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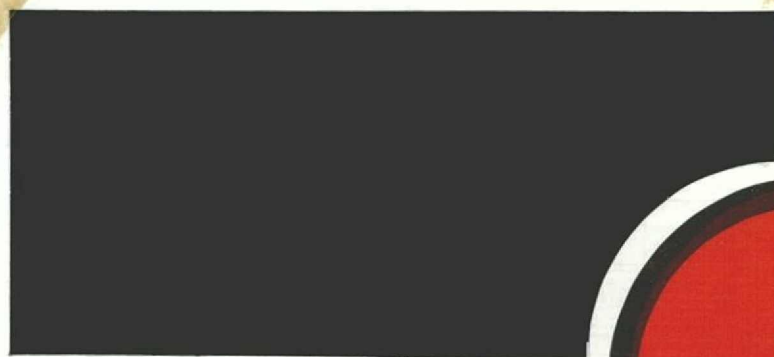
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JOHN W. WHITEHEAD		ANS	
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STAGE IA CULTURAL RESOURCE INVESTIGATION
 GATEWAY CATHEDRAL
 STATEN ISLAND, NEW YORK
 CEQR NO. 89-318R

1989

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NOVEMBER 1989

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I. INTRODUCTION

The Cultural Resource Group of Louis Berger & Associates, Inc. (LBA) has recently completed a Stage IA cultural resources study of the proposed Gateway Cathedral, Staten Island, New York (Figure 1). The goal of this investigation was to determine whether the construction site has the potential to contain significant prehistoric and/or historic archaeological resources. The investigation will determine whether any locations within the project area require subsurface archaeological testing.

The Stage IA study was conducted according to guidelines established by the New York City Landmarks Preservation Commission (NYCLPC) and pursuant to City regulations governing the protection of the cultural environment (CEQRA). This assessment is a preliminary one, based on a records and literature search and a field check.

The study area consists of a tract, approximately 22 acres in size, bounded on the south by Richmond Valley Road and on the north by Boscombe Avenue, between Madsen and Weiner streets. This is just south and east of the toll plaza that marks the approach to the Outerbridge Crossing. Richmond Valley Road is approximately one-tenth of a mile north of Mill Creek and runs roughly parallel to it.

Background research consisted of a review of site files, inventories, maps, reports, and publications at the Staten Island Institute of Arts and Sciences and the New York City Municipal Library. The New York State Office of Parks, Recreation and Historic Preservation (SHPO), and the New York City Landmarks Preservation Commission were also contacted for information concerning the project area. Moreover, individuals knowledgeable in the history and prehistory of the area were consulted.

A description of the environmental setting of the project area, which provided the context for the identification of cultural resources, is presented in Chapter II. The prehistoric and historic overview are outlined in Chapter III. Chapter IV describes the results of the background research of the project area. The methods and results of the archaeological reconnaissance are discussed briefly in Chapter V, and conclusions and recommendations are presented in Chapter VI.

II. ENVIRONMENTAL SETTING

The project area lies within the Atlantic Coastal Lowland (Thompson 1977:34). While the core of Staten Island consists of serpentine, the bedrock within the project area probably contains redbeds and diabase of the Newark Series at a depth of 150 to 190 feet (Federal Energy Regulatory Commission 1981:54). Overlying sediments, from bottom to top, comprise preglacial clays, glacial fill, varied clays and fine sands, younger glacial fill, and loose fill with beach deposits.

The Wisconsin Glaciation's final advance covered the project area, and the glacier's terminal moraine can be observed at Harbor Hill. Glaciers in the vicinity of New York City began to retreat some 17,000 to 15,000 years ago. Glacial scarring created a variety of habitats including estuaries, salt and freshwater marshes, bogs, uplands, and midslope zones. Glacial soils contained a diversity of particle sizes, which allowed for good drainage and adequate water supplies for developing plant and animal communities. At this time, glacial Lake Hackensack deposited a mixture of clay, silts, sands and gravels on western Staten Island. Furthermore, as the lake retreated around 13,000 years ago, a stream began to cut through the sediments and other aeolian deposits to form the Arthur Kill Valley (Silver 1984:2-5).

Humans first inhabited the New York City area about 12,000 BP when sea levels may have been 300 feet lower than present levels and the Atlantic shore had regressed approximately 60 to 90 miles from its modern position (Kraft 1977). River and stream systems then exhibited different configurations as did the plant and animal communities within these environments (Edwards and Merrill 1977). By 5,000 BP, sea level had risen to just 30 feet below its present level. While the sea rose, the Arthur Kill was merely a narrow, intermittent freshwater stream. Despite its location in a steep valley, the stream would not have been a great obstacle for human passage east and west (Silver 1984:5).

The sea continued to rise to a point some 14 feet below present level by 2,000 BP. During this time, the Arthur Kill gradually became a brackish estuary, lined with marshes and capable of providing new possibilities for human subsistence (Silver 1984:5). Over the 12,000-year course of human occupation of western Staten Island, the immediate environment changed from an upland and inland location of oak/pine forest and grasses into a coastal lowland zone, where marine resources could be readily obtained (Silver 1984:5).

III. CULTURAL SETTING

A. PREHISTORIC

The earliest occupation of coastal New York occurred during the Paleo-Indian period (10,000 BC to 8000 BC). Other groups ranged over a wide geographic area of the Western Hemisphere during the Late Pleistocene and early Holocene. It is commonly held that the major economic pursuit of Paleo-Indians centered around the hunting of game animals with the use of fluted projectile points. The animal resources potentially available for exploitation by early Paleo-Indian hunters included mammoth, mastodon, caribou, deer, moose, and elk. However, no evidence has been found in the East to associate Paleo-Indians with such animals. Consequently, the concept of a Paleo-Indian period in the Northeast is based upon the western model. This model characterizes the Paleo-Indians as being highly mobile, specialized big-game hunters living in non-permanent residential camps.

Although numerous fluted projectile points have been located, only one site from this period has been found within the coastal New York region. The Port Mobil Site is located on Staten Island on what was once a high terrace, before the rise in sea level during the Holocene epoch. The restricted tool variety within the site's artifact assemblage suggests a short-term hunting camp.

The Early Archaic period (circa 8000 BC to 6500 BC) was a time of dramatic environmental change resulting from glacial retreat. During this era (i.e., beginning of the Holocene), a wide range of food resources (plants and small animals) increased in frequency and undoubtedly had an effect on human subsistence strategies. Early Archaic site locations were similar to those of the Paleo-Indian period but with the addition of lowland areas, areas adjacent to large bodies of water, and the margins of low swampy ground. Hunting still appeared to be the major subsistence strategy. One significant difference between the two periods was the preference for using cryptocrystalline stone (often exotic in origin) for lithic tools during the Paleo-Indian period and local cryptocrystalline and non-cryptocrystalline stone during the Early Archaic.

