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Columbia
Degraw + Cone

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ARCHAEOLOGICAL SURVEY

COLUMBIA STREET
BETWEEN
ATLANTIC AVE. AND DEGRAW ST.
(CONTRACT 1B)
SOUTH BROOKLYN, (RED HOOK), N.Y.

RECEIVED
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DIV. OF CONSTRUCTION MANAGEMENT

for

Mason & Hanger-Silas Mason Co., Inc.
(Contract No. 213085)
with
Department of Water Resources
City of New York

by

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June 8, 1981

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ABSTRACT

A Stage I Cultural Resources Survey was made during May-June, 1981 of the Red Hook Water Pollution Control Project sewer line route on and adjacent to Columbia Street between Atlantic Avenue and DeGraw Street in Brooklyn, Kings County, New York. The survey was made to determine the sensitivity of the project area to adverse impact by the proposed open-cut sewer line construction. It consisted of a literature search, a walkover of the sewer line route with an inventory of existing building construction thereon and an examination of all subsurface samples and logs from the forty-nine boreholes made by the City of New York on or adjacent to the route. I conclude the area is minimally sensitive to impact by the proposed construction and that no significant pre-historic or historic cultural resources will be affected by it. I recommend no further cultural resource studies be made in connection with this project.

Introduction

A Stage 1 Cultural Resources Survey was performed during late May and early June, 1981 of the projected sewerline route on Columbia Street and Atlantic Avenue between Atlantic Avenue and DeGraw Street, Brooklyn, New York. This construction, part of the Red Hook Water Pollution Control Project, is designated Contract 1B and is located in that part of Brooklyn called Red Hook and/or South Brooklyn. Present plans call for an open-cut burial of sewer pipe that is calculated will have a direct impact on cultural resources at least 15 feet wide along the route of the trench.

The Cultural Resources Survey consisted of a literature search, a walkover of the entire route with a house-by-house and lot-by-lot inventory of existing building construction and an examination of the subsurface by means of a visual inspection of all the samples taken from the 49 boreholes on or adjacent to the route. The sewerline route is shown in Figure 3. The purpose of the survey was to determine the sensitivity of the general area to adverse impact by the described construction on pre-historic and historic cultural resources. I conclude that the area has a low sensitivity in this regard and construction will not imperil cultural resources of any period on the surface or in the subsurface. This project area is here defined as a 100 feet wide band over the entire length of the proposed sewerline between Atlantic Avenue and DeGraw Street including the alternate route between Kane Street and DeGraw Street.

Literature Search

With the earliest secure date for man in the northeast of North America at $12,580 \pm 370$ yr B.P. in Dutchess Quarry Cave, Orange County, New York (Funk et al, 1970) and current geological assessment of retreat of the Wisconsin ice sheet from Long Island at about the same time (Emery and Garrison, 1967) the project area, Figure 3, is theoretically capable of preserving cultural evidence from then to the present. Identifiable pre-historic activity would most likely be recorded as kitchen middens in this coastal region of a major estuary system. Four such shellheap midden sites were located according to Bolton (1936) and Parker (1920) at Third Ave. and 37th St., Bergen Island, Carnarsie and at Ryders Pond, Sheepshead Bay. No sites have been recorded in the project area.

Nevertheless, buried sites representing earlier sea stands might be preserved in the subsurface (Glyn, 1953; Salwen, 1965; Brennan, 1974). Solecki (1978) addressed this problem in a cultural resources study of the Fulton St. Ferry area of Brooklyn and he reports well established earlier sea stands in the Hudson estuary of 8 ft. below present M.S.L. 3000 years ago and 40 ft. below M.S.L. 6000 years ago (op. cit.:49) In recent times sea level rise has been of the order of 1 ft. per century so that since the arrival of Europeans on this continent sealevels have risen over 3 ft. These chronological controls were utilized when the subsurface samples and logs of borings made along the sewer line route were examined.

