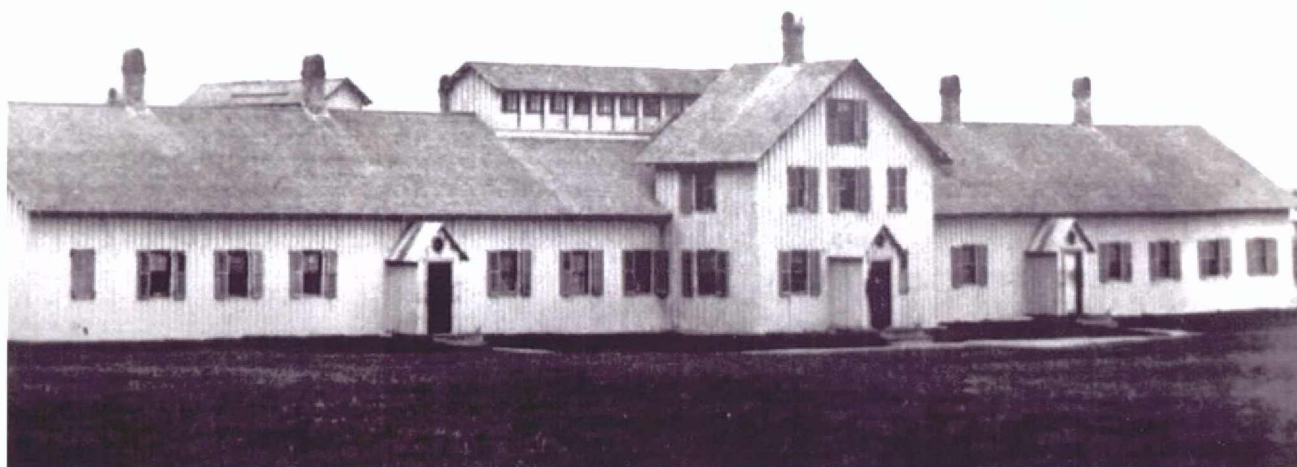


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Archaeological Potential of Fort Totten in Relation to the Demolition of Structures and Creation of a Passive Landscape

Memo Report



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Archaeological Potential of Fort Totten
In Relation to the Demolition of Structures
And Creation of a Passive Landscape

Memo Report

Research, Author, Production: Joan H. Geismar, Ph.D.
Assistant Research and Production: Shelly Spritzer
Graphics: Amy Geller

Prepared for New York City Department of Parks and Recreation
Through Nancy Owens Studio, LLC
Prepared by Joan H. Geismar, Ph.D., LLC
July 2007

MEMO REPORT

To: Nancy Owens, Nancy Owens Studio, LLC

From: Joan H. Geismar, Joan H. Geismar, Ph.D., LLC

Re: A Summary and Assessment of the Archaeological Potential of Fort Totten in "Relation to the Demolition of Structures and Creation of a Passive Landscape"

Date: July 11, 2007

On April 25, 2007, Nancy Owens, Principal of Nancy Owens Studio, LLC, and I, as the archaeological subconsultant for the above-referenced project's design phase, met with representatives of the New York City Department of Parks and Recreation (Parks) and the New York City Landmarks Preservation Commission (LPC). The intent was to discuss issues related to development of Fort Totten's North Park, where nineteen houses will be demolished, as well as those issues associated with a Master Plan for the property within Fort Totten now under Parks' jurisdiction (see Figure 1 for project location). Primary among the issues discussed was the project's archaeological component.

At that meeting, it was determined that Fort Totten, which is a New York City Landmark¹ (Figure 2), has been the focus of several archaeological assessments over the years. These have included literature searches and field surveys (shovel tests and excavations) conducted throughout much of the former army post. Most recently, it also included a monitoring program at the fortifications on the northern tip of the peninsula. Consequently, it was agreed that archaeological issues related to the two tasks under consideration—that is, creation of North Park and a comprehensive Master Plan for the land under Parks' jurisdiction—could be presented in a memo prepared for review by Parks and the LPC. The memo was to address the potential archaeological sensitivity of the North Park area, but it was also to consider past investigations on Parks' land. The memo was also to present any new research findings relevant to the tasks under consideration. Mainly this would address the archaeological potential of the proposed North Park where housing was constructed in the late 1950s to accommodate post personnel. These single and double houses—twenty-two in number and known as Capehart Houses—are typical of 1950s military housing (Dierickx 2007:6-7).² With the exception of three examples of this housing type, these structures, erected on Fort Totten in 1959, are scheduled for demolition to implement North Park. Until now, only a small part of this area has been the focus of archaeological investigation (e.g., Tetra Tech 1998:40). Consequently, documentary research was needed to assess the archaeological potential of this part of the project. Elsewhere, the findings of the reports discussed in the text and/or cited in the bibliography were used to determine archaeological potential throughout the area included in the Master Plan. The findings of these reviews and assessments are presented below.

¹ The Fort Totten Battery was designated a NYC Landmark in 1974, and the Fort Totten Historic District was created and designated in 1999 (Pearson 1999; Dierickx 2007:12). The fortifications were judged eligible for listing in the National Register of Historic Places in 1978 (Traceries 1998:13).

² Both the project's preservation report ((Dierickx 2007:7) and the earlier Fort Totten Historic District Designation Report (Pearson 1999:16 fn) note that the Capehart houses were named after Senator Homer E. Capehart, an Oklahoma Republican, who sponsored this housing in military bases throughout the country.

Maps reproduced in many reports were consulted³ as were several provided generously by Linda Stone. Others were located at the Harbor Defense Museum at Fort Hamilton in Brooklyn⁴ and the National Archives (NARA), Cartographic Division, in College Park, MD. These data were augmented by published and unpublished histories, historical notes, designation reports and nominations, and original documents, the latter also located at NARA in Washington, DC.

Fort Totten--its land now divided among the U.S. Army, the Coast Guard, the New York City Fire Department, the Eastern Paralyzed Veterans Association as well as Parks--dates to the beginning of the Civil War. In 1862, the government acquired a long-established farm on the peninsula that jutted into Little Neck Bay. The proposed fort on the northern end of the peninsula was intended to expand the defense of the harbor provided by Fort Schuyler on Throgs Neck in the Bronx across the bay. Ownership of the farm can be traced to 1639 when the land was patented to William Thorne and known as Thorne's Point. In 1778, it passed from the Thorne family to William Wilkens, and then, in 1829, from Wilkens' heirs to Charles Willets, a local nurseryman, who named it Willets Point or Neck (Pearson 1999:10).

Willets established a nursery and built a Greek Revival style house at the "Point" before his death in 1832. In 1857, his heirs sold the property to George Irving, the last private owner. After a brief ownership, Irving sold his 110 acres to the U. S. Government (e.g., Gaines 1996:9-12; Pearson 1999:10).⁵ The original site was expanded in 1863 when the government acquired 26 and 35/100 adjoining acres from Arthur Day of New York City, a lawyer, and his wife, Phebe (Liber of Deeds 204:208). However, construction of the planned fortifications did not begin until 1864, a project that was quickly revised from four-tier to two-tier guns in casemates (to create a Water Battery) and then abandoned (Abbott 1879). At that time, temporary barracks became a temporary hospital. Known as Grant General Hospital, the hospital's five pavilions were better suited to their original purpose and were again used as barracks in 1865. While post documents do not identify the hospital/barrack's exact location, based on an 1866 survey, it may have been located south of the Parade Ground, that is, beyond the area of concern. Four post hospitals were erected sequentially during the 19th century, but, according to map data, only the last one, built between 1886 and 1890, was located within Parks' jurisdiction (three of these hospitals are illustrated in Figures 3 to 5).

NORTH PARK

North Park, as proposed, is situated on the east side of the peninsula, south of the historical fortifications (see Figure 2). The questions considered in this assessment are 1) what is the potential for prehistoric resources in this part of the site? 2) historically, what post structures were located in the North Park area? and, 3) how has this area been used and altered over time to effect potential prehistoric and historic-era resources?

³ It should be noted that some maps repeatedly reproduced and consulted in the archaeological reports (e.g., Tetra Tech 1998, 1999) appear to document a confusing construction history when it actually is a matter of chronological misidentification. For example, a building shown on the 1875 map in the Tetra Tech reports was not built until after 1886.

⁴ I am very grateful to Richard Cox, Director/Curator of the museum for his help and generosity.

⁵ A well-researched report by William C. Gaines (1996), which is cited here, is recommended for details of the fort's early history and its defenses over time as is the Berger report on Fort Hamilton and Fort Totten (Berger 1986, especially Section 7-30 to 7-39).

The Fort Totten peninsula undoubtedly was attractive to Native American populations. Situated a short distance across the bay from the Bronx, it would have been accessible from the Bronx mainland by water. Fresh water, an important factor, would have been available from a stream that still feeds a pond in the southwest part of the peninsula, beyond Parks' jurisdiction. Food was to be found in the salt marshes as well as in the bays. Good drainage provided by the northwest-southeast slope of the land was also an asset. However, the natural topography was disturbed initially by excavations carried out in anticipation of building extensive fortifications, and then when the terrain was worked over to build the fortifications and then to make and remake the army post (it has been said that the entire army base was "wholly redesigned in 1906" [Berger 1986:7-41]). But perhaps most tellingly, extensive archaeological testing and excavation elsewhere at Fort Totten has produced only scanty prehistoric evidence: 324 shovel tests and eighteen units excavated in 1996 and 1997 produced one projectile point, six stone flakes, and lithic (stone) debitage, suggesting a prehistoric presence but no intact features or sites (Tetra Tech 1999: 116).

When topographical data found on maps that extend back to the 1860s are compared with modern surveys, no major elevation differences are indicated once the defenses are constructed.⁶ However, contours have been altered if not lowered or raised, suggesting land movement. While this may have eliminated viable prehistoric sites, historical features have been documented through archaeological investigations (Tetra Tech 1998, 1999), and evidence of at least one early defensive feature (mortar battery/Battery King) is likely to remain in North Park. In addition, sanitary features, such as abandoned privies and cisterns that became the repositories of artifacts, as well as drains and other infrastructure, undoubtedly remain. These features, and in the case of privies and cisterns, their contents, can offer invaluable information about life on a 19th-century military post.

In 1871, an unnamed mortar battery was introduced on either side of what is now Sylvester Lane. Comprising four 6- to 8-foot deep pits excavated to house mortar guns, the facility was updated and renamed Battery King in 1898 (after Lieut. Colonel W. R. King of the Army Corps of Engineers), when it housed eight 15-inch guns (Gaines 1996:23; see Figures 6 to 8 for photographic images of the Battery). Filling of the mortar pits scheduled for 1932 was finally carried out in 1936, but not until the battery's "subterranean magazine spaces and communications galleries were fitted out for use as bombproof command posts." Although never used for this purpose, these features may still exist underground (Gaines 1996:53). It should be noted that a triangulated, fixed three-gun battery possibly in place by 1936 was situated in the vicinity of the filled Battery King, and two of its three guns were located within the limits of North Park (Seacoast Guns Installations and Fixed Guns 1936).

The hospital located within the limits of North Park was the post's most substantial 19th century medical facility that included an associated Death House and Ambulance Shed (see Figure 5). Built between 1886 and 1890, the hospital structure is documented on maps through 1910.⁷ The history of the post hospitals is found both in four leather-bound, handwritten volumes that cover 1868 to 1913 and in an excerpted, typewritten version compiled in 1946 that mainly includes

⁶ The datum used in field surveys since 1987 is 2 feet less than in the past, a circumstance that erroneously would suggest grading (Berman 2007:personal communication).

⁷ The most recent post hospital, named for Walter Reed, the post's Army Surgeon from 1875 to 1876, was erected in 1906 (Pearson 1999:54). It is building 304 within the New York Fire Department's jurisdiction.

information from the first volume of the original. Both are available at the National Archives in Washington, DC, but the typewritten excerpts are also available at the Harbor Defense Museum at Fort Hamilton in Brooklyn. The information in these volumes and other contemporary sources not only pertains to the illnesses treated and the numbers of patients in the hospitals, but also to prevailing sanitary conditions. Of note in an archaeological perspective are the references to privies and cisterns found long after the post was tied into the nearby Flushing water and waste management system in 1886 (Centennial 1957:15). These and other sanitary issues, as well as prevailing conditions, determine the archaeological resources to be considered. For example, as noted previously, the earliest post hospital was the General Grant Hospital. What has been described as a "Temporary" facility, it functioned for exactly one year, from June 1864 to June 1865 (Medical History 1946:4). Although the hospital's location has not been identified, its configuration described in the Medical History and documented in a contemporary photo (see Figure 3), and map data (Figure 9) suggest it was located south of Parks' jurisdiction. Five years after it closed, the facility was described as "Old hospital buildings, now in ruins, built in 1864; all wood, without proper foundations or roofs" (Meigs 1872:170).

