PHASE IA ARCHAEOLOGICAL INVESTIGATION OF THE AREA OF POTENTIAL EFFECT FOR THE CHARLESTON TOWERS PROJECT AREA

55 ANDROVETTE STREET (FORMERLY 53, 65, AND 83 ANDROVETTE STREET) BLOCK 7407, LOTS 1, 82, AND 80 STATEN ISLAND/RICHMOND COUNTY, NEW YORK CITY, NEW YORK

Prepared for:

65 Androvette Street, LLC,
101 Tyrellan Avenue,
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Prepared by:

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July 10, 2009

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MANAGEMENT SUMMARY

Involved State, Federal, and Local Agencies: New York City Landmarks Preservation Commission

Phase of Survey: IA

Location Information
Location: 53, 65, and 83 Androvette Street (Block 7407, Lots 1, 80, and 82)
Charleston section of Borough of Staten Island, New York City, New York
Minor Civil Division:
County: Richmond County, New York City, New York

Survey Area: Proposed Charleston Towers Senior Residential Development Project Area
Acreage: Three acres

USGS 7.5 Minute Quadrangle Map: Arthur Kill, New York-New jersey

Archaeological Survey Overview
Number and Interval of Shovel Tests NA

Results of Archaeological Survey:
Number and name of prehistoric sites identified: None/Property Sensitive
Number and name of historic sites identified: None/Property Sensitive

Results of Architectural Survey
Number of buildings/structures/cemeteries within project area: Nine
Number of buildings/structures/cemeteries adjacent project area:
Number of previously determined NR listed or eligible buildings/ structures/cemeteries/districts within project area: Two
Number of identified eligible buildings/structures/cemeteries/ districts adjacent project area:

Report Author: Eugene J. Boesch Ph.D., R.P.A.

Date of Report: July 10, 2009

This report presents the results of a Phase IA archaeological investigation of the proposed approximately three acre Charleston Towers Senior Residential Development project area located in the Charleston (formerly known as Androvetteville and Kreischerville) section of southwest Staten Island, Richmond County, New York City, New York (Figures 1 - 3). The study has been conducted and this document prepared for 65 Androvette Street, LLC, 101 Tyrellan Avenue, Staten Island, New York at the request of the New York City Landmarks Preservation Commission. The project area is located on Block 7407, Lots 1, 80, and 82 (53, 65, and 83 Androvette Street, Staten Island, New York). The Phase IA investigation consists of a literature review, pedestrian reconnaissance, and sensitivity assessment of the project area. The objectives of the study are to assess the likelihood that possibly significant cultural resources are present within the project area and to recommend any necessary further investigations.

The proposed impacts to the project area will consist of the construction of a three story, eighty-one unit residential building with parking areas, the installation of utilities, and the landscaping of portions of the property. It will be a market rate building and will be age restricted for persons 55 years of age and older. Amenities include a library, dinning and fitness rooms, laundry, transportation, housekeeping, and security. Existing structures within the project area will be demolished as part of project construction.

The project area landform consists of a raised but sloping terrace-like area that is located within 225 feet of what is referred to in this report as Androvette Creek, a fresh or brackish water tributary of the Arthur Kill, and its associated wetlands. The stream may be seasonal or otherwise ephemeral. The Arthur Kill and associated shoreline salt marshes are located about a quarter mile west of the current project area.

A large number of Native American sites have been identified within about one mile of the proposed Charleston Towers project area, many of which are located on raised ground in proximity to a fresh or brackish water creek, wetlands, or the Arthur Kill. The closest previously identified Native American site recorded to the current project area was located on raised ground overlooking Androvette Creek about 0.15 mile southwest of the project property.

Based upon the presence of the previously recorded Native American sites in the project vicinity, and the former topographic and physiographic setting of the property (raised, terrace-like ground in proximity to a creek), which is similar to that of previously recorded aboriginal sites in southwestern Staten Island, the current project area is considered to be sensitive for the presence of prehistoric and/or Contact period archaeological sites.

Construction of four late nineteenth century residences and associated outbuildings is the only development that has occurred within the current project area. Three of these structures still exist. Two of them (number 53 and number 65 Androvette Street – Block 7407, Lots 1 and 82) are considered eligible for listing on the National Register of Historic Places by the New York City Landmarks Preservation Commission. The fourth structure formerly was located on Lot 1 but was demolished prior to construction of the dwelling that currently exists there.

The occupants of three of the late nineteenth century dwellings were Peter Androvette and John M. Androvette and their families, members of a well know Staten Island family. Both individuals were successful businessmen and boat captains associated with the New York Harbor maritime transportation industry.

It is possible that domestic type archaeological resources consisting of privies, wells, cisterns, or middens associated with the Historic period occupations of the lots still exist within the project area. Two of the structures (number 65 Androvette Street, Lot 82 and the demolished structure at 53 Androvette Street, Lot 1) were constructed before a public water supply was available. Sanitary and water retention features associated with those occupation, in particular, may be present. The existing structures at 53 Androvette Street (Lot 1) and 83 Androvette Street (Lot 80) were constructed after a public water supply was available. It is likely that they were constructed with connections to that supply.

Based upon the history of the Charleston area and the recorded Historic period occupations of the project area, it is considered unlikely that other types of Historic period archaeological sites (industrial/commercial, Revolutionary War/military related, seventeenth to mid-nineteenth century house sites, etc.) are located within the current project area.

It is recommended that Phase Ib-level archaeological testing be conducted within the current project area to determine whether potentially significant Native American period and Historic period archaeological resources are present there. A field testing plan for the work should be produced and submitted to the New York City Landmarks Preservation Commission for review prior to the start of that work. It also is recommended that a qualified architectural historian or historic preservation specialist evaluate the significance of the existing residences at 53 Androvette Street (Lot 1) and 65 Androvette Street (Lot 82) prior to their demolition. A plan for that work also should be submitted to the New York City Landmarks Preservation Commission for its review.

1.0 INTRODUCTION

This report presents the results of a Phase IA archaeological investigation of the proposed, approximately three acre (125,000 square feet), Charleston Towers residential development project area. The property is located on three lots, which together are referred to as 55 Androvette Street (Block 7407, Lots 1, 80, and 82). The lots are located near the Arthur Kill shoreline in the Charleston (known historically as Androvetteville and Kreischerville) section of southwestern Staten Island (Richmond County), New York City, New York (Figures 1 - 3). Individually, the three lot addresses are numbers 53 (Lot 1), 65 (Lot 80), and 83 (Lot 82) Androvette Street. Each lot contains a late nineteenth century residence. According to recent determinations by staff at the New York City Landmarks Preservation Commission (NYCLPC), the residential properties located at what formerly were 53 Androvette Street (Block 7407, Lot 1) and 65 Androvette Street (Block 5074, Lot 82) appear eligible for listing on the New York State and National Registers of Historic Places (Santucci 2008, 2009). Lot 1 also contains an outbuilding, now used as a commercial garage, while Lot 82 contains five outbuildings and sheds. A portion of an artificially created pond also formerly was located in the northwestern corner of the property on Lot 82. Lot number 80 currently does not contain any outbuildings (Figure 2).

The study has been conducted and this document prepared for 65 Androvette Street, LLC, 101 Tyrellan Avenue, Staten Island, New York, at the request of the NYCLPC. The study is being undertaken in partial fulfillment of the terms of a ***Declaration*** filed with the Office of the Richmond County Clerk between 65 Androvette Street, LLC and other parties (Conti 2009). The terms of the ***Declaration*** commit 65 Androvette Street, LLC to have appropriate cultural resource investigations conducted for the project area prior to its development.

The proposed project at 55 Androvette Street will consist of the construction of a three story, eighty-one unit residential building with parking areas. It will be a market rate building and will be age restricted for persons 55 years of age and older. Amenities include a library, dinning and fitness rooms, laundry, transportation, housekeeping, and security (Piccininni 2009).

The Phase IA investigation consists of a literature review, pedestrian reconnaissance, and archaeological sensitivity assessment of the project area. The objectives of the study are to assess the likelihood that possibly significant cultural resources are present within the project property and to recommend any necessary further investigations. The study has been conducted and this document prepared in accordance with the ***Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation, Federal Register, Volume 48, Number 190*** and the guidelines and standards for cultural resource investigations currently adopted by the NYCLPC and the New York State Office of Parks, Recreation and Historic Preservation [NYSOPRHP] (New York Archaeological Council 1994, 2000; New York State Office of Parks, Recreation and Historic Preservation 2005).

1.1 Charleston Towers Project Area Description and Area of Potential Effect

The proposed Charleston Towers project area consists of three lots (numbers 1, 80, and 82) within Block 7407 (Figures 2 and 3). It is bordered on the east by Manley Street and on the south by Androvette Street. Residential properties border the project area to the north and west (Block 7407, Lots 17, 40, 65, and 77). The project area landform consists of a raised but sloping terrace-like area that is located within 225 feet of what is referred to in this report as Androvette Creek, a fresh or brackish water tributary of the Arthur Kill, and its associated wetlands, which flows through a distinct gully or draw. The stream may be seasonal or otherwise ephemeral. The Arthur Kill and associated shoreline salt marshes are located about a quarter mile west of the current study area.

Lot 1 (53 Androvette Street) within the project area is an inverted L-shaped parcel that is 1.4 acres in size (Figures 2 and 3). It contains a late nineteenth century, two and a half story frame residence with a one story addition to its rear. The residence is set back from Androvette Street (Photographs 1 - 3). The house currently is occupied. NYCLPC staff has determined it to be eligible for listing on the New York State and National Registers of Historic Places (Santucci 2008). The building will be demolished as part of the proposed

construction project. The land east and south of the house is relatively level to gently sloping to the south and covered by grass and shrub vegetation (Photographs 4 and 5). A red brick driveway and small section of lawn are located west and southwest of the house. The portion of the lot north of the house is used commercially by the Family Tree Removal Company. That area is relatively level to gently sloping upward to the northeast and is paved with asphalt. Portions of it appear to have been filled. The area is used to store vehicles and other equipment operated by the Family Tree Removal Company (Photographs 6 and 7). Large piles of split wood also cover portions of the commercially used area. A one story garage now used by the tree removal service is located north of the house (Photograph 8). It also is slated to be demolished as part of the development project. Soils within part of the north central and northwestern portions of the L-shaped lot appear to have been excavated creating borrow areas of disturbance that are now covered by wetland and scrub vegetation (Photographs 9 and 10). Some of the removed soils appear to have been deposited in the northeastern most part of the lot to grade the ground.

Lot 82 (65 Androvette Street) within the project area is an almost square shaped parcel that is approximately 1.29 acres in size (Figures 2 and 3). A strip of property 133.6 feet by 30 feet in size that constitutes Lot 80 (83 Androvette Street) was subdivided from Lot 82 during the early twentieth century. A three and a half story frame residence, constructed during the mid-nineteenth century, with a one story rear section added subsequently, is located on the lot. It is set back from Androvette Street (Photographs 11 and 12). The building is not currently occupied. NYCLPC staff has determined it to be eligible for listing on the New York State and National Registers of Historic Places (Santucci 2009). Five frame outbuildings and sheds are located north west of the residence. Areas around the shed apparently have been filled, raising the ground for facilitate the movement of machinery in and out of some of the outbuildings. The residence and outbuildings will be demolished as part of the current project. The area to the south, east, and west of the residence consists of relatively level, grass and tree covered ground (Photographs 13 and 14). The portion of Lot 82 north of the house is covered by dense woodland and scrub vegetation (Photographs 15 and 16). Locations within the northern portion of the lot have been dug out creating depressions with sharp embankments (Photograph 17). The removed soils were possibly deposited near the Lot 82 outbuildings and/or within the northern part of Lot 1. The northwestern most portion of the lot is currently covered by wetland vegetation (Photograph 18). The area was part of an artificially created pond established during the early twentieth century period, possibly within an earlier wetland area (see Chapter 4.4).

Lot 80 (83 Androvette Street) is a relatively small and level, rectangular shaped parcel, approximately 133.6 feet by 30 feet in size (0.09 acres; Figures 2 and 3). A one-story frame building, constructed during the early twentieth century, is located on the lot, fronting onto Androvette Street (Photograph 19). The portion of the lot immediately north of the residence is grass covered beyond which are dense stands of wetland and invasive vegetation (Photograph 20).

The area of potential effect (APE) for the proposed development project consists of all of the land that comprises the three project property lots (Lots 1, 80, and 82; Figures 2 and 3). Ground disturbance within the three lots will result from construction of the three story residential building, driveways, and parking areas, and the installation of stormwater basins and utilities, as well as landscaping of portions of the property.

1.2 Previously Conducted Archaeological Investigations in the Project Vicinity

A number of archaeological investigations previously have been undertaken in the general project vicinity. Three significant prehistoric and two historic period archaeological sites were identified by some of the studies within a third of a mile of the current Charleston Towers project area. In addition, four other locations less than half a mile from the current project area revealed evidence of Native American activity that was not deemed to be significant. Also found in the area was a historic period archaeological site associated with mid-nineteenth century brick manufacturing. It also was determined not to be significant.

A Phase I archaeological survey of the Arthur Kill Factory Outlet Center project area identified a number of locations within that project's 22 acre area of potential effect that contained evidence of Native American activity dating from the Late Archaic through Woodland periods (Hunter Research 1995, 1996). The former Arthur Kill Factory Outlet Center project area was located on raised ground and bluff top settings overlooking

the Arthur Kill, about one quarter to one half mile south of the current Charleston Towers project property. The proposed Outlet Center project was not completed and the property subsequently became part of the Tides at Charleston residential development project. Phase II investigations were conducted by URS Corporation (2004) at the locations were archaeological sites were identified as part of the prior project. Two of the site locations (the Van Allen Farmstead Site and the Price Farm Prehistoric Site) were determined to be significant resources warranting Phase IIII Archaeological Data Recovery excavations, which were subsequently conducted by the URS Corporation in 2005. Four other locations containing evidence of Native American activity and one location associated with mid-nineteenth century brick manufacturing within the project area were determined not to be significant by the Phase II study and no further investigation of them was recommended.

The Allen Farmstead site contained both prehistoric (Archaic through Late Woodland period temporary and long term campsites) and nineteenth century farmstead components. The Price Farm Prehistoric site consisted of Early Woodland through Late Woodland period camps. Both the Allan Farmstead and Price Farm sites were located about a third of a mile south of the current project area and were mitigated as part of the Tides at Charleston residential development project (URS Corporation 2005; see Chapter 3.3).

A Phase II archaeological survey conducted by John Milner Associates in 2000 identified the significant Fairview Prehistoric site and the mid-nineteenth century Balthasar Kreischer Estate site (John Milner Associates 2000). The sites are located about 1,000 feet south of the current project area. A subsequent Phase I study was conducted by John Milner Associates (2000, 2005) on another parcel about 500 feet east of the Balthasar Kreischer Estate site. That study did not recover prehistoric artifacts but did identify archaeological features (cisterns, a barn foundation and a filled-in pond) associated with the Kreischer Estate site. The identified resources reportedly were avoided by the construction project.

A Phase I archaeological survey of the Center at West Shore Development project area, located about a mile and a quarter north of the Charleston Towers project site, did not encounter any prehistoric artifacts or significant Historic period deposits (Pennington and Dieter 1995; Greenhouse Consultants, Incorporated 2000).

A Phase IB archaeological investigation of the Allentown Lane portion of the Charleston Bus-Annex-Stormwater Sewer project area, located approximately 3,500 feet south of the Charleston Towers project area, did not encounter any archaeological sites. The tested area was located along raised, sloping ground overlooking the Arthur Kill (Boesch 2007).

1.3 Previously Identified Historic Properties within the Project Vicinity

The existing residential structures located within the current project area on Lots 1 (53 Androvette Street) and Lot 82 (65 Androvette Street) have been determined by staff at NYCLPC to be eligible for listing on the New York State and National Registers of Historic Places (Santucci 2008 and 2009). Five other significant historic properties also have been previously identified within the Charleston Towers project vicinity. These are (NYSOPRHP 2009a, 2009b; Santucci 2009; Shaver 1993):

- The Kreischer House (90NR000894), located at 4500 Arthur Kill Road is listed on the New York State and National Registers of Historic Places (dates of listing: September 29, 1982, October 29, 1982). The large Stick Style frame residence, constructed c. 1885, is located about 850 feet southeast of the current project area.

- Kreischerville Worker Houses, located at 77 to 85 Kreischer Street, are four identical two-family houses constructed c. 1890 that are listed on the New York State and National Registers of Historic Places. They also were determined to be New York City Historic Landmarks in 1994 by NYCLPC. The houses are the only surviving examples of housing built for Kreischerville brick factory workers. The houses are located about 150 yards northwest of the current project area.

- The Hungarian Church and Parish House built by Balthasar Kreischer ca. 1883 as Saint Peter's German Evangelical Church of Kreischerville. The structures are listed on the New York State

and National Registers of Historic Places. They also were determined to be a New York City Historic Landmark by NYCLPC. Since 1915 the church and parish house have been part of the Hungarian Reformed Church (The Free Magyar Reformed Church). The church and parish house are located at 23 and 25 Winant Place, about 150 yards north of the current project area.

- The Killmeyey Store, located at 4321 Arthur Kill Road, approximately 150 yards northeast of the current project area, has been determined to be eligible for listing on the New York State and National Registers of Historic Places.

- The Winant House, located at 40 Winant Place approximately 100 yards northwest of the current project area, has been determined to be eligible for listing on the New York State and National Registers of Historic Places. It has been assigned the Unique Site Number 08501.000197 by the New York State Department of Parks, Recreation and Historic Preservation (2009a).

1.4 Methodology

This Phase IA archaeological investigation involved documentary research on the Euro-American history and Native American culture history and adaptations of the Charleston Towers project area and vicinity and a pedestrian reconnaissance of the project property. Research for the study was conducted at the following repositories:

New York City Public Library: History, Local History and Genealogy; Map; and General Research Divisions;
New York City Landmarks Preservation Commission;
New York State Office of Parks, Recreation and Historic Preservation; and
Elmer Holmes Bobst Library, New York University.

Knowledgeable people spoken to as part of the research conducted for this study include:

Ms. Amanda Suptkin, New York City Landmarks Preservation Commission;
Mr. Daniel Pagano, New York City Landmarks Preservation Commission;
Ms. Gina Santucci, New York City Landmarks Preservation Commission;
Mr. Douglas Mackey, New York State Office of Parks, Recreation and Historic Preservation;
Mr. Arnold Pickman, New York City Professional Archaeologist; and
Ms. Melissa Piccininni, Executive Assistant, The Tides at Charleston Residential Development, 4553 Arthur Kill Road, Staten Island, New York.

The pedestrian reconnaissance was conducted on June 18, 2009. Based on the documentary research and pedestrian reconnaissance, the archaeological sensitivity of the project area was assessed. Assessment of Native American period sensitivity was based on the location of known archaeological sites reported in the literature as well as a consideration of the present and former topographic and physiographic characteristics of the property. Assessment of Historic period sensitivity was based on an analysis of late eighteenth to twentieth century maps as well as a review of primary and secondary sources.

Appendix A indicates the locations and orientations of the photographic views included in this report as Photographs 1 – 20.

2.0 ENVIRONMENTAL SETTING OF THE PROPOSED CHARLESTON TOWERS PROJECT AREA

The project area is part of the gently undulating landscape of southwestern Staten Island. A small wetland, formerly a pond created during the early twenty century most likely to water horses and/or other livestock, is located in the northwestern portion of the property on Lot 82. The pond may originally have been a wetland before it was transformed into a water body sometime between 1907 and 1913 see Chapter 4.4). A creek, referred to in this report as Androvette Creek, with associated wetlands, flows approximately 225 feet south of the project property (see Chapter 4.4). The creek may be seasonal or other wise ephemeral. The Arthur Kill, and associated salt water marshes, is located approximately one quarter mile to the west of the project property (Figure 1).

The pre-development setting of the project area apparently consisted of raised but sloping, terrace-like sandy ground, in close proximity to one or more fresh or brackish water wetlands and Androvette Creek with the Arthur Kill located at somewhat greater distance.

