REPORT OF THE 2008 AND 2009 PHASE II ARCHAEOLOGICAL TESTING AND MONITORING OF THE CULTURAL RESOURCES ASSOCIATED WITH THE LLOYD STREET SYNAGOGUE, 18BC143 BALTIMORE, MARYLAND

Baltimore Center for Urban Archaeology
Research Series Number

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Report Prepared For
The Jewish Museum of Maryland
Lloyd Street
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22 February 2010

ABSTRACT

Between September and November 2008, the Baltimore Center for Urban Archaeology (BCUA) conducted a Phase II archaeological evaluation of a portion of the Lloyd Street Synagogue Site (18BC142) located at 11 Lloyd Street in Baltimore City, Maryland. The following September (2009) the BCUA monitored the excavation of a utility trench at the same site. The Lloyd Street Synagogue is part of the Jewish Museum of Maryland (JMM). The JMM recently initiated a program of restoration and stabilization work at the Lloyd Street Synagogue that includes painting and repairs to the physical structure of the building, the installation of a fire protection sprinkler system, and the injection of grout beneath the southeast corner of the 1860 addition. The grout will stabilize this corner of the building, which has been settling for many years. The stabilization of the building will entail the removal of soil deposits on both the interior and exterior of the building. Because the Maryland Historical Trust (MHT) holds a preservation easement on the Lloyd Street Synagogue, a phase II evaluation of cultural resources in the limits of disturbance was conducted in compliance with the terms of the easement.

Two units were excavated in the southeast corner of the synagogue property, the first in the interior of the building (Unit 7) and the second on the exterior (Unit 8). In both units fill was recovered that was associated with the 1860 demolition of the *mikveh* house located to the east of the synagogue and with the subsequent construction of an addition to the synagogue on that space. A *mikveh* is a ritual bath that was central to Jewish spiritual and cultural practices in the nineteenth century. Early features associated with the *mikveh* house were also recovered. These included remnants of the west wall of the house in Unit 7 and the south and east walls in Unit 8. Also recovered in unit 8 were a *dut* or cistern that supplied water to the *mikveh* and a system of drains that fed water into the *dut.* The monitoring done in September 2009 was for the excavation of a utility trench in the narrow alley to the rear (east side) of the synagogue. This trench began at Watson Street and extended north through the location of unit 8. Evidence of a partition wall in the basement of the *mikveh* house that separated the *dut* from the *mikveh* bathing rooms was noted during the monitoring, giving insight into the use of space the *mikveh* house.

The archaeological features located during the current excavation and earlier excavation in 2000 and 2001 that are associated with the *Mikveh* house and the *Mikveh* are considered contributing resources to the Lloyd Street Synagogue, which is listed on the National Register of Historic Places. These features include the walls of the *Mikveh* house, the *dut* and its associated drains and drains pipes. With the exception of the *dut* (Feature 29), the proposed work will not have an adverse effect on any of the features listed as contributing resources to the Lloyd Street Synagogue National Register nomination. The *dut*, as stated above is slowly collapsing under the weight of the southeast corner of the synagogue, causing major subsidence in this corner of the structure. Injection of the grout into the ground surrounding the southeast corner will have an adverse effect on the *dut* as it will fill the *dut* and will form a column that will support the overlying basement wall, while also preventing further collapse of the *dut* walls. While the grout will permanently alter the interior of the *dut*, stabilizing the interior will preserve the exterior form of the *dut* and allow future archaeological investigation along the exterior of the feature.

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1.0 INTRODUCTION

Between September and November 2008, the Baltimore Center for Urban Archaeology (BCUA) conducted a Phase II archaeological evaluation of a portion of the Lloyd Street Synagogue Site (18BC142) located at 11 Lloyd Street in Baltimore City, Maryland. The following September (2009) the BCUA monitored the excavation of a utility trench at the same site.

Lloyd Street Synagogue is situated in the Old Town section of Baltimore City (Figure 1) on the northeast corner of Lloyd and Watson Streets. Built in 1845 by the *Nidche Yisrael* Congregation (now Baltimore Hebrew Congregation), it was designed in Greek Revival or Neo-classical tradition. This was the first building erected as a synagogue in the State of Maryland. In 1860, an addition was made to the rear of the synagogue. The current Phase II evaluation was conducted in this addition's southeast corner on the interior and exterior of the building. The entire synagogue was designated an historic Baltimore building on 16 April 1965 and was listed in the National Register of Historic Places on 19 April 1978 (inventory number B-20).

The project area is situated in the Western Shore area of the Atlantic Coastal Plain Province in Maryland archaeological research unit 7 (Figure 2), the Gunpowder-Middle River-Patapsco-Magothy-Severn-South-Rhode-West drainages.

1.1 PURPOSE

The Lloyd Street Synagogue is part of the Jewish Museum of Maryland (JMM). The JMM recently initiated a program of restoration and stabilization work at the Lloyd Street Synagogue that includes painting and repairs to the physical structure of the building, the installation of a fire protection sprinkler system, and the injection of grout beneath the southeast corner of the 1860 addition. The grout will stabilize this corner of the building, which has been settling for many years. The stabilization of the building will entail the removal of soil deposits on both the interior and exterior of the building. Because the Maryland Historical Trust (MHT) holds a preservation easement on the Lloyd Street Synagogue, a phase II evaluation of cultural resources in the limits of disturbance (LOD) was conducted in compliance with the terms of the easement. The preservation easement is filed in the land records of the Circuit Court of Baltimore in Liber 2414, folio 409.

The BCUA did the excavation described in this report at the request of the JMM. This phase II was also part of the ongoing effort to understand the use of space inside the synagogue over its long history. The excavation built on the results of earlier investigations, which were conducted in 2000 and 2001 that included archaeology (Read 2000a and 2001), architectural survey (Stone 2002) and paint analysis (Mosca 1991, 1992, 2000, 2002).

1.2 STAFF AND ORGANIZATION

Staff for the project included Esther Doyle Read as the principal investigator (see Section 11.1 for investigator qualifications); staff archaeologists Peter J. Middelthon, Benjamin F. Perlmutter, and Robin K. Martin; and UMBC student volunteer Angela Swisko. The laboratory staff consisted of Esther Doyle Read and Peter J. Middelthon. Sandra Gammon, a UMBC intern edited the final version of the report. Garry Wheeler Stone, project architectural historian, provided technical editing.

The report is organized into eleven sections. Section 1.0 includes a description of the project and introductory material. Section 2.0 provides a description of the research design that guided the archaeological testing, while Section 3.0 describes the methodology used to complete the work. Section 4.0 presents a description of the current and past environmental settings, an overview of previous archaeological work in the immediate vicinity of the project area, and a cultural context. Section 5.0 provides a description of results of the archaeological study and Section 6.0 presents a summary and interpretation of the excavation results. National Register recommendations and recommendations for additional work are presented in Section 7.0. The final sections of the report include a list of cited references (Section 8.0), figures (Section 9.0), photographic plates (Section 10.0) and appendices (Sections 11.0). The latter includes investigator qualifications and a catalog of recovered artifacts.

2.0 PROJECT GOALS AND EXPECTATIONS

Phase I/II archaeological studies conducted in 2000 and 2001 (Read 2000a, 2001) demonstrated that there were significant archaeological deposits buried under the concrete floor of the 1860 addition. These deposits are associated with the occupation of the property from at least 1845 through circa 1905 (the approximate date of the earliest concrete floor level). The location of the proposed stabilization work in the southeast corner of the synagogue is adjacent to an area that has been shown to have multiple intact features associated with the occupation of the building by *Nidche Yisrael*. These features include the west wall of the *mikveh* house, which was the location of ritual baths that were central to daily life in Judaism, the hearth associated with the *mikveh* house, and the possible edge of a wooden *mikveh* (the ritual bath) in the *mikveh* house.

The goals of the current project were dictated by the stabilization project and the need to record any resources that the proposed work might affect. The goals outlined below fall under the "Religion" theme of the *Maryland Comprehensive Preservation Plan*. These goals are concerned with "objects associated with religious activities" (Weissman 1986:256), specifically the *mikveh* and the *mikveh* house. These two items and an understanding of their location and how they were used by the community during the period 1845-1859 is important to understanding the structure of the Baltimore Jewish community during the mid-nineteenth century.

During the two previous excavations the west wall of the *mikveh* house (Feature 8) was located in units 1 and 5, which were excavated in the *mikva'ot* (plural for Mikveh) rooms (Read 2000a, 2001). The main goal of the current excavation was to continue to trace the wall(s) of the *mikveh* house. This included tracing the west wall (Feature 8) on the interior of the building and locating the east and south walls. The east wall of the *mikveh* house was predicted to lay outside of the synagogue in a narrow alley adjacent to the synagogue's east wall. This prediction was based on documentary evidence. We knew from the Minutes of the Baltimore Hebrew Congregation Board of Managers (hereinafter Minutes) that a *yeshiva* (school) was located between the synagogue and the *mikveh* house. Therefore, the *mikveh* house (which was a row house) had to occupy the eastern edge of the synagogue property. The east property line is 14 feet east of Feature 8. The *yeshiva* occupied a 14 feet wide lot between the synagogue and the *mikveh* house. We knew from many years of excavation experience in the city that a 14-foot wide property lot was not unusual. We assumed that the *yeshiva* and the *mikveh* house were of similar dimensions.

A secondary goal was, if possible, to locate the south wall of the *mikveh* house. It was not known if the south wall extended to Watson Street or if it was immediately adjacent to the south wall of the synagogue.

The possible remnants of the original wood *mikveh* were located along the south wall of unit 5 during the 2001 season of excavation. If it is the remains of the original wood *mikveh*, then it is the oldest *mikveh* in the state of Maryland. One of the concerns of the overall restoration project was to ensure that this possible *mikveh* would not be harmed by the proposed grout work. It is assumed that the *mikveh* was located in the unexcavated area between Unit 5 from the 2001

excavation and Unit 7 from the current excavation. This area measures 11 feet north to south. We reasoned that if the hearth (Feature 3) found during the previous two excavations was part of the firebox and kettle setup detailed in the Minutes, then it had to be fairly close to the original *mikveh* for two reasons. First for the warmth and comfort of those using the bath, and second, for the convenience of the *mikveh* keeper who would be moving water from the kettle into the bath. The probable wood *mikveh* was located along the west wall (Feature 8) of the *mikveh house* and not in the center of the bathing room.

3.0 METHODOLOGY

All field excavation and laboratory analysis was conducted in accordance with the *Standards and Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994), and *Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines* (National Park Service [NPS] 1983). The following sections give a detailed description of the project methodology.

3.1 ARCHIVAL RESEARCH

Extensive archival research was performed during the 2000 and 2001 excavations. Some of this research was completed by the BCUA's project historian and was submitted to the JMM as a separate report (Anderson 2001). Additional research conducted by the JMM staff was primarily concerned with the translation of the Minutes of the meetings of the synagogue's Board of Electors during the period 1851 through 1889. Other research by the JMM staff included a search of contemporaneous newspaper accounts. Information from Anderson's report and from the JMM research was to inform the analysis of materials recovered during the 2001 excavations; the data was also incorporated into the final reports for both investigations. In addition to the documentary research, both Mosca (1991, 1992, 2000, 2002) and Stone (2000, 2002) conducted extensive analysis of the history of paint in the synagogue and of the synagogue's structural elements. Not all of these reports were in their completed form when the 2001 archaeological report was finalized.

Because the research completed in 2000 and 2001 was so extensive, only a minimal amount of archival research was incorporated into the scope of work for this section of the project. Data in the Mosca (1991, 1992, 2000, 2002) and Stone (2000, 2002) reports was more fully incorporated into the current scope of the archaeological work. Initial reporting concerning the excavation of an eighteenth-century *mikveh* in Amsterdam (Gawronski and Jayasena 2007) was also consulted. The Dutch *mikveh* has striking parallels to the current research. Earlier conclusions from the 2000 and 2001 excavations were checked against the new material and adjusted as needed.

3.2 ARCHAEOLOGICAL FIELDWORK

Fieldwork during the current phase of archaeological study included the excavation of two units in the southeast corner of the synagogue property, the first one on the interior of the building (Unit 7) and the second on the exterior (Unit 8). Unit designations continued the use of the numbering system established in 2000.

In each unit, excavation of soil deposits was accomplished by removal of unique stratigraphic layers. All of the soil removed from the units was passed through quarter inch mesh screen. The screen and spoils pile were located outside the building in order to minimize the synagogue interior's exposure to dust and debris. Artifacts recovered during excavation were bagged by unit

and by the level or feature within the unit. Because of the large quantities of rubble in the fill layers, architectural debris, such as brick, mortar and plaster, and miscellaneous debris, such as coal and slag, were noted but not collected.

