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**CASTLE CLINTON
ARCHEOLOGICAL OVERVIEW AND ASSESSMENT
Castle Clinton National Monument
New York, New York**

By

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December 1999

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MANAGEMENT SUMMARY

In the summer of 1999, the Archeology Branch of the Northeast Cultural Resources Center (NCRC), National Park Service (NPS), completed an Archeological Overview and Assessment (AOA) for Castle Clinton, administered as part of the Manhattan Sites. Originally built as a fortification for the War of 1812, Castle Clinton later became Castle Garden (an entertainment hub (1823-1855) and an emigrant station (1855-1892), and finally the New York City Aquarium (1893-1941). The castle emerged from the destructive efforts of Commissioner Moses with most of the Aquarium fabric peeled from the original fortification wall. It was officially established as a national monument in 1950.

An Archeological Overview and Assessment was conducted for Castle Clinton to provide additional information to site managers concerning the remaining archeological resources. The purpose of an Archeological Overview and Assessment, as defined in NPS-28: Cultural Resource Management Guidelines of the National Park Service, is to identify and evaluate potential archeological resources through a thorough investigation of the existing records, documents, and reports. The purpose of the AOA for Liberty Island was to: (1) complement and elaborate on earlier archeological and historical research; (2) identify potentially sensitive archeological sites that could be adversely affected by later construction/maintenance activities; (3) synthesize archeological and documentary data about the site; and (4) identify areas for additional research.

Many of the archeological features and deposits at Castle Clinton have either been previously investigated or damaged by construction/restoration activities. Only a few features within the fortification merit controlled archeological investigation. Because much of the site has been previously impacted by ground disturbing activities, in situ features and deposits will be found only infrequently.

ACKNOWLEDGMENTS

The author wishes to acknowledge the assistance of several individuals who helped bring this project to fruition. Park staff who were particularly helpful included Joe Avery, MASI Superintendent, Doug Cuillard, MASI Deputy Superintendent, Bob McCully, MASI Curator and Mike Schreiber, Interim Curator. Some members of the Northeast Cultural Resource Center also deserve special recognition including Dr. Steven Pendery, Chief, Archeology Branch, and Judy Jacob, Senior Conservator.

Chapter 1 INTRODUCTION

1.1 Overview

Castle Clinton, originally known as the West Battery, was built approximately 200 feet off of the Manhattan Battery in about 35 feet of water (Fig. 1.1). It was constructed in this position to command ship movement on the Hudson River and to protect the city of New York during the War of 1812. It was constructed between 1808-1811 as part of a larger defensive plan for the city of New York, and later renamed Castle Clinton to honor retired Mayor DeWitt Clinton. Other fortifications built for the defense of New York during this time include, but are not limited to, Fort Wood on Bedlow's (Liberty) Island, Castle Williams on Governor's Island, and Fort Gibson on Ellis Island.

By 1823 the castle was no longer considered to be an intricate part of the New York Harbor defense system and was ceded to the city of New York. It was subsequently transformed into Castle Garden, a place for public entertainment. It remained a civic center until 1855 when it became an immigration center for the state of New York. For approximately 35 years it retained this function before it was again transformed in 1892, this time into the New York Aquarium. While it later changed management, the Aquarium remained a valued contributor to the New York City tourist landscape until 1941. Only after the structure was threatened with destruction in the 1940s by New York Parks Commissioner Robert Moses did it finally become a national monument, but not before a protracted legal battle took place. Between 1941 and 1950 when it was finally declared a national monument, much damage was done to the structure as almost all traces of the later transformations of the castle were peeled off the original sandstone wall. Presently, Castle Clinton is a national monument administered as part of the Manhattan Sites Park, National Park Service, and has been restored to its early military appearance.

1.2 Project Objectives

This Archeological Overview and Assessment (AOA) attempts to address the park's need for a more thorough understanding of Castle Clinton's remaining archeological resources.

NPS directive NPS-28, containing the guidelines used by the National Park Service for managing cultural resources, describes an AOA as follows:

An archeological overview and assessment is the basic element of a park's archeological resources management program. It is an archeological research report produced for a park and the first step in determining the requirements for additional archeological research. Based on a thorough examination of existing records, documents, and reports, the overview and assessment describes and

evaluates the known and potential archeological resources in an area and identifies the need for additional field surveys to locate, evaluate, and document resources.

The overview and assessment describes the area's environment and culture history; lists, describes, and evaluates its known archeological resources; describes the potential for as-yet-unidentified archeological resources; describes and evaluates past research in the area or region. It lists the location of collections of archeological materials and associated records related to park resources and contains a comprehensive bibliography. Upon completion the overview and assessment, the park's base map should be updated to show the locations of sites. Maps should show all areas within the park that have been surveyed for archeological resources and indicate the levels of surveys used (NPS-28 1994:78).

The purpose of the AOA for Castle Clinton is to: (1) complement and elaborate on earlier archeological and historical research; (2) identify potentially sensitive archeological sites that may be adversely affected by future construction/maintenance projects; (3) synthesize archeological and documentary data about the site; and; (4) identify areas for later research.

Chapter 2 NATURAL ENVIRONMENT

2.1 Geology, Topography, and Drainage

The West Battery was originally constructed approximately 200 feet off the southwestern tip of Manhattan in approximately 35 feet of water. Colonel Jonathan Williams engineered the construction of the one-tiered structure, built upon an unusually large counterguard composed of stones and wooden timbers. A wooden causeway and a drawbridge connected the fortification to the Manhattan Battery. The gap between the battery and the Manhattan Battery¹ was eventually filled in the late 1840s. Today, the battery is comfortable inside the Battery Park seawall.

The land upon which Castle Clinton sits straddles two different environmental systems. It is near the terminus of the 350-mile long Hudson River, one of the major waterways into the interior of the country for both the historic and prehistoric periods. The Hudson River starts at a small lake in the Adirondacks and is fed by many different tributaries on its southward journey before it terminates in the Atlantic Ocean. Manhattan Island is part of the Lower Hudson Valley environment, herein defined as the region between the Hudson River Highlands gorge southward to the Narrows, an area of roughly 60 miles.

This segment of the Hudson River is bordered on the west by the Shawangunk Mountains, a northern extension of the Kittatiny Range of Pennsylvania. "The Shawangunks come to an end just south of Kingston. From this point north to Catskill, the western boundary of the Hudson Valley is the resistant shale and sandstone rim of the Catskill Mountains, themselves part of the Glaciated Allegheny Plateau (Funk 1976: 5)." The eastern border of the Lower Hudson Valley has northeast-southwest trending crystalline rocks—granite, gneiss, and schist—known as the Reading Prong. Steep bluffs characterize the Hudson River Valley to the north of Manhattan with the Palisades on the New Jersey side. The soils tend to be glacially deposited brown gravelly loams. South of Troy, New York, the river is below sea level, resulting in a 150-mile long estuary with 5 feet tides as far north as Troy (Funk 1976: 5-6).

Manhattan Island was not always an island. During the late Pleistocene, c. 13,000 B.C., after deglaciation had begun, Manhattan Island may have been submerged by Lake Hackensack, a lake formed from meltwater behind a terminal moraine. This lake is suspected to have lasted for about 2,500 -3,000 years (Carmichael 1980: 520). After this lake had drained, and while significant amounts of water were still locked up in the retreating glaciers, Manhattan Island would have been connected with the continent. It was not until much later about 3,000 to 4,000

¹ For the remainder of the report, a lower case "b" in the word battery will be used to denote the Castle Clinton battery, while a capital "B" will refer to the Manhattan Battery.

years ago that rising sea levels inundated much of the shoreline and created the island. Therefore, for most of the Paleo-Indian Period and much of the Archaic Period, Manhattan Island and the land around Castle Clinton were mainland sites. It was only during the Late Archaic that sea level approached modern levels and inundated the area near Castle Clinton.

The position of Castle Clinton makes it impossible to tell, without a geological study, whether the land below Castle Clinton was inundated or whether it was dry land during prehistory. An excellent case can, however, be made for the land below Castle Clinton being exposed. Therefore, the following section, and much of the next chapter are included and are based on the assumption that the land below Castle Clinton was dry during much of prehistory.

2.2 Flora and Fauna

The vast amount of construction present on Manhattan makes it difficult to determine what once might have been there. However, for most of its inhabitable period, the lands of the Lower Hudson were covered by stands of oak, hickory, chestnut, and maple trees (Schaper 1993: 24). Preliminary pollen analysis conducted on Liberty Island in 1985 suggests an oak-hickory forest type of tree cover (Kelso, personal communication).

These hardwood forests in turn supported:

...white-tailed deer, black bear, elk, beaver, woodchuck, raccoon, otter, bobcat, gray fox, timber wolf, squirrel, chipmunk, fisher, muskrat, turkey, and a host of others. Migratory birds were plentiful in season. The deer, elk, and bear, as the largest animals, produced the most meat per individual and were therefore the mainstays among game in all aboriginal periods except that of the Paleo-Indian. Raccoon, turkey, woodchuck, and other small animals were also popular (Funk 1976: 7).

Coastal environments like the one on Manhattan provide a wide variety of exploitable plants. Flotation on some New England coastal sites has allowed the recovery of "pigweed, pokeweed, lamb's quarters, sedge, bedstraw, deer vetch, knotweed, sumac, elderberry, blackberry, American lotus, jewelweed, basswood, birch, acorns and nuts" (Lavin 1988: 112-13). The same should be found in southern New York coastal environments. Several varieties of shellfish and a plentiful variety and number of finfish, especially anadromous ones, could be found within a short distance of the shore. Faunal resources probably included waterfowl, small mammals, reptiles, and perhaps deer.

Chapter 3 CULTURAL HISTORY

3.1 Overview

While Castle Clinton was originally built out into the Hudson River in approximately 35 feet of water, the land that it was built upon was not always underwater. For several thousand years, during much of the Paleo-Indian and Archaic periods, the land was above sea level. Because prehistoric remains, namely shell middens, have been found on both Liberty and Ellis Islands, the potential exists for prehistoric sites to exist below the lowest construction levels of Castle Clinton. The following discussion of prehistoric periods, adapted from the AOA written for Liberty Island, is included in the narrative to inform the reader about the prehistoric inhabitants in the New York Area. For the historical periods, addressed later in this chapter, the focus is much more specific and limited to the area of Castle Clinton and its later transformations.

3.2 Paleo-Indian Period 13,000-8,000 B.C.

The term "Paleo-Indian" denotes the era of the earliest human occupation in the New World. While the time that humans migrated to the Western Hemisphere is still contested, it is more or less accepted that the earliest inhabitants crossed over from the Old World via the Bering Land Bridge. Opponents argue that immigration could have happened earlier (sometime around 30,000 B.C.), but the uncontested available evidence indicates that it did not occur until 12,000-13,000 B.C. These newcomers quickly spread out over the Western Hemisphere and began to thrive by utilizing a hunting and gathering subsistence strategy. Fluted projectile points, so named because of the flaking technique that left a "flute" on the obverse and reverse sides, are characteristic artifacts from the period.

Table 3.1
Prehistoric Periods for the Lower Hudson Valley

Paleo-Indian	13,000 B.C. – 8,000 B.C.
Early Archaic	8,000 B.C. – 6,000 B.C.
Middle Archaic	6,000 B.C. – 4,000 B.C.
Late Archaic	4,000 B.C. – 1,000 B.C.
Early Woodland	1,000 B.C. – A.D. 0
Middle Woodland	A.D. 0 – A.D. 1,000
Late Woodland	A.D. 1,000 – A.D. 1,600
Contact Period	Post A.D. 1,600-

During the Paleo-Indian period, environmental conditions were significantly different than they are today in the southern New York/northern New Jersey region. During much of the Pleistocene, glaciers covered southern New York. The evidence available from C-14 dates from sediments indicates that the Long Island region was not deglaciated until about 17,000 years ago and that the mainland was not deglaciated until about 14,000 to 15,000 years ago (Lavin 1988: 101).

Paleoenvironmental evidence indicates that following deglaciation, the region was a cold, barren area with a tundra-like environment supporting mosses, grasses, and low growing shrubs (Davis 1958, 1969; Newman 1977; Fagan 1978; Lavin 1988:101). A mosaic of spruce and deciduous trees is thought to have existed in some areas (Moeller 1980, 1984; Lavin 1988: 101). This environment in turn supported mammoth, mastodon, musk ox, moose-elk, caribou, giant beaver, and giant sloth (Butzer 1971; Edwards and Emery 1977; Lavin 1988: 101). The Paleo-Indian hunters probably moved along the major riverways hunting animals that they could and gathering foodstuffs that were available. The carrying capacity of the land was low undoubtedly limited by the harsh environment.

Liberty, Ellis and Manhattan Islands, as well as the other islands in the New York Harbor area were still attached to the mainland as sea level was much lower than at present, with much of the water locked up in the retreating glaciers. This lower sea level exposed large amounts of the continental shelf causing the Hudson River to discharge into the sea approximately 120 miles from its present mouth (Funk 1991: 51).

The archeological evidence for the Paleo-Indian Period in the southern New York and northern New Jersey area is spartan and incomplete. Find sites of Paleo-Indian artifacts and fauna indicate that they were in the area of the present Lower Hudson Valley (Ritchie 1994: 11). The rising ocean levels that have only stabilized in the last few millennia may however, have covered up many sites. Funk additionally notes that most of the shell middens found along the coast are younger than 4,000 years, with a majority of them dating to the Middle and Late Woodland periods (Funk 1991: 51). Many of the very early Paleo-Indian sites may thus be located off shore below the sea.

Most of the evidence for Paleo-Indians in the Northeast consists of isolated finds of fluted projectile points. A few sites like Davis and Port Mobil in New York and the Wapanucket No. 8 component in Massachusetts indicate more extensive occupation. The available evidence suggests that the hunters in this period were organized in highly mobile groups, which ranged over great distances (Ritchie 1994: 3). These hunters are suspected to have hunted the megafauna present in the area like the mammoth and mastodon. The people of the Paleo-Indian period have mistakenly been termed "big-game hunters"; indeed, some scholars have suggested that the early New World man was responsible for the extinction of the larger beasts at the end of

the Pleistocene. These assumptions have been weakened, however, by the absence of projectile points in association with the large animals, at least in the eastern United States.

In general, not that much is known about the Paleo-Indian period in the Northeast. Most sites documenting the presence of Paleo-Indian peoples are isolated projectile point find sites with a few suspected campsites. The progressive and at times almost systematic destruction of cultural sites in conjunction with the rise of the sea level undoubtedly clouds our ability to recover information about these early peoples.

3.3 The Archaic Period, 8,000 -1,000 B.C.

The term "Archaic" refers to the era when humans went from being reliant upon large mammals and became intensive hunters and gatherers. Gathering involved the exploitation of seasonally available foodstuffs; no agricultural activities were begun until the later Woodland Period. Ceramics were unknown until the very end of the period, but do not become prominent until the later Woodland Period; presumably earlier containers were made of items invisible in the archeological record like gourds and skin bags. The bow and arrow was also unknown. Instead, people hunted with spears, often propelled by atlatls. Aquatic resources were exploited, with the shell middens left by the Native American inhabitants being one of the chief archeological resources of the period. Ritchie notes several other items that characterize the Archaic. These include an abundance of stone and bone tools, the introduction of cold hammered copper tools (largely a result of the interaction of New York groups with groups of the Old Copper culture centered in Michigan), absence of shell artifacts and pipes, and burials generally not involving mortuary offerings (1994: 31).

The Archaic Period is usually broken down into three subperiods: The Early Archaic 8,000-6,000 B.C.; the Middle Archaic 6,000-4,000 B.C.; and the Late Archaic 4,000-1,000 B.C. Some scholars further subdivide the Late Archaic into a Late Archaic and a Final or Terminal Archaic 1,500 B.C.-1,000 B.C.

The Early Archaic Period 8,000-6,000 B.C.

As with the Paleo-Indian period, the Early Archaic Period is not well known within southeastern New York, mainly because so few sites exist. Funk speculates that the number of sites may be low for a number of reasons, many of which are cited below.

1. Unfavorable environmental conditions that limited the size of ancient populations.
2. Inadequate survey coverage, especially in upland areas.
3. Inadequate typological control, i.e. insufficient knowledge of what northeastern Early Archaic artifacts should look like.
4. Differential destruction by construction and other Euroamerican activities.

5. A tendency of early sites to be more deeply buried in the ground than later sites.
6. Rising postglacial sea levels in coastal zones, inundating and usually destroying archaeological sites (1991: 57).

Paleoenvironmental assessments indicate that the climate continued to ameliorate. The spruce-deciduous mosaic characteristic of the Paleo-Indian and very early part of the Early Archaic was replaced by a pine and mixed deciduous forest from about 7,100 to 5,900 B.C. (Lavin 1988: 101). "At this time the essentially modern floral pattern of open oak woodlands appeared: oak-hemlock followed by oak-hickory and oak-chestnut. The abundant mast foods produced by these species could have supported large populations of deer and wild turkey" (Lavin 1988: 101).

Two adjacent areas of the country have well-defined Early Archaic traditions and controversy exists as to which tradition the Lower Hudson River Valley Early Archaic is related. At sites to the west the Dalton horizon was well defined, noted at sites like Modoc Rockshelter in Illinois, Graham Cave in Missouri, and Eva in Tennessee. The Dalton projectile point, exhibiting basal thinning flakes approaching flutes is believed to have evolved from the fluted Paleo-Indian point (Funk 1983: 316-317).

The Southeast also has a well-defined Early Archaic tradition. Brennan has argued that the available evidence left by the occupants of the Lower Hudson Valley have projectile points that are identical or very close to those made by the southerly Early Archaic peoples who are thought to have moved into the area (1991: 14). "This is to say that the Early Archaic of the Lower Hudson is an extension of the Archaic as seen in the Carolina Piedmont and, curiously, as seen in the Appalachians..." (Brennan 1991: 14).

The available evidence suggests that Paleo-Indian and earlier Archaic economies were largely based on the hunting and gathering of interior food sources with seasonal base camps located around inland lakes and river falls. Temporary campsites were used to exploit shellfish, which is speculated to have been a minor subsistence activity (Lavin 1988: 104).

The Middle Archaic, 6,000-4,000 B.C.

The pattern of inland/riverine base camps continued throughout the Middle Archaic. The adaptive strategy centered on lakes and river falls with the indigenous inhabitants exploiting deer, nuts and wild plants with specialized camps for the collection of other resources. This strategy allowed for population growth. As a result site size and frequency begin to increase. None of the shell middens located in southern Maine, Massachusetts, Connecticut, or southern New York show unequivocal evidence of their use as a base camp (Lavin 1988: 104-105).

The Middle Archaic point types include plain triangles and broad blades with notches at or just above the basal corner (Brennan 1991: 15). These point types are seen as indigenous developments, evolving from earlier styles (Brennan 1991: 16).

The Late and Terminal Archaic Periods, 4,000-1,000 B.C.

Hunting and gathering continued to be the dominant subsistence strategy in the Late Archaic Period. While agriculture and plant domestication was occurring in other parts of the Western Hemisphere, the Northeast populations did not participate in this revolution. No beasts of burden were used, and the only domesticated animal was the dog. Stone vessels were used during the last stages of the period, and while a few ceramic vessels date to the very end of the period, it was not until the following Woodland Period that ceramics became widespread.

Many sites exist for the Late Archaic Period and as a result much more is known about its inhabitants. The well-known Laurentian tradition components, noted elsewhere in New York, do not seem to be well represented in the Lower Hudson Valley. The Vosburg phase of the Laurentian tradition is not "demonstrably present" on Long Island or Staten Island even though surface finds of artifacts of the Laurentian tradition have been found sporadically in the area (Patterson 1955; Ritchie 1994: 143). Instead, the Lower Hudson Valley is marked at about 3000 B.C. by the appearance of narrow-bladed, simple stemmed points known as the Taconic tradition (a.k.a. Appalachian, Piedmont, and narrow-point) (Brennan 1991: 16; Funk 1983: 324). These projectile point types seem to be firmly rooted to the south in the Mid Atlantic region. Thus, for our area it seems that the Taconic tradition is characteristic, but influences of the more northern Laurentian tradition are seen sporadically throughout the area (Ritchie 1994: 144).

The Terminal Archaic refers to a period in which various manifestations of the broadspear tradition appear (Brennan 1991: 17). Ritchie calls this the Susquehanna tradition which is characterized by Broad Points and Soapstone bowls (1994: 150); terra cotta ceramics follow on the heels of these soapstone vessels, with crushed soapstone used as temper in some of the earliest ceramics. These ceramics were not an indigenous development in the southeast New York northeast New Jersey area, but diffused to it from the southeast around 1,200 B.C. (Funk 1983: 332).

There is also a corresponding shift in the location of base camps in the Terminal Archaic from the interior lakes and river drainages to the floodplain and first terraces of the major river drainages; they also appear along coastal regions (Lavin 1988: 104-105). "This settlement shift has been explained in terms of a northward population movement of riverine-adapted Susquehanna groups from the Middle Atlantic region" (Lavin 1988: 104-105).

3.4 The Woodland Period, 1,000 B.C. - A.D. 1,600

The Woodland period was marked by dramatic changes in technology, subsistence, and settlement patterns. Whereas the earlier Paleo-Indian and Archaic Periods are distinguished by changes in stone tools, the Woodland Period inhabitants are classified by changes in ceramics. The bow and arrow also appeared and became a very effective hunting weapon. Plants, most notably corn but also beans and squash, were domesticated and began to play an increasingly important role in the subsistence of the indigenous inhabitants, at least for those in the inland regions. Groups on the interior became at least semi-settled if not sedentary and interregional and intraregional trade flourishes.

Most scholars break down the Woodland Period into three sub-periods: The Early Woodland 1,000 B.C. – 0; the Middle Woodland 0 – A.D. 1,000; and the Late Woodland A.D. 1,000 - A.D. 1,600.

