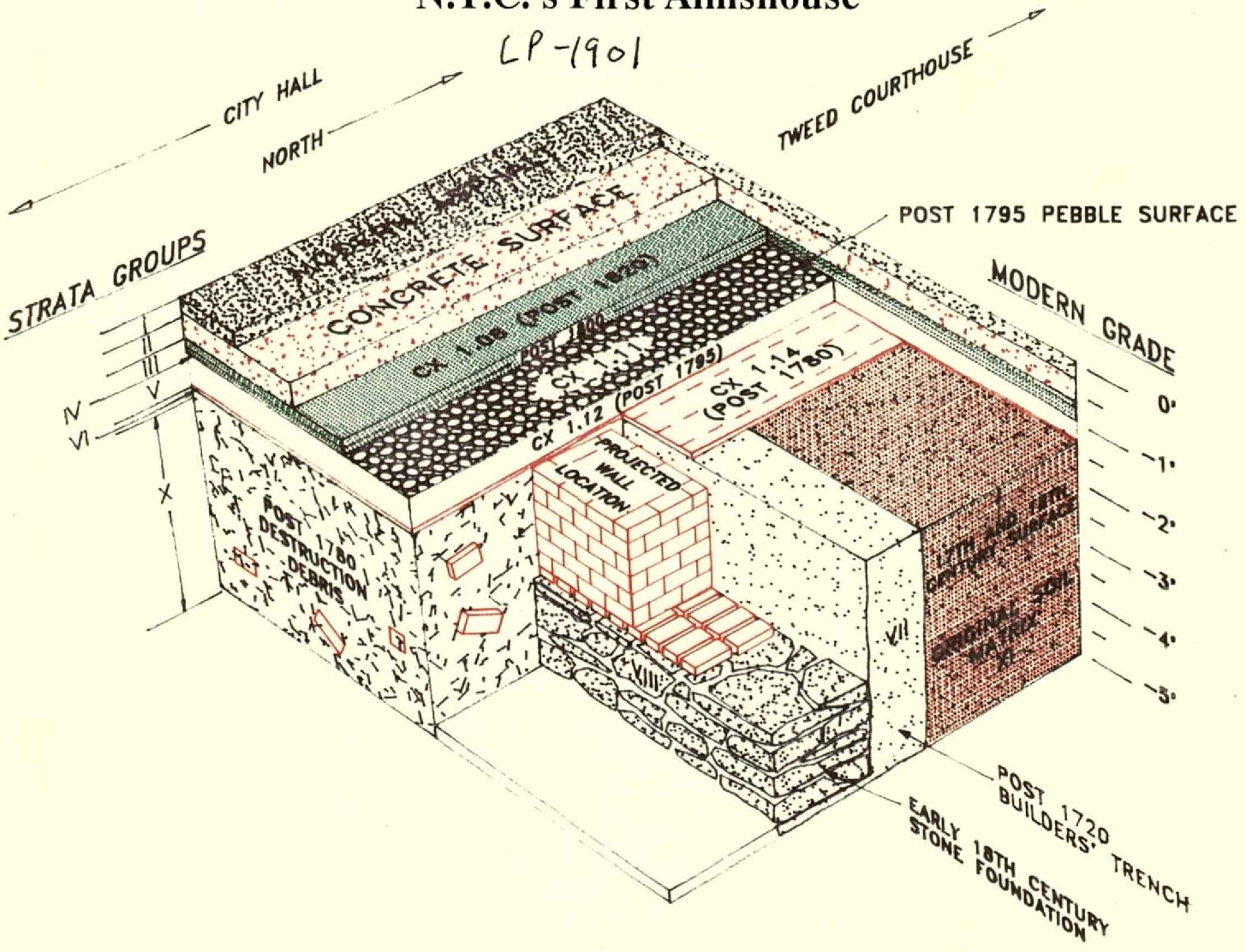
The Buried History of City Hall Park:

The Initial Archaeological Identification, Definition and Documentation of Well-Preserved 18th. Century Deposits and the Possible Structural Remains of N.Y.C.'s First Almshouse



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PREFACE: SUMMARY OF RESULTS

This report documents the discovery and definition in City Hall Park of the previously undocumented structural remains of a colonial building (basement, foundation wall, and preserved, exterior living surface), in association with a well-preserved sequence of naturally stratified, high integrity, historic colonial deposits, spanning a one hundred year sequence between the first quarter of the 18th century through the first quarter of the 19th century (See Figure 1). The 18th century structural remains and colonial deposits were found undisturbed, buried and sealed below the modern asphalt walkway of City Hall Park, approximately midway between City Hall and the Tweed Court House (See Figure 3).

In addition to the identification of the original 18th century surface 18 inches below the modern asphalt pavement, the controlled excavation identified the presence of stone foundation remains and post-occupation destruction debris of an early 18th century (post-1720) structure. Because of the correlation of its location with historic map depictions, and the dated artifact associations, these well-preserved remains may represent the pre-Revolutionary War era foundation wall of New York City's first Almshouse. The discovery of several functionally suggestive artifactual indicators found associated with the building remains, specifically 18th century bone button blanks and copper alloy straight pins, provides corroborative archaeological evidence for early archival references of institutional craft activity by the indigent inhabitants of the original 18th century Almshouse.

In total, the controlled test excavation identified twenty distinct natural stratigraphic deposits (contexts), lenses and features. Based on the recovered and dated artifacts and the stratigraphic relationship of these distinct layers, each context subdivision was then grouped into eleven distinct strata groups, which in turn represented four larger archaeological periods, each indicative of distinct time periods or episodes of initial development, occupation and destruction processes (See Table 1 and Table 4). The eleven strata groups (designated with Roman numerals I-XI), yielded a total of 1,643 colonial, 18th century, and 19th century artifacts, food remains and construction materials. In addition to 507 oyster shells which were distinguished by their large size (36% from a single mid-18th century refuse pit), the collection included 116 clam shells, 175 fragments of historic ceramics, 47 fragments of historic smoking pipe, 6 buttons and bone button blanks, 121 pieces of glass, 8 sherds of historic tile, 7 straight pins, 2 human bones, a lead "weight", and one 18th century door key (See Table 2 and Table 3).

As is documented below, this initial archaeological site testing investigation clearly demonstrated six major insights of relevance to the evaluation of the archaeological sensitivity of City Hall Park:

- 1) The original colonial surface lies buried and sealed, with only minimal intrusions from modern impacts, 18 inches below the most recent pavement surface of City Hall Park.

- 2) This buried colonial surface and the associated 18th century building remains were found overlaid and capped by several deposits of late 18th and 19th century historic fill, possibly deriving from deep basement construction associated with the ca.1812 building of City Hall or the 1861-67 construction of the Tweed Courthouse.
- 3) Beneath this cap of late 18th and 19th century near-surface fill deposits, and beginning at 18 inches in depth, the excavation documented the presence of a well-preserved sequence of construction, occupation and destruction deposits and structural remains spanning from the first half through the last quarter of the 18th century (post-1720 to post-1780).
- 4) This sequence of construction, occupation and destruction deposits showed clear horizontal and vertical stratigraphic distinctions between the interior and exterior of the colonial building. To the south of the identified foundation wall, towards City Hall, the interior cellar hole was filled with mixed destruction debris to a depth of 4.5 feet, consisting of bricks and plaster, and artifacts derived from a broad time range, some associated in time and space with the occupation and use of the building, while others appear to have been deposited as secondary refuse during or shortly after its destruction. The area to the north of the foundation wall, on the building's exterior, was associated with the original 18th century living surface, and with historic features, including the builders' trench and a mid-18th century refuse pit, both of which cut into the original surface.
- 5) In addition to being deeply stratified and predominantly unmixed by later intrusions, these well-preserved 18th century deposits yielded a broad range of chronologically and culturally diagnostic artifacts of bone, metal, ceramic and glass, which were highly indicative of the economic and domestic activities of the colonial inhabitants.
- 6) Furthermore, three independent lines of evidence (archaeological, archival and cartographic) suggest that the excavated building may indeed be New York City's original colonial Almshouse. 1) The location of the excavated building corresponds with the general location of the original Almshouse indicated on 18th century historic maps. 2) The timeframe of the excavated building, which based on dated artifacts was built after 1720 and destroyed after 1780, corresponds with the documented occupation phase of the original Almshouse (1736-1797). And, 3) Artifacts were recovered that matched early historical accounts of craft activity conducted by the Almshouse's indigent inhabitants.

In sum, this well-preserved archaeological record not only augments the written historic record but also represents a sequence of archaeological deposits distinguished by a high level of stratigraphic integrity, preservation, and research potential for understanding the colonial history of New York City.

I. INTRODUCTION: SCOPE AND PURPOSE

This expanded Stage IB presence and absence testing and site evaluation study was conducted by Grossman and Associates for the New York City Department of General Services, Bureau of Facilities Management, as a prelude to the expansion of an existing utilities corridor. When constructed, the new, wider and deeper tunnel would parallel and expand the existing subsurface trench which extends between the rear of City Hall and Tweed Courthouse, to the east of Broadway and to the south of Chambers Street within City Hall Park (Block 122, Lot 1). The archaeological testing program was initiated following the results of an earlier sensitivity study of City Hall Park by Grossman & Associates in November 1988 (Project Number PW-292-44), which highlighted the potential presence of colonial remains.

The results of the initial documentary investigation (Grossman et al. 1988) had suggested the potential survival of undisturbed historic deposits within City Hall Park, based on the results of detailed historic map comparisons, existing Bureau of Topography boring records of historic fill levels, and in general, the reconstruction of colonial era, and seventeenth to nineteenth century land-use patterns within City Hall Park. The analysis of colonial maps which were scaled and overlaid with the plans for modern park facilities, indicated that the proposed construction corridor would possibly intersect with sub-surface deposits relating to former garden and yard areas as well as possible structural remains associated with either the former Almshouse or the Upper Barracks depicted in the 1776 Ratzer Map of New York (See Figure 7, Overlays A, B and C).

Furthermore, the combined evaluation of historic maps and Bureau of Topography boring records suggested that City Hall Park is located in an area which was high, plateau-like ground in the colonial period, with little subsurface fill, which suggested that the colonial era remains potentially lay at a relatively shallow depth, no greater than three to five feet below present grade (See Figure 7, Overlay D). This initial projection proved to be conservative. When tested, the actual colonial surface was identified at a depth of only 18 inches.

As a result of the initial findings of the documentary study and historic sensitivity evaluation, the Landmarks Preservation Commission, in conjunction with the Bureau of Facilities Management, mandated that archaeological testing be undertaken to determine the presence or absence of buried archaeological remains.

Following the recommendations of the initial sensitivity evaluation (Grossman et al. 1988), the GSA Scope of Services specifically mandated the need for one manually exposed test excavation unit for the west side of the existing utilities tunnel and the use of five auger probes on the site of the existing trench to corroborate the results of the controlled, stratigraphic excavation.

Assuming the recovery of artifactual material, the GSA Scope also mandated the need to record all artifactual and contextual data, to package and store the collection, and to stabilize fragile finds. Once the excavation was completed, it was also required that the test locations be back-filled, compacted, repaved and, in general, brought back to previously existing conditions. And finally, as mandated, the results should be reported with appropriate mitigation recommendations if warranted.

The following technical report documents the results of this Stage IB archaeological field testing and site evaluation study for the proposed utilities tunnel expansion impact corridor. Accordingly, this report will provide the following:

- A discussion of the documentary and cartographic evidence for the location and functions of 18th century structures on the site.
- An analysis of the 18th century topography and landscape of this area of colonial New York, prior to the layout of the later 19th century street grid system and the associated cap of landfill.
- A discussion of the field procedures employed.
- A detailed descryption of the stratigraphic record, soil characteristics, and interrelationships of the distinct cultural deposits that were identified.
- A discussion of the artifacts recovered including a detailed analysis of the date of each stratigraphic deposit based on the age of the most recent recovered artifacts, and an analysis of the functional significance of certain artifact groups.
- And finally, these two independent lines of evidence, (the stratigraphic record and chronological evidence provided by dated artifacts), will be combined and compared to project the history, depth and archaeological sensitivity of subsurface deposits within the park today.

II. RECONSTRUCTING THE VERTICAL AND HORIZONTAL LOCATION OF EIGHTEENTH CENTURY STRUCTURES

Introduction

The original documentary and cartographic research (Grossman et al. 1988), focused on the identification of evidence on the land use history of City Hall Park from the 17th through the 19th centuries. This earlier study discussed the site's development from its 17th century use as "the site of a free pasture", often referred to as the Commons, to its nineteenth century use as the site of City Hall (Moscow 1979: 39). In addition to documenting the presence and time span of the original colonial Almshouse (1736), the previous study also recorded several other later 18th and 19th century structures relevant to the site of City Hall Park. These included the Upper Barracks (ca. 1757), the New Gaol (Jail) (1759), the Bridewell (ca. 1775), the New Almshouse (1796), City Hall (1812), the City Court House (1852), and finally, the Tweed Court House (1861-67) (See Figure 7, Overlay B). However, due to the nature (the structural remains of a post-1720 building), and location (in the general mapped location of the original Almshouse) of the archaeological discoveries resulting from the test excavations, this report provides a historical discussion of only the period surrounding the construction, occupation and destruction phases of the original Almshouse and its associated outbuildings. An evaluation of the colonial topography of City Hall Park is also included in this historical discussion, due to its relevance for establishing the vertical location of these possible remains.

Eighteenth Century Cartographic Evidence

The earliest available cartographic evidence of possible 18th century structures within the project area, is the circa 1730 Bradford Map, from a survey by James Lyne. This map shows the "Common" in the present location of City Hall Park, and indicates an unidentified building, as well as a Ropewalk, in the vicinity. Neither the owner of the unidentified structure nor the owner of the Ropewalk are indicated 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, clearly shows a structure identical to the one illustrated on the 1730 Bradford Map. This 1735 map shows the early building bounded by a rectangular enclosure, which appears to represent the boundaries of what was "John Ell's Gardin". This structure corresponds in location to 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 DeWitt and Tienhoven. The location of this unidentified early 18th century structure, however, appears to be well to the west and north of the remains encountered in the archaeological test excavations.

Several 18th century map depictions exist that show the location of the original Almshouse (1736-1797) and adjacent structures. These include the 1813 Grim's General

COMPOSITE 3-D STRATIGRAPHIC DEPICTION OF THE 18TH CENTURY POSSIBLE ALMSHOUSE REMAINS. CITY HALL PARK, NEW YORK CITY, N.Y.

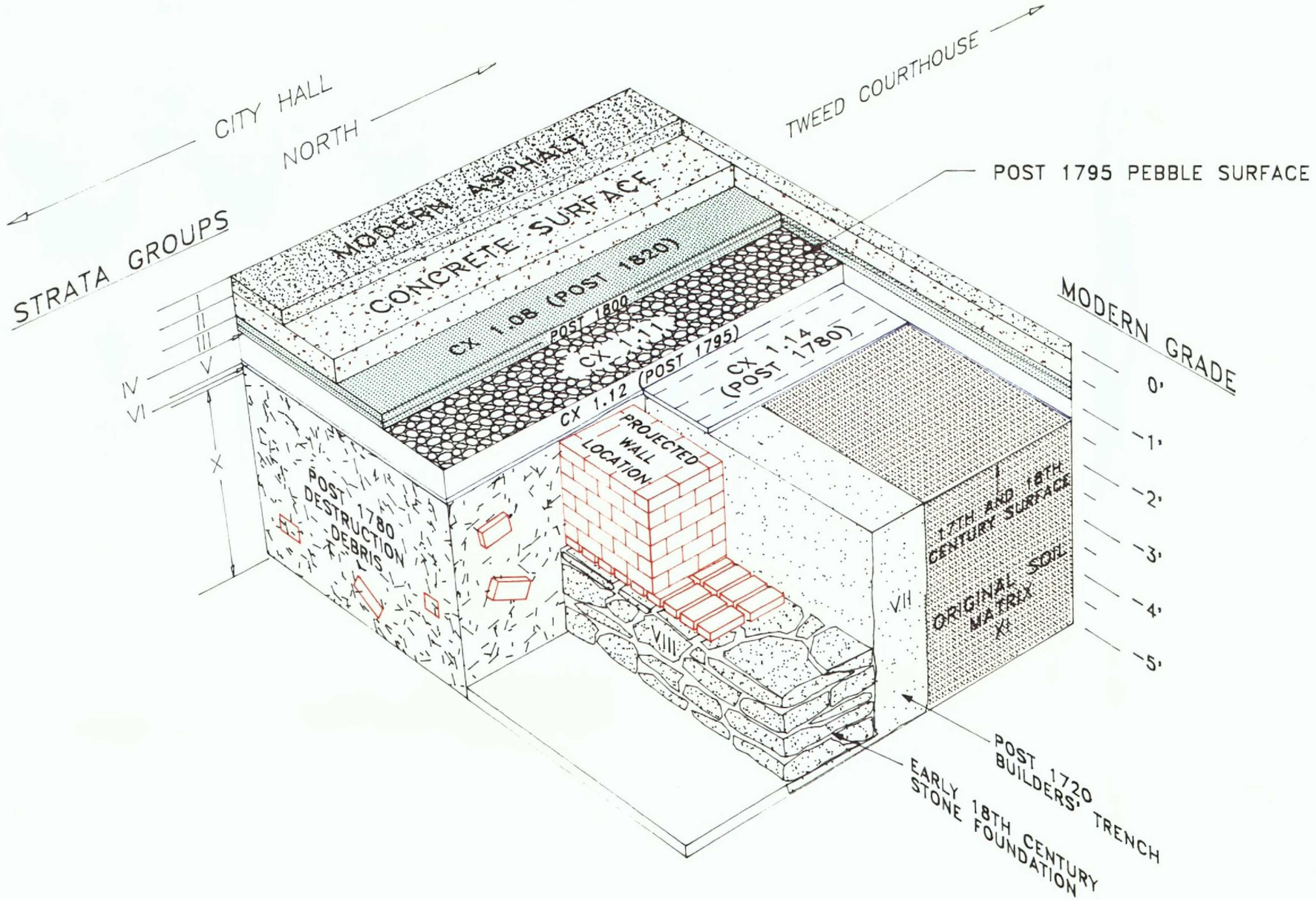

Figure 1: Computer generated three-dimensional stratigraphic reconstruction of the well-preserved 18th century archaeological and structural remains discovered in 1988 buried and sealed 18 inches below the modern asphalt pavement of City Hall Park, showing the original colonial era surface, foundation wall, exterior post-1720 builders' trench, and interior destruction debris, all potentially representing the remains of New York City's first Almshouse.

Plan (depicting ca. 1742), the 1755 Maerschalck or Duyckinck Plan, the 1775 Montresor Plan (depicting 1766), the 1776 Ratzen (Ratzer) Plan and 1776 Ratzer Map (both depicting 1766-67), and the 1797 Taylor-Roberts Plan (depicting 1796) (Stokes 1967 I:270-442). It is sometimes difficult, however, to pin-point the location of historic structures based on historic map renditions. Problems arise due to the surveyor's exaggeration of features to serve his intentions, the simple omission of secondary structures, inaccuracies in scaling by the surveyor or in the recent reproduction, and due to the historic widening of streets (which serve as points of reference) associated with the installation of utilities or changing modes of transportation, specifically the subway system. As a result, a structure may be located anywhere within a 50-100 foot "buffer zone" of the originally mapped and scaled location.

For the purposes of this report, the 1776 Ratzer Map (based on the 1776 Ratzen Plan) was selected as the most accurate and precise cartographic evidence for attempting to establish the location of the original colonial Almshouse and associated outbuildings relative to modern surface features. According to Stokes (1967 I:341), the Ratzer Map "is one of the most beautiful, important and accurate early plans of New York." In addition to clearly showing the Almshouse and its associated gardens, this map also shows a large, unidentified secondary building in the northwest corner of the Almshouse's rear yard. This may have been any of a number of contemporary structures associated with the Almshouse, including a possible kitchen, washhouse, or hospital for contagious diseases.

The 1775 Montresor Plan is also significant because of its depiction of secondary structures in the vicinity of the Almshouse. This map shows two structures to the east and west, in the rear yard of the Almshouse. These buildings, however, are located well outside of the test excavation area. Furthermore, Stokes notes that Montresor conducted his survey in "enforced secrecy," which "probably accounts for numerous inaccuracies and omissions on the plan..." (Ibid.:340) Stokes also quotes Du Simitiere, who referred to the Montresor Plan as "extremely uncorrect [sic] and full of gross errors." (Ibid.).

