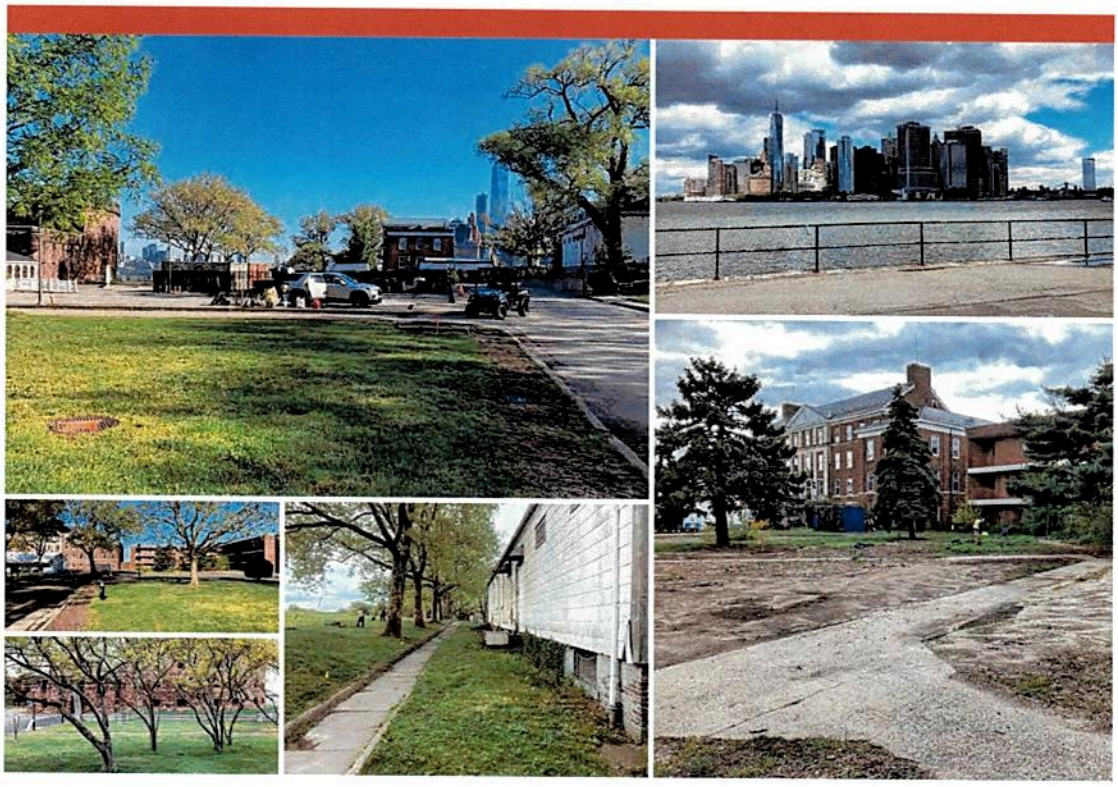
Phase I Archeological Investigations in Support of Demolition of Incidentally Acquired Buildings

Governors Island National Monument (GOIS), New York

NARP Project No. GOIS 2022 A / PMIS No. 152683



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Abstract

On behalf of the National Park Service (NPS), WSP USA Inc. (WSP) completed a Phase I archeological survey in support of the demolition of incidentally acquired buildings at Governors Island National Monument (GOIS), New York, New York. GOIS plans to demolish five buildings within the monument boundary, a large parking lot, and some connecting streets. The work is expected to enhance the visitor experience to GOIS by eliminating structures, parking areas, and streets that are outside the GOIS treatment period. The demolition work supports the NPS General Management Plan of 2008 and the Cultural Landscape Treatment Plan of 2010. To fulfill responsibilities under the National Historic Preservation Act, a variety of archeological excavations are needed to assess the impact of the demolition on archeological resources.

The purpose of WSP's Phase I archeological investigation was to identify archeological resources in the area of potential effect (APE) for the demolition project. This area is defined by the proposed staging areas for the planned demolition: Area One, east and south of Building 251; Area Two, a roughly rectangular grassy area between Kimball Road, Comfort Road, Tampa Road, and Andes Road; and Areas 3 and 4, east and west, respectively, of the Building 513 complex. Current plans for the four areas of the APE call for the removal of the topsoil layers, filling, and subsequent grading of the areas following demolition. The investigation included background research and fieldwork.

According to the Cultural Resources Information System (CRIS) database, 38 surveys have been conducted on Governors Island. Survey types include Phase IA/IB archeological reconnaissance surveys, Phase II site evaluations, archeological monitoring of construction, and emergency assessment of uncovered human remains. CRIS data indicate that 37 previously recorded archeological sites are located within 1.6 kilometers (1 mile) of the APE. These consist of two pre-Contact sites, one multi-component site, and 34 aboveground features. Four of the sites—the Fort Jay Prehistoric Site, Nolan Park Prehistoric Site, Andes Road Cemetery Location 2 (06101.007420), and Fort Jay Midden Site (06101.009527)—are eligible for listing in the National Register of Historic Places (NRHP). The Golf Course Battery Site (06101.009529) and the Governor's House Historic Site (06101.009528) are not NRHP-eligible. The Governors Island Archeological Sites (06101.05029) are east of the APE and listed in the NRHP. This site number includes the Tampa Memorial Library, which was originally built as a storehouse and workshop for the Fort Jay Quartermaster. In addition, a portion of the original Andes Road Cemetery might be located under the library's parking lot. The remaining 30 sites have an undetermined status as to NRHP eligibility.

Subsurface testing in the APE took place between May 1 and 5, 2023. The archeological survey covered all testable areas of the APE, with 59 excavated shovel tests. Buried utilities were present throughout the APE, which precluded subsurface testing in those areas. In addition, portions of the APE were covered by concrete or blacktop surfaces. Testing in the APE revealed substantial disturbance from nineteenth- and twentieth-century demolition, filling, and grading episodes. This is consistent with the mapped soil type of Laguardia-Urban Land complex throughout the APE. Disturbed post-Contact material was found as deep as 110 centimeters (3.61 feet) below ground surface (bgs). Lower strata in shovel tests excavated west of the extant library building and on a rise above the rest of the APE were consistent with glacial B-horizon soils; however, this area also fell within the bounds of the former golf course and soils may have been modified to create golf course features.

Testing encountered one feature, which appears to represent the northwest area of Site GOIS00018, a former supply tunnel linking Castle Williams and Fort Jay. It is WSP's opinion that the area bounded by the nearest negative shovel tests leading out from the positive tests in this area should be avoided. Current plans call for the avoidance of the Site GOIS00018 area, and high-visibility fencing may be erected for better help with identifying the feature area during the project. If the current demolition plans change and impacts to the area cannot be avoided, it is WSP's opinion that a Phase II site evaluation should be conducted to determine the eligibility status of this site.

Portions of the APE extended into the boundaries of the Cafeteria Site (GOIS00044). All of the shovel tests in this section terminated on rock or concrete impasses. These shovel tests consisted of fill horizons, and no intact cultural horizons were present. Portions of the APE in Area Two extended into the boundaries of the Hospital Mess Site (GOIS00039). Shovel testing in this area displayed signs of disturbance. Portions of the APE in Area Three may extend into the boundaries of either or both the Engineer Building 49 Site (GOIS00030.03) and the Crematory Site (GOIS00038). In these areas shovel testing uncovered substantial disturbance and revealed no intact features or cultural deposits. In all three areas, current demolition plans show that disturbance from the proposed project will not extend below 15 centimeters (0.49 foot) bgs; in addition, spot removal of utilities will take place and building foundations will

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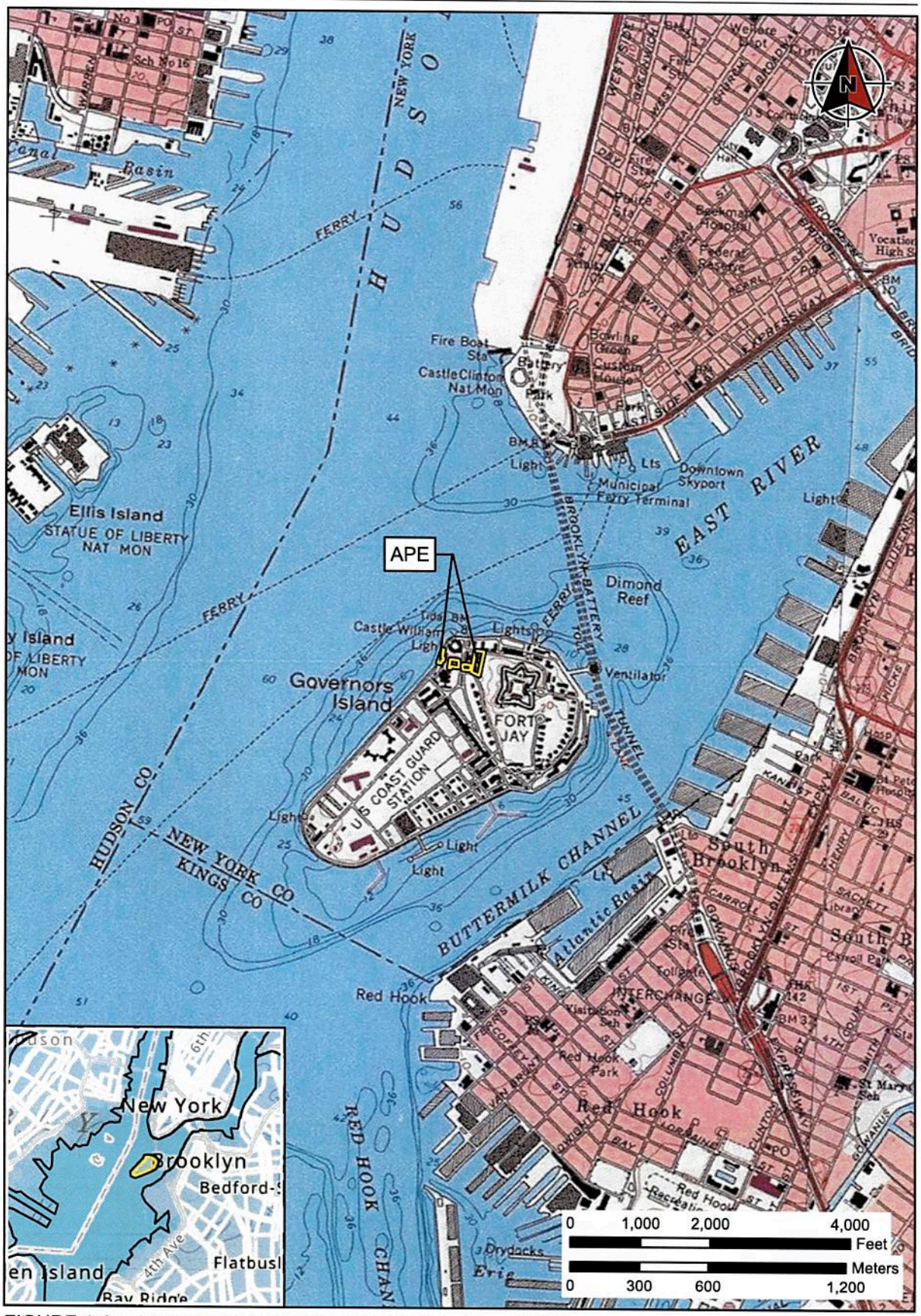


FIGURE 1: Location of Project APE (ESRI USA Topo Maps 2019)

This report contains five chapters. After the introduction in Chapter I, Chapter II summarizes the results of the background research. Chapter III presents the methods and findings of the archeological fieldwork. A summary with recommendations is in Chapter IV. Chapter V contains a list of the references cited. Appendix A contains the shovel test log, which details the soil stratigraphy and soil conditions. Appendix B contains the methods of artifact analysis and cataloging and the artifact inventory.

Timothy Higginson served as project manager for the Phase I survey. Archeologist Kevin Sheridan, PhD, RPA, completed the background research and archeological survey and wrote the report. The field crew for the project consisted of Dr. Sheridan, Tony Fitzpatrick, Lauren Hayden, and Nathan Scholl. Principal Editor Anne Moiseev supervised the editing and production of the report, and Lead Consultant/GIS Jacqueline L. Horsford and Research Analyst Sabrina Jones prepared the graphics.

Project 1939:415; Governors Island Club 1937:34-35; Wilson 1893:40). At the time of European contact, the island was densely forested with oak, chestnut, walnut, and hickory trees.

2. Soils

The entire APE is classified as Laguardia-Urban Land complex and Urban Land soils. Slopes range from 0 to 3 percent. These soils consist of a fill mixture of natural indigenous soil and construction debris that is at least 80 percent overlain by impervious buildings and/or pavement (U.S. Department of Agriculture-Natural Resources Conservation Service [USDA-NRCS] 2005) (Figure 3; Table 1).

TABLE 1: SOILS IN APE

NAME	SOIL HORIZON DEPTH	TEXTURE, INCLUSIONS	SLOPE %	DRAINAGE	LANDFORM
Laguardia-Urban land complex (LUA, LUB)	^Au: 0-20 cm (0–8 in) ^BCu: 20-66 cm (8–26 in) ^Cu: 66-201 cm (26–79 in)	Cobbly-artifactual coarse sandy loam Very cobbly-artifactual coarse sandy loam Very cobbly-artifactual coarse sandy loam	LUA, 0–3 LUB, 3–8	Well drained	Urban Areas
Urban land-Laguardia complex (ULA)	M: 0-38 cm (0–15 in) 2^C: 38-201 cm (15–79 in)	Cemented material Gravelly sandy loam	0–3	Well drained	Urban Areas

USDA-NRCS 2005

B. Pre-Contact Period Context

1. Paleoindian Period (11,000 to 10,000 BP)

Traces of pre-Contact occupation have been largely eradicated from highly developed urban areas as a result of intensive development since early European occupation of the New York City area; however, early in the twentieth century, avocational archeologists, such as Reginald Bolton (1934) and Alanson Skinner (1909, 1915, 1919, 1920), recorded and excavated archeological sites throughout the metropolitan region and documented the location of previously encountered pre-Contact sites. Through the work of these and other avocational archeologists, a rough outline of the pre-Contact occupation of New York City has been constructed. Recent cultural resource management projects have augmented the earlier work both to verify and expand understanding of pre-Contact lifeways in the metropolitan area (Cantwell and diZerega Wall 2001).

The earliest known occupation of New York City was on the southwestern shore of Staten Island, where stone tools dating to about 10,000 BP were found in disturbed soils associated with the Port Mobil oil tanks. Along Charleston Beach, just south of Port Mobil, local avocational archeologists collected stone tools that were similar to those found at Port Mobil (Boesch 1994). The avocational archeologists found a total of 21 fluted points and more than 120 stone tools in three separate areas of the Port Mobil Site: the tank area, on Charleston Beach, and at another beach site to the north (Cantwell and diZerega Wall 2001:41). The common stone tool recovered from the Port Mobil Site consists of a lanceolate-shaped spearpoint with a long, thin channel removed longitudinally from both faces of the point. This technique is known as "fluting" and is a hallmark of the Paleoindian period (Callahan 1979). Other stone tools recovered from the site include unfluted points, scrapers, knives, borers, and gravers (Eisenberg 1978; Kraft 1977).

This small collection of stone tools has been interpreted as pre-Contact refuse from a small resource-procurement encampment (Funk 1977). Although the Port Mobil Site presently overlooks the Arthur Kill, sea levels were lower during the Paleoindian period, and the waterway did not exist when the site was occupied (Edwards and Merrill 1977). The lithic material recovered from the site indicates that the occupants were refining and manufacturing tools and may have processed animal hides and other products on site.

> Some broken points had been pressed into service as knives while others were simply discarded, and the successfully completed points were lashed onto spear shafts. We know that the shafts were also being made at Port Mobil because Anderson and his team found the stone spokeshaves and scrapers that the hunters would have used to trim and prepare wood for the shafts....

> Port Mobil itself was more than just a hunting station. The items found there included not just weapons, but also scrapers for working on wood and animal skins, knives used for a variety of tasks, and drills and gravers for working on bone or antler. This wide range of tool types suggests that small groups of men, women, and children may have come to the area, stayed for a while, and had worked at a number of different activities before moving on…[Cantwell and diZerega Wall 2001:43–44].

The Paleoindian economy may have centered on the hunting of game. Although other economic activities, such as the gathering of plant foods or maritime resources, may have been equally important, they have left little or no trace in the archeological record (Jones et al. 2002; Roosevelt et al. 1996; Sandweiss et al. 1998). The stone most commonly used to manufacture fluted lanceolate projectile points consisted of high-quality cryptocrystalline materials such as chert, jasper, and chalcedony, suggesting that Paleoindians sought out these high-quality materials (Goodyear 1989). This hypothesis that is supported by the presence of lithic materials derived from great distances (up to 300 kilometers) at Paleoindian sites, although geoarcheological surveys such as LaPorta (1994) and Moeller 1999) have challenged this assumption by identifying local sources of poorer quality for some Paleoindian lithic artifacts (Bamforth 2002).

No Paleoindian sites have been identified in the APE. The southwestern shore of Staten Island remains the only location in New York City where Paleoindian artifacts have been uncovered. There are several explanations for the limited evidence of Paleoindian occupation in coastal New York. One is the distance from high-quality lithic sources that were apparently critical to Paleoindian procurement and settlement strategies (Custer et al. 1983; Goodyear 1989). Another is that many habitation sites near the ocean from the Paleoindian era are now underwater (Marshall 1982). The Port Mobil Site suggests that the earliest inhabitants of the area may have favored high, terraced sites close to potable water (Cantwell and diZerega Wall 2001:39). In Manhattan archeologists have identified the Collect Pond area in Lower Manhattan (between modern Lafayette and Centre streets, north of Foley Square) and portions of Washington Heights as having had similar topographic settings to the Holocene conditions offered at the Port Mobil Site and therefore considered these areas a location for Paleoindian sites (Public Archaeology Laboratory [PAL] 2003:14; Rubinson and Winter 1991).