The Early Woodland Period, 1,000 B.C. - 0

As mentioned previously, one of the hallmarks of the Early Woodland Period is the first widespread use of ceramics. The earliest pottery is called *Vinette I* and appears on Long Island around 1,000 B.C. (Brennan 1991: 18). Life, however, was much the same as it had been during the Late Archaic, with people using a seasonal hunting and gathering subsistence strategy.

Ritchie and Funk postulate two distinct and overlapping phases (groups) for the Hudson Valley area of New York (Funk 1983, Ritchie 1994). Artifacts from the Meadowood Phase, primarily centered in northern and western New York, have found their way into the Hudson Valley area. Characteristic artifact assemblages items include the thin side-notched Meadowood point, trapezoidal gorgets, cigar-shaped pipes, bar and expanded-body birdstones. While not prominent, some of these items have been found in the Hudson Valley (Funk 1976: 277). The other phase reported within the area is the Middlesex phase. Its close association with the Adena mound-building culture of Ohio and Kentucky first defined this phase. Characteristic artifacts included blocked-end tubes, Adena-type points, birdstones, gorgets, shell and copper beads (Funk 1983: 334). The presence of these items on Hudson Valley sites led Ritchie to postulate that a splintering of groups had occurred with many Adena people relocating to the immediate area (Ritchie 1994: 202). Many have argued, however, that these items instead made their way into the region as a result of trade (Funk 1983: 335).

Middle Woodland Period, 0-A.D. 1,000

New ceramic types, more complex and sophisticated, known as *Vinette 2* develops during this period. The various changes in type and decoration indicate that several different groups of people, known collectively as the Point Peninsula tradition, were living within the New York

area. The types and styles in the Vinette 2 seem to evolve into the pottery types of later historical groups (Funk 1983: 338).

Much of the information that is written about the Middle Woodland period in the Northeast is derived from developments in the Ohio and Illinois Valleys. More commonly known as the Hopewell, this manifestation is known for its elaborate earthworks, ceremonial centers, material culture, and interaction spheres. These Hopewellian influences seem to have been confined to the western and southern fringes of the Northeast (Funk 1983: 338). Thus, while some interaction took place between these western groups, the Point Peninsula manifestations that took place in various areas within New York during this time period are seen as indigenous.

The Middle Woodland in the Hudson Valley area is broken down into three different phases. Beginning about A.D. 325-450 is the Fox Creek phase characterized by net-marked pottery and Fox Creek points with a variety of other lithic items. This phase seems to evolve into the Fourmile Phase at which time the elements of the Fox Creek phase were replaced by traits diffusing in from central New York. It finally converges with the Hunter's Home Phase, dated to 850 \pm 95. Cord-marked moderate sized, straight-rimmed pots mark this phase. Hunting and gathering on a seasonal basis continued to be the chosen subsistence strategy (Funk 1983: 343-346).

Late Woodland Period, A.D. 1,000-A.D. 1,600

Two separate cultural traditions seem to manifest themselves in New York State during the Late Woodland Period. Ritchie and Funk have seen the development of the historic Iroquois out of an earlier Owasco tradition in most of New York State. Along the coast, however, earlier archeological cultures are thought to evolve into the historic Algonquian tribes. This development, however, is not well known or understood and the archeological manifestations look very similar to the Owasco counterparts (Dent 1995: 221). Funk comments:

On Staten Island, Manhattan, and Long Island, such manifestations as Bowmans Brook, Clasons Point, Sebonac, and Shantook utilized a variety of sites on or near the shore. The sites included shell middens, rockshelters, large agricultural villages, cemeteries, and stockaded settlements... Links to upstate New York cultures are evident in the ceramic and lithic artifacts, but some traits are distinctive to the coastal sequence (Funk 1993: 361).

Very little evidence has been found for domestication of maize on coastal sites. Two kernels dating to the Late Woodland Period have been found at the Hornblower II site on Martha's Vineyard (Ritchie 1969) and another kernel from the Mago Point site in southeastern Connecticut has likewise been dated to the Late Woodland Period. All other maize recovered from coastal sites appears to be historic (Lavin 1988: 113).

This finding has led to some interesting theories from researchers. Ceci hypothesized that while horticulture was being practiced to supplement hunting and gathering inland that horticulture was never developed in the prehistoric period in the coastal regions. Instead, Ceci has postulated that horticulture and sedentism on the coast was an historic phenomenon that resulted from trade relations with the Europeans (1977).

Bernstein, from his work at the Greenwich Cove Site in Narragansett Bay, speculates that settlement on the coast was practically year-round for the last 2,000 years. He, however, clarifies this statement to indicate that this does not mean all occupation sites were completely sedentary. Instead, Bernstein argues that different subsistence activities took place at various locales throughout the year, but that all of these activities took place within a few kilometers of each other. In other words, Bernstein believes that seasonal hunting and gathering activities took place year round within a small area, even without a focus on intensive agriculture (1995: 148).

No matter which theory one subscribes, two things seem to be very clear. First, subsistence practices on the coast seem to be very different from those being practiced inland. The dearth of evidence for domestication of agricultural products on the coast contrasts to the abundance of evidence for it on the interior. Second, a more diverse diet, probably a broader-based seasonality was being practiced on the coast. The inhabitants of the area around the New York Harbor could draw upon terrestrial, oceanic, estuarine, and riverine resources at different times of the year, and perhaps this availability of resources may not have necessitated the intensive focus upon one or more resources.

3.5 The Contact Period, A.D. 1609+

The Dutch came to the New World looking for a Northwest passage through the continent, to capitalize on the silks, spices, and other exotics that lay to the east. Earlier repeated attempts had failed, but the Dutch engaged Henry Hudson in 1609 to again attempt to find a passage. While his attempts were ultimately unsuccessful, he did manage to give the Dutch a foothold on the North American continent known as New Amsterdam. With the advent of the Contact Period, herein defined as the period after Henry Hudson and his ship the "Half Moon" sailed into the New York Harbor and up the river that now bears his name, our ability to tell the tale of the past improves.

A mate aboard Hudson's ship kept a journal of the voyage and the "savages" encountered. Many of these encounters were less than friendly indicating that previous encounters between the Europeans and the indigenous inhabitants were not pleasant experiences for the natives (Kraft 1991: 207). Despite this, trade was conducted with the Indians. Hudson obtained "cares of Indian Corne, and Pompions, and Tobacco [and] Bevers skinnes, and Otter skinnes, which wee bought for Beades, Knives, and Hatchets" (Purchas 1625: 593).

Many groups of Native Americans inhabited the area at the time of Hudson's visit including the Hackensack, Tappan, Esopus and Warranawankongs along the west side of the river and the Rechgawawank, Wiechquaeskeck, Sinsink, Kichtawank, Nochpeem and Wappinger along the eastern side of the river. The Canarse lived in what are now Brooklyn and Queens and the Raritan occupied much of Staten Island (Bolton 1920: 239, 285 in Kraft 1991). The Mahican lived on both sides of the Hudson past the Kingston area north to Lakes George and Champlain (Brasser 1978: 198; in Kraft 1991: 193). All of these groups spoke a Munsee dialect of the Algonquian Delaware language (Goddard 1978 75-76; 237-238 in Kraft 1991).

The furs and pelts acquired from the Indians were extraordinarily important commodities for European markets. The most sought after was the beaver, but others included the otter, bear, mink, raccoon, fox, marten, wild cat, muskrat, and deer (Kraft 1991: 208). The trade in these commodities was so highly sought after that exclusive trading rights were petitioned for within the States of Holland. In 1614, an exclusive trading agreement was granted to petitioning merchants "for four voyages or three years (de Laet 1909: 38, 47)." For these furs and pelts the Europeans traded iron axes, hoes, knives, fishhooks, strike-a-lights, brass kettles, bangles and bracelets, jews-harps, mirrors, glass beads, stroud cloth, blouses, pants, stockings, needles and thread, tobacco pipes, and occasional gun, powder and lead, rum, and beer (Kraft 1991: 208).

Trading was not the only endeavor attempted in the New World. The colonists at New Amsterdam settled and tried to farm the land. The soils were poor and the work was demanding. As a result Secretary Cornelius Van Tienhoven "advised new immigrants, as late as 1650, to bring enough food supplies 'for at least two or three years' because 'it is found by experience in New Netherlands that farmers can with difficulty obtain from the soil enough to provide themselves with the necessary victuals and support' (O'Callaghan 1853-1887 (1): 369 in Kraft 1991: 210)."

Even with all the trade being conducted, European trade items are relatively rare on Native American sites in northeastern New Jersey and adjacent parts of New York (Kraft 1991: 213). This is in direct contrast to sites in upper New York and south central Pennsylvania where large quantities of historic trade goods have been found on Seneca and Mohawk sites. Edward Lenik conducted an analysis of twelve contact period sites in northeastern New Jersey and southeastern New York in an attempt to define what type of contact was actually occurring between the Indians and the Europeans. Lenik concluded that the contacts between the Indians of Northeastern New Jersey and Southeastern New York and the Europeans were occasional and intermittent with the Indians continuing to maintain their own technologies and lifeways (Lenik 1989). Lenik comments:

The sites were small procurement and processing ones. No large base camps or villages have been found in the region...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 early 18th century (Lenik 1989: 116).

One must then ask the question that if vast amounts of furs and pelts were traded for a large number of European goods, why are they not represented on the sites of the Lower Hudson Valley? What happened to all of these goods and why are more not found in the archeological record of the Lower Hudson Valley? Kraft speculates that the paucity may be explained by scouring tides and currents and construction by Europeans. Kraft also speculates that to satisfy the European desire for animal furs, the Indians had to move further up the Hudson and Mohawk rivers (Kraft 1991: 214). The second answer is probably the best although it still does not provide a compelling explanation.

3.6 The Early Fortification of New York City

The Dutch were the first to settle Manhattan. Shortly after settlement in 1626, the Dutch erected Fort Amsterdam on the southern end of the island. At that time Fort Amsterdam was under the direction of Peter Minuit and became the political, religious, and military focus of New Netherland (Young 1940:1). Fort Amsterdam was a crude fortification containing a log blockhouse surrounded by wooden palisades (Bresnan 1978: 2). It was never an effective fortification, which made it easy for the British to capture in 1664. Even after capturing it and renaming it Fort James, the British made few modifications to it which in turn made it easy for the Dutch to recapture it nine years later; it was returned to the English a year later as part of a treaty (Pitkin 1960:5). The fort was briefly taken by Jacob Leisler, following the abdication of James II, and renamed Fort William. It underwent other name changes including Fort William Henry (1691), Fort Anne (1702), and Fort George (1714) until 1790 when it was finally torn down following the revolution. After it was determined to be 'useless for the purpose of defence' (Young 1940: 7-20). It was razed and the 'Government House' was built on the site. Intended to be used by President Washington, it instead served as a governor's mansion and Federal Customs house before being consumed by fire in 1815 (Young 1940:7). The bulk of old Fort Amsterdam now sits under the United States Customs House. However, its boundaries are roughly Battery Place and Bowling Green on the North, State Street on the west, Bridge Street on the south, and Whitehall Street on the east. A portion of the western extent of the fort extends across State Street to the present subway station in Battery Park (Young 1940: 3)

3.7 The Castle Clinton Period

The people of New York City and surrounding areas began to fear from attack as early as the 1790's. Bedloe's, Governor's, and Ellis' island were all fortified around this time (Pitkin 1960: 8). The tension experienced by the inhabitants of the area began to escalate beginning in the first decade of the nineteenth century, primarily involving deteriorating relations with Great Britain who was now struggling to win a war against France. This growth in apprehension was the result of three events that took place in 1806-1807 (Cushman N.D. 1). The first event occurred in April

1806 when a squadron of British ships consisting of the 50 gun *Leander* and the 44 gun *Cambia* appeared off Sandy Hook and began impressing seamen from every ship going in or coming out of the harbor. The second event occurred toward the end of the month of April in 1806 when upwards of twenty British vessels entered New York harbor and fired 100 shots at various points in the harbor and on the shore. The third event was the unexpected attack on the American frigate 'Chesapeake' off of Hampton Road in June of 1807 (Guernsey as quoted in Cushman n.d. 1-2). These events ignited the fortification fever that seemed to sweep through the New York area.

A survey of the harbor, along with recommendations for the construction of various fortifications, had already been conducted by Lt. Col. Jonathan Williams in 1805. Federal inactivity caused the New York State government to intervene. A report put forth by three of the Commissioners of New York State Board of Fortifications in 1807 recommended the fortification of three harbor islands (Bedloe's, Ellis', and Governor's) and the construction of two casemented batteries off of Manhattan Island (Berengarten 1934: 3-5; Bresnan 1978: 2). Construction on the West Battery, the original name of Castle Clinton, began in 1808. William's plan originally called for a circular fortification 50 feet off of the battery. This battery would have been built of 2 or 3 tiers, accommodated a garrison of soldiers, and would have had 30 to 50 guns (Bresnan 1978: 2).

The West Battery was built 200 feet southwest of the Battery, in about 35 feet of water, and was connected to it by a long timber causeway and drawbridge. It was positioned out into the harbor to command passage along the North (Hudson) River. The octagonal rip-rap (submerged foundation of the castle) was so expensive to construct, that only one tier of New Jersey Brownstone, mounting 28 guns, was actually built. The final fortification was circular in design except for the area of the Sallyport which was straight, parallel with the edge of the Battery (Figs. 3.1 - 3.4). It was finally completed in 1811, but was too small to accommodate an off-duty garrison (Bresnan 1978: 2-3). The West Battery was officially renamed Castle Clinton in 1815, in honor of De Witt Clinton, Mayor of New York during the war of 1812 and one of the three commissioners responsible for the fortification of the New York harbor (Berengarten 1934: 12). The earliest drawing that is available for the castle is an 1823 plan drawing in the National Archives (Pitkin 1960). Information on its appearance must then be surmised from earlier works. Adrienne Bresnan in his 1978 article provides a well-written summary of Park Historian Thomas Pitkin's conclusions included in Pitkin's 1960 Historic Structure Report:

The foundation of the fort was laid in 35 feet of water and mud within the counterguard or wharf of the stone blocks. The blocks formed 7 sides of an Octagon, 2 sides on the townside being made into one, the counterguard 39 feet wide at the base, 20 feet at the top and surfaced with a framework of connected logs. Captain Whiley remarked, "never before was there such a mass of stone and timber for the foundation of any work or building." In 1817 there was cracking in the footing wall due to settling of the foundation, the counterguard was strengthened and large iron

straps were provided to counteract the superincumbent weight. The bridge causeway connecting the fort with the Battery was approximately 222 to 224 feet long and 26 to 30 feet wide, the drawbridge section located 20 feet from the counterguard end of the bridge and approximately 14 feet square. In 1815-16 minor repairs were made to the bridge and counterguard stabilizing the iron straps and bolts; deteriorated sections of the bridge and piers were rebuilt, drawbridge wheels and lower protective fender was installed, new railings, gravel resurfacing of the counterguard, replanking of the sallyport and laying of the new flagstones at gateway.

Two guardhouses (each 8' x 12' x 10' high) were at the Battery end of the causeway and two outbuildings (each 27' x 17', 10' high) were at the fort on the counterguard flanking the Sallyport entranceway. These structures were built after the War of 1812 as part of the military headquarters compound.

The outer walls of Fort Clinton were 8 feet in width narrowing to 6 feet at the Gorge. The 20 feet high walls had exterior and interior facing of brownstone ashlar laid in Flemish bond over a core of irregular rubble fill. Most of the brownstone came from a quarry in Newark, New Jersey, and the gateway came from a quarry in Chatham, Connecticut. Aside from the sallyport gateway, the walls of the fort had 28 open embrasures, 4 false embrasures and several narrow ventilation slits. The embrasures were paired and key-hole angled, two to a casemate. A jack arch over each embrasure provided the lintel with a round brick relieving arch not visible beneath the facing stone, a larger brick relieving arch also not visible was laid behind the interior wall facing, spanning each set of embrasures. The coping and soles of the embrasures were also constructed of brownstone.

The sallyport entrance was a massive brownstone gateway. Paired double pilasters of ashlar blocks, alternately outcropped, framed the bolt-studded wooden doors (each 11' x 4' x 7" thickness) opening beneath a plain jack-arch, strengthened by an outcropped discharging arch above. The pilasters extended nearly to the height of the fort walls, the gateway entablature and coping stones extending 5 or 6' higher. The stone of the gateway appeared lighter in color, finer in texture than that of the fort walls. The two gateway doors were constructed of 3 layers of heavy cross-planking, studded with 768 iron bolts of 2" diam. heads, each with 3 large triangular iron hinges and one wicket gate or small door cut into one of the doors. The flooring of the sallyport passage was laid in wood with brownstone sills, wood planks resting on beams, stone and rubble fill below. The earlier garrisoned fort may have had 3 foot elevation differential at the counterguard and sallyport in order to extend ramps for wheeling artillery and other martial equipment.

Four rooms in the Gorge, flanking each side of the sallyport, were established as officers quarters throughout military history of the fort, arranged symmetrically around the 12 foot wide linteled passageway. Brownstone ashlar interior walls separated the quarters from the magazines. The walls facing the sallyport passageway and fort Parade were brick with brownstone base course. Interior walls were plastered, planked floors nailed to beams resting on the brownstone cellar walls. The ceiling supported the board flooring of the garret overhead, reached by garret

stairways. Two sallyport rooms in the basement, also reached by a pair of stairways, had large fireplaces with hearths; they may have served as kitchens after the War of 1812 but were then abandoned in the 1815 quarter renovation. There were also fireplaces in the first floor rooms with chimneys extending 5' above the fort parapet coping. The roofing at the Gorge was wooden shingles resting on wood rafters, slanting down from the Gorge wall to the brick front walls of the quarters. In 1815 General Scott had a portico added, extending the roof some 10' with 12 wooden columns to support the roof, and no rain gutter. The joint between the roof and the Gorge wall was covered with sheet lead to provide flashing. The cellars were not continuous beneath the officers' quarters, during the war they were probably used as guardrooms or prisons. The magazines and privies at the rounded ends of the circular part of the fort walls to either end of the Gorge, were adjacent to the quarters. The privies were verified by 'be 1823 Estimate which listed the "privie doors with locks'. . . 2 barrels lime for cleaning vaults of the West Battery necessaries". The passageways, magazines and privies were white-washed on brick masonry, wooden floors, ventilation provided by slits in the outer walls through false embrasures.

The casemates were divided equally at the inner circumference of the fort from each magazine. Separating the 23' wide casemates were thirteen brownstone traverses, jutting out from the inside of the fort walls. General Malcomb had removed 2 traverses on the east magazine in a plan to convert the casemates into supplementary rooms in the Gorge as seen in the Archive plans 1819 and 1823. Shutters were installed over the embrasures, although no plans are found in the 1823 inventory to illustrate their detail. The gun platform flooring of the casements was of wood planking 18' wide, laid over beams and below radially laid logs, stone till and stone sub-foundation with a slight downward slope toward the fort wall for ease in moving the guns into the battery.

A six foot flagstone walk encircled the parade ground. Thirteen cylindrical brick columns supported the casement roof, two half columns with brownstone caps and bases were built against the magazine walls, beside the passageway entrances. Although Lt. Cul. Williams contemplated a fire-proof slate roofing, wooden shingles were installed with sheet lead flashing. Each casemate was armed with a 32-pound battering cannon, cast iron with a 6-inch bore, mounted on wooden carriages. During the war, artillery also included 4 iron 18-pound field pieces, placed on wooden platforms on the counterguard. In 1815 they were removed to the bridge leading to the Battery, the artillery was reduced to 24 cannon and 4 spare carriages. In 1821 under the Quartermaster the artillery was reduced to 20 mounted cannon and 13 unassembled field pieces. A year later, all guns and equipment were removed to Fort Diamond, another defense point in the Narrows. The parade in the center of the fort, enclosed by a flagstone walk, was gravelled, as noted in the Archive plans. A flagstaff at the rear of the parade opposite the sallyport was set 32 feet high and probably cross mast. Two circular cisterns of unknown depth and capacity stood at either side of the parade, lined with stone and cement to provide a water-tight reservoir, covered with wooden platforms, mounted with two pumps. The fresh water was supplied by the Manhattan Water Co. via wooden pipes run under the causeway

and into the fort. In the center of the fort was a hot shot furnace installed in the post-war period..." (Pitkin 1960 summarized in Bresnan 1978)

After the news that a war had begun in 1812 between the United States and Great Britain, the British blockaded the harbor. To raise spirits Mayor DeWitt Clinton and General Armstrong proposed a gunnery contest between Castle Clinton and Fort Columbus. The hulk of 'The Asia' was to be anchored in the channel between the fortifications. The best gunners from the 2nd, 9th, 11th Artillery Regiments, the Veteran Corp of Artillery of N.Y.S. Militia, and the U.S. Army all took part. The event was widely publicized with General Armstrong commenting about the accuracy of the gunners who took part in the contest (Cushman n.d.: 4). A great psychological stunt, word of which undoubtedly got to the British. Neither Castle Clinton, nor any other fortification in the New York Harbor ever fired a shot at an enemy during the war of 1812. However, the mere presence and readiness may have been enough to dissuade the British from attacking the harbor areas.

Following the conclusion of the War of 1812, public sentiment seemed to favor the restoration of the Battery to its pre-war appearance. There was strong public outcry against General Winfield Scott's plan to construct two office buildings in the Battery at the head of the Castle Clinton causeway. By 1822 Col. Totten of the Army Engineers wrote that Castle Clinton could effectively be struck out of the present defense system and not weaken it. So, in 1823 the battery was decommissioned and given back to the City of New York (Bresnan 1978: 3).

