

# City Hall Rehabilitation Archaeology Project 2010-2011 Volume 1

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Prepared for: Mayor's Fund to Advance New York City

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# City Hall Rehabilitation - Archaeology Project 2010-2011

*Prepared for:*

Mayor's Fund to Advance New York City  
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The City of New York - Landmarks Preservation Commission  
New York, New York

The City of New York – Department of Design and Construction  
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The City of New York – Department of Parks and Recreation  
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## I – INTRODUCTION

The City Hall Rehabilitation Project (2010–2012) was undertaken to upgrade the 200-year-old City Hall. Built from 1803–1811, the building was in need of infrastructural and structural upgrades. City Hall and City Hall Park are listed on the National and State Registers of Historic Places (and structures). New York’s City Hall, Block 122, Lot 01, is located in lower Manhattan within City Hall Park, bordered by Chambers Street to the north, Park Row to the south, Centre Street and Park Row to the east, and Broadway to the west (Map 1.01). It is located within the African Burial Ground and the Commons Historic District, part of New York City’s first—and only—archaeological district.

Beyer Blinder Belle, Architects & Planners LLP (BBB) retained Chrysalis Archaeological Consultants, Inc. (Chrysalis) on behalf of the New York City Department of Design and Construction (DDC) in January 2009 to undertake all cultural resource management (CRM)/archaeological tasks associated with the City Hall Rehabilitation Project. Initially, that meant acting in an advisory capacity during the design and planning phase of the project. In consideration of the scale of the project, Chrysalis teamed with URS Corporation’s Archaeology and Historic Architecture Group (URS), located in Burlington, New Jersey, for the excavation and analysis phase of the project.

The archaeological team consisted of archaeologists from Chrysalis and URS. All key personnel satisfy the qualifications specified in 36 CFR 61, Appendix A.

### THE ARCHAEOLOGY

Due to its landmark status, the City of New York – Landmarks Preservation Commission (LPC) maintains direct supervision over all site activities, including archaeology. Any subsurface work requires permit approval from LPC prior to the commencement of activity.

Throughout the project, all cultural resources work was conducted in accordance with the LPC’s 2002 *Guidelines for Archaeological Work in New York City*; the National Historic Preservation Act of 1966, as amended; the Advisory Council on Historic Preservation’s “Protection of Historic and Cultural Properties” (36 CFR 800); and the New York Archaeological Council’s 1994 *Standards for Cultural Resources Investigations and the Curation of Archaeological Collections in New York State*, as amended, adopted by the New York State Office of Parks, Recreation and Historic Preservation (NY SHPO).

The majority of excavation work was subject to archaeological monitoring or testing. All areas not slated for monitoring or testing were subject to the Unanticipated Discoveries Plan.

Archaeological monitoring and testing occurred from June 2010 through December 2010, April to May 2011, and in September 2011. Over the course of the project, 42 features were documented (Table 7.01) and over 40,000 artifacts and faunal remains, as well as human remains, were recovered.



Map 1.01: City Hall Park, Google Earth 2012

As with many urban CRM projects, there were several constraints placed upon the archaeological process that dictated both the field work and the laboratory analysis. These constraints ultimately shaped the form and content of this report. Due to the various constraints, the archaeological team had to prioritize the laboratory analysis and research. Budgetary constraints limited the artifact and faunal analysis. Though all contexts received basic analysis, key contexts were selected for in-depth interpretative analysis.

#### SIGNIFICANCE AND QUESTIONS

It is not uncommon for archaeological projects to formulate research questions prior to excavation. Doing so, in theory, guides the excavation. However, it has been our experience that in a construction-guided archaeological project, this may be impractical and should be cautioned against so as not to bias (in-field) interpretations.

The historical significance of City Hall Park is well-established. Several groups have utilized the property at different times and concurrently; archaeologists would hope to add to the documentation and history of these groups. Yet caution must be exercised in making preconceived determinations or associations with a specific group(s) or the time period. In essence, the site and collection must speak for itself, and the materials themselves direct the questions to be asked. Four key questions, two of which are interrelated, came to the forefront during the excavation and analysis of the City Hall project archaeological remains.

1. Excavation recovered the quantifiably largest midden deposit excavated to date within City Hall Park—Feature 28. This midden deposit has a tight date range and was a short-term deposition. What is the nature of this deposit? Who created this deposit? Was there a singular event that precipitated this deposit? Is it quantifiably comparable to other large deposits found during previous excavation projects?
2. Unexpected excavations in the basement of City Hall exposed what appeared to be an eighteenth-century cultural deposit. This finding raised questions regarding the nature of the deposit, as during the eighteenth century, this area was within the footprint of the almshouse. Could these materials be associated with the almshouse? If so, what can we learn from an analysis of these materials? What is the relation of the construction of City Hall to this deposit? How might it have survived the construction of City Hall (raising questions about how City Hall itself was constructed)?
3. The landscape and its development (or evolution) was a paramount theme in our interpretation and understanding of the archaeology. Several individual questions are related to this theme of landscape and environment. Some of the questions raised are: What was the original water table? Why is the modern water table at 50' below ground surface? What are the differences in grade between the eighteenth and twentieth centuries? What is the chronology of development of City Hall and its immediately surrounding area? Can we formulate a perspective of the historic landscape?

4. Excavation in the west field exposed and documented a small section of the Bridewell foundation wall, as well as a small portion of a primary interior deposit. This was the first time a structural feature has been definitively associated with an eighteenth-century structure within City Hall Park. What can we learn from this discovery and does it alter any previously held beliefs about the Bridewell?

Other general questions fostered by this excavation focus on the architectural history of City Hall and the question of who were the workers that constructed City Hall. Over 200+ years, this property has been used, developed, and redeveloped. The one constant has been the boundary of this triangular plot of land.

## **THE REPORT**

This report, documenting the 2010–2011 archaeological project, is divided into 13 chapters. A limited budget required focusing the research and contents of the report. Beyond this introduction, Chapter II details the unconventional and evolving nature of the project. Chapter III very briefly reviews previous CRM projects that have occurred on site since the 1980s. Chapters IV and V provide context for the archaeology and analysis. Based on the field work, it was determined that a fully detailed environmental chapter would be included in the report as Chapter IV. The changing landscape played an important role in the development and redevelopment of City Hall Park and is key to site interpretation. Chapter V presents a history of the site. Though several histories have been written of this property and its surrounding area, it is crucial to provide context for this report. Chapter VI discusses the methodologies employed on the project. The construction project did not follow a linear sequence, and some areas were excavated, back-filled, and re-excavated several times. The report is organized, the authors hope, to best convey the information in a concise presentation, while presenting a specific story of historic landscape use and reuse. The field work and artifact analysis are combined into a single chapter (Chapter VII). In-depth materials analyses of selected key contexts are contained in Chapter VIII and Chapter IX. These key contexts are: Room 8C of the Basement, Features 3 and 33/35 in the northeast area, Feature 28 midden deposit, and the Bridewell. Chapter X is dedicated to the human remains recovered on site. Chapter XI presents a synthesis of the information learned from this project. The report concludes with conclusions and recommendations (Chapter XII) and references (Chapter XIII).

In addition, several appendices are attached to this report. Appendix A provides all of the various testing plans, procedures, and field memoranda produced throughout the project. Appendix B provides the Archaeological Sensitivity and Training slide presentation for the construction crew. Appendix C outlines the various LPC presentation and responses related to the archaeology project. Appendices D and E present templates for recording and the raw field notes/field maps. Additional site, project, and artifact images are presented in Appendices F, G, H, and I. Appendix H is provided digitally and contains all site photographic documentation. The artifact, faunal, and human remains databases are presented as Appendices J, K, and L. Appendix M presents the photographs noted international photographer Chester Higgins took of the northeast features. As part of the project, Corinthian Data Capture took digital, three-dimensional scans/images of several features. Although “stills” from these scans are presented, a two-dimensional printed format

cannot do justice to the information (Appendix N). Appendix O contains information on the various conservation efforts related to the material remains. Appendix P presents the data derived from Jablonski Building Conservation, Inc.'s analysis of mortar from Features in the northeast area of the project. The report concludes with Appendix Q, detailing an award the Professional Archaeologists of New York City presented to the site construction company, Rockmore Construction, for their assistance and contribution to the archaeological project.

#### **THE ARCHAEOLOGICAL TEAM**

As stated above, this archaeological project has been a joint effort of Chrysalis and URS. Many persons have contributed throughout.

The site supervisory archaeologists were Alyssa Loorya, who served as Principal Investigator for the overall project, and Daniel Eichinger, Field Director. Christopher Ricciardi and Edward Morin served as Project Managers for Chrysalis and URS, respectively. The archeologists on site throughout the project were Eileen Krall-Hood, Lisa Geiger, and Eileen Kao. Additional archaeological staff support was provided by (in alphabetical order) Angela Garra, Diane George, Deb Marceurette, Clark Moses, Reaksha Persaud, Lynn Rakos, Kevin Smyth, Kirsten Smyth, and Jessica Striebel McLean. Additionally, due to the nature of this project, the on-site construction company, Rockmore Construction, undertook much of the physical excavation work. Rockmore's Site Supervisor Fred Weiss and his team assisted with all phases of excavation.

Artifact processing and analysis occurred at URS' Burlington facility under the direction of Rebecca White. Erin Broadhurst, Mara Kaktins, Tom Kutys, Peter Matrenga, Keri Sansevere, and Kristin Swanson cataloged artifacts. Meta Janowitz, Mara Kaktins, Tom Kutys, and Rebecca White completed the artifact analysis, with technical assistance from Brian Seidel. Chrysalis coordinated the faunal analysis, which Matthew Brown conducted. Matthew Brown also assessed and documented the human remains.

Alyssa Loorya, Daniel Eichinger, Meta Janowitz, Matthew Brown, and Christopher Ricciardi authored this report. Alyssa Loorya, Peter Stratton, Nina Shinn, and Mark Petrovick created the digital graphics. Rebecca Leahy photographed the artifacts for this report. Paul Elwork edited the report for style and consistency.

## II – THE PROJECT

City Hall is a New York City, New York State, and National Historic Landmark designed by John McComb Jr. and Joseph Francois Mangin, built from 1803 to 1811. The property City Hall occupies has a great deal of historic significance. Part of an area formerly known as the Common, it was utilized as early as 1692 and was heavily used and densely populated throughout the last three quarters of the eighteenth century. Since 1735, with the construction of the first almshouse, various municipal institutions occupied the property. During the Revolutionary War, British soldiers were barracked on site. Institutional use continued until the turn of the nineteenth century, when the focus began to shift toward governmental use.

The long-term significant occupation of the site has led it to be the subject of several historic and archaeological studies. Three of these studies are of key significance to the current project: Baugher, Bankoff, and Winter (1989), Hunter Research (1994), and Parsons Environmental (1999) (see Bankoff and Loorya 2008). City Hall’s landmark status and the park’s status as part of the African Burial Ground and the Commons Historic District requires that all subsurface work and impacts are subject to Landmarks Law—inclusive of archaeology. Plans for all work proposed for City Hall and the park require review and approval by LPC before any activities can occur. The law requires that individual permits be issued for all actions undertaken within the park and to the structure.

The Federal-style landmarked building is currently undergoing structural repairs and upgrade of life safety and mechanical components. Work includes a new fire alarm and sprinkler system, new electrical service, elevator replacement, and rehabilitation of the City Council Chambers and associated areas. The project will incorporate sustainable design features. The utility work required excavation for a utility vault on the northeast side of City Hall, excavation for electrical service, and manholes to facilitate junction points for the new electrical service.

The New York City Department of Design and Construction (DDC), the Mayor’s Office of the City of New York, LPC, the New York City Department of Citywide Administrative Services (DCAS), and the New York City – Department of Parks and Recreation (Parks) were the interested parties in this project. DDC was the city agency coordinating the project. DCAS manages the City Hall building, while Parks manages and operates City Hall Park. LPC oversees the permit approval process for all work within this landmark area. The mayor’s office was an interested party, as the primary resident of City Hall.

In addition to the city agencies, several private entities worked together to see this project through. BBB led the design team and Hill International (Hill) served as the management firm coordinating the construction efforts; Rockmore Construction (Rockmore) was the construction contractor for the majority of the excavation work.

Archaeology was designated as part of the design process and Chrysalis worked in conjunction with LPC. Initially, the project sought to make in-kind replacement of electrical lines or utilize previously excavated areas, but this was not feasible. The changing and evolving design and construction plan required that archaeology be undertaken alongside the construction.

During the planning phase of (and throughout) the project, Chrysalis provided the overall City Hall Rehabilitation Project Delivery Team (CH PDT) with detailed outlines of the potential cultural resource impact(s) that various construction scenarios could have. This information included an updated summary of previous CRM projects within and adjacent to City Hall Park, projections of what cultural resources may be encountered, and mapping of previously known resources onto then-current project plan maps. These outlines were used, in part, to plan the proposed excavation, installation routes, and methodology to avoid known culturally significant and/or sensitive areas. Appendix A contains a record of these various plans and recommendations.

During the planning phase, the LPC recommended that a portion of the new utility lines follow the path of, or lay alongside, existing utilities to avoid or minimize potential impact to cultural resources and the need for archaeological excavation and/or monitoring. However, utilizing these previously disturbed areas did not occur due to various engineering and construction requirements.

Prior to the start of preliminary field testing, Chrysalis developed an Archaeological Testing and Monitoring Plan, an Unanticipated Discoveries Plan, and a Human Remains Protocol (Appendix A). The plans identified potential resources and proposed a CRM approach that included archaeological monitoring and testing. The plan established protocols for the overall archaeological process. The Unanticipated Finds Plan and Human Remains Protocol established a course of action should a discovery of cultural resources occur when an archaeologist was not present on site. The Human Remains Protocol detailed appropriate actions should disturbed or intact human remains be uncovered. These plans were adopted and implemented throughout the project.

Preliminary field testing in March 2010 was conducted in the field immediately west of City Hall to identify preexisting utility lines. Chrysalis monitored this excavation and submitted a Technical Memorandum Report to the project and the LPC (Appendix A). Minimal information with regard to material/cultural remains was uncovered during excavation of these test units. However, the contract company's method of excavation did not adequately allow for unobstructed observation of the excavation. The excavation method utilized high-pressure air displacing the soil and a large vacuum tube suctioning the material into a container. Due to the use of a vacuum method, the test units were small and the equipment being used obstructed the view, making observation only possible after the material was removed.

The preliminary testing uncovered undisturbed contexts within two of the four test units. Excavation also revealed that the installation of the existing utilities had caused minimal impact to the surrounding soils. The report also noted that the excavation method utilized was not adequate for documenting potential cultural resources, as the information was literally vacuumed away before any kind of *in situ* remains could be identified or any context could be recorded. The LPC and the CHP PDT concurred that this method was not practicable for archaeology.

Construction was to begin adjacent to the concrete retaining wall in the northeast area behind City Hall in June 2010. LPC had initially determined this area to have a low sensitivity for

the recovery of significant cultural resources and did not slate it for archaeological testing. This determination was based on the idea that the area had been heavily disturbed during the construction and reconstruction of City Hall. However, at the request/recommendation of Chrysalis, the CH PDT agreed to excavate a series of test pits along the northeast area retaining wall to ascertain the level of disturbance.

Three test units measuring 5' x 5' were excavated along a 44' section of the northeast areaway retaining wall (Map 2.01). Rockmore construction removed the existing paving and physically conducted the excavation under direction of the archaeologists. All units showed evidence of what appeared to be an eighteenth-century stone wall (Image 2.01) and associated cultural materials. These initial three test units yielded a total of 1,587 artifacts and 1,093 faunal remains. More specifically, Test Unit 2 (2NE) uncovered 391 artifacts and 43 faunal remains. The unit had a *terminus post quem* (TPQ) of 1815. The materials have a mid-to-late-eighteenth- through turn-of-the-nineteenth-century date range. Test Unit 3 (3NE) contained what appeared to be a significant artifact deposit, as well as three courses of a brick structure in the west profile. The profile showed the cultural deposit to be bowl shaped (Image 2.02). From this context, 603 artifacts and 943 faunal remains were recovered. The unit had a TPQ of 1805 and the materials have a mid-to-late-eighteenth- through turn-of-the-nineteenth-century date range. Test Unit 4 contained 593 artifacts and 107 faunal remains. This unit had a TPQ and date ranges similar to the previous units.

In consultation with LPC, exposure of the wall (designated Feature 1) continued and more extensive excavation was undertaken. It was apparent to the CH PDT that potentially significant buried cultural resources remained in this area, believed to be previously disturbed.

At this time, the protocols set forth during the planning phase of the project were enacted and URS was brought in to assist with the archaeological project.

In accordance with its designation status, all excavation and associated archaeology and specific archaeological excavation was coordinated with the LPC prior to work occurring. Decisions on methodology, location, and extent of excavation all required pre-coordination and permit approval. Additionally, certain construction—and in turn, archaeological—activities required public hearings with formal written determinations by the LPC.

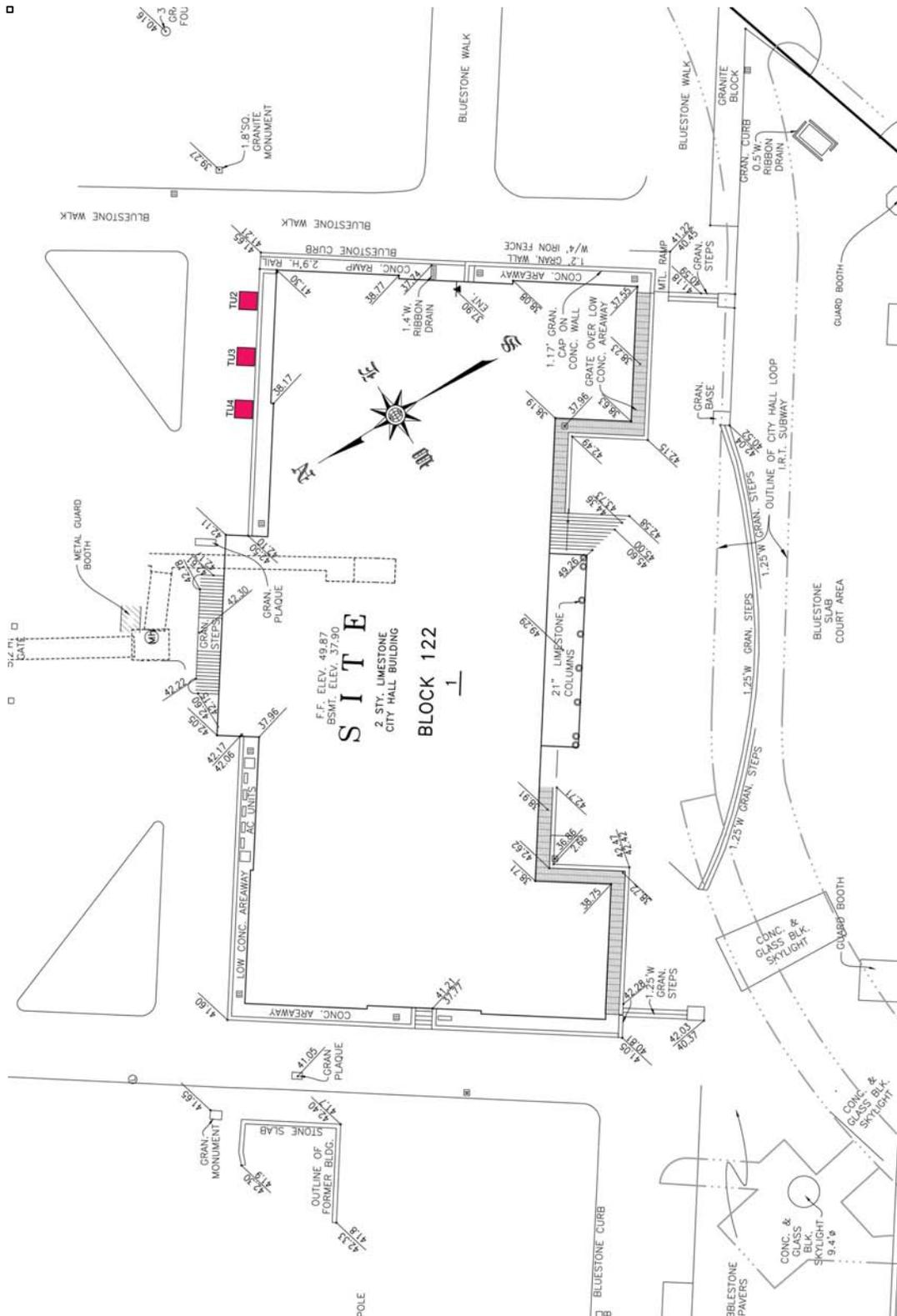
Throughout the months that the Chrysalis/URS archaeological team was on site, project plans and excavation impacts changed several times. Some areas were excavated, filled, and re-excavated several times. This report will attempt to note the various changes to plans with regard to how they may have shaped the overall archaeological investigation. Appendix A contains documentation regarding plan changes.



Image 2.01: Stone wall exposed during initial testing in the northeast area.



Image 2.02: Cultural deposit exposed in Test Unit 3 within the northeast area.



Two factors dictated archaeological excavation throughout the course of the project: requirements and dimensions for construction and the need for additional information in identifying a feature. As per the landmark status designation, all archaeological features are designated landmarks regardless of whether they were previously known or newly discovered. The project team was required to consider altering plans when archaeological features were exposed. LPC's default determination was that all archaeological features remain intact and *in situ*. Exceptions to this only occurred when it was demonstrated that no other viable construction alternatives were available—initially leading to testing multiple areas and to formally request permission to remove several features through the LPC hearing process. Ultimately, the CH PDT opted to use a methodology other than traditional excavation.

At the recommendation of Hill, the option of micro-tunneling was considered and accepted as the final excavation methodology. Micro-tunneling is a method by which successively larger drill bits are passed through an area until the desired dimensions are achieved. The archaeological team, in consultation with the LPC, determined that in order to avoid impact to any cultural resources, micro-tunneling could not occur within 12' feet of the surface. To further ensure avoidance and/or impact to potential resources, micro-tunneling occurred at a depth of 15' or greater.

Though micro-tunneling negated the need for trenching to lay utility lines, it required the excavation of two large pits to facilitate the necessary machinery. These pits would also serve as the location for utility manholes. The selection of the micro-tunneling methodology focused major excavation to three areas of the property: the Northeast Vault area; the northern end of the west path and west field of City Hall; and immediately west of Tweed Courthouse. This final construction plan required the removal of several archaeological features in the Northeast Vault area to facilitate installation of the new vault and at the northern end of the west field. Deconstruction of these features was performed by the archaeological team or occurred under direct archaeological supervision. The discussion of fieldwork, including the deconstruction of features, is located in Chapter VII.

### **III – ARCHAEOLOGY AT CITY HALL PARK**

Many of the previous CRM reports on City Hall Park—or the Common, as it was historically known—have discussed previous archaeological projects in the area. This report includes an overview of the key past projects within City Hall Park to provide context for the current archaeological project. Table 3.01 (located at the end of this chapter) outlines a more comprehensive list of previous archaeological projects within the vicinity of the park. As part of this project, a comprehensive site map detailing the locations of archaeological features and significant deposits from 1999 and 2010/2011 has been created (Map 11.03).

#### **GROSSMAN AND ASSOCIATES (1988)**

Grossman and Associates undertook the earliest known archaeological work within City Hall Park in conducting an archaeological assessment for the proposed subterranean utility corridor between City Hall and Tweed Courthouse.

#### **CITY OF NEW YORK – LANDMARKS PRESERVATION COMMISSION AND BROOKLYN COLLEGE, CUNY (1989)**

In 1989, then-LPC archaeologist Sherene Baugher, along with Drs. H. Arthur Bankoff and Frederick A. Winter of Brooklyn College, CUNY, conducted fieldwork prior to the construction of a utility tunnel between City Hall and Tweed Courthouse. Excavations were conducted as part of the Brooklyn College Summer Archaeological Field School. Using resources of the Brooklyn College Archaeological Research Center’s (BC-ARC) and student labor provided the city with an economical means of complying with preservation laws and regulations, while fulfilling CUNY requirements for students of anthropology and archaeology. The archaeological project focused on the exploration of a foundation wall discovered during earlier excavation work (Baugher 2001; Bankoff 2007).

Over the course of the three-week project, several discrete contexts were recovered, and Dr. Baugher determined these to be related to the first almshouse. Baugher believed the wall to have been the almshouse foundation and the excavated materials to have come from within the almshouse. Analysis of the materials revealed information about the daily activities of almshouse residents, particularly with regard to sewing and button-making activities.

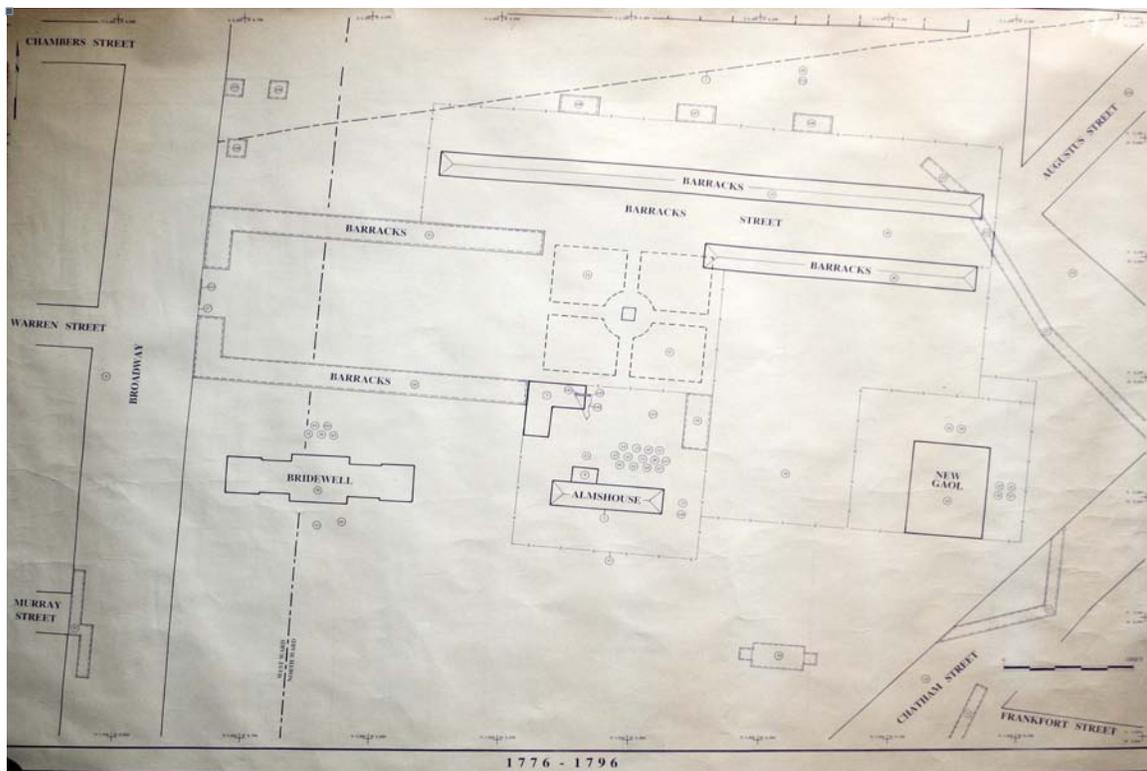
In a 2001 article, Baugher used the analysis to explore the perception of and responses to the poor in eighteenth-century New York City. It is her assertion that the almshouse and its setting demonstrated a popular concern for the welfare of the poor (Baugher 2001).

### HUNTER RESEARCH (1994)

Hunter's 1994 excavation area was not technically within City Hall Park itself, but just north of Tweed Courthouse along Chambers Street. Historically, this area was part of the Commons. The field project resulted in the recovery of over 4,000 artifacts from various mixed contexts. It was determined, due to a lack of associative stratigraphy and the prevalence of post-depositional breakage, that the artifacts were not from a primary context. Human remains were also recovered (Hunter 1994).

As a result of this work and the creation of the African Burial Ground and Commons Historic District, Hunter Research was engaged to conduct an extensive map and site history of City Hall Park. The goal of this study was to identify the location and extent of historic structures within the property. The resulting report included several composite maps that show the proposed configuration of City Hall Park during different time periods. Additionally, it contained an inventory of structures documented to have stood on the property. This inventory included physical descriptions and measurements, when available (Hunter 1995).

The Hunter report presents a heavily used and densely populated area. Several structures, all documented to house large numbers of people, occupied the property simultaneously. Most prominent of these structures were the first almshouse, the gaol, the Bridewell, and a series of military barracks (Map 3.01). While there is some mention of fences that possibly delineated portions of the property, there was no determinative evidence of this either archaeologically or in primary documentary sources (Hunter 1995).



Map 3.1: Composite map depicting the period of 1776–1796 (Hunter 1995).

**PARSONS ENGINEERS SCIENCE (1998–1999)**

In 1998, plans were developed for renovation and infrastructural upgrades to City Hall Park requiring a significant amount of subsurface disturbance. From December 1998 through August 1999, Parsons Engineering Science (Parsons) conducted excavations on behalf of the City of New York – Department of Parks and Recreation (Parks).

In accordance with CRM procedure, the needs of the construction schedule guided excavation. Wherever construction activities were to impact subsurface deposits, archaeologists were required to monitor, sample, test, and/or excavate to ensure the preservation of buried cultural resources. A majority of the excavation was conducted via backhoe trenching, with manual excavation methods employed as needed. Only upon the appearance of a significant archaeological deposit, defined as a dense artifact layer or architectural feature, was mechanical excavation halted, allowing the Parsons field crew to manually excavate these areas.

All archaeological work was limited to excavating within the footprint slated for construction and in accordance with the construction schedule. Parsons produced an initial archaeological sensitivity study of City Hall Park prior to the commencement of fieldwork (Parsons 1999). For their assessment, Parsons used historic maps and previous cultural resource reports to determine areas of high archaeological potential.

Unfortunately, Parsons contracted agreement with Parks did not allow for changes in the schedule due to unexpected finds; monitoring, testing, and excavation plans were determined before the actual excavation (Parsons 1998–2000).

Per Parsons archaeological sensitivity study:

those areas that the study slated for monitoring were thought to be disturbed by previous earthmoving activities, or covered by modern fill to the depth of the construction impact. If it was not clear whether or not an area had been disturbed or covered by fill, the sensitivity report proposed archaeological sampling or testing. In areas thought to contain potentially intact archaeological resources, the study recommended complete manual excavation by archaeologists [Parsons 1998-2000].

Parsons' analysis divided City Hall Park into two halves, with the parking lot in front of City Hall serving as the mid-point of the property. The southern half of the park, which is open to the public, was determined to have little archaeological sensitivity. This triangular point of the park was pre-determined to be heavily disturbed by the construction of the United States Post Office, which stood at the southern tip of the park (1870–1938), the 1938 reconstruction undertaken by the Robert Moses Parks administration, and the construction of the Delacorte Fountain in the late 1970s. Parsons monitored excavation in the southern end of the park that exposed no significant resources (Parsons 1998–2000).

The sensitivity study determined that the northern portion of the park was significantly less disturbed and therefore deemed it to have a high degree of archaeological sensitivity. The

study concluded that despite some twentieth-century modifications, the northern portion of the park retained its general late-nineteenth-century configuration, and archaeological resources were likely preserved beneath several areas of fill (Parsons 1998–2000).

During the 32 weeks of excavation, Parsons uncovered several refuse deposits of varying sizes and shapes, architectural features, and human interments. Anthropologists from the Smithsonian Institution in Washington, D.C., undertook and reported on analysis of the human remains (London 2003).

As construction requirements dictated the archaeological excavation, when features were discovered, they were not always fully excavated. However, according to Parsons' field notes, every effort was made to do so. In several instances, a representative sample was taken or a random sampling strategy was employed due to construction restraints. Excavation units and features were excavated in arbitrary 6" levels or according to the natural stratigraphy (Parsons 1998–2000).

Based on their preliminary analysis in the field and the locational context of the uncovered features, Parsons made a series of associations between historic structures and archaeological features.

In total, over 2,000 individual units were excavated (either mechanically or manually) during the 1998–1999 project and over 250,000 artifacts, including faunal remains, were recovered.

Due to various factors, Parsons did not undertake the laboratory analysis of the excavated materials or produce a report for this project. New York City took possession of the material remains, storing them until funding became available and an agreement was reached with CUNY to undertake the analysis.

#### **HARTGEN ARCHAEOLOGICAL ASSOCIATES (2000)**

In 2000, Hartgen Archaeological Associates monitored a utility improvement project along Chambers Street, adjacent to Tweed Courthouse. This project recovered several thousand artifacts, as well as human remains. The materials were from largely disturbed contexts, demonstrating the significant amount of disturbance that has occurred in the area due to construction work, as well as the density of cultural materials still lying beneath the surface (Hartgen 2001).

#### **BROOKLYN COLLEGE (2001)**

In 2001, with the support of LPC, Parks contracted with the City University of New York (CUNY) to undertake the analysis of the material remains Parsons recovered in 1998–1999. The proposal included a consortium of professors; Dr. H. Arthur Bankoff (Brooklyn College) and Dr. Thomas McGovern (Hunter College) were co-directors, and Dr. Sophia Perdikaris (Brooklyn College) and Dr. Neil Smith (The Graduate School and University Center) were named assistant directors of the project. Alyssa Loorya M.A. was hired as the Laboratory

Director for the Brooklyn College Archaeological Research Center (BC-ARC). All material remains and raw documentation were transferred to Brooklyn College<sup>1</sup>.

Upon arrival at BC-ARC and once the stabilization of the collection was completed, research on the history of the area and analysis on the material and faunal remains began as a series of faculty-guided student projects. These projects yielded several student papers, at least three master's theses, and one doctoral dissertation (in process).

Some of the conclusions reached during this analysis led from the fieldwork itself. During the 1998–1999 Parsons excavation, several of the refuse deposit features appeared to be clustered together within specific areas of the site. The clustering is highlighted in Parsons' field notes, in which they describe Features 50, 64, 65, and 74 as a “series of overlapping pits” (Parsons 1998–2000).

Further analysis identified Features 87, 87/88, 88, and 99 as a single refuse deposit feature (Loorya in process) excavated in separate episodes (Figure 3.01). Feature 87 was uncovered 12” below surface and identified as a large refuse pit. In a separate episode immediately south and separated by a sandy fill layer, another refuse pit, designated Feature 88, was uncovered. As the two features were excavated, a number of different soil types were identified, as well as a third feature, designated Feature 99. The area was fully excavated, extending to 94” below surface. Post-excavation stratigraphic and artifact analysis determined that Features 87, 87/88, 88, and 99 all represented a single larger refuse pit (Loorya in process; Bankoff and Loorya 2008). A locational analysis of the excavation indicated that Features 156 and 163 are in the immediate vicinity of Features 87/88/99 and, given further excavation, could have been revealed to be part of the single larger refuse deposit (Loorya in process).

The 1999 excavations revealed a complex stratigraphy within City Hall Park due to the ongoing change and development of the area. Observations by excavators and stratigraphic analysis indicated a less complex configuration prior to the construction of City Hall and Tweed Courthouse. Construction impacts had given the appearance of several smaller distinct features that were in actuality part of a larger single feature (Loorya in process).

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1. For a complete description of the City Hall Park 1998–1999 project, and analysis of the material remains, see the report *The History and Archaeology of City Hall Park*, Bankoff and Loorya 2008.



Figure 3.01: Stratigraphic profile Features 87/88/99 (Bankoff and Loorya 2008).

## **CONCLUSION**

The archaeological sensitivity and historical significance of City Hall Park has been repeatedly demonstrated. Given its combined status as a historic landmark included within a landmark historic and archaeological district, any subsurface work requires consideration of the archaeological record.

Research and analysis opportunities are still abundant with regard to this property, and several archaeological resources remain undiscovered, even following the most recent field work. All of the previous projects have provided a basis for, and added to, our continued understanding of this important component, both physical and cultural, of New York City's history.

Table 3.01: Previous archaeological reports for City Hall Park and vicinity.

YEAR	SITE NAME	AUTHOR	REPORT TITLE
1988	City Hall Park	Grossman & Associate, Inc.	Archaeological Sensitivity Evaluation and Testing Recommendations for the Proposed Subterranean Utilities Corridor between City Hall and Tweed Court House, City Hall Park, New York City
1989	City Hall Park	Grossman & Associate, Inc.	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
1990	City Hall Park	NYC LPC	The Archaeological Investigation of the City Hall Park Site, Manhattan
1993	*186 sites included	Hunter Research, Inc.	Archaeological Sensitivity Study: African Burial Ground and the Commons Historic District, Borough of Manhattan, City of New York, New York [ 2 volumes ]
1993	Five Points	Milner	Foley Square Federal Courthouse and Office Building, New York, New York, Final research Design for Archeological and Historical Investigations of Five Points
1993	City Hall Park	Redding, Ferreira, Morgan & Ridge	City Hall Park/2 Archaeological Site Report - The J.C. Decaux Public Lavatory Pilot Installation Project in NYC's City Hall Park
1993	African Burial Ground	Milner	Foley Square Federal Courthouse and Office Building - Research Design for Archeological, Historical and Bioanthropological Investigations of the African Burial Ground (Broadway Block)
1994	Tweed Courthouse	Hunter Research, Inc.	Analysis of Cultural Materials Including Human Skeletal Remains Retrieved from Soils Originating From Chambers Street North of Tweed Courthouse at City Hall park
1995	City Hall Park	Hunter Research, Inc.	Archaeological Investigations in City Hall Park Electrical Conduit Trench Tweed Courthouse to Broadway
2000	African Burial Ground	KSK	Biorachaeological Monitoring of Water Main Repairs and Identification of Associated Human Skeletal Remains, Chambers Street Between Broadway and Centre Street, Lower Manhattan, New York City
2000	Five Points	Milner	Tales of Five Points: Working Class Life in Nineteenth-Century New York [ 6 Volumes ]
2003	Tweed Courthouse	Hartgen	Tweed Courthouse Archeological Survey and Data Retrieval Investigations
2004	City Hall Park	Marilyn R. London	Analysis of Partial, Scattered, and Incomplete Human Skeletal Remains Recovered during the 1999 Renovation of the Park
2008	City Hall Park	Bankoff & Loorya	The History and Archaeology of City Hall Park

## IV – ENVIRONMENTAL AND PHYSICAL SETTING

### THE PROTO-HISTORICAL LANDSCAPE

#### INTRODUCTION

Modern lower Manhattan is vastly different from the place Henry Hudson and his crew first experienced in 1609. Where a forest of skyscrapers now forms the upper canopy and numerous lesser buildings comprise the urban underbrush, Hudson saw a trackless forest dotted with salt marshes and red-maple swamps. Instead of the modern street grid, streams and creeks meandered across the landscape. Beavers, deer, elk, black bears, wolves, turkeys, foxes, rabbits, minks, otters, and cranes thrived in this environment, in place of today's commonplace pigeons and squirrels. The landscape undulated with many hills and gullies, as opposed to the level, easily traversed pavement so many stride upon daily. In fact, the island was so hilly, the native Lenape inhabitants named it *Mannahatta*, or the Land of Many Hills. Settlements of the Lenape people dotted the island, where diverse millions would one day live, work, and breathe. These descriptions offer a snapshot of early-seventeenth-century Manhattan, only a little over 400 years before present. In only 200 years, the *Mannahatta* of 1809 would little resemble that of 1609, with gridded city streets filling lower Manhattan and most of the island being comprised of small villages and cleared farm fields. Modern-day Manhattan's concrete, glass, and steel visage would seem like a completely alien world to those original explorers and Lenape inhabitants. Then again, if a modern New Yorker were transplanted into the *Mannahatta* of the Lenape, he or she too would be lost in an alien world. And what would a Lenape see if transported millennia further back into the island's physical history? When titanic geologic forces broke apart supercontinents, formed new seas, and covered the world in ice? That Lenape would be witness to the original formation of the Land of Many Hills.

#### MANHATTAN'S ROOTS IN PANGAEA

The City Hall Park project area lies in lower Manhattan, adjacent to the Brooklyn Bridge. This area falls within the very southern end of the Manhattan Prong section of the New England Uplands physiographic province. The true beginning point of Manhattan Island begins with the Manhattan Prong and its formation. Roughly 510,000,000 years ago (MYA), the Iapetus Ocean (a precursor to the Atlantic) began to close. As the continental plate of Laurentia (North America, essentially) and the Iapetus oceanic plate converged, a volcanic archipelago was formed. Further movement between the plates propelled this volcanic archipelago across the Iapetus Ocean, causing it to collide with Laurentia during the middle Ordovician Period (around 480 MYA). This collision was known as the Taconic Orogeny, and was responsible for the formation of the various bedrocks that comprise the portion of the Manhattan Prong the island occupies. This collision metamorphosed the local materials of Laurentia and the volcanic islands into the four formations that comprise the underlying geology of Manhattan Island. The sandstone and limestone along the continental edge of Laurentia were metamorphosed into Inwood Marble, offshore mudstone was transformed into Manhattan Schist and the Walloomsac Formation, and the sedimentary layers of the volcanic islands themselves became the Hartland Formation. As a result of this titanic collision, these four geologic formations are both adjacent and intertwined. For instance, the

Inwood Marble is in thrust contact with the Manhattan Schist, but also non-conformably overlies portions of the Walloomsac Formation (Bennington and Merguerian 2006). City Hall Park, and most of lower Manhattan, rests upon the Manhattan Schist, which is comprised of layers of medium- to coarse-grained schist and gneiss that may become gray, tan, or maroon-colored if exposed to weather. It is in fault contact with bands of Inwood Marble that occupy the Lower East Side and in thrust contact with the Hartland Formation. A thrust fault, known as Inwood Hill, separates it from the underlying Walloomsac Formation (Baskerville 1994). Although the Taconic Orogeny formed the bedrock upon which Manhattan's skyscrapers would one day rest, the area little resembled even the historic landscape and environment. During the Middle Ordovician, shallow carbonate seas flooded proto-Manhattan, bringing with them trilobites, brachiopods, mollusks, and primitive sharks. High carbon dioxide levels led to a very hot, greenhouse-like atmosphere. Land-based plants consisted mostly of algae and fungus, and there is no direct fossil evidence for land-based fauna (Webby, Paris, Droser, and Percival 2004).

The initial closing of the Iapetus Sea and the Taconic Orogeny mark the beginnings of the formation of the supercontinent Pangaea. Pangaea eventually consisted of all the available landmass on Earth, straddling the equator and reaching as far as the poles. This event took hundreds of millions of years and was not complete until the Permian period (290 MYA), which was the penultimate portion of the Paleozoic Age (Bennington and Merguerian 2006). At this point, Manhattan Island was not an island, but landlocked between what would one day become the continents of North America and Africa. Geographically, it lay in the interior of Pangaea, an area characterized by extensive desert regions. Gymnosperm plant life would have been abundant, as these species' seeds had protective shells to shield them from the environment. Fauna consisted of early arthropods, amphibians, and reptiles. Instead of noting the rabbits, deer, and black bear in their journals, Hudson's crew may have seen dragonflies with up to two-foot wingspans, the ancestors of the dinosaurs (archosaurs), toothed mammals (cynodonts), and the strange beast that combined aspects of both reptiles and mammals, the dimetrodon. The only familiar aspects of Pangaea's landscape would have been certain trees, as the Permian saw the first conifers, ginkgos, and cycads (Webby, Paris, Droser, and Percival 2004).

But Pangaea was not fated to last long, at least not in geologic terms.

### MANHATTAN BEGINS TO GAIN A GEOGRAPHIC IDENTITY

By the late Triassic, a mere 40,000,000 years later, rifts in Pangaea began to open. North America and Africa began to move apart, and the Atlantic Ocean was formed. Also formed were long rift valleys, such as the Newark Basin. This rift valley was formed when bedrock beneath the Newark Basin tilted downward along a fault line in the Ramapo Highlands. This exposed nonconformity, a gap or break, between the sedimentary Newark Basin and the metamorphic Manhattan Prong. During the early Jurassic (205 MYA), volcanic activity and subsurface magma formed the Palisades Cliffs that stretch along a portion of the border between the Newark Basin and this nonconformity. This cliff-lined gap between the Newark Basin and the Manhattan Prong would eventually host the landscape feature that forms the western border of Manhattan Island, the Hudson River (Bennington and Merguerian 2006). During the Triassic period, the Hudson River did not flow down this pathway, but rather into

the newly formed Newark Basin. After the rise of the Palisades, the river flowed through the Highlands and southern New York (Sirkin and Bokuniewicz 2006). The Newark Basin was filled with large freshwater lakes during wet climatic periods and the general climate was tropical. Instead of the copious mammal wildlife that Henry Hudson would experience in 1609, this lush environment attracted dinosaurs and aquatic reptiles, which would have fed off the vegetation that surrounded these lakes and the freshwater fish living within (Bennington and Merguerian 2006). It is likely that nearby Manhattan Island contained similar flora and fauna, as the tropical climate would have produced a similar environment. By the Late Cretaceous (60 MYA), the entire area was under water (Bennington and Merguerian 2006; Hornberger 2005). Global sea level rose dramatically, drowning the coast of North America, the Newark Basin and Manhattan Island included. Manhattan lay under the waves for roughly 55,000,000 years, until the end of the Miocene epoch (around 5 MYA). Although the island gained its approximate eastern border, the surrounding geography did not yet resemble that of modern times. The Hudson still did not mark Manhattan's western border. The retreat of the seas left a Cretaceous-aged ridge, called a *cuesta*, along the inner coastal plain. This formation blocked the Hudson's entrance into the gap between the Newark Basin and the future island. Instead, the Hudson flowed across the Newark Basin once again and drained into Raritan Bay. No waterway yet separated Manhattan from the mainland; the future bed of the Hudson was a low, wide valley overshadowed by the high cliffs of the Palisades. Additionally, the East River did not mark the eastern boundary between Manhattan Island and Long Island. Neither the East River nor Long Island was yet present. If Hudson stood upon the eastern shore of Manhattan, he would have gazed out upon the waters of the ancient Atlantic Ocean. Manhattan's northern boundary, the Harlem River, was also absent. At this point, Manhattan was still part of the mainland. The only geographic feature that Hudson or the Lenape may have recognized was a peninsula destined to become Staten Island. This landform is a Cretaceous formation left behind by the retreating seas (Bennington and Merguerian 2006).

#### MANHATTAN'S FINAL FORMATION

Roughly 1,000,000 years later, during the Pliocene Epoch (4 MYA), one of the island's defining geographic features came into being. A combination of erosion and uplift altered the Cretaceous *cuesta*, allowing the Hudson River to flow into the valley between the Palisades and the Manhattan Prong. At this point, Manhattan was a peninsula and one step closer to becoming an island. It would remain a peninsula for nearly 4,000,000 years, until the retreat of the Wisconsin ice sheet (Bennington and Merguerian 2006).

The Wisconsin ice sheet (glacier) began 100,000 years before present (B.P.) and ended approximately 12,000 B.P. This glacier flowed from north to south and was at least one half of a kilometer thick over northern New Jersey and New York City. The impacts of the weight of the glacier upon the landscape are still extant. Exposed surfaces can be either rounded/polished by this great weight, or have grooves and striations carved into them by the movement of the ice. Such landscape features can be seen in Central Park. During the advance of the ice, existing valleys were widened and glacial lakes carved out across the landscape of New York and New Jersey. Existing rivers, such as the Hudson, were deepened and new river courses were graded into the landscape. The East and Harlem Rivers are products of the glacier (Bennington and Merguerian 2006; Cadwell 1989).

The retreat of the Wisconsin glacier also left its mark upon the landscape. The melting ice deposited multi-tons of material. In Manhattan, this material consists of glacial till or outwash, which underlies the present ground surface and caps the bedrock formations (New York City Soil Survey Staff 2005). Glacial till consists of unsorted particles of various sizes, from boulders to pebbles to sand, which are released and left behind by the melting ice. Outwash consists of sorted and stratified materials transported away from the ice by glacial meltwater. Till fills valleys, covers bedrock substrates, and accumulates in moraines. Long Island is a combination of till and outwash the glacier left behind as moraines. Moraines occur in two forms: side moraines and end moraines. Side moraines consist of the deposits that form on the edges of the glacier, while end moraines are formed of the material pushed along by the ice. End moraines are broken into two further sub-categories, recessional and terminal moraines. Recessional moraines are formed during pauses in a glacier's movement and terminal moraines mark the farthest advance of the glacier. Three such terminal moraines form the twin forks of Long Island (Bennington and Merguerian 2006). The retreat of the ice also formed the characteristic hills that would give the island its Lenape name. The Land of Many Hills was formed in two main fashions. First, the great weight and depth of the glacier's advance carved away the softer bedrocks, such as the Inwood Marble, but left knobby hills of the erosion-resistant Manhattan Schist. These knobs were then covered in till and outwash during the ice's retreat. Second, the glacier left behind hill and drifts of till, outwash, and sand. The Sand Hills, which once occupied lower Manhattan, are examples of this glacial deposition (Sanderson 2009).

The final passage of the Wisconsin glacier transformed Manhattan from a coastal peninsula to an island. The glacier deepened the Hudson's course, carved the East and Harlem Rivers, and left behind Long Island. If Hudson had arrived in the New World 10,000 years before his time, he would have seen a Manhattan Island that was essentially the same geographically as that of 1609.

#### **THE PRE-HISTORICAL LANDSCAPE**

The retreat of the Wisconsin glacier left behind a vast and new ecological niche. If Hudson were to sail up the eponymously named river, he would have seen a landscape both familiar and strange. The basic shapes of the surrounding geography would have been recognizable, but the environment itself would have differed. Instead of the "modern" oak/chestnut forests of Manhattan, he would have seen forests of spruce, fir, birch, and pine dotting the rolling hills (Kinsey 1977; Newman 1977; Sirkin 1977). Instead of deer and bear, herds of large cold-adapted mammals, such as giant elk and mammoth, traversed the landscape. Glacial lakes dotted the landscape. Sometime during this period, between 12,000 and 10,000 B.P., humans first entered the Newark Basin and settled along the Coastal Plain (Cantwell and Wall 2001; Kraft 1986; Marshall 1982; Raber 1985). These folk would not have resembled the Lenape of 1609—no palisaded villages, agricultural fields, or hierarchal society existed. Instead, Hudson would have met family-based bands of hunters that followed the large herd animals and other seasonal-based resources. Evidence for such Paleo-Indian archaeological sites has been identified on nearby Staten Island, situated on knolls or hilltops above easily accessible waterways (Louis Berger and Associates 1987, 1988; Ritchie 1994). The Port Mobil Site on Staten Island provides an example of a seasonally active Paleo-Indian camp (Cantwell and Wall 2001). Such settings are very

similar to those of lower Manhattan, and therefore it is likely that similar groups of people also occupied *Mannahatta*.

By 9350 B.P., the climate became warmer and drier. Pine and oak forests replaced the spruces and firs (Custer 1989; Kinsey 1977; Rippeteau 1977; Sirkin 1977). The mammoths and giant elk declined, replaced by mammals more adapted to deciduous forests. Marshes and swamps replaced the glacial lakes. Hudson would have seen much more familiar wildlife by this time, such as moose, bear, deer, and various small mammals (Cantwell and Wall 2001; Kraft and Mounier 1982a; Milner 1982). The human population would have shifted its focus to these new resources, but essentially followed the same lifeways.

Between 8540 and 5110 B.P., average temperatures continued to rise and oak-hemlock forests became dominant (Custer 1989; Kinsey 1977; Rippeteau 1977). Sea level also rose (Custer 1989; Kraft 1977), continuously pushing tidal headwaters up local rivers (Peltier 1959; Stewart 1990b). Thus, the river that the *Half Moon* sailed up, along with all the rivers that surround the island, was a tidal estuary consisting of salt water (Sanderson 2009). Consequently, anadromous fish (e.g., sturgeon, shad, and herring) extended their spawning grounds farther up the rivers (Hutton 1956; Milner 1982; Schalk 1977) and oysters were available to harvest. Hudson would have seen large mounds of discarded/opened oyster shell along the riverbanks. These refuse mounds, known as shell middens, were mostly the result of meals made of these easy protein sources, but could have also been related to bead making and other utilitarian tasks (Cantwell and Wall 2001). As Hudson's crew sailed up the river, they would have seen the native population at work exploiting these new riverine resources. Extensive fishing via spear, nets, and stone weirs would have been ongoing, as well as oyster collection (Kraft and Mounier 1982a).

The next 3,000 years saw a number of ecological changes (Custer 1989; Milner 1987; Peltier 1959; Stewart 1990b). Sea levels stabilized, which fixed the local rivers and their tidal flows in more or less their modern positions. The average temperature rose and rainfall totals dropped off. Oak/hickory forests replaced oak/hemlock forests (Custer 1989; Milner 1987; Peltier 1959; Stewart 1990b). During this arid time, human groups widely dispersed throughout the Hudson Valley and highlands to the west, due to the need to exploit a larger variety of ecological niches (Ford 1974; Kinsey 1975; Kraft 1986).

Around 2,800 years ago, Manhattan Island's modern environmental conditions were established. These conditions consisted of a dominant oak-chestnut forest and a warm moist climate (Custer 1989; Kinsey 1977; Rippeteau 1977). Available fish included catfish, sturgeon, shad, and herring. Deer, squirrels, woodcocks, wild pigeons, and turkeys inhabited the island's forests (Hutton 1956). The regional human groups expanded throughout the Newark Basin and became more sedentary and specialized (Custer 1989; Kraft and Mounier 1982b; Kraft 1986; Raber 1985). This is the environment Hudson entered in 1609.

The bedrock roots of Manhattan Island were formed nearly 500,000,000 years ago. Four million years ago, the proto-island was partially separated from the mainland by one of its most important resources, the Hudson River. One hundred thousand years ago, the island was covered in ice. It emerged 88,000 years later as an actual island, one covered in its

trademark “Many Hills.” Finally, around 2,800 years ago, Manhattan Island appeared much the way it did in 1609. It took Manhattan Island 500,000,000 years to arrive at this point. After Henry Hudson’s arrival in 1609, it would take much less time to completely alter the landscape again.

### THE HISTORICAL LANDSCAPE

On September 12, 1609, the Dutch East India Company vessel *Halve Maen*, or *Half Moon*, sailed up a broad estuary. Hudson, the captain, hoped to follow this estuary into the heart of North America and find passage through the continent to the riches of the Orient. Instead, the estuary, soon to be named the “Noorte” (North) River, became too narrow for the ship, forcing its withdrawal (Sanderson 2009; Thomson 1980). Although unsuccessful in reaching China, Hudson’s voyage documented Manhattan Island. Hudson’s logs of the voyage allowed his employers to assess the bounty of natural resources present and set the stage for later European colonization. But how did the landscape of Manhattan Island appear before the advent of the Dutch, the English, and finally, the Americans?

### LENAPE TENURE

Few written accounts survive of the *Half Moon*’s voyage up the Hudson. The descriptions of the landscape of 1609 Manhattan that do exist are limited, but informative. One of the few remaining snippets of text from the voyage comes from Hudson’s log.

It is a pleasant land as one can tread upon, very abundant in all kinds of timber suitable for ship-building, and for making large casks. The people have copper tobacco pipes, from which I inferred that copper must exist there; and iron likewise... [Sanderson 2009: 24].

Hudson’s first mate recorded similar thoughts about Manhattan.

[W]e saw a very good piece of ground: and hard by it there was a Cliffe, that looked of the colour of white greene, as though it was Copper or Silver myne; and I thinke it to be one of them, but the trees that grow on it. For they be all burned, and the other places are greene as grasse, it is on that side of the River called Manna-hata. There we saw no people to trouble us: and rode quietly all night; but had much wind and rain [Sanderson 2009: 24].

The river itself was not to be overlooked as a resource-laden landscape feature, as Hudson’s crew reportedly caught “all kinds of fresh-water fish with seines, and young salmon and sturgeon” (Sanderson 2009: 24).

While sturgeon could be found in the North or Hudson River, salmon was most likely not captured here. It is more likely that other anadromous species, such as weakfish or sea trout, were captured (Sanderson 2009). The landscape that Hudson witnessed consisted of one that had been in place for almost two and a half millennia. The “timber suitable for ship-building” was the oak-chestnut forest that had covered Manhattan by 2800 B.P. This forest covered the many rolling hills the Wisconsinan glacier left behind. The migratory fish that

the crew caught had been traveling up the North/Hudson River to mate, spawn, and die for nearly five millennia. The only significant differences between the 1609 landscape and that of 2800 B.P. described at the end of the previous section would have been ascribable to the Lenape, who occupied the land then called *Mannahatta*.

Although the Lenape would have had an impact on the island's landscape, it would not have been as significant as the European-wrought changes to follow. Contact period Lenape were a settled and sedentary people. The dual advances of agriculture and pottery led to large tended crops and the means to store the bounty of those crops. These advances also brought the ability/need to inhabit one area year-round. Instead of the family-based migratory band structure that their ancestors utilized, the Lenape lived in multi-family villages near their fields. The villages would have been on terraces above sources of freshwater, near fertile cultivatable ground, and possessed rich environmental resources (Custer 1989; Kraft and Mounier 1982b; Kraft 1986; Raber 1985). The banks of the North/Hudson River provided for these needs; therefore, some of the Lenape settlements would have been along banks of the North (Hudson), South (East), and Harlem Rivers. Hudson's crew traded for a "great store of very good oysters" with canoe-borne Lenape who probably inhabited one of these coastal villages. Many more of the Lenape inhabited the interior, and may have not encountered the *Half Moon*. They built their villages upon the many hills that gave the island its name. These hills looked down upon sources of freshwater, streams and ponds, and marshy areas, which provided potable water and many animal resources. The hilltops themselves were flat, fertile, and easily planted (Sanderson 2009).

These villages necessitated some clearing of the local forests, and conversion of said forest into longhouses and palisade walls, but it was the farming that had the largest environmental impact. The Lenape cleared their fields through the means of *swidden* agriculture, a process that entailed the burning of swathes of the forest and then the felling of any remaining trees. The fire removed all the smaller trees and underbrush, and the resulting ash helped fertilize the soil. *Swidden* agriculture left open, fertile plots for the Lenape's crops, which consisted of maize, beans, and squash (Custer 1989; Kraft and Mounier 1982b; Kraft 1986; Raber 1985). This process opened gaps in the landscape and began the initial large-scale human alteration of Manhattan Island. It may also explain Hudson's first mate's journal entry: "...but the trees that grow on it. For they be all burned, and the other places are greene as grasse..." (Sanderson 2009:24).

This quotation may be the result of direct observation of *swidden* agriculture in process—a plot had been set aflame and the underbrush cleared, but the largest trees had yet to be felled. Manhattan Island at the beginning of the historic period was in the first stages of human modification. Hudson and crew would have seen an island apparently covered in forest, but signs of human habitation would have been visible along the river's terraces as the *Half Moon* sailed past. This would have amounted to large palisaded villages, cleared and planted fields, and fields in the process of being cleared. Also visible would have been stone fishing weirs that jutted out into the river and large mounds of oyster shell (middens) resulting from past meals. But this would all soon change. Fifteen years after Hudson's report reached his employers, there were Dutch settlements on Manhattan Island (Thompson 1980).

## DUTCH TENURE

Although Henry Hudson was in the employ of the Dutch East India Company, it was the Dutch West India Company that began settlement on Manhattan Island. This institution was formed in 1621 with the intention of starting trading posts and settlements in North America, the Caribbean, Brazil, and Africa. By 1624, they had established several forts on Manhattan Island and farther upriver. In 1626, they purchased the “Island of Manhattes” from a local Lenape group, named it New Netherland, and began the next phase of landscape alteration (Thompson 1980).

In 1625, the Dutch settlers began erecting the capital of New Netherland, New Amsterdam, in the area that surrounds current-day City Hall Park. Modern buildings and pavement aside, what the new owners found in lower Manhattan did not at all resemble the level aspect of the modern city. What existed in 1625 was a large Lenape settlement situated on several 30’ tall hilltops that surrounded a large freshwater pond. This was the Collect Pond, originally named the *Kalck* by the Dutch and also sometimes simply called “Fresh Water.” The Collect Pond was a kettle pond formed by the retreating Wisconsinan glacier. A kettle pond is formed when the glacier leaves behind a large block of ice. The melting waters of the main glacier transport multi-tons of material (outwash) that surround the castoff ice block. When the ice block melts, the cavity left behind becomes a pond. The Collect Pond was approximately 70’ deep and fed by underground springs. Because Manhattan Island is situated within a tidal estuary, the water from the encompassing rivers was salty and non-potable. Therefore, all potable water on the island had to come from underground springs or rainwater, which made the Collect Pond the main source of drinking water for lower Manhattan for nearly 200 years (Sanderson 2009). A much smaller pond was located just to the south of the Collect Pond, separated by a narrow band of land. This smaller pond was generally known as the Little Collect or the Powderhouse Pond, due to the powderhouse situated on the narrow strip of land.

To the south of the two ponds, another broad, flat-topped hill contained the expanse that eventually became City Hall Park. West of the pond was a 40’ high hill known as *Kalck Hoek*, a Dutch name that referred to the numerous oyster shells that lined this hillside. North of the pond was Bayard’s Mount, which rose to 110’. Eastward were two formations. The first was essentially a broad stretch of uplands with bluffs overlooking the East River. The second was Corlear’s Hook, an 80’ tall formation that once jutted out into the East River within what is now the Lower East Side (Sanderson 2009). These are just a few of the 573 hills that covered the island in the seventeenth century. Near the City Hall Park project area, numerous streams and creeks fed by the Collect Pond meandered among these many hills, in turn feeding numerous wetlands and salt marshes. The major streams included the Old Wreck Brook and Lisenard Creek. Old Wreck Brook was fed by the Collect Pond and drained into the East River. It initially drained down a steep incline towards the East River and then meandered through a swampy valley defined by the bluffs along the East River and Corlear’s Hook, creating an area originally known as “The Swamp” and later as “Wolfert’s Marsh.” Lisenard Creek also drained from the Collect Pond, but along a longer route to the west and ultimately into the Hudson River. It ran to the north of and around *Kalck Hoek* through a marsh valley bounded by the *Kalck Hoek* and Bayard’s Mount, then turned westward to the Hudson. Lisenard Creek was sluggish, but wide enough for small boats to

travel between the Hudson and the Collect Pond. Tributaries flowed south and north after the turn towards the Hudson. These tributaries fed a series of wide pastures, swamps, and salt marshes eventually known as the Lispenard Meadows. While the tops of the many hills offered fertile agricultural lands, much of lower Manhattan was comprised of these swamps and salt marshes at the hills' bases. Northwest of the Collect Pond, another string of hills separated future Greenwich Village from the marshlands that surrounded the pond and its attendant streams. The Dutch called these hills the *Zandtberge*, or the Sand Hills (Sanderson 2009).

Hudson foresaw the potential bounty of Manhattan Island from aboard ship. The Dutch settlement of New Amsterdam proved him correct. In November 1626, the Dutch government received its first messages concerning the settlement. The fertile nature of the hills surrounding the Collect Pond was borne out by the news that the colonists “had all their grain sowed by the middle of May, and reaped by the middle of August. They send samples of summer grain; such as wheat, rye, barley, oats, buckwheat, canary seed, beans, and flax” (Thompson 1980:123).

The sheer bounty of the other available natural resources can be seen in the manifest of the ship that brought the news of the successful settlement to Holland. The cargo of this ship included: “7246 Beaver skins, 178 ½ Otter skins, 675 Otter skins, 48 Minck skins, 36 Wildcat skins, 33 Minck skins, 34 Rat skins, considerable Oak timber and Hickory” (Thompson 1980:123).

It has been speculated that when the representatives of the Dutch West India Company began their colony around the Collect Pond in lower Manhattan, they chose the most easily habitable and fruitful area on the island (Sanderson 2009). The older English settlements in Plymouth and Virginia were high-risk ventures that nearly failed. Plymouth still existed on a subsistence-only level; they had only managed to reap enough crops to survive, much less enough to send samples home. The Virginian colonists had nearly starved to death and had just recently become self-supportive (Thompson 1980). In a relatively short amount of time, the Dutch on Manhattan had sown and reaped a surplus of crops, trapped an abundance of fur-bearing animals, and harvested a significant amount of trees. The rich natural resources and temperate environment made the settlers lives easy—naturally, the settlement expanded.

Within 16 years, the colonists had greatly altered the landscape of Manhattan Island. Plantations expanded north from the southern tip of the island, covering most of lower Manhattan and occupying a few prime coastal areas. Vinckeboons' map of 1639 (Map 4.01) shows the expansion of the Dutch farms, along with increased settlement in the lower Manhattan area. Farms surrounded the Collect Pond and lined the marshlands to the north. Docks, windmills, administrative buildings, and Fort Amsterdam occupied the area between the Collect Pond and the tip of the island. Vinckeboons' map also depicts some of the hundreds of rolling hills of Manhattan. The hills shown in the north central portion of the island may be the Sand Hills.



Map 4.01: Jan Vinckeboons' 1639 *Manatvs gelegen op de Noot [sic] Riuiet*.

Towards the end of the seventeenth century, New Amsterdam had grown into a sizable town. Visscher's 1685 map of North America has an inset (Figure 4.01) that depicts the town of New Amsterdam circa 1651. Fort Amsterdam, a windmill, docks, and many houses occupy the island's tip. In the distance, more housing and farms cover the rolling hills. This depiction shows the most immediate impact that Europeans had on Manhattan's landscape—the removal of the oak/chestnut forest that covered lower Manhattan. Another Dutch alteration of the landscape consisted of the canalization of a natural inlet known as the *Heere Gracht*. This wide, log-lined canal allowed ships access to nearly the center of town during high tide, following the course of what would one day be Broadway (Koeppel 2000). Cortelyou's "Castello Plan" of 1660 depicts this early waterway, along with a defensive wall that would one day mark the location of Wall Street (Map 4.02).

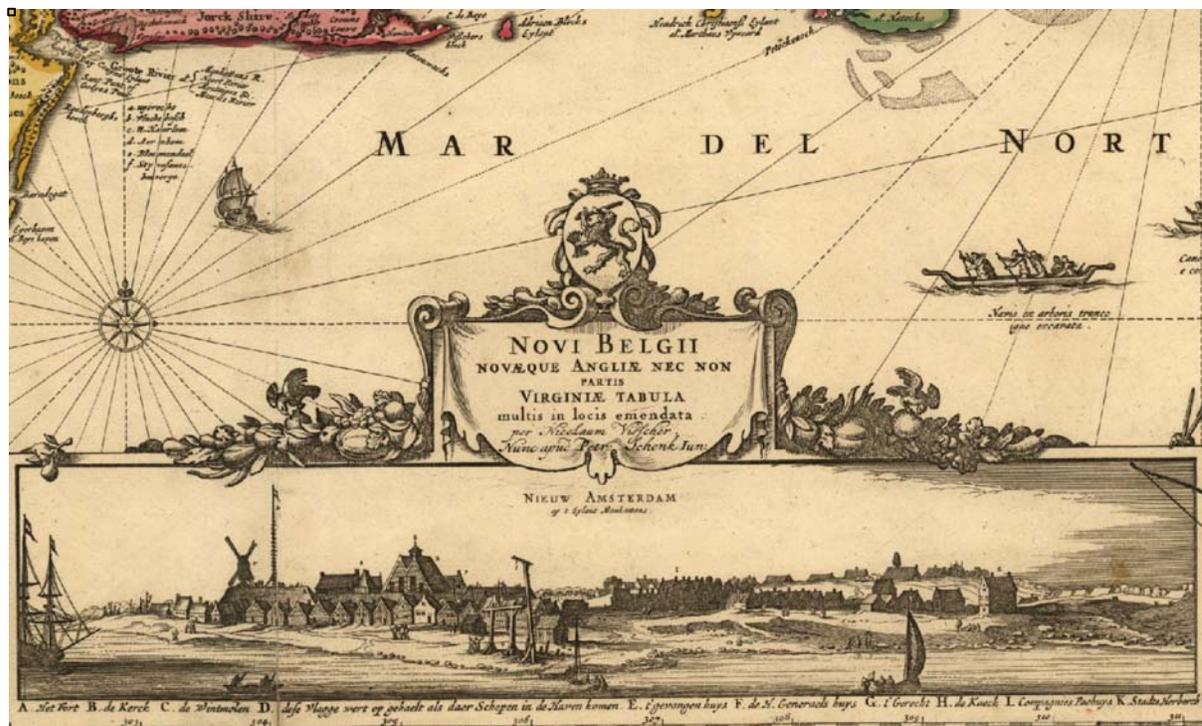


Figure 4.01: Nicolaes Visscher's 1685 *Novi Belgii Novæque Angliæ : nec non partis Virginiae tabula multis in locis emendata /per Nicolaum Visscher nunc apud Petr. Schenk Iun.*



Map 4.02: Cortelyou's "Castello Plan" of 1660.

It should be noted that Cortelyou's early map does not show the Collect Pond (see Map 4.02). It lay beyond the palisade wall to the north and past the map extent. This lack points to one of New Amsterdam's earliest problems, one that persisted into modern times: access to potable water. Drinking water had to either be hauled from the Collect Pond or drawn from wells closer to the city center. The problem was that the public and private wells within the city's walls did not tap into a deep underground spring as the Collect Pond did. Rather, these early Dutch wells were shallow, wood-lined shafts that contained brackish, barely potable water. Such water could not be readily drunk without prior boiling. Therefore, the Dutch used this subpar well water for washing up tasks or processed it into beer (Koeppel 2000). Early brewing involved adding malted grains and hops to water and first allowing it to steep at low temperatures to produce a "wort." After steeping, the grains were skimmed out, generally fed to livestock, and the liquid was brought to a steady boil. After this mixture cooled, the liquid was barreled and yeast was added to start the fermentation process (Koeppel 2000; Bonnett nd). The boiling would render the base water potable and the malted grains would probably mask any leftover brackish flavors.

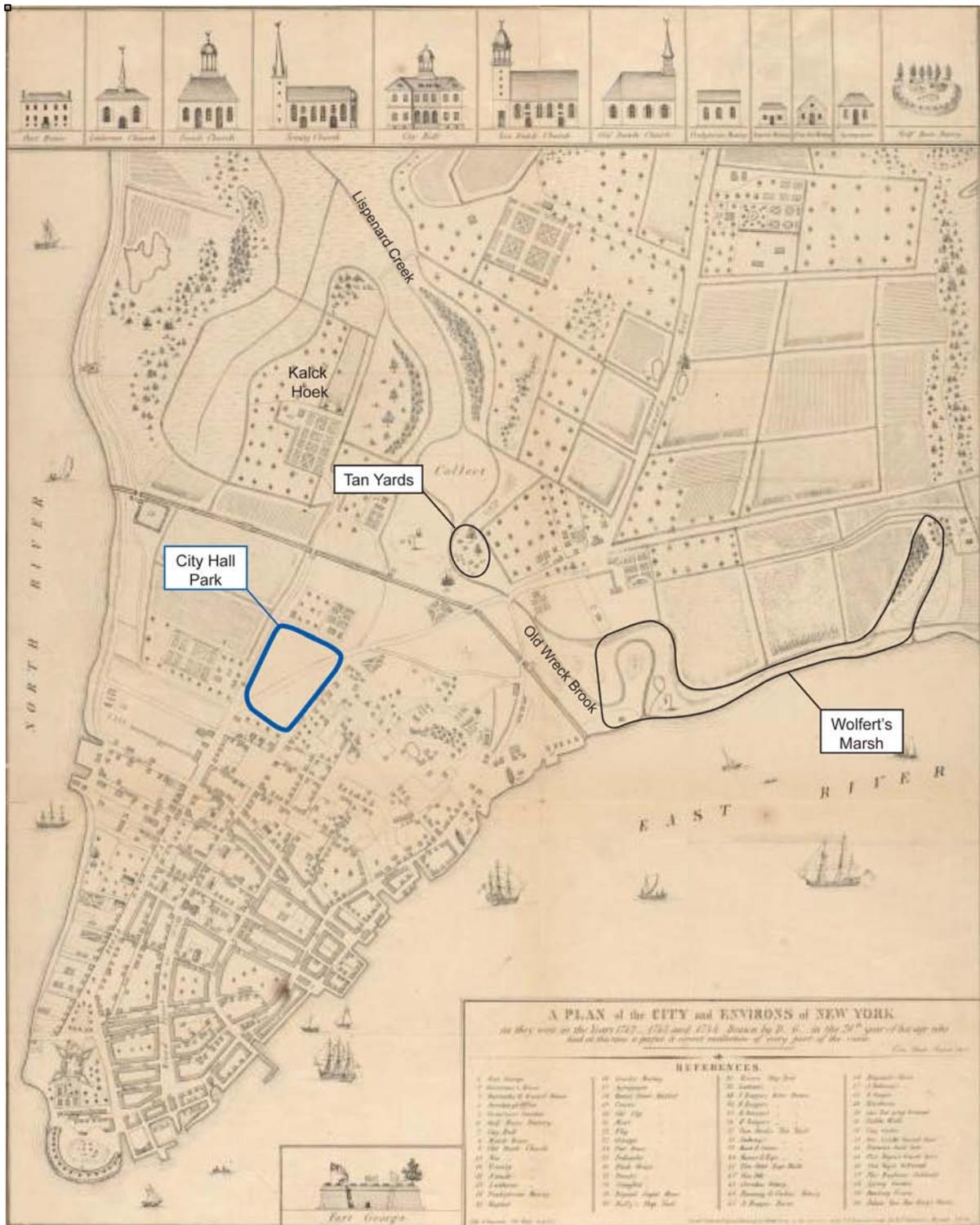
By 1664, New Amsterdam contained approximately 1,500 inhabitants (Thompson 1980). Although not a large population, especially compared to the size of contemporary New England (about 25,000 [Thompson 1980; 127]) or modern demographics, this population was clearly large enough to make the landscape unrecognizable to the former Lenape “owners.” And the next occupants of lower Manhattan would alter the physical landscape even further.

#### BRITISH TENURE

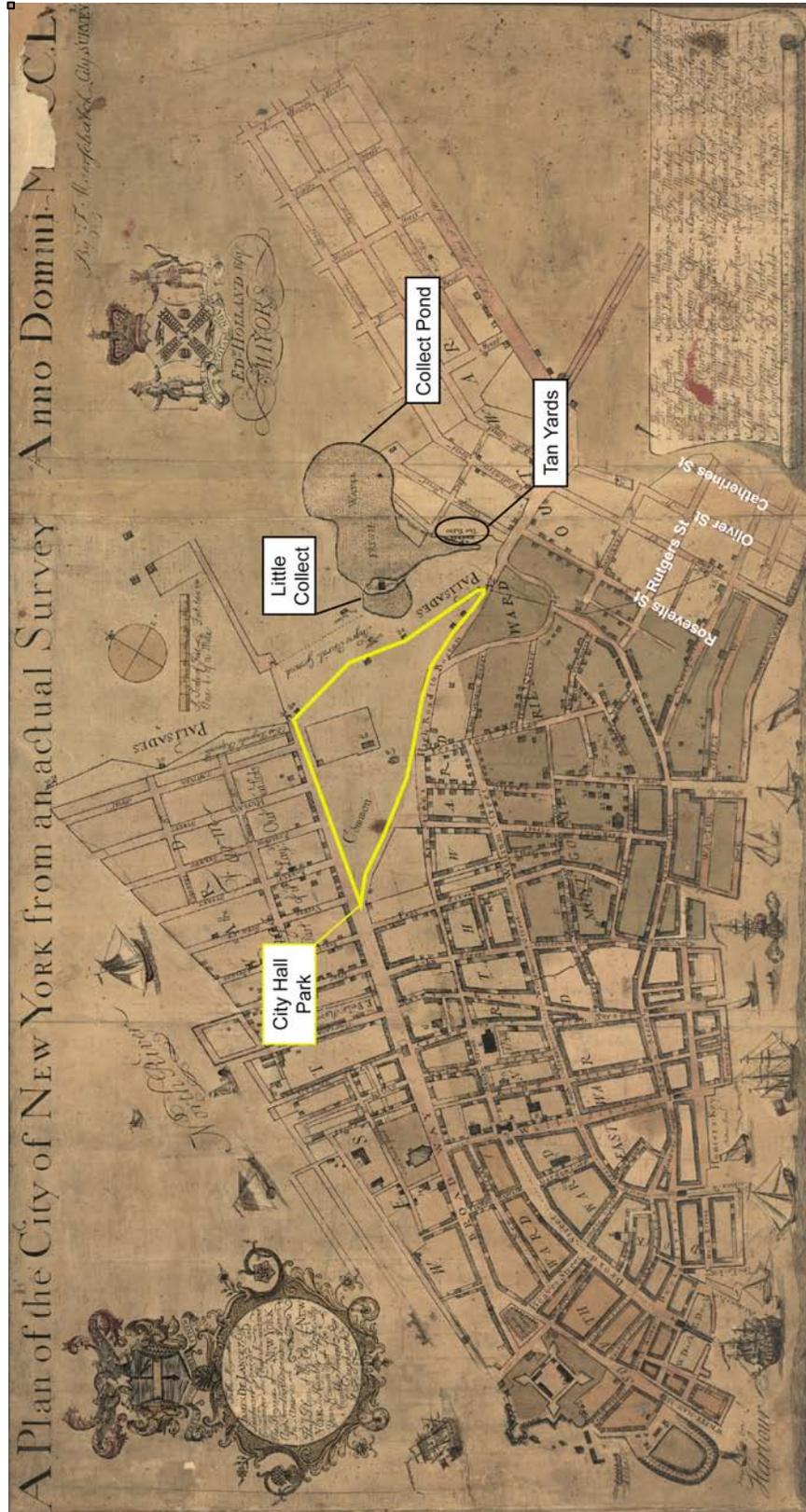
In 1664, a British fleet entered the Upper Hudson Bay and demanded the surrender of New Netherland. The governor of New Amsterdam surrendered Manhattan Island and it became a British holding. New Amsterdam became known simply as the City of New York. But the new owners effected more change than just names. By 1744, the city had greatly expanded beyond the extreme southern tip of the island. Valentines copy of Grim’s map of 1742–1744 (Map 4.03) shows that the street grid plan had expanded to the southern end of the Commons, the future site of City Hall Park. The *Heere Gracht* was filled in 1676 (Koeppel 2000; 19) and is now Broadway. To the north of the Commons, a palisade wall separated the city proper from the Collect Pond and extensive farm fields. Old Wreck Brook and Lispenard Creek still ran along their natural courses, and the farms were situated to take advantage of the fertile fields surrounding the watercourses. Outside the city’s wall, some of the more noxious industries now graced the shores of the Collect Pond. Before the 1690s, tanneries and slaughterhouses had been located near the docks. As the city grew and encompassed these areas, complaints arose about the noxious smells and offal associated with these industries. Therefore, these processes were moved to outside the city’s borders. Because sources of water were necessary for tanneries, both to process the hides and to wash away the polluting byproducts, the Collect Pond became the site of these activities for over a hundred years (Milne 2000). The decision to locate these high-pollution industries at the shore of the city’s closest freshwater source would lead to many problems in later years.

Within another 11 years, the cityscape had greatly expanded, filling in virtually all the land bounded by the edges of the island and the palisade wall. This rapid expansion is shown on Maershalck’s map of 1755 (Map 4.04), along with additional city areas outside the palisade wall to the east of the Collect Pond. What is not depicted on this map is also very important. Old Wreck Brook has been expunged, replaced by Rosevelts Street, which follows the same general course of the brook. Oliver, Catherine, and Rutgers Streets have replaced a portion of Wolfert’s Marsh, represented by the nascent oxbow meander of the brook visible on Map 4.03. The eastern portion of the marsh would be under the map key in the lower right hand corner of the map. The removal of half of the Collect Pond’s outflow system was the beginning of lower Manhattan’s most persistent environmental problem—poor drainage. It also most likely added to the pollution of the Collect Pond, as the brook could no longer be used to wash away the tanneries’ effluvia, which instead went directly into the pond (Milne 200).

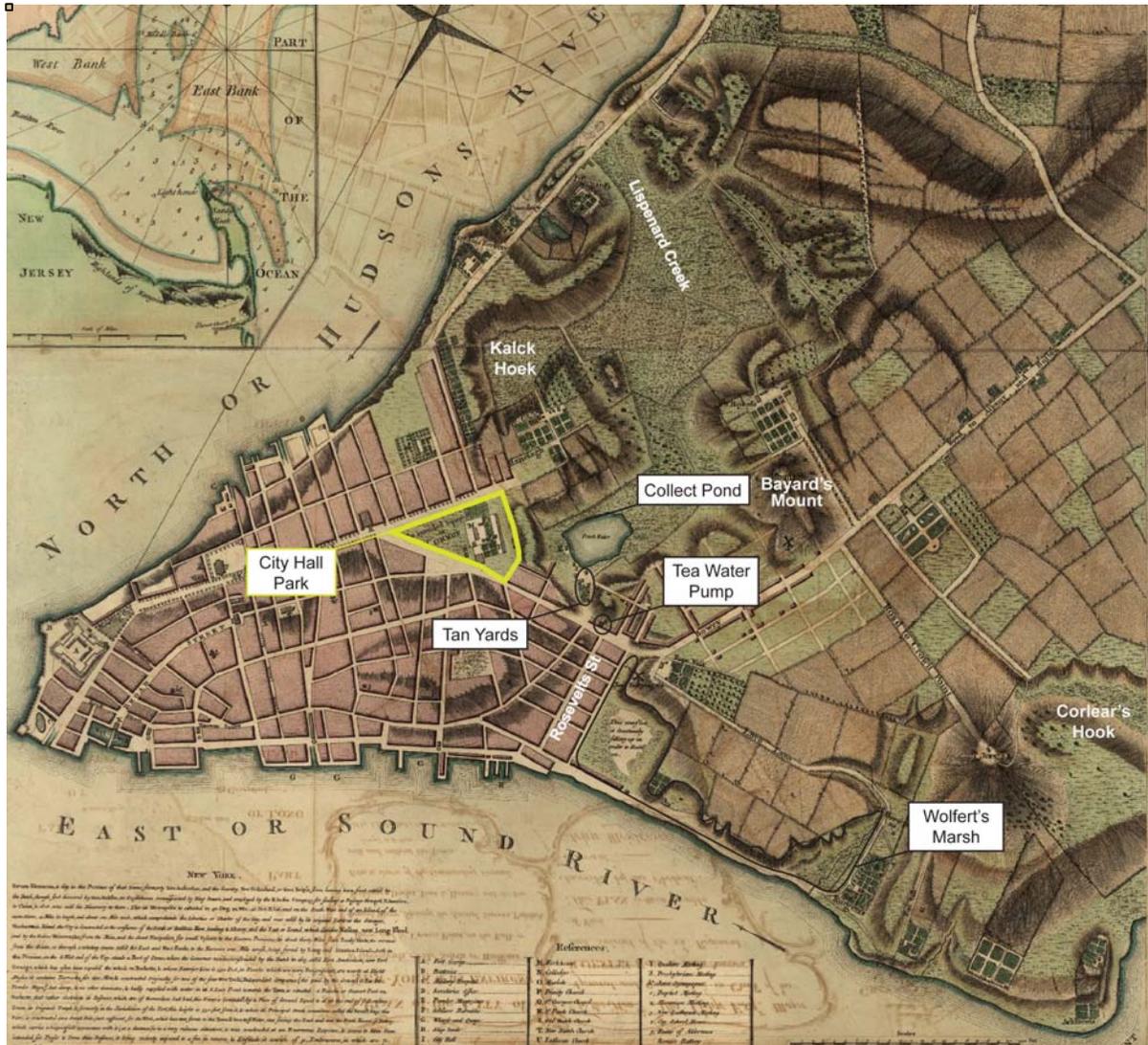
Montresor’s 1766 topographic map of New York City (Map 4.05) highlights this problem. On this later map, the entirety of Wolfert’s Marsh is depicted, but instead of the three streets of 1755, there is a marshy area captioned: “This overflow is constantly filling up in order to Build on.”



Map 4.03: D.T. Valentines *A plan of the city and environs of New York: as they were in the years 1742–1743 and 1744*/drawn by D.G.



Map 4.04: F. Maershalck's 1755 *A Plan of the City of New York from an actual survey*.



Map 4.05: John Montresor's 1766 *A plan of the city of New-York & its environs.*

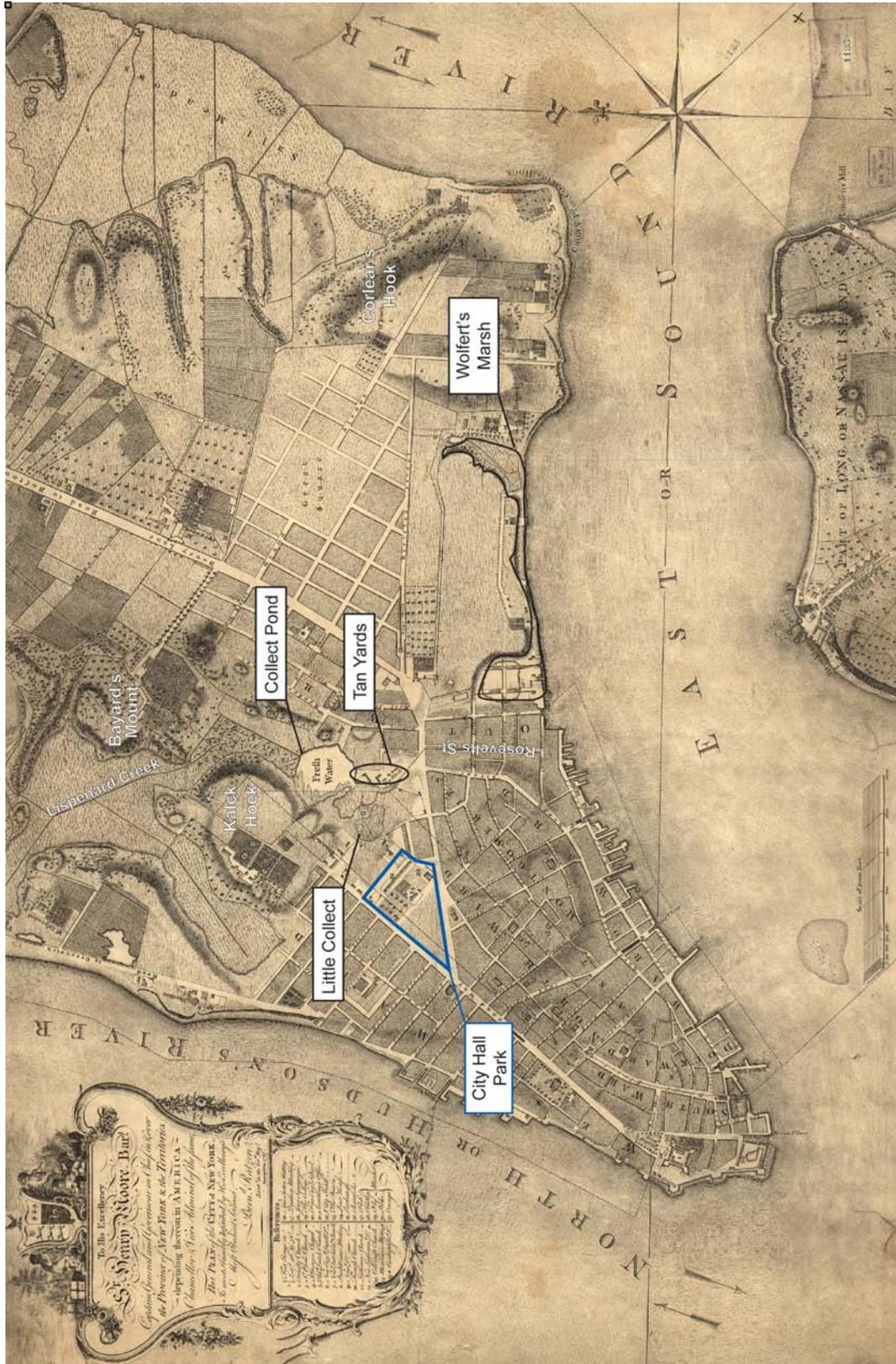
The topographic data offered on the 1766 map (see Map 4.05) explains why this area does not drain properly. The slopes of two hills bound the “overflow,” formerly the western portion of Wolfert’s Swamp. All of the Collect Pond’s eastern drainage was funneled into this valley at its western v-shaped entrance, and then spread out into the wide, swampy valley. Even though the brook was filled in and the Collect Pond’s eastern outflow possibly reduced (i.e., cut off at the source), the underground springs continued to feed the pond. The surplus water had to go somewhere, and it seems unlikely that Lispenard Creek, which took the longer and more sluggish route to the Hudson, could have handled twice the outflow. Thus, the Collect Pond likely continued to drain along its accustomed eastern path. It likely flowed, although slowly, beneath Rosevelts Street and entered Wolfert’s Marsh where the meander once existed. As the brook’s outflow to the East River was also blocked and steep slopes lay to the north, the surplus water gathered in the overflow. The “in order to Build on” portion of the caption may indicate a need to in-fill this area with any available materials,

in order to provide a firm base for future construction. It also seems likely that Rosevelts Street was not the driest of passages, and that the houses lining it, and nearby streets, may not have had the firmest foundations.

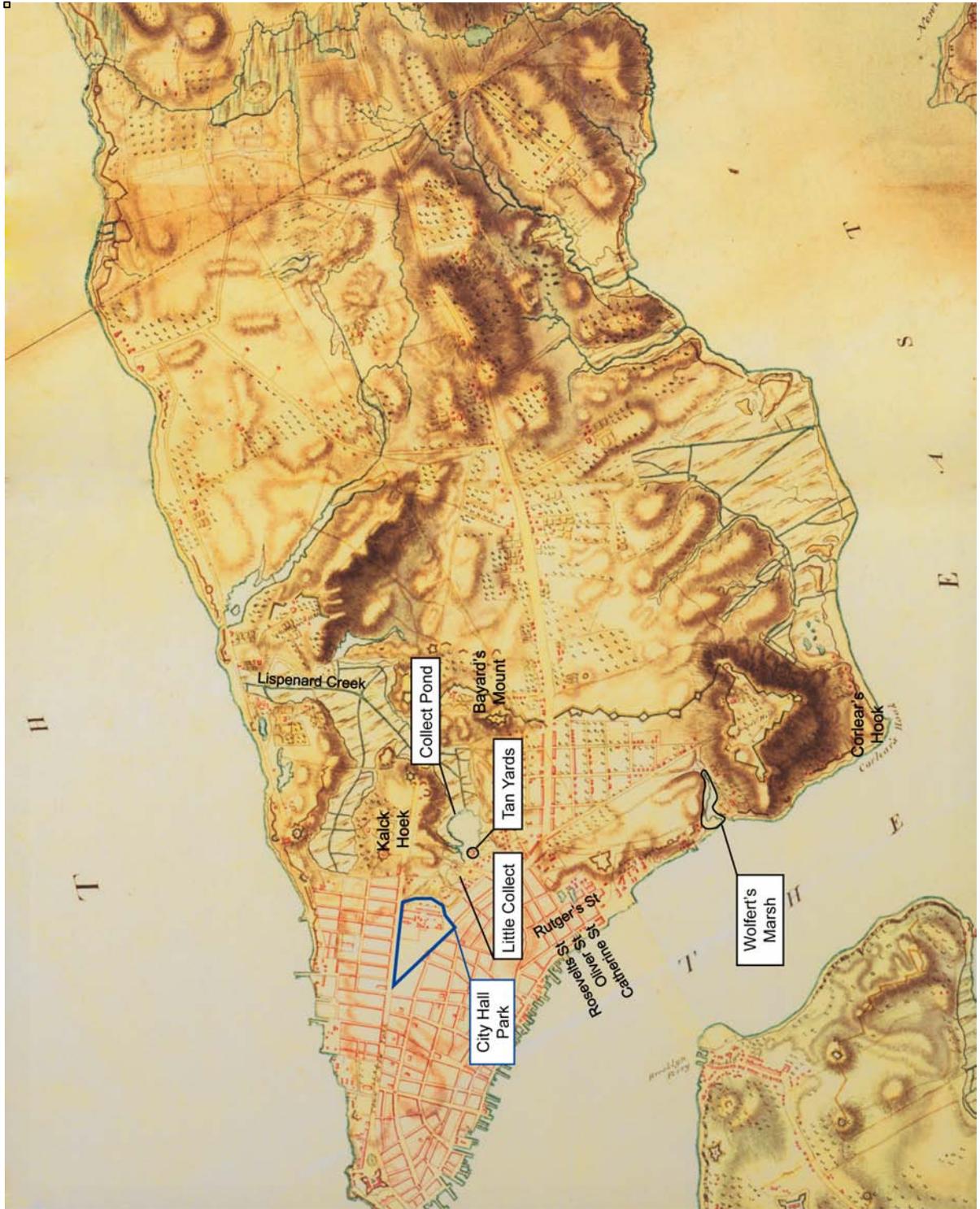
Montresor's map also shows the location of what was one of New York City's main local sources of fresh drinking water. This was the famous Tea Water Pump, frequently used as a selling point for local real estate. It was located to the east of the Collect Pond, near the intersection of present-day Chatham and Orange Streets (see Map 4.05). It tapped into the same underground spring that fed the Collect Pond and was constructed as early as the 1730s. The Tea Water Pump was initially operated (or leased) by the Hardenbrooks family and became the city's primary water source for the remainder of the colonial period (Koeppel 2000: 31; Milne 2000).

Ratzer's map of one year later (Map 4.06) again depicts Oliver, Catherine, and Rutgers Streets, but surrounds them with a swamp/marsh symbol. An outflow to the East River is depicted, which may indicate an attempt to keep this area drained. The eastern portion of Wolfert's Marsh, adjacent to Corlear's Hook, is also present, but there appears to be construction between the two swampy areas. This indicated continued drainage problems in the area, 12 years after the in-filling of Old Wreck Brook. The Ratzer map also depicts the further expansion of New York City; the residential areas are seen here creeping closer to the tanneries on the Collect Pond's shores (see Map 4.06). During this time period, additional tanneries were constructed in close proximity to the Collect Pond, along with slaughterhouses and ropewalks (Milne 2000). All of these industries contributed unfavorably to the health of the pond, as it was used to dispose of their waste products.

The streetscape also expanded to the north and eastward to Corlear's Hook. Farmland still occupied the southern portion of the bluffs between Corlear's Hook and Wolfert's Marsh, but streets were present to the north. While these pre-Revolution maps of New York City offer much topographic and landscape data, they only focus on the more settled portion of the city (i.e., lower Manhattan). The British Headquarters Map of 1782 (Map 4.07) depicts the entire island near the end of the American Revolution. Produced by British Army surveyors to aid in the defense of Manhattan Island from the Colonial Army, this map accurately charts all the island's topography, water courses, roads, settlements, and fortifications. Outside of additional warehousing east of Oliver Street, the streetscape of the city appears little changed from 1767. A portion of Wolfert's Marsh still existed to the east of these new structures, between the bluffs and Corlear's Hook. Additionally, the "overflow" seen on Maps 4.05 and 4.06 had been reduced to two small drainage pools located north of Rutgers Street. For at least 27 years after the removal of Old Wreck Brook, Wolfert's Marsh persisted. The remainder of the island was crisscrossed with roads that literally covered it from end to end. Lisenard Creek, and its attendant salt marshes and swamps, remained untouched. Farms, plantations, and small settlements dotted the landscape, but the bulk of the population remained south of Bayard's Mount and Corlear's Hook. The 1782 map also depicts the 573 hills of Manhattan Island and many streams, swamps, and salt marshes. If the roads, farm fields, and structures were removed and the landscape forested, this map would accurately depict the *Mannahatta* of the Lenape. A year after the completion of this military map, the American Revolution was over and Manhattan Island had new tenants.



Map 4.06: Ratzler's 1767 Plan of the city of New York.



Map 4.07: The British Headquarters Map of 1782.

## AMERICAN TENURE

After the end of the American Revolution, New York City continued to expand, eventually becoming one of the fledgling nation's premier cities. As seen on McComb's 1789 map, the bluffs over the East River had been transformed from agricultural fields into part of the city. McComb's map of 1789 (see Map 4.08) shows the extension of the streetscape onto the bluff, but most of the lots appear unoccupied (i.e., unshaded). As the city grew, the East River shoreline beneath these bluffs would be both landfilled to the bluffs' elevation and expanded southward. The western edge of Corlear's Hook was beginning to be incorporated into the city proper. Over time, this prominence would be excavated, bringing the hook down to roughly the same elevation as the bluffs (Sanderson 2009). The material removed from the hook was possibly used as fill that expanded the city's shoreline. A remainder of Wolfert's Marsh still existed between the bluffs and Corlear's Hook. On McComb's 1789 map, the Kalck Hoek shows little new development (see Map 4.08). At this point, the area surrounding the Collect Pond and the southern portion of the swamps associated with Lispenard Creek remained free of housing, but tanneries and other noxious industries were still situated therein. These concerns continued to pollute the Collect Pond to the point that nearby freshwater springs were rendered non-potable. As the Tea Water Pump tapped into the same spring that fed the Collect, it too was adversely affected. By 1785, its output was so noisome that "common pump water, used only to scrub houses" was preferable for cooking and drinking (Milne 2000: 24). This quote indicates that shallow, brackish wells that dotted the city were now considered of a better quality than the once-vaunted Tea Water Pump. Within the first years of the nineteenth century, the Tea Water Pump was declared unfit to drink and sealed.

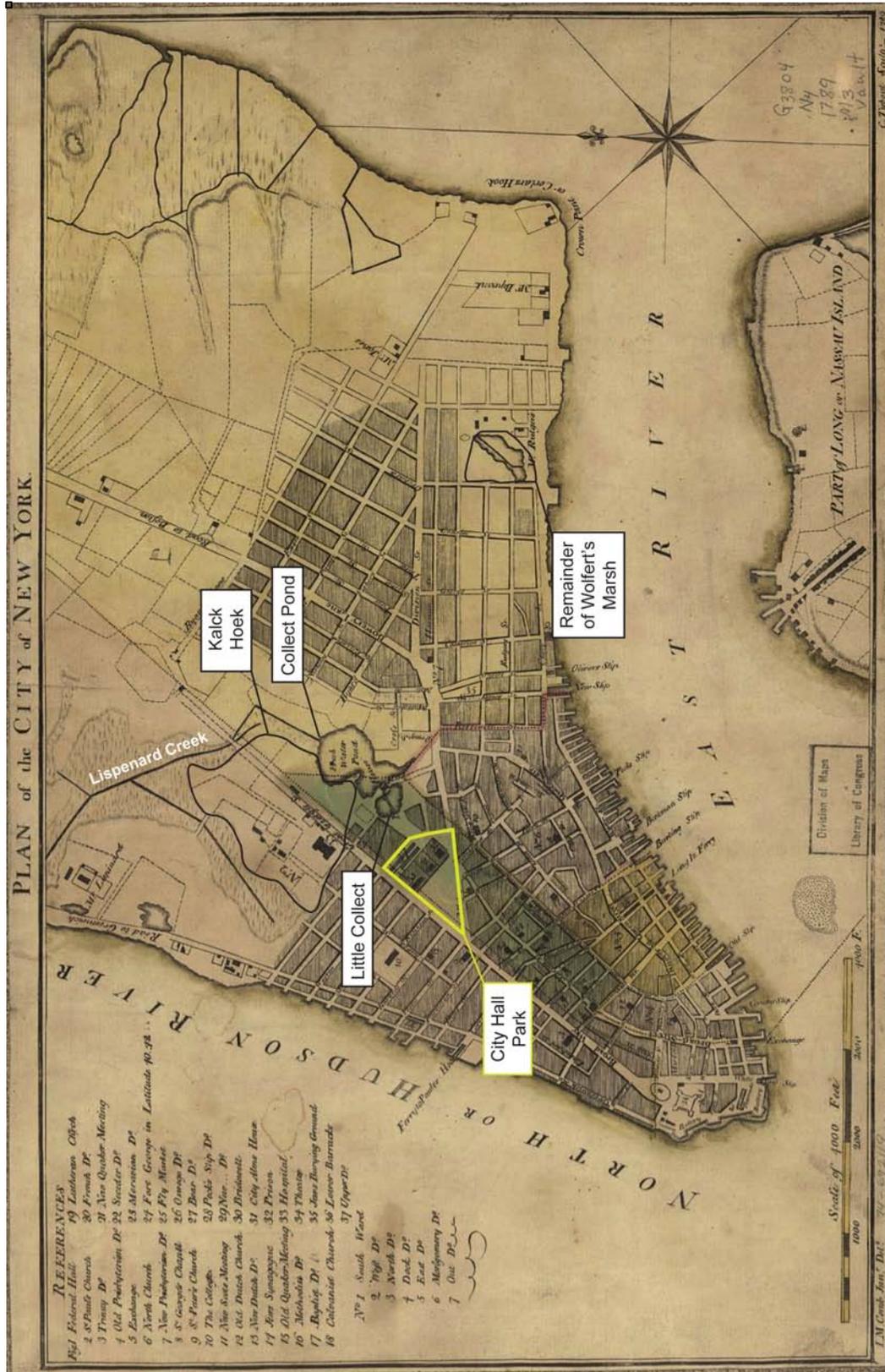
Within only 14 years, most of these open spaces just to the north of City Hall Park would vanish. As shown on Longworth's 1803 map, the cityscape had expanded onto Corlear's Hook and to the north, even into the salt marshes north of the Hook. Much of this area was most likely slated for future housing, as they appear unoccupied (i.e., unshaded). Most of the salt marsh and swamp areas that surrounded Lispenard Creek were also gridded for development, but actual residences were few. Closer to the city center, the city's residences had grown to the edges of the Collect Pond (see Map 4.09). Much of this land consisted of incompletely filled wetlands adjacent to the pond or northern portions of the former Wolfert's Marsh. Tanneries and residences began to sink as the soil subsided and the Collect Pond and its remaining swampland stagnated (Milne 2000). The stagnant conditions affecting this once freshwater source probably contributed to the Yellow Fever epidemic of 1798. An item in the *Commercial Advertiser*, one of the few local newspapers that functioned during the epidemic, described the Collect Pond as a pool of "all the leakings, scrapings, scourings, p - - s - -gs, & - - - - - gs, for a great distance around" (Koeppel 2000: 64).

Increasingly strident calls were made to fill in the Collect Pond and remove this source of disease and noisome stench. Lispenard Creek was widened into a canal that allowed the waters to flow into the Hudson. Part of this canal's path still exists today as Canal Street. The diagonal course of Canal Street marks the original flow of Lispenard Creek. As the pond was being drained, it was filled in using materials mined from nearby Bayard's Mount and other surrounding hills. The city was also paying five cents per cart of soil of any

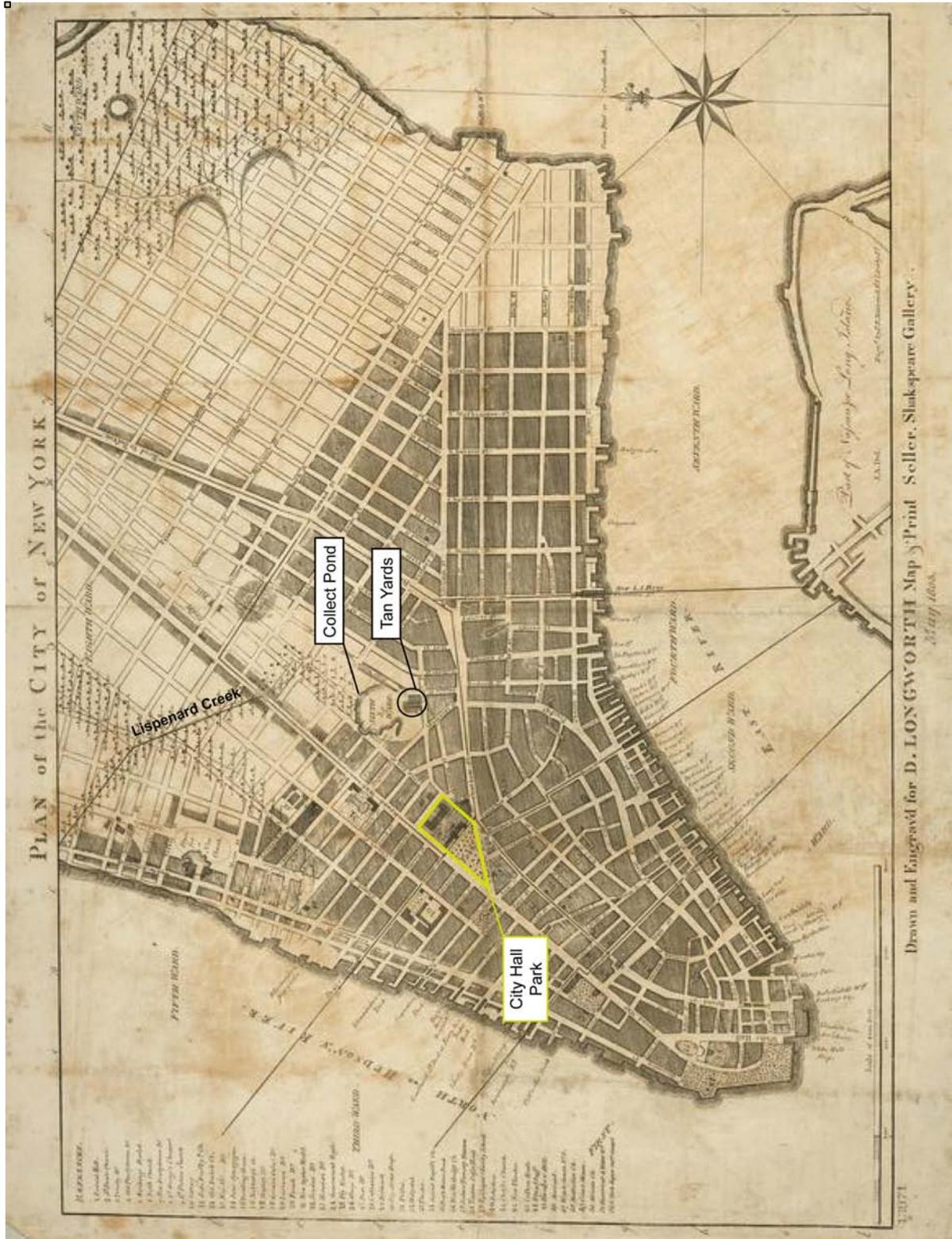
provenience to supplement this fill. By 1811, the city had spent more than \$40,000 on purchased fill materials. By approximately 1812, the Collect Pond was mostly drained and unevenly filled. For a brief period of time, the neighborhood over the former Collect Pond was fashionable. Then by 1820, the ground began to subside and the area over the Collect Pond, known as Five Points, became the first slum of Manhattan (Koeppel 2000; Milne 2000; Sanderson 2009). Longworth's later 1817 map of the city depicts the aftermath of this engineering effort (Map 4.10). At this point in time, the lower Manhattan street grid covered the former pond and the canal had been filled. On Longworth's map, the former northern course of Lispenard Creek is marked by Collect Street, and Canal Street marks the western course of the creek.

Interestingly, although obviously polluted by 1785 and described as a depository of "leakings" in 1798, the area near the Collect Pond was tapped to support the Manhattan Company's water distribution scheme in 1799. Based on the advice of Christopher Colles, the designer of a pre-Revolution waterworks the British destroyed before completion, a well was sunk near the Collect Pond. Colles favored this location over one within present-day City Hall Park, as he believed that the water there would be brackish (Koeppel 2000: 88). As this well must have filled with water similar to that furnished by the Collect Pond and the Tea Water Pump, his choice appears odd.

The year 1811 not only marks the disappearance of the Collect Pond, it also marks the beginning of the end of the many hills of *Mannahatta*. In response to the growing population of lower Manhattan, the Common Council petitioned the State Legislature for assistance in developing a detailed plan for the city's continued expansion. The Common Council also desired the authority to both survey Manhattan and hold future councils to this plan. In 1807, the State Legislature approved the concept and the Common Council moved to impose order over the hilly wilds of Manhattan Island. By 1811, the plan was published and the future of Manhattan was writ large on an 8' map the commission produced. Head surveyor John Randel undertook the survey of the topography this plan would overlay, which would take over 10 years (Bridges 1811; Reps 2002; Sanderson 2009). While the then-extant cityscape of lower Manhattan was a somewhat organic affair that followed natural terrain features and property boundaries, the proposed plan was nothing of the sort. Instead, the 1811 *Commissioners Map of the City of New York*, which depicted the future streetscape, was to follow a strict Cartesian grid superimposed over three-quarters of Manhattan (Map 4.11; note that this map is a later reproduction for *Harper's Weekly*). This grid began at the edge of early-nineteenth-century lower Manhattan, north of where the British fortifications on the headquarters map (see Map 4.07) and Bayard's Mount were once located. From Houston Street northward, the grid extended ruler straight across the bulk of Manhattan, with numbered streets and avenues replacing the X/Y coordinate system of Descartes' grid. Only Greenwich Village escaped this grid, as it already contained an established street system.



Map 4.08: John McComb's 1789 *Plan of the City of New York*.



Map 4.09: David Longworth's 1803 *Plan of the City of New York*.



Map 4.10: David Longworth's 1817 Map of New York.



Map 4.11: 1811 Commissioners' map of the City of New York.  
This map is a later reproduction from *Harper's Weekly*.

This grid did not take current property boundaries or terrain into account; all would be subservient to the rationalizing influence of the grid. The grid divided extant farms and estates. It was apparently assumed that property owners would turn to commercial or real estate interests by the time the city grew to their properties. Current terrain was ignored; much of Twelfth Avenue was located in the Hudson and could not be constructed without future landfilling. The streets and avenues overlaid the hills of Manhattan with no provisions regarding changes in elevation. It was assumed that these hills would either be removed or the surrounding land would be built up (Rose-Redwood 2002). Few large “natural” open spaces would be allowed, as the surrounding East and Hudson Rivers were considered to provide sufficient fresh air for the entire city. The only open spaces were “The Parade,” which eventually became Central Park, a reservoir, a few small public squares, and an area surrounding the Haerlem Marsh at the north of the island (Bridges 1811; Reys 2002; Rose-Redwood 2002).

The 1811 commissioners’ map (see Map 4.11) tolled the death knell for *Mannahatta*, the Land of Many Hills. It heralded into being Manhattan, a modern rational city based on order and right angles. Instead of living in harmony with the land like the Lenape (or even the Dutch), using its natural features and landscape to their advantage without excessive alteration, the environment would be altered to satisfy human desires. The varied resources and terrain would be gridded over and brought into alignment with the modern need for housing and commercialism, with no regard to the resources themselves. In essence, what began with the location of tanneries along the Collect Pond continued with the commissioners’ map.

The subjection of nature to human control is exemplified in the implementation of the 1811 plan. Although John Randel performed a topographic survey of the entire island of Manhattan, which was published on 93 farm maps (Sanderson 2009), little regard was paid to his exhaustive work. As the city expanded and the “plan” followed, the elevation of the notional streets did not relate to that of the surrounding landscape. Randel’s work was ignored and the relative elevation of street versus city block was decided on an ad hoc basis throughout the nineteenth century (Rose-Redwood 2002). Streets and avenues were cut through hills and ridges, sometimes leaving dwellings, or whole farms, above or below the street grade (Image 4.01). Eventually, all these areas would be brought to street grade.

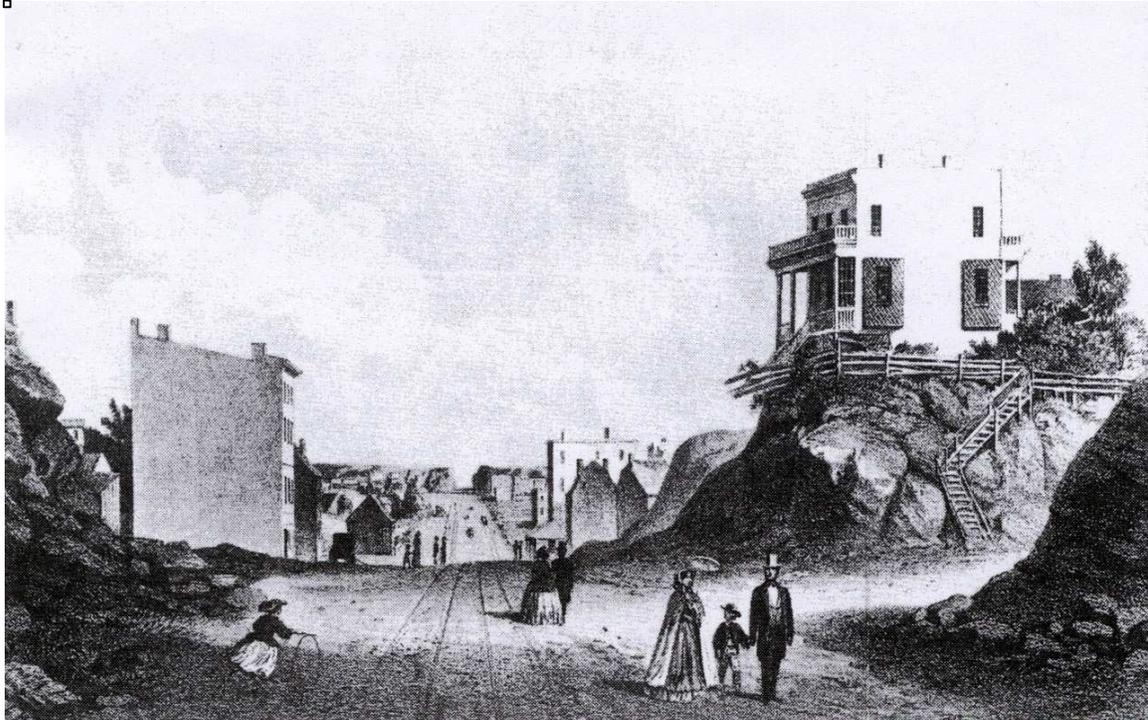


Image 4.01: Junction of 2<sup>nd</sup> Avenue and 42<sup>nd</sup> Street in 1860, facing north (Source: Spann 1988).

By the mid-nineteenth century, Henry Hudson would have been hard pressed to locate a recognizable natural terrain feature in lower Manhattan. Parsons' sketch of 1856 depicts a bustling cityscape (Image 4.02). The original streetscape filled the entire tip of the island and consisted of residential areas, spired churches, and civic buildings. The shorelines had expanded and been built up; docks and four- to five-story warehouse/commercial buildings rested upon landfill materials gleaned from the former hills. North of where Bayard's Mount once rose, the Cartesian grid of 1811 extended far to the north. As the century progressed, so did Manhattan. The commissioners' grid consumed and subsumed all into the cityscape. By the end of the nineteenth century, little of the original terrain of the island remained. James Reuel Smith, a local author and naturalist, lamented:

...as with the very rapid progress of the City, especially during the last decade, springs and other natural features of the landscape are disappearing from sight with such celerity that it is merely a matter of months when there will be none whatever left in view upon Manhattan Island [Smith 1938: 1].

At this point in time, the environmental/landscape aspect of lower Manhattan (and much of the rest of the island) was essentially fixed. The creeks, marshes, and ponds were filled in; the Collect Pond, Lispenard Creek, Old Wreck Brook, and Wolfert's Marsh lay beneath city streets and buildings; the highest and lowest elevations were made even; Bayard's Mount and Corlear's Hook had been used to bring much of lower Manhattan up to a common grade. Generally speaking, the lower Manhattan of 1817 (see Map 4.10) or 1856 (see Image 4.02) differs little from the modern city except in architecture and width. Skyscrapers have risen

among the original Dutch streets, but these can be viewed as modern mosquitos encased in the historic amber of lower Manhattan. The tip of Manhattan has widened significantly along the shorelines of the East and Hudson Rivers due to landfilling to support extensive dock/warehouse structures (Sanderson 2002:81). If Captain Hudson could compare nineteenth-century lower Manhattan to the modern version, he would still be able to recognize the area. He may even be able to discern the British or Dutch roots of the city within the creeping coral of the modern city. But could Hudson recognize the Lenape *Mannahatta* that he viewed in 1609? No, he could not. *Mannahatta* was no more; only Manhattan remains.



Image 4.02: Parsons' sketch of 1856.

## THE CURRENT LANDSCAPE

### UNDERLYING SOILS

Specific soils within the project area consist of Pavement and Buildings, Outwash Substratum (0–5% slopes). This is characterized by nearly level to gently sloping landscapes within highly urbanized areas, where impervious pavements and buildings cover more than 80% of the surface. Sorted and stratified glacial till is located beneath these urban surfaces (New York City Soil Survey Staff 2005). In general, bedrock (i.e., Manhattan Schist) is rather far from the surface in this portion of lower Manhattan. In the area surrounding City Hall Park, the average depth to bedrock varies from 25 to 50 meters (approximately 82' – 164') (Barr et al. 2010).

### HYDROLOGY AND ELEVATION

The East and Hudson Rivers currently provide drainage outlets for Manhattan Island. City Hall Park is located near the center of the southern tip of Manhattan Island, and is roughly equidistant from the two rivers that define the island. The East River is located approximately 2,819' to the southeast and the Hudson River is approximately 2,909' to the northwest. The two rivers join at the southern tip of Manhattan Island, which is 1.021 miles southwest of City Hall Park, and form the Upper Hudson Bay. Elevations within the project area are roughly 40' above mean sea level (amsl). At a nearby USGS monitoring well, located near the intersection of Henry and Pike Street at an elevation of 35' amsl, the water table currently resides at approximately 8.44' amsl, or 31.56' below surface (USGS 2007). This indicates the current water table at City Hall Park is likely 5' deeper (i.e. 36' below surface).

The current depth to water within the project area appears to have changed significantly since the first wells were excavated in the seventeenth century. The Dutch wells were apparently shallow, brackish affairs that never furnished truly potable water. Well water was used for task work and to brew beer and drinking water came from the Collect Pond. The British excavated the first public wells in the city, but these too were of poor quality; they also used the products of these wells for utilitarian purposes and to brew tea. Like beer brewing, tea making required boiling water and steeping, which purified the water and masked the flavor (Koeppel 2001:3). After the discovery of the Tea Water Pump, the sole source of clean spring water in New York City located near the Fresh Water (Collect) pond, those that could afford the annual subscription preferred this source as opposed to the public wells (Koeppel 2000:3, 31). As the last local freshwater sources became tainted by industry in the late eighteenth century, the residents of lower Manhattan imported spring water from the northern “suburban” portion of the island rather than drink from the polluted or brackish sources of lower Manhattan. As late as 1799, a proposed well and waterworks in City Hall Park was decided against due to poor water quality, and a site adjacent to the polluted Collect Pond was considered superior (Koeppel 2000:31, 2001:3). This appears to indicate that as late as 1799, the project area had a shallow, albeit, brackish water table. During fieldwork, a capped stone-lined well (Feature 8) was encountered just behind City Hall at approximately 3.53' below surface<sup>1</sup>. Archaeological investigations determined that the base of the shaft feature

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<sup>1</sup> This will be further discussed in Chapter VII.

was 9.4' below its cap, which is about 12.57' below current surface. If it is assumed that the surface of the well's cap indicates original surface, this feature definitely fulfills the criteria of "shallow." Even if the upper 3.53' of the shaft was removed prior to capping, it is still rather shallow.

Why then is the current water table over 30' below surface? Although the surrounding hills and ponds of lower Manhattan have been leveled or filled, Sanderson's GIS work in the city indicates that the project area itself has undergone little alteration (Sanderson 2002:81). City Hall Park was originally a broad hilltop that overlooked the swampy valley of the Collect Pond; the surrounding terrain was made to conform to the project area's elevation. It does not appear that the landscape surrounding City Hall has been extensively "built up." The water table is an irregular surface that is dynamic. Rainfall adds water to the water table while drought causes it to fall (National Oceanic and Atmospheric Administration 2012).

If weather-related environmental factors could alter the water table, it is reasonable to assume that manmade influences can, as well. Three major public utilities may hold the answer to understanding what led to the change in the water table at City Hall Park. The first is the Croton Aqueduct, which brought abundant freshwater to New York City by 1842 (Koeppel 2000:281). The establishment of the aqueduct lessened the need for public wells, which in turn led to a decrease in the amount of water being drawn from the ground. According to the United States Geological Survey (USGS) and the National Oceanic and Atmospheric Administration (NOAA), pumping can lower the water table surrounding a well. The extensive use of multiple wells in the concentrated area of lower Manhattan had kept the water table at a moderate level. This would have prevented the ground surface from becoming over-saturated, given the natural environment of the surrounding area. The majority of lower Manhattan is classified by Deerfield soils, which is moderately well drained but has a high to very high saturated hydraulic conductivity (United States Department of Agriculture 2012). With the decreased draw on groundwater from these wells following implementation of the Croton Aqueduct system, the water table began to rise. This led to the exacerbation of one of the city's perennial problems: drainage and, in turn, street and basement flooding (Koeppel 2000). In response to increased flooding issues, New York City began construction of a public sewer system (Goldman 1997). The sewer system was designed to help reverse issues of flooding, as well as address poor drainage associated with less water being drawn from the ground via wells (Koeppel 2000). While this would have alleviated issues of surface water, it may not have had a dramatic impact upon the water table. Ultimately, it was the construction of the New York City Subway System that would have the biggest impact on the subsurface of New York City.

The inauguration of New York City's first viable subway system, then known as the Interborough Rapid Transit System (IRT), occurred at the City Hall Loop Station on October 27, 1904 (IRT 1904). The station is located beneath the cobblestone parking lot just to the southwest of City Hall. A 1904 profile of the IRT (Figure 4.03) indicates that the base of the City Hall Loop Station is between 25' and 30' below surface—significantly deeper than Feature 8, the well located on just the other side of City Hall. When detailing drainage issues associated with the new subway, it is stated that drains and pumps were necessary to remove water entering the system from *above*, not below. The subway was constructed by a cut and

cover method that involved trenching from the surface to increasing depths. In deep construction, this method may encounter ground water and certainly did so during subway constructing. To address issues associated with attempting to excavate a formed trench in wet conditions, particularly with an end goal of constructing a watertight tunnel, a series of well points is one of the most commonly utilized methods to drain the water from the construction area. Figure 4.02 depicts a typically installed well point. In the case of the City Hall station, it is noted that an additional sump hole was constructed beneath the station in order to contain overhead leakage from pumping (IRT 1904: Ch. 10).

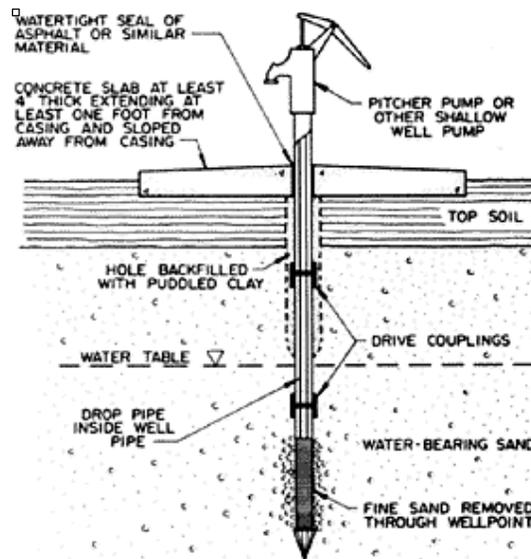


Figure 4.02: Common well point system (Source: Machmeier 1985).

Both during and after construction, the City Hall subway station required that water be pumped away from the surrounding area. Sump No. 1 consisted of a direct connect electrical pump and associated sump pit (IRT 1904). The remainder of the original underground system spans around 15.5 miles, is similar in depth, and is four tracks wide in many locations (IRT 1904). Since its initial construction, the subway system has greatly expanded and a network of subway tunnels surrounds City Hall Park. All of these tunnels and stations require continuous dewatering. Both NOAA and USGS note that the depth and shape of the water table can change dramatically due to pumping of groundwater and that excessive pumping can lower the water table over a wide region (NOAA 2012 and USGS 2012). Today the MTA continuously employs over 200 pump rooms and a series of deep wells to keep water out of and away from the subway system (Metropolitan Transit Authority 2012).

Though naturally exhibiting a relatively shallow water table, the area of City Hall Park now exhibits a significantly deeper water table. It is interesting to note that at nearby Fulton Street, between Cliff and Pearl Streets, the water table is at 6' below surface. The difference in the water table between this street and City Hall Park is approximately 25', though there is only a 10' difference in elevation. Another distinguishing characteristic is the absence of the subway system and associated dewatering along this portion of Fulton Street. It would seem apparent that the substantial underground construction and extensive use of dewatering systems since 1904 has significantly altered the water table within City Hall Park.

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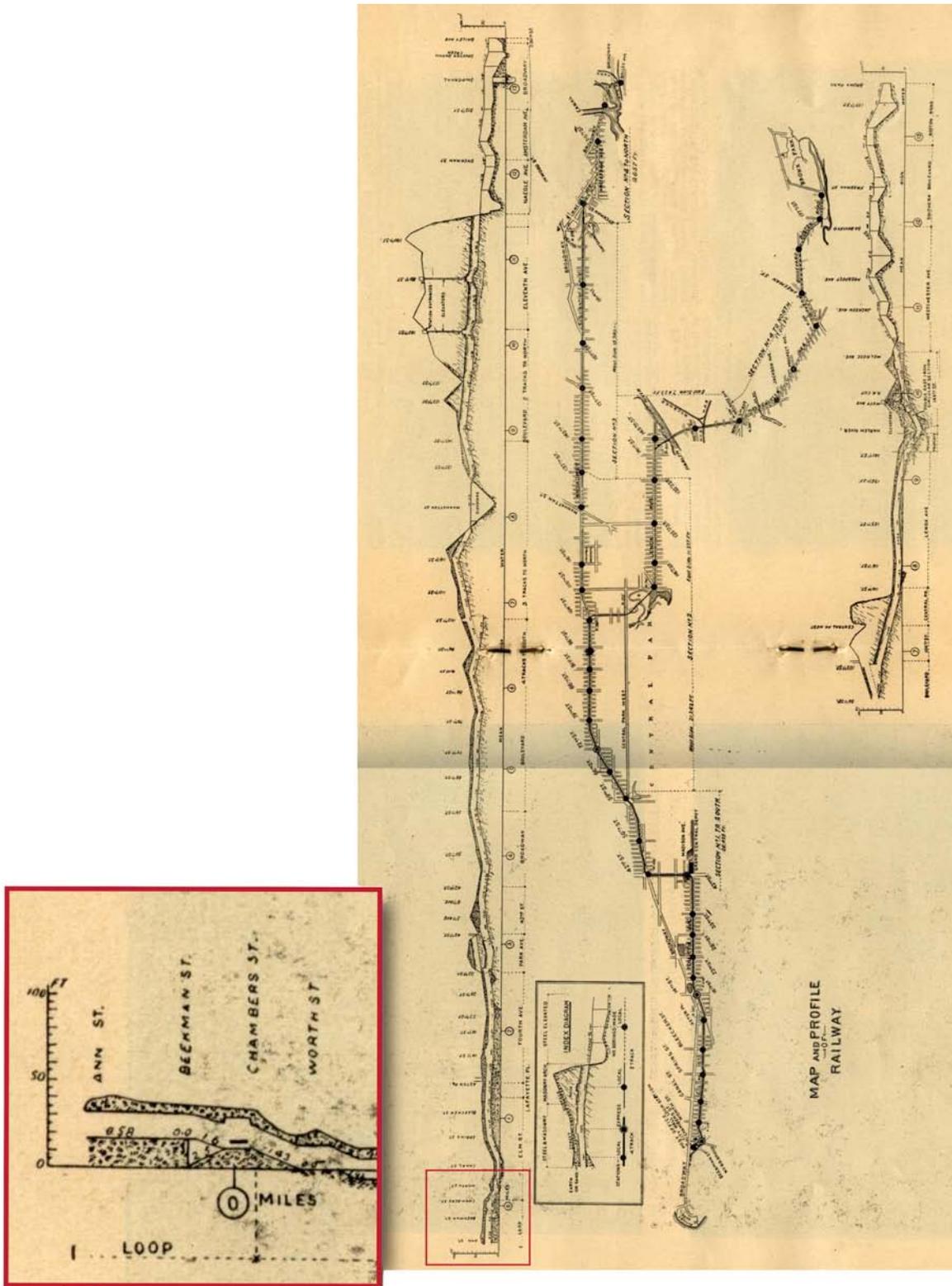


Figure 4.03: Interborough Rapid Transit Company's 1904 *The New York Subway: Its Construction and Equipment*.

## V – A HISTORY OF CITY HALL PARK<sup>1</sup>

### INTRODUCTION

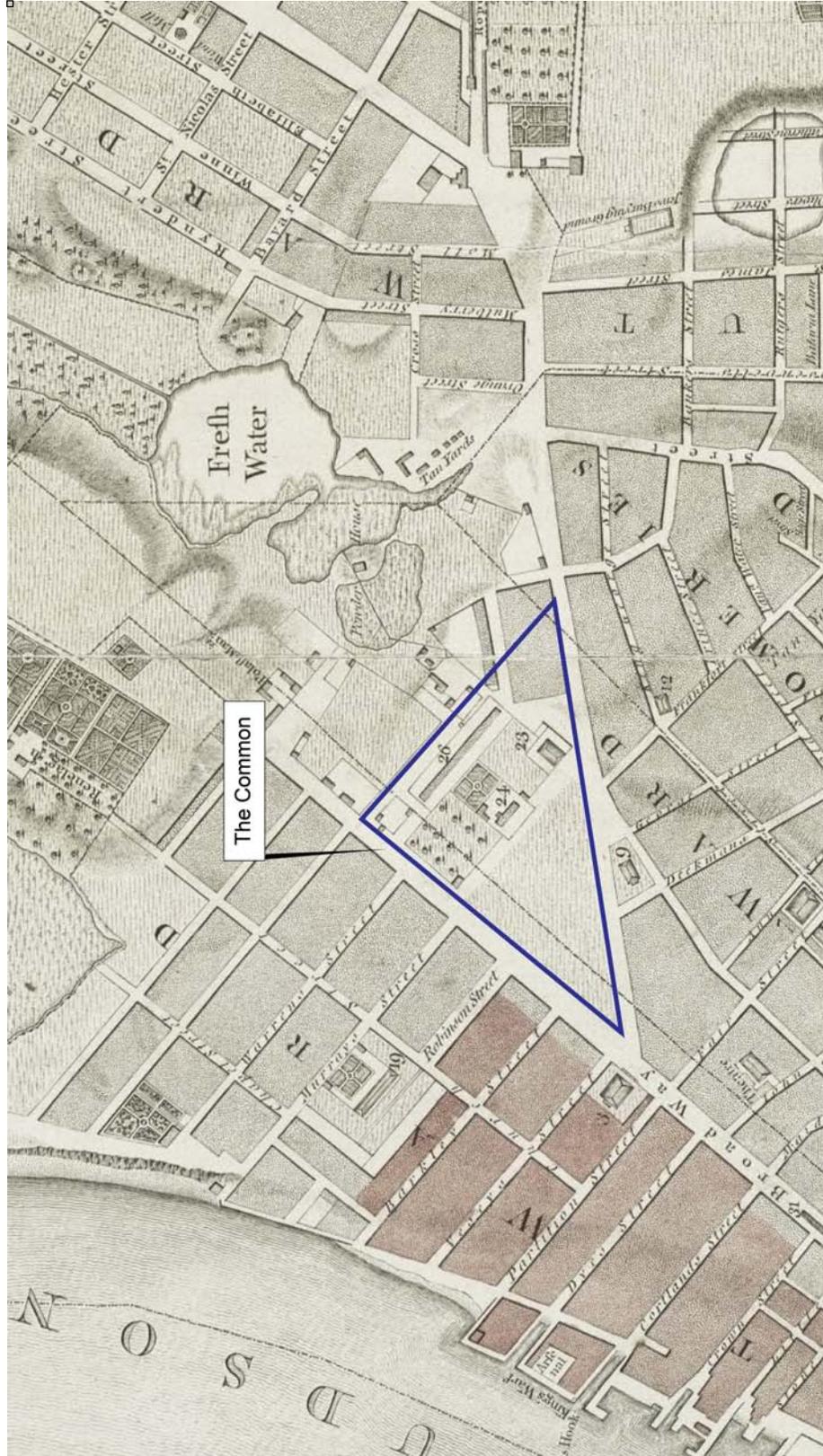
The history and (re-) construction of City Hall is intrinsically tied to the history of what is commonly referred to as City Hall Park, the 8.8-acre parcel of land on which it is located. City Hall Park has an almost 300-year history of public use beginning as a cow pasture in the 1600s. The general history of City Hall Park is fairly well documented through many sources.<sup>2</sup> All histories of the area cite the changing uses of City Hall Park from the Dutch colonial period to the present-day, reflecting upon the municipal issues that the City of New York (which will be referred to here by its common name, New York City) confronted and which urban areas must deal with. In less than 200 years, City Hall Park, first established in the Dutch tradition of common lands, set the stage for the first conflict of the American Revolutionary War, eventually developing into—and remaining—the seat of New York City municipal authority. The area has been known by several names, including “the Common” and “the Fields,” and the development/use of this property has occurred in various phases, each blending into the next. This report does not attempt or intend to recount a complete detailed history of the property. Rather, it hopes to discuss aspects of the history as they relate to the recent archaeological project and to provide the reader with a brief, general context for the project and City Hall Park.

The earliest phase of the property was as common land for local residents to use. The open nature of the Common and its location outside the then-current limits of New Amsterdam led to a shift toward institutional use, which was maintained throughout the eighteenth century (Map 5.01). Institutions to house New York City’s poor and vagrants were constructed in an attempt to solve some of the social ills of urban society. In its next phase, the property was used to house executive and legislative branches of New York City’s government. In this final phase, the land was made into a public park, blending historical traditions with modern use. From 1803 to 1811, City Hall was constructed. By 1838, City Hall Park had settled into its current role as the location of the seat of municipal government. Today, City Hall Park—a local landmark site, part of the African Burial Ground and the Commons Historic District—remains one of the oldest public spaces in New York City and the United States.

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1. This history section draws upon Bankoff and Loorya 2008 and Loorya in process.

2. The most recent being Bankoff and Loorya’s 2008 report detailing the 1998–1999 excavations at City Hall Park, which included *City Hall Park: An Historical Analysis* by Mark Cline Lucey, 2004 master’s thesis on file at Brooklyn College, Department of History.



Map 5.01: Bernard Ratzen map of New York, 1776.

## COMMON LAND

The area's history as common land for the people of New Amsterdam is the foundation of its ongoing history of public use.

Formal settlement by the Dutch began around 1626, bringing about a dramatic shift in the social and cultural history of the area that would become New York City. Though European explorers had visited the area during the sixteenth century, it was not until the arrival of the Dutch West India Company (hereafter "the Company") that the area became settled (Goodwin, Royce, and Putnam 1898). In 1626, Pieter Minuit "purchased" the southern end of Manahatta Island (Manhattan Island) from the Lenape (Burrows and Wallace 1999:23). After the sale, the Dutch founded the first permanent European village in the Lower Hudson Valley region. A fort was built and the settlement, named Nieuw Amsterdam (New Amsterdam), opened the door for larger settlement of the areas surrounding Manhattan Island (Burrows and Wallace 1999:23–24).

Under European law and custom, the Company possessed and controlled all of Manhattan Island. The Dutch government charter granted the Company exclusive trading rights and the power to manage the land as they saw fit. However, the Company could not convince people to immigrate to the new colony. Poor living conditions and the unsettled nature of the colony made it an unattractive prospect. Hence, to those settlers willing to immigrate, the Company provided many opportunities to obtain land, in fee or as tenant, and become a conduit in profitable commercial ventures (Innes 1902:3).

Following Dutch tradition, all Company lands not granted to private individuals became communal property—"Commons" used as a resource for the freeholders (Burrows and Wallace 1999:23, 25). In New Amsterdam, the Common included the lands that comprise present-day City Hall Park. Initially, the Common was used for pasturage, as well as a source of wood, lime, clay, sod, and thatch.

The Dutch term used to describe the area was *Vlackte*, suggesting that the area was originally a flat plateau. Covered by scrub and sod, the plateau descended just north of present-day Chambers Street into a basin containing the Collect Pond, suggesting that the Common was on a rise (Image 5.01). Several hills surrounded the pond. Potbakers Hill stood between present-day Duane and Reade Streets west of Centre Street, and Catiemuts Hill rose at present-day Park Place and Duane Streets (Map 5.2).

In 1653, the newly formed Dutch city government fixed the municipal limits of New Amsterdam at the Hudson and East Rivers "as far as the Fresh Water," the Collect Pond and swamp. The palisade constructed along present-day Wall Street in that same year marked the military true northern boundary (Stokes 1915–1928 1:39).

Roads and topography fixed the boundaries of the Common (Map 5.3). As Lucey observed:

The western border existed as a straight extension of lower Broadway, marking the border of the Dutch West India Company farm to the west.

The diagonal southeastern border of City Hall Park is more perplexing. This road, known today as Park Row, gives the park its characteristic triangular shape. Why did travelers heading north on Broadway diverge from Broadway on their way out of town? Again topography provides the answer. As Broadway passed the Common on the west side, the high ground soon dipped into the marshy drainage of the Collect. The only way to bypass the swamps was via a narrow strip of high ground to the east of the Collect and onto Bowery Lane. Therefore a traveler going north would turn northeast at present-day St. Paul's Chapel, staying on the eastern edge of the plateau, skirting around the east side of Cateimuts Hill, and heading straight for the pass through the fresh water barrier... Cateimuts Hill, Potbakers Hill, and the Collect formed the unofficial northern border of the Common... [Lucey 2004; see Map 5.02 for additional reference].



Image 5.01: The Collect Pond, just north of the Common, circa 1796.  
A hill can be seen on the left side of the image.



Map 5.02: Viele's 1865 map depicts the original landscape relative to the modern street grid (*Sanitary & Topographical Map of the City and Island of New York*, Egbert L. Viele 1865).



Residents readily utilized the land and its resources. However, free-grazing proved too destructive to the farmland. In 1652, the Company began to develop a series of communal pastures (Stokes 1915–1928 4:167). By 1660, the Company “had hired a herdsman to bring the town cattle up the wagon road (Broadway), bear right onto today’s Park Row, and pass the open land known as the *Vlackte* (Flat) en route to the Collect Pond” (Lucey 2004:3).

In 1663/1664, two carpenters, Jan de Wit and Denys Hartogvelt, received a plot of land within the Common measuring 20 x 20 rods<sup>3</sup> from the Company (Burrows and Wallace 1999). On the site, they constructed a wind-powered gristmill, the first known structure on the Common. Maps suggest that the windmill stood just east of present-day Broadway and Murray Streets between 1663 and 1723 (Stokes 1915–1928 3:335).

During this period, the Dutch colony would undergo a cultural and political change. In 1664, the Duke of York was granted “all of the territory between the Delaware and Connecticut rivers” by his brother James II, King of England (Burrows and Wallace 1999:72). Soon after, British warships sailed into the harbor and demanded the Dutch surrender. New Amsterdam’s residents did not mount any resistance, and the colony was turned over to British control. The British renamed the colony New York (Burrows and Wallace 1999:73).

In 1673, the Dutch briefly regained control of New York City, but the British returned in 1674, being given control of the colony through the treaty that ended the third Anglo-Dutch War (Rothschild 1990:11; Cantwell and Wall 2001). During the recapture of New Amsterdam, Dutch troops used the Common as a parade ground. Following the British takeover, Dutch culture began to diminish on Manhattan Island, as many Dutch assimilated into the now predominant English culture. Though some elements of Dutch culture remained, the Dutch language began to disappear and the percentage of residents of Dutch descent in the population significantly decreased (Burrows and Wallace 1999:135–136; Rink 1986:266).

By the turn of the eighteenth century, the Common began shifting toward municipal and institutional use.

### **THE EIGHTEENTH CENTURY**

The history of Manhattan Island is intertwined with commercial ventures and capitalism. As commerce grew, so did New York’s population. Development began moving northward and, as a direct result, farming all but disappeared in lower Manhattan. At the beginning of the eighteenth century, the social structure of New York had begun to “change from a relatively small, open, colonial society to a large, class-structured commercial-capitalist component of a new nation” (Rothschild 1990:3).

By the early 1730s, the population of New York had grown to almost 9,000 (Burrows and Wallace 1999:144) and the northern boundary of the city shifted beyond Wall Street. The increased population and ensuing crowding began to exert new stresses on New York’s infrastructure (see Rothschild 1990). Development was booming by the mid-eighteenth

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3. A rod measures 5.5 yards, putting the size of the property at approximately 100 x 100 yards.

century and the population grew past 13,000 (1749 Census). Alongside this growth was a significant increase in both crime and poverty (Stokes 1905; Burrows and Wallace 1999). As New York grew northward, the Common became increasingly less isolated.

The only structure other than the windmill on the Common was a one-and-a-half story house constructed circa 1720–1730 by John Harris, a former builder and alderman. Harris occupied the house until his death in 1770. At that time, New York regained control of the land and the house was demolished three years later (Stokes 1915–1928; Lucey 2004). The windmill was demolished in 1723.

Despite New York’s northward expansion, the Common remained just outside of town. As such, it became the location for institutions that housed the undesirable and/or dangerous that the residents did not want housed near their homes (Map 5.04).

While the Common stood distant enough from the center of town in the early to middle eighteenth century, it was also near enough to serve as a site for public gatherings. “The city had grown northward, so that the Commons... were conveniently near, and served as a meeting place for the citizens when some public crisis or other brought them together” (Stokes 1915–1928 1:333). Celebrations honoring the King’s Birthday, Guy Fawkes Day, or military victories were held on the Common (Minutes of the Common Council [MCC] 1675–1776 4:163 and 5:421) (Image 5.02). The fact that there were few open green spaces in New York during this period, as evidenced on the Grim Plan of 1742, the Common, just a short walk up Broadway, was a natural gathering spot. Both celebrations and protests frequently occurred on the Common. Some of these protests would eventually lead to the Revolutionary War.

### **ALMS FOR THE POOR**

By the early eighteenth century, New York was dealing with increasing problems of poverty. The first almshouse, opened in 1736, was built in response to these problems (MCC 1675–1776; Lossing 1884). The building’s location on the Common isolated the diseased and the poor from the general population, making their control significantly easier. Petty criminals and many vagabonds were also relegated to the Common, at the gaol.<sup>4</sup>

Almshouses are British institutions, described to be “usually for the old and infirm, endowed by charity. The oldest almshouses are medieval in origin; being founded by religious communities, corporations, or individuals, often for people living in a particular locality or having been employed in some trade” (Cowie 1999:5). The almshouse served for the reception and support of the poor.

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4. “Gaol” is the British spelling for jail and will be used where appropriate.





Image 5.02: *Ye execution of Goff ye neger of Mt. Hochins on ye commons by George Hayward, 1860 in Valentine's Manual (1860).*

Britain's earliest almshouses focused on aiding those who could not work due to unfortunate circumstances and were in need of assistance. They were strictly to provide relief for the poor, as dictated by Britain's Poor Law Act of 1601, which stated: "the justices of the peace were to be responsible for appointing in every parish an Overseer of the Poor, who was to collect a poor rate, relieve the sick, aged and blind" (Cowie 1999:225).

This focus changed in 1723, when the Poor Law Act was amended to include the notion of a workhouse. A workhouse may be defined as a building that poor, able-bodied individuals enter in order to earn their keep and learn a trade, enabling them to reenter society as a productive member of that society while serving their community with needed and practical labor (Cowie 1999). This definition best describes the intent of this first almshouse.

Within New York, the numbers of poor grew and their plight worsened steadily throughout the first quarter of the eighteenth century. Between 1690 and 1723, New York's population had almost doubled from 3,900 to 7,248. So did the number of paupers, helpless dependents, and vagrants. By 1746, the population was 11,717 (Lucey 2004). Burrows and Wallace outline the relationship of the poor and wealthy during this period:

According to the 1730 census, New York's population stood at 8,622: 7,045 whites and 1,577 blacks. That same year a comprehensive property assessment revealed that the richest 10 percent of New York's taxable population, some 140 merchants and landowners, held almost half of its taxable wealth. By contrast, 49 percent of taxable property were held by whites worth 10 pounds or less—a pathetically meager sum, indicating that around one-third of all whites were more or less destitute. Using the assumption that virtually all blacks were no better off, nearly three fifths of the inhabitants thus lived at or near the subsistence level [Burrows and Wallace 1999:144].

It was also during this period that the residents of New York experienced several health concerns, notably severe outbreaks of yellow fever (1702), measles (1727), and smallpox (1731–1732). New York also experienced the economic depression of 1729 to 1737.

Relief for the poor was not limited to English tenure. In Dutch New Amsterdam, it began with the Dutch Reformed Church, which employed a church-based system to help the less fortunate. Traditionally, family, private charity, or the church cared for the poor (Wilson 1893). However, as the population grew, it became increasingly difficult for many people to find suitable work, adding to the numbers of those who were either not willing or not fit to work. Even as the number of impoverished persons rose, it remained the role of the church to deal with this social problem. Frequently, members of a parish were asked to take in poor or destitute members. This was considered a charitable act that God looked upon kindly. Those taken in would become the financial and moral responsibility of the providing individual or family (Wilson 1893; Burrows and Wallace 1999). However, this form of charity and poor relief placed overwhelming pressures on the system, and it could not sustain itself (Burrows and Wallace 1999).

In 1683, the New York Assembly passed the first act to control the poor. The Maintaining the Poor and Preventing Vagabonds Act allowed town government to provide relief for its poor while prohibiting settlement of new indigent immigrants. This act, intended to keep additional poor out of the colony, was not successful (Burrows and Wallace 1999:145).

In 1685, a “poor rate” law was enacted to provide relief to some indigents. The rate was affirmed in the Ministry Act of 1693 and immediately put into effect (Burrows and Wallace 1999:145). The poor rate was similar in design to aspects of the British Poor Law Act of 1601. Poor rate relief was granted to the “deserving poor”; i.e., those who had fallen upon bad times. The able bodied were denied assistance of any kind.

The poor rate consisted of two kinds of relief. Out-relief, the more popular form, consisted mainly of grants of fuel, clothing, food, and cash. This relief was most commonly provided to women and children. The second form of relief involved housing in a dwelling on Broad Street. This house could be considered New York's first almshouse, though the structure was not specifically built for that purpose. The inmates were often old men, too ill to work. Notwithstanding the poor rate, only a small proportion of New Yorkers actually received municipal relief; rather, the church parishes continued providing charity to the poor (Burrows and Wallace 1999:145–146).

By 1720, the problems of poverty and vagrancy began to take a toll on New York. Increases in poor taxes caused a public outcry. As a result, the Common Council, controlled by the newly elected Morrisite “party of the people,” moved to ease public pressure by voting to build a poorhouse. The 1735 Common Council determined that the building would not only be an almshouse, but a workhouse as well. Along with housing the sick, impoverished widows, and orphans, the almshouse building would put the idle back to work and incarcerate criminals (MCC 1675–1776 4:305–311).

The almshouse was destined to be poorhouse, workhouse, and a house of correction (Burrows and Wallace 1999:156). The two-story stone and brick almshouse measured 56’ x 24’ and stood where City Hall stands today (Image 5.03). The location at the north side of the Common reflected society’s desires to afford relief to the inmates and to remove these people from sight. The almshouse served five groups: “Poor Needy Persons”; “Idle Wandering Vagabonds”; “Sturdy Beggars”; “parents of Bastard Children”; and the “bastard” children. Among the reasons for being admitted to the almshouse were insanity, pregnancy, blindness, being lame, consumption, vagrancy, and being an orphan. All citizens had the “free Liberty and Lycense to send to the said House all unruly and ungovernable Servants and Slaves there to be kept at hard labour” (MCC 1675–1776 4:305). Inmates of the almshouse were supplied with clothing marked with the first letters of their names. They were put to work carding wool, shredding old rope for reuse, knitting, spinning, dressing hemp or flax, making shoes, and raising garden crops. The almshouse was furnished with materials to occupy the inmates in productive labor, as all paupers were required to work to earn their keep. The goal of this work was “that such Poor as are able to work may not Eat the Bread of Sloth and Idleness, and be a Burthen to the Publick” (MCC 1675–1776 4:305). Children at the almshouse were taught to read, write, and cast accounts so that they may be apprenticed. A churchwarden, an officer in the church who assists the clergy staff with secular matters, was appointed as the overseer of the almshouse. The first keeper/overseer of the almshouse, appointed in March 1736, was John Sebring, along with his wife and their nine-year-old child.

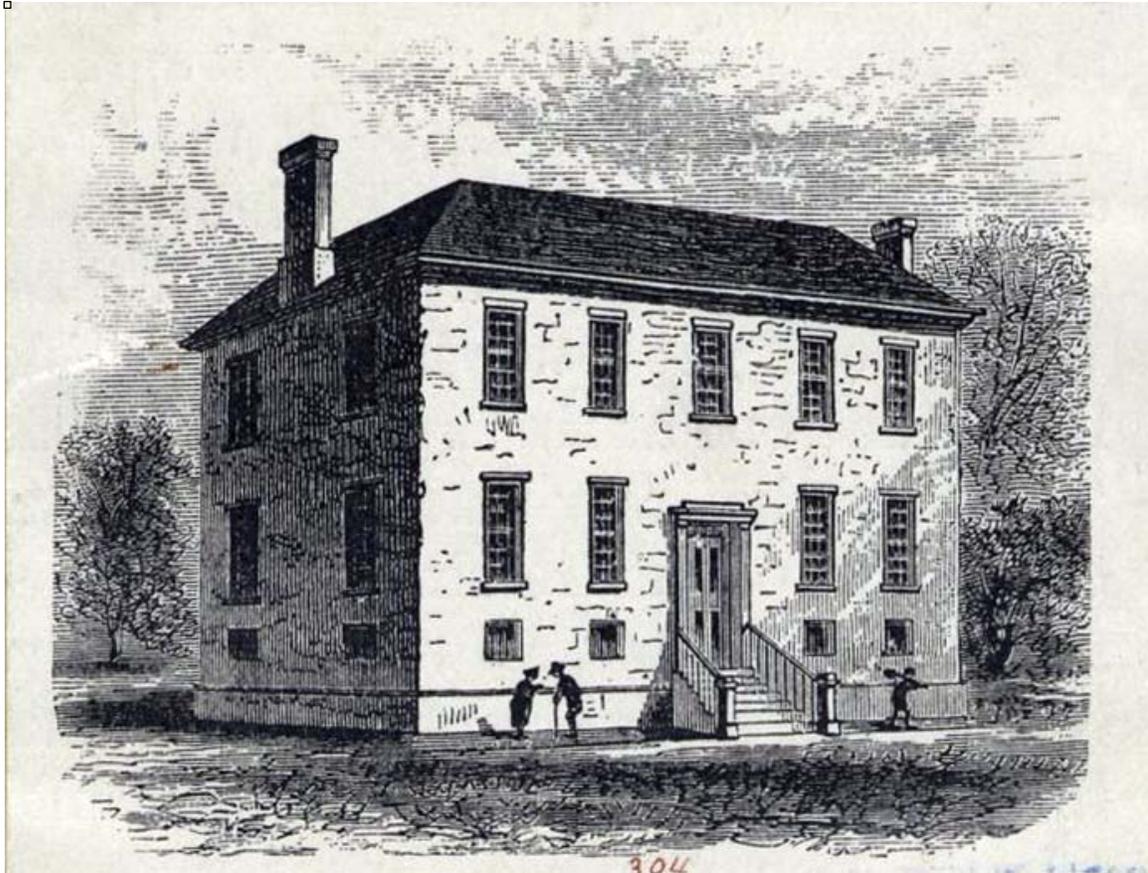


Image 5.03: The first almshouse, constructed 1735/1737 (in Wilson 1892).

The almshouse activities and groups were initially intended to be kept separate. In 1736, the Common Council outlined the use of the almshouse rooms:

That the lower room to the Eastward be for the Keeper and his Family to Dress Victuals and the poor to eat in, that the upper room to the Eastward be the lodging room for the keeper and his family, that the division of the cellar to the eastward be for hard labor and weaving, the middle division of the cellar for the provision of the cellar; and the westernmost division of the cellar for the unruly and obstinate to be confined and imprisoned in: and the other three rooms not herein particularly appropriated to be for spinning, carding, and other labor until such time as this Court shall see cause to make other alterations [MCC 1675–1776: March 31, 1736].

The Upper West room served as an infirmary. Additionally, the Common Council ordered a garden to be fenced, plowed up, and kept for growing “Roots, Herbs, etc.” Finally, the council ordered “That fetters, Gives, Shackles, and a convenient place of whipping post be provided for the said House of Correction for punishing the incorrigible and disor[der]ly persons committed thereunto” (MCC 1675–1776 4:309–310).

Those admitted to the almshouse ranged in age from 4.5 months to 65 years. Stays at the almshouse ranged from a day to weeks, or until the decease of an inmate. The inmates of the

almshouse were held to strict daily schedules consisting of work, prayer, and meals. This strict scheduling was different from the regiment in the private dwellings system of poor relief. Such conditions were intended to discourage many from making the almshouse a permanent home. In its first year of operation, the almshouse only took in 19 people, 12 adults and seven children. In 1737, within one year of opening the almshouse, the Common Council drastically slashed the amount of out-relief given to New York's poor (Burrows and Wallace 1999:157).

Attempts at separating the workhouse, the poorhouse, and the house of correction failed. Increasing numbers of inmates and the small size of the structure made the tripartite division increasingly unworkable. Soon vestrymen expressed concern at housing elderly women and innocent children with vagabonds, criminals, and assorted drunks.

In 1740, the almshouse upper west infirmary room could no longer accommodate the number of persons with contagious diseases. Nor could the almshouse keep the remaining inhabitants disease free. To address the hygiene conditions, the Common Council constructed a small hospital in May 1739. The hospital's mandate was "A Receptacle and Conveniency of Such unhappy Poor as are or shall be Visited with any Malignant or Obnoxious disease" (MCC 1675–1776 4: 457–459). The increasing almshouse population also led the Common Council to approve a first burial ground for the almshouse in March 1757. The burial ground was located just east and north of the almshouse (Lucey 2004).

Responding to the dramatic growth in population, the Common Council continued to address poor relief. During the 1740s and 1750s, New York put considerable effort into making the almshouse more functional. In 1746, the almshouse was enlarged to address the needs of an increased number of poor and/or sick residents who could no longer provide for themselves (MCC 1675–1776 5:171, 176).

During the 1790s, New York experienced several yellow fever outbreaks. An estimated 2,500 residents died from the fever during a single four-month outbreak (Barber 1841). This placed a strain on the relatively small almshouse and the relatively new dispensary that had been established for the out-relief of the ailing poor. As New York grew, the number of indigent residents grew as well, and the crumbling old 1736 building no longer served New York's poor relief needs. In 1796, the Common Council decided that the almshouse building had become obsolete. In May of that year, the council decided that a new almshouse would "be erected on the Rear of the Ground of the present Alms House" on the site of the former Upper Barracks (present-day Tweed Courthouse).

The second almshouse was a three-and-one-half-story brick building with a raised basement and U-shaped plan, designed in the Federal style with columned entrance porches. Significantly larger than the first almshouse, the replacement employed modern conveniences such as Peale's Improved Fireplaces—which had cast-iron fireplace shields and covers that helped keep the interior fires from spreading beyond the fireplace boxes—and sewer connections to Chambers Street. In May 1797, almshouse residents moved to the new almshouse. Less than two months later, the first almshouse was razed.

In 1813, several accounts from the diary of Reverend Ezra Stiles Ely (1786–1861) were published. Reverend Ely offered religious services and support to these two institutions, as

well as to the gaol. His diary provided a firsthand account of the almshouse and Bridewell. Ely provides several accounts of inmates and their circumstances. For example, he wrote of William, a blind man whose job it was to create button molds. Ely described orphaned or abandoned boys who occupied themselves with singing (Ely 1813).

When Bellevue Almshouse (later hospital) opened in 1812, it supplanted the second almshouse.

### INCARCERATION

As the population and poverty grew in the 1750s, so did the crime rate. An additional factor in the increased crime rates was the arrival of British soldiers (Burrows and Wallace 1999:185). Also during this time, French prisoners of war were brought to New York for internment, overwhelming New York's prison system. To deal with this burgeoning prisoner population, the Common Council noted to build "proper and convenient Gaols on Some Grounds to the Southward of Fresh Water" (MCC October 19, 1757 as quoted in Stokes 1915-1928 4:684).

The New Gaol was built between 1757 and 1759 to the east of the almshouse. The structure was designed in a vernacular style typical of most pre-1795 public buildings (Image 5.04). The gaol was constructed of stone and brick, measured 60' x 75', stood three and a half stories high with a cupola on top, and featured a central entry and barred windows.



Image 5.04: The gaol from *Reminiscences of an Octogenarian*, Haswell 1896:26

Upon completion of the gaol in September 1759, all prisoners housed within City Hall (then at Wall and Nassau Streets) were moved to the new facility. Most of the gaol housed civilian lawbreakers with a few rooms specifically set aside for debtors and paupers. The British military claimed part of the prison to detain French prisoners of war. With the combination of New York City's criminal population, paupers, and the French prisoners of war, the New Gaol quickly filled to capacity.

Following the end of the French and Indian War (1763), New York transferred all buildings concerned with municipal disciplinary authority to the Common. There a gallows, public whipping post, stocks, cage, and pillory were erected next to the New Gaol in 1764. In 1767, part of the gaol structure began to serve as a Bridewell for vagrants (Stokes 1915–1928).

In 1775, construction began on a separate Bridewell structure. The Bridewell would serve the “correction” of “the great number of vagabonds daily skulking about this city” (*New York Mercury*, February 7, 1774). The Bridewell was named after the British institution of the same name, the Bridewell House of Correction. Originally built as the Bridewell Palace (1515–1523) for Henry VIII, Edward VI gave the Bridewell Palace to the city of London in 1553 to house homeless children and to punish disorderly women. When London took full possession in 1556, they turned the Bridewell into a prison, hospital, and workrooms. The term “Bridewell” has come to generally refer to such an institution.

Designed by Theophilus Hardenbrook, the Bridewell was constructed in 1775 (Image 5.05). It initially served as a debtor's prison and a house of reform for those convicted of lesser crimes. During the Revolutionary War, the British used the prison to house American prisoners of war. After the war, its function returned to use as a “correctional” facility, beginning in 1803.

The Bridewell is described as having been a large masonry structure with a three-story central wing. The side wings were two stories each. The Bridewell sat atop a raised basement and each section had several bays. It is believed to have measured 39' x 146'. Inmates used the property surrounding the Bridewell for a variety of activities, including two forges, in which prisoners made nails.

Criminals incarcerated in the New Gaol were moved to the Bridewell, leaving only debtors in the gaol. This earned the gaol its new moniker of the Debtors' Prison (MCC 1784–1831 2:338). The Bridewell remained in use as a prison until 1838, when it was demolished.



Image 5.05: The Bridewell (*Valentine's Manual* 1855).

### **MILITARY OCCUPATION**

As New York continued to grow and develop, it faced a military threat. In the 1740s, the French and British battled for possession of Canada, New England, and parts of New York. New Yorkers feared this battle would bring conflict in the form of a French and Indian attack. Capturing New York would strategically benefit the French, as the Hudson River provided a connection to Lake Champlain and the St. Lawrence River, and cut the English colonies in two. In 1744, New York responded to the threat by strengthening Fort George at the southern end of Broadway, constructing a palisade at the northern edge of the Common located just around present-day Chambers Street, and moving the Powder House south of the gaol.

The Palisade was constructed of 14' cedar logs that measured 9" to 10" in diameter; the wall was perforated with loopholes for musketry. A gate was installed at the intersection of Chambers and Broadway (Stokes 1:196).

Starting at the Hudson River just south of extensive swamplands, the palisade ran east along present-day Chambers Street passing to the north of the Common and the almshouse along the top ridge of Cateimuts Hill and then headed down toward the East River staying on higher ground just above the drainage from the Collect [Lucey 2004].

The Common fell within the protected zone of Manhattan Island. The elevated ground of the Common was a determining factor for building the palisade to the north. Defending it from use by others through shelling of the lower land was a plus and it gave protection to the residential areas that had developed to the southeast of the Common (Burrows and Wallace 1999:168).

Tensions between the British and the French escalated in the 1750s. The British sent 1,000 troops to New York for winter quartering in 1756. The barracks at Fort George were inadequate to house these troops, so the earl of Loudon, commander-in-chief of the armed forces in North America, ordered New York residents to quarter the soldiers. Public outcry led the Common Council to declare this “too unequal as well as too heavy a burthen for the Inhabitants to bear” (MCC 1675–1776 6:108) and to order “The Immediate providing of materials for the Carrying on and Compleating [of] Barracks to Contain Eight Hundred men... on the Commons south of Fresh Water” along present-day Chambers Street in October 1757 (MCC 1675–1776 6:108 and 111–112). The barracks would “Contain Twenty Rooms on a floor two stories high, to be Twenty one feet square, [and extend] four hundred and Twenty feet Long and Twenty one feet wide” (MCC 1675–1776 6:108 and 111–112); they were quickly constructed from October 31 to November 29, 1756. By legislative act, title to the barracks and the land upon which they stood would remain with New York, giving the Common Council license to rent them during times of peace (Stokes 1915–1928 4:695).

Throughout the French and Indian War (1754–1763), the economy of New York continued to grow. A housing boom, spurred by the presence of hundreds of British army and naval officers, boosted the economy throughout the 1750s and into the 1760s (Burrows and Wallace 1999:183). From 1753 to 1760, New York’s housing stock increased by over 600 houses. Military officers also supported a consumer economy of luxury items. They “created a rich new market for the luxury goods produced by local carvers and gilders, watchmakers, furniture makers, painters, pewterers and potters, silversmiths, perfumers, glovers, seamstresses, hoopmakers, and mantua makers” (Burrows and Wallace 1999:183).

Even during the war years, 41 wigmakers and hairdressers were employed. The British officers also bought wine, tobacco, ceramics (likely imported) and glassware, stationery, and teas (Burrows and Wallace 1999:183).

Following the French and Indian War, a growing rift between the American colonists and England was apparent. The Commons became a rallying ground for Americans opposed to British policies, such as the Stamp Act and the Navigation Act (Burrows and Wallace 1999). The Stamp Act was put into effect on November 1, 1765. In this act, King George III increased taxes in the colonies to pay the costs of maintaining the North American territories obtained from France in the Treaty of Paris. Tradesmen and mechanics rallied on the Common in November 1765 to protest the Stamp Act. Frequent mass meetings followed this initial meeting, as did demonstrations where those associated with the new law were often burned in effigy. During this period, the Sons of Liberty emerged as a revolutionary force that used the Common as their staging ground. In 1776, the Sons of Liberty incited a rebellious fervor throughout New York City.

In May 1766, the British government repealed the Stamp Act. In response, the Sons of Liberty erected a pine staff on the Common with a large sign inscribed “George III, Pitt & Liberty.”<sup>5</sup> This staff became known as the first liberty pole (Burrows and Wallace 1999; Sons of Liberty 2005).

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5. This referred to King George III and William Pitt, head of the British government.

Conflict between the British soldiers quartered in the barracks and New Yorkers was inevitable, and the Common was witness to an early scuffle prior to the Revolutionary War. On March 31, 1766, several Sons of Liberty “fell on an officer of the Royal Americans on the Common about Dusk, behind his back and beat him unmercifully and broke his sword, which he had drawn in his Defence” (*Montresor’s Journal* 1766:356–357). First blood was spilled on August 11, 1766, when a group of British soldiers cut down the liberty pole. The next day an estimated 2,000–3,000 New York residents rallied at the Common. The New Yorkers hurled bricks and stones at the troops, who charged them with bayonets, wounding some of their number (*Weekly Post-Boy*, 1232, August 14, 1766; *Weekly Post-Boy*, 1233, August 21, 1766).

Two days later, the Sons of Liberty raised a new liberty pole. That same day, a group of soldiers parading on the Common quarreled with an angry crowd of New Yorkers, who pushed through the column of soldiers “saying that the Ground [the Common] was theirs” (*Montresor’s Journal* 1766:382).

Over a four-year period, the Sons of Liberty erected liberty poles that the British troops continued to cut down or destroy. Following the destruction of the fourth pole in January 1770, the Sons of Liberty requested, from the Common Council, permission to erect a fifth pole on the Common as “a monument of freedom” in “the most publick place” (MCC 1675–1776 7:203–204). The council rejected this request, prompting Isaac Sears, a leader of the Sons of Liberty, to purchase the one-twelfth share of the Harris House lot that the Common Council had not acquired (Lucey 2004:18). On this site, the Sons of Liberty erected the fifth, and final, liberty pole. It remained standing until the British capture and occupation of New York in 1776.

In 1774, additional barracks, measuring 20’ x 200’, were constructed on the green. Set between the original barracks and the almshouse, the second barracks housed the increasing number of British troops. Sometime between 1776 and 1782, during British occupation of New York, two more barracks were built on the Common (Image 5.06). These barracks appear to have been approximately 300’ in length and located north of the Bridewell (Lucey 2004:31).

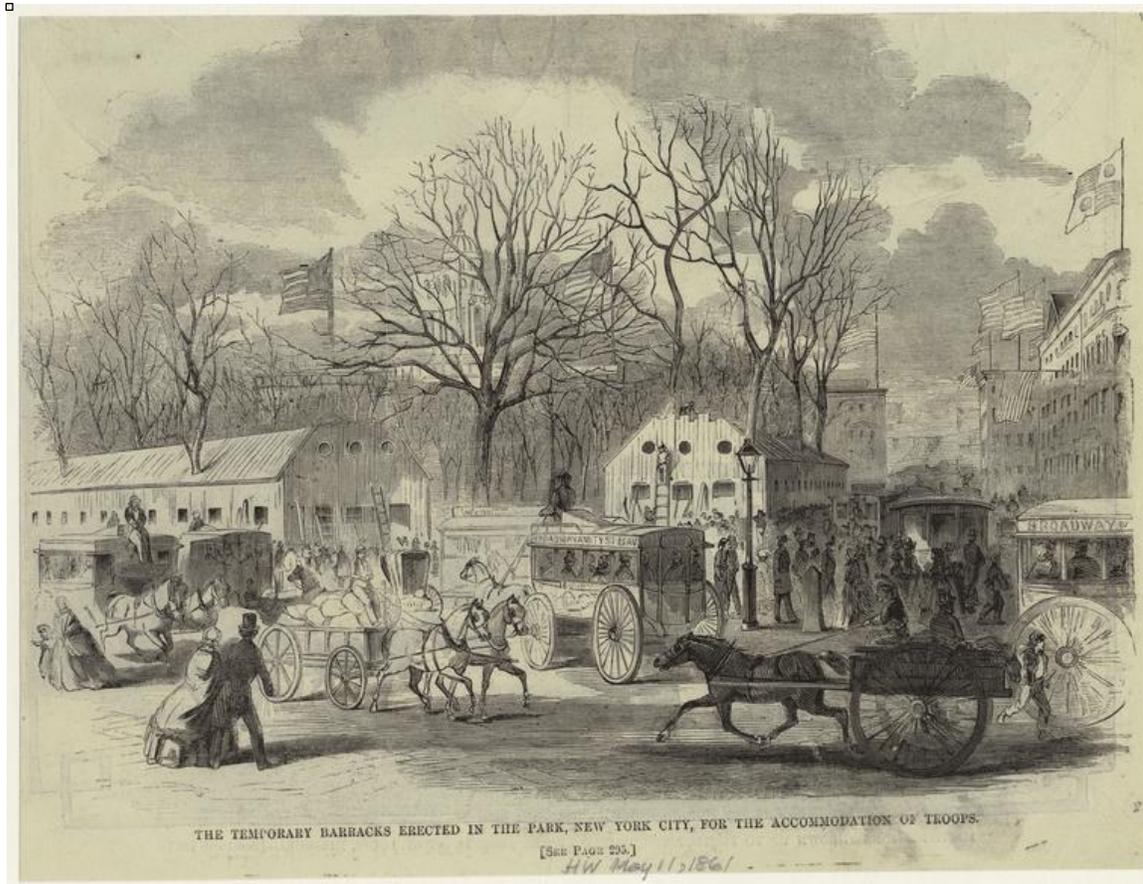


Image 5.06: The temporary Civil War barracks erected in the park, similar to those the British constructed in 1774. (*Harper's Weekly*, May 11, 1861).

Upon receiving news of the battles at Lexington and Concord (April 1775), the Sons of Liberty seized control of the old powder magazine by the Collect Pond. By June, the British troops had been evacuated, and the American colonists hastily built barricades and batteries. For over a year, the Continental Army maintained control of Manhattan. During this time, the Common served as a military parade ground and as a central gathering place (Burrows and Wallace 1999:220–225; Lucey 2004). On July 9, 1776, the Declaration of Independence was read to a cheering crowd gathered on the triangular green of the Common.

Later that year, in August 1776, the Continental Army suffered a major defeat in the Battle of Long Island and retreated northward into Manhattan. On November 15, 1776, British General Howe forced colonial troops out of Manhattan. British troops took control of New York, beginning a seven-year occupation. Thousands of Americans, taken prisoner during the Battle of Long Island and throughout the occupation, found themselves confined in their own prisons—the Bridewell and the New Gaol, as well as on prison ships, in churches, and in sugarhouses. The Bridewell and gaol were severely overcrowded. Treatment of the American prisoners was harsh. The British provost marshal, William Cunningham, starved “more than 2,000 prisoners by stopping their rations,” which he sold. Additionally, he

allegedly admitted just before his death in 1791 that “there were also 275 American prisoners and obnoxious persons executed... the unfortunate prisoners were conducted, gagged, just behind the Upper Barracks, and hung [sic] without ceremony, and there buried” (Stokes 1915–1928 5:1016).

Because of the British occupation and Tories return, the population of New York City increased, but housing units decreased. In November 1777, the British soldiers numbered 5,000; less than a year later, in July 1778, there were over 15,000 troops stationed in New York City. During the last year of the war (1782), 17,000 soldiers were garrisoned in New York (Burrows and Wallace 1999:246). As the occupying force, the British were responsible for law and order among the large civilian population. By 1777, the civilian population rose to 12,000 people (Burrows and Wallace 1999:245).

The British occupation affected food prices, which rose by 800%. To contain the price of food, farmers from outside New York were forced to provide food for the soldiers. The American Revolution also created food supply problems for the British colonies (Williams 1944:112). Shipping food to the British troops in New York was a logistical nightmare for the British army. The Patriots frequently disrupted New York’s overland supply lines that moved provisions from the farmlands outside of New York. Army quartermasters were forced to import food from “elsewhere in the Empire” (Burrows and Wallace 1999:151). Privateers attacked supply ships using the sea routes. The few ships that managed to get supplies through did not abate the rising costs. The supplies were often spoiled and livestock seldom survived the harsh trip across the Atlantic. Apart from the occasional meat coming out of a successful raid on colonist livestock, the only meat that the occupying British received was salted meat. As the war progressed, several of the small islands off Manhattan, such as Governors Island and Randall’s Island, were used for gardens and the pasturing of sheep, cows, and pigs. Although the British troops never completely ran out of food, they often received starvation rations (Williams 1944).

In addition to the scarcity of food, soldiers had to deal with fuel shortages. Winters in New York were typically harsh, but the coldest winter on record occurred during the occupation. In the winter of 1779–1780, the entire harbor was frozen solid, and no sea or land supply shipments could reach the soldiers. This winter was so harsh it created a firewood shortage.

Military authorities couldn’t, or wouldn’t, distribute firewood to civilians, and it became so expensive that some of the city’s poorest inhabitants quietly froze to death. A year or so later, while studying the enemy’s positions on Manhattan from the New Jersey palisades, Washington was astonished to see that ‘the island is totally stripped of trees’ [Burrows and Wallace 1999:155].

In addition to the food, fuel, and housing crises, small pox, cholera, and yellow fever epidemics raged throughout the war (Burrows and Wallace 1999:151).

Throughout the period of 1777–1782, the British military leadership governed through martial law after Governor Howe had disbanded the civilian government. Day-to-day governance was in the hands of a commandant aided by a small group of military leaders,

17,000 troops, and a military police that “enforced military regulations” (Burrows and Wallace 1999:249).

## **POSTWAR**

Military occupation of New York ended on November 25, 1783. The rush of New Yorkers moving back led to expansion of the city and to the areas surrounding the Common becoming heavily residential. Despite New York’s ruinous condition due to British abuse and yet another disastrous conflagration that accompanied British withdrawal, New York had a powerful resurgence. The population boomed from about 12,000 at the end of 1783 to 23,610 two years later (Burrows and Wallace 1999:270).

In the years following the war, New York was named the nation’s first capital and entered what is referred to as its Federalist period. During this time, the Common, once so distant and isolated, became the backyard for many residents, as the population rose to 60,515 by the turn of the nineteenth century (Burrows and Wallace 1999:265–273).

The Common Council worked quickly to improve the Common. In April 1784, repairs were made to the Bridewell and the New Gaol, while rooms in the barracks were leased to tenants who promised to make improvements (Stokes 1915–1928 5:1215). A gallows that stood near newly built residences on present-day Park Row was moved in April 1784 to the space between the almshouse and the gaol (MCC 1784–1831 1:70). A fence was built around the gaol yard, and vagrants in the Bridewell were put to work filling the gaol yard with dirt (MCC 1784–1831 1:214, 381, 388 and 449).

In the spring of 1785, the garden in the rear of the almshouse was reestablished and a fence constructed around the Bridewell (Image 5.07). By June of that year, the almshouse burial ground, established in 1757, had run out of space, causing the keeper of the almshouse to request a “more convenient Piece of Ground for the interment of the Dead from the Alms House.” The Common Council obliged, designating “the vacant Ground in the Rear of the Barricks & not in dispute be used for the interment of the deceased Persons of the Alms House & Bridewell” (MCC 1675–1776, 6:85–86; MCC 1784–1831 1:151, 158; Stokes 1915–1928 5:1206). Acknowledging a complaint from the commissioners of the almshouse that the “Hospital of the House was very much crowded with the sick,” the council ordered that four rooms in the barracks be immediately converted to a hospital for the almshouse (MCC 1784–1831 1:278–279 and 314).

The Common Council’s scheme ultimately failed and the buildings remained in a dilapidated condition. The council noted “the Disposition of the Barracks which were going to ruin for want of Repair & yielded a very trifling Emolument.” On January 15, 1790, the Common Council ordered the treasurer to sell both barracks behind the almshouse. The sale did not take place, and on July 9, 1792, the Common Council ordered the destruction of the “lower” barracks (Stokes 1915 28:1290; MCC 1784–1831 1:516).



Image 5.07: The old Bridewell, in the park as it stood about 1834 (*Valentine's Manual* 1859).

Though still an area for institutional buildings, the first steps toward transformation to a public park were underway by the 1790s. Formal paving of the streets around the Common area delineated the boundaries of the future park.

### **A PARK FOR THE PEOPLE**

The framing of the Common south of Murray Street with a sidewalk is not without present-day significance. The southern portion of the area has always been a public park, complete with pedestrian walks, benches, landscaped trees, and fountains. In 1796, New York formally laid out Chambers Street, setting the northern boundary of the park. The lands north of Chambers Street quickly developed into a grid of streets as developers leveled hills and filled wetlands. Only the characteristic triangular shape of the Common remained unaltered (Map 5.05).

The 1790s brought the ongoing struggle between those who viewed the Common as a park and those who wanted it to remain as a center of municipal institutions to the forefront. Ultimately, it was City Hall that bridged these two visions.

In July 1796, authorities ordered improvements to the Common area “in front of the Alms House & Bridewell” (MCC 1784–1831 1:733). Part of the improvements was to plant trees

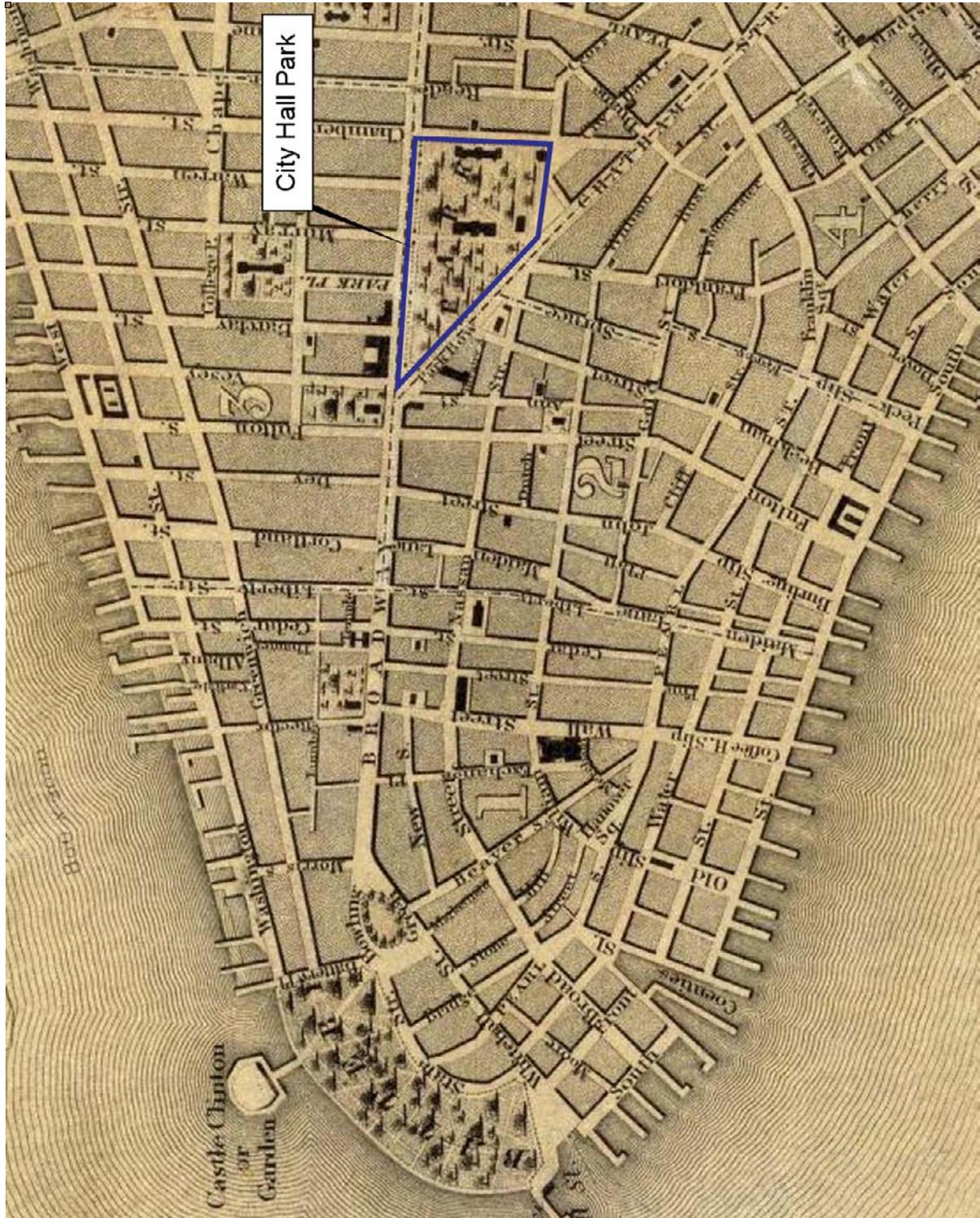
along Murray Street, adding to the park atmosphere. In 1807, New York's first guidebook, *The Picture of New-York*, noted that the park was a "beautiful grove" planted with elms, planes, willows, and catalpas, and that rows of poplars lined the sidewalk (A. T. Goodrich & Company 1818).

Over the course of the next two decades, other small structures appeared in the park and several of the older structures began to serve new purposes.

Among the new structures was a second almshouse, which opened in 1796. Attempts to reuse the first almshouse were made, but the structure was razed in 1797. During this period, the open area was used as a horse market. A public notice run in the May 24, 1798 edition of the *New York Gazette* prohibited the sale of horses by the public "except opposite the Bridewell fence beginning at the northwest and running to the southeast corner of the Gaol fence" (*New York Gazette*, May 1798)—indicating that, at least during this period, the two prisons had been fenced off.

### **THE SEAT OF GOVERNMENT**

As the nineteenth century approached, New York was experiencing yet another spurt of population growth. New York was growing, in terms of population, and the only direction to expand on Manhattan Island was north. As a result, the geographic and political center of the city also migrated northward. The decision to build the "new" City Hall in the park, on the site of the first almshouse, reflects this northward shift. The seat of government was moving to the former outskirts of the city to the area where the undesirable elements of the population had been relegated.



Map 5.05: City and County of New York, J. H. Colton 1836.

The park found itself at the center of activity. Residential neighborhoods rapidly developed north of the park, and it was apparent that further expansion would occur. It is notable that in the 1790s, the economic elite had begun to build their mansions facing the park on the Broadway side, turning the park region into a fashionable district (MCC 1784–1831 2:616; Hall 1910:385–424). The 1800 decision to build City Hall mollified competing visions of how the land should be used. The glamorous new City Hall would serve as an ornament of the city, while also serving as a government building well suited to the new genteel neighborhood. The southern half of the former Common would remain a public park.

In 1802, the city held an architectural competition to choose a design for the new City Hall building. John McComb Jr. and Joseph-Francois Mangin won this competition. The Common Council officially decided that the park would provide the ideal open space for the new building, which led to the redesignation of the entire northern end of the area as the seat of municipal government. New buildings were constructed and old buildings were converted to house offices and functions of the expanding city government. The Common was officially renamed City Hall Park (Burrows and Wallace 1999).

During construction, the Common Council took several steps toward officially relocating the seat of municipal government to the park. Part of this restructuring included the council's orders to remove the two stables standing in the almshouse yard, as well as the barn. An old wooden fence near the almshouse was also torn down (MCC 1784–1831 3:245, 258, 269).

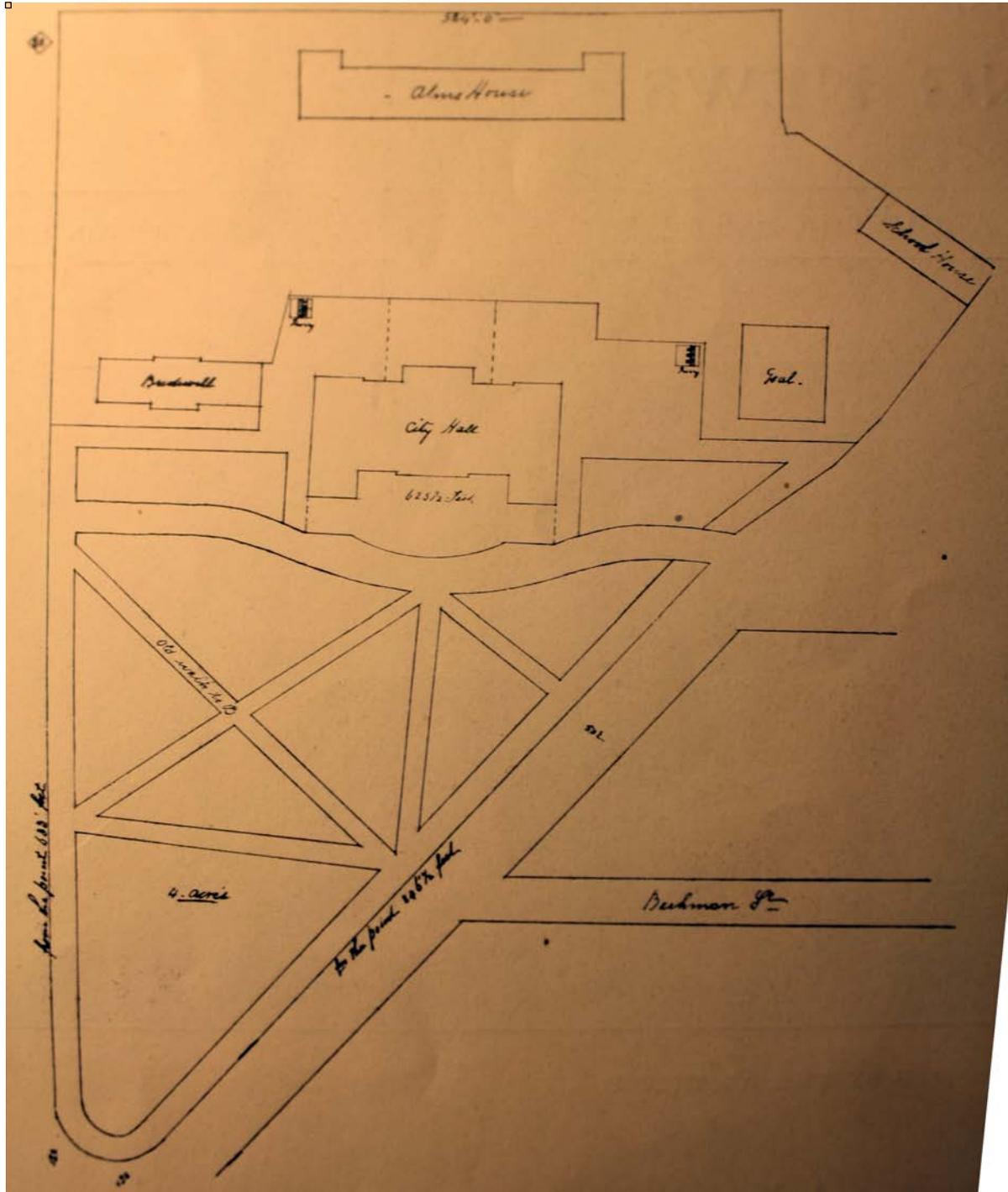
### **BUILDING CITY HALL**

On April 5, 1803, John McComb “marked out the ground for the building and the cart-men began to dig for the foundation” (McComb family papers 1757–1858). The location was chosen with regard to its relation with the three other structures on site: the Bridewell, the gaol, and a second almshouse (Map 5.06). The Common Council required that the front wings of the new building range with Murray Street (Adams 1910; Stokes 1915 1:392).

The cornerstone for the New City Hall, as it was referred to in the contemporary media, was laid on May 26, 1803 by then Mayor Edward Livingston. Directly following the ceremony “all the builders supped with part of the corporation at the Almshouse—had an excellent supper and plenty of good wine. We stayed until one o'clock A.M.” (McComb family papers 1787–1858). McComb also notes that the mayor gave the workmen \$100 and plenty of drink.

Construction continued for eight years (MCC 1784–1831 3:258). McComb's diary only covers the years 1801–1804, but presents a day-to-day accounting of the early years of construction. A review of McComb's diary in *American Architect* noted that it...

...most graphically, and in many instances pathetically, shows the trials that beset the architect engaged in City work. Conditions at that time appear to have been fully as trying and irksome as at the present day. From the outset it would appear he was “bothered and hindered” by frequent demands to alter his plans [*American Architect* vol. XCIII no. 1672].



Map 5.06: McComb's plan of the property and the proposed City Hall.

Scarcity of money was a constant source of anxiety and progress suffered delays due to “dissatisfaction on the part of the workmen as to their pay” and a yellow fever epidemic that caused many to flee the city (McComb family papers 1787–1858).

As completion of City Hall neared, municipal authorities sought to further upgrade the park’s image. In 1808, just one year after it opened, the Free School moved across the park to a former state arsenal on the corner of Chatham Street and Tryon Row. In 1809, the council ordered the whipping post and gallows removed from in front of the Bridewell. A visitor named Timothy Dwight noted that “the infliction of punishment was found to be so revolting to the feelings of the Community,” it amounted to public demand to remove the whipping post. In 1809, gas lamps were installed in the park. By 1810, turnstiles were added to the park’s gates to help regulate pedestrian flow (MCC 1784–1831 4:716–717; 5:572 and 6:372; Dwight 1821–1822:448-484).

City Hall was completed in 1811 (Image 5.08). The building stood two and a half stories and measured 215’ x 105’. The south, west, and east sides of the building consisted of expensive Massachusetts marble from the Johnson & Stevens Quarry in West Stockbridge, Massachusetts. The north side of the building was constructed using brownstone from New Jersey. The city father’s celebrated the Fourth of July in the new building. DeWitt Clinton was the first mayor to occupy City Hall.



Image 5.08: City Hall circa 1850 by August Köllner.

By 1812, all of New York's government offices had moved to their new French Renaissance-style home in the park. The move initiated the last round of improvements and transformations of the park. During this period, all residents of the second almshouse were moved to the new hospital complex at Bellevue.

Though cited as “the most successful piece of civic architecture in New York” at the time of its construction (*The Architectural Record* vol. 23–24:387), it wasn't long before additional improvements and renovations were made to both the park and the building.

In 1814, the grounds to the south and north of City Hall received a facelift. The Common Council had ordered “a Plan for the laying out of the grounds adjoining the New City Hall... in the manner which... would be most proper and advantageous for the Public Interest and the beauty of the City.” In August 1816, a committee of the Common Council recommended a botanic garden be planted between the New York Institution and City Hall. And in 1817, the council ordered that:

the Ground between the City Hall and the old Alms House and that between this time and the first of May next, the whole space to be laid down in Grass, bordered with trees and thrown open for the benefit of New York in the same manner as the spaces in front of the Hall, reserving however so much as may be necessary in the discretion of the Committee to be enclosed for the use of the Hall and Bridewell [MCC 1784–1831 7:715 and 8:600, 790–791].

An 1860 print by George Hayward, depicting the 1809 landscape, shows a 5' to 6' high wooden picket fence running north along the east side of Broadway about Warren Street (Image 5.09). In March 1817, the Common Council decided to erect an English-made iron fence (see Image 5.08). This fence ran from “the Engine House opposite Warren Street and running northerly to Chamber Street; thence along Chamber Street to a point in line with the west end of the New York Institution” (MCC 1784–1831 9:84, 125 and 206 and *New York Gazette* June 19, 1817). Four years later, the council opted to replace the southern wooden picket fence. Starting from the southern tip of City Hall Park, the new fence was to “be so extended as to connect it with that already erected” (MCC 1784–1831 11:686). Another iron fence, with a diamond slat top, ran from the engine house to the front of the Bridewell, and a southern entrance of the park was ornamented with four marble columns to support two pair of new iron gates.

New York's elegant City Hall was joined by the Rotunda, built in 1818 at the northeast corner of the park. John Vanderlyn built the Rotunda to exhibit his panorama *The Palace and Garden of Versailles*. As New York's first art museum, the Rotunda added to the cultural prestige of the booming city (Avery 1988).

In 1824, the Common Council called for the removal of the gaol and all the other small buildings between the Free School on Tryon Row and the park. The council planned to sell the land on which the gaol stood and use that money to build a larger prison in the northern part of the city, much farther away from the now-fashionable City Hall Park area. However, a recommendation called for the conversion of the gaol into a hall of records. In 1830, the

prisoners in the gaol were transferred to a building at Bellevue, and renovation work began for the hall of records (MCC 1784–1831 19:193–195).

As the 1830s progressed, only City Hall and its converted annexes remained within City Hall Park. The redesignation of old institutional buildings into governmental offices set the park's transition into its final stage of development. In 1838, the demolition of the Bridewell removed the last vestige of the park's former role. From 1861–1872, the construction of Tweed Courthouse occupied the northern half of the park. Tweed was built atop the location of the second almshouse, destroyed by fire in 1854.



Image 5.09: *View of Buildings in the Park, N.Y.*, as it was in 1809, by George Hayward 1860.

With the addition of Tweed Courthouse, the park began to take on its present-day configuration, though it still was host to a myriad of construction and improvement projects. These projects included the demolition of the Rotunda (1870) and the installation of a new fountain (1871) and electric lamps (1903). In 1939, the post office building at the southern tip of the park was demolished, restoring the park to its original triangular shape.

In 1966, City Hall was designated a city and national landmark (Image 5.10). In 1993, the park was designated as part of the African Burial Ground and the Commons Historic District. It is the only archaeological district within New York City. This nomination attests to the historic and archaeological importance of the Commons and City Hall Park to New York City's history.



