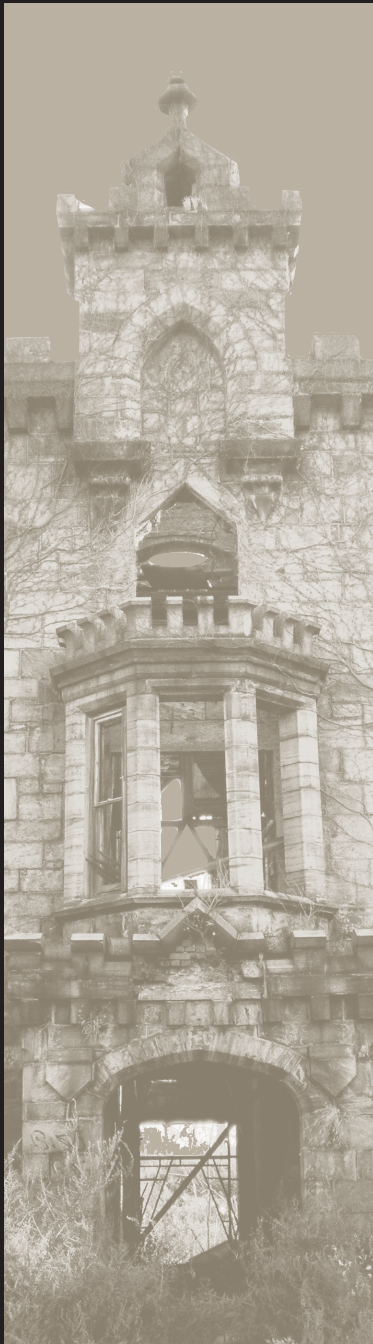


PHASE 1A ARCHEOLOGICAL SENSITIVITY ASSESSMENT FOR SOUTHPOINT PARK

ROOSEVELT ISLAND
NEW YORK, NEW YORK



PREPARED FOR
WALLACE ROBERTS & TODD, LLC
NEW YORK, NEW YORK

AND
THE TRUST FOR PUBLIC LANDS

BY

JMA architects
archeologists
planners
John Milner Associates, Inc.

NOVEMBER 2007

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NOVEMBER 2007

MANAGEMENT SUMMARY

JMA conducted a Phase 1A archeological sensitivity assessment of Southpoint Park, located on Roosevelt Island, New York, New York. The Phase 1A archeological sensitivity assessment was conducted on behalf of Wallace Roberts & Todd, LLC and the Trust for Public Lands in association with the ongoing Phase 1 Redevelopment of Southpoint Park. The purpose of the Phase 1A investigation is to identify previously recorded archaeological or historic sites that may be located within or adjacent to the property. The Phase 1A survey also evaluates the potential for there to be previously unrecorded archaeological or historic resources within the property.

Southpoint Park is a 12-acre parcel located at the southern tip of Roosevelt Island. The 12-acre parcel (the Project Area) is currently vacant land that includes the ruins of the ca. 1855 Smallpox Hospital, an area of overgrown mounds that mark the site of the ca. 1858 City Hospital (demolished in 1989), and a V-shaped mound of landfill that extends south from the original southern end of the island. The Phase 1 Redevelopment will include stabilization and/or restoration of the Smallpox Hospital ruin, landscaping work, and infrastructure improvements.

While there are no historic records of significant Native American settlements on or use of the island, it seems likely that Native Americans would have at least visited the island for specific activities. In the absence of subsequent development and disturbance, there would be potential for small prehistoric archeological sites to be present. The original southern tip of the island may have been a particularly attractive spot for fishing or a campsite because of southern exposure, views of the harbor, and views of both shorelines.

Historical accounts indicate that Roosevelt Island has been occupied since at least the 1630s but remained essentially undeveloped until the City of New York purchased the island in 1828. Since that time, the landscape of the island has been dramatically reconfigured by the construction, associated landscaping, and subsequent demolition of the nineteenth-century penal, charitable, and medical institutions.

JMA investigated the possibility that human burials associated with the City and/or Smallpox Hospitals could be located within the Project Area. Between the early 1850s and 1868 the City Cemetery was located on Ward's Island, and since 1868 has been located on Hart Island. Specific comments in administrative records confirm that the deceased from the Blackwell's (now Roosevelt) Island hospitals were regularly removed to the City Cemetery. There is no evidence that human burials are located within the Project Area.

In the opinion of JMA, a limited Phase 1B archeological investigation of the Project Area is appropriate prior to the conduct of any substantial construction or landscaping work. The purpose of the Phase 1B work would be determine if any intact land surfaces associated with (or that pre-date) the City and Smallpox Hospitals (and associated facilities) are present. The Phase 1B fieldwork should include the level yard areas located in the immediate vicinity of the Smallpox Hospital ruin (within approximately 100 feet). The Phase 1B work should also include a systematic pedestrian survey of the overgrown area between the Smallpox Hospital and former site of the City Hospital, and excavation of judgmental shovel tests in locations that appear to be undisturbed (or where the extent of previous disturbance is not readily apparent). In the opinion of JMA, no archeological investigations are warranted for the structural remains/demolition mounds that represent the former City Hospital and associated facilities because these investigations would not generate any meaningful or important information concerning the former institutional buildings. All Phase 1B work should be conducted under the supervision of a Registered Professional Archeologist.

TABLE OF CONTENTS

Management Summary

List of Tables

List of Figures

List of Photographs

1.0	INTRODUCTION.....	1
1.1	Purpose and Goals of the Investigation.....	1
1.2	Project Location and Description.....	1
2.0	BACKGROUND RESEARCH.....	2
2.1	Geology and Soils.....	2
2.2	Previously Recorded Cultural Resources.....	2
2.2.1	<i>Archeological Sites</i>	2
2.2.2	<i>Landmarks and Historic Sites</i>	4
2.3	History of the Project Area.....	4
2.3.1	<i>Minnahanonck, ca. 1500-1637</i>	5
2.3.2	<i>Varckens Eylandt (Hog Island), ca. 1637-1668</i>	6
2.3.3	<i>Manning's Island/Blackwell's Island: Agricultural Period, ca. 1668-1828</i>	6
2.3.4	<i>Blackwell's Island: Institutional Period, ca. 1828-1921</i>	8
2.3.5	<i>Welfare Island, ca. 1921-1973</i>	10
2.3.6	<i>Roosevelt Island, ca. 1973-present</i>	10
2.4	Existing Conditions.....	10
3.0	ARCHEOLOGICAL SENSITIVITY ASSESSMENT.....	12
3.1	Prehistoric-Period Archeological Sensitivity.....	12
3.2	Historic-Period Archeological Sensitivity.....	12
3.2.1	<i>Potential for Seventeenth and/or Eighteenth Century Archeological Resources</i>	12
3.2.2	<i>Potential for Archeological Resources Associated with the 19th-Century Hospitals</i>	13
3.2.3	<i>Potential for Human Remains Associated with the 19th-Century Hospitals</i>	14
3.3	Prior Ground Disturbance.....	16
3.3.1	<i>Nineteenth-Century Development of the Island</i>	16
3.3.2	<i>Previous Archeological Sensitivity and Disturbance Evaluations</i>	17
3.3.3	<i>Disturbance Summary</i>	18
4.0	CONCLUSIONS AND RECOMMENDATIONS.....	20
4.1	Summary and Conclusions.....	20
4.2	Recommendations.....	21
5.0	REFERENCES CITED.....	22

Figures

Photographs

LIST OF TABLES

Table 1. Archeological sites located within one-mile of the Project Area3

Table 2. Historic sites and landmarks located on Roosevelt Island.....4

Table 3. Reported deaths at Blackwell’s Island hospitals and internments at City Cemetery, 1860-1889.....15

LIST OF FIGURES

- Figure 1. Detail of the *Brooklyn, N.Y. and Central Park, N.Y.-N.J.* USGS (1995a, 1995b) 7.5-minute topographic quadrangles showing the location of the Southpoint Park Project Area.
- Figure 2. Aerial photograph depicting existing conditions within the Project Area with the locations of photographic views referenced in the report.
- Figure 3. Detail of the 1639 *De Manatus* map showing the approximate location of the Project Area.
- Figure 4. Detail of the 1767 Ratzen *Plan of the City of New York* showing the approximate location of the Project Area.
- Figure 5. Detail of the 1782 *British Headquarters* map showing the approximate location of the Project Area and the late-eighteenth-century landscape of the island.
- Figure 6. Detail of the 1811 Bridges *Map of the City of New York* showing the approximate location of the Project Area and steep topography along the original shoreline of the island.
- Figure 7. Detail of the 1836 Colton *Topographical Map of the City and County of New York* showing the approximate location of the Project Area.
- Figure 8. Detail of the 1856 Colton *Map of New York and the Adjacent Cities* showing the location of the ca. 1848-1858 Penitentiary (or Island) Hospital and shoals at the southern tip of the island.
- Figure 9. Detail of the 1863 Dripps *Map of New York and Vicinity* showing the location of the Project Area; this map provides the first depiction of the Charity (or City) and Smallpox Hospitals, and the Bulkead & Pier Line, at the southern tip of the island.
- Figure 10. Map from the “Record of Cholera on Blackwell’s Island” (Yale 1867), included in the *Annual Report of the Commissioners of Public Charities and Correction for the Year 1866*, showing landscaping, elevations, and the locations of structures within the Project Area.
- Figure 11. Detail of the 1867 Peters bird’s eye drawing of *New York and Umgegend* depicting the southern tip of Roosevelt Island. This image was originally published in a German newspaper; note the absence of the City Hospital and Smallpox Hospital in the artist’s depiction.
- Figure 12. Detail of the 1868 Beers *Plan of New York and Brooklyn* showing the location of the City Hospital and shoals at the southern tip of the island.
- Figure 13. Detail of the 1872 Beers *Map of New York City and the Central Portion of Brooklyn* showing the locations of the hospitals and the Bulkead & Pier Line at the southern tip of the island.

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- Figure 14. Detail of the 1874 Viele *Topographical Atlas of the City of New York* showing the locations of the hospitals and steep topography along the original shoreline of the island.
- Figure 15. Detail of the 1876 Loudan *Bird's Eye View of New York City* depicting the southern tip of Roosevelt Island. This image was originally published in a London newspaper; note the absence of the Smallpox Hospital in the artist's depiction.
- Figure 16. Map of Blackwell's Island from the 1879 Bromley *Atlas of the Entire City of New York* showing the locations of structures within the Project Area.
- Figure 17. Detail of the 1879 Galt & Hoy bird's eye drawing of *The City of New York* showing artistic representations of buildings within the Project Area.
- Figure 18. Map of Blackwell's Island from the 1885 Robinson *Atlas of the City of New York* showing the locations of structures within the Project Area.
- Figure 19. Detail of the ca. 1900 *Bird's Eye View of Manhattan and Adjacent Districts, New York City* showing artistic representations of buildings within the Project Area.
- Figure 20. Historic aerial photograph (Fairchild 1924) showing structures within the Project Area and the early-twentieth-century landscape of the island.
- Figure 21. Detail of the 1954 *Welfare Island Plot Plan* prepared by the New York City Department of Hospitals showing the locations of buildings within the Project Area.
- Figure 22. Late-nineteenth-century stereoscopic photograph of the Smallpox Hospital on Roosevelt Island; from the Picture Collection of the New York Public Library.
- Figure 23. Early-twentieth-century artist's depiction of the southern tip of Roosevelt Island (Pettit 1902); from the Picture Collection of the New York Public Library.
- Figure 24. Early-twentieth-century photograph of the nurses' dormitory (former Smallpox Hospital); from the NYC10044 Timeline of Island History. <http://nyc10044.com/timeln/timeline.html>.
- Figure 25. Nineteenth-century illustrations of the original shoreline (above) and construction of the sea wall (below) on Roosevelt Island; from the Picture Collection of the New York Public Library.

LIST OF PHOTOGRAPHS

- Photograph 1. The Smallpox Hospital ruin; view to the east.
- Photograph 2. Detail of the front-façade main entrance of the Smallpox Hospital; view to the east.
- Photograph 3. Yard, road, and shoreline west of the Smallpox Hospital; view to the north.
- Photograph 4. Detail of the yard area west of the Smallpox Hospital ruin; view to the north.
- Photograph 5. Yard area and roadway north of the ruin; view to the east.
- Photograph 6. Rear courtyard area east of the Smallpox Hospital ruin; view to the west.
- Photograph 7. Rear courtyard area and shoreline west of the Smallpox Hospital; view to the north-northwest.
- Photograph 8. Rubble mounds and push-piles along the shoreline east of the ruin; view to the north-northeast.
- Photograph 9. Yard area south of the ruin; view to the west. This is the original southern tip of the island.
- Photograph 10. South façade of the ruin and south yard area from the landfill mound; view to the north.
- Photograph 11. Rubble mounds represent the former site of the City Hospital; view to the east.
- Photograph 12. Rubble mounds represent the former site of the City Hospital; view to the southeast.
- Photograph 13. The central portion of the former site of the City Hospital; view to the west.
- Photograph 14. The northern portion of the former site of the City Hospital; view to the west.
- Photograph 15. North façade of the Strecker Memorial Laboratory (foreground), with mounds representing the former site of the City Hospital, and the Manhattan skyline (rear); view to the west.
- Photograph 16. North façade of the NRHP-Listed Strecker Memorial Laboratory; view to the south.
- Photograph 17. Detail of the north façade of the Strecker Memorial Laboratory; view to the south.
- Photograph 18. Rear (south) façade of the Strecker Memorial Laboratory; view to the north-northeast.
- Photograph 19. Emergency subway exit within the Project Area; view to the north.
- Photograph 20. V-shaped area of landfill at the southern tip of the island; view to the south.
- Photograph 21. Elevation of landfill area from the original southern tip of the island; view to the south-southeast.

Photograph 22. Eastern shoreline of the landfill area; view to the north.

Photograph 23. Western shoreline of the landfill area; view to the north.

1.0 INTRODUCTION

1.1 PURPOSE AND GOALS OF THE INVESTIGATION

JMA conducted a Phase 1A archeological sensitivity assessment of Southpoint Park, located on Roosevelt Island, New York, New York. The Phase 1A archeological sensitivity assessment was conducted on behalf of Wallace Roberts & Todd, LLC and the Trust for Public Lands. The Phase 1A investigation was performed in association with the ongoing Phase 1 Redevelopment of Southpoint Park.

The purpose of the Phase 1A investigation is to identify previously recorded archaeological or historic sites that may be located within or adjacent to the property. The Phase 1A survey also evaluates the potential for there to be previously unrecorded archaeological or historic resources within the property. All research and report preparation were conducted in accordance with the New York City Landmarks Preservation Commission's *Guidelines for Archaeological Work in New York City* and the New York Archaeological Council's *Standards for Cultural Resources Investigations and the Curation of Archaeological Collections* (NYAC 1994), recommended for use by the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP).

1.2 PROJECT DESCRIPTION AND LOCATION

Southpoint Park is a 12-acre parcel located at the southern tip of Roosevelt Island (Figure 1). The 12-acre parcel (the Project Area) is currently vacant land that includes the ruins of the ca. 1855 Smallpox Hospital, an area of overgrown mounds that mark the site of the ca. 1858 City Hospital (demolished in 1989), and a V-shaped mound of landfill that extends south from the original southern end of the island (Figure 2).

In 2003, the State of New York and the Roosevelt Island Operating Corporation requested that the Trust for Public Lands (TPL) lead an effort to create a conceptual plan for the redevelopment of Southpoint Park. TPL has initiated the Phase 1 Redevelopment of Southpoint Park (the Project). The Phase 1 Redevelopment will include: stabilization and/or restoration of the Smallpox Hospital ruins for public access; design and installation of a pedestrian and vehicular circulation system; development of a landscape strategy, the phased removal of invasive species, and the construction of new landscapes appropriate for the character of the new park; the possible location of an interim performance space; stabilization and access to the shoreline; design and installation of a water's edge promenade and/or park area; and the installation of a comfort station. The precise designs, locations, and scopes of these elements are ongoing.

2.0 BACKGROUND RESEARCH

2.1 GEOLOGY AND SOILS

Roosevelt Island is located in the East River parallel to the eastern shoreline of Manhattan between approximately 46th Street and 86th Street. The island is an approximately 1.75-mile-long outcrop of Fordham gneiss, which is the oldest bedrock formation in New York City (Isachsen et al. 2000:47-49; Schubert 1968:86). Roosevelt Island is located approximately equidistant from the eastern shoreline of Manhattan and Astoria, Queens.

The *New York City Reconnaissance Soil Survey* (NYCSSF 2005) identifies the soils for the entirety of Roosevelt Island as Laguardia-Central Park-Pavement & buildings complex, 0 to 8 percent slopes (Map Unit 252). These soils are described as:

Nearly level to gently sloping areas of urbanized till plains that have been cut and filled with natural soil materials and construction debris; a mixture of anthropogenic soils that vary in artifact content¹, with 15 to 49 percent of the surface covered by impervious pavement and buildings; located in Central Park in Manhattan (NYCSSF 2005:20).

The present shoreline, topography, and surface soils on Roosevelt Island reflect the sequence of quarrying, filling, grading, construction, and demolition that has occurred on the island from the 1840s through the present. This history of landscape alteration for the Project Area is described in Sections 2.3 and 3.3 of this report.

2.2 PREVIOUSLY RECORDED CULTURAL RESOURCES

2.2.1 Archeological Sites

Sources reviewed by JMA to identify previously reported archeological sites on Roosevelt Island included:

- the site files of the New York State Museum (NYSM);
- the site files of the NYS Office of Parks, Recreation and Historic Preservation (OPRHP);
- the reports bibliography and site files of the Landmarks Preservation Commission (NYCLPC 2007);
- early-twentieth-century references concerning the archeology of New York City (e.g., Beauchamp 1900; Bolton 1920, 1922, 1934; Parker 1920; Skinner 1915, 1920);
- reports from previous cultural resources projects (e.g., Geismar 1985; HPI 1989; LBA 1998); and,
- syntheses of regional prehistory (e.g., Cantwell and Wall 2001; Funk 1976; Ritchie 1971, 1980).

The inventories maintained by the NYSM, OPRHP, and LPC do not record any previously identified archeological sites on Roosevelt Island. The inventories maintained by these agencies include four previously recorded Native American archeological sites located within one mile of the Project Area (Table 1). One of these sites is located on the eastern shoreline of Manhattan, one is in Brooklyn, and the other two are in Queens.

¹ The *New York City Reconnaissance Soil Survey* uses the term ‘artifact content’ to denote the presence of “human created or altered materials [such as] construction debris, coal ash, garbage, etc.” (NYCSSF 2005:11). In this sense, artifact content is not intended to be indicative of significant archeological deposits or features.

Table 1. Archeological sites located within one-mile of the Project Area.