The distribution and artifact assemblages of Early Archaic sites in the coastal New York region suggests that while food resources may have been abundant in most areas, they were highly dispersed. In the case of certain animal species such as caribou, availability was not consistent in the same locales from year to year. Given the small aboriginal population estimated for this period, hunting and collecting territories were probably much larger than in later periods and more loosely defined in terms of political boundaries. It is hypothesized that periods of resource scarcity were overcome

by high mobility and exploitation of resources in alternative hunting and collecting territories.

Archaeological evidence within the coastal New York region has indicated that sites in the Early Archaic period are usually small and nearly always multicomponent. Since a wandering settlement pattern was characteristic of the Early Archaic period, architectural evidence is not likely to be found in an archaeological context. Archaeological assemblages associated with this period would consist of corner-notched (Palmer) and side-notched projectile points, in addition to bola stones and atlatl weights.

The Middle Archaic (circa 6500 BC to 3000 BC) was a period of adaptation to floral and faunal resources that approximate those of historic and modern times (Kraft and Mounier 1982:66, 77). The overall quality of Middle Archaic environments, however, still cannot be directly compared to recent conditions. A postulated hot/dry climatic interval (Carbone 1976) may have had pronounced effects on some Middle Archaic cultures. Diagnostic Middle Archaic artifact types include bifurcate-base projectile points, such as LeCroy, Saint Albans, and Kanawha, and stemmed points, such as Stanley and Morrow. Other items in Middle Archaic toolkits include ground stone axes, milling stones and other plant-processing equipment, net sinkers, and various flake and bifacial tools.

Subsistence patterns appear to have changed from those noted for the Paleo-Indian and Early Archaic periods. The general impression is that Middle Archaic settlement and subsistence were focused on a broader resource base, contrasting with the Paleo-Indian and portions of the Early Archaic periods. Middle Archaic toolkits tend to show greater variety than those associated with earlier periods, lending support to hypothesized subsistence variety.

Archaeological expressions of the Late Archaic period (circa 3000 BC to 2000 BC) indicate a continuing adaptation to fully emerging temperate deciduous environments. The well-defined seasonality of floral communities and the behavioral adaptations of related fauna are reflected in a very regularized and scheduled use of a broad range of resources during Late Archaic times. This can be viewed as an elaboration of the hunting/gathering/foraging economy of the Middle Archaic period. An emphasis on fishing and shellfish exploitation becomes archaeologically visible during the Late Archaic.

Expansions and changes seen in Late Archaic toolkits reflect a broadening of the resource base and mirror the variety that was evident in Middle Archaic assemblages. Diagnostic artifacts for the initial portion of the period are characterized by a variety of narrow-bladed and stemmed projectile points. Toward the end of the Late Archaic, broad-bladed forms, exhibiting regional diversity, are more common.

The Terminal Archaic (circa 2000 BC to 1000 BC) was a transitional period between the Late Archaic and Woodland periods. This period appears to have involved the introduction of new materials with no alteration of the basic food-gathering economy. The Terminal Archaic has come to be associated with the manufacture and use of soapstone vessels, "fishtail" projectile points, and elaborate mortuary practices. In coastal New York, the Orient Focus is the recognized cultural phase of the Terminal Archaic. Artifact traits commonly found are Orient fishtail points, strike-a-lights, scrapers, side-notched points, celts, adzes, stone gorgets, knives, drills, shellfish middens, soapstone vessels, and burials.

The onset of the Woodland period (1000 BC to 400 BC) has been traditionally associated with the appearance of ceramics (Williams and Thomas 1982). This period has been generally viewed as a continuation of Late Archaic lifestyles, but with a greater degree of sedentism (Gardner 1982). This trend toward sedentary settlement has been linked to an increase in the exploitation of a variety of localized resources, with settlement choices geared to enhancing procurement of these resources; the development of social institutions encouraging or enforcing the generation of food surpluses; and the stabilization of environments and the important food resources associated with them (Gardner 1982).

In the coastal New York region, the recognized cultural phase of the Early Woodland is the North Beach Focus of the Windsor Aspect (Smith 1980:50-51). The characteristic artifact assemblage consists of grit-tempered ceramic vessels resembling Vinette I, and a wide variety of projectile forms, including narrow, wide-blade stemmed, side-notched, some lozenge, semi-lozenge, and fishtail varieties. Other items in the Early Woodland toolkit include scrapers, plain hammerstones, abraders, choppers, anvil stones, net sinkers, and bone awls.

In the coastal New York area, the beginning of the Middle Woodland period (circa 400 BC to AD 900) is marked by the replacement of the North Beach Focus with the Clearview Focus, and the introduction of the Abbott Complex. Both of these foci are known in western Long Island, but are as yet unidentified in eastern Long Island (Smith 1980:51). The Clearview Focus appears to be an outgrowth of the North Beach Focus, with similar ceramic shapes. Except for the Abbott Zoned pottery, the artifact assemblage of coastal New York's Abbott Complex is basically the same for the Windsor Aspect's late North Beach and Clearview foci (Smith 1980:140-141). Diagnostic projectile points include Fox Creek stemmed and lanceolate types. Food remains consist of deer, shellfish (oysters, hard shell clams, bay scallops, and conchs), and tortoise.

The Late Woodland period (circa AD 900 to 1600) exhibits settlement and subsistence patterns different from those ascribed to the

Middle Woodland period. Prehistoric trends toward sedentary life culminate in Late Woodland villages that appear to have been occupied on a year-round basis. This settlement pattern is viewed not so much as an abrupt change from earlier patterns, but more as a continuum along which predictable and dependable food resources permitted establishment of prolonged and focused settlements or hamlets.

The practice of agriculture and its effect on late prehistoric and early historic Indian life in coastal New York are currently the focus of much debate (Ceci 1977, 1980, 1982; Silver 1984). Lynn Ceci reexamined the assumptions that late Woodland coastal New York cultures enjoyed a sedentary life based upon maize agriculture. She believes that the growth of sedentary village life, populations, and the sociopolitical complexities were products of the European fur-wampum trade and not of the cultivation of maize. It was the native population's desire to trade for European goods that induced it to stay through the winter months, leading to the establishment of villages.

The Contact period began with the first interaction between Native American societies and the European explorers, traders, and colonists. Its ending was marked by the final movement of Native American groups from the area. In the western Long Island area, the period lasted less than a century.