This first temporary hospital was replaced in 1866 by a second temporary medical facility also beyond Parks' jurisdiction. An entry in the Medical History documents treatment of 137 patients during the first six months of operation. By 1871, this double building joined by a covered walkway had been altered to become the post's "School, Library, and Band Barracks" (Abbott 1871), and a new hospital, begun in 1867 or 1868, was in use but not completely finished (DeWitt and Janeway 1870; see Figure 10). Bathrooms are noted on the first floor of the new hospital, as were tanks to supply "sufficient" water to both the bathrooms and the hospital's water closets. However, there was also a 13 by 6-foot "sink" [privy] divided into two "apartments" for the use of the "convalescents and attendants" (DeWitt and Janeway 1870). This reliance on privies is also documented at the fourth post hospital, built between 1886 and 1890 within North Park in the vicinity of Building 425 (see Figures 5 and 11).

In 1885, the heating and sanitary facilities in the third hospital, lauded when it was constructed in 1868, were declared inadequate (Medical History 1868-1913:120). Despite the water closets in the building's original design, the May 31, 1885, report notes "There are no water closets—it is in such condition that it will be a source of constant expense even if it was adapted to the purpose." This suggests that privies may have continued in use or may have been adopted later, and entries in the Medical History make references to cleaning and sanitizing "sinks" into the 1890s. For example, it was noted in 1885 that "10 Barrels of lime, 2 barrels of Chloride of lime, 1 barrel of carbolic acid, and 1 barrel of sulfide of iron" were used as disinfectants (Medical History 1868-1913:115). In 1886, twenty-seven cisterns are documented on the post, fourteen of them in the project area (Anon. 1886; see Figure 12), and as late as 1890, the number of documented cisterns had increased to thirty-three, seventeen in the project area. In addition, a well in association with an 1867 Guard House, one of five wells documented in 1890, is also in the project area (King 1890: see Figures 13 and 14). Unfortunately, privies are not depicted on available maps, but in 1892, undoubtedly prompted by a Cholera epidemic in New York City, the directive was given that "all privies will be cleaned, those not in use be filled" (Medical History 1868-1913:275), indicating they were still extant on the post. Privies were the post's earliest toilet facilities, although earth and water closets are also documented. A large cistern is noted in the

Medical History that is described as a 7-foot deep, 30 by 50-foot oval (Medical History 1946:33), but its location is unknown. However, it was noted that "rain water collects [in the cistern] from the surrounding buildings," suggesting it was located within a building cluster. Water from this and other cisterns was used for washing rather than drinking or cooking. Drains were also an early form of infrastructure noted in the Medical History. Intended to channel water from the local swamps, they also may have removed water and human waste from water closets and water-flushed "sinks." By 1898, reports of the post surgeon consistently document the drainage as "good—Sewerage Complet—Water Supply: Excellent" (Medical History 1868-1913 Vol. 4:8). However, the privies, wells, cisterns, and drains noted and documented at the post before this are potential archaeological features that might be encountered during development of the North Park where excavations will occur to accommodate tree balls or to introduce drainage and other infrastructure.

PREVIOUS ARCHAEOLOGICAL AND RELEVANT HISTORICAL REPORTS (in chronological order)

As noted above, the Fort Totten Battery was designated a New York City landmark in 1974, and the Fort Totten Historic District was created in 1999. A number of cultural resources reports and historical studies were produced in connection with these applications and for historical investigations. Consequently, the fort's history has been written and rewritten repeatedly in varying detail. In 2000, as part of an archaeological assessment for Beyer Blinder Belle's Historic Preservation and Interpretive Plan, Linda Stone created an annotated bibliography, which is presented here, to "prevent additional duplication and to help navigate through [them] and other locally available documentation"; in 2005, she prepared a report on monitoring carried out in anticipation of the introduction of drains within the historic Battery. Reports included in the annotated bibliography specific to archaeological surveys, as well as Ms. Stone's two reports and a later Tetra Tech report with my annotations, are as follows:

Fort Totten Centennial Celebration Committee

1957 *100th Anniversary of Fort Totten, N.Y. 1857-1957*. Privately printed. On file at the Fort Totten Historical Center. [and the Harbor Defense Museum, Fort Hamilton, Brooklyn]

This small pamphlet produced after the Fort Totten centennial celebration discusses both the history of events occurring at the fort as well as a concise history of the fortifications. The fortification history is informative in providing not only construction dates, but also data on specific guns and mortars emplaced at Fort Totten. However, once again there is a lack of clarity in the discussion of the history of the earthen barbette batteries as well as unsubstantiated claims regarding the existence of guns at the water battery.

Lindenbusch, John H.

n.d. Fort Totten, New York: An Evaluation of its Historical Significance. On file at the Bayside Historical Society.

This undated 38 page report was likely written prior to 1974 when Fort Totten was designated a New York City landmark. The history is presented in a way to bolster Fort Totten in a broader context with a hopeful result being a landmark or National Register designation. It highlights Fort Totten's uniqueness in demonstrating the developmental changes in military technologies. The history is presented in a readable, story-like way. The distinction between the earthen barbette batteries and the Endicott period batteries is

unclear. This is also the only report which suggests the reason for not completing the five-sided water battery was that terrain "rendered it unnecessary" rather than discontinuation of funding.

The final section of the report is a program for future utilization of the Fort Totten Military Reservation as a state historic park. The plan is ambitious, though not in-depth, proposing conventional museum-type uses for many buildings in addition to outdoor walkways containing interpretive markers.

Louis Berger & Associates, 1986

A Cultural Resource Overview and Management Plan, For U.S. Army Property. Fort Hamilton, Brooklyn, New York, Fort Totten, New York. Contract #CX-4000-4-0072. Terry H. Klein, Principal Investigator. Prepared for [the] National Park Service on behalf of the United States Army. On file at the United States Army Corps of Engineers-New York District. This report was prepared under the auspices of the National Park Service and includes two separate sites. It is informative but also somewhat confusing since discussions of Forts Totten and Hamilton are intertwined. As a result, information on Fort Totten must be carefully culled out, rather than the reader focusing their attention on specific report sections dealing exclusively with Fort Totten. In contrast, a report appendix called "Fort Totten: Historic Overview," summarizes the history of Fort Totten and is a good place to start for an orientation of literature of the site. Interestingly, this is the only part of the lengthy report which acknowledges the barbette batteries and related defensive works of the 1870s.

The management plan section of this report contains well reasoned recommendations for Fort Totten. It clearly defines the site's significance in National Register of Historic Places terminology and bases its recommendations on these interpretations. Unfortunately, the accompanying maps and plans illustrating the management plan's points were not included in the report. This omission reduces the clarity of the report recommendations.

Gaines, William C.

1996 *Fort Totten and the Coast Defenses of Eastern New York*. Champaign, IL: Scarp Associates.

This 86 page treatise is the single most comprehensive scholarly volume on the history of Fort Totten and is, in essence, the article Gaines published in the 1977 Coastal Defense Study Group Journal. It is based mainly on primary documentation, unlike the other reports in this bibliography. The book is organized chronologically, beginning with background on New York City's coastal defenses at the end of the eighteenth century. It presents the reasoning behind the need for a fort at Willets Point and discusses the fort's history in this broader context throughout. This well-footnoted report is recommended reading for anyone who wants a detailed account of Fort Totten's history. However, the report still leaves open some questions. Gaines states the original plan of the fort was triangular, without providing a footnote to a primary source. This triangular, as opposed to pentagonal, plan was not uncovered during our research into primary sources such as archival drawings.

Tetra Tech, Inc., 1998

A Phase IA/B Archaeological Survey of Fort Totten, Queens County, New York City, New York. Contract Number DACA01-96-D-0011. May 15, 1998. Prepared by Paula Bienenfeld and Hope Leininger. Submitted to the United States Army Corps of Engineers-Mobile District. On file at the United States Army Corps of Engineers-New York District.

This report deals exclusively with archaeological testing. It is the only such report in this category, although a number of the other cultural resources reports contain archaeological sections. This report describes a survey of the BRAC (base realignment and closure) property which appears to include the current project area. The maps in the report are not clear. This survey report contains standard sections on the physical/environmental setting, background research and sensitivity assessment, as well as sections relating to the fieldwork Tetra Tech conducted in the central parts of the Fort Totten Military Reservation. The brief historic overview section relies mainly on the works of Gaines, Timelines, and Traceries rather than on any primary documentation. In discussing archaeological sensitivity, Tetra Tech feels there is no prehistoric archaeological potential in the areas on the defensive works because of previous disturbances, mainly from construction of the fort and batteries. Nor do they feel there is archaeological potential in this area for resources dating from the pre-military historic period for the same reasons. However, this report does not provide details, such as analyses of historic filling and grading, to substantiate writing off these periods. This report also disagrees with Berger regarding the possibility of archaeological remains from the military use period. Tetra Tech feels the [W]ater [B]attery was built directly into bedrock and the concrete batteries' very steep foundations make it doubtful any archaeological remains from these features could still exist. Although they do not explain why steep foundations would eliminate archaeological features associated with their construction. Nor do they discuss archaeological potential related to other defensive works in this section of the project area. This being said, Tetra Tech recommends archaeological monitoring around Battery King, should below ground disturbances be planned in that area.

Tetra Tech, Inc., 1999

A Phase II Archaeological Investigation of Fort Totten, Queens County, New York City, New York. Contract Number DACA01-96-D-0011. May 15, 1998. Prepared by Hope Leininger and Paula Bienenfeld Planning and Environment Division, Mobile District, U. S. Army Corps of Engineers, P. O. Box 2288, Mobile, Alabama, 36628-0001. On file at the United States Army Corps of Engineers, Mobile District.

A summary of previous studies and presentation of the findings of further field investigations in Sections A, B, C, D, E, F, and G. No viable evidence of prehistoric use was found, and it was concluded that prehistoric considerations were not an issue. Foundations were encountered within the Parade Ground, but specific associations for these findings were not identified, nor were they made for a trash pit and "modern" columns. A total of 7,135 artifacts were recovered from three areas (A, B, C), 9 of them prehistoric flakes or debitage, the others historic-era material. The report concludes that recovered prehistoric material did not warrant further testing. It also found sections of the Parade Ground (Section A and Section B) eligible for listing in the National Register of Historic Places.

Stone, Linda in Beyer Blinder Belle, 2000

Beyer Blinder Belle, 2000. Fort Totten Battery, Historic Preservation & Interpretive Plan, Prepared for State of New York Northeastern Queens Nature and Historical Preserve Commission, City of New York/ Parks & Recreation. Sponsored by Empire State Development. Contracted by Historic House Trust of New York City. Produced by Beyer Blinder Belle Architects & Planners LLP.

Stone notes that three reports she reviewed-- Berger (1986), Timelines (1989b), and TetraTech (1998)--concluded there is a high potential for prehistoric resources in the fortification zone

where there has been no historic-era construction. She also notes that the New York State Museum found that prehistoric resources were an issue based on environmental conditions. However, despite the archaeological potential of the Fort's defensive works, *major construction disturbances* have occurred. Moreover, she found the lack of topographical analyses a flaw. Stone developed a table that examined elevations and recommended analysis of topographical conditions prior to ground disturbance in the defensive zone. Her analyses also indicated that construction would have destroyed historic era sites, such as the original location of the Willets' summer residence on the point and another building near the dock. However, outbuildings and roads within the fortification zone might remain, as might evidence of early defensive structures and associated buildings. She recommended manual and machine testing in this area should research fail to provide adequate documentation of these resources.

Stone, Linda, 2005

Report on Phase 1B Archaeological Testing at Fort Totten Battery Located at Willets Point, North of the Cross Island Parkway and East of the Throgs Neck Bridge, Queens, New York. Prepared for Advance Buildings, Inc., Brooklyn, New York. December 3, 2004, Revised April 15, 2005.

