition, Berger mentions the historic farming community of Old Place as settled around 1680.

Figure 19
Old Place Prehistoric and Historic Cultural Resources
 Staten Island Bridges Program
 United States Coast Guard



Reference is made to "The Old Place Mill complex on Western Avenue operated from 1803 until 1896" (Berger 1992:IV-81). Historic maps of the vicinity do not show a mill on Western Avenue, but a flour mill complex does appear on Old Place Road to the east of Western Avenue on maps of 1859 and 1874. What appears to be the mill pond is visible on a map dating to 1884. The mill burned in 1896 and its location appears to be on the south side of a bend in Gulf Avenue, slightly east of its intersection with Western Avenue.

Although the Berger report is a preliminary study, it states that "there are no recorded historic or archaeological sites within the project corridor..." (Berger 1992:V-56). This statement conflicts with the previous work in the vicinity and the report by Payne and Baumgardt in which nine loci are located from historic maps within the project area and historic and prehistoric artifacts were recovered from shovel tests 18 and 20 that appear to fall on or just north of the northern project boundary. Historic artifacts dating to the 19th and 20th century were recovered from shovel tests 27, 28, and 43 within the project area in the vicinity of the Halsey House, seen on many historic maps (Figure 19, MAAR Locus 14). The Payne and Baumgardt investigation did not include the location of the flour mill that is clearly within the project area.

New Jersey Sites

The other three projects conducted in the project area are on the New Jersey side of the Arthur Kill (Figure 18). Reports on these projects were examined at the New Jersey Historic Preservation Office in Trenton. None of these projects recovered significant archeological resources.

In 1978, Kraft reported on work conducted for a sludge management facility at the northern edge of the project area about 600 to 1100 feet west of the Arthur Kill. No prehistoric or historic cultural materials were recovered. However, most of the project area has been filled, so materials may have been present under the 6 to 8 feet of fill in the vicinity (Kraft 1978).

In 1980, Kardas and Larrabee reported on the cultural resources in the Arthur Kill and on its shores for proposed removal of drift and for channel dredging (Kardas and Larrabee 1980). Although no prehistoric cultural resources were identified, the nature of the project (mostly underwater) made a definitive statement of prehistoric sensitivity impossible before investigation of possible underwater sites. Historic sites within that project area included three industrial sites: (1) the Clark Wire Company (1903) later American Copper Products (1922), (2) Bowker Fertilizer Co. (pre-1882?), and (3) Borne-Scrymser (1922) (Figure 18). The first site was said to be eligible for nomination to the National Register of Historic Places. The last two sites are no longer standing, but may be present archeologically. Only site 1 still supports standing structures, sites 2 and 3 are archeological. Sites 1 and 2 are south of the existing bridge and would not be disturbed by the southern alternative, site 3 is north of the bridge and may be disturbed by the northern alternative. The report recommended extensive planning, monitoring, and recording of underwater sites as part of the contract to carry out the dredging work (Kardas and Larrabee 1980:48).

Finally, a 1986 report assessing an expansion of the corridor of Route I-95 (The New Jersey Turnpike) states that the project area had a low potential for cultural resources where it crosses the Goethals Bridge project area (New Jersey Turnpike Authority 1986). The report lists several kinds of historic archeological resources that may be located within the I-95 corridor. These include: Revolutionary War fortifications, railroad-related structures, worker housing and associated features, and industrial sites (NJTA 1986:74). However, extensive disturbance or lack of sensitivity are attributed to the presence of wetlands, tank farms, pipelines, railroad tracks, land filling, and a sewage plant (NJTA 1986:76). Field investigation of the project corridor concluded that "no prehistoric or historic archaeological resources were extant within the project corridor" (NJTA 1986:109). However, testing could not be conducted through deep fill deposits or where current construction is extant. Therefore, there may be some potential for buried archeological resources in this vicinity.

HISTORIC OVERVIEW

Maps of the project area dating from the late 1700s to 1937 show many structures that were located within the project area boundaries and are no longer standing (Figures 20 to 32). Most of these sites are described by Payne and Baumgardt and said to be buried under recent construction or fill. Although Payne and Baumgardt suggest a high potential for these sites to exist archeologically (Payne and Baumgardt 1986:III-3), the degree of preservation has yet to be determined.

Although the first settlement of the area on the north side of Old Place Creek occurred about 1680 (Berger 1992:IV-81), it is not until the Revolutionary War era that the first house in the area (the Tunissen house) is shown on a map (Payne and Baumgardt 1986:I-26; Figures 20 and 21). A tidal mill is reported to have been constructed during the Colonial period, in the same location as the later Old Place or Newtown Flour Mill that was constructed in 1803 (Payne and Baumgardt 1986:I-35). However, the early mill does not appear on any maps encountered in our searches. During the Revolutionary War, British forces occupied a site slightly to the north of the project area referred to as the Rev. Kinney property after the occupant of a house there during the early 20th century (Payne and Baumgardt 1986:I-35-6; Figures 17 and 33; Figure 19:Locus 19). A skirmish took place in the vicinity and casualties were buried on the south side of the property. The British forces apparently used the flour mill on Old Place Creek to supply themselves and allow for a degree of independence from supplies on Manhattan (Payne and Baumgardt 1986:I35-36).

After the Revolution, the vicinity of Old Place was occupied by a number of small farmsteads that survived to the late 19th or early 20th century (Payne and Baumgardt 1986:I-36; Figures 20 to 37). Included on 19th century maps is the location of the second tidal mill in Old Place that served a variety of functions during its history (Figures 23 to 25, 38 and 39). These functions changed through time and included grinding wheat, iron ore, and coconut shells. The mill operated from 1803 until 1890-91 and burned in 1896 (SILAS Archives, Architecture Survey). The residential structures in the project area were gradually abandoned during the industrial development.

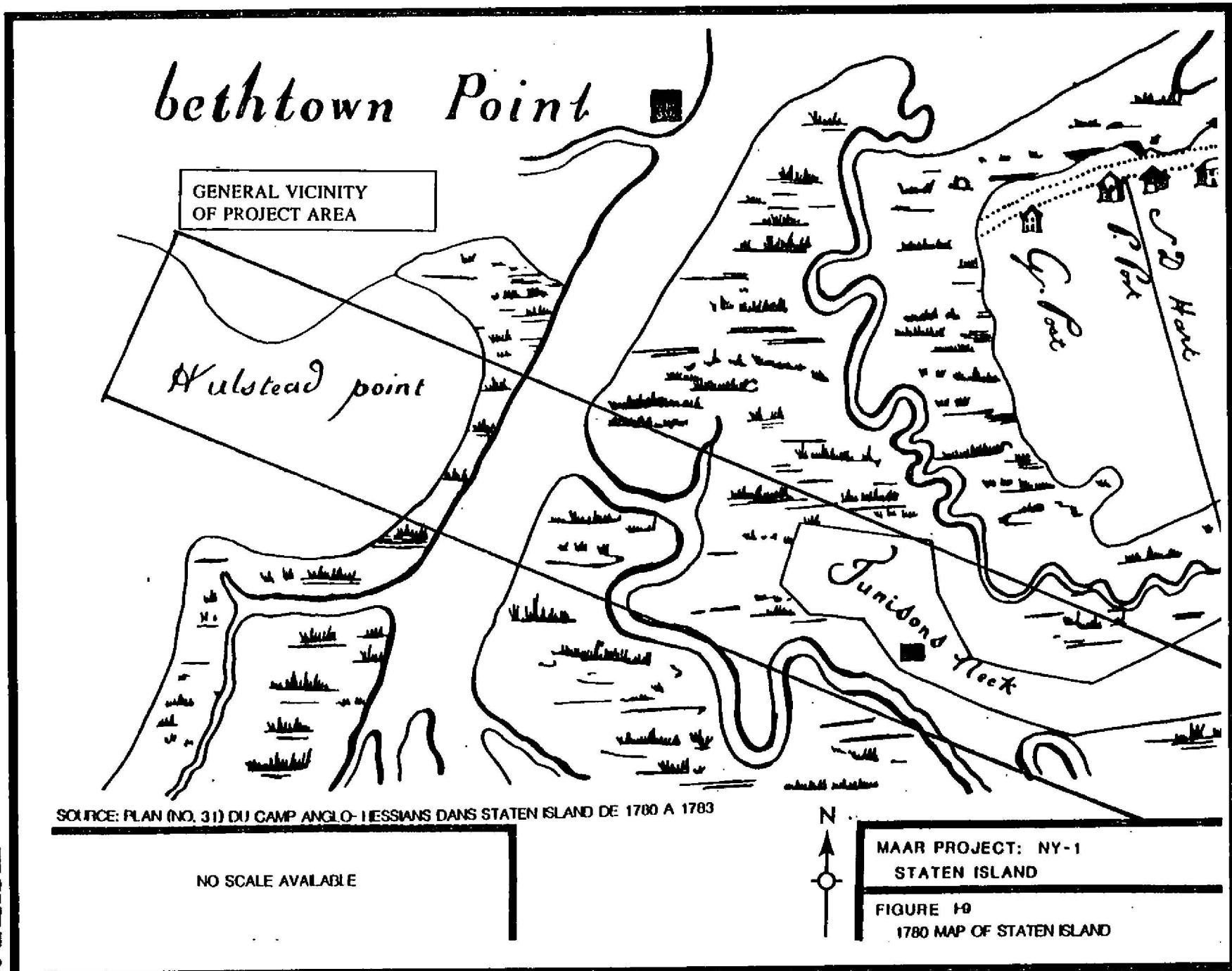
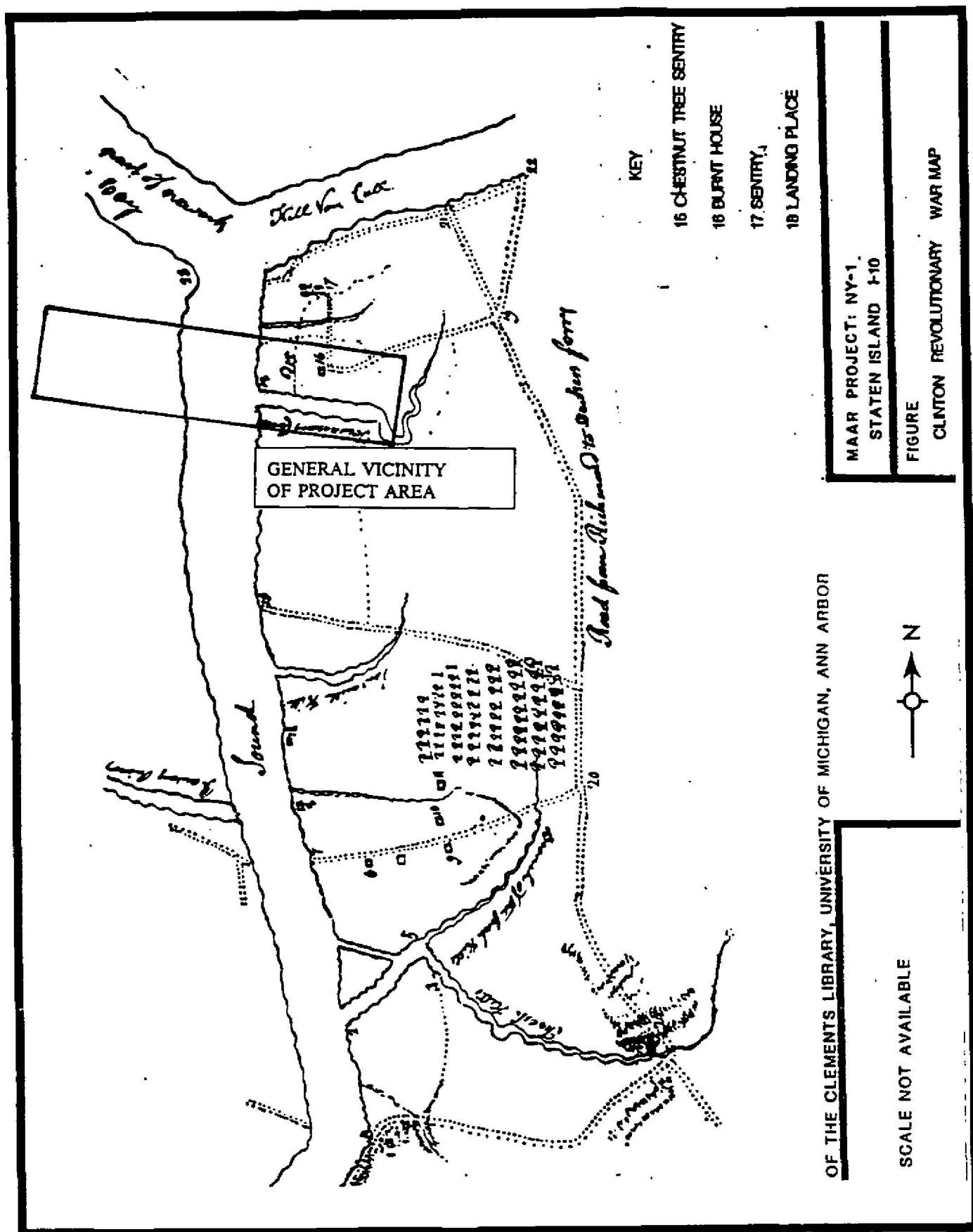


FIGURE 20
1780 Map of Staten Island
(from Payne and Baumgardt 1986)



