Archaeological Sensitivity Evaluation and Testing Recommendations for the Proposed Subterranean Utilities Corridor between City Hall and Tweed Court House, City Hall Park, New York City.

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The Mandated Scope

At the request of the Department of General Services, Bureau of Facilities Management, and in accordance with the requirements of the New York City Environmental Quality Review Act and the New York City Landmarks Preservation Commission (Landmarks) archaeological review procedures under this authority, Grossman and Associates, Inc. conducted a comprehensive archaeological and historical literature search and sensitivity evaluation for City-owned property identified as City Hall Park located on Block 122, Lot 1 in the Borough of Manhattan (Figure 1). The project area is located between City Hall and the Tweed Court House, east of Broadway and south of Chambers Street. The survey area is located along the existing utility tunnel of approximately 130 feet long, located under concrete pavement and extending about six feet on each side of the tunnel.

The City intends to utilize this site for the construction of a service tunnel system, 72 inches in diameter, in order to install pipes to and from City Hall. The lowest point of the system is 13 feet 6 inches below current grade.

Introduction

The purpose of this archaeological sensitivity study is two-fold:

- 1. The development of an historic and archaeological evaluation of the immediate City Hall/Tweed Court House impact area to determine the potential for subsurface remains which may have survived subsequent 19th and 20th century construction and land use patterns.

- 2. The development of recommendations for an appropriate testing strategy aimed at defining the precise depth and physical integrity of any potentially surviving subsurface archaeological remains within the defined utilities tunnel impact corridor.

As detailed below in the discussion of the historical development of City Hall Park (a hub of municipal, social welfare and penal institutions from the colonial period to the present) it can be clearly seen, that the projected construction activities will take place within an area of historically intense land-use. Although the detailed scaled overlay maps, (Appendix I), indicate that proposed construction will transect ill-defined activity areas which include former garden and yard areas, documentary evidence suggests the possibility of the existence of the remains of cisterns, wells, stables, wash houses and sheds associated with the First Almshouse and/or the Upper Barracks. Both structures were formerly located in the vicinity of the impact

zone. Most importantly, (discussed in detail below), there were several vague but significant references to a burial ground associated with the First Almshouse.
In addition to defining the identity and approximate locations of historic structures in the immediate vicinity of the project area, the evaluation of historic maps and recent (1968) boring records, suggest that City Hall and Tweed Court House are situated in an area which was high ground in the colonial period. The analysis of these boring logs indicates that the original colonial surface lies at a relatively shallow depth of 3-5 feet below present grade (Figure 10, Overlay D). Although the projected impacts of the subsurface tunnel, as defined in the Scope of Services, extends to 16 feet below grade, the focus of the recommended testing proposal is aimed at providing physical evidence for the presence or absence of potential 18th century deposits within this depth range.

Because the scope and level of effort for any subsurface testing evaluation raises issues of logistics and feasibility for any testing program, a more detailed level of definition will await the results of negotiations between the archaeological consultants, the staff of the General Services Administration, and the Landmarks Preservation Commission.

City Hall Park, today, serves as a setting for two 19th century buildings, City Hall whose cornerstone was laid in 1803, and the Tweed Court House which dates to 1861. However, it is clear from historic records, Minutes of the Common Council, Building Records, old prints and photographs, and especially from old maps of City Hall Park, that for approximately one hundred years, it served as the heart of New York City's social welfare and penal institutions. The Park, too, served a military function. More than 800 men were quartered in the Upper Barracks along Chambers Street, which was located where the Tweed Courthouse is situated today. During the Revolutionary War, more than a thousand prisoners-of-war were imprisoned in the Bridewell and the Gaol, which were also located in the vicinity of the project area.
At the turn of the 19th century, the project area was transformed into the heart of New York's municipal, legal and administrative institutions. City Hall Park, however, was not legally established as a public park until 1871.

The Prehistoric Evidence

There is no documentary evidence of prehistoric remains within the project impact area. However, the subject needs to be addressed because of its proximity to the Collect Pond. It was noted in Lamb (1877) that "the Dutch found a large shell heap on the west shore of Fresh Water Pond, a small pond, mostly swamp, which was bounded by the present Bowery, Elm, Canal and Pearl Streets." (Skinner n.d.:44). Skinner stated that "this shell-heap must have been the accumulation of quite a vil-

lage" (Ibid). He deduced this from evidence cited by Van Rensselaer (1898), who wrote of a "a castle called Catiemuts overlooking a small pond near Canal Street, and says that the neighborhood was called Shell Point" (Ibid). This "castle" evidently referred to what Hemstreet (1909) says was an "indian lookout" (Ibid). This hill extended southward to Chambers Street. It should be noted that the Collect Pond and "castle" were approximately five to six blocks to the northeast of the project area (Figure 6).

History of the Project Area

The 17th Century

City Hall Park (Block 122) was initially acquired as public lands under the Dongan Charter of 1686 which granted "all the Waste, Vacant, unpatented, and Unappropriated Lands, Lying and being within the Said Citty of New York" to the people of the City (Stokes 1967 VI:66). Throughout the 17th century, the area which included City Hall Park was "the site of a free pasture" which the Dutch called "De Vlackte" (the Flat) (Moscow 1979:39). Other appellations for this piece of land were: the Common, the Fields, the Green and the Vineyard.

Although most documents indicate that the project area was a pasture in the 17th century, there is some evidence to show that one small block of real estate was excluded from the Dongan Charter and was maintained as private property. On May 27, 1664 a parcel of land was granted to Jan DeWitt and Jan Tienhoven. Although the deeds of this transaction are no longer extant, ancillary evidence provided by the Minutes of the Common Council indicate that a fence was erected between the Almshouse garden and the property of John Harris in 1740 (MCC IV:483). It was removed in 1746 (MCC V:176; 187-88). Since the Almshouse was constructed on the Commons, this evidence from the Minutes of the Common Council strongly suggests that some private property did indeed exist in the project area. This parcel of ground, "bounded westerly in front by the Broad Way Southerly by the Green commonly called the fields Easterly by the Ground belonging to this Corporation and occupied with the Poor House and northerly by other Ground of the said Corporation of which Piece of Land John Harris the Elder was seized at the time of his Death" (MCC V:188).

The records also note that the merchant Isaac Sears bought the property for eight pounds from Thomas and Mary Arden in 1770. (Ibid) In 1785, Sears petitioned the Common Council, stating that the Bridewell had been constructed, in part, on his

property (Stokes 1967 V:1202). Sears was willing to give up his claim to the land if he was paid eighty pounds by the City. (Ibid) This deed is no longer extant.

18th Century Developments

The earliest available cartographic evidence showing the project area within the Common Lands, is the circa 1730 Bradford Map, from a survey by James Lyne (Figure 2). An unidentified building is illustrated on the Commons, as well as a Ropewalk. Neither the owner of the unidentified structure nor the owner of the Ropewalk, are identified in the literature and deed evidence is nonexistent. A second early map, "A Plan of the City of New York in the Year 1735" by an unknown cartographer, has been located, however, which clearly shows the identical structure illustrated on the 1730 Bradford Map. This 1735 map shows the early building bounded by a rectangular enclosure, as if to mark off the boundaries of what was "John Ell's Gardin". (Figure 3) This structure corresponds to the site of what Hall (1910) indicated was "the approximate site of the first building on the Common" and which he attributed to the "early 18th century". This enclosed parcel also appears to correspond, in part, with the location of the original 17th century grant of land to De-Witt and Tienhoven.

The Almshouse

Minutes of the Common Council on December 20th, 1734, noted that the "Number and Continual Increase of the Poor within this City is very great and exceeding burthensome to the Inhabitants thereof for want of a Workhouse and House of Correction" (MCC 1905 IV:240). To remedy this situation, the first Almshouse in the city was constructed in 1736 on the Commons. Based on map evidence, it is believed that this structure corresponds in location with the current City Hall (Figure 10 Overlay C).

It should be noted that the Common Council also recorded its concern that the piece of land selected for the Almshouse be "large Enough to Erect Additional Buildings thereupon, for Workhouse and other Conveniences...and for Needful Yardroom and Garden" (MCC 1905 IV:241). It was directed that the Almshouse be 56 feet long and 24 feet wide with a "good Cellar", all of Stone (Ibid) (Figure 10 C). It was also directed that the workmen build a "Kitchen, Oven, and Washhouse to the said Workhouse" (MCC IV:319). It is reasonable to conjecture that these structures would have taken the form of two separate outbuildings; one for the kitchen and oven and the other for the Washhouse. This is based on the fact that in 1769, it was ordered that a small shed be erected adjoining the Alms House which was to be util-

ized as a Wash House. In addition, in 1736, the Common Council ordered that "a large Garden be...fenced, plowed up and made round the...(Alms)house for the raising of all kind of Roots Herbs &c"(Ibid) (Figure 10 Overlay C).
In 1739, an additional building was constructed, to be used as a hospital for contagious diseases (MCC IV:459). It is not clear from available evidence if this hospital was an extension to the Almshouse or a separate building. At any rate, its exact location is unknown. (Ibid). In 1769, a cistern was ordered for the Almshouse and in 1793 a "new well" was dug "in the Almshouse yard" (MCC V:1298). Again, the locations of these former structures cannot be pinpointed with the available data (MCC 1905 V:172-173).
Initially, the Almshouse served three separate functions:

- 1. a House of Correction;
- 2. a Workhouse; and
- 3. a Poorhouse

Such poor as were "able to work, may not Eat the Bread of Sloth & Idleness, and be a Burthen to the Publick" (MCC IV:305). At times, there was a blurring of these multiple functions. The Almshouse keeper was expected to be humane to those poor who were unable to work but to "correct the incorrigible" who had been committed to the House of Correction. According to current perceptions, incorrigibles included those "sturdy Beggars" who wander about the streets asking for alms (Ibid). Labor was expected from all able-bodied inhabitants, no matter where they were incarcerated - Poorhouse, Almshouse or House of Correction, especially, "all disorderly persons, parents of Bastard Children, Beggars, Servants running away or otherwise misbehaving themselves, Trespassers, Rogues, Vagabonds...(as well as) parish children sent to the poorhouse for maintenance" (Stokes IV:545).

An examination of the original Almshouse Records between 1759-1837, indicated that the reasons for admission varied. For example, many children were "sent by police" because their parents were "in the Bridewell". Other reasons for incarceration included several gradations of mental illness, the terminology for which were "silly", "foolish", and "Insane". Some unfortunates were "drunken vagrants", others were syphilitic, blind, without limbs, or just poor and/or pregnant. By 1785, there were 301 people in the Almshouse: 133 women; 63 men; 50 boys; 49 girls; 2 "Black Men & 4 Black Women" (MCC V:198).

Between 1766 - 1769, two additions to the Almshouse were constructed. Their location is unknown (Stokes 1967 IV:546). The Alms House was demolished in 1797 by order of the Common Council after a new one had been built between 1796-97 (Ibid) (see below).

The Upper Barracks

In the mid-18th century, two important structures were built on the Commons. The first was a Barracks Complex constructed to hold approximately 800 men. (Figure 4 and Overlay 10C) The other was the New Gaol (Jail) (Figure 4 and Overlay 10B). The Minutes of the Common Council reveal a discussion which took place on October 21, 1757, regarding completion of work on an Upper Barracks "to Contain Eight hundred men" to be built on "some of the Common Lands of this Corporation, to the southward of freshwater (the Collect Pond) between the New Gaol House and the house of Catemuts" (MCC 1905 VI:112). It was ordered that the building contain twenty rooms "on a floor two stories high, to be Twenty feet Long and Twenty one feet wide" (MCC 1905 VI:112). Either this citation is in error, or it represents an initial phase of construction. Subsequent maps show a long, rectangular structure approximately 400 feet long.

By 1779, the wooden Upper Barracks, (at this time in the hands of occupying British forces), extended along Chambers Street from Broadway, on the west, to Chatham Street (Park Row), on the east. Gates were located at the end of each street (Stokes 1967 V:1080). These barracks were partially located under what is today, the Tweed Court House. Given the documentary references to the length of the barracks, it is possible sections may survive to the east and west of the court house.

Additionally, a house behind the Barracks was utilized as a Hospital. However, this structure burned in 1774.In 1785, the Barracks, itself was used as a Hospital, however by 1790, it was ordered that the buildings at the rear of the Alms House, "formerly occupied as Barracks," be sold (Stokes 1967 VI:296-97).