At issue was the potential for pre-Contact Period archaeological resources within the historic Fort Totten Battery. Screened material from six shovel tests conducted in 2004 where the introduction of infrastructure was planned within the battery recovered eighteen artifacts, none of them considered significant. However, *it was recommended that future work in historic sections of the fort consider changes in elevations to evaluate the likelihood of finding preserved archaeological resources.* No further archaeological work was recommended in relation to the proposed undertaking.

POTENTIAL ARCHAEOLOGICAL SENSITIVITY

Reports and assessments produced over the last two decades considered the archaeological potential of much of the land now within Parks' jurisdiction, noteworthy exceptions being most of the proposed North Park area, the western part of a section designated the NYPD Access, and another section designated Buildings 208, 209, and 211 on Totten Avenue for this report. The archaeological potential of the historic fortifications on the northern end of the post were considered in a 1986 management plan (Berger 1986) and, more recently, in a monitoring program (Stone 2005). In 1996 and 1997, field testing and excavations were carried out by Tetra Tech in areas designated The Historic Parade Ground and the Lower Parade Ground in the current master plan study as well as a small area in North Park, the eastern part of the "Village," and some of "Bay View Green," designations created for the Maser Plan study (see below). Only in the Lower and Historic Parade Grounds did in-ground investigations identify potentially National Register Eligible archaeological resources (Tetra Tech 1999:Appendix G; see Figure 16 this report).

Archaeological documentary reports and additional map and literature research identify former historical structures within Parks' jurisdiction--that is, within the areas included in the Master Plan. As noted above, sanitary features (wells, cisterns, and privies) and early infrastructure are mentioned in documents and depicted on maps. For example, maps document three substantial barracks erected in 1870, two of them located on the west side of what is now the Lower Parade Ground, each with two associated cisterns. Table 1 presents a construction history that identifies buildings erected within the project area between 1863 and 1898. While disturbance has been documented in the Fortification Zone (e.g., Stone 2000), and has occurred throughout the post

(Berger 1986:Section 7-41), historic-era resources more than prehistoric resources continue to be an issue. Urban archaeological studies have proven just how tenacious these resources can be, and research has shown that many of the post's early structures were located in areas within Parks' jurisdiction. Moreover, subsequent development or disturbance in many of these areas—such as the Historical and Lower Parade Grounds—has been minimal. This is also true of the North Park area where the 1950s Capehart houses were constructed on piers rather than on basement foundations.

The project area is divided into sections identified on the plan for “Demolition of Structures and the Construction of a Passive Landscape at Fort Totten – Concept and Design” (Owens 2007). These labels are augmented by the letter designations (A through G) assigned for archaeological purposes in the Tetra Tech reports. Those areas lacking specific labels are identified here by current building numbers (e.g., one section is designated “Buildings 333, 334, 335,” another “Buildings 208, 209, 210, 211”) and their general location. Features identified as potentially sensitive are indicated in Figure 20.

Fortification Zone:

Although archaeological considerations in this designated historical area have included shovel tests and monitoring, there has been no extensive investigation. Among the zone's potential sensitivities are remnants of structures associated with the Charles Willets 1829/1830 summer residence as well as extant pos-Civil War fortifications. The Willets' house had become the Engineer's Office before being moved in 1868 to what is now Totten Avenue where it was reconstructed. It has been noted that construction of Battery Sumner, originally part of Battery Mahan when constructed in 1898 but renamed Battery Sumner in 1903 (Gaines 1996:22-23), would have destroyed any remaining Willets' foundations, however, evidence of outbuildings might be found (Stone 2000:4-5). Beyond existing fortifications, historical structures formerly located in this zone include an Engine House and workshop by 1886 and, by 1890, the Old Torpedo Laboratory, a new Engine House, a coal shed and cable tank, an ordinance store house, and an Operating Casemate. Figure 15 shows this area in 1947 with historical building locations indicated, most of them on the west side of the zone.

North Park:

The eastern half of Battery King, erected as an unnamed mortar battery in 1871 and remodeled and named in 1898, undoubtedly remains in some form, possibly as underground “Command Posts” created prior to filling in 1936. In 1998, the Tetra Tech report recommended archaeological monitoring around Battery King. A photograph from the 1920s suggests the depth of the mortar pits at that time (see Figure 8). In addition, evidence of the post's fourth and last 19th-century hospital (see Figure 5) and an associated Death House and Ambulance Shed may survive. All were constructed sometime between 1886 and 1890 in the vicinity of Building 425. It is also possible that remnants of an Ordinance Store House erected by 1890 in the eastern part of the North Park section may be encountered since the late-1950s Capehart houses constructed throughout North Park lack foundations.

Table 1. FORT TOTTON Construction History (1863-1898) Within Parks' Jurisdiction*

Date of Map/Source	Battery/Fortification Zone	North Park (includes (E))	Lower Parade Ground (B)	Historic Parade Ground (A)	Village (C)	Bay View Green (D), Parking/ NYPD Access	Buildings 207, 208, 211 [Totten Avenue]	Building 422 [N of Parade Ground]	Remarks
1863	Initial work on fortifications; "Dwelling House" 1829/ 1830 (Willets' Summer Residence)	---	---	---	No information	No information	No information	No information	Highest contour 72 ft
1864**	1 structure?; (and fortifications, e.g., beginning Water Battery); dwelling remains	---	---	---	No information	No information	No information	No information	
1866	1 structure (and fortifications); Dwelling becomes "Engr Office"	---	2 structures: Unid (1 in general location of 1871 Sutters, but a new building)	2 structures: 1 Unid and "Comdg Officers Quarters" (2 of 7 proposed Officers Quarter buildings in this area; never built)	No information	1 structure: Unid (becomes Mechanics Quarters by 1886)	No information	---	Temporary hospital S of North Park
1867-1868	[Engineer's Office moved]	---		?	No information	2 structures: 1 Unid (as above); Guard House with basement cell	Former Willets' residence ("Engr Office") moved from Point to what is now Totten Ave; remodelled as Commanding Officer's House	---	Willets now #211 (De Bellis 1992:29; Pearson 1999:48); Guard House (Medical History 1946:22)
Medical History 1869-1913	?????	---	1 structure: Bowling Alley	---	---	---	Same as above	---	
1870 Gaines 1992:14, 16	Barbette Batteries planned [still incomplete in 1875]	---	2 structures: Bowling Alley; "Sutler" (removed to construct barracks)	3 structures: "Officers Quarters" S of Parade Ground as then configured	1 structure: "Eng ^r Office"	Same as above	2 structures: "Com'd Officer" (#211); 1 Unid	Post Garden, no structures	Partial map; "Sutler" building near/on site of new Company A barracks
1871; Gaines 1996:14	?????	1 structure: E half of "Mortar Battery"	4 structures: 2 Barracks (Company B & C); "Sutler" relocated, but still in Lower Parade Ground; Bowling Alley	4 structures: 3 as above and a 4th new officer's quarters (2 each for married and unmarried men)	2 structures: "Ordinance Sergeant"; "Eng ^r Office"	Same as above	Same as above	3 buildings on S side of garden; middle one, "Head Qtrs," located in project area	Mortar Battery (Battery King in 1898); relocated Sutler building poss in project area

Table 1. FORT TOTTON Construction History (1863-1898) Within Parks' Jurisdiction* (continued)

Date of Map/Source	Battery/ Fortification Zone	North Park (includes (E))	Lower Parade Ground (B)	Historic Parade Ground (A)	Village (C)	Bay View Green (D), Parking/ NYPD Access	Buildings 207, 208, 211 [Totten Avenue]	Building 422 [N of Parade Ground]	Remarks
1873	?????	Same as above	Same as above	Same as above	3 structures: Chapel; "Ordinance Sergeant" "Eng Office"	Same as above:	Same as above, with formerly Unid now labeled "Mr Oxholm"	Same as above	3rd hospital officially opens S of North Park, not in project area
1879	?????	1 structure: "Laborers Quarters"	Same as above; Barracks for Companies "A & B" now designated "B & C"	Same as above, but former Commander's Quarters now quarters for unmarried officers, includes a Mess	Same as above	Same as above, but no labels	Same as above, but now "Mr. Oxholm" Unid	Same as above	
1886	2 structures: "Engine House"; "Work Shop"	Same as above	Same as above; Cisterns indicated at barracks	Same as above	4 structures: Ordinance Sergeant with cistern, Chapel; "Eng Office"; 1 Unid	3 structures: 1 Unid; former Unid "Mechanics Qtrs" with outbuildings; Stable; "Guard House"; all but Guard House with cisterns	Same as above, but now "Mr. Oxholm" "Assist Eng's"	Now double building "New Officer's Qrs" with cisterns & 1 outbuilding	
1887							<i>Officers' Mess/Club [The Castle]</i>		Now #208 (Pearson 1999:46)
1890 (Gaines 1992:21)	Endicott Batteries begun 1891; 6 structures: "Old Torpedo Laboratory" (#78); Engine House with cistern (#50); Work Shop demolished; Cable Tank (#89); Ordinance Store House (#101); Coal Shed (#75) Operating Casemate (#76)	5 structures: E half of Mortar Battery; Hospital (#52); "Death House" (#91); "Ambulance Shed" (#92); "Ordinance Store House E.D." (#101);	4 structures: 2 Company Barracks (#21-22); Sutler's becomes "Sergeant Major's Qrs" (#86) with associated cistern; "New Company Rears" (?) (#102); Bowling Alley gone	3 structures: Same as above, but Unmarried Officers/ Mess demolished	5 structures: Chapel (#37); <i>Engineers Museum (New)</i> (#90; now Building 637; former Ordinance Sergeant bldg now Asst Instructor in "Sub marine Mg" (#45); new Ordinance Sergeant (#16); "Engineer Office" (#68)	3 structures: Guard House (#36); "Mechanics Quarters" with well and out buildings (#70); Coal Shed (#104)	3 structures: "Commanding Officer's Quarter" (#1) with cistern; Officers <i>Mess [The Castle]</i> (#53); "Asst Eng'r Qtrs" (#57) with cistern	Same double building "Officers Qtrs" (#47 & 48) & 2 out buildings	Highest contour 70 ft; all structures numbered & named
1895	Same as above (?)	Same as above	2 structures: Sgt Major's (#86); Officers' Quarters (#6) in vicinity of demolished Company B barracks	All structures demolished; Parade Ground extended S c. 150 ft.	Same as above	2 structures: Guard House demolished, others remain	Same as above	Same as above	

Table 1. FORT TOTTEN Construction History (1863-1898) Within Parks' Jurisdiction* (continued)

Date of Map/ Source	Battery/ Fortification Zone	North Park (includes (E)	Lower Parade Ground (B)	Historic Parade Ground (A)	Village (C)	Bay View Green (D), Parking/ NYPD Access	Buildings 207, 208, 211 [Totten Avenue]	Building 422 [N of Parade Ground]	Remarks
1897 (Pearson 1999:149)	No information	Same as above	Same as above	Same as above	[same as above]	Commissary Storehouse (#601)	Same as above	Same as above	
1898	Same as above re fortifications; 3 structures: Coal Shed (#75); Ordinance Store House (#101); Operating Casemate (#76)	Same as above	Same as above	Same as above	Same as above; Engineer Office now "Post School"	4 structures: "Mechanics Quarters"; Commissary Store House (Building 601); Coal Shed; 1 Unid	Same as above	Same as above	Willets Pt renamed Fort Totten; Mortar Battery re- named Bat- tery King; Post Gar- den beyond project area becomes "Engineers Drill Ground"; Site of Engineer Office / Post School severely graded 1904-1906

Note: Date of map is bolded; extant buildings outside the Fortification Zone erected prior to 1892 are italicized and bolded; abbreviations and numbers (#) on the 1890 and 1895 maps are as indicated (e.g., see Figures 13 and 14)

*Project area designations are those used in "Demolition of Structures and the Construction of a Passive Landscape at Fort Totten - Concept Design" (Owens 5/18/07) and, where applicable, includes archaeological section designations (A, B, C, etc.) used in Tetra Tech 1998, 1999. Area E is not included as it is not part of this project. Note: if not identified by name, building numbers are used to define an area.

**The location of Grant General Hospital, built as temporary barracks and used as a hospital for one year (June 1864-June 1865) is probably south of the Parade Ground, beyond the project area. Two subsequent hospital facilities located beyond Parks' jurisdiction were constructed between 1866 and 1873.