3.8 The Castle Garden Period

Following the decommission of Castle Clinton as a military fortification, it was adapted to become one of New York City's best known civic centers (Fig. 3.5). Renamed Castle Garden "fine gardens, flowers, ornament and fountains transformed the Parade [ground] into an elegant setting, vast awnings were hung at the sallyport entrance and a roof promenade covering provided a magnificent viewing stage" (Bresnan 1978: 12). Castle Garden became a focal point for the city with most major events taking place inside or in the Battery around it. "Band concerts, fireworks, balloon ascensions, scientific marvels, a great Croton fountain and nearly every President from Jackson to Pierce was welcomed there" (Bresnan 1978: 12). The grandeur that was Castle Garden was summed up in the New York Gazette and General Advertiser as

... "Under the inner arcade, are erecting fifty boxes, ventilated by the port holes of the Castle. Each box contains a table and seats for eight persons. The circular walk on the top, covered with an awning, is upwards of five hundred feet in length, and fourteen feet in width. On this platform or walk are on both sides benches extending the whole five hundred feet, and across the ends. From this walk, the waters of our Bay, the Narrows, the Hudson, and interesting landscapes, are in full view, with all the bustle of our floating commerce... It is calculated that about two thousand persons may now find comfortable seats on and within the walls of this Castle. With that discretion so important in

establishments of this magnitude, the Castle Garden must become the most fashionable and health place of resort in this country; and...the price of admittance will be but a mere trifle, and within the reach of all..." (quoted in Berengarten 1934: 21).

Most events were unencumbered by problems. However, one event experienced disaster. When President Andrew Jackson visited the Castle on June 12, 1833, the bridge connecting the Battery and the Castle collapsed just after President Andrew Jackson had crossed. Several people fell in along with the two ticket offices; a broken arm was the worst wound reported (Berengarten 1934: 37).

Castle Garden was not permanently roofed until 1845 when it was boosted to be the largest auditorium in the world. At this time a 2nd tier, clerestory roof monitor, interior stage, fanciful columns, balcony and seating were also added. These improvements served to transform the building into an elaborate theater (Bresnan 1978: 12). P.T. Barnum presented Jenny Lind to her first American audience in Castle Garden in 1850. However, by 1855 Castle Garden had lost its attraction for hosting events and performances and was leased back to the city. Its fall from grace was due to the movement of people uptown and the opening of the Academy of Music in 1854 (Berengarten 1934:78).

In 1855, much to the chagrin of many of the nearby residents, the state leased the property as an Immigrant Landing Depot. There was substantial public outcry concerning the states planned conversion of the facility into an Immigrant Center from residents who feared the entry of an undesirable element and declining property values. The large influx of Irish into New York following the potato famine of 1847-48 created anxiety about the practice of dumping the immigrants at the docks and letting them fend for themselves (Berengarten 1934: 80-81). A commission was formed by the state to oversee the mass of immigration that was taking place in New York. The Commission choose Castle Garden as the preferred landing place for the expected the facility to protect the Immigrants, aid the shipper and the Commission in the care of the destitute, help the statistician and the community in general (Berengarten 1934: 80-81) [quoted from State of New York Annual Report of the Commissioners of Emigration, for the Year Ending December 31, 1855, p. 187f. (Berengarten 1934: 82). However, within a year of opening, even the commissioners had grievances filed against them. The Commissioners of Emigration were charged with endangering the health of the city, destroying the use of the Battery as a public space, lowering property values, inhumane treatment of the immigrants, and railroad ticket scalping (Berengarten 1934: 84).

During its heyday from 1855 to 1890, Castle Garden witnessed the immigration of over 8,000,000 people (Bresnan 1978: 14?) (Fig.3.6). Forty percent of the 3,772,707 foreigners arriving at Castle Garden from 1855 to 1879 became residence of the State of New York (Berengarten 1934: 91).

More than three times as many aliens entered the United States through the New York emigrant depot, from 1855 to 1890, than all the other ports of entry combined in the country. This fact is astonishing indeed, when one realizes that the New York authorities taxed the emigrant varying at times from \$.50 to \$2.50; whereas ports like Philadelphia and Baltimore admitted the foreigners without levying a poll tax. This tax helped defray the operating expenses of the depot and aided those aliens who were poverty-stricken and in need of support (Berengarten 1934: 89).

While much of what had been a grand theater was left unchanged, the stage, seating, ornamentation and proscenium were removed for the immigrants. A fence was installed around the perimeter of the Immigrant Depot and numerous buildings were jammed against the battery wall; landfilling was also begun to extend the Battery to the Castle but was not completed though until 1870 (Bresnan 1978: 14) (Fig. 3.7). The renovations to the structure took several months, but the Landing Depot was finally opened in August of 1855. Castle Garden became a bustling place. Estimate vary concerning how many emigrants the Garden was able to accommodate. The annual reports of the commissioners indicate a low of 2000 people per day in 1877, 1879, and 1880 to as high as 4000 per day for 1873 (Berengarten 1934: 88). Services were set up on the interior to accommodate the new arrivals. Along with the people attempting to conduct honest business with the immigrants were hoards of scoundrels that awaited them both within and just outside the facilities. Many of these undesirable entrepreneurs grew rich by exploiting the emigrants who came to America with a lack of understanding of the system. A commission was set up to oversee the Garden.

Castle Garden caught fire on July 9, 1876 and, aside from the stone wall of the battery, was completely destroyed. Reconstruction of the depot was begun in September of 1876 and proceeded rapidly. By the time that it was ready to reopen, the Commissioners claimed that the center was better than it was before (Berengarten 1934: 91-93).

The United State Congress invested the Treasury Department with the power to assess taxes on the immigrants. The money collected was to be divided between all of the ports of entry within the United States. Not only did this move the taxation authority away from the state of New York, but it also took away a great deal of tax money used to support the Emigrant Landing Depot. New York State protested, but their protests were in vein (Berengarten 1934: 95). To supplement the loss of revenue, the Board of Emigration began to charge rental fees and taxes on businesses operating in or around the Garden (Berengarten 1934: 95). From this point on, however, things began to deteriorate until by 1890 the Federal Government was forced to assume responsibility for immigration. In 1892, the Federal Government opened Ellis Island.

3.9 The Aquarium Period

In 1892 a state bill was passed, authorizing the city to spend \$150,000 to refurbish the structure as a public Aquarium (Fig. 3.8). It was not finished until 1896 and remained under the management of the city. However, in October of 1902 the management of the facility was transferred to the New York Zoological Society. From its inception until 1920 the Aquarium boasted a visitation of 43,000,000 people (Berengarten 1934: 104-105).

Various improvements were made to the facilities after the New York Zoological Society began management of the facility: in 1903 a salt-water reservoir was added; a new conduit, filters, boilers etc. in 1904; and a new roof in 1909. Visitation steadily increased, until by 1912, an expansion plan was prepared (Bresnan 1978: 15). Expansion of the Aquarium continued through 1925, and photographs from the period show how elegant the facility had become. By 1925, a third floor of offices was added, projecting masonry walls over the eastern wall of the Aquarium "providing two tower-like structures and a third story facade. The entire wall surfaces and castellated parapets were coated with new stucco and rustication in low relief" (Bresnan 1978: 17). Repair and rehabilitation work was undertaken again in 1938. Improvements included stuccoing of the exterior wall, adding incised and gilded lettering, applying a new terrazzo floor (Bresnan 1978: 17).

In 1941, New York City Parks Commissioner Robert Moses closed the Aquarium for 12 years (Bresnan 1978: 17).

3.10 The Controversy over Castle Clinton

It was clear from the very beginning of the shutdown that Commissioner Moses wanted Castle Clinton torn down, once even describing it as a "large red wart" fixed on the face of the city (Bresnan 1978:18). Years of controversy began between the public, state, and federal government officials and Commissioner Moses. At one point Moses declared the battery to be in the way of the Brooklyn Battery tunnel which meant its elimination (Bresnan 1978: 17). While people were busy attempting to save the battery, Moses demolished the Aquarium additions. This event energized the preservation efforts to save the battery. A court battle ensued until finally in 1948 Justice Samuel Null ruled that the battery should be spared. The court order was impeded by the untimely transfer of title by State Assembly Committee on Affairs of New York, which did not happen until 1949, after Commissioner Moses had already burned the doors of the battery. He was finally ordered to cease the demolition (Bresnan 1978: 18-19).

Castle Clinton National Monument, part of the National Park Service, was established in 1950. Restoration of the fortifications began even before the Monument was established with the stucco being stripped from the exterior of the brownstone wall. Restoration of the monument was

completed in the 1970s. A narrow heptagonal path was placed around the battery to delineate the original counterguard and now serves as the official boundary for NPS ownership.

Chapter 4

PREVIOUS ARCHEOLOGICAL RESEARCH

Several archeological investigations have been done at Castle Clinton. These include, in their order of occurrence, the 1955 archeological investigations conducted by Paul J. F. Schumacher, the 1962 archeological excavations conducted by John L. Cotter, and the 1963 excavations done by William D. Hershey. These excavations were done primarily to aid in the restoration efforts. The following chapter attempts to evaluate the archeological excavations done at Castle Clinton.

4.1 Paul J.F. Schumacher's 1955 Investigations

REPORT TITLE: Archeological Field Notes, Castle Clinton National Monument, New York City, New York

AUTHORS: Paul J. F. Schumacher

DATE OF REPORT: June 1955

DATES OF FIELDWORK: June 1955

PROJECT GOALS: Schumacher's report is simply a journal listing his accomplishments for the two weeks of excavation at Castle Clinton; one map and 17 photographs supplement the journal. Project goals are, therefore, not specifically stated and therefore hard to discern. However, upon reading the various journal entries, the implied goals for the project are surmised as 1) to locate the hot shot furnace 2) to locate the north and south cisterns.

METHODS: Schumacher's excavations were conducted during the first two weeks in June of 1955 (Fig. 4.1). He set out a baseline directly down the middle of the Sallyport entrance. Along this baseline, he and his crew excavated Trench 1, an irregular 3-4 foot wide and 35-foot long trench. Next, Schumacher aligned a secondary baseline perpendicular to the first and located Trench 2A, a 30 foot long trench to the south of Trench 1 and Trench 2B also a 30 foot long trench to the north of Trench 1. Since his report is in journal form, it is difficult to tell exactly what he was looking for, or exactly why he was looking for it. He comments in one of his initial entries that he hired laborers, probably NPS, from Federal Hall. Throughout the two weeks, Schumacher worked with a crew of between 2 and 4 men. These men, since they are identified as laborers and not archeologists, probably had little if any archeological training. The journal descriptions indicate that Schumacher was apparently correct in his selection of laborers for the project as very few artifacts were found, but a lot of very heavy, stone moving was involved. Excavation involved the exposure of large cemented features and the removal of debris from filled features, so one can assume little or no stratigraphy was encountered in the excavations. Pick and shovel were the likely instruments used in the excavations. No field forms were used and while Schumacher indicates that drawings were done on June 17th, the only drawing that appears with the report is a map illustrating the location of the excavations. The map was well

chosen and is to a large enough scale that the location of the excavations may be precisely identified. The 17 black and white photographs that accompany the report provide very good documentation of the trenches, strata, and features found (Fig. 4.2).

RESULTS: Trench 1 exposed a water pipe, terra cotta drain pipe, and a large amount of rubble. Water was encountered 28-32 inches below the surface. The excavators concluded that the water was due to poor drainage of the old fish tank floors. Schumacher notes that Trench 1 runs through Aquarium Turtle fish tank in the center of the building. Ultimately it was the infiltration of water that led to Trench 1 being abandoned. Portions of some of the Aquarium's fish tanks were found in both Trenches 2A and 2B. The cement of the fish tanks could not be broken without a jackhammer so the excavators dug around them. Two mortar and stone walls were found in Trench 2B. The stone fill between the two walls was removed and the base of the walls was exposed approximately 6 feet 7 inches below the ground surface. Schumacher believed that these walls were footings for the parade ground. Excavation in northern portion of Trench 2B revealed "a solid foundation floor of some sort, probably of Castle Garden or Aquarium Period." Identical stone walls were found in Trench 2A but the working space was narrow and more dangerous and was not attempted.

RECOMMENDATIONS: Schumacher noted that the north and south cisterns were probably under the cement slabs of the fishtanks and recommended additional work for these, when time and money permit. Other than this, no additional recommendation is made.

EVALUATION: Schumacher's report provides most of the basics of an informative archeological report. He provides a list of where he excavated and what he found. A map documenting his excavations is also appended which is of large enough scale that the location of his excavations can be pinpointed precisely. Numerous photographs also accompany the report showing the various trenches excavated and several of the features found. Several elements of the report are however disappointing. Schumacher's brevity of description only provides glimpses into what was actually done and found. No profile drawings or plan drawings, other than the large map, are included in the report.

4.2 John L. Cotter's 1962 Excavations

REPORT TITLE: Preliminary Archeological Tests Beneath Aquarium Tank Floors, Castle Clinton

AUTHORS: John L. Cotter

DATE OF REPORT: October 1962

DATES OF FIELDWORK: October 1962

PROJECT GOALS: Cotter's goal for the limited investigations was to explore beneath the aquarium tank by means of a jackhammer and hand labor to locate the north and south cistern. However, it sounds like Cotter observed other excavations being conducted to examine the

footings and foundations to see if they could be restored to their original state. Cotter recorded his observations of their work before noting the results of his own work on the cisterns and the hot shot furnace.

METHODS: While not fully developed in his report, the methods of investigation included a combination of hand labor and machine use (Fig. 4.3). The archeological investigations were being conducted in cooperation with architectural explorations around the interior of Castle Clinton. Hired laborers and not archeologists, aside from Cotter, were used for all of the excavations. This method seems relatively appropriate for the conditions. Thick cement slabs from the aquarium tanks overlay the cisterns and the probable location of the hot-shot furnace. These large and thick slabs (1-1 ½') were broken up by jackhammers; rubble fill from the dismantling of the Aquarium was also encountered across the site. Cotter produced a brief report on his results and appended five photographs to his report. Additional comments on methodology were not included.

RESULTS: The architectural explorations that Cotter includes comment on were conducted in the areaway just to the west of the officer's quarters. It appears from some of the photographs located at the NCRC of Cotter's 1962 work that the officer's quarters immediately inside the Gate had previously been emptied of their contents. It appears as though the workmen excavating the areaway were throwing the backdirt inside the officer's quarter's compartments. Cotter notes that there was a wall eight feet in front of (west) of the front wall of the officer's quarters. This areaway had been interrupted by Aquarium period brick wall partitions set on a slate floor. This areaway is believed to be original to the battery, but the seven steps at the southern extreme and the sides of the stairwell are thought to be from the Aquarium period.

After the cement slabs of the Aquarium tanks were jackhammered and broken up, the two cisterns were located. The Aquarium tanks had been built on top of the masonry walls of the cistern. Cotter describes the cisterns as having been filled with sandy earth with some artifacts. Artifacts mentioned include stoneware, earthenware, and bottle fragments. The entire assemblage, according to Cotter, indicates that the cisterns were filled between 1875 and 1911. Exposure of the hot-shot oven proved to be more of a challenge. To even get down to the approximate level of the feature, the workmen had to remove two and a half feet of scrap iron and rubble, and then hammer through one and a half feet of concrete. After much effort a hole of approximately 5 feet in diameter was blasted through the concrete. Portions of sandstone pieces cemented with 18th century type mortar were exposed below the seal tank. Cotter believed that this could be a part of the hot-shot oven, but its identity could not be securely established.

RECOMMENDATIONS: In a later correspondence, dated February 5, 1963 and addressed to the Chief Archaeologist, Washington, Cotter indicates that "When the concrete bases are completely removed, I shall arrange to observe and possibly test the hot-shot tower location. At that time I shall endeavor to preserve any artifacts encountered."

EVALUATION: While brief, Cotter's report does include many of the necessary elements for an informative archeological report. The report contains a well-written description of what was done and where it was done. Photographs included at the end of the report provide a visual

complement to the text (Fig. 4.4). *Plan and profile drawings recording exact dimensions and would also have been helpful in illustrating finds.*

4.3 William D. Hershey's 1963 Excavations

REPORT TITLE: Castle Clinton at the Battery, New York: Excavations made during August, 1963, involving the hot shot furnace, the cisterns, the casemate foundations, etc.

AUTHORS: William D. Hershey

DATE OF REPORT: 1963

DATES OF FIELDWORK: August 5th – 13th, 1963

PROJECT GOALS: To investigate interior features of the battery including the hot-shot furnace, the North and South Cisterns, the walls in front of the officers' quarters, one casemate support, and the site of the flagpole.

METHODS: Hershey is not explicit about his methods in the report. He does mention that he hired laborers to do the excavation, and that his assistant *John Hanna* was an architect by trade. No mention is made about whether or not soil was screened, notes were taken, or if natural stratigraphic layers were followed. The detailed nature of the report, however, seems to indicate that the excavations were well recorded.

RESULTS: Hershey and his field assistant *John Hanna* began work at the site in August after conducting a reconnaissance of the site on May 8. Heavy equipment was being used to clear the Aquarium rubble. The contractor had cleared the rubble away to expose the top of both the North and South Cisterns. Heavy equipment had also removed the rubble from the area below the seal tank. Workmen were hired for the two week project and six areas were investigated (Fig. 4.5); three "test holes" were also excavated by the contractor.

The Hot-Shot Furnace

Working from a c. 1810 map 36-14, obtained from the National Archives, Hershey located Trench 4, a 5.5-foot long irregular unit. Excavation revealed only rocks, thought to be the rock fill used to build the counterguard. Hershey's computations indicated that the bottom of the trench was well below the low water mark of the c. 1810 drawing. No evidence was found for either the octagonal magazine illustrated on the c. 1810 maps nor for the Hot-Shot oven purportedly built in the same place in 1814. Even the brownstone rocks identified by Cotter were dismissed as being patternless.

The Cisterns

Hershey found the cisterns to be soundly constructed, and even though catch basins, installed during the Aquarium period, had been installed on top of them, partially damaging the west of each cistern. A later 14-inch drainpipe had been installed through the North cistern and had inflicted additional damage. On the South cistern a 1.5-inch pipe and an intrusive north-south wall had been installed. He had to concentrate his efforts on the North cistern because the contractor had left a large pile of rubble fill over most of the south cistern. The interior diameter of the cistern measured 14 feet and they had been set in square stone foundations with a circular rim rising 16-17 inches. The cisterns also had a 2.5 foot wide rim at the then ground surface. Hershey was unable to tell whether or not the rim of the cistern had at one time been higher. It appeared to the excavators that the North cistern was better constructed than the South. Only a portion of the South cistern was excavated, but these excavations revealed a wooden floor, possibly a wooden lining, and a stratigraphic profile absent of any dateable artifacts. Logical reasoning was relied upon to date the various strata within the cistern. Both cisterns were bonded with the casemate column support. Hershey notes "I would suggest that the cisterns are open-ended stone cylinders, the wooded bottom being the actual plank foundation. Not intended for storing drinking water, they were built directly on the foundation, a wooden seal built around the bottom to slow leakage."

The Flagpole Base

A 15 foot long trench was excavated in the vicinity of the original flagpole, believed to be approximately three feet to the north of the present one. The area was heavily disturbed and no evidence for the flagpole was found.

The Casemate Foundation Walls

Hershey also conducted extensive excavations just south of the South Cistern on the Casemate foundation walls. Here he discovered some very interesting developments. The original to-be-built plans were modified and the casemate was shortened. This required a second wall to be constructed to support the floors. A flagstone walk covered the gap between the original and final designed diameters. Hershey goes into excruciating detail to describe the construction phases and why the as-builts were different from the designed.

The Parade in front of the Officers' Quarters

Hershey indicates that removal of the Aquarium period rubble from the area revealed little except for some enigmatic walls. A 16-foot long east-west trench revealed very little of archeological significance, and the finds that were recovered, could not be related to the military period.

RECOMMENDATIONS: Even though Hershey makes no formal recommendations for additional work, he informally refers to areas that need more research. He suggests that one unexplained item in the parade ground attached to the casemate between embrasures 20 and 21

needs additional investigation. While it is unlikely to be found, Hershey notes that an 1810 correspondence to the Secretary of War mentions that three cisterns are to be built for the Southwest Battery. Additional trenching around the cistern is also suggested to see if the cisterns were designed to contain fresh or brackish water.

EVALUATION: Hershey's report is the most detailed of the three archeological reports. He provides a detailed textual discussion of what he found and includes numerous photographs and illustrative drawings (both plan and section) (Fig. 4.6). At times, however, his discussions, especially concerning the casemate construction, are hard to follow. Labeling the various components on a plan would have aided the discussion.

Recommendations for additional archeological work are not given, nor are instructions for caring for the existing resources. The only item mentioned in the text as possibly deserving additional investigation, is an "unexplained item attached to the parade ground side of the casemate column support between embrasures 20 and 21" and the mention of three cisterns purportedly designed for the battery. It is clear from the text that much of the legal protection now available for archeological resources was unavailable at the time that Hershey did his excavations. His mention of the test trenches/pits dug by the EODC provides testimonial for the later implementation of archeological protection laws. To his credit, Hershey does describe the location, size and configuration of the EODC test trenches/pits mentioned in the report.

Hershey also does some very interesting work with elevations. He looked at the early nineteenth-century construction specifications, extracted the elevation of the parade ground and surrounding features based on the depth below the embrasures. These specifications provide cross section illustrations as to how the battery was built. He then looked at the current depth below the embrasures to assess what might be left and/or why he was unable to locate features like the hot-shot oven. The constructional material that Hershey was finding allowed him to figure out his relative position using the cross section drawings. The level of the area below the seal tank was just a couple of feet above the bottom level of the cistern. His basic conclusion was that many of the original fortification features had been severely impacted by the construction of the Aquarium. The elevation exposed when the remains of the Aquarium's seal tank were removed were well below the bottom elevation for the hot-shot oven. A profile plan is illustrated in the report documenting his conclusion.