Image 5.10: *City Hall* by William Guy Wall, 1826.

## **VI – METHODOLOGY**

### **INTRODUCTION**

As part of the African Burial Ground and the Commons Historic District, the LPC maintains jurisdiction over any works that may occur within City Hall Park. With regard to the current project, archaeology was an upfront consideration included as part of the design process. The project was urged, and required, to consider knowledge of previous and potential archaeological discoveries in their planning. Part of the district's determination confers that all archaeological features, known and yet to be discovered, are already considered landmarked. As a result, the project considered various routes and methodologies, and at times redesign, to accomplish their goals.

The landmark status of City Hall Park, the requirements of the LPC, and the unique needs of the client(s) also led to the utilization of a variety of archaeological field methods. At the onset of testing in March 2010, an Archaeological Testing and Monitoring Plan, an Unanticipated Discoveries Plan, and a Human Remains Protocol were developed (Appendix A). These plans served as general guiding documents for the project, establishing various protocols with regard to communication and responsibilities. For the purposes of archaeology and documentation, the project area was divided into a series of smaller areal locations based on construction plans, each of which entailed a general approach. These included: the northeast vault area; the east path; the east field monitoring station; Murray Street path; Warren Street path; the west path and Tweed (Map 6.01). Within each area, methods changed frequently in response to shifting conditions and the construction necessities typical in a project of this scale. The general methods utilized during the overall project are detailed below. Any modifications within individual areas that became necessary as the project progressed are discussed along with the fieldwork of those specific areas (Chapter VII).

### **GENERAL FIELD METHODS**

At the start of the project, construction personnel received archaeological sensitivity training. This training provided the construction crew, who would be physically doing most of the excavation, with an overview of the historic and archaeological sensitivity of the site. The presentation included the types of resources that would likely be encountered. Aspects of the established archaeological procedures for the site, including the Unanticipated Discoveries Plan and Human Remains Protocol, were also presented.

Using construction plan maps as a base, provenience information included the general location of excavation (e.g., west path, Manhole 3), horizontal location data, and depth below surface (i.e., strata). When a trench or unit was completed, it was documented via standardized forms, representative portions of its profile were hand drawn to scale, and digital photographs were taken. If excavation revealed intact archaeological features (i.e., foundations or shaft features), the archaeological team partook in excavation alongside construction personnel and fully documented said features. This documentation involved hand-drawn scaled maps, locational data, the completion of standardized forms, and extensive digital photography. At this juncture, DDC, Hill and Rockmore would be asked to

revise and/or reroute the proposed construction to avoid impact to the archaeological feature(s). If excavation revealed (intact and/or *in situ*) archaeological deposits that could not be avoided and, therefore, had to be removed, limited archaeological excavations occurred. No excavation was undertaken without the express approval of the LPC. These excavations consisted of either test units or controlled excavations of feature fill within definable structures (e.g., shaft or outbuilding features) or significant artifact deposits. The boundaries of all excavations were confined to the boundary of the proposed construction impact area.

When possible, test units consisted of either 3' x 3' or 5' x 5' squares. The placement of the test units was often dependent upon the size of the area to be impacted per the proposed construction plans. Therefore, the size and shape of individual test units sometimes varied. All non-standard test units were rectilinear in shape and quantified in even integers. All test units were excavated stratigraphically until either sterile subsoil or an unsafe depth was reached, or the limits of the construction dimensions were met. At times, Rockmore personnel excavated test units under the supervision of the archaeological team. Each stratum was documented via a standardized form. Archaeological features encountered within a test unit were documented and excavated following the methods described below. Soils were screened through ¼" hardware mesh. Artifacts recovered were bagged and labeled according to their provenience. After the completion of each test unit, representative scaled profiles were hand drawn and the unit was digitally photographed.

Non-structural features (i.e., middens and interior fill of shafts) were excavated in a manner similar to that of the test units. After initial documentation, each feature was either halved or quartered, based on its size. Each half or quarter was excavated stratigraphically; all soil was screened through ¼" hardware mesh. All recovered artifacts were bagged and labeled according to their provenience. After the completion of one half of a feature, the profile was documented via a detailed scale drawing of the profile and digital photography. The second half (or two quarters) was then excavated, following the procedures detailed above. After each feature was fully excavated, final drawings and photography of its final aspect were generated. The archaeological team carried out all aspects of feature excavation; untrained personnel undertook no feature excavation.

Determination of excavation methods and location was subject to changing construction conditions throughout the City Hall Park Rehabilitation Project. As design plans changed, several portions of the project area, including the northeast vault area and Tweed, were backfilled with clean fill and later re-excavated by Rockmore personnel to accommodate new construction goals. The archaeological team monitored re-excavation of all areas containing historic features and previously unexcavated material following the field methodology outlined above. Any previously undiscovered deposits or features were documented, and any additional artifacts encountered were retained and bagged according to the proper provenience.

Design changes also affected the scope of excavation within each project area. Trenching along the Murray Street path and west path areas was halted before completion of the originally intended scope due to alterations in construction methodology. The archaeological team documented these partially completed trenches in-progress using standardized forms,

hand-drawn scaled plan and profile drawings, and digital photographs before the trenches were backfilled. In addition to abbreviating several excavation locations, limits of the construction scope curbed some archaeological feature excavations. Where found features appeared to extend beyond the limits of the construction areas, as in the Manhole 3 area at the northern end of the west path, the archaeological team consulted with LPC to agree upon a suitable documentation plan for these areas. This effort included small extensions of the trench areas to recover additional information or material and extensive in-progress documentation of changing feature plan views and profiles using scaled drawings and digital photography.

Finally, to accommodate construction and design plans, it was necessary to remove several archaeological structural features uncovered during the course of the project. Features affected were located in the northeast vault area and the west path Manhole 3 extension, including stone and brick drains, a stone well, a portion of a square pressed brick structure, the northeast retaining wall, and a portion of the stone foundation of the Bridewell. Before removal, the archaeological team utilized small hand tools—such as trowels, whiskbrooms, dustpans, and paintbrushes—to remove the final vestiges of clean fill from the features. The features were then documented using high-resolution photography and scanned with a three-dimensional modeling imager. The archaeological team then carefully deconstructed the features in 5' sections in order to document any additional artifacts or interior deposits within discrete proveniences that might be revealed. Features constructed of large stones, such as the well in the northeast vault area and foundation wall in the west path Manhole 3 extension, were deconstructed by the Rockmore crew in 5' increments under the archaeological team's close observation. Mechanical means were used to aid in the removal of the retaining wall. The deconstruction process was recorded through digital photography.

*Editorial Note: The success of the non-traditional field approach was made possible due to the working relationship the archaeological team established with Rockmore. Consistently, Rockmore provided the same crew to assist with the archaeological work. As a result, they were able to become versed in/familiar with archaeological excavation methods and techniques.*

## **LABORATORY PROCESSING AND ANALYSIS**

All recovered artifacts were placed in plastic bags labeled according to provenience (location, trench or test unit number, and stratum) in the field. Artifact materials and faunal remains were bagged separately, as they would be analyzed at separate facilities. Potential human remains were immediately separated for identification. Fragile items (e.g., the eighteenth-century bayonet) were wrapped in archival safe materials and handled as per the In Field Materials Handling Procedure (Appendix A).

## **MATERIALS**

While in the field, each artifact bag was assigned an FS number unique to each context. This number was entered into a provenience table with identifying information for each context (see Appendix J). The fields in the provenience table include: FS number, lot, provenience text, unit, strat, level, number of artifact bags, and analytical unit.

Upon arrival at the URS facility in Burlington, New Jersey, artifact processing was initiated. Technicians processed the artifacts using standard archaeological techniques: artifacts were washed either using soft-bristle brushes and a mild, non-ionic detergent or a Branson 5510 ultrasonic cleaner. Following cleaning, the artifacts were air-dried on racks and then marked according to New York State Museum guidelines.

After the cleaning and marking of the artifacts, a basic level of analysis was utilized to identify the following characteristics of artifacts: form (e.g., nail); general functional group (e.g., architectural); material composition (e.g., metal – iron); manufacturing technique (e.g., cut, hand-headed); date of manufacture (e.g., 1790–1830); maker’s marks, if present; and number of artifacts with these characteristics in the context. Information pertaining to ware type and decoration is noted for ceramic artifacts, as this is necessary for accurate dating. Analysts entered this data directly into a Microsoft *Access* database (Appendix J). Each line of data received its own entry number. This entry number was placed on the plastic (4-mm-thick polyethylene) bags with zipper-locking closures that will house the artifacts; each entry was bagged separately in order to facilitate retrieval of artifacts for exhibit or study, if applicable. Identification of artifacts using a functional classification system benefits interpretive analysis with regard to behavior and actions of the persons who utilized these materials.

#### *Database*

During analysis, artifact information was entered into the Microsoft *Access* inventory using “pull down” menus that include standard terms (e.g., earthenware, pearlware, etc.), but that can also accept unique terms. The program automatically assigned individual record numbers to each entry as it was created. URS maintained a daily computer backup file of all data.

#### *Required Fields*

**FS Number:** This is the unique number assigned to each context in the field. This number, followed by a decimal point and the assigned entry number, serves as the artifact catalog number. The provenience table within the database includes every FS within the site for cross-referencing.

**Entry Number:** This is the individual consecutive number assigned during analysis to each record forming part of the catalog number. The artifact(s) described in each record were bagged separately and the FS and entry numbers were written on the bags in order to facilitate locating artifacts.

**Cataloger:** This category identifies the cataloger/analyst.

**Date:** The Microsoft *Access* program assigned dates automatically.

**Artifact Count:** This is the number of artifacts represented within a record.

**Group:** This field records functional groups. It is designed to classify artifacts into broad functional categories: architectural, activities, arms, commercial, electrical, fauna, flora, fuel,

furniture, hardware, household, industrial, medical, other, personal, prehistoric, tack, toy, transportation, and unknown. Definitions of these groups are available in Table 6.01.

**Class:** This field separates groups into types based on their composition; e.g., ceramic, glass, metal, etc.

**Material:** This field records information about the artifacts' material type(s), for example, coarse earthenware, lead glass, aluminum, etc. For floral and faunal pieces, designations such as seed, pit, and shell are recorded.

**Object:** For household group artifacts made of ceramic or glass, smoking pipes, and some other ceramic objects, this field is used to record what part of the vessel is present; e.g., rim, body/base, bowl and stem, etc. For all other artifacts, it describes the object; e.g., nail, button, coal, scissors, etc.

#### *Optional Fields*

These were assigned as required based on the characteristics of each artifact.

**Object:** For artifacts without described forms in the object field, as noted above, this field records their shape: saucer, plate, bottle, etc. This field is left blank for artifacts already described in the object field.

**Ware:** This field records ware types such as pearlware, porcelain, Chinese export, British buff-bodied slipware, etc.

**Primary Decoration:** Information about the main type of decoration on an artifact is entered in this field, e.g., painted, transfer printed, embossed, etc.

**Secondary Decoration:** This field is used if more than one type of decoration is present or to expand upon the information in the primary decoration field. There may be overlap between the two fields.

**Pattern/Motif:** If a pattern can be identified or a motif described, that information is recorded here; e.g., biblical scene, willow, Chinese landscape, floral, etc.

**Color:** This field is used to describe colors of decorations or colors of objects, as appropriate. For example, the glaze color of lead-glazed redware artifacts is noted, as is the color of transfer-printed or painted decorations on vessels.

**Manufacture Technique:** This field describes the manufacture of the artifact; e.g. mold blown.

**Begin and End Dates:** These fields were filled in when manufacturing date ranges could be determined from an artifact's manufacturing technology, decoration, or maker's mark. The principal sources used to determine dates were Miller et al. 2000, Azizi et al. 1996, and Noël Hume 1969. Other sources used are noted, as applicable.

**Weight:** The weight of certain types of artifacts is equally or more significant than their counts, as count is strongly affected by degree of fragmentation. All window glass, bricks, mortar, plaster, cement, roofing tiles, coal, cinders, charcoal, asphalt, and slag were weighed as well as counted.

**Vessel Number:** Vessel numbers were assigned to the ceramic and glass vessels from the Feature 28 midden deposit.

**Makers Mark:** If a maker's or other mark is present on an artifact, it is noted in this field.

**Function:** This field was used to describe the probable function of household group ceramic and glass artifacts; e.g., teawares, tablewares, sanitary, etc.

**Mends:** This field is used to track mending between contexts.

**Percent:** This field is used to record what percent of a vessel is present; this information is noted only for vessels assigned a vessel number and where the information is useful for analysis.

**Condition:** The condition of the artifact (e.g., burned, water worn, manufacturing defect, etc.) is noted here.

**Artifact of Note:** This field is checked for objects suitable for exhibit or for particularly significant or interesting artifacts.

**Status:** The present location (as of September 2012) of the artifact is recorded here; e.g., sent to conservation, pulled for exhibit, etc.

**Bore:** Pipe stem bores, in 64ths of an inch, were recorded.

**Rim/Neck:** This field is used to record the finish shapes or manufacturing technique of selected bottles; e.g., lipping tool, etc.

**Base:** Either the type of base, for bottles (pontil, sand, snap case, etc.), or the foot ring shape, for ceramic vessels (undercut, free-standing, etc.), is recorded in this field for selected vessels.

**Comments:** This is an open text field used to record details about objects, maker's or other marks, and any information useful for analysis and interpretation.

The context bags were placed in catalog number order in acid-free cardboard storage boxes. Each box measures approximately one square foot.

Table 6.01: Definition of artifact groups.

Group	Description
Activities	A broad category for things people do (but not manufacturing, commerce or games).
Architectural	The more or less permanent components of buildings and other structures, such as bridges. Also any sorts of drain pipes and roof, floor and wall tiles.
Arms	Artifacts related to firearms, including projectiles and artillery.
Commercial	Commerce and money.
Debitage	All lithic debitage; flakes, shatter, tested material, split cobbles
Electrical	Electrical wiring, insulators, light bulbs, switches and switch covers.
Food Related	Species used normally as food.
Fuel	Things used to create heat (coal, coal cinders). Not charcoal because this could be accidental rather than deliberate burning. Prehistoric (FCR)
Funerary	Artifacts associated with burial practices such as coffin hardware, planks, name plates, tomb stones etc...
Furniture	
Hardware	A broad category for all sorts of fasteners (except nails and spikes), easily removable parts of buildings & furniture (almost always metal), decorative elements, and such.
Household	Any artifacts used for food preparation, storage, service and consumption.
Indeterminate	Unidentifiable artifacts such as metal fragments.
Lighting	Anything associated with producing artificial light, except for electrical light.
Manufacturing	Machine parts, kiln furniture and wasters, by-products of making things in a craft, proto-industrial or industrial fashion. Slag except coal slag.
Medical	Medicinal and pharmaceutical artifacts.
Non-Food Related	Species not normally used as food items
Ornament	Figurines, etc.
Other	Things that don't fit into any other category. If there are enough of them we could make a new category.
Personal	Artifacts associated with use by one person or artifacts contributing to individuals' identities.
Sample	C-14 samples, Soil Samples, unpicked light fraction.
Sanitary	Chamber pots, soap dishes, toothpaste pots, wash basins and ewers.
Storage/Cooking	Prehistoric ceramics.
Tack	Anything related to horses and other draft or riding animals.
Tool	Hand tools used to make other things or to manipulate the physical world. Prehistoric: Bifaces, Points, Unifacial Tools, Cores etc...
Toy/Recreation	All toys, sporting equipment, and gaming pieces
Transportation	Cars, trucks, railroad (but not spikes unless sure they are railroad).

FAUNAL

Upon arrival at the laboratory facility, the faunal remains covered in dirt were allowed to dry and the remaining soil removed with brushes. Analysis of the faunal remains followed

NABO Zooarchaeology Working Group recommendations and the established traditions of North Atlantic zooarchaeology.

A basic level of analysis was utilized to identify the following characteristics: species/class; skeletal element; fragment size; fusion; age; evidence of butchery, burning, or gnawing. All fragments were identified as far as taxonomically possible, but most mammal ribs, long bone shaft fragments, and vertebral fragments were assigned to “large terrestrial mammal” (cattle or horse sized), “medium terrestrial mammal” (sheep, goat, pig, or large dog sized), and “small terrestrial mammal” (small dog or fox sized) categories. Only elements positively identifiable were assigned to species. Due to budgetary constraints, faunal materials that fall into the categories of fish and bird were not given species identification. This has resulted in bird and fish bones that clearly are of different species (in many cases species identification is obtainable) being allocated simply as AVSP (or unidentified bird species) in the database.

Faunal elements were photographed as necessary. All information was recorded in a Microsoft *Access* database supplemented with Microsoft *Excel* spreadsheets (Appendix K).

#### HUMAN REMAINS

All skeletal material recovered from City Hall Park was recorded according to the standards proposed by Buisktra and Ublelaker (1994), with some modifications. Data forms created based on these standards (again, with modification) were used initially for collection of skeletal information during laboratory analysis. Following the completion of analysis, all data was transferred into an *Access* database created by the author, Matthew Brown (Appendix L). The overall purpose of the database is to facilitate a digital copy of all skeletal material from this site.

In order to facilitate extraction of information from the database through directed searches, each set of skeletal remains was assigned three identifying specimen numbers (INV, SP#, and SubSP#) that increased with specificity. These identification numbers are non-repeating, except in the event the skeletal material was from the same individual. With the exception of highly fragmented skeletal material, all bones were photographed.

#### THE COLLECTION

The final disposition of the City Hall 2010–2011 collection is at present (as of September 2012) undetermined. It is recommended that the collection be stored along with the City Hall 1999 collection, which is housed at the Brooklyn College Archaeological Research Center. Once a final determination and agreement for a repository has been made, all artifacts and paper and electronic copies of the field drawings, field photos, the artifact inventory, and paper and electronic copies of this report will be delivered to the receiving institution.

## VII – ARCHAEOLOGY

Excavation occurred across several areas within City Hall Park, including the interior basement of City Hall. The project was divided into geographic areas, using City Hall as a focal point, and these areas are arranged here as sub-headers for discussion. Map 7.01 highlights these geographic areas.

During the course of the 2010 and 2011 excavations, 43 features were recovered and documented. A total of 44,141 artifact and faunal remains were recovered dating to the eighteenth and nineteenth centuries. Table 7.01 presents a list of features recovered, their geographic location, and brief descriptions. These features are discussed in more detail throughout this section.

Table 7.01: City Hall 2010–2011 features.

Feature #	Location	Description
1	NE Vault Area	Original City Hall retaining wall
2	NE Vault Area	Domed 18 <sup>th</sup> -century brick cistern
3	NE Vault Area	Circa-1860 pressed brick structure
4	NE Vault Area	19 <sup>th</sup> -century brick structure
5	NE Vault Area	Flagstone and brick drainage
6	NE Vault Area	Soil feature – wooden box
7	NE Vault Area	18 <sup>th</sup> -century circular brick and stone feature (well) beneath the northeast corner of Feature 4
8	NE Vault Area	18 <sup>th</sup> -century stone well
9	NE Vault Area	Flagstone and brick drainage
10	NE Vault Area	Flagstone and brick drainage
11	NE Vault Area	Flagstone and brick drainage
12	West Path	19 <sup>th</sup> -century brick-domed cistern
13	West Path	Brick and stone drain south of Feature 12
14	Murray Street Path	Pit feature
15	Northwest	Original City Hall retaining wall
16	West Path	Brick and stone drain north of Feature 12
17	West Path	Brick shaft feature north of Feature 16
18	West Path	Large stone shaft feature east of/adjacent to Feature 17 capped with mortar and bluestone
19	West Path	Slab-capped drain north of Feature 18; running north-south; connecting Feature 18 and Feature 20

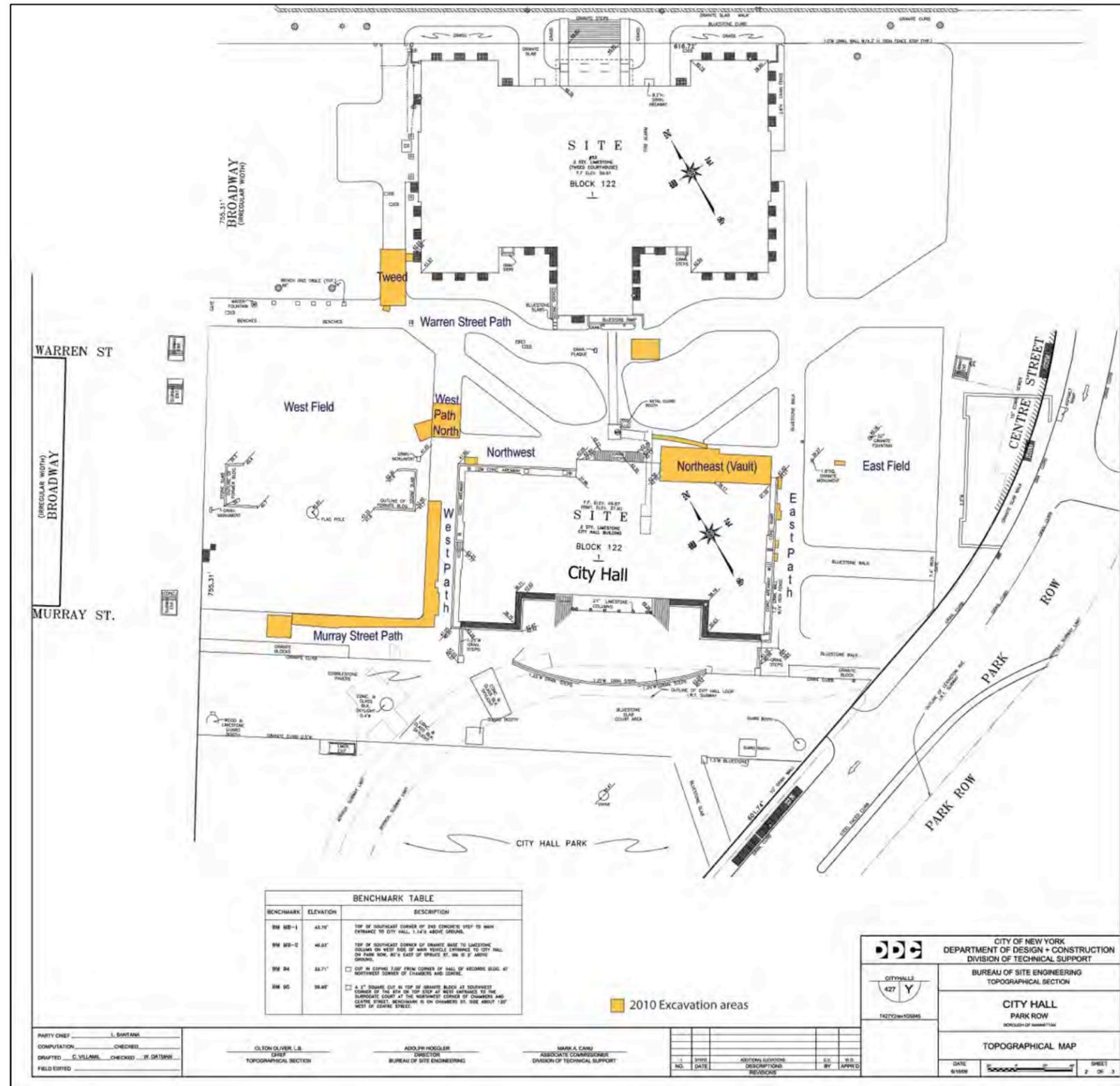
Table 7.01: City Hall 2010–2011 features (Cont'd).

<b>Feature #</b>	<b>Location</b>	<b>Description</b>
20	West Path	19 <sup>th</sup> -century brick-domed cistern; north end of the west path; at north end of Feature 19
21a	Northeast Areaway	Small, square brick feature; east end of areaway
21b	East Areaway	Small, square brick feature – identical to Feature 21a
22	Northeast Areaway	Stone door frame/sill beneath east window of Basement Room 8C
23	Northeast Areaway	Brick wall; lower than Feature 1 retaining wall
24	Northeast Areaway	Small square brick feature; west end of areaway near Feature 2
25	Northeast Areaway	Stone wall beneath Feature 22
26	Northeast Areaway	Stone wall beneath retaining wall (F.1); just north of Feature 23
27	West Path North	Circular deposit north of Feature 28 (Manhole 3)
28	West Path North	Midden in southwest portion of Manhole 3
29	West Path North	Midden in southeast portion of Manhole 3
30	Tweed	Stone circular shaft feature (well)
31	Tweed	Stone drain extending northeast of Feature 30
32	NE Vault Area	Small midden outside northeast corner of Feature 3
33	NE Vault Area	18 <sup>th</sup> -century stone cistern with midden deposit beneath southeast corner of Feature 3
34	NE Vault Area	Wooden circle “barrel” at the edge of Feature 35
35	NE Vault Area	Midden deposit within 18 <sup>th</sup> -century stone cistern abutting Feature 1 and alongside and below Feature 3
36	West Field	Stone-capped brick shaft feature (Manhole 3 extension)
37	West Field	Brownstone tumble; stepped
38	West Field	Rubble filled square soil feature north of Feature 36
39	West Field	Brick arch beneath Feature 37

Table 7.01: City Hall 2010–2011 features (Cont'd).

<b>Feature #</b>	<b>Location</b>	<b>Description</b>
40	West Field	Pit feature in northwest corner of Manhole 3 extension
41	West Field	Schist foundation wall beneath Feature 37 and Feature 39
42	West Field	Midden deposit within Feature 41
43	Murray Street Path	Cobblestone walkway southwest of City Hall

This chapter presents the field investigations and their results. Within the discussion of each geographic area the excavation, stratigraphy, features, associated artifact assemblages, and summary interpretations are presented. The first area discussed is the Warren Street path, and the chapter concludes with the discussion of the northwest midden deposit and the Bridewell.



Map 7.01: City Hall 2010-2011 excavation areas (highlighted yellow). Base map – DDC Topographical Map, May 2010 (modified).

**1. WARREN STREET (ORIGINALLY MANHOLE 3)**

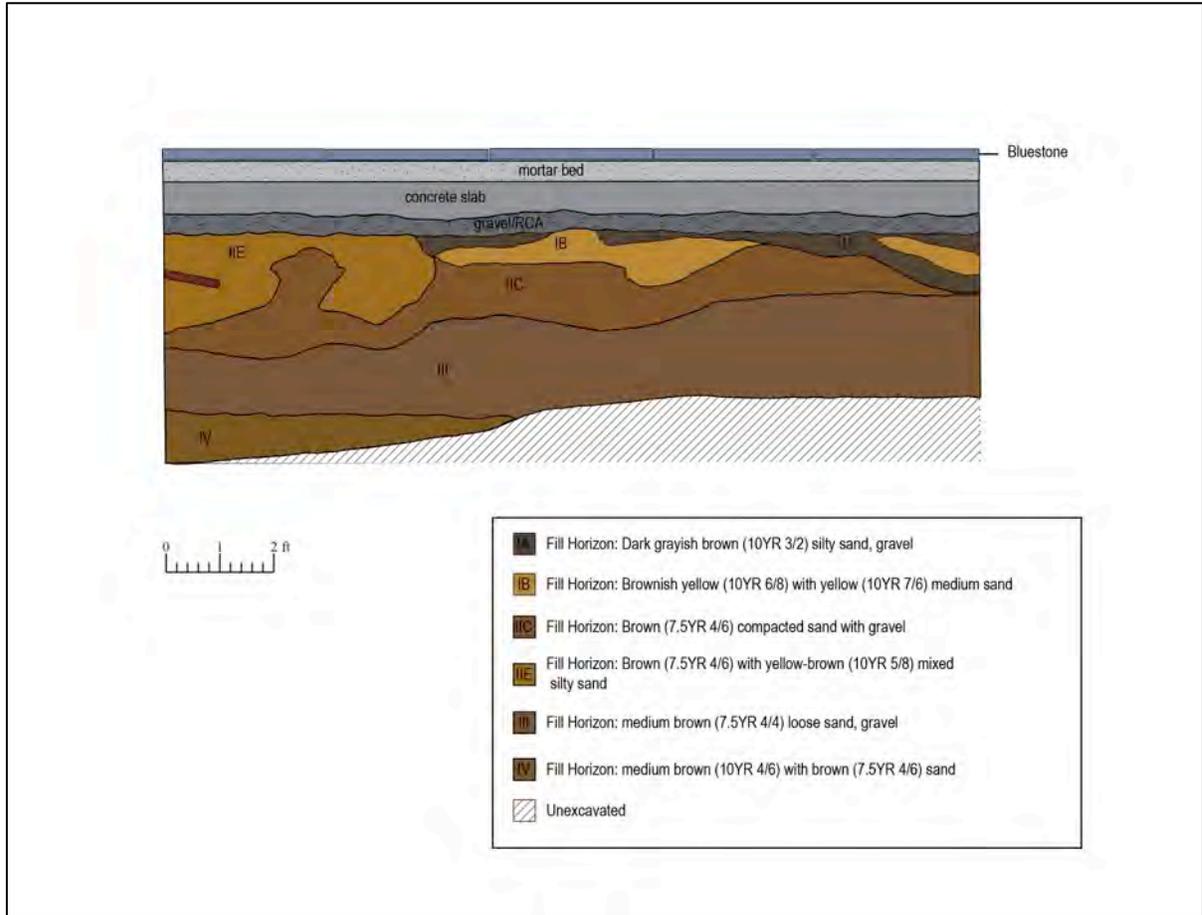
Excavation along the eastern half of the Warren Street path occurred for a proposed manhole during the early design stages of the project. Originally labeled as Manhole 3, the archaeological team has designated it the Warren Street path (Warren Street) to avoid confusion with chronologically later excavation areas. The excavation area measured 15' x 19' (see Map 7.01) and was excavated to a final depth of 6' below surface (bs) (Map 7.02).

ASSOCIATED STRATIGRAPHY

The area excavated consisted of 1.8' of modern bluestone paving and its associated underlayment (Strata I – IV). The remaining stratigraphy consisted of two fill horizons. Stratum V consisted of redeposited soils with some cultural materials and evidence of several utility disturbances. Stratum VI, beginning at 2.67' bs, consisted of clean fill sands not native to the area. No cultural materials were recovered from this stratum. Natural subsoils were not exposed. Overall, this excavation area exhibited a significant amount of disturbance from previous utility or other works. Table 7.02 provides a summary of the stratigraphy of this area.

Table 7.02: Summary of Warren Street stratigraphy.

<b>Stratum</b>	<b>Depth</b>	<b>Soil Description</b>
<b>I</b>	0' – 0.66'	Curb stone
<b>II</b>	0.66' – 0.91'	Mortar bed
<b>III</b>	0.91' – 1.66'	Concrete pad
<b>IV</b>	1.66' – 1.83'	Aggregate/stone
<b>V</b>	1.83' – 2.67'	Fill horizon consisting of various mottled soils with utility disturbances
<b>VI</b>	2.67' – 6'	Fill horizon consisting of clean medium coarse sand and gravel



Map 7.02: Western profile of the Warren Street path excavation.

## ASSEMBLAGE

Artifact recovery occurred as a general collection with contexts assigned based on location beneath paving. Immediately beneath the concrete pad (Stratum III), a small, scattered deposit was recovered containing 83 artifacts (Table 7.03). Among the materials are whiteware and pearlware ceramic and a copper alloy button stamped “C...OS... ON A PARIS.” The disturbed nature of this deposit was demonstrated by the presence of a plastic disk within the assemblage.

Table 7.03: Artifact counts by functional group, Warren Street excavation.

Functional Group	Artifact Count
Architectural	17
Food Related	23
Fuel	1
Household	25
Indeterminate	10
Personal	7

A broader range of materials was recovered from the fill horizons (Strata V and VI). Utility works disturbed these strata, and materials are secondary or tertiary deposits. Historic ceramics include pearlware and whitewares and Chinese import porcelain, along with a sherd of a buff-bodied stoneware jar. The disturbed nature of the context is evident through the presence of modern ceramic and marble tile. One interesting artifact of note is a copper alloy button stamped with “Quartrieme Regiment” over an anchor and crossed cannon (Image 7.01)—a uniform button from the French Fourth Marine Artillery Regiment. The regiment was one of four formed in 1803 and dissolved into companies in 1813 after many casualties decimated their ranks (Haythornwaite 1988). Unfortunately, the disturbed nature of the surrounding context made a deposition date for this martial artifact impossible to determine.

Faunal remains were fragmented, prohibiting species-level identification. The majority of the fragments are of large terrestrial mammal, most likely cattle. In total, 16 fragments were recovered.

#### SUMMARY

This area exhibited significant disturbance from utility installations and other works in the general vicinity that may have been related to the construction of Tweed Courthouse. Any material remains uncovered from within this area were from disturbed secondary or tertiary deposits. For future reference, due to changes in the project plans, the manhole was not constructed in this location. The disturbed nature of this area makes it archaeologically ideal for future utility work or other construction.



Image 7.01: French “Quatrieme Regiment” military button, 1803–1813.

## **2. Tweed Courthouse West – Manhole 2**

This north end of City Hall Park has been built upon multiple times. The earliest construction was the Upper Barracks in 1757. These barracks were razed after the British evacuation following the end of the Revolutionary War. In 1796, the city's second almshouse was constructed on the site of the Upper Barracks. By 1831, the city had moved the poorhouse out of City Hall Park, and the building was used for public offices and courts. The second almshouse building was destroyed by fire in 1854.

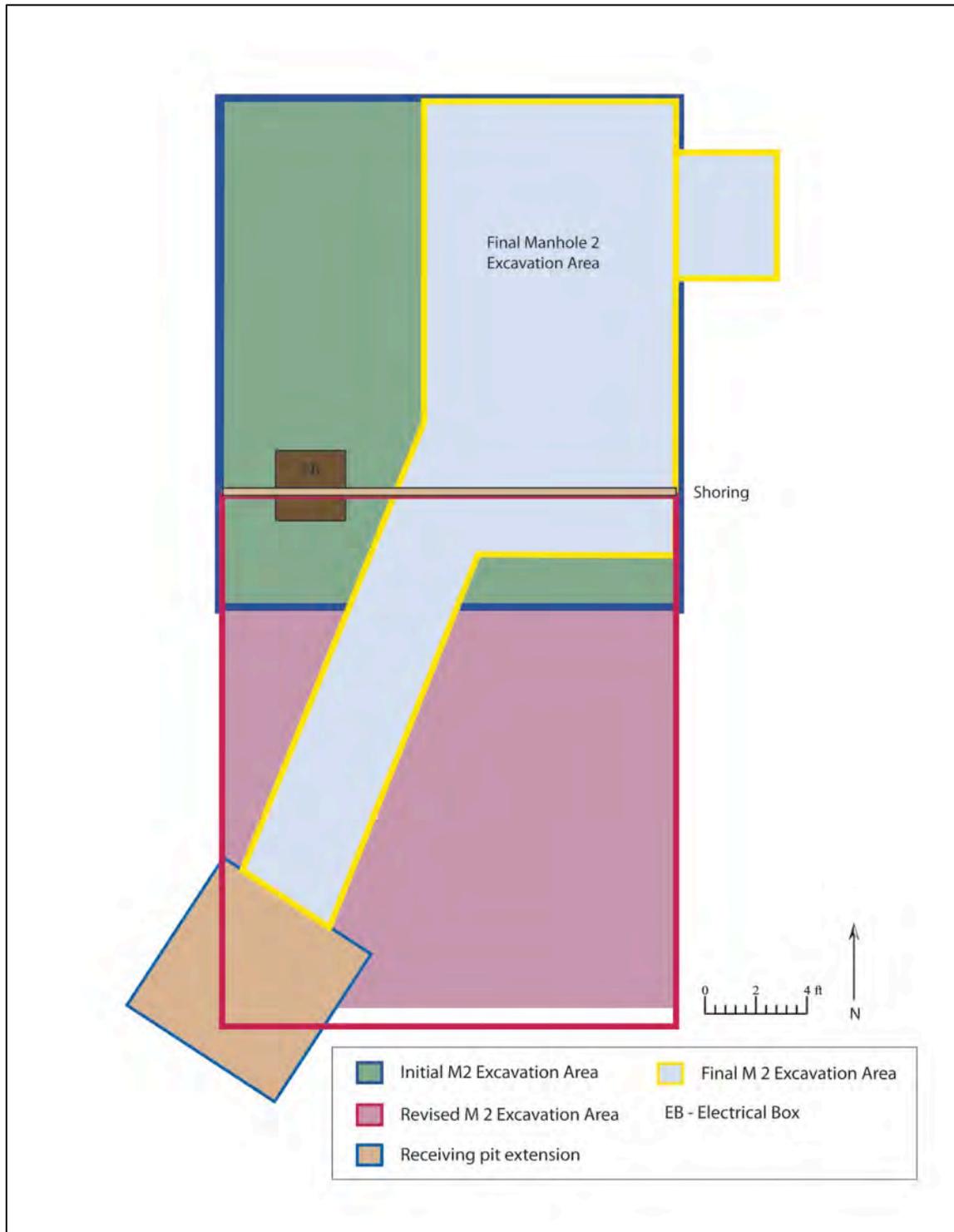
Leveling the northern portion of the park made way for the construction of Tweed Courthouse, which would become the third structure to occupy this location. Formally known as the "Old" New York County Courthouse, Tweed Courthouse was built from 1861–1881 using funds provided by William M. "Boss" Tweed.

The current project required a utility manhole along the southwest side of Tweed Courthouse (see Map 7.01). Evolving project plans over the course of the project repositioned and/or expanded this manhole on several occasions. Map 7.03 depicts the total area excavated, while highlighting the final construction area. Excavation in this location was particularly sensitive due to the discovery of human remains in the general area in 1998/1999 and on nearby Chambers Street in 1992.

Considering the multiple adjustments made to this area, the discussion of the field results is preceded by a brief overview highlighting the various relocations and expansions. The original excavation area measured 20' x 18' and was excavated to 5.5' bs, except for the northern 4' of the manhole area. Excavation was halted in northern 4' of the trench at 3.5' bs, having been determined that this area was unnecessary for the project plans. The area was backfilled with clean sand. At the southern end of the manhole area, a modern, active electrical box was exposed.

A shoring wall was installed and the electrical box supported prior to a 10' extension being added to the southern end of the excavation area. The new excavation area measured 20' x 28'. Excavation in this extension exposed two features (Features 30 and 31) and was excavated to a final depth of 5.5' bs. The area north of the shoring wall was filled with clean sands.

Plans for this area were not finalized until 2011. At this time, it had been determined that the position of the manhole would be moved back to the original location, measuring 10' x 18'. A 5' wide trench from the east wall of the manhole to the window well of Tweed Courthouse would also need to be excavated (see Map 7.01 and Map 7.03). Additionally, to facilitate the micro-tunneling machinery, a 12' wide by 14' long corridor would be excavated from the south wall of the manhole excavation area at a southwest angle, along the western side of the previously discovered Feature 30, to connect with a proposed 7' x 7' "receiving pit."



Map 7.03: Tweed Courthouse West – Manhole 2 excavation area as modified.

ASSOCIATED STRATIGRAPHY

This general profile of the area exhibits a significant amount of disturbance. The area contained a 14” thick concrete footing followed by a ¾”–1” thick layer of recycled concrete aggregate (RCA) beneath the modern paving stones. The next 2’–3’ of the excavation unit consisted of an amalgam of various fill layers, totaling nine distinct sands and soils (Strata III-X).

Stratum XI, beginning at approximately 3.5’–4’ bs, was a pit-shaped layer consisting of sand with gravel inclusions and cultural materials. Stratum XII exposed at approximately 6’ bs, was present at 4.25’ bs in some areas, and consisted of natural sandy subsoil excavated to a final depth of 15’ below surface. Table 7.04 outlines the various stratigraphic layers in this area and Map 7.04 presents a graphical representation of the east profile.

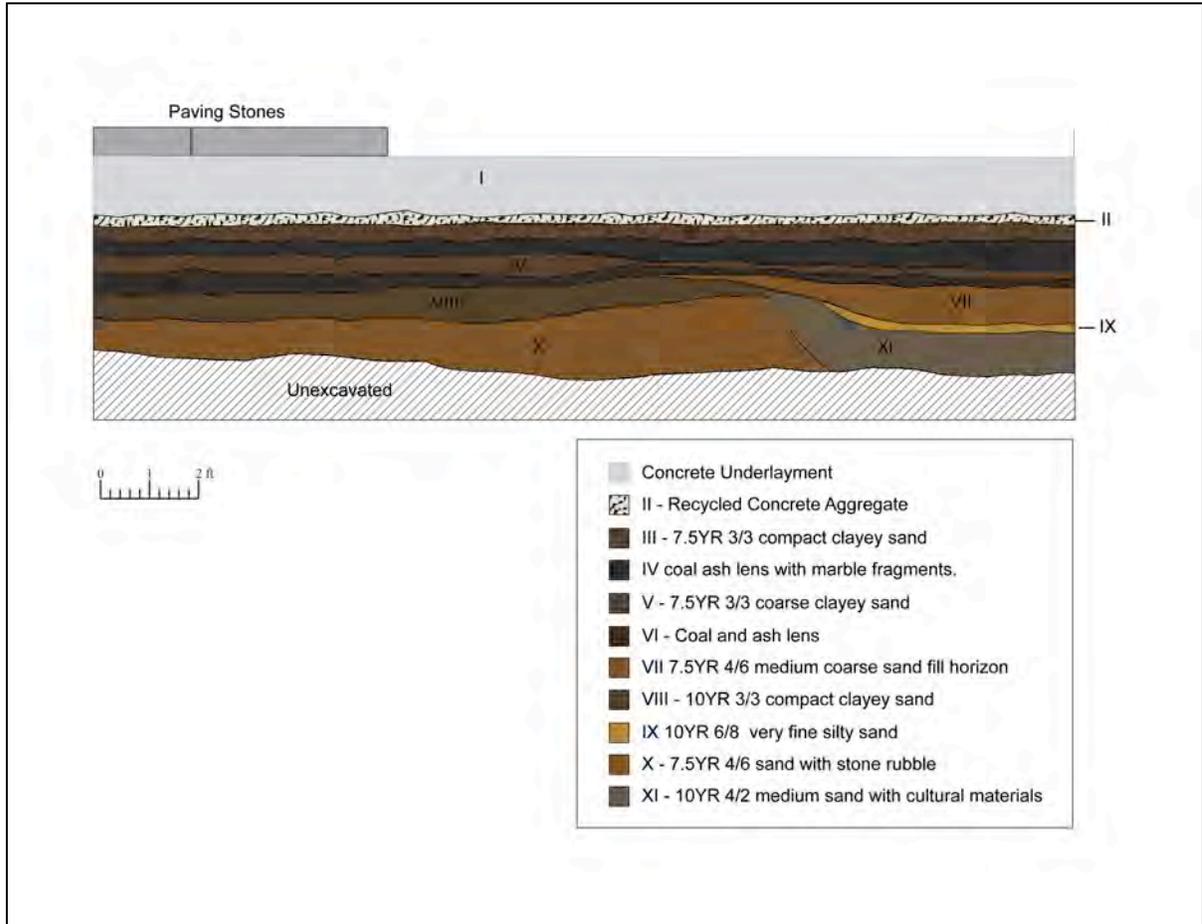
Table 7.04: General stratigraphic profile of the Tweed Courthouse West – Manhole 2 excavation area.

Strat	Depth	Description
I	0’ – 1.2’	Concrete footing for modern bluestone pavers
II	1.2’ – 1.4’	Recycled concrete aggregate
III	1.4’ – 1.7’	Fill horizon - dark brown 7.5YR 3/3 compact clayey sand with pebble, small cobbles and shell inclusions
IV	1.7’ – 1.9’	Fill horizon - coal ash lens with marble fragments within a light gray 2.5Y 6/2, 7/2 compact medium coarse sand
V	1.9’ – 2.3’	Fill horizon - 7.5YR 3/3 mottled with 10YR 3/6 clayey coarse sand
VI	2.3’ – 2.4’	Very thin coal ash lens
VII	2.4’ – 2.8’	Fill horizon – 7.5YR 4/6 with 7.5YR 5/4 medium coarse sand
VIII	2.8’ – 3.45’	Dark brown 10YR 3/3 compact clayey sand with cultural materials
IX	3.45’ – 3.55’	Yellow brown 10YR 6/8 (7/8) very fine sand
X	3.55’ – 4.25’	Fill horizon – stone rubble within a red brown 7.5YR 4/6 sand
XI	3.5’ – 6’	10YR 4/2 medium sand with cultural materials
XII	4.25’ – 15’	Light brown 7.5YR 3/2 sandy subsoil

ASSEMBLAGE

No artifact materials were recovered from Strata I through X. The assemblage excavated from within Stratum XI occurred in multiple phases. The stratum was initially identified during the second phase of excavation in this area, which had extended the manhole 10’ to the south. The materials uncovered at this time were from the thin southwestern edge of the deposit. During this excavation episode, human remains were recovered at the base of the excavation area along the east wall. Clean fill sands characterized the western portion of the excavation area.

When the project plans were finalized, excavation reoccurred in the northern part of the original manhole excavation area and in a 5' wide area that would connect the manhole to the Tweed Courthouse (Image 7.02). Materials recovered during this excavation episode were also from Stratum XI. Human remains were again uncovered (these are discussed separately in Chapter X). The artifact materials are discussed as a single assemblage.



Map 7.04: East profile of Tweed Courthouse West – Manhole 2.



Image 7.02: Excavation of the area connecting Manhole 3 with Tweed Courthouse. The window well foundation for Tweed Courthouse is visible in the top portion of the excavation area.

A total of 179 artifacts were recovered, not including human remains. The majority of the assemblage is split between food-related ( $n=68$ ) and household ( $n=66$ ) artifact remains. Table 7.05 provides a more detailed count relative to functional groups.

Table 7.05: Artifact count by functional groups for Tweed Courthouse West – Manhole 2.

Functional Group	Artifact Count
Activities	1
Architectural	15
Commercial	1
Food Related	68
Furniture	1
Household	64
Indeterminate	1
Personal	26
Sanitary	2

### *Activities*

This group contains one artifact—a redware flowerpot base sherd.

### *Architectural*

This group consists of two pieces of decorative marble molding and two shards of window glass. The remaining 11 artifacts are iron nail fragments that are too corroded to determine the manufacture technique.

### *Commercial*

The commercial group is represented by a copper alloy coin. The coin is a one-cent piece stamped with Lady Liberty on the front of the coin and facing right. Only a partial date was discernible via an x-ray of the coin. The date reads 180\_\_, with the last digit being illegible.

### *Food Related*

This category consists of 68 fragmented faunal remains. The majority of these remains are only identifiable to the species level, including 44 large terrestrial mammal fragments, five medium terrestrial mammal fragments, and 10 unidentified terrestrial mammal fragments. Only nine fragments were identifiable to the species level, including three cattle, one caprine, two pig, and two clam shells.

### *Furniture*

The furniture group contains a copper alloy furniture part pressed with a shell and scroll motif. This artifact is possibly from a mirror.

### *Household*

The household group contains 64 items. Only one shard of glass was recovered from a green bottle of indeterminate manufacture. Among the five coarse earthenwares is an Alkaline mottled glazed sherd; a dark brown slip-decorated British buff-bodied sherd (1670–1795); two lead-glazed redware sherds; and a slip-decorated redware sherd from a pan. Two porcelain sherds were recovered, including soft paste porcelain with a painted sprig molded pattern and Chinese export porcelain, blue painted with gilding.

Several refined earthenwares were recovered, including 15 sherds of creamware (1760–1820). One of these sherds is in the form of a handle and another has a molded geometric rim pattern (1790–1810) (Miller et al. 2000:12). Fourteen pearlware sherds are among the assemblage; most of these have a painted decoration, which includes two sherds of molded edgeware (1800–1830). There are 14 whiteware sherds, as well; five of these exhibit a printed decoration (post 1815). Two of the printed sherds have a more refined date based on their color and pattern (1825–1915) (Azizi et al. 1996).

Completing the refined earthenwares category is an engine-turned red-bodied sherd (1763–1820) (Azizi et al. 1996) and five refined earthenware sherds of indeterminate ware type. One of these has a green dipt reeded decoration (1770–1939) (Jefferson Patterson Park and Museum 2012) and the remaining four are severely burned.

There are six stoneware sherds; four of these are locally produced salt-glazed gray/buff-bodied sherds. The remaining two are an English brown salt-glazed sherd and a white salt-glazed sherd with a molded pattern (1740–1755) (Azizi et al. 1996). The final household artifact is a bone utensil handle.

#### *Indeterminate*

This group also contains one artifact—a hand-wrought iron handle.

#### *Personal*

The personal group contains 20 pipe stem fragments and two pipe bowls. The pipe stems are largely undecorated, except for one decorated with bands and impressed with “PETER” and “DORNI”; two stems exhibit a star or asterisk; one is molded with leaves; and another is molded with a floral motif. Only one of the two pipe bowls is decorated. The decorated bowl has a harp and shamrocks motif facing the smoker (Image 7.03).

The remaining personal items include a complete bone button with a single bore hole and two pieces of a leather shoe or boot heel. The final artifact is an ivory parasol handle. The handle has a knob, but is otherwise undecorated.

#### *Sanitary*

This group consists of two sherds of a Rockingham type spittoon.



Image 7.03: Smoking pipe with harp and shamrocks motif.

#### SUMMARY

This assemblage is highly fragmented, representing secondary or tertiary deposition. The assemblage, which includes human remains, likely contains materials from more than one location on the property and may have been redeposited multiple times. Located above natural subsoils, it is likely the materials were deposited in this location during the construction of Tweed Courthouse.

#### **FEATURES 30 AND 31**

Feature 30 was a large circular stone shaft feature exposed at 4.9' below surface. Large stone slabs measuring approximately 3.8' x 2.9' capped the feature (Images 7.04 and 7.05).

Excavation along the east side of the feature revealed stones forming a line leading from Feature 30 to what appeared to be a stone slab capped semi-circle of stone visible in the east wall. This line and apparent feature within the profile were designated Feature 31 (Map 7.05).

Removal of the stone cap from Feature 30 revealed a dry-laid shaft with an interior diameter of 5.5' and an exterior diameter of 7.5' (Image 7.06). The interior fill consisted of four layers, predominantly a 10YR 5/3 sandy loam with gravel and mortar inclusions and containing redeposited materials. Table 7.06 outlines the four stratigraphic layers within the shaft feature.

Table 7.06: Stratigraphic layers within Feature 30.

Strat	Description
I	Fill – brown 10YR 5/3 sand with stones
II	Fill – grey brown 10YR 3/2 sand
III	Fill – reddish 7.5YR 5/4 sand
IV	Fill – yellow 2.5YR 3/5 fine clayey sand



Image 7.04: Feature 30 with stone cap.

Excavation along the east wall of the shaft feature did not reveal a deliberate connection with Feature 31, which is hypothesized to be a drainage feature (Image 7.07).

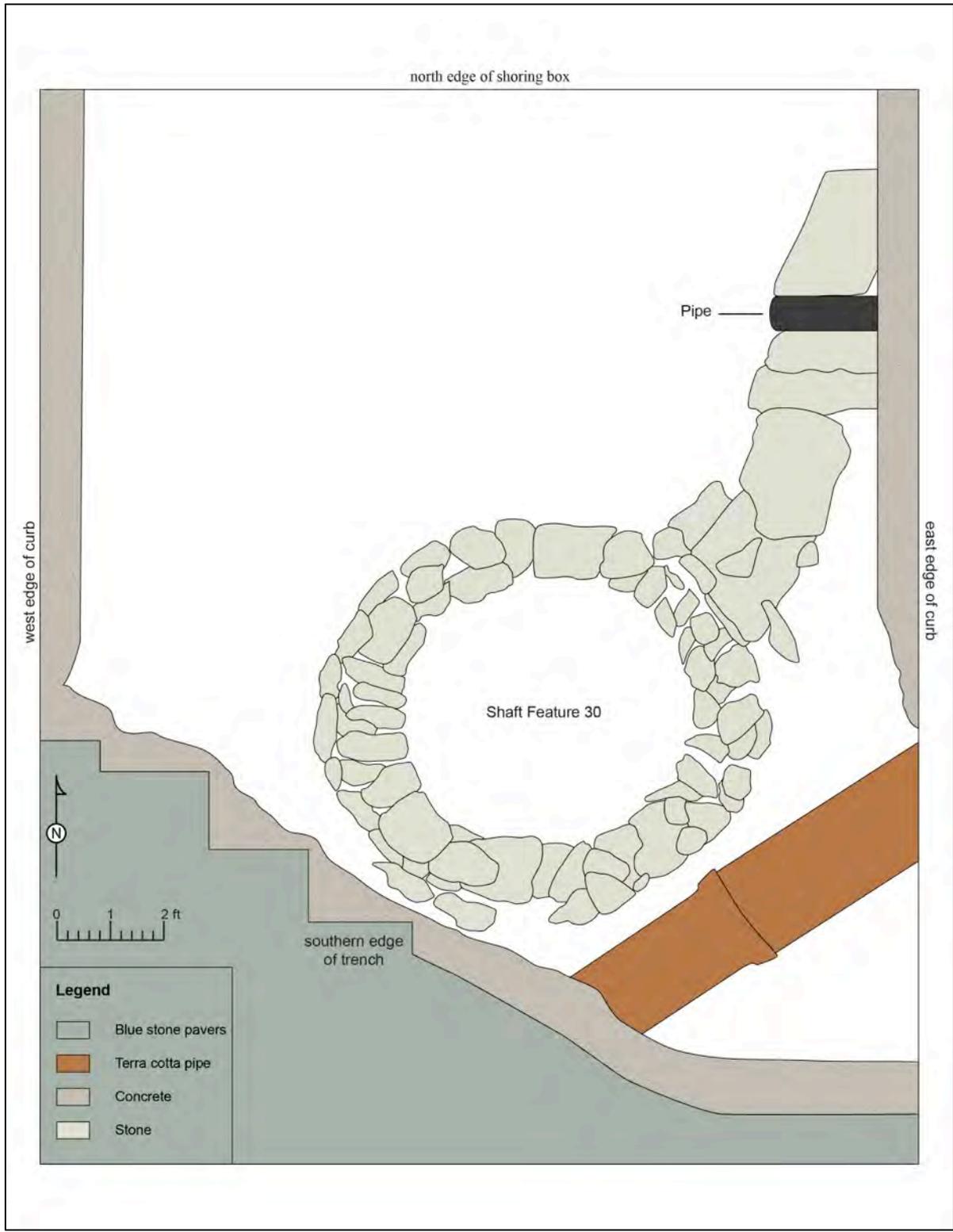
The interior of Feature 30 was excavated to 7' bs before being halted due to safety concerns. During excavation of the above-mentioned 12' x 14' corridor, the western wall of the shaft feature was exposed. Though shoring mechanisms prevented adequate photography of the base of Feature 30, it was unmortared and dry laid atop natural silty subsoil. The final depth of Feature 30 is 9' bs; the corridor was excavated to a final depth of 15' bs.

#### ASSEMBLAGE

Within Feature 30, a total of 59 artifacts were recovered. Table 7.07 provides a breakdown of the artifact count by functional groups.



Image 7.05: Western side of Feature 30.



Map 7.05: Plan view of Features 30 and 31.



Image 7.06: Excavation of Feature 30.



Image 7.07: Features 30 and 31.

Table 7.07: Feature 30 artifact count by functional groups.

Functional Group	Artifact Count
Architectural	15
Arms	1
Food Related	10
Fuel	1
Household	22
Indeterminate	4
Other	1
Personal	5

*Architectural*

The 15 architectural artifacts consist of 13 iron nails of indeterminate manufacture and two shards of window glass.

*Arms*

The single arms-related artifact is an iron knife handle.

*Food Related*

This group has 10 faunal fragments, including two large terrestrial mammal, three medium terrestrial mammal, three cattle, one pig, and one clam shell. These remains are mostly long bone fragments with evidence of butchery

*Fuel*

This group is made up of a single coal fragment.

*Household*

The household functional group contains 22 artifacts. The three coarse earthenwares include two lead-glazed redware sherds and a British buff-bodied slipware sherd (1670–1795). The remaining ceramics are refined earthenwares. There are six pearlware sherds (1775–1840) and five whiteware sherds (post 1815) with indeterminate decoration. One pearlware sherd is blue painted with an indeterminate motif (1775–1830), and three whiteware sherds exhibit blue printing (post 1815). Four bottle glass shards were also recovered—one from a beer or soda bottle and two from a case bottle. None of the glass has defining characteristics that could provide chronological information.

*Indeterminate*

This group consists of four heavily corroded iron fragments.

*Other*

This group contains a single feline ulna.

*Personal*

The personal group consists of five smoking pipe stem fragments. Only one has any decoration; it is molded with a ribbed pattern. The final artifact in this group is a pressed porcelain button dating from 1840–1960 (Sprague 2002:111–127).

SUMMARY

Feature 30 is a well of relatively crude construction. Its identification as a well is based upon its dry-laid circular construction and the bottom elevation of 9' bs. This is approximately the same bottom elevation as Feature 8, the well located in the northeast vault area. This finding also suggests that the historic water table was at 9' below 2010 surface elevations.

The stones used to construct the well were undressed rough cut stones. The well was likely constructed in the eighteenth century for the British barracks, but possibly later for the second almshouse. There was no information to clarify a construction date. The TPQ for the fill materials is 1840, the period when the second almshouse was being used for public offices. This TPQ date suggests that the well was filled during this period, prior to the construction of Tweed Courthouse.

Feature 31 is more of an unknown. Though not definitively identified, this feature is similar to other nineteenth-century drainage features discovered throughout the property. Feature 31 was likely part of this system.

The construction of Tweed Courthouse heavily impacted the eastern portion of this area. The multiple varying fill soils demonstrate this, as do the fragmented artifact and faunal remains.

Fragmented human remains were also found within this deposit. This information can be added to the instances of fragmented human remains found in this vicinity in 1999. It suggests that excavation for the footprint of Tweed Courthouse, which entailed a greater area than the second almshouse, disturbed and redeposited a portion of the almshouse burying ground. Per the minutes of the Common Council (August 1, 1785), the area behind the barracks would be used as a burial ground for the almshouse and the Bridewell. The human remains are discussed in Chapter IX.

The western portion of the manhole contained clean fill sands. Natural subsoils were encountered beginning at approximately 6' bs. Features 30 and 31 remain *in situ*.

### 3. NORTHWEST OF CITY HALL

Construction plans were altered and being developed throughout the project. At one point, it was proposed that an additional manhole might be needed to facilitate the new electric lines being laid as part of the rehabilitation project. The proposed location for this was the northwest corner of City Hall. To determine the viability of this location with regard to archaeological resources, a test unit was excavated along the northern edge of the areaway, at the west end of the building.

This test unit, labeled NW01 (also referred to as Test Probe 4 in some of the field notes), was situated alongside the areaway (see Map 7.01) with two goals in mind. The first was to determine if the previously identified retaining wall found in the northeast vault area (Feature 1) was present in this area, as well. The second goal was to determine the presence or absence of a Bridewell privy. McComb's diary mentions that a "Bridewell sink" had been located at the northwest corner of the City Hall basement. He also noted that this privy had been well cleaned out and filled prior to construction (McComb Family Papers 1787–1858).

The test probe measured 5.5' x 4', beginning at the northwest corner of the City Hall areaway and extending 5.5' to the east, and was excavated to a final depth of 4.5', the bottom of the retaining wall in this area. The retaining wall along this portion of the City Hall areaway, labeled Feature 15, was composed of different stones than Feature 1. The wall in this area was composed of large rectangular schist stones averaging 1' wide and 0.4' thick (Image 7.08). The mortar composition appeared similar to that found in Feature 1.

There was a distinct lack of stratigraphy within this excavation area. Stratum I consisted of gravel/RCA bedding material for the modern bluestone pavers, along with soil mixed with mortar and RCA. Stratum II consisted of coarse sandy fill associated with the installation of a ceramic water/sewer pipe exposed in the northern half of the excavation area. The ceramic sewer/water pipe was exposed along the northern wall of the test unit at approximately 4.1' bs (Image 7.09).

Only eight artifacts were recovered from within this test unit, including three square nails and a piece of ceramic sewer/water pipe. Also, among the eight artifacts are a sherd of whiteware (post 1815) and a sherd of painted yellowware (1827–1920) (Azizi et al. 1996). Two pipe stems were also present. Faunal remains included eight bone fragments, including part of a *Bos taurus* upper jaw with two molars, one avian long bone, and a caprine molar. The presence of a plastic cap (1970–2010) among the same context denotes the disturbed nature of this area.

The plan for this additional manhole was abandoned and no further excavation occurred in this area.



Image 7.08: Feature 15, facing south.



Image 7.09: Plan view of NW01 exhibiting ceramic utility along the north wall of the test unit.

#### 4. WEST PATH

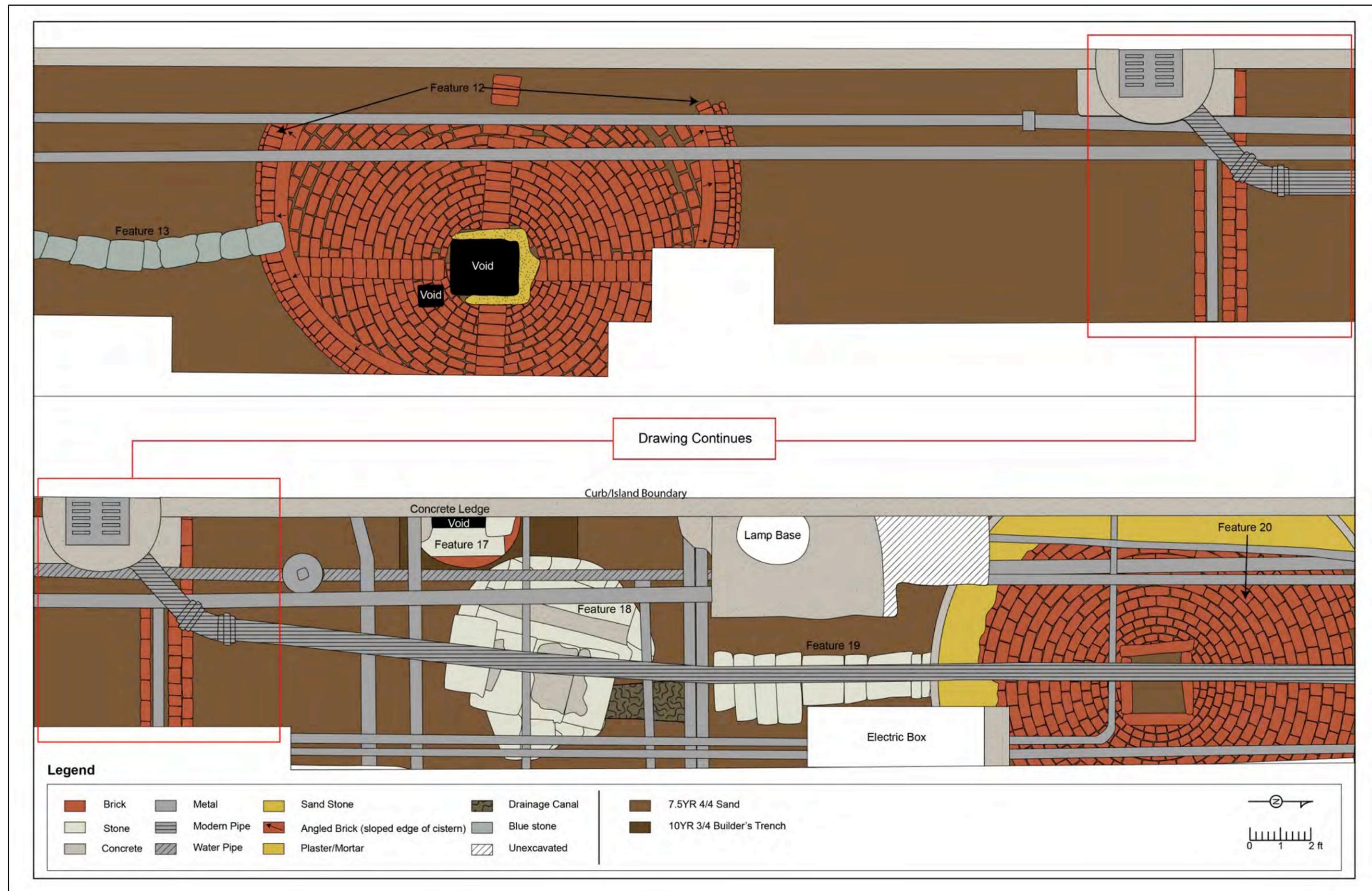
The west path consisted of an 82' long by 9' wide trench along the western side of City Hall (see Map 7.01). It began 34' south of the northwest corner of the western wing and was 11' west of the western breezeway. Seven archaeological features were encountered within the west path (Map 7.06). Two cisterns with associated drains, which were part of an early fire-suppression system at City Hall, a stone-lined shaft feature, a brick-lined shaft feature, and an additional drain were uncovered within the west path. These features will be described from north to south, as this is the direction in which they drain.

##### GENERAL STRATIGRAPHY

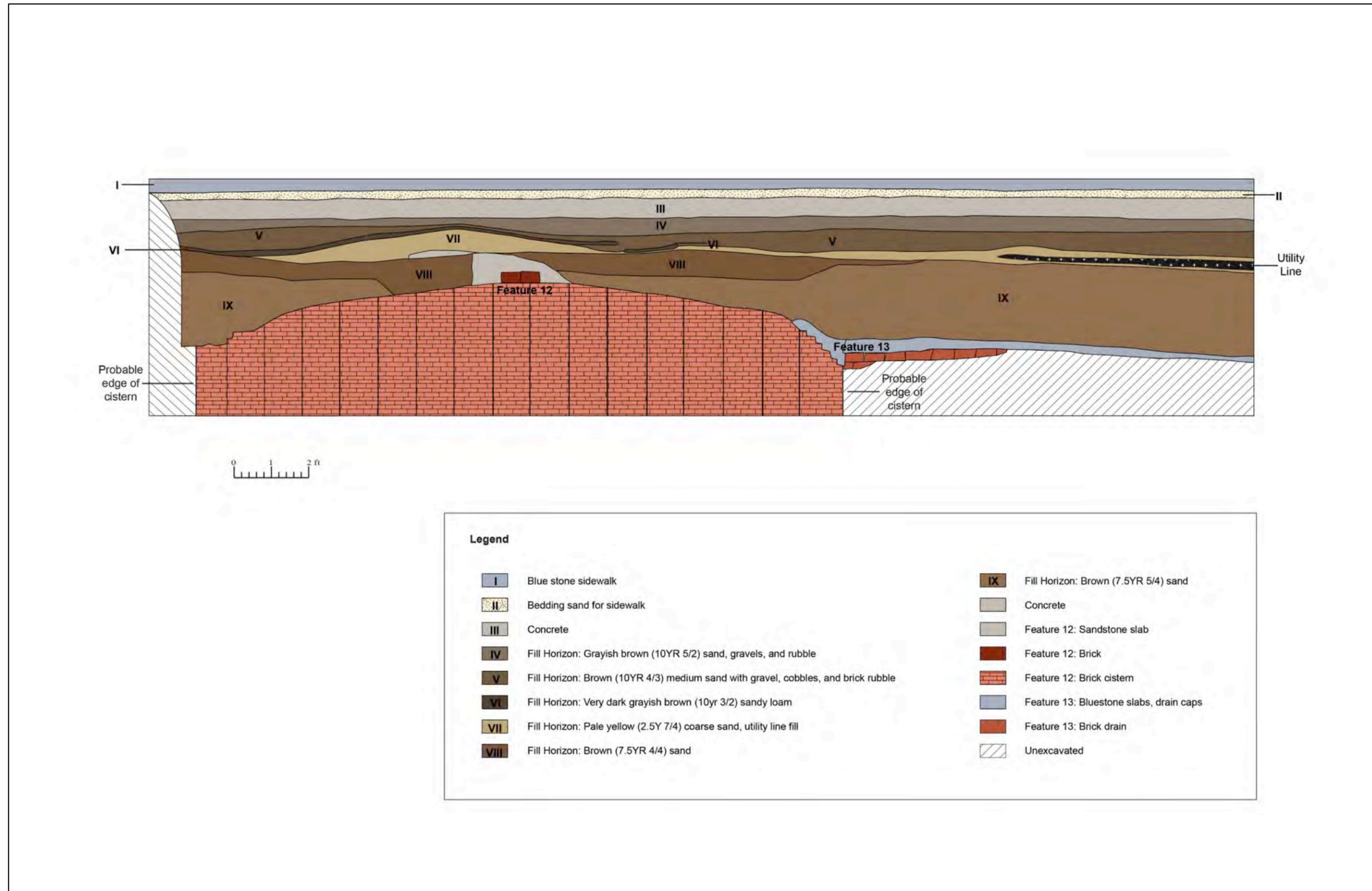
The west path trench was highly impacted by modern utilities and its stratigraphy reflected these disturbances. Because of these impacts and the presence of several historic features embedded in the east and west walls of the trench, only a small portion of the overall profile was visible—the eastern profile at the southern end of the trench. This portion of the west path's profile is described in Table 7.08 and is graphically depicted in Map 7.07. It can be considered representative for the entire trench. Strata IV through VIII are associated with modern utilities (pipe trench fill). Stratum IX most likely represents the early-nineteenth-century burial of the fire-suppression system. Whether this horizon represents the redeposition of the original soil after the feature's construction or historic fill brought in from elsewhere is unknown.

Table 7.08: West path, representative eastern profile.

Stratum	Depth	Soil Description
<b>I</b>	0' – 0.2'	Bluestone slab sidewalk
<b>II</b>	0.2' – 0.4'	Bedding sand for sidewalk
<b>III</b>	0.4' – 0.9'	Concrete
<b>IV</b>	0.9' – 1.4' (varies)	Fill horizon consisting of grayish brown (10YR 5/2) sand, gravel, and rubble
<b>V</b>	1.4' – 1.7' (varies)	Fill horizon consisting of brown (10YR 4/3) medium sand with gravel, cobble, and brick rubble
<b>VI</b>	1.7' – 1.8' (varies)	Fill horizon consisting of very dark grayish brown (10YR 3/2) sandy loam; very thin horizon, not present throughout entire profile
<b>VII</b>	1.8' – 2.0' (varies)	Fill horizon consisting of pale yellow (2.5Y 7/4) medium sand
<b>VIII</b>	2.0' – 2.5'	Fill horizon consisting of brown (7.5YR 4/4) medium sand
<b>IX</b>	2.5' – 4.1' (4.5' at southern end of trench)	Fill horizon consisting of brown (7.5YR 5/4) medium sand



Map 7.06: Plan view of west path features



Map 7.07: Profile of the west path.

GENERAL ASSEMBLAGE

A total of 18 artifacts were recovered during the excavation of the west path trench. These artifacts were collected as a grab sample and technically cannot be ascribed to any particular stratum or feature. Table 7.09 offers a general description of the assemblage from the west path trench.

Table 7.09: West path, general assemblage.

Object	Count	Begin Date	End Date
Mouth Blown Black/Green Bottle sherds	4		
Tin-Glazed Tile	1		
Unidentified Nails	1		
Oyster Shell Hinges	2		
Redware Hollowware sherds	1		
Redware Mug / Tankard sherds <sup>1</sup>	1		
Creamware Plate sherds	1	1762	1820
Tin-Glazed Platter/Dish sherds	1	1700	1800
British Buff-Bodied sherds	2	1670	1795
Salt-Glazed, Gray/Buf-Bodied Hollowware sherds	3		
White Ball Clay Smoking Pipe Stem fragments	1		

<sup>1</sup> Sherds from this vessel also recovered from Feature 14

Only a limited portion of the assemblage, described above, is chronologically diagnostic. The creamware plate sherd technically provides the TPQ date for this assemblage, but as this assemblage represents a general collection from several proveniences, this date does not offer any specific information about depositional age. That being said, the creamware sherd is part of a small vessel with either a classic Royal or Bath rim. Creamware vessels of this variety were generally available circa 1762 through 1820 (Miller et al. 2000:12). The remaining diagnostic artifacts consist of a sherd from a tin-glazed platter or dish and two mending sherds from a buff-bodied drinking vessel. The tin-glazed sherd is from a large vessel, such as a platter. It exhibits a large interior cavetto and a marley. This style of vessel form was prevalent from 1700 through 1800 (Archer and Morgan 1977:122). The British buff-bodied sherds are slip-glazed portions of a large drinking vessel, such as a mug or drinking pot. This ware type was generally available circa 1670 through 1795 (Azizi et al. 1996).

As part of the grab sample, 18 faunal fragments were recovered throughout the west path trench. As in the case of the artifacts, these were in no definable concentration or deposit. The majority of fragments are from large terrestrial mammal ( $n=11$ ), followed by *Bos taurus* ( $n=4$ ). Various skeletal elements are present, including leg, rib, and scapulae, and one cattle molar exhibiting a degree of wear. Several of the bones show evidence of both primary and secondary butchery.

## FEATURE 20

Feature 20 was located at the northern extent of the west path trench (see Map 7.06). It consisted of a large, round brick shaft feature with a domed cap (Image 7.10). The dome is relatively steep and placed directly upon the straight-sided brick walls of the shaft. A mortar or plaster wash was applied to portions of the brick cap, most likely to protect the exterior after burial. In the approximate center of this cap was a roughly 2' wide square opening with a collar constructed of sandstone slabs. This collar most likely originally consisted of four sandstone slabs, but the northern and southern slabs were apparently removed when a modern water utility was placed atop the shaft. The west path trench uncovered an 8.4' wide by 14.0' long section of Feature 20. Although the entire shaft was not exposed, the overall size can be extrapolated. The distance from the center of the square opening to the southern edge of Feature 20 was 7.4', which is the radius of the overall circular shaft. Therefore, Feature 20 was 14.8' ( $d=2r$ ) in diameter, 46.47' in circumference ( $c=\pi d$ ), and covered an area of 171.95 square feet ( $\pi r^2$ ). The interior of feature 20 was not investigated; it was left intact and reburied.



Image 7.10: Feature 20, brick shaft feature with domed cap.

#### ASSOCIATED STRATIGRAPHY

Feature 20 was encountered at 2.1' bs. Based on the representative profile described in Table 7.08 and Map 7.07, the soils above most of Feature 20 are associated with modern utilities. These electric and water lines were laid directly atop the relatively steep dome of Feature 20; all soils above the feature were heavily disturbed during this activity. The portions of Feature 20 that were deeper than 2.5' bs occupied the "undisturbed" soil of Stratum IX, which represents the original burial of the cistern-based fire-suppression system. The interior of Feature 20 was not accessed; no data concerning its potential fill is available.

#### ASSEMBLAGE

No artifacts or faunal remains were recovered from Feature 20.

#### INTERPRETATION

Feature 20 represents a covered cistern that was designed for fire suppression. In 1811, the Common Council mandated the construction of four such cisterns, two for each of City Hall's wings. These structures were "to be supplied from the roof thereof, ... the water [to] only be used at fires" (Koepfel 2000: 124). The central sandstone-lined opening was apparently the access point for a pumping apparatus. City Hall still exhibits the vestiges of the gutter/downspout system that directed the rainwater into the cistern (Image 7.11).

This feature remains intact and *in situ*.

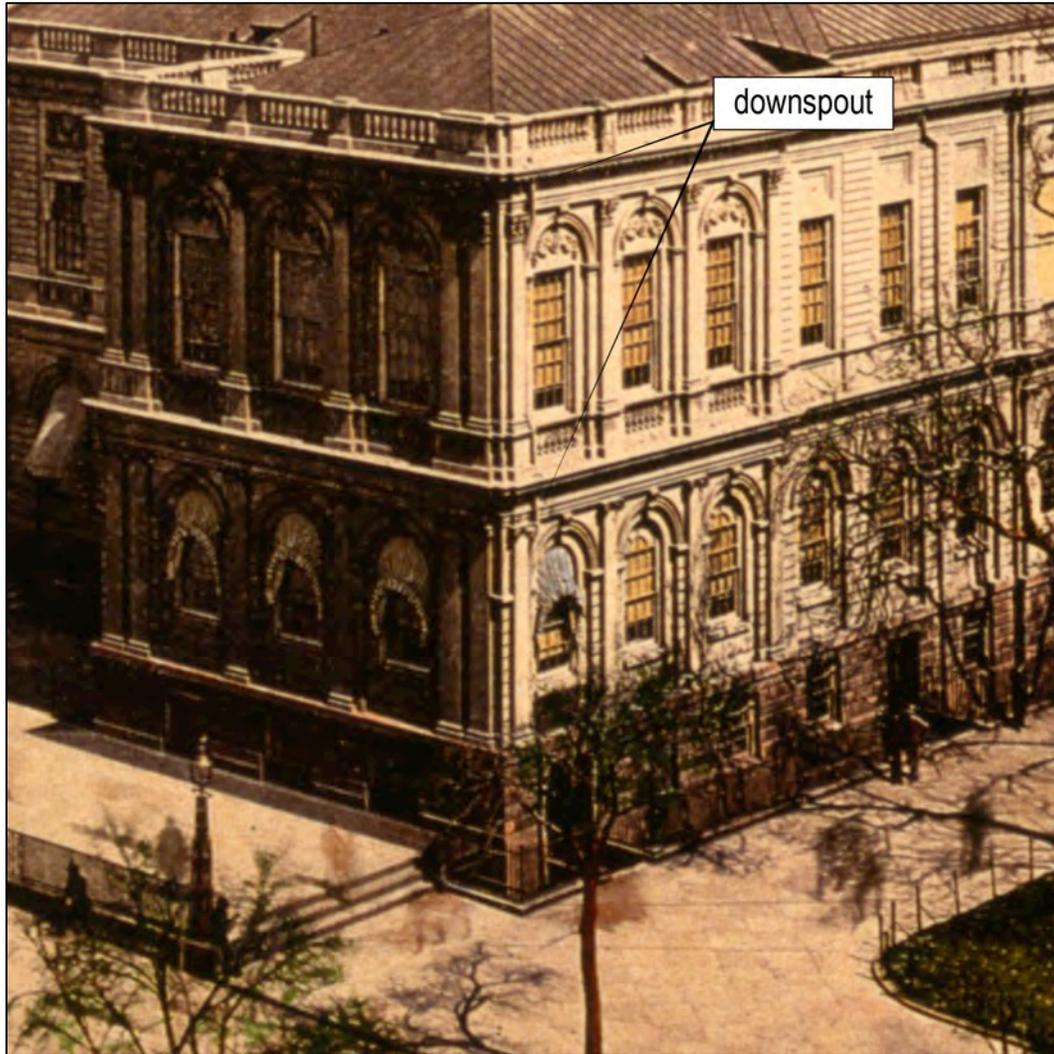


Image 7.11: Circa-1900 image of City Hall showing downspouts extending from the roof into the areaway (Library of Congress online digital collection).

## **FEATURE 19**

This feature was a brick drain attached to Feature 20 (see Map 7.06 and Image 7.12). It began at the southern edge of the cistern and traveled downslope for 9.6' in length before intersecting with another shaft feature (Feature 18). Feature 19 was constructed of three courses of brick that lay atop an interlocking brick floor. Large bluestone slabs were mortared together to form the cover of this 1.2' wide drain. Feature 19 was not disturbed or dismantled for testing; it was left intact and reburied.

### ASSOCIATED STRATIGRAPHY

Feature 19 ranges from 3.4' bs (where it is attached to Feature 20) to 4.35' bs (where it attaches to Feature 18—described below). Based on the representative profile for the west path trench (see Table 7.08 and Map 7.07), this feature was ensconced within Stratum IX. Feature 19's vertical position indicates that it was constructed and buried at the same time as Feature 20.

### ASSEMBLAGE

No artifacts or faunal remains were recovered from Feature 19.

### INTERPRETATION

Feature 19 is a drain designed to siphon excess rainwater from Feature 20. It would drain the water “downhill” to the south, where it entered Feature 18 (discussed separately). It was probably constructed at the direction of the Common Council along with the cistern in 1811 (Koeppel 2000: 124).



Image 7.12: Feature 19, a brick and stone capped drain that was connected to and extended south from Feature 20.

## **FEATURE 18**

Feature 18 consisted of a large stone-lined shaft feature located 9' south of Feature 20 (see Map 7.06) and adjacent to Feature 17 (discussed separately). Feature 18 was 7' in diameter and constructed of sandstone cobbles. The top was capped with bluestone slabs that are mortared to the shaft rim (Image 7.13). Feature 19, the drain from Feature 20, connected to the northern edge of this shaft and was mortared into it. The bluestone slabs from Feature 19 appeared to continue on top of this shaft and formed a portion of the cap. A small amount of brick and concrete was apparent atop these specific slabs; this may indicate that Feature 18 was capped at the same time the drain was attached. The slabs atop the shaft were not dismantled in order to access the interior. The feature was documented, left undisturbed, and reburied.

### ASSOCIATED STRATIGRAPHY

The top of Feature 18 was encountered at 4.25' bs, which was near the base of the trench itself and deeper than the surrounding features. This depth indicates that Stratum IX completely capped Feature 18 (see Table 7.08 and Map 7.07).

### ASSEMBLAGE

No artifacts or faunal remains were recovered from Feature 20.

### INTERPRETATION

Feature 18 was clearly designed or altered to accept rainwater overflow from Feature 20. Based on the stratigraphy and nature of the connection of Feature 19, this most likely happened when the fire-suppression system was installed in 1811. When considering similar shaft features encountered within City Hall Park, Feature 18 most resembles a well such as Features 8 and 30. It can be surmised that the original top of Feature 18 was once closer to the current grade, and the shaft was partially deconstructed in order to serve as a sump/drain for Feature 20 circa 1811. It is also possible that Feature 18 was a purpose-built structure, but it appears too similar to other earlier shaft features for this to be the case. Unfortunately, that is all the data that Feature 18 offers; further investigation would be necessary to determine the origin of this shaft feature.



Image 7.13: Feature 18, large stone-lined shaft feature.

### **FEATURE 17**

Feature 17 consisted of a small brick shaft feature located approximately 7' north of Feature 16 (see Map 7.07) and adjacent to Feature 18. The west path trench exposed roughly half of the shaft; the western wall of the trench bisected the feature. The exposed portion of Feature 17 consisted of a 3' diameter brick ring that was partially capped with two slabs of bluestone (Image 7.14). The slabs left a narrow opening (1.7' long by 0.4' wide), which was utilized to sample the interior fill of the shaft. The sampling was minimal. None of the capstones were removed; access was gained only through the narrow opening, which did not allow for controlled or extensive testing.

### **ASSOCIATED STRATIGRAPHY**

The bluestone slabs that comprised the top of Feature 17 were located at 2.1' bs. Based on the representative profile (see Map 7.07) for the west path, all of the soils above Feature 17 were fill horizons associated with various modern utilities. The soils sampled from the interior consisted of dark oily soil with a distinct petroleum odor.

#### ASSEMBLAGE

A total of seven artifacts were recovered from Feature 17. Three of these artifacts are household ceramics. Two of the ceramics are small body sherds from a white-colored tableware vessel(s). The small size makes identification problematic; they could be either pearlware or later whiteware, and thus must be given a date range of 1805 through 1900 (Miller et al. 2000: 13; Miller 1991:13). The only other chronologically diagnostic sherd consists of a rim sherd from a tin-glazed vessel with painted orange and purple bands. Tin glaze of this variety dates from 1675 to 1800 (Azizi et al. 1996). Also recovered were a fragment of window glass, two white ball clay pipe stems, and an unidentifiable sherd of refined earthenware. This is a small specimen with no extant glaze.

No faunal remains were recovered from Feature 17.

#### INTERPRETATION

Feature 17 is a small, round, brick-lined shaft. Complete excavation was not undertaken, as most of the shaft was outside the project boundaries and could be left intact: therefore, a final determination was not possible. But based on the scant information gathered, this form is most reminiscent of a privy. Though the data gleaned from the scant assemblage is contradictory; an early tin-glazed sherd was recovered, along with later pearl or whiteware specimens. This may be due to the manner in which sampling had to occur, which was through a small opening in an uncontrolled manner. Stratigraphy was not visible and the artifacts may therefore be from different horizons. It should be noted that Feature 17 is at the same relative depth as Feature 43, the cobblestone walkway. This may indicate that they are relatively concurrent or this feature may be originally associated with the Bridewell.

#### **FEATURE 16**

Feature 16 was another brick drain system. It was located near the center of, and oriented perpendicular to, the west path trench (see Map 7.07). Feature 16 spanned the width of the trench (9') and was 1.8' wide. It was constructed of two parallel courses of brick with a 1' gap between them (Image 7.15). The parallel courses were three rows deep and sat upon a base of interlocking bricks. The space between the courses contained later fill and a cast-iron pipe. The cast-iron pipe was located adjacent to the southern wall of Feature 16. The western extent of Feature 16 butted up against a round modern storm sewer. The cast-iron pipe fed into this later addition, but it did not appear that the feature originally did so, as well.

#### ASSOCIATED STRATIGRAPHY

Feature 16 was located 3.91' bs. This depth indicates that it was within Stratum IX, which dates to circa 1811.

#### ASSEMBLAGE

No artifacts or faunal remains were recovered from Feature 16.



Image 7.14 Feature 17, small brick shaft feature.

INTERPRETATION

Feature 16 was clearly a drain, possibly associated with the 1811 fire-suppression system. As it was oriented towards City Hall, it may have once been connected to a downspout. It did not appear to connect to either of the nearby cisterns, but the excavation of the west path only offered a narrow view of the overall area. It is possible that it turned north or south in order to connect to one of the cisterns past the trench, but this seems unlikely. It seems more likely that any downspout connection to the cisterns would have taken the direct route. Although Feature 16 was attached to the modern storm sewer drain, it most likely did not do so originally. Feature 16 approaches the modern sewer at an oblique angle; it does not lead directly into the sewer, instead it just barely intersects the northern portion of the sewer. The location of the cast-iron pipe suggests reuse of the feature. The pipe was placed as close to the feature's southern wall as possible to ensure that the pipe entered the later sewer. This indicates the expedient usage of the nineteenth-century drain when the later system was installed. Feature 16 provided a ready-made trench to protectively place the pipe in and guide it towards the modern sewer. Unlike Features 13 and 19, bluestone slabs did not cap the drain. As similar slabs capped every other brick drain encountered within the project area, it is likely that Feature 16 had once been used as a drain, as well. It can be surmised that when the cast-iron pipe was installed into the existing drain, the slabs were not replaced.

It is possible that Feature 16 once connected to a yet undiscovered cistern or shaft feature to the west or the modern sewer. It is also possible that Feature 16 was part of a general drainage system designed to keep the area surrounding City Hall relatively dry.



Image 7.15: Feature 16.

## FEATURE 12

Feature 12 consisted of a large brick shaft feature—a cistern—located near the southern extent of the west path (see Map 7.06) at 2.6' bs. The entire northern/southern length of this feature was uncovered, revealing it to be 16' in diameter. This indicates a circumference of 50.24' and an area of 201 square feet. Feature 12 was covered with a domed brick cap (Image 7.16) that was relatively shallow in comparison to Feature 20. The dome was attached to a “stepped” base, as opposed to being placed directly on the vertical walls of the shaft. A mortar or plaster wash was applied to the brick cap, most likely to protect the exterior after burial. In the approximate center of this cap was a roughly 2' wide square opening with a collar constructed of sandstone slabs. The domed cap was divided into quadrants by mortared bricks that extended from the collar in a cruciform pattern. A second smaller (at 1' wide) square opening was located in the southeast quadrant of the shaft. This second opening was beneath the four utility lines and was not visible in Image 7.16. These four utilities severely impacted the sandstone collar; it was obviously altered to allow the pipes to lie on a horizontal plane. The two utilities on the west also impacted the feature; a section of the westward cruciform arm was removed for the westernmost pipe.

After the initial documentation of Feature 12 and consultation with LPC, the larger of the two openings was expanded and the interior accessed. The interior of the cistern was approximately three-quarters filled with brick and mortar rubble and sandy soil unevenly distributed. The interior was faced with a plaster skim coating and approximately 0.6'–0.8' of water was observed at the bottom of the cistern. Along the eastern wall of the feature interior was an inlet connection with an attached ceramic pipe (Image 7.17). This inlet appeared to be directly in line with the location of the roof gutter downspout observed in historic photos.

Feature 12, similar to Feature 20, is located adjacent to a corner of City Hall, in this instance the southwest corner.

### ASSOCIATED STRATIGRAPHY

Feature 12 was covered in multiple fill horizons. Many of these are most likely associated with the bluestone sidewalk or the multiple modern utilities that lie directly atop Feature 12. Map 7.07 depicts the eastern profile of Feature 12 and its relation to the overlying fill horizons. Based on the vertical position of the utilities, it is probable that Stratum IX is associated with Feature 12 and not the upper disturbances. Stratum IX covers a larger portion of Feature 12 than its counterpart (Feature 20). The top of Feature 12's dome is 0.5' deeper than that of Feature 20 and is mostly covered by Stratum IX (see Map 7.07). This suggests a southern downward slope in the historic grade of City Hall Park.

### ASSEMBLAGE

Fifteen artifacts were recovered in association with Feature 12, either atop the actual cistern or within the soil immediately surrounding it (Stratum IX). Six of these artifacts consist of whole or fragmentary bricks. One specimen exhibits a maker's mark impressed into a recessed rectangle that reads “D.F. & S” (Image 7.18). This whole brick represents the only chronologically diagnostic artifact recovered from Feature 12. It is from the Denton Fowler and Son brickmaking concern, operated out of Haverstraw, New York. This specific mark



Image 7.16: Feature 12, brick cistern feature similar to Feature 20.



Image 7.17: Cistern interior showing inlet connection from the roof gutters.

was utilized from 1862 through 1896, at which point D. F. & S merged with the Excelsior Company and the mark was changed (International Brick Collectors Association 2012).



Image 7.18: Brick from Denton Fowler and Son, Haverstraw, New York.

The remaining artifacts include five fragments of toilet fixtures, two porcelain floor tiles, a fragment of sewer pipe, and a stem fragment from a white ball clay smoking pipe.

Only one artifact was recovered from the interior of Feature 12—a hard paste porcelain floor tile with concrete fused to its reverse. Unfortunately, this artifact is chronologically non-diagnostic.

No faunal remains were recovered from Feature 12

#### INTERPRETATION

Feature 12 represents a covered cistern designed for fire suppression. In 1811, the Common Council mandated the construction of four such cisterns, two for each of City Hall's wings. These structures were "to be supplied from the roof thereof... the water [to] only be used at fires" (Koeppel 2000: 124). The central sandstone-lined opening was apparently the access point for a pumping apparatus. The smaller opening and interior pipe was for the ingress of rainwater. City Hall still exhibits the vestiges of the gutter/downspout system that directed rainwater into the cistern (see Image 7.11).

### FEATURE 13

This feature consisted of a brick and bluestone drain that extended from the southern edge of Feature 12 at a gradually lowering elevation (see Map 7.06 and Image 7.19). Feature 13 traveled southward for 8' before curving to the east and entering the eastern wall of the west path trench. Overall, 10' of the drain was encountered in the southern end of the west path trench (Image 7.20). The drain itself was constructed of three courses of brick, capped with bluestone slabs, and possessed a wood lining.

#### ASSOCIATED STRATIGRAPHY

Feature 13 is capped by the same sequence depicted in Map 7.07. Stratum IX caps both Features 12 and 13, and most likely dates to the construction/infilling of these features.



Image 7.19: The relationship and gradually lowering elevation of Features 12 and 13.

#### ASSEMBLAGE

Three artifacts were recovered from the interior of Feature 13. Two of these items are chronologically non-diagnostic. The first consists of a wooden half-circle 4.5'' by approximately 1'' thick. The second is an unidentifiable iron nail. The third artifact recovered from Feature 12 is a square medicine bottle. This artifact is comprised of colorless non-lead glass with chamfered corners and a prescription finish. It is 3.5'' tall and its base had a diameter of 1.1''. It exhibits the remains of a paper label and a maker's mark on the

base. The mark consists of a “WT & CO” over the letter “V” (Image 7.21). This mark identifies the bottle as a product of the Whitall Tatum and Company bottling works, a major provider of prescription bottles to local pharmacies that operated in Millville, New Jersey, from 1848 until 1938 (Toulouse 2001: 545–546). Based on the manufacturer’s mark, the bottle shape, and finish, this particular medicine bottle was manufactured between 1880 and 1895 (Lockhart et al. 2006: 61).

No faunal remains were recovered from Feature 13.



Image 7.20: The connection of the brick and stone capped drain (Feature 13) extending south from a cistern (Feature 12) located along the west path.



Image 7.21: Square medicine bottle with the maker's mark of Whitall Tatum and Company on the base.

#### INTERPRETATION

Feature 13 is a drain designed to siphon excess rainwater from Feature 12. It would drain the water “downhill” to the south, possibly either to a leech field or another repurposed shaft. It was probably constructed at the direction of the Common Council along with the cistern in 1811 (Koeppel 2000: 124). However, it is possible that Feature 13 represents a later addition to the cistern. The presence of the medicine bottle could indicate that the drain was added towards the end of the nineteenth century. The observed stratigraphy only supports this theory, if one assumes that the entire cistern was unburied. The same horizon caps and surrounds all seven of the features in the west path (Stratum IX, see Map 7.07), which indicates concurrent burial. It seems unlikely that the entire fire-suppression system was

reexcavated in order to add a single drain (or even two). The presence of the later artifact is probably due to the large opening on the cistern's top, which would have made a convenient disposal site.

#### **WEST PATH SUMMARY**

The west path exhibits vestiges of the nineteenth-century construction and development of City Hall. Only one potentially pre-nineteenth-century feature was exposed—Feature 18, a stone shaft feature that was repurposed for drainage. However, only the top surface of this feature was exposed and it was not further investigated due to construction constraints.

Two of the main nineteenth-century features are the cisterns (Features 12 and 20) that were built as part of a fire-suppression system. These cisterns were incorporated into an overall design for City Hall that employed a natural resource—rainwater—via the roof gutter system. The rainwater runoff was directed into four cisterns that anchored the four corners of City Hall. Any overflow from the cisterns was then directed into the brick and stone drainage system that extended into the southern portion of the property.

All of the west path features remain *in situ*. As part of an early phase of construction that was abandoned, the area of Feature 12 was covered with poured concrete measuring approximately 2.5'–3' thick.

#### **5. MURRAY STREET PATH**

This portion of the project area consisted of a 7' wide trench that extended 128' from the west path towards the intersection of Broadway and Murray Street (see Map 7.01). The western end of this trench culminated in Manhole 1, which consisted of a square measuring 18' on each side. Two features were encountered during the excavation of the Murray Street path trench: a cobblestone walkway (Feature 43) and a possible midden (Feature 14). Manhole 1 did not contain any archaeological remains.

#### **FEATURE 43**

The first feature discovered along the Murray Street path was a cobblestone walkway that encompassed the entire trench. It was located 2' below the bluestone sidewalk that borders the present-day parking lot for City Council members. The walkway was constructed of rounded riverine cobbles that may have been gathered from local watercourses.

#### **ASSOCIATED STRATIGRAPHY**

The profile described in Table 7.10 can be considered representative of the Murray Street path. The only exceptions consist of modern fill intrusions associated with the multiple utilities that impacted the trench and Feature 14.

Table 7.10: Murray Street path, representative western profile.

Stratum	Depth	Soil Description
<b>I</b>	0' – 0.2'	Bluestone slab sidewalk
<b>II</b>	0.2' – 0.5'	Concrete
<b>III</b>	0.5' – 1.6'	Fill horizon consisting of recycled concrete aggregate (RCA)
<b>IV</b>	1.6' – 2.0'	Fill horizon consisting of dark yellowish brown (10YR 3/4) compact medium bedding sand
<b>V</b>	2.0' – 2.3'	Cobblestone walkway
<b>VI</b>	2.3' – 2.95'	Fill horizon consisting of brown (7.5YR 4/3) medium bedding sand
<b>VII</b>	2.95' – 4.7'	C1-horizon consisting of brown (7.5YR 4/4) medium to fine sands
<b>VIII</b>	4.7' – 5.0'	C2-horizon consisting of brown (7.5YR 4/3) medium to fine sands mottled with pinkish gray (10YR 6/2) and yellowish brown (10YR 5/4) sands; rounded riverine cobbles near base of stratum

ASSEMBLAGE

Three artifacts were recovered from the fill horizon directly above the walkway. Two of the artifacts consist of mending fragments from the base and partial stem of a white ball clay tobacco pipe. The remaining artifact is the base of dark green dip molded wine bottle. Although dip molds were first introduced circa 1730 and used until circa 1870, the gradual replacement of this manufacturing technique began in 1821, when the Rickett’s three-piece mold was introduced (Miller et al. 2000: 8; Jones and Sullivan 1989).

INTERPRETATION

It is possible that the cobblestone walkway was once associated with the City Hall loop station of the IRT, as one of the entrance kiosks was once located just to the south of the Murray Street path near its intersection with the west path. However, this is unlikely, because the walkway is 2’ bs. Historic photographs indicate that the subway kiosk was most likely at or near the current grade (Image 7.22). Additionally, the parking lot forms the roof of the inactive station and is constructed of glass block to allow light into the station. This indicates that the parking lot represents the grade since at least 1904. Therefore, the cobblestone walkway located 2’ bs cannot be associated with the subway. A more likely possibility is that the walkway dates to the early days of City Hall (Image 7.23). An 1803 newspaper article describes the basement story as being

now built up agreeable to the plan, being the height of eight feet above the level of the street, and is ready to receive the first floor of timber [McComb family papers 1757–1858].

Currently, the basement story is not 8' above street level; it is 6' above street level at the maximum. This may indicate that at least 2' of fill was used to build up the area around City Hall, and the cobblestone walkway represents an original roadway or ground surface. It may also be associated with the Bridewell. Early depictions of the Bridewell show it adjacent to City Hall (see Chapter V). This may indicate that the walkway was south of the Bridewell. The single diagnostic artifact recovered from the trench possesses a date range of 1730–1870, which does span the period wherein the Bridewell stood (1775–1838). Unfortunately, as these artifacts were recovered from the fill atop the walkway, it cannot be said with any certainty that they are associated with the walkway. The fill horizon could be associated with the demolition of the Bridewell in 1838, or it could have come from another source.



Image 7.22: This 1917 image of a fire in the cupola of City Hall clearly shows the subway station entrance at the modern grade. Photo by Irving Underhill (New York Public Library Digital Gallery).

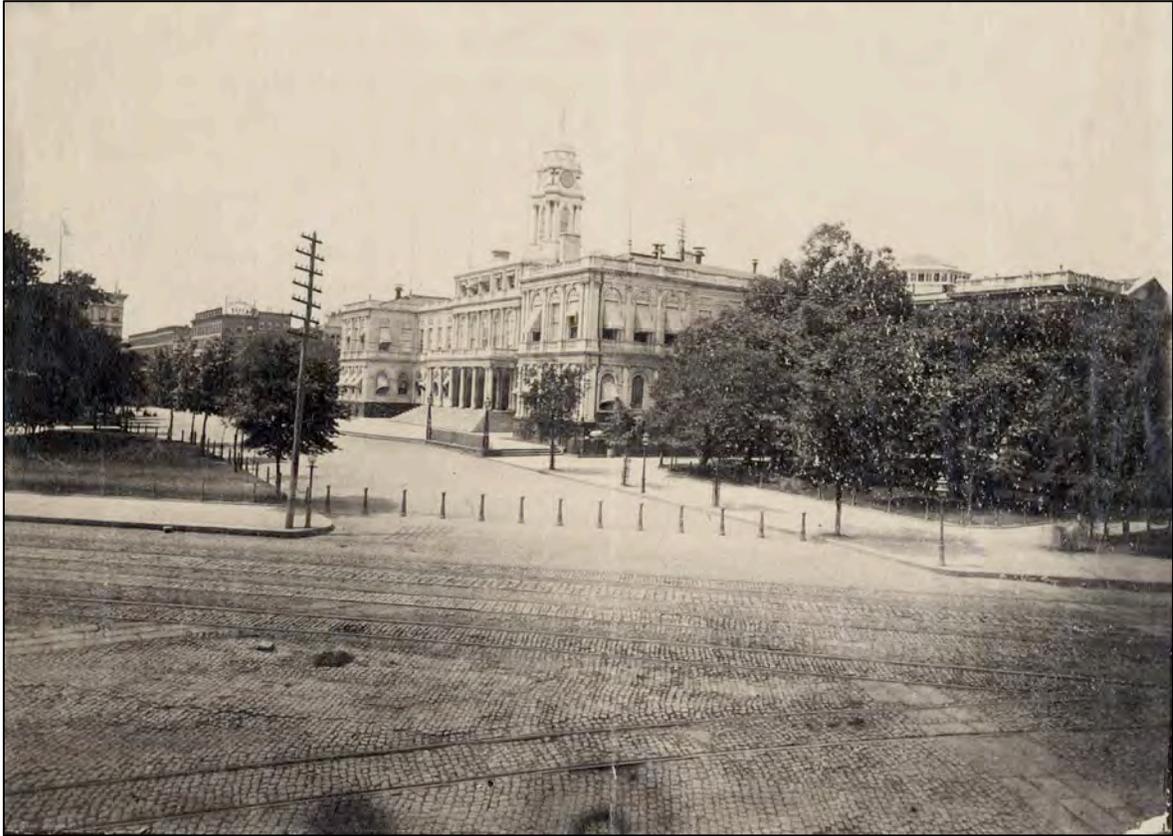


Image 7.23: Circa-1880 image of City Hall showing a stone and cobble road surface.  
Image courtesy of the Design Commission.

#### **FEATURE 14**

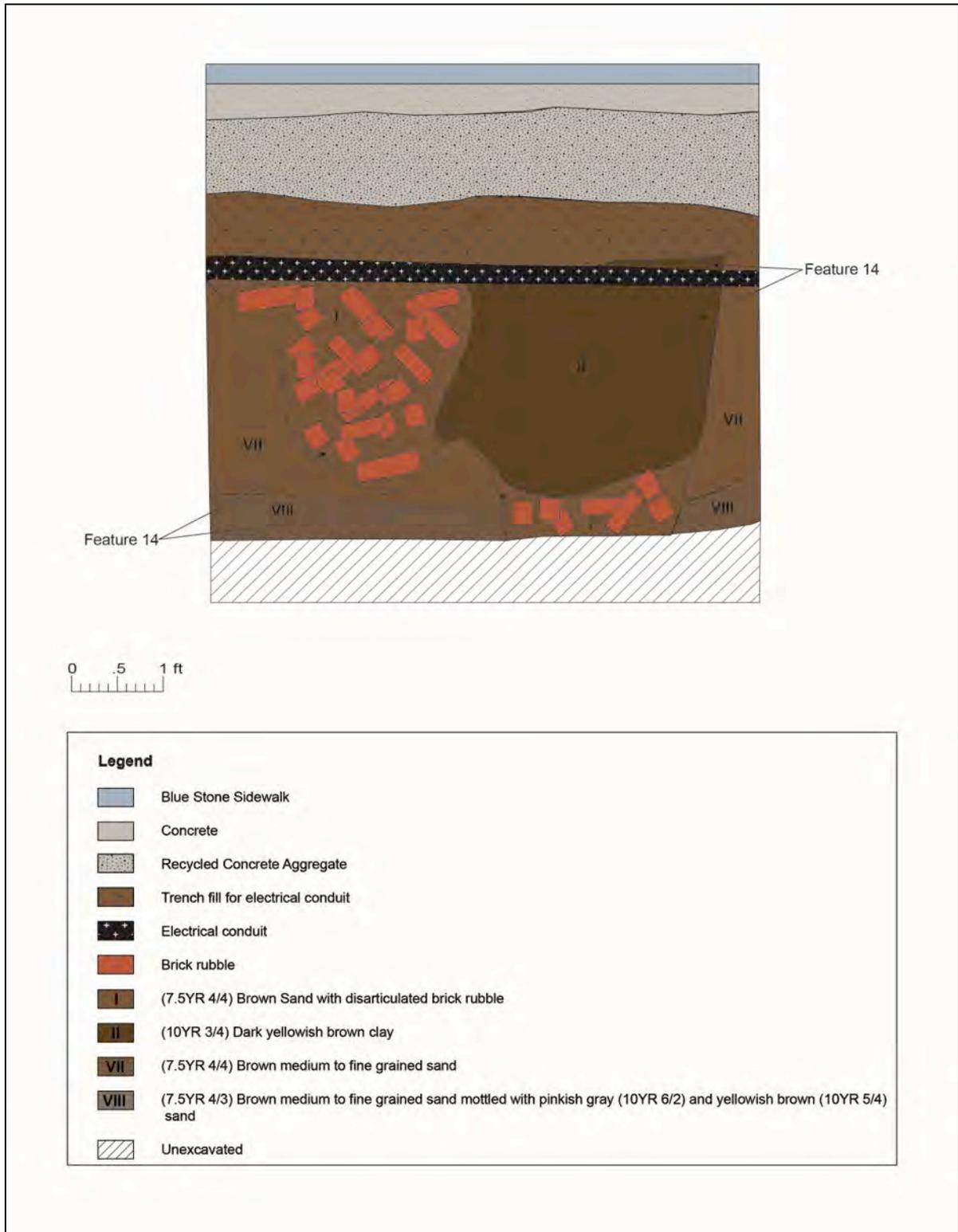
Feature 14 was encountered in the north wall of the Murray Street path trench, approximately 50' westward of the trench's intersection with the west path. It consisted of a basin-shaped deposit of disarticulated brick rubble and clay fill. Although the feature was only present in the north wall of the trench, it may have once extended into the trench. Modern electrical conduits were located just to the south of the feature (Image 7.24) and extended the length of the trench. These modern utilities probably impacted the southern edge of Feature 14. The feature consisted of two strata (Map 7.08). The first consisted of a mass of disarticulated brick rubble interspersed with brown (10YR 4/4) sand. The second feature stratum consisted of dark yellowish brown (10YR 3/4) clay. Overall, Feature 14 was 5.6' long and 2.6' deep. It began at the same general vertical level as the conduits, which were 2.1' bs. The base of the feature was not located; it continued beyond the base of the trench excavation, which ended at 5.2' bs.

#### **ASSOCIATED STRATIGRAPHY**

In general, the stratigraphic sequence that contains Feature 14 is the same as that described for the Murray Street path. The only difference in the surrounding sequence is an additional trench fill horizon associated with modern utilities (see Image 7.24 and Map 7.08).



Image 7.24: Murray Street path, Feature 14, profile of north wall.



Map 7.08: North profile of Feature 14.

## ASSEMBLAGE

Eight non-faunal artifacts were recovered from Feature 14. Half of this portion of the assemblage consists of red-bodied earthenware sherds from a pint-sized tankard. Basal sherds have either the number “4” or the letter “A” inscribed, and the interior exhibits wear from stirring. A sherd from the same vessel was recovered in possible association with the cisterns (Features 12 and 20) encountered in the west path trench. Only two chronologically diagnostic artifacts were recovered: sherds from a hollow stoneware vessel. They possess gray to buff bodies and are salt glazed. These sherds are most likely local products of the Crolius/Remmey pottery, which operated at nearby Potbakers Hill from 1720 to 1820 (Janowitz 2008). The remaining artifacts include an unidentifiable sherd of aqua glass and a bone button blank. The button blank is a partially cut out blank with the button itself still attached. The button is rather large, with a diameter of 1.2”, and it possesses the central hole from the cutting implement.

Faunal remains ( $n=29$ ) are highly fragmented, with the majority unidentifiable to the species level. Only cattle (*Bos taurus*) was identifiable, with a count of five. Some of the bone exhibits primary and secondary butchery, but elements were not complete enough to allow for identification of additional factors. The Mollusk species are all complete oyster half shells. Only complete shells were collected from this context.

## INTERPRETATION

Feature 14 consists of the southern edge of an indeterminate deposit. Many of the artifacts and faunal remains are highly fragmented, suggesting a secondary or disturbed deposit. It may be a midden or the edge of an actual structure, but as only a small portion of the feature was uncovered, its ultimate disposition is unknowable. Based on the stoneware sherds (1720–1820), the assemblage suggests association with either the Bridewell or City Hall. Conversely, red-bodied tankard sherds from the same vessel were also recovered from the fill horizons that covered the cisterns within the west path. This could date the deposit to 1811, when the cisterns were constructed to hold water designated for fire suppression (Koeppel 2000:124).

## 6. EAST OF CITY HALL

### EAST FIELD MONITORING STATION

As part of the construction activities at City Hall, a vibration monitoring station was required to ensure activities did not adversely affect the existing structure. An area east of City Hall, within the existing grassy area, was selected for installation of the monitoring station (see Map 7.01). Rockmore conducted excavation for the installation, which the archaeological team monitored.



Image 7.25: Feature 44, two parallel stone walls, facing south.

The initial excavation area measured 3' x 5'. A total of six strata were exposed and one feature (Feature 44) revealed. Feature 44 is two parallel stone walls exposed at 2'–2.25' bs along the eastern border and center of the excavation unit (Image 7.25). The gray square cut stones were oriented on a north-south axis. With the discovery of the walls, the excavation area was expanded 2' to the west, creating a 3' x 7' excavation unit. This would allow for a buffer zone between the installation of the concrete pad required for the monitoring station and the walls, which were left *in situ*.

#### ASSOCIATED STRATIGRAPHY

Table 7.11 summarizes the stratigraphy of the overall excavation unit. West of the walls was a clean sand fill excavated to a final depth of 2.5' bs. No artifacts were recovered from this stratum. A natural silty sand sub-stratum was exposed at this depth but not excavated. Between the two walls, a dark ashy fill was exposed, excavated, and screened.

This dark ashy stratum extended to 2.45' bs, followed by a brown sandy loam that extended to 3.55' bs. This is the same soil seen on the western side of the walls. Overall, the unit was excavated to a final depth of 4' bs (Image 7.26) (Table 7.11).

Table 7.11: Stratigraphy of monitoring station excavation unit.

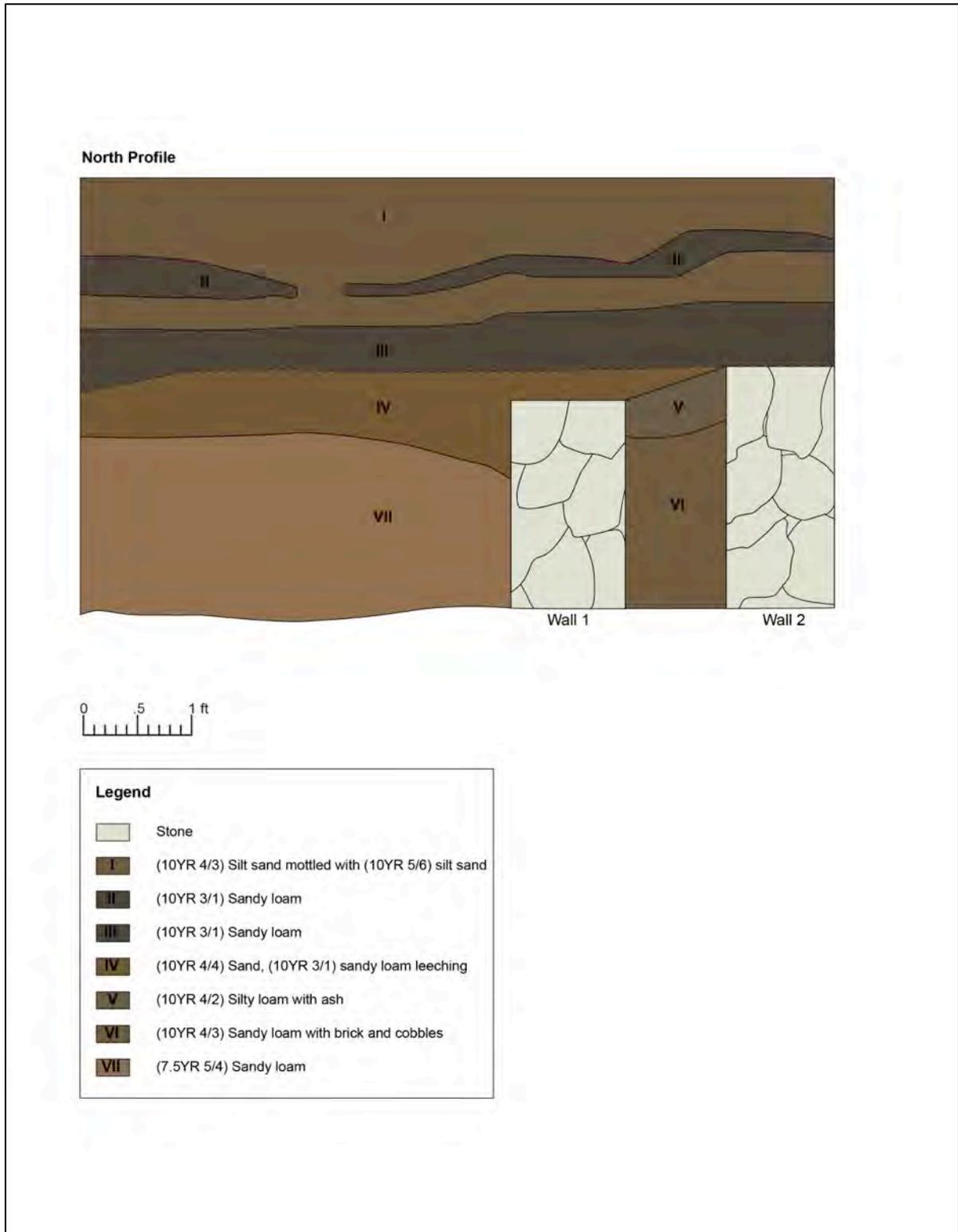
<b>Stratum</b>	<b>Depth</b>	<b>Soil Description</b>
<b>I</b>	0' – 1.3'	Grass and topsoil, 10YR 4.3 silty sand compacted with pea gravel and mottled with 10YR 5/6 silty sand
<b>II</b>	0.6' – 0.7'	10YR 3/1 sandy loam lens
<b>III</b>	1.3' – 1.7'	Fill horizon consisting of 10YR 3/2 sandy loam
<b>IV</b>	1.7' – 2.3'	Fill horizon consisting of 10YR 4/4 sand with 10YR 3/1 sandy loam
<b>V</b>	1.7' – 2.2'	Fill horizon consisting of 10YR 4/2 silty loam with ash
<b>VI</b>	2.2' – 4'	Fill horizon consisting of 10YR 4/3 sandy loam with brick and cobbles
<b>VII</b>	2.2' – 4'	Fill horizon consisting of 7.5YR 5/4 sandy loam

ASSEMBLAGE

Thirty-one artifacts were recovered from the dark ashy fill between the two walls (Stratum V); the majority of these are personal items (Table 7.12). Artifacts recovered from this stratum include a clock turnkey, a Brooks Brothers button, and an 1884 Indian Head penny. The personal items are mostly comprised of several shards of a near complete mold-blown perfume bottle.

Table 7.12: Monitoring station assemblage.

<b>Functional Group</b>	<b>Artifact Count</b>
Architectural	1
Commercial	1
Hardware	1
Household	6
Indeterminate	1
Lighting	1
Personal	20



Map 7.09: North profile of the east field monitoring station, exhibiting two stone walls.

The Brooks Brothers button is a copper alloy stamped “Brooks Bros” (Image 7.26). The Brooks Brothers Company began as H & DH Brooks and Company nearby City Hall in 1818, at the corner of Catherine and Cherry Streets. It was not until the sons of the founder took over the company that the name shifted to Brooks Brothers. The style of the button suggests a date following 1850, when the Golden Fleece logo was adopted. The Cherry Street store closed in 1874 (Brooks Brothers Group 2012). Two Prosser porcelain buttons were also recovered, dating from 1840 onward (Sprague 2002:111–127).

The six household items consist of four bottle sherds and two pottery sherds. The ceramics are a white salt-glazed teacup (1720–1790) and a pearlware with undetermined decoration (1775–1840 (Miller et al. 2000:10–12).

The 1884 Indian Head penny provides the *terminus post quem* (TPQ) for this assemblage. No faunal remains were recovered from within this test unit. No artifacts were recovered from outside the two walls.

#### INTERPRETATION

The overall length and depth of the two walls remains undetermined, as excavation was limited to the area required for the monitoring station. The walls continued to extend beyond the final excavation depth and into both trench walls. The construction and material of the walls is consistent with the mid-eighteenth century. Their location places them in the area between the eighteenth-century gaol and the almshouse. Their function remains undetermined.



Image 7.26: Brooks Brothers button, copper alloy, post 1850.

## EAST PATH

Four test units were excavated along the fence line of the eastern areaway and ramp (see Map 7.01) to determine the presence or absence of the retaining wall exposed in the northeast vault area (Feature 1). This effort was undertaken in advance of work that would require removal of the ramp and areaway.

### TEST UNIT E1

Test Unit E1 was located at the northeast corner of City Hall and exposed the corner of the retaining wall (Feature 1). The stone and rubble retaining wall, as discussed in the northeast vault area (northeast) section of this chapter, also extended the full length of the existing areaway (east-west), including the previously extant ramp, forming a corner. The composition of the wall on the east side areaway is identical to that documented in Feature 1, and it may be considered part of that feature.

#### *Associated Stratigraphy*

Three strata were documented in this test unit (Table 7.13). Stratum I consisted of the concrete underlayment for the modern paving stones. This layer was followed by two fill horizons, Strata II and Strata III.

Table 7.13: Test Unit E1 stratigraphy.

Stratum	Depth	Soil Description
<b>I</b>	0' – 0.6'	Concrete
<b>II</b>	0.6' – 2.4'	10YR 3/4 brown sandy loam fill
<b>III</b>	2.4' – 4.0'	10YR 3/4 medium sand fill

#### *Assemblage*

A total of 16 artifacts were recovered from Test Unit E1.

Among the artifacts are nine household items consisting of two creamware sherds, two pearlware sherds, and three salt-glazed stoneware sherds. The base of a Chinese export porcelain teacup was also recovered. One of the pearlware sherds has a 1795–1830 date based on its painted floral decoration (Miller et al. 2000). Three pipe stems and a single hand-wrought iron nail round out the artifact collection. The three food-related items are fragments of unidentified shell. The 1795–1830 pearlware sherd provides the TPQ date among the artifacts uncovered.

### TEST UNIT E2

Test Unit E2 was located 25' south of Test Probe 1 and measured 4' x 1.5'. It was excavated to a depth of 4' bs. The retaining wall was relatively shallow in this area, extending to only 3.5' bs (Image 7.27).

*Associated Stratigraphy*

Test Unit E2 exhibited the same stratigraphic profile as Test Unit E1.

*Assemblage*

A total of 53 artifacts were recovered from Test Unit E2. Table 7.14 provides an artifact count according to functional group.

Table 7.14: Test Unit E2 artifact count according to functional group.

Functional Group	Artifact Count
Architectural	10
Food Related	32
Household	19
Personal	12



Image 7.27: Retaining wall along the eastern side of City Hall.

**Architectural.** The architectural group contains five pieces of an intrusive ceramic water pipe, four nails of indeterminate shape and manufacture, and one shard of common window glass.

**Food Related.** Thirty-two food-related artifacts were recovered. Twenty-six faunal elements were recovered; 16 of these were unidentifiable to the species level, seven of which were indeterminate. Of those that are identified to the species level are six oyster shell fragments, a *Bos taurus* tibia, and two *Sus scofra* teeth. The remaining six food-related artifacts are eggshell fragments.

**Household.** The household group contains 19 artifacts. Pearlware is the most prevalent ware type with eight sherds, including one from a cordoned and painted lid dating 1795–1830 (Miller et al. 2000). The seven sherds of creamware tableware did not have any distinguishing characteristics to determine anything other than the standard date of 1762–1820 (Miller et al. 2000). Two sherds of a redware dish and one sherd of brown slipped salt-glazed stoneware were also among the pottery recovered. One glass artifact, the neck of a green glass bottle of indeterminate manufacture, completes the household category.

**Personal.** Twelve smoking pipe stems were recovered, all unmarked.

#### TEST UNIT E3

Test Unit E3 was the southernmost unit along the east areaway. This unit measured 5' x 1.5'. At approximately 2.3' bs, a discrete fill deposit was encountered (Image 7.28). Initially composed of large mammal bone and oyster shell, the deposit continued and contained a range of materials. Field observations noted that the deposit appeared to reflect eighteenth-century kitchen waste.

The unit was excavated to a final depth of 4.5' bs. The artifact deposit continued and appeared to extend to the east, north, and south.

#### *Associated Stratigraphy*

Soils were essentially consistent with the other two test units along the eastern pathway (Table 7.15). The one difference was the presence of the cultural deposit.

Table 7.15: Test Unit E3 stratigraphy.

Stratum	Depth	Soil Description
I	0' – 0.6'	Concrete
II	0.6' – 2.3'	10YR 3/4 sandy loam
III	2.3' – 4.0'	10YR 4/4 with 3/4 coarse brown sand with cultural materials



Image 7.28: Trash deposit alongside eastern City Hall retaining wall.

*Assemblage*

This assemblage consists of 147 artifacts. The majority are household artifacts ( $n=82$ , or 55.7%) followed by architectural artifacts ( $n=23$ , or 15.6%) and a relatively large number of indeterminate artifacts ( $n=29$ , or 19.7%).

Table 7.16: Test Unit E3 assemblage.

Functional Group	Artifact Count
Architectural	23
Food Related	65
Household	82
Indeterminate	29
Manufacturing	1
Personal	12

**Architectural.** Architectural artifacts include 10 shards of common window glass and 13 iron nails. Nine of the nails are hand wrought, with the remainder of indeterminate manufacture.

**Food Related.** A total of 65 food-related artifacts were recovered. The majority of the faunal remains consist of 24 shells (four clam and 20 oyster) and 23 large terrestrial mammal bones. The remaining are five medium terrestrial mammal, six *Bos taurus*, three caprine, one *Sus Scrofa*, and three indeterminate. Many of the mammal bones exhibit evidence of butchery, both sawing and chopping, and the majority consists of long bones. The caprine bones consist of a humerus and foot bones, and the six cattle bones contain a juvenile femur, vertebrae, and a tibia. These are all remnant of food use with no evidence of postmortem modification.

**Household.** The household category consists of a combination of tableware and utilitarian ware. Thirteen coarse earthenwares were recovered; six of these are from British buff-bodied slipped tableware dating 1670–1795 (Azizi et al. 1996). The remaining coarse earthenwares are redware with lead glazing. A range of ware types are among the 21 refined earthenwares, including seven pearlware sherds of indeterminate decoration, two tin-glazed sherds, a Rockingham sherd, and 11 creamware sherds. One of the creamware sherds is from a fruit shaped teapot dating 1759–1775. This last artifact is the most tightly dated item within this assemblage.

Several stoneware sherds were recovered ( $n=36$ ), accounting for slightly more than half of all the ceramics. The majority of the stoneware is from locally made gray salt glaze, including a bowl, jar, or jug and general tableware. Nine sherds of white salt-glazed stoneware and a single Nottingham type sherd are also part of the assemblage.

The 10 glass shards consist mostly of green bottle glass; three are mouth blown and one is from a case bottle. Two shards are from a glass container with faint remnants of possible embossed lettering. The remainder is indeterminate and none of the glass artifacts provide any temporal data.

A bone utensil handle completes the household category.

**Manufacturing.** A single manufacturing artifact was recovered, a salt-glazed stoneware expedient kiln pad dating 1720–1820 (Janowitz 2008).

**Personal.** The personal category consists of two buttons, nine pipe stems, and one pipe bowl. The pipes are all unmarked/undecorated. The buttons are both composed of copper alloy. One of the buttons has undulating concentric borders, with an eight-sided star at the center.

**Indeterminate.** The indeterminate artifacts include four shards of common glass and 23 pieces of iron. These pieces of iron are too rusted to determine their original form.

#### TEST UNIT E4

A fourth test unit was excavated for utility purposes to the north of the east entrance to City Hall. This unit measured 2.5' north to south along the east retaining wall and extended 2.5' to the west; it was excavated to a depth of 3.5' bs. Test Unit E4 was 3' south of Test Unit E3, but exhibited no evidence of the cultural deposit with Test Unit E3. A small portion of a builder's trench was present in the northern wall of the unit (Image 7.29).

*Associated Stratigraphy*

Following removal of the concrete, three strata were exposed in Test Unit E4 (Table 7.17). Strata II and III were consistent with the fill horizons observed in Test Units E1 and E2. A fourth stratum, not seen in the other test units, was also exposed.

Table 7.17: Test Unit E4 stratigraphy.

<b>Stratum</b>	<b>Depth</b>	<b>Soil Description</b>
<b>I</b>	0' – 0.6'	Concrete
<b>II</b>	0.6' – 1.2'	10YR 3/4 brown sandy loam fill
<b>III</b>	1.2' – 3.5'	10YR 3/4 medium sand fill
<b>IV</b>	2.8' – 3.5'	10YR 3/2 Builder's Trench

Stratum IV was located at 2.8' bs and appeared to be a builder's trench approximately 0.8' from the retaining wall. Stratum III sits above and slopes downward and alongside the builder's trench (Image 7.29). Unfortunately, due to construction constraints, not enough of an area was exposed to definitively determine the deposition sequence.



Image 7.29: Image of Test Unit E4 showing builder's trench, facing north.

### *Assemblage*

The 110 artifacts recovered from this test unit are divided among three functional groups: architectural ( $n=70$ ), household ( $n=34$ ), and personal ( $n=6$ ).

**Architectural.** The majority of the architectural remains are window glass shards ( $n=50$ ). The remainder of this group contains 18 iron nails of indeterminate manufacture and two square iron nails.

**Household.** The household functional group consists of 19 glass artifacts and 15 ceramic artifacts. The glass is comprised of nine shards of bottle glass; six of these were mouth blown into the mold and date to 1820–1920 (Society for Historical Archaeology 2012). The remaining household glass artifacts include a shard from a tumbler and a shard incised with a geometric pattern. Among the ceramic artifacts are one double-glazed redware sherd; one Chinese export porcelain sherd painted with a Chinese landscape motif; two locally made gray/buff-bodied salt-glazed stoneware sherds; and one indeterminate stoneware sherd. The remaining 10 ceramic artifacts are refined earthenwares. Among these are four undecorated creamware sherds (1762–1820); painted pearlware sherds (1795–1830); one pearlware sherd of indeterminate decoration (1775–1840); one printed whiteware sherd (1815–1915); and one painted whiteware sherd (post 1815) (Miller et al. 2000:12).

**Personal.** The personal functional group contains two scraps of leather and four undecorated smoking pipe stems.

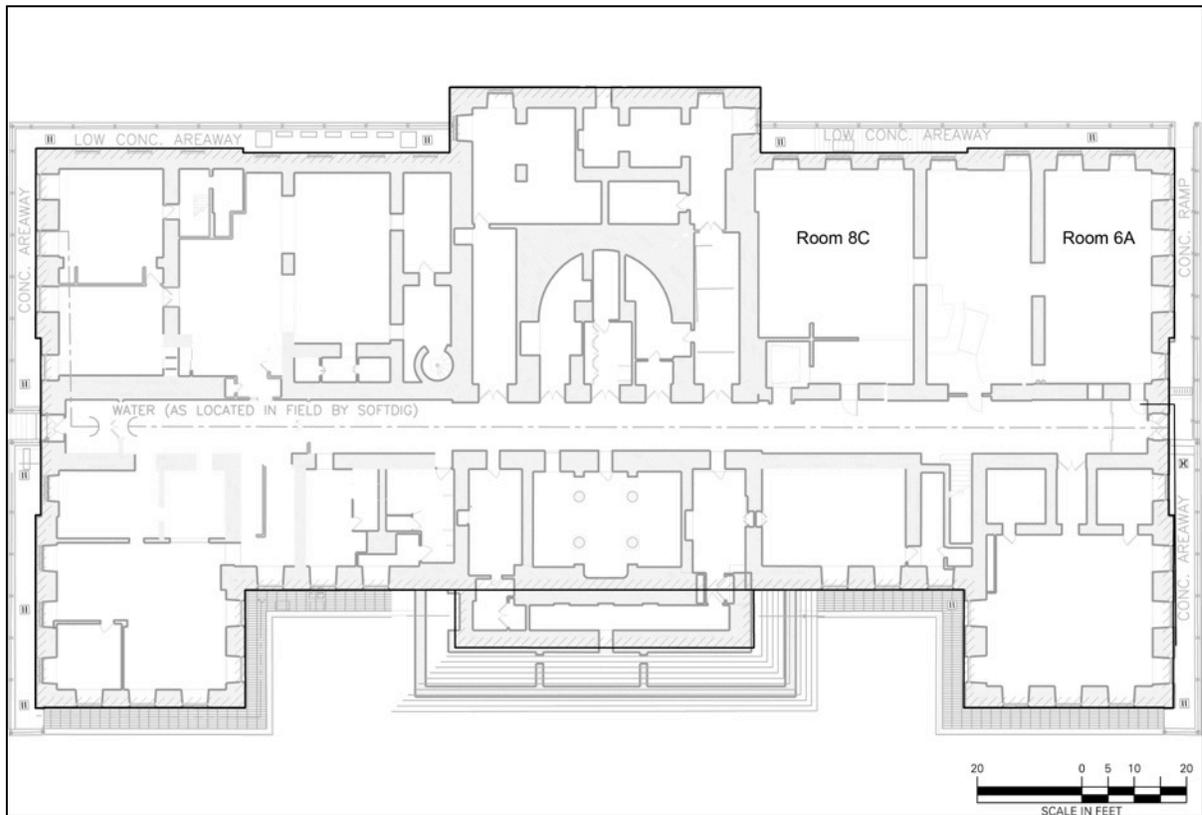
### **EAST PATH SUMMARY**

The purpose of the test units was to identify and determine if the stone retaining wall was present along the east side of City Hall in the area of the modern entry ramp slated for removal. The retaining wall was present in all four test units, with an average depth of 3.5' to 4' bs. Based on this data, and excavation along the northern side of City Hall, it is determined that the retaining wall is present in these areas and is likely present along the remainder of the east side and along the west side of City Hall. Overall, the retaining wall extends on average between 4' and 5' bs and is composed of various types of stone. Though of varying quality, late-nineteenth-century photographs seem to show the areaway.

Three of the test units are similar in composition. They consist of redeposited soils with few artifacts. Test Unit E3 was the only unit with a different profile, as it contained an artifact deposit. The materials suggest late-eighteenth-century kitchen refuse. Though similar material was uncovered in Test Units E1 and E2, it was in significantly lesser amounts and showed no evidence of being a discrete deposit. The deposit in Test Unit 3 appears to be a pre-City Hall trash deposit impacted by the retaining wall. It appeared at 2.3' bs and extended to the final depth of the unit (4' bs). The deposit was visible in the north, south, and west walls of the unit; it was not determined if it extended greater than 4' bs. Test Unit E4 exhibited a later date range of redeposited material remains.

## 7. CITY HALL BASEMENT

During the design phase of the project, the LPC determined that the basement of City Hall did not require any archaeological documentation and/or monitoring. The rationale was that the basement area had been fully excavated during the construction of City Hall to a depth that would have surpassed any cultural deposits. However, following removal of the existing floor surface and the beginning of excavation, workers discovered what appeared to be two parallel stone walls in Room 6A (Map 7.10). As per the Unanticipated Discoveries Plan, the archaeological team was contacted to investigate the discovery.



Map 7.10: City Hall basement floor plan.

In consultation with LPC, it was decided to excavate a series of test pits to better determine the extent of and identify the stone features. Their appearance in Room 6A and adjacent rooms led to further documentation, as well as archaeological excavation in Room 8C.

## ROOM 6A

Four test units were excavated in Room 6A, the northeastern room of the basement (see Map 7.10). Concurrent with this, the area was troweled and swept to determine the extent of the stone features. Seven stone features (6a.1–6a.7) were uncovered, spanning the north-south length of the room. These were ultimately determined to be stone footings composed of two courses of dry-laid, undressed stone (Image 7.30). The stone was consistent with the stone used for the interior support walls. On average, throughout Room 6A, the bottoms of the footings were exposed at 0.8’ below grade (bg). In this instance, and throughout the basement discussion, “grade” refers to the surface following the removal of the existing basement floor.

These stone footings would be exposed throughout Rooms 6A and 6B and part of Room 8C (Map 7.11). With the exception of the wall support footings, these consistently measured approximately 1.5’ wide and extended between 0.8’ and 1’ bs. All footings were mapped and photographed.

### TEST UNIT 6A.1

Test Unit 6A.1 was located between two stone features. An area measuring 4’ long and spanning the width between footings 6a.5 and 6a.6 was excavated to determine the depth of the footings and if any intact surfaces were present beneath.

#### *Associated Stratigraphy*

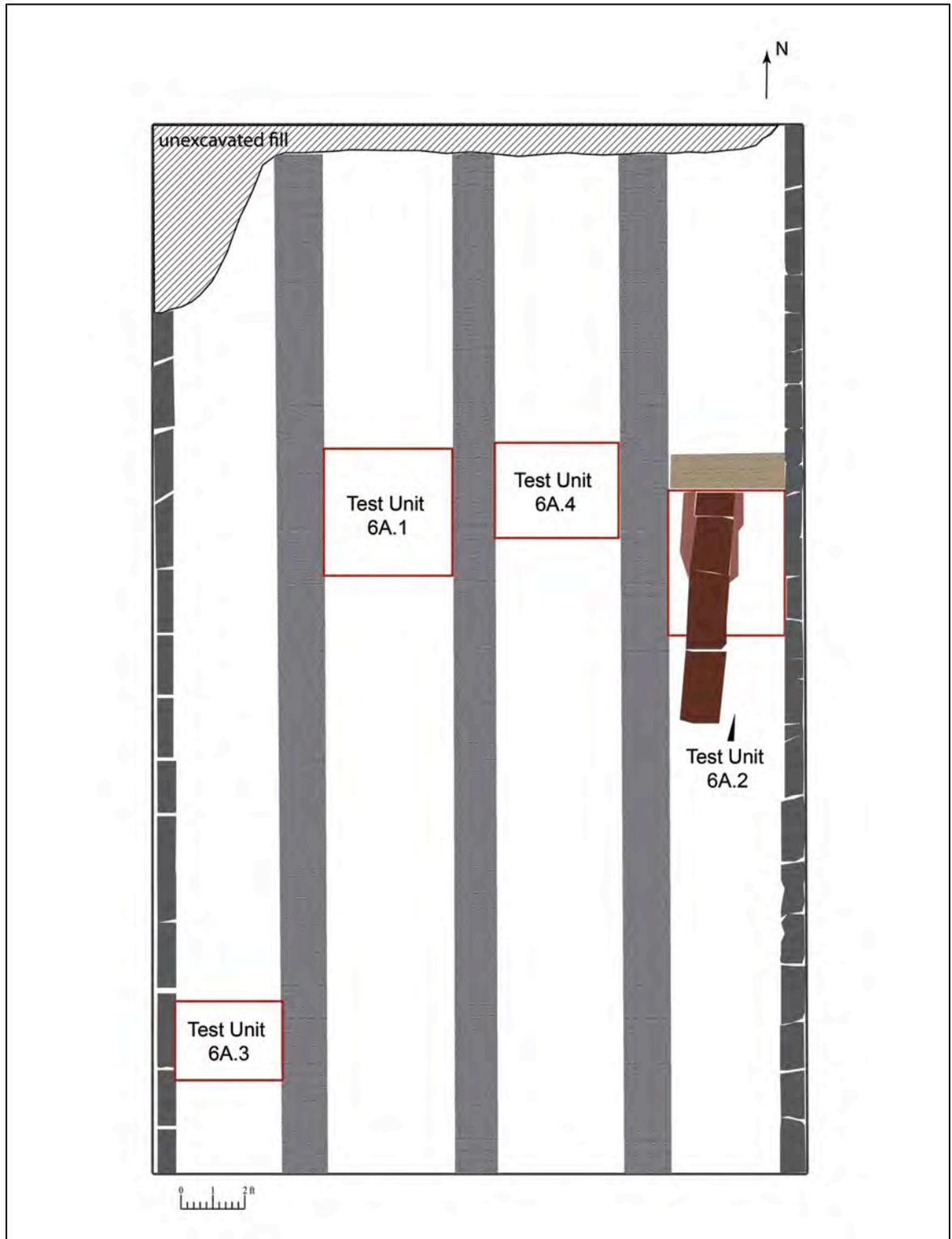
The footings were uncovered within 0.2’ beneath the existing basement floor. The area surrounding the footings consisted of demolition fill. In total, three strata were exposed (Table 7.18). Strata I and II contained loose demolition fill and Stratum III consisted of sand.

Table 7.18: Test Unit 6A.1 stratigraphy.

Stratum	Depth	Soil Description
I	0’ – 1.8’	Fill horizon consisting of 10YR 6/2 sand with demolition fill
II	1.8’ – 3.2’	Fill horizon consisting of 10YR 3/1 sand with demolition fill
III	1’ – 3.2’	C-1 horizon consisting of brown (7.5YR 4/6) medium grained sand



Image 7.30: Fully exposed stone footer within Room 6A.



Map 7.11: Plan view of Room 6A – Features 6A.1 – 6A.7.

*Assemblage*

The demolition fill contained a large amount of common window glass, which was sampled (seven pieces are in the catalog). These broken fragments were likely waste from window repair or replacement. Other materials mixed within are four nails too rusted to determine their manufacture. Two brick fragments and one whole brick round out the architectural group. The whole brick measures 3.3” x 7.8” x 2” and is unmarked. It appears to date to the early nineteenth century. Four shards of opaque frosted white lamp glass comprise the lighting group. One household artifact was recovered, a green case bottle fragment. Not enough of the bottle was present to determine manufacture. No dateable items were recovered from this test unit. Table 7.19 provides a breakdown of the assemblage by functional group.

Table 7.19: Test Unit 6A.1 assemblage by functional group.

Functional Group	Artifact Count
Architectural	14
Lighting	4
Household	1
Indeterminate	1

TEST UNIT 6A.2

Test Unit 6A.2 exposed a stone-capped, nineteenth-century ceramic drain line within 0.5’ bs (Image 7.31 and Map 7.12). The surrounding soil consisted of coarse sand (7.5YR 5/4) with small angular rock fragments (Table 7.20). Due to the placement of the drain line, this unit was not excavated beyond 1’ bs.

Table 7.20: Test Unit 6A.2, Stratum I.

Stratum	Depth	Soil Description
I	0’ – 1’	Fill horizon consisting of 7.5YR 5/4 coarse sand

*Assemblage*

No artifacts were recovered from this test unit.

TEST UNIT 6A.3

This unit was located between footings 6a.6 and 6a.7. Excavation revealed the depth of footer 6a.7, which was located beneath an interior wall and the depth of the rubble fill visible at the surface. The unit measured 3.4' x 2.4'. Footer 6a.7 extended to 1.9' bs (Image 7.32).

*Associated Stratigraphy*

The first stratum consisted of a shallow rubble fill extending to 0.65' bs, the same depth as footer 6a.6. Feature 6a.7 is an interior support wall. The construction is similar to that of the footings, though the stones utilized are dressed, more regular in size and shape. Stratum II consisted of a uniform sand fill (7.5YR 5/4) (Table 7.21).



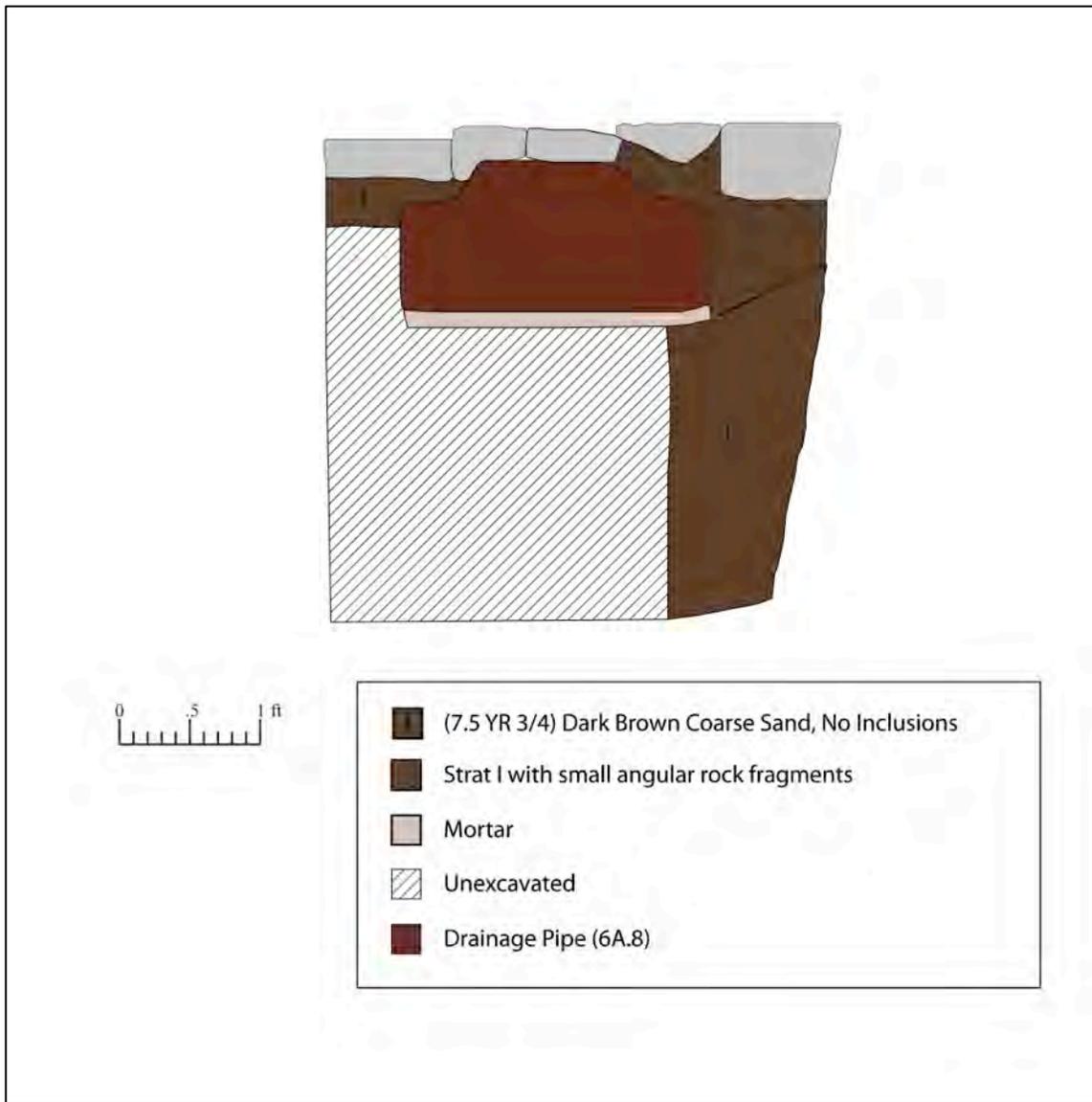
Image 7.31: Stone capped nineteenth-century drain line.

Table 7.21: Test Unit 6A.3 stratigraphy.

Stratum	Depth	Soil Description
I	0' – 0.6'	Fill horizon consisting of 10YR 6/2 sand, brick and plaster rubble fill
II	0.6' – 2.4'	Fill horizon consisting of 7.5YR 5/4 uniform compacted sand

*Assemblage*

No artifacts were recovered from this test unit.



Map 7.12: North profile of Test Unit 6A.2.



Image 7.32: Image of interior support wall (6a.7) exposed within the basement of City Hall.

#### TEST UNIT 6A.4

Test Unit 6A.4 was located between footings 6a.4 and 6a.5. This unit was located to determine the extent of the demolition fill from the adjacent Test Unit 6A.1. The fill in this area differed in that it consisted exclusively of brick and cobble. These bricks were not from the demolition of the almshouse, as they were not consistent with eighteenth-century brick. Their degree of regularity in size and form date them to the early nineteenth century; they were all unmarked.

This unit was excavated to a depth of 1.2' bs.

#### *Associated Stratigraphy*

Test Unit 6A.4 consisted entirely of fill sand (7.5YR 5/4), with a high density of building debris, including brick and some window glass. The bottom level of this stratum was not reached during excavation. Building debris was still present when excavation was halted due to safety concerns.

*Assemblage*

Building debris, similar to the materials observed in Test Unit 6A.1, was noted but not collected.

INTERPRETATION

Excavation in Room 6A exposed a dense layer of demolition fill that included nineteenth-century brick, plaster, rubble, and window glass. This demolition fill is likely associated with one of the many renovation phases of City Hall. Over the past two centuries, there have been more than six renovation projects at City Hall (Table 7.22).

Table 7.22: City Hall renovation projects.

Renovation Date	Architect
1860	Leopold Eidlitz
1898	John H. Duncan
1902	William Martin Aiken
1907, 1912, 1915, 1917	Grosvenor Atterbury
1956	Shreve, Lamb & Harmon
1998	Cabrera Barricklo

The stone footings appear to be original to the construction of City Hall based on their similarity to the inner wall supports. Stone footings were used to separate or raise floor joists from a soil surface. This allows for the free flow of moisture beneath a structure and distributes the load of the structure. Similar construction was discovered during excavation of the Old Provo Tabernacle in Salt Lake City, Utah (Brigham Young University 2012).

Renovations within City Hall’s basement do not appear to have altered the floor level. Plans from the 1902 William Aiken renovation, which replaced the basement floors, specifically note that the floors were to be replaced to their original level. The plan notes state that cinders would be used as fill to facilitate any leveling. This information aided in determining differences in elevation between 1803 and the present day, as well as interpretations of features in the northeast area of the property.

**ROOM 6B**

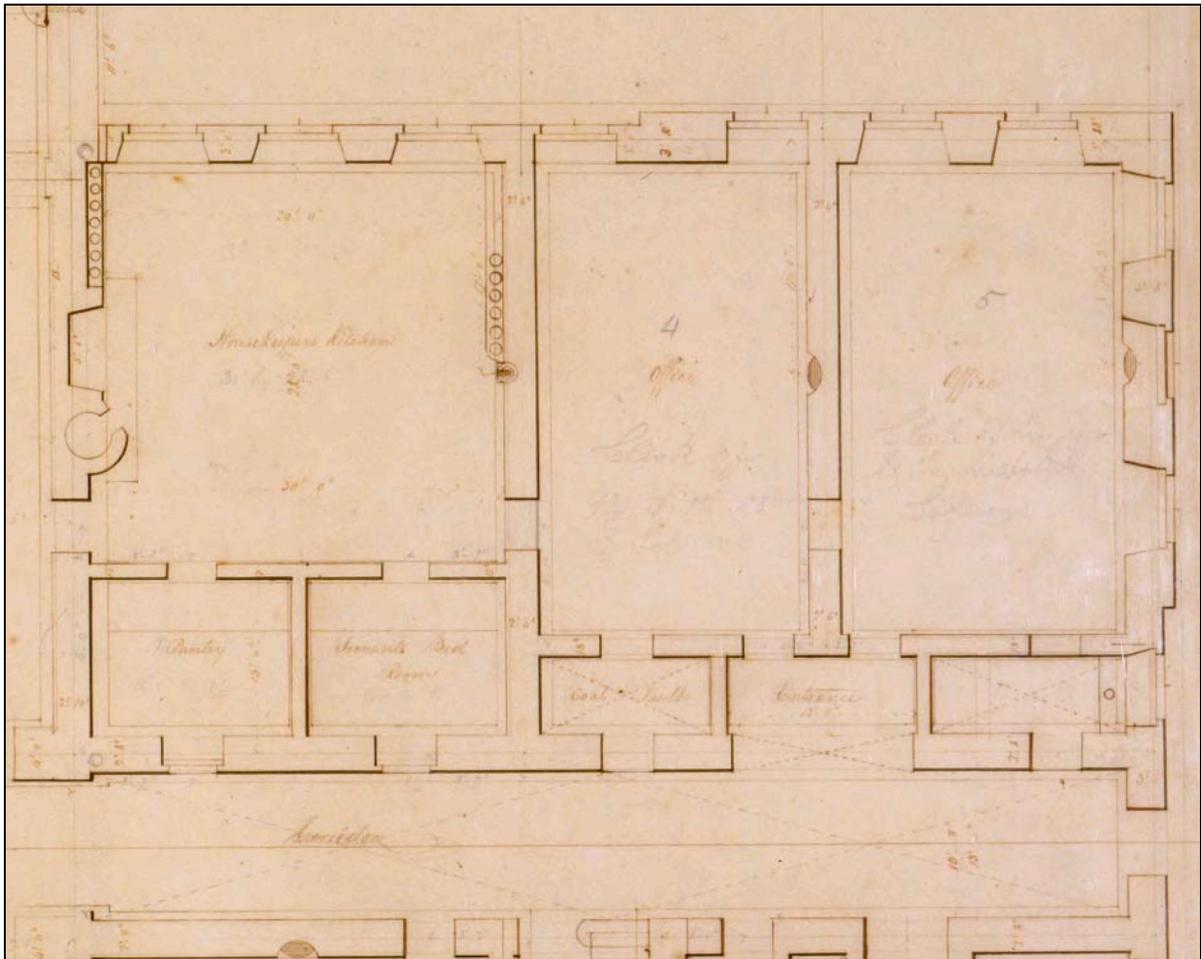
Archaeological testing did not occur in Room 6B. Upon removal of the existing basement floor, stone footings, like those observed in Room 6A, were exposed. These were photographed and mapped with elevations.

**ROOM 8C**

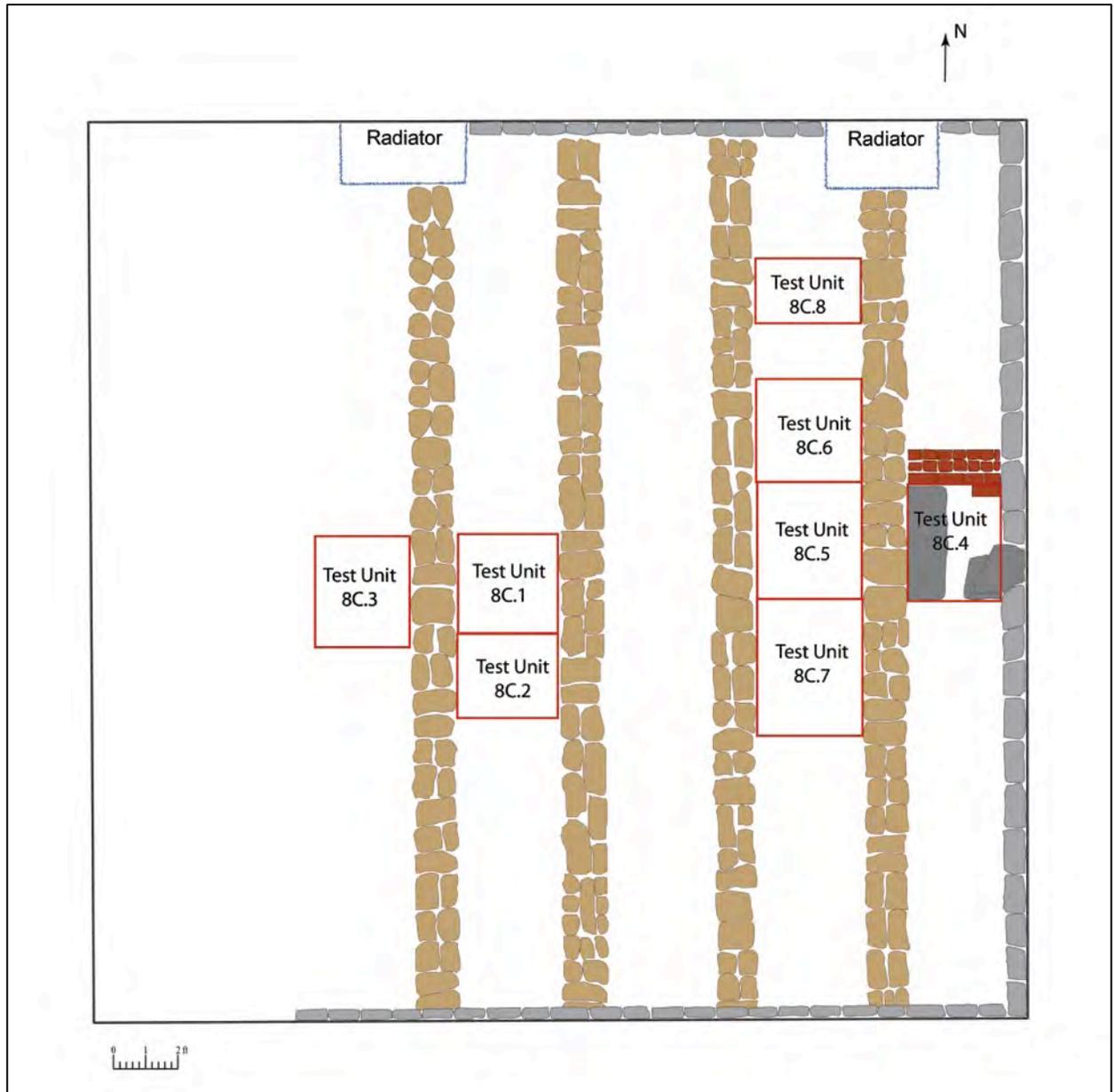
Room 8C is the westernmost room in the east wing of City Hall; its original function was as the housekeeper’s kitchen (Map 7.13). The existing floor had been removed by Rockmore and the footings present in Room 6A and 6B were again noted. However, they did not span

the entire width of the room (Map 7.14). In cleaning the area of the footings for documentation, building debris and artifacts were noted.

A total of eight test units were excavated in Room 8C (see Map 7.14). In all the units, except one, Stratum III was noted as an artifact deposit that appeared to pre-date City Hall. The materials recovered represented a single assemblage, though it was excavated as multiple units. All units were excavated to a depth between 3' and 4'. Test Unit 8C.4, which did not contain the artifact deposit, is discussed separately at the end of this section.



Map 7.13: Original floor plan of City Hall, northeast section only  
(McComb Family Papers 1787–1858).



Map 7.14: Plan view map of Room 8C.

ASSOCIATED STRATIGRAPHY

With little exception, the stratigraphy was consistent throughout this room. Stratum I consisted of demolition fill containing brick, mortar, cobbles, slate, and late-nineteenth-century ceramic tile. The fill extended to an average of 0.6' bs, followed by a compacted sand layer (Stratum II). This sand stratum contained minimal artifact inclusions and appears to be a bedding layer associated with the construction of City Hall. This same soil was observed in Room 6A.

At 1.1' below the top of the stone footings, a soil change—along with cultural and faunal materials—was exposed. This new stratum, Stratum III, consisted of an artifact-laden sandy fill that had a shallow basin shape (Map 7.15). Stratum IV consisted of mottled coarse brown fill sand with some gravel inclusions, and was characterized by a noticeable decrease in artifact density (Table 7.23).

Table 7.23: General stratigraphic profile of Basemen Room 8C.

Stratum	Beginning Depth (Range)	Ending Depth (Range)	Soil Description
I	0'	0.6' – 1'	Fill horizon consisting of brown (10YR 3/6) coarse sand, brick, cobble and tile demolition fill
II	0.6' – 1'	1.25' – 1.4'	Fill horizon consisting of brown (7.5YR 4/4) coarse sand, slightly compacted
III	1.25' – 1.4'	2' – 2.75'	Artifact deposit embedded in dark brown (7.5YR 3/3) coarse sand
IV	2' – 2.75'	2.3' – 3.4'	Fill horizon consisting of dark brown (7.5YR 3/4) coarse sand mottled with brown (10YR 4/3) coarse sand. Lessening artifact density
V	2.3' – 3.4'	3' – 4'	Fill horizon consisting of 7.5YR 3/4 coarse sand

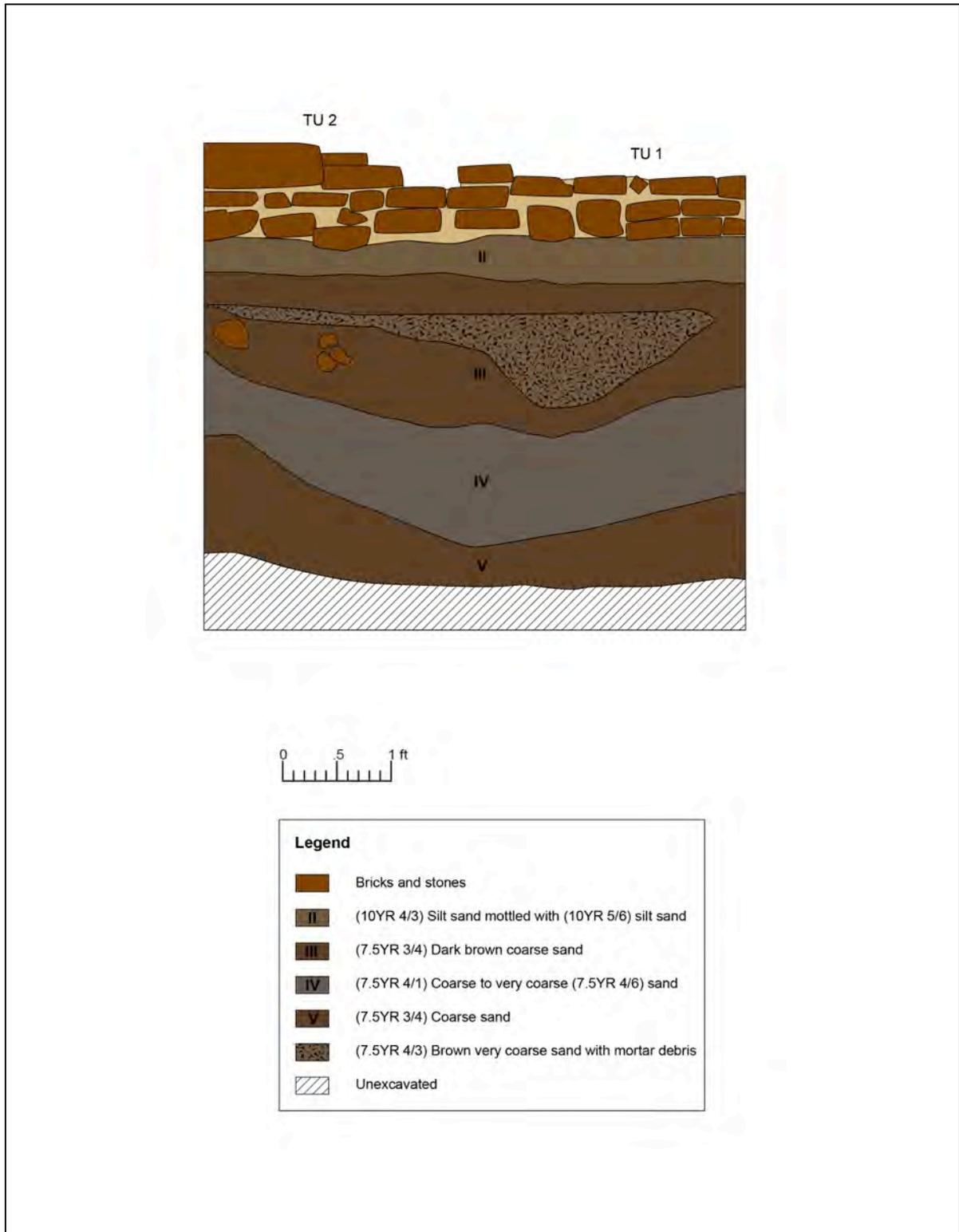
Though technically separate strata, the materials from Strata III and IV are the same assemblage and are discussed as such in this section. The final stratum, Stratum V, was a coarse sand fill layer. No natural subsoils were encountered.

Only one unit did not contain the Stratum III artifact deposit, Test Unit 8C.4, discussed at the end of this section.

ASSEMBLAGE

*Stratum I*

Though brick, mortar, and cobble were noted, no other material remains were recovered from Stratum I. This stratum represented demolition fill from a previous renovation episode.



Map 7.15: Profile of Test Units 8C.1 and 8C.2.

*Stratum II*

Stratum II, located at an average of 0.8'–1.2' bs, was a fill layer, likely a bedding layer associated with the construction of City Hall. Only three artifacts were recovered from Stratum II: two cut iron nails that have a 1790 beginning date and one salt-glazed stoneware sherd (1720–1820) (Janowitz 2008.)

*Strata III and IV*

Strata III and IV contained a wide range of artifacts dating from the eighteenth century ( $n=1,909$ ). The majority of these are food-related faunal remains ( $n=1,162$ , or 62%), followed by household items ( $n=434$ , or 23%). The functional groups best represented following household are personal ( $n=116$ , or 6%) and architectural artifacts ( $n=120$ , or 6%) (Table 7.24). An overview of the artifact assemblage is presented in this chapter. Further, detailed analysis is presented in Chapter VIII and Chapter IX.

Table 7.24: Artifact count by functional group for the Room 8C Strata III and IV deposit.

Functional Group	Artifact Count
Architectural	120
Commercial	3
Food Related	1164
Household	434
Indeterminate	8
Manufacturing	33
Other	30
Personal	116
Toy/Recreation	2

*Architectural*

Architectural materials account for 6% of this assemblage ( $n=120$ ). More than half of these ( $n=67$ ) are iron nails, including 30 hand-wrought nails and 34 square nails. Three of the hand-wrought nails are door nails with wide, flat heads.

Various other building material fragments round out the architectural group. One shard of pale green window glass and 21 shards of aqua (clear) window glass were recovered. The remainder includes whole brick ( $n=2$ ), brick fragments ( $n=4$ ), a brick bat ( $n=1$ ), a red-bodied, black-glazed roofing tile ( $n=1$ ) and cut marble ( $n=4$ ). Four mortar samples are part of the assemblage, one of which has noticeable pieces of ground shell within the temper. None of these objects provided chronological data.

*Commercial*

Three commercial items, copper alloy coins, were recovered. All are British half-pennies. One is dated 1746 and another dates to 1727–1730, based upon the stamped image. The earlier coin depicts an image of a young King George II. The 1746 coin depicts an older King George II on the obverse and Britannia on the reverse side (Image 7.33). X-ray technology was used to obtain images of the coins, which were corroded (Image 7.34). The third coin is highly corroded and an x-ray was only able to discern that the coin depicts of bust of King George II with the letters “GEORGE REX.” No date was visible.

*Food Related*

This group consists of 1,164 faunal remains; more than half are unidentified mammal ( $n=639$ ). Of the 1,164 faunal fragments, only 40 could be identified beyond the class level. A breakdown of the faunal assemblage is presented in Table 7.25. A more detailed discussion is presented in Chapter IX.

Table 7.25: Faunal count by species/class.

Species/Class	Count
AVSP	66
FISH	139
LTM	129
MTM	151
UNIM	639
MOLSP	10
BOS	11
OVCA	8
SUS	9
TUR	2

Among the faunal assemblage is evidence of butchery, some with possible knife marks. Though all skeletal portions are represented, the majority of the fragments are from long bones. Long bones were typically used in button production and worked button blanks. Cow long bones have been recovered as part of this assemblage. Two unusual fragments are turtle shell. Turtle is not unknown as a food item, though it was generally a luxury food item. However, the turtle shell could fall within the manufacturing category, as it may have been used to craft objects, such as decorative hair combs.

*Hardware*

This group is comprised of two pieces of a hand-wrought iron staple. The long flat staple is slightly curved at the center. The two pieces represent a near-complete object.



Image 7.33: British halfpenny. Obverse: Old Laureate and Armored Bust facing left, "GEORGIVS·II·REX." Reverse: Britannia seated with shield facing left, holding spray and spear, "BRITANNIA" (1746) in exergue.

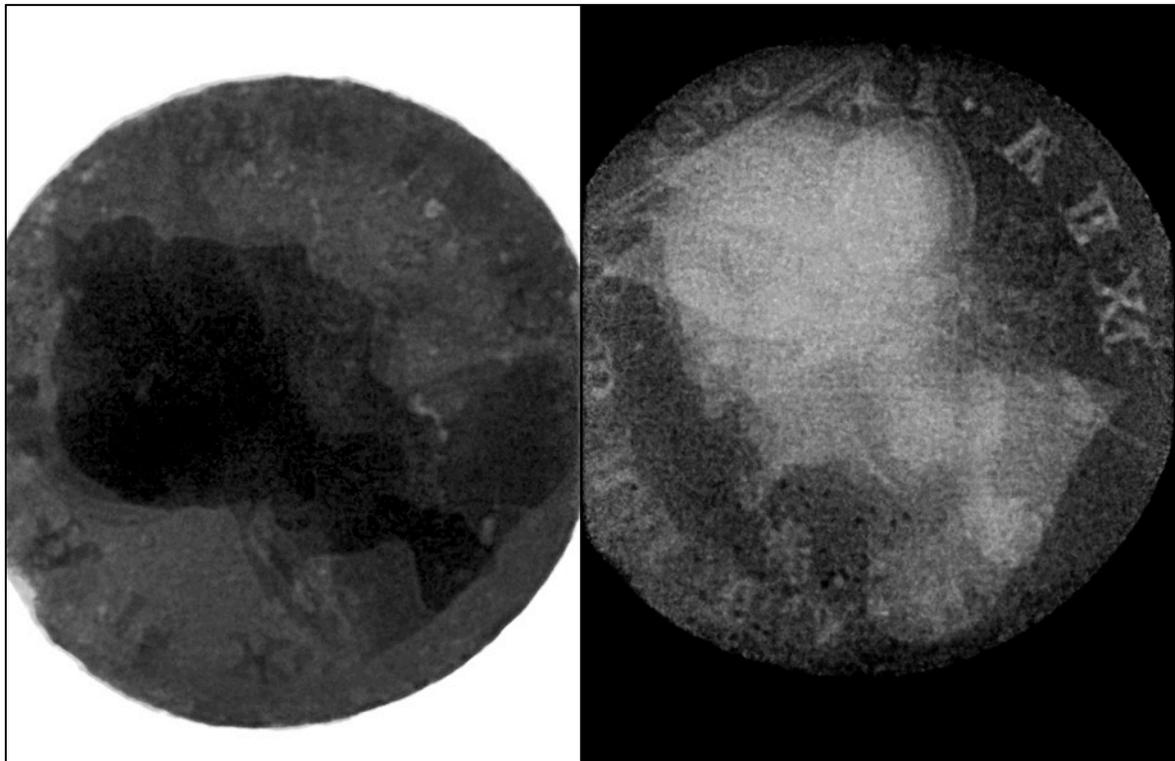


Image 7.34: X-ray image of the earlier British halfpenny (left) and the 1746 British halfpenny (right).

### *Household*

The household group contains 434 artifacts; the majority of these are ceramic wares ( $n=310$ , or 71.4%) and glass ( $n=122$ , or 28.1%). Of the 122 glass items, the majority are bottle glass with little distinction or chronological characteristics. These are largely mouth-blown or mold-blown examples. There are nine fragments of a case bottle, one vial, and two mendable shards of a small cylindrical bottle that has an end date of 1870 (Society for Historical Archaeology 2012).

A small copper alloy spoon and a knife are the only two utensils recovered. The spoon has an egg shaped bowl that measures 0.775" at its maximum width (Image 7.35). The knife is a pistol grip knife handle composed of bone and iron. This form dates from 1700–1780 (Dunning 2000:30–36).

The majority of the household assemblage consists of ceramic artifacts including coarse earthenwares ( $n=91$ ), porcelain ( $n=14$ ), refined earthenwares ( $n=107$ ), and stoneware ( $n=97$ ). The coarse earthenwares include several British buff-bodied slipware sherds ( $n=67$ ) (1670–1795) (Azizi et al. 1996). Among these are 20 sherds of a pitcher with reversed slip colors. The bulbous body with long straight neck has a dark brown slip with white slip squiggly lines. Other forms include dishes, a mug, and at least two porringers. Among the patterns are dot and combed, combed, all over slip, and dot.

Among the 25 redware sherds are slip-decorated sherds including a pan fragment decorated with a geometric motif and a pan with a trailed slip. Three of the sherds have a tortoise shell decoration. Campbell, a local redware potter during the eighteenth century, possibly made these. Two of the sherds have brown, green, and yellow coloring. Coarse earthenware redwares are generally not dateable, as they were continuously made, and these have no assigned date range. However, one sherd in the Lower Delaware Valley style dates 1740–1820 (Azizi et al. 1996).

The remaining coarse earthenwares are five sherds of Agate ware of an indeterminate form. The body of these sherds is composed of agatized red and dark buff/cream clays.

Fourteen Chinese export porcelain sherds were recovered. Two of these sherds have an indeterminate pattern, one is molded with a fluted motif, and the remainders are painted. Due to their size, the motifs of the painted sherds are mostly indeterminate. Two of the overglaze painted sherds were identified as having a floral pattern. One of these has a very detailed floral motif on its exterior and has a border on the interior with traces of gilding. These overglaze painted sherds are teawares.

Among the 107 refined earthenwares are creamwares ( $n=43$ ), tin glazed ( $n=49$ ), and pearlware ( $n=5$ ). The number of tin-glazed sherds, which date 1640–1800 (Azizi et al. 1996), is deceptive, as it includes 33 pieces of exterior spalled glaze with painted blue decoration. Most of the remaining tin-glazed sherds have an indeterminate decoration and/or form. One exception is a medium-sized bowl sherd with a painted decoration that dates 1700–1800 and

a possible punch bowl with a purple spatter decoration, also dating 1700–1800 (Lipski 1984; Azizi et al. 1996).



Image 7.35: Copper alloy spoon with egg-shaped bowl.

The majority of the creamware sherds exhibit no decoration and have a general date of 1762–1820 (Miller et al. 2000:12). Only six sherds exhibit any form of decoration. One is molded with a fluted motif and another is a molded feather edge creamware (1762–1820) (Miller et al. 2000:12). One molded sherd is possibly from a teapot in a fruit or vegetable shape and has gray/green coloring. This sherd has a refined date of 1759–1775 (Miller et al. 2000:12). The only other sherd with a refined date is a dipt creamware dating 1770–1820 (Rickard 2006).

Among the remaining refined earthenwares are five pearlware sherds; three of these have defining characteristics. Two sherds are from a teacup and a saucer exhibiting a painted China glaze decoration (1775–1810) (Miller et al. 2000:12). The trellis decoration has stylized birds on the exterior of the teacup and is likely part of a Chinese landscape motif. The third distinctive sherd is from a brown shell edge decorated plate that dates from 1775–1835 (Jefferson Patterson Park and Museum 2012).

Completing the refined earthenwares grouping are five Jackfield type sherds (1740–1850); one of these is a molded floral teapot finial (1740–1800) (Azizi et al. 1996; Miller et al. 2000:12). Three red-bodied refined earthenwares include a teapot spout fragment and a sherd exhibiting an engine-turned geometric pattern; the latter dates 1760–1830 (Hawkins 1999; Rickard and Carpentier 2004). The remaining two refined earthenwares are a clouded glaze ware type with a tortoise shell motif (1740–1770) (Miller et al. 2000:12).

The last grouping of ceramic household wares consists of the 97 stoneware sherds; more than half of these are salt-glazed/buff-bodied sherds ( $n=79$ ). Identifiable forms include dish, bowl, jar/jug, mug, and porringer, represented by 21 sherds. Many of the 79 sherds exhibit some form of painted (generally blue) or slipped decoration. Among these is a cordoned, incised and blue filled sherd and one with a blue slip decoration (1720–1820) (Janowitz 2008). Many of these were locally produced and include pieces from Crolius and Remmey. A stoneware mug, of possible British origin, is stamped with a capacity mark and “GR” beneath the crown, likely George Rex (King George) (Image 7.36). This mug dates from 1714–1830 (Noel Hume 1969:113 and 15).

Eighteen white salt-glazed stoneware sherds complete the household functional group. Among these are a teacup with a scratch blue herringbone and floral decoration (1735–1783) (Noel Hume 1969:206). There are three additional scratch blue decorated sherds; one from a saucer with a swag motif (1735–1783) (Noel Hume 1969:206). One sherd of debased scratch blue dates from 1765–1795 (Miller et al. 2000:10). The remaining white salt-glazed wares have no defining characteristics and are assigned the standard date range of 1720–1805 (Miller et al. 2000:10).

#### *Indeterminate*

Eight artifacts were classified as indeterminate, including three iron fragments and two glass shards. A coarse earthenware sherd with a thick black lead glaze is noted as a possible, albeit unusually shaped, roof tile. A coarse redware sherd is also part of this category. The final indeterminate artifact is a piece of worked gray English flint with some edge damage. This is likely spall from a gunflint or strike-a-light. A strike-a-light is a type of flint tool in the form of a rod or bar with a slightly pointed end used in conjunction with a piece of stone for making sparks to start a fire.

#### *Manufacturing*

This functional group consists of 33 artifacts. Three salt-glazed stoneware kiln pads are related to local pottery manufacture (1720–1820) (Janowitz 2008). There are also eight kiln wasters or underfired sherds, from four mugs and one jar. These are likely castoffs from the local Crolius and Remmy potter located to the north of the Common. Whether these wasters were used or simply represent unused disposed vessels is uncertain. Four sherds of a redware sugar mold are also part of the manufacturing assemblage.

The remaining 18 artifacts are bone button blanks, the byproducts of bone button manufacture. Two of these blanks are not fully drilled, suggesting they were lost or discarded during their use (Image 7.37). The process of carving buttons from cow long bones and shoulder blades produced these byproducts in the form of a bone blank or disc with a single hole through the center. Button manufacture was a common form of task work (work given to inmates of almshouses and prisons to reform them, in addition to raising money for the institution). These artifacts are a product of that practice (Baugher 2009:8).



Image 7.36: Stoneware sherd with capacity mark.



Image 7.37: Bone button blanks.

*Other*

The other group consists solely of non-food-related faunal materials, including one feline bone and 28 rat bones.

*Personal*

The personal group is comprised of 116 artifacts; the majority of these are smoking pipe fragments ( $n=90$ , or 77.5%). Among these are 85 pipe stems and 31 pipe bowl fragments. Most of the pipe stems are undecorated, though a few exhibit maker's marks or initials. Marks noted on the pipes include "R. Tippet," "RT," "W G," and "TD." The "W G" mark is dated 1775 to 1835 based on the pipe maker (Reckner and Dallal 2000).

One of the pipe bowls, consisting of the bowl with the stem, has a large oval heel and is heavily smoked. The left side of the heel is marked with a "T" under a heart and the right side is marked with a "D" under a heart. Another pipe bowl has a molded pattern with the letters "I B." The last of the decorated pipe bowls is a complete bowl with a Masonic motif (Image 7.38). It is a well-made example with a tall narrow heel. The molded pipe has a stag's head facing the smoker and fluting on the back of the bowl, with garlanding and flowers on both faces. The left face of the pipe depicts the Liver bird. A faint square and compass occupy the right face.

Personal clothing-related items recovered include two buckles—an iron shoe buckle and a copper alloy buckle. The remaining clothing items are 10 buttons; all but two of these are copper alloy buttons. The buttons include a domed two-piece button; a domed button with hand applied loop; and a hollow domed button with a vent hole on the back. There are also two stamped copper alloy buttons. The two non-copper alloy buttons are a plain bone button with a single center hole and a stamped brass button with a basket weave motif and four-hole bone back (Image 7.39).

Other objects in this group include two pieces of a cut/carved bone comb and nine copper alloy pins, eight with wrapped heads.

Of particular note in the assemblage is a pair of copper wire eyeglass frames. The eyeglass frames are Nuremberg single wire spectacles with Klemmer's clips in place (Image 7.40). These eyeglasses were available from the seventeenth through eighteenth century, but the multi-piece frame, assembled with Klemmer's clips, was most common during the early eighteenth century. By 1760, Nuremberg was manufacturing frames from a single wire requiring no clips (College of Optometrists 2012). An eyeglass lens fragment was also recovered, and appears to be a match for the eyeglass frames. The lens is scratched and there is no evidence of a Scarlett's focus mark, a strength-indicating number scratched on the edge of some eighteenth-century eyeglass lenses.

The remaining object of note is a 1770s Hispania silver coin with two pierced holes (Image 7.41). This coin was likely used as a protective amulet (Lees and Beck 2007). These holes may have been used to sew the object onto an article of clothing; the holes appear too small to have a cord threaded through for wear as a necklace.

*Toy/Recreation*

This category consists of two buff-colored clay marbles.



Image 7.38: Pipe bowl with Masonic motif.

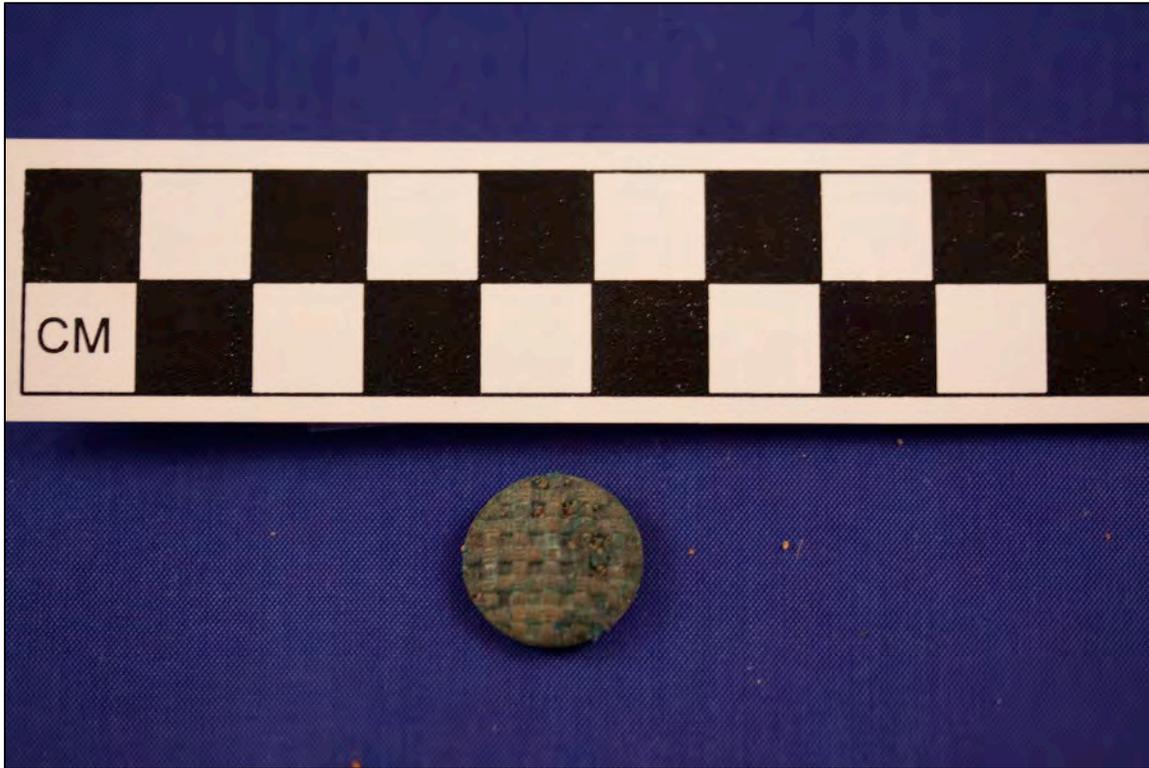


Image 7.39: Stamped brass button with a basket weave motif.



Image 7.40: Nuremberg single wire spectacles frames with Klemmer's clips.



Image 7.41: Hispania coin with two pierced holes, likely used as an amulet.

#### INTERPRETATION

The materials recovered from Strata III and IV generally have an eighteenth-century date with the TPQ of each excavation unit falling between 1762 and 1775. The TPQ for the assemblage as a whole is 1775 (Table 7.26).

Table 7.26: Room 8C TPQ dates.

Test Unit	TPQ	# of Dated Artifacts
8C.1	1762	40
8C.2	1775	9
8C.3	1762	13
8C.5	1775	88
8C.6	1775	30
8C.7	1762	5
8C.8	1775	12

Several characteristics of the assemblage suggest it may have been part of a pre–City Hall deposit. The 1775 TPQ is a characteristic one and the date range of the assemblage is 1699–1811. The range of pottery types, including wasters from the local potteries, suggests an ongoing acquisition of materials or a collection of donated materials. There is evidence of task work (manufacture and sewing) present in the form of bone button blanks, two only partially worked with the buttons still attached, and several copper alloy straight pins. Though food-related and household artifacts dominate the assemblage, the manufacture and personal groups are fairly evenly represented (Figure 7.01). Finally, this deposit was uncovered beneath a compacted sand layer that was sterile, except for three artifacts from a single unit. This layer, observed throughout the basement, is characteristic of a bedding layer for construction.

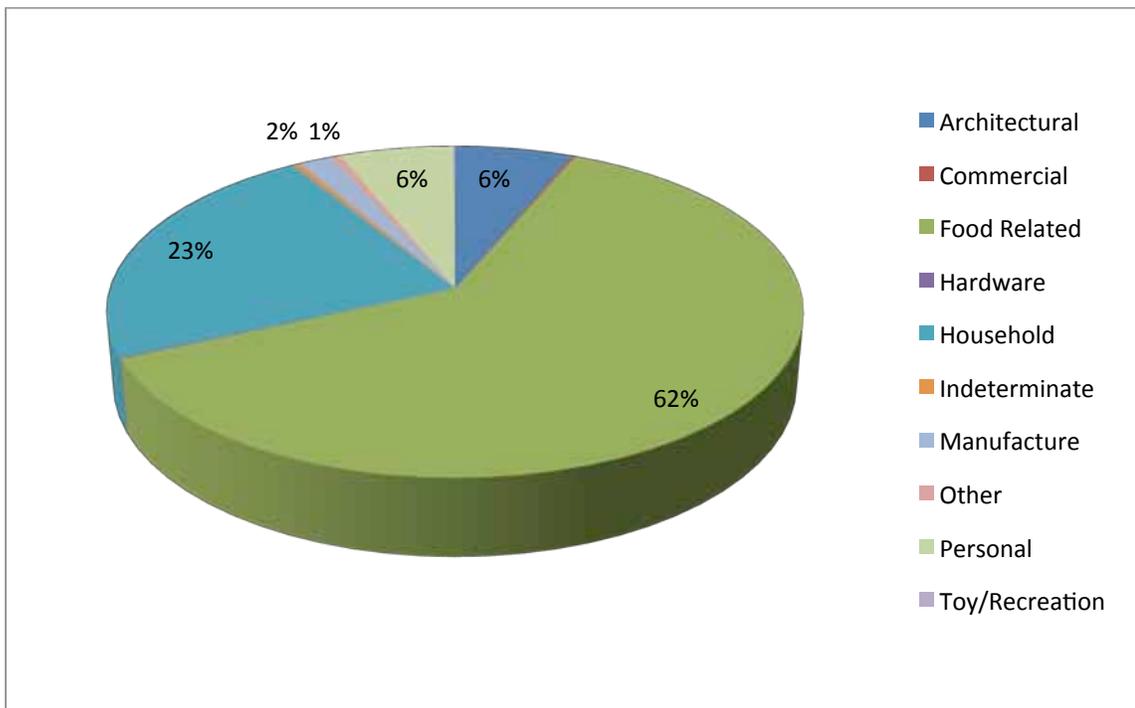


Figure 7.01: Graphical representation of the Room 8C assemblage functional groups.

The composition and provenience of the assemblage suggests an association with the cellar of the eighteenth-century almshouse. Locationally, the almshouse was situated at the approximate east-central portion of present-day City Hall (Map 7.35). The cellar of the almshouse was divided into three sections. The eastern section was used for task work and weaving, and the adjacent central portion housed provisions. The almshouse kitchen was located on the eastern end of the first floor (MCC 1675–1775). The materials recovered from this deposit are consistent with items acquired through various donations over time. The New York almshouse, like those in other locations, relied on charitable donations of goods. The assemblage contains materials consistent with task work assigned to inmates. Common task work assigned included button making, picking oakum, and weaving (Baughner 2001, 2009; Huey 2001).

The provenience of the basement Room 8C assemblage suggests that it may be part of a larger deposit disturbed during the construction of City Hall—perhaps it was redeposited. The distinct lack of later intrusive material hinders the idea of redeposition. This deposit is another example of construction leaving intact pockets of the past across the lower Manhattan landscape. The assemblage is consistent with the tasks and household-related activities of an almshouse assemblage (Baugher 1998; Loorya in process; Kaktins 2012 and in process).

#### TEST UNIT 8C.4

Test Unit 8C.4 was the only unit in Room 8C that had a different stratigraphic profile in that it did not exhibit any trace of the Stratum III deposit. The unit measured 2' x 4' and was located between wall footer 8c.1 and footer 8c.3 (Map 7.15). Its northern wall abutted Feature 8c.2, which was exposed immediately beneath the surface as part of this unit (Image 7.42). An aim of this unit was to determine the depth of the wall footing (8c.1) and continue to determine the extent of the artifact deposit uncovered in previous test units.

Feature 8c.2 consisted of brick laid between footings 8c.1 and 8c.3 (Image 7.43). Three rows of brick were dry laid on an east-west orientation in a single course from footer to footer. The original purpose or function of this feature was not readily evident. The exposed interior support wall (8c.1) is composed of several courses of dressed stone extending 2' below the basement floor surface (Image 7.44).

Along footer 8c.3, another feature was uncovered at 0.5' beneath the top of 8c.3. This stone feature, labeled 8c.7, was 1' wide and extended to a depth of 1.5'. The northern end of the feature abutted Feature 8c.2.

#### *Associated Stratigraphy*

Three strata were excavated within this test unit. The brick and mortar rubble seen throughout the basement was present in Stratum I. The soils of Strata II and III were also similar to the other units within Room 8C, except they contained no indication of the cultural deposit. Table 7.27 defines the strata in this unit.

Table 7.27: Stratigraphy associated with Test Unit 8C.4.

<b>Stratum</b>	<b>Depth</b>	<b>Soil Description</b>
<b>I</b>	0' – 1.2'	Fill horizon consisting of 10YR 3/4 and rubble fill with brick and mortar
<b>II</b>	1.2' – 1.9'	Fill horizon consisting of reddish brown 7.5YR 4/4 fine sand
<b>III</b>	1.9' – 2.4'	Fill horizon consisting of dark brown 7.5YR 4/4 and brown 7.5YR 5/4 coarse sand



Image 7.42: Feature 8c.2.



Image 7.43: Feature 8c.2, located between footers 8c.1 and 8c.3.



Image 7.44: Eastern profile of Test Unit 8C.4, showing interior wall footing 8c.1.

### *Assemblage*

No artifacts or faunal remains were recovered during excavation of this test unit. During clean up of the walls, one brass lever lock type copper key, one cut nail, and one sherd of kiln damaged salt-glazed stoneware was recovered. These are part of disturbance associated with renovation or the removal of Feature 8c.2 and 8c.7.

### *Interpretation*

It is likely that the two features uncovered within this unit represent the remnants of a fireplace and its associated footer. Feature 8c.2 is likely the remnant of the fireplace floor. It is located at the base of an area where a (former) chimney flue can be seen built into the structure of the wall (Image 7.45). Additionally, the original McComb plan notes a chimney in this area (Map 7.16). This fireplace would have been in addition to the cooking hearth along the opposite side of the room. Although adding a fireplace to this room seems an odd choice, considering the large hearth on the opposite wall, there is no evidence that this room was ever subdivided.

The discovery of the eighteenth-century deposit in part led to an exploration of the differing elevations between present-day and the past. The deposit uncovered in Room 8C is a remnant of the almshouse and activity within. Even though it may be incomplete, or disturbed, it remained as evidence of eighteenth-century activity.

The Strata III and IV assemblage was exposed beneath a sterile compacted sand layer typical of construction. This compact layer and the deposit were both beneath the bottom level of the stone footers. Though archaeological excavation did not occur beneath the footers, unit profiles demonstrated the deposit stratum to be intact beneath them, showing that the deposit preceded the footers. The footers impacted the deposit.

Based on a reconstruction of information from the archaeology, the structure of City Hall, and John McComb's notes during construction, analysis identified the 1803 ground surface elevation at approximately 3' below the 2010 elevation. City Hall's basement floor was determined to have been 2' below the 1803 surface, the stone footers from 2.8'–3.8' below the 1803 surface, and City Hall's foundation walls extended 5.5' below the 1803 surface. The deposit recovered was located in the central portion of Room 8C located between (approximately) 4' and 5.75' beneath the 1803 elevation.

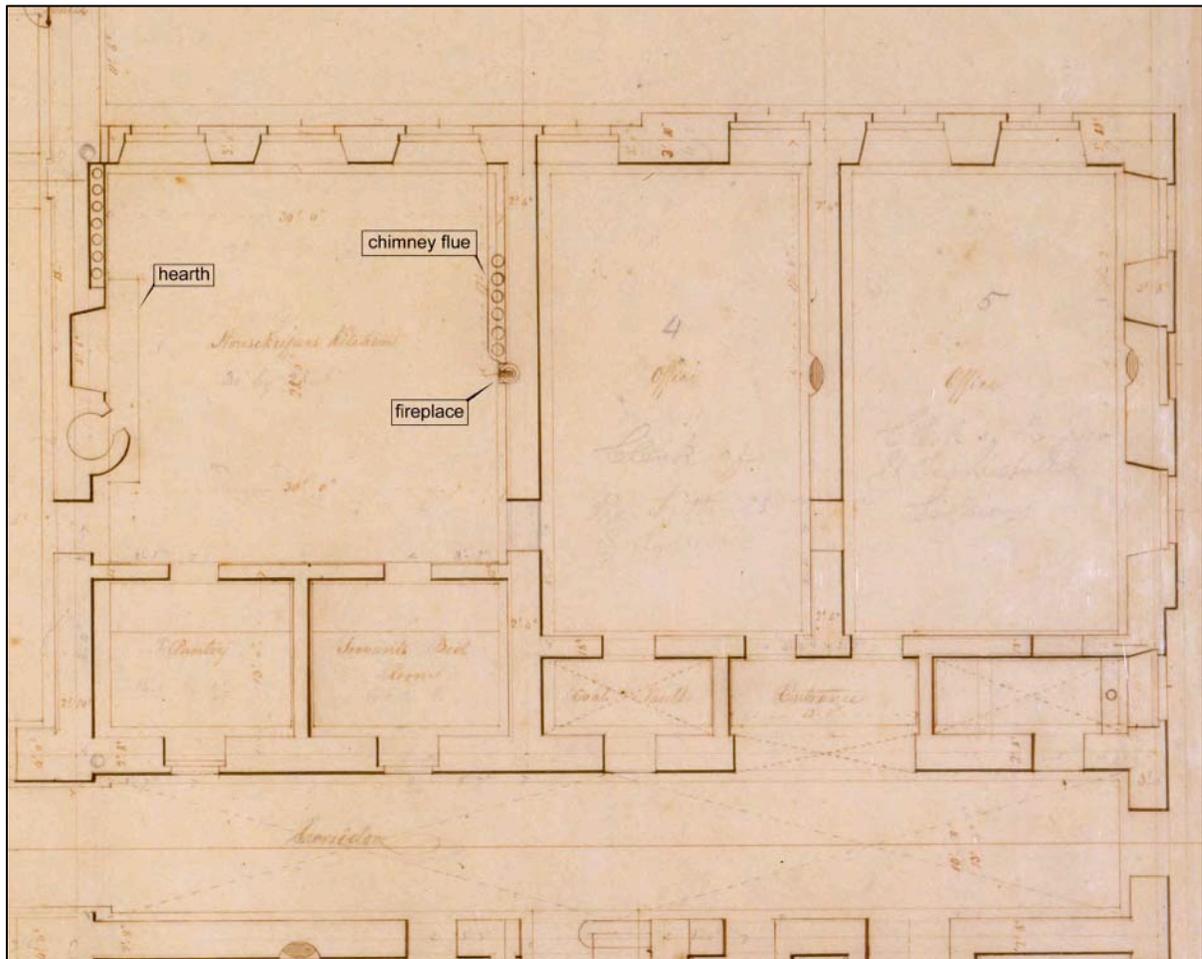


Image 7.45: West wall of Room 6B. Note the reverse side of the former chimney flue and fireplace first observed in Room 8C at the center.