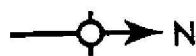
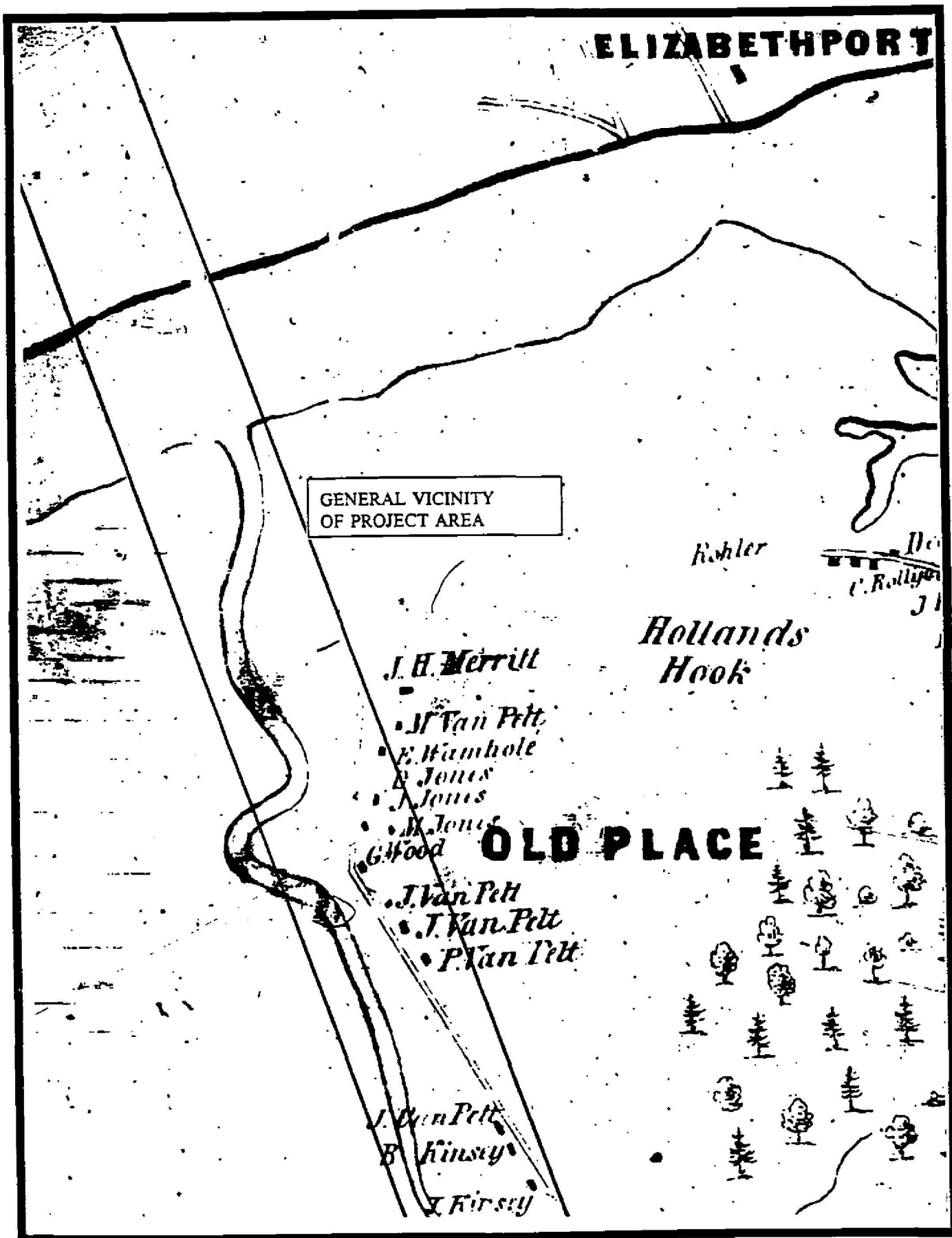