2.1 Geology

The Charleston Towers project area is part of the inner lowland sub-province of the Coastal Plain geomorphic/physiographic province. The Coastal Plain is one of two geomorphic-physiographic provinces represented on Staten Island; the other being the Piedmont Lowlands. The border between the two provinces extends along an imaginary line running from approximately north of Stapleton to Westerleigh and Bloomfield. Generally, the Coastal Plain is a broad, low-lying landform that slopes gently towards the Atlantic Ocean. Most of it is underlain with gently southeastward dipping, unconsolidated marine and fluvial deposits of clay, silt, sand, and gravel of Late Cretaceous and Tertiary age (Wolfe 1977:207).

The inner lowland portion of the Coastal Plain consists of generally level to gently undulating terrain that is generally between sea level and 60 feet in elevation. However, the province is traversed by the terminal moraine of the Wisconsin glaciation, a topographic feature that forms a series of hills, knolls, and ridges along its length, which on Staten Island range between 60 to over 400 feet in elevation. The processes that resulted in the formation of the moranial feature were independent from those which formed the Coastal Plain. The project property is located along the terminal moraine with its elevation ranging between approximately 34 and 64 feet above mean sea level. In the vicinity of the project property, however, the moraine extends up to 130 feet elevation.

2.2 Surface Geology

The portion of the inner Coastal Plain present on Staten Island was greatly affected by the Wisconsin glaciation. Glacial drift covers most of the area north of the terminal moraine while south of it, the Coastal Plain is not much more than a ridge of glacial outwash sediments that almost completely overly the Cretaceous and Tertiary layers. Large areas are also covered with interglacial fluvial deposits of Quaternary age (Wolfe 1977:207).

The terminal moraine on Staten Island is located slightly inland from the Atlantic Ocean. It extends northward roughly from Perth Amboy along Staten Island's Atlantic shore line (the present-day routes of Van Duzer Street, Richmond Road, and Amboy Road run, approximately, along the front or southern edge of the moraine) crossing the Narrows to Brooklyn where it is known as the Ronkonkoma moraine (Isachsen, Landing, Lauber, Richard, and Rogers 1991). In addition, glaciofluvial events created kames or sand hills, kame terraces, outwash plains, eskers, and kettles within the province, most of which have been obliterated by development. Many small streams, rivers, and lakes formed in the area as a result of glacial run off. Over time many of these turned into low-lying wetlands which prior to development were scattered throughout Staten Island, particularly along its coastal shoreline.

The largest of the glacial lakes in the project vicinity was proglacial Lake Hackensack whose southern shoreline

was for a while located approximately one mile north of the current project area. The lake drained about 13,000 BP, after which the Arthur Kill, a tidal strait separating Staten Island from the east shore of New Jersey, began to cut its channel to the Atlantic Ocean (Silver 1984). The Arthur Kill currently is located about a quarter mile west of the current project area and during periods of lower sea level was a much narrower river than it is at present.

A 1913 topographic survey of Staten Island (Figure 18) indicates that the elevation of what is now the project property ranged between approximately 28 and 64 feet above sea level. The survey indicates that the land forms a raised, terrace-like topographic feature sloping downward to the west towards the Arthur Kill and to the south towards Androvette Creek. Elevations and contour information of the area as depicted on the current USGS map for the area and the property survey map for the project, as well as the pedestrian reconnaissance of the property, indicate that the topography and elevation has changed little over the last 95 years. A comparison of the surveys and the site reconnaissance indicates some modification of the terrain only in the north central potion of Lot 82 and the northwest portion of Lot 1 where some site excavations have occurred, probably sometime over the last ten to twenty years (Photographs 10 and 17).

2.3 Project Area Soils

One soil association or type, Riverhead Sandy Loam, is recognized for the current project area. The association is a well drained soil that forms on outwash plains, valley train deposits, beaches, and water sorted moraines on slopes ranging between zero and 50 percent. The stratigraphic sequence associated with this soil type is indicated in Table 1 (see USDA Official Soil Series Descriptions, http://soils.usda.gov/technical /classification/osd/index.html; Louis Berger and Associates 2001).

TABLE 1

TYPICAL SOIL SEQUENCE FOR RIVERHEAD SOILS

Soil Type	Soil Horizon Depth (Inches)	Color	Texture
Riverhead	Ap: 0-12 Bw: 12-27 BC1: 27-32 2BC2: 32-35 2C1: 35-40 2C2:40-65	Brown Strong Brown Tan Brown Yellow Brown Brown Very Pale Brown	Sandy Loam Sandy Loam Loamy Sand Gravelly Loamy Sand Sand Coarse and Medium Sand with Gravel

2.4 Flora and Fauna

The predominant pre-Contact period habitats present within the inner lowlands of the Coastal Plain were saltwater/brackish water marshes and tidal flats, freshwater marshes, and upland climax forest (Robichaud and Buell 1973:106). In many localities, brackish, and fresh water marshes grade from the open shore to the upland forest.

Saltwater and brackish water marshes were formerly common along the entire shoreline of Staten Island, also occurring inland for a short distance along the banks of tidal creeks. Chrysler (1910) provides a list of 38 plants found in salt and brackish water marshes and meadows in the order of their occurrence in soils with decreasing salt context. All are or were formerly present in Staten Island. The first four are glasswort, found nearest to salt water, sea lavender, salt reed grass, and salt water cord grass. The composites marsh elder and groundsel occur near the center of Chrysler's list followed a little further down by cat-tail. The last four salt tolerating plants are swamp-rose, arrowhead, lizard's tail, and bur-marigold.

Freshwater marshes were present along the edges of lakes, ponds, rivers, and wherever depressions of land were kept flooded on a regular basis by high water tables (Robichaud and Buell 1973:105). In pre-Contact period

freshwater marsh environments, the plant community was typically dominated by reed grass, cat-tail, and/or wild rice. All of these would have been important economic plants for Native American groups. Other plants that would have been common in pre-Contact period freshwater marshes were low-growing grass-like sedges, bulrushes, arrow-arum, blue flag, spike rush, bur reed, water dock, marsh fern, orange touch-me-not, and swamp milkweed (Robichaud and Buell 1973:125-127).

The remaining portions of the inner lowland of the Coastal Plain are characterized as upland forest because the most abundant or dominant type of vegetation present were tall growing, deciduous broadleaf trees (Robichaud and Buell 1973:106). The forests are specifically described as oak-chestnut forests composed primarily of mixed oaks (white, red, and black) with some chestnut trees also present on drier slopes (Robichaud and Buell 1973:106). Beech, several varieties of hickory, sugar maple, white ash, and black cherry also would have been numerous (Shelford 1974). All of these species were probably present in the project area or its immediate vicinity during the prehistoric and historic periods. Chestnuts, oak, and hickory trees could potentially have been exploited by Native American groups for subsistence purposes while some of the other varieties had other economic uses (e.g. medicinal, dwelling construction, craft manufacture, household needs, firewood, etc.). Marsh and forest habitats are still found in less developed areas within the inner lowland province on Staten Island.

Shellfish were one of the most important prehistoric subsistence resources found along the Staten Island shoreline. The species commonly utilized by Native Americans were oysters, soft shell clams, hard shell clams, scallops, and various marine snails.

Pre-Contact period faunal species usually present within the Coastal Plain's marshes included various invertebrates, migratory water fowl, and other birds, muskrat, and small rodents, rabbit, raccoon, otter, skunk, opossum, bear, and white-tailed deer, and during at least a portion of the prehistoric period, elk (Shelford 1974; Gosner 1978; Roberts 1979). In the province's freshwater streams, marshes, and lakes were found mussels, fish, certain amphibians and reptiles, migratory fowl, and semi-aquatic mammals (Shelford 1974). Anadromous fish species would have been present seasonally within Staten Island via streams emptying into the estuary system (Raritan Bay, the Narrows, Arthur Kill, Kill Van Kull, and Androvette Creek). All of these economically useful forms would have been present in the current project vicinity during the Native American and early Historic periods.

3.0 DOCUMENTARY RESEARCH - NATIVE AMERICAN PERIOD

The Native American and Native American - European Contact period cultural history of the project region is provided in Chapter 3.1 and 3.2. This is followed by descriptions of Native American sites and other evidence of Native American activity previously identified in the Charleston/Kreischerville vicinity (Chapter 3.3 and 3.4). Analysis of the Native American archaeological sensitivity of the project area is provided in Chapter 5.1.

3.1 Background Culture History

The prehistory of the Staten Island region, which includes the current project area, encompasses the PaleoIndian, Archaic, Transitional, and Woodland periods. The PaleoIndian period (10,000-6,500 B.C.) represents the earliest occupation of the southeastern New York region. The Archaic (6.500-1,700 B.C.) refers to a time prior to the introduction of horticulture and pottery manufacture and is divided into Early, Middle, and Late periods. The Transitional period (1,700-1,000 B.C.) witnessed a gradual change in Archaic lifestyles with the development of "Woodland" period traits. The Woodland period (1,000 B.C.- A.D. 1,600), which is characterized by the use of pottery and reliance on horticulture, also is divided into Early, Middle, and Late periods.

The PaleoIndian period corresponds with the end of the Wisconsin glaciation (80,000 - 11,000 B.P.). The last advance of the ice sheet associated with this stage reached its maximum approximately 18,000 years B.P. covering most of Staten Island with glacial ice. After approximately 18,000 B.P., world wide temperatures started to rise and melting and northward retreat of the ice sheet began. A continuous morainal feature consisting of mixed sands, silts, clays, and boulders, marks the southernmost advance of the ice sheet; on Staten Island the terminal moraine extends down the east shore and into New Jersey at Perth Amboy (Wolfe 1977; see Chapter 2.2).

Sea levels were lower during the PaleoIndian period and the subsequent Early to Middle Archaic period due to sea water being trapped in the remaining glacial ice and did not reach their modern level until approximately 7,000 B.P. (the Early to Mid-Archaic period). Staten Island during most of this era was located well inland from the Atlantic coast, being a tract of raised ground surrounded by glacial lakes and meltwater streams and rivers.

A tundra environment characterized the landscape of Staten Island during the late glacial and immediate post-glacial periods. As the glaciers retreated northward, water drained from the melting ice sheet creating large inland lakes, bogs, and marshes. One of the largest of the lakes was Glacial Lake Hackensack (New Jersey's present-day Hackensack Meadows). Most of the lake was located northwest and west of Staten Island but a portion of the lake covered the northwestern and western most parts of the island. The lakes ancient shoreline for a time was located about a mile north of the current project area. Another lake, Glacial Lake Passaic (New Jersey's present-day Great Swamp) was located west of Staten Island. A third lake, Glacial Lake Hudson, was located north of Staten Island, centered within the ancestral Hudson Valley, between the Narrows and the present-day Havestraw area. The lakes all drained about 13,000 years ago after which the ancestral Arthur Kill, a much narrower river during periods of lower sea level, started to develop its route to the Atlantic Ocean.

The tundra and lacustrian landscape was succeeded by woodland with local forests consisting primarily of spruce and fir with small amounts of oak and other deciduous species (Snow 1980). Many faunal species now extinct or no longer native to the area were present in the forests. These included mammoth, mastodont, horse, caribou, giant beaver, sloth, elk, moose, and peccary (Snow 1980). The remains of three mastodonts have been found in central and southern Staten Island (Kraft 1975:60), including one at Hackensack (Wolfe 1977:168-170) and three Imperial mammoths have been found in nearby areas of New Jersey. Two were discovered at Middletown and the third at North Plainfiield (Wolfe 1977:168).

Little is known about cultural activities during the PaleoIndian period although it is generally accepted that the region was first inhabited by humans at approximately 10,000 B.C. (Funk 1976; Ritchie 1980). Small nomadic bands of hunters and gatherers subsisted probably on the animal species mentioned previously as well as small

game animals, certain riverine resources, and a variety of plants. Population density, however, was very sparse. A variety of functionally diverse site types, however, have been identified based upon intersite variability of artifact assemblages and environmental setting. These include base camps, quarry workshops, rockshelter habitations, open air hunting camps, kill and butchering sites, and other temporary camps (Funk 1972; Gardner 1974; Moeller 1980; Gramley 1982). Most evidence of PaleoIndian activity, however, comes from scattered surface finds of Clovis Fluted points, a diagnostic PaleoIndian artifact (Funk 1976:205). Almost all of the fluted points found throughout Staten Island were recovered as surface finds. At least 15 such points have been found in the Charleston-Kreischerville area, between Ellis Place and the Outer Bridge Crossing along the bluff overlooking the Arthur Kill, which includes the Charleston vicinity and the current project area. A number of these fluted points also been recovered along the beach in Kreischerville overlooking the Arthur Kill, including the section of shore located a quarter mile west of the project area. However, it is probable that they were not in primary context but had eroded onto the beach from an unknown bluff top location.

Information from known PaleoIndian sites in the New York - New Jersey - Pennsylvania-Connecticut region suggests that raised, well-drained areas near rivers, streams or wetlands were the locations preferred for occupation. The project vicinity during the late glacial and early Holocene periods would probably have fit such a topographic and physiographic description. Rock shelters, areas near lithic sources, and lower river terraces also were subject to PaleoIndian occupation and use (Werner 1964; Funk 1976; Moeller 1980; Ritchie 1980; Marshall 1982).

A number of locations in the area between Rossville and Tottenville, which includes the current project area, have produced artifacts attributed to PaleoIndian manufacture. In this area, populations were apparently occupying the high, well-drained ground overlooking the Arthur Kill and the wetlands, such as the Fresh Kills wetlands, associated with the former presence of Glacial Lake Hackensack and exploiting subsistence resources located in those water bodies. Until this century, the Fresh Kills wetlands area consisted of a series of tidal creeks and stretches of marsh extending northwards to Howland Hook. The Port Mobil site (a.k.a. Port Socony north and south – see Chapter 3.3) contained diagnostic PaleoIndian artifacts such as fluted points and spurred end scrapers as well as lithic debitage (Ritchie 1980). However, these were recovered from disturbed contexts associated with construction of the Port Mobil Tank Farm. Fluted points also were recovered from the surface at the Cutting site by the Cutting family. Other sites that may contain a PaleoIndian component are located at Smoking Point and Charleston Beach (Sainz 1962; Rubertone 1974; Ritchie 1980; Silver 1984). The latter site is located less than a half mile northwest of the current project area with the rest located within less than a mile and a half. Non-diagnostic lithic artifacts also were recovered at these sites from deep within sand layers or below peat deposits thought to date in depositional age to the late Pleistocene or early Holocene periods.

A problem in interpreting PaleoIndian occupation in southern Staten Island arises from the fact that sites from which artifacts of definite PaleoIndian manufacture were recovered (i.e. Port Socony North and South, Cutting site) have not been subject to systematic excavation and/or adequately reported. Accordingly, an understanding of the relationship of PaleoIndian artifacts with specific, and comparable, stratigraphic sequences is not available. At sites where systematic excavation has occurred (i.e. Smoking Point, Charleston Beach), diagnostic PaleoIndian artifacts have not been recovered and such occupation only inferred by the association of chipped stone artifacts with probable late Pleistocene/early Holocene deposits.

During the Archaic period (6,500-1,700 B.C.), the environment changed from a pine dominated forest to an increasingly deciduous forest which achieved an essentially modern character by 2,000 B.C. (Salwen 1975). While Archaic cultures have been traditionally thought of as reflecting a forest-based adaptation, more recent research has produced a picture of an increasingly varied subsistence pattern based on the seasonal exploitation of various faunal and floral resources (Ritchie and Funk 1973; Funk 1976; Kraft 1986; Starbuck and Bolian 1980). In the lower Hudson Valley and coastal areas, oyster became a major component of subsistence, at least seasonally, during this period (Brennan 1977). At this time, the project area probably was a forested tract.

Archaic hunters and gatherers were still nomadic and organized into small bands which occupied localities along the Staten Island shoreline, especially its protected coves, inlets, and bays, probably during the warmer months and interior regions during the colder months (Wyatt 1977; Ritchie 1980; Kraft 1986). Population growth throughout the period resulted in an increase in both site density and the number of functional site types represented in the archaeological record. Site types recognized for this period include spring fishing camps

along major streams, fall open air hunting camps, rockshelter habitations, shellfish collecting and processing stations, mortuary sites, quarry and workshop sites, and semi-permanent villages (Harrington 1909; Brennan 1974; Dincause 1976; Barber 1980; Ritchie 1980; Snow 1980). Ritchie states that most Archaic sites were small and multi-component, lacking traces of substantial dwellings, fortifications, storage pits, and graves (Ritchie 1980:32 and 35). Evidence of house patterns attributable to the Late Archaic period, however, has been reported from the Howard site in Old Lyme, Connecticut near Long Island Sound (Pfieffer 1983).

Most information concerning the Archaic period comes from Late Archaic sites since evidence for Early and Middle Archaic sites in the region is almost as scarce as for PaleoIndian sites. The rarity of Early Archaic (6,500- 4,500 B.C.) sites is probably due to the dominance of a coniferous forest in the region during that period (Ritchie 1980). Such environments are inhospitable to human exploitation, offering few plants and animals for consumption. Early Archaic components, however, have been identified on Staten Island at the Hollowell, Old Place, Charleston Beach (in the immediate vicinity of the current project area), Ward's Point, Travis, and Richmond Hill sites (Ritchie and Funk 1973:38-39). These Staten Island sites represent the first inarguable evidence of an Early Archaic presence in New York State (Ritchie and Fund 1973:38).

Early Archaic lifestyles and adaptations are generally considered to be similar to PaleoIndian lifestyles and adaptations (Gardner 1974).

During the Middle Archaic (4,500 - 2,500 B.C.), the region's coniferous forests receded and were replaced by deciduous forests which provided humans with more exploitable resources. Sites dating to this period tend to be located on floodplains and low terraces of major rivers and streams and in association with marsh, swamp, and estuarine environments (Ritchie and Funk 1973; Funk 1972, 1976; Ritchie 1980). The present project area contains similar topographic and physiographic features (high, sloping terrace-like ground overlooking a stream and marsh). Although rare (or rarely recognized) on Staten Island, Middle Archaic components have been identified at Ward's Point and possibly at Chemical Lane, and Harik's Sandy Ground (Florance 1982; Jacobson 1980; Lavin 1980; Rubertone 1974).

Human population, site density, and site size apparently increased in the Staten Island region during the Late Archaic period (2,500 – 1,500 B.C.). Some sites appear to have been occupied on a semi-permanent basis. Sites apparently containing Late Archaic components have been found on high ground in close proximity to area estuaries (Pottery Farm, Bowman's Brook, Smoking Point, Goodrich, Rubertone 1974; Silver 1984) and along major interior streams (Sandy Brook, Wort Farm, and Arlington Avenue – Lenik 1987; Yamin and Pickman 1986a). Temporary hunting camps associated with this period are frequently located on sandy knolls and localized areas of sandy soil. Such sites have been discovered in Clay Pit Pond Park and along Clay Pit Pond Road, less than one mile east of the current project area (Yamin and Pickman 1986b).

Sites dating to the Transitional period (or Terminal Archaic; 1,700 - 1,000 B.C.) are most frequently found along the coast and major waterways (Funk 1976; Ritchie 1980; Vargo and Vargo 1983) although smaller sites are known from the interior (Funk 1976; Vargo and Vargo 1983). New and radically different broadbladed projectile point types appeared during this period as did the use, during the latter half, of steatite (soapstone) vessels. On Staten Island, Transitional period components have been found at the Pottery Farm, Wards Point, Old Place, and Travis sites. Orient Fish Tail type projectile points also have been recovered along the beach at Kreischerville, about a quarter miles west of the current project area. The points probably eroded from sites located on nearby bluff tops within the project vicinity.

During the Early Woodland period (1,000 B.C. - A.D. 1), the use of fired clay ceramic vessels gradually replaced the reliance on steatite vessels. Subsistence practices included a continuation of the hunting, gathering, and fishing of the Archaic but were supplemented by an increase in shellfish collecting. It has been suggested that this indicates a trend towards more sedentary lifestyles (see Funk 1976; Snow 1980). Evidence of Early Woodland occupation is fairly widespread on Staten Island.

Human populations during the Middle Woodland period (A.D. 1 - 800) gradually adopted a more sedentary lifestyle. Although it is generally felt that subsistence was essentially based on hunting and gathering supplemented by fishing and shellfish collecting (Williams and Thomas 1982), there has been speculation that domestication of various plants occurred during this period (Ritchie and Funk 1973; Snow 1980). Most Middle

Woodland sites are located near estuaries although smaller inland sites also are known (Funk 1976; Ritchie 1980). Middle Woodland components on Staten Island have been found at the Huguenot Site, the Cutting site, Wort Farm, Pottery Farm, Page Avenue North, and at the Van Deventer/Fountain House.

