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Appendix A

**ABB Energy Ventures
Oak Point Energy Generating Facility
Hunts Point, The Bronx, New York City
Preliminary Cultural Resources Assessment**

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Report Prepared for:

**Black & Veatch Corporation
Environmental Advisory Services
B&V Project Number 01-098254**

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Cultural and Historical Resources Executive Summary

The cultural and historical resources of the general project vicinity and site are discussed in the sections to follow.

Existing Conditions

The cultural resources consulting firm of Geoarchaeology Research Associates was retained to assess the cultural and historic resources of the proposed project area. Two site visits and extensive background research were conducted. The proposed project will not impact any previously-listed New York City Landmarks or properties listed on, or determined eligible for, the National Register of Historic Places and there are no extant buildings within the proposed project area. Documentary research indicated a high potential for the initial formation of prehistoric, historic, and industrial archaeological sites within the proposed project area. However, the extensive disturbance that resulted from the construction and subsequent demolition of the New York, New Haven, and Hartford (NY, NH, and H) Oak Point rail yard has negated the potential for significant subsurface prehistoric and historic archaeological deposits. However, the remnants of the circa 1915 NY, NH, and H carfloat docks may represent a significant industrial archaeological resource.

Potential Impacts and Mitigation During Construction

In view of the extensive prior disturbance, it is anticipated that the proposed construction will not impact any historic buildings or subsurface prehistoric or historic archaeological deposits. However, the proposed construction will impact the remnants of the NY, NH, and H carfloat docks, a potentially significant industrial archaeological resource. Additional study is recommended to fully assess the significance of this site and determine the appropriate mitigation measures, if required.

Potential Impacts and Mitigation During Operation

The operation of the proposed facility (as distinguished from the construction) will not result in any potential impacts. Therefore, no mitigation measures related to the operation of the proposed facility are anticipated.

Proposed Studies

The proposed construction will impact the remnants of the NY, NH, and H carfloat docks, a potentially significant industrial archaeological resource. A full-scale historic structures report and determination of eligibility should be prepared to assess the significance of this site and the appropriate mitigation measures, if any. It is anticipated that the maximum required mitigation measure would be preparation of HABS/HAER (Historic American Buildings Survey/Historic American Engineering Record) documentation of the property prior to construction. The HABS/HAER documentation could include detailed documentary research, photography, and measured drawings. It is possible that a viewshed/visual impact analysis could also be required.

Introduction

This report is an element in the environmental assessment for a proposed natural gas fueled electricity generating plant to be located on the East River in the Hunts Point area of The Bronx, New York City (Figures 1 and 2). The study area encompasses a total of approximately 28 acres, 21 acres of land and 7 acres of river frontage. The lead client for this project is ABB-Energy Ventures. Black & Veatch Corporation, Environmental Advisory Services Division, is coordinating aspects of the environmental permitting process. Geoarchaeology Research Associates (GRA), as a subconsultant to Black & Veatch, was retained to provide a preliminary cultural resources assessment of the proposed project area. This assessment identifies anticipated cultural resources issues and provides guidance regarding possible additional studies and impact mitigation measures.

In New York City, historic preservation requirements necessitate isolation of key areas of archeological sensitivity, those containing objects or structures of prehistoric or historic value, or locations, which provide new information about a period in history or prehistory. These criteria are utilized to determine eligibility for listing on the National Register of Historic Places (Code of Federal Regulations, Title 36, Part 60). New York State and the New York City Landmarks Preservation Commission (LPC) have adopted these criteria for evaluations of historic and prehistoric potential and significance (CEQR 1993: Section 120). In addition, other regulatory entities (e.g. U.S. Army Corps of Engineers) may be required to provide cultural resources clearance for the project.

This report was prepared by Joseph Schuldenrein, Ph.D. and Terrence W. Epperson, Ph.D. Both authors conducted site visits (Schuldenrein May 8, 2000 and Epperson May 26, 2000). Epperson conducted extensive documentary research and conducted a phone interview with the current property owner. Repositories utilized during the research include the New York Public Library and the Bronx County Historical Society.

Project Area History

The proposed project is located in the Borough and County of The Bronx, New York City. In 1639 the Dutch Crown granted the land between the present-day Harlem and Bronx rivers (including the present project area) to Jonas Bronck, the namesake of both the river and the later county and borough appellations. With the establishment of English control, the project area was encompassed by the town of West Farms in lower Westchester County. The earliest major industry in the area was an iron foundry established in 1823 northwest of the project area by Jordan Mott, the namesake of the Mott Haven neighborhood. In 1874, the portion of lower Westchester County located west of the Bronx River (including the towns of Morrisania, West Farms, and Kingsbridge) was annexed by New York City. This area, known as the Annexed District, became the 23rd and 24th wards of New York City. Until the late nineteenth century, the land in the project vicinity remained relatively undeveloped, serving primarily as farms and country estates for wealthy families living on Manhattan Island (Fitzpatrick 1927; Jackson 1995:142-146; New York City Department of City Planning 1993).

A map published in 1887 depicts over a dozen buildings in or very near the proposed project area (Robinson 1887; see Figure 3). The "Oak Point Pavilion" and another large building, labeled "Bathing Pavilion," were located on the north shore of the East River at the southern edge of the project area. According to a published oral history account, the Oak Point Pavilion was the only amusement park in The Bronx. In addition to the beach, the park attractions included "a dance hall, swings, and a carousel" (Ultan 1985:85). The remaining buildings, including a hotel, are all oriented toward a road and a property line that pass diagonally through the project area. On the 1887 map the project vicinity is overlain by a symmetrical grid of city streets. However, the placement of buildings and examination of later sources indicate that none of these gridded streets had actually been opened in the project area. Although the Harlem River Branch of the New York, New Haven and Hartford (NY, NH, and H) railroad passes within 300 feet of the northern boundary, no railroad development had occurred within the project area at this date. This map also depicts a long jetty or pier near the Oak Point Pavilion, indicating that some coastline modification had occurred.

A nautical chart drafted in 1888 includes detailed topographic depictions of coastal zone features. By superimposing this image on a present-day topographic map, we can assess the extent of recent landform modifications (U.S. Coastal and Geodetic Survey 1888; see Figure 4). Although the map does not have a key, the drafter carefully distinguished between a range of coastal environments. The area coded as "A" on Figure 4 is open water. All soundings are in feet below mean low water. The zone coded "B" was lightly stippled on the original graphic, apparently indicating mud flats. The zone coded "C" was lightly cross-hatched, probably indicating a tidal flat with scant vegetation. The zone coded "D" had darker cross-hatching, apparently indicating a heavily vegetated marsh. The area coded "E" is well-drained upland. Hatchure marks were used on the original graphic to depict areas of significant relief. In the area to the east of Barretto's Point (located east of the project area), the full gamut of topographic zones from open water (A) to well-drained upland (E) is depicted. Within the project area, Oak Bluff (which is apparently synonymous with Oak Point) is depicted as an area of sharp relief where open water abuts well-drained uplands. In general, the superimposition of these two images indicates that relatively limited coastline modification and filling have occurred in the project area.