The New Gaol (Jail)

Construction of the "new gaol" began in 1757 and was completed two years later. It was located next to Park Row on the eastern side of City Hall Park, east of the Almshouse, and can be clearly seen on the Ratzer Plan (Figure 4). This building was used as a military prison during the Revolutionary War (like the Bridewell) and was known as the "Provost" during that time period. In 1784 an "Execution House" was constructed between the Almshouse and the Powder Magazine (see Overlay 10 B) about on a "range with the Almshouse and Goal (sic)" (Stokes 1967 III:972). The exact location of this place of punishment is unknown, however.
In 1830, the "New Gaol" was reconstructed, renovated and transformed into a Hall of Records and Register's Office. This building was demolished in 1903.

The Bridewell

The fourth major 18th century structure built on the Common was The Bridewell or Reformatory. On March 25, 1775, New Yorkers laid out a plot of ground between the original Almshouse and the Liberty Pole, for the construction of a Bridewell. Constructed of "dark grey stone, two stories high, besides the basement", it was used as a prison even before it was completed. During the Revolutionary War, 816 American prisoners-of-war were incarcerated in the "New Bridewell" (Stokes 1967 V:1040).

Conditions were horrific: it was reported that the building was "a cold open house, the windows not glazed" (Ibid). Some of the prisoners "had not one mouthful of food" from the Saturday of their capture at Fort Washington until the following Thursday. Rations were scanty, there was no straw or hay; all fires were doused at nine P.M. and "there was nothing to keep out the cold except the iron grates" (Stokes 1967 V:1040).

The Minutes of the Common Council of April 5, 1785, noted that the "ground in the rear of the bridewell" should be used as gardens for the Bridewell and the Almshouse. It was also ordered that any pre-existing stables and/or other structures be removed. This is important information since the first Almshouse was located where the present City Hall stands and any buildings or stables to the rear may have been located within the project impact zone. Unfortunately, the exact locations of these gardens, outbuildings and stables can not be located with surviving documentary sources.

In 1803, the Bridewell was used as a Debtors' Prison, and by 1838, it had been demolished (Stokes 1967 III:972).

The Second Almshouse

By the end of the 18th century, overcrowding and poor conditions necessitated the building of the Second Almshouse. Authorized in 1795, the building was completed in 1796 (Overlay 10B) Situated where the Upper Barracks once had been, it did not function for long in this capacity. By 1815, the poor had been removed to Bellevue and the Second Almshouse was transformed into a cultural and arts center. It was utilized by the Academy of Arts, the New York Historical Society, the American Museum, the Literary and Philosophical Society and even John Scudder's Cabinet of Natural History (Figure 8).

The second Almshouse was transformed once again in 1849, when it was converted into offices and courtrooms and became the City Hall Annex. Destroyed by fire in 1854, it is now covered by the Tweed Court House.

18th Century Burial Grounds and Cemeteries

Documentary and cartographic information suggest the possible presence of 18th century colonial burial grounds within City Hall Park. However, evidence for the possible existence of a burial ground within the immediate vicinity of the project area is ambiguous. On March 19, 1757, a committee was appointed to "fence in a piece of ground for a burial-place next to the fence of the east side of the almshouse" (MCC 1917 VI:85). In addition, the vacant land behind the Upper Barracks was order to be utilized as a cemetery by the Common Council in August of 1785. Evidence strongly suggests that this cemetery was never laid out since in November of that same year, a committee of Alderman was formed to look into "a proper Place for a Burial Ground for the Alms House and Bridewell" (MCC I:185). It is not known if any of these cemeteries were actualized. Evidence suggests not.

A number of maps and secondary resources illustrate as well as discuss the existence of a "Potters Field" on the block to the north of the project area, on the northern side of Chambers Street (Block 153) and bounded by Centre St. on the east, and Broadway on the west (Figure 6) (Stokes 1967; N.Y.C. Scrapbook n.d.; Wilson 1903).

The 19th Century

City Hall

In 1802, a competition was held for a design for a new City Hall. "Joseph Francois Mangin and John McComb, Jr. teamed up to win the $350" (Tauranac 1979:10). Mangin designed the exterior and McComb, the interior. Construction of this 216 foot in length by 105 foot deep building began in 1803 and was completed in 1812. It is located where the first Almshouse once stood (1736-97) (Figure 10 Overlay A and C). A 1904 alteration record (Alt 1202/04) gives a depth of fourteen feet for the foundation walls of the structure.

In 1904, there was a "proposal to excavate below the main corridors in (the) basement for (a) tunnel which will be 6' 6" high" (ALT 1202/04). It was proposed to ex-

cavate to a depth of approximately eight feet below the then-existing floor surface. "This alteration was to be made for the purpose of so locating the water and gas pipes, the house drain and electric conduits, etc. in a tunnel, so that they may, at all times be accessible for repairs or renewal" (letter to Borough President from Chief Engineer, Feb. 20, 1905). No available information exists to establish its location relative to the existing utilities corridor. However, the possibility exists that this turn of the century utilities tunnel may be present in the vicinity of City Hall.

It is pertinent to note that although a now unused extension or loop of the IRT was built in front of City Hall, the tunnel did not extend into the vicinity of the proposed impact corridor (Figure 12).

The City Court House

The Court House at 30-32 Chambers Street, located 140 feet west of Centre Street was built in 1852 and demolished in 1928. Its dimensions were 73 feet front, 73 feet rear, and 115 feet deep. This building was located to the east of the second Almshouse and to the west of the Rotunda (1818-1870). (Figure 10: Overlay B). This structure stood on the location of a previous court house shown in the 1825 view of the project area (Figure 8).

The Tweed Court House

The County Court House located at 52 Chambers Street, between Broadway and Centre Street, was initially designed by the architect, John Kellum and finished after his death (in 1876) by Leopold Eidlitz. Construction began in 1861 and it has been occupied since 1867 - although never completed as planned. This structure "is the embodiment of post-Civil War urban and political history" (Tauranac 1979:43). William M. Tweed, leader of what became known as the Tweed Ring, headed a group of corrupt city politicians and contractors which used this building as an excuse to bilk the city out of millions of dollars.

An alteration application noted that the depth of the foundation walls was 15 feet (ALT 1717/11). However, a prior building record noted the foundation at only 14 feet below curb level (P&D 1879/12).

Colonial Topography and Landfill History

The original topography and landscape of colonial New York can be projected from two sources of available information:

- 1. the use of 18th and 19th century historic maps depicting undulations in the landform; and
- 2. the evaluation of boring profiles which document the thickness of fill and depth of original colonial surfaces relative to the modern and artificially altered surface topography of Manhattan.

While it is generally understood that much of the original landscape of Manhattan lies buried and, often, preserved below varying thicknesses of 19th and 20th century fill, the absolute depth of these historic surfaces varies on a block by block basis. As documented by boring records from the Bureau of Topography, as well as past archaeological investigations in lower Manhattan. (7 Hanover Square; Broad Financial Center; 175 Water Street; Stadt Huys and other sites), the original topography of Manhattan was drastically altered in the 19th century when previously existing hills were cut down and low or swampy areas filled in as part of the transformation of Manhattan Island into a modern cityscape. Thus, a major issue of any archaeological or historical sensitivity evaluation involves the definition of two historic processes:

- 1.) a reconstruction of the projected depth of fill within each study zone, and
- 2.) once defined, the reconstruction of the definition of the location and depth of subsequent building and basement construction in the immediate vicinity.

Where subsequent basement depths or utility construction cut into or below the depth of the original colonial surfaces, the potential for surviving archaeological materials, (either prehistoric or historic), is generally low. However, where subsequent construction depths do not appear to have intruded into or below the original colonial surface, the possibility of encountering surviving undisturbed archaeological remains or deposits is relatively high given the intensity of historic occupation from the 17th century to the present in lower Manhattan.

As detailed below, the situation for City Hall Park appears to reflect one of relatively shallow surface deposits of modern or historic fill confined with a limited number of subsequent deep basement or utility construction other than the existing three foot wide conduit line.

The characterization of the colonial landscape in the vacinity of City Hall Park can be projected, in general, from two historic maps of lower Manhattan: The pre-Revolutionary War era Ratzer Plan dating 1766-67 and the later Viele Map which dates to 1874 (Figures 4 and 9), but which shows the original topographic highs and lows of Manhattan relative to 19th century street alignments. Both topographic depictions show City Hall Park was, physiographically, a plateau which dropped off to the north above Chambers Street and extended as far south as Vesey Street or the southern point of the (then) triangle of the Park (Figure 1). While both agree as to the topographic context of the Park, neither rendition gives contours or elevation data which can be compared to modern bench marks. The only source of data for reconstructing the probable colonial elevation prior to landfill or levelling activities in the 19th century is through the Bureau of Topography Boring Logs which depict the depth of 19th century and modern fill deposits.

As can be seen in Figures 10d and 11, available and relatively recent subsurface boring logs (1968), documents eight boring profiles within 150 feet of City Hall and the Court House within the northern portion of City Hall Park. Two borings to the east of the Court House, (Numbers 22 and 26a), document fill depths of 9-10 feet which may relate to open cutting construction activities of the subway line on the eastern side of the Park. Three borings, (Numbers 16, 21, 24), on the west side of the Park taken in a line within 50-60 feet east of Broadway and approximately 100 feet west of the Court House document comparable depths of fill ranging from 6 feet to the south to 10 feet in the area of the intersection of Broadway and Chambers Street. Thus, these lateral borings are consistent in indicating that the original surface to the east and west of the Court House and City Hall sloped down to a depth of 9-10 feet below modern surface grade on either side of the Park.

However, two borings in the immediate vicinity of these municipal buildings, Number 17 at the northwest corner of the Court House, taken at the edge of Chambers Street and Number 25, taken 20 feet to the north, or immediately adjacent to City Hall, both show a consistent depth of 3-5 feet below the modern surface.

Boring Number 17 (Figure 11), shows the presence of a near-surface deposit of miscellaneous fill, (sand, silt, gravel and brick chips), to a depth of three feet, overlying compact brown sand with traces of gravel and silt to a depth of 10 feet, which appears to indicate the original colonial substrate. Boring Number 25, (Figure 11), documents the recovery of the presence of miscellaneous fill, (sand, gravel and cinders) to a depth of 5 feet below modern grade. Thus, both boring logs in the immediate vicinity, 1.) northwest of the Court House (Number 17) and 2.) Number 25, between the Court House and City Hall, are consistent on two counts. First, the depth of fill in both borings is relatively shallow, ranging between 3-5 feet and second, both documented the presence of historic fill elements, cinders in one and brick chips in the other. When considered together, these borings support the

topographic renditions of the two historic maps and indicate that not only was City Hall built on a plateau but also that it was situated on what appears to have been the point of highest ground on that plateau for that portion of City Hall Park. These depth of fill data are rendered as a subsurface topographic map (through computer-based interpolation) of the immediate project parcel (Figure 10d).

Based on these multiple lines of evidence, the data suggest that if any surviving cultural materials are preserved intact, they would be encountered at, or immediately below, the interface of this relatively thin near-surface fill and the underlying brown sand, presumed to represent the original land form.

Given the relatively shallow depth of these deposits, it is possible to indicate a minimally appropriate presence or absence testing program to document potential archaeological sensitivity of the proposed utility corridor expansion.

Testing Recommendations and Logistical Considerations

Based on three lines of evidence, (the historic map analyses, synthesis of primary and secondary sources and the reconstruction of the topography based on subsurface boring profiles), the proposed impact corridor may overlap in space with the location of, relatively shallow, buried 18th century cultural deposits. With the exceptions of the actual basement construction of City Hall and Tweed Courthouse and the existing three foot wide utilities corridor between the two, the proposed tunnel construction corridor appears to have been minimally impacted by subsequent construction activities. While it is clear that two of the major 18th century structures in the area, the Upper Barracks and the first Almshouse, appear to had been destroyed by later deep basement construction associated with these two buildings, the intervening space between them may have been minimally impacted, if not well preserved, by the addition of subsequent fill and landscaping which brought the topography to its present elevation. Based on the mandate of the Department of General Services Scope of Services, some form of subsurface testing is indicated as appropriate to evaluating the presence or absence, and nature of potential remains as well as the impact of the proposed construction.