2. *Archaic Period (10,000 to 3000 BP)*

Archeologists typically divide the Archaic period in the Northeastern United States into three subperiods: the Early Archaic (10,000 to 8000 BP), the Middle Archaic (8000 to 6000 BP), and the Late Archaic (6000 to 200 BP). These subperiods are distinguished by differences in tool assemblages, projectile point types, and preferred lithic materials.

a. *Early Archaic Period (10,000 to 8000 BP)*

Of the several Early Archaic sites (8000 to 6000 BC) identified in New York City, most are located on Staten Island, including the Old Place Site, the Ward's Point Site, the H.F. Hollowell Site, and the Richmond Hill Site. All of these sites produced Kirk components, which yielded radiocarbon dates from 8250 to 7260 BP.

The assemblage recovered from the Ward's Point Site provides the clearest window into past Early Archaic lifeways in this area. The Ward's Point Site is a multicomponent site with the Early Archaic component representing the earliest and most deeply buried deposit, Zone 5. Several hearths and associated fire-cracked rocks were found in this stratum, indicating that cooking activities, which included the use of stone boiling as a heating technique, occurred on site during the Early Archaic period. Heavy and smaller scraping tools were also found on site, reflecting that initial- and later-stage hide working occurred on site. In addition, a total of 36 spearpoints were recovered from the site, including bifurcated points. Tools for manufacturing and refining stone tools and other evidence of lithic reduction were also found, including hammerstones, cores, and spokeshaves for straightening wood into spear shafts (Cantwell and diZerega Wall 2001:51–52).

b. *Middle Archaic Period (8000 to 6000 BP)*

Archeological sites dating to the Middle Archaic (8000 to 6000 BP) are extremely rare in New York City, although extensive Middle Archaic shell midden sites are known from sites along the Hudson River approximately 30 miles to the north (Brennan 1977; Cantwell and diZerega Wall 2001; Claassen 1995). The Dogan Point Site, north of the city in the lower Hudson Valley, consists of several large shell middens of oystering debris dating to the Middle and Late Archaic periods. The Dogan Point Site is significant because it represents one of the earliest shell midden sites

a. Early Woodland Period (2700 to 2000 BP)

Few Early Woodland sites have been identified in the region. Aside from a few shell midden sites that have produced early ceramic sherds, the North Beach Site, near LaGuardia Airport, provides the best glimpse into lifeways during this period. Diverse artifacts were recovered from a refuse pit at the North Beach site. These artifacts included

> pottery sherds, hunting equipment, woodworking and hide-working tools, paint stones, bone awls that could be used in basket making or for punching holes in hides to make clothing, and a few bone needles. The diversity of these tool types and their everyday functions suggest that North Beach may have been a base camp for a small family group [Cantwell and diZerega Wall 2001:76].

b. Middle Woodland Period (2000 to 1000 BP)

Changes in pottery temper, vessel form, and surface treatments are some chronological indicators marking the transition to the Middle Woodland period. Middle Woodland ceramics include shell-tempered wares with cord and net impressions. Several Woodland sites have been identified in New York City, but only a few sites in Manhattan have yielded Woodland-period material. The largest number of Woodland sites are on Staten Island, although sites in the Bronx have yielded information regarding exchange networks in the metropolitan region and have suggested ritual behavior and possible social stratification in the area during this period (Cantwell and diZerega Wall 2001). Many of the Middle Woodland sites in the region have been found at the mouths of estuaries, streams, bays, and coves, reflecting the importance of marine resources to Middle Woodland people. Cantwell and diZerega Wall (1001:91) suggest that the locations of these sites may reflect not just the importance of fish and other marine-based mammals as a food resource but also noneconomic factors, such as aesthetic or spiritual considerations.

c. Late Woodland Period (1000 to 400 BP)

The Late Woodland period in the Northeast is marked by technological shifts with respect to weaponry, storage equipment, and cooking. Triangular stone arrowheads, reflecting bow and arrow technology, constitute one hallmark of the Late Woodland period. Ceramic vessels became bigger, rounder, and more thinly walled, and decorative treatments became more elaborate and extensive. Late Woodland ceramics include various collared vessels with incised as well as dentate and cordmarked decoration (Ritchie 1994). Archeologists often associate this time period with the introduction of full-scale farming, of primarily maize but also beans and squash. The economic shift to intensive farming would have required increased, possibly permanent sedentism in the vicinity of the agricultural fields (Cantwell and diZerega Wall 2001:94).

The Aqueduct Site in Queens is a Late Woodland site that contains evidence of increasing sedentism. Excavations at the site uncovered extensive refuse pits with faunal remains, postholes reflecting the presence of temporary or more permanent structures, and potential secondary burials with associated grave goods. Several Late Woodland dog burials have also been identified in northern Manhattan. The presence of potential secondary burials and dog burials at Late Woodland period sites suggests mortuary ritual behavior. Analysis of the human burials at Late Woodland sites has indicated that the Late Woodland occupants of coastal New York did not rely on an exclusively agriculture-based diet. Rather, the relatively small presence of the nutrients associated with a maize-based diet within these individuals suggests that agriculture played a small role in the Late Woodland diet in the region, and that the Late Woodland occupants of coastal New York may have exploited the diverse resources in the area and only supplemented these resources with limited horticulture. People most likely occupied an annual base camp from which select groups would visit specific resource procurement sites throughout the year. In this way the Late Woodland occupants of this region may have differed from much of the Late Woodland occupation in the rest of the Northeast, where agriculture played a more dominant role (Cantwell and diZerega Wall 2001:109–116).

The largest pre-Contact burial site in the New York metropolitan area was found at the southwestern corner of Staten Island at Ward's Point. First noticed by Skinner, this site, known as Burial Ridge, provides a good example of the range of occupations that can occur within a single archeological site. Collections from Burial Ridge include a large variety of projectile point types dating from the Early Archaic to the Late Woodland. The assortment of recovered ceramic wares is diagnostic of all phases of Woodland occupation. At least 127 pits, burials, hearths, and some 4,000 artifacts have been associated with the Burial Ridge/Ward's Point complex. Such findings suggest intensive Native American occupation from the Archaic through the Woodland periods (Cantwell and diZerega Wall

> No evidence has been found to suggest that the introduction of European material culture during the Contact period caused the rapid decline of Native American technologies. On the contrary, the data presented indicate that the Indian's stone toolmaking technology and the utilization of ceramic pots persisted into the 18th century [Lenik 1989:116].

Grumet's findings regarding the flexibility of Munsee society may further explain the lack of European items at Contact-period archeological sites, further supporting Lenik's conclusions. Or, the relative lack of European trade items at archeological sites in the Lower Hudson Valley may reflect the effects of flooding and scouring episodes in addition to more recent construction, or it may be that to acquire pelts to trade with the Europeans, Native American traders had to move farther up the Hudson and Mohawk rivers (Griswold 1999:12-14; Kraft 1991:214).

European contact resulted in violence and the introduction of European-developed warfare technology, alcohol, and previously unknown diseases to the Munsee. The impact of these European introductions upon the Indigenous population in the area was tremendous and to some extent incalculable. By the beginning of the eighteenth century, only a small number of Munsee continued to live in coastal New York and the Lower Hudson Valley. With the close of the Seven Years' War (known as the French and Indian War in North America) in 1763, the remaining Munsee began to migrate westward, settling in Ohio, Indiana, Oklahoma, and Ontario (Cantwell and diZerega Wall 2001:147–148; Grumet 2009:15, 208–212, 273–286).

The first European to see Governors Island was most likely Giovanni da Verrazzano, who sailed into the harbor in 1524. At that time the island was known as Pagganck (meaning "nut-trees") by the local Native Americans inhabiting the New York area. In 1609 Henry Hudson, contracted by the Dutch East India Company to locate the elusive Northeast Passage to Asia, provided the Dutch with land claims to the entire Mid-Atlantic region during his explorations, designated New Netherlands. Hudson's accounts of the Native population in the Hudson Valley region indicate that relations there were not always peaceful (Barthel 2008). Shortly afterward, the Dutch began sustained trading with the area's Native groups for furs in the new territory (Hart 1959). Repeated efforts by the English and French to expel the Dutch from the region failed, with the Dutch steadfastly holding their claim to the area through colonization. For this effort, the Dutch West India Company created the Colony of New Netherlands, allowing wealthy patrons to purchase tracts of land from the Native Americans (Kraft 1991).

D. Post-Contact Context

Although Governors Island derives much of its significance from its major role in the defensive system of New York Harbor, the significance of its early history is substantial. In 1621 the West India Company made one of the first settlements near the mouth of the Hudson River on "Nooten Eylandt" ("Nutten Island," sometimes "Notten Island") (Wilson 1893:39). The island was purchased from the Manahattas by the Governor General of New Netherlands, Wouter van Twiller, in 1637 (Azoy 1978:1-3; Roberts 1980:280).

Shortly after this purchase, van Twiller was charged with malfeasance and incompetence and was subsequently removed from office. Although the island had been granted to him for his private use, this grant was annulled in 1638 when the island was placed in the public domain as the official residence-estate for the Dutch governors and their English successors. During his tenure as the first and only private owner of Nutten Island, van Twiller established a tobacco plantation there (Vingboons 1639), and perhaps also a sawmill (Wilson 1893:39). A map dating to 1639 depicts a plantation belonging to van Twiller on the northwest corner of Governors Island, outside the APE (cf. Vinckeboons 1639), although Azoy (1978:4) attributes these innovative uses of the island to the second Dutch governor, Wilhelm Kieft (Figure 4).

Despite its strategic location, Nutten Island was never fortified during the Dutch occupation. Consequently, this island was taken by the English when they captured New Amsterdam in 1664. The Dutch regained their province and the island in 1673 during the third Anglo-Dutch War, but it again fell under English control according to the Provisions of the Treaty of Westminster in 1674. In 1698 Nutten Island was reserved by the Assembly "for the benefit and accommodation of His Majestie's Governors for the time being," and became known as "The Governor's Island." The name was officially changed from Nutten to The Governor's Island by an act of the Legislature in 1784; over time the name became simply Governors Island (Roberts 1980:281).

In 1710 Governors Island was designated as a quarantine station for the thousands of Palatine Germans who were brought to America through the efforts of Queen Anne and Governor Robert Hunter. Fearing the spread of "contagious distemper" that had ravaged the ships bringing them across the Atlantic, as many as 7,000 to 10,000 Palatine immigrants were camped on Governors Island at one time (Azoy 1978:8; O'Callaghan 1850:551-557; Roberts 1980:282; Wilson 1892:128-130). As many as 250 of these immigrants died while quarantined and were buried on the island (Smith 1923:36).

Military troops were stationed on the island for the first time in 1755. The initial garrison was the 51st Regiment of British Colonial Militia under American-born Sir William Pepperrell. During the years between the last of the French and Indian Wars and the Revolution, there was very little military activity on the island itself. The island's defenses were neglected with no permanent fortifications installed and only a small force maintained on the island until New York was threatened by assault from the sea early in the Revolution (Roberts 1980:282; Wilson 1893:40) (Figure 5).

Unable to maintain a force sufficient to defend New York adequately, the British withdrew all soldiers from Governors Island and the adjacent city in 1775. Work began on the island's fortifications under American forces as early as 1776. A substantial breastwork had been erected and a regiment encamped on the island by May 1776. But New York and Governors Island were again under British control by August of that same year. Until their surrender in 1783, the British kept Governors Island fully garrisoned and fortified (Azoy 1978:15-19; Roberts 1980:282-283). Correspondence between British military officers dating to September 1, 1779, indicates that an army hospital occupied at least a portion of the island (Smith 1923:61, 63).

With the close of the Revolutionary War by 1783, American command was reestablished on Governors Island and the British works were occupied. Although all guns had been removed from their emplacements before the surrender, the extensive British fortifications remained intact. Also intact were the military buildings constructed by the troops, including a captain's quarters, junior officers' quarters, barracks for enlisted personnel, kitchens, a guard house, a convalescent hospital, a barn, a summer house, a gardener's house, and a wharf.

Once the island was returned to the State of New York, Governor Clinton leased the island for use as a racetrack almost immediately, although this did not last long. The island again became a quarantine station between 1786 and 1790. In 1790 it was leased to Columbia College; however, fearing a war with France, New York State took back control of the island in 1790 for use as a quarantine station and the construction of new fortifications. In 1794 New York militia forces and local volunteers were called on to enlarge and improve the prior fortification on the island, which was then named Fort Jay. In 1800 New York State ceded Governors Island to the United States. In 1806, when war with England again threatened, all the existing fortifications were demolished, including the first Fort Jay, and construction of a permanent fort began (Azoy 1978:20; Governors Island Club 1937:25–26). The map shown in Figure 6, although undated, appears to show Governors Island at approximately this time period, as the more permanent Fort Jay is shown but Castle Williams is not yet present.

Along with the new Fort Jay, the square four-bastioned Castle Williams was one of New York Harbor's largest defensive works. Both were built under the Second American System of fortifications before the War of 1812. Both structures are listed in the National Register of Historic Places (Tompkins 1985:1). Located 200 feet north of the beginning of the APE at the intersection of Andes and Hay roads, Castle Williams was begun in 1807 and completed in 1811. The Castle, as designed by Lt. Col. Jonathan Williams, is a three-tiered, circular, casemented fortification of Newark red sandstone on a bed of rock at the extreme northwest point of the island. The walls are 40 feet high, 8 feet thick on the lower tier, and 7 feet thick on the upper tier. This structure served as the prototype for a new era of American coastal fortifications (Smith 1923:73; Tompkins 1985:3–4). Besides these fortified structures and a defile (possibly covered) connecting the Castle Williams with Fort Jay (Figure 7), no other buildings were present in the APE vicinity in the early nineteenth century (Figure 8).

The function of Governors Island changed during the decades of peace following the War of 1812. Although appropriations were made for repairs to the fortifications and weaponry was updated periodically, the role of the island as a major element in the defense of New York Harbor had diminished by the end of the nineteenth century. As the central Army recruiting agency for the Eastern Seaboard between the years 1858 and 1872, volunteers and draftees en route to the South were funneled through Governors Island during the Civil War (Azoy 1978:41). In 1862 Castle Williams was used as a prison for captured Confederate soldiers, and as many as 1,000 prisoners were confined within the castle during the war. Prisoners were also confined in the stockade adjacent to Castle Williams and in the basement of a building on the east side of Fort Jay (Azoy 1978:42; Smith 1923:73–74; Tompkins 1985:5–6).

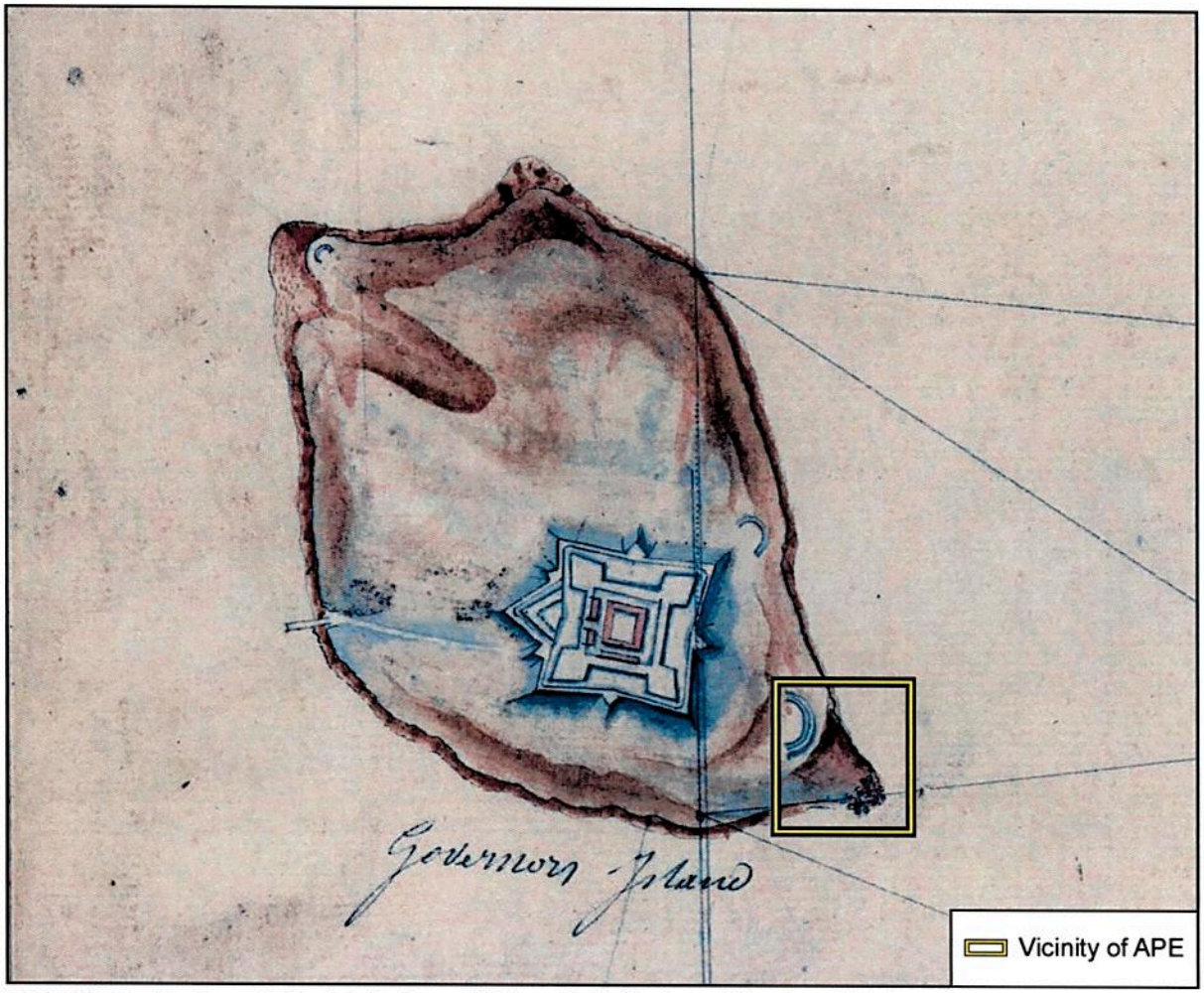


FIGURE 6: Portion of Undated Map of New York Harbor, Showing Vicinity of APE and Details of Governors Island (north is facing down). Fort Jay is present but Castle Williams is not, placing map to between 1800 and 1813. Note topographic representations and rocky point on which Castle Williams will be built. (NARA)