FIGURE 22
1850 Sidney Map of Staten Island

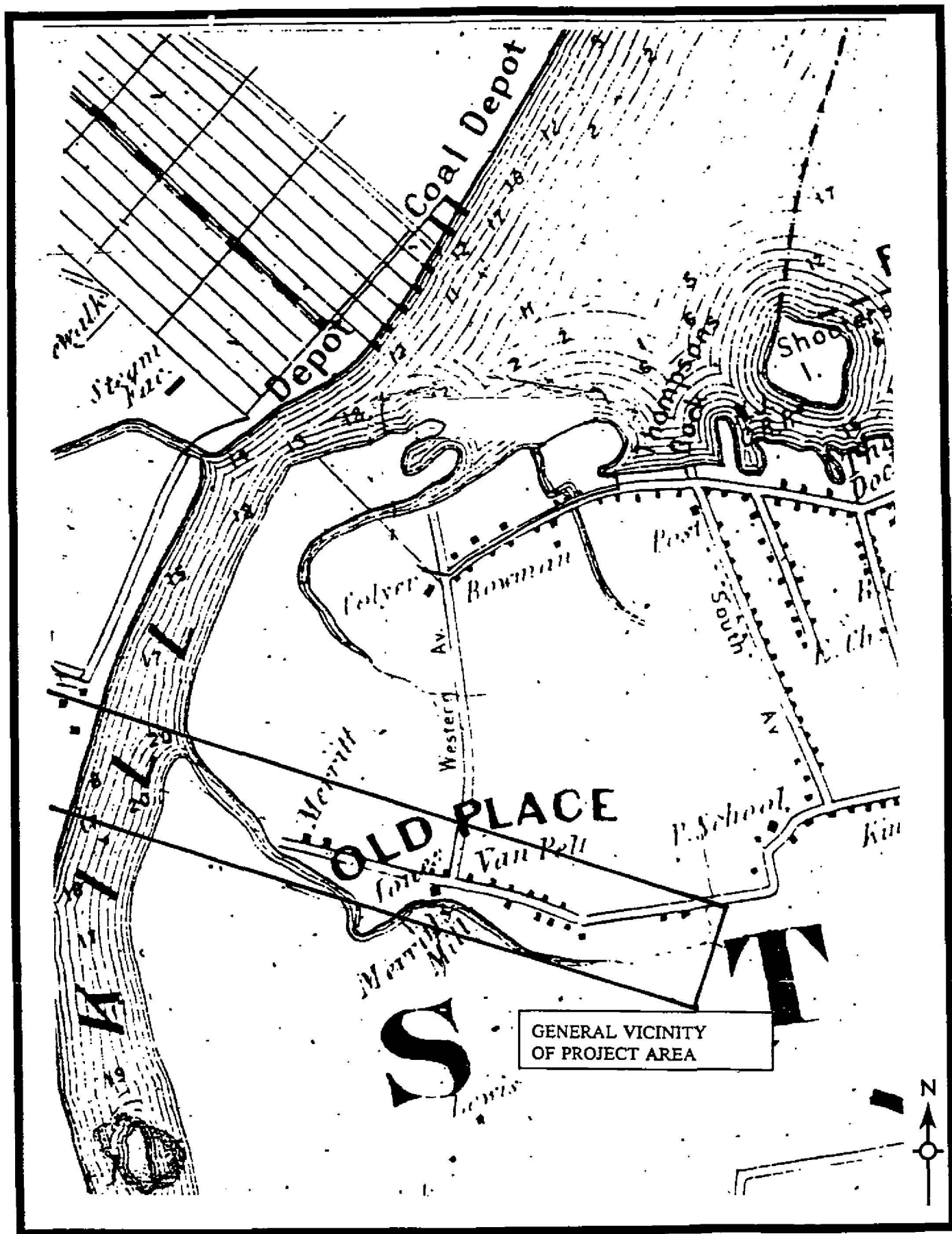


FIGURE 24
1860 Grover & Baker Map of Staten Island

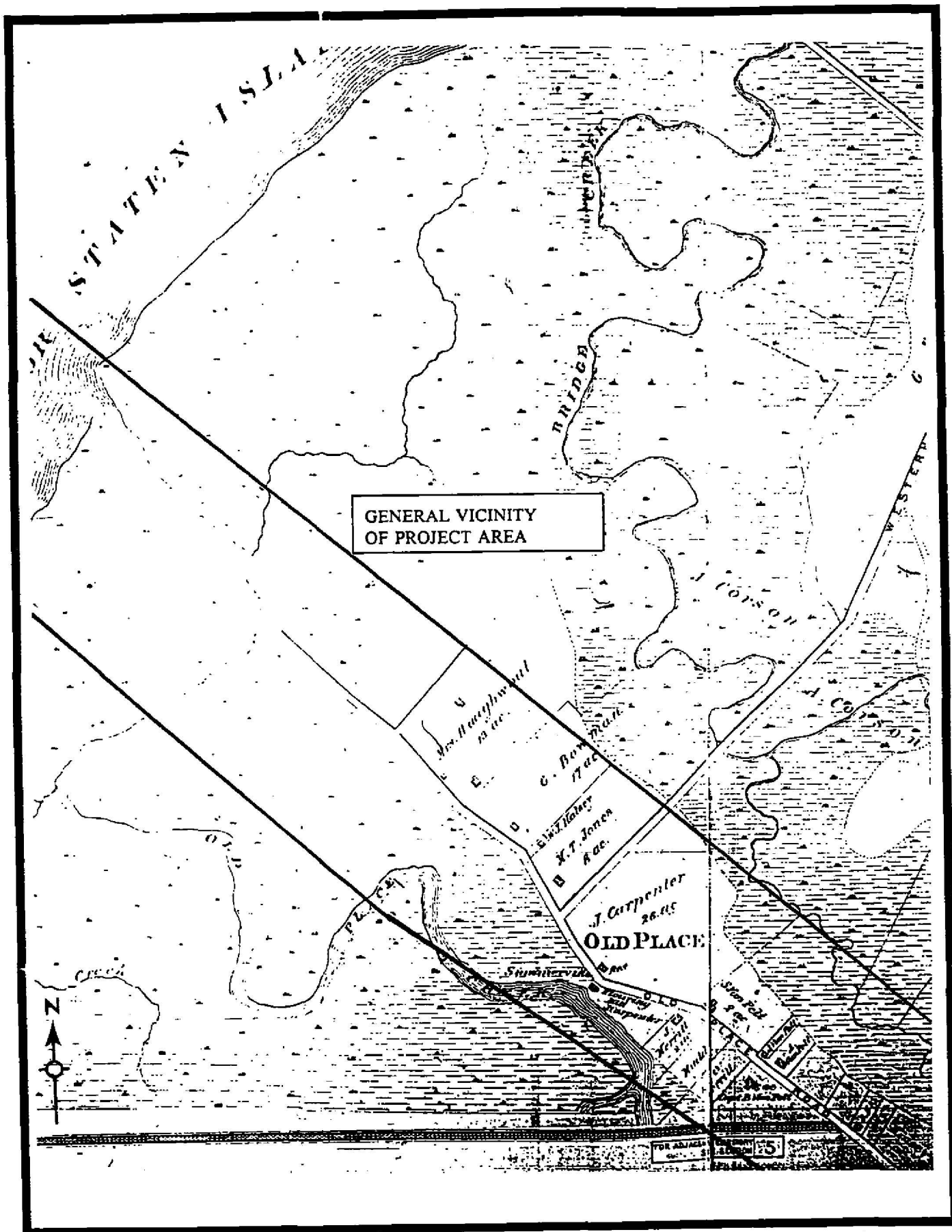


FIGURE 25
1874 Beers Atlas of Staten Island

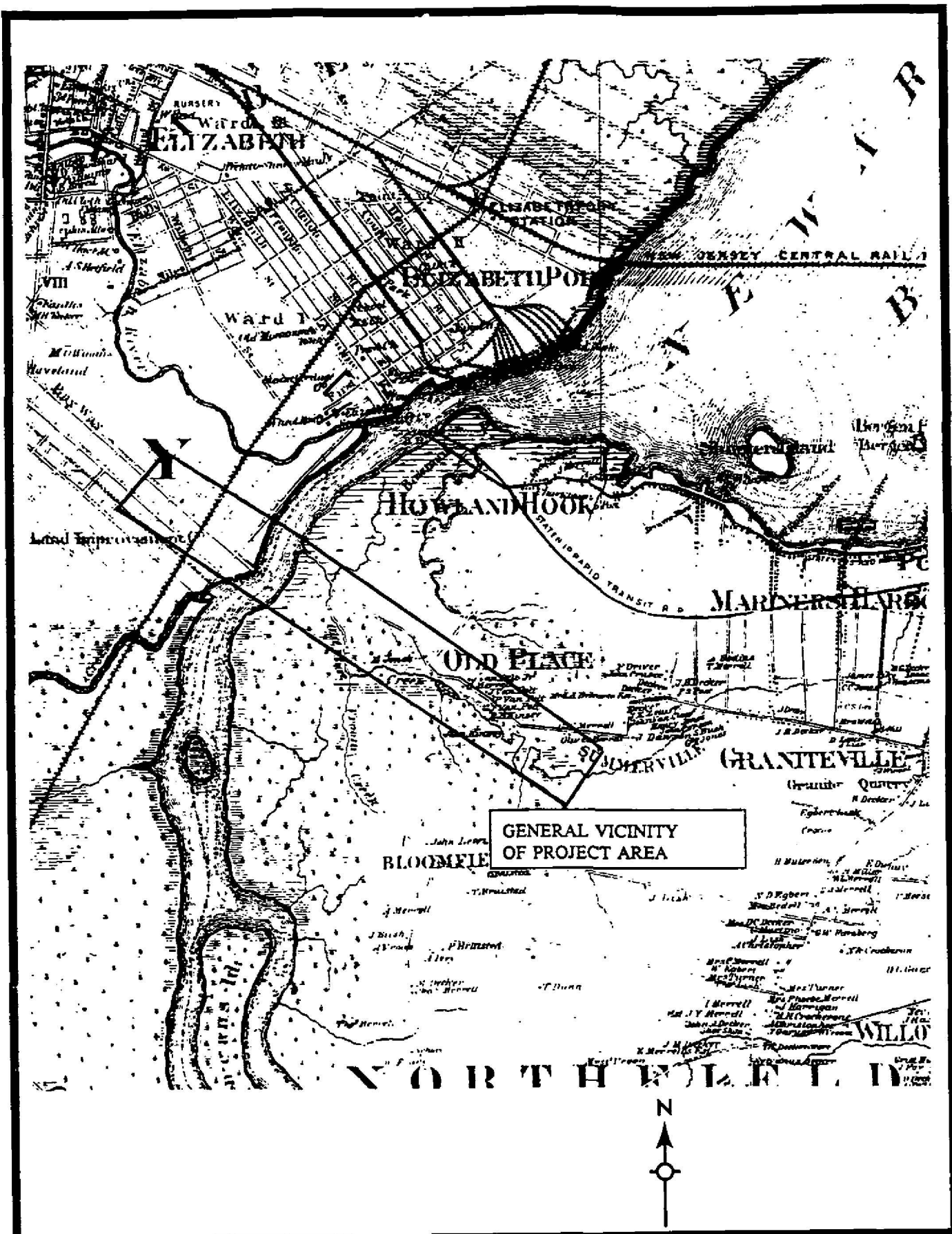


FIGURE 26
1884 Colton Map of Staten Island

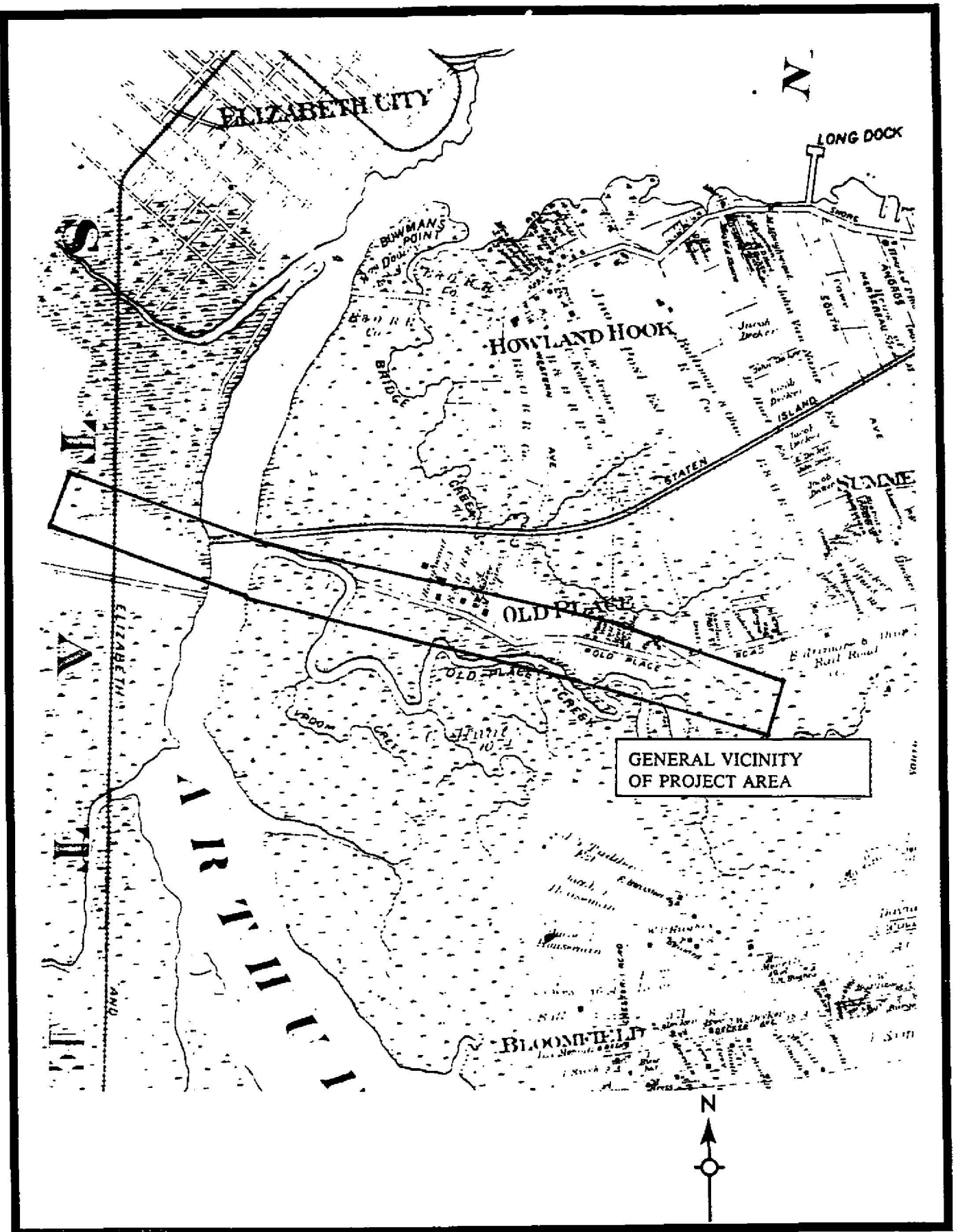


FIGURE 27
1887 Beers Map of Staten Island

Borough of Richmond
City of New York.

Filed Maps.