The methodology used by Hershey, as already mentioned, was not made clear. He and his crew of five moved a lot of earth in a two-week period, so it is unlikely that any material was screened. It becomes very clear in Hershey's discussion of the casemate investigations that this was an excavation designed to uncover architecture and not one focussed on stratigraphic material. This is understandable when period photographs are examined that document the condition of the battery. One can assume, especially given the description of the stratification in the cistern, that natural stratigraphic layers were utilized during excavation. Occasionally, Hershey notes an artifact that was uncovered, but no catalog of artifacts was given, and no indication was given that any soil samples were saved. An analysis of one of the bottle fragments uncovered during the excavation was conducted by the Corning Glass Center and dated to post 1850.

Chapter 5 CONSTRUCTION AND RESTORATION IMPACTS

In addition to the previously discussed archeological excavations, several other excavations have been conducted inside or around the castle for various reasons. These excavations are necessarily detrimental to the archeological record. These excavations are mentioned here because they will be factored into the assessment of what may be left archeologically.

5.1 Aquarium Pump and Boiler Room Excavations

While proper archeological excavations were not done when the pump and boiler rooms were excavated in the 1920's renovations of the Aquarium, a letter from H. de B. Parsons Consulting Engineer to Messrs, McKim, Mead & White provides for a few interesting details. A portion of this letter is reproduced as follows:

“When the excavation was made for the Pump and Boiler Room, we found the material consisted of fine to coarse sand mixed with some gravel and containing stones varying from about 3 in. to 18 in., chiefly the smaller sizes.

Apparently the material was filling on top of the rock reef, but this rock reef was not exposed.

At the sump where the deepest excavation was made, we uncovered a wooden grillage consisting of logs averaging about 8 in. diameter. We exposed two layers of logs superimposed at right angles. The logs were in good condition, being below mean low water.

We inferred that this grillage extended under all the walls, but we only exposed it at the sump.

The foundation courses of the walls below water line were laid dry with joints filled with sand and fine gravel. The foundation stones were flat on bed and build [sic] and were carefully laid with broken joints” (Jacob 1998; Quoted from a letter to Messrs. McKim, Mead & White, New York, NY from H. DeB. Parsons, Consulting Engineer, New York, NY, October 5th, 1922. Collection: New York Historical Society).

The description of exposing “grillage” and dry-laid stones is in accordance with plan 36-14 from the National Archives. The only discrepancy being the notation that the two layers of superimposed logs were below mean low water. In fact, according to the original design, these logs and planks would have been at mean low water level.

5.2 The Battery Park Underpass

One of the largest and most damaging construction projects from an archeological perspective was the excavation of the trench for the Battery Park Underpass. This underpass connects the Westside Highway and the FDR Drive and was coordinated by New York City Parks Commissioner Robert Moses back in the 1940's. Photographs in the park archives show an excavation trench approximately 30 feet deep and at least 30 feet wide running in front of the eastern portion of the fortifications (Fig. 5.3). The tunnel, in fact, went underneath a portion of Castle Clinton, which then had to be supported by a steel frame (Fig. 5.3). Another photograph taken a little over a month later shows the excavation of a "test pit" underneath the overhang of the castle. This "test pit", most likely an engineering test pit, shows timbers and stones probably from the construction of the counterguard (Fig.5.4). This indicates that the base of the counterguard was probably never reached and that undisturbed deposits may exist below the lowest level of the underpass.

5.3 1968 Engineering Investigations

Another project bearing upon our examination of Castle Clinton concerned subsurface engineering investigations done by the Prepakt Concrete Company. The project was designed to assess the subsurface conditions of the main Battery wall and to test the effectiveness of jet grouting below the wall to stabilize it (Fig. 5.5). Three test pits were excavated (dimensions unknown) to approximately 10 to 13 feet; a fourth was excavated only about 6 feet deep due to caving. Two borings were also drilled to between 25 to 32 feet deep. The Prepakt Concrete company concluded that:

The borings, test pits, and probes indicate that the fill material placed in developing the site consists primarily of rock fragments of varying size. Above the timbers, there is evidence that the rock was graded or specially placed in such a manner so as to minimize voids between the rock fragments. Beneath the timber layer, the rock fragments appear to be randomly oriented, and much of this fill contains a large amount of voids. In portions of this zone, the spaces between rock fragments are partially filled by sand and gravel-size particles. Within the lower fill penetrated in Borings 1 and 2, soft organic silt was encountered between rock fragments... Test Pit D, which was terminated at shallow depth, disclosed significantly different materials consisting of sand and gravel and moderate amounts of debris and organic matter (Colle 1968: 5-6).

5.4 Castle Clinton Restoration

Following the successful struggle to save Castle Clinton, plans began to be garnered for the eventual restoration of the structure when money permitted. Several plans were obtained from the National Archives in Washington, D.C. that illustrated the diachronic

changes that the fortification had undergone from its construction in 1808-1811 to its cession in 1823. Park Historian, Thomas Pitkin's efforts in the 1960s were especially helpful in obtaining design specifications from the original structure.

While Thomas Pitkin's Historic Structures Report represents an accurate study of the design specifications, little attention was devoted to field investigation of the structure by an architectural historian. As noted by several members of the National Park Service's architectural community (See correspondence in Park Files), this initially permitted a less than accurate reconstruction.

The actual restoration activities in 1973 were, not only damaging from an architectural perspective, but were especially damaging to the archeological deposits. Specific damage to archeological deposits and features will be discussed in the following chapter.

5.5 Counterguard Restoration

Work began in the late 1970s on the restoration of the counterguard and sallyport plaza. The scope of work called for:

- (1) the removal of the deteriorated asphalt paving, gravel and rock fill on the six rear sides of the counterguard; the deteriorated scrubbed aggregate concrete slab and bluestone paving on the sally port plaza in the front of the fort; and approximately 155 feet of deteriorated concrete boundary curb on the north side of the fort; (2) the placement of a new scrubbed finish concrete slab on the counterguard and sally port plaza; and approximately 155 feet of new concrete curb; and (3) the construction of a wheelchair ramp. Also included as alternate bid items are (4) the resetting of the bluestone sally port stairs and a capping block; the repointing of the bluestone sally port stairs, curbs, pylons, etc.; (5) the cleaning of the sally port entrance pylons and regilding of the incised lettering.

While neither construction plans nor specifications could be found, personal experience has shown that the depth of impact is at least a foot deep, probably deeper.

Chapter 6

KNOWN AND POTENTIAL ARCHEOLOGICAL RESOURCES

The West Battery, as Castle Clinton was originally known was constructed in approximately 35 feet of water. As a result, the most of the battery is an archeological resource. The following chapter assesses the archeological resources likely to be encountered by any ground disturbing activities on and around Castle Clinton.

6.1 Prehistoric Archeological Resources

Because of the fluctuating sea levels through time, sites that are now underwater may have at one time have been dry land. Such is the case with the land on which Castle Clinton was built. Following deglaciation, the area where Castle Clinton sits was dry land during much of the Paleo-Indian and Archaic periods. Numerous sites within the area were buried by rising water as the sea approached its modern levels. It is possible that one or more prehistoric sites may be located under the counterguard and stone fill of Castle Clinton. Logistically, however, it would be extraordinarily difficult to even examine the ground surface below the counterguard. However, events like the construction of the Battery Park Tunnel indicate that excavations needed to examine the old ground surface do occasionally take place. Future excavations like this should take into account the possibility of uncovering prehistoric archeological resources. Measures should be taken to adequately test the area for prehistoric sites provided deep excavations like those used in the construction of the Battery Park Underpass occur.

6.2 Historic Archeological Resources

The Castle Clinton Period

As the earlier excavators at Castle Clinton have indicated, it is very difficult to excavate below the tidal water table. The water table at the site fluctuates daily, and makes the excavation of archeological test units below the water table difficult if not impossible, even with a water pump. The excavations that have taken place below the water table have not yielded productive results. It appears that the Counterguard was built, as described by Pitkin and illustrated in map 36-14 from the National Archives, by creating an octagonal structure of stone blocks and then filling the middle of it with stones. One of the deepest excavations done by William Hershey in 1963 protruded into this stone fill, leading the excavator to describe it as "a hole in the rocks" (Hershey 1963: 4). The engineering tests also found that the stones below the timbers seemed to be randomly thrown in. Other than exploring architectural construction debris, excavation into these deposits has limited archeological value.

Previously Examined Archeological Features

The Cisterns, Hot Shot Furnace, Flagpole and Casemate

Both the north and south cisterns were excavated, first by Cotter and later by Hershey. Good detailed drawings exist of them from these excavations. Both of these cisterns have since been restored and are presently used for water collection. As a result of their restoration, the archeological integrity of these features and their associated deposits has been compromised. It may, however, be worthwhile to conduct excavations on the exterior of the cisterns to learn more about their design and function. The information necessary to answer these questions should be buried deeply enough so as to have avoided impact from the previous construction episodes.

Both of the archeological excavations that were conducted to record the remains of the hot-shot oven have failed to locate any remnants of it. Hershey's research, specifically his analysis of the elevation of the preserved levels where the hot-shot oven would have been found, indicate that it was destroyed much earlier, probably by the conversion of the fortification into an aquarium. Hershey's work on the south casemate has already provided archeologists with additional information on the southern casemates. The evidence uncovered by the 1963 excavations established new information concerning the construction on the casemates, namely that the original design for the casemates had been shortened and an additional interior wall connecting the column supports had been added.

No evidence has been found for the original flagpole. Any and all remains connected to it were probably erased with the construction of the Aquarium.

Additional Fortification Features

A. The Cellars and Cellarway

The 1962 photographs taken by John Cotter show that after the Aquarium was wrested from the fortification wall, that nothing remained of these Quarters, except the cellars and part of the cellarway. The dugout area directly below the Officer's Quarters was used for various purposes according to Pitkin. One large room was located below each set of rooms above. They measured 17' 9" front to back, three feet shorter than the officer's quarters upstairs due to the thickness of the Gorge Wall at that level. The Sallyport separated the cellars. While these rooms were referred to as cellars, they most likely served other functions, probably as guardrooms and prisons. These cellars were accessible by a wooden stairway from the quarters above and by cellar steps leading to the cellarway. The cellarway was then located *in front of* the cellars. It is described as being 27 feet long, 4 feet wide, and 3'2" deep, which would mean that access to the cellar must have been down steps because the height of the cellar door was described as being over 6' tall.

Excavation observed by Cotter in 1962 focused on the cellarway. Cotter observed workmen excavating the southern half of the cellarway, under the direction of Grant Cadwaller, NPS Architect. The purpose of the excavations was to determine if the old foundations could be

restored. Subsequently, Hershey excavated an east-west trench that would have crossed the cellarway, but concluded that nothing of the military period was left.

The 1968 restoration drawings (4G) and 1972 restoration drawings (4A-A and 4C-C) illustrate that the walls were to be reconstructed and a waterproof barrier was to be added on the exterior side of the reconstructed walls. Ultimately, this means that all archeological integrity surrounding these walls is gone.

B. The Magazine's and Privies

Pitkin identifies the two connected rooms in both of the rounded ends of the battery, near the gorge as the magazines and privies. The two large chambers on the interior were the magazines and the two smaller chambers started off as latrines. The magazines were 8 x 13 feet with a transverse arch. Entry was through a 15-foot long corridor with thick wooden doors at each end. The privies were described by Pitkin as being 12' by 4'6" longitudinally arched and whitewashed structures. One map shows six privies or holes in each chamber, but other maps do not specifically identify this chamber as being a latrine. Each privy had a door with a lock. Each of these smaller chambers was vented by a triangular shaped air vent, approximately 15 feet long, that led to the exterior of the battery.

Archeologically, nothing is known about either of the magazines or privies. The 1962 photographs taken by John Cotter illustrate that the superstructure of these rooms has been rather severely damaged by later construction. Much of the substructure of these rooms may, however, survive. Other magazines sometimes had rather elaborate drainage systems below the floor to keep the powder dry. One would suspect that these magazines also had such a system, especially with latrines nearby. The substructure of the latrines may still be intact; no mention is made in the reconstruction drawings concerning the archeological impact from the reconstruction. Future investigations may be useful for these structures.

C. The Guardhouses

Pitkin notes that two Archive Plans 36-27 and 36-31 show two outbuildings, one on each side of the sallyport entrance. These outbuildings were approximately 27' 2" by 17' 2" by 10' high. Each of these buildings had two rooms, two entrance doors, and eight windows. Nothing archeologically is known for this area, however, the foundation for the southern outbuilding was demolished by the construction of the Battery Park Tunnel. The foundation, or at least part of the foundation for the northern outbuilding, may still remain.

D. The Parade Ground

William Hershey's work demonstrated that the hot-shot furnace had been removed and the surrounding elevation had been taken down well below the military parade ground level for the construction of the Aquarium. No archeological integrity exists for the original parade ground.

The Castle Garden Period 1823-1855

No design plans were found for the interior conversion of Castle Clinton to Castle Garden. Undoubtedly there were impacts to the ground surface, some of which may still be preserved. However, both the later construction of the Aquarium and the reconstruction efforts by NPS to rebuild Castle Clinton may have had detrimental impacts on these archeological impacts. Without plans showing the conversion, assessment of potential archeological remains is nearly impossible. A few conclusions can, however, be drawn by examining period drawings of the interior of the structure. Figure 3.5 shows three rows of columns to support the roof and balcony of the structure. An interior row of at least 7 surrounds the stage area, while a row of 14-16 hold up the balcony, and an additional 14-16 extend from the balcony to the roof. Being support columns, these would have had large footings or pilings. Hershey may have found one of these (1963:40). Several more of these as well as other impacts could exist.

The Castle Garden Period 1855-1892

A drawing published in Barbara Benton's book *Ellis Island, A Pictorial History*, shows the continuity of the interior of the new emigrant station with that of the entertainment center. A few changes have been made; the staging/staging area was removed; the seats were removed from the ground floor, etc. Basically, however, the interior organization remained intact.

Several maps were found of the buildings associated with the conversion of the facility to an immigration processing station. One map found in the New York Public Library (Robinson 1885) actually shows footprints of the various buildings within the compound. A bird's-eye photograph shows additional buildings that were not included in the Robinson map (Fig. 3.7). Using the 1885 Robinson map, as well as the c. 1890 Library of Congress photograph a compilation map was developed illustrating the probable footprints of the various buildings outside the Castle Clinton wall (Fig. 6.2). Many of these building footprints spill over onto land not owned by NPS. All of the buildings within the perimeter of the fence surrounding Castle Garden have been illustrated. Even though the building footprints are somewhat speculative, since they are based on drawings of the facility, the perimeter is based on the 1885 Robinson map and should be accurate.

While many of the buildings associated with Castle Clinton spill over onto city parklands, it was beyond the scope of this project to assess the non-NPS land for archeological potential. It is important to point out that the city-owned Battery Park has also undergone dramatic alterations through the ages since the Castle Garden-Emigrant Station period. Nevertheless the non-NPS owned land, originally comprising the Castle Garden Emigrant Depot grounds is judged to have more archeological potential than that owned by NPS.

The Aquarium Period

Although a very systematic effort was made first by Commissioner Moses and then later by NPS to remove all traces of the Aquarium, some features may still remain archeologically. Most notably the pump and boiler rooms on the west interior of the battery. Correspondence between Frank Barnes, Castle Clinton Historian and the Regional Director on December 19, 1950 indicated that "the underground chambers uncovered inside the west or rear wall of Castle Clinton be filled in to contract grade-level with materials currently available rather than cleared out"(See Appendix 1). Design plans for the original first floor layout for the Aquarium exist and a reduced version is included as Fig. 3.8.

Chapter 7 RECOMMENDATIONS

7.1 The Archeological Resources

As noted in the previous section, archeological resources likely exist on both the interior and exterior of the fortification wall. Most of the existing fort related features have either been previously investigated, or are reasonably well known. The information gained from earlier excavations on the cisterns, the hotshot oven, and the casemates, adds to our understanding of the construction and functioning of the fortifications. Controlled excavations around the exterior of the cisterns, in the magazines and privies, and in the area of the northern guardhouse may reveal additional archeological information. However, construction, destruction, and archeological impacts have been so far-reaching on both the interior and the exterior of the fortification wall that remnants of the earlier periods in other areas of the fortifications will only be found haphazardly (Fig. 7.1). These impacts may even have affected those areas suggested for controlled excavations.

Thomas Pitkin's report of the early construction of the fort is a very good and informative document. Its use by many as a Historic Structures Report is, however, somewhat curious. While the available background documentation is in the report, it should be supplemented by actual field investigations, typical of a modern HSR. An HSR would fill in the gaps left by Pitkin's document and should devote attention to the later alterations of Castle Clinton.

Vestiges of later transformations of the castle no doubt remain, but it is nearly impossible to devise a cost-effective strategy to investigate these remains (Fig. 7.2). The damage done by Commissioner Moses and the restoration activities of NPS on the site has destroyed most of the archeological information concerning Castle Clinton's use as an aquarium. Similarly, the construction of the Aquarium most likely erased most of the features associated with Castle Clinton's use as an entertainment hub and immigration center. Any kind of traditional archeological survey of the property based on an excavation of test pits seems unwise. Not only would it be extraordinarily difficult to dig through the layers of fill that are known to exist, but it would be a stroke of luck to find features belonging to these later transformations. While remnants of these periods will no doubt be uncovered from time to time, there is really no good method for locating them. The vestiges that remain will likely be deeply buried or will be of substantive construction.

A brief examination of the archeological collections at the park headquarters illustrates the minimal collection philosophy of the various excavators at the site. Artifacts curated by the park are substantially under-represented for the amount of archeological work done at the site. The collections are, however, adequately housed. Most of the museum quality artifacts in the collection were purchases for the earlier displays and exhibits at the site

Castle Clinton illustrates a case in point of why it is necessary to document all archeological resources and not just ones related to a particular interpretive period. Beginning back in the 1950s, after the fortifications became a National Park Service National Monument, the emphasis has been on collecting information, both historical and archeological, concerning the 1808-1823 period. Information on other periods was considered of lesser importance, even though the transformation of Castle Clinton into Castle Garden (both the entertainment and immigration centers) and the Aquarium contributed to the site's preservation. All of these functions are listed in the National Register of Historic Places nomination form, and all deserve archeological attention.

This issue is included because the park is currently moving toward restoring the function of Castle Clinton to its earlier use as an entertainment center. It is unlikely that the fortifications will be completely reshaped to reflect this function, but NPS is currently looking at ways to embellish the present structure so as to make it more reflective of its Castle Garden (1823-1855) function. Proper documentation of the archeological components of this and later transformations could have substantially contributed to this new design.

It is very important for future Section 106 projects for park planners and administration to work in conjunction with archeologists to document all remaining archeological resources. The vast majority of these resources will be found during construction projects, which require Section 106 work.

Section 106 mandates that federal agencies take into account the effects of their actions on properties listed or eligible for listing in the National Register and give the Advisory Council on Historic Preservation a reasonable opportunity to comment...Its practical effect is to encourage agencies to seek ways to avoid or minimize damage to cultural resources...The goal of the process is to make sure that preservation is fully considered in federal actions, thereby protecting our shared heritage from thoughtless or ill-considered damage (NPS 28: 55)

Strong measures in a systematically applied program must be taken to document and protect the remaining archeological resources. NPS-28 goes on to comment:

For purposes of Section 106, the Advisory Council's regulations define an undertaking as "any project, activity, or program that can result in changes in the character or use of historic properties" whether federal agency jurisdiction is direct or indirect...Undertakings include obvious interventions such as installation of new plantings or fences in a Register-eligible cultural landscape, rehabilitating historic park quarters, and land-disturbing activity...NPS involvement with, or requirements imposed on, concessionaires or lessees may include undertakings. Not every park activity is an undertaking, but those that have the potential to affect properties that meet National Register criteria, whether or not any such properties have been identified yet, are subject to Section 106 review. If a

park is uncertain about whether an action is subject to Section 106,
regional office advice should be sought (NPS 28-59)

Therefore, in terms of devising some guidelines for archeological investigations, if construction activities are to be conducted in the areas of the cisterns, magazine, privy, or northern guardhouse, traditional controlled archeological investigations should be conducted. Controlled archeological excavations in these areas will allow archeologists to refine recommendations for future work in these areas. For other areas, both interior and exterior, an archeologist should be present to monitor all ground disturbing activities.