Based on the scaled comparison of the archaeological remains and modern building locations in City Hall Park, relative to the 18th century Ratzer Map, the location of the original Almshouse could have either overlapped with the foundation footprint of City Hall, and thus been destroyed, or it may have been located some 50-100 feet to the north, outside of and undisturbed by the early 19th century construction of City Hall (See Figure 7, Overlay C). Given the flex in scaling due to difficulties in correlating modern features with historic map-based building locations, and due to the structural characteristics, artifact associations and age of the excavated archaeological remains, the possibility exists that the colonial building encountered in the test excavations between City Hall and Tweed

Courthouse, represents the original colonial Almshouse. Based on dated artifacts and its setting relative to historic map depictions, the timeframe of the excavated structure does appear to correlate, in time and space, with the projected Almshouse location.

The Almshouse and Associated Structures

Minutes of the Common Council on December 20; 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.

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.; See Figure 7, Overlay 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, if built, would have taken the form of at least two separate outbuildings; one for the kitchen and oven, and the other for the washhouse. This assumption is supported by the fact that in 1769 the Common Council ordered that a small shed, to be utilized as a washhouse, be erected adjoining the Almshouse. 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.; See Figure 7, Overlay C).

In 1739, an additional building was constructed, for use as a hospital for contagious diseases (MCC IV:459). Because no map depictions have been encountered which identify the structure, it is not clear from available evidence if this hospital was an extension to the Almshouse or a separate building, and its exact location is therefore unknown (Ibid.).

Between 1766-1769, two additions to the Almshouse were constructed, the location of which are also unknown (Stokes 1967 IV:546). 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 structures cannot be pinpointed from the available documentary or cartographic data (MCC 1905 V:172-173).

These references to the Almshouse and to the construction of additional structures associated with the Almshouse, suggest the possible presence of a number of early and mid-eighteenth century structures and outbuildings in City Hall Park, in the vicinity of or between City Hall and the Tweed Courthouse.

The Almshouse and Its Historical Function

It is pertinent to note, that both the documented timespan and the nature of the archaeological remains recovered from the test excavations, provide corroborative evidence for the possibility that the partially excavated colonial building may in fact be the original Almshouse, which was initially constructed in 1736 and later demolished in 1797. In addition to the diagnostic artifactual material which dated the building's construction to post-1720 and its destruction to post-1780, the recovery of seven straight pins and three bone button blanks from the brick rubble on the interior of the foundation, suggests that institutional craft activity, associated with the production of clothing and fittings, was being conducted in this facility. As will be discussed below, these craft indicators are consistent with the type of work documented as having been assigned to the indigent residents of the colonial Almshouse.

The Common Council ordered the Almshouse built so that the city's poor that were "able to work, may not Eat the Bread of Sloth & Idleness, and be a Burthen to the Publick" (MCC IV:305). Initially, the Almshouse served three separate functions,

- 1) As a House of Correction,
- 2) A Workhouse,
- 3) And a Poorhouse.

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 contemporary perceptions, incorrigibles included those "sturdy Beggars" who wander about the streets asking for alms (Ibid.). Labor was expected from all able-bodied inhabitants, whether they were incarcerated at the Poorhouse, Almshouse or House of Correction. Work was especially demanded of "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 were interred for being "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).

The Almshouse was eventually demolished in 1797 by order of the Common Council after a new one had been built between 1796 and 1797 (Ibid.). The new Almshouse was also located in what is now City Hall Park, but was situated to the north of the original Almshouse, in the approximate location of the earlier Upper Barracks (1757-1790) and the later Tweed Courthouse (1861-67) (Ibid.).

The Colonial Topography of City Hall Park

As part of the initial sensitivity study conducted by Grossman and Associates in November 1988, the original topography and landscape of colonial New York was projected from two sources of available information:

- 1) The use of 18th century 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 subsurfaces 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 its modern grid-based cityscape. Given these processes of land alteration and the burial of historic surfaces, the previously completed archaeological and historical sensitivity evaluation focused on the definition of two historic land formation processes:

- 1) A vertical reconstruction of the projected depth of fill within each study zone to establish the potential depth of historic deposits.
- 2) The definition of the location and depth of subsequent 19th and 20th century building and basement construction in the immediate vicinity of the projected utilities corridor impact area.

Where subsequent deep basement 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, City Hall Park appears to have relatively shallow near-surface deposits of modern and historic fill over the buried 18th century deposits, which have been impacted by a relatively limited number of subsequent deep basement or utility construction disturbances, including that of the existing three foot wide conduit line linking City Hall and Tweed Courthouse.

Cartographic Evidence and Boring Records

The characterization of the colonial landscape in the vicinity of City Hall Park can be projected, in general, from two historic maps of lower Manhattan: The Revolutionary War era Ratzer Map (depicting 1766-1767 and published in 1776), and the later Viele Map which dates to 1874, but which shows the original topographic highs and lows of Manhattan relative to 19th century street alignments (See Figure 4 and Figure 5). Both topographic depictions show that 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 triangle of the park. While both maps 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 serve to help project the depth of 19th century and modern fill deposits with a variance of plus or minus 1-2 feet.

Available and relatively recent subsurface boring logs (1968), document 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, and 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 the original surface to be at a consistent depth of 3-5 feet below the modern surface.

Boring Number 17 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 documents the presence of miscellaneous fill (sand, gravel and cinders), to a depth of 5 feet below the modern grade. Thus, both boring logs in the immediate vicinity, 1) Number 17, northwest of the Court House, 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, represented by cinders in one and brick chips in the other, suggesting the near-surface presence of buried structural remains. 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 highest point of ground on that plateau for that portion of City Hall Park (See Figure 7, Overlay D).

The evidence provided from the eighteenth century maps and the boring records from the Bureau of Topography, suggests 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. As was the case in this Stage IB archaeological investigation of City Hall Park, the sandy colonial surface was actually encountered below only 18 inches of historic fill and the most recent surface. This correlates with the evidence from the maps and boring records, suggesting that the test excavation unit and the colonial remains encountered, were situated on one of the higher points of the plateau on which City Hall was built.

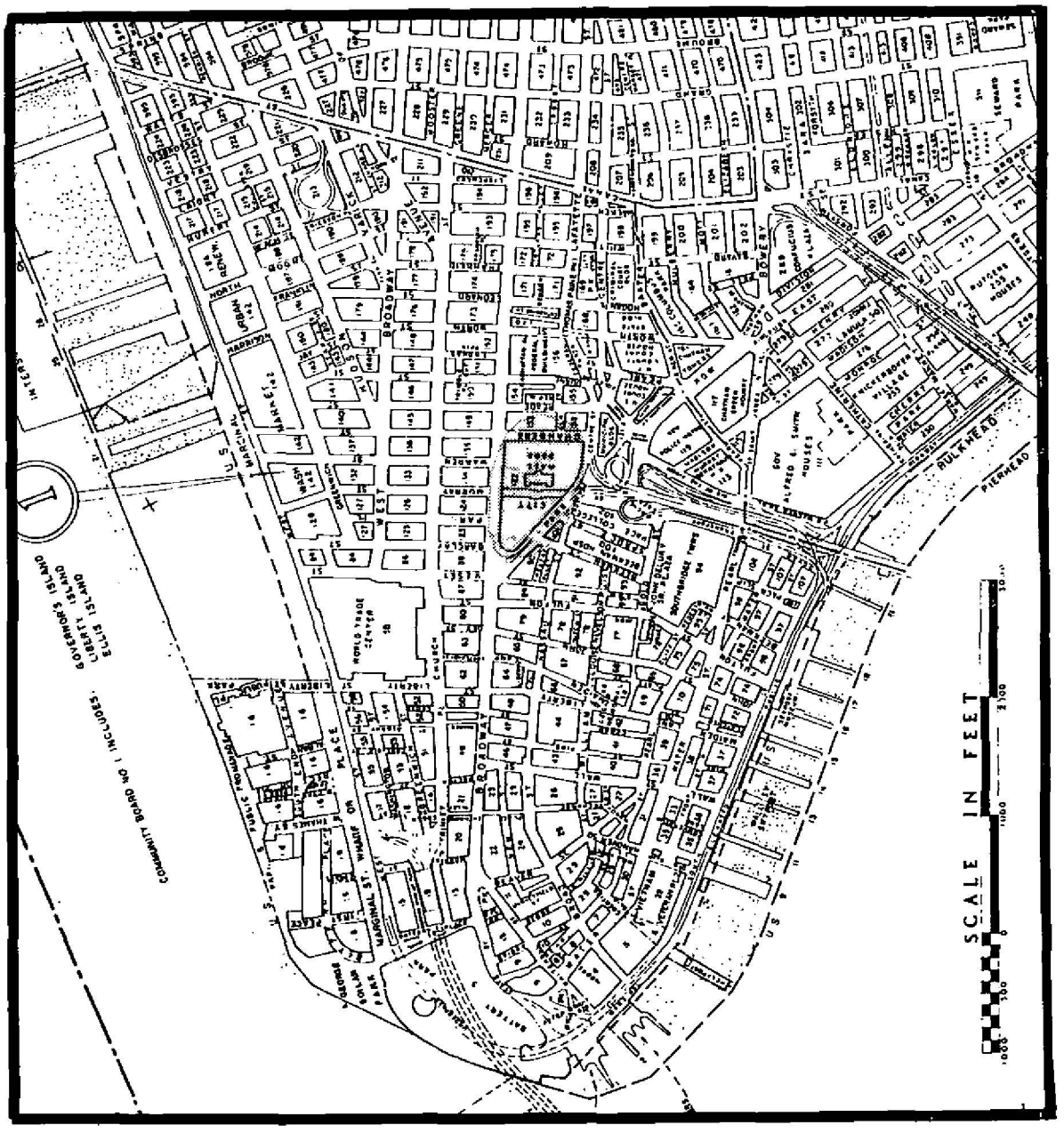

Figure 2: Site map showing the City Hall Park project in lower Manhattan, Block 122.

Grossman and Associates, Inc. 1991

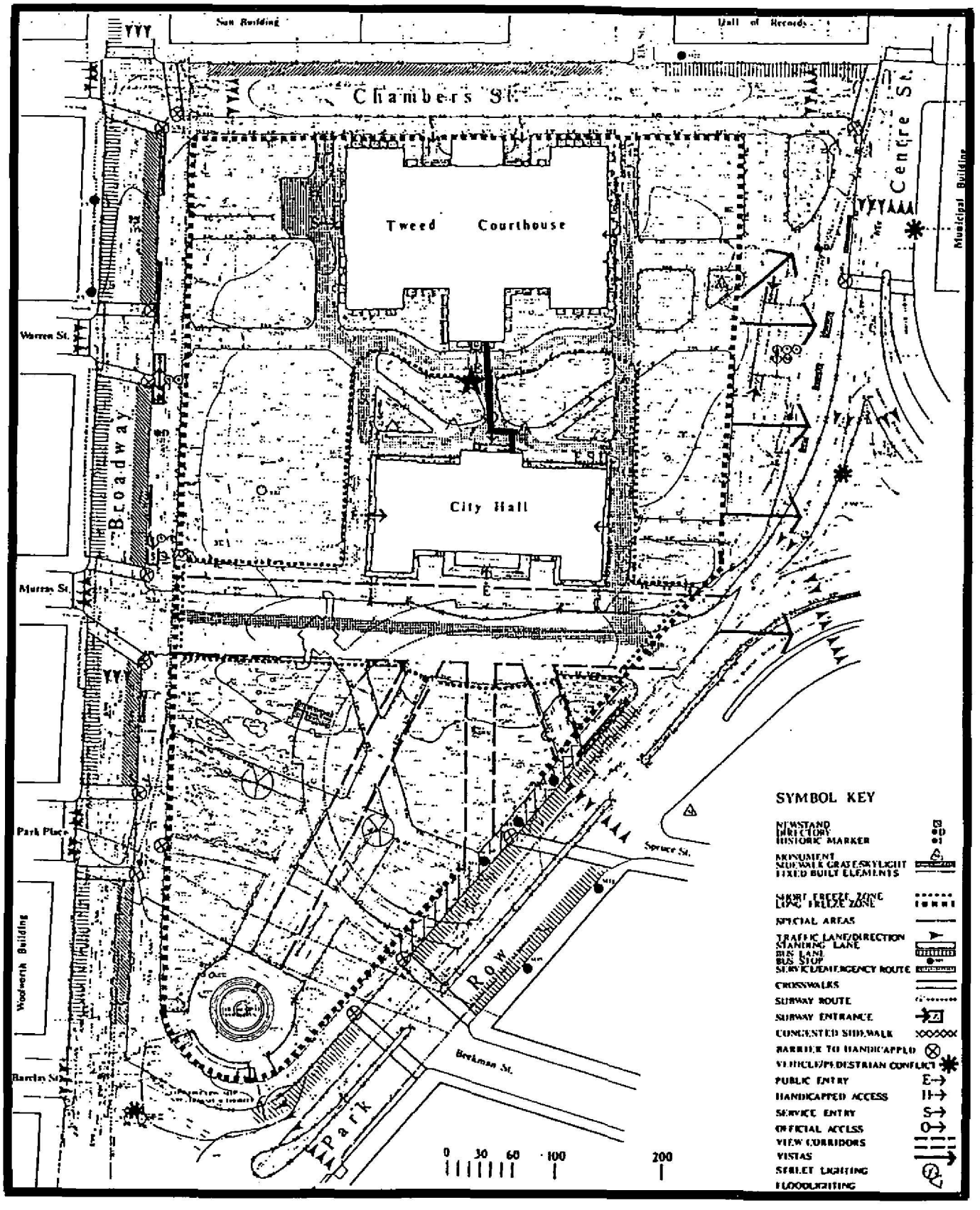

Figure 3: Modern "as built" map of City Hall Park indicating the general location of the projected impact corridor and the archaeological test excavation unit.

Grossman and Associates, Inc. 1991

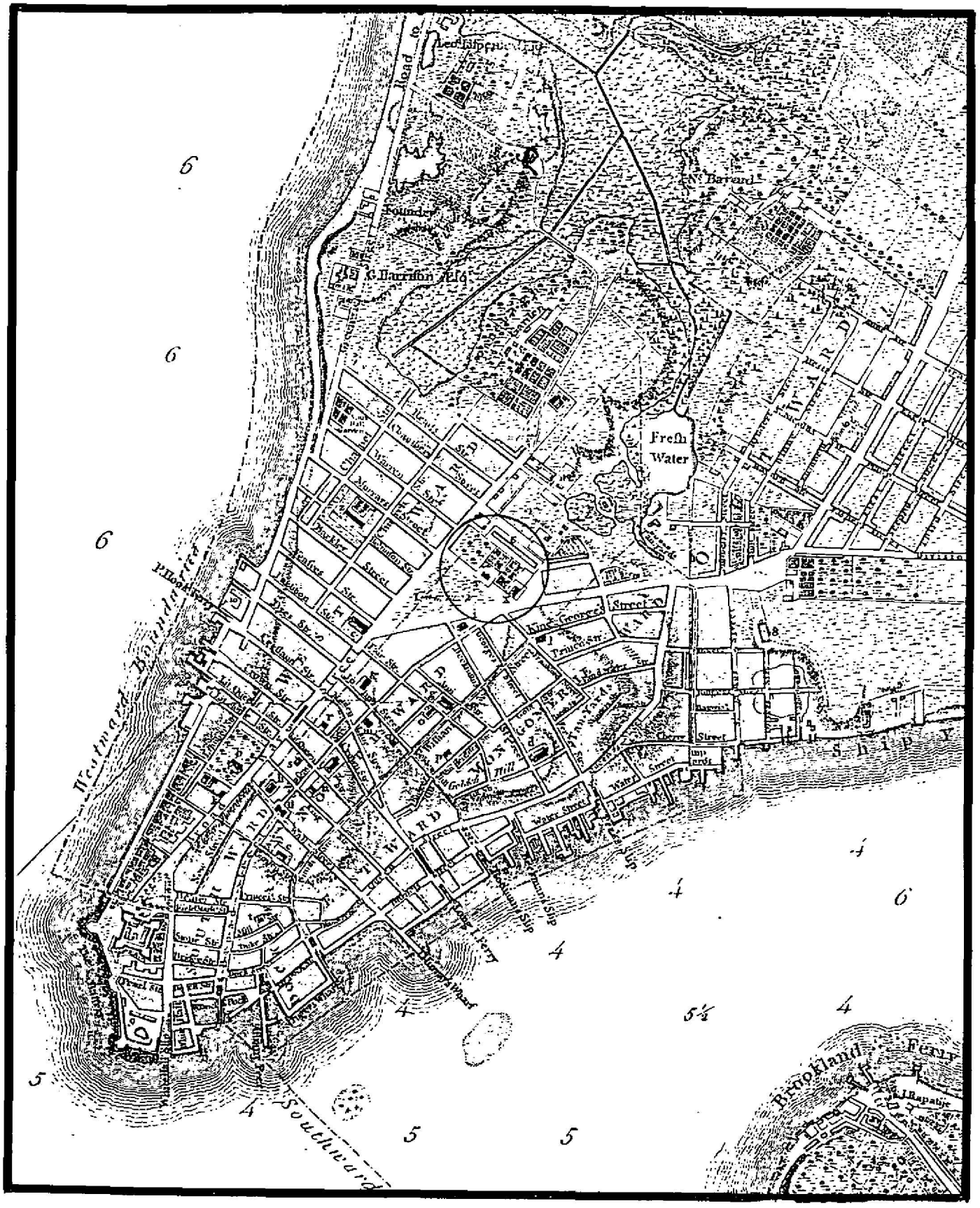

Figure 4: Section of the Revolutionary War British military map of lower Manhattan, *surveyed in 1766-67 and published in 1776 (The Ratzer Map).* This map shows the location of the 18th century Almshouse, the Common, the Upper Barracks and the New Gaol, as well as the orchard and gardens associated with the Almshouse.

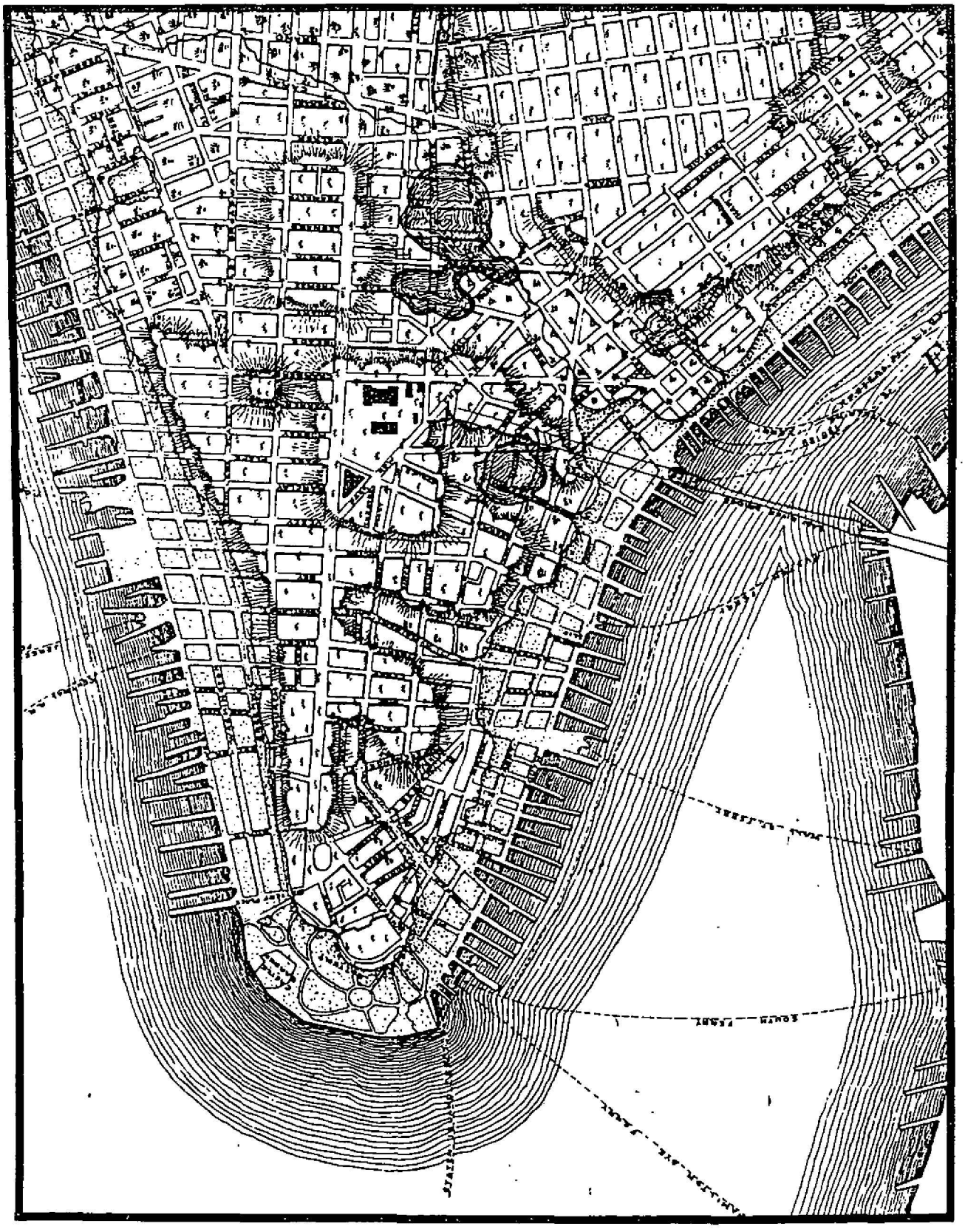

Figure 5: The Viele Map (1874), showing a projection of the original topography of Manhattan Island, with the 19th century street grid overlaid, and City Hall and the Tweed Court House situated on a plateau to the south of the Collect Pond.