GENERAL VICINITY
OF PROJECT AREA

~~OLD PLACE~~

FIGURE 28
1895 ROBINSON ATLAS OF
THE BOROUGH OF RICHMOND

FIGURE 28

1895 ROBINSON ATLAS OF
THE BOROUGH OF RICHMOND

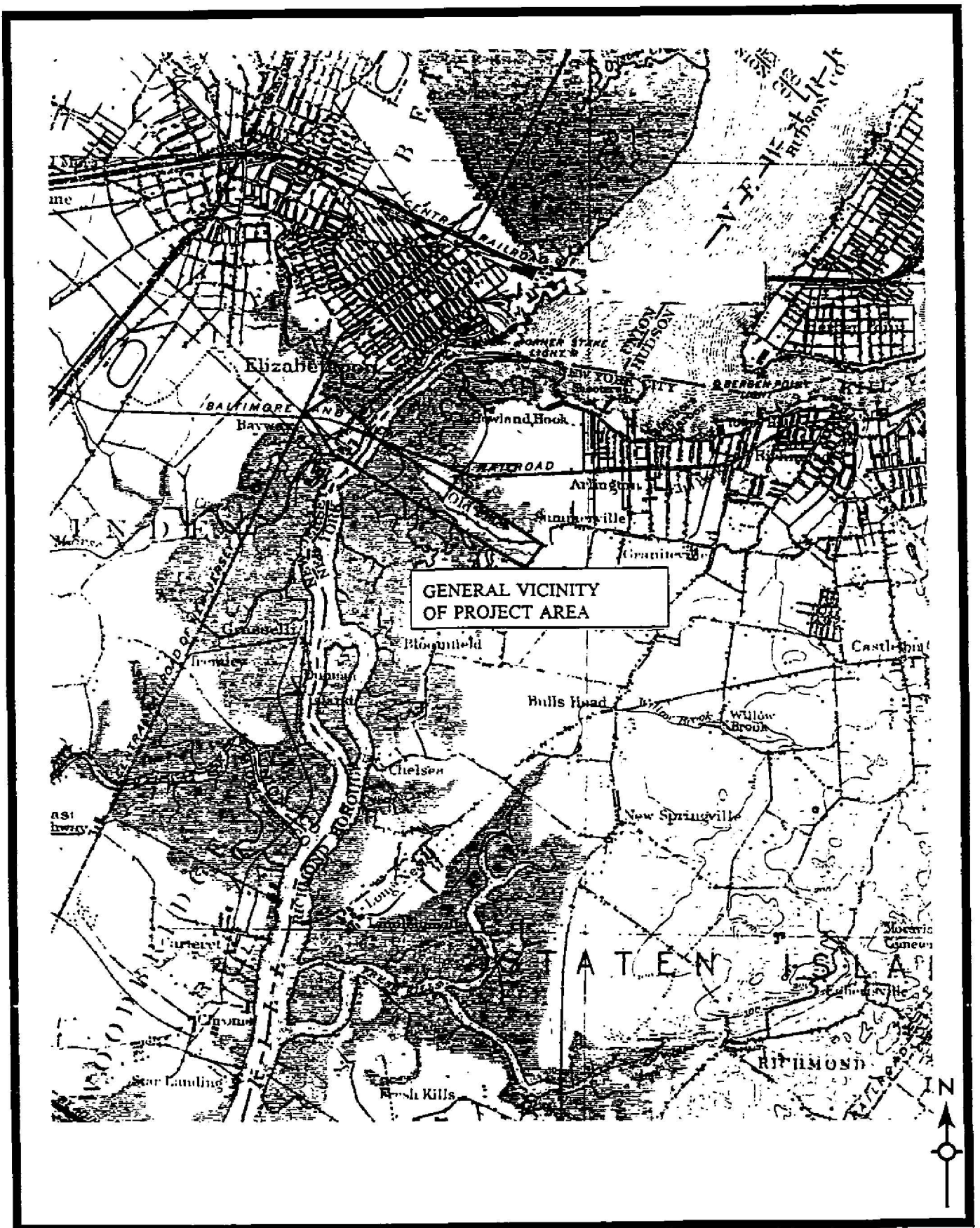


FIGURE 29
1900/1909 USGS Staten Island
15' Quadrangle

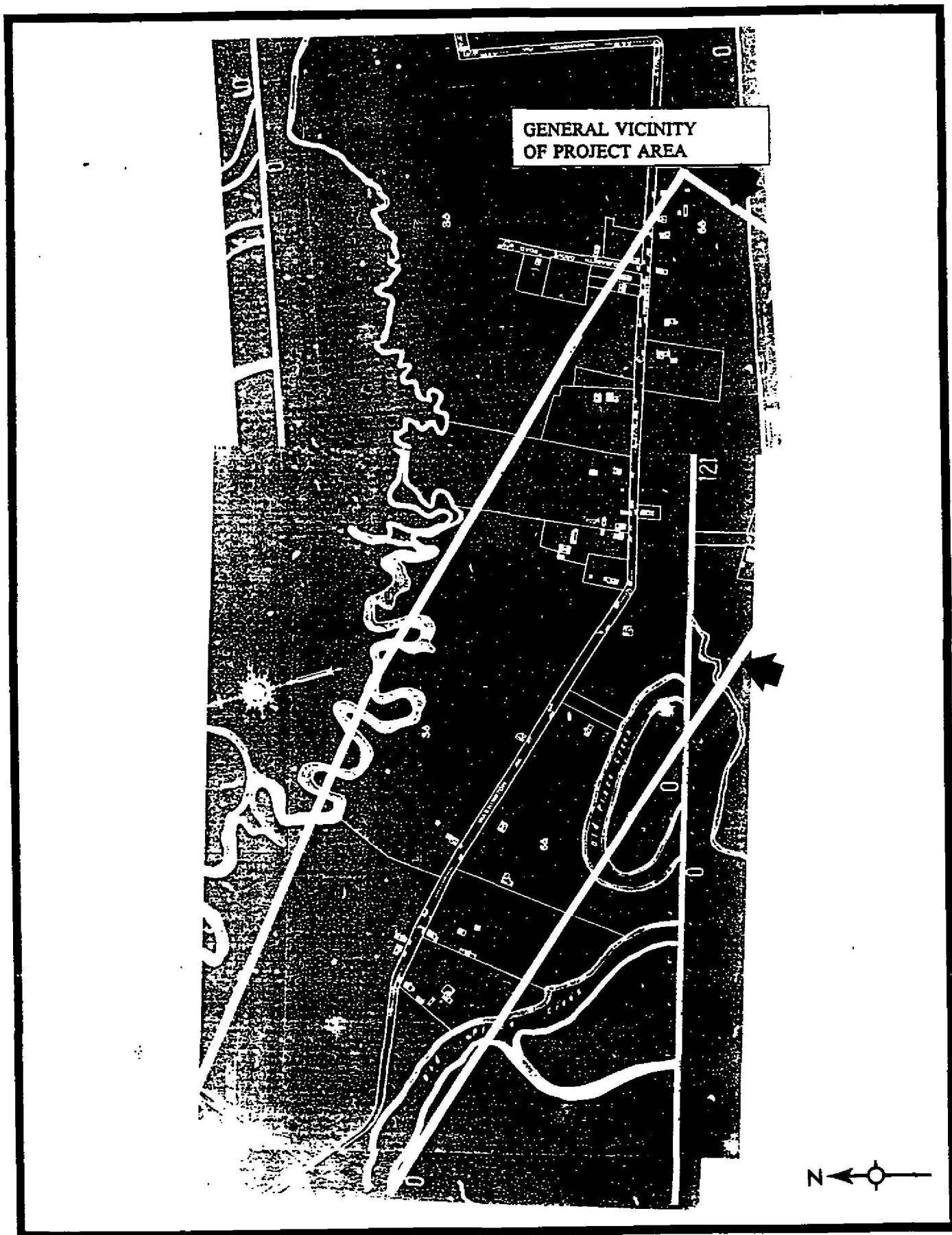


FIGURE 30
1917 Sanborn Map of Staten Island

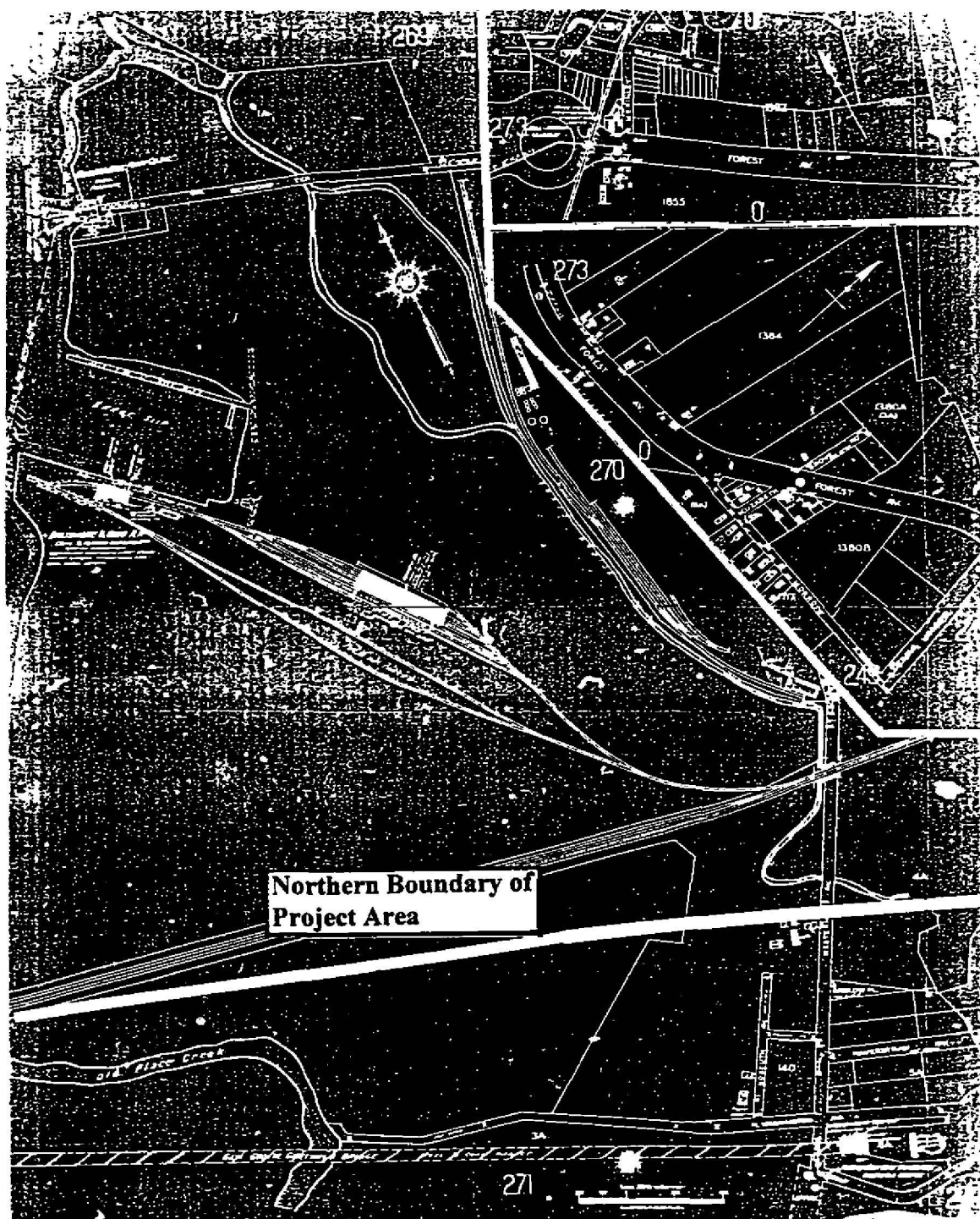


FIGURE 31
1937 Sanborn Map of Staten Island

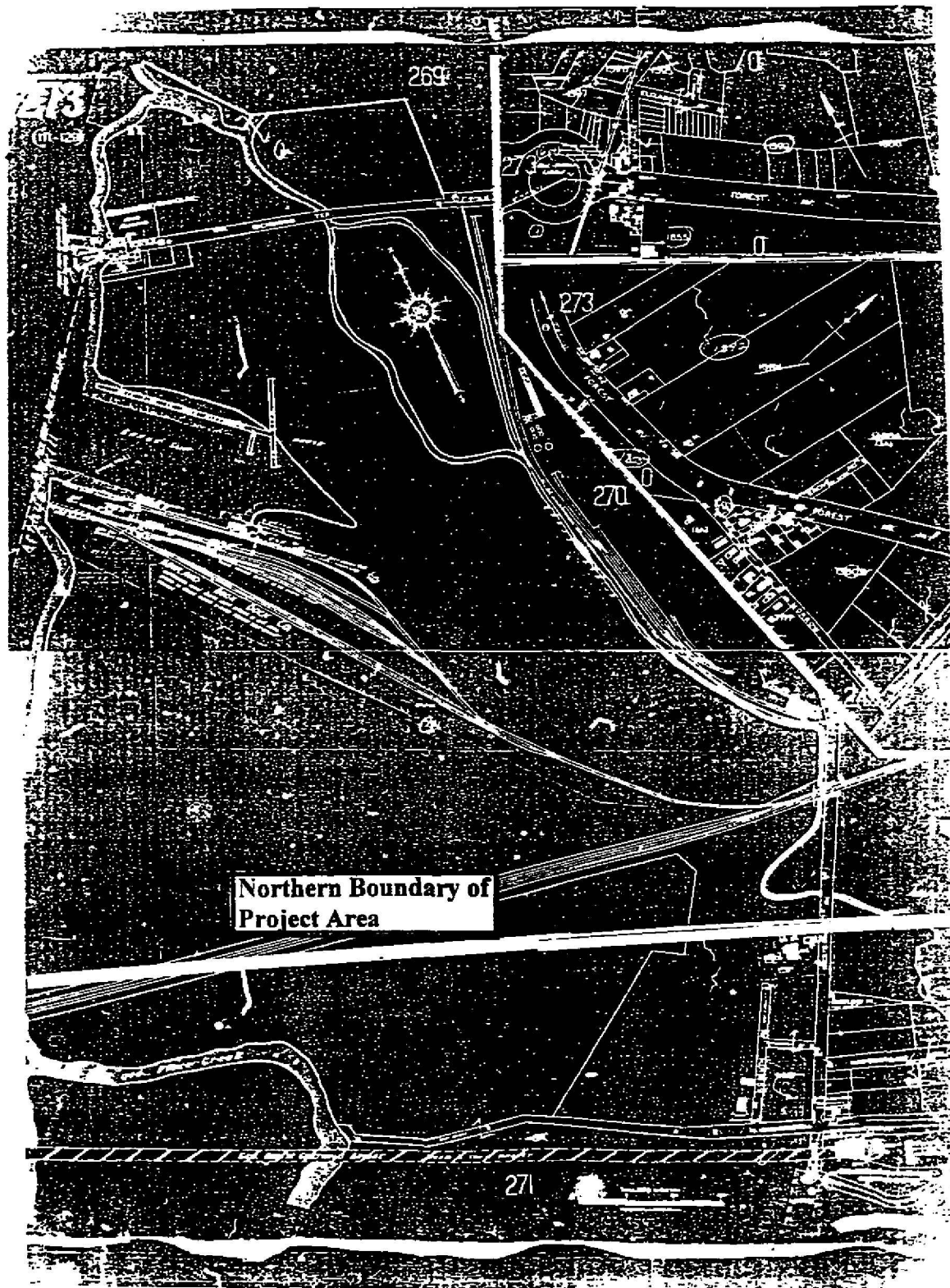


FIGURE 32
1937-1951 Sanborn Map of Staten Island

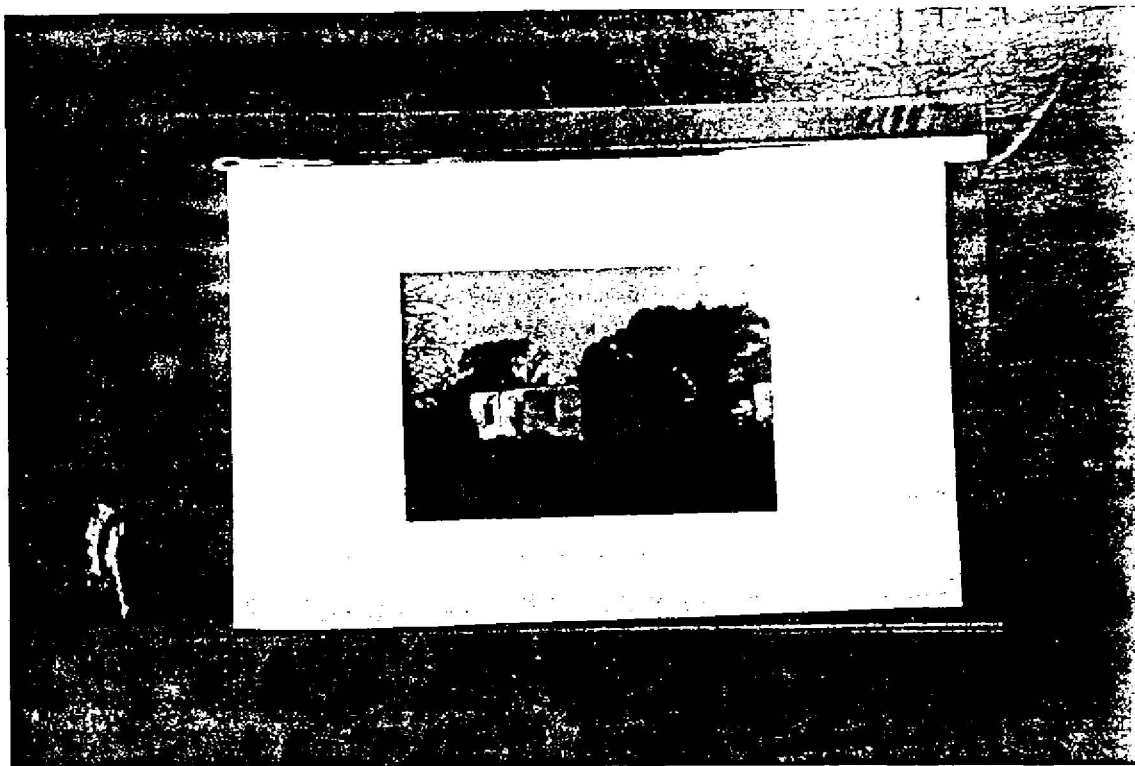


Figure 33:1924 photo of Rev. Kinney house (by William T. Davis)
(from SILAS archives)



Figure 34:1924 photo of unidentified house on Old Place Road (by William T. Davis)
(from SIAS archives)

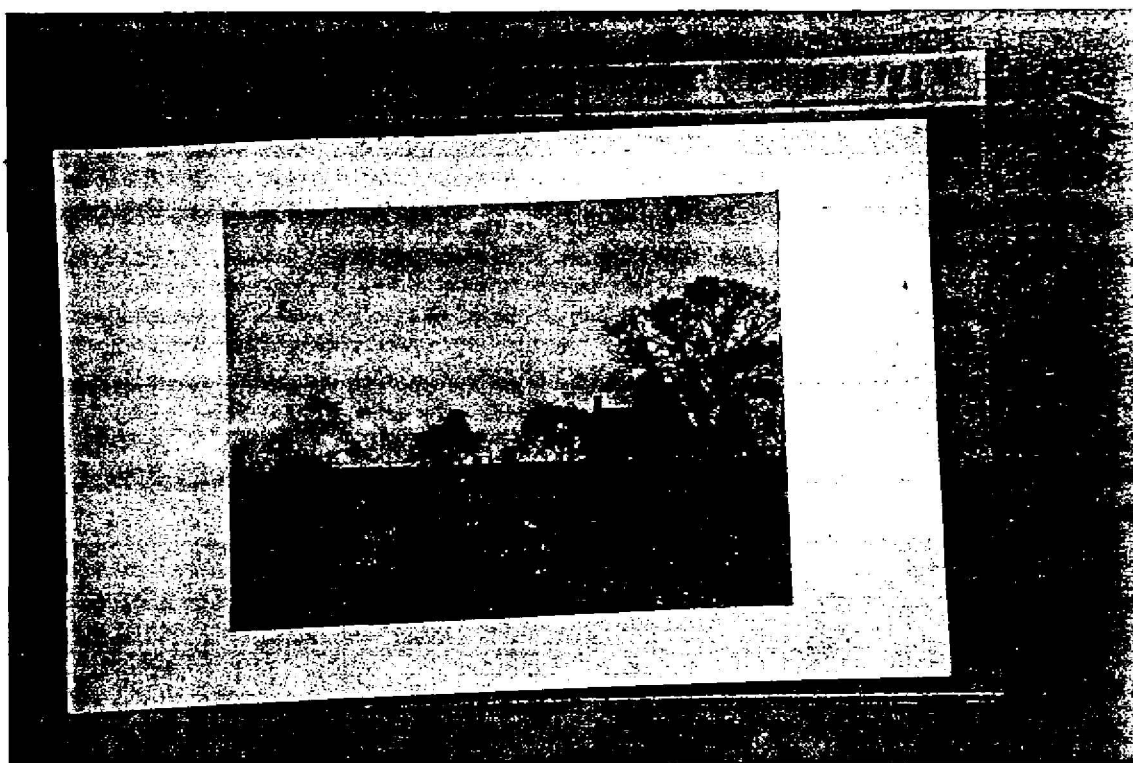
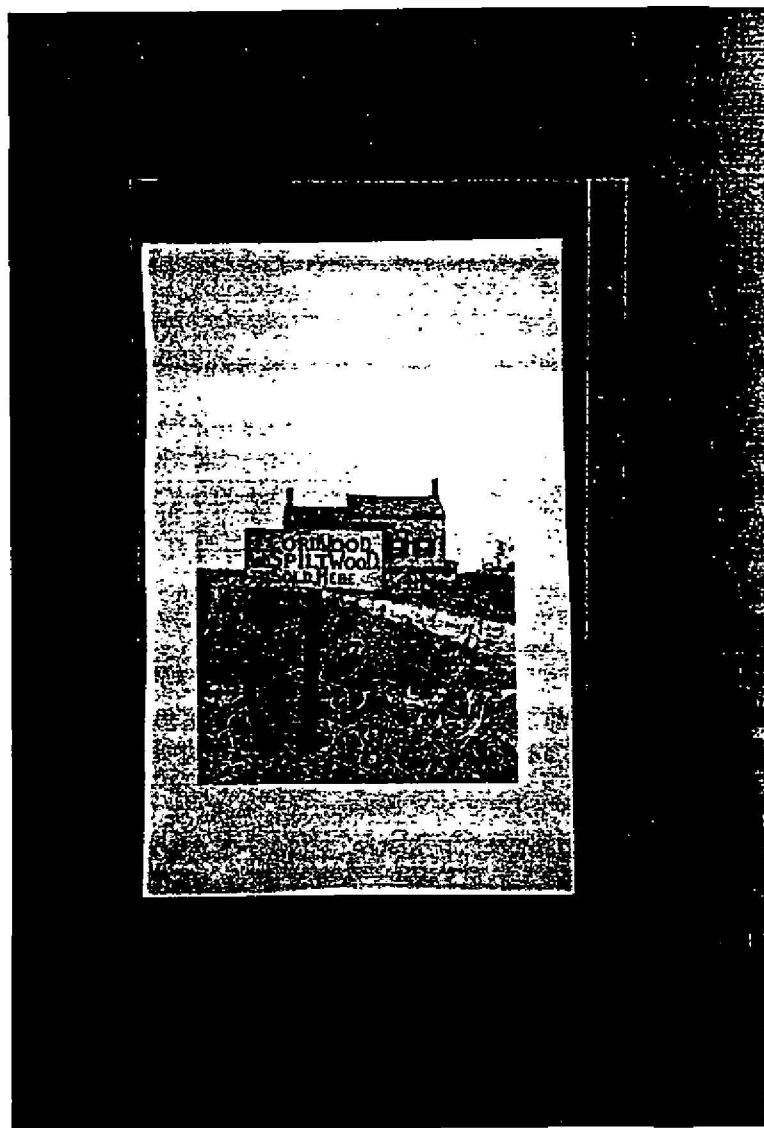