Unid = unidentified. Abbreviations and numbers on the historical maps are as indicated

In 1996, archaeological testing in a small portion of what is now included in the North Park area was designated Section E (Tetra Tech 1998:40). Located on the east side of the intersection of Murray and Abbott Roads, a total of seven shovel tests were excavated in the open area around Buildings 406 and 407, both Capehart houses. Testing recovered seventeen artifacts, including one oyster shell and one bone fragment; the other material comprised modern or historic-era objects or fragments. In addition, a possible post hole feature was uncovered.

Lower Parade Ground

Field investigations (Phase 1B testing) conducted in 1996 and more intensive testing in 1997 (Phase II excavations) in Section B uncovered “two intact building foundations, a refuse pit, and possible footers to a building,” all assigned a mid-19th to early-20th century date (Tetra Tech 1999:118). One of the features (B1), a foundation, was interpreted as a possible remnant of the Sutler’s building found on historical maps beginning in 1870 (see Figure 16 for the general location of this and other features in Section B). Foundation walls located in B2 and B3 were identified as “barracks for enlisted men” (Tetra Tech 1999:118). It is possible that these features, encountered 2 feet below the surface in the northwest corner of Section B along the sidewalk that separates the Lower and Historic Parade Ground, were the remnants of the most northerly of three barracks constructed in 1871. These 180-foot long structures, which had associated cisterns and possibly privies, were demolished by 1895. A building identified as “Officer’s Quarters,” was constructed by 1895 in the northwest corner of the Lower Parade Ground where the most northerly barracks had stood, but evidence of all these structures undoubtedly would be limited to building foundations, although, as noted, the 1871 barracks did have associated cisterns and possibly privies. The aforementioned Sutler’s building had become the Sergeant Major’s Quarters with an associated cistern by 1890. The 1890 post map also documents a building labeled “Company Rears” (see Figures 13 and 14). The archaeological features found during testing were judged eligible for Listing in the National Register of Historic Places (Tetra Tech 1999: Appendix G; see Figure 16 this report). Maps also document an unidentified structure (1866) and a bowling alley (1870) within this eligible area.

In addition to the historic-era features, a quartz projectile point, considered an “isolate”—that is, an unassociated find—was recovered in a pocket of buried A Horizon (original) soil at a depth of 6 feet below the surface in a large trash pit feature (Section B4) (Tetra Tech 1999: 93). This suggests a fill deposit of 6 feet in this part of the Lower Parade Ground.

Historic Parade Ground

Field investigations in Section A addressed selected areas of the Historic Parade Ground in 1996 and 1997. Features that included remnants of two foundations, a refuse pit, and a posthole were located during Phase 2 testing in the southern part of the section along Story Avenue (Tetra Tech 1999:116). Artifacts associated with the foundations suggested the second half of the 19th century as a timeframe, and map data were used to refine this date to post-Civil War. One feature (A1; see Figure 16 this report) was thought to be the site of the 1866 Commanding Officer’s Quarters; this may very well be the case, but, as presented, the interpretation is somewhat unclear. This may be because the Parade Ground was expanded to the south sometime after 1904 (possibly in 1906), thus causing confusion in regard to building locations. Figure 16 locates A1, A2, and A4.

In addition to the 1866 Commanding Officer's Quarters, the 1866 map shows two unidentified structures; it also indicates this was the location of two of seven proposed officer's quarters (see Figure 9), but these, like the five others, were never built. In 1870, the former Commanding Officer's quarters, now labeled simply "Officers Quarters," was located south of the Parade Ground as then configured. As mentioned above, this is now the southern end of the expanded Parade Ground. In 1871, this structure housed unmarried officers, and three more structures had been built to create a row of houses, two for married officers and a third for unmarried officers (see Figure 10). The original officers' quarters were expanded to include a Mess by 1879; this building was demolished by 1890. Figure 17 is a photograph of one of the 1871 barracks and Figure 18 shows the Parade Ground in 1890. Like the features found in Area B, those in Area A were also considered National Register Eligible (see Figure 16).

Village

Field investigations comprising a total of thirty-three shovel tests and two excavation units (trenches) were carried out in the eastern half of this area (Section C) by Tetra Tech in 1996-1997. These investigations uncovered what was interpreted as a post hole from the fort's original chapel and the foundation of a former fire station 2 to 3.7 feet below the surface. Artifacts comprised historic-era and "modern" material (Tetra Tech 1999:99-107, 115). The Chapel, built in 1873 (Figure 19) and destroyed by fire in 1939, was located in this area. The present Chapel was built on or near this site. The western half of the "Village," which has not been tested, was the location in 1871 of a house for the "Ordinance Sergeant" that was labeled the "Assistant Instructor in Submarine Mg" by 1886 (see Figure 12), both with associated cisterns according to the post's 1886 map. An "Engineer Office," first documented in 1871 and later the Post School, was located on a hill that was severely graded between 1904 and 1906. Two new buildings documented in "the Village" in 1890 include an Engineer's Museum and a residence for the Ordinance Sergeant.

Bay View Green, Parking/NYPD Access

Section D of the archaeological testing carried out by Tetra Tech in 1996 comprised the eastern part of Bay View Green (Tetra Tech 1998:40; see Figure 16 this report). A total of twenty-two shovel tests were carried out in the vicinity of Building 203, the Field Officer's Quarter's erected in 1905 (Pearson 1999:40). Testing produced twenty-two historic-era and modern artifacts (Tetra Tech 1998:40). The area designated NYPD Access, which was not part of Section D, was the location of several early structures. Among them were the Mechanics Quarters (1866) with a surrounding cluster of outbuildings (by 1886) and, perhaps potentially most sensitive, the 1867 Guard House with an associated well and privy. This structure was demolished by 1895 and the site, which may lie partially in the intersection of Totten Avenue and Duane Road, seems only minimally developed according to available map documentation (an Auto Shed stood on or near it from 1904 to 1928) (see Tetra Tech 1999; Figures 9-13). A coal shed is also documented (1890), as is the Quarter Master's Commissary Store House (1896/7) that still stands (Building 601) and an unidentified structure (by 1898), but these last two mentioned are not considered archaeologically sensitive.

Buildings 207, 208, 211 on Totten Avenue

Building 211, included in this section, is the Willets' summer residence, not in its original location, but in place since 1868. As discussed earlier, it became the Engineers' Office on

its original site and then the Commanding Officer's Quarters (apparently replacing those quarters originally south of the Parade Ground as noted above). A cistern associated with the building in 1890 is not indicated in 1886 (see Figures 12 and 13). In 1868, the relocated building may have had an associated outdoor privy. In 1890 or thereabouts, a fire damaged the building (De Bellis 1992:31; Polaski and Williford 2003:79), but despite this, and despite construction of nearby domestic structures in 1906, this section may harbor cisterns and privies as well as building elements associated with this and other early structures. Among them are a building unidentified in 1870 that became the Assistant Engineers by 1890 and the 1887 Officers' Mess, which still stands and is known as "The Castle." No archaeological testing has occurred in this section.

Building 422 North of the Parade Ground

A small section of the more northerly Post Garden lies within Parks' jurisdiction. A standing structure in this section (Building 422, Officer's Quarters constructed in 1909 [Pearson 1999:129]) is set back from the former site of a building identified as "Headquarters" in 1871 (see Figure 10) and expanded into a double building labeled Officers' Quarters by 1886 (see Figure 12). It is possible that foundations and sanitary features, such as two cisterns documented on the 1886 map, remain in front of Building 422.

RECOMMENDATIONS

Based on the findings of documentary research presented in this and earlier reports, and on field investigations and monitoring carried out in various parts of Fort Totten under Parks' jurisdiction, monitoring and/or testing related to excavations below 2 feet is recommended when conducted in the vicinity of the thirty-one structural features considered potentially sensitive (and, in some instances, proven so). These former and, in two cases, existing structures (some with multiple identifications) were, or are, located where no subsequent construction is documented, or where it has been minimal or remains a question. Former or existing structures that predate 1892, where cisterns and privies with artifacts may be an issue, are considered potentially sensitive.

It is also recommended that any soil boring logs and/or test pit data that become available should be reviewed by an archaeologist to determine the depth of fill throughout the land within Parks' jurisdiction. This would provide an invaluable record of subsurface conditions for assessing the likelihood of finding Native American resources. For example, the single projectile point, an isolate, recovered from a pocket of buried A Horizon soil at a depth of 6 feet documents 6 feet of fill in the area of discovery in the Lower Parade Ground. However, evidence of historic-era structures is found much closer to the surface. Also, an archeologist should review landscape or construction plans as they develop to determine if proposed actions will have a potentially adverse impact on an archaeological resource. If so, testing and/documentation may be called for if the potential impact cannot be mitigated by redesign. It is also hoped that some of the information provided in this report will be used to inform design as appropriate.

The structures and identified features of concern are numbered as indicated on Figures 15 (Fortification Zone detail, Nos. 1-8) and 20 (other sections in the Master Plan, Nos. 9-31) with construction dates provided in parentheses. It should be noted that the thirty-one identifications made here are a minimum number of potential features.

BIBLIOGRAPHY

Text References Cited or Reviewed

Abbott, Henry L., 1879. "Fort at Willet's Point, Willet's Point, N.Y. Harbor, June 30th 1879." Annual Report sent to Brig. Gen. H. G. Wright, Chief of Engineers, U.S.A., Washington, D. C. Annual Report for Fiscal Year Ending 30 June 1879, Submitted to Chief of Engineers. RG 77 Entry Box 38, File 307 NARA, Washington, DC (made available through Linda Stone).

Anon., Post-1945. General Defense Plans, Eastern Artillery District of New York, Est. 1906. On File, Harbor Defense Museum, USAG, Fort Hamilton, Brooklyn.

Berger, Louis & Associates, 1986. A Cultural Resource Overview and Management Plan, for U.S. Army Property Fort Hamilton, Brooklyn, New York, Fort Totten, Queens, New York. Prepared for the Office of Cultural Programs, Mid-Atlantic Region, National Park Service, On Behalf of the United States Army. Prepared by The Cultural Resource Group, Louis Berger & Associates, Inc., March 1986.

Berman, Anne, 2007. Personal Communication. Re: noted discrepancies between latest contour elevations and those from earlier surveys. Nancy Owens Studio, LLC., New York.

Beyer Blinder Belle, 2000. Fort Totten Battery, Historic Preservation & Interpretive Plan, Prepared for State of New York Northeastern Queens Nature and Historical Preserve Commission, City of New York/ Parks & Recreation. Sponsored by Empire State Development. Contracted by Historic House Trust of New York City. Produced by Beyer Blinder Belle Architects & Planners LLP.

Centennial, 1957. *100th Anniversary of Fort Totten, N.Y. 1857 – 1957*. Fort Totten Centennial Celebration Committee. Privately printed. On file, Box 8 Folder 1, Harbor Defense Museum, USAG, Fort Hamilton, Brooklyn. Also on File at the Bayside Historical Center, Fort Totten, Bayside, NY.

De Bellis, 1992. Historic Preservation Plan, Building 211, Fort Totten, New York. Prepared for Telemarc, Inc. Fairfax, Virginia for the U.S. Army Engineer District, Norfolk. Prepared by The Office of P. De Bellis, White Plains, NY.

Dewitt, G. and J. H. Janeway, 1870. Willet's Point, New York Harbor, Report of Assistant Surgeons G. Dewitt and J. H. Janeway, United States Army. On file, Box 8 Folder 5, Harbor Defense Museum, Box 8 Folder 5, Fort Hamilton, Brooklyn.

Dierickx, Mary B., 2007. Fort Totten Historic Landscape. Prepared for Nancy Owens Studio, May 22, 2007.

Gaines, William C., 1996. *Fort Totten and the Coast Defenses of Eastern New York*. Scarp Associates, Champaign, Illinois (courtesy of Linda Stone and Jack Fein).

BIBLIOGRAPHY (continued)

Text References Cited or Reviewed

Liber of Deeds, 1863. Henry Day and Phebe Lord, his wife, to the U. S. Government, April 14, 1863. Recorded May 9, 1863. Copy on file, Box 8, Folder 4. Harbor Defense Museum, USAG, Fort Hamilton, Brooklyn.

Medical History, 1946. Interesting Excerpts from a Manuscript Volume Entitled Medical History of the Post at Willets Point. Typescript. Covers the period from January 1, 1866 to January 31, 1873, and including a brief summary of the Post's History back to July 9, 1857, when the Post was founded. Volume I. Prepared at Fort Totten, New York 7/9/46, by the Office of the Special Assistant to the Commanding General, Atlantic Division, Air Transport Command. On File, Box 8 Folder 5, Harbor Defense Museum, USAG, Fort Hamilton, Brooklyn; also Two Volumes. NARA RG 393-16. Washington, DC.