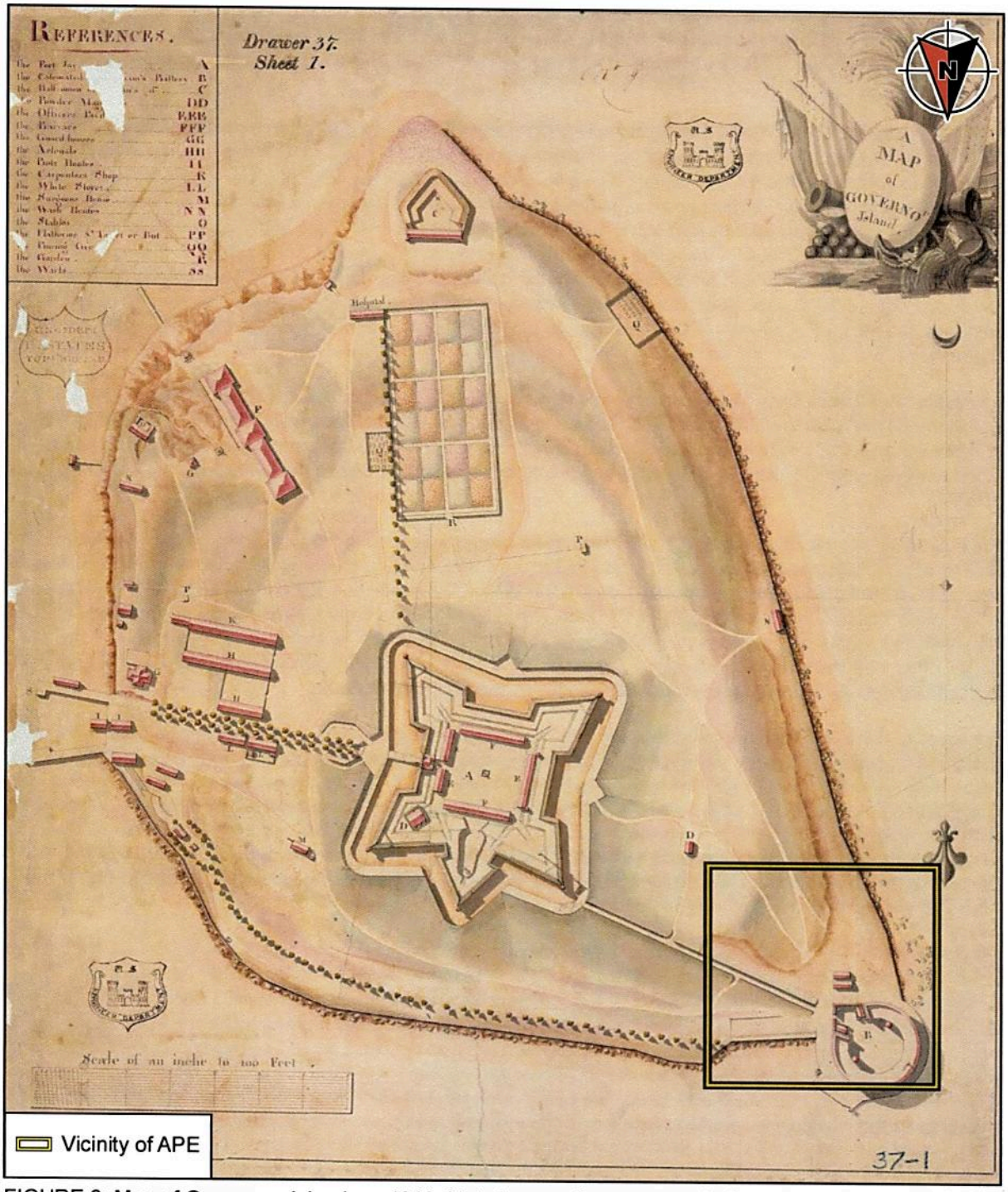


FIGURE 8: Map of Governors Island ca. 1813. Note how northwestern end of defile between Fort Jay and Castle Williams takes advantage of a natural depression. Also, northern and western shorelines appear to have been encased with seawall. (U.S. Engineer Department ca. 1813)

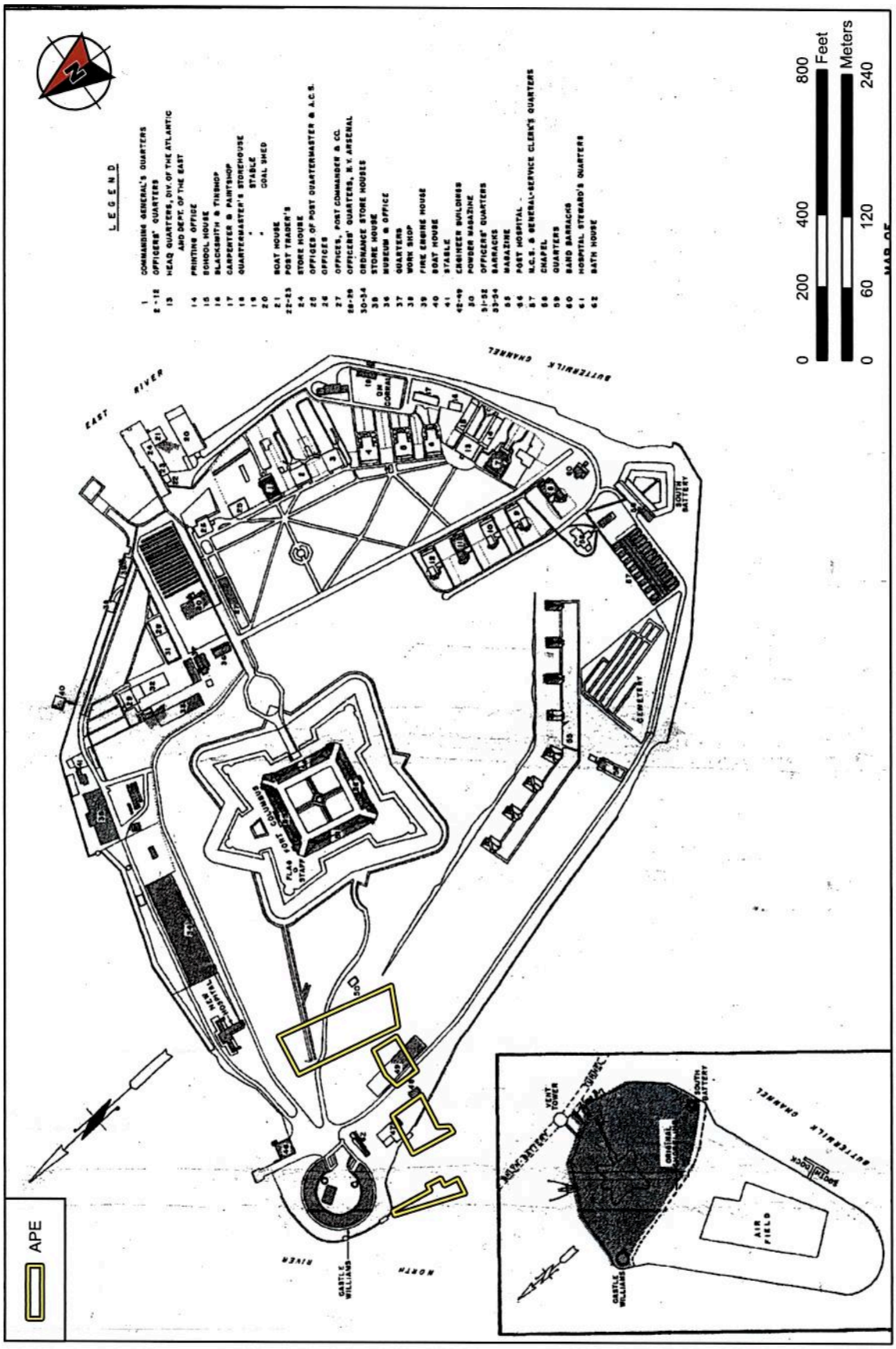


FIGURE 9: Plan of Facility Layout of Governors Island in 1879 (Griffin and Owen 1879)

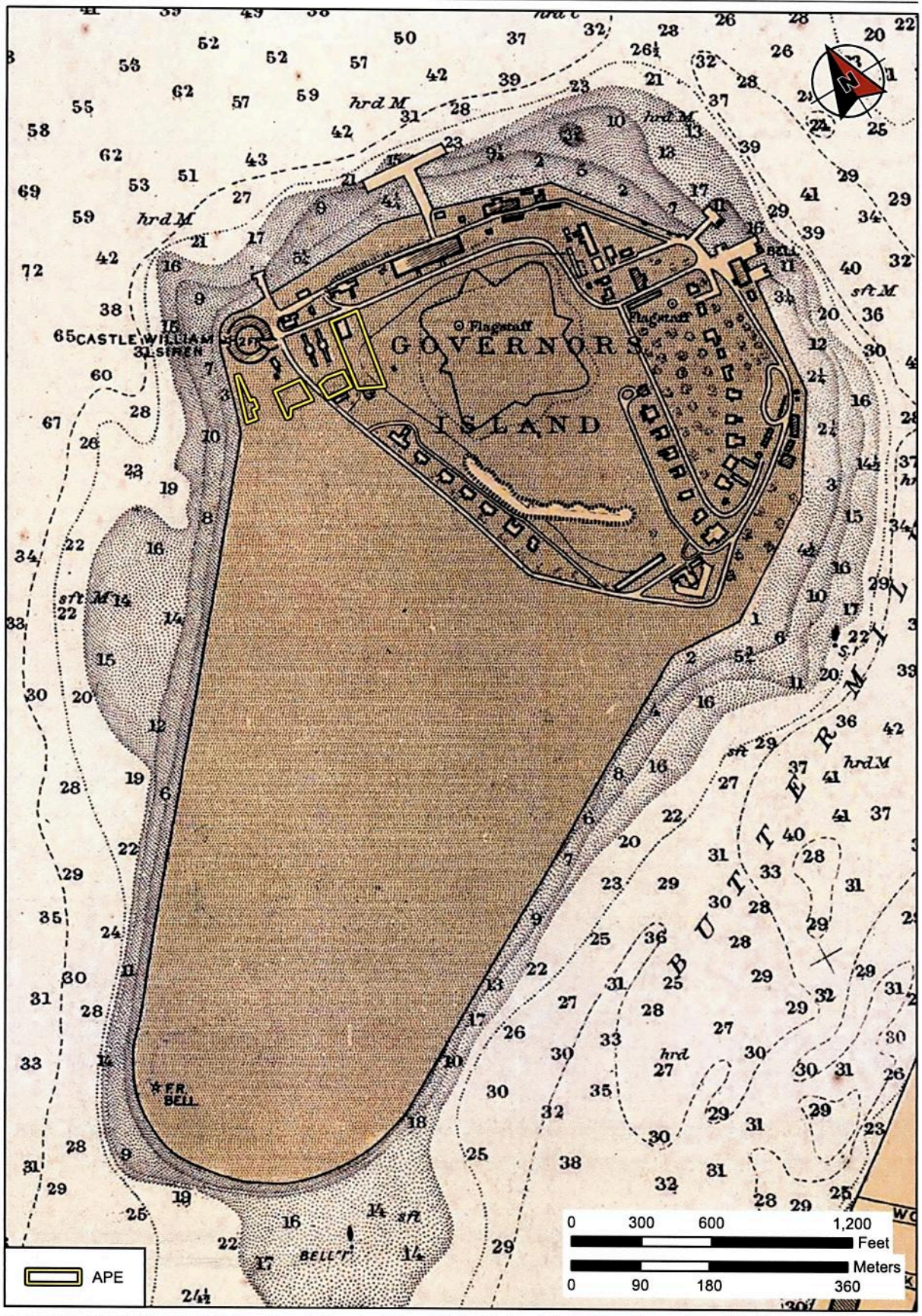


FIGURE 11: Portion of Navigational Chart of New York Harbor, Detailing Plan of Facility Layout of Governors Island in 1919. Note structures are now present in general vicinity of APE and island has artificially been extended to the southwest. (USCGS 1919)

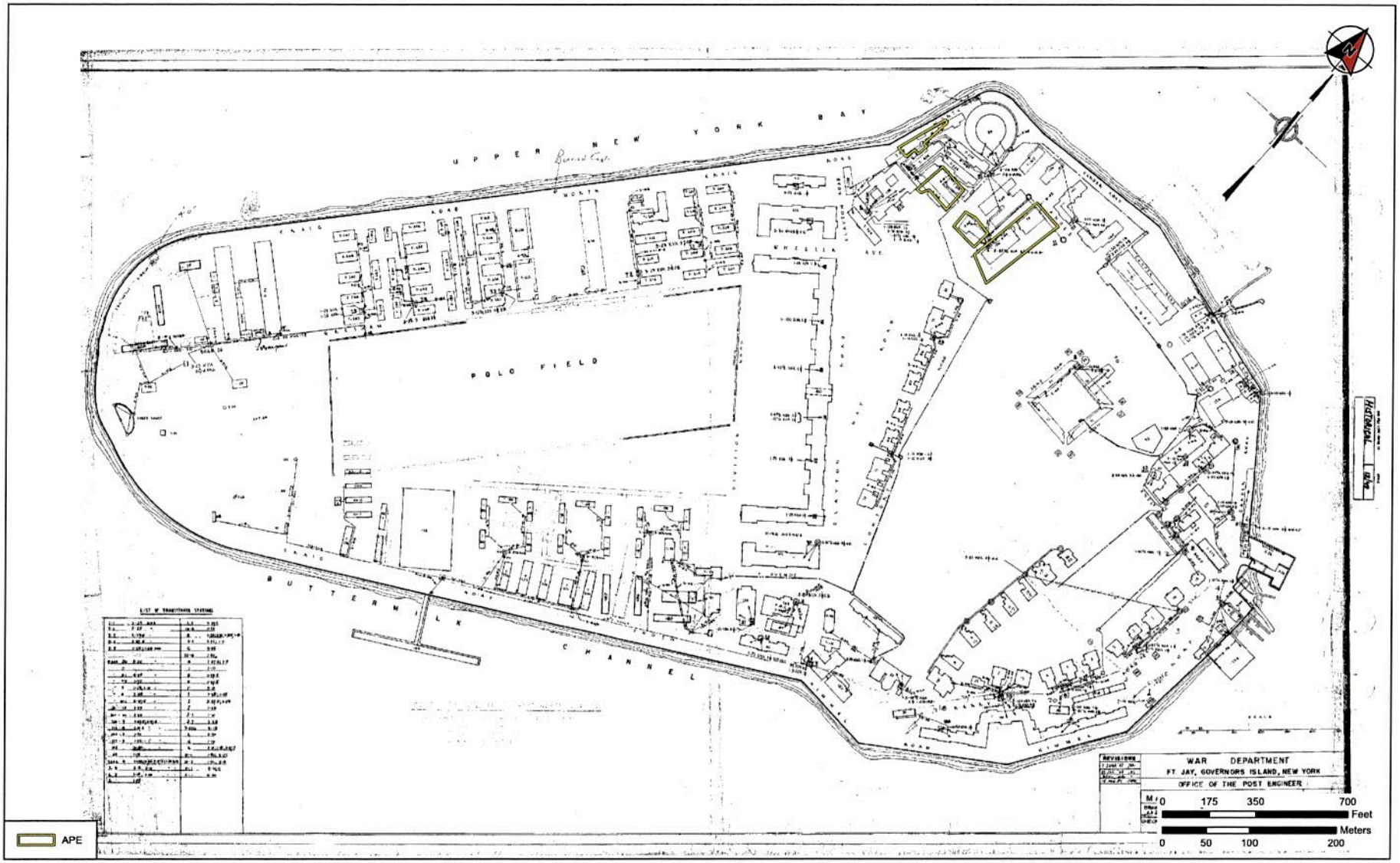


FIGURE 13: Plan of Facility Layout of Governors Island in 1948. Note some of the structures depicted in 1906 are still present, with new ones added in general vicinity of APE. Also shows that proposed layout of structures on 1930 map were not adopted. (U.S. Coast Guard 1948)