A detailed map prepared in 1892 by the New York City Topographical Bureau again depicts the inland buildings aligned with the road and property line, although the shore-side pavilions are no longer depicted (Topographical Bureau 1892, not available for duplication). This map indicates "New York, New Haven and Hartford Rail Road" as the owner of most of the project area, although there is not yet any indication that construction had been initiated on the rail yards. This map also depicted proposed street realignments as well as the low water line, the high water line, and the 10 foot and 20 foot above sea level contours within the project area. This contour information is utilized below in the stratigraphic analysis of disturbance within the project area. The inland buildings aligned with the road and property line are again depicted on an 1896 fire insurance map (Sanborn-Perris Map Company 1896; see Figure 5). This map indicates that the "hotel" structure depicted on the 1887 map (Figure 3) was a four-story structure.

In 1901 the New York City Department of Docks and Ferries granted the New York, New Haven, and Hartford Railroad Company a permit to place about 300 cubic yards of rip-rap filling at its Oak Point freight yard west of Cabot Street, Bronx Kills (Department of Docks and Ferries 1901:424; see also Betts 1997). A 1901 fire insurance map shows the NY, NH, and H railroad as the owner of the entire project area, although the bathing pavilion is still incongruously depicted next to the rail yard (Sanborn-Perris Map Company 1901; see Figure 6). By this date all of the inland buildings had been demolished for construction of the extensive railyard. Although railroad docking facilities are depicted on the shoreline, the configuration would be significantly altered by 1915. The extensive Oak Point Yard of the NY, NH, and H is depicted in considerable detail on a 1915 fire insurance map (Sanborn Map Company 1915; see Figure 7). By this date the entire project area is within the railyard and there are no remaining traces of any nineteenth-century buildings or landscape features. Within the project boundary this map depicts five carfloat bridges. The landward (northern) ends of these bridges are attached to the dock by a series of "pivots," which are analogous to door hinges. The pivots keep the bridges securely attached to the dock while still permitting the southern ends of the structures to rise and fall with tidal fluctuations. This facility was used to transfer rail cars to and from large barges that transferred the cars across the East River and to terminals on the New Jersey side of the Hudson River. As documented below, many elements of the carfloat docks survive in the project area.

The New York & New Haven Railroad completed its connection to New York City on December 25, 1848. In 1870 the New York & New Haven entered into a joint operation agreement with the Hartford & New York Railroad. This agreement was followed by a formal merger in 1872, creating the New York, New Haven, and Hartford Railroad (NY, NH, and H). By 1900 the NY, NH, and H had absorbed more than fifty southern and central New England railroads. Through a system of interlocking directorates and sundry other mechanisms, this road was effectively controlled by interests aligned with financier J.P. Morgan (Association of American Railroads 1915; Fitzpatrick 1927:768-9; Merriam 1988; Weller 1967). During the period 1908-1914 this structure came under intense federal antitrust scrutiny. Saddled with a grossly overcapitalized structure and facing increasing competition from autos and trucks, the railroad declared bankruptcy in 1935 and was reorganized in 1947 (Carson 1971; Merriam 1988; Sunderland 1948). By the early 1950's, changes in freight routing and the construction of additional railroad bridges and tunnels had rendered the carfloat system obsolete and the Oak Point Yard was gradually decommissioned. By 1961 the New Haven was again facing bankruptcy and was forced by federal regulators into the Penn Central merger in 1968. However, by 1970 the Penn Central, along with five smaller regional railroads in the northeastern U.S., was facing financial ruin. The Penn Central became the core of the Consolidated Rail Corporation (Conrail) in 1976 (Saunders 1978). The Conrail holdings in the project were subsequently assumed by CSX. Although no railyard facilities remain within the project area, active CSX spurs remain immediately to the east and west.

Coincidentally, the fate of the South Bronx mirrored that of the NY, NH, and H. During the period after World War II, industrial divestment, declining city services, shifting

demographic patterns and crumbling infrastructure combined to create ever-expanding slum conditions in the project vicinity. During the 1970s the project area was utilized as a dumping area for demolition debris from buildings razed throughout the South Bronx. The project area is within a National Empowerment Zone, the Port Morris Economic Development Zone, and an In-Place Industrial Park (IPIP); all of these programs provide financial incentives for economic development. A project that would provide a direct intermodal freight rail link between the Oak Point area and the Harlem River Rail Yards has been completed. (Commission on Critical Transportation Choices 1980; Energy and Environmental Analysts 1981; Hermalyn 1981).

Cultural Resources Assessment

Four cultural resource issues need to be addressed for this project: historic buildings, prehistoric archaeology, historic archaeology, and industrial archaeology.

Historic Buildings. As previously indicated, there are no extant buildings within the proposed project area and no potentially significant buildings are located on the periphery of the project area. Therefore this issue requires no additional investigation or mitigation measures.

Prehistoric Archaeology. Analysis of early topographic maps (see Figure 4) indicates that prior to construction of the Oak Point Railyard, the project area was situated on a well-drained promontory on the north bank of the East River in close proximity to tidal marshes and fresh water streams. The wide variety of immediately-available ecological niches means that the project area had a high potential for the initial formation of prehistoric archaeological sites. In fact, several important archaeological studies have been conducted in the vicinity of the project area. In 1900, M.R. Harrington excavated a portion of a large shell heap on Throgs Neck (located about four miles east of the present project area) for the American Museum of Natural History. This was one of the first excavations conducted in the northeast with the express purpose of obtaining stratigraphic data. (Harrington 1909; Smith 1950: 165-6) Alanson Skinner (1919) conducted additional studies at Throg's Neck as well as extensive excavations at Clasons Point (located about two miles east of the project area). The Clasons Point excavations revealed some 66 pits filled with marine shells and other refuse scattered over a level area above a marshy cove. Seven of the pits contained the skeletal remains of adult males in flexed positions.

In order to assess the potential for the preservation of subsurface archaeological deposits within the present project area, the boring logs for three groundwater-monitoring wells were analyzed in conjunction with the 1892 map prepared by the New York City Topographical Bureau (Topographical Bureau 1892). This compiled information provides a north-south 700 foot stratigraphic profile perpendicular to the East River (Figures 2 and 8). The 10 foot contour traversed the project area near the location of boring MW-41 while the 20 foot contour was near boring MW-42. All of the profiles indicated petroleum-saturated soils down to bedrock as well as extensive filling and ground disturbance. The profile for boring MW-41 indicates historic fill to a depth of at least 14

feet below present ground surface (approximately 6 feet above sea level). This fill deposit contains slag to a depth of at least 10 feet below surface. Similarly, the profile for MW-42 contains historic fill to a depth of at least 16 feet below present surface (approximately 6 feet above sea level). These profiles indicate that disturbance associated with construction and demolition of the Oak Point Railyard extended to a depth far below the elevation of the ground surface that existed in 1892. In view of these findings, it appears that the project area has negligible potential for prehistoric archaeological deposits.

Historic Archaeology. Historic maps (Figures 3-7, also Topographical Bureau 1892) indicate the presence of at least a dozen structures within the present project area during the nineteenth century. These buildings included recreational facilities, a motel, and country estate houses and agricultural buildings. All of these structures predated the installation of modern water and sewage services; therefore, there was some potential for shaft features such as wells and privies that could contain significant archaeological deposits. However, as indicated above, the disturbance associated with the construction and demolition of the railyard appears to have negated the potential for the preservation of significant archaeological deposits. While historic-period fill in boring profiles could indicate the presence of potentially significant archaeological deposits, the logs indicate that most of the fill is of recent origin. Boring MW-43 contained asphalt fragments to a depth of at least 10 feet below present surface while boring MW-42 yielded plastic fragments to a depth of at least 6 feet below surface. In view of these findings, it appears that the project area also has negligible potential for historic archaeological deposits.