Medical History, 1868-1913. MEDICAL HISTORY OF THE POST AT WILLETS POINT 1868-1913. Four Volumes. Handwritten (copied?) in 4 leather-bound notebooks. July 1868-June 1913, NARA RG 94 E 547. Washington, DC.

Meigs, M.C., 1872. Post of Willet's Point, New York Harbor (Fort at Willet's Point, Long Island). An Outline Description of U.S. Military Posts and Stations in the Year 1871. War Department Quartermaster General's Office, Washington, D. C. Government Printing Office.

Nancy Owens Studio, 2007. The Demolition of Structures and the Construction of a Passive Landscape at Fort Totten – Schematic Design, Bounded by the Cross Island Parkway, the East River and Long Island Sound, Borough of Queens. City of New York Parks and Recreation. Nancy Owen Studio LLC. 5/18/2007.

Pearson, Marjorie, 1999. Fort Totten Historic District, Borough of Queens, Designation Report. Prepared by Marjorie Pearson. Prepared for the New York City Landmarks Preservation Commission, June 1999.

Polaski, Leo and Glen Williford, 2003. New York City's Harbor Defenses (NY). *Images of America Series*. Arcadia Publishing, Charleston, SC.

Stone, Linda, 2005. Report on Phase 1B Archaeological Testing at Fort Totten Battery, Located at Willet's Point, North of the Cross Island Parkway and East of the Throgs Neck Bridge, Queens, New York. Prepared for Advance Builders, Inc. Submitted by Linda Stone, December 3, 2004. Revised April 15, 2005.

Tetra Tech, 1999. A Phase II Archaeological Investigation of Fort Totten, Queens County, New York. Hope Leininger and Paula Bienenfeld. Submitted to Planning and Environment Division, Mobile District, U.S. Army Corps of Engineers, Mobile, Alabama. Submitted by Tetra Tech, Inc. Falls Church, Virginia. June 1999.

BIBLIOGRAPHY (continued)

Text References Cited or Reviewed

_____, 1998. A Phase 1A/B Archaeological Survey of Fort Totten, Queens, New York. Paula Bienenfeld and Hope Leininger. Submitted to Planning and Environment Division, Mobile District, U.S. Army Corps of Engineers, Mobile, Alabama. Submitted by Tetra Tech, Inc. Falls Church, Virginia. May 15, 1998.

Tracerics, 1998. Historic Architectural Inventory Survey and Determination of Eligibility, Volume II, Fort Totten, Bayside, Queens County, New York. Prepared by Laura V. Trieschmann and Kathryn A. Gettings. Submitted to Planning and Environmental Division, Mobile District, U.S. Army Corps of Engineers, Mobile, Alabama. May 26, 1998.

Maps Cited or Reviewed

Abbott, Henry L, 1870, Willet's Point, NY. March 9, 1870. Respectfully Forwarded to Head Qutrs, Corps of Engineers, with Accompanying Letter of This Date to Show Proposed Location of New Barracks. Map 632. On file, Harbor Defense Museum, Fort Hamilton, New York.

_____, 1871. Map of Willet's Point NYH Showing Locations of Proposed New Buildings, 1871. Respectfully Forwarded to Chief of Engrs Wm Cullum with (?) this date Henry L. Abbott, Major of Engrs Comdg. NARA RG77 34-32, NARA College Park, MD.

_____, 1873. Willet's Point, N.Y. Feb. 20, 1973. Respectfully Forwarded to Chief of Engineers with Letter of This Date. Henry L. Abbott, Major of Engineers Comdg. 106; Approved Feb 24, 1873. On file RG77 34-34, NARA, College Park, MD.

_____, 1879. Map of Willet's Point N.Y.H. Showing Locations of Post Buildings, 1879. Scale 150' to 1". Proposed New Officers Quarters and New Position for Hospital Stewart's House – shown in red. Willet's Point Oct 28'79. Respectfully Forwarded to Chief of Engrs with Endorsement of This Date. Henry L. Abbott Major Engrs. On file RG77 34 - 32 NARA, College Park, MD.

Anon., 1947. Fort Totten Topographic & Utility Survey, Area No. 16. War Department, Corps of Engineers, Office of the District Engineers, New York, New York. Carman & Dunne Engineer & Survey Org. Map Made from June 2, 1947 Survey. Courtesy of Jack Fein, Curator.

_____, 1897. Map of a Part of the Post of Willets Point, N.Y. "C" Company [citation only partly legible]...S. O. 43 U.S. Engineering School, Willets Point, L.I. March 30, 1897. On file RG77 34-53?, NARA, College Park, MD.

_____, 1886. Map of Willets Point. Fort Totten Development. Cisterns and Wells are Indicated in "Red." Cisterns are Marked "C." NARA RG 77 34-36. College Park, MD.

BIBLIOGRAPHY (continued)

Map References Cited or Reviewed

_____, 1866. Tracing of Map of Willet's Point, L.I. 1866, Showing Proposed Fortifications and Officers Quarters. On file RG 77 34-36. NARA College Park, MD (also, Courtesy of Linda Stone).

_____, 1863. N°3. Plan of Willet's P^t, L.I. Engr. Dept. June 25th 1863, Copy sent to Mr. Throwbridge with letter of this date. NARA RG77 35-11. College Park, MD (also, Courtesy of Linda Stone).

King, W. R., 1890. Map of Willets Point, U.S. Military Reservation. Drawn Under the Direction of Lieut. Col. W. R. King, Corps of Engineers U.S.A. September 1890. NARA RG77 34 - 46. College Park, MD.

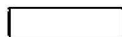
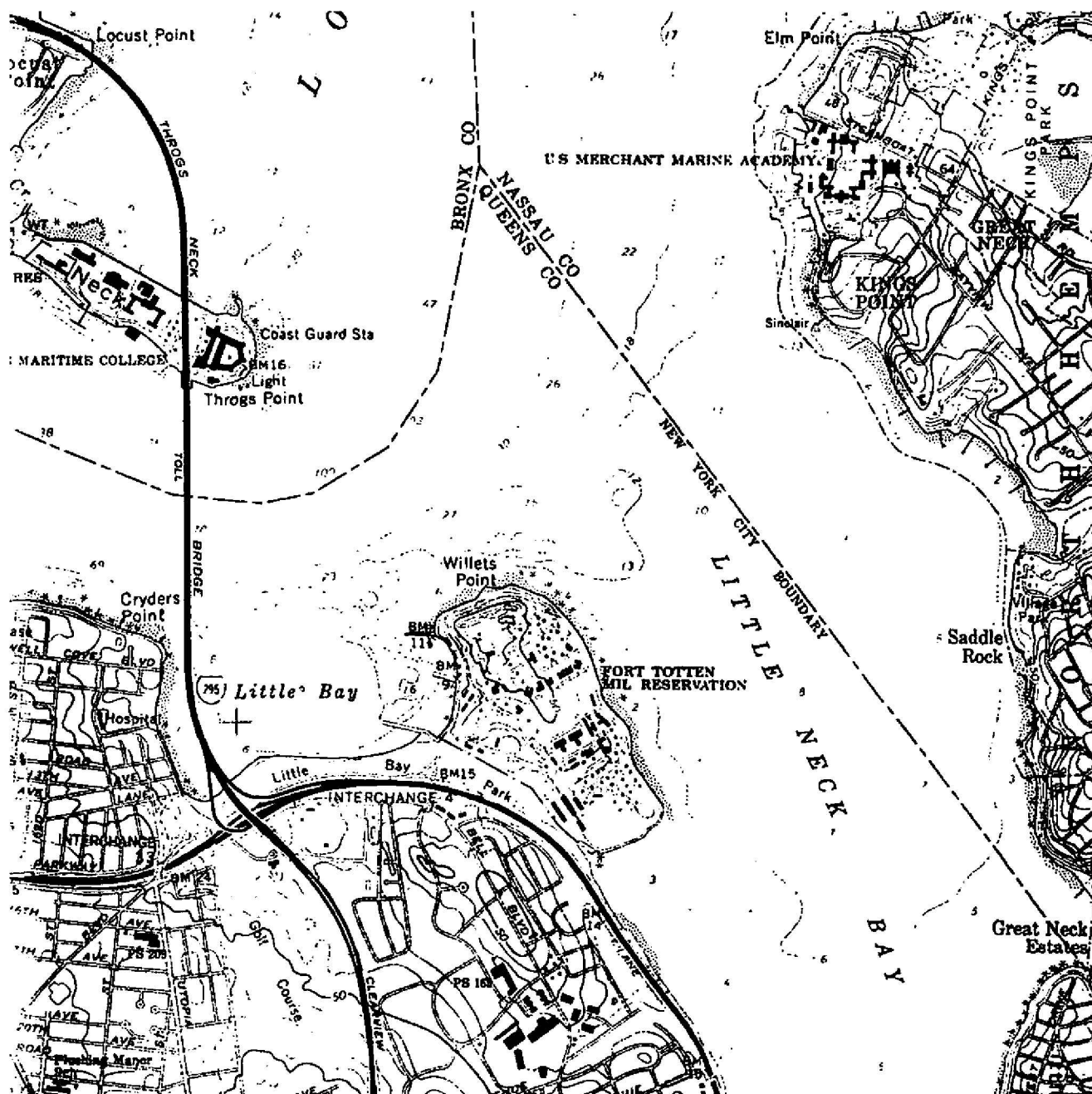
_____, 1895. Map of Willets Point, U.S. Military Reservation. Revised and Drawn under the Direction of Lieut. Col. W. R. King, Chief of Engineers, U.S.A. February 1895 (Courtesy of Linda Stone).

Knight, John C. D., 1898. Map of Willets Point, U.S. Military Reservation. Revised and Drawn Under the Direction of Major John C. D. Knight, Corps of Engineers U.S.A. September 1898. On file, Harbor Defense Museum, USAG, Fort Hamilton, Brooklyn.

Seacoast Guns Installations and Fixed Guns, 1936. NARA RG 77 34-?. Washington, DC.

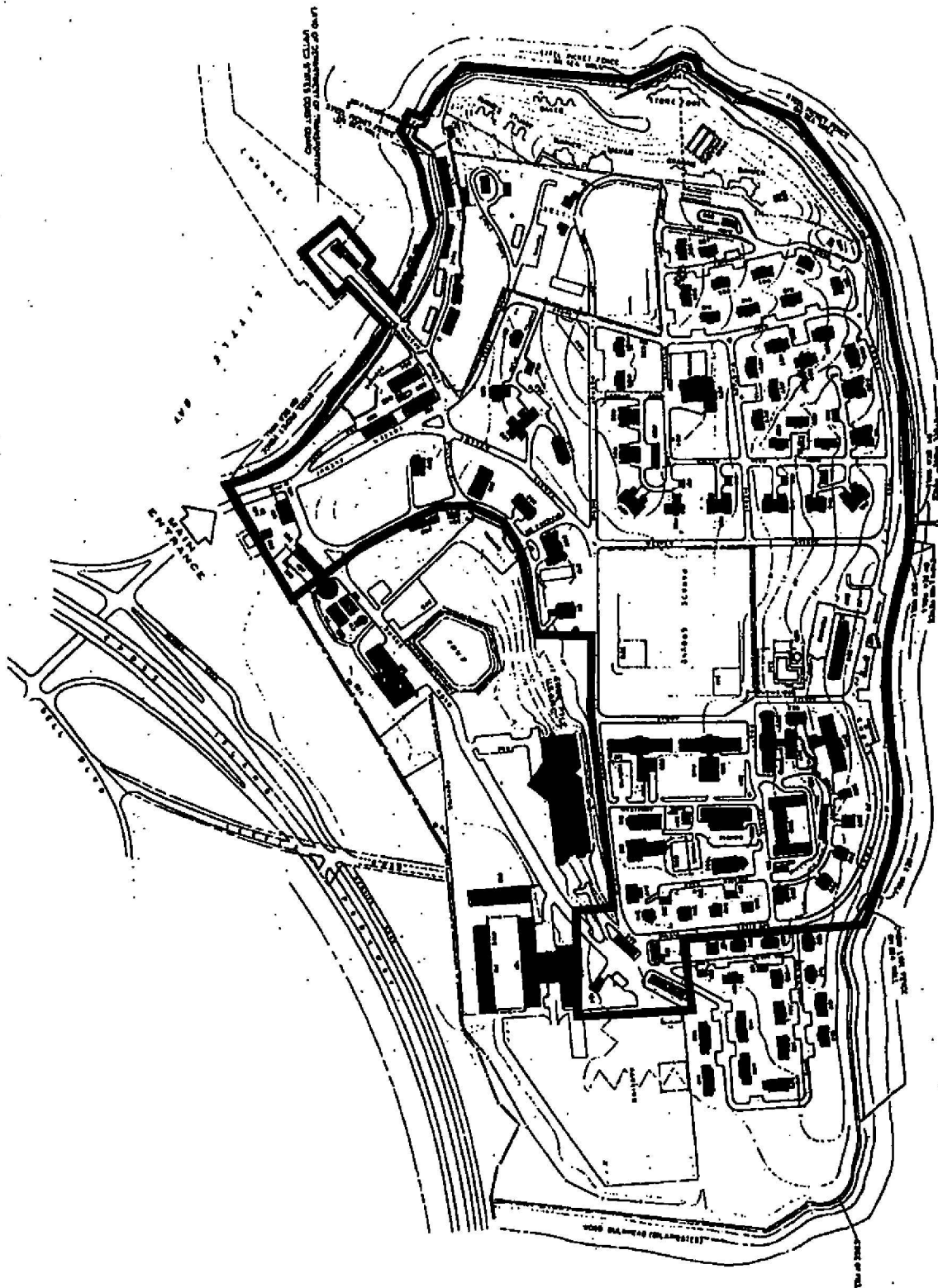
Trowbridge, W. P., 1864. Fort Totten at Willet's Point. Plan Showing the Progress of the Work, Excavations & Embankments. May 20, 1864. Drawn Under the Direction of W. P. Trowbridge, Engineer in Charge (Courtesy of Linda Stone).