Unit level forms were kept for each unique level within a unit. Each form recorded information about the depth of the level, the soil type and Munsell color of each soil encountered in a level, features encountered in the level, the types of artifacts recovered and their associated bag lot numbers, and general observations made by the level excavator. Feature forms were kept for each unique feature encountered. The data contained on these forms was similar to that recorded on the level forms. Plan views were made of features and unique soil deposits. Profiles were done of the unit stratigraphy and of features. A photographic record was also made of the excavation.

The monitoring done in September 2009 required the on-site presence of one archaeologist who watched the excavation of a utility trench in the narrow alley to the rear (east side) of the synagogue. This trench began at Watson Street and extended north through the location of unit 8. Because of resource/time limitations, we could only monitor that portion of the trench on JMM property. Notes were made during the two-day monitoring period. The primary purpose of the monitoring was to assure that no intact archaeological deposits or features were disturbed by the installation of the utility trench.

3.3 LABORATORY ANALYSIS

Artifacts recovered during the excavation were processed and cataloged in accordance with *Standards and Guidelines, Technical Update No. 1: Collections and Conservation standards* (MHT 2005) and the Secretary of the Interior's *Standards and Guidelines for Curation* (36 CFR 79). Artifacts recovered during the excavation were processed according to their individual bag or lot number (which corresponds to its provenience on the site). Most artifacts were washed using plain water and a soft toothbrush. Delicate and/or unstable materials, such as decayed metal and organic material, were carefully dry-brushed with a soft toothbrush. The artifacts were labeled and cataloged using the same catalog system that was established during the 2001 excavation. This catalog employs modified South (1977) functional categories, as well as material categories to sort and describe artifacts types. Lot number 69 was the last lot number used in 2001; hence the lot numbers for the present season began with lot 70. The catalog was entered into an Access database, which was established in 2001 (artifacts recovered during the 2000 excavation were entered into a Lotus 123 catalog). Detailed artifact analysis was limited to diagnostic ceramics and bottle glass. At the conclusion of the analysis, all artifacts were bagged in 4-milliliter archival plastic bags and archival boxes for on-site curation by the JMM.

4.0 RESULTS OF ARCHIVAL RESEARCH

Portions of this section are reprinted from the Read 2000a and 2001 reports. Section 4.1, Environmental Setting has been updated and is essentially a new section. Section 4.2, Previous Archaeological Investigations is basically unchanged, though a few additional paragraphs summarizing the results of the 2000 and 2001 excavation have been added to the section's end. Section 4.3, "Native American Context" has been largely rewritten to include updates in the field of archaeology over the last decade. The Read 2001 report for the initial archaeological testing devoted a great deal of time to the post-contact land use of the Lloyd Street Synagogue and the several congregations that worshiped there. This information is presented in Section 4.4, "Post-Contact Cultural Contact Period." Section 4.5, "Site Specific Context" is a new addition, and is specific to the synagogue and the *mikva'ot*. It incorporates data previously presented in the historic background sections of the Read 2000a and 2001 reports, as well as new information gathered during the current study.

4.1 ENVIRONMENTAL SETTING

The Lloyd Street Synagogue is located on the northeast corner of the intersection of Lloyd and Watson Streets in the Old Town section of Baltimore City (figure 1). The project is in a city block bounded on the west by Lloyd Street, on the north by Baltimore Street, on the east by Central Avenue, and on the south by Watson Street.

4.1.1 Project Setting and Current Land Use

The synagogue is in an urban setting. Corn Beef Row (on Lombard Street) is south of the project area and features remnants of the Jewish Community that once flourished in this area. The main attractions are Attman's, Weiss's and Lenny's Delis. St. Vincent, which engages in out-reach to the poor, is east of the project area on Central Avenue. To the north along Baltimore Street is the McKim Center, a neighborhood center run by the City of Baltimore with funding from the Presbytery of Baltimore and the Society of Friends. West of the project area are newly constructed town houses that replaced the Flag House Projects, a former Section 8 housing complex. The high rises associated with the complex were imploded in the summer of 2000. Lower three-story dwellings surrounding the former high rise were also razed and replaced with the new construction between 2000 and 2008. Many of these new homes are now occupied and the redevelopment of the area continues.

4.1.2 Physiographic Province, Geology, and Soils

The project area is located in the Atlantic Coastal Plain Province (Figure 3). Unconsolidated Quaternary sediments, that include gravel, sand, silt, clay, and peat, underlay the province (*c.f.* Weaver 1967 *Generalized Geological Map of Maryland*). These sediments form a wedge extending from the Piedmont Province to the Atlantic coast that become progressively thicker as

the coast is approached; eventually reaching a thickness of greater than 8,000 feet (2438.4 meters). On the western edge of the Coastal Plain, the sediments are thinner and overlap the rocks of the eastern Piedmont Plateau Province along an irregular line of contact known as the Fall Zone (Edwards 1981). The fall zone is where the Piedmont Plateau Province of the Appalachians descends steeply to the Coastal Plain. At the point where rivers and streams cross the Fall Zone, falls and rapids are typically encountered. This zone extends for several miles on either side of the fall zone. The project area is sited on the eastern edge of the Fall Zone.

Soils in the project area are part of the hydrologic soil group. These soils are Udorthents, or disturbed urban soils that are very deep, loamy fill soils commonly found on slopes of 8 to 15 percent (Levin and Griffin 1998).

4.1.3 Hydrology

Baltimore City is located on the Patapsco River. The South Branch of the Patapsco originates at Parrs Spring, where Carroll, Frederick, Howard, and Montgomery counties meet. The North Branch originates in northern Carroll County. The two branches meet near Marriottsville, Maryland on the Carroll and Howard County borders to form the Patapsco River proper. The River has a watershed of 680 square miles (1,760 kilometers). The last 10 miles (16 kilometers) of the river is a tidal estuary inlet of the Chesapeake Bay. The tidal area of the river is comprised of the Northwest Harbor and Middle Branch of the Patapsco River (Baltimore County n.d.a.).

Several streams enter the Patapsco River within the Baltimore City limits. The largest of these streams is the Jones Falls. Much of this stream's watershed is located in Baltimore County. It flows through the Jones Falls Valley and is channelized through much of the city in either a concrete lined streambed or in a tunnel. The steam enters a tunnel beneath the Jones Falls Expressway (I-83) at North Avenue and flows into the Inner Harbor area of the Patapsco River at the base of President Street. In the eighteenth century this stream had large areas of wetlands along its lower reaches and a delta area at its mouth known as Harrison's Marsh. The Jones Falls served as the boundary between Baltimore Town and Jones (or Old) Town in the second quarter of the eighteenth century (Folie 1792; Olson 1980 [Figure 4]).

Harford Run enters the Patapsco River east of the Jones Falls. The stream is currently located in a conduit beneath Central Avenue. Development began along Harford Run in the late eighteenth century. The 1792 A.P. Folie *Plan of the Town of Baltimore And It's Environs*, shows the area along the lower reaches of Harford Run as (Figure 4). Development along the stream did not occur until the marshes along its banks had been drained. Thirty years later, when the Fielding Lucas, Jr. *Plan of the City of Baltimore* was published, the stream was channelized in a canal that emptied into the old city dock at the base of Central Avenue (Figure 5). The street on either side of the canal was known then as Canal Street. During the twentieth century, the canal was slowly covered over, although portions of the stream were still open into the 1950s. Eventually a railroad track was placed directly over the stream (Olson 1980). The rails were removed in the late 1990s. Harford Run is located one block east of the project area.

Harris Creek was formerly located to the east of Harford Run. It entered the harbor at Canton and was the location of a shipyard belonging to Samuel and Joseph Sterrett. The keel for the original frigate *U.S.S. Constellation* was laid here in 1796, the ship was built under the direction of Major David Stodder. The ship was commissioned on 26 June 1798 (Wegner 1991). This creek was completely covered over by the mid-nineteenth century. Currently it discharges into the harbor through a storm water drainpipe (Baltimore City n.d.).

Herring Run occupies the northeast corner of the city. The stream's headwaters are in Baltimore County; it empties into Back River in Baltimore County on the eastern side of the city. Six other streams flow into Herring Run in Baltimore City: the Western Branch, Chinquapin Run, Biddson Run, Moores Run, Tiffany Run, and Armistead Run. Redhouse Run joins Herring Run just outside of the city's southeastern boundaries. Herring Run has a watershed that covers 31 square miles (80.29 square kilometers) and includes 41 miles (65.98 kilometers) of stream within its reach (Herring Run Watershed Association n.d.).

The Gwynns Falls Watershed is located on the western side of the city. The watershed encompasses 44 square miles (114 square kilometers) and includes 112 miles (180.25 kilometers) of stream (Baltimore County n.d.b.). Several tributaries join the Gwynns Falls before it flows into the Middle Branch of the Patapsco near Carroll Park in the city. These streams include: Red Run, Horsehead Branch, Scotts Level Run, and Powder Mill Branch in Baltimore County, and Dead Run and Maiden Choice's in Baltimore City (Gwynns Falls Watershed Association n.d.).

4.1.4 Paleoenvironment

Detailed paleoenvironment studies of the Middle Atlantic include those by Carbone (1976) and Gardner (1977) for the Shenandoah Valley of Virginia, and Funk and Wellman (1984) for the Susquehanna River Valley in New York State. Closer to the project area, Brush (1986) has studied climate change in the Chesapeake Region, while Louis Berger and Associates were able to identify seven environmental zones at the Indian Creek V Site in Prince George's County, Maryland (LeeDecker and Koldehoff 1991). This site is located near the Prince George's County/Washington D.C. boundary on an abandoned channel of Indian Creek, a tributary stream of the Northeast Branch. The Indian Creek V site is within a 50-mile radius of the Lloyd Street Synagogue Site. It is assumed that the paleo-climates of both sites were analogous.

Climatic trends documented for the area paint a picture of long-term environmental change. Between 12800 and 10800 years before present (B.P.) the region experienced a cool moist Pre-Boreal Climatic Phase. Pollen recovered from Zone 1 at the Indian Creek V site indicates that the area was covered by open spruce parkland that included pine and alder trees, as well as herbaceous plants (LeeDecker and Koldehoff 1991). Zone 1 of the site is associated with the PaleoIndian Stage of Native American prehistory in the Chesapeake region. However, no cultural remains associated with PaleoIndian occupation were recovered during the excavation of Indian Creek V.

Zones 2, 3, and 4 of the Indian Creek V site are associated with Archaic Stage occupations of the site. Pollen samples from all three zones indicate that average annual temperatures were warm but the amount of precipitation varied greatly over time. Pollen from Zone 2 of the site (which coincides with the Early Archaic Period) indicates that between 10800 and 7660 years B.P. the region experienced a gradual warming period characterized by dry conditions. Forest cover during this period changed from open spruce parkland to mixed deciduous forests of birch and oak, with pine and alder mixed throughout. During the Middle Archaic Period, which coincides with Zone 3 pollen samples (7660 to 5000 years B.P.), the annual rate of precipitation increased. Zone 3 forest cover was dominated by species of oak, hazelnut, and alder, with a decrease in pine and a complete absence of spruce. The Late Archaic Period (Zone 4 of the site) experienced a decrease in precipitation. The warm, dry conditions of this period persisted from 5000 to 3860 years B.P. These climatic conditions favored forests dominated by oak and hickory, with inclusions of pine (LeeDecker and Koldehoff 1991).

As the climate gradually warmed over the course of the Archaic Stage, the last of the Late Pleistocene glaciers began to retreat, releasing water back into the world's oceans. Global sea levels rose as much as 300 to 500 feet over several thousands of years (Whitehead 1972). During this period, the Chesapeake Bay was formed as rising sea levels flooded the lower reaches of the ancestral Susquehanna River. As the marine transgression filled the Chesapeake Bay, the rivers emptying into the Chesapeake Bay assumed their tidal character below the fall line. After 3000 years B.P., the climate and its floral and faunal associations assumed an essentially modern character.

Pollen from Zone 5 of the Indian Creek V site indicates that during the period between 3860 and 1770 years B.P. (the Early to Middle Woodland Periods), the area surrounding this particular site experienced a marked decrease in the amount of arboreal pollen deposition. Although oaks continued to dominate the forest area, pollen in Zone V showed an increase in herbaceous species such as legumes, elderberry, blueberry, and arrowwood. During the later part of the Middle Woodland Period, the area once again experienced a shift in the local climate. This climatic shift signaled the beginning of a mini-Ice Age (Fagan 2000). Pollen in Zone 6 of the Indian Creek Site, which coincides with the Middle and Late Woodland Periods, indicates that between 1700 and 350 years B.P., temperatures were cooler on average and annual precipitation was higher than in the preceding climatic Zone 5. Mixed deciduous forests reappeared across the landscape, although nonarboreal pollen continued to make up a significant part of the pollen found in this zone. Herbaceous plant pollen and blueberry pollen dominated the nonarboreal pollen (LeeDecker and Koldehoff 1991).