Industrial Archaeology. As indicated above, well-preserved remnants of the NY, NH, and H carfloat docks are found within the project area (Figure 7, Plates 3-8). Specifically, the pivots for bridges 2, 3, and 4 as depicted on the 1915 map (Figure 7) are still extant, along with many other elements that can be identified from the 1915 map. Therefore, the project area may have the potential to provide significant industrial archaeological data.

Summary and Recommendations

In view of the extensive prior disturbance, it is anticipated that the proposed construction will not impact any historic buildings or subsurface prehistoric or historic archaeological deposits. However, the proposed construction will impact the remnants of the NY, NH, and H carfloat docks, a potentially significant industrial archaeological resource. Additional study is recommended to fully assess the significance of this site and determine the appropriate mitigation measures, if required. A full-scale historic structures report and determination of eligibility should be prepared to assess the significance of this site and the appropriate mitigation measures, if any. It is anticipated that the maximum required mitigation measure would be preparation of HABS/HAER (Historic American Buildings Survey/Historic American Engineering Record) documentation of the property prior to construction. The HABS/HAER documentation could include detailed documentary research, photography, and measured drawings. It is possible that a viewshed/visual impact analysis could also be required.

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Plate 1

Interior portion of the study area, view looking south. Steep mound on left side of photo reflects dumping of building demolition debris. Groundwater monitoring well MW 42 is located in the left center portion of photo (indicated by arrow). (Photo by Terrence W. Epperson, 5/26/00).



Plate 2

Interior portion of the study area, view looking south. Mapped concrete slab is visible in left center of photo. Note large trash dumpster and extensive recent debris. (Photo by Terrence W. Epperson, 5/26/00).

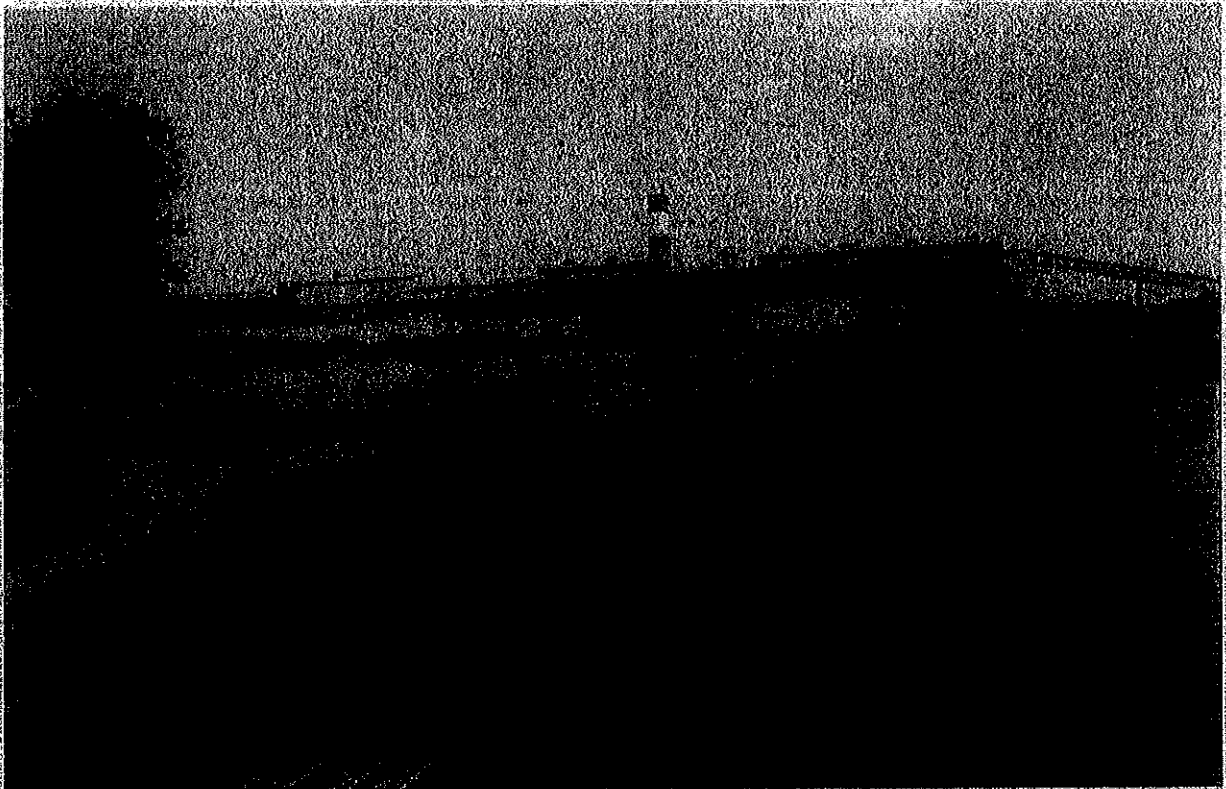


Plate 3
Eastern waterfront portion of study area, view looking northeast. Note stone fill behind wooden crib work. The large industrial structure is outside of the study area. (Photo by Terrence W. Epperson, 5/26/00).



Plate 4

View looking south towards remnants of New York, New Haven, and Hartford Railroad carfloat docks. Tree-covered North Brother Island is visible on the horizon. Mary Mallon (a.k.a. Typhoid Mary) was institutionalized at Riverside Hospital on this island in 1907-10 and from 1915 until her death in 1938. (Photo by Terrence W. Epperson, 5/26/00).