USGS Flushing Quadrangle, 1966. Photorevised 1979. United States Geological Survey, Reston, Virginia.



project location

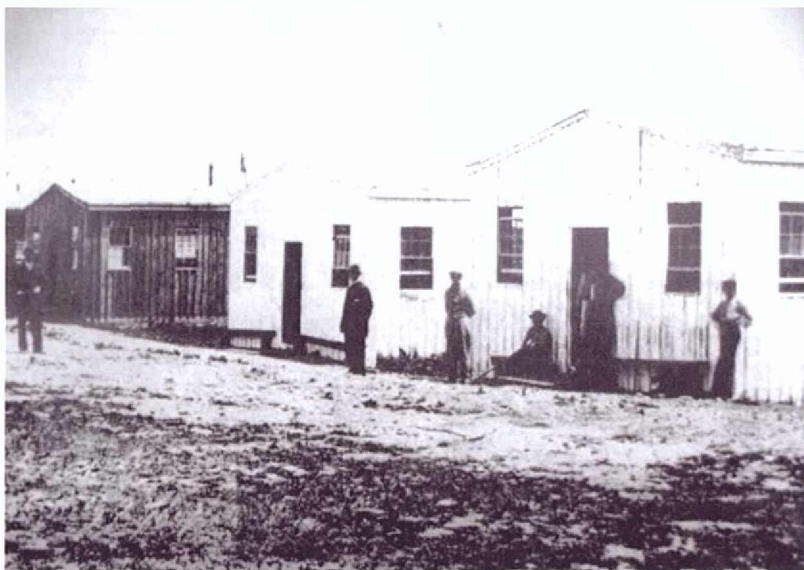




— Historic District

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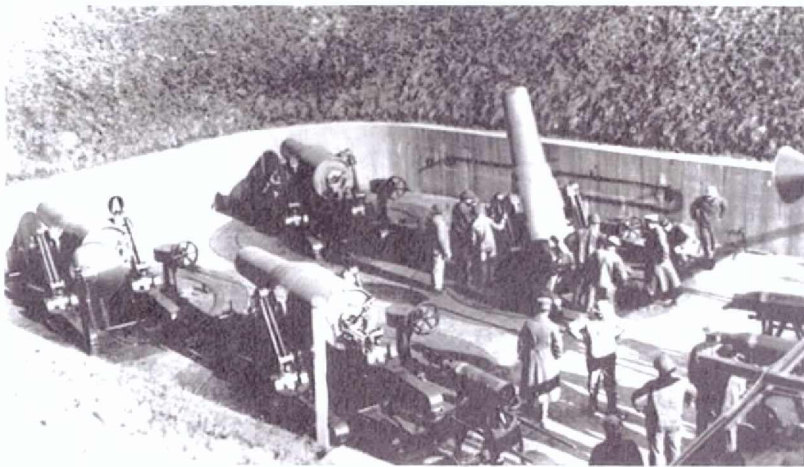
3 First post hospital (Grant General Hospital) believed to have been located in southern part of post beyond project area. The buildings, erected in 1864, were intended as temporary barracks which they became in 1865. (Photo courtesy of Harbor Defense Museum, Fort Hamilton)



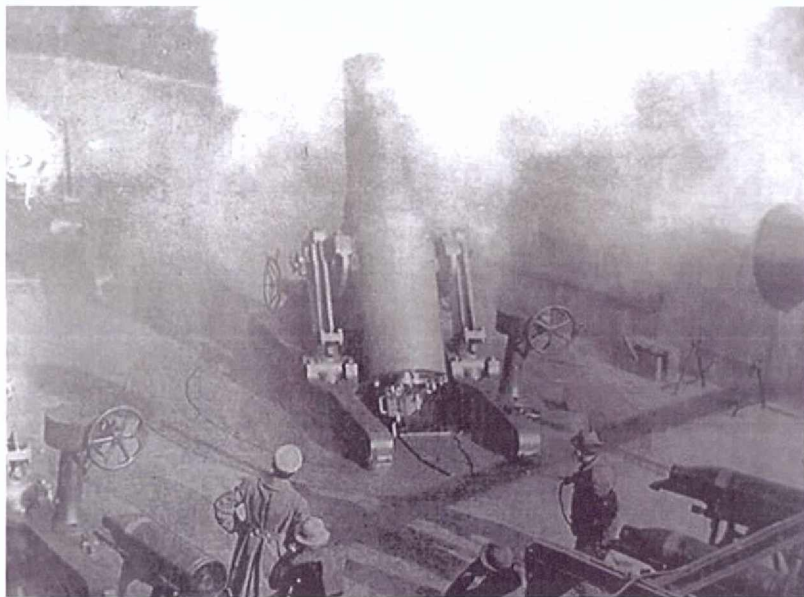
4 Third post hospital (begun before 1868, completed 1873) beyond project area. (Photo courtesy of Harbor Defense Museum, Fort Hamilton)



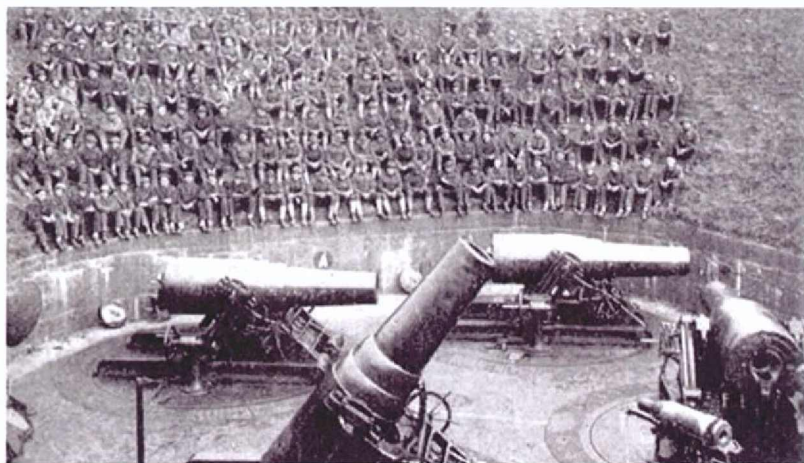
5 Fourth post hospital erected between 1886 and 1890. Located in the vicinity of Building 425 in North Park. (Photo courtesy of Harbor Defense Museum, Fort Hamilton)



6 Battery King during a loading drill. (Polaski and Williford 2003:87)



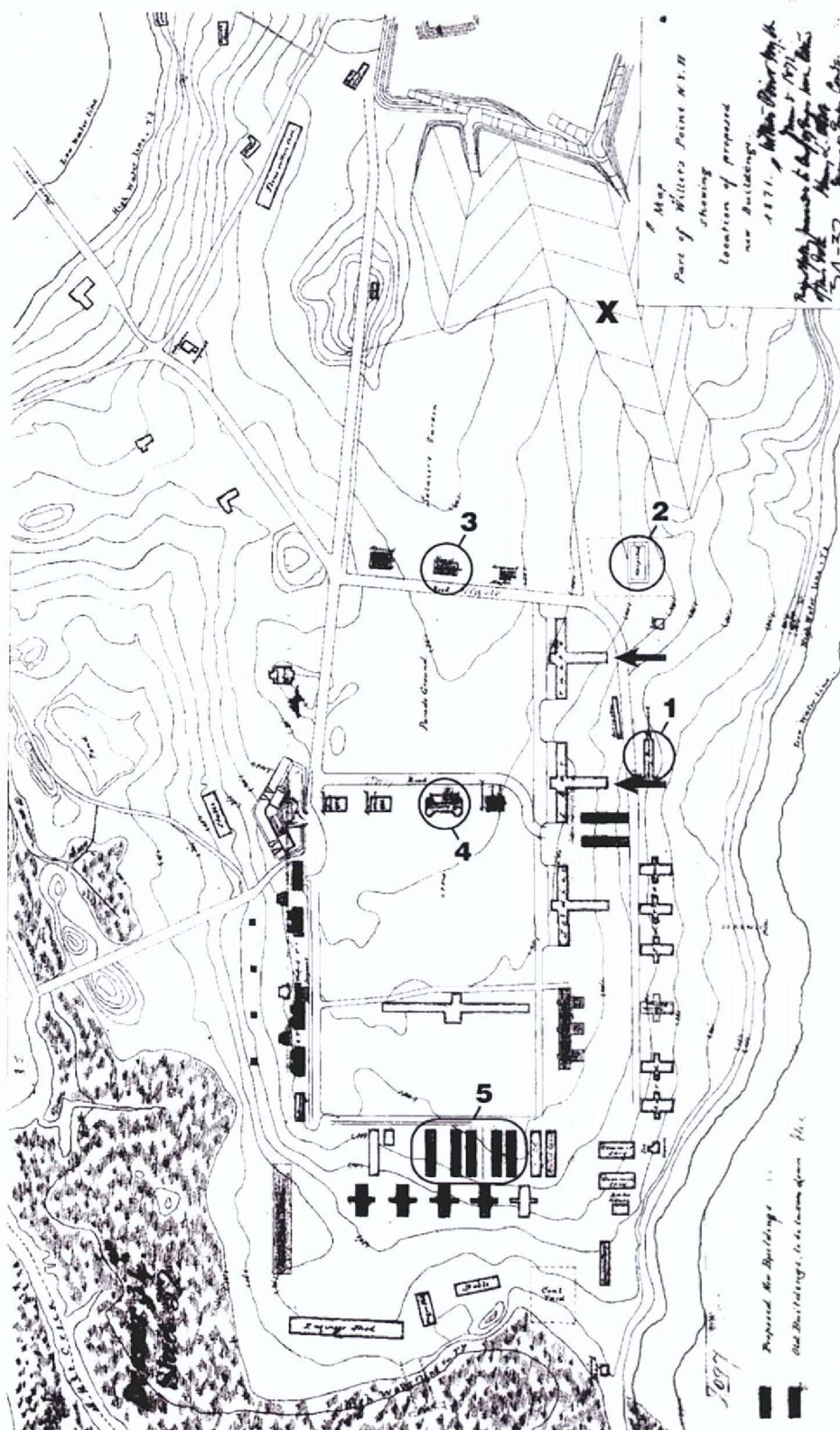
7 Mortar fired from what is believed to be Battery King, undated. (Photo courtesy of Harbor Defense Museum, Fort Hamilton)