## ORIGINAL BASEMENT ARCHITECTURE

Excavation and renovation work in the basement provided a range of insight and information about the history and structure of this portion of City Hall. Part of the renovation project required that the basement be stripped down to its bare walls. In doing so, long-forgotten architectural features were exposed within the basement. Among these were chimney flues built on a diagonal in a stepped fashion, old fireplaces, a kitchen hearth, and an exterior doorway.

The form of the original kitchen, or the “Housekeeper’s Kitchen” as cited on McComb’s plan, was also revealed (see Map 7.16). Three key elements of the kitchen are the original cooking hearth, a fireplace with a flue that exited at the side of the building, and an exterior door that is not marked on the original plans. These elements, documented in the following photographs, provide an insight to the original form and function of City Hall beyond McComb’s 2D plan of the structure. Images 7.46–7.53 highlight this hidden architecture.



Map 7.16: McComb’s basement floor plan highlighting the chimney on the east wall of Room 8C.



Image 7.46: Bricked-up former doorways in Room 6A.



Image 7.47: Brick fireplace along the exposed east wall of Room 6A.



Image 7.48: Bricked-up doorway exhibiting original arched brick frame in Room 6B.



Image 7.49: Closed brick fireplace with stepped chimney flue visible within the stone wall.



Image 7.50: Former fireplace in Room 8C, exposed after excavation of the fireplace foundation had been uncovered in Test Unit 8C.4.



Image 7.51: Bricked-up exterior doorway in Room 8C leading to the northeast area behind City Hall.



Image 7.52: Original kitchen hearth bricked up in Room 8C.

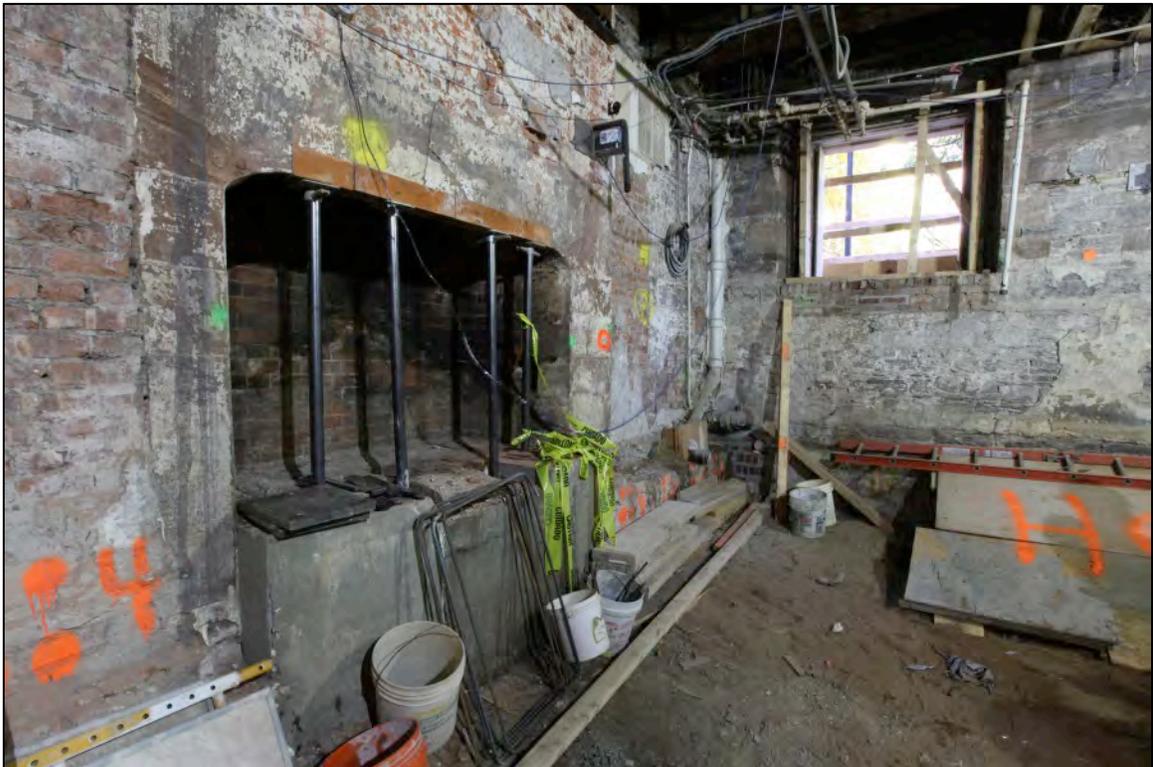


Image 7.53: Original kitchen hearth fully exposed and reopened.

## **BASEMENT SUMMARY**

Though originally not part of the plan, excavation within the basement of City Hall has led to a richer understanding of the building's construction and architecture, in addition to building an understanding of the late-eighteenth- and nineteenth-century landscape. More so, it reaffirms the notion that construction and development does not always eradicate all evidence of the past. Archaeology provides the rare opportunity to allow the unrepresented, or underrepresented, to speak through the remnants of their activities. The materials recovered in this assemblage add to a subset of knowledge depicting what it meant to be poor in eighteenth-century New York City.

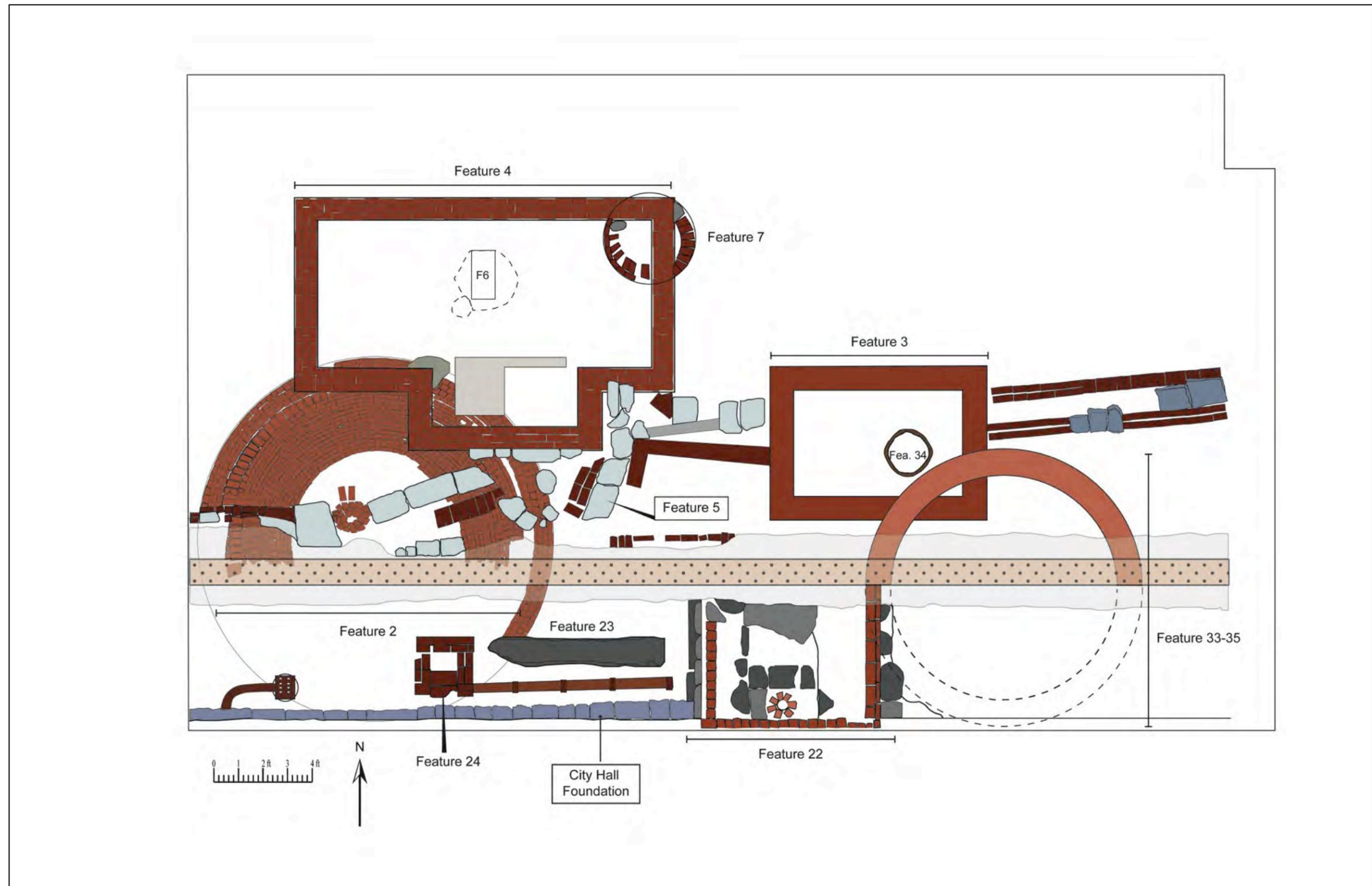
## **8. NORTHEAST OF CITY HALL**

Excavation of the northeast area behind City Hall began as a series of test units to determine if there would be any impact to the area from the proposed utility vault. The initial test units turned into mass excavation following the discovery of a stone and rubble wall. For control purposes, the area was excavated in 5' x 5' sections. An approximate 15' wide by 76' long area, including the existing areaway, was excavated to an approximate depth of 18' bs. Ultimately, 21 features were discovered within this area (Map 7.17). Map 7.17 is a plan view map of the northeast area features; as this area measured 76' in length, the map is divided into two sections, 7.17a (the western half of the area) and 7.17b (the eastern half of the area).

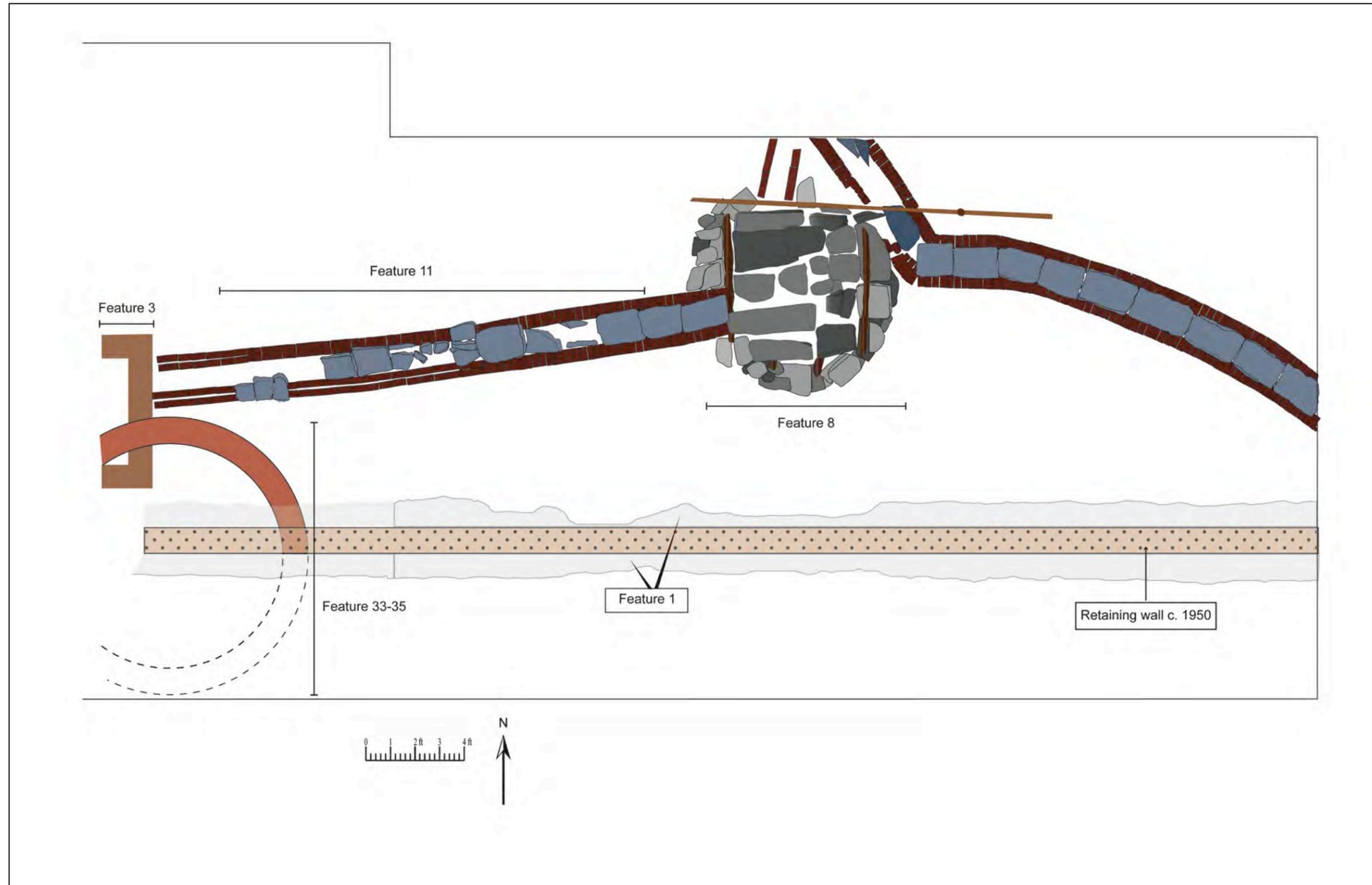
The features found within this area will generally be discussed chronologically with regard to their excavation, though there are some exceptions required to maintain the flow of the narrative. The summary/interpretation, at the end of this section, will discuss the chronology of the features with regard to their construction. Test units will only be discussed with regard to their relation to the larger area and the features, not individually. Map 7.18 presents a schematic of the test units.

Prior to excavation, Rockmore removed the bluestone pavers and associated concrete underlayment within the area. The granite curb of the areaway fence was used as the datum for the northeast area (Image 7.54). Though it was to be removed at a later date, this is a known point with an elevation recorded on DDC topographic maps of City Hall Park (City Hall, Park Row, Borough of Manhattan Topographical Map 6/18/09). Additionally, measurements taken during the project correlate the datum with the stairs at the north of City Hall.

During the course of the project, this area was backfilled and reexcavated several times to facilitate construction activities. The proposed construction also required the removal of all but two of the archaeological features. As all of the archaeological features are pre-determined landmarks, this required the project to go before the LPC for approval. Approval was granted on the condition that the features be fully excavated, documented, and ultimately deconstructed by the archaeological team, in addition to post-project mitigation. Prior to deconstruction, the features were professionally photographed (Appendix M) and recorded through 3D imaging (Appendix N).



Map 7.17a: Northeast excavation area displaying all features, western half of the excavation area.



Map 7.17b: Northeast excavation area displaying all features, eastern half of the excavation area.





Image 7.54: Northeast area prior to the start of excavation.

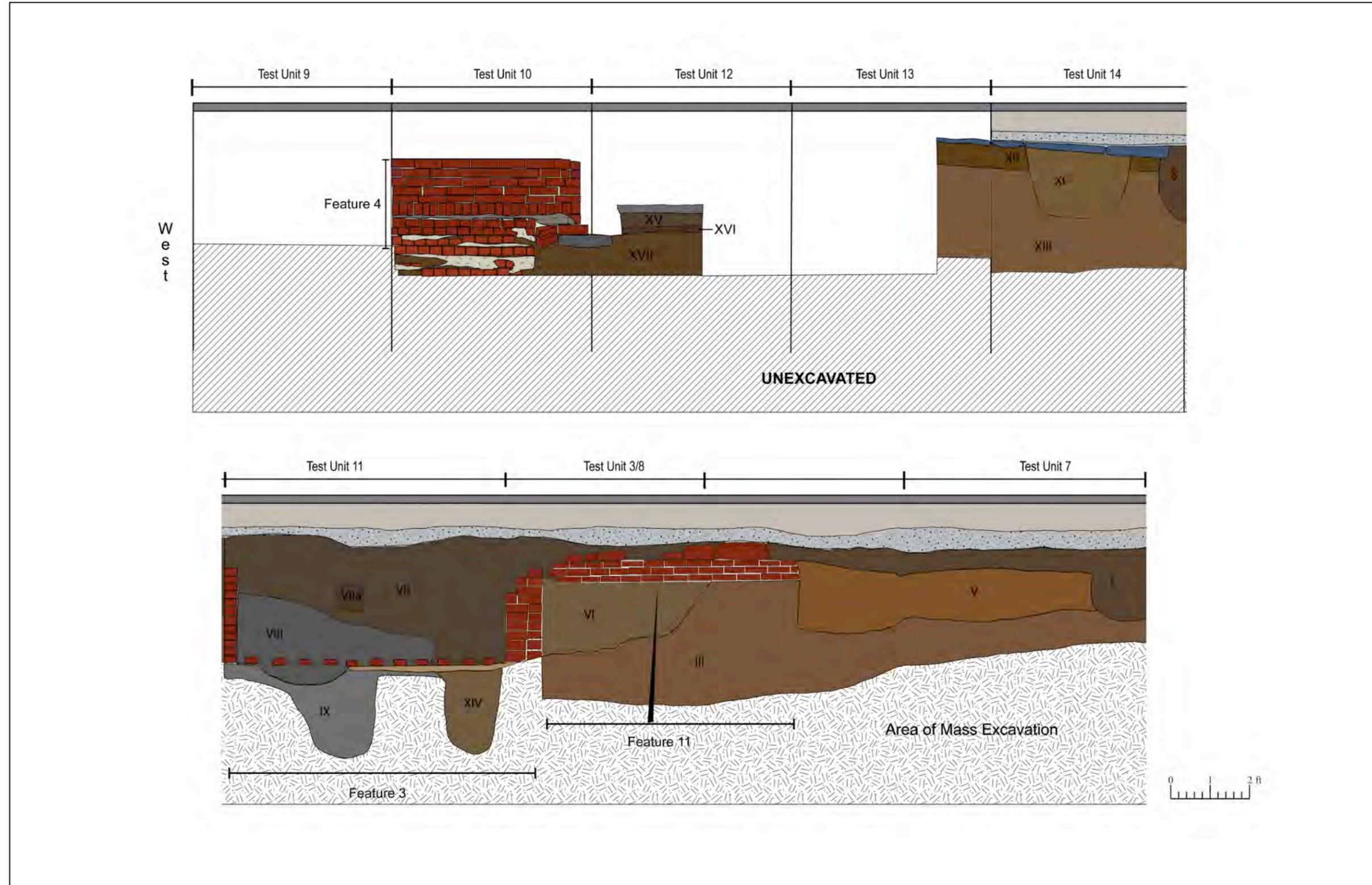
#### GENERAL STRATIGRAPHY

The excavation of the northeast area provided a broad window into the stratigraphy of this area. Construction episodes for the various features characterize the profile. Map 7.19 is a representation of the north profile of the initial excavation trench, located along the 76' length of the northeast retaining wall/areaway of City Hall. This initial excavation, which is depicted in the profile map, only extended to an average depth of 5'-5.5'. This map is also divided into two parts: 7.19a and 7.19b.

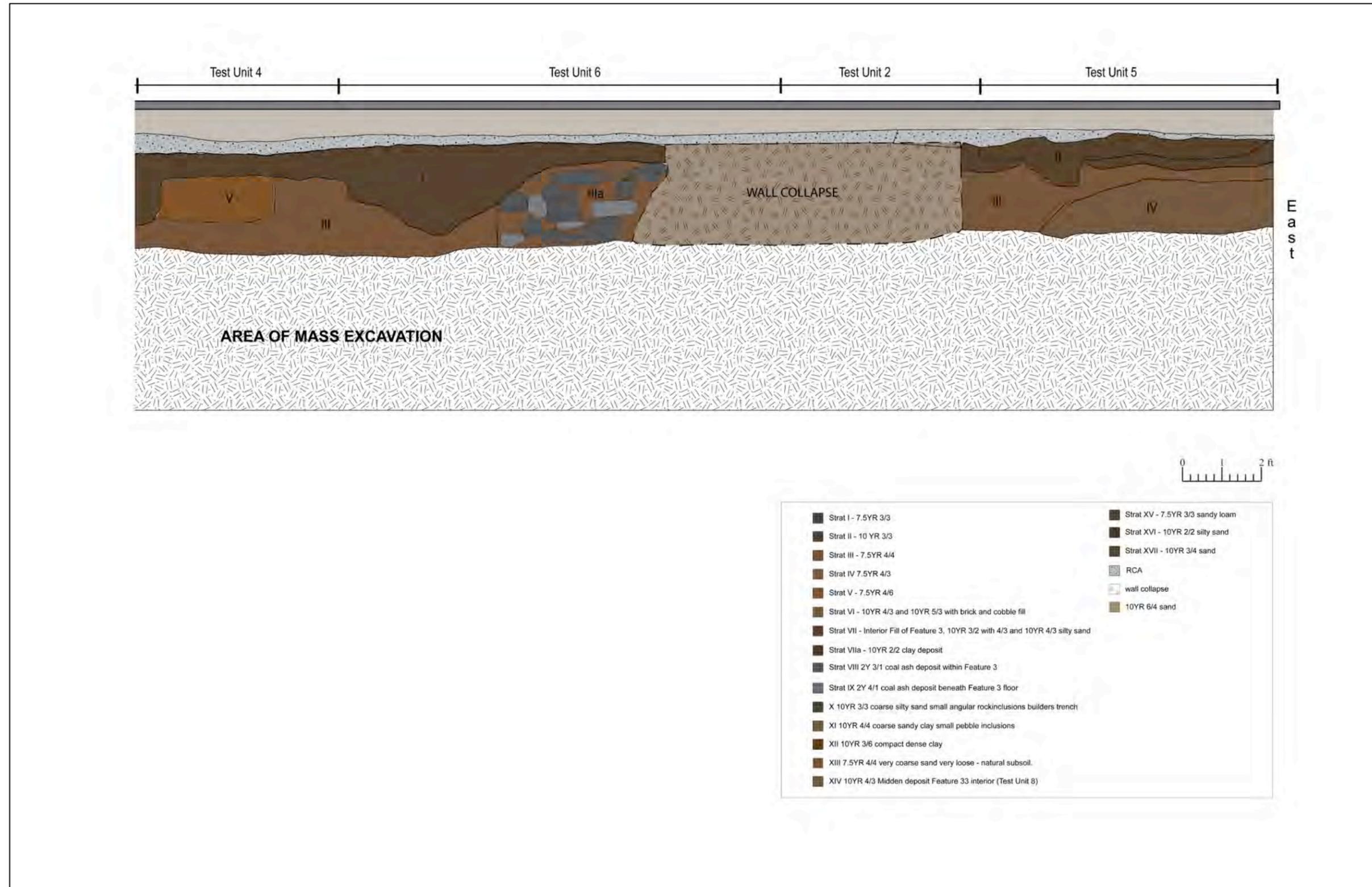
The area uniformly displayed modern bluestone pavers, a cement underlayment, and a bedding of recycled concrete aggregate extending to 1'-1.2' below surface. Various strata of historic fill followed these surface layers. Table 7.28 details the general stratigraphy represented in the north profile schematic.

Table 7.28: General profile of northeast area.

Strat	Depth	Description
I	1.2' – 1.8' (3' in some areas)	Fill horizon 7.5YR 3/3 sand that appears to have been used to level to area
II	1' – 1.4' / 2'	Fill – 10YR 3/3 sand intrusive to Stratum I
III/IIIa	2' – 4'	7.5YR 4/4 coarse loose sand – natural subsoil. IIIa contains remnants of a wall collapse during excavation
IV	2' – 3.5'	7.5 YR 4/3 sandy subsoil. Similar to Stratum III but less coarse
V	1.8' – 3'	Fill horizon – 7.5YR 4/6 sand intrusive to Stratum III
VI	2' – 3.8'	Fill horizon – 10YR 4/3 abd 10YR 5/3 with brick and cobble fill
VII	1.28' – 3.5'	Interior Fill of Feature 3 – 10YR 3/2 with 10YR 4/3 silty sand
VIIa	2.22' – 2.88'	Clay deposit within the feature fill
VIII	2.6' – 4.48'	2Y 3/1 coal ash deposit
IX	4.48' – 6.5'	2Y 4/1 coal ash deposit beneath Feature 3 floor
X	1' – 3'	10YR 3/3 coarse silty sand – builder's trench
XI	1.2' – 2.84'	10YR 4/4 coarse sandy clay
XII	1.1' – 1.75'	10YR 3/6 compact clay
XIII	4.35' – 6.4'	10YR 4/3 midden deposit (Feature 33)
XIV	2.72' – 3'	7.5YR 3/3 sandy loam
XV	3' – 3.2'	10YR 2/2 silty sand
XVI	3.2' – 4.2'	10YR 3/4 sand



Map 7.19a: North profile of initial northeast excavation trench.



Map 7.19b: North profile of initial northeast excavation trench.

## FEATURE 1

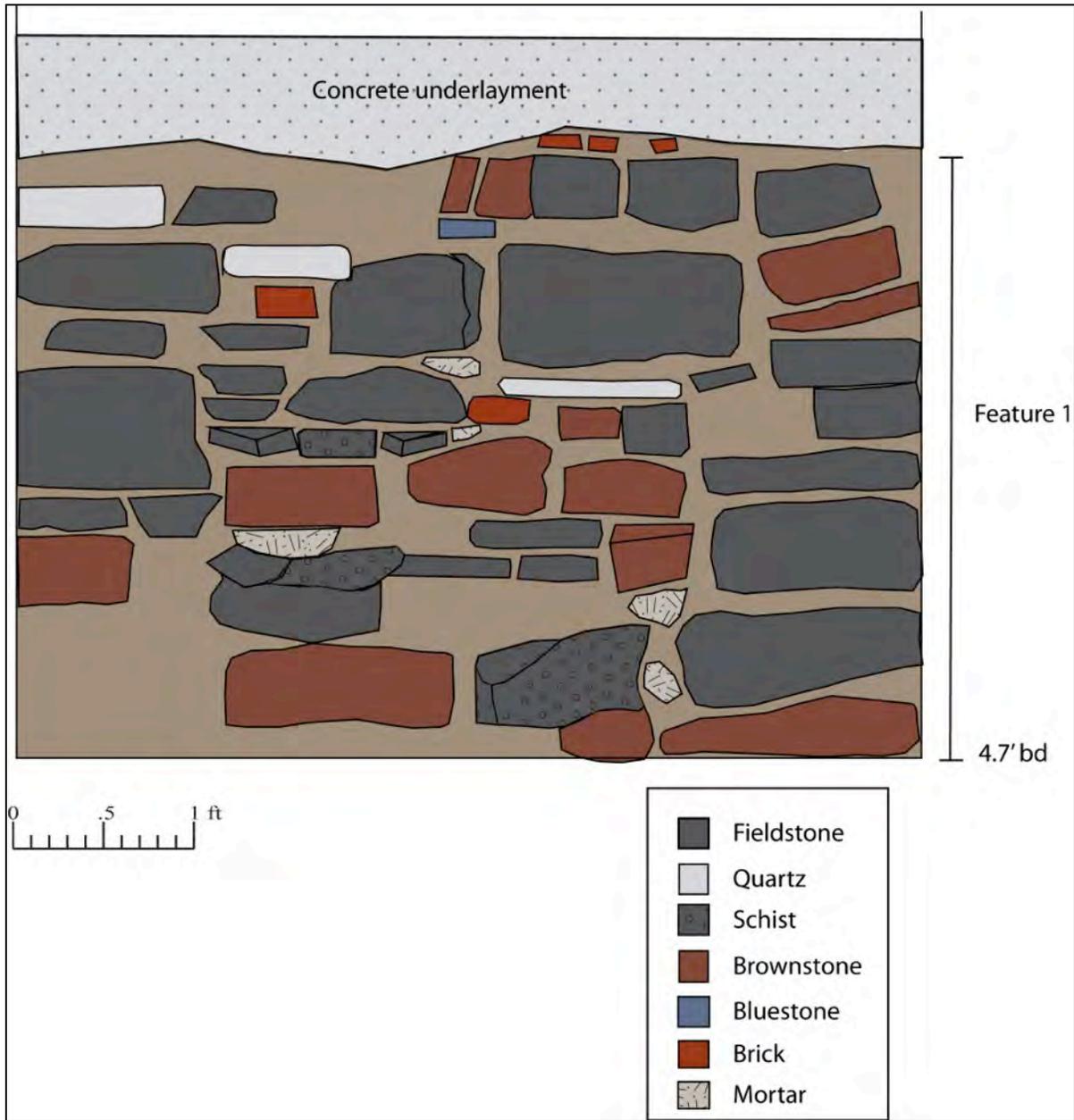
Feature 1 was first identified within Test Units NE2 and NE3 (see Map 7.18). Each of these test units was 5' x 5' and abutting the granite curb of the then-existing areaway. At approximately 1.5' below datum (bd), fieldstones were exposed extending 0.66' from the granite curb and associated with the circa-1950 concrete retaining wall of the areaway. Further excavation showed these stones to continue to a depth of 5' bd, forming a mortared stone wall.

This wall appeared in Test Units NE2, NE3, and NE4. In consultation with LPC, it was decided to expose the entire length of the wall. This was accomplished by trenching along the areaway in 5' x 5' segments.

The final exposed length of the wall measured 71'. The majority of the wall extended to 5' bd, except at its eastern end, where it only extended to 4.5' bd (Image 7.55). The wall was composed of a variety of stones, including gray fieldstone, quartz, schist, and brownstone; the mortar appeared to be sand based. Portions of the wall were patched with brick (Map 7.20).



Image 7.55: Feature 1, facing south.



Map 7.20: Profile of Feature 1 identifying the various stones used in its construction.

Based on its construction, the wall appeared to pre-date City Hall, leading to the hypothesis that it may be associated with the eighteenth-century almshouse. To further identify the age and association of this wall, Dr. Allan Gilbert, professor of anthropology and sociology at Fordham University, was brought in to consult and Jablonski Building Conservation, Inc., (JBC) took mortar samples for analysis.

Dr. Gilbert made a visual inspection of the wall. In his opinion, the technique was vernacular, in that it made use of available materials. He noted a lack of uniformity among the shape and material of the stones; he also noted that, based upon a visual inspection, the mortar appeared to be consistent to mortars dating to the mid to late eighteenth century.

Compositional analysis of the mortar identified it as a sanded-lime mortar. However, this alone cannot provide a definitive date. “Lime mortars are even used today in restoration work. It is therefore difficult to pinpoint exactly when the Rubble Wall... in the archaeological site [was] built based on an analysis of the mortars alone” (JBC 2010).

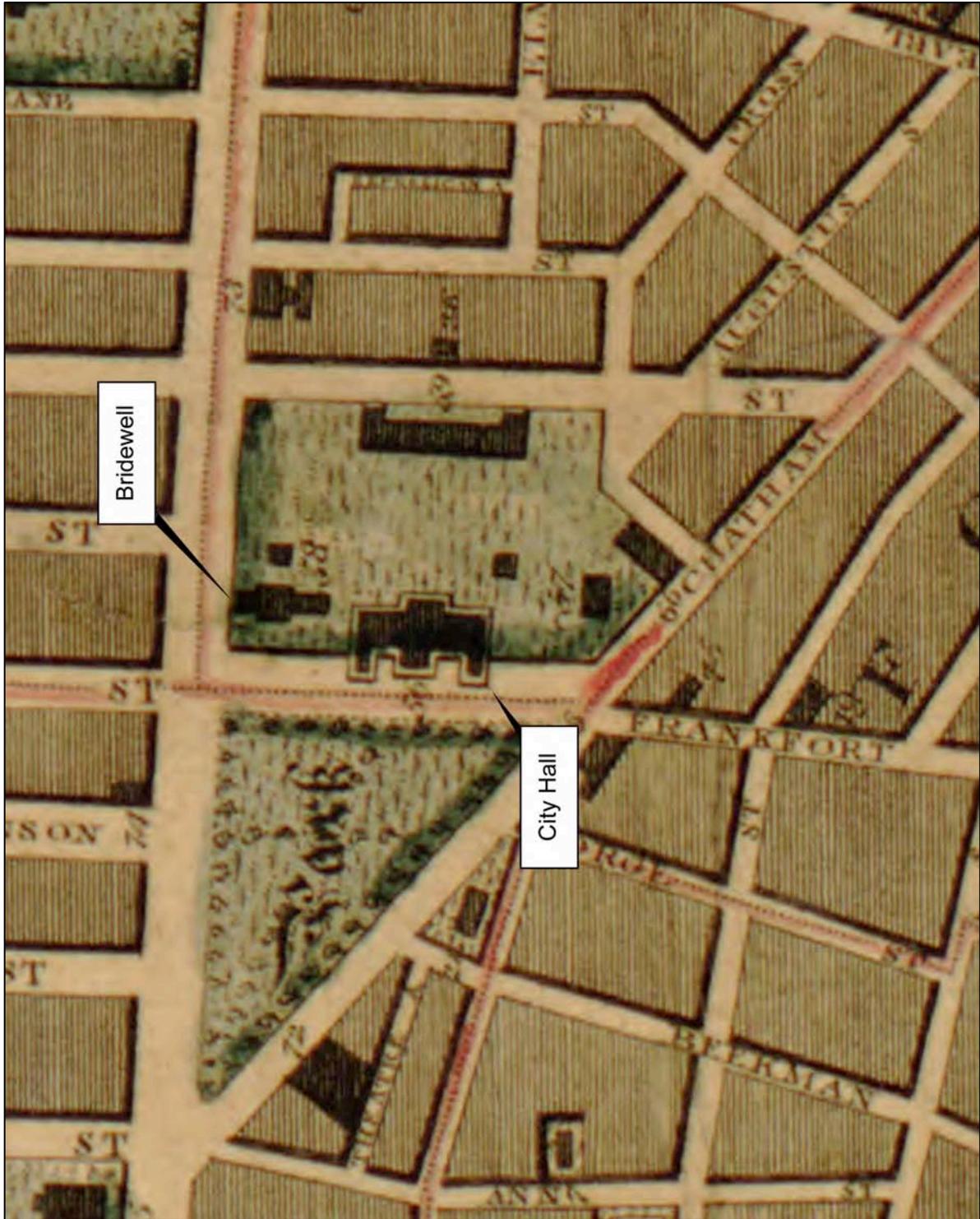
Based on the above and the juxtaposition of historic research and additional archaeological investigations around City Hall, it was ultimately determined that the wall was the original retaining wall built during the initial construction of City Hall. It is likely that this wall was constructed in conjunction with the excavation for the basement of the structure, beginning in 1803.

The extant areaway with reinforced concrete retaining wall and granite curb was installed circa 1950. Late-nineteenth- and turn-of-the-twentieth-century photographs show an areaway already present (Image 7.56). Though no reference was found within McComb’s papers, it appears that a retaining wall was part of the original construction of City Hall. McComb notes excavating out the basement and then building the foundation/basement walls (McComb family papers 1787–1858). It is possible the retaining wall began as a means of supporting/securing the work area where the natural subsoils consisted of unconsolidated sands. The 1811 commissioners’ plan (Map 7.21) demarks an outline around the perimeter of City Hall; this may be representative of the areaway.

While excavating to expose the extent of Feature 1, other features were exposed, requiring further investigation. Due to the project’s requirements, Feature 1 was completely deconstructed and removed.



Image 7.56: Circa-1900 photograph of City Hall showing the areaway (Library of Congress 2012).



Map 7.21: A zoom of the 1811 commissioners' plan showing the Bridewell and City Hall.

## FEATURE 2

Feature 2, what appeared to be a flagstone path, was located immediately west of Feature 1, within Test Units 9, 10, and 12, at approximately 1.5' bd (Image 7.57 and Map 7.17). Excavation also revealed them to be sitting atop a brick structure. These five stones were mapped and removed. Immediately beneath the flagstone, a circular brick structure was exposed.



Image 7.57: Flagstone path atop Feature 2.

Excavation of Feature 2 exposed an 11.5' wide circular domed brick structure. The high point of the structure, located in its center, was 1.95' bd. The southern end of the feature was truncated by the modern granite curbed concrete retaining wall. The northeastern end of the feature had another brick structure (Feature 4) built atop it. Excavation along the perimeter of the feature showed it to be stepped (see Image 7.57; Images 7.58 and 7.59). Feature 1 did not impact this feature; instead, the wall ended at the eastern edge of the cistern.

The form of this circular feature is consistent with that of a cistern. Cisterns were used to capture and hold rainwater, which could then be used for task work.

Based on its provenience and construction, Feature 2 pre-dated Feature 1, the City Hall retaining wall, and Feature 4, which will be discussed later in this section. The structure was comprised of unmarked red brick and dates to the late eighteenth century. The mortar binding the bricks appeared to be a lime mortar with shell inclusions. Mortar analysis by JBC identified it as a sand-lime mortar mix (JBC 2010).

No access was available to the interior of this feature, though a small break in the brick and mortar at the top surface allowed for a limited view. It was noted that the cistern appeared to be filled with soil. At a later point in the project, excavation was required within the areaway, on the south side of the concrete retaining wall that had truncated the cistern.

During this second phase of excavation, the truncated portion of the cistern was fully exposed. Excavation uncovered the remainder of the cistern intact beneath the concrete retaining wall. The concrete retaining wall was capped with a 0.8' thick granite curb (the top of which was the datum for this area); the wall itself measured 3.8'; the wall had a 1' concrete footing slab. The total depth of the wall, excluding the aboveground granite curb, was 4.8' bd. Beneath this was an additional 18 courses of brick, measuring 4.5', forming the remainder of the cistern (Map 7.22).

The interior of the cistern contained clean fill soils. However, toward the bottom of the feature, an approximately 1" thick dark organic deposit was exposed. This is likely due to any remaining moisture that had been remnant in the cistern when it was filled. Within this stratum were 11 artifacts: seven shards of common window glass, one piece of indeterminate wood, one piece of mortar, and two shards of a green bottle glass. None of the materials provided any definitive temporal data, but the bottle glass had an applied string finish. This applied finishing form was most common between 1830 and 1885 (Society for Historical Archaeology 2012). The cistern could not have been filled prior to 1830; however, this does not provide additional information regarding the construction date.

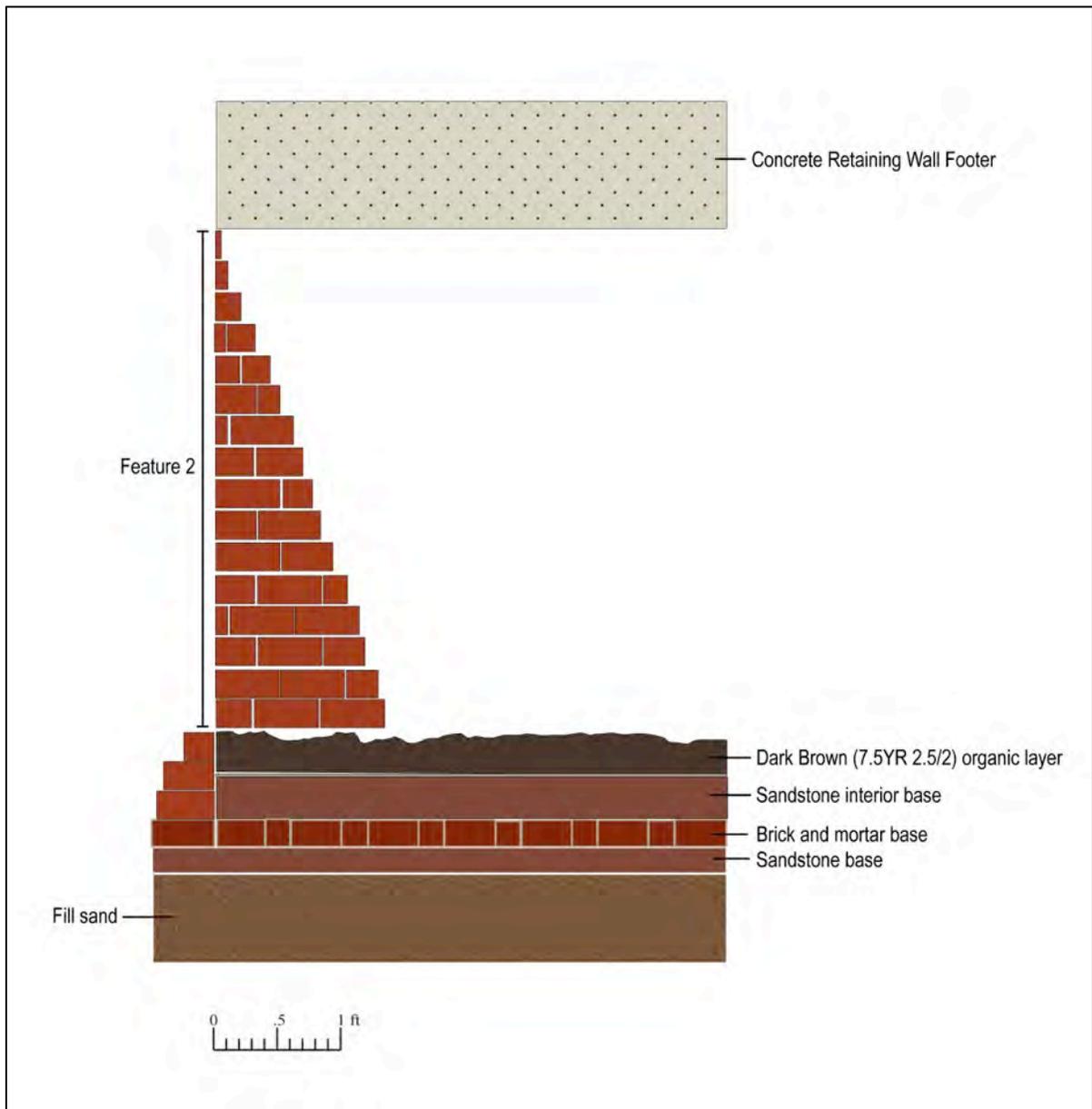
The base of the cistern consisted of large dark reddish brown sandstone slabs approximately 4" thick (Image 7.60). These stones were faced with mortar on the inner surface of the cistern. The cistern walls were skim-coated with a ½" thick plaster. Clean fill sand was found beneath the sandstone slabs.



Images 7.58: Feature 2, a brick domed cistern with stepped sides.



Image 7.59: Feature 2 shown with Feature 4 built on top. A portion of Feature 2's outside wall is visible beneath and protruding from the wall of Feature 4.



Map 7.22: Profile of Feature 2.



Image 7.60: Plan view of the base of Feature 2 within the areaway.



Image 7.61: Exposed base of the cistern shown abutting City Hall at the left edge of the photograph.

The original retaining wall of City Hall extended to the eastern edge of the cistern. Though visibility was limited and partially obscured by modern concrete/cement spillage, the end of the retaining wall appeared to stop before the cistern. The retaining wall showed no evidence of having been impacted by the cistern; it appeared as though the retaining wall had been built up to the point adjacent to the cistern and stopped. The cistern was impacted, however, by the installation of the twentieth-century retaining wall, though it is possible that this impact could have occurred earlier. The southern edge would have abutted the foundation of City Hall (see Image 7.60 and Image 7.61).

There are two possible associations for the cistern.

The first is that it is contemporary with the construction of City Hall. Its location would have placed it outside the City Hall kitchen, located in the basement. According to Dr. Allan Gilbert, some cisterns had outlets within structures that provided water access from the cisterns to other locations (personal communication 2010). However, no direct evidence of this was exposed when the interior walls were stripped during renovation. This cistern is different in size, style, and construction from the other cisterns documented as being constructed contemporaneously with City Hall. It is significantly smaller, has a steeper dome, uses different construction materials, and is located much closer to City Hall itself. While some of these differences may be accountable to different purposes of usage, the material and construction techniques should have more similarities if they were contemporaneous to the other City Hall cisterns.

The second possibility, and more likely association, is with the eighteenth-century almshouse. Analysis of construction materials points toward a late-eighteenth-century date for this cistern. There is a notation of a new cistern for the almshouse in the July 1769 minutes of the Common Council (MCC 1675–1776 7:172). It is likely that Feature 2 was constructed during the last decades of the first almshouse's operation and continued to be used during the early years of City Hall.

Due to the current project's requirements, the portion of the cistern exposed beneath and south of the modern retaining wall was completely deconstructed. The portion of the cistern extant on the north side of the concrete retaining wall remains *in situ*.

### **FEATURE 3**

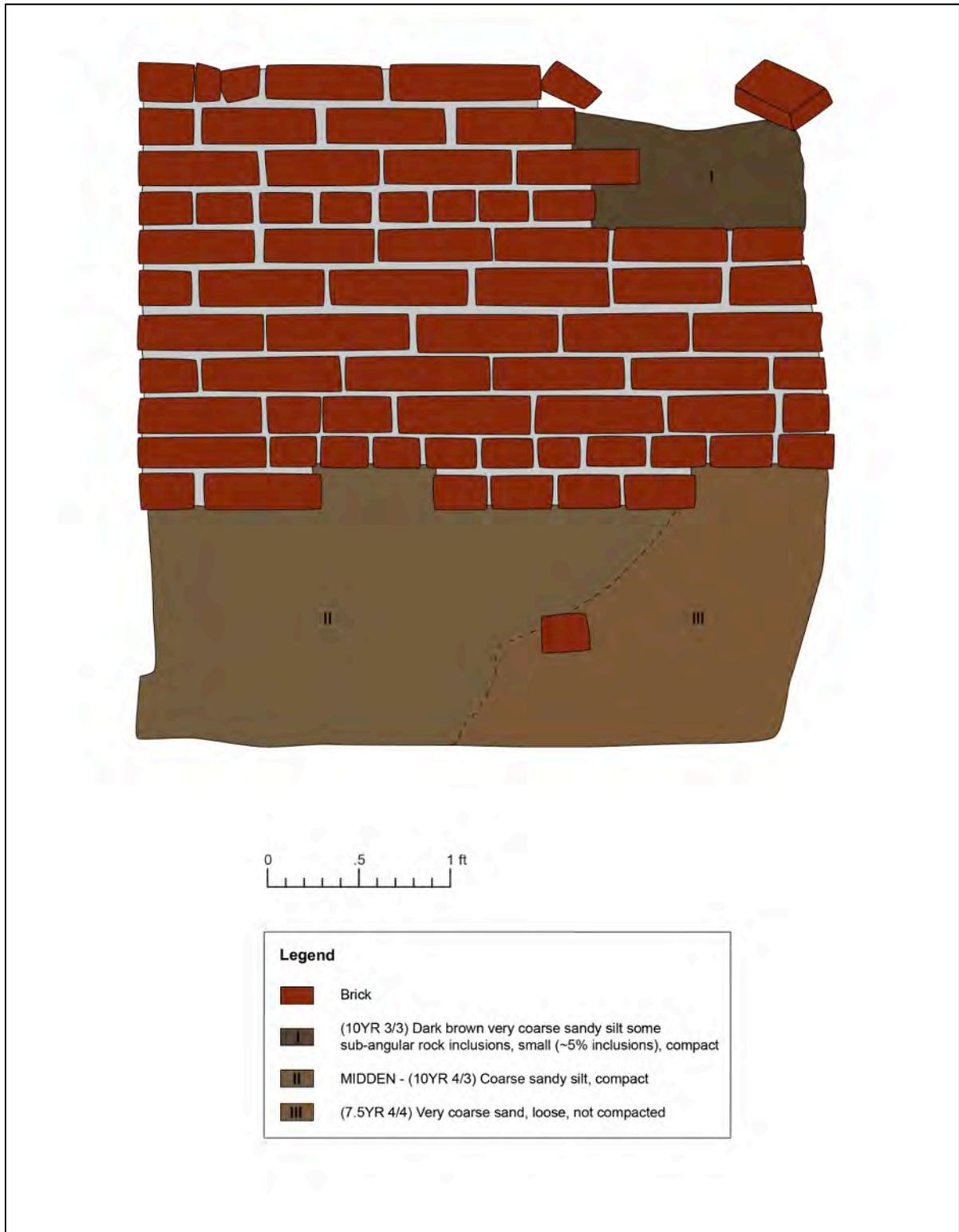
Feature 3 was a pressed brick structure located alongside, and up against, the City Hall retaining wall (Feature 1) (Images 7.62 and 7.63; Map 7.17). This feature was first exposed during excavation of Test Unit 3, renamed Test Unit 8 after a break in excavation during which Test Unit 3 was backfilled. The east wall of the feature was fully exposed within Test Unit 8. In this unit—alongside and beneath the exterior east wall of the feature, and abutting the retaining wall—an apparent midden deposit was uncovered (Map 7.23). This deposit, which was not formally assigned a feature number, would also be exposed on the south side of the retaining wall during excavation of the areaway and was later determined to be part of the interior fill of an earlier eighteenth-century feature (Feature 33/35) that had been impacted during the construction of Features 1 and 3. The materials recovered from Test Units 3 and 8 (these will be referred to as Test Unit 3/8 when discussed in conjunction) will be discussed following Feature 3 and as a lead in to the discussion of Feature 33/35.



Image 7.62: Feature 3 in process, facing south.



Image 7.63: Feature 3 fully excavated, facing south.



Map 7.23: Profile of Feature 3 and the Test Unit 3 midden deposit.

Continued exposure and excavation of Feature 3 occurred as part of Test Units 11, 23, and 25. Of the test units excavated, only Test Unit 25 was completely within the interior of Feature 3. Test Unit 11 straddled the western boundary of Feature 3 and Test Unit 23 straddled the northern boundary of the feature (Map 7.24). The feature measured 6' x 9' with 1' thick walls, and was composed of pressed brick with a natural cement mortar (JBC 2010). The feature had a brick floor, exposed at 4.5' bd, with a deliberately unlaid 1.4' x 1.1' area that may have served as a drain.

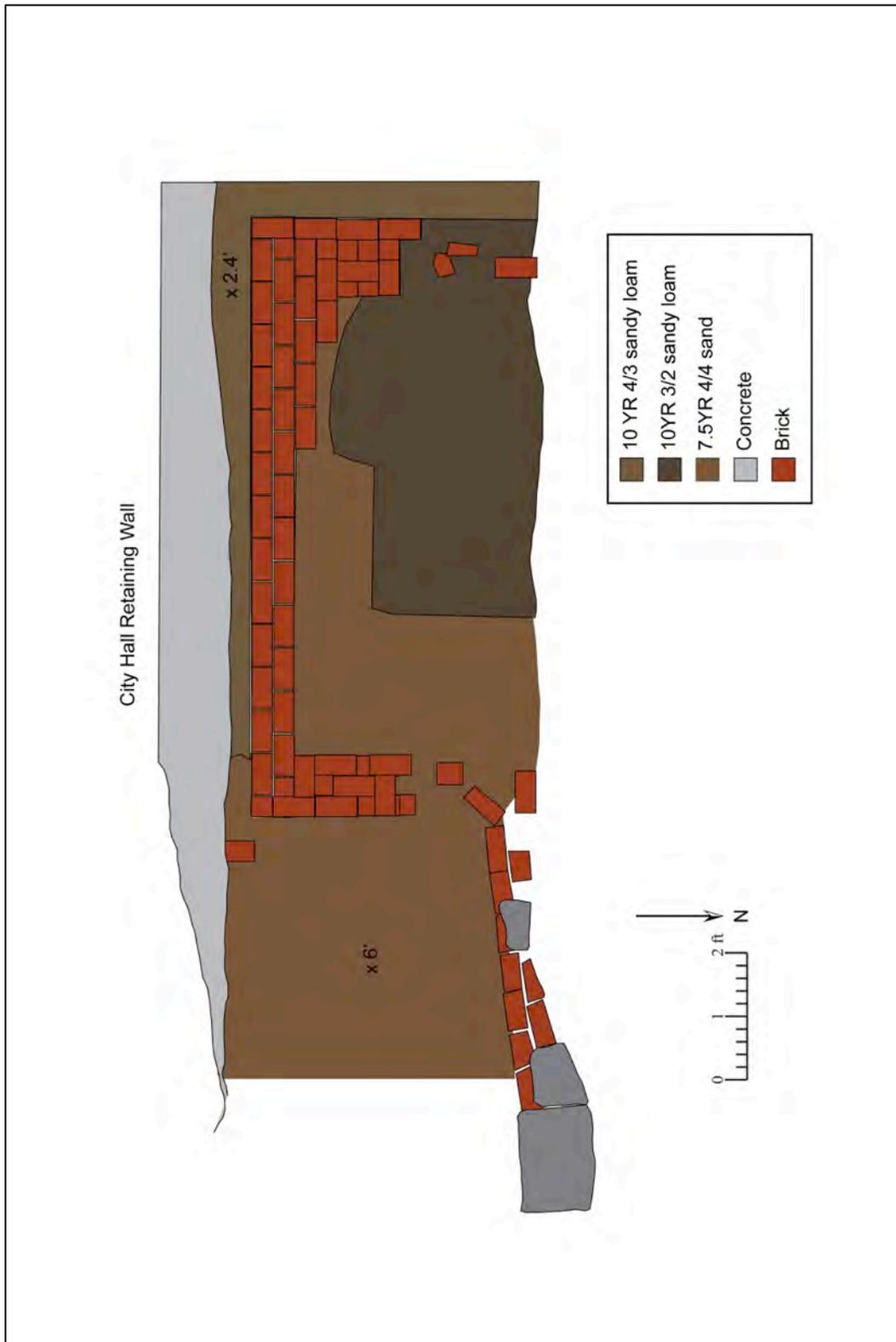
The interior of Feature 3 contained an ashy fill deposit with cultural materials. This deposit consisted of two strata and extended to the floor of the feature. During excavation, it was noted that the area within the open portion of the floor contained a separate sandy deposit. Removal of a section of the brick floor revealed a distinct stratum, also containing cultural materials, beneath the floor of Feature 3. This deposit pre-dates the interior fill from Feature 3.

ASSOCIATED STRATIGRAPHY

Stratigraphic designations were assigned contiguously with those from Test Units 3/8 and 11. As a result, there are gaps in the numbering sequence of the strata of Feature 3. A total of seven strata were uncovered in association with Feature 3 (Table 7.29). Strata I and II, located above Feature 3, consisted of compacted gravel and RCA, which served as bedding material for the modern bluestone paving. The exposure and interior stratigraphy of Feature 3 began with Stratum III, a dark brown sandy fill with brick and mortar fragments, as well as some ash inclusion within the interior of Feature 3. Stratum V followed Stratum III; Strata IV, VI, and VII were located beneath Feature 3. However, not all strata beneath the feature floor were present in all of the test units. For example, Stratum VII was only present in Test Unit 11.

Table 7.29: General stratigraphy associated with the Feature 3 excavation.

Stratum	Depth	Soil Description
<b>I and II</b>	0' – 2.4'	Compact gravel and RCA fill horizon. Gravel laden 10YR 3/2 fill soil. Bedding material for bluestone sidewalk
<b>III</b>	2.4' – 4.35'	Dark brown (10YR 3/3) coarse sandy silt. Dark grayish brown (10YR 3/2) sandy loam fill with brick and mortar fragments and ash inclusions
<b>IV</b>	4.65' – 4.8'	Sandy fill beneath feature floor
<b>V</b>	4.25' – 4.4'	Coal ash fill within feature interior immediately below Stratum III
<b>VI</b>	4.8' – 5.1'	10YR 3/4 compact sandy clay mottled with 10YR 5/3; coal and ash deposit some brick fragments beneath feature floor
<b>VII</b>	4.65' – 5.1'	Artifact deposit beneath south east corner of feature floor



Map 7.24: Plan view of the Feature 3 excavation area.

ASSEMBLAGE

An overview of the materials relative to interpretation is presented below. However, a more detailed analysis of the material and faunal remains from Feature 3 is presented in Chapters VIII and IX.

**FEATURE 3 – INTERIOR**

STRATA I AND II

A total of 143 artifacts were recovered from Strata I and II. All are from a disturbed context, as they are part of the compacted layer that contained bedding materials, including RCA, for the bluestone pavers that surround City Hall. Additionally, materials were only noted within Test Unit 11, suggesting they were mixed in with or redeposited within the bedding layer. Table 7.30 provides a breakdown of the artifact count by functional group.

Table 7.30: Strata I and II artifact count by functional group.

Functional Group	Artifact Count
Activities	7
Architectural	45
Food Related	29
Hardware	3
Household	52
Indeterminate	2
Manufacturing	2
Other	1
Personal	1
Toy/Recreation	1

*Activities*

This group consists of seven artifacts, all part of a salt-glazed stoneware slip-decorated master ink bottle. Master ink bottles were used to house ink from which smaller, desktop inkwells were refilled. No date was associated with this particular style or object.

*Architectural*

The architectural group consists of 45 artifacts, 31% of the assemblage from Strata I and II. The majority of the architectural artifacts are common window glass shards ( $n=30$ ). Other artifacts include eight iron nails of indeterminate manufacture, a yellow brick fragment, an iron spike, and a wood fragment. A slip-glazed stoneware sewer/water pipe fragment dates post 1850 (Arizona Water Association 2012). This is likely a remnant from one of the many no longer used utility pipes observed throughout the area.

*Food Related*

Twenty-nine artifacts were recovered from within this group (Table 7.31). None of the faunal material, except for shell, was identifiable to the species level. Even though the faunal material was fragmented, evidence of butchering is noted. Five oyster shell fragments are also part of the assemblage.

Table 7.31: Faunal count, Strata I and II.

Species/Class	Count
MTM	3
LTM	4
UNIM	17
MOLSP	5

*Hardware*

Three hardware-related artifacts were recovered, including two iron bolt/nuts and one copper alloy hinge. No dates are associated with these objects.

*Household*

This is the largest category, accounting for 36% ( $n=52$ ) of the assemblage from Strata I and II. The majority of these items are refined earthenwares and glass artifacts. The glass consists of 19 artifacts. Among these are container glass shards, tableware, and bottle shards. The bottle shards are both mouth- and mold-blown examples. Only one of the glass artifacts was complete enough to provide any chronological information. A colorless, pressed mold ribbed tableware shard dates from 1825 onward (Miller et al. 2000:7), based upon the manufacture technique.

The majority of the ceramic wares are refined earthenwares. In addition, there are four coarse earthenwares, a British buff-bodied slipware rim sherd dating 1670–1795 (Azizi et al. 1996), and two redware sherds (no date). The fourth coarse earthenware sherd is buff-bodied with an Agatized decoration. The mixed buff and light orange clays with yellow lead glaze are similar to a chamber pot from the Broad Street site. Three porcelain sherds are also present—bone china with an indeterminate decoration and two sherds of an English soft-paste teacup printed with a Chinoiserie decoration (1760–1840) (Miller et al. 2000:9).

There are 26 refined earthenware sherds in the assemblage, including pearlware, creamware, whiteware, white granite, and ironstone/stone china. Forms include table and teawares. All of the refined earthenwares were dateable. The earliest dateable types are the six creamware sherds (1762–1820) (Miller et al. 2000:12) and an engine-turned red-bodied sherd (1760–1830) (Hawkins 1999). Among the most recent types are two sherds of a white granite saucer (1842–1930) (Miller et al. 2000:13) and a printed ironstone/stone china plate sherd (1840–1915) (Azizi et al. 1996).

*Indeterminate*

The two indeterminate artifacts are a piece of iron sheet metal and an iron bar. Both are too rusted to identify any discerning characteristics.

*Manufacturing*

The two manufacture-related artifacts are a bone button blank fragment and an underfired, unglazed stoneware waster.

*Other*

The one artifact in the other group is a chunk of synthetic composite asphalt.

*Personal*

This group consists of two molded and fluted smoking pipe stems. No dateable characteristics are present on either.

*Toy/Recreation*

This group consists of a gray, possibly stone, playing marble.

*Interpretation*

Both Stratum I and II lack any primary context and are of limited interpretive value. The RCA provides a modern twentieth-century TPQ for these strata. The strata were both located above the walls of Feature 3, serving as the underlayment for the modern bluestone surface. The artifacts appear to have been redeposited along with the soils associated with regrading the area surrounding City Hall in the twentieth century and represent a secondary or tertiary deposition.

STRATUM III

Stratum III was a sizable artifact deposit excavated from within the interior of Feature 3. It was excavated across three test units—11, 23, and 25—which have been combined for analysis.

A total of 1,591 artifacts were recovered from Stratum III (Table 7.32). Almost half of these are architectural materials, accounting for 44% ( $n=698$ ), followed by household-related artifacts, which account for 29.1% ( $n=464$ ) of the assemblage. The materials from Stratum III were embedded in a sandy fill mixed with mortar and ash inclusions.

Table 7.32: Feature 3, Stratum III artifact count by functional group.

Functional Group	Artifact Count
Activities	6
Architectural	698
Food Related	199
Fuel	15
Furniture	9
Hardware	11
Household	464
Indeterminate	114
Lighting	36
Manufacturing	4
Medical	1
Other	1
Personal	25
Sanitary	7
Toy/Recreation	1

#### *Activities*

Seven activity-related artifacts were recovered from Stratum III. Three sherds of a large redware flowerpot saucer, all which mend, were recovered. The remaining three artifacts are a worn slate pencil fragment and two sherds of a brown/purple glass Master ink bottle. In general, mold-blown bottles date between 1830–1930 (Society for Historical Archaeology 2012).

#### *Architectural*

The majority—over 75% ( $n=532$ )—of the 698 architectural artifacts are common window glass shards. There are some large pieces of (possibly interior) window pane among the collection, including some which appear to fit a non-square or rectangular window. One shard is frosted and etched, likely having belonged to an office door. Nails make up the second most common type in this group; 158 iron nails were recovered. Most of the nails are too rusted to determine their manufacture. Of those that are identifiable, there are 14 square nails, one hand-wrought nail, and one headed machine-cut nail. A single copper alloy hand-wrought nail is also among the assemblage. One wire nail is dated post 1875 (Wells 2000:326–327).

Other architectural materials include slate roofing tile and part of a stoneware water pipe dating to post 1850 (Arizona Water Association 2012).

### *Food Related*

One hundred ninety-nine food-related faunal artifacts were recovered. The majority of these are only identifiable to the class level: medium terrestrial mammal ( $n=51$ ), large terrestrial mammal ( $n=36$ ), and unidentified mammal ( $n=44$ ). Among the identifiable species are *Bos Taurus* ( $n=10$ ), caprine ( $n=7$ ), *Sus Scrofa* ( $n=3$ ), and *Gallus gallus* (chicken) ( $n=1$ ). Many of the bones are fragmented, but show evidence of butchery. Twenty-nine mollusk shells were recovered; the majority of these are quahog clam ( $n=22$ ). Of the seven oyster shells, one is riddled with predator holes.

A more detailed analysis of the faunal materials from this context is part of the faunal section in Chapter IX.

### *Fuel*

The fuel group consists of seven coal fragments, seven coal cinders, and one piece of charcoal. These were taken as a sample of the ash and cinder from within this stratum.

### *Furniture*

There are nine artifacts related to furniture; eight of these are shards of mirror glass. The last artifact in this category is an iron tufting button. The artifact is the back of the button with a remnant of cloth covering on the face. This type of button was used on upholstered furniture and carriage seats.

### *Hardware*

Eleven artifacts identified as part of the hardware functional group were recovered. Eight of these are unidentified iron tubes that are heavily rusted and encrusted. The remaining artifacts include an indeterminate iron object that is possibly a drawer or cabinet handle, an indeterminate flat white metal object, and a copper alloy ring.

### *Household*

There were 464 household-related artifacts recovered from Stratum III; these are either ceramic or glass. Glass accounts for 66% of the household items.

Among the glass are 270 bottle or container glass fragments. Various manufacture techniques are represented among the bottles, including mouth blown, mold blown, and dip molded. Of the dateable bottles, most date 1730–1870 based on the mold type. Fifteen case bottle shards date 1730–1870. Based on the finish type, one amber bottle dates from 1840–1920 (Society for Historical Archaeology 2012). Forty-four mold blown demijohn shards are also part of the glass assemblage. These shards have an end date of 1920 (Jones and Sullivan 1920:39). Thirty-one glass tumbler fragments were recovered (Image 7.64); several of these are pressed and molded with a fluted form and date 1825–1930 (Miller et al. 2000:7).



Image 7.64: Glass tumblers recovered from within Feature 3.

Ceramic artifacts are divided among coarse earthenwares ( $n=22$ ), porcelain ( $n=21$ ), refined earthenwares ( $n=88$ ), and stoneware ( $n=24$ ), for a total of 156 ceramic sherds. The coarse earthenwares include 15 sherds of lead-glazed redware (no date) and six British buff-bodied slipware sherds (1670–1795) (Azizi et al. 1996). Three of the British buff-bodied sherds represent a dish with a combed slip decoration and another sherd represents a dish with a trailed slip decoration.

Twenty-one porcelain sherds were recovered in Stratum III. Among these are hard and soft paste porcelain, Chinese export porcelain, and bone china. One hard paste porcelain sherd of an indeterminate form is painted with liquid gold over an orange colored glaze. This type of decoration was first available in 1870 (Miller et al. 2000:13). Among the identifiable forms are teawares, including an undated Chinese export porcelain saucer with an overglaze painted geometric pattern. The rim pattern is a yellow band bordered in black lines over an orange band with gilded swags. A bone china teacup is painted with a landscape design featuring a diaper trellis border with pendant dumbbells alternating with elongated diamonds (1794–1840) (Jefferson Patterson Park and Museum 2012).

The stonewares are mostly salt-glazed, except for four slip-glazed sherds. These are all likely from utilitarian vessels, but most are too fragmented to conclusively identify the object. Four sherds are from salt-glazed jar/jugs.

A total of 88 ceramic sherds are refined earthenwares. Of these artifacts, 35 are creamware sherds, including one plate with a molded pattern. Most of the creamware has no visible decoration. As a result, only the general creamware date of 1762–1820 can be ascribed (Miller et al. 2000:12). Sixteen pearlware sherds of various decorations are part of the assemblage. The general pearlware date is 1775–1840 (Miller et al. 2000:12), but some decorations can be more specifically dated. A dipt-decorated sherd with a herringbone motif dates 1775–1850 (Rickards 2006) and a teapot sherd in the Castleford style dates 1790–1840 (Azizi et al. 1996).

Whitewares form the second largest grouping among the refined earthenwares, with 28 sherds. Several of these have printed patterns dating 1815–1915 (Azizi et al. 1996). Two of the sherds have a printed floral pattern; one of these has the flowers printed on a “worm trail” background. One sherd is part of a child’s mug printed with Ben Franklin’s maxims<sup>1</sup> (1815–1880) (Riley 1991); this is part of the same vessel from Stratum V. The sherd is burned, making the print illegible. Other objects include portions of a teacup, plates, and an egg cup (Image 7.65).

The remaining refined earthenwares include an Agate ware sherd (1740–1783); a red-bodied teapot lid (1763–1820); Rockingham (1812–1920); a white granite tableware sherd (1842–1930); and two yellowware sherds (1827–1940) (Azizi et al. 1996; Miller et al. 2000).

#### *Indeterminate*

Seven percent ( $n=114$ ) of the Stratum III assemblage was unidentifiable. The majority of these artifacts are metal or composite materials. A large amount ( $n=44$ ) of iron sheet metal is within this group. Three noted objects are what may be a piece of a red rubber ball; a piece of glass that may be part of jewelry or some other ornament; and a green glass disk with a rusted corroded material attached to one surface. As the glass is not clear, it is unlikely to be an eyeglass lens.

#### *Lighting*

Thirty-six artifacts classified under lighting were recovered. These include shards from glass lampshades, lamp chimneys, and a lamp globes. Colors include colorless and milk glass colored white and green and white and red. The six lamp globe sherds are frosted with a geometric pattern. The lamp glass shards provided minimal chronological data, though some could be assigned a beginning date of 1743 (Miller et al. 2000). None have a definable end date.

#### *Manufacturing*

Four manufacturing artifacts were recovered, including three salt-glazed stoneware wasters (1720–1820) (Janowitz 2008) and a sherd from a redware sugar mold (no date).

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1. Benjamin Franklin’s maxims appeared in his annual *Poor Richard’s Almanac* from 1732–1758.



Image 7.65: Whiteware egg cup.

### *Medical*

The single medical-related artifact recovered is a mold-blown and embossed panel medicine bottle dating 1847–1920 (Griffenhagen and Bogard 1999; Jones and Sullivan 1985:39). The embossed lettering on the bottle reads “R.R.R. RADWAY & Co NEW YORK/ENTD ACCORD TO ACT OF CONGRESS” (Image 7.66). This refers to Radway’s Ready Relief, introduced by Richard R. Radway about 1847 as a pain reliever and for other ailments, including dysentery (Image 7.67). Radway’s Ready Relief was sold until 1928 (Griffenhagen and Bogard 1999:82).

### *Other*

This group consists of a single mouse bone.

*Personal*

The personal functional group category consists of shoe remnants, buttons, and smoking pipe fragments. A total of nine pipe stems, all undecorated, were recovered, along with three pipe bowls. One of the bowls is molded with a fluted pattern and the other has an incised band around the rim. All three are smoked, and no dateable characteristics are present.

Among the clothing-related items recovered are three buttons. The two porcelain buttons are pressed (1840–1960) (Sprague 2002:111–127). The third button is made of a synthetic rubber (1853–1886) (Rusch-Fischer 2012). This button measures 9/16” and was attached with a white metal loop. The back of the button is marked “N.R. CO. GOODYEAR’S P-T,” a novelty rubber company that closed in 1886 (Vintage Buttons 2012) (Image 7.68).

The remaining personal artifacts are 10 leather shoe remnants, portions of the heel and one upper boot scrap. The nine heel scraps are all part of a stacked leather heel with visible nail holes.



Image 7.66: Complete R.R.R. Radway and Co. medicine bottle.

**THE BUDGET.**

VOL. I. NO. 36.      MILBURN, N. J., WEDNESDAY, SEPTEMBER 8, 1886.      TERMS: \$1.00 PER YEAR.      (SINGLE COPY 3c)

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**R.R.R. Radway's Ready Relief**

In from one to twenty minutes, never fails to relieve PAIN with one thorough application. No matter how violent or excruciating the pain, the Rheumatic, Bedridden, Infirm, Crippled, Nervous, Neuralgic, or prostrated with disease may suffer, RADWAY'S READY RELIEF will afford instant ease.

**BOWEL COMPLAINTS,  
DYSENTERY,  
Diarrhœa, Cholera Morbus.**

It will, in a few minutes, when taken internally, according to directions, cure Cramps, Spasms, Sour Stomach, Heartburn, Sick Headache, SUMMER COMPLAINT, Diarrhœa, Dysentery, Colic, Wind in the Bowels, and all internal pains.

**THE TRUE RELIEF.**

RADWAY'S READY RELIEF is the only remedial agent in vogue that will instantly stop pain. It instantly relieves and soon cures Headache, whether sick or nervous, Toothache, Neuralgia, Nervousness and Sleeplessness, Rheumatism, Lumbago, Pains and Weakness in the Back, Spine or Knees, Pains around the Liver, Pleurisy, Swelling of the Joints, Sprains, Bruises, Bites of Insects, and Pains of all kinds. RADWAY'S READY RELIEF will afford immediate ease, and its continued use for a few days effect a permanent cure.

**MALARIA IN ITS VARIOUS FORMS.  
FEVER AND AGUE.**

There is not a remedial agent in the world that will cure Fever and Ague and all other Malarious, Bilious, Scarlet and other Fevers (aided by RADWAY'S PILLS) so quick as RADWAY'S READY RELIEF. Price Fifty Cents. Sold by Druggists.

**DR. RADWAY'S  
(The Only Genuine)  
SARSAPARILLIAN RESOLVENT!**

**The Great Blood Purifier.**

For cure of all chronic diseases, Scrofula, Blood Taints, Syphilitic Complaints, Consumption, Glandular Disease, Ulcers, Chronic Rheumatism, Erysipelas, Kidney, Bladder and Liver Complaints, Dropsical Affections of the Lungs and Throat, purifies the Blood, restoring health and vigor.

**THE SKIN.**

After a few days' use of the Sarsaparillian, becomes clear and beautiful. Pimples, blotches, Black Spots and Skin Eruptions are removed; Sores and Ulcers soon cured. Persons suffering from Scrofula, Eruptive Diseases of the eyes, mouth, ears, legs, throat and glands, that have accumulated and spread, either from uncured diseases or mercury, may rely upon a cure if the Sarsaparillian is continued a sufficient time to make its impression on the system. Sold by Druggists. \$1 per Bottle.

**DR. RADWAY'S PILLS**

**The Great Liver and Stomach Remedy**

For the cure of all disorders of the Stomach, Liver, Bowels, Kidneys, Bladder, Nervous Diseases, Loss of Appetite, Headache, Constiveness, Indigestion, Biliousness, Fever, Inflammation of the Bowels, Piles and all derangements of the Internal Viscera. Purely vegetable, containing no mercury, mineral or deleterious drugs. Price 25 cents per box. Sold by all druggists.

Send a letter stamp to DR. RADWAY & CO., No. 32 Warren Street, New York, for "False and True."

**\*BE SURE TO GET RADWAY'S.**

Image 7.67: An 1886 ad for Radway's Ready Relief promising relief from various ailments (*The Budget*, Spetember 8, 1886, I(36)).



Image 7.68: Goodyear's novelty rubber company button.

### *Sanitary*

Six sanitary artifacts were recovered; five of these are sherds from an undecorated white granite basin (1842–1930) (Miller et al. 2000:13) and the remaining artifact is an ironstone chamber pot sherd with a printed faux marble decoration (1840–1915) (Azizi et al. 1996). One sherd of an Albany type slip-decorated spittoon was also recovered.

### *Toy/Recreation*

This group consists of a single stoneware marble.

### STRATUM V

Stratum V is a continuation of the same deposit excavated as Stratum III, but it had a lesser density of artifacts and a greater density of coal and ash. This was noted during excavation and it was treated as a distinct stratum. It was also the bottom 0.2' of the fill deposit within Feature 3. A total of 393 artifacts were recovered from this level (Table 7.33).

Table 7.33: Feature 3, Stratum V artifact count by functional group.

Functional Group	Artifact Count
Activities	1
Architectural	180
Food Related	70
Fuel	1
Furniture	4
Hardware	2
Household	91
Indeterminate	19
Lighting	12
Personal	10
Sanitary	7
Toy/Recreation	1

*Activities*

Only one artifact was recovered within this group—a slate pencil.

*Architectural*

A total of 180 architectural artifacts were recovered. The majority of these are common window glass shards ( $n=159$ , or 88%). The remaining 21 artifacts are iron nails of indeterminate manufacture.

*Food Related*

Seventy food-related artifacts were recovered (Table 7.34); among these are two oyster shells, 14 large terrestrial mammal bones, 18 medium terrestrial mammal bones, six avian bones, one *Bos Taurus* bone, and 29 indeterminate mammal bones.

Table 7.34: Faunal count from Feature 3, Stratum V.

Species	Count
AVSP	6
LTM	14
MOLSP	2
MTM	18
UNIM	29
BOS	1

### *Fuel*

The single fuel artifact is a charcoal sample.

### *Furniture*

This category consists of four mirror glass shards.

### *Hardware*

Two hardware artifacts were recovered, including a piece of lead pipe and a copper alloy tube of an unknown function.

### *Household*

The household category contains a range of types among the 91 artifacts that comprise this group. Among these are five tumbler drinking glass shards, representing a minimum of three vessels. Other glass artifacts include tablewares, such as stemware and container glass. Most of this glass is pressed glass with a molded pattern. The manufacture technique dates these items as 1825–1930 (Miller et al. 2000:7).

The range of ceramic wares includes a single coarse earthenware redware sherd, 11 porcelain sherds, and eight stoneware sherds. The porcelain sherds are mostly teawares, including a Chinese export porcelain with an overglaze painted European Neo-Classical design (1750–1840) (Azizi et al. 1996) and two bone china teacups printed with a Chinese landscape design (1810–1840) (Jefferson Patterson Park and Museum). The three stoneware artifacts are salt-glazed with an Albany type slipped interior and mend with sherds from Stratum III.

The remaining ceramic artifacts are refined earthenwares, including creamware (1760–1820), pearlware (1775–1840), and whiteware (post 1815). Of note are four sherds from a child's mug printed with Ben Franklin's maxims (1815–1880) (Riley 1991) (Image 7.69). The discernible text reads "THE WAY TO WEALTH... DR. FRANKLIN Poor Richards... FOR YOUTH." Two additional sherds from this mug were found within Stratum III.

### *Indeterminate*

The indeterminate artifacts are almost exclusively metal objects of either iron or copper alloy. Also indeterminate are a milk glass shard and a piece of red ceramic that may have been part of a brick.

### *Lighting*

Twelve lighting-related artifacts were recovered; all are glass shards from lamps or globes, and two are of milk glass. Some of these are likely part of the same vessels from Stratum III. One of the lamp globe shards is acid etched with a frosted pattern resembling chevrons.

*Personal*

The 10 personal artifacts consist of nine smoking pipe fragments and one synthetic rubber comb. The pipes are both stem and bowl fragments, two of which are in the Peter Dorni style (Dallal 2000:35). The comb fragment dates post 1815.

*Sanitary*

Two of the sanitary artifacts are from an ironstone vessel printed with a faux marble pattern (1840–1915) (Azizi et al. 1996). Based on the color of the pattern, these are not from the same vessel in Stratum III. Five stoneware sherds of a spittoon (1805–1940) (Azizi et al. 1996) are also among the assemblage (Image 7.70).

*Toy/Recreation*

This group consists of a light green glass marble. The marble has white swirls mixed with the green glass and is fairly large, measuring approximately  $\frac{3}{4}$ " in diameter.

*Interpretation*

The deposit excavated within Strata III and V is a single deposit, as evidenced by cross mends and sherds of the same vessel. The materials reflect two things: refuse from some sort of building renovation and a range of mid-nineteenth-century materials associated with dining and social activity. The household items reflect vessels associated with meals and tea—items connected to consumption and serving, with little evidence of vessels associated with food preparation. Further supporting the notion of the assemblage being reflective of social activity are the drinking glasses, tumblers and stemware, smoking pipes, and spittoons.



Image 7.69: Child's cup with illegible printing.



Image 7.70: Stoneware spittoon.

The numerous architectural materials consist mostly of window glass shards, including some large panes. Many seem to be from interior office doors, based on thickness, shape, and the etched or frosted character, as opposed to exterior windows. These may represent one of the interior renovations that occurred within City Hall itself.

The TPQ for the assemblage is 1875, taken from an iron wire nail. The deposition date likely corresponds to the circa-1902 William Martin Aiken renovation of City Hall that redesigned the interior. Aiken wrote and submitted an account of the work to be undertaken (August 12, 1902); Aiken noted general repairs to sashes and windows, work on transoms, installing a new casement sash in the mayor's office, the opening of at least two closed windows, installing windows in place of the two outside doors, and the removal of two French screens made of wrought iron and glass. Aiken also noted the use of cinders to level the new basement floors, as needed. The work proposed involved both glass work and the use of cinders, two of the most common items present in the Feature 3 fill deposit.

### **BENEATH THE FEATURE 3 FLOOR SURFACE**

#### **STRATUM IV**

Stratum IV was a thin layer of sandy soil immediately beneath the brick floor of Feature 3. Only 32 artifacts were recovered from this layer (Table 7.35). The sandy soil was used as a bedding layer for the construction of Feature 3. The artifacts within this layer likely date to that period.

Table 7.35: Feature 3, Stratum IV  
artifact count.

<b>Functional Group</b>	<b>Artifact Count</b>
Architectural	5
Food Related	1
Household	23
Indeterminate	2
Personal	1

#### *Architectural*

The five architectural artifacts are all shards of common window glass.

#### *Food Related*

The single food-related artifact is a fish bone.

*Household*

Household is the most commonly represented group with 23 artifacts. Within this group are coarse earthenwares, such as British buff-bodied slipware (1670–1795) (Azizi et al. 1996) and redware; a sherd of painted Chinese export porcelain; and several refined earthenwares. Among these are creamware (1762–1820), painted pearlware (1807–1830), white salt-glazed stoneware (1720–1805), and whiteware (post 1815). Four bottle shards and one shard from a drinking vessel are also within this category.

*Indeterminate*

The two indeterminate objects are both metal—copper alloy sheet metal and what may be an iron nail.

*Personal*

The one personal artifact is an undecorated pipe bowl fragment with no distinct or dateable characteristics.

STRATUM VI

Stratum VI was only present within Test Unit 11 in the southwestern portion of Feature 3. This layer was located immediately beneath the sand underlayment observed in Stratum IV. It is likely part of the same deposit/episode, but Stratum VI was noted as clayey when compared to the sandy texture of Stratum IV.

The assemblage is consistent with that of Stratum IV and contains 48 artifacts (Table 7.36).

Table 7.36: Feature 3, Stratum VI artifact count.

<b>Functional Group</b>	<b>Artifact Count</b>
Architectural	6
Food Related	3
Fuel	1
Hardware	1
Household	32
Manufacturing	3
Personal	2

*Architectural*

This group consists of six window glass shards.

*Food Related*

Three food-related artifacts were recovered: one rib fragment from a medium terrestrial mammal and two other unidentified medium terrestrial mammal bone fragments.

### *Fuel*

The single fuel-related artifact is a piece of cinder.

### *Hardware*

The hardware group consists of a single cooper alloy metal fragment. This is likely a small rivet, screw, or nail, but the item is heavily corroded.

### *Household*

Thirty-two household artifacts were recovered. Two of these artifacts are glass container fragments; the remaining 30 artifacts are ceramic wares. Though both glass shards were identified as mouth blown, neither had any other defining characteristics to provide temporal data.

Among the ceramic remains are coarse earthenwares ( $n=7$ ), refined earthenwares ( $n=18$ ), and stoneware ( $n=5$ ). The coarse earthenwares include two British buff-bodied sherds (1670–1795), one of which is a drinking vessel (Azizi et al. 1996). The remaining five sherds in this group are redware with no dateable decorative techniques extant. The five stoneware sherds include three gray/buff-bodied salt-glazed and two white salt-glazed sherds. One of the gray salt-glazed sherds is painted with a banded motif and is a large plate, bowl, or pan with an everted rim. Not enough of the body was extant to make a definitive identification of the form, but Crolius/Remmey potted this piece (1720–1820) (Janowitz 2008). Of the white salt-glazed sherds, one is scratch blue dating 1735–1783 (Noel Hume 2001:206).

The majority of the ceramics are the 18 refined earthenware sherds: 11 creamware sherds, five pearlware sherds, and two red-bodied sherds. Only one of the creamware sherds exhibited any decoration—a molded rim sherd with a beaded motif (1760–1820) (Miller et al. 2000:12). Among the pearlware are two painted sherds with an indeterminate motif (1775–1830) and two molded shell edge decorated sherds (1800–1835) (Miller et al. 2000:12). The two red-bodied sherds are slip decorated with a banded motif. These two mendable pieces are likely part of a teapot that was possibly made in Philadelphia.

### *Manufacturing*

Three manufacturing-related artifacts were recovered. One artifact is part of a redware sugar mold; the remaining two are related to pottery manufacture—a redware saggar and a corner piece from a kiln shelf. While it is common to find artifacts associated with stoneware production, it is much less common to find remnants from redware production.

### *Personal*

Two undecorated smoking pipe stems comprise this group.

STRATUM VII

Stratum VII was excavated within Test Units 11 and 25; 453 artifacts were recovered (Table 7.37). Though first recognized as an artifact deposit beneath Feature 3, it was later determined that this stratum was part of the deposit excavated within Test Units 3 and 8. A discussion of those units follows.

Table 7.37: Feature 3, Stratum VI artifact count.

Functional Group	Artifact Count
Architectural	33
Arms	2
Food Related	226
Hardware	1
Household	164
Indeterminate	2
Lighting	1
Manufacturing	10
Other	6
Personal	14

*Architectural*

This group consists of 20 shards of common window glass and 13 iron nails. Only two of the nails could be identified as square. The remainder is too heavily rusted and encrusted to determine their manufacture.

*Arms*

Two pieces of English flint were recovered. One is a large flake fragment, likely from gunflint manufacture. The second is a wedge-shaped piece of flint with heavy wear along the thin edge. This is possibly a strike-a-light. These two arms-related artifacts are among the few of this type to be recovered across the site from all excavation projects.

*Food Related*

A total of 220 food-related faunal remains were recovered, accounting for 48% of the Stratum VII assemblage. Many of these were only identifiable to the class level. Table 7.38 provides a breakdown of the faunal materials recovered.

Table 7.38: Faunal count from Feature 3, Stratum VII.

Species	Count
AVSP	5
LTM	51
MOLSP	1
MTM	15
STM	3
UNIM	91
BOS	34
OVCA	2

Of the 34 *Bos taurus* elements recovered, several portions of the skeleton are present. Across the assemblage, several of the bones show evidence of sawing or chopping. The single mollusk specimen is a large, chowder-sized quahog clam. As with the remainder of the site, shell was sampled.

#### *Hardware*

The one hardware-related artifact is an iron wire of indeterminate manufacture.

#### *Household*

The household functional group consists of 168 artifacts, or 37% of the Stratum VII assemblage. Thirty-four of these are glass and the remaining artifacts are ceramic.

Most of the glass artifacts consist of container or bottle glass shards. Among these are 16 dip molded wine bottle shards dating 1730–1870 (Society for Historical Archaeology 2012). Three of the glass shards are tableware, including one tumbler. None of these three have chronologically diagnostic characteristics.

The 134 ceramic artifacts consist of coarse earthenwares ( $n=16$ ), porcelain ( $n=5$ ), refined earthenwares ( $n=82$ ), and stoneware ( $n=27$ ).

Among the coarse earthenwares are four British buff-bodied, slip-decorated sherds, two in the form of a dish. One of these sherds has reverse slip colors, a broad light slip trail on a dark slip background. The remaining 12 coarse earthenwares are common lead-glazed redwares that do not have assigned date ranges.

The porcelain includes four Chinese export porcelain sherds and one bone china sherd. The Chinese export porcelain is painted. One teacup sherd is overglaze painted with a European Neo-Classical motif (1750–1840) (Azizi et al. 1996).

Refined earthenwares make up the majority (61%) of the ceramic collection. With one exception, these sherds are either creamware (1762–1820) or pearlware (1775–1840) (Miller et al. 2000:12). Of the 46 creamwares, most do not have a distinctive decoration to refine the standard date range of 1762–1820. There are two bat-printed sherds that date 1765–1820

(Miller et al. 2000:12). The identifiable creamware forms are a bowl, plates, a saucer, and a teapot. Several of the 35 pearlwares have decorative characteristics that allow for refinement of their date range. Among these are three shell edge sherds (1800–1835); China glaze painted with a Chinoiserie motif (1775–1810); floral painted (1795–1830); dipt with a checkerboard pattern (1775–1850); and printed (1807–1830) (Miller et al. 2000:12–13 and Rickard 2006). Forms include plates and saucers. The remaining refined earthenware sherd is the rim sherd of an ironstone/stone china plate (1840–1915) (Azizi et al. 1996).

The majority of the stoneware is gray/buff-bodied, salt-glazed stoneware (1720–1820) (Janowitz 2008). Of the 24 salt-glazed sherds, only six have definitively identifiable forms—three jar sherds and three sherds of a porringer that mend. This would be a large porringer, so it could also be a small bowl. It has a mottled brown exterior slip and an even glossy interior brown slip. Two sherds in the stoneware assemblage are slip-decorated Nottingham type (1683–1810) (Miller et al. 2000:10). The remaining two sherds are from a white salt-glazed saucer and teacup (1720–1790) (Miller et al. 2000:10).

#### *Indeterminate*

The indeterminate artifacts are one fragment of iron sheet metal and a triangular cut piece of copper. This piece is flat and was likely part of some sort of trimming or part of an ornamental item.

#### *Lighting*

This group consists of one shard of milk glass that dates post 1743.

#### *Manufacturing*

Ten manufacturing-related artifacts were recovered, many related to pottery production. A preformed stoneware kiln pad and a redware sherd with a kiln pad fragment were recovered. Five sherds of salt-glazed stoneware wasters or seconds are among the manufacturing-related artifacts (1720–1820) (Janowitz 2008); one is identified as a jar and another is a pan identified as a Crolius/Remmey kiln waster. Three sherds of a redware sugar mold, one with a thin white slip on the interior, round out the manufacturing group.

#### *Other*

This group consists of six feline faunal fragments.

#### *Personal*

Fourteen personal artifacts were recovered. Except for one copper alloy wrapped head pin, all the artifacts are smoking pipe fragments. The pipe fragments include nine undecorated pipe stems and four pipe bowl fragments. Though two of the bowls are molded, neither have any chronologically diagnostic characteristics.

### FEATURE 3 SUMMARY

Feature 3 was constructed during the mid-nineteenth century. It is composed of pressed brick bonded with natural cement. Natural cement was first discovered in America in 1817 in Fayetteville, New York, during the construction of the Erie Canal. Commercial production of natural cement began in 1819. The pressed brick used in the construction dates the feature to circa 1860 (JBC 2010). No information was discovered during excavation that would aid in definitively identifying the original function of this feature.

The structure was built atop a sand underlayment (Strata IV and VI). The unmortared laid brick floor was constructed with a deliberately unpaved area (Image 7.62). Both aspects suggest facilitating some form of drainage. Additionally, the east and west walls of the structure had deliberate openings that correlated to the drains exposed in the northeast area (Image 7.71).

Initial field assumptions identified Feature 3 as a potential icehouse based on the aspect of drainage and its proximity to the City Hall kitchen. The early configuration of City Hall's basement included an exterior door that led from the basement kitchen area to the northeast area, situated between the locations of Features 3 and 4.

Icehouses are typically aboveground structures with shallow subterranean levels. Regionally, icehouses tend to have a circular form with a domed roof. A squared structure was more common to cold storage. However, Feature 3 did not appear to share other characteristics of cold storage, such as a ventilated floor (URS 2011).

The form of Feature 3 is similar to nineteenth- and early-twentieth-century utility boxes commonly seen throughout lower Manhattan. An example from Peck Slip is a 5' x 7' pressed brick and mortar rectangle with 4.5' tall walls terminating in a brick floor 5' bs (Chrysalis 2012). Small gaps of brick are removed from the walls to feed utility lines in through the sides in order to link up/connect different sets of electric and telephone lines. These access points also have a circular or square hole cut into the bottom to drain collected water/runoff down into the underlying soil. It is possible that Feature 3 is an abandoned, or even unused, utility box. Electric and other utilities came to City Hall in the mid to late nineteenth century.

Both of the above are plausible theories for the original function of Feature 3, though it might be expected that an icehouse would have been constructed earlier than 1860. There were not enough defining architectural or archaeological elements to enable a definitive identification of the original function of Feature 3. However, by the end of its functional lifecycle, it clearly served as a drainage point for the drainage system surrounding City Hall and for refuse disposal. The drainage system will be discussed later in this chapter.

The fill material has a TPQ of 1875, a mere 15 years after the construction date of circa 1860. The composition of the deposit, containing a significant amount of interior architectural material, window glass, and nails, suggests that this deposit is contemporaneous with one of

the renovation episodes that occurred within City Hall. Research indicates the deposit is associated with the 1902 Aiken renovation.

Both the horizontal and vertical location of Stratum VII places it in line with the deposit from Test Units 3 and 8. Though these test units were excavated prior to the units that encompassed Feature 3, it was not until this later excavation that the formation sequence of this dense area could be understood. Feature 3 impacted the deposit recovered from Test Units 3 and 8, as did Feature 1. The deposit is earlier than both Features 1 and 3. A discussion of these individual units is presented for contextual comprehension of this area's formation and interpretation.



Image 7.71: Wall openings to facilitate drainage were present in the east and west walls of Feature 3.

**TEST UNITS 3 AND 8**

Though Test Units 3 and 8 were excavated prior to and in part led into the complete excavation of Feature 3, they are discussed here, after Feature 3, to provide interpretive context for this area and the following discussion of Features 33 and 35.

Test Unit 3 was one of the early test units undertaken before—and a contributor to—the start of large-scale excavation in the northeast area (Map 7.17). This 5' x 5' unit was located alongside the retaining wall, 37' from the northeast corner of City Hall. As it was one of the first units excavated, Test Unit 3 was excavated in arbitrary levels.

ASSOCIATED STRATIGRAPHY

Five strata were documented within Test Unit 3 (Table 7.39). The first two strata are associated with the modern surface and pavement surrounding City Hall. Stratum III was a dense clayey loam with some artifacts. At 1.6' bd, dark soil with a high density of artifacts was exposed. Test Unit 3 was excavated to a final depth of 4.25' before being back-filled during a temporary work stoppage to facilitate a change in the project's overall plans.

When excavation resumed, Test Unit 3 was renamed Test Unit 8 to distinguish between excavation episodes. This next episode of excavation would expose the eastern wall of Feature 3. Table 7.39 summarizes the stratigraphy of these two units. The newly renamed Test Unit 8 was excavated to a final depth of 5.1' bd.

Table 7.39: Test Units 3 and 8 stratigraphy.

Stratum	Depth	Soil Description
I	0' – .4'	Concrete located beneath the modern bluestone pavers
II	.4' – .66'	Compact gravel and RCA fill horizon
III	.66' – 1.6'	10 YR 4/6 dense clayey loam
IV	1.6' – 5.1'	10YR 4/3 sandy loam mottled with 10YR 4/2 clay; midden deposit
V	3.4' – 5.1'	Reddish brown medium sand

ASSEMBLAGE

No artifacts were recovered from Strata I and II.

STRATUM III

Excavation of Stratum III recovered a total of 227 artifacts (Table 7.40). Almost 40% (*n*=90) of these are within the household functional group. Architectural and food-related artifacts each account for 26.8% (*n*=61).

Table 7.40: Artifact summary, Test Units 3 and 8, Stratum III.

Functional Group	Artifact Count
Activities	1
Architectural	61
Food Related	61
Fuel	4
Hardware	3
Household	90
Indeterminate	1
Personal	6

*Activities*

The single activity-related artifact is a redware flowerpot sherd.

*Architectural*

More than half of the 61 architectural artifacts are window glass. The remainder consists of iron nails, a piece of copper flashing, plaster, and a red-bodied ceramic roofing tile. Some of the 16 nails are too corroded to determine their manufacture, but seven are square and two are of cut manufacture. Two of the nails have wood attached. The cut nails have a beginning date of 1790.

*Food Related*

Sixty-one food-related artifacts were recovered (Table 7.41). All but two of the faunal artifacts were too fragmented to identify to the species level.

Table 7.41: Faunal remains from Test Units 3 and 8, Stratum III.

Species	Count
FISH	1
LTM	19
MOLSP	14
MTM	3
UNIM	22
BOS	1
SUS	1

*Fuel*

Four fuel-related artifacts are part of the assemblage: four pieces of coal, taken as samples.

### *Hardware*

The three hardware-related artifacts are two pieces of iron wire and an iron rod with a threaded end.

### *Household*

The household group consists of ceramic and glass wares. Twenty-one glass artifacts were recovered; the majority of these are mold blown. Objects present within this group are bottles, container glass, and tableware. Some chronological information is available for the glass. A dip mold wine bottle base is dated 1730–1870 (Society for Historical Archaeology 2012); four white milk glass shards date from 1743 onward (Miller et al. 2000:7). The latest dates come from a pressed glass tableware shard with a molded floral pattern (1825 onward) and a non-lead bottle shard embossed with the letter “S,” which dates from 1864 onward (Miller et al. 2000:8).

Ceramic remains are divided among coarse earthenwares, porcelain, refined earthenwares, and stoneware. Five coarse earthenwares were recovered; all but one of these is lead-glazed redware, for which no date can be ascribed. The fifth coarse earthenware is a British buff-bodied sherd that is slipped and combed (1670–1795) (Azizi et al. 1996). Eight porcelain sherds, including Chinese export porcelain and hard paste porcelain, were recovered. Though two are identified as teaware and one as a bowl, none have clearly defined decorative characteristics that allow for dating. Stonewares account for 10 of the ceramic artifacts; eight of these are salt glazed. These artifacts include a mug incised and filled with a checkerboard pattern that was likely produced by Crolus/Remmey (1720–1820) (Janowitz 2008). The one slip-glazed stoneware artifact is probably part of an ale or ginger beer bottle. This sherd is from the same vessel recovered in Test Unit 18, Stratum V, of Feature 4. The remaining stoneware is a white salt-glazed sherd (1720–1805) (Miller et al. 2000:10).

The majority of the ceramic artifacts are refined earthenwares ( $n=67$ ). Several ware types are present, predominantly creamware, pearlware, and some whiteware, which suggests a nineteenth-century date for the deposition of this stratum.

Fifteen creamware sherds are part of the assemblage. As none of these has any defining decorative characteristics, they are assigned the general creamware date of 1760–1820 (Miller et al. 2000:12). Pearlwares account for 19 of the refined earthenwares; the majority of these are painted. Pearlwares generally date from 1775–1840 (Miller 2000:12), though decorative patterns/motifs can aid in more closely dating some of the sherds. Several sherds have adjusted end dates based on their decoration. One printed pearlware sherd is dated 1807–1830 (Miller et al. 2000:13). Two sherds are identified as pearlware/whiteware, representing the transition period of changing technology in ceramic production. These are both shell edge decorated, dating 1805–1895 (Miller et al. 2000:13). The five whiteware artifacts confirm a nineteenth-century date for this stratum. Whiteware was produced from 1815 onwards. As whiteware is technically still produced today, there is no end date. However, one sherd with an indeterminate printed decoration is more closely dated to 1815–1915 (Azizi et al. 1996). A second sherd, printed with a landscape motif on the exterior and a dagger border on both the exterior and interior, is dated 1825–1880 (Azizi et al. 1996).

*Indeterminate*

One glass shard, partially melted, forms the indeterminate group.

*Personal*

Six personal artifacts were recovered, all smoking pipe fragments. These take the form of two bowls and four stems, one of which has molded leaves. None of the other pipe stems are decorated. One of the pipe bowls has a rounded maker's mark stamp, but it is not legible. There is some charring noted on this bowl. The second pipe bowl contains a common motif described in the Zorn catalog as "Cheap Pipe" (Zorn 1982:9). The bowl exhibits charring on its interior and is roughly molded with a highly visible seam and jagged rim. None of the pipe fragments provided chronological information.

*Interpretation*

Stratum III has an 1865 TPQ based on a single bottle shard. The next closet TPQ date is 1825, followed by 1815. While both TPQ's are possible, the 1825 date is more probable. It is likely that the 1865 shard is intrusive from the construction of Feature 3, and it may be a better indicator of that feature's construction date.

STRATUM IV

A total of 2,384 artifacts were recovered as part of Stratum IV (Table 7.42). The overwhelming majority of these, 67.2% ( $n=1,604$ ), are food-related faunal remains. The next largest functional group is household, consisting of 21% ( $n=499$ ) of the assemblage. In general, the assemblage is heavily dominated toward kitchen-based activity; 88% of the assemblage has some relationship to food consumption.

Table 7.42: Artifact count from Test Units 3 and 8, Stratum IV.

<b>Functional Group</b>	<b>Artifact Count</b>
Architectural	136
Food Related	1,604
Fuel	7
Furniture	1
Hardware	1
Household	499
Indeterminate	32
Manufacturing	22
Personal	51
Sanitary	16

*Architectural*

The architectural group consists of 136 artifacts. It is the third largest group, representing 5.7% ( $n=136$ ) of the assemblage. The most common item among the architectural artifacts is iron nails ( $n=82$ ). Only 15 of these are identifiable as square manufacture; the remaining nails are indeterminate. A 4.5” long square iron spike is also part of the architectural assemblage.

The second most prominent artifact within the architectural group is window glass, with 37 shards. None of these shards has any defining characteristics. Four gray slate roofing tiles were recovered, as was a tin-glazed wall tile, which is painted with an indeterminate motif.

The remaining architectural artifacts are two pieces of mortar and seven brick fragments, two brick bats, and one whole brick. No chronologically diagnostic characteristics are present on the brick.

*Food Related*

The food-related functional group contains 1,604 faunal remains (Table 7.43), accounting for 67.9% of the Stratum IV assemblage. Of these remains, 374 are definitively identifiable to the species level; the remaining 1,230 are identified to the class level. Below is a tabular breakdown of the species and class data.

Mammal bone dominates the assemblage. Of the identified species, these are almost exclusively cattle (*Bos taurus*). Of the identifiable mollusk species, 55 are oyster and the remainder are clam—all quahog clam, except for a single possible cherrystone clam.

Table 7.43: Count of faunal materials, Test Units 3 and 8, Stratum IV.

Species/Class	Count
AVSP	12
FISH	18
LTM	744
MOLSP	189
MTM	101
STM	9
UNIM	346
BOS	164
OVCA	8
OVI	1
SUS	12

### *Fuel*

This group consists of six charcoal fragments and one coal fragment.

### *Furniture*

The furniture group consists of a cast-iron andiron. Andirons were used to lay logs upon for burning in an open fireplace. In the sixteenth through eighteenth centuries, they were also used as a rest for a roasting spit. They are generally used in pairs.

### *Hardware*

A heavily rusted and encrusted iron hinge alone represents this group.

### *Household*

The household functional group is the second largest within the Stratum IV assemblage, with 499 artifacts accounting for 21% of the total. The majority of these are ceramic ( $n=416$ ) and the remainder glass ( $n=83$ ).

Seventy of the 83 glass artifacts are bottle shards. The other 13 shards are container glass ( $n=7$ ), tableware ( $n=5$ ), and a tumbler. The tumbler is molded pressed glass and dates 1825 onwards (Miller et al. 2000:7).

Except for four shards, all of the bottle glass is green or black/green. The four aqua colored shards are from a mouth-blown mold that has an end date of 1870 (Society for Historical Archaeology 2012). Of the 70 bottle fragments, 30 are listed simply as bottle, their use not clearly identifiable; four are case bottles and 36 are wine bottles. The wine bottles are all dip molded, dating 1730–1870 (Society for Historical Archaeology 2012). One has an up-tooled string rim which refines the date to 1730–1850 (Jones 1986). The case bottles are also dip molded. Several of the other bottle fragments are mouth-blown molded. No chronologically diagnostic data is associated with these.

There are 59 coarse earthenwares in the Stratum IV assemblage. The ware types are predominantly redware and British buff-bodied slipware. Lead-glazed redware (29 sherds) does not have an assigned date range, as it has been continually made. British buff-bodied slipware (16 sherds) has a general date range of 1670–1795 (Azizi et al. 1996). These exhibit a range of decorative techniques, including combed, combed and feathered, combed slip, and dot and trailed. Identified forms include dish and mug/cup/drinking pot. There are eight slip-decorated redware dish sherds. Three sherds of Iberian coarse earthenware jars complete the assemblage.

All 24 porcelain sherds are Chinese export with all but two identified as having a painted decoration. There are nine teacup sherds and one teaware sherd. One of the teacups has an overglazed painted floral pattern with gilding; another has a painted Chinoiserie pattern with a fish scale motif on the border. The remaining teawares are overglaze painted with a

European Neo-Classical motif dating from 1750–1840 (Azizi et al. 1996). Of the remaining porcelain artifacts, some are painted with a floral motif, but the patterns are generally indeterminate, providing no chronologically diagnostic information.

Stonewares are represented by 97 sherds, all but seven salt-glazed gray/buff bodied. These remaining seven sherds consist of five white salt-glazed pieces (1720–1805) (Miller et al. 2000:10), one of which has a molded beaded rim dating it from 1740–1783 (Azizi et al. 1996). The remaining two sherds belong to teapots: a Black Basalts (1750–1850) (Miller et al. 2000:10) and an engine-turned red-bodied teapot dating 1760–1830 (Hawkins 1999; Rikards and Carpentier 2004).

The refined earthenwares are the bulk of the household ceramic assemblage, with 236 sherds. Creamware accounts for 151 (64%) of these, almost all with the standard date range of 1762–1820 (Miller et al. 2000:12); six overglaze painted sherds date 1765–1815 (Miller et al. 2000:12). Various vessel types are represented, including plates, bowls, teacups, and possibly a punch bowl.

Sixty-eight pearlware sherds form the remaining bulk of the refined earthenware assemblage. Forms include bowls, plates, mugs, teacups, and saucers. The majority of the sherds exhibit painted decoration and date 1775–1840 (Azizi et al. 1996; Miller et al. 2000:12). Some of the identifiable patterns and motifs include: 13 sherds representing mugs and saucers of China glaze painted with a Chinoiserie motif (1775–1810) (Miller et al. 2000:12); six shell edge decorated plate sherds (1800–1835) (Miller et al. 2000:12); and eight teacup sherds painted with floral, trellis, or swag designs (1775–1830) (Miller et al. 2000:12). Four printed pearlware sherds are also part of the assemblage; all have a Chinoiserie motif (1807–1830) (Miller et al. 2000:13). One of these sherds is line engraved printed; this decorative technique refines its date range to 1783–1815 (Miller et al. 2000:13).

The remaining 17 refined earthenwares include: one Agate ware (1740–1783); four Jackfield type teawares (1740–1850); one Brown Faience (no date), possibly a flacon; a red-bodied slip-decorated teapot lid (no date); two tin- and lead-glazed tableware sherds (1620–1675); and four whiteware sherds with printed decoration (1815–1915) (Azizi et al. 1996; Miller et al. 2000). Two sherds of note are of a tin-glazed teacup (1680–1800); the glaze is a Robin's Egg blue color (Azizi et al. 1996).

#### *Indeterminate*

This group consists of 26 iron sheet metal fragments; a black mica fragment; an iron fragment; and a composite metal fragment. The remaining three artifacts in this group are classed as flora. These consist of burned material that was bagged with an associated Gouda pipe. However, if this material is tobacco, there is much more than would fit within a pipe bowl.

#### *Manufacturing*

Twenty-two artifacts were recovered as part of the manufacturing functional group. Eight fragments of bone button blanks were recovered. Button making was a common activity

associated with the almshouse. Also among the assemblage that may relate to the activities of persons on site are two fragments of redware sugar molds. An object of interest in this group is a graphite crucible. The large vessel is covered on both surfaces with copper alloy.

The remaining 11 artifacts are associated with stoneware manufacture, likely the nearby Crolius/Remmey pottery, which also had a location—possibly a store—along Chambers Street in the eighteenth century. These artifacts include sherds of kiln wasters, seconds, or kiln pads. One of the objects is an underfired small-mouthed jar with a lightly glazed exterior and unglazed interior. Though these items were discarded or not suited for sale, it is possible they were either sold *damaged* or *as is*, or donated to the almshouse for use. This is purely conjecture, as there is no evidence other than their presence to suggest this.

### *Other*

This group is comprised of 11 rat bones and four feline bones.

### *Personal*

The personal group consists of 51 artifacts; all but one are smoking pipe fragments. The remaining object is a copper alloy button with a loop shank.

Of the 50 smoking pipe fragments, five are pipe bowls and 45 are pipe stems. Only one of the pipe stems has any defining characteristics—stamped lettering that appears to read “HST” over “INZ.” No information to better identify this was found. Three of the pipe bowls have distinctive characteristics. The first is a Dutch pipe with a maker’s mark on the heel. This mark is a crown with “23” beneath it and the “Arms of Gouda” on the other side of the heel. This pipe bowl dates from 1739–1819 (Boon 20102). The second distinctive pipe bowl is also a Gouda pipe with the “Arms of Gouda” on the left side of the heel; the heel also has a mark of a crowned “D.” This bowl, which dates 1739–1898 (Boon 20102), is burned from fire and not from use. The final pipe bowl with defining characteristics has a masonic-stag motif. The bowl depicts a cervid head with upright antlers facing the smoker. A variety of masonic symbols are present on either side; the square and compass, and possibly a shield, on the left side and the square with *castles in triangle*. There is no date associated with this pipe bowl.

### *Sanitary*

Sixteen sanitary-related artifacts were recovered, all chamber pot sherds. The five stoneware sherds are salt glazed and date 1720–1820 (Janowitz 2008). Three of the sherds mend and form part of a well potted, decorated, and fired piece. The decoration is that of incised and filled leaves or petals. One sherd is of slip cast creamware (1762–1820) (Miller et al. 2000:12). The remaining 10 chamber pot sherds are redware.

## **TEST UNIT 3/8**

As the project progressed, it was determined that excavation would need to occur within the areaway, on the southern side of the retaining wall. Though the overall areaway excavation is

discussed toward the end of this chapter, it is mentioned here, as this unit recovered part of the Stratum IV deposit found within Test Units 3 and 8. Test Unit 3/8 was located on the south side of the retaining wall, whereas Test Units 3 and 8 were located on the north side of the retaining wall. The deposit was (re-) exposed almost immediately beneath the concrete areaway surface, approximately 3' bd. As the deposit was excavated in one episode spanning the full length of Test Units 3 and 8—as well as several months later—this excavation unit was labeled Test Unit 3/8. Soils and artifact type and densities were consistent with Stratum IV of Test Units 3 and 8.

ASSEMBLAGE

A total of 305 artifacts were recovered in this test unit (Table 7.44). Overwhelmingly, the majority of these artifacts ( $n=287$ ) are food-related faunal remains.

Table 7.44: Test Unit 3/8 artifact count.

Functional Group	Artifact Count
Architectural	1
Food Related	287
Household	17

*Architectural*

The single architectural artifact is a brick fragment.

*Food Related*

Consistent with Stratum IV of Test Units 3 and 8, this unit contained several larger faunal elements identifiable to the species level. Table 7.45 provides a breakdown of the faunal identification and count.

Table 7.45: Faunal count for Test Unit 3/8.

Species/Class	Count
LTM	67
MOLSP	1
MTM	6
UNIM	72
BOS	132
OVCA	8
SUS	1

Among the 132 cattle (*Bos taurus*) bones, a variety of skeletal elements are present, including skull, vertebrae, and long bones. One bone of note is a horn core with skull fragment that exhibits heavy bone growth.

*Household*

The 17 household artifacts include three glass shards from a container, a bottle and a wine bottle, and 15 ceramic sherds. The majority of the ceramic sherds are salt-glazed stoneware (1720–1820) (Janowitz 2008), five in the form of jar/jugs. Also present are five creamware sherds (1760–1820), two of which show heavy wear and two floral painted pearlware sherds (1795–1830) (Miller et al. 2000:12). The pearlware sherds mend and are part of a large punch bowl.

**TEST UNIT 3 – LEVELS 6 AND 10**

Levels 6 and 10 of Test Unit 3 included wall cleaning. Due to their mixed context, they are discussed jointly.

LEVEL 6

A total of 61 artifacts were recovered during wall cleaning (Table 7.46). As they are a mix of the various strata in the unit, they cannot be assigned to any specific portion of the deposit. Table 7.46 provides a breakdown of the artifact count by functional group.

Table 7.46: Test Unit 3, Level 6 artifact count.

Functional Group	Artifact Count
Food Related	48
Household	11
Manufacturing	1
Sanitary	1

*Food Related*

A total of 48 faunal remains were recovered from this level. The faunal remains consist of large terrestrial mammal ( $n=24$ ), mollusk ( $n=6$ ), unidentified ( $n=1$ ), and *Bos taurus* ( $n=17$ ). Many of the elements show evidence of butchery. The six mollusk shells are quahog clam ( $n=5$ ) and oyster ( $n=1$ ).

*Household*

The household artifacts include: two British buff-bodied slipware, three salt-glazed stoneware, four creamware, and two pearlware sherds. The two pearlware sherds are shell edge decorated (1800–1835) (Miller et al. 2000) that mend and show heavy wear on the base. There is another sherd from this vessel in the Stratum IV assemblage. One of the stoneware sherds exhibits a tooled and squared off Crolius/Remmey rim shape (1720–1820) (Janowitz 2008).

*Manufacturing*

The one manufacturing artifact is an underfired, very lightly glazed stoneware sherd, a remnant of stoneware production.

*Sanitary*

A single stoneware sherd represents this group. It is a chamber pot fragment decorated with an incised and filled floral pattern (1720–1820) (Janowitz 2008). This chamber pot may have been locally made.

LEVEL 10

Level 10 contained 57 artifacts (Table 7.47).

Table 7.47: Test Unit 3, Level 10 artifact count.

Functional Group	Artifact Count
Food Related	36
Household	12
Indeterminate	6
Personal	3

*Food Related*

Thirty-six faunal remains were recovered as part of this level. These remains include: avian ( $n=1$ ), large terrestrial mammal ( $n=10$ ), medium terrestrial mammal ( $n=1$ ), unidentified mammal ( $n=18$ ), *Bos taurus* ( $n=5$ ), and oyster shell ( $n=1$ ).

*Household*

Twelve household artifacts include a glass bottle shard and 11 ceramic sherds. Among the ceramic ware types are: two creamware, five pearlware, three salt-glazed stoneware, and one white salt-glazed stoneware. None of these sherds has any distinctive characteristics. Only one, a pearlware with a printed geometric pattern, has a refined date of 1807–1880 (Miller 1991; Miller et al. 2000:13).

*Indeterminate*

The five indeterminate artifacts are six pieces of iron; five of these are defined as sheet metal, possibly handles from utensils.

*Personal*

There are three personal items in this assemblage. Two buttons were recovered: the first is the back of a copper alloy domed button; the second is made of bone and has a raised drilled back. The remaining personal artifact is an undecorated smoking pipe stem.

## STRATUM V

This was a clean sand layer beneath the deposit devoid of cultural materials.

## TEST UNIT 3/8 SUMMARY

The materials recovered from Test Units 3 and 8 (and Test Unit 3/8) are the same deposit. The Stratum III deposition of Test Units 3 and 8 are a single deposit that may be considered secondary. Stratum III is observed on the east side of Feature 3 (exterior), which cut into this deposit (Map 7.25). It is clear the deposit was impacted; less clear is if it was redeposited. The TPQ for Stratum III is 1864. However, the next TPQ, which is more consistent with the overall deposit, is 1825—a gap of almost 40 years. The assemblage is characterized by a fairly even distribution of architectural, food-related, and household remains. The 1865 date may be intrusive and more indicative of the construction date of Feature 3 than the deposition of Stratum III.

Stratum IV, which is observed within Test Units 3, 8, and 3/8, is a single primary deposit. This deposit is overwhelmingly characterized by a dominance of food-related remains. These faunal elements are larger, compared to those within the other strata, with a higher percentage identifiable to the species level. The TPQ for Stratum IV is 1825 from a shard of molded pressed glass. Based upon the amount of faunal remains, it would appear that Stratum IV represents a kitchen deposit. Spatially, this area is located adjacent to the original, early-nineteenth-century basement kitchen of City Hall.

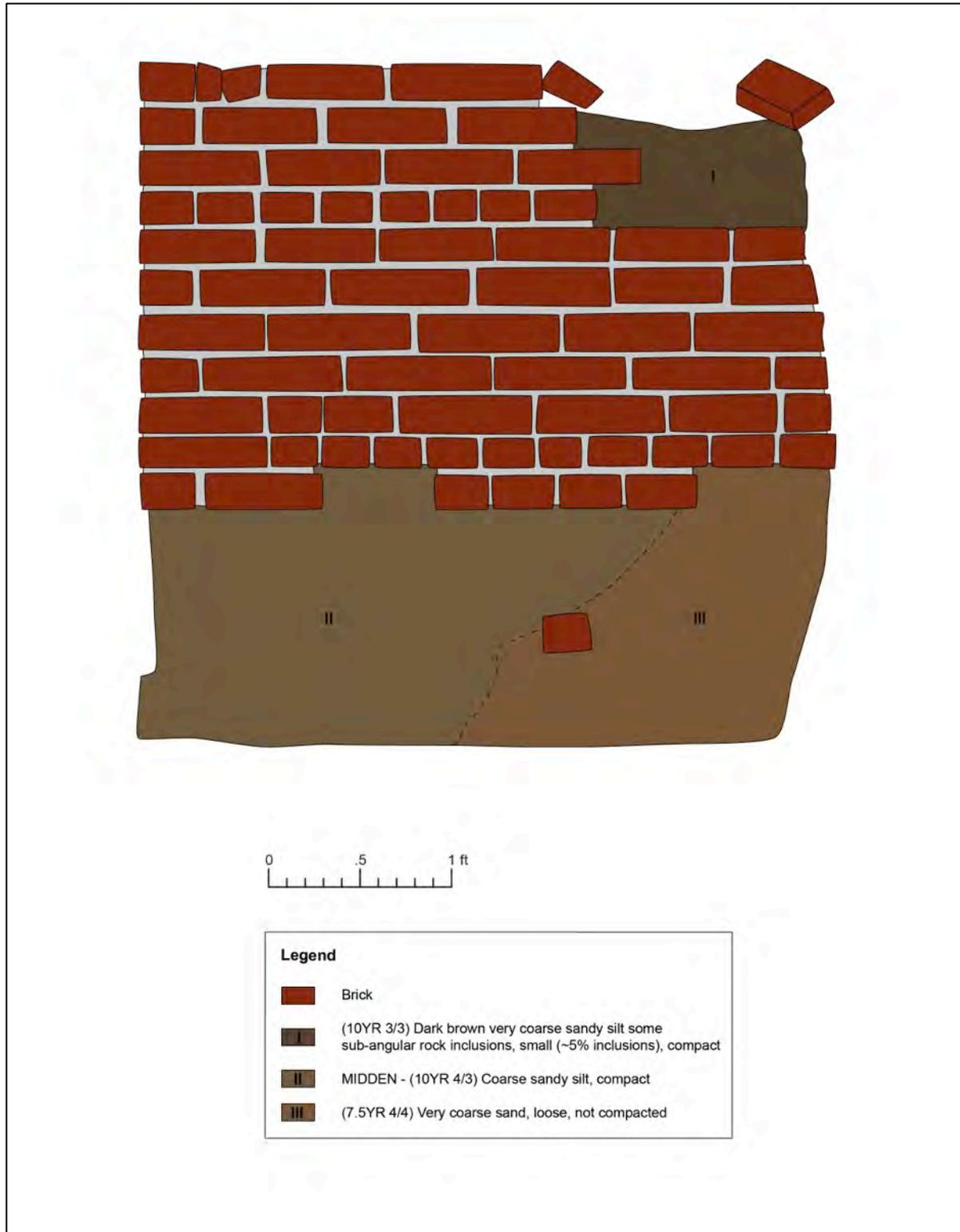
There were no noted distinctions during excavation that could determine if this was a single dumping episode or an accretionary deposit.

## FEATURE 32

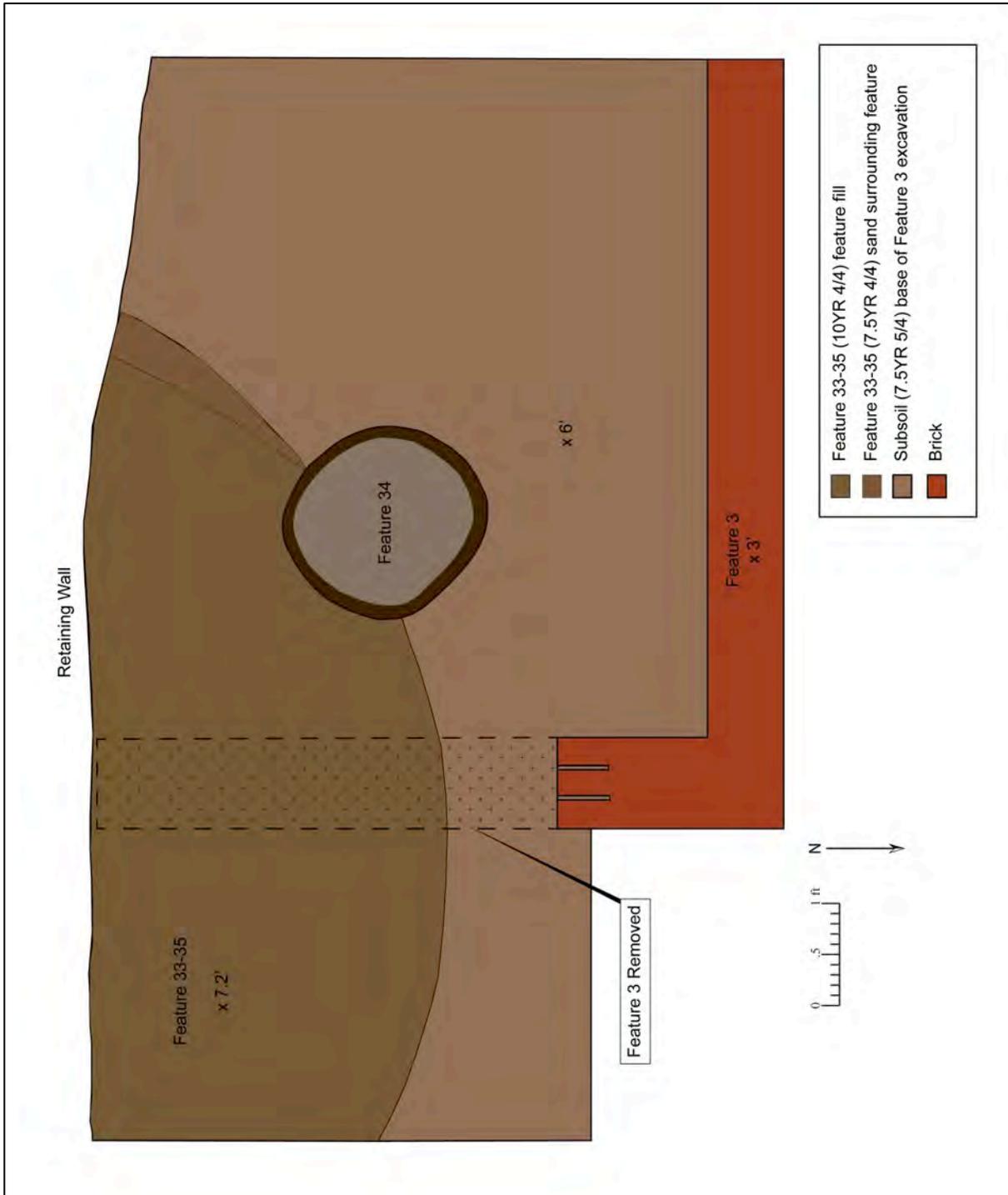
This feature was identified within Test Unit 27, a 5' x 2.5' area along the east wall exterior of Feature 3. Test Unit 27 was excavated after the drain features (Features 9–11) had been dismantled. Feature 32 was first observed at 3' bd and identified as a (trash) deposit located outside and beneath the northeast corner of Feature 3. The soil and materials in the deposit were noticeably different than those of the adjacent Test Units 3 and 8 deposit. The Feature 32 deposit had a roughly circular shape that was truncated by a builder's trench for Feature 3 (Map 7.26).

## ASSOCIATED STRATIGRAPHY

The soil matrix consisted of 10YR 3/3 to 10YR 4/3 sandy loam exposed at 3'bd and extending to 3.5' bd. The intrusive builder's trench consisted of 7.5YR 5/4 sand.



Map 7.25. – Profile showing the relation between Feature 3 and the Test Unit 3 and Test Unit 8 artifact deposit (represented in the graphic as Stratum II).



Map 7.26: Plan view of Feature 32 and adjacent features.

ASSEMBLAGE

This small deposit contained 166 artifacts. The majority of the recovered artifacts are household related. Table 7.48 provides a breakdown of the artifact count by functional group.

Table 7.48: Feature 32 artifact count.

Functional Group	Artifact Count
Architectural	16
Food Related	48
Hardware	1
Household	91
Indeterminate	1
Personal	9

*Architectural*

This group consists of five shards of common window glass and 11 iron nails of indeterminate manufacture.

*Food Related*

A total of 48 faunal remains were recovered. Among these remains is a heavily weathered oyster shell with a hack mark on its edge. The majority of the faunal elements could only be identified to the class level: large terrestrial mammal ( $n=10$ ), small terrestrial mammal ( $n=1$ ), and unidentified mammal ( $n=28$ ). The remaining eight specimens are *Bos Taurus* ( $n=4$ ) and caprine ( $n=4$ ).

*Hardware*

The single hardware artifact is a copper alloy tube of indeterminate manufacture.

*Household*

The household group accounts for slightly more than half of the artifacts recovered from this context, or 54.8% ( $n=91$ ).

The household assemblage consists of 10 glass shards and 81 ceramic sherds of coarse earthenwares, porcelain, refined earthenware, and stoneware. The glass shards are mouth-blown bottle glass and one indeterminate shard.

The coarse earthenwares consist of a British buff-bodied, slip-decorated dish sherd (1670–1795) (Azizi et al. 1996); three slip-decorated redware sherds with end dates of 1870 (Denker and Denker 1985:54–68); and 12 lead-glazed redware sherds (no date). All of the six porcelain sherds are Chinese export porcelain and include two teacup sherds with an

overglaze painted floral pattern and a saucer with an overglaze painted geometric pattern. The nine stoneware sherds are all salt glazed; one of these is a small, roughly teardrop-shaped finial measuring 0.64” high and 0.5” at its widest point.

As is common throughout the site, the majority of ceramic wares are refined earthenwares ( $n=50$ )—predominately creamware ( $n=31$ ) and pearlware ( $n=17$ ). The creamwares are all assigned the standard date range of 1762–1820, except for two overglaze painted sherds that date 1765–1820 (Miller et al. 2000:12). The pearlwares have slightly tighter date ranges based on their decorative techniques. Among the decorative techniques are three painted China glaze sherds with a Chinoiserie motif (1775–1810); one dipt sherd (1775–1850); five painted sherds (1775–1830); and four printed sherds (1807–1830) (Azizi et al. 1996; Miller et al. 2000:12; Rickard 2006).

The remaining three refined earthenware sherds are a Jackfield type decorated teapot sherd (1740–1850), one tin-glazed, and one indeterminate sherd (Azizi et al. 1996; Miller et al. 2000:12).

#### *Indeterminate*

The single artifact in this group is a shard of glass.

#### *Personal*

Nine artifacts were recovered within the personal group, all smoking pipe fragments, including six undecorated pipe stems and three pipe bowls. Though all of the pipe bowl fragments exhibit decoration, only one is dateable. This fragment (1775–1835) consists of the base of the bowl and the start of the stem, with a tall heel featuring a “W” on one side and a “G” on the other (Reckner and Dallal 2000).

#### BUILDER’S TRENCH

The builder’s trench was observed along a small portion of the north wall of Feature 3 and along a portion of the east wall. It was visibly intrusive to the deposit labeled Feature 32 (Image 7.72). Nineteen artifacts were recovered from this intrusion: five architectural, 10 household, three indeterminate, and one personal. None have any chronologically defining characteristics. The creamware sherd is assigned the standard date range of 1762–1820 and the painted pearlware sherd is dated 1775–1830. The remaining seven ceramic sherds are part of a slipped redware dish with an end date of 1870.

#### SUMMARY

Feature 32 is a small deposit impacted during the construction of Feature 3. It appears as though the majority of the deposit was excavated during construction of Feature 3 and likely redeposited elsewhere. The portion of the deposit recovered has a TPQ of 1807. Stratigraphically, this deposit was distinct from the deposit excavated within Test Units 3 and 8, and observed in Strata IV and/or VI beneath the floor of Feature 3.

To facilitate project plans, which required the removal of Feature 1, a portion of Feature 3 was removed. The archaeological team dismantled approximately two-thirds of the feature. Following this, excavation continued beneath Feature 3 to see if there were additional portions of the builder's trench or other cultural deposits.



Image 7.72: Soil profile with builder's trench beneath Feature 3.

### **FEATURE 33**

Feature 33 was a cultural deposit located following the deconstruction of a portion of Feature 3. It was situated beneath the southeast corner of the feature and was adjacent to and abutting Feature 1, which was intrusive to this deposit (Map 7.17). During excavation of Feature 33, another feature—Feature 34 (discussion to follow)—was exposed at its outside edge and excavated separately. Feature 33 extended to 5.7' bd.

#### **ASSOCIATED STRATIGRAPHY**

Feature 33 consisted of a 10YR 4/3 sandy loam midden deposit measuring from 5.1'–5.7' bd. The feature bottom was reached with the discovery of a clean sand layer.

ASSEMBLAGE

Excavation of Feature 33 recovered 318 artifacts (Table 7.49). The assemblage is dominated by food-related remains, which account for 60% ( $n=191$ ). The next largest group is household remains, accounting for 23.8% ( $n=76$ ) of the assemblage. In this aspect, Feature 33 is similar to the deposit in Test Units 3, 8, and 3/8, which were situated above it.

Table 7.49: Feature 33 artifact assemblage by functional group.

Functional Group	Artifact Count
Architectural	20
Arms	1
Food Related	191
Household	76
Indeterminate	15
Manufacturing	4
Personal	11

*Architectural*

The architectural group contains 20 artifacts, including window glass ( $n=12$ ), nails ( $n=6$ ), ceramic sewer/water pipe ( $n=1$ ), and mortar ( $n=1$ ). The iron nails are of indeterminate manufacture. The ceramic sewer/water pipe fragment is composed of stoneware and has a beginning date of 1850. There is a notation in the field notes that this fragment was located immediately adjacent to the bottom layer of Feature 3; it may be associated with the feature and not actually part of the Feature 33 assemblage.

*Arms*

The arms group is represented by an English flint gunflint (Image 7.73).

*Food Related*

This group accounts for the majority of the assemblage, containing 191 faunal remains (Table 7.50). The majority of these remains are too fragmented to identify beyond the class level; 105 fragments are unidentified mammal. Of the 29 bones that were identifiable to the species level, all but three are cattle. Among the six clam shells, two exhibit shucking marks.

Table 7.50: Feature 33 food-related faunal remains.

Species/Class	Count
UNIM	3
AVSP	3
LTM	35
MOLSP	10
MTM	6
UNIM	105
BOS	26
OVCA	1
SUS	2



Image 7.73: Gunflint.

### *Household*

The household group contains 76 artifacts—four glass shards and 72 ceramic sherds. Among the glass are two bottle glass shards of indeterminate manufacture and two mold-blown beer or soda bottle fragments. This bottle was made in a cup mold with a snap case and dates 1850–1920 (Society for Historical Archaeology 2012).

Fourteen coarse earthenware sherds were recovered, including three sherds of British buff-bodied slipware (1670–1795) and five sherds of lead-glazed redware (no date). The remaining six coarse earthenwares are slipped decorated redware dish sherds with end dates of 1870 (Denker and Denker 1995). The three porcelain sherds are Chinese export porcelain; these are both teaware sherds with a painted decoration. Four stonewares were recovered, three gray/buff-bodied salt-glazed and one white salt-glazed teaware.

Among the refined earthenwares are 34 creamware sherds (1760–1820); none of these has any visible decoration. There are 10 pearlware sherds exhibiting various decorative techniques. A China glaze saucer painted with a floral landscape dates 1775–1810; another saucer with a painted decoration dates 1795–1830 (Miller et al. 2000:12). The remaining refined earthenwares are three tin-glazed sherds; a slip-decorated red-bodied ware; and two sherds identified as “molded fruit/vegetable ware,” with a green-glazed cauliflower leaf design dating 1760–1780 (Jefferson Patterson Park and Museum 2012).

### *Indeterminate*

The 15 indeterminate artifacts include 11 fragments of iron sheet metal, three fragments of wood, and a thin hook-shaped piece of copper alloy.

### *Manufacturing*

The manufacturing-related artifacts are four stoneware wasters or seconds, one in the form of a jug. These are likely discards from local pottery production.

### *Personal*

The two personal objects are copper alloy buttons.

## FEATURE 33 SUMMARY

Feature 33 is largely comprised of food-related faunal remains and household materials suggestive of a kitchen-related deposit. One sherd of beer/soda bottle glass and a piece of ceramic sewer/water pipe were recovered with a beginning date of 1850. However, these are outside the range of all the other dateable materials in the Feature 33 assemblage. It is likely that these two artifacts are intrusive from the construction of Feature 3. The two next closest TPQ dates are 1795 from a painted pearlware saucer and 1775 from several artifacts. Feature 33 culminated with a thin clean sand layer devoid of any cultural material.

### FEATURE 34

Feature 34 was a wooden barrel or bucket feature located beneath the southeast corner of Feature 3 (see Map 7.26); it first appeared as a decayed wooden ring at the outside edge of Feature 33 at 5.5' bd (Image 7.74). Excavation within the feature revealed a decayed wood lining, the barrel or bucket itself, extending less than 1' to approximately 6' bd. The feature had a 1.8' diameter. Its location would eventually place it within Feature 35.

The soil matrix within the wooden barrel/bucket was a 10YR sandy silty loam.

Only 10 artifacts were recovered from within this shallow feature, among them one shard of window glass, one clam shell fragment, a cattle humerus, two shards of bottle glass, two creamware sherds (1762–1820), one painted pearlware sherd (1775–1830), one bone button blank fragment, and one undecorated pipe stem.



Image 7.74: Feature 34 appeared as a wooden ring/stain.

**FEATURE 35**

Feature 35 was defined by several factors, including its appearance at the boundary, or edge, of Feature 33, a clean sand layer beneath Feature 33, and the intrusion of Feature 34 (see Map 7.26). This feature began as an oblong exposure measuring approximately 8' x 3' and abutting Feature 1. The deposit was located beneath Feature 33; a 7.5 YR 4/3 sand lens separated the two deposits. The separation of the two deposits was clearly visible in profile. In addition to the dividing sandy lens, the deposit labeled Feature 35 also appeared to contain older artifact material.

This deposit was fully excavated and ultimately terminated with the base of an eighteenth-century cistern at 7.2' bd that had been truncated by Feature 1 and likely Feature 3. The cistern was labeled Feature 33/35, as it was now obvious that these two deposits, as well as that of Test Units 3, 8, and 3/8, were located within the interior of this feature.

ASSOCIATED STRATIGRAPHY

The soil matrix of the Feature 35 deposit consisted of 10YR 4/3 and 10YR 5/2 sandy silt.

ASSEMBLAGE

Feature 35 is a midden assemblage containing 1,274 artifacts (Table 7.51). The assemblage shares characteristics with the above deposits; food-related faunal remains account for the majority of the assemblage at 58.7% ( $n=748$ ), followed by household remains at 26.7% ( $n=341$ ).

Table 7.51: Feature 35 artifact assemblage by functional group.

Functional Group	Artifact Count
Activities	1
Architectural	49
Arms	3
Food Related	748
Fuel	2
Hardware	4
Household	341
Indeterminate	43
Manufacturing	14
Other	45
Personal	23
Sanitary	1

*Activities*

This group contains one artifact, an inkwell dating 1800–1870 (Society for Historical Archaeology 2012).

*Architectural*

There are 49 artifacts within the architectural group. Among the artifacts recovered are three whole bricks and three brick fragments, including a Dutch brick fragment; a piece of sandstone; 10 pieces of mortar; and one piece of plaster. There are 15 iron nails of indeterminate manufacture and one hand-wrought copper alloy nail measuring 1.2”; this is likely a decorative finishing nail. There are 11 shards of window glass and three fragments of ceramic water/sewer pipe.

*Arms*

This group consists of three fragments of the copper (alloy) spout of a powder horn.

*Food Related*

This is the largest group within the Feature 35 assemblage, containing 748 faunal fragments (Table 7.52). Of these, almost 70% are only identifiable to the class level. Of the class level identifications, over 95% are mammal. There is little presence of fish or bird species.

Table 7.52: Feature 35  
faunal count.

Species/Class	Count
AVSP	19
FISH	3
LTM	89
MOLSP	14
MTM	43
STM	25
UNIM	340
BOS	202
OVCA	12
SUS	1

The identifiable species are predominated by cattle ( $n=202$ , or 89.7%). Several skeletal elements are present, including head and mandible. Many of the elements exhibit marks of butchering. Caprine and pig are nominally represented. The caprine bones are almost exclusively head and mandible. Shell, which was abundant during excavation, was noted and discarded except for a few samples—these are quahog clam and two species of oyster.

Cattle and sheep heads and cows feet were common in several eighteenth-century recipes, including broths made with root vegetables (Rumble 2009). A recipe from *The Art of Cookery* by Hannah Glasse (1774) for baked calf or sheep's head offers insight:

Take the head, pick it and wash it very clean; take an earthen dish large enough to lay the head on, rub a little piece of butter all over the dish, then lay some long iron skewers across the top of the dish, and lay the head on them skewer up the mean in the middle that it don't lie on the dish. Then grate some nutmeg all over it, a few sweet herbs shred small, some crumbs of bread, a little lemon-peel cut fine, and then flour it all over: stick pieces of butter in the eyes and all over the head, and flour it again. Let it be well baked, and of a fine brown; you may throw a little pepper and salt over it, and put into the dish... A bundle of sweet-herbs, and onion, some whole pepper, a blade of mace, two cloves, a pint of water, and boil the brains with some sage. When the head is enough, lay it on a dish, and set it to the fire to keep warm, then stir all together in the dish, and boil it in a saucepan; strain it off, put it into the saucepan again, add a piece of butter rolled in flour, and the sage in the brains chopped fine, a spoonful of catchup and two spoonful of red wine; boil them together, take the brains, beat them well, and mist them with the sauce: pour it into the dish and send it to the table. You must bake the tongue with the head, and don't cut it out. It will lie the handsomer in the dish [Glasse 1774:28].

### *Fuel*

This group contains two charcoal fragments.

### *Hardware*

There were four hardware-related artifacts recovered within Feature 35. One of these artifacts is a heavily rusted iron wire, possibly a bale handle. An iron doorknob and a possibly associated iron washer are also part of the assemblage. The remaining artifact in this group is a cast-copper alloy escutcheon or hasp engraved with a floral motif. This may have been part of a small chest. No dates are associated with any of these four artifacts.

### *Household*

Of the 341 household artifacts, 23 are glass and the remaining 318 are ceramic. The glass consists of bottle glass and some drinking vessel glass, including shards of a tumbler and stemware. None provided any clear chronological data. The ceramic sherds are divided among coarse earthenwares ( $n=31$ ), porcelain ( $n=16$ ), refined earthenwares ( $n=225$ ), and stoneware ( $n=46$ ).

The coarse earthenwares consist of eight British buff-bodied slipwares and 23 redwares; three of the redwares are slip-decorated. The British slipwares, one of which is decorated with a dot pattern, date 1670–1795 (Azizi et al. 1996). One of the redware sherds is part of a Lower Delaware Valley–style bowl dating 1740–1820 (Azizi et al. 1996).

Sixteen Chinese export porcelain sherds were recovered. Several of these exhibit a painted decoration, but none have enough of the design extant to provide chronological information. Among the 46 stoneware sherds are 39 gray/buff-bodied, salt-glazed, and seven white salt-glazed. The gray/buff-bodied sherds exhibit painted, cordoned, and incised and filled decoration; identifiable forms include jars and jugs. One jar is wide-mouthed with a flat-topped squared-off rim and has a crudely executed incised and filled floral moosehead pattern. Among the white salt-glazed is a teacup with an indeterminate decoration (1720–1790) (Mille et al. 2000:10) and a plate with a bead and reel molded pattern (1740–1783) (Azizi et al. 1996). Another sherd is overglaze painted which dates 1746–1783 (Miller et al. 2000:10).

The refined earthenwares are the largest household ceramic group, with 225 artifacts. These artifacts are mostly split among creamware ( $n=151$ ) and pearlware ( $n=63$ ). The remaining refined earthenwares include three Jackfield type (1740–1850); five sherds of a tin-glazed teacup; and three engine-turned red-bodied sherds, one from a teapot lid (1760–1830) (Azizi et al. 1996; Hawkins 1999; Miller et al. 2000; Rikard and Carpentier 2004).

The majority of the creamware sherds exhibit no decoration and date 1762–1820 (Miller et al. 2000:12). There are eight plate sherds with the molder Royal Rim patten and two with the molded Queen’s Rim pattern. One sherd with a green glaze dates 1759–1775. Four mendable sherds exhibit a “DD & Co Castleford” maker’s mark with a stylized sunburst; this refines the date range to 1790–1820 (Edwards 1982; Miller et al. 2000:12). Forms include plate, mug, pitcher, saucer, and general tableware. Two sherds of a nappie are also present.

A variety of decorative types are present among the pearlware sherds, including several painted sherds (1775–1830); China glaze painted (1775–1810); dipt (1775–1850); printed (1807–1830); and shell edge (1800–1835) (Miller et al. 2000). Most of the pearlware sherds are fragmented and have indeterminate forms. A painted China glaze saucer with a Chinese landscape pattern is described as having a “kill hole” in the center of its base, appearing to be intentionally damaged or perforated.

#### *Indeterminate*

There are 43 objects for which no definitive identification could be made. Except for two glass shards, these are all heavily rusted and corroded metal fragments.

#### *Manufacturing*

There are 14 manufacturing-related objects in the assemblage. Seven of the manufacturing artifacts are related to stoneware pottery production; one is a sherd from a waster or second, but the remaining six are kiln pads (1720–1820) (Janowitz 2008). The remaining half of the assemblage contains two bone button blank fragments and five redware sugar mold sherds, two with a thin white slip on the interior (Image 7.75).

Sugar molds generally take the form of long, solid blocks with a series of depressions or earthenware cones into which raw sugar cane syrup could be poured. Each mold would stand in its own collecting pot to catch the dark syrup and uncrystallized matter that drained through a small hole in the bottom of the mold. The loaves were then tapped out of the

molds, dried in a stove room, trimmed to their final shape, and wrapped. Sugar molds, and in turn the sugarloaves, varied in size considerably—the larger the loaf, the lower the grade of sugar. Households bought their sugar in the tall, conical loaves, from which pieces were broken off with special iron sugar-cutters (sugar nips). This was the standard of sugar production until the mid-nineteenth century (Society for Promoting Christian Knowledge 1846; David 1977).



Image 7.75: Sugar mold sherds from Feature 35 and a representative image (inset) of a more complete example.

*Other*

The other group is composed of 45 non-food-related faunal elements, including 17 canine, 23 feline, and five rat bones. The dog and cat bones include various skeletal elements, suggesting that the deceased animals were discarded within this feature.

*Personal*

Twenty-three personal artifacts were recovered, all smoking pipe fragments. Among these are 21 pipe stems and two pipe bowl fragments. Only one has any identifying characteristics, a pipe bowl fragment molded with “R. Tippet” in a slightly oval cartouche. None provide any chronological data.

*Sanitary*

The single sanitary artifact is part of a salt-glazed stoneware chamber pot.

FEATURE 35 SUMMARY

Feature 35 culminated with the interior base of an eighteenth-century cistern (Feature 33/35) (Image 7.76). The cistern was mostly demolished, likely beginning with the construction of Feature 1 and continued during construction of Feature 3. Only one course of the stone remained. The walls of the cistern had been constructed of large reddish sandstone blocks mortared with a sand based mortar and a thin plaster coating on the interior wall. The base was constructed of slabs of the same stone and a single row of a brick outer rim. Measurements determined the cistern to have had a 9’ diameter.

This area was exceedingly complex stratigraphically, having been built upon multiple times. The cistern was the first feature constructed in this vertical location, horizontally placed at 46’–59’ from the northeast point of the pre-existing areaway of City Hall. At some point, this cistern was no longer used for the purpose of holding water and it became a repository for trash, as represented in the Feature 35 deposit.

Feature 35 is characterized by a large number of food-related faunal remains and household items (Figure 7.02). The faunal elements are largely identifiable and are less fragmented than earlier deposits. The composition of the assemblage is suggestive of a kitchen deposit. The TPQ for Feature 35 is 1800.

This deposition was covered with a layer of clean sand. Sometime after that, an additional smaller deposit accumulated. The new or more recent deposit, Feature 33, appears to have been impacted during the construction of Feature 1 and Feature 3. The Feature 33 deposit did not encompass the full width of the cistern; instead, the Feature 33 deposit was surrounded by clean soils that extended to the boundary of the cistern’s walls. This was likely fill associated with the deconstruction of the cistern walls. Feature 33 is similar in composition to Feature 35 (Figure 7.03) and has a TPQ of 1795.

The Feature 33 deposition was also covered with a layer of clean sand prior to the third deposition episode, or period, within the cistern. This third deposition includes Stratum IV of Test Units 3 and 8 and Stratum VII of the Feature 3 excavation. Figure 7.04 provides a visual representation of this deposition by functional group. This deposit is similar in composition to both Feature 35 and 33. Food-related faunal materials, followed by household-related artifacts, dominate the deposit. The TPQ for this deposit is 1807.

A fourth and final deposition within the cistern occurred some time before the construction of Feature 3. Stratum III in Test Units 3 and 8 represents this deposition. Feature 3, constructed post 1850, impacted this deposit and can be considered of mixed context. The architectural, household, and food-related remains are more evenly distributed (Figure 7.05). The TPQ is 1825.



Image 7.76: Final plan view image of Feature 33/35.

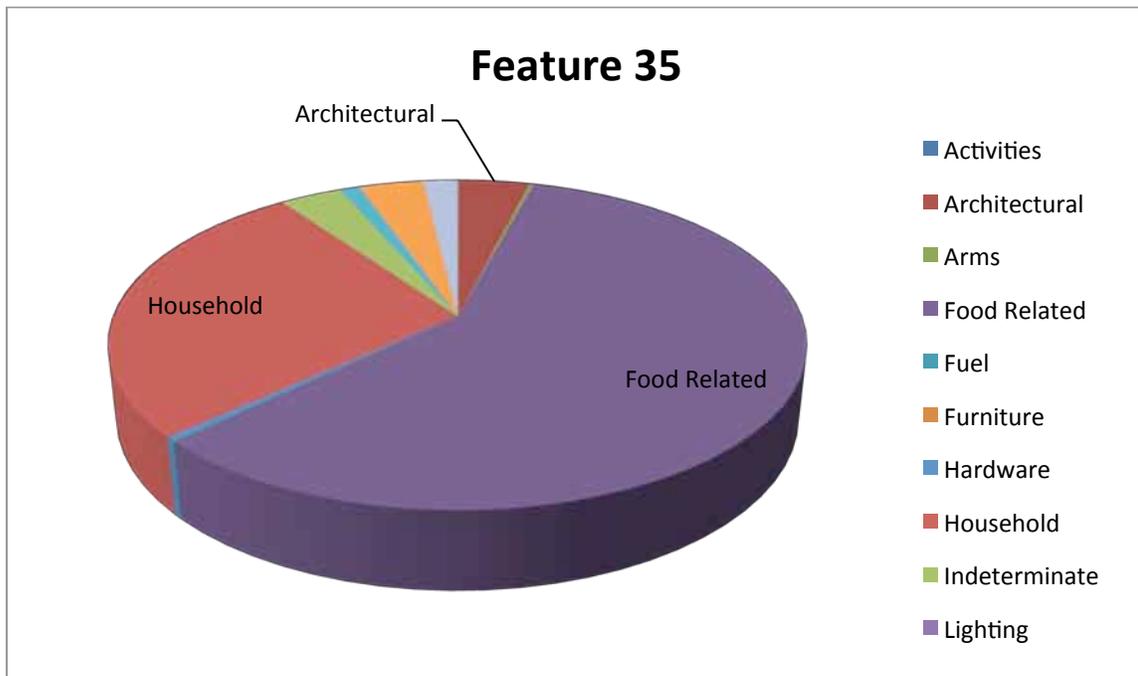


Figure 7.02: Feature 35 composition by functional groups, first deposition episode.

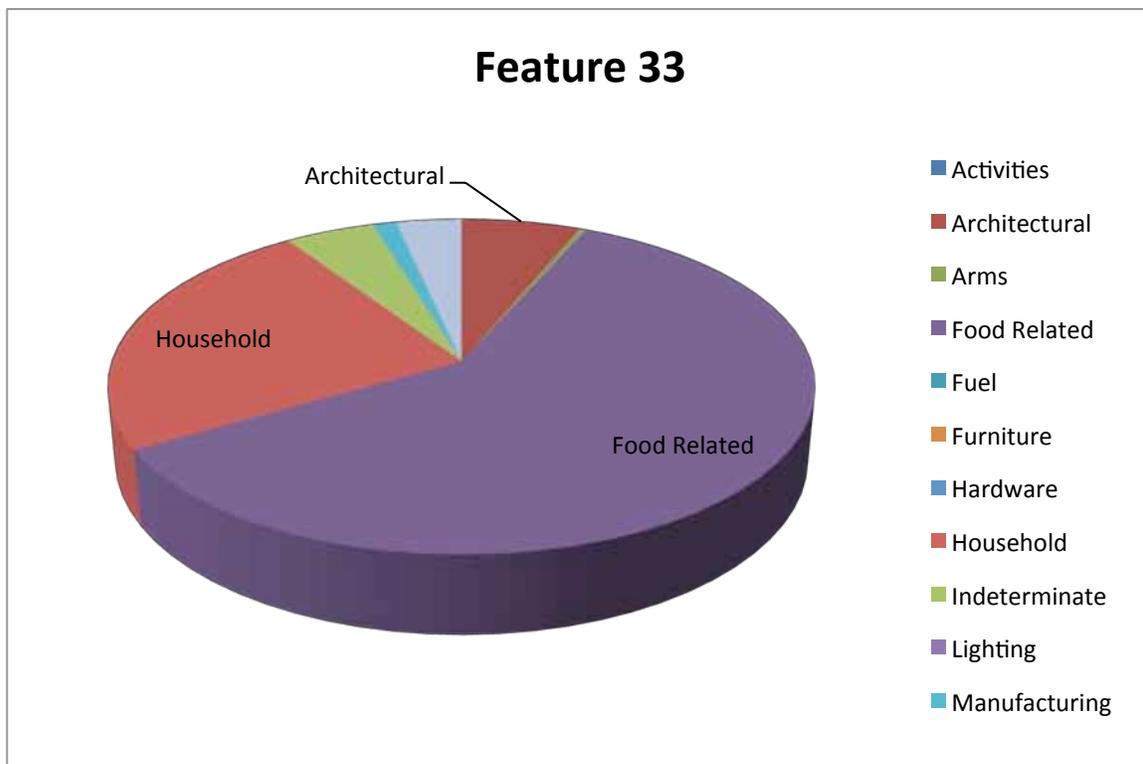


Figure 7.03: Feature 33 composition by functional groups, second deposition episode.

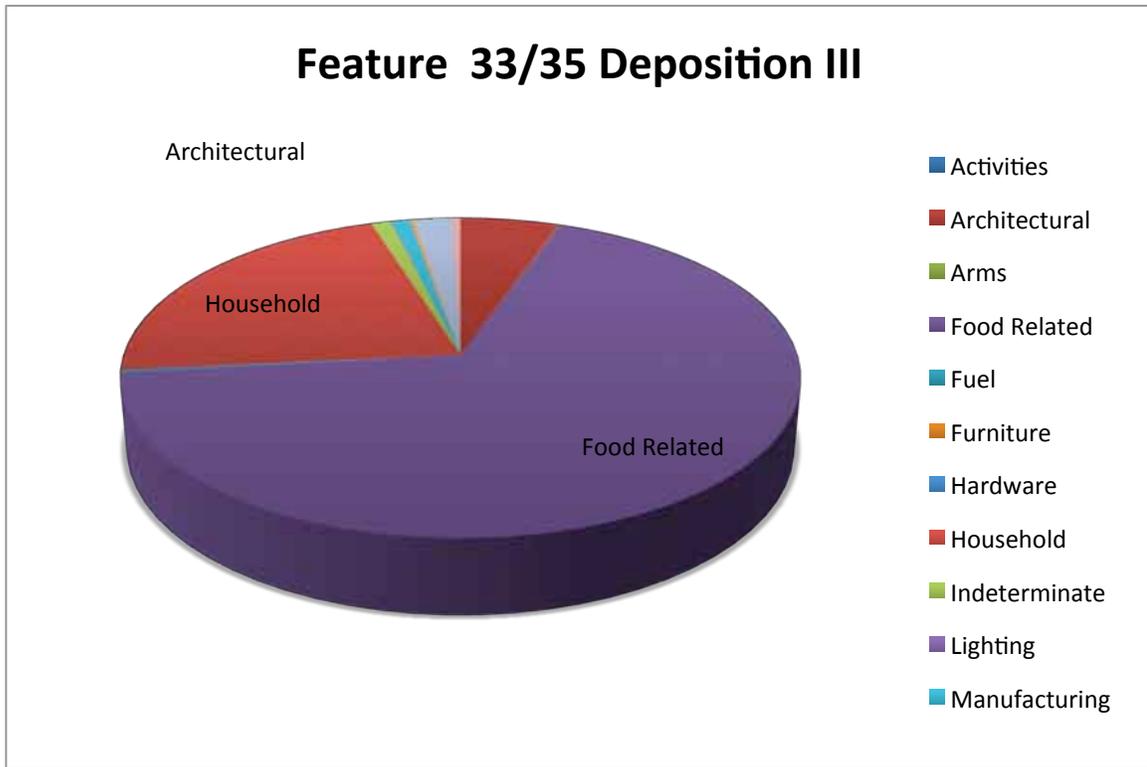


Figure 7.04: Third deposition episode within Feature 33/35.

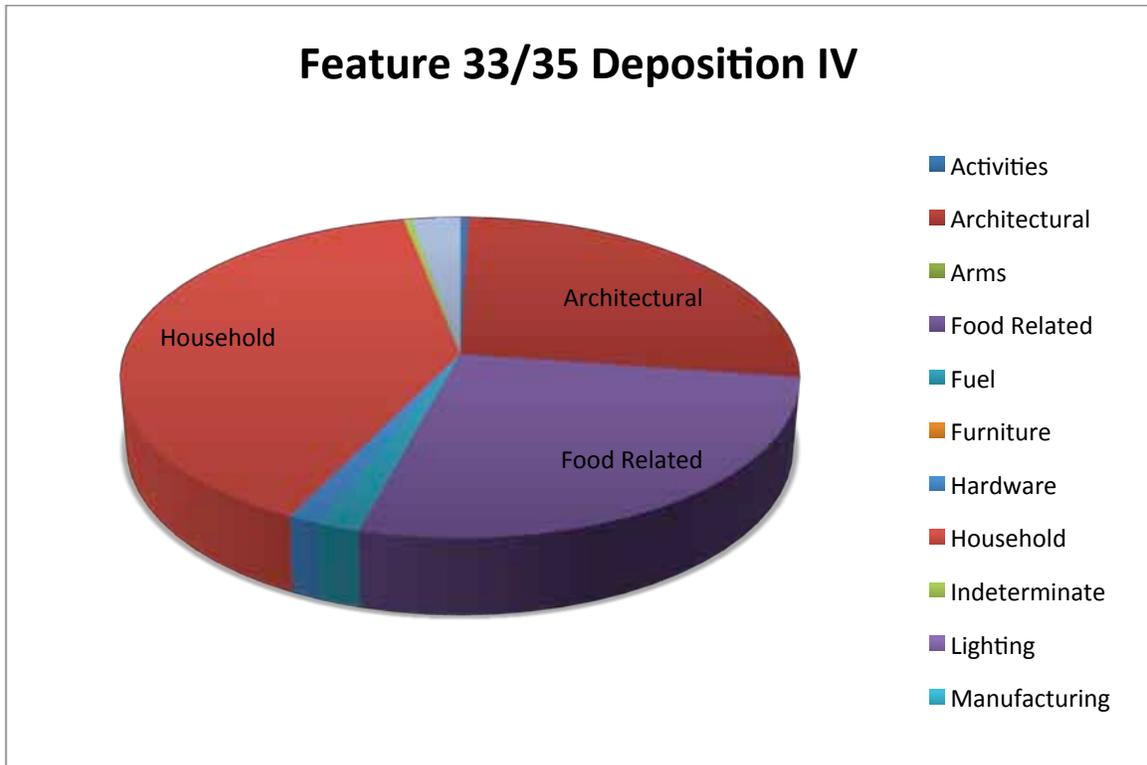


Figure 7.05: Fourth and final deposition episode within Feature 33/35.

With the exception of the fourth, the three deposition episodes or periods within the cistern are fairly similar in composition. The deposition TPQ's range from 1795–1825; Table 7.53 provides the TPQ for each of the episodes. A thin layer of clean sand separated each of the deposition episodes. Though it is undetermined when the walls of the cistern were deconstructed and some of the deposition episodes have been impacted, resulting in an incomplete sample, it is clear that the cistern was used as a receptacle for trash deposition for a period of time. It is likely that this deposit results from the presence of workers during the construction of City Hall. The workers were on site for eight years and there are undocumented references to workers living on site. Regardless of whether they were living on site or not, they would probably partake in at least one meal per day at the construction site. As people have a tendency to transport their “trash” as short a distance as possible before discarding it, this empty shaft feature would have made an ideal receptacle for the workers.

Table 7.53: TPQ for each of the deposition episodes within Feature 33/35.

Deposition episode	TPQ
IV	1825
III	1807
II	1795
I	1800

Comparatively, the fill deposit within the intrusive Feature 3 is quite different with regard to composition and date. Architectural materials and a larger percentage of household materials, compared to the cistern deposits, dominate the interior of the Feature 3 assemblage (Figure 7.06). Food-related faunal remains are third with regard to percentage of the whole. Additionally, the TPQ for this deposit is much later—1875.

The interior deposit of Feature 3 is the result of activity a century later than the cistern deposition. In this instance, it may also be related to work on site, but during a period after City Hall had been operating for several decades. The turn-of-the-nineteenth-century deposition reinforces the notions of behavioral patterns with regard to trash disposal in early New York City. As stated above, people tend to dispose of their trash in the closest, most convenient possible location. Once again, an unused subterranean feature was an ideal receptacle for disposal.

Feature 3 was partially deconstructed to facilitate construction plans. Feature 33/35 was completely deconstructed.

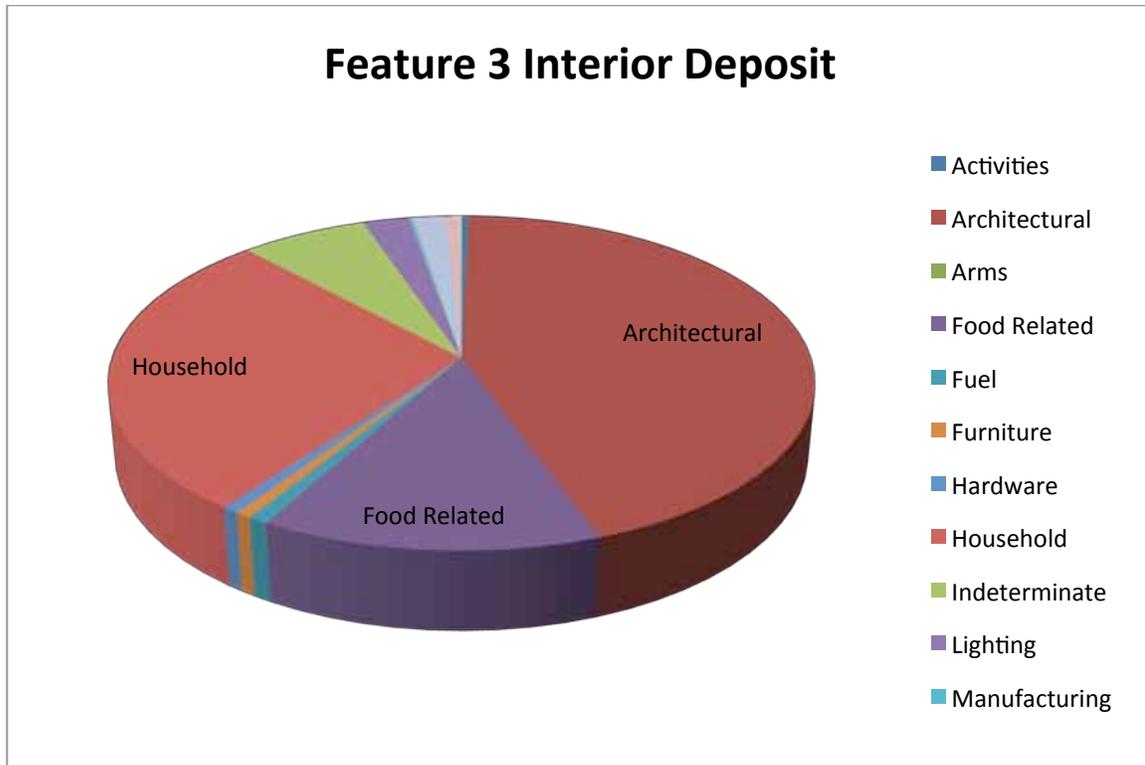


Figure 7.06: Feature 3, interior, composition by functional groups.

#### FEATURE 4

Feature 4 was uncovered in the rear of City Hall during the excavation of the northeast vault area (Map 7.17)—a medium-sized outbuilding that was located close to the juncture of City Hall’s east wing and central section; initially located at approximately 1.5’ bd. Feature 4 consisted of a rectangular brick and stone foundation with an attached bay (Map 7.27). The main body of the foundation was 16.8’ in length along its east-west (long) axis and 8.4’ along its shorter north-south axis. The attached bay was also rectangular. It was located in the center of the feature’s southern wall and measured 8.8’ along its east-west axis by 2.4’ along its north-south axis.

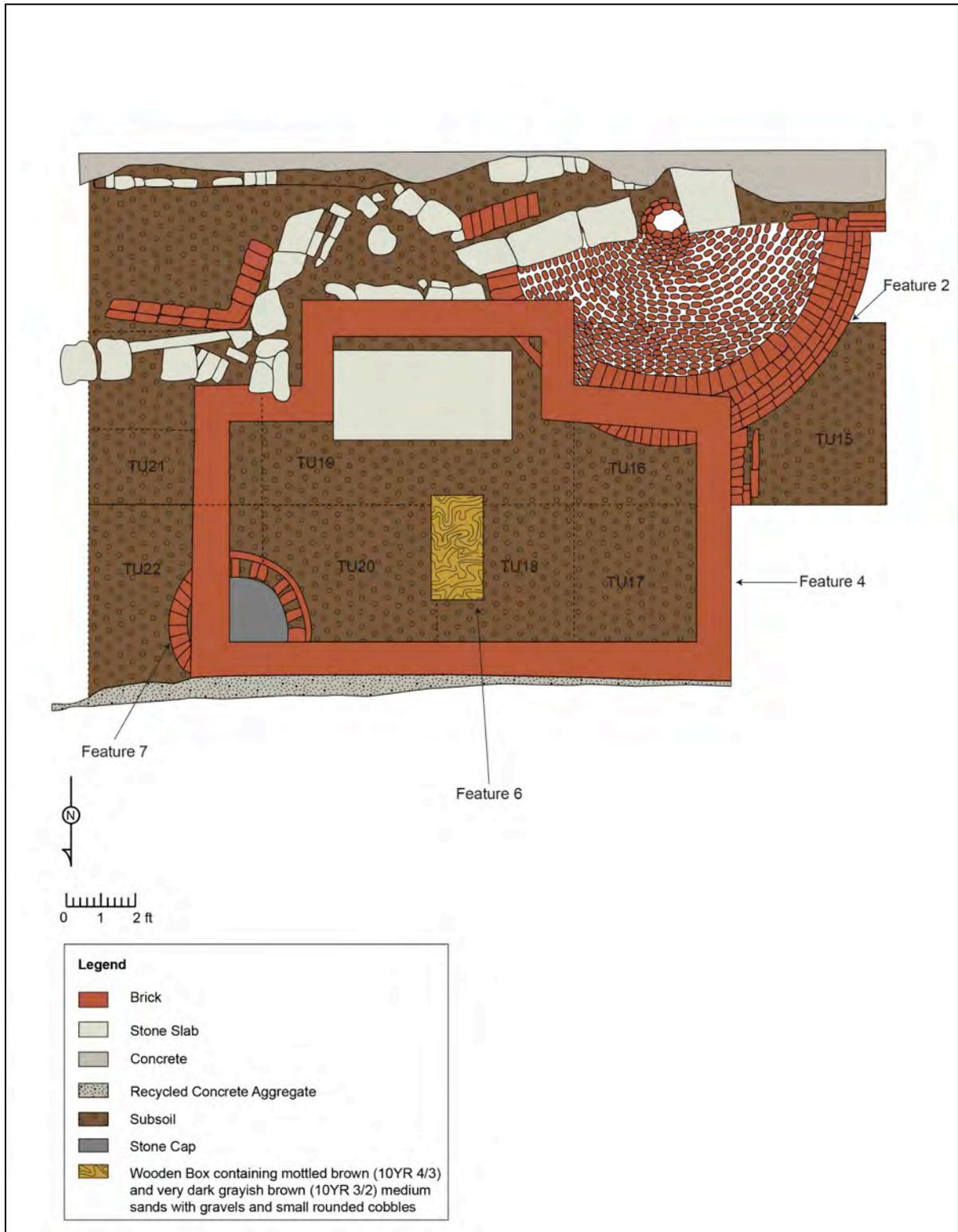
As the cubic volume that comprised the trench was removed incrementally via test units, 10 units in total were excavated. Test Units, 10, 12, and 13 were located in the southern portion of Feature 4. As trenching expanded northward, Test Units 16 through 22 uncovered the remainder of the feature. Test Units 16 through 20 documented the interior fill of Feature 4.

A large slab of schist (or granite) was located in the bay at 2.9’ bd. The slab was level and appeared to be purposefully placed. It measured 4.8’ long by 2.2’ wide by 0.2’ thick, which was not large enough to completely fill the bay’s interior space. The western edge of the slab was 1’ from the western bay wall. To the east, the slab was 0.2’ from the bay wall. The slab was offset in terms of its north-south placement. It was located 0.4’ from the southern wall of the bay and jugged the same amount past the bay’s northeastern interior corner (Image 7.77).

The southwestern portion of the main structure and the bay sat directly upon and were anchored to the northeastern arc of Feature 2 (the cistern) by mortar. Feature 7, a small shaft feature, was encountered beneath the northwest corner of Feature 4. In this case, the walls of Feature 4 were not mortared directly to the shaft; rather another granite slab, that capped Feature 7, served as the anchoring point. A third feature was encountered within Feature 4's walls—Feature 6, a small rectangular shaft/wooden box. It was encountered at the base of the test units within Feature 4.

Feature 4's foundation walls were three stretchers wide, which made the approximate width of the wall 1'. Approximately 2 vertical feet of the feature's walls were extant. Various combinations of brickwork and stone made up Feature 4's walls. In general, the brickwork is best described as American Bond, which usually consists of a series of five stretcher courses separated by single header courses. The number of courses varies in Feature 4; header courses separate three to five stretcher courses. There are also portions where the header course is actually constructed of "rowlocks," which are headers laid lengthwise. The foundation was comprised of 1.2' of brickwork and 0.8' of stonework (Image 7.78). In general, the brickwork consisted of five stretcher courses upon a single header course. On the interior of the foundation, this brickwork sat upon two courses of stonework. The first course was of cut granite block (0.4') and the second of cut schist blocks (0.4'). All the joints between brick and stone were mortared.

The northern wall varies slightly from the above descriptions. Portions exhibit a rowlock course instead of a header course. Beneath the rowlocks are one to three additional stretcher courses. The portions that only have one additional stretcher course lay upon granite blocks. The portions with three additional stretcher courses lay directly upon the lower schist blocks (Image 7.79). This different construction technique could be due to a shortage of the granite blocks when completing the north wall of Feature 4.



Map 7.27: Plan view of Feature 4.



Image 7.77: Feature 4, view of southern bay and slab.



Image 7.78: Feature 4, View of interior brickwork of western wall.



Image 7.79: Feature 4, view of interior brickwork and schist footers of northern wall.

Feature 4's exterior offered a strict contrast to the interior. Instead of the neatly cut granite blocks beneath the brickwork, a rough mass of brick and stone was present (Image 7.80). It consisted of a mixture of rough-cut schist and randomly oriented bricks that protruded approximately 0.3' from the western wall. This capped a rough-cut course of schist blocks. The rough work either represents a "spread" footer, or it may have been constructed in order to mate the exterior with Feature 2. As the eastern exterior wall also exhibits protruding rough brickwork (Image 7.81), this probably indicates that the protrusion was designed as a "spread" footer. As can be seen in the photograph, the lower exterior bricks in the eastern wall appear rougher and have a different hue. This may indicate that they were either recycled from an earlier structure or merely manufactured differently. The roughness of the exterior brickwork indicates that these portions were below ground and not visible. The interior face(s) were most likely visible while the outbuilding was utilized.

ASSOCIATED STRATIGRAPHY

Although several test units were excavated within Feature 4, they revealed a common stratigraphy. Table 7.54, describes this stratigraphy.

Table 7.54: Feature 4 stratigraphy.

Stratum	Depth	Soil Description
I	1.5' – 1.7'	Compact gravel and RCA fill horizon. Bedding material for bluestone sidewalk
II	1.7' – 2.1'	Very dark brown (10YR 2/2) coarse sandy silt; very compact; bedding for sidewalk
III	2.1' – 2.9'	Dark yellowish brown (10YR 4/4) very compact sandy silt with brick and mortar throughout
IV	2.9' – 3.6'	Brown (7.5YR5/4) to yellowish brown (10YR 4/4-5/4) compact coarse silty sand with mortar and angular cobbles
V	3.6' – 4.2'	Black (10YR 2/1) sandy loam mottled with very dark grayish brown (10YR 3/2) sandy loam
VI	4.2' – 4.6'	Mottled yellowish brown (10YR 5/6), strong brown (7.5YR 5/6), and brown to dark yellowish brown (7.5YR 4/4 – 10YR 4/4) very coarse sands

Many of the horizons represent fill episodes. Strata I and II are associated with the installation of the modern bluestone sidewalk. Based on the observed amount of uncollected demolition debris (i.e., mortar, cobbles, and brick fragments) and the recovered assemblages, Strata III and IV may represent fill associated with the demolition and subsequent in-filling of the Feature 4 structure. Because the amounts of demolition debris and architectural remains dropped significantly in Strata V and VI, it was hypothesized that these strata may represent deposition that occurred either while the structure was utilized or during its construction. Additionally, Stratum V began at more or less the bottom of the brick portion of the structure, at the interface between the brick and stone footer. This may indicate that Stratum V represents either a packed floor surface, or the materials that fell between floorboards. Stratum VI appeared to represent the fill utilized to bury the stone slab footers that the bricks lay upon. This horizon could very well date to the construction of the building.

As previously stated, the slab located within the trench was purposely placed. It would be expected that the placement of this slab would be a clear demarcation between the various strata of the trench. However, excavations revealed that while Stratum III capped the slab, a small pocket of Stratum III was also located beneath the slab. This pocket is thin (approximately 0.1' thick) and basin-shaped. It appears that a small amount of Stratum III soils was utilized to “even out” the surface of Stratum IV. This would have served to make a

stable horizontal (level) surface to place the slab upon. Additional amounts of Stratum III were then placed atop the slab.



Image 7.80: Feature 4, view of exterior brickwork of western wall.

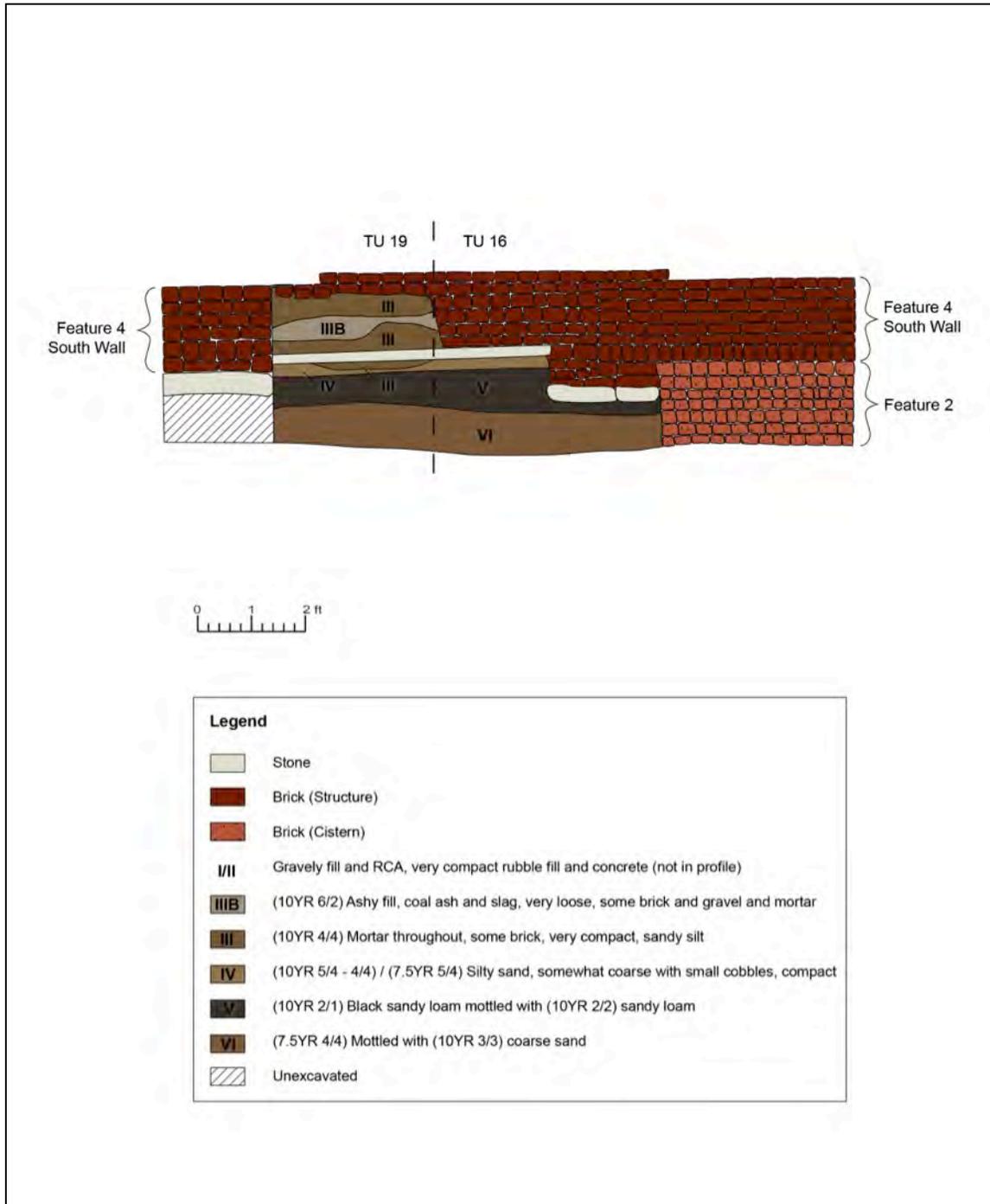


Image 7.81: Feature 4, view of exterior brickwork of eastern wall.

There are several possible reasons for the placement of the slab. The first is that it may have been part of an attempt to “floor” the bay, and possibly the rest of Feature 4. The profile of Test Unit 16 and 19’s southern walls (Map 7.28) indicates that the slab is only 0.2’ above the stone footers that support portions of Feature 4’s walls. This position indicates that the slab may have been intended as flooring. The lack of similar slabs in the main body of Feature 4 may indicate that this was only intended in the bay, or simply not completed elsewhere. The second possibility is that the bay’s intended usage was that of an oven or fireplace. The position and shape of the bay suggests that it was once part of oven/fireplace/chimney attached to the rear of the structure. The slab may have been utilized as the base of such a fireplace. However, the problem with these hypotheses is the presence of Strata III and IV beneath the slab. Based on the soil matrix—and observed amounts of cobble, mortar, and brick fragments in Strata III and IV—these strata may represent the demolition of Feature 4. This would then indicate that the slab’s position was entirely coincidental.

The soil matrix and the lack of demolition debris uncovered in Stratum V suggest that this layer was not associated with Feature 4’s demolition. Rather, the deposition may be associated with the original usage of Feature 4. The law of superposition indicates that Stratum VI may also be associated with its usage and/or construction versus the apparent demolition, as indicated in Strata III and IV.

Two additional strata were identified in Test Unit 19 exclusively: Strata IIIa and IIIb. Stratum IIIa was located in the eastern half of Test Unit 19, adjacent to the northeastern corner of the bay. Vertically, the stratum was located between Stratum II (sand bedding for bluestone sidewalk) and Stratum III. It consisted of 0.6” of light gray (2.5Y 7/1) compacted silty sand with pockets of clay and black (10YR 2/2) charred earth.



Map 7.28: Test Units 16 and 19, profiles of southern walls.

Stratum IIIb was located in the southwestern portion of Test Unit 19, within the bay. Stratigraphically, it appeared as a thin (0.2”) deposit within Stratum III, which indicates concurrent deposition. Stratum IIIb consisted of light brownish gray (10YR 6/2) ash, coal ash, and slag. The matrix was very loose and small amounts of brick and mortar were included. Both of these strata within Test Unit 19 are likely associated with the demolition of Feature 4.

ASSEMBLAGE

A total of 1,080 artifacts were recovered from the interior of Feature 4 (Test Units 16–20). Ninety-six of these artifacts were recovered from the two initial heavily disturbed/modern strata (Strata I and II). These artifacts will not be discussed. The artifact densities from the historical strata are shown in Figure 7.07.

STRATUM III

Stratum III was likely a demolition horizon associated with the destruction of Feature 4. The fact that nearly half of the 340 artifacts recovered from Stratum III were architectural remains ( $n=160$ , or 47%) lends credence to this hypothesis. Household artifacts ( $n=115$ ) only account for 34% of this functional group. Table 7.55, shown below, summarizes the totals from each functional group.

Table 7.55: Feature 4, Stratum III, totals from functional groups.

Functional Group	Artifact Count
Activities	4
Architectural	160
Commercial	5
Hardware	2
Household	115
Indeterminate	39
Lighting	3
Manufacturing	1
Personal	10
Sanitary	1

*Activities*

Four artifacts that fall within the activities group were recovered from Stratum III. Three of these artifacts are mending fragments of a slate pencil. If mended, the repaired pencil would measure approximately 4.5” in length. The fourth artifact is a sherd from a redware flowerpot. None of these artifacts are chronologically diagnostic.

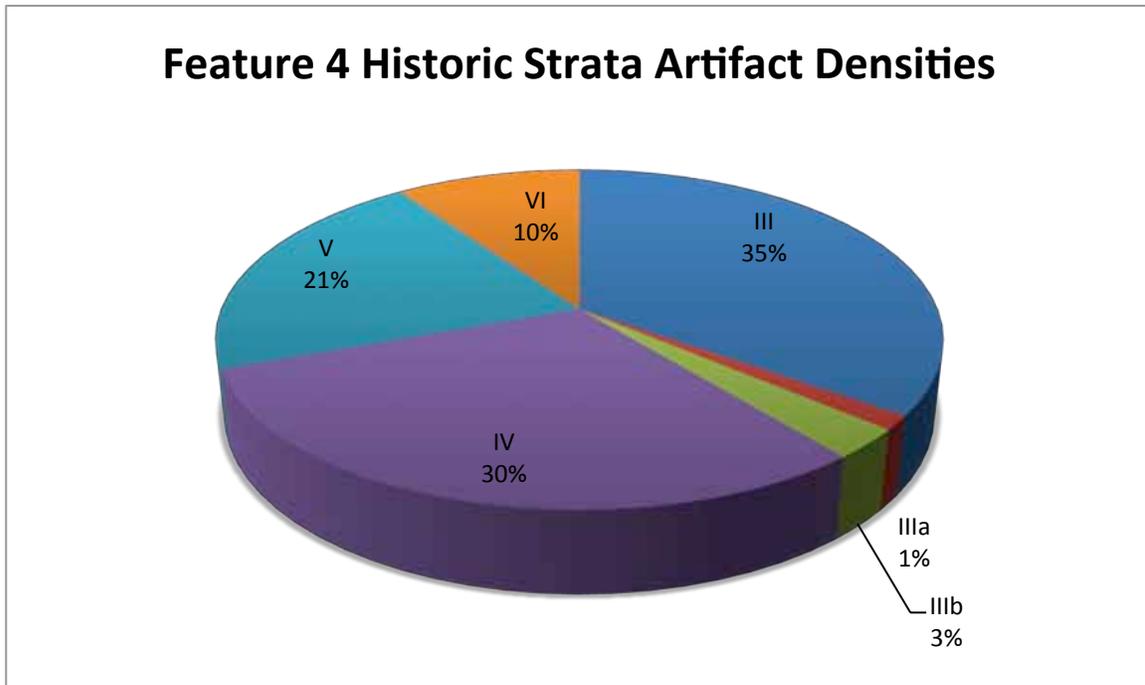


Figure 7.07: Feature 4 historic artifact densities.

*Architectural*

A total of 160 architectural remains were collected from Stratum III. The bulk of the materials consist of fragments of window glass ( $n=93$ , or 58%). The next most numerous artifact type is unidentifiable nails ( $n=31$ , or 19%). These specimens are too heavily corroded to identify shape or manufacturing technique. Table 7.56 shows a general breakdown of the recovered architectural remains.

Table 7.56: Feature 4, Stratum III, architectural remains.

Object	Artifact Count	Begin Date	End Date
Pressed & Ridged Window Glass	13	1850	1950
Asbestos Fragment	1		
Brick Fragment	1		
Redware Roofing Tile (Lead Glazed)	1		
Fire Brick Fragment	1		
Brick Bat	1		
Molded Terra Cotta Lintel/Cornice	1		
Window Glass	93		
Plaster (Painted)	6		
Unidentifiable Nails	31		

Table 7.56: Feature 4, Stratum III, architectural remains (Cont'd).

Object	Artifact Count	Begin Date	End Date
Square Nails	5		
Cut / Carved Building Material	1		
Cut / Carved Tile	1		
Cut / Carved Floor Tile	1		
Pressed Door Knob (Refined Agate Ware)	1		
Pressed Tile (Red Bodied)	1		
Pressed Tile (Unidentified Refined Earthenware)	1		
<b>Total</b>	<b>160</b>		

The only chronologically diagnostic artifacts from this assemblage are pressed window glass. These are thick, flat specimens with narrow ridges on one surface. This variety of window glass is known as “privacy glass” and was popular circa 1850 through 1950 (Old House Journal 2012). The remaining architectural materials are likely the result of the demolition of Feature 4. The firebrick may indicate that the bay portion of Feature 4 was utilized for heating or cooking.

*Commercial*

Five coins comprise this group. All of the coins are heavily corroded and the date stamps are not easily discernible. Through the use of x-ray imaging, the date stamps of three of the coins were ascertained. The first is an 1893 Indian Head penny; the second is an 1888 penny (Image 7.82). The 1893 coin provides the TPQ date for Stratum III; no artifacts could have been deposited before 1893. The third coin is an 1892 Liberty Head nickel with the characteristic “V” on the reverse. Like the 1893 specimen, the fourth coin is also an Indian Head penny. Unfortunately, it is too corroded to completely discern the date stamp. Only the digit “8” is discernible. Indian Head pennies were minted between 1859 and 1909 (Yeoman 2000: 94); therefore, this specimen could date to either anytime within the 1800s or 1908. The fifth coin is too heavily corroded for identification.

*Food Related*

A total of 31 food-related artifacts were recovered. The majority of the faunal elements are too fragmented for species-level identification, limiting analysis. Among the faunal collection are eight large terrestrial mammal species, 13 avian species, eight indeterminate, and two oyster shell fragments.

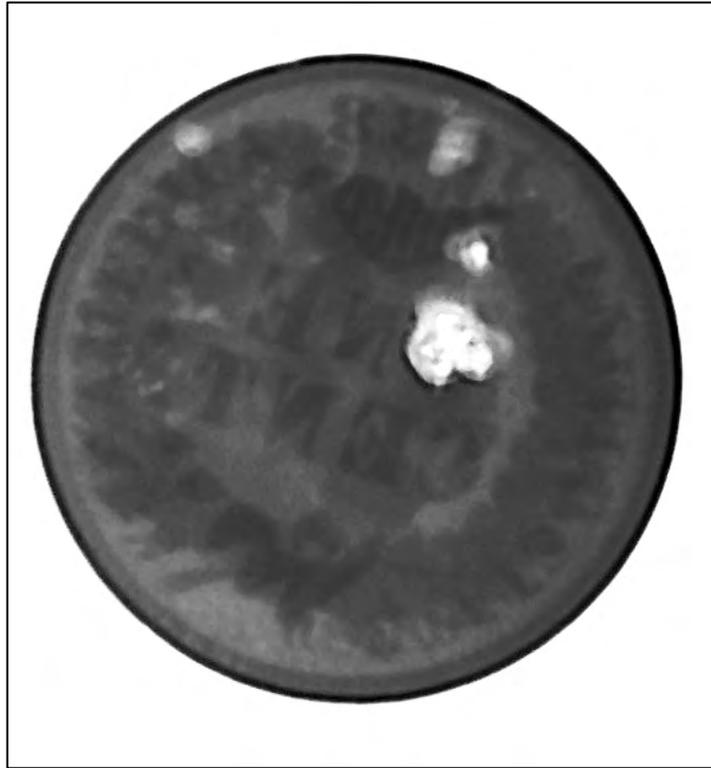


Image 7.82: X-ray image of an 1888 penny.

### *Hardware*

Two hardware-related artifacts were recovered from Stratum III. The first is a small (0.4') stamped copper alloy band. Each of the band's ends is cut and possesses two holes, most likely attachment points. This item may have been utilized as a tag or label. The second hardware item is a small cast-copper alloy artifact. It is 1.75" in length and comprised of two sections. The first section is a 1" long by 0.5" wide rectangle. The second section is a narrow post that extends from the rectangle 0.75". The overall form is reminiscent of a cleaver with the rectangle forming the blade and the post the handle. This artifact's ultimate usage is unknown. It could be an internal part of a simple machine, such as a lock, or it could be electrical in nature.

### *Household*

A total of 115 household artifacts were recovered from Stratum III. The bulk of the artifacts consist of ceramic specimens ( $n=82$ ). The remainder are glass artifacts ( $n=33$ ).

**Ceramics.** Eighty-two ceramic household artifacts were recovered from Stratum III. The ceramic assemblage includes refined earthenware ( $n=21$ ), coarse earthenware ( $n=54$ ), stoneware ( $n=6$ ), and porcelain ( $n=1$ ). The greater amount of utilitarian and serving wares (i.e., coarse earthenwares and stonewares) may indicate that Feature 4 was utilized for food preparation, and service occurred elsewhere. The varieties of refined earthenware are listed in Table 7.57.

Table 7.57: Feature 4, Stratum III, refined earthenwares.

Ware	Prime Decoration	Pattern / Motif	Count	Begin	End
Whiteware	Indeterminate	PPCO Maker's Mark	1	1890	1904
Whiteware	Undecorated		1	1860	1930
White Granite	Indeterminate	Indeterminate	1	1842	1930
White Granite	Molded Pattern	Fluted	1	1842	1930
Ironstone/Stone China	Printed	Indeterminate	1	1840	1915
Yellowware	Indeterminate	Indeterminate	1	1827	1940
Whiteware	Indeterminate	Indeterminate	1	1815	1880
Whiteware	Indeterminate	Indeterminate	6	1815	2010
Whiteware	Molded Pattern	Ribbed	1	1815	1930
Whiteware	Printed	Indeterminate	1	1815	1915
Pearlware	Molded Pattern	Shell Edge, Even Scalloped, Curved Lines	1	1800	1835
Pearlware	Painted	Floral, Small Scale	1	1795	1830
Pearlware	China Glaze, Painted	Chinoiserie	1	1775	1810
Pearlware	Indeterminate	Indeterminate	1	1775	1840
Creamware	Undecorated		2	1762	1820
		<b>Total</b>	<b>21</b>		

*Refined Earthenware.* The refined earthenwares generally indicate a late-nineteenth-century deposition. The latest specimen is a whiteware hollowware sherd that exhibits the monogram "PPCO," which is surrounded by the words "SEMI / PORCELAIN." This is the mark of the Peoria Pottery Company, which produced similar vessels from 1890 through 1904 (Barber 1968: 162). The remainder of the collection is mostly comprised of similar later refined wares, such as ironstone and white granite, which are ware types introduced in the nineteenth century, but readily available into the early twentieth century (Miller et al. 2000: 13). Only six of the recovered artifacts are earlier wares (pearlware=4; creamware=2). Based on the preponderance of the later refined wares, which dovetails with the later dates (and TPQ) provided by the coins (1888, 1892, and 1893), deposition occurred within the last decade of the nineteenth century.

*Coarse Earthenware.* Fifty-four sherds of coarse earthenware were recovered from Stratum III. All of these specimens are sherds from utilitarian redware vessels. Most ( $n=34$ ) of the redware sherds are undecorated lead-glazed specimens. Seventeen of the remaining sherds are slip-decorated. Other decoration includes blotched, streaked, or speckled glazes ( $n=5$ ). An unglazed specimen and a sherd with an unidentifiable decoration round out the assemblage. The high amount of these coarse, utilitarian wares versus finer dining wares may also indicate that Feature 4 was utilized for preparation of food served elsewhere.

*Stoneware.* Six stoneware sherds were recovered from Stratum III. Four of these specimens are chronologically diagnostic. The latest consists of two sherds that exhibit Albany/Bristol-style slip glazes. This variety possesses a wide date range; it was introduced in 1880 and still available circa 1950 (Azizi et al. 1996). Two salt-glazed sherds from locally produced stoneware were also recovered. These are products of the Crolius/Remmey pottery and are decorated with cordoned blue bands. The interior is not slipped and the turn rings from the wheel are still visible. Crolius/Remmey operated in the area circa 1720 through 1820 (Janowitz 2008). The remaining two sherds are also salt glazed, and most likely also Crolius/Remmey products, as well.

*Porcelain.* The porcelain collection from Stratum III consists of a single sherd of Chinese export porcelain. This specimen is painted with a Chinese landscape, but not enough of the design is extant for dating purposes.

**Glass.** A total of 33 household glass shards were recovered; around half ( $n=16$ ) are chronologically diagnostic. Table 7.58 offers a general breakdown of the recovered household glass.

Table 7.58: Feature 4, Stratum III, household glass.

Manufacture Technique	Prime Decoration	Pattern / Motif	Count	Begin	End
Mouth Blown, General	Etched	Lettering	8	1864	2010
Pressed	Molded Pattern	Diamonds	1	1864	2010
Mold Blown, Mouth			1	1850	1920
Mold Blown, Mouth	Embossed	Lettering	4	1821	1870
Milk Glass Indeterminate			2	1743	2010
Indeterminate			9		
Mold Blown, Indeterminate			6		
Mouth Blown, General			2		
		<b>Total</b>	<b>33</b>		

Eight of the glass shards are from a mouth-blown jar that exhibits a rounded foot, straight sides, sloping shoulders, and a narrow opening. It exhibits an etched design that features a tobacco pipe over the logo “B&G MAKERS.” The words “MYER... NEW YORK” surround the pipe and logo. As of yet, this manufacturer and mark have not been identified. Based on the etched tobacco pipe, it is likely from a tobacco retailer or distributor. Although the vessel is mold blown, it is not complete enough to technically identify whether it was blown into the mold via mouth or machine, or the type of mold used. Therefore, the date range is based on the introduction of colorless non-lead glass—1864 (Miller et al. 2000: 8).

Other diagnostic specimens include a flat shard from a large vessel that exhibits molded diamonds (1864–2010) and another shard that has an applied and tooled packer/English ring finish. This variety of finish was prevalent from 1850 through 1920 (Jones and Sullivan 1985: 39). Four shards to an embossed mouth-blown bottle were also recovered. Around the base, the letters “...MA...ASS” are visible. The base has the word “CAKING” embossed across it. This vessel was blown by mouth into a Ricketts’ type three-piece mold, prevalent from 1821 through 1870 (Miller et al. 2000:8; Society for Historical Archaeology 2012). The final two diagnostic glass shards are milk glass specimens from unidentified vessels. Milk glass was introduced in 1743 (Miller et al. 2000: 7) and has no determined end date.

### *Indeterminate*

Thirty-nine artifacts could not be assigned to a functional group. Most ( $n=24$ ) of these artifacts are unidentifiable fragments of glass. Thirteen of these artifacts consist of various metallic objects. Included in this portion of the assemblage are five heavily corroded iron fragments (possibly a pipe), four fragments of copper alloy wire, a heavily rusted object with three short protruding legs, and a piece of slag. A final copper alloy item appears to be a small (0.75”) fragment of hollow tube with a rounded end. The rounded end is pierced with a small diameter hole, which is only wide enough for thread or wire. This object may be the handle end of a small copper ornamental bell or other hanging decoration.

Also recovered were two unglazed redware sherds that appear similar to a flowerpot’s “saucer,” but are larger and thinner than most such examples. The ultimate function of these artifacts is unknown.