Site Identifier	Site Name	Time Period	Description	Distance from Project Area
NYSM 4061	ACP NYRK NO#	unknown prehistoric	traces of occupation	~1500 feet W
NYSM 3613	ACP KNGS NO#	unknown prehistoric	traces of occupation	~4500 feet SSE
NYSM 4538	ACP QUNS NO#	unknown prehistoric	Village	~1 mile E
NYSM 4537	ACP QUNS 14	unknown prehistoric	burial site	~1 mile E

The NYSM, OPRHP, and LPC inventories do not include any sites on Roosevelt Island. Earlier sources imply that Native Americans likely occupied the island – although there is no indication of any major settlements. In the early-twentieth century, archeologists recorded the former locations of Native American sites in New York City (e.g., Bolton 1920, 1922 1934; Skinner 1920). It was recognized at the time that many of these sites were being (or would be) destroyed by urban development and construction activities. These early references provide the best documentation of the locations of Native American settlements in the city.

In *Indian Paths in the Great Metropolis*, Roosevelt Island is identified as “Station 112” in the index of “stations” [Native American archeological sites] in the city:

112. MINNAHANONCK. Blackwells island. The island was owned and perhaps occupied by natives of the Marechkawick or Brooklyn chieftaincy (Bolton 1922:238).

In *New York City in Indian Possession*, Bolton makes repeated mention of the islands in the East River: “From the fact that all the nearby islands in the East River were owned by the Mareckawick group of the Canarsee [and] ... Their business of fishing and oystering extended up the East river to Blackwells and Wards islands” (1920:268, 271-272). These passages suggest that the Native American inhabitants of the region would have been very familiar with Roosevelt Island and may have made regular visits or stops along its shores.

The sketch map of Manhattan in *The Archeological History of New York* (Parker 1920:626) depicts “traces of occupation” (NYSM Site 4061) along the eastern shoreline of the island between approximately 46th Street and 70th Street, opposite the southern half of Roosevelt Island. These indications for traces of occupation seem to be derived from historical accounts and speculation regarding the locations of Native American habitations:

On the east shore of the island ... there were apparently desirable sites for Indian occupancy, such as Kips bay, Turtle bay; and doubtless along the bluffs facing Blackwells island could have been found by interested observers in years gone by, the sites of fishing camps (Bolton 1922:67).

Other sites located on the shorelines of Queens, and Brooklyn opposite (or near) Roosevelt Island include: “traces of occupation” along the southern bank and outlet of Newtown Creek in Brooklyn (NYSM Site 3613; Parker 1920); a village site and burial site near Crescent Street in Long Island City (NYSM Sites 4537 and 4538; Bolton 1934:150; Parker 1920:672); the Sunwick site, consisting of “shell deposits and a few objects” on the East River at Gibbs Point (OPRHP Site A08110.0001000; Bolton 1922:238); and the site at Hallets Point (formerly Sanford’s Point) in Astoria, located opposite the northern tip of Roosevelt Island, which included a “shell heap ... [and] early and modern relics” (NYSM Site 4535; OPRHP Site A08110.000099; Bolton 1934:150; Parker 1920:672).

2.2.2 Landmarks and Historic Sites

JMA reviewed the National Register of Historic Places (NRHP), State Register of Historic Places (SRHP) and the New York City Landmarks Preservation Commission (LPC) inventory of New York City Landmarks to identify historically significant properties located in or near the Project Area. There are seven structures located on Roosevelt Island (or that were located on Roosevelt Island prior to being demolished) that are both NRHP-Listed and designated NYC Landmarks (Table 2); the NRHP-Listed and NYC Landmark Queensboro Bridge (or 59th Street Bridge) also passes over Roosevelt Island north of the Project Area.

Table 2. Historic sites and landmarks located on Roosevelt Island.

OPRHP Identifier	Site Name	Construction Date	Description	Distance from Project Area
90NR00633	Smallpox Hospital	ca. 1854-1856	Ruin	within Project Area
90NR00628	City Hospital	ca. 1858-1860; demolished 1989	former hospital; demolished 1989	within Project Area
90NR00634	Strecker Memorial Laboratory	Ca. 1892	former pathology lab	within Project Area
90NR00625	Blackwell House	ca. 1796-1804	Clapboard farmhouse	~3200 feet NNE
90NR00627	Chapel of the Good Shepherd	ca. 1888-1889	Church	~3800 feet NNE
90NR00632	The Octagon	Ca. 1839	former lunatic asylum	~1.36 miles NNE
90NR00630	The Lighthouse	Ca. 1842	Lighthouse	~1.69 miles NNE

The historic and architectural significance of the structures listed in Table 2 are well-documented (e.g., Cavaglieri 1970; Dolkart 1998; Kramer 1971; LBA 1989; Rosebrock et al. 1971a, 1971b, 1971c, 1971d, 1971e, 1971f) and not repeated in detail within this report. Three of the properties listed in Table 2 are located within the Project Area. The Smallpox Hospital is presently a ruin, although some stabilization work was conducted during the 1990s. The Strecker Memorial Laboratory building was recently renovated and now houses an electrical substation (LBA 1998). The City Hospital complex formerly occupied most of the northern portion of the Project Area; its former location is now represented by massive overgrown push-piles and mounds of rubble and structural debris. The City Hospital was subject to a Historic American Buildings Survey (HABS) recordation and photo-documentation (LBA 1989) prior to being demolished in 1989.

2.3 HISTORY OF THE PROJECT AREA

JMA reviewed both written and cartographic documents relating to historical development of Roosevelt Island. JMA personnel conducted research for the Project at the New York City Landmarks Preservation Commission, Municipal Archives at City Hall Library, and the New York Public Library Maps Division. Historical and archival sources examined for the Project included:

- Burrows and Wallace (1999) *Gotham, A History of New York City to 1898*;
- I.N. Phelps Stokes *Iconography of Manhattan Island* (Stokes 1922, 1926);
- the *WPA Guide to New York City* (GCFWP 1939);
- *Lights and Shadows of New York Life; or the Sights and Sensations of the Great City* (McCabe 1872);
- *New York and Its Institutions 1609-1871* (Richmond 1871); and,
- the *Annual Reports of the Commissioners of Public Charities and Correction* for the years 1860-1889 (CPCC 1861-1892).

Historic maps examined by JMA for the Project included:

- the 1639 *De Manatus* map (Vingboons 1639)(Figure 3);
- the 1767 Ratzen *Plan of the City of New York in North America* (Figure 4);
- the 1782 *British Headquarters* map (Stevens 1900)(Figure 5);
- the 1811 Bridges *Map of the City of New York and Island of Manhattan* (Figure 6);
- the 1836 Colton *Topographical Map of the City and County of New York* (Figure 7);
- the 1842 Moorse map of *New York and Vicinity*;
- the 1856 Colton *Map of New York and the Adjacent Cities* (Figure 8);
- the 1863 Dripps *Map of New York and Vicinity* (Figure 9);
- the 1867 Peters bird's eye drawing of *New York and Umgegend* (Figure 11);
- the 1868 Beers *Plan of New York and Brooklyn* (Figure 12);
- the 1872 Beers *Map of New York City and the Central Portion of Brooklyn* (Figure 13);
- the 1874 Viele *Topographical Atlas of the City of New York* (Figure 14);
- the 1876 Loudan *Bird's Eye View of New York City, New York* (Figure 15);
- the 1879 Bromley *Atlas of the Entire City of New York* (Figure 16);
- the 1879 Galt & Hoy bird's eye drawing of *The City of New York* (Figure 17);
- the 1885 Robinson *Atlas of the City of New York* (Figure 18);
- the 1892 Sanborn *Insurance Maps of the City of New York*;
- the ca. 1900 *Bird's Eye View of Manhattan* (Anonymous 1900)(Figure 19);
- a 1924 aerial photograph (Fairchild 1924)(Figure 20); and,
- the 1954 *Welfare Island Plot Plan* prepared by the City of New York Department of Hospitals (Figure 21).

2.3.1 Minnahanonck, ca. 1500-1637

Lenape (or Delaware) groups of Native Americans occupied the Lower Hudson Valley and coastal areas of New York during the Late Woodland and Early Contact Periods (Burrows and Wallace 1999; Cantwell and Wall 2001:120; Goddard 1978; Snow 1980:96). Within New York City, close to eighty Lenape habitation sites have been documented, along with the locations of agricultural fields and a network of trails that connected the individual settlements (Burrows and Wallace 1999:6; Grumet 1995:26). The islands in the East River (i.e., Roosevelt Island, Ward's Island, and Randall's Island) are believed to have been occupied or at least claimed by the Mareckawick (or Marechawick) group of the Canarsee, who generally occupied Brooklyn and possibly parts of southern Manhattan (Bolton 1920:238-240). According to Bolton (1922:238) and most subsequent sources (e.g., GCFWP 1939), the Native American name for Roosevelt Island was Minnahanock. Stokes (1922:86, 89) states that Minnahanock was actually the name for Randalls Island, but has erroneously been assigned to Blackwells (Roosevelt) Island. The origins and resolution of this argument are unclear.

In the early-seventeenth century, the Mareckawick occupied a village in Brooklyn (see Figure 3; Vingboons 1639) and practiced fishing and oystering in the East River, including the waters around Roosevelt and Wards Islands (Bolton 1920:272). The government of Holland formally established the colony of New Netherlands in 1614. Dutch colonists began to settle in increasing numbers at New Amsterdam (the small Dutch fort at the southern tip of Manhattan) in 1624 (Burrows and Wallace 1999:19-21). In 1637 the Mareckawick chiefs (or sachems) Numers and Seyseys sold Minnahanock/Roosevelt Island (together with Wards Island) to the Colony's Director Wouten Van Twiller of the Dutch West India Company (Bolton 1920:272, 361; GCFWP 1939:423).

2.3.2 *Varckens Eylandt (Hog Island), ca. 1637-1668*

The Dutch appear to have settled upon and begun farming Roosevelt Island immediately upon (perhaps prior to) the acquisition of the island by Van Twiller from the Mareckawick. The Dutch named the island Varckens Eylandt (or Hog Island), which likely reflected the island's use as pasture for swine; the name may also have referred to the shape of the island, with steep sides and an arched center, which likely resembled the spine of the animal (i.e., a hogsback) (Geismar 1985:23). The 1639 *De Manatus* map (Figure 3) depicts the island and identifies it as Varkens Eylandt. While this map does depict the fort, windmills, houses, and *bouwerries* (farms) on the southern tip of Manhattan and the Indian village of Mareckawick in Brooklyn, no structures or other features are indicated on Roosevelt Island. Although the Manatus map does not depict any occupation on the island, historical sources indicate that the island was actively farmed and perhaps included a residence by the early 1640s:

Varckens (now Blackwells) Island was being farmed before January 24, 1639 by Jan Claessen Alteras, and we learn from a report of referees, of August 30, 1642, that improvements were made on the island by him. The island is laid down on the Castello-Manatus map of 1639 (Stokes 1922:89).

In 1652, the Dutch West India Company authorized Peter Stuyevstant (then Director of the Colony) to grant Hog Island to Francis (or Francois) Fyn (Stokes 1922:127). It does not appear that Fyn occupied the island, but instead leased the island to a tenant (Laurens Duyts) who historical records indicate made unspecified improvements:

Matheus de Vos, as attorney for Francois Fyn, patentee of Varckens (now Blackwells) Island, is granted on attachment [on November 28, 1658] against whatever property on the island may belong to Laurens Duyts, of Holstein, a farmer ... for his default on his lease ... Duyts was punished and banished from the province for selling his wife into immoral slavery, and for gross immoralities committed by himself (Stokes 1922:193).

The Dutch West India Company surrendered the New Netherlands colony to the English in 1664 (Burrows and Wallace 1999). Varckens Island was among the properties claimed by the English Crown at the conclusion of the conflict with the Dutch (Stokes 1922:267).

2.3.3 *Manning's Island/Blackwell's Island: Agricultural Period, ca. 1668-1828*

On January 28, 1668 the English Governor Richard Nicolls patented Varkens Island to Captain John Manning (GCFWP 1939:423; Stokes 1922:267, 334). In July of 1673, during the third Anglo-Dutch War, a Dutch squadron under the command of Admiral Cornelius Evertson attacked New York. The English Governor (then Francis Lovelace) was in Connecticut at the time and Fort James was ill-prepared for the attack. The acting commander of the British garrison, Captain John Manning, surrendered the fort and colony to the Dutch. The colony was returned to British rule as part of peace negotiations in February, 1674 (Burrows and Wallace 1999:82-83). As punishment for his conduct in surrendering New York to the Dutch, the disgraced Captain Manning was banished to his island, which briefly was referred to by his name. A report dated August 7, 1678 from the Reverend Charles Wolley to the Governor (then Major Edmund Andros) issued upon the Governor's return to New York from a visit to New England, included the following account of Manning's Island:

... the fort of New York, which is one of the strongest and best situated in Garrisons in the North parts of America, and was never taken but once through the default of one Captain Manning, ... for which he was condemned an exile to a small Island from his name, call'd Manning's Island [Blackwells Island], where I have been several times with the said Captain, whose entertainment was commonly a Bowl of Rum-Punch (reproduced in Stokes 1922:315).

After John Manning's death in 1685, ownership of the island passed to his stepdaughter Mary Manningham and her husband Robert Blackwell, after which point the island was known as Blackwell's Island (GCFWP 1939; Rosebrock et al. 1971d; Stokes 1922:334; Ratzen 1767; Stevens 1900; Bridges 1811; see Figures 4-6). Between 1685 and 1828 the island was owned and occupied by four generations of the Blackwell family.

During the Revolutionary War, Blackwell's Island figured prominently in a series of exchanges during the siege of New York. Jacob Blackwell (then owner of the island) was a Patriot. On September 2, 1776 the island was occupied by the British. The journal of an English officer (Captain Archibald Robertson) records that on September 3, 1776:

This Night the Rose man of war came up the E. River w^t 20 flat Boats she Anchored under Blackwells Island received Sev^l Shot in com^g past the Batt^{ys} – A Picquet sent to take Possessⁿ of Blackwell's Island for her Protection (reproduced in Stokes 1926:1007).

The American forces reclaimed Blackwell's Island on the following day (September 4, 1776):

... the English left their post on Blackwells Island, the rebels occupied it in force, and so strong, that the outposts on the main shore were exposed to a continuous fire, which even the great battery could not silence (Stokes 1926:1007).

During peace negotiations near the end of the Revolutionary War (July of 1782), arrangements were made for American naval prisoners being held on British ships to be released on Blackwell's Island during the day to escape the heat of the ships' holds (Stokes 1926:1150). Soon after the war ended, the Blackwell family attempted to sell the island. A real estate notice published in the *New York Packet* on March 8, 1784 provides the most detailed available description of the landscape and improvements on the island prior to the nineteenth century:

For Sale, that agreeably situated Island, known by the name Blackwell's Island, on the East River, about four miles from this city. It is without exception one of the most healthful situations in this state. It is remarkable for the number of fish and fowl that is caught there in the different seasons. There is on premises, two small Dwelling Houses, a Barn, Bake and Fowl Houses, Cyder [sic] Mill; a large Orchard containing 450 of the best grafted fruit trees... There is a number of the best stone quarries, ready cleared to begin breaking immediately; and the subscriber [seller] has a complete set of quarry tools, with all his farming utensils and stock to dispose of at the same time. The Island abounds with running springs of most excellent water. The above contains 107 acres, eight of which are in salt meadow, and the whole has been considerably improved with manure, and in good fence (reproduced in Stokes 1926:1187).

Despite this rosy description, the Blackwell family was unable to sell the island. The NRHP-Listed Blackwell House, the oldest standing structure on the island, was built ca. 1796-1804. James and Elizabeth Blackwell sold the island in 1823 to James Bell, who passed away before satisfying the terms of the sale (Rosebrock et al. 1971d).

2.3.4 *Blackwell's Island: Institutional Period, ca. 1828-1921*

On July 19, 1828 the City of New York purchased the island from the Blackwell family (Richmond 1871: 524). The City acquired the island for the purpose of constructing various penal and welfare institutions:

the Corporation of this City have recently purchased Blackwell's Island ..., at the price of 32,500 dollars as a site for a new Penitentiary. The island contains about 100 acres of land, and a great quantity of building stone. This location for a prison is considered judicious (Stokes 1926:1678).

Early institutions on the island included a penitentiary (constructed 1832; see Colton 1836; Figure 7), lunatic asylum (1835-1839), and almshouses for both sexes (1847). By the end of the nineteenth-century, there were seven major institutions on the island with a population of approximately 7,000 (Geismar 1985:3). Construction of these institutions also initiated the dramatic reconfiguration of the landscape of the island. Most of the institutional buildings, as well as the seawall and areas of landfill, were constructed by convicts and inmates using local gneiss – also quarried on the island by convicts and inmates (LBA 1989; McCabe 1872; Richmond 1871).

Island Hospital/Charity Hospital/City Hospital

The southern tip of the island (i.e., the Project Area) was occupied exclusively by hospital facilities during the nineteenth and early-twentieth centuries. In 1848 the first hospital was erected on the island called the Penitentiary Hospital (later Island Hospital), which was destroyed by fire in February 1858 (see Colton 1856; Figure 8). The Penitentiary Hospital was replaced by a new Island Hospital (see Dripps 1863; Figure 9), renamed the Charity Hospital in 1866, and later known as the City Hospital after 1892 (Richmond 1871:527-528; Rosebrock et al. 1971b), which formerly occupied most of the northern portion of the Project Area. Construction of the new hospital began a few months after the fire that destroyed the previous hospital:

The cornerstone of the Charity Hospital, erected on site of the one so happily destroyed [i.e., the Penitentiary/Island hospital that burned in February of 1858], was laid with appropriate services July 22, 1858... This magnificent structure is of stone quarried from the island by convicts, and is the largest hospital about New York, and probably the largest on the continent. It is a three and a half story, 354 feet long, and 122 wide (Richmond 1871:528).

The Charity/City Hospital was a massive, four-and-one-half-story Second Empire-style stone structure consisting of a mansard-roofed central pavilion, perpendicular main block, and two transverse wings flanking the main block at either end (Cavaglieri 1970; LBA 1989; Rosebrock et al. 1971b). Between the 1860s and 1880s the hospital served increasing numbers of the impoverished, and became associated with the treatment of sexually transmitted diseases and other socially unacceptable conditions:

This Hospital, though open for the reception of patients of every variety of disease, is largely devoted to the treatment of syphilis. During the past year, more than 2,000 cases have been admitted. It will soon be necessary to erect a building for the degraded class who are the victims of this disease, for they affect injuriously the character of the Hospital. Patients of pure morals are reluctant to be treated here, though carefully separated from those afflicted with syphilis. Aside from this objection, it is to be deprecated that so noble a building, the most conspicuous object in the harbor of New York, should be regarded as the shelter of a scandalous disease (CPCC 1868:18).

City Hospital opened a school for female nurses in 1877, and operated a training school for male nurses between 1887 and 1903 (Rosebrock et al. 1971b). In its later years the hospital was regarded as one of the premier medical institutions in the country.