Figure 35:1917 photo of unidentified house on Old Place Neck (by William T. Davis)
(from SIAS archives)



**Figure 36:1917 photo of unidentified house on Old Place Neck (by William T. Davis)
(from SIIAS archives)**



Figure 37:1890 etching from Harper's Weekly of unidentified house on Old Place Road
(from SIAS archives)

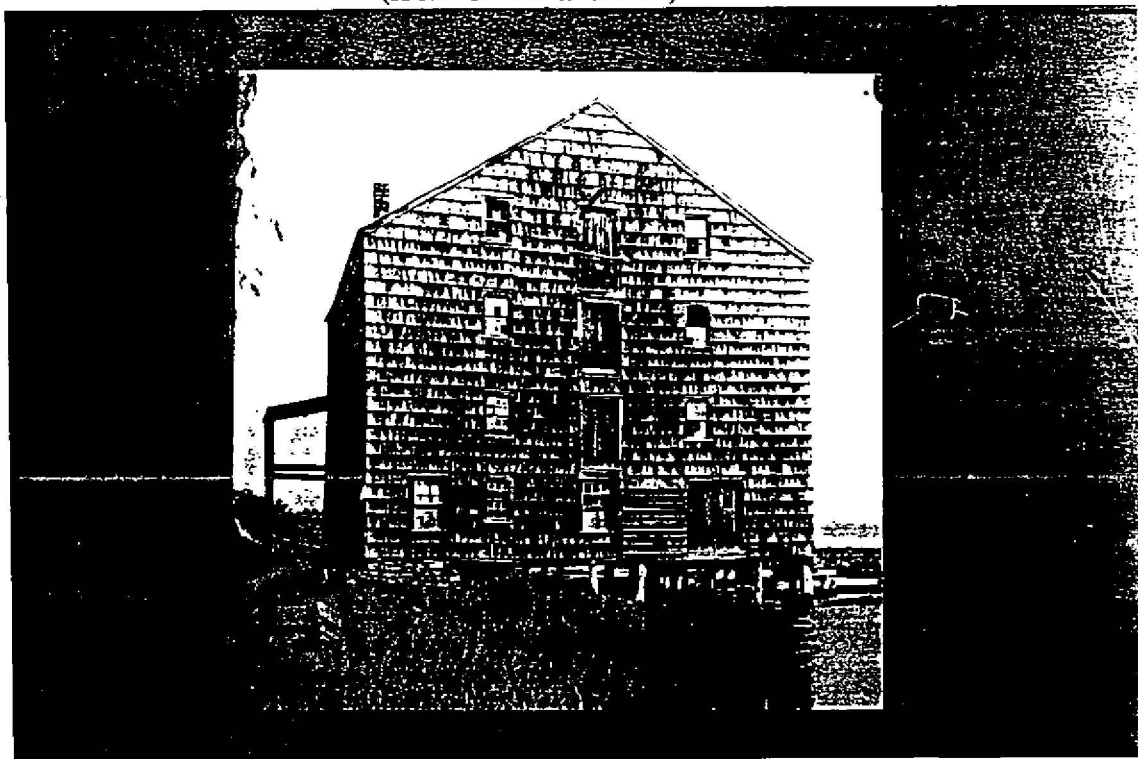


Figure 38:1893 photo of Old Place Mill (by William T. Davis)
(from SIAS archives)



Figure 39:1890 etching from Harper's Weekly of Old Place Mill
(from SIAS archives)



Figure 40:View to NW interior of wooded area north of Goethals Bridge

Construction of Goethals Bridge was the final blow to Old Place as a residential area (Figures 30 and 31).

SUMMARY OF ARCHEOLOGICAL POTENTIAL

Prehistoric resources in the project area are located in three concentrations at the Old Place site as shown in Figure 2. Although some of this area is certainly disturbed, portions of it are either undisturbed or covered by parking lots, roads, or fill with minimal disturbance. In particular, there is an area east of the natural gas pump station on the north side of Goethals Ave. that is currently wooded, is not a wetland, and does not appear to have been disturbed in the past 100 years (Figures 2 and 40). Jacobson's Loci B (Figure 19) is another area that may be minimally disturbed by construction, although he mentions extensive pot-hunting in the vicinity (Jacobson 1963-64:33). Areas of wetlands west of Western Avenue towards the mouth of Old Place Creek may contain prehistoric sites that were once on dry ground (Boesch 1994:17-23). In particular, inundation of these areas due to the rise in sea level at the end of the Pleistocene suggest that Paleoindian sites may exist in this vicinity (Figure 41).

Many of the locations of the various buildings depicted on 18th and 19th century maps of the project area have been covered by construction. As with the prehistoric sites, some of the historic sites are probably destroyed, such as those under the Goethals Bridge ramp and tollgate. However, the majority of the locations do not appear to have been drastically modified since the destruction of the buildings. These sites are located under buildings, parking lots, roads, or fill that may not have extensively disturbed these locations (Figure 2). One site location that seems to be relatively undisturbed is the site of the tidal mill at the bend in Gulf Ave. immediately east of its intersection with Western Ave. (Figure 14). However, the building did burn, so archeological remains may be minimal (SIAS Archives, Architecture Survey).

POTENTIAL IMPACTS TO ARCHEOLOGICAL RESOURCES

As stated in Section 106 of the National Historic Preservation Act of 1966 and explained by 36 CFR 800, federal agencies must consider the effect of their actions on any properties listed on or determined eligible for the National Register of Historic Places. For each archeological site or historic property/structure, the federal agency official, in consultation with the State Historic Preservation Officer (SHPO), must determine whether the project would have any beneficial or adverse effect on the characteristics of the property that qualify it for the register.

Although as yet undetermined, the expansion of the Goethals Bridge may adversely effect National Register eligible sites and properties in Staten Island and New Jersey. Determination of site eligibility is necessary for standing structures to be affected as well as potential archeological sites. There are currently no archeological sites listed on the State or National Registers of Historic Places in the study area. Archeological sites may be assessed for eligibility after the sites are located on

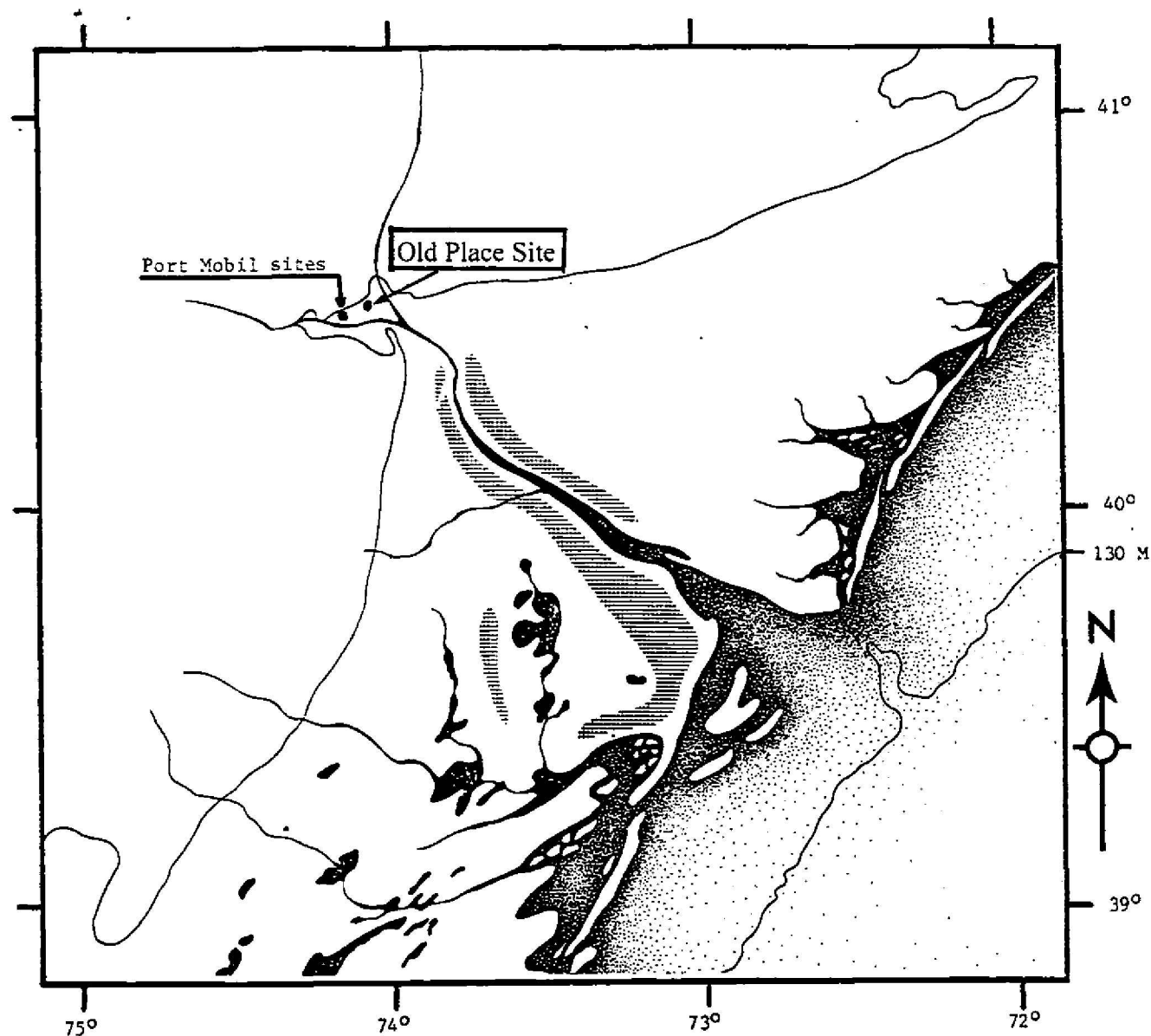


FIGURE 41
Map of Pleistocene Shoreline (Circa 10,000 years BP)
(from Kraft 1977b:4)

the ground and their boundaries and chronological and cultural affiliations are determined. The following is an overview of the impact the construction may have on potential archeological resources along both the northern and southern alternatives. In addition, preliminary recommendations for mitigation of potential archeological sites are discussed.

OVERVIEW OF POTENTIAL SITES ALONG EACH BRIDGE ALTERNATIVE

STATEN ISLAND SIDE

The Staten Island side of the Goethals Bridge expansion is more sensitive than the New Jersey side. This difference is due to the presence of a greater number of potential sites on the Staten Island side of the project than on the New Jersey side. Potential sites have been documented by earlier archeological work (Skinner 1909; Anderson 1964; Jacobson 1963-64; Payne and Baumgardt 1986) and the examination of historic maps and photographs (Figure 42).