Historically, this part of Long Island was not settled by the Dutch before 1636. Administered by the Dutch West India Company, the early colonists negotiated with Carnarsie Indians

for land title and started settlements at News Amesfort (Flatlands) and at Gowanus. Part of the Gowanus neighborhood was included in a tract purchased in 1636 by William Adriaense Bennett and Jaques Bentyn. That tract, the first purchase in what was to become Brooklyn, ran along Gowanus Bay from modern Twenty-seventh St. southward to the New Utrecht line. Within several years, Bennett constructed a house near Third Avenue and Twenty-eighth Street, the structure reportedly being burned during the Indian difficulties of the 1640's. Red Hook or South Brooklyn apparently was considered part of Gowanus at that time (Stiles, 1884, I:80-82; Weld, 1938:11; Wilson, 1892, IV:1).

By 1640, the Dutch West India Company had secured title from the Indians for virtually all the remaining lands in Kings County and much of the area quickly fell into the hands of private individuals. Fredrick Lubbertsen in 1640 obtained a patent for a tract on the north side of Gowanus Cove and Cornelis Lambertse received land running from First Street southward to the Bennett-Bentyn purchase shortly thereafter. During the middle 1600's a small number of additional settlers established farms in Gowanus, which was recognized in the provincial records as a hamlet, separate both politically and geographically from the village of Brooklyn to the north. The dividing line between the two is not specified but in later times it was set at District Street (now Atlantic Avenue). (Stiles, 1884, I:80-82; O'Callaghan, 1856, I:544; ibid., II:488).

Following the conquest of all of New Netherlands by the English in 1664, Gowanus lost its separate political identity and became part of the town of Brooklyn. A survey of seventeenth and eighteenth

century wills and tax records indicate the European population of Gowanus remained predominantly Dutch. Non-Europeans in the area consisted of many black slaves and a few Indians. Gowanus continued to be primarily agricultural in its economy, surviving accounts make scant reference to commercial fishing, ocean traffic, shipbuilding, or other maritime activities (Pelletreau, 1893; O'Callaghan, 1850, II:290-293 and 93-96).

An account of the period 1679-80 (Danckaerts, 1679:53-60) describes the general vicinity of the project area. The author stayed at the house of Simon De Hart, located in the Bennett-Bentyn purchase overlooking Gowanus Bay and Red Hook. He reported the area between the house and the sea as low, flat ground overrun by water at every tide. It produced salt reed or grass, cut by the Dutch as hay. Sheep grazed on some of the higher lands, and the whole vicinity constituted a hunting ground for the shooting of snipe and wild geese. Several Indian families lived in huts erected on the beach. Gowanus Bay and the low marshy area of Red Hook, with connecting bodies of water yielded seafood, particularly oysters. Notable for their size, Gowanus oysters were pickled, packed in small casks and shipped to the West Indies. Small vessels navigated Gowanus Creek, particularly after the ^creation of a canal connecting the East River with Gowanus Creek. This enabled rowboats and craft of smaller size to avoid the difficult and dangerous navigation around Red Hook (Stiles, 1884, I:85).

According to a map made in 1766-67 (Ratzer, 1766), no lands directly adjacent to or in the project area were under cultivation. However, this map does show a mill located at what is presently the

intersection of President and Van Brunt streets, just south of the project area. It was apparently a tidal rather than a windmill and the mill race figured rather prominently several years ago when a house constructed over it collapsed and killed an elderly occupant (Michael Greenman, New York City Department of Public Works, personal communication). Rutzer's map shows the project area to be marshy and cut by narrow waterways connecting the marsh with the sea. Maps of Brooklyn drafted in the mid-nineteenth century that attempt to designate "old farm lines", original landholders and other features of colonial Gowanus also indicate no structures in the project area (Dripps, 1868; Dripps, 1869; Perris, 1855).

Although the Battle of Long Island during the Revolutionary War (August 27, 1776) took place in the general vicinity of this part of Red Hook, no action is reported in the project area and the nearest American fortification was located at Pacific and Bond streets (Stiles, 1884, I:51-55; Johnston, 1878:161-163; Wilson, 1892-93, II:506-509).

Figures 1 and 2 represent the best assesment available of the early configuration of the project area together with the principal period of construction (Board of Health, City of New York, 1875-76; Butt, 1846). It can be seen in the map of 1875-76, depicting the 1776-77 shoreline, that the entire project area with the exception of a small area near the intersection of Columbia and DeGraw streets was under water two centuries ago. Contrasting it with Butts's map of 1846 shows that by that date the entire area had been filled in and built upon. The latter map shows the shoreline of an earlier period (I estimate it to be c. 1830) and it is apparent

that about half the sewer line route, between Kane and DeGraw streets, had already been filled in by about 1830. It is equally clear that the entire project area had been reclaimed from the sea by the time the map was drawn. Stiles (1884, II:637-638) suggests that residential building in the area was greatly stimulated by construction of the Atlantic Docks (now Basin) in 1839-1847 just south below Hamilton Avenue. Streets in the area were paved during the 1850's (Burt, 1943).