The following testing recommendations or options have been formulated based on the assumption that the fill is relatively thin in this immediate area and that the original 18th century surface may lie relatively undisturbed at a depth of 3-5 feet below modern pavement. The testing options are being presented as an initial suggestion which may require review and refinement by staff of the General Services Administration and the Landmarks Preservation Commission. They are being presented with the clear understanding that the open space between these two build-

ings serves as a principal thoroughfare for pedestrians through the park as well as bands or zones of security currently being maintained on a regular basis by the New York City Police Department. These defined security zones include both walkways parallel to the rear of the Court House and City Hall, and the connecting walkway between the two. The Proposed construction corridor overlaps with an entranceway to each building - one public for the Court House, one official for the rear entrance of City Hall. Thus, any proposed subsurface testing would have to be carefully positioned to minimize impacts to these primary routes and any ongoing official activities.

Testing Goals

The archaeological testing has been formulated to address the following issues:
1. the definition of the nature, thickness and cultural contents of the indicated near-surface fill deposits;
2. the definition of the nature and cultural association of the suspected 18th century interface immediately below this fill; and
3. the nature and extent of past impacts from the construction of the existing utilities corridor, relative to the projected vertical and lateral impacts of the proposed tunnel construction.

If any significant resources are to be encountered, future recommendations concerning appropriate mitigation would require that the scope be limited to address the definable impact zone. Thus, the definition of the width of the previous builder's trench associated with the existing conduit line would have to be carefully defined. At the same time, the possibility exists that the builders trench may have obliterated any subsurface remains beyond the width of the proposed construction, which would obviate the need for any mitigation.

Although the proposed impact will extend to at least 16 feet below modern grade, the conclusions of the sensitivity evaluations indicate that efforts should focus on determining the preservation of colonial remains within this 3-5 foot depth zone. No evidence exists to suggest the probability of potential prehistoric resources, but, if present, they would be encountered in this near-surface zone.

Based on these considerations, it is reasonable to suggest utilizing a conservative approach based on the use of one or possibly two, manually exposed test excavation units. The use of one controlled unit would permit definition of the nature of deposits on one side of the trench. The use of two units would provide a basis for evaluating the presence of historic deposits on both sides.

A more conservative option would utilize either hand or machine auger probes, but given the documented presence of cement rubble near the surface, this may not be possible. Although auger or soil borings may provide additional information to augment what is already known from existing soil profiles, because of their small size, may not provide a sufficient level of definition to give presence or absence evidence concerning the preservation of cultural material.

Accordingly, we recommend the placement of at least a 1 X 2 meter unit perpendicular to the existing utility tunnel. This alignment would provide a vertical transect cross-cutting and defining the extent of the construction associated with the building line. It would also provide a sample to characterize the stratigraphy and content of the overlying fill deposits, as well as a minimally adequate exposure of the underlying historic interface or surface. This, in turn, would provide information to evaluate the research potential and stratigraphic integrity of any deposits within the defined impact corridor.

The placement of the units between the two grass knolls is being suggested to minimize the inconvenience to pedestrians within the two primary east-west walkways and security zones. An additional option for minimizing disturbance would be to consider undertaking archaeological testing over the weekend.

Laboratory Procedures:

All laboratory activity will be conducted in compliance with guidelines established by the Department of the Interior for the proper curation of Federally-owned and administered archaeological collections (36 CFR 79 and 66). The objectives of these laboratory procedures will be:

- 1. To prepare artifacts and samples for analysis, including wet or dry cleaning, special drying procedures, and/or special packaging or handling of samples destined for instrumental analysis;

- 2. To physically stabilize fragile finds; and

- 3. To record all artifactual and contextual data in order to allow for in-depth research and analysis.

The initial processing is intended to provide a preliminary level of quantified control on the nature, variation and number of excavated materials. At this first-cut level, procedures are restricted to:

- 1. cleaning
- 2. coding, quantification and initial data entry
- 3. stabilization

A simple taxonomy will be used in the preliminary stage to ensure accurate records of all artifacts recovered during the excavation, on a day to day basis

context number: This is the original unit of natural stratigraphic association, and it is the main number that links the object to other forms of recorded information.
material: Indicates the material the object is made of.
class: Initial identification of fundamental artifact categories.
count:
weight:
comments:

Stabilization

The on-site conservation capabilities provided by the Manhattan laboratory will be directed toward halting the accelerated deterioration of artifacts that can be caused by the collection process itself. Generally, the approach will involve inert curation materials suitable for conditions, and will attempt to slow down the effect of environmental change from a wet soil environment to a dry, aerated one. The physical stabilization of artifacts may also require our facilities for chemical treatment where the necessary equipment is available and appropriate safety measures can be taken.

Advanced Laboratory Procedures are:

1. Labeling of Artifacts:
(The physical device of labeling artifacts, or the manner in which objects are keyed to recorded data.) Depending on size and characteristics, artifacts will receive at least one or more of a three-staged form of permanent identification. These forms of labeling are:

- a. A context number which will be applied directly to the artifact with India-ink. A coat of polyvinyl acetate, (type UHU), in acetone, will be brushed on the surface of the artifact prior to the application of the label and another coat applied afterward to protect the ink after it has dried.

- b. Clearly visible context numbers and all other necessary information will additionally be written on the polyethylene packaging bag with a waterproof pen.

- c. "Tyvek" waterproof labels indicating the context number, site number and the initial classification of the object or objects will be placed inside the polyethylene bag, along with the artifact. "Tyvek" is a non-paper printing material made of high-density polyester fibers impregnated with polyethylene.

This three-stepped labelling procedure ensures that throughout all phases of artifact processing, research and analysis, the object will always have some form of identification.

2. Formal Identification and Data Entry of Artifacts

This work will be the completion of the rudimentary identification that took place on a daily basis during excavation. The same database program (Paradox) will be used because it is an easily expandable and flexible one. First, a hard copy of a list of major and basic characteristics will be made. This follows the general security measures to ensure adequate documentation and backup evidence. This artifact inventory data base will include the following categories of information:

Context number
Map number
Photo number
Period
Count
Weight
Material
Class
Technique
Type
Elements
Comments

3. Artifact Packaging and Storage

The context number initially assigned in the field to each discrete excavation unit, level, or deposit will follow the artifact6s through the laboratory process as the basic unit of recording and identification as well.

Diagnostic artifacts, bulkier artifacts, as well as non-diagnostic materials, will be stored in sequential context number order. Individual items will be packaged, (depending on their condition), in ziplock polyethylene bags, boxes or vials, in acid-free tissue paper, or placed in acid-free boxes. All the finds from one context number will be placed in a larger archival box. These boxes will be organized in context number sequence and prepared for shipment to the long-term storage facilities.

4. Photodocumentation of Artifacts

All diagnostic artifacts will be photodocumented. Our Manhattan laboratory is equipped with an up-to-date darkroom and equipment for this documentation.

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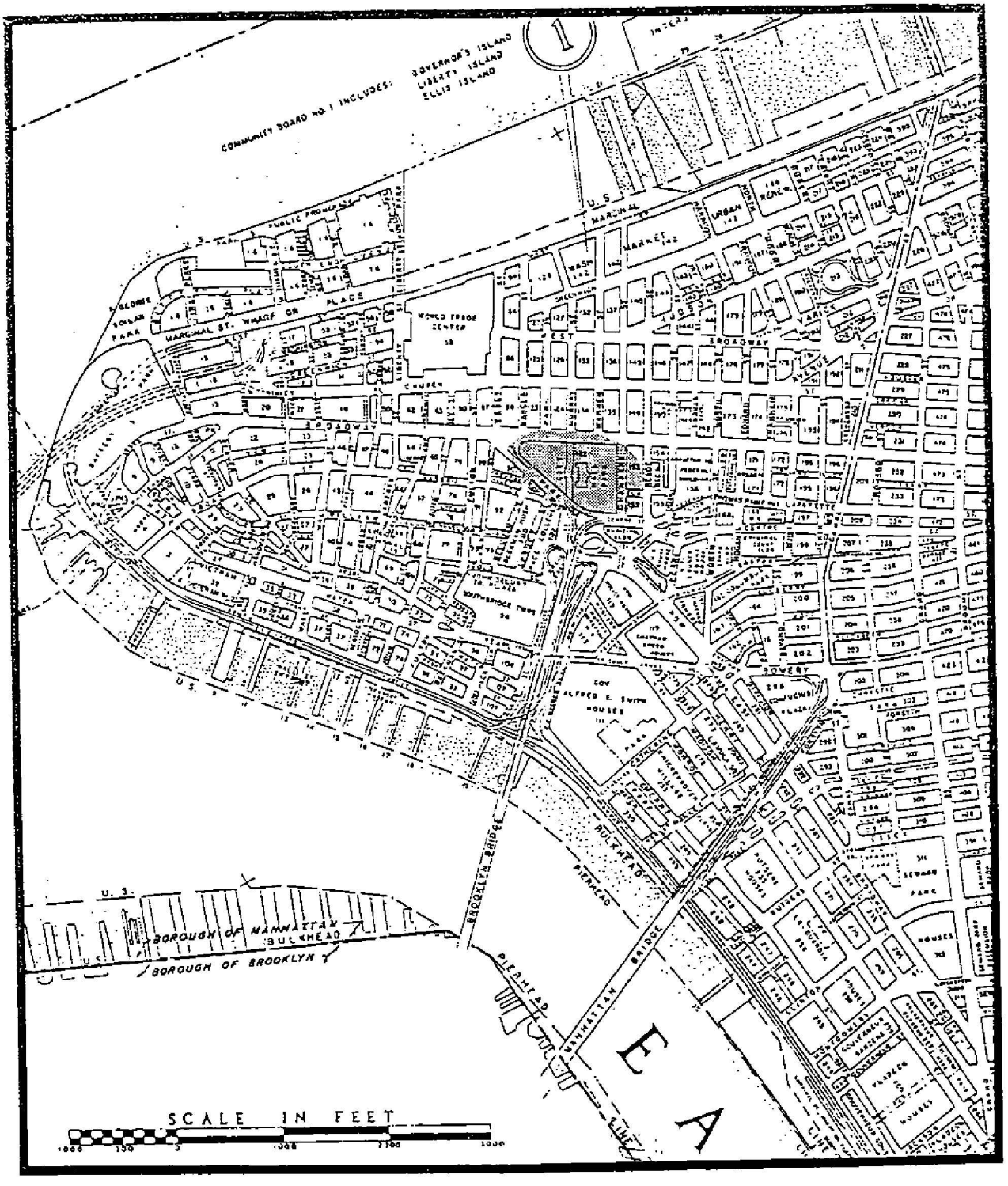


Figure 1: Site Map showing Block 122, the City Hall Park project area.