4.2 PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

There are seventeen recorded archaeological sites in the Old Town area of Baltimore City, 16 of these sites have been the subject of archaeological investigation. Only the Eden Street Kiln site (18BC28) has not been subjected to systematic excavation. A local pothunter dug into this site in the late 1970s or early 1980. The site was visited and recorded by three professional archaeologists in 1980 and 1981. Dennis Pogue wrote a description of rims recovered from the surface of the site during those visits. The manuscript Pogue produced is included in the

Maryland Archeological Site Survey: Basic Form for 18BC28, which is on file at the MHT in Crownsville, Maryland.

The earliest excavated site in Old Town was the Thomas Morgan Pottery (18BC1). Morgan was a stoneware potter who purchased his leasehold (i.e. ground rent) property from Archibald Campbell in 1794. He was located at this site from 1794 through at least 1837 (Baltimore County Land Records, hereinafter BCLR Liber WG no. 80, folio 360; Matchett 1824, 1833, 1835; Sprinkle 1962). Morgan's pottery site was destroyed by construction of the United States Post Office on Fayette Street in the 1960s. However, John Sprinkle, Sr. of the Archaeological Society of Maryland, Inc. (ASM) and members of the Central Chapter of ASM were able to conduct salvage excavations at the site in 1961. Excavation recovered numerous pieces of kiln furniture, stoneware and redware wasters, as well as stoneware tiles. In addition to the artifacts, a stone foundation and brick paving were also located (Sprinkle 1962).

In 1975, Deborah Harrison conducted archaeological testing along Front Street between 9 Front Street and the Shot Tower (18BC14). Harrison's original research design was concerned with locating prehistoric remains that might be buried along the former bed of the Jones Falls. Instead of locating prehistoric remains, Harrison recovered eighteenth- through twentieth-century architectural features, including walls and fireplaces (Cosans and Roberts 1982; Harrison 1975). Archival investigation for the Johns Hopkins Comprehensive Cancer Care Center Archaeological Project in Fells Point (18BC111) suggests that Harrison may have placed test trenches in the foundations of the first Episcopalian Christ Church building (BCUA project files).

Proposed continuation of I-83 (which is also known as the Jones Falls Expressway) in the early 1980s resulted in archaeological investigation of the alignment under Section 106 of the National Historic Preservation Act of 1966 as amended. John Milner and Associates conducted a Phase I archival study of 23 city blocks. Using city ordinances, the 1866 tax assessor's ward books, and city directories from the nineteenth century, Milner generated land use maps for the alignment (Cosans and Roberts 1982). Their maps also included a predictive model for the location of prehistoric resources. Milner and Associates returned in 1983 and conducted Phase II testing at select locations identified during the Phase I. Several of the Phase II excavation units yielded intact structural remains and associated artifacts that dated to the early nineteenth century. Very few of the sites tested during the Phase II were given site numbers.

In 1984, Phase III mitigation was done by the BCUA at the Claggett's Brewery site (18BC38) as part of the proposed extension of I–83 from its President Street terminus to I-95. This site was identified during Milner's Phase I/II testing and evaluation. The remains of the late eighteenth-century Claggett family brewery and dwelling were uncovered during the Phase III. A privy associated with the house was also excavated (Comer et. al. 1984). Part of the site was developed as Brewers' Park on the corner of Lombard and President Streets and was maintained by the Baltimore City Life Museums. However, in June 1997, Baltimore City Life Museums permanently closed and the park was no longer open to the public. A portion of the site was destroyed by improvements made to President Street. In 1999, Goodwin and Associates conducted limited testing in a parking lot immediately to the south of this site as part of the section 106 compliance work done in connection with the Reginald F. Lewis Building of the African American History and Culture. Testing failed to recover anything of archaeological

significance (Fehr *et al.* 1999). In 2008, the remaining portion of the site was destroyed by construction of a hotel. No additional archaeological investigation was done at this location before construction of the hotel began, despite the fact that intact features had been left at this location for future investigation.

In 1994, Ballweber conducted Phase II archaeological testing on the grounds of the Asiquith Street Friends Meeting House (18BC106). Ballweber recovered very little in the way of material culture. A stratum containing a dense concentration of brick was interpreted as either the remains of an earlier walkway or of a wall. Ballweber also speculated that the debris might be from 1967 renovation work. This Phase II was concentrated around the building and was not extended into the lawn area beyond the Meeting House (Ballweber 1994). The lawn area was probably the location of the meetings burial ground.

The BCUA has performed archaeological excavations at 11 other sites in Old Town. These excavations have included studies of the Carroll-Caton site (18BC6), 44 Albemarle Street (18BC48), 46 Albemarle Street (18BC49), 48 Albemarle Street (18BC50), the Jones Falls Metro Station (East) site (18BC65), the Baltimore History Museum (18BC68), the Shot Tower Metro Station (North) site (18BC69), Glascow Studio (18BC76), the McKims School site (18BC107), President Street Station (18BC124), the Star Spangled Banner Flag House Site (18BC140), and the Lloyd Street Synagogue site (18BC148). Detailed archival information and analysis of the excavation for these sites is included in reports by Akerson (1989), DeLeonardis (1995), Lane (1997), Peters (1986), Read (1994, 2001, 2002), Scott (1989), and Ward (1989a, 1989b). Other data is recorded in the BCUA project files that are maintained by the Maryland Historical Society in Baltimore, Maryland. These projects are briefly summarized forward.

No report was written for excavation done at Glascow Studio site (18BC76). In 1990, BCUA staff and volunteers excavated a clay- and wood-lined feature in the floor of the studio. The feature was 8.1 feet in depth and contained architectural debris deposited in the 1880s. A few domestic artifacts were also recovered. Excavation records, background information, and artifact catalogues from this excavation are on file at the Maryland Historical Society (BCUA project files, Glascow Studio; MHT site files, 18BC76).

The BCUA investigations at the Carroll-Caton site (18BC6), 44 Albemarle Street (18BC48), 46 Albemarle Street (18BC49), 48 Albemarle Street (18BC50), and the Baltimore History Museum (18BC68) were all associated with the initial construction and later expansion of the Baltimore City Life Museums that formerly occupied the south half of the block bounded by Front Street on the west, Lombard Street on the south, and Albemarle Street on the east. The Carroll-Caton site was the winter home of Charles Carroll of Carrollton in his later years. Carroll was the only Catholic to sign the Declaration of Independence. The house belonged to his daughter and son-in-law, Mary and Richard Caton. The Baltimore History Museum Site (18BC68) was located in the garden area to the rear of the Carroll-Caton House. The house and grounds passed out of the Carroll family in 1856. In the late nineteenth century the first floor of the house was used as a commercial establishment, and the upper floors were divided into apartments. The city purchased the property in 1914 and used it as a vocational school and then later as a recreational center. In 1963 the city began renovation of the Carroll-Caton house and placed it under the care of the Municipal Museum, which became part of the Baltimore City Life Museums in 1985. When the

Baltimore City Life Museums closed in 1997, the Carroll-Caton Mansion and grounds (18BC6) were placed under the care of the Carroll Museums, Inc., which offers tours of the house to the public. Remains from all the different periods of occupation were found on the grounds of the mansion and in the area later occupied by the Blaustein building of the Baltimore City Life Museums. The houses at 44, 46 and 48 Albemarle Street were all rowhouse properties. These sites were private residences throughout the nineteenth century and into the first half of the twentieth century. The buildings were once the homes of middle-class families, but as the nineteenth century drew to a close the dwellings were divided into tenement apartments with multiple families and single boarders dwelling within them. The archaeological excavation of these properties recovered artifacts associated with the various occupations of the building and demonstrated the changing face of the neighborhood (Akerson 1989; DeLeonardis 1994; Scott 1989: Ward 1989b)

In 1994, Read conducted a Phase I/II excavation at the McKims School site (18BC107). The school is located on Baltimore Street around the corner from the Lloyd Street Synagogue and is of contemporary age and of similar Greek Revival design. Isaac McKim built the school between 1833 and 1839 as a free school for the city's poor. The façade of the school is a to-scale replica of the temple of Theseus in Athens. During excavation three layers associated with the occupation of the property, dating from the period 1800 through 1892, were located. The lowest level pre-dated the school and was a neighborhood midden with a mean ceramic date of 1815.39. A layer of herringbone brick paving was located directly on top of the midden. Above this paving was a schoolyard layer. A distinct school deposition pattern was noted in the latter two layers. This pattern was similar to patterns noted at the Carroll-Caton House vocational school and at school sites in Delaware (DeLeonardis 1994; DeLeonardis and Snyder 1994; Read 1994).

Phase III mitigation at the Jones Falls Metro Station (East) site (18BC65) and the Shot Tower Metro Station (North) site (18BC69) was part of the overall Section 106 mandated work for the Baltimore Metro Line extension from Charles Center to Johns Hopkins Hospital (Peters 1986). During the Phase III mitigation of both sites, Ward (1989a) uncovered the remains of domestic and commercial business sites. Deposits included intact cellar deposits in the basements of mercantile establishments that burned during the 1904 Baltimore fire. Ward was able to establish a chronology for the occupation of the property by the Dalrymple Family and to chart their changing economic status and consumption patterns through the late nineteenth century.

In 1996, Lane conducted a Phase I survey of the grounds surrounding the former President Street Rail Road Station (18BC124). The Baltimore Civil War Museum was in the process of establishing a museum in the old railroad station and needed a phase I survey done before trenching for utility lines began. During the Phase I a backhoe trench was placed across the yard area. The edge of a possible wooden railroad track (circa 1830) was uncovered in the wall of the trench (Lane 1997). Additional work was done by Read in 1998. During this excavation six units were opened in the yard that exposed an intact wooden railroad track with a few *in situ* metal attachments for the iron rail. Due to the collapse of the BCLM and funding constraints the BCUA at UMBC is only now analyzing the material.

The Star Spangled Banner Flag House Site (18BC140) was subjected to a Phase II evaluation in 1999 by the BCUA. This was the home of Mary Pickersgill, who was a flag maker during the

first quarter of the nineteenth century. Pickersgill made the flag that flew over Fort McHenry during the bombardment by the British in 1814. During this excavation, the remains of a beehive oven were exposed and mapped in anticipation of the future reconstruction of the oven at this location. Material recovered in this feature was entirely associated with the Pickersgill occupation of the property. In addition, a privy was located adjacent to the edge of the oven. Excavation in this feature recovered a few remains associated with the Pickersgill family at the very base of the privy. However, a large amount of material was recovered that was connected with the occupation of the house by later late nineteenth- through early twentieth-century Italian immigrants (Read 2002). Greenhorne and O'Mara, Inc. did additional Phase II work in 2001 prior to the construction of the new museum and visitor's center at the Star Spangled Banner House. This excavation also recovered domestic remains associated with all phases of occupation at the site. However, most of the recovered material was yard deposit and did not retain intact vertical patterning. No additional work was recommended for this area of the site (Ward *et al.* 2002).

In 2000, the BCUA conducted initial archaeological testing in the basement of the Lloyd Street Synagogue (Read 2000a). Two units were placed in the east end of the synagogue in the rooms that contain the extant *mikva'ot*, or ritual baths. Unit 1, which was placed immediately adjacent to the southern most of the two *mikva'ot*, contained the remains of a hearth. Excavation of the unit also uncovered the remains of the builder's trench for one of the 1905 *mikva'ot* currently in basement. Artifacts recovered in the trench indicated that the current *mikveh* dates to the period of the second congregation, the *Shomrei Mishmeres Hakodesh*. Unit 2 was placed in the room with the claw-footed bathtubs. No features were uncovered in this unit. Unit 3 was placed at the base of the matzah oven in the western end of the synagogue. This unit was placed to determine the oven's date of construction. While the mortar used to build the oven was similar to that used for the 1845 portion of the synagogue, stratigraphic analysis established that the *Shomrei Mishmeres Hakodesh* built the oven in the early twentieth century (Read 2000a:58-61; Stone 2002:25, 35-37). Unit 4, the final unit, was placed in the schoolroom, which is located in the south half of the central portion of the synagogue basement. This unit was placed around the base of the only square support column in the basement (the rest are round). The purpose of this unit was to determine construction methods used in the original portion of the building, the age of the column, and why (if possible) this column was square as opposed to round. The unit did reveal methods of construction that included placing large undressed stones in a small trench as the basal support of the column. Very few artifacts were recovered in the unit. Those that were present suggested a date of 1845 for the construction of the stone column base. However, excavation was unable to determine if the wooden column was original or a replacement as the wood portion of the support column began above ground. Paint analysis of the column suggested that the column is original and that at one time a partition wall abutted the column (Stone 2000).

