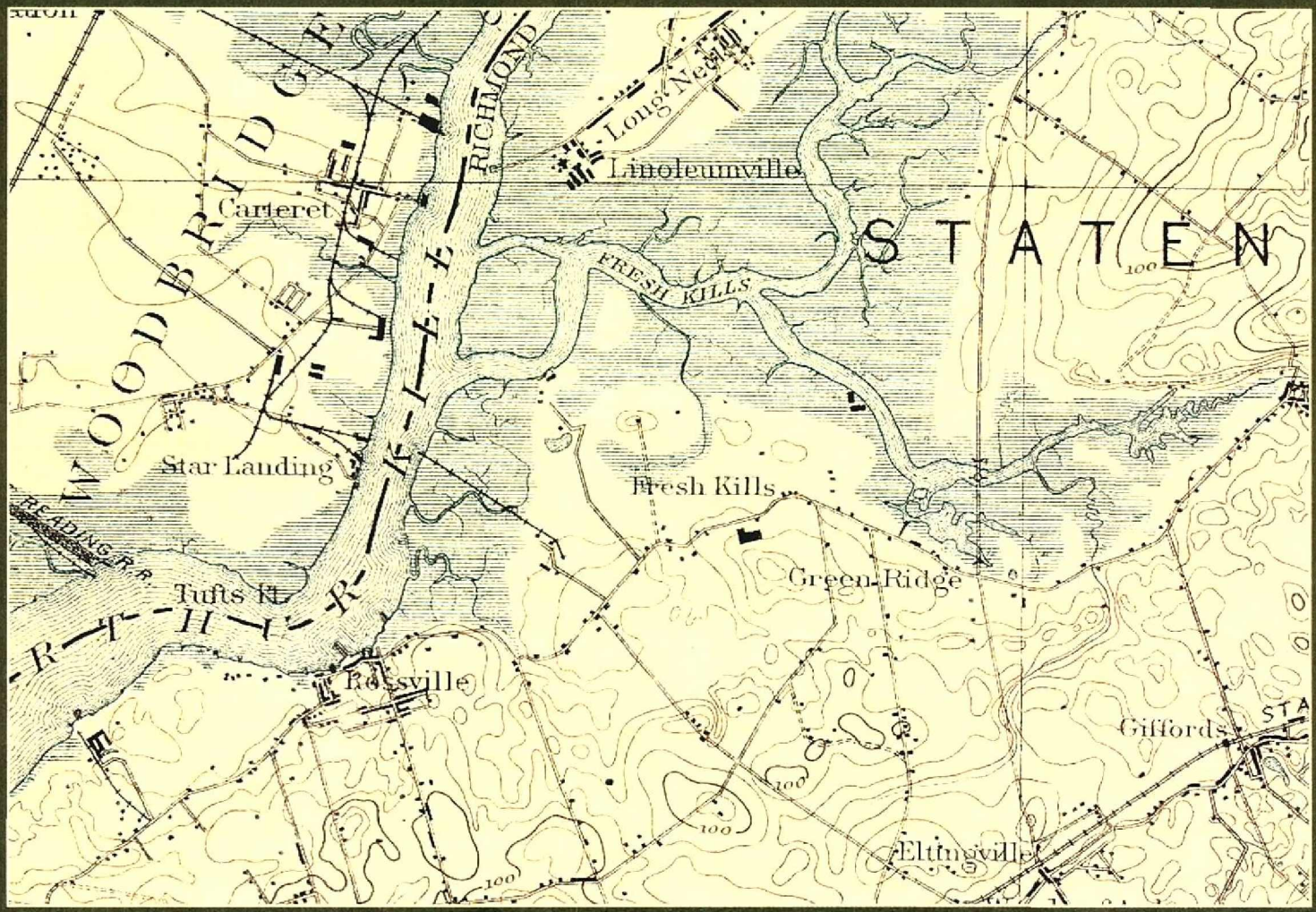
23903R JMA

Phase I Archeological Resources Reconnaissance Survey
Pin x731.05.101

Program Year 2006-2007

Proposed Park and Ride Facility
West Shore Expressway
At Arthur Kill Road
Richmond County, New York



Prepared For
The New York State Museum

Prepared By
John Milner Associates, Inc.
Croton-on-Hudson, New York

Sponsored By
New York State Department Of Transportation
and
Federal Highway Administration

March 2007

1009

PHASE I ARCHEOLOGICAL RESOURCES RECONNAISSANCE SURVEY
PIN X731.05.101

Program Year 2006-2007

PROPOSED PARK AND RIDE FACILITY WEST SHORE EXPRESSWAY AT ARTHUR KILL ROAD RICHMOND COUNTY, NEW YORK

Prepared by:

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Prepared for:

The New York State Museum

March 2007

Sponsored by
New York State Department of Transportation
And
Federal Highway Administration

Management Summary

PIN:	X731.05.101
DOT Project Type:	Construct a park and ride facility and a building for New York City Police Department on existing NYSDOT right-of-way.
Cultural Resources Survey Type:	Phase 1 reconnaissance survey.
Location:	West Shore Expressway, Exit 4 eastbound ramp/service road at Arthur Kill Road, Richmond County.
Survey Area:	Approximately 918 feet (280 m) east to west. Approximately 262 feet (80 m) north to south.
USGS 7.5-minute Quadrangle:	*Arthur Kill, NY*
Sensitivity Assessment:	No archeological sensitivity due to extent of previous disturbance.
Archeological Survey Methods:	Forty-eight (48) shovel test units, no excavation units, no surface survey
Archeological Survey Results:	Number of prehistoric sites identified: none Number of prehistoric sites recommended for investigation: none Number of historic sites identified: none Number of historic sites recommended for investigation: none Number of listed/eligible/potentially eligible S/NRHP sites identified: none
Architectural Survey Results:	Number of buildings/structures in Project Area: none Number of known NR listed/eligible buildings/structures: none Number of recommended buildings/structures or districts: none Number of NR properties that may be impacted: none
Author/Institution:	Patrick J. Heaton, RPA Timothy C. Lloyd, Ph.D., RPA John Milner Associates, Inc., Croton-on-Hudson, New York
Date:	March 2007
Sponsor:	NYSDOT

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I. ARCHEOLOGICAL SURVEY

A. DOT Project Description

John Milner Associates, Inc. (JMA) conducted a Phase 1 cultural resources survey in March 2007 for PIN X731.05.101. All research, fieldwork, and report preparation were conducted in accordance with the *New York State Education Department Cultural Resources Survey Program Work Scope Specifications for Cultural Resources Investigations on New York State Department of Transportation Projects* (NYSM 2004).

PIN X731.05.101 (the Project) is located along the West Shore Expressway (NYS Route 440) on the eastbound off-ramp/service road at Exit 4 (Arthur Kill Road/Huguenot Avenue) east of the hamlet of Rossville in Richmond County (Staten Island), New York (Figures 1 and 2). The Project is sponsored by the New York State Department of Transportation (NYSDOT). The Project consists of the construction of a proposed park and ride facility and a building for the New York City Police Department (NYPD) on the existing NYSDOT right-of-way (Figure 3). The Project Area is bound on the north by the West Shore Expressway, on the south by the eastbound off-ramp (Exit 4), and on the east by Arthur Kill Road.

B. General Project Area

The Project Area is located approximately 1,000 feet (305 m) east of the Arthur Kill and approximately 1,000 feet south of the Fresh Kills Landfill, east of the hamlet of Rossville. A small channeled drainage (identified on historic maps as Killifish Brook) runs from the southeast to northwest (to the Arthur Kill) immediately to the east of the Project Area on the east/north side of Arthur Kill Road. Huguenot Avenue intersects Arthur Kill Road approximately 350 (107 m) feet southeast of the eastern end of the Project Area.

There are no standing structures located within the Project Area. The nearest structure is a NYS Department of General Services municipal building located on the northeast side of Arthur Kill Road opposite the eastern end of the Project Area. There are no residential structures in the vicinity of the Project Area.

The conditions of the Project Area at the time of JMA's survey fieldwork are shown in Photographs 1 through 6.

C. Background Research

JMA personnel conducted background research to gather information on the history and prehistory of the Project Area. Institutions and/or archives consulted by JMA personnel included the Staten Island Museum/Staten Island Institute of Arts and Sciences (SIIAS) and the Maps Division at the New York Public Library. The research included interviews with Raymond Mattarazzo, Assistant Curator of Science at the SIIIAS, and Dorothy D'Eletto, Archivist/Researcher at the SIIAS Library, for whose assistance JMA is greatly appreciative.

1. Previously Recorded Cultural Resources

JMA reviewed the following sources for information regarding previously identified archeological sites within or in the vicinity of the PIN X0731.05.101 Project Area:

- the LPC *Archaeological Evaluation and Sensitivity Assessment of Staten Island, New York* (Boesch 1994);
- the combined archeological site files of the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) and the New York State Museum (NYSM);
- the site files and report library of the New York City Landmarks Preservation Commission (LPC);
- syntheses of regional prehistory (e.g., Beauchamp 1900; Bolton 1934; Cantwell and Wall 2001; Funk 1976; Parker 1920; Ritchie 1980; Ritchie and Funk 1971, 1973; Skinner 1903, 1909); and,
- reports of previous cultural resources surveys conducted in the vicinity of the Project Area (e.g., EarthTech 2005; Eisenberg 1987; JMA 1997; Pickman 1978).

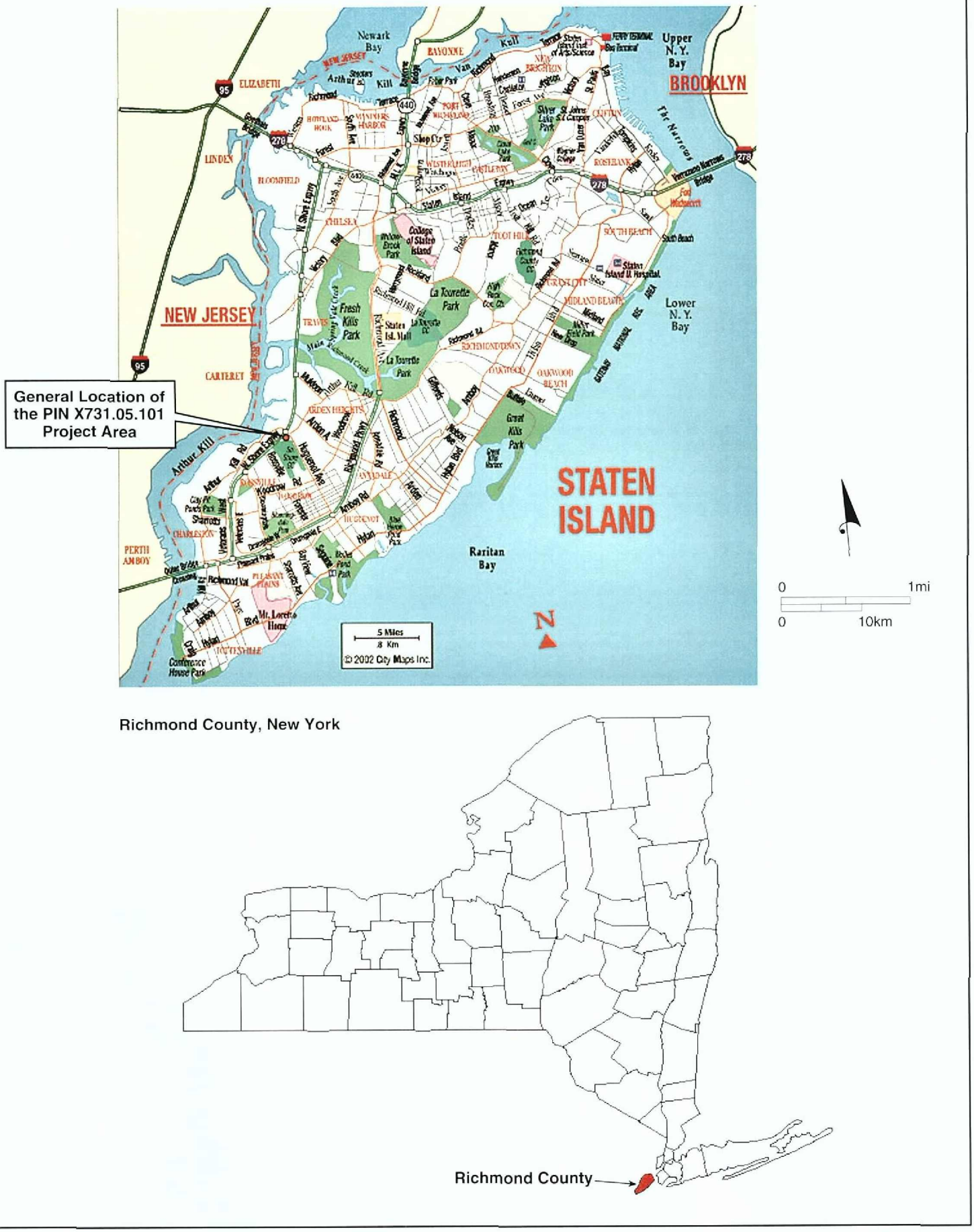


Figure 1. General location of the PIN X731.05.101 Project Area in Richmond County, New York.