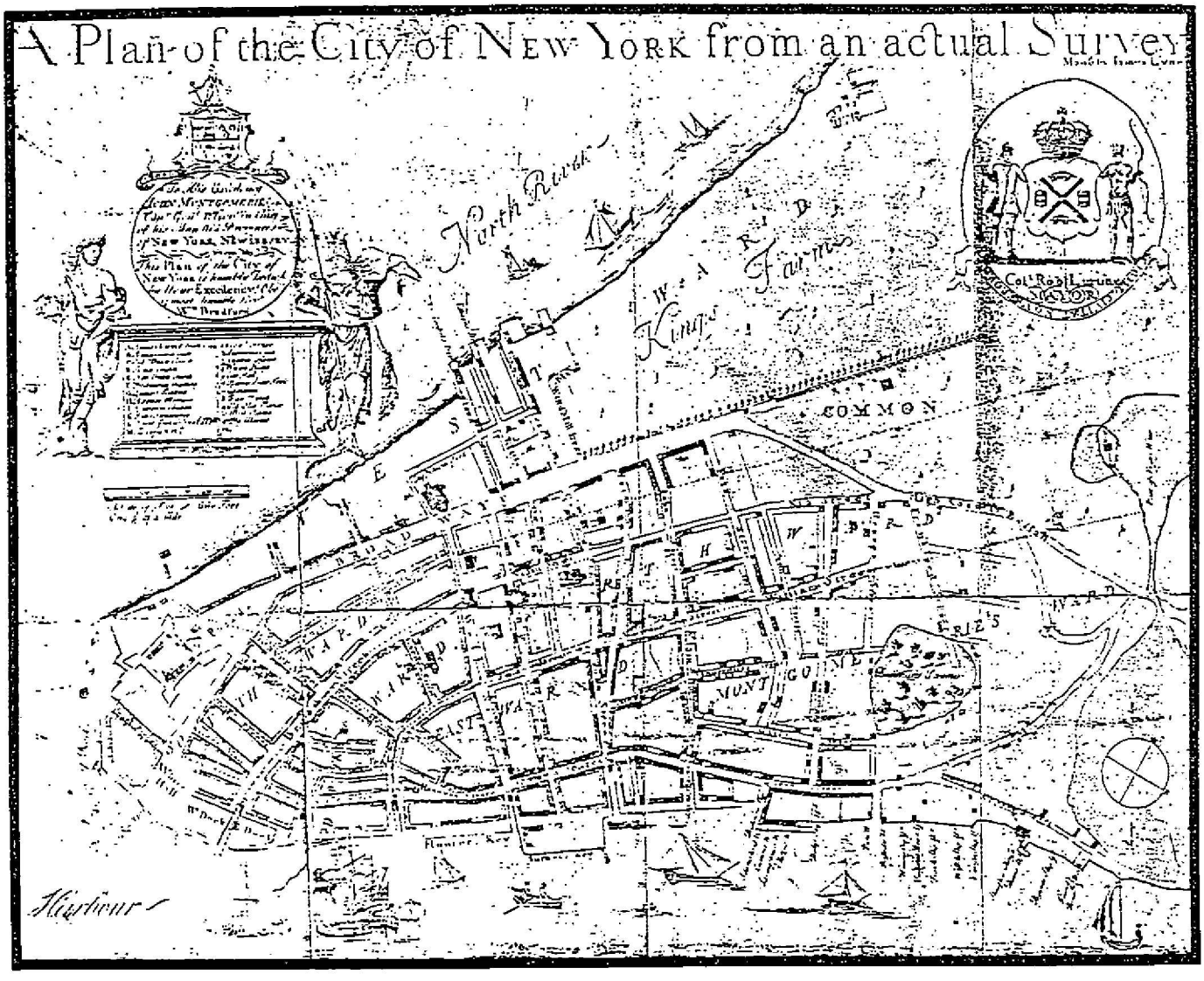


Figure 2: Bradford Map (circa 1730) illustrating the "Common", the "Ropewalk" and an unidentified structure thought to be the earliest structure on the Common.

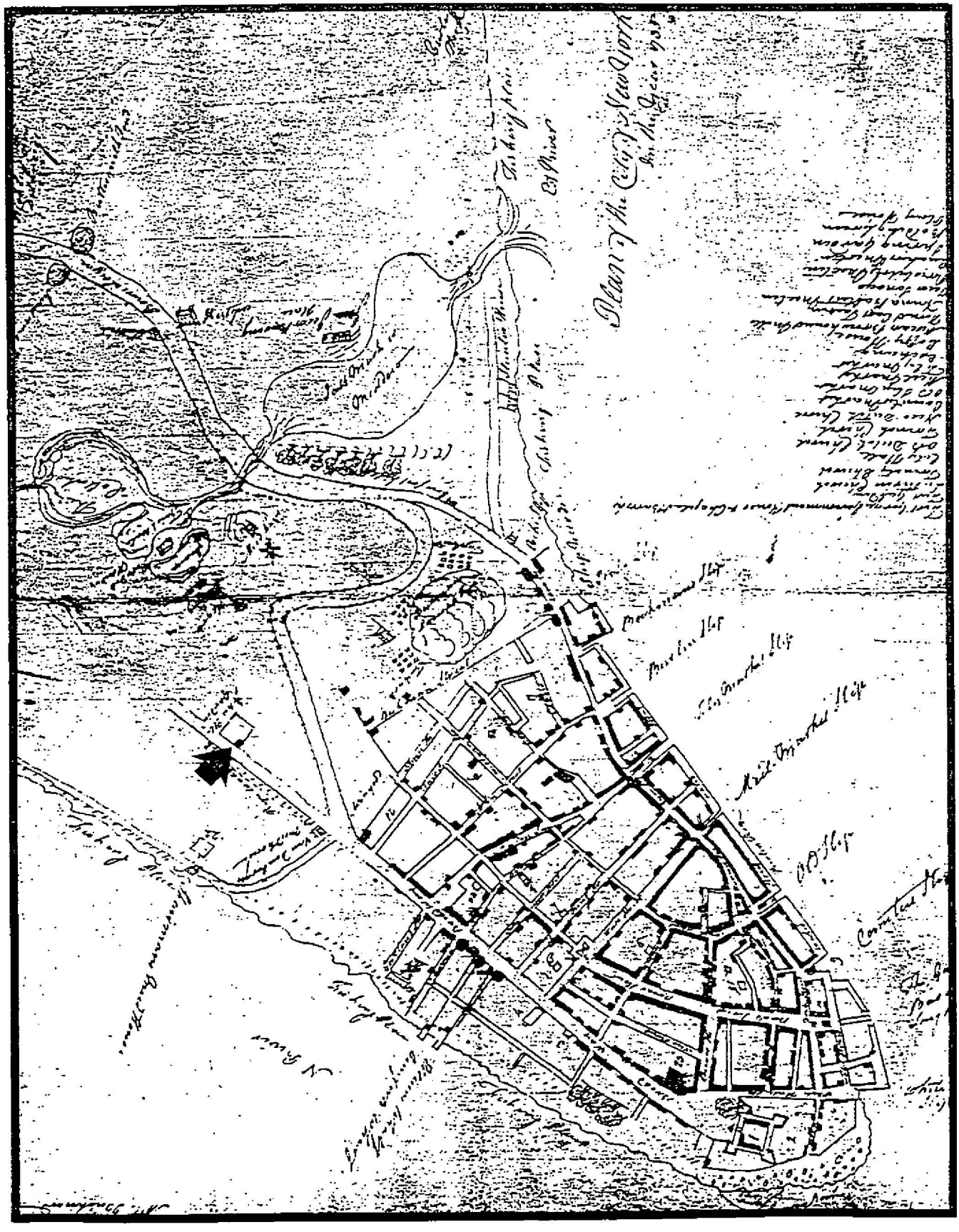


Figure 3: "Plan of the City of New York in the Year 1735" showing "John Ell's Gardin."

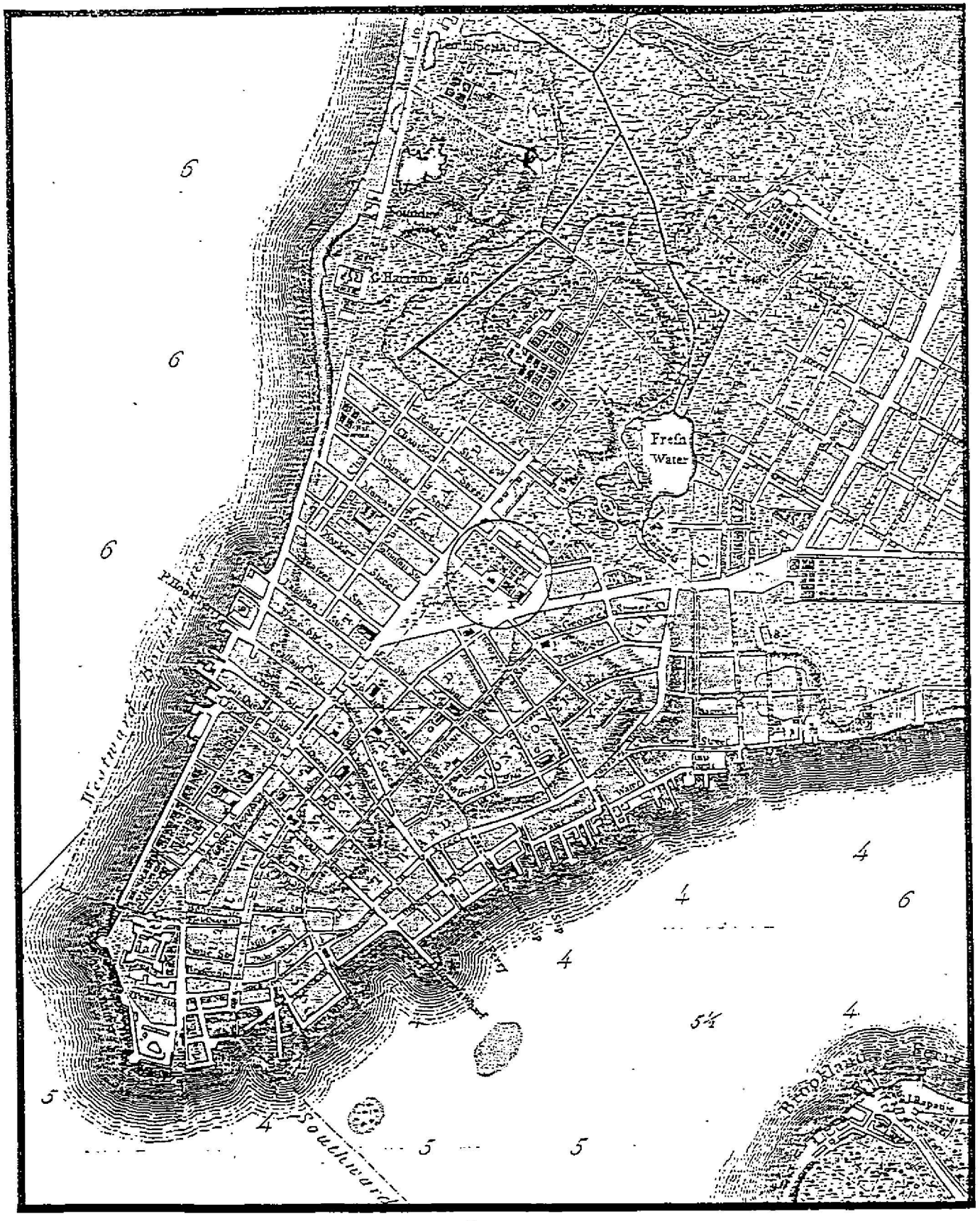


Figure 4: Ratzer Plan (1766-67), clearly illustrating the Common, the Upper Barracks, the Alms House and the New Gaol. It also shows the orchard and garden associated with the Alms House.

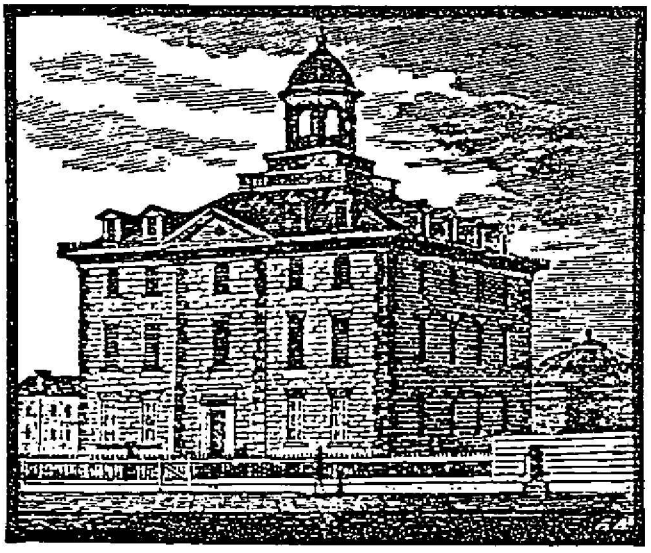


Figure 5A: The New Gaol or "Provost"