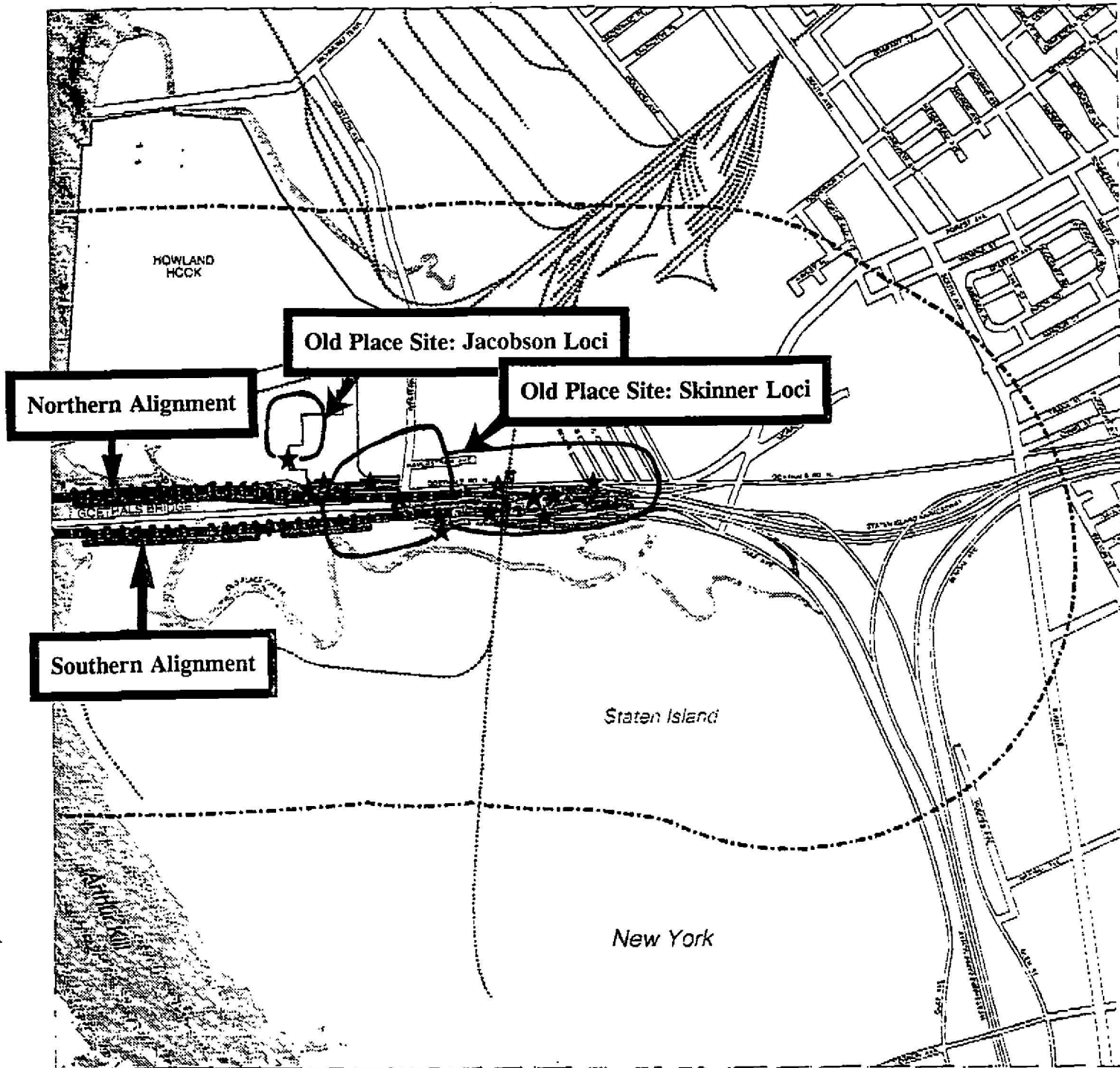
Northern Alternative

Potential historic sites with good approximate locations in the area of the northern alternative include the following nine structures depicted on the 1874 Beers map:

- (1) Mrs. Haughwout outbuilding
- (2) Mrs. Haughwout house
- (3) G. Bowman house
- (4) W. J. Halsey house
- (5) M. T. Jones house
- (6) S. Van Pelt house
- (7) J. Van Pelt house
- (8) A. Van Pelt house
- (9) J. L. Kinsey house

Other maps depict additional structures in the vicinity (Figures 23 and 24). However, accuracy problems with these maps call into question the existence of the structures and inhibit the identification of their location in relation to the project area. Several maps show a road running west as an extension of Old Place Road to the edge of Old Place Creek approximately in the location of the northern alternative (Figures 23 to 26; Figure 42 and 43). Some of the houses appear to be located along this extension and may, therefore, be visible archeologically and directly on the route of the northern alternative.

In addition to the potential historic sites, the prehistoric loci reported by Alanson Skinner (1909) are bisected by both the northern and southern alternatives (Figure 42). Preservation of these sites is likely to be highly variable depending upon the precise location under consideration. However, overall, they are likely to have some integrity in parts of the project area that have minimal disturbance. The locus identified by Jacobson (1963-64) seems to fall entirely outside of the area



Legend

--- Study Area
 --- Areas of Impact

★ = Historic Structure Locations
 from 1874 Beers Map

FIGURE 42

**Areas of Potential Archeological
 Sensitivity Overlain on Areas of
 Potential Impact**

of disturbance for either alternative (Figure 42). However, the site boundaries are not strictly defined and may extend further to the south than indicated by Jacobson.

Southern Alternative

The southern alternative runs through fewer historic house locations, however, they may be more historically significant than those on the northern alternative (Figure 42). They may include the following:

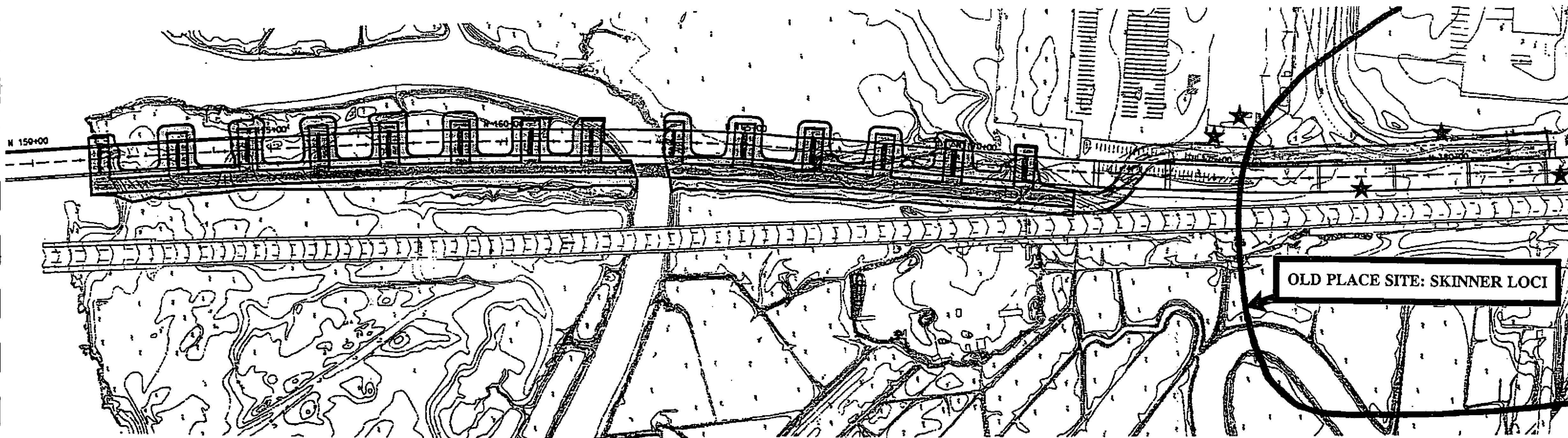
- (1) the residence associated with the Old Place tidal mill
- (2) possibly the location of the 1680 Tunissen house
- (3) J. Merrill house
- (4) Captain B. Van Pelt house

Each of these is shown on the 1874 Beers map, except for the Tunissen house that appears to have been slightly north of the mill residence (Figure 20). As the home of the first European inhabitant of the region dating to the 1680s (Payne and Baumgardt 1986:135), the Tunissen house is an important resource if any part of it or associated deposits are preserved. The location of the Old Place tidal mill appears to be relatively undisturbed, although no remains are visible on the surface. The mill location is not likely to be affected by construction of either alternative, but it should be specifically protected from damage. Impacts to prehistoric sites are similar to the northern alternative, with the Jacobson locus outside of the impact area and the Skinner loci being bisected by the bridge route (Figures 42 and 44).

Unknown Sites

Aside from these known sites, the potential for prehistoric deposits on either alternative deep in the marshes along Old Place Creek is high. Such deposits would be difficult to excavate, given the high water table and marshy conditions. Despite this difficulty, they could be important sites and might be earlier than those located by Jacobson and Skinner (Archaic through the Contact period). Paleoindian sites elsewhere on Staten Island (Port Mobil) demonstrate that the area was occupied during the Pleistocene epoch and suggest such early sites could be preserved below the present sea level. Both alternative alignments have potential for the presence of unknown sites. Pier and road construction could extensively disturb such sites. Therefore, an attempt must be made to examine these deposits.

Unrecorded historic sites may also be present along either alternative. With approximately 240 years of residential occupation in the area, it is likely that many structures and features were extant and just not depicted on the relatively few historic maps available. Of course, preservation of such sites is likely to be highly variable depending on the history of construction in any one location.



1" = 200 FEET



FIGURE 43
Northern Alternative
Pier Locations
★ = Historic Structure Locations
from 1874 Beers Map



1" = 200 FEET



FIGURE 44
Southern Alternative
Pier Locations
★ = Historic Structure Locations
from 1874 Beers Map

NEW JERSEY SIDE

The potential for archeological sites on the New Jersey side of either alternative is difficult to access. There has been much more development in this area than on the Staten Island side, therefore, sites are less likely to be preserved. This tendency seems to be confirmed by the few archeological surveys that have taken place in the area (Kraft 1978; Kardas and Larrabee 1980; New Jersey Turnpike Authority 1986) that have found no significant archeological remains. However, there are some open areas that could retain archeological deposits.

The standing industrial sites on the New Jersey side of the project area may be important for historical reasons related to architecture, technology, and trade. In addition, standing residential areas in the vicinity may be worker housing for the nearby industries and, thus, provide interesting information on worker-company interactions. Archeological investigations in such areas to be affected by construction might provide further information not obtainable from historic or architectural studies (Beaudry and Mrozowski 1987). However, the archeological potential of earlier industrial sites, residential sites, and prehistoric sites may be low due to the heavy use and development of this area.

CONSTRUCTION ACTIVITIES AND IMPACTS

Construction of either alternative will entail considerable disturbance along the route. Below is an assessment of the potential impact of various aspects of the project.

Construction (Piers and Roadways)

Disturbance from the primary construction will include removal of some existing roads and constructions, grading and filling of approach areas, placement of driven piers, drilled shafts, and coffer dams.

Each of these activities could have significant impacts on the archeological resources, depending on the locations of the archeological deposits and the depth of construction. In particular, the pier construction in the wetland areas will remove large amounts of soil to the bedrock. The coffer dams would be the largest disturbance with soils being removed wet or drained. Drilled shafts for piers with diameters of 4 to 6 feet would also be significant disturbances. The driven piers would have less impact on deeply buried deposits, but their placement would entail disturbance of the surrounding areas. These excavations could encounter potentially important prehistoric archeological deposits that have thus far been inaccessible to archeological investigations. Figures 43 and 44 depict the pier locations for either alternative and their relationship to suspected archeological resources. Most of the pier construction would take place in the marshlands west of the known archeological deposits. Nevertheless, these areas have high potential for preservation of archeological deposits.

Movement of roadways, utilities, removal of RR bridge and embankments

In order to make way for the proposed bridge expansion, various modifications of the present infra structural features will be undertaken. An eastern section of Gulf Ave. will be moved to the south, and parts of the Staten Island Expressway will be relocated to allow for expansion of the tollgate area and widened roadway. This change would include the movement of utilities from under the present road to the new location, and filling and grading of the new roadways. The Travis Spur railroad overpass and embankments are planned to be removed to allow for the widened roadway.

Excavation related to the movement of Gulf Ave. and placement of new utility lines would take place in areas that have not been extensively disturbed by recent activities. At least one house on the 1874 Beers map was located in the area to which Gulf Ave. is to be moved. Removal of the railroad bridge and embankments could require heavy equipment in the wooded area to the west of the railroad bridge and to the east. This area seems to be free of recent disturbance and may retain prehistoric and historic archeological remains. The prehistoric site identified by Skinner is shown to be located throughout this area (Figure 42).

Temporary roads, bridges, staging areas, embankments, retention ponds, erosion controls

Throughout the project area temporary roads, bridges, parking and staging areas, embankments, retention ponds, and erosion controls will be constructed. These are necessary to provide access into the wetland areas, allow for onsite storage of materials, and prevent erosion of soils into the Arthur Kill and Old Place Creek.

Although temporary, these activities will cause some disturbance in each location. It is difficult to assess their impact on subsurface deposits because of (1) their uncertain locations and (2) the unknown degree to which such activities will affect areas below the surface. In wetland areas, efforts will be made to protect the integrity of the environment. However, compaction of the soils could damage archeological remains, if present. A suggestion to "loosen" compacted soils after the project is completed may be suitable for environmental concerns, but could adversely affect archeological deposits. Perhaps the greatest impact may be caused by construction of retention ponds to allow for settling of muddy water before it is let into the Arthur Kill or Old Place Creek. The size and location of excavations for these ponds have not been specified.

SUMMARY

The above discussion demonstrates the high sensitivity of the project area, primarily on the Staten Island side of the bridge. The unknown factor is the degree to which archeological materials are preserved in (1) undisturbed areas, (2) filled areas, (3) wetland areas, and (4) areas of recent construction.

Potential National Register eligible prehistoric and historic archeological sites within the project area must be indentified for proper avoidance or mitigation. Archeological sites with visible or below-surface remains would need to be located and tested to see if they meet National Register eligible standards. The approach and methodology for testing to further investigate the preservation of remains and to avoid and/or mitigate any effects to possible archeological deposits will be determined in consultation with the New York State Historic Preservation Officer.

REFERENCES

Anderson, Albert J.

1964 Old Place and the "Old Place Complex", The Chesopian II(3):50-56.

Baugher, Sherene

1989 Trade Networks: Colonial and Federal Period (1680-1815), Proceedings of the Staten Island Institute of Arts and Sciences 34(1):33-37.

Beauchamp, William

1900 Aboriginal Occupation of New York, New York State Museum Bulletin No. 32. Albany.

Berger, Louis, and Associates, Inc.

1992 Draft Environmental Report, Staten Island Bridges Program, Port Authority of New York and New Jersey, (XA-1083A).

Boesch, Eugene J.

1994 Archeological Evaluation and Sensitivity Assessment of Staten Island, New York, Submitted to the New York City Landmarks Preservation Commission, March 20th, 1994.