No shipwrecks have been reported in New York Harbor near the project area (Rattray, 1953 & 1973; Hayn, 1979). This is not surprising in view of the marshy, shoaling coastline which would have been avoided by deep draft vessels.

Subsurface Investigations

The subsurface along the sewer line route was investigated by means of samples and logs kept of boreholes made for the Department of Public Works, Division of Engineering Services, City of New York, in Job No. 570, borings 89 - 117 and Job No. 671, borings 1 - 14. The location of these borings is shown in Figure 3. Job No. 570 was completed in October, 1968 and Job No. 671 in July, 1969. It is a tribute to this Department and Division of it that such meticulous subsurface records are made, preserved and kept available to other investigators. Geological descriptions of the various strata are stunningly accurate as are data of other features. Mr. Michael Greenman, geologist, of the Division of Engineering Services spent much time explaining all the nuances of the sampling system and showing me the samples from Job No. 671, stored under the Manhattan end of the Brooklyn Bridge. The samples from Job No. 570 were studied at the Coney Island Pollution Control facility.

Without going into specifics, the borings made into the subsurface are done in such a way that intact, unrotated examples of underground materials are recovered by a hollow coring device called a spoon. With an inside diameter of 1.25 in., the spoon is capable of recovering small artifacts and other datable materials from buried strata. Borings in the project area were terminated around 30 ft. below present mean sea level. Their logs show precise hardness, color, and particle size of the sediments, stratification boundaries and many other details of interest. From the archaeological viewpoint the only real difficulties arise over the small size of the man-made materials that can be recovered and the fact that the term "fill" on the logs does not have same meaning it does to an archaeologist. The borehole program was primarily designed to establish subsurface stability for construction, engineering, purposes and the term "fill" in this context implies instability, not necessarily that bricks, rubble, etc. are actually present.

All the samples and logs from the 78 boreholes shown in Figure 3. were examined. Covering a linear distance of just under a mile (4800 ft.), on and adjacent to the sewer line route, boreholes provided data of the subsurface every 60 ft. The logs of representative boreholes along the actual sewer line route are shown in Figure 4.

Two fill episodes appear to have taken place in the project area according map sources, Figures 1 & 2. If two such actually did take place they could not be distinguished in the borehole samples and logs. Rather, one fill only can be inferred from the subsurface data. This fill layer extends from the surface, 10 ft. to 15 ft. above M.S.L., to more than 10 ft. below M.S.L., depending on the location of the borehole in relation to the old shoreline.

It contained fragments of brick, mortar, cement, coal, cinders and ash, worked and unworked wood, a shell(?) pendant, a tiny fragment of molded glass, no ferrous or non-ferrous metals of any kind in an abundant matrix of natural material ranging in size from cobbles to clay. Mr. Greenman informed me that fill samples are inspected individually and obvious artifacts removed so the absence of nails and other metal objects may be an artifact itself of the inspection method. I place the fill material of late 18th and early 19th Century origin and it is, of course, completely removed from its original context.

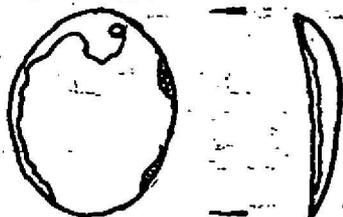
My reasons for dating it thus are as follows. The bulk of the unburnt coal recovered was anthracite, as opposed to bituminous, lignite or saprolitic (canal) coal. My own research at the Henry Whitfield House, Guilford, Conn. in 1963-65 (unpublished) shows this high grade coal became scarce in the early 1800's, for whatever reason. Most of the mortar is hard, strong material implying a late date but one piece is soft and friable with organic binders reminiscent of colonial period manufacture. The brick fragments range in color (Munsell System) from 2.5 YR 6/8 to 5 YR 4/6 and are indistinguishable in this regard from^m mid-nineteenth century material. However, the matrix is finer and there are fewer inclusions of stone and other foreign material in them suggesting, perhaps, an earlier time when more selective choices of clay for brick making was operative. The glass fragment could be of any period up to the present. The pendant shown in Figure 5 is unusual and appears to be of an early date in that it is clearly hand-made. It seems to be made of calcite, CaCO₃, and may be a shell. It is perforated slightly off-center and is heavily stained