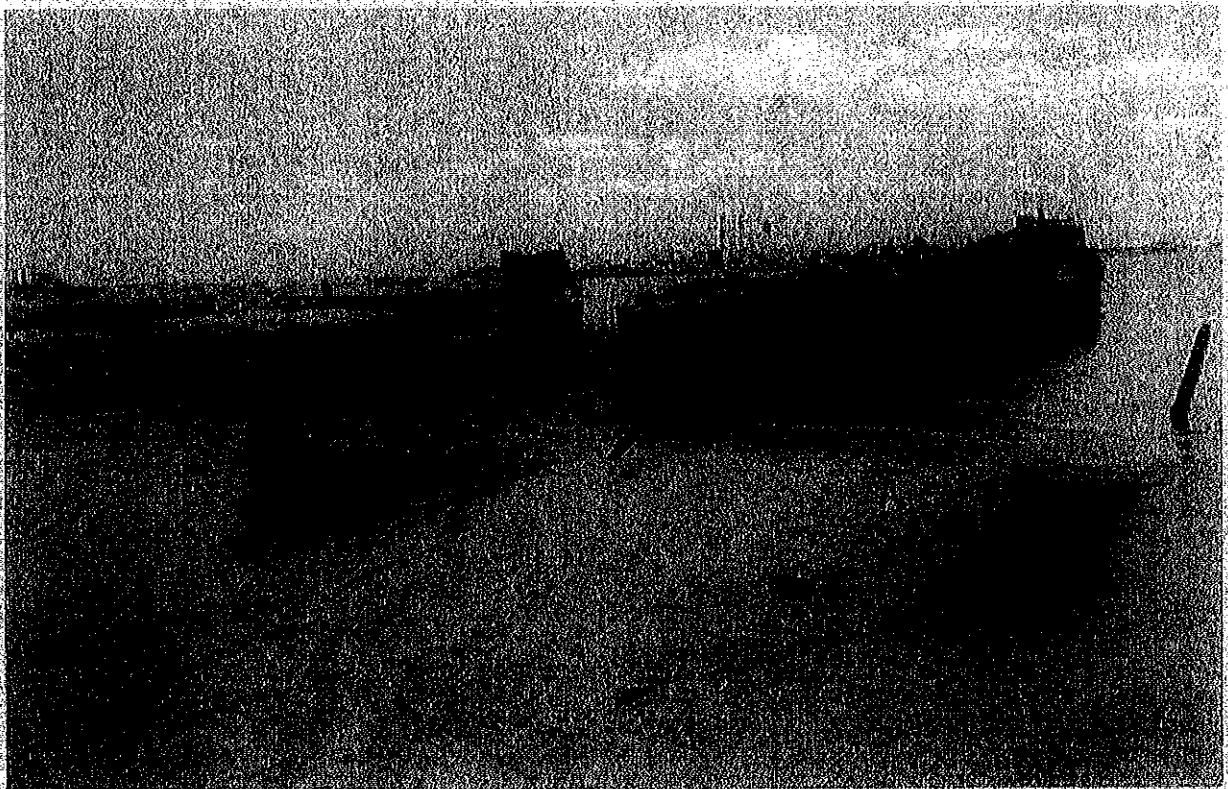


Plate 5
View looking southeast towards remnants of carfloat docks. The Rikers Island prison facilities are visible on the center horizon.
(Photo by Terrence W. Epperson, 5/26/00).



Plate 6

View looking northwest toward the pivots for carfloat bridge #2 (left side of photo), #3 (center of photo), and #4 (right side of photo). Note extensive mounding from recent dumping of demolition debris. Photo taken at low tide. (Photo by Terrence W. Epperson, 5/26/00).



Plate 7

Oblique view looking west toward the pivot for carfloat bridge #4. Note extensive stone foundation blocks and wooden cribbing.
(Photo by Terrence W. Epperson, 5/26/00)



Plate 8

View looking southwest toward the end of the pivot for carfloat bridge #4. The bridge plate was installed on the flat surface of the pivot. The semicircular lower surface rotated in the iron bed, allowing the river end of the bridge to rise and fall with the tide. The diameter of the pivot (measured across the flat surface) is approximately 42 inches.

(Photo by Terrence W. Epperson, 5/26/00).

