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**PHASE IA ARCHAEOLOGICAL SURVEY
NATIONAL LIGHTHOUSE REDEVELOPMENT PROJECT
BLOCK 1, PORTION OF LOT 60
STATEN ISLAND
BOROUGH AND COUNTY OF RICHMOND
NEW YORK CITY**

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TABLE OF CONTENTS

I. INTRODUCTION	1
A. Background and Study Objectives	1
B. Description of Site and Project	2
C. Environmental Setting, Geology, and Soils	4
II. THE PREHISTORIC PERIOD	5
A. Assessment of Sensitivity for Prehistoric Archaeological Remains	6
III. THE HISTORIC PERIOD	7
A. Seventeenth and Eighteenth Centuries	7
B. The Quarantine Station	7
C. The Revenue Marine Station	8
D. Establishment of the Light-House Depot: 1863 - 1867	9
E. Development of the Light-House Depot: 1867 - 1874	12
1. Joseph Henry and Light-House Board Experimentation	14
F. Expansion of the Depot after 1874	16
G. Twentieth Century	17
IV. SITES OF HISTORIC STRUCTURES	19
A. Building Sites and Features Within the Project Area	19
1. Building 1 - The Inspector's House and its Occupants	19
2. Building 4 - Revenue Marine and Light-House Board Storehouse	21
3. Existing Structures (Buildings 5 - 11)	22
4. Other Building Sites within the Project Area	24
5. Sub-Surface Features	26
6. Wharfs and Piers	28
7. Light-House Depot Boundary Wall	29
B. Building Sites Not Within the Project Area	30
V. CONCLUSIONS AND RECOMMENDATIONS	33
A. Site Significance	33
B. Archaeological Sensitivity	33
1. Northwestern Portion of the Site	34
2. Central Portion of the Site	35
3. The Plaza Area	36
C. Recommendations	37
V. REFERENCES CITED	39

FIGURES AND SITE PHOTOGRAPHS (FOLLOWING TEXT)

Figures:

- Figure 1 Site Location**
- Figure 2 1999 Site Plan Showing 2007 Photograph Locations**
- Figure 3 2007 Site Plan**
- Figure 4 1780 Map**
- Figure 5 1797 Connor and Sprong Map**
- Figure 6 Map Showing Land Grants**
- Figure 7 1799 Mangin Survey**
- Figure 8 1845 Ewen Map**
- Figure 9 1850 Dripps Map**
- Figure 10 1866 Ewen Map**
- Figure 11 1868 Photograph Showing Office Building Construction and Wharf**
- Figure 12 1858 Print Showing Quarantine Grounds**
- Figure 13 1868 Photograph Showing Oil Vault Construction and House**
- Figure 14 1868 Photograph Showing Office Building Construction and House**
- Figure 15 1874 Beers Map**
- Figure 16 1887 Beers Map**
- Figure 17 1898 Robinson Map**
- Figure 18 1912 Photograph Showing South Pier**
- Figure 19 1907 Robinson Map**
- Figure 20 1912 Borough of Richmond Topographic Map**
- Figure 21 1917 Sanborn Map**
- Figure 22 1924 Fairchild Aerial Photograph**
- Figure 23 1937 Sanborn Map**
- Figure 24 1951 Sanborn Map**
- Figure 25 1961 Sanborn Map**
- Figure 26 1990 Sanborn Map**
- Figure 27 1884 Photograph Showing Area to Rear of Work Shop Building**
- Figure 28 1885 Photograph Showing Workers**
- Figure 29 1884 Photograph Showing Experimental Lighthouse**
- Figure 30 1890's Photograph Showing Experimental Lighthouse**
- Figure 31 Ca. 1906 Photograph Showing Inspector's House**
- Figure 32 1939 Photograph Showing Inspector's House**
- Figure 33 1947 Aerial Photograph**
- Figure 34 1909 Photograph Showing Light House Depot**
- Figure 35 Ca. Early 1930's Aerial Photograph**
- Figure 36 1948 Aerial Photograph**
- Figure 37 1925 Photograph Showing Southeastern Portion of Site**
- Figure 38 Ca. 1960 Aerial Photograph**
- Figure 39 Ca. 1900-1910 Photograph Showing View Along Bay Street**
- Figure 40 Portion of 2000 Site Survey**
- Figure 41 2003 Photograph Showing Northwestern Portion of Site**
- Figure 42 2003 Photograph Showing Alley Between Buildings 10 and 11**

Figure 43 2003 Photograph Showing Foundation in Northwestern Portion of Site
Figure 44 Location of Historic Structures (modified from 2004 report)
Figure 44 2007 Site Plan Showing Location of Historic Structures within Site Boundary

2007 Site Photographs:

Photograph 1 Plaza Area in Southeastern Portion of Site
Photograph 2 View from Pier
Photograph 3 View of Entrance Road and Stair Tower
Photograph 4 View Showing the Laboratory Building (Building 5)
Photograph 5 View Showing the Oil Vaults
Photograph 6 Area at Rear of Office Building (Building 7)
Photograph 7 Area at Rear of Laboratory Building
Photograph 8 Area at Rear of Work Shop Building (Building 8)
Photograph 9 Office Building and South Courtyard
Photograph 10 View Across Northwestern Portion of Site
Photograph 11 View of Northwestern Portion of Site Near Post Office Property
Photograph 12 View of Gravel Surface and Gates in Northwestern Portion of Site
Photograph 13 Bay Street Brick Wall and Gates
Photograph 14 Alley Between Buildings 10 and 11
Photograph 15 Portion of Building 6 Façade Showing Construction Date
Photograph 16 Portion of Building 8 Façade Showing Construction Date
Photograph 17 Portion of Building 7 Façade Showing Construction Date

APPENDIX A: List Of Third District Inspectors And Engineers: 1873 - 1909

APPENDIX B: Inspector And Engineer Household Data

I. INTRODUCTION

A. Background and Study Objectives

The New York City Landmarks Preservation Commission (LPC) has requested that a Phase IA archaeological survey be conducted for the site of the proposed National Lighthouse Redevelopment Project. The site is located in the St. George area of the County and Borough of Richmond (Staten Island), New York (see Figure 1). The site encompasses approximately three acres, which represents a portion of Lot 60, Block 1 on the present Borough map. It is bounded on the north by Borough Place (South Street) and the St. George Ferry Terminal, on the east by Upper New York Bay and the DOT Ferry Maintenance Facility, on the west by Bay Street and the St. George Station of the U.S. Post Office, and on the south by a residential complex, known as the Bay Street Landing apartments, which was under construction at the time of this survey.

The Redevelopment Project site is currently owned by the City of New York and will be developed by the City and by Triangle Equities Corporation. It constitutes a major portion of the site formerly occupied by the historically significant United States Lighthouse Depot. The site includes six standing buildings and a semi-subterranean vault structure, which were part of the Depot. Four of the buildings (referenced in this report as buildings 5 - 8) were listed on the National Register of Historic Places in 1983, and one (building 7 - the "Office Building") was designated as a New York City Landmark in 1980.

The proposed project will include the restoration of the six standing buildings on the site; two of these (buildings 10 and 11) will serve as the National Lighthouse Museum. The project will also include the Lighthouse Point Development. This will consist of three new residential buildings including 2000 units, and creation of approximately 45,000 square feet of ground floor retail space to be located both within the residential structures and the renovated historic buildings. The project will also include the creation of "programmable open spaces," including two plazas and an amphitheater.

In 2003, Cragsmoor Consultants conducted a Stage IA study of the National Lighthouse Museum Project for Skanska USA Building, Inc., at the request of the New York State Historic Preservation Office (Pickman and Harris 2004). At that time the project was much more limited in scope than at present, being restricted to the renovation of the two buildings designated as 10 and 11 (see below). The study focused on the areas to be impacted by the installation of proposed utilities connecting these buildings with Bay Street.

The 2003 study identified potentially significant archaeological resources that could be present in the vicinity of a nineteenth century residential structure that stood in the northwestern portion of the site (building 1 - see Chapters III and IV), and recommended that archaeological monitoring be conducted during the installation of utilities. This

monitoring was never carried out, although reconnaissance of the site during the present study indicates that at least some of the utilities may have been installed.

The present Phase IA archaeological study expands our previous study to obtain further details on portions of the site not impacted by the project as proposed in 2003. Additional historic photographs, maps and other sources have been reviewed. In addition we have reviewed all of the United States Light-House Board annual reports for the years 1867 - 1909. The present report also includes additional details about some of the scientific/engineering work aimed at improving lighthouse technology that was conducted on the site, as well as information pertaining to those residing on the site. A site visit was conducted on June 20, 2007 in order to document any changes in the site that have occurred since 2003.

The Phase IA study objective is to determine the likelihood that significant archaeological resources could be present on the site and to recommend any additional archaeological assessments that may be necessary.

B. Description of Site and Project

The overall layout of the site, including the existing buildings, is shown on a 1999 site plan included here as Figure 2. We have also indicated the location of the 2007 site photographs on this plan.

Figure 3 shows the site plan for the present National Lighthouse Redevelopment Project. The southeastern portion of the project site, adjacent to New York Bay and the Staten Island Ferry Maintenance Facility, includes an open plaza area (see Photograph 1), which is separated from the portion containing the Light-House Depot buildings by a chain link fence. A pier extends eastward from the shoreline into the Bay (Photograph 2). As shown on Figure 3, an amphitheater will be constructed in the plaza, which will also be landscaped. It is also proposed to relocate to this area a lighthouse that stood within the Depot grounds in the latter decades of the nineteenth century (see Chapters III and IV). Adjacent to the plaza on its south side are two buildings (buildings #10 and #11) that are to be restored and will house the proposed National Lighthouse Museum. During the reconnaissance we noted that work on these buildings has already begun.

A roadway extends northwards from the plaza towards South Street and the Ferry Terminal entrance ramp. A metal stairway tower provides access to the site from the ramp (see Photograph 3). The roadway separates the plaza area and the Ferry Maintenance Facility from the central portion of the site, which is approximately at the same grade as the roadway. Immediately west of the road are the three of the four National Register buildings (buildings 6 - 8). Building 5 is located immediately behind (west of) building 6 (see Photograph 4). A paved courtyard extends north of buildings 5 and 6, with a stone retaining wall on the north side of this courtyard. The semi-subterranean oil vaults (building 9) are built into the sloping ground west of the open courtyard and building five (Photograph 5). Although the project will involve restoration

of buildings 5 - 8, the project description and site plan (Figure 3) do not indicate the proposed disposition of the oil vaults. The site plan also indicates that a plaza will be constructed in the open space north of buildings 5 and 6. As shown on the site plan, this would involve the removal of the stone retaining wall noted above.

The ground west of buildings 5 - 8 slopes upward from an elevation of approximately 10-12 feet to approximately 27 - 30 feet at the top of the bank. There is a retaining wall at the base of the slope extending southward from the southern end of the oil vaults. The space between the rear of buildings 5 - 7 and the retaining wall is paved (Photographs 6 and 7). However, probing indicates that the western portion of the area between the rear of building 8 and the retaining wall is not paved (Photograph 8). There are also paved courtyard areas between the wings of the office building (Photograph 9). The site plan (Figure 3) indicates that the courtyard and alleyway areas between and behind these buildings will be landscaped and that two "residential lobby circulation" structures will be constructed.

Most of the slope to the rear of these buildings, and the area extending immediately westward at the top of the bank are covered with dense undergrowth and some larger trees. The site plan (Figure 3) indicates that the sloping bank area, including the area where the oil vaults are located would be terraced.

From the top of the bank westward to Bay Street the grade slopes upward more gradually from approximately 35 feet near the northeastern corner of the Post Office property to approximately 55 feet adjacent to Bay Street. An area less than 50 feet in width extending across this western portion of the site was apparently excavated during the nineteenth century when the railroad tunnel was built. The location of this tunnel is indicated by a dashed line on Figure 2, and on the late nineteenth and twentieth century maps drawn after the construction of the tunnel in the 1880's (see Chapters III and IV).

The 1999 site plan (Figure 2) indicates a parking area in the northwestern portion of the site. At the time of our 2003 site reconnaissance we noted indications of a former asphalt surface in a portion of this area, but there was no existing parking area at that time (see Figure 41). The 2007 reconnaissance, however, indicates that grading of the area has occurred since 2003 (see Photographs 10 and 11 and compare with Figure 41). The presence of a gravel surface and wooden barriers at the periphery of the graded area suggests that a portion of this area has been used for parking. Several light poles have also been installed and a portion of the brick wall along Bay Street has been removed. A new entrance gateway *has been* installed and the portion of the wall adjacent to the gateway replaced (see Photographs 10 - 13). A new electrical box has also apparently been installed east of this new entrance gateway. It seems likely that at least some of the utilities lines planned at the time of the 2003 archaeological survey have been installed. This is indicated by the electrical box and light poles. In addition, new air conditioning equipment was noted between buildings 10 and 11 (see Photograph 14 and compare with Figure 42), and it appears that a trench has been excavated immediately south of building 10, apparently to install electrical lines.

Two of the three planned residential structures will be constructed in the northwestern portion of the site. The third residential building will be located east of the Post Office property, along the southern boundary of the site, as shown on Figure 3.

The site is separated from Bay Street by a brick wall (Photograph 13). Brick and concrete walls separate the Post Office property from the site.

C. Environmental Setting, Geology, and Soils

The project area is located within the inner lowland subprovince of the Coastal Plain physiographic province. This subprovince is characterized by generally level to gently undulating terrain. Although elevations here are typically between 20 and 50 feet, a terminal moraine of the Wisconsin glaciation traverses the subprovince creating a topographic feature that is 100 to 350 feet in elevation. Unconsolidated marine and fluvial deposits of clay, silt, sand and gravel of the Late Cretaceous and Tertiary Age are also present. Along portions of Staten Island's shoreline there are also beach, marsh, dune, swamp, estuarine, and fill deposits of more recent origin overlying the glacial deposits. Prior to the development that occurred during the mid-twentieth century, the predominant habitat consisted of salt, brackish, and fresh water marshes grading from the open shore to the oak-hickory climax forest (Robichaud and Buell 1973: 125-127; Wolfe 1977:207). At the present time, the project area environs are completely urbanized. Land use here is commercial, residential, and governmental (Habib *et al.* 1999).

II. THE PREHISTORIC PERIOD

Evidence has been found of occupation of Staten Island by prehistoric Native American groups beginning with the earliest, PaleoIndian, period (10,000—8,000 B.C.), and continuing through the Woodland Period (1,000 B.C.-1,600 A.D.) and the subsequent arrival of Europeans on Staten Island during the 17th century.

A number of sources were reviewed to determine whether any prehistoric sites have been reported in or near the present location of the project area. Major sources of information on such sites are the compendiums published by Bolton (1922; 1934), Parker (1922), and Skinner (1909) prior to the destruction of many sites by twentieth century development. The files of the New York State Museum (NYSM) include these sites as well as additional sites reported by other sources. The approximate site locations are plotted on maps included in the State Museum files. Many of the sites included in the above sources are also included in the archaeological site inventories maintained by the Staten Island Institute of Arts and Sciences (SIAS). Finally, the New York City Landmarks Preservation Commission prehistoric site compendium prepared by Boesch (1994) was also reviewed. This document integrates the data contained in the above sources into a single list of sites containing descriptions and locations.

According to these sources, prehistoric sites located within a mile of the project area include the following (site names are from Boesch 1994):

- **Unnamed site at the corner of Sand and Bay Streets.** Site #14 (Boesch 1994: 121); STD-BS (SIAS). Located approximately 4000 feet south of the project area. Boesch (1994:221) describes it as "a small camp site...formerly located at this intersection." Woodland Period.
- **Unnamed Site.** Site #67 (Boesch 1994:114); ACP-RICH-28 (Parker); #4618 (NYSM); #24 (Skinner 1909:17). Located approximately 3500 feet southwest of the project area. Described by Skinner (1909: 17) as "On Ward's Hill, near Cebra Avenue, many triangular so-called warpoints have been found in a small area. Such an abundance of these war-points, so far from any known camp or village site is remarkable." Woodland Period. This may be the same site as Boesch's site #115, designated below as "Thompkinsville."
- **Harbor Hill.** Site #66 (Boesch 1994: 114); ACP-RICH-24 (OPRHP); #4614 (NYSM); #20 (Skinner 1909:16). Located approximately 4500 feet southwest of the project area. According to Skinner (1909:16), the site was a "campsite" and was located near Harbor Brook and Lafayette Avenue. Boesch (1994: 114) cites a report indicating that the area remains undeveloped. Woodland Period.
- **Thompkinsville.** Site #115 (Boesch 1994:121); STD-PV, STD-T (SIAS); #24 (Skinner 1909:17). See description above of "Unnamed Site," Boesch #67.

- **Fort Hill.** Site #112 (Boesch 1994:121); STD-Fort (SIIAS). Located approximately 2000 feet west of the project area. According to Boesch (1994: 114), artifacts are frequently found at this location. Woodland Period.
- **Stuyvesant Place.** Site #69 (Boesch 1994: 114); ACP-RICH-28 (Parker); #4629 (NYSM). Located approximately 1000 feet northwest of the project area. Boesch (1994:114) quotes Parker who describes the site as “a campsite containing traces of occupation.” Woodland Period.

A. Assessment of Sensitivity for Prehistoric Archaeological Remains

The probability that prehistoric archaeological remains will be encountered in the project area is low. No archaeological sites have been reported within its bounds or in the immediate vicinity. No present or former water sources, generally associated with prehistoric sites, have been documented here. As discussed below in Chapters III and IV, there has been a large amount of construction on the property since the mid-nineteenth century, suggesting that any evidence of prehistoric occupation would have been disturbed.

III. THE HISTORIC PERIOD

A. Seventeenth and Eighteenth Centuries

The process of parceling out Staten Island among European landowners began in 1629, when the Dutch West India Company issued its Charter of Privileges and Exemptions (Anderson and Sainz 1965: 82). The present project area constituted a portion of a land parcel granted to Thomas Lovelace, the brother of the English provincial governor, in the late 17th century. As surveyed in 1687, this parcel consisted of 340 acres located on the east side of the Island and bounded on the north by Kill Van Kull. Situated upon it was "the Watering Place," described as "one of the earliest spots on Staten Island to which history can be attached." Beginning possibly as early as the 1620s, European vessels stopped here to take on supplies of water and wood before setting off on their voyages (Leng and Davis 1930:88). An early European settlement apparently developed at this location, as there is a record of its destruction by Native Americans circa 1655 (Leng and Davis 1930:88). The Watering Place is shown on maps drawn during the last two decades of the 18th century (Figures 4 and 5) and on Skene's 1907 map of colonial land patents on Staten Island (Figure 6). It is believed to have been located near present day Victory Boulevard, approximately 1000 feet south of the project area.

Lovelace's parcel passed to his niece Mary Duxbury and came to be known as "the Glebe" or "Duxbury's Glebe." Problems with the original patent led to its regranting to Mary and her husband Judge Ellis Duxbury in 1708. In his will of 1718, Mary's husband bequeathed the Glebe to the Church of St. Andrew's. During the Revolutionary War, British troops who were camped in the general vicinity of the project area plundered local farms—including the Glebe (Leng and Davis 1930:120, 129, 156).

B. The Quarantine Station

In 1799, thirty acres of the Glebe, including the present project area, were transferred to the State of New York to house a quarantine station, or lazaretto. Late 18th century maps (see Figures 4 and 5), including the 1799 survey of the quarantine tract (Figure 7) indicate that the project area vicinity was not populated. The one house shown on the 1799 survey (Figure 7) —possibly the same structure shown on the ca. early 1780's map (Figure 4) —would have been located well inland.

Intended to isolate passengers and crews of ships possibly infected with contagious diseases such as yellow fever, cholera, and small pox, the quarantine station had been a feature of the Port of New York since 1758. In that year, by Act of the Colonial Legislature, the first station was erected on Bedloe's Island. In response to pressure from worried citizens, the station was moved further away from the city, possibly first to Governor's Island and then to Staten Island. Initially there was some local opposition but the land was taken by eminent domain and construction of the complex proceeded. On a site located in what is now St. George and bounded by the present day Bay Street,

Victory Boulevard, and the harbor, approximately fourteen buildings were erected. Most of the larger structures were built between 1800 and 1828. None of these appear to have been located within the project area, most of the quarantine station facilities being located in the southern two-thirds of the State's property (McMillen 1953:10-11; 1845 Ewen Map, see Figure 8)

Morris (1900: 376) states that the quarantine station buildings were "quite imposing." He describes them as follows:

The largest one in the enclosure was three stories high, twenty-eight by one hundred and thirty-six feet, and had wings twenty-eight by thirty-seven feet at each end. A hospital building near the water was three stories high, fifty by fifty-five feet, with wings at each end twenty-six by sixty-six feet. These two buildings were designed to accommodate four hundred patients. The small pox hospitals were two stories high, twenty-eight by eighty feet, with a piazza running along the front and rear. They were designed to accommodate fifty patients. There were twelve other buildings on the ground, viz.: Health Officer's residence (still standing [i.e. ca. 1900]), deputy health officer's residence, assistant physician's house, workhouse, house for bargemen, boat house, office, carpenters' shop, ice and coal house, wagon house and barn.

Documents, maps, and illustrations from the period indicate that the larger buildings were designed in the Greek Revival style and that the grounds were carefully landscaped and well maintained. Other features of the complex included a large garden, a 500-foot pier terminating in a washhouse for cleaning infected clothing, a cemetery, and a morgue. The entire quarantine grounds were enclosed by a wall.

In relocating the quarantine station from Bedloe's to Staten Island, the State had sought a relatively isolated setting. This portion of the Island, however, gradually ceased to be rural. In 1815, the Governor of New York State, Daniel Tompkins, began developing the village of Tompkinsville on the remaining portions of the Glebe, which he had bought from the Church of St. Andrew under an act of Legislature. Lots and roadways were laid out, homes were built, and ferry service established. Gradually a village grew up adjoining the quarantine station (Leng and Davis 1930:221-222; McMillen 1953). An 1850 map illustrates Tompkinsville's proximity to the quarantine station (Figure 9).

Attributing outbreaks of disease to the presence of the quarantine station, local residents unsuccessfully attempted to have the State remove it. Finally, in 1858 they succeeded in burning the quarantine station buildings to the ground (Leng and Davis 1930:221-222; McMillen 1953).

C. The Revenue Marine Station

Formed in 1790 by US Treasury Secretary Alexander Hamilton, the Revenue Marine's (known also as the Revenue Service) function was to patrol both inland and offshore waters in order to enforce customs laws as well as other aspects of maritime regulations and safety. It originated as the only armed naval service in the nation between 1790 and 1794, the Continental Navy having been disbanded in 1790 and the United States Navy not being created until 1794. In the early twentieth century, it merged with the U.S.

Lifesaving Service to become the Coast Guard. Under its initial authorization, the Revenue Service's fleet of small topsail schooners (also known as "revenue cutters") boarded and inspected ships to ensure that customs duties and import tariffs were paid to approved Ports of Entry such as New York City (Mordica n.d; Night Beacon n.d.; Smith 1932).

In 1814, Daniel D. Tompkins, as Governor of the State of New York, executed a deed transferring to the United States government five acres in the northeastern portion of the land previously acquired by the State for use as a Quarantine Station. This tract, fronting on the Bay, was to be utilized as a Revenue Marine station (Dibble 1980: 4). The deed, recorded in Richmond County Deed Liber G, p. 379, and executed on June 22, 1814, described the five acres as "being part of the tract of land heretofore purchased by the State of New York for a Marine Hospital" (another designation for the quarantine station). The Collector of the Port of New York, Joshua Sands, is named as the purchaser acting on behalf of the United States Government (Thompkins 1815).

In addition to the collection of customs duties, the Revenue Service also performed other missions, including the enforcement of quarantine regulations. Presumably, because it was immediately adjacent to the quarantine station, a major share of the responsibilities of the unit based at the project area site would have been the interception of ships with ill passengers (Mordica n.d; Night Beacon n.d.; Smith 1932).

After purchasing the five acre tract, the United States government erected several structures for use by the Revenue Marine Service. The dates of construction are not known, but they would have been erected between 1814, when the land was acquired and 1845, when a map of the Quarantine and Revenue Marine stations, known as the Ewen Map (see Figure 8), was drawn, showing the buildings present at that time. Four structures had been erected by this year at the Revenue Marine Station. Two of these were domestic structures that housed the Revenue Marine officers. The northernmost was the residence of the "Boarding Officer" while the southernmost was utilized by the "Store Keeper." As discussed below, these structures, with some apparent modifications continued to stand into the twentieth century. The site of the northernmost house (i.e. the "Boarding Officer's house) is located within the present project site, while the location of the southernmost would place it within the present Post Office grounds.

The 1845 map also shows two storehouses located at the head of a wharf that extended into the Bay. The site of the southernmost storehouse, and the southern portion of the wharf, would be within the present project area (see also below), while the northernmost storehouse would be at the site of the present Ferry Maintenance Facility. The map also shows a small shed on the pier that extends into the Bay.

D. Establishment of the Light-House Depot: 1863 - 1867

The administration of the nation's lighthouses was centralized by Congressional action in 1789, creating the Light-House Service and placing all lighthouses in the country under

the control of the United States Treasury Department. In an era when most commerce and travel was still maritime, lighthouses were of critical importance. In 1845, lighthouse administration was assigned to the Revenue Marine Bureau (Smith 1932).

In an attempt to upgrade lighthouse operations, the Light-House Board was formed in 1852 as a semi-autonomous agency, pursuant to legislation passed by Congress in 1851. Although it remained linked to the Secretary of the Treasury, who acted as its president, the Board now had complete control over all lighthouse matters. Admiral William B. Shubrick was elected as the first Chairman of the Light-House Board. New staff was hired—naval officers, army engineers, and maritime industry leaders—and equipment, buildings, the quality of supplies, and the overall organization was improved. New York was placed in the Third Light-House District—one of twelve—which extended down the Atlantic Coast from Maine to Delaware. Each District was assigned an Inspector, nearly always a Navy officer, and an Engineer, who was an Army Engineer officer (Dibble 1980; National Lighthouse Museum n.d., Weiss 1926).

The headquarters of the Third Light-House District were soon set up in New York City. However, the Light-House Board's top officials believed that what was truly needed was a "super depot"—a site that could become a base of operations for the nation's entire lighthouse system. In 1863, the Secretary of the Treasury transferred the northernmost half of the existing five acre Revenue Marine property on Staten Island to the Light-House Board (Chase 1863). In addition to establishing a depot to store and disburse supplies needed for lighthouse operations, the Board hoped that the Staten Island site would support the development and testing of new lighthouse technology such as fuels, lamps, and sound signals (Dibble 1980; National Lighthouse Museum n.d.).

As noted above, residents of Tompkinsville burned the quarantine station buildings to the ground in 1858. However, the buildings within the Revenue Service depot apparently were not affected by the conflagration (McMillen 1953:10). A map drawn in 1866 (Figure 10) continues to show the configuration of buildings as depicted in 1845 (Figure 8), with some additions.

The 1866 map (Figure 10) shows the division of the sites' facilities between the Revenue Marine Service and the Light-House Board and also reflects the initial construction undertaken by the latter on the site. The first major building erected by the Light-House Board was the building referenced here as building 6 (see Figure 2), built in 1864 (Light-House Board 1891 - see also Photograph 15). It is indicated on the 1866 map (Figure 10) as the Light-House Engineers Office, but it also served as the main storehouse for lighthouse supplies at this time.

The offices connected with the service of this depot, and of the 3rd district, are located in the storehouse ... wherein is usually stored something like a half million dollars' worth of light-house supplies and apparatus, besides records which could not be replaced (Light-House Board 1868:40).

The 1866 map (Figure 10) also continues to show the two domestic structures previously depicted in 1845 (Figure 8). The configuration of the two houses as depicted on these two maps suggests that the old structures were most likely modified and/or additions built. The former "Boarding Officer's Residence" (within the project area) had been taken over by the Light-House Board by 1866 and served as the "Light-House Engineer's Residence." The former "Store Keepers" house (not within the present project area) continued to be used by the Revenue Service in 1866, serving as the "U.S. Revenue Officers Residence".

The two storehouses shown at the head of the wharf in 1845 also continued to be utilized by the Revenue Service in 1866. McMillen (1953) published an article which includes an 1858 print showing the Quarantine Buildings (see Figure 12). McMillen captioned the print to indicate the various buildings, with the "U.S. Lighthouse Grounds" indicated at the right of the print. The building shown at the extreme right of the print would appear to be the southernmost of the two storehouses as shown on the 1845 map.

By 1866 the former Revenue Service wharf had been extended along the shoreline of the property by construction of a sea wall and filling-in behind this wall. The old Revenue Service Pier (also shown on the 1850 map - Figure 9) had been removed by 1866 and two new piers built, the southernmost utilized by the Revenue Service and the northernmost by the Light-House Board. This latter pier can be seen in the background of an 1866 photograph (Figure 11). The 1866 map also shows sheds constructed by the Light-House Board near the head of this pier. The site of these structures would be at the location of the present Ferry maintenance building.

Construction of the sea wall and creation of the new land behind it is described in the 1868 Light-House Board Annual Report:

The sea wall in front of that portion of the depot ground extending from the former revenue wharf to the northern boundary line and along this line to the shore ... has been completed in a very substantial manner of large blocks of coursed granite, backed by rubble masonry, the whole being laid in cement (Light-House Board 1868: 39).

While the sea wall is described as extending along the northern portion of the site, the 1866 map (Figure 10) also indicates that the portion of the shoreline south of the location of the 1845 wharf had been bulkheaded.

Some of the fill deposited behind the sea wall was obtained by dredging the basin in front of the depot and depositing the spoil behind the sea wall. Other fill was obtained by cutting into the sloping area where buildings 7 and 8 were constructed. Grading and filling operations were described as follows:

A large quantity of earth obtained from the bank at the depot grounds has been used in filling in behind the seawall, and for properly raising and grading the grounds...about 2,690 cubic yards of earth were obtained from the quarantine grounds...taken to the depot grounds, and used for filling in. A large quantity of earth is yet required to complete the filling. The high bank behind the depot grounds has been graded and sodded (Light-House Board 1868: 40).