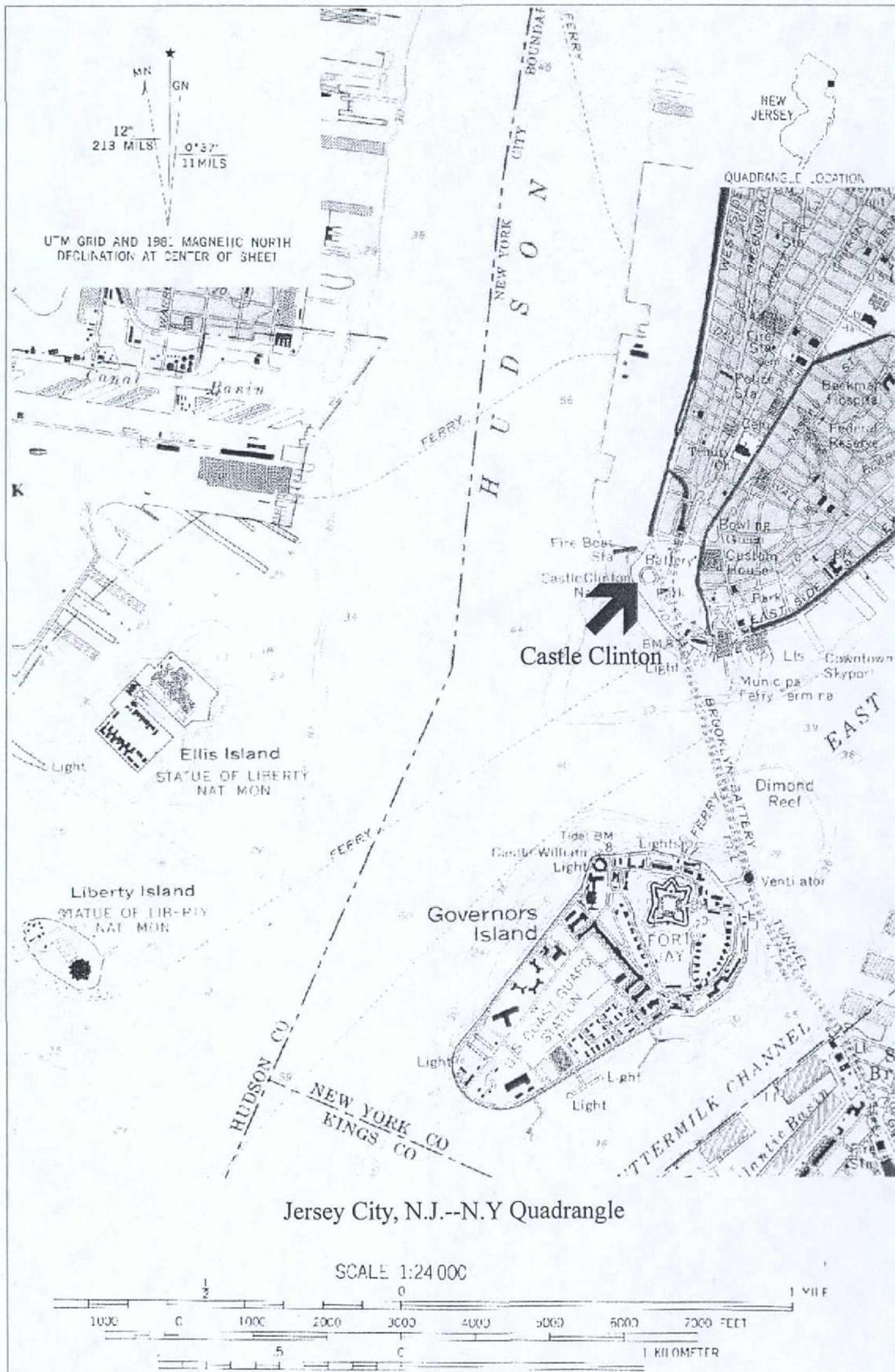


Figure 1.1 Portion of USGS Quadrangle map showing the location of Castle Clinton.

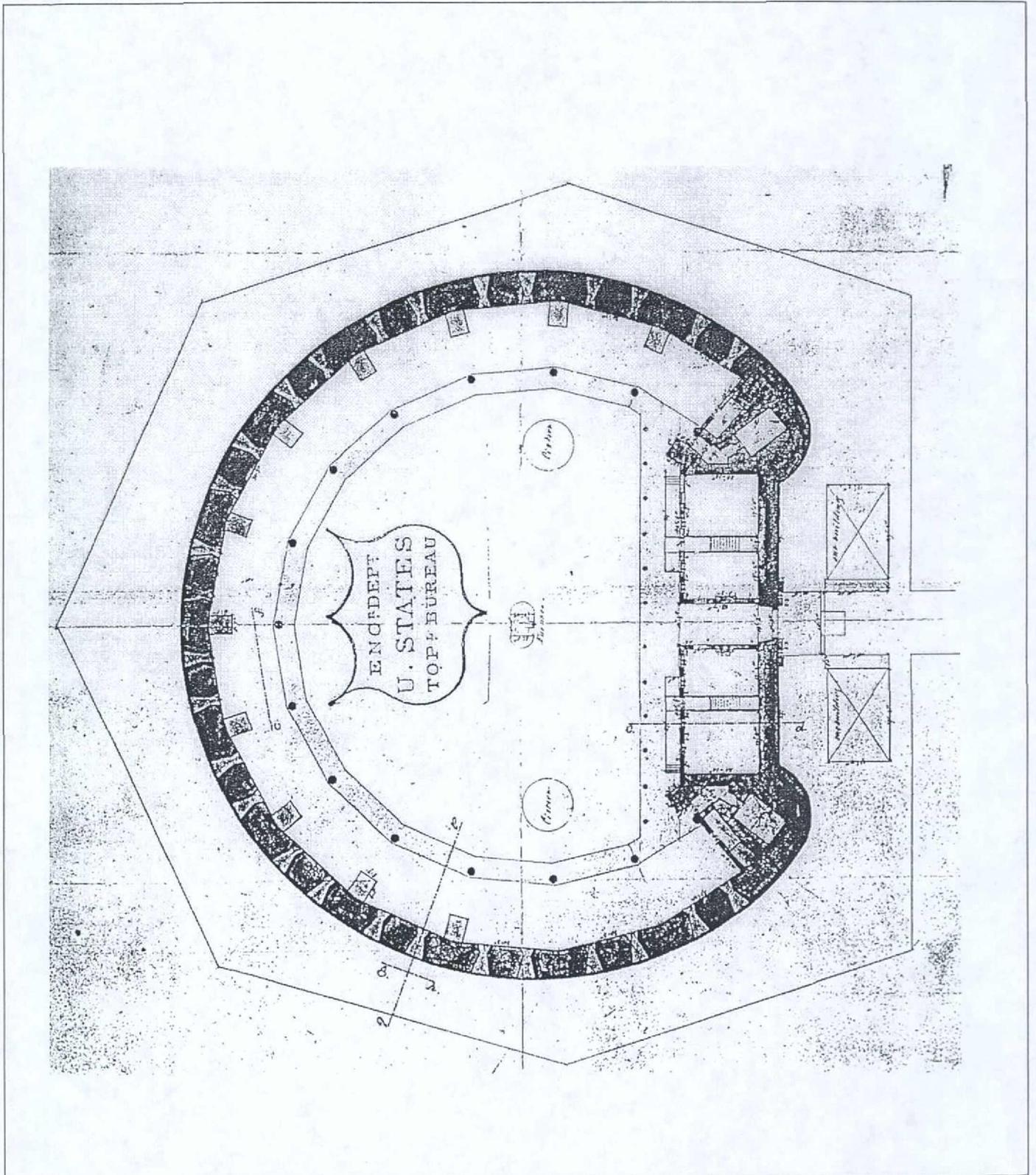


Figure 3.1 Close-up of National Archives drawing (Cartographic and Architectural Room, Drawer 36-32).

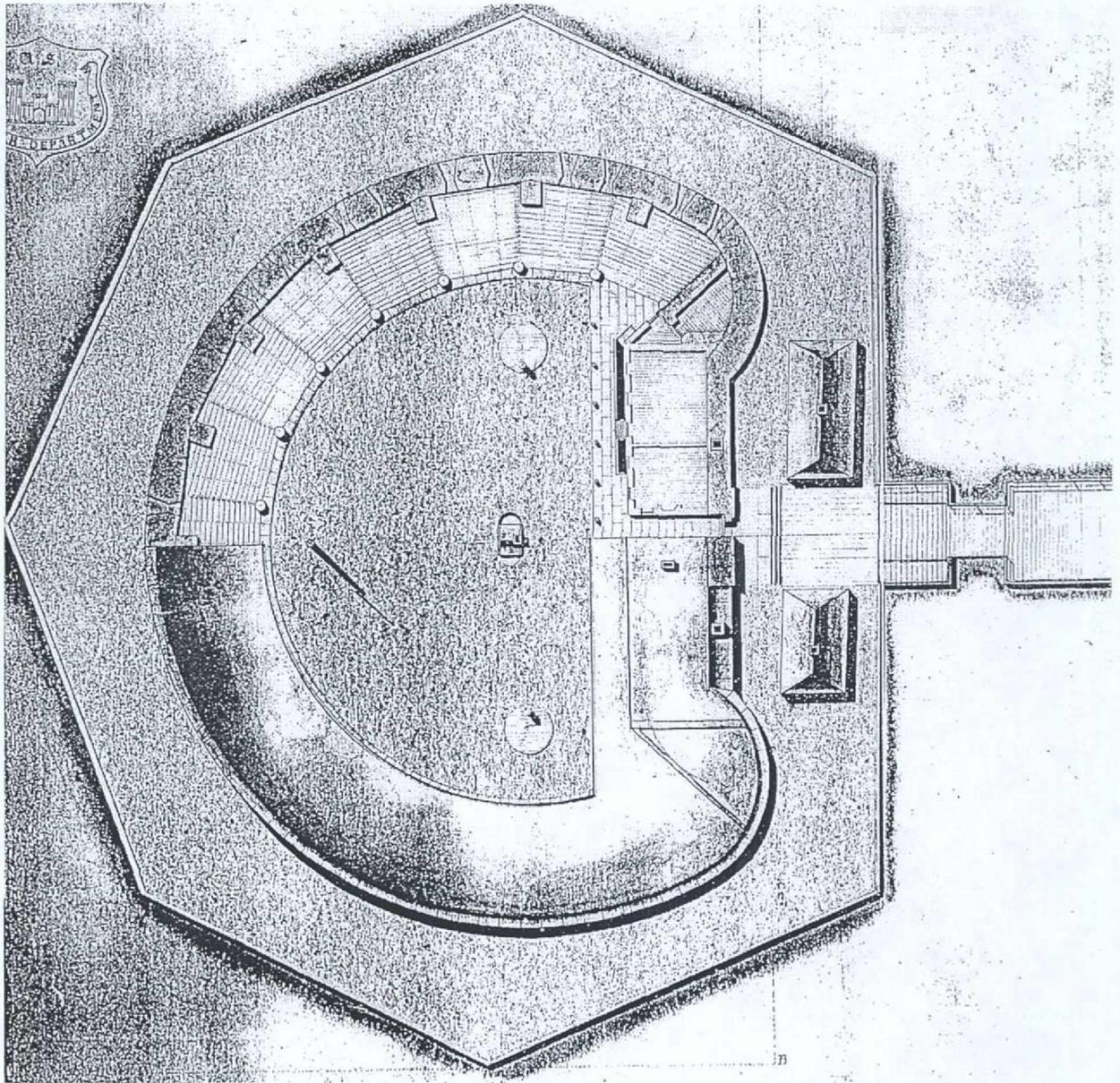


Figure 3.2 Close-up view of National Archives Map. (Cartographic and Architectural Room, Drawer 36-31).

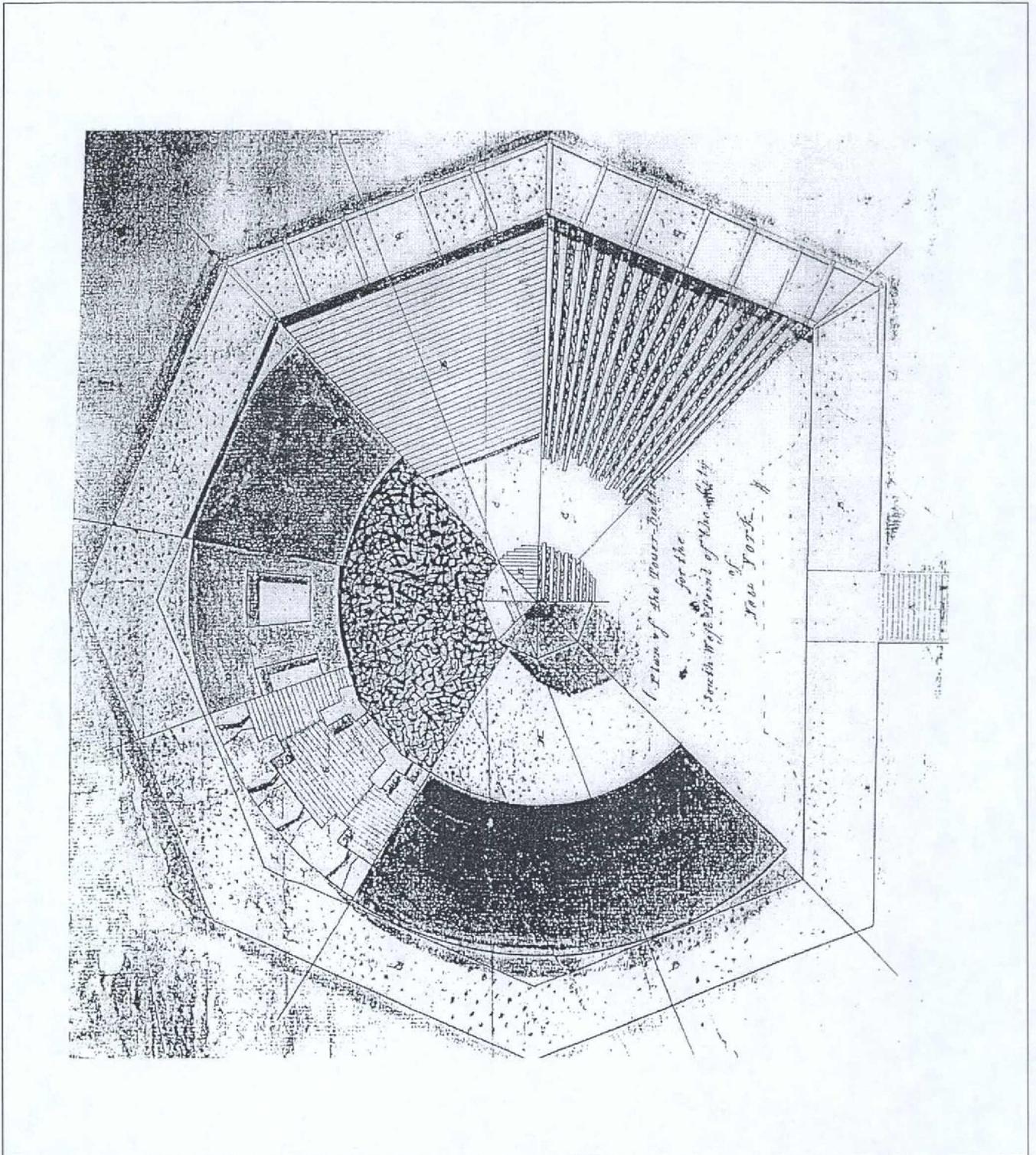
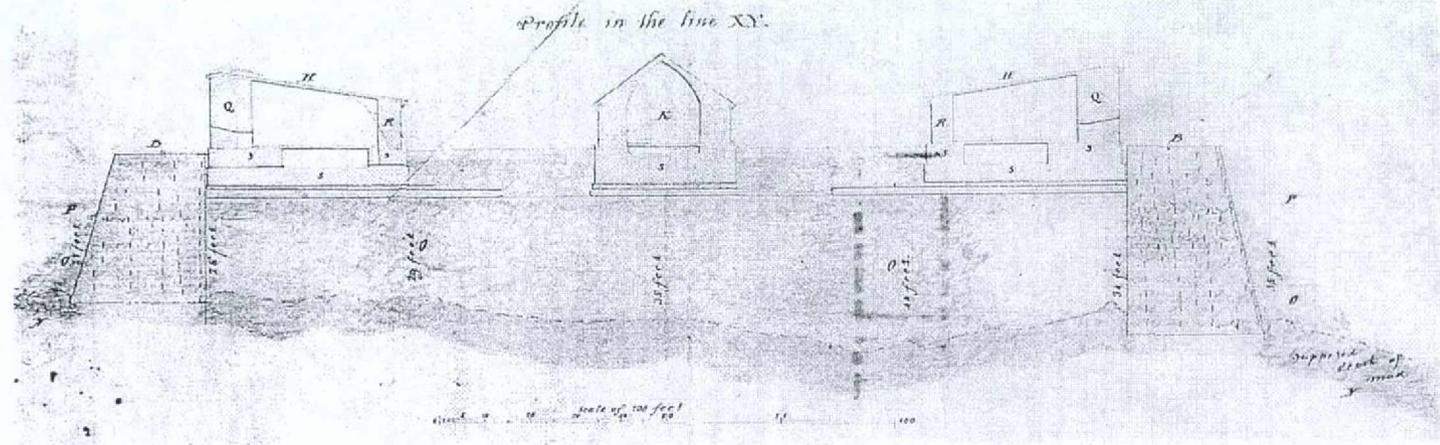


Figure 3.3 Close-up of National Archives drawing (Cartographic and Architecture Room, Drawer 36-14).



Description of the Plan

- A Bridge connecting with the Battery
- B Wharf or Counter-guard, 20 ft wide at top, 30 ft at bottom
- C Road after being filled to low water mark, 20 ft diam.
- D Log pile in ditch with mason work between them - at low water mark
- E Timbers laid over their tops
- F Foundations works upon the floor
- G The plan shows the entrance of the establishment, platform for guns & Piece of the interior wall
- H The surface after being covered with a roof
- I Space between the walls & covering filled with stone & covered at top with gravel
- K Magazine in different state of preparation
- L Stone between the Magazine & Casemate
- M Low, after being spalled

Profile

- N Face of stone outside, prepared at bottom
- O Stone above Mud: is very irregular
- P Outer line - low water
- Q Wharf - s foundation walls
- R Exterior wall
- S Path
- T Interior wall
- X Magazine

Remarks on the Plan & Profile

1. In the Plan but part of the bridge is seen
2. The stone round the outside cannot be accurately estimated, it being impossible to ascertain how far they have extended in the mud.
3. The foundation is of the full strength and the fortification walls were to have been built of Basalt. It being impossible to make any determination in this manner, not strong enough for the whole it would not support itself.

On the Profile

1. The irregularity of the interior was known by means of a plan. 2. The irregularity outside could not be ascertained but by the actual nature of the stone. 3. The lower surface of the plan is a complete one & can only settle in one body. 4. The interior foundation is independent of the wharf & in case of settling will go down by itself & being flooded at low water must therefore settle uniformly. 5. The foundation of the Magazine is also flooded & independent of the other part.

Figure 3.4 Close-up of National Archives drawing (Cartographic and Architecture Room, Drawer 36-14).

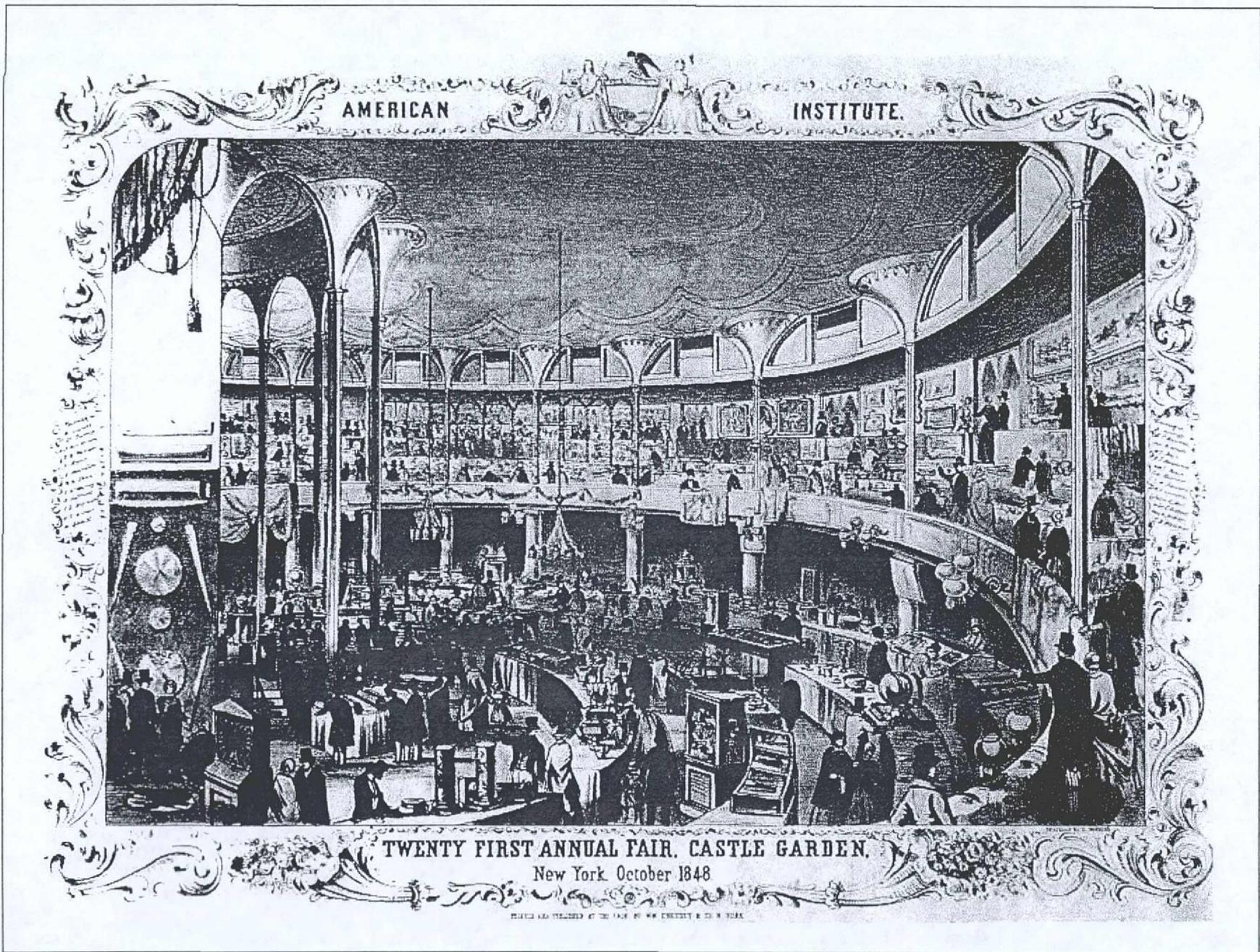


Figure 3.5 Drawing of the interior of Castle Garden when it served as an entertainment hub for the city of New York.