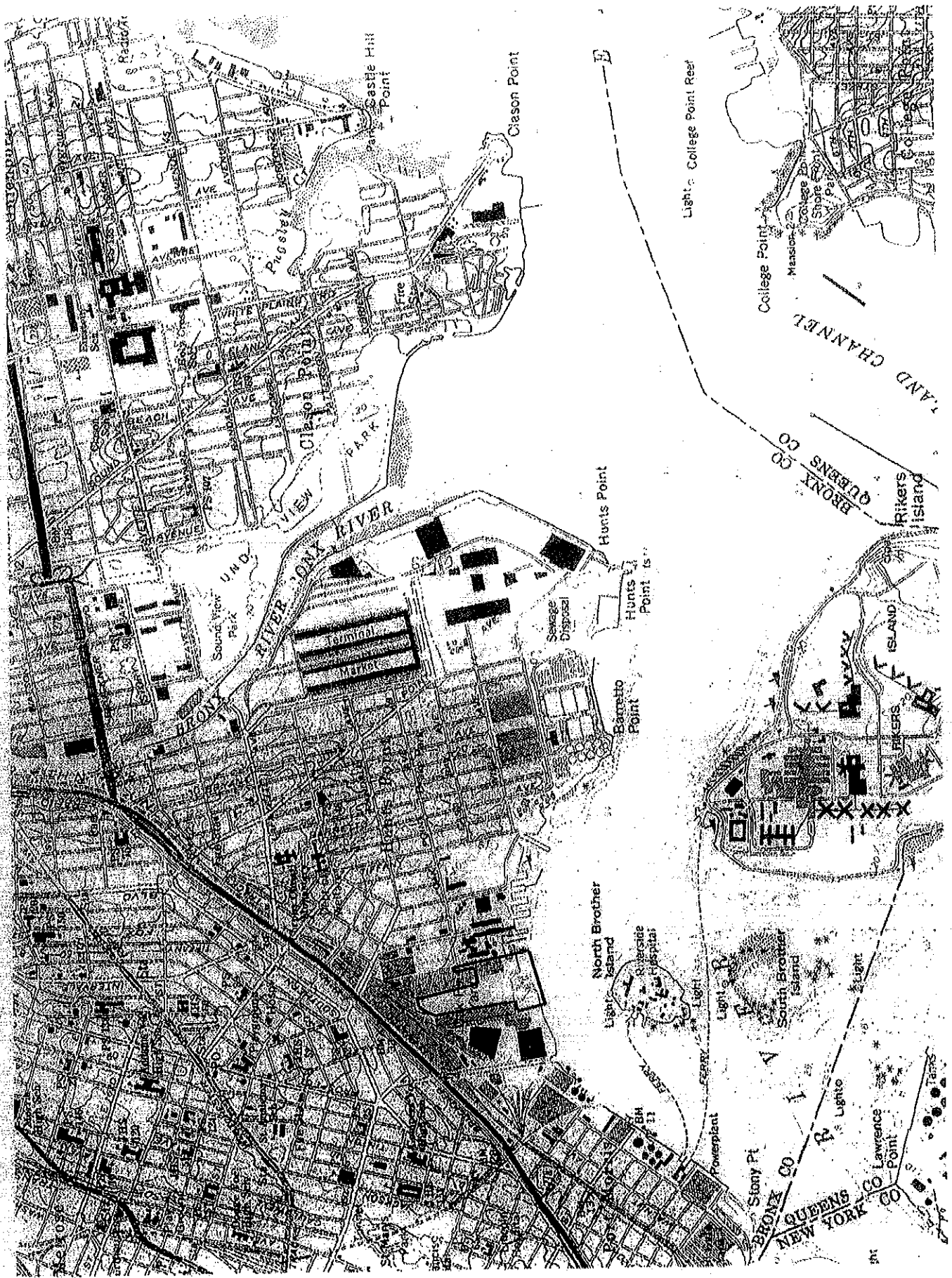


Figure 1 Project Location

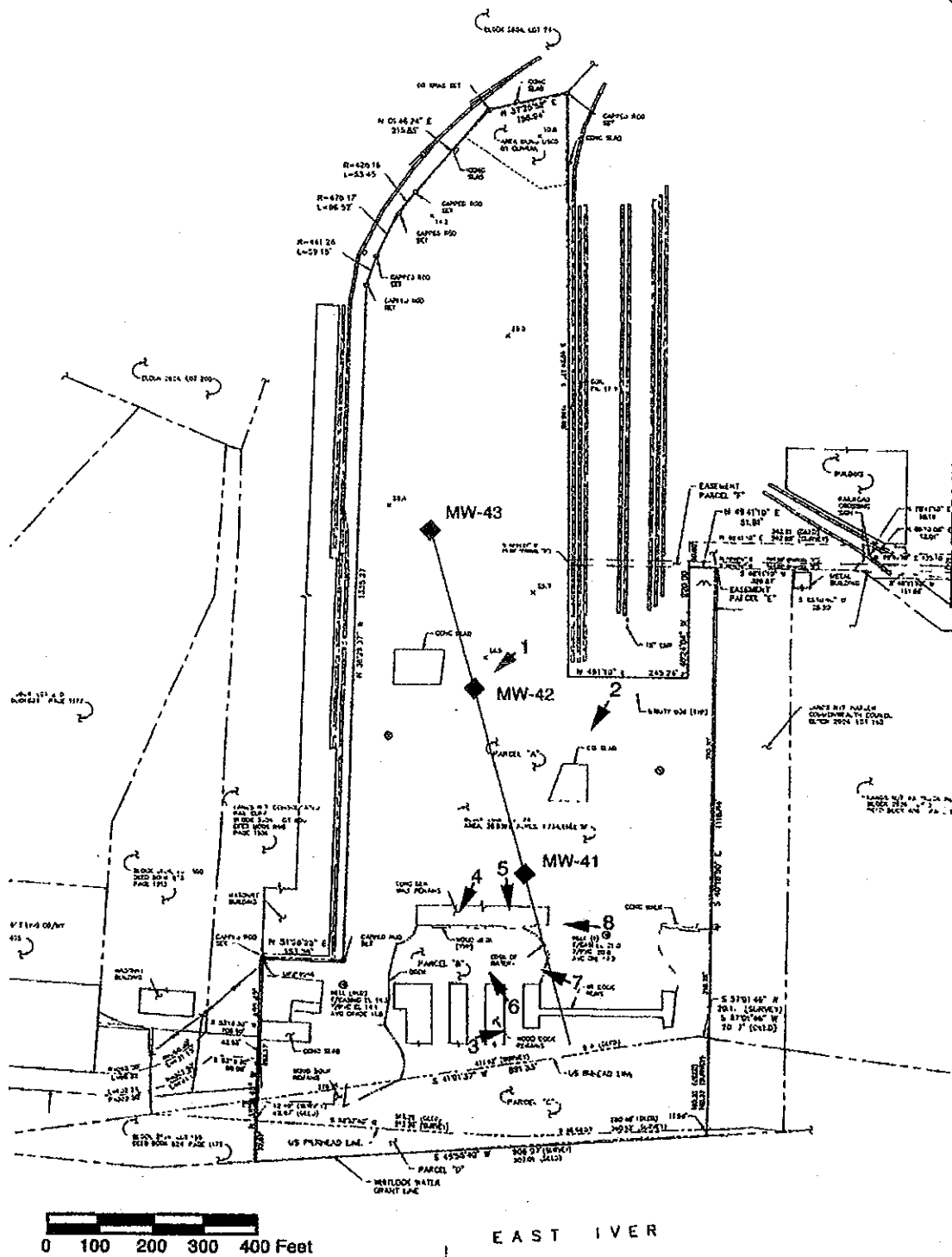


Figure 2 Project Area Base Map
 The project area is outlined in red, the profile section (Fig.8) is seen in blue and the green arrows indicate the position of photographs in corresponding plates (Plates 1- 8).

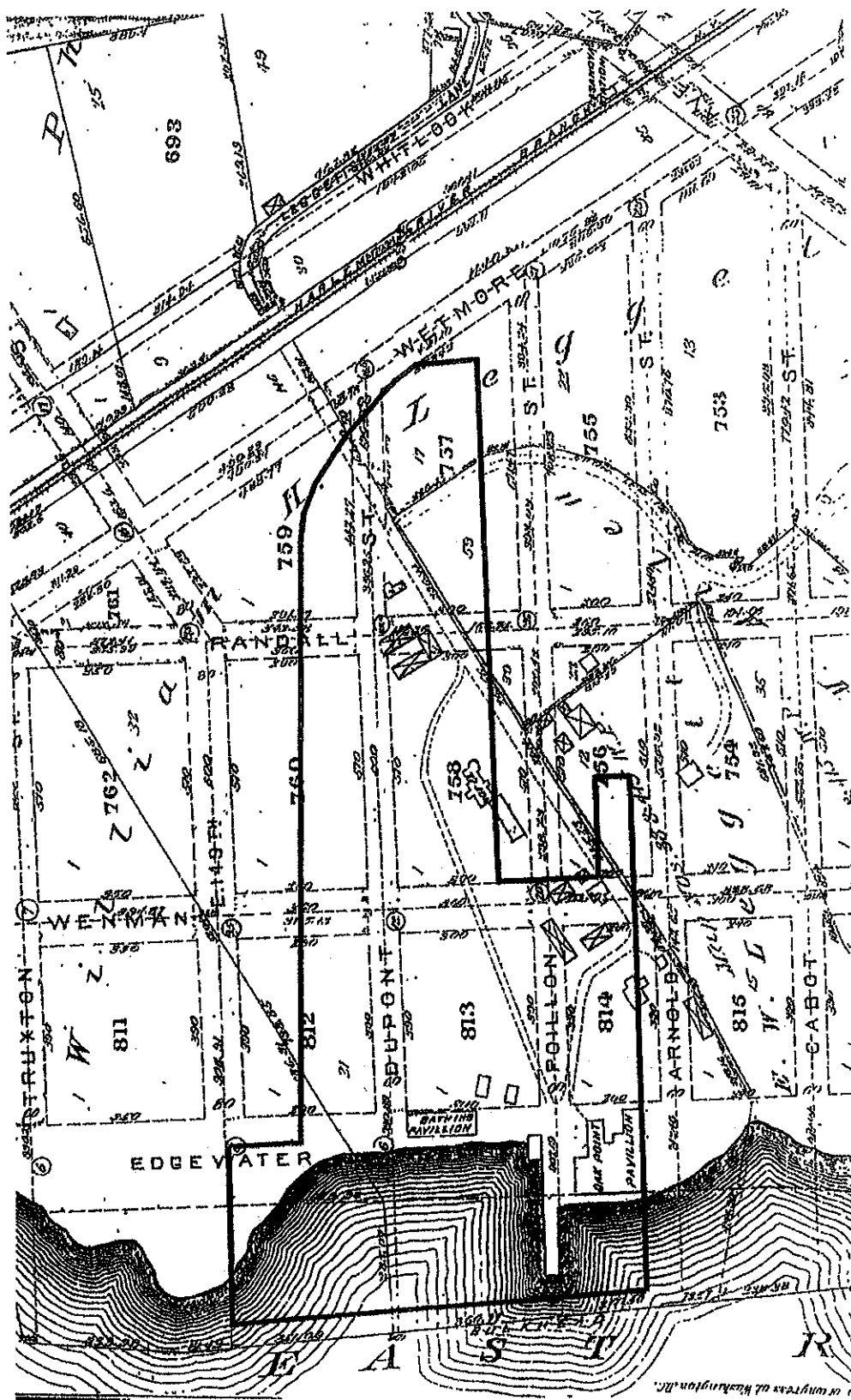


Figure 3 Project Area, 1887
 (Source: Robinson 1887)