In 2001, the BCUA returned to the Lloyd Street Synagogue to expand excavation in the *mikva'ot* room (Read 2001). Unit 5 was placed adjacent to the south edge of unit 1. This location was selected in order to further trace Features 2 (the *mikveh* builder's trench), 3 (the brick pad at the base of unit 1) and 4 (a cast iron utility pipe at the base of unit 1). Feature 3 was the firebox associated with the kettle that heated water for the *mikveh*. It was hoped that we would to be able to locate the 1845 *mikveh* through placement of this unit. A possible corner of the 1845 *mikveh* was located at the base of the unit along the south wall. A second unit, Unit 6, was placed in the

apse of the synagogue in an attempt to locate the rear (or north) wall of the *mikveh* house and to explore the use of the apse. Excavation failed to uncover evidence of the *mikveh* house wall. Data from the excavation and structural analysis of this area suggests that the apse functioned as an entry area into the *mikva'ot* rooms after the synagogue was extended in 1860. There is a door into the synagogue located on the southern edge of the apse. The doorway is currently bricked shut, and an exhaust fan occupies the upper portion of the entry.

In summary, archaeological investigations of the neighborhood surrounding Lloyd Street Synagogue suggest that the neighborhood was culturally and economically diverse. Wealthy Anglo-Americans, such as Charles Carroll of Carrollton, occupied mansions on the main streets of Old Town through the late eighteenth and early nineteenth centuries. Small business owners, such as Thomas Morgan and Mary Pickersgill, lived in close proximity to the very wealthy. Their homes and businesses often occupied the same property and/or building. In the nineteenth century the neighborhood began to change. The Port Deposit, Wilmington, and Baltimore Rail Road (PW&B RR) erected a station at the south end of President Street and ran track along what is now Fleet Street. Wealthier individuals began to move out of the neighborhood, leaving working class families behind. Immigrants began to move in. While the neighborhood was still the location of homes and businesses, the economic status of the residents had changed. Many of them were poor immigrants. In the late nineteenth century many of East Baltimore's residents worked in garment sweat shops located in the neighborhood or for the PW&B (later the Pennsylvania RR). Throughout the eighteenth, nineteenth, and twentieth centuries, the neighborhood was the home of diverse cultural and religious groups. Churches, meetinghouses and synagogues around the area were the location of numerous Catholic, Episcopalian, Presbyterian, Methodist, Lutheran, and various Jewish congregations, as well as the Society of Friends (Quakers). Through time, many ethnic groups have called Old Town home – German and Eastern European Jews, Catholic and Protestant Germans and Irish, other Eastern European groups, Italians and African Americans. Each of these groups has left behind a rich cultural record.

4.3 NATIVE AMERICAN CULTURAL CONTEXT, 13,000 B.P. TO A.D. 1650

Three major stages are widely recognized for all indigenous traditions in the northeast United States. They are the Paleo-Indian Stage, from approximately 13000 B.P. (or possibly earlier) to circa 7500 B.C.; the Archaic Stage, from circa 7500 B.C. to circa 1000 B.C.; and the Woodland Stage, from circa 1000 B.C. to circa A.D. 1600 (Dent 1995; Steponaitis 1980; Willey 1966). The Archaic and Woodland Stages in the Middle Atlantic region are further subdivided into the Early, Middle, and Late periods. Together, the three stages do not represent a simple linear cultural history but rather median dates of major changes in regional material cultural traditions. Some overlaps exist between stages and phases.

The following overview of Native American regional history has been abstracted from several secondary sources including *Delaware Prehistoric Archaeology: An Ecological Approach* (Custer 1984), *Prehistoric Cultures of the Delmarva Peninsula: An Archeological Study* (Custer 1989), *Prehistoric Cultures of Eastern Pennsylvania* (Custer 1996), *Chesapeake Prehistory: Old Traditions, New Directions* (Dent 1995) and *Commoners, Tribute and Chiefs: The Development*

of Algonquian Culture in the Potomac Valley (Potter 1993). In addition to these book-length treatments of the subject, numerous journal articles, professional papers, and reports were also consulted. These are listed in Section 8.0 of this report.

4.3.1 Paleo-Indian Stage (c. 13000 B.P. to c. 7500 B.C.)

There are several recorded Paleo-Indian sites in Delaware, Maryland, and Virginia; most of these sites are represented by surface finds of fluted points and blade tools. A small number have been subjected to sub-surface archeological investigation. These latter sites include the Williamson Site on the western shore of southern Virginia, the Thunderbird Complex in Warren County, Virginia, the Higgins Site on the western shore of Maryland, the Paw Paw Cove Site on the eastern shore of Maryland, the Wise-Wix Site in Delaware, and the Upper Ridge Site along the Atlantic coast of Virginia (Brown 1979; Dent 1995; Ebright 1992; Egloff and Woodward 2006; Gardner 1974, 1977; Lowery 2002, 2003). Based on the types of artifacts recovered from these sites—small, utilized blades and lanceolate points of chert and chalcedony—it is probable that the sites functioned as interior hunting/camping sites. While these interior sites are fairly common in the Delmarva Peninsula, there is little information about sites located along the ancestral Susquehanna River and on the Continental Shelf portion of the Atlantic Coastal Plain Province. Site locations of this type are currently under water. They were inundated due to the rapid rise in world sea level between approximately 13000 B.P. and 4000 B.P., which flooded the lower reaches of the Susquehanna River and its tributaries and created the Chesapeake Bay (Dent 1995; Ebright 1992; Kraft 1971). The retreat of the Wisconsin glacial sheet was the main factor in the overall rise in sea level.

Based on ice cores from Greenland and northern Europe, it appears that initial human settlement of North America occurred during a period of climatic instability. Oeschger (1986) suggests that two climatic modes existed during the late Wisconsin glaciation. Around 13,000 years ago, essentially Holocene climatic conditions existed for northern Europe, Greenland, and portions of North America, in essence a warm climate mode. An abrupt climatic change is well documented for the northern hemisphere during the period between 12,900 and 11,500 years ago, which switched the climatic system back to a cold climate mode. This climatic change is known as the Younger Dryas cold spell, in which almost glacial conditions reappeared across the northern hemisphere. However, the climate system was unable to maintain the cold climatic mode and switched back to a warm mode around 11,500 years ago, a condition that has essentially prevailed (with minor alterations) since that time. According to Oeschger (1986), large amounts of continental ice and global ocean circulation played an important role in the variability of the climatic system during the Wisconsin glaciations.

Global ocean circulation has been the focus of most recent models of global climatic transitions (Stute *et al.* 2001). These models are based on the principles of fluid dynamics and thermodynamics. Recent paleoclimate research suggests that some past climatic transitions, such as glacial and interglacial cycles, were associated with the formation of deep water in the North Atlantic Ocean. The North Atlantic is about four degrees warmer than the North Pacific Ocean (at similar latitudes). A wide divergence in the temperature of the water circulating between the two oceans has the potential to cause significant and large-scale abrupt climatic change. Stute *et*

al. (2001) believe that the Younger Dryas cold spell was a direct result of the shutdown of circulation in the North Atlantic due to an influx of fresh water from Lake Agassiz (a huge lake that existed in the center of North America and that was fed by glacial run-off) and from deglaciation in North America. Global climate was then locked into the cold mode until freezing removed the fresh water from the North Atlantic Ocean around 11,500 years ago (Broecker 2006).

Human occupation in Baltimore City may have begun before 12000 years B.P. The Wisconsin ice sheet was located to the north in up-state New York. Radiocarbon dates from Meadowcroft Rockshelter in southwestern Pennsylvania indicate that humans were living there circa 16,000 years B.P. (Adovasio 2002).

For a long time scholars believed that Paleo-Indians must have subsisted by hunting late Pleistocene megafauna, such as mastodons and elk, basing this assumption on finds of large, fluted stone points of Clovis and similar types at megafaunal kill sites in the western half of the Unites States (Griffin 1977; Willey 1966). Evidence recovered at archeological sites in the Eastern United States over the last couple of decades indicates that the subsistence base may have been broader, including such small game as hare and arctic fox, and such plant foods as black walnut, blackberry, goosefoot, and wild grape (Dent 1995; Ritchie 1957). Evidence from central Pennsylvania, New York, and New Jersey suggests that Paleo-Indians in the region hunted quantities of whitetail deer and elk (Funk 2004; Funk *et. al.* 1990; Funk and Wellman 1984) as well as smaller mammals. There is also evidence of fishing from the Shawnee-Minisink Site on the upper Delaware River in Northeastern Pennsylvania (Kaufman and Dent 1982).

Some researchers have suggested that most Pleistocene megafauna were extinct on the East Coast by the time of first human settlement (Funk 2004; Funk *et. al.* 1990; Funk and Wellman 1984). One theory concerning the mass extinctions of the Late Pleistocene postulates that the Pleistocene–Holocene transition was an abrupt transition that occurred over an extremely short period. Humans in the New World during this transition would have been confronted by rapidly changing environments that created variety in the availability of both animal and plant food resources. These populations were forced to continually adapt to the changing climatic conditions and look for new resources to utilize (Webb et al. 2004). This hypothesis is in direct opposition to the work of Paul S. Martin (2007) and others who argue that over hunting by the Clovis peoples, not climate change killed off the Pleistocene megafauna. Stuart Fiedel (2005) recently published a paper in which he argued that domesticated dogs could have contributed to the extinction of megafauna in three ways: first, domesticated dogs assisted humans in tracking and immobilizing prey; second, the dogs served as camp sentries, warning humans of the approach of carnivores and harrying the native carnivores that were in direct competition with human populations; and finally, domesticated dogs may have "transmitted one or more Eurasian diseases to New World carnivores, provoking a devastating trans-specific epidemic" (Fiedel 2005:18).

Regardless of the cause of the late Pleistocene mass extinctions, the Paleo-Indian tool kit from all regions of North America is specialized for hunting. It comprises scrapers, gravers, burins, denticulate flakes, utilized flakes, hammerstones, knives, bifaces, and fluted points (Custer 1984; Funk 1972; Gardner 1974, 1977; Kinsey 1972). Tools are characteristically made of high quality

cryptocrystalline material, such as chert and jasper, or of macrocrystalline material, such as quartz or quartzite (Dent 1995). Paleo-Indian groups were probably seasonally mobile, exploiting new and different resources as they shifted locales. Gardner (1974, 1977, and 1979) has identified several types of Paleo-Indian sites using data from the Flint Run culture Paleo-Indian Complex in Virginia. The largest of these sites have been labeled "base camps," *i.e.* the main areas of habitation. They are identified by the variety of artifacts in the assemblage, the non-random distribution of stone tools and debitage (suggesting discrete activity areas), and pits and post molds. Aggregate bands may have occupied base camps at different times throughout the year. Examples of base camps include the Thunderbird Site of the Flint Run culture complex and the Shoop Site in Pennsylvania (Gardner 1974; Witthoft 1952). Smaller sites are identified as special purpose areas, which were occupied for brief periods by smaller groups than those at base camps. These smaller sites include quarries, lithic workshops, base camp maintenance sites, and outlying hunting sites (Dent 1995). Many archeologists studying the prehistory of North America have long assumed that there is a direct correlation between the size of a site and whether it was a base camp or an auxiliary camp, or whether it was occupied by a large corporate group or by a small band. It should be noted that this premise has been roundly criticized on the basis of ethnographic evidence (Binford 1980, 1983).

4.3.2 Archaic Stage (c. 7500 B.C. to c. 1000 B.C.)

The Archaic Stage followed the Paleo-Indian Stage and is commonly divided into the Early, Middle, and Late Archaic periods. There is one recorded site in Baltimore City with components dating to the Archaic Stage. This site is located in northern Baltimore City and was excavated by William B. Marye (1958). Based on the limited information available, it appears that it may have been a macro-band base camp dating to the period 4000 to 3000 years B.P (the Late Archaic Period [Akerson 1988]). A second site, the Carroll's Meadow site (18BC141), may also date to this Period. This site was an interior lithic scatter located adjacent to an intermittent tributary of the Jones Falls (Read 1999a). The lack of Archaic Stage Sites in the city is probably due in part to heavy development along the waterways and the harbor.