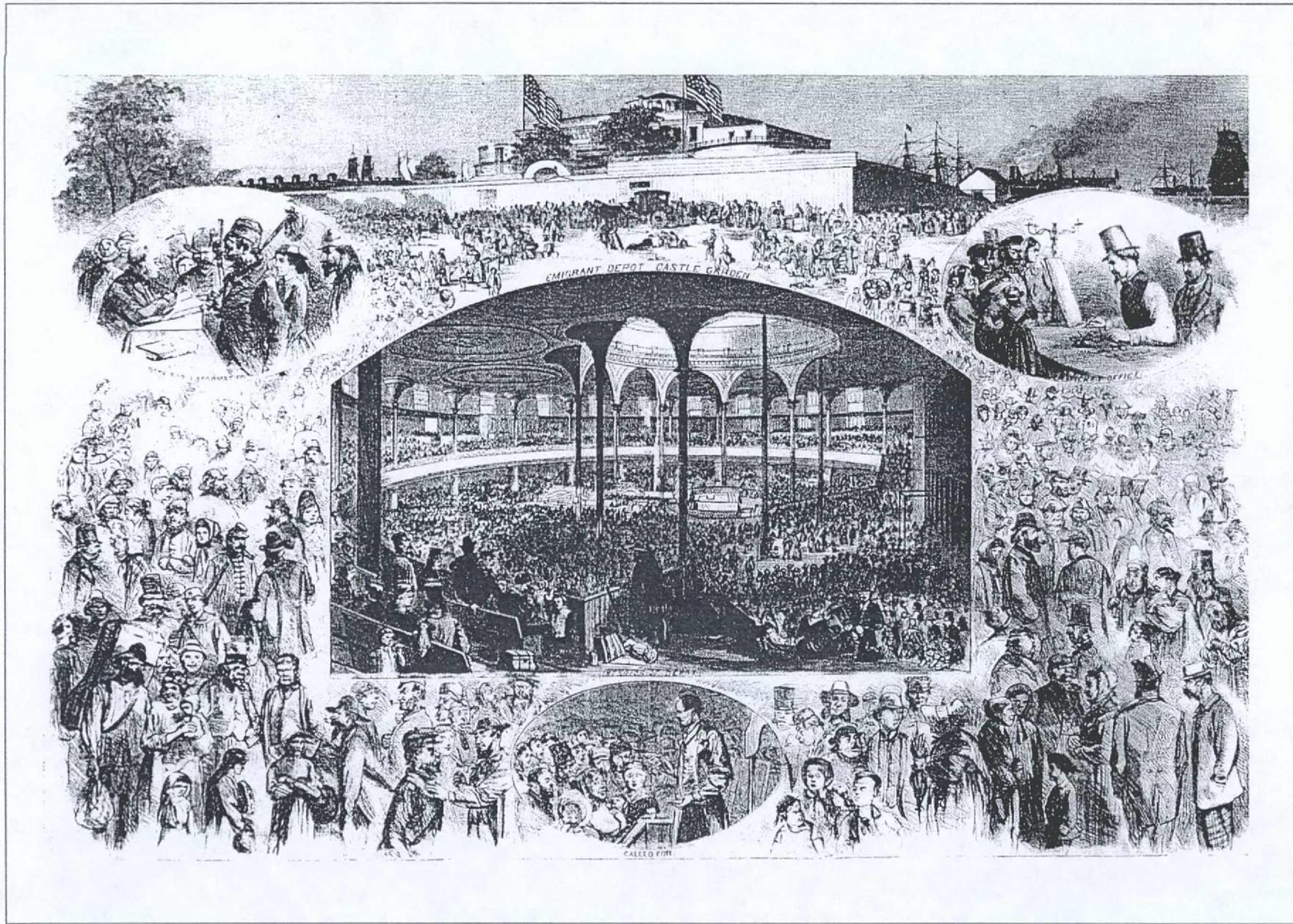


Figure 3.6 Drawing of the interior of Castle Garden, (After Benton 1985)

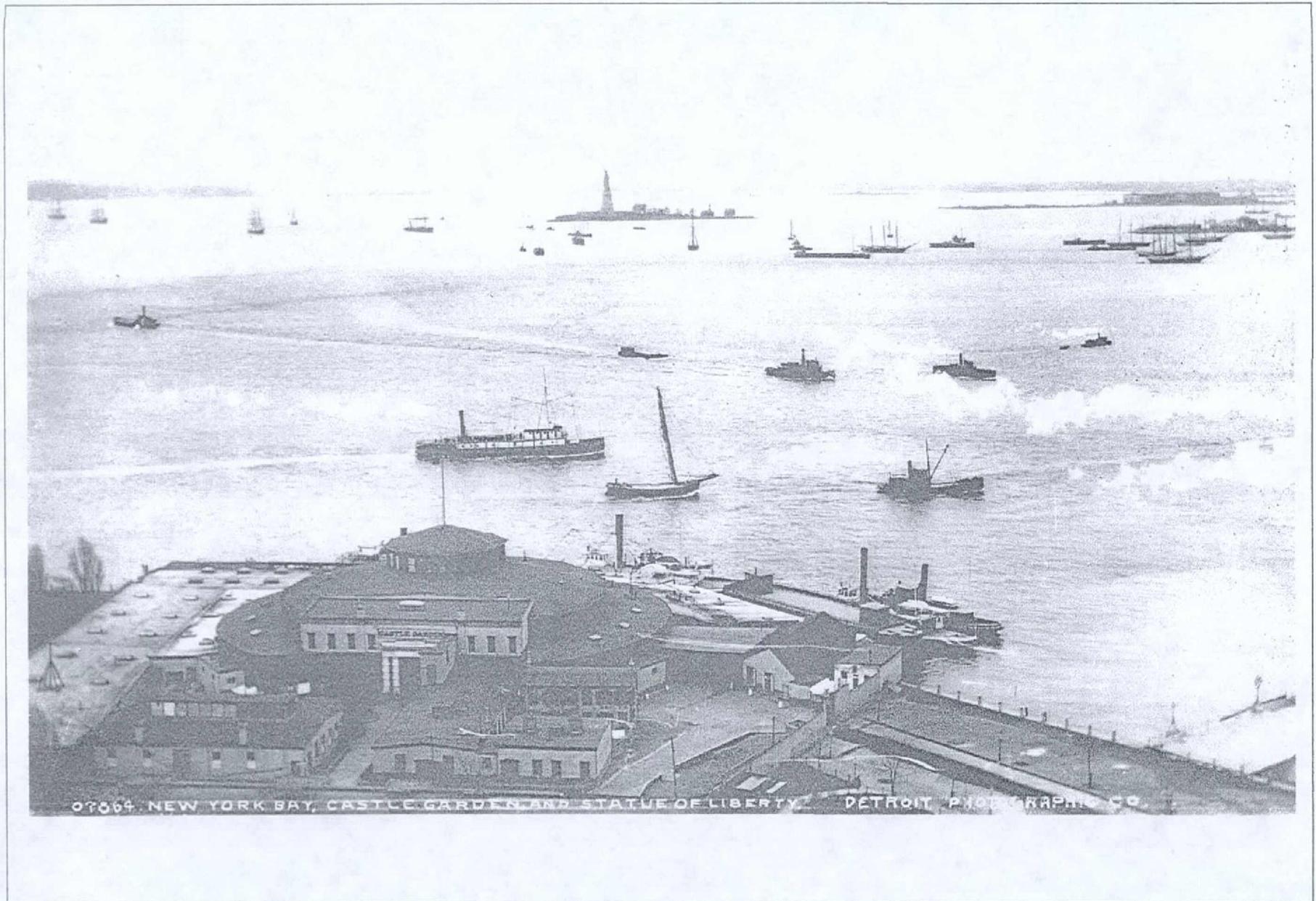


Figure 3.7 Exterior photograph of Castle Garden c. 1890 from the Library of Congress D418-7864.

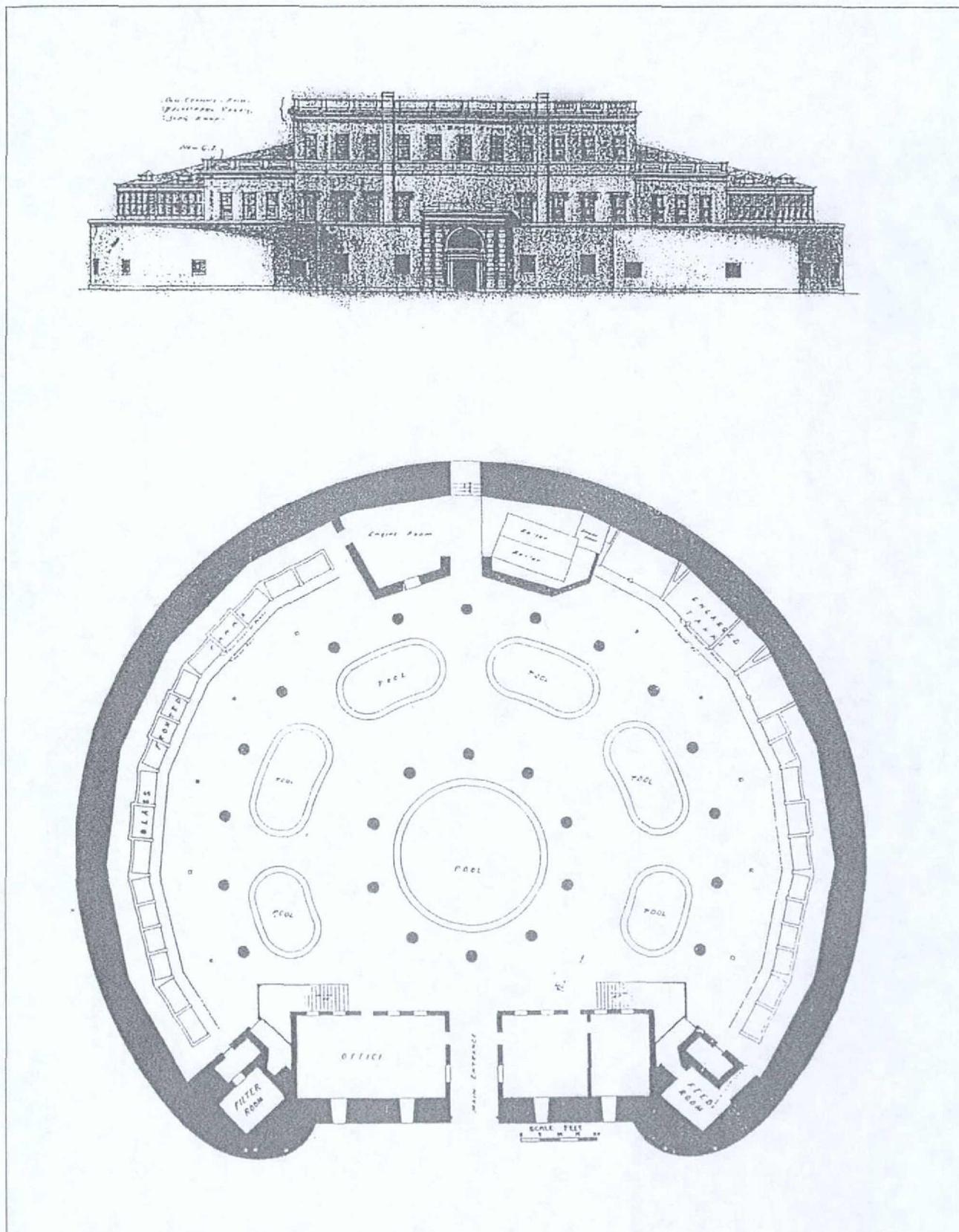


Figure 3.8 Front View and ground floor plan for the Aquarium.

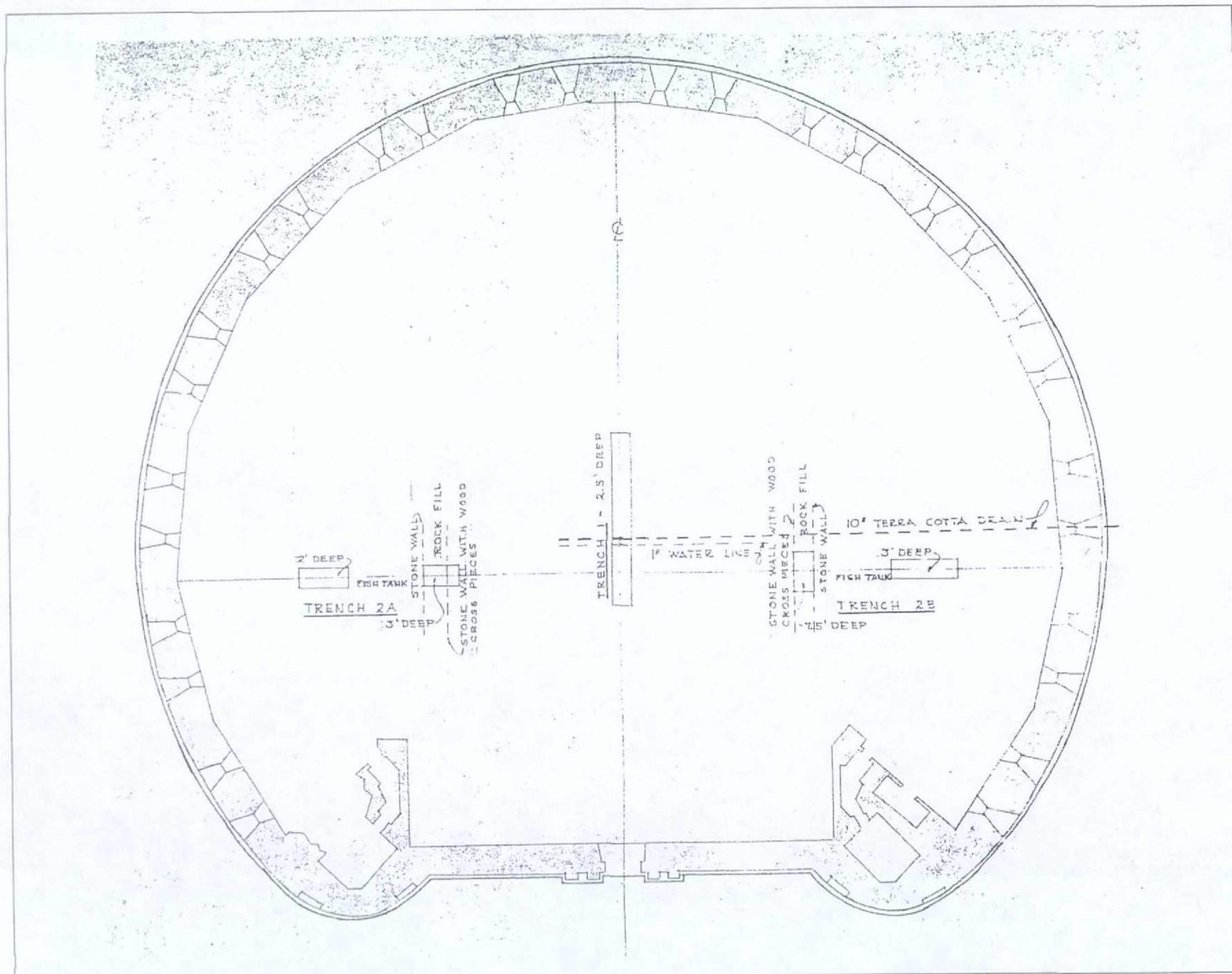
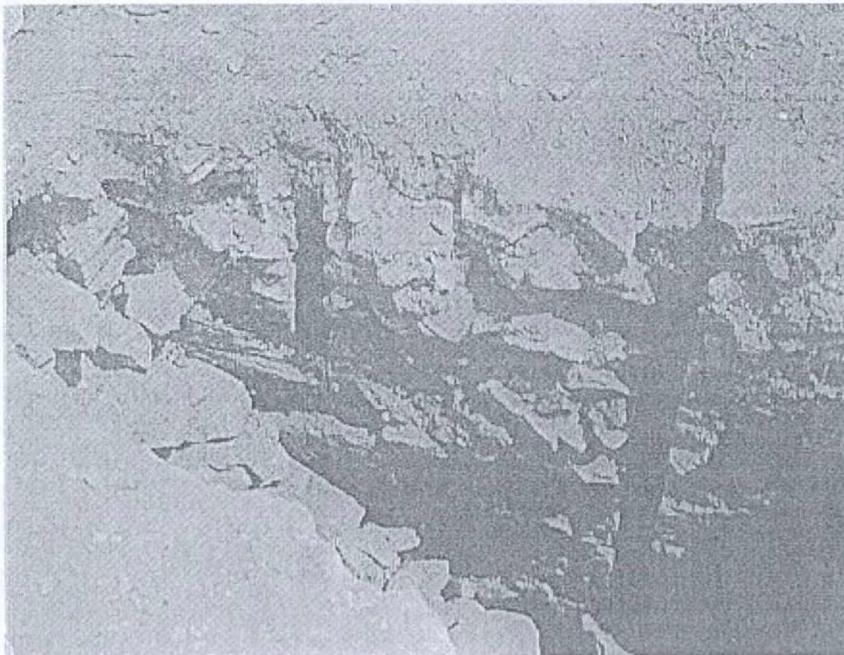


Figure 4.1 Map showing the location of Paul Schumacher's excavations (after Schumacher 1955).



Interior of Trench 2 - North View



Interior of Trench 2 - South View

Figure 4.2 Photographs of Paul Schumacher's excavations.

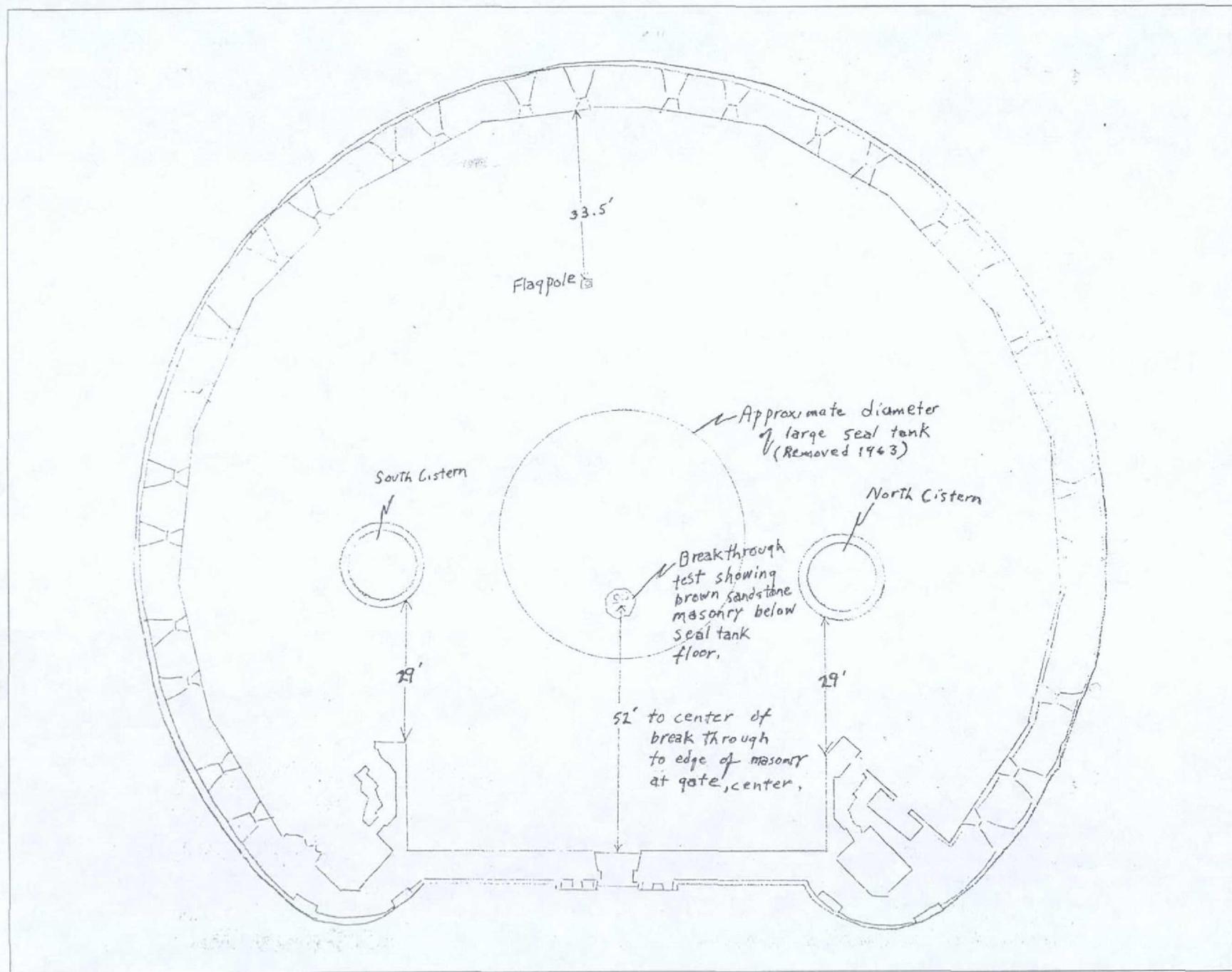
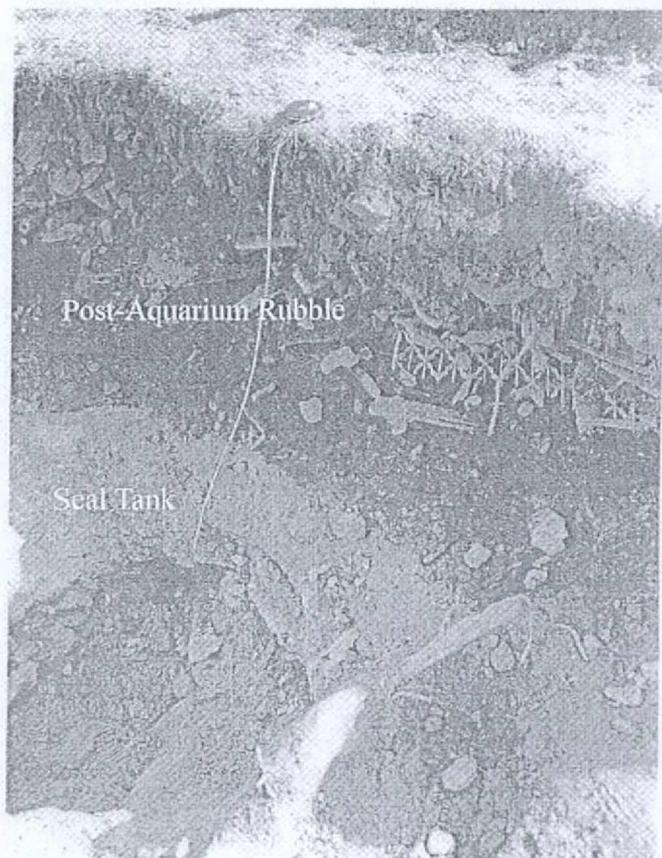


Figure 4-3 Map showing the location of John Cotter's excavations (after Cotter 1962)



Excavation below the Seal Tank



Excavation below the Seal Tank



The North Cistern

Figure 4.4 Photographs of John Cotter's excavations.