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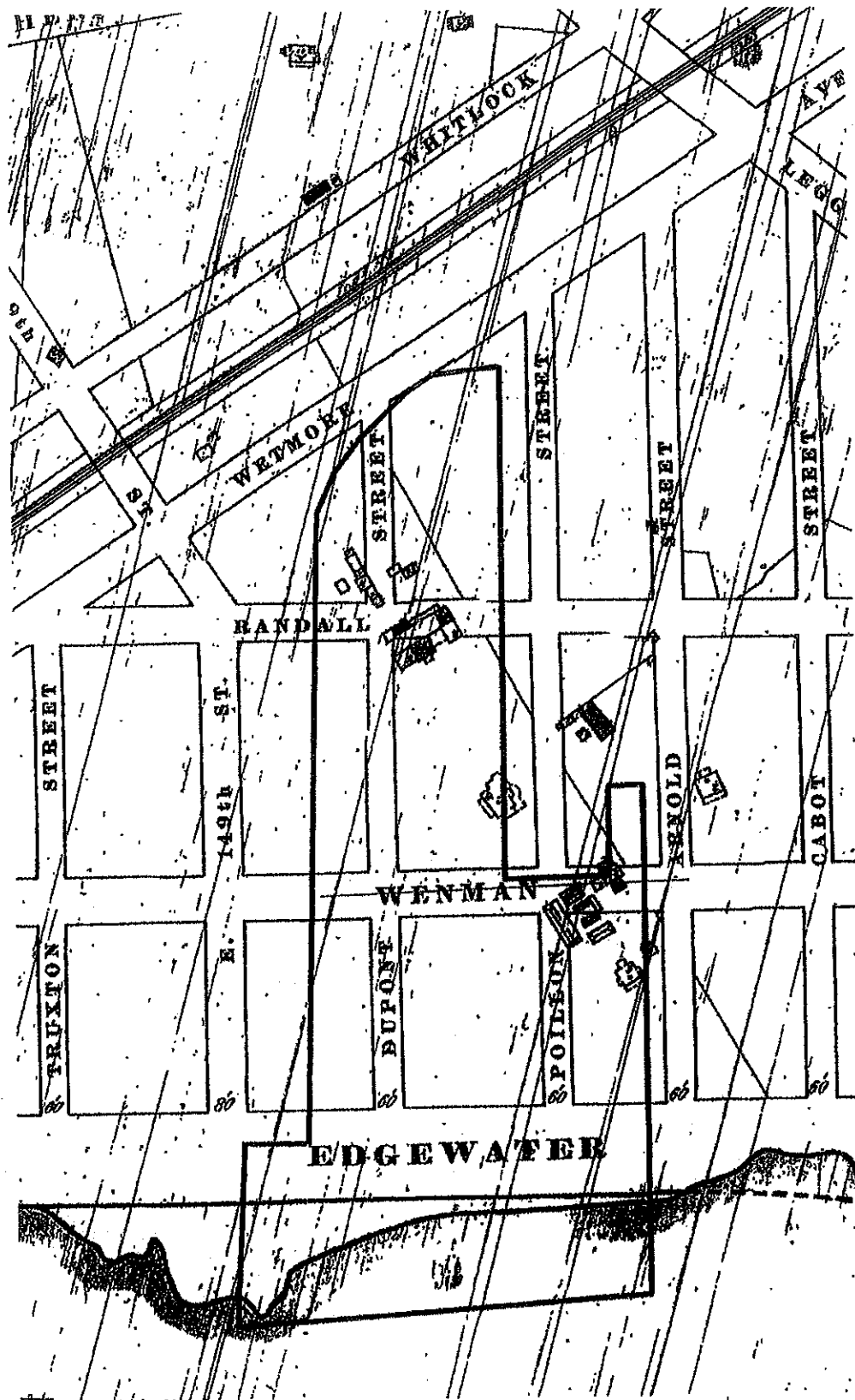
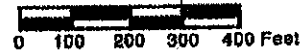


Figure 5 Project Area, 1896
 (Source: Sanborn-Perris Map Company 1896)



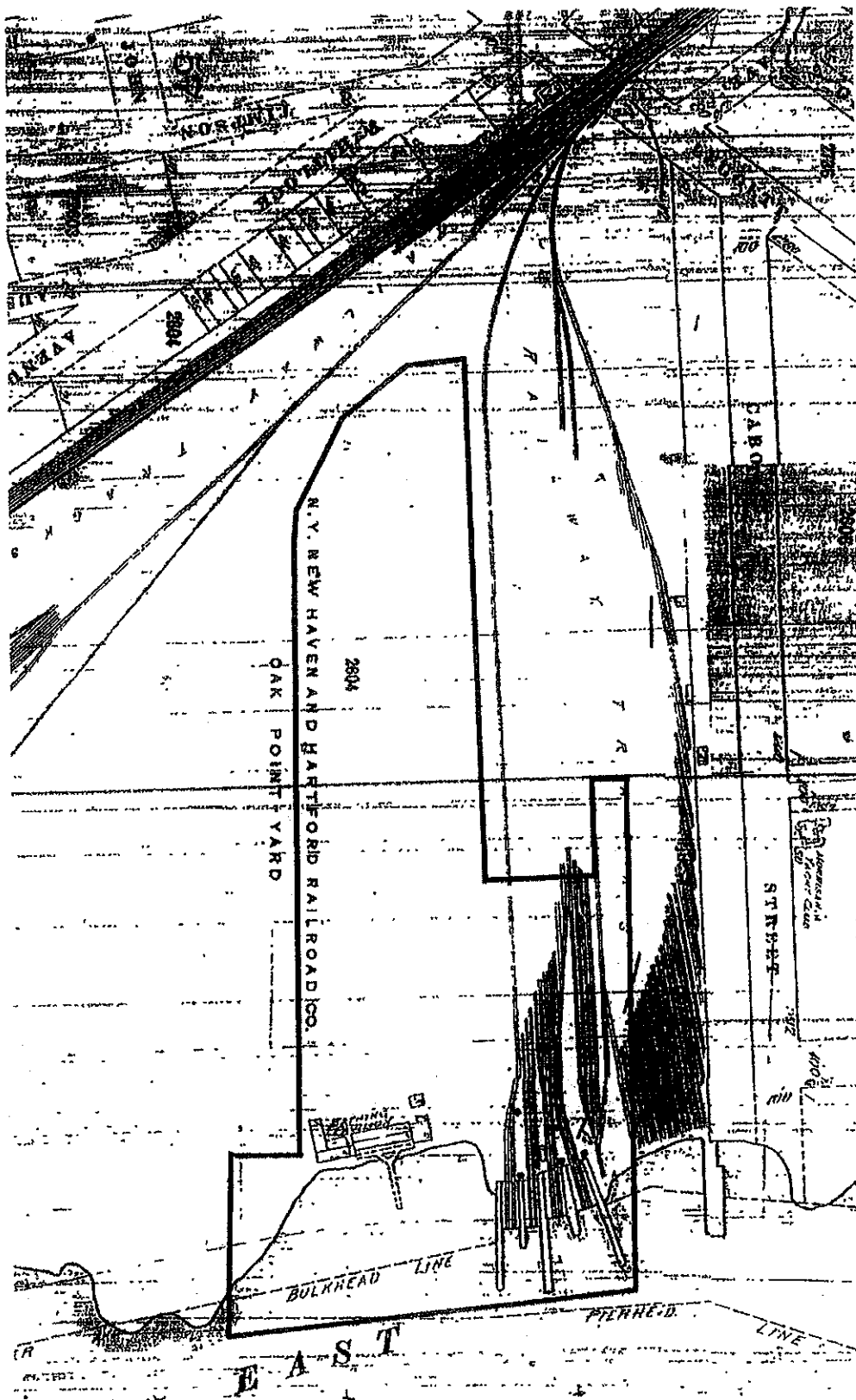
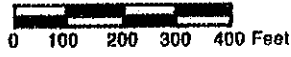


Figure 6 Project Area, 1901
 (Source: Sanborn-Perris Map Company 1901)