over part of its surface in green. The stain may have been left by copper or brass, a part of the original pendant mounting or elaboration, but no trace of metal now remains. The pendant catalog No. is SB - 1 and the carefully finished pine wood fragment, at right in Figure 5, is designated SB - 2. Catalog No. SB - 3 includes all other man-made and some natural material collected from samples of the topmost, 'fill', stratum in the 78 boreholes.

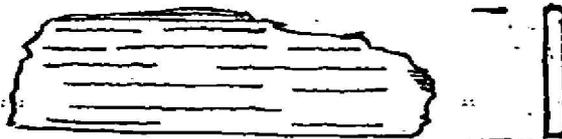
Every borehole sample that included shell in its content description was carefully checked for evidence of a buried shell midden. Very clearly no such prehistoric deposit was encountered during the drilling program. What shell did appear was sparse, fragmentary and unidentifiable as to genus and species.

From the drilling logs, shown in Fig. 4, a good stratigraphic marker is the peat horizon at circa 10 ft. below M.S.L. in many of the boreholes. It represents an earlier, lower sea stand when the entire area was marsh or near-shore bottom. Its date is uncertain but it certainly lies in the time range 3000 to 500 yr B.P. Samples from it contained no artifacts or unusual concentrations of shell.

Figure 5. Artifacts recovered during the survey with their catalog numbers.



Pendant - SB1



Wood fragment - SB2

Synopsis of Building Inventory

A building-by-building, lot-by-lot inventory of all construction along the sewer line route and its alternate was made during the archaeological survey. Attention is here confined to buildings which might qualify for inclusion in the National Register of Historic Places. None were identified that met the minimum inclusion criteria.

Approximately one half the sewer line route is occupied by modern Port Authority piers (7 & 8) on the right moving toward DeGraw St., and a city park, Van Voorhees, on the left. Another one third, between Congress and DeGraw on Columbia St. is vacant land filled with rubble. Of the remaining structures I place the following as the oldest and most architecturally interesting; all except one are brick, three story and all appear to date from the 1840's and 1850's:

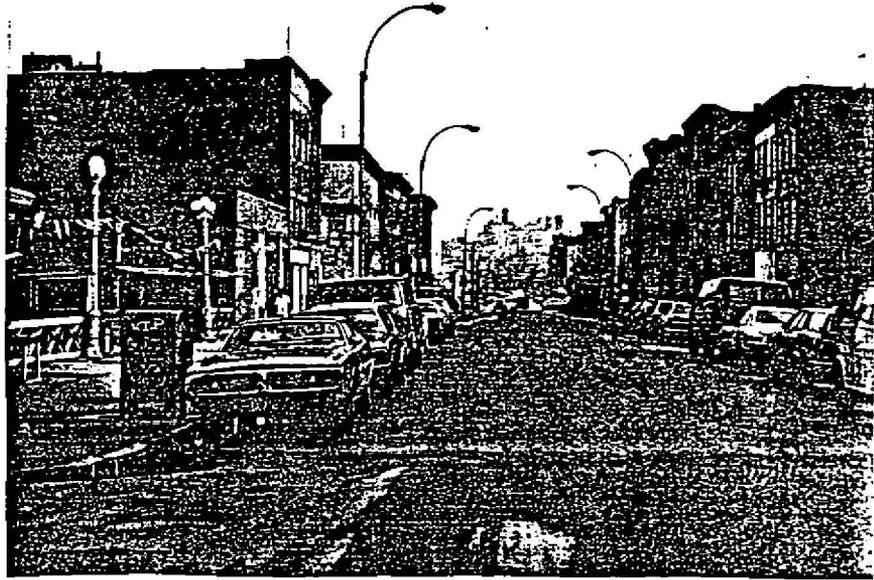
- Congress St. to Baltic St. ✓
- No. 73 Columbia St.
- Baltic St. to Kane St.
- None
- Kane St. to Irving St.
- No's 121, 123 and 144 (four story brick with stables) Columbia St.
- Irving St. to Sedgwick St.
- No's. 160, 161, 162, 163 and 164 Columbia St.
- Sedgwick St. to DeGraw St.
- No's. 165, 167, 168, 169, 183 and 184 Columbia St.