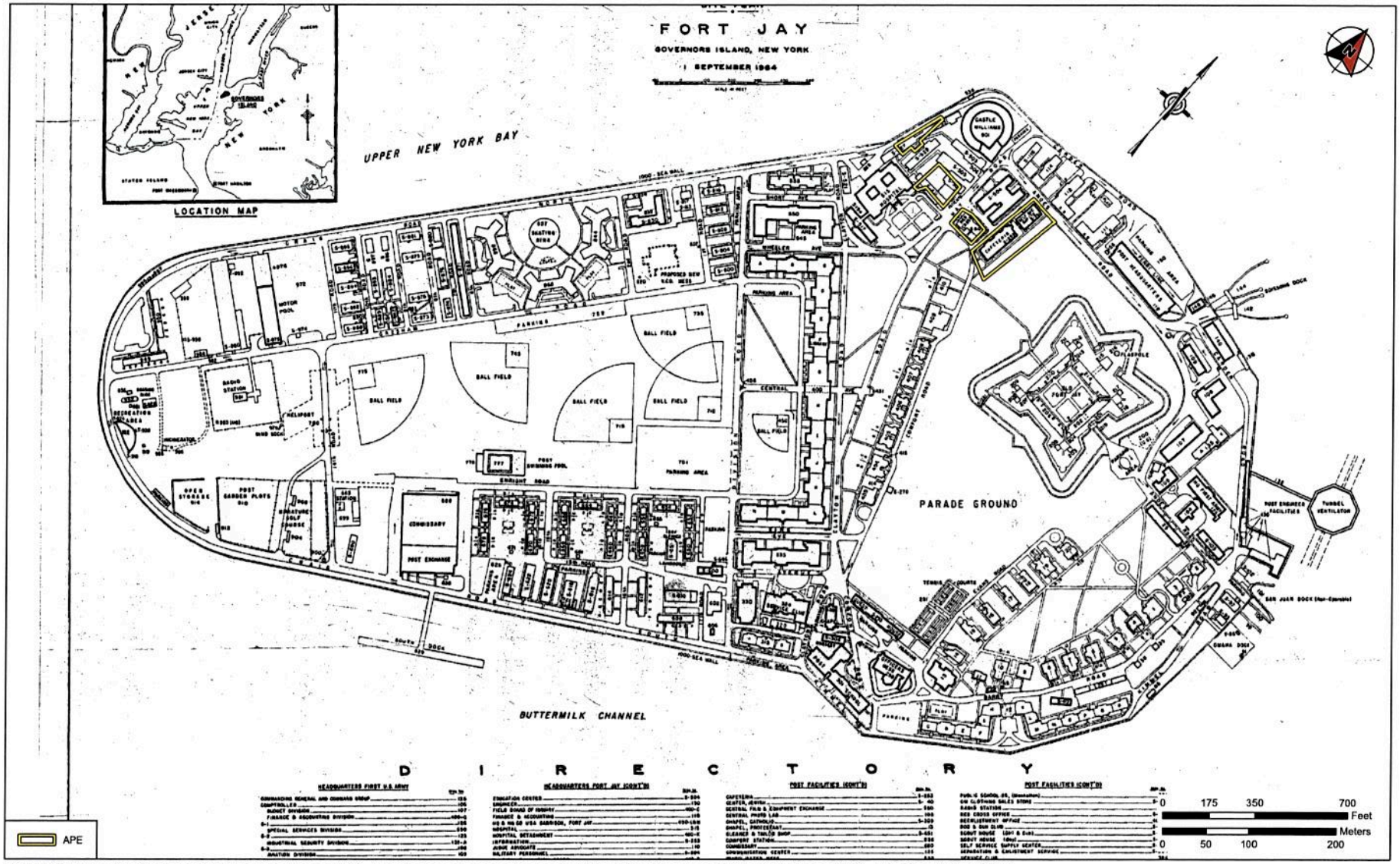


FIGURE 15: Plan of Facility Layout of Governors Island in 1964. Note there has been no change of structure layout in general vicinity of APE since 1954. (U.S. Coast Guard 1964)

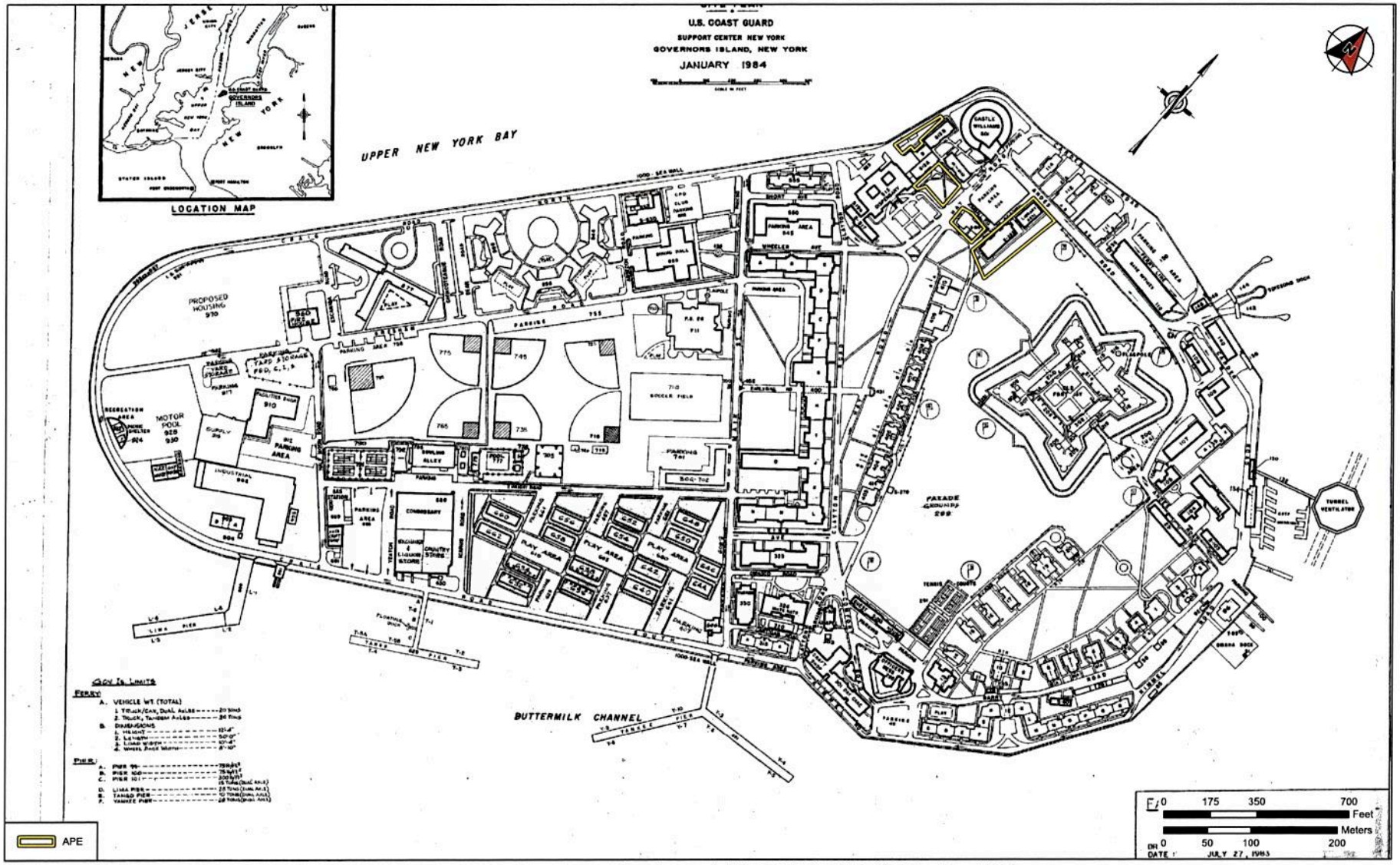


FIGURE 17: Plan of Facility Layout of Governors Island in 1984. Note there has been no change of structure layout in general vicinity of APE since 1976. (U.S. Coast Guard 1984)

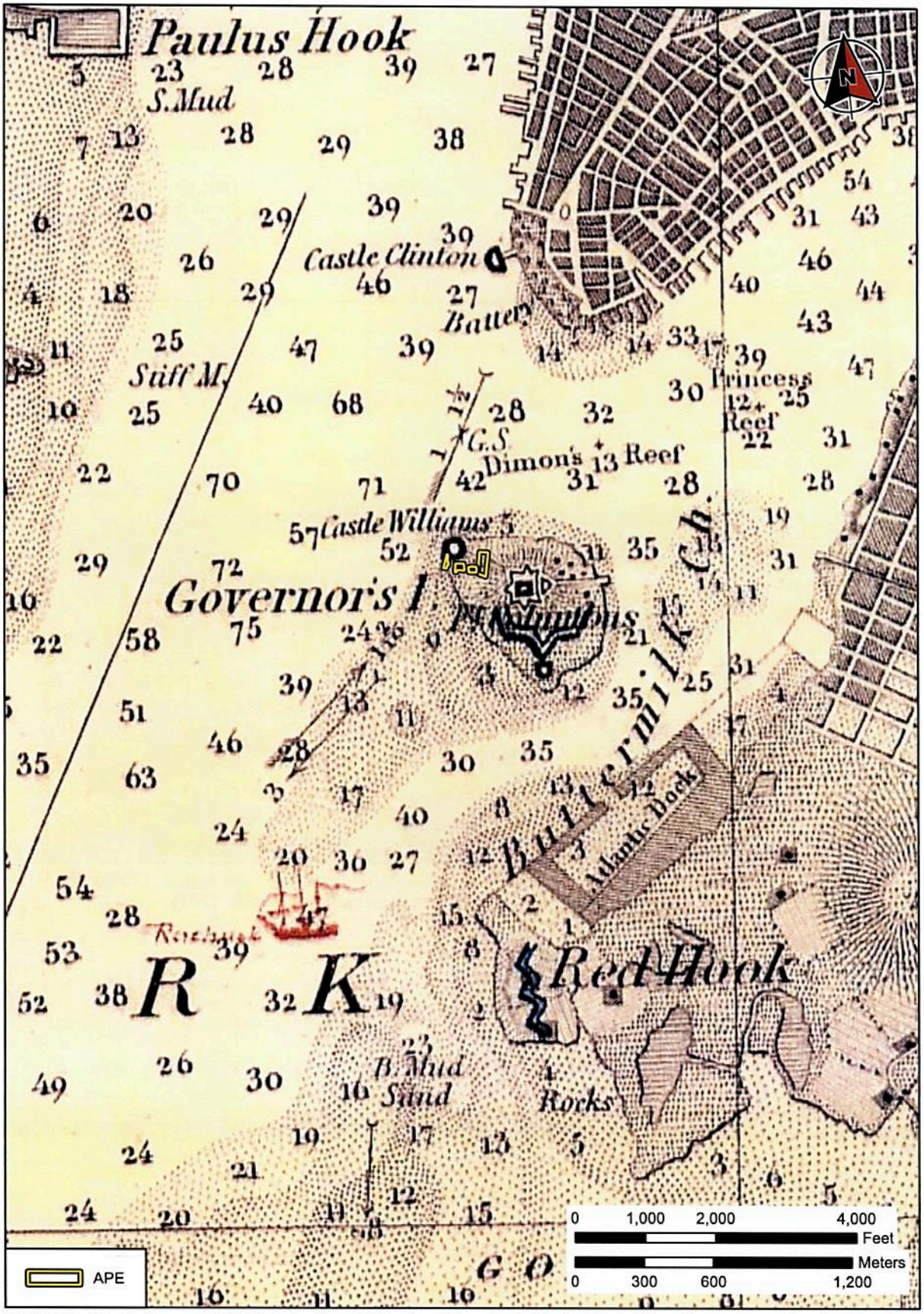


FIGURE 19: Portion of 1845 Navigational Chart of New York Harbor Detailing Governors Island. Note southwest side of island exhibits a sand shoal that mirrors submerged portion of the former drumlin landforms. (Hassler et al. 1845)

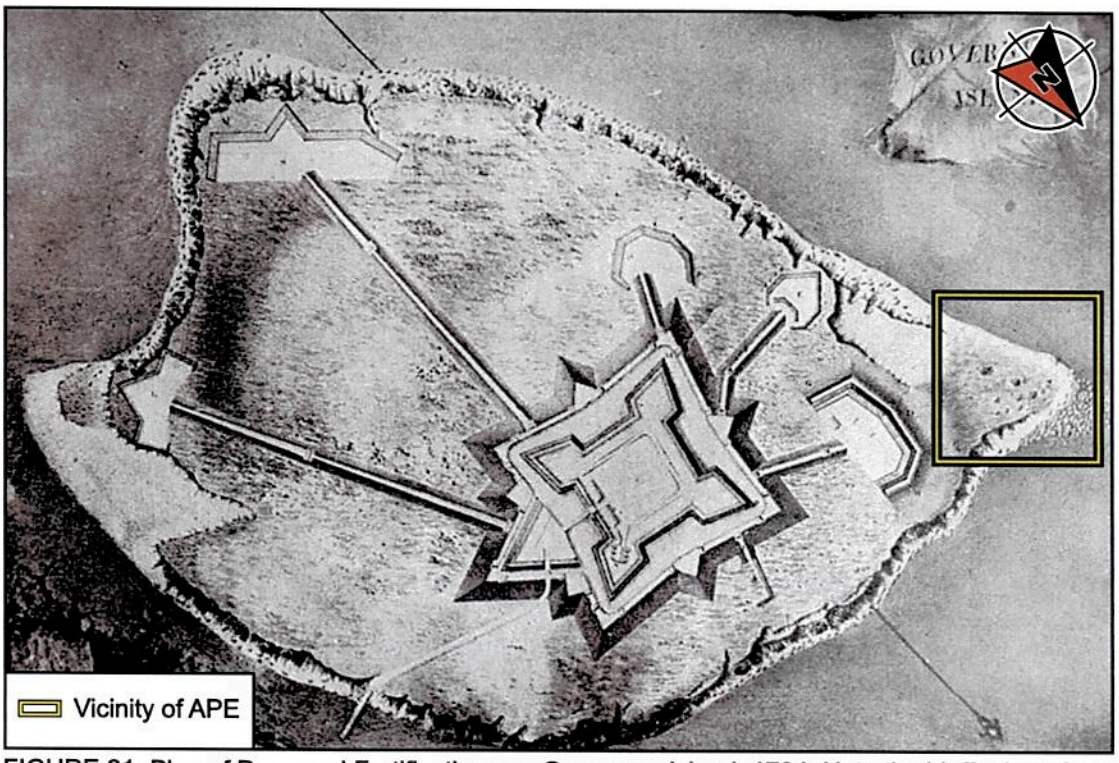


FIGURE 21: Plan of Proposed Fortifications on Governors Island, 1794. Note the bluff edge of the island's shoreline (Governors Island Club 1937)

FIGURE 23: Photograph from ca. 1862, Showing Original Bluff of Governors Island's Northern Shoreline Reduced to Gentle Slope, and that a Track Road from the Wharf to Castle Williams Had Been Built. Sea wall ca. early 1800s visible as low stack of rocks against slope base, more of a rip-rap than a wall. (Brady 1861-1865, NAID 527660)

strengthen the shoreline (Figure 25). The next major addition to the island occurred between 1887 and 1890 (Figures 26 and 27), when the north shore of the island was brought in line with the outer north edge of Castle Williams to form a new seawall, extending the shoreline to the low tide line, from that point to the existing seawall around the wharves on the northeast edge of the island.

Plans to enlarge the island significantly began around 1900. Drafts produced by 1902 show the expansion of the island with man-made land to the southwest (see Figure 11). The new land was created on top of the shoals on that side of the island, representing the drowned portion of the drumlin landform. Fill was sourced from dredging in nearby Buttermilk Channel and from the construction of the New York subway lines. A seawall was constructed around the shoals, the water inside the walls was removed, and then the fill was added. This expansion was completed in 1909 and increased the island from approximately 66 acres in size to it current approximately 170 acres.

Historical maps of the facility layout of the area of the APE where Areas 3 is located also show that several iterations of different structures were built in this location during the nineteenth and twentieth centuries, including a mastics works (see Figure 24), a crematory (see Figure 10), hospital wards (see Figure 14), and general housing (see Figure 16). Twentieth-century maps of the facility layout shows that Area 2 was first occupied by a building (for a Hospital Mess or later the Red Cross) since at least the early 1900s (Figure 10) to the mid-1980s (see Figure 16), which was gone by the 1990s (see Figure 17). Area 1 appears to have been occupied by the (currently extant) structure since at least 1919 (see Figure 11), which was a post exchange by 1954 (see Figure 14), and a library by 1976 (see Figure 16). The cafeteria building was present by at least 1948 (see Figure 13) and gone by 1992 (see Figure 18).

E. Previous Surveys and Sites in Project Vicinity

1. Recorded Archeological Sites in the Project Vicinity

CRIS data indicate that 37 previously recorded archeological sites are located within 1.6 kilometers (1 mile) of the APE (Table 2) (New York State OPRHP 2023). These consist of two pre-Contact sites, the Fort Jay Prehistoric Site (06101.009523) and the Nolan Park Prehistoric Site (06101.009524); one multi-component site, the Governors Island Potable Water Project (GIPWP) Feature 12-original shoreline (06101.09129); and 34 aboveground features.

The Fort Jay Prehistoric Site, Nolan Park Prehistoric Site, Andes Road Cemetery Location 2 (06101.007420), and Fort Jay Midden Site (06101.009527) are eligible for listing in the NRHP. The Golf Course Battery (06101.009529) and the Governor's House Historic Site (06101.009528) are not NRHP-eligible. The Governors Island Archeological Sites (06101.05029) are listed in the NRHP. This site number includes the Tampa Memorial Library, which was originally built as a storehouse and workshop for the Fort Jay Quartermaster (see discussion below). In addition, a portion of the original Andes Road Cemetery might be located under the library's parking lot. The remaining 30 sites have an undetermined status as to NRHP eligibility.