By Late Woodland times (A.D. 900 - 1,600), horticulture was the primary subsistence base and permanent villages existed. Use was still made, however, of temporary and special purpose campsites (Ritchie 1980; Snow 1980). Late Woodland sites are relatively numerous on Staten Island. Large base camps/villages are usually located adjacent to major tidal rivers. These were probably occupied on a permanent or semi-permanent basis. Smaller inland sites, usually located near a fresh water source, that were probably occupied on a seasonal or temporary basis, also have been recognized (Funk 1976; Ritchie 1980; Snow 1980). Extensive shell middens associated with Late Woodland occupations also have been identified on Staten Island (see Boesch 1994).

Late Woodland subsistence apparently relied extensively on horticulture although hunting, gathering, and in some locations, shellfish collecting also continued to be practiced.

3.2 Native American - European Contact Period

The documentary history of the Staten Island vicinity which includes the project area begins with the information recorded by early settlers concerning the Native American groups who occupied the area when Europeans first arrived in the early seventeenth century.

The Contact period (A.D. 1600 - ca. 1750) is the time of the first large scale contacts between Native Americans and European colonists. By the latter part of the Late Woodland period Native American cultures began to resemble those of groups that were encountered by seventeenth century Europeans. At this time, Long Island Native Americans were part of the widespread Algonquian cultural and linguistic stock. Specifically, they were a group of Munsee (Minsi) speakers who migrated into the area during Late Woodland times (Goddard 1978a, 1978b; Salwen 1978; Grumet 1995). The Munsee speakers were a linguistic subgroup of the Lenape or Delaware whose English appellation derived from the river named in 1610 by Captain Samuel Argall or the pinance Discovery in honor or Thomas West, Lord de la Warr, the second Governor of Virginia (Weslager 1967; Salomon 1982:15). The Unami and the Unalachtigo were the other two sub-groups of the Lenape (Goddard 1971, 1978a; Salomon 1982). The southern limit of Munsee territory (including Staten Island) bordered the territory of the Unami speaking Lenape and some scholars feel that the Native Americans who resided on Staten Island (see below) were not Munsee speakers but Unami speakers.

The Lenape consisted of autonomous, loosely related bands or lineages living in small family groups or hamlets (Kraft 1975:61). They never formed a politically united tribe. The origin of the name “Lenape” is unclear. Goddard (1978b:236) states that the name translates roughly as “real people.” Salomon (1982:14; see also Tooker 1911) agrees in a general sense stating that the name means “the real men” or “common people.”

Originally the name Lenape (and Delaware) was applied only to the Unami-speaking bands. By the mid-eighteenth century it had also become associated with the Munsee and Unalachtigo speaking bands, which had migrated away from their traditional homelands and merged.

The Munsee occupied most of the land south of the Catskill Mountains to a line drawn from the headwaters of the Lehigh River through the Delaware water gap area to the Raritan River in New Jersey, and eastward to approximately the current New York-Connecticut border and the New York City-Nassau County border (Goddard 1978a:214). They composed a relatively large, loosely related group who shared the same totemic symbol, the wolf (Ruttenber 1872: 47). Munsee settlements included camps along major rivers, estuaries, coves, inlets, and bays with larger villages located at river mouths (Salomon 1982). Small hunting, gathering, and agricultural sites were located in the interior. Despite references to such sites by early European explorers and settlers, only a few Contact period sites have been identified on Staten Island. Some of those, however, were identified relatively close to the current project area.

Robert Juet, an officer on the "Half Moon", provides an account in his journal of some of the Contact period Native Americans who inhabited southeastern New York (see Cunningham 1959). In his entries for September

4th and 5th, 1609 he states (Juet 1859:28):

> This day the people of the country came aboord of us, seeming very glad of our coming, and brought greene tobacco, and gave us of it for knives and beads. They goe in deere skins loose, well dressed. They have yellow copper. They desire cloathes, and are very civill. They have great store of maize or Indian wheate whereof they make good bread. The country is full of great and tall oakes.
>
> This day [September 5th, 1609] many of the people came aboord, some in mantles of feathers, and some in skinnes of divers sorts of good furres. Some woman also came to us with hempe. They had red copper tabacco pipes, and other things of copper they did wear about their necks. At night they went on land againe, so wee rode very quite, but durst not trust them.

The political, linguistic, and social relationships that existed among the various bands of Munsee speakers probably will never be fully understood for a number of reasons. The Native groups themselves had no fixed boundaries and "ownership" of particular areas may have overlapped with use rights shared. EuroAmerican colonists also frequently misunderstood and misrecorded Native American associations with particular areas. Finally, early pressure on some Native groups by colonial expansion probably resulted in frequent shifts of villages and territories (Goddard 1978b).

Native American identification with particular areas and with themselves as members of particular “tribes”, and the development of large permanent villages, was likely the result of changes in Native American social and subsistence systems caused by seventeenth century EuroAmerican territorial expansion (Ceci 1980; Strong 1997). Native American identification during the period of initial European Contact, and probably during the Late Woodland period as well, likely was not based on “tribal” identification but on kinship relations, shared totems, linguistic relationships, and/or other criteria (Strong 1997:23).

In political terms the Munsee were divided into six to 21 main groups or chieftaincies, depending upon which authority is consulted, and numerous smaller political and dialectic sub-groups and bands (Ruttenber 1872:47, 89-93; Goddard 1971, 1978a, 1978b; Salomon 1982). Little is known about these divisions. Scholars traditionally have associated the Raritans and Hackinsacks with Staten Island (Ruttenber 1872:90; Hodge 1910:II:79; Bolton 1922, 1975).

Knowledge of the exact territories that these bands inhabited is elusive. The Hackinsacks traditionally occupied the Hackinsack and Passaic River Valleys as well as northern Staten Island (Ruttenber 1872:90). The Raritans were traditionally located in the valley of the Raritan River and its tributaries and from there occupied lands extending east to the Atlantic Ocean and northeast to the Hudson River and the southern part of Staten Island (Ruttenber 1872:89-90).

The Hackinsacks and Raritans apparently moved inland to the Kittatinny Valley and mountain area in northwestern New Jersey from their traditional homelands in the 1640’s as a result of a series of violent confrontations with Unami speaking Lenape and Dutch colonists between 1640 and 1643 and again in 1655, and because spring floods had destroyed much of their stored food (Ruttenber 1872:90; Bolton 1922; Van der Zee and Van der Zee 1978; Goddard 1978a:213). By 1649, members of the Wechquaesgeek, a sub-group of the Wappinger Confederacy traditionally associated with western Westchester County, had immigrated to the same territory, seeking to escape their own troubles with the Dutch. These immigrants were thereafter referred to by the EuroAmericans as the Raritans (Goddard 1978a:213). The movement of most of the remaining Native Americans away from Staten Island began around 1670.

Although the Raritans and Hackinsack were apparently the traditional residents of Staten Island, other groups seem to have had usufructuary rights there (Goddard 1978a:215). By 1652, a group of Nayacks who had sold their homeland on Brooklyn, moved to Staten Island (Goddard 1978a:215). Bolton (1922:285-297) implies that this indicates that a familial relationship existed between the Nayacks and the Raritans and/or Hackinsacks.

Although Native Americans were emigrating from their traditional homelands on Staten Island by the early 1640's, their lands were not formally deeded to the Dutch, and later the English, until 1651, 1655, 1657, 1664, and 1670 (Ruttenber 1872:90 and 362; Bolton 1920:61-73). The present project area was included in each of these purchases. The multiple purchases of the same lands, each necessitating additional payments, were made "on the principal that it was easier and safer to pay them (the Native Americans) another price than to make them understand that the property had passed from one white to another" (Fox 1926:73). Some Native Americans apparently still resided in the area late in the seventeenth century. The 1679 travel account by Jasper Danckaerts and Peter Sluyter relates their encounter after a long period of heavy rain with some Native Americans along a tributary of the Raritan River:

> …we saw the houses of the Indians on the right and went to them partly for the purpose of drying ourselves, for though the rain seemed at times to abate it still continued, and partly to inquire the best way to go, in order to cross the large creek. We entered their dwelling where we dried ourselves and breakfasted a mouthful out of our traveling sacks. We presented the Indians some fish-hooks which pleased them. While we were in this house, a little naked child fell from its mother's lap and received a cut on its head, whereupon all who sat around that fire, and belonged to that household, began to cry, husband and wife, young and old and scream more than the child, and, as if they themselves had broken their arms or legs. In another corner of this house, there sat around a fire, forming another household, a party whose faces were entirely blackened, who observed a gloomy silence and looked very singular. They were in mourning for a deceased friend.
>
> They [the Native Americans] offered us some boiled beans in a calabash, cooked without salt or grease, though they bought us our own kind of spoons to take them out with. It was the queen who did this, who was more dressed than the others. She gave us also a piece of their bread, that is, pounded maize kneaded into a cake and baked under the ashes (Danckaerts and Sluyter 1861:247-248).

Staten Island was referred to in Contact Period accounts and deeds by different aboriginal names. In a 1631 deed, the island is referred to as "Matawucks"; in 1655, it is referred to as "Eqhquaous", and in 1657, as "Monocknong" with the clan occupying it referred to as "Monatons" (Ruttenber 1872: 362; see Leng and Davis 1930).

Problems and conflicts during the seventeenth century between Staten Island Native Americans and the Dutch resulted in the deaths of large numbers of aboriginals (Hodge 1910; Washburn 1978). The introduction of European diseases such as smallpox further devastated the local Native American populations. During the early period of European Contact, the total Native American population of the Munsee is estimated to have numbered approximately 4,500 individuals (Goddard 1978a:214). Others, however, feel that figure is low and an accurate number is closer to 10,000 people (Nelson 1913). The population of the Raritan alone was estimated to be approximately 1,200 people (Nelson 1913:252). By the year 1779, the total population of Munsee speakers has been estimated to have been reduced to approximately 1,200 individuals (Goddard 1978a:214).

Contact period components on Staten Island have been identified at the following sites: Ward's Point, Old Place, Corsons's Brook, Travis, New Springfield, and the Walton-Stillwell House (Jacobson 1980; Boesch 1994).

3.3 Previously Recorded Native American Sites in the Project Vicinity

Research has long indicated that southern Staten Island was the location of extensive Native American activity (see Boesch 1994). Early in the twentieth century, archaeologists had already noted that "continuous [Native American] camps occur along the shore from Rossville to Tottenville [the area includes the current project

property] with scattered relics in nearly every field" (Skinner and Schrabisch 1913:44). Although no prehistoric or Contact period remains have been reported within the project property, the presence of at least 26 identified sites and artifact scatters within an approximately one mile radius of the Charleston Towers project area indicates that prehistoric activity did occur in the region (Table 2; Figure 4). The sites are situated either on bluff tops overlooking the Arthur Kill and associated wetlands or on terraces, knolls, or other high ground overlooking a stream, creek, pond, and/or wetlands. The environmental setting of the current project area, located on a terrace-like feature overlooking what is referred to in this report as Androvette Creek, is similar to the location of many of the identified sites. Information on these sites, including their environmental settings, is summarized in Table 2.

The nearest known evidence of Native American activity to the project area was recovered approximately 0.15 miles to the southeast, centered just east of the intersection of Englewood Avenue and Arthur Kill Road. The area consists of high ground in proximity to Androvette Creek. Parker (1922) refers to the location as "Indian Fields" and describes it as containing "traces of [Native American] occupation." The area reportedly was used by Native Americans for cultivation during the Contact period, if not earlier.

Numerous other Native American camps sites, referred to collectively as the Kreischerville campsites, have been identified west of the project area on top of and/or at the base of the bluffs overlooking the Arthur Kill. The sites range in distance between 0.2 and 0.7 miles from the current project area. Recovered materials include at least 15 fluted points, Orient Fish Tail points, pestles, large net sinkers, scrapers, axes, hammer stones, lithic debris and fire cracked rock (Parker 1922; Anderson 1963, 1967).

Other sites in the project vicinity include the following (see Table 2 and Figure 4; see Boesch 1994):

- The Price Farm site, located about one third of a mile south of the current project area on high ground overlooking the Arthur Kill. The site was subject to Phase III level archaeological investigations as part of the Tides at Charleston residential development project (URS Corporation 2005). Temporary and long term camp sites were identified and mitigated there as part of the archaeological investigations, with evidence for occupations dating from the Archaic through Early Woodland and Late Woodland periods recovered.

- Evidence of Native American activity was identified at the Van Allan Farmstead historic period archaeological site, located about 0.35 mile south of the current project area. Both prehistoric and historic period components there were subject to Phase III level archaeological investigations as part of the Tides at Charleston residential development project (URS Corporation 2005). The Native American occupation consisted of campsites dating to the Early to Late Woodland periods. The prehistoric camps were located on high ground overlooking the Arthur Kill.

- The Canada Hill site (NYSOPRHP # A08501.0073; NYSM #770) consisted of a surface scatter of shell fragments and lithic debitage. The site is located within the former Balthasar Kreischer Estate on high ground near a pond, approximately 1,000 feet southeast of the current project area. It has been determined that the Canada Hill site is erroneously named since Canada Hill actually is located further to the south. Accordingly, the area of Native American occupation known as the Canada Hill site has recently been referred to as the Fairfield Prehistoric Site (John Milner Associated 2000; 2005). What erroneously has been called Canada Hill in the literature is more commonly known as Kreischerville Hill (Leng and Davis 1930).

- The Charleston Beach site, located along the shore of the Arthur Kill, approximately 0.8 mile northwest of the project area, consisted of artifacts dating from the Paleo-Indian through Late Woodland periods in uncertain contexts. They were recovered along a beach and from below a buried beach margin peat layer. It is not certain whether the artifacts were recovered in-situ or if they eroded from an adjacent bluff prior to the formation of the marsh that formed the peat.
- RMSC/Salamander site (NYSOPRHP # A08501.2378) consists of a scatter of lithic

debitage recovered along a knoll overlooking a stream and wetland. The site is located about 0.9 mile northeast of the project area.

- A number of sites have been identified along Clay Pit Pond Road and within Clay Pit Pond Park, located between about 0.5 and one mile north and northeast of the current project area. The finds consist of numerous camp sites found along small, sandy knolls and bluffs bordering Tappen Brook and a pond. Occupations of the sites range from the Archaic through Woodland periods.

- The Port Socony-South site (a.k.a. Port Mobil South) was located on the bluffs north of Ellis Place overlooking the Arthur Kill, approximately 0.9 miles northwest of the current project area. Fluted points and other lithic debris were recovered from disturbed contexts suggesting a PaleoIndian occupation in the area.

- Port Socony-North site (a.k.a. Port Mobil North) was located on the bluff overlooking the Arthur Kill, approximately 0.9 mile north of the current project area. Diagnostic artifacts recovered date from the PaleoIndian through Woodland periods.

- A small village site was identified by Parker (1922) as located inland from Ellis Point. The area consists of raised ground/bluffs over looking the confluence of Arthur Kill and Old Place Creek. The general location is about three quarters of a mile north of the current project area.
- Archaic and Late Woodland projectile points, lithic debitage, and Native American ceramics were recovered from this unnamed campsite which is situated on high ground overlooking a stream and wetland about 0.95 mile north of the current project area.

- The Sharrott Estates site was a small hunting camp located on high ground overlooking Sandy Brook about one mile east of the project area.

- The Ultramarine site consists of lithic debitage, prehistoric ceramics, and charcoal recovered from a bluff top location overlooking the Arthur Kill about one mile northeast of the current project area.

- The Chemical Lane site was located on high ground along an unnamed stream near the Arthur Kill about 1.1 miles north of the current project area. It has been described as a hunting/fishing/shell fish gathering camp, which also contained human burials dating from the Archaic through Woodland periods. It may be associated with the nearby Smoking Point site.

- The Pottery Farm site was located on high ground along the same stream as the Chemical Lane site. Projectile points, pottery, lithic debitage, and shell were recovered from the site, which dates from the Late Archaic through Late Woodland periods.

- A Native American shell midden and other traces of occupation were identified by Parker (1922) along the bluff over looking the Arthur Kill, about 1.1 miles south of the current project area.

3.4 Other Evidence of Native American Activity in the Project Vicinity

Other indications of Native American activity in the Charleston Towers project vicinity are suggested by references to Contact period aboriginal trails in the area. Such a trail followed portions of what is now Amboy Road with a branching path extending northward via what are now referred to as Richmond Valley Road and Arthur Kill Road towards Kreischerville (Bolton 1922). These trails would have been important regional and local travel corridors and by-ways, communications arteries, and trade routes, for Contact period Native Americans. They provided access to crossing points over the Arthur Kill between Staten Island and New

Jersey. Their importance probably also extends for some period back in time. These and other trails would have brought seventeenth century Native Americans into the immediate vicinity of the project area.

The current project area is included within a large zone of archaeological sensitivity defined by the New York State Office of Parks, Recreation and Historic Preservation (2009b). According to NYSOPRHP, undisturbed locations within such a zone have the potential to contain prehistoric or Contact period Native American sites. Skinner (1909; Figure 5) and Boesch (1994) also include the Kreischerville area, which includes the current project property, within a zone of Native American period archaeological sensitivity. The Skinner map also indicates what is referred to in this report as Androvette Creek, which flows just south of the current project area.