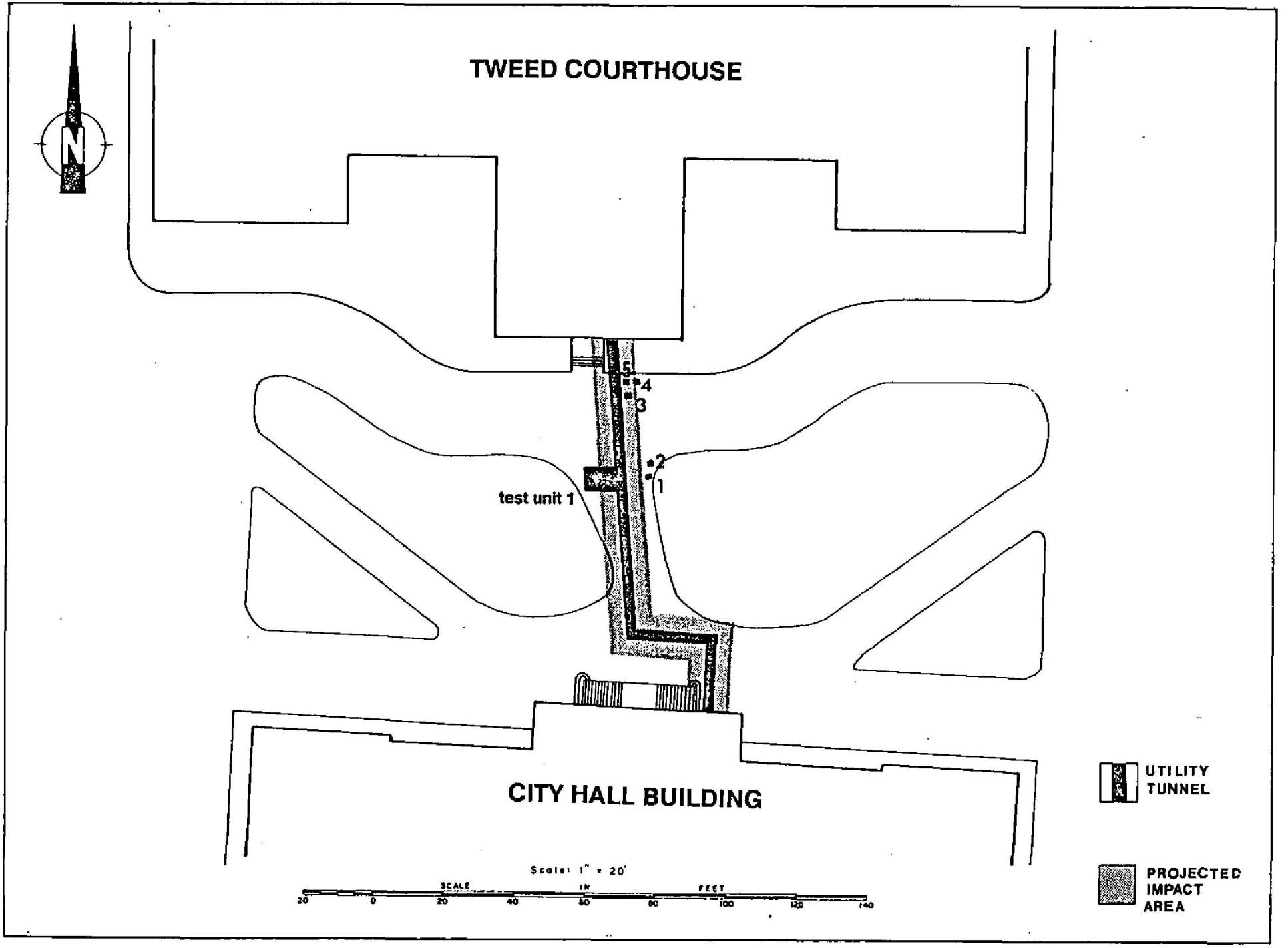

Figure 6: Map of the project area showing the location of the Grossman and Associates' test excavation unit and auger holes, relative to the proposed utilities tunnel impact area between City Hall and Tweed Courthouse in City Hall Park.

Grossman and Associates, Inc. 1991

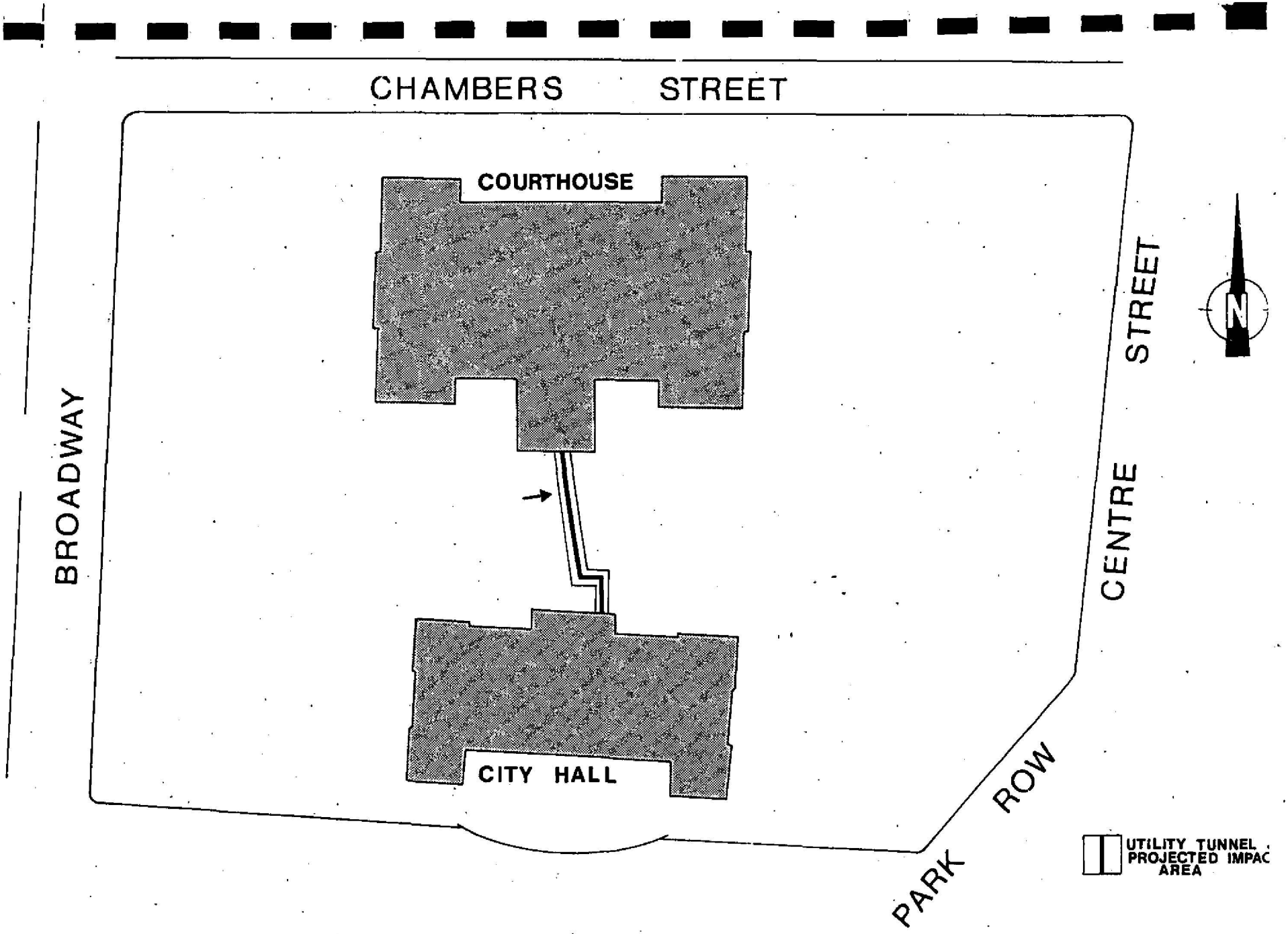

Figure 7, Overlay A: Scaled reference map of the modern City Hall Park buildings, showing the location of the test excavation relative to the utilities corridor between the municipal buildings.

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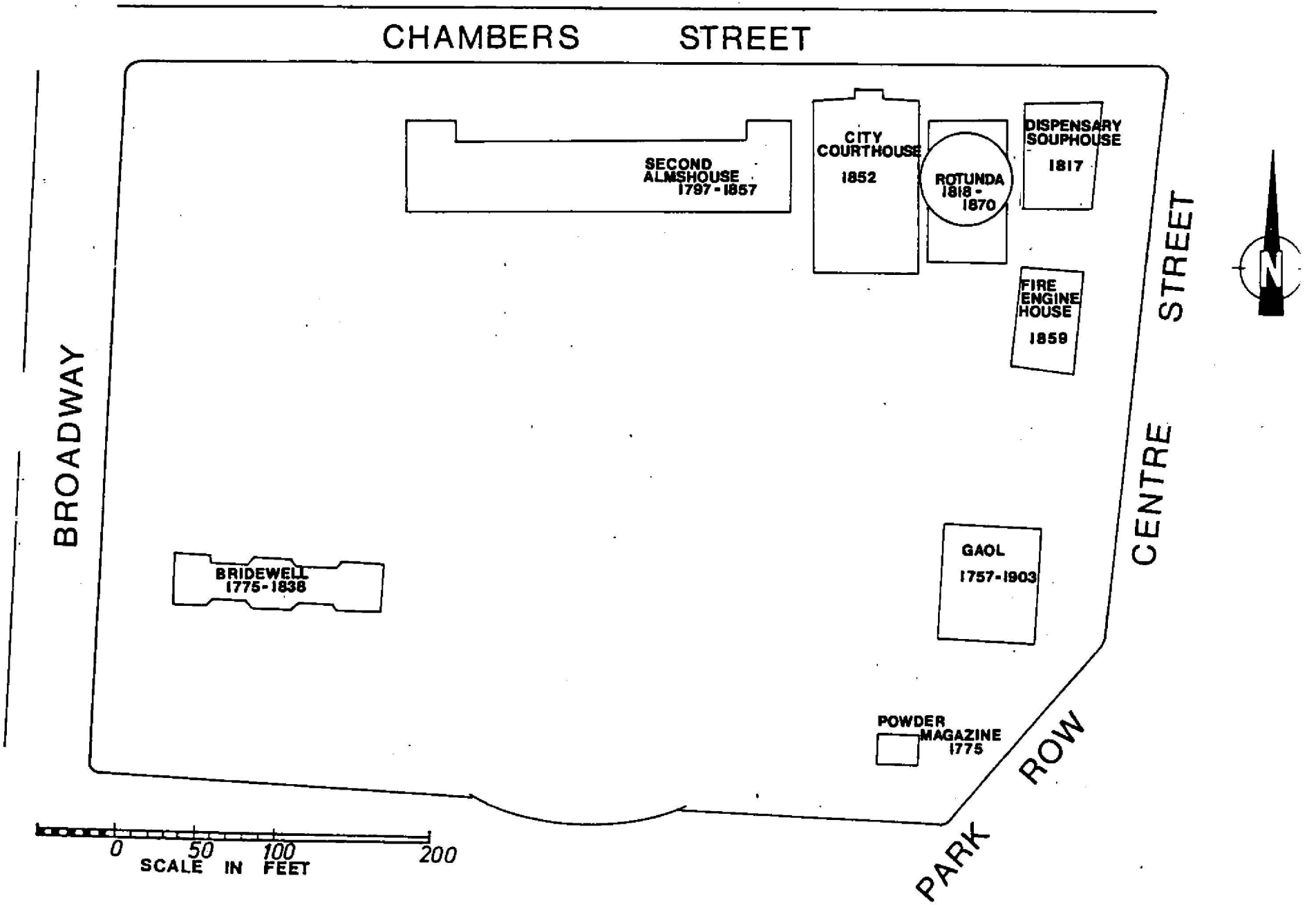

Figure 7, Overlay B: Scaled historic composite map showing the location of subsequent late 18th and 19th century buildings, and indicating the lack of any later (post-Almshouse [1736-1797]) historic structures in the vicinity of the identified and excavated 18th century buried archaeological remains.

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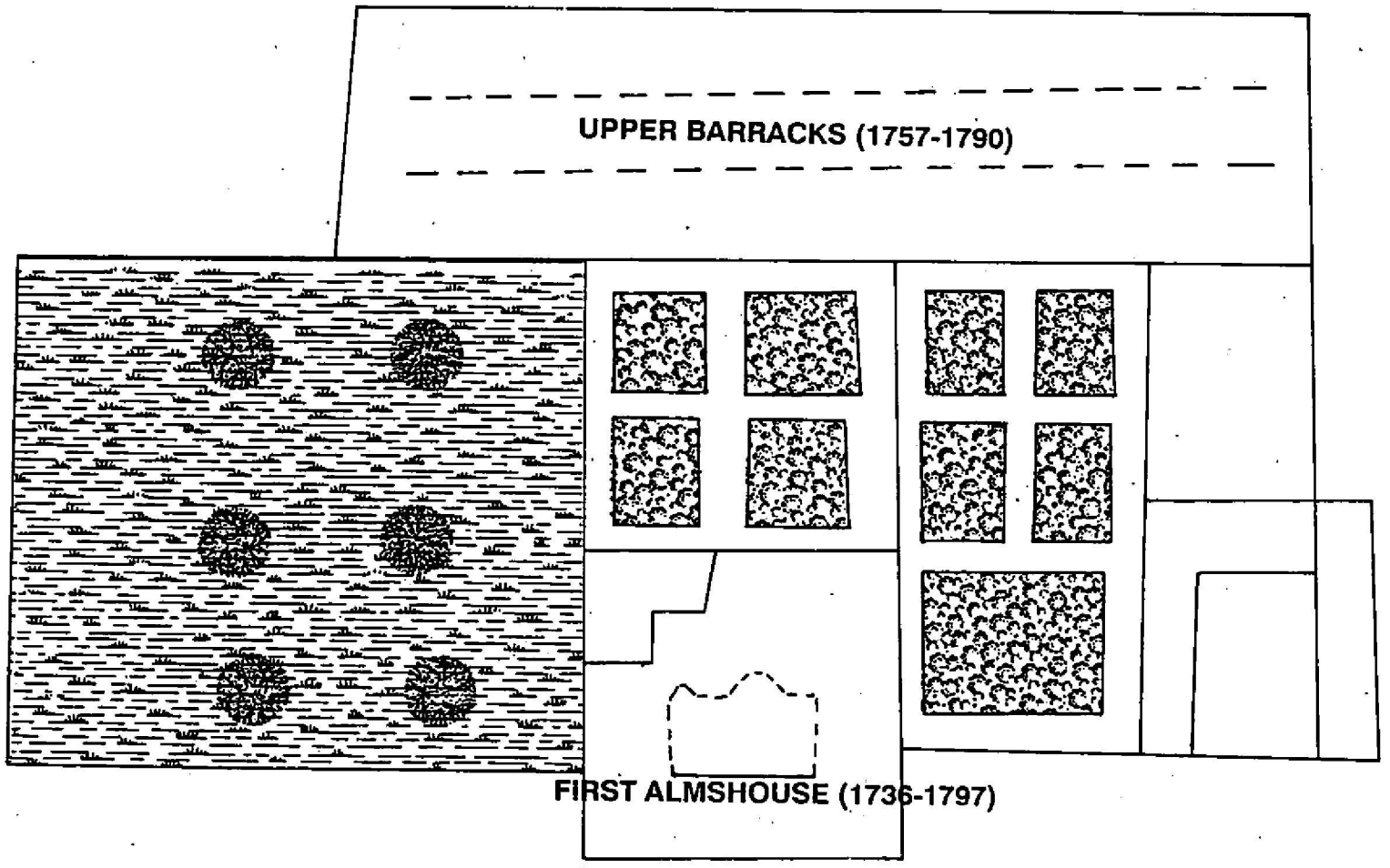

GARDENS

ORCHARD

Figure 7, Overlay C: Enlargement of the 18th Century British Ratzer Map showing orchards and gardens surrounding the Almshouse parcel, in the immediate vicinity of the excavated 18th century structural remains.

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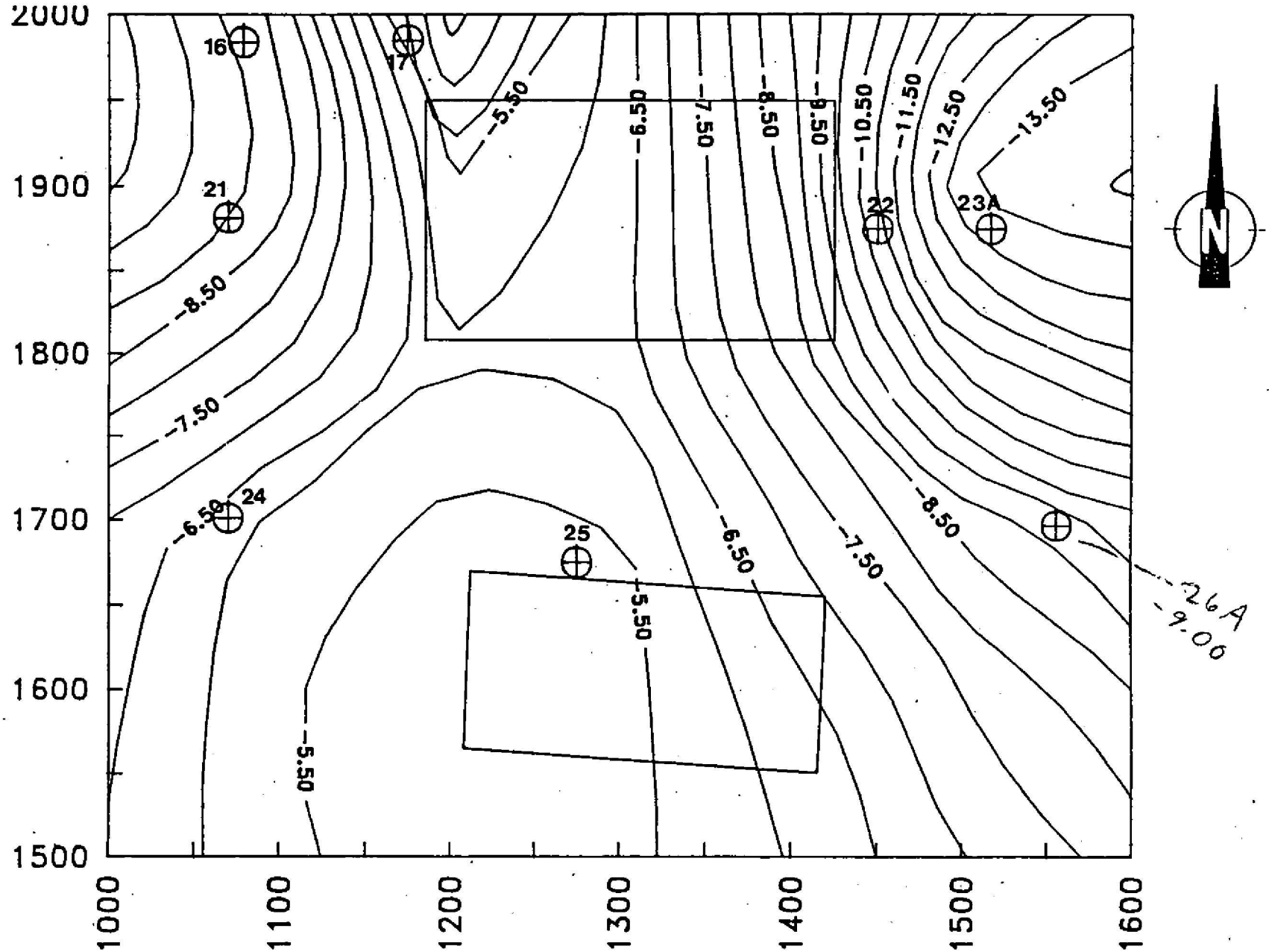

Figure 7, Overlay D: Computer generated sub-surface topographic map of City Hall Park, showing the projected depth of fill and buried colonial era surface deposits, based on available New York Bureau of Topography boring records.