Seven archeological sites are located in the APE, all part of Governors Island Archeological Sites (06101.015029) (see Table 2). All of the following information on these possible sites is paraphrased from Wright and Binzen (2003).

The Tampa Memorial Library (Building 251) (GOIS00002) was built in 1908 as a temporary storehouse and workshop for the Fort Jay Quartermaster. The building became a library in 1918. Previous archeological surveys in its vicinity did not produce any information regarding its early use. Wright and Binzen (2003) recommended regular inspections to the building because it was included on the NRHP application for Governors Island that was approved in 1985. In addition, a portion of the original Andes Road Cemetery might be located under the library's parking lot.

The Engineer's Buildings 47, 48, and 49 (Site GOIS00030) is shown on a U.S. Army Corps of Engineers (USACE) map of Governors Island (Griffin 1879). These structures no longer have any aboveground features, and an archeological survey completed by PAL in 1997 did not reveal any evidence of these structures. Wright and Binzen (2003) recommended an archeological investigation in this area to determine the history of the use of these buildings and their construction and demolition dates.

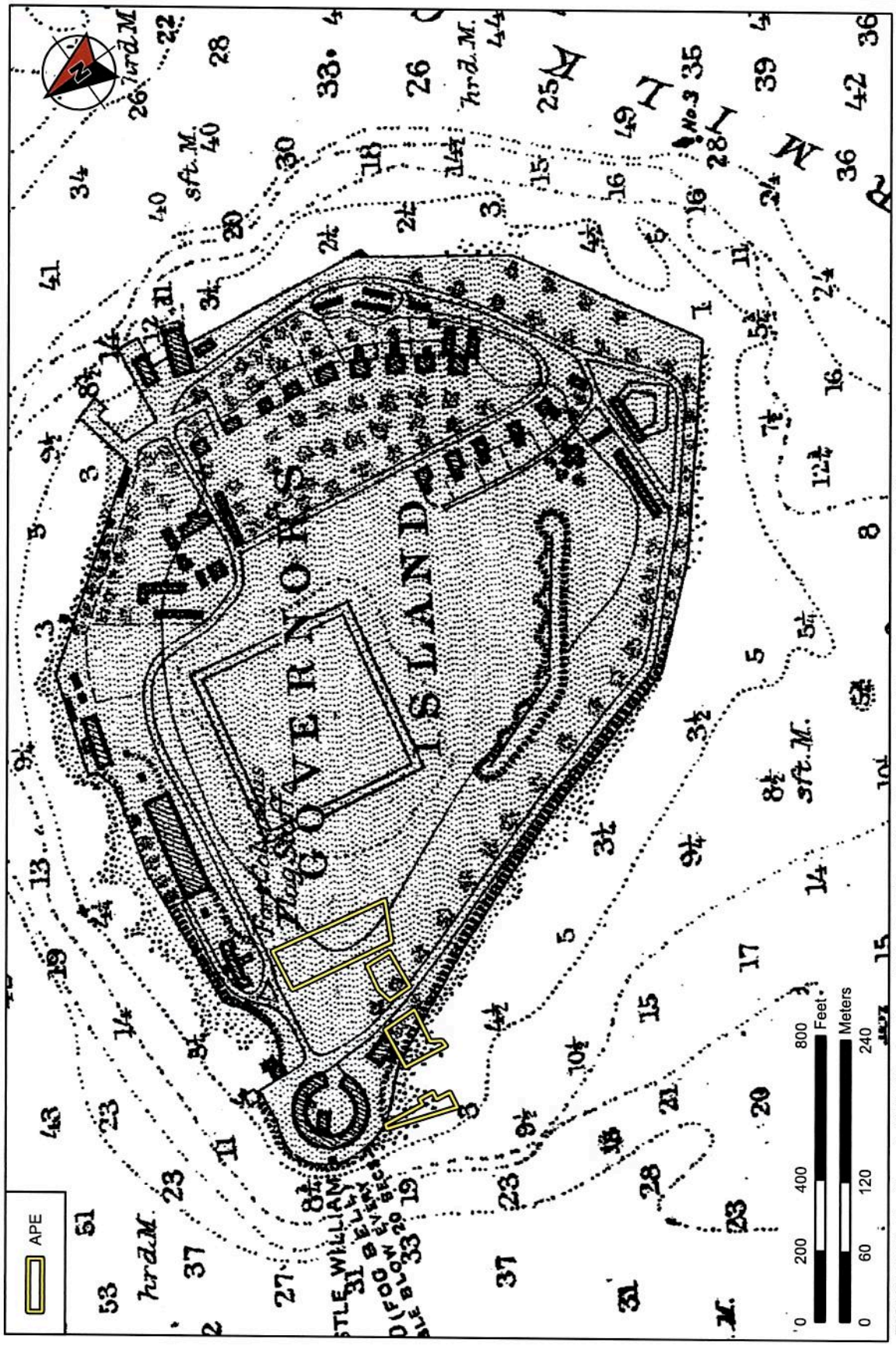


FIGURE 26: Portion of 1887 Navigational Chart of New York Harbor Detailing Governors Island. Note northern shoreline of the island is still marked at the high tide level. (USCGS 1887)

TABLE 2: RECORDED ARCHEOLOGICAL SITES WITHIN 1.6 KILOMETERS (1 MILE) OF APE

SITE NUMBER/ ADDITIONAL SITE No. or NAME	DISTANCE FROM APE	TIME PERIOD/ SITE TYPE	ARTIFACTS/FEATURES	REPORTED BY
06101.018965/Wash House originally mapped in 1813 (aka Feature 8)^	3.87 meters (12.7 feet)	Nineteenth-century feature	Mortar, bricks, foundation stones/remains of two buried walls	Linda Stone
06101.019128/GIPWP Feature 11^	22.1 meters (72.6 feet)	Post-1934 feature	Cement feature	Linda Stone
06101.023221/Andes Road Cemetery Location 1, Governors Island^	24.5 meters (80.3 feet)	Eighteenth- and nineteenth-century cemetery	Cemetery relocated but original plot might still contain human remains	Elizabeth D. Meade
06101.007420/Andes Road Cemetery Location 2, Governors Island*	25.1 meters (82.5 feet)	Eighteenth- and nineteenth-century cemetery	Eighteenth- and nineteenth-century cemetery, ca. 1900 hospital pavilion	James C. Garman/PAL
06101.021862/ca. 1879 Post Hospital Site^	32.1 meters (105.2 feet)	Nineteenth and twentieth centuries	Brick and concrete walls and floors associated with Post Hospital	Linda Stone
06101.018966/ Possible Foundation or Floor of Former Wash/Bath House (aka Feature 9)^	69.9 meters (229.4 feet)	Pre-1867	Cluster of building stones possibly once part of floor or foundation	Linda Stone
06101.015029/Governors Island Archeological Sites‡	60.1 meters (197.1 feet); seven sites in APE (see discussion below)	Eighteenth and nineteenth centuries	Site number and NRHP designation refer to all known archeological sites on Governors Island when the entire island was added to NRHP in 1985	University of Massachusetts Archaeological Services
06101.019127/GIPWP Feature 10-footings^	0.17 kilometer (0.11 mile)	Nineteenth;- and twentieth centuries	Two pre-1919 warehouse footings	Linda Stone
06101.018349/Fort Jay Courtyard^	0.19 kilometer (0.12 mile)	Twentieth century	Brick/two subterranean bomb-proof chambers, one chamber with a cistern	Linda Stone
06101.018960/GIPWP Feature 9 - pump room^	0.21 kilometer (0.13 mile)	Pre-1902	Mortar bricks and concrete/part of subterranean brick structure with concrete floor	Linda Stone
06101.018959/ca. 1900 Pump Room for Gasoline Tank (aka Feature 1)^	0.21 kilometer (0.13 mile)	ca. 1900	Mortar bricks and concrete/part of subterranean brick structure with concrete floor and vaulted room	Linda Stone
06101.009527/Fort Jay Midden Site*	0.21 kilometer (0.13 mile)	Nineteenth century	Domestic refuse: cut and wire nails, ceramics, clay pipe fragments, bottle glass, faunal remains, military buttons made and used during War of 1812, Civil War-era buttons and army insignia, coins, artillery, ammunition fragments	Holly Herbster/ PAL
06101.009523/Fort Jay Prehistoric Site*	0.22 kilometer (0.14 mile)	Woodland period	Pre-Contact pottery and charcoal fragments	Holly Herbster/ PAL
06101.019129/GIPWP Feature 12-original shoreline^	0.24 kilometer (0.15 mile)	Undated pre-Contact and historic components	Historic artifacts include brick, slag, and coal; possible location of pre-Contact shell midden	Linda Stone

SITE NUMBER/ ADDITIONAL SITE No. or NAME	DISTANCE FROM APE	TIME PERIOD/ SITE TYPE	ARTIFACTS/FEATURES	REPORTED BY
06101.009528/Governor's House/Feature 10 Historic Site†	0.47 kilometer (0.29 mile)	Eighteenth and nineteenth centuries	Clay pipe fragments, faunal remains, ceramics, glass, nails, and shell fragments/two historic trash middens	Holly Herbster/ PAL
06101.019123/GIPWP Feature 2-concrete footing and slab^	0.51 kilometer (0.31 mile)	Nineteenth and twentieth centuries	Pipe bowl and brock fragments/concrete slab and footing	Linda Stone
06101.019124/GIPWP Feature 3-brick surface^	0.51 kilometer (0.31 mile)	Pre-1931	Ceramic and coal/brick feature that was either a road or a walkway	Linda Stone
06101.018963/GIPWP Feature 1-Conservatory^	0.52 kilometer (0.32 mile)	ca. 1905	Building material, ceramics, and glass/partial foundation made of bricks and stone	Linda Stone
06101.009526/GIPWP Feature 4-Post Hospital wings^	0.52 kilometer (0.32 mile)	Nineteenth century	Coal, machine-cut nails, ceramics, clay pipes, brick fragments, glass, mortar, and cut fieldstones/possible historic cellar hole	Holly Herbster/ PAL

New York State OPRHP 2023
* NRHP Eligible; † Not NRHP Eligible; ^ Undetermined Status; ‡Listed in NRHP

A USACE (1908) map shows a structure in the area of the Hospital Mess Site (GOIS00039) that provided service to the Pavilion Hospital complex. This structure no longer has any aboveground features, and no previous archeological surveys have been completed in this area. The condition of the site is unknown. Wright and Binzen (2003) recommended an archeological investigation in this area to determine the construction and demolition dates for the Hospital Mess Site.

The USACE (1908) map records a structure in the area of the YMCA Site (GOIS00040). This structure no longer has any aboveground features, and no previous archeological surveys have been completed in this area. The condition of the site is unknown. Wright and Binzen (2003) recommended an archeological investigation in this area to determine the YMCA Site's construction and demolition dates as well as to gather information on activities at the site.

The USACE (1908) map records a structure labeled "F.O." (Site GOIS00043). The meaning of these letters is unknown. This structure no longer has any aboveground features, and no previous archeological surveys have been completed in this area. The condition of the site is unknown. University of Massachusetts Archaeological Services recommends an archeological investigation in this area to determine the dates that the 1908 "F.O." Site was constructed and demolished as well as to gather information regarding the activities that the site was used for.

The USACE (1908) maps records a structure in the area of the Cafeteria Site (GOIS00044). This structure no longer has any aboveground features, and no previous archeological surveys have been completed in this area. The condition of the site is unknown. Wright and Binzen (2003) recommended an archeological investigation in this area to determine the construction dates of the Cafeteria.

A structure is recorded in the area of an Unidentified Kimball Road Structure Site (GOIS00045) on maps of the island from the 1980s (see Wright and Binzen 2003). The maps identify this structure with the letters S510, but the meeting of this notation is unknown. This structure no longer has any aboveground features, and no previous archeological surveys have been completed in this area. The condition of the site is unknown. Wright and Binzen (2003) recommended an archeological investigation in this area to determine the structure's construction and demolition dates as well as the history of its use.

III. Fieldwork

A. Archeological Field Methods and Techniques

The archeological survey covered all testable areas in the four testing locations of the APE. Buried utilities were present throughout the APE, which precluded subsurface testing. In addition, portions of the APE were covered by concrete or blacktop surfaces. Initially, WSP laid out a total of 52 shovel tests: radial tests were added around Shovel Test A-4 at a potential feature (see Section B.1). In total, 59 shovel tests were excavated throughout the APE. The shovel tests were excavated at 10-meter (33-foot) intervals throughout all testable portions of the APE. Dimensions of the shovel tests were 50x50 centimeters. Shovel tests were excavated 15 centimeters (0.49 foot) into B-horizon soils or to 1 meter (3.28 feet) below ground surface (bgs) if such natural subsoil were not encountered, unless obstructed by unmarked buried utilities, rock, or the water table.

All soils removed from the shovel tests were passed through 0.64-centimeter (0.25-inch) mesh hardware cloth to recover artifacts. As each natural or cultural stratum was excavated, that stratum was assigned a numeric designation (Stratum 1, Stratum 2, etc.) to indicate its stratigraphic relationship to the other levels in the shovel test. The number designations were assigned beginning with the first excavated level of the shovel test and proceeded numerically through each subsequent level until the termination of the shovel test. All recovered artifacts were bagged by level, and a field number was assigned to each provenience. Recent materials, such as windshield glass, plastic, asphalt, concrete, brick, and items found in association with these artifacts that were recovered from fill strata, were noted and then discarded in the field. If shovel tests encountered asbestos-containing materials, which could pose a hazard to human health, any artifacts recovered from such shovel tests were considered to be potentially contaminated and were therefore noted and discarded into the test of origin. The shovel test data were recorded on standardized WSP forms, noting stratum depth, soil texture, soil color according to Munsell soil color charts, and artifact content. Shovel test proveniences and APE conditions were recorded on a project plan map. Digital photographs were taken of the APE to document disturbances and cultural features, and to complement the field notes. Appendix A contains a descriptive log of all excavated shovels tests from this investigation. Appendix B contains the methods used for artifact analysis and cataloging as well as a catalog of the artifacts recovered from this investigation.

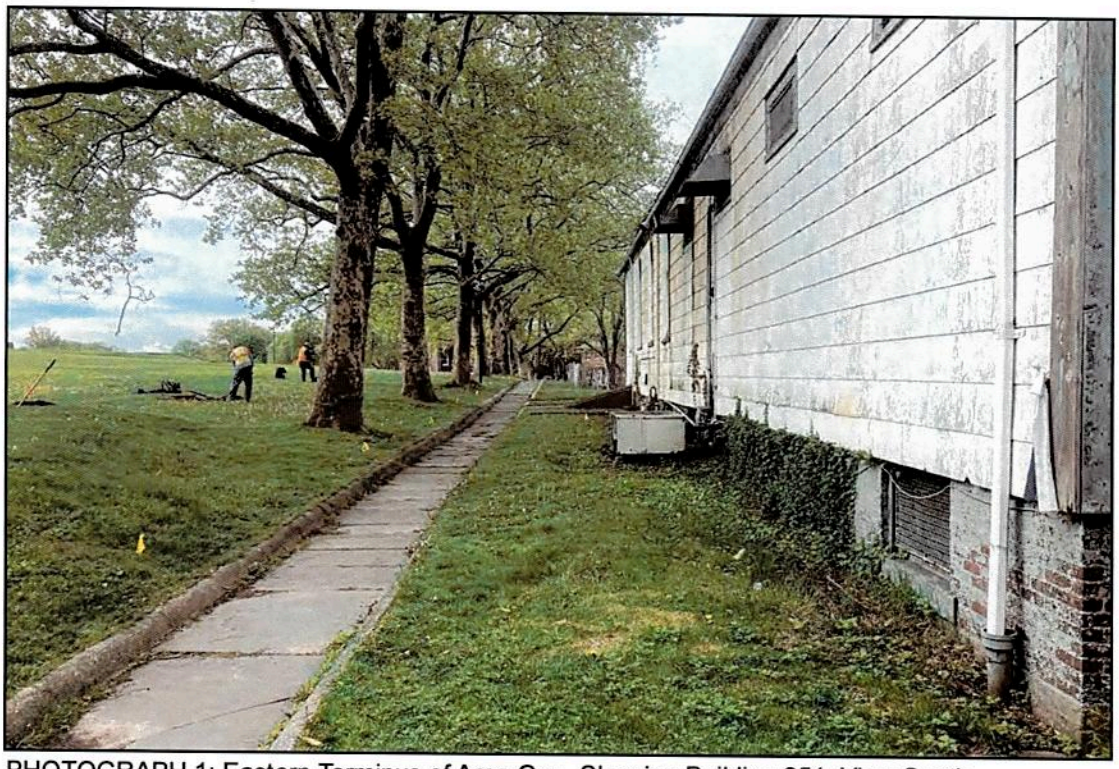
B. Results of Fieldwork

The soils in the shovel tests excavated for this investigation displayed variable levels of disturbance throughout the APE. This is consistent with the Laguardia-Urban Land complex soil type mapped for the APE. The area with the least amount of apparent disturbance was observed in Shovel Tests A-1 through A-7, excavated east of the extant library building. This section of the APE falls within the northwest edge of a former golf course present on the island from the 1920s until 2006 (Glen 2006). Figure 28 displays the results of the archeological survey of the APE.