4.3.2.1 Early Archaic Period (c. 7500 B.C. to c. 6000 B.C.)

This period is characterized by the appearance of two artifact traditions: the Corner-Notched Tradition (c. 7500 to c. 6800 B.C.), and the Bifurcate Tradition (c. 6800 B.C. to c. 6000 B.C.). The beginning of the Corner-Notched Tradition is marked by the replacement of fluted points with corner-notched points, reflecting changes in hafting techniques and utilization. Rhyolite from the Piedmont Province replaces cryptocrystalline stone as the material of choice. Projectile points associated with the Bifurcate Tradition have bilobes at the base and are not fluted. The artifact assemblages of both major traditions are similar to those of the Paleo-Indian Stage, but there is greater regional variation. There is also greater variation in settlement pattern, with sites found in environments that are more diverse. The consensus is that Early Archaic peoples were exploiting a wider variety of game, fish, and forest resources, including fruit and nuts (Dent 1995; Funk 1978; Steponaitis 1980). However, the people associated with both the Corner-Notched and Bifurcate traditions probably continued to follow a seasonal hunting schedule, as

suggested by their specialized tool kits and settlement patterns. These patterns were based on large macroband base camps that were surrounded by numerous smaller microband base camps and special use sites that included activities such as hunting, fishing, gathering, and quarrying (Gardner 1974, 1977, 1979).

Both Gardner (1978) and Custer (1989) see the Early Archaic Period as part of a broader Late Pleistocene to Early Holocene adaptation continuum. Parker (1990), however, believes that the settlement and subsistence patterns of the Early Archaic Period are more than a reflection of resource availability. He believes that the settlement pattern was a way to mitigate the risk factors produced by unpredictable resource availability (see also Weissner 1982). The location and size of the sites reflects efforts to not only feed groups but was also a means to integrate diverse populations. The smaller groups came into contact with one another at the larger sites. This contact fostered reciprocity in terms of shared resources and cultural ideas. The smaller groups would then disperse to forage and hunt, knowing that the relationships they had established would enable them to tap into the resources of other groups when they were in need. Parker's model, and those of Gardner and Custer, is concerned with human economy, which is defined by Tankersley (1998) as the process of production, consumption, distribution, and exchange of materials that sustain or reproduce human livelihood.

Faunal remains recovered in and around the District of Columbia indicate that Early Archaic populations hunted deer and elk (Humphrey and Chambers 1985). Smaller mammals were probably included in the diet. Plant remains from the Slade Site in Virginia and the Crane Point Site on Maryland's Eastern Shore indicate that Early Archaic populations exploited a wide variety of resources. These plants included forest mast such as hickory nuts, butternut, and possibly acorns, as well as starchy seed plants like amaranth and chenopod (Egloff and McAvoy 1991; Dent 1995; Lowery and Custer 1990). Excavations at sites in the southeastern United States indicate that Early Archaic populations also utilized plant materials to produce basketry and other items. At the Icehouse Bottom Site (now under the waters of the Tellico Reservoir) near Knoxville, Tennessee, impressions of basketry and netting were pressed into the clay surrounding hearths on the site (Chapman 1985). Although there is no direct evidence for these types of material culture items, it is likely that they were also produced in the Middle Atlantic region.

4.3.2.2 Middle Archaic Period (c. 6000 B.C. to c. 4000 B.C.)

The Middle Archaic Period began when the still dominant oak–hickory forest completely replaced the boreal forest associated with the last glaciation in the northern portions of the eastern United States (LeeDecker and Koldenhoff 1991; Whitehead 1972). The climate, which had begun to warm gradually during the Early Archaic Period, reached an average temperature level nearly the same as, if not slightly warmer than, the present era, with a rise in precipitation as well. Morrow Mountain and Stanley points are the diagnostic tools of the Middle Archaic Period (Coe 1964; Custer 1989). Tool kits generally resemble those of the previous period, with the addition of such ground-stone tools as mortars and atlatl weights or bannerstones. The latter were used to balance atlatl spear throwers. These have been found in the Middle Atlantic region, particularly along the Nottaway River in Virginia (Egloff and MacAvoy 1990) and at the

Hardaway and Doerschuk Sites in North Carolina (Coe 1964). A possible bannerstone fragment was recovered at the Kettering Site in Prince George's County, Maryland (Jefferson Patterson Park and Museum 2002). Fragments of mortars and pestles of the *mano–metate* type were found at the Higgins Site on the Western Shore of Maryland (Ebright 1992). A substantial bone tool industry also developed during this period. Artifacts associated with this industry include atlatl hooks, projectile points, and flakes (Dent 1995).

Settlement patterns appear to continue in the tradition of the Early Archaic Period (Dent 1995). Some researchers have suggested that coastal areas were abandoned in favor of the Piedmont during this period (*e.g.* Kavanagh 1982), however the continuing rapid rise in sea level until the end of this period probably accounts for the lack of coastal sites (Steponaitis 1983). Site locations include interior wetlands, areas near stream confluences, and floodplains. There is no real evidence of houses in the Chesapeake region. However, sites do show evidence of distinct activity areas associated with processing foodstuffs, tool production, and maintenance (Dent 1995).

Recent geoarcheological and archeological surveys along the Potomac River in the C&O Canal National Historical Park (Fiedel and Potter 2004) have identified deeply stratified prehistoric sites on the floodplains of the Potomac dating prior to 4000 B.P. Using Coe's research in the Roanoke River basin (Coe 1964), Fiedel and Potter produced a predictive model for site location in the Fall Zone of river valleys. Coe theorized that early Holocene sites would be found at locations with specific characteristics:

- "A narrow valley forms a funnel neck where there was limited space for a campsite,"
- "In narrow and rocky valleys, the high velocity of the water prevented the development of mature meander patterns, and"
- "Fingers of resistant rock extend from the valley wall to the edge of the river. Behind these projecting rocks, the river forms large eddies when it is in flood and deposits sand and silt at a faster rate than elsewhere along the narrow flood plains. Eventually these deposits become higher than the normal flood level" (as quoted in Fiedel and Potter 2004, 2007).

Coe also observed that deep alluvial deposits containing stratified sites may occur where a river confluence, located just above the narrowest point in the valley, creates eddies. As part of this study, Dr. Daniel P. Wagner conducted geoarcheological studies of the Potomac River floodplain. Wagner took auger cores to a depth of 3.4 meters (11 feet) in areas identified by the predictive model. The survey located 16 new sites along the Potomac River, as well as relocating 14 previously recorded sites. Two of these sites were subjected to further study. Testing at the mouth of Tuscarora Creek (18FR798) "revealed a four-horizon cultural sequence: Late Woodland at the top, Early Woodland about 3 ft below surface, a very faint late Middle to Late Archaic horizon at about 5.7 ft, and an Early Archaic and/or Paleoindian zone at ca. 7 to 8 ft below surface" (Fiedel and Potter 2007). As Fiedel and Potter have pointed out, it is clear that there are deeply buried stratified sites along the Potomac River; however, no work of this kind has been conducted in the Fall Zone of the Patapsco River.

There were no major changes in subsistence between the Early Archaic and Middle Archaic periods. Fiber analysis of materials recovered from the Higgins Site in Anne Arundel County, Maryland suggests that turkeys were being hunted (Ebright 1992). Shellfish were probably not a major part of the diet. Continued Marine Transgression hindered establishment of sizable submerged oyster shell reefs in the Chesapeake Bay (Dent 1995).

Gardner (1978, 1980) and Custer (1984) have identified three types of sites associated with the Middle Archaic Period, which they feel reflect the social organization of the period (*cf.* Gardner and Custer 1978). These sites include macro- and microband camps and procurement sites. In the fall when food resources were abundant, bands fused together into macro- or corporate bands that gathered at macroband base camps that tended to be located at the Fall Line. Artifact assemblages recovered at these sites indicate fairly long term occupation with a wide variety of activities. The microbands were comprised of family groups who tended to live in a single river valley. They moved between the valley floor and adjacent upland areas throughout the year, living in microband base camps and utilizing procurement sites. Microband base camps tended to be located in environmental settings that could not support the larger populations associated with macroband base camps. Procurement sites yield fewer tool types and tend to be related to a limited number of activities. Location of these sites was dependent on the type of resource being utilized (*i.e.* quarry sites, interior hunting sites, etc.). See Binford (1980, 1983) for an alternative view of the relationship between site size and function.

4.3.2.3 The Late or Terminal Archaic Period (c. 4000 to c. 1000 B.C.)

The Late or Terminal Archaic Period coincided with the "xerothermic maximum," the peak of an episode of warm, dry climate, in which oak–hickory forests flourished (Carbone 1982; LeeDecker and Koldehoff 1991). This period is often described as a transitional period between non-ceramic cultures and ceramic cultures. In riverine areas, soil profiles show the development of buried landscapes, or paleosols. Soil discontinuities have also been noted in these profiles, which include changes in soil particle size or changes in the rate of soil profile development (Custer 1996). During this period riverine and estuarine environments stabilized, a result of the increased rise in sea level. These areas were ideal places for intensive exploitation of resources, supplemented by a spring-fall migration.

Stabilization of estuarine areas increased the range for oyster beds and anadromous fish. Oysters become a major food source and large oyster shell middens are common on coastal sites. Other estuarine resources that were gathered included gulf periwinkle that was found in cordgrass along the marshy margins of tidewater areas, ribbed mussels, and various clam species that were found in tidal mud-flats (Dent 1995).

Anadromous fish, such as American shad, red drum, herring, perch, and striped bass (rock fish), began to make spring runs from the Chesapeake Bay up into the fresh water portions of rivers to spawn. In order to take advantage of these spring runs, fish weirs were constructed that directed fish into traps. These were made from both stone and cane or wood. Boudain (2008) documented stone weirs along the Potomac River during the drought of 2007. Although there are no documented weirs along the Patapsco, it is likely that these structures were once in use along its

length. Moeller (2005) believes that Native Americans manufactured fish spears. He suggests that many of the lithic tools recovered in the Delaware River Valley that have been identified as drills are in actuality barbed fish spears. Fishnets were also used to capture fish during the spring runs. Floats for fishing nets were made from gourds (*Cucurbita pepo)* and net sinkers were made of stone (Fritz 1999). The catch made with a net was generally not as large as that from a weir, but regardless of the method employed, large numbers of fish were caught during these spring runs, and they needed to be processed in an extremely short period of time. Fish were smoked on large stone platform hearths and also on wooden platforms that were constructed over hearths. Native Americans were still using the same fishing and processing methods when Europeans arrived (Dent 1995; Harriot 1972[1588]).

Cooking technology changed greatly during this period. It has long been assumed that these changes were a direct response to the increased diversity and quantity of available resources (Sassaman 1999). Cobble ovens and roasting pits appear on sites throughout the Chesapeake region (Dent 1995). The production of steatite (soapstone) vessels began during this period. These vessels included cooking stones and slabs, as well as bowls and cups. Steatite is a talc-like stone that can be an easily carved and polished into vessel form. Prehistoric steatite quarries were located throughout the Piedmont region in the Susquehanna Uplands of Pennsylvania, in Cecil County, Maryland (Ward and Custer 1988), along the Patuxent River in Howard and Montgomery Counties near Browns Bridge (Clark and Inashima 2003; Read forthcoming), and in the Maryland counties of Baltimore, Carroll, Cecil, Harford, and Montgomery (Brown 1980).

Throughout this period, population continued to increase, becoming more sedentary (Mouer 1991; Steponaitis 1980). Base camps were established at the mouths of streams and rivers or in marshy embayments. Upland areas were the locus of food processing camps. Small lithic scatters are common throughout the uplands; probably representing debris from the manufacture of expedient tools used to process food resources (Custer 1996). Other sites were the locus of seasonal or short-term-procurement stations. In the past, these sites have been categorized as "quarries," but recent excavation of the Lyonsfield III Site in Baltimore County and the Anderson Branch Site in Montgomery County has contradicted this model. Both of these sites appear to be the locus of overlapping activities that include lithic procurement and processing as well as the utilization of resources from nearby drainages and bogs (Ferguson and Randolph 2006; Maymon *et al.* 1997). On the Coastal Plain, groups focused on shell fish and fish. Multiple large macroband base camps were located on the Coastal Plain and were surrounded by smaller procurement sites. In the Piedmont, groups focused on harvesting nuts, deer, and turkey in the interior uplands. In the river valleys, they exploited the annual fish runs (Dent 1995).