The subsistence and settlement patterns of the Native American groups on western Long Island were those of the Late Woodland, East River Aspect, Clasons Point Phase. This was characterized by semi-permanent villages of approximately one acre located on tidal streams and bays. Archaeological evidence (i.e., shellfish middens and small amounts of bird, amphibian, and fish bones) recovered from sites dating to this period indicate a fishing and hunting economy. The degree to which maize cultivation was part of the subsistence base has not been fully determined (see Ceci hypothesis in discussion of Late Woodland). Nevertheless, archaeological evidence in the form of stone hoes, pestles, and shallow mortars suggests maize cultivation.

Trade with Europeans had an immediate impact on the economy and material culture of Native Americans. They replaced their Late Woodland material assemblages with such items as iron pots, metal tools, knives, household implements, bottles, jugs, and cloth. Dependency on European goods quickly eroded the Native American cultural system and intertribal rivalries escalated as a result of competition for access to the fur trade.

B. HISTORIC

The presence of European trade goods at several Native American sites near the project area reflects the relatively early contact

between Europeans and the Native American occupants of western Staten Island. Most of the aboriginal groups are believed to have left the island in the third quarter of the seventeenth century. Jacobson (1980:12-13) suggests that some Native Americans may have remained on Bentley Manor, which in 1675 comprised the modern village of Tottenville, until the early eighteenth century. Creation of Bentley Manor by 1675 indicates that there was a European presence in the vicinity of Wards Point by the third quarter of the seventeenth century. Settlement in the vicinity of Smoking Point, north of the project area, is believed to have occurred between 1670 and 1680 (Leng and Davis 1930:124).

During the eighteenth century, Staten Island developed as an agricultural and fishing area. The products of a mixed agricultural economy included beef, pork, wheat, rye, and apples. Fish, oysters, and clams were harvested from waters around the island and salt hay was gathered from the extensive salt meadows. Prior to 1772, Cornelius Disoway's gristmill was constructed on Mill Creek, across from Perth Amboy. This is the only mill on record to serve a large portion of the western section of Staten Island; it was razed shortly after 1900. The mill was located 150 feet west of Arthur Kill Road on the northern bank of Mill Creek (McMillen 1951). Although this is outside of the project area, a "P. W. Dissoway" appears near the boundary of the project area by 1859. The Disoway homestead and cemetery were located near the approaches to the Outerbridge Crossing. The dwelling was destroyed in about 1920; the disposition of the family cemetery is unknown (Davis Collection, Photograph of Disoway Homestead, ca. 1920).

During the American Revolution, British forces consolidated their control of Staten Island in the summer of 1776, and they retained control of it until the conclusion of the war in 1783. The island was used as a staging area for British forays into New Jersey and across to Long Island, and was a source, as well, for produce, wood, and fodder (Cohn 1962). The ferry near the modern location of Rossville, north of the project area, was one of their embarkation points. Along Page Avenue in Tottenville, a cannon ball, two George II coins, one mid-eighteenth century Spanish silver real, and unidentified ceramics were recovered as well as prehistoric artifacts (Archaeology Section 1962:93). Both the cannon ball and the English coins suggest that the British military presence may have pervaded the island. The excavations undertaken at the Conference House suggest another side to the Revolutionary War and its impact on the civilian population. Baugher and Venables (1987:49-50) attribute the absence of items reflective of Christopher Billopp's high social status to British confiscation and American looting. Billopp, a loyalist, relocated his family during the war to a safer locale, presumably taking many of his possessions with him.

In the early decades of the nineteenth century, wealthy New Yorkers "discovered" Staten Island and with the advent of increased leisure

established fashionable bathing resorts and summertime retreats. They built large summer houses along the shores and gradually began to create year-round residences, particularly in such communities as New Bright, Stapleton, and Clifton. Construction of the Staten Island Railroad between Vanderbilts Landing (Clifton) and Tottenville in 1860 redirected development away from the vicinity of Rossville, where there had been a ferry, and toward the southwestern part of the island.

Agriculture and oystering supported the local economy in the post-Civil War period, although there was increasing evidence of industrialization in the form of isolated manufacturing plants (Weingartner 1967). Balthazar Kreischer's brick works in Kreischerville (Charleston), begun in 1845, continued to expand to include a chemical works and ultramarine-blue factory, reaching a peak in the late nineteenth century (Bayles 1887). The works closed in 1927, but the company town that had been established survived.

As industrial development proceeded in New Jersey in the vicinity of Elizabeth and Newark, the oyster beds became contaminated. The pollution was initially observed in the 1880s, but the New York Department of Health did not condemn the Staten Island oyster beds until 1916 (Board of Education 1964:181). In 1938, the Outerbridge Crossing and Goethels Bridges were opened, and rezoning permitted construction of liquid natural gas tanks, petroleum storage facilities, a marine junkyard, and a sanitary landfill along the Arthur Kill (Geismar 1985:38).

IV. BACKGROUND RESEARCH RESULTS

A. PREHISTORIC

Archaeological studies of the prehistory of western Staten Island began in the first decade of the twentieth century, when Skinner (1909:11) documented numerous prehistoric sites from Rossville to Kreischerville (now Charleston). He observed that the Rossville and Woodrow area of Staten Island was a unique zone, where sites were found inland on sandy soils as well as along the coast. Shoreline locations had the highest frequency of sites (Skinner 1909:3).

Prehistoric sites have been recorded both north and south of the project area. Seventeen sites and/or multicomponent complexes have been reported north of the project area, roughly between Richmond Valley and Rossville (Table 1; see Figure 1). Additionally, three sites and/or site complexes have been recorded south of the project area (Table 2). The sites represent three major periods of Northeastern prehistory: Paleo-Indian (10,000 to 8000 BC), Archaic (8000 to 1000 BC) and Woodland (1000 BC to AD 1600s).

Since Skinner's pioneering studies, western Staten Island has been subject to recurring scrutiny, resulting in an extensive literature (see, for example, Jacobson 1980:8-11). In general, localities occupied by Paleo-Indians on southwestern Staten Island were near the incipient stream, later to become the Arthur Kill. One Paleo-Indian site, Port Mobil, has been reported two miles to the north of the project area. The site appears to represent small group encampments or forays. Its location suggests that marine resources may have been one focus of settlement and subsistence patterns. This aspect of Paleo-Indian lifeways has received little attention in the past although tentative evidence from interior locales has suggested its importance (Dent 1979; McNett, McMillan, and Marshall 1977). However, the artifact assemblages from the Port Mobil Site do not suggest a marine adaptation. The geomorphology of the area, in combination with the effects of glaciation and subsequent sea level rise, indicates that marine environments were probably not stable at this early date and could not have served as a primary focus of subsistence activities (Custer and Stewart 1983; Edwards and Merrill 1977; Newman 1977).

During the Archaic period, prehistoric occupants still inhabited sites relatively close to the Arthur Kill, but additional settlement occurred further away from the streams (e.g., Wort Farm, Harik's Sandy Ground). Woodland occupation continued to be both adjacent to the Arthur Kill and at inland locations.