In 1867, the southern portion of the former Revenue Marine service tract, still being used by that agency, was transferred to the Light-House Board, which now operated the entire facility. In addition, in 1867 and 1868 the Governor of New York State transferred two additional strips of land to the United States government for addition to the Depot. These strips were located, respectively, on the north and south sides of the Light-House Depot. The northern strip was 29½ feet in width and that on the southern side 49 feet and seven inches (Light-House Board Annual Reports 1867-68; Fenton 1867; 1868). In 1869 an additional 33 foot wide strip adjoining the previously acquired land along the northern boundary of the depot was transferred from New York State to the U.S. government (Hoffman 1869). Analysis of maps, however, does not indicate that this strip was ever incorporated into the Light-House Depot grounds.

E. Development of the Light-House Depot: 1867 - 1874

After taking over the remainder of the former Revenue Marine Station in 1867, the Light-House Board began construction of several new buildings required to carry out the work of the Depot. The Board also utilized several of the buildings that had been constructed by the Revenue Marine Service.

Workshop (Building 8)

The 1868 annual report describes the activities at the Light-House Depot, and the duties of the 24 workers employed there.

There are employed in the workshop for the manufacture and repair of lamps, apparatus, implements, and all accessories of light stations, one foreman, seven lampists, one machinist, one laborer, and for the general work of the depot in the receipt, packing and delivery of store, keeping the grounds in order and caring for the public property, one foreman two watchmen, eleven laborers" (Light-House Board 1868:37).

The manufacture and repair activities at the Depot must have been conducted at that time in the buildings shown on the 1866 map. However, in order to centralize all of the manufacturing and repair work in one building, work was begun in 1868 on construction of a building to house the Depot's workshops (building 8), and this is the date on the building façade (see Photograph 15). However, construction continued through 1869 and was completed in 1870, with the installation of a 20 horsepower steam engine and boiler (Light-House Board 1868 -1870). This building is shown labeled as a "work shop" on the 1874 map (Figure 15), but is sometimes referenced as the "Old Lamp Shop."

The building was actually constructed to house three workshops - a lamp-shop, blacksmith shop and brass foundry (Light-House Board 1870). In addition to activities concerned with the manufacture and repair of "lamps and illuminating apparatus", this building was used for "testing oils and other supplies purchased by contract; and for experimenting with lamps and illumination apparatus" (Light-House Board 1869). The experimental work done at the depot will be discussed further below.

Office Building (Building 7)

In 1868, work was begun on a new building to serve as the Depot offices (building 7). Work continued through 1869 (the date on the façade - see Photograph 17) and 1870, with the building completed in 1871 (Light-House Board 1868 - 1871). This building, which is designated as a New York City landmark for its architectural qualities as well as its historical significance, was designed by A.B. Mullett, the Supervising Architect of the Treasury Department between 1865 and 1874. He was also responsible for the design of the old State, War, and Navy Department buildings in Washington, D.C. and the former Post Office building formerly located in Manhattan's City Hall Park (demolished in 1939) (Dibble 1980). This building constitutes the central portion of the standing structure (building 7).

Oil Vaults

In 1867, construction began on vaults for the storage of oil used in the lighthouse lamps; the vaults were completed in 1869. They were described as having a capacity of "85,000 gallons of oil. Of which 50,000 gallons will be stored in five large tanks of cast-iron lined with tin and the remainder in barrels, piled in rows in shallow iron troughs" (Light-House Board 1868:39). The structure, divided into six separate vaults was built into the sloping bank and consists of six vaults with metal doors (see Photograph 5). Five of the vaults are 21 feet wide and 51 feet in length with approximately 13 foot high vaulted ceilings. The sixth vault is approximately half the size of the others (National Lighthouse Museum n.d.).

Domestic Structures

After the Light-House Board took over the entire Depot in 1867, both of the domestic structures shown on the 1845 and 1866 map were occupied by the Light-House Depot officers. The northernmost of the two dwellings (building 1), which had been occupied by the Light-House Engineer in 1866 (Figure 10), now became the residence of the Inspector, as shown on the 1874 map (Figure 15), while the southernmost house, formerly utilized by the Revenue Marine Service, now served as the residence of the Engineer. Information about the residents of these houses and changes to the buildings will be discussed below.

Two photographs taken in 1868, showing the construction underway at that time, depict building 1 and other structures. One of these photographs (Figure 13) shows the construction of the oil vaults, with the 1864 store house (building 6) at the left side of the photograph. The Inspector's house (building 1) is shown to the rear of the oil vaults at the center of the photograph. Two other buildings are shown in this photograph. The small building to the left of the Inspectors house (building 12) is not shown on the 1866 map (Figure 10) but does appear on the 1874 map (Figure 15). The small building on top of the bank to the right of the oil vaults could be the structure shown east of building 6 on the 1866 map. It would appear to be located within the strip of land acquired from the State of New York in 1867. It is not shown on the 1874 map.

A second 1868 photograph (Figure 14) shows the office building (building 7) under construction, with building 6 and the oil vaults (under construction) at the right. This photograph also shows building 12 (at the left center of the photograph, as well as the inspectors house (building 1), in the center of the photograph and partially obscured by a large tree.

Revenue Marine Storehouses

When the Light-House Board took over the portion of the site previously used by the Revenue Marine Service, the two storehouses shown in the southeastern portion of the site on the 1866 map (Figure 10) continued to stand. The Light-House Board initially planned to demolish both of these structures, but subsequently decided to continue using one of these (Light-House Board 1867; 1868). The 1874 map (Figure 15) shows the southernmost of the two structures continuing to stand while the northernmost had been removed. The remaining structure is the one shown on the 1858 print cited above, and its site is located within the present project area

Wharfs and Piers

The facilities for loading and unloading supplies were also improved after the 1867 acquisition of the site by the Light-House Board, with derricks having a lifting capacity of 10 tons erected on both wharves in 1872 (Light-House Board 1872). In 1871 a large coal bin was erected adjacent to the basin, and further enlarged in 1872 (Light-House Board 1871; 1872). While this facility is not indicated on the 1874 map, the location of the basin as shown would indicate that the coal bin was located in the portion of the Depot now occupied by the Ferry Maintenance Facility.

1. Joseph Henry and Light-House Board Experimentation

Contributing to the significance of the Staten Island Light-House Depot is its association with experimentation that advanced the technology utilized by lighthouses and other navigational aids, and in particular its association with Joseph Henry, a noted nineteenth-century American scientist. These associations are cited in the significance statement included in the National Register nomination for this site (Gobrecht 1981).

Joseph Henry has been called "America's foremost physical scientist" (Coulson 1950). Henry is best known as one of the discoverers of electromagnetic induction, and the unit of induction is, in fact, called the "Henry." Henry also made other significant discoveries in the field of electromagnetism. He discovered, for example, the method of insulating wire so that it could be formed into the large coils needed to construct powerful electromagnets, and invented a machine that was a forerunner of the electric telegraph, as well as the relay and the transformer. Henry was also appointed to organize the Smithsonian Institution (Coulson 1950; Johnson 1964).

As a prominent scientist, Henry was the only civilian member appointed to the Light-House Board when it was formed in 1852, and Henry was instrumental in the adoption by the Board of the Fresnel lens for use in lighthouses. This lens is designed to refract light into parallel rays in the required direction, and was a significant improvement over the Argand lamp with parabolic reflector previously in use (Coulson 1950). Henry also conducted research into the use of different types of oils in lighthouse lamps. These had traditionally burned whale oil, which by the mid-nineteenth century had increased in price to a point which made its continued use impractical. Henry's researches lead to his discovery of methods to enable the practical use of the much less expensive lard oil for lighthouse lamps. He also conducted phonometric research to determine the best audible devices for use in marine signaling and warning devices; testing various whistles, reed trumpets, bells and other devices (Coulson 1950; Reed 1967). Henry reportedly carried out these research projects at the Staten Island depot.

When Admiral Shubrick, the first chairman of the Light-House Board, resigned in 1871 Joseph Henry was appointed as his successor, a position Henry held until his death in 1878. Henry reportedly maintained a laboratory at the Staten Island depot (Coulson 1950; Reed 1967), and his presence at the Depot was confirmed by comments he made subsequent to being stricken with his final illness in 1877. In an address to the National Academy of Sciences, Henry stated: "I awoke on the 5th December, in my office at the Light-House Depot on Staten Island, finding my right hand in a paralytic condition" (quoted by Coulson 1950: 326). After becoming Chairman of the Light-House Board, Henry reportedly made weekly trips from Washington to the Depot on Staten Island to conduct and supervise various experiments. As the above quote suggests, Henry must have maintained facilities for spending the night in his office/laboratory.

The location of Henry's laboratory within the Depot is uncertain. Coulson (1950: 325) makes reference to "the little laboratory on Staten Island," and it is usually assumed that this refers to the small building (building 5) located behind the store-house (building 6). This building was not constructed until 1882, however, four years after Henry's death. The annual report for 1882 states that

Due progress was made in the erection of a laboratory building, in which to test oils and chimneys. This work was done, heretofore, in the lamp-shop building, under some disadvantage as the materials to be tested were raised to the upper floor (Light-House Board 1882:26-27).

This suggests the possibility that Henry's office, laboratory, and possibly living facilities where he could spend the night were located on the upper floors of the workshop building (building 8). This is also suggested by an 1867 plan of the Light-House Depot in the collection of the National Archives, drawn by Joseph Lederle, then the acting Light-House Engineer. This plan, which apparently showed the same configuration of buildings as the 1866 map (Figure 10), was examined by James Dibble, of the New York City Landmarks Commission (n.d.a). His notes on the map indicate that the workshop building was intended to have "coopers on the lower floor, lampists on the second floor, [and a] laboratory for testing oil - experiments on third floor."

Further Experiments

After Joseph Henry's death the Staten Island Depot continued to be a major location for experimentation. In the 1880's it became a major facility for exploring the use of electricity to illuminate lighthouses and buoys. In 1884, a tower was erected at the Depot for the purposed of testing electric lighting to illuminate lighthouse beacons. The tower was connected with a "substantial boiler house, covering two boilers and a single engine in the base of the tower" (Light-House Board 1884:36). The tower was reportedly 60 feet in circumference (Reed 1963) and about 45 feet high (National Lighthouse Museum n.d.). These experiments were conducted by Lt. John Millis, who also was the resident Engineer at the Depot in 1886 and 1887. Millis tested various combinations of lamps, electrical generators and batteries in the experimental lighthouse. The tower stood at the depot until 1897, when it and the adjacent power house were removed (Light-House Board 1897). The experimental lighthouse was reportedly relocated to Romer Shoals, at the entrance to New York Harbor (National Lighthouse Museum n.d.).

The lighthouse at the Depot is shown on photographs dating to 1884 and to the 1890's Figures 29 and 30. As discussed in Chapter IV, it was located in the portion of the Depot now occupied by the Ferry Maintenance Facility.

Other experimentation at the Staten Island Depot during the 1880's concerned lighting and power for navigational buoys. The depot engineers experimented with electro-chemical fluorescent lighting, and the use of both compressed gas and submarine electric cables to power buoys (Reed 1963).

F. Expansion of the Depot after 1874

During this period the depot was extended further to the west. In 1879 the annual report noted that Stuyvesant Avenue (at the location of what is now Bay Street) was to be opened and that the location of the proposed street was some 100 feet west of the western boundary of the depot. The report recommended that the government purchase the land between the old boundary and the new street, in order to provide access to the Depot from it. The location of the Street is shown on both the 1874 and 1887 Beers maps (Figures 15 and 16) with both maps showing the Depot boundary east of the Street.

We could not find reference to the actual acquisition of this tract in the Light-House Board annual reports. However, the 1898 map (Figure 17) and subsequent maps show the Depot extended to Stuyvesant Avenue (later Bay Street).

In 1884 and 1885, the Staten Island Rapid Transit Railroad Company constructed its railroad tunnel through the Depot grounds. A description of the work in the annual reports of 1885 and 1886 indicate that construction was by open cut. The railroad excavated 100 foot sections at a time, built the masonry tunnel and replaced the earth. In 1886, the railroad regraded the depot grounds and replaced the trees and shrubs removed

during the tunnel construction (Light-House Board 1886). The tunnel is shown on the 1887 map (Figure 16) and subsequent maps.

During this period the tasks carried out at the depot expanded from those detailed in the 1860's. The following is a description of the activities at the depot in 1891

The work done here in the engineer's department during the year consisted, as usual, of manufacturing and repairing lamps, supplies, fitting illuminating apparatus, making oil cans and light ship lanterns, receiving material for manufacturing and repair work, repairing frames, etc. for light houses, oil houses and other structures, repairing buoys and appendages, and general works of repair, etc., for the district. The work done in the inspectors department consisted in receiving, storing, and shipping building materials, illuminating apparatus, supplies, buoys, and fuel; testing paint, chimneys, and oils; inspecting and weighing provisions and general stores; loading and unloading the supply steamer and the tenders; cleaning and repairing buoys and appendages; repairing tenders and boats; making sails, awnings and the like, and improving the methods and means of storing, inspecting and handling the supplies and keeping the accounts of the same (Light-House Board 1891: 70).

During the nineteenth century the Light-House Board operated a fleet of lighthouse tenders, used to distribute supplies and construction materials to lighthouses and lightships and also to transport the lighthouse inspectors and other officials to these facilities. Before 1900 the tenders were also used to tow lightships to their stations. The first tender on Staten Island was the *Nettle*, a wooden steamer built in 1878 (Gatullo *et al.* 1977). When the tenders were at the Depot, their crews apparently lived on board. The 1900 census lists the crew of the tender *Mistletoe* at the Depot, in addition to the households of the Engineer and Inspector (see discussion in Chapter IV). In addition, the Depot served as the home port for several light-ships, and these ships were brought to the depot for repairs when necessary (Nichols 1961 - see also Figure 18). Expanded wharf facilities at the Depot were required to service these tenders.

Chapter IV discusses modifications to the buildings discussed above as well as the new buildings constructed at the Light-House Depot during the late nineteenth and early twentieth centuries.

G. Twentieth Century

In 1903, the Light-House Board was removed from the Treasury Department and placed within the Department of Commerce and Labor. The latter soon re-organized the Board; renaming it the Bureau of Lighthouses in 1910. Construction of new buildings continued in the early twentieth century with the major new buildings being the new lamp shop (building 10) built in 1907, and the foundry (building 11) built in 1912. By the 1920's the number of persons employed at the Depot had increased; with estimates ranging from approximately 200 (National Lighthouse Museum n.d.) to 850 (Leng and Davis 1930:1001). By the end of the 1930's, however, most lighthouses had become electrified. Consequently, with the processes involved in lighthouse maintenance and operation becoming more simplified, the need for the Light-House Depot was greatly reduced.

The Depot was taken over by the United States Coast Guard in 1939. Although it became the new headquarters for the 3rd Coast Guard District, lighthouse support was not regarded as an important Coast Guard mission, and lighthouse activities and personnel were gradually eliminated from the Depot. The Office Building (building 7) became the Administration Building for the Coast Guard Station and the Store House (Building 6) was utilized by the Coast Guard as a barracks. In 1966 the Third District Coast Guard station moved from Staten Island to Governor's Island and the Staten Island facility was closed (National Lighthouse Museum n.d.; Habib *et al.*1999).

Although some of the buildings were briefly used by the New York Harbor Pilot's Association, the site was vacated by the early 1980s and acquired by New York City. In response to the proposed construction of a ferry maintenance building, the subsequent razing of several buildings and the continual deterioration of the surviving structures, a coalition of city officials and concerned citizens intervened. The New York City Landmarks Preservation Commission declared The Old Administration Building a city landmark in 1980. In 1983, several of the remaining structures were placed on the National Register of Historic Places as the "Office Building and U.S. Light-House Depot Complex." The project area was selected as the site for the National Lighthouse Center and Museum in 1998. (National Lighthouse Museum n.d.; Habib *et al.*1999).

IV. SITES OF HISTORIC STRUCTURES

Our 2004 report included a Figure showing the approximate locations of 33 buildings constructed on the site during the nineteenth and twentieth centuries. It is included here as Figure 44, with modifications reflecting the additional research conducted for this survey. Those structures within the present project area are also shown on a copy of the 2007 site plan included here as Figure 45. Numbers have been assigned to each structure to facilitate discussion. The standing structures have been assigned the same numbers as shown on previous site plans (see e.g. Figure 2).

The following discussion will focus on those structures within the present project site, including those noted in Chapter III. The structures whose location places them within the present Post Office and Ferry Maintenance Facility properties will only be mentioned briefly.

A. Building Sites and Features Within the Project Area

1. Building #1 - The Inspector's House and its Occupants

This building was constructed between 1815, when property was acquired by the United States government, and 1845, as it is shown on the map drawn in the latter year (Figure 8) when it served as the residence of the Revenue Marine Service Boarding Officer.

As indicated on the 1866 map (Figure 10), after the 1863 acquisition of the property by the Light-House Board, this building served as the residence of the Light-House Engineer. At this time this house was probably the residence of Joseph Lederle, who is referenced both as Engineer and Superintendent in letters written in 1866 (transcribed by Dibble n.d.b). On the plan that he drew in 1867; Lederle indicates his title as "Acting Light-House Engineer" (Dibble 1980; n.d.a).

Joseph Lederle is listed in the records of the 1870 census adjacent to the listing for Charles S. Boggs, Commodore, U.S. Navy, most likely the Light-House Board Inspector, suggesting that Lederle continued to reside at the Depot at this time. Lederle's household in 1870 (see Appendix B) included his wife and four children, as well as two female domestic servants and a 63 year old physician, who was most likely a relative of Lederle's wife. Boggs' household included his wife, daughter and two sons, one of whom was also in the Navy and the second who worked at the Depot as a clerk.

By the end of 1871, J.C. Woodruff had replaced Lederle as the Light House engineer, as he is so indicated in an advertisement for the sale of surplus items dated December 7, 1871 (New York Times 1871). Woodruff continued to serve as the Depot's Engineer through 1878 (see Appendix A).

The 1874 Beers map (Figure 15) indicates that by this date, the Light-House Engineer resided in a house (building 2) located at the present site of the U.S. Post Office while building 1, formerly the residence of the Engineer, now served as the Inspector's house.

It is uncertain when building 1 became the residence of the Inspector, rather than the Engineer. It may not have occurred until after 1872, when the Light-House Board annual report indicates that "the dwelling of the inspector has been repaired, and occupied by him" (Light-House Board 1872:32).

The names of the Engineer and Inspector for the 3rd District are included in the Light-House Board annual reports. The names of these individuals for 1873 - 1909 are listed in Appendix A. The copies of the portions of the annual reports from 1867 - 1872, obtained by Dibble from the National Archives and included in the files of the New York City Landmarks Preservation Commission, did not include this information.

The Inspector, who resided in building 1, was a naval officer, whose rank varied from Captain to Rear Admiral. The Engineer, who resided in building #2, was an officer of the Army Corps of Engineers, with a rank varying from Lieutenant to Colonel. As can be seen in Appendix A, the tenure of the Inspectors at the Depot was generally shorter than that of the Engineers.

We were able to locate census listings for the Light-House Inspector and Engineer in the U.S. Census listings for 1870 (see above), 1900 and 1910, and in the New York State Census of 1875. Information from these records is included in Appendix B. The Inspector for the 3rd Light-House District was Commodore Stephen Trenchard in 1875; Commander Edwin M. Shepard in 1900 and Captain Robert Doyle in 1910. The Inspector's household included seven persons in 1875, six in 1900 and four in 1910. Residents in each of these years included the Inspectors' wives, grown children, and two female domestic servants, who in each case were immigrants from Ireland, Sweden or England. In 1875, the Inspector's household also included his brother-in-law and a male servant who served as a messenger.

As shown on the 1866 survey, the Inspector's House has a somewhat different morphology than that shown in 1845. The shape of the buildings suggests that extensions were added on the west side of the two T-shaped buildings shown in 1845, resulting in the building morphology depicted in 1866. It is also possible, however, that the two ca. 1845 houses were razed and new structures built at the same location. The house can be seen in the background of two photographs taken in 1868 (Figures 13 and 14). As seen in Figure 13, the structure appears to be a 2½ story frame building with a porch facing east.

Subsequent maps and photographs strongly suggest that the original structure was expanded to include several extensions. As noted above, the 1872 annual report notes "repairs" to the structure, apparently necessary prior to occupation of the house by the Light-House Inspector. The 1879 annual report indicates that both the Inspector's and Engineer's quarters had undergone "necessary repairs and renovations." The report

indicates that both buildings were "in a dilapidated condition" (Light-House Board 1879:27). Repairs to both buildings were also noted in the annual reports for 1881, 1882, and 1888.

The early twentieth century Sanborn maps (Figures 21; 23-26) show a central 2½ story frame structure with frame additions. This is supported by several photographs taken during the early through mid-twentieth century that show the structure (see Figures 31-33). The view of the building from the east (Figure 33) in particular supports the inference that the central portion of this building represented the original early or mid-nineteenth century building.

During the site reconnaissance that we conducted in 2003, a portion of a stone foundation wall was noted in the northwestern portion of the site, where this building was located. Photographs of the wall and its location taken at that time are included in this report as Figures 41 and 43). The visible portion of the wall extended for approximately five feet. A dense accumulation of vegetation and roots made further examination of the wall unfeasible at that time.

As noted in the Introduction, our reconnaissance for the present study indicated that grading of the western portion of the site had occurred since our 2003 reconnaissance. Portions of the area have been covered with a gravel surface, apparently to create a parking area, while piles of earth deposited during the grading, now overgrown with vegetation, were noted in other areas (see Photographs 10 and 12). It is uncertain whether the location of the foundation observed in 2003 was at the location of the gravel surface graded area or under one of the spoil piles. In either event, it is considered likely that portions of the foundation are still intact. It would appear that the greatest amount of downcutting (approximately two feet) occurred in the southern portion of the area, closest to the Post Office property (see Photograph 11).

2. Building 4 - Revenue Marine Service and Light-House Board Storehouse

As noted in Chapter III, this was the southernmost of the two storehouses located in the southeastern portion of the site and shown on the 1845 and 1886 maps (Figures 8 and 10). The building appears to be shown in an 1858 print (Figure 12). The map overlay included in the 2004 report (Pickman and Harris 2004: Figure 21) shows the building depicted on the 1874 map (Figure 15) as a separate building (building 18), reflecting the assumption that the original storehouse had been torn down and a new one built. Additional examination of the maps and additional research indicates that this was not the case. The 1873 Light-House Board annual report indicates that one of the storehouse buildings acquired from the Revenue Marine service continued to stand, while the other had been demolished and materials from it used to repair the second. In 1881 the annual report continues to refer to "the old revenue building in the southeast part of the ground" (Light-House Board 1881:29). A building continues to be shown at this location on maps dating through the mid-twentieth century. Several photographs dating from the 1890's through the 1940's (Figures 22, 30, 34 - 36) show this building. Its appearance, similar to the building shown on the 1858 print is consistent with the inference that it is the original

building erected on this site by the Revenue Marine service in the early nineteenth-century period. The building was demolished prior to 1960, as it is not shown on an aerial photograph taken in that year (Figure 38). The site of this building was at the location of the existing plaza. We have modified the map overlays showing the historic structures (Figures 44 and 45) to reflect this additional research.

3. Existing Structures (Buildings 5 - 11)

Building 5 - The Laboratory

The 1882 annual report indicates that building 5 was constructed in that year for the purpose of testing oils and chimneys, tasks previously performed in the upper floor of the workshop building (see citation in Chapter III). In 1888, "a boiler house was built and a boiler was fitted for heating the laboratory" (Light-House Board 1888:67). This is apparently the small addition visible at the rear of the building (see Photograph 7).

Building 6 - The Inspector's Storehouse

Constructed in 1864, this was the first building constructed after the Light-House Board occupied the northern half of the Revenue Marine station. It initially served as the Engineers office, but after the Light-House Board assumed control of the entire depot in 1867, it was also used as a storehouse for lighthouse supplies, and it is referred to in at least one of the annual reports (Light-House Board 1881:29) as "the Inspector's Storehouse." After the Coast Guard took over the site in 1939, the building was used as a barracks for Coast Guard personnel.

Building 7 - The Office Building

The construction of this building between 1868 and 1871 was discussed in Chapter III. Construction of two wings (buildings 7a and 7b) located north and south of the original section began in 1901 and was completed in 1902 (Light-House Board 1901; 1902). Retaining walls were also constructed behind the new wings at this time to support the embankment (Light-House Board 1902 - see Photograph 6). As shown on the 1912 and 1917 maps (Figures 20 and 21) the two additions were separate structures connected by a walkway with the original building, and this configuration is shown in a ca. 1909 photograph (Figure 34). The 1924 aerial photograph (Figure 22), indicates that by this year another addition (building 7c) had been completed that joined the two wings with the original building to form the existing single T-shaped structure.

Building 8 - The Workshop

As discussed in Chapter III, this building, constructed between 1868 and 1870 housed the main workshops and laboratories of the Depot during the nineteenth century. In 1875 "a duplicate engine for the use of the lamp shop ... [was] ... put up during the year and an additional building for its housing" (Light-House Board 1875:35). This engine house is apparently the small brick structure attached to the north end of the western façade of the

building and shown in an 1884 photograph (Figure 27). The remains of the engine house are still present at this location (see Photograph 8).

The 1868 description of Depot activities (see Chapter III) indicates that at that time ten workers would have been employed in the workshop building, while an 1885 photograph (Figure 28) shows 20 workers posed in front of the building. Cisterns to provide drinking water for the buildings workers, as well as for its boilers, as well as the presence of a cesspool for sanitary needs are noted in the Light-House Board annual reports (see below).

Building 9 - The Oil Vaults

The oil vaults were constructed between 1867 and 1869. As noted below, a cistern was constructed in the vicinity of the vaults in 1881. In this same year the annual report notes that "the oil vaults have had a brick extension built" (Light-House Board 1881:29). This extension (Building 9a) would appear to be the one-story brick structure shown on the 1887 and 1912 maps (Figures 16 and 20) and the subsequent Sanborn maps (Figures 21 and 23-26). It was located in front of the oil vaults in the space now occupied by the courtyard adjacent to the north side of building 6. The building is also shown in aerial views dating to the 1920's and 1940's (Figures 22 and 33). The vaulted doors in the front of this structure (see e.g. Figure 33) would tend to support the identification of this building as the 1881 oil vault extension. It is identified as a store house on the Sanborn maps, and was apparently converted to this function after the vaults were no longer needed for oil storage. This structure was demolished in the latter portion of the twentieth century.

By 1890, two of the large iron tanks in the vaults had been removed and the space used for storing supplies (Light-House Board 1890), and in 1891 one of the vaults was converted for use as an ice house (Light-House Board 1891).

Building 10 - The New Lamp Shop

This building (was constructed in 1907 to provide more space for the Depot's workshops (National Lighthouse Museum n.d.). It is shown on the 1912 topographic sheet (Figure 20) and subsequent maps.

Building 11 - The Foundry/Machine Shop

This brick building was reportedly built in 1912 as a foundry for the manufacture of lightship anchors, chains, buoys and other lighthouse equipment.(National Lighthouse Museum n.d.) It was subsequently used as a machine shop and is so indicated on the 1917 Sanborn map (Figure 21). The subsequent Sanborn maps (Figures 23 - 26) indicate that the structure was used as a carpenters shop. This building was not shown on the 1912 topographic sheet and was presumably constructed shortly after this map was drawn. It was built on the site of a smaller building (building 31) shown here on maps dating from 1898 through 1912 (Figures 17 - 20).

4. Other Building Sites within the Project Area

Building 12 - Carriage House and Possible Dwelling

Two 1868 photographs (Figures 13 and 14) show a smaller, gable-roofed 1½ story building southwest of the “Inspectors house” (building 1). This building does not appear on the 1866 map (Figure 10), but one is shown in this approximate location on the 1874 Beers Map (Figure 15), suggesting that it may have been constructed as part of the improvements made after the entire Depot was taken over by the Light-House Board. The building is shown with a T-shaped configuration on the 1845 map. It is uncertain whether the western portion of this building was added after 1868, or if it is merely not visible in the photograph. As shown in one of the 1868 photographs (Figure 14), the building has large doors on its south side, suggesting that it may have functioned as a carriage house for the occupants of the Inspector’s House. The attic dormers, also visible on the south side of the building in the photograph, and attic window on its east side suggest the possibility that the building may also have functioned as living quarters for an employee of the Light-House Board. The building is also depicted on the 1887 map (Figure 16) but is not shown on later maps. It was apparently removed during the turn-of the century period. It is not visible in a photograph taken during the first decade of the twentieth century (Figure 39).

The site of building 12 would place it along the boundary between the project site and the U. S. Post Office property, and a portion of the building would fall within the site. During our reconnaissance for the 2003 survey, we noted a concrete foundation in this portion of the site with a quantity of building stone also noted adjacent to this foundation, suggesting that an earlier foundation may have been disturbed when the concrete foundation was constructed. As discussed above, the reconnaissance conducted in 2007 indicates that recent grading has occurred in the western portion of the site, with the greatest amount of downcutting (up to approximately two feet) in the vicinity of these features. No indications of the concrete foundation or the building stone were visible.

Building 20 - Cottage

An 1868 Photograph (Figure 13) shows a small “cottage” located north of the Store House (building 6). This may be the same structure shown on the 1866 map (Figure 20) within the strip of land added to the Depot in 1867 (see Chapter III). Although the building appears closer to building 6 and the oil vaults in the photograph than as shown on the map, this may be due to the photographic perspective. Its location as shown on the 1866 map would place the site of this building adjacent to South Street in the area now occupied by the site access tower.