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III. FIELD PROCEDURES: DISCOVERY AND DEFINITION

As a result of the initial findings and under the recommendation of the documentary study and historic sensitivity evaluation (Grossman et al. 1988), the Landmarks Preservation Commission, in conjunction with the Bureau of Facilities Management, mandated that archaeological testing be undertaken to define the following:

- 1) The presence or absence of buried archaeological remains.
- 2) The nature, thickness and cultural contents of the indicated near-surface fill deposits.
- 3) The nature and cultural association of the suspected eighteenth century surface deposits beneath this projected fill layer.
- 4) And, the nature and extent of past impacts from the construction of the existing utilities corridor, relative to the projected vertical and horizontal impacts of the proposed tunnel construction.

Specifically, the Scope for the archaeological testing program mandated the need for one manually exposed test excavation unit for the west side of the existing utilities tunnel, and the use of five auger probes on the site of the existing trench to corroborate the results of the controlled, stratigraphic excavation. The general location of the test trench was delimited by the impact area for the proposed DGS utilities corridor. However, the precise location of the actual initial test unit was targeted by the archaeological field director based on scaled, historic map correlations, and was fixed to overlap with projected building locations and lot lines, specifically those indicated on the enlarged and scaled, Revolutionary War era Ratzer Map.

The archaeological testing of the City Hall Park site was initiated on March 27, 1989, and continued without interruption until April 7, 1989 (See Plate 1 and Plate 2). The initial test excavation unit, measuring 4 by 8 feet (later expanded to 8 by 8 feet), was laid to sufficiently intersect historic property lines, while at the same time reducing the pedestrians' inconvenience. The test unit was placed perpendicular to the centerline of the existing utilities pipe and the proposed corridor impact expansion area, which runs from the Supreme Court House to the City Hall building (See Figure 6). Furthermore, the location of the test unit was also placed to intersect with the western side of the cement cap and trench of the existing utilities line, in order to investigate the degree of past disturbance to the underlying cultural deposits.

After cutting and removing the asphalt pavement and cement bedding with a diamond saw and jackhammer, all subsequent deposits were manually excavated following the natural stratigraphic breaks. During the course of excavation, the initial 4 by 8 foot Test Unit 1 was expanded to the south in order to better document the buried cultural deposits, for a total subsurface exposure area of 8 by 8 feet. This extension was conducted

upon the request of the N.Y.C. Landmarks Preservation Commission and after negotiations with the Department of General Services on March 31, 1989. This expanded 4 by 8 foot unit was excavated as a separate control designated Test Unit 1b.

All excavated cultural deposits and natural sediments (strata), comprised of both matrix (soil deposits) and interfaces (the point of separation between two distinct soil deposits), were assigned decimal context number subdivisions for each distinct natural stratigraphic deposit. In addition to the context system used for individual deposits, the Grossman and Associates recording system applied distinctive feature numbers beginning with 5000 (i.e. 5001, 5002, etc.) for discrete cultural features, such as pits or trenches, which were cut into and down from any of the identified natural stratigraphic lenses or surfaces.

All individual decimal subdivisions of the context numbers, as well as features, were subsequently grouped, when pertinent, into larger strata group units (designated with Roman numerals I-XI), based mainly on the artifactual associations, the sedimentary properties, and the relative chronology of deposition based on the natural stratigraphic sequence recovered. These eleven strata groups, in turn, represented four, larger archaeological periods characteristic of different phases of site development, occupation and destruction (See Table 1).

IV. THE STRATIGRAPHIC RECORD

Stratigraphic Summary

After the mechanical removal of 5 sterile layers of contemporary asphalt and cement pavement, the subsequent excavations uncovered nine, distinctive, natural stratigraphic deposits, as well as six man-made features, all of which were segregated into eleven, culturally and chronologically related episodes, designated Strata Groups I through XI (See Figure 8 and Figure 9). These eleven strata groups, in turn, represented four chronologically and stratigraphically distinct episodes of historic activity (See Table 1 and Table 4):

- A) 20th Century Surface and Late 19th Century Deposits (Strata Group I and Strata Group II)
- B) Late 18th and Early 19th Century Post-Almshouse Fill Deposits (Strata Group III - Strata Group VI)
- C) 18th Century Construction, Occupation, and Destruction Remains (Strata Group VII - Strata Group X)
- D) Original Soil Matrix (Strata Group XI)

Beneath the excavated asphalt surface and the underlying layers of concrete and utility trench deposits (Strata Groups I and II), lay a series of fill deposits dating from the first decade of the 19th century. Because of the mixture of 19th century cultural materials together with sand from the original, underlying, colonial surface, it appears highly probable that these deposits accumulated during the early 19th century construction of the City Hall basement foundation, and the later construction of the Tweed Courthouse basement foundation. These predominantly unmixed layers of early 19th century fill, overlay and were separated from the underlying 18th century remains by a thin lens of silty-sand, which appears to have accumulated as a result of rain run-off, following the destruction of the 18th century building discovered beneath it. Resting at only 18 inches below the modern grade and representing a period of disuse and exposure to the elements, this cap of silt functioned as a stratigraphic and chronological break with the undisturbed 18th century remains preserved below. All underlying deposits, features and structural remains pertained to the 18th century occupation of the site.

The sequence of fill deposits above and below the stratigraphic break appeared to contain at least two surfaces. One of these was demarcated by a layer of pebble bonded with clayish soil, and possibly belonged to the late 18th/early 19th century. The other identified surface layer seems to represent the original 18th century surface, demarcated by the top of the sandy matrix of Cx.1.16.

Cutting into this 18th century surface was a builders' trench (Feature 5001), which based on the artifacts found associated with its fill, postdated 1720. Laid into this 4 foot deep builders' trench, and into the adjacent basement hole to the south, was a well-constructed field stone and mortar foundation wall, which was plastered on all sides. Brick and plaster wall remains found in the rubble fill, and the evenly mortared surface of the stone foundation, indicated that a multi-course brick wall once stretched the width of the 19.7 inch foundation, suggesting that it supported a substantial, multi-story brick building. Both the builders' trench (Feature 5001) and the stone foundation wall (Feature 5007) date to the initial construction phase of the 18th century building.

Inside the structure, to the south of the foundation wall and builders' trench, the old cellar hole was filled with a dense matrix of brick and plaster destruction debris. Included in this debris were food remains and associated artifacts which postdate 1780, suggesting that the interior rubble reflects the post-occupation, destruction debris of the collapsed and dismantled brick building.

The interior fill of the destroyed building contained a large number of 18th century artifacts, including ceramics, glass, food debris, and two identified human bones of undetermined origin. The presence of food remains which may have been added in during the process of filling the abandoned cellar hole is consistent with both contemporary and 18th century patterns of refuse disposal. Given the fact that the destruction remains on the inside cellar hole represented a variety of mixed materials from the mid to late 18th century, it is not possible to establish a strict functional interpretation of the significance of these remains. Food remains were recovered from a range of many different stratigraphic contexts representing different periods and functions of deposition including both the 18th century structural remains and the late 18th and early 19th century post-Almshouse fill deposits (See Table 2 and Table 3). The food remains encountered in the rubble fill may have accumulated during the period of the building's occupation, or they may instead represent the secondary deposition at the time of its destruction. The presence of the two human bones in the rubble suggests strongly that at least some of the organic materials recovered from the interior cellar hole may have been deposited after or during the destruction of the building, sometime before the beginning of the 19th century.

However, the fill also contained other artifact classes that were suggestive of craft activities and were clearly associated only with the 18th century deposits and were contemporary with the building. These included copper alloy pins and 18th century bone blanks (drilled pieces of bone) for the domestic manufacture of bone buttons (See Plate 14 and Plate 15). Unlike the food remains, these artifacts were recovered exclusively from the rubble fill and the mid-18th century refuse pit, indicating their association with the occupation phase of the excavated colonial building (See Table 2).

Thus, to the south of the foundation wall, towards the present City Hall, the pre-19th century deposits below the sealed cap of silty-sandy deposits (Cx.1.14) (with the exclusion of the foundation wall), represent a homogeneous mixture of post-1780 destruction debris, with no stratigraphic or chronological subdivisions of significance. Toward Tweed Court House to the north of the foundation wall and builders' trench, and beneath the 18 inches of early 19th century fill layers, the original 18th century surface was found preserved and undisturbed, outside of what would have been the north face of the buried 18th century building. This undisturbed, buried, 18th century surface of homogeneous glacial sands represented the living surface at the time of the construction and occupation of the 18th century building and possible Almshouse.

Cutting into this buried surface, and associated in time with the pre-destruction, occupation phase of the 18th century building, was an oval pit filled with food remains and other 18th century artifacts. A total of 183 pieces of oyster shell were recovered from the pit, which account for 36% of the total oyster encountered in the test excavations. This pit, which postdated 1765, also cut into the builders' trench of the 18th century building, and thus provided additional evidence that the building construction predated 1765. The discovery of this secondary refuse pit in association with both the building and the 18th century living surface, seems to highlight the potential archaeological sensitivity of this buried, near-surface, colonial deposit. Specifically, it is highly possible that if properly sampled, other contemporary 18th century pit features could also be encountered at this depth, in association with other potentially surviving structural remains and activity areas.

A. 20th Century Surface and Late 19th Century Deposits

Strata Group I

This strata group consisted of two superficial layers of modern asphalt pavement, Cx.1.00 and Cx.1.01, together measuring 7cm-9cm (2.8in-3.5in) in thickness. Both layers were devoid of any associated historic cultural materials.

Strata Group II

This strata group consisted of five distinct late 19th and possibly early 20th century layers or deposits. These included two underlying layers of cement pavement, Cx.1.04 and Cx.1.05, together measuring 11cm-12cm (4.3in-4.7in) in thickness; interface Cx.1.02, a dark yellowish-brown lens between the asphalt layers which it cut through; Cx.1.03, the cement work which covered the existing utilities pipe between the Supreme Court House and the City Hall Building; and Cx.1.06, the dark yellowish-brown trench fill deposits that were cut for the placement of the utility pipe.

B. Late 18th and Early 19th Century Post-Almshouse Fill Deposits

Strata Group III

Immediately below Strata Group II lay the first of the historic layers, represented by late 18th and early 19th century fill deposits, which were assigned to Strata Group III. This strata group was further subdivided into subgroups A and B, based on the perceived temporal differences in the artifacts recovered from each subgroup, which were separated by a thin interface. In total, Strata Group III measured 10cm-11cm (3.9in-4.3in) in thickness. Subgroup A consisted of Cx.1.07, a shallow, very dark grayish-brown sandy lens; Cx.1.08, a loamy-sandy, dark yellowish-brown sandy matrix; and Cx.1.09, an interface between Cx.1.08 and Cx.1.10.

Subgroup B included Cx.1.10, a loamy, dark yellowish-brown/dark grayish-brown sandy matrix; as well as the contents of an intrusive nineteenth century conical pit, designated Feature 5006, which cut down from the top of Cx.1.10 (See Plate 3 and Plate 4). The upper outline of this intrusive pit feature was elliptical, with wide conical projections which tapered to a rounded point at the bottom. Based on the morphological characteristics, the numerous inclusions of large fragments of mortar and brick, as well as the stratigraphic relations of the feature relative to the surrounding deposits, the intrusive feature was classified as a possible 19th century post hole.

The sedimentary properties of the remaining strata comprising Strata Group III were of similar composition. Each layer, with the exception of Feature 5006, appeared to represent secondary fill which may have derived from the nineteenth century basement construction within the park associated with City Hall (1812) and the Tweed Court House (1861-67).

Strata Group IV

The beginning of Strata Group IV (Cx.1.11) was marked by the appearance of a compact layer of dark brown to gray gravel (1.0cm.-1.5cm [0.4in-0.6in] in thickness), that consisted primarily of fine (0.2cm.-0.6cm [0.08in-0.2in]), and medium pebbles (0.6cm-2.0cm [0.2in-0.8in]). The pebbles were highly compacted and bonded with a matrix of clay between the stones. The clay and compaction of this layer of gravel suggests that it represents a compacted, exterior surface, located in an open area and exposed to the elements. Furthermore, the sedimentary and stratigraphic attributes of this intact pebble surface indicated that it sealed the younger, deeper, historic deposits from more recent intrusive disturbances, with the exception of the possible post-hole (Feature 5006), which protruded downward from Cx.1.10 in Strata Group III.

Strata Group V

Beneath Strata Group IV, a 12cm to 13cm (4.7in-5.1in) thick layer of two sandy fill layers or deposits was encountered and assigned to Strata Group V. This strata group consisted of Cx.1.12, a brown/dark brown organically stained, sandy matrix, and Cx.1.13, an interface consisting of a thin, dark yellowish-brown sandy lens, which served as a stratigraphic interface between the upper Cx.1.12 fill layer and the underlying Cx.1.14 lens of silty-sandy rain wash which capped the buried 18th century deposits. The relatively thick fill layer of Cx.1.12 included clay, silt, medium and coarse sand, as well as coarse pebbles and cobbles. Furthermore, Cx.1.12 incorporated a feature (Feature 5003), consisting of a lens of black ash and charcoal, FCR (fire-cracked rock), and thermally altered sand particles. Artifacts recovered from Strata Group V consisted of a wide range of eighteenth century ceramics, five kaolin pipe fragments, glass fragments, square cut iron nails, charcoal, and coal (See Table 2). Based on the assigned date range of artifacts in this deposit (TPQ dated post-1795), this buried layer appears to correspond in time with the last decade of the eighteenth century and represent the first accumulation of post-Almshouse fill deposit within City Hall Park.

Strata Group VI

Strata Group VI included two context subdivisions, a thin, dark yellowish-brown lens of sandy-silty rain wash sediments (Cx.1.14), and a stratigraphic interface marked by the shift to a dark reddish-brown sandy matrix below (Cx.1.15). Both layers measured 1.0cm-1.5cm (0.4in-0.6in) in thickness. Based on the date range of the limited number of artifacts recovered, and its stratigraphic relationship to the late 18th and early 19th century deposits above the building construction, occupation and destruction remains below, this strata group appears to represent an episode of deposits that sealed and capped the 18th century structural remains.

C. 18th Century Construction, Occupation and Destruction Remains

Strata Group VII

Immediately below the silty-sandy cap of Cx.1.14, which separated the buried 18th century remains, the field team exposed a long, rectangular builders' trench (Feature 5001), oriented east to west, that was designated Strata Group VII. To the south and parallel to the builders' trench, the stone foundation wall of a building (Feature 5002), and the brick and plaster remains of a wall that apparently collapsed into the interior of the building during demolition (Feature 5004) were also uncovered. This brick wall debris cut into the original soil deposits of the colonial surface (Cx.1.16).

The foundation wall could be classified as a free standing type, implying that it was laid while the builder was standing in the trench, on the exterior side of the brick building. The builders' trench (Feature 5001), located on the outside of the stone foundation wall, measured 30cm (11.8in) in width and extended to a depth of 1.12m (44in) below the original surface matrix (Cx.1.16).

The builders' trench did not reveal significant internal stratification or differential discoloration of soil deposits, suggesting it was backfilled with homogenous, dark grayish-brown sand within a relatively short time interval. Furthermore, both the exterior colonial surface and the uppermost surface of the builders' trench fill was cut by an intrusive, oyster-shell-filled pit feature, designated Feature 5002 (Strata Group IX). Based on its stratigraphic relationship, cutting the original surface (Cx.1.16) and capped by later fill layers, the pit feature (5002) postdated the cutting and filling of the builders' trench and predated the destruction of the brick building.

Strata Group VIII

The actual wall foundation was assigned Feature 5007, of Strata Group VIII, and measured an average of 50cm (19.7in) in height, and an average of 50cm (19.7in) in width (See Plate 3). The length could not be recorded as the wall extended to both the east and west, beyond the limits of the excavation unit.

The stone foundation was constructed of four courses of mortared, light gray, cut field stones, with finished faces on both the exterior and interior sides. The mortar (Cx.5007/A) had a high proportion of coarse sand particles and inclusions of pebbles (angular and sub-angular in sphericity) which appear to have been intentionally added in order to increase the strength of the bonding material. The interior face of the stone foundation wall was plastered flush with what appeared to be several superimposed layers of white plaster (Cx.5007/B).

The top surface of the stone foundation wall was evenly squared and flattened with mortar, suggesting that the wall which stood on it was flush with both sides of, and as wide as, the 19.7in. foundation wall. The densely packed brick and plaster rubble (Feature 5004) excavated from the interior sellar hole of the colonial building suggested that the upper walls consisted of multi-courses of brick, versus stone masonry, capable of supporting a multi-story structure. An alternative coursing of headers and stretchers was evidenced by the mortar impressions on bricks encountered in the interior rubble fill. The treatment and nature of the gaps between these bricks indicated the presence of both external face walls (based on the recessed brickwork pointing), as well as interior face walls, which were coated with multiple, overlapping layers of white plaster like that encountered on the interior face of the stone foundation wall.

The fact that the interior face of the brick wall was built flush with the stone foundation wall, indicates the existence of a cellar or a basement. The presence of a basement is supported by the Common Council's request for the construction of "A good Cellar, all of Stone," when the Almshouse was built in 1736 (MCC 1905 IV:240).

The archaeological evidence suggests that when demolished, the brick walls of the building collapsed, together with the wooden floor elements, into the cellar or basement. This possibility is supported by the recovery of preserved traces of wood on brick faces (on the stretcher sides), which were found still *in situ* together with square cut iron nails. An iron beam bracket was also excavated from within the interior brick fill (Feature 5004), at a level immediately above the upper surface of the stone foundation (Feature 5007). The presence of an iron beam bracket may indicate the use of a supportive element between wooden floor structures, or it could just as well have fallen into the cellar hole when the upper stories collapsed into it.

The excavations also uncovered fragments and whole bricks with kiln-fired, glazed headers, as well as a whole brick with a bull-nose on the one header side, indicating the existence of a possible arch. Furthermore, the discovery of an 18th century key in the interior rubble basement fill, suggests proximity to a door along this section of the north wall (See Plate 11 and Plate 12).

Strata Group IX

Strata Group IX includes an apparent refuse pit, designated Feature 5002, which was cut into the builders' trench (Feature 5001 and Strata Group VII) of the foundation wall (Feature 5007 and Strata Group VIII), and the exterior living surface (Cx.1.16) (See Plate 5 and Figure 8). The upper portion of the intrusive pit was ill-defined with no clear peal line, color break, or differentiation in sedimentary deposits with the adjacent builders' trench. Only when the lower half of the feature was exposed was it possible to distinguish, based on differences of compaction and content, between the oyster-shell-filled pit matrix and the surrounding deposits which consisted of the builders' trench (Feature 5001), and the silty-sandy matrix of the original 18th century surface (Cx.1.16), into which it cut. The profile of the intrusive feature graduated from a vertical, tubular cut to a wide, bell-shaped outline at the bottom. Based on the frequently appearing inclusions of dietary remains, including ca. 160 large oyster shells, fragments of large mammalian, as well as rodent bones, it appears the cut feature (5002) represents a refuse pit which was cut into the builders' trench and the exterior surface of the building sometime after the structure was built. Based on the datable ceramics from within it, this occurred after 1765, which was during the building's occupation period, and ca. 30 years after it was built.