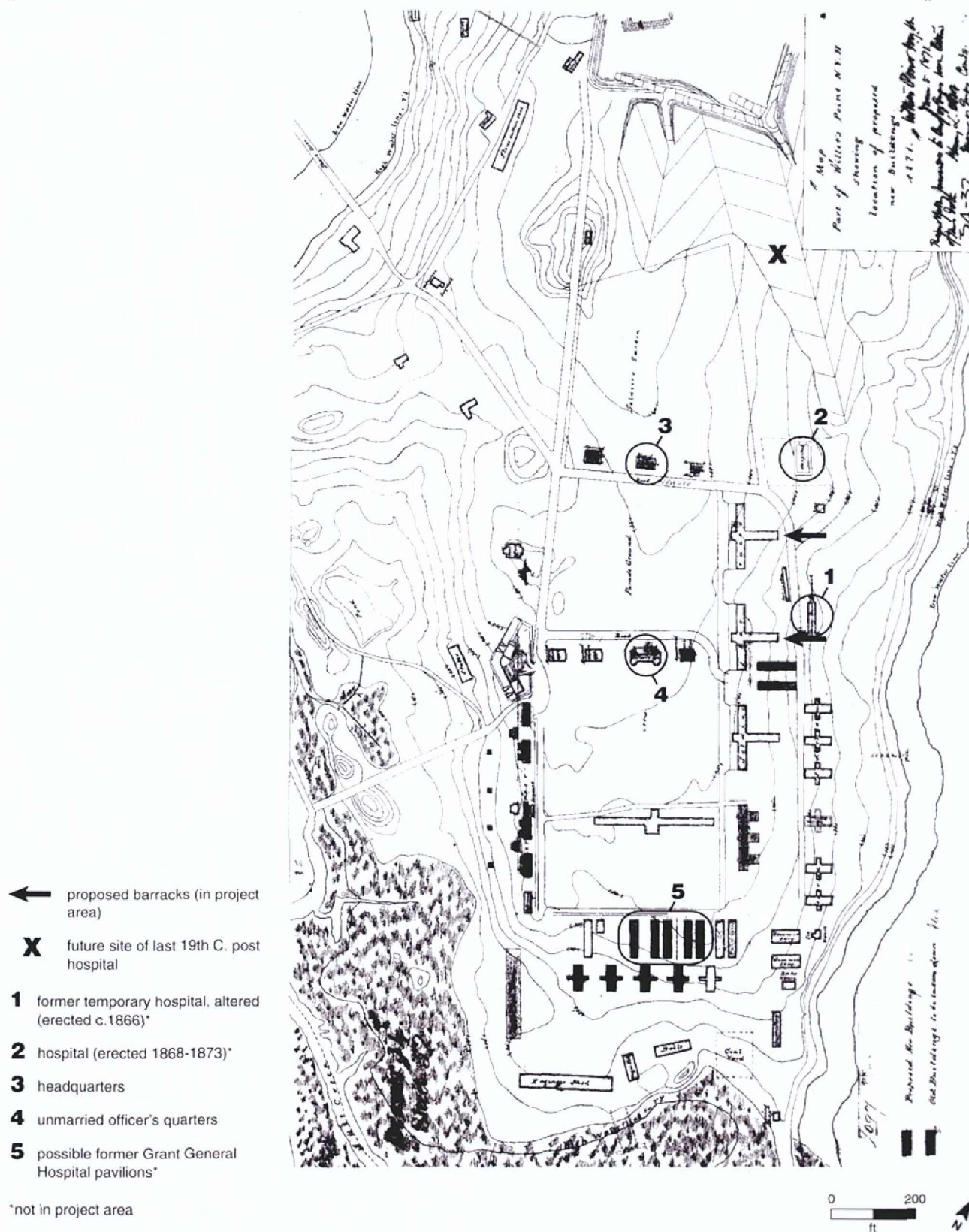


8 Battery King as amphitheater during instruction in the 1920s. (Polaski and Williford 2003:88)

- ← proposed barracks (in project area)
- X future site of last 19th C. post hospital
- 1 former temporary hospital, altered (erected c.1866)*
- 2 hospital (erected 1868-1873)*
- 3 headquarters
- 4 unmarried officer's quarters
- 5 possible former Grant General Hospital pavilions*

*not in project area

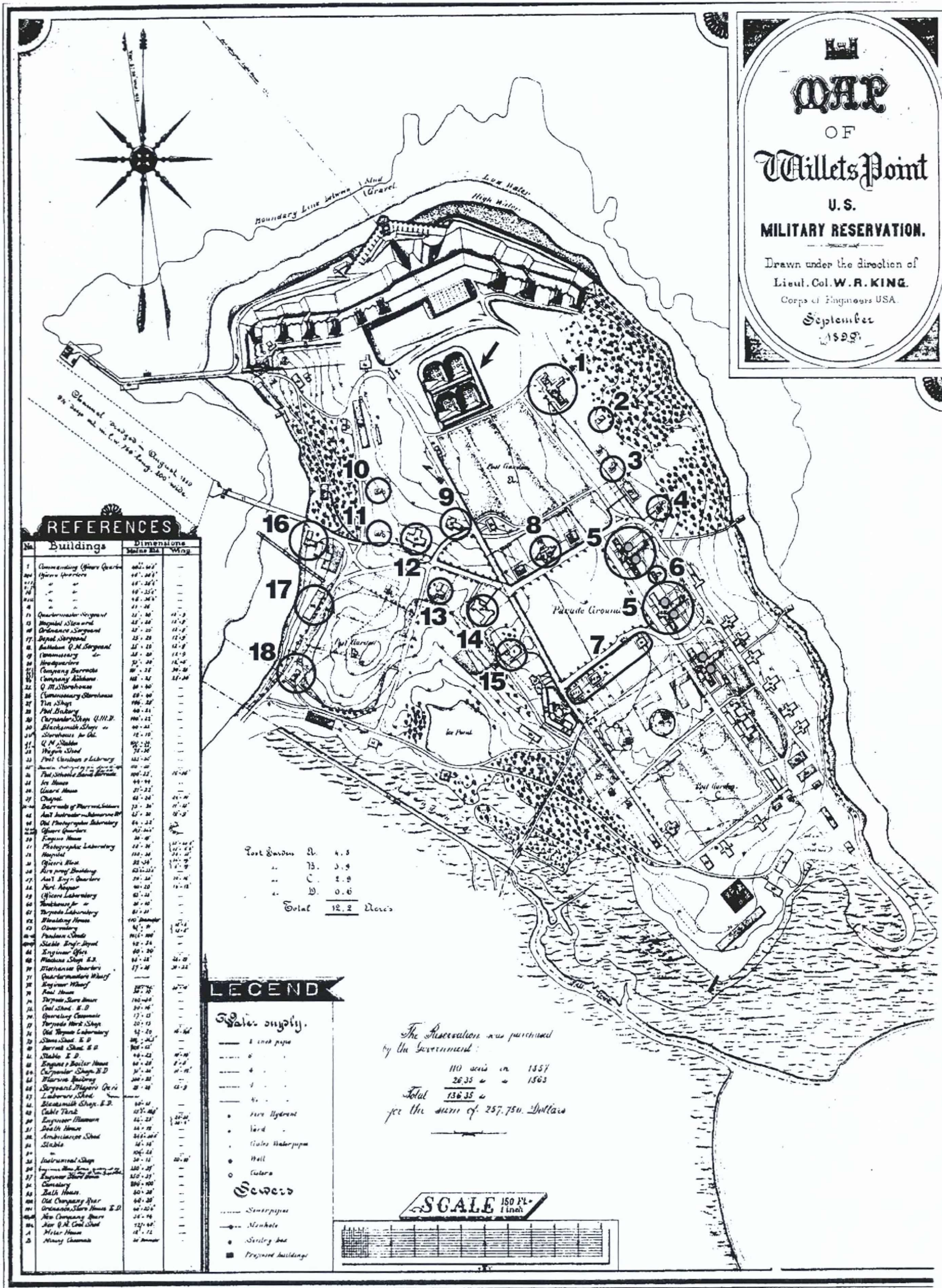






11 Looking southwest from Abbott Road, just east of Shore Road. Buildings 423 (left), 424 (center), and 425 (right), clustered around the paved parking area, are situated approximately where the post's last 19th-century hospital was located. Building No. 427 on Whistler Avenue is visible between Building 424 and Building 425. (Geismar August 23, 2007)

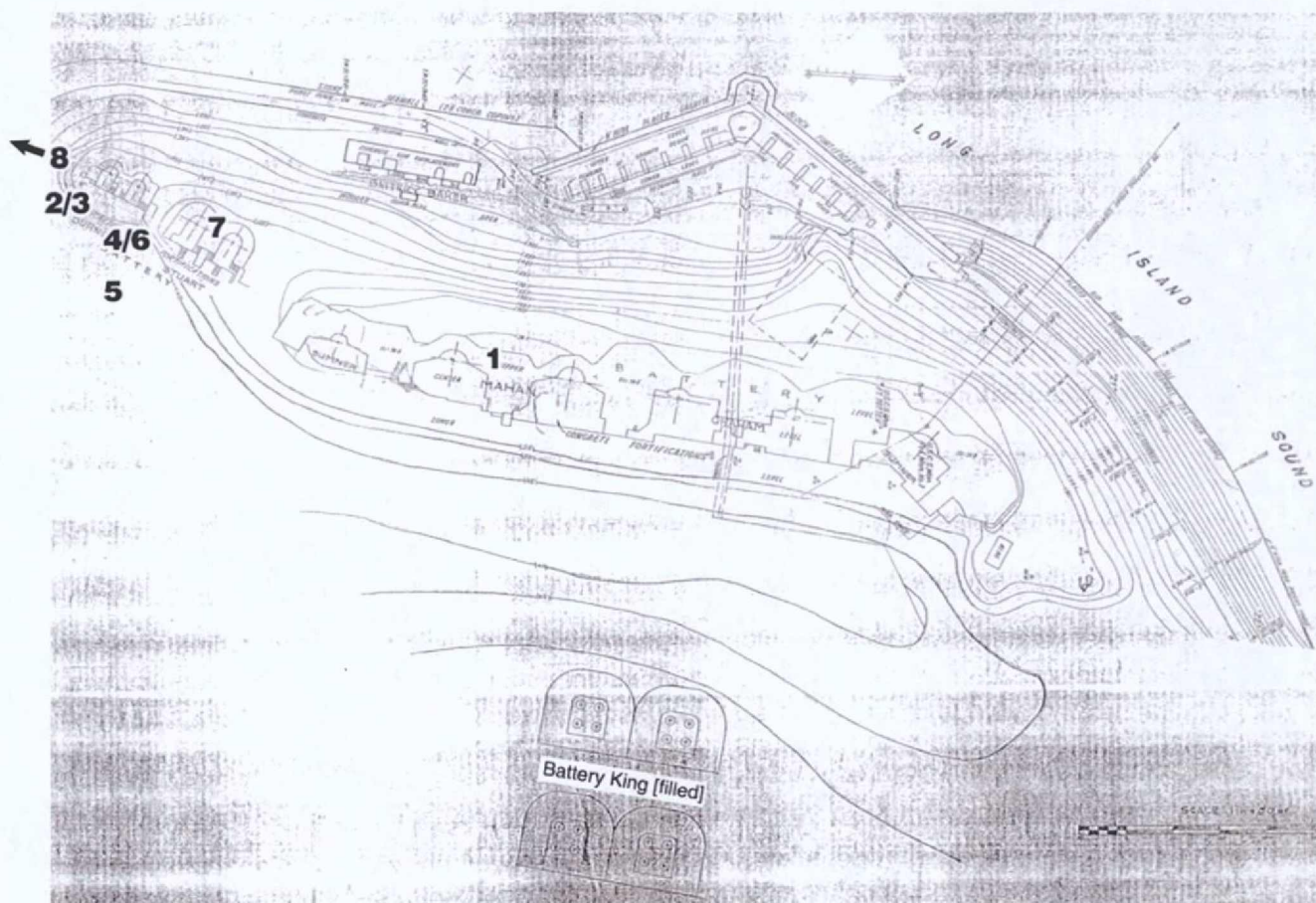




- locations approx.
- cistern
 - ← Mortar Battery, later Battery King
 - 1 fourth 19th-century post hospital
 - 2 Ordnance Store House E.D. (by 1890)
 - 3 Hospital Steward
 - 4 Sergeant Major's (former Sutler)
 - 5 Company Barracks in project area
 - 6 Company Rears
 - 7 Officer's quarters
 - 8 Officer's quarters
 - 9 Chapel
 - 10 Ordinance Sergeant
 - 11 Assistant Submarine Mg (former Ordnance Sergeant)
 - 12 Engineers Museum
 - 13 Assistant Engineer's Quarters
 - 14 Officer's Mess "The Castle"
 - 15 Commanding Officer's Quarters (former Willets' house)
 - 16 Mechanic's Quarters with outbuildings
 - 17 Coal Shed
 - 18 Guard House, no cistern indicated