Buildings 21 and 21a - General Storehouse and Carpenters Shop

The 1881 annual report notes that “the general storage-house, adjoining the old revenue building in the southeast part of the grounds, was completed and connected by tracks and truck-cars with the extremity of the south wharf and a new storage-shed there” (Light-

House Board 1881:29). The building (building 21) is depicted immediately adjacent to the east side of the old Revenue Service storehouse (building 4) on the 1887 Beers Map (Figure 16), but was not shown on the 1874 map (Figure 16), consistent with the annual report citation noted. This building is partly visible in photographs taken in the 1890s and in 1909 (Figures 30 and 34). It appears to be a one story structure in these depictions and the 1898 and 1907 maps indicate it as being of brick construction. The building is noted on the 1912 Richmond Topographic sheet (Figure 20) however, as a "3 Sty. Brick shop," and it is possible that additional stories were added to the 1881 building.

It appears that building 21 was replaced by a new structure (building 21a) between 1912 and 1917. The Sanborn map of the latter year (Figure 21) indicates this new structure as a three story concrete-walled carpenter shop. It is indicated on later Sanborn maps as a "machine shop." The appearance of the building in a photograph taken in the 1920's (Figure 37), and in an aerial photograph taken ca. 1960 (Figure 38) would appear to be consistent with the description of this as a concrete-walled building. In addition, while both the 1881 building and the three story brick structure depicted on the 1912 map are shown abutting the east side of building 4, the building as depicted on the Sanborn maps, and shown in the 1924 and ca.1930's aerial photographs (Figures 22 and 35) is slightly east of building 4. The building shown on the Sanborn maps (building 21a) also appears to extend further to the east than the one shown on the 1912 map. The Sanborn maps and the ca 1920's photograph (Figure 37) also show a wooden ramp along the south side of building 21a.

Buildings 26 and 27 - Pump and Hose House

In 1888 "a new fire-engine house was built and fitted with boilers, fire-pump and connections" (Light-House Board 1888: 67), and a "hydrant and hose-house 12 feet square" was also constructed (Light-House Board 1889:71). There is another reference in 1893 to the purchase of a "new steam fire engine" and the construction of an engine house.

The 1912 map (Figure 20) shows two small structures (buildings #26 and #27) at the top of the bank west of the office building (building 7). The subsequent 1917 Sanborn map (Figure 21) identifies building #26 as a "Hose Ho.," and building #27 as "Fire Eng." These structures apparently represent sheds housing the fire fighting equipment for the Light-House Depot as noted in the earlier annual reports. A building at the approximate location of building #27 is also shown on the 1937 map (Figure 17), and is indicated as an "Auto Ho" (i.e. a garage) on the latter map.

Building 29 - Dwelling House

The 1937 Sanborn Map (Figure 23) shows a domestic structure located south of the Inspector's house, at approximately the same location as the greenhouse (building 31 - see below) shown on the earlier 1917 Map (Figure 21). The Post Office had been constructed in the southwestern portion of the Light-House Depot during this same period. This new domestic structure can be seen in ca. 1940's aerial photographs (see

Figures 33 and 36). A brief analysis of the site in the files of the New York City Landmarks Preservation Commission (Anonymous n.d.) suggests that this structure may actually represent a dwelling house (apparently the one referenced here as building #2 - the Engineers House) that was formerly on the Post Office site and moved to this location when the Post Office was built. Comparison of earlier photographs of the Engineer's house (see e.g. Figure 1939) with the ca 1940's views is not inconsistent with this inference.

Building 30 - Twentieth Century Storage Building

A one story storage building (building #30) was constructed west of building #10 and south of building #8 between 1937 and 1951 (compare Figures 23 and 24). It continues to be shown on the 1990 map (Figure 26), and was demolished during that decade along with the other buildings shown on the 1990 map with the exception of the existing buildings on the site.

Building 31

This small brick structure is shown in the southeastern portion of the Depot on the 1898, 1907 and 1912 maps (Figures 19 and 20). Its function is not indicated. The site of this building is within the footprint of the ca. 1912 foundry building (Building 10) and building 30 was apparently demolished when the former building was constructed.

Building 32 -- Inspector's Greenhouse

The 1917 Sanborn Map (Figure 21) shows a greenhouse south of the Inspector's House (building 1). It is not shown on the 1912 map (Figure 20), but may have been built shortly before this year. While it is not shown in a 1906 photograph (Figure 31) it may be the building shown south of the Inspector's House in two subsequent photographs taken during the first decade of the twentieth century (Figures 34 and 39). The greenhouse was apparently removed prior to the construction of building 29 at the same location between 1917 and 1937.

Building 34 - Lumber Shed

A one-story lumber shed was constructed east of building 11 between 1912 and 1917. It is shown on the Sanborn map of the latter year (Figure 21), as well as subsequent editions of the Sanborn maps (Figures 23 - 26), but is not shown on the 1912 map. This shed is also partially visible in a 1925 photograph (Figure 37).

5. Sub-Surface Features

Subsurface features such as cisterns, privies and wells would have been necessary to provide water and sanitary facilities to the occupants of the Inspectors house prior to the availability of a public water supply in the latter decades of the nineteenth century (see

below). Such features would have first been constructed prior to the occupation of the site by the Light-House Board.

In addition to the features associated with the domestic structures as noted above, the Light-House Board annual reports document the presence of a number of sub-surface features associated with the work-shop, oil vaults and other locations in the central and eastern portions of the site. In 1873, there is a reference to a cesspool associated with the lamp shop. The report refers to the installation of "a six inch drain to conduct to the cesspool the water coming from the springs in the back [i.e. the bank at the rear of the building] and overflowing the floor of the boiler room" There is also reference to the installation of 12 inch drains (replacing the original 6 inch drains to conduct water from the roof of the oil vault and the cellar of the office building to "the major 18 inch drain of the yard" (Light-House Board 1873: 37).

The 1877 annual report notes that "two large convenient cisterns connected with several of the depot buildings have been built and are now well supplied with fresh water, for use of the boilers of the lamp-shop and the general use of the depot" (Light-House Board 1877:24).

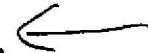
The 1880 report states that "the coal bins were improved and roofed over, with gutters for collecting the rain and carrying it into a capacious cistern built in the vicinity" (Light-House Board 1880:26). In 1898 the "old wooden covering of the cistern at the northwest end of the coal shed was replaced by a concrete covering supported on steel girders" (Light-House Board 1898:87). The location of the coal bins and associated cisterns is discussed in a following section, it is likely that they would have been in the portion of the site now occupied by the Ferry Maintenance Facility.

The 1881 report notes that "another cistern, in the vicinity of the oil vaults, was built during the year."

After 1880, however, it would appear that the cisterns would have served only as an adjunct to other sources of water. The 1880 report states that "for obtaining additional supply of water, two artesian wells were sunk during the year" (Light-House Board 1880:26) and the 1880 and 1881 reports indicate that pipes were laid within the depot to connect the facility with water supplied to this part of Staten Island by a water works corporation. In 1882 "the laying of water pipes with a hydrant, for use in case of fire, and for the supply of the vessels of the establishment was complete" (Light-House Board 1882:26).

Cisterns and wells (presumably the artesian wells noted above) apparently continued to supply some of the water needs of the depot into the early portion of the twentieth century, however. In 1902 it was noted that

the facilities of the yard have recently been increased by the utilization of an old well to insure a full supply of fresh water for the boilers of the tenders stationed at this point. The system of cisterns has likewise been united to this end (Light-House Board 1902: 89).

The 2000 site survey shows a large cistern (approximately 25' x 30') located in the southernmost courtyard of the office building (building 7) (Figure 40). It is uncertain whether this is one of the cisterns referenced in the annual reports as cited above, or if it is a more recent feature. 

There is a reference in the 1896 annual report to an improvement to the sewerage system, suggesting that by this time the depot no longer utilized cesspools like the one referenced in the 1873 report cited above.

6. Wharfs and Piers

The 1845 map (Figure 8), drawn when the entire depot site was operated by the Revenue Marine Service, shows a single wharf and pier extending outward from the shoreline. As indicated by the 1866 map (Figure 10), after acquiring the northern portion of the site in 1863, the Light-House board constructed a second pier, extending eastward from the northern end of the site. This map also suggests that the Revenue Service pier had been reconstructed slightly to the north of its former location. The wharf was also extended northward along the shore from the Revenue Service pier to join with the new Light-House pier; and the ends of both piers were modified so that together they formed a docking basin.

The new Light-House pier can be seen in the background of one of the 1868 photographs (see Figure 11).

The new wharf (or "sea wall") along the shoreline was described in 1868:

the sea-wall in front of that portion of the depot grounds extending from the former revenue wharf to the northern boundary line, and along this line to the shore, to connect with the brick wall built thereon, has been completed in a very substantial manner of large blocks of coarse red granite, backed by rubble masonry, the whole being bonded in the best manner and laid in cement (Light-House Board 1868:39).

The filling-in behind the new sea wall to extend the shoreline eastward from its previous location was described in Chapter III.

The 1866 configuration of the wharf and two piers, with modifications to their seaward ends is approximately the same as shown on the 1874 and 1887 maps (Figures 15 and 16). It should be noted that the southern pier, as shown on these maps, is not in the same location as the existing pier. At that time it was approximately aligned with the Office building (building 7), while the existing pier is approximately 150 feet south of this location.

The 1866, 1874 and 1887 maps (Figures 10, 15 and 16) indicate that the shoreline south of the south wharf had been bulkheaded. Comparison with the 1845 map (Figure 8) indicates that this occurred between the latter date and 1866. Modifications to the north wharf and pier were undertaken in the early 1890s (Light-House Board 1889; 1891), but

the location of the south wharf and the shoreline in the southern portion of the site remained unchanged.

The docking basin was subsequently enlarged during the mid -1890 by moving the south pier to its present position and extending the sea wall along the shoreline south of the new pier. "The new south wharf was completed under contract in January, 1896, and the work of removing the old south wharf was begun in April 1896. It was nearly completed at the close of the year" (Light-House Board 1896:68). The north pier was also moved north of its former location with the new location at and immediately adjacent to the end of South Street. The ends of the piers were also extended to create a larger basin as shown on the 1898, 1907 and 1912 maps (Figures 17, 18 and 20) and the subsequent Sanborn maps (Figures 21; 23 -26). As a result of these improvements, the shoreline in the southern part of the site and the south pier were at their approximate present locations.

7. Light-House Depot Boundary Wall

An approximately 10 foot high brick wall separates the Depot site from Bay Street. The wall follows the curve of Bay Street near its intersection with South Street. It ends a short distance east of the intersection , and is continued to the east by a chain link fence. As noted in Chapter III, prior to the latter decades of the nineteenth century the western boundary of the Light-House Depot was east of the present location of Bay Street (formerly Stuyvesant Avenue or Place). The Depot's western border was extended to Stuyvesant Place prior to 1898. A map drawn in the latter year (Figure 17) indicates that at this time Stuyvesant Place and South Street intersected at a right angle, indicating that the existing curving wall was constructed after this date.

The 1907 map (Figure 19) suggests a planned widening of Stuyvesant Place and creation of the curving intersection. This configuration of the intersection is shown on the 1912 map (Figure 18), which also indicates the presence of the brick wall (also shown on the subsequent Sanborn maps). A photograph taken during the first decade of the twentieth century (Figure 39) also shows the wall.

The twentieth century maps show the boundary wall continuing along the South Street frontage of the Depot to the shoreline. It is assumed that this portion of the wall was removed during the ca. 1990's structural demolition. As noted in the Introduction, a small portion of the wall was apparently recently removed and rebuilt during the installation of a new entrance way.

The data suggest that the brick boundary wall, which follows the curve of Bay Street, was constructed during the turn-of-the twentieth century period, a time of what may have been the greatest activity at the depot. An environmental assessment conducted in 1999 concluded that the wall, as well as the early twentieth century buildings (i.e. buildings 10 and 11) that were not included in the National Register nomination "appear to be eligible for local and/or national distinction" (Habib *et al.* 1999: D-1).

B. Building Sites Not Within the Project Area

The sites of the following structures place them within the portions of the former Light-House Depot site that are now occupied by either the U.S. Post Office or the Ferry Maintenance Facility or are at the present location of Bay Street.

Building 2 - The Engineer's House

This house served as the Store Keeper's house when the site was operated by the Revenue Marine Service, and the U.S. Revenue Officer's residence during the portion of the 1860's when the Revenue Marine shared the site with the Light-House Board. It subsequently served as the Light-House Engineer's House. The building is located within the portion of the site now the location of the U.S. Post Office and will not be discussed further. However, data on the house's occupants are included in Appendices A and B.

Building 3 - Revenue Marine Service Storehouse

This was one of two storehouses standing within the southeastern portion of the Revenue Marine Service depot that were acquired when the Light-House Board took over the entire site in 1867. It was demolished prior to 1874. The site of this building is at the location of the Ferry Maintenance Facility

Building 13 - Engineer's Carriage House/Barn

A small building is shown on the 1874 map (Figure 15) south of building 12, closer to the Engineer's House. A building continues to be shown at this approximate location on the 1912 and 1917 maps (see Figures 20 and 21). This building appears to be the barn or carriage house shown north of the engineer's house in a ca. 1900-1910 photograph (Figure 39). The location of this building would be within the present Post Office property.

Building 14 - Building Northwest of Inspector's House

A large building is shown northwest of the Inspector's House on the 1874 and 1887 Beers Maps (Figures 15 and 16). It does not appear on later maps. Its location would place it at the present location of the Bay Street pavement.

Building 15 - Small Building Northeast of Inspector's House

A small shed or other outbuilding is shown north and slightly to the east of the Inspectors house on the 1874 map (Figure 15). The subsequent widening of South Street would place the site of this building partially within the bed of the Street.

Building 16 - Revenue Service Shed/Oil House

The 1866 map (Figure 10) shows a building labeled "Light House Department Sheds" near the north wharf. This building was apparently removed by 1874 (see Figure 15) and replaced by a new building near the entrance to the north pier. A building continues to be shown here on maps through 1912 (Figure 20) and it is indicated as a 3-story brick structure on the latter. By 1917, this building was either extended or replaced by a new structure used as an oil house (see Figure 21). These buildings were located in the portion of the site now occupied by the Ferry Maintenance Facility.

Building 17 - Shop/Coal Shed and Adjacent Structures

The various maps examined, as well as the annual reports of the Light-House Board, indicate that a number of structures were built and rebuilt in the northeastern portion of the site, where the Ferry Maintenance Facility is now located. One of these buildings (building 17) is shown on the 1874 map (Figure 15). A building at this location continued to stand through 1912 (Figure 20), when it is indicated as a "brick shop." By 1917 (Figure 21) this building had been replaced by a large coal shed, connected to a hoist and elevated trestle for loading and unloading coal. There are references in the Light-House Board annual reports to earlier coal bins located adjacent to the basin, but these are not specifically identified on the maps. By 1887 (Figure 16), a second building (building 19) was built along the wharf adjacent to the south side of building 17. It is also indicated as a "brick shop" on the 1912 map (Figure 20). It is likely that this is the same one-story brick and iron structure shown on the 1917 Sanborn map (Figure 21) and utilized at that time as a blacksmith's shop, with an attached machine shop. The location of the following buildings also places them within the present site of the Ferry Maintenance Facility.

Buildings 25a , 25b and 28 - Carpenter's Shop/Storage/Coal Shed/Powerhouse

The 1898, 1907 and 1912 maps (Figures 17, 19 and 20) show two small buildings (buildings 25a and 25b) located along the wharf between buildings 19 and 21 (see Figure 44). The southernmost (building 25b) continues to be shown on the 1917 map (Figure 21), where it is indicated as a carpenters shop. In 1937 (Figure 23) the building is labeled as being used for general storage. The 1912 map shows a small structure (building #28) immediately east of building 25a. By 1937 this had become the site of a new coal shed and loading facility. This facility apparently replaced the coal shed and loading facilities shown further to the north in 1917 (see above). The northernmost of the two small buildings (building 25a) was replaced by 1917 by a new reinforced concrete powerhouse building. The Sanborn map of the latter year (Figure 21) indicates that this building had been constructed in 1911.

Buildings 22 and 23 - Stable/Paint Shop/Carpenter's Shop

Building 22 was a brick structure shown on the 1898 (Figure 17) and subsequent maps. It is indicated as a stable on the 1912 map (Figure 20) and a paint shop on the 1917 Sanborn

map (Figure 21). The annual reports indicate that this building was built in 1888 (Light-House Board 1888:67). Building 23 is shown on the 1912 map and the subsequent 1917 Sanborn maps. It is indicated on the latter map as a carpenter's shop.

Watch House

A brick building is shown immediately west of the paint shop on the 1912 and later maps. The 1917 Sanborn (Figure 21) indicates this as a watch house. A smaller building was shown at this approximate location on the 1898 map (Figure 17). The annual reports indicate that this latter structure was a small watch house formerly located along the sea wall and moved to this location in 1892 (Light-House Board 1892). It was replaced by the new and larger structure built in 1905. This building was occupied by a watchman. It was flanked by two towers supporting beacon lights, the easternmost of which was an extension of the watch house (Light-House Board 1905; 1906). This site of this building would place it partly within the Ferry Maintenance Facility property and partially at the location of the present entrance roadway.

The Experimental Light Tower

As discussed in Chapter III, in 1883 a lighthouse tower and powerhouse were constructed at the Staten Island Depot for the purpose of experimenting with the use of electric lighting for lighthouse illumination. It was removed in 1896. This lighthouse is not depicted on the 1887 map (Figure 16). The lighthouse tower and powerhouse are shown, however, in photographs taken in 1884 (Figure 29) and in the 1890's (Figure 30). These photographs depict the tower and associated engine house at the foot of the south wharf. As discussed above, prior to 1896, the south wharf was located approximately 150 feet north of its present location. This is consistent with the ca. 1890's photograph (Figure 30), which shows the wharf aligned with the office building (building 7). The tower was apparently removed at the time the wharf was relocated to its present position. The location of the lighthouse and powerhouse as shown in the photographs would place these structures within the portion of the site now occupied by the Ferry Maintenance Facility.

Building 33 - Engineer's Greenhouse

The 1917 Sanborn Map (Figure 21) shows a second outbuilding near the Engineers House, located near the Carriage House/Barn indicated as building 13. This building would also be located at the location of the present ca. 1930's Post Office

V. CONCLUSIONS AND RECOMMENDATIONS

A. Site Significance

The research conducted for this study confirms the overall significance of the Light-House Depot site, a portion of which is already listed on the National Register of Historic Places. The National Register nomination cites, in particular the fact that the Depot is "historically significant for the role played in the development of lighthouse technology in the United States." We have also noted its significance in this regard due to the association of the site with Joseph Henry, a major figure in the history of American contributions to science.

The site is also significant due to its role in local and national history. Originally a portion of the Quarantine Ground, the site was first developed as a station for the Revenue Marine Service after 1815 and was utilized by this agency until 1863. After sharing the site with the Revenue Marine Service for some four years, the U.S. Light-House Board took over the entire site in 1866, utilizing a few of the former Revenue Marine structures, and constructing numerous additional buildings on the site in the ensuing years. Maintaining and supplying lighthouses and light ships was a vital function, as these facilities were necessary elements in maintaining maritime commerce with nineteenth century technology, and these functions continued to be vital in the early years of the twentieth century.

In a previous study of the National Light-House depot, Cragmoor Consultants plotted the location of most of the major buildings constructed on the Depot between the early nineteenth and the mid-twentieth century. The resulting graphic, with some modifications, is reproduced here as Figure 44.

The present project will result in major impacts to the site resulting from construction of three condominium buildings and associated amenities; renovation of the existing buildings to be used for commercial purposes, as well as a museum facility; and improvements in public recreational facilities.

The project's area of potential effect (APE) constitutes only a portion of the former Light-House Depot. The southwestern portion of the Depot is now the site of a United States Post office, constructed in the 1930's, and the northeastern portion is the location of the Staten Island Ferry Maintenance Facility, constructed in the 1990's. The approximate locations of the Light-House Depot structures erected within the project APE are shown on the site plan for the present project (see Figure 45).

B. Archaeological Sensitivity

Analysis of the data discussed in this report indicates the possibility that significant archaeological remains associated with the operation of the U.S. Light-House Depot,

including some remains that could date to the earlier operation of the site as a Revenue Marine station, could remain intact in portions of the site. Such remains could take the form of artifacts deposited in sub-surface features. On some sites, refuse was buried in pits dug specifically for that purpose. Refuse deposits are also found within stone, brick, or wood-lined subsurface features, such as cisterns, privies and wells, needed to provide water and meet sanitary requirements prior to the availability of a public water supply. Although some artifact deposits in such features may date to their period of use, more typically refuse was placed in these features as fill, after the feature was no longer utilized for their original purpose.

It is also possible that refuse deposits could be present in the form of surface middens in some portions of the site, although subsequent near-surface disturbance reduces the likelihood of such refuse middens being present at most locations.

Archaeological remains could also be present in some portions of the site in the form of the foundations of early buildings that have subsequently been demolished.

Analysis suggests that such deposits would most likely be found in three portions of the APE.

1. Northwestern Portion of the Site

Significant deposits in the form of domestic refuse could remain in the vicinity of the former location of building 1. This was a domestic structure built between 1815 and 1845 that served as the home of Revenue Marine officers. After the site was acquired by the Light-House Board in 1863, the house initially served as the residence of the Light-House Engineer and after ca. 1870 it became the home of a succession of naval officers who served as the Inspector of the 3rd the Light-House District. Census records indicate that the Inspectors occupied this house with their families and domestic servants. Analysis of maps and photographs suggest that although the structure was modified and additions made after it was acquired by the Light-House Board, the original house most likely served as the core of the modified structure, and the building continued to stand here until the major demolition of structures on the site during the 1990's.

During a 2003 reconnaissance of the site, a portion of a foundation wall constructed of stone set in mortar was noted at the approximate location of building 1, as shown on the various historic period maps. Although some minor grading of this area has since occurred, it is considered likely that the foundation is still present in this area. Moreover, any sub-surface features of the types noted above that were present in the area should also remain intact. Deposits of domestic artifacts and other refuse within such features could provide insight into the daily lives of the occupants of the Inspector's house.

Although the Light-House Board records indicate that the bank on the eastern portion of the site was graded and partially excavated for landfill, there has apparently been no major downcutting on the western portion of the site. This is indicated by the presence of the intact foundation wall and the fact that the elevations on this portion of the site are

above those of the adjacent street. Comparison of the topographic contours shown on the 1912 topographic map (Figure 15) with those shown on a 2000 site survey (Elken 2000) also indicate that there has been no major downcutting on this portion of the site. While episodes of landscaping and reconstruction, as well as near-surface grading in this general area may have removed any surficial middens that may have been present, sub-surface features should remain largely intact.

Construction of the proposed project would completely remove any remains associated with the Inspector's House. The site plan indicates that one of the condominium towers would be constructed at this location. Excavation for this building would reach depths between 30 and 47 feet below present grade.

The structures in this portion of the site indicated as buildings 12, 29 and 32 are unlikely to have any surviving significant archaeological remains, because of their function, date of construction, and/or subsequent disturbance. Building 32 was most likely an earlier structure, moved to this location in the twentieth century.

2. Central Portion of the Site

This portion of the site represents the area west of the entrance roadway and east of the sloping bank. It includes the sites of the buildings cited in the National Register nomination; the Laboratory (building 5), Storehouse (building 6), Office (building 7), and Work Shop (building 8), as well as the Oil Vaults (building 9), which are built into the bank. Archaeological deposits could be present in the vicinity of these structures, in particular in the strip of land at the rear of the buildings (between the buildings and the bank), as well as in the courtyard areas between the buildings.

Deposits associated with these buildings could represent refuse deposited by the workers. In addition, refuse associated with the work conducted (lamp glass, scrap metal etc.) could also be present and could provide additional information on technology utilized - such deposits would most likely be associated with the Work Shop building (building 8).

The presence of subsurface features associated with these buildings has been documented in the annual reports of the Light-House Board. These reports mention a cesspool in the vicinity of the Work Shop building (building 8), as well as cisterns associated with this structure, the oil vaults and other buildings. These features would have been utilized prior to the availability of a public water supply at the start of the 1880's. Refuse present in and around these buildings could have been deposited in these features at this time. Cisterns would most likely be located near the corners of the buildings, particularly at the rear, while cesspools or privies would most likely be located to the rear of the buildings.

The presence of surficial refuse in this portion of the site is unlikely with the exception of one area at the rear of building 8. The 1873 Light-House Board annual report notes that "the grounds in front and rear of the lamp shop and near the north gate have been graded and partly laid in grass" and that "flagging has been laid from the gate at the south entrance along the front of the shop office and store house nearly to the north gate, on the

end of each of the buildings and hence to the oil vaults" (Light-House Board 1873:37). The flagstone pavements have since been replaced with asphalt or concrete slabs. However, it would appear that there is an area to the rear of the work shop (i.e. the lamp shop) (building 8) that has not been paved. This strip extends from the end of the paved area immediately adjacent to the building for approximately 15 feet to the base of the bank. Although this area is not clearly visible in an 1884 photograph (Figure 27), it would also appear to have been unpaved at that time.

The site plan (Figure 3) indicates that the central portion of the site will be affected by grading and landscaping, construction of the "Fresnel plaza," terracing of the adjacent bank, creation of walkways, and construction of "lobby structures." According to personnel of Philip Habib Associates, the project would involve excavation at the base of the bank. The grade in this portion of the site is approximately +10 feet, while indicated excavation would reach a depth of +5 feet, a five foot depth of excavation. This could substantially impact any features present.

Building 20 is a small cottage shown in an 1860's photograph and possibly on the 1866 map. It was removed by 1866, possibly as a result of site grading conducted during this period. The site would have been further disturbed as a result of the construction of the existing entrance stairway tower.

3. The Plaza Area

The revenue marine station included two storehouses constructed prior to 1845 in the southeastern portion of the site. One of these (building 4) continued to be used by the Light-House Depot, and analysis of maps and photographs indicates that it continued to stand until the mid-twentieth century. There was no subsequent construction at this site of this building although the 2000 survey (Elken 2000) indicates that a 24 inch sewer line does traverse a portion of the site.

A portion of the foundation of this structure could remain intact in the northwestern portion of the plaza area (see Figure 45). Although the documentation does not specifically indicate the presence of features in connection with this building, such features, for the use of workers in the two store houses, could have been present when the building was utilized by the Revenue Marine service. At that time there were no other buildings in the immediate vicinity.

As shown in Figure 45, a portion of the wharf constructed by the Revenue Marine station and shown on the 1845 map would be at the location of the present plaza area. After the Light-House Board took over the site, the southern portion of the shoreline was apparently bulkheaded to create a wharf, with the location of a portion of this wharf also being beneath the existing plaza. The shoreline in the southern portion of the depot did not reach its present location until the southern pier and the associated wharf were reconstructed in the 1890's.

The location of the 1845 wharf and shoreline with respect to the present shoreline was shown in the 2004 report (Pickman and Harris 2004, Figure 21). The research conducted for the present study indicates that its location was somewhat further to the west. The revised position of the 1845 wharf and shoreline, as well as the bulkheading and wharf as shown on the 1866 and later nineteenth century maps, are shown on Figures 44 and 45. The shoreward end of the 1845 wharf was located approximately 60-100 feet west of the present shoreline, with its bayward end within 20 feet of it, and the pier extending bayward from the end of the wharf. The southern portion of the 1845 wharf, and the subsequent 1866 wharf line would be within the boundaries of the existing plaza area. Portions of the wooden bulkheading for these structures could remain intact. Depending on the depth of subsequent fill, a portion of these structures could have been affected by the construction of the three story reinforced concrete building constructed here ca. 1912-1917 (building 21a).

Any remains of the early wharfs in this area, as well as the foundations of building 4, would represent a part of the history of this site. Exposure and recording of any such remains would contribute to interpretation of this history.

The project impacts to the plaza area are uncertain. In addition to landscaping of the area, the existing site plan shows the construction of a "Lighthouse Amphitheater" in the eastern portion of the plaza. There are also plans to reconstruct the ca 1880 experimental lighthouse tower in this portion of the site.

C. Recommendations

Cragmoor Consultants recommends that archaeological field testing be undertaken to determine the presence or absence on the site of the archaeological remains noted above. As specified in the New York Landmarks Preservation Commission's Guide to Archaeology, the first step in the implementation of such testing would be the submission of a detailed testing plan.

In general, archaeological testing would involve backhoe trenching in the portions of the site noted above. These would include the vicinity of building 1; the areas to the rear of the buildings in the central portion of the site, and the courtyard areas between these buildings. Preliminary shovel testing should also be conducted in the vicinity of building 1, and in the unpaved area to the rear of the work shop (building 8) to provide a preliminary indication of site stratigraphy, and in the latter case, to determine the presence of artifact deposits associated with possible nineteenth century ground surfaces.

Testing in the Plaza area, in the vicinity of building 4 and at the approximate locations of the 1845 and 1866 wharfs should also be conducted, unless more detailed construction plans indicate that only near-surface disturbance would occur at these locations.

The impact on the oil vaults of the planned terracing and excavation into the bank is uncertain, as is the planned utilization of this semi-subterranean structure. As these vaults

are a contributing element to this National Register site, detailed construction plans should be evaluated and construction monitored if necessary avoid adverse impacts to this structure.