Artifact diversity increases during this period, as represented by groundstone axes, hammerstones, net weights, and drills. Overall, there is an increase in both the number and variety of groundstone tools. Caches of groundstone tools associated with plant food processing appear during this period. It is assumed that these heavy tools were placed in pits and hidden away when a site was abandoned, implying that the occupants intended to return and retrieve these caches. Diagnostic artifacts include both narrow blade stemmed and broad blade point types. Narrow blades tend to be made from a wide variety of locally available quartz and quartzite, with lesser numbers manufactured from rhyolite found in the Piedmont. The broad blades makers showed a preference for local quartzite (Custer 1996, Dent 1995). Custer (1996)

and Mouer (1991) have noted that site assemblages with broad blades are more common along the Coastal Plain, while narrow blade assemblages appear more frequently west of the Fall Line. Custer notes that west of the Fall Line in the Piedmont, 96 percent of the sites with broad blades in their assemblages are located along rivers. Mouer has noted a similar distribution in Virginia. Eighty-seven percent of the sites with broad blade assemblages are located on the water's edge and only 13 percent were found on sites located in interior regions. Most researchers now believe that the narrow blade tradition was focused on the utilization of sylvan (or forest) resources, while the broad blade tradition was a response to the newly available riverine and marine resources. However, contention arises among researchers when the origin of the broad blades is brought into focus. Currently, most researchers believe that the narrow blade tradition developed *in situ*, while the broad blades entered the Chesapeake region from the southeast (Dent 1995; Custer 1996). The question is how did broad blades enter the Chesapeake region?

In 1975, Turnbaugh published an article in the *Journal of Anthropological Research* in which he argued that broad blade using groups migrated out of the Southeast up the Atlantic Coast into the Chesapeake region and the Northeast. This article set off a firestorm of debate in the late 1970s and early 1980s, and to this day the matter has never been completely resolved. In 1976, Cook published a rebuttal to Turnbaugh's article in which he claimed that broad blades appear on sites in the Northeast as early as they do in the Southeast. The article cited radiocarbon dates from the Neville site in New Hampshire in support of the early appearance of broad blades. However, as Dent (1995: 201) has pointed out, the use of these dates is highly questionable. The radiocarbon date of 4300 years B.P. cited by Cook in 1976 is not directly associated with the broad blades but comes from a stratum *below* these points and is directly associated with narrow blades, not broad blades (Dincauze 1976:112-113).

The problems with the dates in the 1976 Cook article aside, many archeologists still contend that the appearance of broad blades in the Middle Atlantic or Chesapeake region is not due to the direct migration of peoples into the region but is instead the result of broad-based trade networks in which items were traded hand-over-hand across long distances. The argument is that once some of the broad blades had entered the region, they were quickly adopted by the local populace and became part of the archeological assemblage. What is not mentioned in many of the trade arguments is that other cultural attributes associated with the use of broad blades in the southeast – subsistence and settlement practices, possibly the social structure and similar burial practices – also appear at the same time (Dent 1995).

Dent (1995) argues that the stimulus for the Broad Blade Tradition in the Northeast and the Chesapeake region was imported into the Chesapeake through the exchange not only of technology but also of ideas. He also argues that this exchange did involve the movement of small groups of outsiders into the region and that exchange probably occurred along the boundaries between the two cultural groups where the movement of people, technology, and ideas is more fluid. One group appropriated new cultural ideas and new technology, adjusted them to fit their specific needs and cultural ideology, and then spread these ideas and associated technological items to others within the same cultural group.

However, Custer (1996) believes that the same cultural group used both types of blades – broad and narrow. He cites the co-occurrence of these blades in assemblages on sites across the Middle

Atlantic region. The contextual integrity of these sites is excellent – the blades have been found together on stratified sites, in clearly defined deposits. Custer argues that this supports the usage of these blades by a single cultural group and that it does not indicate the presence of a unique Narrow Blade Cultural Group and a unique Broad Blade Cultural Group. Dent (1995:214) on the other hand argues, "this co-occurrence of artifacts is more likely a case of expected interaction between very different yet contemporaneous groups…." The distribution of these blade types does indicate a major break at the Fall Line, which historically served as a boundary between different cultural groups.

4.3.3 Woodland Stage (1000 B.C. to A.D. 1700)

The Woodland Stage (c. 1000 B.C. to c. A.D. 1700) follows the Archaic Stage, and, like the Archaic Stage, it is usually divided into the Early, Middle, and Late Periods. Each period in turn is subdivided into phases, which are marked by unique pottery types. The Woodland Stage is distinguished by the addition of "true" (*i.e.* fired) pottery to the technological assemblage. It is also marked by increasingly sedentary occupations, agriculture, and social complexity through at least the Middle Woodland Period (c. 500 B.C. to c. A.D. 900). In the central United States these trends culminated in the Adena, Hopewell, and Mississippian cultures. In Maryland, however, the Woodland Stage is distinguished less by dominant regional cultures—though the three just mentioned had influence—and more by local changes in pottery style.

In Baltimore City, there are three sites dating to the Woodland Stage of development. Both 18BC7 and 18BC8 have been destroyed by recent development. These sites both contained Early and Middle Woodland Period components although little is known about either of the sites (Akerson 1988; Stearns 1966). The third site, 18BC10, is located at Mount Clare in Carroll Park. This portion of 19BC10 was comprised of a shell midden yielded radiocarbon dates of A.D. 960-$\pm$70 and 1010$\pm$60 (Ward 1988).

4.3.3.1 Early Woodland Period (c. 1000 B.C. to c. 300 B.C.)

Early Woodland peoples built upon the social and technological developments of their Late Archaic predecessors (Dent 1995). The Early Woodland Period is inaugurated with the invention or introduction of distinct pottery styles. Early ceramics are known as "Experimental Wares" and are often similar in form to earlier steatite vessels. Egloff and Potter (1982) argue that southeastern ceramics inspired early Middle Atlantic ceramics. Ceramics first appeared along the Georgia and South Carolina Coast circa 1500 B.C. to 1000 B.C. In the Middle Atlantic, many of the early wares developed in the Piedmont region and the technology spread rapidly through the rest of the region. While some ceramic types may have originated outside of the region, other types were probably local innovations and are unique to the Chesapeake. Included in this latter group are Selden Island (Slattery 1946), Bushnell, and Croaker Landing wares (Custer 1989). Dent (1995:225) notes that these wares appear to be "spatially restricted to the Piedmont Zone and sometimes the outer Coastal Plain. None are typically recovered in great quantities." Other ceramic types associated with the Early Woodland Period include Marcey Creek ceramics, which are tempered with crushed steatite and whose forms are reminiscent of the carved steatite bowls

of the previous period. That is, slab built with a flat bottom and lug handles. These wares first appeared in the southern reaches of the Middle Atlantic (Custer 1984; Manson 1948; Mouer 1991; Stephenson *et al.* 1963; Steponaitis 1980). Selden Island ceramics, like Marcey Creek wares, are tempered with steatite. However, unlike Marcey Creek, Selden Island wares have a conical bottom and no lug handles (Slattery 1946).

In the Coastal Plain and Piedmont regions, Marcey Creek was eventually replaced by Accokeek wares, which were tempered with sand and quartz and employed new forms (such as conical bottoms) and coil construction (Stephenson *et al.* 1963; Steponaitis 1980; Wright 1973). "Clark believes that the transition to conical-shaped vessels and the shift from steatite to quartz temper suggests that around 800 B.C. the steatite quarries of the [Rocky Gorge Reservoir] had ceased to be part of the annual exploitation round of the Native Americans of the Patuxent River" (Clark and Inashima 2003:24).

Early Woodland settlement and subsistence patterns show strong continuity with Late Archaic life styles and a continuation of what Dent calls the "Intensification Process". The main difference is the appearance of ceramics. The chipped-stone industry reflects Late Archaic "intensification": drills, small bifaces, perforators, scrapers, and utilized flakes. Antler and bone tools have also been recovered (Dent 1995). Local groups appear to have become more sedentary, occupying larger sites for longer periods, served by outlying extraction sites (Gardner 1982; Mouer 1991). There is no evidence for the establishment of villages during this period; instead habitation sites appear to have been a number of seasonal camps (Waselkov 1982). Along the coast, major base camps seem to be linked to more transient, limited-purpose interior sites. A division appears in settlement patterns associated with freshwater and estuarine resource extraction (Custer 1984, 1989; Mouer 1991; Wright 1973). Wright (1973) postulated small family based groups moving between forest, riverine, and tidal sites. Tidal sites supported larger populations that gathered oysters and other estuarine resources, while inland forest and riverine sites were used for smaller hunting and gathering camps where a variety of animals were hunted and hickory nuts were gathered. The same pattern has been noted for the Susquehanna, Patuxent, Severn, South, and Potomac Rivers (Clark and Inashima 2003; Kent *et al.* 1971; Steponaitis 1980; Wright 1973). Steponaitis (1980) notes an increase in shell middens along the tidal portions of the Patuxent River, as well as increase of Accokeek components as compared to the number of earlier Marcey Creek components.

Perhaps the most striking assemblages of this period are the Adena culture artifacts, imported from the Ohio Valley and found in elaborate graves. These artifacts first appear in the Midwest about 2,500 years ago and are found on Maryland's Eastern Shore and on the West River in Anne Arundel County. The artifacts recovered from the Maryland sites include block-end tubes, bifaces, gorgets, and large blades made of non-local chert (Dent 1995; Ford 1976). In 1963, Don Dragoo hypothesized that the Adena on the East Coast were immigrants from the west. Adena developed out of an earlier Late Archaic Burial Tradition known in the literature as the "Cult of the Dead." According to Dragoo, this "Cult of the Dead" extended from the western Great Lakes into Upstate New York, New England, and Canada. It was also found in Central Ohio and the Middle Atlantic. These earlier burial cults included the Glacial Kame Complex (Moorehead 1909; Cunningham 1948), the Red Ocher Complex (Ritzenthaler and Quimby 1962), the Red

Paint Complex or People (Moorehead 1922), and the Old Copper Complex or Cult (Ritzenthaler 1957), all of which were fully in place during the Late Archaic Period (Milner 2004).

Adena developed between 500 B.C. and 250 A.D. as a distinct regional culture in Ohio. It spread along the Ohio River and up major tributaries for 100 to 150 miles. Trade items leaving Ohio ended up deposited in similar mortuary deposits spread over widely separated areas. However, it is also important to assume that more than material items were being exchanged in these long distance trade networks. Part of the exchange included the cultural ideal of the "Cult of the Dead." This ideal served as a unifying theme over hundreds of miles. It not only stylized burial customs and material remains, but also united diverse ethnic groups living in diverse ecological settings. In Ohio, the early burials contain mostly utilitarian objects. Later Adena burial mounds show definite evidence of social hierarchy with exotic goods in elaborate and large-scale interments, probably indicating Big Man systems (Johnson and Earle 2000; Sahlins 1968). Adena and other burial cults may have started as a way of symbolizing the claims of egalitarian groups to territory. Over time, an elite group emerged in the society that controlled the distribution and trade of luxury goods over a wide area. Initially, religious specialists probably carried out long-distance trade missions in order to obtain rare goods. Adena burial practices and goods were spread to other groups through ritualized long-distance trade relationships (Custer 1984; Dent 1995; Dragoo 1963; Milner 2004). Custer (1984) believes that the presence of Adena goods without the mortuary complex on a site would simply signify trade. However, the building of Adena style mortuary complexes across great distances indicates an exchange not only of goods but also of the religious ideology and customs of the Adena ceremonial complex.

In the Ohio and Mississippi River valleys, Adena evolved into more complex mortuary practices associated with the Hopewell Peoples. Hopewell did not extend into the Chesapeake. Instead, Adena disappeared from the Chesapeake by 200 B.C., or at the beginning of the Middle Woodland Period. The trade networks with Ohio also appear to have ended around this time (Custer 1984; Dent 1995; Milner 2004).

4.3.3.2 Middle Woodland Period (c. 300 B.C. to c. A.D. 900)

Changes in pottery styles characterize the phases of the Middle Woodland, just as they did in the preceding period. During the later part of the Early Woodland and the early part of the Middle Woodland, Popes Creek ceramics are the predominate ware found on the Coastal Plain of Maryland, as well as in parts of Delaware, Pennsylvania, and Virginia. The core area for Popes Creek pottery is in the tidal drainage of the Potomac River. Distribution extends to the Fall Line and into the Fall Zone; but is rare in the Piedmont proper. Popes Creek is thick-walled, tempered with sand, and bears net impressions (Holmes 1992 [1903]; Stephenson *et al.* 1963).