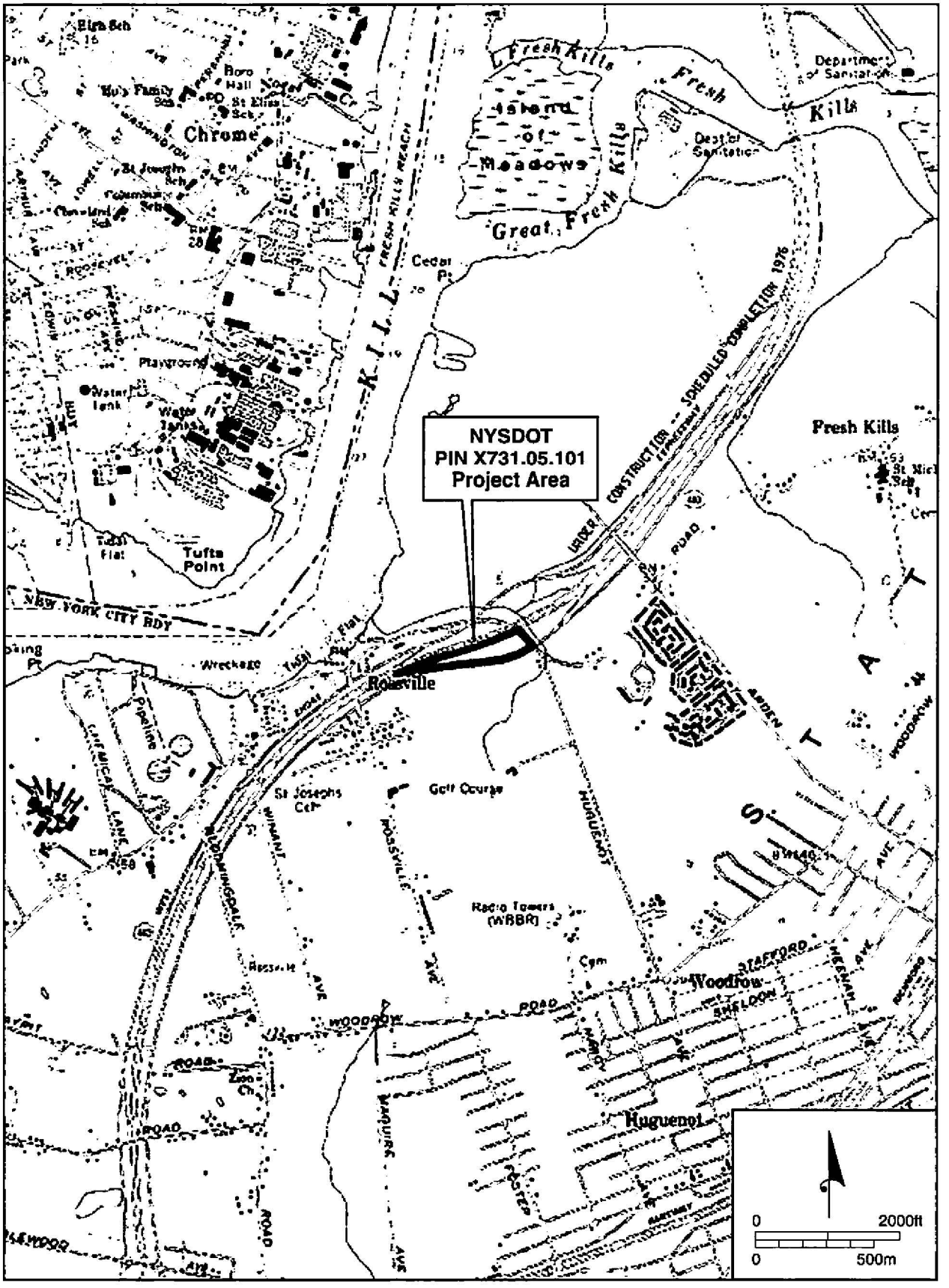


Figure 2. Detail of the 1975 NYSDOT *Arthur Kill, N.Y.* 7.5-minute topographic quadrangle showing the location of the PIN X731.05.101 Project Area.

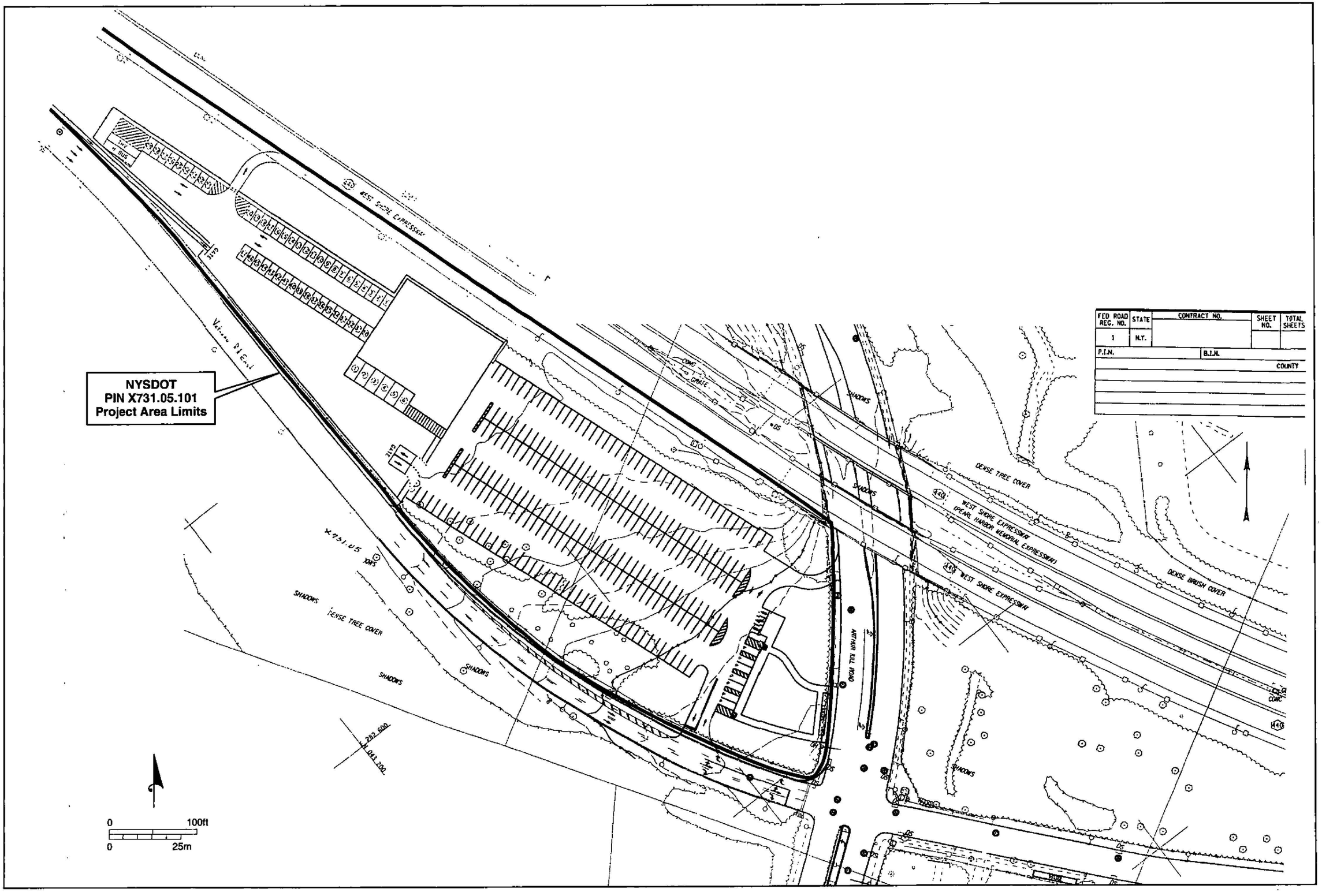


Figure 3. NYSDOT plans showing the layout of the proposed Arthur Kill Park and Ride facility (PIN X731.05.101 Alternative 4).

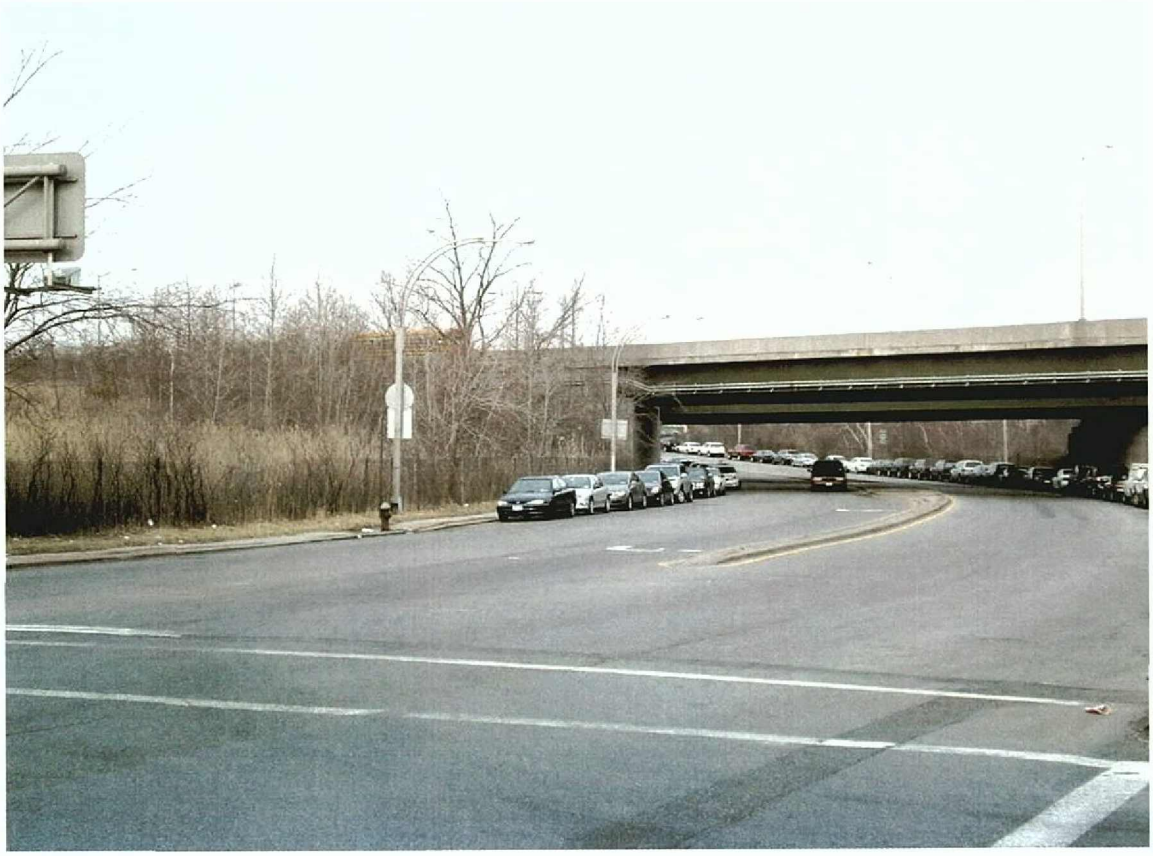
Photograph 1. The western end of the Project Area showing the West Shore Expressway/NYS Route 440 (right) and the Exit 4 service road/off-ramp (left), view to the west.

Photograph 2. The Exit 4 off-ramp defines the southern perimeter of the Project Area, view to the east.

Photograph 3. Wooded/overgrown area in the central portion of the Project Area, view to the west.

Photograph 4. The eastern end of the Project Area showing the West Shore Expressway (NYS Route 440) over Arthur Kill Road, view to the northeast.

Photograph 5. The eastern end of the Project Area from Arthur Kill Road, view to the west-southwest.



Photograph 6. The West Shore Expressway (NYS Route 440) over Arthur Kill Road, view to the northwest.

Previously Recorded Archeological Sites

JMA identified a total of seventeen previously recorded archeological sites within one mile (1.6 km) of the Project Area (see Table 1). In Table 1, Site Identifiers with the prefix STD were assigned by the Staten Island Institute of Arts and Sciences (SIIAS). The prefix LPC indicates site numbers assigned as part of the LPC *Archaeological Evaluation and Sensitivity Assessment of Staten Island* (Boesch 1994).

Table 1. Previously recorded archeological sites within one mile of the PIN X731.05.101 Project Area.