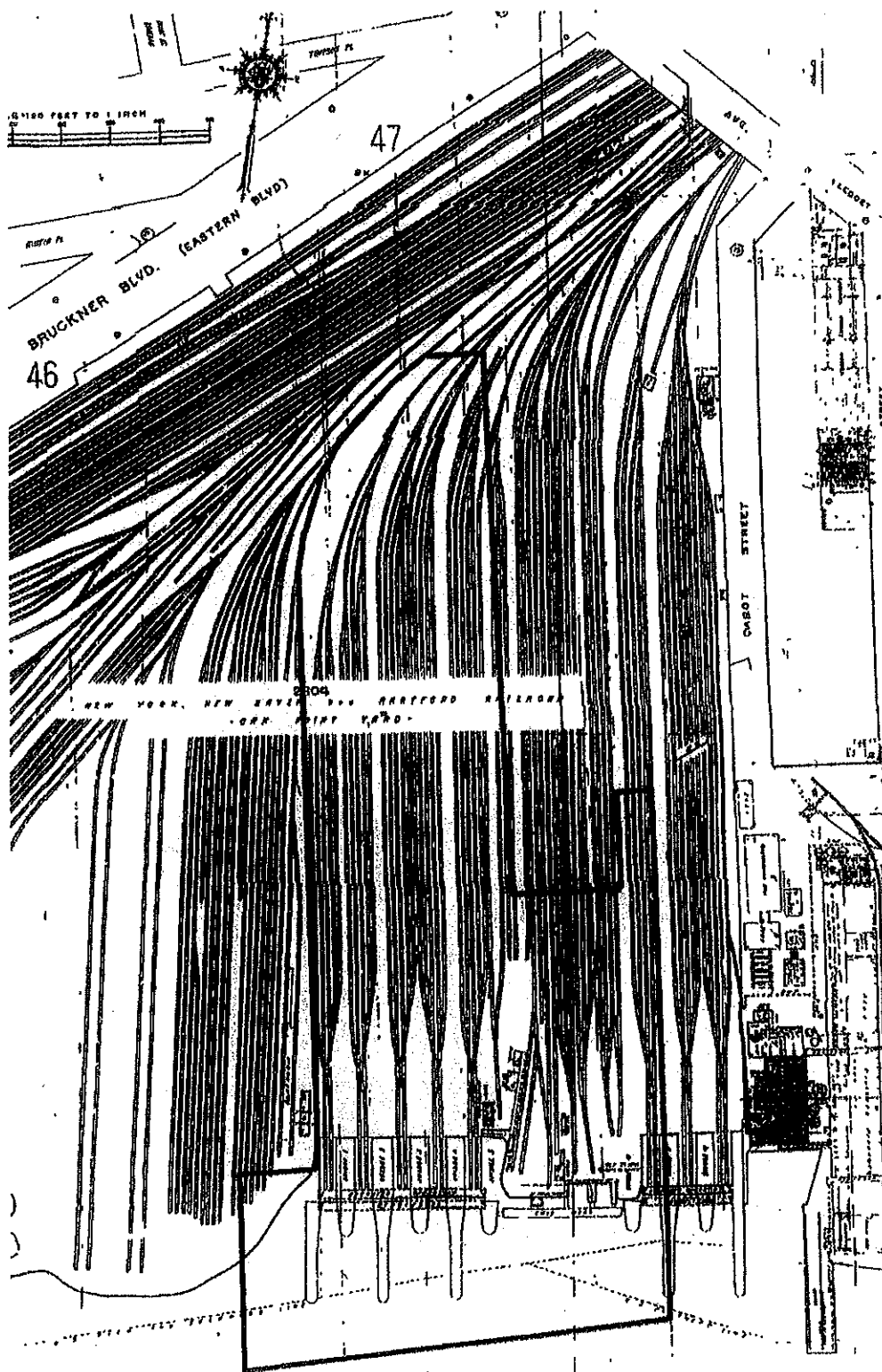


Figure 7 Project Area, 1915
 (Source: Sanborn-Perris Map Company 1915)



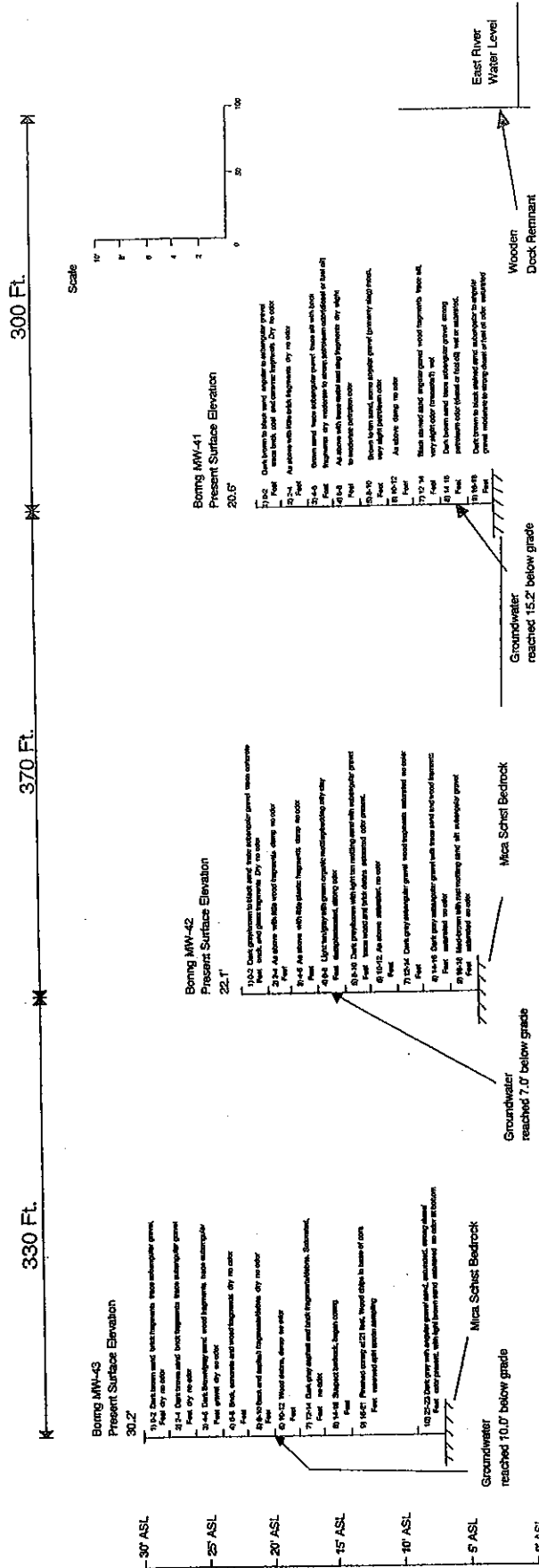


Figure 8 Composite Stratigraphic Profile of Project Area (see Figure 2 for location of borings)