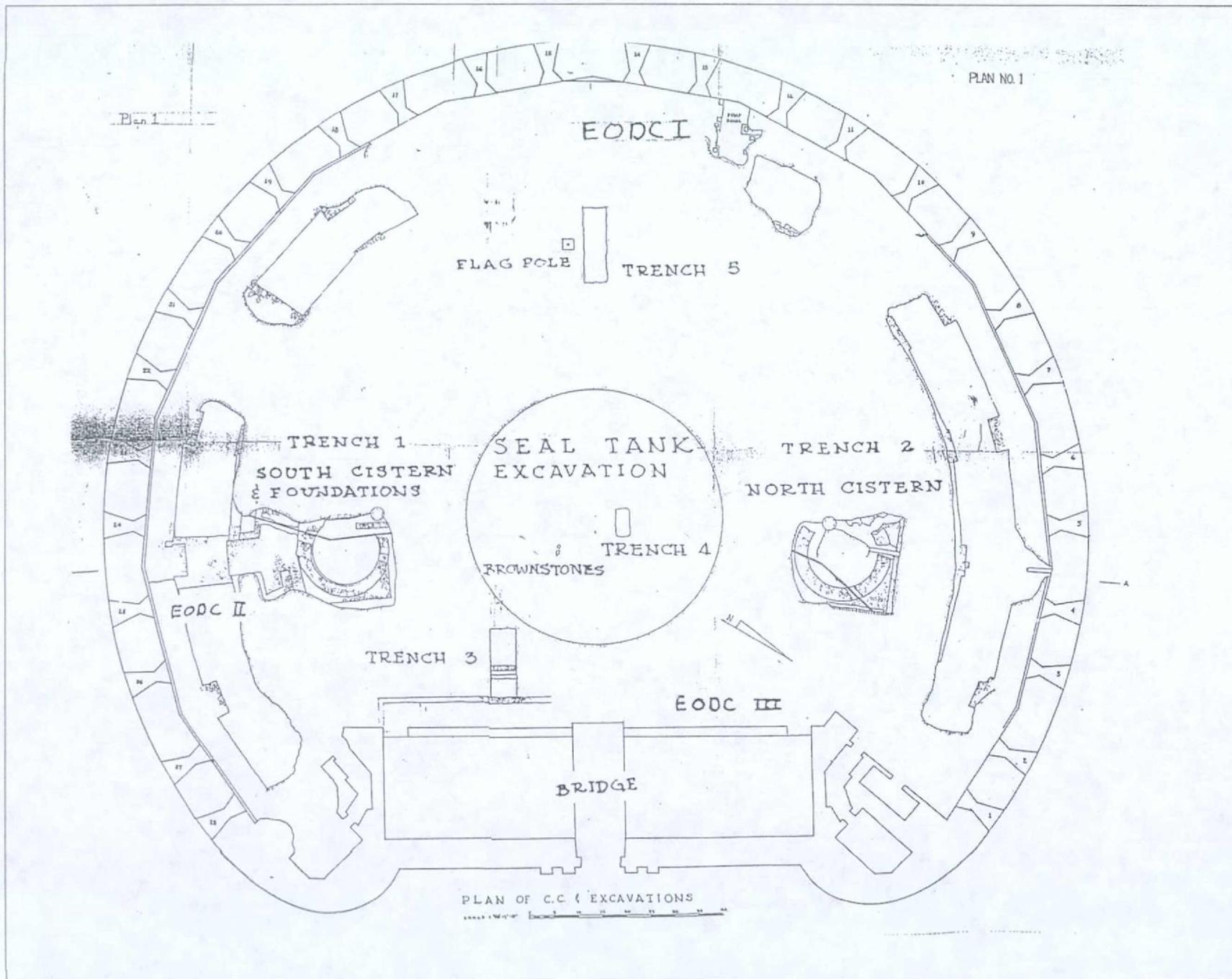


Figure 4.5 Map showing the location of William Hershey's excavations (after Hershey 1963)

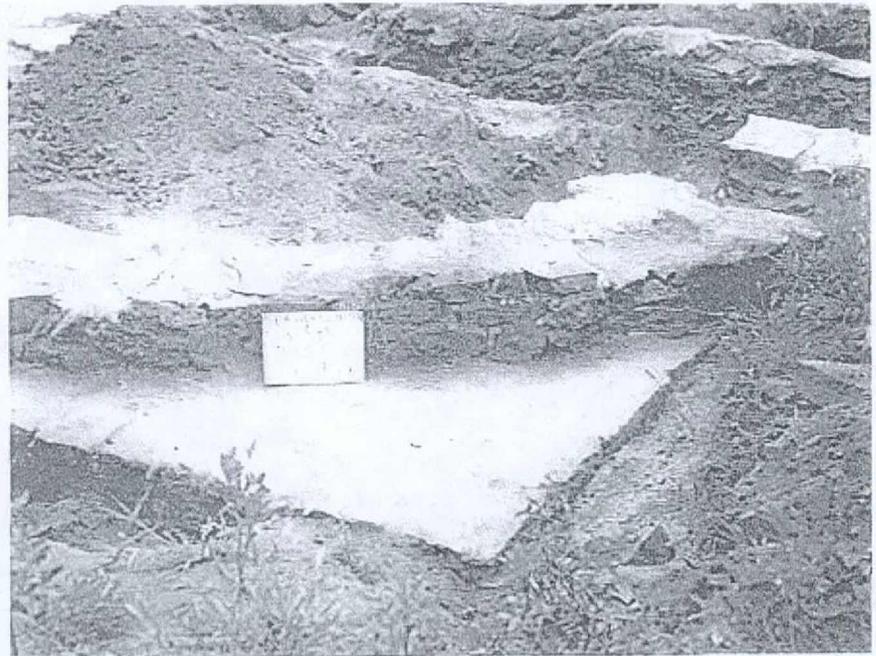


Figure 4.6 Photographs of Hershey's excavations.



Figure 5.1 Photograph of the interior of Castle Clinton c. 1950s.

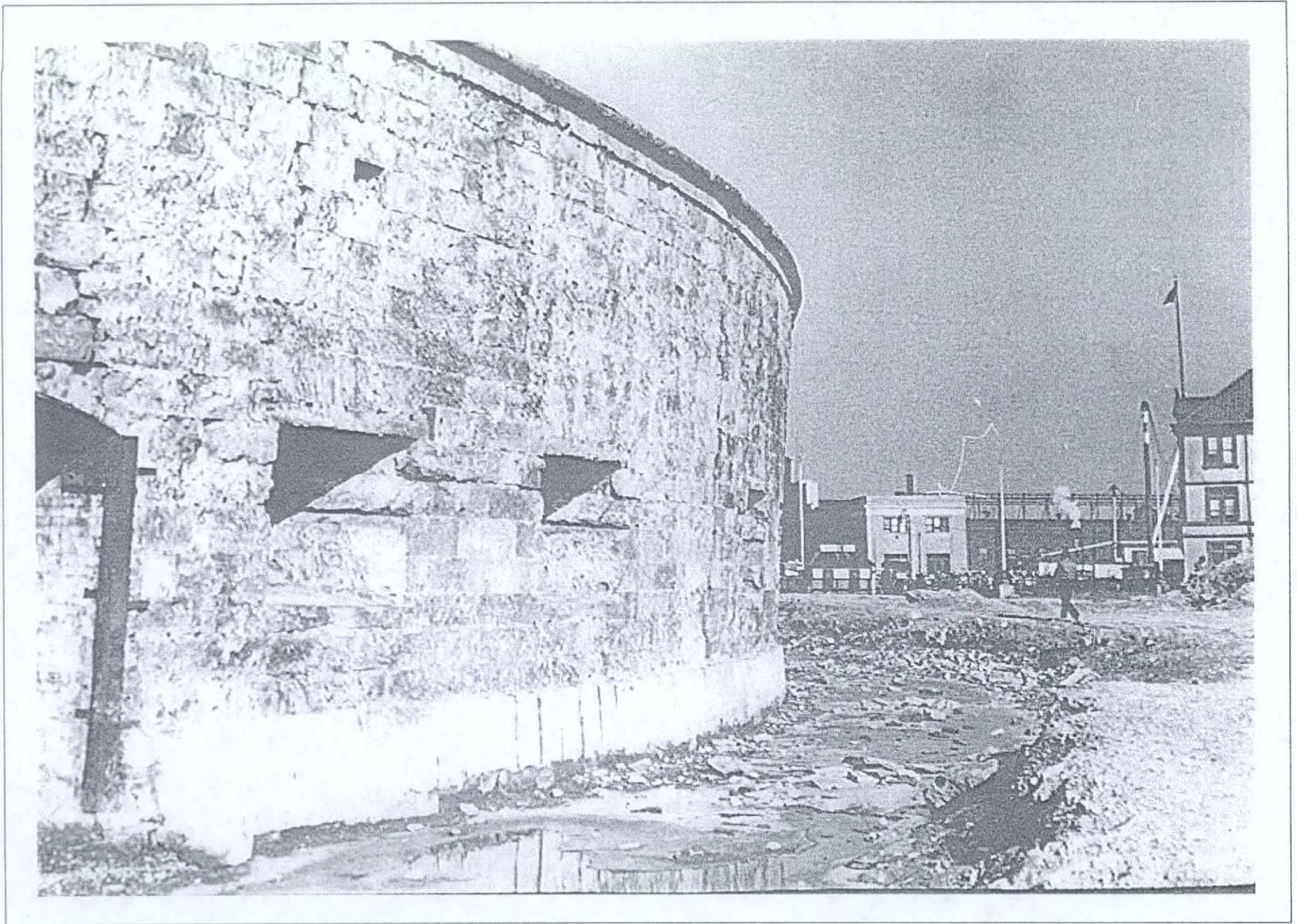


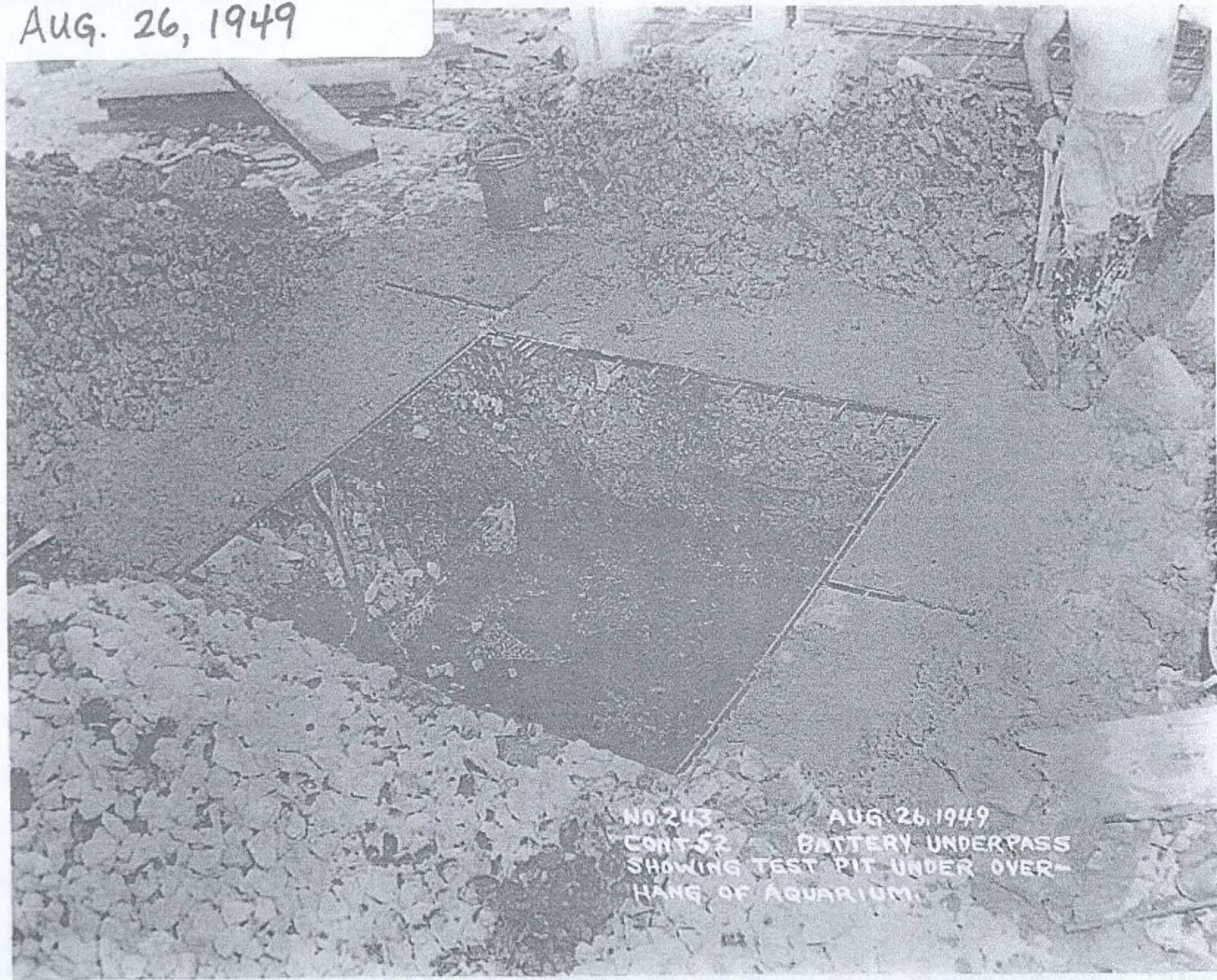
Figure 5.2 Photograph of the exterior of Castle Clinton c. 1950.

JULY 20, 1949



Figure 5.3 Photograph of the construction of the Battery Park Tunnel.

AUG. 26, 1949



NO. 243 AUG. 26, 1949
CONT. 52 BATTERY UNDERPASS
SHOWING TEST PIT UNDER OVER-
HANG OF AQUARIUM.

Figure 5.4 Photograph of a test pit dug underneath the overhang of Castle Clinton at the bottom of the tunnel.

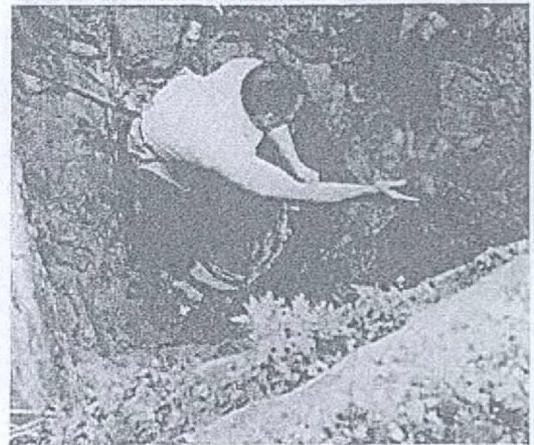
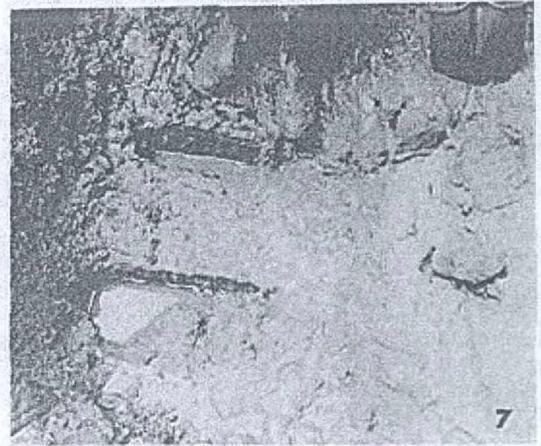


Figure 5.5 Photographs of engineering tests (after Colle 1968).

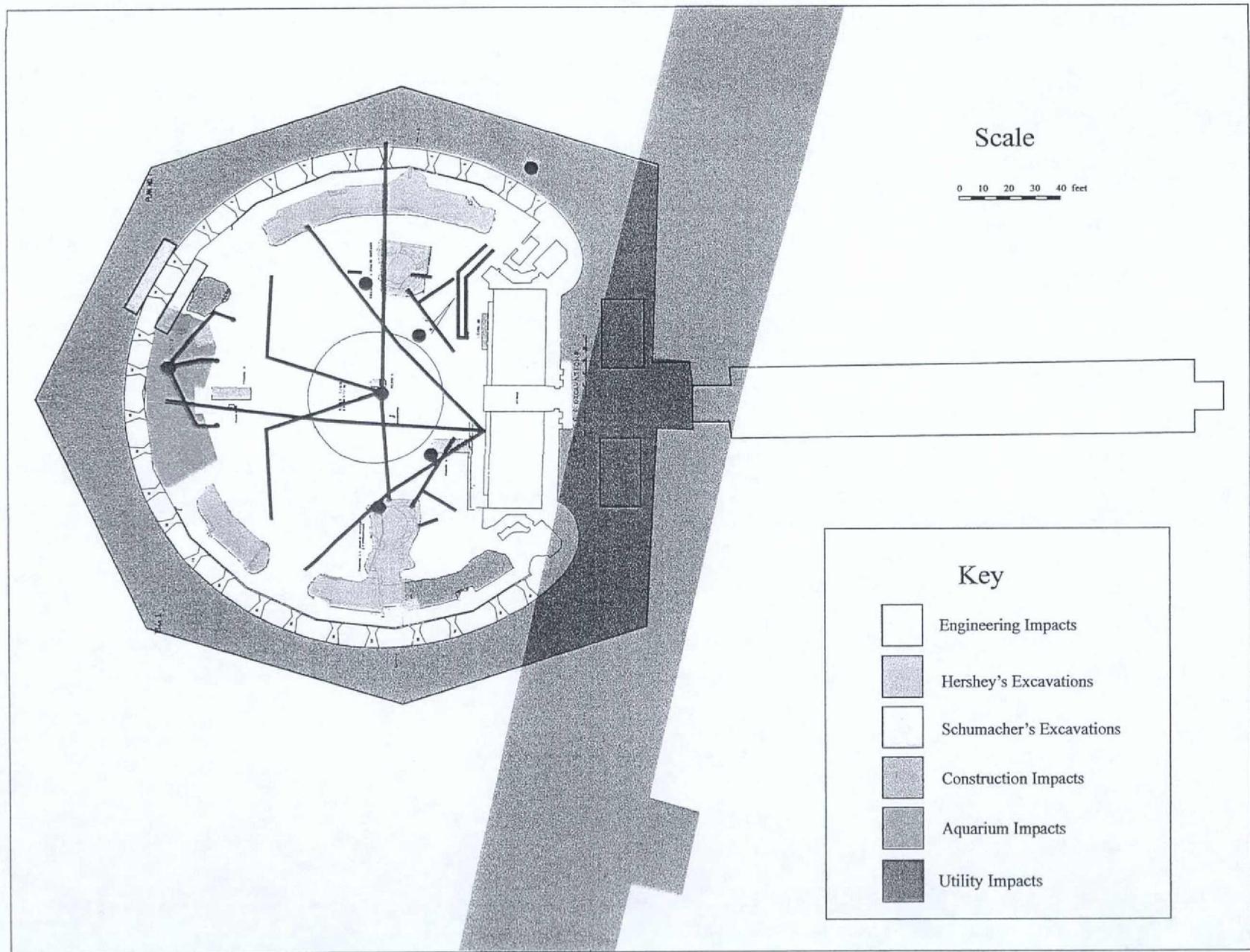


Figure 5.1 Impacts to the archeological deposits at Castle Clinton.