TABLE 2
PREVIOUSLY RECORDED NATIVE AMERICAN SITES WITHIN ONE MILE OF THE CHARLESTON TOWERS PROJECT AREA

Key to Figure 4	Site Name	OPRHP #	NYSM #	Approx. Distance From APE	Time Period	Functional Site Type	Site Environ-mental Setting
A	Canada Hill/ Fairview Site	A08501.0073	770	0.2 mile southeast	Woodland	Campsites; lithic debitage and shel scatter	Raised ground near pond
B	RMSC/ Sala-mander	A08501.2378		0.9 mile northeast	Prehistoric	Lithic debitage scatter	Knoll near unnamed stream and wetland
C1	Abraham's Pond Locus A (Clay Pit Pond Park)	A08501.2378		0.63 mile to northeast	Archaic to Woodland	Unknown	Raised sandy ground near pond and Tappen Brook
C2	Abraham's Pond Locus B (Clay Pit Pond Park)	A08501.0879		0.57 mile northeast	Archaic to Woodland	Temporary Campsites	Raised sandy ground near pond and Tappen Brook
C3	Abraham's Pond Locus C (Clay Pit Pond Park	A08501.0880		0.45 mile northeast	Archaic to Woodland	Temporary Campsites	Raised sandy ground near pond and Tappen Brook
C4	Park Head-quarters (Clay Pit Pond Park)	A08501.0130		0.5 mile northeast	Archaic to Woodland	Temporary Campsites	Raised sandy ground near pond and Tappen Brook
C5	Junkyard Site (Clay Pit Pond Park)	A08504.131		0.68 mile northeast	Archaic to Woodland	Temporary Campsites	Raised sandy ground near Tappen Brook
C6	Winant House (Clay Pit Pond Park)	A08501.0083		0.85 mile northeast	Prehistoric	Unknown	Raised sandy ground near Tappen Brook
C7	Clay Pit Pond East (Clay Pit Pond Park)	A08501.0121		0.83 mile northeast	Archaic to Woodland	Unknown	Raised sandy ground near Tappen Brook

TABLE 2
(Continued)

PREVIOUSLY RECORDED NATIVE AMERICAN SITES WITHIN ONE MILE OF THE CHARLESTON TOWERS PROJECT AREA

Key to Figure 4	Site Name	OPRHP #	NYSM #	Approx. Distance From APE	Time Period	Functional Site Type	Site Environmental Setting
C8	Clay Pit Road (Clay Pit Pond Park)	A08501.0124		0.56 mile north	Archaic to Woodland	Temporary Campsites	Raised sandy ground near Tappen Brook
C9	Clay Pit Pond Road Bluff North (Clay Pit Pond Park	A08501.0123		0.69 mile northeast	Archaic to Woodland	Temporary Campsite	Raised ground/bluff overlooking Tappen Brook
D	Kreischer-ville Campsites		4606	0.2 to 0.7 mile west, southwest, and northwest	PaleoIndian to Late Woodland	Small Campsites	Raised ground/bluffs overlooking the Arthur Kill
E	Charles-town Beach			0.8 mile to northwest	PaleoIndian to Late Woodland	Native American artifacts	Raised ground/bluffs overlooking the Arthur Kill
F	Port Socony – South			0.9 mile to northwest	Paleo-Indian	Fluted stone projectile points and lithic debris – hunting sites	Raised ground/bluffs over looking confluence of Arthur Kill and Old Place Creek
G	Unnamed Site			0.72 mile to north	Prehistoric/ Early Woodland	Small Village	Raised ground/bluffs over looking confluence of Arthur Kill and Old Place Creek
H	Port Socony – North			0.95 mile north	Paleo-Indian to Woodland	Small Campsites	Raised ground/bluffs over looking the Arthur Kill

TABLE 2
(Continued)

PREVIOUSLY RECORDED NATIVE AMERICAN SITES WITHIN ONE MILE OF THE CHARLESTON TOWERS PROJECT AREA

Key to Figure 4	Site Name	OPRHP #	NYSM #	Approx. Distance From APE	Time Period	Functional Site Type	Site Environmental Setting
I	Gerike Organic Farm			0.95 mile to north	Archaic to Lake Woodland	Campsites	High ground overlooking a stream and wetland
J	Sharrott Estates			1 mile east	Late Woodland	Small Hunting Camp	High ground near Sandy Brook
K	Ultramarine Site			1 mile northeast	Prehistoric/ Woodland	Campsite	Bluff near Arthur Kill
L	Chemical Lane			1.1 mile north	Archaic - Woodland	Campsites, Shell Midden, Burial/Ritual Area	High ground near unnamed stream
M	Pottery Farm			1 mile north	Late Archaic-Late Woodland	Village and Campsites	High ground near unnamed stream
N	Price Farm			0.33 mile south	Late Archaic-Early Wood-land, Late Woodland	Temporary and Long term Campsites	Raised ground/bluffs over looking the Arthur Kill
O	Van Allan Farmstead			0.35 mile south	Early – Late Woodland	Campsite	Raised ground/bluffs over looking the Arthur Kill
P	Indian fields			0.15 mile southeast	Prehistoric	Traces of Occupation	High ground near unnamed stream (Androvette Creek) and wetlands
Q	Unnamed Site			1.1 mile south	Prehistoric	Shell middens and traces of occupation	Raised ground/bluffs over looking the Arthur Kill

TABLE 2
(Continued)

PREVIOUSLY RECORDED NATIVE AMERICAN SITES WITHIN ONE MILE OF THE CHARLESTON TOWERS PROJECT AREA

Key to Figure 4	Site Name	OPRHP #	NYSM #	Approx. Distance From APE	Time Period	Functional Site Type	Site Environ-mental Setting
R	Unnamed Site			0.7 mile north	Early Woodland	Campsite	Raised sandy ground near Tappen Brook

(Sources: Parker 1922; Boesch 1994; URS Corporation 2005; Meade and Dallal 2006).

4.0 DOCUMENTARY RESEARCH - HISTORIC PERIOD

The Euro-American history of the region which includes the current Charleston Towers project area is presented in Chapters 4.1 – 4.3. This is followed in Chapter 4.4 and 4.4.1 by a discussion of the Historic period occupational history of the property. The assessment of the Historic period archaeological sensitivity of the project area is presented in Chapter 5.2.

4.1 Seventeenth and Eighteenth Centuries

The initial settlements on Staten Island were established during the seventeenth century, mostly on the portion of the island closest to New York City. However, grants of land in the southwestern portion of the island were made to various individuals during this period. The largest of these, encompassing 960 acres of land and marsh along the south/southwestern tip of Staten Island, was granted to Christopher Billopp in 1676. The Billopp house or the Manor of Bently, also known as the Conference house (see below), is located just north of modern day Hylan Boulevard in Tottenville, approximately 2.2 miles south of the project area (see Burrows and Wallace 1999). Billopp's community was the first settlement in southern Staten Island. The area around his house became known as Billopp's Point from which Billopp operated a ferry to New Jersey. Within a few years most of the lands in south/southwestern Staten Island had been awarded as grants to English and Scottish settlers. However, these remained undeveloped and the southern portion of Staten Island continued to be virtually empty of Euro-Americans throughout the seventeenth and early eighteenth centuries. The Skene map, published in 1907 shows the boundaries of the various patents. Based on that map, the current project area was included within an approximately 295 acre tract acquired around 1685 by John Bridges, possible for speculation. Bridges, a Scotsman, arrived in the colony soon after the 1664 conquest (Leng and Davis 1930:901; Skene 1907). However, he apparently was never awarded a patent for his lands from the New York legislature. Bridges apparently sold the parcel to an individual named Tunis Egbert sometime before 1699. Jean Andrivette purchased the land from Egbert on January 27, 1699 (Pelletreau 1907). The purchased land includes the general vicinity of what is today the Charleston section of Staten Island. Andrivette was a Huguenot from Merindal, France who immigrated to New York in the 1690's. After immigrating, Jean Andrivette changed his name to John Androvette. The family name became well known on Staten Island over the next two centuries (Pelletreau 1907). The population of Staten Island during this period remained small and scattered with only 727 people living there as later as 1698. Ten percent of this figure reportedly were slaves. Most of the population was living along the island's north shore with another cluster in the Tottenville area near the Billopp house (Steinmeyer 1987:113). However, there is no indication that the current project parcel was developed during this period. It likely remained an undulating, forested tract overlooking the Arthur Kill with Androvette Creek flowing to the south.

In addition to Billopp's ferry, other ferries were established during the eighteenth century along Staten Island's western shore, facilitating the transport of goods, services, and people between Staten Island and New Jersey. The ferries generated much traffic and commerce resulting in population growth along the island's western and southwestern shores. A network of roads was soon constructed to connect the ferries.

The earliest depiction of Staten Island that includes the current project location reviewed for this study is the 1733 Popple map (Figure 6). The map shows all of the island and surrounding areas and stylistically indicates areas of settlement. No indications of settlement in the current project vicinity are shown on the 1733 map. The closest settlement shown is the ferry at Billopp's Point (Tottenville).

During the American Revolution, British and Loyalist forces reportedly occupied encampments in Staten Island between 1776 and the end of the war (Bayles 1887). The nearest military camp to the current project area reportedly was located near the Billopp house in Tottenville, about 2.2 miles to the south. On September 11, 1776, the house was the site of a failed peace conference between the Americans, represented by Benjamin Franklin, Edward Rutledge, and John Adams, and the British represented by Lord William Howe. American forces reportedly conducted numerous raids across the Arthur Kill into Staten Island throughout the war (Steinmeyer 1987:51).

The first maps of Staten Island which show the location of structures with any degree of accuracy date to the latter part of the eighteenth century. The three maps dating to this period that were reviewed for this study indicate that no structures were located in or near the project area at this time. The maps do show the roadway, now referred to as Arthur Kill Road, which had been laid out during the early eighteenth century following the route of an aboriginal trail (see Chapter 3.4). The original route of Arthur Kill Road south of the project area was located closer to the shore line. It was not until sometime between 1866 and 1874 that the route of the road south of the project area was moved inland to its present location. However, the distinctive jog in its present alignment essentially follows the course of the original road. Throughout this period, the area between Tottenville and Rossville, including what is now the Charleston vicinity and the current project area, was characterized by a few small and dispersed communities, sometimes comprised of only a handful of dwellings. Communication with New Jersey and Manhattan was by ferry. The project area on these maps is located north of Mill Creek, south of a point of land now known as Ellis Point, and west of the still existing distinctive jog or dog leg in the road (i.e. Arthur Kill Road) that extends along the southwestern shoreline of Staten Island.

The 1780-1783 Plan (No. 31) du Camp Anglo-Hessois dans Staten Island (British-Hessian Plan of Camps in Staten Island (Figure 7) and a composite map of Staten Island during the American Revolution incorporating data from a number of period military maps (Figure 8; McMillian 1933) indicate Arthur Kill Road extending along the south/southwestern shore line of Staten Island. Two structures are shown on both maps north of Mill Creek and west of Arthur Kill Road. Neither structure was located within the current project area. The northernmost of the homes is indicated on both maps as the residence of an individual named P. (Peter) Andruvat. It was Peter Andruvat grandson, named Peter Androvette, who construct a house within a portion of the current project area (53 Androvette Street; Block 5074, Lot 1) sometime after 1866 (see below). Peter Andruvat's structure formerly was located west of Arthur Kill Road near the vicinity of what is today the intersection of that road and Kreischer Street. The 1933 Loring McMillen Map of Staten Island During the American Revolution 1775-1783 (Figure 8) also shows the distinctive jog in Arthur Kill Road. The current project area is located just west of the mid-point of the jog. No structures are shown in that location on the McMillen Map with the P. Andruvat home located to its west and south.

Peter Andruvat son, Charles, the Grandfather of J.M. and Peter Androvette (see below) who occupied the current project area during the late nineteenth century, purchased a large tract of land after the American Revolution that included most of what is now the Charleston section of Staten Island.

The 1781 Taylor and Skinner Map (Figure 21) also shows the distinctive jog in Arthur Kill Road, placing the current project area immediately west of the mid point of that jog. The map also indicates a small stream flowing west towards the Arthur Kill extending through the mid-point of the jog. This stream is the waterway referred to in this report as Androvette Creek, which flows about 225 feet south of the project property. The current project area is located immediately north and west of the mid-point of the jog in Arthur Kill Road. The 1781 map also indicates a structure west of Arthur Kill Road, south of the roadway's jog. This building, located south of the current project area, is apparently the P. Andruvat residence shown on the 1780-1783 map.

A surge in Staten Island's population occurred following the American Revolution after land previously owned by British Loyalists was confiscated, sub-divided, and sold by the New York State Legislature. This resulted in the need for more efficient local government and in 1788, the island was officially divided into four townships, Castleton, Northfield, Southfield, and Westfield. The last includes the current project vicinity. Reflecting this trend, by the late eighteenth century, the population and number of small farmsteads in the vicinity of the current project area apparently had grown somewhat in size and number. Many of those people apparently were members of the Androvette family. As a result, the area soon was referred to as Androvetteville or Androvettetown (Steinmeyer 1987:108). The 1797 Map of Staten Island by John Tyson, Abraham Burbank, Daniel Lake, and Benjamin Lanzelere (Figure 9) indicates a number of structures were located along Arthur Kill Road in that year. However, the map does not indicate any structures in the vicinity of the current project area but does show what is probably the P. Andruvat house. It is possible that portions of the current project parcel during this period were cultivated.

4.2 Nineteenth and early Twentieth Centuries

The population of Staten Island increased dramatically throughout the nineteenth century as increasing population density in Manhattan drove many people to the outer boroughs. During the early nineteenth century, the chief industry in Staten Island was farming and ship building and repair with fishing and oystering also practiced (Morris 1900:II:468; Steinmeyer 1987). During the early nineteenth century, however, over harvesting of oyster basically depleted local beds resulting in a decline of that industry (see below). The 1844 United States Coast Survey Map (Figure 10) does not indicate any structures within the project area as of that year but does suggest that what is now the current project vicinity remained wooded. By the second quarter of the nineteenth century ship building and repair began to dominate the local economy, joined by the mid-nineteenth by a revival in oyster farming.

When New Amsterdam was first settled, the bottom of New York Bay reportedly was covered with shellfish, particularly oysters. As indicated above, by the early nineteenth century over harvesting had depleted the beds. Oysters, in particular, virtually disappeared. Taking advantage of an economic opportunity, seed oysters were brought by oystermen from Long Island and the Chesapeake Bay region and planted in local bays and inlets. By the second decade of the century, Staten Island oysters had become well established and the resulting oyster boomed reached its height in the 1850's. Thriving communities had developed by the middle of the nineteenth century along the southwestern shore of Staten Island, including within Androvetteville. Prior to the 1850's, most families in Androvetteville and in other areas of western Staten Island were involved in the oyster business or other maritime industries. The occupations of local residents listed in the 1850 census indicate that the area remained rural with occupations such as boatman, farmer, carpenter, and oysterman predominating (Meade and Dallal 2006). The affluence of the area, however, is reflected by fine residences that were constructed there during the mid and late nineteenth century. The prosperity of Androvetteville increased ever further during the 1850's with the advent of brick manufacturing there (see below).

The local oyster industry began to decline in the 1880's chiefly due to water pollution and had all but disappeared from the region between 1900 and the second decade of the twentieth century (Johnson 1995:728; Pickman 1990). Marine construction and the brick industry, dominated the local economy of southwestern Staten Island during the early to mid-twentieth century.

The industry that became most important to the Androvetteville vicinity began with the arrival there in 1854 of a German/Bavarian immigrant named Balthazar Kreischer. Kreischer was lured to the area by its widespread, exceptionally pure clay deposits for use in the manufacture of heat resistant or fire brick by newly arrived German and Irish immigrants (Sachs 1988). The locality was described in 1856 in a local newspaper as "beautifully located near the water and containing a mine of wealth both as regards purity of clay and pretty ladies" (Steinmeyer 1987:108). Kreischer founded the Staten Island Clay Retort Works (later the B. Kreischer and Sons Fire Brick Works) to exploit the rich clay deposits and to manufacture heat resistant and other brick. Kreischer's successful venture ushered in a period of industrialization to Androvetteville, and southwestern Staten Island generally, that lasted until the early twentieth century (Abbot 1949). Other related companies owned and operated by Kreischer and his family followed over the next few decades including marine transportation companies which carried Kreischer's bricks far and wide. Two members of the Androvette family who lived within the current project area during the late nineteenth century were involved for a time and to some extent in this aspect of the brick manufacturing industry (see Chapter 4.4). The company and its operations proved to be highly successful. By the 1890's, more than 300 workers were employed by the Kreischer Brick works, most of whom lived locally.

Within a few years of the opening of the brick works, the area was no longer referred to as Androvetteville but was known as Kreischerville. The area become a bustling company town consisting of Kreischer's still existing and National Register of Historic Places listed Italianate Mansion (see Chapter 1.3), the residences of his two sons, an inn, hotel, grocery store, other stores, a church, and housing for his workers (Weiner 1995:202). The Kreischerville Brick Works closed in 1927.

The project vicinity began to be referred to by its present name of Charleston during World War I, likely as the unpopularity of the German name Kreischer during that period of world conflict grew (Fioravante 2002). With the brick company's closure in 1927, Charleston became the accepted name for the neighborhood.

4.3 Previously Recorded Historic Periods Archaeological Sites in the Charleston Towers Project Vicinity

A search of the data files of the NYSOPRHP and NYCLPC identified seven previously recorded historic period archaeological sites within one mile of the current Charleston Towers project area. These are summarized in Table 3 below.

TABLE 3

PREVIOUSLY RECORDED HISTORIC PERIOD SITES WITHIN ONE MILE OF THE CHARLESTON TOWERS PROJECT AREA

Site Name	OPRHP #	Approx. Distance From APE	Time Period	Site Type
Canada Hill	A08501.0073	0.2 mile southeast	Historic	Historic scatter
RMSC/ Sala-mander	A08501.2378	0.9 mile northeast	Historic	Historic scatter
Historic Vessels	A08501.002601 - A08501.002703	Along Arthur Kill Shoreline	Historic	Vessels
Clinton Residence	A08501.0229- A08501.0231	1 mile	Historic	Domestic Residence
Porzio Residence	A08501.0082	0.75 mile	Historic	Domestic Residence
Dubois Residence	A08501.0080	0.6 mile	Historic	Domestic Residence
Anderson Brick Works	A08501.0079	1.000 feet to southwest	Historic	Foundation

4.4 The Charleston Towers Project Area Occupational History: Mid-Nineteenth through Early Twentieth Centuries

In order to investigate the history of Euro-American land use within the project area, maps showing the pertinent part of the Charleston section (Androvetteville and Kreischerville) of Staten Island and other sources were consulted.

As indicated above, the name Androvetteville remained in use until the around 1854 when the community stated to be referred to as Kreischerville after Balthasar Kreischer and the brick manufacturing company he started in the area. On early to mid-nineteenth century maps, the current project area is located west of the mid-point of a distinctive jog in Arthur Kill Road. By the late nineteenth century the roads currently known as Androvette Street and Manley Street had been laid out and here serve as location indicators. The community was referred to as Kreischerville until 1927 when the Kreischer Brick works closed. The area henceforth was referred to as Charleston (Jackson 1995:202).

Beginning in the mid-nineteenth century, fairly detailed maps were drawn which indicate ownership and land-use patterns within the current project area. The earliest of these reviewed for this study dates to 1844. No structures are located within the current project area as indicated by the United States Coast Survey Map of that

year (Figure 10). The map depicts the distinctive jog in Arthur Kill Road with no indication of structures immediately west of the mid-point of the jog. What is likely the P. Andruvat house is shown on the 1844 map west of the project locale. The map does indicate that the project area remained wooded as of that year.

The 1853 Butler map (Figure 11) indicates that the current project area remained undeveloped as of that year. The map does, however, show the stream referred to in this report as Androvette Creek as well as a long driveway leading to a residence northwest of the current project area. The driveway likely extended just north of the current project property.

No buildings are shown on the 1859 Walling map (Figure 12) as located within the current project area. However, the map does show that the area that includes the project property was owned by J.M. Androvette as of that year (see below). What is now Androvette Street also is indicated by dashed lines on the 1859 map indicating that it was either planned or already laid out as of that year. The 1859 map also indicates the increased number of residences and commercial buildings in the Androvetteville community by that year reflecting the growth and prosperity of the area after the Kreischer's Brick Works opened in 1854.

Structures were not located within the current project area as of 1866, according to the Colton map (Figure 13) of that year. The map indicates that J.M. Androvette still owned the area that includes the project property.

By 1874, according to the Beers map of that year (Figure 14), the land owned by J.M. Androvette north of Androvette Street, including what is now the project area, had been sub-divided. What is now Manley Street, bordering the east edge of the project property had been constructed. The road is not shown on the 1866 Colton map. The 1874 map depicts what is now Lot 1 in the same configuration as it is currently. One structure is located on the lot as of 1874, according to the Beers map, fronting onto Androvette Street. The house and lot were owned by P. (Peter) Androvette. This building is not the building that currently exists on Lot 1 but an earlier structure that apparently was located south of the existing building which is set back from Androvette Street. What is now Lot 82 also was established by 1874, owned in that year by J.M. Androvette. At the time, the lot also included the southernmost portion of what is now Lot 80 with its northern portion part of an adjoining property. The 1874 map depicts a residence as located on the eastern end of J.M. Androvette's lot. That building is the residence that currently exists on Lot 82 within the project area (i.e. 65 Androvette Street; Photographs 11 and 12). No other structures were located within what is not the current project area.

The 1887 Beers map (Figure 15) indicates the J.M. Androvette and P. Androvette residences in the same location and configuration as they are shown on the 1874 map. No other structures are depicted as located within the current project area as of that year.

According to the 1898 Robinson map (Figure 16), by that year the residence fronting onto Androvette Street shown on the 1874 and 1887 Beers maps as owned by Peter Androvette was no longer present. A new residence apparently had been constructed behind its former location. This building apparently is the structure that currently exists on Lot 1 (i.e. 53 Androvette Street; Photographs 1-3). The 1898 map indicates that a six inch water pipe had been laid within Androvette Street by 1898. Accordingly, it is possible that the new residence had been constructed with connections to that water main suggesting that water retention (wells or cisterns) or sanitary features (privies; although cess pools may have been used) may not have been in use. Three out buildings also were located on the lot as of that year, behind the new residence. Peter Androvette stilled owned the lot and buildings as of 1898.

The building owned by J.M. Androvette (Lot 82; 65 Androvette Street) is shown in the same location and configuration on the 1898 map (Figure 16) as it is shown on the 1887 and 1874 Beers maps. Two outbuildings, however, had been constructed behind it by 1898 according to the Robinson map.

The residence that is located on what is now Lot 80 (83 Androvette Street; Photograph 19) fronting onto Androvette Street had been constructed by 1898 (Figure 16). In that year, however, the building and land that currently comprise Lot 80 were part of the larger parcel owned by J.M. Androvette (i.e. Lot 82, 65 Androvette Street).