Of all these houses the most interesting is No. 184 Columbia St and it is further described and pictured Photograph C.

PHOTOGRAPHS

- A. View north along Columbia St. sewer line route from DeGraw St.
- B. View north along Columbia St. sewer line route from Baltic St.
- C. House on northwest corner of Columbia and DeGraw streets is typical of the earliest building construction in the area (circa 1840). Simple, low original cost, yet elegant this house uses limestone window lintels, sturdy American bond brickwork and non-functional V-front roof elaboration of the period. It, like others on the sewer line route, has street level entrances because the minimally stable beach subsurface probably would not support the deep foundations necessary for the then fashionable basement entrance.
- D. View south from Sedgwick St. to DeGraw St. of sewer line route where it and its alternated pass through the interior of blocks rather than on Columbia St. itself.
- E. View east of now partially abandoned row houses on Columbia St. intersection with Sedgwick St. They are representative of the earliest construction (1840's) in this low-lying part of coastal Brooklyn. Residential construction in the area was stimulated by the building of the nearby Atlantic Docks (Basin), 1839-1847, just south of the project area below Hamilton Avenue.

A



B

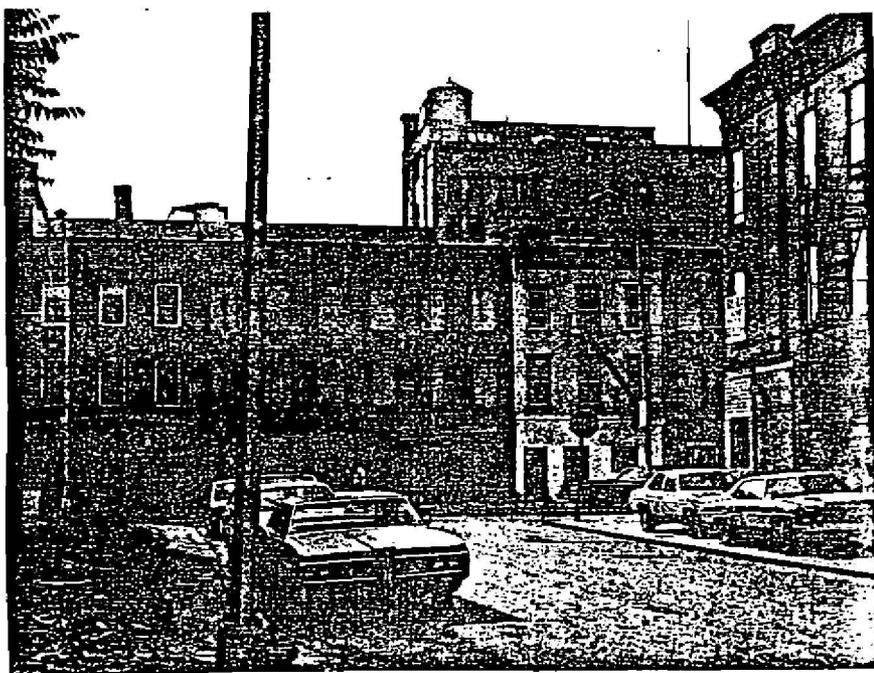
C



D



E



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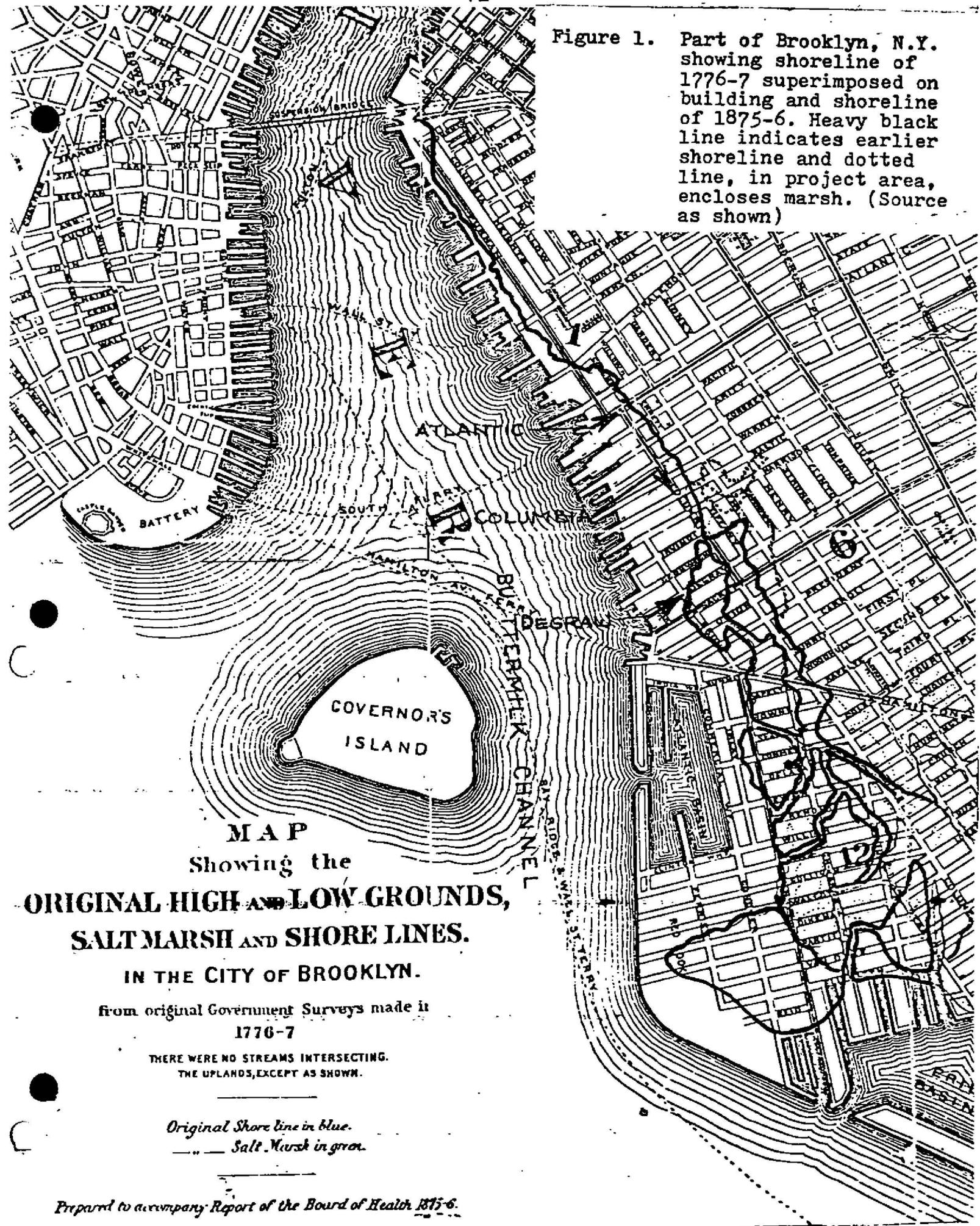
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Figure 1. Part of Brooklyn, N.Y. showing shoreline of 1776-7 superimposed on building and shoreline of 1875-6. Heavy black line indicates earlier shoreline and dotted line, in project area, encloses marsh. (Source as shown)



MAP
 Showing the
ORIGINAL HIGH AND LOW GROUNDS,
SALT MARSH AND SHORE LINES.
 IN THE CITY OF BROOKLYN.

from original Government Surveys made in
 1776-7

THERE WERE NO STREAMS INTERSECTING
 THE UPLANDS, EXCEPT AS SHOWN.

Original Shore line in blue.
 — — — Salt Marsh in green.

Figure 2. Part of Brooklyn, N.Y. showing pre-1846 shoreline (circa 1830) superimposed on a street map of 1846. Heavy black line indicates pre-1846 shoreline. (Source as shown)



Fig. 4
 Comparison of selected borings
 along sewerline route on Columbia
 St. between Atlantic Ave. and De-
 raw St. Job No. precedes borehole
 no. at top of log and are keyed to
 borehole locations shown in Fig. 3.
 on horizontal scale. Vertical scale
 indicated by elevations above and
 below Mean Sea Level on individual
 logs.