Site Identifier (s)	Site Name	Site Description	References	Distance from Project Area
LPC 1 STD-H	Huguenot	Native American – Middle Woodland	Boesch 1994 Anderson 1962	~200 ft S
LPC 110 STD-BC	Benedict Creek	Native American – period undefined	Boesch 1994 SIIAS Files	~600 ft N
LPC 2	Cutting	Native American – Paleoindian through Middle Woodland	Boesch 1994	~800 ft W
NYSM 8946	-	Native American – "Traces of Occupation"	NYSM Files	~1000 ft W-SW
LPC 4; NYSM 7270 STD-6; RIC-6-AJA	Hammerstone Hill	Native American – Woodland	Boesch 1994 Skinner 1909 Parker 1920	~2,600 ft SW
OPRHP 08501.002426	SICF Area C-1	Native American – Early and Late Woodland	Boesch 1994 OPRHP Files	~3,100 ft W
OPRHP 08501.000119 ACP RICH 18 Bolton 80	Rossville	Native American – Woodland	OPRHP Files Parker 1920 Bolton 1922	~3,300 ft SW
LPC 113 STD-CAB	-	Native American – Woodland	Boesch 1994 SIIAS Files	~3,400 ft NE
LPC 5 STD-SH	Harik's Sandy Ground	Native American – Archaic	Boesch 1994	~3,800 ft SW
LPC 21 NYSM 772	Rossville Campsite II	Native American – period undefined	NYSM Files Boesch 1994 Parker 1920	~4,400 ft SW
OPRHP 08501.000075 NYSM 738; LPC 8 STD-23-3; 30-RIC-16-AJA	Pottery Farm	Native American – Late Archaic through Late Woodland	Boesch 1994 OPRHP Files	~4,600 ft SW
NYSM 735/7271 LPC 11; ACP RICH 14 STD-2-30	Wort Farm	Native American – Late Archaic through Contact (village and burial site)	NYSM Files Parker 1920 Boesch 1994 Bolton 1922	~4,900 ft SSW
LPC 40 STD-PI	Price's Meadow Island	Native American – period undefined	Boesch 1994 Skinner 1909	~5,000 ft N
OPRHP 08501.000074 NYSM 739; LPC 7 STD-23-2; 30-RIC-16-AJA	Chemical Lane	Prehistoric – Archaic and possible Early Woodland	OPRHP Files Davis 1896 Boesch 1994	~5,000 ft SW
OPRHP 08501.002569	NYC SCA 56R	Prehistoric – Middle Archaic through Late Woodland (may be same as NYSM 735/Wort Farm)	OPRHP Files	~5,100 ft SSW
OPRHP 08501.000076 NYSM 737; LPC 6 STD-14-3; 30-RIC-16-AJA	Smoking Point	Native American – Paleoindian through Late Woodland (village and burial site)	NYSM Files Boesch 1994 OPRHP Files	~5,100 ft W
LPC 12 NYSM 773	Rossville Campsite	Prehistoric – Woodland	NYSM Files Boesch 1994 SIIAS Files	~1 mile SSW

All of the sites listed in Table 1 are Native American. NYSM site 8496 (described as "traces of occupation") includes a large area along the southwestern shore of Staten Island. The area of NYSM 8496 encompasses many of the more specific site locations listed in Table 1. Many of the sites listed in Table 1 were identified in the late-nineteenth or early-twentieth century (e.g., Beauchamp 1900; Bolton 1934; Parker 1920; Skinner 1903, 1909). Most of these sites have been the subject of sporadic investigations by local artifact collectors and/or professional archeologists. The available information indicates that many of the sites listed in Table 1 have been disturbed, or entirely destroyed, by historic period development.

Previously Recorded Historic and/or Architectural Resources

JMA reviewed the OPRHP SPHINX Building-Structure Inventory, the LPC *Guide to New York City Landmarks* (Dolkart 1998), the *Landmarks of New York* (Diamonstein 1998), and the *AIA Guide to New York City* (White and Willensky 2000) for information regarding historic and/or architecturally significant properties that are located in the vicinity of the Project Area. These include properties that are listed on, or have been determined eligible for the State and/or National Register of Historic Places (S/NRHP), or have been designated New York City Landmarks. JMA also reviewed relevant sections of the *Draft Design Approval Document: West Shore Expressway Access and Safety Improvements* (EarthTech 2005) for information on previously identified cultural resources.

There are no properties located within the Project Area that are listed on or have been determined eligible for listing on the S/NRHP, or that have been previously determined to be New York City Landmarks. Previously identified historic and architectural resources located within one mile of the Project Area are listed in Table 2.

Table 2. Previously identified historic and/or architectural resources in the vicinity of the Project Area.

Property Name/ Address	Property Identifier/ Reference	NRHP/NYC Landmark Status	Distance from Project Area
Sleight Family Cemetery (Arthur Kill Road at Rossville Avenue)	OPRHP 08501.000965 *Guide to NYC Landmarks*:#58 *AIA Guide*: S7a	NYC Landmark	~1,000 feet W
2286 Arthur Kill Road	OPRHP 08501.000951 *AIA Guide*: S7	No NRHP Eligibility Determination	~1,000 W
1087 Rossville Avenue	*West Shore Expressway DAD* 2005	No NRHP Eligibility Determination	~1,000 SW
1088 Rossville Avenue	*West Shore Expressway DAD* 2005	No NRHP Eligibility Determination	~1,000 SW
2341 Arthur Kill Road	OPRHP 08501.000953	No NRHP Eligibility Determination	~1,500 W
2355 Arthur Kill Road	OPRHP 08501.000955	No NRHP Eligibility Determination	~1,600 W
1815 Arthur Kill Road	*West Shore Expressway DAD* 2005	No NRHP Eligibility Determination	~1,800 ENE
1765 Arthur Kill Road	*West Shore Expressway DAD* 2005	No NRHP Eligibility Determination	~2,000 ENE
Old Bermuda Inn (2512 Arthur Kill Road)	OPRHP 08501.000961 *AIA Guide*: S8	No NRHP Eligibility Determination	~2,500 WSW
2522 Arthur Kill Road	OPRHP 08501.000962 *AIA Guide*: S9	No NRHP Eligibility Determination	~2,500 WSW
St. Luke's Cemetery (Arthur Kill Road at Zebra Place)	OPRHP 08501.000964 *AIA Guide*: S10	No NRHP Eligibility Determination	~3,000 WSW
Woodrow Methodist Church (1109 Woodrow Road)	OPRHP 08501.001592 90NR01041 *Guide to NYC Landmarks*:#53 *AIA Guide*: S12	NRHP-Listed NYC Landmark	~4,500 feet S
Rossville A.M.E. Zion Church Cemetery (Crabtree Avenue)	*Guide to NYC Landmarks*:#59 *AIA Guide*: S11	NYC Landmark	~1 mile SW

There are three properties located within one mile of the Project Area that are listed on the S/NRHP and/or are designated New York City Landmarks (Table 2). The Sleight Family Graveyard (also known as the Rossville or Blazing Star Burial Ground) is a small graveyard that served the community of Rossville ca. 1750-1850 (Dolkart 1998:294) located on the west side of Arthur Kill Road approximately 1,000 feet (854 m) west of the Project Area. The NRHP-Listed Woodrow Methodist Church is located approximately 4,500 feet (1.4 km) south of the Project Area. The Rossville A.M.E. Zion Church Cemetery, a nineteenth century African-American burial ground, is located approximately one mile (1.6 km) southwest of the Project Area.

2. Environmental Setting

The southwest coast of Staten Island along the Arthur Kill is located within the inner lowland sub-province of the Coastal Plain Province. Most of this area is underlain by unconsolidated marine and fluvial deposits of clay, silt, sand, and gravel of Late Cretaceous and Tertiary age. Surficial topography in this area is largely determined by more recent glacial outwash sediments that flowed south from the terminal moraine at Harbor Hill (Boesch 1994; NYCSSS:6; Wolfe 1995).

The Project Area is located on an area of relatively higher elevation within the gently sloping outwash plain of stratified and sorted gravel, sand, and silt. The *New York City Reconnaissance Soil Survey* identifies soils within the Project Area as previously disturbed:

> [Map Unit] 7. Laguardia-Ebbets-Pavement & buildings, wet substratum complex, 0 to 8 percent slopes: Nearly level to gently sloping areas filled with a mixture of natural soil materials and construction debris over swamp, tidal marsh, or water; a mixture of anthropogenic soils which vary in coarse fragment content, with 15 to 49 percent of the surface covered by impervious pavement and buildings (NYC SSS 2005:14).

3. Prehistoric Context and Sensitivity Assessment

Collectively, the sites listed in Table 1 span the entire known period of Native American occupation in the northeast, from Paleoindian through the early Historic Period. The site types include small camps, villages, and cemeteries. These sites demonstrate extensive Native American occupation of the southwest coast of Staten Island adjacent to the Arthur Kill throughout the prehistoric period. The LPC *Archaeological Evaluation and Sensitivity Assessment of Staten Island* identifies five criteria for assessing the prehistoric sensitivity of areas on Staten Island. In general, highly sensitive areas on Staten Island are those characterized by three or more of the following criteria (Boesch 1994:18-19):

1. known sites, or surface finds recovered, in the immediate vicinity
2. freshwater source located nearby
3. high subsistence potential for area (e.g., marsh, shoreline, river/stream mouth nearby)
4. high ground overlooking water with slopes not exceeding 30 percent
5. well-drained soil, particularly areas with a sandy soil substratum.

The Huguenot Site (Table 1: LPC 1; STD-H) is described as located at the intersection of Huguenot Avenue and Arthur Kill Road (Anderson 1964; Boesch 1994), on a well-drained sandy knoll immediately adjacent to a small drainage (identified on historic maps as the Killifish Brook). A brief description included in the "Archeology Section" of the October 1964 issue of the *New Bulletin of the Staten Island Institute of Arts and Sciences* provides the only available description of the site:

> An area off Huguenot Avenue and Arthur Kill Road which was bulldozed for fill exposed an area where predominantly Middle Woodland artifacts were found. Sixteen projectile points, one net sinker, a possible gorget (broken during manufacture), one large ovoid scraper, one sherd, and countless chips were found (Anderson 1964:9).

The LPC site files identify the location of the Huguenot Site approximately 200 feet (61 m) south of the southeast corner of the Project Area. It is possible that the site originally extended within or very close to the southern boundary of the Project Area. The LPC *Archaeological Evaluation and Sensitivity Assessment of Staten Island* states that the site "has been bulldozed during construction for a development and is probably extensively disturbed although remnants may remain including truncated pit features" (Boesch 1994: Appendix C).

Prior to the construction episodes described above (Anderson 1964) and the construction of the West Shore Expressway in the 1970s, the Project Area would have exhibited all of the prehistoric sensitivity criteria listed above. The identification of archeological deposits within the Project Area would be dependent on the presence of intact land surfaces that were not disturbed during previous construction episodes.

4. Historic Context and Sensitivity Assessment

JMA reviewed both written and cartographic documents relating to past and present environmental conditions and historical settlement of the region. Sources examined for the Project included the 1877 Clute *Annals of Staten Island, From Its Discovery to the Present Time* and the 1898-1900 Morris *Memorial History of Staten Island*. JMA's research also included review of maps and other sources in the collections of the New York Public Library and Staten Island Museum/Staten Island Institute of Arts and Sciences.

The small hamlet of Oude Dorp (or Old Town), constructed in 1641, was the first European settlement on Staten Island. Relations between the Dutch colonists and local Native American groups were characterized by periodic warfare throughout the 1640s, 1650s, and 1660s. In 1664 the Dutch surrendered the New Amsterdam colony to the British. Despite numerous treaties between the Dutch and the Indians, Staten Island was not permanently acquired by deed until 1670 (Clute 1877; Morris 1898). In 1683 over 200 European families were living on the island. By the end of the seventeenth century, only a handful of Native Americans were still living on Staten Island (Boesch 1994).

During the eighteenth century, European settlers began clearing the wooded landscape of Staten Island and pursued a livelihood based on agriculture and fishing. The population steadily increased, growing from 727 in 1698 to 2847 in 1771 (Clute 1877). New York grew in prominence throughout the 1700s as the principal port in the Northeast for exporting agricultural produce to feed the slave populations of British sugar plantations in the Caribbean. Small farms dispersed across the hinterland of the growing port city, including Staten Island, were responsible for producing agricultural staples for export (Burrows and Wallace 1999). Many of these farms were dependent on slave labor, and population records indicate that "Blacks" made up as much as 20 percent of Staten Island's population throughout the eighteenth century (Clute 1877).

The British occupied Staten Island throughout the Revolutionary War, using the island as a staging area and source of produce, wood, and fodder. British and allied troops reportedly assaulted civilians, ravaged women, and pillaged the landscape at will (Burrows and Wallace 1999). Numerous hostilities occurred both on and in the waters around Staten Island, and the British constructed numerous forts, or redoubts, along the coastline (Morris 1898).

In the early nineteenth-century, Staten Island was relatively isolated, and not until the 1830s did outsiders begin to settle in significant numbers (Morris 1900). The establishment of large-scale manufacturing operations in the mid-nineteenth century transformed the economy and landscape of Staten Island (Burrows and Wallace 1999). The opening of the Staten Island Railroad between Tottenville and Vanderbilts Landing (now Clifton) in 1860 encouraged population growth and economic development in the southwestern area of the island (Morris 1900).

The western coast of Staten Island grew increasingly industrial in the early-twentieth century. In 1938 the Outerbridge Crossing and Goethals Bridge were opened, and subsequent rezoning permitted the construction of natural gas and petroleum storage facilities on the coastline. The Fresh Kills landfill was opened in 1947 and ultimately grew to over 2100 acres in size. Subsequent to the opening of the Verrazano-Narrows Bridge in 1964, the population of Staten Island has increased dramatically and the island continues to take on an increasingly suburban character (EarthTech 2005).

Historic Map Review

JMA reviewed historic maps to identify any map-documented structures (MDS) formerly located within the Project Area and help evaluate the extent of previous disturbance within the Project Area. Historic maps examined for the Project (Figure 4-12) included:

- the 1781 Taylor and Skinner *Map of New York and Staten Island and Part of Long Island: Surveyed by Order of His Excellency Sir Henry Clinton, Commander in Chief of His Majesty's Forces* (Figure 4);
- the 1853 Butler *Map of Staten Island or Richmond County, New York* (Figure 5);
- the 1874 Beers *Atlas of Staten Island, Richmond County, New York* (Figure 6);
- the 1887 Beers *Atlas of Staten Island, Richmond County, New York* (Figure 7);
- the 1891 USGS *Staten Island, N.Y.* 15-minute topographic quadrangle;
- the 1896 Leng and Davis *Map of Staten Island with Ye Olde Names and Nicknames*;
- the 1898 USGS *Staten Island, N.Y.* 15-minute topographic quadrangle (Figure 8);
- the 1907 Robinson *Atlas of the Borough of Richmond, City of New York* (Figure 9);
- the 1906-1913 *Borough of Richmond, Topographic Survey* (Figure 10);
- the 1917 Bromley *Atlas of the Borough of Richmond, City of New York*;
- the 1966 (photo-revised 1981) USGS *Arthur Kill, N.Y.* 7.5-minute topographic quadrangle (Figure 11);
- the 1973 NYSDOT *West Shore Expressway* As-built maps (Figure 12); and,
- the 1989 NYCDEP *WP-138 Oakwood Beach Water Pollution Control Project* As-built maps.