Handsman and McNett (1974) suggest a continuing seasonal fission and fusion for the Popes Creek Peoples. Along the tidal portion of the Potomac River the major Popes Creek settlements were occupied during the fall and winter. Satellite sites for specialized hunting and procurement activities were located beyond the Fall Line and in the interior portions of the Coastal Plain. The main base campsites have dense shell midden accumulations. At the Popes Creek type site, approximately 35 acres (14 hectares) of shell accumulation was spread on both sides of the creek and was between 14 and 26 feet (4.27 and 7.92 meters) in depth. During the spring, part of the

group would travel up river to the Fall Zone in order to take advantage of the annual runs of anadromous fish (Dent 1995). Steponaitis (1980) notes that for the tidal portion of the Patuxent River, lithic materials used during the Popes Creek Phase tend to be primarily of local origin. Most of the Rossville points associated with Popes Creek components were made of either quartzite (46 percent) or quartz (41 percent). Smaller numbers were made of Piedmont rhyolite (11 percent), chert from Pennsylvania (1 percent), or Pennsylvania jasper (1 percent). In the Upper Patuxent, Severn, and Magothy drainages, local quartz quarries were utilized for both lithic resources and seasonally available resources at nearby drainages and bogs (Polglase *et al.* 1990, 1992; Polglase and Neuman 1991a, 1991b; Steponaitis 1980; Wright 1973).

Custer (1996) notes that transient camps and small procurement and processing stations continue to be as an important part of the Early and Middle Woodland Period settlement patterns as they were during the Late Archaic Period. Transient camps are less ephemeral than procurement and processing stations, and ceramics are frequently found in their assemblages. Rock shelters were commonly used as the locus of transient camps. Stewart (1985) has referred to rock shelters as the "prehistoric motels" of the Early and Middle Woodland periods. These transient camps were probably associated with specific procurement activities such as plant resources, lithic outcrops, or riverine resources (Custer 1996).

Clark and Inashima (2003:25) note an expansion of population into new geographical areas during the following Selby Bay Phase and state that the Middle Woodland Period is a time of "dynamic change." There is a substantial shift in population location, lithic procurement activities, and subsistence patterns between the Popes Creek Phase and the Selby Bay Phase of the later Middle Woodland. During Selby Bay, expanding populations began to move into the Fall Zone. Eventually populations residing in the Patuxent drainage began to cross the ridge near what is now Parrs Ridge Maryland and enter the Monocacy River Valley; from there, they directly exploited Blue Ridge rhyolite quarries. Clark believes that at this point the old down-the-line trade network system gave way to direct procurement (Clark and Inashima 2003). Steponaitis (1980) noted the change in lithic material preference in collections from the tidal Patuxent. Ninety-three percent of the Selby Bay Points in these collections were manufactured from rhyolite. Smaller numbers were made from argillite (3 percent), chert (2 percent), and quartz and quartzite (1 percent). Potter (1993) also noted a direct correlation between rhyolite and Selby Bay Points at the Plum Nelly Site along the Potomac River in Virginia. Other items recovered from this site include bifaces made of local stone, green stone celts, and bone tools, needles, and awls.

In addition to new point types and a shift in lithic material preference, new ceramics also mark the Selby Bay Phase. The Mockley ceramics associated with this phase appear circa A.D. 200 and are found in the archeological record until circa A.D. 900. They are tempered with coarsely crushed, unburned oyster shell. The exterior surfaces are either plain or are cord-marked or net impressed. Mockley is distributed across both the Western and Eastern Shores of the Coastal Plain in Maryland and Delaware and as far south as the James River in Virginia. It is also found in the Fall Zone, but is rare west of there. Small amounts have been reported from rock shelter sites in the Piedmont and Great Valley regions of Maryland (Clark and Inashima 2003; Jefferson Patterson Park and Museum 2002).

Initially, Selby Bay settlement patterns mirrored those of the Popes Creek Phase. Then following a dry interval between A.D. 400 and 500, very large midden sites on land next to coves or the embayments of tributary streams began to appear in the tidal portions of the Chesapeake region's rivers. Leland Gilsen (1978, 1979) suggests settlement and subsistence patterns during the latter portion of the Selby Bay Phase in the Chesapeake region may be characterized as an "Estuarine Efficiency Model." Gilsen argues that there is a dual adaptation to both the tidewater and freshwater areas of the rivers that emphasizes shellfish as the primary food resource and anadromous fish as a secondary resource. Both sources are predictable in terms of location and timing, and both are abundant. He predicts a settlement pattern based on a main village or base camp located in the estuarine portion of the river that was occupied during the late summer, fall, and early winter. During these seasons of the year, the population gathered shellfish and supplemented their diet with turtles, fish, deer, and plant materials. Then during the late winter, spring, and early summer, a secondary village or base camp was established along the riverine portion of the river near the spawning areas. Selby Bay peoples exploited the anadromous fish runs and supplemented their diets with plants, turtles, waterfowl, small mammals, deer, and wapiti (elk). Potter (1993) suggests that this may be the last intensive gatherer and hunter era in the Middle Atlantic and, further, that the rich Coastal Plain environment may have delayed plant husbandry until much later in the Late Woodland Period.

McLearn and Mouer (1994) both argue that between A.D. 200 and 800, Middle Woodland peoples gradually changed their fission–fusion cycles, staying in one place for much longer periods of time, until they began to live in more permanent settlements. Mobility decreased as groups increased their focus on collecting specific resources. Potter (1993) and Steponaitis (1980), based on their work in Virginia and along the Patuxent River, both suggest that specific task groups were assigned to secure the various food sources and to bring them back to residential base camps. This type of fission-fusion cycle is also known ethnographically (*c.f* Binford 1980). Very large midden sites begin to appear after A.D. 550 and increase in number between A.D. 700 and 900. Groups are larger, and while fission–fusion continues, some members of the group remain at the base camp/village year round.

House patterns appear in the Middle Atlantic for the first time during the later part of the Middle Woodland Period. A possible domestic structure was uncovered in Calvert County along the Patuxent River (Dent 1995). At the Indian Point Site on the Schuylkill River, semi-subterranean house pits with numerous hearths and storage pits were recovered during excavation. Household clusters were identified at the Clyde Farm Site in Northern Delaware. Each of these clusters contained a house and food storage/processing pits associated with an individual family. Between A.D. 700 and 900, distinct local pottery was produced along with Mockley. Examples include Nomini in Southern Virginia and Hell Island ceramics in Delaware (Custer 1996; Dent 1995; Egloff and Woodward 2006).

Rhyolite, which was the preferred lithic material for much of the Selby Bay Phase, could only be obtained in the Piedmont. After A.D. 700, trade or direct access to the resource declined, effectively ending around A.D. 900. Rhyolite points recovered from Coastal Plain sites post-dating A.D. 700 are heavily reworked, and an increasing number of points are made from local quartz and quartzite. This suggests localization as groups settled into distinct territories. This is not due to the introduction of agriculture as Binford (1964) hypothesized but is due to intensive

gathering and hunting of select species. There are changes in the diet at the end of the Middle Woodland Period marked by a decrease in the diversity of species in oyster shell middens and an increase in the volume of oysters. Populations focused on deer, turkey, and anadromous fish. It is also possible that some cultivation starts during this period (Dent 1995).

Boundary definitions between groups would have intensified as mobility deceased. Luckenbach *et al.* (1987) suggest that the during the Selby Bay Phase, the local population, represented by the Accokeek and Popes Creek peoples, may have been replaced and/or absorbed by a large influx of Algonquian-speaking Native Americans. Potter (1993) notes new territories on the Northern Neck of Virginia and in the Potomac Basin, along the Rappahannock River Basin South to the James River, along the Patuxent River Basin and in the Piedmont west of Fall Line. Custer (1996) notes similar territories in the Delaware and Schuylkill River Valleys affiliated with coastal groups to the south and east. Groups in the Susquehanna River Valley were more closely affiliated with interior Piedmont groups to the north and west.

4.3.3.3 Late Woodland Period (c. A.D. 900 to A.D. 1700)

Horticulture, and possibly agriculture, was well established by the beginning of this period. The first appearance of either practice probably dates much earlier in the Woodland Stage (Custer 1984). Selig (1993) suggests that plant domestication in the Eastern Woodlands began with indigenous seed plants. These included Chenopod (Goosefoot), Marsh Elder (Gall Bush), Squash, Sunflower, Erect Knotweed, Little Barley, and Maygrass. By 2,000 B.C., significant morphological changes appear in the archeologically recovered seeds of cultivars from sites west of the Appalachian Mountains. These changes include thinning of the seed coats and an increase in seed size. Between 250 B.C. and A.D. 200 (the Popes Creek and Mockley Phases), small farming communities began to appear on the Mississippi and Ohio River Drainages. In the southeast, small communities appeared along the Gulf Coast and in river valleys. The focus was on indigenous crops, not maize. This type of food production began at the same time as the emergence of Hopewell in the Midwest, a regional culture that does not reach into the Middle Atlantic (Selig 1993; Milner 2004). Circa A.D. 800, maize began to dominate fields and diets. Maize production spread rapidly through the Eastern Woodlands and by A.D. 900, it extended from Florida up the East Coast into Ontario Canada. The transition coincided with emerging Mississippian Chiefdoms in the Midwest, and the beginnings of chiefdoms in the Middle Atlantic. In the Middle Atlantic, maize was part of a diet that included nuts, starchy tubers, amaranth, and goosefoot (Ameringer 1975; Dent 1995; Kinsey and Custer 1982; Moeller 1975). Wild plants and faunal and aquatic resources, including freshwater shellfish and anadromous fish, supplemented the diet.

Lithic technology does not change appreciably during this period, although the appearance in the archeological record of triangular stone points probably indicates the manufacture and use of bows and arrows. Other tools include stone celts and hoes, bone and antler tools, and angular pipes. Copper beads and pendants have been recovered but are rare (Dent 1995).

The cultural boundary demarcated by the Fall Line and evident in settlement patterns and material culture before the Late Woodland Period persisted between the Piedmont and the

Coastal Plain Provinces. As Potter (1993:155) notes, the "fall line had been a dynamic place since at least 2,000 B.C., but if became particularly so during the Late Woodland." In Virginia, this was particularly true in the century or so preceding the settlement of Jamestown. The Fall Line became a cultural buffer zone between the Monacans of the Piedmont and the Powhatans of the Coastal Plain. This cultural buffer is also noted in the distribution of ceramic types throughout the area (Potter 1993).

In Maryland, pottery found in the Piedmont that dates to the Late Woodland Period includes Shenks Ferry, Shepard, Page, and Keyser wares. All of these wares have distribution patterns that are located to the west of the project area. Townsend Series ceramics were distributed throughout the coastal plain to the Fall Zone. Townsend Series ceramics include several defined types – Rappahannock Fabric-Impressed, Rappahannock Incised, Rappahannock Plain, Townsend Herringbone, and Townsend Corded-Horizontal. Moyoane and Potomac Creek ceramics also appear on the Coastal Plain (Jefferson Patterson Park and Museum 2002). Distribution of all of these ceramic types appears to match the locations of two distinct linguistic groups – the Algonquians and the Iroquoians. Areas that were predominately inhabited by Algonquian speakers are associated with the distribution of Townsend series ceramics, Potomac Creek ceramics, and Shepard ceramics, while areas with Iroquoian/Eastern Siouan speakers are associated with the distribution of Shenks Ferry ceramics (Custer 1996; Dent 1995; Griffith and Custer 1985; Potter 1993).

Luckenbach *et al.* (1987) have suggested that Algonquian speakers appeared in the Chesapeake region during the Selby Bay Phase and replaced and/or absorbed earlier populations represented by the Accokeek and Popes Creek peoples. Another hypothesis concerning the movement of ancestral Algonquian populations in the Chesapeake region is the Montgomery focus hypothesis. Karl Schmitt (1965), who worked on the Potomac Creek Site as a graduate student in 1940, initially stated the hypothesis. Schmitt noticed similarities between artifacts recovered from the Potomac Creek Site and from later components of the Accokeek Creek Site, particularly the Potomac Creek Cord-marked pottery. Sites with these attributes were grouped together as the "Potomac Creek Complex". Schmitt also noticed that there seemed to be a relationship between these two sites and sites along the Potomac River in the Piedmont Province. In particular, he noted similarities between the Shepard Site (18MO3) in Montgomery County and the Potomac Creek Complex sites. The defining pottery for the Piedmont sites was Shepard Cord-marked, which is similar to Potomac Creek Cord-marked. Schmitt hypothesized that during the very Late Woodland, small groups living in the Piedmont formed close alliances and then moved east onto the Coastal Plain where they built large fortified villages. He suggested that "A possible stimulus to such a movement and banding together would be a desire for security from tribes, possibly Iroquoian, to the west and north" (Schmitt 1965:30).