The Smallpox Hospital and Fever Pavilions

The Smallpox Hospital, designed by noted architect James Renwick, Jr., was constructed 1854-1856 on the southern tip of the island:

A short distance below this main Hospital [i.e., the Charity Hospital], situated on the extreme southern point of the island, stands the Small-Pox Hospital, erected in 1854. It is a three story stone edifice, 104 by 44 feet, in the English Gothic order, with accommodations for one hundred patients, and cost \$38,000... It is a fine building, well arranged and admirably conducted, designed not only for paupers, but for pay patients, where, secluded from friends to whom they might impart their disease, they receive every attention that science and the most skillful nursing can bestow (Richmond 1871:529).

The Gothic Revival-style building replaced a series of “old wooden shacks” that burned in January of 1857. The facility was first known as Riverside Hospital, and was built and designed to isolate smallpox patients from patients and inmates in the other institutions on the island (Rosebrock et al. 1971a). To better control outbreaks of contagious diseases during the 1860s, the City also constructed “fever pavilions”, near the Smallpox Hospital:

The Fever Hospitals, devoted principally to the treatment of typhus and ship fever, consist of two wooden pavilions, each 100 feet in length, one of which is assigned to either sex... They are situated on the eastern side of the Island, between the Charity and Small-Pox Hospitals... The grounds around these institutions are very inviting, the view rich and diversified, and everything, save the countenance of the suffering patients, wears an air of cheerfulness (Richmond 1871: 530).

The arrangement and evolution of the hospitals, fever pavilions, and other associated outbuildings are depicted on nineteenth-century maps and bird’s eye perspective drawings (see Figures 10-21). The Smallpox Hospital served its intended function until 1885, at which time the Health Department transferred the patients from the hospital to a facility on North Brothers Island. After 1886, the renovated structure housed the dormitory for the Nurses Home and Training School (CPC 1916). Two additional wings (that flank the original structure) were added to the hospital-turned-dormitory in 1903-1905 (Rosebrock et al. 1971a). An undated late-nineteenth-century photograph documents the original appearance of the building – prior to the installation of the two later wings (see Figure 22).

Strecker Memorial Laboratory

The Strecker Memorial Laboratory is located in the northern portion of the Project Area. The NRHP-listed stone and brick building, designed by Withers & Dickson, was built in 1892 to provide services to City Hospital. The structure included an autopsy room, a morgue, blood bank, animal house, and chemistry and serology laboratories (Rosebrock et al 1971c). The structure was extensively renovated by the NYC Transit Authority for use as an electrical substation in 1996.

2.3.5 Welfare Island, ca. 1921-1973

The City changed the name of the island to Welfare Island in 1921. The name reflected the reputation for overcrowding, violence, and corruption for which the prison and workhouse had become known (Fletcher 1995). In 1935 the penitentiary on Rikers Island opened. After relocating the inmates from the penitentiary on Welfare Island to Rikers Island, the infamous nineteenth-century prison was demolished. In 1939, the Welfare Hospital for Chronic Diseases (now Goldwater Memorial Hospital) was built on the former site of the penitentiary, immediately north of the Project Area (LBA 1998). By this time, City Hospital included 18 buildings, could accommodate 1000 beds with a resident staff of 53 doctors, and was considered to be one of the finest hospitals in the country (GCFWP 1939:422). The hospital closed in 1957, after which the structure decayed into ruin (Rosebrock et al. 1971b).

By the 1960s all of the former institutions on Welfare Island had been relocated to new facilities and the nineteenth-century structures not already demolished were in a state of decay. At this time the City began to pursue various redevelopment schemes for the island. In 1969 the New York State Urban Development Corporation (UDC) entered into a 99-year-long lease with the City to manage the redevelopment of the island with residential and commercial facilities (Geismar 1985:27; Fletcher 1995).

2.3.6 Roosevelt Island, ca. 1973-present

Welfare Island was again renamed in 1973 to Roosevelt Island in honor of the former president Franklin Delano Roosevelt. The UDC undertook the redevelopment of the island according to a master plan which envisioned an automobile-free community with apartments and stores along a single central thoroughfare, with public spaces and parks at both the northern and southern ends of the island (Fletcher 1995). While the northern part of the island has been extensively redeveloped since the late 1960s, the Project Area has remained abandoned and slowly developed its present state of hazardous ruins, demolition rubble, and overgrown vegetation.

Noted modernist architect Louis I. Kahn was commissioned to design a memorial to former president Roosevelt, which was his last major work before his death in 1974 (Heuvel 1998; Leigh 2005). The 2.8-acre memorial design included landscaping, an open air vault, and commemorative statues or busts located within the V-shaped area of landfill located at the southern tip of the island, within the southern portion of the Project Area.

Prior to being demolished in 1989, the former City Hospital was listed on the NRHP and subject to a detailed HABS (Historic American Buildings Survey) recordation and photo-documentation (LBA 1989; Rosebrock et al. 1971b). In 1996, the NYC Transit Authority rehabilitated the Strecker Memorial Laboratory building for use as an electrical substation (LBA 1998).

2.4 EXISTING CONDITIONS

JMA's Principal Archeologist conducted a field reconnaissance of the Project Area on December 5, 2006. The purpose of the field reconnaissance was to document existing conditions within the Project Area, identify previously disturbed areas, and evaluate the potential for intact archeological deposits to be present. In general, the Project Area is vacant land that includes heavily overgrown areas, open areas, ruins, and massive mounds of demolition rubble. Photographs 1-23 document existing conditions within the Project Area (see Figure 2).

The ruins of the ca. 1855 Smallpox Hospital designed by James Renwick are located within the central portion of the Project Area (Photographs 1-10). The ruins are in a state of ongoing deterioration but retain their original Gothic character (Photographs 1, 2, 6 and 10) and provide a focal point of interest for the property. The yard areas immediately adjacent to the ruin (within approximately 25-75 feet) are relatively level and open (Photographs 3, 4, 5, 7, and 9). Large mounds and push-piles of stone and demolition rubble (Photograph 8) define the eastern and northern perimeters of the yard area around the ruin.

The portion of the Project Area that extends north from the Smallpox hospital ruin is heavily overgrown (Figure 2) and marked by undulating and irregular mounds of rubble and push-piles (Photographs 11-14). These mounds and push-piles represent structural debris from the demolition of the City Hospital and associated outbuildings.

The NRHP-Listed/New York City Landmark Strecker Memorial Laboratory is located in the northeastern portion of the Project Area (Figure 2; Photographs 15-18). The structure was renovated in 1996 by the NYC Transit Authority for use as an electrical substation. The areas surrounding the Strecker Laboratory are marked by irregular mounds and push-piles of demolition debris. An emergency subway exit is located within the Project Area southwest of the Strecker Memorial Laboratory (Photograph 19).

The southern portion of the Project Area (approximately 3 acres) is a V-shaped area of landfill that extends south from the Smallpox Hospital Ruin (Photographs 20-23). This area is maintained as open lawn (Figure 2; Photograph 20). The landfill area is elevated approximately 20 feet above the surrounding grade at the northern end (Photograph 21). The rip-rap seawalls along both shorelines (Photographs 22 and 23) are typical of the condition of the seawalls for the entire length of the Project Area.

3.0 ARCHEOLOGICAL SENSITIVITY ASSESSMENT

3.1 PREHISTORIC-PERIOD ARCHEOLOGICAL SENSITIVITY

The NYSM, OPRHP, and LPC site inventories do not report any previously recorded archeological sites on Roosevelt Island. These inventories do record the locations (or former locations) of numerous Native American archeological sites located opposite Roosevelt Island on the eastern shoreline of Manhattan and along the shoreline in Queens. In the early 1600s the Mareckawick of Brooklyn claimed the islands in the East River and referred to Roosevelt Island as Minnahanonck (Bolton 1922); it is unclear if they actually occupied or frequently visited the islands that they claimed.

The 1784 real estate notice included in Section 2.3.3 provides the most detailed description of the pre-development landscape of the island. The island is described as a lush and fertile place with salt-marshes along the shoreline. The description states that the island is “remarkable for the number of fish and fowl that is caught there in the different seasons... [and] The Island abounds with running springs of most excellent water” (Stokes 1926:1187). All of these qualities would have been attractive to the Native Americans who occupied the adjacent shorelines in Manhattan and Queens, and who regularly fished and canoed across the waters of the East River.

While there are no records of significant Native American settlements on or use of the island, it is almost certain that Native Americans would have at least visited the island for specific activities. In the absence of subsequent development and disturbance, there would be potential for (at minimum) small, ephemeral prehistoric archeological sites to be present. The original southern tip of the island may have been a particularly attractive spot for fishing or a campsite because of southern exposure, views of the harbor, and views of both shorelines.

3.2 HISTORIC-PERIOD ARCHEOLOGICAL SENSITIVITY

3.2.1 *Potential for Seventeenth and/or Eighteenth-Century Archeological Resources*

Historical sources indicate that Dutch tenant farmers raised pigs and crops, and likely resided, on the island as early as the 1630s (see Section 2.3.2). The British captain John Manning resided on the island during the 1670s. Between 1685 and 1828 the island was owned and occupied by four generations of the Blackwell family. The island was occupied by the British during the Revolutionary War (see Section 2.3.3). A real estate notice published in the *New York Packet* on March 8, 1784 provides a detailed description of the landscape and improvements on the island at the end of the eighteenth century (Stokes 1926:1187; see Section 2.3.3). Some of The structures, orchards, and other features described in the 1784 real estate notice are depicted on the 1767 Ratzen plan and 1782 *British Headquarters* map (Figures 4 and 5). The eighteenth-century Blackwell farm was located in the central and northern parts of the island; the 1767 and 1782 maps do not depict any structures or landscape improvements in the southern part of the island (including the Project Area).

It is reasonable to assume that the British military forces who occupied the island during September of 1776 made use of the buildings depicted on the 1782 map, although no sources provide specific information regarding the precise locations of troops on the island. There is no direct historical or cartographic evidence for early historic-period structures or occupation at the southern tip of the island.

3.2.2 *Potential for Archeological Resources Associated with the Nineteenth-Century Hospitals*

There is a considerable literature in historical archeology devoted to both nineteenth-century institutions and nineteenth-century medical practices, although institutions on Roosevelt Island and practices related to epidemic/contagious disease in New York have not been the subject of previous archeological study. Archeological remains associated with the hospitals on Roosevelt Island could theoretically include foundation/structural remains associated with the various outbuildings, tents, pavilions, and other features depicted on historic maps; shaft features (possibly filled with artifacts or debris) related to the building's plumbing/wastewater systems; or buried yard surfaces with artifact scatters and/or rubbish heaps that date to the period of the hospitals' operation.

Historical sources, historical maps, and administrative records provide a relatively complete record of the number, locations, configuration, and details of nineteenth-century institutional buildings located on Blackwell's Island. Prior to 1828, the only buildings on the island were confined to the central part of the island, in the vicinity of the Blackwell farm (Figures 4-6). The 1836 Colton map (Figure 7) depicts the penitentiary near the southern end of the island. The ca. 1848-1858 Penitentiary (or Island) Hospital is depicted within the Project Area, south of the penitentiary, on the 1856 Colton map (Figure 8). The 1863 Dripps map provides the first depiction of the City (or Charity) and Smallpox Hospitals at the southern tip of the island (Figure 9).

The 1869 *Annual Report of the Commissioners of Public Charities and Correction* includes an appraisal of all of the buildings on the island owned by the Department of Public Charities and Corrections (CPCC 1870:354). Buildings within the Project Area in 1869 included the Charity Hospital (appraised value \$470,000), gas and boat houses (\$7,000), small pox hospital (\$110,000), and two fever hospitals (\$14,000). The locations of the major institutional buildings, roadways, landscape elements, as well as "fever pavilions", "cholera tents", and other outbuildings are depicted on an 1866 map of Blackwell's Island included in the 1867 *Annual Report* (Yale 1867; see Figure 10). The 1879 Bromley atlas and 1885 Robinson atlas (Figures 16 and 18) also provide detailed depictions of the locations and footprint of major institutional buildings and outbuildings within the Project Area. Historical and administrative sources also provide more specific details for many of the structures formerly located on the island. For instance, the "fever pavilion" structures were generally located around the perimeter of the island, parallel to the shorelines. As described by Richmond (1871:530; see Section 2.3.4), these buildings were 100-foot-long, single-story, wooden frame structures.

Bird's eye perspective drawings of New York City, which were very popular during the late-nineteenth century, also depict the arrangement and appearance of buildings on the island. The 1867 Peters drawing and 1876 Loudan drawing both provide a general sense of the locations and styles of buildings on the island (Figures 11 and 15); however, the Smallpox Hospital (built ca. 1855) is not included on either of these drawings, which suggests that these images do not provide reliable depictions of structures. These drawings were both originally published in Europe, and likely relied on dated map sources for the configuration of buildings. The 1879 Galt & Hoy perspective drawing (Figure 17) is considerably more detailed, and the locations of institutional structures, landscaping, and outbuildings is consistent with maps from the same general period. The 1900 bird's eye drawing, a 1902 post card, and early-twentieth-century photograph of the nurses dormitory (former Smallpox Hospital) depict the southern end of the island at the turn-of-the-twentieth century (Figures 19, 21, and 24).

During the first half of the twentieth century, the Project Area was densely developed with additions and outbuildings associated with the City Hospital and Nurses School (i.e., the former Smallpox Hospital). The 1920s aerial photograph (Fairchild 1924; see Figure 20) displays the congested nature of structures within the Project Area,

and the general lack of vegetation or obvious landscaping. The 1954 NYC Department of Hospitals plan of the island (Figure 21) depicts the structures located within the Project Area immediately preceding the closing of City Hospital in 1957. Of particular interest is the addition of a kitchen and dining hall off the rear (east) side of the “Old Nurses Home” (former Smallpox Hospital) – this area is currently open and overgrown with no obvious structural remains from the former addition or wing.

The *Annual Reports of the Commissioners of Public Charities and Correction* for the years between 1860 and 1889 (CPCC 1861-1892) provide some data concerning plumbing facilities associated with the various institutions on the island, and therefore inform the likelihood that shaft features may be present. The 1784 real estate notice included in Section 2.3.3 states that “the Island abounds with running springs of most excellent water” (Stokes 1926:1187); by 1860 water was delivered to the island from the Croton Water Supply via two pipes laid across the bottom of the East River (CPCC 1869:29; Geismar 1985:39). The larger institutions had indoor plumbing facilities and various upgrades, maintenance, and/or replacement of such facilities are frequently discussed or accounted for in the *Annual Reports*. For instance, in 1865 thirty new “water closets of an approved pattern” were installed within the City Hospital for a cost of \$1,175 (CPCC 1866:62-67).

The most detailed description of plumbing facilities is provided in a special report within the *Annual Report* for 1866 entitled “Record of Cholera on Blackwell’s Island” (Yale 1867) that describes the origin, spread, timeline, and response to a particularly dramatic outbreak in the Almshouse, Workhouse, and Lunatic Asylum – all of which were located on the northern half of the island. Because of the nature of symptoms and means of transmission, wastewater facilities feature prominently in the report. The report describes the locations of water closets within or adjacent to the various institutions, and describes the means by which wastes were piped and directly discharged into the East River:

The privies in these pavilions are of the same pattern as those in all the buildings of the Asylum, viz.: a trough, covered by a seat, containing water, which, whenever necessary, is allowed to escape by removing a plug; the contents passing into a sewer which connects the river, a few yards distant from the Pavilion (Yale 1867:132).

These facilities which discharged directly to the river may have persisted until 1881, at which point the City enacted a health ordinance that forbade the dumping of privy, sink, or cistern materials in either the Hudson or East Rivers (Geismar 1985:39). While the pavilions and associated privies described in this (above) passage were not located within the Project Area, they are perhaps representative of the facilities that were typical for these various “pavilions” and “tents” associated with the larger institutional buildings. The privies mentioned in the 1866 cholera outbreak report are described as being connected to sewers; any artifacts deposited in such features would likely have been discharged to the river, unless they were deposited at the time the features were abandoned.

3.2.3 *Potential for Human Remains Associated with the Nineteenth-Century Hospitals*

Because of the nature of the institutions on the island, as well as common practices at nineteenth-century institutions (especially those for the indigent) to dispose of the dead in the cheapest most-convenient manner, there is a reasonable concern that human burials associated with the City and/or Smallpox Hospitals could be located within the Project Area². To investigate this issue, JMA reviewed the *Annual Reports of the Commissioners of Public*

² This concern was expressed to JMA’s Principal Archeologist (Patrick J. Heaton) by Daniel Pagano (Urban Archeologist, New York City Landmarks Preservation Commission) during JMA’s Phase 1A research visit to NYCLPC on December 13, 2006.

Charities and Correction (CPCC) for the years 1860-1889 at the New York City Municipal Reference Library (City Hall Library) on Chambers Street.

The CPCC *Annual Reports* include financial and administrative reports from the superintendents of the various institutions on the island (and other locations); in many years, for some institutions, these reports included an enumeration of the numbers of deaths at each institution. The *Annual Reports* also include an annual statement from the Warden of the City Cemetery that (for most years) included the number of internments and for some years the number of internments received from various city hospitals and penal institutions, as well as reports on the number of convicts and inmates employed in the work of burying the dead (Table 3).

Table 3. Reported deaths at Blackwell's Island hospitals and internments at City Cemetery, 1860-1889.

Year	Reported Deaths: Blackwell's Island Hospitals ³			Reported Internments: City Cemetery ⁴			
	Island/City/Charity	Smallpox/Nervous	Fever	Island/City/Charity	Smallpox	Fever	All City Institutions
1860	208	36	-	135	29	-	2,383
1861	619	123	-	493	109	-	3,042
1862	643	56	-	281	46	-	2,128
1863	647	19	-	117	11	-	-
1864	578	105	-	-	-	-	1,946
1865	744	140	-	-	-	-	-
1866	694	29	121	-	-	-	2,043
1867	505	15	58	-	-	-	2,378
1868	449	15	39	-	-	-	2,776
1869	542	52	39	-	-	-	-
1870	662	100	68	-	-	-	2,281
1875	711	-	-	364	49	10	-
1880	375	4	-	176	-	-	-
1885	611	2	-	326	-	-	-
1889	543	20	-	222	1	-	-

For the years when comparable data are provided in the reports of the Steward of Hospitals on Blackwell's Island and Superintendent of the City Cemetery, the number of recorded deaths at each of the various hospitals on Blackwell's Island consistently exceeds the number of reported internments received from each hospital by the City Cemetery (see Table 3; CPCC 1861-1892). The most significant factor in these discrepancies is likely accounted for by families and/or congregations claiming the remains of the deceased.