Figure 5B: The Bridewell

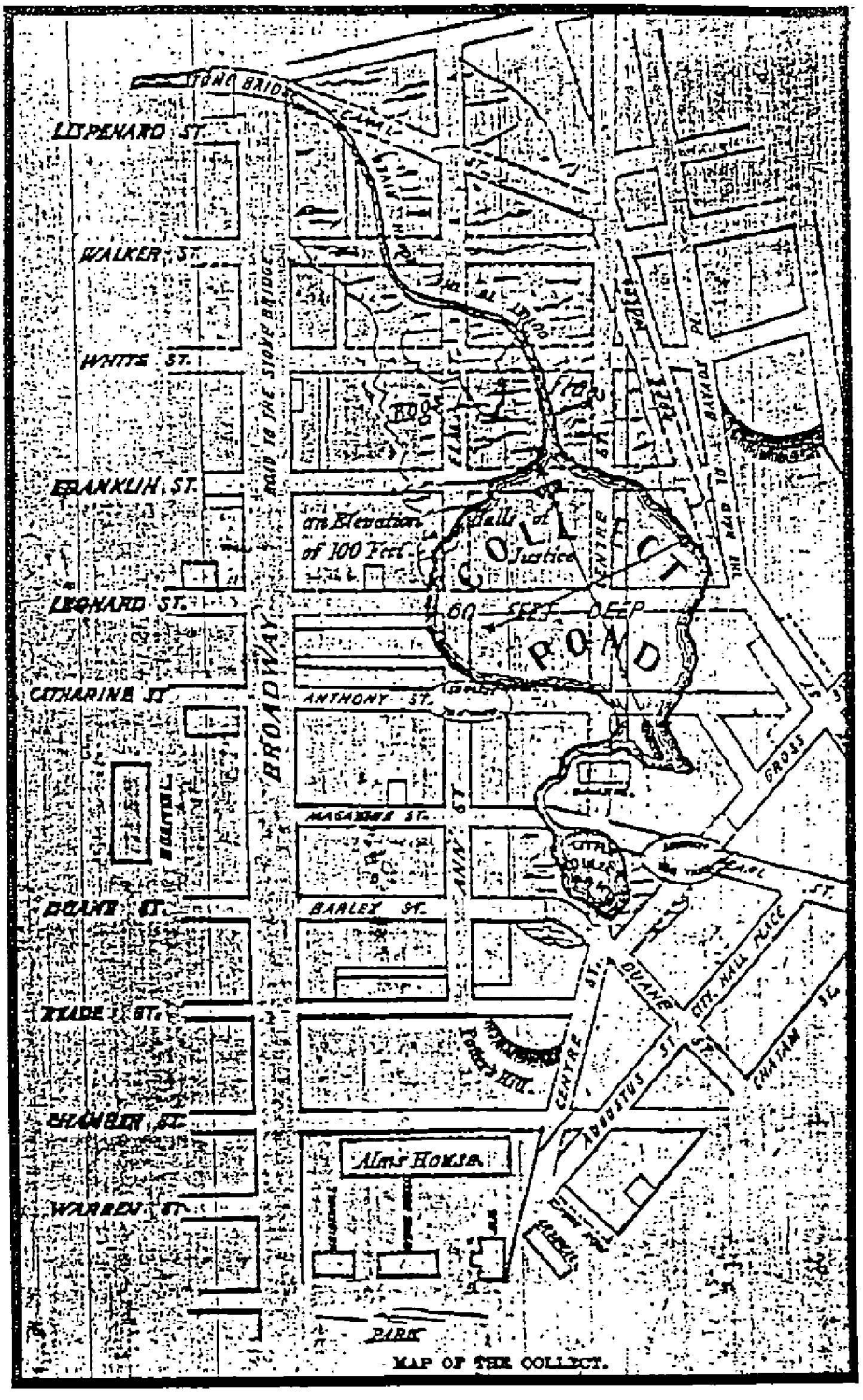


Figure 6: 19th Century Schematic Map of the Collect Pond, showing the Little Collect, the Bridewell, Almshouse and Jail, as well as the "Potters Hill" north of Chambers Street. There was a burial ground south of the hill and bounded by Chambers Street.

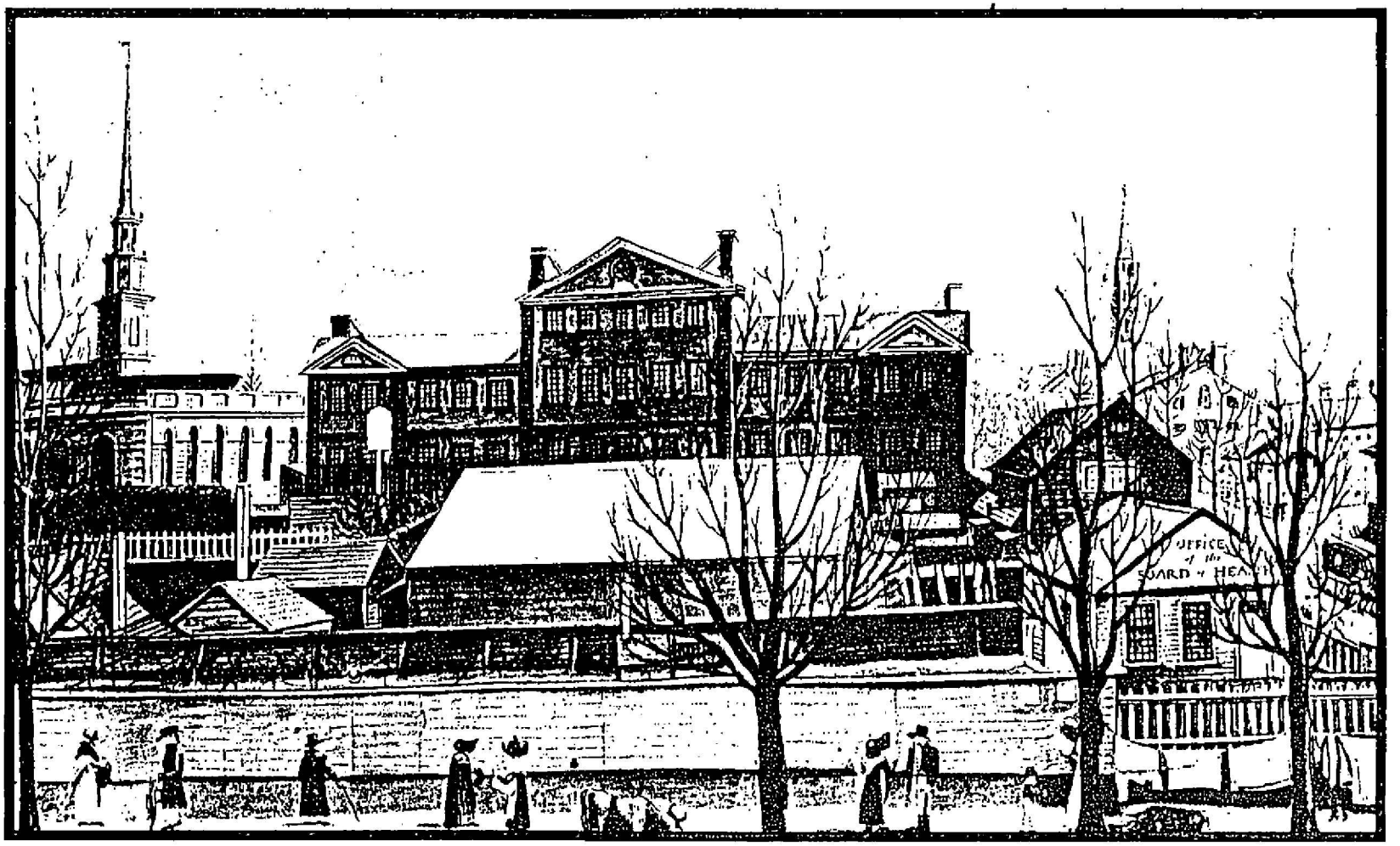


Figure 7: View (1808) from Chambers Street in the vicinity of the Project Area. Broadway is on the extreme right. The large building to the rear is the Bridewell, next to the rear of the unfinished City Hall. On the corner of Broadway and Chambers Street in the foreground, is the Office of the Board of Health. In the center is the Charity School (1807). The view does not extend into the project area, however, it does characterize Block 122 at the turn of the 19th century.

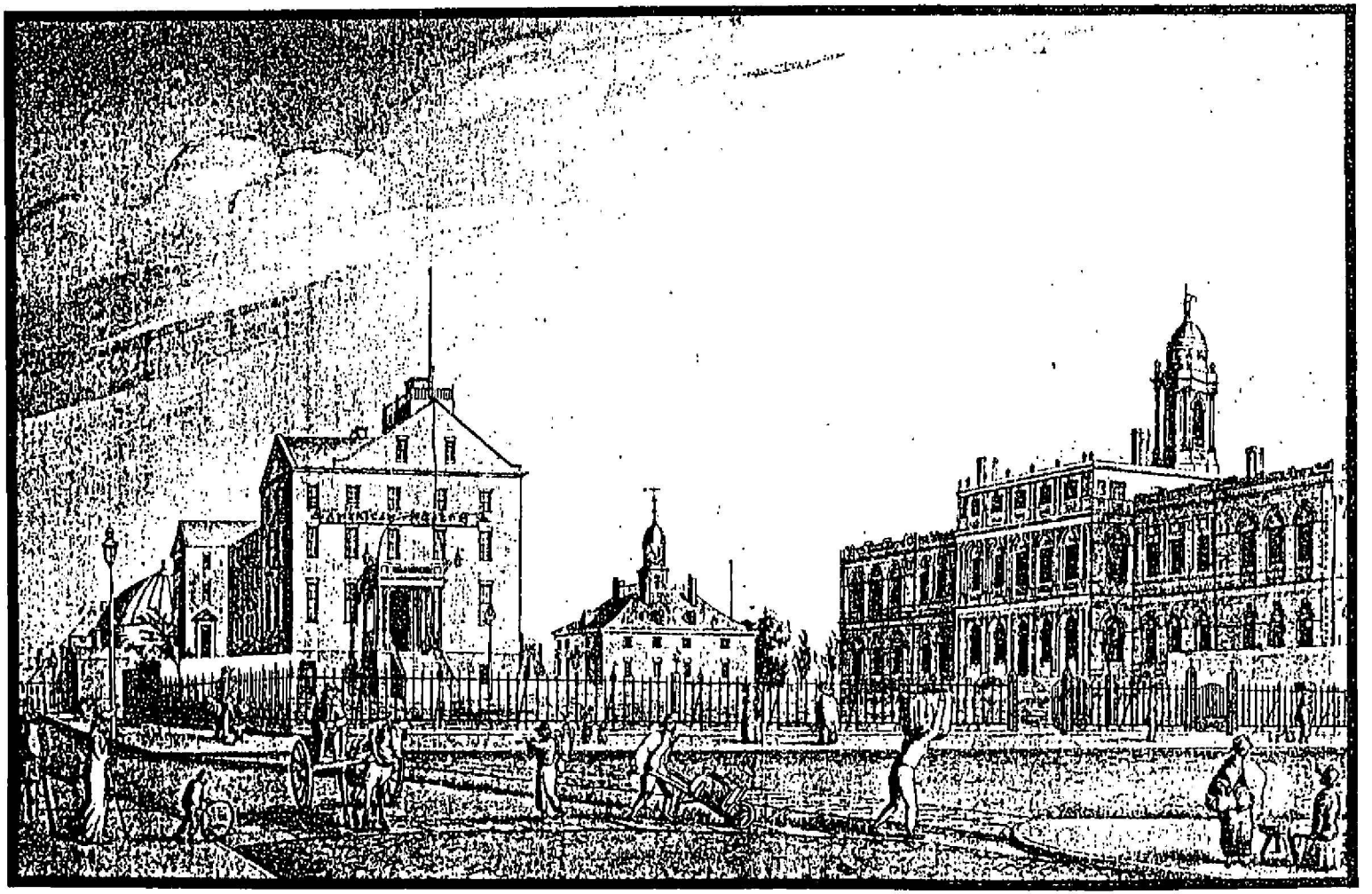


Figure 8: 1825 view of the project area showing it devoid of structures between the rear of City Hall and the Second Alms House (the American Museum, at this time). Next to the Museum, is the new City Court House and the Rotunda. The Gaol can be seen at the center of the view.