The 1907 Robinson map (Figure 17) indicates the J.M. Androvette and Peter Androvette residences and outbuildings in the same location and configuration as they are shown on the 1898 map. The map indicates that an eight inch water main was located within Androvette Street by that year.

The three residences depicted on the 1913 Bridgeman Topographical Survey map (Figure 18) as located within the current project property are shown in the same locations and general configurations as on the 1907 Robinson map. Ownership of the houses and lots is not indicated on the 1913 map. The outbuildings shown on Lot 1on the 1907 map are not shown on the 1913 map, but two new out buildings are depicted. One apparently is the structure that still exists on the lot and used currently as a commercial garage (Photograph 8). Only one outbuilding is shown on what is now Lot 82 as of 1913. The 1913 map also indicates that a three and a half foot deep pond had been constructed by that year straddling the boundary between Lot 82 and the property to its west. Androvette Street is described as a dirt road on the 1913 map.

The three residences shown on the 1907 and 1913 maps and the three outbuildings shown on the 1913 map are indicated in the same locations and configurations on the 1917 Bromley and Bromley map (Figure 19). Both residences are described as two and a half story frame structures. The pond also is shown in the same location on both maps. No owner is indicated for what is now Lot 1, which was owned by Peter Androvette as late as 1907. The former property of J.M. Androvette (Lot 82) is owned by an individual named Chas. Jelicks by 1917 according to the Bromley and Bromley map. Also by 1917, the configuration of Lot 80 had taken its current form.

The 1937 Sanborn Insurance map (Figure 20) shows the three residences shown on the 1917 map in the same locations but in slightly different configurations. Additional out buildings are shown on all three lots.

4.4.1 Peter Androvette and J.M. Androvette – Late Nineteenth and Early Twentieth Century Occupants of the Proposed Charleston Towers Project Area

P. Androvette, the occupant of Lot 1, was Captain Peter Androvette, who was born in Androvetteville (what became Kreischerville) on June 11, 1834, the second child of Peter and Clara C. (Van Schoick) Androvette. Peter (the son) was educated locally until 12 years of age after which he worked a series of jobs. However, he eventually stated his lifelong career in the marine transportation industry in New York Harbor ultimately acquiring a fortune in the business. On December 22, 1859, he married Anna Maria Marshall (born November 20, 1842) of Woodbridge, New Jersey. They had three daughters, Elizabeth Etta (born 1861), Clarissa (born 1863), and Susan Ester (born 1868) and two sons, James Murray (born 1866) and Jesse Alfred (born 1878; Pelletreau 1907; Jacob 1936). Early in his career, Peter Androvette joined the marine transportation firm of Kreischer and Maurer. Soon, however, became a general manager of the large freighting business of B. Kreischer and Sons. A large part of the business of both firms was the transport of the fire brick made by Kreischer's brick manufacturing company. Androvette apparently was an innovator in the marine transportation business, recognizing by 1872 that steam powered vessels were coming to the fore as the primary means for powerful and rapid people and freight transportation. He soon acquired enough capital to construct a number of steam tugs and lighters. Throughout his career, Androvette was master and part owner of at least 18 sail and steam powered vessels ranging in size between 50 and 250 tons and numerous barges. The 1880 United States Census lists his occupation as "Boatman." In 1890 or 1891, Peter Androvette formed and was the first President of the Androvette Towing and Transportation Company, incorporated under the laws of the State of New Jersey with a capital stock of $20,000.00, operating around New York Harbor. He also served for five years as President or Director of the Perth Amboy Dry Dock Company. In 1900, Peter purchased the B. Kreischer and Sons Fire Brick Works at Kreischerville and in 1902 organized the Kreischer Brick Manufacturing Company, serving as its President through 1907 (Hubbell 1893:99; Pelletreau 1907; Jacob 1936).

J. M. Androvette was Captain John M. Androvette. He was born in Androvetteville on November 23, 1831 the eldest son of Peter and Clara C. (Van Schoick) Androvette and the brother of Captain Peter Androvette. Like his brother, John Androvette was educated locally. In his teenage years, Androvette began working in the New York harbor and coastal trade. In 1857, he became a part owner and Captain of the "Fire-Brick", transporting

fire-brick for the B. Kreischer and Nephew Company (Pelletreau 1907; Jacob 1936). The 1880 United States Census lists Androvette's occupation as "Boatman."

J. M. Androvette married Elizabeth Worth on December 5th, 1852. The couple had two daughters, Laura (born 1861) and Clara S (born 1873) and four sons, Reuben W. (born 1854), Peter (born 1855), Anderson (born 1858), and Edward (born 1863). Elizabeth, his first wife, died in 1876. Two years (1878) later Androvette married again, this time to Elizabeth Joline by whom he had one daughter, Bessie Hazelton (born 1884; Hubbell 1893; Pelletreau 1907; Jacob 1936).

5.0 ASSESSMENT OF ARCHAEOLOGIAL SENSITIVITY AND RECOMMENDATIONS

5.1 Native American Period Archaeological Sensitivity

At least 26 Native American sites have been identified within 1.1 miles of the proposed Charleston Towers project area. Most of the sites are located on raised, sometimes sandy ground, in proximity to a creek, wetland, or other fresh or brackish water source or the Arthur Kill. Such an environmental setting is similar to that which characterizes the current project area (raised, terrace-like ground overlooking Androvette Creek and in proximity to the Arthur Kill). The apparent large density of sites in the area was commented upon by Skinner and Schrabisch (1913:44) who stated that "continuous [Native American] camps occur along the shore from Rossville to Tottenville with scattered relics in nearly every field." The general project vicinity also is identified as being archaeologically sensitive by the NYSOPRHP and by an assessment of Richmond County previously prepared for the New York City Landmarks Preservation Commission (Boesch 1994:22).

The closest previously identified Native American site recorded to the current project area was located on raised ground overlooking what is referred to in this report as Androvette Creek, centered just east of the intersection of Englewood Avenue and Arthur Kill Road, about 0.15 miles southeast of the current project area. Parker (1922) refers to the location as "Indian Fields" and describes it as containing "traces of [Native American] occupation." The area reportedly was used by Native Americans for cultivation during the Contact period, if not earlier. Other nearby camp sites were recorded along the bluff and beach overlooking the Arthur Kill, situated about a quarter mile west of the project area. More extensive occupation sites also were identified about a third of a mile south/ southwest of the current project property along the buff overlooking the Arthur Kill (see Chapter 3.3).

Construction of the existing late nineteenth century dwellings within the project area is the only development that has occurred there. Principal prior impacts to the property include the building of the houses and outbuildings and the installation of utilities. However, these have directly impacted only restricted portions of the current project area. Other impacts consist of an unknown extent of grading, particularly in the northern most portion of Lot 1. An unknown amount of filling apparently also has occurred within portions of the project property, especially near some of the outbuildings. The grading may have disturbed any buried former ground surface possibly present. However, grading may not have occurred uniformly throughout the area, resulting in the preservation of buried surface strata in some locations. In addition, filling of portions of the project area may have preserved any former ground surfaces present. Finally, if pit type features and hearths were associated with any Native American occupation of the project area, prior construction activities may have impacted only the upper portions of those postulated cultural resources and truncated features may remain intact on the property.

Based upon the presence of the previously recorded Native American sites in the project vicinity, and the former and current topographic and physiographic setting of the property (raised, terrace like ground overlooking Androvette Creek to the south and in proximity to the Arthur Kill and its adjoining bluffs), which is similar to that of previously recorded aboriginal sites in southwestern Staten Island, as well as the limited development that has occurred there, the current project area, and its APE, is considered to be sensitive for the presence of prehistoric and/or Contact period archaeological sites. Such environmental settings, raised ground in proximity to a water source, are traditionally considered by archaeologists to be sensitive for Native American occupation.

Only a small number of the previously identified Native American sites within the vicinity of the project area have been systematically investigated. None of those excavated date to the poorly understood PaleoIndian or Early Archaic periods. If potentially significant Native American sites are determined to be present within the project area, they could offer the opportunity for systematic excavations to be conducted. Such investigations, if warranted, could provide information on Native American sites oriented towards exploiting subsistence resources associated with a small creek (Androvette Creek) and its wetlands as well as provide knowledge on the cultural history of the southwestern Staten Island region.

5.2 Historic Period Archaeological Sensitivity

Portions of the current three acre project area and APE are considered to be sensitive for the presence of Historic period domestic type archaeological resources. A dwelling, the residence of Peter Androvette, had been constructed within the southwestern corner of Lot 1 (53 Androvette Street) fronting onto Androvette Street by 1874. A public water supply was not available in the area when the house was constructed so it is likely that it was built with water retention and sanitary features (wells, cisterns, privies) in its immediate vicinity. Midden deposits or other Historic period cultural deposits of potential significance associated with the occupation of the house also may be present on the lot. This structure was demolished sometime between 1887 and 1898 and a new residence constructed by Peter Androvette, set back from Androvette Street. That house still exists and has been determined to be eligible for listing on the National Register of Historic Places by the NYCPLA. A public water supply was available in Androvette Street by 1898 so it is possible that the second structure on the lot was constructed with connections to that utility, making the use of wells, privies, and/or cisterns unnecessary. It also is possible that construction of the second Peter Androvette residence impacted the earlier backyard, destroying any archaeological features that may have been present. Alternatively, such features may have been present within areas not impacted by the post-1887 construction and Historic period midden deposits preserved in areas removed from the footprint of the existing dwelling. Accordingly, Lot 1 is considered to be sensitive for Historic period domestic type archaeological resources dating to the late nineteenth and early twentieth century period.

The residence of J.M. Androvette (Peter's brother) was constructed on Lot 82 (65 Androvette Street) by 1874. The house still exists, set back from the street, and has been determined to be eligible for listing on the National Register of Historic Places by the NYCPLA. A public water supply was not available in the area when the house was built so it is likely that privies wells, and/or cisterns were in use and located in proximity to the residence. Midden deposits or other Historic period cultural deposits of potential significance associated with the occupation of the house also may be present on the lot. Other than construction of the house and a number of outbuildings, as well as some soil removal in the north central part of the lot, extensive disturbance does not seem to have occurred within this portion of the project area. Accordingly, Lot 82 is considered to be sensitive for Historic period domestic type archaeological resources dating to the late nineteenth and early twentieth century period.

The dwelling that still exists on Lot 80 (83 Androvette Street) was constructed sometime between 1887 and 1898. It likely was constructed with connections to the public water supply so it is unlikely that privies, wells, or cisterns, were associated with the occupation of the building. Midden deposits or other Historic period cultural deposits of potential significance associated with the occupation of the house, however, may be present on the lot. Accordingly, the lot is considered to be sensitive for the presence of Historic period domestic type archaeological resources dating to the late nineteenth and early twentieth century period.

If Historic period archaeological deposits are located within the project area, they most probably would be associated with the Androvette brothers occupations of the two lot parcels. Both individuals, members of the well known Androvette family in Staten Island history, were successful businessmen and ship captains in the New York–New Jersey maritime transportation industry. Archaeological investigation of deposits associated with these individuals could provide data on that industry, and on individuals who were responsible for its operation on a daily basis. The industry was critical to the economic growth and development of New York City and its metropolitan area during the nineteenth and early twentieth centuries. Data associated with the occupations of the Androvette residences, if significant, could be compared with other data potentially derived from Kreischerville working class occupation sites, providing economic and behavior information on the Kreischerville community during the late nineteenth century period, a time of dynamic growth and social change. Data from the Kreischerville Estates site also may be drawn upon to provide a comparison with more elite members of the community.

Based upon the history of the Charleston area and the recorded Historic period occupations of the project area, it is considered unlikely that other types of Historic period archaeological sites (industrial/commercial, Revolutionary War/military related, seventeenth to mid-nineteenth century house sites, etc.) are located within

the current project area.

5.2.1 Architectural Sensitivity

The existing late nineteenth century dwellings at 53 and 65 Androvette Street (Lots 1 and 82) appear to retain their architectural integrity. The dwellings were constructed for Peter and J.M. Androvette, middle to upper class maritime business men and ship captains, who were actively involved in the Kreischerville community, both economically and socially, during its most prosperous time. Both structures were determined to be eligible for listing on the National Registers of Historic Places by the NYCLPC. Accordingly, both structures are considered to have historical value.

5.3 Recommendations

It is recommended that Phase IB level sub-surface testing following current NYLPC and NYSOPRHP standards and requirements be undertaken within the current project area prior to the start of construction to determine whether Native American period or Historic period archaeological sites are present there. A field testing plan should be prepared for the sub-surface testing of the project area and submitted to NYCLPC for review prior to the start of that work.

It also is recommended that an architectural historian or historic preservation specialist evaluate the dwellings at 53 Androvette Street (Lot 1) and 65 Androvette Street (Lot 82) to determine whether they have architectural and/or historic value prior to their demolition. A plan for the evaluation should be prepared and submitted to NYCLPC for review prior to the start of that work.

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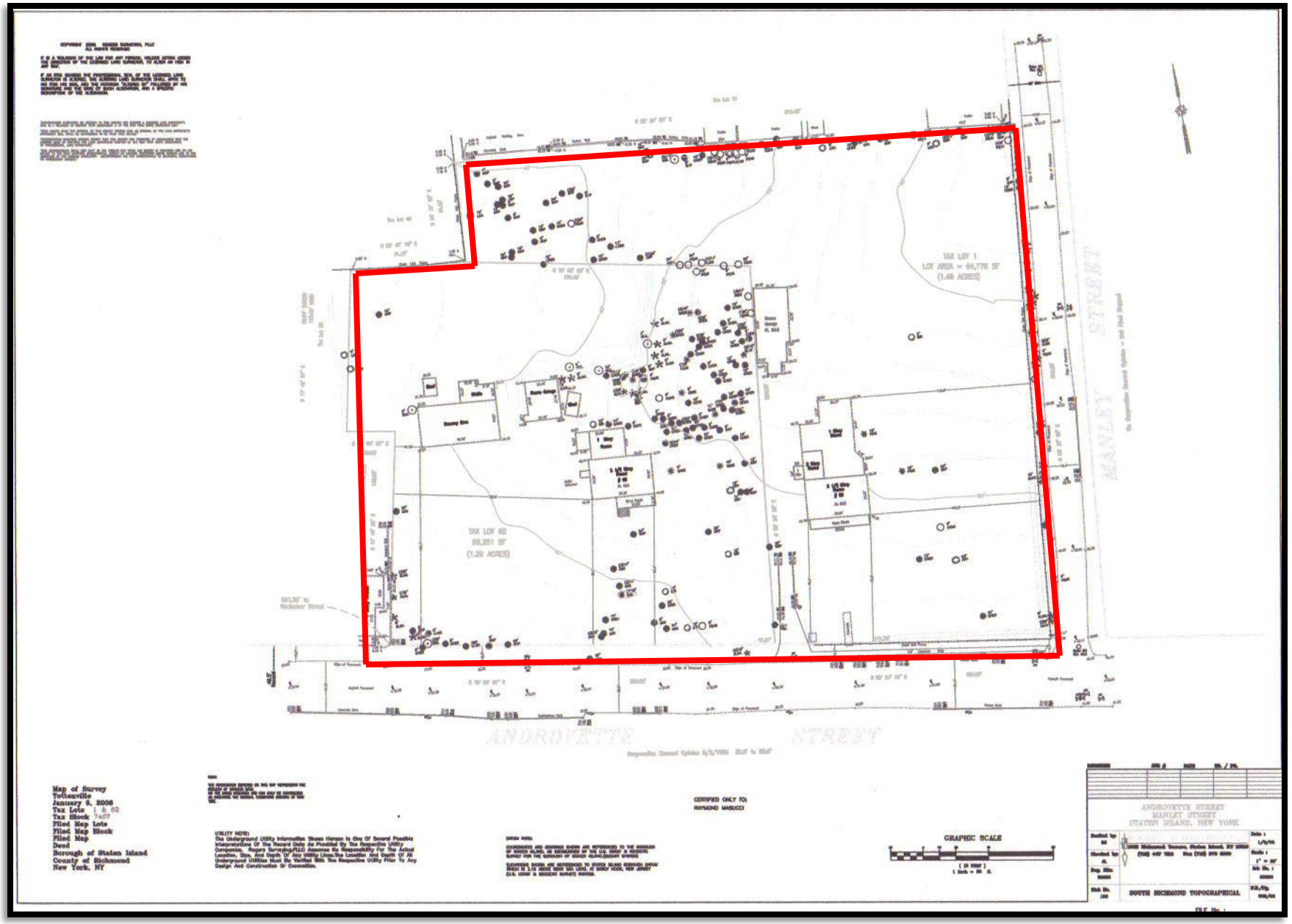
FIGURES

FIGURE 1
Charleston Towers Project Area Location
Base Map Source: United States Geological Survey 1975
Scale of Original: 1:24,000
Contour Interval: 10 feet
Arrow indicates approximate location of the project area.

FIGURE 2
Charleston Towers Project Area Showing Block and Lot Numbers and the Project's Area of Potential Effect
Source: Rogers Surveying PLLC 2006
Key:
: Project Area and Project's Area of Potential Effect



Map of Survey
Tottenville
January 5, 2006
Tax Lots 1 & 62
Tax Block 7407
Filed Map Lots
Filed Map Block
Filed Map
Deed
Borough of Staten Island
County of Richmond
New York, NY

CERTIFIED ONLY TO:
RAYMOND MASUCCI

ANDROVETTE STREET
MANLEY STREET
STATEN ISLAND, NEW YORK

SOUTH RICHMOND TOPOGRAPHICAL

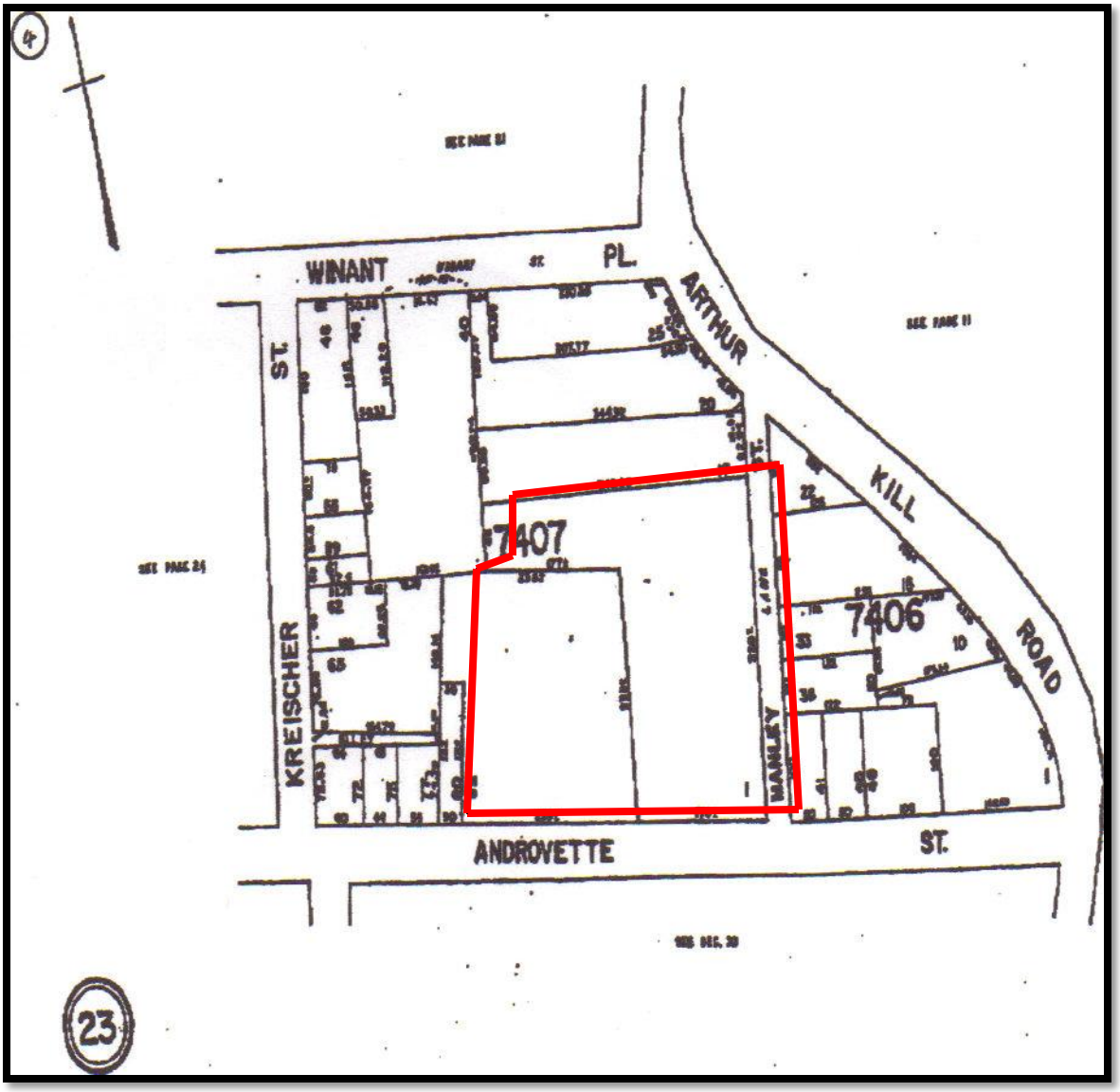


FIGURE 3
Tax Map Showing the Charleston Towers Project Area
Source: Rogers Surveying PLLC 2006