³ Table 3 includes data for a sample of years between 1860 and 1889 for the hospitals located within the Project Area (i.e., at the southern end of the island): the City/Charity Hospital, Smallpox Hospital, and Fever Hospital (or Fever Pavilions). For some years, the CPCC *Annual Reports* do include deaths and internments data for other institutions managed by the Commissioners (including other institutions located on Roosevelt Island); however, JMA did not consider inclusion of these data from other institutions relevant toward evaluating the likelihood that human remains may be present within the Project Area.

⁴ The column "All City Institutions" records the number of burials received from all institutions run by the CPCC, and these data are included for those years where specific information for each institution was not available.

Between the early 1850s and 1868 the City Cemetery was located on Ward's Island. The City acquired Hart Island for use as a cemetery in 1868, where New York's potters' field has remained through the present (Berghoffen 2001). It is clear from the *Annual Reports* that the CPCC only operated a single burying ground at any given time. None of the individual institutions' reports (other than the City Cemetery) make mention of burying the deceased, nor report expenses associated with tools or labor associated with burials, nor request funds, services, or equipment for the purpose of burying the dead. In general, the nature of these reports includes such a variety of minutia and attention to detail that these expenses, had they been incurred, would have been included in the report.

A brief comment in the *Annual Report* for 1867 confirms that the deceased from the island hospitals were regularly removed to the City Cemetery:

The Commissioners in May last [1866] contracted for a small steam propeller to convey the sick of infectious disease to the hospitals on Blackwell's Island... *The same vessel carries the dead, at fixed periods, to the Public Cemetery on Ward's Island* (CPCC 1868:20, *emphasis added*).

Based on JMA's review of historical records, on-site burial of the deceased does not appear to have been a regular or approved practice at the city institutions on Roosevelt Island. It is conceivable that unreported, perhaps illicit, disposal of the dead may have occurred on the island; such burials would be the exception to the rule and if present their location cannot be predicted.

3.3 PRIOR GROUND DISTURBANCE

Archeologists working in New York have observed that historic and modern development, construction, and urban landscaping activities have in many places destroyed any prehistoric sites that may have been located in the areas they investigate. For instance, of the 17 major archeological data recovery projects undertaken in Manhattan in the 1980s, prehistoric materials were recovered during only four of these projects. In each case where archeologists identified Native American materials at these sites, all materials recovered were isolated finds recovered from areas of historic landfill or other disturbed contexts (Lenik 1992). These finds suggest that while a rare occurrence, it is possible to identify Native American archeological deposits and/or artifacts in areas where extensive urban development has previously occurred.

3.3.1 Nineteenth-Century Development of the Island

Dramatic reconfiguring of the landscape of Roosevelt Island occurred in tandem with the construction (and later demolition) of the various penal, medical, and benevolent institutions located on the island institutions throughout the nineteenth and twentieth centuries. Most of the nineteenth-century institutions were built of local gneiss quarried from the island utilizing the labor drawn from the inmates of the various penitentiaries, asylums, and almshouses:

The island originally abounded with rich quarries, most of which have now been exhausted in the erection of the princely edifices that crown its surface, a very large proportion of the toil having been performed by the convicts (Richmond 1871:531).

The original shoreline of the island and subsequent construction of the seawall are depicted in detail in nineteenth-century illustrations (see Figure 25). Hatching and topography representations on the 1767 Ratzen, 1782 *British*

Headquarters, 1811 Bridges, and 1874 Viele maps (Figures 4, 5, 6, and 14) also indicate that the rocky shoreline of the island rose steeply out of the water. The construction of a massive stone seawall (Figures 24 and 25) and extensive filling along the shoreline made the island more accessible to boats and resulted in an increase of the size of the island by approximately 40 acres:

The labor of docking, building sea wall, and the admirable grading by which the island is made to slope gradually on either side to the water brink, has all been performed by inmates of the Penitentiary and Workhouse (Richmond 1871:524-525).

The Bulkhead and Pier Line for Roosevelt Island were established during the mid-nineteenth century and are depicted on the 1863 Dripps map and 1872 Beers atlas (Figures 9 and 13), although the actual filling of these shoreline areas was ongoing through the twentieth century. The Bulkhead and Pier Line at the southern tip of the island encompassed the rocky shoals depicted on the 1639 *De Manatus*, 1767 Ratzen, 1782 British Headquarters, 1811 Bridges, 1836 Colton, 1856 Colton, and 1868 Beers maps (Figures 3-8 and 12). The perimeter of the massive V-shaped mound of landfill that extends south from the Smallpox Hospital ruin generally corresponds to the Bulkhead and Pier Line established in the mid-nineteenth-century.

3.3.2 *Previous Archeological Sensitivity and Disturbance Evaluations*

A previous archeological study conducted for the Long Island Railroad East Side Access project evaluated the potential sensitivity of a site along the East River shoreline, within the Bulkhead Line (i.e., on the landward/east side of the seawall), located approximately 750 feet north of the Queensboro Bridge (AKRF 2001:8.14). Borings conducted at this location revealed twentieth-century fill directly overlying sand and gravel river bottom sediments, with no evidence for intact, prehistoric-period land surfaces.

Other previous archeological evaluations have been conducted in the northern portion of the island, in the vicinity of the former almshouse (Geismar 1985; HPI 1989). These studies cite historical records of blasting and removing approximately 1,000 cubic yards of rock during the construction of the almshouse. Both studies conclude that despite the historical interest of the former institutions on the island, the extent of disturbance associated with the construction and demolition of the almshouse and related features precludes the possibility that intact archeological deposits could be present within these areas.

A previous Phase 1A archeological sensitivity study was performed within the Project Area for the locations of proposed high voltage feeder cable duct banks and associated manholes for the New York City Transit Authority (LBA 1998). The Phase 1A study included a review of 1940s and 1950s boring logs:

Records of borings made in the vicinity of City Hospital were acquired from the NYC Department of Design and Construction, Subsurface Division, to assist in the evaluation of archaeological sensitivity. A series of 11 borings were made in 1944 prior to the construction of City Hall Laboratory and Morgue, located just south of the Strecker Laboratory. In each of these borings, the top 5 to 10 feet (average 8 feet) consisted of fill, which was composed of sand, bricks, cinder, loam, concrete, and gravel. In some cases the fill extended to bedrock or decomposed rock, the average depth of which was 13 feet below the ground surface. Where borings encountered soil above rock, it was consistently described as compact sand and gravel ... A record of probings conducted near the East Channel seawall and dock for the extension of steam service to City Hospital, recorded fill throughout the 10-foot-deep probes in the "undeveloped" area between the

Children's Pavilion and the Stone Garage ... In addition, a recent boring along the East Road just south of the Goldwater Hospital encountered 8 feet of fill above a fine brown peaty sand that contained phone cable fragments (LBA 1998:9-14).

The previous Phase 1A study concluded that because of the extent of previous disturbance within the southern portion of the island, there was no potential for undisturbed archeological deposits to be present within or at the locations of the proposed duct banks (LBA 1998).

3.3.3 *Disturbance Summary*

The areas immediately adjacent to (within 100 feet) the Smallpox Hospital ruin are relatively level and open (Photographs 3, 4, 5, and 9) and exhibit generally fewer of the push piles and rubble mounds that are so pervasive in the vicinity of the former City Hospital and Strecker Memorial Lab. Push-piles and demolition debris along the eastern shoreline (Photograph 8) and within the tree-line north of the ruin define a perimeter for the open yard area. The yard area around the ruins also represents the former (natural) southern tip of the island (the elevated area that extends south of the ruin is entirely recent landfill).

The courtyard area located east of the central bay of the Smallpox Hospital ruin, and between the northern and southern wings, is currently vacant, open, and relatively level (Photographs 6 and 7). The 1924 aerial photograph and 1954 NYC Department of Hospitals map (Figures 20 and 21) depict the Nurses Dormitory dining hall, kitchen, and a long connecting corridor in this area. As a result of the construction and demolition of this wing/addition, the western/rear courtyard area may be more disturbed than the yard areas located to the south, east, and north of the Smallpox Hospital ruin.

Evidence for previous disturbance in the form of massive mounds of rubble and push-piles occurs across the entire northern portion of the Project Area (Photographs 11-14). This area was formerly occupied by the City Hospital near the northern perimeter of the Project Area, and numerous associated outbuildings and institutional structures were located in the area between the City Hospital and Smallpox Hospital (see Figures 20 and 21). The buildings depicted on the 1954 *Welfare Island Plot Plan* (Figure 21) were condemned in 1966; razing of these structures began in 1969. The overgrown mounds of rubble throughout the area are assumed to represent debris from the demolition of these buildings, as well as debris from the demolition of the City Hospital. It is possible that dispersed or isolated areas of undisturbed ground surface are located in the areas between and around these mounds.

Prior to its demolition in 1989, the City Hospital was subject to a detailed HABS recording (LBA 1989), so there is likely little information to be gained through archeological examination of structural remains. Moreover, the demolition of the structure appears to have been so complete that investigation of the rubble mounds and adjacent areas in the former area of the City Hospital is unlikely to result in the identification of any intact features or deposits, including deposits that pre-date the hospital. In general, the visible results of demolition within the northern portion of the Project Area are to such an extent that there is no potential for intact archeological remains within the former area of the City Hospital.

The artificially elevated, V-shaped, 3-acre area that extends south from the Smallpox Hospital ruin (Photographs 20-23) is entirely landfill. This area was formerly rocky shoals that were encompassed by the ca. 1860s pier and bulkhead line, and gradually filled during the twentieth-century. Most of this area was filled beginning in the mid-1960s using rock and spoil derived from the excavation of the subway tunnel that services the island, which extends

under the East River from Manhattan to Queens. Fill for this area was also derived from the demolition of the condemned (former institutional) buildings on the island during the 1960s, and later demolition of the City Hospital. In 1994, the Roosevelt Island Operating Corporation graded the rubble and fill in accordance with the Louis I. Kahn design for the Franklin D Roosevelt Memorial (Heuvel 1998), resulting in the present topography and open-lawn condition of the landscape. The southern part of the Project Area is entirely disturbed – there is no potential for intact archeological resources to be located within this area.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 SUMMARY AND CONCLUSIONS

There are no previously recorded archeological sites or reported Native American settlements on Roosevelt Island. While there are no historic records of significant Native American settlements on or use of the island, it seems likely that Native Americans would have at least visited the island for specific activities. In the absence of subsequent development and disturbance, there would be potential for (at minimum) small, ephemeral prehistoric archeological sites to be present. The original southern tip of the island may have been a particularly attractive spot for fishing or a campsite because of southern exposure, views of the harbor, and views of both shorelines.

Historical accounts indicate that Roosevelt Island has been occupied since at least the 1630s but remained essentially undeveloped until the City of New York purchased the island in 1828. Since that time, the landscape of the island has been dramatically reconfigured by the construction, associated landscaping, and subsequent demolition of the nineteenth-century penal, charitable, and medical institutions. In general, the history of construction and existing conditions within the Project Area suggest that the entire landscape of Roosevelt Island, including the southern end around the Smallpox and former City Hospitals, is extensively disturbed. Previous archeological reports for Roosevelt Island are limited to Phase 1A reports. Previous researchers consistently conclude that the extent of previous disturbance (in selected areas) precludes the possibility that intact archeological deposits are present, despite the obvious historical interest of the island as a whole.

Because of the nature of the nineteenth-century institutions on Blackwell's (now Roosevelt) Island there is a reasonable concern that human burials associated with the City and/or Smallpox Hospitals could be located within the Project Area. To investigate this issue, JMA reviewed administrative records and descriptive accounts related to the penal and medical institutions on the island. Between the early 1850s and 1868 the City Cemetery was located on Ward's Island, and since 1868 has been located on Hart Island. It is clear from administrative records that the City only operated a single burying ground at any given time. None of the individual institutions' administrative reports (other than the City Cemetery) make mention of burying the deceased, nor report expenses associated with burying the dead. Specific comments in administrative records confirm that the deceased from the Blackwell's Island hospitals were regularly removed to the City Cemetery. Based on JMA's review of the historical record, there is no evidence that human burials are located within the Project Area.

The areas immediately adjacent to the Smallpox Hospital ruins are relatively level, open, and exhibit generally fewer of the push piles and rubble mounds that are so pervasive in the vicinity of the former City Hospital and Strecker Memorial Lab. The yard area around the ruins also represents the former (natural) southern tip of the island (the elevated area that extends south of the ruin is entirely recent landfill). In addition to the possibility that Native American archeological deposits may be (or have once been) located in this area, historic maps depict the locations of various pavilions, tents, and outbuildings associated with the hospital and later dormitory. Archeological remains associated with the hospitals on Roosevelt Island could theoretically include foundation/structural remains associated with the various outbuildings, tents, pavilions, and other features depicted on historic maps and/or buried yard surfaces with artifact scatters and/or rubbish heaps that date to the period of the hospitals' operation.

4.2 RECOMMENDATIONS

In the opinion of JMA, a limited Phase 1B archeological investigation of the Project Area is appropriate prior to the conduct of any substantial construction or landscaping work. The purpose of the Phase 1B work would be determine if any intact land surfaces associated with (or that pre-date) the City and Smallpox Hospitals (and associated facilities) are present:

- The Phase 1B fieldwork should include the level yard areas located in the immediate vicinity of the Smallpox Hospital ruin (within approximately 100 feet). Because of the likelihood that fill and/or demolition debris deposits may be present, JMA recommends that the most efficient way to conduct this work would be machine-aided (e.g., small backhoe) excavation of test trenches in conjunction with hand-excavated excavation of shovel tests, as appropriate.
- The Phase 1B work should also include a systematic pedestrian survey of the overgrown area between the Smallpox Hospital and former site of the City Hospital, and excavation of judgmental shovel tests in locations that appear to be undisturbed (or where the extent of previous disturbance is not readily apparent).
- In the opinion of JMA, no archeological investigations are warranted for the structural remains/demolition mounds that represent the former City Hospital and associated facilities because these investigations would not generate any meaningful or important information concerning the former institutional buildings.

All Phase 1B work should be conducted under the supervision of a Registered Professional Archeologist.

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FIGURES



Figure 1. Detail of the Brooklyn, N.Y. and Central Park, N.Y.-N.J. USGS (1995a, 1995b) 7.5-minute topographic quadrangles showing the location of the Southpoint Park Project Area.



Figure 2. Aerial photograph depicting existing conditions within the Project Area with the locations of photographic views referenced in the report.

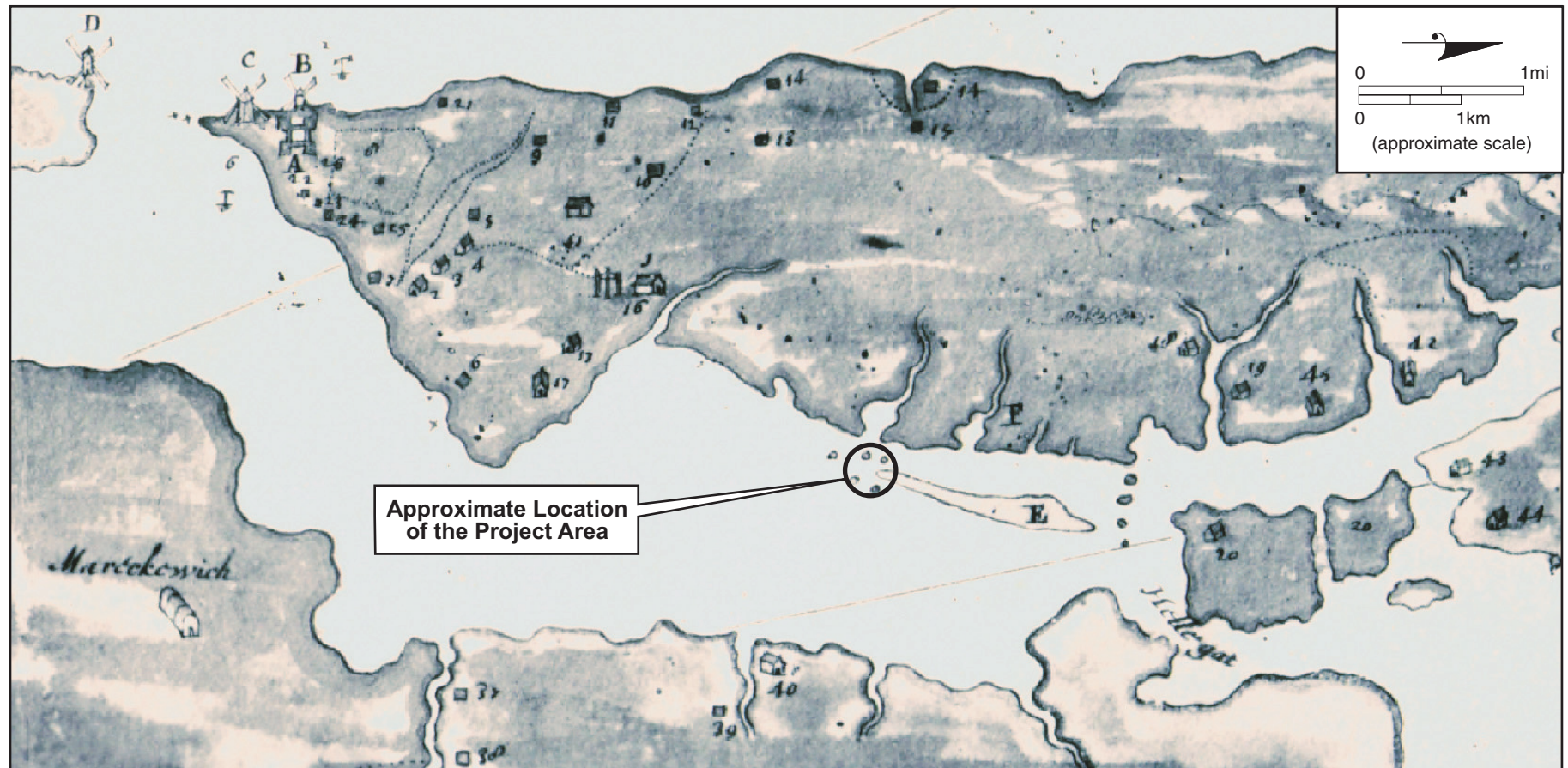


Figure 3. Detail of the 1639 *De Manatus* map showing the approximate location of the Project Area.