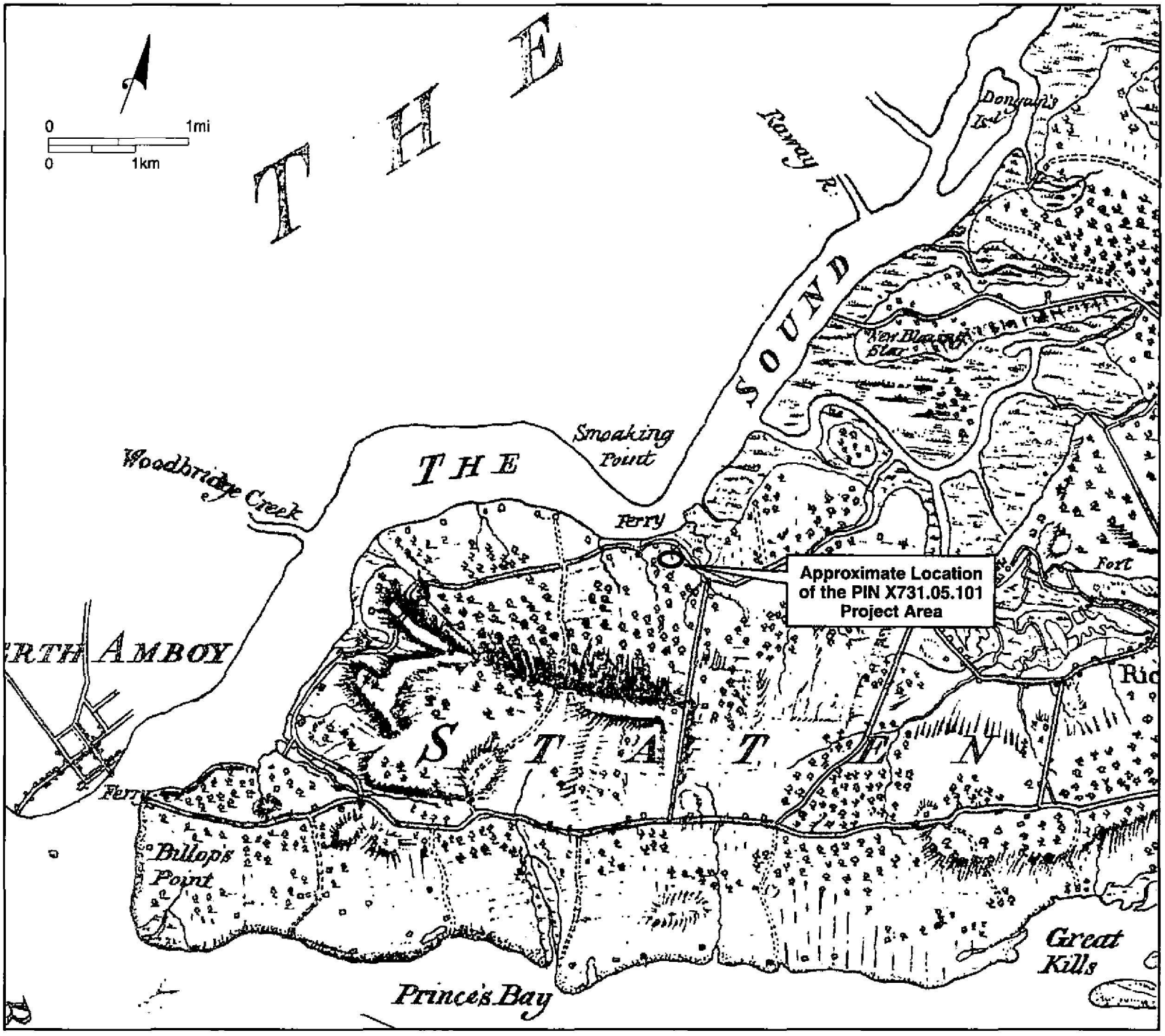


Figure 4. Detail of the 1781 Taylor and Skinner *Map of New York and Staten Island and Part of Long Island* showing the approximate location of the PIN X731.05.101 Project Area.

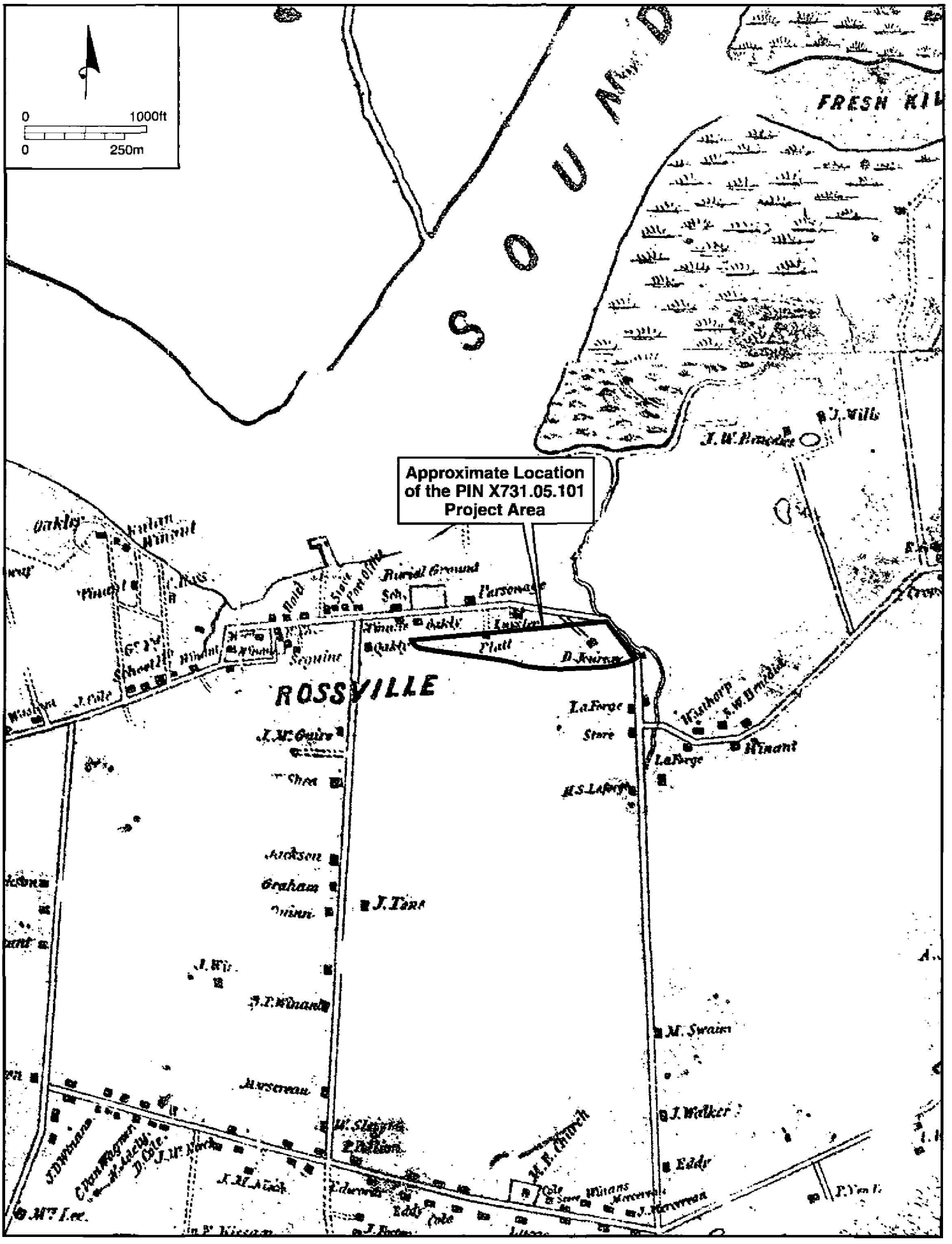


Figure 5. Detail of the 1853 Butler *Map of Staten Island or Richmond County, New York* showing the approximate location of the PIN X731.05.101 Project Area.

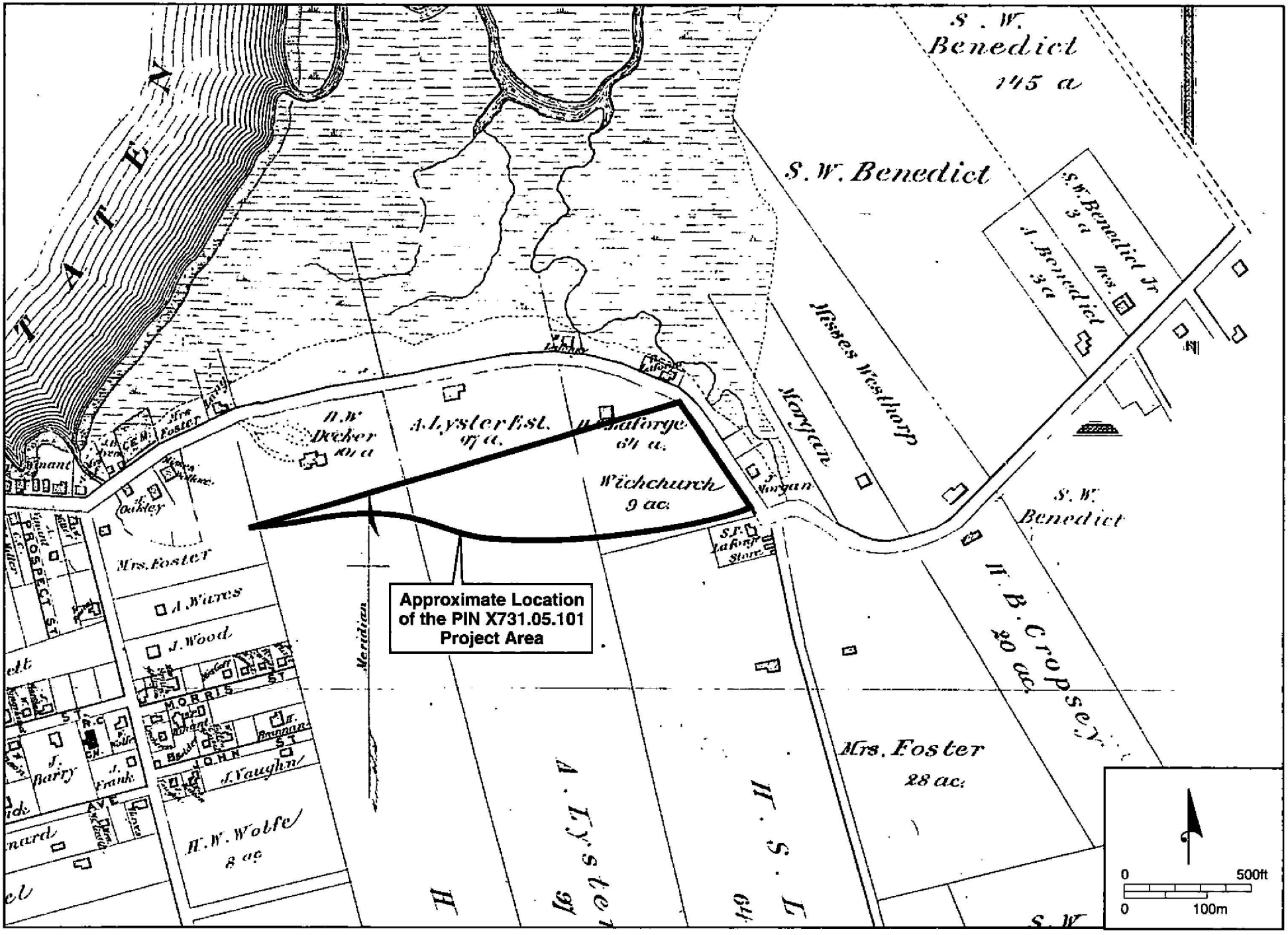


Figure 6. Detail of the 1874 Beers *Atlas of Staten Island, Richmond County, New York* showing the approximate location of the PIN X731.05.101 Project Area.