Strata Group X

The brick rubble on the interior and south side of the stone foundation wall was treated as a distinct deposit and designated Feature 5004, of Strata Group X. This post-occupation brick and plaster structural debris was capped by the silt layer of Cx.1.14, and rested on the underlying sterile soil deposits (Cx.1.17, Cx.1.18 and Cx.1.20), which were all assigned to Strata Group XI. The presence of artifactual remains including glass, ceramics, kaolin pipe fragments, as well as two disarticulated human bones, a right human calcaneus and a left human ulna (both adult), suggest that the interior destruction debris included secondary fill as well as the structural remains of the destroyed brick building. Strata Group X also included Cx.1.19, an arbitrary division within the fill of the interior basement destruction debris (Feature 5004).

D. Original Soil Matrix

Strata Group XI

Strata group XI contains those contexts excavated from the exterior and underlying post-glacial sands of the original colonial surface, into which the building foundation was cut and upon which the colonial era residents lived. These included a light yellowish-brown to yellowish-red series of sandy interfaces and deposits which were darker closer to the surface due to the leeching of organic materials (Cx.1.16 a sandy-loamy matrix, Cx.1.17, a thin interface; Cx.1.18, a sandy matrix; and Cx.1.20, a sandy matrix).

The Near-Surface Auger Probes

In addition to the test unit on the west of the existing utilities pipe trench, five shovel test pits were located on the east of the test unit. The shovel test pits were designed to recover control samples of archeological materials, as well as to provide additional geoarchaeological data. The five mandated shovel test pits on the east of the existing corridor were sampled with two procedures:

- A) The use of metrically controlled, vertical (2 1/2 inch) manual core borings to accurately document vertical stratigraphic sequences relative to the controlled natural stratigraphic excavation unit to the west; and
- B) The use of a large volume hand auger to recover associated archaeological materials in order to establish their nature and date ranges.

It is important to note that the sedimentary information extracted from the auger probes, to an approximate depth of five feet from the asphalt pavement, indicated stratigraphic sequences that correlated with all natural deposits documented to the west, during the controlled natural stratigraphic excavation of the test unit.

Excavations terminated on April 7, 1989, with two 20cm by 40cm (7.9in by 15.7in) vertical probes into the dark yellowish brown and sporadically black, sterile sandy sediments of Cx.1.20 (the matrix within Strata Group XI just under the colonial surface) in order to verify the absence of deeper cultural deposits. No cultural materials were recovered and no evidence of any earlier or deeper buried living surfaces were identified below Cx.1.16, the original 18th century (post-1720) living surface on the exterior and north of the stone and brick building, foundation and builders' trench.

In summation, to the north of the builders' trench and the associated stone foundation (the area between the Tweed Court House and the excavation unit), the test excavation documented the well-preserved colonial surface at 18 inches below modern grade. Cutting into the colonial surface and the builders' trench was an 18th century refuse pit. To the south of the early 18th century wall and foundation remains, the archaeological deposits consisted of 5 feet of mixed, post-1780 brick and plaster rubble fill of collapsed structural remains within the former basement or cellar of the early 18th century (post-1720) building, and possible Almshouse.

CITY HALL PARK PROJECT

Feature Profiles

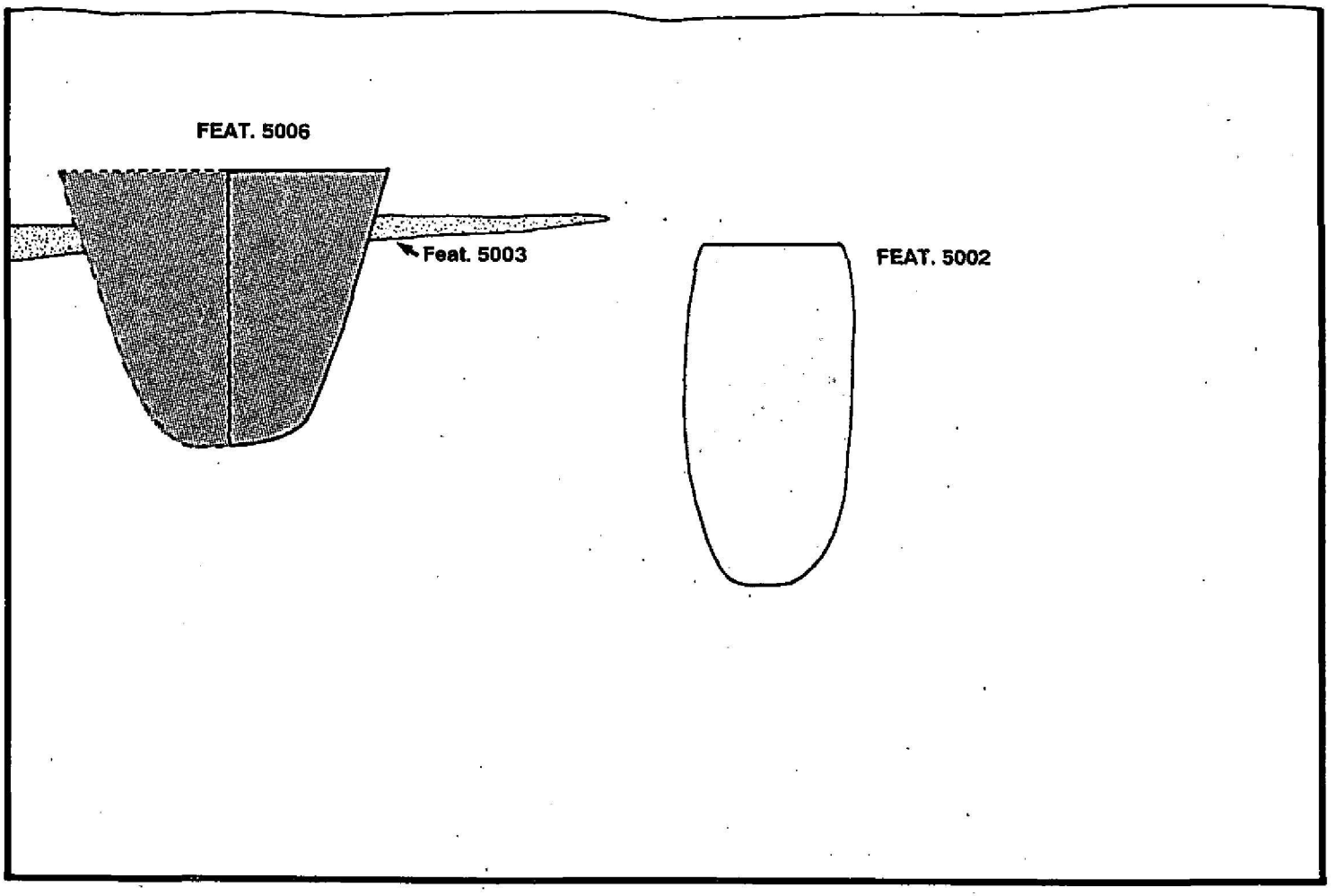

Figure 8a: Scaled stratigraphic overlay showing the relationship of intrusive pit features to vertically superimposed and naturally stratified 18th and 19th century archaeological deposits.

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CITY HALL PARK PROJECT

WEST WALL PROFILE

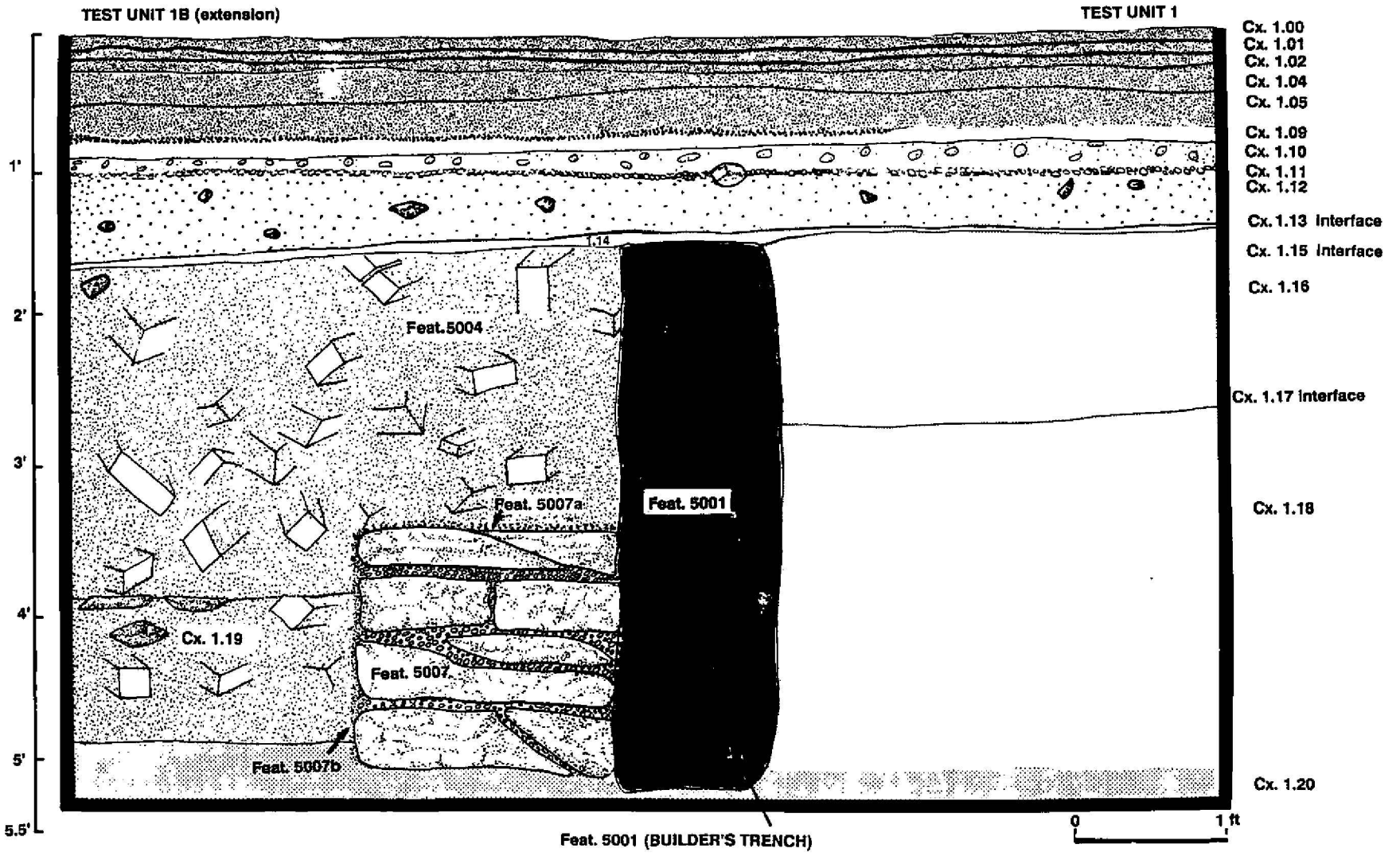

Figure 8b: Detailed, stratigraphic profile drawing of the west excavation wall, showing the relationship of the buried, 18th century structural remains, builder's trench and foundation wall, to overlying early 19th century near-surface fill deposits.

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CITY HALL PARK PROJECT
NORTH WALL PROFILE

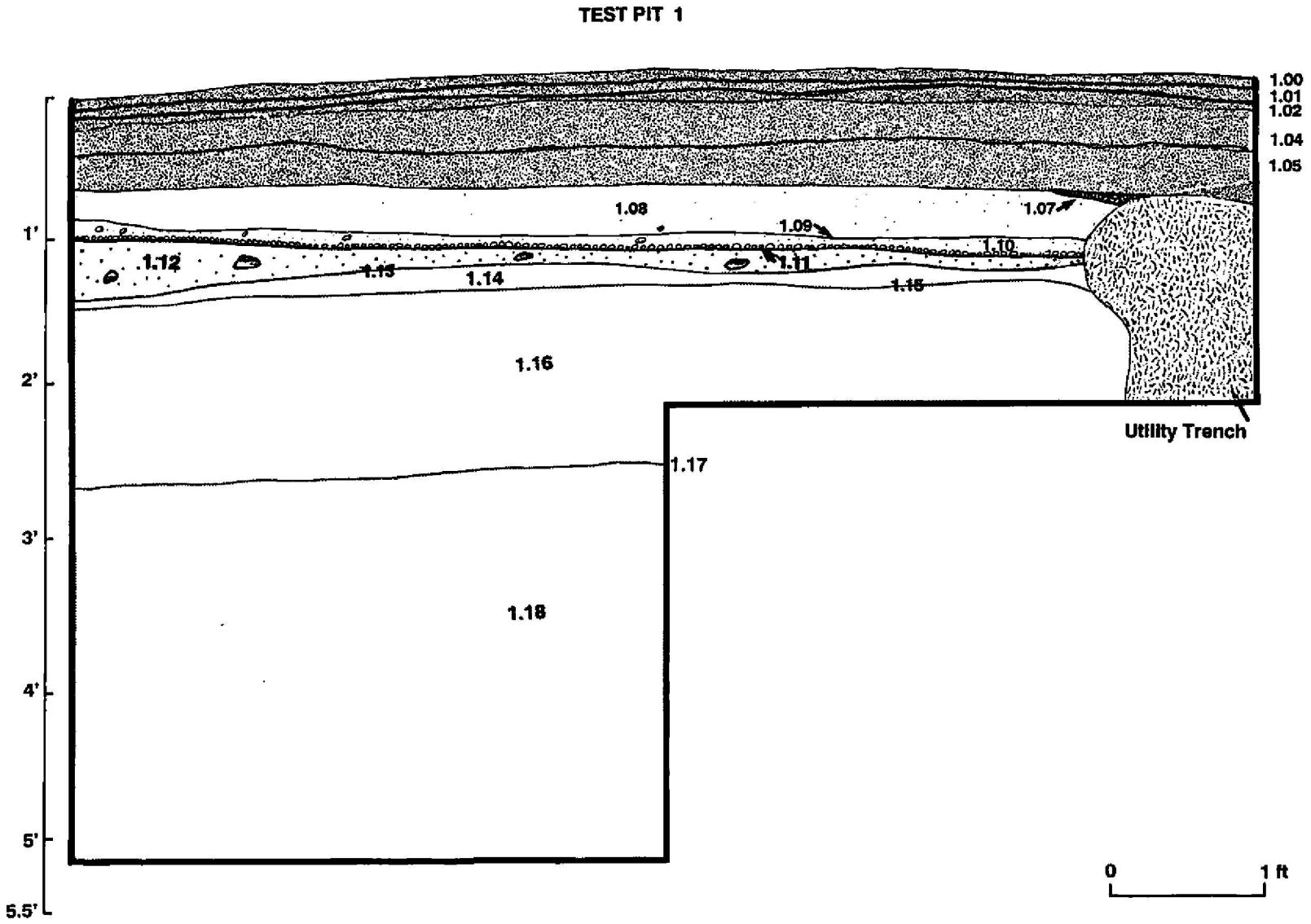

Figure 9: Profile of the north wall of the test excavation unit, showing the relationship of near-surface, early 19th century fill deposits (Cx.1.07-1.15), to the buried 18th century surface (Cx.1.16), underlying modern City Hall Park.

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V. CHRONOLOGICALLY AND FUNCTIONALLY DIAGNOSTIC ARTIFACTS

Chronologically Diagnostic Artifacts

Due to the highly fragmented nature of the bulk of the ceramic assemblage recovered from the City Hall Park site, identification of ceramic "type", vessel forms, manufacture date, and origin assignments were at times difficult to establish. Hence, identification was, in these cases, limited to technical paste/glaze determinations (e.g. gray, salt glazed stoneware). Where diagnostic decorative characteristics (e.g. transferprinting on creamware), indicative of a more specific time bracket, were absent due to small sherd size, the more general "type" date range (e.g. "creamware") was applied. The artifact manufacture dates, ceramic types and origins were derived from Stanley South's "Evolution and Horizon as Revealed in Ceramic Analysis in Historical Archaeology" (1978: 72). Terminus post quem (TPQ's), "the beginning manufacture date for the latest type present...", were established for each strata grouping and natural stratigraphic subdivision based on the identification of datable ceramics, with additional corroborative dates provided by diagnostic pipes, glass, or other datable items, when available (Ibid.: 74). Ceramic vessel element identifications (i.e. rim, body, base) were noted where pertinent.

A total of 167 ceramic sherds were recovered from controlled strata, excluding those from the six auger tests. Of these, 116 (70%) were datable. The remainder consisted of non-diagnostic or undatable specimens in the following general ceramic categories and numbers:

Unidentifiable:	9	(5%)
Earthenwares:	28	(17%)
Stonewares:	10	(6%)
Porcelains:	4	(2%)

Pipe stem bores were measured and dated using Harrington's method based on the changing diameter of the pipe stem bores through time (Harrington, 1978: 63-65). No bowls were complete enough to apply existing bowl-dating typologies based on elements of design or form.

A. 20th Century Surface and Late 19th Century Deposits

Strata Group II

This strata group consisted of cement work and bedding (Cx.1.02-Cx.1.05), and utility trench deposits (Cx.1.06). Artifactual material was recovered from Cx.1.06 only. Diagnostics in this layer consist of 2 undecorated body sherds of creamware (1762-1820), and 1 undecorated body sherd of pearlware (1780-1830), thus placing the TPQ of the deposit from this meager evidence, at post-1780. This should not, however, be taken as

a reliable indicator of deposition date, due to the fact that these diagnostic artifacts were recovered from the fill of an intrusive utility trench, which contained deposits of a more recent date than the early fill into which the trench was cut.

B. Late 18th Century and Early 19th Century Fill Deposits

Strata Group IIIA and IIIB

The designation of A and B within Strata Group III was based on the perceived temporal differences in the artifacts from Cx.1.07-Cx.1.09, versus those of Cx.1.10/Feat. 5006 respectively.

Strata Group IIIA included various matrices and an interface. While no artifacts were recovered from the interface Cx.1.09, and no diagnostics from Cx.1.07, Cx.1.08 contained a total of 33 datable sherds ranging from a decorated, tin-glazed, earthenware body sherd (1600-1802) to 17 sherds of 19th century whiteware (1820-1900+). Also present were 9 pearlware sherds (1790-1830) (one of these transferprinted [1795-1840]), 3 plain creamware sherds (2 base, 1 body, [1762-1820]; See Plate 7), 1 English, brown sherd (1690-1775), and 2 German, gray, salt-glazed stoneware bodysherds with cobalt decoration (1700-1775). Seven undecorated pipe stem fragments of 4/64" stem bore (1750-1800) were also present. The range of datable artifact material indicates a highly mixed deposit, with a TPQ date of post-1820.

Conversely, the diagnostics recovered from the underlying Cx.1.10 in Strata Group IIIB suggest a more temporally homogeneous deposit. These included 8 pearlware body sherds, 6 plain (1780-1830), 1 embossed (1800-1820), and 1 transferprinted sherd (1795-1840); as well as 1 4/64" undecorated pipe stem fragment (1750-1800). Feature 5006, a possible post-hole which was cut into the matrix of Cx.1.10, was devoid of datable items, and contained only oyster and clam shell.

The limited range of material within IIIB (TPQ 1800), with its tight temporal bracketing, provides supportive evidence for the designation of this particular strata grouping as a deposit separate from, and probably predating Strata Group IIIA.

Strata Group IV

This strata group included a single context consisting of a surface of small pebbles, which was treated as an interface between upper and lower deposits. Diagnostic artifacts recovered from this context include 1 English, buff-bodied (salmon), slip-trailed, earthenware body sherd (1670-1795), 1 German, gray, stoneware body sherd with cobalt decoration (1700-1775), and 10 post-1780 to post-1795 pearlware sherds. Nine of these pearlware sherds were undecorated, suggesting a date range of 1780-1830, and one, a rim sherd, was transferprinted, indicating a slightly later date range of 1795-1840. Like the

overlying Strata Group IIIA deposits, the recovered diagnostic material covers a broad temporal span, with the TPQ indicating a relatively late deposition date of post-1795 for the pebble layer of Cx.1.11.