The largest burial site in the New York metropolitan area was found along the Arthur Kill at Burial Ridge (Geismar 1985; Jacobson

TABLE 1
DOCUMENTED PREHISTORIC SITES
NORTH OF THE PROJECT AREA

<u>SITE NAME</u>	<u>PERIOD</u>
1. Huguenot Site	Middle Woodland
2. Cutting Site	Paleo-Indian to Woodland
3. St. Luke's Cemetery	Prehistoric
4. Hammerstone Hill (Rossville Shell Heap)	Woodland
5. Harik's Sandy Ground	Late Archaic
6. Smoking Point	(Paleo-Indian?), Late Archaic, Woodland
7. Chemical Lane	Archaic, Woodland
8. Pottery Farm Site	Archaic, Middle or Late Woodland
9. Port Socony Site-North	Paleo-Indian to ?
10. Gerike Organic Farm	Archaic to Late Woodland
11. Wort Farm	Late Archaic to Late Woodland
12. Rossville Campsite	Woodland
13. Clay Pit Road Sites	Middle and Late Woodland
14. Port Socony Site-South (Port Mobil Hill)	Paleo-Indian
15. Charleston Beach	Paleo-Indian to Late Woodland
16. Kreischerville Sites	Paleo-Indian to Woodland
17. Canada Hill	Prehistoric

TABLE 2
DOCUMENTED PREHISTORIC SITES
SOUTH OF THE PROJECT AREA

<u>SITE NAME</u>	<u>PERIOD</u>
18. Page Avenue Sites I & II	Middle Woodland
19. Wards Point (8 sites)	Archaic, Woodland
Billopp Ridge	
Burial Ridge	
Block bounded by Clermont	
Court, Surf Ave., McDonald	
Court, and Moon Ave.	
20. Princes Bay	Prehistoric
Sharrott Avenue Site	
Wolfes Pond Site	
Red Bank	

1980). Skinner (1909:91) reported that burials had also been observed by local farmers in the vicinity of Smoking Point, but no evidence of them has been found. In addition to these burials, archaeological remains included worked stone tools, flakes, shell pockets or middens, fire pits and hearths and ceramic sherds. No village sites with permanent or semi-permanent dwellings have been excavated or "carefully recorded" (Geismar 1985:34).

The complexity of western Staten Island's prehistoric resources is amply demonstrated by the number of multicomponent sites. Smoking Point, for example, contains material from the Late Archaic period although some Paleo-Indian artifacts may also be present (Pickman and Yamin 1978:II-7; Silver 1984:21-22). Diagnostic Late Archaic artifacts from the site indicate a Normanskill/Poplar Island and Blue Island occupation from 3000 to 1000 BC (Silver 1984). A Transitional Orient phase (1000 to 700 BC) is also present, in the context of a shell midden. Oystering, the hunting of deer and turkey, and the gathering of nuts seem to have been the major subsistence strategies represented at the site.

The Page Avenue Sites I and II (see Figure 1), located less than one mile from the project area, were the first local sites to produce "Cody Knives," i.e., transverse blades usually shouldered on one side but occasionally characterized by a parallel-sided base without an inset (Anderson 1967:1). One burial, a shell heap, and several types of ceramics were recovered from these sites in addition to stone hammers and scrapers and "the usual rejectage such as cracked-stone and unworked 'chips'" (Anderson 1967:3).

Extensive archaeological materials have also been recovered from Ward's Point and Tottenville (Jacobson 1980). At least 127 pits, burials, hearths, and some 4,000 artifacts have been associated with the Wards Point complex, for example, implying relatively intensive aboriginal occupation spanning the Archaic and Woodland periods. Jacobson (1980:69), in his extensive review of this material, concludes that, collectively, these remains reflect strong ties with Delaware Valley groups, which differ from central and western New York groups. The area was, however, a hub for many waterways and its occupants were apparently subject to multiple cultural influences.

In addition to the resources reported to the State of New York and described either in site forms or in professional reports, the Archaeology Section of the News Bulletin of the Staten Island Institute of Arts and Sciences (1962:93) noted that Joseph Bodnar and his sons had "worked" a shell "heap" at an unspecified location in Richmond Valley. The site had also yielded ceramics, tools, and projectile points. At other locations along Page Avenue, the remains of an aboriginal child and dog were found as well as projectile points, pottery, a three-fourths grooved axe, and scrapers (Archaeology Section 1962:93, 1965:36).

Numerous prehistoric sites with significant informational potential have been identified all along western Staten Island. The reported presence of prehistoric archaeological resources in the immediate vicinity of the project area, and the proximity to Mill Creek as well as to the Arthur Kill, together with the relative absence of historic construction activities (that would have resulted in disturbance to any extant subsurface resources), demonstrate that the prehistoric cultural resource potential for the project area is high.

B. HISTORIC

Although there were a number of residences located along roads in the Richmond Valley area in the late eighteenth century (Figures 2 and 3), the project area remained vacant until the mid-nineteenth century (Figure 4). Richmond Valley, at this point, was still a relatively undeveloped locale, given an identity, however, when the railroad company established a station there (Garnice 1976:86-87). One residence, "P. W. Dissoway", appears on the Wallings Map of 1859 (Figure 5), within the boundaries of the project area. It is located north of Richmond Valley Road, which dates to the eighteenth century when it was part of the Arthur Kill Road (McMillen 1951).

The project area and vicinity witnessed development of increasing intensity, roughly parallel to the history of western Staten Island. Between 1859 and 1874, the project area and vicinity was subdivided into residential rural properties of between 10 and 25 acres (Figure 6). Prior to the turn of the century a bicycle and race track appeared within the study area (Figure 7). The Bromley Map of 1917 indicates that the western boundary of the project area contained the rear lots of residences and several associated outbuildings (Figure 8).

In the 1920s, new streets and sidewalks were laid out in Tottenville and adjacent areas along Page Avenue in the hope that completion of the Outerbridge Crossing would stimulate development (Wilk 1978). This development, however, did not materialize, although Page Avenue was extended to become the principal feeder from southwestern Staten Island to the bridge.

Because the project area was not intensively developed in the late nineteenth and early twentieth centuries, it is probable that the subsurface historic cultural resources, indicated by the historic maps, are present. LBA has identified significant historic archaeological resources in similar contexts on Staten Island at the Fountain-Mouquin Site (Louis Berger & Associates 1985).