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FIGURES

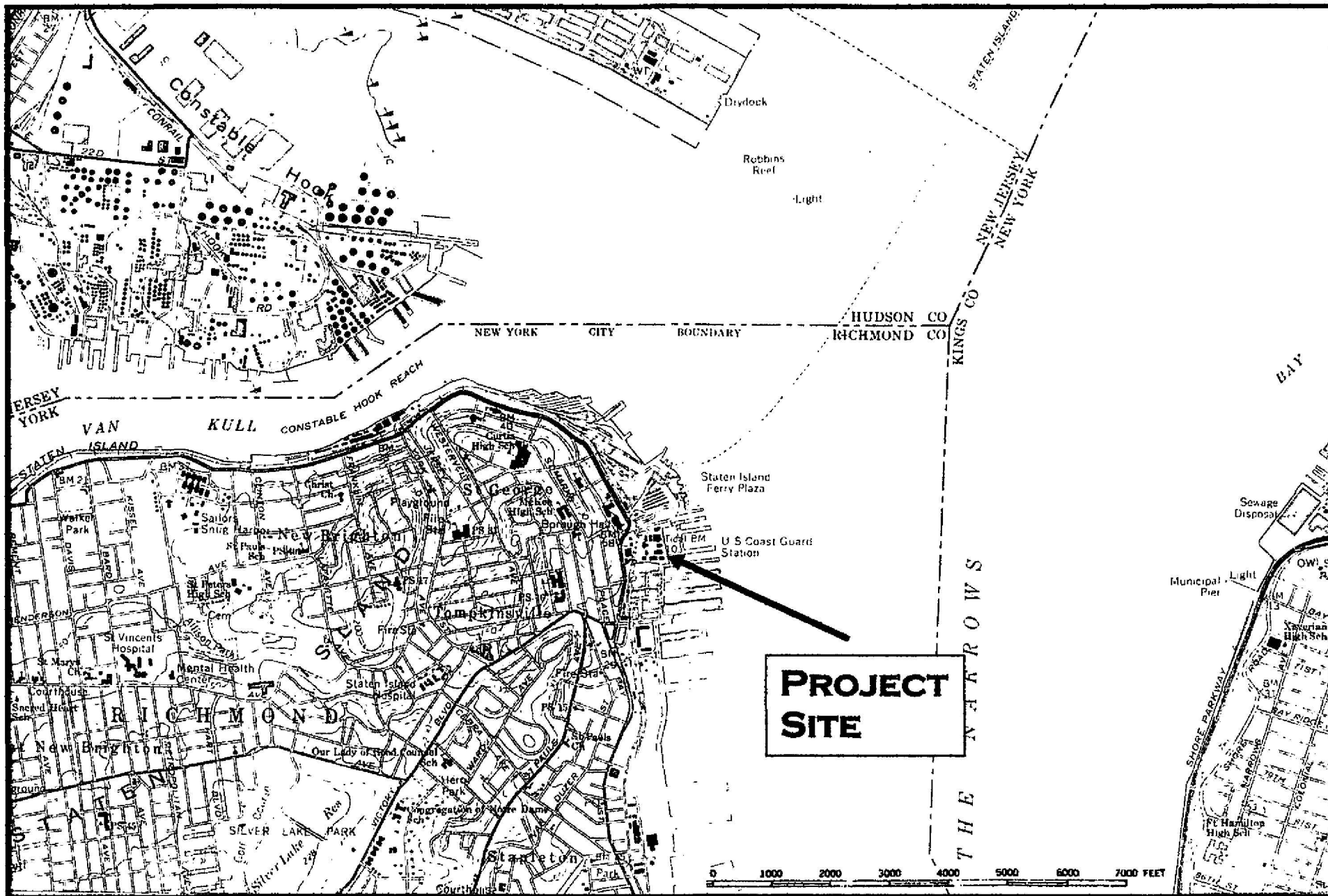


Figure 1
Site Location
Base Map: USGS Jersey City Quadrangle (1981)

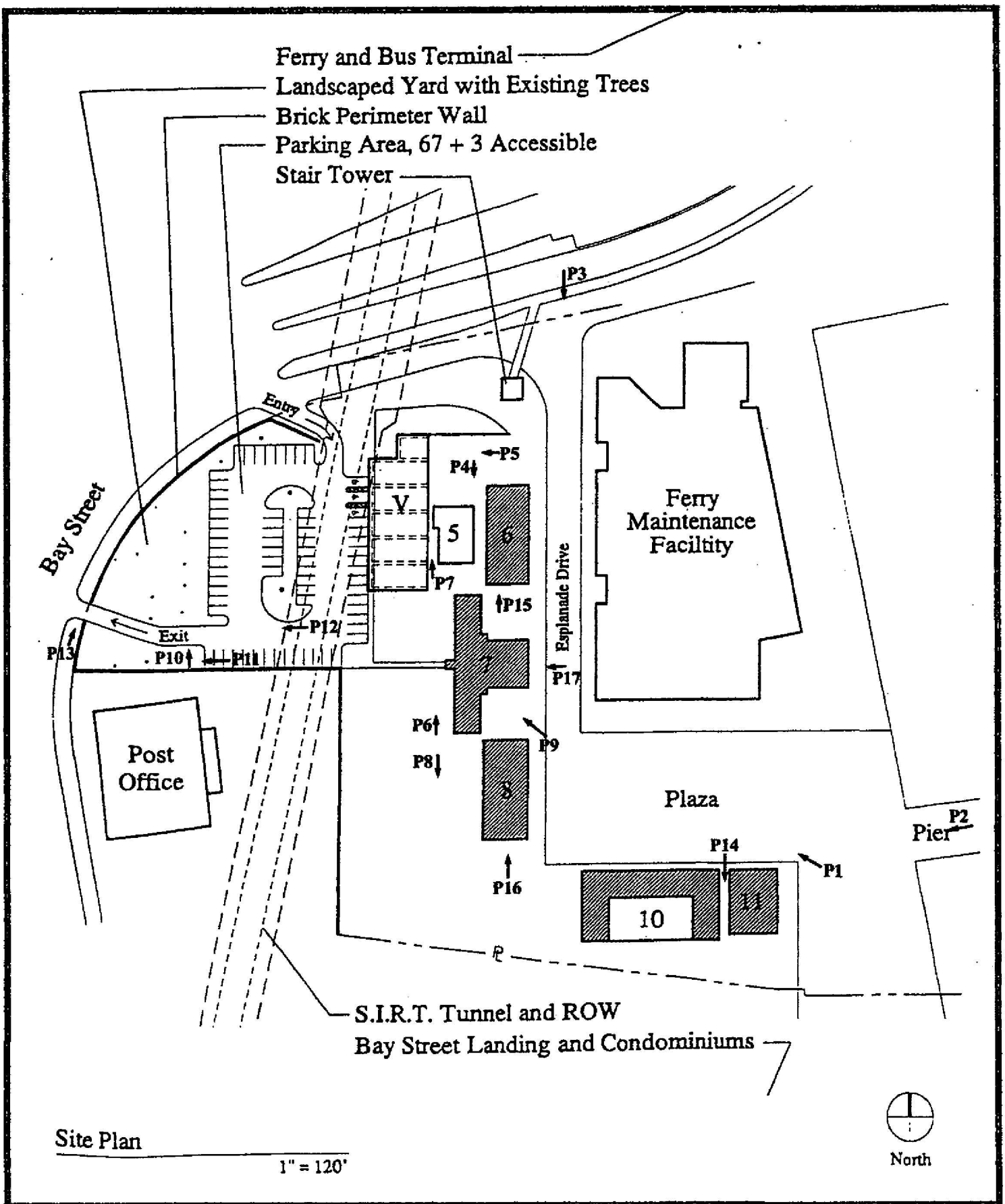


Figure 2
1999 Site Plan Indicating Locations of 2007 Site Photographs
 Site Plan Source: Habib *et al.* (1999)

National Lighthouse Harbor Site
Staten Island, New York

Site Plan

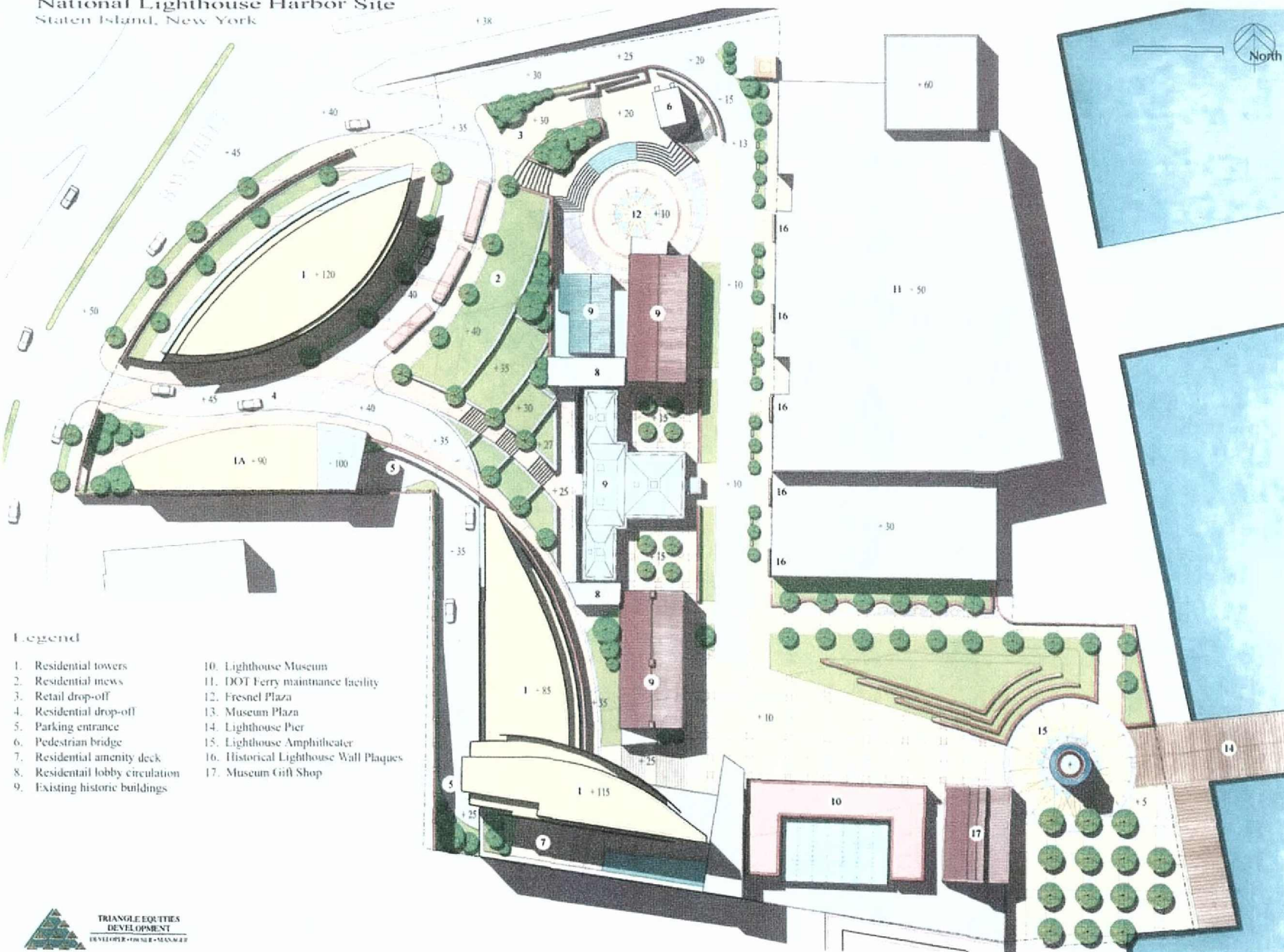


Figure 3
2007 Site Plan



Figure 4
 Ca. 1780's "Plan No. 31" Map
 Scale: 1" = 1130'
 Arrow Indicates Approximate Location of Project Site

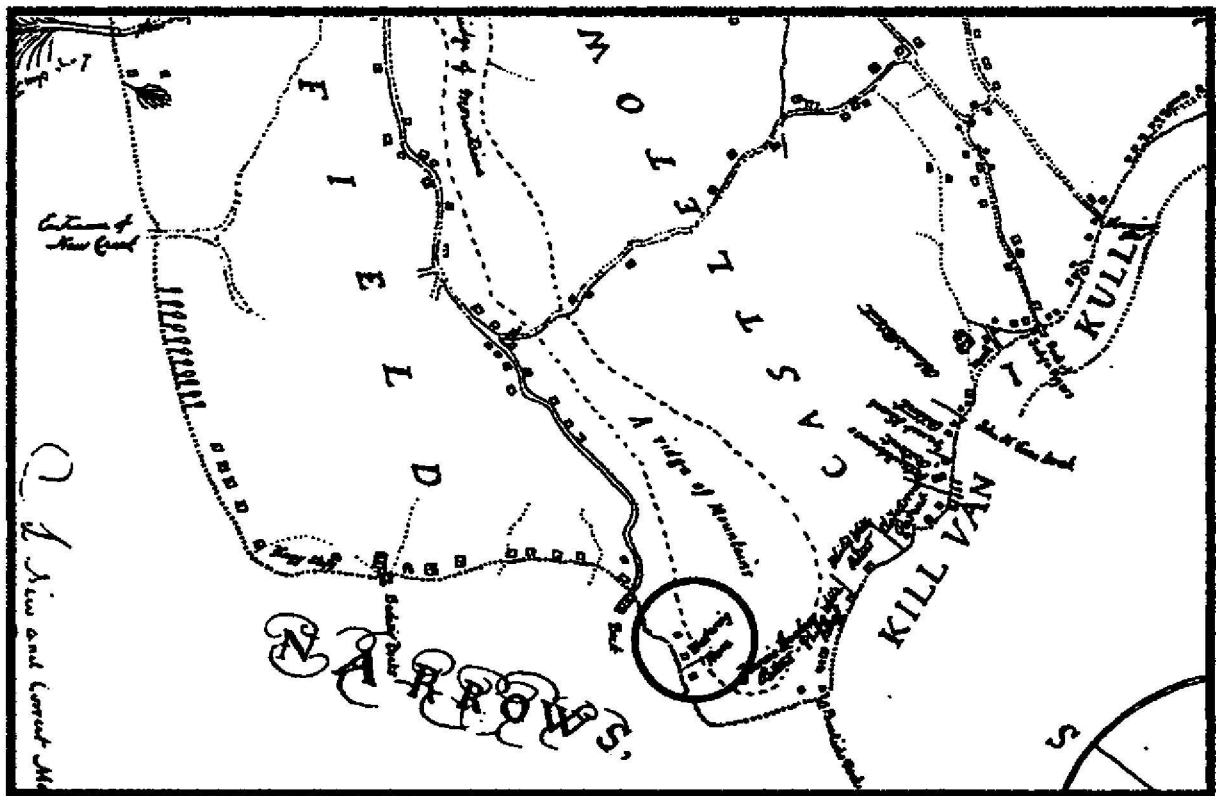


Figure 5
 1797 Conner and Sprong Map
 Source: Historical Records Survey (1942)
 Site of "Watering Place" is Indicated by Circle
 Scale of Original: 1" = 40 chains



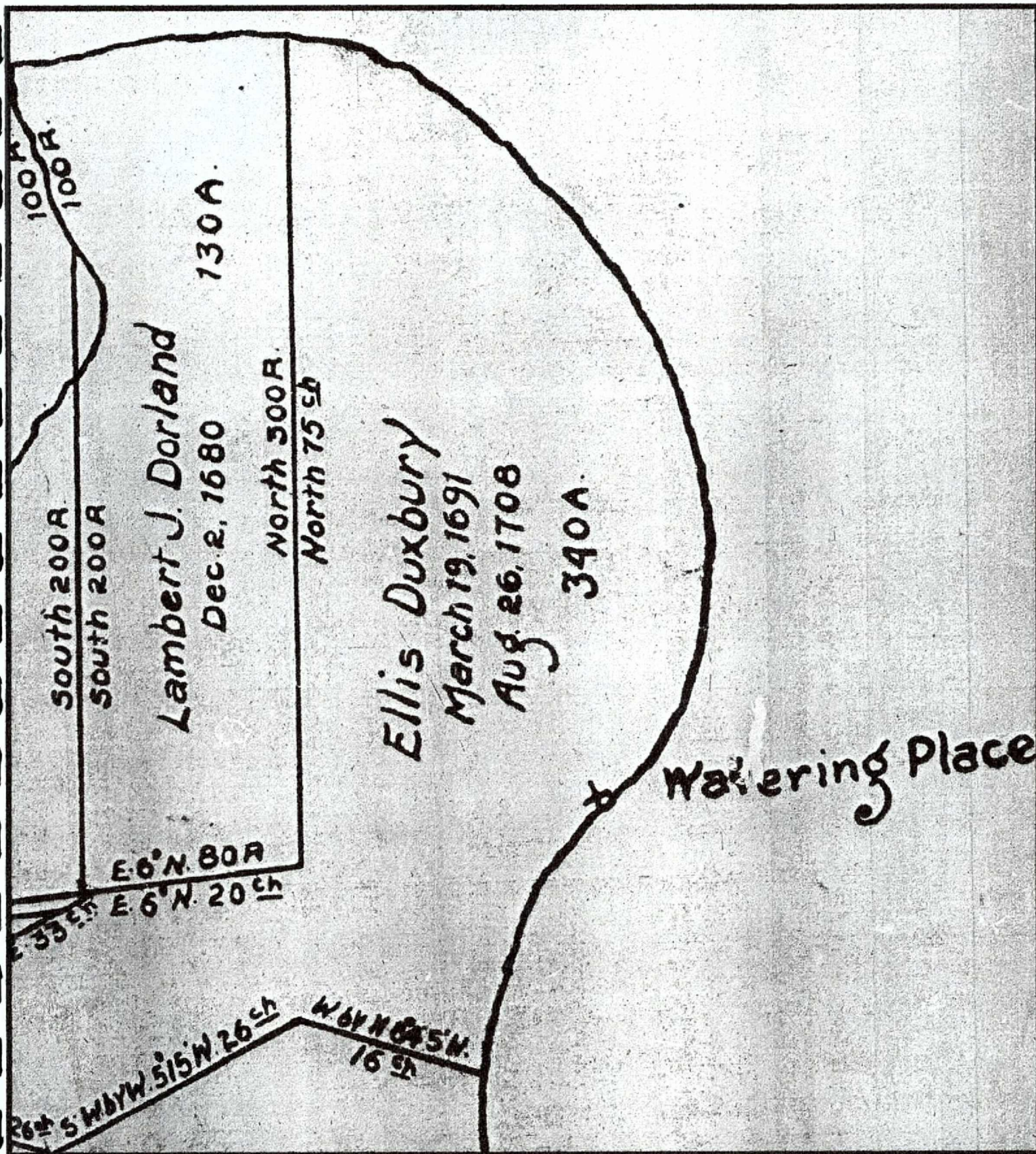
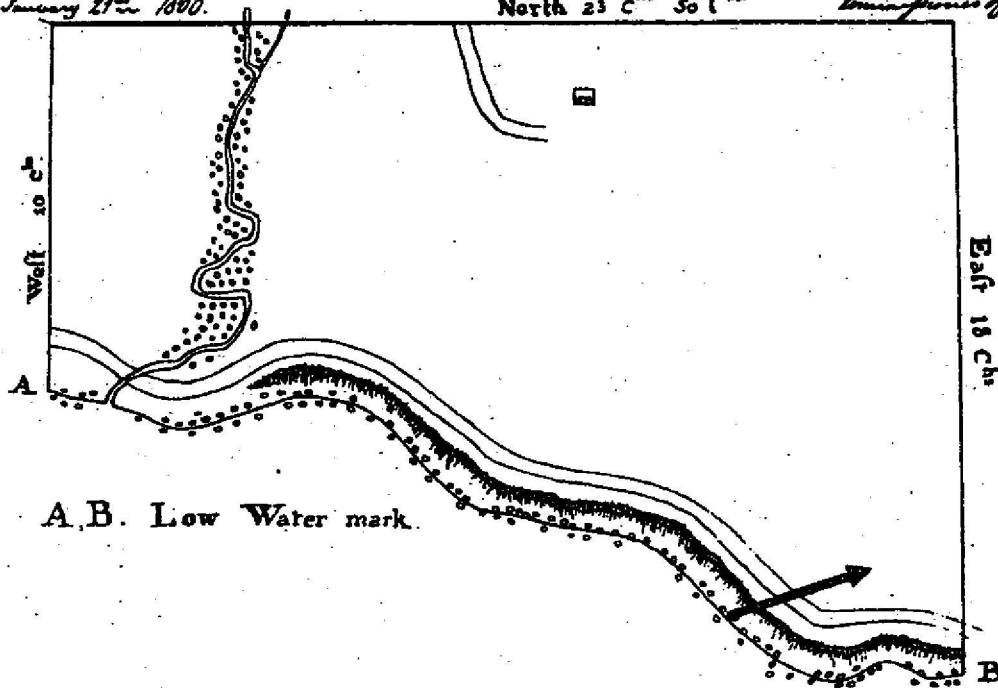


Figure 6
1907 Skene Map Showing Early Land Grants
Scale: 1" = approximately 750'



called the watering place of a lion nineteen feet above of the southernmost part of a large Rough Rock
marked near the top on the westerly side with the letter A. and on it. *Gabriel J. Freeman, Comd*
New York January 21st 1800. North 23 C^h So 1st *Commissioner of the Health Office*



Survey & Map of Tracts of Land on the East of Staten Island
(Not comprehending the High way of Sixty Leaks in Breadth) the property of
the Episcopal Church on that Island for the use of the State of New York for the
Erection of a Marine Hospital or for the accommodation of the United States
pursuant to a Law of the State of New York, Entitled: an act to amend an act
Entitled: an act to provide against infectious & pestilential Diseases: passed 25 January
1799. Beginning at Low water mark on the westerly side of the small
Island called the watering place & running thence One with two Chains thence
due North twenty three Chains fifty links Thence due East Eighteen Chains at
Low water mark, Thence Southerly along Low water mark to the place of
Beginning.

Done on the 13th day of April 1799.

Comd By Joseph J. Freeman
by Joseph J. Freeman

Figure 7
1799 Mangin Survey
Scale: 1" = approximately 350'
Arrow Indicates Approximate Location of Light House Depot

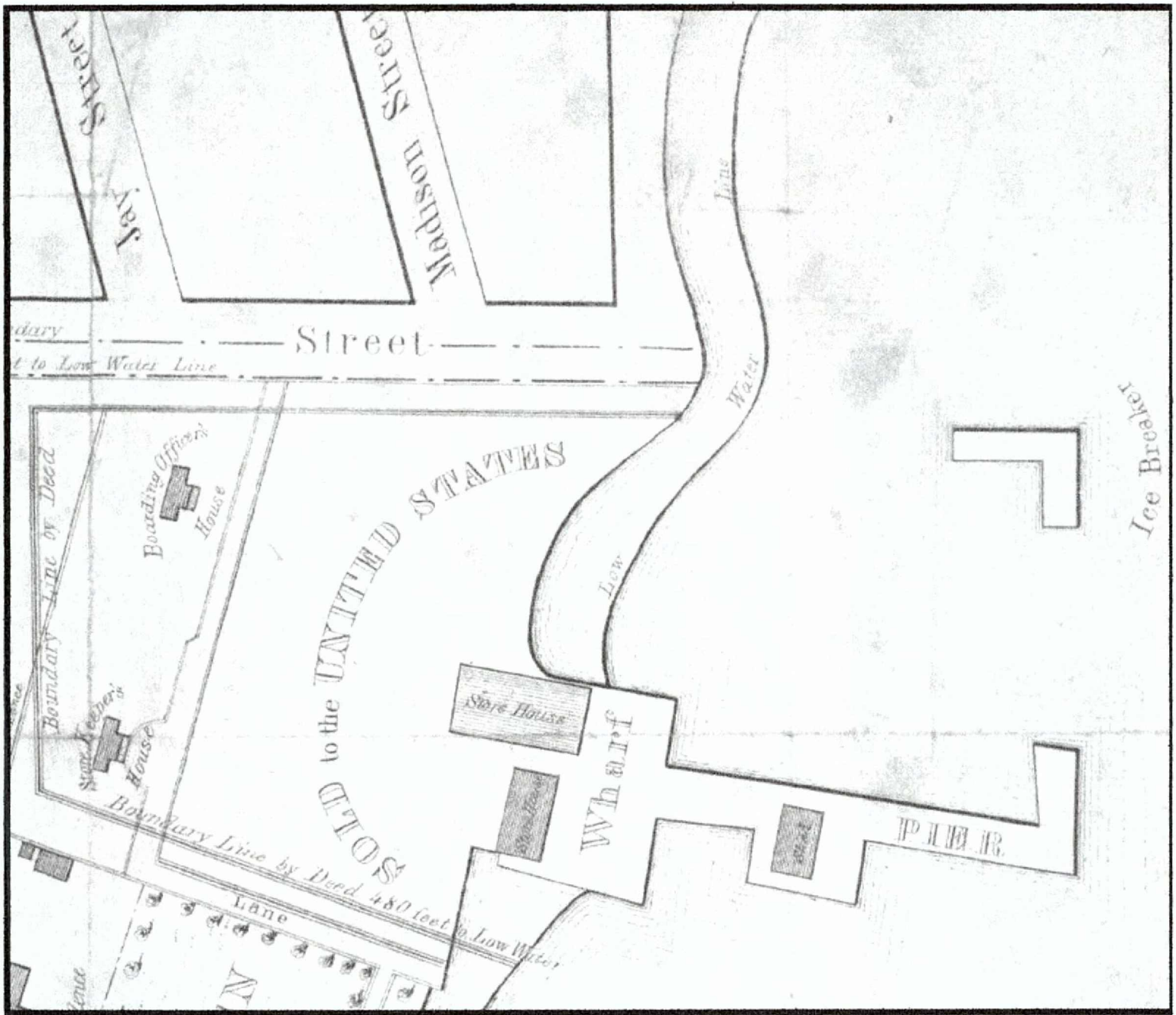


Figure 8
 1845 Ewen Map
 Scale: 1" = approximately 125'
 N ↑

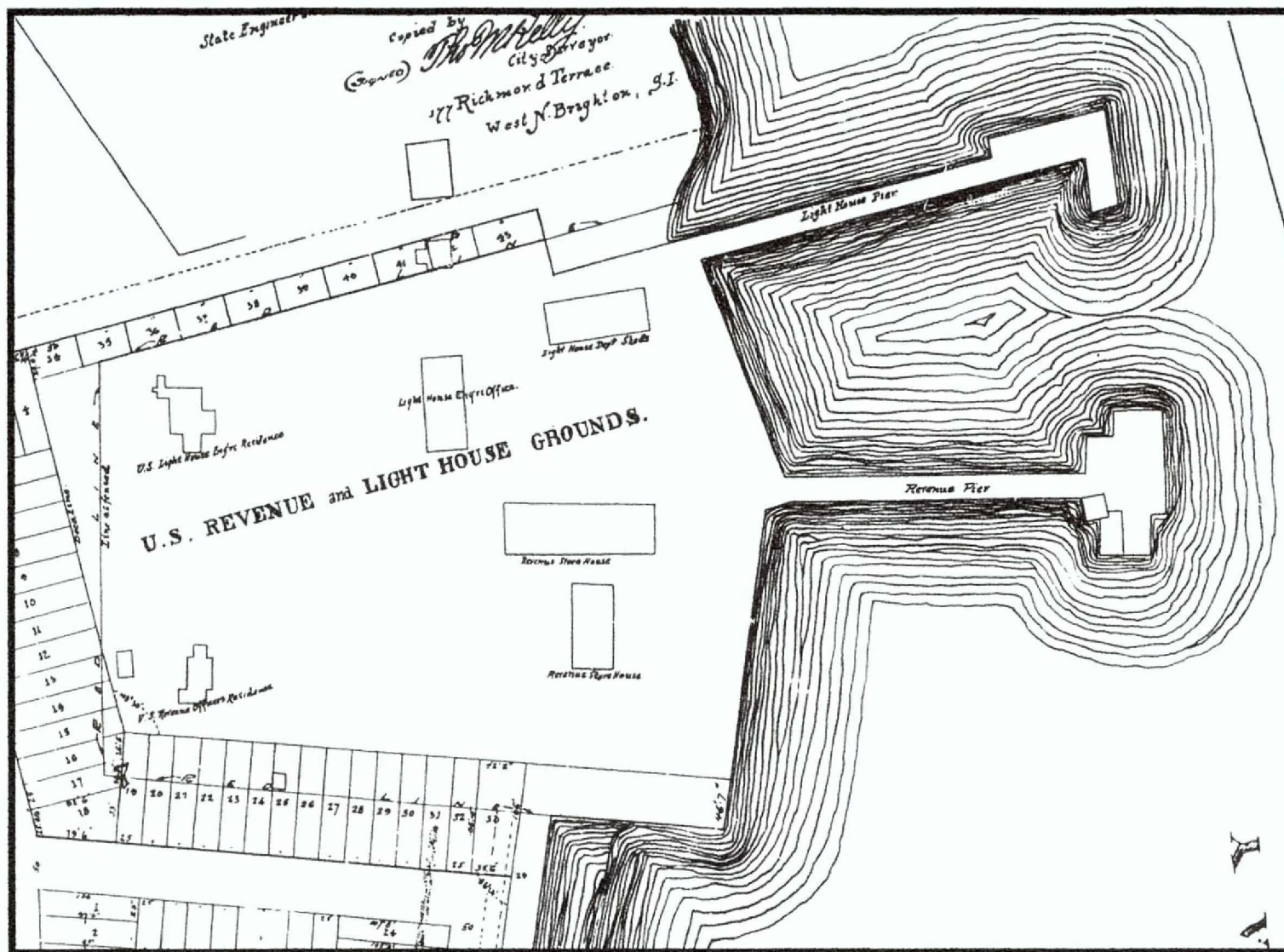


Figure 10
1866 Tubbs Map
Scale: 1" = approximately 150'