### *Lighting*

Three artifacts associated with lighting were recovered; all three are milk glass. Two sherds are most likely part of the same milk glass lampshade and the third is from a different lamp. Milk glass was introduced in 1743 (Miller et al. 2000:7). However, the power source (oil versus electric) of these lamps cannot be determined at this time.

### *Manufacturing*

This group consists of a sherd from a redware sugar mold. Although not diagnostic, this item may point to the usage of Feature 4 for food preparation.

### *Personal*

Ten personal items were recovered from Stratum III. Six of these artifacts are pressed porcelain buttons. These buttons were manufactured using the Prosser process, which was popular from 1840 through 1960 (Sprague 2002: 111–127). A seventh button was made from shell; the species is unknown. The final two personal items consist of a smoking pipe stem and a pipe bowl. Neither is decorated.

### *Sanitary*

The final artifact from Strata III is the lid to either a toothpaste jar or similar-shaped squat jar. This artifact would have most likely possessed a paper label. It is constructed of whiteware, introduced in 1815 (Azizi et al. 1996). Toothpaste was sold in such containers until the 1896 introduction of toothpaste in squeeze tubes (Miller et al. 2000: 15).

### STRATUM IIIA

A total of 13 artifacts were recovered from Stratum IIIa, including architectural remains ( $n=5$ ), electrical-related items ( $n=1$ ), household artifacts ( $n=6$ ), and a personal item.

#### *Architectural*

This group consists of five fragments of window pane.

#### *Electrical*

A fragment from a porcelain electrical insulator comprises this functional group. It possesses a threaded bore, through which copper wire once passed, and is semi-vitrified. Insulators of this type were introduced in 1878 (Miller et al. 2000: 15).

#### *Household*

Household artifacts are divided between ceramic and glass. The ceramic portion consists of a single sherd of whiteware (1815–2010) (Miller et al. 2000: 13) and a lead-glazed redware sherd. The glass artifacts consist of a milk glass (1743–2010) (Miller et al. 2000: 7) shard from an indeterminate object and two unidentifiable glass container sherds.

#### *Personal*

The single personal item is an undecorated white ball clay pipe stem.

### STRATUM IIIb

A total of 28 artifacts were recovered from Stratum IIIb, including activity-related items ( $n=1$ ), architectural remains ( $n=12$ ), household artifacts ( $n=12$ ), and three indeterminate items.

#### *Activities*

This functional group contains a single sherd from a redware flowerpot.

#### *Architectural*

Most of this group is comprised of flat fragments of window glass ( $n=8$ ). One pressed/ridged shard of privacy glass (1850–1950) (Miller et al. 2000: 7) was also recovered; this shard is of the same type of glass found in Stratum III. Also recovered was a fragment of red-bodied sewer pipe, a cut nail, and a screw. The cut nail was too corroded to determine whether or

not its head was attached via hand (1790) or machine (1805). Wire nails are common after circa 1885 and mostly supplant the cut varieties (Miller et al. 2000). Therefore, it is generally assumed that cut nails are used historically between 1790 and 1885–1890. The self-starting gimlet pointed screw was patented in 1846 and is still common today (Miller et al. 2000: 14).

*Food Related*

Two faunal remains were recovered: one avian species fragment and one mouse femur.

*Household*

Four ceramic and eight glass artifacts comprise the household group. The ceramics consist of three redware sherds and a stoneware sherd. The redware sherds are lead-glazed utilitarian/serving wares. The stoneware is a gray bodied salt-glazed specimen that was probably locally produced at the Crolius/Remmey pottery.

Of the glass artifacts, only one is chronologically diagnostic—a body sherd from a colorless beer bottle that bears the logo for “The Frank Brewery.” This brewery operated in Brooklyn from 1892 through 1916 (Brooklyn Genealogy 2012). The remaining 11 glass artifacts do not possess sufficient characteristics for relative dates. They are all container glass sherds, but their manufacturing technique is unidentifiable.

*Indeterminate*

This group is comprised of two corroded unidentifiable iron items and a fragment of iron wire.

STRATUM IV

Stratum IV was likely a demolition horizon associated with the destruction of Feature 4. The fact that nearly half of the 296 artifacts recovered from Stratum IV are architectural remains ( $n=137$ , or 46%) lends credence to this hypothesis. Household artifacts ( $n=89$ ) only accounted for 30% of this functional group. Table 7.59 summarizes the totals from each functional group.

Table 7.59: Feature 4, Stratum IV, functional groups.

Functional Group	Artifact Count
Activities	3
Architectural	137
Commercial	3
Electrical	1
Food Related	1

Table 7.59: Feature 4, Stratum IV,  
functional groups (Cont'd).

Functional Group	Artifact Count
Hardware	1
Household	89
Indeterminate	24
Lighting	2
Manufacturing	1
Ornament	16
Personal	16
Sanitary	2

### *Activities*

Three artifacts comprise the activities group. Two of these artifacts are sherds from redware flowerpots, which are not chronologically diagnostic. The third activity-related artifact is a section of a wood and graphite pencil. This specimen possesses a round “lead” and has a portion of the metal eraser socket on the dorsal end. Round graphite “leads” were introduced shortly after the 1876 Centennial Exhibition by the Joseph Dixon Crucible Company. The year 1880 saw the introduction of rubber erasers inserted into metal bands at the pencils’ tops (Early Office Museum 2012). The pencil suggests deposition at the very end of the nineteenth century.

### *Architectural*

A total of 137 architectural remains were recovered from Stratum IV. Most of these remains consist of fragments of non-diagnostic window pane ( $n=75$ , or 55%). The only diagnostic artifacts are seven fragments of the same pressed/ridged privacy glass (1850–1950; Early Office Museum 2012) found in Stratum III. The remainder of the architectural assemblage consists of unidentifiable nails ( $n=26$ ), unidentified square nails ( $n=12$ ), eight floor tiles of various material, and two plaster fragments. Also recovered was a fragment of asbestos, an iron spike, two fragments of plaster, a brick fragment, and a whole brick.

### *Commercial*

Three commercial artifacts were recovered from Stratum IV, all heavily corroded coins. One specimen can be identified as an 1895 Indian Head penny. The remaining two coins are also pennies, but are too corroded to identify. It is possible that they are also Indian Head examples. Indian Head pennies were minted from 1859 through 1909 (Yeoman 2000:94).

### *Electrical*

A single electrical-related artifact was recovered from Stratum IV—a fragment of a carbon rod that is probably part of a carbon arc lamp. A Russian army engineer named Paul

Jablochkoff invented practical carbon arc lamps for commercial purposes in 1876 (Miller et al. 2000:15; LPC 1997:3). The first American version is attributed to Charles Brush in 1877 (Woodhead et al. 1994; Woodoff 1997:3). Brush also brought electric carbon arc street lighting to Manhattan in 1880 (Woodoff 1997:3). Although the technology originated three years earlier, it is more appropriate to use the date of 1880 for this carbon rod, as this is when arc lighting first came to Manhattan. This artifact also provides the TPQ date for Stratum IV; no other artifacts could have been deposited before 1880.

#### *Food Related*

This group consists of a single oyster shell and 29 faunal elements. The majority of these are avian species bones ( $n=21$ ); the remaining elements are five large terrestrial mammal bones and three domestic cat phalanges.

#### *Hardware*

A single artifact comprises the hardware functional group: a flat iron plate with an iron bar that extends at a right angle. It is attached (nailed) to remnants of a wooden panel. Although heavy corrosion has obscured the manufacturing technique and specific identity, this artifact is most likely an example of door hardware.

#### *Household*

A total of 89 household artifacts were recovered from Stratum IV. Most of the assemblage consists of ceramics ( $n=63$ , or 71%). The remainder of the assemblage consists of glass artifacts ( $n=26$ ).

**Ceramics.** The ceramic assemblage contains refined earthenware ( $n=21$ ), coarse earthenware ( $n=36$ ), stoneware ( $n=4$ ), and porcelain ( $n=2$ ). The greater amount of utilitarian/serving wares (i.e., coarse earthenwares and stonewares) may indicate that Feature 4 was utilized for food preparation and service was carried out elsewhere.

*Refined Earthenware.* A total of 21 refined earthenwares were recovered from Stratum IV. Most of these ceramics were later whiteware ( $n=9$ ), whiteware/pearlware ( $n=2$ ), or Rockingham ( $n=1$ ) specimens, but some earlier-nineteenth-century wares (pearlware and creamware) were collected. Table 7.60 shows a breakdown of the recovered refined earthenwares.

At first glance, the refined earthenware assemblage appears to indicate an early-nineteenth-century deposition. Unfortunately, this view is based on a small collection, nearly half of which are wares of long duration. The nine sherds of whiteware and the Rockingham sherd represent ceramic wares available into the twentieth century, if not still available today. When considered along with the TPQ date of 1880, which was provided by the carbon arc light rod, it seems more likely that the whitewares are from the later end of their date range(s).

Table 7.60: Feature 4, Stratum IV, refined earthenwares.

Ware	Prime Decoration	Pattern Motif	Count	Begin	End
Whiteware	Indeterminate		3	1815	2010
Whiteware	Printed	Indeterminate	5	1815	1915
Whiteware	Printed	Landscape. Indistinct mark on reverse	1	1815	1915
Rockingham	Lead Glazed		1	1812	1920
Pearlware/Whiteware	Indeterminate		1	1805	1880
Pearlware/Whiteware	Molded Pattern	Shell Edge	1	1805	1835
Pearlware	Painted	Floral	1	1795	1830
Pearlware	Indeterminate		3	1775	1840
Pearlware	Painted	Indeterminate	1	1775	1830
Creamware			4	1762	1820
		<b>Total</b>	<b>21</b>		

The pearlware/whiteware category refers to sherds of such a small size as to make final identification difficult. The stated date ranges are an amalgamation of two wares' standard date ranges and that of any discernible decorations. Because final ware identification is problematic, the assigned date ranges are of minimal use when dating a deposit.

The presence of the earlier refined earthenwares is interesting. Nearly half ( $n=8$ ) of the refined assemblage consists of late-eighteenth- to early-nineteenth-century wares. If the pearlware/whiteware sherds are considered to be pearlware, these earlier wares account for half the assemblage. If this stratum was deposited circa 1880 (based on the carbon rod), why are there so many earlier refined wares? If Feature 4 was utilized as an outdoor kitchen, one would not expect any tableware, much less older tableware. As this structure is likely associated with late-nineteenth-century City Hall and not the Bridewell or earlier almshouse, these artifacts cannot be attributed to donations of older tablewares. Instead, this points to the artifacts within Feature 4 being the result of secondary deposition.

*Coarse Earthenware.* A total of 36 coarse earthenwares were recovered from Stratum IV. All but one of these wares are sherds from redware utilitarian vessels.

*Redware.* Most ( $n=28$ ) of the redware sherds are lead-glazed specimens; slipped ( $n=2$ ), incised ( $n=1$ ), and mottled ( $n=1$ ) specimens are present in the assemblage. Unglazed sherds ( $n=2$ ) and an unidentifiable redware sherd round out this portion of the collection.

*Buff-Bodied.* The single non-redware coarse sherd is a rim sherd from a British buff-bodied drinking vessel. This specimen exhibits a slightly everted lip and is slip-decorated with slipped dots. This ware type was prevalent from 1670 through 1795 (Azizi et al. 1996).

*Stoneware.* Four stoneware sherds were recovered. Three of these sherds are from salt-glazed vessels with gray/buff bodies. These sherds do not exhibit any overt signs of local production (kiln damage, underfiring) or any other diagnostic characteristics, but it is quite likely that they were locally produced at the Crolius/Remmey pottery.

The fourth stoneware is a sherd from a slip-glazed vessel. It does not exhibit any diagnostic aspects.

*Porcelain.* Two porcelain sherds were recovered from Stratum IV. They are both Chinese export varieties. The first is painted with an unidentifiable design and cannot be ascribed a date. The second exhibits a European Neo-Classical pattern. Such decorations were prevalent from 1750 through 1840 (Azizi et al. 1996).

**Glass.** A total of 26 glass household artifacts were recovered from Stratum IV; most ( $n=17$ ) of these specimens do not exhibit enough characteristics for dating purposes. Many are clearly blown into a mold, but it cannot technically be determined whether they were blown via mouth or machine. As no machine made bottles were recovered, it is likely that they were blown into the mold by mouth. Table 7.61 lists all the household glass from Stratum IV.

Table 7.61: Feature 4, Stratum IV household glass.

Material	Manufacture Technique	Decoration or Finish	Count	Begin	End	Class
Non-Lead Glass	Mold Blown, Indeterminate		6	1864	2010	Glass
Common Glass	Mouth Blown, General	Tooled Rim, Blob Top	1	1840	1920	Glass
Milk Glass	Indeterminate		2	1743	2010	Glass
Common Glass	Mold Blown, Indeterminate		6			Glass
Common Glass	Cased	Other (see comments)	2			Glass
Common Glass	Indeterminate		2			Glass
Common Glass	Indeterminate	Etched	1			Glass
Leaded Glass	Mold Blown, Indeterminate		1			Glass
Non-Lead Glass	Indeterminate		5			Glass
		<b>Total</b>	<b>26</b>			

Even among the “diagnostic” glass shards, most of the specimens do not offer much chronological data. For instance, there are six colorless non-lead glass shards that range from

1864 to 2010. This range is too wide to offer much depositional insight. Because the ultimate method of how the glass was blown into the mold cannot be discerned, the beginning date of 1864 is based on the introduction of colorless “soda lime” glass (Miller et al. 2000: 8), which distinguishes them from the other “mold blown, indeterminate” specimens, in various colors. As stated earlier, no machine-made bottles were recovered, so it is likely that they were mouth blown. Machine production of bottles began in 1893 (Miller et al. 2000: 8), so these shards can be tentatively assigned a range of 1864–1893. This range concurs with the 1880 TPQ (based on the carbon rod) and offers more insight about possible deposition dates.

The finish (neck and rim) from a brown bottle offers a somewhat tighter date range. Although the ultimate manufacturing technique is technically unidentifiable, the rim of the artifact is a tooled blob top. Blob tops were common throughout the 1840s until the end of the mouth-blown era, circa 1920 (Society for Historical Archaeology 2012).

The remaining diagnostic household glass consists of two shards of milk glass. The shards are too small to distinguish the original object or its manufacturing technique. Because milk glass is still technically available today, the range begins at its introduction (1743) and extends into the present day.

Of the non-diagnostic glass, two varieties bear extra description. The first variety consists of the “cased” glass shards. This refers to flat pieces of clear glass layered with blue glass. These shards could originally be from a large tableware vessel, a lampshade, or a stained glass pane. The second variety consists of a small, dark green container shard that exhibits a roughly etched *fleur de lis*.

#### *Indeterminate*

The ultimate function of 23 artifacts from Stratum IV could not be determined. Twenty-one of these artifacts are iron. Twenty of the iron artifacts are heavily corroded iron and impossible to identify. The final iron artifact is also heavily corroded, but may be a fragment of a bayonet blade. The remaining indeterminate artifacts consist of a thin, folded scrap of non-ferrous metal, possibly an alloy, and a piece of slag.

#### *Lighting*

This functional group contains two milk glass (1743–2010) shards from a glass lamp shade.

#### *Manufacturing*

A coarse earthenware rim/body sherd comprises this group. It is buff colored and from a large vessel. The body is coarse, and small remnants of a dark brown glaze are still extant. This sherd is the rim from a saggur, which is utilized in the manufacture of pottery. A saggur is a box constructed of highly refractive clay in which finer ceramics are kilned.

### *Ornament*

Sixteen shards of pressed pale green glass were found in Stratum IV. Based on these shards, the original vessel would have been tall and multi-sided with a molded bowl and a hollow stem. The ultimate utility of this item is unknown, but it appears to have been an ornamental piece or freestanding decoration.

### *Personal*

Sixteen personal items were recovered from Stratum IV. Thirteen of these artifacts consist of fragments of the leather upper from a boot or shoe. Grommets and lace hooks are present, as is remnant lining. Two fragments of white ball clay smoking pipes were also recovered—stem fragments and a bowl fragment with an unidentifiable molded decoration. The final personal item is a porcelain Prosser process collar button. The production date for the button is circa 1840 through 1960 (Sprague 2002: 111–127).

### *Sanitary*

The final functional group recovered from Stratum IV consists of two sherds from a sanitary vessel. These are from a gray bodied, salt-glazed stoneware chamber pot. Although no diagnostic characteristics are extant, it may have been locally produced.

## STRATUM V

Stratum V is the first stratum that is most likely not associated with the demolition of Feature 4. The soil matrix was noticeably different, very dark and organic, and the amount of demolition debris/architectural remains dropped significantly. Based on its soil and its stratigraphic position, Stratum V and its assemblage may be associated with the everyday activities that occurred within this small structure. Analysis of the artifacts revealed that this was probably not the case, as the assemblage is more indicative of secondary deposition.

A total of 203 artifacts were recovered from Stratum V. More than half of these artifacts fall within the household artifacts ( $n=112$ , or 55%) functional group. The second largest group consists of the architectural remains ( $n=50$ , or 25%) functional group. Table 7.62 summarizes the totals from each functional group.

Table 7.62: Feature 4, Stratum V,  
functional groups.

Functional Group	Artifact Count
Activities	1
Architectural	50
Commercial	1
Electrical	1
Food Related	1
Household	112
Indeterminate	16
Lighting	1
Manufacturing	4
Personal	13
Sanitary	2
Toy/Recreation	1

*Activities*

One activity-related artifact was recovered from Stratum V—a Bakelite plastic holder for pen nibs. It is approximately 6” long and exhibits a red and black swirled pattern. Bakelite was patented in 1907 (Miller et al. 2000: 16) and is still used for some products today. As the swirled pattern is reminiscent of tortoiseshell, it is possible the nib holder is made of an earlier plastic. Celluloid plastic was used to manufacture imitation mother of pearl, tortoiseshell, amber, coral, and ivory between 1868 and 1920 (Miller et al. 2000: 16).

*Architectural*

Fifty architectural remains were recovered from Stratum V. Half of these artifacts consist of fragments of windowpane. The next most numerous category is that of unidentifiable nails ( $n=20$ ). Two tiles (marble and slate) and a brick fragment were also recovered. Two copper alloy nails round out the architectural assemblage; these are both small in size, which indicates that they are most likely tacks or brads. One specimen is too corroded for identification, but as the second specimen is a cut specimen, the first also is likely cut. The cut nail specimen was too corroded to determine whether or not its head was attached via hand (1790) or machine (1805). Wire nails were common after circa 1885 and mostly supplanted the cut varieties (Miller et al. 2000). It is generally accepted that cut nails were used historically between 1790 and 1885–1890.

*Commercial*

This group contains an 1882 Indian Head penny (Image 7.83). This artifact provides the definitive TPQ date for the stratum. No other artifacts could have been deposited before 1882.

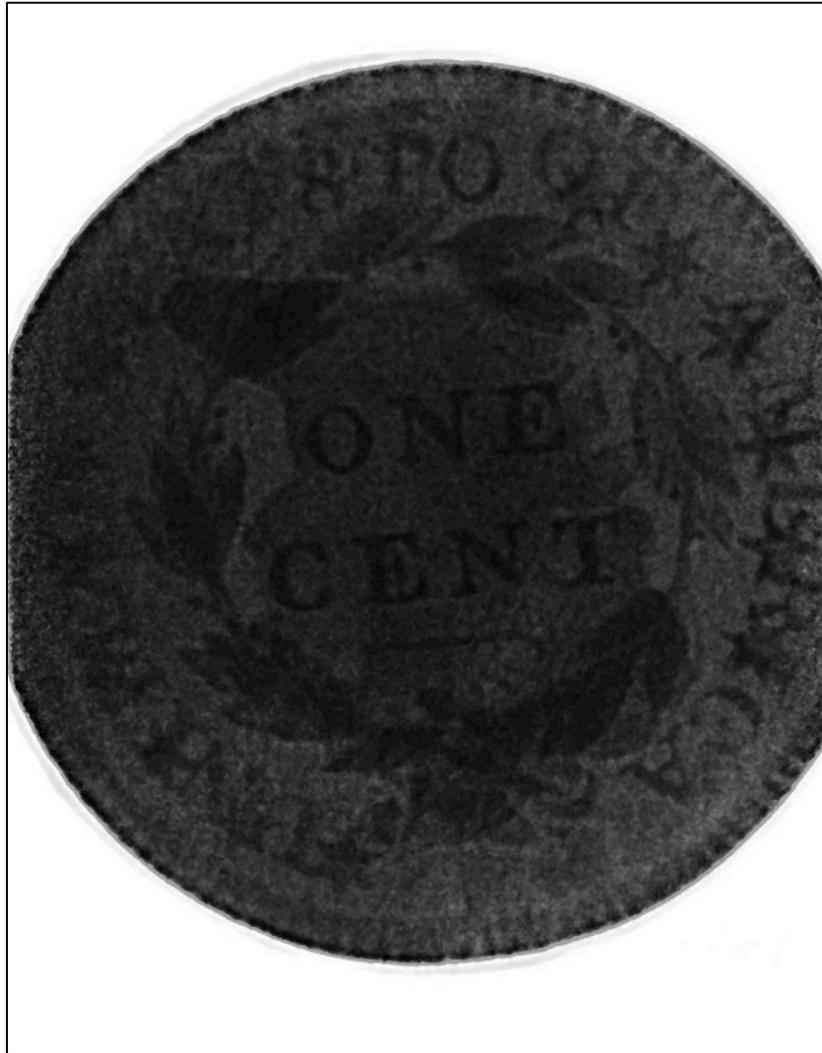


Image 7.83: X-ray image of 1882 Indian Head penny.

### *Electrical*

A single electrical-related artifact was recovered from Stratum V: a fragment of a carbon rod, which was part of a carbon arc lamp. Charles Brush brought electric carbon arc street lighting to Manhattan in 1880, as noted above (Woodoff 1997: 3).

### *Food Related*

This group consists of a single clam shell fragment and eight faunal remains. As with most of the assemblage, the faunal elements were too fragmented for species-level identification. The assemblage includes four large terrestrial mammal bones, two medium terrestrial mammal bones, one avian species bone, and one indeterminate mammal bone.

*Household*

A total of 112 household artifacts were recovered from Stratum V. The bulk of these artifacts ( $n=101$ , or 90%) consist of ceramics. Only 11 household glass artifacts were recovered.

**Ceramics.** Of the 101 household ceramics, nearly two-thirds are refined earthenware ( $n=63$ , or 62%). Stoneware is the next most numerous category ( $n=21$ ), followed by porcelain ( $n=12$ ) and coarse earthenware ( $n=5$ ). As opposed to Strata III and IV, the household ceramics are predominately refined, not utilitarian wares. Refined earthenware and porcelain account for three-quarters ( $n=75$ ) of the household ceramics. If Feature 4 were a kitchen and Stratum V the first potentially intact horizon within the structure, one would expect more utilitarian wares versus tablewares. Instead, the ratio is reversed. This may indicate that Stratum V probably was not an intact horizon, but rather an episode of fill similar to the previous strata. Additionally, many of the recovered ceramics are small in size and weight, indicative of secondary, not primary, deposition. Based on the household ceramics in general, Stratum V was probably a demolition fill deposited around the same time as Strata III and IV.

*Refined Earthenwares.* A total of 63 refined earthenware sherds were recovered from Stratum V. Similar to Stratum IV, the ratio of earlier refined wares versus later examples appears high. Creamware ( $n=30$ , or 47.62%) and pearlware ( $n=11$ , or 17.46%) account for nearly two-thirds (65.08%) of the assemblage, while later refined wares (whiteware, Rockingham, and Victorian Majolica) only account for 27% of the refined wares. Based on the dates provided by the celluloid pen nib holder (1907) and the Indian Head penny (1882), one would expect the ratio to be reversed. This disparity is the result of secondary deposition. The artifacts from Stratum V may have little to do with actual activities occurring within Feature 4. They may represent a fill that originated on site, but this cannot be determined. Table 7.63 shows a general list of the refined earthenwares from Stratum V.

As evident in the table below, the refined earthenwares span many ware types, decorative elements, and time spans. This is a condition of the nature of the stratum as a secondary deposit.

Table 7.63: Feature 4, Stratum V, refined earthenwares.

Ware	Prime Decoration	Pattern / Motif	Count	Begin	End
Victorian Majolica	Molded Pattern		1	1850	1900
Whiteware	Printed	Various	2	1815	1915
Whiteware	Molded Pattern	Indeterminate	1	1815	2010
Whiteware	Indeterminate		9	1815	2010
Whiteware	Molded Pattern	Floral	1	1815	1930

Table 7.63: Feature 4, Stratum V, refined earthenwares (Cont'd).

Ware	Prime Decoration	Pattern / Motif	Count	Begin	End
Whiteware	Printed & Painted	Indeterminate	1	1815	1915
Rockingham	Various		2	1812	1920
Pearlware	Printed	Chinoiserie	2	1807	1840
Pearlware	Printed	Various	2	1807	1830
Pearlware/White ware	Printed	Indeterminate	3	1807	1880
Pearlware	Painted	Indeterminate	2	1795	1830
Pearlware	Indeterminate	Indeterminate	5	1775	1840
Creamware	Undecorated		29	1762	1820
Creamware	Molded Pattern	Royal Rim	1	1762	1820
Tin Glazed	Colored Glaze	Indeterminate	1	1700	1800
Red Bodied	Lead Glazed		1		
		<b>Total</b>	<b>63</b>		

*Coarse earthenware.* The coarse earthenware ceramic category consists of five sherds of redware; four are lead-glazed and one is decorated with an all-over slip. None of these artifacts are chronologically diagnostic.

*Stoneware.* A total of 21 stoneware sherds were recovered. They comprise a mixture of eighteenth-century white salt-glazed specimens and somewhat later local products. Again, this mixture is a product of secondary deposition. Table 7.64 shows a general list of the recovered stonewares.

Table 7.64: Feature 4, Stratum V, stonewares.

Ware	Prime Decoration	Pattern / Motif	Count	Begin	End
White Salt Glazed	Scratch Blue	Floral	1	1735	1783
White Salt Glazed	Indeterminate		2	1720	1805
Salt Glazed, Gray/Buff Bodied	Various	Various	4	1720	1820
Slip-Glazed Stoneware	Slip Decorated	Various	6		
Salt Glazed, Gray/Buff Bodied	Indeterminate		7		
Salt Glazed, Gray/Buff Bodied	Painted	Indeterminate	1		
		<b>Total</b>	<b>21</b>		

*Stoneware: White Salt Glaze.* The stoneware assemblage consists of three sherds of white salt-glazed stoneware. The first two are small and the decoration is unidentifiable. The general date range for white salt-glazed stoneware is 1720 through 1805, but it was rarely available for sale after 1790 (Miller et al. 2000: 10). The third sherd is scratch blue, a form of white salt-glazed stoneware prevalent between 1735 and 1783 (Noel Hume 2001: 206)

*Stoneware: Salt Glaze, Gray/Buff-bodied.* The bulk of the stoneware assemblage ( $n=12$ ) consists of this ware type. Four of these exhibit kiln damage or underfiring, both indicative of local manufacture. As with much of this ware type, these specimens are an example of local products from the nearby Crolius/Remmey pottery. It is likely that the remaining eight specimens are also of local manufacture.

*Porcelain.* One dozen porcelain sherds were recovered from Stratum V. Generally speaking, the diagnostic specimens fall within the late eighteenth to early nineteenth century. Table 7.65 shows a general breakdown of the recovered porcelains.

Table 7.65: Feature 4, Stratum V, porcelain.

Ware	Prime Decoration	Pattern / Motif	Count	Begin	End
Bone China	Printed	Chinese Landscape	1	1810	1840
Bone China	Printed & Painted	Floral	1	1794	2010
Bone China	Indeterminate		1	1794	2010
Porcelain, Soft Paste	Printed	Indeterminate	1	1760	1840
Porcelain, Hard Paste	Indeterminate		1		
Porcelain, Chinese Export	Printed	Various	5		
Porcelain, Chinese Export	Indeterminate		2		
		<b>Total</b>	<b>12</b>		

Eight of the porcelain sherds consist of hard paste or export varieties that do not possess enough characteristics for relative dating. The four diagnostic sherds all reflect somewhat similar dates. The latest bone china sherd is part of a London-shape teacup with a blue-printed Chinese landscape. The London shape for teacups was popular from 1810 through 1840 (Miller et al. 2000:13). The remaining two bone china sherds are too small to fully identify the shape or decoration, so they can only be assigned a very general date. Bone china was introduced to the European market in 1794 and is still technically available today (Miller et al. 2000: 9). That being said, these specimens are most likely contemporaneous with the other porcelain specimens. The final diagnostic porcelain sherd is a painted British soft paste specimen. It exhibits a dark blue underglaze-printed design. Such decorations on

British soft paste porcelain began circa 1760 (Miller et al. 2000:9) and ended circa 1840 (Jefferson Patterson Park and Museum 2012).

**Glass.** Eleven household glass shards were recovered from Stratum V. Generally, these are bottle fragments ( $n=9$ ) without enough characteristics for relative dating. The remaining two glass shards are milk glass fragments from an unknown vessel. Milk glass was introduced in 1743, but is still available today (Miller et al. 2000:7).

#### *Indeterminate*

A total of 16 artifacts from Stratum V could not be completely identified. Nearly half ( $n=8$ ) of the indeterminate artifacts consist of glass items. These shards are too small or fragmentary to identify the original artifact or its manufacturing technique. Six metal artifacts are also unidentifiable; these are iron or copper alloy specimens that are either too fragmentary or too corroded for definitive identification. The remaining indeterminate artifacts include an unidentifiable piece of fabric and fragments of slate. The slate specimen could either be a roof tile or part of a writing slate, but final identification was not possible.

#### *Lighting*

This group contains only a shard from a milk glass lamp globe or shade. Milk glass was introduced in 1743 and is still currently available (Miller et al. 2000:7).

#### *Manufacturing*

A total of four artifacts comprise this functional group. The first two are underfired sherds of brown-bodied salt-glazed stoneware. These are either kiln furniture or kiln wasters. Two fragments of lead constitute the remainder of the manufacturing functional group. These artifacts represent excess lead from an unknown manufacturing process (smelting, bullet casting, or window pane construction).

#### *Personal*

Thirteen personal items were recovered from Stratum V. Eleven of these artifacts consist of fragments of white ball clay smoking pipes. The pipe assemblage consists of one bowl and 10 stem fragments. The bowl fragment exhibits a molded floral pattern along its seam, but this decoration does not offer any diagnostic information. One of the stem fragments exhibits the molded letters “XL” on one side and “CT” on the reverse. The remaining pipe stem fragments are undecorated. The remaining personal items are two buttons; the first is a heavily corroded copper alloy specimen with a loop shank; the second is cut from oyster shell.

#### *Sanitary*

Two fragments from chamber pots were recovered from Stratum V. The first is a rim sherd from a lead-glazed redware vessel. This specimen is chronologically non-diagnostic. The

second specimen consists of a buff-bodied salt-glazed sherd; it is underfired, which is generally a sign of local production. It is most likely that these artifacts are associated with the nearby Crolius/Remmey pottery that operated in area from 1720 to 1820 (Janowitz 2008).

*Toy/Recreation*

The final artifact recovered from Stratum V is a doll head constructed of molded hard paste porcelain. Remnant black paint is discernible on the doll’s molded hair.

STRATUM VI

Stratum VI is the second stratum that is most likely not associated with the demolition of Feature 4. Again, the soil matrix was noticeably different (mottled coarse sands) and the amount of demolition debris/architectural remains dropped significantly. Stratigraphically, it was at the same vertical depth as the stone footers that support the main brick structure. This may indicate that Stratum VI is associated with the original construction of Feature 4 or lay beneath the floor surface of the structure.

A total of 203 artifacts were recovered from Stratum VI. Almost half of these artifacts fall within the household ( $n=47$ , or 49%) functional group. The second largest group is the architectural ( $n=20$ , or 20%) functional group. Table 7.66 summarizes the totals from each functional group.

Table 7.66: Feature 4, Stratum VI, functional groups.

Functional Group	Artifact Count
Activities	1
Architectural	22
Commercial	1
Household	47
Indeterminate	13
Manufacturing	1
Personal	10

*Activities*

One artifact makes up the activities group—a sherd from a redware flowerpot that is not chronologically diagnostic.

*Architectural*

A total of 22 architectural remains were recovered from Stratum VI. Half of these artifacts consist of clear window glass fragments. An additional five frosted fragments of window

pane were also recovered; these may have been from an office door(s). Two nails were also recovered. One is too heavily corroded for identification; the other is hand wrought from a copper alloy. As hand-wrought nails represent an ancient industry and are still technically available today, assigning dates is problematic. However, machine-made nails with hand-attached heads began to largely replace the wrought variety circa 1790 (Miller et al. 2000: 14). It is very possible that this wrought specimen at the very least pre-dates 1790.

The final two architectural remains are fragments of schist from the footer(s) that the brick portions of Feature 4 rest upon.

#### *Commercial*

This group contains a single copper alloy coin. Unfortunately, it is too corroded to identify the date.

#### *Food Related*

This category consists of one large terrestrial mammal fragment.

#### *Household*

A total of 47 household artifacts were recovered from Stratum VI. The bulk ( $n=41$ , or 89%) of these artifacts are ceramic specimens. Only five shards of glass were recovered.

**Ceramics.** Forty-one household ceramics were recovered from Stratum VI. The bulk of these consists of refined earthenwares ( $n=16$ , or 39%). Stoneware is the next most common ceramic ( $n=12$ , or 30%). Coarse earthenwares ( $n=9$ , or 22%) and porcelain ( $n=5$ , or 9%) round out the assemblage.

*Refined Earthenwares.* Most of the refined earthenwares from Stratum VI are creamware ( $n=10$ , or 62.5%). These sherds are undecorated and fall within the standard creamware date range (1762–1820) (Miller et al. 2000: 12). The next most numerous ware type is pearlware ( $n=4$ , or 25%). All of the pearlware sherds have polychromatic designs painted under the glaze. This pearlware decorative style was prevalent from 1795 through 1830 (Miller et al. 2000: 12). An additional printed sherd was too small to be positively identified as either pearlware or white. The pearlware/whiteware category refers to sherds of such a small size as to make final identification difficult. The stated date ranges are an amalgamation of two wares' standard date ranges and that of any discernible decorations. Due to the final ware identification being problematic, the assigned date ranges are of minimal use when dating a deposit.

The final sherd is a small sherd of whiteware. Its small size precludes decoration and vessel type identification. Whiteware became popular in America circa 1815 and is still currently produced (Miller et al. 2000: 13). Technically, this artifact provides the TPQ date for Stratum VI; no other artifacts could have been deposited before 1815. As it is the only definitive sherd of whiteware present, the possibility exists that it is intrusive. If this is the

case, the pearlware sherds may more accurately place the deposition of Stratum VI in the late eighteenth century.

*Coarse Earthenware.* A total of nine coarse earthenware sherds were recovered from Stratum VI. Four of these sherds consist of lead-glazed redware sherds from utilitarian vessels. An additional four sherds are from British buff-bodied slipware vessels. Three of these sherds are lead-glazed and one exhibits an unidentifiable slip-decorated pattern. British buff-bodied utilitarian vessels were prevalent from 1670 through 1795 (Azizi et al. 1996).

The final coarse earthenware is a coarse buff-bodied sherd with a green-tinted tin glaze on both surfaces. This specimen may be an example of either Iberian or Mexican tableware, but its small size makes final identification difficult.

*Stoneware.* A total of 12 stoneware sherds were recovered. Many of these sherds consist of gray or buff-bodied wares with a salt glaze ( $n=5$ , or 42%). One of these sherds is cordoned and painted but exhibits a blotchy salt glaze and is underfired. These characteristics indicate local manufacture at the nearby Crolius/Remmey pottery, which operated in the area from 1720 through 1820 (Janowitz 2008). It is likely that the remaining four salt-glazed sherds are also local products.

Five sherds of white salt-glazed stoneware were also recovered. These specimens exhibit rouletted rims. White salt glaze was available from 1720 through 1805, but is rarely found after 1790 (Miller et al. 2000: 10).

The final stoneware sherds consist of two buff-bodied, slip-glazed stoneware sherds. They are both body sherds.

**Glass.** Five household glass sherds were recovered from Stratum VI. The first three are colorless neck shards from bottles with the manufacturing technique unidentifiable. The remaining two consist of olive-colored bottle neck fragments. Once again, the manufacturing technique was unidentifiable. None of the household glass is chronologically diagnostic.

#### *Indeterminate*

Thirteen unidentifiable artifacts were recovered from Stratum VI. Eight of these specimens are heavily corroded fragments of an unknown cylindrical iron item. Two additional fragments of iron are too heavily corroded for identification. Also recovered was a melted piece of lead, which may be related to a casting process, an unidentifiable fragment of melted colorless glass, and an unidentifiable fragment of milk glass (1743–2010).

#### *Other*

A printer's type block makes up this functional group. It is constructed of a molded copper alloy and exhibits the word "AYRES." This could represent a proper name or, possibly, the earlier spelling of Buenos Aires.

*Personal*

Ten personal artifacts were recovered from Stratum VI. Eight of these artifacts are undecorated stem fragments of white ball clay smoking pipes. None of these specimens are chronologically diagnostic. Also recovered were two copper alloy straight pins.

INTERPRETATION

The ultimate function of Feature 4 is difficult to determine. The structure's placement adjacent to the rear of City Hall clearly indicates some function associated with City Hall. The form of the structure, with the fireplace-like southern bay, seems to indicate its function as an outdoor or summer kitchen. Unfortunately, the slab is only 0.2' above the stone footers that support portions of Feature 4's walls and is surrounded by Stratum IV. This position indicates that the slab was either meant as flooring or is merely coincidental demolition fill. The shape of Feature 4 does not offer any concrete data on its ultimate usage.

The artifacts, while plentiful, are mostly small in size and encompass many functions, from architecture to household wares to electrical items. If Feature 4 was a kitchen, one would expect artifacts associated with food preparation and a larger quantity of food-related faunal material. Instead, many examples of tableware and large amounts of architectural debris were recovered. The small size of the artifacts is indicative of secondary deposition; these items were broken elsewhere and eventually redeposited into the convenient void formed by Feature 4's walls. One clue to the deposition date is a slip-glazed stoneware sherd that is from a vessel recovered within the interior fill of Feature 3. Based on the TPQ dates of the recovered artifacts (ceramics, glass, and coins), this deposition occurred near the very end of nineteenth century. Therefore, the assemblage recovered also does not offer any insight into Feature 4's original function.

**FEATURE 6**

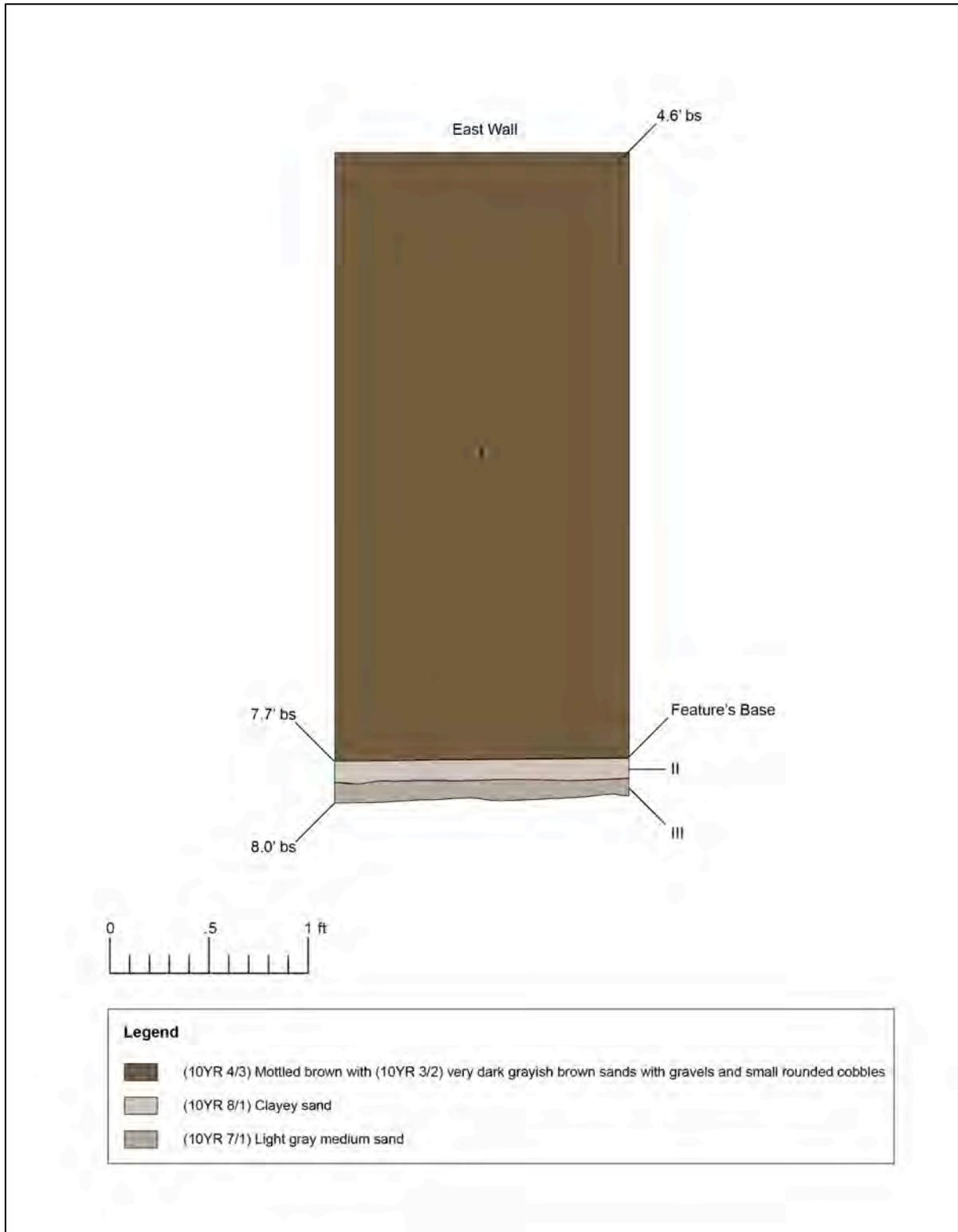
This feature consisted of a small rectangular wooden box (shaft feature) found in the approximate center of Feature 4 (Image 7.84). Portions of the feature were located within Test Units 16, 18, 19, and 20. Feature 6 measured 1.7' from east to west by 3' from north to south. Horizontally, it was located at the top of Stratum VI, the final surface uncovered within Feature 4, which places the top of the shaft at approximately 4.6' bd. The feature itself was constructed of thin wooden planks (Image 7.85).



Image 7.84: Plan view of Feature 6, facing north.



Image 7.85: Profile of Feature 6 interior, facing east.



Map 7.29: Feature 6, profile of east wall.

ASSOCIATED STRATIGRAPHY

The soil matrix within the planks (Stratum I) consisted of 3.1' of mottled brown (10YR 4/3) and very dark grayish brown (10YR 3/2) medium sands with gravels and small rounded cobbles. There was banded micro-stratigraphy throughout, but these bands were lamellar in nature and can be attributed to the passage of water as opposed to deposition. Beneath the observed base of the box, two additional strata were encountered. Stratum II consisted of white (10YR 8/1) clayey sand. Stratum III consisted of light gray (10YR 7/1) medium sand. Each of these strata was approximately 0.1' thick, which puts the overall feature depth at 3.4' below Stratum VI, or 8.0' bd (Map 7.29). All of the strata were very damp, indicating the constant presence, or passage, of groundwater.

ASSEMBLAGE

A total of 222 artifacts were recovered from Feature 6. One hundred and ninety six were recovered from Stratum I and 26 were recovered from Stratum II. No artifacts were recovered from Stratum III.

STRATUM I

Of the 196 artifacts recovered from Stratum I, the bulk ( $n=159$ , or 81%) are architectural remains. Table 7.67 shows a breakdown of the functional groups recovered from Stratum I.

Table 7.67: Feature 6, Stratum I, functional groups.

Functional Group	Artifact Count
Architectural	159
Food Related	1
Fuel	1
Household	26
Indeterminate	4
Personal	5

*Architectural*

A total of 159 architectural remains were recovered from Stratum I. Two-thirds of these remains ( $n=109$ ) consist of damp fragments of the wooden planks that formed Feature 6; these were retained as a sample. No speciation was completed. Thirty-seven nails were also recovered. Twenty-three of the nails are cut specimens too corroded to determine whether or not their heads were attached via hand (1790) or machine (1805). As cut nails are still utilized in certain industries today, only the beginning date of 1790 (Miller et al. 2000) can technically be attributed to this portion of the assemblage. Wire nails are common after circa 1885 and mostly supplant the cut varieties (Miller et al. 2000). As the recovered specimens are iron, and milled steel begins to be used for cut nails circa 1890 (Wells 2000), the general assumption is that the cut nails are used historically between 1790 and 1885–1890.

Ten of the recovered nails were fasteners from the wooden plank box. These are heavily corroded, but not too corroded to determine that they are essentially square. Unfortunately, the level of corrosion is too great to determine whether or not they are square cut nails or square wrought nails. The four remaining nails are too heavily corroded to identify. The remainder of the architectural assemblage consists of 13 fragments of window glass.

#### *Food Related*

This functional group consists of the hinge portion from an oyster shell. Four recovered faunal remains are too fragmented for species identification.

#### *Fuel*

This functional group consists of a coal cinder.

#### *Household Artifacts*

Twenty-six household-related artifacts were recovered from Stratum I. Most of these artifacts are sherds ( $n=23$ ) from ceramic vessels. Only three sherds from glass vessels were recovered.

**Ceramics.** The bulk of this portion of the assemblage consists of refined earthenware ( $n=15$ ). Stoneware ( $n=5$ ) and coarse earthenware ( $n=3$ ) specimens are also represented.

*Refined Earthenware.* Three varieties of refined earthenware were recovered from Stratum I. Almost half of these specimens consist of creamware sherds ( $n=7$ ). Pearlware is the next most numerous ware type ( $n=6$ ), followed by whiteware ( $n=2$ ).

Creamware. Seven creamware sherds were recovered from Stratum I. They are all undecorated and do not offer any chronological data outside that of the general creamware date range (1762–1820) (Miller et al. 2000: 12).

Pearlware. A total of six pearlware sherds were recovered from Stratum I. The first specimen is a molded rim sherd that exhibits even-scalloped shell-edging and curved lines. This decoration was prevalent from 1800 through 1835 (Miller et al. 2000: 12). Five of the pearlware sherds exhibit blue floral painting that is under the glaze. This style ranges from 1775 through 1830 (Miller et al. 2000: 12). The remaining sherd does not exhibit any decoration, so can only be given the general date range for pearlware vessels, 1775–1840 (Miller et al. 2000: 12).

Whiteware. Two sherds of whiteware were recovered; both exhibit transfer-printed decorations that cannot be identified. Transfer-printed whiteware dates circa 1815 through 1915 (Azizi et al. 1996). These sherds represent the TPQ for Stratum I; no other artifacts could have been deposited before 1815.

*Stoneware.* Stratum I contained five stoneware sherds. Three of the stoneware sherds are salt-glazed specimens with gray or buff bodies. Two of these sherds do not offer any characteristics that allow for relative dating. The third gray/buff-bodied sherd exhibits a dark brown lead-glazed interior and an Albany-type slip-decorated exterior. This style of decoration was prevalent from 1805 through 1940 (Azizi et al. 1996). The only other chronologically diagnostic stoneware specimen consists of a white salt-glazed sherd from an unidentified teaware. White salt-glazed stoneware was popular circa 1720 to 1805 (Miller et al. 2000:10). The remaining stoneware specimen is a salt-glazed sherd with a brown-colored body. This sherd is chronologically non-diagnostic.

*Coarse Earthenware.* Three coarse earthenware sherds were recovered from Stratum I. Two of these sherds are redware specimens. One is lead-glazed and the other exhibits incised lines on the exterior. Neither is chronologically diagnostic. The final coarse earthenware specimen is a sherd from a British buff-bodied mug. It is slip-decorated and exhibits a series of dots along its rim. This ware type was popular from 1670 through 1795 (Azizi et al. 1996).

**Glass.** Three glass sherds were recovered from Stratum I. The only dateable sherd is from a dip molded wine bottle. Although dip molds were first introduced circa 1730 and used until circa 1870, the gradual replacement of this manufacturing technique began in 1821, when the Rickett's three-piece mold was introduced (Miller et al. 2000: 8; Jones and Sullivan 1989). The remaining two glass sherds are mold blown, but do not possess enough characteristics to technically determine whether they were blown into the mold via mouth or machine. These sherds are most likely mouth blown and contemporaneous with the wine bottle sherd.

#### *Indeterminate*

The function of three artifacts could not be determined. The first is a thin strip of copper alloy, which appears to have been cut from a sheet of the same material. The second consists of three opaque milk glass artifacts that melted and fused into one unidentifiable item. Opaque milk glass was first introduced in 1743 (Miller et al. 2000:7). The third item is a heavily corroded iron hook.

#### *Manufacturing*

A single stoneware sherd comprises this group. It is an underfired brown-bodied, salt-glazed sherd. This specimen was most likely the result of local stoneware pottery production, possibly the Crolius/Remmey pottery. The sherd is either kiln wastage or kiln furniture.

#### *Personal*

Five personal artifacts were recovered from Stratum I. Four of these artifacts consist of stems from white ball clay smoking pipes. One of the specimens exhibits the remains of a green lacquer; the others are undecorated. The fifth personal item is a cast-copper alloy button with a broken shank.

## STRATUM II

A total of 26 artifacts were recovered from Stratum II. Twenty-five of these artifacts consisted of thin, damp fragments of wood which once formed the wooden walls of Feature 6. Although Stratum II appeared to be below the base of Feature 6, the presence of these wood fragments may indicate that Stratum II was once inside the box. The damp conditions of the soil and the wood indicate that significant decay occurred at the base of the feature. It is possible that the wood fragments represented the decayed original base of the box, and Stratum II was once an interior horizon. One faunal fragment of a medium terrestrial mammal was also recovered. The final artifact consists of a heavily corroded square nail that was embedded in a fragment of mortar. The nail is too corroded to determine if it is wrought or cut. It too indicates that Stratum II was once interior to the feature.

## STRATUM III

No artifacts were recovered from Stratum III.

## INTERPRETATION

Feature 6's initial appearance suggested either a small privy or possibly an infant/small child burial. Upon its discovery, care was taken to determine whether or not the box contained human remains. Subsequent excavations revealed no human remains, few artifacts, and no soil horizons that are characteristic of privies. As opposed to the organically rich and artifact laden horizons that are usually encountered in privies, the Feature 6 strata were mostly composed of sand and gravel. Artifact content was very low and the soils themselves possessed no organic material (other than fragments of the wooden box itself). Its small size and position near the center of Feature 4 would also appear to preclude its usage as a privy. These factors suggest that Feature 6 was more likely a drainage feature than a privy. The medium-grained sand and gravel mix inside the box would allow for the passage of water, and the observed lamellae lend credence to this hypothesis. Therefore, it is likely that Feature 6 was a sump, an internal drain for the outbuilding/kitchen. Historic research indicates drainage problems at City Hall (McComb family papers 1787–1858), which would have made on-site drainage solutions necessary.

Although very few chronologically diagnostic artifacts were recovered, the presence of early- to mid-nineteenth-century artifacts (i.e., whiteware) probably indicates that Feature 6 was concurrent with Feature 4. If Feature 6 was a sump designed to keep Feature 4 dry, then it is likely they are contemporaneous.

## FEATURE 7

Feature 7, was encountered beneath the northeast corner of Feature 4 at 4.6' bs (see Map 7.17 and see Map 7.27). It consisted of a relatively small stone shaft with an interior diameter of 2.8' (Image 7.86). Upon initial discovery, Feature 7 appeared to be a brick-lined shaft capped with slabs of schist and brownstone. The schist footer slabs that support the brick portion of Feature 4 were attached directly to the visible interior slab(s) cap and outer brick ring (Image 7.87). As the northeast corner of Feature 4 obscured most of the shaft's northern and eastern portions, the approximate quadrant of Feature 7 inside Feature 4 was excavated.

This excavation revealed that Feature 7 was not a brick-lined shaft, but rather a stone shaft. The initially visible brick upper structure was actually a three course thick collar (Image 7.88). Beneath this collar and even with the base of Test Unit 20, Stratum VI, the actual shaft began. It was constructed of small slabs of brownstone and reached a depth of approximately 3.2' below the first stone course (7.8' bs). The first (at 0.5') several courses of stone exhibited evidence of sand mortar between them. This is generally indicative of a privy or cistern, versus wells, which are generally not mortared. The tight conditions and poor lighting made confirmation of mortar at greater depths impossible.



Image 7.86: Feature 7, plan view.

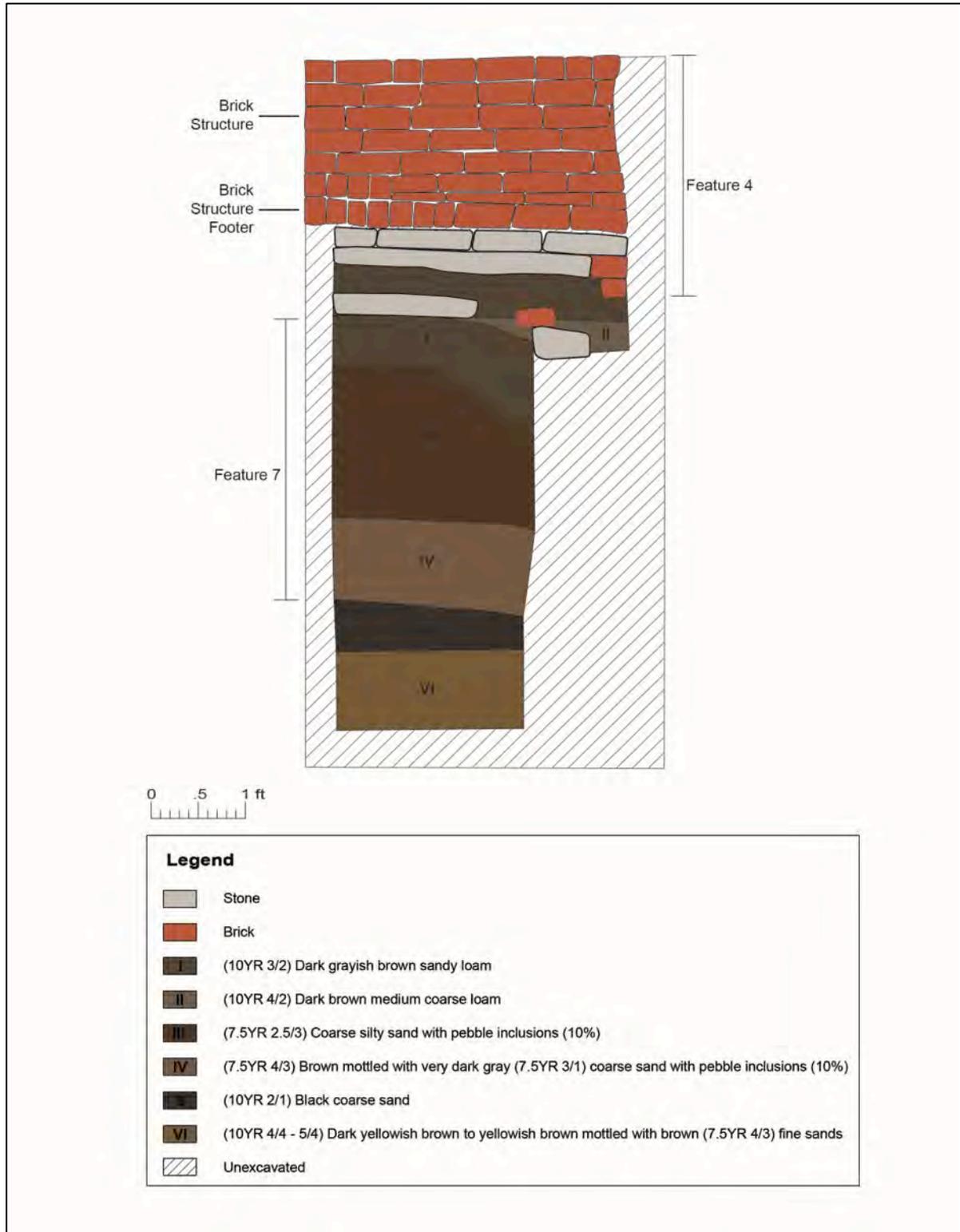
#### ASSOCIATED STRATIGRAPHY

Six horizons were encountered during the excavation of Feature 7. Strata I through IV were located inside the shaft (Map 7.30; see Image 7.87). At the surface of the feature, Strata I and II appeared to be concentric rings with Stratum I located on the inside (Maps 7.17 and 7.27; Image 7.86). Excavations revealed Stratum II to be a narrow and thin (0.4' wide by 0.2' thick) ring adjacent to the inner face of the shaft. Stratum I consisted of fill and exhibited a pronounced slope to the south. Thus, while it reached a depth of 5.2' bs in the north, it terminated at 5.9' bs to the south. The remainder of the strata exhibited generally level interfaces with each other. Strata V and VI were beneath the shaft and represented

sterile C horizons composed of glacial till. Table 7.68 lists the depths and descriptions of each encountered horizon.

Table 7.68: Feature 7 stratigraphy.

<b>Stratum</b>	<b>Depth</b>	<b>Soil Description</b>
<b>I</b>	4.6' – 5.2' (n) / 5.9' (s)	Dark grayish brown (10YR 3/2) sandy loam
<b>II</b>	4.6' – 4.8'	Dark brown (10YR 4/2) medium coarse loam
<b>III</b>	5.2' / 5.9' – 6	Very dark brown (7.5YR 2.5/3) coarse silty sand with pebble inclusions (10%)
<b>IV</b>	6.8' – 7.8'	Brown (7.5YR 4/3) mottled with very dark gray (7.5YR 3/1) coarse sand with pebble inclusions (10%) shaft feature terminates at base of stratum
<b>V</b>	7.8' – 8.2'	Black (10YR 2/1) coarse sand; possible C-horizon (glacial till)
<b>VI</b>	8.2' – 9.0'	Dark yellowish brown to yellowish brown (10YR 4/4-5/4) mottled with brown (7.5YR 4/3) fine sands; C-horizon (glacial till)



Map 7.30: Feature 7, east profile.



Image 7.87: Feature 7, east profile.



Image 7.88: Feature 7, in progress plan view showing stone slabs.

#### ASSEMBLAGE

A total of 101 artifacts were recovered from Feature 7. Two of these artifacts represent whole bricks taken from the collar ring as samples. These bricks were unmarked and appear to date to the eighteenth century. The remaining 99 were recovered from Strata I through IV. No artifacts were recovered from Strata V or VI. Table 7.69 lists the amounts of material recovered from the artifact-bearing strata.

Table 7.69: Feature 7  
stratum totals.

Stratum	Count
1	24
2	8
3	18
4	49
<b>Total</b>	<b>99</b>

## STRATUM I

A total of 24 artifacts were recovered from Stratum I. Most of the materials are split evenly among architectural remains ( $n=11$ ) and household artifacts ( $n=11$ ). The remainder of the assemblage consists of unidentifiable items ( $n=1$ ) and lighting-related artifacts ( $n=1$ ).

### *Architectural*

Most of the architectural remains consist of fragments of window glass ( $n=5$ ). The next most numerous artifact type consists of nails ( $n=4$ ). Two of the nails are square nails too corroded to determine whether they are cut or wrought varieties. The other two nails are very heavily corroded and cannot be identified at all. The remaining architectural artifacts consist of a slate roofing tile fragment and a glass tile. The glass tile is 0.5" thick and likely from a skylight or other specialized window.

### *Food Related*

Nine faunal elements were recovered, including the fragmented pelvis of a domestic cat. The remaining elements were too fragmented for species identification.

### *Household*

Ten of the household artifacts consist of ceramic sherds. Only one household glass artifact was recovered.

**Ceramic.** The most numerous household ceramic group is refined earthenware ( $n=5$ ). Coarse earthenware ( $n=2$ ), stoneware ( $n=2$ ), and porcelain ( $n=1$ ) specimens were also recovered.

*Refined Earthenware.* The refined earthenwares include three creamware and two whiteware sherds. The creamware sherds are undecorated rim and body sherds. Creamware was popular from 1762 through 1820 (Miller et al. 2000: 12). The first whiteware sherd exhibits a blue transfer-printed decoration. Although the overall pattern is indiscernible, most transfer-printed whiteware was produced between 1815 and 1915 (Azizi et al. 1996). The final sherd consists of a small sherd of whiteware. Its small size precludes decoration and vessel type identification. Whiteware was introduced in 1805, but did not become popular in America until circa 1815 and is still in production today (Miller et al. 2000: 13). This artifact provides the TPQ date of 1815 for Stratum I.

*Coarse Earthenware.* Two coarse earthenware sherds were recovered from Stratum I. The first consists of a redware rim sherd that is slip decorated in the Lower Delaware Valley style. This variety of redware was popular from 1740 through 1820 (Azizi et al. 1996). The second sherd is from a British buff-bodied slipware vessel. The slip decoration is of the trailed variety; this style of vessel was popular from 1670 through 1795 (Azizi et al. 1996).

*Stoneware.* Two stoneware sherds were recovered. They are both examples of slip-glazed stoneware with light buff bodies and do not offer enough characteristics for diagnostic dating.

*Porcelain.* The single porcelain sherd consists of a hard paste rim sherd with an indeterminate decoration. It does not offer enough characteristics for diagnostic dating.

**Glass.** The single glass household artifact is a body sherd from a black or dark green dip mold bottle. Dip molds were first introduced circa 1730 and used until circa 1870, but the gradual replacement of this manufacturing technique began in 1821, when the Rickett's three-piece mold was introduced (Miller et al. 2000:8; Jones and Sullivan 1989).

*Indeterminate.* This functional group consists of a fragment of flat colorless glass. It may be part of a bookcase or a similar piece of furniture, but could also be windowpane.

*Lighting.* This functional group consists of a sherd from a frosted lamp globe. The manufacturing technique is unknown and no relative date can be assigned.

## STRATUM II

A total of eight artifacts were recovered from Stratum II. Most of the assemblage consists of household artifacts ( $n=6$ ); the remainder consists of architectural remains.

### *Architectural*

The architectural remains consist of two heavily corroded nails that cannot be identified.

### *Household*

The bulk of the household assemblage consists of creamware sherds ( $n=4$ ); they are undecorated and range from 1762 to 1820 (Miller et al. 2000: 12). Also recovered was a sherd of gray salt-glazed stoneware. Although it exhibits no obvious characteristics that provide a date, this sherd was likely a product of the Crolius/Remmey pottery (1720–1820) (Janowitz 2008). The final household artifact is a sherd of Chinese export porcelain. It is likely from a teaware, but is undecorated and non-diagnostic.

## STRATUM III

Eighteen artifacts were recovered from Stratum III. Close to half of the assemblage consists of architectural remains ( $n=7$ , or 39%). The next most numerous functional group consists of household artifacts ( $n=6$ , or 33%), followed by personal items ( $n=3$ , or 25%). Activity-related items ( $n=1$ ) and unidentifiable artifacts ( $n=1$ ) were also recovered.

### *Activities*

A single artifact comprises this functional group—a shoulder sherd from a gray salt-glazed stoneware ink bottle. This artifact is likely from a “master” bottle, which was used to fill individual ink bottles.

### *Architectural*

Five of the architectural remains consist of heavily corroded nails that cannot be identified. The remaining two architectural remains are two fragments of windowpane.

### *Household*

All six of the recovered household artifacts consist of ceramic sherds. The most common ware type is undecorated creamware ( $n=3$ , or 50%), which was popular from 1762 through 1820 (Janowitz 2008). These sherds exhibit light heat damage. A lightly burned sherd of pearlware was also recovered. This specimen exhibits an underglaze painted floral design and a yellow band around the rim. Pearlware that exhibits this decorative technique dates from 1795 to 1830 (Miller et al. 2000: 12). The two remaining ceramic sherds are from whiteware vessels. The first is a rim sherd from a Willow-pattern plate. This sherd dates from 1815 through 1915 (Azizi et al. 1996). The final whiteware sherd is a small fragment and identification of its form and decoration are not possible. Whiteware was introduced in 1805, but did not become popular in America until circa 1815, and are still in production today (Miller et al. 2000: 13). This artifact provides the TPQ date for Stratum III of 1815.

### *Indeterminate*

This group consists of a thin and flat fragment of copper wire. Its original function cannot be determined.

### *Personal*

Three personal items were recovered from Stratum III; these consist of fragments from white ball clay pipe stems. The specimens are undecorated and non-diagnostic.

## STRATUM IV

Forty-nine artifacts were recovered from Stratum IV. Most of the assemblage consists of household artifacts ( $n=31$ , or 62%). Architectural remains ( $n=13$ ) account for 26% of the assemblage. The remainder consists of unidentifiable items ( $n=3$ ) and personal items ( $n=2$ ).

### *Architectural*

More than half of the architectural remains consist of non-diagnostic fragments of window glass ( $n=7$ ). Also recovered were two sand-cast bricks with pebble inclusions and two unidentifiable nails. A white marble floor tile and another possible tile (or decorative brick) made from coarse earthenware round out the assemblage.

### *Household*

A total of 31 household artifacts were recovered from Stratum IV; most ( $n=28$ ) consist of ceramic sherds. The remaining three household artifacts are glass sherds.

**Ceramic.** Refined earthenwares ( $n=18$ ) are the most common ceramic in this assemblage. The second most common is stoneware ( $n=6$ ), followed by coarse earthenware ( $n=3$ ), and porcelain ( $n=1$ ).

*Refined Earthenware.* The refined earthenware portion of the assemblage consists of creamware ( $n=11$ ), pearlware ( $n=5$ ), and whiteware ( $n=2$ ) specimens.

Creamware. Eleven creamware sherds were recovered from Stratum IV. Ten of these specimens are undecorated sherds that can be assigned the general creamware date (1762–1820) (Miller et al. 2000: 12). One additional specimen exhibits an overglaze-printed design that cannot be identified. This decorative style upon creamware was popular from 1765–1815 (Miller et al. 2000: 12).

Pearlware. Five pearlware sherds were recovered. Four possess visible decorative elements; one does not. The specimen without visible decorative elements can only be assigned the general pearlware date of 1775–1840 (Miller et al. 2000: 12; Azizi et al. 1996). The visibly decorated sherds offer tighter date ranges. The latest specimen exhibits a stipple-printed pattern, a decorative style prevalent from 1807 through 1830 (Miller et al. 2000:13). The next specimen is from an unidentified hollowware and exhibits both printing and engraved lines. The interior possesses an underglaze-printed black border of hexagonal cells, which then had a clobbered orange pigment. The exterior exhibits a panel of underglaze-printed small diamond cells, which were also then clobbered, but with a light blue pigment. Underglaze printing on pearlware was prevalent from 1783–1830 (Miller et al. 2000:13).

The final two decorated pearlware sherds consist of painted body sherds. The painting is under the glaze and exhibits blue floral patterns. Such decorations were popular from 1775 to 1830 (Miller et al. 2000: 12).

Whiteware. Two whiteware sherds were recovered from Stratum IV. The first consists of a transfer-printed body sherd. This sherd dates from 1815 through 1915 (Azizi et al. 1996). The final whiteware sherd is a small fragment and identification of its form and decoration are not possible. Whiteware was introduced in 1805, but did not become popular in America until circa 1815 and is still in production today (Miller et al. 2000:13). This artifact provides the TPQ date for Stratum IV of 1815.

*Coarse Earthenware.* Three coarse earthenware sherds were recovered from Stratum IV. All were redware sherds. Two are lead-glazed sherds from hollowware vessels and are non-diagnostic. The third is slip decorated in the Lower Delaware Valley style, which was popular from 1740 through 1820 (Azizi et al. 1996).

*Stoneware.* Six stoneware sherds were recovered. Three of these sherds consist of gray or buff-bodied specimens with salt glazes. They are underfired and exhibit a light salt glaze. These characteristics indicate local production at the Crolius/Remmey pottery, which operated upon nearby Potbakers Hill from 1720 to 1820 (Janowitz 2008). A sherd from an Albany-type slip vessel was also recovered. This variety of slip decorating was prevalent from 1805 through 1940 (Azizi et al. 1996). Also recovered were a sherd of white salt-glazed stoneware and another slip-decorated sherd. The white salt glaze sherd exhibits an indeterminate decoration. This ware type was popular from 1720 through 1805, but rarely found after 1790 (Miller et al. 2000:10). The slip-glazed sherd is non-diagnostic.

*Porcelain.* One porcelain sherd was recovered—a Chinese export saucer rim sherd with a painted design. The design is unidentifiable; the sherd is non-diagnostic.

**Glass.** Three glass household artifacts were recovered from Stratum IV. Two are sherds that do not possess enough characteristics to identify the vessel or manufacturing technique. The third is from a colorless vessel that cannot be definitively identified.

#### *Indeterminate*

Three unidentifiable artifacts were recovered from Stratum IV. Two of the indeterminate items are metal objects too heavily corroded to positively identify the type of metal. They are curved fragments of a dome-shaped object that may be a copper alloy button. The final unidentified item consists of a bar-shaped but heavily corroded flat iron object. No final identification of this artifact can be made.

#### *Personal*

Two personal items were recovered from Stratum IV. They consist of a stem and bowl fragment from white ball clay smoking pipes. Neither is decorated or diagnostic.

#### INTERPRETATION

Feature 7 consisted of a small stone shaft located beneath the northeast corner of Feature 4. The shaft was capped and sealed, presumably during the construction of Feature 4. Four strata were encountered within Feature 7. Although the four strata were visibly different, they provided consistent dates throughout. Strata I, III, and IV contained whiteware sherds, which provide a TPQ of 1815. Although Stratum II did contain a creamware sherd, it is very likely that the sherd is contemporary with the whiteware. Therefore, one can conclude that this shaft was filled circa 1815, which is consistent with the TPQ date provided by the lowest stratum of Feature 4.

Because the interior surfaces of Feature 7 were mortared, it can be surmised that the shaft was either a narrow, shallow cistern or a privy. Of these two hypotheses, a cistern is more likely, as a privy positioned nearly adjacent to City Hall would be unsanitary.

## **FEATURES 5, 9, 10, AND 11**

Features 5, 9, 10, and 11 are all sections of a nineteenth-century drainage system exposed in the northeast area (see Map 7.17). Throughout the area, flagstones were exposed at varying elevations; these stones capped brick and flagstone drains. Each was constructed of brick and capped with bluestone slabs (Map 7.31; Image 7.89). The drains were approximately 2' wide and three courses tall (0.6') (Image 7.90). The bluestone slabs did not completely overlap the brick portions; brick was visible on either side of the slabs (Image 7.91). The first of these drains to be exposed was Feature 5, located in Test Units 12, 13, and 14 (Image 7.92).

The feature was mapped and eventually deconstructed to further expose Features 1 and 2. Further excavation in these units did not reveal any additional features. Feature 5 sloped downward from west to east into Feature 3. The end of the drain aligned with an opening in the western wall of Feature 3.

Features 9, 10, and 11 were situated on the eastern side of Feature 3. Feature 11 extended from an opening on the eastern side of Feature 3 at a slightly lower elevation than Feature 5, sloping downward and into Feature 8—a stone well (Image 7.93). Feature 9 was a split drain that directed runoff into the northern end of Feature 8 and continued into Feature 10. Feature 10 continued to slope downward to the east and continued into the eastern trench wall into an unexcavated area.

The drains appear to continue to the east side of the property and from the northern end of the property. Feature 9 is part of a feature that was partially uncovered in 1999 (Parsons Engineering Science 1999). In 1999, a feature (labeled Feature 46) was identified 1.4' below surface (according to field records) and described as being

capped with cut stone which was removed to reveal a brick lined drain that PES notes is possibly associated with the first almshouse. The sides of the drain line were composed of five courses of brick. Ultimately, the drain line turned toward City Hall [Bankoff and Loorya 2008].

Bankoff and Loorya concluded that this feature dated to the nineteenth century and was associated with City Hall (Bankoff and Loorya 2008).

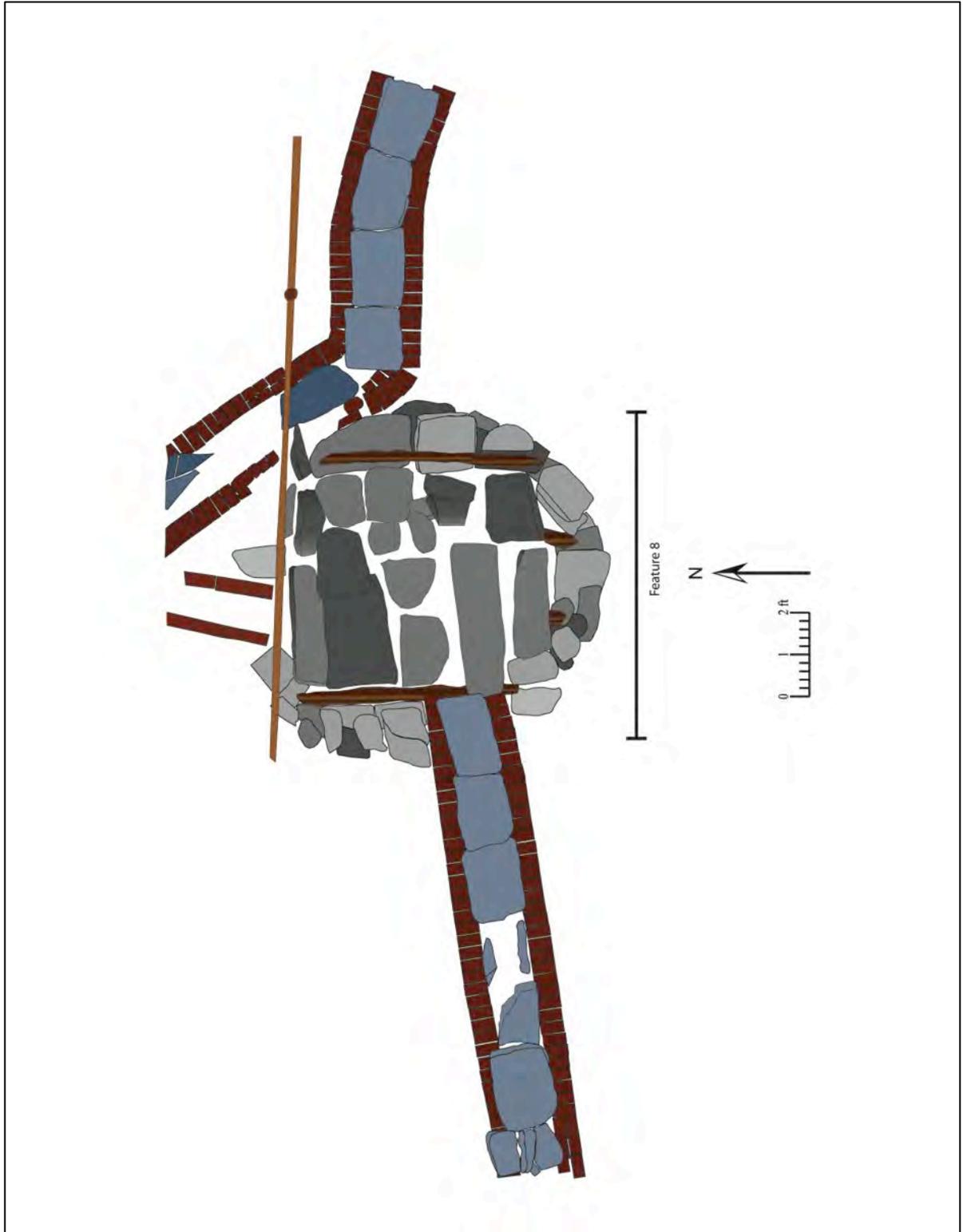
This assessment appears to hold up when taking into account the more recent excavations and features. The depth below datum at which these drains were uncovered ranges from 1.7' bd (Feature 5) at the western end to 3' bd (Feature 10) at the eastern end of the northeast area. This demonstrates a distinct slope eastward from the west and the north. The drains connect earlier shaft features in the northeast area, particularly Feature 3 and Feature 8 (see Map 7.17).

The drainage system, a similar form of which was exposed on the western end of the property, made use of pre-existing features, or structures, in the landscape. Based on the analysis of Feature 3 (discussed previously) and Feature 8 (discussion following), it is likely that the section of the drainage system labeled as Feature 5 was constructed post 1850, the construction date of Feature 3. Based on the similarity of form and materials, Features 9, 10, and 11 are contemporaneous with Feature 5.

Features 9, 10, and 11 are further discussed along with Feature 8. All of the drains were deconstructed to facilitate project plans.



Image 7.89: Features 8, 9, 10, and 11 initial plan view.



Map 7.31: Plan view of Features 8 with Features 9, 10, and 11 extending outward from Feature 8.

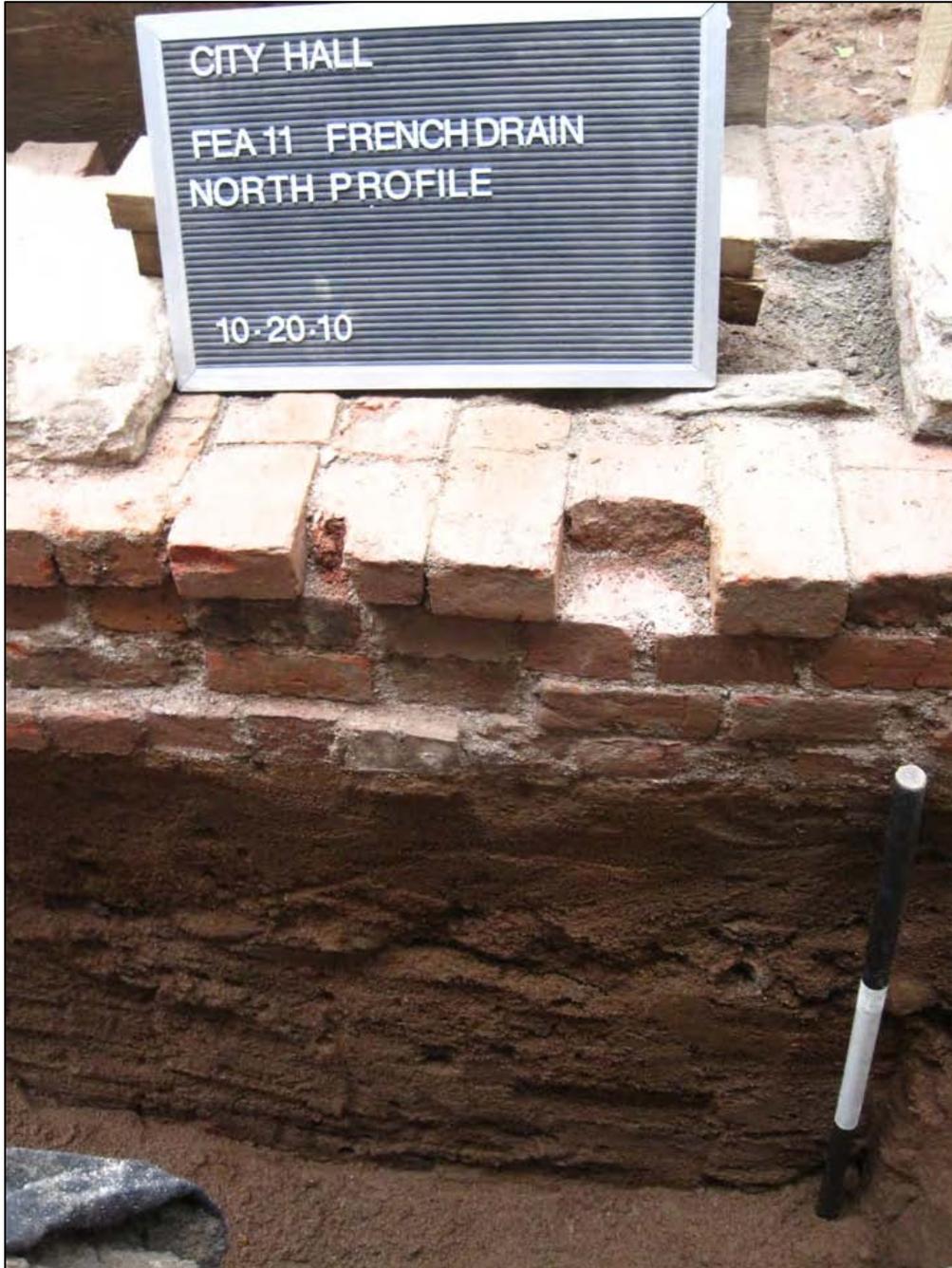


Image 7.90: Feature 11, representative profile.



Image 7.91: Feature 9, representative plan view.



Image 7.92: Portion of Feature 5 exposed within Test Units 12 and 13.



Image 7.93: Feature 11 drained into Feature 8, the stone well.

### **FEATURE 8 (INCLUDING FEATURES 9, 10, AND 11)**

This complex of features consisted of two distinct parts. The first part was Feature 8, a stone shaft, and a series of covered brick drains (9, 10, and 11) attached at a later time (see Map 7.17 and Map 7.31).

Feature 8 was a large circular stone shaft with an outside diameter of 8.7'. It was encountered at approximately 3.1' bs. Large rectangular slabs of schist/bluestone capped Feature 8 when it was discovered (see Image 7.89). Upon removal of these capping stones, the shaft was revealed as a structure with 2.5' thick walls. These walls were constructed of dry-laid schist and enclosed a 6.2' diameter circular area, which contained feature fill.

Features 9, 10, and 11 consisted of drains that fed into Feature 8 (see previous section for a description of these features). Features 9 and 10 were encountered at the same depth below ground surface as Feature 8 (3.1' bs). Feature 11 was located at a slightly higher elevation than Feature 8 and drained down into it. Feature 9 extended from the eastern side of Feature 8 and curved to the southeast for approximately 17' (see Map 7.31). The full extent of this feature was not uncovered; the excavations in the northeast did not extend beyond the eastern side of City Hall. This being said, it is likely that Feature 9 was once connected to a rainspout on the northeastern corner of the building. Feature 9 wrapped around the northeast of Feature 8 and extended 5' to the north.

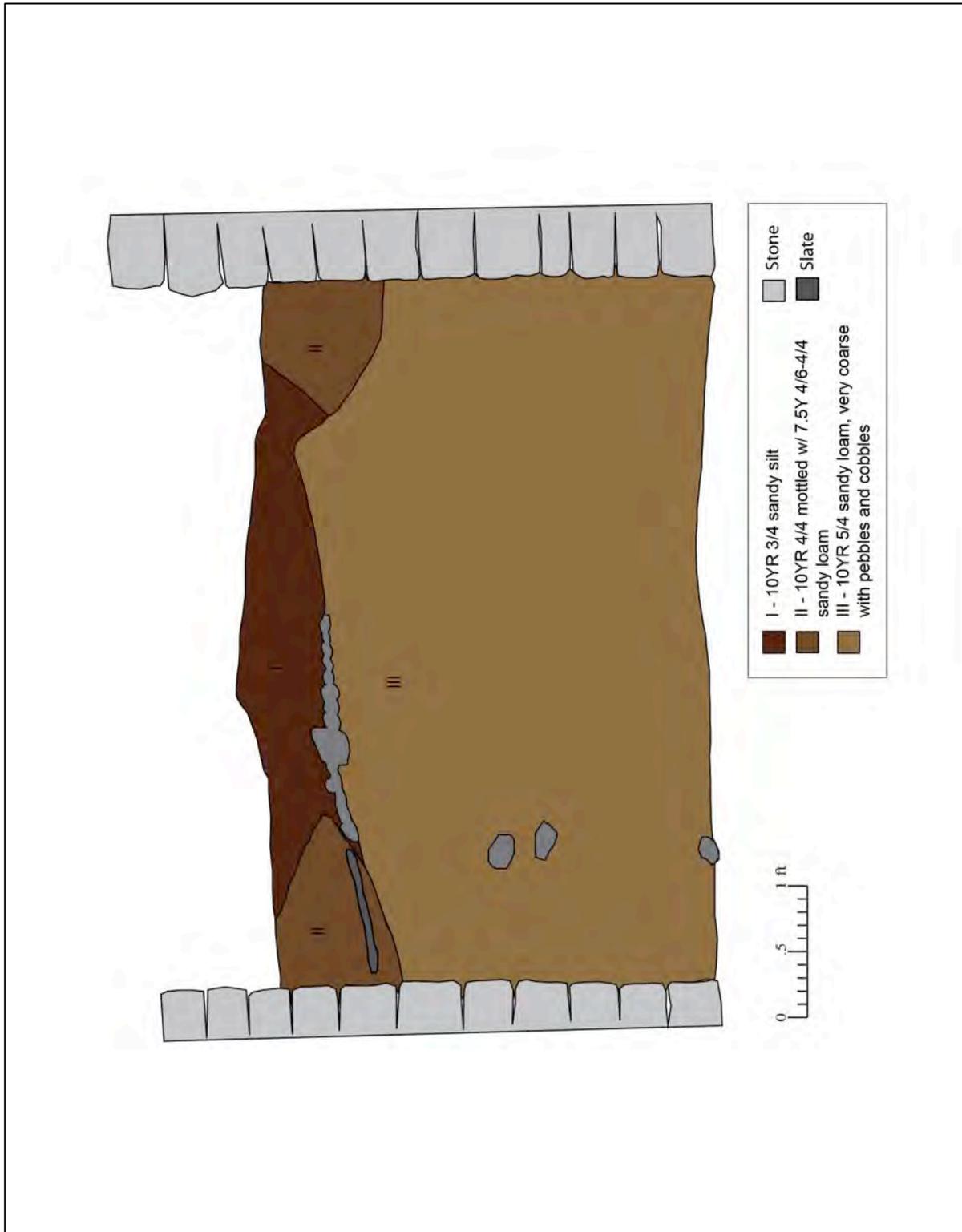
Although Feature 9 did not physically enter Feature 8, a lead pipe was driven through the shaft and into the drain, presumably to alleviate overflow in Feature 9. Feature 10 was a small section of drain that extended 3' from the north of Feature 8; it directly entered the shaft, draining water from somewhere to the north of City Hall. Feature 11 also directly entered the shaft. It connected to the western side of Feature 8, and the drainage system extended west and lay atop Feature 3. Whether Feature 11 was designed to alleviate overflow from the one of the two cisterns located at the western end of the northeast area or was once connected to a downspout in that area is unknown. For the purposes of this discussion, Feature 11 will refer to the section of drain that bridged the 22' between Features 8 and 3.

Based on the construction and depth below surface of these four interconnected features, it is likely that Feature 8 pre-dates the drains. Feature 8 was likely an earlier well, possibly associated with the almshouse. When City Hall was under construction, the well was filled and capped. At a later point, when drainage issues arose at City Hall, the brick drainage system was added and funneled into the earlier well.

#### ASSOCIATED STRATIGRAPHY

Although the capped surface of Feature 8 was encountered at 3.1' bs, the actual feature fill began at a lower depth (3.97' bs). Two strata were apparent at this depth. Stratum I encompassed the central portion of the shaft and Stratum II was a 0.7' wide ring adjacent to the shaft's walls (Map 7.32). Although Strata I and II were located at the same basic elevation, the center of Stratum I began at a slightly higher elevation (3.97' bs versus 4.17' bs) and sloped down towards the shaft's sides; this was the result of the in-filling of the shaft—the feature fill “mounded up” in the center. It is also likely that Stratum II was not deposited at the time of the shaft's in-filling. The later drainage system (Features 9, 10, and 11) fed into the shaft at this approximate level and it is very possible that Stratum II is the result of small amounts of soil deposited via the brick drains. Stratum I was mounded towards the center of the shaft, and the brick drains deposited soils around the apex of the mound.

Four feature fill horizons were encountered within Feature 8. The final, Stratum IV, capped sterile subsoil; this also marked the end of the stone walls of the structure. Altogether, the documented portion of the shaft measured 9.93', which placed the base of the feature at 12.8 below current ground surface. The four strata encountered within the shaft are listed below in Table 7.70.



Map 7.32 Feature 8, Profile of North Wall.

Table 7.70: Feature 8 stratigraphy.

Stratum	Depth	Soil Description
I	3.97' – 4.77'	Dark yellowish brown (10YR 3/4) sandy silt
II	4.17' – 5.27'	Dark yellowish brown (10YR 4/4) mottled with brown to strong brown (7.5 YR 4/4-4/6) sandy loam
III	4.77' – 11.7'	Light yellowish brown to yellowish brown (10YR 6/4-5/4) coarse sandy loam with 60% small cobbles and pebbles
IV	11.7' – 12.8'	Dark grayish brown (2.5Y 4/2) damp silty coarse sand

#### ASSEMBLAGE

A total of 549 artifacts were recovered from Feature 8. Stratum I and II contained the bulk of the assemblage; totals decreased as depth increased. The artifact totals recovered from each stratum are listed below in Table 7.71.

Table 7.71: Feature 8 stratum totals.

Stratum	Count
I	240
II	155
III	86
IV	68

#### STRATUM I

A total of 240 artifacts were recovered from Stratum I. Most of the materials are split nearly evenly among architectural remains ( $n=98$ ) and household artifacts ( $n=118$ ). Table 7.72 lists the functional groups into which the assemblage fell.

Table 7.72: Feature 8, Stratum I, functional groups.

Functional Group	Artifact Count
Architectural	98
Food Related	10
Hardware	1
Household	118
Indeterminate	3
Personal	10
<b>Total</b>	<b>240</b>

### *Architectural*

A total of 98 architectural remains were recovered from Stratum I. Most of these artifacts consist of fragments of window glass ( $n=61$ , or 62%). Unidentifiable nails comprise the second most common artifact type ( $n=25$ , or 25.5%). Nine square nails were also recovered. These specimens can be identified as “square,” but are too corroded to determine whether they are wrought or cut. The remainder of the assemblage consists of brick fragments, an iron spike, and a fragment of copper alloy flashing.

### *Food Related*

This group consists of 51 faunal elements, including 30 quahog clam shell fragments and four elements from a rat. The remaining elements were too fragmented for species-level identification, but include six medium terrestrial mammal, one small terrestrial mammal, and one avian species. They are likely the remains of meals.

### *Household*

The household assemblage consists almost entirely of ceramic artifacts ( $n=114$ ); only four glass household artifacts were recovered.

**Ceramics.** More than half of the ceramic portion of the household assemblage consists of refined earthenwares ( $n=65$ , or 57%). Stoneware ( $n=29$ , or 25%) is the next most common ware, followed by coarse earthenware ( $n=13$ , or 11%). The final recovered ware type consists of porcelain ( $n=7$ , or 7%).

*Refined Earthenware.* Almost half of the refined wares consist of creamware ( $n=31$ , or 48%). The next most common ware is pearlware ( $n=14$ , or 23%), followed by whiteware ( $n=10$ , or 15%) and tin glaze ( $n=4$ , or 6%). Six (8%) unidentifiable refined wares were also recovered. These were sherds that either lacked glaze or were too heavily burnt for identification.

Creamware. The bulk ( $n=28$ ) of the recovered creamware sherds consist of undecorated body sherds. Only two identifiable rim sherds were recovered; these both exhibit the Bath rim. The final creamware sherd was decorated via bat printing. Bat printing is essentially transfer printing, as the “bat” refers to the medium that contains the pattern to be transferred to the ceramic. Early transfer printing, or bat printing, utilized bats constructed of glue and isinglass. Stippled patterns were etched into copper plates, which were covered with mixtures of linseed oil and pigments. The bat was pressed onto the copper plate and the linseed oil based pattern adhered to the bat. The bat was then pressed to the already glazed ceramic, and the pattern was transferred. The vessel was then fired in the kiln again, to set the design in place. This method was time-consuming and the bat could only be used once. The pattern on this specific sherd cannot be determined, as the overglaze printing often led to the design wearing away. Unfortunately, none of the creamware sherds offer any characteristics that provide any additional date information outside of the standard creamware date range, which spans from 1762 through 1820 (Miller et al. 2000:12).

Pearlware. Fourteen pearlware sherds were recovered from Stratum I. Half of the pearlware did not exhibit any decorative elements and is assigned the general date range for pearlware (1775–1840) (Miller et al. 2000:12, Azizi et al. 1996). Painted sherds account for two sherds in the pearlware assemblage. The painted sherds exhibit blue floral decorations that are under the glaze. Such decorations were prevalent between 1775 and 1830 (Miller et al. 2000:12). The remaining sherds consist of four printed and one molded sherd. The printed sherds are stipple-printed specimens, a decorative technique that was popular from 1807 to 1830 (Miller et al. 2000:13). The final pearlware sherd is a rim sherd that exhibits a molded blue design. Such decorations were popular circa 1820 to 1835 (Miller et al. 2000:13).

Whiteware. Ten whiteware sherds were recovered. Four of these sherds exhibit an indeterminate decoration and these sherds can only be assigned the general whiteware date (1815–2010). Whiteware was introduced in 1805, but did not become popular in America until circa 1815. It is still currently produced (Miller et al. 2000: 13). The remainder of the whiteware sherds exhibit various transfer-printed decorations; all but one of these sherds exhibit blue transfer-printed designs, which were prevalent from 1815 through 1915 (Azizi et al. 1996). The final whiteware sherds exhibit a red transfer-printed design, which depicts a scene in the Romantic style. Red pigmentation was first utilized with transfer printing in 1825 (Azizi et al. 1996) and was popular through circa 1880 (Jefferson Patterson Park and Museum 2012). This sherd provides the TPQ date for Stratum I; no other artifacts could have been deposited before 1825.

Tin Glaze. Four fragments of tin glaze were recovered from Stratum I. The first two consist of a body sherd with an indeterminate decoration and one with a floral scene painted in blue. The remaining two samples of tin glaze consist of fragments of the actual tin glaze that became separated from the earthenware portion of a sherd(s). One exhibits an indeterminate blue floral scene and the other is undecorated, but is likely from the same sherd. English tin glaze was popular from 1640 through 1880 (Azizi et al. 1996).

*Coarse Earthenware.* The coarse earthenware assemblage from Stratum I consists of 10 redware sherds and three sherds of British buff-bodied slipware. One of the redware sherds exhibits slip decoration that consists of a single wavy line with slipped dots on either side. Due to the long time span of redware, determining a beginning date for this sherd is problematic. This style of slipped decoration was popular until circa 1870 (Denker and Denker 1985: 54–68). The remaining nine redware sherds are lead-glazed utilitarian vessels and are chronologically non-diagnostic.

The British slipware falls within two decorative styles. Two of the sherds are simple lead-glazed hollowware sherds. The final sherd is slip decorated with combed lines. British slipware was prevalent from 1670 through 1795 (Azizi et al. 1996).

*Stoneware.* Twenty-nine stoneware sherds were recovered from Stratum I. Twenty-seven of these sherds consist of salt-glazed sherds with gray/buff bodies. Most of the salt-glazed sherds ( $n=25$ ) do not possess enough characteristics for definitive dating, but two are underfired and painted with blue swirling designs. These are products of the Crolius/Remmey pottery, which operated on nearby Potbakers Hill from 1720 to 1820 (Janowitz 2008). It is likely that the other 25 salt-glazed sherds are also Crolius/Remmey products.

The remaining two stoneware sherds exhibit an Albany-type slip. This style of decoration was prevalent from 1805 through 1940 (Azizi et al. 1996).

*Porcelain.* Seven porcelain sherds were recovered from Stratum I. Five of these sherds consist of Chinese export porcelain; two are of the hard paste variety. Only one of the porcelain sherds is diagnostic—an export sherd decorated in a European Neo-Classical style. The design, an exterior sprig motif and a scroll motif on the interior, was painted over the glaze with black pigmentation. Such decorative elements upon Chinese export porcelains were popular between 1750 and 1840 (Azizi et al. 1996).

**Glass.** The glass household assemblage is very limited. It consists of a colorless (lead glass) sherd of unidentified tableware, two dark green bottle sherds, and an aqua container glass sherd. None of these sherds possess enough characteristics to identify manufacturing technique or time period.

#### *Indeterminate*

Three objects, which cannot be identified, were recovered. All are flat, corroded fragments of iron.

#### *Personal*

Ten personal items were recovered from Stratum I. All consist of fragments of white ball clay smoking pipes. Eight undecorated pipe stem fragments and two undecorated pipe bowl fragments comprise this functional group. None are chronologically diagnostic.

### STRATUM II

A total of 155 artifacts were recovered from Stratum II. The most common functional group consists of household artifacts ( $n=75$ , or 48%), followed by architectural remains ( $n=36$ , or 36%). Table 7.73 lists all the functional groups into which the assemblage fell.

Table 7.73: Feature 8, Stratum II, functional groups.

Functional Group	Artifact Count
Activities	1
Architectural	36
Food Related	10
Household	75
Indeterminate	22
Personal	11

*Activities*

This functional group contains only a single slate pencil with a broken tip.

*Architectural*

Thirty-six architectural remains were recovered from Stratum II. Most of these remains consist of non-diagnostic fragments of window glass ( $n=20$ ). The next most common artifact type was unidentifiable nails. These specimens are too corroded to determine whether they are round or square. Two additional nails can be identified as square shaped, but are too corroded to identify the manufacturing technique (wrought versus cut). The remainder of the architectural remains consists of three brick fragments.

*Food Related*

Twelve artifacts related to food consumption were recovered from Stratum II. Seven of these artifacts consist of hinged shell halves or shell fragments from quahog clams. Also recovered were three oyster shell fragments. Other faunal elements include one ovine-caprine, three medium terrestrial mammal, one avian species, and one indeterminate mammal fragments.

*Household*

Similar to Stratum I, the household assemblage consists almost entirely of ceramic artifacts ( $n=70$ ); only five glass household artifacts were recovered.

**Ceramics.** More than half of the ceramic portion of the household assemblage consists of refined earthenwares ( $n=42$ , or 60%). Stoneware ( $n=17$ , or 24%) is the next most common ware, followed by coarse earthenware ( $n=10$ , or 14%). A single sherd of porcelain was also recovered.

*Refined Earthenware.* Close to half of the refined wares consist of creamware ( $n=17$ , or 40%). The next most common ware is pearlware ( $n=11$ , or 26%), followed by whiteware

( $n=9$ , or 21%) and tin glaze ( $n=3$ , or 7%). One sherd of refined agate ware and an unidentifiable sherd were also recovered.

Creamware. All of the recovered creamware sherds consist of undecorated sherds. None of the creamware sherds offer any characteristics that provide additional date information outside of the standard creamware date range, which spans from 1762 through 1820 (Miller et al. 2000:12).

Pearlware. Eleven pearlware sherds were recovered from Stratum II. Six of the pearlware sherds do not exhibit any decorative elements and are assigned the general date range for pearlware (1775–1840) (Miller et al. 2000:12, Azizi et al. 1996). Three of the pearlware sherds exhibit indeterminate blue colored decorations that are under the glaze. In general, this decorative technique was prevalent between 1775 and 1830 (Miller et al. 2000:12). Also recovered was a painted China glaze sherd and a dipt sherd. The China glaze sherd is decorated in the Chinoiserie manner, which was popular from 1775 to 1810 (Miller et al. 2000: 12). The dipt sherd exhibits a polychrome joggled slip, a technique popular from 1811 to 1850 (Rickard 2006).

Whiteware. Nine whiteware sherds were recovered. Four of these sherds exhibit unidentifiable painted or molded decoration; these sherds can only be assigned the general whiteware date (1815–2010). Whiteware was introduced in 1805, but did not become popular in America until circa 1815. It is still currently produced (Miller et al. 2000:13). The next three whiteware sherds exhibit various blue or brown transfer-printed decorations, which were prevalent from 1815 through 1915 (Azizi et al. 1996). The final two whiteware sherds possess tighter date ranges. The first exhibits a blue transfer-printed Chinese landscape, which may be an early example of the Willow pattern. Based on this popular decorative style, this specimen dates from 1815 through 1880 (Azizi et al. 1996; jefpat.org). The final sherd is undecorated, but is highly crazed and discolored. Based on these characteristics, it is likely an early whiteware specimen with the same date range as the previous sherd (Azizi et al. 1996).

Tin Glaze. Three fragments of tin glaze sherds were recovered from Stratum II. The first two consist of body sherds that are missing glaze. The final sherd possesses its glaze, which exhibits a blue cast. English tin glaze was popular from 1640 through 1880 (Azizi et al. 1996).

Refined Agate Ware. A single sherd of this ware type was recovered, a red-bodied sherd that is lead glazed. The exterior exhibits red and white banded clays and an incised groove. Refined agate ware was popular from 1740 through 1783 (Miller et al. 2000: 12).

Unidentified. A single refined ware cannot be identified. It is buff-bodied and possesses a brown lead-glazed exterior and clear glazed interior. It may be a sherd of yellowware, but its fragmentary condition makes final identification impossible.

*Coarse Earthenware.* The coarse earthenware assemblage from Stratum II consists of seven redware sherds and three sherds of British buff-bodied slipware. All of the redware sherds are lead-glazed specimens from utilitarian vessels and are non-diagnostic.

The British slipware falls within two decorative styles. Two of the sherds are simple lead-glazed hollowware sherds. The final sherd is slip decorated with combed lines. British slipware was prevalent from 1670 through 1795 (Azizi et al. 1996).

*Stoneware.* Seventeen stoneware sherds were recovered from Stratum II. Fifteen of these sherds consist of salt-glazed sherds with gray/buff bodies. Seven of the salt-glazed sherds do not possess enough characteristics necessary for definitive dates, but seven are underfired or exhibit evidence of kiln damage. The final salt-glazed sherd exhibits a rouletted diagonal motif below a cordoned and filled-in band. This sherd and the underfired/damaged specimens are products of the Crolius/Remmey pottery, which operated upon nearby Potbakers Hill from 1720 to 1820 (Janowitz 2008). It is likely that the other seven salt-glazed sherds are also Crolius/Remmey products.

The remaining two stoneware sherds consist of a slip-glazed specimen and white salt-glazed specimens. The slip-glazed specimen exhibits an Albany-type slip. This style of decoration was prevalent from 1805 through 1940 (Azizi et al. 1996). White salt-glazed stoneware was popular from 1720 through 1805 (Miller et al. 2000: 10).

*Porcelain.* A single sherd of Chinese export porcelain was recovered from Stratum II. It exhibits a portion of a blue-painted motif, but this is not sufficient to identify the motif or the specimen's relative date range.

**Glass.** Five glass household sherds were recovered from Stratum II. Three consist of body sherds from green bottles. The remainder consists of body sherds from aqua and pale green containers. None of these possess enough characteristics to fully identify the manufacturing technique or age of the sherds.

#### *Indeterminate*

Stratum II contained 22 unidentifiable artifacts; 21 of these consist of heavily corroded lumps of iron. These may be nails, but the corrosion makes final identifications impossible. The final artifact is a corroded copper alloy disk with a slightly raised center and may be a button.

#### *Personal*

Eleven personal items were recovered from Stratum II. Around half ( $n=6$ ) consist of fragments of white ball clay smoking pipes. Five undecorated pipe stem fragments and one undecorated pipe bowl fragment were recovered; none are chronologically diagnostic.

Four parts to a copper alloy change purse were also recovered. The pieces mend and form the two halves of a small coin style purse. The exterior surfaces still retain small flecks of

white or yellow metal plating. The distal edges exhibit the rounded terminal for the pins that once joined the hinges.

The final personal item is a four-hole porcelain button. This is a pressed specimen that was manufactured utilizing the Prosser process. Porcelain buttons were manufactured in this manner from 1840 until 1960 (Sprague 2002:111–127). This artifact provides the TPQ date for Stratum II. The fact that it is later than the preceding stratum is not problematic, as Stratum II is likely associated with the later brick drainage system.

### STRATUM III

A total of 86 artifacts were recovered from Stratum III. More than half of this assemblage consists of household artifacts ( $n=47$ , or 55%), followed by architectural remains ( $n=23$ , or 27%). Table 7.74 lists all the functional groups into which the assemblage fell.

Table 7.74: Feature 8, Stratum III, functional groups.

Functional Group	Artifact Count
Activities	1
Architectural	23
Food Related	2
Hardware	5
Household	47
Indeterminate	4
Personal	3
Sanitary	1

#### *Activities*

This functional group consists of a fragment of slate pencil. It is square in cross section.

#### *Architectural*

Twenty-three architectural remains were recovered from Stratum III. Most of these remains consist of unidentifiable nails ( $n=18$ ). Ten of these specimens are too corroded to determine whether they are round or square. Eight additional nails can be identified as square-shaped, but are too corroded to identify the manufacturing technique (wrought versus cut). The remainder of the architectural remains consists of three fragments of window glass, a square iron spike, and a whole brick.

### *Food Related*

Ten artifacts related to food and eating were recovered from Stratum III: two fragments of quahog clam shells, one large terrestrial mammal, three medium terrestrial mammal, one avian species, three indeterminate mammal, and a single cattle calcaneus.

### *Hardware*

This functional group consists of four small hand-wrought nails, likely tacks or brads, possibly for furniture.

### *Household*

Similar to previous strata, the household assemblage consists almost entirely of ceramic artifacts ( $n=44$ ); only three glass household artifacts were recovered.

**Ceramics.** Half of the ceramic portion of the household assemblage consists of stoneware ( $n=22$ , or 50%). Refined earthenwares ( $n=17$ , or 39%) are the next most common ware, followed by coarse earthenware ( $n=2$ , or 5.5%) and porcelain ( $n=2$ , or 5.5%).

*Refined Earthenware.* More than half of the refined wares consist of pearlware ( $n=9$ , or 53%). The only other refined wares recovered consist of creamware ( $n=4$ , or 23.5%) and whiteware ( $n=4$ , or 23.5%).

Creamware. Three of the recovered creamware sherds consist of undecorated body sherds. The fourth specimen is a rim sherd that exhibits a Bath rim. Unfortunately, none of the creamware sherds offer any characteristics that provide additional date information outside the standard creamware date range, which spans from 1762 through 1820 (Miller et al. 2000: 12).

Pearlware. Nine pearlware sherds were recovered from Stratum III. Seven of the pearlware sherds do not exhibit any decorative elements and are assigned the general date range for pearlware (1775–1840) (Miller et al. 2000:12, Azizi et al. 1996). One of the pearlware sherds exhibits an indeterminate blue colored decoration that is under the glaze. In general, this decorative technique was prevalent between 1775 and 1830 (Miller et al. 2000:12). The final sherd exhibits a floral design rendered in earth-tone colors. This decorative technique was popular from 1795 to 1830 (Miller et al. 2000:12).

Whiteware. Four whiteware sherds were recovered. All of these sherds exhibit unidentifiable painted or molded decoration; as such, these sherds can only be assigned the general whiteware date (1815–2010). Whiteware was introduced in 1805, but did not become popular in America until circa 1815 and is still in production today (Miller et al. 2000:13).

**Glass.** Four glass household shards were recovered from Stratum III; three of these shards are from dip molded bottles. Although dip molds are first introduced circa 1730 and used until circa 1870, the gradual replacement of this manufacturing technique began in 1821, when the Rickett's three-piece mold was introduced (Miller et al. 2000:8; Jones and Sullivan 1989).

The final glass household shard is from a colorless jar or bottle. Its manufacturing technique and relative date cannot be definitively determined.

*Indeterminate*

Four unidentifiable artifacts were recovered from Stratum III: all are iron, three are heavily corroded lumps that may be nails, and one is a flat fragment.

*Personal*

Three personal items were recovered from Stratum III. Two of these items are undecorated fragments of white ball clay pipe stems and one is a bone button with four holes, exhibiting a raised rounded edge; the holes appear to be hand drilled.

*Sanitary*

A single sanitary item was recovered—a chamber pot rim with evidence of an attached handle. It is constructed of gray salt-glazed stoneware and exhibits blue-painted cordoned bands. This may be a product of the Crolius/Remmey pottery.

STRATUM IV

A total of 68 artifacts were recovered from Stratum IV. The most common functional group consists of household artifacts ( $n=28$ , or 41%), followed by indeterminate artifacts ( $n=18$ , or 26%) and architectural remains ( $n=15$ , or 22%). Table 7.75 lists all the functional groups into which the assemblage fell.

Table 7.75: Feature 8, Stratum IV, functional groups.

<b>Functional Group</b>	<b>Artifact Count</b>
Architectural	15
Food Related	1
Household	28
Indeterminate	18
Non-Food Related	5
Personal	1

### *Architectural*

Fifteen architectural remains were recovered from Stratum IV. Most of these remains consist of unidentifiable nails ( $n=11$ ) too corroded to determine whether they are round or square. The remainder of the architectural remains consists of two fragments of window glass, a mortar fragment, and a brick fragment.

### *Food Related*

Three artifacts related to food and eating were recovered from Stratum IV. They consist of an oyster shell fragment and two fragments from a medium terrestrial mammal.

### *Household*

Similar to previous strata, the household assemblage consists almost entirely of ceramic artifacts ( $n=44$ ); only three glass household artifacts were recovered.

**Ceramics.** Half of the ceramic portion of the household assemblage consists of stoneware ( $n=22$ , or 50%). Refined earthenware ( $n=17$ , or 39%) is the next most common ware, followed by coarse earthenware ( $n=2$ , or 5.5%) and porcelain ( $n=2$ , or 5.5%).

*Refined Earthenware.* Close to half of the refined wares consist of pearlware ( $n=7$ , or 41%). The next most common ware type is creamware ( $n=4$ , or 23.5%). Other recovered ware types include tin glaze ( $n=1$ ), clouded glaze ( $n=1$ ), and an unidentified sherd.

Creamware. All four of the recovered creamware sherds are undecorated body sherds. Unfortunately, none of the creamware sherds offer any characteristics that provide any additional date information outside of the standard creamware date range, which spans from 1762 through 1820 (Miller et al. 2000:12).

Pearlware. Seven pearlware sherds were recovered from Stratum IV. Three of the pearlware sherds do not exhibit any decorative elements and are assigned the general date range for pearlware (1775–1840) (Miller et al. 2000:12, Azizi et al. 1996). One of the pearlware sherds exhibits an indeterminate blue decoration that is under the glaze. In general, this decorative technique was prevalent between 1775 and 1830 (Miller et al. 2000:12). The next sherd exhibits an indeterminate design rendered in earth-tone colors. This decorative technique was popular from 1795 to 1830 (Miller et al. 2000:12). This sherd provides the TPQ date for Stratum IV; no other artifacts could have been deposited before 1795.

The final two pearlware sherds exhibit polychrome dipt decorations. The dipt consists of dark and light brown on one sherd and blue and white slipped bands on the other. These styles range from 1782 to 1820 (Miller et al. 2000:12; Rickard 2004).

Tin Glaze. One fragment of a tin glaze sherd was recovered from Stratum IV; it is missing the glaze. English tin glaze was popular from 1640 through 1880 (Azizi et al. 1996).

Clouded Glaze. One sherd of clouded glaze was recovered. It exhibits a brown and green tortoiseshell decoration, a style that was prevalent from 1740 through 1770 (Miller et al. 2000:12).

**Glass.** Three glass household shards were recovered from Stratum IV. One of these shards is from dip molded bottles. Although dip molds were first introduced circa 1730 and used until circa 1870, the gradual replacement of this manufacturing technique began in 1821, when the Rickett's three-piece mold was introduced (Miller et al. 2000:8; Jones and Sullivan 1989). The remaining two shards do not possess enough characteristics to definitively determine manufacturing technique or date.

#### *Indeterminate*

Eighteen unidentifiable artifacts were recovered from Stratum IV. Sixteen of these artifacts are iron. Six of the iron artifacts are part of a heavily corroded and encrusted object that has collapsed in upon itself; it may be either a pipe or a box. Five are amorphous rusted lumps. The next four consist of heavily corroded/encrusted flat iron fragments. They could be either associated with the corroded iron box/pipe or a separate container. The final unidentifiable iron object is approximately 7" in length and may be a spike.

The two unidentifiable items are wooden. They are partially charred and fragmentary and may represent a utensil handle.

#### *Non-Food Related*

This functional group consists of five dried hollow-stemmed plant stems, one of which is attached to small fragment of rust.

#### *Personal*

A single personal item was recovered from Stratum IV—an undecorated bowl from a white ball clay smoking pipe.

#### INTERPRETATION

The complex of Features 8, 9, 10, and 11 consists of a stone well (Feature 8) that was later incorporated into a three-part drainage system. The drainage system consisted of inflowing (Feature 11) and outflowing (Feature 10) French drains. The third part consisted of Feature 9, which was not connected to Feature 8, but its similar construction implies that it is part of a larger system that was installed concurrently.

Feature 8, the stone well, pre-dates City Hall. Diagnostic artifacts from its deepest extent consist of pearlware, creamware, clouded glaze ware(s), and tin glaze. All of these wares pre-date the construction of City Hall; therefore, the shaft dates earlier. It may be associated with the earlier almshouse, but could very well represent an earlier Dutch well that tapped the brackish waters beneath what is now City Hall Park.

## **NORTHEAST AREAWAY**

The project required removal of the concrete and historic retaining wall and excavation within the existing areaway to a final depth of 17.5' below surface (Map 7.17). Due to the density and depth of features within the northeast area and potential utilities, it was decided to conduct a series of test units within the areaway to determine the extent of disturbance. Within the areaway and/or following removal of the retaining wall, an additional 10 features were found within the northeast area, four of which have already been discussed. These additional features added to the complexity of this area, further demonstrating its use and reuse throughout the historic period.

### **FEATURE 21**

A small, square, mortared brick structure uncovered in the areaway was labeled Feature 21. This 2.3' square feature had utility pipes running atop its north end. The interior of the feature measured 1' square and was located at 5' bd. Feature 21 extended six courses of brick deep and every other course had gaps, measuring 0.15'–0.2' built into the wall (Images 7.94 and 7.95). The floor of the feature was also constructed of brick. The bricks were stamped "Rose" from the Rose Brick Company in Roseton, New York, and date to the mid to late nineteenth century.

### **ASSOCIATED STRATIGRAPHY**

Two different soil matrixes were excavated within the feature. Matrix I was a brown sandy loam (10YR 3/3) extending 0.8'; below this layer was a black (10YR 2/1) moist silty loam.

### **ASSEMBLAGE**

Some window glass and metal were noted and discarded.

### **INTERPRETATION**

A second identical brick structure was exposed further east along the areaway and not assigned an individual feature number. A third identical feature (Feature 36a) was exposed in the northeast areaway, as well. The function of these three features is unknown, but they likely served a utility-related purpose associated with City Hall. Both features were removed as part of the construction project.



Image 7.94: Interior of Feature 21.



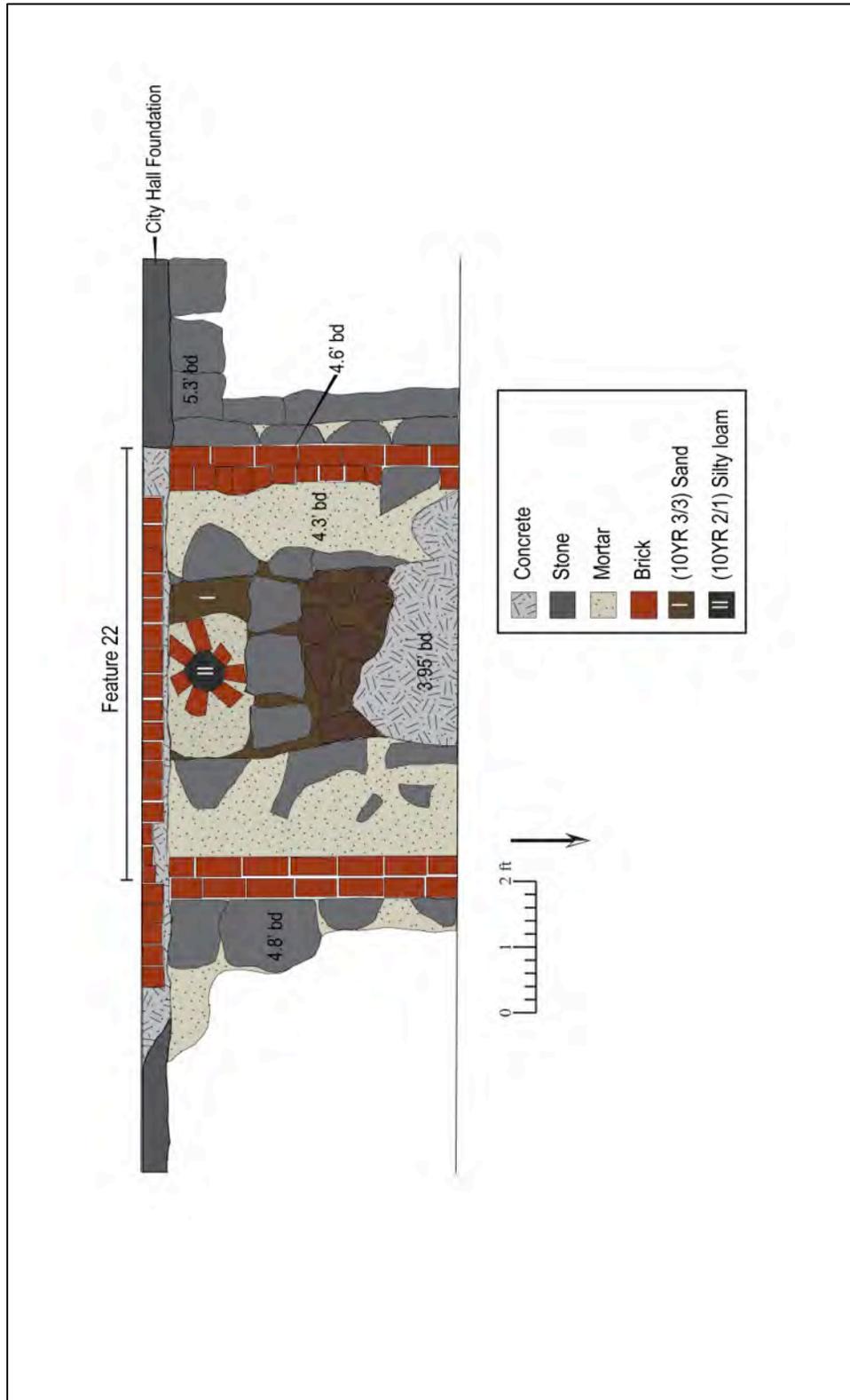
Image 7.95: Feature 21, plan view.

## FEATURE 22

Continued testing within the areaway revealed a series of articulated bricks (Map 7.17). Further excavation uncovered what appeared to be two rows of brick, running north-south, that led into the extant City Hall foundation. Designated Feature 22, this feature extended three courses deep and sat atop a stone base that extended between 0.4' and 0.8' from the outer face of the brick. A second set of bricks—also two rows wide, extending three courses deep—was exposed 5.8' to the west (Map 7.33).

Between the two brick segments lie 1.2'–1.8' thick stones running north-south and covered with mortar and brick debris. This debris was remnant of an additional course of the brick segments. At the center of the area, between the two brick segments was rubble fill and what appeared to be a concrete spill from the installation of the concrete retaining wall. South of this, situated adjacent to the City Hall Foundation wall, were three evenly laid stones that formed a surface and a 0.6' diameter brick-lined circle. The bricks were oriented like the points of a star or the rays of the sun (Image 7.96).

The two brick segments were exposed at 4.3' bd and the laid stones were exposed at 4.35' bd. The stone footers, situated beneath the brick segments, extended to 5' bd.



Map 7.33: Plan view of Feature 22.

#### ASSEMBLAGE

Two ceramic sherds—a Jackfield type teapot dating 1740–1850 (Azizi et al. 1996 and Miller et al. 2000) and a buff-bodied stoneware sherd dating 1720–1820 (Janowitz 2008)—and a copper alloy metal buckle were the only artifacts recovered from Feature 22.

#### INTERPRETATION

Feature 22 was situated outside and beneath a basement window of Room 8C. This room was the original kitchen for City Hall. Part of the interior renovation work stripped the interior walls to their foundation, revealing that the current window was a replacement for a doorway (Image 7.97). Feature 22 is at the same elevation as the base of the shadow of this former door.

Although there is no door in this location on the McComb plans for City Hall, the physical evidence suggests otherwise, as both the interior and exterior of these areas are consistent with the 1803 elevation of the property. Additionally, the William Aiken account of renovation work to be undertaken, dated August 12, 1902, notes two outside doors to be changed to windows within the basement.

This feature was completely deconstructed and removed.



Image 7.96: Feature 22.



Image 7.97: Doorframe and bricked up doorway within Room 8c of the basement in the area of Feature 22.

### FEATURE 23

Feature 23 was a 7.2' long by 1.1' wide mortared brick wall exposed adjacent to (but at a greater depth than) the retaining wall, Feature 1 (Map 7.17). This feature was uncovered at 5.4' bd. The east-west oriented wall was three courses deep, likely having been reduced to this level during the construction of Feature 1.

The south, west, and east ends of the wall appear to have been chipped or pick-axed away. The southwestern portion of the wall was intact and finished, indicating that the original width of the wall was 1.1'. This area also appeared to have been a corner, but its proximity to the foundation of City Hall inhibited further investigation. Its eastern end had been demolished, presumably prior to the construction of Feature 22 and/or City Hall (Image 7.98). The bricks used in the construction were unmarked and had several inclusions, appearing to date to the eighteenth century. No footer was found in association with this wall.

Feature 23 was truncated and partially demolished. The feature pre-dates Feature 22 and Feature 24 and City Hall. The location and apparent chronology of Feature 23 associate it with the first almshouse. No material remains were found in association with this feature. As the wall was not intact and the overall area was clearly disturbed during the 1803 construction of City Hall, LPC approved the deconstruction and removal of the remaining feature following its documentation.

## FEATURE 24

Feature 24 was another small, square, brick structure, similar to Feature 21. This feature is discussed separately because it has slight differences to Feature 21 and because of its proximity to the other features in the northeast area (Image 7.99).

Feature 24 was a 2.2' x 2.6' rectangular brick structure located west of Feature 23 and east of Feature 2. Unlike Feature 21, Feature 24 is roughly constructed and unevenly faced. Only three courses of brick remain, as it was truncated for the installation of a ceramic pipe that was run through the eastern wall of the feature.

The soil within the interior of the feature is a 10YR 2/1 sandy loam. No artifacts were recovered from this feature. The bricks used in its construction are faintly stamped “JJJ.” These bricks are from Jova Brick Yards, located in Roseton, New York, a late-nineteenth-century company owned by Juan Jacinto Jova, a Cuban immigrant (International Brick Collectors Association 2012). Jova bricks were also used in the construction of the Custom House at Bowling Green and the Public Library completed in 1903 (Durbak n.d.). No artifacts were recovered and the feature was deconstructed.



Image 7.98: Feature 23, facing south.



Image 7.99: Feature 24, plan view facing south.

## FEATURE 25

Feature 25 presented itself as a segment of stone wall located beneath Feature 22, the doorway to the basement kitchen of City Hall (Map 7.17). It was discovered during the excavation of the interior area of Feature 22. The eastern wall of Feature 22 was deconstructed to allow for better exposure of Feature 25.

Feature 25 extended further east than the boundary of Feature 22, and the westernmost edge of Feature 25 intersects with the west wall of Feature 22 (Image 7.100). The easternmost end of the feature appears to turn northward beneath the retaining wall, forming a corner.

This segment of stone wall is a remnant that had been partially destroyed during the construction of City Hall and Feature 22, which sits directly above it. The remaining segment of wall was exposed at 6.15' bd and extended to 7.25' bd. When initially uncovered, it was thought to be a continuation of Feature 23, the brick wall to the west of Feature 22. However, the structural composition and materials negated this original working hypothesis.

Feature 25, or what remains of the wall, was constructed of three to four courses of large angular flat stones with no footer. In contrast, Feature 23 was constructed of brick and sat atop a stone footer. The stones used for the footing at Feature 23 are not the same stones as those of Feature 25. Additionally, there was no evidence of brick having been built atop of Feature 25.

Five artifacts were recovered during excavation of Feature 25, all ceramics from the household category. These are a tin-glazed tableware (1640–1800); a brown-glazed redware sherd (no date); a British Slipware sherd (1670–1795); and two sherds of a painted pearlware bowl (1795–1830) (Azizi et al. 1996; Miller et al. 2000).

Feature 25 pre-dates Feature 22 and City Hall. Its western end was partially destroyed during the construction of Feature 22. Removal of the retaining wall (Feature 1) did not further clarify the corner of the feature, as there was significant impact from the construction of the retaining wall.

#### **FEATURE 26**

This feature was a wall remnant visible within the profile beneath the retaining wall (Feature 1) (Map 7.17). Due to physical constraints of the area and safety concerns, the profile of the feature was cleaned off and documented, but no further excavation occurred (Map 7.34).

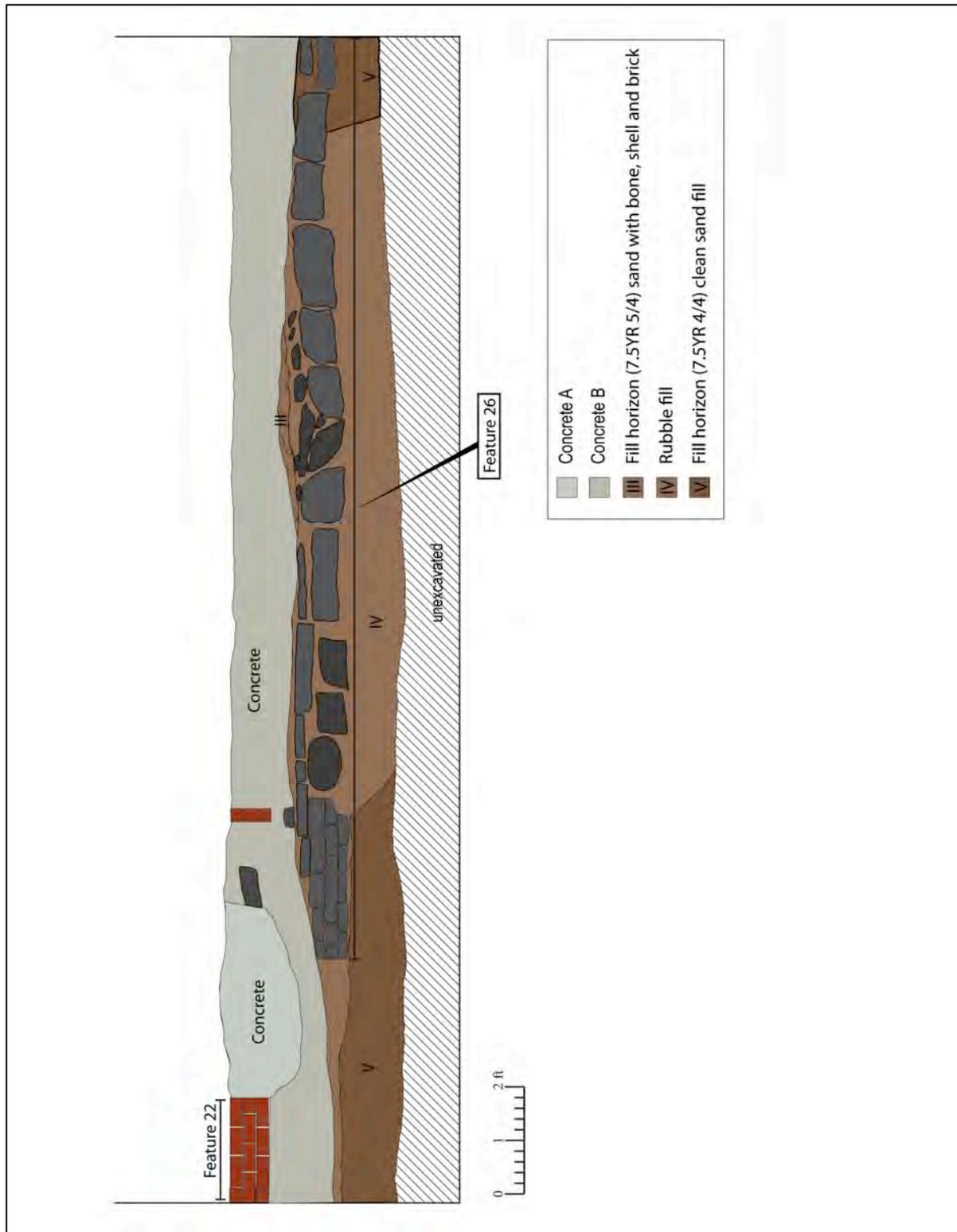
What was visible in the wall was a disturbed 14' length of a stone and rubble wall approximately 1' below the base of the retaining wall at approximately 6' bd.

While cleaning the profile to expose the wall, 26 artifacts were recovered. These artifacts include 13 faunal elements, a brick fragment, a green bottle glass shard, three pearlware sherds (1775–1830), and one white salt-glazed stoneware sherd (1720–1805). None of these materials come from a clearly defined context and could have been introduced during construction of the retaining wall.

This wall remnant pre-dates City Hall. Its original purpose is undetermined.



Image 7.100: Feature 25 was located beneath Feature 22 and represents an earlier construction.



Map 7.34: Profile of Feature 26.

## NORTHEAST VAULT AREA SUMMARY

Excavation in the northeast area behind City Hall uncovered over 20 archaeological features dating from the eighteenth through the nineteenth centuries and capped with twentieth-century construction. This area contained representations from over 250 years of occupation within City Hall Park. It demonstrates a theme of urban density and reuse that is seen throughout the property.

The approximate 1,900 square foot area has been built upon multiple times, creating an amalgam of building and activity. The overall northeast profile, along with the individual profiles throughout, gives a sense of the multiple impacts and intrusions (see Map 7.19). Close attention to detail regarding construction materials, soil intrusions and impacts, and depositional composition—combined with previous knowledge—has benefitted the analysis of this area, as sometimes the answers lie within the anomalies.

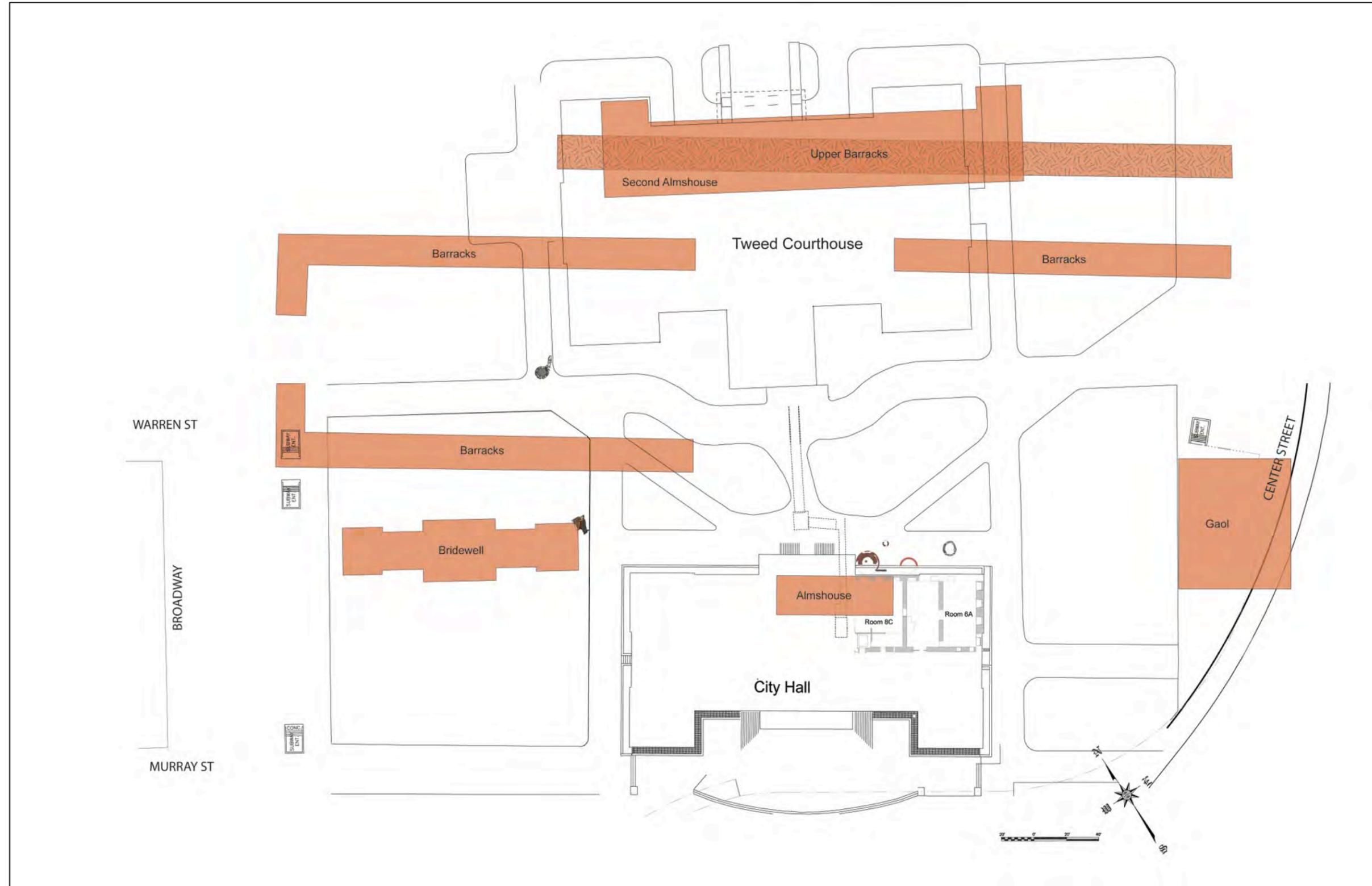
The number and density of structural features created a complex configuration. A general chronological sequence has been extracted from the analysis.

### BUILDING IT UP

The first known substantial construction in this area began in 1735 with the first almshouse, located at the approximate center point of City Hall (Map 7.35). The first almshouse had a stone foundation and brick upper. It measured 24' x 86', with two stories and a cellar. Three eighteenth-century wall features (Features 23, 25, and 26) were uncovered. One of these features was remnant of the first almshouse foundation. Map overlays suggest Feature 23 or Feature 25 as the most likely option. The other wall feature(s) may represent the expansion of the almshouse, which measured 24'x56' when first built (Image 7.101). Additionally, one of the supporting structures of the almshouse may be represented. Common Council minutes note an adjacent washhouse and other additions.

On June 12, 1735, Paulus Hoppe was paid for digging a well for the poorhouse, which was under construction. On the same date, David Devoe is noted as being paid for 340 loads of stone (MCC 1675–1776 IV: 259–260). We cannot be certain that these references refer to Feature 8, the stone well, but it is a possibility; they may also refer to Feature 7. Minutes of the Common Council noted that two cisterns of white cedar should be constructed for the almshouse (MCC 1675–1776 11 August 1749). No evidence of these cisterns was found, but a stone and a brick cistern were exposed. Feature 33/35 is the earlier of the two cisterns exposed in the northeast area, based on its construction and provenience. The last of the recovered features to be constructed in the eighteenth century is the Feature 2 cistern. In July 1769, a new cistern was ordered built for the poorhouse (MCC 1675–1776 VII: 172).

Both wells and cisterns were necessary features for the eighteenth-century poorhouse. At this location inland on the island, the water would have been less brackish and therefore potable. The cistern would store rainwater for task work.



Map 7.35: Composite plan of eighteenth-century features and structures overlaid onto the 2010 plan view map.

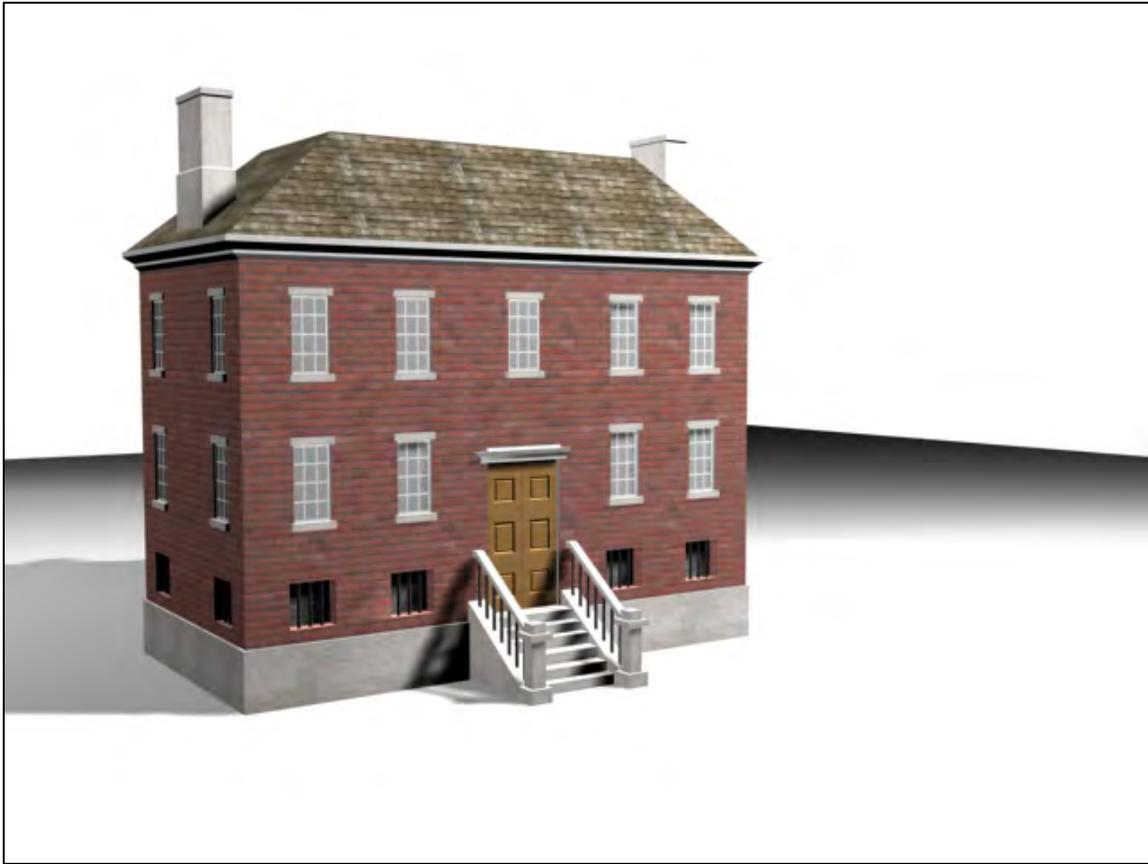


Image 7.101: A 3D computer generated rendering of the first almshouse (Bankoff and Loorya 2008).

#### TEARING IT DOWN AND BUILDING IT UP, AGAIN

Less than 30 years after a new cistern was ordered to be built, the almshouse was demolished and presumably any associated structures fell into disuse. Instead of collapsing the building in on itself, which was a common practice, the structural materials were removed from site for reuse in Washington Square Park. Plans for the reuse of the land on which the first almshouse had stood were already being considered.

By 1803, the area had been leveled and filled in. McComb refers to the site for the new City Hall as “Maiden Ground except the NW corner which stands on one of the Bridewell sinks which was well cleaned out, and filled in for about 4 feet with fresh earth well Rammed and wet” (McComb family papers 1787–1858) (Image 7.102).

On April 5, 1803, workers began to dig for the new building foundation. The soils encountered likely consisted of the fill soils associated with the almshouse demolition and the natural top and subsoils. These natural soils would have been poorly drained with a high water table, particularly on the north side of the site, as it was closest to water bodies, including the Collect Pond. The wells recovered in this area extend to approximately 9’

below the 2010 grade, indicating that the eighteenth-century water table was at that depth. In the eighteenth century, the water table would have been approximately 6' below surface.

The 1803 surface that McComb and the workers occupied was approximately between 2.5' to 3' below modern grade. On December 5, 1803, the basement story, the building foundation, and the basement walls had been built up according to plan and are noted as being 8' above ground level (McComb family papers 1787–1858). Comparatively, the top of the basement level currently measures between 5.5' and 6' above the 2010 surface. The floor of the basement was a mere 2' below the 1803 surface, though the foundation walls extended 5.5' below surface, approximately half a foot above the water table (see Map 7.18).

In excavating for the foundation, it appears as though a stone retaining wall (Feature 1) was constructed around the north, east, and west sides of the site/proposed structure. This wall would cut into the one of the cisterns built in the eighteenth century. Feature 33/35 was truncated and a portion of the new foundation would sit atop the southern edge of this cistern. The workers on site used the Feature 33/35 cistern to dispose of refuse. Feature 2 appears to have remained relatively intact at this time. City Hall's foundation wall was built at the outside of the southern face of the cistern and the retaining wall was constructed up to its eastern edge. One may hypothesize that this cistern was used for ready access to water necessary for construction.

The retaining wall created an areaway surrounding the foundation of the building. Though photographs show an areaway surrounding City Hall as early as 1870 (Image 7.103), it is uncertain if this remained exposed upon completion of the original construction.

Though not part of McComb's drawing, there is architectural and archaeological evidence of a doorway from the basement kitchen to the north area behind City Hall. This door was situated where a window is presently extant. Beneath the window, the shadow of a bricked-up door is visible. The door was likely constructed as part of the original work. Its location places it just east of Feature 4.

Feature 4 was constructed sometime during the first half of the nineteenth century. It sits atop Feature 2 and Feature 7. The original function or purpose for the structure remains unknown. In a review of McComb's diary in the January 11, 1908 edition of *American Architect*, there is a notation on "whether or not McComb's plan included additional buildings at the rear of the City Hall that would screen it and thus not expose the difference in color of the exterior materials is conjecture" (*American Architect* 11 January 1908, vol. XCIII No. 1672 p.15). This passage suggests that there were at that time—and even earlier—buildings at the rear of City Hall. No records have been found containing mention of this structure (Feature 4), which would have been relatively substantial.

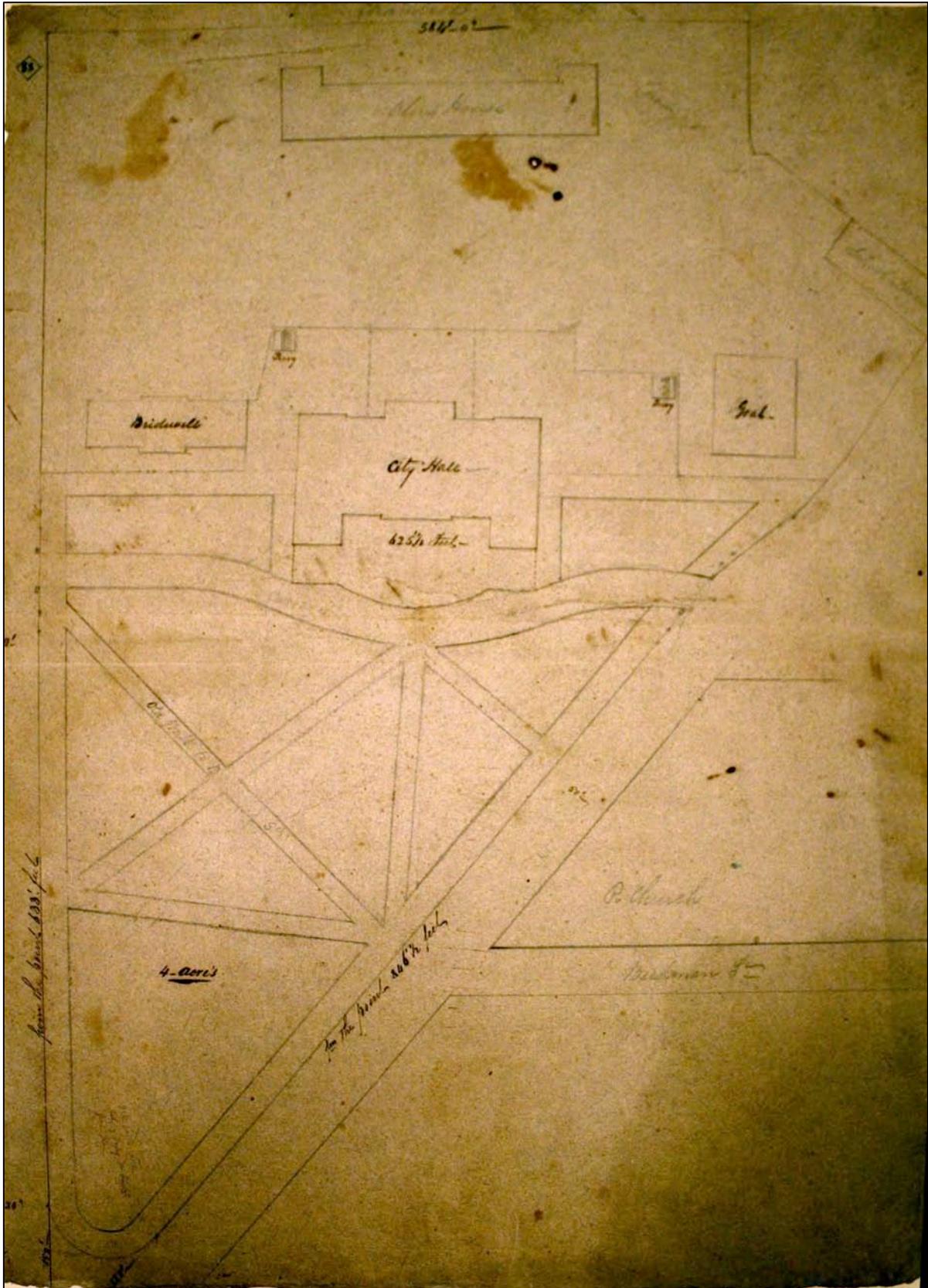


Image 7.102: McComb's plan of City Hall Park with the proposed City Hall.



Image 7.103: Circa-1870 image of City Hall. The areaway is visible in the lower left corner of the photograph (New York Public Library Stereoscopic Views Collection).

Around 1860, Feature 3 was constructed. Also during the mid-nineteenth century, a stone and brick drainage system was installed or expanded in the northeast area and continued into the east end of the property. There is evidence that similar drains existed on the west side of City Hall and to the north, in the vicinity of Tweed Courthouse. Located at 2.3' below surface, this feature suggests that the area surrounding City Hall was approaching its modern grade by this time.

The drain system no longer used shaft features running from the area above Feature 2, sloping east into Feature 3, and from Feature 3 into Feature 8. Drains were positioned to flow into Feature 8 from the west and the north. Another drain extended downward to the east from Feature 8. Map 7.36 presents the nineteenth-century features in relation to the 2010 plan view map of City Hall.

Feature 4 was razed and filled in some time toward the turn of the twentieth century. The door (Feature 22) was also removed by the twentieth century, when photographs show the modern areaway and raised grade. This final change in elevation likely occurred in conjunction with the IRT subway construction, circa 1900–1904.

In the early twentieth century, likely with the 1902 Aiken renovation, Features 3 and 4 were completely filled with refuse and debris and paved over, along with Feature 2. This effort brought the area surrounding City Hall to its modern countenance. During the mid-twentieth century, a new concrete retaining wall was installed around City Hall. In the northeast, this impacted the southern portion of Feature 2.

#### DECONSTRUCTING THE PAST

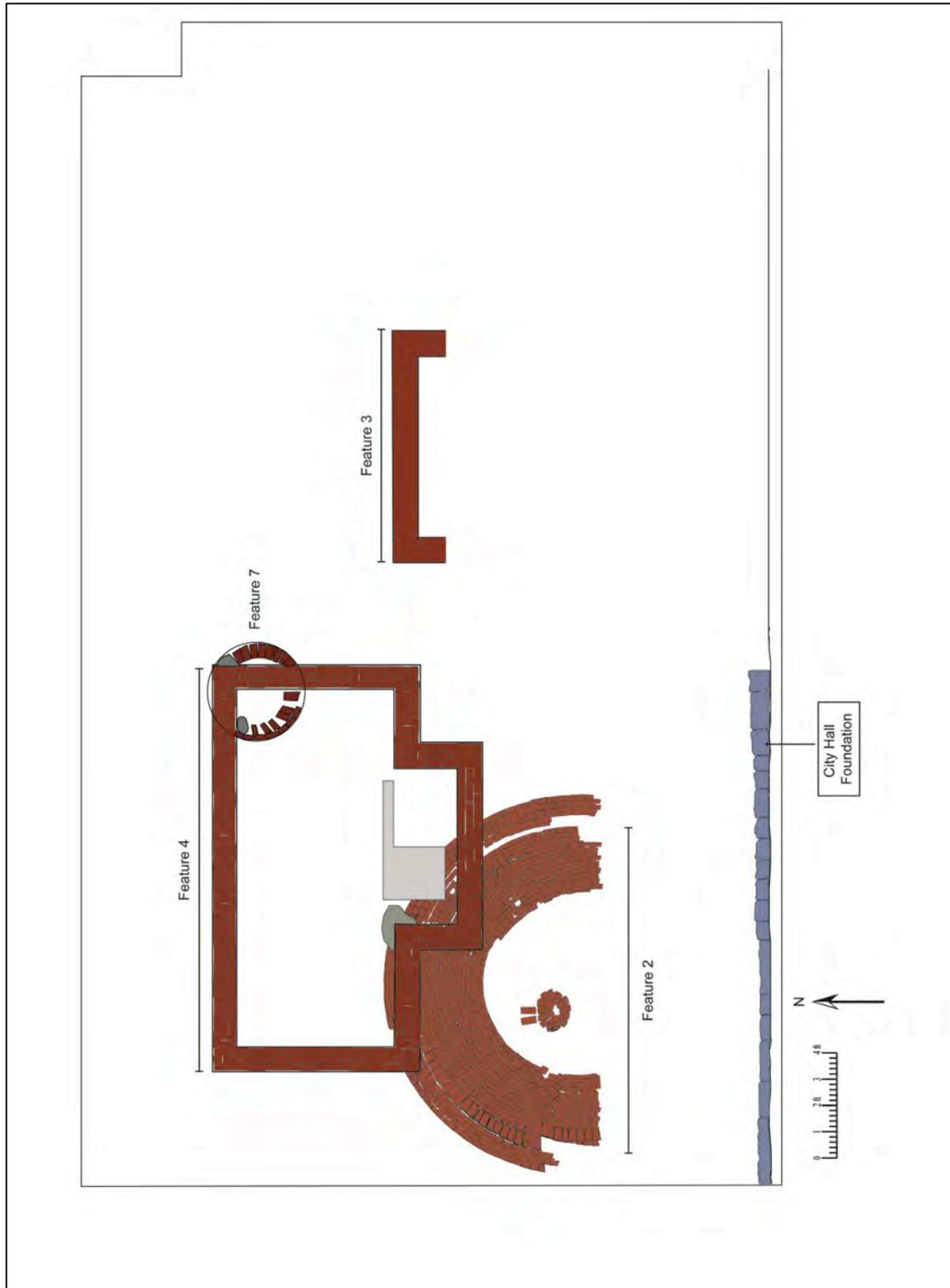
To facilitate the construction plans, the majority of the exposed features in the northeast area had to be removed. As all archaeological features are pre-determined landmarks within the African Burial Ground and the Commons Historic District, the project had to seek a special permit from the LPC to remove any features. At a public hearing, the project requested permission to remove the following features:

- **Feature 1:** the original City Hall retaining wall
- **Feature 3:** all but the north wall of the circa-1860 brick structure
- **Feature 5, 9, 10, and 11:** brick and stone drains
- **Feature 8:** stone well
- **Feature 22:** doorway
- **Feature 23 and 25:** eighteenth-century foundation walls
- **Feature 26:** eighteenth-century foundation wall discovered after initial request
- **Feature 33/35:** eighteenth-century cistern
- **Part of Feature 2:** portion of the cistern on the south side of the retaining wall

The only features that did not need to be impacted for construction were the north wall of Feature 3; Feature 4 with Feature 7 beneath its northeast corner; and the majority of Feature 2, located on the north side of the retaining wall (Feature 1). The LPC granted permission with the following conditions: documentation of the area using 3D digital imaging; professional photographs of all features in high-resolution digital photography; complete

archaeological documentation; and public mitigation in the form of a web site and artifact display.

The final requirement was that the features be deconstructed by the archaeological team or under their supervision. Following completion of conditions 1–3, listed above, the archaeological team proceeded with deconstruction of the features, with assistance from Rockmore. Feature 2, Feature 4, Feature 7, and a portion of Feature 3 remain intact (Map 7.36). These features have been reburied using clean fill sand.



Map 7.36: Plan view of the remaining *in situ* northeast archaeological features.

### 9. WEST PATH, NORTH – MANHOLE 3

#### FEATURE 27

Feature 27 was a circular stain, approximately 2.7' in diameter (Image 7.104). It was encountered just to the north of and adjacent to the northwestern portion of Feature 28. The stain was located between two of the modern conduits, at the same vertical depth as the undisturbed portions of Feature 28 (2.5' bs).

#### ASSOCIATED STRATIGRAPHY

Feature 27 was a thin deposit of brown (10YR 4/3) silty sand. It was only 0.5' thick, terminating at 3' bs.



Image 7.104: Feature 27, plan view.

ASSEMBLAGE

A total of 30 artifacts were recovered from Feature 27; most ( $n=22$ ) were household-related artifacts. Table 7.76 lists the various functional groups that these artifacts fall within.

Table 7.76: Feature 27  
functional groups.

Functional Group	Artifact Count
Architectural	3
Fuel	1
Household	22
Manufacturing	1
Personal	3

*Architectural*

The architectural remains consist of three fragments of window glass.

*Fuel*

This functional group contains a single charcoal fragment.

*Household*

Twenty-two household artifacts were recovered from Feature 27. These artifacts are split between ceramics ( $n=9$ ) and glass ( $n=13$ ).

**Ceramics.** Nine ceramic artifacts were recovered from Feature 27. They consist of refined earthenware, coarse earthenware, and stoneware specimens.

*Refined Earthenware.* Four refined earthenware sherds were recovered from Feature 27. These consist of three undecorated creamware body sherds (1762–1810) (Miller et al. 200:12) and a decorated pearlware rim sherd. The pearlware is an even-scalloped blue shell-edged specimen. This ware was prevalent between 1800 and 1835 (Miller et al. 2000:12). This sherd represents the TPQ artifact for the assemblage; no other artifacts could have been deposited before 1800.

*Coarse Earthenware.* Two sherds of lead-glazed redware comprise this portion of the assemblage. These are from utilitarian hollowware(s), which would have been used for storage or serving.

*Stoneware.* Three sherds of gray/buff-bodied salt-glazed stoneware were recovered. Although they do not technically exhibit enough characteristics for definitive dating, they are likely products of the nearby Crolius/Remmey pottery (1785–1820; Janowitz 2008).

**Glass.** Of the 13 glass sherds, 11 do not possess enough characteristics to discern whether they were blown into the mold via mouth or machine. Although mouth blown is most likely, a definitive determination cannot be made. The two body sherds that can be positively identified are from a thin bottle that was mouth blown into a dip mold. Although dip molds were first introduced circa 1730 and used until circa 1870, the gradual replacement of this manufacturing technique began in 1821, when the Rickett's three-piece mold was introduced (Miller et al. 2000: 8; Jones and Sullivan 1989).

### *Manufacturing*

A single sherd of salt-glazed stoneware comprises this functional group. It is a buff-colored specimen that was utilized as kiln furniture. It is most likely associated with the Crolius/Remmey pottery.

### *Personal*

Three personal items were recovered from Feature 27. Two of these items consist of white ball clay pipe stems; the third is a heavily corroded copper alloy button.

## INTERPRETATION

Feature 27 was a small shallow stain adjacent to Feature 28. Unlike Feature 28, it was relatively shallow (0.5') and did not contain a surfeit of artifacts. The few chronologically diagnostic artifacts indicate a deposition just before the construction of City Hall. As this feature was initially encountered at 2.5' bs, it may represent the remnant base of a midden related to the the construction of City Hall.

## **FEATURE 29**

Feature 29 was a rectangular pit feature encountered 5' from the southern border of Manhole 3. It was located just to the northeast of Feature 28, beneath the same complex of modern utility conduits (see Map 7.37). In terms of depth, Feature 29 was encountered closer to the surface/utility conduits than Feature 28. To the east, the top of Feature 29 was located 2.3' bs. It gradually sloped down to the west, eventually reaching the same general depth as Feature 28 (2.7' bs; see Map 7.38; Image 7.105). This difference in depth is due to the western portion of Feature 29 having not been impacted by the modern conduits. The western portion of Feature 29 lies below the conduits, and was impacted down to 2.7' bs. Although not impacted by the modern conduits, portions of the feature's east half were impacted during other later constructions. RCA and gravel deposits intruded into the extreme east of the feature; these were probably associated with the curbs along the borders of the walking path in the park. Since only the Manhole 3 portion of Feature 29 within the Manhole 3 area could be addressed, it is very possible that the feature continues east and is intact within the green space to the east.

Feature 29 was not directly adjacent to Feature 28; there was approximately 1' of sterile subsoil between the features (see Map 7.37 and Image 7.105), along the western and southern borders of Feature 29. The exposed portion of the feature measured 4.8' from north to south

by 2.8' from east to west. The northern border protrudes approximately 1.8' beyond the northernmost extent of Feature 28. Although not part of Feature 28, this nearby feature is clearly associated with the larger midden. The recovered diagnostic artifacts indicate a similar depositional timeframe—during the construction period of City Hall. Additionally, ceramic vessels cross mend between the two features, offering further evidence for concurrent deposition. These artifacts will be discussed in later portion of this analysis.



Image 7.105: Feature 29, profile of south wall.

#### ASSOCIATED STRATIGRAPHY

Feature 29 consisted of one stratum (Stratum I); no stratification was identified in the observable portion of the feature. As additional feature fill is most likely located to the east, the unexcavated portion could exhibit stratification. The single stratum consisted of a brown (10YR 4/3) medium coarse sand. To the east, where conduit disturbance was minimal, it began at 2.3' bs and terminated at 4.2'bs. The overall undisturbed depth was 1.9'. The same sterile subsoil that bordered the feature to the south and west was encountered below; it consisted of brown (7.5YR 5/4) coarse sand.

#### ASSEMBLAGE

A total of 1,187 artifacts were recovered from Feature 29, Stratum I. An additional 23 artifacts were recovered during the identification of the feature and were classed as "general collection." As there was only a single stratum encountered, it can be assumed that these 23 items are associated with Stratum I. Therefore, all 1,210 recovered artifacts will be considered as a whole.

The bulk of the assemblage consisted of household artifacts ( $n=916$ , or 75.7%), followed by personal items ( $n=132$ , or 10.91%), and architectural remains ( $n=118$ , or 9.75%). The percentages of these and the remaining functional groups can be seen in Figure 7.08.

#### *Architectural*

One hundred and eighteen architectural remains were recovered from Feature 29. Most of those remains ( $n=94$ ) consist of window glass fragments. The next most numerous artifact type consisted of iron nails ( $n=22$ ). All of the nails were too heavily corroded to distinguish between wrought or cut varieties, and are considered chronologically non-diagnostic. The remainder of the architectural collection consists of a single whole brick and a sherd of sewer pipe. The sherd of sewer pipe is similar to the later sewer pipe (circa 1851) encountered in Feature 28. It can therefore be considered intrusive and dismissed.

#### *Food Related*

All of the food-related remains ( $n=10$ ) consist of bivalve shells. Six of the shells are from oysters; the remaining four are quahog clams.

#### *Fuel*

This group consists of seven charcoal fragments.

#### *Household*

The household artifacts consist of 728 ceramic artifacts and 188 glass artifacts. Ceramics will be discussed first.

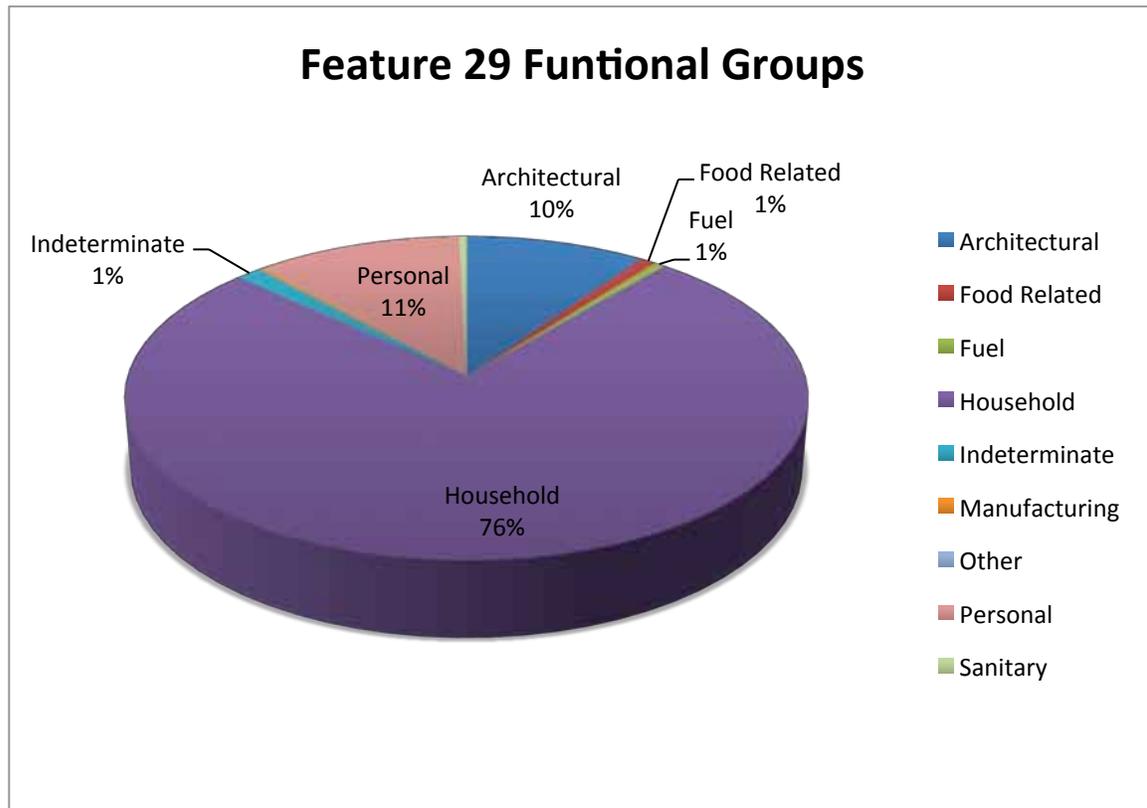


Figure 7.08: Feature 29 functional groups.

**Ceramics.** Of the 728 ceramic household artifacts, around half ( $n=385$ , or 53%) consist of refined earthenwares. The remainder consists of coarse earthenwares ( $n=269$ , or 37%), porcelain ( $n=34$ , or 5%), and stoneware ( $n=40$ , or 5%).

*Refined Earthenwares.* A total of 385 refined earthenwares were recovered from Feature 29. Most of these specimens ( $n=285$ ) consist of sherds from creamware vessels.

Creamware. The bulk ( $n=246$ ) of the creamware sherds consist of undecorated body sherds, which can only be assigned the standard creamware date range (1762–1820) (Miller et al. 2000:12). Thirty-five rim sherds were also recovered. These sherds exhibit either the popular Royal Rim ( $n=31$ ), ruffled ( $n=2$ ), or indeterminate molded patterns; these sherds also fall within the standard creamware date range.

Four creamware sherds offer slightly tighter date ranges. Three are body sherds that exhibit a “DD & Co. Castleford” maker’s mark. This mark refers to David Dunderdale & Company potters, which operated in Castleford circa 1790 through 1820 (Godden 1964; Grabham 1916).

The final creamware sherd exhibits brown painting over the glaze. As with many overglaze decorations, the pattern is worn and cannot be identified. This style of decoration was in use circa 1765 through 1815 (Miller et al. 2000: 12)

Pearlware. A total of 89 pearlware sherds were recovered from Feature 29. Table 7.77, shown below, offers a general breakdown of the various pearlware specimens.

Table 7.77: Feature 29 pearlware varieties.

Decoration	Pattern/Motif	Count	Begin	End
Printed (stippled)	Chinoiserie or Indeterminate	4	1807	1830
Molded Pattern	Shell Edge, Even Scalloped, Straight Lines	1	1800	1835
Painted	Various	11	1795	1830
Printed, Line Engraved	Floral	1	1783	1825
Printed, Line Engraved	Chinese Landscape	1	1783	1815
Molded Pattern	Pratt Type	1	1780	1840
Dipt	Banded or Checkerboard	17	1775	1850
Indeterminate	Indeterminate	20	1775	1840
Molded Pattern	Shell Edge, Indeterminate	9	1775	1835
Molded Pattern	Other	1	1775	1830
Painted	Floral Sprigs & Dot Band	9	1775	1830
Painted	Indeterminate	3	1775	1830
China Glaze, Painted	Chinoiserie or Other	3	1775	1810
Molded Pattern	Shell Edge, Rococo	8	1775	1810
	<b>Total</b>	<b>89</b>		

The four printed pearlwares, listed at the top of Table 7.77, provide the TPQ for Feature 29. No other later artifacts were recovered from this midden; 1807 represents the earliest date for deposition. Similar pearlware sherds also provided the TPQ dates for Strata II and III of Feature 28, further indicating concurrent deposition. The remainder of the pearlware assemblage is comparable to that of Strata II, III, and IV in Feature 28. These specimens indicate deposition during, if not before, the construction of City Hall.

Refined Red-Bodied Ware. Five sherds from refined red-bodied vessels were recovered. Four of these are engine-turned teapot sherds decorated with a basket weave-like geometric pattern. This style of teapot was popular from 1760 through 1830 (Hawkins 1999; Rickard and Carpentier 2004). The fifth red-bodied sherd possesses a light brown to light red lead glaze and may be engine turned.

Jackfield Type. Four sherds from wares that closely resemble Jackfield were recovered. All four possess a black lustrous glaze and may represent true Jackfield, as opposed to being copies of that style. Jackfield type wares were popular between 1740 and 1800 (Miller et al. 2000: 12).

Unidentifiable Refined Earthenwares. Two sherds could not be identified due to either burning or lack of glaze.

*Coarse Earthenware.* A total of 269 coarse earthenwares were recovered from Feature 29. All but two of these specimens consist of redware sherds. Most ( $n=139$ ) of the redwares are lead-glazed specimens with no decoration. Slip-decorated specimens account for the bulk of the remainder ( $n=126$ ). Most of the slipped sherds are decorated simply via trailed slip ( $n=113$ ), but trailed/combed ( $n=2$ ), jogged ( $n=5$ ), and dot ( $n=6$ ) decorations are also present. The final two redware sherds consist of body sherds with no extant glaze or decoration. These redware sherds are from utilitarian vessels most likely used for the serving of meals.

The two non-redware coarse earthenwares consist of a sherd of British buff-bodied slipware and unidentifiable earthenware. The British buff-bodied slipware is from an unknown hollowware and exhibits light use marks on the interior. This variety of coarse earthenware was produced from 1670 to 1795 (Azizi et al. 1996). The unidentifiable sherd is also buff-bodied and possesses a mottled dark brown glaze.

*Porcelain.* A total of 34 porcelain sherds were recovered from Feature 29. All of these are Chinese export specimens. Eleven of these sherds are blue painted in styles that date circa 1750 through 1850 (Howard 1984). Nine are overglaze painted with polychrome colors in a European Neo-Classical style. Such decorations were prevalent 1750 through 1840 (Azizi et al. 1996). The remaining 14 porcelain sherds are decorated via various techniques and styles, but do not offer any diagnostic information.

*Stoneware.* A total of 40 stoneware sherds were recovered from Feature 29. Thirty-six of these sherds do not offer enough diagnostic characteristics to assign a tentative date range. The remaining four sherds exhibit the kiln damage and poor salt glazing that is characteristic of local Potbakers Hill products (1720–1820) (Janowitz 2008). It is likely that all the stoneware specimens are products of this local pottery.

**Glass.** Only three of the 188 glass shards recovered from Feature 29 were chronologically diagnostic. The first two are from a mouth-blown vessel with an applied rim. They exhibit a v-shaped lip that is basically the same thickness as the neck and a flat string rim. This variety of bottle was prevalent from 1770 through 1785 (Jones 1986: 20; Jones and Sullivan 1985: 39). The third is a basal shard from an engraved mouth-blown vessel that exhibits a glass tipped pontil scar and wide flutes. The engraving is along the vessel's border and consists of crosshatched ovals. Such decoration was prevalent from 1760 through 1820 (Palmer 1993: 92–93).

The remaining 155 chronologically non-diagnostic glass shards are from a wide variety of objects. Examples of wine bottles, condiment bottles, tumblers, and decanters were recovered. Although definitive dating was not possible for this portion of the assemblage,

the large variety of glass artifacts points toward a great variety of foodstuffs and potables being consumed.

### *Indeterminate*

Sixteen artifacts that could not be definitively identified comprise the indeterminate group. Twelve of these are fragments of sheet metal, but their original shape/usage is unknown. Two consist of round rusted fragments from an unidentifiable object. A final metal item consists of a thick, heavily corroded iron half circle (Image 7.106); it is possible that this is a portion of a manacle, similar to that found in Feature 28, Stratum II. As Feature 29 is also adjacent to the Bridewell, it would not be unexpected to find prison-related artifacts. The final indeterminate artifact consists of a roughly pentagonal slip-glazed redware sherd. It is approximately 1" in diameter. The shape is suggestive of a game piece or counter, not unlike those found in Feature 28, Stratum II.

### *Manufacturing*

This functional group contains four sherds of buff-colored wheel-thrown refined earthenware. They all appear to be kiln wasters from a local pottery and may be examples of American queensware/yellowware.



Image 7.106: Possible manacle (F29-FS409.4).

*Other*

This group contains a single artifact. It appears to be a fired brick clay fragment, but the material cannot be definitively determined. It is impressed with large Ginko-like “fossilized” leaves and two small organic impressions, which may be crinoid fossils. This may be a whole natural item.

*Personal*

A total of 133 personal items were recovered from Feature 29. Most of these artifacts ( $n=119$ , or 90%) consist of fragments of white ball clay smoking pipes. Other personal artifacts consist of a copper alloy buckle and 13 buttons. More than half ( $n=8$ ) of the buttons are made of a copper alloy. The remaining five buttons are made of bone. Of the 119 fragments of smoking pipes, seven possessed enough diagnostic characteristics to assign tentative date ranges. The first diagnostic smoking pipe fragment is an entire bowl with garlanding along the seams. This style was prevalent between 1790 and 1829 (Noel Hume 1969: 303). Two pipes with thin, brittle bowls and flat-based spurs date from circa 1780 through 1820 (Grillo et al. 2003:11–12). The remaining diagnostics consist of Dutch pipes that feature the coat of arms of the city of Gouda. The heel of one has “666” inscribed on it. This variety of tobacco pipe was available from 1745–1812 (van der Meulen 2003). Two others have “50” crowned on the heel, dating them from 1739–1819 (van der Meulen 2003), and the final bowl exhibits a crowned “6” (1739–1850) (van der Meulen 2003). Among the non-diagnostic pipe fragments, of interest are three of the ubiquitous “Masonic” pipes that display the Masonic “Angle and Level” symbol and a deer or stag head that faces the smoker. Table 7.78 below offers a general breakdown of the smoking pipe fragments recovered from Feature 29.

Table 7.78: Feature 29 smoking pipe fragments.

Part	Decoration	Pattern / Motif	Count	Begin	End	Comments
Pipe Bowl	Molded Pattern	Floral	1	1790	1820	INH Shape 25 (Noel Hume 1969:303)
Pipe Bowl	Undecorated		2	1780	1820	Shape 27 (Grillo et al. 2003: 11-12)
Pipe Bowl	Polished		1	1745	1812	City of Gouda coat of arms; "666" on heel. (van der Meulen 2003)
Pipe Bowl	Polished		2	1739	1819	City of Gouda coat of arms; crowned “50” on heel. (van der Meulen 2003)
Pipe Bowl	Polished		1	1739	1850	City of Gouda coat of arms; crowned “6” on heel. (van der Meulen 2003)
Pipe Bowl	Undecorated		17			
Pipe Bowl	Molded Pattern	Various	8			
Pipe Bowl	Polished		5			

Table 7.78: Feature 29 smoking pipe fragments (Cont'd).

Part	Decoration	Pattern / Motif	Count	Begin	End	Comments
Pipe Bowl	Molded Pattern	Masonic	3			
Pipe Stem	Undecorated		75			
Pipe Stem	Rouletted		3			
Pipe Stem	Lead Glazed		1			
		<b>Total</b>	<b>119</b>			

### *Sanitary*

The final functional group contains five sherds from creamware chamber pots. These are undecorated and fall within the general date range for creamware (1762–1820) (Miller et al. 2000:12).

### INTERPRETATION

Feature 29 consisted of a portion of a potentially larger feature. Size notwithstanding, this small midden revealed a single stratum that contained 1,187 artifacts. The three printed Chinoiserie pattern pearlware sherds and the single printed sherd with an indeterminate pattern or motif provide the TPQ date for this feature. These artifacts indicate a deposition of circa 1807, which would be during the construction period of City Hall.

### **FEATURE 28**

Feature 28 was first encountered along the southern half of Manhole 3, beneath a series of modern utility conduits (Map 7.37). Because of these modern intrusions, the depth at which the top of this large feature was encountered varied. Where impacted by conduits (see plan), the top of the midden was approximately 2.7' bs. Where the web of conduits did not impact the feature (Image 7.107), the top of Feature 28 was 2.3' to 2.5' bs. Feature 28 spanned the entire exposed east-west expanse of Manhole 3, which measured 17.4' (see Image 7.107). The northern boundary was irregular. It extended 7.2' from the southern edge of Manhole 3 at its widest point, but was only 3.4' from this edge in the east. Because only the portion of Feature 28 within the manhole was available for study, the overall shape of Feature 28 could not be discerned. Based on the documented extent, it may have possessed either a rough ovoid or rectangular form.

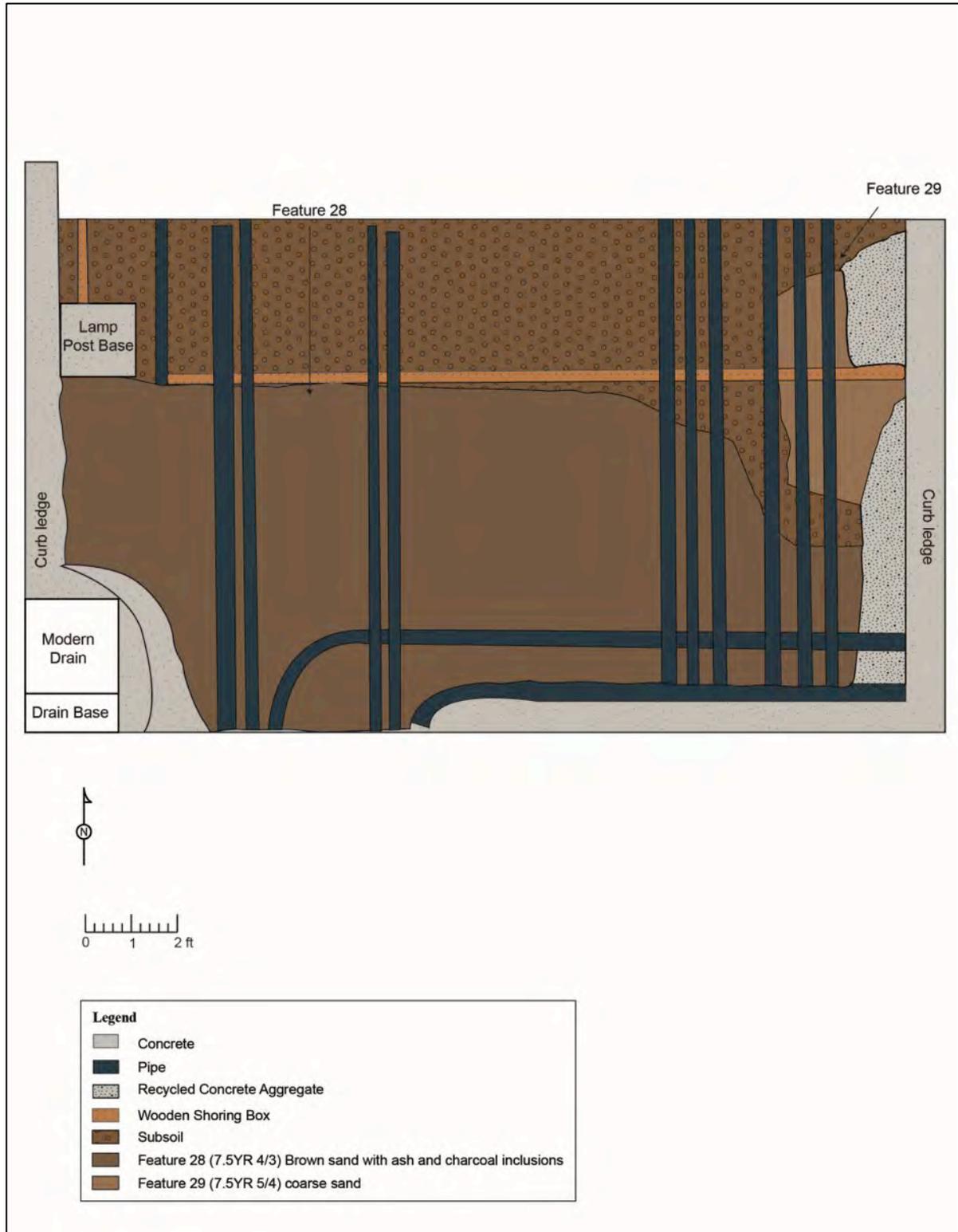
Although the overall shape of Feature 28 was unidentifiable, archaeological excavations and artifact analysis garnered much data regarding this feature. Feature 28 consisted of a stratified, artifact-rich midden or trash pit (Image 7.108). It yielded 8,933 artifacts (not counting the faunal remains) that generally pre-dated the construction of City Hall. A very small number of post-City Hall artifacts were recovered; they are the result of a mid-

nineteenth-century sewer pipe, which impacted a small portion of the midden. A total of 11,292 faunal fragments were recovered; during this recovery, a large amount of mollusk, clam, and oyster shell was sampled, including whole shells with hinges. Together, 20,225 archaeological remains were recovered from Feature 28. Four strata were documented within Feature 28. These revealed a steep sided basin-like profile with clear boundaries between the four strata.

As Feature 28 is adjacent to the Bridewell, it may be associated with this public building. The Bridewell occupied the area to the west of City Hall from 1775 to 1838 and served as a prison (see Chapter V). The journal of John McComb Jr., the architect of City Hall, refers to several large “sinks” associated with the Bridewell that were filled in prior to City Hall’s construction (McComb Family Papers 1787–1858). It is possible that Feature 28 represents one of these “sinks,” which were large privies, though these were reportedly cleaned prior to the construction of City Hall. It may also represent a later midden, one that was in use during the construction of City Hall, but associated nonetheless with the Bridewell and/or the work force constructing City Hall.

Another consideration is the relatively large amount of household ceramics and personal items recovered from Feature 28. If the midden is associated with a prison, why are there so many finely decorated ceramics, wine/beer bottles, and smoking pipes? The answer to that may lie in reconsidering our modern conceptions of exactly what a prison entails. Modern citizens see prisons as state-funded institutions that house criminals and those that are dangerous to society. Seventeenth- and eighteenth-century prisons fulfilled a wider role, incarcerating criminals, debtors, women of “ill repute,” and even children in one grim establishment. Unlike modern prisons, these people were generally housed communally with only the very dangerous (or wealthy) kept separate (Johnston 2010: 22).

Additionally, even though seventeenth- and eighteenth-century prisons (and almshouses) were initially built by the “state,” they partially relied on donations from the upper economic strata of society. Many of these donations were not monetary, but of objects, such as dinnerware and blankets (Kaktins in process). Furthermore, many early prisoners were required to purchase their own foodstuffs and some even brought the means to eat this food with them to prison. Alcohol and tobacco were also available for purchase, usually from prison staff (Johnston 2010:22–23). It should also be noted that the keeper of the Bridewell resided at the prison with his family, and the two deputies were allowed to take their meals there (NYCC 1817:92). To what extent does Feature 28 contain items associated with the keeper and deputies? Is the wide variety of household-related artifacts due to a combination of staff possessions, donations, and brought-items to the Bridewell? Or does Feature 28 represent community-wide deposition? Is there an association with the workers who built City Hall? The following discussion seeks to determine which, if any, possibilities are most likely.



Map 7.37: Features 28 and 29, plan view.



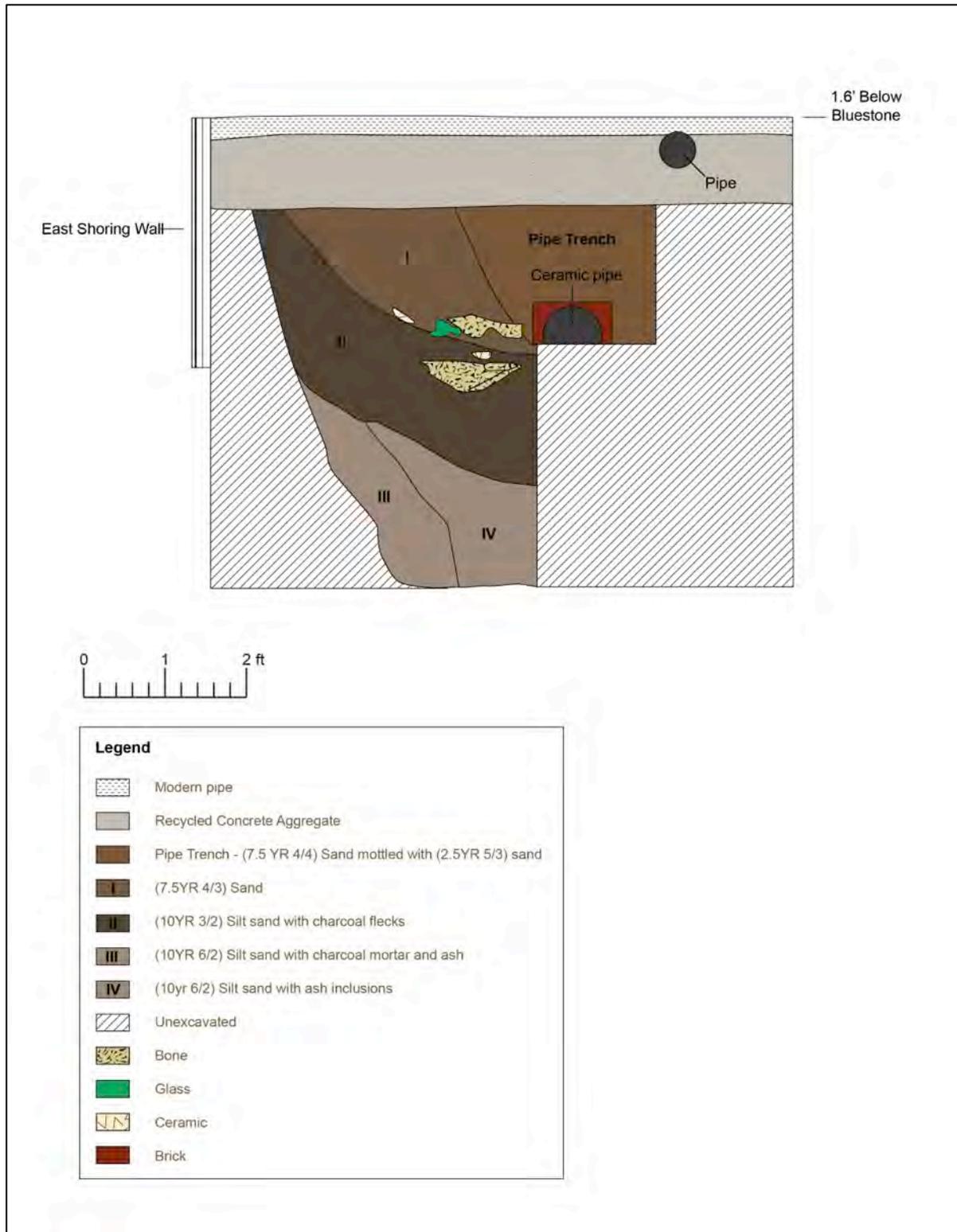
Image 7.107: Feature 28, in progress plan view.



Image 7.108: Feature 28, profile of east wall.

#### ASSOCIATED STRATIGRAPHY

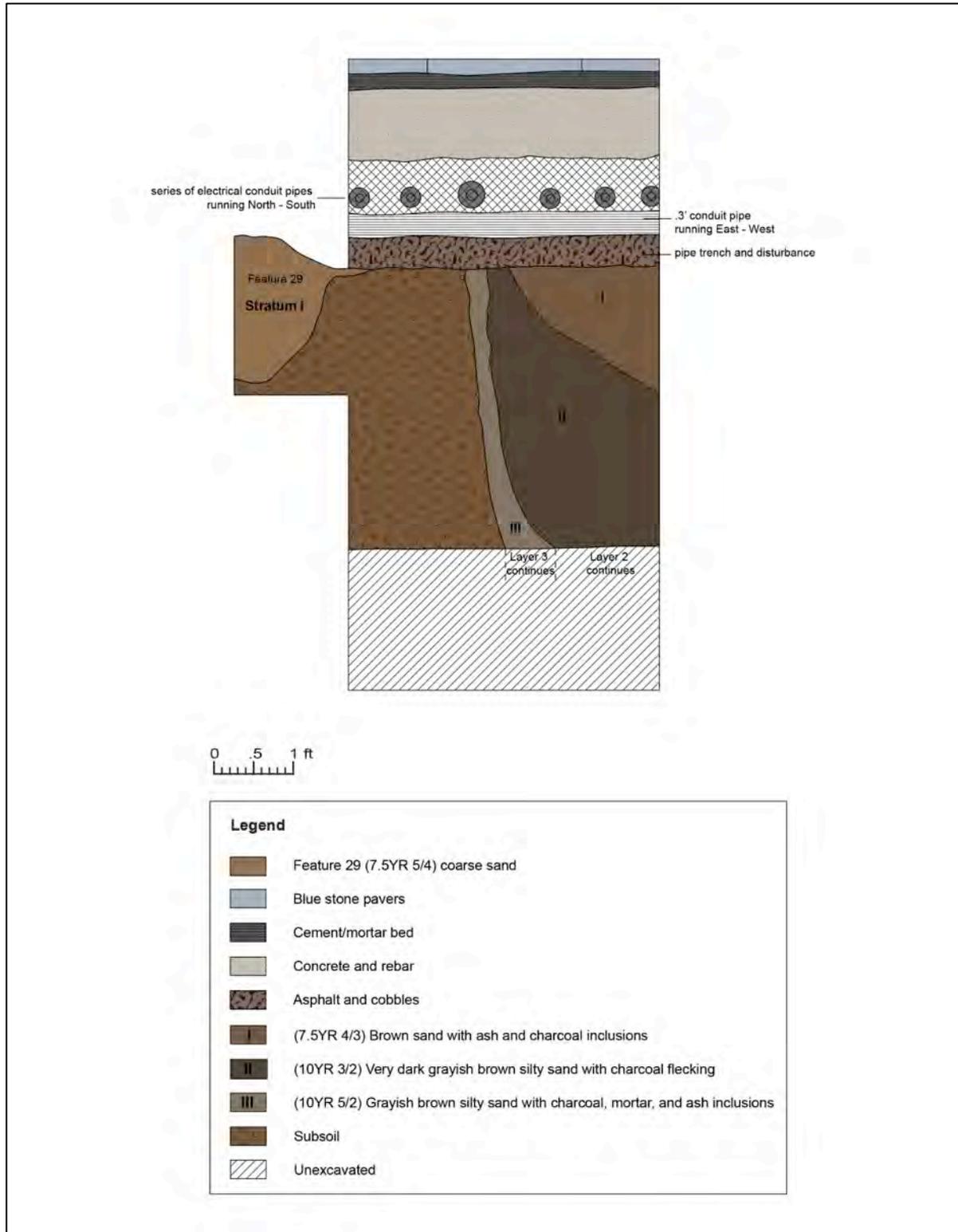
Four horizons were documented within Feature 28. There are four depositional episodes, all of which are more or less basin-shaped. Strata I, II, and IV are essentially consecutive stratified deposits. Stratum III is a horizon that apparently “lines” the outer face of the midden. Based on the profiles (Map 7.38/Image 7.109; Map 7.39/Image 7.110), it appears that Strata II and IV were either excavated directly into Strata III or were later deposits. Stratum III consisted of a thin horizon that “clung” to the outer basin shape of Feature 28. It began at the same elevation as Stratum II and was co-level with Stratum IV, but did not cap Stratum IV or apparently continue beneath it. Based on an auger test, Stratum IV lay directly upon sterile subsoil. Because of safety concerns related to the depth of the excavation, neither the bases of Strata III nor IV were reached; it is assumed that Stratum III terminated at approximately the same level as Stratum IV.



Map 7.38: Feature 28, profile of east wall.



Image 7.109: Feature 28, formal profile of east wall.



Map 7.39: Features 28 and 29, profiles of southern walls.



Image 7.110: Feature 28, profile of southern wall.

The relatively thin profile of Stratum III and the high concentration of charcoal and ash therein possibly indicate that the midden was originally utilized for cooking/heating fire remains. It is possible that moderate amounts of such remains were disposed of in this large, convenient hole, and these remains clung to and lined the sides of the hole. If this were the case, then the remaining strata were deposited on top of, rather than excavated into, Stratum III. It is very likely, based on the stratigraphy and the assemblage data (to follow), that Strata II and III were deposited within the same general time period.

A later nineteenth-century glazed sewer pipe and associated trench impacted the southern edge of Feature 28. It was located adjacent to the edge of the excavation/manhole and impacted portions of Strata I and II.

The east and southern profiles depict this stratigraphy. Table 7.79 lists the descriptions of each stratum and their relative depths. Please note again that due to safety concerns regarding overall depth, the base of Feature 28 was not reached during the archaeological excavations. An auger test, placed at the base of Stratum IV (excavated) and near the southern edge of the excavation, encountered subsoil at 8.5' bs. Outside of direct observation, this is assumed to be the terminal depth of Strata III and IV.

Table 7.79: Feature 28 stratigraphy.

<b>Stratum</b>	<b>Depth</b>	<b>Soil Description</b>
<b>I</b>	2.3' – 4.5' bs	Brown (7.5YR 4/3) sand with ash and charcoal inclusions
<b>II</b>	4.5' – 6.1' bs	Very dark grayish brown (10YR 3/2) silty sand with charcoal flecking; very artifact-rich, more artifacts than actual soil matrix
<b>III</b>	2.6' – 8.5' bs	Grayish brown (10YR 5/2) silty sand with charcoal, mortar and ash inclusions
<b>IV</b>	6.1' – 8.5' bs	Light brownish gray (10YR 6/2) silty sand with ash inclusions; mostly ash, very few artifacts

#### ASSEMBLAGE

A total of 8,933 non-faunal artifacts were recovered from Feature 28<sup>2</sup>. Seventy-nine percent ( $n=7,031$ ) of these artifacts were recovered from Stratum II, which possessed a higher artifact content than soil matrix. It should be noted that this assemblage represents possibly less than half of the entire feature. While a wealth of data was recovered, the overall view is unfortunately incomplete. Because the remaining half (presumably) of Feature 28 still remains untouched, final determinations about the depositional order (e.g., primary or secondary) are difficult. Sherd size and minimum vessel counts could be skewed, as the extant portion of Feature 28 may contain the “other half” of such data. Having said that, the assemblage size and complexity is great enough to make several hypotheses.

Figure 7.09 shows the breakdown of artifact totals among the strata (and the later pipe trench).

#### STRATUM I

A total of 460 non-faunal artifacts and 322 faunal fragments ( $n=782$ ) were collected from Stratum I. Nearly three-quarters of these non-faunal artifacts consist of household-related items ( $n=328$ , or 71.3%). Figure 7.10 shows a breakdown of the functional groups within Stratum I.

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2. Though the faunal remains will be discussed here, they are more fully detailed and discussed in Chapter IX. Additionally, the faunal remains are not included in the percentile analysis of Feature 28. Their inclusion, the number of fragments not being equal to the number of individuals, artificially inflates the food-related functional group percentages.