1. Area One

a. Shovel Tests

Archeologists initially staked out 25 shovel tests in Area One (Photographs 1–5). Shovel Tests A-1 through A-7 were located east of the library building on a higher topographic surface than any of the rest of the APE. These shovel tests were placed to avoid two field-marked utility lines running perpendicular to Andes Road. A potential feature consisting of flat stones was discovered in Shovel Test A-4. Radial shovel tests were therefore excavated at 5-meter and 1-meter intervals to the north, east, and south of A-4 (Photograph 6). A buried utility west to the west precluded the excavation of radials to the west. In Shovel Test A-7, a buried strip of tape possibly indicating a buried utility was encountered and the shovel test was halted in Stratum 1 at 22 centimeters (0.72 foot) bgs. This upper portion of the APE may have been disturbed most recently by the golf course that was once located in the vicinity; for example, a small rise in the location of Shovel Test A-2 may have been a tee box for one of the course holes (Glen 2006). This area also represented the most natural portion of the original island landform compared with the rest of the APE, likely containing less overall landscaping or fill.



PHOTOGRAPH 1: Eastern Terminus of Area One, Showing Building 251, View South

PHOTOGRAPH 2: Southern Terminus of Area One, Showing Utility Access Holes, View North

PHOTOGRAPH 5: Profile of Shovel Test A-5 in Area One

Stratum 1 consisted of dark brown (10YR 3/3), dark grayish brown (10YR 3/2), dark yellowish brown (10YR 3/4), very dark brown (10YR 2/2), and black (5YR 2.5/1) silt loam, loamy sand, sandy loam, and silty sandy loam. This stratum extended to between 12 and 35 centimeters (0.39 and 1.15 feet) bgs. Stratum 2 consisted of brown (7.5YR 4/4), light brown (7.5YR 6/4), strong brown (7.5YR 5/6), dark yellowish brown (10YR 4/6), yellowish red (5YR 4/6), brown (7.5YR 4/4) mottled with very dark brown (7.5YR 2.5/3), and pale brown (10YR 6/3) mottled with light brown (7.5YR 6/4) sand, sandy loam, loamy sand, silty sandy loam, and sandy clay loam. This stratum extended to between 24 and 80 centimeters (0.79 and 2.62 feet) bgs. Some shovel tests revealed Strata 3 and 4. Stratum 3 consisted of brown (7.5YR 4/4), dark yellowish brown (10YR 3/6), very dark grayish brown (10YR 3/2), and reddish brown (5YR 4/3) sand and sandy loam. This stratum extended to between 32 and 100 centimeters (1.05 and 3.28 feet) bgs. Stratum 4 consisted of brown (7.5YR 4/4) and strong brown (7.5YR 5/6) mottled with yellowish red (5YR 5/6) sand and sandy clay loam with pockets of sand. Shovel tests in this section extended to between 22 and 100 centimeters (0.72 and 3.28 feet) bgs.

Shovel Tests A-8 through A-11 were excavated in the southeast corner of Area One. This area contained a series of unmarked utilities detected by the presence of utility hole covers on the surface. Shovel tests displayed substantially variable, disturbed soils in this section. Stratum 1 consisted of dark brown (10YR 3/3), very dark brown (10YR 2/2), very dark gray (10YR 3/1), and black (5YR 2.5/1) silt loam, sandy loam, and silty sandy loam. This stratum extended to between 8 and 37 centimeters (0.26 and 1.31 feet) bgs. Stratum 2 consisted of reddish brown (5YR 3/4), yellowish brown (10YR 5/6), and strong brown (7.5YR 5/6) mottled with very dark gray (10YR 3/1) sand, sandy loam, and sandy clay. This stratum extended to between 19 and 58 centimeters (0.62 and 1.9 feet) bgs. Shovel Tests A-10 and A-11 contained Strata 3 and 4. Stratum 3 consisted of very dark gray (10YR 3/1) silty sandy loam and very dark brown (7.5YR 2.5/3) sandy clay extending to between 25 and 45 centimeters (0.82 and 1.48 feet) bgs. Stratum 4 consisted of reddish brown (5YR 4/4) sandy clay loam and dark reddish brown (5YR 3/4) sandy clay. This stratum extended to between 58 and 66 centimeters (1.9 and 2.17 feet) bgs. Shovel tests overall in this section extended to between 50 and 66 centimeters (1.64 and 2.17 feet) bgs.

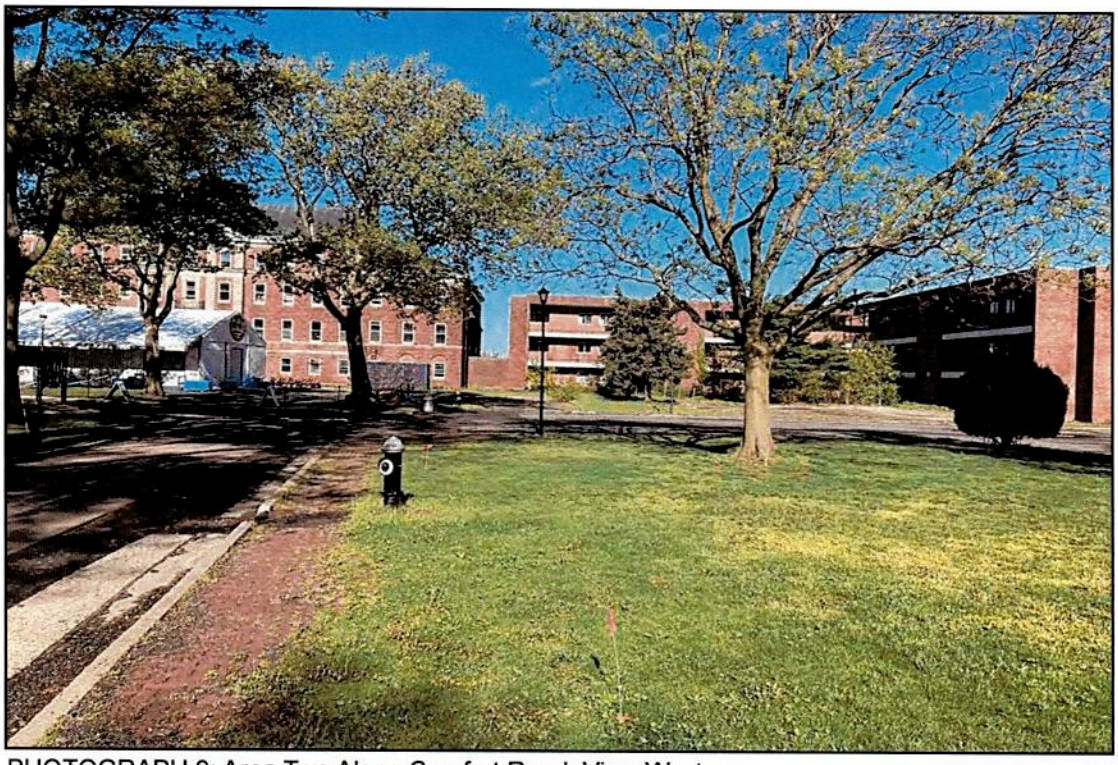
Shovel Tests A-12 through A-21 fell within the area of a former cafeteria associated with the former Army complex. This portion of the APE was noticeably flattened and abutted against the side of the slope to the higher topographic surface to the east. Stratum 1 consisted of very dark brown (7.5YR 2.5/2 or 10YR 2/2), very dark grayish brown (10YR 3/2), and black (10YR 2/1) silt loam and sandy loam, with between 10 and 30 percent gravel. This stratum extended to between 10 and 28 centimeters (0.33 and 0.92 foot) bgs. Stratum 2 consisted of dark brown (10YR 3/3), very dark brown (10YR 2/2), dark yellowish brown (10YR 4/4), dark reddish brown (5YR 3/4), very dark grayish brown (10YR 4/2) mottled with reddish yellow (7.5YR 6/6), and strong brown (7.5YR 5/6) mottled with very dark grayish brown (10YR 3/2) silty sand, silt loam, sandy loam, sandy clay, and sandy clay loam. This stratum extended to between 21 and 105 centimeters (0.69 and 3.44 feet) bgs. Where present, Stratum 3 consisted of brown (7.5YR 4/4), dark brown (10YR 3/3), and dark reddish brown (5Y 3/4) sandy loam, silt loam, sandy clay, and clayey sand. This stratum extended to between 39 and 68 centimeters (1.28 and 2.23 feet) bgs (Photograph 7). Shovel tests overall in this section extended to between 20 and 68 centimeters (0.66 and 2.23 feet) bgs.

Shovel Tests A-22 through A-25 were excavated around the former library building. Stratum 1 consisted of dark brown (10YR 3/3) and very dark brown (7.5YR 2.5/3) sandy loam with 3 to 20 percent gravel. This stratum extended to between 15 and 30 centimeters (0.39 and 0.98 foot) bgs. Stratum 2 consisted of dark yellowish brown (10YR 4/4), strong brown (7.5YR 5/6), reddish brown (5YR 4/4), and very dark brown (7.5YR 2.5/2) mottled with strong brown (7.5YR 4/6) sand and sandy loam with 3 to 40 percent gravel. This stratum extended to between 44 and 70 centimeters (1.44 and 2.3 feet) bgs. Shovel Tests A-23 and A-24 contained Stratum 3, which consisted of reddish brown (5YR 4/4) and dark reddish brown (5YR 3/4) sand with 20 to 30 percent gravel. This stratum extended to between 75 and 95 centimeters (2.46 and 3.12 feet) bgs. Shovel tests overall in this section extended to between 44 and 95 centimeters (1.44 and 3.12 feet) bgs (Photograph 8).

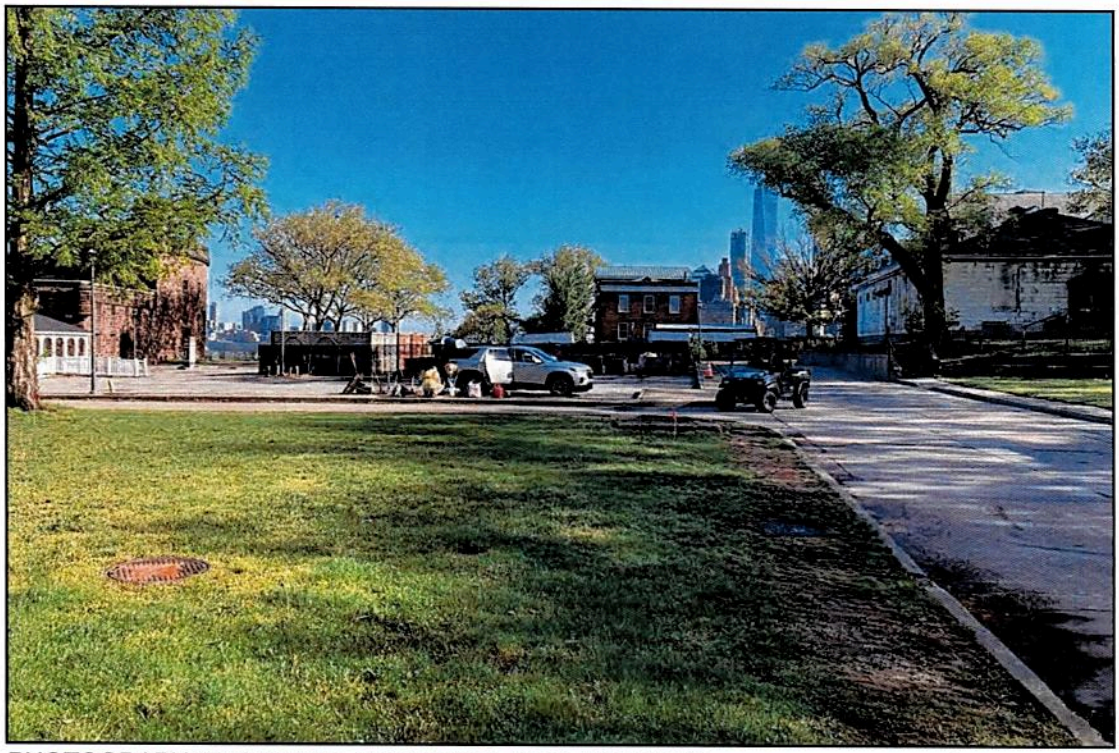
b. Cultural Material

Artifacts were recovered and cataloged from shovel tests that did not contain asbestos material. Five post-Contact artifacts were recovered from Stratum 2, Shovel Test A-2. These consisted of one porcelain sherd, one unidentified bottle or jar glass fragment, one unidentified curved vessel glass fragment, and two flat window glass fragments. Six post-Contact artifacts were recovered from Stratum 2, Shovel Test A-6. These consisted of five unclassified bottle or jar glass fragments and one oyster shell fragment. These shovel tests fell within the area of the former golf course.

PHOTOGRAPH 8: Profile of Shovel Test A-25 in Area One



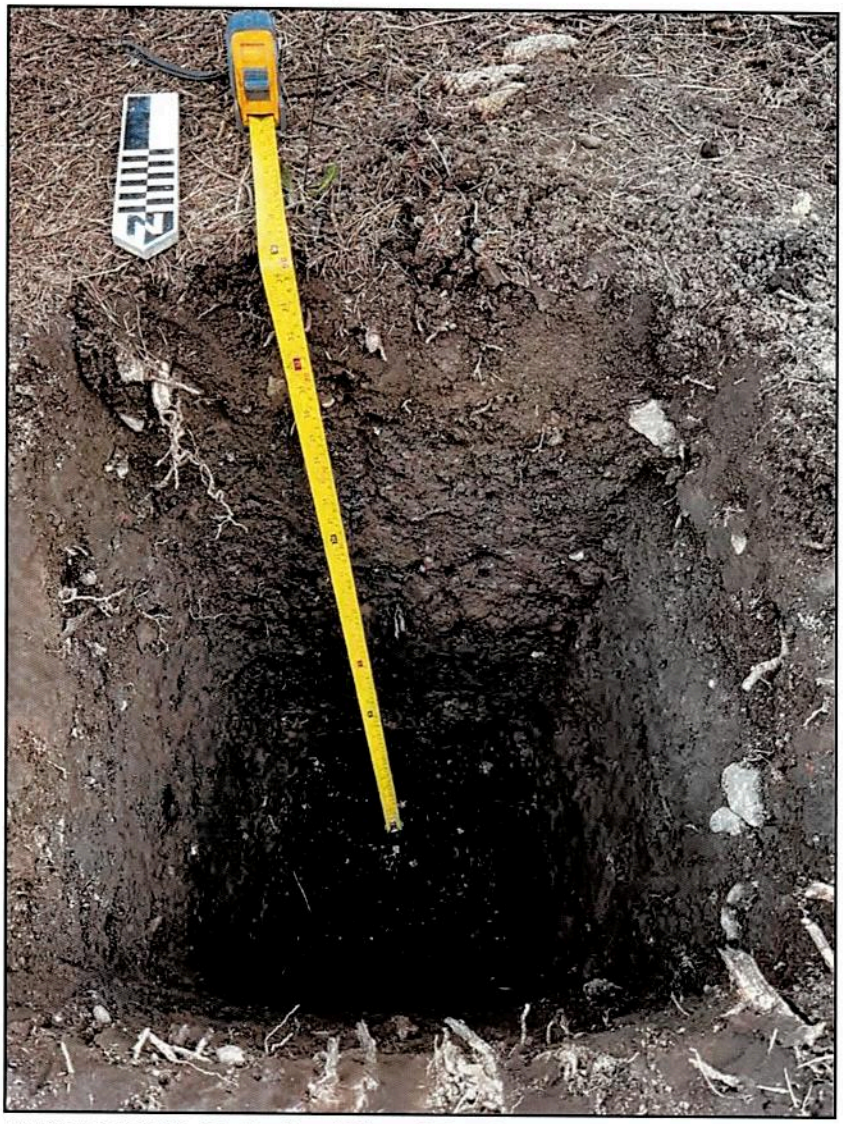
PHOTOGRAPH 9: Area Two Along Comfort Road, View West



PHOTOGRAPH 10: Area Two Along Tampa Road, View North

PHOTOGRAPH 12: Area Three, Showing Courtyard of Building 513, View Southeast

PHOTOGRAPH 13: Area Three, Showing Disturbed Sections of Building 513, View Southwest



PHOTOGRAPH 15: Profile of Shovel Test C-7 in Area Three

PHOTOGRAPH 16: Area Four, View North

PHOTOGRAPH 17: Area Four, View South

PHOTOGRAPH 19: Profile of Shovel Test D-4 in Area Four

PHOTOGRAPH 20: Glass Artifacts Recovered from APE

a) Pharmaceutical bottle with tooled packer finish (Field No. 10.8)
b) Colorless bottle base produced in a cup-bottom mold (Field No. 9.1)
c) Mold-blown olive glass (Field No. 2.3)
d) Mold-blown aqua glass (Field No. 2.4)
e) Tempered aqua safety glass (Field No. 11.10)

Shovel Tests A-12 through A-21 fell within the bounds of the previously identified Cafeteria Site (GOIS00044). All the shovel tests in this section terminated on rock or concrete impasses. The soil horizons in these shovel tests consisted of fill horizons, and no intact cultural horizons were present. No artifacts were saved from this section because asbestos tiles were present throughout the shovel tests. Architectural material observed in the shovel tests included brick, wood fragments, concrete, sewer pipe fragments, wire nails, unidentified nails, and asbestos tile—all consistent with the general construction materials that were likely used in the cafeteria building.

All other areas of the APE displayed substantial disturbance. In Area Two, the location of the Hospital Mess Site (GOIS00039), concrete was found at 110 centimeters (3.61 feet) bgs. Area Three, where either or both the Engineer Building 49 Site (GOIS00030.03) and the Crematory Site (GOIS00038) may have been fully or partially located, displayed substantial disturbance in all the shovel tests. Brick fragments and coal ash and slag were found at 95 centimeters (3.12 feet) bgs. Substantial utilities were present throughout Area Three. Area Four contained fill soils down to 100 centimeters (3.28 feet) bgs. Area Four also contained substantial utilities within its boundaries.