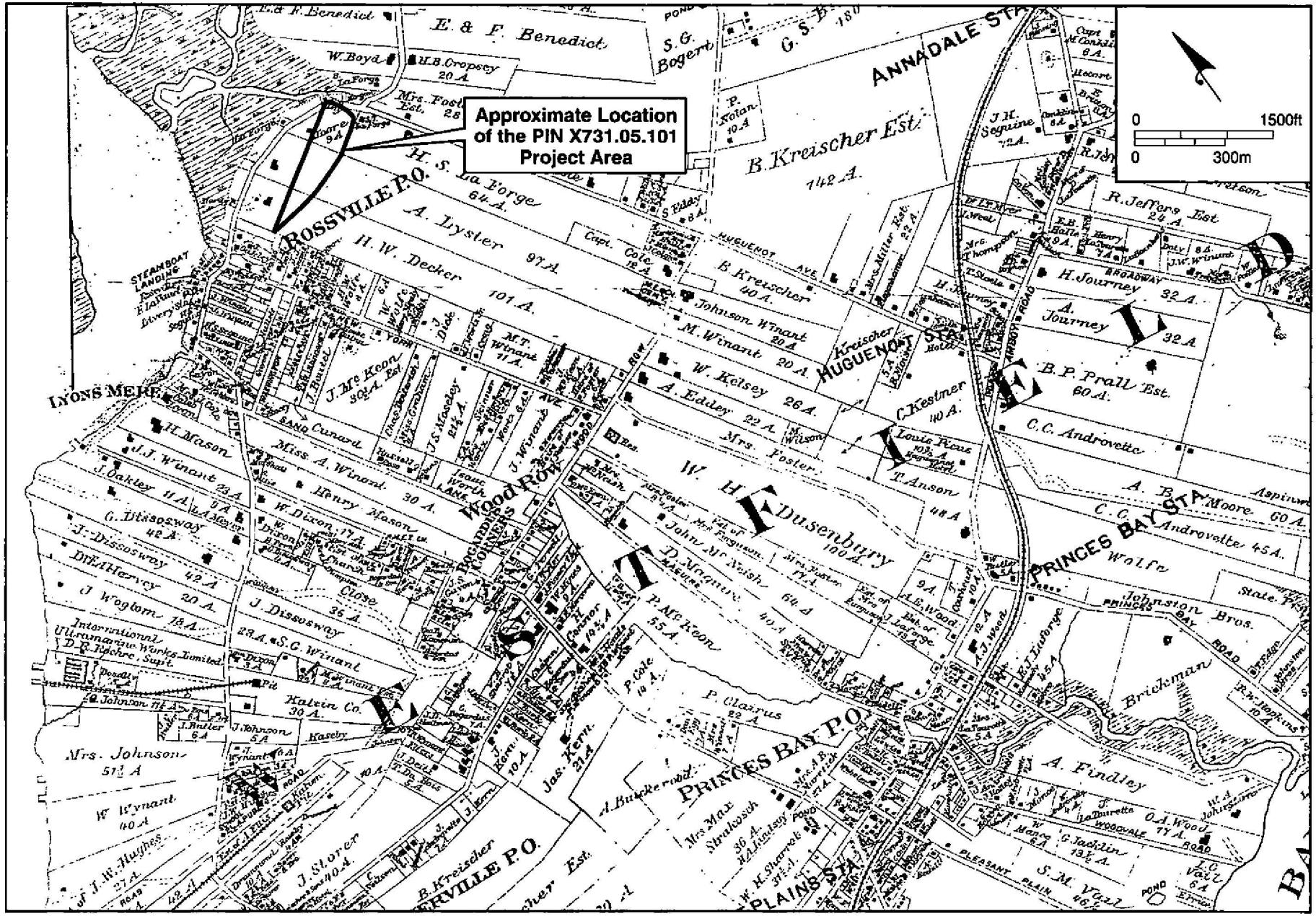


Figure 7. Detail of the 1887 Beers *Atlas of Staten Island, Richmond County, New York* showing the approximate location of the PIN X731.05.101 Project Area.

Figure 8. Detail of the 1898 USGS *Staten Island, N.Y.* 15-minute topographic quadrangle showing the approximate location of the PIN X731.05.101 Project Area.

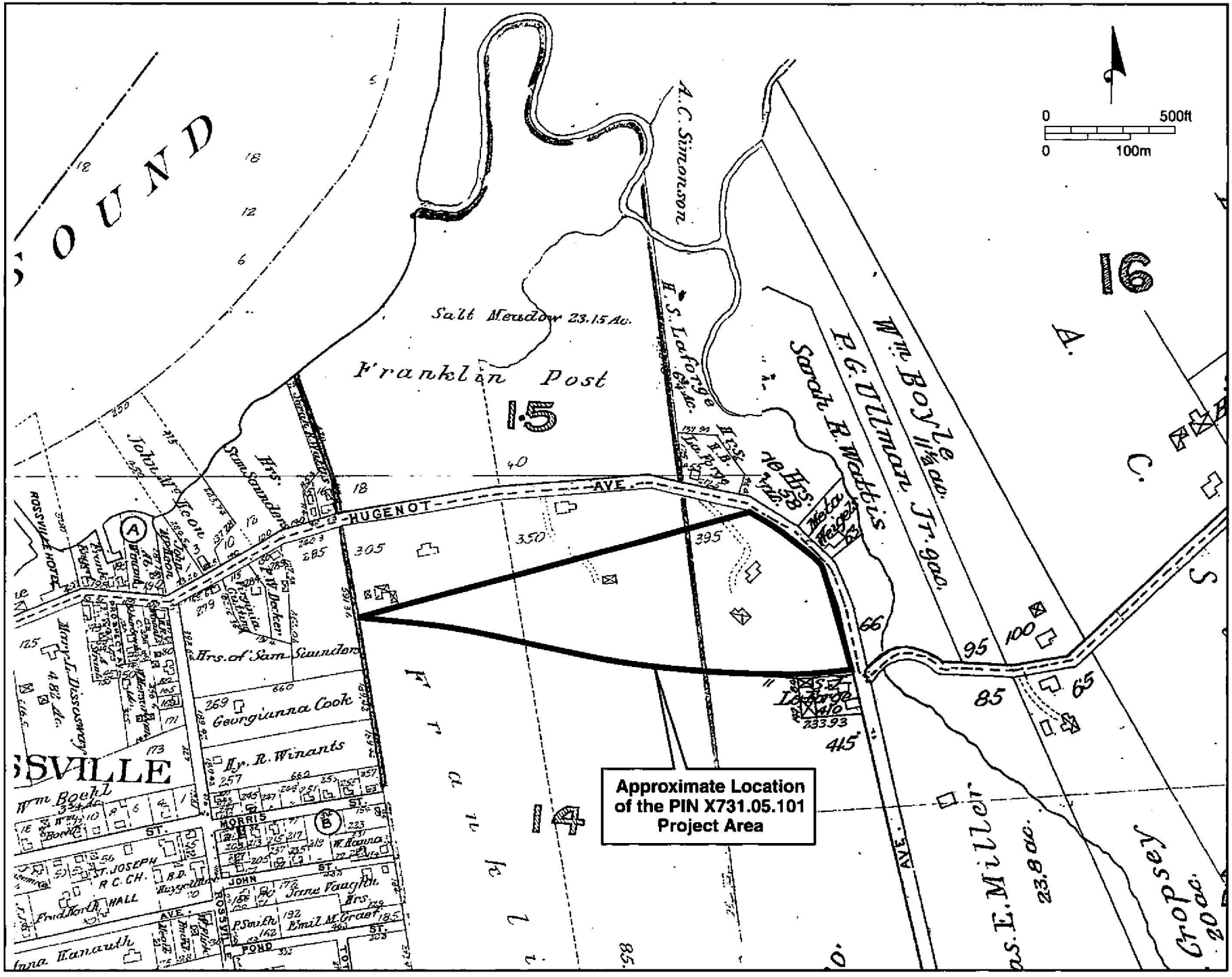


Figure 9. Detail of a 1907 Robinson *Atlas of the Borough of Richmond, City of New York* showing the approximate location of the PIN X731.05.101 Project Area.

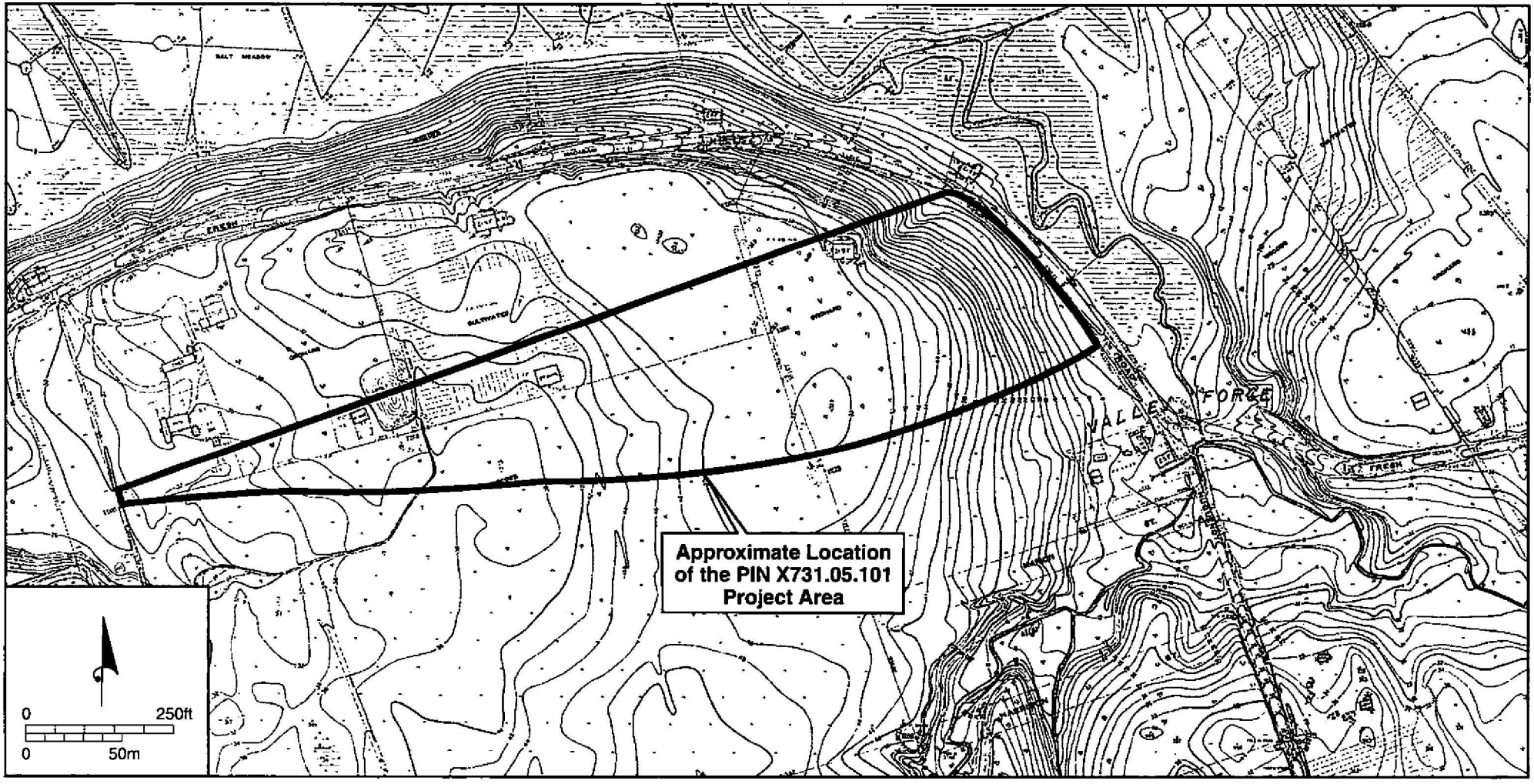


Figure 10. Detail of the 1913 *Borough of Richmond Topographic Survey: Sheet 67* showing the approximate location of the PIN X731.05.101 Project Area.

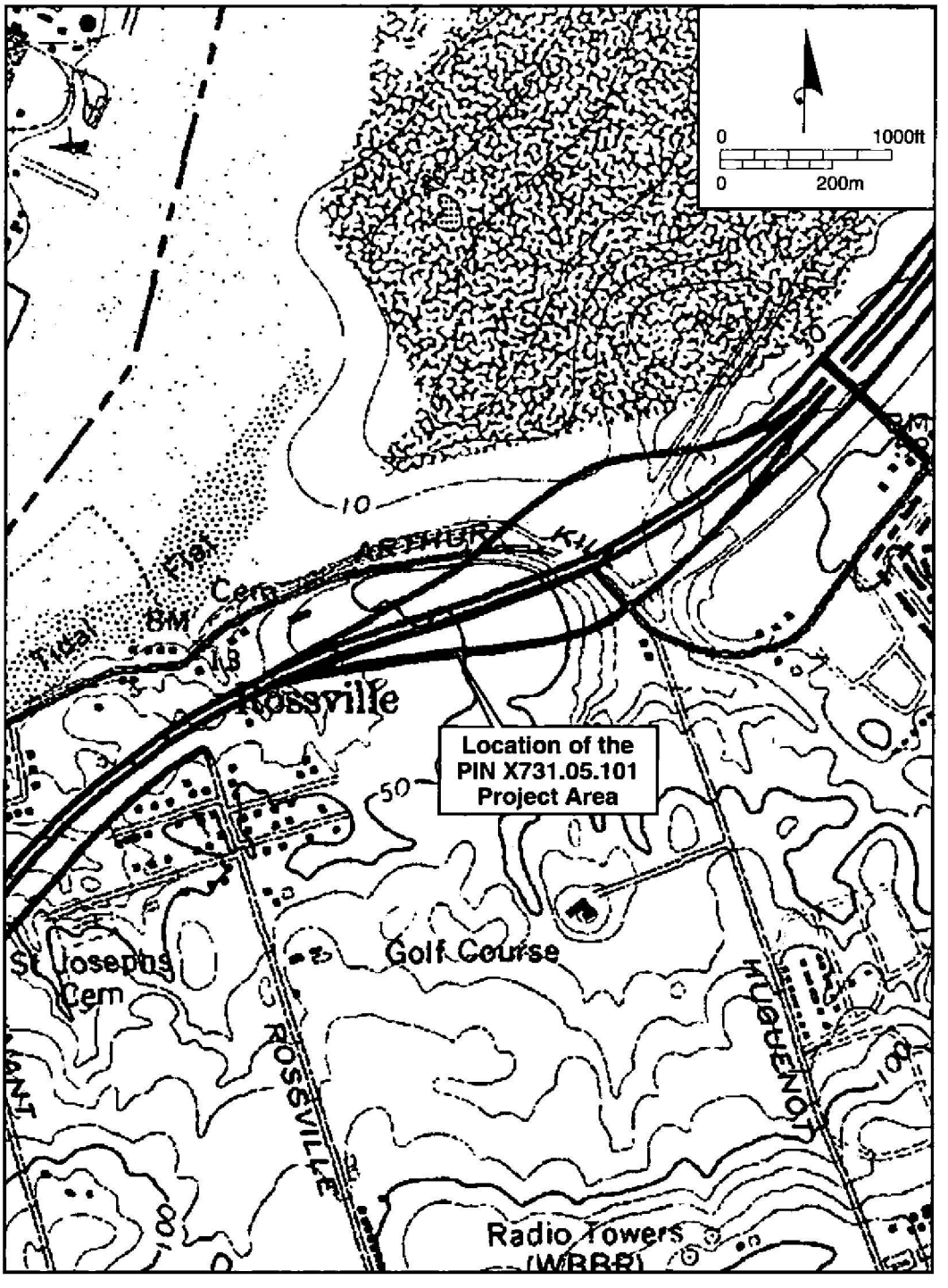


Figure 11. Detail of the 1981 USGS *Arthur Kill, N.Y.* 7.5-minute topographic quadrangle showing the location of the PIN X731.05.101 Project Area.