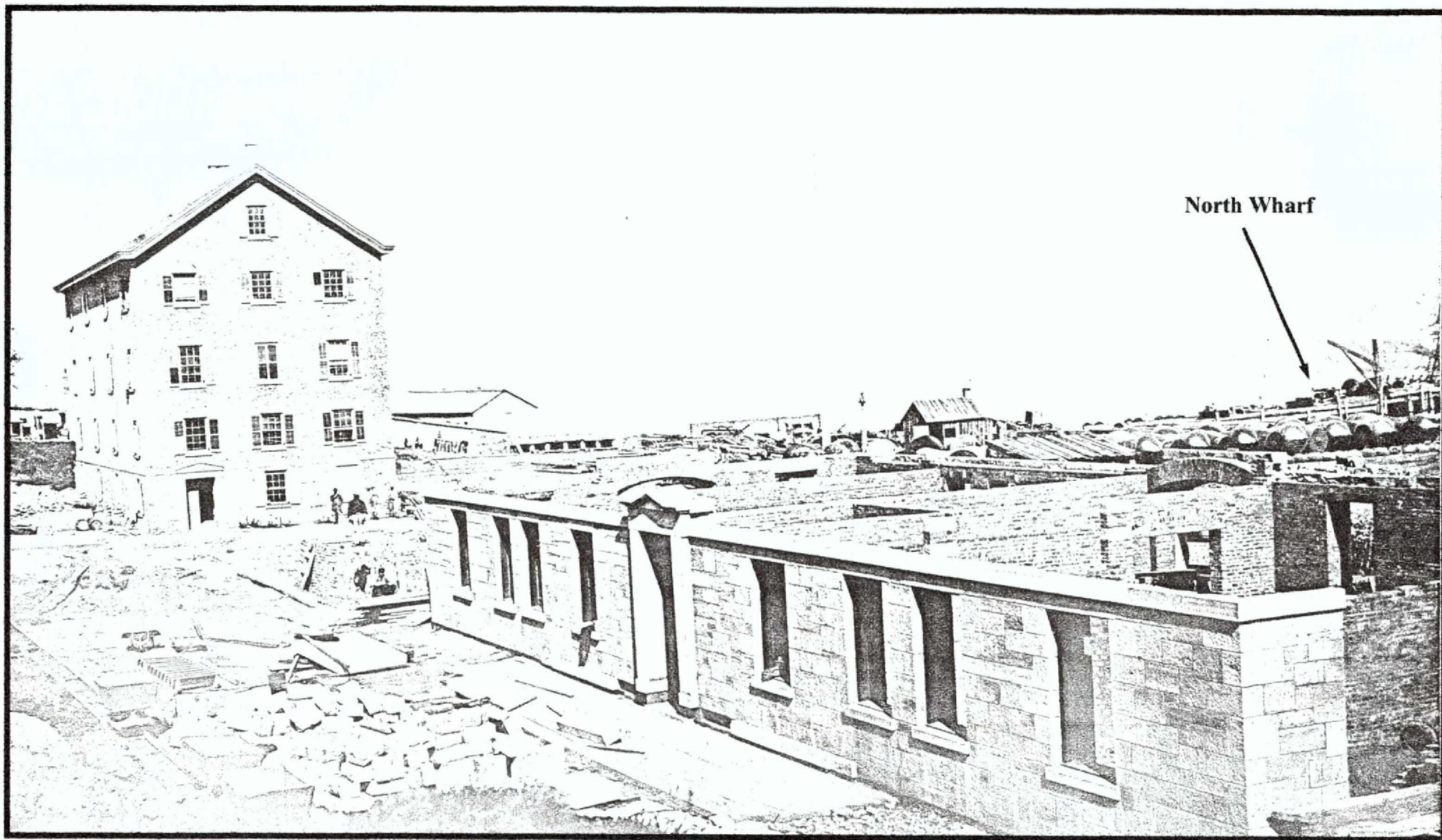


Figure 11
1868 Photo Showing Construction of the Office Building (Building 7) in Foreground
Building #6 is to the Left
View to the Northeast from Bank
The arrow indicates the Light-House Pier (North Pier) Extending Eastward from the Shoreline
Source: Photographs of the Third Light-House Depot 1868



Figure 12
1858 Print of Quarantine Grounds
A Portion of the Future Light-House Depot Including Building 4 is Visible at Right
Source: McMillen (1953: 9)

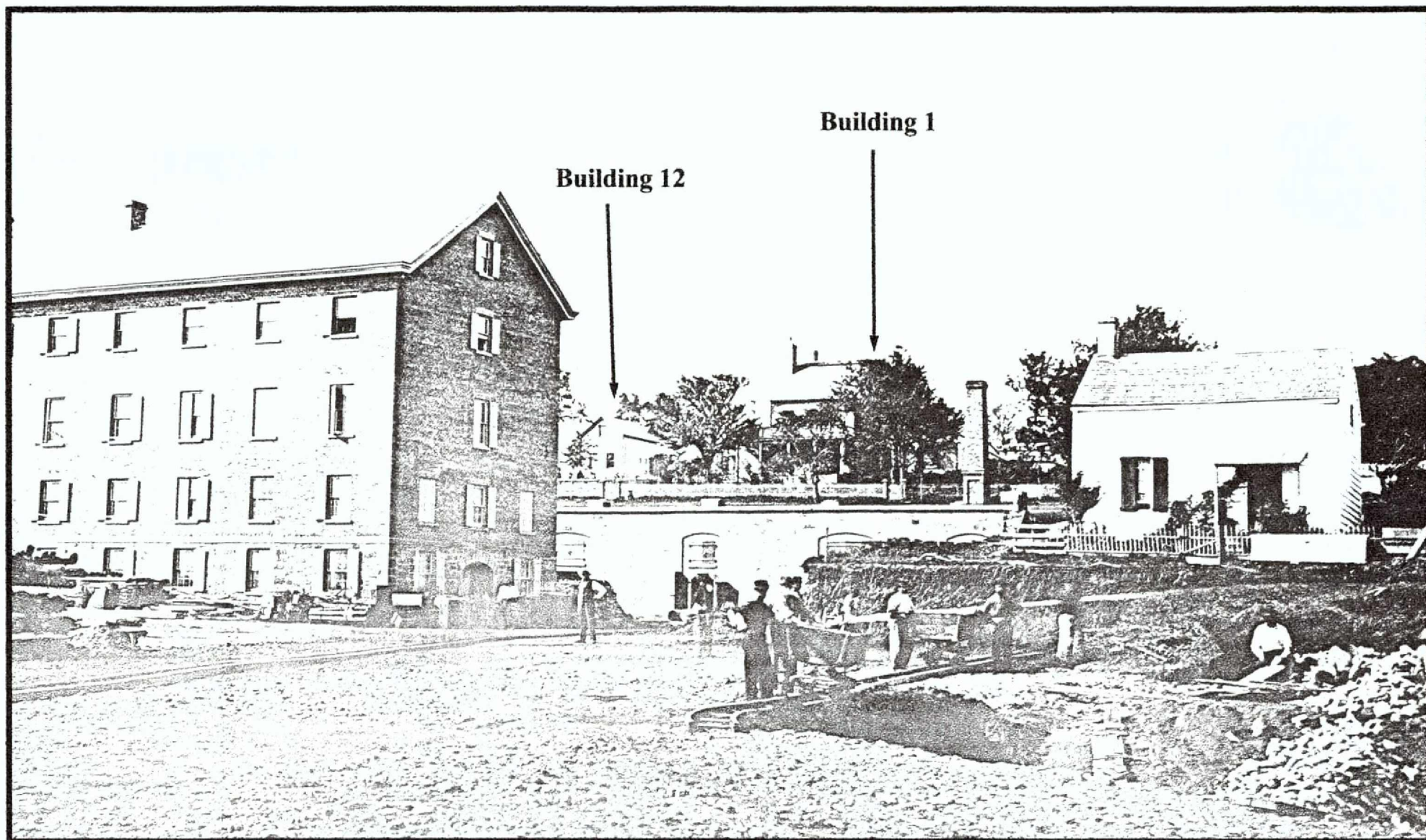


Figure 13
1868 Photo Showing Oil Vaults Under Construction
Building #6 is at Left
Arrows Indicate Building 1 (the Inspector's House) and Building 12
Source: Photographs of the Third Light-House Depot 1868

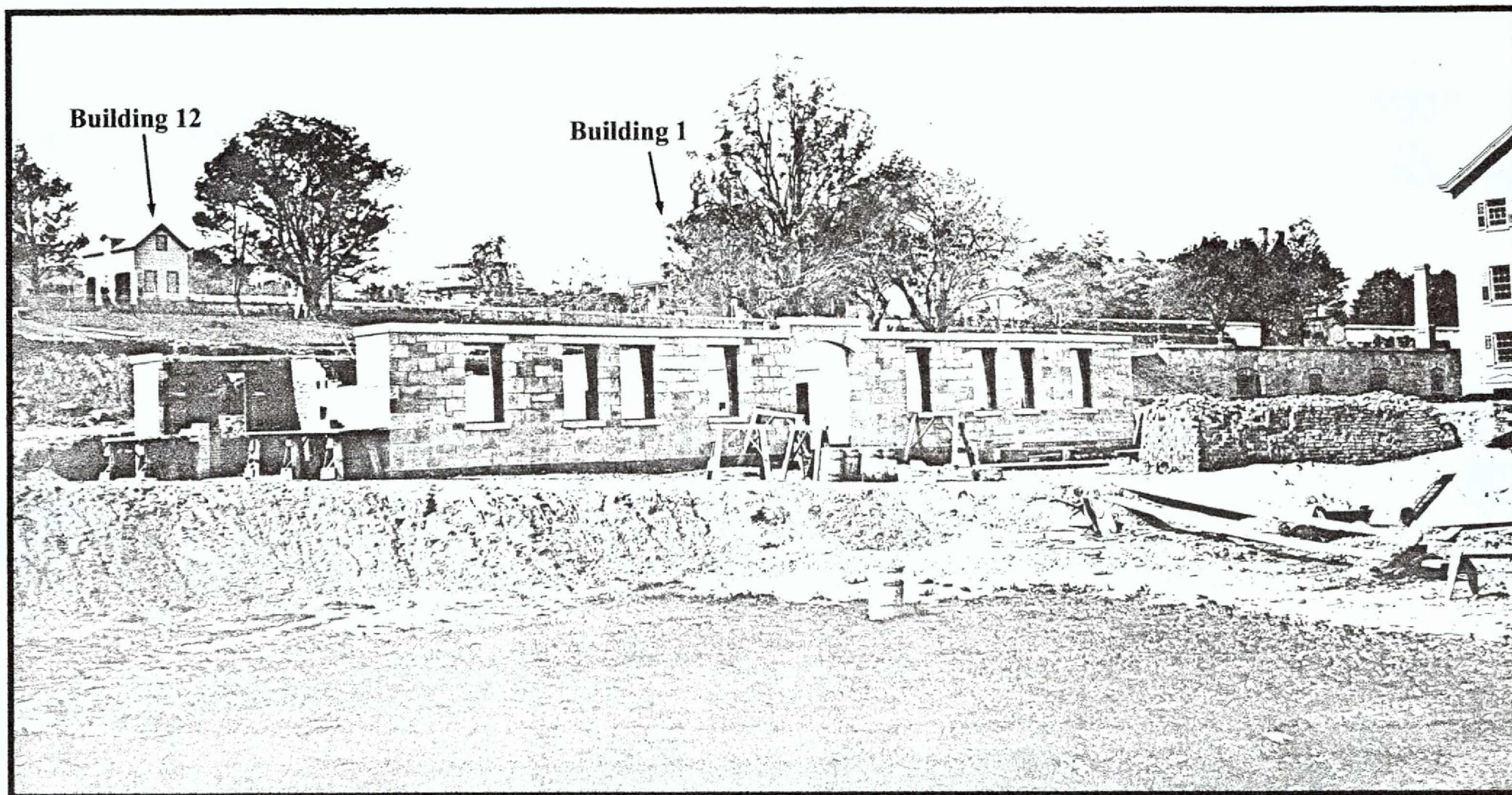


Figure 14
1868 Photo Showing Construction of the Office Building (Building 7) in Foreground
Building #6 to the Right
The arrows indicate Building 12 and Building 1 (the Inspector's House - Behind Tree)
Source: Photographs of the Third Light-House Depot 1868

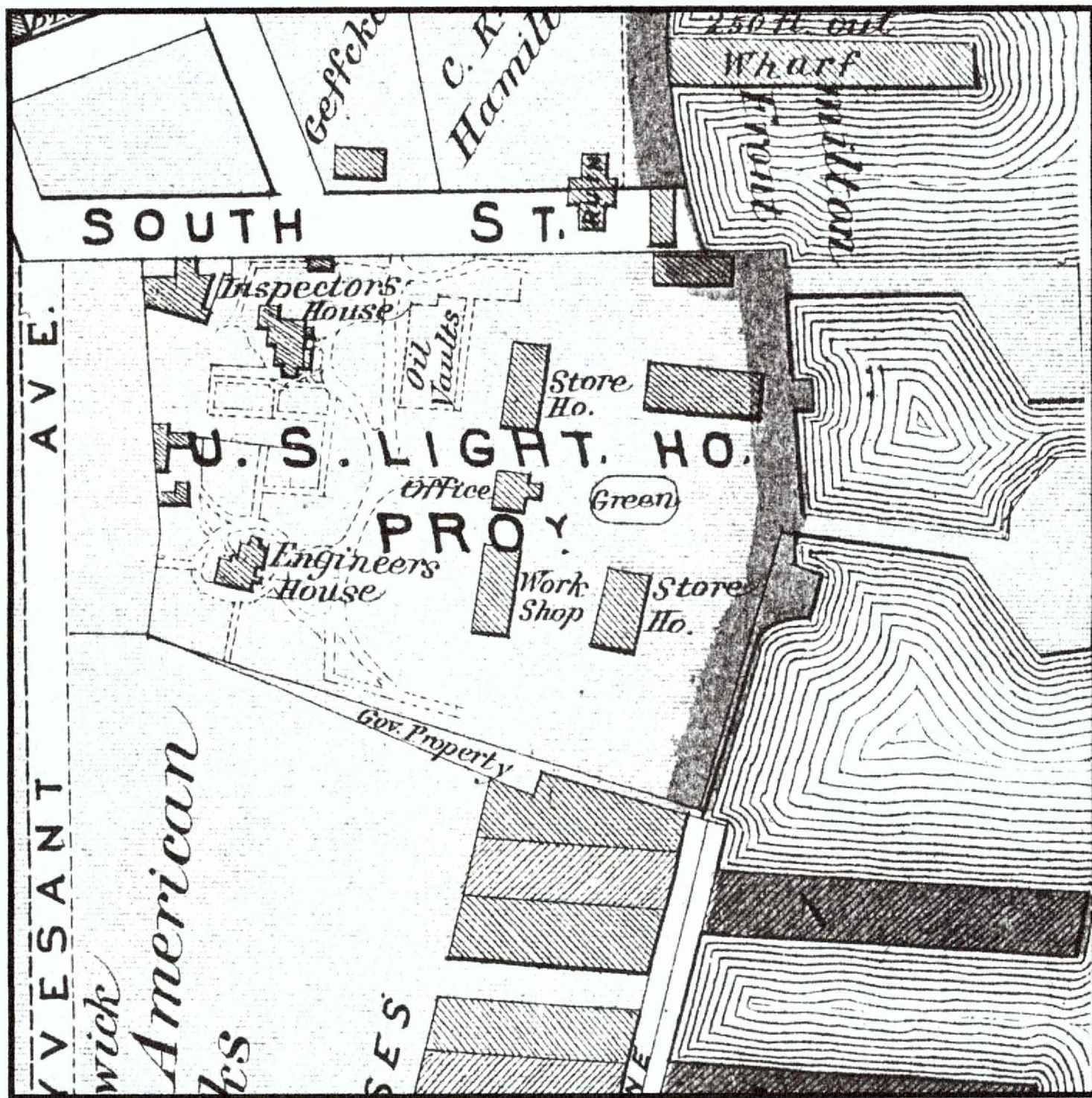


Figure 15
1874 Beers Map
Scale: 1" = approximately 150'



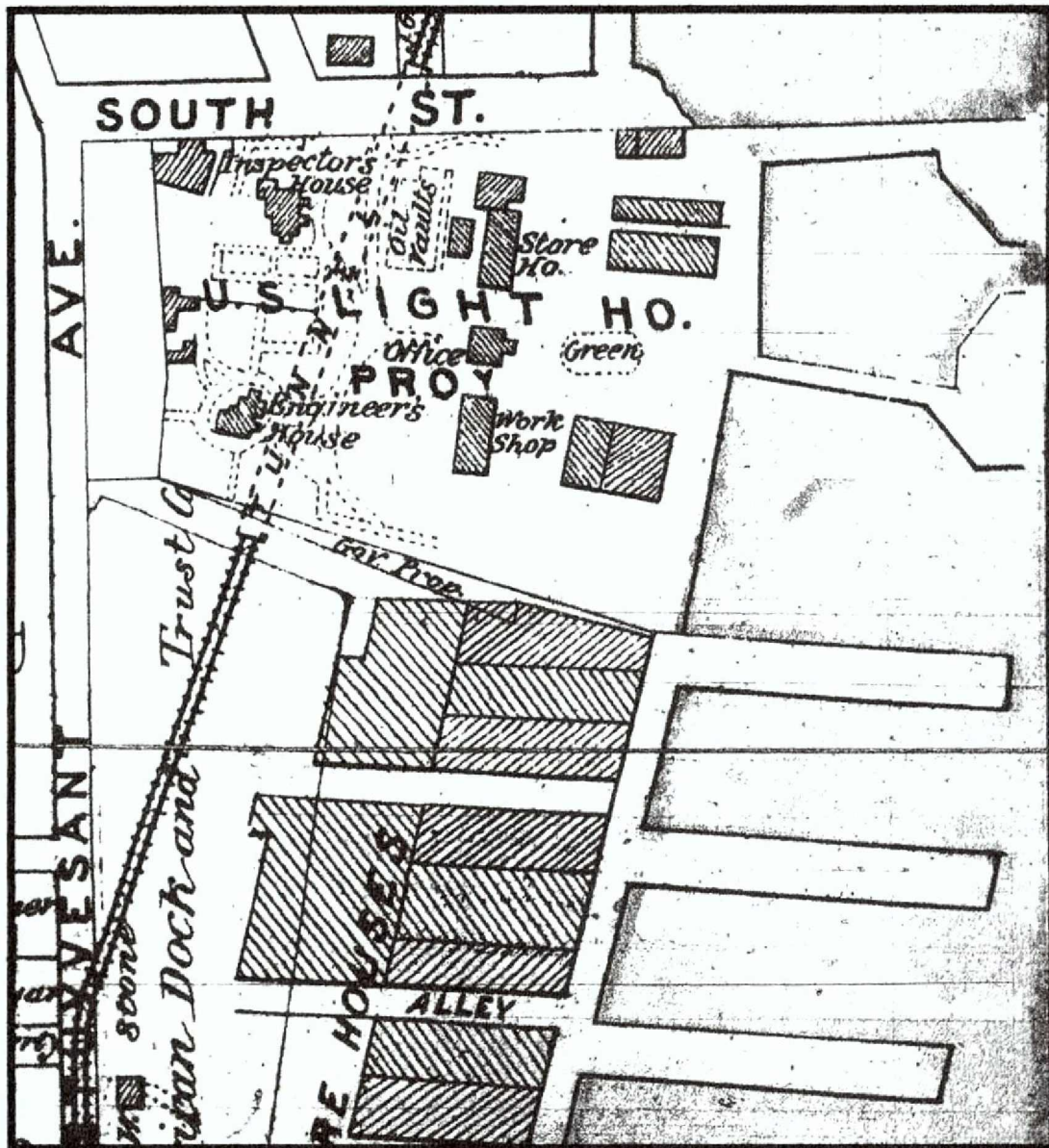


Figure 16
1887 Beers Map
Scale: 1" = approximately 215'



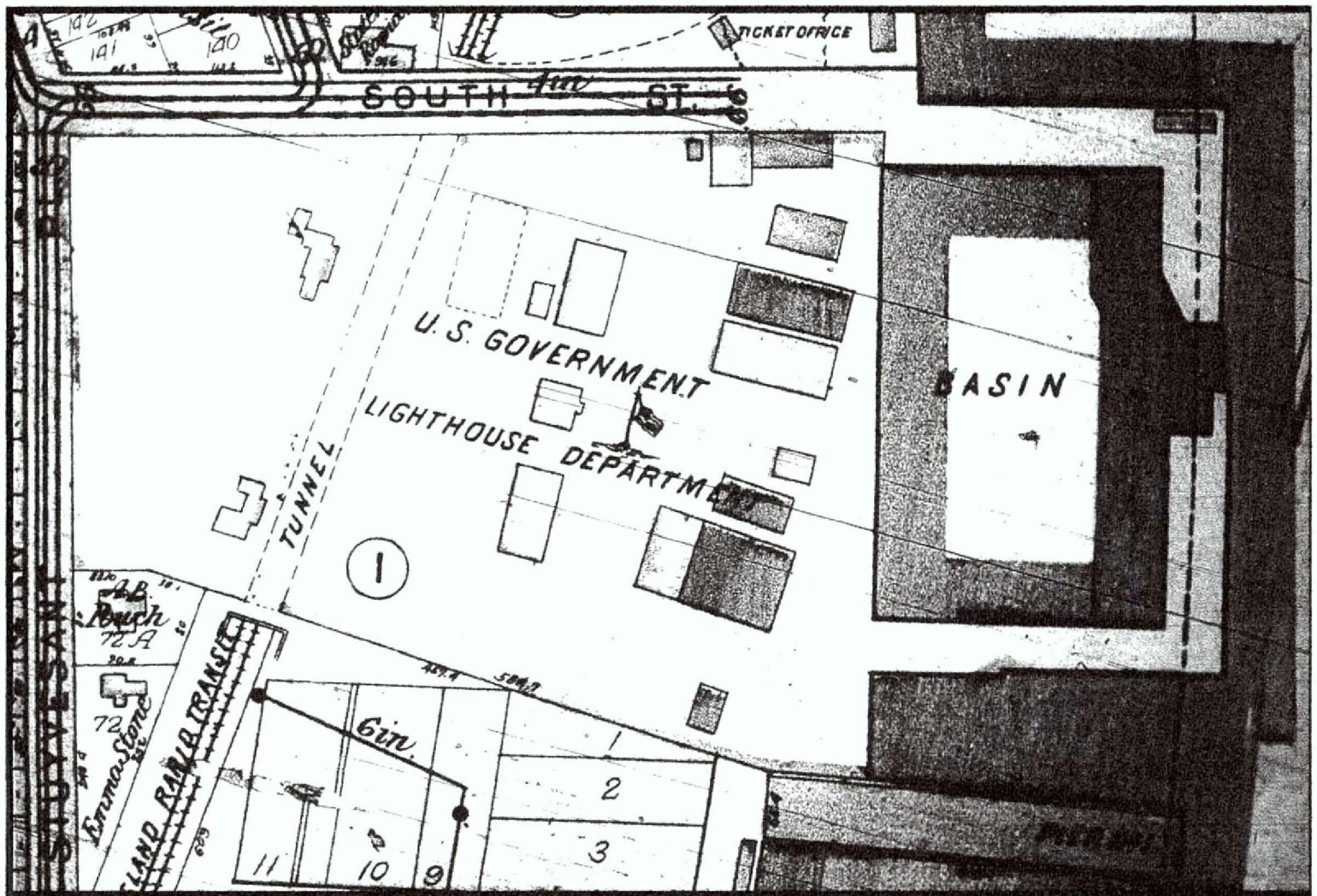


Figure 17
1898 Robinson Map
Scale: 1" = 150'

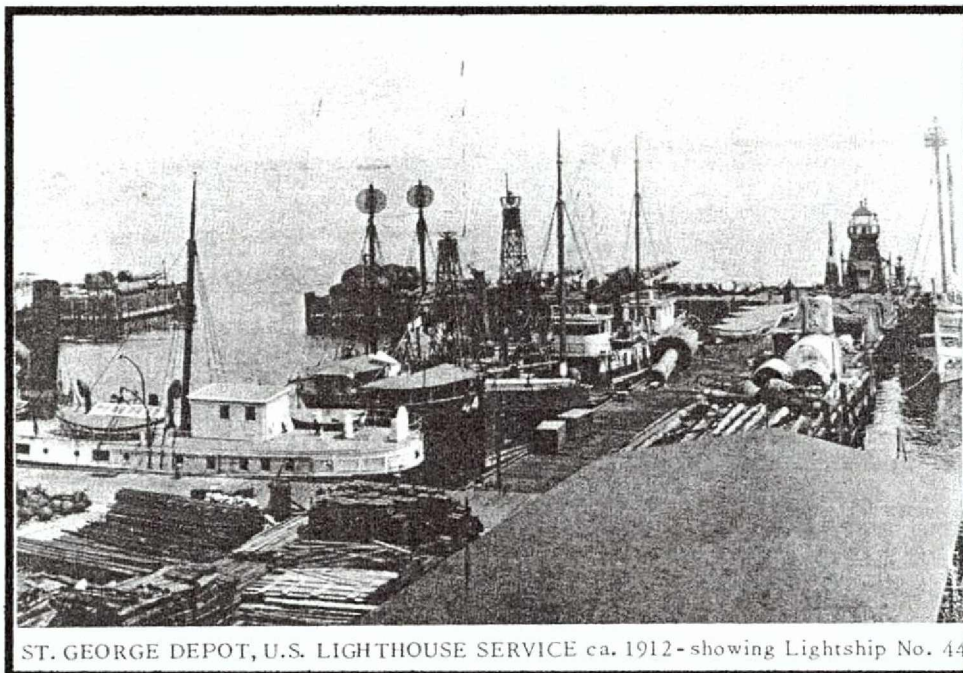


Figure 18
Ca. 1912 View of South Warf and Basin
View Northeast
Source: Gatullo *et al.* 1977:96

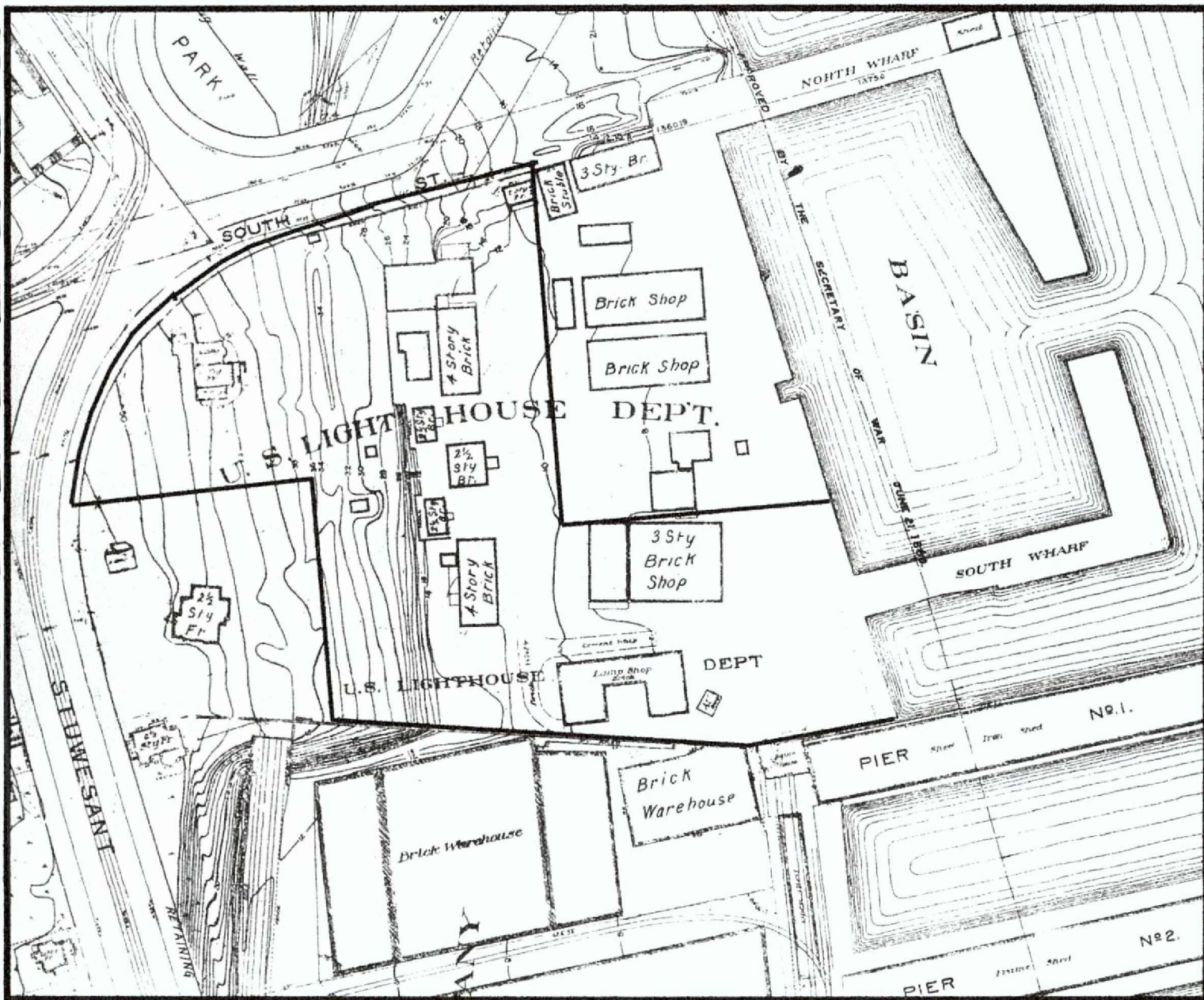


Figure 20
 1912 Borough of Richmond Topographic Map (Sheet #11)
 Scale: 1" = 150'
 Approximate Boundaries of Present Project Site Outlined