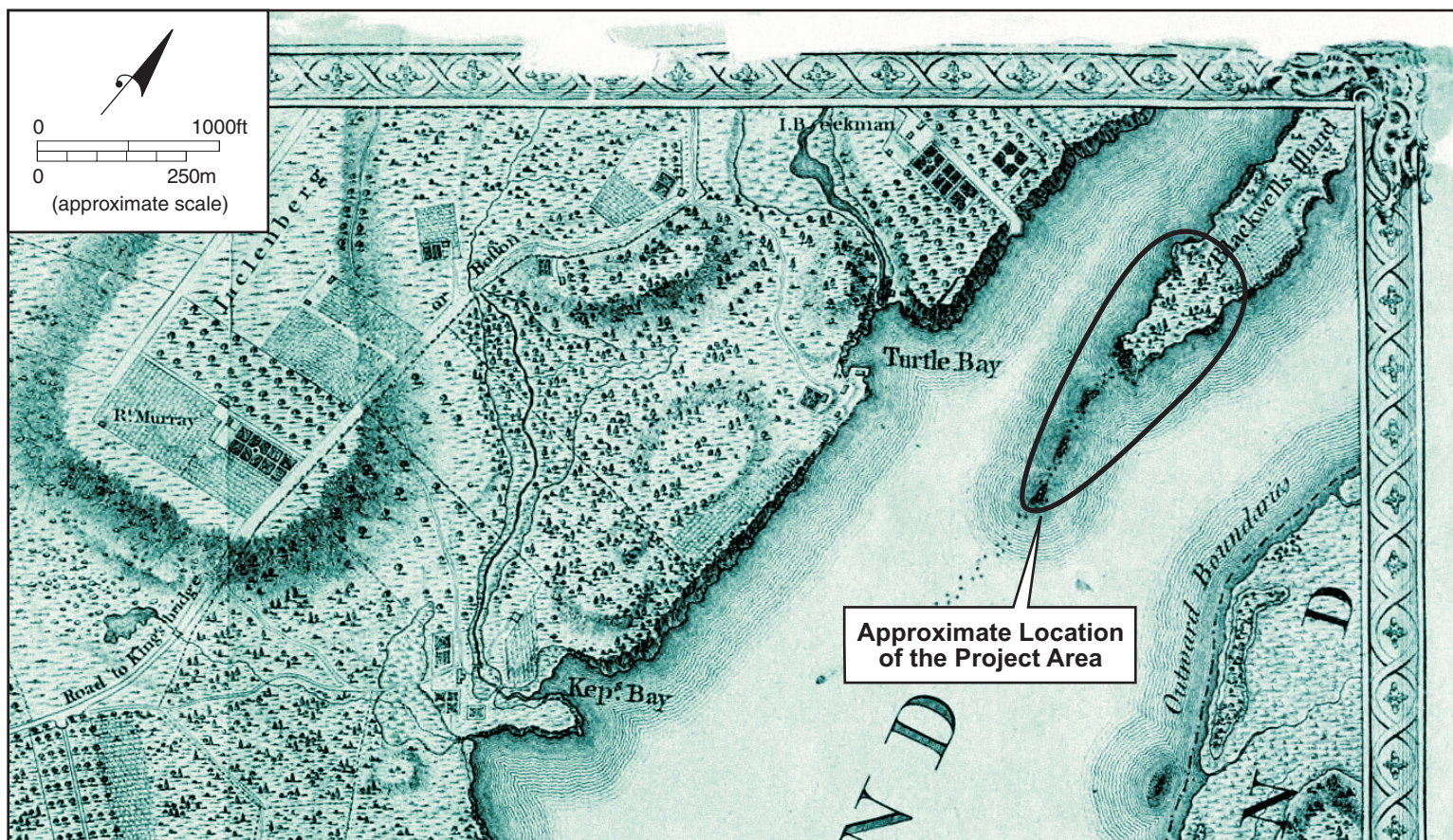


Figure 4. Detail of the 1767 Ratzen *Plan of the City of New York* showing the approximate location of the Project Area.

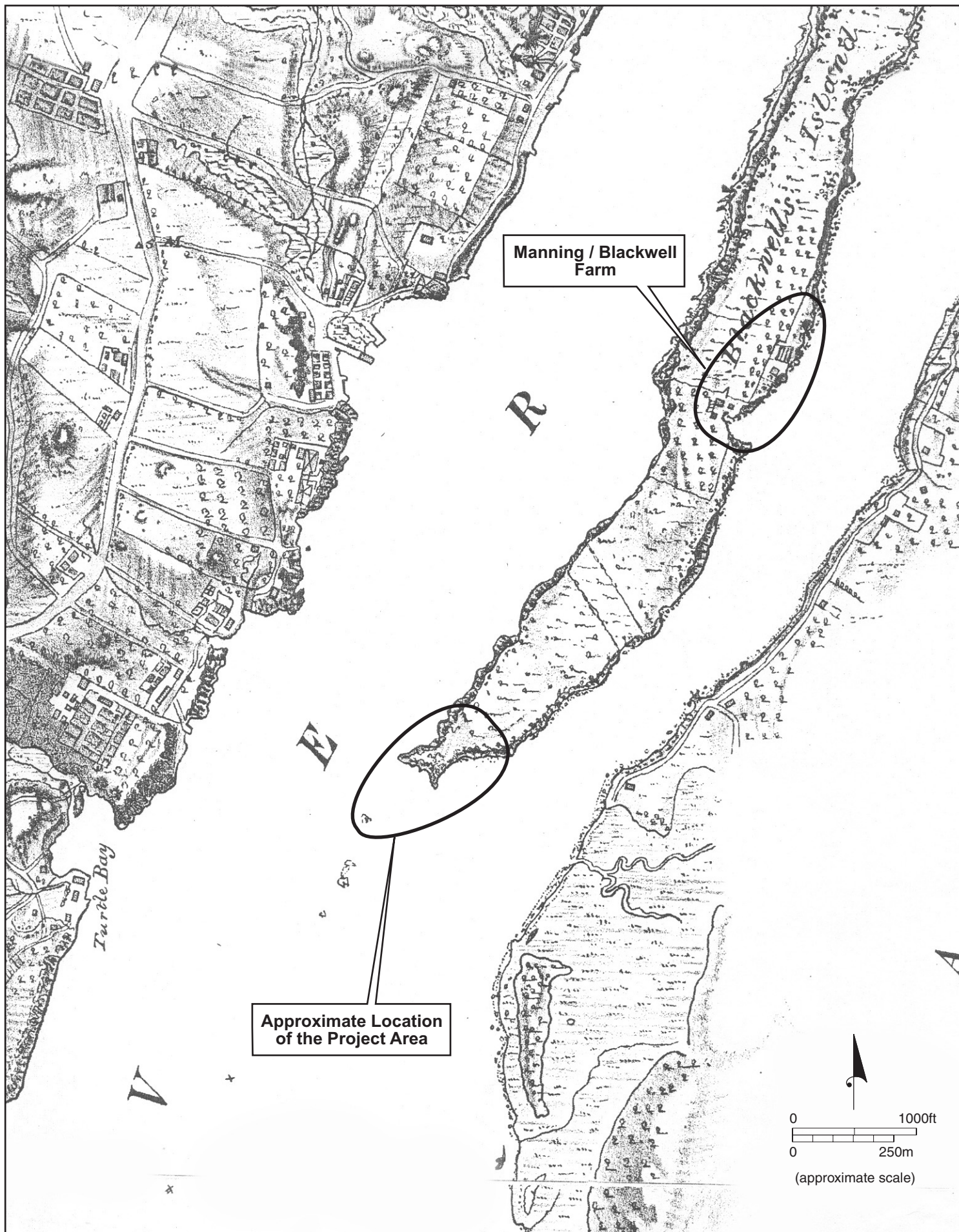


Figure 5. Detail of the 1782 *British Headquarters* map showing the approximate location of the Project Area and the late-eighteenth-century landscape of the island.

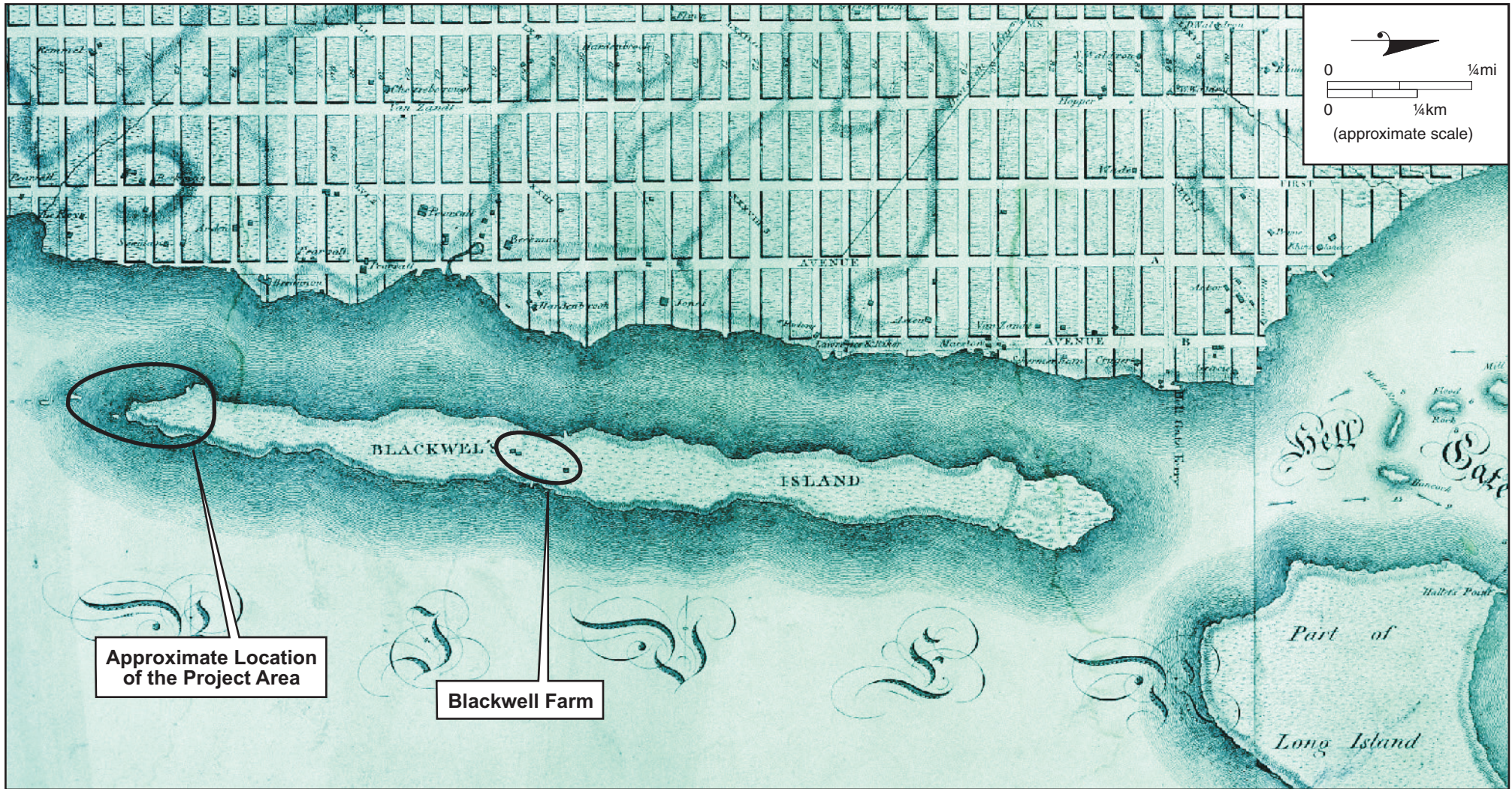


Figure 6. Detail of the 1811 Bridges *Map of the City of New York* showing the approximate location of the Project Area and steep topography along the original shoreline of the island.

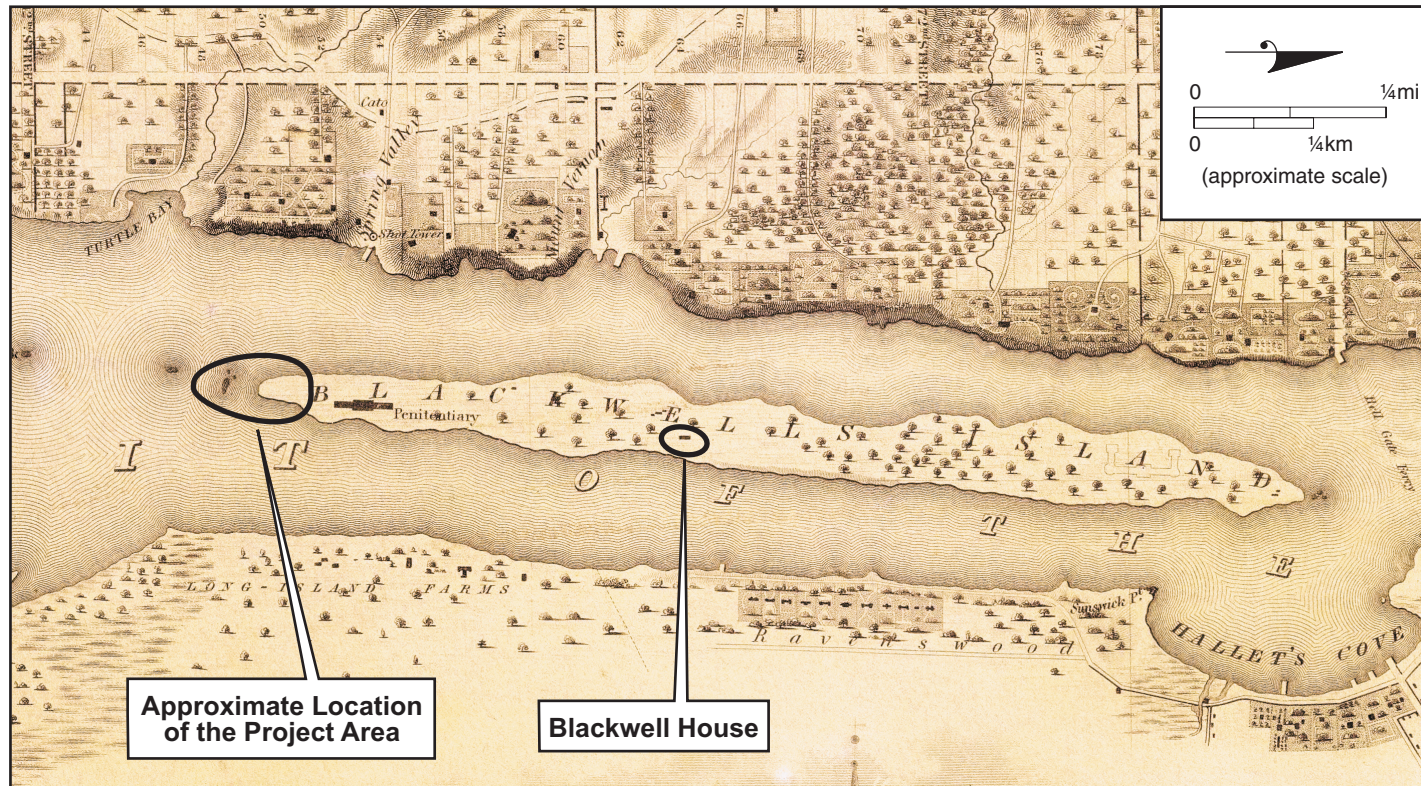


Figure 7. Detail of the 1836 Colton *Topographical Map of the City and County of New York* showing the approximate location of the Project Area.

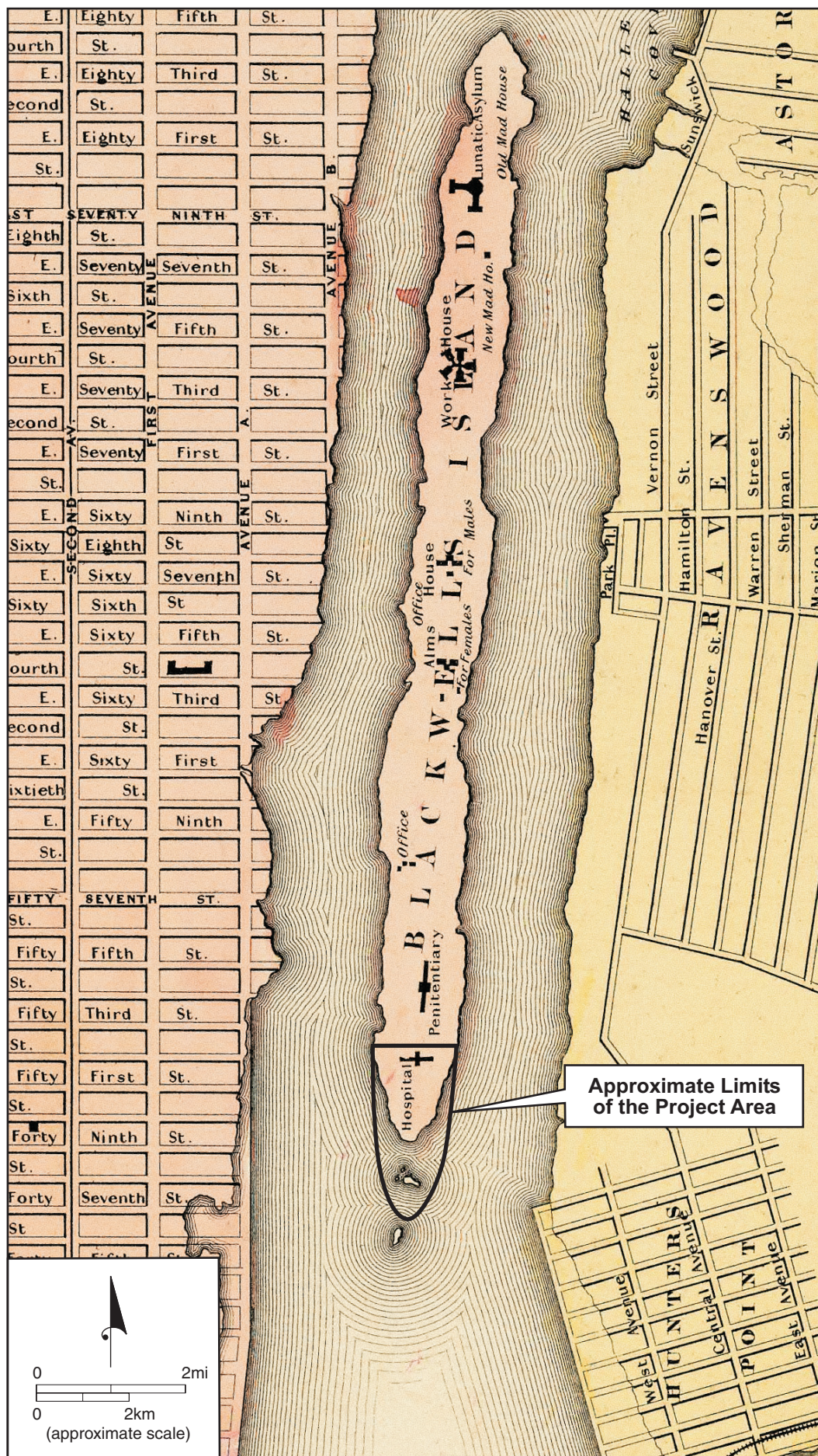


Figure 8. Detail of the 1856 Colton *Map of New York and the Adjacent Cities* showing the location of the ca. 1848-1858 Penitentiary (or Island) Hospital and shoals at the southern tip of the island.