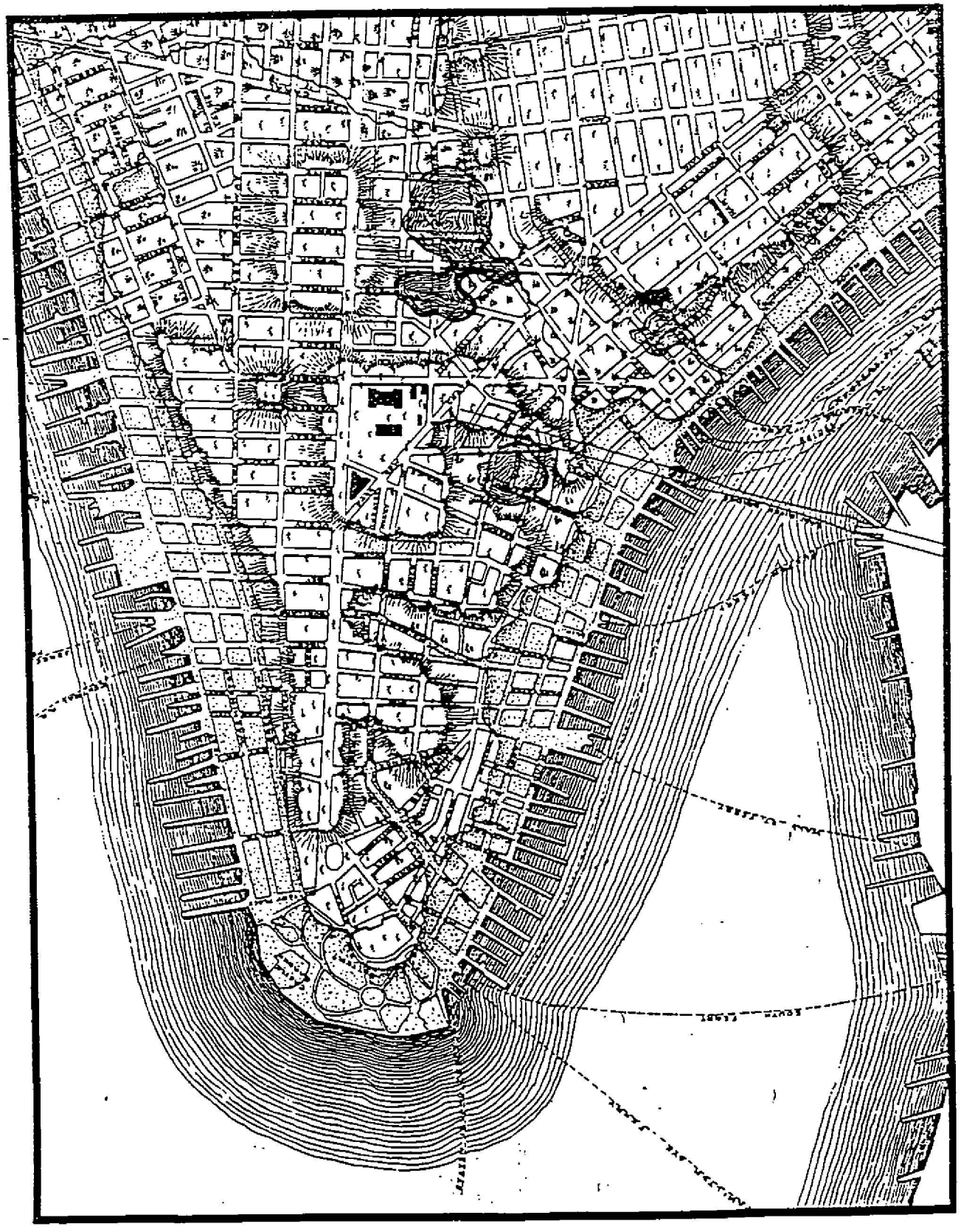
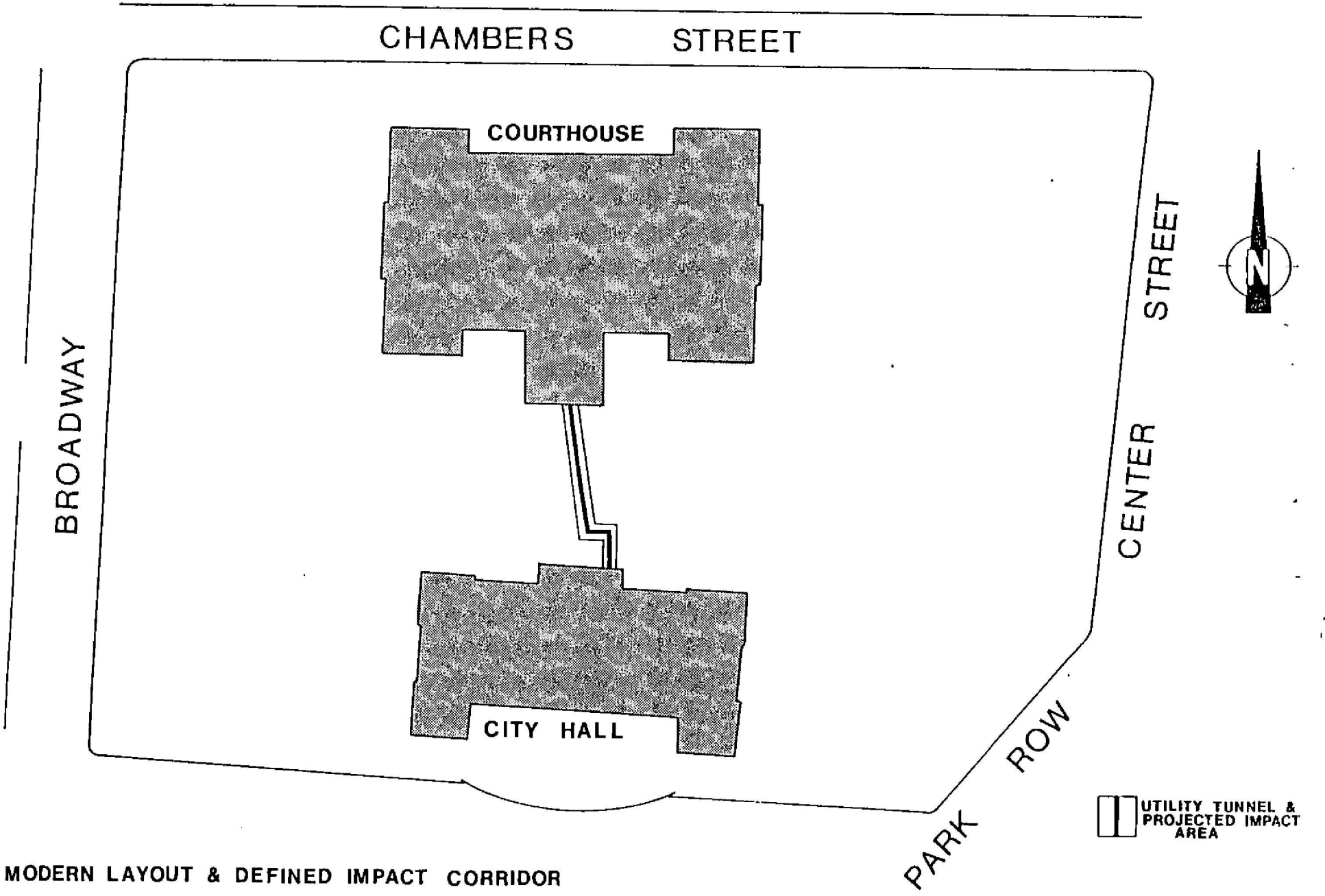
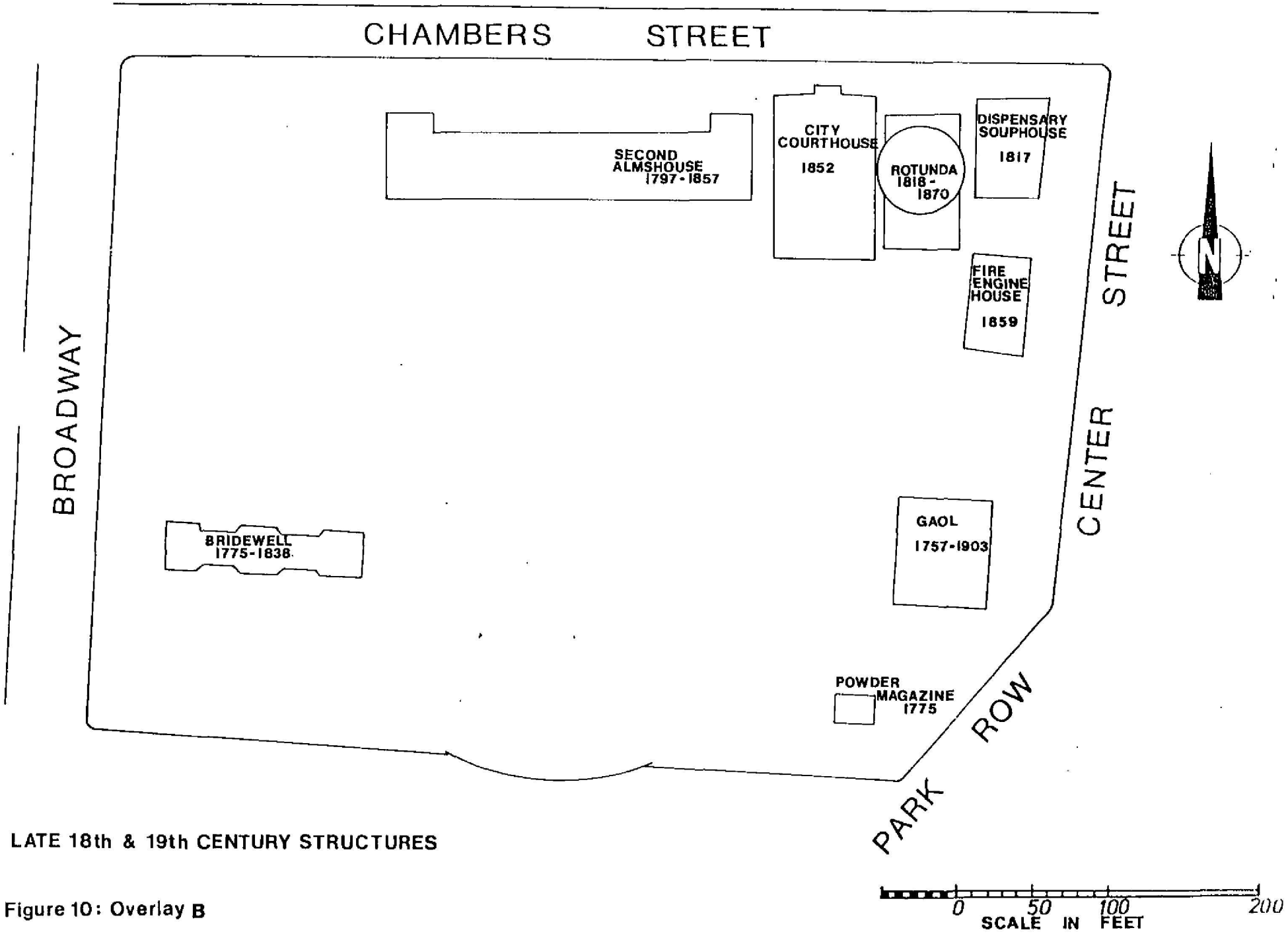


Figure 9: Viele Map (1874) showing original topography of Manhattan Island. The City Hall and Court House can be seen on a plateau to the south of the Collect Pond.