Strata Group V

Strata Group V included Cx.1.12, a matrix which contained Feature 5003 (a thin charcoal lens), and the underlaying interface (Cx.1.13) between Strata Group V and the next deposit. A total of 32 diagnostic sherds were recovered, the bulk of them from Cx.1.12. These included an English, white, salt-glazed base sherd (1720-1805); 1 body fragment of English, buff-bodied, slip-trailed earthenware (1670-1795), 7 undecorated creamware sherds (4 basal, 3 body [1762-1820]), and 19 sherds of pearlware, four of which were transferprinted body fragments, indicating that they dated later (1795-1840) than the others. The remaining 15 porcelain specimens consisted of 10 body sherds, 3 handle pieces, a rim sherd and a base sherd (all 1780-1830). Three 4/64" pipe stem fragments (1750-1800) and one 5/64" fragment (1710-1750), all undecorated, were also present.

Feature 5003, a charcoal lens designated Cx.1.12, contained only one fragment of undecorated creamware (1762-1820), and a pipe bowl fragment with an embossed "R. Tippet" maker's mark, dating to the period 1740-1770 (Stone 1974: 105; See Plate 9). These earlier dates are not terribly significant, however, since the feature is within Cx.1.12, which, by the other associated ceramics, postdates 1795.

Three fragments of pearlware, 2 undecorated (1780-1830) and 1 transferprinted (1795-1840) were recovered from Cx.1.13. These fragments, along with the pearlware present in Cx.1.12, T.P.Q. date this grouping to post-1795.

Strata Group VI

Contexts 1.14 and 1.15 consisted of the sandy-silty layer and the interface with the underlying deposit, which together formed the cap that overlay and sealed the intact stone foundation and early 18th century structural remains found buried and sealed below. The TPQ date for this strata group is placed at post-1780 based on the presence of 1 undecorated, pearlware body fragment within the silt layer of Cx.1.14. This context also produced one 4/64" pipe stem (1750-1800) and one 5/64" pipe stem (1710-1750), both undecorated. The interface, Cx.1.15, contained 4 undecorated creamware sherds (3 body and 1 rim sherd [1762-1820]), and one undecorated 4/64" pipe stem fragment (1750-1800). Although the sample is small, the latest material contained in Cx.1.14 suggests that the buried 18th century surface of Cx.1.16 was exposed and lived on as late as the decade of the 1780's.

C. 18th Century Construction, Occupation, and Destruction Remains

Strata Group VII

The builders' trench, designated Feature 5001, represents one of the most significant separate deposits of the City Hall Park site. The most recent datable artifacts recovered from its fill demarcate and date the cutting and filling of the builders' trench, and hence, the initial date of construction of the historic foundation. Stratigraphically, the builders' trench was cut down from, and was thus contemporary with, the 18th century colonial surface beginning 18 inches below modern grade.

The diagnostic artifacts recovered from the builders' trench were consistently earlier than those recovered from any other grouping. These included 1 English, white, salt-glazed stoneware body fragment (1720-1805; See Plate 7), 2 English, buff-bodied, slip-trailed earthenware fragments (1 body and 1 base [1670-1795]; See Plate 8), 2 decorated, buff-bodied, tin-glazed earthenware body fragments (1600-1805; See Plate 8), and 2 German, gray, salt-glazed stoneware fragments (1700-1775). One of these was a handle fragment with cobalt decoration (See Plate 7), the other was a body fragment. Also recovered from the builders' trench were a statistically small sample of eight 4/64" pipe stem fragments, which when encountered in large numbers suggest a date range of the mid-18th century, and two undecorated 5/64" pipe stem fragments, which suggest a date range from the first half of the 18th century (See Plate 9). In addition to the general 18th century date of the pipestems, the diagnostic ceramics indicate a TPQ of post-1720 for the artifacts from the fill of the builders' trench. This date of post-1720 indicates that the builders' trench and foundation wall were built sometime after the first quarter of the 18th century, an archaeological date which is consistent with the original Almshouse construction date of 1736, indicated in published sources.

Strata Group IX

Feature 5002 was a conical, predominantly oyster-shell-filled refuse pit which cut down through the 18th century surface (Cx.1.16), and the builders' trench (Feature 5001). The pit contained a total of 5 creamware sherds; 2 undecorated base fragments, 1 decorated body fragment and 1 rim sherd (all within the 1762-1820 date range), and 1 overglaze enamelled, hand painted body fragment (1765-1810), placing the TPQ date for this grouping at post-1765.

The date and stratigraphic placement of the intrusive pit is significant because the date of the most recent artifact from its fill serves to help confirm the relative age of the builders' trench and the associated 18th century surface into which it cut. Put simply, because the refuse pit cut down and into both the 18th century surface and the builders'

trench for the foundation wall, it postdates their deposition. Based on the diagnostic artifacts, the refuse pit postdates 1765, and based on its stratigraphic relationship, it predates the overlying silty layer (Cx.1.14), which was TPQ dated to post-1780. The stratigraphic relationship and artifact associations therefore document that the underlying 18th century surface and builders' trench must predate the cutting of the refuse pit, which occurred after 1765 and before the deposition of the overlying silt layer following the destruction of the building.

Strata Group X

This strata grouping was comprised of the brick rubble fill within the stone foundation. As to be expected from a secondary fill deposit, the material was represented by a mixture of multiple time periods and activities. The dateable ceramics ranged in time between the 17th and late 18th century, and included decorated, buff-bodied, tin-glazed earthenware (1 body fragment, 1600-1802), and pearlware (1 body fragment, 1780-1830). The remainder of the recovered diagnostics included a "pie-crust" rim fragment of English, buff-bodied, slip-trailed earthenware which spanned in time from 1670-1795, but most likely dated to the third quarter of the eighteenth century (Noël Hume 1982:107; See Plate 10); 1 English Nottingham stoneware body fragment (1700-1810); 5 undecorated sherds of creamware including 4 body sherds and 1 rim sherd (1762-1830); 6 undecorated 4/64" pipe stem fragments (1750-1800); 3 undecorated 5/64" pipe stem fragments (1710-1750); and finally, a wine/liquor bottle base dating to ca. 1770-1800 (Noël Hume, 1961: 101-105).

The presence of one piece of pearlware (TPQ dated 1780) and one bottle base, suggested that the destruction phase of the 18th century building occurred after 1780, and based on the dates of the overlying deposits, before 1795. The predominance of post-1762 creamware sherds, further attests to the 18th century use of the structure.

D. Original Soil Matrix

Strata Group XI

Strata Group XI contains those contexts excavated from original, underlying, post-glacial sands into which the building foundation and the refuse pit were cut, and upon which the colonial era residents lived. The sample of datable artifacts from this strata group was limited in number, and consisted of 1 English, white, salt-glazed stoneware body fragment (1720-1805), and 1 undecorated, 5/64" pipe stem fragment (1710-1750), both recovered from the original, sandy, colonial surface of Cx.1.16. This early series of dates does, however, corroborate the early 18th century, post-1720 TPQ of the original surface (Cx.1.16), into which the building foundation and cellar hole were cut.

The Near-Surface Auger Probes

A series of 5 core/auger probes were opened north of the building wall to obtain comparative artifactual information between the interior destruction debris which filled the cellar hole, versus what turned out to be the exterior surface of the building (See Figure 6). Three auger holes, designated Auger Hole 2, Auger Hole 4 and Auger Hole 5, yielded diagnostic artifacts in very small amounts, due to the limited volume of the sample; however, all showed the presence of late 18th and 19th century artifacts. Auger Hole 2 contained 1 blue, shell-edged, pearlware rim sherd (1780-1830; See Plate 7). One undecorated, pearlware body sherd (1780-1830) was recovered from Auger Hole 4. Finally, Auger Hole 5 contained 2 pearlware body fragments (1780-1830), and 1 English, white, salt-glazed stoneware body sherd (1720-1805). These were consistent with the date range of materials from the uppermost, late 18th and 19th century fill deposits, found overlaying and capping the 18th century surface at 18 inches below modern grade.

Functionally Diagnostic Artifacts

In addition to the 116 chronologically diagnostic ceramic sherds recovered during the test excavation, 10 functionally diagnostic artifacts were found which provided corroborative physical evidence for early documented accounts of institutional craft activity by the indigent inhabitants of the original 18th century Almshouse.

These artifacts included 7 copper alloy straight pins and three bone button blanks, all found associated with the brick rubble fill in the interior of the colonial building (See Plate 14 and Plate 15). Similar bone button blanks were found at a Revolutionary War era barracks site at West Point, New York. During the revolution, American soldiers manufactured bone blanks "cut from meat bones by means of a carpenter's brace and a bit, and these blanks were covered with cloth by means of which they were sewn to the garment." (Calver and Bolton 1950:44 and 53). In addition, one bone button back with an off-set rim was found in the post-1765 oyster-shell-filled refuse pit which was stratigraphically and chronologically associated with the occupation phase of the colonial building. The presence of these artifacts suggests that activity related to clothing production is consistent with early published accounts referring to the performance of craft activities by the Almshouse residents who were required to work for their food and lodging during their residence.

When planning the construction of the original Almshouse, the Common Council considered "what manufactures will be most convenient to Employ the Poor upon: Such as carding, Knitting, Spinning, Dressing Hemp or Flax..." (MCC 1905 IV:305). In addition, the Council mandated that children sent to the Almshouse be "employed in spinning of wool, Thread, Knitting, Sewing or other Labour most suitable to their Genius..." (MCC 1905

IV:307-11). This documentary evidence, combined with the archaeological evidence for institutional activity related to clothing production, suggests that the cellar, stone foundation wall, builders' trench and brick and plaster rubble of a post-1720 colonial building, may indeed be that of New York City's original colonial Almshouse.

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Table 1: Datable Items By Context/Feature

Strata Group	Context/ Feature	Description	TPQ by Cx/ Feature	Diagnostic Items	TPQ for Strata Group
	A. 20th. Century surface and late 19th. Century deposits				
I	1.00	Asphalt	-	-	-
	1.01	Asphalt	-	-	
II	1.02	Interface between asphalt layers	-	-	-
	1.03	Cement block	-	-	
	1.04	Cement bedding	-	-	
	1.05	Cement bedding	-	-	
	1.06	Utility trench deposits/dark yellowish bro	1780	2 creamware 1762	
				1 pearlware 1780	
	B. Late 18th. Century and Early 19th. Century Post-Almshouse Fill Deposits				
IIIA	1.07	Below II, dark gray stain	-	- -	1820
	1.08	Loamy matrix	1820	1 decorated tin glazed earthenware 1600	
				3 creamware 1762	
				17 whiteware 1820	
				8 pearlware 1780	
				1 English brown stoneware 1690	
				2 German gray saltglazed stoneware 1700	
				7 4/64" Mid 18th Century pipe stems	
				1 pearlware 1795	
	1.09	Interface, thin lens	-	-	-
IIIB	1.10	Loamy dark matrix	1800	6 pearlware 1780	1800
				1 pearlware 1800	
				1 pearlware 1795	
				1 4/64" Mid 18th Century pipe stem	
	5006	Intrusive pit, possible post hole			

Strata Group	Context/ Feature	Description	TPQ by Cx/ Feature	Diagnostic Items	TPQ for Strata Group
IV	1.11	Pebble layer	1795	9 pearlware 1780 1 pearlware 1795 1 German gray saltglazed stoneware 1700 1 English buff bodied slip trailed earthenware 1670	1795
V	1.12	Brown/dark brown sandy matrix, contained 5003	1795	7 Creamware 1762 1 English buff bodied slip trailed earthenware 1670 15 pearlware 1780 4 pearlware 1795 1 English white saltglazed stoneware 1720 3 4/64" Mid 18th Century pipe stems 1 5/64" Early 18th Century pipe stem	1795
	1.13	Interface between charcoal and clay cap	1795	2 pearlware 1780 1 pearlware 1795	
	5003	Charcoal lens, black ash layer	1762	1 creamware 1762 1 R. Tippet marked pipe bowl fragment 1740-1770	
VI	1.14	Silt lens capping the 18th C. struct. remai	1780	1 pearlware 1780 1 4/64" Mid 18th Century pipe stem 1 5/64" Early 18th Century pipe stem	1780
	1.15	Interface, capping the 18th C. struct remai	1762	4 creamware 1762 1 4/64" Mid 18th Century pipe stem	
	C. 18th. Century Construction, Occupation and Destruction Remains				
VII	5001	Builders trench, cut 1.16	1720	1 English white saltglazed stoneware 1720 2 German gray saltglazed stoneware 1700 2 English buff bodied slip trailed earthenware 1670 1 Creamware 1762 2 Decorated tin glazed earthenware 8 4/64" Mid 18th century pipe stems 2 5/64" Early 18th century pipe stems	1720

Strata Group	Context/ Feature	Description	TPQ by Cx/ Feature	Diagnostic Items	TPQ for Strata Group
VIII	5007	Stone foundation	-	-	-
IX	5002	Oyster pit, intrusive feature (into 5001)	1765	3 creamware 1762 2 creamware 1765	1765
X	5004	Post-occupation brick and plaster rubble fill and destruction debris in basement	1780	1 English brown stoneware of Nottingham type 1700 1 Decorated tin glazed earthenware 1 pearlware 1780 5 4/64" pipe stems 1750 3 5/64" pipe stems 1710 1 Bottle base 1770 1 English buff bodied slip trailed earthenware 1670	1780
X	1.19	Arbitrary context sub-division between upper and lower levels of interior post-destruction rubble fill, no cultural or chronological significance (Feature 5004)		5 Creamware 1762 1 4/64 mid 18th Century pipe stem	
	D. Original soil matrix				
XI	1.16	Sandy loam, 5001 cuts into it	1720	1 English white saltglazed stoneware 1720 1 5/64" Early 18th Century pipe stem	1720
	1.17	Thin sandy interface	-	-	-
	1.18	Sterile, sandy matrix	-	-	-
	1.20	A sterile, sandy matrix; shovel test	-	-	-

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Table 2 : Artifact Class by Strata Groups

	A	B					C			D						
	20th Century Surface and Late 19th Century Deposits	Late 18th Century and Early 19th Century Post-Almshouse Fill Deposits					18th Century Construction, Occupation and Destruction Remains			Original Soil Matrix	Artifacts from the Auger Holes					
Class	II	IIIa	IIIb	IV	V	VI	VII	IX	X	XI	1	2	3	4	5	6	SUM
brick	9	11			6	4	10	3	2						2		47
button			1		1	1		1	2								6
clam	1	29	11	7	28	3	9	3	22			2				1	116
fish							2										2
glass	2	27	5	2	24	5	20		27	1	2	4	2				121
bone		24	5	19	25		54	47	19	4	1						198
metal		39	4	11	29		6	5	62	1				1	2		160
oyster	4	50	23	18	53	12	108	183	42		3				9	2	507
pin									7								7
pipe		8	1		7	4	15		12								47
plaster	17				2	4	7	10	151	4							195
ring		1															1
sherd	3	47	9	12	42	4	18	9	23			2		2	3	1	175
stone								2	2								4
tile	8																8
unident		8			39										1		48
wood					1												1
TOTAL	44	244	59	69	257	37	249	263	371	10	6	8	2	3	17	4	1,643

Prepared by: Grossman and Associates, Inc. 1989

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Table 3: Relative artifact distribution by major stratigraphic groups

Material	bone	ceramic	clay	coal	glass	kaolin	metal	rubble	shell	stone	teeth
Early 19th C. Fill Deposits	73	121	26	5	60	16	85	19	224		1
Late 18th C,. Destruction Debris	18	27	6		32	16	70	155	79	2	3
Mid 18th C. Occupation	104	27	13		21	15	12	21	303	2	4

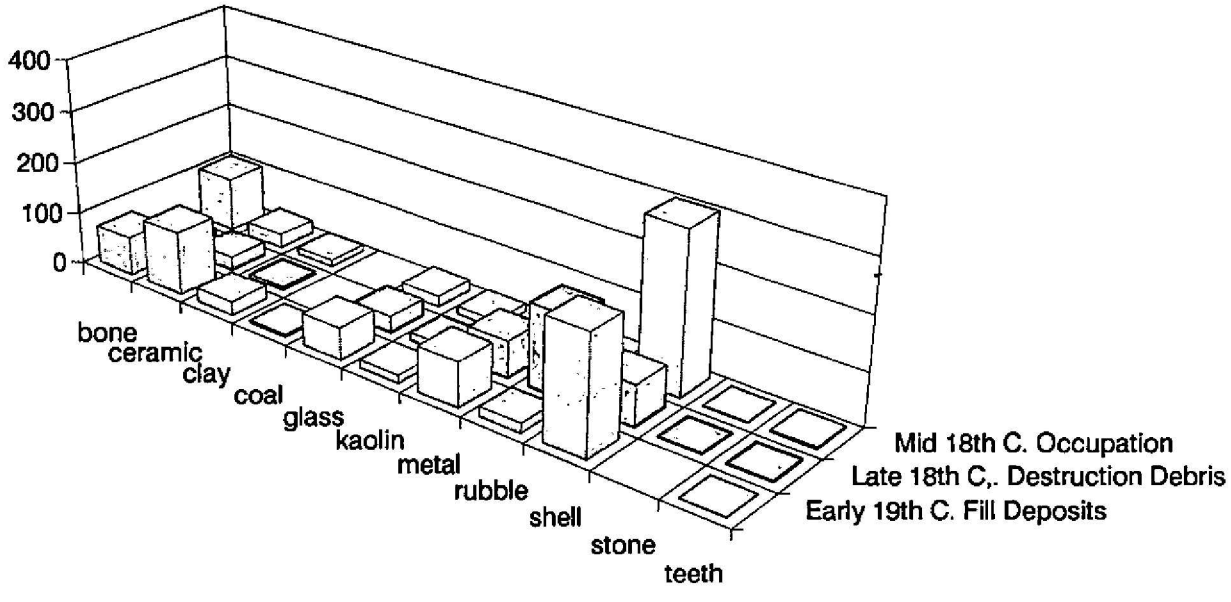

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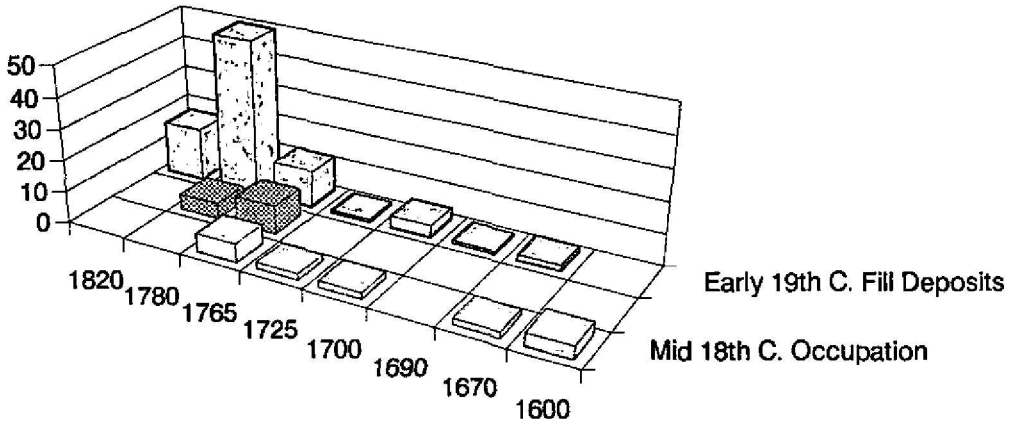
Table 4: Relative counts and time span of datable artifacts by major stratigraphic groups

TPQ	1600	1670	1690	1700	1725	1765	1780	1820
Early 19th C. Fill Deposits		2	1	4	1	12	50	17
Late 18th C. Destruction Debris						9	5	
Mid 18th C. Occupation	4	2		2	2	6		



VI. CONCLUSION

In addition to addressing the specific mandates of the Scope of Services, controlled test excavations by the Grossman and Associates team conducted March-April 1989, documented the presence of a detailed, 5 foot deep stratigraphic record of high integrity, buried 18th and 19th century deposits and 18th century structural remains, beginning immediately below the black top and cement which forms the modern surface. Beneath this modern cap, the excavations revealed the presence of several episodes of late 18th and 19th century fill over a thin lens of silt, which separated and capped the original, underlying, 18th century colonial surface at ca. 18 inches below modern grade.