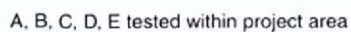


14 Fort Totten: color detail of 1890 map, composite image. (See Figure 13)

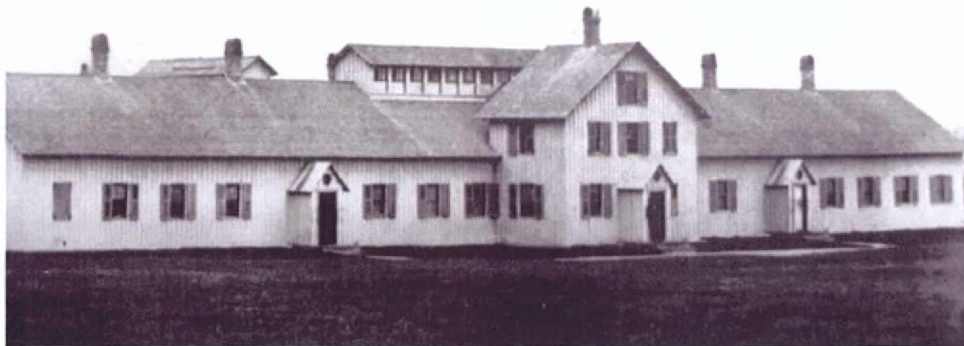


- 1** Willets' Summer Residence (1829.1830), Engineer's Office (1866)
- 2** Engine House (1886)
- 3** Work Shop (1886)
- 4** Old Torpedo Factory (1890)
- 5** Coal Shed (1890)
- 6** Cable Tank (1890)
- 7** Ordinance Store House (1890)
- 8** Operating Casemate (1890)

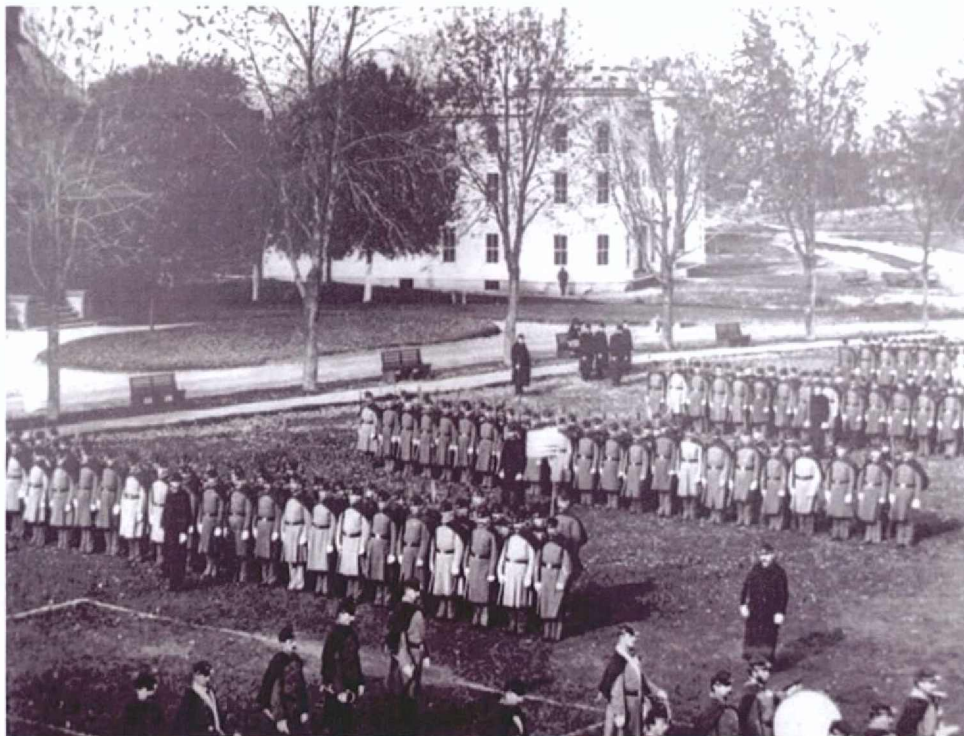
Note: Although Battery King is depicted, it had been filled in 1936



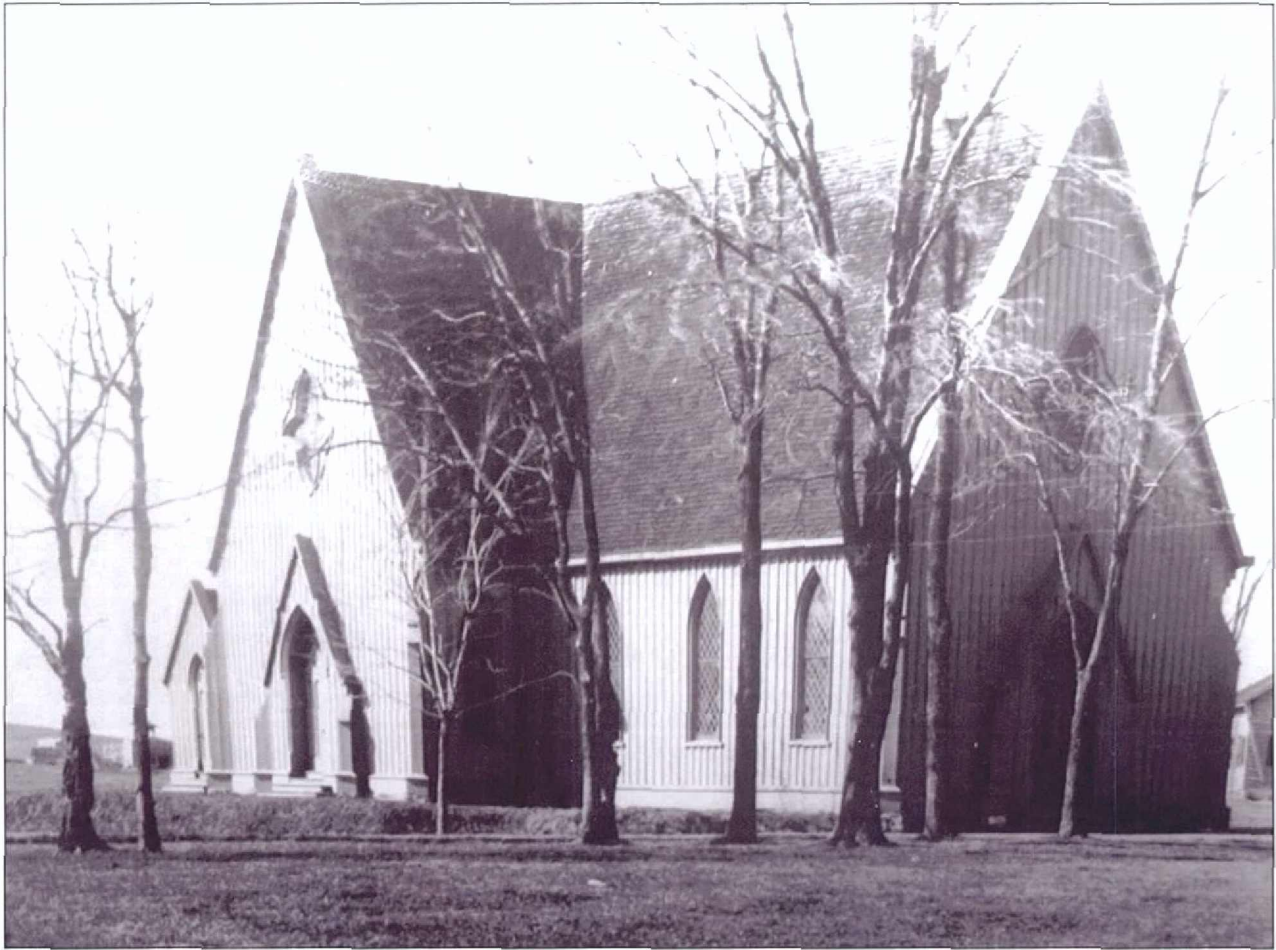
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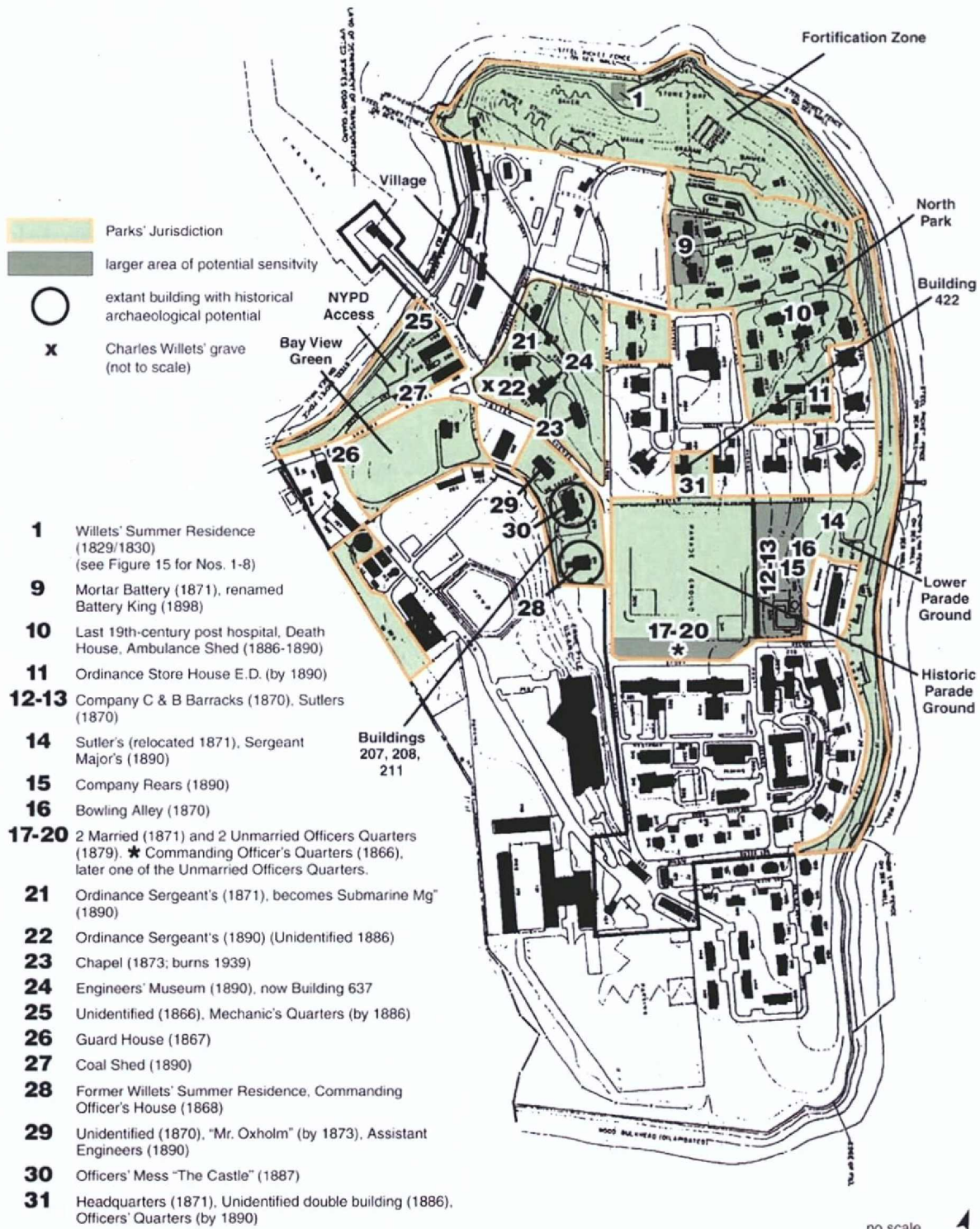
17 One of three Company Barracks erected in 1871 on west side of what is now the Lower Parade Ground, two of them in the project area. (Photo courtesy of Harbor Defense Museum, Fort Hamilton)



18 Parade Ground in 1890. White building in background is the Mess Hall built in 1887, also known as "The Castle." (Photo courtesy of Harbor Defense Museum, Fort Hamilton)



19 First Chapel, erected 1873 and destroyed by fire 1939. Present chapel is on or near same site.
(Photo courtesy of Harbor Defense Museum, Fort Hamilton)



locations approx.