*Architectural*

A total of 66 architectural remains were recovered from Stratum I. More than half ( $n=49$ , or 74%) of this portion of the assemblage consists of fragments of window pane. The remainder consists of nails too heavily corroded for identification ( $n=14$ ), two plaster fragments, and a mortar fragment. None of these artifacts are chronologically diagnostic.

*Food Related*

This portion of the assemblage consists of 314 fragmented faunal remains and shell fragments from two different mollusk species. Only 25 fragments are identifiable to the species level; 73.95% of the faunal assemblage is only identifiable to the class level. Table 7.80 provides a breakdown of the assemblage. The identifiable fragments are almost exclusively cow ( $n=22$ ). The remaining three identifiable fragments are caprine ( $n=2$ ) and pig ( $n=1$ ). There is some diversity evident in the assemblage, which contains bird (6.75%) and fish (7.07%). Two hinges and five fragments from oyster shells were recovered. Clam portions were also recovered—two hinges and six shell fragments.

Table 7.80: Faunal count by species/class, Feature 28, Stratum I.

<b>SPECIES</b>	<b>COUNT</b>
COW	22
PIG	1
OVCA	2
TURTLE	0
BIRD	21
MOLSP	16
FISH	22
LTM	51
MTM	50
STM	3
FTM	0
VSTM	0
UNIM	126

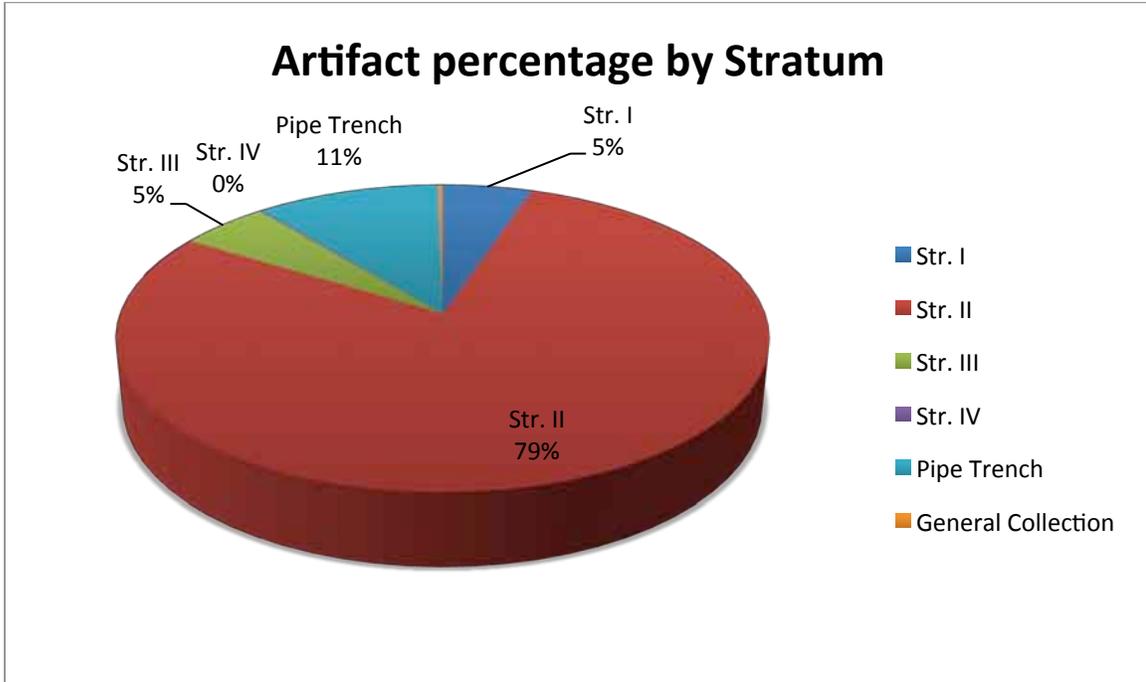


Figure 7.09: Feature 28 artifact percentages.

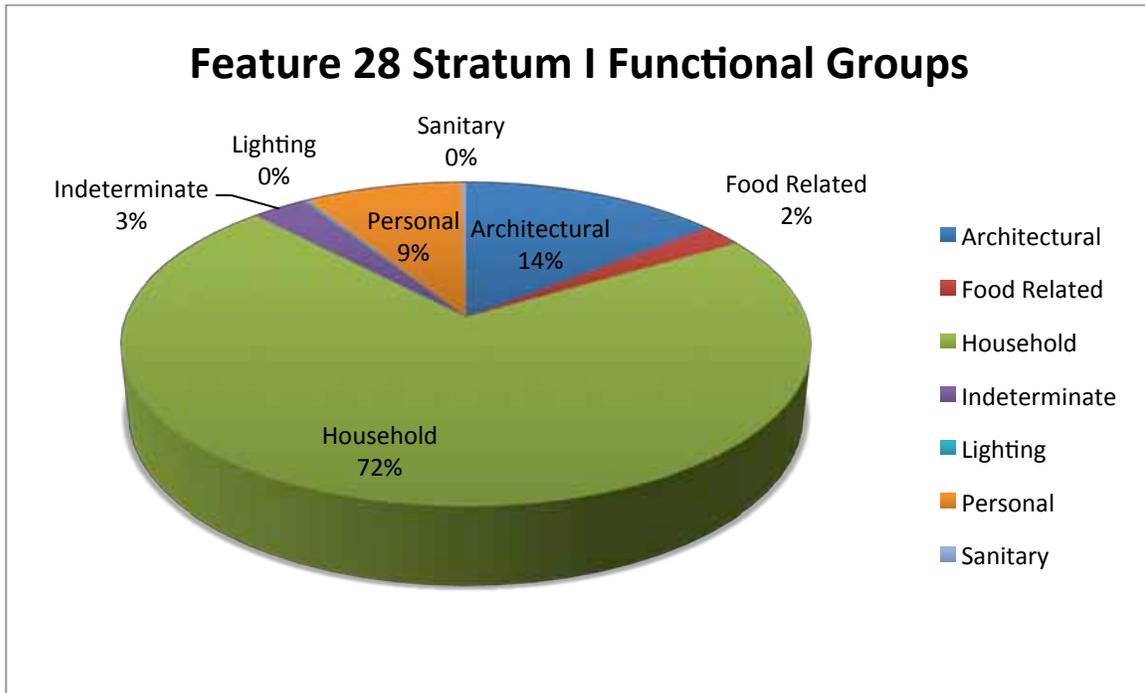


Figure 7.10: Feature 28, Stratum I, functional groups.

*Household Artifacts*

Three hundred and twenty-eight of the recovered artifacts can be classified as household related. These items consist of ceramic ( $n=235$ ), glass ( $n=87$ ), and metal specimens ( $n=6$ ).

**Ceramics.** Ceramic household artifacts comprise the bulk of this portion of the assemblage (72%) and half of the Stratum I assemblage overall (51%). Refined earthenwares are the most common ceramic material ( $n=176$ , or 74%), followed by coarse earthenwares ( $n=41$ , or 17%). Stoneware ( $n=10$ ) and porcelain ( $n=8$ ) each account for approximately 4.5% of the assemblage.

*Refined Earthenwares.* Within the refined earthenwares category, creamware specimens are the most numerous ( $n=114$ , or 48.5%).

Creamware. Table 7.81 below offers a general view of the varieties of creamware recovered from Stratum I.

Table 7.81: Feature 28, Stratum I, creamware.

Decoration	Pattern/Motif	Count	Begin	End
Molded Pattern	Shell Edge	2	1774	1800
Painted, Overglaze	Floral	1	1765	1815
Undecorated		107	1762	1820
Molded Pattern	Royal Rim	4	1762	1820
	<b>Total</b>	<b>114</b>		

As can be seen above, most of the creamware specimens are undecorated and fall within the general date range for this ware type. The Royal Rim specimens refer to sherds obviously of the Royal pattern, which refers to a specific rim design. Unfortunately, this pattern was the most common of creamware patterns and was produced extensively. It is very possible that the undecorated sherds are also remnants of Royal pattern vessels.

Two varieties of creamware with tighter date ranges were recovered. The first consists of two sherds that exhibit evidence of a molded shell-edge rim. Shell-edged creamware was prevalent from 1774–1800 (Miller et al. 2000). The second variety is a sherd comprised of portions of the base, body, and rim of a saucer. The body of this specimen is relatively thick and exhibits signs of burning. It is painted over the glaze with a polychrome floral design, which appears somewhat crudely executed. This style of decorated creamware was prevalent between 1765 and 1815 (Miller et al. 2000).

Although the undecorated creamwares do not necessarily tighten the date range for Stratum I, they do offer some specific information. First, this ware type’s origin pre-dates City Hall. Therefore, they could very well have been deposited before construction began in 1803. If this is the case, then the artifacts could be attributed to the almshouse or the Bridewell. The variety of vessels types is also interesting. The creamware assemblage includes identifiable portions of saucers, mugs, plates, platters, and teapots. This indicates a wide usage of creamware vessels, which could point to multiple place settings. Unfortunately, the relative

dearth of cross mends from Stratum I make such a supposition problematic.<sup>3</sup> Creamware vessels were not sold as discrete services, but rather by the dozen—therefore, these creamware sherds do not represent a discrete, single service but an amalgamation of many separately purchased vessels. Additionally, tableware was not generally provided to prisoners in seventeenth- and eighteenth-century prisons; it entered via donations or came with specific prisoners (Katkins in press; Johnston 2010:22–23). While this makes it possible that entire “complete” sets of creamware (and other ceramics) were donated (or provided by family members), this is most likely not the manner in which vessels entered the Bridewell. It is more likely that either individual or limited numbers of vessels were donated; the unbroken “odds and ends” that were left over from older (or unfashionable) sets.

Pearlware. The second most common ceramic ware from Stratum I is pearlware. Sixty-two pearlware sherds were recovered from Stratum I. As with the creamware specimens, the sample possesses a large range of vessel shapes and uses. Unlike the creamware sample, nearly half ( $n=28$ ) of these sherds exhibit identifiable decorations, which offers chronological data within the standard pearlware date range (1775–1840) (Miller et al. 2000). Table 7.82 offers a breakdown of the various pearlware sherds and their date ranges.

Table 7.82: Feature 28, Stratum I, pearlware.

Decoration	Pattern/Motif	Count	Begin	End
Sponged		1	1815	1840
Molded Pattern	Shell Edge	1	1800	1835
Painted	Other	3	1795	1830
Printed	Willow	2	1795	1830
Painted	Star/Asterisk	1	1795	1830
Painted	Indeterminate	1	1795	1830
Painted	Floral, Small Scale	1	1795	1830
Painted	Floral & Brown Line	1	1795	1830
Painted	Floral	1	1795	1830
Dipt	Indeterminate	4	1775	1850
Indeterminate		34	1775	1840
Molded Pattern	Shell Edge	1	1775	1835
Dipt	Over All Slip	3	1775	1830
Painted	Other	2	1775	1830
China Glaze, Painted	Indeterminate	6	1775	1810
China Glaze, Painted	Chinese Landscape	1	1775	1810
	<b>Total</b>	<b>62</b>		

3. Analysis of the minimum vessel counts and cross mends within and between strata follows the general analysis of Feature 28.

In general, the pearlware specimens also indicate a pre–City Hall deposition. The only glaring exception consists of the blue sponged teacup (1815–1840). This variety of pearlware post-dates City Hall, which may indicate deposition soon after construction’s end. On the other hand, this sherd is rather small (1.1 grams) and is more likely the result of an intrusive secondary deposition (i.e., pipe trench). The remainder of the pearlware specimens generally pre-date 1803, as does the remainder of the ceramic and glass assemblages. This artifact is considered an outlier.

The variety of vessel types and decorations indicates usage of a wide range of different pearlware place settings, or pieces, from multiple services. But does this variety suggest deposition from multiple sources over a relatively long period of time, as this assemblage ranges in date from 1775 to 1835? Or does it suggest deposition from a single source over a much shorter period of time? The presence of so many different pearlware varieties may offer insight. For instance, consider the green shell-edge baker (see top of Table 7.82). This variety of pearlware was prevalent between 1800 and 1835. If the blue sponged pearlware sherd is considered intrusive, then this sherd offers the TPQ date for Stratum I; no artifacts could have been deposited before 1800.

Then consider the many painted specimens, along with the dipt and the China glaze specimens (see Table 7.82). In any other locale, the sheer variety of decorations would suggest deposition from multiple sources over a possibly long time span—a public midden, possibly. But standard ways of analyzing an assemblage do not necessarily apply. This deposit, this midden, was located adjacent to an eighteenth-century prison, not in a commonly accessible area. Even if accessible, it seems unlikely that the public would venture to the boundary of such an institution. These sherds represent donated vessels that were later broken and discarded by Bridewell staff and inmates. This explains the wide variety of pearlwares (and other ceramics). Based on the TPQ date of 1800, combined with the presence of many similarly aged specimens, this deposition probably occurred during the construction of City Hall.

*Coarse Earthenwares.* A total of 41 coarse earthenware sherds were recovered from Stratum I. Most of these specimens are from redware vessels ( $n=36$ ). Table 7.83 offers a breakdown of the various coarse ceramics recovered.

Table 7.83: Feature 28, Stratum I, coarse earthenware.

Ware	Decoration	Count	Begin	End
British Buff-Bodied Slipware	Lead Glazed	5	1670	1795
Redware	Lead Glazed	21		
Redware	Slip Decorated	10		
	<b>Total</b>	<b>41</b>		

The British slipware sherds are the only chronologically diagnostic coarse earthenwares. These base, body, and rim sherds are lead glazed, and the rims are coggled. This variety was prevalent from 1670 to 1795 (Azzizi et al. 1996) and most likely originally dates to pre-Revolution New York. As such, they may be the result of secondary deposition. The redware is split between slip-decorated ( $n=15$ ) and lead-glazed ( $n=21$ ) varieties. These are utilitarian wares that would have been utilized as cooking and serving dishes for daily meals.

*Stoneware.* Ten stoneware sherds were recovered from Stratum I. None of these specimens are chronologically diagnostic. These represent utilitarian vessels utilized for daily meals and storage. Table 7.84 lists the stoneware vessels and their decorations

Table 7.84: Feature 28, Stratum I, stoneware.

Ware	Decoration	Decoration Color	Count
Dry Bodied Stoneware	Ridged		1
Salt Glazed, Gray/Buff Bodied	Indeterminate		5
Salt Glazed, Gray/Buff Bodied	Miscellaneous Brown Slip	Brown	2
Salt Glazed, Gray/Buff Bodied	Slip Decorated	Blue	1
Salt Glazed, Gray/Buff Bodied	Undecorated		1
		<b>Total</b>	<b>10</b>

*Porcelain.* Eight porcelain sherds were recovered from Stratum I; only one of these sherds is chronologically diagnostic. It is from a Chinese export sauce boat with an *encre de chine* (India ink) floral scene and gold highlights painted over the glaze. This variety of Chinese export porcelain was prevalent between 1720 and 1800 (Azizi et al. 1996). Table 7.85 offers a breakdown of the recovered porcelains.

Table 7.85: Feature 28, Stratum I, porcelain.

Ware	Decoration	Count	Begin	End
Porcelain, Chinese Export	Painted, Overglaze	1	1720	1800
Porcelain, Chinese Export	Painted, Overglaze	2		
Porcelain, Chinese Export	Painted	2		
Porcelain, Chinese Export	Indeterminate	1		
Porcelain, Hard Paste	Indeterminate	2		
	<b>Total</b>	<b>8</b>		

**Glass.** Eighty-seven shards of bottle and container glass were recovered from Stratum I. In general, household glass is best dated when nearly the entire vessel is present. Much documentary evidence is available about when certain molds were utilized, or how and with what tool necks and lips (finishes) were attached to bottle bodies. Unfortunately, most assemblages consist of fragments that do not possess these necessary characteristics. In these instances, assigned date ranges are either rather long or incomplete. For instance, one can tell that a bottleneck was mouth blown into a mold, but cannot tell the exact mold type because the base is missing. Therefore, the only ascribable date is 1920, which is when machine-made bottles became widely available (Miller 2000 et al). If the distinctive mark where the blower's glass rod was removed from the base of the bottle is visible (pontil mark), but no other characteristics are, only the date of 1870 can be assigned. This is because by 1870, empontilling had generally been replaced by snap cases (Jones et al. 1989). In order to avoid incomplete, or wide, date ranges, the bottle and container glass assemblage has been compared to data compiled in Olive Jones' 1986 article "Cylindrical English Wine and Beer Bottles, 1735–1850." Her 1985 joint article with Smith, "Glass of the British Military, ca. 1755–1820," was also referenced. Jones 1986 looks at both dated and undated British wine and beer bottles, seeking similarities among various characteristics, especially the "finishes" (lip and rim). Although the sample size is small, Jones' article is uniquely suited to City Hall Park. The long British presence in Manhattan left an indelible mark upon the material culture of the city; their influence is still noticeable even when City Hall started construction. The bulk of the recovered artifacts are British imports, so utilizing a study that focuses on an important sector of these imports is logical. And many of the recovered bottles from intact horizons exhibit the exact same characteristics as those Jones noted.

Only four of these shards exhibit enough characteristics to assign definitive dates. The first is a mouth-blown bottle shard with an applied rim. This is a downturned v-shaped string rim, a style popular circa 1780–1820 (Jones 1986; Jones and Smith 1985:21). This is likely a beer bottle. The second diagnostic glass artifact is a mold-blown shard with an applied rim that slopes downward and has a flattened string rim beneath it. In general, this neck/finish style was popular from 1770 to 1785 (Jones 1986:8, 44). The third is a large, square non-lead decanter with an engraved tulip design. This design was popular between 1760 and 1820, and may indicate that the vessel was manufactured in either New York or Philadelphia (Palmer 1993:92–93). The final dateable shard comes from a dip molded case medicinal bottle. Although dip molds were first introduced circa 1730 and used until circa 1870, the gradual replacement of this manufacturing technique began in 1821, when the Rickett's three-piece mold was introduced (Miller et al. 2000: 8; Jones and Sullivan 1989).

The remaining glass shards do not possess enough characteristics for definitive dating. While they were clearly blown by mouth into a mold, the exact type of mold cannot be determined. Table 7.86 offers a breakdown of the household glass from Stratum I.

Table 7.86: Feature 28, Stratum I, household glass.

Material	Manufacturing Technique	Rim /Finish	Base	Decoration	Count	Begin	End
Common Glass	Mouth Blown, General				1	1780	1820
Common Glass	Mold Blown, Mouth	Applied			1	1770	1785
Non-Lead Glass	Mold Blown, Mouth			Engraved	1	1760	1820
Common Glass	Dip Mold				1	1730	1870
Common Glass	Mold Blown, Mouth				54		1920
Common Glass	Mold Blown, Mouth			Chamfered Corners	1		1920
Common Glass	Mouth Blown, General		Sand Pontil		3		1870
Common Glass	Mold Blown, Mouth		Blow Pipe Pontil		1		1870
Common Glass	Indeterminate				13		
Non-Lead Glass	Indeterminate				4		
Common Glass	Mold Blown, Indeterminate				1		
Non-Lead Glass	Mouth Blown, General			Engraved (black)	1		
Leaded Glass	Indeterminate				1		
Leaded Glass	Indeterminate			Indeterminate	1		
Non-Lead Glass	Indeterminate			Engraved (unidentified)	1		
Non-Lead Glass	Mouth Blown, General				1		
Common Glass	Mouth Blown, General				1		
				<b>Total</b>	<b>87</b>		

Of the non-diagnostic bottle glass shards, a few warrant further description. The first comes from a bottle with multiple panels and chamfered corners, possibly a medicine bottle. The second is an engraved tumbler; the engraving is a floral garland with black paint or enamel. It is possible that the black enamel is actually discolored gilt.

**Metal.** This class of household artifact consists of six iron fragments of a knife or similar kitchen utensil.

*Indeterminate Group*

Fourteen artifacts could not be attributed to any functional group. They are shown below in Table 7.87.

Table 7.87: Feature 28, Stratum I, indeterminate.

Material	Comments	Count
Colorless Common Glass	Very thin, either lighting or case bottle	11
Indeterminate	Possibly burned bone or seed	1
Iron	Sand/mortar fused to frags	2
Iron	Small hollow tube with cap at one end, possible rivet for handle	1
	<b>Total</b>	<b>14</b>

*Other*

This group consists of non-food-related faunal remains, including three rat bones and five cat bones.

*Personal*

Forty personal artifacts were recovered from Stratum I. Most of these ( $n=37$ , or 93%) are fragments of white ball clay smoking pipes. Three of the recovered pipe bowls are chronologically diagnostic, either via the bowl shape or decorative elements. Table 7.88 shows a breakdown of the pipes.

Of the three diagnostic pipe bowls, two can be dated via recourse to an Atkinson and Oswald 1969 article entitled “London Clay Tobacco Pipes,” which has been adapted by the Digital Archaeological Archive of Comparative Slavery into a tobacco pipe cataloging manual (Grillo et al. 2003). The pipes with a thin, brittle bowl and a flat-based spur are circa 1780 through 1820 (Grillo et al. 2003: 11–12). The third diagnostic pipe bowl has an identifiable design. This specimen has a distinctive Dutch bowl shape and depicts the coat of arms of the city of Gouda on either side of the heel. The heel itself has “666” inscribed and the rim is rouletted. This variety of tobacco pipe was available from 1745 to 1812 (van der Meulen 2003).

Table 7.88: Feature 28, Stratum I, smoking pipes.

Part	Decoration	Pattern / Motif	Count	Begin	End	Comments
Pipe Bowl	Undecorated		2	1780	1820	Shape 27 (Grillo et al. 2003: 11-12)
Pipe Bowl	Molded Pattern	Other	1	1745	1812	City of Gouda coat of arms; "666" on heel; rouletting around rim (van der Meulen 2003)
Pipe Stem	Undecorated		20			
Pipe Stem	Undecorated		3			
Pipe Bowl	Molded Pattern	Floral	2			Vine motif along the seams facing away from the smoker.
Pipe Bowl	Undecorated		2			
Pipe Bowl	Undecorated		1			
Pipe Bowl	Molded Pattern	Other	1			Aboriginal figure (St. Tammany?) on the bowl wearing a headdress.
Pipe Bowl	Molded Pattern	Masonic	1			Large stag's head on back of bowl, garlanding on bowl faces.
Pipe Bowl	Molded Pattern	Indeterminate	1			Small portion of a bowl with a tall narrow heel. Elaborate motif.
Pipe Bowl	Molded Pattern	Indeterminate	1			Elaborate decoration.
Pipe Bowl	Undecorated		1			Large portion of bowl
Pipe Stem	Undecorated		1			Teeth marks on stem
			<b>37</b>			

Two other decorated pipes are also of note. The first depicts an aboriginal figure on the side of the bowl (Image 7.111). This figure has an upright crested headdress and is wearing a loincloth. Beneath the figure, there are five extant molded letters. The first three appear to be "N.R.I." The fourth is either a "C" or possibly an "O." The fifth, which is rather indistinct, may be an "A." A whirled ovoid shape is beneath the letters. The reverse of the bowl depicts a shield/coat of arms. The details are somewhat indistinct, but two elements are discernible. The first is a small hooved animal, possibly a horse or a doe, located in the lower left quadrant of the shield. The second appears to be a set of antlers that crown the shield. It is assumed that the central portion of the shield may have once depicted an antlered animal. The aboriginal figure resembles eighteenth-century depictions of Native Americans. It is hypothesized that this pipe may be related to Tammany and the Tammany Society, which was founded in New York in 1789.

The second decorated pipe also appears to be related to a fraternal society. This specimen depicts the angle and level symbol of the Masons on the sides of the bowl and a large antlered stag or deer head on the reverse (Image 7.112). Garlanding is exhibited throughout. Several similar pipes were found throughout the midden.

The remaining three personal artifacts consist of a portion of a buckle and a button. The buckle is constructed of copper alloy with decorative cut-outs along the length. The remnant of a pin terminal is located on the dorsal side. The button consists of the mending halves of a single-hole bone button.

*Sanitary*

This group consists of a single sherd from a creamware chamber pot (1762–1820).



Image 7.111: Pipe with aboriginal figure.



Image 7.112: Pipe with Masonic symbols and stag.

## STRATUM II

A total of 6,949 non-faunal artifacts and 10,331 faunal artifacts were recovered from Stratum II, totaling 17,279 archaeological remains. Two-thirds of the non-faunal artifacts consist of household remains. Of the 17 identified functional groups, only the household artifacts, the architectural remains, and personal items are numerous enough to efficiently chart. The 12 remaining functional groups only comprise 4% of the whole. Figure 7.11 depicts a breakdown of the functional groups, exclusive of faunal, from Stratum II.

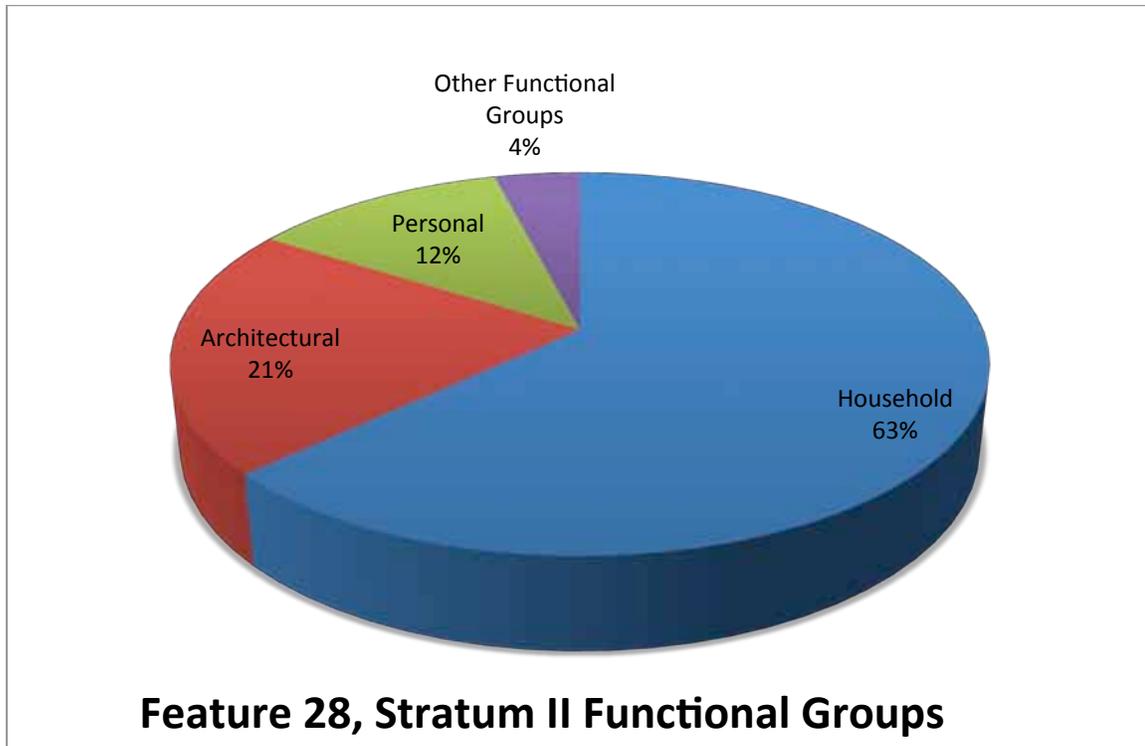


Figure 7.11: Feature 28, Stratum II, functional groups.

### *Architectural*

A total of 1,454 architectural remains were recovered from Stratum II. Almost all of these remains consist of fragments of window glass ( $n=1,359$ , or 93%). The only chronologically diagnostic artifacts are 15 cut nails and a fragment of sewer pipe. The fragment of sewer pipe is impressed with the name of Greenwich Pottery and the words “steam pressed ironstone.” Greenwich Pottery operated out of Greenwich Village and introduced steam-pressed sewer pipes into Manhattan circa 1851 (Windsor and Kenfield et al. 1894, 1897:270). This is a portion of the later sewer pipe that impacts the southern portion of the midden; therefore, it is intrusive and will be dismissed.

The cut nails recovered from Stratum II are too corroded to determine whether or not their heads were attached via hand (1790) or machine (1805). Thus, as cut nails are still utilized in certain industries today, only the beginning date of 1790 (Miller et al. 2000) can technically be ascribed to this portion of the assemblage (see artifact database Appendix J). That being said, wire nails were common after circa 1885 and mostly supplanted the cut varieties (Miller et al. 2000). Additionally, the recovered specimens are iron, and milled steel began to be used for cut nails circa 1890 (Wells 2000). Therefore, it is safe to assume that cut nails were used historically between 1790 and 1885–1890. While this date range is rather wide, it is useful to know that cut nails are available by 1790, and pre-date City Hall.

Sixty-one hand-wrought nails were also recovered. As this is an ancient manufacturing technique, ascribing a beginning date is problematic. Additionally, their usage technically

overlaps that of cut nails and continues into the present (see artifact database Appendix J). On the other hand, they logically must date to some construction within City Hall Park. The first documented building within City Hall Park was the De Wit and Hartogvelt gristmill, built between 1663 and 1723 (see Chapter V). Therefore, the wrought nails could possibly date to this period. More likely, they date to the period of City Hall's construction. The wrought specimens outnumber the cut varieties by roughly five to one and were found in the same context. This may indicate that both varieties were utilized at this time, but the wrought variety was still more readily available. As City Hall's construction began around the time that cut nails were beginning to supplant wrought nails, and there are a greater number of wrought nails, it can be assumed that the wrought nails in question date to this time period.

The remaining architectural materials consist of mortar, brick, tile, and wood fragments. An overview of all the architectural remains from Stratum II is shown below in Table 7.89.

Table 7.89: Feature 28, Stratum II, architectural remains.

<b>Object</b>	<b>Count</b>	<b>Begin</b>	<b>End</b>
Pipe, Sewer/Water	2	1850	
Cut Nail	15	1790	1885-1890
Window Glass	1359		
Hand-Wrought Nail	61		1790-1805
Mortar	7		
Brick, Fragment	4		
Wood Fragment	2		
Tile, Roofing	1		
Brick, Fragment	1		
Brick, Whole	1		
Brick, Bat	1		
<b>Total</b>	<b>1454</b>		

*Arms/Debitage Related*

This group consists of a two fragments of flint. The first is a honey yellow spall from a French gunflint, the second a gray colored spall, which is either of British or local flint.

*Commercial*

Two coins comprise this group. The first is actually half of a large copper alloy coin. It is too corroded to identify as to type and date. The size may indicate that it is a tuppence. The second is a white metal coin; it is also too corroded for identification.

*Food Related*

The bulk of the food-related remains consist of 10,129 faunal remains. Of these, 59% ( $n=6,068$ ) are only identifiable to the class level. Table 7.90 provides detail of the faunal count. The faunal assemblage exhibits a fair amount of diversity of diet. Of the identified species, accounting for 41% of the assemblage, cow is the best represented ( $n=1,542$ , or 15.3%). There is relatively more caprine here than in other contexts from the site as a whole ( $n=284$ , or 2.8%). Bird species are also well represented, accounting for 7.6% ( $n=769$ ), as is fish, accounting for 12.8% ( $n=1,295$ ) of the assemblage. Among the sampled mollusk species are hard shell clams (quahogs), represented by three shell fragments and 64 clam shell hinges. Oyster remains consist of two shell fragments and 14 oyster hinge fragments. Among the less represented species are turtle ( $n=8$ ) and one crab shell fragment. The remainder of the food-related group consists of 16 peach pits.

Table 7.90: Food-related faunal count, Feature 28, Stratum II.

<b>SPECIES</b>	<b>COUNT</b>
COW	1542
PIG	80
GOAT	6
SHEEP	8
OVCA	270
TURTLE	8
BIRD	769
MOLSP	129
CRAB	1
FISH	1248
LTM	2664
MTM	1376
STM	39
FTM	17
VSTM	6
UNIM	1966

*Fuel*

The fuel group consists of 27 charcoal fragments, one wood fragment, and one coal cinder.

*Hardware*

This group consists of three iron straps. One specimen has a circular hole at its end and is most likely a strap hinge; the other two are unidentifiable.

*Household*

This functional group comprises the bulk ( $n=63%$ ) of the assemblage from Stratum II. Within the group, most of the artifacts consist of ceramic sherds ( $n=2,654$ , or 59.82%). Figure 7.12 shows a breakdown of the material types among the household artifacts.

**Ceramics.** Within the ceramic household artifacts, refined earthenwares comprise the bulk ( $n=2033$ , or 77%) of the assemblage. As can be seen in Table 7.91, much smaller amounts of coarse earthenware, stoneware, and porcelain were recovered.

Table 7.91: Feature 28, Stratum II, ceramic types.

Material	Count
Refined Earthenware	2033
Coarse Earthenware	425
Stoneware	108
Porcelain	88
<b>Total</b>	<b>2654</b>

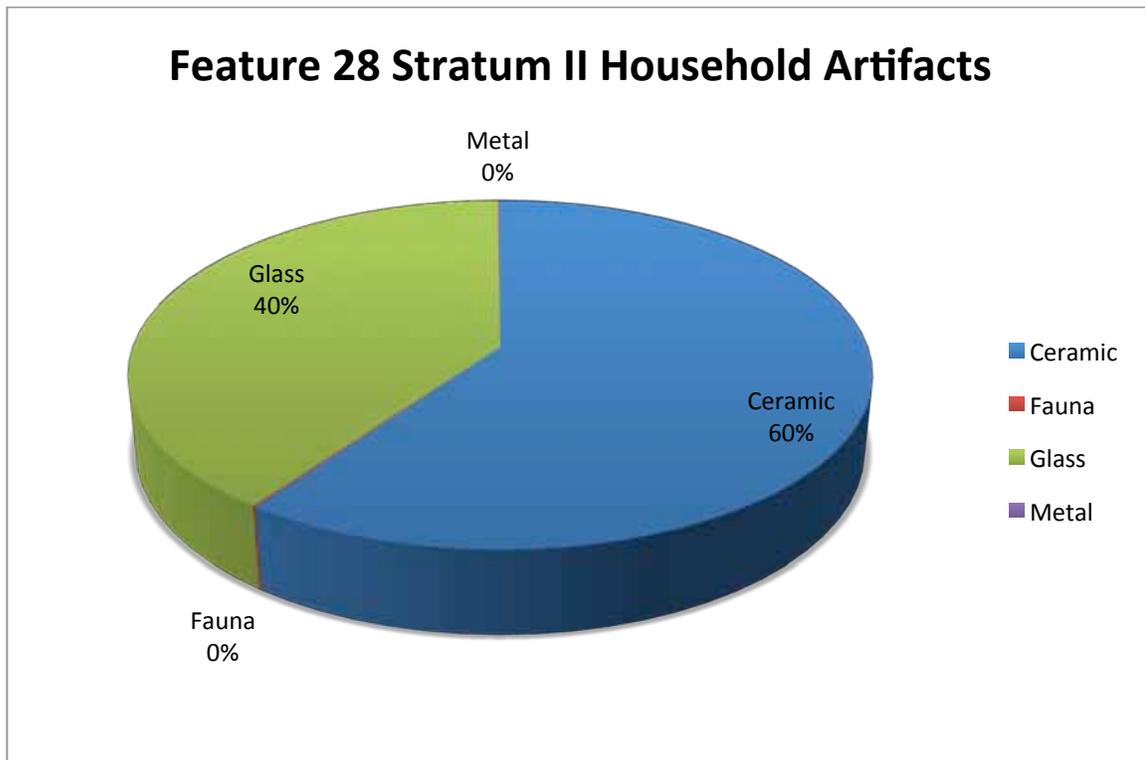


Figure 7.12: Feature 28, Stratum II, household artifacts.

*Refined Earthenwares.* Of the refined earthenwares, creamware was the most common ware, comprising 64.73% of the total. Figure 7.13 shows a breakdown of the refined earthenwares.

*Creamware.* A total of 1,316 creamware sherds were recovered from Stratum II. Only 29 of these sherds exhibit sufficient characteristics to assign somewhat tighter date ranges than the standard creamware range (1762–1820). In order to effect an efficient discussion of this large sample, these sherds will be discussed first and the remainder will be divided into subcategories based on decorative styles. Table 7.92 describes the general characteristics of the 29 sherds that offer greater data.

Table 7.92: Feature 28, Stratum II, creamware sherds more refined date ranges.

Decoration	Pattern/Motif	Makers Mark	Count	Begin	End
Undecorated	None	David Dunderdale & Co.	7	1790	1820
Molded Pattern	Shell Edge, Rococo		1	1774	1800
Dipt	Banded		13	1770	1820
Painted, Overglaze	Floral		8	1765	1815
		<b>Total</b>	<b>29</b>		

Four varieties of creamware sherds comprise this subcategory. The first consists of seven undecorated sherds. These sherds mend into three plates that exhibit the “DD & Co. Castleford” maker’s mark. This mark refers to David Dunderdale & Company potters, which was started by Dunderdale in Castleford (Yorkshire) circa 1790. Dunderdale’s wares were highly valued throughout the late eighteenth and early nineteenth centuries, especially in Portugal and Spain. Unfortunately, French privateering during the Peninsular War adversely affected his trade with these countries. The business suffered; Dunderdale retired and closed the manufactory in 1820 (Godden 1964; Grabham 1916).

The second variety consists of a rococo motif green shell-edged sherd. This variety was popular circa 1774–1800 (Miller et al. 2000). The third variety consists of 13 dipt sherds. Various colors grace these sherds, but the style itself dates from 1770–1820 (Rickard 2006). The final variety consists of eight sherds with floral designs painted over the glaze. These represent several thick-bodied vessels and the painting style is somewhat crude. Overglaze painting on creamware dates circa 1765–1815 (Miller 2000).

A total of 319 creamware sherds with molded patterns and falling within the standard creamware date range were recovered. Although such specimens can usually provide data regarding consumption patterns or number of vessels/table settings, the recovered examples do not offer additional dating information. Table 7.93 shows the various patterns and motifs represented by the molded assemblage.

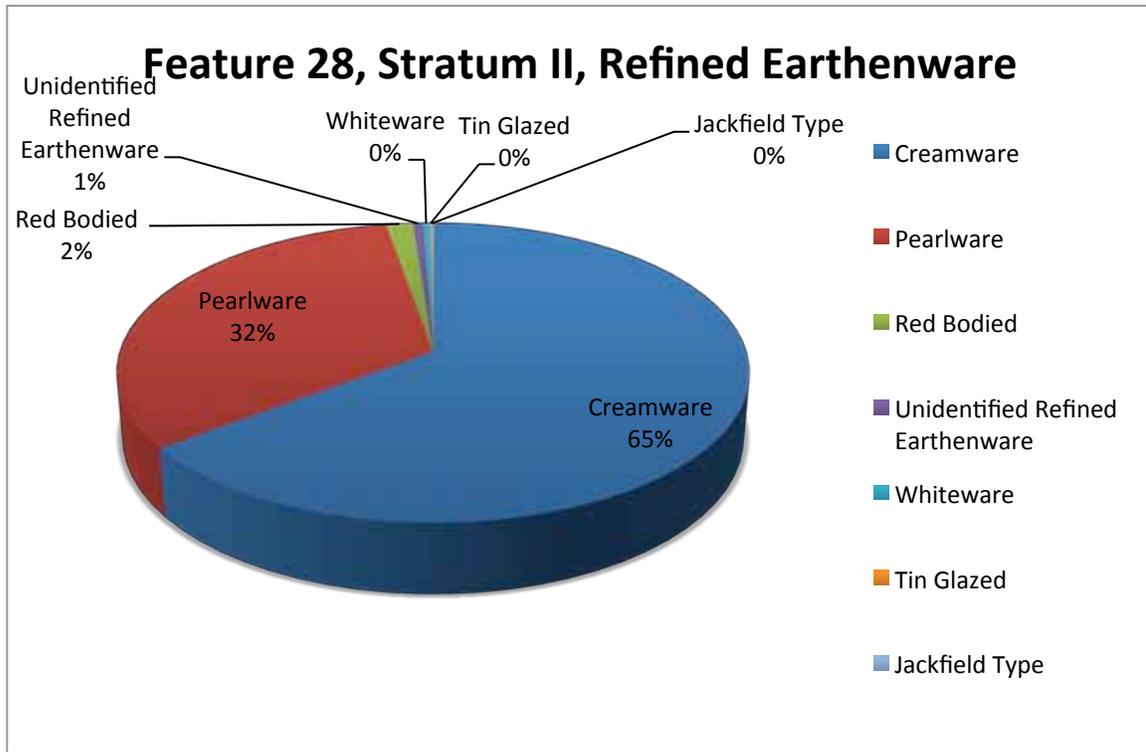


Figure 7.13: Feature 28, Stratum II, refined earthenwares.

Table 7.93: Feature 28, Stratum II, molded pattern creamware.

Pattern/Motif	Count
Royal Rim	171
Indeterminate	42
Bath Rim	31
Paris/Plain Rim	26
Feather Edge	10
Foliate Handle Attachment	8
Bead Around rim	6
Ribbed	6
Ruffled	6
Other	4
Floral Handle Attachment	4
Acorn Shape	2
Queen's Rim	2
Concave Rim	1
<b>Total</b>	<b>319</b>

More than half of the molded pattern sherds could be identified as the Royal pattern. Two of these Royal pattern sherds exhibited maker's marks. Both of these were small and shallowly impressed; they consisted of the name "WEDGWOOD," followed by a possible "1." An impressed star or cross molder's mark was located in the center of each base. The remaining 148 molded sherds exhibit the large variety of potential vessels recovered from the midden. The diversity of molded patterns is probably due to the ware's popularity and low price around the turn of the century. By 1790, creamware was the cheapest of the refined earthenwares (Miller et al. 2000:12) and widely available in America.

Twenty-six of the creamware sherds were decorated via bat printing. Bat printing is essentially transfer printing, as the "bat" refers to the medium that contains the pattern to be transferred to the ceramic. Early transfer printing, or bat printing, utilized bats constructed of glue and isinglass. Stippled patterns were etched into copper plates, which were covered with mixtures of linseed oil and pigments. The bat was pressed onto the copper plate and the linseed oil based pattern adhered to the bat. The bat was then pressed to the already glazed ceramic, and the pattern was transferred. The vessel was then fired in the kiln again, to set the design in place. This method was time-consuming, the bat could only be used once, and the overglaze printing often led to the design wearing away. A general breakdown of the patterns found on the 26 bat printed sherds appears in Table 7.94

Table 7.94: Feature 28, Stratum II, bat printed creamwares.

Pattern/Motif	Count
Landscape	5
Ship	1
Other	1
Indeterminate	2
Greenwich Hospital	6
Genre Scene	10
Figure	1
<b>Total</b>	<b>26</b>

Several of the scenes from these bat-printed sherds bear further description. Six of the sherds are from a pitcher that depicts the Royal Hospital for Seamen at Greenwich (Image 7.113). Queen Mary II founded this institution, designed to house injured British sailors, in 1694. The hospital consisted of four quadrants, or courts, the last of which was completed in 1742. Other scenes of a ship(s) and a smiling figure (possibly a sailor) may be related to the Greenwich Hospital jugs, as the hospital and pensioned sailors were common bat-printed scenes (Port Cities London 2012a, b).

Other depicted scenes include landscapes. Ten sherds, which mend into three jugs, depict a pastoral “genre” scene within a large central medallion. The words “SHEP.../Reclin’d ...He sweetly p... In praise...” are located beneath the scene. This phrase may be biblical or refer to a Grecian idyll. Five sherds from a large strap-handled mug also depict a pastoral landscape.



Image 7.113: Royal Hospital bat-printed pitcher.

The creamware assemblage contains three tooled and one ridged sherd. Two of the tooled specimens have tooled exterior rims and ridged strap handles. The third tooled specimen has a rim that has been tooled into a prominent bead. The ridged specimen consists of a large handle with a large central ridge.

The remainder of the creamware assemblage ( $n=938$ ) is either undecorated or the decoration cannot be determined. A few sherds bear partial molder’s marks. One basal sherd possesses a mark that begins with an impressed “B,” but the rest of the mark is not extant. Five basal sherds possess impressed asterisks. Two mending sherds bear an eight-pointed star, and a final sherd possesses a stylized four-leaf clover. None of these marks are identifiable.

Pearlware. A total of 661 pearlware sherds were recovered from Stratum II. Close to half ( $n=299$ ) of the pearlware assemblage consists of painted specimens. Most of the painted specimens ( $n=257$ ) bear polychrome designs painted under the glaze. This style of pearlware decoration was prevalent between 1795 and 1830 (Miller 2000 et al). The remaining 42 pearlware sherds consist of blue-painted designs that were also under the glaze. Blue underglaze painting began 20 years earlier than the polychrome variety (Miller et al. 2000).

Table 7.95 depicts the various blue and polychrome painted pearlwares recovered from Stratum II.

Table 7.95: Feature 28, Stratum II, painted pearlware.

Pattern/Motif	Count	Begin	End	Pattern/Motif	Count	Begin	End
Geometric Pattern	122	1795	1830	Star/Asterisk (blue)	8	1775	1830
Floral	26	1795	1830	Floral (blue)	7	1775	1830
Floral & Brown Band	22	1795	1830	Indeterminate (blue)	7	1775	1830
Floral & Brown Line	20	1795	1830	Other (blue)	6	1775	1830
Star/Asterisk	16	1795	1830	Floral Sprigs & Dot Band (blue)	5	1775	1830
Strawberry & Leaves	13	1795	1830	Floral(blue)	4	1775	1830
Floral, Small Scale	7	1795	1830	Trellis (blue)	3	1775	1830
Floral/Geometric	6	1795	1830	Geometric Pattern (blue)	1	1775	1830
Floral Sprigs	5	1795	1830	Shell Edge, Indeterminate (blue)	1	1775	1830
Banded	3	1795	1830	<b>Sub-Total</b>	<b>42</b>		
Indeterminate	3	1795	1830	<b>Total</b>	<b>299</b>		
Star/Asterisk & Shell Edge	3	1795	1830				
Floral/Geometric w/ Brown Band	2	1795	1830				
Floral & Brown Line	2	1795	1830				
House & Tree	2	1795	1830				
Chinoiserie	1	1795	1830				
Floral Band	1	1795	1830				
Floral w/ Yellow Band	1	1795	1830				
Other	1	1795	1830				
Floral, Small Scale w/ Brown Band	1	1795	1830				
<b>Sub-Total</b>	<b>257</b>						

The painted pearlware specimens indicate a pre–City Hall deposition. The variety of painted decorations probably indicates usage of a wide variety of different pearlware vessels that entered the Bridewell through donation.

Ninety-seven of the pearlware specimens were decorated with a molded pattern. In general, these patterns consist of shell-edge designs with scalloped or rococo patterns. As can be seen below in Table 7.96, most of the molded pearlwares pre-date the construction of City Hall. Two sherds from an unscalloped shell-edged plate are the only exceptions. This style of molded edge is much later than the remainder of the assemblage (Miller and Hunter 1990) and is most likely associated with the later utility pipe/trench that impacts Feature 28. It is considered an outlier.

Table 7.96: Feature 28, Stratum II, molded pattern pearlware.

Pattern/Motif	Count	Begin	End
Shell Edge, Unscaloped	2	1840	1865
Shell Edge, Even Scaloped, Straight Lines	16	1800	1835
Shell Edge, Even Scaloped, Curved Lines	9	1800	1835
Pratt Type	1	1780	1840
Ribbed	3	1775	1840
Shell Edge, Other	1	1775	1840
Shell Edge, Indeterminate	19	1775	1835
Shell Edge, Rococo	46	1775	1810
<b>Total</b>	<b>97</b>		

Of the molded pearlwares listed above, two varieties bear further description. The first is the Pratt type, which consists of molded designs painted with earth-tone colors, popular between 1780 and 1840 (Lewis and Lewis 1993). The second variety consists of ribbed specimens. These sherds are pearlware, but exhibit the narrow style ribs below the rim that are usually associated with molded creamware. Although the general date range of pearlware has been assigned, these may be early examples of pearlware.

Forty-two sherds of dipt pearlware were recovered. Table 7.97 lists the varieties of dipt recovered from Stratum II.

Table 7.97: Feature 28, Stratum II, dipt pearlware.

Pattern/Motif	Count	Begin	End
Mocha	1	1790	1850
Combed and Feathered	1	1782	1820
Banded	18	1775	1850
Checkerboard	10	1775	1850
Checkerboard & Banded	7	1775	1850
Geometric Pattern	5	1775	1850
<b>Total</b>	<b>42</b>		

As can be seen above, six varieties of dipt were recovered from Stratum II. These varieties all indicate a possible pre-City Hall deposition and a wide variety of table settings from multiple services.

Four sherds of spatter decorated pearlware were recovered; these are decorated in a blue speckled pattern. As there are no firm dates for this pattern/decoration, the only date that can be assigned is that of blue underglazed painted pearlware (1775–1830) (Miller et al. 2000).

Forty-five sherds of painted China glaze pearlware were recovered from Stratum II. Most of these sherds exhibit portions of either Chinoiserie or House & Tree patterns. Table 7.98 shows the patterns/motifs found on the China glaze specimens.

Table 7.98: Feature 28, Stratum II, painted China glaze pearlware.

Pattern/Motif	Count	Begin	End
Chinese Landscape	2	1775	1810
Chinoiserie	21	1775	1810
House & Tree	20	1775	1810
Other	1	1775	1810
Trellis	1	1775	1810
<b>Total</b>	<b>45</b>		

Blue-painted China glaze with Chinese motifs was only manufactured from 1775–1810 (Miller et al. 2000; Miller 1987:87; Miller and Hunter 2001). Although possibly still available in local stock, the China glaze was probably not deposited post–City Hall. When combined with the TPQ of 1807 (see printed pearlware [Table 7.99] below), deposition within the first decade of the nineteenth century, during the construction of City Hall, can be inferred.

Eight pearlware sherds exhibit blue underglaze stippled printing. This style of decoration was prevalent from 1807 to 1830 (Miller et al. 2000). These specimens are listed below in Table 7.99. Most of those sherds exhibit what is best described as the Chinoiserie pattern, but may be either a Willow pattern derivation or imitation. The geometric pattern exhibited by the last sherd listed on Table 7.99 consists of small circles with dots.

Table 7.99: Feature 28, Stratum II, printed pearlware (stippled).

Pattern/Motif	Count	Begin	End
Chinoiserie	5	1807	1830
Chinese Landscape	1	1807	1830
Indeterminate	1	1807	1830
Geometric Pattern	1	1807	1830
<b>Total</b>	<b>8</b>		

These pearlware sherds are the latest artifacts recovered from Stratum II, and as such, provide the TPQ date for this stratum. No artifacts in Stratum II could have been deposited before 1807, indicating that this horizon was deposited during the construction of City Hall.

Fifteen of the pearlware specimens exhibit underglaze printing, engraved lines, and no obvious stippling. This style of decoration dates circa 1783 to 1830 (Miller et al. 2000). Table 7.100 lists the various motifs found on these specimens.

Table 7.100: Feature 28, Stratum II, printed pearlware (non-stippled).

<b>Pattern/Motif</b>	<b>Count</b>	<b>Begin</b>	<b>End</b>
Shells & Trellis	2	1783	1830
Indeterminate	1	1783	1830
Floral	3	1783	1830
Chinoiserie	2	1783	1830
George Washington	7	1783	1830
<b>Total</b>	<b>15</b>		

Of interest are seven sherds from a vessel that exhibits a portrait of George Washington. This vessel was a tall mug with a plain strap handle. This same patriotic view appears on an earlier creamware mug (Snyder 1995:9), possibly indicating that this particular vessel is an early example of pearlware.

A total of 151 pearlware sherds possess indeterminate decorations, either because not enough of the decoration is extant to completely identify or none is present on the sherd. As most, if not all, pearlware vessels are decorated at least around the rim (Miller et al. 2000), an “undecorated” sherd could represent the blank central portion of a decorated vessel. Therefore, these are classed as indeterminate.

Refined Red-Bodied Ware. Thirty-two sherds of refined redware were recovered from Stratum II. All of these sherds are engine-turned, which has left bands reminiscent of basket weave, wavy lines, or scalloped lines upon the sherds. These sherds represent at least two creamers and several teapots. Refined red-bodied wares were prevalent from 1760–1830 (Hawkins 1999; Rickard and Carpentier 2004).

Whiteware. Eight sherds of whiteware were recovered. These exhibit very fine white bodies and narrow molded borders that portray a blue floral pattern of buds and leaves. These are examples of early whitewares, which date from 1805 to 1835 (Miller et al. 2000:13).

Tin Glaze. Two sherds of tin glaze were recovered from Stratum II. One sherd exhibits two blue-painted lines; the other’s decoration is indeterminate, but it may be from a plate rim. Tin glaze is a very long-lived ware that began as early as the sixteenth century (Noel Hume 1969). Tin-glazed plates were available in America circa 1640 through 1800 (Azizi et al. 1996). As tin glaze was primarily a Dutch product, and as the Dutch began settling Manhattan in earnest by 1624, one could technically push the date back to that point within the confines of Manhattan.

Jackfield-Type. Two sherds of wheel-thrown Jackfield-type were recovered. These sherds, which are probably from the same vessel, exhibit a black lustrous lead glaze, thin walls, and a purplish body. Jackfield was produced between 1740 and 1800 (Miller et al. 2000).

Unidentifiable Refined Earthenwares. One dozen refined sherds do not possess enough characteristics (i.e., glaze) to identify ware type. Two of these sherds do exhibit checkerboard dipt decorations, but are too burnt to formally identify (pearlware versus whiteware). The decorations return a date range of 1770 to 1850 (Rickard 2006).

*Coarse Earthenware.* A total of 425 coarse earthenwares were recovered from Stratum II. The greater amount of these sherds consists of redware ( $n=412$ , or 97%). The remainder of the coarse sherds consists of British buff-bodied slipware ( $n=13$ , or 3%).

Redware. The 412 redware sherds were divided nearly evenly between lead-glazed and slip-trailed specimens. Table 7.101 shows the various types of redware recovered from Stratum II.

Table 7.101: Feature 28, Stratum II, redware types.

Decoration	Pattern/Motif	Count
Lead Glazed		192
Lead Glazed	Rolled Rim	6
Lead Glazed	Unglazed Interior	1
Slip Decorated	Trailed Slip	189
Slip Decorated	Dot	11
Slip Decorated	Marbled	4
Slip Decorated	Trailed & Combed Slip	4
Slip Decorated	Dot & Trailed Slip	1
Slip Decorated	Joggled Slips	1
Indeterminate		3
	<b>Total</b>	<b>412</b>

Generally, redware is a long utilized ware that does not provide distinct chronological information. That being said, slip decoration’s popularity ended circa 1870 (Denker and Denker 1985:54–68).

For the most part, these are utilitarian wares that would have been utilized as cooking and serving dishes for daily meals. A few exceptions exist. Three sherds appear to have been modified into gaming pieces/counters. These gaming pieces will be discussed later in this chapter under toys and recreational items.

There is another sherd that may point to an association with the Bridewell—the base of a slip-decorated/combed redware dish that has been inscribed. Several markings were done post manufacture into the unglazed base of this dish (Image 7.114). The markings appear to be either an “A” with another “A” superimposed above, or possibly a star-shape. These markings could be the result of a Bridewell prisoner marking the object as owned.

Although not chronologically diagnostic, this portion of the assemblage can potentially offer insight into the origin of the materials found within Feature 28. Does the presence of these serving dishes indicate Bridewell meals or a community midden?

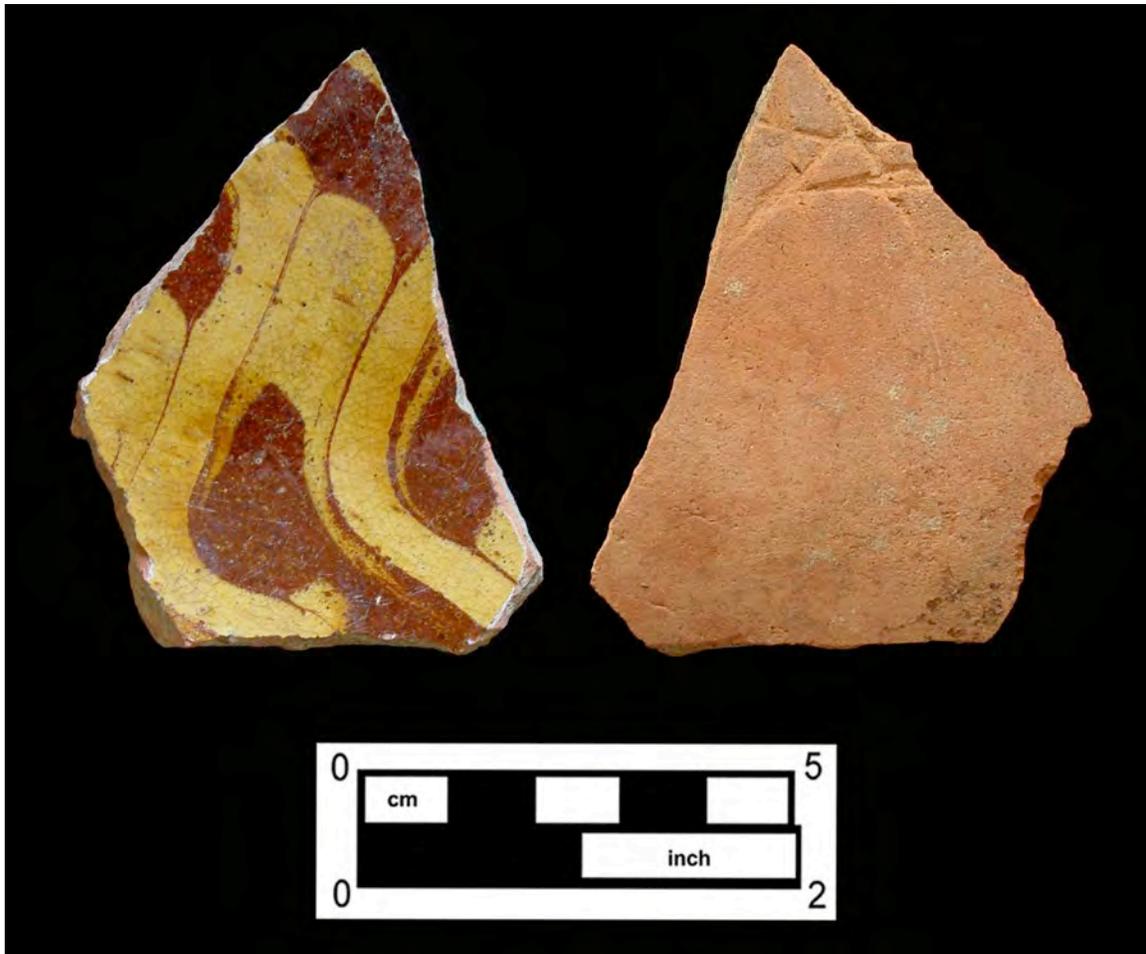


Image 7.114: Redware plate with markings on base.

British Buff-Bodied Slipware. Thirteen of the coarse earthenwares are of this ware type. Nine of the sherds are decorated via trailed slip; seven of the trailed sherds possess coggled rims. One untrailed sherd exhibits a brown dot on the exterior. This ware type was prevalent from 1670 to 1795 (Azizi 1996) and most likely originally dates to pre-Revolution New York. As such, they may be the result of secondary deposition.

Stoneware. One hundred and eight sherds of stoneware were recovered from Stratum II. Most of these sherds ( $n=98$ , or 91%) are from salt-glazed vessels with gray to buff-colored bodies. The remainder of the stonewares consist of white salt-glazed stoneware ( $n=6$ , or 5.5%) and black basalts ( $n=3$ , or 3.5%). Table 7.102 offers a general breakdown of the varieties of stoneware recovered from Stratum II.

Table 7.102: Feature 28, Stratum II, stoneware.

Ware	Decoration	Pattern/Motif	Count	Begin	End
Salt Glazed, Gray/Buff Bodied	Painted	Crolius-Style Clouds	8	1785	1820
Black Basalts	Molded Pattern	Various	3	1750	1850
Salt Glazed, Gray/Buff Bodied	Various	Various	18	1720	1820
White Salt Glazed	Indeterminate or Undecorated		5	1720	1805
White Salt Glazed	Indeterminate		1	1720	1790
Salt Glazed, Gray/Buff Bodied	Various		72		
		<b>Total</b>	<b>108</b>		

Eight of the stoneware sherds are from salt-glazed vessels decorated with bushed blue clouds. This style of decoration indicates manufacture at the Crolius/Remmey pottery, which was located on nearby Pot Bakers Hill, north of City Hall Park. This particular decorative style was popular from 1785 through 1820 (Janowitz 2008). An additional 18 salt-glazed sherds exhibit kiln damage that consists of underfiring, kiln marks, and/or incomplete salt glazes. This damage indicates that they too are of local manufacture; it is unlikely such merchandise would be shipped across the Atlantic. These sherds could also be from the Crolius/Remmey manufactory. This style of salt-glazed stoneware was produced between 1720 and 1820.

Two other varieties of stoneware are chronologically diagnostic. The first consists of four sherds from two to three black basalt teapots. This ware type was prevalent from 1750 to 1850 (Miller et al. 2000: 10). One sherd exhibits acanthus leaves over a stippled background; the other exhibits a ribbed base and spout, and is decorated in a geometric pattern. The second diagnostic variety consists of six sherds of white salt-glazed stoneware. This white-bodied stoneware was designed to emulate Chinese porcelains and is a precursor to later white refined earthenwares. In general, white salt glaze was prevalent from 1720 to 1805. One of the recovered sherds is from an undecorated saucer, which pushes its specific end date back to circa 1790 (Miller et al. 2000).

The remaining 72 stoneware sherds are from buff-bodied salt-glazed vessels with indeterminate places of manufacture (Potbakers Hill versus Europe). Although chronologically non-diagnostic, these sherds are also likely from Crolius/Remmey vessels.

*Porcelain.* Eighty-eight porcelain sherds were recovered from Stratum II. Fifty-two of these sherds exhibit sufficient characteristics to assign date ranges. All of the chronologically diagnostic porcelain sherds consist of painted Chinese export porcelain ( $n=80$ , or 91%), and these painted decorations allow for chronological identification. The remainder of the porcelains consists of hard paste ( $n=6$ , or 7%) and soft paste ( $n=2$ , or 2%) varieties. Table 7.103 lists the various forms of decoration (or otherwise) of both diagnostic and non-diagnostic porcelain sherds.

Table 7.103: Feature 28, Stratum II, porcelain.

Ware	Decoration	Pattern/Motif	Count	Begin	End
Porcelain, Chinese Export	Painted	Waterscape	10	1780	1850
Porcelain, Chinese Export	Painted	Various	17	1750	1850
Porcelain, Chinese Export	Painted, Overglaze	European Neo-Classical Style	8	1750	1840
Porcelain, Chinese Export	Painted, Overglaze	Floral, European Style (famille rose)	8	1720	1840
Porcelain, Chinese Export	Painted, Overglaze	Encre de Chine & Gilding	6	1720	1800
Porcelain, Chinese Export	Painted, Overglaze	Floral (famille rose)	2	1720	1840
Porcelain, Chinese Export	Painted, Overglaze	Indeterminate	1	1720	1840
Porcelain, Chinese Export	Painted	Various	24		
Porcelain, Hard Paste	Indeterminate		6		
Porcelain, Soft Paste	Painted	Chinoiserie	2		
Porcelain, Chinese Export	Indeterminate / Undecorated		3		
Porcelain, Chinese Export	Painted, Overglaze	Indeterminate	1		
		<b>Total</b>	<b>88</b>		

As can be seen above, the diagnostic porcelain sherds all represent fairly wide date ranges that generally encompass the construction of City Hall. The long date ranges could be the result of donations of individual vessels to the Bridewell over a long period of time, but actual deposition occurred over a much shorter span.

**Glass.** A total of 1,772 sherds of glass bottles and containers were recovered from Stratum II. The bulk of these shards ( $n=1,675$ ) do not possess enough characteristics to identify complete date ranges. Ninety-seven shards do possess such characteristics and are shown below in Table 7.104.

Table 7.104: Feature 28, Stratum II, diagnostic household glass.

Material	Manufacturing Technique	Object	Rim/Finish	Decoration	Count	Begin	End
Common Glass	Mold Blown, Mouth	Bottle	Applied		22	1790	1820
Non-Lead Glass	Mouth Blown, General	Tumbler		Indeterminate	3	1780	1805
Non-Lead Glass	Mold Blown, Mouth	Stemware		Painted, Overglaze	6	1775	1825
Common Glass	Mold Blown, Mouth	Bottle	Applied		17	1770	1785
Non-Lead Glass	Mold Blown, Mouth	Tumbler / Decanter		Engraved	43	1760	1820
Common Glass	Mold Blown, Mouth				4	1755	1850
Common Glass	Mouth Blown, General		Firepolished Lip/Rim		1	1730	1860
Common Glass	Mold Blown, Mouth		Cracked-Off		1	1730	1860
				<b>Total</b>	<b>97</b>		

Twenty-two of the bottle/container shards were blown into molds and possess applied rim/finishes. The finishes have lips that are either equal or dominant to the string rim. The lips and string rim were duntooled and exhibit a distinct space between them. This style of bottle was popular between 1790 and 1820 (Jones 1986: 21, 44). Three shards of non-lead glass are most likely from a stemmed trumpet-shaped bowl(s). One shard has white lines on the interior of the bowl and patinated stress lines. Based on the stem type, these shards may be from a German-style vessel(s) manufactured at Amelung, Maryland (Noel Hume 1988:191).

Six shards from a tumbler(s) with polychrome painting were also found. These decorations consist of wavy bands below the rim and a floral motif on the body, which are painted in white, yellow, red, and blue enamels. The vessel(s) is probably of European (German or Bohemian) origin and dates from 1775 to 1825 (Palmer 1993: 88–89). Seventeen of the bottle/container shards were also blown into molds and possess applied rims/finishes. These had different lip/rim characteristics than the initially described sherds, which date them somewhat earlier. The sherds exhibit v-shaped lips that are basically the same thickness as their necks and duntooled string rims. These characteristics were popular on bottles from 1770 to 1785 (Jones 1986: 20, 44).

Forty-three sherds of various engraved tumblers and decanters were recovered, all exhibiting designs that can be described as “Stiegel type” after the Manheim, Pennsylvania, glassworks of Baron Stiegel. While emulating that variety of mold-blown and engraved glass, these particular specimens were probably made in New York City, Philadelphia, or Bohemia

(Palmer 1993: 92–93; McKearin & McKearin 1978: Plate 35 #1). The remainder of the chronologically diagnostic household glass consists of six bottle shards that date from the mid-eighteenth century into the mid-nineteenth century (Jones 1986: 24, Miller et al. 2000:8).

The 1,675 chronologically non-diagnostic glass shards are from a wide variety of objects. Examples of bottles, stemware, tumblers, vials, mugs, and decanters were recovered. Although definitive dating was not possible for this portion of the assemblage, the sheer variety of glass artifacts is telling. It points towards a large-scale consumption of a great variety of foodstuffs and potables within the Bridewell. It also indicates the large variety of donated glass tableware the prisoners utilized.

**Metal.** Six metal household artifacts were recovered, consisting of two fragments of a metal basin with a rolled over rim and four fragments of a large kitchen knife blade.

**Bone.** Five household-related items made of bone were also recovered; all of these are handles to knives. One specimen exhibits an incised “x” and another exhibits a carved checkerboard pattern (possibly for gripping). The remaining two are undecorated.

*Indeterminate*

Eighty-three artifacts could not be identified and comprise the indeterminate group. Table 7.105 offers a general breakdown of these items.

Table 7.105: Feature 28, Stratum II, indeterminate artifacts.

Material	Object	Comments	Count
Wood	Indeterminate	Indeterminate wood fragments	2
Copper Alloy	Indeterminate	Copper Alloy lump	1
Copper Alloy	Indeterminate	Flattened circular ring.	1
Copper Alloy	Indeterminate	Requires conservation for identification	1
Copper Alloy	Indeterminate	Unidentified thin curved fragment	1
Iron	Indeterminate	Unidentifiable metal fragments	9
Iron	Sheet Metal		41
Iron	Strap	Possible Manacle	1
Other	Fabric	Small piece of coarsely woven fabric	1
Other	Other	Yarn	25
		<b>Total</b>	<b>83</b>

Of the above artifacts, one is particularly interesting. A semi-circular iron strap that may be a portion of a manacle was recovered. One end of this thick, corroded artifact has an encrustation that may be either the remains of a hinge or an attachment point for a chain (Image 7.115). This artifact may be a portion of a leg iron. As the midden is adjacent to the Bridewell, it would not be unexpected to find artifacts related to the prison.



Image 7.115: Manacle.

### *Manufacturing*

This group contains two wheel-thrown hollowware sherds. They are classed within the manufacturing group because they are unglazed and bisque-fired, which probably indicates they are specimens that did not survive the kilning process (i.e., kiln wasters). As such, they are most likely from a local pottery. One sherd appears to have been destined to be a mug or tankard with a tooled collar and a small raised rib below the rim. The second sherd is from an unidentifiable hollowware.

### *Medical Artifacts*

Eighteen artifacts that can be considered related to the medical field were recovered from Stratum II. Table 7.106 lists the medical-related artifacts recovered from Stratum II.

Table 7.106: Feature 28, Stratum II, medical artifacts.

Ware / Material	Manufacturing Technique	Object	Count	Begin	End
Creamware		Ointment Pot	2	1762	1820
Bone	Cut/Carved	Cap /	1		
Bone / Iron	Cut/Carved	Internal Irrigator	5		
Common Glass	Mold Blown, Mouth	Vial	1		1870
Common Glass	Mouth Blown, General	Vial	2		
Common Glass	Mouth Blown, General	Vial	5		
Leaded Glass	Mold Blown, Mouth	Vial	2		1920
		<b>Total</b>	<b>18</b>		

Ten of the above artifacts consist of sherds from medicine vials. These are all fragmentary vessels and the ultimate manufacturing technique, and thus date range, cannot be discerned. The only chronologically diagnostic artifacts consist of two sherds from a creamware (1762–1820) ointment pot. This is a cup-shaped vessel with a small rolled rim.

The remaining bone/medical artifact(s) is very interesting. This artifact is an early vaginal irrigator or syringe, the predecessor of modern douche (Image 7.116). It consists of a 3.5” long by 1” diameter polished hollow bone cylinder. The ends of the cylinder possess inset external threads, which allow the end caps to seal flush with the cylinder. Two end caps were recovered with this item. The first is a simple cap; it is slightly rounded and its center is pierced by a 0.26” hole. The second cap is more elaborate; it consists of a rounded dome (0.92” diameter) with seven perforations and an incised circle. The incised circle is roughly half an inch in diameter and occupies the center of the dome. Six of the perforations are spaced evenly around this circle in a hexagonal shape. The seventh perforation is located in the center of the circle/hexagon. The final part of this item consists of a 3.15” long by 0.23” diameter bone shaft with external threads on either end. This is most likely the central shaft portion of a plunger. This shaft would have passed through the simple cap’s central hole and been secured using an internally threaded handle. The other end would have been threaded to a plunger head, which may have also been constructed of bone. The irrigator would have been filled with a cleansing liquid or powder, which would have been expelled by the pressing of the plunger (Peck 2012). It would have been used as a means of contraception or to treat venereal disease.

*Other*

This group consists of two pieces of rope, 100 rat bones, 63 cat bones, and 39 dog bones. The final object classified as other is an almost complete cow hyoid bone with a precisely carved/incised “M” on the central section (Image 7.117). While we assume this to be an “M,” it could possibly be the runic symbol “eoh,” which means horse rather than a letter. It also resembles an upper case Greek Sigma. This may have been perforated, possible to wear as a pendant, but the ends are damaged.

*Personal*

The bulk of the personal items consist of fragments of smoking pipes ( $n=787$ , or 92%). Only 46 of this large quantity proved to be chronologically diagnostic. The dates were based on either known maker’s marks or the pipe bowl shape (Grillo et al. 2003). A general breakdown of the recovered pipe bowls and stems is shown below in Table 7.107.



Image 7.116: Bone vaginal irrigator.



Image 7.117: Hyoid bone with an incised symbol that may have been worn as a pendant.

Table 7.107: Feature 28, Stratum II, smoking pipes.

Part	Decoration	Pattern/Motif	Count	Begin	End	Comments
Pipe Stem	Molded Pattern	Lettering	2	1790	1845	R. Morgan Liverpool (Reckner and Dallal 2000: 127)
Pipe Bowl	Various	Masonic (2)	30	1780	1820	Shape 27 (Grillo et al. 2003: 11-12)
Pipe Stem	Molded Pattern	Lettering	1	1775	1825	J. Birch Rain... (Reckner and Dallal 2000: 200)
Pipe Stem	Molded Pattern	Lettering	6	1767	1845	W. Morgan Liverpool (Reckner and Dallal 2000: 127)
Pipe Bowl	Various	Other	2	1745	1812	Arms of Gouda, 666 on heel (van der Meulen 2003)
Pipe Bowl	Undecorated		1	1740	1800	Shape 26 (Grillo et al. 2003: 11-12)
Pipe Bowl	Molded Pattern	Other	3	1739	1850	Arms of Gouda, crowned 66 on heel (van der Meulen 2003)
Pipe Bowl	Molded Pattern	Other	1	1739	1810	Arms of Gouda, "PVP" (van der Meulen 2003)

Table 7.107: Feature 28, Stratum II, smoking pipes (Cont'd).

Part	Decoration	Pattern/Motif	Count	Begin	End	Comments
Pipe Bowl	Rouletted		1	1739		Unidentified Arms of Gouda (van der Meulen 2003)
Pipe Stem	Molded Pattern	Lettering	12		1891	Various T. Morgan Liverpool (Reckner and Dallal 2000: 127)
Pipe Bowl	Undecorated		130			
Pipe Bowl	Molded Pattern	Masonic	29			
Pipe Bowl	Molded Pattern	Various	21			
Pipe Bowl	Rouletted Rim		7			
Pipe Bowl	Molded Pattern	Lettering	4			Unidentifiable / Miscellaneous
Pipe Bowl	Indeterminate		1			
Pipe Stem	Undecorated		514			
Pipe Stem	Lead Glazed		19			
Pipe Stem	Rouletted		1			
Pipe Stem	Molded Pattern	Other	1			
Pipe Stem	Molded Pattern	Geometric Pattern	1			
			<b>787</b>			<b>Total</b>

As can be seen in the preceding table, the diagnostic smoking pipes span a long period of time, from before the Revolution to well after the construction of City Hall. Many pipe manufacturers produced the same forms/decorations for multiple decades. The long time frame aside, this collection does point to deposition around the turn of the century. The most common diagnostic pipe bowl shape is one popular from 1780 through 1820 (Shape 27: Grillo et al. 2003: 11–12), and many of the other diagnostic pipes' date ranges either begin or end around the turn of the century. Based on this, it seems rather likely that these pipes were deposited during the construction of City Hall.

Also of interest are the many ( $n=31$ ) pipe bowls, or fragments thereof, that possess Masonic markings. These generally consist of molded representations of the Masonic "Angle and Level" symbol and a deer or stag head that faces the smoker.

The remaining personal artifacts consist mostly of buttons ( $n=64$ ). The most common button material is bone ( $n=35$ ), followed by copper alloy ( $n=27$ ). The remainder of the buttons consists of a possible horn button and a specimen too corroded for material identification. Other clothing-related artifacts consist of a copper alloy clothing fastener and an iron clothing hook. The final personal items consist of a carved bone comb, a pocketknife, a glass cane fragment, and a slate pendant. The bone comb is curved and could possibly be a decorative accent versus utilitarian. The pocketknife consists of a folding knife with bone handles. The handle portions exhibit rough incised cross-hatching. The final personal artifact is a fragment of a colorless glass cane (Image 7.118). This artifact is a curved specimen that is a portion of the cane's handle. The glass itself possesses a decorative twist that is relatively deeply ridged. Items such as this cane are generally called "whimsies" and were the produce of "end of the day glass," which was the unusable excess left in the kiln at the end of a glassblower's day. Many glassworks owners allowed their glassblowers to use this excess glass to create items for home use, as gifts, or possibly to sell.



Image 7.118: Handle portion of glass cane.

The final personal item is a rectangular slate object that may be a pendant (Image 7.119); it measures 1.4" long by 0.9" wide by 0.13" thick. A drilled hole is offset on one of the narrow (width) ends, most likely for a thong or some other means of wearing the item around one's neck or wrist. The obverse appears to be thumb worn and the reverse exhibits damage near the drill hole. It is possible that this pendant was actually a slate marker (i.e., carpenter's pencil) or tally keeper, as this lithic material was used in historic pencils. The fact that the edges appear worn down could attest to this possibility. On the other hand, the apparent

thumb wear on the obverse is oriented towards the thong hole as opposed to a usable edge. This would indicate that the item was gripped with the thumb oriented upward towards the thong, which would preclude usage as a “pencil.” The worn edges may just be due to the soft lithic material. It seems more likely that this item was a worn around the neck and gripped/rubbed during anxious moments by the owner, thus causing the noticeable wear.

### *Samples*

Thirteen fragments of charred wood were retained. The species could not be determined.

### *Sanitary*

Twenty-seven artifacts comprise the sanitary functional group. Most of these artifacts are sherds to chamber pots. Ten creamware chamber pot sherds represent the dateable portion of this collection (1762–1820). Ten stoneware and six redware chamber pot sherds were also recovered. The stoneware sherds are from one vessel decorated with a simple pattern of blue brushed flowers and cordons below the rim. The base is unglazed and there are kiln scars at the rim. Five of the redware sherds are from a single wheel-thrown vessel. The lead glaze exhibits caramel mottling and there are two parallel grooves on the exterior of the body. The remaining redware sherd is of uneven thickness and may be handmade. It exhibits deep vertical grooves along the handle and a horizontal indentation. The final sanitary object is a fragment of a bone toothbrush head. This artifact exhibits drilled holes for the insertion of organic bristles.

### *Toys and Recreational*

This group is comprised of two marbles and three gaming pieces (Image 7.120). The marbles are constructed of refined earthenware, while the gaming pieces are made of sherds of coarse earthenware. The first gaming piece is a rough pentagonal shape that is 1” diameter, the second is a small triangle with a notch at one end, and the third appears to be a smaller version of the former examples. Prisoners seeking to occupy themselves while incarcerated could have crafted such items from broken sherds. If this is the case, then Feature 28 is very likely associated with the Bridewell.



Image 7.119: Slate pendant or marker.



7.120: Gaming pieces.

STRATUM III

A total of 459 artifacts and 337 faunal remains ( $n=796$ ) were recovered from Stratum III. Unsurprisingly, household-related artifacts comprise the bulk ( $n=285$ , or 62.09%) of the artifact assemblage. The percentages of the other functional groups recovered from Stratum III are shown in Figure 7.14.

It should be remembered that although consecutively numbered, Stratum III does not necessarily completely underlie Stratum II. Stratum III consisted of a thin horizon that “clung” to the outer basin shape of Feature 28. It began at the same elevation as Stratum II and was co-level with Stratum IV, but did not cap Stratum IV. Stratum IV lay directly upon sterile subsoil.

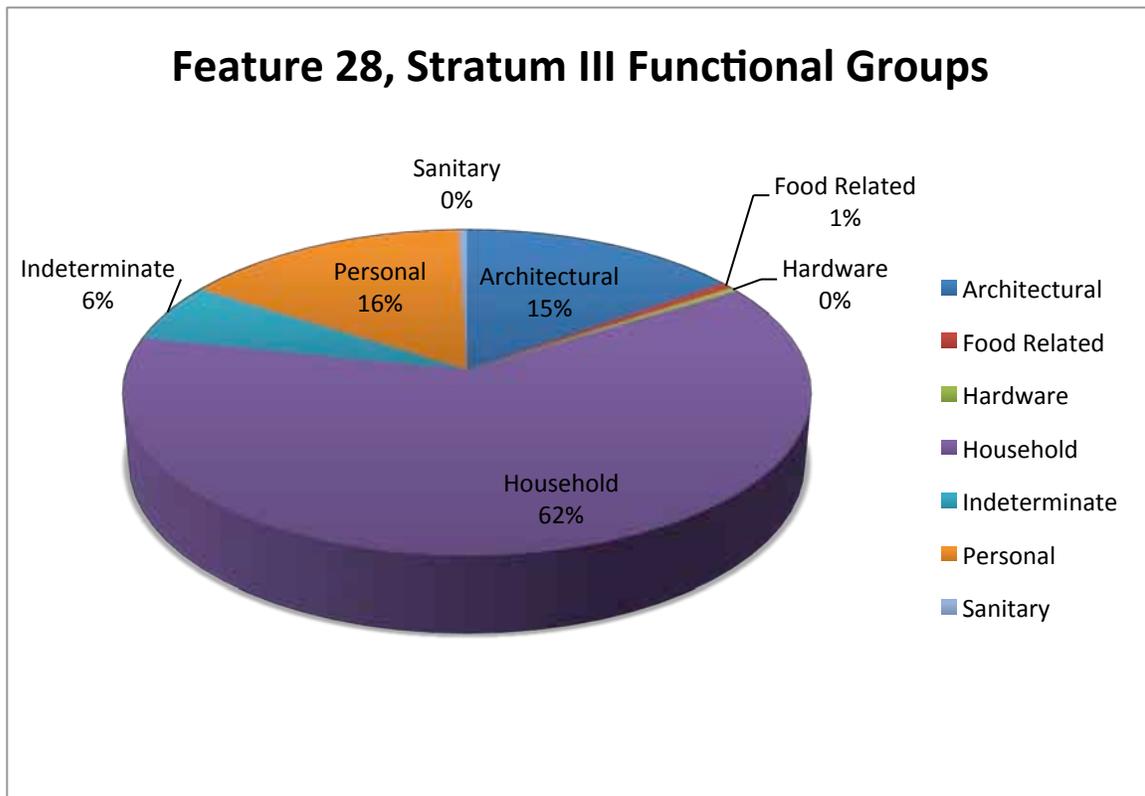


Figure 7.14: Feature 28, Stratum II, functional groups.

*Architectural*

A total of 69 architectural remains were recovered from Stratum III. The bulk of these items ( $n=58$ ) consists of window glass fragments. The only somewhat diagnostic artifacts are nine hand-wrought nails. As hand-wrought nails represent an ancient industry and are still technically available today, assigning dates is problematic. On the other hand, machine-made nails with hand-attached heads began to largely replace the wrought variety circa 1790 (Miller et al. 2000: 14). It is very possible that these wrought specimens at the very least pre-date 1790. The remainder of the architectural remains consists of a whole brick and a plaster sample.

*Food Related*

Food-related remains consist of two eggshell fragments and 336 faunal remains. Table 7.108 provides a breakdown of the species count. Not unexpectedly, the majority of the fragments were only identifiable to the class level ( $n=267$ , or 79.23%). The only identifiable species were 32 cow bone fragments.

Table 7.108: Feature 28, Stratum III, faunal remains.

SPECIES	COUNT
COW	32
BIRD	15
FISH	22
LTM	106
MTM	64
STM	1
UNIM	96

*Hardware*

This functional group consists of two iron hinges too corroded to identify manufacturing technique or usage.

*Household*

The amount of household-related artifacts from Stratum III is much smaller than found in Stratum II. The overall percentage of household artifacts versus other groups is nearly equal between the two strata, but the raw count drops dramatically. There were a total of 285 household-related artifacts recovered from Strata III. Ceramics accounted for 181 (63.5%) of this total, glass for 100 (35%). Only four metal household artifacts (1.5%) were recovered.

**Ceramics.** Ceramic household artifacts comprise both the bulk of this portion of the assemblage ( $n=181$ , or 63.5%) and that of the Stratum III assemblage overall (39%). Refined earthenwares were the most common ceramic material ( $n=162$ , or 89.5%), followed by coarse earthenwares ( $n=13$  or 7%). Porcelain was the third most common ( $n=4$ , or 2%), followed by stoneware ( $n=2$ , or 1%).

*Refined Earthenware.* Seventy-six sherds of creamware were recovered from Stratum III.

Creamware. Most of the creamware sherds ( $n=74$ ) are undecorated and do not offer any chronological data outside that of the general creamware date range (1762–1820) (Miller et al. 2000:12). The remaining two sherds provide more discrete timespan information. The first exhibits dipt decorations, consisting of bands of dark brown, light brown, and blue slip. Such decoration types were prevalent between 1770 and 1820 (Rickard 2006). The second sherd is decorated with an unidentifiable olive green-brown motif. The motif is unidentifiable because it was painted over the glaze and has mostly worn off the sherd's

surface. Overglaze painting on creamware was popular between 1765 and 1815 (Miller et al. 2000: 12).

Pearlware. Eighty sherds of pearlware were recovered from this stratum. The assemblage generally reflects the dates and variety/styles of pearlwares found in Stratum II. The overall numbers are much lower, but the decorative elements and techniques are the same. This is due to the fact that Stratum III, as discussed before, is co-level with Strata II (and IV) and was probably deposited within the same general time frame. A general view of the various pearlwares recovered from Stratum III is located in Table 7.109.

Table 7.109: Feature 28, Stratum III, pearlware.

Decoration	Pattern/Motif	Count	Begin	End
Molded Pattern	Shell Edge, Even Scalloped, Curved Lines	5	1800	1835
Molded Pattern	Shell Edge, Even Scalloped, Straight Lines	3	1800	1835
Painted	Various Underglaze Polychrome	15	1795	1830
Dipt	Mocha	1	1790	1850
Printed (indeterminate)	Indeterminate	3	1783	1830
Printed, Line Engraved	Chinoiserie	1	1783	1830
Dipt	Various	5	1775	1850
Indeterminate	Indeterminate	11	1775	1840
Molded Pattern	Fluted	1	1775	1840
Molded Pattern	Shell Edge, Indeterminate	2	1775	1835
Painted	Various Underglaze Blue	10	1775	1830
Spatter	Speckled	2	1775	1830
Painted, Overglaze	Various	1	1775	1815
China Glaze, Painted	House & Tree	18	1775	1810
Molded Pattern	Shell Edge, Rococo	2	1775	1810
	<b>Total</b>	<b>80</b>		

Whiteware. One sherd of early whiteware was recovered. It possesses a very fine white body and exhibits a molded pattern of flower buds and leaves. This early style of whiteware was produced between 1805 and 1835 (Miller et al. 2000:13). This sherd provides the TPQ date for Stratum III; no artifacts could have been deposited before 1805.

Refined Red-Bodied Ware. Two engine-turned sherds with a geometric pattern or wavy lines were recovered. These sherds mend and are from a teapot. Refined red-bodied wares were prevalent from 1760 to 1830 (Hawkins 1999; Rickard and Carpentier 2004).

**Unidentifiable.** Three unidentifiable refined earthenware sherds were recovered from Stratum III. The first is somewhat unusual and possesses a light buff-colored body that is harder than tin glaze, but softer than creamware. The glaze is thick and semi-opaque and appears to mimic that of Chinese export porcelain. It is possible that this sherd is from a southeastern Asian earthenware or Iberian majolica. The remaining two earthenware sherds are too badly burned for identification.

**Coarse Earthenware.** All the recovered coarse earthenwares ( $n=13$ ) consist of redware. Eleven of these sherds are lead-glazed jar or porringer sherds that are chronologically non-diagnostic. The remainder consists of slip-decorated sherds, one joggled and one trailed. Slip decoration was popular until 1870, but no beginning date is identifiable (Denker and Denker 1985:54–68).

**Porcelain.** Four sherds of porcelain were recovered from Stratum III—all are examples of Chinese export porcelain and exhibit some form of decoration. The first is from a plate and exhibits a poorly painted border decoration that consists of fish roe, scrolls, and trellises. This style of decoration was popular from 1750 through 1850 (Howard 1984). The second sherd is from a coffee cup with an elaborate molded dragon handle (Howard 1984:76). It exhibits a European-style floral scene that is painted over the glaze. This sherd dates circa 1720 to 1840 (Azizi et al. 1996). The remaining two sherds are painted porcelain and are chronologically non-diagnostic.

**Stoneware.** The stoneware assemblage consists of two sherds from gray buff-bodied salt-glazed vessels. One is blue painted and exhibits the kiln damage and poor salt glazing characteristic of local Potbakers Hill products (1720–1820) (Janowitz 2008). The second sherd exhibits an unidentifiable decoration and cannot be dated. Having said that, this sherd may very well also be a local product.

**Glass.** One hundred shards from glass bottles or containers were recovered from Stratum III. Only nine of these shards possess enough identifiable characteristics to assign date ranges. The remaining 91 shards consist of either unidentifiable body shards or ones clearly blown by mouth into a mold; the type of mold could not be ascertained. The only date that can be ascribed to these specimens is an end date of 1920, which is the advent of machine bottling (Jones and Sullivan 1985: 1939). The chronologically diagnostic glass shards are shown in Table 7.110. As was the case with the pearlware assemblages of Strata II and III, there is little substantive difference between the diagnostic glass of Strata II and III.

Table 7.110: Feature 28, Stratum III, diagnostic household glass.

Material	Manufacturing Technique	Rim/Finish	Base	Decoration	Count	Begin	End
Non-Lead Glass	Mold Blown, Mouth			Engraved	2	1760	1820
Common Glass	Mold Blown, Mouth				1	1755	1850
Common Glass	Mold Blown, Mouth	Fire Polished			1	1755	1765
Common Glass	Mold Blown, Mouth				3	1730	1920
Common Glass	Mold Blown, Mouth	Fire Polished	Pontil, Glass tipped		2	1730	1860

**Metal.** Four metal household artifacts were recovered; all appear to be part of a single iron utensil, possibly a table or butter knife.

*Indeterminate*

Twenty-seven artifacts recovered from Stratum III could not be identified. Twenty of these artifacts consist of glass shards of uncertain manufacture or use. The remainder consists of five lengths of yarn and two unidentified organic items; these appear to be small clumps of hair or fabric stained from contact with a copper item.

*Other*

This group consists of one rat bone.

*Personal*

Seventy-one personal items were recovered from Stratum III. All but eight of these items are smoking pipes or fragments thereof. Of the 63 smoking pipe fragments, only six are chronologically diagnostic. The first of these is decorated in a molded floral pattern and has even fluting around the lower half of the bowl. Based on the decoration and shape of the bowl, this specimen dates circa 1790 through 1820 (Shape 25: Noel Hume 1969: 303). Three of the diagnostic pipe bowls exhibit a form prevalent from 1780 to 1820 (Shape 27: Grillo et al. 2003: 11–12). One of the Shape 27 bowls exhibits the molded Masonic patterns (angle/level and cervid) seen in other strata. The final two diagnostic pipe bowls possess a form that dates circa 1740 to 1800 (Shape 26: Grillo et al. 2003: 11–12). The remaining tobacco pipe assemblage consists of 15 bowls and 42 stem fragments. Six of the bowls exhibit decorations consisting of either molded patterns or rouletting. Three of the molded patterns are the familiar Masonic design. Only one of the stem fragments exhibits decoration; it has a molded pattern of concentric lines and circles that cover the stem and is impressed with “MEISTER” on one side and what may be “LUSI...” on the other. This maker’s mark could not be identified.

The remaining personal items consist of two bone buttons, two copper alloy buttons, and four fragments of a fine-toothed bone comb.

### *Sanitary*

The sanitary remains consist of two sherds to a creamware chamber pot (1762–1820). These are rim sherds that exhibit rolled rims and a glazed over gouge/bump on the interior.

### STRATUM IV

Only 14 artifacts and 22 faunal remains ( $n=36$ ) were recovered from Stratum IV. Half of the artifact items consist of household artifacts. Personal ( $n=3$ ) and indeterminate ( $n=3$ ) items each comprise 21% of the total.

### *Food Related*

This functional group consists of 22 faunal fragments. Only six fragments are identifiable to the species level: four cow bone fragments, one caprine fragment, and one clam shell. Table 7.111 provides a breakdown of the faunal count.

Table 7.111: Feature 28,  
Stratum IV, faunal count.

SPECIES	COUNT
AVSP	2
LTM	2
MTM	10
MOL	1
UNIM	3
BOS	4
OVCA	1

### *Household Artifacts*

Seven artifacts comprise this functional group. Six of these artifacts are ceramic sherds; one is a glass sherd.

**Ceramics.** Six ceramics were recovered from Stratum IV, as described below.

*Creamware.* A single sherd from an undecorated creamware plate was recovered. This artifact dates circa 1762 through 1820 (Miller et al. 2000: 12).

*Pearlware.* Two pearlware sherds from teacups were recovered. The first exhibits earth-tone-colored (polychrome) underglaze painting. This decoration technique was prevalent from 1795 to 1830 (Miller et al. 2000: 12). This sherd provides the TPQ date for Stratum IV. The second sherd is China glaze and exhibits a blue-painted Chinese landscape. It dates circa 1775 through 1810 (Miller et al. 2000: 12).

*Redware.* Two sherds from a joggled slip-decorated redware dish were recovered.

*Porcelain.* One sherd from an unidentified teaware was recovered—a Chinese export porcelain with an indeterminate design. No date range could be assigned.

**Glass.** A single shard of unidentifiable bottle or container glass was recovered.

*Indeterminate*

This assemblage group consists of three unidentifiable shards of glass. Their function could not be determined.

*Personal*

Three personal items were recovered from Stratum IV, consisting of fragments to three tobacco pipe bowls. One is molded and exhibits a floral design. None of these items possess enough identifiable characteristics to assign a date range.

INTERPRETATION

Feature 28, though incompletely excavated, contained over 17,000 artifacts. Its size makes it the largest midden deposit excavated, with regard to number of material remains recovered, within City Hall Park to date. Feature 28 is almost certainly a primary deposit that dates to the first decade of the nineteenth century. The TPQ for the main portion of the deposit (Stratum II) is 1807. Table 7.112 provides the TPQ for each excavated stratum.

Table 7.112: Feature 28  
TPQ dates.

Stratum	TPQ
I	1800
II	1807
III	1805
IV	1795

Despite the relatively tight date range of this deposit, there are several questions and uncertainties. Feature 28 was located northwest of City Hall (see Map 7.01). In the early nineteenth century, this area was adjacent to (east of) the Bridewell and to the northwest of the construction of City Hall. It has been noted that McComb's diary refers to a large Bridewell sink (privy) at the northwest corner of the new City Hall foundation. It further states that this sink had been well cleaned out and filled with clean earth (McComb family papers 1787–1858). Based on McComb's description, this privy would have sat beneath the northwest corner of the present-day City Hall foundation and is not Feature 28.

It does not appear that Feature 28 was a privy, as it lacks key characteristics that would define it as such. The soil within was not night soil; there was no regularity of form or wood lining. Soil samples were floated, but there was no evidence of seeds or other organic material typically associated with a privy.

Stratigraphically, Feature 28 exhibits little evidence of being an accretionary deposit. The bulk of the assemblage is within Stratum II, which displayed a consistency of soil type and artifact density. Evidence suggests a short-term deposition. The size of the deposit, including the large amount of faunal remains, suggests multiple persons or a community. The two groups occupying this area at the time in question were the Bridewell and its inmates and the workers building City Hall.

Within the assemblage, there is a range of household wares and the faunal remains suggest some dietary variety. Beef supplemented by shellfish, fish, and poultry dominated the diet. Turtle is also present; turtle was considered a luxury food item in the eighteenth and nineteenth centuries (Schweitzer 2009). The variety present would be inconsistent with a prison population. The household wares include various tablewares, but lack a significant percentage of utilitarian wares. Forms include cappuchines, flacons, condiment bottles, a punch bowl, several teapots, and pitchers—decidedly high-end forms/types, suggestive of a more privileged population.

Of particular note within the collection are the small finds. In this densely occupied, relatively small property, it is, as previously stated, at times the anomalies in an assemblage that provide its distinction. Several medical-related items were recovered, mostly bottles and vials likely associated with self-medication. A particularly interesting object is the vaginal irrigator or syringe made of bone; this would have been used for contraceptive purposes or the treatment of venereal disease. Sanitary objects include several chamber pots and three bone toothbrushes.

There were 290 smoking pipe bowls or bowl fragments recovered. Of these artifacts, 103 exhibit some form of decoration and 37 of these are decorated with Masonic motifs. The Masons were likely represented among the workers building City Hall and the elected officials overseeing its construction. John McComb, City Hall's architect, was also a stone mason and may have been part of the Masonic order. There are references in historic documents noting that McComb's father and grandson were Masons (*Masonic Monthly* 1864 and *Freemasons* 1871).

While materials from the Bridewell residents are undoubtedly within this assemblage, its general character suggests the assemblage is the product of another group—the workers constructing City Hall. Why this appears to be a short-term deposit is uncertain, but there are some hypotheses. The deposit may be associated with some event that necessitated a cleanup of the area. One such event could be the yellow-fever epidemic in 1805. A cleanup of the site during this period could possibly explain the presence of multiple cats and dogs in this short-term assemblage. The epidemic halted construction on City Hall as the workers fled (McComb family papers 1757–1858). Another possibility for the tight-framed deposition was for the inevitable cleanup of the site leading up to the opening ceremonies for City Hall in 1811.

Regardless of the event, this deposit is one of the few tightly dated deposits recovered from within City Hall Park and reflects a period of transition for the property from non-public use to public use.

**MANHOLE 3 EXTENSION – THE BRIDEWELL**

Project plans required an extension of Manhole 3 to facilitate the micro-tunneling machinery. Manhole 3 was a 20’ x 24’ area excavated northwest of City Hall and was the location of Features 27, 28, and 29 (see Map 7.01). These features formed a significant midden deposit dating to the period of City Hall’s construction. The proposed expansion extended southwest from the previously excavated area, measuring approximately 13’ east to west; 8’ on the east side, where it met with the pre-existing manhole; and 12.6’ on the west side of the new excavation area.

Excavation exposed several significant and substantial architectural features, as well as a significant material deposit. Initially, this included a wide staggered stone structure, believed to be a base for stairs and a brick shaft feature (Image 7.121). Archaeological excavation was expanded to determine the extent of these two features and attempt to identify them, resulting in the discovery of additional features. A total of seven features were found within the Manhole 3 extension area.

*Associated Stratigraphy*

The stratigraphy in this area was characterized by modern landscaping within City Hall Park (Strata I, II, and III), followed by a series of historic layers. The historic layers were associated with historic fill episodes and/or features. Table 7.113 details the seven strata exposed.

Table 7.113: General stratigraphy of the Manhole 3 extension excavation area.

<b>Strat</b>	<b>Depth</b>	<b>Soil Description</b>
I	0’ - .4’	Thin mulch layer, not consistent across entire area
II	.0’ - .8’	Soil and plantings associated with park landscape – 10YR 5/4 silty loam
III	.8’ – 2.2’	A Horizon: 10YR 3/2 silty loam
IV	2.2’ – 3.4’	Historic fill horizon – 10YR 4/4 coarse sand
V	3.3’ – 5’	Historic fill horizon – 10YR 5/6 sand
VI	3.2’ – 5’	Feature 38 - 10YR 4/5 sandy loam with rubble
VII	3.4’ – 4.4’	Feature 40 - 10YR 4/4 sand with loose gravel



Image 7.121: Features initially exposed within the Manhole 3 Extension.

### **FEATURE 36**

The first feature to be exposed in this unit was Feature 36—a circular, 3' x 3' brick shaft feature located 2' west of a modern drainage grate. Excavation surrounding this feature determined that it continued beyond 5' bs.

The feature presented itself as a circular metal cap (1.5' x 1.5') set within mortar (3.2' x 3.2') at approximately 2' bs. Further excavation revealed a squared bluestone cap measuring 3.4' x 3.9' beneath the metal and mortar cap. The bluestone cap was wider than and mortared to the top of the circular brick shaft (Image 7.122). The bricks and mortar appeared to date to the nineteenth century.

Feature 36 was observed cutting into Feature 37, exposed after Feature 36 (Image 7.123). Additional excavation along the north and east side of Feature 36 exposed a 0.8' wide ceramic pipe, covered with brick, at approximately 4.5' bs. This pipe was connected to the brick shaft through an open circular hole. The pipe was resting in place and not mortared or joined to the brick shaft in any formal manner. The presence of various construction shoring mechanisms made it difficult to determine the precise angle of the pipe, but it extended at a northeast angle alongside Feature 37. It is very likely that this is the same pipe exposed in the pipe trench within Feature 28; there was no indication of this feature being connected to the adjacent modern drain.

Though the cap was not removed from the feature, a sample of the interior fill was obtainable from the area where the pipe connected into the shaft. The feature was filled with a very rich organic (10YR 3/1) silty loam. No artifacts were recovered in association with this feature.

As time and construction constraints did not allow for full excavation, either surrounding or inside of this feature, its original function remains unknown. Based on construction materials and its provenience, it dates to the mid-nineteenth century. Like many of the shaft features throughout the property, it was eventually used for some form of drainage. This feature remains *in situ*.

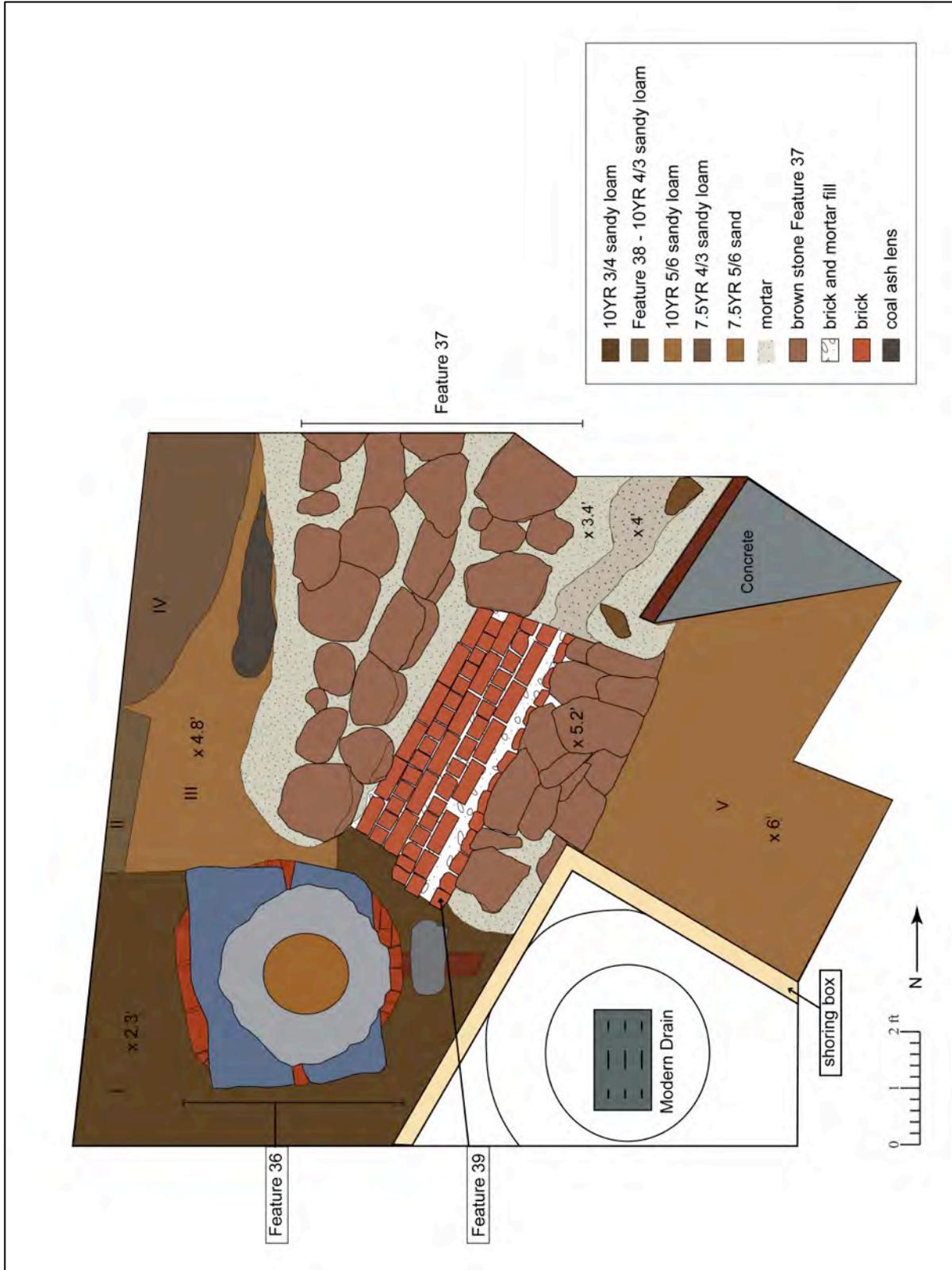
### **FEATURE 38**

Feature 38 was first observed in the west profile of the excavation unit. It appeared to be a 2.8' wide pit dug into Strata IV and V. The feature is adjacent to, but separated from, Feature 36 by Stratum V (Map 7.40).

The identification of Feature 38 remains undetermined. The feature was still visible at the final excavation depth of 5'. No further excavation was undertaken in this area.



Image 7.122: Feature 36.



Map 7.40: Plan view showing Feature 37 and 39, as well as Feature 36, 38, and 40, within the Manhole 3 Extension excavation area.



Image 7.123: Feature 36 and Feature 37.

### **FEATURE 37**

Feature 37 was initially exposed as three rows of brownstone blocks in a north-south orientation. It was located to the north of Feature 36, beginning at 3.65' bs. The stones appeared to be mortared and were overlapping at the edges, having a stepped appearance. Each row of stone was at a different elevation (Image 7.124).

The feature appeared to be the base of steps rising east to west. The lowest step in the east was exposed at 5.2' bs and had a dressed front face. The back face was irregular. The upper "steps" were more uniform. Feature 37 pre-dated Feature 36 and was noted as being in the approximate location of the northeastern end of the Bridewell (Image 7.125). The orientation and materials were consistent with lithographic images, historical descriptions, and the date of the Bridewell. The Bridewell was one of two prisons located in City Hall Park during the eighteenth century. Erected in 1775, the Georgian-style stone structure was demolished in 1838.

To facilitate the needs of the project, a portion of this feature needed to be removed. Removal required the project to go before the LPC to request a permit for the action. Approval was granted on the condition that controlled deconstruction was performed under supervision of the project archaeologist and additional testing undertaken to learn more about this significant archaeological resource. Prior to deconstruction, 3D imaging and high-resolution digital photography occurred.

Initially, eight large stones were removed and further excavation along the eastern face revealed an additional 4' depth of cut brownstone blocks. Only one course of stone was present at the western end of the feature. Beneath the western courses of stone, a mortared brick arc that abutted the eastern wall of Feature 37 was exposed and designated Feature 39.



Image 7.124: Feature 37 presented itself as rows of brown stone with a stepped configuration.

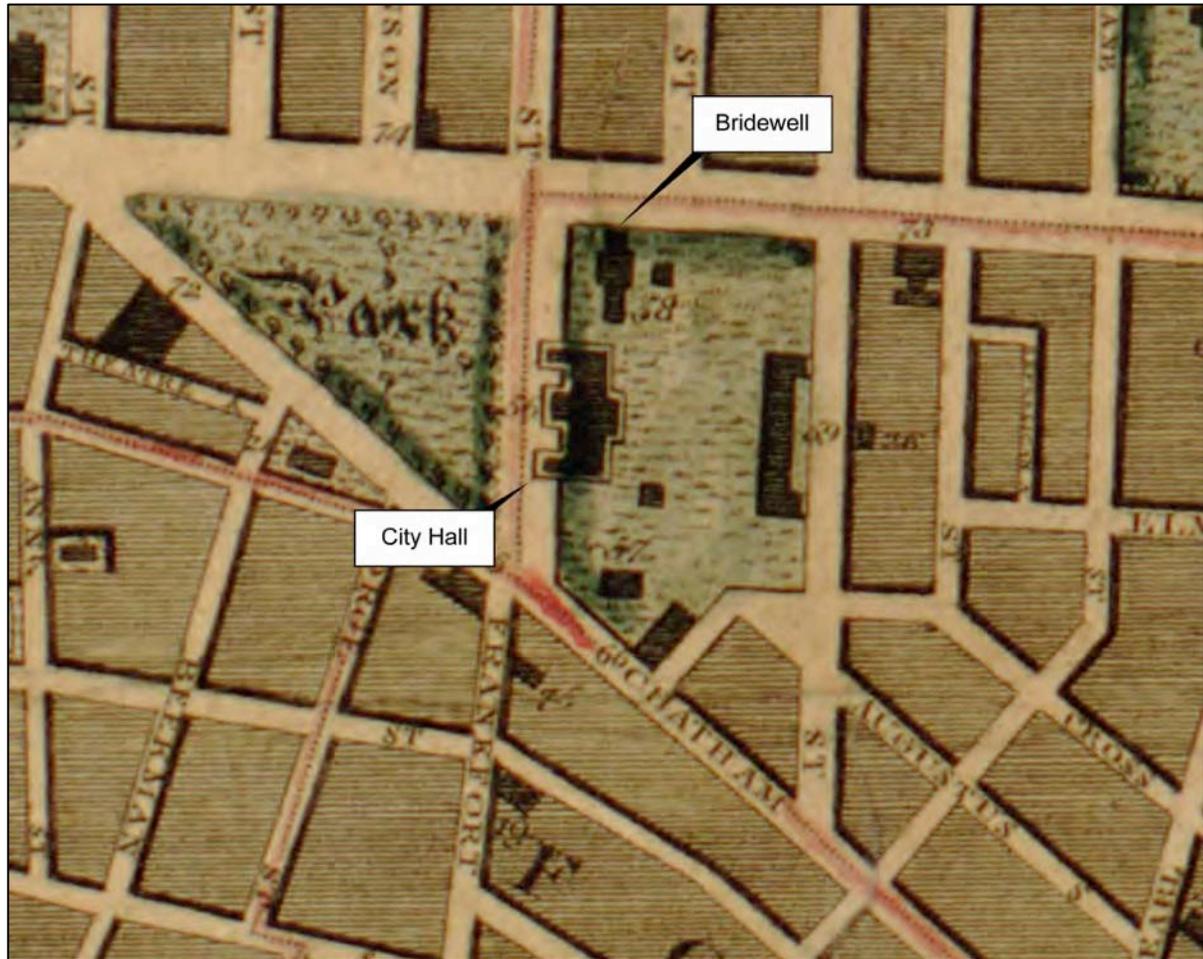


Image 7.125: The 1811 commissioners' map showing the proximity of City Hall and the Bridewell.

#### ASSOCIATED STRATIGRAPHY

Feature 37 was located beneath Strata II and III. The soil surrounding the feature itself was a 10YR 3/2 sandy loam; this was also a fill soil, but directly associated with Feature 37. Feature 36 cut into Feature 37, impacting the southern portion of the excavation area. Feature 37 extended beyond the excavation area to the north and the south.

#### ASSEMBLAGE

Seven artifacts were recovered in direct association with Feature 37. Three of the artifacts are architectural samples: a whole molded brick, a piece of mortar, and a shard of window glass. The brick has no identifying marks but dates to the nineteenth century based on its composition. Three household-related artifacts were recovered, including a shard of container glass and two creamware sherds. The creamware sherds have no defining characteristics. Creamware has a general date range of 1762–1820. One undecorated smoking pipe stem fragment was also recovered.

## INTERPRETATION

Feature 37 pre-dated Feature 36. Historic maps and images place it in the location of the eighteenth-century Bridewell (Image 7.126); the orientation of the feature is consistent with this finding. That this feature represents stairs is less certain, as continued excavation suggested that it could be a collapsed wall.



Image 7.126 – The Bridewell (Source unknown).

## FEATURE 39

Feature 39 is the brick arc exposed at 4.9' bs following the removal of a portion of Feature 37 (Image 7.127; Map 7.40). The mortared brick structure abutted the eastern wall of Feature 37. It was constructed as alternating rows of two courses of horizontal brick and one course of vertical brick. Like Feature 37, the brick arc was cut into for the construction of Feature 36 (Image 7.128).

This feature was initially thought to be a drain. However, this interpretation was ruled out when further excavation did not reveal a bottom. Photographing the interior through a slightly less than 1' gap in the brick showed the arc to extend both north and west.

Beneath the brick structure was a considerable amount of brick and mortar demolition fill. Three artifacts were recovered in association with Feature 39: two whole brick samples from demolition fill and a shard of olive green bottle glass. The bricks are unmarked and have no clear defining characteristics.

Further excavation—including the removal of a portion of the brick arc—determined this to be an *in situ* feature. Its location would have placed it inside and as part of the east end of the Bridewell. The purpose of the brick arc is unclear and its fill extent was not excavated due to construction constraints. Of the portion that was exposed and documented, the curvature of

the feature did not appear significantly pronounced. This may have been a support or vaulted ceiling of the Bridewell basement. However, the presence of the brick and mortar demolition fill is problematic, in that it should not be present if this structure had been collapsed in on itself, as suggested by Feature 37, as part of the demolition process.



Image 7.127: Feature 39, a brick arc located beneath Feature 37.



Image 7.128: Feature 36 cut into Feature 37 and 39.

#### **FEATURE 40**

Feature 40 was a pit feature exposed west of Feature 47 at the northwest corner of the excavation unit. It cuts into Stratum V, visible in the west profile (see Map 7.40). This feature appears to be a historic fill deposit. Due to construction constraints, only a small portion of this deposit was investigated.

#### ASSEMBLAGE

Only 36 artifacts were recovered from this feature.

#### *Architectural*

Ten artifacts are part of the architectural functional group, including seven iron nails of indeterminate manufacture, a shard of window glass, and a piece of mortar

#### *Household*

The household functional group contains 20 artifacts, including five shards of olive green bottle glass of indeterminate manufacture; the remainder of the artifacts are ceramic ( $n=15$ ). Among the ceramics are four sherds of Chinese export porcelain; two of these are from a plate. All four porcelain sherds exhibit a blue-painted decoration and have an end date of 1840; none have a beginning date. A painted China glaze pearlware sherd dates from 1775–

1810 (Miller et al. 2000). Another pearlware sherd from a cup or bowl is printed with a romantic scene (1815–1840) (Azizi 1996 et al). Two whiteware sherds are part of the assemblage; both are blue-printed and date 1807/1825–1915 (Azizi et al. 1996). One coarse, lead-glazed redware sherd and four stoneware sherds complete the household group. The four stoneware sherds are all salt-glazed, buff-bodied examples; two are locally produced “Blue at Base of Handles” sherds (1720–1820) (Janowitz 2008). Of the other two sherds, one has a tan interior slip and the other is a dark brown Albany-type slipped ware.

### *Indeterminate*

This group contains a copper alloy metal fragment and a piece of iron.

### *Personal*

Four undecorated pipe stems comprise the personal group.

### INTERPRETATION

The full extent and context of Feature 40 remain unknown. As the feature extended beyond the area required for construction excavation, no additional work was permitted in this area. Other than this small sample, which has a TPQ of 1825, Feature 40 was not excavated and remains *in situ*. Its horizontal and vertical location would place it within the boundary of the Bridewell foundation.

### **FEATURE 41**

During the removal of an additional portion of Features 37 and 39, a dry-laid schist foundation wall on a north-south orientation was exposed immediately beneath the east wall of Feature 37 (Map 7.41). This schist wall was designated Feature 41 (Image 7.129). Two courses of the wall were initially exposed. The top course measured 1.3’ wide and the second course measured 2’ wide. Continued excavation revealed that this foundation wall increased in width as the depth increased (Image 7.130).

Excavation of this feature was limited to an approximate 7’ x 6’ area bounded by a wooden shoring box (Images 7.131 and 7.132). This area was the limit required for construction activity accessibility. The required excavation depth would extend beyond 15’ bs and require removal of the feature in this area. Per protocols, this work was done in conjunction with archaeological supervision and documentation.

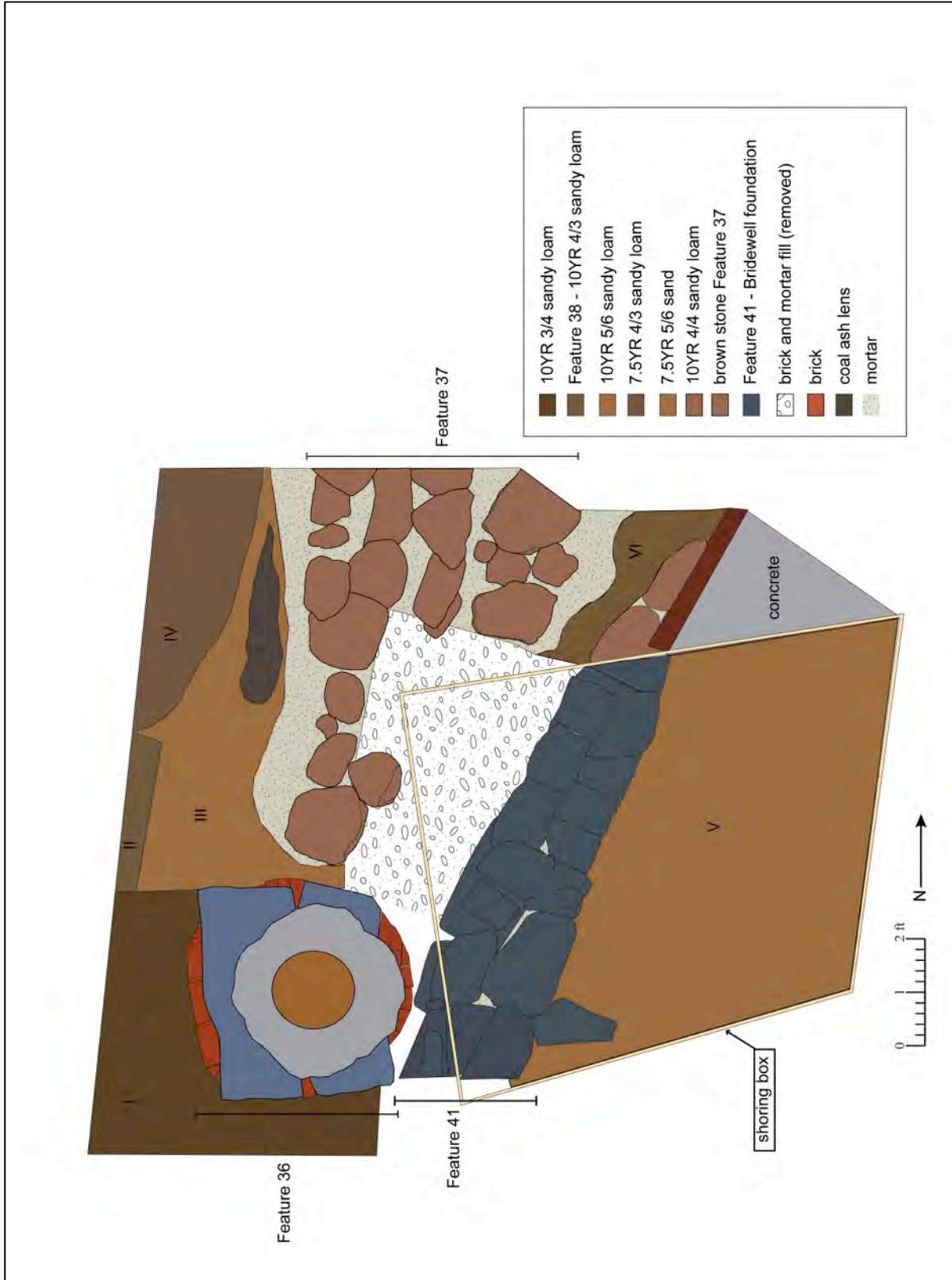
The soil excavated along the exterior (east) side of the foundation wall consisted of olive brown colored (2.5YR 5/6) fill sand. This soil extended approximately 1’ from the feature wall, representing a builder’s trench for this feature. The builder’s trench cut into a light brown (7.5YR 5/6) natural sandy subsoil. The west side of the feature, the interior, contained a continuation of the brick and mortar demolition fill observed immediately beneath Feature 39. This demolition fill extended to 9.2’ bs. Beneath the demolition fill, a midden deposit (Feature 42) was exposed, extending to 12.2’ bs.

No artifacts were directly associated with Feature 41.

The foundation wall extended to a final depth of 13.5' bs and had a bottom width of 5'. Feature 41 is part of the Bridewell foundation. This foundation was built for substantial structural support; its expanding width is representative of a load-bearing mechanism for the large stone structure. The soil at the base of the foundation consisted of a sandy silty loam (10YR 5/1), consistent with the natural subsoil of this area.



Image 7.129: Schist foundation wall exposed beneath Features 37 and 39.



Map 7.41: Plan view of Feature 41 following the partial removal of Features 37 and 39.



Image 7.130: Excavation of Feature 41.



Image 7.131: Excavation and removal of Feature 41.



Image 7.132: Excavation and removal of Feature 41.

## FEATURE 42

Beginning at approximately 8' bs, the amount of rubble within Feature 41 significantly lessened and a dense artifact deposit was exposed at 9.2' bs. Feature 42 was an intact primary deposit. The materials recovered represent only a small portion of the deposit (Image 7.133). Due to construction constraints, the remainder of the deposit was unexcavated and remains *in situ*.



Image 7.133: Limited profile view of Feature 42 midden deposit.

### ASSOCIATED STRATIGRAPHY

The exposure of this feature at 9.2' bs corresponds to 3.5' beneath the top of the first course of the schist foundation wall. It was exposed at the northern end of the shoring box on the west side (inside) of the foundation wall. The deposit continued to a depth of 12.2' bs, culminating with a silty loam (10YR 3/1).

Though the shoring box—which continued to be installed/extended as the excavation continued farther below surface—obscured a full view of the profile, it was clear that the deposit continued beyond the confines of the shoring box. The deposit was clearly visible in the profile, but lay outside the confines of the excavation area.

### ASSEMBLAGE

A total of 991 artifacts were recovered from this feature. Though the entire deposit was not recovered, this sample provides insight into the general composition of the assemblage. The

majority of the assemblage is food related, which accounts for 60% ( $n=603$ ). Household artifacts are the next largest group, accounting for 26.5% ( $n=263$ ). Table 7.114 provides a complete breakdown of all the functional group counts, and percentages are visually represented in Figure 7.15.

Table 7.114: Feature 42, artifact count by functional group.

Functional Group	Artifact Count
Activities	1
Architectural	65
Food Related	603
Household	263
Indeterminate	11
Lighting	5
Medical	3
Ornament	1
Other	2
Personal	22
Sanitary	11
Toy/Recreational	4

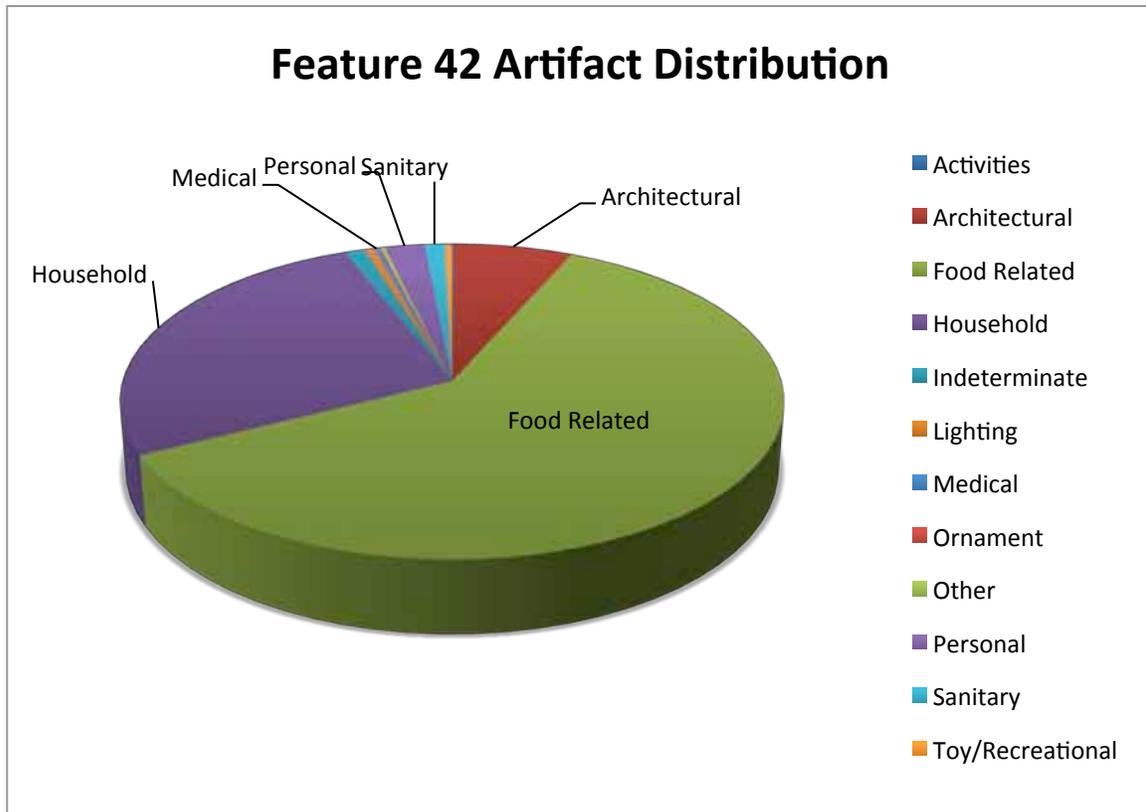


Figure 7.15: Feature 42 artifact distribution.

*Activities*

The group consists of a single stoneware Master Ink bottle. The bottle is English brown salt glazed.

*Architectural*

Sixty-three shards of window glass dominate the architectural functional group. The remaining two artifacts are iron nails of indeterminate manufacture. None of these 65 artifacts provide any chronological data.

*Food Related*

This is the largest group within the Feature 42 assemblage, containing 603 faunal fragments. In contrast to the majority of the site, this assemblage has a high percentage of faunal elements that are identifiable to the species level. Table 7.115 provides a breakdown of the faunal count.

Table 7.115: Feature 42 faunal fragment count.

Species/Class	Count
AVSP	22
FISH	17
LTM	123
MOLSP	61
MTM	43
UNIM	141
BOS	186
OVCA	8
SUS	1

The majority of the species-level identified bones are cattle, particularly leg bones. Several of these exhibit evidence of sawing or chopping.

*Household*

Household is the second largest group within the Feature 42 assemblage. The artifacts consist of both glass and ceramic remains, with ceramic representing the majority. Among the 58 glass artifacts are several bottle shards; these are large enough to identify the various manufacture techniques, which include dip mold wine bottle shards (1730–1850) and mouth- and mold-blown bottle shards. Of note among the bottles is a two-piece molded “Success to the Railroad” flask dating 1830–1860 (McKearin and Wilson 1978:493; Society for Historical Archaeology 2012). These flasks celebrate the growing railroad system. Other glass objects include three mouth-blown stemware shards and five tumbler shards. Two of the stemware shards are from a small wine glass decorated with a cut geometric pattern. The 10-sided cup of the glass has cross-hatch etching and a half sunburst. The base of the glass is

a plain conical foot with single bladed knob that provides an end date of 1870 (Society for Historical Archaeology 2012). Four shards mend into a mold-blown tumbler with a molded star/asterisk pattern. The base of this glass has a 12-point sunburst. The remaining other tumbler shard is a dip mold base (1730–1870) (Miller et al. 2000:8) that has an “X” or cross incised into the center of the blow pipe pontil scar (Image 7.134). This type of marking is generally seen as indicative of African American presence on a site. Examples of similar marks have been found on household-related items at the Hendrick I Lott House in Brooklyn and the Assay Site.

The household ceramics include coarse earthenwares, porcelain, refined earthenwares, and stoneware. Among the coarse earthenwares are eight sherds of a brown mottled glaze redware mixing bowl and 13 sherds of at least two double lead-glazed redware jars. There are 14 sherds of trailed slip-decorated redware; 11 of these are coggled rim sherds from dishes. One sherd is from a rectangular platter or large dish. A single British buff-bodied combed and feathered slip-decorated dish sherd, dating 1670–1795, is also present (Azizi et al. 1996).

Thirteen porcelain sherds, all overglaze painted, were recovered. One of the sherds is Chinese export porcelain with a polychrome fluted and scalloped decoration (1765–1810) (Madsen and White 2011:116). Five of the sherds mend into a muffin plate with traces of gold painted on the rim.

Most of the ceramic artifacts are refined earthenwares. In this assemblage, these are predominantly categorized by pearlware ( $n=45$ ) and whiteware ( $n=67$ ). Sixteen of the pearlware sherds are dipt decorated: three sherds of a Mochaware bowl (1810–1840); five sherds of a polychrome cabled pitcher (1811–1850) (Image 7.135); a sherd from a marbled slop bowl (1810–1840); and a polychrome banded pitcher spout (1775–1820). Ten of the pearlware sherds exhibit a painted decoration. Two sherds of a blue-painted floral motif teapot (Image 7.136) and four sherds of a similarly decorated teacup date 1779–1830. Two of the remaining painted pearlware sherds are decorated with green curved lines (1800–1835). Thirteen of the pearlware sherds have a printed decoration in either a floral or landscape motif (1807–1830). Forms include a creamer, plate, and saucer (Miller et al. 2000:12).

Whiteware is the most common refined earthenware in the assemblage. The majority of these have either painted or printed decorations. Among the printed decorations are floral, landscape, or romantic scenery motifs; these appear on plate, teacup, and teapot sherds. Generally, this ware type dates 1815–1915, but certain colors have more refined date ranges. A teacup printed in brown with a romantic motif dates 1830–1860 (Jefferson Patterson Park and Museum). A sherd printed with a beehive motif in red dates 1825–1840. Among the painted whitewares are a teacup sherd decorated in a blue, green, and pink floral design (1828–1840) and eight blue-painted edgeware sherds (1815–1840) (Miller et al. 2000:12; Jefferson Patterson Park and Museum). Other decorative techniques among the whiteware sherds include two sherds with a copper colored lustre and overglaze gold painting along the rim (1815–1840) (Azizi et al. 1996). Three sherds are decorated with engine-turned banding and date 1815–1900.

The remaining refined earthenware sherds include a CC ware handle (1790–1900), two sherds of a creamware plate (1762–1820), and a Jackfield-type teapot sherd (1740–1850). Of

note are 14 mendable sherds of a yellowware pie plate (1828–1850). The stamped maker's mark reads "American/Jersey City." This mark is associated with David and James Henderson, early manufacturers of yellowware in the United States. The final refined earthenwares of note are 18 red-bodied, lustre-decorated sherds (1790–1840) (Azizi et al. 1996). Eleven of these partially mend into a creamer with an overglaze floral motif (Image 7.137).

Seven stoneware sherds complete the household category. Six of these are salt glaze/buff-bodied sherds, one is a handle with blue-painted decoration, and the remaining sherds have a miscellaneous brown slip. These were all locally produced. The final stoneware sherd is unidentified with a miscellaneous brown slip.

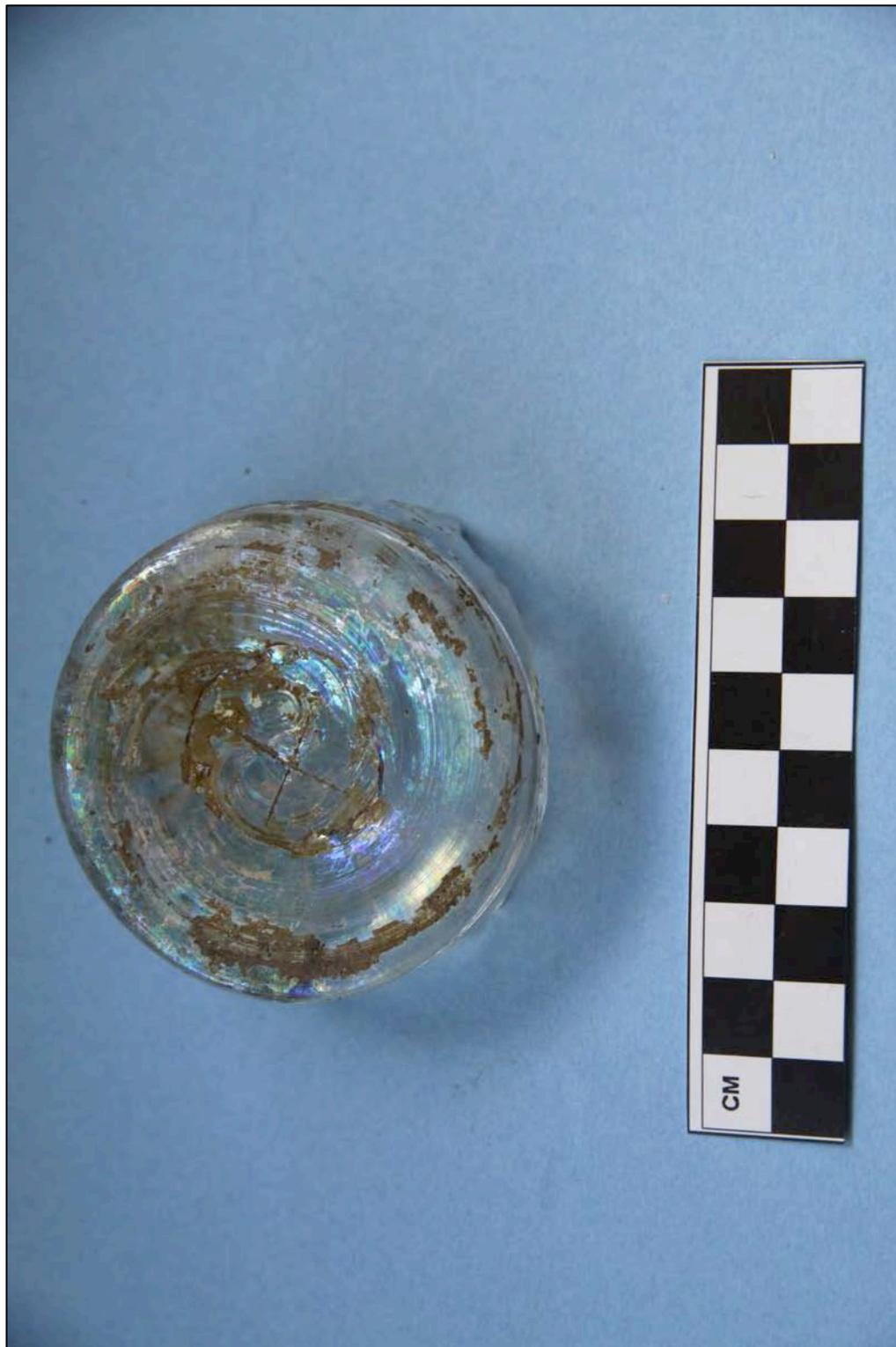


Image 7.134: Dip mold tumbler base with a circled “X” or cross, incised within the blow pipe pontil scar.



Image 7.135: Polychrome cabled pitcher (1810–1840).



Image 7.136: Blue-painted floral motif teapot (1779–1830).

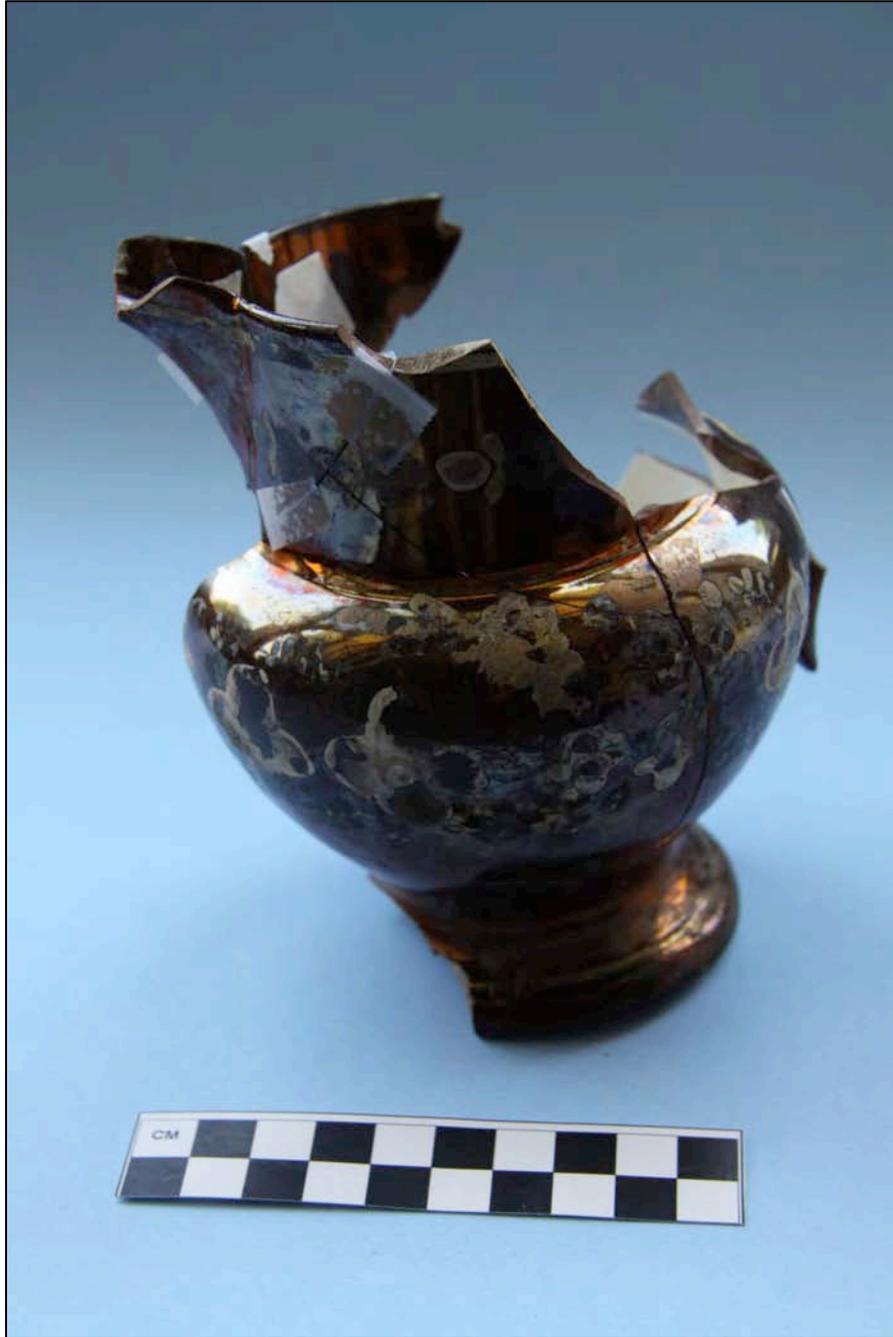


Image7.137: Lustre-decorated creamer.

*Indeterminate*

The indeterminate group consists of 11 ceramic sherds, including five creamware sherds that could be from either a large bowl or a chamber pot. None of the sherds have enough defining characteristics to make a determination. The six whiteware sherds are likely part of a jar, but there were not enough defining characteristics to determine if they belong with the household or medical functional group.

### *Lighting*

Four chimney lamp glass shards and one general lamp glass shard form this functional group. All are mold blown and date post 1800 (Woolhead et al. 1984:58–64). The general lamp glass shard is a pressed lamp glass base.

### *Medical*

Three glass medicine bottle shards were recovered. One is mouth blown with a simple tooled lip that provides an 1825 end date. A green shard is from a dip mold bottle dating 1730–1870 (Miller et al. 2000:8). The final shard is part of a two-piece mold embossed bottle (1810–1860) (Society for Historical Archaeology 2012). The extant lettering reads “\_\_\_SEARS” “\_\_\_OIL.” Research could not identify the full verbiage of the bottle.

### *Ornament*

This group consists of a single object—the bottom half of a molded, polychrome painted pearlware figurine (1780–1840) (Lewis and Lewis 1993:13–19) (Image 7.138). This figurine shows evidence of burning. Attempts to identify the figurine have not been successful. However, the stance of the lower body of the figure is similar to nineteenth-century figurines of allegorical figures of “Faith,” “Hope,” and “Charity.”

### *Personal*

This group contains 22 artifacts, including two sherds of a two-piece mold perfume bottle dating 1810–1860 (Society for Historical Archaeology 2012). Two shell buttons were also recovered. The remaining personal items are a smoking pipe stem and bowl fragments. One of the pipe bowls is molded in the shape of a male head, wearing what appears to be a turban. The figure represented on this nineteenth-century pipe is possibly a Turk (Dallal, personal communication) (Image 7.139). Many of the pipe bowl fragments are rib molded, but none of these have dateable characteristics.

### *Sanitary*

The sanitary group consists of 11 pearlware chamber pot sherds; five of these are molded with a floral pattern (1775–1840).

### *Toy/Recreation*

Four sherds of two children’s plates were recovered. One is a brown-printed pearlware with a molded leaf motif on the rim. The plate has a Clew’s maker’s mark and depicts a rhyme known as “Old Woman of Leeds” (Image 7.140). This plate dates 1818–1830. The remaining three sherds form a partially mended blue-printed pearlware plate decorated with a romantic motif. This pattern is likely a biblical scene. The maker’s mark on the bottom is “Spode 30,” which was used until 1829; this plate dates 1807–1829.



Image 7.138: Pearlware figurine with evidence of burning.



Image 7.139: Molded pipe of a male head, possibly a Turk.



Image 7.140: Child's plate printed with a rhyme, "Old Woman of Leeds."

## INTERPRETATION

Seven features were identified as part of the Manhole 3 extension excavation. The first feature exposed was Feature 36, a circular brick shaft feature. Feature 36 post-dates Features 37, 39, 41, and 42. It clearly cuts into Features 37, 39, and 41, which were observed on either side of Feature 36. Though Feature 36 was likely part of the late-nineteenth-century park infrastructure, the definitive original function of this feature remains unknown. It was constructed post 1838, the demolition date of the Bridewell. Features 38 and 40, exposed in the west profile of the excavation area, are of an undetermined association. As they were not fully excavated, there is not enough information to form any hypotheses. However, it does appear that Feature 40 could be associated with the Bridewell based on its provenience.

Features 37, 39, 41, and 42 are remnants of the eighteenth-century Bridewell. This set of features included a stepped formation of brownstone (Feature 37) that may have once been stairs or a collapsed wall; a brick arc (Feature 39) that may have been part of a vault or some form of support structure within the Bridewell basement; the substantial stone foundation wall of the Bridewell (Feature 41); and a small portion of a primary deposit from within the cellar of the Bridewell (Feature 42). The building materials of the features are consistent with known descriptions of the Bridewell structure, and the assemblage composition and date is consistent with the demolition date of the Bridewell.

Several historic lithographs, depicting the period 1811–1840, present City Hall and the Bridewell as being in line with one another, their fronts along the same line. Contrary to this, the 1811 commissioners' plan and the Mangin-Goerck plan (1834) show the Bridewell situated farther north. The maps depict the front of the Bridewell almost on line with the rear of City Hall. A color lithograph by John Hill (1826) also visually depicts the Bridewell set back in relation to City Hall (Stokes 1915) (Map 7.125; Image 7.141).

If one considers the role of City Hall and the intent for the structure to be a statement of the city within the Common—within the newly minted City Hall Park—it is more likely that the commissioners' plan, the Mangin-Goerck plan, and the Hill picture are accurate.

Designed by Theophilus Hardenbrook, the Bridewell was constructed in 1775. It initially served as a debtors' prison and a house of reform for those convicted of lesser crimes. During the Revolutionary War, the British used the prison to house American prisoners of war. After the war, its function returned to use as a “correctional” facility.

The Bridewell remained in use as a prison until 1838, when it was demolished. It is described as having been a large masonry structure with a three-story central wing. The side wings were two stories each. The Bridewell sat atop a raised basement, each section of which had several bays. It measured 39' x 146'. Inmates used the property surrounding the Bridewell for a variety of activities, including two forges in which prisoners made nails.

The Feature 42 assemblage represents a primary deposit of materials from the period that the Bridewell was shut down and demolished, circa 1838. The date range of the assemblage is 1775–1843 and the TPQ 1835. These dates are consistent with the operation dates of the Bridewell.



Image 7.141: “City Hall – to the Hon. Phillip Hone, Mayor of the City of New York” by John Hill, 1826.

These materials may have been discarded remnants of the last inmates or the keeper and his family, who lived at the Bridewell (MCC 1817:92). The assemblage has a “put together” character, a mismatched quality and variety in types. In general, the pottery and glass are low-cost items exhibiting extensive use-wear.

Inmates in the Bridewell were mostly the undeserving poor, vagrants, disorderly persons, and prostitutes. Inmates included men, women, and children as young as 12. A 12-year-old boy, Thomas H. C., who was charged with stealing in 1824 had already been sentenced to the Bridewell twice before (Society for the Reformation of Juvenile Delinquents 1832). The commissioners of the almshouse and Bridewell (and by default, the city) provided minimal support for the inmates. Inmates were expected to pay for their own food, clothing, and fuel (Burrows and Wallace 1999: 365).

Two artifacts in particular speak of life at the Bridewell: the modified tumbler and the pearlware figurine. One of the ways institutional life manifests itself archaeologically is through modified objects and/or spiritual items. These artifacts are a direct response to the stresses of confinement amplified, in this instance, by overcrowded, deplorable conditions (Kaktins 2012; Warfel 2009; Ferguson 1992). The tumbler may have been marked to denote ownership or for some other ritual purpose. The pearlware figurine could have belonged to the keeper and his family, or may have been a token belonging to an inmate.

Discovery of the Bridewell marks the first time within City Hall Park that the remnants of an eighteenth-century structure have been identified with near 100% certainty. The western side of City Hall has only been subject to minimal utility installations or other construction episodes and minimal archaeological testing. There is a high probability that the remainder of the Bridewell foundation and associated material lies undisturbed beneath the surface.

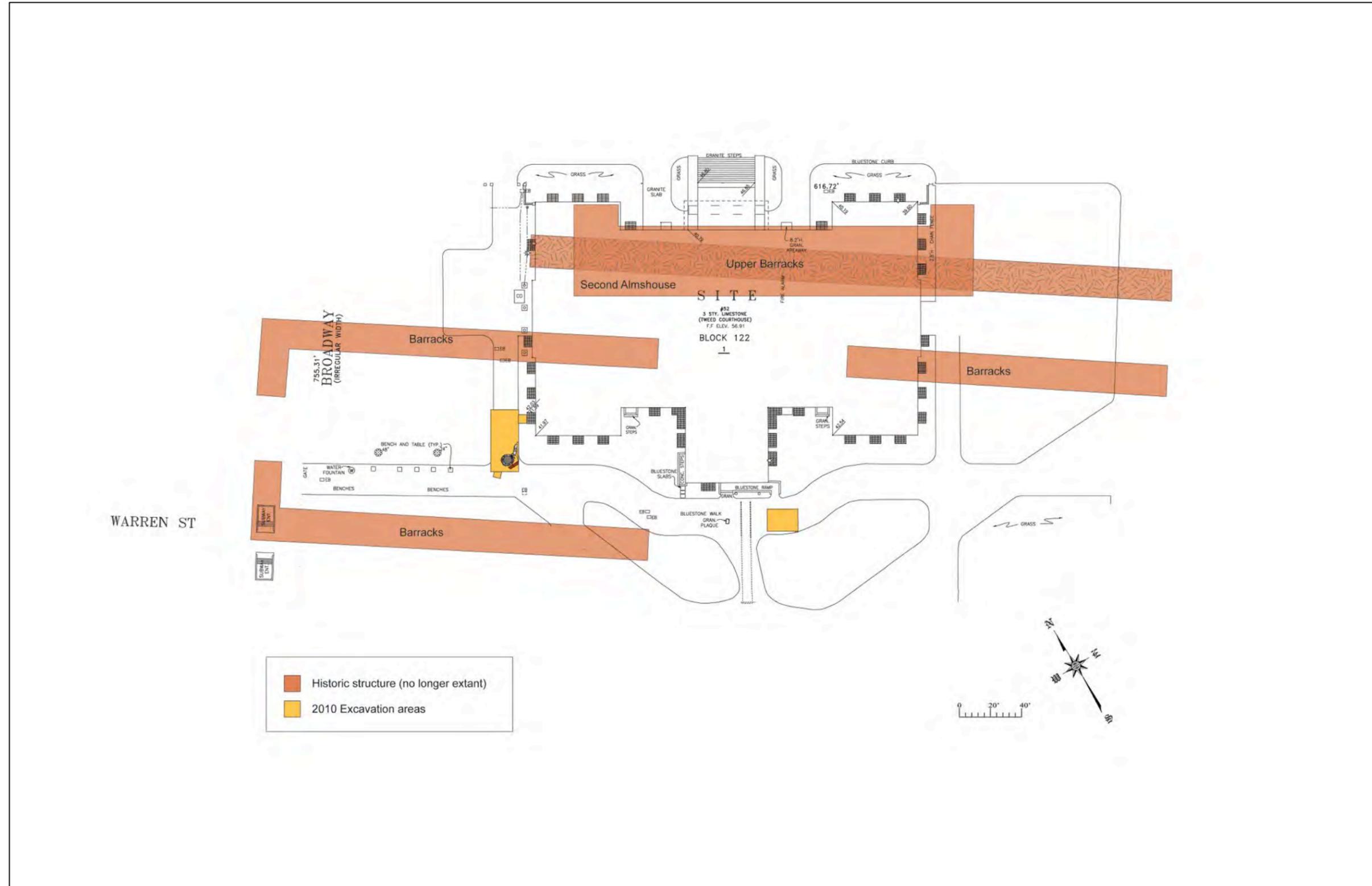
The opportunity exists to better define this discovery. The possibility exists to document a near-complete eighteenth-century structure, a distinct rarity in not only City Hall Park, but Manhattan and New York City itself. Additionally, the potential for further recovery of Feature 42 and other artifact deposits that can be definitively associated with the Bridewell would offer the opportunity to learn more about the activities, diet, and general lifeways of these residents, traditionally underrepresented in the historical record. Those sentenced to the Bridewell were a deplorably poor subset of the population at a time when little distinction was made between poor and being a petty criminal.

#### **FIELD SUMMARY**

The 2010–2011 archaeological project at City Hall has reaffirmed the archaeological and historic importance of this site. The density of historic occupation is mirrored through the archaeology. The 40+ features attest to the use and occupation by multiple communities since the early eighteenth century. Map 7.42 is an overall site map that depicts the various features discovered throughout this project.

The next two chapters present a more in depth materials analysis of key contexts (Chapter VIII) and faunal analysis of key contexts (Chapter IX). These key contexts are: Feature 3/Feature 33–35 in the northeast; Room 8C in the basement; the Feature 28 midden in the northwest; and the Bridewell. These two chapters are followed by Chapter X, which focuses on human remains.





Map 7.42b: City Hall 2010 – 2011 archaeological site map, northern half.

## VIII – MATERIALS ANALYSIS

### ROOM 8C

The artifact assemblage found during excavations in Room 8C of the City Hall basement (see Map 7.35) will be discussed as one analytical unit. The assemblage consists of secondary refuse deposited before and possibly at the time of construction of City Hall. Five strata were identified in this area (refer to Chapter VII): Stratum I was a fill horizon with brick and mortar rubble; Stratum II was a sandy fill horizon; Stratum III was a cultural deposit in a sandy matrix; Stratum IV was a coarse sand fill horizon; Stratum V (not present in all test units) was a very coarse sand/gravel fill horizon.

TPQ dates for the three artifact-bearing strata (I, II, and III) within the deposit are consistent (Table 8.01) (the 1790 TPQ for Stratum II, Test Unit 1, is from two cut nails that could have been incorporated into the deposit during construction of City Hall or from the overlying rubble fill in Stratum I), as are the mean beginning and end dates for ceramic sherds (Table 8.02).

Table 8.01: TPQ Dates for Room 8C assemblage by strata.

Strat	TU	FS	TPQ	# of Dated Artifacts
II	1	193	1790	2
II	4	208	1720	1
III	1	194	1762	40
III	2	196	1775	9
III	3	198	1762	13
III	5	209	1775	88
III	6	225	1775	30
III	7	226	1762	5
III	8	227	1775	12
IV	1	195	1765	14
IV	2	197	1740	3

Table 8.02: Ceramic mean beginning and end dates of manufacture.

Strat	Mean Begin	Mean End	# of Dated Sherds
II	1720	1820	1
III	1699	1807	189
IV	1708	1811	16

The artifacts were not distributed evenly within the excavated area; the great majority was found in Stratum III, in particular in Test Units 5 and 6 (Table 8.03). In the field, Stratum III was identified as a cultural deposit between two layers of coarse sandy soil (Strata II and IV). It is likely that the artifacts in Stratum IV originated in the Stratum III deposit. There were only three artifacts in Stratum II (two cut nails and a gray salt-glazed stoneware sherd); it is possible that this stratum was deposited to cover the refuse in Stratum III, when City Hall was constructed.

Table 8.03: Total artifacts  
(without faunal materials) by  
provenience.

Strat	TU	Count
II	1	2
II	4	1
III	1	77
III	2	36
III	3	28
III	5	272
III	6	145
III	7	29
III	8	42
IV	1	62
IV	2	6
TOTAL		700

The majority of the artifacts are in the household group, followed by the personal and architectural groups (Table 8.04).

Table 8.04: Artifact groups (without  
faunal materials).

Group	Count	Percent
Architectural	101	14.5%
Commercial	3	0.4%
Hardware	2	0.3%
Household	435	62.3%
Indeterminate	8	1.1%
Manufacturing	33	4.7%
Personal	116	16.6%
Toy/Recreation	2	0.3%
TOTAL	700	

HOUSEHOLD

Approximately 72% of the artifacts in this group are ceramics; the remaining artifacts are glass, one copper alloy spoon, and one knife handle (Table 8.05).

Table 8.05: Household group artifacts (sherd counts).

Class	Material	Count
Ceramic	Coarse Earthenware	92
Ceramic	Porcelain	14
Ceramic	Refined Earthenware	107
Ceramic	Stoneware	98
	<i>subtotal ceramics</i>	<i>311</i>
Glass	Common Glass	61
Glass	Common Glass	12
Glass	Common Glass	48
Glass	Lead	1
	<i>subtotal glass</i>	<i>122</i>
Metal	Copper Alloy	1
Composite	Iron and Other	1
	<i>subtotal metal</i>	<i>2</i>
TOTAL		435

There were no apparent cross mends for any of the ceramic or glass artifacts and minimum number of vessel (MNV) counts were not assigned, due to the fragmentary nature of the assemblage. If they had been assigned, the ratio of sherds to vessels would have been relatively equal, except for several vessels—a pitcher, porringer, and mug made of British slipware and three dark green bottles, all discussed below. Over two-thirds of the ceramic sherds were too small for identification of their forms (Figure 8.01; Table 8.06).

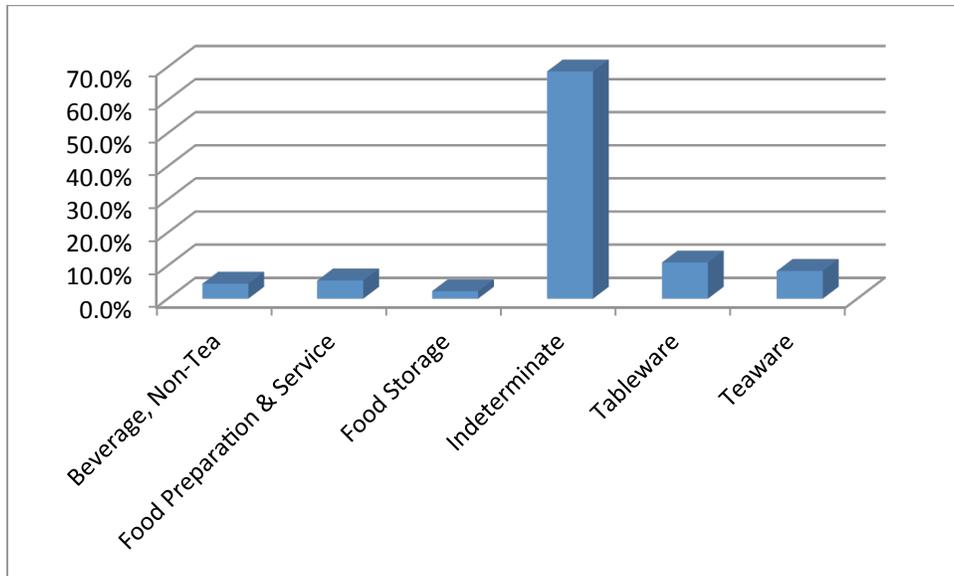


Figure 8.01: Ceramic functional groups (sherd counts).

Table 8.06: Household ceramic objects and ware types (sherd counts).

Function	Object	Ware	Count
Beverage, Non-Tea	Mug	British Buff-Bodied Slipware	4
Beverage, Non-Tea	Mug	Salt Glazed, Gray/Buff Bodied	9
Food Preparation & Service	Dish	British Buff-Bodied Slipware	11
Food Preparation & Service	Dish	Redware	2
Food Preparation & Service	Dish	Salt Glazed, Gray/Buff Bodied	2
Food Preparation & Service	Pan	Redware	2
Food Storage	Jar/Jug	Salt Glazed, Gray/Buff Bodied	7
Tableware	Bowl	Salt Glazed, Gray/Buff Bodied	2
Tableware	Bowl	Tin Glazed	1
Tableware	Pitcher	British Buff-Bodied Slipware	20
Tableware	Plate	Creamware	1
Tableware	Plate	Pearlware	1
Tableware	Porringer	British Buff-Bodied Slipware	8
Tableware	Porringer	Salt Glazed, Gray/Buff Bodied	1
Teaware	Saucer	Pearlware	1
Teaware	Saucer	Porcelain, Chinese Export	6
Teaware	Saucer	White Salt Glazed	2
Teaware	Teacup	Pearlware	1
Teaware	Teacup	Porcelain, Chinese Export	3
Teaware	Teacup	White Salt Glazed	2
Teaware	Teapot	Creamware	1
Teaware	Teapot	Red Bodied	2
Teaware	Teaware, General	Clouded Glaze	1
Teaware	Teaware, General	Jackfield Type	1
Teaware	Teaware, General	Porcelain, Chinese Export	1
Teaware	Teaware, General	Red Bodied	1
Teaware	Teaware, General	White Salt Glazed	4
TOTAL			97

As an exercise, numbers and weights of household group ceramics and glass shards were compared for the four analytical units from the current City Hall Park excavations (Table 8.07).

Table 8.07: Household group ceramics and glass shard counts and weights.

Analytical Unit	Count	Weight (grams)	Average Weight
<b>CERAMIC</b>			
Fea. 3 Interior	319	2296.72	7.2
Interior of F.33/35	1134	5360.51	4.7
Midden	4299	49891.9	11.6
Room 8C	312	1441.8	4.6
Total Ceramic	6064	58990.93	9.7
<b>GLASS</b>			
Fea. 3 Interior	396	3511.425	8.9
Interior of F.33/35	175	2234.1	12.8
Midden	2331	37715.8	16.2
Room 8C Total	122	649.1	5.3
Total Glass	3024	44110.425	14.6

While these numbers should not be taken as especially significant—as different wares types and vessel forms obviously have different weights—it is interesting to note that the assemblage from Room 8C has the smallest sherds, in particular for glass. Small sherds can be indicative of sheet middens and it is possible that this assemblage was such a deposit, although there are some large ceramic sherds—namely salt-glazed stonewares and British slipwares from FS 209, Stratum III, Test Unit 5, and some personal group artifacts (notably an eye glasses frame from Stratum IV, Test Unit I)—that do not fit this pattern.

The ceramic sherds are from a variety of ware types (Table 8.08). Some of the wares have manufacturing date ranges that extend backward into the late seventeenth century (British slipware and tin-glazed earthenwares) or forward into the early nineteenth century (creamware and pearlware). However, no late pearlwares types—polychrome painted and transfer-printed motifs in particular—are present. The most common sherds are made of salt-glazed stoneware, probably by the potters working nearby on Pot Bakers Hill (see Feature 33/35 artifact analysis for a discussion of these potters). Some of these stoneware sherds are underfired and/or lightly salt glazed and might have been sold as seconds if they were not more extensively damaged on the missing portions of the vessels, in which case they would be kiln wasters (see the manufacturing group discussion below). The tin-glazed count is high because of the number of glaze flakes ( $n=30$ ) in Stratum III, Test Unit 1.

Table 8.08: Household ceramic ware types (sherd counts).

Ware	Count	Percent
Salt Glazed, Gray/Buff Bodied	80	25.6%
British Buff-Bodied Slipware	62	19.9%
Tin Glazed	49	15.7%
Creamware	42	13.5%
Redware	25	8.0%
White Salt Glazed	18	5.8%
Porcelain, Chinese Export	14	4.5%
Agate Ware, Coarse	5	1.6%
Pearlware	5	1.6%
Jackfield Type	4	1.3%
Red Bodied	4	1.3%
Clouded Glaze	2	0.6%
Creamware, Dark	1	0.3%
TOTAL	311	

The 89 sherds with identifiable forms (54 from Stratum III in Test Unit 5, FS 209) came from a variety of objects (Table 8.09). Twenty sherds came from a single British slipware pitcher (Image 8.01). This unusual vessel has a bulbous body with a long, straight neck and is entirely covered with dark red/brown slip with lines of white slip in a wavy pattern around its body and a single slip line below its rim. Seven other sherds are from one British slipware porringer with a lead glaze so light colored that the surfaces appear to be almost white instead of the usual yellow. It has a slightly everted rim and two rows of dark red slip dots. Four other sherds are from one mug, also completely covered in a dark red slip that appears as very dark brown under the yellow lead glaze. Based on the color and texture of the body and the color of the slip, this is also British slipware.

Table 8.09: Household group ceramic sherds with identifiable forms.

<b>Object</b>	<b>Ware</b>	<b>Count</b>
Bowl	Salt Glazed, Gray/Buff Bodied	2
Bowl	Tin Glazed	1
Dish	British Buff-Bodied Slipware	11
Dish	Redware	2
Dish	Salt Glazed, Gray/Buff Bodied	2
Jar/Jug	Salt Glazed, Gray/Buff Bodied	7
Mug	British Buff-Bodied Slipware	4
Mug	Salt Glazed, Gray/Buff Bodied	9
Pan	Redware	2
Pitcher	British Buff-Bodied Slipware	20
Plate	Creamware	1
Plate	Pearlware	1
Porringer	British Buff-Bodied Slipware	8
Porringer	Salt Glazed, Gray/Buff Bodied	1
Saucer	Pearlware	1
Saucer	Porcelain, Chinese Export	6
Saucer	White Salt Glazed	2
Teacup	Pearlware	1
Teacup	Porcelain, Chinese Export	3
Teacup	White Salt Glazed	2
Teapot	Creamware	1
Teapot	Red Bodied	2
<b>TOTAL</b>		<b>89</b>



Image 8.01: Sherds from a British slipware pitcher with reverse color (white on dark) slip motif (FS 209.21).

The salt-glazed stoneware forms include sherds from at least seven mugs, two to four jugs or jars, a shallow oval dish, a porringer, and one or more bowls. The dish (Image 8.02) is a rare form in this ware, though it is seen within the 1999 City Hall assemblage. It has a flat foot, with a large unglazed kiln pad scar on the base, and its face is partially colored with brown slip. The decoration is a thin grayish-blue cobalt slip painted in wavy lines and dots. One of the mugs (Image 8.03), in the manufacturing group because it is a waster, has a similar decoration of cobalt-colored slip dots covering its body below a plain rim and a blue-colored cordoned band. Sherds from another mug—also in the manufacturing group as wasters—are decorated with incised and filled-in motifs (Image 8.04).

The bowl sherds (FS 209.39 and .43, both rim sherds) are also unusual. The larger sherd has a shape similar to creamware bowls, but with a thicker body, and appears to be undecorated; it probably came from a punch bowl (Image 8.05). The smaller sherd has a faint blue band atop its rim; it might have come from a shallow dish rather than a bowl, but is too fragmentary to determine its exact shape. The porringer sherd (FS 225.58) also has a blue painted motif, which is too incomplete for determination of its design.



Image 8.02: Salt-glazed stoneware small dish with blue decoration (FS 209.49).



Image 8.03: Salt-glazed stoneware mug with cobalt-colored slip dots (FS 209.38).



Image 8.04: Sherds from a salt-glazed stoneware mug with incised and filled-in motifs (FS 209.44).



Image 8.05: Salt-glazed stoneware bowl rim sherd (FS 209.39).

A small sherd from another mug might be British rather than New York made because it has a stamped “crowned GR” (Georgius Rex) capacity mark (Image 8.06). The mark is unevenly stamped and is at a distinct angle to the vertical plane of the vessel. Capacity marks were used by British potters to prove that their vessels were standard pint- or quart-sized (Noel Hume 1969:113). The body and glaze of this sherd, however, resemble those of the other salt-glazed stonewares from City Hall, and it is possible that the Pot Baker’s Hill potters copied this British mark, especially as they are known to have made mugs with sprigged GR medallions (Janowitz 2008A).



Image 8.06: Stamped crowned GR capacity mark on a mug (FS 209.46).

Among the teawares are three noteworthy—but small—Chinese porcelain sherds: one from a teacup with a well-painted *encre de chine* (black ink) overglaze painted floral motif and traces of gilding; another overglaze painted in *famille rose* colors that might have come from a coffee cup, as it appears to be too straight sided for a teacup; and a saucer sherd with a fluted body and underglaze blue painting. Other teawares include at least two white salt-glazed scratch blue teacups (Image 8.07) and two teapots, one with a refined red body and another made of creamware with its body molded in narrow columns/flutes. A black-glazed molded floral finial could be from a teapot or sugar bowl; its glaze is very lustrous and its refined earthenware body is black from firing in a reducing atmosphere.



Image 8.07: Scratch-blue decorated teacup (FS 209.1).

Identification of the manufacturing technique and vessel form of many of the glass shards was problematical because of their small size and heavy patination; however, it is likely that most if not all were mouth blown into a mold (Table 8.10). Thirty-one of the 42 “mouth-blown, general” shards are from black (very dark green) bottles, probably English-made wine or beer bottles. The other bottle shards have a variety of green and aqua colors. One shard is a very thin fragment of colorless lead glass; another dark blue shard is probably from a pattern molded flask.

Table 8.10: Household group glass objects (shard counts).

Material	Manufacture_Technique	Object	Count
Common Glass	Indeterminate	Bottle	60
Common Glass	Indeterminate	Indeterminate	1
Common Glass	Mold Blown, Mouth	Bottle	1
Common Glass	Mold Blown, Mouth	Bottle, Case	9
Common Glass	Mold Blown, Mouth	Hollowware	1
Common Glass	Mold Blown, Mouth	Vial	1
Common Glass	Mouth Blown, General	Bottle	42
Common Glass	Mouth Blown, General	Container Glass	5
Common Glass	Mouth Blown, General	Hollowware	1
Lead	Indeterminate	Indeterminate	1
TOTAL			122

The complete copper alloy teaspoon has an egg-shaped bowl and a handle with a round end (Image 8.08). Its length is 3.9” and the bowl’s maximum width is 0.78”. The handle tapers from 0.43 to 0.13” in width and its weight is 7.5 grams. The knife handle (4.5” in length) has a pistol-grip shape and an iron through tang (i.e., the tang extends the complete length of the handle); pistol-grip shaped handles were common for knives from about 1700 to 1780 (Dunning 2000). The material that makes up the scales (the coverings for the handle) is very deteriorated and rust-encrusted, but is either wood or bone.



Image 8.08: Copper alloy teaspoon (FS 225.45).

ARCHITECTURAL

Artifacts in this group could be associated either with the construction of City Hall or repairs to one of the earlier buildings on the Common. Over half are nails (Table 8.11): two cut, 30 hand wrought, and 35 unidentifiable; two were in Stratum II, 54 in Stratum III, and 11 in Stratum IV.

Table 8.11: Architectural group artifacts.

Object	Count
Brick, Fragment	3
Building Material	2
Mortar	3
Nail	67
Tile, Floor	3
Tile, Roofing	1
Window Glass	22
TOTAL	101

The “building materials”—a chunk of a marble block (weighing 258 grams) and a smaller (188 grams) piece of red sandstone, as well as three small square marble floor tiles—were in Stratum IV. A red earthenware roofing tile with black glaze on its face and a sandy textured back was found in Stratum III.

#### PERSONAL

The personal group has a number of interesting objects. The first is a complete white clay pipe bowl with a stag’s head motif similar but not identical to those found in the Feature 28 midden (see the Feature 28 artifact discussion for more information on this motif) (Image 8.09). This pipe, from Stratum III in Test Unit 6 (FS 225.43), was made in a crisp mold (unlike some of the Feature 28 pipes) and has been well smoked. It has a stag’s head facing the smoker with garlands and flowers on both sides; on the left face is a small liver bird and a faint Masonic square and compass is on its right face.



Image 8.09: Pipe bowl with Masonic symbols and a stag’s head (FS 225.43).

Several other white clay pipes have maker’s marks. Two have the letters “W” and “G” on either side of their heels, but one of them has “TD” in a decorative circle on the bowl facing the smoker, while the other has “WG” in a similar circle. There is evidence that these marks were used in conjunction sometime during the period after 1775 and before circa 1840 (Reckner and Dallal 2000:245). Another pipe has on the left side of its large oval heel a “T” under a heart and a “D” under a heart on the right side. TD marked pipes became a standard form later in the nineteenth century, but more research is needed to discover the sequence for the early use of this mark, particularly in conjunction with the

WG mark. Another bowl sherd has “R/TIPPET” in a cartouche, and another has “RT” stamped on the bowl facing the smoker. The Tippett family made pipes in Bristol and exported them to North America for at least three generations between 1660 and 1722 (Walker 1977:617–618 and 660–665), but later pipe makers apparently used the mark, as Tippett pipes have been found in Revolutionary War contexts (Dallal, in Grossman 1982:V-145; Janowitz 2008:103–105). Two other bowl fragments have faint stamped marks that might be “IB,” initials of a number of British pipe makers (“I” was used for the initial “J” as in John, James, etc.).

A pair of metal eyeglass frames was found in Stratum IV of Test Unit 1 (FS 195.26) (Image 8.10). They are Nuremberg-type single copper wire spectacles with small pieces of copper wire holding the circular loops closed in what are called Klemmer clips; this simple type of spectacle without ear pieces was made in great quantities in Germany during the seventeenth and eighteenth centuries (The Science Museum of London 2012; The College of Optometrists 2012).

Two badly scratched lenses that are probably associated with these frames were in Stratum III, Test Unit 5 (FS 209.99). The lenses are round and vary from 0.036 to 0.06” in thickness, with a diameter of about 1.5”; there is no trace of a Scarlett’s focus mark, a number scratched on the edge of some eighteenth-century eyeglass lenses to indicate their strength (College of Optometrists 2012).



Image 8.10: Copper wire eyeglass frames (FS 195.26).

X-ray analysis revealed the word “Hispania” and “177-” on a deteriorated silver coin pierced with two holes (Image 8.11), from the same stratum (FS 209.51). Its size (0.6” diameter) and weight (1.6 grams) are within the range for Spanish half reales (Jordan 2012). Pierced coins, especially silver, have been worn as charms “bringing luck or protection to ward off conjuring or other maligned [sic] spirits and illness”; they have been recovered from a number of southern sites associated with people of African descent, although pierced coins were worn by people of other ethnicities: “[English] folklore sources stated the use of a pierced silver coin was for luck and protection against witchcraft and illness” (Lees and Beck 2007).



Image 8.11: Spanish silver coin. The partial mark is “HISPANIA” with 177- (FS 209.51).

William Lees and Monica Beck of the University of West Florida undertook a study of United States coinage with pierced holes offered on eBay (Lees and Beck 2007). They noted that most were pierced with a single hole, but that a small number (26 of their 469 coins) had two holes; they speculated that these coins might have been strung with others to form bracelets or other compound jewelry, or that the coins were sewn onto clothing. The small pierced holes on the FS 209 coin are more or less evenly spaced in the center of the object, so it might well have been used as a button. If this coin had been sewn onto a garment, it could have functioned as both a clothing fastener and protective object.

Eight copper alloy buttons were found in Stratum III. Two of the buttons are too fragmentary to tell their shapes or types of fasteners, while five—two flat discs and three domed shapes—have or had loop shanks. One complete button (FS 209.52) has a four-hole bone back and a stamped brass face with a basket-weave motif (Image 8.12).

Other bone artifacts in the personal group are a single-hole bone button, which probably would have been covered in fabric or thread, and a bone comb. The other metal artifacts are eight straight pins with wrapped heads, a copper alloy buckle frame fragment, and an iron buckle tang.

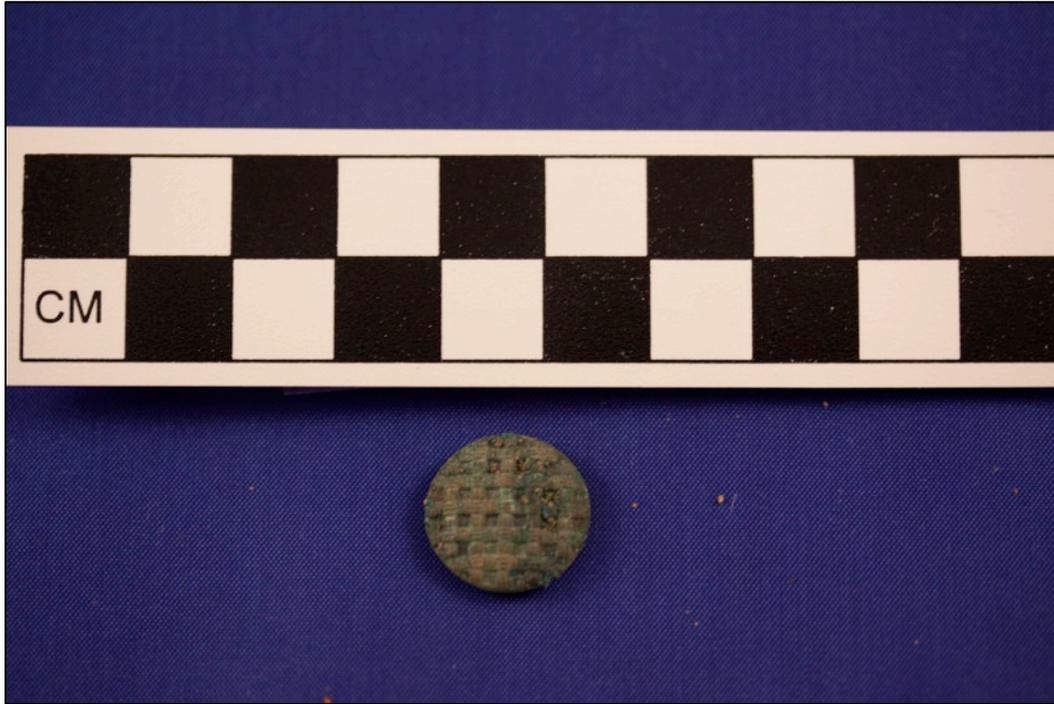


Image 8.12: Button with bone back and stamped brass face (FS 209.52).

MANUFACTURING

Over half of the artifacts in this group are bone button blanks (Table 8.12; Image 8.13).

Table 8.12: Manufacturing group artifacts.

Material	Object	Ware	Count
Coarse Earthenware	Sugar Mold	Redware	4
Stoneware	Kiln Pad, Expedient	Salt Glazed, Gray/Buff Bodied	2
Stoneware	Kiln Pad, Preformed	Salt Glazed, Gray/Buff Bodied	1
Stoneware	Kiln Waster-Hollowware	Salt Glazed, Gray/Buff Bodied	1
Stoneware	Kiln Waster-Jar	Salt Glazed, Gray/Buff Bodied	1
Stoneware	Kiln Waster-Mug	Salt Glazed, Gray/Buff Bodied	6
Bone	Button Blank		18
TOTAL			33

Bone button blanks are flat pieces of mammal bone from which simple round discs intended to be used as buttons have been removed by drilling, a simple and inexpensive way to produce buttons and button backs. The discs have a single central hole (used to anchor the drill) and, for the most part, would have been used as the skeleton for buttons covered with cloth or metal rather than as buttons themselves.



Image 8.13: Bone button blanks (FS 209.102, .103 and .104).

The first New York archaeologists to excavate and discuss button blanks were the pioneering team of William Louis Calver and Reginald Pelham Bolton, who found both button blanks and single-hole bone buttons in their excavations of Revolutionary War-era military sites (Calver and Bolton 1950:43–44, 53). They were of the opinion that buttons were cut from ribs and other flat bones using a carpenter's brace and center bit (a bit was found near the blanks during their excavations), an opinion repeated by later archaeologists who have excavated button blanks from City Hall Park (see Image 8.72). During the first of the recent excavations in City Hall Park, 61 buttons of all types were found; 27 were bone discs with one central hole (Baugher et al. 1990:55–58). Most were cut using a carpenter's brace and bit, as evidenced by circular cut marks on many; two, however, appear to have been hand cut using a knife, although—based on the results of an experimental project—they might have been drilled out of cow femurs, which tended to give a jagged edge (Glazer 2006). Seventy-six pieces of bone blanks were found within test units that the excavators believed at the time were within the foundations of the almshouse. Other excavations around City Hall also recovered button blanks: Grossman (1991:11) found three in the demolition rubble inside a feature he identified as the first almshouse, Hartgen Archaeological Associates (2003:171–172) found several at various locations on the Common, as did the excavations conducted during the renovations in City Hall Park (Bankoff and Loorya 2008). The ubiquity of button blanks in excavations on the old Common have lead archaeologists to the conclusion that bone buttons were being

manufactured in the area, almost certainly at one of the public institutions located there, specifically the almshouse.

Inhabitants of the almshouse likely made bone buttons as part of the work required of able-bodied residents. Drilling holes using hand tools would have been a monotonous, repetitive, and somewhat physically taxing job that unskilled workers could perform. Shannon Glazer, in her 2006 master’s thesis, experimented with bone button production in all its stages of manufacture. Using her experimental results and examples from previous excavations of the almshouse, she concluded that cow—and possibly pig—long bones, ribs, and scapulae were utilized to make buttons in a process during which “every step was affected by the maker’s surroundings, which was compatible with the overseers’ goal of reforming through labor” (Glazer 2006:iv, see also Cantwell and Wall 2001:275).

Fifty-six pieces of bone blanks were found during the current excavations, with the greatest concentrations in Room 8C ( $n=18$ ) and Test Unit 5 ( $n=13$ ); however, the majority of the single-hole buttons were found elsewhere, with 43 of the 50 single-hole bone buttons coming from the midden in Features 28 and 29 (Tables 8.13 and 8.14). The buttons in the midden are likely to have been lost or discarded after they were covered and sewn onto garments, rather than being unused or unsold objects manufactured on site. Conversely, during the previous excavations described in Baugher et al. 1990, the button blanks and bone buttons were found in roughly the same area.

Table 8.13: Button blanks.

TU	Fea #	Count
		2
	14	1
	34	1
	8	1
2		3
4NE		3
5		13
6		2
7		1
11	3	1
	35	2
3NE		8
8C.1		3
8C.3		1
8C.5		8
8C.6		4
8C.8		2
TOTAL		56

Table 8.14: Single-hole bone buttons.

TU	Fea #	Count
2		1
5		3
29 (so. ext.)	35	1
3NE		1
	28	38
	29	5
8C.7		1
TOTAL		50

The Room 8C assemblage (see Table 8.12), like the Feature 33/35 fill, included kiln-associated material from the stoneware potters working nearby, as well as stoneware sherds included in the household group that might have been classified as kiln wasters if they had been more complete. The six mug sherds came from at least four different vessels, all with painted abstract decorations and one with an incised and painted motif (see Images 8.3 and 8.4). The single hollowware sherd also has an incised and painted motif, but is too small to tell either its precise form or motif, although it is likely to have come from a mug, as these vessels generally had the most complex decorations. The jar sherd is plain. One of the sugar mold sherds has a thin white slip on its interior; the others have plain very smooth unglazed interiors.

#### OTHER GROUPS

The commercial group consists of three British coins found in Room 8C: two George II halfpennies and an unidentified “Georgius Rex” coin. The George II halfpennies were minted at different times. The older, identified through X-ray analysis, is a “young head” style, made circa 1729–1739 (Noel Hume 1970:162); the other is an “old head” style minted in 1746. The third English coin is very corroded and could only be partially identified through X-ray analysis as belonging to the reign of one of the four Georges who ruled England from 1714 to 1830.

The only artifacts in the toy/recreation group are two plain buff-colored clay marbles from Test Unit 6, Stratum III. The hardware group consists of two mending pieces of a large iron staple. One end is bent at an angle of 90 degrees to the body; the other is broken off.

The small indeterminate group ( $n=8$ ) includes a curved, black-colored, coarse earthenware sherd with a dark brown lead glaze on the convex surface; the concave surface is unglazed and has a sandy texture. The black color of the body is probably due to reducing (i.e., oxygen poor) conditions in the kiln. This sherd might be a piece of an unusually shaped roof tile. The other interesting artifact in this group is a flake/spall of English flint that could have come from either a gunflint or a strike-a-light.

## SUMMARY

The artifact deposit in Stratum III, Room 8C, consisted of secondary refuse deposited before City Hall was constructed. It is not possible to connect the artifacts as a group with a particular household or with the occupants of the almshouse or the gaol, although the presence of button blanks suggests that at least some of the artifacts originated at the almshouse, and Room 8C's location places it within the footprint of the almshouse. The kiln furniture and kiln wasters in the deposit are almost certainly from the stoneware potters working on Pot Bakers Hill.

## FEATURE 3 INTERIOR FILL

The artifact assemblage from within Feature 3 was excavated from Test Unit 11 with additional work in Test Units 23 and 25 (see Chapter 7 and Map 7.35). Within Test Unit 11, Strata I and II, were brick and rubble fill, the bedding for the contemporary bluestone sidewalk. Stratum III was a sandy fill layer; Stratum V was a layer with a large amount of coal ash located under Stratum III and above the brick floor of the feature. Stratum IV was a shallow layer of sand under the brick floor. Stratigraphy was the same in Test Units 23 and 25, except that Stratum IV was not present in Test Unit 25. Artifacts were not collected from Strata I and II during the excavations of Test Units 23 and 25.

The artifact assemblage consists of, for the most part, secondary refuse with the addition of a few artifacts that were in use shortly before or at the time when this feature was filled in. The latest artifact (Table 8.15) is a single wire nail from Stratum III in Test Unit 11 (FS 55); wire nails began to be manufactured in large quantities after about 1875 (Wells 2000:326–327). The next latest manufacturing beginning dates, also from Stratum III (FS 55), are from a hard paste porcelain saucer sherd with liquid gold decoration (post 1870 [Miller et al. 2000:13]) and a piece from a mold-made soda/lime glass container (post 1864 [Miller et al. 2000:8]). A shield-motif nickel coin, made between 1866 and 1883, came from FS 56, Test Unit 11, Stratum III, a gap in the wall. For Stratum V, the ashy layer, the latest artifacts are a post-1851 hard rubber comb and a post-1850 glass container. Based on these manufacturing beginning dates, it is possible that the feature was filled during the last quarter of the nineteenth century.

Table 8.15: TPQ by strata and test unit.

Strat	FS#	TU	TPQ	# of dated artifacts
1	53	11	1850	22
2	54	11	1815	11
3	55	11	1875	243
3	276	25	1855	36
3 (gap in wall)	56	11	1866	58
4	57	11	-	0
4	285	23	1815	12
5	58	11	1850	20
5	278	25	1851	18
5	283	23	1825	30
brick sample	281	25	-	0
	284	23	1877	4

Stratum IV was the sand layer underneath the brick floor of the feature and thus was not actually part of the feature fill, although it is possible that some artifacts moved down into this stratum through gaps in the floor.

There were no significant differences in ceramic manufacturing date ranges between Strata I, II, III, and V; Stratum IV, as expected, had earlier dates (Table 8.16).

Table 8.16: Ceramic mean beginning and end dates of manufacture.

Strat	Mean Begin	Mean End
1	1781	1867
2	1783	1866
3	1784	1879
3 (gap in wall)	1774	1855
4	1752	1832
5	1797	1897

The artifacts were not evenly distributed within the feature fill; over half were found in Test Unit 11, Stratum III (FS 55), but the same stratum in Test Units 23 and 25 had relatively few artifacts (Table 8.17). In Test Unit 23, Stratum V, the ashy layer had many more artifacts than Stratum III, while in Test Unit 25, the amounts were approximately the same. This pattern could be the result of dumping cartloads of dirt with varying amounts of different types of refuse into the feature as it was filled. Stratum IV (present only in Test Units 11 and 23) had only 31 artifacts.

Table 8.17: Total artifacts (without faunal materials) by provenience.

TU	Strat	Count	Percent
11	1	71	3.3%
11	2	43	2.0%
11	3	1268	59.4%
11	3 (gap in wall)	260	12.2%
11	4	3	0.1%
11	5	99	4.6%
23		11	0.5%
23	3	25	1.2%
23	4	28	1.3%
23	5	119	5.6%
25		1	0.0%
25	3	98	4.6%
25	5	105	4.9%
TOTAL		2131	

The most common artifacts in the feature fill were in the architectural and household groups (Table 8.18).

Table 8.18: Feature 3 fill groups (without faunal materials).

Group	Count	Percent
Activities	16	0.8%
Architectural	1075	50.4%
Commercial	1	0.0%
Electrical	2	0.1%
Fuel	17	0.8%
Furniture	18	0.8%
Hardware	20	0.9%
Household	715	33.5%
Indeterminate	140	6.6%
Lighting	54	2.5%
Manufacturing	6	0.3%
Medical	1	0.0%
Other	1	0.0%
Personal	52	2.4%
Sanitary	8	0.4%
Toy/Recreation	5	0.2%
TOTAL	2131	

Within FS 55 (Test Unit 11, Stratum III), which had almost 60% of the artifacts in the fill, architectural group artifacts account for slightly more than half of all objects (Table 8.19)—due in large part to the 502 pieces of window glass and 141 nails in this stratum (643 of the 654 artifacts in the architectural group).

Table 8.19: Test Unit 11, Stratum III (FS 55), groups (without faunal materials).

Group	Count	Percent
Activities	6	0.5%
Architectural	654	51.6%
Fuel	15	1.2%
Furniture	9	0.7%
Hardware	11	0.9%
Household	406	32.0%
Indeterminate	110	8.7%
Lighting	28	2.2%
Manufacturing	4	0.3%
Medical	1	0.1%
Personal	18	1.4%
Sanitary	6	0.5%
TOTAL	1268	100.0%

Even though it appears that the fill deposit is made up of at least two dumping episodes (Strata III and V), the deposit will be discussed as one assemblage, based on the dates and on the presence of at least one cross mend (a stoneware spittoon, see below). The two deposits might represent separate cartloads, one containing relatively more ashes, dumped at the same time. The assemblage cannot be linked to a particular source or sources.

#### ARCHITECTURAL

The high percentage of artifacts classified as architectural is due to the large amount of window glass in the fill. The glass pieces are from a variety of window panes. Of the 867 pieces, 583 are aqua colored, 250 are colorless, 21 are light aqua, two are dark aqua, 10 are pale green, and one is blue. The manufacturing technique of most could not be determined, except for one piece (from Stratum III), which is crown glass. Several of the pieces have adhesions of window putty. One piece is frosted on one surface and probably came from an interior door, possibly to an office. The colorless window glass shards from Stratum III include some large pieces of panes, one of which appears to be cut to fit a non-square or rectangular window, possibly a transom.

The great majority of the 188 nails in the feature fill are too heavily rusted and encrusted with miscellaneous materials to determine their method of manufacture, or to tell if they were discarded along with the wood in which they were presumably embedded. One, however—a cut nail with a machine-made head from Stratum III—has been burned, so it is not rusted. Cut nails with machine-made heads were made after 1805 (Miller et al.

2000:14). The wire nail from the same context is also less rusted. A copper alloy nail, possibly for roofing, is also from this stratum.

Two pieces of post-1850 slip-glazed stoneware sewer or water pipes were found, one from Stratum I and the other from Stratum III. Other architectural artifacts collected from the fill include a yellow brick fragment that might have come from a Dutch-made brick, although the body is harder than most seventeenth-century Dutch bricks found in New York, and a complete red brick.

The complete red brick is a sample taken from the structure of Feature 3, as it has a circular depression on one face (Image 8.14). According to Dr. Allan Gilbert, an expert on colonial and nineteenth-century bricks, this depression might have functioned as a “key” to help hold mortar, a feature observed on some bricks made during the first half of the nineteenth century. Dr. Gilbert has seen similar small rectangular depressions on bricks used to construct the circa-1848 smallpox hospital on Roosevelt Island. Alternatively, this circular depression might have been left by a stick or other instrument used to test if the brick was firm enough to be removed from the mold. The darker oval areas on the side of the brick are from its placement in the brick clamp; this brick was stacked on edge on top of three bricks in the layer below. The areas in contact with the lower layer did not receive as much oxygen during firing, which caused the clay to burn to a darker color (in potter’s terms, these areas are “reduced”). The marks are oval rather than rectangular because some oxygen was able to seep in around the edges of the lower bricks (Allan Gilbert, personal communication, December 21, 2011).



Image 8.14: Brick with “key” depression on the top and kiln scars on the side (FS 281.1). The other architectural artifacts consist of a rusted cut spike and a rusted screw, a few fragments of mortar ( $n=3$ ) and plaster ( $n=1$ ), a piece of cut wood, and a small piece of slate that is probably from a roofing tile, but might be from a slate writing board.

#### HOUSEHOLD

The artifacts classified in the household group are made of ceramic or glass (Table 8.20).

Table 8.20: Household group artifacts (sherd counts).

Class	Material	Count
Ceramic	Coarse Earthenware	39
Ceramic	Porcelain	45
Ceramic	Refined Earthenware	187
Ceramic	Stoneware	48
Glass	Common Glass	318
Glass	Leaded Glass	61
Glass	Non-Lead (Soda/Lime) Glass	17
TOTAL		715

Almost half (44%) of the artifacts in the household group (Table 8.21) are pieces of bottles or other containers<sup>1</sup> made of common glass of different colors (colorless glass is classified as “lead” or “non-lead”—i.e., soda/lime—all other colors are “common glass” in the inventory; see Appendix J). Many of the glass shards were too fragmentary to determine their method of manufacture, but those with determinable manufacturing methods were mouth blown in molds (Table 8.22).

Table 8.21: Common glass containers (shard counts).

<b>Object</b>	<b>Object Color</b>	<b>Count</b>
Bottle	Amber	2
Bottle	Aqua	22
Bottle	Aqua, Dark	2
Bottle	Black/Green	4
Bottle	Brown	2
Bottle	Green	6
Bottle	Green, Dark	117
Bottle	Green, Olive	2
Bottle, Case	Green, Dark	1
Bottle, Case	Green, Olive	14
Bottle, Panel	Aqua	1
Bottle, Panel	Green, Dark	1
Container Glass	Amber	5
Container Glass	Aqua	7
Container Glass	Aqua, Dark	5
Container Glass	Black/Green	4
Container Glass	Green	3
Container Glass	Green, Dark	10
Container Glass	Green, Olive	59
Container Glass	Green, Pale	2
Container Glass	Olive	1
Container Glass	Purple	1
Demijohn	Green, Dark	44
Indeterminate	White	3
<b>TOTAL</b>		<b>318</b>

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1. In the inventory, “Container Glass” was used for objects too incomplete to identify if they came from bottles, jars, other containers, or—especially if colorless glass—drinking vessels.

Table 8.22: Household group glass containers (shard counts).