Figure 9. Detail of the 1863 Driggs Map of New York and Vicinity showing the location of the Project Area; this map provides the first depiction of the Charity (or City) and Smallpox Hospitals, and the Bulkead & Pier Line, at the southern tip of the island.

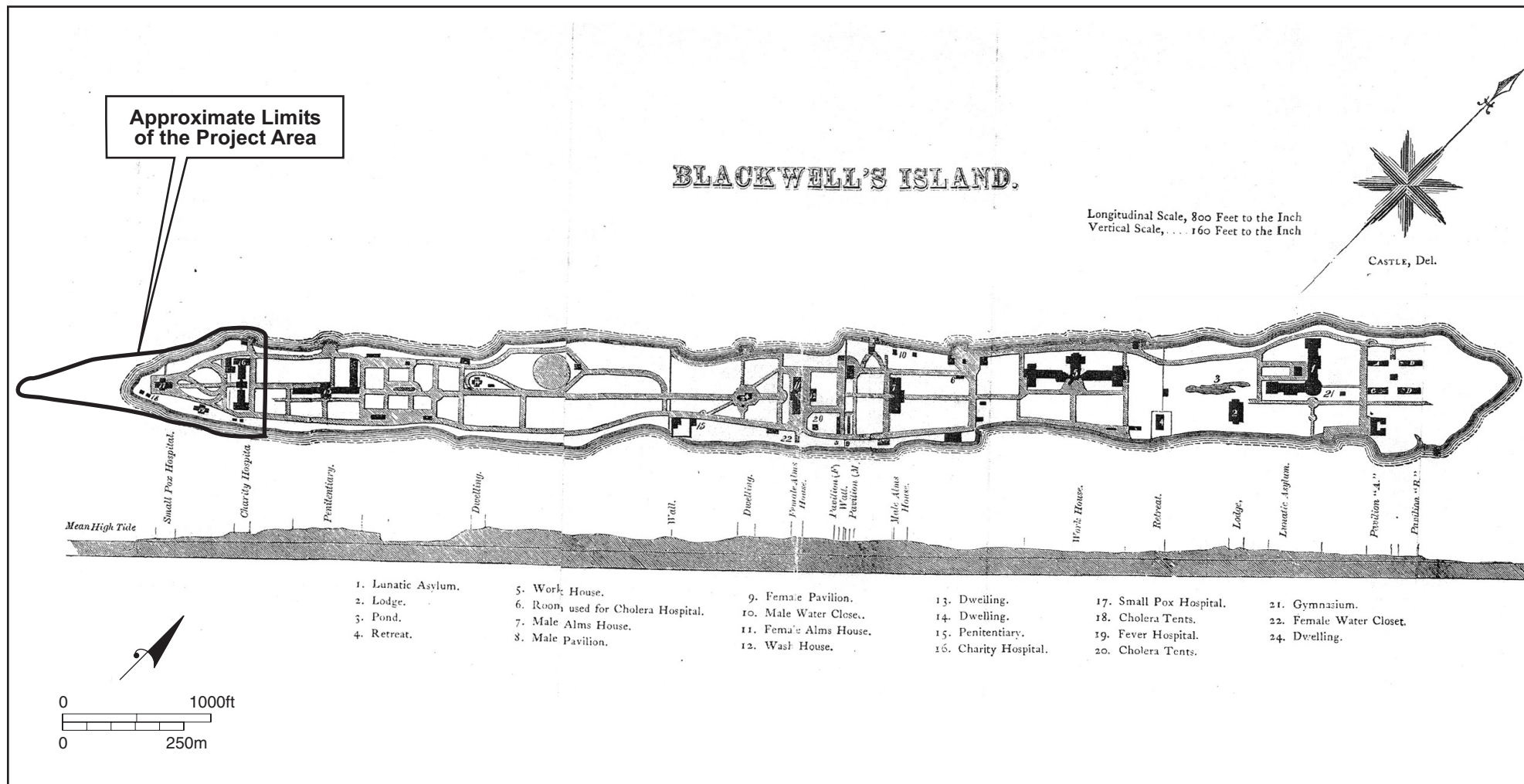


Figure 10. Map from the “Record of Cholera on Blackwell’s Island” (Yale 1867), included in the *Annual Report of the Commissioners of Public Charities and Correction for the Year 1866*, showing landscaping, elevations, and the locations of structures within the Project Area.

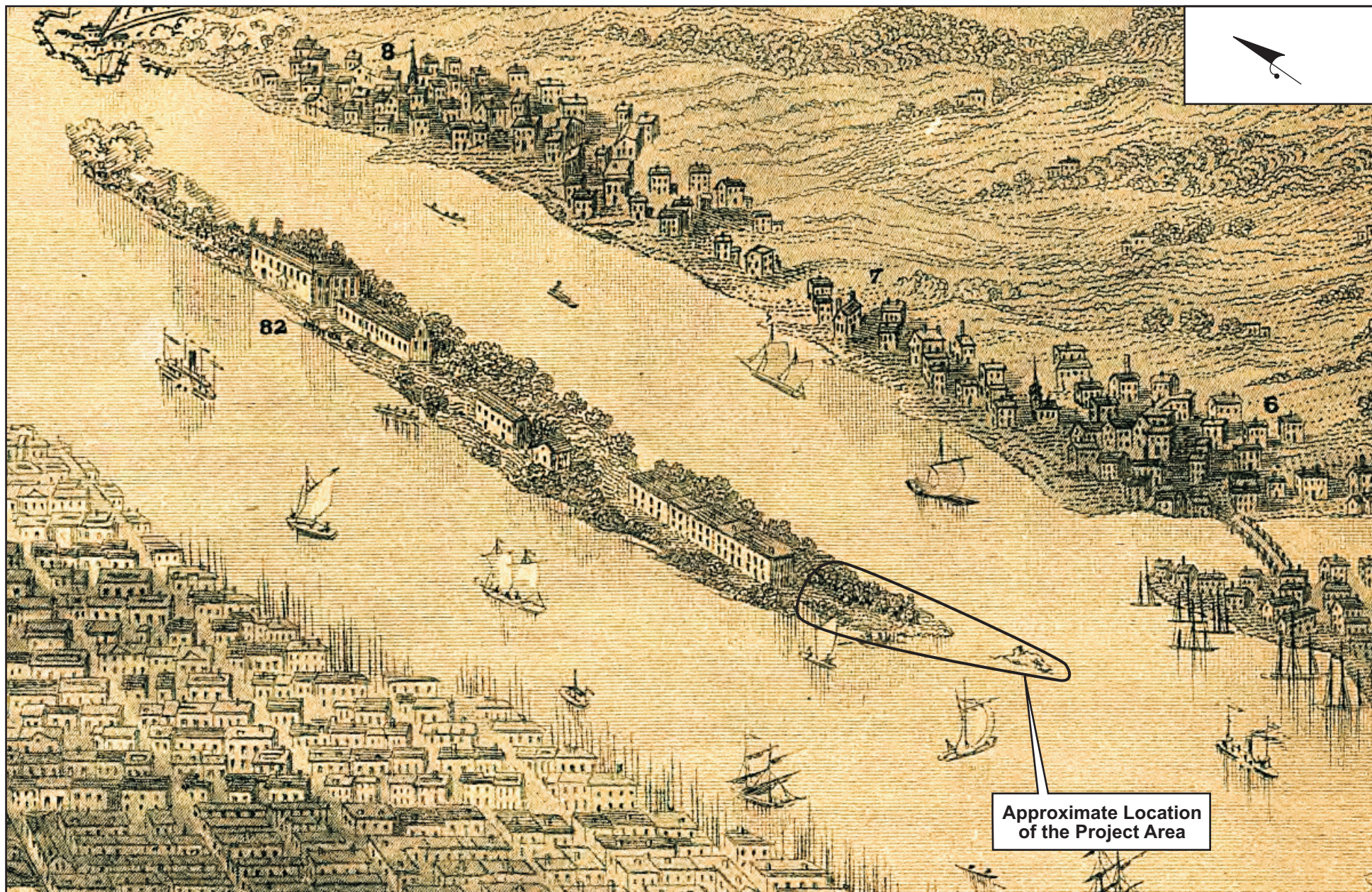


Figure 11. Detail of the 1867 Peters bird's eye drawing of *New York and Umgegend* depicting the southern tip of Roosevelt Island. This image was originally published in a German newspaper; note the absence of the City Hospital and Smallpox Hospital in the artist's depiction.

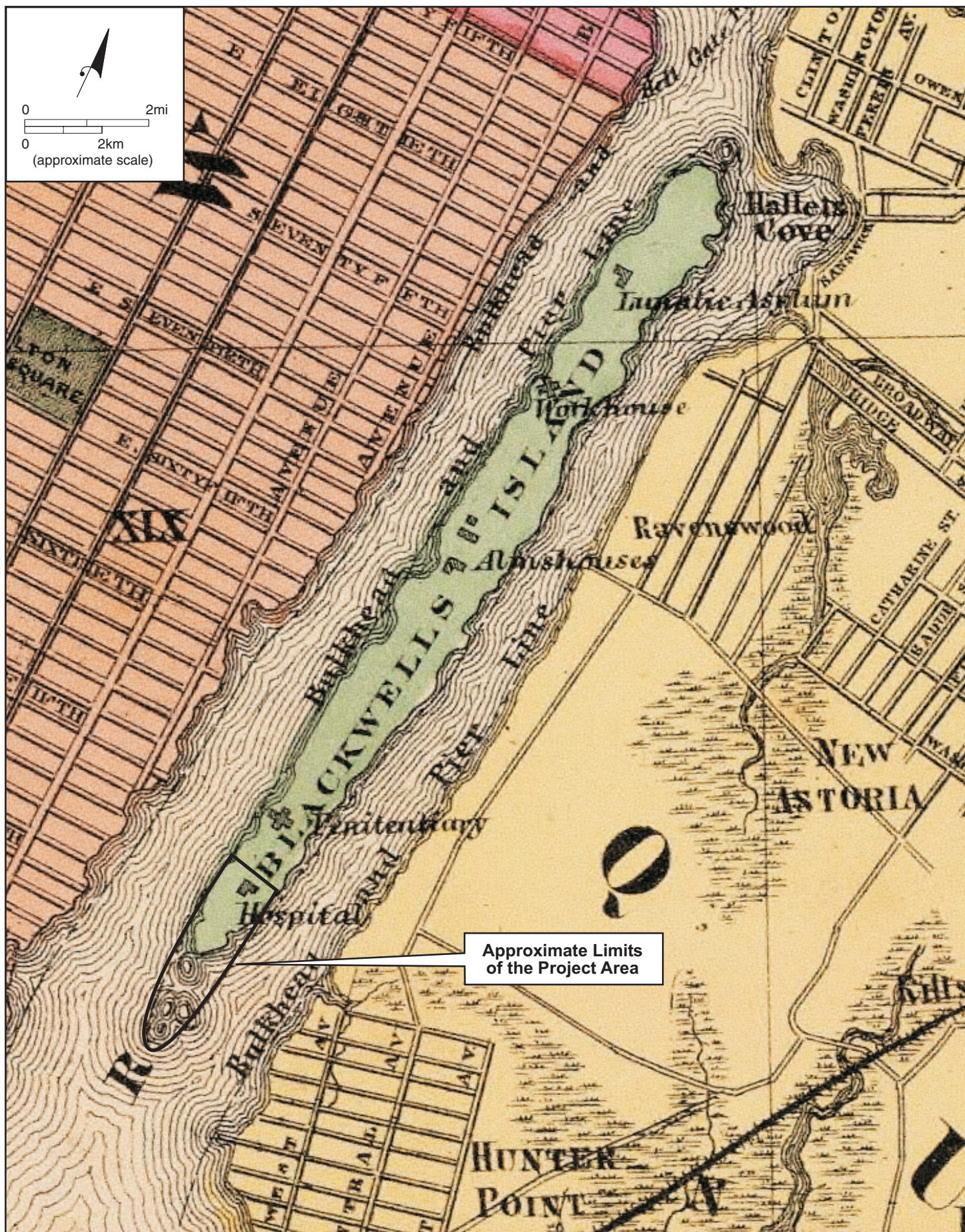


Figure 12. Detail of the 1868 Beers *Plan of New York and Brooklyn* showing the location of the City Hospital and shoals at the southern tip of the island.

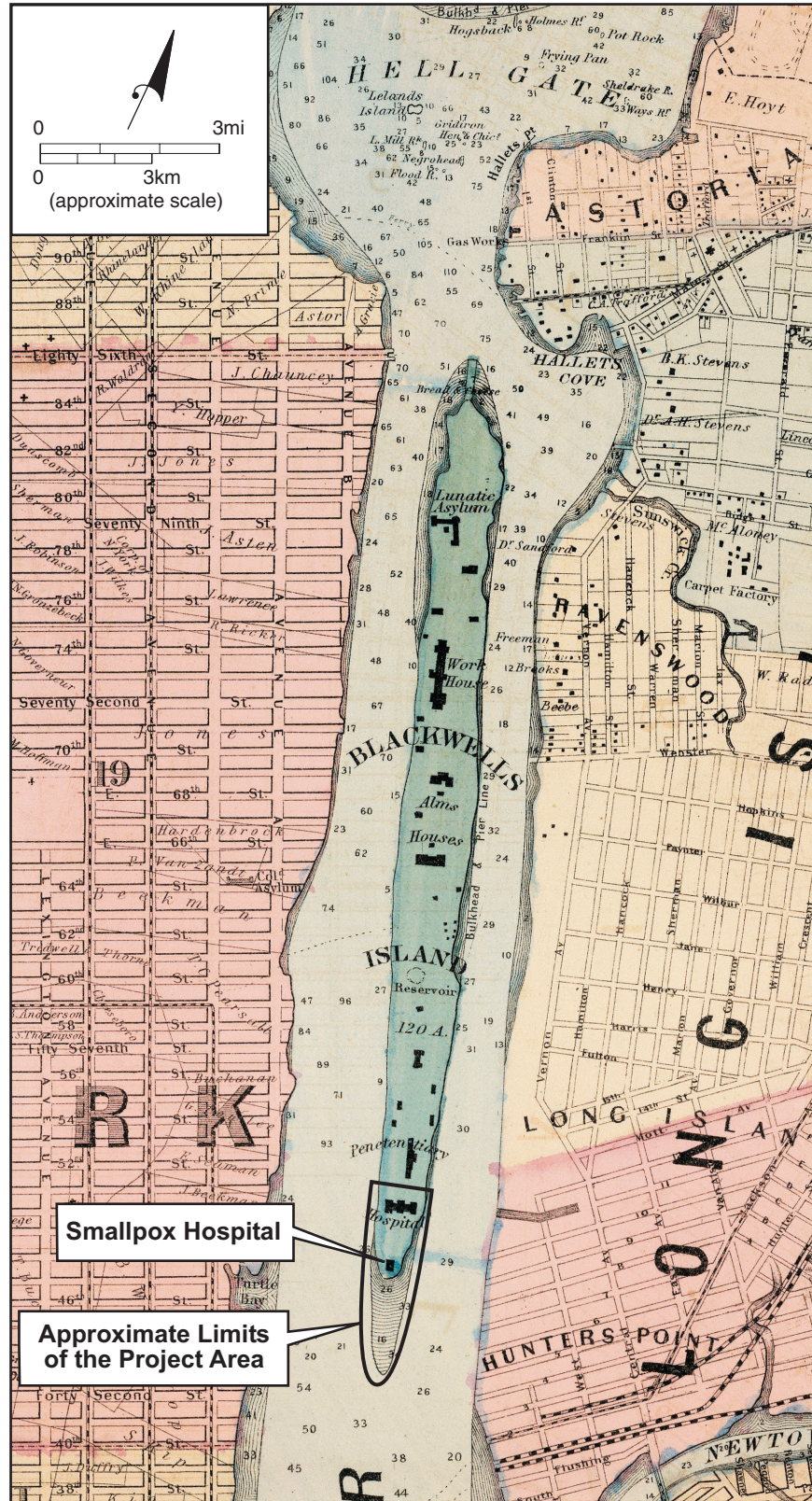


Figure 13. Detail of the 1872 Beers Map of New York City and the Central Portion of Brooklyn showing the locations of the hospitals and the Bulkead & Pier Line at the southern tip of the island.



Figure 14. Detail of the 1874 Vile *Topographical Atlas of the City of New York* showing the locations of the hospitals and steep topography along the original shoreline of the island.



Figure 15. Detail of the 1876 Loudan *Bird's Eye View of New York City* depicting the southern tip of Roosevelt Island. This image was originally published in a London newspaper; note the absence of the Smallpox Hospital in the artist's depiction.

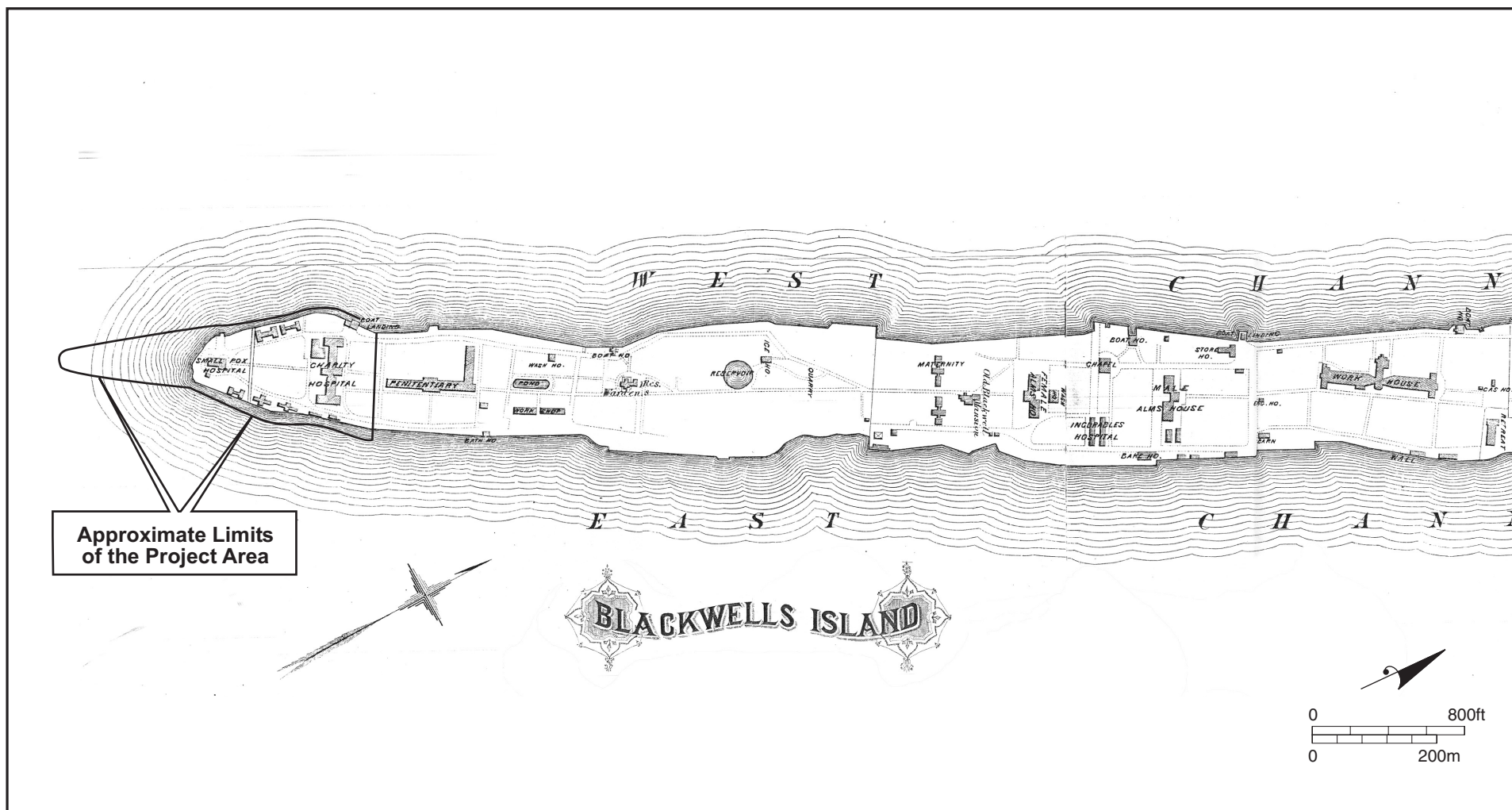


Figure 16. Map of Blackwell's Island from the 1879 Bromley *Atlas of the Entire City of New York* showing the locations of structures within the Project Area.