Recent research has demonstrated that significant information can be retrieved if residential deposits from archaeological sites can

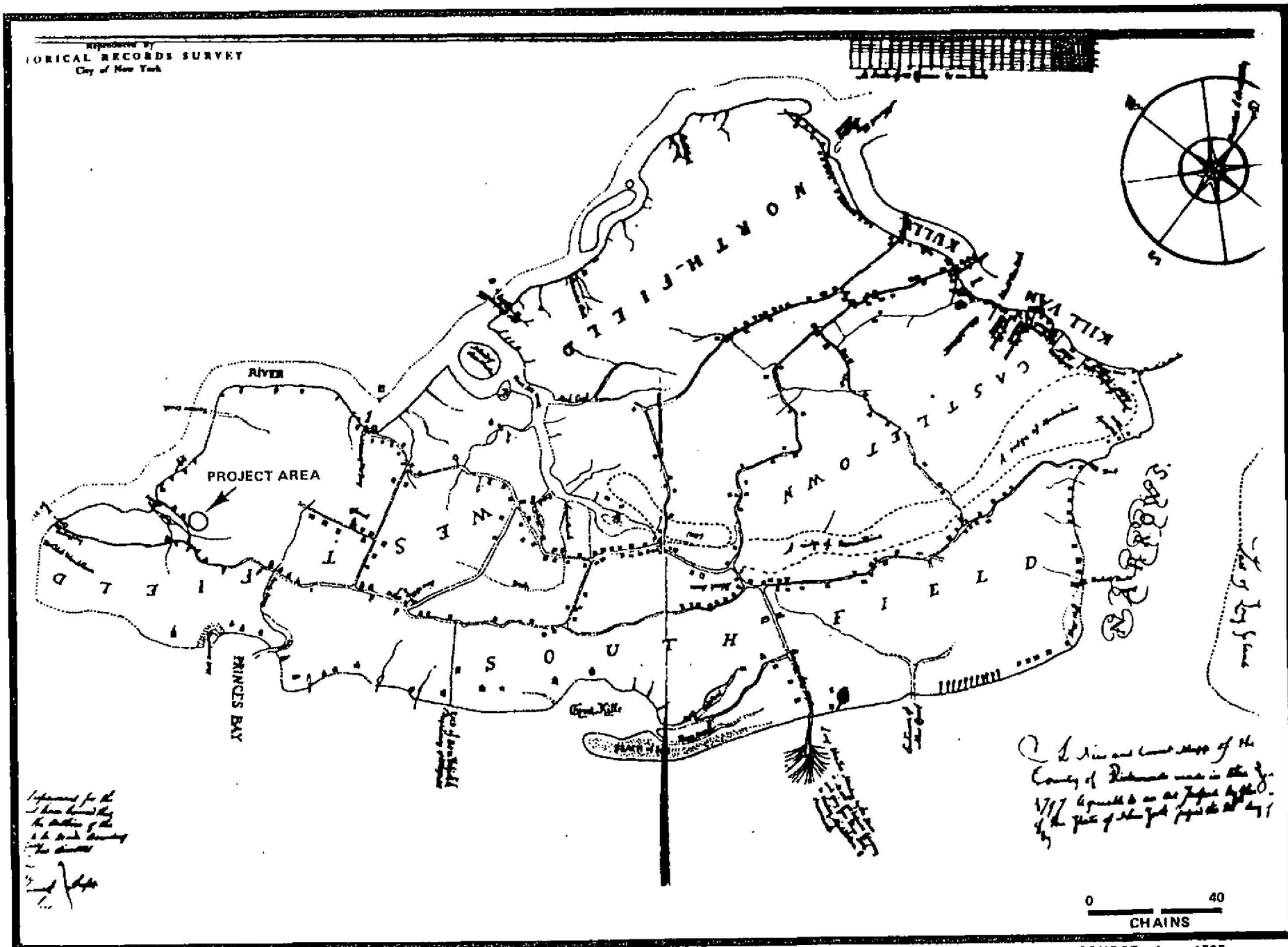


FIGURE 3: Project Area and Vicinity, 1797

SOURCE: Anon 1797

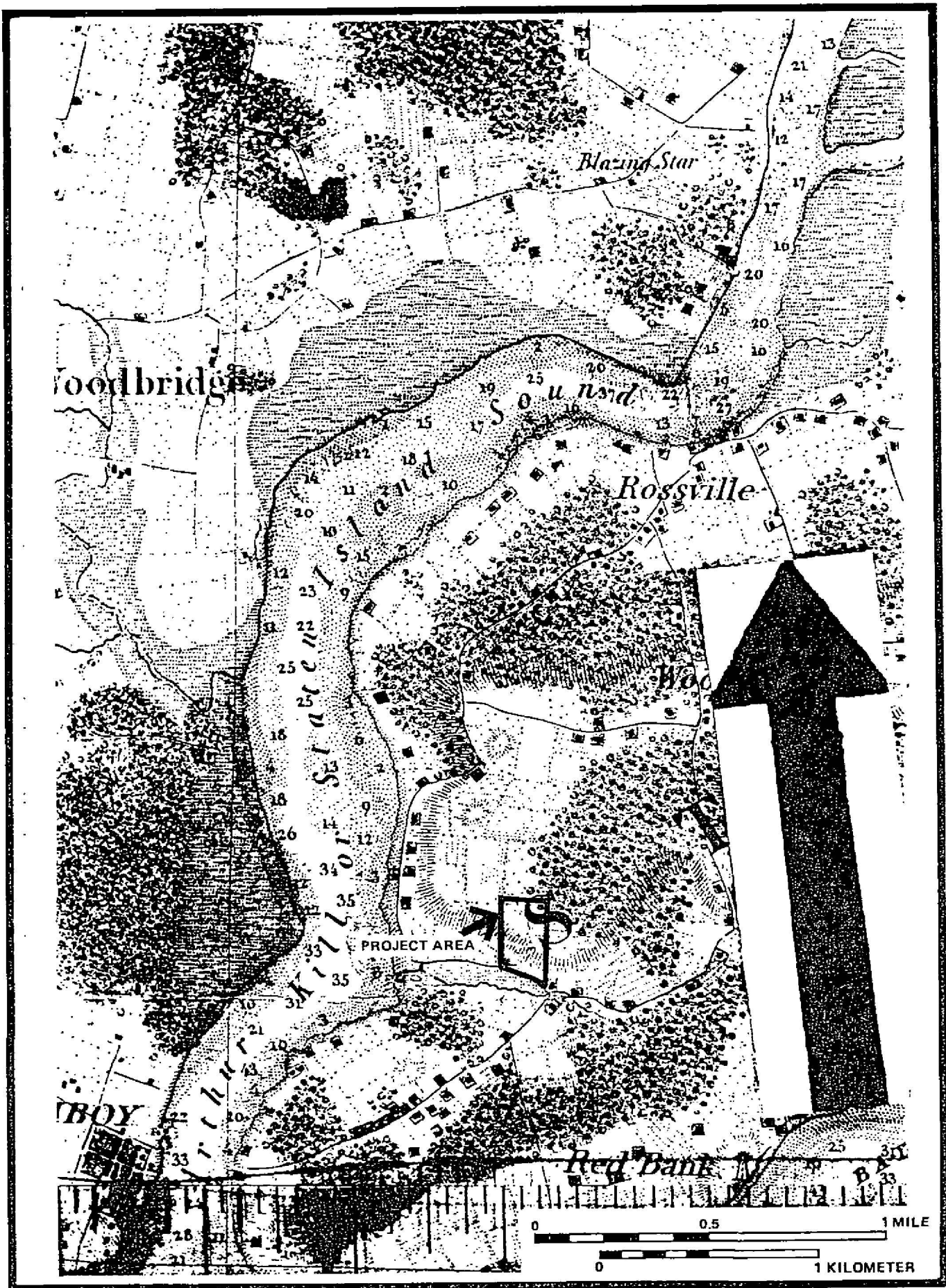


FIGURE 4. Project Area and Vicinity, 1845