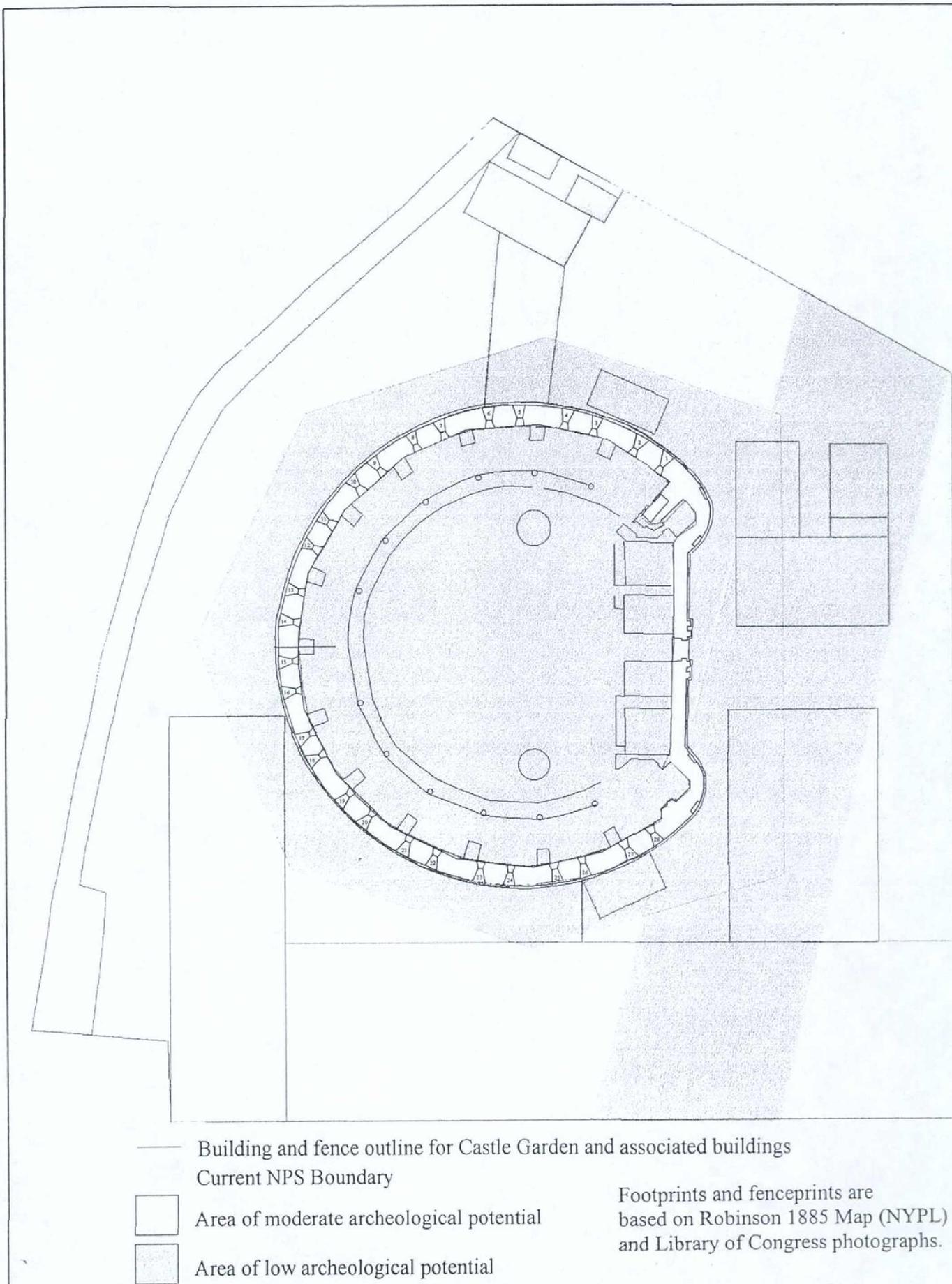


Figure 6.2 Compilation Map of Castle Garden and surrounding buildings.

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Appendices

Appendix 1



IN REPLY REFER TO:

United States Department of the Interior
NATIONAL PARK SERVICE

MANHATTAN SITES
26 WALL STREET
NEW YORK, N.Y. 10006

Castle Clinton
Federal Hall N.
General Grant M
Hamilton Grange
Theo. Roosevelt
Birthplace N.F.

D-2623

June 7, 1979

Memorandum

To: Chief, Division of Contracting and Property
Management NARO

From: Superintendent, Manhattan Sites

Subject: Completion Report

Enclosed is completion report, which includes forms 10-174, 10-174a, narrative report, the last lump sum contract payment, photos and drawings for the project Counterguard and Sally Port Plaza, Castle Clinton, N.M., work order no. 1812-7001-503.

Duane R. Pearson

Scope of Work: Restoration of the counterguard and sally port plaza at Castle Clinton National Monument. The principal features of the base bid work include (1) the removal of the deteriorated asphalt paving, gravel and rock fill on the six rear sides of the counterguard; the deteriorated scrubbed aggregate concrete slab and bluestone paving on the sally port plaza in the front of the fort; and approximately 155 feet of deteriorated concrete boundary curb on the north side of the fort; (2) the placement of a new scrubbed finish concrete slab on the counterguard and sally port plaza; and approximately 155 feet of new concrete curb; and (3) the construction of a wheelchair ramp. Also included as alternate bid items are (4) the resetting of the bluestone sally port stairs and a capping block; the repointing of the bluestone sally port stairs, curbs, pylons, etc.; (5) the cleaning of the sally port entrance pylons and regilding of the incised lettering.

Office of the National Park Service
Historic Sites Division

August 12, 1954

Memorandum

To: The Regional Director

From: Castle Clinton National Monument

Subject: Change Order - Current Castle Clinton Contract

The contractor will be instructed to verify if the Castle Clinton chambers were ever inside the walls of the fort. The chambers should be filled in to concrete grade level with materials currently available rather than cleared out. The Historian is quite sure that these underground chambers are of no historic value, and represent subsequent American use (coal bins, pipe trench). Superintendent Foster will write a change order covering this contract amendment. In addition to historical considerations, it is noted that considerably more expenses will be involved if the chambers are cleared now and refilled later; this way, a credit of about \$250 will be allowed.

Frank Barnes
Historian
Castle Clinton Natl Monument

Chief Archeologist, Washington

February 3, 1949

Regional Archeologist, Northeast Region

Master Plan Drawing MS-65 109 (Castle Clinton)

In answer to your inquiry of January 31 whether "Bronze artifacts encountered, See Spec. 2, Drawing No. 3 on the above is adequate for the recovery and preservation of archaeological materials. I believe this may be stated:

1. Due to the presence of large concrete level high walls over all or portions of the structure and a relatively limited trenching, only limited tests have been possible. In these tests accomplished with jack hammers, portions of the structure associated primarily with Castle Clinton during the War of 1812 and possibly later periods, were tested last fall. The soil fill indicated they were about late in the 19th Century. No early artifacts were encountered. Due to the nearly two feet of concrete covering the presumed location of the hot-shot tower, only a very small hole could be bored through the concrete. In a three square foot area, I noted some bronzstone set masonry which I presumed could be the hot-shot tower base. This remains to be proved. No artifacts were encountered.

2. When the concrete bases are completely removed, I shall arrange to observe and possibly test the hot-shot tower location. At that time I shall endeavor to preserve any artifacts encountered. Engineers in this Office have agreed to keep me informed as to the date of further clearing and the Castle Clinton staff is also aware that I am to be informed.

Thus, I hope the situation is adequately, if not indistinctly, covered.

John L. Cotter
Regional Archeologist

cc: ✓ Dr. Thomas Pitkin, Federal Hall
John B. Lohans, Architect, Northeast Region

UNITED STATES GOVERNMENT

Memorandum

TO: Dr. Thomas Pitkin

Statue of Liberty
National Monument
Washington 25, D.C.

DATE: September 21, 1963

FROM: Region 1
Statue of Liberty
National Monument

FEDERAL HALL
NATIONAL MEMORIAL

RECEIVED
APR 25 1963

April 23, 1963

RECEIVED
APR 30 1963

SUBJECT: Report on archaeology due December 1, 1963

A.M. 7 8 9 10 11 12 1 2 3 4 5 P.M.

A.M. 7 8 9 10 11 12 1 2 3 4 P.M.

purchase order for Castle Clinton

Mr. William Hershey that Mr. Hershey's report is due
Central Railway

Should there be any specific information

request relevant to Mr. Hershey's work before this date.

We are pleased to have committed to you a purchase order for \$2,000 to provide archaeological investigation and a report on evidence within the walls of Castle Clinton. A contract for you to work removing masonry concrete floors of apartments built over the historic features. This work should be completed by the end of this month.

We believe it will be best for you to make an inspection trip of Castle Clinton as soon as possible in order to plan your work and observations and become acquainted with the area. You should make the acquaintance of Dr. Thomas Pitkin whose office is located in Federal Hall, located on Wall and Nassau Streets. Dr. Pitkin's telephone number is KANOVER 2-1780. Dr. Pitkin will see that you are admitted to the grounds and will identify you to the contractor and others concerned. It is suggested you let Dr. Pitkin know when you expect to visit New York for this purpose.

You have our best wishes for the Castle Clinton investigation.

Sincerely yours,

(Sgd.) Ronald F. Lee

Regional Director

cc:
Supt., Statue of Liberty
Chief, RSDC

Memorandum

TO : Dr. Thomas Pitkin

DATE: September 23, 1963

FROM : Regional Archeologist

SUBJECT: Report on Castle Clinton archeology due December 1, 1963

I have just checked the purchase order for Castle Clinton archeology and found that Mr. Hershey's report is due December 1, 1963. Should there be any specific information required relevant to Mr. Hershey's work before this date, I am sure he will be ready to supply it.

John L. Cotter
 John L. Cotter

NB. —

Less formally, I have been very sorry to learn of your bout at the hospital and other difficulties — wish to join your other friends here in hoping all goes well from here on!

John

Appendix 2

catalog

accession object

	Newspaper, Frank Leslie's Illustrated Magazine, Puck
	Magazine, Harpers Weekly
	Magazine, Puck
	Magazine, Puck
	75 Archives
	273 Archives
	91 Archives
	41 Archives
	Print, b/w, framed
CACL	75 Archives
CACL	74 Artifacts, archaeological
CACL	75 Photos, color, lantern slides
CACL	75 Photos, b/w, lantern slides
CACL 1 a,b	1 Shard, bottle, glass
CACL 10	4 Photo b/w
CACL 101	18 Tongs, fireplace
CACL 102	19 Pot, iron, black
CACL 103	19 Tongs, fireplace
CACL 104	19 Pot, iron, cast
CACL 105	20 Bootjack, wood
CACL 107	22 Candlestick, brass set of 2 a,b
CACL 113	25 Bottle, spirits, glass
CACL 114	25 Shard, bottle, glass
CACL 115	25 Wall, sconce, ceramic
CACL 116	25 Shard, pottery
CACL 12	4 Photo, b/w
CACL 13	4 Photo, b/w
CACL 130	28 Candle stick, brass
CACL 131	28 Shovel, fireplace
CACL 132	28 Cup, tea, ceramic, glazed
CACL 133	28 Bowl, ceramic, glazed
CACL 136	28 Chair, ladder back, rush seat
CACL 137	28 Chair, ladder back, rush seat
CACL 139	30 Glass, drinking, wine
CACL 14	4 Photograph, b/w
CACL 140	30 Glass, drinking, cordial
CACL 141	30 Decanter, glass
CACL 142	30 Stopper, decanter, glass
CACL 143	31 Bottle, glass, brown
CACL 144	31 Bottle, glass, brown
CACL 146	33 Shard, pottery
CACL 152	35 Bust, Lafayette, bronze
CACL 16	4 Photograph, b/w
CACL 166	37 Stand, candle, iron, brass
CACL 169	39 Candlestick, pewter
CACL 17	4 Photograph, b/w
CACL 170	40 Mug, stoneware
CACL 171	41 Chair, windsor
CACL 172	42 Chair, ladder back, woven seat
CACL 176	44 Stand, candle, iron
CACL 18	4 Photograph, b/w
CACL 185	46 Chair, ladder back, woven seat
CACL 19	4 Photograph, b/w
CACL 190	48 Bucket, fire, leather
CACL 191	48 Bucket, fire, leather
CACL 192	48 Bucket, wood
CACL 193	49 Box, pewter, with hinged lid

CACL 194	49 Bowl, tin
CACL 195	49 Spoon, pewter
CACL 196	49 Plate, pewter
CACL 197	49 Box, pewter, with lid
CACL 199	50 Cup, drinking, pewter
CACL 2	1 Fragment, pipe stem
CACL 20	4 Photograph b/w
CACL 201	52 Bowl, tin
CACL 202	53 Trunk, field
CACL 203	54 Pot, iron, black
CACL 205	56 Ribbon
CACL 206	57 Photo, b/w, stereo
CACL 207	58 Commission, military
CACL 208	59 Glass, drinking, cordial
CACL 209	59 Glass, drinking, wine
CACL 21	4 Photograph, b/w
CACL 210	59 Glass, drinking, cordial
CACL 22	4 Photograph, b/w
CACL 222	60 Book
CACL 223	69 Print, b/w
CACL 224	69 Print, b/w
CACL 225	69 Print, b/w
CACL 226	69 Print, b/w
CACL 227	69 Print, b/w
CACL 228	69 Print, b/w with text
CACL 229	69 Print, b/w
CACL 23	4 Photograph, b/w
CACL 230	69 print, b&w
CACL 237	61 Print, b/w
CACL 238	61 Print, b/w
CACL 239	61 Print, color, woodcut
CACL 24	4 Photograph, b/w
CACL 240	62 Program, concert
CACL 241	63 Periodical
CACL 242	64 Photo, b/w
CACL 243	64 Photo, b/w
CACL 244	65 Postcard, b/w
CACL 245	65 Postcard, color
CACL 246	66 Print, color
CACL 247	66 Print, color
CACL 248	66 Print, b/w
CACL 249	66 Print, b/w
CACL 25	4 Photograph, b/w
CACL 250	66 Music, sheet
CACL 251	66 Music, sheet
CACL 253	68 Cup, horn
CACL 254	72 Postcard, color
CACL 255	73 Print, color
CACL 256	73 Print, color
CACL 257	73 Print, color
CACL 258	73 Photo, b/w, retouched
CACL 259	73 Print, b/w, retouched
CACL 26	4 Photograph, b/w
CACL 260	73 Print, b/w
CACL 261	73 Print, b/w
CACL 262	73 Photo, b/w
CACL 263	73 Clipping, newspaper
CACL 264	73 Clipping, newspaper
CACL 265	76 Photo, b/w, retouched
CACL 265	76 Hanger, coat

CACL 266	76 Photo, color, retouched
CACL 266	76 Auger, metal
CACL 267	76 Invitation, CACL
CACL 268	76 Photo, b/w
CACL 269 a,b	76 Photo, b/w
CACL 27	4 Photograph, b/w
CACL 270 a,b	76 Photo, b/w
CACL 271 a,b	76 Photo, b/w
CACL 272 ab	76 Photo, b/w
CACL 273 ab	76 Photo, b/w
CACL 274 ab	76 Photo, b/w
CACL 275	76 Page from newspaper, Harper's Weekly
CACL 276	76 Photo, b/w
CACL 277	76 Booklet, bulletin, NY zoological society
CACL 277	76 Photo, b/w
CACL 28	4 Photograph, b/w
CACL 280	76 Pipe, wooden
CACL 281	76 Plane, block, wood
CACL 29	4 Photograph, b/w
CACL 3	1 Shard, pottery
CACL 30	4 Photograph, b/w
CACL 31	4 Photograph, b/w
CACL 32	4 Photograph, b/w
CACL 33	4 Photograph, b/w
CACL 34	4 Photograph, b/w
CACL 35	4 Photograph, b/w
CACL 36	4 Photograph, b/w
CACL 38	4 Photograph, b/w
CACL 39	4 Photograph, b/w, retouched
CACL 4	1 Shard, pottery
CACL 41	4 photo, color
CACL 42	4 print, b&w
CACL 43	4 Photograph, b/w
CACL 44	4 Photograph, b/w
CACL 45	4 Photograph, b/w
CACL 46	4 Photograph, b/w, retouched
CACL 47	4 Photograph, b/w
CACL 48	4 Photograph, b/w
CACL 49	4 Photograph, b/w, retouched
CACL 5	1 Shard, pottery
CACL 50	4 Photograph, b/w
CACL 51	4 Photograph, b/w
CACL 53	6 Print, b/w
CACL 54	6 Photograph, b/w
CACL 55	7 Key, door, brass
CACL 58	10 Print, color
CACL 59	11 Print, color
CACL 6	1 Shard, pottery
CACL 60	12 Print, color
CACL 61	13 Print, color
CACL 62	13 Print, color
CACL 63	13 Cover, songsheet
CACL 65	15 Painting, color,
CACL 67	15 Book, titled Kancyoñal aneb Citara
CACL 68	15 Sampler, cloth (marked 68, and 341)
CACL 69	15 Trunk, document
CACL 7	1 Hook, fireplace, iron
CACL 70	15 Ax head, iron and handle, wood 2 parts
CACL 71	15 Goblet, silver
CACL 73	15 Doily, cloth

CACL 74	15 Zither
CACL 75	15 Towel, linen
CACL 76	15 Book, hebrew, 1878
CACL 77	15 Scissors
CACL 78	15 Book, hebrew
CACL 79	15 Certificate, entrance pass
CACL 8	2 Report, prisoner
CACL 80	16 Ladle, iron
CACL 81	16 Fork, cooking
CACL 82	16 Fork, cooking
CACL 83	16 Tongs, fireplace
CACL 84	16 Hanger, fireplace
CACL 85	16 Fork, cooking
CACL 86 ab	16 Andirons, iron, black, pair
CACL 87	16 Lantern, candle, tin
CACL 88	16 Lantern, candle, tin
CACL 89	16 Bucket, water
CACL 9	3 Print, color
CACL 90	16 Box, wood, with hinged lid
CACL 91	16 Kettle, tea, copper
CACL 92	16 Trivit, iron
CACL 94	16 Pan, iron, cast
CACL 95	16 Scissors
CACL 96	16 Hook, fireplace
CACL 98	16 Textile, sheet
CACL 99	16 Textile, towel
FEHA	273 Archives
FEHA	273 Photos, color, lantern slides
FEHA	273 Photos, color, lantern slides
FEHA	273 Archives
FEHA	273 Archives, photo
FEHA	273 Film, motion picture
FEHA	273 Photos, color, lantern slides
FEHA	273 Photos, color, lantern slides
FEHA	273 Photos, b/w, lantern slides
FEHA	273 Film, microfilm
FEHA	273 Photos, color and b/w, lantern slides
FEHA	273 Photos, color, lantern slides
FEHA	273 Prints, b/a
FEHA	273 Archives
FEHA	273 Photos, lantern slides
FEHA	273 Photos, color, lantern slides
FEHA	273 Archives
FEHA 1	1 Stone, sandstone
FEHA 10	2 Periodical, NY weekly journal
FEHA 107	30 Print, color
FEHA 109	31 Letter, George Thatcher
FEHA 11	2 Newspaper, NY Journal
FEHA 110	32 Letter
FEHA 111	33 Receipt, Charles Thomson
FEHA 112	34 Letter, Charles Thomson
FEHA 113	35 Letter, Richard Henry Lee
FEHA 115	37 Book
FEHA 116	37 Book, house of represenatives journal 1789
FEHA 119	37 Print, b/w
FEHA 12	2 Pamphlet
FEHA 120	37 Print, b/w
FEHA 1262	258 Print, b/w
FEHA 127	39 Book
FEHA 128	40 Currency, paper



United States Department of the Interior

NATIONAL PARK SERVICE
FIRE ISLAND NATIONAL SEASHORE & NEW YORK CITY GROUP
26 WALL STREET
NEW YORK, N.Y. 10005

March 29, 1971

APR 2 1971

IN REPLY REFER TO:

D6215-NEYO

Memorandum

To: Chief, Museum Operations, HFC
Acting
From: /Superintendent, Fire Island & NYC Group
Subject: Transmittal of Castle Clinton National Monument
Museum Items

In compliance with telephoned request of Mr. Richard Strand, your office, we are forwarding under separate cover, the following nine Castle Clinton Museum Items for consideration in exhibit planning for that area:

- | | |
|--|---------------|
| ✓ 1. Glass bottle neck | Catalog No. 1 |
| ✓ 2. Broken pipe stem, white clay | 2 |
| ✓ 3. Rim shard, probably bowl | 3 |
| ✓ 4. Body shard, yellow glaze with brown design | 4 |
| ✓ 5. Brownware shard, possibly jug handle | 5 |
| ✓ 6. Brownware shard, possibly fragment of drainage pipe | 6 |
| 7. Iron pipe hook | |
| ✓ 8. Signed receipt for Prisoners of War - Ware of 1812 | 8 |
| ✓ 9. Bronze key, said to be for Castle Clinton | 55 |

James F. Wolfe
James F. Wolfe
Acting Superintendent

Enclosures (Under SC)

481 240
cat.

Copied from accession book, May 1987

Accessions #1 and #2 (acc. #1-9) were sent to
Harper's Ferry, later, "returned 3/18/75."

Question mark beside acc #1 cat 7. Perhaps this
refers to the fact that this item (iron pistol
hook) does not appear on lists of items returned
from HFC.

1
2
3
4
5
6
7
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9

See Report
under 10/10/87

NATIONAL PARK SERVICE
ACCESSION RECEIVING REPORT

Page 1 of 1

CACL
Park Acronym

LIST OF OBJECTS

Accession No. 74

If the objects in an accession are not itemized on the legal document for the transaction, use this form to provide a list of the objects and their condition. This form is used only as an attachment to the Accession Receiving Report (Form 10-95)

Quantity	Description and Condition	Value		Notes
		Unit	Total	
	1 pipe bowl			Bag CACL F.S. No. 1 10.02.1962
	2 ceramic glazed pieces			" "
	1 elongated pointed object			" "
	4 bones (one sawed and gnawed)			Bag CACL F.S. No. 4 10.17.1962
	1 wineglass fragment			Bag CACL F.S. No. 4 10.17.1962
	13 glass fragments (some wine bottle)			" "
	1 iron chunk			Bag CACL F.S. No. 4 10.17.1962
	7 pieces of slag			" "
	16 ceramic fragments			Bag CACL F.S. No. 4 10/17/1962
	2 glass fragments			Bag CACL RE: Fall 1977 Note
	1 chunk of Jasper(?)			" "
	1 chunk			Bag CACL RE: Fall 1977 Note
	1 metal spoon			" "
	2 nails (iron)			" "
	8 ceramic fragments (glazed)			Bag CACL RE: Fall 1977 Note
	1 pipe stem fragment			" "