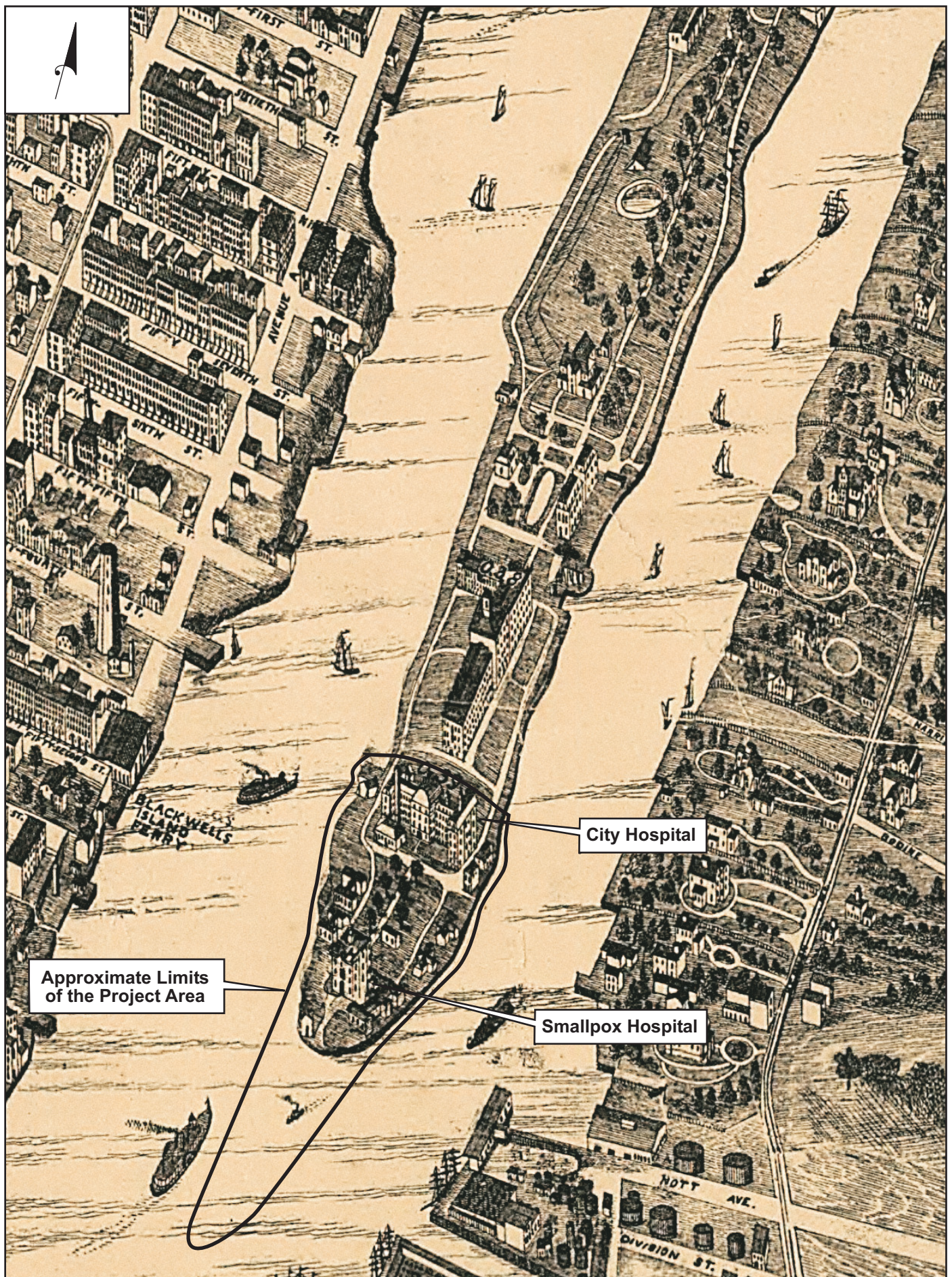


Figure 17. Detail of the 1879 Galt & Hoy bird's eye drawing of *The City of New York* showing artistic representations of buildings within the Project Area.

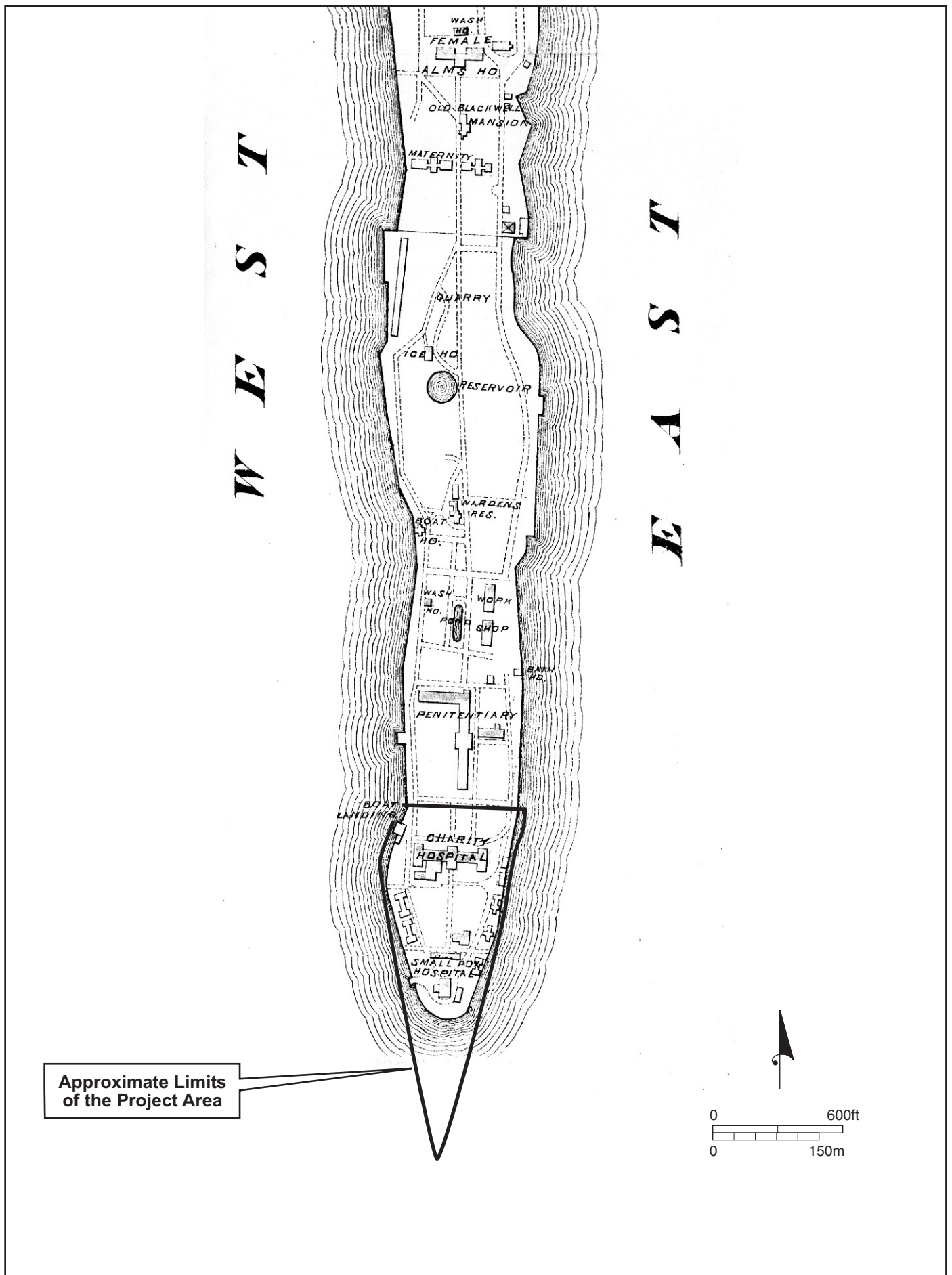


Figure 18. Map of Blackwell's Island from the 1885 Robinson *Atlas of the City of New York* showing the locations of structures within the Project Area.

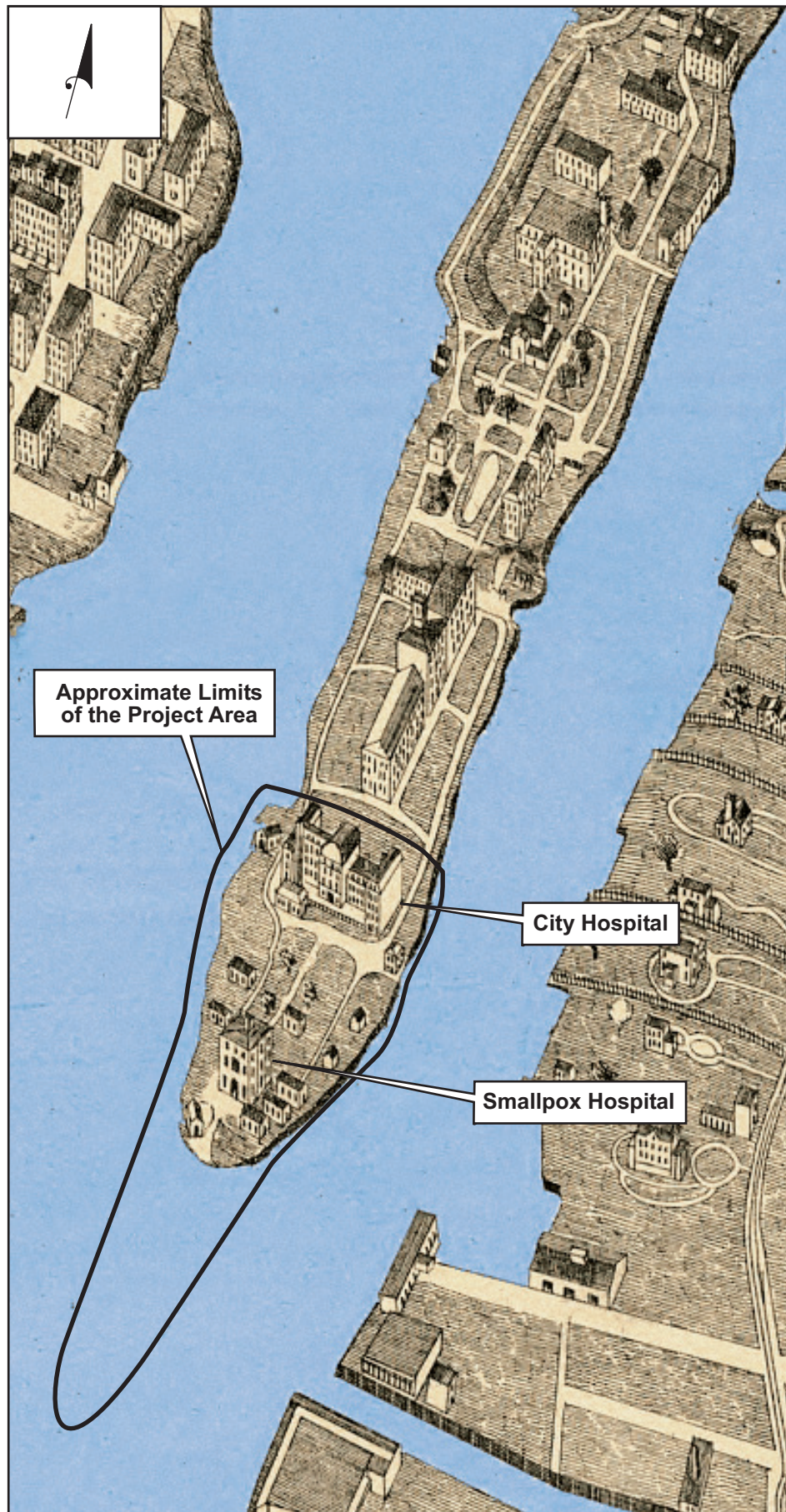


Figure 19. Detail of the ca. 1900 *Bird's Eye View of Manhattan and Adjacent Districts*, New York City showing artistic representations of buildings within the Project Area.

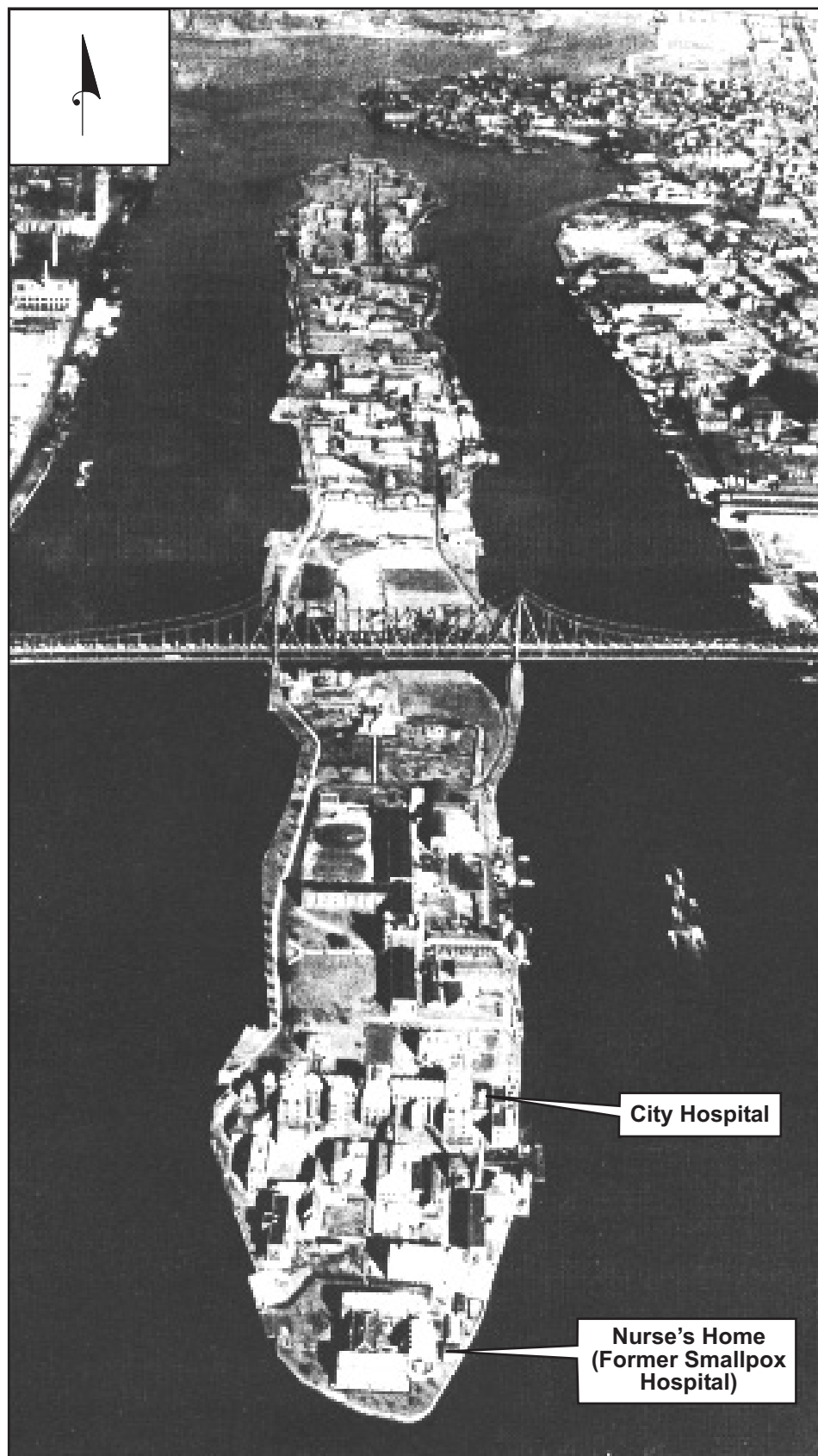


Figure 20. Historic aerial photograph (Fairchild 1924) showing structures within the Project Area and the early-twentieth-century landscape of the island.