Ceci, Lynn

1980 Locational Analysis of Historic Algonquin Sites in Coastal New York: A Preliminary Study, In: J. A. Moore (ed.), Proceedings on the Conference on Northeastern Archaeology, Research Reports Number 19, Dept. of Anthropology, Univ. of MA, Amherst, pp 71-91.

Chesler, Olga

1984 Historic Preservation Planning in New Jersey: Selected Papers on the Identification, Evaluation, and Protection of Cultural Resources, Office of New Jersey Heritage, NJDEP.

Dincauze, Dina, and Mitchell T. Mulholland

1977 Early and Middle Archaic Site Distributions and Habitats in Southern New England, In: Amerindians and Their Paleoenvironments in Northeastern North America, W. S. Newman and B. Salwen (eds.), Annals of the New York Academy of Sciences 288:439-456.

Fisher, Donald W., Yngvar W. Isachsen, and Lawrence V. Rickard (eds.)

1970 Geologic Map of New York, Lower Hudson Sheet, New York State Museum and Science Service, Map and Chart Series Number 15.

Flagg, Thomas, Gerry Weinstein, and Norman Brouwer

- 1992 Reconnaissance of Marine Cultural Resources at the Newark Bay Site, Staten Island, New York, New York City Long Range Sludge Management, GEIS III / New York City Department of Environmental Protection.

Funk, Robert E.

- 1972 Early Man in the Northeast and the Late Glacial Environment, Man in the Northeast, No. 4, pp 7-39.
- 1976 Recent Contributions to Hudson Valley Prehistory, New York State Memoir 22, Albany.
- 1977 Early Cultures in the Hudson Drainage Basin, In: Amerindians and Their Paleoenvironments in Northeastern North America, W. S. Newman and B. Salwen (eds.), Annals of the New York Academy of Sciences 288:316-332.
- 1978 Post-Pleistocene Adaptations, In: B. G. Trigger (ed.), Handbook of North American Indians, Vol. 15, Northeast, Smithsonian Institution, Washington, pp 16-27.

Grossman, Joel W., and John Cavallo

- 1982 The Status and Potential of Predictive Surveys in New Jersey, In: O. Chesler (ed.), New Jersey's Archeological Resources From the Paleo-Indian Period to the Present: A Review of Research Problems and Survey Priorities, Office of Cultural and Environmental Services, NJDEP, Trenton, pp 256-277.

Hartgen Archeological Associates, Inc.

- 1994 Cultural Resource Sensitivity Assessment, Newark Bay Composting Facilities, New York City Long Range Sludge Management Plan, Town of Northfield, Staten Island, Richmond County, New York.

Hasenstab, Robert

- 1991 Wetlands as a Critical Variable in Predictive Modeling of Prehistoric Site Locations: A Case Study from the Passaic River Basin, Man in the Northeast, No. 42, pp 39-61.

Jacobson, Jerome

- 1963-64 Field Research in Staten Island Prehistory, Manuscript on file at the Staten Island Institute of Arts and Sciences.

Kardas, S., and E. Larrabee

- 1980 Cultural Resource Reconnaissance, New York Harbor Collection and Removal of Drift Area of Elizabeth, Union County, New Jersey, and Channel Dredging Elizabethport and North and South of Shooters Island Reaches, Historic Sites Research.

Kraft, Herbert C.

- 1977a Paleoindians in New Jersey, In: Amerindians and Their Paleoenvironments in Northeastern North America, W. S. Newman and B. Salwen (eds.), Annals of the New York Academy of Sciences 288:264-281.
- 1977b The Paleo-Indian Sites at Port Mobil, Staten Island, In: R. E. Funk and C. F. Hayes III (eds.), Current Perspectives in Northeastern Archeology: Essays in Honor of William A. Ritchie, Researches and Transactions of the New York State Archeological Association 17(1):1-19.
- 1978 Archaeological / Historical Resources Survey of the Proposed Joint Meeting Sludge Management Facility Site in Elizabeth, Union County, New Jersey, Archaeological Research Center, Seton Hall University Museum.

_____, and R. Alan Mounier

- 1982a The Archaic Period in New Jersey, ca. 8000 BC - 1000 BC, In: O. Chesler (ed.), New Jersey's Archeological Resources From the Paleo-Indian Period to the Present: A Review of Research Problems and Survey Priorities, Office of Cultural and Environmental Services, NJDEP, Trenton, pp 52-102.

_____, and R. Alan Mounier

- 1982b The Late Woodland Period in New Jersey, ca. AD 1000 - 1600, In: O. Chesler (ed.), New Jersey's Archeological Resources From the Paleo-Indian Period to the Present: A Review of Research Problems and Survey Priorities, Office of Cultural and Environmental Services, NJDEP, Trenton, pp 139-184.

Kuchler, August W.

- 1964 Potential Natural Vegetation of the Coterminous United States, American Geographical Society.

Larrabee, Edward McM.

- 1982 New Jersey's Cultural Resources: AD 1800-1865, In: O. Chesler (ed.), New Jersey's Archeological Resources From the Paleo-Indian Period to the Present: A Review of Research Problems and Survey Priorities, Office of Cultural and Environmental Services, NJDEP, Trenton, pp 220-240.

Lenik, Edward J.

- 1989 Cultural Contact and Trade in Prehistoric Staten Island, Proceedings of the Staten Island Institute of Arts and Sciences 34(1):25-32.
- 1992 Native American Archaeological Resources in Urban America: A View from New York City, The Bulletin No. 103, pp 20-29.

Marshall, Sydne

- 1982 Aboriginal Settlement in New Jersey During the Paleo-Indian Cultural Period: ca. 10,000 BC - 6000 BC, In: O. Chesler (ed.), New Jersey's Archeological Resources From the Paleo-Indian Period to the Present: A Review of Research Problems and Survey Priorities, Office of Cultural and Environmental Services, NJDEP, Trenton, pp 10-51.

New Jersey Turnpike Authority (NJTA)

- 1986 New Jersey Turnpike 1985-1990 Widening Technical Study, Vol. IV: Cultural Resources Interchange 8A-9 and 11 to US Route 46, NJTA.

Parker, Arthur

- 1920 The Archeological History of New York, New York State Museum Bulletin Nos. 237, 238, Albany.

Payne, Ted M., and Kenneth Baumgardt

- 1986 Howland Hook Marine Terminal Expansion. Cultural Resources Reconnaissance, MAAR Associates, Inc.

Ritchie, William A.

- 1965 The Archaeology of New York State, revised 1969, Natural History Press, Garden City.

_____, and Robert E. Funk

- 1971 Evidence for Early Archaic Occupations on Staten Island, Pennsylvania Archaeologist 41(3):45-59.
- 1973 Aboriginal Settlement Patterns in the Northeast, New York State Museum and Science Service Memoir No. 20. Albany.

Rutsch, Edward S.

- 1982 New Jersey's Cultural Resources: AD 1865 to the Present, In: O. Chesler (ed.), New Jersey's Archeological Resources From the Paleo-Indian Period to the Present: A Review of Research Problems and Survey Priorities, Office of Cultural and Environmental Services, NJDEP, Trenton, pp 241-255.

Schaper, Hans F.

- 1989 Shell Middens in the Lower Hudson Valley, The Bulletin, No. 98, pp 13-24.

Shaver, Peter D.

- 1993 The National Register of Historic Places in New York State, The Preservation League of New York State, Furthermore Press, Rizzoli, New York.

Skinner, Alanson B.

- 1909 The Lenape Indians of Staten Island, Anthropological Papers 3:3-62, American Museum of Natural History.

Snow, Dean R.

- 1980 The Archaeology of New England, Academic Press, New York.

Venables, Robert W.

- 1989 A Historical Overview of Staten Island's Trade Networks, Proceedings of the Staten Island Institute of Arts and Sciences 34(1):1-24.

Wacker, Peter O.

- 1982 New Jersey's Cultural Resources: AD 1660 - 1810, In: O. Chesler (ed.), New Jersey's Archeological Resources From the Paleo-Indian Period to the Present: A Review of Research Problems and Survey Priorities, Office of Cultural and Environmental Services, NJDEP, Trenton, pp 199-219.

Williams, Lorraine E., and Susan Kardas

- 1982 Contact Between Europeans and the Delaware Indians of New Jersey, In: O. Chesler (ed.), New Jersey's Archeological Resources From the Paleo-Indian Period to the Present: A Review of Research Problems and Survey Priorities, Office of Cultural and Environmental Services, NJDEP, Trenton, pp 185-198.

Williams, Lorraine E., and Ronald A. Thomas

- 1982 The Early/Middle Woodland Period in New Jersey, ca. 1000BC - AD 1000, In: O. Chesler (ed.), New Jersey's Archeological Resources From the Paleo-Indian Period to the Present: A Review of Research Problems and Survey Priorities, Office of Cultural and Environmental Services, NJDEP, Trenton, pp 103-138.

Wyatt, Ronald J.

- 1977 The Archaic on Long Island, In: Amerindians and Their Paleoenvironments in Northeastern North America, W. S. Newman and B. Salwen (eds.), Annals of the New York Academy of Sciences 288:400-409.

Maps

Beers, F.W.

1874 Atlas of Staten Island.

Beers, J. B., & Co.

1887 Atlas of Staten Island.

Bein, J. R.

1891 Map of the Metropolitan District and Adjacent Country.

Colton, G. W., and C. B. Colton

1884 Map of Staten Island.

Grover & Baker Sewing Machine Company

1860 Map of Staten Island.

Robinson, E.

1898 Atlas of the Borough of Richmond.

Sanborn Map Company

1917 Fire Insurance Map of the Borough of Richmond.

1937 Fire Insurance Map of the Borough of Richmond.

1937/1951 Fire Insurance Map of the Borough of Richmond.

Sidney, J. C.

1850 Map of Staten Island or Richmond County, M. Dripps, New York.

USGS

1900/1909 Staten Island 15' Topographic Quadrangle.

1966/1981 Arthur Kill, NY - NJ 7.5' Topographic Quadrangle.

1967/1981 Elizabeth, NJ - NY 7.5' Topographic Quadrangle.

Walling, H. F.

1859 Map of Staten Island, Richmond County, New York, D. A. Fox, New York.

APPENDIX I: NEW YORK STATE MUSUEM SITE FILE CORRESPONDENCE

NEW YORK STATE MUSEUM

3122 Cultural Education Center
Albany, NY 12230
518/474-5813 FAX 518/473-8496

Anthropological Survey

Page 1 of 2

DATE: 9/6/94

To:
TOM JAMISON
HARTGEN ARCHAEOLOGICAL ASSOCIATES
27 JORDAN ROAD
TROY, NY 12180

Proposed Project: GOETHAL'S BRIDGE EXPANSION
7.5' U.S.G.S. Quad: ELIZABETH, NJ-NY AND ARTHURS KILL, NY-NJ

In response to your request our staff has conducted a search of our data files* for locations and descriptions of prehistoric archaeological sites within the area indicated above. The results of the search are given below.

If specific information requested has not been provided by this letter, it is likely that we are not able to provide it at this time, either because of staff limitations or policy regarding disclosure of archaeological site data.

Questions regarding this reply can be directed to the site file manager, at (518) 474-5813 or the above address. Please refer to the N.Y.S.M. site identification numbers when requesting additional information.

Please resubmit this request if action is taken more than one year after your initial information request.

*[NOTE: Our files normally do not contain historic archeological sites or architectural properties. For information on these types of sites as well as prehistoric sites not listed in the N.Y.S.M. files contact The State Historic Preservation Office; Office of Parks, Recreation & Historic Preservation; Agency Building #1; Empire State Plaza; Albany, NY, 12238 at (518) 474-0479.

RESULTS OF THE FILE SEARCH:

Recorded sites ARE located in or within one mile of the project area. If so, see attached list.

Code "ACP" = sites reported by Arthur C. Parker in The Archeology Of New York, 1922, as transcribed from his unpublished maps.