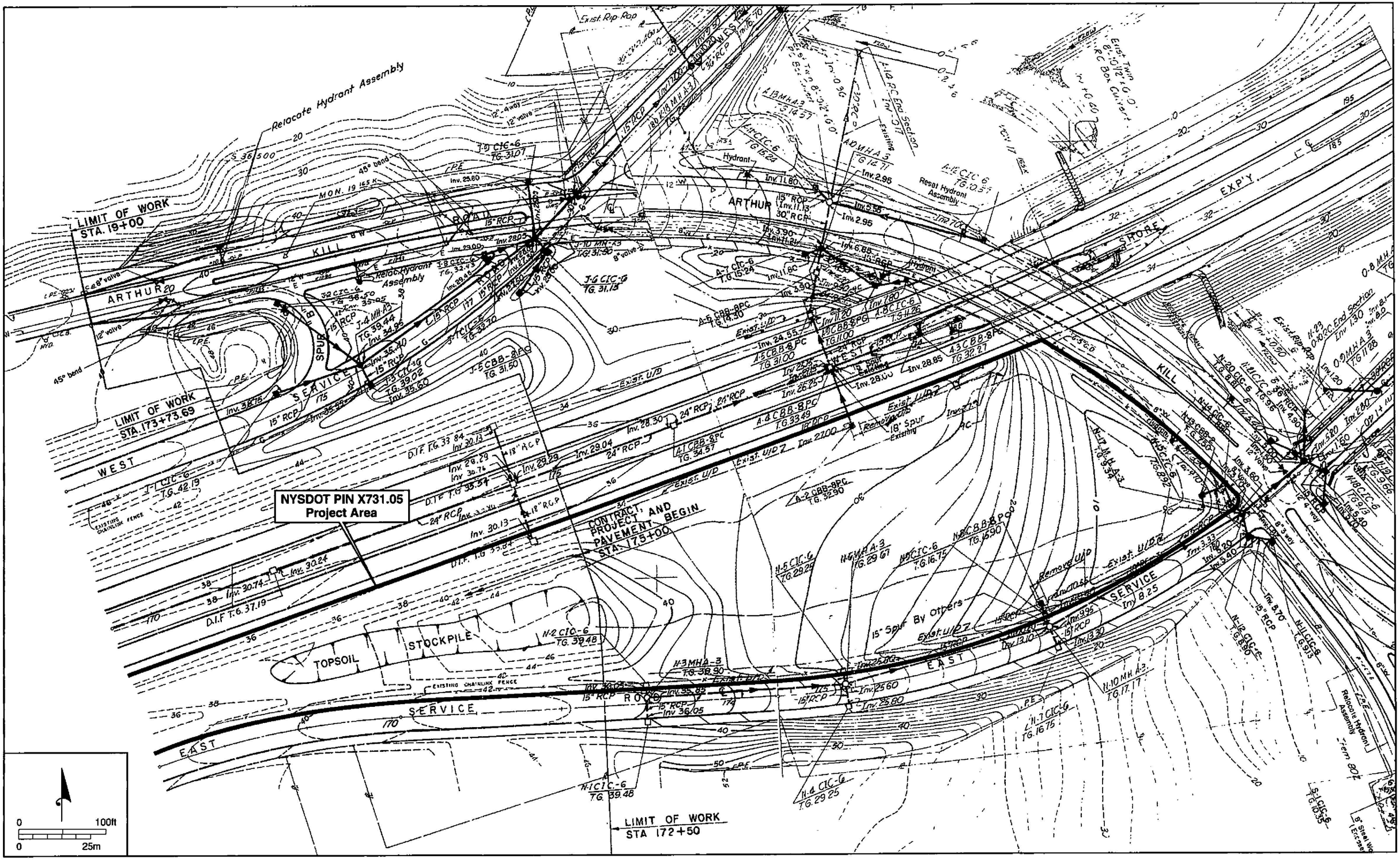


Figure 12. Detail of 1973 NYSDOT as-built map depicting grading and drainage improvements during construction of the West Shore Expressway (Sheet No. 56, Revised June 1973).

Arthur Kill Road (formerly Shore Road or Fresh Kills Road) is among the oldest roads on Staten Island, and served as an important thoroughfare from the ferry at Smoking Point. Before the Revolutionary War the ferry was known as Blazing Star, which lent its name to the Old Blazing Star Tavern (an inn) constructed in Rossville ca. 1825 (Pickman 1978:II-9; see Figure 4). The 1781 Taylor and Skinner map (Figure 4) depicts two structures (MDS 1 and 2; see Table 2) on the south side of Arthur Kill Road in the area immediately north of the Project Area. The 1853 Butler map and later maps through the 1910s (Figures 4-10) show three structures (MDS 1, 2, and 3) located on the south side of Arthur Kill Road in the general vicinity of the Project Area. All three of these structures were farmhouses. The ca. 1907-1917 maps (Figures 9 and 10) also depict the locations of various barns, sheds, and outbuildings and provide some information concerning the architectural details and construction materials of the structures. The easternmost farmstead (MDS 3) appears to have been located within or immediately north of the eastern portion of the Project Area.

Table 3. Map-documented structures (MDS) within or in the immediate vicinity the Project Area.

MDS #	1781 Taylor	1853 Butler	1874 Beers	1887 Beers	1891 USGS	1898 USGS	1907 Robinson	1913 BRST	1917 Bromley
MDS 1	UID structure	Platt	HW Decker	HW Decker	UID structure	UID structure	F Post	2-story	2.5-story
MDS 1.1	-	-	-	-	-	-	outbldg	Shed	outbldg
MDS 1.2	-	-	-	-	-	-	outbldg	Barn	outbldg
MDS 1.3	-	-	-	-	-	-	-	Ice House	outbldg
MDS 2	UID structure	Luyster	A Lyster Est	A Lyster	UID structure	UID structure	F Post	2-story	2.5-story
MDS 2.1	-	-	-	-	-	-	outbldg	Barn	Outbldg
MDS 3	-	Soureay	HS Laforge	Moore	-	UID structure	JT Kitchell	2.5-story	-
MDS 3.1	-	-	-	-	-	-	outbldg	-	-

Sensitivity Assessment and Previous Disturbance

Structures depicted on historic maps indicate that three eighteenth-century and/or nineteenth-century farmhouses and associated outbuildings were located within or immediately north of the Project Area on the south side of Arthur Kill Road. All three of these farmsteads were located within the present right-of-way of the West Shore Expressway (NYS Route 440). The West Shore Expressway was originally conceived and planned by Robert Moses as the "West Shore Parkway" in the 1930s. The expressway was financed and constructed in sections between 1959 and 1976. The first completed section of the road, between the Outerbridge Crossing and the Project Area (Exit 4), opened to traffic in December 1972 (Eastern Roads 2007).

Comparisons between the 1973 NYSDOT As-built map (Figure 12) and earlier depictions of the topography in the vicinity of the Project Area documents the extent of excavation and grading (particularly in the eastern portion of the Project Area) that occurred during the construction of the West Shore Expressway. The original topography in the Project Area is depicted on both the 1913 *Borough of Richmond, Topographic Survey* (Figure 10) and 1981 USGS quadrangle (Figure 11), the latter of which is a photo-revised survey that depicts ca. 1966 (pre-NYS Route 440 construction) contour lines. As depicted on these surveys the Project Area traverses what was formerly the crest of an elevated and relatively level knoll, which dropped steeply at the eastern end to Arthur Kill Road and the Killifish Brook – both of which were located at the base of the slope. The contours along this drop indicate that the slope formerly descended relatively uniformly from west to east.

As shown on the 1973 NYSDOT As-built (Figure 12), the eastbound Exit 4 ramp cuts across and through the slope at the eastern end of the Project Area. The extent of cutting is most clearly shown in the contour lines south of the service road. These contours document the stark contrast between the original topography and the steep cut bank that descends to the service road. The extent of grading within the Project Area (north of the service road) is also readily apparent when compared to the original contours shown south of the service road. The As-built map also documents the change in the direction of slope at the eastern end of the Project Area from west-to-east to northwest-to-southeast that was constructed to drain stormwater run-off away from the West Shore Expressway.

None of the MDS listed in Table 2 are depicted on the 1975 NYSDOT quadrangle (Figure 2), 1981 USGS quadrangle (Figure 11), or 1973 NYSDOT As-built maps (Figure 12). All of these structures appear to have been demolished prior to (or possibly in anticipation of) the construction of the West Shore Expressway..

D. Archeological Survey Methodology

1. Project Walkover

JMA archeologists conducted an initial walkover of the Project Area on February 28, 2007 to assess conditions and develop a survey strategy. The western and northern portions of the Project Area are generally in mowed lawn right-of-way areas that are relatively level (Photographs 1-3). The areas in the central portion of the Project Area immediately adjacent to the fence that defines the southern perimeter of the Project Area (along the eastbound Exit 4 ramp) are overgrown with small trees, shrubs, brambles, vines, and poison ivy (Photographs 2-3). The eastern end of the Project Area is gently sloped from northwest to southeast and overgrown with tall grasses, phragmites, and shrubs or bushes (Photographs 4-6).

Evidence for previous disturbance is readily apparent throughout the Project Area (see Appendix D). Buried electrical and fiber utility lines are located within the southern road shoulder of eastbound NYS Route 440 (Photographs 7-8). JMA field personnel observed access plates for service boxes in this area with the labels N.Y.C. ELECTRICAL, NYSDOT ELECTRICAL, and NYSDOT FIBER.

The central portion of the Project Area is level with low lawn grasses and weeds. This area was formerly paved and likely has been used by the DOT as a lay-down area or staging area (Photographs 9-10). Intermittent areas of exposed asphalt paving are apparent on the ground surface (Photograph 9). JMA personnel observed a manhole labeled DEP SEWER that marks the location of the Oakwood Beach Sewer, which was constructed ca. 1989 and traverses the eastern end of the Project Area from northwest to southeast (see Appendix D). The Oakwood Beach Sewer in this area is a 30-inch interceptor enclosed within 60-inch-diamter steel casing (NYCDEP 1989).

The western end of the Project Area has been graded to create a swale to drain water away from both the Expressway and Exit 4 eastbound ramp (Photograph 11). The extent of excavation that occurred at the eastern end of the Project Area during the construction of NYS Route 440 and Exit 4 ramp (NYSDOT 1973; see Figure 12) is readily observable in the steep cut bank that rises to the south of the eastern end of the exit ramp (Photograph 12).

2. Testing Procedures

Within apparently undisturbed areas (or areas where the extent of previous disturbance was not readily apparent based on the initial walkover reconnaissance), JMA field personnel excavated shovel tests at 50-foot (approximately 15 m) intervals. In areas where soils in shovel tests were observed to be previously disturbed to the extent that there was no likelihood that archeological remains could be present (e.g., stripped areas), JMA personnel excavated shovel tests at 100-foot (approximately 30 m) intervals. The purpose of testing at this interval was to confirm the presence and extents of disturbed/stripped conditions. There are no cultivated areas suitable for pedestrian surface survey located within the Project Area.

Shovel tests were generally 16-20 inches (40-50 cm) in diameter, and excavated to depths up to approximately 18 inches (46 cm). All excavated soils were passed through a one-quarter-inch hardware cloth to insure uniform recovery of artifacts. Shovel test profiles were recorded on standard field forms, which minimally included information pertaining to stratigraphic depths; soil color, texture and inclusions; disturbances; and artifacts. The locations of all shovel tests were plotted on a base map of the Project Area. The field activities and existing conditions across the Project Area were photo-documented.

E. Archeological Survey Results

1. Brief Overview of Results

JMA field personnel conducted archeological survey fieldwork for the Project on March 13-15, 2007. JMA personnel excavated a total of forty-eight (48) shovel tests within the Project Area. The location of shovel tests, areas not tested, previously disturbed areas, map documented structures, and photographic angles are shown on the Project Map in Appendix D. Shovel test unit descriptions and artifacts recovered are presented in Appendix B.

Photograph 7. Buried electrical and fiber lines along the south shoulder of the West Shore Expressway (NYS Route 440), view to the east.