Key:
: Project Area

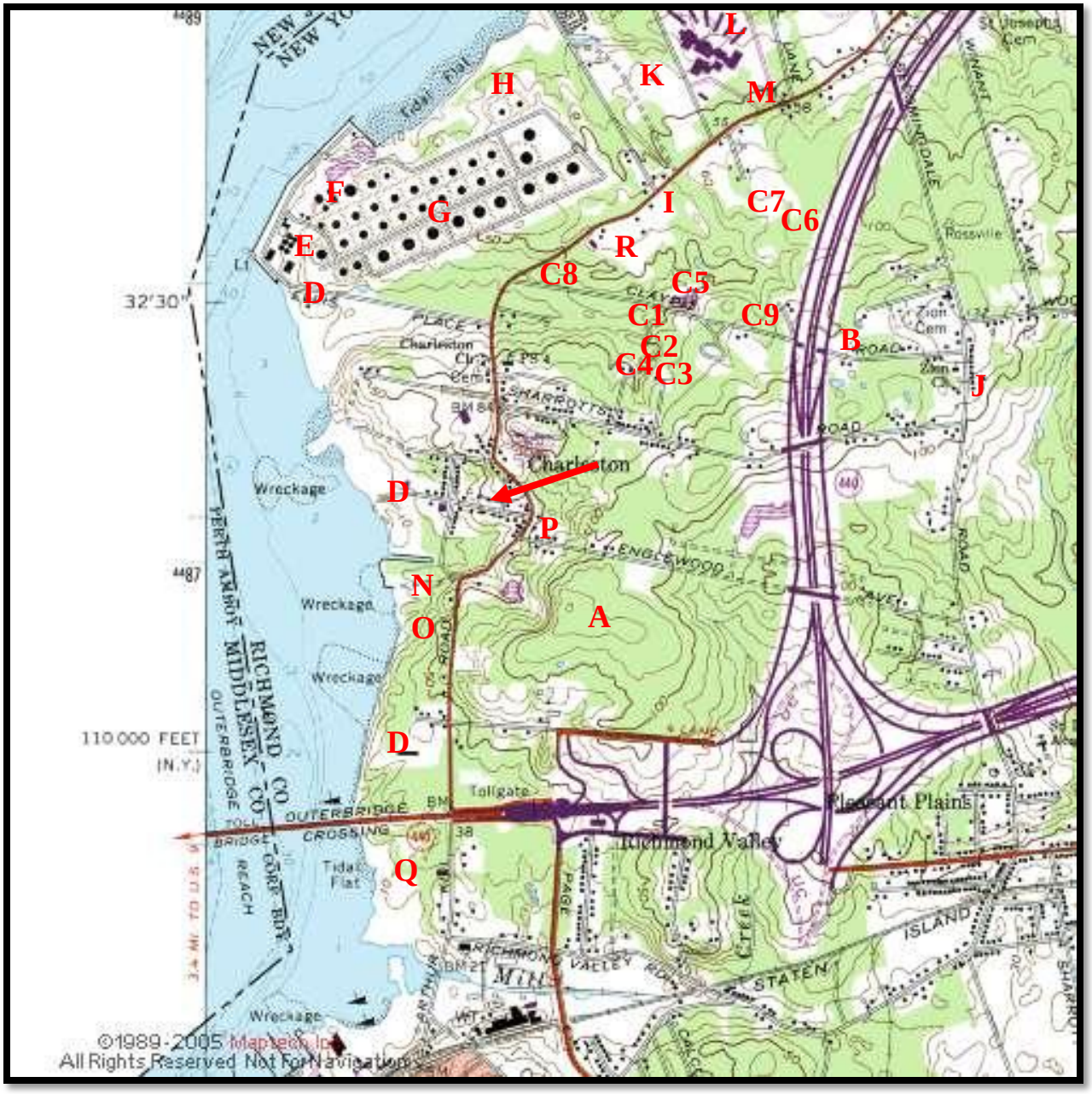


FIGURE 4
Reported Locations of Native American Archaeological Sites
Base Map Source: United States Geological Survey 1975
Scale of Original: 1:24,000
Contour Interval: 10 feet
See Table 2 for Key to Archaeological Sites
Arrow indicates approximate location of the project area.

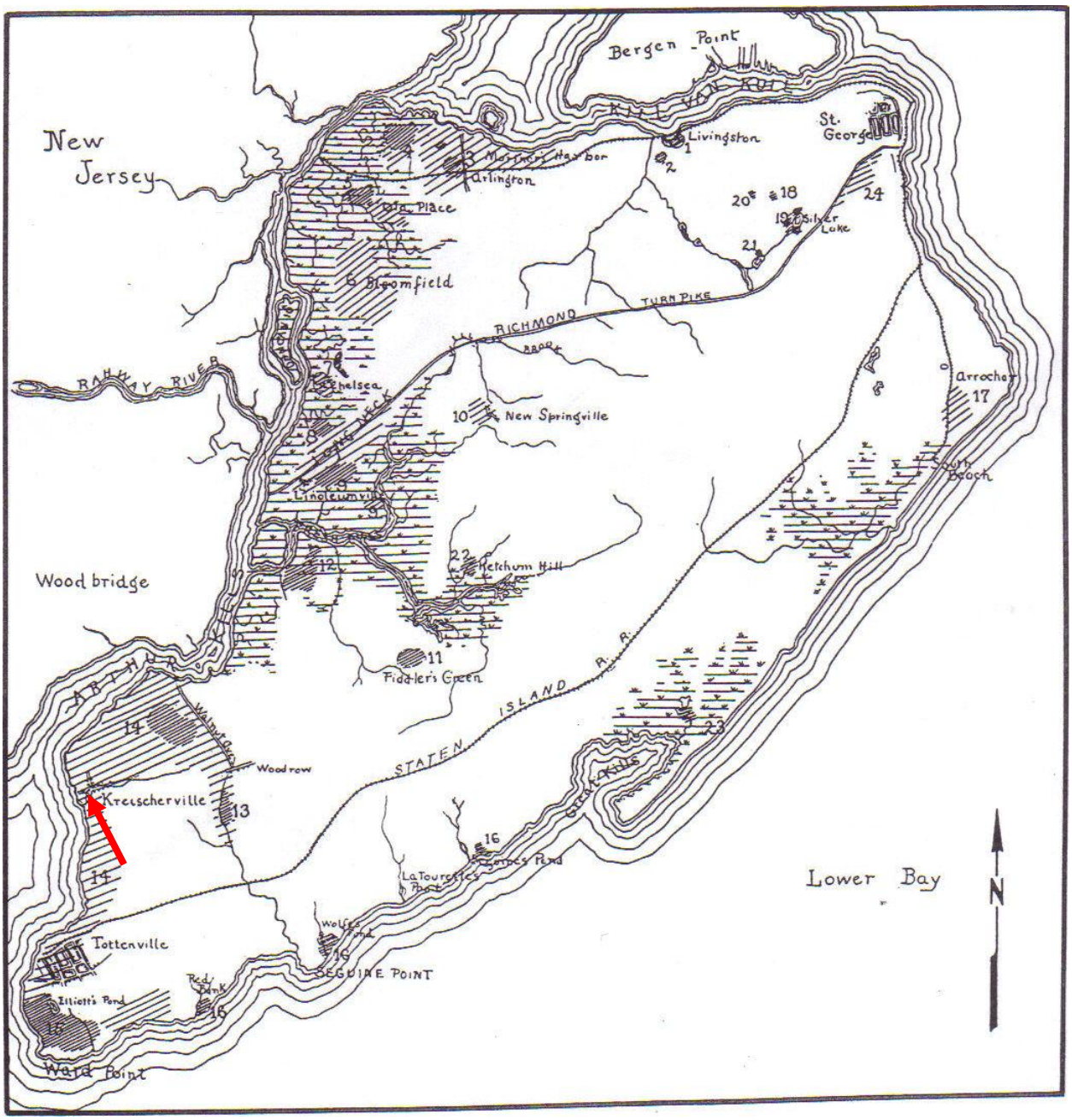


FIGURE 5
Archaeological Site and Sensitivity Map of Staten Island
Source: Skinner 1909
Arrow indicates approximate location of the project area.

FIGURE 6
1733 Popple Map
Arrow indicates approximate location of the project area.

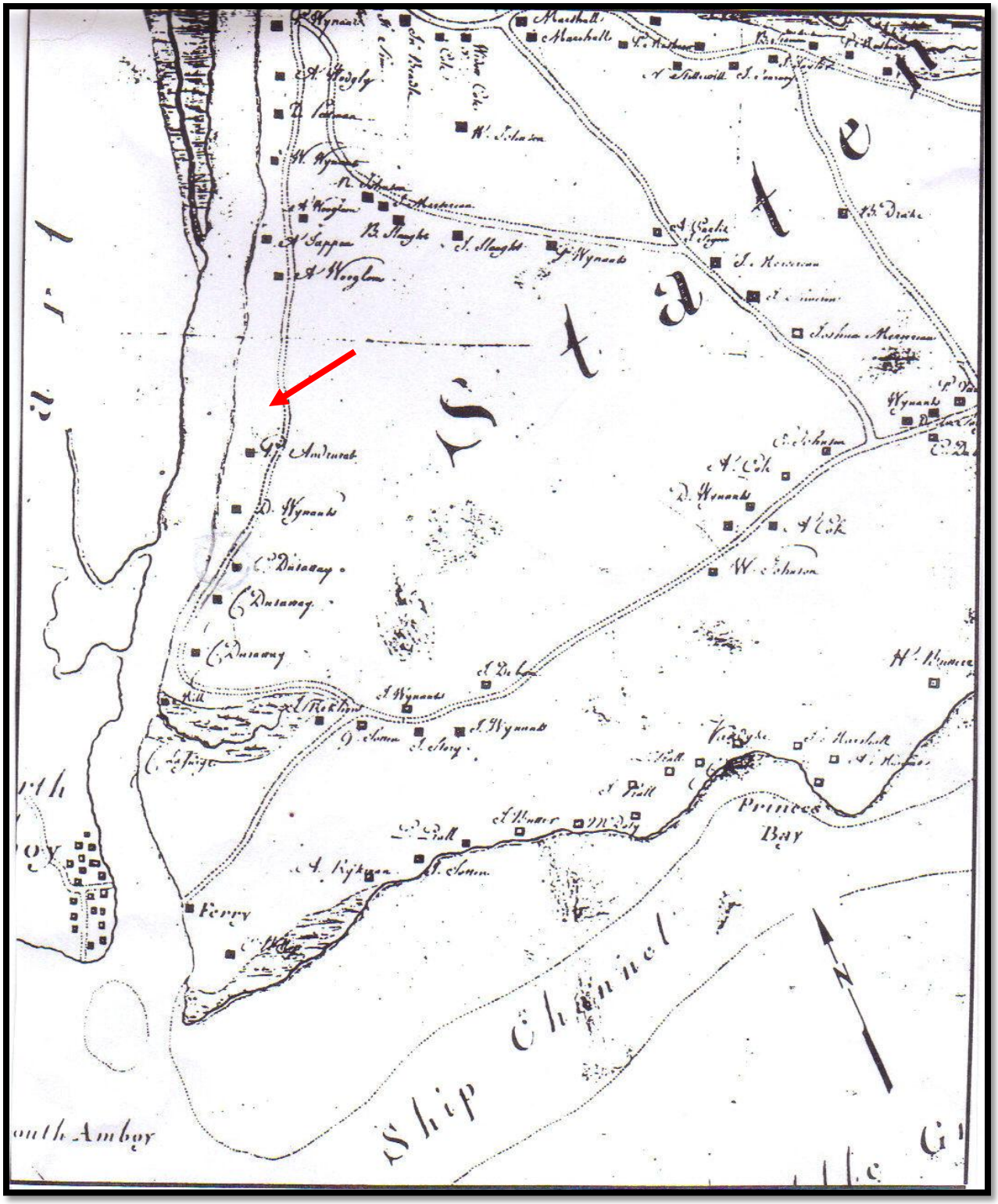


FIGURE 7
British-Hessian Plan of Camps in Staten Island 1780-1783
No Scale – Arrow indicates approximate location of the project area.

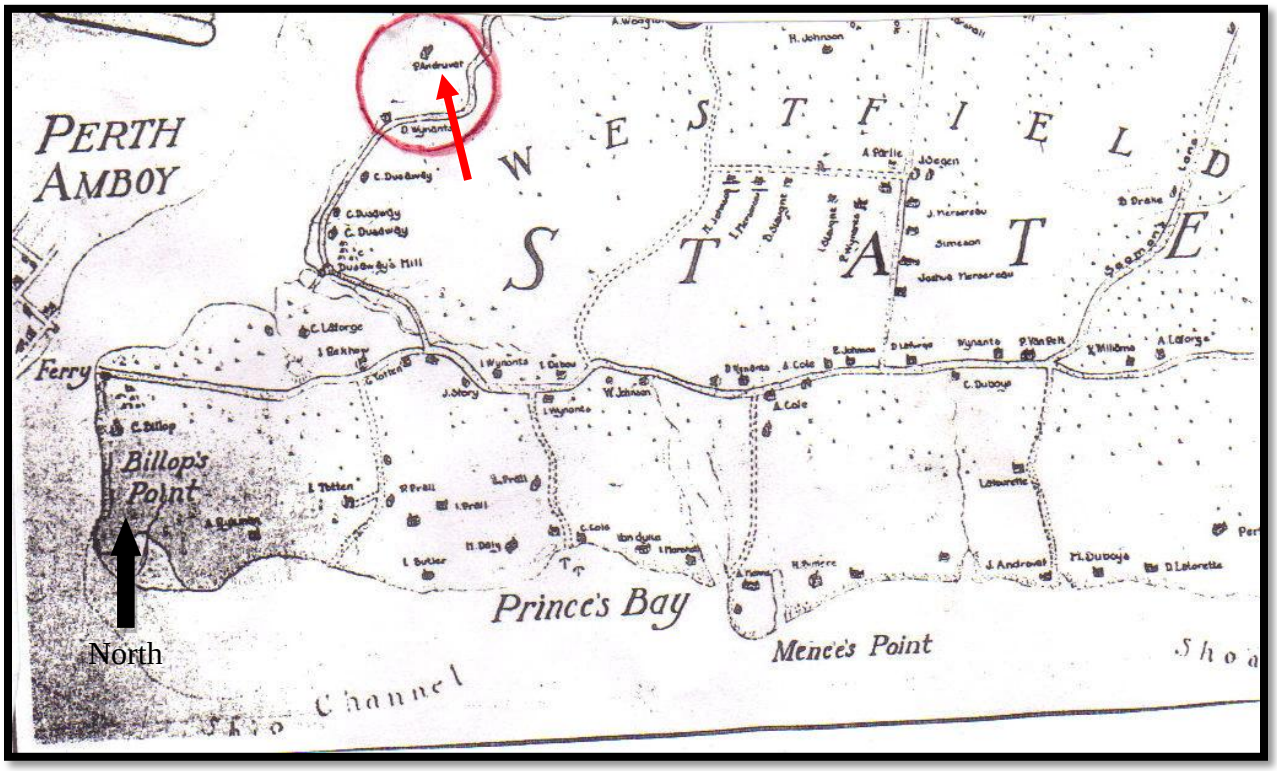


FIGURE 8
A Map of Staten Island During the American Revolution
Source: McMillen 1933
Not to Scale

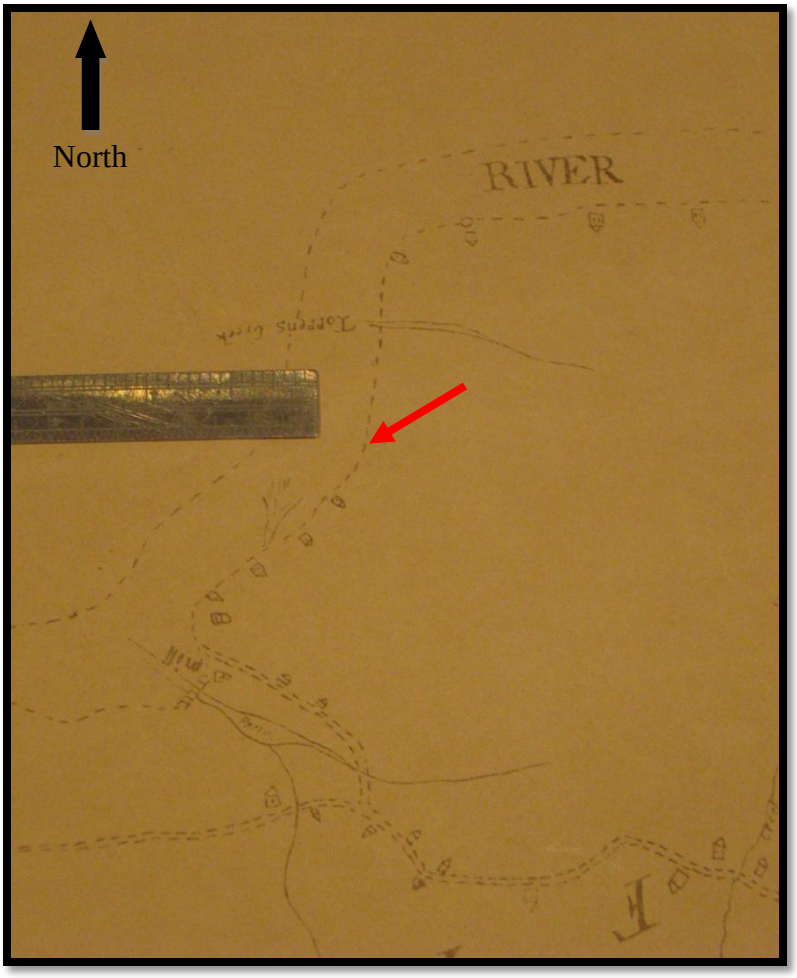


FIGURE 9
1797 Tyson, Burbank, Lake, and Lanzelere Map
Scale of Original: 1 inch = 1 mile
Arrow indicates approximate location of the project area.

FIGURE 10
1844 U.S. Coast Survey Map
Scale of Original: 1/30,600
Arrow indicates approximate location of the project area.