Material	Manufacture Technique	Object	Count
Common Glass	Dip Mold	Bottle	120
Common Glass	Dip Mold	Bottle, Case	1
Common Glass	Indeterminate	Bottle	12
Common Glass	Indeterminate	Container Glass	13
Common Glass	Indeterminate	Indeterminate	3
Common Glass	Mold Blown, Indeterminate	Bottle	19
Common Glass	Mold Blown, Indeterminate	Bottle, Case	14
Common Glass	Mold Blown, Indeterminate	Bottle, Panel	1
Common Glass	Mold Blown, Indeterminate	Container Glass	76
Common Glass	Mold Blown, Mouth	Bottle	2
Common Glass	Mold Blown, Mouth	Bottle, Panel	1
Common Glass	Mold Blown, Mouth	Demijohn	44
Common Glass	Mouth Blown, General	Bottle	4
Common Glass	Mouth Blown, General	Container Glass	6
Common Glass	Multi-Part Mold	Container Glass	2
<i>subtotal common glass</i>			<i>318</i>
Leaded Glass	Indeterminate	Container Glass	2
Leaded Glass	Indeterminate	Hollowware	4
Leaded Glass	Indeterminate	Indeterminate	5
Leaded Glass	Mold Blown, Indeterminate	Container Glass	1
<i>subtotal lead glass</i>			<i>12</i>
Non-Lead Glass	Indeterminate	Bottle	1
Non-Lead Glass	Indeterminate	Container Glass	4
Non-Lead Glass	Indeterminate	Hollowware	2
Non-Lead Glass	Indeterminate	Indeterminate	4
Non-Lead Glass	Mold Blown, Indeterminate	Bottle	1
Non-Lead Glass	Mold Blown, Indeterminate	Container Glass	1
<i>subtotal non-lead glass</i>			<i>13</i>
<b>TOTAL</b>			<b>343</b>

Many of the bottles could have been used to hold alcohol in one form or another, although none was complete enough to be identified as a wine bottle (see the Feature 28 artifact discussion). Although it was noted during analysis that sherds from several different bottles seemed to be scattered throughout Stratum III, no obvious cross mends were identified.

The bottles made in dip molds were most likely made between 1730 and 1870 (Lindsey 2012). A small round aqua bottle with embossed letters (“...OWS” on one side and “...RS W” on the other) was probably made after circa 1750 and before 1920 (Miller et al 2000:8). A double ring-style finish dates the amber bottle from which it came to 1840–1920 (Lindsey 2012); a dark aqua vessel, made in a cup mold, was manufactured after 1850

(Lindsey 2012). The other shards could not be assigned manufacturing date ranges, although all the vessels identified as mouth blown were almost certainly made before 1920.

The forms of some of the table glass from the feature fill, in particular tumbler shards, are more identifiable (Table 8.23).

Table 8.23: Table glass (shard count).

Material	Manufacture Technique	Object	Count
Leaded Glass	Indeterminate	Drinking Vessel	4
Leaded Glass	Indeterminate	Tableware, General	3
Leaded Glass	Indeterminate	Tumbler	2
Leaded Glass	Mold Blown, Indeterminate	Tableware, General	1
Leaded Glass	Mold Blown, Indeterminate	Tumbler	1
Leaded Glass	Pressed	Tableware, General	8
Leaded Glass	Pressed	Tumbler	30
Non-Lead Glass	Indeterminate	Tableware, General	3
Non-Lead Glass	Mold Blown, Mouth	Tableware, General	1
TOTAL			53

The 30 pressed lead glass tumbler shards make up at least six vessels, some quite complete. All have flutes on their bodies and those with present bases have ground pontils (Image 8.15). These vessels do not exactly match each other, so they were not all made in the same mold, but they are sufficiently similar to be considered as a possible set. Pressed glass tablewares were first made circa 1825 in imitation of cut glass (Jones and Sullivan 1985 11, 33–34) and continue to be made today. Pressed lead glass is heavier and usually more expensive than pressed non-lead glass, although both are less expensive than cut glass. Four of the vessels were in Stratum III; two (represented by only four shards) were in Stratum V. The four tumblers from Stratum III, because they are much more intact than most artifacts in the fill, might have been primary refuse included with the secondary refuse that made up this deposit.

The non-lead shard classified as “mold blown, tableware, general” in Table 8.23 is an oval pedestal foot (2/12” x 2 3/16”) that might be part of a master salt dish or salt cellar (Image 8.16). It is heavy glass with a partially ground-down pontil and a mark on the base that might be a “P” or a “B,” or simply an imperfection in the mold.

The ceramic sherds in the feature fill are from vessels made from a variety of ware types, from eighteenth-century (British buff-bodied slipware) to mid-nineteenth-to-early-twentieth-century types (white granite and some hard paste porcelain) (Table 8.24).



Image 8.15: Fluted lead glass tumblers (FS 55.10 and .14).



Image 8.16: Vessel with a pedestal foot, possibly a master salt or salt cellar (FS 56.41).

Table 8.24: Household group ceramic artifacts (sherd counts).

Material	Ware	Count	Percent
Coarse Earthenware	Agatized Body	1	0.3%
Coarse Earthenware	British Buff-Bodied Slipware	9	2.8%
Coarse Earthenware	Redware	29	9.1%
<i>Coarse Earthenware Subtotal</i>		39	12.2%
Porcelain	Bone China	11	3.4%
Porcelain	Porcelain, Chinese Export	19	6.0%
Porcelain	Porcelain, English Soft Paste	2	0.6%
Porcelain	Porcelain, Hard Paste	11	3.4%
Porcelain	Porcelain, Soft Paste	2	0.6%
<i>Porcelain Subtotal</i>		45	14.1%
Refined Earthenware	Agate Ware, Refined	1	0.3%
Refined Earthenware	Creamware	69	21.6%
Refined Earthenware	Creamware, Dark	1	0.3%
Refined Earthenware	Ironstone/Stone China	1	0.3%
Refined Earthenware	Jackfield Type	1	0.3%
Refined Earthenware	Pearlware	45	14.1%
Refined Earthenware	Pearlware/Whiteware	1	0.3%
Refined Earthenware	Red Bodied	3	0.9%
Refined Earthenware	Rockingham	3	0.9%
Refined Earthenware	Tin Glazed	1	0.3%
Refined Earthenware	White Granite	3	0.9%
Refined Earthenware	Whiteware	55	17.2%
Refined Earthenware	Yellowware	3	0.9%
<i>Refined Earthenware Subtotal</i>		187	58.6%
Stoneware	Salt Glazed, Gray/Buff Bodied	35	12.9%
Stoneware	Slip Glazed Stoneware	2	0.6%
Stoneware	White Salt Glazed	5	1.6%
<i>Stoneware Subtotal</i>		48	15.0%
<b>TOTAL</b>		313	

The majority of the sherds are too incomplete for precise identification of their forms. Of the 313 sherds, only 114 have identifiable forms (Figure 8.02; Table 8.25).

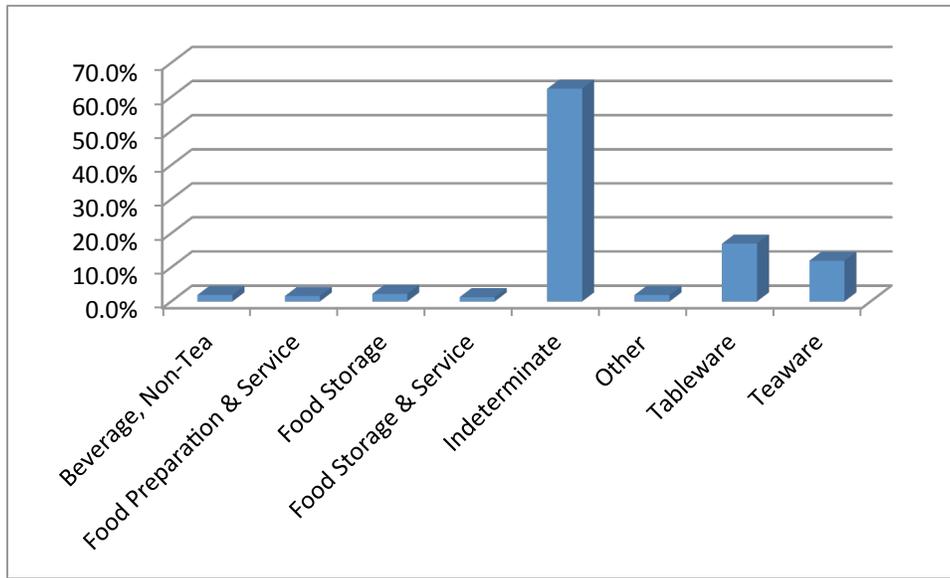


Figure 8.02: Household ceramic functional groups (sherd counts).

Table 8.25: Household ceramic functional groups and ware types (sherd counts).

Function	Object	Ware	Count
Beverage, Non-Tea	Mug, Child's	Whiteware	6
Food Preparation & Service	Bowl	Salt Glazed, Gray/Buff Bodied	1
Food Preparation & Service	Dish	British Buff-Bodied Slipware	4
Food Storage	Jar/Jug	Redware	1
Food Storage	Jar/Jug	Salt Glazed, Gray/Buff Bodied	4
Food Storage	Jug	Salt Glazed, Gray/Buff Bodied	2
Food Storage & Service	Bottle	Slip Glazed Stoneware	3
Food Storage & Service	Bowl	Pearlware	1
Tableware	Egg Cup	Whiteware	7
Tableware	Plate	Creamware	10
Tableware	Plate	Ironstone/Stone China	1
Tableware	Plate	Porcelain, Chinese Export	2
Tableware	Plate	Porcelain, Hard Paste	2
Tableware	Plate	Whiteware	12
Tableware	Tableware, General	Creamware	6
Tableware	Tableware, General	Pearlware	9

Table 8.25: Household ceramic functional groups and ware types (sherd counts) (Cont'd).

Function	Object	Ware	Count
Tableware	Tableware, General	Red Bodied	1
Tableware	Tableware, General	White Granite	1
Tableware	Tableware, General	Whiteware	3
Teaware	Saucer	Bone China	1
Teaware	Saucer	Creamware	1
Teaware	Saucer	Pearlware	2
Teaware	Saucer	Porcelain, Chinese Export	5
Teaware	Saucer	Porcelain, Hard Paste	5
Teaware	Saucer	White Granite	2
Teaware	Teacup	Bone China	8
Teaware	Teacup	Pearlware	2
Teaware	Teacup	Porcelain, Chinese Export	2
Teaware	Teacup	Porcelain, English Soft Paste	2
Teaware	Teacup	Whiteware	1
Teaware	Teapot	Pearlware	1
Teaware	Teapot	Red Bodied	1
Teaware	Teaware, General	Creamware	1
Teaware	Teaware, General	Pearlware	1
Teaware	Teaware, General	Porcelain, Chinese Export	2
Teaware	Teaware, General	Whiteware	1
TOTAL			114

Although MNVs were not assigned during analysis, it was possible to make an estimate of the MNV with identifiable forms—from information recorded in the inventory, based on the particular motifs present (Table 8.26; the 25 sherds identified only as “General Tea- or Tablewares” are not included on this table). For example, the five sherds of Chinese export porcelain had a variety of under- and overglaze painted motifs that indicated they came from four different vessels. The estimate for plain vessels (i.e., creamware) was less precise because of their lack of decoration; the 10 creamware plate sherds could have come from between three to six different vessels, so the lower number was chosen as a minimum number. The high ratio of sherds to vessels is another indication that the artifacts within the Feature 3 fill were redeposited; i.e., moved one or more times from the place where they were originally discarded.

Table 8.26: Household group ceramic sherds and vessels with identifiable forms.

Object	Ware	Count	MNV
Bottle	Slip Glazed Stoneware	3	3
Bowl	Pearlware	1	1
Bowl	Salt Glazed, Gray/Buff Bodied	1	1
Dish	British Buff-Bodied Slipware	4	2
Egg Cup	Whiteware	7	1
Jar/Jug	Redware	1	1
Jar/Jug	Salt Glazed, Gray/Buff Bodied	4	2
Jug	Salt Glazed, Gray/Buff Bodied	2	2
Mug, Child's	Whiteware	6	1
Plate	Creamware	10	3
Plate	Ironstone/Stone China	1	1
Plate	Porcelain, Chinese Export	2	2
Plate	Porcelain, Hard Paste	2	1
Plate	Whiteware	12	6
Saucer	Bone China	1	1
Saucer	Creamware	1	1
Saucer	Pearlware	2	1
Saucer	Porcelain, Chinese Export	5	4
Saucer	Porcelain, Hard Paste	5	2
Saucer	White Granite	2	1
Teacup	Bone China	8	3
Teacup	Pearlware	2	2
Teacup	Porcelain, Chinese Export	2	2
Teacup	Porcelain, English Soft Paste	2	1
Teacup	Whiteware	1	1
Teapot	Pearlware	1	1
Teapot	Red Bodied	1	1
Spittoon	Salt Glazed, Gray/Buff Bodied	6	1
TOTAL		95	49

The earliest vessels in the fill are probably the four sherds from at least two British slipware dishes (made circa 1670–1795); the latest are sherds of undecorated hard paste porcelain and white granite saucers with wells (post 1840 and 1842, respectively) and the one post-1870 sherd of a hard paste porcelain hollowware with liquid gold gilding.

Other relatively complete ceramic vessels are the undecorated hard paste porcelain saucer (about two-thirds complete) and an undecorated whiteware egg cup with a thin, fine-grained body and a distinct blue tint to the glaze. There are smudged black marks on the base of the egg cup that are probably a misapplied and illegible printed maker's mark (Image 8.17)

Seven sherds (only three mend) of a child's mug with a printed motif were found in Strata III (FS 55 and 56) and V (FS 283). The two sherds from FS 55 (Test Unit 11) and FS 56 (the gap in the wall) are burned (the one in FS 56 is also encrusted with small cinders), but the four from FS 283 are not, even though Stratum V had more coal ash than Stratum III. The print on this vessel is smudged to the point where it would most probably have been sold as a second. The remaining decoration consists of the words "THE WAY TO WEALTH ... DR. FRANKLIN Poor Richards ... FOR YOUTH" arranged beneath triangular designs (Image 8.18). "The Way to Wealth" was an essay Benjamin Franklin first published in 1758 as a preface to his almanac. It was not part of Poor Richard's maxims, but was an essay giving good advice in the form of a purported speech by an old and virtuous man, who made use of many of the maxims. Franklin's maxims were popular decorations on transfer-printed children's mugs, along with such mottos as "For a Good Boy" and "For Loving a Book," during the middle decades of the nineteenth century (Riley 1991). Didactic artifacts were part of the everyday world of Victorian-era children, teaching them to be moral and hard-working citizens.

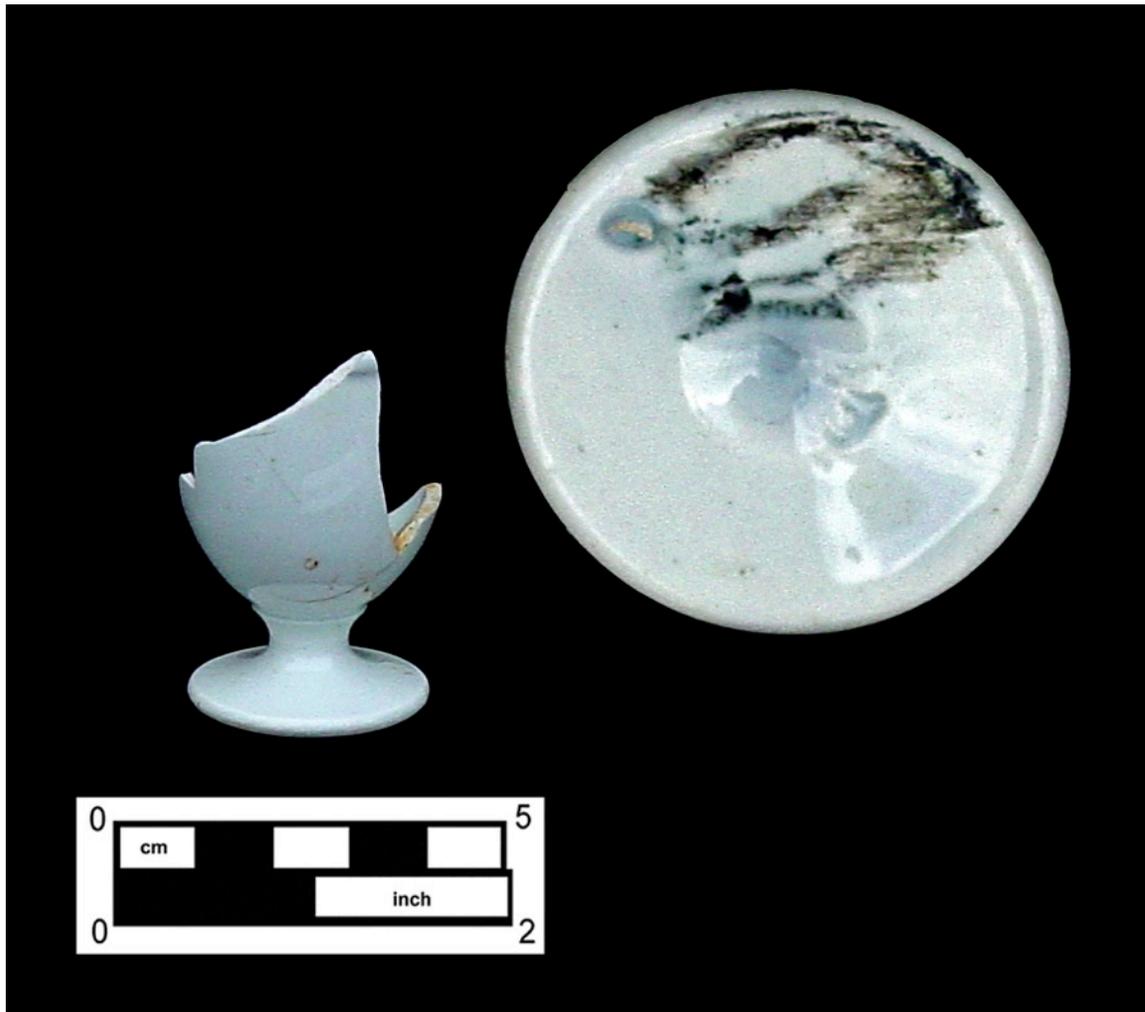


Image 8.17: Whiteware egg cup with smudged maker's mark (FS 56.1 and 55.40).

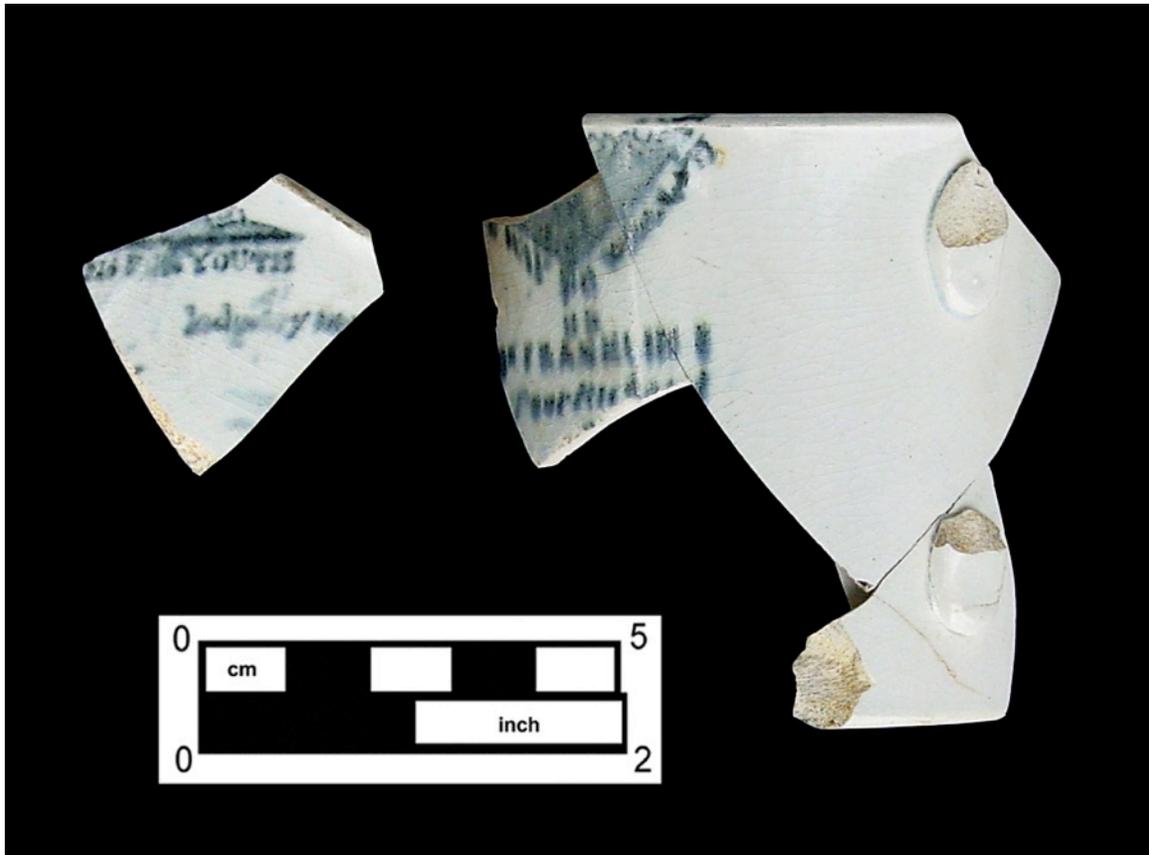


Image 8.18: Child's mug with a smudged print (an aphorism from Benjamin Franklin) (FS 55, 56 and 283).

At least two bone china London-shaped cups with dark blue transfer-printed decorations came from Stratum V, with matching sherds, probably from the same cups, in Stratum III (Image 8.19). The teacups, made between 1810 and 1840, have matching very dark blue Chinese porcelain-style landscapes on their exteriors and interior borders, with pendants of fleurs-de-lis and balls; the same border is on a saucer from Stratum III. These cups and saucer were probably part of a tea set, likely used and first discarded well before the date of the filling of the feature.

A large sherd from a pearlware teapot roughly contemporaneous (circa 1790–1840) with the bone china teacups was found in Stratum III. It is part of the base of a large, possibly oval, vessel with a molded decoration of acanthus leaves outlined in dark blue (Image 8.20). This style of classically inspired molded, blue outlined decoration is most closely associated with fine stonewares made at the Castleford pottery (Edwards 1982), but, as evidenced by this vessel, the style was copied in less expensive pearlware.

The most numerous ceramic vessels ( $n=6$ ) from the fill are whiteware plates, at least five of which are transfer printed: two with indeterminate (but not the same) light blue motifs, two with blue motifs (one floral, the other indeterminate), and one black floral print on a “worm trail” background. All are represented by single sherds.



Image 8.19: Bone china with transfer-trinted motifs  
(FS 283.2, 278.1 and 55.4, .128 and .129).



Image 8.20: Sherd from a pearlware teapot with Castleford-style molded and painted decoration (FS 55.2).

#### PERSONAL

The personal group is dominated by 32 pieces of white clay smoking pipes: six from bowls and the rest stem fragments. Two of the bowls were molded in a fluted pattern, a common decoration throughout the nineteenth century. At least one and possibly two pipe stems were decorated in the elaborate Peter Dorn style, with bands of rouletted squares and stylized oak leaves. This combination of decorations was first used by either the French pipe maker Peter Dornier or the German Peter Dorn, but was copied by a number of other pipe makers, especially during the last half of the nineteenth century (Reckner and Dallal 2000:35).

Eight buttons—five Prosser-type pressed porcelain, two rubber, and one copper alloy—and a Prosser-type pressed porcelain collar stud were in the fill. All of the Prosser-type buttons are plain white and are four-hole sew-through buttons, but they vary in size: three are 0.44", one is 0.38", and the other is 0.8". One of the 0.44" buttons has a domed face and an almost lustrous surface. All that remains of the copper alloy button is a flat corroded disc.

One of the rubber buttons (both are from Stratum III) is a plain, black, molded two-hole rubber coat button (1" diameter) with the back mark "N.R. Co./ Goodyear's P-T 1851"; 1851 was the year that a patent for hard rubber buttons was granted to Charles Goodyear. The patent expired in 1872, after which most manufacturers ceased to use the patent date in their back marks (Cienna 2012). The "N.R." is for the Novelty Rubber Company, in

business from 1853 to 1886, first in Connecticut then, from 1855 on, in New Brunswick, New Jersey (Worthpoint/GoAntiques 2012). Another smaller button (0.56” diameter) has the same back mark, minus the year, and an attached white metal loop shank.

The other personal group artifacts are pieces from a shoe or boot featuring a stacked leather heel with nail holes and a fragment of a post-1851 black rubber comb.

#### SANITARY

Four ceramic vessels are in the sanitary group: a large sherd from an ironstone chamber pot, two small sherds from an unidentified ironstone form, five large sherds from a white granite<sup>2</sup> wash basin, and six sherds from a stoneware spittoon. The printed decoration on the chamber pot and the unknown form vessel is a motif designed to resemble marble, commonly used on sets of toilet vessels during the late nineteenth century. The chamber pot is printed in gray, while the other has a light blue print.

The white granite wash basin has an exterior rim diameter of slightly over 12” and a remaining (not complete) height of 5.5”, so it was a substantial, although plain, vessel, possibly suited for use in a non-domestic space, such as an office.

The salt-glazed stoneware spittoon (Image 8.21) has sherds in FS 55 (Test Unit 11, Stratum III), FS 278 (Test Unit 25, Stratum V), and FS 283 (Test Unit 23, Stratum V); the sherds in 278 and 283 mend with those in 55, but not with each other, which illustrates how the artifacts in the fill were disbursed. It is the only object in the Feature 3 fill to be assigned a vessel number (C-0308). The spittoon, between 26 and 50% complete, is a large, thick-walled vessel with dark brown Albany slip on its interior and on the face of its funnel—a good choice to mask traces of tobacco juice. Its large size and sturdiness would have made it suitable for a public space, although it could have been used in a domestic setting.

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2. Following the usage of ceramic historians, the term “ironstone” is used here for hard, white, well-vitrified, refined earthenware bodies that have printed or painted surface decorations and “white granite” is used for the same body when it is undecorated (except for patterns formed by the molds used to make these vessels).



Image 8.21: Spittoon, salt-glazed stoneware with Albany slip on the funnel and Interior (C-0308).

#### MEDICAL

The single artifact in the medical group is a complete aqua glass panel bottle embossed “R.R.R. RADWAY & Co NEW YORK/ENTD ACCORD TO ACT OF CONGRESS” (Image 8.22). The finish has a very slight indentation, which probably acted as a pouring lip. Radway’s Ready Relief was a liniment, introduced about 1847 and still sold as late as 1928, that purported to be efficacious for both internal and external pain (Griffenhagen and Bogard 1999:82). This bottle is mouth blown, not machine made, so it was manufactured before 1920. It is 6” high with sides of 2” and 3”.

Contemporary advertisements for this nostrum claim that it was a cure for all sorts of ailments:

**PAIN CURED**—Radways’s Ready Relief is the most important medicinal curative—for the immediate relief of the sufferer—of all varieties of PAINS, ACHES and INFRIMITIES, and the prompt cure of the sick where PAIN, either internal or external, is a concomitant of the disease, that has ever been discovered. IN A FEW MINUTES after the application of the READY RELIEF externally, or its administration internally, the patient—seized with the most excruciating PAINS, ACHES, CRAMPS, RHEUMATISM, NEURALGIA, GOUT, LUMBAGO, FEVER AND AGUE, SPASMS, SORE THROAT, INFLUENZA, DIPHTERIA, CONGESTION or INFFLAMMATION, will enjoy ease and comfort.

SOLD BY DRUGGISTS EVERYWHERE. PRICE 25 CENTS A BOTTLE. (Anonymous 2012a).



Image 8.22: Mouth-blown bottle for Radway’s Ready Relief patent medicine (FS 55.528).

According to an entry in the Smithsonian Museum’s catalog, the ingredients in the liniment were alcohol (27%), oleoresin capsicum, ammonia, camphor, potassium, and castile soap (Smithsonian 2012). With 27% alcohol, it is no wonder that patients experienced a diminution of pain after taking the drug internally. Capsicum (pepper), ammonia, and camphor applied externally would have dulled the pain of some of the other ailments, at least temporarily.

An article in the July 13, 1904 *The Printers' Ink* (a publication devoted to furthering advertising, especially in newspapers) noted that:

the same copy [i.e., the same advertisement] was printed for almost a generation. The ads were of moderate size and without pictures. It is thirty years since the Radway remedies have been aggressively advertised, yet their prestige has continued with the public, and they have been on sale not only in every drug store in the United States but in practically every country in the world [*The Printer's Ink* 1904].

Under new leadership, an aggressive advertising campaign was begun that tied in Radway's Ready Relief to coupons for a fashion magazine and S & H green trading stamps, both distributed through drug stores, and included pictures and patient testimonials in the advertisements (see *The Printers' Ink. A Journal for Advertisers*, Vol. XLVIII No. 2, pages 10–11 for a complete description of this plan).

#### LIGHTING

All of the artifacts in this group are pieces of lamp globes, chimneys, or shades. The most numerous artifacts in the lighting group are shards from one or more conical milk glass lamp shades. Shades of this type could have been used for either gas or electrical lights. Twenty-four pieces were found throughout Stratum III and two in Stratum V. Two pieces of cased glass (layers of different colored glass fused together), one clear and red colored and the other white and green, were found in Stratum III, FS 55. At least two lamp globes with frosted exteriors cut or etched through to create clear patterns against the frosted surfaces came from Strata III and V; 10 pieces are lead glass and eight are non-lead glass. Eight pieces from a very light aqua non-lead glass lamp chimney with a bell-shape came from Stratum III.

#### INDETERMINATE

The indeterminate group has a relatively high number of artifacts ( $n=140$ ) due to the amount of deteriorated metal within the fill. The metal objects are made of iron ( $n=59$ ), copper alloy ( $n=15$ ), and a mixture of materials. The artifacts listed as "Other" in class are conglomerations of various materials held together by rust.

#### OTHER GROUPS

The other functional groups—activities, commercial, electrical, fuel, furniture, hardware, manufacturing, toy/recreation, and other—had relatively few artifacts (see Table 8.15).

Seven of the 16 artifacts in the activities group are from a single stoneware bottle, probably a master ink bottle; two others are from a glass master ink bottle made of an unusual purple/brown-colored glass (similar in color to the purple/brown flacon from the Feature 28 midden). This vessel has an applied and tooled pouring lip. Three redware sherds are from

a large, plain flower pot saucer. The remaining artifacts in this group are pencils: three made of slate and one a graphite insert for a wooden pencil.

The single commercial artifact is the 1866–1883 shield nickel.

The only electrical-related artifact in the feature fill is a carbon arc lamp rod (FS 284, no stratum; a miscellaneous find). Arc lamps “most popular use was for lighting streets and public areas in large cities after about 1877 and until the 1950s,” after which they were replaced by incandescent lamps (Woodhead et al. 1984: 75). According to a web site devoted to the work of Charles Francis Brush, who perfected the arc lamp, Brush’s arc lamps were in use on the streets of New York City, specifically Broadway between 14<sup>th</sup> and 34<sup>th</sup> Streets, by the end of 1881 (La Favre 2012).

The furniture group consists of 14 pieces of glass from at least two mirrors and two copper alloy buttons, probably tufting buttons from upholstered furniture or from a carriage seat. One has wood attached and the other has the remnant of a cloth covering on the face.

All of the artifacts in the hardware group are made of metal (copper alloy, iron, and lead). They include a small brass hinge, probably for furniture, a large iron bolt, and an almost complete penta (pentagon-shaped head) bolt. Penta bolts are used for security purposes, as they need a specially shaped screw driver to remove them. This bolt is probably intrusive to the deposit, as it is not rusted. Two pieces of lead pipe, one 2.75” in diameter and the other approximately 3.75”—both with one cut end and one crimped/pressed end—were found.

Six artifacts are in the manufacturing group; this group consists of both artifacts used to make things (one sherd from a redware sugar mold) and the byproducts of manufacturing processes (kiln wasters and a button blank). The section concerning the artifacts from the fill beneath Feature 3 (the fill associated with Feature 33/35) discusses these artifacts in more detail.

The five artifacts in the toy/recreation group are all marbles: two ceramic, two glass, and one stone. One of the ceramic marbles is plain and unglazed stoneware, but the other is glazed with a polychrome flint enamel-type lead glaze in browns, yellow, and blue. It has a distinct kiln scar on one surface, so it would not roll well. The flint enamel glaze was first used in 1849 by American potters on ceramic vessels (Azizi et al. 1996), but it was most probably not used on marbles until later. The glass marbles were handmade (post 1846) (Miller et al. 2000:9). One is blue with light buff swirls and is approximately 0.7” in diameter; the other is light green with white swirls and is slightly larger (0.75”); both are heavily patinated. The stone marble is also 0.75” in diameter and has traces of what might be red paint.

The single artifact in the other group is a chunk (over 2” thick) of asphalt from Stratum I.

In the fuel group are seven pieces of coal cinders, eight fragments of coal, and two pieces of charcoal. All but one piece of the charcoal came from Stratum III.

## SUMMARY

The artifact assemblage from the deposit within Feature 3 is composed of secondary (at least) refuse from an unknown number of sources, most probably deposited during the last decades of the nineteenth century. There are several artifacts included in the refuse, however, that probably were in use at the time of the fill, possibly in City Hall itself: a stoneware spittoon, a large white granite wash basin, a liniment bottle, and at least four pressed glass tumblers. Some of the window glass might also have come from broken windows in the building itself, but this is speculative.

### **FEATURE 33/35 CISTERN INTERIOR**

The Feature 33/35 analytical unit is composed of the fill from the interior of a cistern located underneath Feature 3. The cistern had been truncated by the retaining wall built in conjunction with City Hall; only its base remained (see Chapter VII).

The fill within Feature 33/35 is possibly associated with the construction of City Hall, although some later artifacts are included in the assemblage. The TPQ for the assemblage is 1864, based on a small sherd of a non-lead colorless glass bottle from Test Unit 8, Stratum I. The next latest date (1850) is also from a bottle: two mending sherds of an aqua-colored embossed bottle (the letters "NE..." are all that remain) from Feature 33 along the south wall of Feature 3. It was made in a cup mold using a snap case. A piece of a post-1850 sewer pipe was also found in this provenience, along with another piece from a different pipe, in Feature 35, Test Unit 28. The bulk of the assemblage, however, has earlier beginning dates (Tables 8.27 and 8.28). The later artifacts might have been introduced into the assemblage when the overlying Feature 3 was demolished (see Chapter VII and Feature 3 artifact discussion).

Table 8.27: TPQ by provenience.

TU	Strat	Fea #	Fea Strat	TPQ
3NE	2			1825
3NE	3			1800
3NE	4			1800
3NE	5			1775
3NE	6			1800
3NE	7			1795
3NE	8			1800
3NE	10			1807
8	1			1864 (next earliest 1815)
8	2			1825
8	3			1825
8	4			1775
11	6	3		1800
11	7	3		1840 (next earliest is 1800)
25	7	3		1807
28 (south extension)		35		1850 (next earliest is 1800)
29 (south extension)		35		1807
30		35		1807
		32		1807
		33	along S. wall of Fea. 3	1850 N=2; next earliest is 1828)
		35	cxt 1	1828
		35	cxt 2	1800

Table 8.28: TPQ by date.

TU	Strat	Fea #	Fea Strat	TPQ
3NE	5			1775
8	4			1775
3NE	7			1795
		35	cxt 2	1800
11	6	3		1800
3NE	3			1800
3NE	4			1800
3NE	6			1800
3NE	8			1800
		32		1807
25	7	3		1807
29 (south extension)		35		1807
30		35		1807
3NE	10			1807
3NE	2			1825
8	2			1825
8	2			1825
		35	cxt 1	1828
11	7	3		1840 (next earliest is 1800)
28 (south extension)		35		1850 (next earliest is 1800)
		33	along S. wall of Fea. 3	1850 (N=2; next earliest is 1828)
8	1			1864 (next earliest 1815)

The ceramic mean beginning and end dates are fairly well clustered from the middle of the eighteenth to the first three decades of the nineteenth centuries, with little evidence of earlier dates in lower strata or later in higher strata (Table 8.29).

Table 8.29: Ceramic mean beginning and end dates of manufacture.

TU	Strat	Fea #	Fea Strat	Mean Begin	Mean End
3NE	2			1750.19	1821.84
3NE	3			1756.80	1840.71
3NE	4			1748.58	1821.91
3NE	5			1748.00	1819.69
3NE	6			1737.54	1818.46
3NE	7			1753.92	1818.75
3NE	8			1755.73	1824.40
3NE	10			1768.88	1833.13
8	1			1778.50	1846.25
8	2			1766.48	1837.42
8	3			1753.53	1821.91
8	4			1756.00	1821.36
11	6	3		1753.43	1818.48
11	7	3		1759.93	1827.50
25	7	3		1756.95	1825.26
		32		1761.71	1823.97
		33	along S. wall of Fea. 3	1751.34	1826.09
28 (south extension)		35		1759.04	1829.62
29 (south extension)		35		1764.13	1823.14
30		35		1739.28	1815.28
		35	cxt 1	1779.47	1867.12
		35	cxt 2	1756.60	1820.52

The bulk of the artifacts came from Test Units 3NE and 8 (Table 8.30).

Table 8.30: Total artifacts (without faunal materials) by provenience.

TU	Strat	Fea #	Fea Strat	Count
3NE	2			168
3NE	3			15
3NE	4			115
3NE	5			43
3NE	6			13
3NE	7			20
3NE	8			34
3NE	10			21
<b>3NE Total</b>				<b>429</b>
8	1			21
8	2			114
8	3			369
8	4			24
8	wall			2
<b>8 Total</b>				<b>530</b>
11	6	3		45
11	7	3		54
<b>11 Total</b>				<b>99</b>
25	7	3		173
<b>25 Total</b>				<b>173</b>
28 (south extension)		35		62
<b>28 (south extension) Total</b>				<b>62</b>
29 (south extension)		35		125
<b>29 (south extension) Total</b>				<b>125</b>
30		35		75
<b>30 Total</b>				<b>75</b>
		32		118
		33	along S. wall of Fea. 3	127
		35	cxt 1	96
		35	cxt 2	112
<b>TOTAL</b>				<b>1946</b>

Over two-thirds of the artifacts in the fill are in the household group (Table 8.31), a greater percentage than in other feature fill assemblages.

Table 8.31: Artifact groups (without faunal materials).

Group	Count	Percent
Activities	2	0.1%
Architectural	307	15.8%
Arms	6	0.3%
Fuel	13	0.7%
Furniture	1	0.1%
Hardware	8	0.4%
Household	1309	67.3%
Indeterminate	107	5.5%
Lighting	1	0.1%
Manufacturing	54	2.8%
Personal	120	6.2%
Sanitary	18	0.9%
TOTAL	1946	

#### HOUSEHOLD

Of the 1,309 artifacts in the household group, 1,134 are ceramics and 175 are glass (Table 8.32). Refined earthenwares, in particular creamwares, make up over 60% of the ceramic artifacts (Table 8.33).

Table 8.32: Household group artifacts (sherd counts).

Class	Material	Count
Ceramic	Coarse Earthenware	152
Ceramic	Porcelain	61
Ceramic	Refined Earthenware	717
Ceramic	Stoneware	204
Glass	Common Glass	142
Glass	Leaded Glass	15
Glass	Milk Glass	6
Glass	Non-Lead Glass	12
TOTAL		1309

Table 8.33: Household group ceramic artifacts (sherd counts).

<b>Material</b>	<b>Ware</b>	<b>Count</b>	<b>Percent</b>
Coarse Earthenware	British Buff-Bodied Slipware	38	3.4%
Coarse Earthenware	Iberian Coarse Earthenware	3	0.3%
Coarse Earthenware	Redware	110	9.7%
Coarse Earthenware	Unidentified Coarse Earthenware	1	0.1%
<i>Coarse Earthenware Subtotal</i>		<i>152</i>	<i>13.4%</i>
Porcelain	Bone China	1	0.1%
Porcelain	Porcelain, Chinese Export	57	5.0%
Porcelain	Porcelain, Hard Paste	2	0.2%
Porcelain	Porcelain, Soft Paste	1	0.1%
<i>Porcelain Subtotal</i>		<i>61</i>	<i>5.4%</i>
Refined Earthenware	Agate Ware, Refined	1	0.1%
Refined Earthenware	Astbury	1	0.1%
Refined Earthenware	Creamware	433	38.2%
Refined Earthenware	Creamware, Dark	5	0.4%
Refined Earthenware	Faience, Brown	1	0.1%
Refined Earthenware	Ironstone/Stone China	1	0.1%
Refined Earthenware	Jackfield Type	9	0.8%
Refined Earthenware	Molded Fruit/Vegetable Ware	2	0.2%
Refined Earthenware	Pearlware	219	19.3%
Refined Earthenware	Red Bodied	8	0.7%
Refined Earthenware	Tin & Lead Glazed	2	0.2%
Refined Earthenware	Tin Glazed	12	1.1%
Refined Earthenware	Unidentified Refined Earthenware	2	0.2%
Refined Earthenware	Whiteware	21	1.9%
<i>Refined Earthenware Subtotal</i>		<i>717</i>	<i>63.2%</i>
Stoneware	Black Basalts	1	0.1%
Stoneware	Nottingham Type	2	0.2%
Stoneware	Red Bodied	2	0.2%
Stoneware	Salt Glazed, Gray/Buff Bodied	179	15.8%
Stoneware	Slip Glazed Stoneware	1	0.1%
Stoneware	White Salt Glazed	19	1.7%
<i>Stoneware Subtotal</i>		<i>204</i>	<i>18.0%</i>
<b>TOTAL</b>		<b>1134</b>	

Several sherds of unusual wares are in the assemblage: three sherds from two different Iberian *ollas* (from Test Units 8 and 3NE); a single sherd each of Astbury ware and French brown faience (also from Test Unit 8); and two sherds of maiolica (tin glazed on the interior, lead glazed on the exterior), from Test Unit 3NE. The Iberian *ollas* were used to ship a variety of goods from Spain and Portugal throughout the seventeenth and eighteenth centuries, from olive oil to cloth, and were often reused as storage jars when emptied of their original contents. The Astbury ware sherd, made between 1725 and 1785, has a single slip line around its rim and is probably part of a tea vessel, possibly a cup or sugar bowl. The French brown faience (often but erroneously called “Rouen faience”) came from a medium-sized bottle with a constricted neck, possibly a bottle or flacon used for olive oil. The maiolica sherds are the earliest objects in the assemblage; made between 1625 and 1675; they probably came from a single plate and have large-scale decoration in light and dark blue. They could have been made in the Netherlands and brought to Manhattan during or shortly after the Dutch period.

Based on the presence of the great variety of ware types, from early (tin-glazed and British buff-bodied slipware) to late (whiteware), and the small size and indeterminate form and function of most of the sherds (Figure 8.03; Table 8.34), the household group ceramics are likely redeposited secondary refuse, probably from a variety of sources. MNVs were not calculated for the assemblage, but, if they had been, the ratio of vessels to sherds would be low (i.e., less than three sherds per vessel), another indication of secondary deposition.

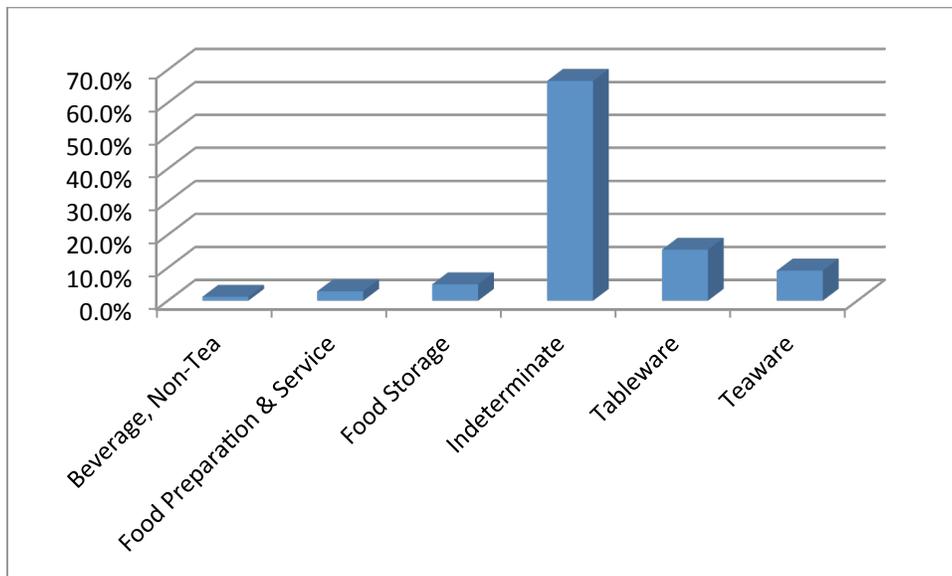


Figure 8.03: Household ceramic functional groups (sherd counts).

Table 8.34: Household ceramic functional groups and ware types (sherd counts).

Function	Object	Ware	Count
Beverage, Non-Tea	Mug	Creamware	2
Beverage, Non-Tea	Mug	Pearlware	4
Beverage, Non-Tea	Mug	Salt Glazed, Gray/Buff Bodied	5
Beverage, Non-Tea	Mug/Cup/Drinking Pot	British Buff-Bodied Slipware	2
Food Preparation & Service	Dish	British Buff-Bodied Slipware	14
Food Preparation & Service	Dish	Redware	15
Food Preparation & Service	Nappie	Creamware	2
Food Preparation & Service	Pan	Redware	1
Food Storage	Jar	Iberian Coarse Earthenware	3
Food Storage	Jar	Redware	3
Food Storage	Jar	Salt Glazed, Gray/Buff Bodied	22
Food Storage	Jar/Jug	Redware	7
Food Storage	Jar/Jug	Salt Glazed, Gray/Buff Bodied	16
Food Storage	Jug	Salt Glazed, Gray/Buff Bodied	5
Tableware	Bowl	Creamware	7
Tableware	Bowl	Pearlware	3
Tableware	Bowl	Porcelain, Chinese Export	1
Tableware	Bowl	Redware	2
Tableware	Bowl/Porringer	Redware	2
Tableware	Hollowware	Pearlware	1
Tableware	Pitcher	Creamware	1
Tableware	Plate	Creamware	51
Tableware	Plate	Creamware, Dark	1
Tableware	Plate	Ironstone/Stone China	1
Tableware	Plate	Pearlware	33
Tableware	Plate	Porcelain, Chinese Export	1
Tableware	Plate	White Salt Glazed	1
Tableware	Plate/Platter	Creamware	1
Tableware	Platter/Dish	White Salt Glazed	1
Tableware	Porringer	Redware	1
Tableware	Porringer	Salt Glazed, Gray/Buff Bodied	6

Table 8.34: Household ceramic functional groups and ware types (sherd counts) (Cont'd).

Function	Object	Ware	Count
Tableware	Tableware, General	Creamware	44
Tableware	Tableware, General	Pearlware	5
Tableware	Tableware, General	Tin & Lead Glazed	2
Tableware	Tableware, General	Tin Glazed	2
Teaware	Saucer	Creamware	10
Teaware	Saucer	Pearlware	27
Teaware	Saucer	Porcelain, Chinese Export	2
Teaware	Saucer	White Salt Glazed	2
Teaware	Teacup	Creamware	5
Teaware	Teacup	Pearlware	12
Teaware	Teacup	Porcelain, Chinese Export	13
Teaware	Teacup	Tin Glazed	7
Teaware	Teacup	White Salt Glazed	2
Teaware	Teapot	Black Basalts	1
Teaware	Teapot	Creamware	1
Teaware	Teapot	Jackfield Type	2
Teaware	Teapot	Red Bodied	5
Teaware	Teaware, General	Astbury	1
Teaware	Teaware, General	Jackfield Type	2
Teaware	Teaware, General	Pearlware	2
Teaware	Teaware, General	Porcelain, Chinese Export	5
Teaware	Teaware, General	Porcelain, Soft Paste	1
Teaware	Teaware, General	White Salt Glazed	3
TOTAL			371

The refined earthenwares with identifiable forms, in particular creamware and pearlware sherds, are from table- and teawares—with plates the most common identified creamware form, and plates and saucers the most common pearlwares (Table 8.35). The creamware plates are undecorated except for their molded rims (Royal, Bath, Queen's, and octagonal shapes). One base sherd has the maker's mark "DD & Co CASTLEFORD" with a stylized sunburst after the "CO." David Dunderdale operated a pottery in Castleford, England, between 1790 and 1821 (Edwards 1982). He had an extensive export trade and his mark has been found on other New York City sites. The pearlware plate sherds are from blue and green shell-edged vessels, while the cups and saucers are painted, most in blue but some in the post-1795 earth-tone colors. One saucer sherd has an engine-turned motif partially filled in with dark brown slip to create a checkerboard border. Five sherds (from Test Unit 3NE, Strata 7 and 8) mend to form most of the base of a China glaze (i.e., blue

painted under a blue-tinted glaze) large mug or small teapot that might be a second-quality vessel, as its base is of uneven thickness and its central portion is extremely thin.

Table 8.35: Household group ceramic sherds with identifiable forms.

Object	Ware	Count
Bowl	Creamware	7
Bowl	Pearlware	3
Bowl	Porcelain, Chinese Export	1
Bowl	Redware	2
Bowl/Porringer	Redware	2
Dish	British Buff-Bodied Slipware	14
Dish	Redware	15
Finial	Salt Glazed, Gray/Buff Bodied	1
Jar	Iberian Coarse Earthenware	3
Jar	Redware	3
Jar	Salt Glazed, Gray/Buff Bodied	22
Jar/Jug	Redware	7
Jar/Jug	Salt Glazed, Gray/Buff Bodied	16
Jug	Salt Glazed, Gray/Buff Bodied	5
Mug	Creamware	2
Mug	Pearlware	4
Mug	Salt Glazed, Gray/Buff Bodied	5
Mug/Cup/Drinking Pot	British Buff-Bodied Slipware	2
Nappie	Creamware	2
Pan	Redware	1
Pitcher	Creamware	1
Plate	Creamware	51
Plate	Creamware, Dark	1
Plate	Ironstone/Stone China	1
Plate	Pearlware	33
Plate	Porcelain, Chinese Export	1
Plate	White Salt Glazed	1
Plate/Platter	Creamware	1
Platter/Dish	White Salt Glazed	1
Porringer	Redware	1
Porringer	Salt Glazed, Gray/Buff Bodied	6
Saucer	Creamware	10
Saucer	Pearlware	27
Saucer	Porcelain, Chinese Export	2
Saucer	White Salt Glazed	2

Table 8.35: Household group ceramic sherds with identifiable forms (Cont'd).

Object	Ware	Count
Tableware, General	Creamware	44
Tableware, General	Pearlware	5
Tableware, General	Tin & Lead Glazed	2
Tableware, General	Tin Glazed	2
Teacup	Creamware	5
Teacup	Pearlware	12
Teacup	Porcelain, Chinese Export	13
Teacup	Tin Glazed	7
Teacup	White Salt Glazed	2
Teapot	Black Basalts	1
Teapot	Creamware	1
Teapot	Jackfield Type	2
Teapot	Red Bodied	5
Teaware, General	Astbury	1
Teaware, General	Jackfield Type	2
Teaware, General	Pearlware	2
Teaware, General	Porcelain, Chinese Export	5
Teaware, General	Porcelain, Soft Paste	1
Teaware, General	White Salt Glazed	3
TOTAL		371

A number of sherds are made of gray- or buff-bodied salt-glazed stoneware, probably by the potters working nearby on Pot Bakers Hill (see the manufacturing section below). Identifiable forms are mugs, jugs, jars, and porringers. Although they do not cross mend, two sherds from Test Unit 3NE and three sherds from Test Unit 11—from Stratum 7 in both—probably came from the same large porringer or small bowl; the vessel has a mottled brown slip on the exterior and a glossy even brown slip on the interior. Some of the sherds could have come from damaged vessels discarded as kiln wasters, but not enough of each vessel is present to determine this. Some do show manufacturing defects, but it cannot be determined if these would have made the vessels unusable; if the vessels were damaged but still functional, they could have been sold at reduced prices as seconds. Vessels with manufacturing defects include two sherds from a thick-bodied lightly glazed mug with its handle attached at a distinct angle, which would have made holding the vessel awkward, and a sherd from a jug whose cobalt-colored slip is very thick and bubbled. One sherd is an almost complete, small, roughly teardrop-shaped finial with a hollow top, but the small central hollow does not extend the length of the finial. Finials with central hollows are usually found on teapot lids, but this partial hollow could not have functioned as a vent for steam and might thus be another manufacturing defect.

Several sherds have decorations known to have been used by the Pot Bakers Hill potters (Images 8.23 and 8.24). One large sherd from a wide-mouthed jar has an incised and blue filled-in motif that has been called a “floral moose head” motif, a distinctive decoration used by these potters and others they trained. Another sherd from a small thinly potted vessel (possibly a porringer) has a rouletted “icicle” motif found on sherds from the potters’ wasters at the African Burial Ground (Janowitz 2008A).

The glass artifacts in the household group consist of shards from bottles, drinking vessels, and unidentifiable forms (Table 8.36). Three shards from two different bottles are probably intrusive to the deposit. The first, from Test Unit 8, Stratum I, is a small piece of clear non-lead glass with an embossed “S” visible on the fragment. Clear non-lead mold-made bottles began to be manufactured after 1864 (McKearin and McKearin 1948:8). The two other pieces, which are larger and which mend to each other, are from Feature 33 along the south wall of Feature 3, and might be associated with the demolition of Feature 3. They were made of aqua glass using a snap case rather than a pontil to remove the bottle from the mold, a post-1850 technique (Miller et al. 2000:8). The remaining embossment on this bottle is “NE...,” probably part of “NEW YORK.”



Image 8.23: Stoneware sherd made by the Pot Bakers Hill Potters with incised and filled-in “floral moose head” motif (FS 442.38).



Image 8.24: Stoneware sherd made by the Pot Bakers Hill Potters with impressed "icicle" motif (FS 47.68).

Table 8.36: Household group glass shards.

Material	Manufacture_Technique	Object	Count
Common Glass	Cased	Indeterminate	1
Common Glass	Dip Mold	Bottle, Case	5
Common Glass	Dip Mold	Bottle, Wine	53
Common Glass	Indeterminate	Bottle	12
Common Glass	Indeterminate	Container Glass	8
Common Glass	Indeterminate	Drinking Vessel	5
Common Glass	Mold Blown, Indeterminate	Bottle	10
Common Glass	Mold Blown, Indeterminate	Container Glass	3
Common Glass	Mold Blown, Mouth	Bottle	7
Common Glass	Mold Blown, Mouth	Bottle, Beer/Soda	2
Common Glass	Mold Blown, Mouth	Container Glass	1
Common Glass	Mouth Blown, General	Bottle	28
Common Glass	Mouth Blown, General	Container Glass	7
<b>Subtotal Common Glass</b>			142
Leaded Glass	Indeterminate	Indeterminate	1
Leaded Glass	Indeterminate	Stemware	1
Leaded Glass	Indeterminate	Tableware, General	3
Leaded Glass	Indeterminate	Tumbler	1
Leaded Glass	Mold Blown, Indeterminate	Container Glass	5
Leaded Glass	Mold Blown, Indeterminate	Tableware, General	1
Leaded Glass	Mold Blown, Indeterminate	Tumbler	1
Leaded Glass	Mouth Blown, General	Container Glass	1
Leaded Glass	Pressed	Tableware, General	1
<b>Subtotal Leaded Glass</b>			15
Milk Glass	Mold Blown, Indeterminate	Indeterminate	4
Milk Glass	Pressed	Tableware, General	2
<b>Subtotal Milk Glass</b>			6
Non-Lead Glass	Indeterminate	Container Glass	1
Non-Lead Glass	Indeterminate	Indeterminate	5
Non-Lead Glass	Indeterminate	Tableware, General	2
Non-Lead Glass	Indeterminate	Tumbler	1
Non-Lead Glass	Mold Blown, Indeterminate	Bottle	1
Non-Lead Glass	Mold Blown, Indeterminate	Tableware, General	2
<b>Subtotal Non-Lead Glass</b>			12
<b>Grand Total</b>			175

At least 53 and probably as many as 80 of the 175 glass shards are from English black glass wine bottles made sometime between 1730 and 1870, but probably before 1820 (Jones and Smith 1985). Other bottles are made of green, aqua, and amber glass. None can be dated except where the base portions are intact; all the intact bases have pontil marks, dating them before 1870 (Miller et al. 2000:8).

Three shards of post-1825 pressed table glass came from Test Units 8 and 3NE, both from Stratum II. Two shards are milk glass, possibly from a decorative dish, with an indeterminate pattern. The other, probably from a tumbler or small vase, is made of lead glass and has a reeded body with an overlying leaf motif.

The other table glass in the assemblage is undated and consists of three base pieces from three different clear glass tumblers (two of lead glass and the other non-lead), a short section of a plain stem from a lead glass stemware, and small shards of lead and non-lead glass that could be from either tumblers or stemware bowls. There is also a thick lead glass base shard with a pedestaled foot that might be from a candlestick.

#### ARCHITECTURAL

Of the 307 artifacts in the architectural group, 143 are nails and 129 are window glass. The great majority of the nails ( $n=117$ ) are too rusted to determine their method of manufacture, although 24 were identified as square and one each as cut and hand wrought. Many of the nails still have wood adhering to them, an indication that building (or possibly cabinetry) parts were discarded, not just the nails themselves. The window glass consists of aqua, very pale green, and colorless fragments with one very blue piece.

The whole brick and one of the brick bats have striations on one of their surfaces, probably from removing excess clay after it was put into a mold. Among the brick fragments are two pieces of buff-colored fire brick, from Test Unit 8, Strata II and III, with gravel temper. Most of the mortar pieces are fragments, but one large piece has visible temper made of pulverized shells and brick fragments.

Four of the roofing tiles are dark gray slate; the other is made of red earthenware with a dark brown lead glaze on one surface and remnants of mortar on the other. The wall tile is tin-glazed, one of only three found during the current excavations. The sherd is quite small and, although it has a blue-painted motif, it is too fragmentary to determine the scene depicted.

#### PERSONAL

The personal group is dominated by smoking pipes: 106 of the 121 artifacts. The other artifacts consist of four copper alloy pins, at least two of which have wrapped heads, and copper alloy and bone buttons. The six copper alloy buttons (one mends from two pieces) are all corroded, but at least two are domed, another is dish-shaped, and another is possibly a two-piece button. The two bone buttons are simple discs. One unusual artifact is a partial wig curler made of white ball clay. Wig curlers, as the name states, are small, more

or less dumbbell-shaped objects used by hair dressers, barbers, and wig makers to impart a fashionable tight curl to eighteenth-century wigs (Noel Hume 1970:321–322).

Eighty-eight of the 106 pipe fragments were plain stem pieces, one of which has yellow glaze at the mouthpiece. The only decorated stem piece has shallow stamped letters that might be “HST” over “INZ.” No pipe makers with this combination of initials could be found in available references. Of the 17 pipe bowl pieces, 11 show no decoration and one has a simple rouletted band around its rim. Five other pipes are decorated: one is fluted with a floral garland along its seam lines; another is also fluted but is more crudely made; another is too small to identify the motif but the remaining portion is elaborate; and two more have Masonic motifs, as did many pipes at other locations around City Hall. One is a small fragment with floral garlands along the seam and a square and compass. The other is a larger piece with a stag’s head facing the smoker and a variety of Masonic symbols on either side of the bowl, the same motif as on some of the pipes found in Feature 28.

Six of the pipe bowls have maker’s marks. Two are Dutch with maker’s marks on the base of their heels and the arms of the city of Gouda on the sides of the heels, dating them to after 1739. One has a crowned “D” on the heel, a mark used by various members of the Van Leeuwen family until 1861 and by Jan Prince & Cie. (Co.) until 1898; the other has a crowned “23,” a mark used by at least four pipe makers between 1739 and 1819 (Boon 2012).

The four remaining bowls are probably British-made. Three have marks in side cartouches, but the last has only the base of the heeled bowl extant. This tall heel is marked with a “W” on one side and a “G” on the other. WG pipes have been found on other sites, but their attribution to a particular maker or makers is not clear. Reckner and Dallal (2000:245), referencing Walker 1983, date a complete pipe from the Five Points Site with these heel letters to post 1775 and attribute it to an East London manufacturer. The Five Points Site pipe also has a partially legible “rouletted or wreath-like cartouche” with letters, possibly “TD” on the bowl facing the smoker. A very similar mark of “TD” within a decorative cartouche is on another pipe bowl piece from the Feature 33/35 fill. Walker (1983:86, cited in Reckner and Dallal 2000:245) notes this as the earliest style of TD pipes (TD pipes became very common during the nineteenth century).

The other two pipe bowls with marks in cartouches on their sides consist of a small piece with an illegible mark and another with “R/TIPPET” in a slightly oval side cartouche. Tippet pipes are ubiquitous on North American sites throughout the eighteenth century.

#### MANUFACTURING

More than half of the 54 artifacts in the manufacturing group (Table 8.37) are salt-glazed stoneware kiln wasters or kiln furniture, a not-unexpected occurrence, given that stoneware potters operated nearby on Pot Bakers Hill and that wasters and furniture from these potters have been found in large numbers at both the African Burial Ground and previous City Hall excavations (Ketchum 1987:40–41; Bankoff and Loorya 2008; Janowitz 2008A; Cheek and Roberts 2009; Perry, Howson and Bianco 2009). As noted above, many of the other

stoneware sherds from this analytical unit could be kiln wasters, but from relatively undamaged parts of vessels. During analysis, any sherd that was severely underfired or had little or no salt glaze was judged to be a kiln waster and was included in the manufacturing group, but others that were merely slightly underfired and/or lightly salt-glazed were classified in the household group—although it is quite possible that they too were manufacturing wasters.

Table 8.37: Manufacturing group artifacts.

Material	Object	Ware	Count
Coarse Earthenware	Kiln Waster-Hollowware	Redware	1
Coarse Earthenware	Kiln Shelf	Redware	1
Coarse Earthenware	Sagger	Redware	1
Coarse Earthenware	Sugar Mold	Redware	11
Stoneware	Kiln Pad, Expedient	Salt Glazed, Gray/Buff Bodied	11
Stoneware	Kiln Pad, Preformed	Salt Glazed, Gray/Buff Bodied	2
Stoneware	Kiln Waster-Hollowware	Salt Glazed, Gray/Buff Bodied	1
Stoneware	Kiln Waster-Jar	Salt Glazed, Gray/Buff Bodied	1
Stoneware	Kiln Waster-Jar/Jug	Salt Glazed, Gray/Buff Bodied	2
Stoneware	Kiln Waster-Jug	Salt Glazed, Gray/Buff Bodied	8
Stoneware	Kiln Waster-Mug	Salt Glazed, Gray/Buff Bodied	1
Stoneware	Kiln Waster-Other	Salt Glazed, Gray/Buff Bodied	2
Stoneware	Kiln Waster-Pan	Salt Glazed, Gray/Buff Bodied	1
Bone	Button Blank		10
Graphite	Crucible		1
TOTAL			54

To briefly summarize the history of stoneware manufacture near City Hall: kilns for making stoneware pottery were established on Pot Bakers Hill sometime between 1720 and 1730 by the Cortselius/Crolius/Remmey families of German-trained potters. The potters continued at this location until approximately 1820, when the last member of the families moved away from this rapidly developing area of the city (Janowitz 2008A). Potteries, especially in the time before scientific firing techniques using coal and gas were developed, generated large amounts of kiln debris consisting of used kiln furniture, vessels damaged during firing, and, occasionally, pieces of the kiln itself or of the clay used to seal the kiln for firing. This debris had to go somewhere; the Manhattan stoneware potters dumped some of their refuse on the land that was the African Burial Ground directly north of the

Common. The kiln debris found around City Hall could have been dumped directly onto the Common during the years before City Hall was built or could have been included in landscaping soils brought from nearby areas closer to Pot Bakers Hill.

The stoneware kiln pads found in the Feature 33/35 fill are of two forms: preformed shapes probably made in the potter's workshop and brought to the kiln along with the vessels to be fired, and expedient forms made as needed while the kiln was being loaded to keep vessels separated and stacks stable (Greer 1971). Both kinds were made out of the same clay used for vessels (although sometimes lesser quality clays were added), with the addition of sand to make them less liable to stick to each other or to vessels. The preformed shapes included rectangles, bent rectangles, and tri-armed flat pads (a form that might be unique to Manhattan potters and those trained by them). The pad seen at the left in Image 8.24 is an example of a bent rectangle. The tan-orange line clearly visible on the otherwise gray surface is the non-glazed shadow left by the edge of the base of the vessel that rested on it. At the right is an example of the tri-armed flat pad shape. It was formed by cutting partially circular shapes out of a flat pad. The openings thus created allowed salt vapor to get to the interior of vessels without compromising the stability of the stack. This particular kiln pad has the shadow of a vessel base on one surface and a circular indentation from a vessel rim (probably a mug, as its diameter is 3.5") on the other. Image 8.25 shows how preformed and expedient kiln pads were used together: vessels were placed atop preformed pads and then balanced out with wads of clay used as expedient pads. Often, as in this case, the two were welded together by salt glaze in the kiln.



Image 8.25: Stoneware preformed kiln pads. At left (FS 440.40), a bent rectangle with a noticeable kiln scar; at right, part of a tri-armed flat pad (FS 440.41).



Image 8.26: Expedient kiln pad atop preformed kiln pad (FS 47.127).

The kiln wasters (damaged vessels) have various forms (see Table 8.37). The 11 hollowware sherds came from at least four and possibly as many as nine vessels, at least two of which have blue-painted decorations. All are underfired and have very light or no salt glaze—the features that identify them as kiln wasters. The two jar sherds are from separate vessels, based on their rim shapes (one squared and one a straight collar) (Image 8.27). The single mug and jar/jug sherds are base fragments. The jug sherd is from a large vessel; it is not underfired, but there is a large iron inclusion that has come through the body on the interior and the cobalt slip is bubbled and dark-colored. The “pan” is somewhat unusual; it is probably a pan with rounded sides and an everted rim, but could be a shallow bowl. It has an unidentifiable large-scale motif painted in blue on its rim. Pans and bowls are rare in nineteenth-century stonewares, but were made by the eighteenth-century potters working on Pot Bakers Hill (Janowitz 2008A). The “other” vessels consist of two very unusual pieces (Images 8.28 and 8.29). The first is possibly the base for a candlestick with a slightly up-turned lip and a shaft attached as a separate piece. The second has an overall flared shape with a small (2.4” diameter) solid base and rim diameter of 7”. It might possibly be a lid or a small dish of late medieval form (Reineking-Von Bock 1971 #128). It is definitely a kiln waster, as it has glaze on its broken edge and might be from the early production years of the Cortselius/Crolius/Remmey potters.



Image 8.27: Salt stoneware kiln waster, underfired and lightly glazed jar rim (FS 60.27 and FS 47.123).



Image 8.28: Salt-glazed stoneware kiln waster, possibly a candlestick base (FS 47.126).



Image 8.29: Salt-glazed stoneware kiln waster, possibly a lid or small dish (FS 442.39).

The red earthenware (redware) kiln debris could have originated from the pottery of John Campbell, located north of the Commons from about 1759 into the 1790s (Ketchum 1987:42–43) (see Feature 28 midden discussion). The hollowware sherd has a piece of a kiln pad attached to its exterior. The saggars (used to hold earthenwares during firing to protect them from direct flames and smoke) has remnants of brown glaze on its interior (glaze could migrate from vessels to the saggars, which enclosed them during firing). The “kiln shelf” is a curved corner piece that is just possibly from a large saggars. All three of the redware kiln-related sherds came from Test Unit 11, Strata 6 and 7.

Other manufacturing-related artifacts include 11 sherds of sugar molds from at least three vessels. Molds made of red earthenwares were used in the sugar-refining process throughout the seventeenth and eighteenth and well into the nineteenth centuries (Barr et al. 1994). The cone-shaped molds had very smooth interiors, occasionally coated with white slip on the larger sizes, in order to allow the compact dried sugar loaf to be extracted after refining. (These very smooth and/or thin white slip coated interiors are what identify sherds as coming from sugar molds when their distinctive cone-shaped pierced bases are absent.) Attrition of the molds was probably fairly high, due to the stresses put on them when the sugar loaves were forced out of the molds, and at other sites—such as the Metropolitan Detention Center site in Philadelphia and the fill under Faneuil Hall in Boston—hundreds of sherds from sugar molds have been recovered from primary deposits (Dent et al. 1997; Louis Berger and Associates 1999). When single or a few sherds of sugar molds are found, it is generally another indication of secondary refuse.

The crucible piece, found in Test Unit 8, Stratum III, is from a large vessel covered on both surfaces and on part of a broken edge with metallic materials, probably including copper. The presence of the metallic substance on the broken edge indicates that it broke during use. Crucibles were used in a variety of crafts. At the Barclays Bank Site, a number were recovered from the basement workshop of Daniel van Voorhis, a gold and silversmith working in New York after the Revolution (Louis Berger and Associates 1987).

Many of the bone button blanks came from Test Unit 3NE; all but one are fragmentary, but all appear to be made from large mammal (probably cow) ribs. Buttons were drilled from flat pieces of bone by hand using metal bits. Based on the most extant unfinished example, they were one-hole buttons. One hole buttons could be used with a simple shank, probably made of thread, or could be covered with fabric and sewn onto clothing.

#### SANITARY

The 18 ceramic sherds that comprise the sanitary group came from at least seven chamber pots: one each made of redware and creamware and five of stoneware. Ten sherds are from the redware chamber pot; it has dark brown lead glaze on both surfaces with a single incised line on the exterior and a broad (1.25”) ridged strap handle. A single rim sherd represents the creamware vessel. The stoneware vessels were probably made by the potters working on Pot Bakers Hill and might be wasters rather than utilized vessels, although only one has recognizable kiln damage. This kiln-damaged vessel is underfired and has very light salt glaze, but its motif is almost identical to a better fired one (Image 8.30). Both

have more elaborate decorations than are commonly found on chamber pots: each has incised leaves or petals filled in with blue, but on the better-fired vessel, the leaves/petals have additional incised lines within them. Their interior diameters are about 6.5". The other stoneware pots have more simple motifs; one has a wavy line of very dark blue slip below the rim, one has a line of blue-painted swags beneath the rim, and the last has a mottled brown slip on both interior and exterior surfaces and a swath of blue slip applied at the base of the handle, where it attaches to the body.



Image 8.30: Salt-glazed stoneware chamber pots with incised and filled-in motifs (FS 17.17 and FS 19.4).

## OTHER GROUPS

The activities group consists of one sherd from a plain redware flower pot and a single piece from a blue/green glass inkwell. The inkwell is octagonal with unequal sides, a shape most common circa 1800–1870 (Lindsey 2012).

Three gunflints and the copper spout for a powder horn make up the arms group. The gunflints are all English dark gray flint, but only one is complete; another might have been reutilized as a strike-a-light, based on the heavy wear along the thin edge of its wedge shape; and the other is a large flake, possibly from the manufacture or refashioning of gunflints.

The single artifact in the furniture group is a piece of an andiron. This piece itself is not distinctive, but it is similar to andiron pieces found in Test Units 2 and 5, both Stratum 3, also in the northeast vault area. The piece in Test Unit 2 is a cast top portion with decorative elements that are obscured by rust; the piece in Test Unit 5 is a base portion with a two-pronged cast foot and a square central shaft; the piece from the Feature 33/35 assemblage is probably another part of a central shaft.

The single artifact in the lighting group is a piece of a milk glass lampshade very similar to pieces found in the fill of Feature 3 (which overlay Feature 33/35). It is possible that this sherd migrated down from the Feature 3 fill into the Feature 33/35 fill.

The artifacts in the hardware group are made of iron and various copper alloys. One is a copper alloy fragment, either an escutcheon or a hasp, with an engraved or stamped floral motif, probably from a small box. The iron artifacts include a badly rusted hinge of indeterminate form and pieces that are possibly from a door knob. None can be dated.

The fuel group is made up of fragments of coal, charcoal, and cinders.

The indeterminate group artifacts are, for the most part, made of iron or copper alloy, and are either too fragmentary or too rusted or corroded to determine their forms and functions. One large piece of iron and 13 small pieces, all from the Feature 35 general collection, might be from an iron cooking pot with a diameter of about 8", based on the curvature of the large piece. The four pieces of glass in this group could have come from vessels, lamps, or window panes, but are too small for determination of their shapes.

## SUMMARY

The majority of the artifacts in the Feature 33/35 fill were probably deposited at the time of the construction of City Hall, even though some later artifacts are included in the assemblage, possibly as a result of the late-nineteenth-century construction of the overlying Feature 3. It is likely that the origin of most of the artifacts was one or more households, but this redeposited refuse cannot be linked to its source(s). The artifacts in the manufacturing group were probably refuse from nearby manufactories, in particular the stoneware potters on Pot Bakers Hill.

**FEATURE 28 MIDDEN (WEST PATH NORTH - MANHOLE 3)**

Although obvious soil color and texture differences between the deposits were noted during excavations (see Chapter VII), the artifacts excavated from the midden found in Features 28 and 29—and the associated Feature 27—will be discussed in this section as one deposit. There were ceramic and glass cross mends between Strata I, II, and III of Feature 28 and there were over 40 cross mends between Features 28 and 29. With the exception of intrusive objects most probably associated with the pipe trench in Feature 28, the materials found in all three are very similar and make up a coherent assemblage. Almost 70% of the artifact assemblage was found in Stratum II of Feature 28 (Table 8.38).

Table 8.38: Artifact count distribution within the midden (without faunal materials).

Fea #	Fea Strat	Count
27		30
28		26
28	1	449
28	2	6917
28	3	456
28	4	13
28	Pipe Trench	936
29		23
29	1	1176
TOTAL		10026

The artifacts appear to have been deposited in the midden around the time of City Hall’s construction (1803–1811). A few artifacts (Table 8.39) post-date this time period, but they are almost certainly associated with the later pipe trench that disturbed the midden: one or two late-nineteenth- to twentieth-century bricks stamped “BROCKWAY” (Image 8.31), a Hudson River brick maker (International Brick Collectors Association 2012); and pieces of a post-1850 sewer pipe in Feature 28, Stratum II, and Feature 29, Stratum I. Two small sherds from two different sponge-decorated vessels (a teacup and a small plate)—from Feature 28, Stratum I, and the Feature 28 general collection—could have entered the midden during activities associated with the construction of the pipe trench.

Table 8.39: TPQ by provenience.

Fea #	Fea Strat	Fea Quad	TPQ
27			1800
28			1815
28	1	NW	1815
28	1	North Central	1800

Table 8.39: TPQ by provenience (Cont'd).

Fea #	Fea Strat	Fea Quad	TPQ
28	1	NW	1775
28	1	NE	1762
28	2	North Central	1850
28	2	NW	1807
28	2	NE	1807
28	3	NW	1805
28	3	North Central	1800
28	3	NE	1795
28	4	North Central	1795
28	Pipe Trench	North Central	1883
28	Pipe Trench	NE	1883
29			1783
29	1	N	1850
29	1	S	1807



Image 8.31: Brick from the Brockway brick yard in Beacon, New York.

If these artifacts are omitted, the TPQ for the assemblage is 1807, based on the presence of pearlware vessels with transfer-printed decoration that includes stippling (Miller et al. 2000:13). This 1807 date, however, is not absolute. The ceramic historians upon whose research Miller bases this beginning date of manufacture state that stippling as an engraving technique for transfer-printed patterns was developed sometime before 1807 and probably after 1800 (Coyshe and Henrywood 1982:9).<sup>3</sup> However, there are also sherds from a whiteware plate (Strata II and III in Feature 28) with a very fine white body and a narrow molded border of buds and leaves painted blue. The earliest beginning date for whiteware is thought to be 1805 (Miller et al. 2000:13); thus, unless this vessel is either an extremely pale example of pearlware or is intrusive, the TPQ for the midden is 1805. The next latest dated artifacts are at least 13 pearlware plates with shell edge decorations in even scalloped patterns that Miller dates to circa 1800–1835 (Miller et al. 2000:12).

Four creamware sherds, two from plates and the others base sherds that could have been from plates, had the impressed mark “D. D. & Co. CASTLEFORD.” David Dunderdale operated a pottery in Castleford, West Yorkshire, between 1790 and 1820/21 (Godden 1964:224). Marked Dunderdale creamwares have been found at other Manhattan sites, in particular in the circa-1810 ceramic dealer’s dump at the 7 Hanover Square Site (Rothschild and Pickman 1990). Dunderdale manufactured creamware in the style of Leeds pottery, painted pearlware, Black Basalts stoneware, and a particularly fine smear-glazed white stoneware called Castleford stoneware by modern collectors (Grabham 1971:14–15). He apparently had an extensive foreign trade; in addition to his American exports, he was noted as having commercial connections with Spain and the Baltic, and a version of his 1796 pattern book was printed in French and Spanish (Grabham 1971:13, 16).

The other identifiable mark found was from Josiah Wedgwood. Two sherds—a pearlware base sherd and a creamware plate—had the small stamped mark “WEDGWOOD,” followed in one case by “19...” and in the other by “1...” The numbers probably refer to a mold or body pattern type. The creamware plate also has an impressed star or cross, possibly the mold maker’s mark. Wedgwood marks were also found on sherds in the 7 Hanover Square dump site. Another creamware base sherd is stamped “AS,” possibly for Ambrose Smith & Co, working between 1784 and 1786 in Staffordshire, but the known marks of this firm include “& Co.” (Godden 1964:581), of which there is no trace on this sherd. Another creamware base sherd is stamped “B...”; a number of sherds from the Hanover Square dump were marked “B.B.,” but this mark could not be positively identified, although it might be an unrecorded one used by members of the Baddeley family, who worked in Staffordshire from about 1750 to 1822 (Godden 1964:46)<sup>4</sup>.

With the exception of Stratum I NE in Feature 28 (which yielded only 19 sherds with beginning dates) and Stratum III North Central in Feature 28 (which has only five sherds

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3. The 1807 beginning date is used in the database as it is the one commonly accepted by historical archaeologists. Nevertheless, it should not be used as an infallible TPQ for assemblages until more research using printed pearlware vessels with maker’s marks is compiled. This research is difficult, because many firms did not yet routinely mark their wares during the first decade of the nineteenth century.

4. The most likely candidates are possibly John and Edward Baddeley (1784–1806), although their recorded marks are a single “B” or “IEB” (Godden 1964:46).

with beginning dates), the mean beginning and end dates of manufacture for the deposit are between 1761 and 1777 and 1821 and 1841, respectively (Table 8.40).

Table 8.40: Ceramic mean beginning and end dates of manufacture.

Fea #	Fea Strat	Fea Quad	Mean Begin	Mean End
27			1761.2	1823.0
28			1774.7	1841.4
28	1	NE	1737.8	1821.1
28	1	North Central	1767.0	1826.4
28	1	NW	1769.5	1829.7
28	2	NE	1763.6	1829.6
28	2	North Central	1764.0	1828.9
28	2	NW	1766.0	1826.0
28	3	NE	1770.4	1825.8
28	3	North Central	1784.0	1840.8
28	3	NW	1769.2	1823.2
28	4	North Central	1777.3	1840.0
28	Pipe Trench	NE	1768.8	1831.4
28	Pipe Trench	North Central	1765.5	1828.6
29			1756.3	1827.3
29	1	N	1766.4	1838.1
29	1	S	1762.6	1833.8

The ceramics thus have compact manufacturing date ranges, which can be illustrated on a percent contribution chart. The method used to create this chart is found in Bartovics 1982. The percent contribution indicates the probability of a randomly selected sherd from a particular provenience being manufactured in a given year. The formula used is:

$$P=S/(N*D)$$

Where P=probability contribution for one year

N=total number of datable sherds in the provenience

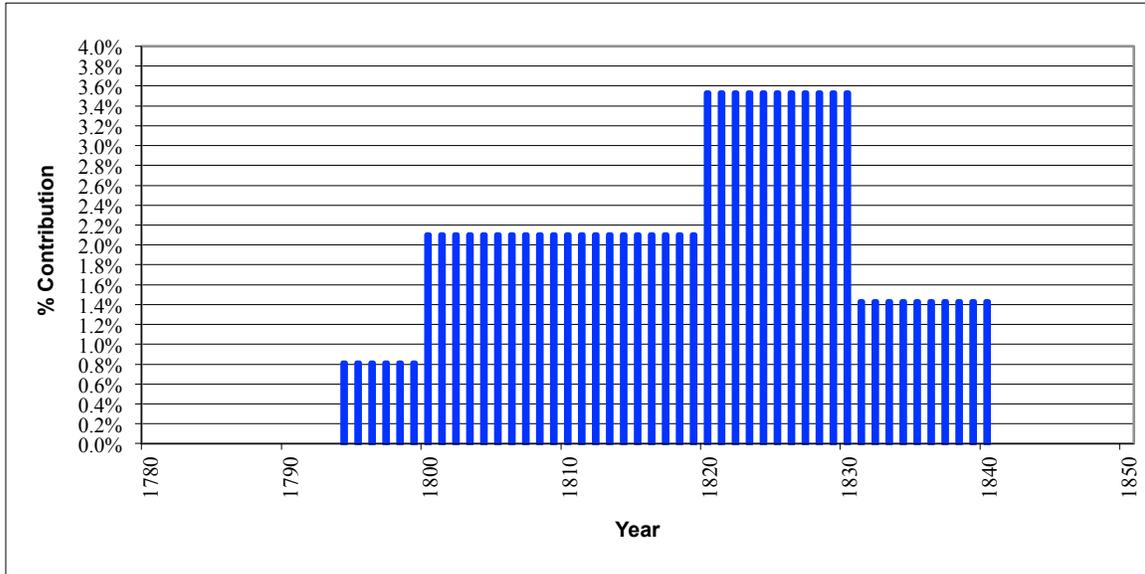
S=number of sherds of the ware type

D=range of manufacture in years

P is determined for each ware type with a unique date range (for example, 1744–1775 for scratch-blue decorated white salt-glazed stoneware). The value is then entered into each year of manufacture for that ware type. Each year’s cumulative probability is determined by adding all the values of P for each ware type manufactured in that year. This cumulative % value is then graphed for the range of years.

For example, using a simple 10 sherd collection (only five years are shown as a sample) results in the following chart:

Ware	Total	Begin Date	End Date	Range	Percent	1797	1798	1799	1800	1801
Pearlware, Plain	3	1794	1830	37	0.8108%	0.8108%	0.8108%	0.8108%	0.8108%	0.8108%
Pearlware, Painted	4	1800	1830	31	1.2903%	0.0000%	0.0000%	0.0000%	1.2903%	1.2903%
Pearlware, Shell Edge	3	1820	1840	21	1.4286%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
	10					0.8108%	0.8108%	0.8108%	2.1011%	2.1011%



This shows that a cumulative chance of a particular sherd being manufactured during a particular time span is 100% for 1794–1840, 96% for 1800–1840, 82% for 1800–1830, and 39% for 1820–1830.

The percent contribution chart for the midden shows that the majority of the ceramic vessels were produced between 1762 and 1830, with a peak between 1795 and 1810 (Figure 8.04). This graphically shows that the majority of the dated vessels were made of creamware (1762–1820) or pearlware (1775–1840).

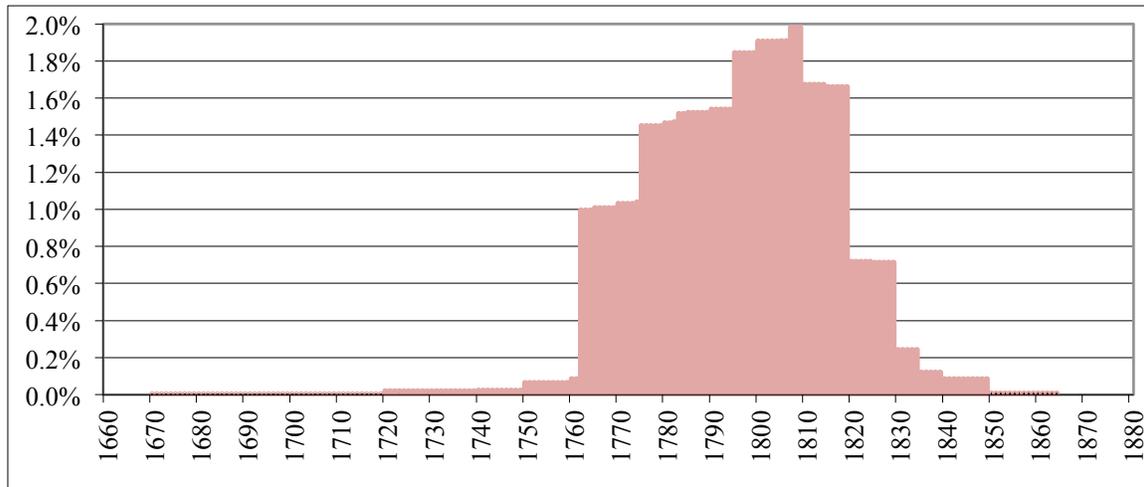


Figure 8.04: Percent contribution chart for ceramic sherds.

The ceramic vessels with the latest manufacturing date ranges are probably associated with the disturbance caused by construction of the pipe trench, although in one case the vessel might be an example of an anomalous motif. The vessel in question is a pearlware plate with a blue-painted shell-edged decoration with a plain (unscalloped) rim outline. Unscalloped rims are most commonly found on plates made between 1840 and 1865 (Miller and Hunter 1990:117). This plate, found in Stratum II and less than 25% complete, might be an early example of this shell-edged style that falls outside the range of marked vessels Miller and Hunter examined, especially because it is pearlware rather than whiteware, or it might be associated with the pipe trench. One vessel is almost certainly associated with the pipe disturbance: two small sherds from a pearlware plate with a molded and blue-colored band of tassels over a molded fish scale motif (made circa 1820–1835) came from the pipe trench (FS 401) itself. As noted above, two small sherds from two sponged vessels (one blue colored and one green) from Stratum I and the Feature 28 general collection date after 1815/1820 (Azizi et al. 1996) and are also most probably intrusive to the assemblage.

The midden artifact assemblage is dominated by materials associated with food preparation, storage, and service. Pattern analysis (based on South 1977) shows that two-thirds of the artifacts can be classified in the household group, with much smaller numbers from other functional groups (Table 8.41).

Table 8.41: Artifact groups (without faunal materials).

Group	Count	Percent
Architectural	1888	18.8%
Arms	1	0.0%
Commercial	2	0.0%
Fuel	37	0.4%
Hardware	5	0.0%
Household	6651	66.3%
Indeterminate	153	1.5%
Manufacturing	8	0.1%
Medical	24	0.2%
Other	2	0.0%
Personal	1213	12.1%
Sanitary	38	0.4%
Toy/Recreation	4	0.0%
TOTAL	10026	

#### HOUSEHOLD

The discussion of the artifacts in this functional group is based on the analysis of vessels rather than sherds (Table 8.42). Before the artifact inventory was begun, the ceramic and glass artifacts from the midden were laid out as a group and cross mended to identify vessels. Vessel numbers (consecutive numbers beginning with C-0001 for ceramics and G-0001 for glass) were assigned to those sherds that either cross mended, were more than 25% complete, or that were particularly interesting or informative. One MNV was assigned per vessel (see Appendix J). The residual sherds were then examined to see if there were any that did not appear to be part of the identified vessels. If they appeared to be from separate vessels, they were assigned an MNV of one. The MNV count thus provides an estimate of the original number of vessels by giving the same weight to unique sherds as it does to more complete vessels. Assigning MNVs has some inherent pitfalls. In particular, it is easier to isolate and identify ceramic vessels compared to glass bottles and it is easier to identify decorated vessels. Glass shards are more difficult to separate out into unique vessels than are ceramics and, within the ceramic group, decorated vessels, such as painted pearlwares, are more easily segregated than plain creamwares or redwares. Thus, decorated vessels, and ceramics in general, tend to be relatively better represented in the MNV count. In addition, vessels with distinctive forms (such as sugar bowls or sauceboats) or motifs (such as hand-painted Chinese export porcelains) are also more easily identified as separate vessels. It must be remembered that these are *minimum* numbers. Nevertheless, assigning MNVs remains the best way to get an estimate of the actual artifacts that made up the behavioral assemblage, the source of the excavated archaeological assemblage.

Table 8.42: Household group artifacts.

Class	Material	MNV	Count
Ceramic	Coarse Earthenware	97	836
Ceramic	Porcelain	44	151
Ceramic	Refined Earthenware	466	3129
Ceramic	Stoneware	30	183
	<i>Subtotal Ceramics</i>	<i>637</i>	<i>4299</i>
Glass	Common Glass	81	1871
Glass	Leaded Glass	20	108
Glass	Non-Lead Glass	31	352
	<i>Subtotal Glass</i>	<i>132</i>	<i>2331</i>
Metal	Iron	1	16
Fauna	Bone	3	3
Fauna	Composite	2	2
	<i>Subtotal Other</i>	<i>6</i>	<i>21</i>
TOTAL		775	6651

*Ceramic Vessels*

The overwhelming majority of the vessels from the midden are made of creamware or pearlware (Table 8.43).

Table 8.43: Ceramic ware types.

Material	Ware	MNV	Percent
Coarse Earthenware	British Buff-Bodied Slipware	4	0.6%
Coarse Earthenware	Other (see comments)	1	0.2%
Coarse Earthenware	Redware	92	14.4%
Porcelain	Porcelain, Chinese Export	42	6.6%
Porcelain	Porcelain, Soft Paste	2	0.3%
Refined Earthenware	Creamware	264	41.4%
Refined Earthenware	Jackfield Type	1	0.2%
Refined Earthenware	Other (see comments)	1	0.2%
Refined Earthenware	Pearlware	188	29.5%
Refined Earthenware	Pearlware/Whiteware	2	0.3%
Refined Earthenware	Red Bodied	7	1.1%
Refined Earthenware	Tin Glazed	1	0.2%
Refined Earthenware	Unidentified Refined Earthenware	1	0.2%
Refined Earthenware	Whiteware	1	0.2%
Stoneware	Black Basalts	2	0.3%
Stoneware	Dry Bodied Stoneware	1	0.2%
Stoneware	Salt Glazed, Gray/Buff Bodied	24	3.8%
Stoneware	White Salt Glazed	3	0.5%
TOTAL		637	

The vessels from the midden are more complete than those from other deposits throughout the site; all but 11% of the vessels are complete enough for identification of their forms and functions (Figure 8.05; Table 8.44). Tablewares make up almost half of the ceramic vessels.

Table 8.44: Household group ceramic vessels.

Function	MNV	Percent
Beverage, Non-Tea	36	5.7%
Food Preparation & Service	63	9.9%
Food Storage	21	3.3%
Indeterminate	70	11.0%
Tableware	304	47.7%
Teaware	143	22.4%
TOTAL	637	

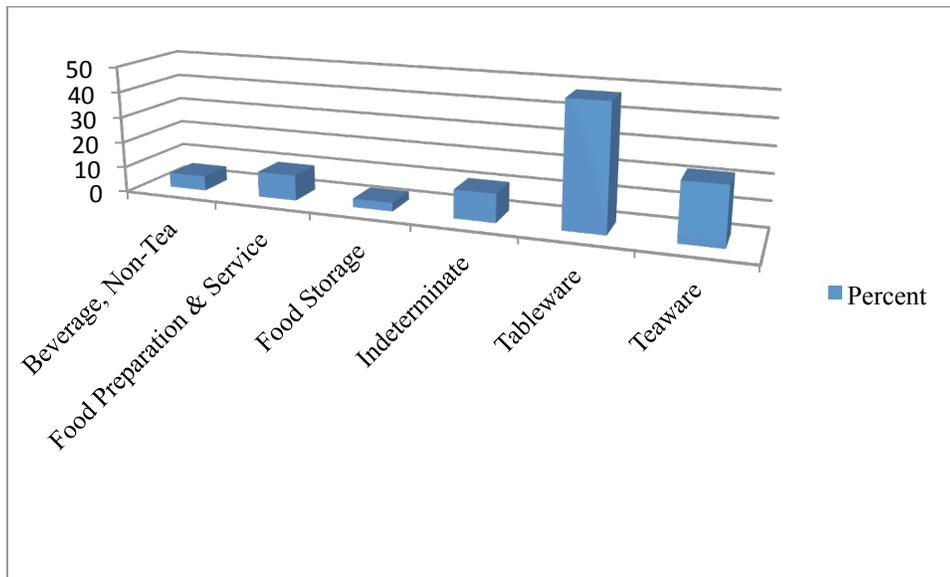


Figure 8.05: Household ceramic functional groups.

**Tablewares.** Creamware plates are the most numerous tableware form (Table 8.45).

Table 8.45: Ceramic tablewares.

<b>Object</b>	<b>Ware</b>	<b>MNV</b>
<i>consumption</i>		
Bowl	Creamware	30
Bowl	Pearlware	27
Bowl	Porcelain, Chinese Export	1
Bowl	Redware	4
Plate	Creamware	116
Plate	Pearlware	40
Plate	Porcelain, Chinese Export	6
Plate	White Salt Glazed	1
Plate	Whiteware	1
Plate, Soup	Creamware	23
Plate, Soup	Pearlware	2
Porringer	Redware	14
Tableware, General	Creamware	6
Tableware, General	Pearlware	11
Tableware, General	Pearlware/Whiteware	1
<i>subtotal consumption</i>		283
<i>service</i>		
Pitcher	Creamware	13
Pitcher	Pearlware	1
Pitcher	Redware	1
Platter/Dish	Creamware	4
Platter/Dish	Porcelain, Chinese Export	1
Sauce Boat	Porcelain, Chinese Export	1
<i>subtotal service</i>		21
<b>TOTAL</b>		<b>304</b>

Over 90% of the plates and soup plates are less than 25% complete (Table 8.46), which would usually indicate that the assemblage was a secondary rather than a primary deposit. However, as the midden was not completely excavated due to project constraints, this is probably not a reliable indicator of deposit type. In addition, there were two disturbances to the midden—the pipe trench mentioned above and a stone slab that might have been put in place after the midden had formed (see Chapter VII).

Table 8.46: Ceramic plates and soup plates percent extant.

Percent Extant	MNV	Percent
0-02 %	63	33.2%
03-10 %	58	30.5%
11-25 %	51	26.8%
26-50 %	9	4.7%
51-75 %	8	4.2%
TOTAL	189	

There is no temporal patterning to which plates are more or less complete; the 17 most complete consist of creamwares and pearlwares, plus the one white salt-glazed vessel in the assemblage. The plates complete enough for measurement of their diameters vary in size: 10” (*n*=20), 9” (*n*=15), 8” (*n*=9), 7” (*n*=7), 6.5” (*n*=1), and 6” (*n*=1).

The creamware plates, with the exception of one green-painted shell edge vessel, are undecorated except for their molded rim patterns (Table 8.47). The rim patterns are standard, very common shapes (Royal, Bath, plain, Queen’s, and feather edge), except for five matching plates with “ruffled” rims (Image 8.32).

The pearlwares, as is to be expected for this ware, are all painted and some have molded motifs (Images 8.33 and 8.34). The white salt-glazed plate is unusual; it is completely undecorated, although the great majority of white salt-glazed plates were made with molded rim motifs (Mountford 1971; Skerry and Hood 2009). The six Chinese export porcelain plates are painted in blue under the glaze in a variety of motifs. Two are rather poorly painted and one (Vessel C-0152) has a bit of old adhesive on a broken edge. The adhesive, probably a milk-based glue, appears as a thin off-white layer on the edge. Milk-based glues, made from lime and milk or soft cheese, were used from at least the sixteenth century (Mercer 2000:311).



Image 8.32: Feather edge. Third row: “ruffled” rim. Bottom row: Royal rim.



Image 8.33: Pearlware vessels from Feature 28 (painted China glaze plate).

Table 8.47: Motifs on ceramic plates and soup plates.

Object	Ware	Prime Decoration	Pattern/Motiff	MNV
Plate	Creamware	Undecorated		4
Plate	Creamware	Molded Pattern	Bath Rim	12
Plate	Creamware	Molded Pattern	Concave Rim	1
Plate	Creamware	Molded Pattern	Feather Edge	2
Plate	Creamware	Molded Pattern	Indeterminate	1
Plate	Creamware	Molded Pattern	Paris/Plain Rim	7
Plate	Creamware	Molded Pattern	Queen's Rim	1
Plate	Creamware	Molded Pattern	Royal Rim	82
Plate	Creamware	Molded Pattern	Ruffled	5
Plate	Creamware	Molded Pattern	Shell Edge, Rococo	1
Plate	Pearlware	China Glaze, Painted	Chinoiserie	1
Plate	Pearlware	Painted	Floral	1
Plate	Pearlware	Molded Pattern	Other Molded & Painted	1
Plate	Pearlware	Molded Pattern	Shell Edge, Even Scalloped, Curved Lines	2
Plate	Pearlware	Molded Pattern	Shell Edge, Even Scalloped, Straight Lines	8
Plate	Pearlware	Molded Pattern	Shell Edge, Indeterminate	3
Plate	Pearlware	Molded Pattern	Shell Edge, Rococo	23
Plate	Pearlware	Molded Pattern	Shell Edge, Unscaloped	1
Plate	Porcelain, Chinese Export	Painted	Painted	6
Plate	White Salt Glazed	Undecorated		1
Plate	Whiteware	Molded Pattern	Molded & Painted, Floral	1
Plate, Soup	Creamware	Undecorated		7
Plate, Soup	Creamware	Molded Pattern	Bath Rim	2
Plate, Soup	Creamware	Molded Pattern	Indeterminate	1
Plate, Soup	Creamware	Molded Pattern	Royal Rim	13
Plate, Soup	Pearlware	Molded Pattern	Shell Edge, Even Scalloped, Curved Lines	1
Plate, Soup	Pearlware	Molded Pattern	Shell Edge, Rococo	1
TOTAL				189



Image 8.34: Pearlware vessels from Feature 28 (varieties of shell edge plates).

Small bowls are also common in the midden assemblage (see Table 8.45). These bowls are classified, based on their size, as having the primary function of food consumption for semi-liquid foods—such as soups, stews, porridges, or gruels—rather than food preparation or service. They range in size from 2.8–3” in height and 4.5–7” diameter, with 26 of the 35 bowls that are complete enough to measure having rim diameters between 5 and 6”. The creamware, pearlware, and Chinese porcelain bowls of this size could also have functioned as slop bowls (i.e., a small bowl that received tea leaf dregs before a new cup was poured) or large breakfast cups for drinking tea or other warm beverages.

Undecorated creamwares are the most common type of these small bowls, followed by pearlwares painted in a variety of polychrome (earth-tone colors) and blue motifs (Table 8.48; Images 8.35 and 8.36). The single porcelain bowl is polychrome painted over the glaze with a motif of simple floral sprigs under a simple small-scale border (called “European Neo-Classical Style”). The redware (i.e., red-bodied coarse earthenware) bowls are lead glazed without decoration.

Table 8.48: Ceramic small bowls.

<b>Object</b>	<b>Ware</b>	<b>Prime Decoration</b>	<b>Pattern/Motiff</b>	<b>MNV</b>
Bowl	Creamware	Undecorated		29
Bowl	Creamware	Dipt	Banded	1
Bowl	Pearlware	China Glaze, Painted	Chinoiserie	2
Bowl	Pearlware	China Glaze, Painted	House & Tree	4
Bowl	Pearlware	China Glaze, Painted	Other	1
Bowl	Pearlware	China Glaze, Painted	Trellis	1
Bowl	Pearlware	Dipt	Banded	2
Bowl	Pearlware	Dipt	Indeterminate	1
Bowl	Pearlware	Painted	Earth-Tone Colors, Floral	10
Bowl	Pearlware	Painted	Earth-Tone Colors, Geometric	1
Bowl	Pearlware	Painted	Blue, Star/Asterisk	1
Bowl	Pearlware	Painted	Brown, Star/Asterisk & Shell Edge	1
Bowl	Pearlware	Printed	Blue, Chinese Landscape	1
Bowl	Pearlware	Printed, Line Engraved	Blue, Chinoiserie	1
Bowl	Pearlware	Printed, Line Engraved	Brown, Floral	1
Bowl	Porcelain, Chinese Export	Painted, Overglaze	European Neo-Classical Style	1
Bowl	Redware	Lead Glazed	Lead Glaze, Black	1
Bowl	Redware	Lead Glazed	Lead Glaze, Dark Brown	1
Bowl	Redware	Lead Glazed	Lead Glaze, Light Brown	2
<b>TOTAL</b>				<b>62</b>



Image 8.35: Pearlware painted and dipt vessels from Feature 28. At top, China glaze painted teacup. At bottom, small bowl painted in earth-tone colors.



Image 8.36: Pearlware painted and dipt vessels from Feature 28. Top row: small bowl with dipt decoration; two sherds from a hollowware with dipt mocha decoration; small bowl with painted asterisks. Bottom row: small bowl painted in earth-tone colors.

As is the case with the plates, the small bowls are also incomplete (Table 8.49). The most complete (Vessel C-0225) is a polychrome-painted pearlware vessel with kiln damage (Image 8.37). The glaze around the rim of the vessel formed into bubbles that burst during firing, leaving small unglazed spots. In other places, the glaze has flaked off above the yellow/orange pigment used in the simple floral motif. The vessel is well formed and delicately painted, but would almost certainly have been sold as a second, due to the kiln damage.

Table 8.49: Ceramic small bowls  
percent extant.

Percent Extant	MNV	Percent
0-02 %	6	9.6%
03-10 %	27	43.5%
11-25 %	23	37.1%
26-50 %	5	8.1%
51-75 %	0	-
76-95 %	1	1.6%
TOTAL	62	



Image 8.37: Small hand-painted pearlware bowl with kiln damage (C-0225).

The redware bowls are interesting because this form is relatively unusual in early-nineteenth-century Manhattan assemblages, but common in Philadelphia ones of the same period (see, for example, Dent et al. 1997 and Louis Berger & Assoc. 1987 and 1990). Philadelphia and the region surrounding it was an important center of redware production in the Northeast during the eighteenth and early nineteenth centuries (Myers 1980; Bower 1985). Some Philadelphia-style forms and decorations are distinctive and easily recognized: small bowls and porringers have a flat foot which was hollowed out (trimmed) by the potter on the interior (rather than on the exterior, as was more common in other regions) to create a well; and slip was often applied to hollowware interiors in the form of broad swirls/petals (Liggett 1978; Dent et al. 1997)<sup>5</sup>. None of the midden vessels have this distinctive “Lower Delaware Valley style” slip decoration but, of the four small redware bowls, the two with extant feet all have their interiors hollowed out into what can be referred to as the “Philadelphia foot” style.

The bowls could have been traded to New York from Philadelphia, but it is also possible that they were made by a potter who had moved to Manhattan from the Philadelphia area. In early 1773, a potter named Jonathan Durell advertised in the *New-York Gazette and Weekly Mercury*:

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5. In the data base (see Appendix J), this type of slip decoration is identified as “Lower Delaware Valley Style” in the pattern/motif field. Ceramics historian Ellen Denker coined this name (Denker, personal communication 2000).

Philadelphia Earthenware:

Now manufacturing and to be sold at that well known house, called Keechemet's mead house, about mid-way between the New city-hall, and the tea water pump, on the left hand side of the road as you go out of the city; where city and country store keepers may be supplied with any quantity of said ware, at reasonable rates; the ware is far superior to generality, and equal to the best imported from Philadelphia, or elsewhere, and consists of butter, water, pickle, oyster and chamber pots, milk pans of several sizes; jugs of several sizes; quart and pint mugs, quart, pint, and half pint bowls of various colors; porringers, and smaller cups of several shapes, striped and clouded dishes of divers colors, pudding and wash hand basons [sic], with sauce pans, and a variety of other sorts of ware too tedious to particularize, by the manufacturer late from Philadelphia. Jonathan Durell [quoted in Ketchum 1991:44].

The location for the pottery is not given, but Durell was listed in the city directories from 1789 to 1803 as a potter at 12 Roosevelt Street (a no longer extant street that ran from Pearl Street at Park Row to the East River), and it is possible that he was operating in the neighborhood of the Common from his earliest days in New York (Ketchum 1991:44)

Another potter working near the Common also advertised that he was making "Philadelphia" earthenwares; John Campbell operated a pottery slightly north of the Common on the west side of Broadway, opposite the African Burial Ground, from about 1759 into the 1790s (Ketchum 1987:42–43; Cheek and Roberts 2009:73, 116). Campbell, although born in New York state, advertised in 1774 that he "continues making what is called Philadelphia earthenware of the best quality and will sell on the lowest terms for cash, wholesale and retail" (Ketchum 1987:42). Campbell, according to the ceramic historian William Ketchum, obtained his clay from the Common<sup>6</sup> because in 1788 he complained that a recently enacted law forbade him from continuing this practice, so "unless he be permitted to procure clay there his manufactory of pantiles must cease" (Ketchum 1991:43). This might be evidence that Campbell had ceased to make "Philadelphia earthenwares" by this time, possibly because of competition from Durrell, or that he had different sources for the clay for his tiles than for his vessels.

Kiln pads, saggars, and kiln wasters attributed to Campbell's pottery were recovered from the excavations at the African Burial Ground. Analysis of this material concentrated on the kiln furniture and no detailed account of vessel forms is given in the report, but mention is made of kiln waster vessels of black-glazed hollowwares, including "jars and pots," slip-decorated dishes and pans, and at least one bowl with the distinctive Philadelphia foot (Cheek and Roberts 2009:421).

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6. Pockets of red clay were found during the current excavations (Alyssa Loorya, personal communication 2012).

The redware bowls from the midden might have been made in the shops of John Campbell or Jonathan Durell. One bowl (Vessel C-0516) has an interior well into which glaze has puddled; its rim diameter is 6” and it is 3” tall, with a 2 15/16” base diameter (Image 8.38). The base has a deep scar on the exterior where an adhesion, probably from a kiln prop, was torn away (redware bases were generally left unglazed so that vessels would not stick to kiln furniture, but the glaze on the exterior of this vessel has run down onto the foot in the area surrounding the scar). The interior of the vessel has some wear marks (stirring marks) within the well and the patch of glaze on the foot shows heavy wear at its edge; there is also a small charred patch on the unglazed portion of the base.



Image 8.38: Small “Philadelphia-foot” style redware bowl with kiln damage (C-0516).

Porringers were made to serve the same food consumption functions as small bowls, but they are literally handier for eating because they have a separate sturdy handle (Image 8.39). The 14 porringers in the midden assemblage are all made of red earthenware with various shades of lead glaze on both surfaces (except for their bases). At least three (C-0545, C-0550, and C-0542) have wells in their interiors. C-0545 and three others (C-0475, 0541, and 0544) have the same distinct squared handle attachment, an indication that they were almost certainly made by the same potter. This potter, whether Campbell, Durrell or another, could have had a formal or informal arrangement to supply inexpensive earthenwares to the almshouse.



Image 8.39: Redware porringer with a “Philadelphia-foot” and a charred base (C-0545).

Many of the bases are charred, probably because the porringers were either placed directly into hot coals or were put over or in front of a hearth on a trivet or other support. Vessel C-0545, for example, is charred on the center of the base and on the body up until the glazed area (from which charring could be washed off). The edge of the base is worn, which might have removed charring from this portion of the vessel, or the lack of charring here could indicate that the vessel stood in a circular trivet that protected the outer edge of the base from direct contact with flames or smoke.

The porringers, like the other tablewares, are relatively incomplete: eight are less than 10% complete, three are between 11 and 25% complete, and three are between 26 and 50% complete.

The last form in the tableware-consumption class is identified as “tableware, general.” These are vessels, often represented by rim or base sherds, which are not complete enough for precise identification, but that nevertheless can be identified as plates, platters, or bowls. Eighteen such vessels were so designated.

Pitchers<sup>7</sup> are 15 of the 21 food service vessels (see Table 8.45): 13 are creamware, one is pearlware, and one is redware. The pearlware pitcher (Image 8.40) has a dipt decoration consisting of an engine-turned pattern of circles filled in with dark brown slip on a brown slip band edged by blue slip bands. This same motif is also on two mugs (Vessels C-0227 and 0228), one of only three instances of matching vessels (the others are teawares; see below) in the midden assemblage.<sup>8</sup> The redware pitcher could have been made by the same potter as at least some of the bowls and porringers, because it has the same dark brown lead glaze with orange and dark brown flecking as some of these vessels.



Image 8.40: Pearlware pitcher and mugs with matching dipt (slipped and turned) decoration (C-0128, 0227, and 0228).

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7. Pitchers are called jugs in British and some American ceramic references, but the term jug is reserved here for vessels with very narrow mouths used for storage of liquids. Pitchers have wider mouths and either a spout or a wide pouring lip and were used on the table to dispense liquids.

8. Creamware and shell-edged pearlware plates cannot properly be identified as matching vessels because the patterns—Royal rims, shell edge with even scallops and curved lines, etc.—were made as generic patterns and were not intended to be sold as part of complete unique dinner services.

Eight of the creamware pitchers are undecorated, one has a molded band of small beads around its rim, and the other four have bat-printed<sup>9</sup> decorations. The beaded rimmed vessel is small sized and might be a large creamer rather than a small pitcher, but it is too fragmentary (less than 25%) to tell. The bat-printed vessels belong to a class of tableware that was very popular during the last decades of the eighteenth and the first decades of the nineteenth century (Towner 1978; Teitelman 2010). Mugs, bowls, and especially pitchers were decorated with a variety of printed scenes. The scenes were often of sailing ships on one side with heroes of one sort or another—such as Colonel Tarleton of Revolutionary War notoriety or George Washington—or genre or pastoral scenes on the other; some also had mottos or pieces of well-known poems or songs. Three of the four bat-printed pitchers from the midden assemblage are under 10% complete and their entire motifs could not be determined, although one has the partial inscription “SHEP[HERD?].../Reclin’d ...He sweetly p[layed?]... In praise...,” which could be a quote from a pastoral romance. Unfortunately, the complete quotation could not be tracked down with the resources presently available. Another of the fragmentary pitchers has a large medallion with part of what is probably an agricultural scene and the word “farmer.” An additional sherd (not assigned an MNV) has a figure of a smiling man, possibly a sailor.

The last bat-printed pitcher (Vessel C-0300) is more complete (between 26 and 50%) and its motif could be identified. The scene depicted is the Royal Hospital for Seaman at Greenwich, England, an institution founded in 1694 by royal charter that still exists as the Old Royal Naval College (Image 8.41). The building itself was the design of the renowned architect Christopher Wren (the architect of St. Paul’s Cathedral in London) and has been much admired both when it was built and over the course of the subsequent centuries (PortCities London 2012). Although other bat-printed vessels with this particular print have not been located during the current research, a more detailed image of the hospital from the same vantage point is seen on transfer-printed pitchers from the 1820s in the collection of the Naval College, where the scene is identified as coming from a print published in 1792 (PortCities London 2012). As this print was probably also the source for the bat-printed scene, 1792 has been assigned as the vessel’s beginning date.

Four of the five platters are plain creamware in oval shapes; the other is Chinese export porcelain with an overglaze painted floral pattern. The sauce boat is also Chinese porcelain; although both vessels are represented by single sherds, they are distinctive enough to have been assigned an MNV. The platter cannot be dated, but the sauce boat is decorated over the glaze with black ink and gilding, a style called *encre de chine*, most popular circa 1730 to 1750, but made until the end of the eighteenth century (Palmer 1976: 17–18).

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9. Bat printing was an early form of transfer printing applied over the glaze using a glue bat.

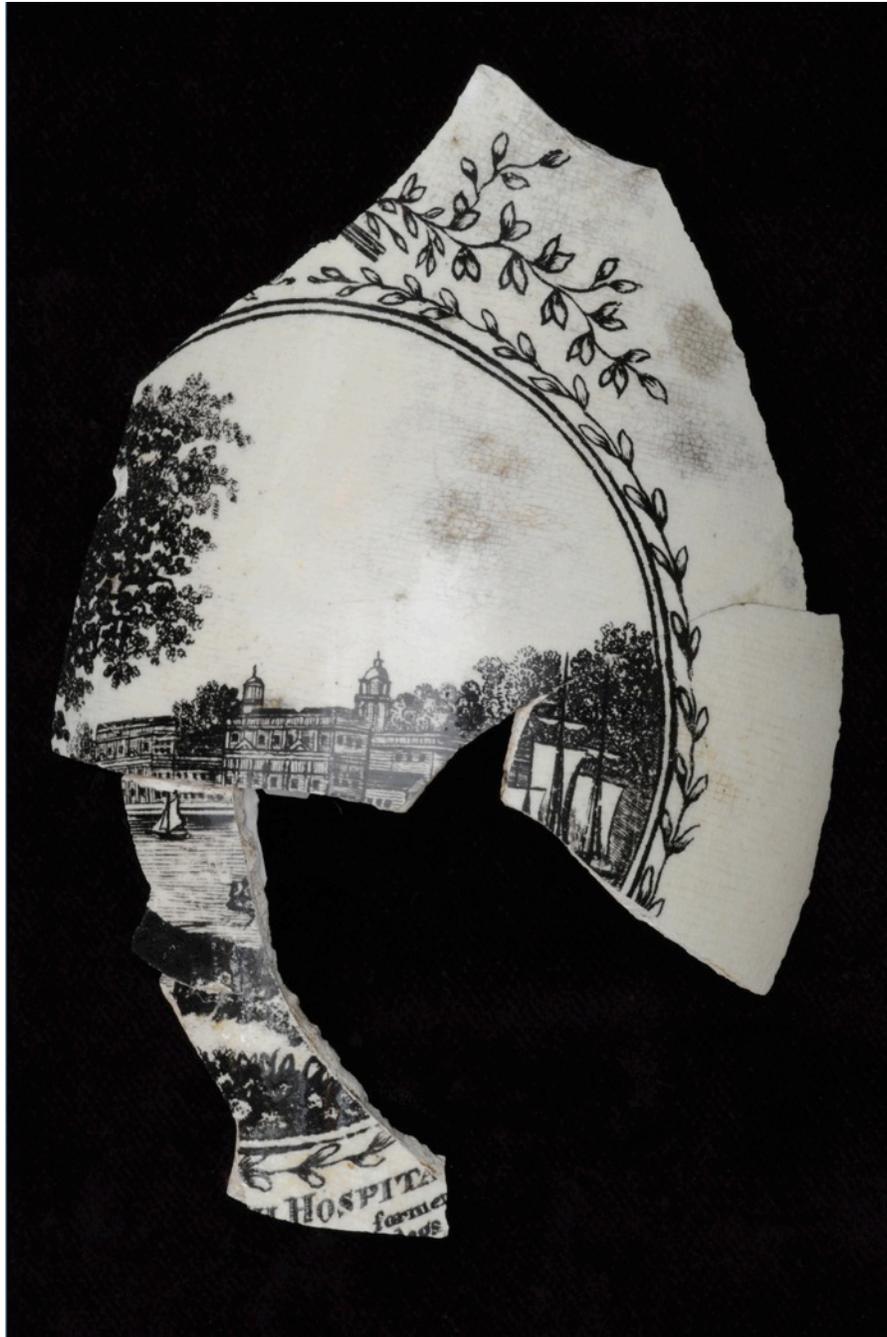


Image 8.41: Bat-printed creamware pitcher with an image of the Royal Hospital for Seaman at Greenwich, England (C-0300).

**Teawares.** Vessels associated with drinking tea, coffee, or chocolate comprise 22.4% of the midden assemblage (see Table 8.44). This class includes one unusual vessel, a cappuccino, and a disproportionately large number of saucers compared to cups (Table 8.50).

Table 8.50: Ceramic teawares.

Object	Ware	MNV
Cappuchine	Pearlware	1
<i>Cappuchine Total</i>		<i>1</i>
Coffee Cup	Pearlware	1
Coffee Cup	Porcelain, Chinese Export	2
<i>Coffee Cup Total</i>		<i>3</i>
Creamer	Red Bodied	1
<i>Creamer Total</i>		<i>1</i>
Saucer	Creamware	21
Saucer	Pearlware	48
Saucer	Porcelain, Chinese Export	17
Saucer	White Salt Glazed	1
<i>Saucer Total</i>		<i>87</i>
Sugar Bowl	Pearlware	1
Sugar Bowl	Porcelain, Chinese Export	1
<i>Sugar Bowl Total</i>		<i>2</i>
Teacup	Creamware	8
Teacup	Pearlware	16
Teacup	Pearlware/Whiteware	1
Teacup	Porcelain, Chinese Export	6
Teacup	Porcelain, Soft Paste	1
<i>Teacup Total</i>		<i>32</i>
Teapot	Black Basalts	2
Teapot	Creamware	2
Teapot	Dry Bodied Stoneware	1
Teapot	Jackfield Type	1
Teapot	Pearlware	1
Teapot	Red Bodied	6
<i>Teapot Total</i>		<i>13</i>
Teaware, General	Creamware	1
Teaware, General	Pearlware	2
Teaware, General	Porcelain, Chinese Export	1
<i>Teaware, General Total</i>		<i>4</i>
TOTAL		143

A cappuchine is a specialized form of cup with a round body and a tall collar; it was first developed in the seventeenth century for drinking the newly introduced coffee (Victoria and Albert Museum 2012). The vessel from the midden is made of pearlware with a dipt decoration (Image 8.42). Dipt decorations on teawares are rare after the first quarter of the nineteenth century (Rickard 2006) and, although the cappuchine form was never common (there are none illustrated in Rickard’s extensive catalogue of dipt wares and it is not

included on most lists of ceramic forms), it was more popular in the eighteenth than the nineteenth century. It might have been an old, out of fashion vessel by the time it was discarded.

Late eighteenth- to early-nineteenth-century coffee cups are distinguished from teacups because of their shape: coffee cups are taller and narrower than teacups and almost always have handles (Miller 2011:8). The three identified coffee cups in the midden assemblage are all distinctive. One is pearlware with no colored decoration and a motif more commonly associated with creamwares: the body is molded in narrow ribs beneath a plain band at the rim. The others are Chinese export porcelain. The most complete (Vessel C-0143) (Image 8.43) is overglaze painted in *famille rose* colors with a European-style motif of a floral medallion and floral sprigs, as well as an elaborate dragon handle (Howard 1984:76). Based on the colors and motif, it was made after 1720 and before 1840. The other porcelain coffee cup cannot be dated. It is painted under the glaze in blue featuring a riverscape scene with rocks, a pagoda, and a bridge (Image 8.44).



Image 8.42: Pearlware cappuchine with dipt decoration (C-0230).



Image 8.43: Chinese export porcelain coffee cup with overglaze painted floral motif (C-0143).

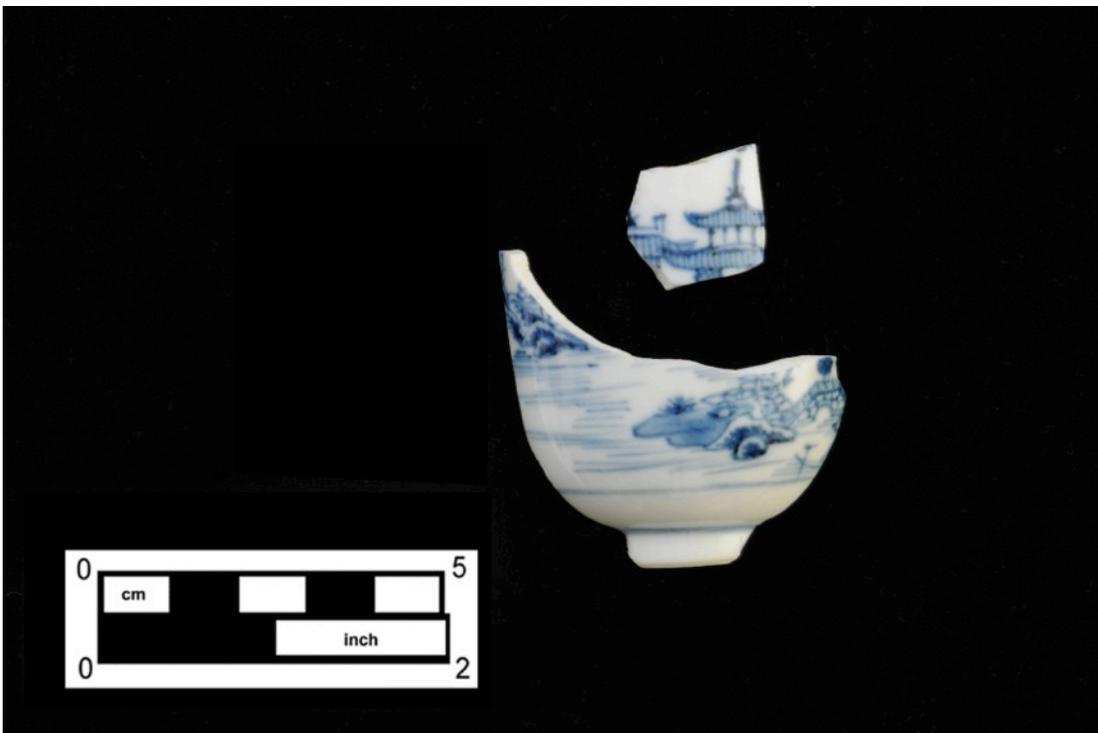


Image 8.44 Chinese export porcelain coffee cup with underglaze blue-painted riverscape motif (C-0157).

One of the two sugar bowls is also Chinese porcelain painted in a *famille rose* floral pattern. It too is very fragmentary (less than 10% extant), but the unglazed interior rim for an in-sitting lid is present. The other possible sugar bowl is more complete, but is less obviously a sugar bowl, as it is shaped like a low bowl but has a slightly everted rim (Image 8.45). It is dipt decorated pearlware with a small-scale engine-turned checkerboard pattern on the rim's exterior.

The single identified creamer has a refined red body and is decorated with engine-turned lines in a basket-weave pattern under a light brown lead glaze. It has a pear-shaped body with a constricted neck and a flaring rim (Image 8.46).

There are at least six red-bodied engine-turned earthenware teapots and one red-bodied stoneware teapot spout with a ridged decoration (most probably part of an engine-turned vessel) in the midden assemblage. Red-bodied engine-turned tea sets (i.e., teapots, sugar bowls, creamers, milk jugs, and tea caddies, but not cups or saucers) were very popular during the 1760 to 1780/85 period (Hawkins 1999; Jefferson Patterson Park and Museum 2012), although engine-turned vessels were made until circa 1830 (Rickard and Carpentier 2004). With the exception of a lid that is between 26 and 50% complete, all the others are under 25% complete.



Image 8.45: Pearlware sugar bowl with dipt and turned decoration (C-0138).



Image 8.46: Engine-turned red-bodied creamer sherds (C- 0529).

Two other teapots, both between 11 and 25% complete, are made of Black Basalts stoneware, a dry-bodied (unglazed) ware created by Josiah Wedgwood about 1750. It remained popular until the mid-nineteenth century. Black Basalts teapots were often decorated with classical inspired molded and/or sprigged<sup>10</sup> motifs: one of the midden vessels has acanthus leaves, a popular neo-classical motif, on its oval-shaped body and the other has fine ribs around its base and spout, another neo-classical motif. Another teapot is also black but it is black-glazed red earthenware; it might have been made locally, but its black, lustrous glaze and thin-walled purplish body suggest it is of English manufacture, as are the red-bodied and Black Basalts vessels. It is less than 10% complete.

One of the two creamware teapots is also less than 10% complete. This vessel has a squared shoulder and a fancy foliate design on the handle attachment, a style often associated with the potteries at Leeds, but copied by other English manufacturers (Towner 1963). The other, between 11 and 15% complete, has a round shape, but also has foliate handle attachments.

The pearlware teapot has a manufacturing defect: the large spout has been poorly attached so that some of the holes in the rose (the perforated section of the teapot body that leads into the spout) have been obscured by the walls of the spout. This might have created

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10. Sprigged decorations are made in separate small molds, then applied to the vessel. They often have a high level of detail and can be quite delicate.

problems when pouring from the teapot. The vessel is painted under the glaze in blue with small floral motifs on the body and a band of blue dots bordered in blue lines around the tall straight collar that forms the neck. The size of the spout and the shape of the collar could suggest that this is a coffee pot rather than a teapot, but not enough of the vessel is present (it is between 11 and 25% extant) to make this determination.

The saucers and teacups from the midden deposit are made of refined wares, as expected; saucers were almost three times as plentiful as cups, but both are made of the same materials and generally have the same decorations (Tables 8.51 and 8.52). There are at least two possible reasons for the disproportionate number of saucers compared to cups: there might have been differential breakage of the two at some stage in their use lives, or the functions of cups could have been filled by the 58 small bowls noted above as tablewares. The similarity of decorative motifs on the small bowls and the teacups and saucers makes this a likely conclusion (see Tables 8.47 and 8.51).

Table 8.51: Ware and decorative types, saucers and teacups.

Ware	Prime Decoration	Object	MNV
Creamware	Undecorated	Saucer	17
Creamware	Undecorated	Teacup	8
Creamware	Molded Pattern	Saucer	1
Creamware	Painted, Overglaze	Saucer	3
Pearlware	China Glaze, Painted	Saucer	14
Pearlware	China Glaze, Painted	Teacup	3
Pearlware	Painted	Saucer	30
Pearlware	Painted	Teacup	8
Pearlware	Printed	Teacup	3
Pearlware	Printed, Line Engraved	Saucer	4
Pearlware	Printed, Line Engraved	Teacup	2
Pearlware/Whiteware	Sponged	Teacup	1
Porcelain, Chinese Export	Painted	Saucer	10
Porcelain, Chinese Export	Painted	Teacup	4
Porcelain, Chinese Export	Painted, Overglaze	Saucer	7
Porcelain, Chinese Export	Painted, Overglaze	Teacup	2
Porcelain, Soft Paste	Printed	Teacup	1
White Salt Glazed	Indeterminate	Saucer	1
TOTAL			119

Table 8.52: Saucers and teacups, motifs.

Object	Ware	Prime Decoration	Pattern/Motiff	MNV
Saucer	Creamware	Undecorated		17
Saucer	Creamware	Molded Pattern	Ribbed	1
Saucer	Creamware	Painted, Overglaze	Polychrome, Floral	3
Saucer	Pearlware	China Glaze, Painted	Blue, Chinoiserie	9
Saucer	Pearlware	China Glaze, Painted	Blue, House & Tree	5
Saucer	Pearlware	Painted	Floral	14
Saucer	Pearlware	Painted	Earth-Tone Colors, Floral/Geometric	2
Saucer	Pearlware	Painted	Earth-Tone Colors, Geometric	3
Saucer	Pearlware	Painted	Earth-Tone Colors, House & Tree	1
Saucer	Pearlware	Painted	Blue, Indeterminate	2
Saucer	Pearlware	Painted	Blue, Star/Asterisk	1
Saucer	Pearlware	Painted	Earth-Tone Colors, Star/Asterisk	3
Saucer	Pearlware	Painted	Brown, Star/Asterisk	1
Saucer	Pearlware	Painted	Earth-Tone colors, Strawberry & Leaves	2
Saucer	Pearlware	Painted	Blue, Trellis	1
Saucer	Pearlware	Printed, Line Engraved	Blue, Chinoiserie	3
Saucer	Pearlware	Printed, Line Engraved	Blue, Floral	1
Saucer	Porcelain, Chinese Export	Painted	Blue, Floral Landscape	1
Saucer	Porcelain, Chinese Export	Painted	Blue, Indeterminate	1
Saucer	Porcelain, Chinese Export	Painted	Blue, Trellis	1
Saucer	Porcelain, Chinese Export	Painted	Blue, Waterscape	7
Saucer	Porcelain, Chinese Export	Painted, Overglaze	European Neo- Classical Style	5
Saucer	Porcelain, Chinese Export	Painted, Overglaze	Floral	1
Saucer	Porcelain, Chinese Export	Painted, Overglaze	Encre-de-Chine	1

Table 8.52: Saucers and teacups, motifs (Cont'd).

Object	Ware	Prime_Decoration	Pattern/Motiff	MNV
Saucer	White Salt Glazed	Indeterminate		1
Teacup	Creamware	Undecorated		8
Teacup	Pearlware	China Glaze, Painted	Blue, Chinese Landscape	1
Teacup	Pearlware	China Glaze, Painted	Blue, House & Tree	2
Teacup	Pearlware	Painted	Blue, Floral	2
Teacup	Pearlware	Painted	Earth-Tone Colors, Floral	2
Teacup	Pearlware	Painted	Earth-Tone Colors, Geometric	1
Teacup	Pearlware	Painted	Blue, Indeterminate	1
Teacup	Pearlware	Painted	Earth-Tone Colors, Star/Asterisk	1
Teacup	Pearlware	Painted	Earth-Tone Colors, Strawberry & Leaves	1
Teacup	Pearlware	Printed	Blue, Chinoiserie	3
Teacup	Pearlware	Printed, Line Engraved	Blue, Chinese Landscape	1
Teacup	Pearlware	Printed, Line Engraved	Brown, Shells & Trellis	1
Teacup	Pearlware/Whiteware	Sponged	Blue Sponged	1
Teacup	Porcelain, Chinese Export	Painted	Blue, Indeterminate	1
Teacup	Porcelain, Chinese Export	Painted	Blue, Genre Scene	1
Teacup	Porcelain, Chinese Export	Painted	Blue, Waterscape	2
Teacup	Porcelain, Chinese Export	Painted, Overglaze	European Neo- Classical Style	2
Teacup	Porcelain, Soft Paste	Printed	Blue, Indeterminate	1

The most common saucers are underglaze painted pearlwares, both blue and polychrome colored. Fourteen of the blue-painted pearlware saucers can be classified as “China glaze,” dating circa 1775–1810, and another three as simply blue painted. At least five and possibly seven of the China glaze saucers have the very common “house and tree” motif (Image 8.47). The other China glaze saucers are too incomplete for identification of their

main motifs, although all have designs inspired by Chinese porcelain and three have the same border design (Image 8.48).

Vessel C-0184, a non-China glaze blue-painted saucer, matches one of the teacups (C-0183): both have an interior border of a light blue band with darker blue dots and square uncolored reserves containing blue dots in a cross pattern (Image 8.49). The body of the cup, which is more complete (26–50%) than the saucer (11–25%), is decorated with small floral motifs. The other identifiable blue-painted non-Chinese motif is on Vessel C-0258 (51–75% extant). The interior of this saucer has multiple star/asterisks and a simple border of a blue line with pendant swags and straight lines. Three polychrome-painted and one brown-painted saucer, as well as two small bowls and two vessels too small to determine their forms and functions, share the star/asterisk motif. This simple motif that could fill up the interiors of saucers and exterior of cups and small bowls would have been easy and quick for pottery decorators, who were paid by the piece (Weatherill 1971:100) (Image 8.50).

The red-bodied engine-turned teapots and creamer, and possibly the porcelain vessels, could be considered as old fashioned, compared to the pearlware vessels in this assemblage. It is possible that they were older goods donated to the almshouse by families who had replaced them with newer, more currently fashionable vessels. In Philadelphia, tea- and tablewares were donated to the almshouse by patrons (Kaktins—in process), and it is likely that the same sort of philanthropy occurred in New York.



Image 8.47: Pearlware China glaze painted saucers with house and tree painted motifs (C-0169 and 0170).



Image 8.48: Pearlware China glaze painted saucers with matching rim motifs (C-0163, 0164, and 0165).



Image 8.49: Matching pearlware underglaze blue-painted teacup and saucer (C-0183 and 184).



Image 8.50: Pearlware large teacup and saucer with simple painted star/asterisk motifs (C-0332 and 0258).

**Non-Tea Beverage Vessels.** This category consists of punch bowls and mugs; the vessels are made of the same wares as the other household group vessels, with the addition of locally made salt-glazed stonewares (Table 8.53).

Table 8.53: Ceramic non-tea beverage vessels.

Object	Ware	Prime Decoration	Pattern/Motiff	MNV
Bowl, Punch	Creamware	Undecorated		2
Bowl, Punch	Porcelain, Chinese Export	Indeterminate		1
Bowl, Punch	Porcelain, Chinese Export	Painted, Overglaze	Indeterminate	2
Mug	Creamware	Undecorated		10
Mug	Creamware	Dipt	Banded	2
Mug	Creamware	Dipt	Other	1
Mug	Creamware	Molded Pattern	Other	1
Mug	Creamware	Printed, Bat	Landscape	1
Mug	Pearlware	Dipt	Checkerboard & Banded	1
Mug	Pearlware	Dipt	Geometric Pattern	2
Mug	Pearlware	Printed, Line Engraved	George Washington	1
Mug	Pearlware	Spatter	Speckled	1
Mug	Redware	Lead Glazed		2
Mug	Salt Glazed, Gray/Buf Bodied	Cordoned		1
Mug	Salt Glazed, Gray/Buf Bodied	Incised	Banded	1
Mug	Salt Glazed, Gray/Buf Bodied	Incised	Lined	1
Mug	Salt Glazed, Gray/Buf Bodied	Incised	Reeded	1
Mug	Salt Glazed, Gray/Buf Bodied	Indeterminate		1
Mug	Salt Glazed, Gray/Buf Bodied	Miscellaneous Brown Slip		2
Mug, Child's	Creamware	Undecorated		2
TOTAL				36

Punch bowls are defined here as hemispherical vessels with straight rims (i.e., without a lip) and diameters greater than 8". Punch was a very popular drink during the eighteenth and early nineteenth centuries (Dunning 2005), but these bowls could of course also have been used as serving vessels for a great variety of foods. Punch bowls were generally made

of porcelain and refined earthenwares, as are the vessels from the midden. All of these vessels are fragmentary: four of the five bowls are less than 10% complete and the other is between 11 and 25% complete. Two of the Chinese porcelain bowls are definitely, and the third is probably, decorated with painting over the glaze in polychrome colors, a very common decorative style used on punch bowls (Palmer 1976; Mudge 1986). One has an unidentified orange motif in a black cartouche surrounded by gilded scrolls and flowers; the other has a landscape scene that includes a red fence. The two creamwares are probably undecorated and one has a manufacturing defect in the form of extra glaze at its rim.

The mugs are comprised of both imported creamwares and pearlwares and locally made stonewares and redwares. Most of the mugs are under 10% complete, although there are relatively more complete mugs than other household group forms: six are 11–15% extant; four are 26–50%; and one each is 51–75% and 76–95%. The creamwares and pearlwares have some of the same types of decorations as the other household ceramics (undecorated and dipt creamwares, dipt and transfer-printed pearlwares), but several of the vessels have noteworthy decorations. As mentioned above, pearlware mugs C-0227 and 0228 have the same dipt motif (engine-turned circles filled in with dark brown on a brown band edged by blue slip) as a pitcher (C-0128). Another pearlware mug (C-0101) has a printed (line only) figure of a debonair mounted man (Image 8.51) who has been identified as George Washington (Snyder 1995:9 Teitelman et al. 2010:75). This mug is unusual because this type of decoration was most often applied over the glaze (bat printed) on creamwares, but the glaze on this vessel is definitely blue-tinted and the image is under the glaze. Teitelman et al. (2010:74) note that very similar equestrian depictions of Washington, all based on a mezzotint published in London in 1775, appear on a number of transfer-printed vessels, although the images have slight differences so were not all from the same engraving. The final decorated mug from the midden is creamware with a bat-printed, unidentified landscape scene. The two children's mugs are made of creamware and both are undecorated, although the smaller is less than 10% complete (the other is between 25 and 50% extant) and might have been decorated on the missing portions.

The pattern of organic staining on one of the children's mugs (C-0078) reflects post-depositional conditions: three sherds from FS 378 (Stratum 3 in the northwest portion of Feature 28) are stained, but the mending sherd from FS 376 (Stratum 2 in the north central portion of Feature 28) is not. When all the creamware sherds from both contexts are considered, however, FS 376 has relatively more stained sherds. There were probably pockets of organic material in the midden that stained those sherds in close proximity.



Image 8.51: Pearlware mug with printed image of George Washington.

**Food Preparation and Service.** These vessels, which make up 9.9% of the household group (see Table 8.44), had multiple functions. By far the most common vessels are locally made redware dishes<sup>11</sup> (called “pie plates” by some archaeologists and collectors) with slip decoration (Table 8.54; Images 8.52 and 8.53). These were versatile vessels; they could be used in a bake oven or Dutch oven, or over a fire on a trivet or grate for baking and braising. Most are shallow, so would not be suitable for cooking stews or soups, foods better prepared in redware pans or deep metal pots. Redware pans could similarly be used in a bake oven or over the fire. Based on the charring present on the unglazed backs of many redware dishes and pans from the midden, they were used over a fire; when the breakage patterns are examined, it appears that some at least broke during their last use. For example, two mending pan base sherds from Stratum 2 (FS 376, Entry 503) have a distinctive charring pattern: one is charred on two broken edges and the unglazed back while the other is not charred at all. The charred sherd likely fell into the fire when the vessel broke, while the unmarked one stayed out of the flames. Other vessels show bands of charring on their bases or over their rims, where their contents bubbled over and burned.

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11. Dishes as defined here are shallow vessels, usually round but occasionally oval and rarely rectangular, featuring rims decorated with notches or cogging (indented designs made using a rolling coggle wheel). Pans are deep round vessels, with either guttered or straight rims.

Table 8.54: Ware types, ceramic food preparation and service vessels.

Ware	Object	MNV
Creamware	Baker	2
Pearlware	Baker	1
British Buff-Bodied Slipware	Dish	3
Redware	Dish	37
Redware	Pan	17
Salt Glazed, Gray/Buff Bodied	Pan	1

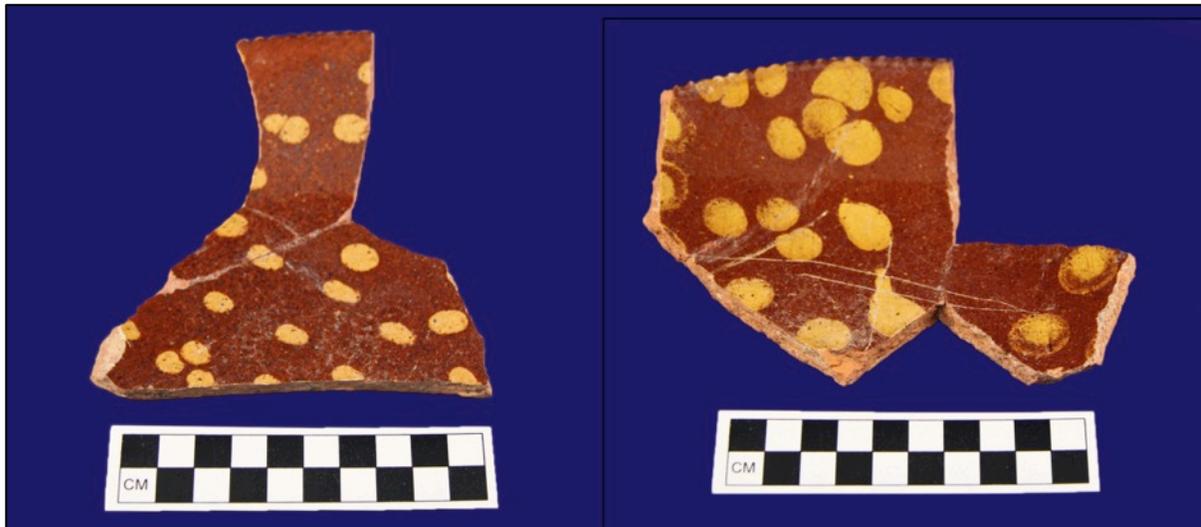


Image 8.52: Redware dishes with unusual slip dots decoration (C-0491 and 0505).

All of the pans have simple trailed slip decorations with either straight or wavy slip bands on their guttered rims and bodies (Table 8.55; Image 8.54). The slip decorations on the dishes are more varied. The great majority ( $n=27$ ) have simple trailed decorations, but five others have an unusual (for this ware) dotted slip motif, probably all made by the same, as yet unidentified, potter. Four others have joggled/marbleized slips, created by shaking the dish while the applied slip was still wet.



Image 8.53: Pan base sherds (FS 376.53). Note charring pattern.



Image 8.54: Redware pan with concentric circles slip decoration (C-0484).

Table 8.55: Ceramic food preparation and service vessels, decorations and motifs.

Object	Ware	Prime Decoration	Pattern/Motiff	MNV
Baker	Creamware	Undecorated		1
Baker	Creamware	Molded Pattern	Bath Rim	1
Baker	Pearlware	Molded Pattern	Shell Edge, Even Scalloped, Straight Lines	1
Bowl, Large	Redware	Lead Glazed		2
Dish	British Buff-Bodied Slipware	Indeterminate		1
Dish	British Buff-Bodied Slipware	Slip Decorated	Trailed Slip	2
Dish	Redware	Lead Glazed		1
Dish	Redware	Slip Decorated	Dot	4
Dish	Redware	Slip Decorated	Dot & Trailed Slip	1
Dish	Redware	Slip Decorated	Joggled Slips	2
Dish	Redware	Slip Decorated	Marbled	1
Dish	Redware	Slip Decorated	Trailed & Combed Slip	1
Dish	Redware	Slip Decorated	Trailed Slip	27
Pan	Redware	Slip Decorated	Trailed Slip	17
Pan	Salt Glazed, Gray/Buff Bodied	Undecorated		1
TOTAL				63

The redware dishes could certainly have been used for pies and pot pies, but a very common daily food for New Yorkers during much of the eighteenth century was sappaen (corn meal mush). Pehr Kalm, a Swedish naturalist, traveled throughout eastern North America from 1748 to 1751. During his time in New York, he lodged with families of modest means (his budget from the Swedish Academy of Sciences was not lavish) and he noted that sappaen was “the perpetual evening meal” for Dutch families in New York City, as well as Albany (Kalm 1987:602–3, 629). It was served in the following manner: the mush was put into a large dish and a well was made in the center into which milk or buttermilk, often sweetened with sugar or syrup, was poured; each person ate from this dish and more milk was added as needed. The sappaen was followed by bread and butter, sometimes with cheese or cold meat; if any porridge was left over, it was boiled the next morning with more milk. It is possible that the pans and dishes found in the midden were also used for grain porridges served at the almshouse or Bridewell. Perhaps a future project will have the funds to have the charred residues on these vessels tested for their chemical contents.

Vessels are unusual for a turn-of-the-nineteenth-century assemblage (Image 8.55). These two large (rim diameters are approximately 10”) redware bowls have rolled rims and flat tooled bases with internal wells, but the base of C-0514 is much broader than the other and

its well is correspondingly wider. Their bases are also trimmed into different shapes and their glazes are different shades of light brown. We do not know the range of base forms and glaze colors produced by Campbell or any other local redware potter, so it is not possible to speculate whether they were made at the same workshop. In a late-nineteenth-century assemblage, vessels of this shape could be common (although made of yellowware), but large redware bowls are not common in archaeological deposits from earlier in the century (Louis Berger and Associates 1987, 1990).

How these bowls were used is problematical. Neither has charring on its base (although the bases are incomplete) and both have only light use-wear (stir marks) on their interiors, located largely around the edges of their wells. The light wear could indicate that these vessels were not in use for a long period of time, but C-0514 has heavy wear around its rim, most probably from stacking smaller vessels inside it, which indicates it was in use long enough to acquire this type of wear. This question is discussed further in the midden summary section below.



Image 8.55: Large redware bowls with rolled rims and internal wells (C-0307 and 0514).

The creamware bakers<sup>12</sup> are oval and undecorated. The pearlware baker is also oval, but has a green-painted shell edge rim. Bakers, according to George L. Miller, were listed on potter's price lists directly after plates and platters (Jefferson Patterson Park and Museum 2012), so they might be considered to be tablewares. They are included in the food preparation and service category here, however, because of their presumed function (based on their name), although none of these vessels are charred.

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12. A baker is defined as a vessel, usually oval or oblong/hexagonal, with no footring and a flat rim (Jefferson Patterson Park and Museum 2012). These vessels are deeper than plates or platters.

**Food Storage.** There are relatively few (3.3% of the household group) food storage vessels in the midden assemblage—nine red earthenwares and 12 salt-glazed stonewares (Table 8.56). The redware jars all are lead glazed on their interiors with unglazed exteriors, as are most utilitarian jars (sometimes simply called “pots”) from this time (Ketchum 1991:32). The two most complete (both between 26–50% extant) are quite large (over 12” high) with lug handles. One, C-0538, has a distinctive square cupped lug handle, as does another MNV (not given a vessel number) from the midden (FS 404.122) (Image 8.56). These square-handled jars were almost certainly made by the same potter; handles were formed individually and can be clues to the working techniques of their makers. Unfortunately, the maker of these distinctive handles has not yet been identified.



Image 8.56: Large redware jar with distinctive squared lug handles (C-0538).

Table 8.56: Ceramic food storage vessels.

Object	Ware	Prime Decoration	Pattern/Motiff	MNV
Jar	Redware	Lead Glazed		8
Jar	Salt Glazed, Gray/Buf Buff Bodied	Indeterminate		2
Jar	Salt Glazed, Gray/Buf Buff Bodied	Miscellaneous Brown Slip		1
Jar	Salt Glazed, Gray/Buf Buff Bodied	Painted	Blue at Base of Handles	1
Jar	Salt Glazed, Gray/Buf Buff Bodied	Painted	Cordoned & Blue Band	1
Jar	Salt Glazed, Gray/Buf Buff Bodied	Painted	Crolius-Style Clouds	1
Jar	Salt Glazed, Gray/Buf Buff Bodied	Painted	Indeterminate	2
Jar	Salt Glazed, Gray/Buf Buff Bodied	Painted	Spiral	1
Jar	Salt Glazed, Gray/Buf Buff Bodied	Undecorated		1
Jug	Redware	Lead Glazed	Unglazed Interior	1
Jug	Salt Glazed, Gray/Buf Buff Bodied	Miscellaneous Brown Slip		1
Jug	Salt Glazed, Gray/Buf Buff Bodied	Painted	Other	1
TOTAL				21

Five of the 10 stoneware jars are decorated with painted blue motifs and another has an incised and blue-painted motif. They were probably made by the potters who worked nearby on Pot Bakers Hill (see the Feature 33/35 artifact discussion for a short history of these potters). At least one of the vessels, C-0534, has a painted motif (Image 8.57) sometimes described as “clouds” by collectors, known to have been used by potters working for Clarkson Crolius during the first quarter of the nineteenth century (Janowitz & Botwick 1986) (Images 8.57 and 8.58). Another, C-0523, has a painted or slip-trailed spiral motif (Image 8.58) also associated with the Pot Bakers Hill potters (Janowitz 2008A). One rim sherd from a large vessel with lug handles has blue around the base of the handles and a small part of an unidentifiable incised and blue filled-in motif. Incised and filled-in motifs were frequently used to decorate vessels, most often mugs but also jars and jugs, by the Manhattan potters.

Vessel C-0534 and two other stoneware jars have kiln damage, an indication that the potters were either selling second-grade goods to their neighbors, most likely at reduced rates, or that some of the stonewares in the midden are kiln wasters. Vessel C-0534 lost one of its two handles in the kiln (the scar is glazed over), but could have been serviceable if the jar was otherwise undamaged. Vessel C-0518 and another vessel assigned an MNV but no vessel number are both underfired and have light salt glaze, defects that would not

have severely affected the utility of these vessels, although it might have made them not completely water tight.

Vessel C-0521 is probably a small jar with a slightly everted rim, although it is possibly a pitcher with the lip section missing (Image 8.59). Stoneware wide-mouthed jars with this style of rim shape are not common forms in New York City archaeological or museum collections, but it is quite possible that this is a specialized form not made in any quantity.<sup>13</sup> However, at least two other vessels with this form and rim shape (MNVs assigned to FS 376, Entry 357, and FS 409, Entry 124) were found in the midden. One of the other vessels has the same distinctive round “push” at the lower handle attachment (the handle is not present on the other), a characteristic seen on some Pot Bakers Hill vessel wasters.

Of the three jugs, only the small redware vessel (C-0333) is relatively complete (76–95% extant) (Image 8.60). The rim is not present, but the overall form is a short squat pear shape; the interior is unglazed, not a common feature of lead-glazed redwares in general. The foot is also unglazed (a common feature) and there is the remnant of a strap handle with large flattened attachments. The vessel is heavy for its size, due to the solid tooled foot, which would have made it a sturdy container; the wear on the foot attests to its use over time.

Both of the stoneware vessels have unglazed interiors, standard for salt-glazed jugs, as the jug stackers used in the kiln to balance and separate vessels during firing made it difficult for salt vapors to reach jug interiors. This did not affect their utility because stonewares are naturally waterproof when fired correctly: salt glaze gives stoneware vessels a glossy attractive appearance, but is not a functional necessity. One of the jugs has a bright blue painted motif that is possibly a Crollius/Remmey style spiral/butterfly, a motif seen on many jug and jar sherds from the African Burial Ground assemblage (Janowitz 2008A).

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13. A redware vessel with a similar body and rim shape and without a spout is illustrated in Cullity 1991 (#25, page 21), where it is identified as a pitcher made circa 1784–1820.



Image 8.57: Stoneware jar with “clouds” motif, made by the Crolius or Remmey potters working on Pot Bakers Hill (C-0534).



Image 8.58: Stoneware jar with spiral motif, made by the Crolius or Remmey potters working on Pot Bakers Hill (C-0523).



Image 8.59: Stoneware single-handled jar (or pitcher), probably made by the Crolius or Remmey potters working on Pot Bakers Hill (C-0521).



Image 8.60: Bulbous-bodied, narrow-necked redware jug (C-0333).

**Indeterminate Forms.** Among the vessels with indeterminable forms and function are several that are interesting or unusual. One is Vessel C-0515, a wheel-thrown redware vessel shaped after throwing into a square or rectangular form, possibly so that it would fit more securely into a packing vessel (Image 8.61). Stoneware and redware flasks were made by making small jugs, without handles, and then flattening two sides to make a slim vessel, but this vessel is not a flask because it is flattened on its three remaining sides and is not at all slim. Only part of the body and base of this dark-brown double-glazed vessel are present, so the rim shape and diameter are unknown. If the rim were small and constricted, this is probably an unusually shaped jug, but if the rim were wide-mouthed, the vessel would have resembled glass snuff jars in shape, although it is larger than most glass snuff jars recovered from archaeological contexts.

Another interesting vessel (C-0377) is a creamware base, probably from a punch bowl, with a bat-printed part of a compass rose with numbers (Image 8.62). A bowl with a very similar compass rose is illustrated in Teitelman et al. 2010:289, Figure 125. The illustrated bowl also has the nautical term “Come Box the Compass” on its interior and two scenes and inscriptions evenly spaced around the exterior.<sup>14</sup>

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14. The scenes are of a man fording a stream while carrying a woman with a basket on her head and of sailors in a rowboat; the inscriptions are respectively “friendship without Interest./And love without deceit” and “From rocks & Sands/And every ill/May God preserve/the Sailor still.”



Image 8.61: Redware squared jug or jar (C-0515).



Image 8.62 Creamware punch bowl base with bat-printed compass rose (C-0377).

In addition to C-0225, the pearlware bowl noted above, a number of creamware and pearlware vessels exhibit some type of manufacturing defect or kiln damage, albeit minor ones (Table 8.57). These imperfections would not have affected the utility of the vessels, but might have affected their price or desirability.

Table 8.57: Imperfect refined earthenware vessels.

Ware	Object	Vessel No	Comments
Creamware	Bowl	C-0013	Kiln prop scar on interior.
Creamware	Bowl	C-0014	Glazed gouge on interior.
Creamware	Bowl	C-0030	Glazed extra clay lines and small blobs on interior.
Creamware	Bowl, Punch	C-0041	Small amount of extra glaze at rim.
Creamware	Hollowware	No Vessel #	Large, unglazed inclusion on the interior; second or third quality.
Creamware	Hollowware	C-0071	Small kiln adhesions and heavy puddling of glaze on the exterior.
Creamware	Hollowware	C-0072	Interior surface is not completely smooth..
Creamware	Pitcher	C-0083	Small scrap of extra clay at the interior rim.
Creamware	Plate	C-0321	Burst air bubbles on underside of marley
Creamware	Teacup	C-0068	Glaze imperfections on interior; base has been thinned too much.
Pearlware	Bowl	C-0175	Small glazed depressed area at rim.
Pearlware	Bowl	C-0246	Border matches Vessel C-178 but the painting on this sherd is badly smudged.
Pearlware	Bowl	C-0225	Kiln damage in the form of burst glaze bubbles at the interior rim.
Pearlware	Saucer	C-0113	Blob of orange paint on exterior.
Pearlware	Saucer	C-0188	Small kiln adhesion on base.

Vessels used for food consumption would be expected to show scratch marks from forks, stir marks from spoons, and cut marks from knives that would become heavier and more noticeable the longer each vessel was used. Some, but not all, of the plates and bowls from the midden show fairly heavy wear, which indicates they were used over a long period of time. The teawares also show use-wear marks. Two creamware vessels (C-0042 and 0043), both bases from large hollowwares—probably either chamber pots or punch bowls—show very heavy interior wear, and both have holes in the center of their bases (in one case almost rectangular and the other irregular). These holes could be deliberate or the result of breakage at a weak spot in a well-used vessel.

*Glass Vessels*

The household group glass vessels from the midden consist for the most part of bottles and drinking glasses (tumblers and stemwares) (Table 8.58).

Table 8.58: Household glass from the midden.

Object	MNV	Count
Bottle	52	1652
Bottle, Case	10	114
Bottle, Condiment	9	56
Bottle, Wine	9	15
Container Glass	2	128
Decanter	5	39
Misc. Drinking Vessel	0	5
Flacon	3	38
Indeterminate	1	11
Mug/Pitcher	1	1
Stemware	7	24
Tableware, General	9	66
Tumbler	25	182
TOTAL HOUSEHOLD	133	2331

The vessels are almost equally split between alcohol-related containers (wine\liquor bottles) and tablewares (tumblers and stemwares) (Table 8.59). The “indeterminate” class is large because it was not possible to determine the function of many bottles. Only four bottles are more than 50% complete and most ( $n=110$ ) are under 25% extant. Artifacts identified as black glass “bottles”<sup>15</sup> in the inventory are included in the alcohol-related functional category, but “bottles” of other colors were classified as indeterminate function, unless they had characteristics that suggested a specific use, such as the small octagonal glass bottles that were probably manufactured as containers for condiments (included in the food storage functional group). However, it is not unlikely that many of the indeterminate bottles were used for wine, beer, cider, liquor, or other alcoholic beverages.

Table 8.59: Household glass functional groups.

Function	MNV	Percent
Alcohol-Related	48	35.3%
Food Storage	12	8.8%
Indeterminate	26	19.1%
Tableware	47	34.6%
TOTAL	133	

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15. Black glass is the term used by glass historians to refer to very dark green wine/liquor bottles (see Jones and Sullivan 1985 for example).

**Alcohol-Related and Food Storage.** The identified alcohol-related bottles include both cylindrical and square forms. Olive Jones, formerly of Parks Canada, performed a thorough study of English cylindrical wine and beer bottles made between 1735 and 1850 (Jones 1986). As part of her study, she measured various aspects of the bottles' bodies, necks, and finishes, and compiled a record of what characteristics were most common during different years. Her methodology was applied to the black glass bottles from the midden, when the relevant parts of the bottles were present, and date ranges were assigned (see Appendix J). One bottle had finish characteristics most common from circa 1755–1765, 15 had characteristics most common circa 1770–1785, and 17 had characteristics most common from 1780/90–1820. No glass in the midden had a discernible beginning date of manufacture after 1790 (Image 8.63).

Although most of the cylindrical alcohol-related bottles are probably English made, seven olive green bottles (Image 8.64) could have been made in France to contain French wines; French wine bottles of the late eighteenth to early nineteenth century were taller and slimmer than English bottles, with more tapering shoulders (Jones and Smith 1985:22). The bottles from the midden could have held either red or white French wine.



Image 8.63: Bottle necks and finishes. At left, a type most common circa 1770–1785 (G-0087); at right, a type most common circa 1790–1820 (G-0100) (Jones 1986:20-21).



Image 8.64: French wine bottle (G-0089).

Case bottles are square-shaped, which made shipping them in boxes (cases) easier and more secure. Many square-shaped bottles held alcohol, especially gin, but many were also used for pickles of various types (including pickled walnuts), anchovies, capers, or other condiments, as well as for snuff (Jones and Smith 1985:75, 107–108). The body section used to distinguish liquor from condiment or snuff bottles is the finish, which seven of the 10 case bottles in the midden lacked. The three with intact finishes (Vessels G-058, 0105, and 0106, all made of black glass) have narrow mouths and liquor bottle style finishes characteristic of the period 1755–1850 (Jones and Smith 1985:24); they were assigned to the alcohol-related functional class.

The other case bottles from the midden have several colors: two are green, another two are pale green, and there are single bottles of blue-green, colorless, and black glass. The green and blue-green bottles could have originally held a variety of contents; the colorless (lead glass) bottle might have been used in a medicine chest, as vessels used in these cases were generally made of colorless lead glass (Jones and Smith 1985:87–88).

The three case bottles with intact bases all show obvious use-wear on the corners of their bases. One (G-0003, the blue-green vessel) has additional heavy wear along its sides. This small (0.9” on each side) vessel (Image 8.65) was probably stored in some sort of case, but the wear marks run perpendicular to the long axis of the vessel—indicating that it was not placed into a deep compartment, but instead was probably pushed into a slot-type of storage compartment, possibly in a medicine or spice chest. Whatever its contents were, this vessel saw heavy use.



Image 8.65: Case bottle with heavy wear (G-0003).

An additional square bottle was complete enough to be included in the food storage functional category; Vessel G-0033 is a blue-green bottle with a wide mouth and a flanged lip that could have held a variety of condiments. Like the case bottles, this vessel has wear around the edges of its base. The other vessels classified in the food storage group are octagonal in shape, square shaped with chamfered corners, and flacons. The octagonal and square bottles are made of aqua, green, and blue-green glass (Image 8.65); all of the bases are intact and show considerable wear around the edges. Some of the octagonal bottles have even sides, but some have unequally sized panels. Two (G-0006 and 0018) were made in hinge molds.

Flaçons were made in France, of blue-green glass with seed bubbles, in two forms: square bodied with a narrow tube-like neck, used for oils—especially olive—and other liquids; and round bodied with a tall neck and wide mouth, used for pickles of all sorts, olives, brandied fruit, and other preserves (Jones and Smith 1985:63) (Image 8.66). All three of the identified flacons from the midden have narrow tube-like necks, but two are unusual because of their color. G-0001 is made of light brown glass and G-0002 of yellow glass, although their square bodies and long tubular necks fit the description of flacons. The third vessel (G-0024) is made of a more common blue-green glass and is heavily patinated; its neck flares a bit at the mouth.

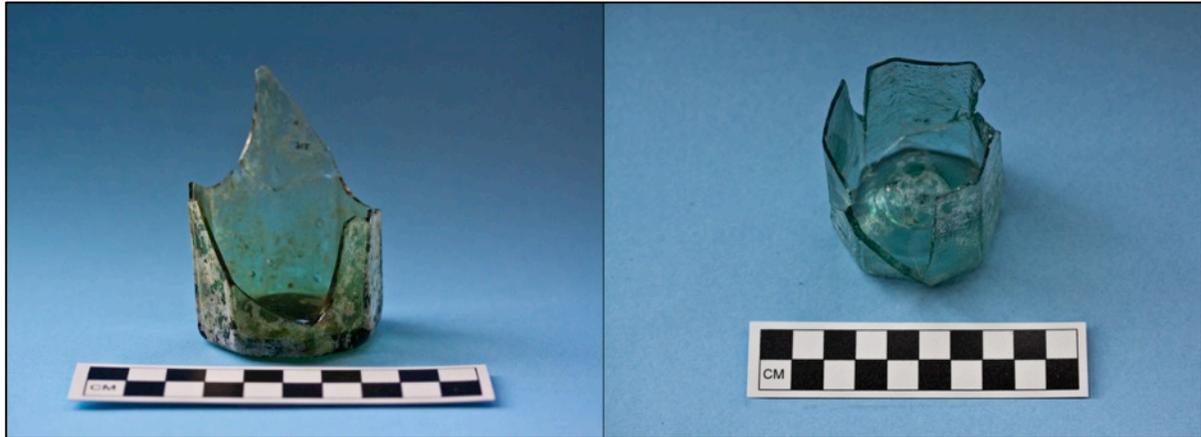


Image 8.66: Octagonal bottles, probably for preserved fruits or vegetables or condiments (G- 0006 and 0018).



Image 8.67: French flacons with long tubular necks (G-0001 light brown and 0024 blue-green heavily patinated glass).

No food-serving glass vessels were identified in the midden assemblage, which is to be expected for an assemblage of this period. During the eighteenth and early nineteenth centuries, glass serving vessels were few and limited to specialized foods, in particular condiments and desserts (Jones 1986:59). The “tableware, general” sherds listed in Table 8.57 are pieces of drinking vessels or decanters; all are made of colorless lead or non-lead glass. No sherds that could have come from serving vessels were identified, with the possible exception of a handle that could have been part of a small pitcher, but is more likely from a mug.

**Tablewares.** Although many vessels were too fragmentary to determine their forms, the identified tablewares from the midden consist of decanters, tumblers, stemwares, and the possible mug, all of colorless leaded or non-lead (soda) glass (Table 8.60).

Table 8.60: Glass tablewares, lead and non-lead.

Object	Material	MNV
Decanter	Leaded Glass	1
Decanter	Non-Lead Glass	3
Mug/Pitcher	Non-Lead Glass	1
Stemware	Leaded Glass	5
Stemware	Non-Lead Glass	2
Tableware, General	Leaded Glass	6
Tableware, General	Non-Lead Glass	4
Tumbler	Leaded Glass	3
Tumbler	Non-Lead Glass	21
TOTAL		46

Non-lead glass tablewares ( $n=31$ ) are approximately twice as common as lead glass ( $n=15$ ).<sup>16</sup> Lead glass tablewares found in eighteenth- and early-nineteenth-century North American contexts are most often of English or Irish manufacture and occasionally of domestic make, while those made of non-lead glass were likely made in Continental Europe or in America (Palmer 1992; Jones and Smith 1985:34; McKearin and McKearin 1948: 13).

The ratio of stemwares ( $n=7$ ) to tumblers ( $n=24$ ) is unequal. Tumblers and stemwares were used concurrently on the table, and glass researchers have not been able to determine if there was a consistent distinction between which forms were used for which beverages (Jones and Smith 1985:34–35). There is a contradiction between early-nineteenth-century documentary and archaeological evidence as to which form was more common: documentary evidence (at least for military sites) suggests that more stemwares were purchased, but many more tumblers than stemwares have been recovered from circa 1800–1820 North American archaeological sites (Jones and Smith 1985:34). This disparity could be the result of several factors, including differential rates of breakage or bias in the documentary record. Tumblers were generally more expensive than stemwares because glass was often priced according to its weight, so their greater numbers cannot be attributed to their being a less valuable form.

Decanters make up an unusually large percentage of the vessels (Table 8.61). Decanters were used on the table to serve various beverages, especially port and other wines that leave sediment, although paintings and engravings from the eighteenth and early nineteenth centuries show that not all alcoholic beverages were served in decanters—in many images, bottles and decanters are shown together on tables—and water could also be served in decanters, as well as in carafes (Jones and Smith 1985:25).

16. Lead and non-lead glass can be distinguished in the laboratory by exposing them to a short-wave UV light in a darkened place; lead glass glows a bright ice blue and non-lead a yellow-green color.

Table 8.61: Glass tablewares, forms.

Object	MNV	Percent
Decanter	4	8.7%
Mug/Pitcher	1	2.2%
Stemware	7	15.2%
Tableware, General	10	21.7%
Tumbler	24	52.2%
	46	100.0%

The four identified decanters are varied in their shapes and decorations. Vessel G-0025, made of lead glass and between 11 and 25% extant, has a tapered shape and is probably undecorated; Jones and Smith (1985:29) note that this is a common form for decanters of the late eighteenth century, which has been found also on several early-nineteenth-century sites. Vessel G-0029 (less than 10% extant and classified as general tableware) might be a similar decanter, but it is too fragmentary to determine its shape. The base diameter of G-0025 is approximately three inches and that of 0029 is slightly smaller—both vessels have wear around the outside edges of their bases. Jones and Smith (1985:25, 29) also note that most decanters found on North American late-eighteenth-century military sites were British-made of undecorated lead glass.

Another decanter (G-0020, 11 to 25% extant) could have been made either in Europe (possibly in Bohemia) or in North America (probably in Philadelphia or New York) between 1760 and 1820 (Palmer 1993:92; McKearin and McKearin 1948:98–100). This large square vessel (Image 8.68), made of non-lead glass, has an engraved tulip design that appears identical to one illustrated in McKearin and McKearin 1948 (Plate 35 #1). The authors call the illustrated vessel a “case bottle”<sup>17</sup> and state that it is

engraved with a typical Dutch style conventionalized tulip design... [the bottles were] made in different sizes... sold in sets in specially made wooden cases. The sets frequently comprised bottles of two sizes, accompanied by wines [glasses] or tumblers [McKearin and McKearin 1948: 99].

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17. The midden vessel is called a decanter rather than a case bottle, as its primary function was as a dispenser rather than a container for liquids.



Image 8.68: Non-lead glass decanter with engraved tulip motif (G-0020).

None of the engraved drinking vessels in the midden assemblage match this motif, however (see below).

The other two decanters are fragmentary (less than 3% complete). One is probably a paneled-shape vessel and the other is represented only by a ground neck shard (ground on the interior to accommodate a stopper); both are of non-lead glass.

Of the seven identified stemwares, five are lead glass, thus probably English or Irish made. Three of the lead glass vessels have intact trumpet-shaped bowls, one of which (G-0012) is pattern molded in a ribbed motif. Its conical foot, which has a fire-polished pontil, appears to have been formed separately. Fire-polished pontils are common after circa 1770 (Jones and Smith 1985: 29).

Twenty tablewares, both leaded and non-lead glass, have identifiable decorations (Table 8.62). The motif on one of the two engraved stemwares (G-0014, less than 10% complete) is a fringed swag with floral elements (Image 8.69). The more complete of the two (G-0013, between 26 and 50% complete) has a trumpet-shaped bowl on a plain straight stem; its motif is a simple swag with floral elements (possibly a leaf) at the intersections of the swag, with alternating leaves pointing up or down. Noel Hume (1969:190) dates this stem shape to circa 1780 to 1805 and describes it as a “short, drawn stem of a type seemingly produced in quantity by the Amelung factory in Maryland.” Amelung was a German glass maker who came to America after the Revolution to establish a glassworks near Fredericktown, Maryland. His workers produced a great variety of glass objects—from

window glass of all qualities to fine tablewares—but the business did not prosper and the works closed in the early 1790s (McKearin and McKearin 1948:100–103). Amelung advertised that he made “flint” (i.e., leaded glass), but the identified products of his factory are non-lead glass (McKearin and McKearin 1948:100–103; Palmer 1993). Nevertheless, there is a possibility that the two engraved lead glass stemwares from the midden could be domestic products, although they were more likely imported from Great Britain.

Table 8.62: Decorated tablewares.

Object	Decoration	Material	MNV
Decanter	Engraved	Non-Lead Glass	1
Stemware	Engraved	Leaded Glass	2
Stemware	Molded Pattern	Leaded Glass	1
Tumbler	Cut Pattern	Non-Lead Glass	4
Tumbler	Engraved	Non-Lead Glass	6
Tumbler	Painted, Overglaze	Non-Lead Glass	1
Tableware, General	Engraved	Leaded Glass	2
Tableware, General	Engraved	Non-Lead Glass	2
Tableware, General	Molded Pattern	Leaded Glass	1
TOTAL			20



Image 8.69: Stemware bowls with engraved motifs (G-0013 and 0014).

In contrast, the six engraved tumblers are all non-lead glass and could have been made either in American glass houses in European styles, in the German states, or in Bohemia. Their style of decoration is classed as “Steigel type”<sup>18</sup> in the inventory (see Appendix J), based on the designs produced in the glassworks of Henry Stiegel in Mannheim, Pennsylvania, between 1763 and 1774. Steigel’s Continental and British workers brought their skills and traditions to North America (McKearin and McKearin 1948:83–84). If the tumblers from the City Hall midden were made after the Revolution, however, they were probably imported. According to the glass historian Arlene Palmer, “thousands upon thousands of [non-lead] drinking glasses, decanters, and other tablewares with delicate engravings and facet-cutting were imported from continental Europe to the United States in the post-revolutionary period” (Palmer 1993:72). This vast importation, cheaper than English lead glass, was the main reason for the failure of the Amelung glass factory. The midden vessels could have been part of this wave of European glass.

Two of the engraved tumblers (G-0022 and 0023, both between 11 and 25% extant) have similar but not identical motifs: a wavy line over a straight line over a band of alternating simple floral and cross-hatched oval elements (Image 8.70). Two of the others (G-0035 and 0021) also have fairly simple engraved motifs, while another (G-0050) has part of an engraved basket holding flowers, a common motif on some Steigel-made glass (McKearin and McKearin 1948:113). Vessels 0021 and 0023 have cut fluted bodies below the engraved rims.

One unusual vessel, (G-0112, represented by one shard), is a thick rim piece with an engraved floral garland with remnants of enameling over the engraved motif. The remaining color of the enamel is black, but it might originally have been blue or gold, discolored in the ground. Another tumbler (G-0016, 11-25% extant) is not engraved but has a floral motif painted in white, yellow, red, and blue enamels that Palmer (1993:88) dates circa 1775–1825 (Image 8.71). This vessel too could be of American or German manufacture.

The remaining four tumblers (G-0094 and 0095, 26–50% complete; G-0096, 3–10%; and G-0116, 76–95%) are decorated with cut panels/flutes on their bodies (Image 8.72). Jones and Smith (1985:35) note that “during the Revolutionary War period cutting began to replace engraving as a decorative technique on English lead glass tumblers,” but these four vessels are made of non-lead glass. The most complete has traces of a gilt band around the exterior rim, a trait noted as “more a European than English technique” by Jones and Smith (1985:35). These vessels are thus also likely to be part of the vast post-Revolution importation of European glass to New York.

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18. “The shallow, lightly ground engraving on... wares accredited to Stiegel have almost the appearance of acid etching and present a uniform sameness of conventionalized patterns” (McKearin and McKearin 1948:110).



Image 8.70: Tumblers with engraved motifs (G-0021, 22, 23, 35, 50 and 112).

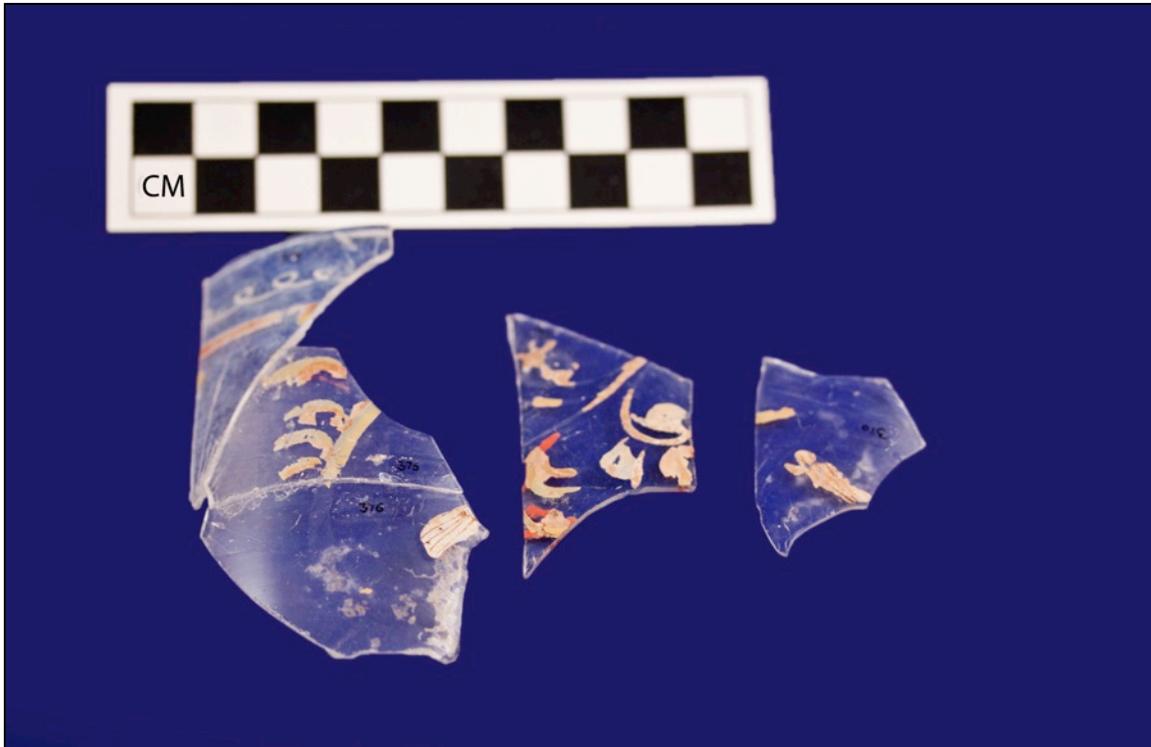


Image 8.71: Tumbler with enameled motif (G-0016).



Image 8.72: Tumbler with cut flutes and gilded band around the rim (G-0116).

Tumblers in this time period could have been used to drink all sorts of beverages, including wine, although stemware was possibly preferred for wine (Jones and Smith 1985:33–34). All sorts of other alcoholic beverages—punch, toddy, beer, cider, etc.—were also consumed in tumblers.

The remaining glass tableware vessels are too incomplete for separation into small decanters or large tumblers (base shards), stemwares or tumblers (rim shards), and other forms (body shards). Six are lead glass and four are non-lead. The lead glass vessels consist of three undecorated, two engraved, and one pattern-molded shards. One of the undecorated shards (G-0052) appears to be from an oval vessel, possibly a flask. The pattern molded shard (G-0044) is fluted. Two of the non-lead vessel shards have engraved motifs; the identifiable motif (G-0034) is a well-made floral decoration.

The majority of the tumblers with intact bases show use-wear, most light to moderate, but heavy on three (G-0116, 0050, and 0040). The decanters with present bases also have use-wear. The bottle glass—in particular the square and octagonal vessels, as noted above—show wear around their bases.

PERSONAL

Over 92% of the personal artifacts from the midden are smoking pipes, although there are a number of other interesting artifacts (Table 8.63).

Table 8.63: Personal group artifacts.

<b>Class</b>	<b>Material</b>	<b>Object</b>	<b>Count</b>
Ceramic	Refined Earthenware	Smoking Pipe	1116
Fauna	Bone	Button	44
Fauna	Bone	Comb	5
Fauna	Composite	Knife, Pocket	1
Fauna	Other	Button	1
Glass	Common Glass	Cane	1
Lithic	Graphite	Jewelry	1
Metal	Copper Alloy	Buckle	2
Metal	Copper Alloy	Button	39
Metal	Copper Alloy	Fastener	2
Metal	Iron	Hook	1
<b>TOTAL</b>			<b>1213</b>

All but one of the 44 bone buttons have single central holes (the exception is a four-hole sew-through disc) (Image 8.73). The diameters of 38 bone buttons were measured; their diameters cluster around 0.5, 0.63, 0.75, and 0.88 inches, a result of using drill bits of different sizes (Table 8.64). The amount and uniformity of the buttons could suggest that they were manufactured at the almshouse (see the discussion of the button blanks from Room 8C). Alternatively, the bone—and the copper alloy—buttons might have come from worn-out garments or rags of garments deposited in the midden: Although only one piece of fabric was recovered during excavation of the midden, no button blanks were found (unlike in Room 8C), which supports an argument against the midden buttons as discards from the almshouse production.



Image 8.73: Variety of bone buttons from the midden (FS 376).

Table 8.64: Single-hole bone button diameters.

Diameter (inch)	Count
0.40	3
0.47	2
0.50	9
0.54	1
0.56	1
0.60	1
0.63	8
0.67	1
0.70	1
0.71	1
0.74	1
0.75	3
0.76	1
0.88	3
1.00	1
1.25	1
TOTAL	38

One round, flat, single-hole button with smooth surfaces is made of what might be horn. It is tan colored with a patch of darker brown on one surface and the central hole appears to have been drilled from one direction. Its thickness is 0.067 inches and its diameter is 0.68 inches.

The 39 copper alloy buttons are all highly corroded. Eight of these buttons appear to be domed, 10 are flat, but the shapes of the rest cannot be determined. Several were X-rayed (to determine if they were coins or buttons), but no details of their decorations, if any, could be discerned. Other clothing-related artifacts in this assemblage are two copper and one iron clothing fastener and pieces of two copper alloy buckles. The smaller piece has no distinguishing characteristics, but the larger came from a large buckle with an open work decoration.

Four of the five pieces of bone comb came from a single fine-toothed comb (fine-toothed combs are often called lice combs). The other is a small curved piece that might have come from a hair ornament rather than a grooming comb.

The glass cane is an interesting object (Image 8.74). Glass canes are reported to have been made as end of day “whimsies” by glassmakers as gifts or decorations (Cane Quest 2012). At the end of the nineteenth and well into the twentieth centuries, glass canes were also carried as a badge of craft solidarity and skill by glassmakers in parades or ceremonies celebrating labor. For example, in an 1893 parade at the Columbian Exhibition (the Chicago World’s Fair) “several hundred” employees of the Libby Glass Works carried glass canes (*Scientific American* 1893:3). No reference has been found as yet to say when this practice started, but it is tempting to speculate that this cane might have been carried in one of the celebrations of the early republic that took place on or near the Common.

Two other personal items of interest are not clearly identified. The first is a rectangular slate object that may be a pendant. It measures 1.4” long by 0.9” wide by 0.13” thick. A drilled hole is offset on the narrow end and may have been used to thread a thong or some other means for wearing this item. The obverse appears to be thumb worn and the reverse exhibits damage near the drill hole. One possibility is that this object was a slate marker (i.e., carpenter’s pencil) or tally keeper, as this lithic material was used in historic pencils. The fact that the edges appear worn down could attest to this possibility. On the other hand, the apparent thumb wear on the obverse is oriented towards the thong hole as opposed to a usable edge. This would indicate that the item was gripped with the thumb oriented upward towards the thong, which would preclude usage as a “pencil”.

The other interesting item may also have been some form or pendant or totem. This is an almost complete cow hyoid bone with a precisely carved/incised “M” on the central section (Image 8.75). There is some damage to the edge of the bone where a drill hole might have been placed, but the damage precludes any definite indicators. The incised marking could have multiple interpretations. While we assume this to be an “M,” it could possibly be the runic symbol *eah*, which means horse rather than a letter. It also resembles an upper case Greek sigma. No comparative examples have been identified, but the clearly deliberate marking of this bone carries some, as yet, unknown significance.



Image 8.74: Section of a glass cane (FS 376.154).



Image 8.75: Hyoid bone, species *Bos*, incised with the letter "M" or the Runic symbol *eoh*.

***Smoking Pipes from the Midden***

Pipes exist in at least two contexts. The first is strictly utilitarian: the pipe is designed to hold tobacco which is then smoked. The second context is social and includes all the relevant variables that enable one to define it as a pipe and impart to it a complex social meaning that is interpretable by the user and the group to which he or she belongs. Elements of style are purposely chosen to signify social relationships and group membership, and ethnic and class subcultures wield style as a tool to identify those who belong and those who do not [Dallal in Yamin 2000:111–112].

A total of 1,116 fragments of white clay smoking pipes were recovered from the midden, the majority of which ( $n=785$ ) were stem pieces (Table 8.65).

Table 8.65: Smoking pipes from the midden.

<b>Part</b>	<b>Decoration</b>	<b>Count<sup>19</sup></b>
Pipe Bowl	Indeterminate	185
Pipe Bowl	Molded Pattern	97
Pipe Bowl	Polished	25
Pipe Bowl	Rouletted Rim	3
Pipe Bowl	Undecorated	21
Pipe Stem	Indeterminate	730
Pipe Stem	Lead Glazed	23
Pipe Stem	Molded Pattern	27
Pipe Stem	Rouletted	5
<b>TOTAL</b>		<b>1116</b>

English, Dutch, and unknown maker’s marks are on some pipes: the identified Dutch examples are on bowls and the English on stems (Table 8.66). The Dutch pipes with marks were made in the city of Gouda, a center of pipe making in the Netherlands, while the marked English pipes were made in the city of Liverpool or the town of Rainford, a satellite of that city, located to the northeast (Boon 2012; Van der Meulen 1994; National Pipe Archive 2012).

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19. Although MNVs were not assigned to the pipes, each entry was a separate pipe, so count can be taken to represent individual pipes; i.e., in the case of pipes, count is the equivalent of MNV.

Table 8.66: Pipe maker's marks from the midden.

Part	Makers Mark	Count
Pipe Bowl	Unidentifiable Mark Facing the Smoker	1
Pipe Bowl	Unidentifiable Motif on Bowl	1
Pipe Bowl	Unidentifiable Mark in Side Cartouche	1
Pipe Bowl	Unidentifiable Marks on the Heel	3
Pipe Bowl	Miscellaneous TD mark	1
Pipe Bowl	Miscellaneous RT Mark	1
Pipe Bowl	Unidentifiable Mark with the Arms of Gouda	1
Pipe Bowl	The Arms of Gouda with a crowned 66 on the heel 1739-1850	3
Pipe Bowl	The Arms of Gouda with 666 on the heel 1745-1812	4
Pipe Bowl	The Arms of Gouda with a crowned 50 on the heel 1739-1819	2
Pipe Bowl	The Arms of Gouda with a crowned 6 on the heel 1739-1845	1
Pipe Bowl	The Arms of Gouda with "PVP" 1739-1810	1
<b>TOTAL MARKED BOWLS</b>		<b>20</b>
Pipe Stem	Unidentifiable Maker's Mark Molded on Stem	1
Pipe Stem	Unidentifiable Makers Mark with "LIVERPOOL"	6
Pipe Stem	"W. MORGAN LIVERPOOL" 1767-1845	8
Pipe Stem	"... MORGAN LIVERPOOL" with first initial missing 1767-1845	1
Pipe Stem	"T. MORGAN LIVERPOOL" 1790-1808	4
Pipe Stem	"T. MORGAN" 1790-1808	2
Pipe Stem	"R. MORGAN LIVERPOOL" 1790-1845	2
Pipe Stem	"J BIRCH RAINFORD" ca. 1775-1825	1
<b>TOTAL MARKED STEMS</b>		<b>25</b>

From the last quarter of the eighteenth and throughout the nineteenth century, Liverpool was one of the most important port cities of Great Britain, second only to London (Walker 1977:321–322). Its situation on the west coast of England with easy access to the interior, including the potteries in Staffordshire, via the Trent and Mersey Canal (completed in 1777), gave it an advantage in the Atlantic trade and it was the foremost English port for the African slave trade before the trade was abolished in 1807 (World Port Source 2012). Smoking pipe makers had been active in Liverpool since the late seventeenth century, but there was an increase in the number of pipe makers after 1760, corresponding to the rise of Liverpool as an important port for the English triangular trade of cheap goods to Africa, enslaved people to the Caribbean (especially Jamaica), and sugar and tobacco back to England (Walker 1977: 319, 323).

All but six of the pipe stems with the word “Liverpool” bear the name “Morgan”; those without it are fragments with partial marks, so it is possible that they too are Morgan products. Pipes from the Morgan family of Liverpool are fairly common on New York City sites, particularly from early-nineteenth-century contexts (Diane Dallal, personal communication 2011). Walker (1983:7, cited in Reckner and Dallal 2000:127) lists four pipe makers with the surname “Morgan” who worked in the Liverpool area: the first was William Sr., working between at least 1767 and 1796, and the last was Richard, working between 1790 and 1845. William Morgan Jr. was listed as a pipe maker in 1803. In addition to the two Williams and Richard, a Ralph Morgan worked as a pipe maker in 1788, according to the pipe historian Iain Walker, but Walker found no record for a T. Morgan. Later research (Higgins 2011), however, has identified two Thomas Morgans (along with a number of other members of the family who made their livings as pipe makers, including widows and daughters of male manufacturers). The first Thomas worked from at least 1790–1808 and is probably the maker of these pipes; the other Thomas worked as a pipe maker from about 1800–1827, but he is less likely to be the maker because he spent most of his career as an employee rather than a shop owner. The widow and then the daughter and son-in-law of Thomas I mentioned above could have used the “T. MORGAN/LIVERPOOL” mark until 1818.

One pipe stem has the mark “J. BIRCH RAIN[FORD].” The late-eighteenth- and early-nineteenth-century pipe makers of Rainford, located about 12 miles from Liverpool, worked in both small cottage industries and in factories employing up to 50 workers (Walker 1977:325–326; Dagnall 1982:179). There were at least three Rainford pipe makers with the name James Birch who lived there between 1777 and 1867 (Dagnall 1982:259). The export trade, particularly to South Africa and North America through the port of Liverpool, was an important part of Rainford’s commerce (Walker 1977:326).

The Liverpool and Rainford pipes from the midden are representative of trade between New York City and Liverpool, trade that was drastically reduced during the Revolution and the War of 1812, as well as the various economic sanctions that preceded the latter, beginning with Jefferson’s 1807 Embargo Act. It might thus be argued that the Morgan pipes entered the city between 1783 (the end of the Revolution) and 1807, but this is speculative.

In spite of Great Britain’s final takeover of New Netherland in 1673, trade between New York and the Netherlands continued, albeit on a smaller scale. One of the most archaeologically visible components of this trade is smoking pipes. Dutch-made smoking pipes have been found on all of the major Manhattan excavations (see for example the most recent excavations at the South Ferry Terminal as reported in AKRF et al. 2012), especially those made in Gouda.

Gouda was a center of pipe making from the seventeenth to the twentieth centuries, with production organized during much of this time under the guild system (Dallal 2004; Brongers 1964:31–48; Boon 2012). Dutch pipes have been found on other New York City sites (Louis Berger and Associates 1987 and 1990; Rothschild and Pickman 1990; Rothschild, Wall, and Boesch 1987; Reckner and Dallal 2000), but the number, repetition,

and variety of Gouda marks in the midden collection are somewhat unusual (see Table 8.66). The Dutch marks have long date ranges: the right to use specific marks could be bought or inherited by several generations of pipe makers, which creates a problem for archaeologists trying to establish dates of manufacture. (The common beginning date of 1739 is from the placement of the arms of the City of Gouda on each side of the heel, a mark mandated by the guild after this date.) Nevertheless, seven of the 12 Gouda pipes have end dates between 1810 and 1819, which is compatible with the ceramic manufacturing date ranges (see the household section above). The makers who possessed these marks are as follows (all are small marks on the base of the heel; dating information on the web has been abstracted from Van der Meulen 1994 and Boon 2012):

**666** ( $n=4$ ): Gijsbert can der Spelt, 1745–1759; Hendrik Schoon and his widow, 1783–1811; Hendrik Houbraak, circa 1812.

**Crowned 66** ( $n=3$ ): Hermanus van der Spelt, after 1720; Jan Mullart, after 1737; Willem de Beij, after 1774; Willem de Beij Jr., 1783–1819; Dirk Stibbes, after 1821; Pieter Sibbes, 1838; and the widow of Pieter Sibbes, 1842–1850.

**Crowned 50** ( $n=2$ ): Jan Mout, after 1728; Anthony Steenwinkel, after 1743; Pieter Visser, after 1749; Jan de Wilde, 1761–1763; Adrianus de Bruijn, after 1767; widow Bruijnings (possibly de Bruijn), 1811–1819.

**Crowned 6** ( $n=1$ ): Cornelis Porens, after 1704; Pieter Verschut, after 1758; Jacob Verblaauw, after 1771; widow of Jacob Verblaauw, 1782; Aart Bremmert, 1782–1789; Benjamin Herbus, after 1793; Teunis van Gent, after 1804; widow of Teunis van Gent, after 1819; Teunis Pelt, 1825–1845.

**PVP** ( $n=1$ ): Pieter Danielsz Verplanck, after 1690; Pieter Engelen van der Put, after 1705; Pieter van der Putten, after 1745; Wouter Begeer, 1771–1810.

Six pipe maker's marks could not be identified, although it is likely that, based on their bowl shapes, they were not made in the Netherlands. Pipes from other English and Scottish centers of production, as well as some made in the United States, have been found on New York City sites (see for example Reckner and Dallal 2000) and the unidentified marks could be from pipe makers working in any of these locations. One nearly complete bowl has the initials "LC" or "IC" surrounded by dots on its right side; if this is indeed "IC," it might have been made by John Coe, who worked in New York City in the mid-eighteenth century (Dallal 1986:46), although this would be a very early date for the midden deposit. Two other fragmentary bowls have well known initials—"RT" and "TD." The RT mark was used by at least three generations of the Bristol-based Tippett family between circa 1660 and the mid-eighteenth century (Walker 1977:1732) but, as it appears on many sites in the New York/New Jersey area in Revolutionary War contexts (see for example Dallal, in Grossman 1982:V-145, and Janowitz 2008B:103–105), it is likely that the mark was used after the last recorded Tippett ceased to make pipes. Like Dutch marks, English pipe

marks could be “sold, rented, traded or inherited” (Dallal in Grossman 1982:V-142) and it is not unlikely that some unknown pipe maker used this mark, which was firmly associated with the colonial pipe trade (Walker 1977:618). The initials “TD” inside a circular cartouche facing the smoker are on another bowl fragment. The “TD” mark became generic during the nineteenth century and, as this fragment has no distinguishing characteristics, it cannot be assigned to a particular maker or locality.

Archaeologists have analyzed smoking pipes as personal artifacts that can reflect the political opinions, ethnic or occupational affiliations, or individual interests of their owners (see, for example, Dallal 2000, Brighton 2004, and Reckner 2001 and 2004). Did the smokers whose pipes were deposited in the midden know that they were smoking pipes made in England or the Netherlands, and if so, did they choose to demonstrate their political preferences or ethnic affiliations by choosing one over the other—or was it a matter of which pipes were cheaper, of better quality, or simply available? This question cannot be answered without direct connections between discarded pipes and identified smokers, a situation impossible with the artifacts in the midden. Some speculations can be ventured, however, by examining the motifs on the decorated pipe bowls. Many of the pipe bowls are too incomplete to determine if they are decorated, and a few ( $n=21$ ) are complete enough to determine that they are undecorated (Table 8.67). The majority of the remaining pipe bowls have molded patterns; pipes with polished surfaces but no other remaining decorations were also categorized as decorated.

Table 8.67: Decorated smoking pipe bowls from the midden.

Part	Prime Decoration	Pattern/Motiff	Count
Pipe Bowl	Molded Pattern	Aboriginal Figure	4
Pipe Bowl	Molded Pattern	Floral	2
Pipe Bowl	Molded Pattern	Fluted	10
Pipe Bowl	Molded Pattern	Fluted & Other	1
Pipe Bowl	Molded Pattern	Geometric Pattern	1
Pipe Bowl	Molded Pattern	Indeterminate	6
Pipe Bowl	Molded Pattern	Leafy Garland	16
Pipe Bowl	Molded Pattern	Lettering (initials)	5
Pipe Bowl	Molded Pattern	Masonic	25
Pipe Bowl	Molded Pattern	Masonic-Stag	15
Pipe Bowl	Molded Pattern	Stag	3
Pipe Bowl	Molded Pattern	Other	8
Pipe Bowl	Polished		25
Pipe Bowl	Rouletted Rim		3
Pipe Bowl	Indeterminate		1
TOTAL			125

The four pipes with an “aboriginal figure” are especially interesting (Image 8.76). Three of the four bowls are fragmentary, but all were smoked. The most complete (FS 376, Entry 69) has a figure on either side who is wearing a headdress and possibly a short skirt. The figure holds a spear in one of its outstretched arms. Beneath the figure’s feet are the letters “H[I or U] ...” on the right side of the bowl and “... [W or N]RIGHT” on the left side;

beneath the letters are swirls in an oval shape (possibly the Masonic all-seeing eye, but this is a tenuous association). Facing the smoker is a shield, probably a coat of arms, surmounted by flames. The figures within the shield/coat of arms are too small to be identified, but one might be an equine of some sort.



Image 8.76: Smoking pipe with a Native American figure (FS 376.69).