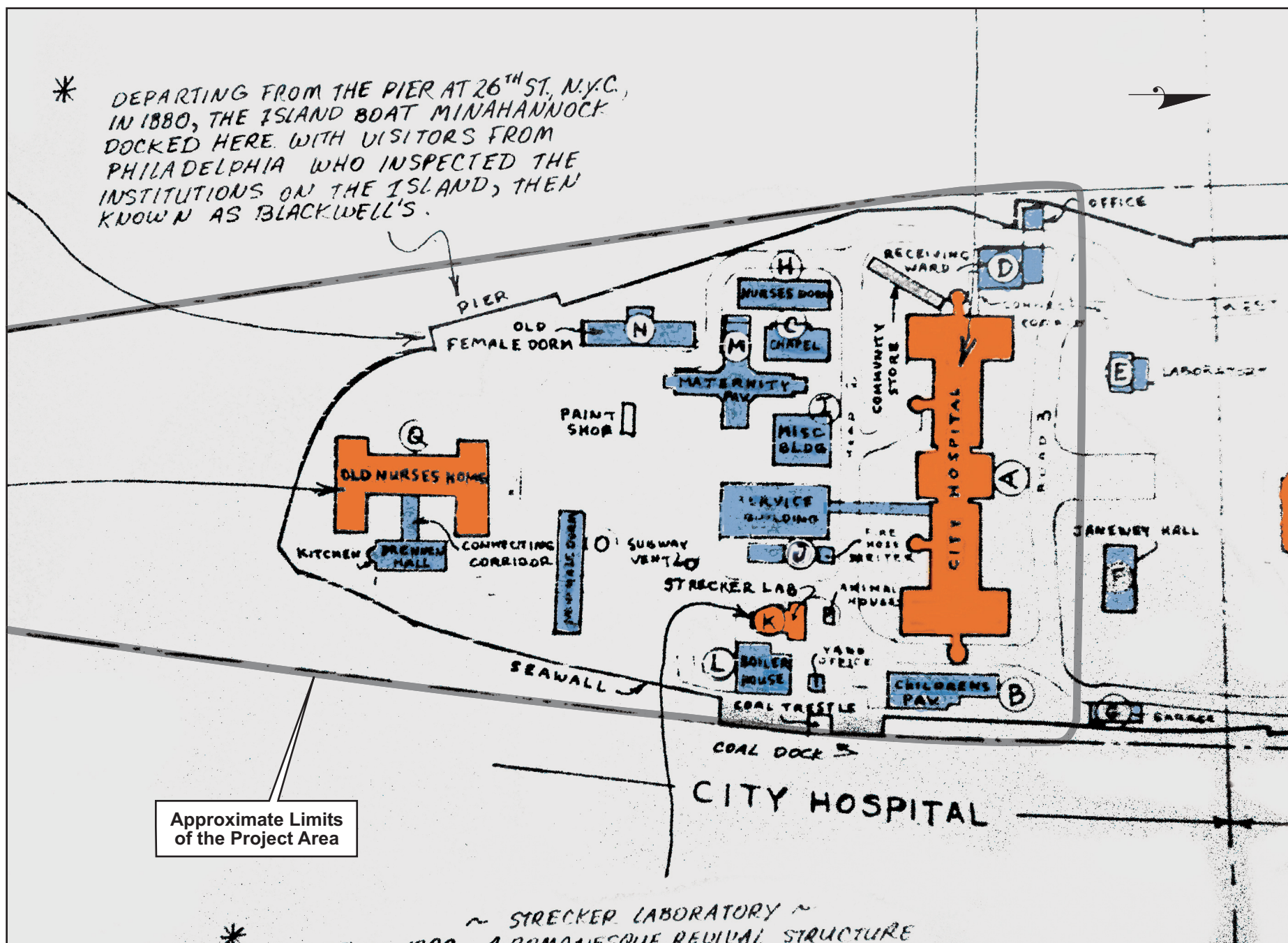


Figure 21. Detail of the 1954 *Welfare Island Plot Plan* prepared by the New York City Department of Hospitals showing the locations of buildings within the Project Area.



Figure 22. Late-nineteenth-century stereoscopic photograph of the Smallpox Hospital on Roosevelt Island; from the Picture Collection of the New York Public Library.



Figure 23. Early-twentieth-century artist's depiction of the southern tip of Roosevelt Island (Pettit 1902); from the Picture Collection of the New York Public Library.

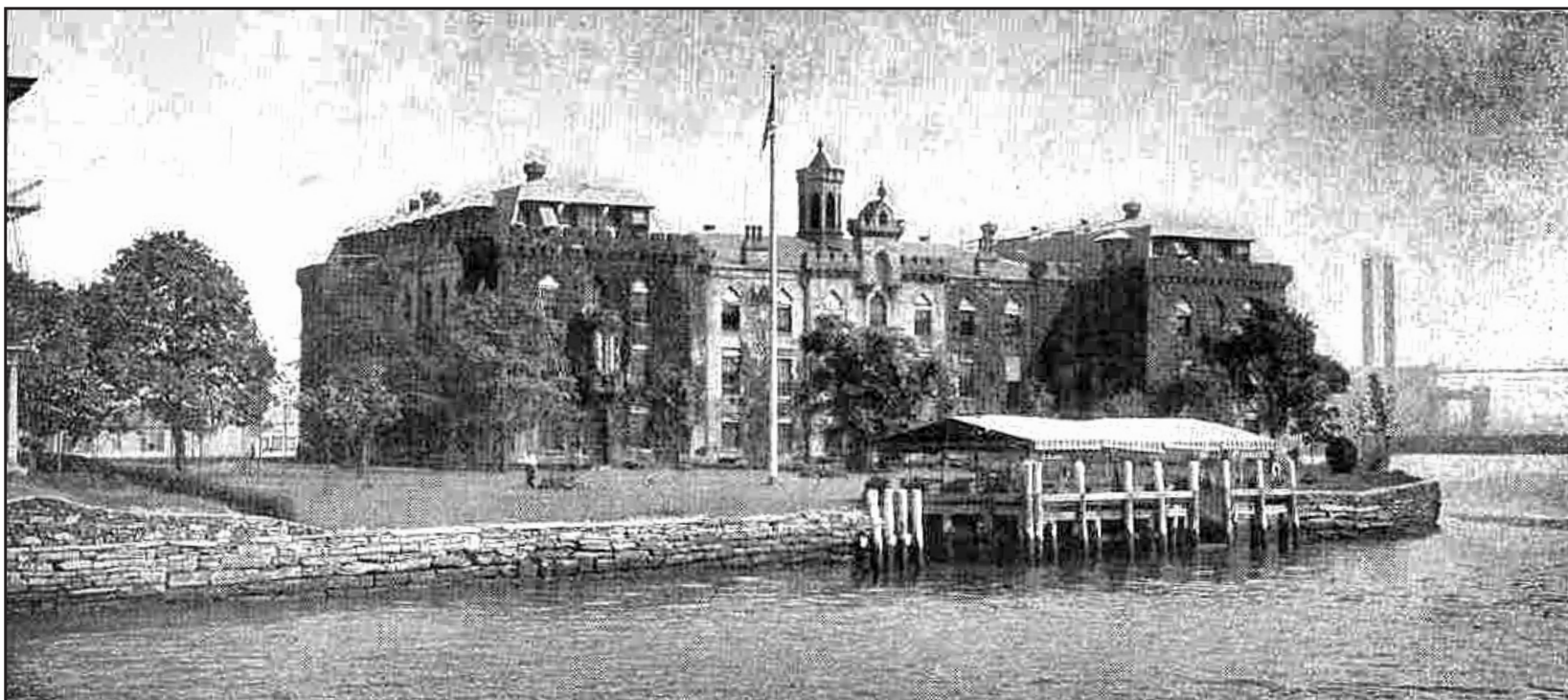


Figure 24. Early-twentieth-century photograph of the nurses' dormitory (former Smallpox Hospital); from the NYC10044 Timeline of Island History. .

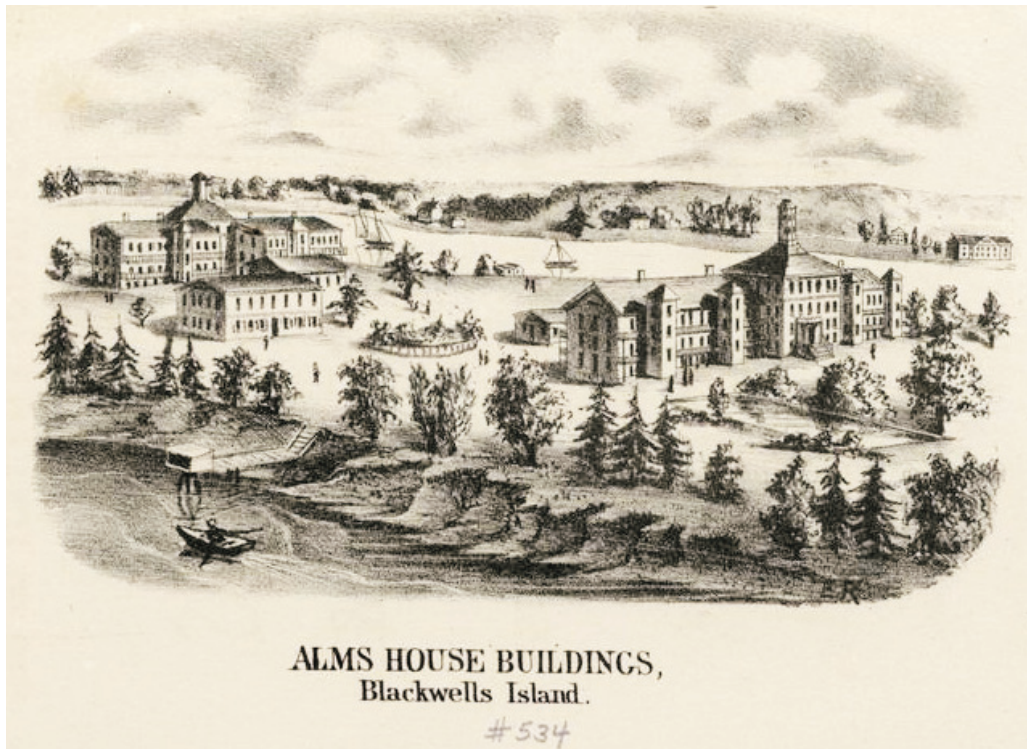


Figure 25. Nineteenth-century illustrations of the original shoreline (above) and construction of the sea wall (below) on Roosevelt Island; from the Picture Collection of the New York Public Library.

PHOTOGRAPHS



Photograph 1. The Smallpox Hospital ruin; view to the east.



Photograph 2. Detail of the front-façade main entrance of the Smallpox Hospital; view to the east.



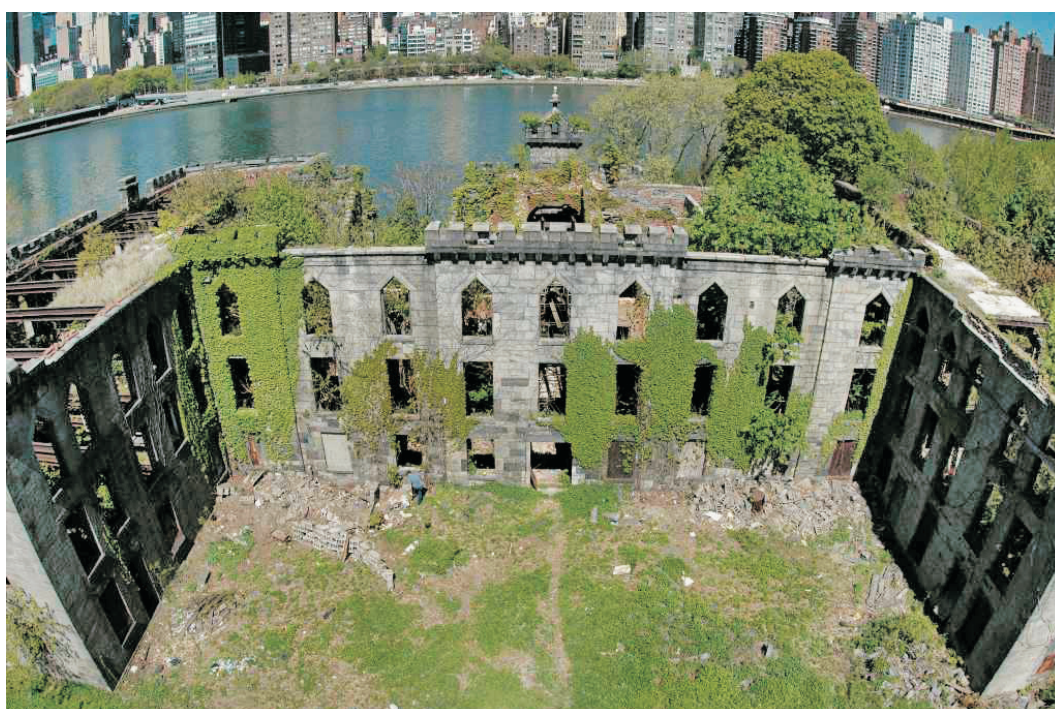
Photograph 3. Yard, road, and shoreline west of the Smallpox Hospital; view to the north.



Photograph 4. Detail of the yard area west of the Smallpox Hospital ruin; view to the north.



Photograph 5. Yard area and roadway north of the ruin; view to the east.



Photograph 6. Rear courtyard area east of the Smallpox Hospital ruin; view to the west.



Photograph 7. Rear courtyard area and shoreline west of the Smallpox Hospital; view to the north-northwest.



Photograph 8. Rubble mounds and push-piles along the shoreline east of the ruin; view to the north-northeast.



Photograph 9. Yard area south of the ruin; view to the west. This is the original southern tip of the island.



Photograph 10. South façade of the ruin and south yard area from the landfill mound; view to the north.



Photograph 11. Rubble mounds represent the former site of the City Hospital; view to the east.



Photograph 12. Rubble mounds represent the former site of the City Hospital; view to the southeast.



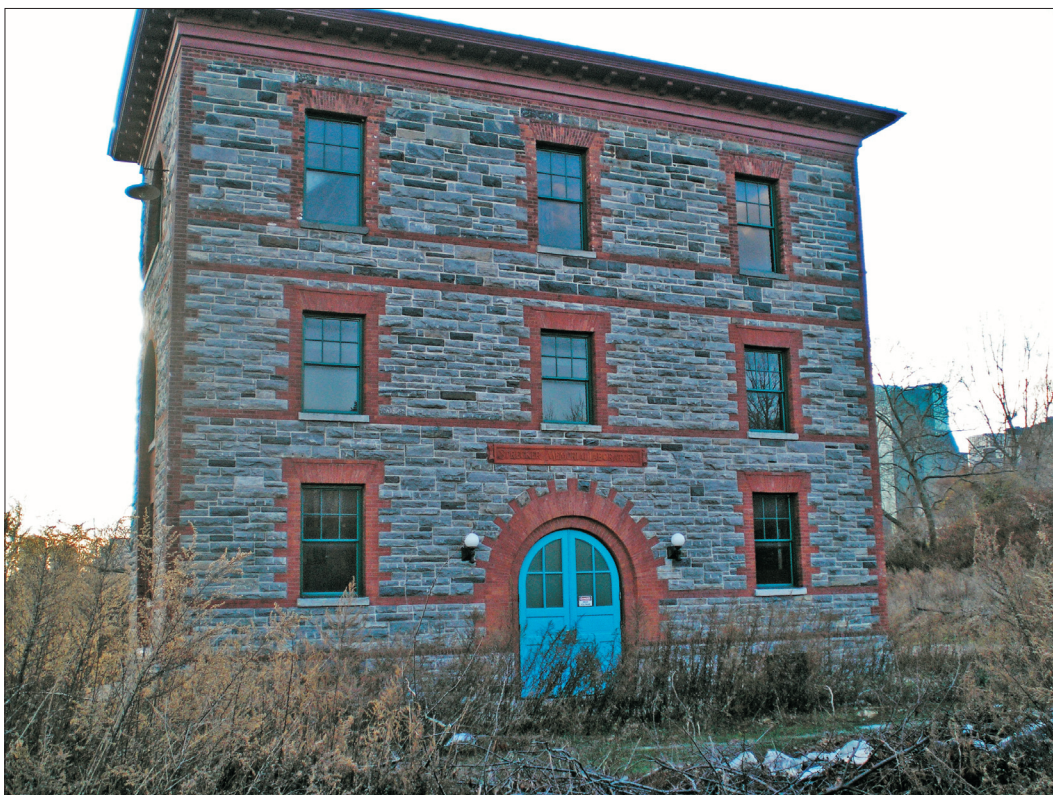
Photograph 13. The central portion of the former site of the City Hospital; view to the west.



Photograph 14. The northern portion of the former site of the City Hospital; view to the west.



Photograph 15. North façade of the Strecker Memorial Laboratory (foreground), with mounds representing the former site of the City Hospital, and the Manhattan skyline (rear); view to the west.



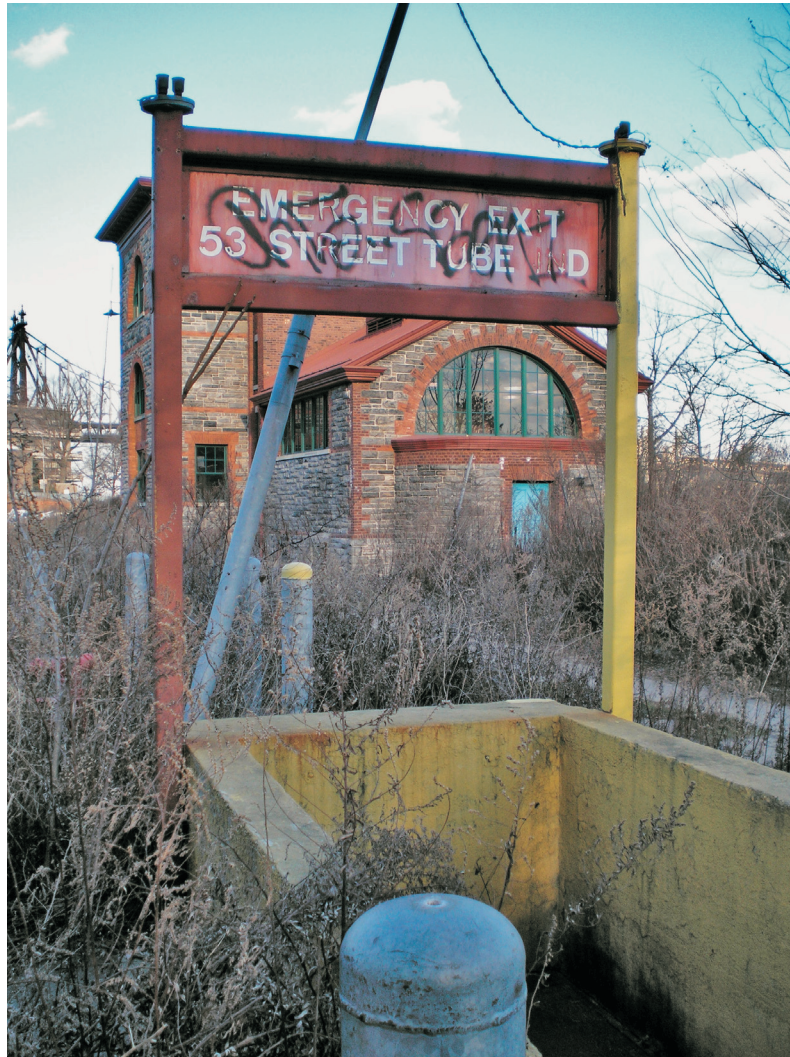
Photograph 16. North façade of the NRHP-Listed Strecker Memorial Laboratory; view to the south.



Photograph 17. Detail of the north façade of the Strecker Memorial Laboratory; view to the south.



Photograph 18. Rear (south) façade of the Strecker Memorial Laboratory; view to the north-northeast.



Photograph 19. Emergency subway exit within the Project Area; view to the north.



Photograph 20. V-shaped area of landfill at the southern tip of the island; view to the south.



Photograph 21. Elevation of landfill area from the original southern tip of the island; view to the south-



Photograph 22. Eastern shoreline of the landfill area; view to the north.



Photograph 23. Western shoreline of the landfill area; view to the north.