Photograph 8. Electrical utilities along the south shoulder of the West Shore Expressway (NYS Route 440), view to the east.

Photograph 9. Exposed asphalt paving on the surface in the former construction lay-down or staging area in the central portion of the Project Area (adjacent to shovel test 3.3), view to the east.

Photograph 10. "DEP SEWER" manhole in the former construction lay-down or staging area in the central portion of the Project Area, view to the south.

Photograph 11. Drainage swale area in the western portion of the Project Area adjacent to the Exit 4 service road/off-ramp (right), view to the east.

Photograph 12. Cut-bank south of the Exit 4 service road/off-ramp, view to the east.

JMA excavated 48 shovel tests along three transects that extended from west to east across the Project Area (see Appendix B; Appendix D: Project Map). Shovel tests 1.01-1.18 were excavated at 50-foot intervals along a transect located parallel to and approximately 20 feet north of the chain-link fence that defines the southern perimeter of the Project Area. Shovel tests 2.01-2.16 were excavated at 50-foot intervals along a transect located 50 feet north of and parallel to shovel tests 1.01-1.18.

Shovel tests 1.01-1.18 and 2.01-2.09 were excavated within the relatively level and overgrown western portion of the Project Area. Soils observed in these shovel tests consisted of black silt loam topsoil underlain by reddish brown or dark yellowish brown mottled and mixed clay loam with gravel and pebbles that extended to between 8 and 12 inches (20-30 cm) below the surface. These soil layers were underlain by compact reddish brown clay subsoil. A single sherd of gray stoneware was recovered from mixed black and reddish clay (0-6 inches, or 0-15 cm below surface) in shovel test 1.05. No other artifacts were recovered from these shovel tests.

The black topsoil in the western portion of the Project Area was clean, loose, organic loam and may represent the "TOPSOIL STOCKPILE" depicted on the 1973 NYSDOT As-built map (Figure 12). The underlying mixed clay loam with gravel layer likely represents the original native soils that were re-deposited or graded/smoothed during the construction of the Expressway. These soils directly overlay intact subsoil. The original near-surface soil horizons in this portion of the Project Area are no longer present.

Indications of the sandy soils that may have formerly covered the Project Area (prior to the construction of the West Shore Expressway) were observed in shovel tests 1.14 and 1.15. These soils consisted of mixed together strong brown mottled with gray sand and clay loam with gravel and pebbles that extended to between 10 and 11 inches (25-28 cm) below the surface. The mixing of sands and clay loam in these shovel tests indicate that the area is previously disturbed. A single fragment of cobalt-blue glass (likely from a cold-cream jar) and crushed oyster shell fragments were recovered from shovel test 1.14. No prehistoric materials were observed in association with these crushed shell fragments.

JMA personnel excavated shovel tests 3.01-3.16 at 50-foot intervals parallel to and 50-feet north of shovel tests 2.10-2.15. All 12 of these shovel tests were excavated within the open, mowed area that was formerly paved and likely used as a staging area (Photographs 9 and 10). Intact asphalt paving was encountered 3.02-3.04 just below the ground surface. Soils observed within the remaining shovel tests in this area consisted of between 4 and 6 inches (10-15 cm) of dark grayish brown clay or clay loam with gravels and pebbles directly overlying reddish brown compact clay subsoil. These soils represent a layer of graded or smoothed soils over intact subsoil. The original near-surface soil horizons in this portion of the Project Area are no longer present.

Shovel tests 1.19-1.21 and 2.17-2.21 were excavated at 100-foot intervals within the eastern portion of the Project Area. All of these shovel tests were excavated along the northwest-to-southeast downward-slope that is the result of grading depicted on the 1973 NYSDOT As-built map (Figure 12; refer to discussion above). Soils in these shovel tests consisted of approximately 5 inches (13 cm) of loose, wet reddish brown clay loam with gravel overlying reddish brown compact clay subsoil. These soils represent a layer of re-deposited graded soils over intact subsoil. The original topography in this portion of the Project Area has been extensively modified.

No above-ground or surface indications (e.g., foundations or structural remains) of the MDS identified in Table 3 were apparent within the Project Area. MDS 3 and MDS 3.1 may have been formerly located within the Project Area (or immediately north, within the NYS 440 ROW; see Appendix D); however, if within the Project Area then these structures would have been located along the stripped and graded slope that drains stormwater run-off away from the Expressway (Table 4). No indications of these structures, nor evidence of any intact soils, were observed within this eastern portion of the Project Area.

Table 4. Results of archeological investigations at MDS within or adjacent to the Project Area.

MDS #	First Map Identification	Inside Project Area	Field Conditions	Testing Interval	# of Shovel Tests	# of Artifacts	Comments
MDS 1	unidentified structure 1781 Taylor & Skinner	No	w/in NYS Route 440 ROW *or under* industrial buildings.	-	-	-	Outside project area. No testing conducted.
MDS 2	unidentified structure 1781 Taylor & Skinner	No	w/in NYS Route 440 ROW.	-	-	-	Outside project area. No testing conducted.
MDS 3	"Soureay" 1853 Butler	Yes	w/in NYS Route 440 ROW. Stripped and graded slope southwest of roadway.	-	-	-	Previously disturbed and steeply sloped. No testing conducted.
MDS 3.1	outbuilding 1907 Robinson	Yes	w/in NYS Route 440 ROW. Stripped and graded slope southwest of roadway.	-	-	-	Previously disturbed and steeply sloped. *No testing conducted.*

The results of the Phase 1 reconnaissance indicate that the Project Area is entirely previously disturbed. No archeological deposits or features warranting any additional investigation were identified during the Phase 1 survey reconnaissance fieldwork.

II. ARCHITECTURAL SURVEY

A. Architectural Survey Methodology

There are no previously recorded historic or architectural resources located within the Project Area. There are no properties within or in the immediate vicinity of the Project Area that are listed in or have been determined eligible for the State and/or National Register of Historic Places. There are also not any properties designated New York City Landmarks within the immediate vicinity of the Project Area. None of the structures depicted on historic maps along Arthur Kill Road in the vicinity of the Project Area are still standing.

B. Architectural Survey Results

The only standing structure located in the immediate vicinity of the Project Area (Table 1) is a 45,000 square-foot municipal building owned by the NYS Department of General Services, which was built in 1955 (NYCDCP 2006). In the opinion of JMA, the building is not historically or architecturally significant. The eastbound and westbound lanes of the West Shore Expressway (NYS Route 440) cross over Arthur Kill Road on two bridges (BINs 1069711 and 1069712). Both of these bridges were constructed ca. 1977. NYSDOT has determined that neither of these bridges are eligible for listing on the National register of Historic Places (see Appendix C).

Table 5. List of architectural properties in the immediate vicinity the Project Area.

Address/Location	≥50 years old and JMA recommends NRE	≥50 years old and JMA recommends Non-NRE	< 50 years old	Existing NR Status / Comments
Richmond County (MCD 08501)				
1951 Arthur Kill Road (ca. 1955, Dept of General Services Bldg)		X		
BIN 1069711 (ca. 1977, girder beam)			X	
BIN 1069712 (ca. 1977, girder beam)			X	

JMA did not identify any historic or architecturally significant properties that could be affected by the proposed project.

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Appendix B: Shovel Test Unit Profiles and Artifact Catalog

PIN X731.05.101 - Phase I Reconaissance Survey
Appendix B: Shovel Test Unit Straigraphic Profiles
John Milner Associates, Inc. - March 2007

Shovel Test	Stratum	Depth (in)	Soil Description	Artifacts Recovered
1.01	I	0-2	10YR 2/1 black silt loam	No Cultural Material (NCM)
1.01	II	2-3	5YR 4/3 reddish brown clay loam w/ gravel	NCM
1.01	III	3-8	2.5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray compact clay (subsoil)	NCM
1.02	I	0-1	10YR 2/1 black silt loam (stripped and redistributed)	NCM
1.02	II	1-3	2.5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray clay (groundwater)	NCM
1.03	I	0-4	10YR 2/1 black silt loam	NCM
1.03	II	4-10	2.5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray clay (subsoil)	NCM
1.04	I	0-6	10YR 2/1 black mottled w/ 2.5YR 5/3 reddish brown clay	NCM
1.04	II	6-10	2.5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray clay (subsoil)	NCM
1.05	I	0-6	10YR 2/1 black mottled w/ 2.5YR 5/3 reddish brown clay	1 gray salt-glaze stoneware/Albany slip interior
1.05	II	6-11	2.5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray clay (groundwater)	NCM
1.06	I	0-5	10YR 2/1 black mottled w/ 2.5YR 4/3 reddish brown clay	NCM
1.06	II	5-10	2.5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray clay (subsoil)	NCM
1.07	I	0-3	10YR 2/1 black silt loam	NCM
1.07	II	3-4.5	10YR 6/1 gray sand	NCM
1.07	III	4.5-10	2.5YR 5/4 reddish brown clay w/ gravel & pebbles (subsoil)	NCM
1.08	I	0-6	10YR 2/1 black silt loam	NCM
1.08	II	6-9	10YR 5/6 yellowish brown mottled w/ 10YR 2/1 black silt loam w/ gravel	NCM
1.08	III	9-12	2.5YR 5/4 reddish brown compact clay (subsoil)	NCM
1.09	I	0-4	10YR 2/1 black silt loam	NCM
1.09	II	4-8	10YR 2/1 black mottled w/ 2.5YR 5/4 reddish brown compact clay (subsoil)	NCM
1.09	III	8-10	2.5YR 5/4 reddish brown clay loam w/ pebbles & cobbles (subsoil)	NCM
1.10	I	0-4	10YR 3/2 very dark grayish brown clay loam w/ gravel & pebbles	NCM
1.10	II	4-11	10YR 4/4 dark yellowish brown mottled w/ 10YR 3/2 very dark grayish brown clay loam w/ gravel & pebbles	NCM
1.10	III	11-15	2.5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray compact clay (subsoil)	NCM
1.11	I	0-4	10YR 3/2 very dark grayish brown silt loam	NCM
1.11	II	4-11	10YR 4/4 dark yellowish brown mottled w/ 10YR 3/2 very dark grayish brown clay loam w/ pebbles & cobbles	NCM
1.11	III	11-15	2.5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray compact clay (subsoil)	NCM
1.12	I	0-5	10YR 3/2 very dark grayish brown silt loam	NCM
1.12	II	5-11	10YR 4/4 dark yellowish brown mottled w/ 10YR 3/2 very dark grayish brown clay	NCM
1.12	III	11-13	2.5YR 5/4 reddish brown compact clay (subsoil)	NCM
1.13	I	0-5	10YR 3/2 very dark grayish brown silt loam	NCM
1.13	II	5-11	10YR 4/4 dark yellowish brown mottled w/ 10YR 3/2 very dark grayish brown clay	NCM
1.13	III	11-13	2.5YR 5/4 reddish brown compact clay (subsoil)	NCM

Shovel Test	Stratum	Depth (in)	Soil Description	Artifacts Recovered
1.14	I	0-5	10YR 4/3 brown sand	1 frament cobalt-blue glass
1.14	II	5-10	7.5YR 4/6 strong brown mottled w/ 7.5YR 6/1 gray clay loam w/ gravel	oyster shell fragments
1.14	III	10-16	7.5YR 4/4 brown sand (outwash)	NCM
1.15	I	0-5	10YR 4/3 brown silty clay loam	NCM
1.15	II	5-11	7.5YR 4/6 strong brown mottled w/ 7.5YR 6/1 gray clay loam w/ gravel	NCM
1.15	III	11-16	7.5YR 4/4 brown sand (outwash)	NCM
1.16	I	0-4	10YR 2/1 black compact silt loam	NCM
1.16	II	4-9	10YR 4/3 brown silty clay loam	NCM
1.16	III	9-12	2.5YR 5/4 reddish brown compact clay	NCM
1.17	I	0-8	10YR 4/3 brown sandy loam	NCM
1.17	II	8-12	2.5YR 5/4 reddish brown clay	NCM
1.18	I	0-6	10YR 4/3 brown sand	NCM
1.18	II	6-10	10YR 6/1 gray sand	NCM
1.18	III	10-12	2.5YR 5/4 reddish brown compact clay (subsoil)	NCM
1.19	I	0-4	2.5YR 5/4 reddish brown clay	NCM
1.19	II	4-11	10YR 3/3 dark brown mottled w/ 10YR 5/3 brown sand	NCM
1.19	III	11-15	2.5YR 5/4 reddish brown compact clay (subsoil)	NCM
1.20	I	0-5	2.5YR 5/4 reddish brown clay (groundwater)	NCM
1.20	II	5-10	10YR 3/3 dark brown mottled w/ 10YR 5/3 brown sand (groundwater)	NCM
1.20	III	10-16	2.5YR 5/4 reddish brown clay	NCM
1.21	I	0-5	2.5YR 5/4 reddish brown clay (groundwater)	NCM
1.21	II	5-10	10YR 3/3 dark brown mottled w/ 10YR 5/3 brown sand (groundwater)	NCM
1.21	III	10-16	2.5YR 5/4 reddish brown clay (groundwater)	NCM
2.01	I	0-2.5	10YR 2/1 black compact silt loam	NCM
2.01	II	2.5-6	5YR 5/4 reddish brown silty clay loam w/ gravel	NCM
2.01	III	6-13	2.5YR 4/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray clay (subsoil)	NCM
2.02	I	0-4	10YR 2/1 black compact silt loam	NCM
2.02	II	4-8	2.5YR 4/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray clay	NCM
2.02	III	8-15	10YR 6/6 brownish yellow mottled w/ 10YR 7/2 light gray clay (subsoil)	NCM
2.03	I	0-6.5	10YR 2/1 black compact silt loam	NCM
2.03	II	6.5-17	2.5YR 4/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray compact clay (subsoil)	NCM
2.04	I	0-6	10YR 2/1 black compact silt loam	NCM
2.04	II	6-15	5YR 5/4 reddish brown mottled w/ 2.5YR 5/4 reddish brown clay (subsoil)	NCM
2.05	I	0-5.5	10YR 2/1 black compact silt loam	NCM