David Higgins, who has done extensive research about the pipe makers of Liverpool, says that the maker of these pipes is a member of the Wright family of Hull (a town on the east coast of England), who made pipes with American Indian figures acting as supporters of various coats of arms (Higgins, personal communication 2011). The figure's outstretched arm without the spear would be to hold a shield. The recorded makers of these pipes, however, are later than the date of the midden deposit: William Wright I was born in 1805 and is recorded as working between 1848 and 1851, while William II was working between 1851–1861. Nevertheless, it is possible that an earlier member of the family was the originator of the motif, which became a generic image later in the nineteenth century.

The headdress of the figure could be made of feathers, but it and the short skirt were probably made of tobacco leaves. Figures of American Indians clothed in tobacco leaves were icons used in the tobacco trade—forerunners of the cigar store wooden Indian.

Although the figure of an American Indian standing to the side of a shield became a generic image on later pipes, it might have originally represented King Tammany or

Tamanend, a legendary personage from early American folklore (Grinde and Johansen) (Image 8.77). When most modern New Yorkers hear the name of Tammany, they immediately recall the immensely powerful and corrupt political machine that controlled city politics from the early nineteenth into the mid-twentieth centuries. The ideals and reasons for existence of the original Sons of King Tammany, however, were not the same as those of its political descendant Tammany Hall.

According to the historians Donald A. Grinde Jr. and Bruce E. Johansen, the legend of Tammany began to take shape in 1732 when the Schuylkill Fishing Company was established in Philadelphia. The company claimed “their fishing rights had been given to them by the Delaware chief and friend to William Penn, Tammany.” The real Tammany had placed his mark on only two treaties (1683 and 1692), but in Pennsylvania folklore, he became the Middle Atlantic equivalent of Massasoit for Massachusetts: a kind and virtuous American leader who helped the European settlers.

The company adopted Tammany as their patron and designated May 1 as his feast day. Grinde and Johansen claim that

at this time, Chief Tammany was viewed by many Philadelphians as a nature spirit whose ritual day was celebrated to assure a bountiful fishing season, but he seems to also have been associated with a resolve to protect the fishing rights (and by proxy, the political rights) of its [the Schuylkill Fishing Company’s] members [Grinde and Johansen].

When political agitation became rife in mid-century with opposition to the Stamp Act, images of Native Americans, often identified as Tammany, were used by European Americans as “symbols of resistance to British Authority.” Grinde and Johansen present evidence that European Americans, especially those born in North America, consciously sought to establish an identity separate from that of Europeans by using American Indian symbols and concepts to create a new American identity that would be a composite of all that was best in European and Native American cultures.



Image 8.77: St. Tammany weathervane. Artist unidentified; possibly from Massachusetts or New York, circa 1890 (American Folk Art Museum purchase, 1963.2.1. Photograph by John Parnell).

Tammany continued to be a powerful symbol throughout the period leading up to the Revolution. The society of the Sons of King Tammany was organized in Philadelphia during the early 1770s, at least in part to unite patriotic men of all ethnic origins under “a benign American Indian symbol.” In 1773, the Sons of King Tammany held a ceremony formally (although secularly) canonizing Tammany as a saint and changed their name to the Sons of St. Tammany. The Sons of Liberty also adopted St. Tammany as their patron saint “to validate their emerging identity as Americans” (Grinde and Johansen).

The leaders of the Revolution and the delegates to the Continental Congress were aware of and looked to Native American forms of government as antidotes to what were perceived to be antiquated and corrupt European forms. The Iroquois were the most familiar and

powerful of the tribes with whom these men interacted and “the Tammany society began to fuse Iroquois imagery to their mythic leader’s identity,” but they do not specify what images were thus fused. According to Grinde and Johansen, the image of Tammany was used again after the war ended as a symbol in the political disagreements between the Federalists and the anti-Federalists, when the Jeffersonian anti-Federalists presented him as an icon to counteract the alleged European aristocratic tendencies of the Hamiltonian Federalists (Grinde and Johansen).

In the waning years of the eighteenth century, Tammany societies flourished throughout the new country. However, the character of some began to change: In the words of an early historian of the society

the reconstruction [with a new constitution and laws, although it had been established in New York in 1786] of the New York Tammany Society in 1789 inaugurated the second phase of the movement, when its political character gradually became paramount and assumed, between 1803 and 1820, such proportions that its influence determined the political complexion of national administrations [Kilroe 1913:84].

There is a direct connection between the second almshouse and the Tammany Society: William Mooney, one of the founding members of the New York Tammany Society and a sometime Grand Sachem and committee chairman, was appointed the superintendent of the almshouse, reportedly through his political connections in the society. He was removed from this post in September 1809 for malfeasance in office: “gross irregularities, misappropriation of funds, and the perversion of the perquisites of his office to luxurious and intemperate indulgence” (Kilroe 1913: 131–132). Part of the complaint against Mooney was that, compared to a year before he became superintendent, “the quantity of rum consumed is more than double that in the former; that of gin is six times and that of brandy four times as much as in former years” (Kilroe 1913: 153). The modern reader is left to wonder if this amount of drink was consumed at the almshouse or diverted to a tavern or other establishment in which Mooney had an interest. Nevertheless, he remained an honored member and leader of the society until his death in the 1830s (Kilroe 1913: 153).

The aboriginal figure on the four pipe bowls from the midden could thus be seen as representative of the early days of creating the myth of what it is to be an American. Today the mythical heroes from the early United States are presidents—especially Washington and Jefferson—or other political figures—such as Benjamin Franklin and Alexander Hamilton—but before these men became entrenched as symbols of American identity and virtue, other heroes were necessary to embody American values. Tammany, the helpful, saintly Indian, filled this function. For these City Hall pipes, from what is probably an early-nineteenth context, there might also be another ideological meaning: the figure on the pipes could symbolize the rising role of the Tammany Society as a political force controlling jobs and opportunities in the rapidly growing city.

The Tammany Society began to exercise political power in the first decade of the nineteenth century. Another influential group at the turn of the century was the Masons. Most of the founding fathers were Masons, as were many merchants and craftsmen. The ideals of Masonry were those of the Enlightenment, especially rule by reason rather than absolutism. The Masons also stood for personal integrity and brotherhood.

Diane Dallal undertook a study of the Masonic pipes recovered from the Five Points Site in New York (Dallal 2000). Quoting another historian, she states that “Masonic ties and patriotism were so closely entwined during the period after the Revolution, that they virtually merge in popular usage” (Franco 1980:15–16, cited in Dallal 2000:114). Masonic symbols as a decorative style were very common circa 1790–1830 (Dallal 2000:115). Pipes with Masonic symbols are the most common type of decorated pipe from the midden, another indication of the late-eighteenth/early-nineteenth-century date of manufacture of the midden artifacts (see Table 8.67).

Pipes can be given general dates based on their shapes (Walker 1977: Volume D; Noel Hume 1970:302–303; Atkinson and Oswald 1969, among others), but there is variation in shape based on place of manufacture as well as on time. The bowl shapes of the Masonic pipes (Image 8.78) from the midden resemble some made between circa 1780 and 1830/40, as illustrated in Walker (1977: 1521, 1527, 1533, 1537, 1545, 1551, compiled from various sources), but all of the Walker-illustrated pipes have their heels or spurs under the base of their bowls. The midden pipes, and the Rainford pipes illustrated in Dagnall (1982: Figures 2 and 3), have the heel under the start of the stem (no pipes from Liverpool or Rainford are illustrated in Walker 1977). The identifiable shapes of the midden pipe bowls seem to indicate that Rainford was their place of manufacture, although no precise dates can be assigned based on their shape.

Several types of Masonic pipes were identified. All have been smoked, some heavily (see Appendix J); bore diameters range from 4/64” to 6/64”, with the majority 5/64”. The most numerous (identified as Masonic #1 in the inventory in the pattern field) are 12 that could have come from the same mold, although some have crisper details than others (Image 8.79; see Image 8.78). Their upright bowls have short, thin heels, which are under the start of the stems rather than under the bowls. Well-molded leafy garlands are along the front and back seams. On the right side of the bowl, other leafy garlands surround a square and compass within a crowned square cartouche above a row of dots and a star. On the left side are six crescent shapes (probably the moon) around a mason’s square with two castles above and one below the square. There is also a flame or fan element just below the rim and three leafy garlands on the left. This motif is unlike any of the Masonic pipes illustrated in Reckner and Dallal 2000 (Figures 42, 43, and 45).

The next pattern (Masonic #2 in the inventory) is on at least four pipes (Image 8.79). The shape is the same as the Masonic # 1 pipes, except that the heel is somewhat larger. All appear to have come from a worn mold. On both the front and back seams, there is a rather crude leafy garland with small rudimentary leaves. On the right side of the bowl is an unidentifiable motif in a square cartouche surrounded by sketchy leafy garlands in crescent

shapes. On the left side is a square with two castles above and one castle below, along with more sketchy garlands and a C or crescent shape.



Image 8.78: Pipe with Masonic symbols (“Masonic #1 Motif”) and heel under the start of the stem (FS 406.8).



Image 8.79: Left and right sides of a pipe bowl with “Masonic # 1” molded motif (FS 409.18).



Image 8.80: Pipe bowl with “Masonic #2” molded motif (FS 404.39).

In addition to these Masonic pipes with patterns 1 and 2—and other more fragmentary bowls with Masonic symbols—a group of 15 others had not only Masonic symbols, but also an unusual figurehead facing the smoker. The figure has been described as the head of a reindeer (Dagnall 1982) and a stag (Reckner and Dallal 2000:112), an understandable multiplicity of terms, as the head has characteristics of several different species in the cervid biological group, which includes moose and elk, as well as reindeer and various other deer species (Images 8.80, 8.81, 8.82, 8.83, 8.84, 8.85, and 8.86). Liverpool pipe historians identify it as a stag, a motif that continued well into the nineteenth century in that pipe making center in increasingly debased forms (Higgins 2011). In contrast to the probable small number of molds used for the above-described Masonic pipes, these stag head Masonic pipes came from at least seven different molds. The overall shapes of the pipes are the same as those of the other Masonic pipes.



Image 8.81: Pipe bowl with stag head and Masonic symbols, view facing the smoker (FS 404.62, Masonic Stag #1).



Image 8.82: Back and side views of pipe bowl with stag head and Masonic symbols (FS 404.62).



Image 8.83: Pipe bowl with stag head and Masonic symbols (FS 404.64, Masonic Stag #1).



Image 8.84: Pipe bowl with stag head and Masonic symbols (FS 15.33, from the Interior of Feature 33/35).



Image 8.85: Pipe bowls with stag's heads. Note differences in the size and placement of the antlers and the Masonic symbols used. At left, FS 15.33; at right, FS 372.56, Masonic Stag #3.



Image 8.86: Pipe bowl with stag's head and Masonic symbols (FS 372.56, Masonic Stag #1).



Image 8.87: Pipe bowl with stag's head and Masonic symbols (FS 376.101, Masonic-Stag #2).

The first ( $n=7$ ) group has the stag head facing the smoker; the two halves of the mold do not match completely and the animal's eyes are on slightly different levels, giving the beast a comic aspect, at least to modern eyes (see Image 8.81 for example). On the left side is a bird surrounded by dots in a shield with leafy garlands on either side of the shield. On the right side is a square and compass above a semicircle of dots. The back of the bowl has fan-like ribbing/fluting. The pipes in this group could all have been made in the same mold, although the ribbing on one extends up to the rim, possibly as the result of trimming, whereas on the others it stops slightly below the rim. None of the pipes are complete. The one pipe with an intact base has a short heel under the start of the stem with—possibly—the Masonic all-seeing eye represented by oval swirls (smaller than those on the Tammany pipes) on either side of the heel.

The second ( $n=5$ ) group came from at least two molds. These pipes are similar to the first group, except the bird on the left side of the pipe is not in a shield; they are also very similar to the pipe illustrated in Dagnall 1982: Figure 2 G, but on the midden pipes, with one exception, the head of the bird is higher than the head of the stag; on the Dagnall-illustrated pipe and on one of the midden examples, the heads are on a line with each other. On the right side is an upside-down square and compass. The same fan-like ribbing/fluting as on the first group, and on many of the pipes illustrated in Dagnall's Figure 2, is on the back of the bowls. One pipe (376.68) has a tall spur; another (376.101—see Image 8.87) has a short, small heel that appears to be cut down from this tall spur.

The identity of the bird on these pipes is problematical (Figure 8.87). It could be a dove, “the symbol of the messenger in English masonry” (Dallal 2000:119), or a pelican, one of the symbols of the eighteenth degree of masonry (Dallal 2000: 120), but it is most likely a liver bird, the heraldic bird of the city of Liverpool (Liver Bird 2012). As noted above, pipe stems marked “Liverpool” and “Rainford” are part of the midden assemblage. During a brief archaeological survey of lands within the town of Rainford, 16 complete bowls and 21 fragmentary bowls with stag heads and Masonic symbols, from at least two molds, were found (Dagnall 1982:180–182). The English archaeologists identified the liver bird, presumably based on its resemblance to architectural elements using the liver bird as seen on Liverpool’s buildings (Liver Bird 2012) and Rainford’s proximity to Liverpool.



Image 8.88: Close up of probable liver bird (FS 376.101).

The other stag head pipes came from different molds, each represented by a single pipe in the midden; all are partial bowls, so their complete designs cannot be determined, but the stag heads differ on each. The first has the antlers on the head standing straight up, unlike the branching antlers of the others. On the left side of the bowl is a ladder and the start of a pillar. The next also has upright antlers, but the Masonic symbols are different: on the left side, a square and compass, possibly in a shield; on the right, a square with castles in a triangle about it and other indeterminate symbols that might include a plumb. Another pipe from the same mold was found in FS 15, Entry 33, from Test Unit 3NE Stratum 2 (the interior of Feature 33/35).

Two other bowls have stag heads but no Masonic symbols. One (FS 376, Entry 113) is complete except for the heel section. It has a well-molded large stag head facing the

smoker, with antlers extending out to the side, and smaller ears than on the other pipes, as well as a finely molded band of dots around the rim, very similar to Dagnall 1982: Figure 2 C and D (which, however, do not have stag heads). The sides have almost identical motifs: a large palmate/fan (on one side surmounted by a semicircle of dots, on the other the dots are very faint) with floral elements that are not exactly the same on each side, but which closely resemble Dagnall Figure 2 motifs. The back seam has what looks like fine stitching, rather than a leafy garland, in which the two sides almost, but not perfectly, match up (similar mold seam treatments are seen on some Rainford-collected pipes). The other pipe (FS 374, Entry 56) without Masonic imagery is missing the sides and back, so it might have had these motifs. The stag head is large with misaligned eyes, side-extending antlers, and a prominent mold seam running down the middle of the head. Two other bowls are too fragmentary to evaluate their motifs.

The stag head pipes found at Rainford were described as being “of clean smooth white fabric with clear sharply molded decorations and of a high quality considering that they are probably all kiln wasters” (Dagnall 1982:180). The stag head pipes from the City Hall midden are not of especially high quality, nor are the several recovered from other New York City sites (Diane Dallal, personal communication October 6, 2011), but this might be a matter of perception between the English and American archaeologists (the Rainford pipes are illustrated with line drawings rather than photographs) or it might mean that the Rainford pipes were copied by other pipe makers with less finely made molds and poorer quality clay. However, as a stem marked “RAINFORD” is part of the midden assemblage, it is likely a matter of perception. It is also possible that second-quality pipes were sent to North America.

Dallal (2000: 119–121) described the elementary significance<sup>20</sup> of Masonic symbols used on pipes. The square is a symbol of virtue, the compass of reason; when combined they represent reason and faith. Triangles represent God’s qualities. Castles denote protection; arranged in a triangle, they could be a symbol of God’s protection. The ladder (Jacob’s ladder) is the symbol of encouragement. Pillars represent Solomon’s temple, which in turn is the Masonic lodge. The crescent is probably a moon, a complex symbol referring most obviously to night and women. The five-pointed star is symbolic of the five points of Masonic fellowship; arranged in two triangles of six stars, they form Solomon’s Seal (the star of David). The all-seeing eye (familiar to all Americans from their paper currency) is for the omniscience of God. The plumb “represents the laws of morality and signifies the uprightness of character expected of the disciples of Freemasonry” (Dallal 2000: 119–121).

At the remove of 200 years, we cannot be certain that the high numbers of Masonic-referencing pipes from the midden were used by those who smoked them to “identify those who belong and those who do not” (Dallal 2000:112). We can only note their prevalence and speculate that they might have been used by men—workers on the new City Hall who owed their jobs not only to their skills but to their political connections, celebrants at public spectacles of solidarity, or even inmates of the goal or Bridewell—who sought to remind themselves and others that they were members of the enlightened, politically up and

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20. Masonic symbols have many levels of meaning that are revealed as members pass through the various degrees of initiation.

coming, class. Similarly, did the men who smoked Dutch-made pipes know that these pipes were made in the Netherlands and identify themselves as members of a non-English ethnic group? As late as the middle of the nineteenth century, a New York statesman described himself to another politician as “your fellow Dutchman” in the latter’s autograph book (even though the man so addressed was of German descent) (Clarkson Crolius Jr. n.d.). We do not know if the choice of Dutch-made pipes by some smokers was based on their place of manufacture, their style, their relative price, or simply their availability.

The motifs on the other decorated pipes are common ones for the late eighteenth and early nineteenth centuries—flutes/ribs on bowls and leafy garlands along mold seams—as well as others too fragmentary to identify. One (FS 404, Entry 32) has wavy ribs/flutes over most of its body, with a well-molded leafy garland along the back mold seam flanked by more leafy garlands; it too has the Rainford bowl shape. The pipes noted as polished are otherwise undecorated, except for rouletting around their rims, and are most probably Dutch made.

The decorated pipe stems (Table 8.68) include those with molded maker’s marks, discussed above. The “lead glazed” stems have their ends at the mouthpiece dipped in glaze, in order to reduce possible sticking of porous clay stems to smokers’ lips. One has a light green glaze, while all the others have yellow glaze (the natural color of lead glaze).

Table 8.68: Decorated pipe stems from the midden.

<b>Part</b>	<b>Decoration</b>	<b>Pattern/Motiff</b>	<b>Count</b>
Pipe Stem	Lead Glazed		23
Pipe Stem	Molded Pattern	Lettering	25
Pipe Stem	Molded Pattern	Geometric Pattern	1
Pipe Stem	Molded Pattern	Other	2
Pipe Stem	Rouletted	Geometric Pattern	5
TOTAL			56

The molded geometric pattern stem has a continuation of the narrow flutes/ribs that would have been on the missing bowl section of this pipe. One of the two stems identified as “Molded – Other” (FS 376 Entry 100) is a long stem fragment with the base of the bowl and small heel remaining; on either side of the heel is a molded circle, again possibly the all-seeing eye. The other (FS 399, Entry 2) is a stem piece covered in lines and circles with “MEISTER” molded on one side and “LUSI...” on the other. This pipe maker has not yet been identified but, based on the lettering, he might have been German.

The rouletted pipe stems have a variety of geometric designs: bands of small rectangles, rows of circles and squares, and rows of circles. One (FS 404, Entry 12) has multiple rows of small squares, with some of the rows applied at an angle, a possible manufacturing defect. None of the other pipes show obvious manufacturing defects.

MEDICAL

Twenty-four artifacts from 10 objects were classified in this group (Table 8.69). The most interesting artifact in this group is a bone device, an “internal irrigator” (an early vaginal douche) (Image 8.89). It is a 3.5” long by 1.0” diameter polished hollow bone cylinder. The ends of the cylinder possess inset external threads, which allow the end caps to seal flush with the cylinder. Two end caps were recovered with this item. The first is a simple cap, slightly rounded, with its center pierced by a 0.26” hole. The second cap is more elaborate—a rounded dome (0.92” diameter) with seven perforations and an incised circle. The incised circle is roughly half an inch in diameter and occupies the center of the dome. Six of the perforations are spaced evenly around this circle in a hexagonal shape. The seventh perforation is located in the center of the circle/hexagon. The final part of this item consists of a 3.15” long by 0.23” diameter bone shaft with external threads on either end. This is most likely the central shaft portion of a plunger. This shaft would have passed through the simple cap’s central hole and been secured by an internally threaded handle. The other end would have been threaded to a plunger head, which may have also been constructed of bone. The irrigator would have been filled with a cleansing liquid or powder, which would have been expelled by the pressing of the plunger (Peck 2012). It would have been used as a means of contraception or to treat venereal disease. This device could have been used to inject medicines, but could also have been used as a form of birth control.

Table 8.69: Medical group artifacts.

Material	Object	MNV	Count
Creamware	Ointment Pot	1	2
Bone	Other	2	6
Common Glass	Bottle, Medicine	2	4
Common Glass	Vial	4	10
Leaded Glass	Vial	1	2
TOTAL		10	24

The other bone artifact is a small case-type cap with internal threading and a single hole; it is similar to the cap on the internal irrigator and might be from a similar device (FS 376.143). The creamware ointment pot is cup-shaped with a solid base and a small rolled rim; many creamware ointment pots with this shape were found in an early-nineteenth-century deposit associated with a doctor and a pharmacist—the brothers Joel and Jotham Post—at the Barclays Bank Site on Pearl Street (Louis Berger and Associates 1987). The vials and medicine bottles have no particularly distinguishing characteristics: they are mouth blown with glass-tipped or blow-pipe pontil marks (except for the lead glass vial, which has been fire-polished to eliminate the pontil mark).



Image 8.89: Bone internal irrigator.



Image 8.90: Bone small case-type cap with internal threading (FS 376.143).

SANITARY

The sanitary group consists of chamber pots and two toothbrushes (Table 8.70). The toothbrushes are both incomplete; the more complete has six rows of holes for bristles; the other has only the edges of one row. The chamber pots are also relatively fragmentary; all but two are less than 10% complete. The less complete of the two (11–25% extant) pots is a creamware vessel (C-0010) with a narrow everted rim and an 8” exterior rim diameter. Rim diameters for the other creamware chamber pots range from 7.5–10”. Of the nine creamware vessels, five have rolled unattached rims, two have rolled attached rims, and two have everted rims.

The most complete chamber pot (26–50% extant) is made of salt-glazed stoneware and is 7.5” tall with a rim diameter of 8”. It is decorated with a simple flower painted in blue and has a blue band around the handle attachment and cordons below the rim, all decorative motifs used by the Pot Bakers Hill potters.

Table 8.70: Sanitary group.

Ware	Object	MNV	Count
Redware	Chamber Pot	2	7
Creamware	Chamber Pot	9	19
Salt Glazed, Gray/Buff Bodied	Chamber Pot	1	10
Bone	Toothbrush	2	2
TOTAL		14	38

MANUFACTURING

The manufacturing group consists of eight artifacts: a lump of melted lead, possibly from casting bullets, one kiln pad, and six sherds of unusual (for early-nineteenth-century Manhattan sites) kiln wasters. The kiln pad is a fragment of an expedient (irregular form) salt-glazed stoneware kiln prop, almost certainly debris from the potters working nearby.

The kiln wasters are sherds from two or three vessels, possibly mugs, with yellow/buff high-fired earthenware or stoneware bodies and no trace of glaze. Their bodies are both denser and finer grained than the kiln waster fragments recovered from the African Burial Ground (where the potters from Pot Bakers Hill dumped some of their failed products; see the Feature 33/35 Fill discussion). It is possible that they are anomalous products of the Pot Bakers Hill potters, but it is also possible that they were made by a local potter, perhaps Campbell or Durrell, as an attempt to make a substitute for creamware. During the period between Jefferson’s 1807 embargo and the end of the War of 1812, various Philadelphia earthenware potters made a version of “Queen’s ware” to try to fill the void left by restriction of trade with England (Myers 1980:7–12) and it is possible that these vessels are early examples of this attempt (404.211, 409.147, 376.496, 385.106).

ARCHITECTURAL

The great majority (approximately 87%) of the artifacts in this group are pieces of window glass (Table 8.71). Of the 1,683 pieces, 1,312 are aqua colored, 370 are pale green, and one (a fragment that might not be window glass) is uncolored. The manufacturing technology of all but one (a piece of crown glass) could not be determined. The pieces are small, with an average weight of 2.4 grams.

Table 8.71: Architectural group.

Material	Object	Count
Coarse Earthenware	Brick, Bat	1
Coarse Earthenware	Brick, Fragment	8
Coarse Earthenware	Brick, Whole	3
Coarse Earthenware	Pipe, Sewer/Water	10
Stoneware	Pipe, Sewer/Water	3
Wood	Wood Fragment	2
Common Glass	Window Glass	1683
Slate	Tile, Roofing	2
Iron	Nail	165
Composite	Mortar	8
Composite	Plaster	3
TOTAL		1888

Although the nails from the midden are heavily rusted, 70 were identified as hand wrought and 15 as cut (post 1790), a combination that accords well with the building dates of City Hall.

As noted above, the latest artifacts from the midden are two pieces of brick from the pipe trench with the maker’s mark “BROCKWAY” (see Image 8.31). Brockway was a Hudson River brick manufacturing company that operated in Haverstraw circa 1883 to 1965 (International Brick Collectors Association 2012; Conrad, Conrad and Palmer 2012). These bricks were almost certainly introduced into the midden as part of the disturbance caused by the construction of the pipe trench.

One of the three pieces of stoneware sewer/water pipe has the remnants of a stamped mark: “[P?]IPE...” over “...e...t 18...,” but this mark has not been identified.

INDETERMINATE

Most of the artifacts in the indeterminate group consist of rusted pieces of iron and thin-bodied glass fragments that could have come from containers (especially case bottles), lamps, or even window glass (Table 8.72). Twenty-five of the 30 yarn (or possibly thin rope) fragments were found in FS 376 (Stratum II) and the rest in FS 378 (Stratum III). The single piece of fabric has a coarse weave.

Table 8.72: Indeterminate group.

Class	Material	Object	Count
Metal	Iron	Sheet Metal	53
Glass	Common Glass	Indeterminate	35
Other	Fabric	Yarn	30
Metal	Iron	Indeterminate	18
Metal	Copper Alloy	Indeterminate	5
Flora	Wood	Wood Fragment	3
Metal	Iron	Strap	2
Ceramic	Redware	Indeterminate	1
Ceramic	Slip Glazed Stoneware	Hollowware	1
Lithic	Chert	Indeterminate	1
Lithic	Limestone	Indeterminate	1
Other	Fabric	Cloth	1
Unknown	Indeterminate	Indeterminate	2
TOTAL			153

The two iron straps are semi-circular and possibly hinged. They could have been part of a machine or tool, or even possibly of a set of manacles (hand or foot cuffs). The redware sherd has a roughly pentagonal shape and is approximately 1” in diameter. It could have been trimmed from a broken piece of a pot to use as a counter or gaming piece. The stoneware sherd is very small with a very lustrous brown glaze on both surfaces, although the exterior profile has a distinct angle that would be unusual for a hollowware vessel.

The chert and limestone chunks came from the pipe trench. The objects listed as of “unknown” class are pieces of corroded copper that appear to have fabric or hair attached by corrosion; they were excavated in Stratum III.

Three indeterminate artifacts do not appear on Tables 8.41 and 8.72 because they were not identified as part of the historic period assemblage during analysis (in Appendix J they are listed as “Unknown” rather than “Historic,” “Prehistoric,” or “Organic”). They are a small flake of gray flint or chert, a burned object that might be a carbonized seed or bone fragment, and a piece of fired clay (possibly a fire brick) from Stratum I in Feature 29 that has impressions of large Ginko-like leaves and two small unidentified organic impressions, which look like crinoid fossils.

#### OTHER GROUPS

The other functional groups are not well-represented in the assemblage (see Table 8.41). The hardware group consists of two pieces of an iron hinge and three pieces of an iron strap or barrel hoop. The commercial group is made up of two deteriorated and undatable coins: one copper alloy coin of 1.7” diameter cut in half and a smaller (0.8”) diameter white metal, probably silver, coin. The white metal coin was X-rayed, but no identifying details could be seen. Three plain clay marbles (count of four, but two mend) are the toy/recreation group. A single flake from a French gunflint makes up the arms group. The

fuel group consists of 34 pieces of charcoal, one coal cinder, and one piece of coal (from the pipe trench). The other group consists of two pieces of rope.

#### INTRA- AND INTER-SITE COMPARISONS

In its general distribution of groups of artifacts, the Feature 28 assemblage is not significantly different from the other analytical units defined for the current excavations at City Hall Park (with the exception of the fill of Feature 3, which has a large amount of architectural destruction debris) (Figure 8.06), although the artifacts from the midden are in general more complete. It is unfortunate that the entire midden could not be excavated at the present time to make a more accurate determination of its type of deposit (primary, secondary, or a combination of different types).

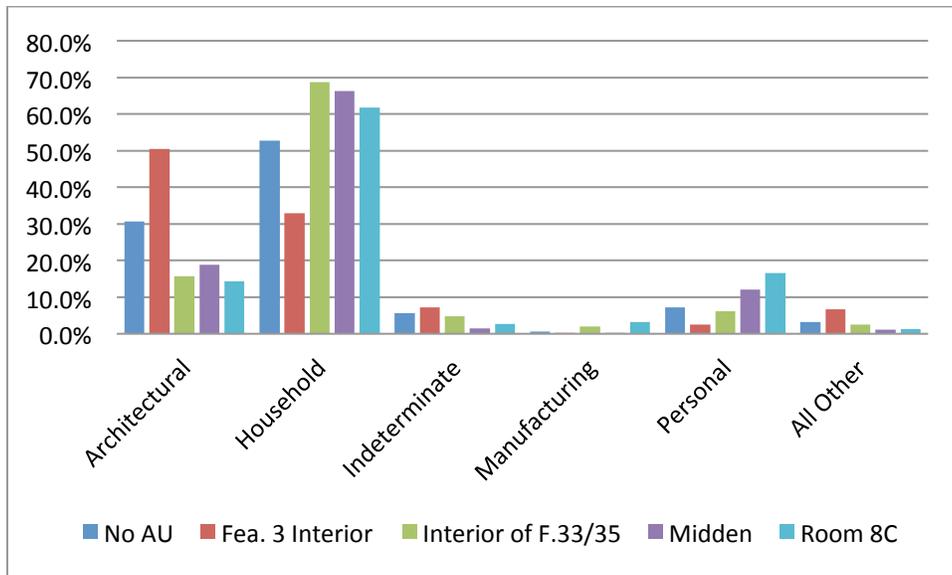


Figure 8.06: Intrasite comparison of functional groups by analytical unit.

During previous excavations at City Hall Park, two other large deposits were located, Features 84 and 88 (Bankoff and Loorya 2008). Based on the ceramic ware types present (Table 8.73), the midden was deposited later than the other two, which are possibly associated with the period of British occupation of the Common during the eighteenth century.

Table 8.73: Coarse and refined earthenware types from current and previous City Hall Park excavations (sherd counts).

Earthenware Types	Fea 28		Fea 88		Fea 84	
	count	percent	count	percent	count	percent
British Buff-Bodied Slipware (1670-1795)	19	0.5%	118	7.2%	59	15.9%
Creamware (1762-1820)	2056	51.9%	914	55.7%	26	7.0%
Jackfield Type (1740-1800)	7	0.2%	27	1.6%	15	4.1%
Other Earthenware (undated)	4	0.1%	5	0.3%	0	0.0%
Pearlware (1775-1830/40)	991	25.0%	12	0.7%	1	0.3%
Pearlware/Whiteware (1805-1880)	2	0.1%	0	0.0%	0	0.0%
Red Bodied Refined Earthenware (undated)	43	1.1%	0	0.0%	0	0.0%
Redware (undated)	816	20.6%	294	17.9%	158	42.7%
Tin Glazed (1700-1800)	2	0.1%	249	15.2%	103	27.8%
Unidentified Earthenware (undated)	16	0.4%	22	1.3%	8	2.2%
Whiteware (post 1805)	9	0.2%	0	0.0%	0	0.0%
	3965		1641		370	

A brief comparison of the ceramic vessels from the midden with two assemblages from the Barclays Bank Site, located at the corner of Pearl and Water Streets in Manhattan, shows some differences (Table 8.74).

Table 8.74: Ceramic functional groups intersite comparisons (vessel counts).

	FEA. 48 CA. 1800-1815 (BARCLAYS BANK)*	VAN VOORHIS 1784-1789 (BARCLAYS BANK)*	MIDDEN CITY HALL PARK
Functional Group	Percent	Percent	Percent
Teawares	13.1	13.4	22.0
Tablewares <sup>1</sup>	34.8	33.0	52.3
Food preparation	3.0	3.1	9.7
Food storage	1.9	3.1	3.2
Hygiene <sup>2</sup>	9.0	3.1	1.8
Ornamental	-	0.3	-
Activities	0.7	2.8	-
Pharmaceutical <sup>3</sup>	1.5	3.7	0.2
Bottles (stoneware)	1.9	2.5	-
Unknown <sup>4</sup>	34.1	34.9	10.8

1. For the midden, includes “other beverage” to conform to the Barclays’ assemblages
  2. Chamber pots
  3. Ointment pots
  4. This number is high for the Barclays Bank assemblages because some multi-functional vessels (food preparation/service vessels—dishes and pans—in particular) were included in this category
- \*Information is from Table VIII.10 in Louis Berger and Associates 1987, Volume I.

The midden stands out because of its high percentages of both tea- and tablewares. Both the Van Voorhis and Feature 48 assemblages were domestic/household deposits; thus, the high amount of vessels used almost exclusively for consuming food and drink might be indicative of a non-domestic context, such as an institution, a tavern, or a public celebration.

In Philadelphia, a privy associated with the first almshouse (1732–1767) has been excavated (Kaktins 2008 and in process). Analysis of the artifacts deposited in this feature is ongoing, but a preliminary analysis of the ceramic vessels has yielded results that differ in some ways from the assemblage in the midden (Tables 8.75 and 8.76).

Table 8.75: Philadelphia almshouse privy ceramic artifacts (vessels).

FUNCTIONAL GROUP	Count	Percent
sanitary	32	31.70%
teawares	18	17.80%
tablewares: coarse earthenwares bowls, porringers)	23	22.80%
tablewares: refined earthenwares	9	8.90%
food preparation and storage	15	14.90%
unidentified	4	4.00%
TOTAL	101	

Table 8.76: City Hall Park midden and Philadelphia almshouse percentages of ceramic functional groups (vessels).

FUNCTIONAL GROUP	MIDDEN	PRIVY
teawares	22.0	17.8
tablewares	52.3	31.7
food preparation & storage	12.9	14.9
sanitary	2.0	31.7
unidentified	10.8	4.0

The Philadelphia assemblage might be skewed towards sanitary vessels simply because it was deposited in a privy; i.e., due to a taphonomic rather than a functional factor. Nevertheless, there is a great difference in the amounts of tablewares in the two assemblages.

Comparison of the glass vessels with those in the Barclays Bank assemblages does not present a clear picture, as the proportions are different in all three assemblages (Table 8.77). However, the midden has many fewer pharmaceutical vessels, forms which might be expected to be high in an almshouse, unless the inhabitants were not doctored with medicines or at least not with those dispensed in glass.

Table 8.77: Glass functional groups intersite comparisons (vessel counts).

	<b>FEA. 48 CA. 1800-1815 (BARCLAYS BANK)*</b>	<b>VAN VOORHIS 1784-1789 (BARCLAYS BANK)*</b>	<b>MIDDEN CITY HALL PARK</b>
<b>Functional Group</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>
Alcohol-Related	12.1	56.0	34.5
Food Storage	5.1	0	8.6
Indeterminate	4	10.0	18.7
Pharmaceutical	18.2	24.0	5.0
Tableware	60.6	9.0	33.1

Table 8.78 shows the combined functions of glass and ceramic vessels (as presented above in Tables 8.44 and 8.59). Tablewares dominate the assemblage. As noted above, there are at least 15 pitchers and five platters in the assemblage (included in the tableware count), 40 dishes and 18 pans (food preparation and service), and five decanters (with the tableware). These vessels could have been used for communal service of beverages and foods, but whether they were used in an institutional, tavern, or domestic setting cannot be determined. The amount of slightly damaged ceramics—seconds—in the assemblage could suggest an institutional setting, but this is by no means certain.

Table 8.78: Functional groups – ceramic and glass vessels.

<b>Function</b>	<b>MNV</b>	<b>Percent</b>
Tableware*	386	48.9%
Teaware	143	18.1%
Indeterminate	96	12.2%
Food Preparation & Service	63	8.0%
Alcohol-Related	48	6.1%
Food Storage	33	4.2%
Sanitary	12	1.5%
Pharmaceutical	8	1.0%
<b>TOTAL</b>	<b>789</b>	

\*Includes ceramic “Beverage Non-Tea” ceramic vessels

## CONCLUSION

The artifacts found in the midden could have come from a variety of sources: the Bridewell (located adjacent to the midden); the almshouse; working men constructing City Hall; public celebrations that took place on or near the Common; a tavern; or a combination of all or some of these. The assemblage is most probably not associated with the British barracks, because too many of its artifacts post-date the Revolutionary period.

While there is nothing definitive in the characteristics of the ceramic and glass vessels found in the midden that points unequivocally to their source, there is also nothing definitive that rules out their origin in any of the possible sources—the Bridewell, the almshouse, a tavern, or a group of workers or celebrants. The relative costliness of some of the vessels (in particular the Chinese porcelains and some of the glassware) could suggest that these objects were donated to the almshouse, or brought to the Bridewell by inmates of means, or were household objects brought to work or celebrations because they were old. Many of the vessels, especially the glass ones, show wear, which could be an indication of either second-hand goods or of long use in one establishment, domestic or otherwise.

## **The Bridewell Artifacts**

A total of 450 artifacts were recovered from the excavation of the Bridewell area. The assemblage consists entirely of historic artifacts, most of which are composed of glass, ceramic, and metal. The lack of prehistoric artifacts in the assemblage indicates that the collection of organic artifacts, comprised of bone and shell, are likely associated with the historic occupation of the site. Artifacts were divided into functional groups: architectural, household, hardware, personal activities, sanitary, toy/recreation, electrical, commercial, lighting, food and non-food-related faunal remains, storage/cooking, ornament, and indeterminate. The majority of the site assemblage consisted of artifacts from two of these functional groups—household and architectural.

### FEATURE 39

Feature 39, the brick arc beneath Feature 37, contained two brick samples, which are heavily encrusted with sandy mortar, and a single sherd of thickly patinated olive wine bottle glass. No exact dates could be derived from these artifacts, although the extent of the patination on the glass would seem to indicate that this is not a recent feature. Patination is a deposit of minerals leached from the glass and deposited on the surface due to exposure to water, and requires many years to accumulate (White 2000:147).

### FEATURE 37

Feature 37 also did not contain a large number of artifacts. There are equal numbers of architectural and household artifacts, and a single personal item (one white ball clay smoking pipe stem fragment). Architectural artifacts consist of a sampled whole brick, one shard of aqua window glass, and a sample of mortar. Household artifacts include an aqua shard of container glass and two fragments of indeterminate creamware that provide the only dates for this feature: 1762–1820 (Miller et al. 2000).

### FEATURE 42

Feature 42 is firmly associated with the Bridewell. This feature, only a small portion of which was excavated, contained 388 artifacts, some of which will be discussed individually below. This feature assemblage has the potential to substantially contribute to the knowledge base of what life at the Bridewell was like—what life was like for criminals and the poor.

### *Ceramics Artifacts from the Bridewell*

Feature 42 yielded a relatively high percentage of household artifacts, at over 70%. The majority of these are ceramics ( $n=208$ , or over 53%) (Table 8.79). These ceramics span all periods of the Bridewell's existence and may be associated with inmates, poor children housed at the adjacent almshouse, or the keeper and his family. It should be noted that a large percentage of the ceramics and some of the glass from Feature 42 exhibit obvious use-wear, meaning the objects likely had a long use life. A total of 63 glass and ceramic

sherds exhibit obvious use-wear, which is almost a quarter of the 267 household glass and ceramic artifacts from Feature 42. This is an unusually high percentage for a household assemblage, although not unexpected for an institution, which would be more concerned with providing utilitarian wares for inmates rather than fashionable ones. Vessels would likely be utilized until broken. There is no evidence that any of the ceramics in Feature 42 were “matched” or represent sets. The managers of the Bridewell would not have been concerned with providing inmates with matched china and would have purchased the cheapest ceramics available to them, also relying on donated or second-hand ceramics, as in the case of the Philadelphia City Almshouse (Kaktins 2012). Almshouses, or poorhouses, were very similar to prisons and the Bridewell, and it is useful to compare the two types of institutions for the purpose of this analysis. Much research has been done on the New York and, recently, the Philadelphia and Albany almshouses, and many parallels may be drawn between these institutions and the Bridewell. In New York, the almshouse and Bridewell were jointly managed by the commissioners of the almshouse. Both were organized and run in a similar fashion, housing the city’s unwanted and most vulnerable citizens. In addition, they operated on very limited budgets. Thus, the archaeological assemblage of the Bridewell has many similarities to those of recently excavated almshouses.

Table 8.79: Feature 42 by group.

FEA#	Type	Group	Class	Total	Percent
42	Historic	Household	Ceramic	208	53.61%
42	Historic	Architectural	Glass	63	16.24%
42	Historic	Household	Glass	58	14.95%
42	Historic	Personal	Ceramic	18	4.64%
42	Historic	Indeterminate	Ceramic	11	2.84%
42	Historic	Sanitary	Ceramic	11	2.84%
42	Historic	Lighting	Glass	5	1.29%
42	Historic	Toy/Recreation	Ceramic	4	1.03%
42	Historic	Architectural	Metal	2	0.52%
42	Historic	Personal	Fauna	2	0.52%
42	Historic	Personal	Glass	2	0.52%
42	Organic	Food Related	Fauna	1	0.26%
42	Unknown	Non-Food Related	Fauna	1	0.26%
42	Historic	Activities	Ceramic	1	0.26%
42	Historic	Ornament	Ceramic	1	0.26%
<b>Total</b>				<b>388</b>	

A wide variety of vessel forms are represented among the sherds recovered from Feature 42 (Table 8.80). It should be noted that even though this feature contained ceramics utilized by incarcerated individuals, there were a number of teawares recovered (12 creamer sherds, 14 teacup sherds, eight saucer sherds, and five teapot sherds). The MNV represented are four saucers (a black-printed whiteware saucer with floral motif; one

porcelain example with polychrome enameling; and two pearlware saucers—one with blue floral painted decoration and the other with blue printed floral motif); two creamers (a blue-printed pearlware creamer and the other an elaborately overglaze painted example with refined red body and copper lustre) (Image 8.91); three teapots (one Jackfield type with molded decoration and one each of whiteware and pearlware, both exhibiting blue printed floral designs); and four teacups (one pearlware cup with floral painted motif and three whiteware cups, one of which is painted in chrome colors with a floral design and the other two printed in black and brown, respectively). It should be noted that none of these teawares match, which provides an argument against them belonging to the keeper of the Bridewell. Although it may seem unexpected that the Bridewell would serve tea to inmates, this is not necessarily unusual. For example, a total of 18% of the vessels identified from the Philadelphia City Almshouse excavation were teawares (Kaktins 2012). This was also true of the New York Municipal Almshouse excavation, where teawares comprised 18% of the tableware assemblage from that site (Baugher 2001). Huey notes the presence of teawares in the Albany almshouse artifact assemblage (Huey 2001). Similar to the Bridewell teawares, none of the vessels from the Philadelphia City Almshouse represent matched sets, because all vessels were likely donated by prominent Philadelphians, purchased used, or purchased as damaged wares (or “seconds”) (Kaktins 2012). The assemblage from the various excavations of City Hall Park’s eighteenth-century institutions contains a number of damaged wares or seconds from local stoneware potters, including Crolius and Remmey.

The answer as to why tea, a beverage with connotations of status in the eighteenth and early nineteenth century, was being served to inmates at the Bridewell is an interesting one. There is documentary evidence that tea and chocolate were purchased for residents of both the New York and Philadelphia almshouses (Shammas 1990). It may be the case that tea was served to Bridewell convicts, not with any aim to elevate them past their lower class status, but in an effort to include them in a ritual that respectable citizens were expected to observe (Yentsch 1990). Evidence has demonstrated that inmates of the Second Philadelphia Almshouse, the Bettering House, were given tea and coffee as reward for labor and good behavior (Philadelphia City Archives, Daily Issues 1805 and Daily Receipts 1801). This was likely the case at the Bridewell, as well. A further possibility is that the teawares from Feature 42 represent the growing temperance movement within the country, which was often directed specifically at the prison system. Alcohol consumption, particularly by poor citizens, was blamed for crime in America. Between the 1820s and 1840s, temperance societies began multiplying and publishing sensational stories about the horrors of imbibing and the path this would lead one down. Therefore, a reformed criminal was, by necessity, a sober one (Smith 2012). It is possible that tea drinking was encouraged as a replacement for the evils of alcohol.

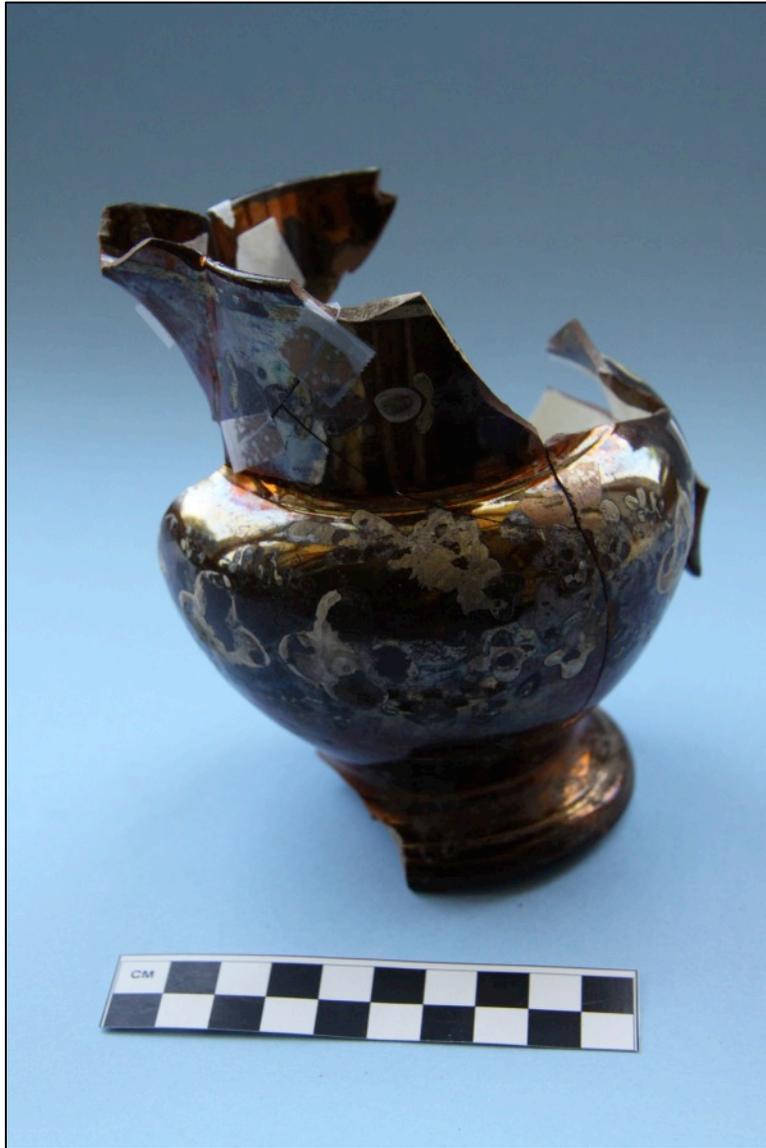


Image 8.91: Creamer overglaze painted with refined red body and copper lustre.

Table 8.80: Ceramic household objects from Feature 42.

FEA#	H/P	Object	Total Sherds
42	Historic	Bottle	1
42	Historic	Bowl	6
42	Historic	Bowl, Mixing	8
42	Historic	Bowl, Slop	1
42	Historic	Creamer	12
42	Historic	Dish	11
42	Historic	Flatware	8
42	Historic	Hollowware	35
42	Historic	Indeterminate	3
42	Historic	Jar	15
42	Historic	Pie Plate	14
42	Historic	Pitcher	10
42	Historic	Plate	32
42	Historic	Plate, Muffin	23
42	Historic	Platter/Dish	1
42	Historic	Saucer	8
42	Historic	Tableware, General	1
42	Historic	Teacup	14
42	Historic	Teapot	5

Other ceramic artifacts of interest from Feature 42 include a salt-glazed stoneware master ink bottle representing the activities group. Such bottles were used to fill ink wells. Personal items include 18 smoking pipe stems and bowls, some with molded ribbed and floral motifs, but no other defining characteristics. Two pearlware chamberpots, one with foliate handle terminals and the other with obvious use-wear, make up the sanitary group.

The remaining ceramic artifact of note is the base of a burned pearlware figurine that appears to represent a woman (FS 477.133) (Image 8.92). While much can be said about the significance of figurines within households and their dual role as eye-pleasing ornamentation and in projecting the status and good taste of the owner (Galke 2009 and Mullins 2004), the fact remains that this figurine is associated with institutional life, not a traditional household. There are many possible interpretations of how and why this unfortunate statuette ended its life broken, burned, and in the Bridewell. However, if one were to speculate as to the more likely possibilities, perhaps a child at the almshouse or adjacent school, discussed below, could have converted it into a toy, or a sentimental visitor may have brought it to a loved one incarcerated on the grounds. Or it simply may have belonged to the keeper's family.

Table 8.81: Household ceramic wares from Feature 42.

<b>Feature</b>	<b>Group</b>	<b>Class</b>	<b>Ware</b>	<b>Total</b>	<b>Percent</b>
477	Household	Ceramic	Whiteware	67	32.21%
42	Household	Ceramic	Pearlware	45	21.63%
42	Household	Ceramic	Redware	39	18.75%
42	Household	Ceramic	Red Bodied	18	8.65%
42	Household	Ceramic	Yellowware	14	6.73%
42	Household	Ceramic	Porcelain, Hard Paste	11	5.29%
42	Household	Ceramic	Salt Glazed, Gray/Buff Bodied	6	2.88%
42	Household	Ceramic	Creamware	2	0.96%
42	Household	Ceramic	British Buff-Bodied Slipware	1	0.48%
42	Household	Ceramic	CC ware	1	0.48%
42	Household	Ceramic	Jackfield Type	1	0.48%
42	Household	Ceramic	Pearlware/Whiteware	1	0.48%
42	Household	Ceramic	Porcelain, Chinese Export	1	0.48%
42	Household	Ceramic	Unidentified Stoneware	1	0.48%
<b>Total</b>				<b>208</b>	



Image 8.92: Pearlware figurine (FS477.133).

Ware types recovered from Feature 42 were generally low-cost. Whitewares, pearlwares, and redwares make up the majority of the pottery associated with this feature (Table 8.81). Vessels exhibit inexpensive and relatively common decoration types, with the exception of a few elaborately decorated lusterware red-bodied creamers. The more high-dollar porcelains and Jackfield ware make up only slightly more than 6% of the household ceramics. This finding is to be expected of an assemblage associated with the Bridewell, which would not be providing extravagant ceramics for the inmates unless they were seconds (damaged during production and sold cheaply), donated, or bought used. Finer wares may also have been brought to the site by the keeper living within the Bridewell.

*Glass Artifacts from the Bridewell*

Window glass makes up the majority of the glass artifacts from the Bridewell feature ( $n=63$ , or 49%) (Table 8.82), although a total of 58 shards of glass from this feature fall into the household category (Table 8.80). Household glass vessels include at least six non-specific bottles represented by 25 shards and in a variety of colors. At least five black glass wine bottles, which are in reality a very dark green, are also represented in this feature. All of these bottles were mouth blown into a dip mold and date between 1730 and 1850 (Millet et al. 2000). Despite the burgeoning temperance movement noted above, alcohol consumption was still a large part of everyday life for most citizens. Although partaking of spirits within a prison is currently prohibited, it was likely tolerated to some degree and the overseers may have officially sanctioned it. The same almshouses (noted above) that were encouraging tea consumption were also doling out alcohol to inmates for numerous reasons. Almshouse inmates in early-nineteenth-century Philadelphia were offered their choice of whiskey, gin, or rum after a week's good labor (as were the employees and overseers), and those ailing in the hospital were offered whiskey and wine to aid their recovery. Unfortunate souls dying in the infirmary were granted the best whiskey available as a last act (Philadelphia City Archives Record 35.86 Liquor Book 1808-1810). It is likely that inmates at the Bridewell were also allowed weekly rations of alcohol, especially if they showed good behavior or labored for the institution. Those ailing would almost certainly have been medicated with spirits. It should also be noted that, although we classify the bottles in question as "wine bottles" due to their shape and color, these were actually all-purpose bottles that commonly held alcoholic beverages of all kinds (Jones 1986:17). It should not be assumed that only wine was being held in them.

Further evidence of alcohol consumption at the Bridewell can be found in the form of two flasks excavated from the feature that almost certainly originally held whiskey. Both flasks exhibit molded designs. One is light olive in color with indeterminate motif and the second, discussed in full below, is an example of a "railroad flask," produced to celebrate the building of our country's rail system. Remnants of two stemware glasses indicate that some finer spirits may also have been consumed on the Bridewell property. The first is a champagne glass of indeterminate decoration, the rim being absent. The second is a small, 10-sided glass with elaborate cut decoration in a cross-hatched motif forming a half-sunburst. This glass would have been employed for serving fortified wines, such as sherry, port, and madeira (Vernay 1909). Finer wares such as these were likely owned by overseers of the Bridewell or perhaps left over from the British occupation of the city. Another artifact the Bridewell keeper may have owned is a small mouth-blown perfume bottle molded with a floral motif. This is, not unexpectedly, one of the few personal items recovered from this feature other than pipe fragments. The final beverage vessel, a tumbler, is of great significance due to an incision on its base, and is discussed below in further detail.

Table 8.82: Feature 42 glass artifacts.

FEA#	Type	Group	Object	Total	Percent
42	Historic	Architectural	Window Glass	63	49.22%
42	Historic	Household	Bottle	25	19.53%
42	Historic	Household	Bottle, Wine	14	10.94%
42	Historic	Household	Flask	7	5.47%
42	Historic	Household	Indeterminate	1	0.78%
42	Historic	Household	Stemware	3	2.34%
42	Historic	Household	Tumbler	5	3.91%
42	Historic	Lighting	Lamp, Chimney	4	3.13%
42	Historic	Lighting	Lamp, General	1	0.78%
42	Historic	Medical	Bottle, Medicine	3	2.34%
42	Historic	Personal	Bottle, Perfume	2	1.56%
<b>Total</b>				<b>128</b>	

Additional glass artifacts include glass from two lamp chimneys and the pressed base of an oil lamp. Given the time period of the deposit, which does not appear to date later than the demolition of the Bridewell, these were likely whale oil or camphene lamps. Kerosene lamps did not become common until after the mid-nineteenth century with Drake’s 1859 drilling of the first oil well resulting in a decrease in the cost of kerosene (Miller et al. 2000). Prior to this, whale oil was the preferred lighting fuel, though camphene was cheaper—albeit highly explosive. Without the burner, or font, portion of these lamps, it is impossible to determine which of these two fuels they used.

Three medicine bottles recovered from Feature 42 indicate that inmates may have been treated for various ailments while incarcerated. Two generic medicine bottles, one colorless and the other light green, were identified, along with a third bottle embossed with the letters: “\_SEARS” “\_ OIL”. The maker or contents could not be identified, although it is certain that this was one of many patent medicines that were very popular throughout the nineteenth century. These medicines did not list their ingredients and could potentially contain narcotics and large amounts of alcohol, which made the patient “feel better,” but did nothing to actually cure them. Addictions to those “medicines” were common. Often, in the case of oils and liniments, the contents were useless mixtures of water, fragrance, and menthols to add a “tingly” sensation. By the early twentieth century, a number of deaths had been linked to these medicines, prompting passage of the Food and Drug Act of 1906 (Carson 1961). These medicines were often utilized for self-medication, an alternative to hiring an actual doctor, and may have been an inexpensive way to treat inmates of the Bridewell.

### *Other Artifacts*

There are few artifacts in Feature 42 that are not composed of glass or ceramic. These artifacts consist of two indeterminate iron nails, an undecorated shell button, a fragment of an oyster shell, and a fragment of a sea anemone. This last artifact was likely brought to the site by animals or collected by curious children, as anemone was not likely consumed by eighteenth- and early-nineteenth-century New Yorkers.

### *Children at the Almshouse/Bridewell*

Fragments of two toys were recovered from this phase of the excavation. Both examples, partial miniature pearlware children's plates with printed motifs, were unearthed from Feature 42. These few sherds are a testament to the children who lived, worked, and perhaps played on the site. Period documents state that in 1803, the Common Council ordered the construction of a small school adjacent to the Bridewell for the purpose of educating the children living in the neighboring almshouse, and that by 1807 the school was in place (MCC 1784–1831 4:363, 394). Given the proximity of the school to the Bridewell, it is not improbable that these children's plates would be deposited in this feature.

Beginning in the eighteenth century, children were encouraged to mimic adults with their toys and were given miniature versions of adult items so they could “play grownup” and define their gender roles early in life (Feister 2009). The end result of this mindset was that little girls were given dolls, small tea sets, and kitchenwares, while boys played with items such as miniature pocketknives, watches, and novelty white clay pipes (Zorn 1892). There are two kinds of toy ceramics—those big enough that they could actually be used by children at the table and to prepare “make believe” meals, and those which were even smaller and designed to be “used” by their toys (i.e., dolls). The four fragments of miniature ceramics from this feature fall into the first category. The printed motifs on the plates serve another purpose, as well; both exhibit “educational” motifs and may have served to teach boys and girls morals.

The first (FS 477.88) is a single sherd from a “Limerick Plate,” which exhibits a molded leaf pattern around the rim and a Clews maker's mark on the exterior base, dating it to between 1818 and 1830 (Image 8.93) (Godden 1994; Miller et al. 2000). Although only a portion of the brown-printed decoration remains on this sherd, the entire plate would have read:

*There was an old woman of Leeds, who spent all of her time in good deeds;  
She worked for the poor, Till her fingers were sore, this pious old woman of  
Leeds.*

The second plate is printed in blue with a Spode maker's mark dating it from 1807 (Miller et al. 2000) to 1829 (Godden 1994), and likely depicts a biblical scene. The poorest children of New York City likely ate from these plates, the hope being that while they did

so, perhaps they would learn a catchy phrase about a kindly and moral woman or ponder over an important story from the bible.



Image 8.93: Child's plate with "Old Woman of Leeds" limerick (FS 477.88)

*Raise a Bottle to Our Great Country: The Railroad Flask (FS 477.2)*

The fragment of a dark green whiskey flask recovered from the City Hall excavations, though small and seemingly insignificant, represents the story of American innovation, the excitement and optimism surrounding the expansion of the transportation system, and the growth of our country. The shard in question displays a portion of a horse-drawn railroad cart, an early form of rail transportation, although horse carts were quickly replaced by steam locomotion. The whole flask would have had lettering across the top proclaiming "Success To The Railroad" (Image 8.94). These flasks first started appearing in 1830, although this country hit its peak of "Railroad Fever" around 1840, with no fewer than 14 different types of railroad flasks documented. They were made into the 1860s as the lines continued to be extended across the nation and new areas of our country were truly opened up to the masses. Although there is no way to determine the exact bottle manufacturer that produced this artifact or the specific line it was meant to commemorate, given its provenience, it likely commemorated an early line. It was also during the mid-nineteenth century that images of historical figures—such as Washington, Franklin, and other founding fathers and military men—were being placed on flasks as a means of celebrating our country's great heroes. American eagles were also a popular motif on flasks (McKearin and Wilson 1978). Patriotic tipplers abounded during this time and were eager to raise a glass (or whole bottle) to our great country.



Image 8.94: Example of a complete railroad flask.

*Religion at the Bridewell: The Tumbler with Incised "X" (FS 477.7)*

Of all the artifacts from this assemblage, one has the potential to give a view into the private life of the individual who owned or used it. An undecorated glass tumbler with a simple "X" or cross incised in the center of the base is a particularly exciting find (Image 8.95). Not only did the user intentionally alter this object, but the X was placed in the center of the blow pipe scar, which is a hollow circle remaining as a byproduct of the glass-blowing process (Jones 1986). It has been speculated that the cross or X inside a circle is a basic, though powerful, cosmological symbol (Image 8.96). It is generally accepted that these are religious in nature and that the symbol represents a cosmogram in some traditional African religions, with one line of the cross representing the division between the worlds of the dead and the living (Ferguson 1992). Identical symbols are found inscribed on artifacts from archaeological sites once inhabited by African Americans,

indicating that those of African descent living in America were utilizing similar symbols (Ferguson 1992:111; Schroedl and Ahlman 2002). The crosses tend to be inscribed on the base of vessels, which are circular—thus, an inscribed circle may not always be necessary if an existing one is present, as with the tumbler and many other examples. Ferguson argues that the more circles the better, which may be why the cross or X on the tumbler was essentially inscribed within two—the blow pipe pontil scar and the circle of the base. These inscribed vessels may be related to the manufacture of traditional Kongo medicines, or nkisi, and would have held objects or materials of power (Ferguson 1992:114; Wilkie 1997:98). Modern-day Voodoo maintains similar symbols, such as the Petro symbol (Lampe 1982:72), which resembles that inscribed on the tumbler, and when inscribed upon an object or the ground will aid in the invoking of a Voodoo god, or Loa.

The tumbler's association with the Bridewell is intriguing. It is not a coincidence that the majority of these incised artifacts are associated not just with African Americans, but with the removal of freedom. Slave dwellings in the south are the most common location for such magic objects (Ferguson 1992). A redware plate with an X inscribed on the base was recovered from the Hendrick I. Lott House in Brooklyn, New York, a nineteenth-century farmstead. Additionally, corn cobs were placed in this formation beneath the floor boards of an attic/garret space along with other ritual objects. The Lott family was among the largest slave-owning families in that area (Bankoff, Ricciardi, and Loorya 2000). In Manhattan, a reassessment of the Assay Site identified the bowl of a spoon with three Xs marked on its base (Cantwell and Wall 2001). A chamber pot with an X inscribed on the base was recently identified from the almshouse in Philadelphia (Kaktins 2008), and now at the Bridewell in New York.

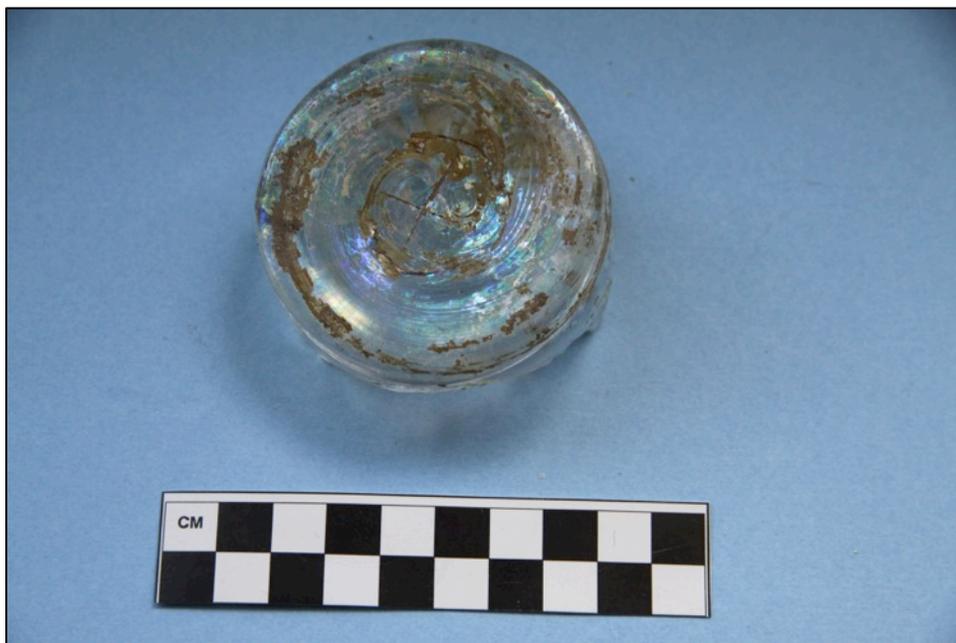


Image 8.95: Image of tumbler base with incised "X" (FS 477.7).

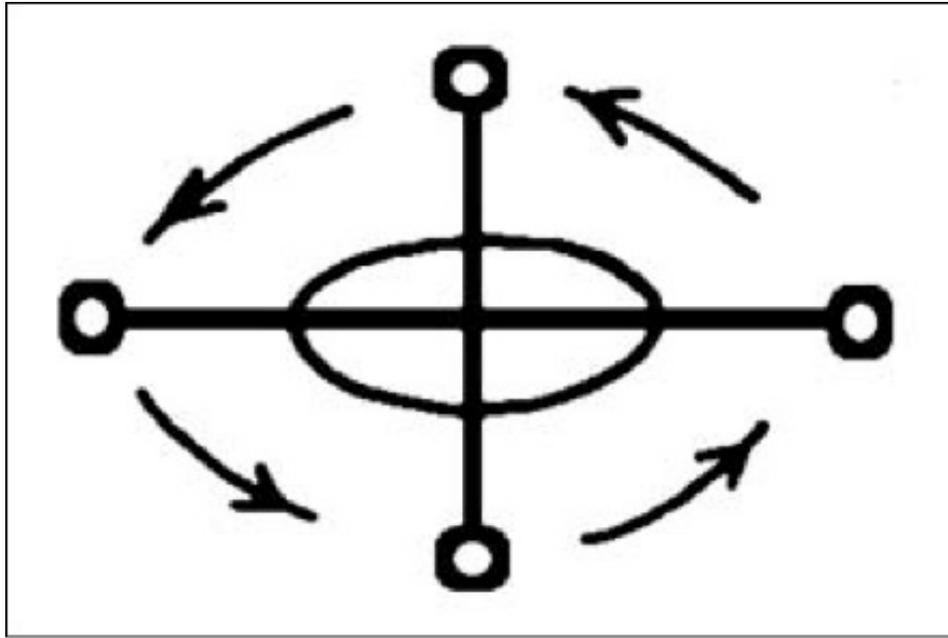


Image 8.96: Example of the traditional cosmogram.

#### *Summary of Feature 42*

A TPQ of 1835 for this feature is derived from a whiteware shell-edged plate (FS 477.58), and the mean beginning and end dates are 1775 and 1843, respectively. These dates are consistent with the dates of operation for the Bridewell (1775–1838). Given the fact that no artifacts have beginning manufacture dates that post-date the demolition of the Bridewell, although some come close, it is likely that Feature 42 was formed near to or at the time of the building's destruction. The artifacts recovered additionally support the interpretation that this feature is associated with the Bridewell. A greater percentage of ceramic and glass vessels show use-wear, and the wear is more extensive than would be expected on most domestic sites. In addition, there were low percentages of high-cost wares. These institutions were low budget, and staying up to date with ceramic fashions was not a priority. The altered tumbler is also not unexpected, given the conditions with which inmates would have been confronted within the Bridewell. Confinement is stressful, and modified objects are one of the ways that institutional life manifests itself archaeologically (Kaktins 2012; Warfel 2009; Ferguson 1992).

Feature 42 contained artifacts that span the entire history of the Bridewell and that potentially represent portions of the entire community associated with it. These artifacts attest to the lives of the prisoners confined therein, the orphaned children playing and being schooled on the adjacent grounds, and the individuals running the Bridewell.

## **IX – FAUNAL ANALYSIS**

### **INTRODUCTION**

During the City Hall Rehabilitation Project (2010–2011), excavations exposed a substantial quantity of eighteenth-, nineteenth-, and twentieth-century zooarchaeological material. Previous excavations in and around City Hall Park during the late 1990s also uncovered large amounts of zooarchaeological material, which was the subject of a report by Brewington and Hambrecht (2001).

The zooarchaeological material discussed in this specific analysis comes from contextual layers that date between the eighteenth and nineteenth centuries, and is associated with structures/features uncovered during the 2010–2011 excavation. In total, this project yielded 20,388 faunal fragments representing both domesticates and wild fauna (fish), of which 17,437 faunal fragments are the subject of this analysis. In addition to the animal fauna recovered, a small number of human remains were all found mixed in with the animal bones, as discussed in Chapter X.

The following zooarchaeology analysis represents a general analysis of the faunal material focusing on general questions related to quantity, specie representation, and patterning of butchering. The analysis uses basic quantitative methods (NISP, MAU, and MGUI—described below) for recording and representing the zooarchaeological material, following the recommendations of the NABO (North Atlantic Biocultural Organisation) zooarchaeology working group.

As noted above, only 16,834 of the total 20,388 faunal fragments recovered were analyzed. These analyzed fragments represent the following key archaeological contexts: Features 3 and 33/35, including Test Units 3/8, 3NE-8NE; the midden deposits of Features 27, 28, 29; and Feature 42 and Room 8C of the basement. The remaining 2,951 bone fragments were recorded and entered into the zooarchaeology database, but were from contexts that were not secure and therefore not included in this report.

### **LABORATORY METHODS**

The methods used in the report largely follow the parameters used by the Brooklyn College Zooarchaeology and Hunter College Bioarchaeology Laboratories. Comparative mammal and fish bone collections housed by the Brooklyn College Zooarchaeology Laboratory were used with permission from Dr. Sophia Perdikaris (PI). Following guidelines set up by these laboratories, all fragments were identified to the most specific taxonomic level, as warranted per the state of preservation and fragmentation of specific elements. In addition, all fragments, where applicable, were identified to specific element; however, left and right sides were not determined. General fragment size was calculated according to the recording standards suggested by the NABONE recording package (9<sup>th</sup> edition). Age was determined according to the state of fusion of epiphyses and dental eruption. Any patterns of burning and butchering were recorded.

All data from this analysis was first recorded onto standard NABONE recording forms and then entered into an *Access* database<sup>1</sup> based on the standard NABO recording form. Each entry was given an automatically assigned consecutive number as a tracking method in the chance that further analysis is needed. Quantitative analyses (MAU and MGUI) were calculated using the spreadsheets created by the NABO working group located in the NABO database.

As noted above, while specie identification was a primary goal of this analysis, the state of preservation, fragmentation, and specific element category did not always allow for this. Specific bone elements—including rib, some vertebra, and long bone shafts—were assigned to the following categories: large terrestrial mammal (LTM); medium terrestrial mammal (MTM); or small terrestrial mammal (STM). Those fragments that were identified as mammal but did not allow further taxonomic identification were allocated to the category of UNIM.

Due to limited time and funding, specific limitations (see below) were placed upon the analysis, which in turn restricted the type of information recorded, as well as directly influencing the questions that can be asked in regard to the assemblage and the statements that can be made about diet and food distribution related to the zooarchaeological material. More specifically, these limitations include speciation of fish, birds, and mollusks, and specific aging methods. Other limitations were found to be associated with the recording standards, including butchering and coding. All limitations are described in more detail below, along with the specific measures taken to correct for them.

## **NOTES AND LIMITATIONS ON RECORDING AND ANALYSIS**

### TAXONOMY IDENTIFICATION

Fish, bird, and mollusk fragments were taxonomically identified only to the level of FISH, AVSP, and MOLSP. These categories are usually used for unidentified (speciated) fish, bird, and mollusk bones and shell, due to fragmentation, poor preservation, or elements that do not exhibit cross differences that allow further taxonomic differentiation. Analysis to the specie level for FISH and AVSP is time intensive. Funding limitations did not allow for this.

Since only very general information, with no attempt of speciation, of the fish, bird, and mollusk material was recorded, these fragments were placed in a separate bag according to context after entry, in the hopes that future analysis may occur.

### AGE DETERMINATION/ATTRITION

General age determination was assessed based on the state of fusion and eruption. No attempt was made to achieve a more specific age. Tooth rows were kept separate from all other material from individual contexts, but patterning was not analyzed for this report. They are, however, identifiable based on the notes entered for those specific elements.

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1. Matthew Brown, who conducted the analysis, created the database.

## BUTCHERING PATTERNS

Butcher patterns were recorded as per the NABONE guidelines and coding. These parameters, however, do not account for multiple types of butchery affecting the same bone. As a result, when bones from this collection did exhibit multiple types of butchery, only one butchering type was recorded in the associated field. Any secondary butcher mark was recorded in the notes for that particular bone. The direction of the butchering was not listed on the NABONE forms (sagittal, coronal, etc.), so this information, when identifiable, was recorded in the notes for the particular bone. All butchered material was placed in separate bags for further analysis and photography.

## CODES

The codes used to record data from this assemblage were based primarily on the system used by NABONE (9<sup>th</sup> edition). There were, however, a number of situations in which new codes had to be added for both species (e.g., turtle) and elements. For a full list of codes, see the faunal database.

## **BUTCHERY PRACTICES – TYPES DESCRIBED**

Several types of butchery marks were found on bones from the City Hall assemblage. All marks were identified macroscopically. Saw marks were identified based on observations of ridges on the relatively smooth face of the cut. Chop marks were void of the defined linear ridges and, instead, had some visible micro-fracturing at the point of impact. Evidence for cutting resulting from knife use was identified based on the presence of shallow incisions on the surface bone cortex without extending through the external surface of the bone. These cuts were often multidirectional and on top of one another. Punctures were identified based on circular holes that penetrated through the bone, often with fragmentation around the edges of the impact.

## **QUANTITATION METHODS**

This analysis utilizes the following methods for extraction of information from this assemblage: number of identified specimens present (NISP); minimal animal unit (MAU and %MAU); and meat grease utility index (MGUI). NISP refers to the number of specimens (bones) identified to the most useful level (species). This does not include categories such as LTM, MTM, or FISH. MAU and %MAU specifically look at the differentiation with regards to survivability of specific elements/regions of the skeleton after burial, which allows for comparison between different parts of the animal skeleton. MGUI, which can be seen as a continuation of MAU, is used by assigning scores or quartile ranks (1<sup>st</sup>–4<sup>th</sup>) to specific regions of the skeleton based on the amount of meat, grease, and sinew they contain/produce. Those regions associated with the 1<sup>st</sup> quartile are those linked with higher meat-bearing properties. Fourth quartile ranks contain elements that account for the least meat and grease. While NISP was used for each feature from the zooarchaeological assemblage, MAU and MGUI were only used where applicable. For a more detailed discussion on using NISP,

MAU, and MGUI for zooarchaeology analysis, see Lyman (1994), Reitz and Wing (2008), and Binford (1976).

## **ZOOARCHAEOLOGY**

Zooarchaeology, simply put, is the analysis of animal bones from archaeological sites. From this material, questions regarding diet, environment, climate, trade, economics, and culture can be addressed. A common misapprehension, however, is that zooarchaeological analysis will specifically indicate whether or not the local community in fact consumed the animal represented in the excavated faunal material.

In addition to this macroscopic evidence, Katzenberg (2008) notes that zooarchaeological material will at the very least only tell that the animal was present and in some way used by the individuals within the community, but it will not identify those individuals within the community that consumed the animal(s). Thus, questions specifically targeting differential access to food, diet, and status (class) cannot be fully determined. While it is clear that there are some limitations with respect to zooarchaeology, it is a primary and vital step in the goal to understanding past human diet and the use of available faunal resources.

## **SUMMARY OF SPECIES REPRESENTED**

Figure 9.01 displays the total number of fragments for all key features of the zooarchaeology assemblage for the City Hall Rehabilitation Project. The majority of all fragments could not be identified to genus or species, and were therefore allocated to the general category of unidentified, which is comprised of LTM, MTM, STM, and VSTM; these, combined together, account for 64.73% of all fragments. Domesticates—which include cattle, pig, and caprine, as well as dogs and cats—were found to be at significantly lower percentage (17.73%) compared to unidentified material. Within the domesticate group (not including cats and dogs), cattle account for 83.64% of all domesticates and 14% of all fragments of the assemblage. In comparison to the 1999 assemblage, the total domestic NISP is very similar. The key difference, however, is that the current assemblage consists of six contexts in 10 excavation units, while the 1999 report addressed five features—meaning that the NISP was spread more thinly in this report, limiting how much could be said about each feature. This factor will become more apparent in the discussions pertaining to each specific analytical unit.

While not identified to specie or genus, FISH and AVSP remains represent significant percentages (9.48% and 6.21%, respectively) of the TNF for the 2010–2011 assemblage. This finding is profoundly different than the NISP recorded for the earlier (1999) assemblage, where bird only accounted for 0.21% and fish accounted for 0.82% of the TNF for zooarchaeological material. The prevalence of these faunal categories will be discussed at the end of this chapter in more detail, as will the presence of turtle remains.

Each of the following individual analyses provides more information relating to the specific taxa represented as they pertain to individual features or contexts. Further data-oriented discussions (element distribution patterns, butchery patterns, etc.) will be addressed, where

applicable. As noted above, there are 10 excavation units at the core of this analysis, of which only nine are documented by individual reports. Feature 34, which contained a single juvenile cattle bone (mandible fragment), was not documented with a full report, but is counted in the total NISP for cattle and the TNF for the City Hall 2010–2011 zooarchaeological material.

Table 9.01: All features TNF.

NISP			FEA 3	FEA 33	FEA 34	FEA 35	Test Units 3&8	Test Unit 3/8	FEA 27	FEA 28	FEA 29	FEA 42	RM8C		
	CODE	COM NAME	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	TOTAL	PERCENT
	BOS	COW	35	19	1	166	156	130	2	1634	132	156	10	2441	14.00
	SUS	PIG	3	2	0	1	13	1	1	87	6	1	9	124	0.71
	CAP	GOAT	0	0	0	0	0	0	0	6	0	0	0	6	0.03
	OVI	SHEEP	0	0	0	0	1	0	0	8	1	0	0	10	0.06
	OVCA	OVCA	10	1	0	14	5	8	0	274	7	8	11	338	1.94
	FEL	CAT	6	0	0	16	4	0	1	76	5	0	1	109	0.63
	DOG	DOG	0	0	0	17	0	0	0	40	7	0	0	64	0.37
	EQU	HORSE	0	0	0	0	0	0	0	0	0	0	0	0	0.00
<b>DOM- NISP</b>			<b>54</b>	<b>22</b>	<b>1</b>	<b>214</b>	<b>179</b>	<b>139</b>	<b>4</b>	<b>2125</b>	<b>158</b>	<b>165</b>	<b>31</b>	<b>3092</b>	17.73
	TURT	TURTLE	0	0	0	0	0	0	0	8	2	0	2	12	0.07
	RAT	RAT	0	0	0	5	11	0	0	112	3	1	29	161	0.92
	AVSP	BIRD	26	3	0	19	11	0	2	855	74	22	70	1082	6.21
	MOLSP	MOLSP	6	1	0	3	16	1	0	54	1	61	6	149	0.85
	CRA	CRAB	0	0	0	0	0	0	0	1	0	0	0	1	0.01
	FISH	FISH	1	0	0	3	19	0	2	1363	109	17	139	1653	9.48
<b>MARINE</b>			<b>7</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>35</b>	<b>1</b>	<b>2</b>	<b>1418</b>	<b>110</b>	<b>78</b>	<b>145</b>	<b>1803</b>	10.34
	LTM	LTM	109	42	0	124	758	71	7	2948	337	153	136	4685	26.87
	MTM	MTM	92	6	0	40	98	6	1	1548	114	43	151	2099	12.04
	STM	STM	4	0	0	32	10	0	0	42	2	0	0	90	0.52
	FTM	FTM	0	0	0	0	0	0	0	0	0	0	0	0	0.00
	VSTM	VSTM	2	0	0	0	0	0	0	6	0	0	0	8	0.05
	UNIM	UNIM	198	108	0	340	373	72	25	2252	253	141	643	4405	25.26
<b>UNIDENT</b>			<b>405</b>	<b>156</b>	<b>0</b>	<b>536</b>	<b>1239</b>	<b>149</b>	<b>33</b>	<b>6796</b>	<b>706</b>	<b>337</b>	<b>930</b>	<b>11287</b>	64.73
		<b>TNF</b>	<b>492</b>	<b>182</b>	<b>1</b>	<b>780</b>	<b>1475</b>	<b>289</b>	<b>41</b>	<b>11314</b>	<b>1053</b>	<b>603</b>	<b>1207</b>	<b>17437</b>	100.00

**ROOM 8C**

The zooarchaeological material associated with Room 8C was excavated from within the basement of City Hall (Map 7.35). Based on the archaeological material, the faunal material from the basement likely dates to the mid to late eighteenth century. In order for ease of discussion, the different but related units of Room 8C were combined for this analysis. The information regarding the different units and their association with their specific TNF counts can be found in the City Hall zooarchaeology database.

In total, 1,207 fragments (~7.2% of TNF for all contexts combined) were recorded from this feature, of which only 33 (or 2.7%) were identified to a meaningful level (species)—making it, percentage-wise, one of the smaller NISP compared to other key contexts in this analysis. It did, however, yield a relatively significant number of fish bones in addition to a small number of bird remains. Figure 9.01 below displays the distribution and TNF for each taxon. The faunal material from Room 8C displays a small percentage of identified domestics. More interestingly, however, is the small number of cattle bones compared to other taxa (fish and bird). Furthermore, for the first time, cattle do not contain the greatest quantities of fragments for domesticates, albeit only a difference of one. Fish bones constitute 11.6% of the TNF, while bird (AVSP) represents slightly less than 5.8%, and the combined domestics (not including FEL) account for ~2.4% of the TNF.

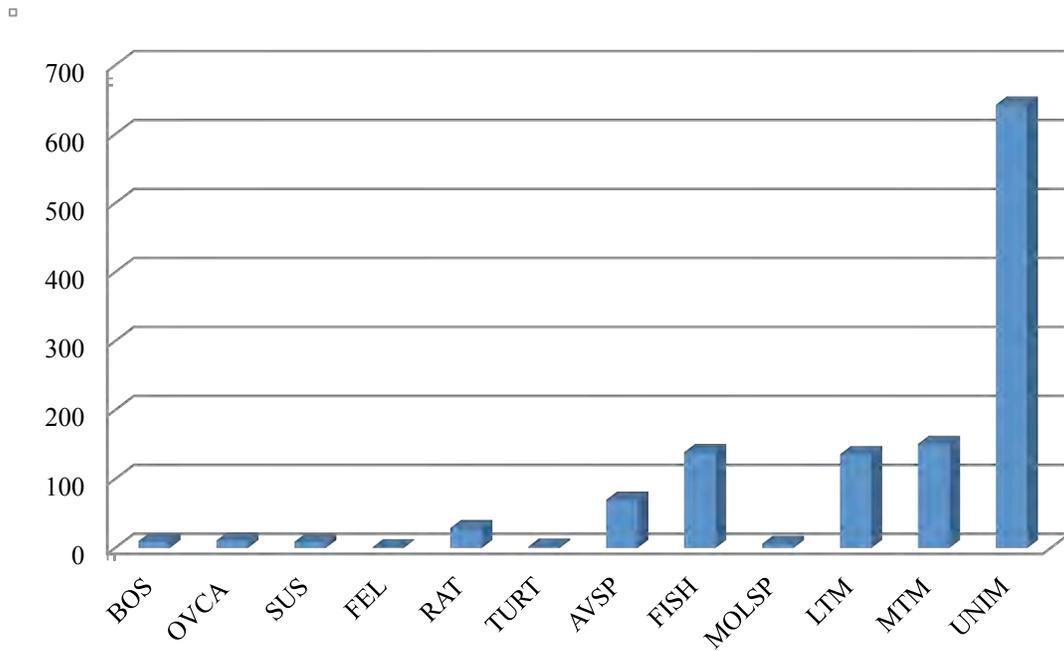


Figure 9.01: Room 8C - TNF - taxa distribution.

SPECIES (DOMESTICATES) AND ELEMENT DISTRIBUTION

Figure 9.02 shows the distribution of specific elements/regions as they relate to domestic terrestrial mammals (cow, pig, and caprine). As indicated in Figure 9.02, caprine elements are represented in the largest quantity, albeit only by one fragment compared to cattle. Of the 30 bones from the domesticate category 40% ( $n=12$ ) are elements from the skull, the majority of which were identified as loose teeth (11/12). The overall distribution of all the domesticates might suggest that Room 8C suffers from poor preservation, as teeth are the most resilient part of the skeleton and are more likely to survive under conditions bone would not (e.g., highly acidic soil). This, however, is difficult to discern, as there are significant numbers of both bird and fish bones present, which are in general more at risk of preservation issues. Irrespective, the total number of fragments for individual species (and combined) are too few to make strong arguments regarding the element distribution for domesticates from this context.

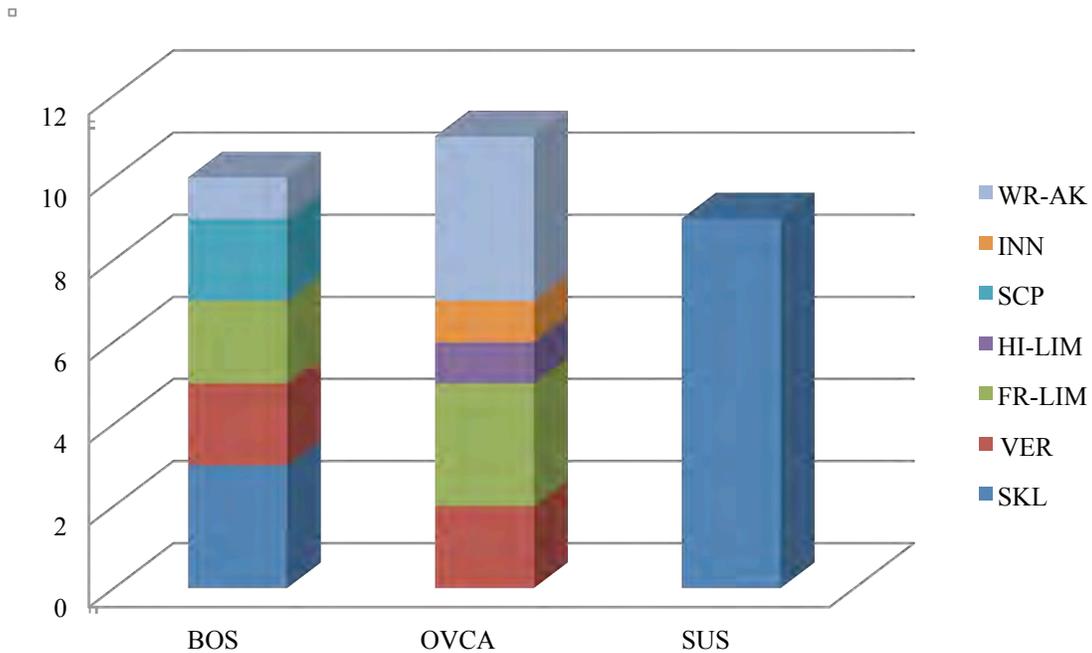


Figure 9.02: Room 8C - element distribution – domesticates.

BUTCHERY PATTERNS (ALL TAXA)

Of the 1,207 fragments recorded for this feature, only 37 (or ~3%) exhibit any sort of evidence of being butchered. The majority of the cut types, as found in all other features, were those caused by sawing. This specific butchery method accounted for almost 65% of the cuts with chop and knife marks, comprising the remaining butchery marks. Figure 9.03 shows the element distribution related to the type of butchery practice for all taxa (identified and unidentified). For those elements showing signs of being butchered, Figure 9.04 exhibits the focus on areas of higher meat-bearing regions (long bones, scapulae, etc.) when they are combined and compared to other regions associated with lower meat-carrying capacity. The relatively small sample of butchered material makes it difficult to make definitive statements related to butchery patterns. This is more apparent when removing all unidentified material and only focusing on domesticates.

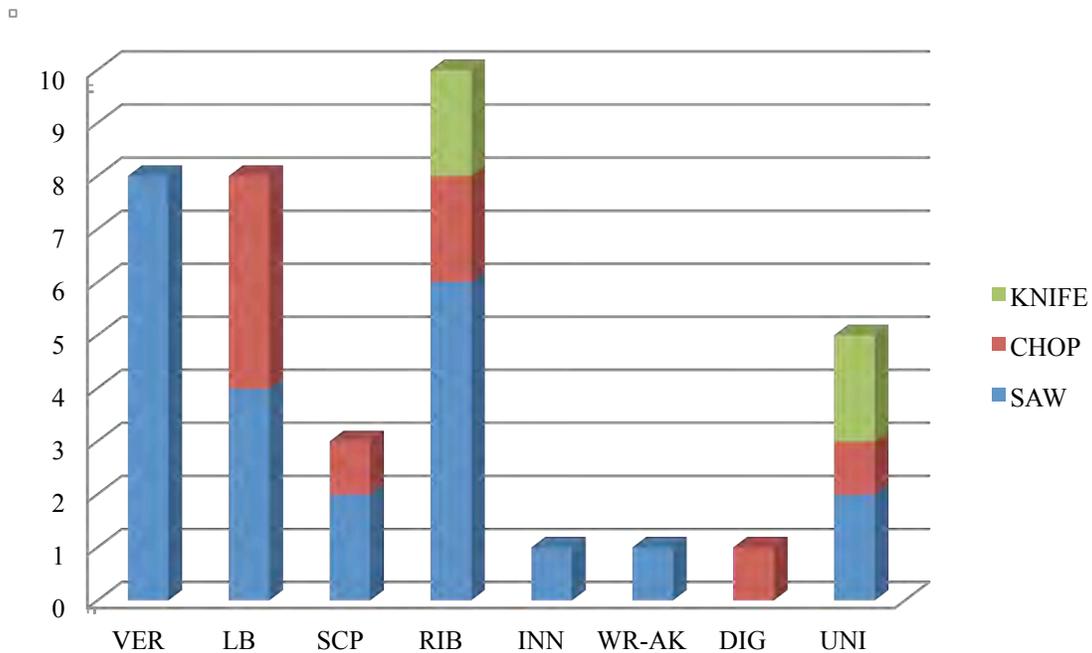


Figure 9.03: Room 8C - butchery type/element - all taxa.

BUTCHERING PATTERNS (DOMESTICATES)

Domesticates comprise approximately 18% ( $n=7$ ) of the total material exhibiting evidence of butchery marks. While the small number of bones limits what can be said regarding the butchering patterns, it is likely that the marks (saw and chop) are those that represent primary sources of butchery.

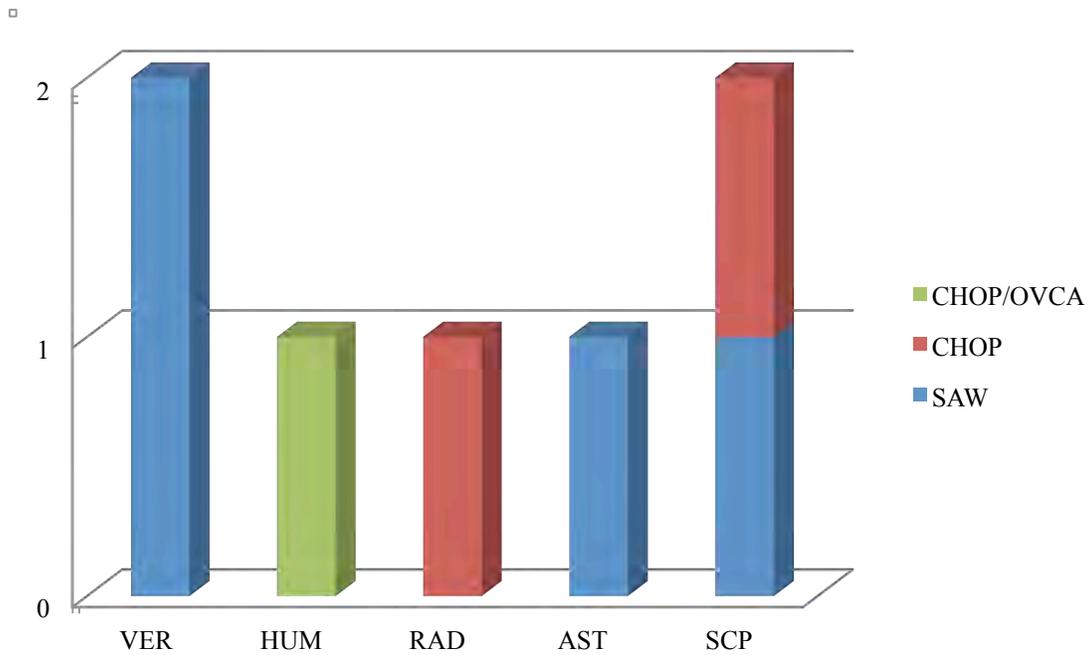


Figure 9.04: Room 8C - butchery patterns - type/element - BOS/OVCA.

#### AGE DETERMINATION

Only five bones of the 30 (16.6%) from the category of domesticated terrestrial mammals displayed non-fusion of epiphyseal ends. Due to the small sample available for age determination from Room 8C, patterns for age at death could not be identified. Based on the fusion rates for cattle, pig, and caprine, ages of less than 3.5 years for all bones available for analysis are suggested.

#### FEATURE 3

Feature 3 was located in the northeast vault area behind City Hall (see Map 7.01). This feature and the faunal remains were associated with the interior renovation of City Hall, including the removal of the basement kitchen during the early twentieth century. Compared to all other key contexts discussed in this report, Feature 3 is the most recent deposit of zooarchaeological material. Feature 3 accounted for approximately 2.9% ( $n=492$ ) of the TNF for the entire collection. Feature 3 consisted of three Test Units (11, 23, and 25). The faunal material from these test units is combined in this analysis and represented in Table 9.01 and Figure 9.05 below.

Of the 492 fragments from Feature 3, 54 (or 10.98%) are identifiable taxonomically to species level. This group is represented by BOS, OVCA, SUS, and FEL. The majority of fragments in the domesticate category are represented by elements from the taxa BOS. Due to the small number of elements identified to species level for BOS, SUS, and OVCA (other than NISP), further quantitative (%MAU) analysis is not warranted. It is difficult to make

statements regarding the taphonomy of the feature, as fragment size varied between scores of 2 and 12. The presence of bird bones is suggestive of a less damaged or fragmented context. This being said, any conclusions related to post-burial processes should be viewed with caution.

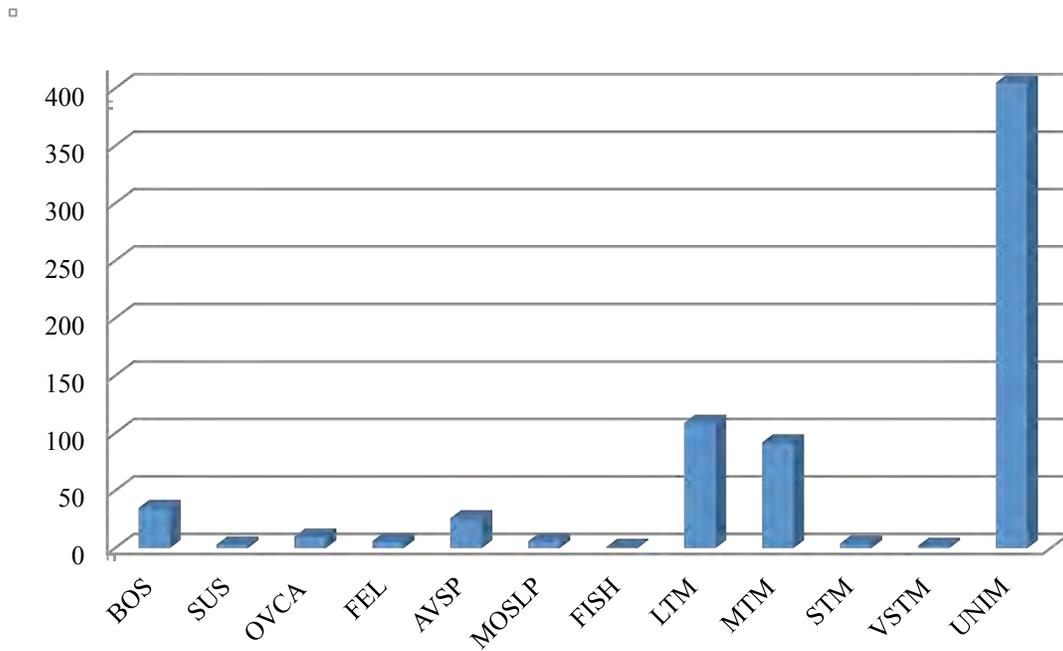


Figure 9.05: Feature 3 - TNF - taxa distribution.

SPECIES (DOMESTICATES W/O FEL) AND ELEMENT DISTRIBUTION

Figure 9.06 below displays the distribution of elements between BOS, OVCA, and SUS. Statements based on cross comparison between these domesticates is not beneficial due to the small number of identifiable fragments. The category of BOS represents the greatest number of identifiable fragments. Of these 35 fragments, the majority were found to be bones from the wrist and ankle, with very few from the skull.

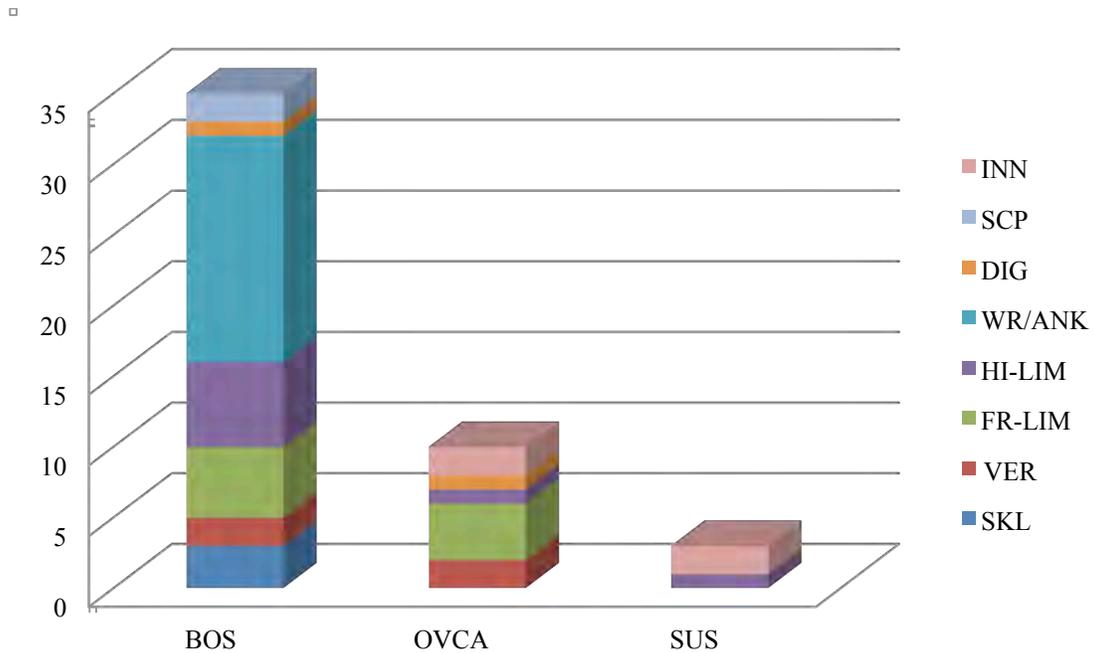
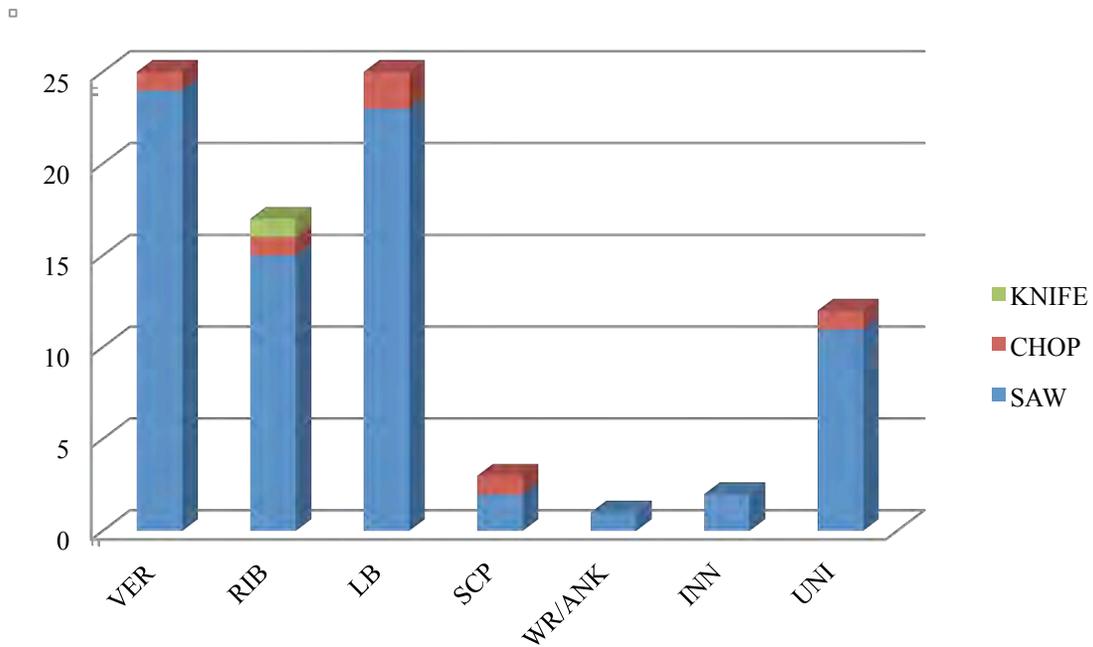


Figure 9.06: Feature 3 - element distribution – domesticates.

BUTCHERING PATTERNS (ALL TAXA)

Evaluation for the practice of butchering for Feature 3 revealed that of the 492 fragments, 85 (or ~17.28%) show evidence of marks associated with some post-mortem processing. The majority of cuts were identified as coming from butchery saw ( $n=78$ ), with evidence of chop marks effecting significantly fewer bones ( $n=6$ ). Knife cuts are only displayed on one element. Figure 9.07 displays the pattern of the type of butchering practice identified on the faunal material from Feature 3. There is no evidence of cut marks of any category found on bird (AVSP), fish, or mollusk fragments.



Key – VER=Vertebrae; LB=Long Bone (includes fragments and identified elements); SCP=Scapula; WR/ANK=Wrist and Ankle; INN=Innominate; UNI=Unidentified Bone Fragment

Figure 9.07: Feature 3 - butchery type and element.

The category of UNID (LTM, MTM, UNIM, etc.) constitutes the majority of butchered remains, making up 85% of the cut bones. Vertebra, long bones, and ribs represent the largest number of bones altered by butchery in this particular category. As these are unidentified fragments, no specific discussion on butchery directly related to UNID will be attempted.

#### BUTCHERING PATTERNS – DOMESTICATES

Since it is unlikely that cats were being consumed as a food resource, they are not considered in this section of analysis. The butchery marks found on material from Feature 3 are represented by saw and chop marks. Of the 48 domestics, 11 (23%) exhibit some form of butchering (see Figure 9.08)

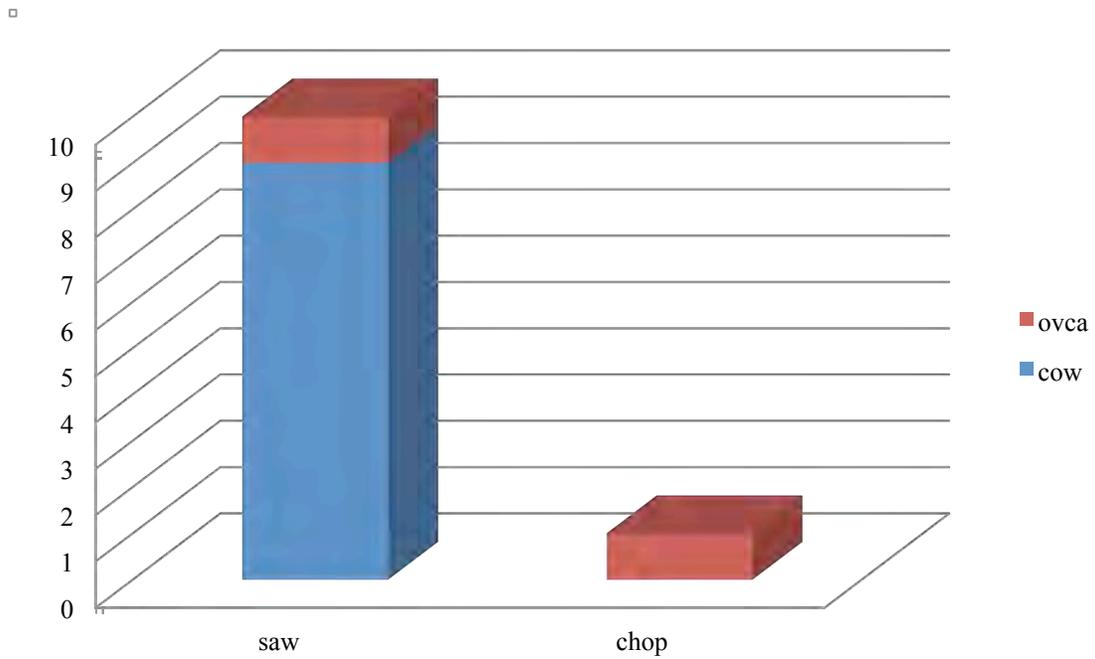
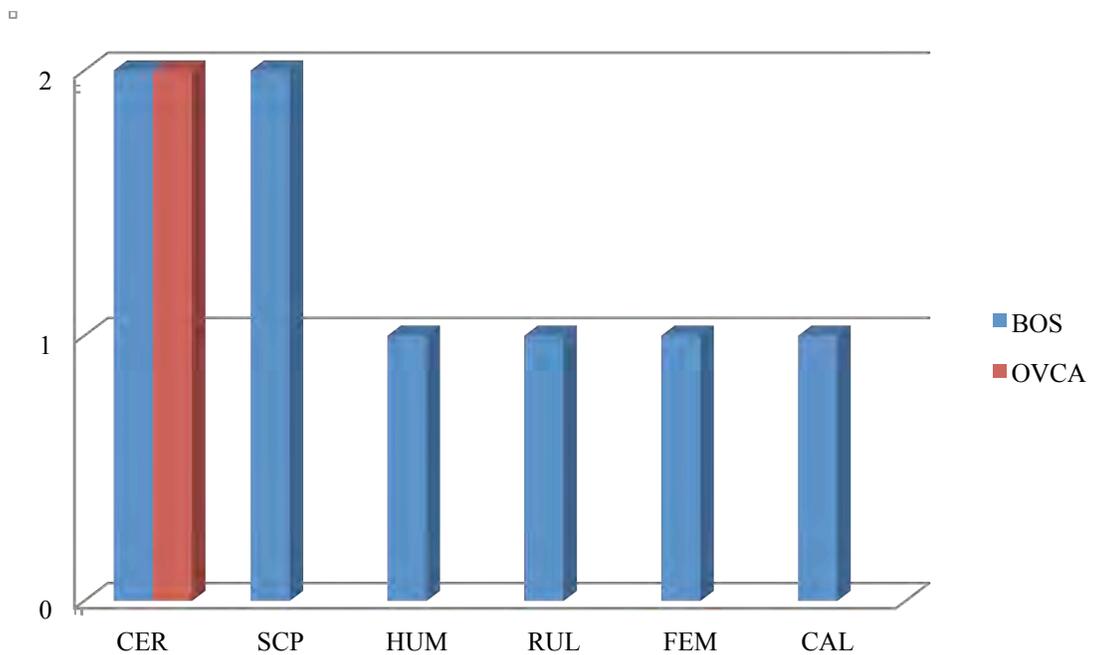


Figure 9.08: Feature 3 - butchery patterns – domesticates.



Key - CER=Cervical Vertebra; SCP= Scapula; HUM=Humerus; RUL=Radius/Ulna; FEM=Femur; CAL=Calcaneus

Figure 9.09: Feature 3 -butchery (saw) - element/species.

Figure 9.09 displays the element distribution for species with evidence of butchery. There are too few elements to make conclusive statements regarding patterns of butchery for this feature. This being said, the following regional cut information is known from the analysis. The long bones were cut in a transverse orientation, removing either the proximal or distal ends, with variable proportions of the shaft along with it. The two scapulae that exhibit saw marks were both cut across the neck, effectively removing the blade and leaving the glenoid fossa in the midden (this is a pattern seen in other features). The location of the chop mark (not shown in Figure 9.09), indicated above, is positioned on the mid-shaft, on the radius of an OVCA.

The lack of knife cuts within the domesticated category and the single knife mark on an UNID fragment is suggestive that the butchering of these particular elements was more in line with primary butchering (butcher shop or industrial setting) practice rather than secondary home or kitchen butchering.

#### AGE DETERMINATION

A total of 13.8% ( $n=68$ ) of the bones from Feature 3 were found to show evidence of incomplete or non-fusion, suggesting incomplete growth. Of these, 17 (3.45%) are from domesticates (including FEL). Basic age assessment using fusion rates was applied to specific long bones, the calcaneus and the innominate (acetabulum) of the domesticates (not including FEL). Of the total domestics (not including FEL) ( $n=48$ ), 14 (29%) were identified as juveniles based on the lack of epiphyseal fusion. Further distinction shows that 26% ( $n=9$ ) of the cattle bones are from juveniles, while four of 10 OVCA are juvenile; of the three pig bones, one is from a juvenile. Based on the information from Figure 9.10, cows were less than 3.5 years of age at the time of death, while OVCA were found to be less than 2.5 years old, with one showing an age of less than six months old at the time of death. The single pig bone (INN) represented in this chart was found to be less than 12 months old. The small numbers (over all NISP) do not allow for further statements regarding pattern of age-based slaughter.

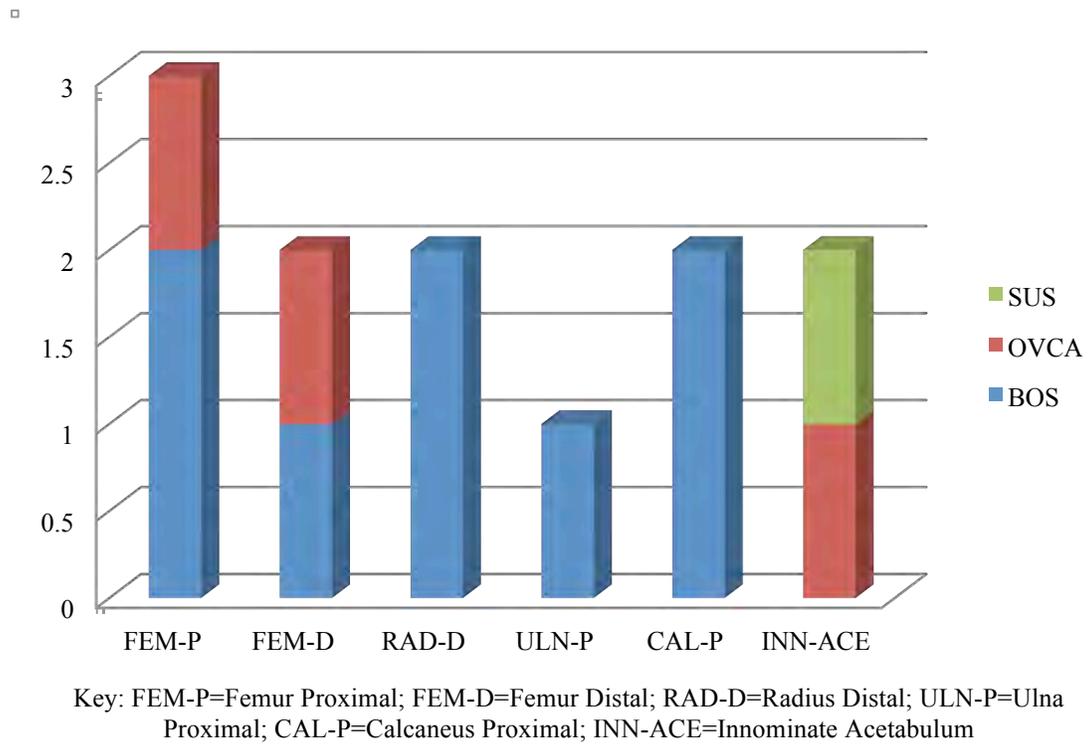


Figure 9.10: Feature 3 -domesticates –fusion – age.

### TEST UNIT 3/8

Zooarchaeological material from Test Unit 3/8 accounted for ~2.6% (TNF=289) of the total number of fragments from the targeted collection. This material was excavated from the northeast vault area of the excavation (see Map 7.01) and dates to the first quarter of the nineteenth century.

The bones are largely divided between cattle bones and unidentified mammal bones (see Figure 9.11). Of the 289 fragments, 130 are identified as cattle, eight are sheep/goat remains, and one is identified as being pig. Cattle, as found in all the key features, is the dominant domesticate present in terms of quantity and percentage, making up approximately 94% for this particular category. As there are relatively few fragments that comprise this context, any statements made regarding butchering and survivability should be viewed with caution. That being said, the use of MAU and MGUI statistics do offer some information regarding the distribution of cattle bones. These statistics are not applicable to any of the other domesticates for this context.

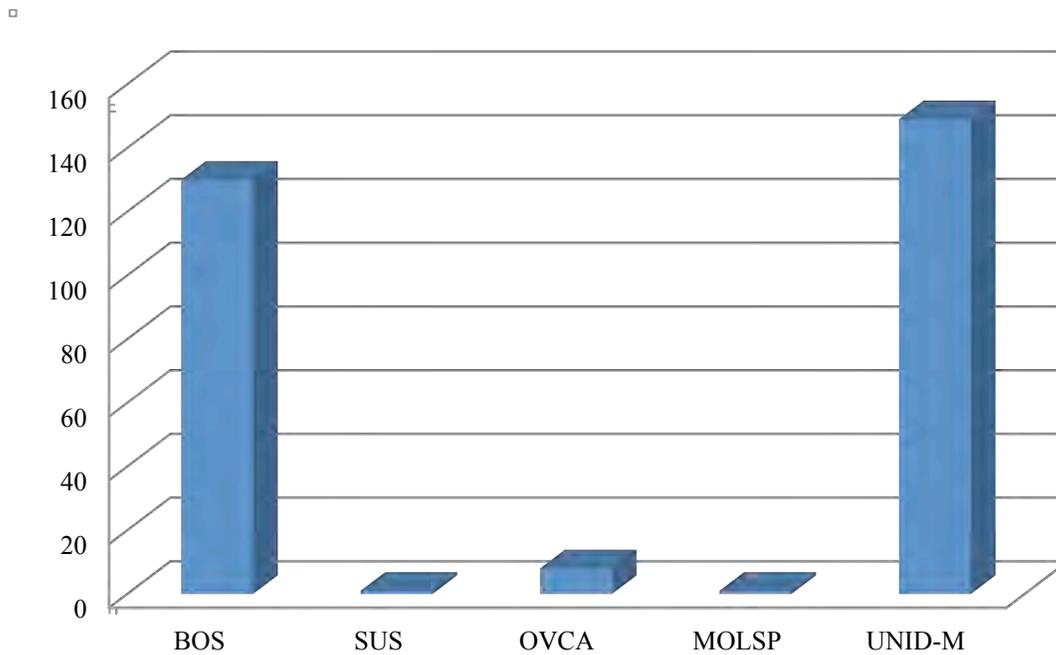


Figure 9.11: Test Unit 3/8 - TNF - taxa distribution.

SPECIES AND ELEMENT DISTRIBUTION

The categories of forelimb and hind limbs represent approximately 42% ( $n=55$ ) of the total elements identified for the taxa BOS from this context. As identified in zooarchaeological analysis for some of the features, teeth do not make up a large proportion of Test Unit 3/8. The forelimb and hindlimb regions, together with the pelvis and scapula, represent areas that contain large amounts of meat (e.g., hindquarter and forequarter). This observation will be discussed in more detail below. Pig and sheep/goat contain too few bones to make statements related to distribution. The relatively large and dense bones of the cattle might be suggestive of differential survivability.

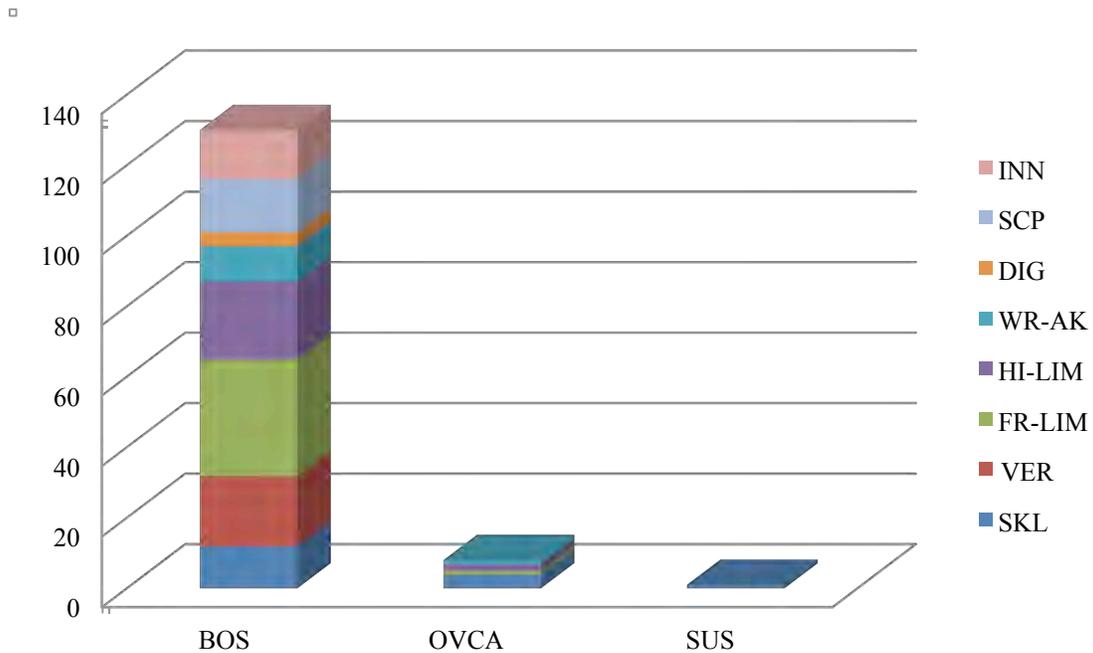


Figure 9.12: Test Unit 3/8 - element distribution – domesticates.

BUTCHERY PATTERNS

Approximately 20% of the bones from Test Unit 3/8 exhibit some form of butchering. Figure 9.13 shows the distribution of butchering for all fragments from this context. It is clear from this chart that the main source of cuts comes from sawing, more specifically saw marks on long bones. There was no evidence of other forms of butchering, including those originating from knife use. In some cases, bones exhibited multiple butchery marks with clear indication of different directional orientations. However, these were not quantified for this analysis, though they are documented in the database notes.

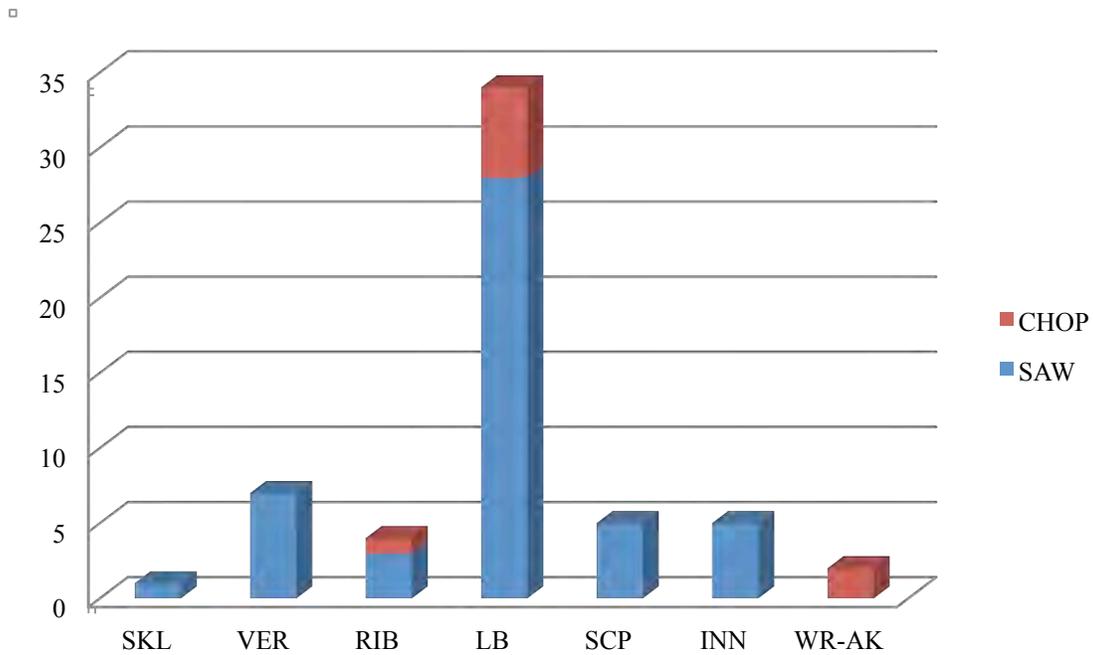


Figure 9.13: Test Unit 3/8 - butchery type / element - all taxa.

Out of the domesticated mammals from this feature, cows exhibit evidence for butchery. Of the 130 identified cow bones, 40 (or approximately 30.8%) display cuts marks. The distribution of the elements and the type of cut are displayed in Figure 9.14. The lack of other types of cut marks (knife) suggests that the butchery marks were not likely from secondary home/kitchen practices.

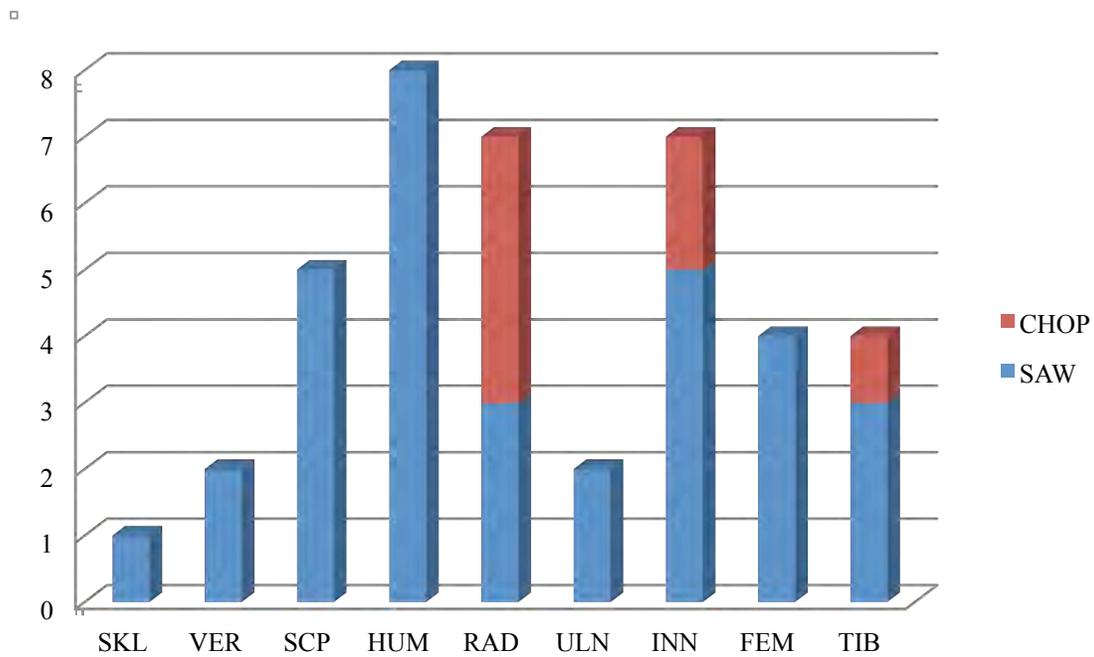


Figure 9.14: Test Unit 3/8 - butchery patterns - BOS elements.

#### MAU AND MGUI ANALYSIS

MAU and MGUI analyses were used to identify different patterns of distribution of elements with relationship to survival and potential selective preferences. For Test Unit 3/8, this could only be applied to cattle remains, as there are too few pig and caprine fauna to make statements regarding survivability and use.

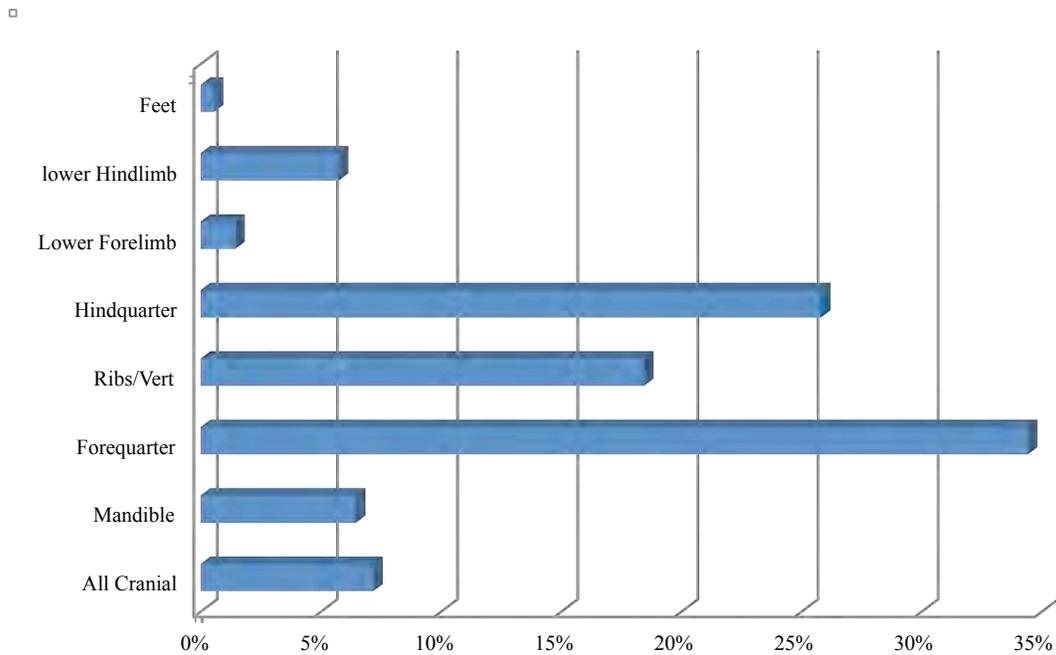
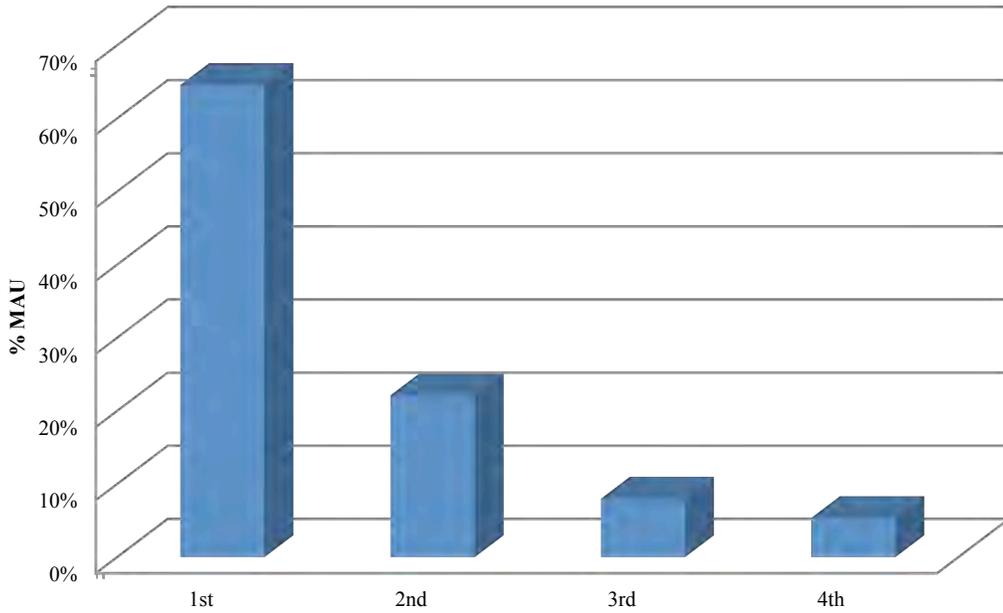


Figure 9.15: Test Unit 3/8 - %MAU - BOS element distribution.

Figure 9.15 displays the %MAU for cattle bones. Here it can be seen that within this taxa, the bones representing the hind and forequarters dominate this particular collection. Crania, mandibles, and the lower hind and fore limbs show up in much smaller percentages in Figure 9.15. Those bones generally carry low meat quantities when compared to the forequarter and hindquarter regions. The vertebrae, in the case of Test Unit 3/8, represent a significant percentage of the cattle elements. These for the most part represent atlas, axis, and other cervical vertebrae.

By looking at the MGUI, it can be seen that the bones associated with this context are represented by the specific elements that offer the greatest amount of meat and grease, which together with the butchery and element distribution further strengthen the idea that the material from Test Unit 3/8 is likely from a primary butchering source.



Key: 1<sup>st</sup>, 2<sup>nd</sup>, ...4<sup>th</sup> represent highest or richest source to the lowest or poorest source of MGU

Figure 9.16: Test Unit 3/8 - MGUI quartile rank – BOS.

#### AGE DETERMINATION

A total of 19 of the 139 (~14%) domesticates (all cattle) exhibited evidence for non-fusion or partial fusion. Figure 9.17 below displays the distribution of specific bones (long bones and innominate [ACE]) used for identification age in the cattle cohort. Based on the fusion rates for these particular bones, 14.6% (130 cattle bones) of the cattle bones are from animals between the age of 6 months and 3.5 years. This percentage, however, does not take into consideration the bones not used for determining age. Nonetheless, it can be said that some of the cattle from Test Unit 3/8 were at the prime age for meat processing, with the majority under 3.5 years of age.

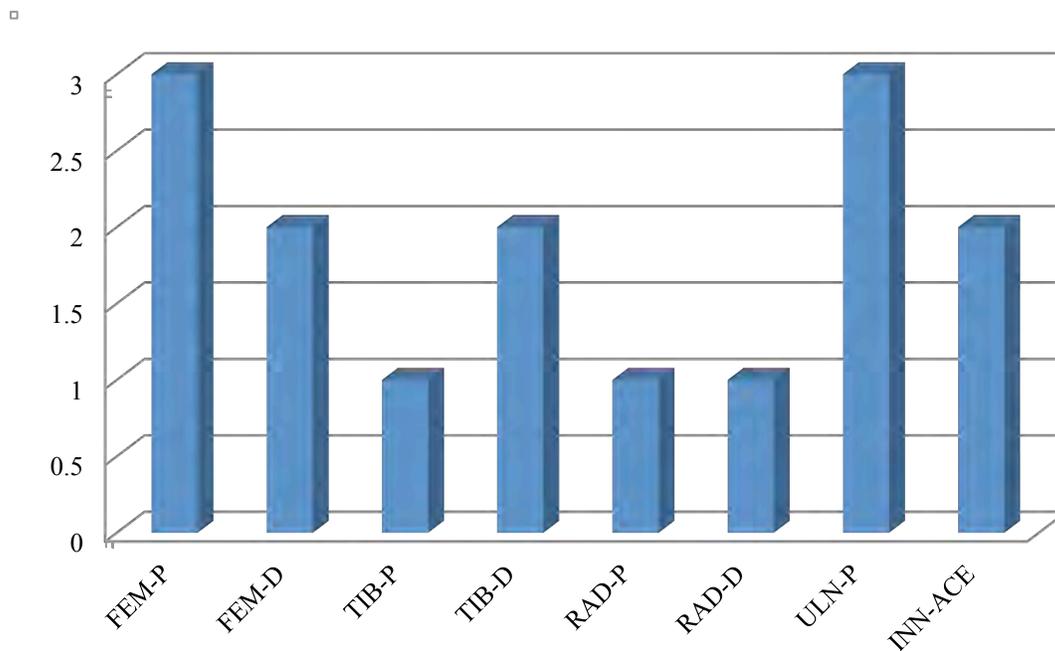


Figure 9.17: Test Unit 3/8 - fusion- BOS.

### TEST UNITS 3(NE) AND 8

Test Units 3 and 8 were located in the northeast vault area of the City Hall excavation (see Map 7.01) and have been dated to the early nineteenth century. These units are actually comprised of different associated layers that have been combined for ease of analysis and their general archaeological relatedness (for the difference among bones and species per layer, see Chapter VII and the zooarchaeological database). There are a total of 1,475 fragments associated with these units, making up approximately 8.8% of the total TNF for all key contexts. The distribution of bone fragments in relation to taxa (see Figure 9.18) points to 84% of the bones from this feature being allocated to the general category of unidentified mammal. A small percentage of bones, not included in the overall unidentified mammal category, were identified as being from fish and bird. The NISP for domesticates ( $n=179$ ) mostly consists of cattle remains, while pig and caprine make up significantly smaller percentages of this group.

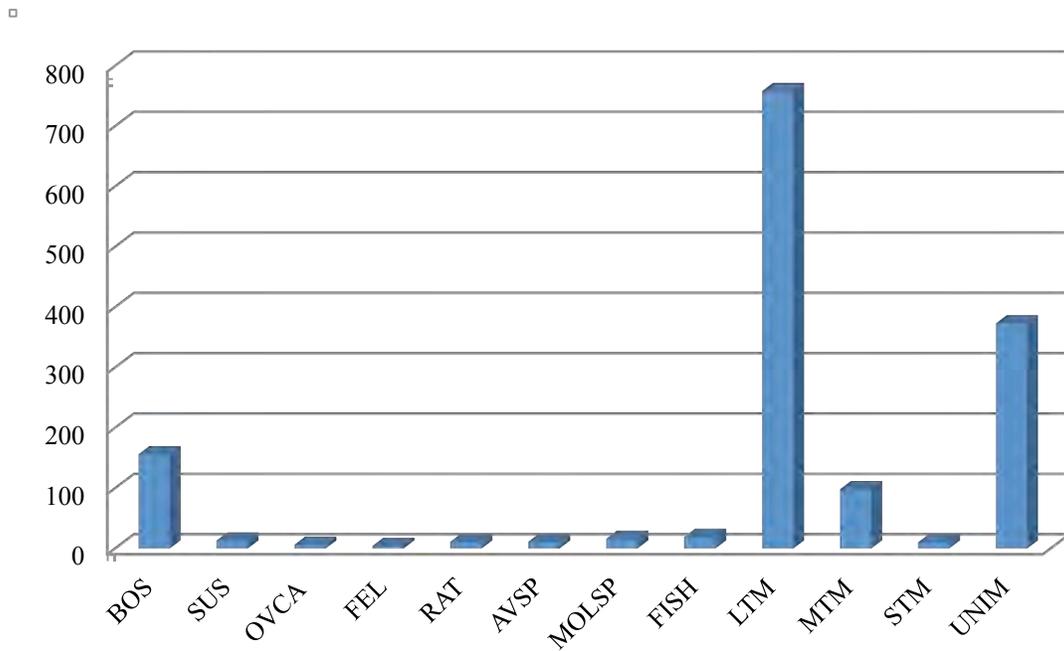


Figure 9.18: Test Units 3 and 8 - TNF -taxa distribution.

#### SPECIES (DOMESTICATES) AND ELEMENT DISTRIBUTION

Like other features from the City Hall 2010–2011 excavations with zooarchaeological material, cattle bones are represented here in the greatest quantity when compared to other domesticates (pig and caprine). Figure 9.19 shows significant differences between these groups, where cattle bones constitute almost 90% of the total NISP (FEL were removed for this calculation). The distribution of cattle bones show a spread of different elements, with the majority of the bones coming from the post-cranial skeleton; specifically, the leg bones, scapula, and—to a lesser extent—the innominate bones of the forequarter and hindquarter. These bones constitute slightly over 42% of all cattle bones. Cranial bones, along with other low meat producing elements, are present with some significance when combined. This being said, skull fragments from cattle constitute 16% ( $n=25$ ) of all bovine elements, as displayed in Figure 9.19. This number is slightly biased by the presence of loose teeth, which account for 24% of the skull bones. This pattern of prevalence is further indicated in Figure 9.22. Both pig and caprine are represented by too few fragments to make statements regarding the distribution of the specific elements. It is noted that of the nine cranial fragments identified as pig, all represent dental remains (mandible, maxilla, or loose teeth).

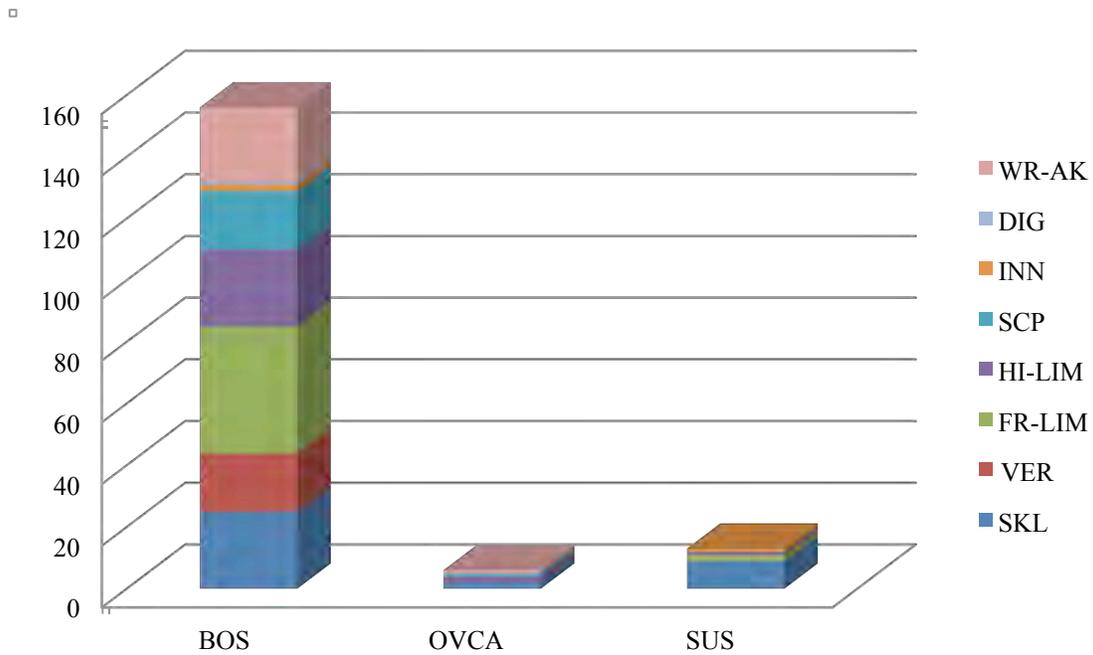


Figure 9.19: Test Units 3 and 8 - element distribution – domesticates.

#### BUTCHERY PATTERNS (ALL TAXA)

Evidence for butchery was identified in 171 (~11.6%) fragments from this context. Figure 9.20 displays the element distribution and the type of these cuts for all taxa. Following the trend that has been identified in other features from City Hall, saw marks are high in number compared to other forms of butchery (chop and knife mark). Saw marks constitute ~84% ( $n=144$ ) of the butchery marks identified for this feature, with chop cuts and knife marks accounting for the remainder of the butchery profile. The distribution of butchery (saw and chop) clearly shows a focus on vertebrae, long bones, and scapulae, as combined they constitute almost 75% ( $n=128$ ) of all butchered material. These regions combine to make up the 1<sup>st</sup> and 2<sup>nd</sup> MGUI quartiles, which are the two larger categories for meat-bearing regions (see below for more detail).

The majority of butchered remains are from fragments not identified to species level. These bones comprise approximately 74% of all butchered material. Domesticates (cattle and pig) account for the remaining material, showing evidence of butchery (see below).

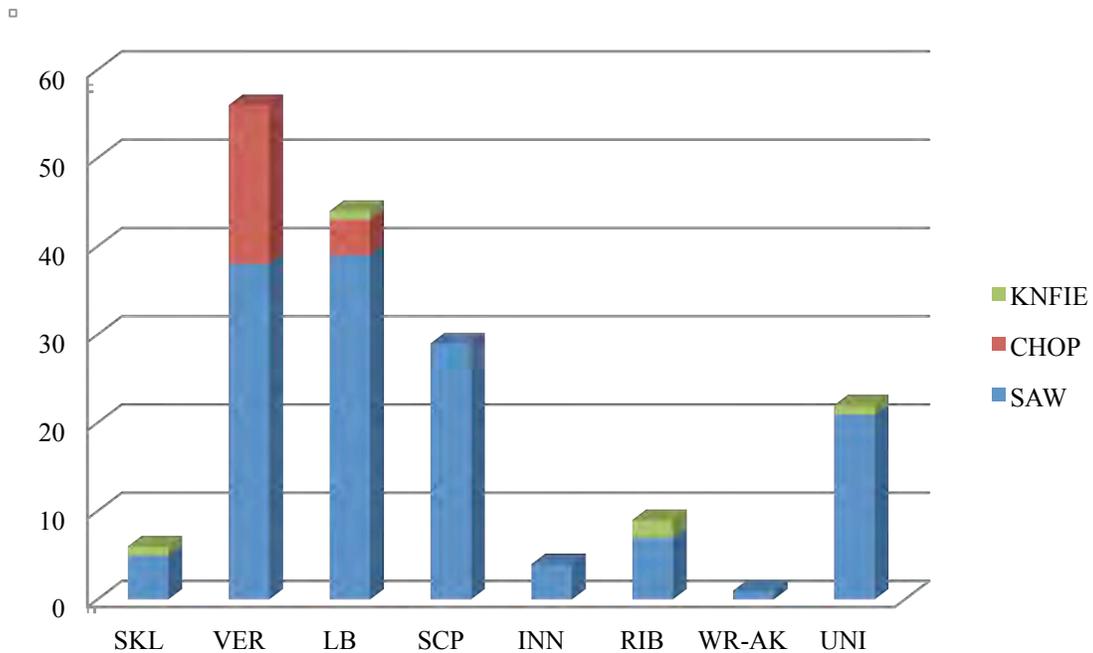


Figure 9.20: Test Units 3 and 8 - butchery type/element - all taxa.

#### BUTCHERY DOMESTICATES (BOS)

Of the 156 bones representing the taxa BOS, 44 (or 28%) were found to have butcher marks. The majority of these cuts (~86%) were identified as saw marks, with fewer being related to chop and knife marks. Figure 9.21 displays the type and the distribution (affected element) of butchery marks on cattle bones. Not shown in this graph is the single pig bone (a mandible that exhibited chop marks). The pattern that emerges from the butchery marks and element distribution is that, for the most part (barring the single knife mark), these represent primary butchery rather than secondary or kitchen/household refuse. In addition, most of the material that exhibits these particular types of cuts (chop or saw) also makes up those particular regions that contain the most meat, grease, etc. This selection is further highlighted in the MAU and MGUI analysis below.

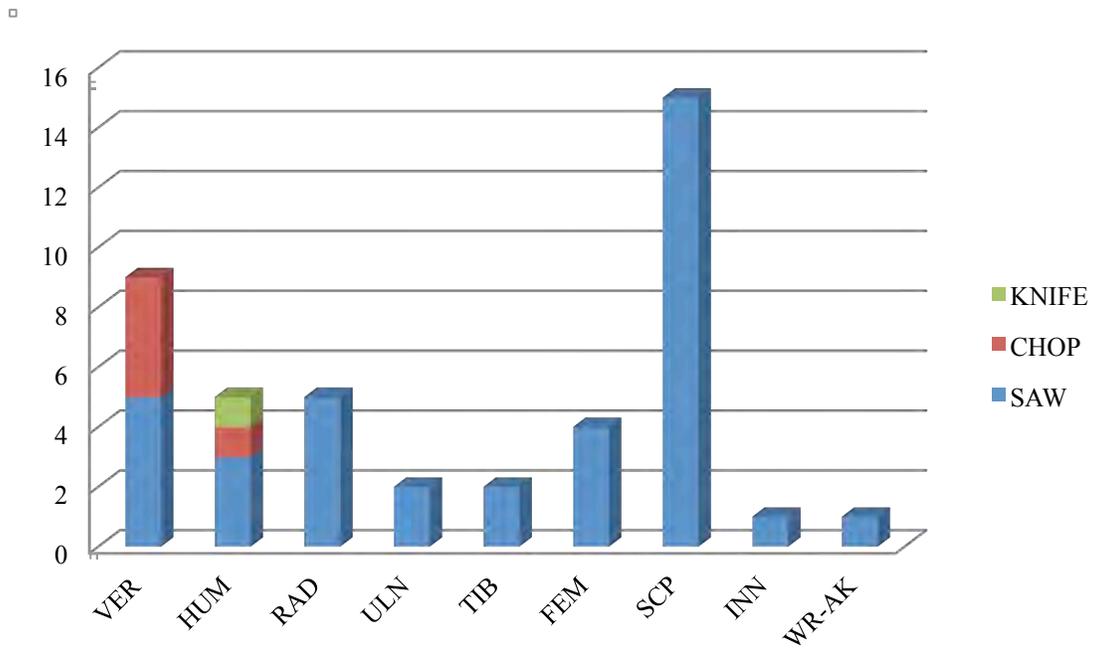


Figure 9.21: Test Units 3 and 8 - butchery pattern - type/element – BOS.

#### MAU AND MGUI ANALYSIS

Figure 9.22, as noted above, further highlights the differences between the element distribution with regard to cattle. Those categories that contain the highest meat-bearing regions (forequarter and hindquarter) show high %MAU scores when compared to lower meat-bearing regions, with the exception of the cranial elements. This is confirmed when viewing the MGUI scores, making it clear that the cattle bones from Test Units 3NE-8 are largely dominated by bones that contain high amounts of meat and grease, as represented in the 1<sup>st</sup> quartile. The significant presence of vertebra is suggestive that these cattle were not brought in as butchered elements, but were rather locally based products. As noted above, the increase in the % MAU for this category is likely related to the number of teeth present.

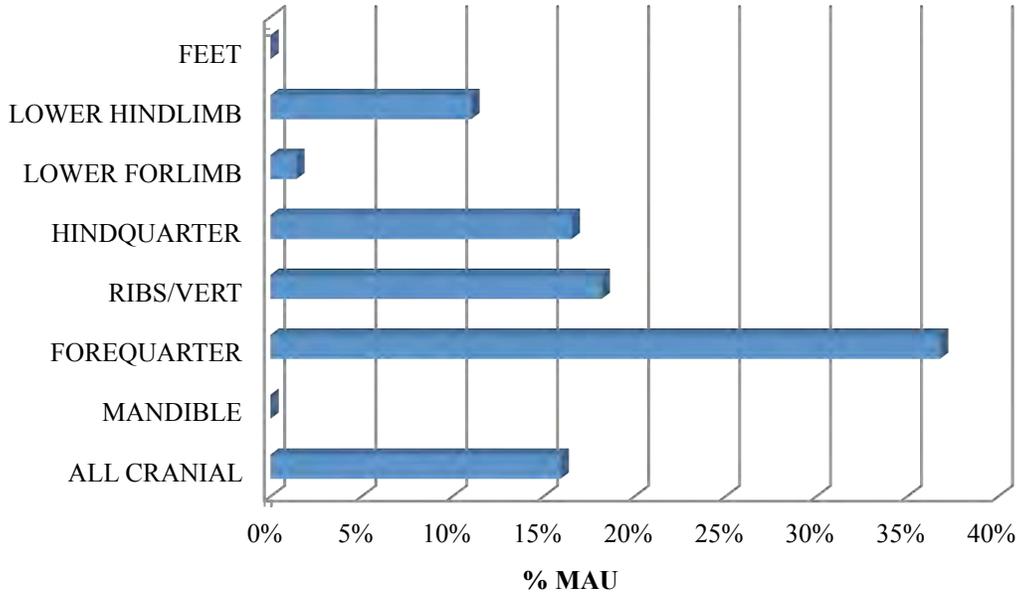


Figure 9.22: Test Units 3 and 8 - % MAU - BOS element distribution.

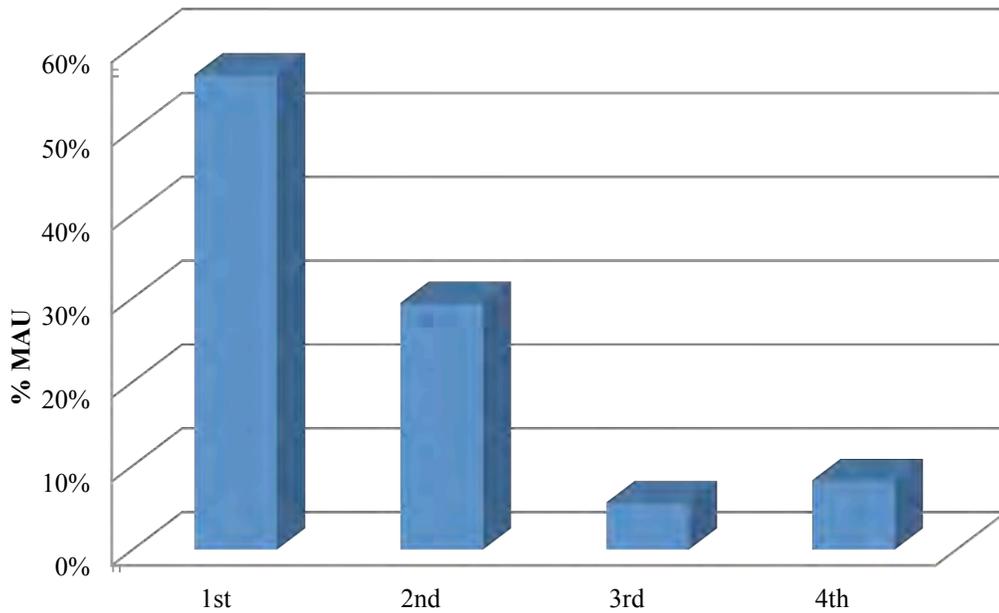


Figure 9.23: Test Units 3 and 8 - MGUI quartile rank – BOS.

AGE DETERMINATION

Of the 175 bones representing cattle, pig, and caprine, 37 (~21%) exhibited evidence of no fusion or partial epiphyseal fusion. Figure 9.24 displays the distribution of the selected bones from cattle and pig used for age reconstruction. Based on the fusion age for these specific bones, the majority of long bones are from individuals (cow and pig) older than one year of age, but younger than 3.5 years of age, putting them at a prime age for slaughter. In addition to the long bones not showing complete fusion, some vertebrae, ankle bones (calcaneus), scapulae, and innominates also exhibit a lack of fusion. These bones, for the most part, followed the same age pattern as the long bones (between 1 and 3.5 years of age).

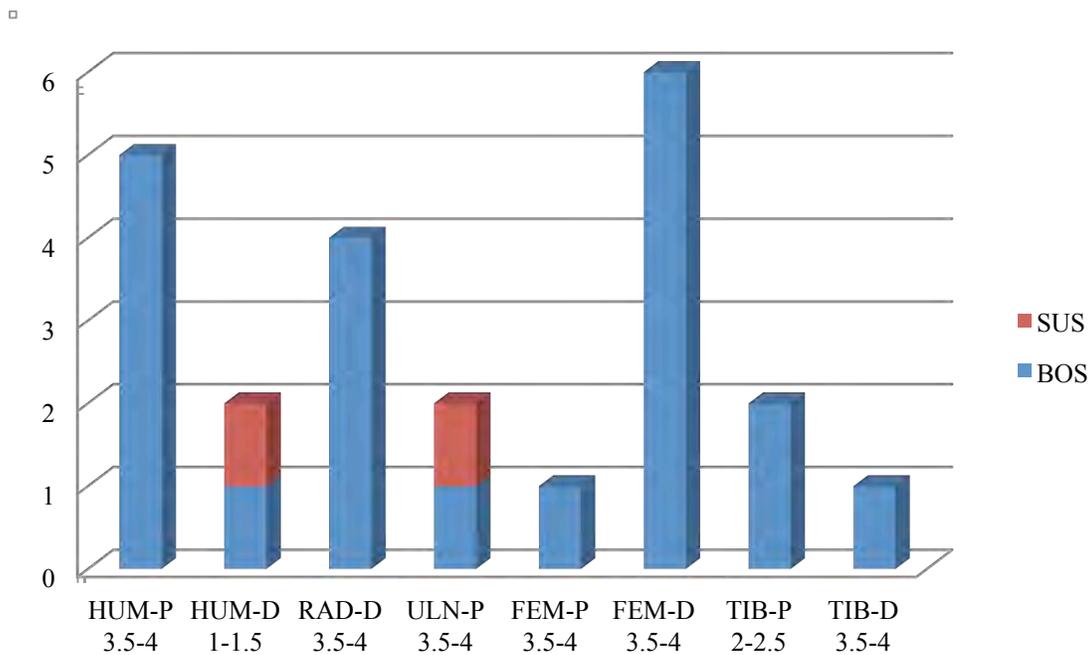


Figure 9.24: Test Units 3 and 8 - age determination – fusion - cow/pig.

**FEATURE 33**

The faunal material from Feature 33 was excavated from the northeast vault area of the City Hall excavation and was dated to the early nineteenth century. There were only 182 fragments removed from this context, of which only 22 (12%) were identified to a useful taxonomic level. As such, analyses of MAU and MGUI and interpretation of butchery practices will be limited. The taxa distribution is displayed in Figure 9.25, and shows that the majority of fragments represent classes of unidentified mammal with very few bird bones. While the number of fragments for identified species (domesticates) are few, there is a continuation of the pattern in which cattle bones represent the greatest percentage of fragments for this particular group.

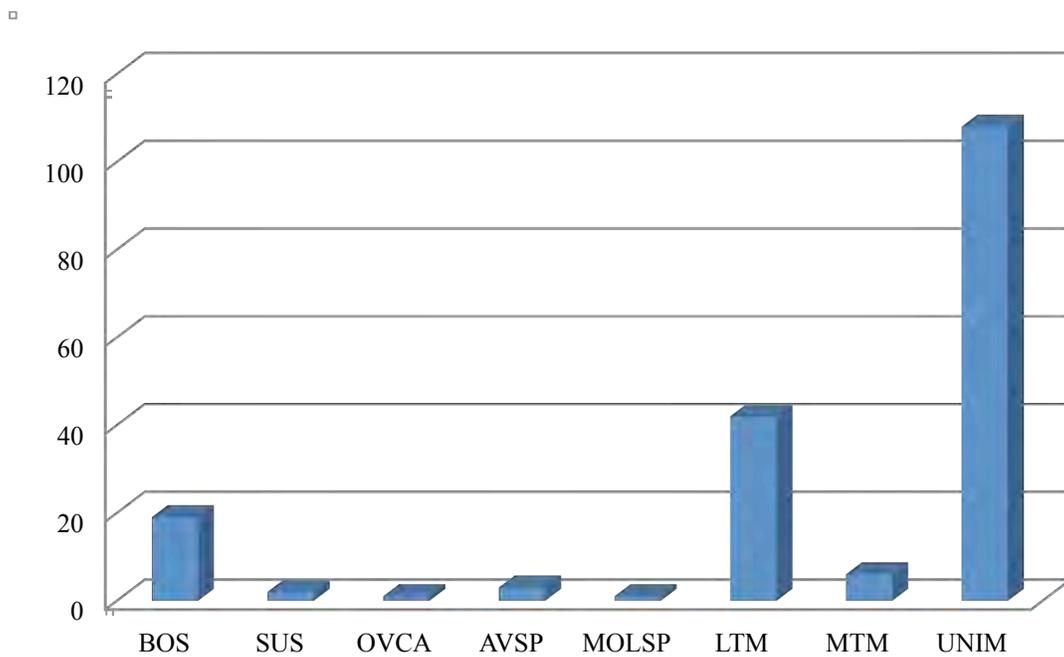


Figure 9.25: Feature 33 - TNF - taxa distribution.

**SPECIES (DOMESTICATES) AND ELEMENT DISTRIBUTION**

Cattle bones represent slightly over 86% ( $n=19$ ) of domesticates from Feature 33, with pig and caprine bones constituting the remainder of the fragments from this group. While there is limited information that can be determined from the small sample, it was found that limb bones account for the largest percentage when compared to other skeletal categories from Feature 33. This may point to differential preservation of the more dense bones—difficult to discern, however, due to the limited number of bones present.

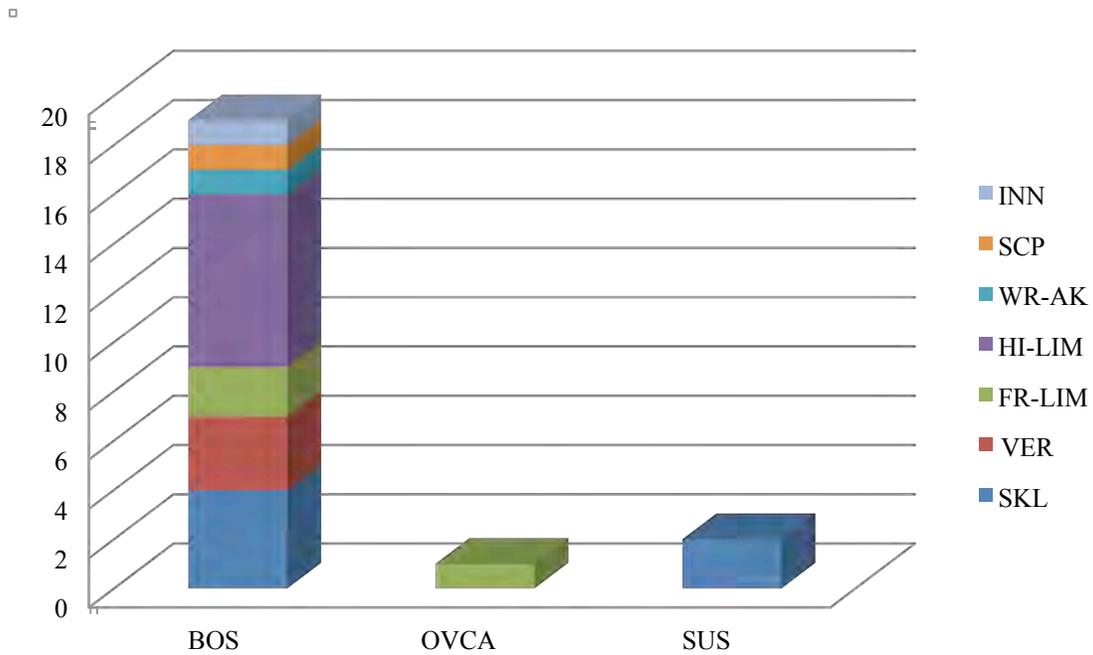


Figure 9.26: Feature 33 - element distribution – domesticates.

BUTCHERY PATTERN (ALL TAXA)

Figure 9.27 displays the distribution of elements that exhibit evidence for being butchered. As indicated in the chart below, saw type butchery is the most frequent type of cut found on the bones from Feature 33. Of the 10 butchered bones, six are from cattle, with no representation from other identified domesticates. All cut marks represented are more in line with primary butchery and are less likely to be from kitchen/household waste.

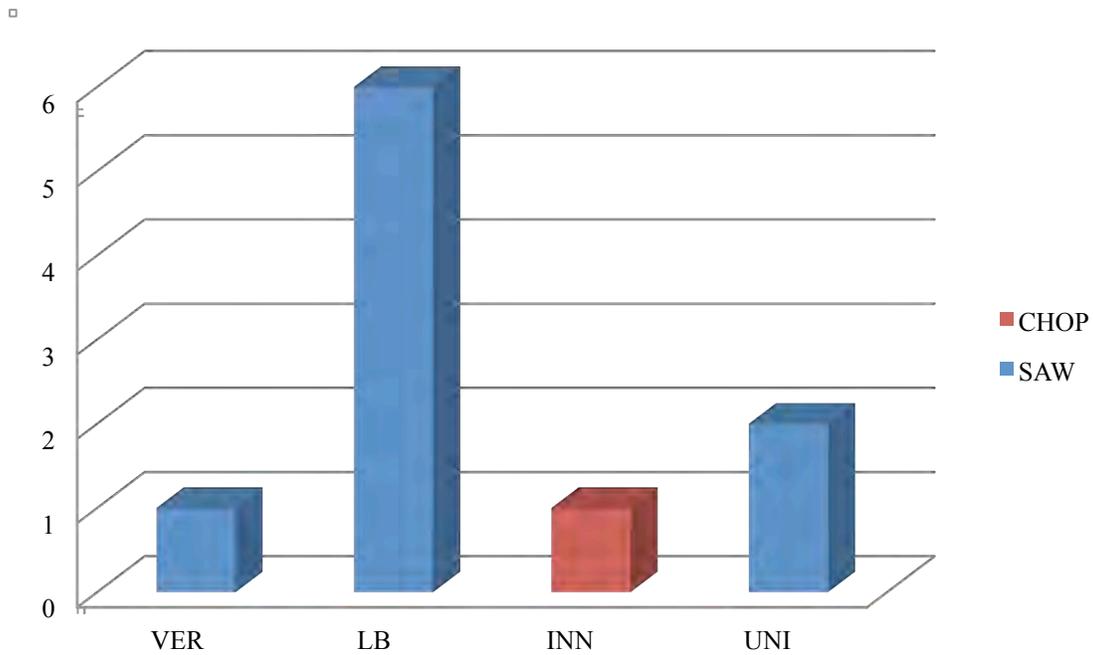


Figure 9.27: Feature 33 - butchery type/element - all taxa.

#### AGE DETERMINATION

Of the 22 bones representing domestic mammals, six were shown to lack fusion, all of which are cattle long bones. Based on fusion rates for the proximal and distal tibia and the proximal humerus, this particular set of cattle were aged to be older than neonates but less than 3.5 year of age at the time of death. The low number of fragments does not permit more detailed analysis related to age distribution.

#### FEATURE 35

Feature 35, located in the northeast vault area of the City Hall excavation, has been dated to the early nineteenth century. The zooarchaeological material from this feature accounts for approximately 4.6% ( $n=780$ ) of the TNF for the key contexts. These faunal remains are largely dominated by unidentified mammal bones, which constitute almost 68% for the TNF for this particular feature. The remainder largely consists of the bones from cattle and other domesticated fauna (Figure 9.28). Similar to the findings in other features from City Hall Park, cattle bones dominate the NISP of domestic mammals.

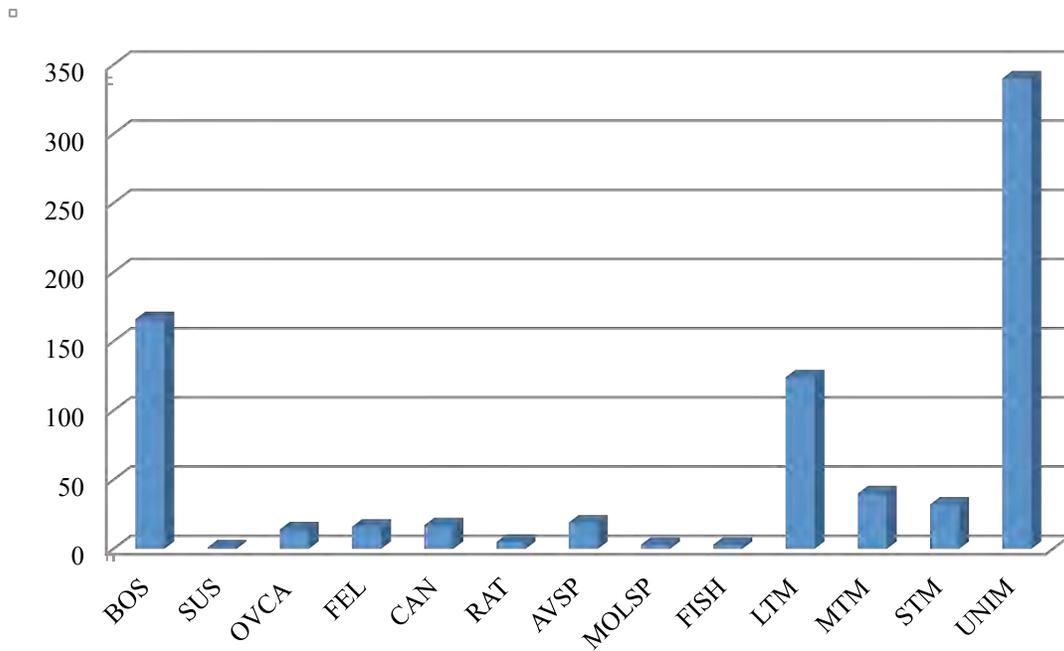


Figure 9.28: Feature 35 - TNF -taxa distribution.

#### SPECIES (DOMESTIC) AND ELEMENT DISTRIBUTION

Figure 9.29 shows the disproportionate abundance of cattle bones as compared to both pig and sheep/goat. Cattle bones make up approximately 92% of the terrestrial mammal domestic NISP (calculated without FEL and CAN NISP). In contrast to other features (e.g., Feature 29), there are very few skull bones present ( $n=4$ ), with no loose teeth. These four bones, however, are represented by two maxillae and two mandibles. Irrespective of the specifics of the skull elements, the overwhelming majority of cattle bones come from regions other than the skull. The largest proportions of bones are grouped within the categories of vertebra (VER), forelimb (FR-LIM), and hind limb (HI-LIM). These three categories of bone account for 57% of the cattle NISP. It is also noted that these regions together with the innominate and the scapulae are carriers of larger quantities of meat compared to other cattle bones (e.g., digit and skull bones). This pattern of higher meat-carrying elements will become more obvious in the discussion on MAU and MGUI below. The bones from bone OVCA and SUS represent only a small percentage of the NISP for domestic mammals, and patterns cannot be observed with such a small number of identifiable elements.

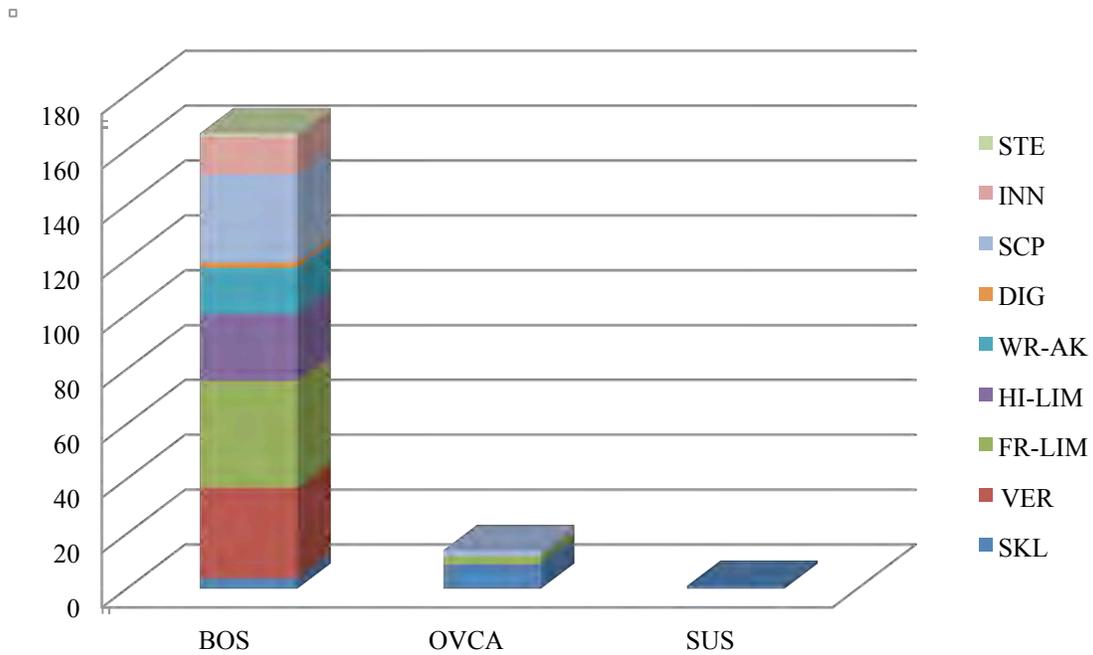


Figure 9.29: Feature 35 - element distribution – domesticates.

#### BUTCHERY PATTERNS (ALL TAXA)

Slightly more than 13% of the bones from Feature 35 show evidence of being butchered. Among these 104 fragments, most butchering is the result of sawing ( $n=100$ ). The distribution of butchery shows a clear preference for long bones and the scapula, making up approximately 68.3% of bones that display cut marks. Other than cattle, no other domesticates exhibit any evidence of butchery. Interestingly, one bird bone does display saw marks.

In addition to the saw marks, there are three instances of bones showing chop marks and one that displays evidence of being cut with a knife. The pattern that is observed with all taxa (including cattle, discussed in more detail below) is suggestive of primary butchering practices that would not occur in a kitchen or home.

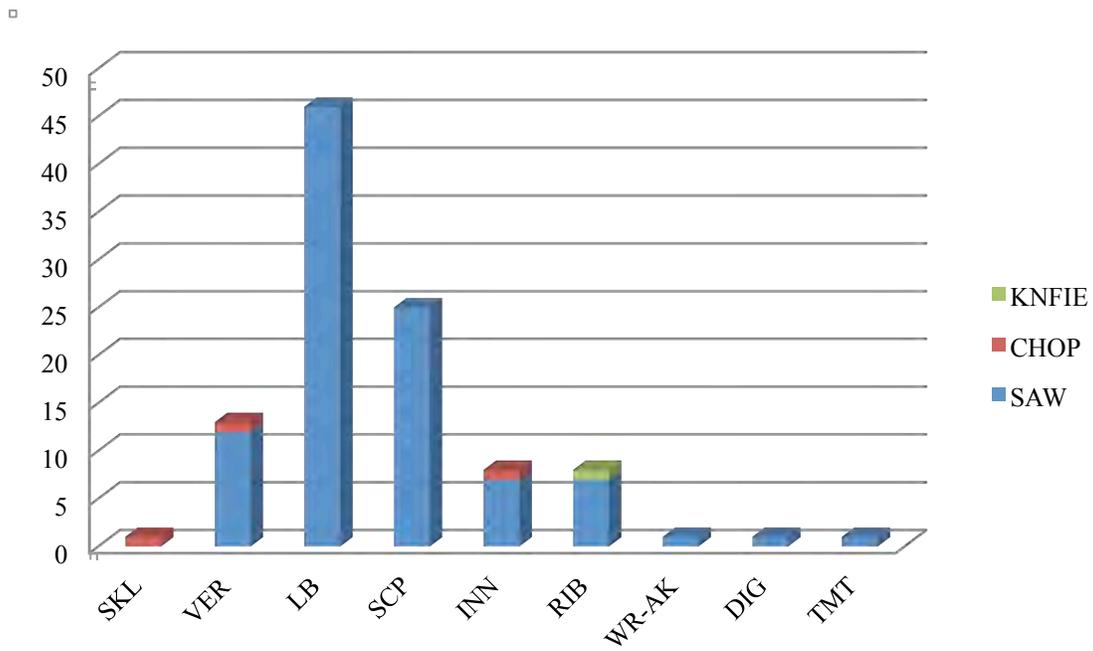


Figure 9.30: Feature 35 - butchery type/element - all taxa.

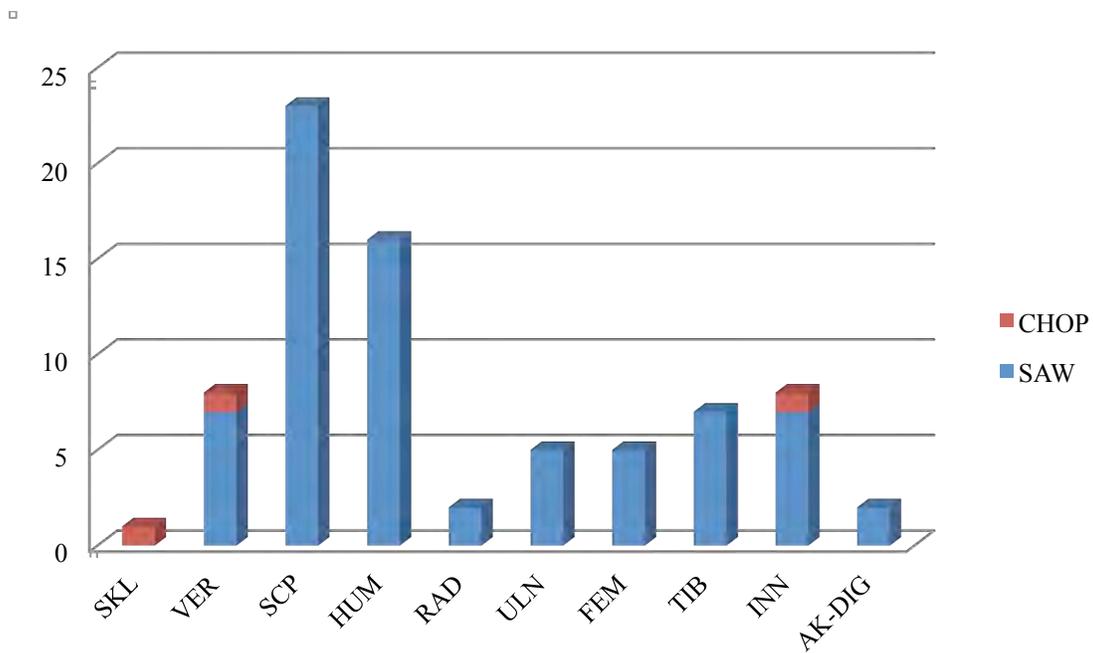


Figure 9.31: Feature 35 - butchery patterns - type/element – BOS.

BUTCHERING DOMESTICATES (BOS)

Evidence of butchery was only identified on cow bones from the domesticate mammal category. Of the total NISP for cattle ( $n=166$ ), 77 (or 46.4%) exhibit butchery marks, with the majority ( $n=74$ ) resulting from sawing. The distribution of elements affected by butchering is displayed in Figure 9.31. It is clear that long bones, as a group, constitute the greatest number of bones butchered, followed by the scapula. This pattern of butchering is largely reflective of primary butchery (saw marks) and a selection for higher quality meat-bearing regions (e.g., fore and hind quarters). The preference for these is further highlighted in the discussion regarding MAU and MGUI.

MAU AND MGUI ANALYSIS

The propensity for specific elements/regions becomes clearer based on the portrayal of MAU for cattle found in Figure 9.32. The regions of the fore and hind quarters are highly represented, while elements associated with the feet, forelimb, and hind limb are found in much lower percentages. This difference may be a reflection of the selection for high meat-bearing elements (forequarter and hindquarter). This pattern becomes more apparent in Figures 9.32 and 9.33.

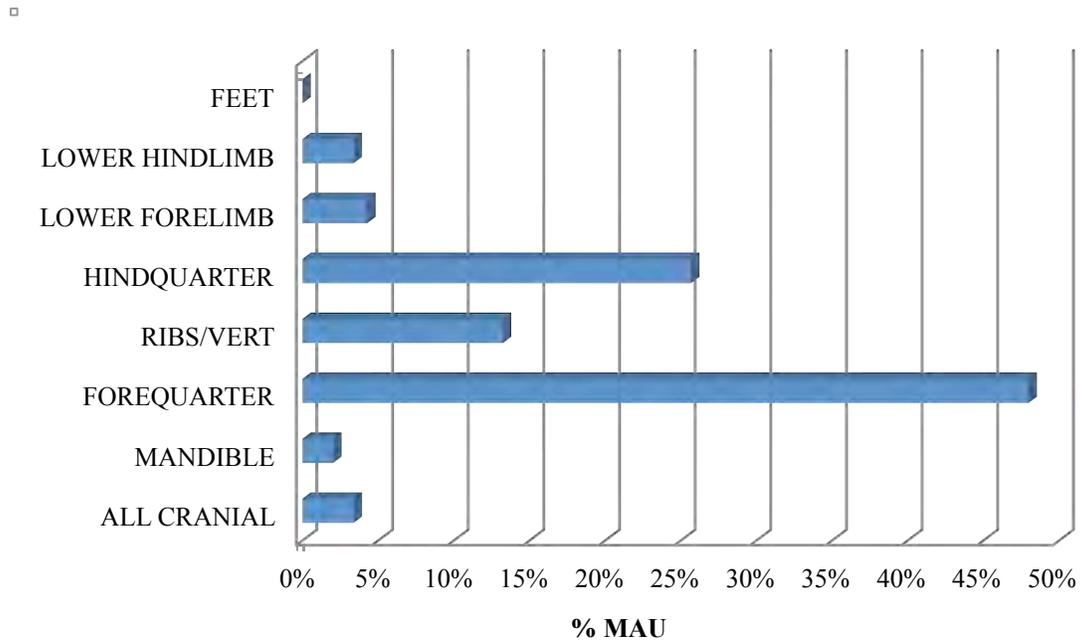


Figure 9.32: Feature 35 - % MAU - BOS element distribution.

The pattern of selection for high meat-bearing regions is strengthened by the result from MGUI scores. Those bones/regions associated with the highest meat-bearing portions are represented by the 1<sup>st</sup> quartile, while regions such as the lower hind and forelimbs and feet are represented by the 4<sup>th</sup> quartile. Interestingly, a very similar pattern of MGUI was identified by Hambrecht and Brewington (2001) for pig remains from Feature 88/99 of the 1999 City Hall excavation. They suggested, in relation to the pig material—based on the MGUI pattern along with the age (juvenile) range of the pigs—that the meat was being brought into the city having already been butchered. This being said, there are large differences in the sample size, which may call into doubt cross comparisons between the cattle material from Feature 35 and the pig remains from the earlier City Hall excavation.

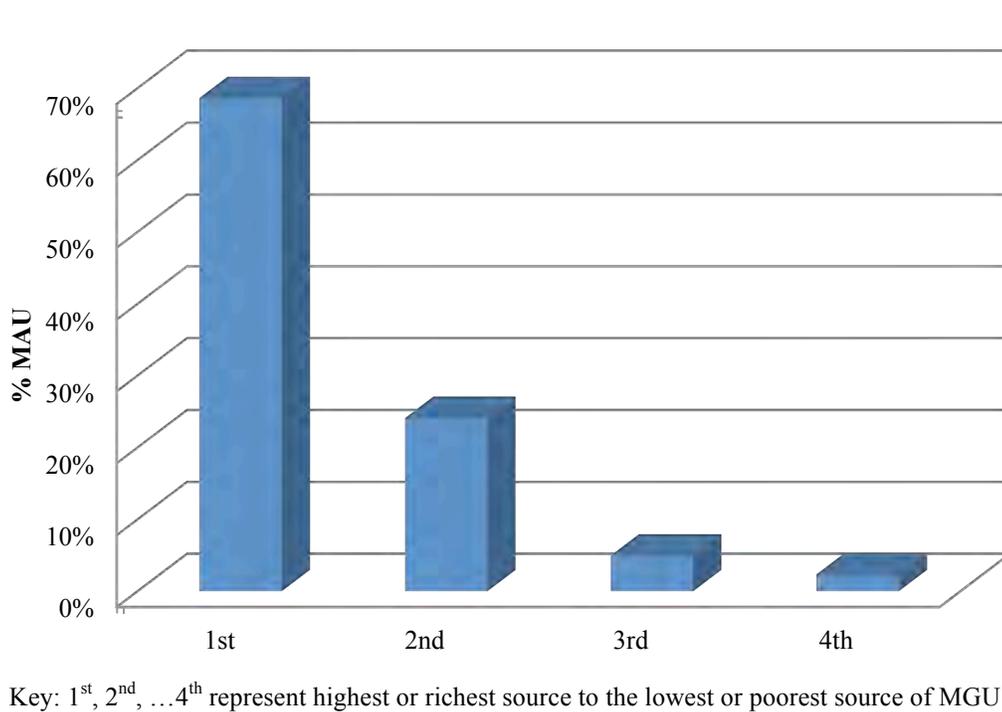


Figure 9.33: Feature 35 - MGUI quartile rank – BOS.

#### AGE DETERMINATION

There were a total of 32 cattle bones (19.3%) showing a lack of fusion. Figure 9.34 displays the distribution of the selected elements from cattle used to determine age. The general information gathered from the chart below suggests that approximately 19% of the bones come from cattle somewhere between 1 and 3.5 years of age, which is thought of as a prime period for butchering. In addition to the cattle bones, one sheep/goat humerus was unfused at the proximal end, suggesting an age of less than 3.5 years old.

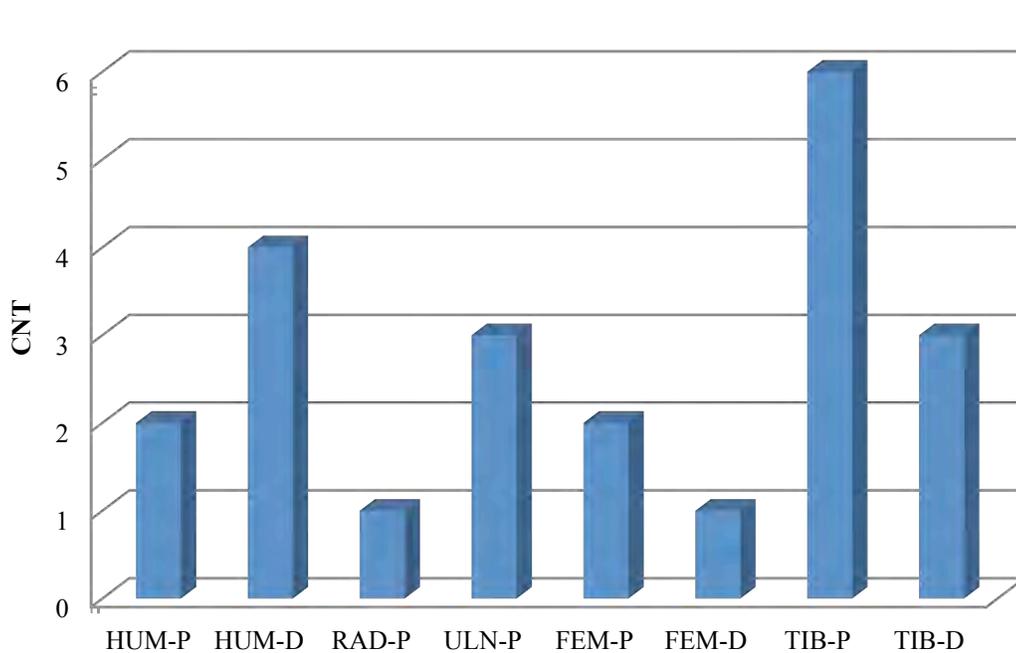


Figure 9.34: Feature 35 - fusion - elements – BOS.

## FEATURE 27

Feature 27 was excavated along the northern part of the west path (see Map 7.01). The archaeological assessment of Feature 27 and adjacent Features 28 and 29 determined that the zooarchaeological material (and features) likely date to the early nineteenth century (1800–1811). Feature 27 consisted of a total of 41 fragments, or 0.25% of the total fragments under analysis. This feature is comprised of two contexts (see database for specific FS# associated with Feature 27), with one containing a single bone and the other 40 fragments. Due to the small number of bones associated with this particular feature, the interpretation will be limited to a very basic analysis and interpretation.

The total NISP for Feature 27 is represented by two cattle fragments, one pig molar, and one cat bone—or 4.9%, 2.4%, and 2.4%, respectively. None of the bones associated with domesticates or any of the unidentified, bird, and fish bones display evidence of butchering. Evidence of burning was found on two fragments. All zooarchaeological material is represented by bones from non-juvenile individuals. Marine (fish) and bird make up a small percentage (both ~4.9%) of the bones from Feature 27. The remaining bones fall into the category of unidentified fragments (83% of TNF). The distribution of bone elements with associated taxa are represented in Figure 9.35.

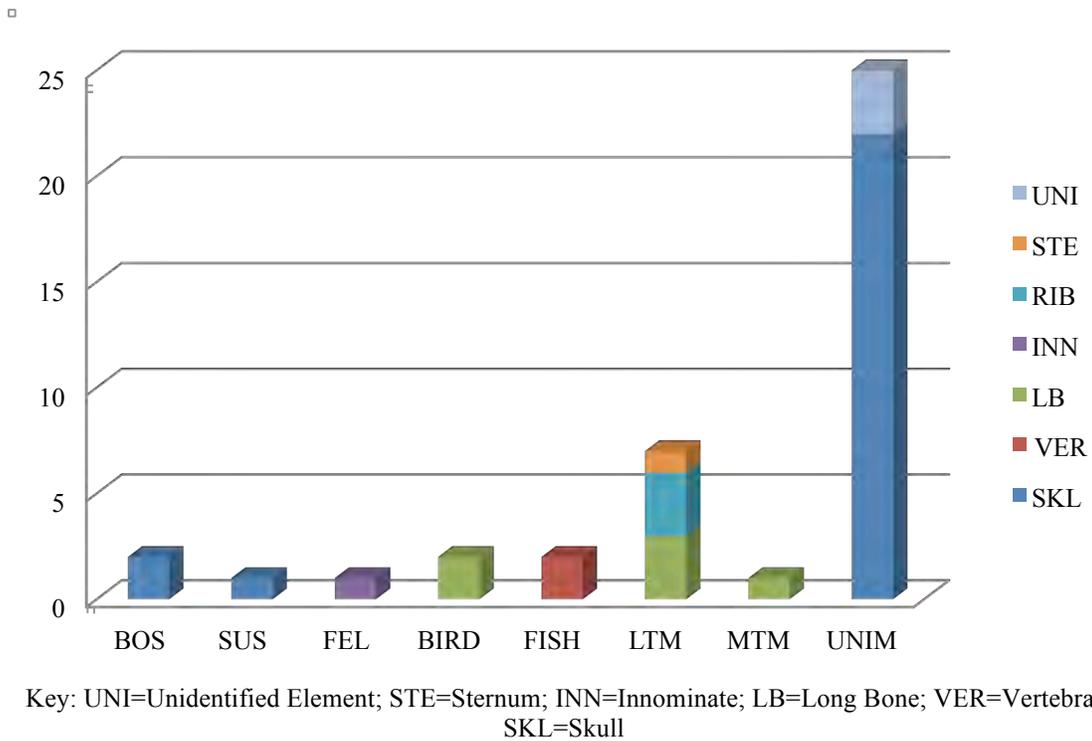


Figure 9.35: Feature 27 - species and element distribution.

### FEATURE 29

The zooarchaeological material from Feature 29 was excavated from the area of west path north (see Map 7.01), adjacent to Feature 28; it likely dates to the early years of the nineteenth century (1800–1811). The faunal remains from this feature constitute approximately 6.3% of the TNF for all key contexts. The majority of the TNF are represented by unidentified mammal bone fragments ( $n=706$ , or 67%), while the NISP (domesticates) only makes up 15%. Figure 9.36 displays the distribution for all taxa for Feature 29.

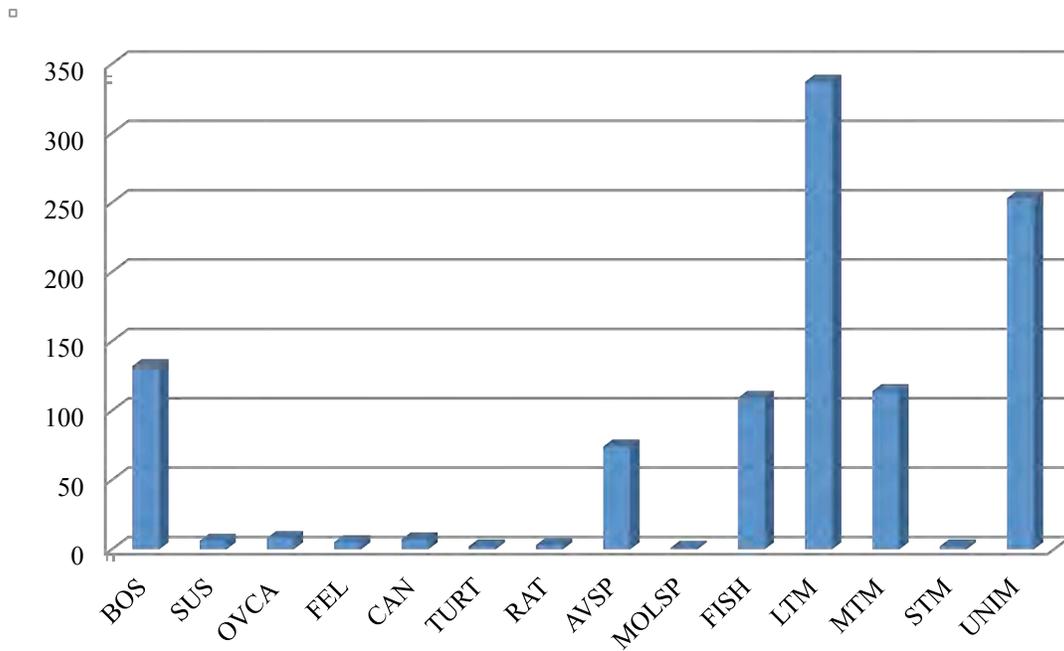


Figure 9.36: Feature 29 - TNF - taxa distribution.

#### SPECIES (DOMESTICATES) AND ELEMENT DISTRIBUTION

Figure 9.37 clearly shows that cattle again represents the greatest number of identified taxa based on the faunal material (not included in this chart are dog and cat). When compared to other domesticates (pig and OVCA), cattle bones were found to represent approximately 90% ( $n=132$ ) of the NISP for this category, while pig and caprine constitute approximately 4.1% and 5.5%, respectively.

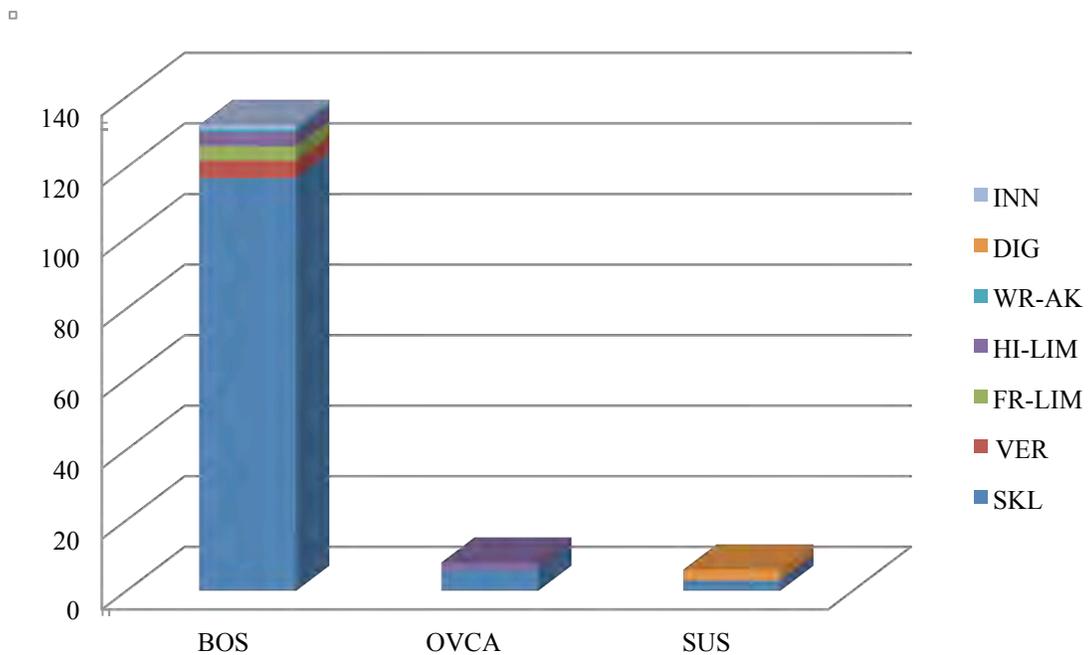


Figure 9.37: Feature 29 - element distribution – domesticates.

While it is clear that the faunal material associated with cattle is dominant in terms of quantity, what is not observable in this figure is the fact that a significant percentage of these cattle bones are teeth. Individual teeth constitute slightly more than 62% of all cattle bone from Feature 29. Teeth are the most resilient part of the mammal skeletal system, directly related to the properties of enamel. A higher proportion of teeth could suggest that the survivability of bones from Feature 29 is low; this, however, is less likely, as fish ( $n=109$ , or 10.35%) and to a lesser extent bird ( $n=74$ , or 7%) bones are represented in large enough numbers to suggest otherwise. Long bones constituting the larger meat regions of the cow are found to be in a relatively low percentage (6%), which may suggest that overall there was a selection for poor-quality cuts of meat. The few bones identified as being from pig and OVCA are too small in number to look at patterns of distribution.