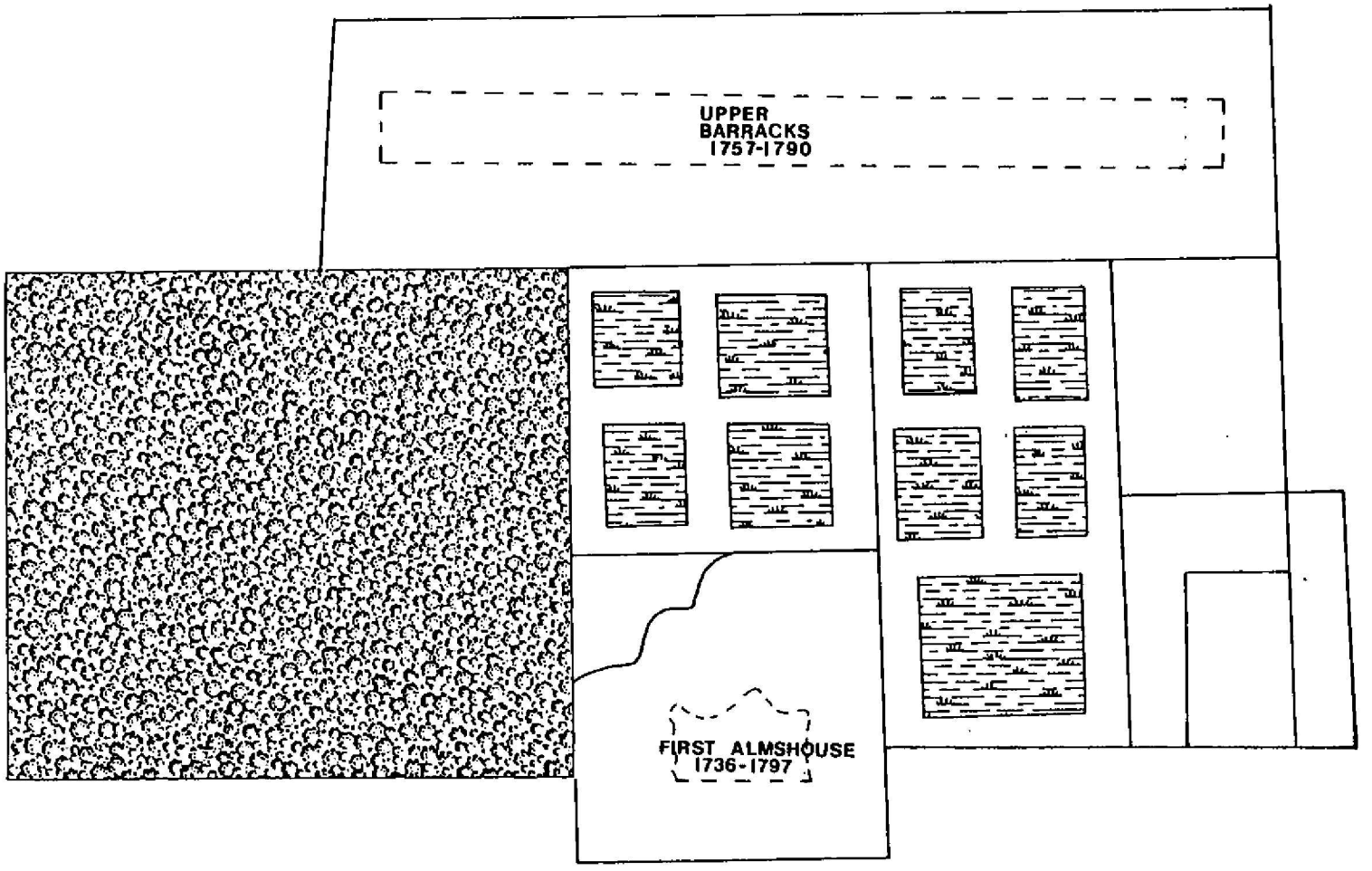
MODERN LAYOUT & DEFINED IMPACT CORRIDOR

Figure 10: Overlay A



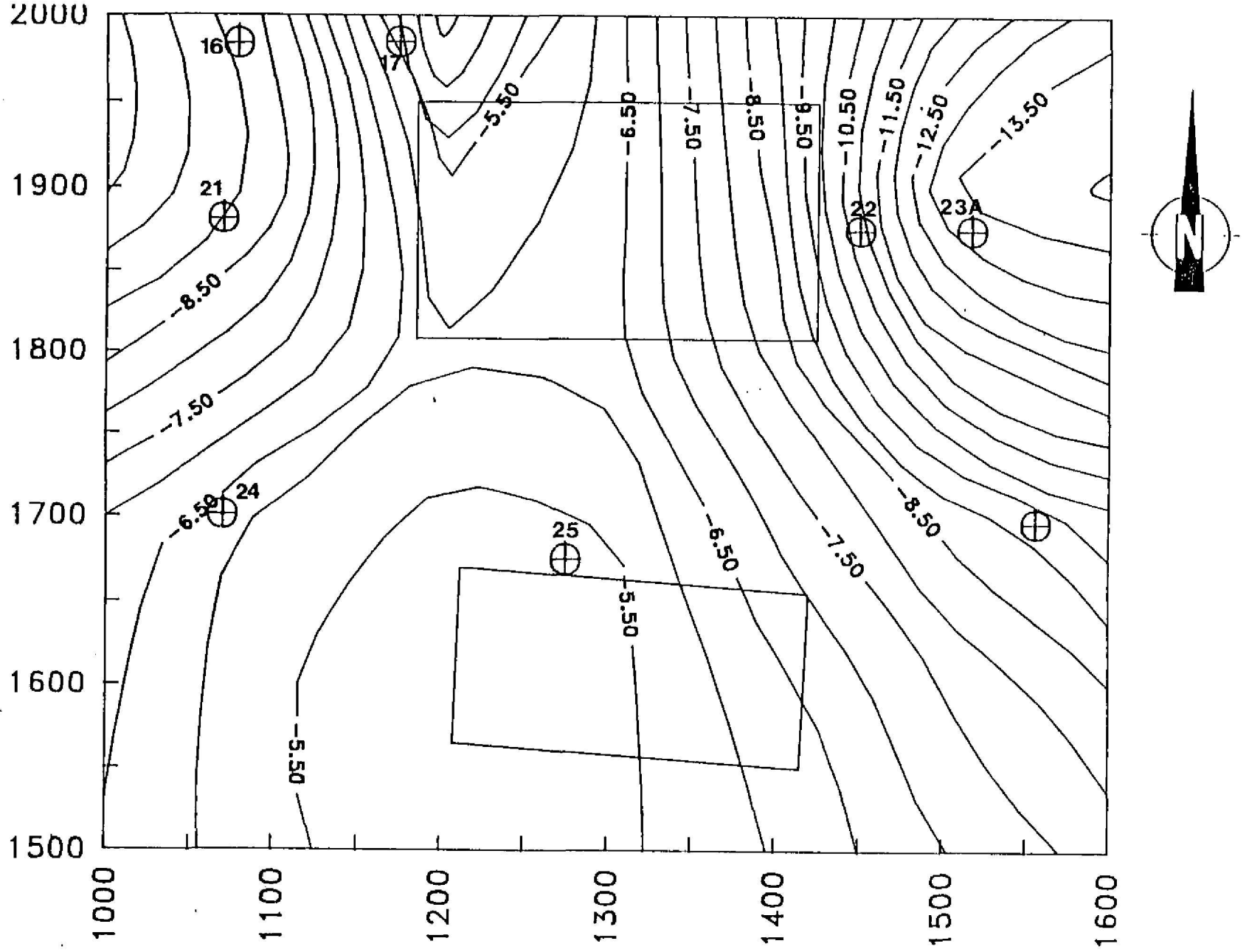
LATE 18th & 19th CENTURY STRUCTURES

Figure 10: Overlay B



RATZER (1766-67) PROJECTION

Figure 10: Overlay C



PROJECTED COLONIAL TOPOGRAPHY
DEPTH BELOW SURFACE

Figure 10: Overlay D

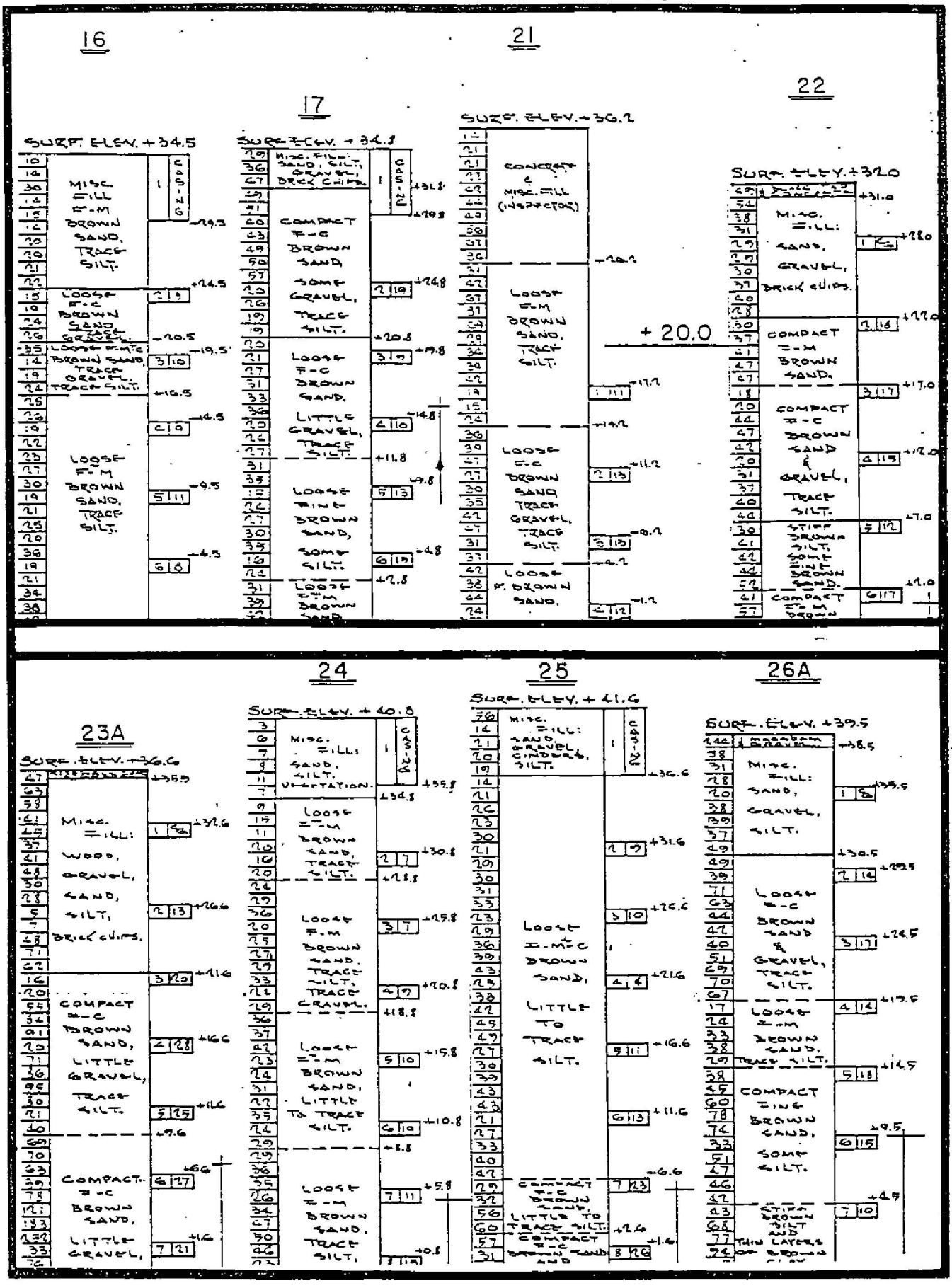


Figure 11: Stratigraphic fill data from borings within the project area.