SEARCH CONDUCTED BY: BM (initials) Anthropological Survey, NYS Museum

cc: N.Y.S. OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION; HISTORIC PRESERVATION FIELD SERVICES BUREAU

9/6/94 To: TOM JAMISON, HARTGEN ARCHAEOLOGICAL ASSOCIATES

Project: GOETHAL'S BRIDGE EXPANSION Topo. Maps: ELIZABETH, NJ-NY AND ARTHURS KILL, NY-NJ

BW (initials) Anthropological Survey, NYSM

New York State Museum Prehistoric Archaeological Site Files

EVALUATION OF ARCHAEOLOGICAL SENSITIVITY FOR PREHISTORIC (NATIVE AMERICAN) SITES

Examination of the data suggests that the location indicated has the following sensitivity rating:

HIGH PROBABILITY OF PRODUCING PREHISTORIC ARCHAEOLOGICAL DATA

The reasons for this finding are given below:

- ☒ A RECORDED SITE(S) IS(ARE) INDICATED IN, ADJACENT TO, OR IN THE VICINITY OF THE LOCATION AND WE HAVE REASON TO BELIEVE IT(HEY) COULD BE IMPACTED BY THE PROPOSED ACTIVITY.
- ☒ A RECORDED SITE IS INDICATED IN THE GENERAL VICINITY OR SOME DISTANCE AWAY. DUE TO THE MARGIN OF ERROR IN THE LOCATION DATA IT IS POSSIBLE THE SITE ACTUALLY EXISTS IN OR IMMEDIATELY ADJACENT TO THE LOCATION.
- ☒ THE TERRAIN IN THE LOCATION IS SIMILAR TO TERRAIN IN THE GENERAL VICINITY WHERE RECORDED ARCHAEOLOGICAL SITES ARE INDICATED.
- ☒ THE PHYSIOGRAPHIC CHARACTERISTICS OF THE LOCATION SUGGEST A HIGH PROBABILITY OF PREHISTORIC OCCUPATION OR USE.
- ☐ THE PHYSIOGRAPHIC CHARACTERISTICS OF THE LOCATION SUGGEST A MEDIUM PROBABILITY OF PREHISTORIC OCCUPATION OR USE.
- ☐ THE PHYSIOGRAPHIC CHARACTERISTICS OF THE LOCATION SUGGEST A LOW PROBABILITY OF PREHISTORIC OCCUPATION OR USE.
- ☐ EVIDENCE OF CULTURAL OR NATURAL DESTRUCTIVE IMPACTS SUGGESTS A LOSS OF ORIGINAL CULTURAL DEPOSITS IN THIS LOCATION.
- ☐ THE PHYSIOGRAPHIC CHARACTERISTICS OF THE LOCATION ARE MIXED, A HIGHER THAN AVERAGE PROBABILITY OF PREHISTORIC OCCUPATION OR USE IS SUGGESTED FOR AREAS IN THE VICINITY OF EITHER PRESENT OR PREEXISTING BODIES OF WATER, WATERWAYS, OR SWAMPS. A HIGHER THAN AVERAGE PROBABILITY IS SUGGESTED FOR ROCK FACES WHICH AFFORD SHELTER OR FOR AREAS SHELTERED BY BLUFFS OR HILLS. AREAS IN THE VICINITY OF CHERT DEPOSITS HAVE A HIGHER THAN AVERAGE PROBABILITY OF USE. DISTINCTIVE HILLS OR LOW RIDGES HAVE AN AVERAGE PROBABILITY OF USE AS A BURYING GROUND. LOW PROBABILITY IS SUGGESTED FOR AREAS OF EROSIONAL STEEP SLOPE.
- ☐ PROBABILITY RATING IS BASED ON THE ASSUMED PRESENCE OF INTACT ORIGINAL DEPOSITS, POSSIBILITY UNDER FILL, IN THE AREA. IF NEAR WATER OR IF DEEPLY BURIED, MATERIALS MAY OCCUR SUBMERGED BELOW THE WATER TABLE.
- ☐ INFORMATION ON OTHER SITES MAY BE AVAILABLE IN A REGIONAL INVENTORY MAINTAINED AT THE FOLLOWING LOCATION(S).

COMMENTS:

cc: N.Y.S. OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION; H. P. FIELD SERVICES BUREAU

NYSM Site Files
Room 3122
Cultural Education Center
Albany, NY 12230

Phone: (518)474-5813
Fax: (518)473-8496

NEW YORK STATE MUSEUM: OFFICE OF THE STATE ARCHEOLOGIST
PREHISTORIC SITE PROJECT SCREENING FILE: USE REQUEST FORM

NAME: Tom Jamison

BUSINESS ADDRESS: 331 North Greenbush Road, Troy, NY 12180

AGENCY/COMPANY/INSTITUTION REPRESENTED: Hartgen Archeological Associates

PHONE: 283-0534

PURPOSE OF REQUEST: Goethal's Bridge expansion

EVENTUAL DISTRIBUTION OF DATA: Client, municipalities, and review agencies

USGS 7.5' QUADS: Elizabeth, NJ - NY and Arthur Kill, NY - NJ

The following site(s) may be within or adjacent to the project area:

NYSM#	OPRHP #	Site Identifier	Site Description	USGS 7.5' QUAD
28		Arlington Ave. Site	traces of occupation	Elizabeth, NJ
29	A085-01-0139	Arlington Place Site	Late Archaic, Early and Late Woodland and Transitional camps and pos. villages	Elizabeth, NJ
30	A085-01-0138	Arlington Station Site	Woodland and pos. Transitional; shell heaps and pits	Elizabeth, NJ
731		Gerties Knoll Site	traces of occupation	Elizabeth, NJ
732		Goodrich Site	Early and Late Archaic, pos. Middle Archaic; projectile points	Elizabeth, NJ
4593		ACP Rich-3	traces of occupation; shell pits	Elizabeth, NJ
4594		ACP Rich-4	burial; refuse pits	Elizabeth, NJ
4595		ACP Rich-5	Early Historic; village, pos. camps, burials	Elizabeth, NJ
4596		ACP Rich-6	Late Woodland, Historic, Iroquois camp	Arthur Kill, NY
730		ACP Rich no#	village	Elizabeth, NJ
776		ACP Rich no#	multi-component camps	Arthur Kill, NY
7215	A085-01-2366	Old Place Site	traces of occupation	Elizabeth, NJ
7216		ACP Rich no#	pos. Transitional	Eliz., NJ & Arthur Kill, NY
724			traces; Milliken foundation	Arthur Kill, NY
721	A085-01-2364	Bowman's Brook Site	camp	Elizabeth, NJ
7811		ACP Rich no#		Elizabeth, NJ

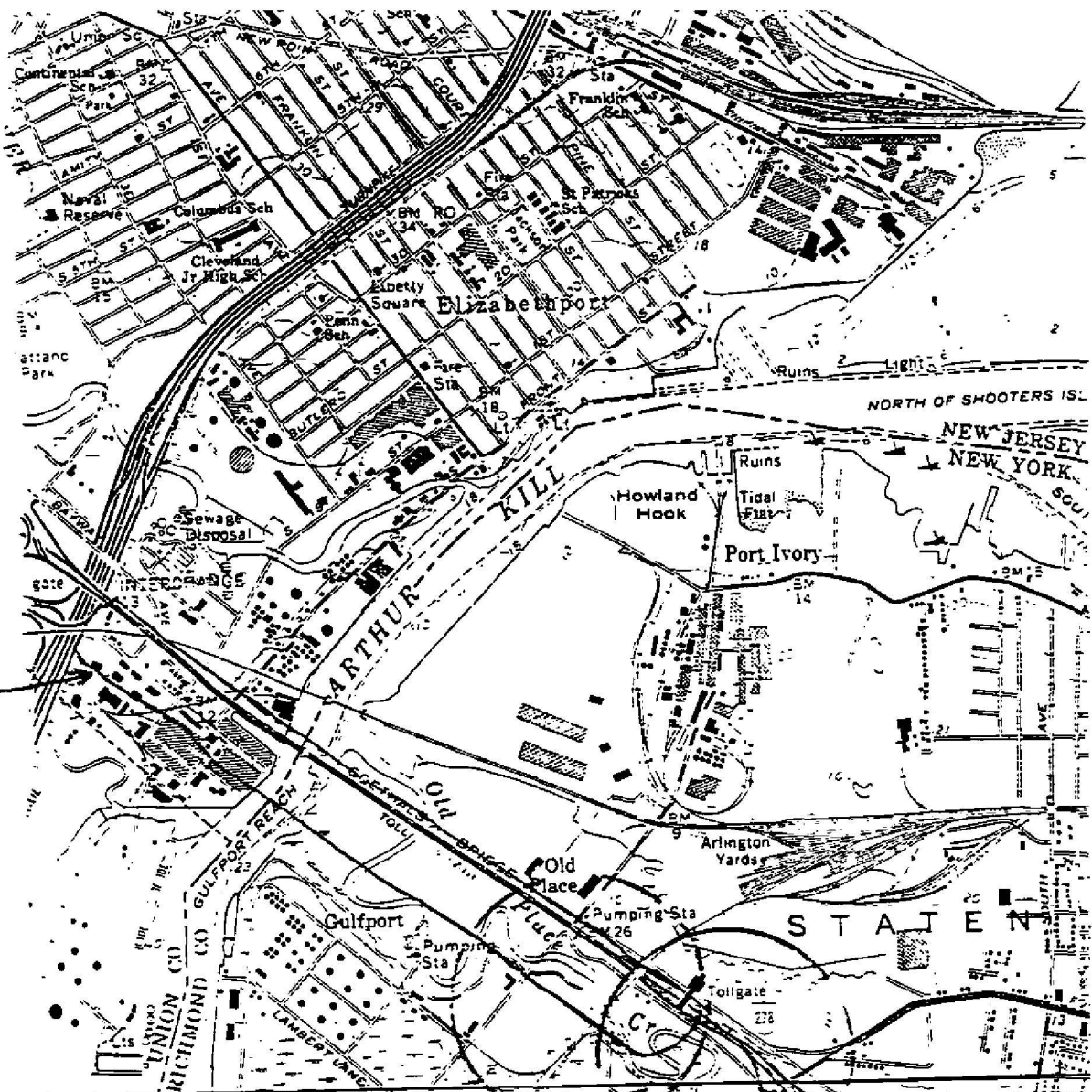
Understand that the information provided is to be used solely for the preparation of an environmental impact statement as required by State or Federal law and must be marked and maintained as 'confidential' for use only as required by State or Federal law or with the written permission of the State Archeologist.

Thomas R. Jamison
(Signature)

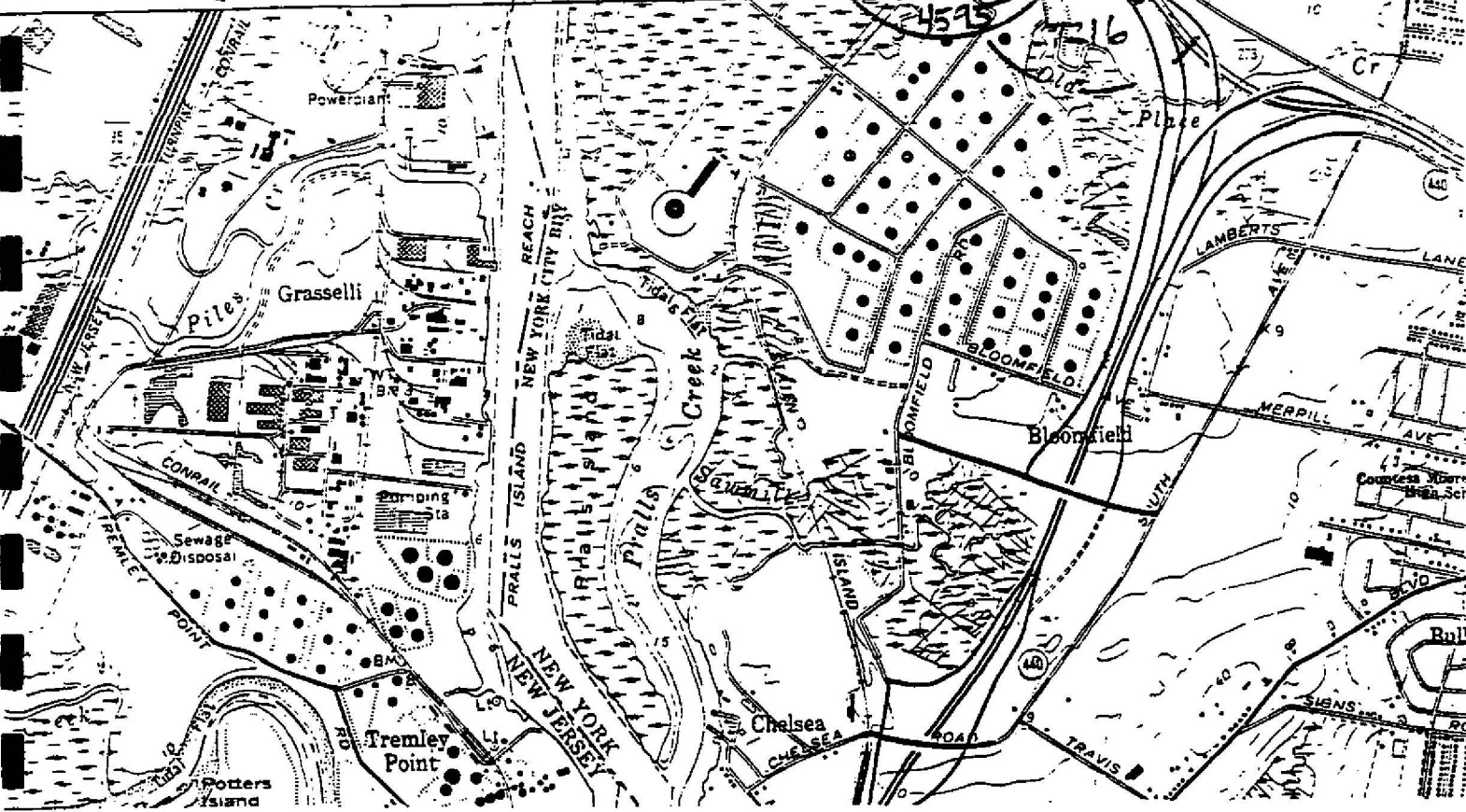
9/1/94
(Date)

Please provide a sensitivity rating for the attached project area. ☒ Mail my response (addressed envelope attached)

ELIZABETH, NJ
QUAD



ARTHUR KILL, NY
QUAD



APPENDIX II: NEW JERSEY STATE MUSEUM SITE FILE CORRESPONENCE



State of New Jersey
NEW JERSEY STATE MUSEUM
DEPARTMENT OF STATE
205 WEST STATE STREET CN 530
TRENTON, NJ 08625-0530

September 23, 1994

Mr. Thomas R. Jamison
Project Director
Hartgen Archaeological Associates, Inc.
331 North Greenbush Road
Troy, NY 12180

Re: Expansion of Goethal's Bridge,
New Jersey Section, Project Area

Dear Mr. Jamison:

We have checked our records for the above-referenced project and report the following:

No known archaeological resources appear to be located within the boundaries of the project site. There are known archaeological sites located within a two mile radius of the project site on Staten Island, New York. An archaeological survey, by a professional archaeologist, would have to be conducted in order for an accurate assessment to be made of its archaeological significance.

If we can be of further assistance, please do not hesitate to contact us.

Sincerely,

A handwritten signature in cursive script, appearing to read "K Flinn".

Karen Flinn
Registrar
Archaeology/Ethnology Bureau

KF:gg

CC: NJ Department of Environmental Protection
Historic Preservation Office

New Jersey Is An Equal Opportunity Employer