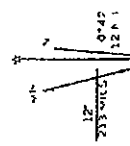
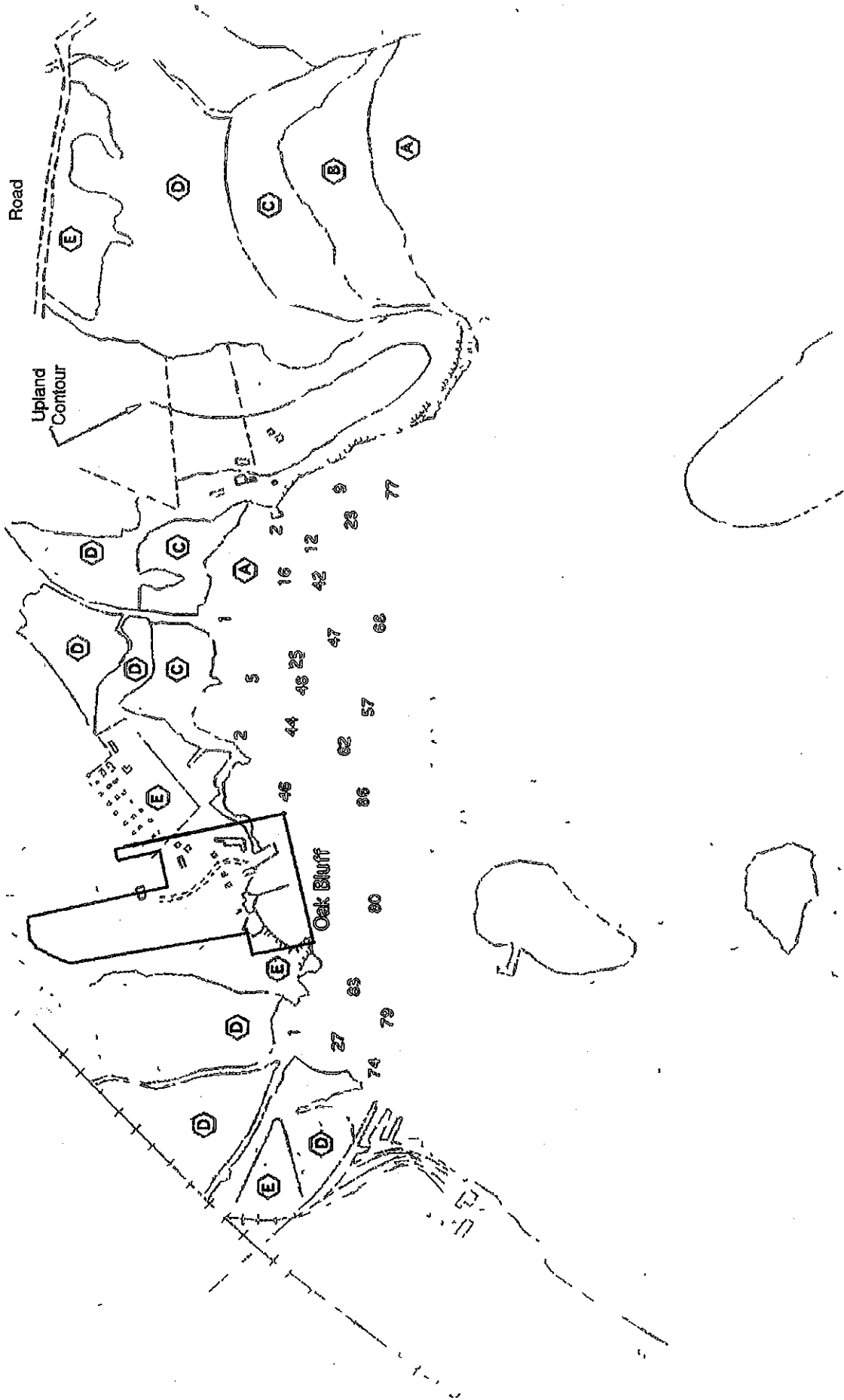
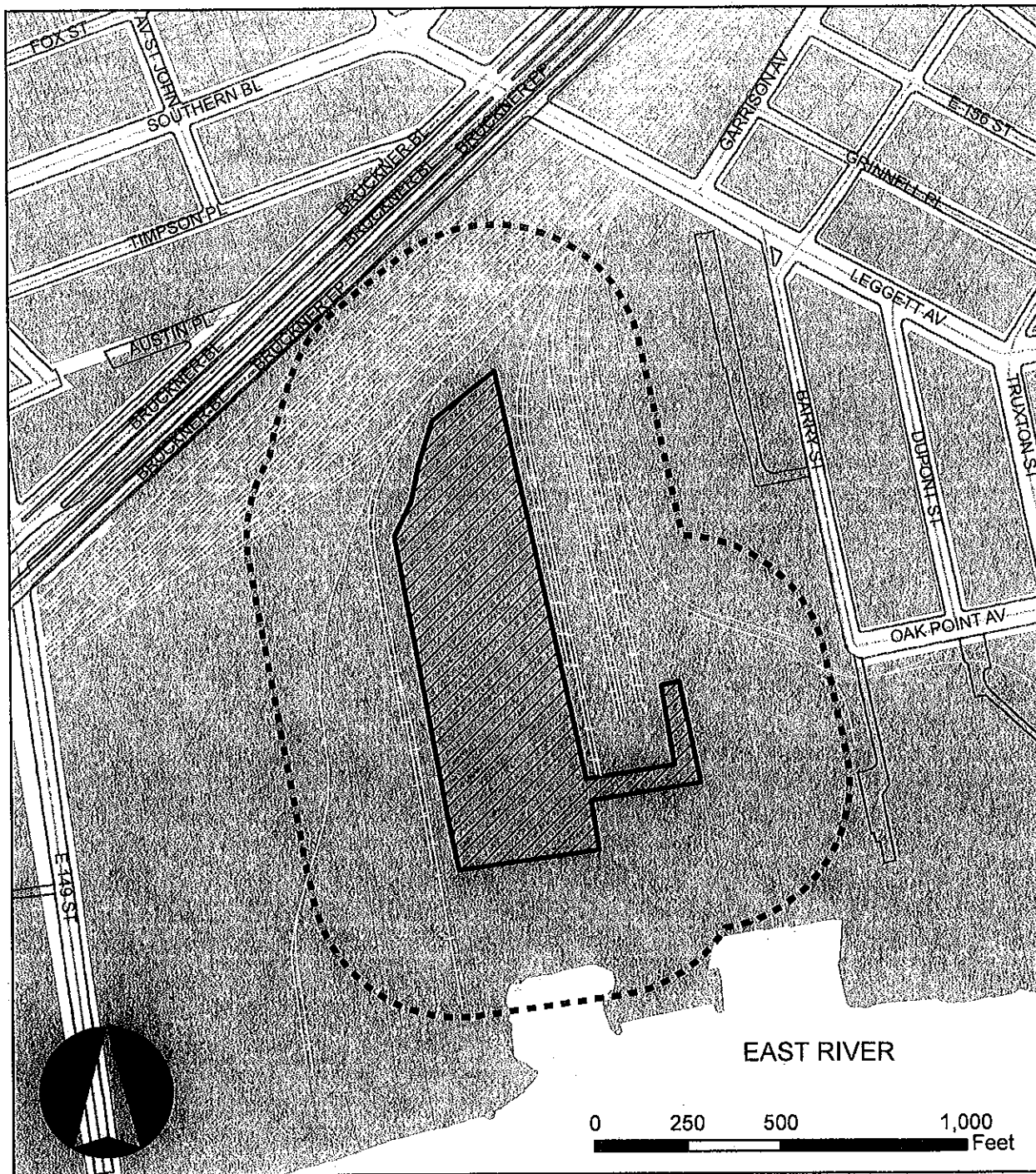




Figure 4 Project Area, 1888
 (Source: U.S. Coastal and Geodetic Survey 1888)

UTM GRID AND 1970 MAGNETIC NORTH



Legend

-  400 feet radius
-  Project Site