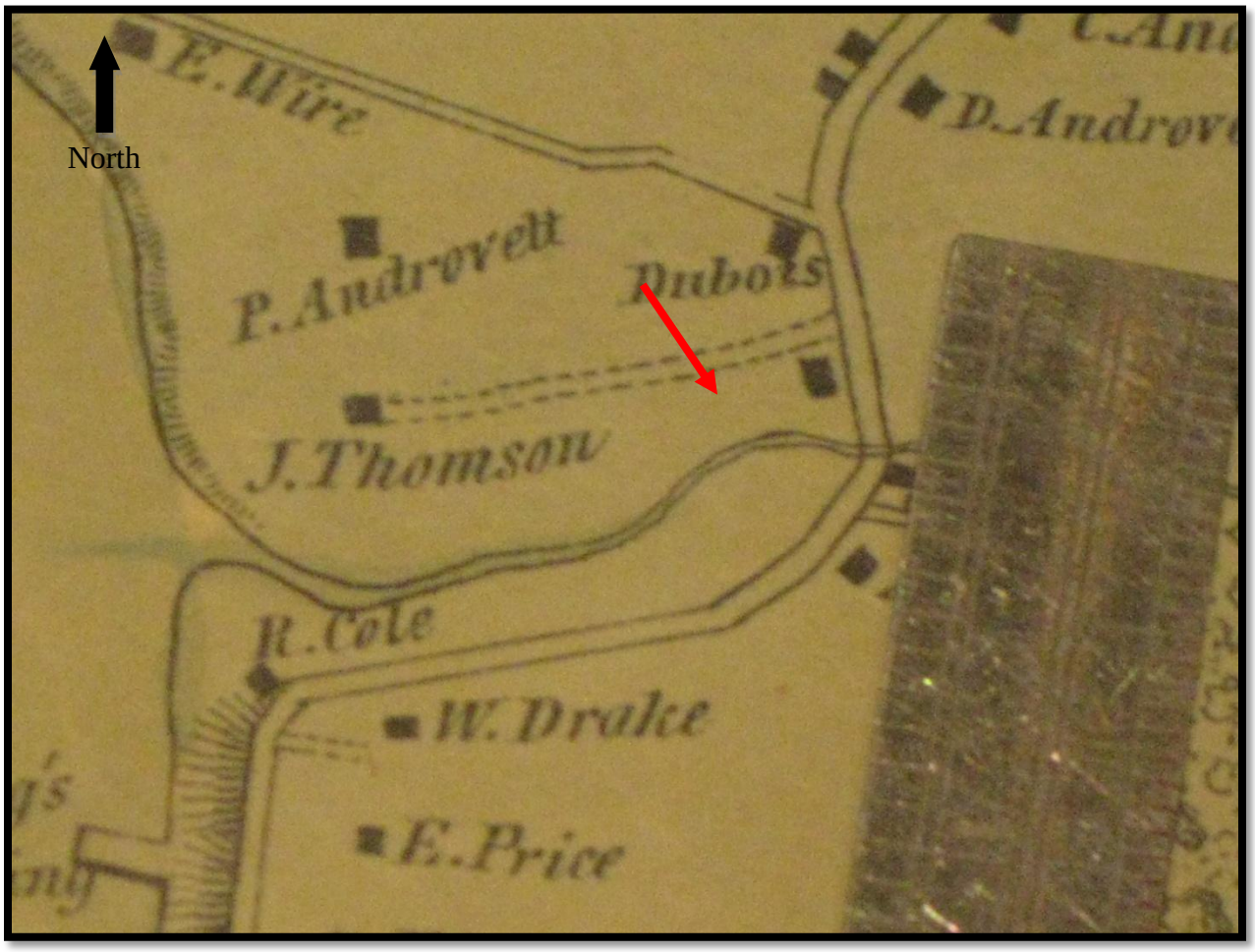


FIGURE 11
1853 Butler Map
Scale of Original: 1 inch = 1,320 feet
Arrow indicates approximate location of the project area.

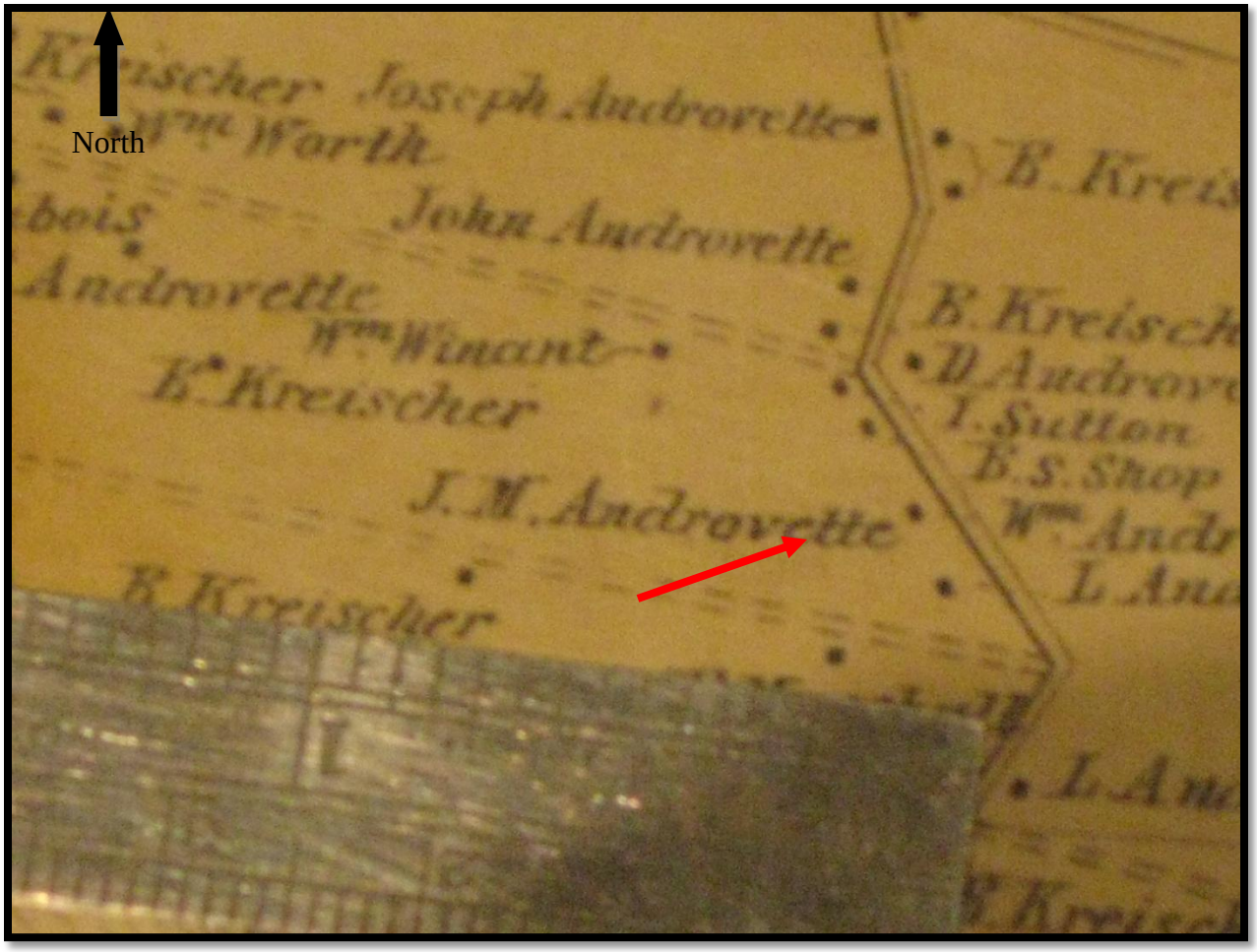


FIGURE 12
1859 Walling Map
Scale of Original: 1 inch = 1,320 feet
Arrow indicates approximate location of the project area.

FIGURE 13
1866 Colton Map
Scale of Original: 1 inch = 0.5 mile
Arrow indicates approximate location of the project area.

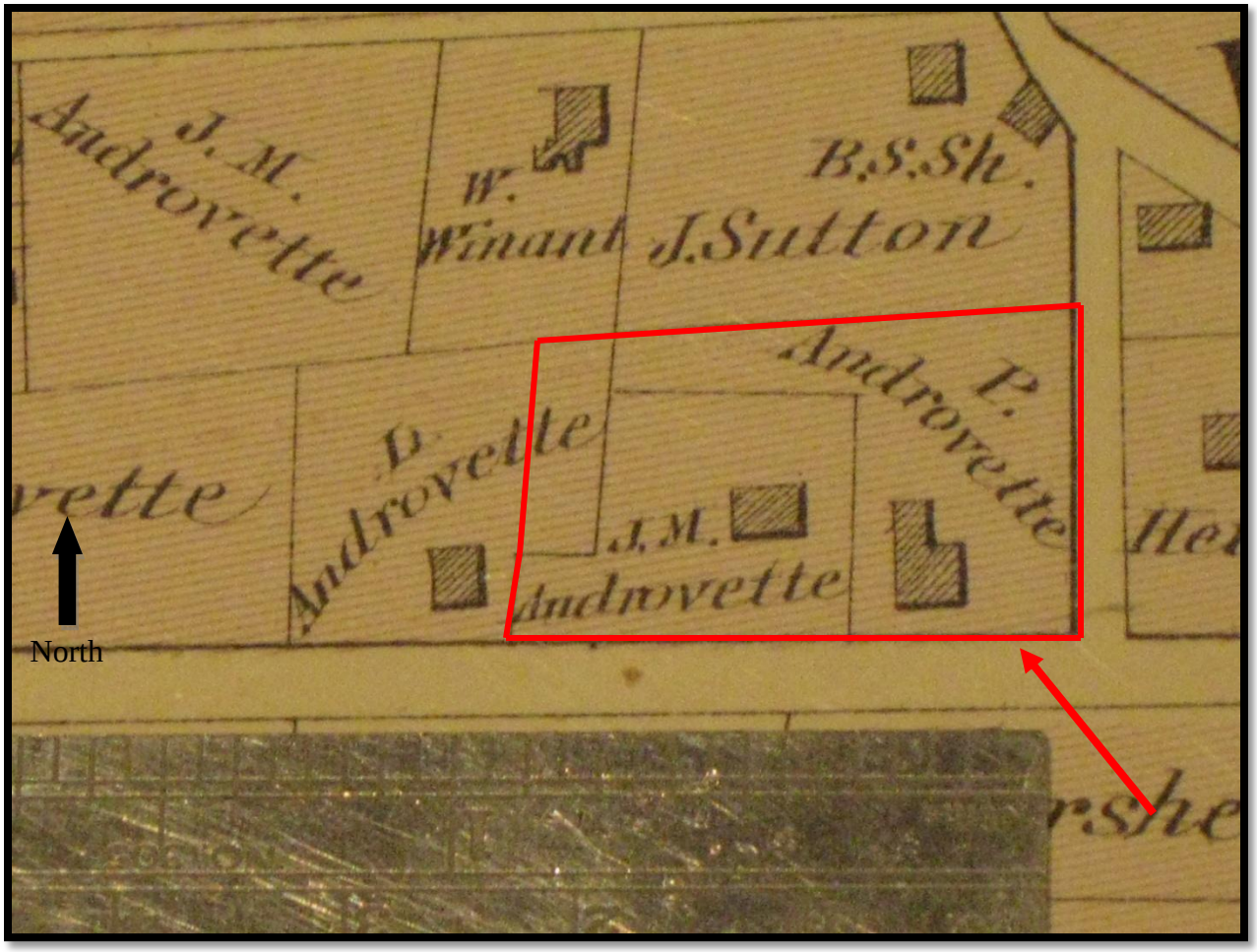


FIGURE 14
1874 Beers Map
Scale of Original: 1 inch = 400 feet
Arrow indicates approximate location of the project area.

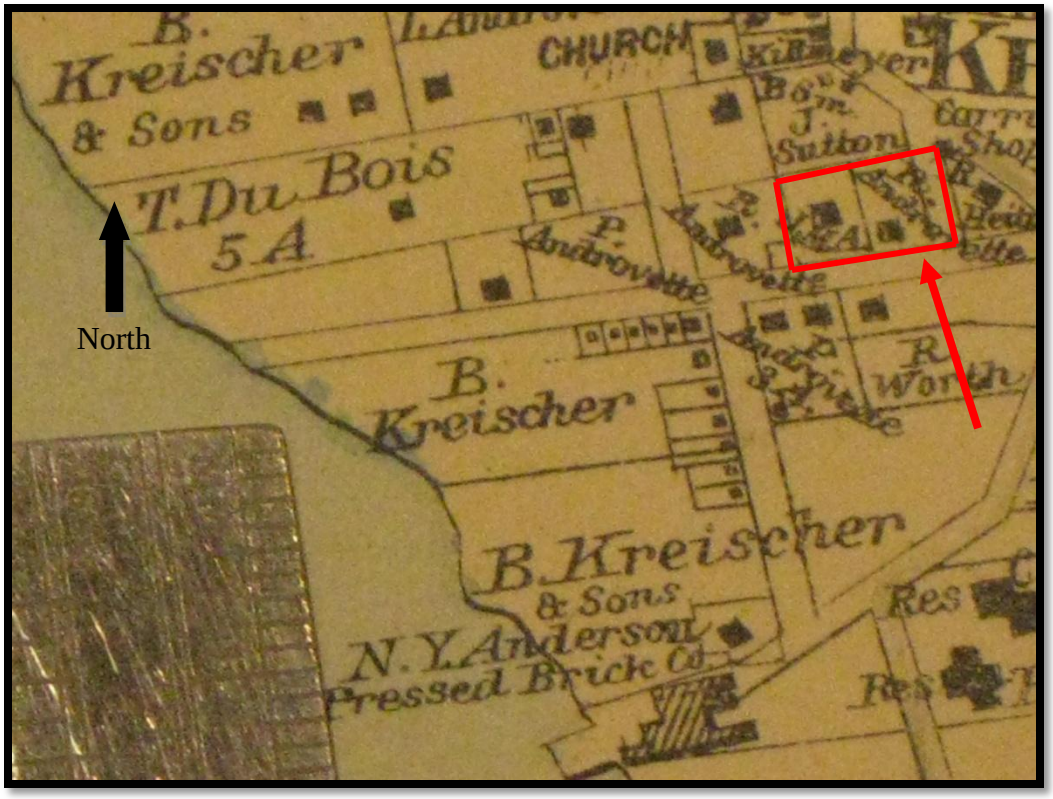


FIGURE 15
1887 Beers Map
Scale of Original: 1 inch = 800 feet
Arrow indicates approximate location of the project area.

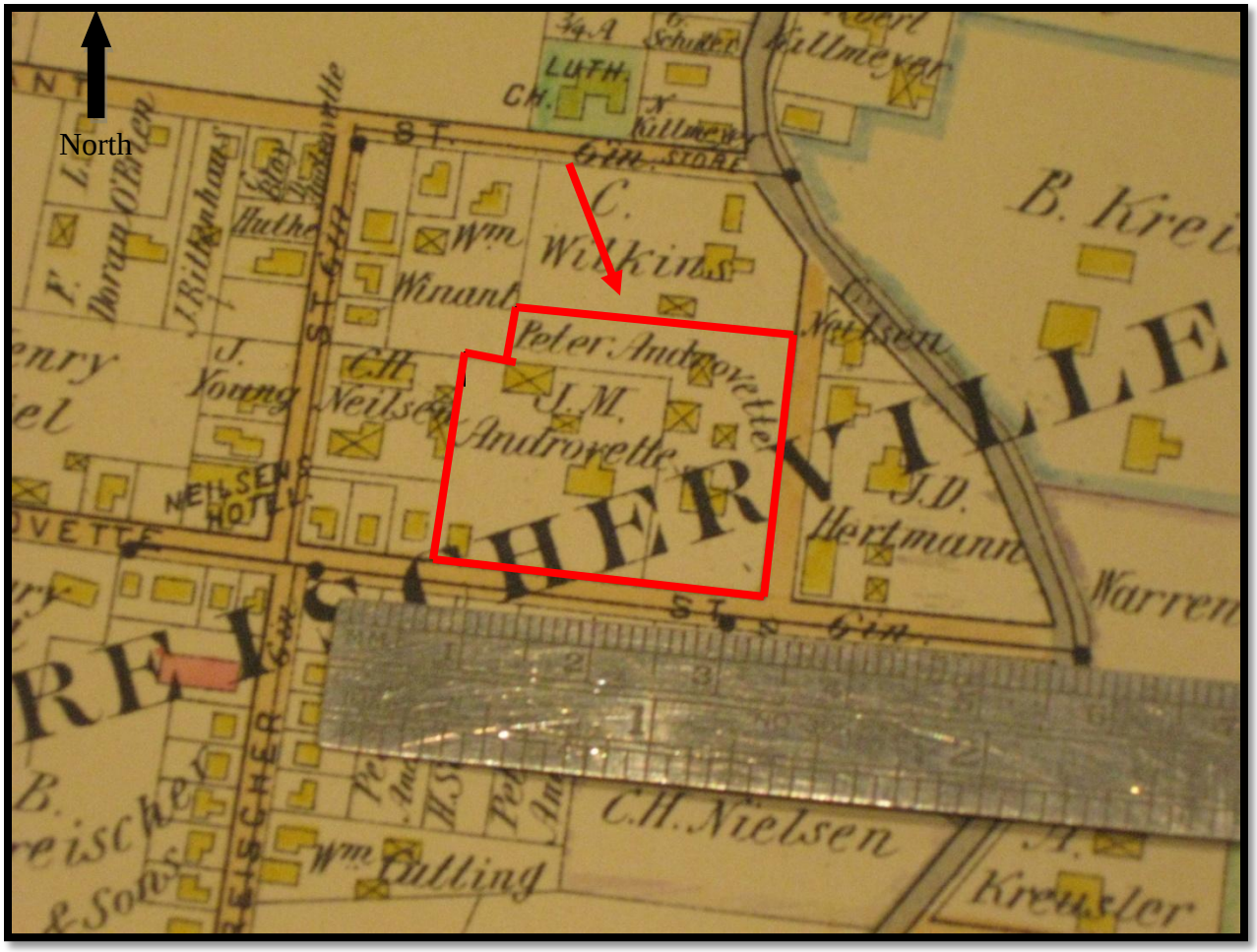


FIGURE 16
1898 Robinson Map
Scale of Original: 1 inch = 400 feet
Arrow indicates approximate location of the project area.

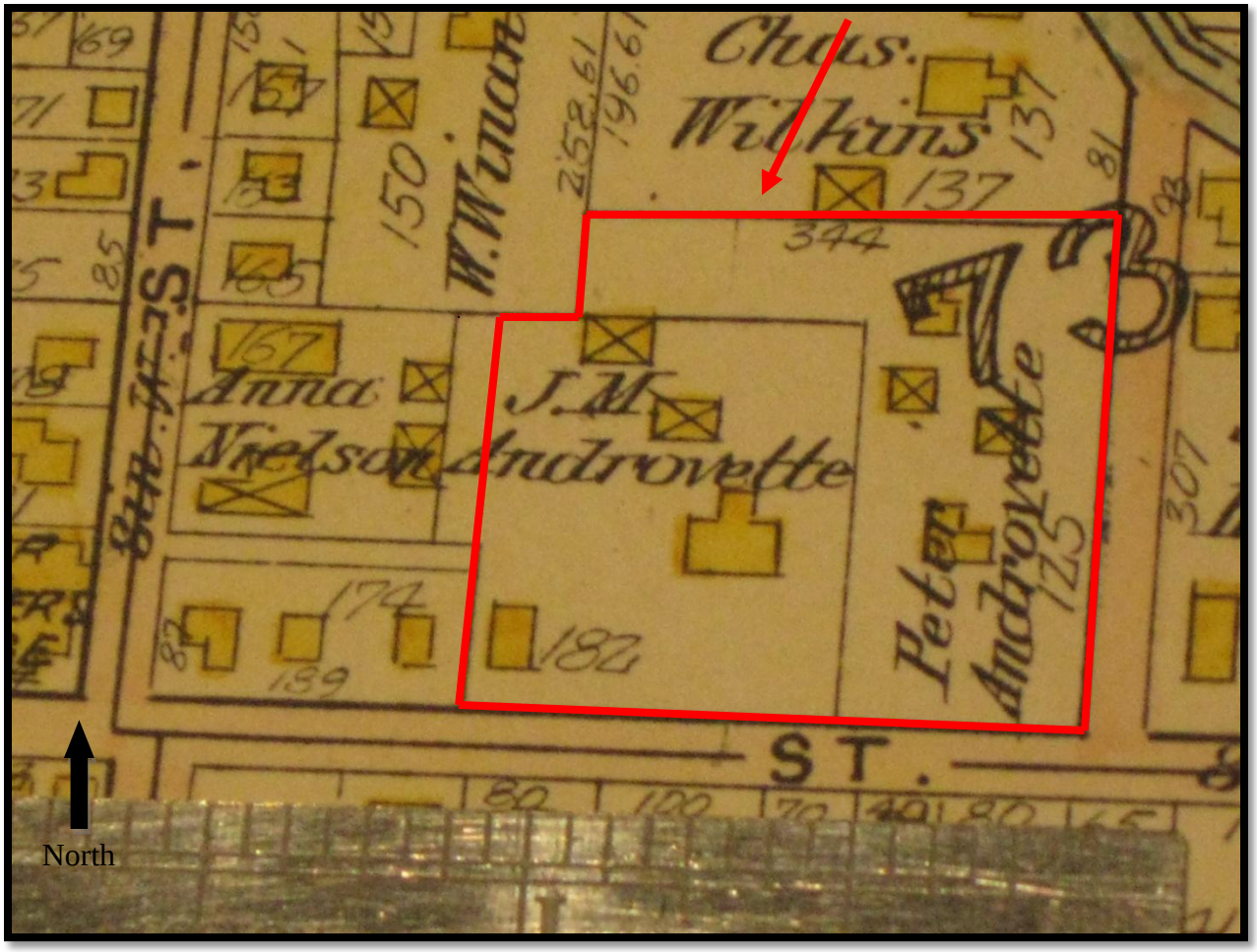


FIGURE 17
1907 Butler Map
Scale of Original: 1 inch = 400 feet
Arrow indicates approximate location of the project area.