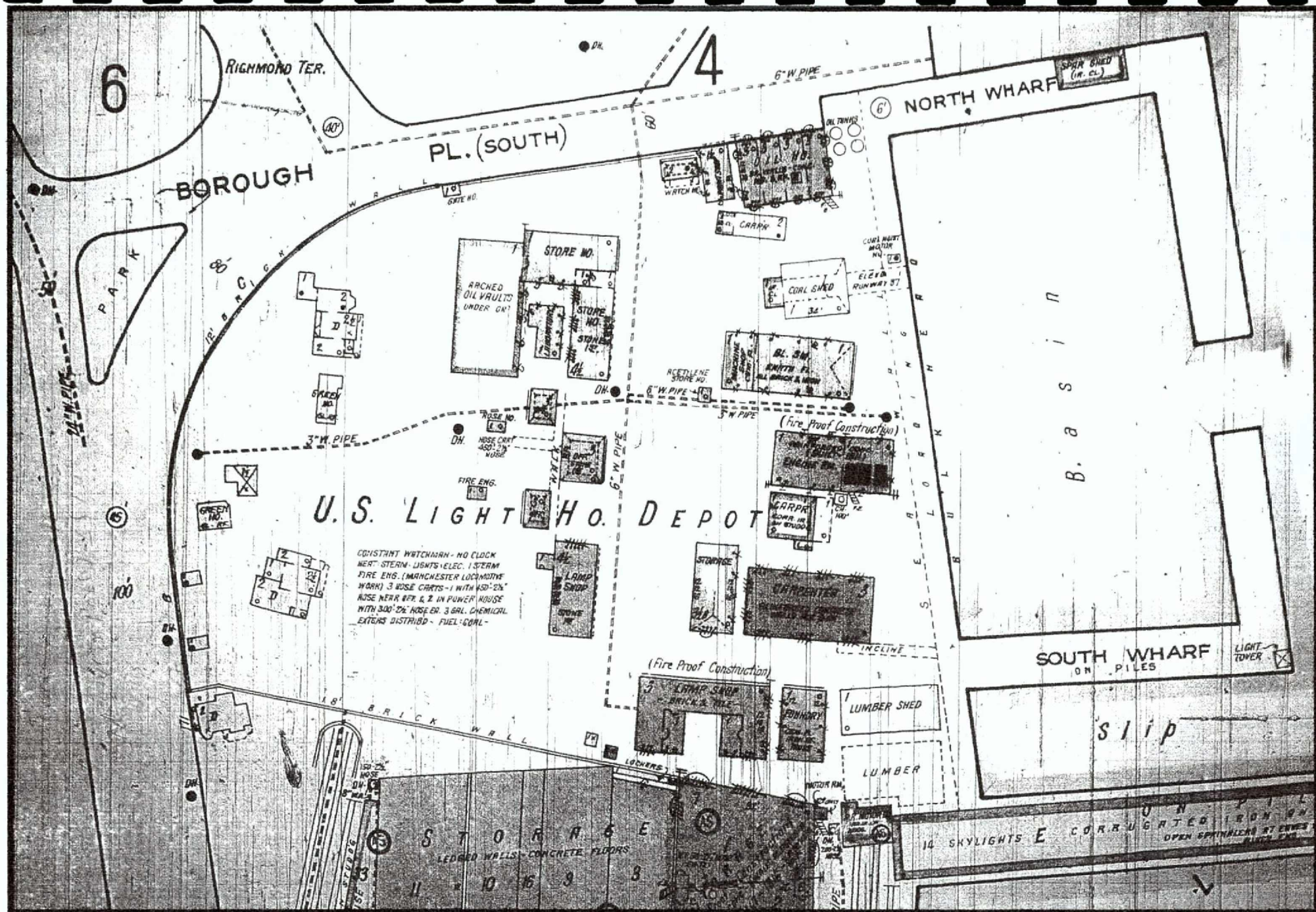


Figure 21
1917 Sanborn Map
Scale: 1" = approximately 115'



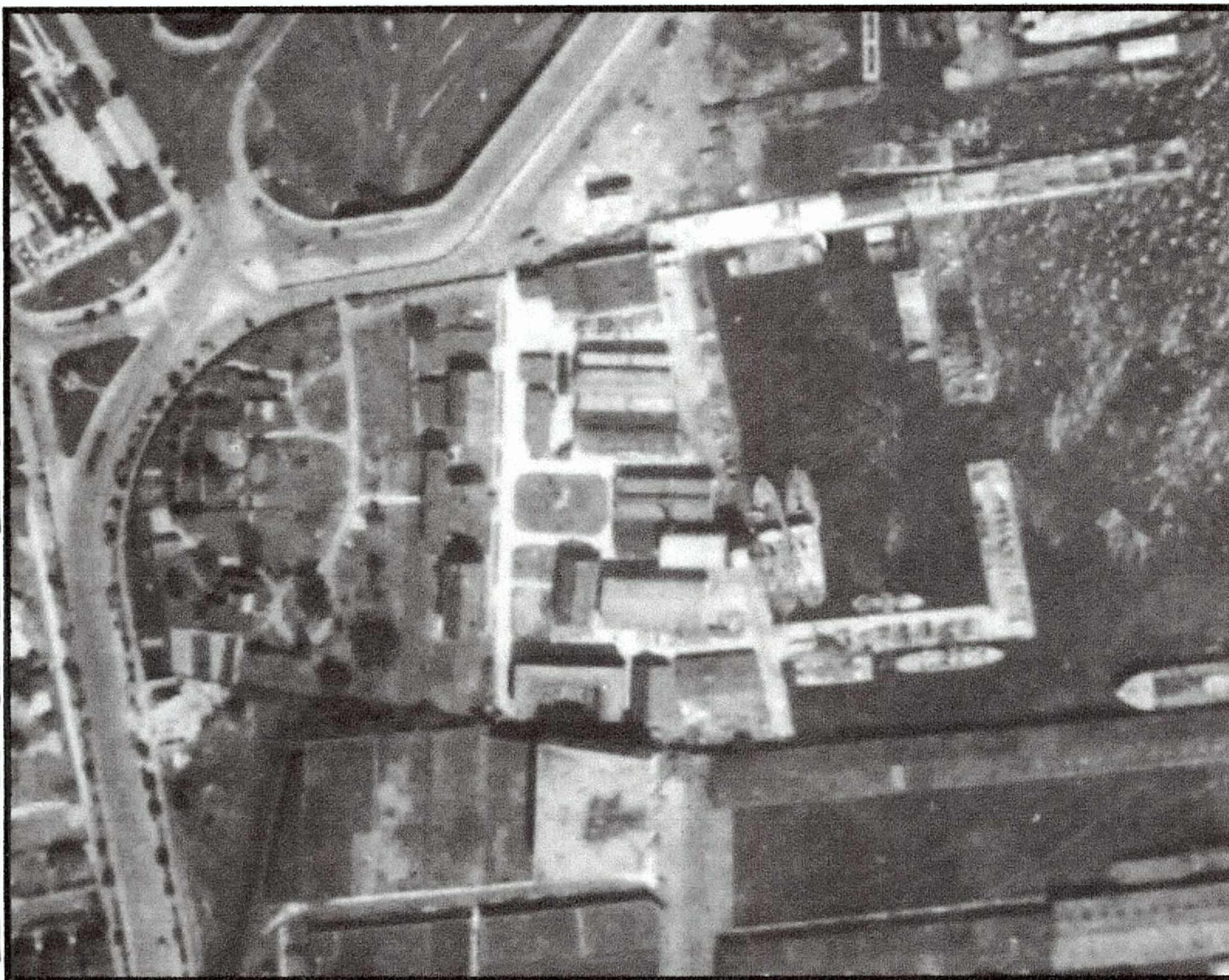


Figure 22
1924 Aerial Photograph
Fairchild (1924; Sheet 21b)
Collection of the New York Public Library

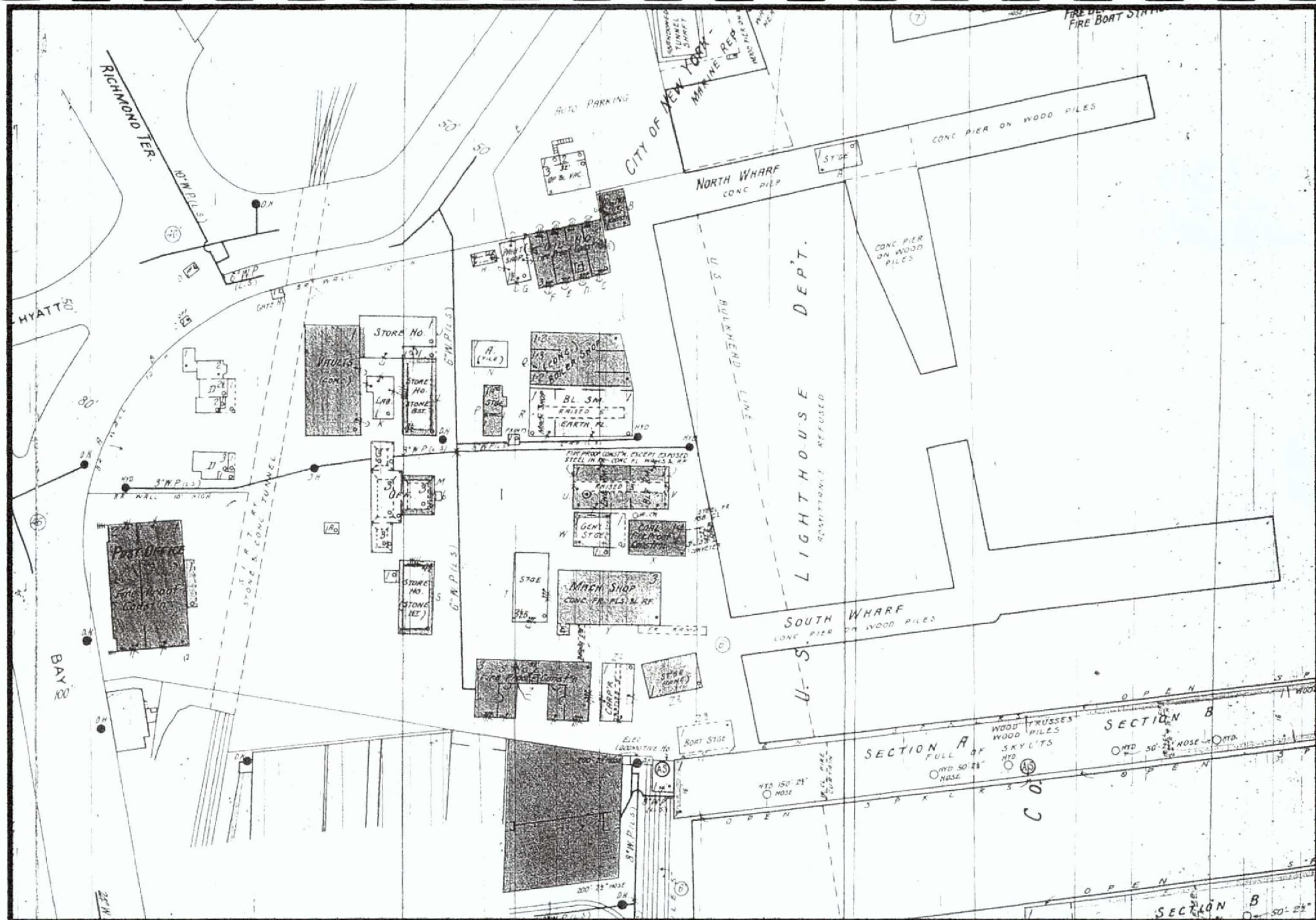


Figure 23
1937 Sanborn Map
Scale: 1" = approximately 145'



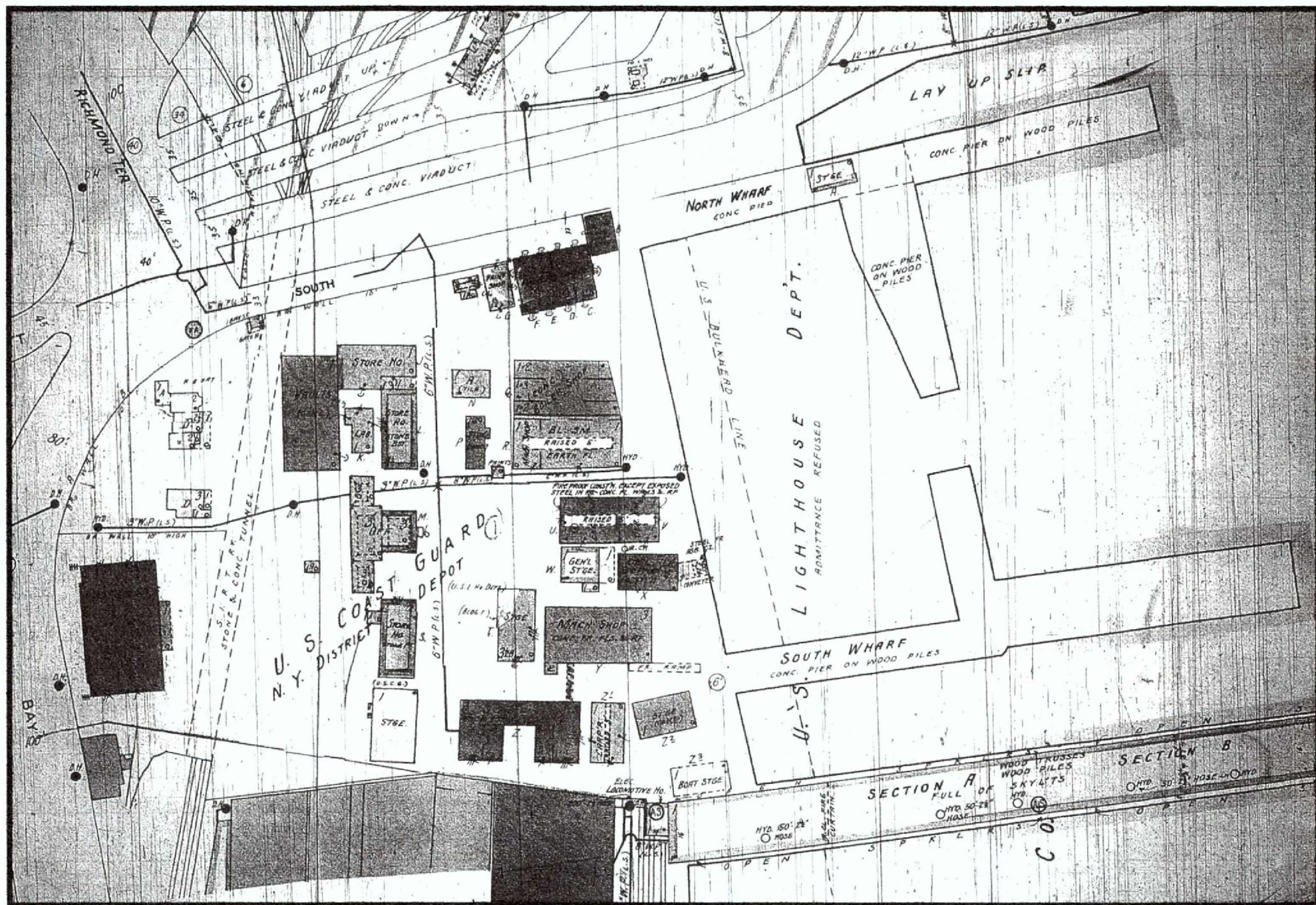


Figure 24
1951 Sanborn Map
Scale: 1" = approximately 145'



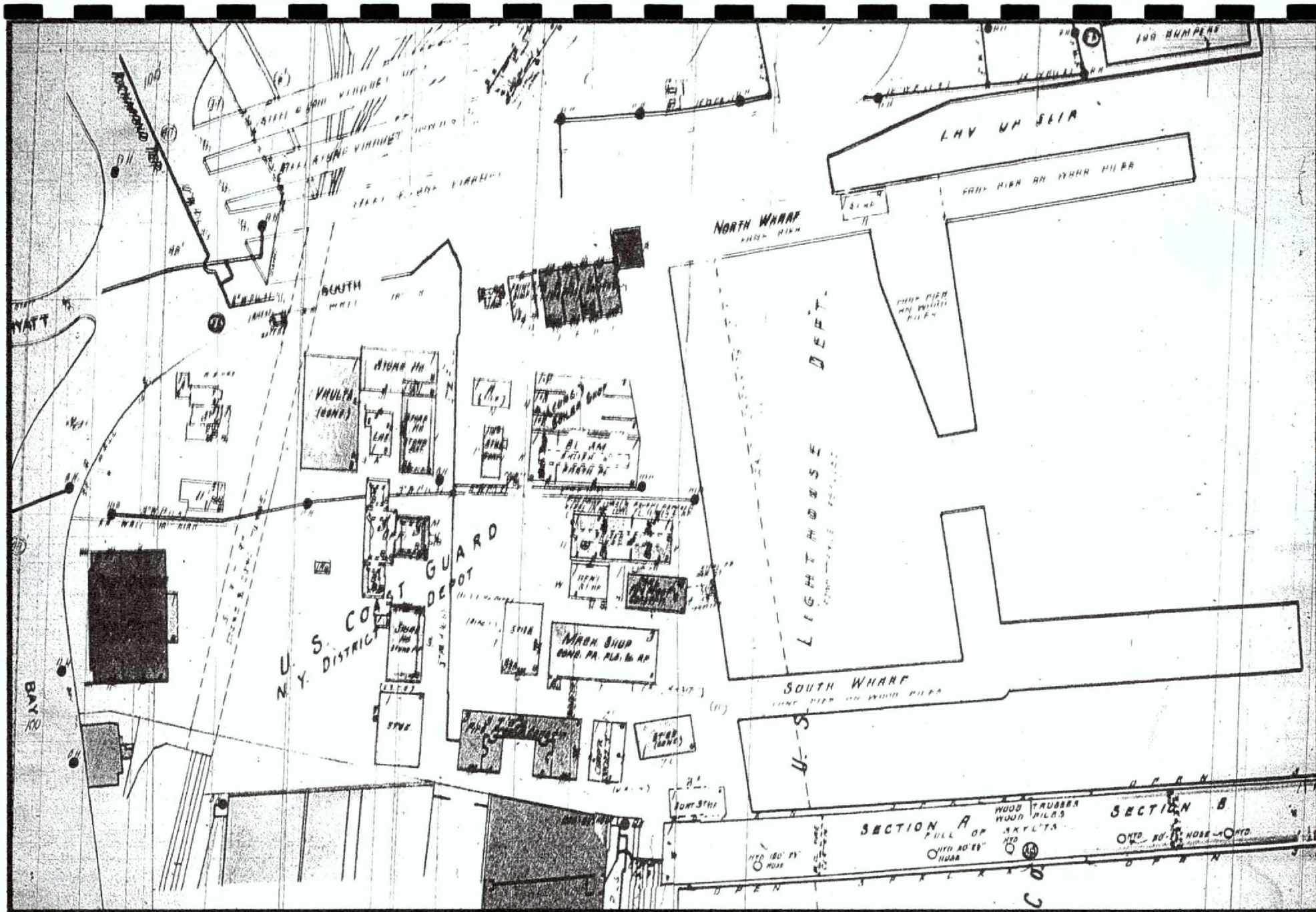


Figure 25
1961 Sanborn Map
Scale: 1" = approximately 145'



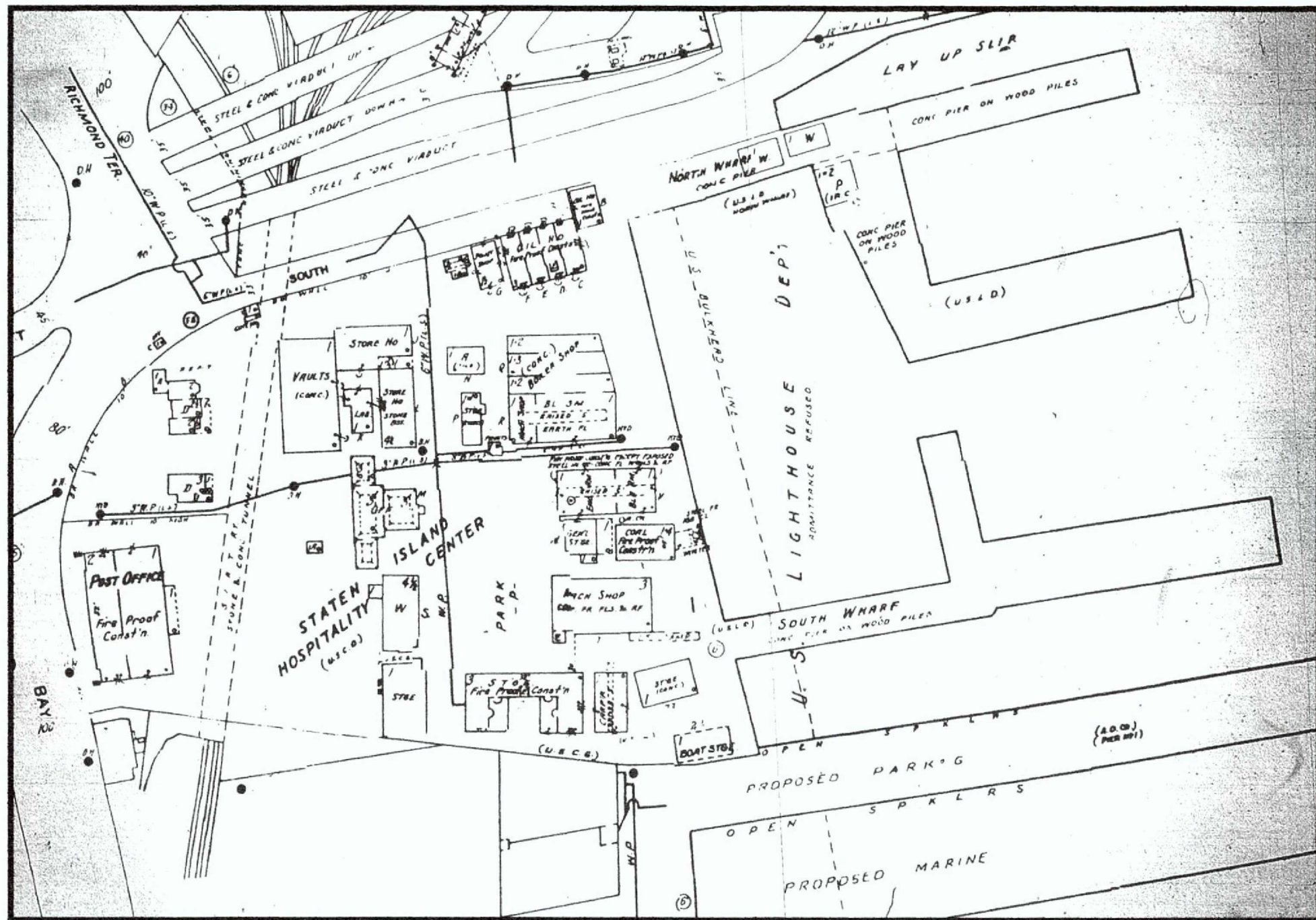


Figure 26
1990 Sanborn Map
Scale: 1" = approximately 145'



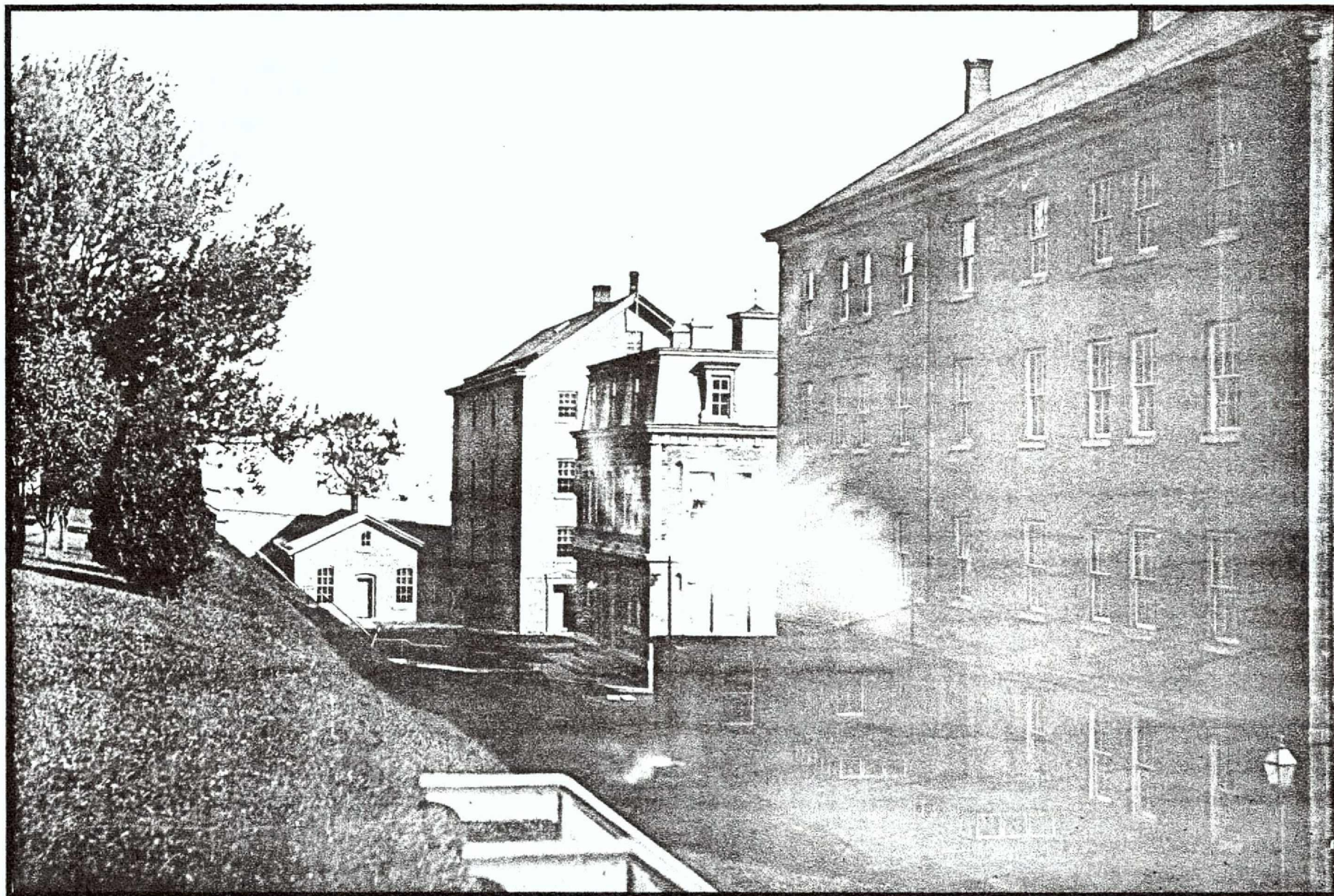


Figure 27

**1884 Photo Showing Rear of Building 8 (At Right), Building 7, and Building 6 with North Side of Building 5 at Left
View to the Northwest from Bank**

Source: Photographs of the Third Light-House Depot 1884

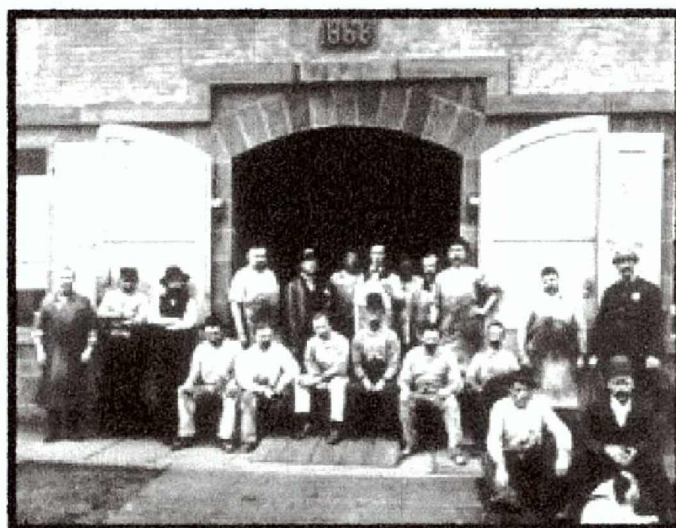


Figure 28
Workers in Work Shop Building (Building 8) Posed in Front of Building Ca. 1885
Photograph from Collection of the National Archives
Source: National Lighthouse Museum (n.d.)