SOURCE: U.S. Coastal Survey, 1845

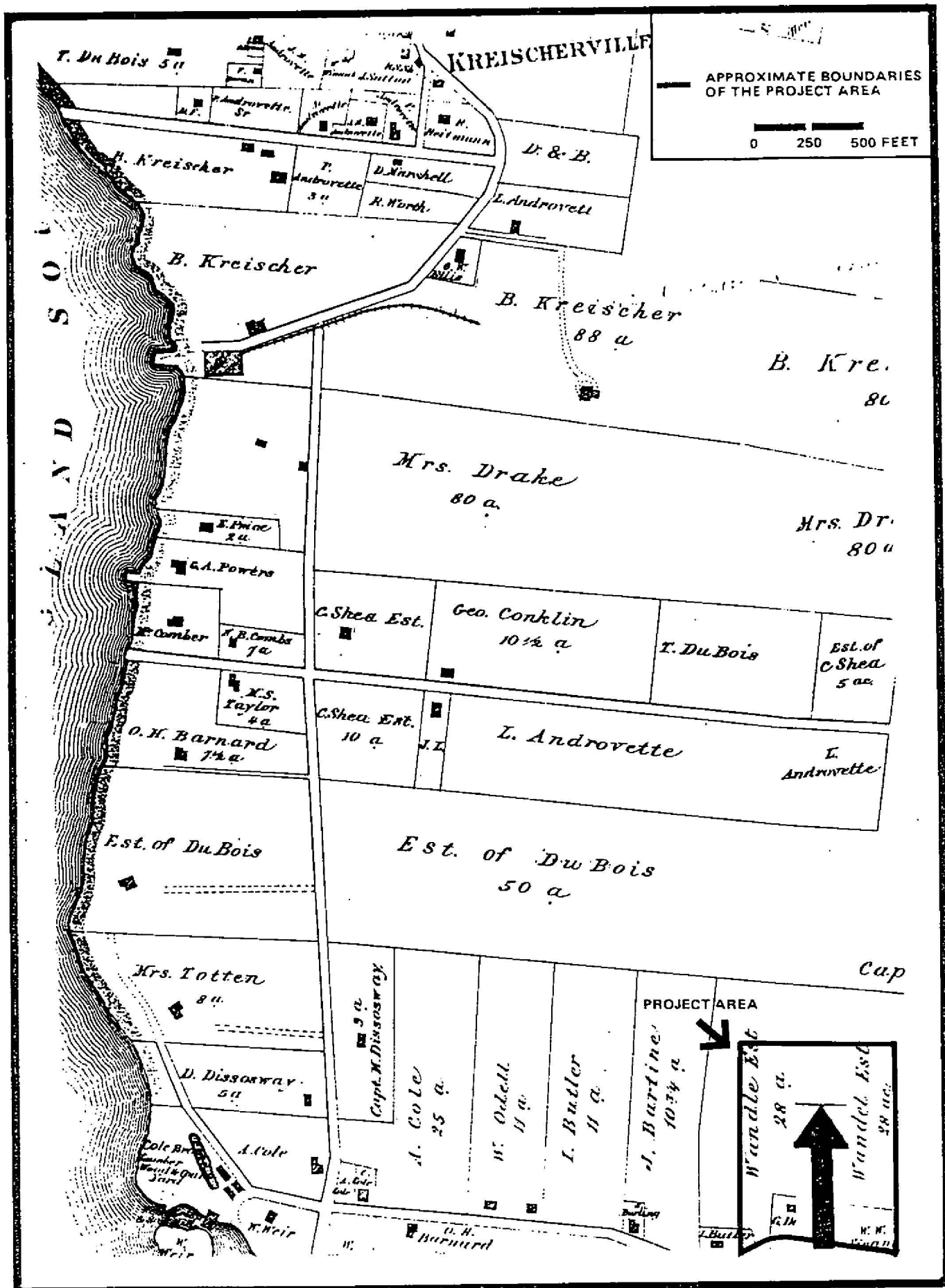


FIGURE 6. Project Area and Vicinity, 1874

SOURCE: Beers 1874

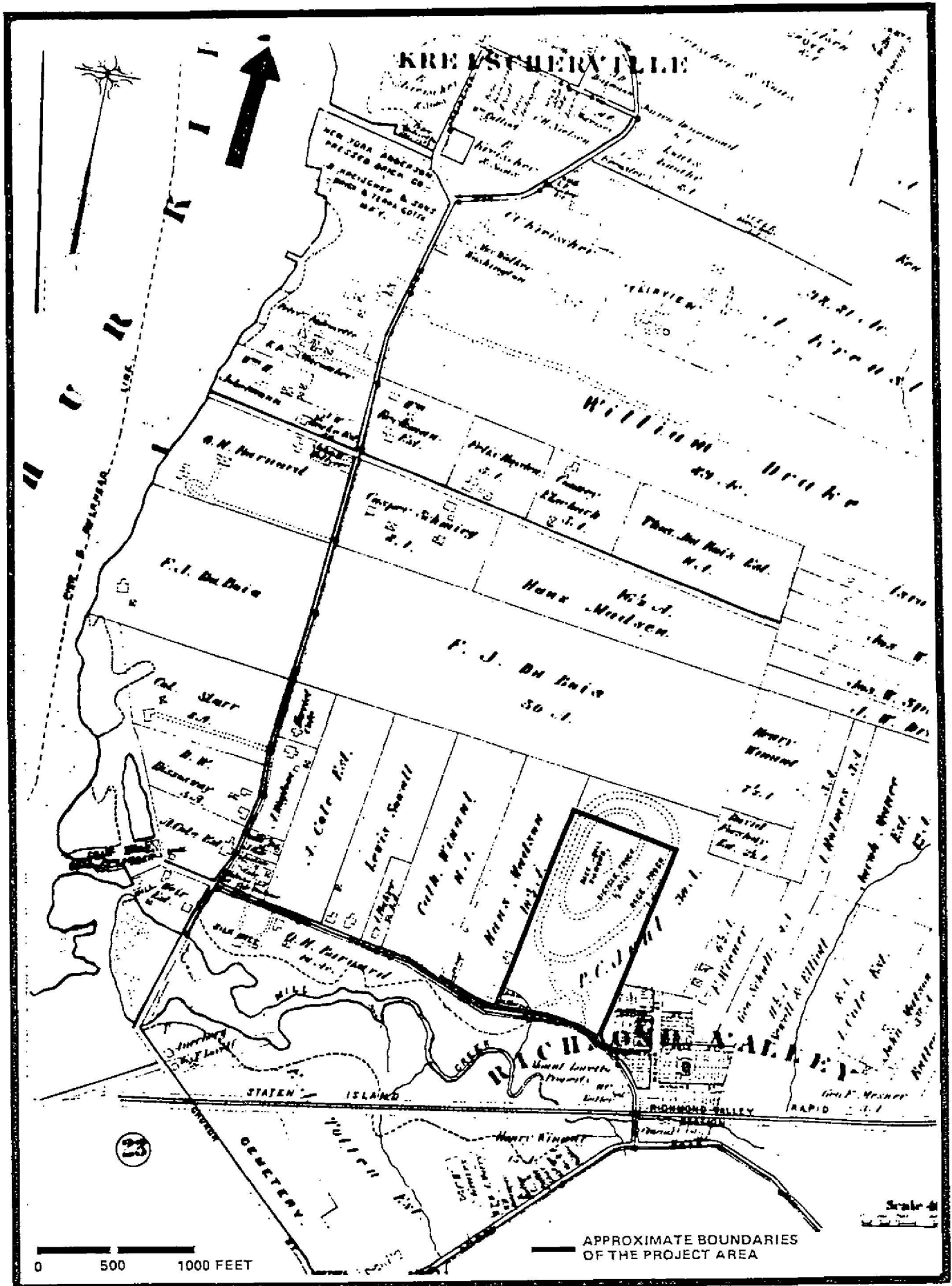


FIGURE 7: Project Area and Vicinity, 1898

SOURCE: Robinson 1898

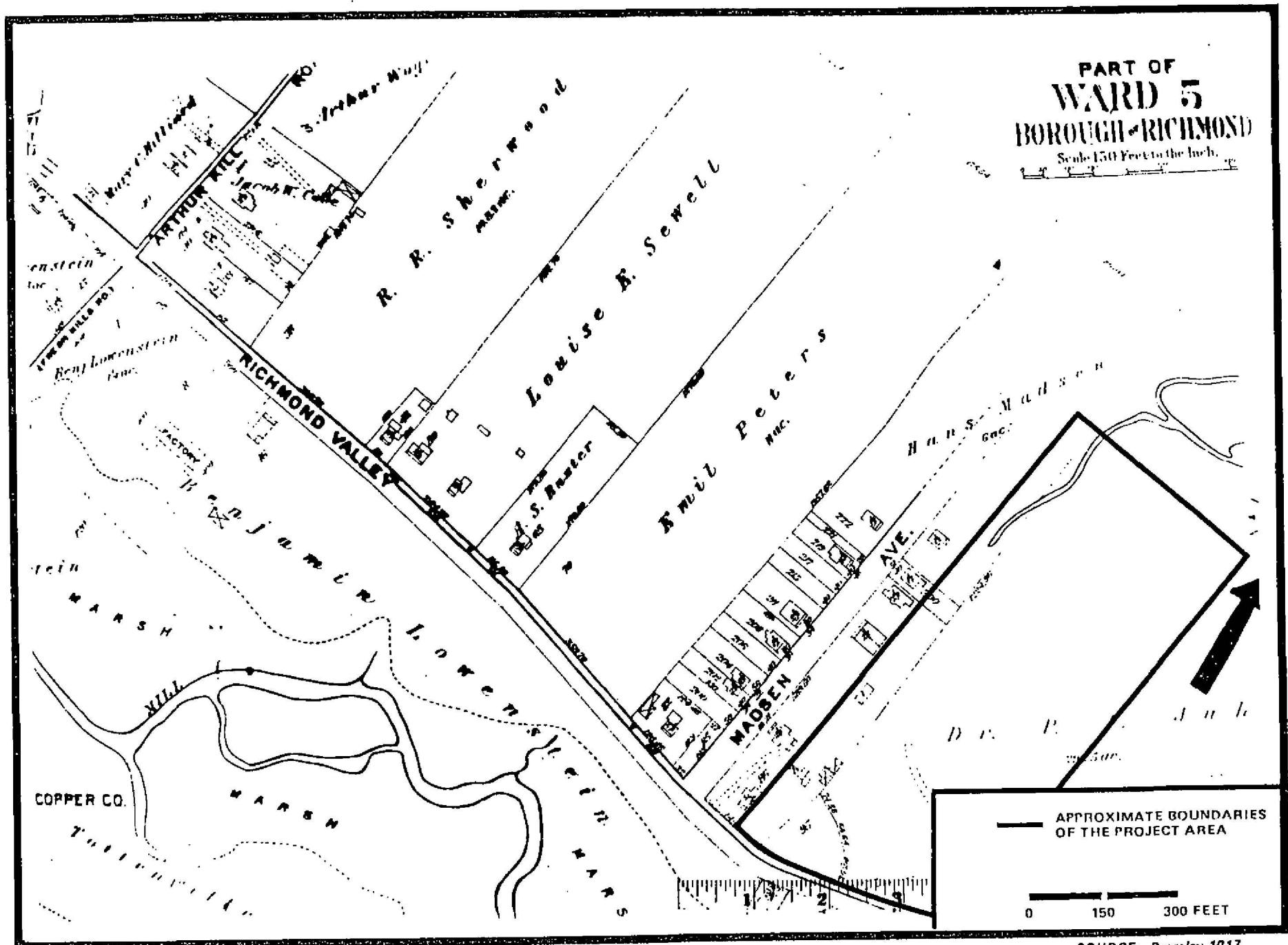


FIGURE 8. Project Area and Vicinity, 1917

SOURCE: Bromley 1917

be assigned to known historic households (cf. Louis Berger & Associates 1986 and Spencer-Wood 1987). It is quite likely that additional historical research could identify households to which surviving archaeological materials could be linked. Thus, the potential for significant historic archaeological resources is considered high.