Cutting into this buried colonial surface and extending to between four and five feet below the asphalt cover, the excavations documented the presence of a builders' trench, a stone foundation wall, and what appears to represent the brick-rubble-filled basement of an early 18th century structure.

The combined cartographic, archival and archaeological evidence indicates that the excavated colonial building may be New York City's original colonial Almshouse. Firstly, the location of the excavated building corresponds with the general location of the original Almshouse indicated on historic 18th century maps. Secondly, the timeframe of the excavated building, which based on dated artifacts was built after 1720 and destroyed after 1780, corresponds with the documented occupation phase of the original Almshouse (1736-1797). And finally, several artifacts were recovered during the excavation which functionally matched early historical accounts of craft activity conducted by the Almshouse's indigent inhabitants.

In addition to documenting the presence of these previously unidentified 18th century structural remains, this initial archaeological presence or absence testing investigation, conducted in 1989, has made four key discoveries pertinent to defining the archaeological sensitivity of this and other areas of City Hall Park.

- 1) The original colonial surface and associated 18th century archaeological features lie preserved and undisturbed, in areas, only 18 inches below the most recent surface pavement of City Hall Park.
- 2) The identified 18th century structural remains lie buried and sealed, beneath and cutting through this colonial surface to a depth of up to 5 feet.
- 3) This buried colonial surface and the associated 18th century building remains are overlaid and capped by several deposits of late 18th and 19th century historic fill, possibly deriving from deep basement construction associated with the ca.1812 building of City Hall or the 1861-67 construction of the Tweed Courthouse.

- 4) Based on the discovery of a post-1765 refuse pit cutting the original 18th century surface, the possibility exists that comparable 18th century refuse pits, or other near-surface, intrusive, historic pit features also cutting this buried colonial surface, lie preserved and relatively undisturbed throughout other areas of the park.

In sum, this well-preserved archaeological record not only augments the written historic record but also represents a sequence of archaeological deposits distinguished by a high level of stratigraphic integrity, preservation, and research potential for understanding the colonial history of New York City.

Plate 1. Field view looking southeast, showing location of portable shelter in the immediate vicinity of City Hall Building.

Plate 2. Closeup field view showing location of excavation units delimited by police barricades and protected by portable shelter. City Hall Building in background.

Plate 3. General view of excavation unit looking south showing stratification of archaeological deposits below street pavement, and quartersectioned intrusive 19th century post-hole Feat. 5006 (left); foundation fill Feat. 5004 (center).

Plate 4. Field view showing quartersectioned intrusive 19th. century post hole, Feature 5006.

Plate 5. Field view showing contents and stratigraphic relations of a 19th century Feature (5002) to the surrounding matrices. Feat. 5002, a refuse pit (containing over 160 large oyster shells, bone, ceramic sherds, glass and pipe fragments) is intrusive and post-dates the natural deposits of Cx. 1.16 as well as the builder's trench, Feat. 5001.

Plate 6. A closeup view of the brick rubble fill, Feat. 5004, showing portions of the proximal third half of a human ulna and a clam shell imbedded in the ruble fill (left of center).

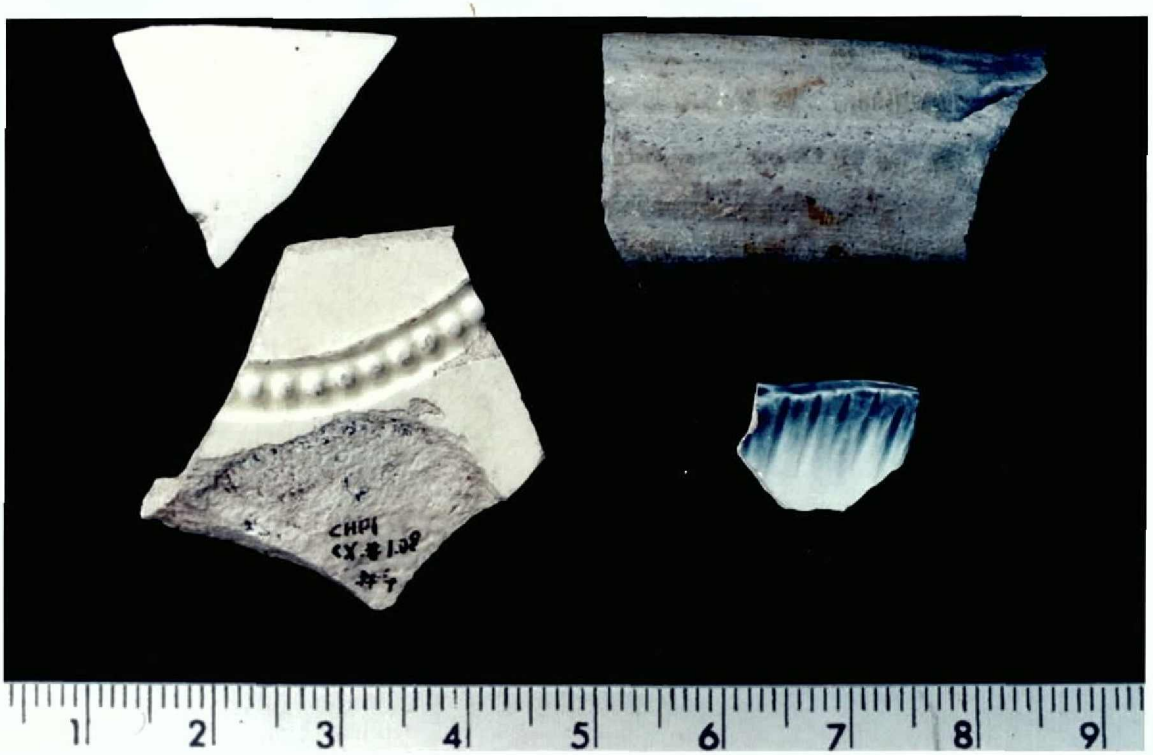


Plate 7. **Top left**: Feat. 5001 (builder's trench). English white salt-glazed stoneware (1720-1805). **Top Right:** Feat. 5001 (builder's trench). German gray salt-glazed stoneware "Westerward" type handle with cobalt blue decoration (1700-1775). **Bottom left:** Cx. 1.08 Creamware basal fragment (1762-1820). **Bottom right:** Auger Hole 2. blue shell-edged pearlware rim fragment (1780-1830).

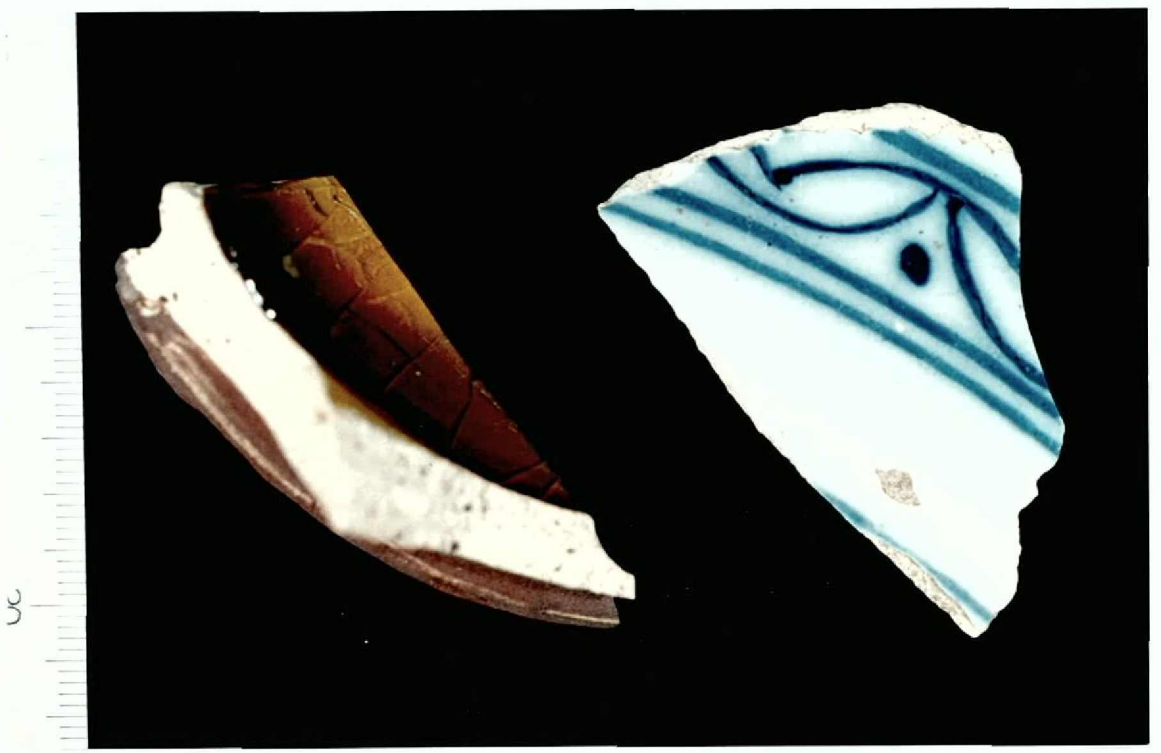


Plate 8. **Left:** Feat. 5001 (builder's trench VII) English buff bodied slipware (1670-1795). **Right:** Decorated tin-glazed buff-bodied earthenware (1600-1805)

Plate 9. **Top left:** Feat. 5003 (charcoal lens) pipe bowl Fragment, Robert Tippet Factory (English manufacture: 1740-1780, Stone 1974: 148-149). **Top Right:** Feat.5001 (builder's trench) Decorated pipe bowl fragment, upside down, no date.
Bottom row: Feat. 5001 (builder's trench) Various pipe stems, *center stem decorated.*

Plate 10. Feat. 5004, (brick rubble/fill) "Pie Crust" rim fragment of English buff-bodied, slip-trailed earthenware. Probable third quarter of 18th century, (Noël Hume 1985: 107).

Plate 11. Iron key from post-destruction rubble of Feat 5004, in the fill of building interior, deposited in third quarter of 18th century.

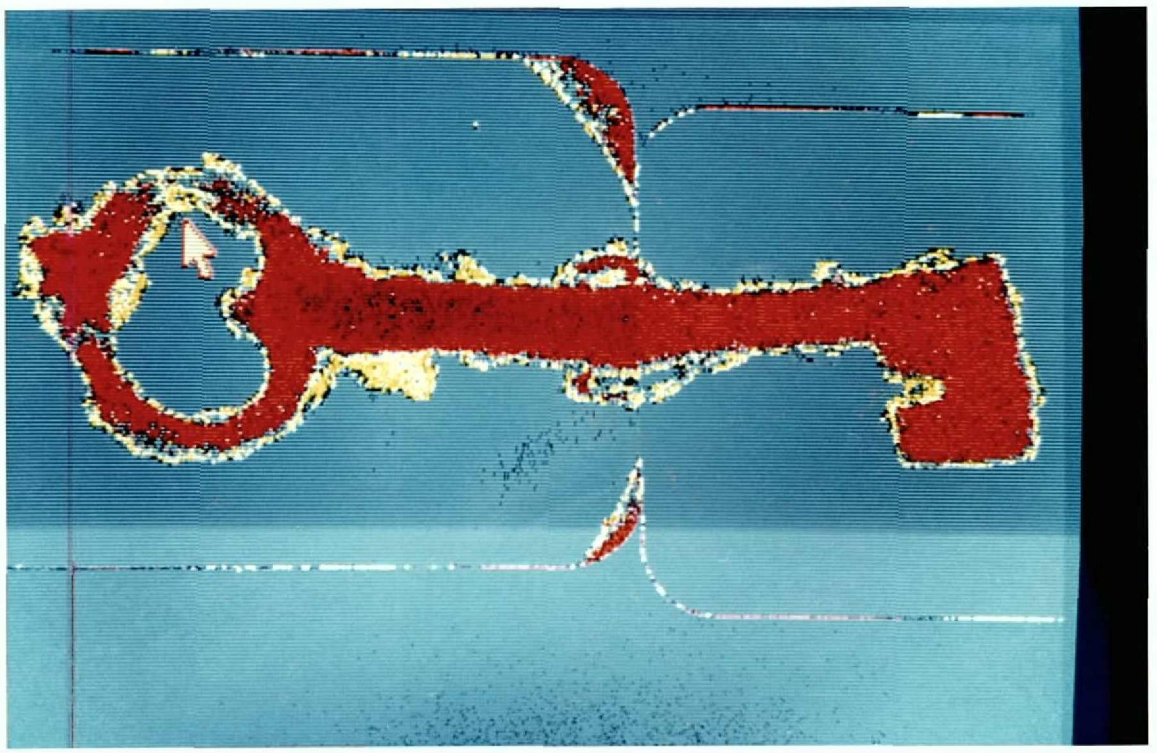


Plate 12. Computer generated false-color enhancement of X-Ray image of 18th century iron key, found with post-destruction rubble in interior of the Almshouse, in City Hall Park (Feature 5004). Red defines unoxidated interior metal. (X-Ray courtesy of Dr. W. Heilbut; excavation and image processing by Grossman and Associates. March 1989).

Plate 13. Cx. 1.19 (brick rubble/fill). Unidentified lead object, possible weight.

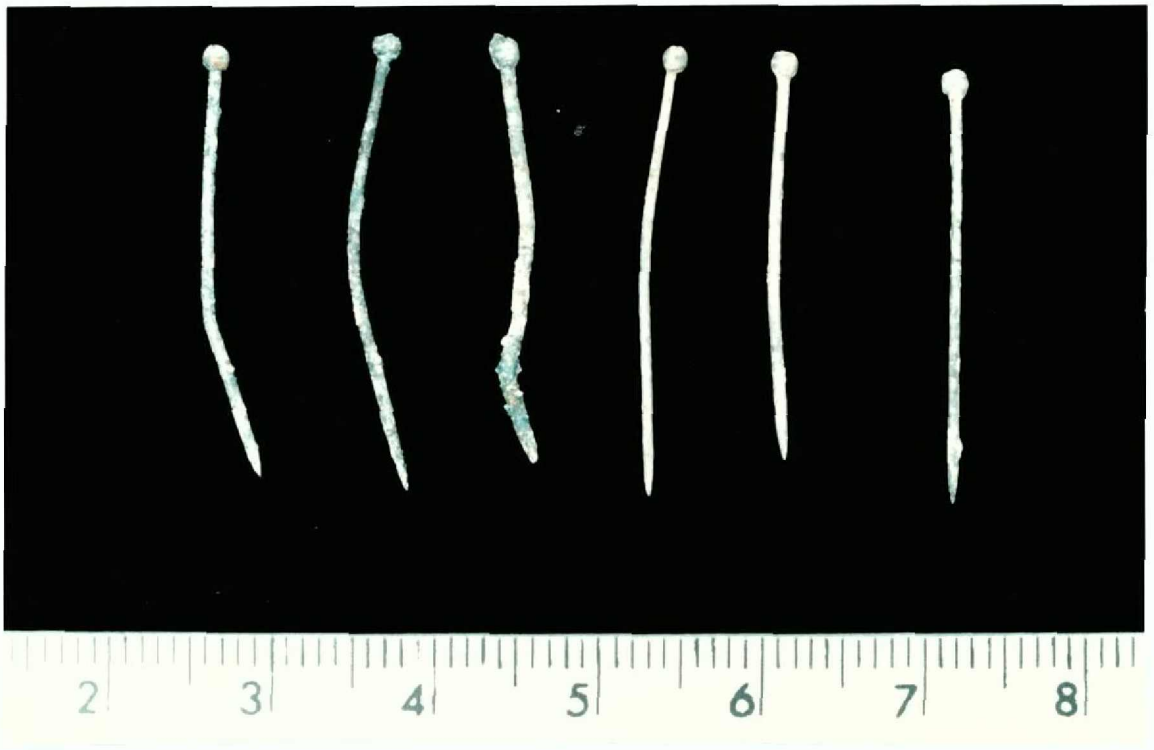


Plate 14. Feat. 5004 (brick rubble/fill). Copper alloy straight pins, probably brass, possibly originally tin-plated (Noël Hume 1985: 254), no date.

Plate 15. **Bottom row:** Feat. 5004 (brick rubble/fill). Bone button blank, no date. **Top row:** Bone button blanks.

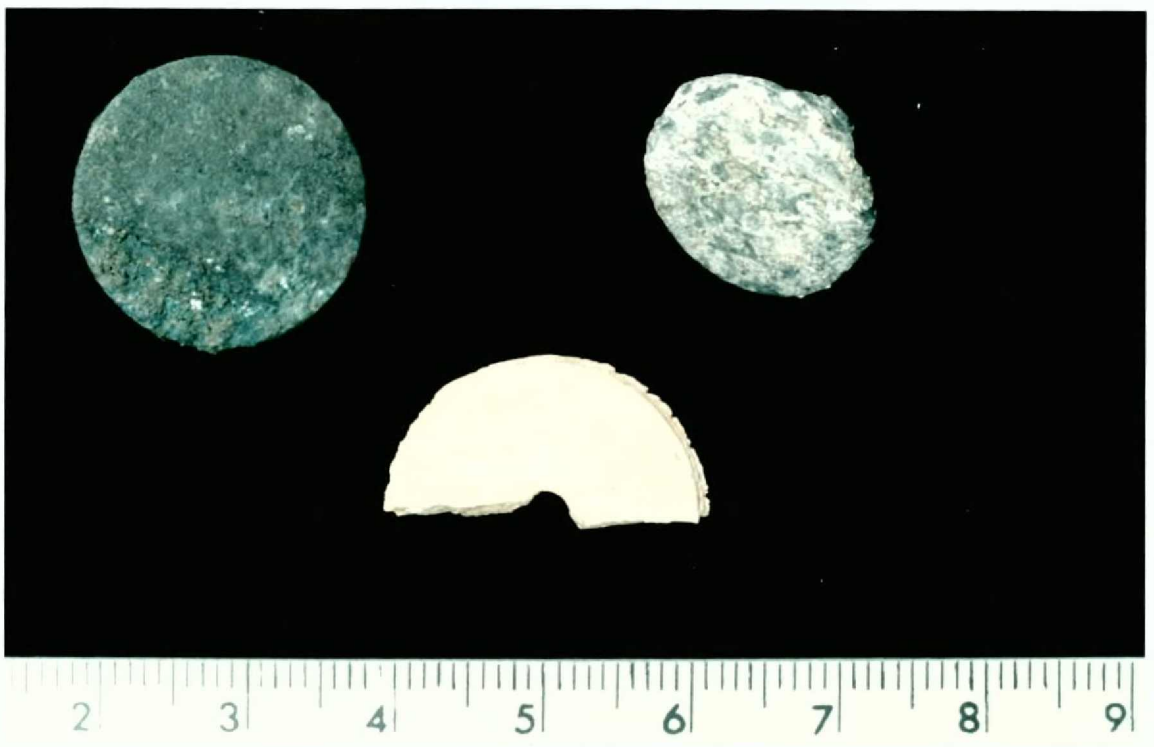


Plate 16. **Upper Left:** (Cx. 1.10 IIIb) South button type 7, copper Alloy (brass?), spun back, 18th century, continuing into 19th century (Noël Hume 1985: 90-92). **Upper right:** Feat 5004 (brick rubble/fill) South button type 11, one piece cast white metal with mold seam (18th century continuing into 19th century (Noël Hume 1985: 90-92). **Lower center:** Feat 5002 (oyster trash pit) bone button back with off-set rim, no date.