#### BUTCHERY PATTERNS (ALL TAXA)

Only a small percentage (~2.6%) of bones from Feature 29 shows evidence of being butchered (see Figure 9.38), and of these, the majority fall into the category of ribs and vertebrae (combined=55%). As with other features from City Hall Park, the saw type of butchering constitutes the largest number of cut bones at 20 (or 74%). The butchery marks identified in Figure 9.38 reflect only bones from mammals; birds and fish do not exhibit any evidence of cuts. The faunal material from domesticates (BOS, OVCA, and SUS) shows very little evidence for butchering. Only five bones (3.4%) show cut marks, all of which affect cattle bones and all representing saw marks. Of these cattle bones, saw marks were found on two long bones (femur and tibia), two cervical vertebrae, and one innominate. The preponderance of saw and chop marks (relative to the total number of butchered bones)

points to this material being associated with primary butchering practices rather than with secondary home/kitchen practices.

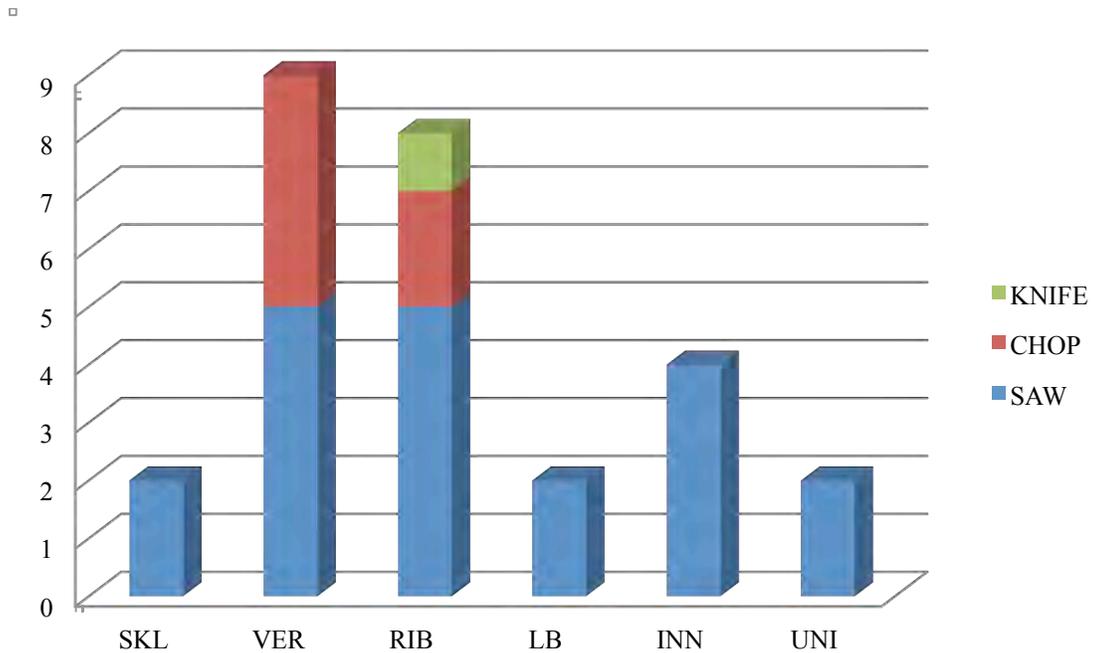


Figure 9.38: Feature 29 - butchery type/element-all taxa.

#### MAU AND MGUI ANALYSIS

As discussed above, Feature 29 shows a large percentage of bones (teeth) with low meat value. Figure 9.39 supports this notion, showing a significant bias toward cranial elements, with teeth being the main culprit. As noted above, this might suggest that there are taphonomic issues with survival of material from Feature 29. Likewise, it was previously pointed out that lack of survivability is less likely due to the presence of fish. Therefore, the presence of a relatively significant percentage of mandibles points to the possibility that less costly cuts of meat were being utilized. Moreover, when observing Figure 9.40, the high values associated with the 4<sup>th</sup> quartile and that of the 3<sup>rd</sup> quartile present evidence for the overall poor quality of cuts in terms of meat and grease cattle bones from Feature 29. As noted in the previous City Hall report (see Hambrecht and Brewington 2001), this type of pattern may suggest material associated with lower economic class consumption.

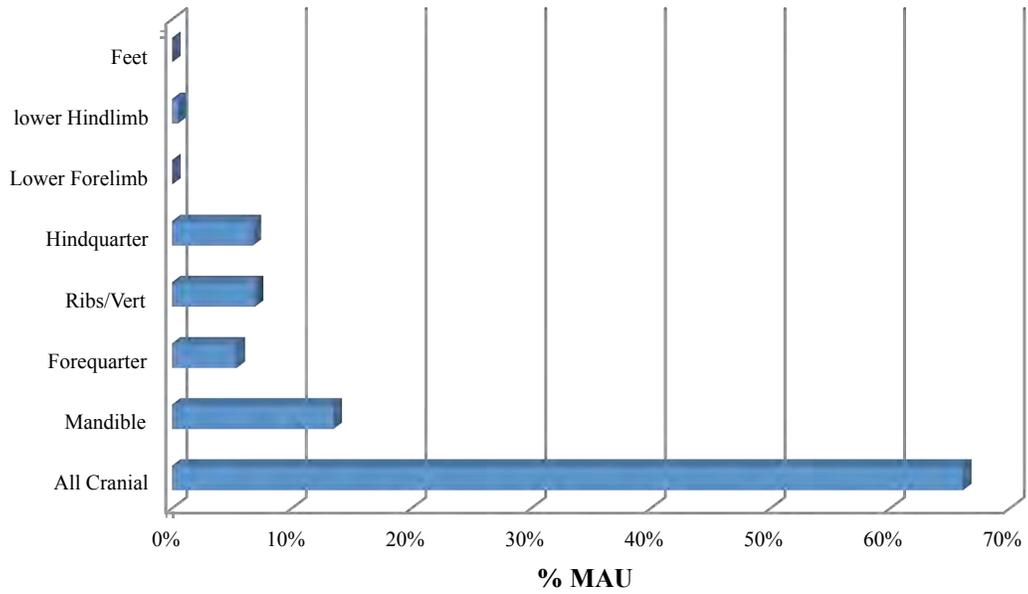
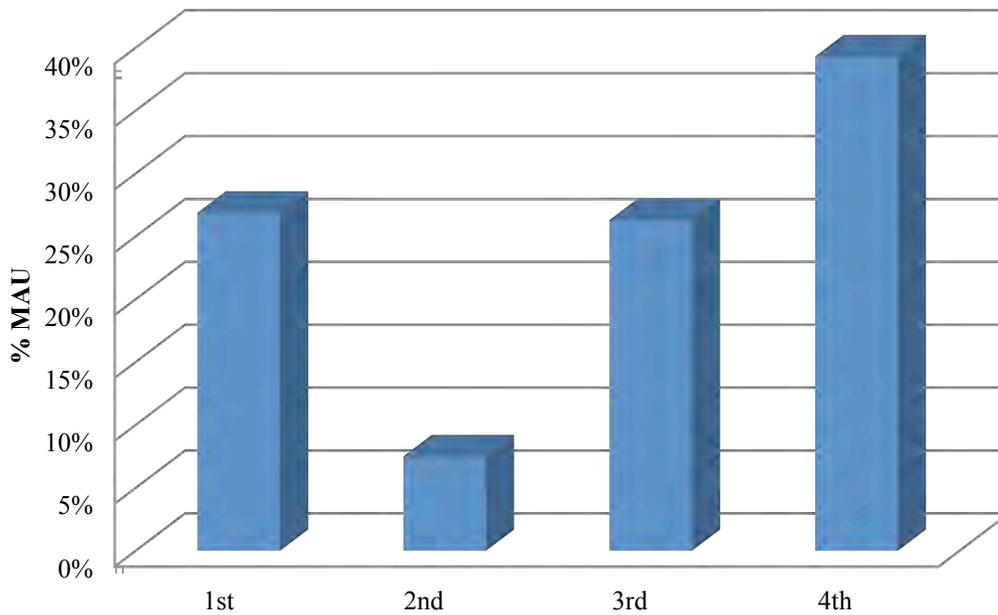


Figure 9.39: Feature 29 - %MAU - BOS element distribution.



Key: 1<sup>st</sup>, 2<sup>nd</sup>, ...4<sup>th</sup> represent highest or richest source to the lowest or poorest source of MGU

Figure 9.40: Feature 29 - MGUI quartile rank – BOS.

AGE DETERMINATION

Evidence of the lack of fusion was identified in six bones representing domesticates (BOS, OVCA, and SUS) from Feature 29. Based on the fusion rates for selected bones, it was determined that some of the bones subjected to age determination were less than 3.5 years of age, but were older than neonates. The very small number of bones makes it difficult to make any further statements regarding butchering practices associated with age. Other methods were not used for the calculation of age; using dentition would have aided in the construction of age profiles for this feature.

**FEATURE 28**

Feature 28 was located along the west path north area of the excavation (see Map 7.01). The material (faunal) from this feature has been dated to the early nineteenth century and is likely associated with City Hall construction workers of that period. The zooarchaeological material from Feature 28 comprises the highest TNF ( $n=11,314$ ) compared to all other features from the City Hall (2010–2011) collection, accounting for 67.2% of the faunal material. This material, though combined for this analysis, was excavated from multiple levels within this particular feature. For information on the relationship between TNF and specific levels, see Chapter VII and the zooarchaeology database.

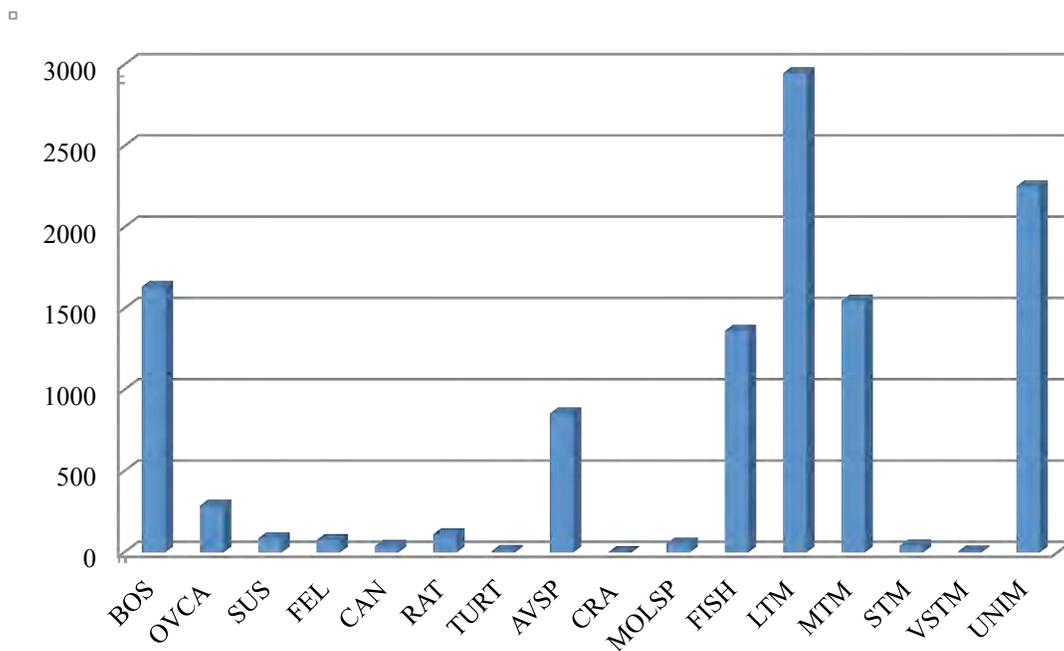


Figure 9.41: Feature 28 - TNF - taxa distribution.

#### SPECIES (DOMESTICATES) NISP DISTRIBUTION

Domestic mammals (cattle, caprine, and pig) make up approximately 17.8% ( $n=1,634$ ) of the TNF for Feature 28. Within this group, cattle bones dominate the domestic NISP (a pattern found throughout the City Hall collection), accounting for slightly more than 81% of the fragments identified ( $n=1,634$ ), while OVCA (caprines) constitute ~14.3% ( $n=288$ ) and pig contains the least number of identified fragments ( $n=87$ , or ~4.3%). Figure 9.41 presents this data clearly, indicating the significant difference between cattle, pig, and caprine bones. For the most part, OVCA bones are represented by elements that could not be securely identified as being either sheep (OVI) or goat (CAP). A small number of the 288 OVCA bones were recognized morphologically as being from goat or sheep; goat ( $n=6$ ) and sheep ( $n=8$ ) together make up less than 1% of the NISP for domestics.

#### DOMESTICATES – ELEMENT DISTRIBUTION

Figure 9.42 shows the distribution of skeletal elements/regions per domestic taxa. For the most part, all regions of the skeleton were identified in some frequency for each of the three terrestrial mammals. According to Figure 9.42, it is clear that while there was a spread of elements represented, cranial bones (skull) were found in the greatest quantity for cattle and caprine with slightly fewer, in relation to other bones, for pig. Overall, this region accounted for slightly more than 56% of all identified fragments for domesticates. Figure 9.42 does not, however, display the fact that loose teeth for cattle and pig constitute a significant percentage (~10.7% and ~21.8%, respectively) of the total number of skull bones within each species and a slightly smaller percentage found within caprines (7.3%). This factor is likely to have biased the overall number of cranial remains compared to other skeletal elements for domesticates. This, as discussed below, becomes more apparent when observing the %MAU and MGUI analyses. It is also important to note that of the 33 fragments recorded for pig, 19 are loose teeth and the remaining 12 are either maxilla or mandible fragments. Similarly, cattle showed that in addition to the 175 loose teeth, 260 fragments from the maxilla and mandible were recovered, and when combined with teeth account for almost 27% of all cattle NISP. Caprines almost exhibit this pattern, with these particular elements accounting for 35% ( $n=101$ ) of all fragments.

Long bones, those of the front and hind limbs, together with the scapula and innominate, constitute large meat-bearing regions. In comparison to cranial elements, these account for significantly lower percentages. For cattle and pig, these skeletal elements comprise ~12.6% of their respective NISP, while the same combined elements account for 25% of the NISP. Vertebrae for all three domesticates are represented in lower numbers, comprising percentages between a high of 11.7% (cattle) and a low of ~2.3% (pig). Regions of the skeleton offering a lesser quantity of meat (digits, wrists, and ankles) were found in relatively high percentages, with the exception of caprines (~7.6%). These elements making up the foot comprised 47.1% of all pig bones, while cattle were found to have a significantly lower percentage, but still elevated at ~19.5% of the respective NISP.

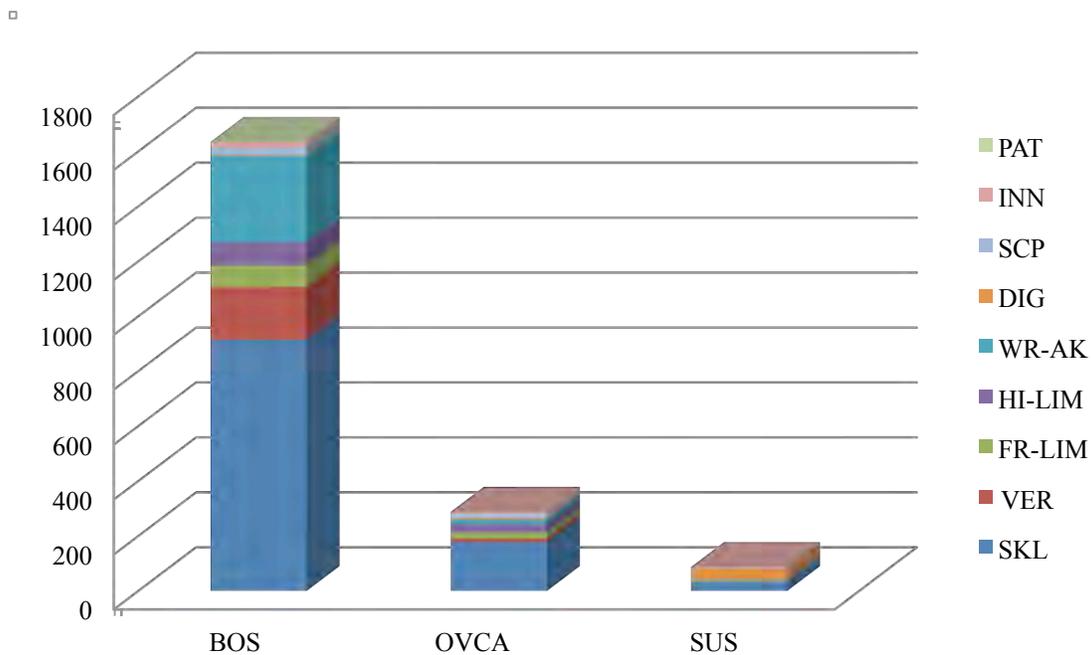


Figure 9.42: Feature 28 - element distribution – domesticates.

#### BUTCHERY PATTERNS (ALL TAXA)

Evidence of butchering practices was identified on 749 fragments, or slightly more than 6.6% of the TNF. The order, relating to type and quantity of cuts, follows the pattern observed in other features from City Hall. Saw marks were identified on 504 fragments, accounting for ~67.3% of the butchering from Feature 28. Cuts related to chop practices were found to represent 29.5% ( $n=221$ ) of all butchery, while marks representative of knife use were found in 2.8% ( $n=21$ ) of the butchered material. The last category, puncture marks, has not previously been identified in any of the other features, but was observed on three skull bones (0.4%). These may be related to the slaughter of the animal.

In addition to the domestic taxa (cow, caprine, and pig), bird and turtle are also represented in the butchered material from this feature, albeit in very low numbers compared to domesticates. The distribution of elements and the type of butchery marks found are displayed in Figure 9.43. Irrespective of specie, the regions (combined individual elements) associated with cut marks were found to affect high-bearing meat sections of the skeleton (i.e., the quarters). The combined limb bones and fragments from the scapulae and innominate constitute 24% of the material displayed in Figure 9.43, while the vertebra and ribs account for around 48% of butchered fragments. Lower meat-bearing regions (foot and skull) show significantly fewer bones with evidence of being butchered. The pattern derived from the butchering data (all taxa) is suggestive of targeting higher meat-bearing (and potentially more costly) regions of the skeleton. This will be further discussed below, specifically in relationship to terrestrial domesticates (cow, caprine, and pig). Overall, the

types of cuts found on bones from Feature 28 (including domesticates) show primary butchering practices rather than what would be expected for household kitchen butchery.

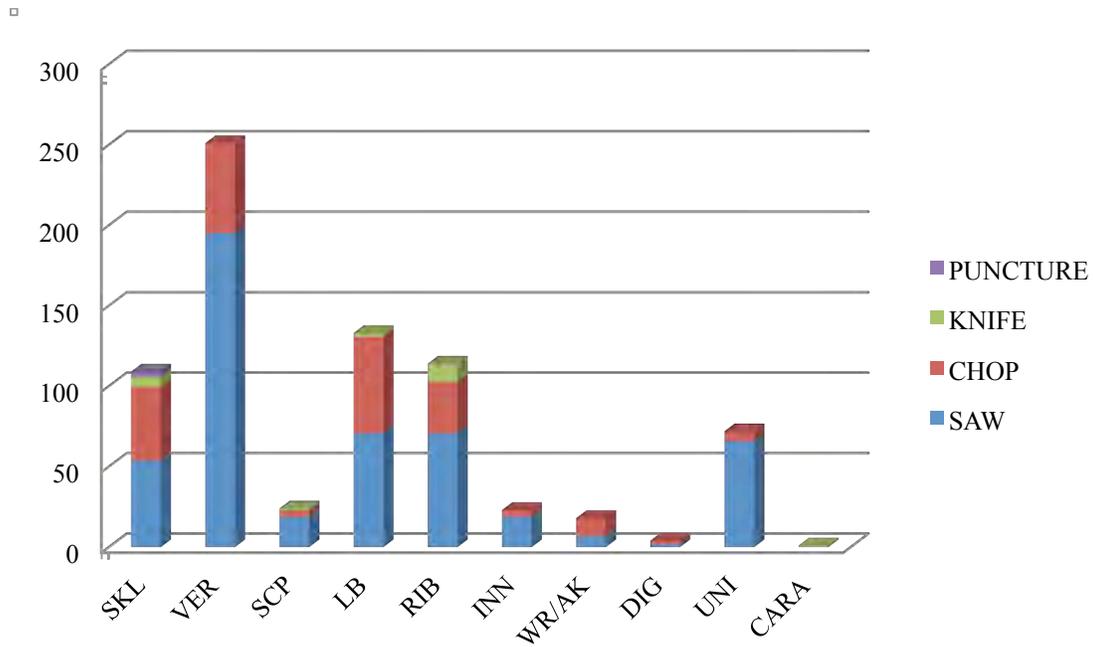


Figure 9.43: Feature 28 - butchery type/element - all taxa.

BUTCHERY PATTERNS (DOMESTICATES – CATTLE – CAPRINE – PIG)

*Cattle*

Figure 9.44 shows the distribution of elements and the type of butchering found to affect cattle remains. Cattle bones account for 85.7% ( $n=228$ ) of all the butchered domesticates ( $n=266$ ). Feature 28 cattle show a similar pattern as other features from City Hall, with saw type butchery representing the most frequent type of practice, accounting for almost 65% of the cuts found on the cattle bones. The overall dominance of saw marks was followed by chop (33.3%), knife (1.32%), and puncture marks (0.44%), in terms of quantity and percentage for cattle.

Skeletal regions/individual bones containing the highest meat-bearing properties are represented in significant proportions compared to lower bearing meat regions (skull and wrist/ankle). The bones representing the quarters (fore and hind) account for slightly more than 37% of the butchered bones, irrespective of the type of cut. Vertebrae, accounting for slightly less than the quarter regions, were still found to represent a significant percentage of the butchered cattle bones at 34.6%. Of interest, and not observable in Figure 9.44, is the distribution of vertebra type showing evidence of butchering. Cervical, including the axis and atlas vertebrae, were the most prevalent, accounting for almost 80% ( $n=63$ ) of the bones from this group. Thoracic, lumbar, and sacral vertebrae, while present, constitute much smaller

percentages of the butchered vertebrae. The high number of vertebrae points to the slaughter of cattle within the city rather than the provisioning of cattle parts butchered elsewhere. Furthermore, the high quantity of saw and chop marks make it likely that the butchering was the result of primary rather than secondary butchery practices.

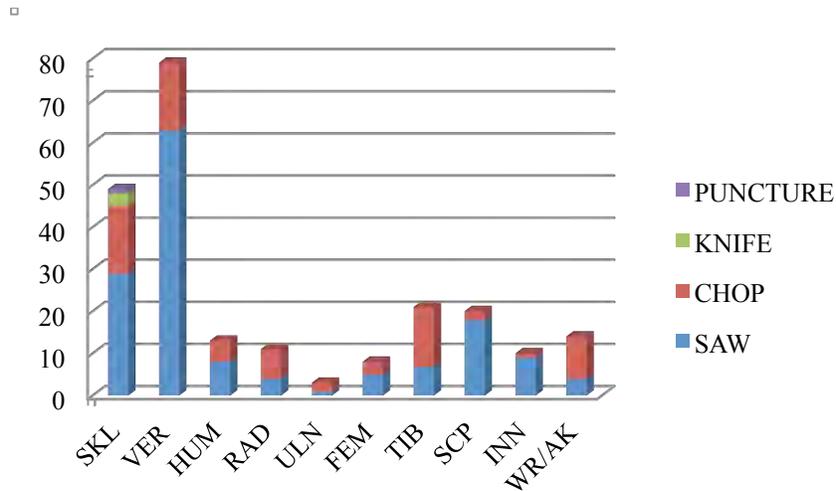


Figure 9.44: Feature 28 - butchery patterns - type/element – BOS.

### Caprine

Bone fragments from caprines showing evidence of being butchered represent 11.65% ( $n=31$ ) of domesticates in this category. The distribution of the elements and type of butchery, which are found in Figure 9.45, show that 64.5% ( $n=20$ ) consist of bones that comprise heavier meat-bearing regions (quarters and vertebrae), as compared to the skull and foot (WR/AK) bones, which make up a lower percentage of the material. While the butchery sample is small (10.7% of all caprine bones), this pattern of higher meat-bearing regions is more apparent in reference to the MAU and MGUI scores (see below). The dominance of saw and chop type butchery practices for caprines is suggestive of primary butchering rather than secondary kitchen/household butchery.

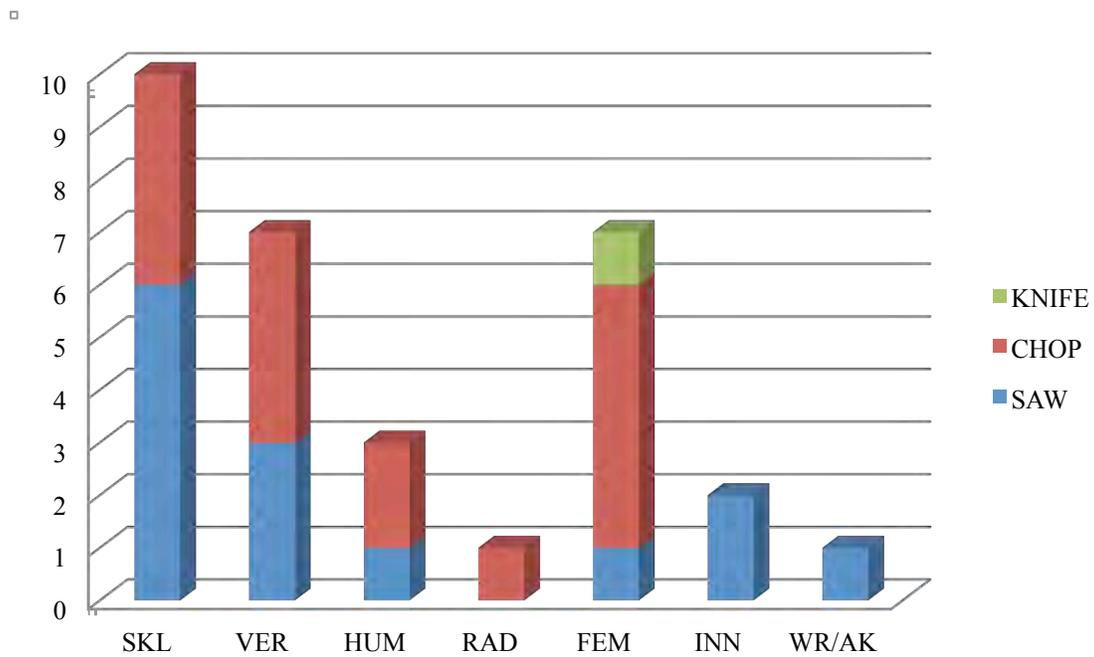


Figure 9.45: Feature 28 - butchery patterns - type/element – caprine.

*Pig*

Pig bones represent a small percentage of butchered material, accounting for only 2.63% ( $n=7$ ) of domesticates showing evidence of butcher marks. As such, there is not much that can be extrapolated from this particular set of data. Of the seven bones found with evidence of cuts, four showed evidence for being sawed and three were chopped (Figure 9.46).

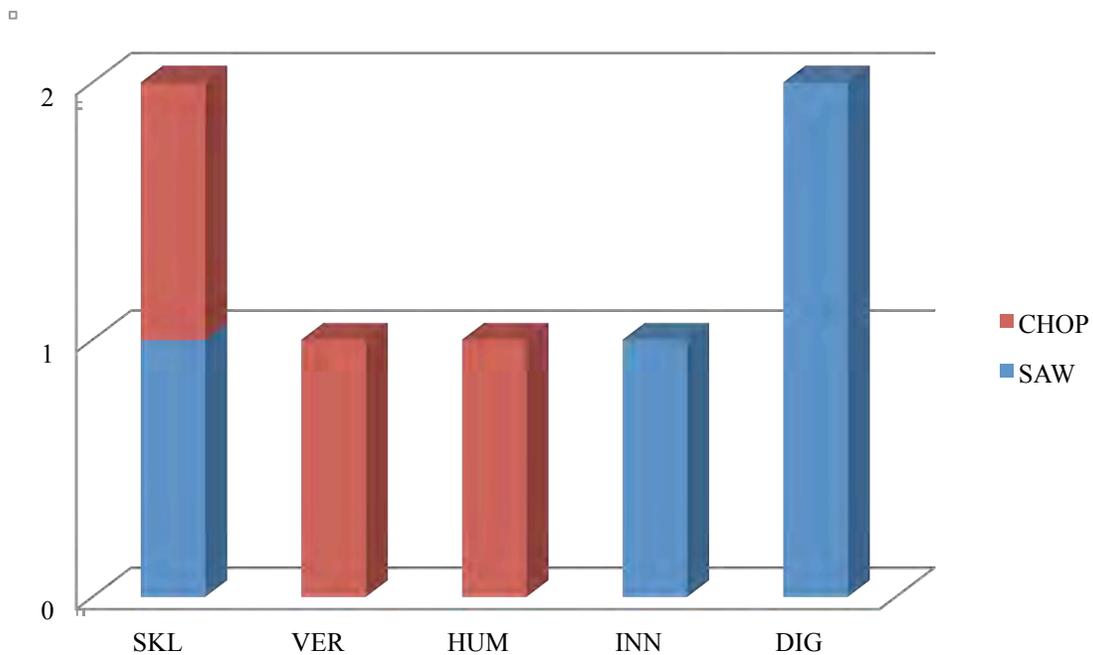


Figure 9.46: Feature 28 - butchery patterns - type/element – SUS.

MAU AND MGUI ANALYSES (BOS AND CAPRINE)

*Cattle*

Figure 9.47 shows the %MAU profile for cattle. The percentages display a clear bias toward elements of skull and mandible, with fewer representations of the bones from the heavier meat-bearing regions (fore and hind quarters and vertebrae/ribs). The dominance of the cranial bones is likely in part due to the number of teeth (loose) associated with these remains. As noted above, of the 1,634 fragments of cattle bones, 175 (or 10.7%) are loose teeth. This presentation quantitatively favoring cranial material overall might suggest that this feature was damaged due to degenerative processes (taphonomic/diagenic), combined with the increased survivability of teeth and the normal abundance of cranial bones and the ease at which they are fractured. This line of thinking, however, is problematic, as the MGUI ranking (Figure 9.48) suggests otherwise. The 1<sup>st</sup> and 2<sup>nd</sup> quartile ranks, representing the skeletal regions which contain the highest meat, grease, and sinew of the skeleton, show the highest percentages compared to the 3<sup>rd</sup> and 4<sup>th</sup> quartiles. This being said, there is still evidence of the bias towards the lower meat-bearing regions (forelimb and hind limb) and cranial bones. Further, the representation for all parts the skeleton, taken together with the patterns (type of butchery—see above) is suggestive of cattle being butchered on site (or nearby within the city) rather than being provisioned. The presence of lower quality sections of the cow might indicate that some of these regions were being supplied to individual(s) or groups of lower economic status.

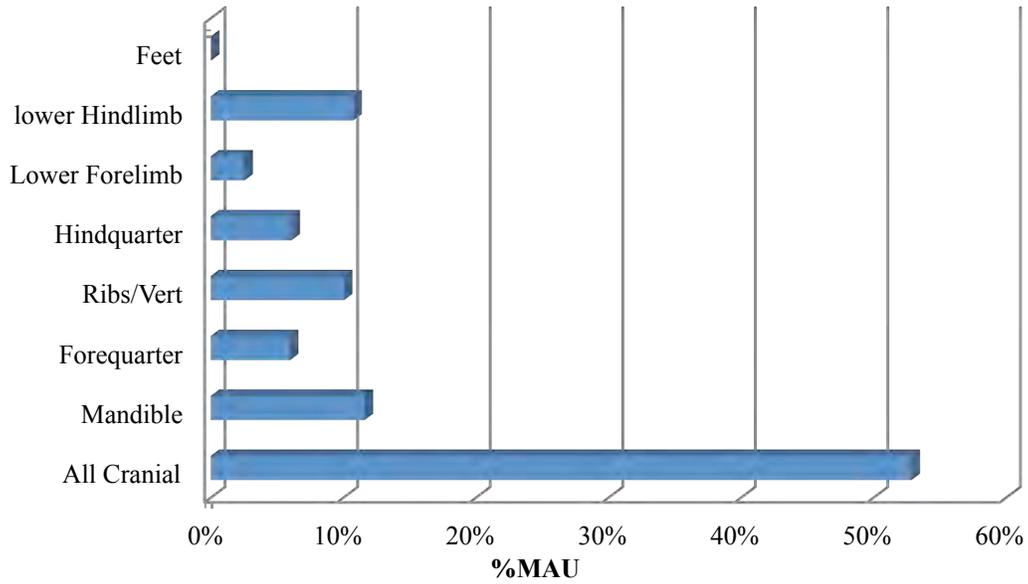


Figure 9.47: Feature 28 - %MAU - BOS element distribution.

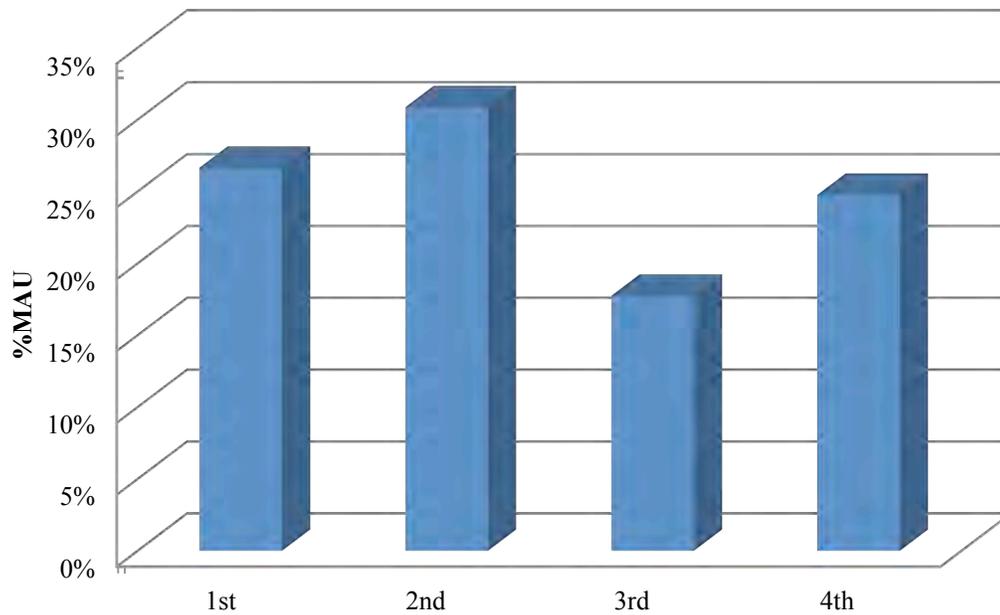


Figure 9.48: Feature 28 - MGUI quartile rank – BOS.

*Caprine*

The %MAU for caprines (Figure 9.49) shows a similar bias toward the abundance of cranial bones, as found among cattle. This dominance of caprine cranial bones ( $n=180$ ) is—as in the case of cattle cranial elements—influenced by individual loose teeth which accounted for 11.6% ( $n=21$ ) of the cranial remains for caprines. While the similarities are apparent with respect to element of skull, caprines do show a higher prevalence for heavier meat-bearing skeletal regions. The forequarter and hindquarter are present in significant quantities. Interestingly, however, vertebrae are shown to account for a small percentage of caprine material. The lack of vertebra might suggest that, unlike cattle, caprines (goat/sheep) were being slaughtered elsewhere, and then being brought into the site or area of the city. This possibility becomes more apparent with the MGUI distribution in Figure 9.50, but is not necessarily conclusive. The MGUI scores show that caprine remains are largely represented by regions that carry larger quantities of meat, grease, and sinew (1<sup>st</sup> quartile), with smaller percentages associated with quartiles 2–4. The low score for 2<sup>nd</sup> quartile mirrors the low %MAU for vertebra and, to some extent, strengthens the idea that the goat/sheep might have been brought into the area after already having been butchered. The higher score for the 1<sup>st</sup> quartile also points to catering to a higher economic class group.

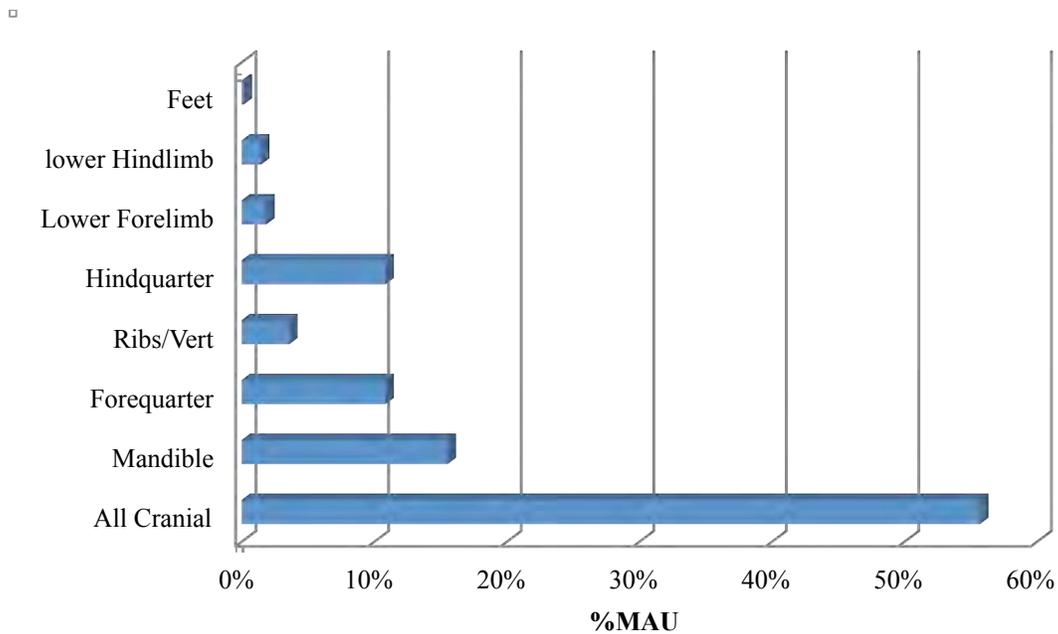


Figure 9.49: Feature 28 - %MAU - caprine - element distribution.

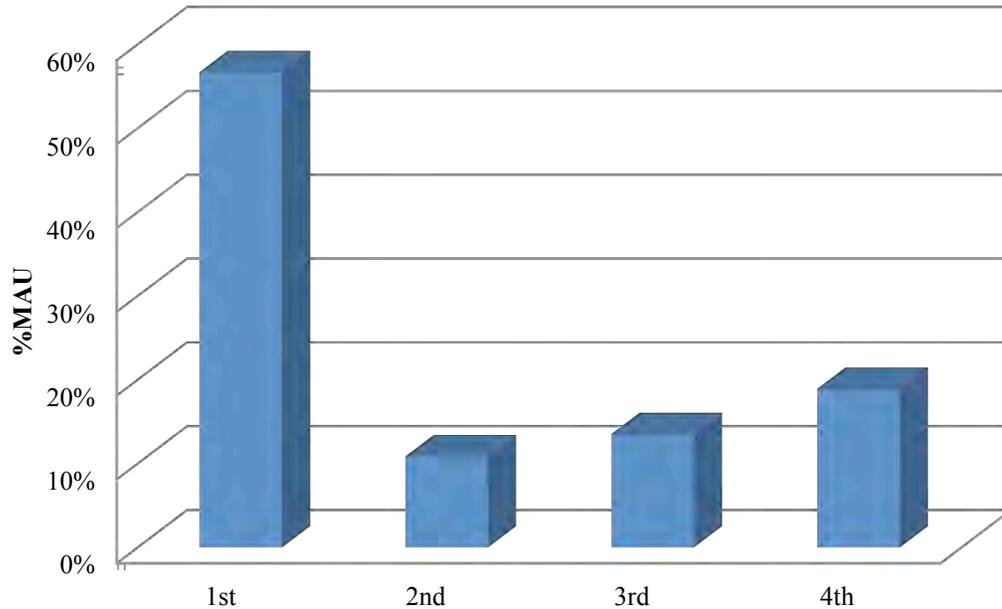


Figure 9.50: Feature 28 - MGUI quartile rank – caprine.

#### AGE DETERMINATION (DOMESTICATES)

Evidence for incomplete fusion was identified on 379 bones representing terrestrial domestic mammals (cats and dogs were not included), which constituted approximately 3.34% of the total sample from Feature 28. This percentage slightly increased to 3.87% when specimens from the following taxa were removed from the total samples: FISH, MOLSP, RAT/RODENT (age determination information was not considered for these groups). In addition to the domesticated mammals discussed below, evidence for incomplete fusion was also identified on bird bones. Of the 855 bones from this taxa, 22 (~2.57%) were found to be from juvenile specimens. Unfortunately, no further assessment was undertaken for bird remains.

#### *Cattle*

Juvenile remains were found to account for ~17.01% ( $n=278$ ) of cattle bones from Feature 28. Figure 9.51 displays age determination based on fusion rates for selected long bones. The majority of material shows that cattle were being slaughtered prior to maturity but after the period of infancy (neonates). This age range pattern is found in all the features from the City Hall 2010–2011 assemblage, as well as being documented in previous zooarchaeological analyses conducted for the 1999 assemblage by Hambrecht and Brewington (2001). The butchery patterns (discussed above) and the age distribution of cattle point to the selection of younger animals being processed within the city. To support this, it was found that approximately 27% of the cattle showing incomplete or no fusion also exhibited some form

of butcher marks. Lower percentages of young animals with evidence of butcher marks were found for caprines and pigs.

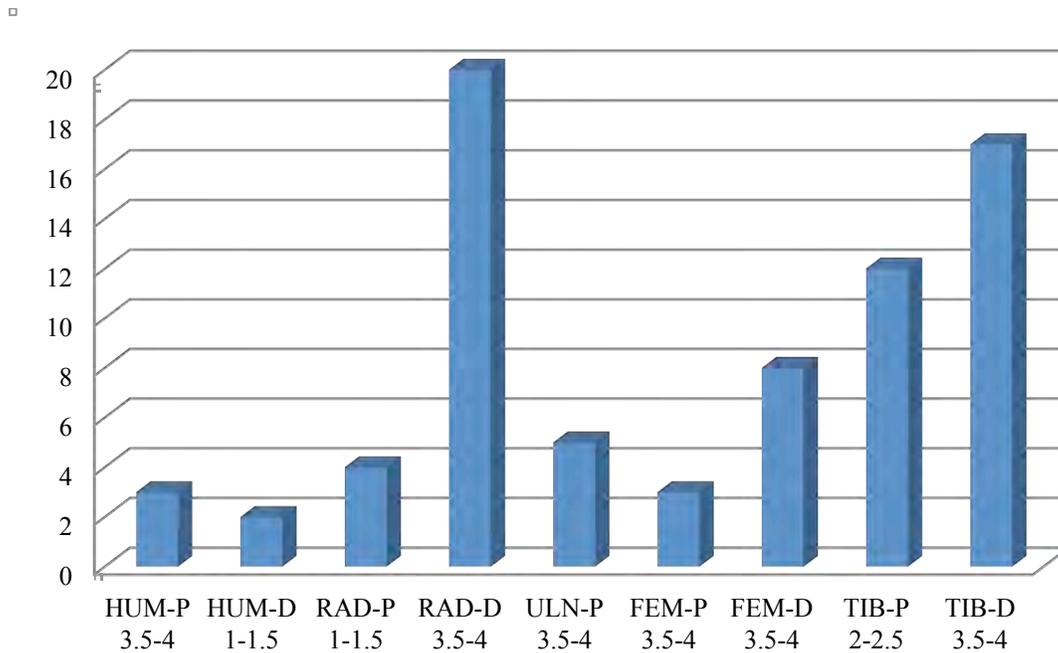


Figure 9.51: Feature 28 - age determination - fusion – BOS.

*Caprine*

Juveniles, those showing little or no fusion of the epiphyses, represented 22.9% of all caprines, the majority of which were long bones. Figure 9.52 displays the age range for caprines according to fusion rate of selected long bone elements. Based on the information presented in this figure, most caprines were being slaughtered at some point between the ages of 3 and 3.5 years, with a few showing younger ages (<1 year–2 years). While it might seem that younger caprines (lambs) were being targeted, it is clear that older, post-fusion animals were also being used (mutton).

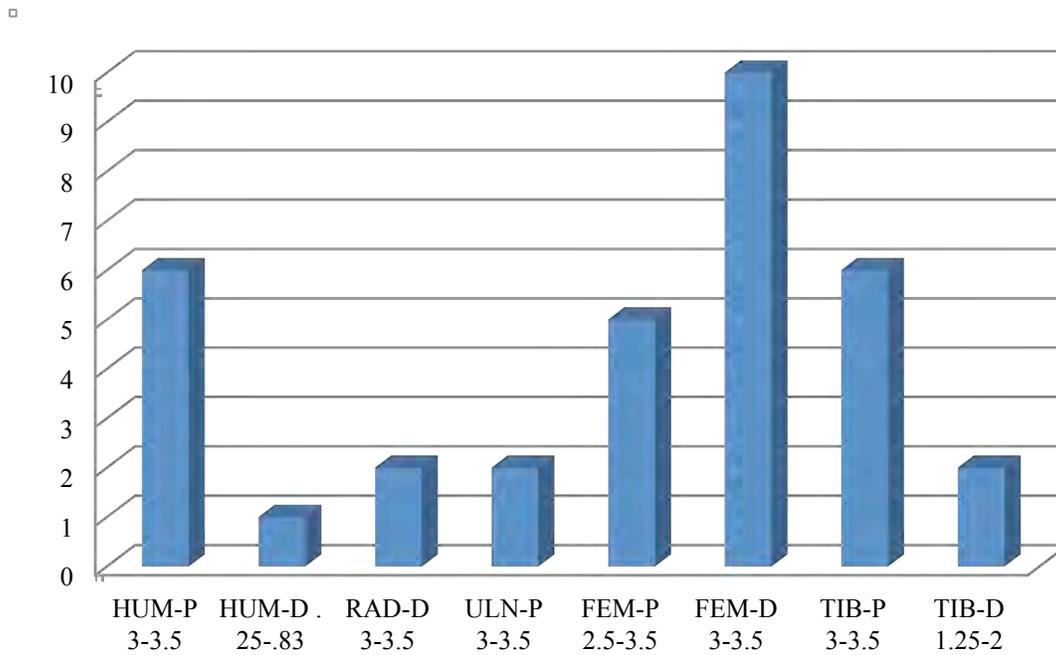


Figure 9.52: Feature 28 - age determination - fusion – caprines.

*Pig*

Slightly more than 42% of pig bones are represented by juvenile-aged remains. Of these, only four bones were selected for age determination. Based on these bones, the animals in which they originated fell between 1 and 3.5 years of age at the time of slaughter. While there were few target bones used for age determination, it is clear by the overall percentage of unfused material that the majority of pigs represented in the bones from Feature 28 were slaughtered prior to reaching maturity. By combining age distribution, with information relating to element distribution (see above), it could be suggested that pigs were not being processed within the city, but rather these animals were a product of provisioning. Unfortunately, however, the overall NISP for pigs does not permit the use of the analytical tools of MAU and MGUI, which would have aided in better understanding the processing of pigs.

**FEATURE 42**

Feature 42 was excavated as part of the Manhole 3 extension (see Map7.01). The faunal material was recovered from within the foundation remains of the Bridewell, which was demolished in 1838. The zooarchaeological material excavated from this primary deposit represents ~3.6% ( $n=603$ ) of the total TNF for City Hall fauna. Taxonomically, the animal bones are largely dominated by unidentified mammal bones, followed by material identified as being cow (Figure 9.53)—a pattern that is seen throughout the City Hall Park zooarchaeological material.

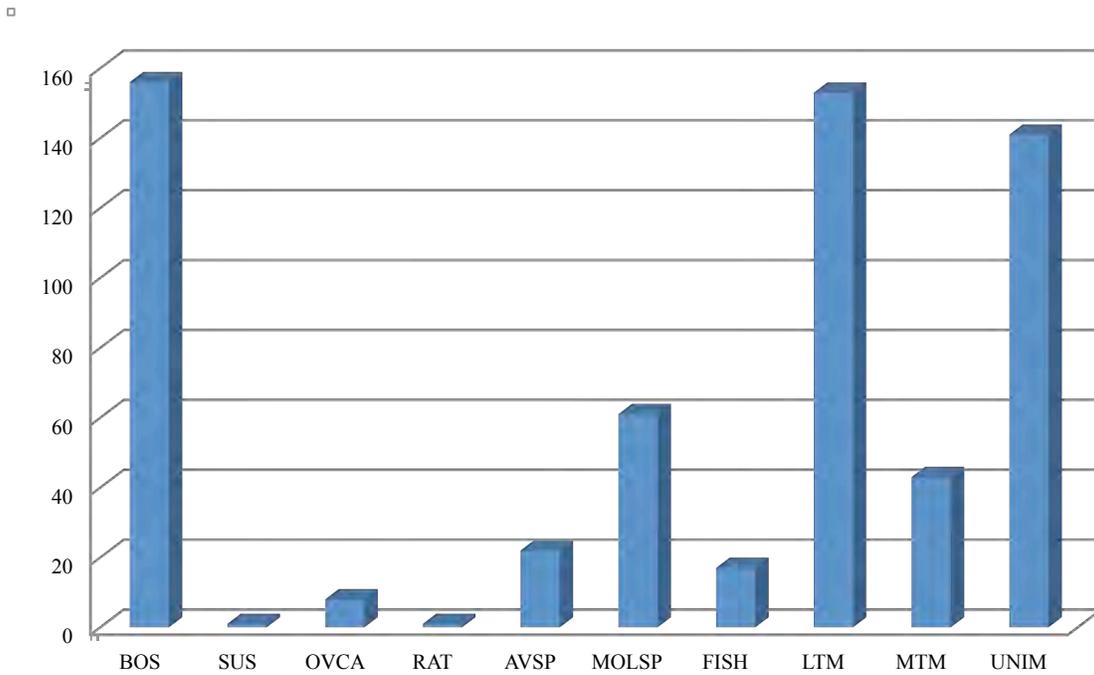


Figure 9.53: Feature 42 - TNF -taxa distribution.

**SPECIES (DOMESTICATES) NISP DISTRIBUTION**

Figure 9.53 displays the distribution of NISP across the domesticated mammals from Feature 42. Domesticates (cattle, caprine, and pig) represent approximately 27% ( $n=165$ ) of the TNF from Feature 42. Cattle, as found in most other features from City Hall Park, account for the greatest proportion of the identified mammal bones. Cow bones represent 94.5% ( $n=156$ ) of the domesticate NISP, while caprine and pig constitute significantly lower percentages of the NISP for this category, with the former accounting for ~5% ( $n=8$ ) and the latter representing less than 1% ( $n=1$ ) of the all identified domestic mammal bones.

DOMESTICATES – ELEMENT DISTRIBUTION

Figure 9.54 exhibits the distribution of elements/regions identified for domesticates. Long bones, account for approximately 48% ( $n=80$ ) of all elements, constituting the majority of bones from domesticates. These bones represent high meat-bearing regions as compared to elements such as the foot and cranium. In addition to this 48%, bones representing the pectoral and pelvic girdle were also found in significant numbers. The scapula and innominate combine to account of ~24% of all bones from domesticates. Together with the long bones, these high meat-bearing regions make up almost 73% of all domestic mammal bones. Unlike several of the other features, there are very few cranial bones ( $n=4$ ).

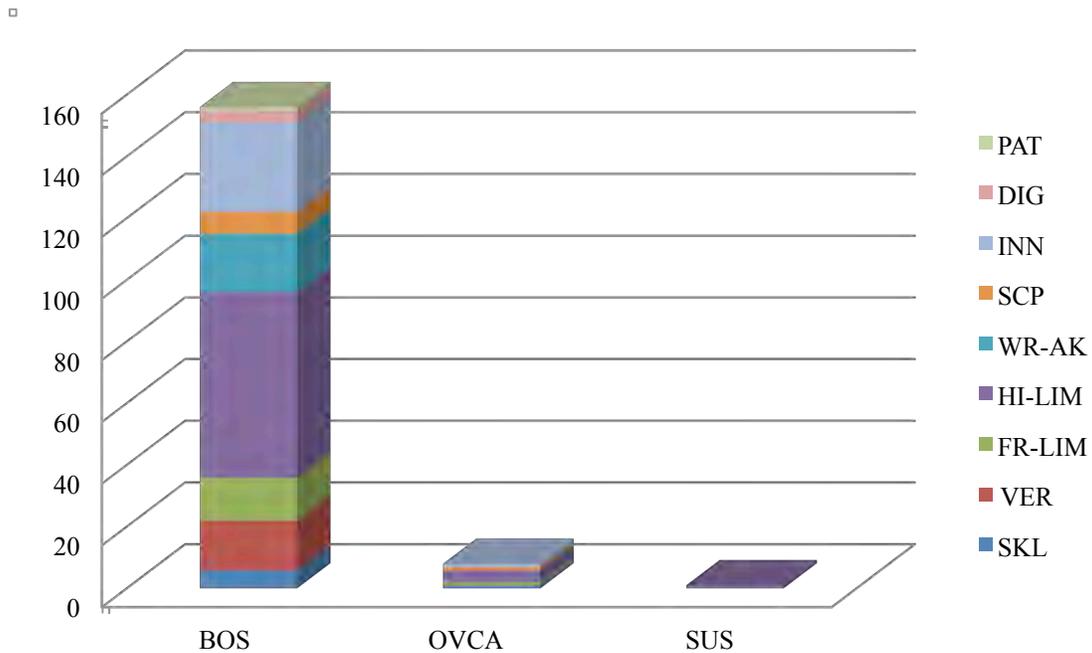


Figure 9.54: Feature 42 - element distribution – domesticates.

BUTCHERY PATTERNS (ALL TAXA)

Marks associated with butchery practices were identified on 211 fragments of bone, or ~35% of the material from Feature 42. The majority of these cuts are saw marks (~84%), followed by chop marks (~15.2%) and knife marks (<1%). The distribution of butchered elements shows an overall preference for long bones and vertebra (Figure 9.55), which is likely to be in part a result of the high number of limb bones present in comparison to other regions of the animal skeleton. These regions showing the greatest number of cut bones are also segments of the animal skeleton that bear the greatest quantity of meat. This pattern of selection will become more apparent in the discussion on %MAU and MGUI.

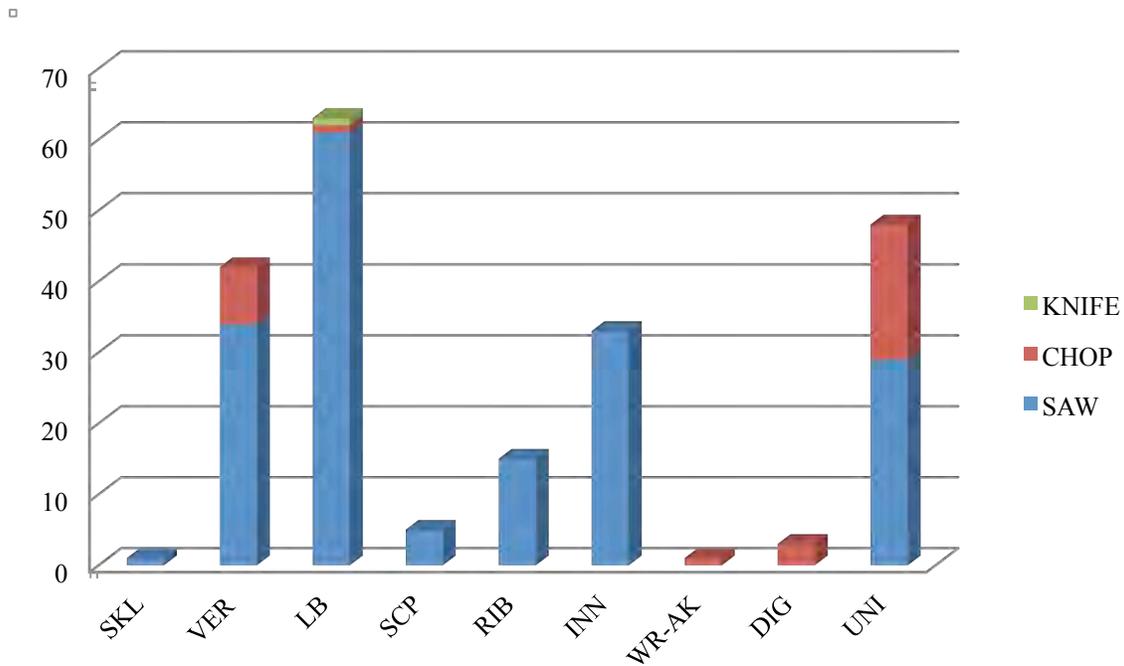


Figure 9.55: Feature 42 - butchery type/element - all taxa.

#### BUTCHERY PATTERNS (DOMESTICATES)

Slight less than half of the butchered material (~48.3% or  $n=102$ ) is from identified domesticated mammals (cattle, pig, and caprine); of these, 99 pieces are from cattle. The distribution of butchered cattle elements is represented in Figure 9.56. The overwhelming majority of these cuts are the result of sawing ( $n=93$ ), with only a small percentage (~6%) from chop-type butcher marks. Cattle long bones from fore and hind limb account for ~52% of all cattle bones showing evidence for saw marks.

Following the long bones, the innominates exhibit the next greatest prevalence for butchery saw marks ( $n=29$  or ~31%). Long bones account for the majority of butchered elements, likely a reflection of the greater number of elements present in comparison to other skeletal regions. Alternatively, as noted above, these areas (long bones and innominates) are high meat-bearing regions and may have been targeted for butchering. Three bones, two caprine and one pig, also exhibit evidence of butchering. The butcher marks found on all the domesticate mammal bone, with the exception of one knife mark identified on a caprine femur, are likely the result of primary or butcher shop practices and not household butchering or food preparation practices.

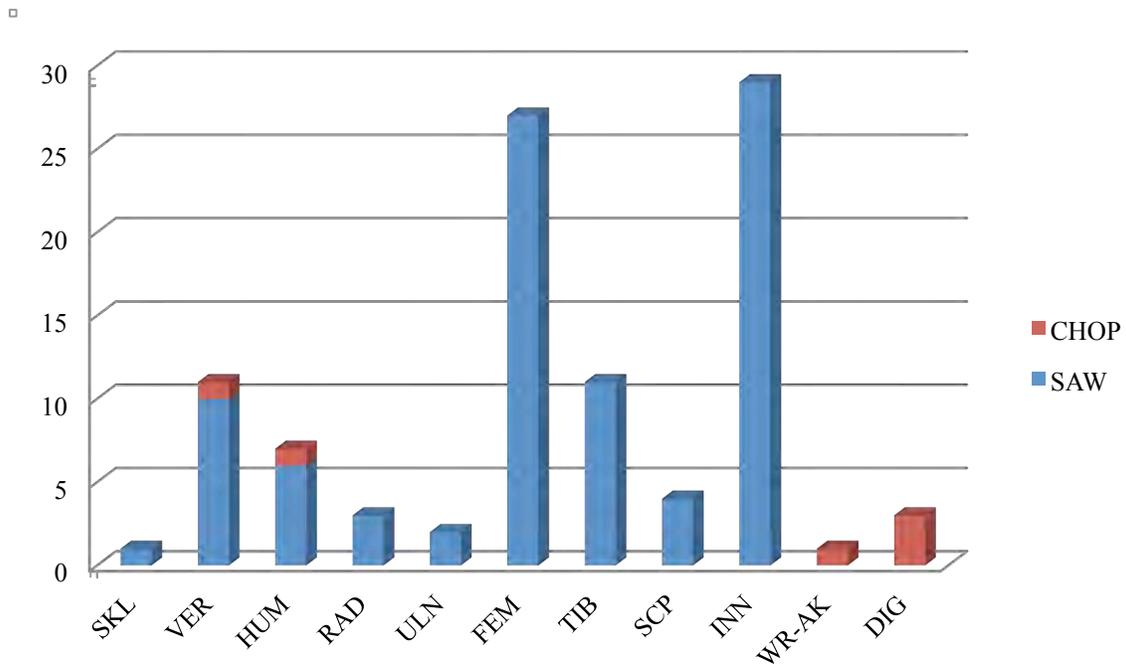


Figure 9.56: Feature 42 - butchery patterns - type/element – BOS.

#### MAU AND MGUI ANALYSIS

The overall dominance of cow bones associated with the fore and hind quarters (long bones, scapula, and innominates) is clearly observable in Figure 9.57 (MAU). These regions are the high meat-bearing areas of the skeleton and were clearly targeted as demonstrated in the material from Feature 42. It could be argued that these bones are more likely to survive post-burial processes and therefore are biased. While that is possible, the presence of more fragile bones (fish and bird) in large enough quantities makes preservation bias less practical in accounting for the abundance of more meat-bearing regions.

Figure 9.58 further strengthens the point that high meat-bearing regions (hind and fore quarters) were being targeted in Feature 42. This pattern of extremes was also found in Feature 35 (see Feature 35 discussion). It would seem that based on the lack of representation of the 3<sup>rd</sup> and 4<sup>th</sup> quartiles, cattle meat might have been transported into the city from the surrounding area. However, the presence of elements from the vertebral column and feet make this less likely. More probably, based on the elements present and the butchery practices discussed above, the cattle were being raised and butchered locally with a preference for higher quality (more meat-bearing) regions.

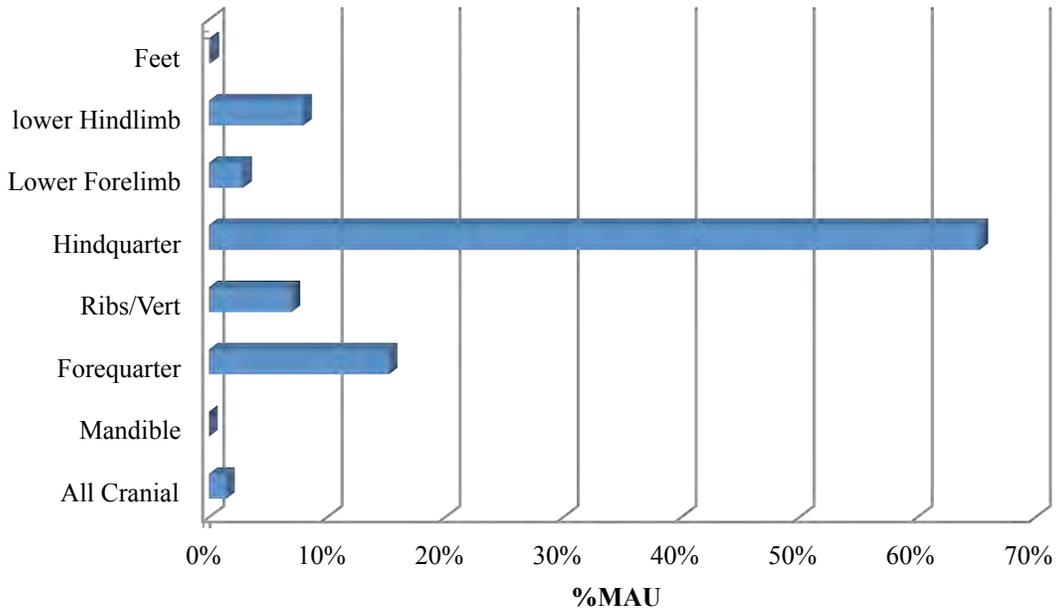


Figure 9.57: Feature 42 - %MAU - BOS element distribution.

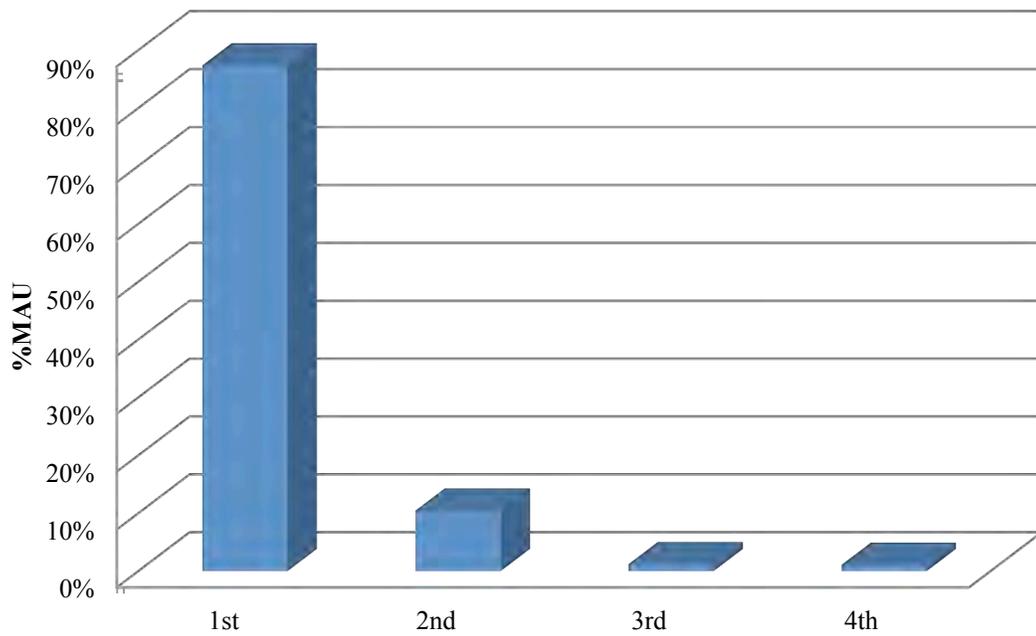


Figure 9.58: Feature 42 - MGUI quartile rank – BOS.

AGE DETERMINATION

A total of 102 fragments of bone from Feature 42 show evidence for incomplete fusion. Of these 55 (53.9%) are from domesticated mammals (cattle and caprine). Cattle elements make up 98% ( $n=54$ ) of the bones displaying a lack of epiphyseal fusion. Juvenile bones identified as cow constitute slightly less than 35% of all cattle bones, which might suggest that cattle were be butchered while they were still in the process of growing. Based on the selected sample of bones being used for age determination, it is clear that the cattle from this assemblage were butchered at a young age (Figure 9.60). For the most part, the cattle were below the age of 3.5 years, which is thought to be a prime age for butchering. In addition to the cattle material, one caprine bone shows evidence for incomplete fusion.

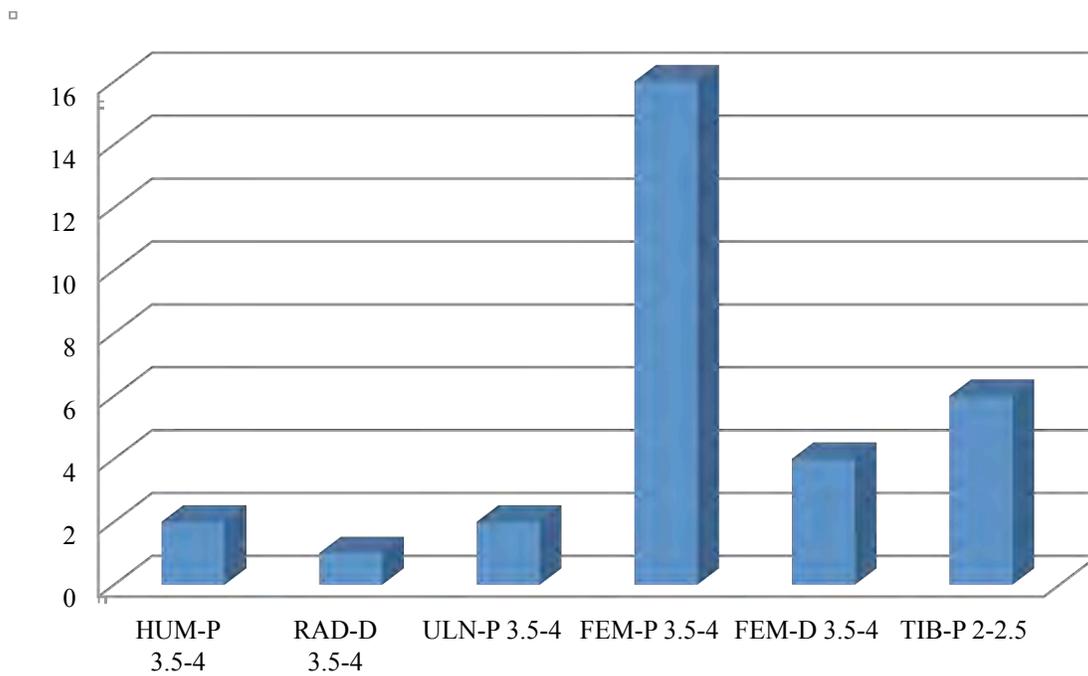


Figure 9.60: Feature 42 - age determination - fusion – BOS.

## SUMMARY

The zooarchaeological material excavated from City Hall 2010–2011 represents a number of deposits that date from the late eighteenth century to the early- and mid-nineteenth century. In total, 17,437 fragments were analyzed for this report, with another 2,951 analyzed and recorded, but excluded from this report for reasons already stated (see chapter introduction). As these were distinct contexts from different chronological periods, a combined contextual analysis was not possible. This circumstance effectively dictated that the sample size of a number of the features were too small for some quantitative analysis. Furthermore, low sample size also limited the ability to make statements regarding zooarchaeological patterns (diet, distribution, economics, etc.). While attempts were made to make connections between the faunal material and specific patterns relating to butchery, age range, element distribution, cultural behaviors, economics, and diet, any conclusions drawn from these should be viewed with caution for a number of reasons, most importantly sample size. Below are some of the more relevant trends and patterns apparent within each feature and, to some extent, across all key features.

## NISP

The overall NISP for all features recognized that cattle bones were most prevalent, generally exhibiting significantly higher quantities of bone when compared to other domesticates (pig and caprine). Similar patterns were also observed in the 2001 City Hall zooarchaeology report by Hambrecht and Brewington. The presence of high numbers of cattle bones is in itself suggestive of a group/population consuming more expensive types of meat (compared to caprine and pig). The MAU and MGUI analysis for the most part supports this idea of expensive type/cuts of meat by indicating the overall dominance of heavier meat-bearing regions and, therefore, potentially more expensive cuts. The lower NISP for other domesticates (caprine and pig) might be suggestive of provisioning, in which only selected parts of the animal were being transported into the city from other areas. Alternatively, and perhaps more likely, it might be a consequence of using lower quality cuts (crania and foot elements) for lower economic status groups/individuals.

## BUTCHERING PATTERNS

The general trend of butchery practices, which crossed both spatial and temporal boundaries of the individual features, was overall dominated by saw marks, followed by chop marks. Figure 9.61 displays the type and prevalence of butchery marks for all key contexts combined (Features 27 and 34 did not contain fragments that show evidence for butchery). This type of butchering is largely associated with primary butchery practices and combined accounts for 97.65% of all cuts. As such, it is likely that the processing of these elements was likely not the result of secondary butchery or household/ kitchen processing. Secondary cuts, knife marks, appear with significantly less frequency (2.11%), further strengthening the idea that for the most part, butchered elements from the overall assemblage represent butcher shop primary processing.

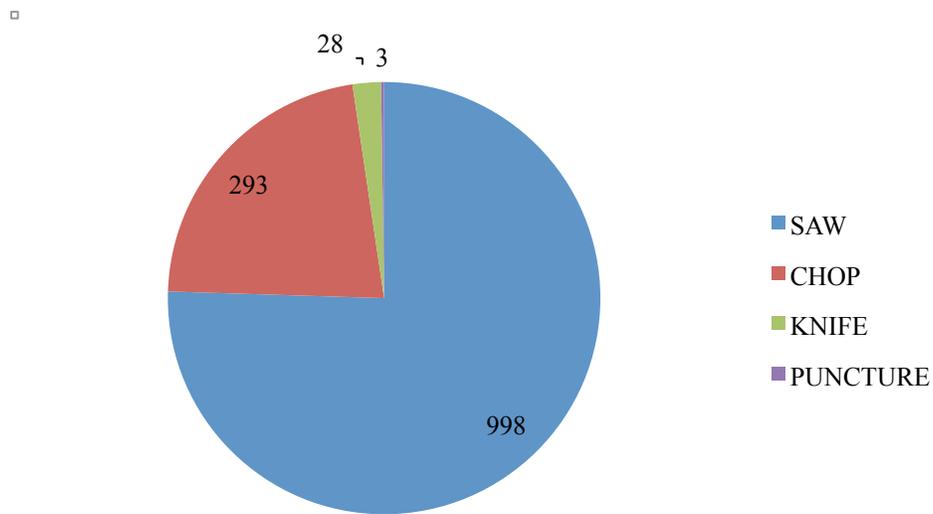


Figure 9.61: Butchery types and counts - all features.

#### MAU AND MGUI

MAU and MGUI analyses were only applicable for use in six of the individual contexts. Furthermore, only cattle were present in large enough quantities, with the exception of the Feature 28 caprines, to conduct these quantitative analyses. Figure 9.62 displays the %MAU across all features, in which it can be observed that cranial bones show a heavy dominance, with a significant representation from both the fore and hindquarters and the vertebra. All of these (excluding cranial bones) represent heavy meat-bearing regions. Overall, the lower meat-bearing skeletal elements are found in smaller percentages (see Figure 9.63), with the exception of cranial bones, when compared to other regions. The MGUI ranking strengthens the evidence on element distribution, especially with regard to the majority of scores falling into the 1<sup>st</sup> quartile (the richest meat-bearing regions). The %MAU and MGUI charts (cattle), point to a general pattern of consumption of higher meat-bearing regions. It also makes clear that, in most cases, other skeletal regions, lower meat-bearing regions, were present in lower number. Overall, this points to the entire skeleton being present and the notion that cattle were not being slaughtered outside the city and brought in as cuts of meat. The lower quality and lower meat-bearing cuts (cranial, mandible, feet, etc.) could have easily been part of the diet of less wealthy consumers eating soups, tongue, and head cheese.

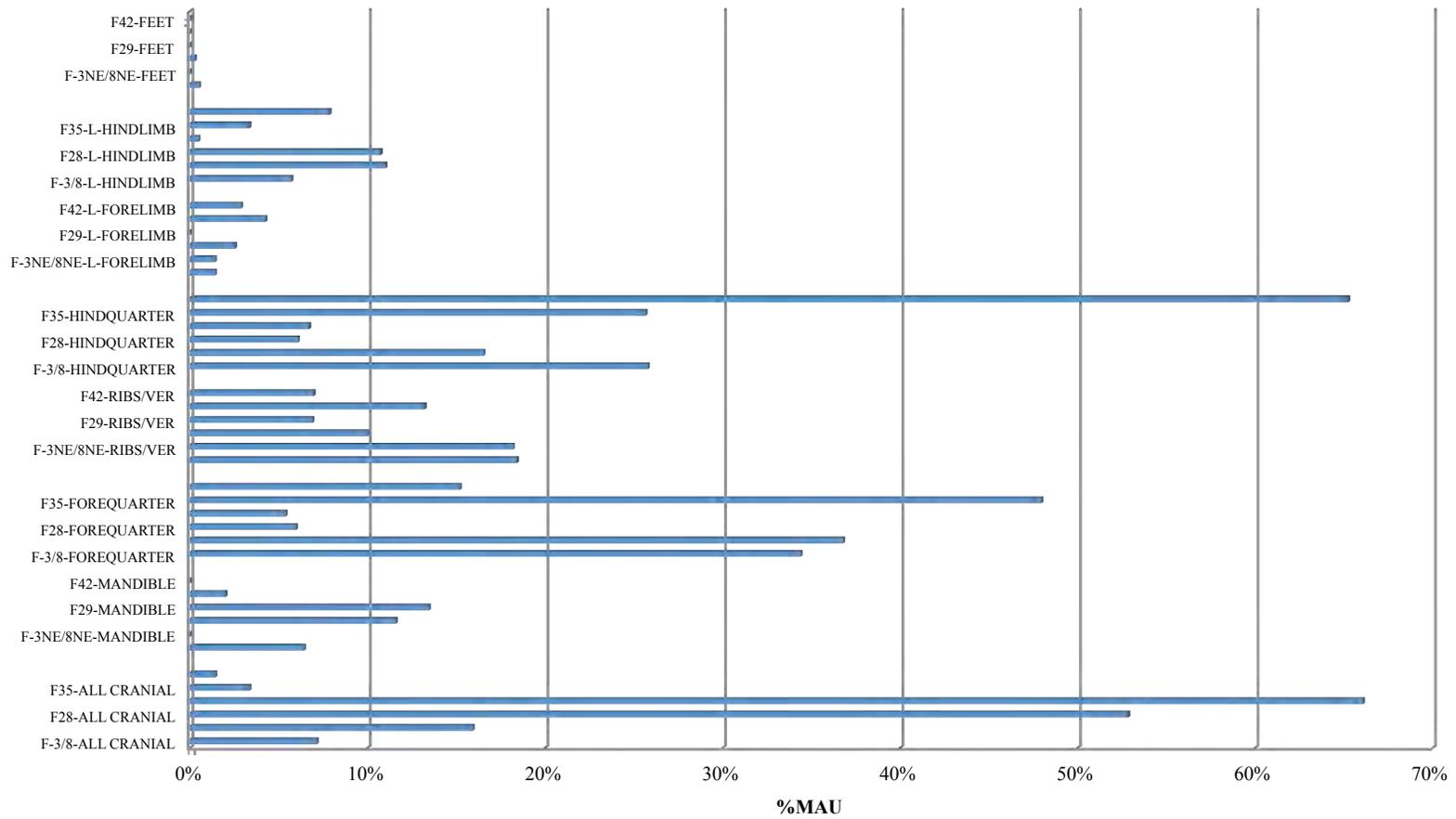


Figure 9.62: %MAU - all features – BOS.

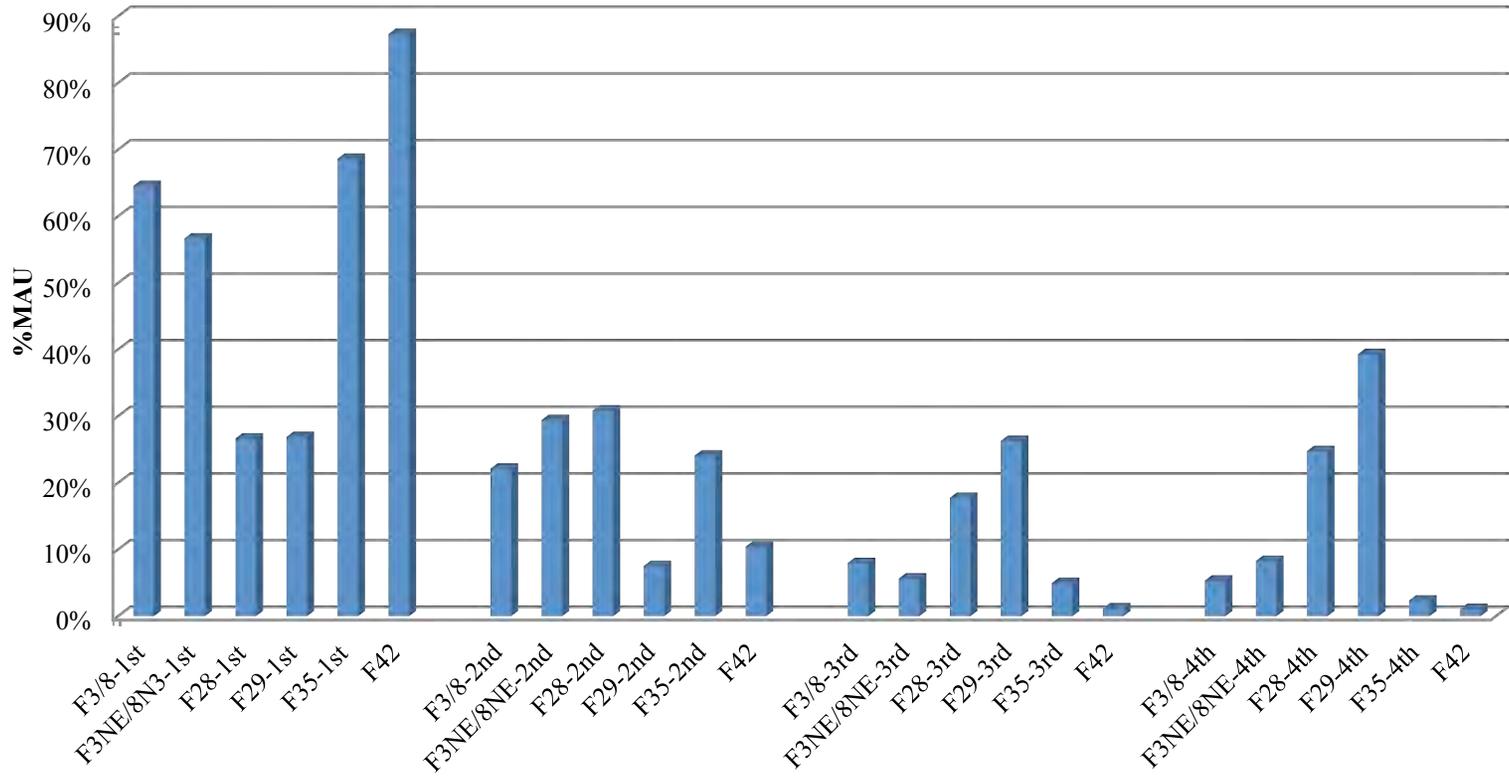


Figure 9.63: MGUI - quartile ranks - compared features – BOS.

NOTES ON FISH

Fish bones represented 9.48% of the TNF for the City Hall zooarchaeological collection. The majority of these fish bones are from Feature 28 ( $n=1,363$ ), 29 ( $n=109$ ), and Room 8C ( $n=139$ ), with small quantities found in other features (Figure 9.64). The preservation of these bones for the most part is good to excellent. In another indication of overall good preservation for this site, complete fish crania to very small vertebra were found within faunal material. The size of specific elements are often found to be in the range of <1 centimeter to between 5 and 10 centimeters (ex. vertebra), which points to the presence of a range of fish and fish sizes. As noted in the introduction of this chapter, fish are not identified to species level. Future work should include this material, as it would potentially help to better understand the subsistence use of local or non-local resources for consumption and/or economic factors.

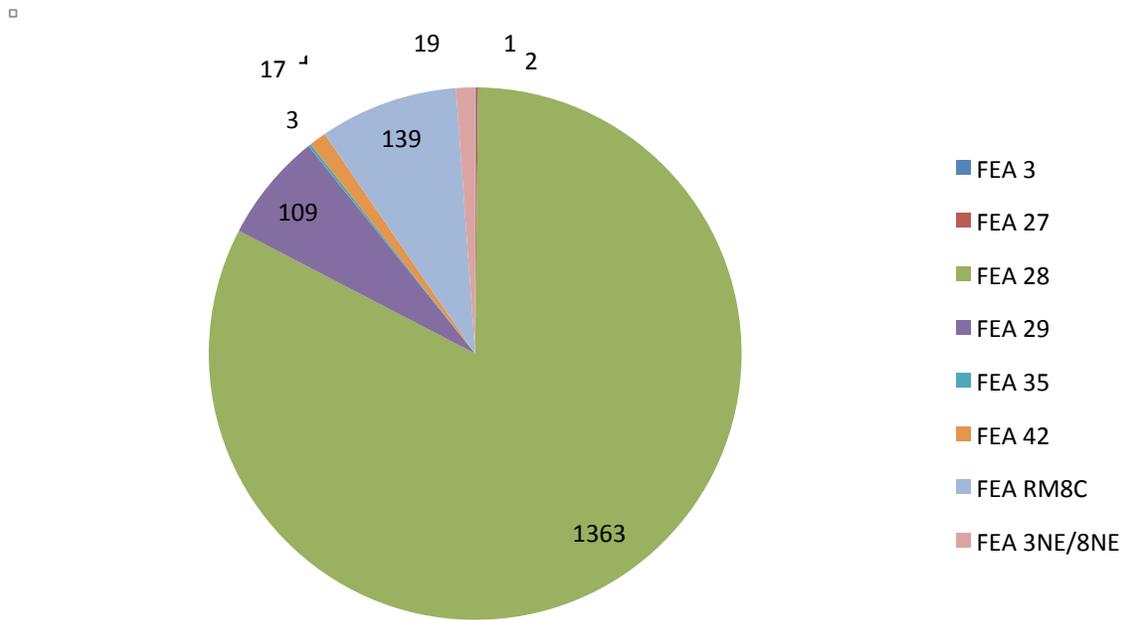


Figure 9.64: Fish - all features.

NOTES ON AVSP (BIRDS)

Birds were recorded, irrespective of species identification, as AVSP. Birds were found in eight of the key contexts and represent 6.21% ( $n=1,082$ ) of the TNF for all zooarchaeological material (Figure 9.65). The majority of AVSP bones are largely represented in Feature 28, 29, and Room 8C, accounting for slightly more than 92.33% of all bird remains. Smaller percentages were found in the remaining contexts containing bird bones. As in the case of the fish remains (see above), there is little that can be said about the prevalence and distribution within and between the features due to the lack of speciation of these remains. This being

said, overall preservation is excellent, showing a wide range of element size and type. Determination of wild vs. domestic bird was not determined. Future work should include a complete analysis of bird remains, as it can (like fish) add to the understanding of consumption or subsistence reliance on wild vs. domestic species, as well as economics.

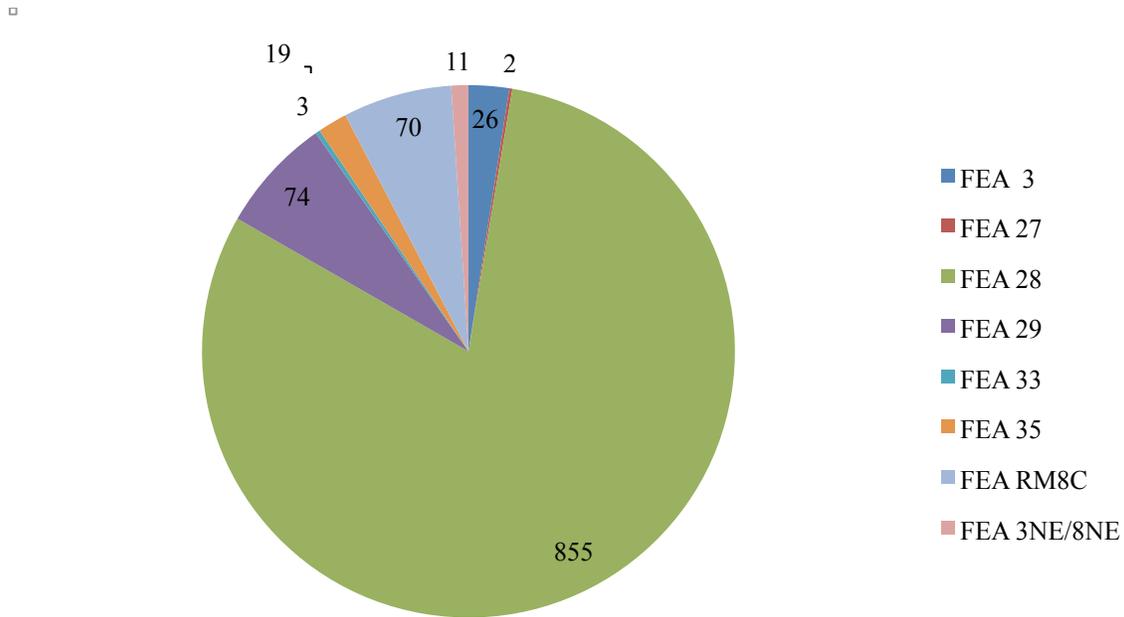


Figure 9.65: AVSP (bird) - all features.

#### NOTES ON TURTLES

Turtle remains account for a very small percentage (0.07%, or  $n=12$ ) of the TNF for the City Hall 2010–2011 zooarchaeological assemblage. Turtle elements were found in three of the key contexts discussed in this report (Figure 9.66), two of which were dated to the early nineteenth century (Feature 28 and 29) and one to the late eighteenth century (Room 8C). While the few remains offer little for quantitative analysis, it should be noted that turtle was consumed during these periods in New York City for both meat (in soup) and eggs. It has been suggested that turtle meat was more expensive and somewhat of a luxury item (see Schweitzer 2009). Interestingly, in the absence of enough money to purchase turtle meat for soup, young cow cranial and feet were often used to create “mock turtle soup” (Schweitzer 2009). Irrespective of a link between the consumption of turtle soup (or lack of it) and contexts in which a large number of cattle cranial bones are present, it is likely that some of the meat from the cows and caprines were being used for consumption in the form of broths or soups, possibly by individuals of lower economic status.

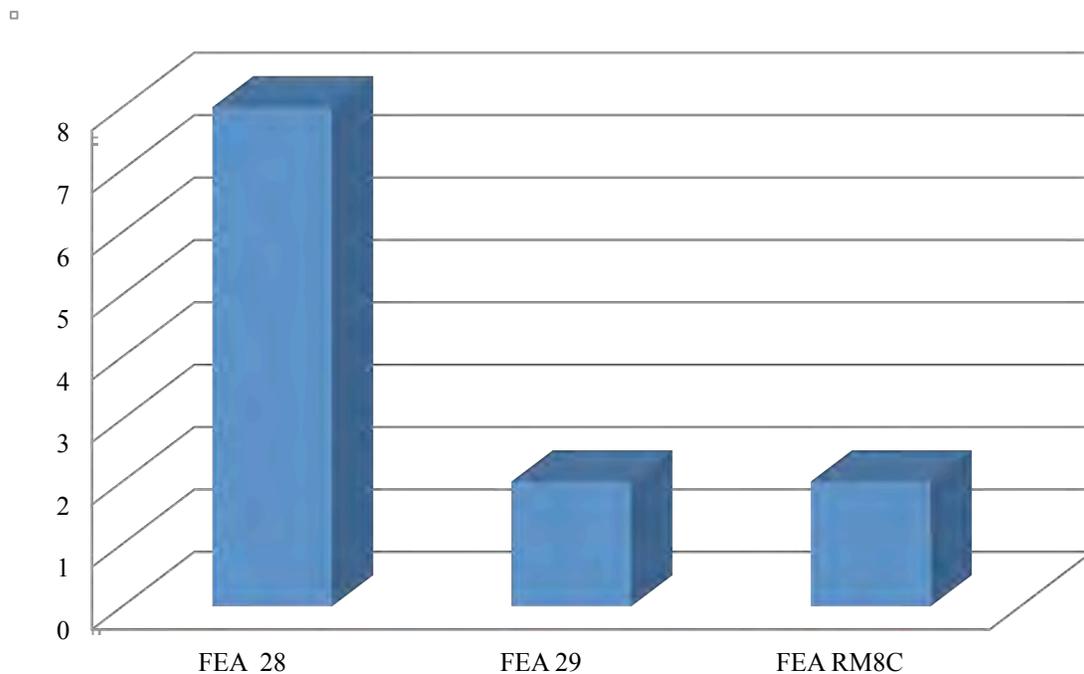


Figure 9.66: Turtle – all features.

#### BURNING

The number and percentages of burnt bones for each context can be found in Table 9.02. In total, 1,060 (~6.07%) fragments exhibit evidence of having been subjected to fire. The largest number of burnt bones were found in Feature 28 ( $n=1,009$ ), but this only accounts for approximately 5.8% of the TNF. Household consumption would likely show evidence of burning, while it would be less likely to find burning among the remains from a butcher shop. The material from this assemblage, as found in the 2001 City Hall zooarchaeological report, is more likely the product of primary butchering and not from domestic (household/kitchen) refuse.

#### GNAWING

The presence of gnaw marks was extremely scarce, with evidence identified on 25 specimens, of which 24 cases were caused by rodents and one was the result of dog chewing. The overall lack of alteration of midden refuse is suggestive of dumps that were covered quickly, not allowing dogs, rodents, and other scavengers time to gain access to them, or depositing the waste in a location that was closed off and not readily accessible by these animals. Based on the faunal material from the collection, it is clear that dogs, cats, and rodents were present (albeit in small percentages), but these animals apparently had no access to these midden dumps.

Table 9.02: Number and percentages of burnt bone.

FEA	3		3/8		3NE/8NE		RM8C		27		28		29		33		34		35		42	
BURN	CNT	%	CNT	%	CNT	%	CNT	%	CNT	%	CNT	%	CNT	%	CNT	%	CNT	%	CNT	%	CNT	%
Unburnt	478	97%	288	99.7%	1472	99.8%	1198	99%	36	88%	10305	91%	1038	99%	181	99%	1	100%	780	100%	599	99%
White	1	0%	0	0%	0	<1%	1	<1%	1	2%	574	5%	6	1%	0	0%	0	0%	0	0%	3	<1%
Black	2	0%	1	<1%	2	<1%	6	<1%	4	10%	281	2%	3	<1%	0	0%	0	0%	0	0%	1	<1%
Scortch	11	2%	0	<1%	1	<1%	2	<1%	0	0%	154	1%	6	1%	1	1%	0	0%	0	0%	0	<1%
Total	492	100%	289	100%	1475	100%	1207	100%	41	100%	11314	100%	1053	100%	182	100%	1	100%	780	100%	603	100%

## **X – HUMAN REMAINS**

### **INTRODUCTION**

During the course of excavations at City Hall Park, a small group of human skeletal remains were recovered, mostly from the area of Tweed Courthouse. The human remains largely represent disarticulated skeletal material that, with a few exceptions, cannot be directly connected to other human bones. All of the remains were found mixed in with other materials removed from site. As such, none of the bones were found to be associated with a proper burial (grave shaft) and were likely redeposited or disturbed sometime after original interment. This vicinity was adjacent to the almshouse burial ground. These human bones are currently awaiting reburial.

Most of the material was found to be in fair condition with evidence of post-mortem damage noted. Basic demographic information was limited due to the physical state of the material and, more so, to the incompleteness of the skeletons. The majority of bones are from non-juvenile individuals; however, exact ages could not be attained due to specific missing elements (pelvis, skulls, etc.) normally used for more accurate age determination. While most bones are from older individuals, evidence of non-adults (children) was found.

### **METHODOLOGY**

#### **RECORDING**

All skeletal material recovered from City Hall Park during 2010–2011 was recorded according to the standards proposed by Buisktra and Ublelaker (1994) with some modifications by the author. Data forms created based on these standards, with modification, were used to collect skeletal information during laboratory analysis. Matthew Brown at the Brooklyn College Archaeology Laboratory analyzed all human material. Following the completion of analysis, all data was transferred into an *Access* database created by Matthew Brown. The overall purpose of the database is to facilitate a digital copy of all skeletal material from this site.

In order to facilitate extraction of information from the database through directed searches, each set of skeletal remains were assigned three identifying specimen numbers (INV; SP#; SubSP#) that increased with specificity. These identification numbers are non-repeating, except in the event that the skeletal material was from the same individual.

*Note:* All tables found in this chapter include abridged descriptions. Complete entries can be found in the database and are available upon request.

#### **PHOTOGRAPHY**

With the exception of highly fragmented skeletal material, all bones were photographed with a Panasonic Lumix 10 megapixel digital camera using the macro setting. As necessary, bones

were photographed from different angles. A complete record of all bone images will be available through Chrysalis Archaeology.

#### **STATEMENT OF ETHICS**

The excavation and analysis of human remains has been and still is a highly sensitive issue, often leading to polarized views regarding the rationale for excavation and examination of skeletal material. This divide, among other reasons (i.e., cultural beliefs), can in part be traced to the mistreatment or removal of skeletal material without communication or permission from descendent populations (for a more detailed review of research ethics in regard to human skeletal material, see Walker 2008). Excavation and removal of human skeletal material from City Hall Park was conducted under the direct supervision of Alyssa Loorya. Matthew Brown analyzed all skeletal material ethically and responsibly. All actions regarding human remains were in accordance with the protocols outlined in the Unanticipated Discoveries Plan and Human Remains Protocol (March 2010) and the Society of American Archaeology's statement concerning the treatment of human remains.

#### **TWEED MANHOLE (AND EXTENSION) GENERAL COLLECTION**

##### **CHP2010TWMH-GEN-COL-1**

These remains consist of the mid shaft of a right femur (Image 10.01). The bone was recovered from the general collection – Manhole 2 (Tweed) (see Map 7.01). The bone is in poor condition, missing proximal 1/3 and distal 1/3. The lack of proximal and distal ends does not allow for the use of epiphyseal fusion as a method for age determination. Based on the overall size, however, and comparison to laboratory specimens, it is likely that this bone is from an individual older than 17 years of age. Biological sex was not determined. Macroscopic assessment of this specimen did not reveal any evidence for pathology.

The maximum length measurement (see Table 10.04) was taken of the shaft, but no reconstruction of stature could be comprised due to the missing proximal and distal ends. Mid-shaft diameter was also recorded and can be found in Table 10.04.



Image 10.01: Anterior (left) and posterior (right) surfaces of CHP10-4.  
Proximal end at top of image.

#### CHP2010TWMH1-FS350-1

This material consists of a single right tibia (Image 10.02) recovered during wall cleaning within the Tweed excavations (see Map 7.01). The bone is complete and in good condition, but was broken in two pieces post-mortem. Both the proximal and distal epiphyses are completely fused, which suggests that this individual was older than 18 years of age. Biological sex was not determined. This tibia does not exhibit evidence of pathology.

#### *Metrics/Stature Estimation*

Maximum length and stature were estimated based on standards found in Buikstra and Ubelaker (1994) and Bass (2005). Stature estimation is given for black and white males and females using the formulae found in Bass (2005). The maximum length was 34.8 cm (13.7”), giving a range in stature of 157.91–166.146 cm (62.16–65.41”). This range includes possible stature for black and white males and females. For further explanation and specifics, see Table 10.01.



Image 10.02: Anterior (left) and posterior (right) surfaces of CHP10-5. Proximal end towards top of image.

Table 10.01: Stature reconstruction.

Bone	MxL (mm)	MxL (cm)	MxL (in)	Stat (cm)	Stat(in)	Sex/Anc	+/-	H-Ran (cm)	L-Ran (cm)
Tibia	348	34.8	13.70079	166.146	65.411811	Male/White	4 cm	170.146	162.146
Tibia	348	34.8	13.70079	161.572	63.611024	Male/Black	3.96 cm	165.532	157.612
Tibia	348	34.8	13.70079	162.45	63.956693	Female/White	3.66 cm	166.11	158.79
Tibia	348	34.8	13.70079	157.91	62.169291	Female/White	3.7 cm	161.61	154.21

Key: MxL=Maximum Length; Stat=Stature; Anc=Ancestry; H-Ran=High Ran; L-Ran=Low Range  
 Formulae (see Bass 2005): M/White:  $2.42(\text{MxL Tibia}) + 81.93 \pm 4.0$ ; M/Black:  $2.19(\text{MxL Tibia}) + 85.36 \pm 3.96$ ; W/Female:  $2.9(\text{MxL Tibia}) + 61.53 \pm 3.66$ ; W/Black:  $2.45(\text{MxL Tibia}) + 72.65 \pm 3.70$

#### CHP2011TWMH-EXT-FS480-A

CHP2011TWMH-EXT-FS480-A consists of co-mingled and fragmented cranial and post-cranial remains of at least two individuals recovered during excavations of FS 480, general collection – Tweed manhole extension (Tweed), on June 7, 2011 (see Map 7.01). The human bones were not found to be associated with a proper grave, but were mixed in with artifact and zooarchaeological remains, indicating that this particular material was part of redeposited soil from areas in and around the almshouse burial ground.

Morphological differences related to the age of the individuals represented in the material indicate that there were at least two persons represented. As a result of this finding, CHP2011FS480-A was assigned two separate sub-specimen numbers to account for the MNI of 2 (CHP2011TWMH-EXT-FS480-A1 and CHP2011TWMH-EXT-FS480-A2).

A total of 18 bones are identifiable to specific element, with two skull fragments only identifiable as being part of the cranial vault. The majority of bones exhibit fair to poor preservation and suffer from post-burial damage. The low number of bones recovered in addition to the often poor preservation of the individual bones effectively limited the overall data that was extractable using standard bioarchaeological and paleopathological methods of analysis.

#### CHP2011TWMH-EXT-FS480-A1

This material consists of a group of 14 human bones (see Table 10.02) that range in preservation from complete and in good condition to <10% complete and in poor condition. All damage to and loss of bone occurred post-mortem. This material was originally mixed with CHP2011TWMH-EXT-FS480-A2.

A direct relationship could not be determined between the individual bones from CHP2011TWMH-EXT-FS480-A1 that would clearly indicate that they were all from the same person. The exception is the left talus and calcaneus, which were from the same individual. It was also not possible to identify, macroscopically, evidence that would indicate that the 14 bones were from different individuals. Therefore, the fewest individuals or MNI that can account for this set of bones is 1. This being said, it is possible that these bones represent more than one person.

Macroscopic analysis of the bones from CHP2011TWMH-EXT-FS480-A1 did not reveal a significant amount of demographic information. The fragmented state of some of the material, in addition to the low number of bones recovered, significantly decreased or limited any identifying information that would normally be extractable from a complete skeleton or mostly complete set of remains. Furthermore, as indicated above, the material—while having an MNI of 1—could possibly represent more than one person, calling into question statements made concerning basic demographic information of CHP2011FS480-A1.

Sex determination, stature estimation, and ancestry could not be reliably determined using the bone elements from CHP2011FS480-A1. According to rates of epiphyseal fusion for specific bone elements (see Scheuer and Black 2000), in addition to overall size and morphology, it was determined that none of the material represents an individual or individuals younger than 16 years of age. A more specific age could not be attained for this material as a group or as individual elements. All bones were evaluated for evidence of pathology; none was identified.

Table 10.02: Bone inventory – CHP2011TWMH-EXT-FS480-A1.

Bone	Side	Com	Path	Age	Cnt	Comments
TAL	L	1	NO	17+	1	Bone is complete. Bone belongs w/ CAL from this sample.
CAL	L	2	NO	17+	1	Missing most of inferior surface and posterior end (PM). Belongs w/ TAL from the sample.
PHP-2	R	1	NO	16+	1	Mostly complete missing fragments from proximal and distal end (PM).
PHP-UK	SND	3	NO	16+	1	Missing most of dorsal surface, entire distal epiph and part of the medial/lateral shaft (PM).
PHD-UK	SND	1	NO	16+	1	Bone in good condition. Determination of side and number was not identified.
CER3-5	NA	2	NO	16+	1	Bone missing left inferior articular facet, anterior cortex and inferior body surface. Age 16+.
THR-1	NA	1	NO	16+	1	Mostly complete missing small fragment and the superior right articular facet. Age 16+.
STE-BOD	NA	4	NO	NC	1	Highly fragmented (<10% complete). PMD
RIB-1	R	1	NO	NC	1	Rib is complete and in good condition. No pathology. Non-child.
RIB3-10	L	NA	NO	NC	2	Two ribs shafts of left side ribs. No numerical identification.
RIB3-10	R	NA	NO	NC	3	Fragments from right side ribs. Not numerically identified. No age determination.

**Key:** COM=Complete; PATH=Pathology; CNT=Count; L=Left; R=Right; SND=Side Not Determined; NA=Not Applicable; NC=Non-Child

**Bone Key:** TAL=Talus; CAL=Calcaneus; PHP=Phalange Hand Proximal; PHD=Phalange Hand Distal; UK=Unknown; CER=Cervical Vertebra; THR=Thoracic Vertebra; STE-BOD=Sternal Body

#### CHP2011TWMH-EXT-FS480-A2

CHP2011TWMH-EXT-FS480-A2 represents the fragmented remains of at least one child approximately two years of age. These bones were originally mixed with the non-child bones from CHP2011TWMH-EXT-FS480-A1 and fragments of non-human animal bone. In total, four bones were associated with this group, representing fragments of the cranium, pectoral girdle, and pelvic girdle (see Table 10.03). With the exception of the left scapula (Image 10.03), the bones are in poor condition, offering little diagnostic information (Image 10.04).

These bones, like those associated with CHP2011TWMH-EXT-FS480-A1, could not be definitively separated into more than one individual based on macroscopic analysis and the state of fragmentation. (It should be noted that it is possible that these bones represent more than one person.) The right and left scapula, which based on size and siding, likely belong to the same individual. Irrespective of the possibility of more than one person being represented by these bones, the MNI was calculated to be 1 due to the inability to clearly separate these bones into more than one person.

The limited quantity, in addition to the highly fragmented state of the material from CHP2011TWMH-EXT-FS480-A2, does not allow for in-depth analysis. Sex determination was not conducted on remains of individuals of this age using standard skeletal methods largely due to the fact that the sexually dimorphic regions of the skeleton are not developed until much later (puberty), making it almost impossible to identify male and female from the skeletal materials of children. Other analyses, including stature and ancestry, were not assessed due to the age of the individual and the limited material available for analysis. No evidence of pathology was identified on any the bones from this group.

Determination of age was calculated using comparative specimens housed at the Brooklyn College Archaeology Laboratory. Based on similarities mainly related to overall size and the state of fusion for the left and right scapula and the right ilium (see Table 10.03), it was determined that the material associated with CHP2011TWMH-EXT-FS480-A2 was likely from an individual or individuals approximately two years of age.



Image 10.03: Left scapula (CHP2011TWMH-EXT-FS480-A2).



Image 10.04: Right innominate (CHP2011TWMH-EXT-FS480-A2).

Table 10.03: Bone inventory – CHP2011TWMH-EXT-FS480-A2.

Bone	Side	Com	Path	Age	Cnt	Comm
PAR	SND	4	NO	C	1	Consists of 2 small frags
CRA-UK	SND	4	NO	C	2	2 Small unidentified cranial fragments from a child (vault area)
SCP	L	1	NO	2	1	Mostly complete missing some fragments from the blade and spine.
SCP	R	4	NO	2	1	Missing most of the SCP-all that remains is part of the blade
ILI	R	4	NO	2	1	Bone in poor condition with only a small fragment with the auricular surface

Key: COM=Complete; PATH=Pathology; CNT=Count; COMM=Comments; L=Left; R=Right; SND=Side Not Determined; NA=Not Applicable; C=Child

Bone Key: PAR=Parietal; CRA-UK=Cranial Bone Unknown; SCP=Scapula; ILI=Ilium

### NORTHEAST VAULT AREA

#### CHP2010TU6-LVL7-1

This single bone was found mixed in with zooarchaeological material from Test Unit 6, Level 7, in the northeast vault area behind City Hall. These remains consist of the proximal phalange of the third digit of the hand (Image 10.05). The bone is complete and in good condition, and there is no evidence of post-mortem damage. None of the other human bones recovered from City Hall Park show a direct connection with this specimen (i.e., come from the same person).

Based on the overall size and status of fusion of this bone—both the proximal and distal epiphyses are completely fused—this individual was older than 16.5 years of age (Scheuer and Black 2000). Determination of biological sex was not attainable and there was no evidence of pathology. Maximum length measurements were taken (see Table 10.04).



Image 10.05: Proximal phalange of the third digit of the hand (CHP2010TU6-LVL7-1).

#### CHP2010TU6-LVL8-1

These remains consist of the right fourth metatarsal (Image 10.06). The bone was found mixed in with the faunal material excavated from Test Unit 6, Level 8, with no connection to any of the other human bones recovered from City Hall Park. It is in fair condition, but is missing most of the distal end post-mortem.

Age determination was based on fusion rates found in Scheuer and Black (2000). According to the rate of proximal epiphyseal fusion, this individual was older than 17 years of age. Biological sex was not determinable and there was no evidence of pathology. Metrics were completed for this specimen (see Table 10.04). The maximum length was calculated without this distal end based on comparisons to laboratory specimens.

Table 10.04: Measurements.

SP#	BONE	SIDE	COMP	MEAS-TYPE	MxL	NOTES
CHP2010TU6-LVL7-1	PHA-PRX-3	SND	YES	MxL	4.07	Bone complete. Good condition.
CHP2010TU6-LVL8-1	MT4	R	NO	MxL	6.03	Reconstructed MxL=6.15-6.2
CHP2010TWMH-GEN-COL-1	FEM	R	NO	MxL	20.4	Bone not complete. Shaft only
CHP2010TWMH-GEN-COL-1	FEM	R	NO	MxD	2.8	Approx mid shaft



Image 10.06: Right fourth metatarsal lateral surface, left and mesial surface, right (CHP2010TU6-LVL8-1).

CHP2010TU6NE-LVL2-1

These remains consist of a permanent right upper second molar (RM<sup>2</sup>) from Test Unit 6NE, Level 2 (Image 10.07). The tooth was found mixed in with the faunal material from this context. No other human remains were connected with this tooth. This specimen is complete and in good condition, showing no significant post-mortem damage.

The root and crown are complete, suggesting that the tooth was from an individual of at least 16 years of age. The cusps of the crown have been blunted as a result of attrition, and while there is no evidence of dentin exposure, the addition of wear on the occlusal surface implies that this tooth is from an individual older than 16 years. Biological sex was not determined for this specimen.

CHP2010TU6NE-LVL2-1 exhibits one moderate size and one small carie on the mesial surface (Images 10.07 and 10.08) of the tooth. The larger of the two lesions is approximately 3 mm x 1.8 mm. The small lesion is the size of a pin prick. There is a small amount of calculus (mineralized plaque) on the distal surface just above the cemento-enamel junction.



Image 10.07: Lateral surface, carious lesion (red arrows).



Image 10.08: Mesial surface calculus (red arrows).

## XI – SYNTHESIS

Like the history of City Hall Park, there are many facets to the archaeological interpretation of this area. It is sometimes asked: What more can archaeology teach us that isn't already part of the historical record? That the historical record contains all we need to know is too simple an assumption. It is naïve to accept the historical record as complete or unfailingly accurate, and that nothing remains to be learned. A prime example of this is the Five Points neighborhood, which is historically depicted as a disease and crime-ridden slum. However, archaeology demonstrated the determination and attempt of the many immigrants residing in Five Points to maintain some semblance of respectability as well as a connection with their cultural heritage (John Milner Associates 2000). Two other local examples of archaeology being able to clarify or expand the breadth of the historic record include the African Burial Ground (John Milner Associates 2009) and the Stadt Huys excavations (conducted by Rothschild and Wall in 1979). The practice of archaeology asks: What else can we learn, and what about everyone else, those not represented in the historic record? In this way, archaeology raises questions about what we already *know*.

Historical archaeology generally starts with research questions, often very specific ones. These questions, which tend to be post-processual in nature, can at times be difficult to address within a dense urban environment such as New York City—more specifically, within a site like City Hall Park. Post-processualism seeks to understand human behavior, the actions and motivations associated with the use of materials and the built environment as a statement of social and/or economic conditions within a period or region. It also asks the interpreter of the past—the interpreter of archaeological evidence, historical documents, etc.—to be aware of and consider that multiple points of view are essential to understanding the past. The past is not a static point in time; it is “always momentary, fluid and flexible” (Hodder 1997), as is our interpretation of it. Post-processual questions are not impossible to address, as such questions are currently being investigated with regard to the first Philadelphia almshouse (Kaktins, in process) and have been addressed in other urban areas (see Elia and Wesolowsky 1991; Huey 2001; and Beisaw 2009). The benefit these studies have had is that the institutions being investigated were self-contained or had clearly delineated boundaries. This is not so for the institutions within New York City's Common. The Common was true to the proverbial “everything within a single New York City block.”

At a site such as City Hall Park, specific theoretical questions relative to specific social groups are difficult to apply and are better served as guiding factors of research that may be possible to address. The density noted (both spatial and temporal) on the Common with regard to occupation, development, social groups, and population is best suited to broad-based questions that leave open the opportunity to formulate questions based on the assemblage and the practical aspects of archaeology. The difficulties of addressing pre-determined theoretical questions within City Hall Park are amplified by the nature of doing archaeology within a construction site, where excavation is directed by wholly different objectives than research (i.e., schedule and funding generally do not allow excavation of an entire site to ensure the recovery of all relevant information or excavation of areas selected through research, and study is bound by the limits of the construction impacts). In essence, it is not always possible to formulate questions regarding the archaeological investigation until there is some sense of the nature of the archaeological assemblage.

Allowing the assemblage to guide the research led this project toward a more in-depth study of how the environment and landscape have been used, altered, and reused throughout the almost 300 years that this parcel of land has been occupied. This is a key component to better understand certain recurring themes within the archaeology and history of City Hall Park:

- Urban population and spatial density
- Landscape use/reuse
- Issues of garbage/refuse disposal

Because of the intensive use and reuse of City Hall Park, there has been a great deal of temporal mixing on site with regard to structural features. There were large numbers of people living in close quarters, all leaving evidence of their activities. Distinguishing interpretive differences within the assemblages often relies on close attention to, and the recognition and tracking of, small details and anomalies.

A significant amount of interdependency exists with regard to the interpretation of the archaeological resources. Individual components and details combine to create the big picture; at the same time, elements of the broader scope (e.g., landscape or societal mores) influence the circumstances of specific components and details (e.g., the poor, prisoners, and their daily lives). None can be fully understood without considering the various elements in total. This becomes clearer as the interpretive discussion continues. The above is also true of the practical aspects of archaeology—there is a great interdependency with regard to reliable or reasonable interpretation. Artifact analysis is dependent upon the context in which an assemblage is found. Without context, artifacts are nothing more than broken bits of pottery and glass. To not acknowledge or consider the multi-layered interdependencies is a disservice to the goal of recovering and understanding the past.

This phase of study at City Hall Park incorporates various layers of information and detail from the most recent excavations and previous works<sup>1</sup> into a broader understanding to help set the stage for the ongoing interpretation of this site within New York City's past. Among the broad-based questions the project sought to address was a clearer interpretation of the physical landscape and development of the built environment.

In the decade since the last archaeological investigation of City Hall Park in 1999 and the earlier 1994 study, there have been several works defining the historic landscape of New York City. Among these is the Manahatta Project (*Manahatta: A Natural History of New York City*, Sanderson 2009), which documented and digitally recreated the original landscape and environment of the island. This work greatly enhances the commonly referred to *Sanitary and Topographical Map of the City and Island of New York* by Viele (1864) that depicts the original topography of Manhattan Island relative to the modern street grid. The Manahatta Project combined a wide range of resources and information using available technology to digitally define and depict the past landscape. This information was utilized to

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1. Of the previous studies listed in Table 3.01, three are, at present, most relevant to the ongoing study and interpretation of City Hall Park: Baugher (2001), Hunter Research (1994), and Bankoff and Loorya (2008), based upon excavations by Parsons (1999).

address questions brought about by recent archaeological investigations. The most direct of these questions being: What was the original level of the water table? The modern water table is measured at almost 50' below surface within City Hall Park,<sup>2</sup> yet all the wells discovered archaeologically only extended to approximately 9' below surface. What accounts for such a drastic difference in the water level? This in turn led to questions about the changes in grade between the eighteenth and twentieth centuries. How did the construction of City Hall and the post-industrial development of the city alter this parcel of land once noted for its natural qualities? Could we formulate a better-defined chronology of events or impacts for the physical or environmental development of the Common and City Hall Park? Perhaps the more interesting of these, are insights into how the city's ancestors interacted with or adapted the physical landscape.

Not lost within these broad questions are the people—the institutions and communities that inhabited the landscape. In contrast to the 1999 excavations, the 2010–2011 excavations have been able to determine clearly identifiable associations of archaeological discoveries with actions or groups. The ability to make such associations was limited for the 1999 assemblage due to a variety of reasons, including constraints upon the excavation project and human error. The 1999 archaeological project was focused within the grassy islands of the park landscape and small portions of the existing pathways. Among the 35 architectural features and 26 trash deposit features exposed, none were fully excavated. Analysis undertaken by the Brooklyn College Archaeological Research Center relied upon often incomplete field documentation.

The analysis of the 1999 materials led to hypotheses as to how the property, densely inhabited in the eighteenth century, dealt with refuse, particularly its disposal. Due to the lack in field documentation, information regarding context for the various excavation episodes/assemblages was skewed. Distinctions within the assemblages were noted based on general location or anomalies within the identification or quantification of artifact types. Having hindsight and a familiarity with the 1999 project, close attention was paid to nuances—the details and anomalies that would best aid in unraveling the many threads of information that would be generated while studying this site for the 2010–2011 project.

The 2010–2011 project brought three topics to the forefront with regard to the excavation and analysis. The first is the aforementioned water table. Second, excavations in the basement of City Hall exposed an apparent eighteenth-century cultural deposit. This allowed an opportunity to consider materials from within the eighteenth-century almshouse. Another avenue of questioning arose with the discovery of the Bridewell foundation and a primary deposit within its interior. This discovery raised questions regarding the physical layout of the historic landscape and historic renderings of the Bridewell.

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2. This was determined by DDC and the various contractors of the project and passed on via personal communication (Fred Weiss and Sal Cali 2010). USGS places the water table for this area at approximately 36' below surface (USGS 2007).

The final group of questions focused on an aspect of the history that has been little addressed in studies of City Hall Park—that of the workers who built City Hall. Much of the research surrounding this property has been anchored to the eighteenth century, the institutions that occupied the Common, and the residents of those structures. Excavation, however, has recovered multiple deposits associated with the construction and renovation of City Hall. In simple terms, the question of who built City Hall came to the forefront. History tells us that John McComb Jr. and Francois Mangin won the design competition for City Hall, and that John McComb Jr. was hired to oversee the construction. McComb’s diary, spanning the first three years of construction, provides multiple details about the process, as well as his thoughts and concerns regarding the project. However, McComb did not physically construct the building. Perhaps for the first time, research asks about the workmen who constructed New York City’s City Hall. Ultimately, the 2010–2011 excavation has provided information on the early-nineteenth-century period of City Hall, on the land that was the Common, and on its transformation into New York City’s seat of municipal power.

The questions above are jointly addressed in two sections, one on the built environment and the other on the assemblages.

### **THE BUILT ENVIRONMENT**

Questions regarding the landscape and environment of City Hall Park first arose during excavations in the northeast vault area behind City Hall (Map 11.01a). Excavation in this area uncovered over 20 archaeological features dating from the eighteenth through nineteenth centuries, interspersed and atop one another, capped with the twentieth-century landscape. This approximately 1,900-square-foot area distinctly illustrated 250+ years of occupation within City Hall Park. It also clearly demonstrated the recurring theme of density and reuse seen throughout the park.

The northeast vault area—adjacent to the location of the first almshouse as depicted in historic maps, Hunter’s 1994 study, and the findings of the current project—has been built upon multiple times, creating an amalgam of building and activity. The number and density of structural features created a complex configuration and sequence. Archaeological analysis was able to synthesize the results of the excavation throughout the area with historic documents and maps to determine a sequence for construction of these features,<sup>3</sup> as well as changes in elevation between the present day and 1803. Of particular use in establishing shifts in the historic grade of the area was McComb’s diary, which details the daily progress of the early years of construction. McComb noted when the construction of the foundation for City Hall began and when the basement walls were completed, detailing their height above ground surface in 1803. This information was coupled with other notations of differences in grade between the site and Broadway, as well as newspaper accounts describing the construction progress.

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3. Chapter VII contains a detailed discussion regarding the multiple northeast area features and their temporal sequence.

For example, on December 5, 1803, the basement level had been built up according to plan and the basement walls, floor to ceiling, measured 8' feet above ground level (McComb family papers 1787–1858). Measurements taken during the 2010–2011 project identified the basement level to be at 5' above surface (5.5' in some areas). The basement is a fixed point. When the basement was renovated in 1903, the architect noted that the basement floor elevation remained unchanged or was restored to its original elevation and that its walls had not been extended (Aiken 1902). Based on the measurements taken, the 1803 surface that McComb and the workers constructing City Hall occupied was approximately 3' below modern grade. Notations regarding the elevation of Broadway with regard to the site and measurements correlating the basement interior surface prior to removal of the floor (and including the stone footings) produced similar results. Calculations determined that the floor of the basement was a mere 2' below the 1803 surface and the foundation walls extended 5.5' below surface.

Further evidence determining the difference in grade comes from the discovery of a former doorway along the northeast wall of City Hall. Though not part of McComb's original plan drawing (Image 11.03), architectural and archaeological evidence exists of a doorway leading from the basement kitchen to the north area behind City Hall. The shadow of this door, the archaeologically exposed door sill/frame, and the basement floor were all at the same approximate level. The 2010 basement floor measured 4' below datum (or 3.2' bg); the door sill/frame (Feature 22) was located at 4.6' below datum (or 3.8' bg) and approximately 0.2' and 0.8' below the 1803 grade, respectively. The 0.6' is negligible when you consider the actual doorstep, which was no longer extant; only the foundation of the door sill/step was recovered (Image 11.01).

Another feature that brought about questions regarding the built environment was Feature 42, the Bridewell, in the west path north area (Map 11.01b). This discovery was significant, in that for the first time one of the Common's eighteenth-century structures had been identified and recovered archaeologically. The Bridewell was one of the most notorious and most feared public institutions of its time, housing men, women, and children convicted of petty crimes. Based upon the small area documented during excavation, the Bridewell had a surprisingly substantial foundation, extending to 13' below grade (or 10' below the 1803 grade) and expanding to a width of 5' at its base. The expanding width of the foundation functions similarly to a spread footer, and distributed the weight of the Bridewell's masonry walls more evenly. This structural component would have provided stability within the sandy soils of the area. Based upon the recovery of materials within the walls of the Bridewell foundation, the basement floor was at approximately 10.5' below modern grade or 7.5' below 1803 grade, suggesting the Bridewell had a large basement.

Its location suggests that a significant portion of the structure may yet be recoverable, as there has been little work, construction or otherwise, within the west field. The location of this feature also suggests that the front of the Bridewell was aligned with the rear of City Hall. This finding is contrary to several nineteenth-century drawings, which show the two structures aligned at the front. Chapter VII contains a more detailed discussion of this aspect.



Image 11.01: Feature 22, former basement doorframe and sill.

Ultimately, these threads of information led us to further consider where the various features recovered were vertically located in regard to the 2010 and 1803 surface elevations. Several of the archaeological features were vertically plotted. Figure 11.01 is a schematic that shows the vertical relationship of various archaeological and architectural features, including City Hall, to the 2010 surface elevation and the reconstructed 1803 surface elevation. Two horizontal axis lines represent the 2010 and 1803 surfaces. It should be noted that this schematic does not accurately represent the horizontal relationship of feature location or scale.

This exercise visually demonstrated that the majority of features were aligned to the 1803 elevation. The tops of the cisterns would have been exposed, the cobble surface uncovered along the Murray Street path was the 1803 elevation, and the well in the northeast vault area (Feature 8) appears to have been leveled to the 1803 surface elevation. The exercise also confirmed that the three wells recovered on site, which extended to a depth of 9' below modern grade, all extended to the same approximate depth of 6' below the 1803 grade. This brought about questions regarding the modern water table, identified at approximately 50' below surface during the 2010–2011 project. Specifically, what could account for the dramatic shift in the water table?





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Vertical Location of Archaeological Features Relative to 1803 and 2010 Surface Elevations.

Vertical location is to scale. Horizontal location is NOT accurate or to scale.

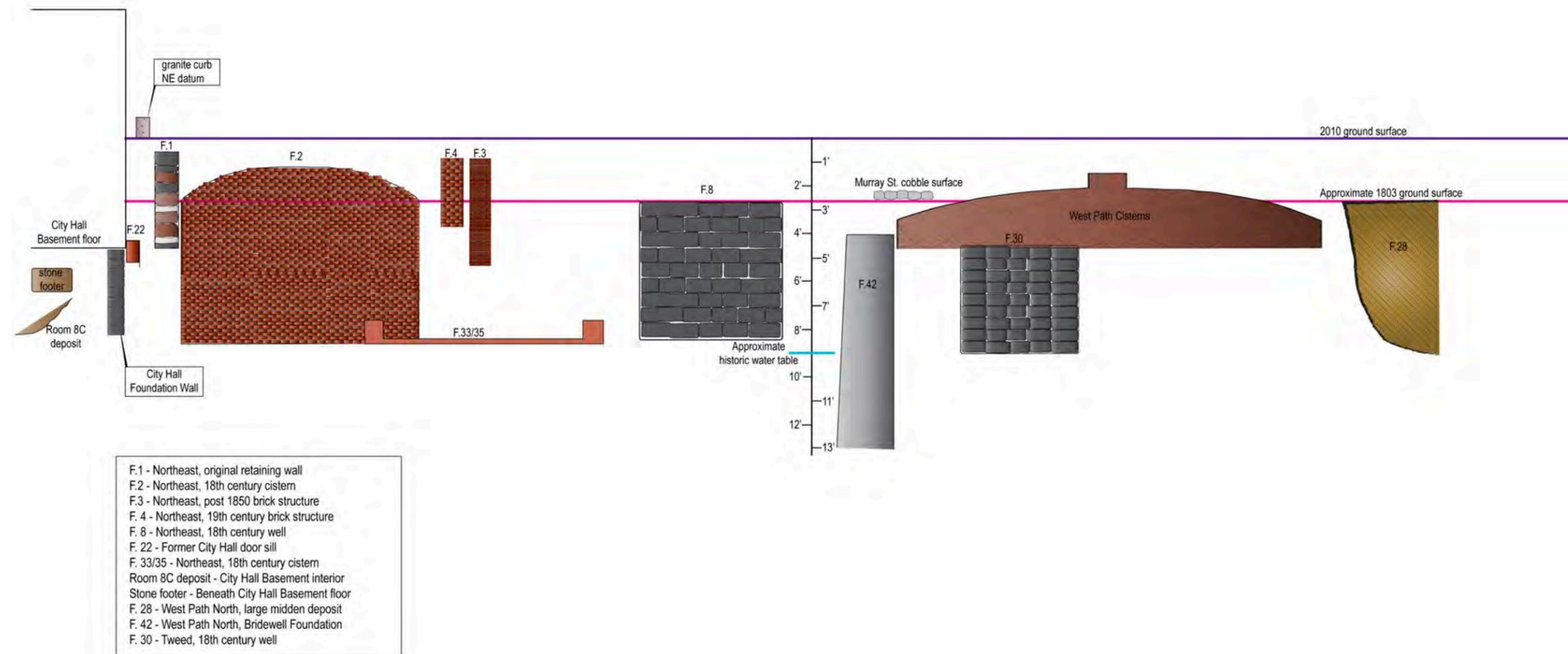


Figure 11.01: Schematic representing the vertical relationship between archaeological features recovered in 2010 and City Hall with regard to the 1803 and 2010 landscape elevation. The horizontal location of the features in this schematic is for representative purposes only; it is neither accurate nor to scale.

Archaeological evidence provides definitive information regarding the historic water table. All the wells recovered on site extended to 9' below modern grade, 6' below the 1803 grade. It is noted that no wells were uncovered during previous excavations. The features recovered during the 2010 excavation provide the extent of the sample within City Hall Park.

Water wells and cisterns were common features of the eighteenth- and early-nineteenth-century landscape. At the Commons, located inland on Manhattan Island, well water might have been less brackish than in other areas and possibly suitable for consumption. Cisterns stored rainwater for task work and were a resource for firefighting during the early decades of City Hall. Both of these types of features provide small insights into how the city's ancestors utilized the landscape and its natural resources, as well as their understanding of it.

Access to fresh water has always been a priority for New York City. New Yorkers often had to go to great lengths to obtain potable drinking water, including importing bottled water from Europe, as evidenced by material remains recovered as part of the ongoing Fulton Street Development Project (Chrysalis Archaeology 2012). In part, the nature of commerce dictated that initial settlement of Manhattan took place on the waterfront periphery of the island. Due to the environmental nature of Manhattan, the groundwater available to residents settling along the waterfront was brackish. It was suitable for beer production or brewing tea, but unsuitable for direct consumption. Residents had to travel inland and/or north to obtain and transport fresh water. The nearest freshwater source was the Collect Pond, but that was becoming polluted by local industry in the early to mid-eighteenth century. As early as 1677–1678, New York City's mayor proposed a plan to establish a citywide system of public freshwater wells. Several projects since then, and up to the present day, have continued to build systems to provide New York City residents with fresh drinking water.

The current interpretation is that the water table at City Hall Park was shallow in the eighteenth century and as late as 1803. Following demolition of the first almshouse (1797), one idea proposed (in 1799) for the area was a public well and waterworks (Koeppel 2000:31, 2001:3). This would indicate that, as late as the turn of the nineteenth century, the project area had a shallow water table. Additional supporting evidence for this conclusion began with identification of the existing surrounding environmental conditions. City Hall Park, located near the center of the southern tip of Manhattan Island, is roughly equidistant from the two rivers that define the island. Research identified elevations within the project area to be approximately 40' above mean sea level. At a nearby USGS monitoring well—located near the intersection of Henry and Pike Streets at an elevation of 35' amsl—the water table is at approximately 8.44' amsl, or 31.56' below surface (USGS 2007). This indicates the current water table at City Hall Park is likely 5' deeper (i.e., 36' below surface).

Although the hills and ponds surrounding City Hall Park have been leveled or filled, Sanderson's GIS work as part of the Manahatta Project indicates that the project area itself has undergone little alteration (Sanderson 2002: 81). It does not appear that the landscape surrounding City Hall has been extensively built up. Archaeological features and burials have been exposed within 3' of the present-day surface. Based on archaeological evidence, the current depth to water within the project area has changed significantly, not the surface elevation, since the first wells were excavated in the eighteenth century.

As discussed in Chapter IV, it was likely the construction and ensuing operation of the New York City subway system that ultimately altered the water table of the project area. The City Hall Loop Station lies between 25' and 30' below the parking lot of City Hall. This is significantly deeper than the historic water table, as determined by the documented depth of the well features recovered during this project.<sup>4</sup> The subway station was manually excavated using a method known as “cut and cover” (Image 11.02). In this method, a trench is excavated and roofed with an overhead support system. When detailing the construction of the new Interborough Rapid Transit subway in 1904, it was stated that drains and pumps were necessary to remove water entering the system from *above* (IRT 1904). One of the most common methods of lowering the water table during cut and cover excavation is to employ a series of deep wells and well points (Hemphill 2012). In the case of the City Hall station, a sump hole was constructed beneath the station in order to contain overhead leakage and pumping (IRT 1904). Sump No. 1, the depth of which is not known, would be a permanent fixture of the City Hall Loop Station. It originally consisted of a directly connected electrical triple plunger pump and sump pit connected to the sewer system. Both during construction and afterward, this system lowered the surrounding water table to ensure the stability of the subway tunnel by directing water to the sewer/storm drainage system (IRT 1904).



Image 11.02: Beginning excavation for the City Hall subway station, circa 1901  
(New York Public Library Digital Gallery, 2012).

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4. USGS records the present-day water table at Henry and Pike Streets, approximately one mile from City Hall Park, as being 31.56' below surface. The water table within the current project area was measured during the project at approximately 50' below surface.

Today, over 200 pump rooms and a series of deep wells operate continuously, pumping several million gallons of water per day to keep the city's subway system dry. Without this system of continuous dewatering, the subway system would flood and its exterior walls would be subjected to constant wet conditions (Metropolitan Transit Authority 2012). Both USGS and NOAA state that continuous pumping of water can dramatically alter the shape and depth of the water table (USGS 2003 and USGS 2013). The substantial subsurface construction of the subway system throughout the area—specifically on the west, east, and south sides of the park—and the required associated water drainage and pumping systems has determinately altered, or modified, the natural water table within City Hall Park.

By the time the subway was constructed, lower Manhattan no longer relied upon wells for drinking water. Fresh water was, by that time, being brought in from upstate New York via the Croton Aqueduct system. Cisterns continued to be used into the nineteenth century. The use of cisterns speaks to an economy of resources. With fresh water being a hard to get or a limited resource, it was not wasted on task work. Rather, the city's ancestors collected rainwater for non-consumptive water use. This method was still common when four cisterns were constructed to store water for use in case of a fire at City Hall. To ensure these were always at capacity, the cisterns were connected to City Hall's roof gutters. All rainwater runoff from the roof was directed into the cisterns, similar to the way in which rain barrels are installed today. Subsurface pipes connected the gutter downspouts to the cisterns.

We can see this economy of water storage and use further employed when we consider the question of overflow from these cisterns. The more developed and paved the city streets are, the less opportunity heavy rains have to disperse, which can create flood conditions. Anyone who has observed a rain barrel during a rainstorm can comment on the sheer volume of water created from even the smallest roof. To combat potential overflow from the roof runoff into the cisterns at City Hall, a series of drains were installed that connected the cisterns. These drain features were observed on both the north and west sides of City Hall. The drains connected over a wide area, channeling into several no longer used features (e.g., the wells). This system was further extended, draining potential overflow from those features out to the open fields to the east and south of City Hall. The drain observed in the northeast vault area appeared to extend eastward, away from City Hall; the drain at the southwest corner of City Hall extended farther south, away from the building. These areas are at lower elevations of the property, thereby draining water away from City Hall and directing the overflow back into the ground and, in turn, the water table.

Historic use of the landscape and its resources is coupled with how it was physically occupied. Analysis of the 1999 assemblage and recent work suggests that structural development occurred throughout the property, except for a portion of the eastern area between the gaol and barracks (Map 11.02). Initial analysis incorporated a spatial assessment of the location and type of resources. Areal boundaries were defined based upon the type and location of archaeological resources and their relative position to historic structures within the property (Loorya, in process). While containing some degree of arbitrary delineation, the areal definitions identified a pattern in which the majority of the trash deposit features were situated within the eastern side of the property. Architectural features were identified throughout the property, but with minimal presence in the eastern area (see Map 11.02).

Trash deposit features were recovered elsewhere on the property, but all of these were significantly smaller than those recovered from the eastern portion. It was also noted that all of the deposits on the east side of the property dated to the eighteenth century. Any nineteenth-century deposits recovered during the 1999 excavation tended to be smaller and outside of the eastern area. The eastern side of the property contained 91% of all artifact remains from trash feature contexts recovered in 1999. Expanding the sample to include the eighteenth-century materials recovered from the 2010–2011 project reduces this percentage by four points. Of the eighteenth-century materials recovered from the 1999 and 2010–2011 projects, 87% were recovered from deposits within the east field of City Hall Park. It would appear, based on the available data, that the majority of eighteenth-century refuse disposal occurred regularly and deliberately on the east side of the property.



A continued understanding of the historic landscape included reassessing previously created composite maps, such as those from the 1994 Hunter study, depicting the location of eighteenth-century structures, particularly the almshouse and the Bridewell. Information from these composite maps, historic references about the configuration of the area, McComb's original site plan (Image 11.03), and several historic maps were combined to create the composite map(s) presented in this report. Using the DDC topographic survey as a base map, and City Hall as the focal point, historic maps were converted to the topographic survey map scale. As a means of control, various property dimensions were correlated for additional accuracy and consistency in translating the historic maps. Variations that existed between the measurements from the historic maps and dimensions from historic records were, in some instances, averaged. However, it should be noted that the measurements averaged never ranged more than approximately 5' in difference.

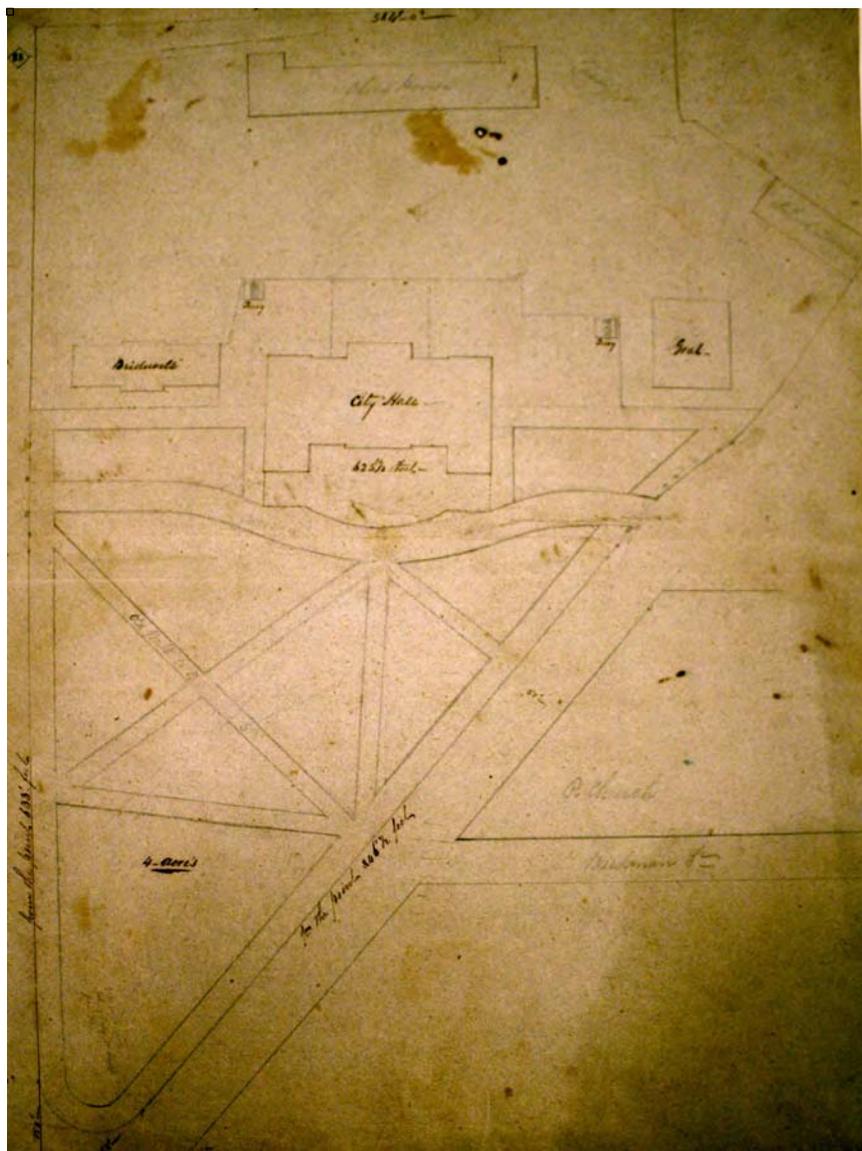


Image 11.03: McComb site plan of City Hall.

The first known substantial construction in this area began in 1735 with the first almshouse, located along the northern edge of the future City Hall. Previous composites all place the north end of the almshouse in line with the north end of City Hall, though there is variation with regard to the east-west position of the building.

The first almshouse had a stone foundation and brick upper and measured 24' x 86' (Minutes of the Common Council 1675–1776; Hunter 1994). Three eighteenth-century wall features (Features 23, 25, and 26) were uncovered during excavation in 2010–2011 (see Maps 11.01a and 7.17a), and one or more of these features was likely remnant of the first almshouse foundation. Though the eighteenth-century composite presented in this report (Map 11.03) is conservative with respect to repositioning the almshouse from its location on the 1994 composite maps created by Hunter Research, map overlays support the hypothesis that either Feature 23 or Feature 25 were part of the almshouse foundation. These wall remnants are both at the appropriate depth for the almshouse, which had two stories and a cellar, and are composed of materials appropriate to contemporaneous accounts of the materials used in construction of the almshouse.

Locational analysis places the deposit excavated from within Room 8C of the City Hall basement within the footprint of the first almshouse, specifically the northeast section of the structure. Historic documents cite the northeast room of the almshouse cellar as having been used for task work and other activities, located beneath the almshouse kitchen and dining area. The materials recovered are consistent with this account. Among the assemblage, which dates to the eighteenth century, are materials associated with task work, various household items, and food remains associated with poorer quality meat portions.

The almshouse was demolished in 1797. Historically, it was a common practice to collapse a building in on itself and to reuse the structural materials. Archaeology throughout New York City, and archaeology in general, has demonstrated this past practice of using the fabric of the demolished structure to level out an area before rebuilding. This has been observed archaeologically at the Stadt Huys Site (Rothschild and Wall 1987), Five Points (John Milner Associates 2000), and most recently along Fulton Street (Chrysalis Archaeology 2013). If materials were removed from a demolition or construction site, it was generally for reuse or land-building activities. The concept of a dedicated landfill area, the sole purpose of which is to receive and indefinitely house discarded waste materials with no potential for reuse, has been more exclusively utilized within the late twentieth century.

By the nineteenth century, fewer persons were occupying the property, the eastern area was likely covered and leveled, and other smaller areas were utilized for refuse disposal. The city may also have been having greater success with regulations that required residents to dispose of refuse in the East River.

When excavating for City Hall, the workers would likely have excavated only the area necessary for construction. The soils encountered would have consisted of the fill soils associated with the almshouse demolition and the natural subsoils. These natural soils would have been poorly drained and consisted of loose unconsolidated sands with pockets of clay. This assessment is based on the established historic environment of the area and direct

observations during recent excavations. Another consideration that would have ensured a conservative excavation depth for City Hall's foundation and basement would be the relatively shallow water table. While it is not unknown to observe stone foundation walls that extend into the water table, care would have been taken to maintain excavation of the larger interior area of the proposed basement within dry soil conditions, and this work may have employed the use of well points.<sup>5</sup> Consideration of the high water table is noted in the bottom depth of the stone footings identified beneath the basement floor at approximately 0.5' above the historic water table. The footings themselves are a structural feature commonly used to raise floor joists above potentially wet conditions, permitting air and water circulation beneath the subsurface of the floor (Brigham Young University 2012).

Dated to the early nineteenth century, one of the more substantial features recovered is the stone wall found alongside the circa-1950s concrete area way retaining wall (Maps 11.01a and 7.17a). The stone retaining wall (Feature 1) may have been a practical feature that aided construction of City Hall. Identified along the north, east, and west sides of City Hall, it is also likely present along the southern side of the structure. The wall was vernacularly constructed utilizing a variety a building materials readily available to the workers. Among the stone used in the construction of the wall is cut gray stone, white marble, and brownstone. The marble and brownstone were among the original materials used for City Hall. Considering the natural soils of the area, this wall potentially acted as a form of shoring that enabled the workers to construct the foundation for City Hall. A possible scenario is that the workers trenched the perimeter of the proposed building footprint, constructing the retaining wall on one side as they trenched and constructed the City Hall foundation along the opposite wall of that trench before excavating the interior.

The retaining wall would have created an areaway surrounding the foundation of the building. It is uncertain if this remained exposed upon completion of the original construction, as it is not shown as part of McComb's original site plan (see Image 11.03). The areaway would have been minimal, extending approximately 2' below the 1803 grade. An areaway is depicted on the 1811 commissioners' plan map (see Image 7.125) and is suggested in some early paintings of City Hall.

The retaining wall would not be the only structural feature not shown on McComb's original plan. There is the doorway that led from the basement kitchen (Feature 22) and another door that is visible in a 1905 photograph (when the photograph is digitally zoomed in or enlarged) from the Library of Congress. This photograph (Images 11.04 and 11.05), taken during the period of the William Aiken renovation that began in 1903, shows a side door with the words "Police Precinct" above. There have been many renovations of City Hall that have altered its configuration and access points to the exterior.

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5. Well points are pipes inserted into the ground and from which water is drawn. They are generally small in diameter and have openings near the bottom. Water is drawn through these points via a pump or vacuum system. Well points are typically installed at close centers in a line along or around the edge of an excavation. They can be installed in stages, with the first installation reducing the water level by up to 5 m, and during a second stage, installed at a lower level, further lowering the water level (Machmeier 1985; Powers 1992).



Image 11.04: 1905 image of City Hall and surrounding area by Detroit Publishing Company (Library of Congress Online Collection 2012).

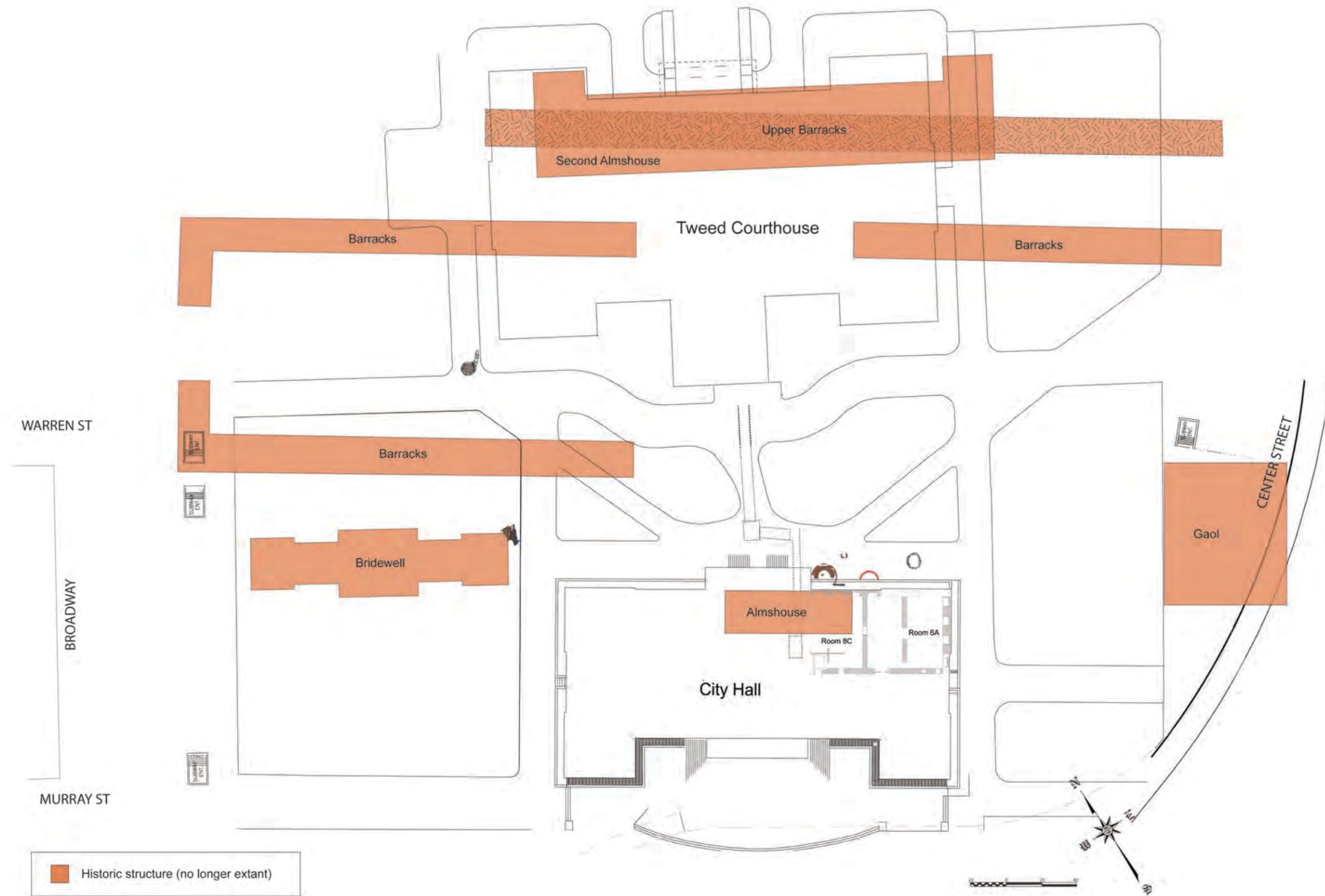


Image 11.05: Detail of the 1905 image (11.04) showing a no longer extant side door.

The following pages contain map composites created during this project. These composites use the NYC DDC map as a base, with multiple sources of information overlaid to formulate the final product. They are:

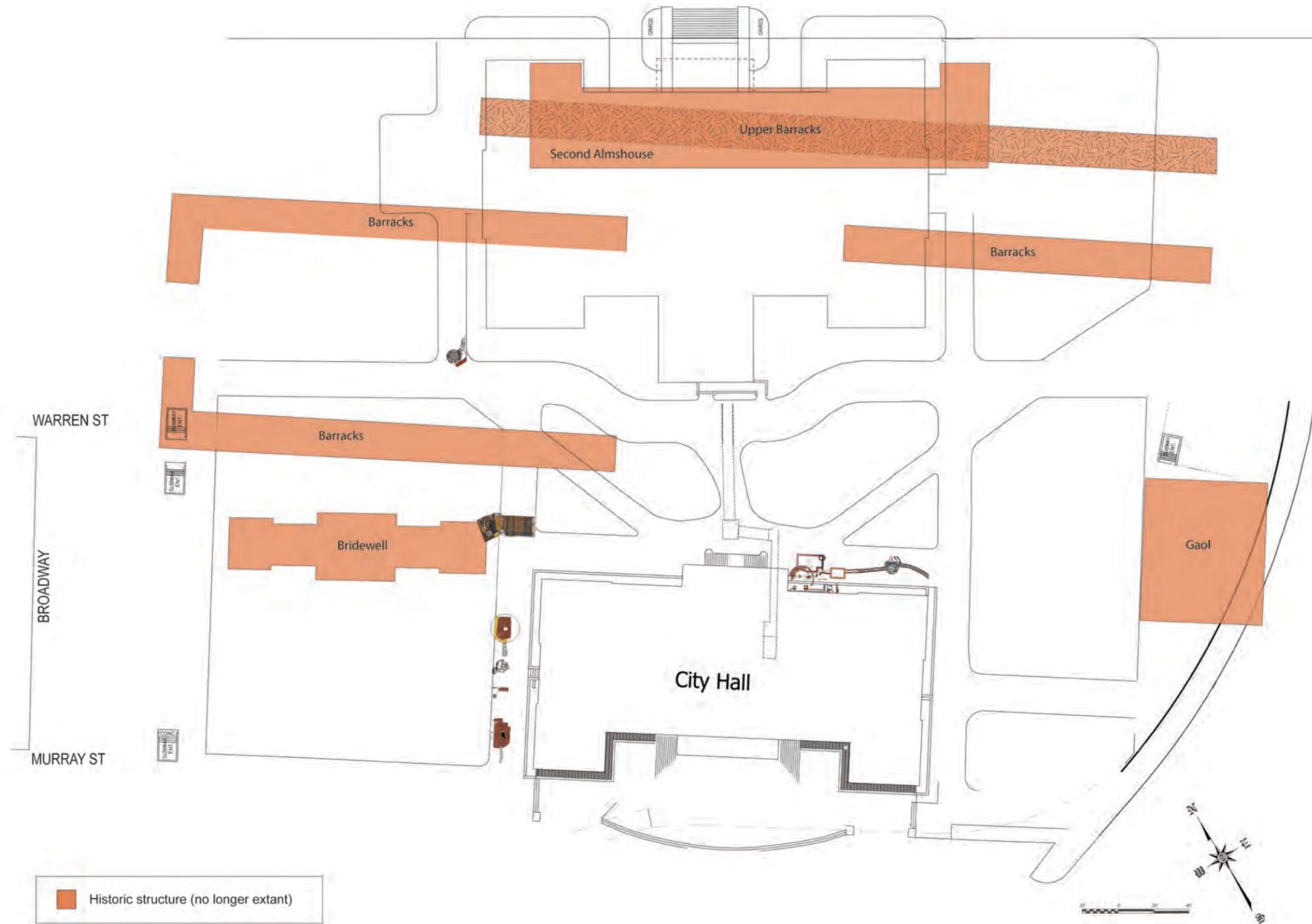
1. Map 11.03: This map presents a composite of the eighteenth-century structures and recovered eighteenth-century archaeological features overlaid onto the map of City Hall Park. The twentieth-century features include the modern grassy islands, City Hall, and Tweed Courthouse.
2. Map 11.04: This map presents a composite of the nineteenth-century structures and recovered nineteenth-century archaeological features overlaid onto the map of City Hall Park. As above, the twentieth-century features include the modern grassy islands, City Hall, and Tweed Courthouse.

□



Map 11.03: Eighteenth-century composite map depicting structures and recovered archaeological features.

□



Map 11.04: Nineteenth-century composite map depicting structures and recovered archaeological features.

### ASSEMBLAGES... REFUSE DISPOSAL THROUGH THE CENTURIES

It has been generally accepted that when it comes to refuse disposal, human beings seek the easiest course of action, to travel the shortest distance possible. In historical archaeology, this is represented in former shaft features becoming trash receptacles in household back yards. While this system is feasible on the household level, it may require modification within a densely populated institutional setting. Considering the two most recent excavations within City Hall Park (1999 and 2010–2011), it appears that during the eighteenth century, the majority of refuse disposal occurred as communal deposition on the east side of the property. During that period, it was the least occupied—or the least developed—portion of the Common (see Maps 11.02 and 11.03). It was the backyard of the gaol, and there is the possibility that the area was cordoned off from the barracks at the northern end of the structure (Image 11.06).

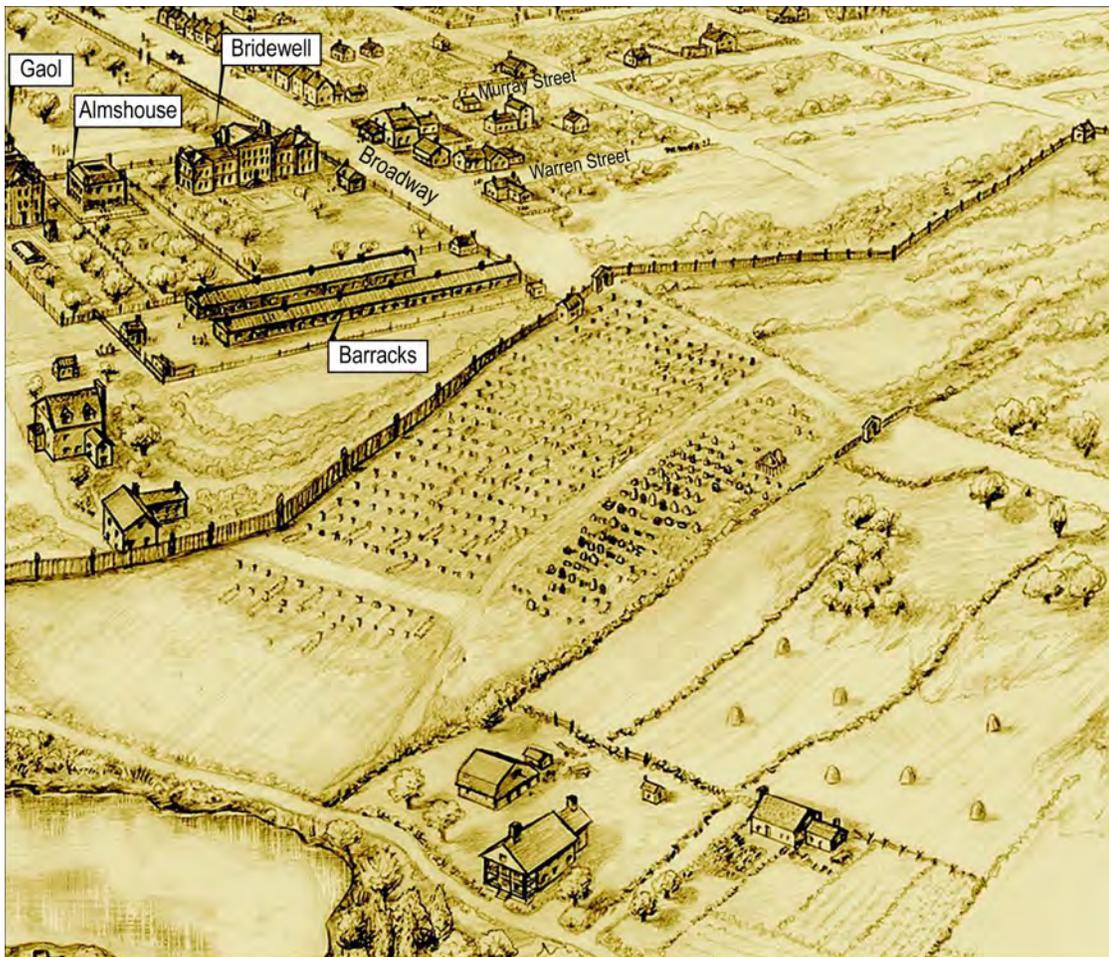


Image 11.06: This image is described as the African Burial Ground in Manhattan, late 1700s (author unknown) and also shows the northern half of the Common, including the gaol, almshouse, and Bridewell, all in a row, and the British Barracks.<sup>6</sup>

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6. This image was obtained from Wikimedia 2012. The originally referenced location on the African Burial Ground web page is no longer active. Attempts to identify the original source have so far been unsuccessful.

The western side of the property had been built upon by the mid-eighteenth century and was occupied by the Bridewell and the lower barracks. Additionally, the western side of the property fronted Broadway, an active thruway that had houses built upon its western edge as early as the mid-1700s. This would have made it a less likely or less feasible location for large-scale refuse disposal. The east side and southern portion of the Common were the only large open areas where major trash deposition by multiple entities could occur. Considering there were hundreds of people living on the Common—a relatively small area—at any given point in time during the eighteenth century, it would seem to make sense, from a modern-day point of view, that refuse disposal be limited to a centralized location.

This discussion does not address issues of outside deposition—materials disposed of by persons or industries not residing on the Common. While it is highly likely that deposition from off-site persons did occur, it is not immediately relevant to the presence or absence of trash deposition on site. However, it should be acknowledged that once an area of deposition was established, it is possible, if not probable, that others within the vicinity of the Common utilized the deposition area. It would be less likely that persons not occupying the property would dispose of significant amounts of trash in random locations—i.e., in an area of the property not already subject to refuse disposal.

There are several inherent assumptions in the above assessment, which make an understanding of the formation of refuse deposits within City Hall Park more complex than straightforward. First, it has been archaeologically demonstrated at City Hall Park that not all refuse was disposed of in the eastern area of the property. Smaller subsidiary garbage disposal areas were identified throughout the property. Several institutions and a large number of people occupied the property for a long period of time, and would have produced significant amounts of trash. Unless the large disposal areas in the east were cleaned out and the trash carted away, there should be additional areas of refuse disposal. These may not have been discovered yet, or it is equally possible they were impacted or removed by various construction works throughout the area. However, based on available evidence, certain hypotheses or assumptions can be made.

The demonstrated locational analysis of the materials from the 1999 excavation suggests concentrated refuse disposal on the eastern side of the Common. The multiple deposits excavated in this area represent long-term deposition. Due to construction constraints and field conditions, the area was excavated as several distinct depositions. However, stratigraphic analysis has identified several of these as a single deposit with stratified temporal distinctions. Figure 11.02 depicts the reconstructed stratigraphic profile for three of these separately excavated trash features.

The question of trash disposal is dependent on several variables. Foremost is human behavior, and as noted above, it has been repeatedly demonstrated that human beings have a tendency to transport their “trash” as short a distance as possible before discarding it. Despite numerous regulations within eighteenth-century New York attempting to regulate trash disposal, garbage in the city streets remained a problem (Burrows and Wallace 1999). It is noted in contemporary documents that residents did not always follow regulation. Access to trash disposal within the Common is another variable. The volume of deposition recovered

from the eastern portion of the property in 1999 suggests a sizable community. The question is in regard to the limitation of that community. Was refuse disposal in some manner limited to residents of the Common or did refuse disposal also come from the larger surrounding area? There is no definitive evidence of the Common being closed off by fences or some other barrier. Regardless of outside deposition, multiple social groups deposited refuse within the eastern area of the Common. At a minimum, these groups are limited to the almshouse residents, gaol and Bridewell residents, and those occupying the British barracks.

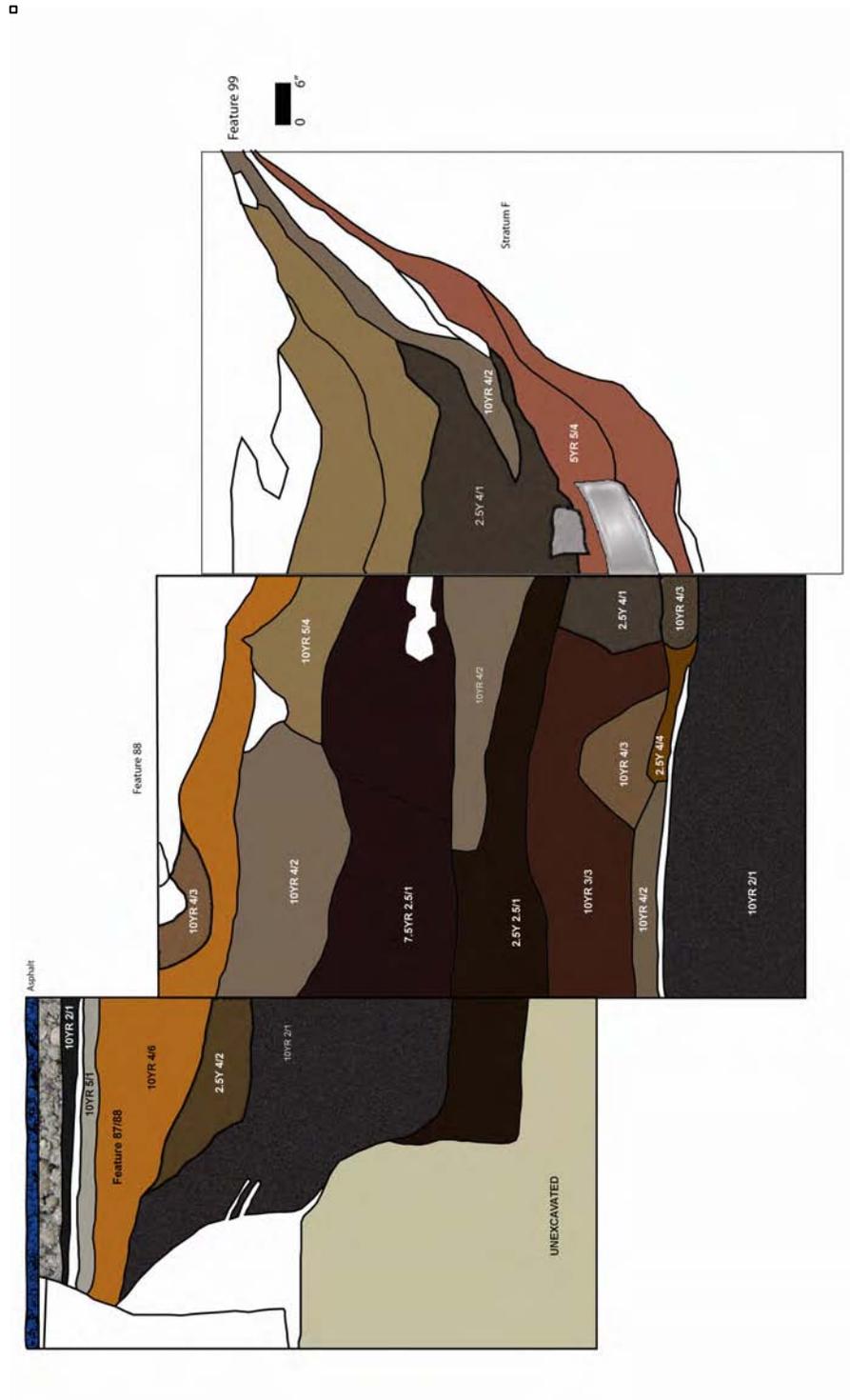


Figure 11.02: The reconstructed profile of three trash deposit features from the 1999 excavation project.

Though the 1999 large-scale deposit is stratified, there is no current method and theory to filter the materials into the possible social groups for association. Further muddying the association of materials is that all three of the above-mentioned social groups would tend to present similar material assemblages; their uniqueness would only be identified in small finds, such as military-related artifacts, a quantifiably significant representation of button-making activities comparative to other deposits, or the quality and variety of meat being consumed.

Even though the largest of the deposits recovered in 1999 cannot be directly associated with a particular group, there are smaller deposits that can be. These smaller deposits can be associated based on location or composition. The best example of this is the shallow sheet deposit located in the approximate location of the western wall of the gaol (Features 91 and 92 from the 1999 project) (see Map 11.02). Highly fragmented materials and a large number of smoking pipe stems and bowl fragments characterize this deposit. While fragmentation is generally an indicator of a secondary or tertiary deposit, there are no other indications that these features represent a redeposition. The fragmentation is relatively uniform; the deposit was spread, shallow, and highly compacted, according to field documentation. The deposit was not pit shaped, which would have indicated a hole being dug for redeposition. All information suggests that Features 91 and 92 represent a heavily trodden down surface. The percentage of smoking pipes comparative to other artifact types is significantly greater in this deposit than is exhibited in other assemblages from the site. One might speculate that this deposit represents, or is the result of, an area where people stood and smoked alongside the gaol.

No nineteenth-century refuse deposits were recovered within the eastern portion of the property. Additionally, the nineteenth-century deposits that have been recovered either during the 1999 or 2010–2011 projects tend to be smaller or more contained. The largest nineteenth-century deposit recovered to date is Feature 28, recovered during the 2010–2011 project on the west side of the property (see Map 11.01a). This feature represents a short-term or single-episode deposition tightly dated to within the first 15 years of the nineteenth century. With the construction and opening of City Hall in 1811, there was likely an emphasis on containing refuse disposal in the newly minted park.

Though similarly large in quantifiable terms, the nineteenth-century refuse deposit (Feature 28) found during the 2010–2011 excavations is distinct from the large-scale Feature 88 deposit from 1999. First, Feature 88 (1999) dates to the last half of the eighteenth century, while Feature 28 (2010–2011) dates to the early nineteenth century. Also, Feature 28 was a short-term deposit, while Feature 88 showed evidence of accretion over time. Feature 88 exhibited distinct temporal levels, and this large eighteenth-century refuse deposit represents multiple groups. Feature 28 exhibited none of these characteristics. Evidence suggests that this feature was used/filled in a single episode or a relatively short duration during the early years of the nineteenth century.

Feature 28, though incompletely excavated, contained over 17,000 artifacts. It is almost certainly a primary deposit dating to the first decade of the nineteenth century. Located northwest of City Hall (see Maps 7.01, 7.42a, and 11.01a), Feature 28 was adjacent to (east

of) the Bridewell and northwest of the City Hall construction. Stratigraphically, Feature 28 exhibited no evidence of being an accretionary deposit. A distinct lack of rodent disturbance supports the idea that the deposit was short term and quickly covered. The size of the deposit suggests multiple persons or a community; the two groups occupying this area at the time in question were the Bridewell and its inmates and the workers building City Hall. The analysis suggests this deposit has little association with the institutional residents of the area, and is likely associated with the workmen constructing City Hall.

During the construction of City Hall, John McComb was a regular presence on site. A newspaper listing John McComb with regard to the lease of a property directs the reader to contact him at the “New City Hall” (*New York Gazette*, May 2, 1806). According to his diary, he leased a residence across the street on Broadway (McComb family papers 1787–1858). However, it was Alexander Campbell and Abraham Labagh, both master stonecutters and masons, who organized and managed the physical construction work. A search of historical newspapers (including the *Evening Post*, *Daily Advertiser*, and *New York Journal*) identified several advertisements for workmen promising constant employ in a “salubrious situation” with high wages paid weekly. All inquiries were directed to Campbell and Labagh at the “New City Hall.”

The association of Feature 28 with the workers is largely indicated by the time frame of the assemblage (1800–1815) and the presence of several masonic pipes. Also, within the assemblage are a range of household wares, including a variety of tablewares with regard to form and style, but the assemblage lacks a significant percentage of utilitarian wares. The tablewares include cappuchines, flaçons, condiment bottles, a punch bowl, several teapots, and pitchers—decidedly high-end forms/types, suggestive of a more privileged population. Additionally, the faunal materials suggest a varied diet composed of high-quality portions of cattle, a variety of fish, and delicacies, such as turtle. This variety would be inconsistent with a prison population. While undoubtedly materials from the Bridewell residents could be within this assemblage, its general character suggests the assemblage is the product of another group, likely the persons constructing City Hall and the result of some sort of event.

Feature 28 is reflective of the changing use of the area in the nineteenth century. No longer did multiple institutions inhabit the property; it was a municipal property and public park often used for celebration. People no longer lived within City Hall Park. The single or short-term deposition of Feature 28 may be associated with an event that necessitated a cleanup of the area. One such event could be the inevitable cleanup of the site leading up to the opening ceremonies for City Hall in 1811. It may also reflect a single celebratory event that involved a feast or celebration among workers constructing City Hall. The dinner paid for by the mayor, at the beginning of the project, is one such possibility. A celebration followed the cornerstone laying ceremony on May 26, 1803. According to McComb, “all the builders supped with part of the corporation at the Almshouse—had an excellent supper and plenty of good wine. We stayed until one o’clock A.M.” (McComb family papers 1787–1858). McComb also notes that the mayor gave the workmen \$100 and plenty of drink. Other possible celebrations could be for Evacuation Day or the opening of City Hall. Regardless of the event, this deposit is one of the few tightly dated deposits recovered from within City Hall Park and reflects a period of transition for the property from institutional to governmental use.

There is an interesting consistency among the larger assemblages recovered throughout City Hall Park (in 1999 and again in 2010–2011)—the lack of rodent disturbance or gnawing of faunal elements in these deposits. This strongly suggests that the deposits were quickly covered or somehow made inaccessible. That they were quickly covered is the most feasible option, and further suggests attempts to control the rodent population by not providing them with a food source, as well as attempts to maintain the area. It may also have been a means of controlling disease or insects that might be attracted to rotting food waste.

Several smaller refuse deposits have also been found throughout the site in various contexts. A detailed comparison between the current and the 1999 assemblages was beyond the scope of this report; as such, only broad statements can be made. These statements will hopefully be useful for future consideration or analysis.

The smaller refuse deposits recovered in 1999 mostly date to the eighteenth century. This is likely due to the coincidence that areas where excavation was focused happened to correlate to areas of denser occupation and disposal within the eighteenth century. Comparatively, as a matter of happenstance, the majority of smaller deposits recovered from the 2010–2011 excavations date to the nineteenth century. Again, this is likely due to the fact that the areas being focused on were coincidentally areas of nineteenth-century activity. What is apparent from these smaller deposits is the pattern of land use. Based on available data, prior to the nineteenth century the majority of refuse was regularly and deliberately deposited on the east side of the property. Following the turn of the nineteenth century, there was a distinct lessening of refuse deposition that is not associated with the various construction episodes. Refuse was no longer permanently disposed of on site by the twentieth century.

These smaller deposits provide the best opportunity to associate materials with specific groups or actions. Several of the 2010–2011 deposits are associated with workmen building or renovating City Hall. There are deposits from the early nineteenth century, the period of City Hall's construction, and deposits that contain refuse and demolition debris associated with the early-twentieth-century renovation of City Hall.

It is a fair assumption that, from 1803 to 1811, the workers building City Hall were most likely on site for multiple hours of the day; it may even be a possibility that some resided in one of the no longer used barracks structures.<sup>7</sup> The multiple deposition layers recovered from Features 33 and 35 (2010–2011), within an eighteenth-century cistern, date to the period of City Hall's construction. Sand was laid atop the refuse between at least four distinct deposition episodes. It is hypothesized that these deposits represent the refuse of the workmen, perhaps from their meal breaks. The no longer used cistern was a ready and convenient receptacle. A new crop of workers in the early twentieth century used newly defunct structures, such as Features 3 and 4 (2010–2011) to not only dispose of their refuse but to dispose of debris from the renovation work they were doing. This was particularly apparent within Feature 3, which contained various architectural materials, including glass panes from the removal of transoms and glass-paneled doors (Aiken 1902).

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7. This is conjecture; there is no supporting documentary evidence that has been found to date.

Another smaller deposit, one that may be much larger, is the primary deposit recovered within the Bridewell. Only a small portion of this deposit, which dates to the period of the Bridewell's deconstruction, was recovered due to construction constraints. Further archaeological testing, as recommended in the Landmarks Preservation Commission decision (see Appendices A and C) will provide additional information about the eighteenth-century building techniques utilized on the Bridewell, additional primary deposit materials, and information as to how the building and basement were utilized, thus providing additional insights into penal institutions in eighteenth-century New York City.

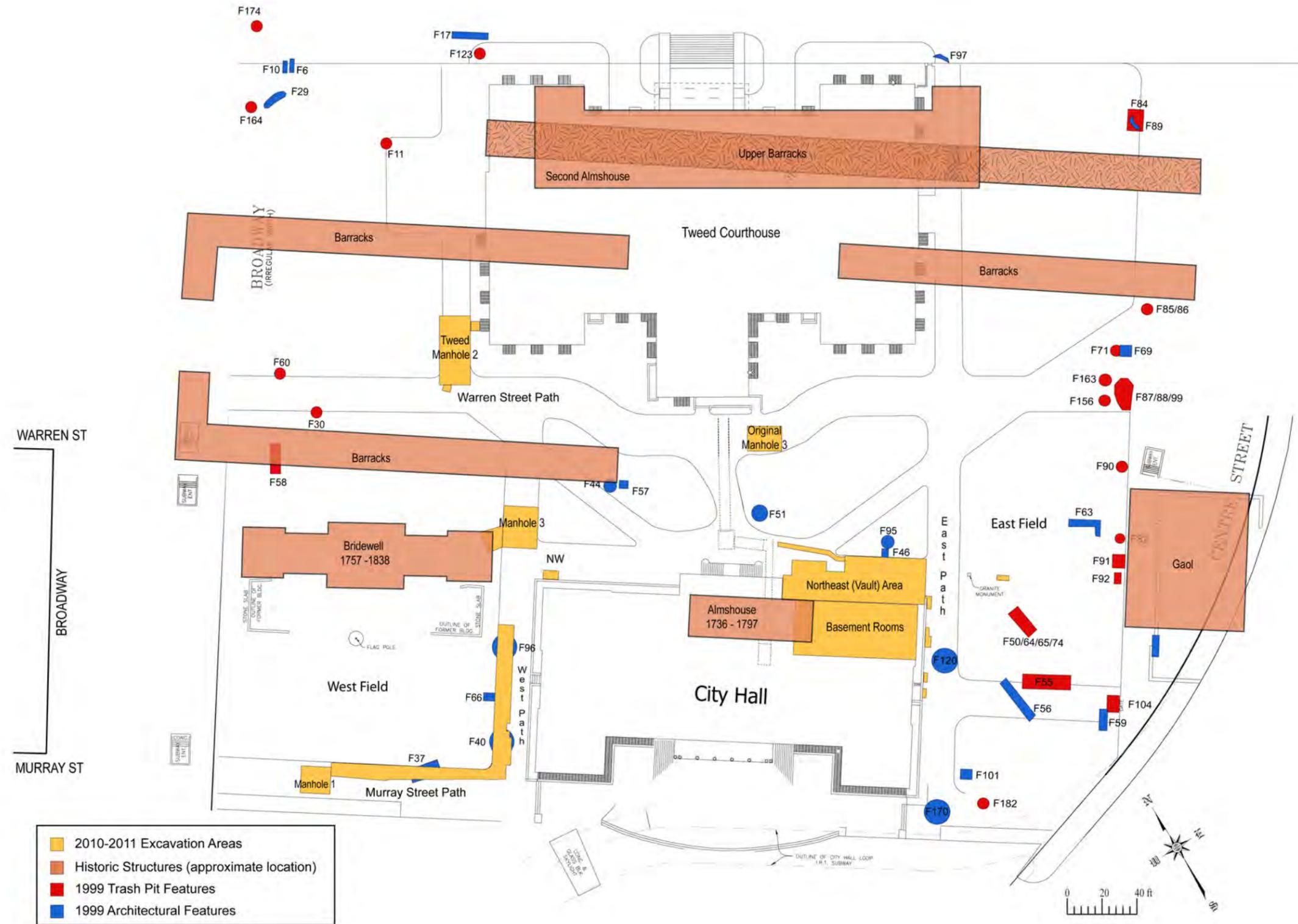
The materials recovered with this Bridewell deposit are reflective of a clean out. Based on the small sample recovered, the assemblage contains an odd assortment of objects left behind or discarded as the building was vacated.

Recovered deposits represent singular events or the accumulation of activity by the city's ancestors. The deposit from Room 8C in the City Hall basement appears to be the scattered remains of occupation within the first almshouse. In this we have evidence of the task work undertaken by almshouse inmates, information regarding the diet provided to these deserving poor persons, lost currency, and a pair of eyeglasses. This assemblage is similar to the one recovered by the Brooklyn College field school in 1989. Baugher's analysis associated these materials with the first almshouse.

#### **SUMMARY**

As exemplified in the material and feature remains recovered during the 2010–2011 excavations—coupled with the information recovered during the previous excavations, most notably in 1999—City Hall Park has provided, and continues to provide, a wealth of information on various aspects of New York City's history. From the natural environment, as noted in the changing water tables, to the built environment, as noted in the changing landscape and utilization of resources, to the cultural environment, which informs us about activities, diet, and identity, the archaeology of City Hall Park provides a focused window into several aspects of New York City's past.

Archaeology is ultimately about the people—the human beings who made and utilized materials, who inhabited a locale and modified their environment through deliberate action. Over the past 275 years, since the opening of the first almshouse, several thousand individuals have inhabited City Hall Park for varying durations. These people were from various segments of New York City's residential population: the poor and indigent; petty criminals; billeted British soldiers (and/or hired Hessians); American soldiers being held as prisoners of war; construction workers; city municipal workers; and government officials. The Revolutionary War-era British bayonet recovered from a disturbed context, a set of New York State Guard buttons, and fragmented human remains from disturbed burials represent evidence of these past occupants and some of the varied activities or roles this property has served. Even if some of these are from disturbed or little understood contexts, many of these groups who occupied City Hall Park have still left some evidence of their existence.



Map 11.05: Composite site map depicting the 1999 and 2010–2011 excavation areas.

## **XII – SUMMARY AND RECOMMENDATIONS**

The 2010–2011 archaeological project at City Hall was undertaken to upgrade the 200-year-old City Hall. Built from 1803–1811, the building was in need of infrastructural and structural upgrades. This required excavation within City Hall and City Hall Park. During this work, 42 archaeological features and over 40,000 artifacts and ecofacts were recovered. The analyses of the excavation and associated materials and features have broadened our knowledge and understanding of the property that was once known as the Common.

To date, a great deal of research has occurred revolving around this property; archaeological projects and historic research have recovered a plethora of materials and information. The major concepts of landscape change, use/reuse, and institutional populations have been—and remain—recurring themes within studies of City Hall Park. Data from the recent excavations not only added to existing information, but also added a wealth of new information, opening new avenues of inquiry.

Some of the earliest work in City Hall Park focused on the almshouse. Sherene Baugher analyzed materials the Brooklyn College archaeological field school recovered with an eye for button making and task work as associated with conceptions of the poor (Baugher 2001). Based on what has been learned since that earlier excavation, the materials used during her analysis likely came from the area immediately behind the almshouse. The composition of the assemblage recovered in 1989 is similar to that uncovered beneath the basement of City Hall in 2010–2011.

During the 2010–2011 excavations, foundation wall remnants associated with the first almshouse and materials identified to have been within the confines of that structure were recovered beneath the existing basement of City Hall. The recovered material remains were likely from within a cellar room of the almshouse, which was used for various task work. Evidence of sewing and button making were recovered in the form of bone button blanks and straight pins. The assemblage is also reflective of accumulated and/or donated materials, based on the range of styles present. The recent excavation has expanded upon and clarified information from the 1989 project; it has also demonstrated that earlier *in situ* and significant deposits remain beneath City Hall itself. The construction of City Hall has not completely erased all of the evidence of previous structures that once stood in that location, as the multiple features located beneath the areaway and northeast vault area confirm. Regarding the almshouse, future excavation and research should combine the data from the various projects into a single analysis, while applying comparative studies with other urban almshouses, such as the Philadelphia almshouse.

Excavation adjacent to the foundation of City Hall revealed a wealth of information on the period prior to and just after the construction of the municipal structure itself. It has been noted in this report that much of the earlier archaeological projects within City Hall Park focused on the eighteenth century. There has been little research focused on the nineteenth-century construction of City Hall itself and the ensuing period. The 2010–2011 work provided an opportunity to more fully consider the development and use of the landscape. Numerous feature remains were recovered, including eighteenth-century wells and cisterns;

nineteenth-century drainage channels, cisterns, and a possible exterior kitchen; and a possible storage or utility house. In addition, a retaining wall built during the 1803 construction of City Hall was exposed.

Excavations further exposing the ever-changing landscape of City Hall Park led to identifying shifts in the water table and changes to the elevation of the property. Documenting the various building foundations, retaining walls, and outbuilding structures, the project has been able to construct an overlay of different time periods within the landscape (see Maps 11.03 and 11.04). This stands out from earlier composites, developed by Hunter Research (1994), which relied upon the documentary record. The composites presented in Maps 11.03 and 11.04 build upon those Hunter Research developed, using/incorporating additional historic research supported by the physical evidence recovered during ensuing archaeological projects. The use and reuse of structures is demonstrated among the repurposing of wells, cisterns, and other outbuildings surrounding City Hall for different purposes after their originally intended functions were no longer necessary or applicable. These features would be used as trash repositories or part of the extensive drainage system.

Several thousand artifacts dating to the first decades of the nineteenth century and the turn of the twentieth century were recovered. These material remains provide information about the workmen who constructed the building, about the initial operating years of City Hall, and about ensuing renovations. This excavation has presented an opportunity to look into the lives of turn-of-the-nineteenth-century construction workers, yet another group/community that has occupied City Hall Park and a group that has not been studied previously. The turn-of-the-twentieth-century deposits reflect changes to City Hall that came with post-industrial development. The relative lack of eighteenth-century deposits in the west and north portions of the property adds substance to Bankoff and Loorya's analysis (2008), as well as Loorya's (in process) hypothesis, of concentrated refuse disposal on the east side of the property during the eighteenth century. During a discussion to highlight this circumstance in Chapter II, it is shown that 87% of all the eighteenth-century materials from the 1999 and the 2010–2011 excavations were recovered from the east field.

Of all the features and material remains recovered during the 2010–2011 excavation, the discovery of a small portion of the Bridewell is the most significant. This is the first time an eighteenth-century structure has been definitively identified within City Hall Park. Its discovery led to questions about the historically accepted location of the Bridewell, based on nineteenth-century maps and lithographs. Although only a small section was excavated, the size and complexity of the foundation were unexpected. Its mass suggests a substantial basement. It is likely that the remainder of the foundation lies intact beneath the modern-day surface and that material may be deposited within the confines of the foundation. The potential future excavation of the Bridewell can—and most likely will—provide an unparalleled opportunity to investigate the use of, and activities associated with, the Bridewell. Similar to the inmates of the almshouse, prisoners were set to various forms of labor in hopes of transforming them into “productive” members of society. Historical records have indicated that among the task work performed by residents within the Bridewell was forging iron nails. Records indicate that children were regularly among the Bridewell's

inmates, as well. As this area of the property, west of City Hall, has been minimally disturbed, the potential for full recovery of the foundation and associated material remains is high, and the significant potential integrity provides a unique future research opportunity.

While there are many questions and avenues of research regarding City Hall Park that have been explored, many more remain unexplored and may form the basis of future work. As with any archaeological project associated with construction, much of the recent work was directed by scope, schedule, and budget. During the 1999 and recent excavations there are areas or features that were incompletely excavated, as they fell outside construction impacts and were therefore limited by project scopes. Limitations of record keeping and documentation from the 1999 excavation hindered aspects of analysis and the ability to undertake comparative analysis with the current assemblage. However, the analysis and documentation from the 2010–2011 project can greatly inform aspects and interpretation of the 1999 assemblage. Current analysis and documentation from 2010–2011 can supplement the lack of documentation from the 1999 project by informing about site-formation processes, landscape construction, and associated stratigraphic information. This information may help to further interpretive analyses of previously recovered archaeological contexts from City Hall Park.

At the outset of analysis, the archaeological team identified key contexts and devoted its time and resources to each of these during the analysis and writing phase of the project, the results of which are presented in this document. Analysis also clearly identified areas requiring further research. City Hall Park is one of the most significant sites within New York City; its continuous occupation from the early eighteenth century through to the present day is well documented, and its archaeological and historic significance are widely recognized. Despite the amount of research that has been done, or perhaps in light of it, it is recommended that future funding be sought for additional and continued research.

This continued research should include:

- A detailed analysis of remaining contexts from the 2010–2011 and 1999 assemblages, including in-depth speciation of birds and fish within the faunal materials.
- A comparative analysis and synthesis of the 1999 and 2010–2011 assemblages.
- Further archaeological investigations of the Bridewell, as recommended by the Landmarks Preservation Commission in their May 2011 decision.

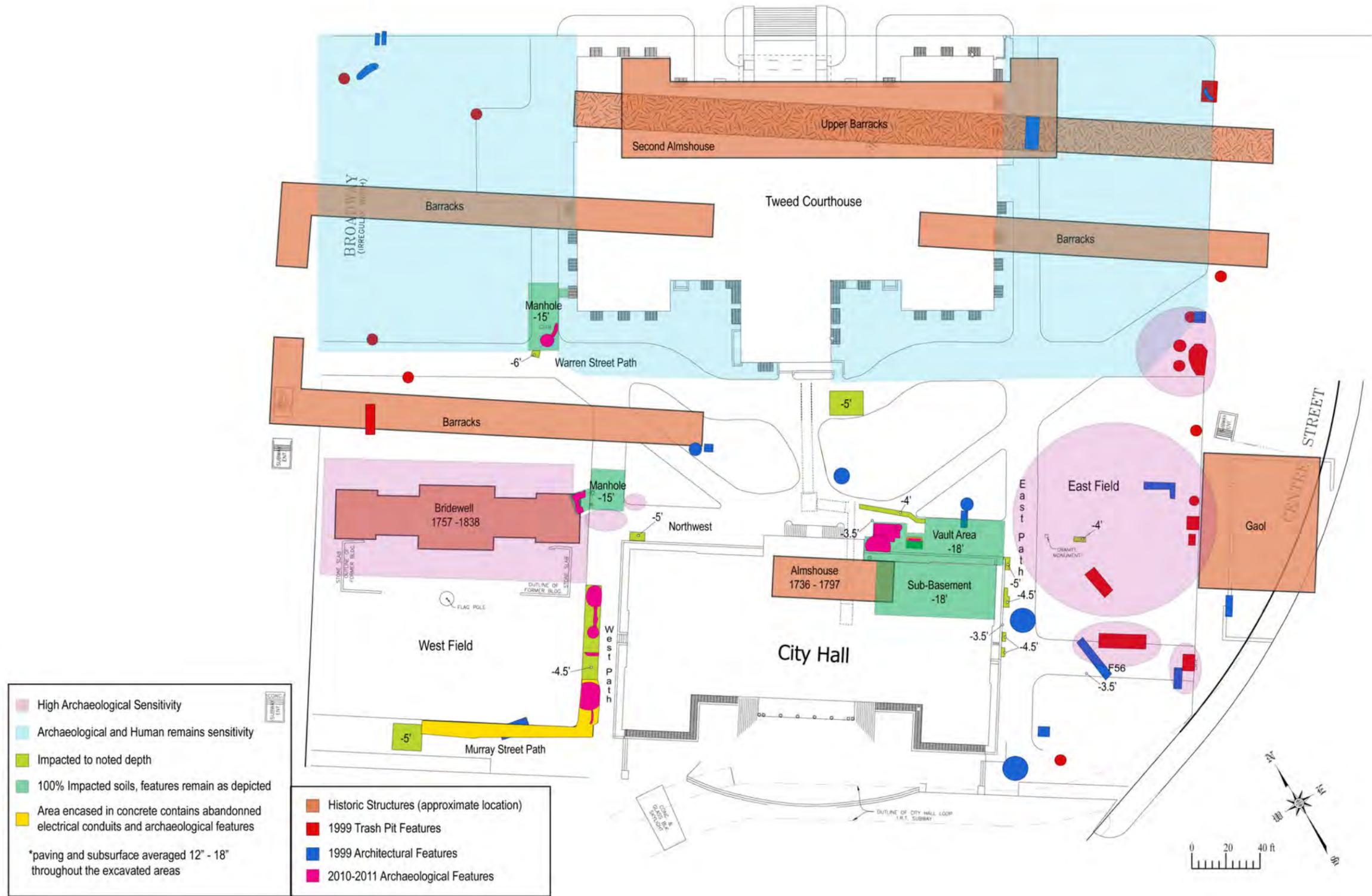
## **RECOMMENDATIONS**

Based on the most recent and previous excavations within City Hall Park, the assumption that any previous construction-related activities have negatively impacted the archaeological record must be considered false. Even with the large number of disturbances that have occurred within the park, many areas of *in situ* stratigraphic layers and cultural deposits remain.

City Hall Park retains a high level of sensitivity for cultural resources and human remains. Any future work within City Hall Park must be archaeologically monitored and/or tested

prior to the onset of work, unless it is 100% certain that previous works have completely impacted the specific area in question. Such areas of 100% impact would be the area of the new utility vault and Manholes 2 and 3. All other areas retain some level of archaeological sensitivity. The following sensitivity map (Map 12.01) and associated table (Table 12.01) attempt to convey various aspects of that sensitivity. For example, the northeast and northwest corners of the park (highlighted in blue) are sensitive for cultural resources and for human remains. The map highlights the areas that are considered 100% impacted. Additional information provided on the sensitivity map includes, but is not limited to, a notation that areas excavated during 2010–2011 demonstrated the paving and subsurface within the park to be between 12”–18” below surface, not uniformly extending to 18”, as previously reported. The final excavation depths for the 2010–2011 project are also noted. Though not included on this map, it should be noted that Chamber Street has a known sensitivity for the presence of human remains.

□



Map 12.01: City Hall Park archaeological sensitivity map.

Table 12.01: Archaeological sensitivity map key and definitions.

Key	Title	Definition
	High archaeological sensitivity	These areas contain features that have not been fully excavated. Among these are two large trash features, Feature 88 (excavated in 1999) and Feature 28 (excavated in 2010) and the potential remains of the Bridewell foundation.
	Archaeological and human remains sensitivity	These areas have demonstrated the significant potential for the recovery of human remains, in addition to materials remains. Human remains may exist as intact burials, impacted or compromised burials, or disarticulated human bone fragments.
	Impacted to noted depth	These areas have been excavated and archaeologically monitored to the depth noted on the map.
	100% impacted soils, features remain as depicted	These areas have been excavated to a depth of 15' or greater and currently house utility vaults. During excavation, some features (depicted on the map) were protected during excavation and remain <i>in situ</i> within these impacted areas. No additional archaeological work is required in these areas due to the extensive excavation, but the features should be protected and remain <i>in situ</i> .
	Area encased in concrete, contains abandoned electrical conduits and archaeological features	This area was excavated to a depth of 4.5'. Archaeological features within the area were documented prior to the laying of utility lines and their encasement in concrete. The features depicted on the map remain <i>in situ</i> beneath the concrete.
	Historic structures (approximate location)	The historic structures known to have occupied the property prior to the construction of City Hall and Tweed Courthouse. These locations are based on the research undertaken and presented within this report.
	1999 trash pit features	These features, excavated in 1999, were in many instances not fully excavated. These areas remain archaeologically sensitive, as remnants of these features may remain <i>in situ</i> .
	1999 architectural features	These features were left <i>in situ</i> following the 1999 excavation and retain significance.
	2010–2011 archaeological features	These are remaining <i>in situ</i> features documented during the 2010–2011 project. None of the depicted features are trash features; all trash features from 2010–2011 were 100% documented and recovered within the boundaries of the construction excavation. These features retain potential significance.

As a majority of the property retains some level of archaeological sensitivity, it is further recommended that future work should include archaeology within the design phase of a project, as opposed to being brought in at the construction phase, where scope, timing, and funding have already been predetermined. In this way, required archaeological work, including post-excavation concerns (e.g., additional historical documentation work, laboratory analysis, conservation, and report writing/production), can be afforded both time and consideration.

This project, like many others within New York City, once again demonstrated that the archaeological record survives beneath the city streets. Despite widespread development, areas of New York City remain viable and valuable archaeological sites. This is abundantly clear within City Hall Park. From the thousands of artifacts recovered in historic deposits to the remnants of 200 years of building and infrastructure—as well as both intact burials and disturbed human remains recovered from the park since the 1980s—City Hall Park remains one of New York City’s most significant archaeological and historic sites.

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