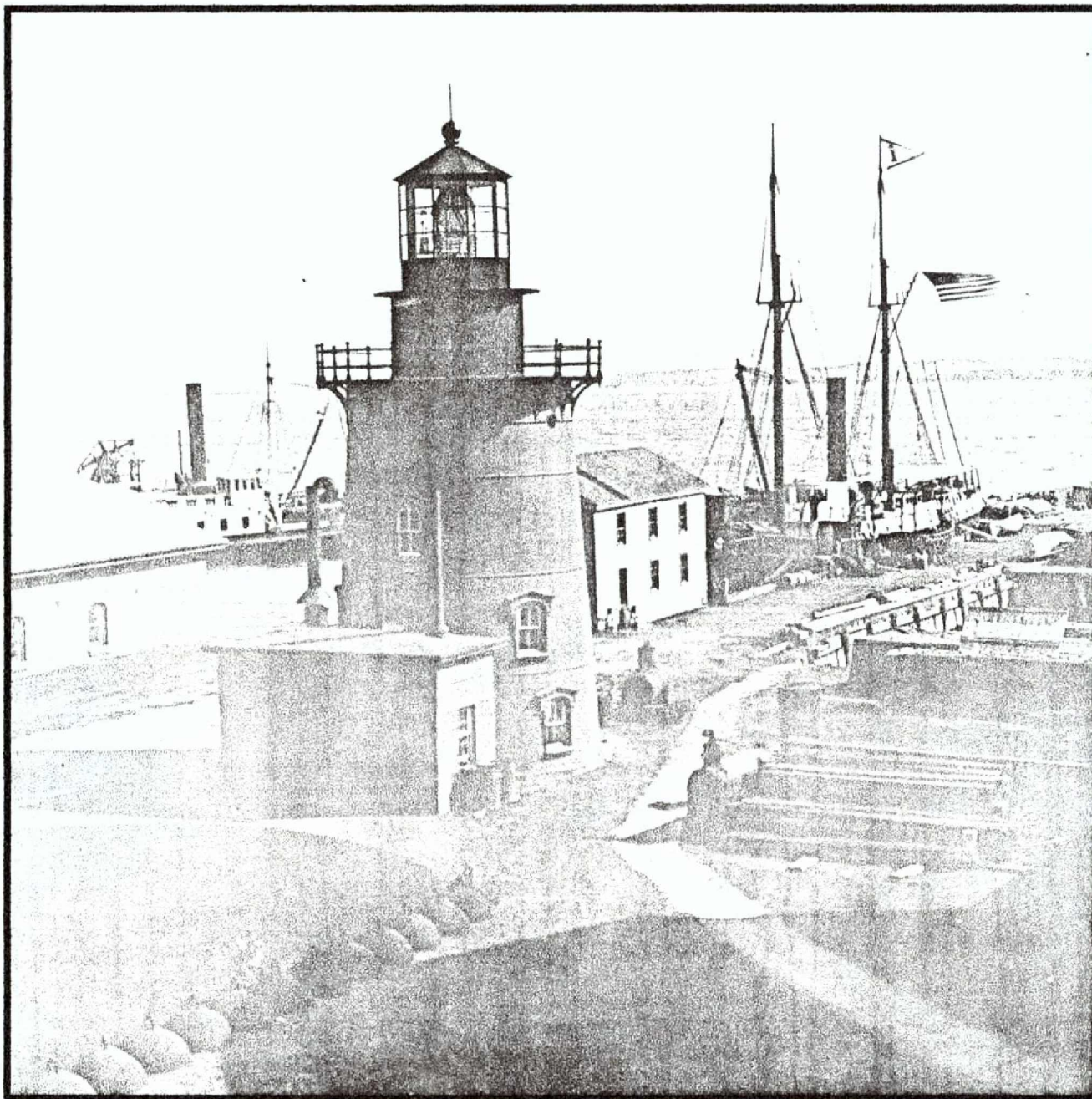


Figure 29
1884 Photograph Showing Experimental Lighthouse and South Wharf
View to the Northeast
Source: Photographs of the Third Light-House Depot 1884

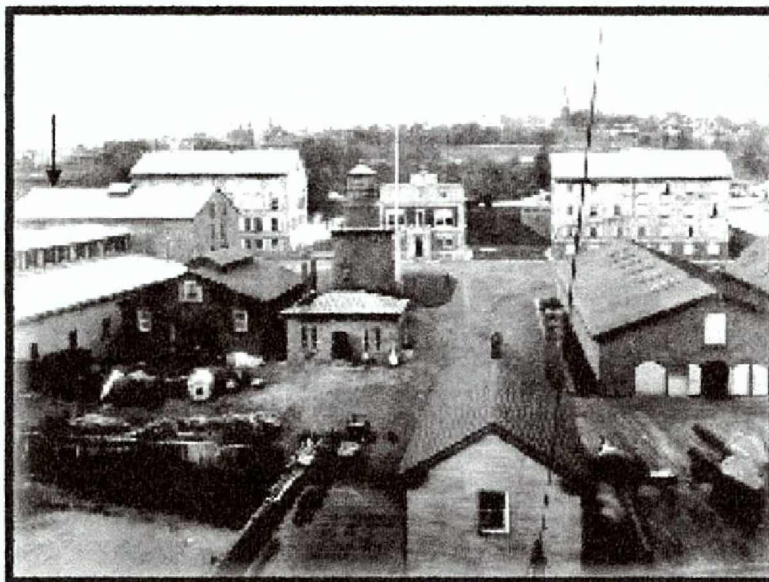


Figure 30

Ca. 1890's Photograph Showing Experimental Lighthouse and South Wharf

View to the West From Wharf

Office Building (Building 7) In Center Background

Buildings 4 (Indicated By Arrow) and 21 at Left of Photograph

Collection of the National Archives

Copy from National Lighthouse Museum (n.d.)

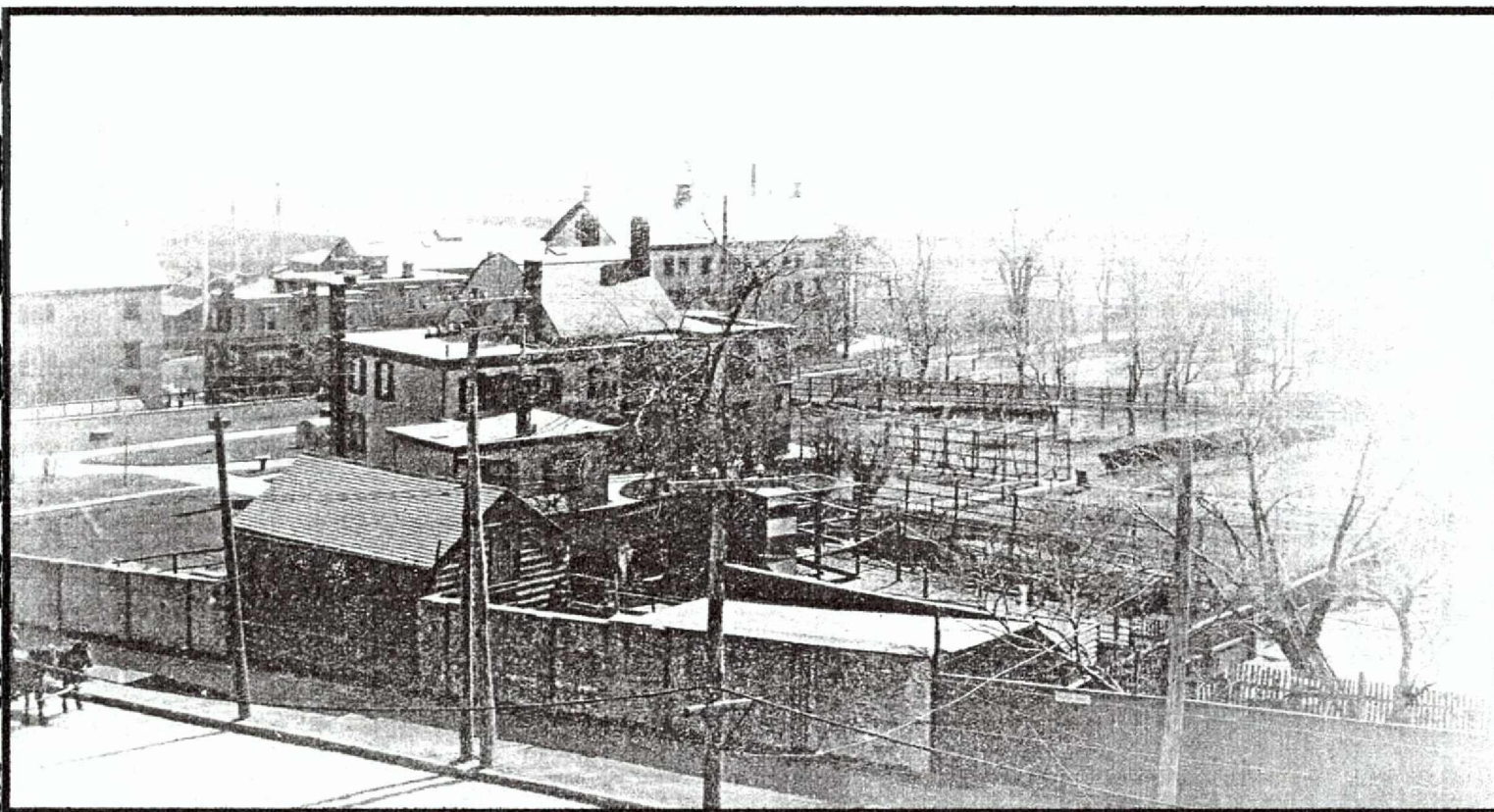


Figure 31
Ca. 1906 Photograph showing the Inspector's House (Building 1) in Foreground
View to the Southeast
Photographer: E. A. Sargent
Collection of the Staten Island Historical Society



Figure 32

1939 Photograph showing the Inspector's House (Building 1) in Right Foreground

View to the Northeast from South Side of Bay Street

View also Shows Wall and the South Street Gatehouse at Center Of Photograph

Photographer: P.L. Sperr

Collection of the New York Public Library

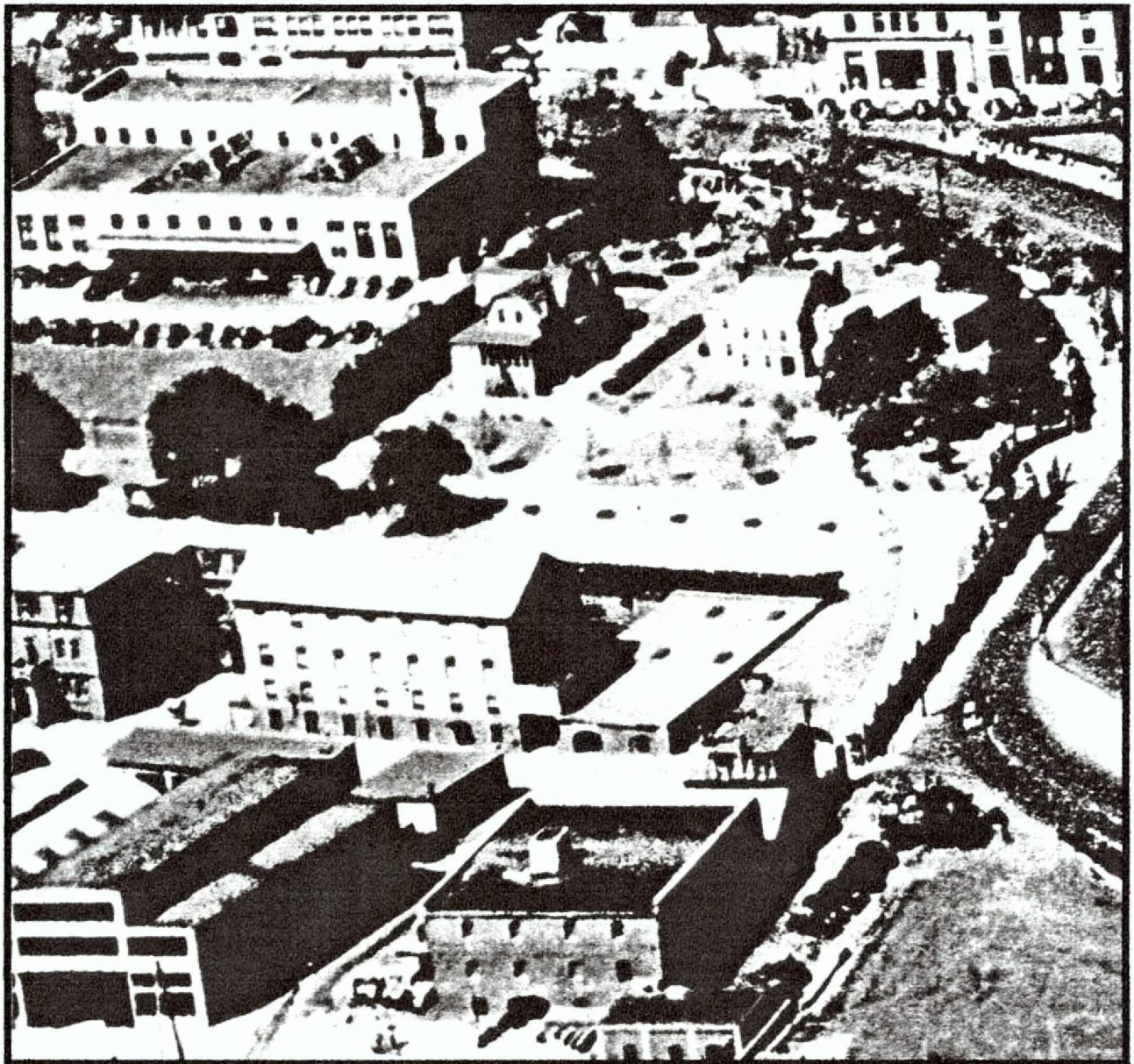


Figure 33

1947 Aerial Photograph Showing Inspectors House (Building 1) At Upper Right

Also shown are Building 29 to the Left of Building 1

Building 6 is at Left Center of Photograph with the One-story

Oil Vault Extension (Building 7a) to the Right

View is to the Southeast

Collection of the Staten Island Historical Society

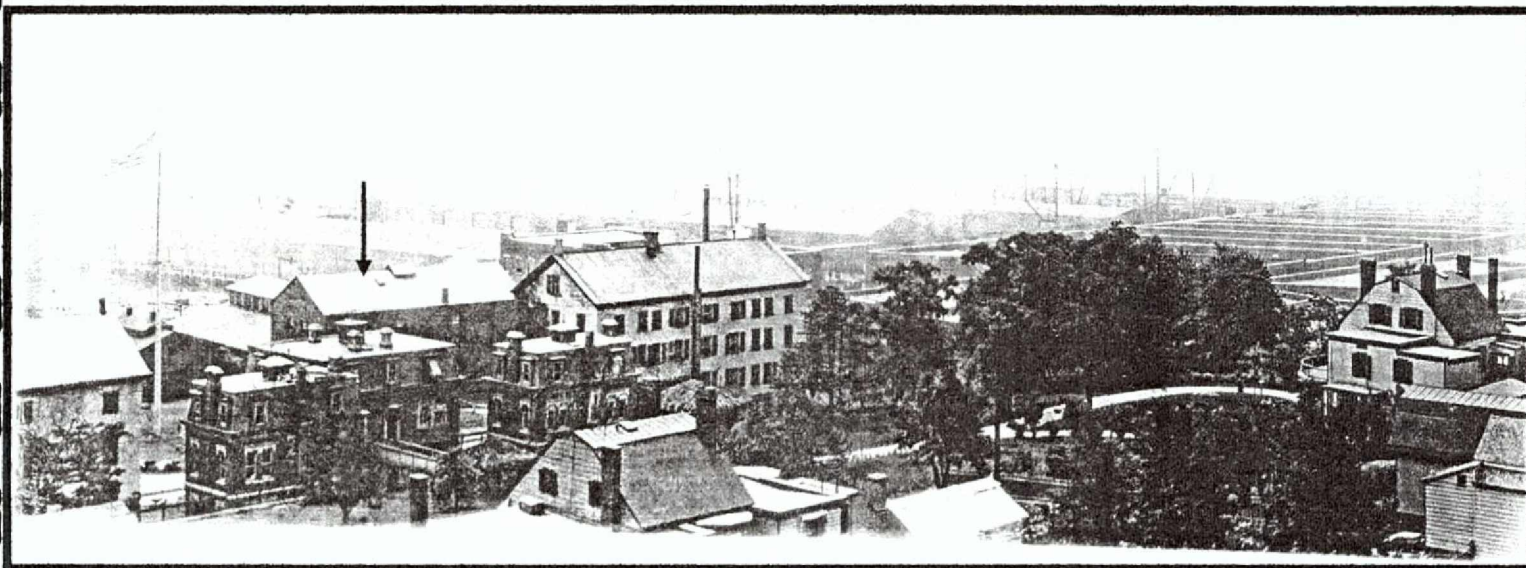


Figure 34

Ca. 1909 Photograph of Light-House Depot

View Southeast from Borough Hall

Roof of Inspectors House in Center Foreground

Office Building (Building 7) and Early 20th Century Wings (Buildings 7a and 7b) Behind and to Left

Building 8 is at Center - Arrow Indicates Building 4

Photographer: E. Seahuysen

Collection of the Staten Island Historical Society

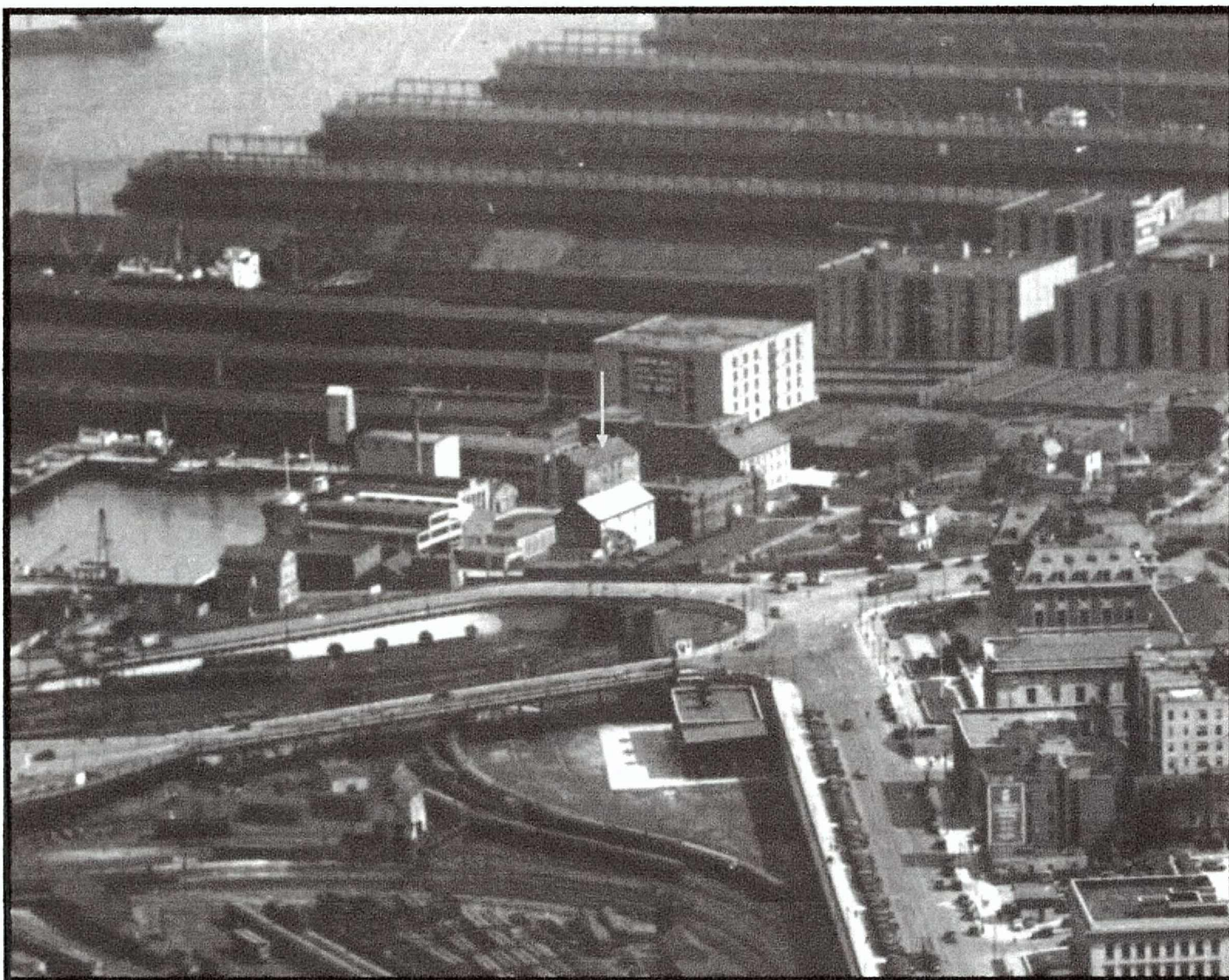


Figure 35
Ca. Early 1930's Aerial Photograph Showing Light-House Depot
View Southeast
Arrow Indicates Building 4 with Building 21a to Left
Photographer: Ewing Galloway
Collection of the New York Public Library

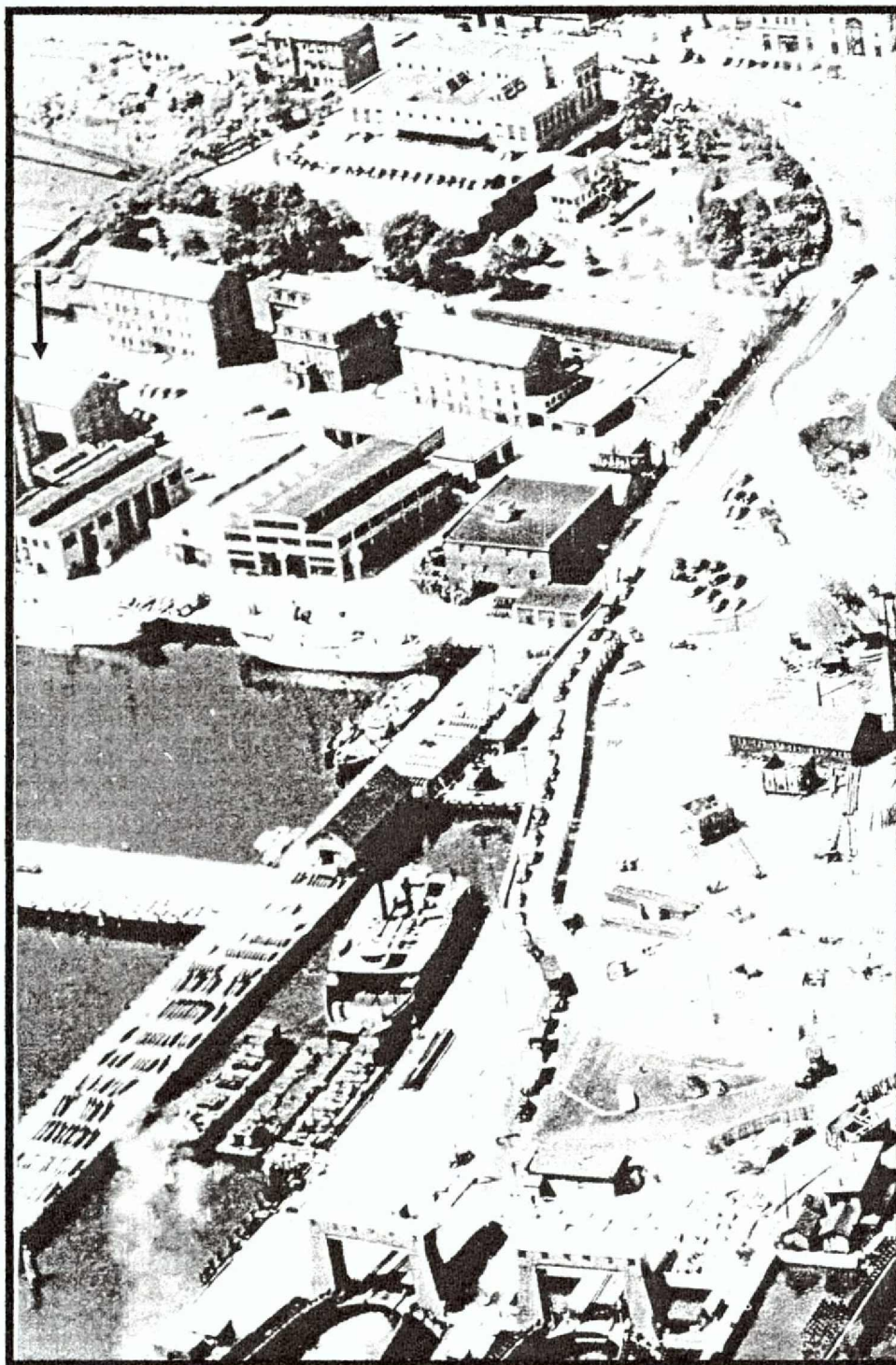


Figure 36
1948 Aerial Photograph
View Southwest
Arrow Indicates Building 4 at Left of Photograph
Collection of the Staten Island Historical Society

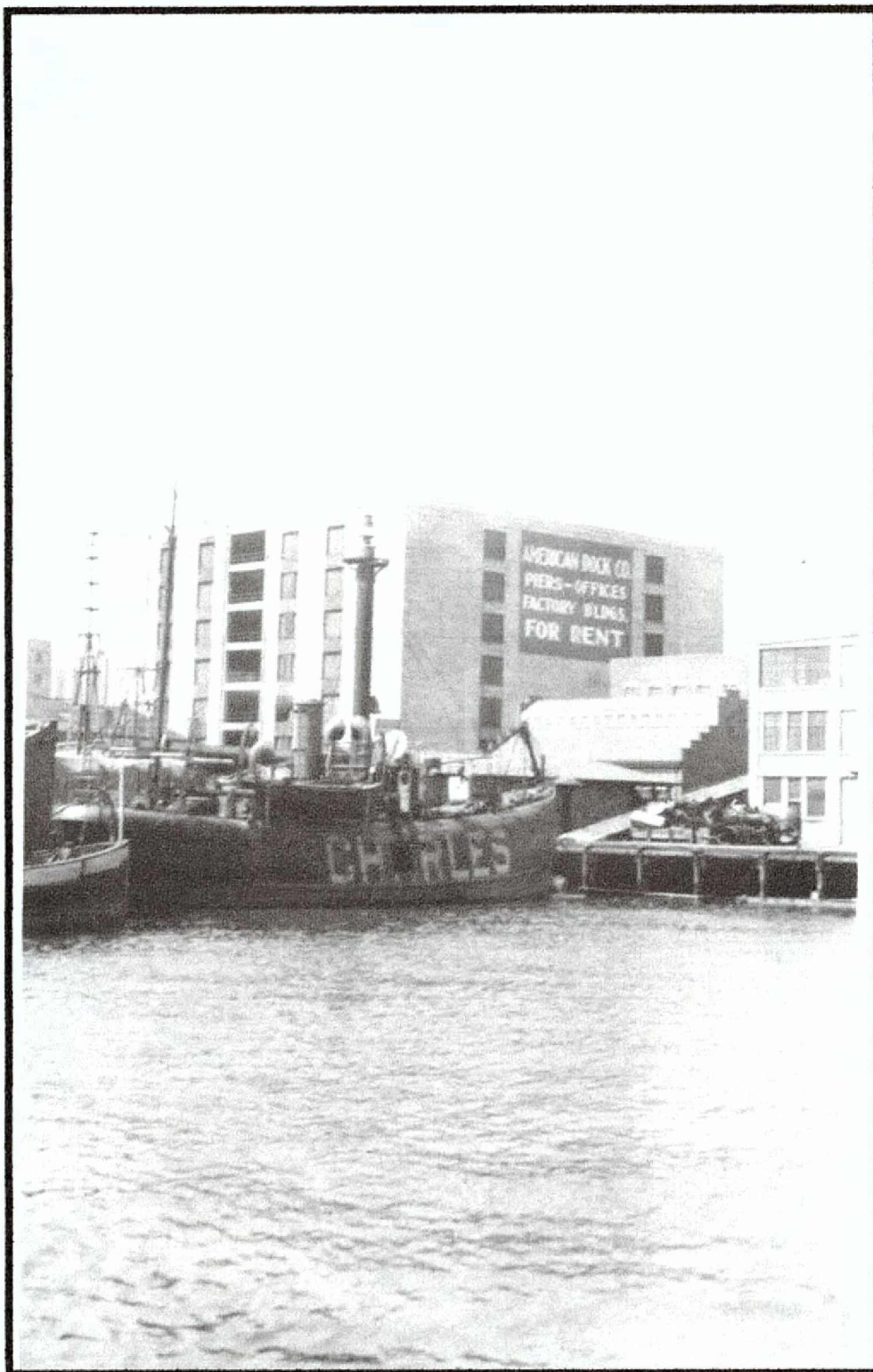


Figure 37
1925 Photograph Showing Building 11 with Building 21a at Right
Wooden Ramp is Between These Buildings
View Southwest
Photographer: P.L. Sperr
Collection of the New York Public Library

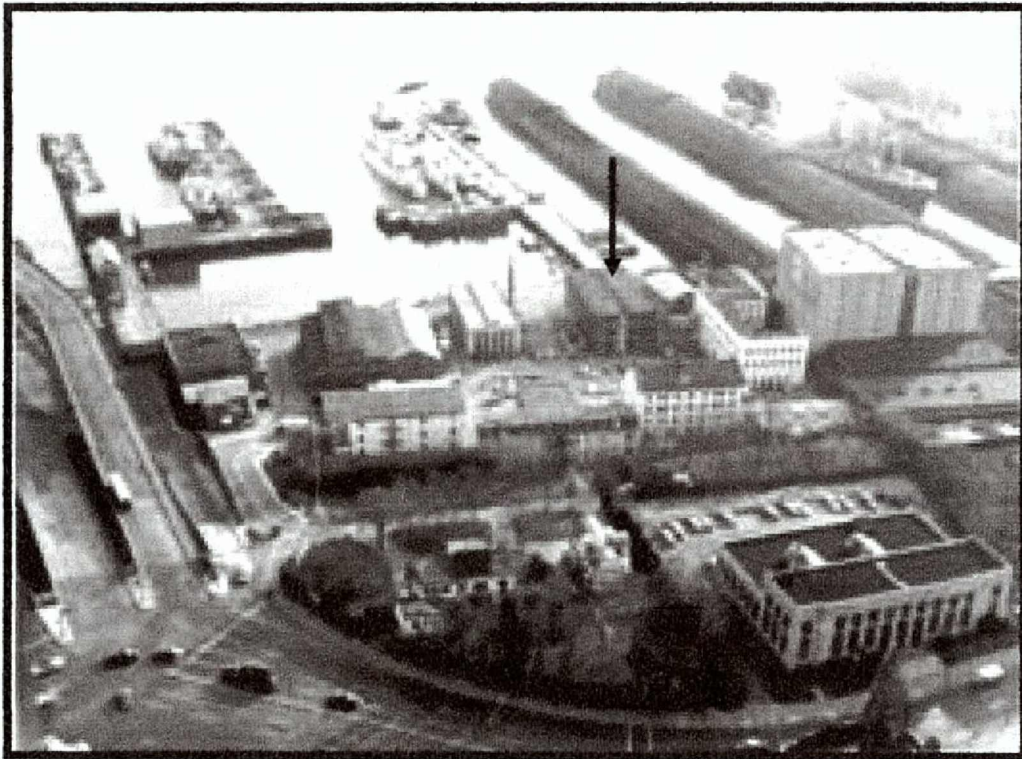


Figure 38
Ca. 1960 Aerial Photograph
Arrow Indicates Building 21a
Building 4 Has Been Removed
Source: National Lighthouse Museum (n.d.)