C. PREVIOUS ARCHAEOLOGICAL RESEARCH

According to the Staten Island Institute of Arts and Sciences, the project tract has revealed no evidence of fossils or prehistoric artifacts. At the same time, however, it was stated that some of the artifacts presently in the institute's collections, including celts, a gorget, a projectile point, a mortar, and a hammerstone, may have been obtained within or in proximity to the project area.

Several cultural resource projects have been conducted in close proximity to the proposed cathedral site. Louis Berger & Associates (1987) conducted a Phase IA survey of the proposed Chateau Dubois housing development located directly west of the project area. This study resulted in the finding that this area has the potential to contain significant subsurface cultural resources dating to both the prehistoric and historic periods. Therefore, a Phase IB survey was recommended in order to identify potential cultural resources within the project area.

Greenhouse Consultants (1985a, 1987a) conducted a Phase I and II archaeological survey of the Page Avenue project area, which is situated about one mile south of the proposed cathedral site (see Figure 1). The background research and preliminary walkover resulted in the identification of a prehistoric site and a nineteenth-century farmhouse foundation within the Page Avenue tract. Field testing of these sites consisted of the excavation of over 150 shovel test pits and several larger test units. Although a variety of artifacts were recovered from these areas, including ceramics, bottle glass, building materials, prehistoric lithics, and ceramics (Woodland period), they were all retrieved from disturbed contexts. As no potentially significant cultural resources were present within the study area, no additional work was recommended.

A Phase IA cultural resources survey was conducted for the proposed Amboy Road Development Project located less than one mile southeast of the project area (Greenhouse Consultants 1985b). Based on the historic map and documentary research, no prehistoric or pre-Civil War historic sites were within the boundaries of the project tract. The locations of three late nineteenth-century structures were identified within the impact area; however, they were determined to be not potentially significant. No additional work was conducted.

Finally, a Phase IA and IB historical and archaeological evaluation was implemented for the proposed Surfside Village Development Project (Greenhouse Consultants 1987b), which is located about one mile to the southwest of the project tract. The site of a probable nineteenth-century farmstead and a possible prehistoric site were identified during the course of the background research and field reconnaissance. Additional fieldwork (i.e., Phase IB), which included the excavation of three backhoe trenches, 39 shovel test pits, and one five-foot test unit, resulted in the identification of a portion of a disturbed farmhouse foundation in association with ceramics, glass, and iron artifacts. Prehistoric flakes, predominantly jasper and chert, were also recovered in this general area in addition to fire-cracked rock, a possible jasper tool, and a possible hearth. Since all of the above prehistoric and historic deposits were recovered from disturbed strata, additional work was not recommended.

V. PRELIMINARY FIELD INSPECTION

LBA staff visited the proposed Gateway Cathedral project area on October 31, 1989. The tract is undeveloped, and slopes upward from west to east. The elevation of the project area ranges from less than 10 feet above sea level along its southern boundary in the vicinity of Richmond Valley Road to approximately 65 feet above sea level to its northeast. The project tract is predominantly wooded, with dense brush occurring over much of the area. Sections of the project tract that bound Richmond Valley Road contain low-lying areas with marsh grass.

Two natural drainages divide the project area (City Environmental Quality Review Project Data Statement 1988). One small gully extends diagonally southwest across the tract until it turns southward approximately 200 feet from the western boundary. Another gully is located at this point and extends south toward Richmond Valley Road.

The project area is underlain by bedrock of the Newark Subgroup consisting of reddish shales and sandstones (City Environmental Quality Review Project Data Statement 1988). The Raritan Formation, which includes unconsolidated subsurface deposits, overlies the bedrock at a depth of several feet below sea level along Richmond Valley Road to almost 50 feet above sea level to the northeast. The Harbor Hill Terminal Moraine, which represents Upper Pleistocene deposits and extends the length of Staten Island, overlies the Raritan Formation. These deposits contain unsorted sand, gravel, cobbles, and boulders within a clayey and silty matrix.

The archaeological walkover of the project area resulted in the identification of several dirt roads extending south and west from Buscombe Avenue. According to Mr. R. Andrew Fletcher of John W. Whitehead AIA and Associates, these roads were recently graded to facilitate access for heavy equipment into the project area. The roads were surveyed for evidence of cultural resources. This survey resulted in the observation of a thin, random scatter of window glass in this area in addition to several small sherds of blue transfer-printed whiteware, blue shell-edge whiteware, and blue transfer-printed ironstone. No structures or cultural features were identified during the course of the survey.

Several auger tests were excavated in the vicinity of Buscombe Avenue and Richmond Valley Road. Tests placed in the area of Buscombe Road exposed intact soil stratigraphy, consisting of a thin humic soil overlying a silty sand subsoil. The Richmond Valley Road area tests encountered the water table within one foot of the surface. These preliminary tests, and the overall surface inspection, suggest that the project area has the potential to contain intact soils. As a result, there is also the potential for intact subsurface archaeological remains.

VI. CONCLUSIONS AND RECOMMENDATIONS

The results of the records check and limited historical research indicate that the project area has the potential to contain significant subsurface cultural resources dating to both the pre-historic and historic periods. Given this potential, LBA recommends that a Phase IB survey be conducted to identify the specific locations and configurations of these potential resources. This recommendation follows the procedures set forth in the NYCLPC guidelines for archaeology.

Phase IB archaeological fieldwork should involve a program of systematic shovel tests. These tests, consisting of hand-dug holes approximately one foot in diameter, should be placed along parallel transects spaced 50 to 100 feet apart. The interval between shovel tests along each transect should be 50 to 100 feet. These test pits will be investigated in association with well-drained landforms and any possible locations of historic residences.

Shovel tests would be dug by natural and/or culturally defined strata. All soils from the shovel tests would be screened through 1/4-inch mesh hardware cloth. Measurements would be taken to document changes in soil texture, color, and content. Cultural material recovered from the excavated soils would be properly provenienced. Every attempt should be made to extend each shovel test into sterile subsoil. At the completion of each test, all screened soil would be redeposited into the hole.

Data on the individual tests would be recorded on a shovel test form. These data would include soil stratum color, texture, and beginning and ending depths below surface. All tests would be mapped into existing landmarks within and adjacent to the project area.

All artifacts recovered from the shovel tests should be cleaned. Prehistoric tools, utilized flakes, and other artifacts that could be analyzed for use-wear should be bagged separately in the field and should receive considerable care pending appropriate analyses. All diagnostic materials should be fully provenienced and labeled. Recovered artifacts should be identified, so far as is possible, to cultural and temporal affiliation, material, style, function, form, etc. Analysis should be sufficient to provide a functional site type definition.

No further historical research is recommended at this point. If, however, intact historic archaeological resources are identified, then site-specific research, covering deeds, census, and directory and tax records is recommended.

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