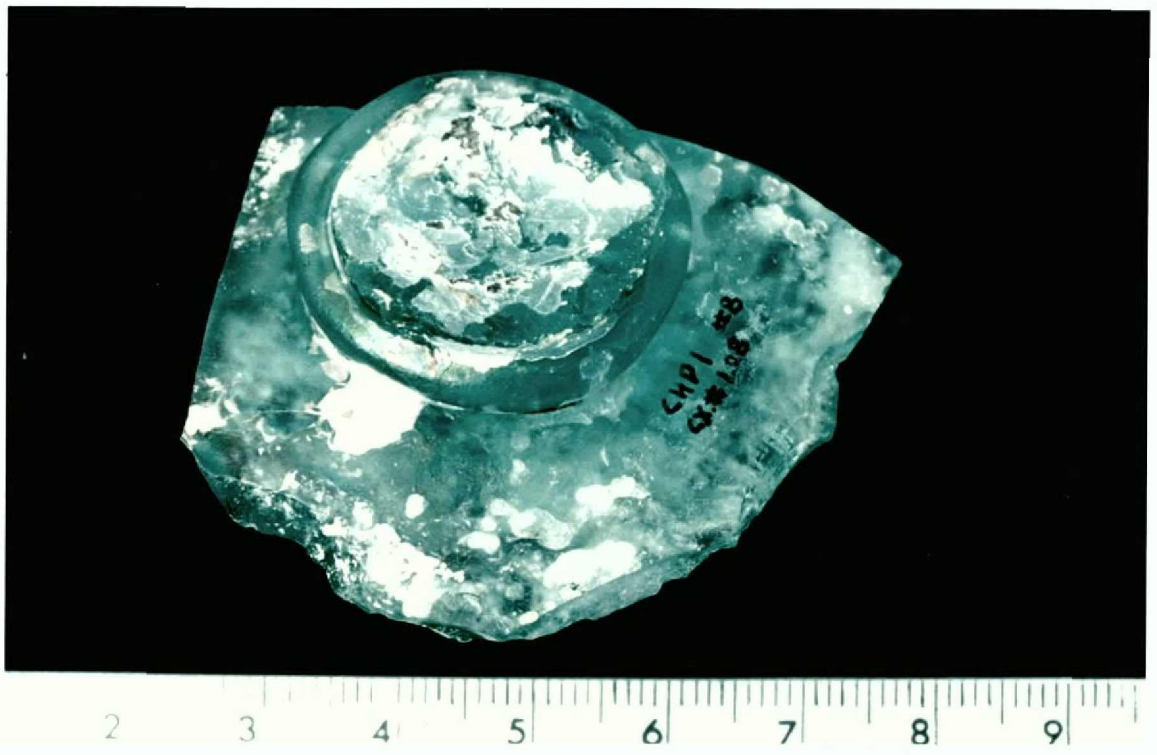


Plate 17. Cx. 1.08, Strata Group IIIa. Pontil scar or "bull's eye" from crown glass, found with mid-late 19th century deposits immediately below cement and black top pavement (Noël Hume 1985: 234).

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APPENDIX: ARTIFACT INVENTORY

Artifact Inventory

Comp	Cx.	Feat.	Period	Count	Weight	Material	Class	Tech	Type	Element	TPQ	Comments
AH 1			H	2		glass	glass		window		N/E	1 clear 1 pale green
AH 1				1	2.0	bone	mammal		N/A	frag	N/E	
AH 1				3	48.0	shell	oyster		N/A	frag	N/E	
AH 2				2	12.0	shell	clam		N/A	frag	N/E	
AH 2			H	1		glass	glass		bottle	base	N/E	olive
AH 2			H	3		glass	glass		curved		N/E	clean
AH 2			H	1		ceramic	sherd		pearlware	rim	1785	item 5
AH 2			H	1		porcelain	sherd		soft paste	body	N/E	
AH 3			H	2		glass	glass		curved		N/E	green
AH 4			H	1		metal	metal		unident		N/E	
AH 4			H	1		ceramic	sherd		creamware	body	1765	
AH 4			H	1		ceramic	sherd		earthenware	body	N/E	red
AH 5			H	2		clay	brick		N/A	frag	N/E	
AH 5			H	1		metal	metal		iron nail		N/E	
AH 5			H	1		metal	metal		unident		N/E	
AH 5				9	21.0	shell	oyster		N/A	frag	N/E	
AH 5			H	1		ceramic	sherd		stoneware	body	1725	white
AH 5			H	2		ceramic	sherd		pearlware	body	1780	1 w\blue handpainted decor
AH 5				1		unident	unident		unident		N/E	seed ?
AH 6				1	8.0	shell	clam		N/A	frag	N/E	
AH 6				2	8.0	shell	oyster		N/A	frag	N/E	
AH 6			H	1		ceramic	sherd		earthenware	body	N/E	red, yellow trailed slip decor
II	1.06		H	9		clay	brick		N/A	frag	N/E	
II	1.06		H	1	1.0	shell	clam		N/A	frag	N/E	
II	1.06		H	2		glass	glass		window		N/E	pale green
II	1.06		H	4	6.0	shell	oyster		N/A	frag	N/E	
II	1.06		H	1		plaster	plaster		cement	frag	N/E	
II	1.06		H	16		plaster	plaster		unident	frag	N/E	

Artifact Inventory

Comp	Cx.	Feat.	Period	Count	Weight	Material	Class	Tech	Type	Element	TPQ	Comments
II	1.06		H	1		ceramic	sherd		pearlware	body	1780	
II	1.06		H	2		ceramic	sherd		creamware	body	1765	
II	1.06		H	8		ceramic	tile		N/A	frag	N/E	
IIIb		5006		1	70.0	shell	clam		N/A	whole	N/E	
IIIb		5006		10	9.0	shell	oyster		N/A	frag	N/E	
IIIa	1.07			5		clay	brick		N/A	frag	N/E	
IIIa	1.07		H	4		glass	glass		window		N/E	pale green
IIIa	1.07			1		metal	metal		iron nail		N/E	
IIIa	1.07			12		bone	mammal		N/A	frag	N/E	
IIIa	1.07		H	1		ceramic	sherd		earthenware	body	N/E	buff
IIIa	1.07			5		coal	unident		N/A	frag	N/E	
IIIa	1.08			6		clay	brick		N/A	frag	N/E	
IIIa	1.08			29	120.0	shell	clam		N/A	frag	N/E	
IIIa	1.08		H	1		glass	glass		bead		N/E	item 7
IIIa	1.08		H	1		glass	glass		bottle	base	N/E	item 8
IIIa	1.08		H	2		glass	glass		molded		N/E	join pale green
IIIa	1.08		H	7		glass	glass		curved	body	N/E	
IIIa	1.08		H	12		glass	glass		window		N/E	5 clear 7 pale green
IIIa	1.08		H	8		metal	metal		unident		N/E	
IIIa	1.08		H	30		metal	metal		iron nail		N/E	
IIIa	1.08			12	16.0	bone	mammal		N/A	frag	N/E	
IIIa	1.08			50	106.0	shell	oyster		N/A	frag	N/E	
IIIa	1.08		H	8		kaolin	pipe		N/A	stem	N/E	
IIIa	1.08			1		metal	ring		N/A	frag	N/E	
IIIa	1.08		H	1		ceramic	sherd		creamware	base	1765	
IIIa	1.08		H	1		ceramic	sherd		earthenware	rim	N/E	buff
IIIa	1.08		H	1		ceramic	sherd		pearlware	rim	1780	
IIIa	1.08		H	1		ceramic	sherd		unident	body	N/E	
IIIa	1.08		H	1		ceramic	sherd	saltglazed	stoneware	body	1690	gray, brithish brown

Artifact Inventory

Comp	Cx.	Feat.	Period	Count	Weight	Material	Class	Tech	Type	Element	TPQ	Comments
IV	1.11			18	24.0	shell	oyster		N/A	frag	N/E	
IV	1.11		H	1		ceramic	sherd		earthenware	body	1670	buff
IV	1.11		H	1		ceramic	sherd		pearlware	rim	1780	blue transfered print
IV	1.11		H	1		ceramic	sherd		stoneware		1700	gray
IV	1.11		H	4		ceramic	sherd		pearlware	body	1780	
IV	1.11		H	5		ceramic	sherd		pearlware	base	1780	
IX		5002		3		clay	brick		N/A	frag	N/E	
IX		5002	H	1	1.0	bone	button		N/A	frag	N/E	
IX		5002		3	20.0	shell	clam		N/A	frag	N/E	
IX		5002	H	4		metal	metal		metal nail		N/E	
IX		5002		1	25.0	bone	mammal		N/A	tooth	N/E	
IX		5002		16	3.0	bone	mammal		N/A	whole	N/E	
IX		5002		30	138.0	bone	mammal		N/A	frag	N/E	
IX		5002	H	1		metal	metal		N/A		N/E	
IX		5002		65	233.0	shell	oyster		N/A	frag	N/E	
IX		5002		118	16251.0	shell	oyster		N/A	whole	N/E	max length 21.5 cm
IX		5002		10		plaster	plaster		unident		N/E	
IX		5002	H	1		ceramic	sherd		creamware	rim	1765	
IX		5002	H	1		ceramic	sherd		earthenware	body	N/E	red, item 3 x mends w/5001
IX		5002	H	1		ceramic	sherd	saltglazed	stoneware	body	N/E	gray
IX		5002	H	2		ceramic	sherd		creamware	base	1765	
IX		5002	H	2		ceramic	sherd		creamware	body	1765	
IX		5002	H	2		ceramic	sherd		earthenware	body	N/E	red
IX		5002	H	2		stone	stone		kiln	frag	N/E	
V		5003		3	14.0	shell	clam		N/A	frag	N/E	
V		5003	H	1		glass	glass		curved		N/E	
V		5003	H	3		glass	glass		window		N/E	
V		5003	H	1		metal	metal		iron nail		N/E	
V		5003		4	27.0	bone	mammal		N/A	frag	N/E	

Artifact Inventory

Comp	Cx.	Feat.	Period	Count	Weight	Material	Class	Tech	Type	Element	TPQ	Comments
V		5003		16	127.0	shell	oyster		N/A	frag	N/E	
V		5003	H	1		kaolin	pipe		N/A	bowl	N/E	
V		5003	H	2		plaster	plaster		unident		N/E	
V		5003	H	1		ceramic	sherd		creamware	body	N/E	
V		5003	H	1		ceramic	sherd		earthware	body	N/E	
V		5003	H	1	1.0	organic	wood		unident		N/E	
V	1.12		H	4		clay	brick		N/A	frag	N/E	
V	1.12			23		shell	clam		N/A	frag	N/E	
V	1.12		H	3		glass	glass		curved		N/E	2 clear 1 green
V	1.12		H	17		glass	glass		window		N/E	2 clear 15 pale green
V	1.12		H	4		metal	metal		iron		N/E	
V	1.12		H	18		metal	metal		iron nail		N/E	
V	1.12			1		bone	mammal		N/A		N/E	teeth
V	1.12			20		bone	mammal		N/A	frag	N/E	
V	1.12			32		shell	oyster		N/A	frag	N/E	
V	1.12		H	1		kaolin	pipe		N/A	bowl	N/E	
V	1.12		H	5		kaolin	pipe		N/A	stem	N/E	
V	1.12		H	1		ceramic	sherd		earthenware	body	1670	buff
V	1.12		H	1		ceramic	sherd		earthenware	rim	N/E	red
V	1.12		H	1		ceramic	sherd		pearlware	body	1780	
V	1.12		H	1		ceramic	sherd		pearlware	body	1780	
V	1.12		H	1		ceramic	sherd	saltglazed	stoneware	base	1725	white
V	1.12		H	1		porcelain	sherd		soft paste	body	N/E	
V	1.12		H	2		ceramic	sherd		earthenware	body	N/E	red
V	1.12		H	2		ceramic	sherd	saltglazed	stoneware	body	N/E	gray
V	1.12		H	3		ceramic	sherd		creamware	body	1765	
V	1.12		H	3		ceramic	sherd		pearlware	body	1780	underglaze handpainted
V	1.12		H	3		ceramic	sherd		unident	body	N/E	
V	1.12		H	4		ceramic	sherd		creamware	base	1765	

Artifact Inventory

Comp	Cx.	Feat.	Period	Count	Weight	Material	Class	Tech	Type	Element	TPQ	Comments
V	1.12		H	4		ceramic	sherd		pearlware	body	1780	blue transfered print
V	1.12		H	10		ceramic	sherd		pearlware	body	1780	
V	1.12			39		unident	unident	burned	unident		N/E	above burn layer
V	1.13		H	2		clay	brick		N/A	frag	N/E	
V	1.13		H	1	1.0	bone	button	blank	N/A		N/E	
V	1.13			2	1.0	shell	clam		N/A	frag	N/E	
V	1.13		H	6		metal	metal		iron nail		N/E	
V	1.13			5	3.0	shell	oyster		N/A	frag	N/E	
V	1.13		H	1		ceramic	sherd		pearlware	body	1780	blue transfer paint
V	1.13		H	2		ceramic	sherd		pearlware	body	1780	
VI	1.14		H	4		clay	brick		N/A	frag	N/E	
VI	1.14			1	1.0	bone	button		N/A		N/E	
VI	1.14			3	18.0	shell	clam		N/A	frag	N/E	
VI	1.14		H	5		glass	glass		window		N/E	pale green
VI	1.14			12	22.0	shell	oyster		N/A	frag	N/E	
VI	1.14		H	2		kaolin	pipe		N/A	bowl	N/E	1 w\rouletting
VI	1.14		H	2		kaolin	pipe		N/A	stem	N/E	
VI	1.14			4	1.0	plaster	plaster		interior		N/E	
VI	1.14		H	1		ceramic	sherd		earthenware	body	N/E	buff
VI	1.14		H	1		ceramic	sherd		pearlware	body	1780	
VI	1.14		H	2		ceramic	sherd		earthenware	body	N/E	red
VII		5001	H	10		clay	brick		N/A	frag	N/E	
VII		5001		3	18.0	shell	clam		N/A	frag	N/E	
VII		5001		6	60.0	shell	clam		N/A	frag	N/E	
VII		5001		2	.5	bone	fish		N/A	vertebra	N/E	
VII		5001	H	6		glass	glass		curved		N/E	1 clear 1 palegreen 4 amber
VII		5001	H	14		glass	glass		window		N/E	pale green
VII		5001	H	1		metal	metal		unident		N/E	
VII		5001	H	4		metal	metal		iron nail		N/E	

Artifact Inventory

Comp	Cx.	Feat.	Period	Count	Weight	Material	Class	Tech	Type	Element	TPQ	Comments
VII		5001		1		bone	mammal		N/A		N/E	teeth
VII		5001		2	2.0	bone	mammal		N/A		N/E	teeth
VII		5001		9	27.0	bone	mammal		N/A	frag	N/E	
VII		5001		42	51.0	bone	mammal		N/A	frag	N/E	
VII		5001	H	1		metal	metal		N/A		N/E	
VII		5001		15	22.0	shell	oyster		N/A	frag	N/E	
VII		5001		93	256.0	shell	oyster		N/A	frag	N/E	
VII		5001	H	1		kaolin	pipe		N/A	stem	N/E	
VII		5001	H	4		kaolin	pipe		N/A	bowl	N/E	1 decorated
VII		5001	H	10		kaolin	pipe		N/A	stem	N/E	
VII		5001		7	5.0	plaster	plaster		interior		N/E	
VII		5001	H	1		ceramic	sherd		creamware	body	1765	intrusion ?
VII		5001	H	1		ceramic	sherd		earthenware	body	N/E	buff
VII		5001	H	1		ceramic	sherd		earthenware	rim	N/E	red
VII		5001	H	1		ceramic	sherd		stoneware	body	1725	white
VII		5001	H	1		ceramic	sherd		stoneware	body	1725	white, item 1
VII		5001	H	1		ceramic	sherd		stoneware	handle	1700	white, item 2
VII		5001	H	1		ceramic	sherd		unident	body	N/E	
VII		5001	H	1		ceramic	sherd	saltglazed	stoneware	body	1700	gray
VII		5001	H	1		ceramic	sherd	saltglazed	stoneware	body	N/E	gray
VII		5001	H	1		ceramic	sherd	saltglazed	stoneware	rim	N/E	gray
VII		5001	H	2		ceramic	sherd		earthenware	body	1670	buff
VII		5001	H	2		ceramic	sherd		earthenware	body	N/E	red, item 3 x mends w/5002
VII		5001	H	4		ceramic	sherd	tinglazed	earthenware	body	1600	buff
X	1.19	5004		1		clay	brick		N/A		N/E	
X	1.19	5004	H	1		clay	brick		N/A	frag	N/E	
X	1.19	5004		1	1.0	bone	button	blank	N/A		N/E	item 13
X	1.19	5004	H	1		metal	button		N/A		N/E	item 12
X	1.19	5004		2	2.0	shell	clam		N/A	frag	N/E	

Artifact Inventory

Comp	Cx.	feat.	Period	Count	Weight	Material	Class	Tech	Type	Element	TPQ	Comments
X	1.19	5004		4	105.0	shell	clam		N/A	frag	N/E	
X	1.19	5004		16	201.0	shell	clam		N/A	frag	N/E	
X	1.19	5004	H	1		glass	glass		bottle	base	N/E	olive
X	1.19	5004	H	3		glass	glass		curved		N/E	
X	1.19	5004	H	4		glass	glass		curved		N/E	3 pale green 1 amber
X	1.19	5004	H	9		glass	glass		window		N/E	
X	1.19	5004	H	10		glass	glass		window		N/E	9 pale green 1 amber
X	1.19	5004		1		metal	metal		hinge		N/E	item 14
X	1.19	5004		1		metal	metal		unident		N/E	
X	1.19	5004		25		metal	metal		iron nail		N/E	
X	1.19	5004	H	1		metal	metal		key		N/E	item 10
X	1.19	5004	H	1		metal	metal		iron nail		N/E	lead? twisted
X	1.19	5004	H	3		metal	metal		unident		N/E	
X	1.19	5004	H	29		metal	metal		iron nail		N/E	
X	1.19	5004	H	1		metal	metal		unident		N/E	
X	1.19	5004		3	2.0	bone	mammal		N/A		N/E	teeth
X	1.19	5004		3	4.0	bone	mammal		N/A	frag	N/E	
X	1.19	5004		3	24.0	bone	mammal		N/A		N/E	
X	1.19	5004		10	112.0	bone	mammal		N/A		N/E	
X	1.19	5004		9	13.0	shell	oyster		N/A	frag	N/E	
X	1.19	5004		15	110.0	shell	oyster		N/A	frag	N/E	
X	1.19	5004		18	110.0	shell	oyster		N/A	frag	N/E	
X	1.19	5004		1		metal	pin		N/A		N/E	
X	1.19	5004	H	6		metal	pin		N/A		N/E	item 11
X	1.19	5004	H	1		kaolin	pipe		N/A	stem	N/E	
X	1.19	5004	H	1		kaolin	pipe		N/A	stem	N/E	
X	1.19	5004	H	2		kaolin	pipe		N/A	bowl	N/E	
X	1.19	5004	H	8		kaolin	pipe		N/A	stem	N/E	
X	1.19	5004		10		plaster	plaster		interior		N/E	

Artifact Inventory

Comp	Cx.	Feat.	Period	Count	Weight	Material	Class	Tech	Type	Element	TPQ	Comments
X	1.19	5004		62		plaster	plaster		rubble fil		N/E	
X	1.19	5004		79	179.0	plaster	plaster		interior		N/E	
X	1.19	5004	H	1		ceramic	sherd		creamware	rim	1765	
X	1.19	5004	H	1		ceramic	sherd		creamware	rim	1765	mends w\body
X	1.19	5004	H	1		ceramic	sherd		earthenware	base	N/E	buff
X	1.19	5004	H	1		ceramic	sherd		earthenware	body	N/E	buff
X	1.19	5004	H	1		ceramic	sherd		earthenware	body	N/E	red
X	1.19	5004	H	1		ceramic	sherd		pearlware	base	1780	
X	1.19	5004	H	1		ceramic	sherd		unident	body	N/E	
X	1.19	5004	H	1		ceramic	sherd	saltglazed	stoneware	body	N/E	gray
X	1.19	5004	H	1		ceramic	sherd	saltglazed	stoneware	body	N/E	gray
X	1.19	5004	H	2		ceramic	sherd		earthenware	body	N/E	red
X	1.19	5004	H	2		ceramic	sherd	saltglazed	stoneware	rim	N/E	gray, cobalt blue on exterior
X	1.19	5004	H	3		ceramic	sherd		creamware	body	1765	
X	1.19	5004	H	3		ceramic	sherd		pearlware	body	1780	1 with blue handpaint decor
X	1.19	5004	H	4		ceramic	sherd		creamware	body	1765	mends w\rim
X	1.19	5004		2		stone	stone		unident		N/E	large biface
XI	1.18			4	2.0	plaster	plaster		interior		N/E	
XI	1.20		H	1		glass	glass		window		N/E	pale green
XI	1.20		H	1		metal	metal		iron nail		N/E	
XI	1.20			4	98.0	bone	mammal		N/A	frag	N/E	