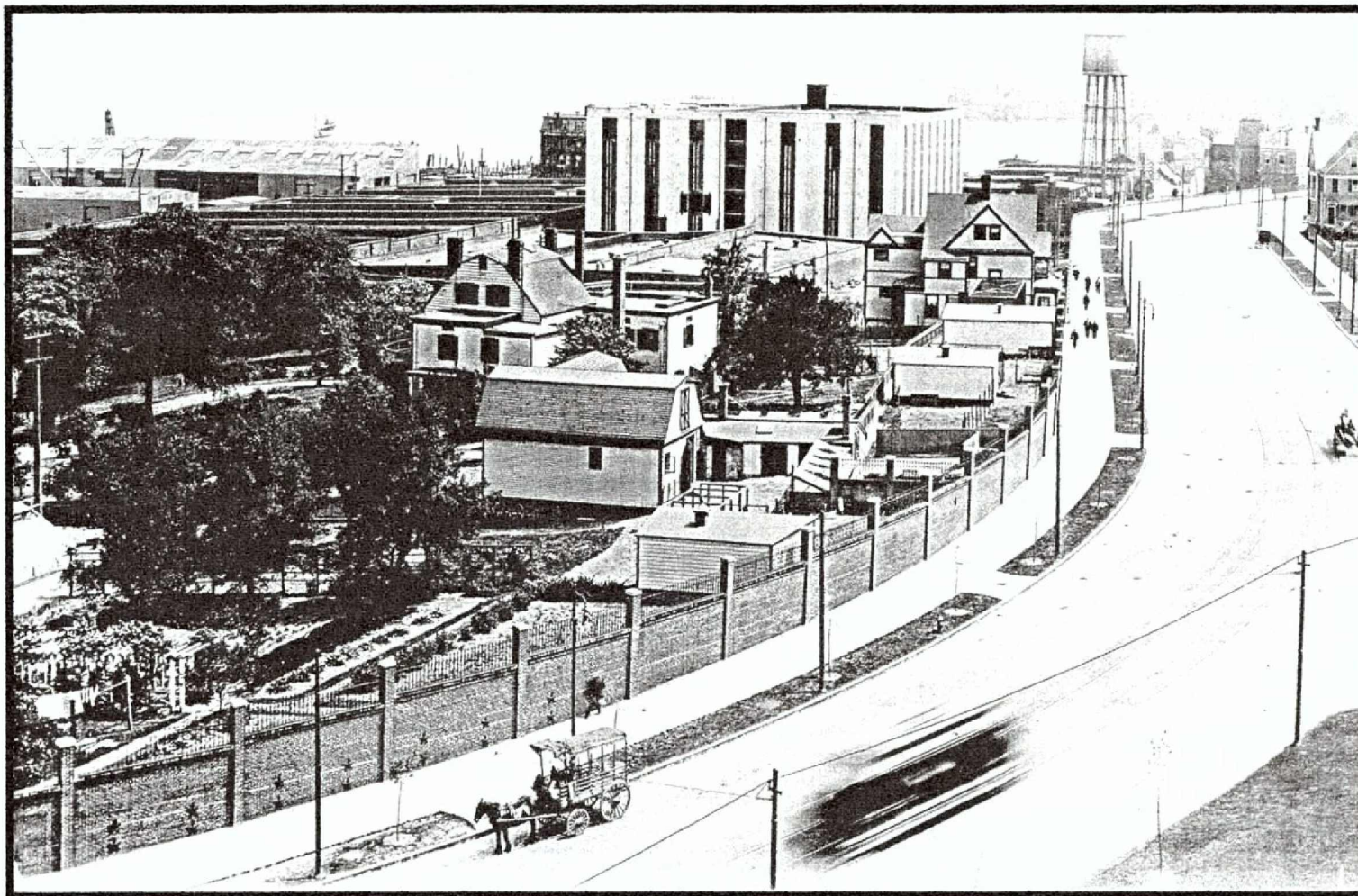


Figure 39
Ca. 1900 - 1910 Photograph
View East Along Bay Street from Borough Hall
Showing the Engineers House (Building 2), Outbuilding (Building 13) and the Bay Street Wall
Building 32 (Inspector's Greenhouse) Partly Visible at Extreme Left
Collection of the Staten Island Historical Society

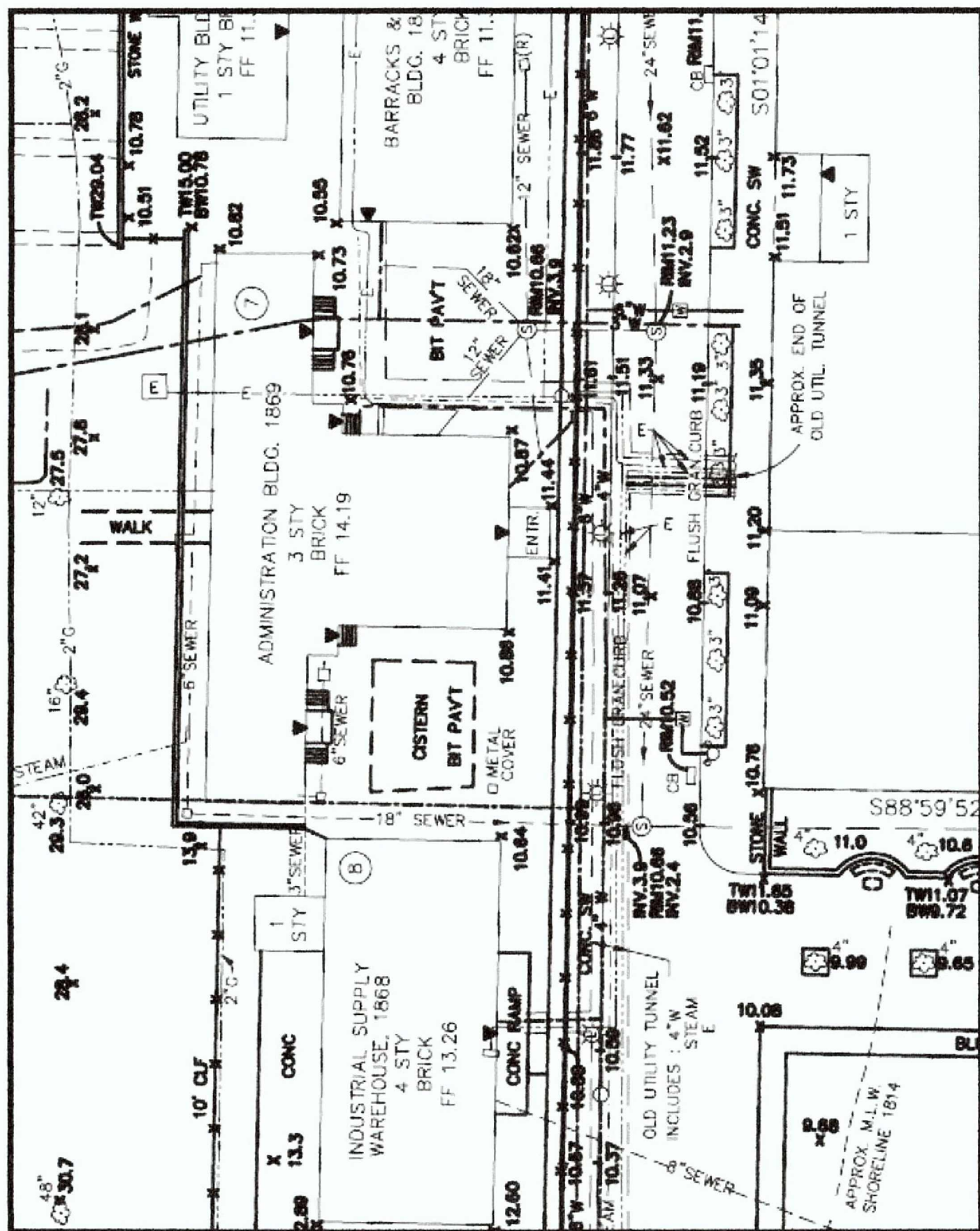


Figure 40
 Portion of 2000 Site Survey (Elken 2000) Showing Cistern Between Buildings 7 and 8
 Scale 1" = 30'



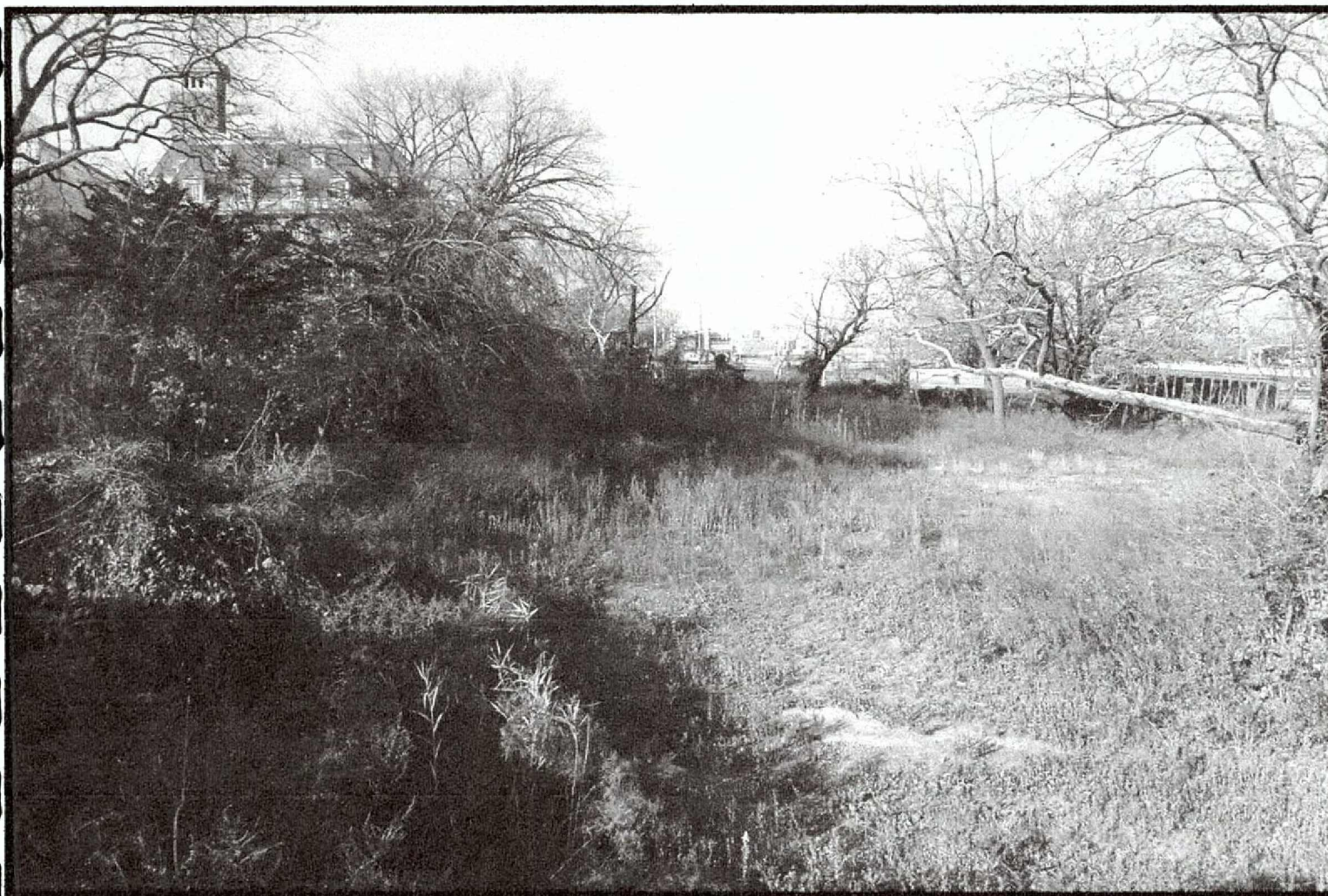


Figure 41
2003 Photograph Showing Western Portion of Site
View to North From Vicinity of Northern Boundary Wall of Post Office Property
Location of Building 1 Foundation Wall is in Background of Photograph
November 3, 2003

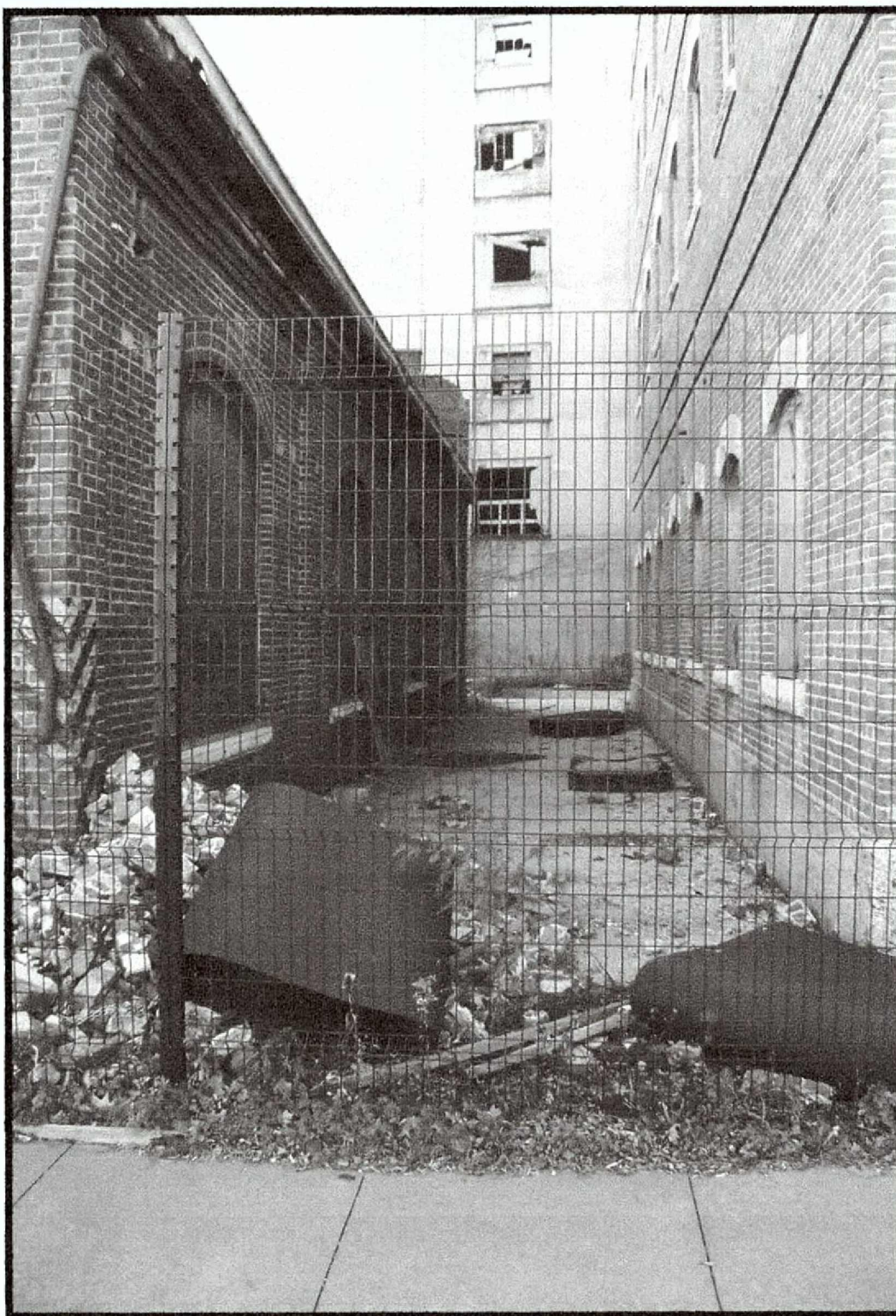


Figure 42
2003 Photograph Showing Alley Between Buildings 10 and 11
View to South
November 3, 2003

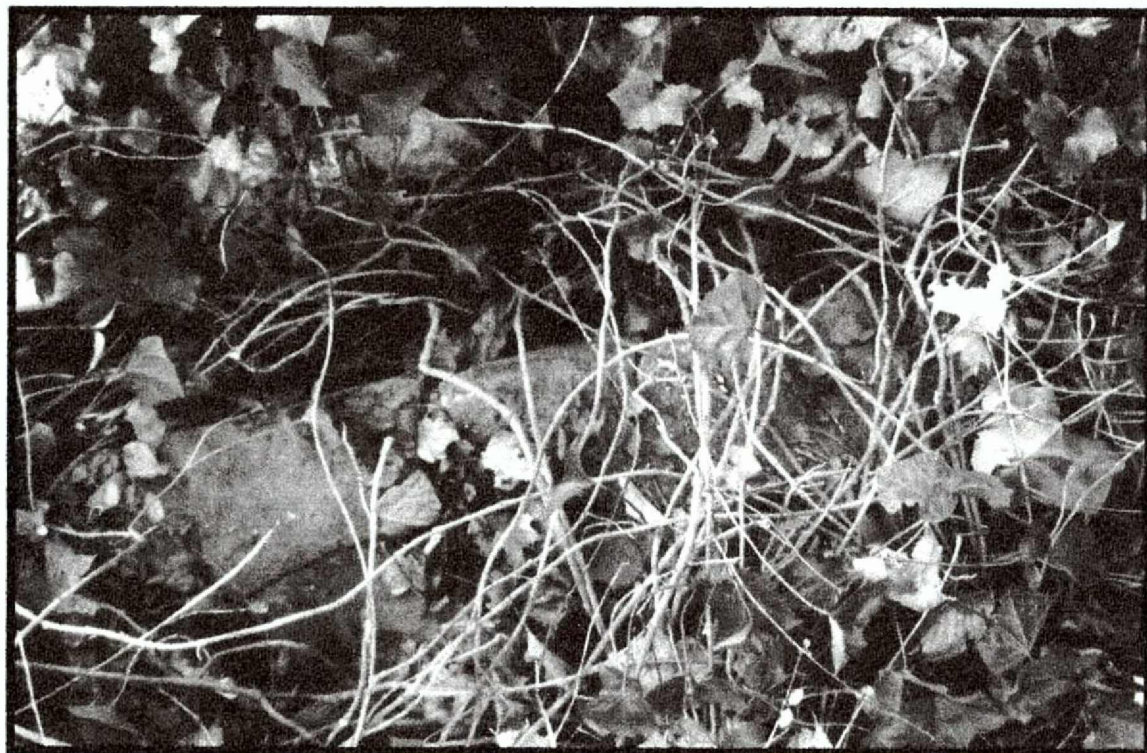


Figure 43
2003 Photograph Showing Portion of Stone Foundation wall
at Site of the "Inspector's House" (Building 1)
November 3, 2003

National Lighthouse Harbor Site
Staten Island, New York

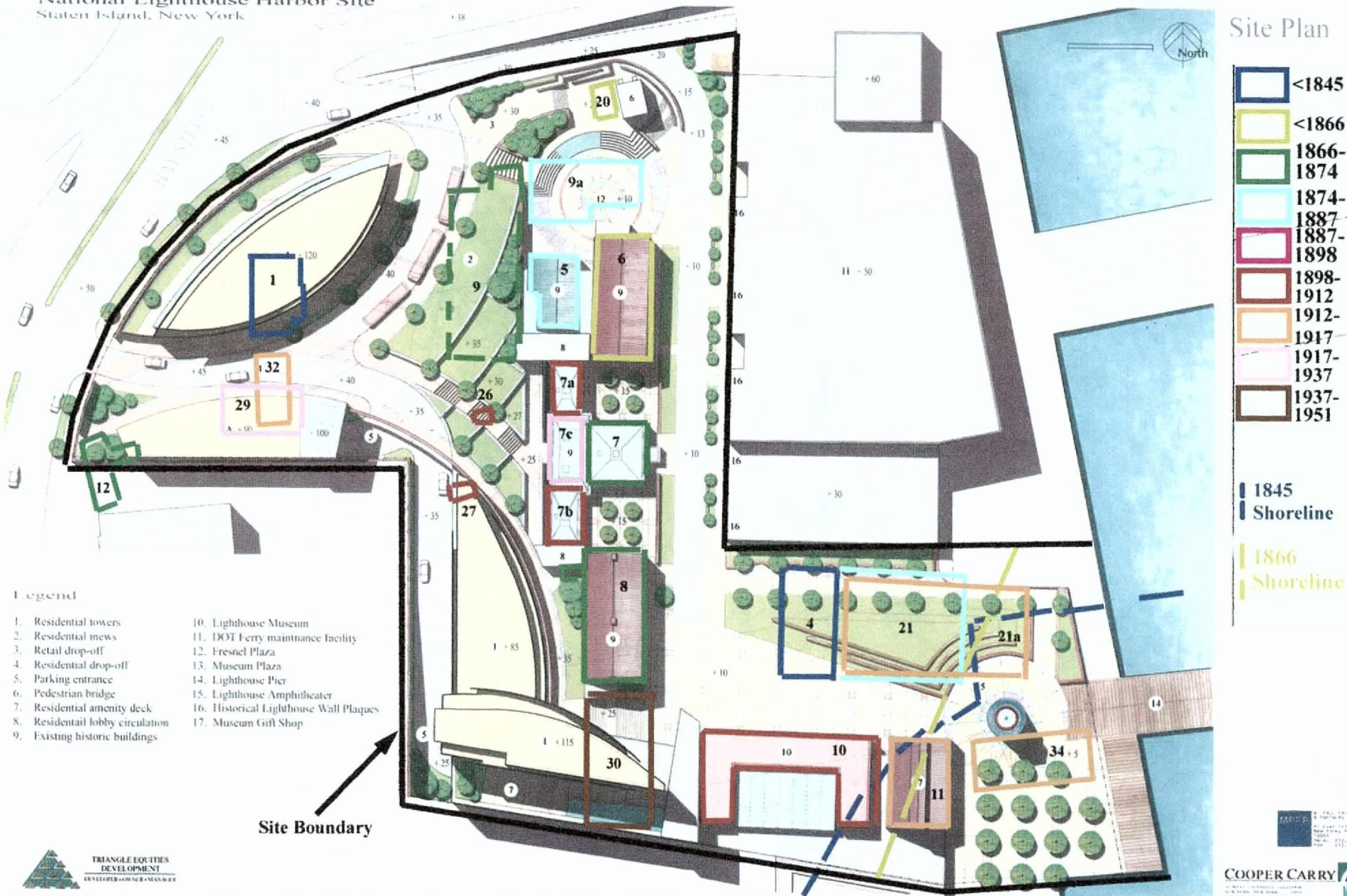


Figure 45

2007 Site Plan Showing History of Building Construction and Approximate Shoreline Locations Within Site Boundary

2007 SITE PHOTOGRAPHS



Photograph 1
Plaza Area in Southeastern Portion of Site
View To the Northwest
Building 8 in Background
June 20, 2007



Photograph 2
Concrete Pier
View to West
Building 8 in Center Background; Buildings 10 and 11 in Left Background
June 20, 2007



Photograph 3
Entrance Roadway with Buildings 6 - 8 at Right
Entrance Stair Tower at Right Foreground
View South from Ferry Terminal Entrance Ramp
June 20, 2007



Photograph 4
Laboratory (Building 5) with Office Building in Rear
View to South
June 20, 2007



Photograph 5
Northern Portion of Oil Vaults with Retaining Wall at Right
View to West
June 20, 2007



Photograph 6
Areaway and Retaining Wall at Rear of Office Building (Building 7a - 7c)
View to North
June 20, 2007



Photograph 7
Paved Area between Laboratory (Building 5 - At Right) And Oil Vaults (At Left)
View to North
June 20, 2007



Photograph 8
Area at Rear of Workshop Building (Building 8)
Showing Unpaved Portion
Portion of Brick Extension at Left
View to South
June 20, 2007



Photograph 9
Office Building (Building 7) with Portion of Southern Courtyard
View to Northwest
June 20, 2007



Photograph 10
Western Portion of Site Showing Lamp Posts, Parking Area Surface and Wooden Barriers
View to North From Vicinity of Northern Boundary Wall of Post Office Property
Site of Building 1 is in Background of Photograph
June 20, 2007



Photograph 11
Western Portion of Site
View to West Near Post Office Property with Bay Street in Background
Showing Effects of Grading and Wooden Parking Area Barriers
June 20, 2007



Photograph 12
Portion of Parking Area Surface, Lamp Post and New Bay Street Entrance Gate
View to West
June 20, 2007



Photograph 13
View to West Along Bay Street
Showing Section of Original Brick Wall in Foreground
With Recently Reconstructed Portion and New Entrance Gates to Left
June 20, 2007



Photograph 14
Alley Between Buildings 10 and 11
Showing Recently Installed Air Conditioning Equipment
View to South
June 20, 2007



Photograph 15
Portion of Southern Façade of Store House (Building 6)
Showing Construction Date
June 20, 2007



Photograph 16
Portion of Southern Façade of Work Shop Building (Building 8)
Showing Construction Date
June 20, 2007



Photograph 17
Portion of Eastern Façade of Office Building (Building 7)
Showing 1869 Construction Date
June 20, 2007

APPENDIX A

LIST OF THIRD DISTRICT INSPECTORS AND ENGINEERS: 1873 - 1909
SOURCE: LIGHT-HOUSE BOARD ANNUAL REPORT

LIGHT-HOUSE DEPOT OFFICERS AS OF JUNE 30

<u>Year</u>	<u>Inspector</u>	<u>Engineer</u>
1873	Commodore James H. Strong (to 6/30/73) (from 6/30/73)	Col I.C. Woodruff
1874	Commodore Stephen Decatur Trenchard	" " "
1875	" " " "	" " "
1876	Capt. R. C. Rhind	" " "
1877	Commodore Alexander C. Rhind	Col. I.C. Woodruff
1878	Commodore J.M.B. Clitz	" " "
1879	" " "	Col. I.C. Woodruff (to 12/10/78) Lt.Col. James C. Duane (from 2/21/78)
1880	" " " (to 6/30/78) Rear Adm. Edward T. Nichols (from 6/30/78)	Lt.Col. James C. Duane
1881	" " " " " (to 6/21/1881) Capt. George Brown (from 6/21/1881)	" " " " "
1882	Capt. George Brown	" " " " "
1883	" " "	" " " " "
1884	" " "	Col. James C. Duane
1885	" " " (to 11/15/84) Capt. Andrew E.K. Benham (from 11/15/84)	" " " "
1886	Commodore Andrew E.K. Benham	" " " "
1887	" " " " "	" " " " (to 11/12/1886) Lt. John Millis (from 11/12/1886)
1888	" " " " " (to 1/2/88) Commander Frederick Rodgers (from 1/2/88)	" " " (to 7/6/87) Maj. David Porter Heap (from 7/6/87)
1889	Commander Frederick Rodgers	Maj. David Porter Heap
1890	" " " "	" " " "

1891	" " " " (to 9/22/90) Capt. Henry F. Picking (from 9/22/90)	" " " "
1892	Capt. Henry F. Picking (to 3/3/92) Capt. Winfield S. Schley (from 3/3/92)	" " " "
1893	Capt. Winfield S. Schley	" " " "
1894	Capt. Winfield S. Schley	" " " "
1895	Commander Albert S. Snow	Lt. William E. Craighill
1896	" " " "	Lt. Col. William Ludlow
1897	" " " "	Lt. Col. David P. Heap
1898	Capt. Edwin M. Shepard	" " " " "
1899	" " " "	" " " " "
1900	" " " "	" " " " "
1901	Capt. William M. Folger	" " " " "
1902	" " " "	Maj. William T. Russell
1903	" " " "	" " " " "
1904	Capt. Morris R. S. Mackenzie	Lt. Col. William T. Russell
1905	" " " "	" " " " "
1906	Capt. John A. Rodgers	" " " " "
1907	" " " "	Maj. Charles L. Potter
1908	" " " "	" " " "
1909	Capt. Charles Chauncey Thomas	" " " "

APPENDIX B

**DATA ON HOUSEHOLDS OF THIRD LIGHT-HOUSE DISTRICT
INSPECTOR AND ENGINEER**

SOURCE: RECORDS OF THE UNITED STATES AND NEW YORK STATE CENSUS

Name	Age	Occupation	Birth Place	Relationship	Building Value
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1870

Joseph Lederle	44	Architect	Baden		
Clara "	27	Keeping House	Austria		
William "	12	Attending School	Michigan		
Bertha "	7	Attending School	New York		
Ernest "	4	At Home	" "		
Clara "	2	At Home	" "		
George Gunther	63	Physician	Saxony		
Luisa Berg	15	Domestic Servant	Massachusetts		
Catherine Miller	38	" " "	Baden		

Charles S. Boggs	59	Commodore U.S. Navy	New Jersey		
Sophia "	55	Keeping House	Nova Scotia		
Emeline "	23	At home	New Jersey		
Charles e. "	30	U.S. Navy Paymaster	" "		
John D. "	20	Clerk in L.H. Depot	" "		

1875

Stephen Trenchard	50	Commodore U.S. Navy	New York		Frame \$20000
Anne "	45		Penn	Wife	
Edward "	26	Artist in New York City	"	Son	
Frank Barclay	40		"	Brother in Law	
Ellen Kelley	40	Chamber Maid	Ireland	Servant	
Rose Daly	42	Cook	"	Servant	
Thomas N. Farley	18	Messenger	Richmond	Servant	

Josiah C. Woodroof	59	General U.S. Army	NJ		Frame \$20000
Caroline A. "	52		Erie	Wife	
Earle "	32	U.S. Army	"	Son	
Thomas M. "	25	" "	"	Son	
Edward L. "	23	Civil Engineer	"	Son	
Isabella M. "	24		"	Daughter	
Julia Carls	26	Cook	Ireland	Servant	
Margaret Lavin	24	Washing	"	Servant	

1900

Edwin M Shepard	56	Commander 3 rd Light House District	New York	
Alice S.	"		"	Wife
Kate	"		"	Daughter
Alice L. Davison	30		"	Daughter
Amanda Peterson	30	Servant	Sweden	Servant
Siebert Peterson	19	Servant	Sweden	Servant

David P. Heap	57	Light House Depot Army Officer	Turkey	
Jane P. Schorrere	47		Pennsylvania	Daughter
Gwynne " "	26	Mining Engineer	Washington DC	Nephew
Josephine " "	24		Pennsylvania	Niece
Matilda Anderson	23	Servant	Sweden	Servant
Tolinda Peterson	22	Servant	Sweden	Servant

1910

Capt. Robert Doyle	53	U.S. Lighthouse ?	Louisiana	
Kate	"		New Jersey	Wife
Mary Moon	30	Servant	England	Servant
Maggie Monetta	25	Servant	?	Servant
Charles Potter	46	Lighthouse Engineer		
illegible "	43			Wife
illegible "	1			Daughter
Katherine McEvans	23	Servant	Norwegian	Servant
Joanna Adams	23	Servant	English	Servant