Comparison of the current landscape configuration of Governors Island with the representations of Governors Island from historical maps (see Chapter II.D.1) show that sections of the APE were not extant prior to the late nineteenth century. A comparison of Figures 5 and 21 as the natural island vs. Figure 8 shows how the land around the northwest tip of the island expanded after Castle William was built. The portion of the APE containing Areas Three and Four fell outside the original land mass of Governors Island, and this part of the island was extensively filled in and built up in the nineteenth through early twentieth centuries. Comparison of a photograph from 1861 with the current landscape shows that the original landscape surrounding Castle Williams was a rocky shoal that was considerably built up in the last century and a half (Figure 29). Area Two may have occupied a portion of the original landscape on the lower slope or edge of the original island, or it may be composed entirely of historic-era fill. Area One likely contains the most intact or natural portion of the landscape in the APE. The upper portion of Area One (the locations of Shovel Tests A-1 to A-7) is located on the original upper topographic surface of the landform observable on many of the historical maps. Figure 10 is particularly useful as it shows a topographic map of the island before the Library and the Cafeteria buildings were constructed, as well as the defile. The division between the upper topographic surface and the lower (possibly fill) surface is well represented by the closely spaced 22- and 19-foot contour lines. It appears that the Library was built on the point of land of the upper surface, where the defile ended, likely destroying that part of that historical feature. The Cafeteria was built at the base of the slope below the upper topographic surface, possibly on historic-era fill.

Current plans for the demolition project are to remove the buildings, surfacing, and other features while minimizing potential ground disturbance and thus avoiding potential archeological resources. Roadway surfacing, parking areas, and sidewalks will be removed and backfill and topsoil placed to match the existing grade. Surfacing subbase materials will not be removed beyond the surfacing demolition, and subbase material will not be decompacted or scarified—instead, topsoil will be placed directly on it.

Building 251 will be removed to the foundation to 61 centimeters (2 feet) below the proposed grade, with the remainder abandoned, the basement slab broken for drainage, and a localized excavation at the building to support demolition. Retaining walls will be removed to a minimum of 61 centimeters (2 feet) below grade. Excavation south of Building 251 (in the area of the Cafeteria Site) will be confined to the removal of approximately 15 centimeters (0.49 foot) of soil to be replaced with new topsoil. Thus, excavations within the bounds of the previously identified Cafeteria Site will not extend below the disturbed fill layers identified in the present survey. OPRHP has determined that the treeline directly east of Building 251 represents a contributing feature to GOIS and will not be removed. No excavation is planned east of the treeline, including the area containing the buried tunnel (Site GOIS00018) as defined by Shovel Test A-4 and the three surrounding 1-meter (3.3-foot) radial shovel tests.

Building 513 will be removed to 61 centimeters (2 feet) below the proposed grade, with the remainder abandoned, the basement slab broken for drainage, and a localized excavation at the building to support demolition. An interment area is planned within the footprint of Building 513D. This will consist of an area for the interment of human remains discovered at GOIS in the future. The foundation of Building 513D will be removed and excavated to 183 to 243.8 centimeters (6 to 8 feet) bgs.

Utilities will be removed from each area via spot excavations based on utility depth. Electrical conduits will generally require burial at 61 to 76.2 centimeters (2 to 2.5 feet) bgs, whereas water and sewer utilities will require burial at 122 to 183 centimeters (4 to 6 feet) bgs. The excavation of utilities will take place in the disturbed utility corridors.

IV. Conclusions and Recommendations

On behalf of the NPS, WSP has completed a Phase I archeological survey in support of the demolition of incidentally acquired buildings at GOIS, New York, New York. GOIS plans to demolish five buildings within the monument boundary, a large parking lot, and some connecting streets. The work is expected to enhance the visitor experience to GOIS by eliminating structures, parking areas, and streets that are outside the GOIS treatment period. The demolition work supports the General Management Plan (NPS 2008) and the Cultural Landscape Treatment Plan (Nowak 2010). To fulfill responsibilities under the NHPA, a variety of archeological excavations are needed to assess the impact of the demolition on archeological resources.

The purpose of WSP's Phase I archeological investigation was to identify archeological resources in the APE for the demolition project. This area is defined by the proposed staging areas for the planned demolition. Area One, east and south of Building 251; Area Two, a roughly rectangular grassy area between Kimball Road, Comfort Road, Tampa Road, and Andes Road; and Areas 3 and 4, east and west, respectively, of the Building 513 complex. Current plans for the four areas of the APE call for the removal of the topsoil layers, filling, and subsequent grading of the areas following demolition. The investigation included background research and fieldwork.

According to the CRIS database, 38 cultural resource surveys have been conducted on Governors Island. Survey types include Phase IA/IB archeological reconnaissance surveys, Phase II site evaluations, archeological monitoring of construction, and emergency assessment of uncovered human remains. CRIS data indicate that 37 previously recorded archeological sites are located within 1.6 kilometers (1 mile) of the APE. These consist of two pre-Contact sites, the Fort Jay Prehistoric Site (06101.009523) and the Nolan Park Prehistoric Site (06101.009524); one multi-component site, the GIPWP Feature 12-original shoreline (06101.09129); and 34 aboveground architectural resources. The Fort Jay Prehistoric Site, Nolan Park Prehistoric Site, Andes Road Cemetery Location 2 (06101.007420), and Fort Jay Midden Site (06101.009527) are eligible for listing in the NRHP. The Golf Course Battery (06101.009529) and the Governor's House Historic Site (06101.009528) are not NRHP-eligible. The Governors Island Archeological Sites (06101.05029) are east of the APE and listed in the NRHP. This site number includes the Tampa Memorial Library, which was originally built as a storehouse and workshop for the Fort Jay Quartermaster. In addition, a portion of the original Andes Road Cemetery might be located under the library's parking lot. The remaining 30 sites have an undetermined status as to NRHP eligibility.

Subsurface testing in the APE took place between May 1 and May 5, 2023. The archeological survey covered all testable areas of the APE, with 59 excavated shovel tests. Buried utilities were present throughout the APE, which precluded subsurface testing in those areas. In addition, portions of the APE were covered by concrete or blacktop surfaces.

The APE displayed substantial disturbance from nineteenth-and twentieth century demolition, filling, and grading episodes. This is consistent with the mapped soil type of Laguardia-Urban Land complex throughout the APE. Disturbed post-Contact material was found as deep as 110 centimeters (3.61 feet) bgs. Shovel Tests A-1 through A-7 were excavated west of the extant library building and on a rise above the rest of the APE, part of the more natural original topographic landscape of the island. The lower strata encountered in these shovel tests were consistent with glacial B-horizon soils; however, this area also fell within the bounds of the former golf course and soils may have been modified to create golf course features.

The feature encountered in Shovel Test A-4 and its three 1-meter (3.28-foot) radial tests appears to represent the northwest portion of Site GOIS00018, a former supply tunnel linking Castle Williams and Fort Jay. It is the opinion of WSP that the area bounded by Shovel Tests A-4 N5, A-4 E5, and A-4 S5 (which represent the nearest negative shovel tests leading out from the 1-meter grid) should be avoided. Current plans call for the avoidance of the site area. High-visibility fencing may be erected for better help with identifying the feature area during the project. If the current demolition plans change and impacts to the area cannot be avoided, it is WSP's opinion that a Phase II site evaluation should be conducted to determine the eligibility status of the site.

Portions of the APE in Area One extended into the boundaries of the site identified as the Cafeteria Site (GOIS00044. Excavations in the site boundaries showed areas of disturbed fill soils which terminated on compact rock or concrete fill between 20 to 68 centimeters (0.66 to 2.23 feet) bgs. Shovel Test A-21 extended to 105 centimeters (3.44 feet) bgs, with concrete recovered at the bottom of this shovel test. Current demolition plans call

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APPENDIX A: Shovel Test Log

Transect	STP	Stratum	Depth to Base of Stratum		Soil Color	Texture	Coarse Fraction	Artifacts	Comments
			cm	ft					
A	4 1m E	1	24	0.79	10YR 3/4 Dark Yellowish Brown	Silt Loam	10% Gravel	NCM	
		2	56	1.84	7.5YR 5/6 Strong Brown	Sandy Loam	10% Gravel	NCM	BOE
A	4 5m E	1	19	0.62	10YR 3/2 Very Dark Grayish Brown	Silt Loam		Discarded: 2 nails	
		2	60	1.97	10YR 4/6 Dark Yellowish Brown	Sand	20% Rocks and Gravel	Discarded: mortar	
		3	88	2.89	10YR 3/6 Dark Yellowish Brown	Sand		NCM	BOE
A	4 1m S	1	19	0.62	10YR 3/2 Very Dark Grayish Brown	Silty Sandy Loam		NCM	
		2	30	0.98	7.5YR 6/4 Light Brown	Sandy Clay Loam		NCM	Rock Impasse; Possible Demolition Debris
A	4 5mS	1	24		10YR 3/3 Dark Brown	Sandy Loam	3% Gravel	Discarded: Aqua glass, window glass, brick fragments	
		2	67		7.5YR 5/6 Strong Brown	Sand		NCM	BOE
A	5	1	33	1.08	10YR 2/2 Very Dark Brown	Loamy Sand	2%-5% Gravel	Discarded: aluminum pull tab, plastic wrapper, modern nail, and brick fragment	
		2	80	2.62	5YR 4/6 Yellowish Red	Coarse Sand		NCM	BOE
A	6	1	15	0.49	5YR 2.5/1 Black	Silt Loam		NCM	
		2	80	2.62	7.5YR 4/4 Brown mottled w/ 7.5YR 2.5/3 Very Dark Brown	Sand		Discarded: 10 plate glass sherds and 3 nails Historic N=20: bricks, green bottle glass, clear bottle glass, and shell	
		3	100	3.28	7.5YR 4/4 Brown	Sand		NCM	BOE
A	7	1	22	0.72	10YR 2/2 Very Dark Brown	Loamy Sand	20%-30% Gravel	Discarded: brick fragment, mortar fragment, modern glass sherd, and coal	Fill Level; Terminated at Underground Electric Utility

Transect	STP	Stratum	Depth to Base of Stratum		Soil Color	Texture	Coarse Fraction	Artifacts	Comments
			cm	ft					
A	13	1	28	0.92	10YR 3/1 Very Dark Gray mottled w/ 7.5YR 6/6 Reddish Yellow	Silt Loam	10% Gravel	Discarded: plastic, 6 clear bottle glass sherds, 3 green bottle glass sherd, 1 clear flat glass sherd, 3 brick, 4 wire nails, 1 ceramic sherd, 1 earthenware sewer pipe fragment, 3 asbestoes tiles, and cable fiber fragments	
		2	34	1.12	7.5YR 6/6 Reddish Yellow	Silt Loam	10% Gravel	Discarded: plastic, 2 brown bottle glass sherds, 1 green bottle glass sherd, 2 clear bottle glass sherds, 1 copper button back, 2 ceramic sherds, 1 asbestoe tile, 3 browls, and 1 metal fragment	
		3	61	2	10YR 3/2 Very Dark Grayish Brown	Silt Loam	20% Gravel	Discarded: wood fragments	Terminated at Concrete Impasse
A	14	1	22	0.72	10YR 2/2 Very Dark Brown	Sandy Loam	20%-30% Gravel	Discarded: plastic, 1 whiteware ceramic sherd with green paint, 1 black glass sherd, and 1 asbestos tile	
		2	24	0.79	10YR 4/4 Dark Yellowish Brown	Sandy Loam		NCM	Soil is Compact; Rock Impasse
A	15	1	10	0.33	7.5YR 2.5/2 Very Dark Brown	Sandy Loam	20%-30% Gravel	Discarded: 1 stoneware ceramic sherd, 1 whiteware ceramic sherd, 1 glass sherd, and 1 asbestos tile	
		2	21	0.69	10YR 3/3 Dark Brown	Sandy Loam	30%-40% Gravel	Discarded: brick fragments	
		3	39	1.28	5YR 3/4 Dark Reddish Brown	Clay Sand	20%-30% Rocks and Gravel	Discarded: brick fragments	STP Terminated at Rock and Concrete Impasse
A	16	1	15	0.49	10YR 2/1 Black	Silt Loam		Discarded: aqua glass sherd and whiteware ceramic sherd	
		2	30	0.98	10YR 3/3 Dark Brown	Sandy Clay		Discarded: nail	
		3	50	1.64	7.5YR 4/4 Brown	Sandy Clay	20% Rocks and Gravel	Discarded: plate glass and brick fragments	
		4	51	1.67	7.5YR 2.5/1 Black	Sandy Clay		Discarded: brick fragments and concrete fragments	Terminated at Concrete Impasse

Transect	STP	Stratum	Depth to Base of Stratum		Soil Color	Texture	Coarse Fraction	Artifacts	Comments
			cm	ft					
A	23	1	30	0.98	10YR 3/3 Dark Brown	Sandy Loam	5% Gravel	Discarded: wire nails, ceramic sherd, and ceramic sherds	
		2	58	1.9	10YR 4/4 Dark Yellowish Brown	Sandy Loam	3% Gravel	Discarded: brick fragment	
		3	75	2.46	5YR 4/4 Reddish Brown	Sand		NCM	BOE
A	24	1	15	0.49	7.5YR 2.5/3 Very Dark Brown	Sandy Loam	10%-20% Gravel	Discarded: 3 modern window glass sherds, brick fragments, and 1 asbestos tile	Fill Level
		2	70	2.3	7.5YR 2.5/2 Very Dark Brown mottled w/ 7.5YR 4/6 Strong Brown	Sandy Loam mottled w/ Sand	30%-40% Gravel	Discarded: asphalt fragments, coal, concrete fragments, and brick fragments	Fill Level
		3	95	3.12	5YR 3/4 Dark Reddish Brown	Sand	20%-30% Gravel	NCM	Fill Level; BOE
A	25	1	24	0.79	10YR 3/3 Dark Brown	Sandy Loam	3% Gravel	Discarded: aqua glass sherd, window glass sherd, shell, and brick fragments	
		2	67	2.2	7.5YR 5/6 Strong Brown	Sand		NCM	BOE
B	1	1	25	0.82	10YR 2/2 Very Dark Brown	Sandy Clay Loam	10% Gravel	Discarded: 10+ glass sherds, 8 brick fragments, and 3 nails	
		2	70	2.3	10YR 3/3 Dark Brown mixed w/ 2.5YR 3/4 Dark Reddish Brown	Sand mixed w/ Silt	10% Gravel	NCM	Terminated at Pooling Water
B	2	1	26	0.85	10YR 3/2 Very Dark Grayish Brown	Sandy Clay Loam	Light Root Activity; 10% Gravel	Discarded: plastic, coal, 10+ brick fragments, 2 concrete fragments, 5 clear flat glass sherds, 2 green bottle glass sherds, 2 machine-cut nail, 1 wire nail, 1 pipe stem, 1 aqua bottle glass sherd, 1 clear bottle glass sherd, 1 lamp chimney, asphalt, 50+ cement fragments, 100+ brick fragments, and 1 abestos tile	Soil is Wet
		2	51	1.67	5Y 6/6 Olive Yellow	Silty Clay	Heavy Root Activity; 20% Rocks	Discarded: 2 flat clear glass sherds, asbestos tile, and sheet rocks	

Transect	STP	Stratum	Depth to Base of Stratum		Soil Color	Texture	Coarse Fraction	Artifacts	Comments
			cm	ft					
B	7	1	40	1.31	10YR 3/2 Very Dark Grayish Brown	Sandy Loam		Discarded glass, brick	
		2	70	2.3	5YR 4/4 Reddish Brown	Sandy Clay Loam		Discarded glass, ceramic	
		3	92	3.02	5YR 3/3 Dark Reddish Brown	Sand			Water Impasse - BOE
B	8	1	21	0.69	10YR 3/2 Very Dark Grayish Brown	Sandy Clay Loam	10% Gravel	Discarded: 1 flat glass sherd, 10+ brick fragments, and asbestos tiles	
		2	110	3.61	7.5YR 4/4 Brown mottled w/ 10YR 3/3 Dark Brown	Sand	20% Rocks	Discarded: 20+ brick fragments and concrete fragments	BOE
B	9	1	30	0.98	10YR 3/2 Very Dark Grayish Brown	Sandy Loam	5% Gravel	Discarded brick, nail	
		2	50	1.64	10YR 3/2 Very Dark Grayish Brown mottled with 10YR 5/8 Yellowish Brown	Sand	3% Gravel		
		3	67	2.2	10YR 3/2 Very Dark Grayish Brown	Sand	Wet	Discarded wrapper	
		4	98	3.22	10YR 5/6 Yellowish Brown	Sand	Wet		Water Impasse = BOE
C	1	1	20	0.66	10YR 3/3 Dark Brown mottled w/ 10YR 4/6 Dark Yellowish Brown	Sand	20%-30% Gravel	NCM	Terminated at Asphalt Impasse
C	2	1	14	0.46	10YR 3/3 Dark Brown	Silty Sand	5%-10% Gravel	NCM	
		2	30	0.98	10YR 2/2 Very Dark Brown	Silty Sand	30%-40% Gravel	Discarded: 1 whiteware ceramic sherd, 1 scalloped clear glass sherd, and 1 asbestos tile	
		3	46	1.51	5YR3/3 Dark Reddish Brown mottled w/ 10YR 2/2 Very Dark Brown	Sand	10%-20% Rocks and Gravel	NCM	Terminated at Rock and Concrete Impasse
		1	20	0.66	10YR 3/2 Very Dark Grayish Brown	Silty Sand	5%-10% Gravel	Discarded: styrofoam and plastic	
		2	31	1.02	10YR 3/3 Dark Brown	Silty Sand	20%-30% Gravel	Discarded: plastic and coal	