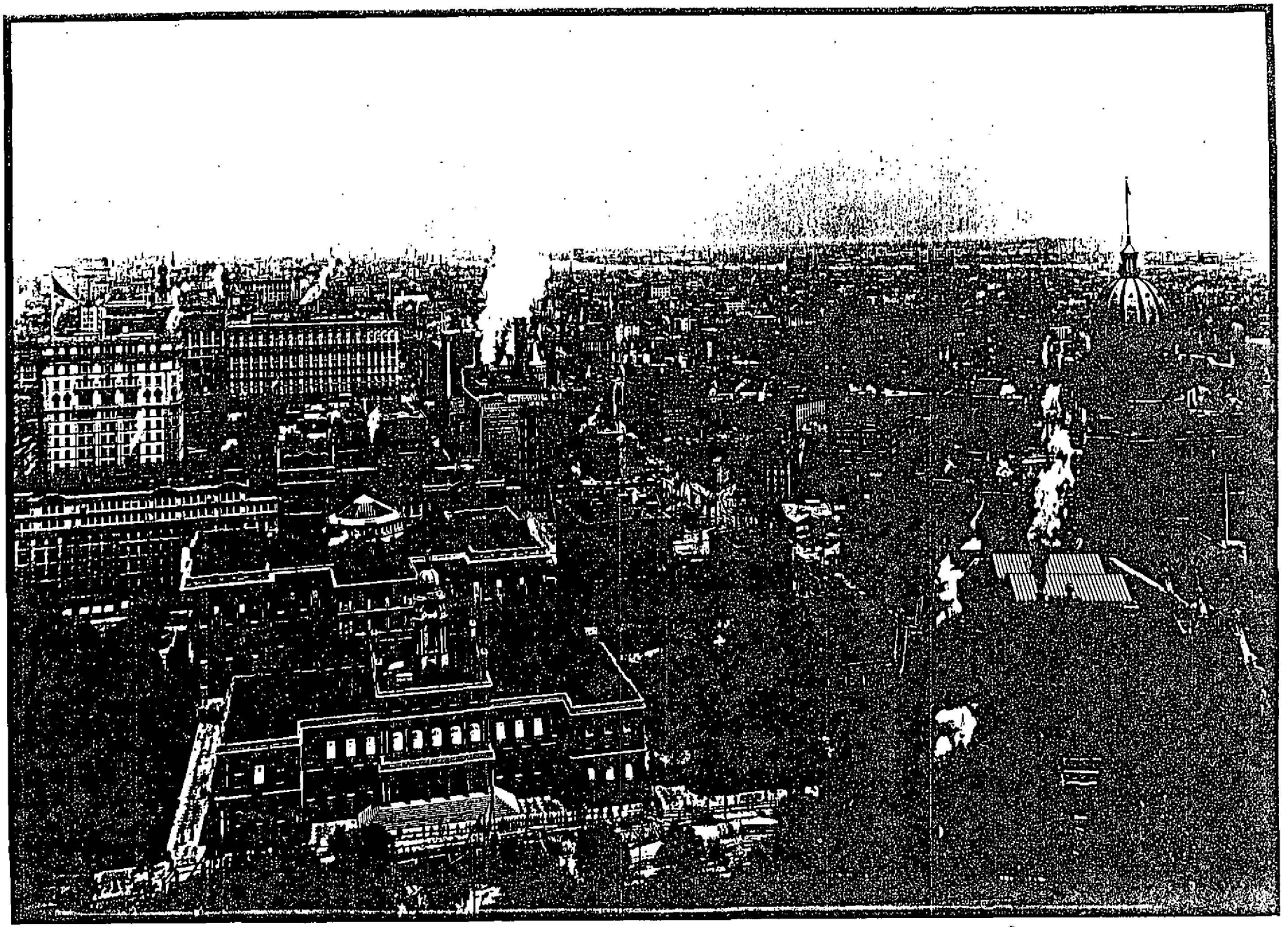


Figure 12: Reproduction of circa 1904 photograph showing men digging in front of City Hall for a subway tunnel and station. (Courtesy of Ken Cobb, Municipal Archives)

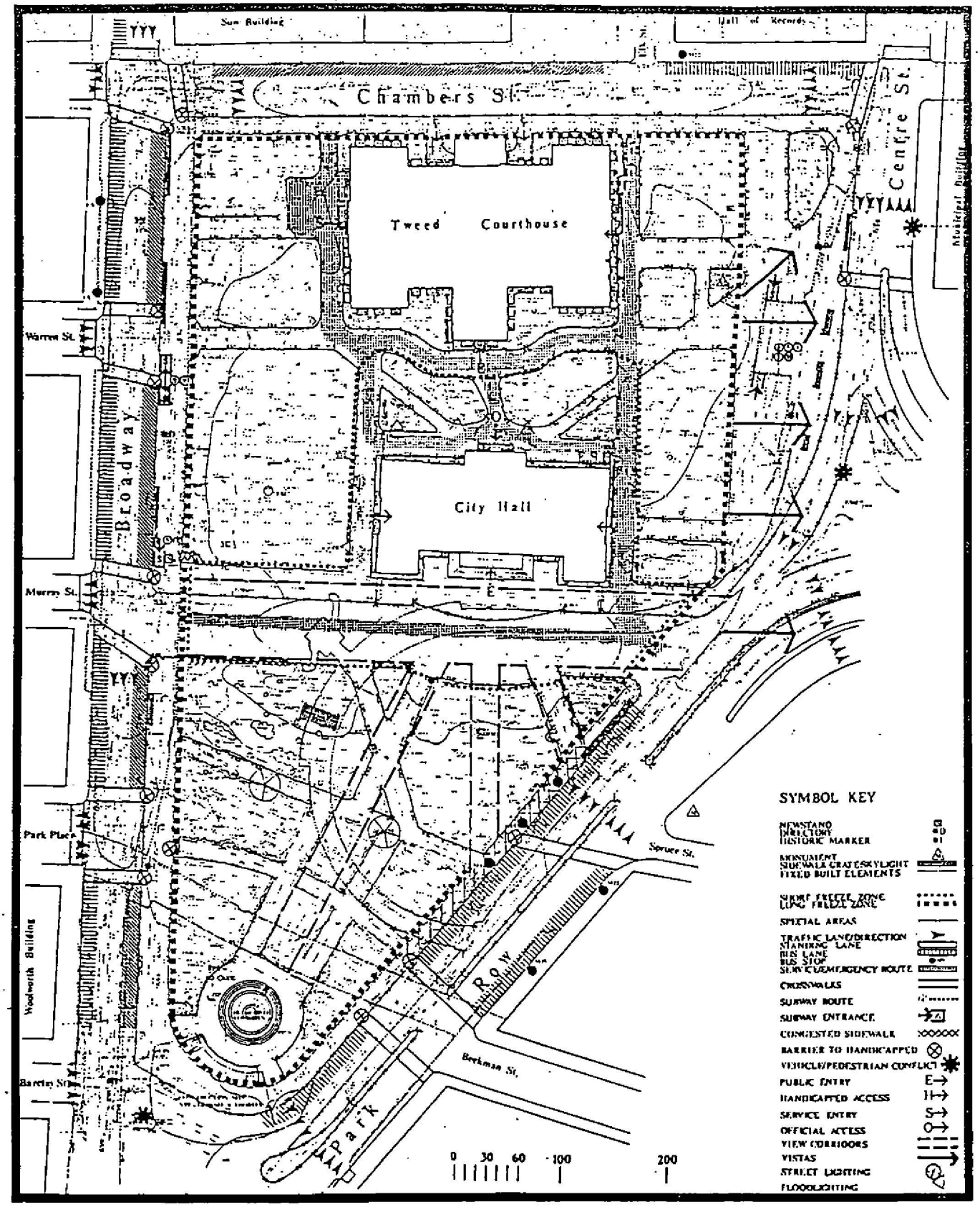


Figure 13: "As-is" drawing of the project area showing subsurface path of subway.

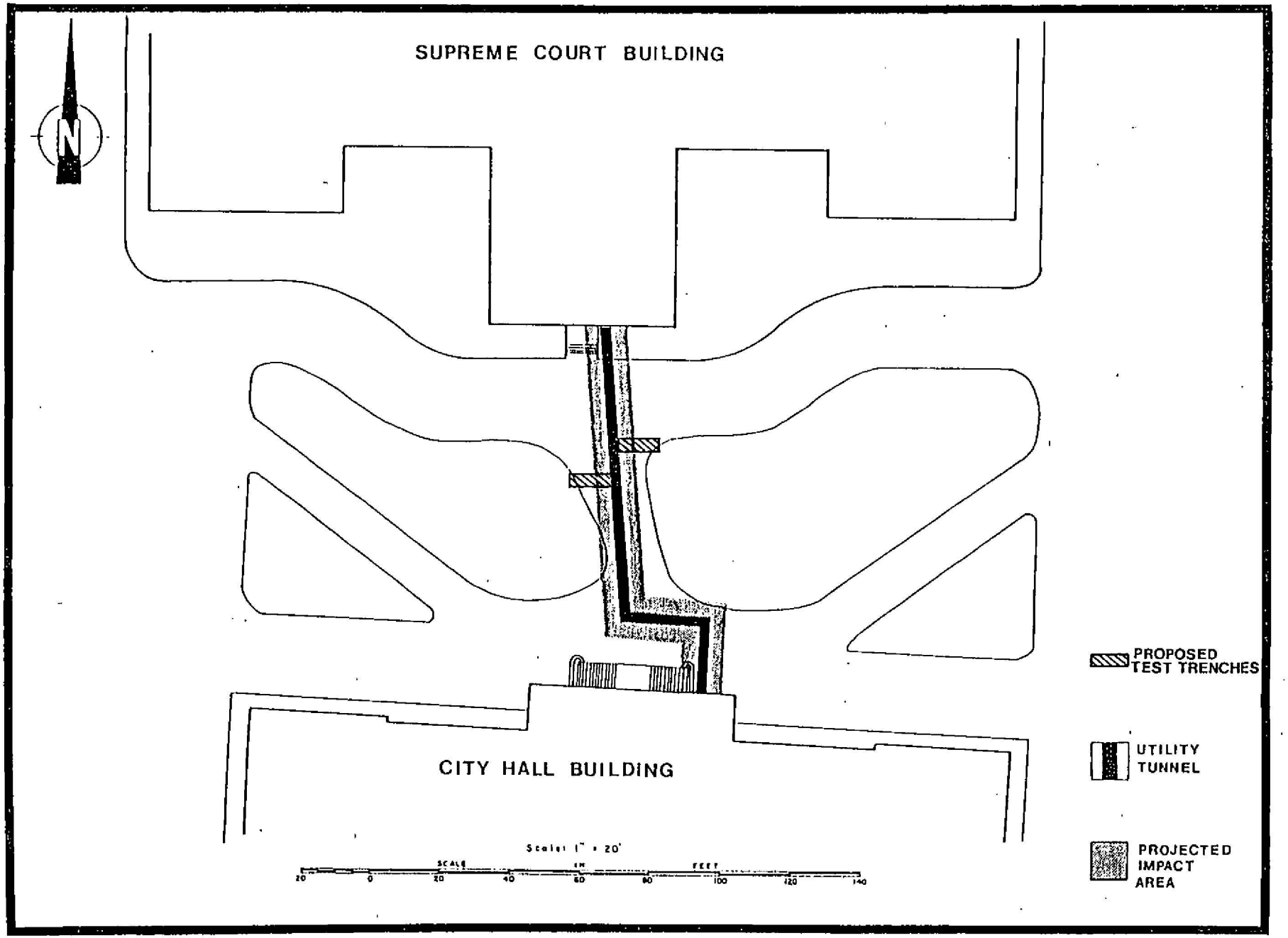


Figure 14: The project impact area illustrating location of proposed test trenches.

Grantor	Grantee	Date	Liber	Page	Old lot #
		1-Jan-1654			
No instruments of record between 1654-1811					
Kip, Henry H.	Alderman (N.Y.C. Mayor)	14-Dec-1812	100	431	not lotted
No instruments of record between 1813-1830		1-Jan-1834			
Van Vleck, John	Alderman (N.Y.C. Mayor)	2-Jun-1831	272	574	not lotted
Fentor, Reuben (N.Y.State governor)	Consent	16-Apr-1867	1012	141	not lotted
Alderman (mayor) & Community of N.Y. city	United States of America	16-Apr-1867	1012	142	not lotted
Kipp, John	Kipp, James	12-Aug-1867	1024	401	not lotted
No instruments of record between 1868-1888		1-Jan-1868			
Bird, William	Lamont, Daniel	18-Sep-1889	2253	146	not lotted
N.Y. elevated RR Co.	Agreement	20-Jun-1891	4	479	not lotted
No instruments of record between 1892-1905		1-Jan-1892			
Lechman, Samson (referee)	N.Y. Pneumatic Service Co	18-Oct-1906	108	221	not lotted
U.S. District Court	Order appointing trustees bond	21-Jan-1907	102	458	not lotted
No instruments of record between 1908-1911		1-Jan-1911			
Taylor, Howard (special master)	Wallace, James	9-Feb-1912	138	28	Conveyance of franchise
Bondholders Committee of 3d Ave Rr Co.	Third Ave. R.R. Co.	9-Feb-1912	139	34	Conveyance of franchise
Third Ave. R.R. Co.	Third Ave. R.R. Co.	9-Feb-1912	138	42	Conveyance of franchise
Bondholders Committee of 3d Ave RR Co.	Declaration as to Compliance by 3d. Ave RR Co	16-Nov-1912	138	495	Not lotted
United States of America	City of New York	13-Nov-1914	150	483	Not lotted
Schwartz, Bernard (referee)	N.Y. Railways Corp.	2-Jan-1935	3892	335	