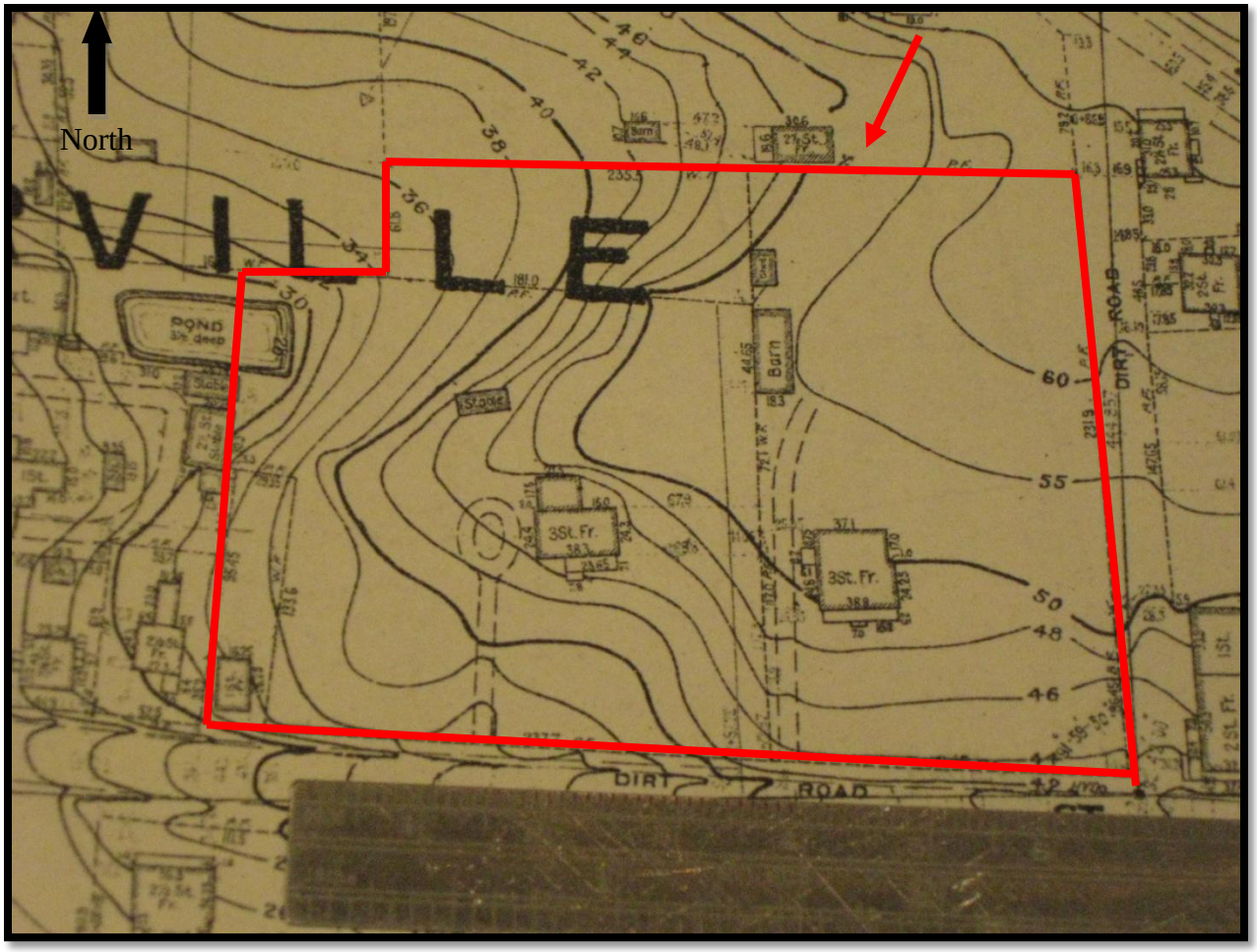


FIGURE 18
1913 Bridgeman Topographical Survey Map
Scale of Original: 1 inch = 150 feet
Arrow indicates approximate location of the project area.

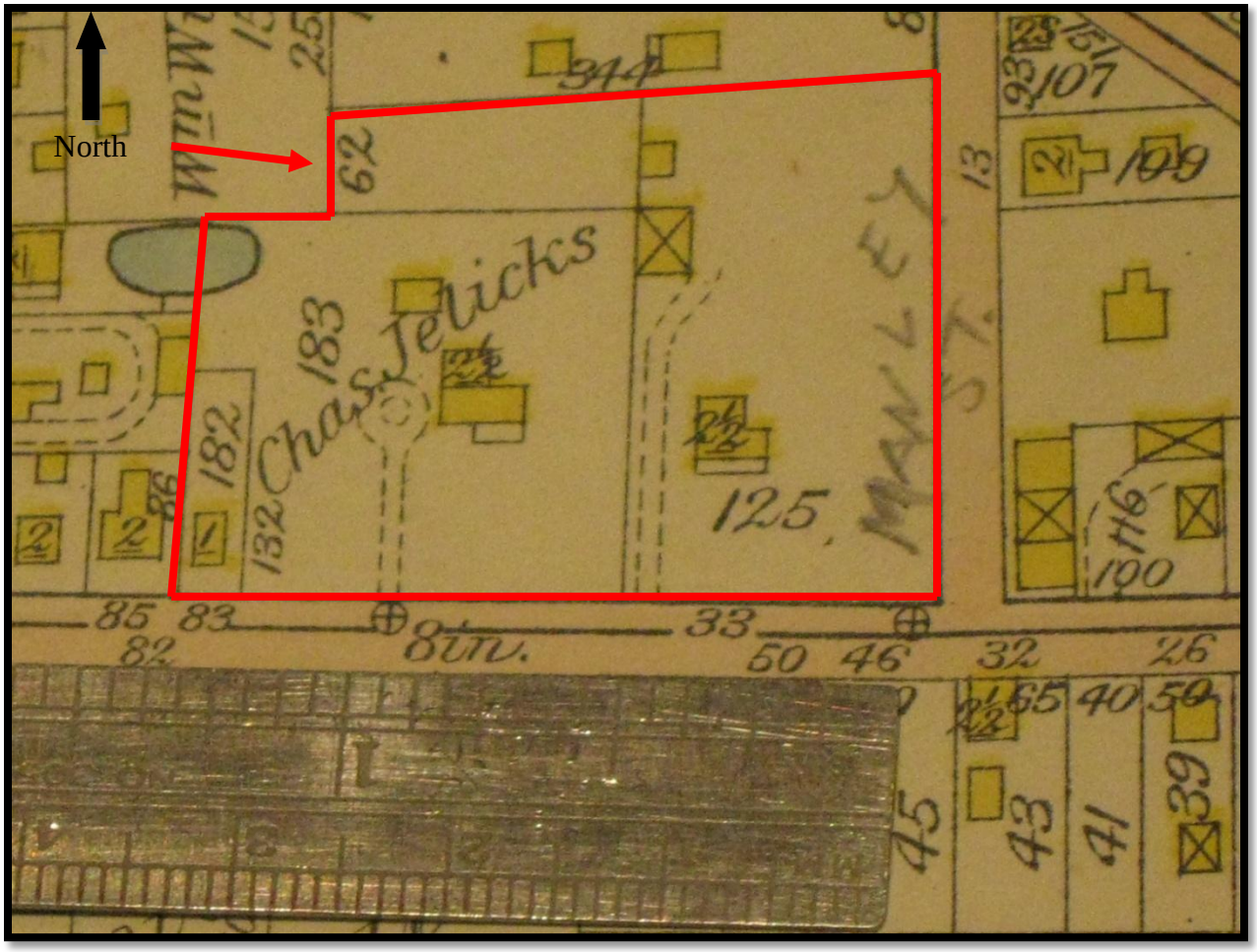


FIGURE 19
1917 Bromley and Bromley Map
Scale of Original: 1 inch = 300 feet
Arrow indicates approximate location of the project area.

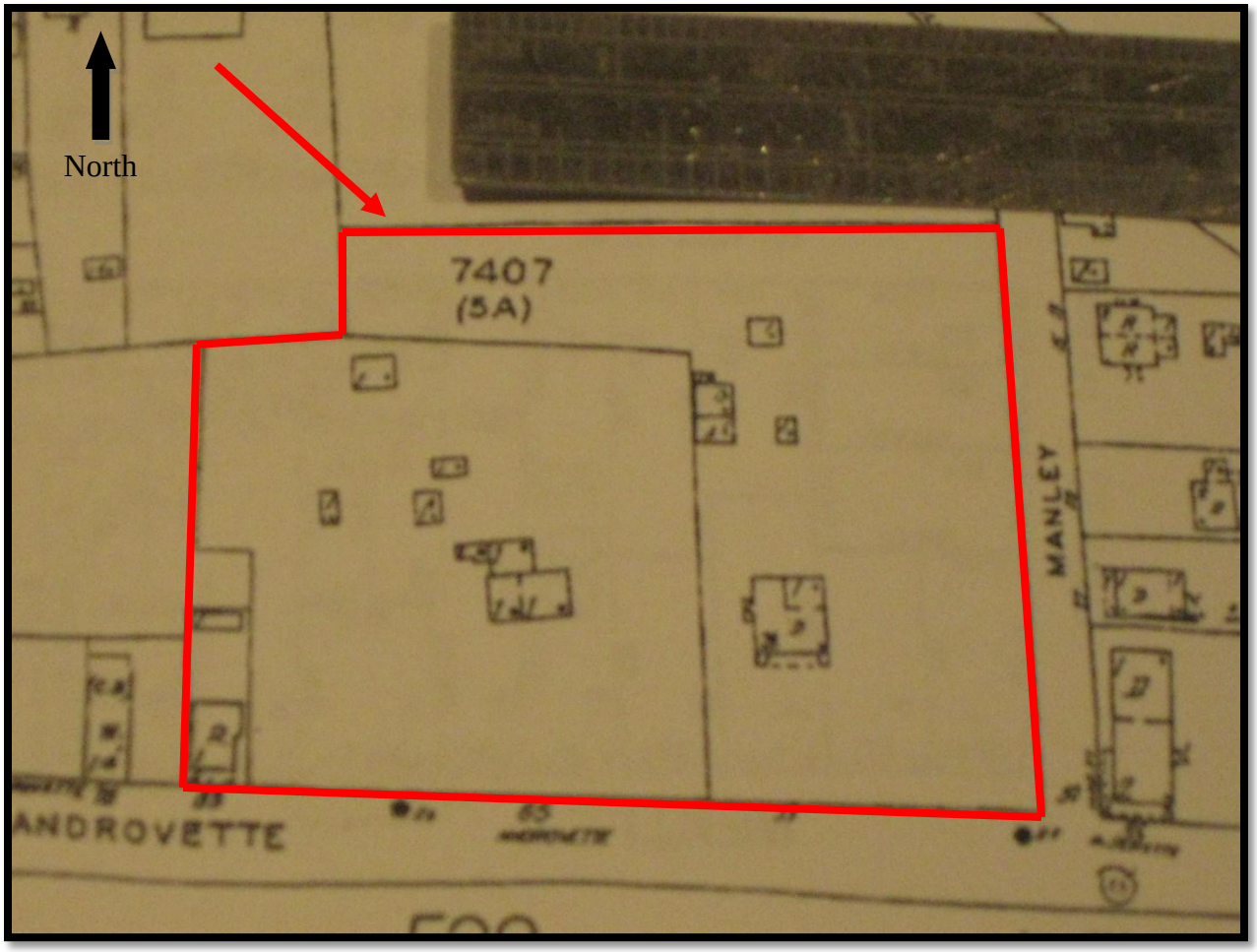


FIGURE 20
1937 Sanborn Insurance Map
Scale of Original: 1 inch = 200 feet
Arrow indicates approximate location of the project area.

PHOTOGRAPHS

PHOTOGRAPH 1
Residence at 53 Androvette Street
Block 7407 Lot 1
View is to the North

PHOTOGRAPH 2
West Side of Residence at 53 Androvette Street Showing Brick Paved Driveway
Block 7407 Lot 1
View is to the North

PHOTOGRAPH 3
Rear Portion of Residence at 53 Androvette Street Showing 1-Story Addition
Block 7407 Lot 1
View is to the South

PHOTOGRAPH 4
Residence at 53 Androvette Street and Front and Side Lawn
Block 7407 Lot 1
View is to the Northeast

PHOTOGRAPH 5
53 Androvette Street and Front and Side Lawns
Block 7407 Lot 1
View is to the East

PHOTOGRAPH 6
53 Androvette Street – Commercial Vehicle Parking Area in Northernmost Portion of Lot Block 7407 Lot 1
View is to the Southwest

PHOTOGRAPH 7
53 Androvette Street – Paved Commercial Area in Northernmost Portion of Lot Showing Garage and Wood Pile
Block 7407 Lot 1
View is to the West

PHOTOGRAPH 8
53 Androvette Street – Northern Portion of Lot Showing Garage
Block 7407 Lot 1
View is to the Southwest

PHOTOGRAPH 9
North Central Portion of 53 Androvette Street
Block 7407 Lot 1
View is to the East

PHOTOGRAPH 10
Northwest Portion of 53 Androvette Street
Block 7407 Lot 1
View is to the Northeast

PHOTOGRAPH 11
Residence at 65 Androvette Street
Block 7407, Lot 82
View is to the Northwest

PHOTOGRAPH 12
Residence at 65 Androvette Street
Block 7407, Lot 82
View is to the Northeast

PHOTOGRAPH 13
Residence at 65 Androvette Street and Lawn West of Building
Block 7407, Lot 82
View is to the East

PHOTOGRAPH 14
Lawn South of Residence at 65 Androvette Street
Block 7407, Lot 82
View is to the East

PHOTOGRAPH 15
Wooded Area North of Residence at 65 Androvette Street
Block 7407, Lot 82
View is to the Northeast

PHOTOGRAPH 16
Outbuilding Northwest of Residence at 65 Androvette Street
Block 7407, Lot 82
View is to the North

PHOTOGRAPH 17
Disturbed/Excavated Area North of Residence at 65 Androvette Street
Block 7407, Lot 82
View is to the Southeast

PHOTOGRAPH 18
Wetland in Northwest Portion of 83 Androvette Street
Block 7407, Lot 80
View is to the West

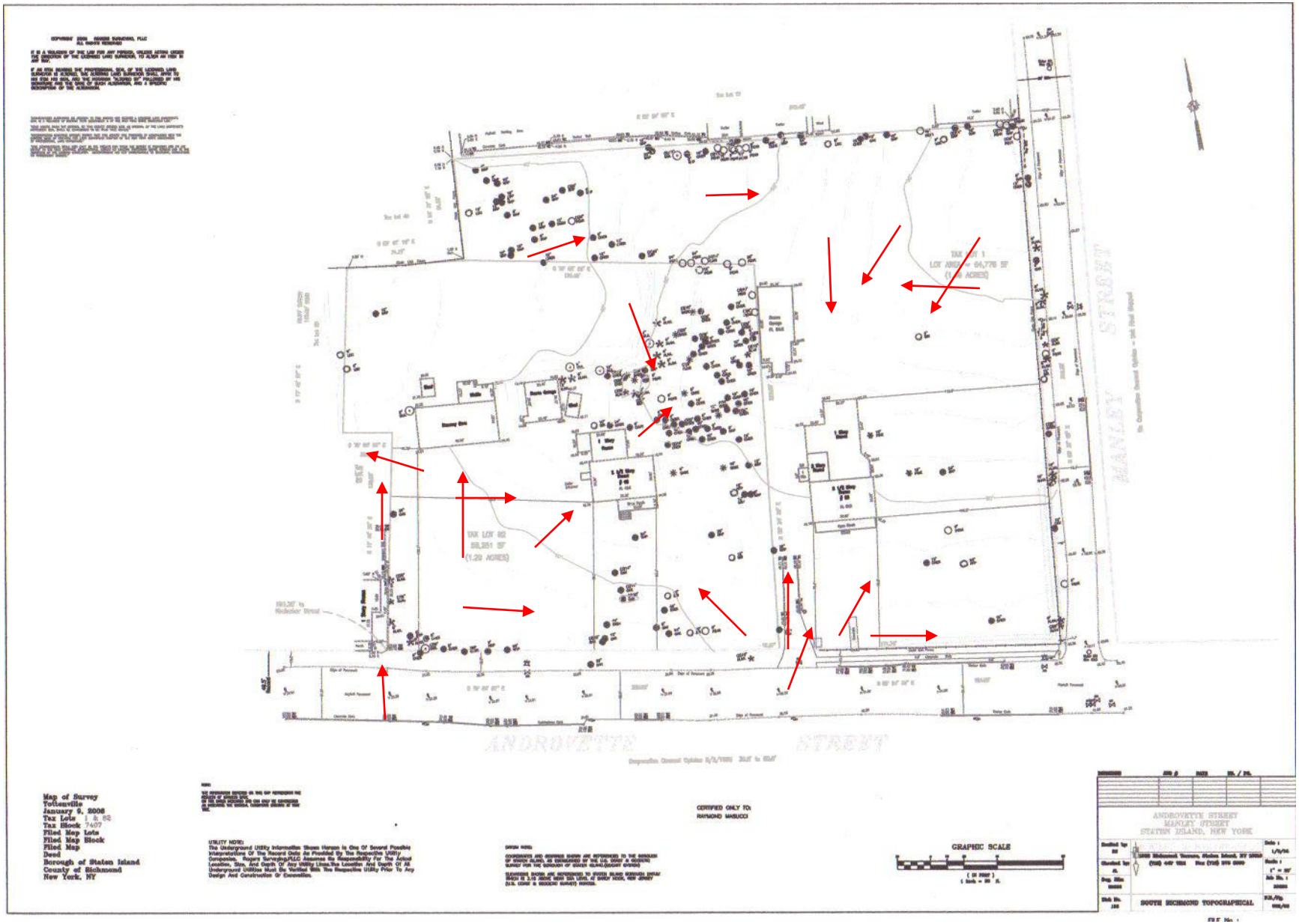
PHOTOGRAPH 19
Residence at 83 Androvette Street
Block 7407, Lot 80
View is to the North

PHOTOGRAPH 20
Lawn and Other Vegetation Behind Residence at 83 Androvette Street
Block 7407, Lot 80
View is to the North

APPENDIX A

Locations of Photographic Views Included in the Report as Photographs 1 – 20

Base Map Source: Rogers Surveying PLLC 2006



Map of Survey
Totteneville
January 9, 2008
Tax Lots 1 & 62
Tax Block 7407
Filed Map Lots
Filed Map Block
Filed Map
Deed
Borough of Staten Island
County of Richmond
New York, NY

UTILITY NOTE:
The Underground Utility Information Shown Hereon Is One Of Several Possible Interpretations Of The Record Data As Provided By The Respective Utility Companies. Rogers Surveying/PLLC Assumes No Responsibility For The Actual Location, Size, And Depth Of Any Utility Lines.The Location And Depth Of All Underground Utilities Must Be Verified With The Respective Utility Prior To Any Design And Construction Or Excavation.

CERTIFIED ONLY TO:
RAYMOND MASUCCI

GRAPHIC SCALE

ANDROVETTE STREET
MANLEY STREET
STATEN ISLAND, NEW YORK

SOUTH RICHMOND TOPOGRAPHICAL