Transect	STP	Stratum	Depth to Base of Stratum		Soil Color	Texture	Coarse Fraction	Artifacts	Comments
			cm	ft					
C	5	2	33	1.08	10YR 4/3 Brown	Silt Loam	10% Gravel	Discarded: 1 flat red glass sherd, plastic, 1 metal fragment, 20+ brick fragments, and 1 brick tile	
		3	58	1.9	10YR 2/1 Black	Coal Ash		Discarded: slag, 2 wire nails, 1 flat clear glass sherd, 5+ brick fragments, and asbestoes tile	
		4	95	3.12	10YR 6/3 Pale Brown	Sand		Discarded: shell and brick fragments	BOE
C	6	1	25	0.82	10YR 3/2 Very Dark Grayish Brown	Silty Sandy Loam	20% Gravel	Discarded: 4 ceramic tiles	
		2	35	1.15	10YR 2/1 Black	Coal and Ash	25% Gravel	Discarded: flat glass sherd and asbestos tile	
		3	43	1.41	10YR 4/4 Dark Yellowish Brown	Sandy Loam	15% Gravel	Discarded: metal fragment	
		4	65	2.13	10YR 2/1 Black	Coal and Ash	25% Gravel	Discarded: glass sherd	
		5	79	2.59	10YR 4/3 Brown	Fine Sand		NCM	Shell Fragments in Soil
		6	95	3.12	10YR 5/2 Grayish Brown	Fine Sand		NCM	BOE
C	7	1	16	0.52	10YR 4/3 Brown	Silt Loam	10% Gravel	Discarded: 1 concrete fragment, 2 clear bottle glass sherds, and 1 flat clear glass	
		2	56	1.84	10YR 3/1 Very Dark Gray	Sandy Loam	10% Gravel	Discarded: 2 wire nails, 2 concrete fragments, 20+ brick fragments, 1 shell, 9 asbestos tiles, 3 ceramic sherds, 1 redware ceramic sherd, 1 milk glass sherd, 1 ribbed flat glass sherd, 1 melted glass, 7 flat clear glass sherds, 1 solarized flat glass sherd, 2 flat aqua glass sherd, 5 clear bottle glass sherds, 7 wire nails, concrete, 1 whole brick, 1 mortar fragment, 1 brick tile, and 2 shells	
		3	64	2.1	10YR 2/2 Very Dark Brown	Silt Loam	10% Gravel	Discarded: brick fragments and concrete fragments	
		4	73	2.4	10YR 4/2 Dark Grayish Brown	Silt Loam	10% Gravel	Dicarded: 20+ brick fragments	
		5	95	3.12	10YR 2/1 Black	Coal Ash		Discarded: coal ash and slag	BOE

Transect	STP	Stratum	Depth to Base of Stratum		Soil Color	Texture	Coarse Fraction	Artifacts	Comments
			cm	ft					
		5	53	1.74	10YR 2/1 Black	Sand		Discarded: bottle glass, plate glass, brown bottle glass, and 6 shell casins	
		6	65	2.13	10YR 6/4 Light Yellowish Brown	Sand		NCM	Terminated at Compact Soil
D	3	1	18	0.59	10YR 3/2 Very Dark Grayish Brown	Sandy Loam	10% Gravel	Discarded: 1 rubber fragment, 2 slate tiles, 1 brown glass sherd, 2 clear glass sherds, 1 metal fragment, 2 brick fragments, 1 asphalt, 1 concrete, 1 rebar, and 2 shells	
		2	30	0.98	5Y 5/6 Olive	Sand	10% Gravel	Discarded: 1 clear bottle glass, 1 nail, 1 asphalt fragment, 3 cermaic sherds, and 1 brown glass sherd	
		3	70	2.3	10YR 4/4 Dark Yellowish Brown	Sand	10% Gravel	Discarded: 1 bottle cap and 1 brick fragment	Terminated at Concrete Impasse
D	4	1	14	0.46	10YR 4/3 Brown	Silt Loam	10% Gravel	Discarded: plastic, 1 brick, 1 turquoise, 5 clear bottle glass sherds, 1 US penny minted in 1984, slag, and coal	
		2	22	0.72	10YR 3/1 Very Dark Gray	Sand	20% Gravel	Discarded: 1 ceramic tile pipe, 2 pull rings, 1 clear bottle glass sherd, 5 flat clear glass sherds, 2 wire nails, 1 mortar fragment, and coal	
		3	44	1.44	5YR 6/4 Light Reddish Brown	Sand	20% Gravel	Discarded: 1 cider bottle fragment, 1 brick, 2 concrete fragment, 3 ceramic sherds, 1 green bottle glass sherd, 1 brown bottle glass sherd, 1 clear bottle glass sherd, 1 aqua bottle glass sherd, 1 burnt bottle glass sherd, 4 wire nails, 1 flat glass sherd, 10+ wire concrete mesh fragments, and coal	
		4	59	1.94	7.5YR 5/4 Brown	Sand	20% Gravel	NCM	

Transect	STP	Stratum	Depth to Base of Stratum		Soil Color	Texture	Coarse Fraction	Artifacts	Comments
			cm	ft					
D	8	1	17	0.56	10YR 2/2 Very Dark Brown	Sandy Loam	20% Gravel	Discarded: glass sherds and aluminum pull tabs	Fill Level
		2	33	1.08	10YR 3/2 Very Dark Grayish Brown mixed w/ 10YR 7/4 Very Pale Brown and 5YR 4/4 Reddish Brown	Sand	10% Gravel	Discarded: glass sherd and ceramic sherd	Fill Level
		3	44	1.44	5YR 4/4 Reddish Brown	Sand		Discarded: glass sherd and ceramic sherd	Fill Level
		4	57	1.87	10YR 5/2 Grayish Brown mixed w/ 10YR 3/2 Very Dark Grayish Brown	Sand		N=18	Fill Level
		5	99	3.25	10YR 3/3 Dark Brown	Sand	30% Gravel	N=1	Fill Level; BOE

METHODS OF ARTIFACT CATALOGING AND ANALYSIS

A. LABORATORY PROCESSING

All artifacts were transported from the field to the heritage resource laboratory at WSP USA Inc. (WSP). In the field artifacts were bagged in 4-mil resealable polyethylene bags. Artifact cards bearing provenience information were included in the plastic bags. A Field Number was assigned to each unique provenience in the field. This number appears with all the provenience information and is used throughout processing and analysis to track artifacts.

Most historic artifacts were washed in water with a soft toothbrush. Faunal material and fragile artifacts were wet-brushed with a soft natural-bristle paintbrush or were simply dry-brushed. Metal objects were cleaned using a dry toothbrush or stainless steel wire brush. All artifacts were laid out to air-dry in preparation for analysis.

During analysis individual Specimen Numbers were assigned to artifacts. After analysis the artifacts were re-bagged into clean perforated 4-mil resealable polyethylene bags. Artifacts are organized sequentially first by Site Number, then Field Number, and finally by Specimen Number. Before submitting for curation, catalog numbers were assigned in accordance with National Park Service guidelines. An acid-free artifact card listing full provenience information and analytical class was included in each bag.

When labeling, all artifacts dime sized and larger were labeled as follows using India Ink and quill with a base coat of 25% Acryloid B-72 in Acetone and a top coat of 10% Acryloid B-72 in Acetone.

(State Site Number)	Ex.	18PR000
(Park) Catalog Number		PARK 0000

Please note that all nails and window glass in the collection were not labeled. No conservation treatment on the artifacts was needed or performed.

B. ANALYTICAL METHODS

All artifact analyses were conducted by the Laboratory Supervisor and/or Material Specialist(s). WSP maintains an extensive comparative collection and laboratory research library to aid in making complete and accurate analyses.

WSP has also developed a flexible analytical database system that fully integrates all artifacts in one database for use in data manipulation and interpretation. The computerized data management system is written using Microsoft Access, a relational database development package that runs on a Windows® platform.

Each class of artifacts—historic ceramics, small finds/architectural, curved (vessel) glass, and faunal—has a series of attributes, sometimes unique to that class, that are recorded to describe each artifact under analysis. Artifact information (characteristics) was entered into the system during the process of analysis. The system was then used to enhance the artifact records with the addition of provenience information. WSP maintains a complete type and attribute coding system in the database.

The format for the historic artifacts is based on the South/Noël Hume typology (South 1977), as modified for use in a computerized system (Louis Berger 2013).

Begin/End Dates. Dating of the glass artifacts was completed according to established diagnostic criteria. These criteria, utilized either singly or in combination, can include various technological aspects of glass manufacture, such as finish treatments, tooling methods, empontilling techniques, mold markings, Brand, Maker's Marks, Color, and various stylistic elements (including Decoration/Motif) associated with certain tablewares. Sources for glass dating include but are not limited to Busch (1987), Cheney (1980), Ferraro and Ferraro (1964, 1969), Fike (1987), Haynes (1959), Jones (1971, 1983, 1986), Jones and Smith (1985), Jones and Sullivan (1985), Kaplan (1982), Klamkin (1973), Kovel and Kovel (1986), Lief (1965), Lindsey (2018), Lockhart (2004), Lorrain (1968), McKearin (1970), McKearin and McKearin (1948), McKearin and Wilson (1978), Miller and Sullivan (1984), Munsey (1970), Noël Hume (1961, 1968, 1969a, 1969b), Paul and Parmalee (1973), Riley (1958), Spillman (1981, 1982, 1983), and Toulouse (1971, 1969).

Finish. Common names, such as "Blob-top," "Crown," and "Screw," were used when appropriate. Sources include Everette 1982.

Base. The majority of coded base types in the collection indicate the marks on the basal surfaces of glassware. "Snap case" indicates the lack of any markings when this device was used to hold a bottle in place while its finish was formed. Machine-made basal markings were also coded, if identifiable.

Manufacturing Technique. Manufacturing Technique refers to the distinctive mold seams and markings found on the bodies (and sometimes bases, finishes, or rims) of glassware.

Wear. The Wear category has been devised to aid in specialized analyses, e.g., in distinguishing commercial as opposed to domestic deposits from urban sites (Diamond in Geismar 1983:315). Vessels from establishments offering glassware for sale would not be expected to show more than slight evidence of use-wear; however, vessels from domestic deposits would be expected to show use-wear ranging from heavy to very heavy. The code Wear on Interior can be used to indicate artifacts associated with fill deposits. The code Waterworn or Rolled can be used to indicate artifacts that have been rolled in surf.

Lead/Non-lead (Comments). A short-wave ultraviolet light was used to examine select colorless glass vessels and sherds for the presence of lead. Leaded glass exposed to UV light appears ice-blue in color; non-leaded glass appears pale yellow or shows no change.

4. Faunal Analysis

The analysis of the faunal material allowed the identification of Species, Element, and completeness of the specimen. Identifications were made with the aid of a comparative faunal type collection and the use of reference materials, which include but are not limited to Abbott 1968, 1985; Gilbert (1973), Olsen (1964, 1968, 1979), and Schmid (1972).

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Site No.	NPS Cat Num	STP	Stratum	Level	Field #	Spec #	Class	Artifact Description:	Count	Weight (g)	Begin Date	End Date	Comments
	GOIS 3989	B1	1		5	1	Glass	Unidentified Bottle/Jar	2	10.5			Colorless body sherds; two molded ribs; unidentified manufacture, likely machine-made
	GOIS 3990	B1	1		5	2	Small Finds/Architectural	Unidentified Glass	1	4			Thick, flat, pale aqua glass; possible safety glass or plate glass
	GOIS 3991	B1	1		5	3	Small Finds/Architectural	Wire Nail	2	11.1	1880		Ferrous metal; complete; corroded with concretions
	GOIS 3992	B1	1		5	4	Small Finds/Architectural	Unidentified Nail	1	13.7			Ferrous metal; encased in concretions; complete, unidentified
	GOIS 3993	D3	1	10-18 cm	6	1	Glass	Unidentified Curved/Vessel Glass	2	2.6			Colorless body sherds; unidentified manufacture
	GOIS 3994	D3	1	10-18 cm	6	2	Glass	Unidentified Curved/Vessel Glass	1	3.9			Brown body sherd; thick glass; unidentified manufacture
	GOIS 3995	D3	1	10-18 cm	6	3	Small Finds/Architectural	Unidentified Metal	1	1.9			Flat, thin metal fragment; ferrous; corroded with concretions
	GOIS 3996	D3	1	10-18 cm	6	4	Small Finds/Architectural	Roofing Slate	1	3.7			Flat, red slate fragment
	GOIS 3997	D3	1	10-18 cm	6	5	Small Finds/Architectural	Miscellaneous Decorative Furnishing	1	5.4			Quartzite/stone building stone or decorative stone fragment; textured lines on back; face is spalled
	GOIS 3998	D3	1	10-18 cm	6	6	Small Finds/Architectural	Shingle	1	0.1			Thin asphalt fragment, fibrous, likely roofing shingle
	GOIS 3999	D3	1	10-18 cm	6	7	Small Finds/Architectural	Unidentified Plastic	1	2.2	1930		Green plastic with darker green uneven stripes on interior; unidentified object; hard plastic, possible sewer/drain
	GOIS 4000	D3	1	10-18 cm	6	8	Faunal	Oyster	1	0.5			Small shell fragment that has been pitted by parasite activity
	GOIS 4001	D3	1	10-18 cm	6	9	Faunal	Clam	1	0.7			Shell fragment
	GOIS 4002	D3	3	18-30 cm	7	1	Historic Ceramic	Ironstone	1	0.4	1840	2000	Very small possible hollowware fragment; undecorated
	GOIS 4003	D3	3	18-30 cm	7	2	Small Finds/Architectural	Tile	1	2.6			Earthenware tile fragment; one side spalled; opposite side unglazed and flat
	GOIS 4005	D3	3	18-30 cm	7	3	Glass	Unidentified Bottle/Jar	1	7			Aqua bottle neck/shoulder fragment; no visble seams, unidentified manufacture; heavy patina
	GOIS 4004	D3	3	18-30 cm	7	4	Glass	Unidentified Curved/Vessel Glass	1	2.9			Brown body sherd; small, unidentified manufacture

Site No.	NPS Cat Num	STP	Stratum	Level	Field #	Spec #	Class	Artifact Description:	Count	Weight (g)	Begin Date	End Date	Comments
	GOIS 4023	D7	2	28-60 cm	10	11	Small Finds/Architectural	Unidentified Glass	3	4.7			Aqua flat glass fragments; likely window glass
	GOIS 4024	D7	2	28-60 cm	10	12	Small Finds/Architectural	Unidentified Nail	1	10.1			Ferrous metal; missing tip/lower shank; encased in concretions
	GOIS 4026	D8	4		11	1	Historic Ceramic	Ironstone	1	1.5	1840	2000	Flatware; rimsherd; straight rim; undecocrated
	GOIS 4025	D8	4		11	2	Historic Ceramic	Ironstone - Decal - Overglaze	4	13.5	1880	2000	Flatware base to rimsherds; mend; straight rim; faint interior band around border/rim and another around center recess
	GOIS 4027	D8	4		11	3	Historic Ceramic	Ironstone - Embossed Body	1	4.3	1840	2000	Body sherd; hollowware; embossed unidentified motif, possible fleur de lis on interior; exterior undecorated
	GOIS 4028	D8	4		11	4	Historic Ceramic	Ironstone - Transfer Printed - Flowing Colors	5	9.2	1840	1910	Mend; hollowware, likely bowl; straight rim; interior and exterior flow blue decorated floral sheet pattern (Mulberry?), exterior has filigree around border; thin bodied;
	GOIS 4030	D8	4		11	5	Glass	Unidentified Bottle/Jar	1	12.3			Colorless finish fragment; tooled double ring; slightly melted; broken below second collar
	GOIS 4029	D8	4		11	6	Glass	Unidentified Bottle/Jar	1	8.7			Dark amber-olive bottle fragment; body sherd; very thick; not machine made
	GOIS 4031	D8	4		11	7	Glass	Unidentified Curved/Vessel Glass	1	10			Pale aqua body sherd; thick glass; unidentified manufacture
	GOIS 4032	D8	4		11	8	Glass	Unidentified Curved/Vessel Glass	1	2.9			Aqua body sherd; slightly melted; unidentified manufacture
	GOIS 4033	D8	4		11	9	Glass	Unidentified Curved/Vessel Glass	1	6.9			Brown body sherd; melted; unidentified manufacture
	GOIS 4034	D8	4		11	10	Small Finds/Architectural	Safety Glass	1	3.7	1903		Aqua fragment; thick, flat tempered glass with ridges
	GOIS 4035	D8	4		11	11	Small Finds/Architectural	Unidentified Glass	1	2.2			Flat aqua glass; thin; likely window glass
	GOIS 4036	D8	5		12	1	Historic Ceramic	Ironstone	1	6.9	1840	2000	Hollowware base sherd; burned; no visible decoration

NPS Archeology Report Certification

The archeological report
Phase I Archeological Investigations in Support of Demolition of Incidentally Acquired Buildings, Governors Island National Monument, New York,
by *WSP* has been reviewed against the criteria contained in 43 CFR Part 7.18(a)(1) and upon recommendation of the Park Archeological Advisor has been classified as "Not Available"

Superintendent

10/5/2023
Date

Classification Key Words:

"Available" - Making the report available to the public meets the criteria of 43 CFR 7.18 (a)(1).

"Available (deletions)" - Making the report available with selected information on site locations and/or site characteristics deleted meets the criteria of 43 CFR 7.18(a) (1). A list of pages, maps, paragraphs, etc. that must be deleted from each report in this category is attached.

"Not Available" - Making the report available does not meet the criteria of 43 CFR 7.18 (a)(1).