Shovel Test	Stratum	Depth (in)	Soil Description	Artifacts Recovered
2.05	II	5.5-15	5YR 5/4 reddish brown mottled w/ 2.5YR 5/4 reddish brown clay (subsoil)	NCM
2.06	I	0-6	10YR 2/1 black compact silt loam	NCM
2.06	II	6-14	5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray clay (subsoil)	NCM
2.07	I	0-4	10YR 2/1 black compact silt loam	NCM
2.07	II	4-12	10YR 6/6 brownish yellow mottled w/ 10YR 7/2 light gray compact clay (subsoil)	NCM
2.08	I	0-4	10YR 2/1 black compact silt loam	NCM
2.08	II	4-7.5	5YR 5/4 reddish brown clay	NCM
2.08	III	7.5-15	2.5YR 4/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray compact clay (subsoil)	NCM
2.09	I	0-7	5YR 5/4 reddish brown clay loam	NCM
2.09	II	7-8.5	10YR 4/3 brown clay loam	NCM
2.09	III	8.5-17	5YR 5/4 reddish brown clay w/ gravel & pebbles (subsoil)	NCM
2.10	I	0-2	10YR 3/2 very dark grayish brown clay w/ gravel & pebbles	NCM
2.10	II	2-4.5	10YR 4/4 dark yellowish brown clay w/ gravel & pebbles	NCM
2.10	III	4.5-14	5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray compact clay (subsoil)	NCM
2.11	I	0-3.5	10YR 3/2 very dark grayish brown clay loam	NCM
2.11	II	3.5-10	5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray compact clay (subsoil)	NCM
2.12	I	0-3	10YR 3/2 very dark grayish brown clay loam w/ gravel	NCM
2.12	II	3-8	10YR 4/4 dark yellowish brown mottled w/ 10YR 6/2 light brownish gray clay loam w/ gravel	NCM
2.12	III	8-14	2.5YR 4/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray compact clay (subsoil)	NCM
2.13	I	0-7	10YR 3/2 very dark grayish brown clay loam w/ gravel	NCM
2.13	II	7-12	2.5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray compact clay (subsoil)	NCM
2.14	I	0-6	10YR 3/2 very dark grayish brown clay loam w/ gravel	NCM
2.14	II	6-12	2.5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray compact clay (subsoil)	NCM
2.15	I	0-9	5YR 5/4 reddish brown mottled w/ 10YR 3/2 very dark grayish brown clay loam w/ gravel	NCM
2.15	II	9-16	10YR 7/1 light gray mottled w/ 10YR 6/6 brownish yellow sandy loam (subsoil)	NCM
2.16	I	0-4	5YR 5/4 reddish brown clay loam w/ gravel	NCM
2.16	II	4-12	10YR 7/1 light gray mottled w/ 10YR 6/6 brownish yellow sandy loam (subsoil)	NCM
2.17	I	0-7	5YR 5/4 reddish brown clay loam w/ gravel	NCM
2.17	II	7-13	10YR 7/1 light gray mottled w/ 10YR 6/6 brownish yellow sandy loam (subsoil)	NCM
2.18	I	0-4.5	5YR 5/4 reddish brown clay	NCM
2.18	II	4.5-10	10YR 7/1 light gray mottled w/ 10YR 6/6 brownish yellow sandy loam (subsoil)	NCM
2.19	I	0-2	5YR 5/4 reddish brown clay loam w/ gravel	NCM
2.19	II	2-7	10YR 4/2 dark grayish brown clay loam w/ gravel	NCM
2.19	III	7-13	10YR 7/1 light gray mottled w/ 10YR 6/6 brownish yellow sandy loam (subsoil)	NCM

Shovel Test	Stratum	Depth (in)	Soil Description	Artifacts Recovered
2.20	I	0-5	5YR 5/4 reddish brown clay loam w/ gravel	NCM
2.20	II	5-9	10YR 4/2 dark grayish brown compact clay loam	NCM
2.20	III	9-13	10YR 7/1 light gray mottled w/ 10YR 6/6 brownish yellow sandy loam (subsoil)	NCM
2.21	I	0-5	5YR 5/4 reddish brown clay loam w/ gravel	NCM
2.21	II	5-12	10YR 7/1 light gray mottled w/ 10YR 6/6 brownish yellow sandy loam (subsoil)	NCM
3.01	I	1-4	10YR 2/1 black sand	NCM
3.01	II	4-7	2.5YR 4/3 reddish brown compact clay	NCM
3.02	I	0-2	10YR 2/1 black clay (buried blacktop)	NCM
3.03	I	0-3	10YR 2/1 black clay (buried blacktop)	NCM
3.04	I	0-3	10YR 3/2 very dark grayish brown compact silt loam (buried blacktop)	NCM
3.05	I	0-6	10YR 3/2 very dark grayish brown clay loam	NCM
3.05	II	6-11	2.5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray compact clay (subsoil)	NCM
3.06	I	0-4	10YR 3/2 very dark grayish brown clay loam	NCM
3.06	II	4-11	2.5YR 5/4 reddish brown mottled w/ 2.5YR 5/1 reddish gray compact clay (subsoil)	NCM

Appendix C: Correspondence

FORM A - CULTURAL RESOURCE SURVEY CHECKLIST (DATE SUBMITTED 11-9-06)

PIN X 731.05.101

P.R. #: _____

REGIONAL PRIORITY: 3

Number of copies needed: _____

PROJECT LOCATION

Hamlet/ Village/ City: STATEN ISLAND

Town: NYC

County: RICHMOND

ROLL-OVER PROJECT? (Y/N) N

DATE OF PREVIOUS REQUEST _____

CHANGE IN PROJECT SCOPE N

PREVIOUS SURVEYS? (Y/N) Y

IF YES, SURVEY DATE IN PROGRESS

TYPE & LEVEL OF SURVEY REQUESTED

PHASE I - RECONNAISSANCE SURVEY X or ADDENDUM SURVEY _____

PHASE II - SITE EXAM _____ (Indicate Site Name and USN)

PHASE III - DATA RECOVERY PLAN _____ DATA RECOVERY _____ (Indicate Site Name & USN)

HABS/HAER (I,II, III) _____ (Indicate BIN or Bldg Name/ Address & USN)

UNIQUE SITE NUMBER(S) (USN):

PROJECT DESCRIPTION & PROPOSED WORK: CONSTRUCT A PARK & RIDE FACILITY & A BUILDING FOR NYPD ON EXISTING NYSDOT R.O.W.

INCLUDES: Temporary easement and access areas _____ ROW acquisition _____ On-site detours _____ Other _____

PROJECT AREA BOUNDARIES FOR CRS (see attached plans): Rte/ Highway Name ROUTE 440 - WEST SHORE EXPRESSWAY (ON THE NORTH)

FROM: EAST SERVICE ROAD (ON THE SOUTH)

TO: ARTHUR KILL ROAD (ON THE EAST)

ESTIMATED LENGTH (FT./M. OR MILES) 2800 m

ESTIMATED WIDTH (FT./M) 80 m

ESTIMATED NO.OF BUILDINGS IN PROJECT AREA 0

ESTIMATED NO.OF BUILDINGS TO BE ACQUIRED/ REMOVED 0

FEDERAL FUNDING (Y/N) Y

CURRENT PROJECT PHASE: I - IV PRELIMINARY DESIGN

FEDERAL PERMITS (INCL. NATIONWIDE): YES

SCOPE CLOSURE DATE: _____

BIN 1069711 / 1069712

Year Built 1977 / 1977

Type: GIRDER BEAM / GIRDER BEAM

RESULTS OF 2002 HISTORIC BRIDGE INVENTORY

Eligible _____ Not Eligible X National Register Listed _____ Unevaluated _____ Individual Evaluation Needed: (Y/N) _____

ADDITIONAL COMMENTS or SPECIAL INSTRUCTIONS:
PROJECT SITE IS WITHIN APE OF X096.18.101 - ACCESS & SAFETY IMPROVEMENTS TO WEST SHORE EXPRESSWAY - RT 440 - CULTURAL RESOURCE STUDY - FINAL REPORT IN PROGRESS, REPORT CONDUCTED BY EARTHTECH.
C.R. CONCERNS: FIGURE 10-13, BUILDING FOOTPRINTS
FIGURE 10-5, PREVIOUS IDENTIFIED ARCHAEOLOGICAL RESOURCE

ELECTRONIC MAPS AVAILABLE (Y/N) N

REGIONAL CONTACTS

1. WILLIAM MAUSLING — PHONE/ EMAIL: (718) 482-4058 wmausling@dot.state.ny.us
2. ROBERT LARAVIE — PHONE/ EMAIL: (718) 482-6724 rlaravie@dot.state.ny.us

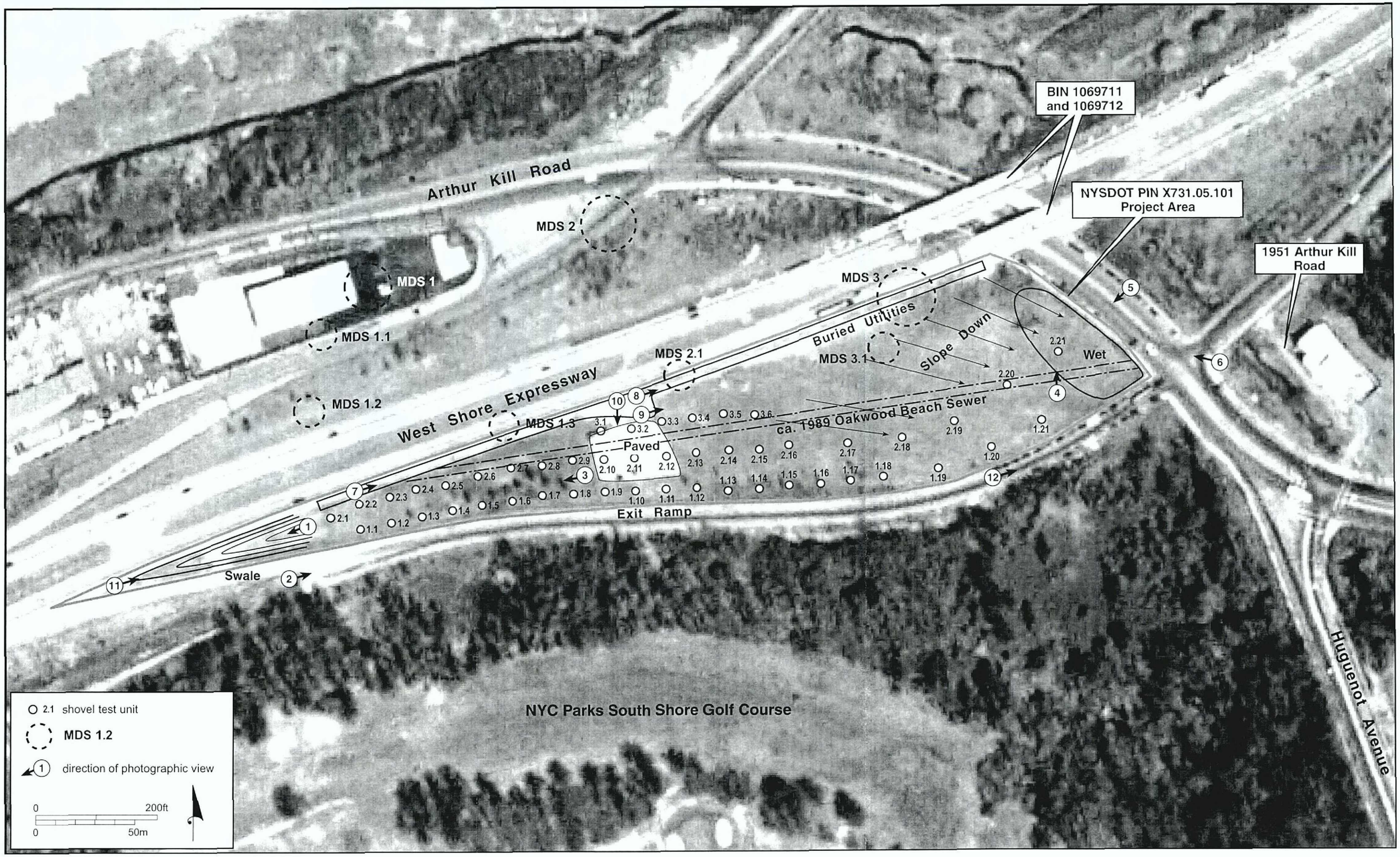
Form A Package:

- 4 copies Form A - (2 SED, 1 SHPO, 1 EAB)
- 4 copies Location Maps – USGS Quad or DOT Planimetric w/ survey limits
- 4 copies Project Plans w/ cultural resource survey limits
- 4 copies WinBolts Screen
- 4 copies Cultural Resource Screening Results
- 4 copies Documentation for cultural resource identification prior to current SED work request

1/06

Due 3/30/07

Appendix D: Project Map



Appendix D. PIN X731.05.101 Project Map.