Subsequent work on Piedmont sites with Shepard ceramics led to these sites being grouped under the heading of the "Montgomery Complex" (Curry and Kavanagh 2004; Slattery and Woodward 1992). While there are many similarities between the Potomac Creek Complex and the Montgomery Complex, there are also major differences. The latter include house patterns, which are circular for the Montgomery Complex and rectangular or longhouse-like forms for the Potomac Creek Complex. Mortuary practices also differ. Montgomery complex burials are generally flexed and placed in single graves. Bundle burials are extremely rare (Potter 1993).

Potomac Creek Complex burials are secondary reburials in ossuaries (Curry 1999). Potter (1993) points out that when the postulated movement of the Montgomery Complex occurred (circa A.D. 1300-1400) secondary burials in either ossuaries or mounds were already common in Virginia and the Montgomery Complex peoples may have adopted the practice of secondary burials from their neighbors after moving onto the Coastal Plain.

Another avenue of evidence supporting the Montgomery Complex hypothesis is the movement of other peoples in the Piedmont region. The Mason Complex peoples used Page Cord-marked ceramics and Levanna points. In A.D. 1300, these groups were based in the upper Potomac and northern Shenandoah Valley. Like the Montgomery Complex peoples, they too were pressured by other groups and eventually left the Piedmont. Groups living in palisaded villages that engaged in agriculture, and used Keyser Cord-marked pottery and Madison triangular points replaced them. Known as the Luray Phase, they spread through the Piedmont and by the 1400s had displaced both the Mason Complex and Montgomery Complex populations (Potter 1993).

While the distribution of ceramics is strongly correlated to the distribution of linguistic populations, overall settlement patterns remained much the same as during the previous period. Semi-sedentary villages appear throughout the region, which were associated with small seasonal hunting, fishing, and gathering camps (Potter 1982). Smaller villages appeared between A.D. 800 and 1300 while larger villages tend to appear after A.D. 1300. Between A.D. 800 and 1600, fortified villages began to appear along river valleys. This may be due to the movement of populations through the region that was described in the preceding paragraphs. A number of villages were fortified with substantial stockades that surrounded a central building, while others surrounded the whole settlement. The former may have marked precinct bounds, while the latter were defensive (Clark 1980; Dent 1995). Population increased and social organizations throughout the Middle Atlantic exhibited a greater range of social complexity, increased social stratification, and corresponding social inequality (Potter 1993).

Small gathering and hunting communities generally do not organize on the tribal level unless an abundance of resources exist. In the Chesapeake region, there was an abundance of shellfish and other estuarine resources that became available during the Late Archaic/Early Woodland periods. Groups tended to be more sedentary, although they were not living in villages. Seasonal dispersal of families hampered establishment of strong tribal entities as the coherence of the corporate group was continually disrupted. However, as communities became more sedentary through the Middle Woodland Period, they may have begun to organize into what Sahlins (1968) describes as segmentary tribes. Segmentary tribes tended to be divided into independent local communities that were the primary political segments. The communities and their territories were small. Individual communities could be formed from a single descent group or lineage or by an association of several different lineages. Leadership of the groups was generally in the form of either a petty chieftain or a Big Man. Neither position was hereditary. Eventually one of these leaders might be able to gain control of a group of villages, and, through time, he and possibly his descendants were able to consolidate and centralize their political control over the group.

By the late 1400s to early 1500s, there was increasing social and political centralization in the Chesapeake region. Potter (1993) believes that complex societies began to emerge at this time in the form of chiefdoms. Robert Carneiro (1981:45) defines chiefdom as "[a]n autonomous

political unit comprising a number of villages or communities under the permanent control of a paramount chief." The earliest of these chiefdoms probably emerged from the Potomac Creek Complex and was comprised of the Piscataway of Maryland and associated groups such as the Nacotchtanks, Pamunkeys, Nangemoys, and Potapocos, and the Patawomekes of Virginia and groups like the Patuxenents in Maryland. This chiefdom continued until the end of the 1500s when the Patawomekes broke away under their own chief (Potter 1993). This early chiefdom arose just to the east of the Fall Line on the inner Coastal Plain along the Potomac River. This is also the same setting where the Powhatan Chiefdom arose along the James River in Virginia.

Numerous explanations have been put forth as to why centralized chiefdoms emerged in the fifteenth and sixteenth centuries. These include the location of agricultural soils, population pressure on resources, control over resources (such as anadromous fish) and external pressure by non-Algonquian populations who entered the Fall Zone to exploit the area's resources. Alternative explanations include trade arrangements between Coastal Plain and Piedmont groups that allowed certain members of Algonquian society to secure trading monopolies that became hereditary. This is turn concentrated wealth in the hands of a few individuals who were eventually able to consolidate control over other Algonquian groups in the area through trade restrictions and alliances (Potter 1993). Rountree (1989) has also suggested that sporadic contact with Europeans during the sixteenth century introduced epidemic diseases among the Powhatans. She suggests that these diseases disrupted the social order and enabled an ambitious individual to establish control as paramount chief.

When the first Europeans arrived in Virginia, the Powhatans were the largest of the chiefdoms. The paramount chief of this group was Powhatan, or Wahunsonacock, who ruled from 1572 until 1617. The Powhatans were comprised of most of the Virginia Algonquians. Powhatan had subordinates, or Werowances, who ruled local groups. The position of Werowance was hereditary and was affirmed through the accumulation and control of wealth, especially of copper, which was highly prized and carefully controlled by the Werowances. Beneath the Werowance were lesser Werowances who ruled individual villages within the territory of the main Werowance, as well as priests, advisers, and the most important of the warriors. Commoners and war captives occupied the lowest ranks of the society (Potter 1989).

In 1608, when John Smith explored the northern Chesapeake Bay, he encountered Algonquian-speaking tribes in southern Maryland and northern Virginia (Dalrymple 1874; Hall 1910; Harriot 1972[1588]). During the 1608 voyage, Smith sailed up the Potomac River and encountered the main village of the Patawomeke Werowance in what is now Stafford County, Virginia. This village was once believed to be the location of the Potomac Creek Site, but excavation there and at the Accokeek Creek Site failed to recover any European goods. European goods were recovered in the adjacent ossuaries. It is likely that burial continued in the ossuaries after the villages were abandoned and that the villages were not reoccupied after contact with the Europeans had occurred (Potter 1989, 1993). Smith mapped other large villages on the Anacostia River and along the Potomac River, as well as along other rivers that are located in what is now Maryland.

Smith also noted a high density of Algonquian speaking people along the Patuxent River that were either part of the Patuxent Chiefdom or of three other related chiefdoms (Clark and

Rountree 1993). These chiefdoms were confined to the tidal portions of the river. He encountered 15 villages along the lower Patuxent River and estimated the population as approximately 665. In 1639, Father Smith of the Society of Jesus (Jesuits) resided with Native Americans living at the mouth of the Patuxent. The following year, their chief adopted European dress. The Jesuits also conducted missionary trips along the length of the Patuxent, giving away bells, needles and thread, iron fishing hooks, and other small items. The Patuxent were assigned a 700-acre (283.28-hectare) reservation in Prince George's County across the Patuxent River from what is now Waysons Corner. In 1690, their numbers decimated by small pox and other European diseases, the few remaining Patuxent warriors and their families petitioned the Maryland General Assembly to allow them to abandon their reservation and join the Choptico and Piscataway in St. Mary's County. These three groups joined the Maryland Rangers in their patrols of the Maryland frontier between circa 1690 and 1710 (Scharf 1879).

At the extreme northern end of the Bay, Smith encountered Iroquoian-speaking Susquehannocks and their allies (Arber 1967; Noël Hume 1994). The Susquehannocks main villages were in Pennsylvania, but they claimed control over the Piedmont area of the Patuxent. They used this area as a hunting ground from the late spring through the summer, generally sending in small groups of men and their families. In 1647, the Jesuits estimated the population of the Susquehannock at approximately 6,500. Early settlers in the upper Chesapeake Bay frequently came into contact with the Susquehannock, and many of these early contacts resulted in violence. On 5 July 1652, the Susquehannock signed a treaty with the Governor of Maryland in which they ceded all territory between the Patuxent River and Palmer's Island and from the Choptank River to the Northeast Branch of the Elk River. This did not stop tension between the Susquehannock and the settlers. In 1661, the Governor of Maryland and the Council met at the home of Nathaniel Utie on an island off the shore of what is now Aberdeen Proving Ground in Harford County, to investigate complaints of attacks upon the settlers by the Susquehannock. During that same year, smallpox swept through the Susquehannock, greatly reducing their numbers. Two years later, when the Seneca Indians began raids against both the Susquehannock and the settlers, the two groups signed a peace treaty and entered into mutual defense against the Seneca. The long war between the Seneca and the Susquehannock coupled with smallpox and continued friction with white settlers eventually led to the dwindling of the tribe and the retreat of the majority into Pennsylvania (Brooks and Rockel 1979). In 1674, the few Susquehannock remaining in Maryland relocated to the mouth of the Patuxent River at the invitation of the Governor of Maryland (Marye 1955; Scharf 1879).

4.4 POST CONTACT CONTEXT, 1634-2008

The written history of Maryland begins with the arrival of John Smith as briefly sketched above. The following section relied on general histories such as *Maryland: A Middle Temperament 1634-1980* (Brugger 1988), and local histories of the city and county including: *A History of Baltimore County* (Brooks and Rockel 1979), *Baltimore: An Illustrated History* (Greene 1980) and *Baltimore: The Building of an American City* (Olsen 1980). Other articles and books were also consulted these are listed in Section 8.0.

4.4.1 Contact and Settlement Period, A.D. 1570–1750

Captain John Smith surveyed the northern Chesapeake Bay in 1609. During exploration of the Patapsco River, he encountered what would become known as Federal Hill and the Baltimore Inner Harbor. Smith described them as "a great bank of red clay flanking a natural harbor basin" (Ruckert 1980). Despite Smith's favorable impression of the northern Chesapeake Bay, European settlement in Maryland did not officially occur until 1634. In that year, Cecilius Calvert, second Lord Baltimore, sent a group of colonists sent to the Chesapeake who founded St. Mary's City in southern Maryland. In 1631, earlier settlers led by William Claiborne of Virginia had illegally colonized Kent Island (Brugger 1988; Fausz 1988). Between 1634 and 1649, settlers continued to cluster around St. Mary's City. Official settlement in the upper Chesapeake Bay began with the arrival of Richard Bennett's group of Virginian Puritans in 1649. Bennett's group initially settled at Providence in Anne Arundel County, across the Severn River from what is now the city of Annapolis (Beauregard *et al.* 1999; Luckenbach 1995; Read 1993). Over the next two decades, these settlers began to spread south into southern Anne Arundel County and north into what are now Baltimore and Harford Counties.

The project area was part of a 200-acre (81-hectare) tract called "Mounteneys Neck" that was patented by Alexander Mounteney on 30 June 1663 (Maryland Provincial Court Land Records, hereinafter PCLR Liber 5, folio 376). This was the second patent taken out in Baltimore County (now City). The southernmost boundary of "Mounteneys Neck" was along the Patapsco River. Harford Run ran through the center of the tract. Throughout the eighteenth century, land speculators bought and sold parts of "Mounteneys Neck," subdividing the large parcel into smaller and smaller holdings. To the west of "Mounteneys Neck" were the holdings of Thomas Cole, who in 1649 arrived in Maryland with his wife Priscilla. In 1668 he patented "Coles Harbour," a 550-acre (222.5-hectare) tract of land that includes the current Inner Harbor (PCLR Patents Liber 11, folio 490; PCLR Patents Liber 12, folio 134; Skordas 1986). "Coles Harbour" was later incorporated into a larger tract known as "Todds Range."

Sometime before 1685, "Mounteneys Neck" was transferred to Samuel and Ann Wheeler. However, the mechanism for this transfer is unknown (Power 1992). The Wheelers sold "Mounteneys Neck" to David Jones in 1685 (BCLR Liber RM no. HS, folio 180). The stream flowing on the western edge of his property now bears his name, the Jones Falls. Like the majority of seventeenth-century Chesapeake residents, Jones was a tobacco planter, and he appears to have been successful. At his death in 1687, he left a large landed estate and considerable personal estate. His will devised his dwelling plantation to his wife Anna for life. At her death it was to pass to his sister Elizabeth Jones. The will also provided that if Elizabeth died without children then the property would go to Jones's stepdaughters, Frances and Averilla Todd, the daughters of Anna Jones by her first husband Thomas Todd (Provincial Court Probate Records Wills, hereinafter PCPR Wills Liber 4, folio 240; PCPR Testamentary Proceedings, Liber 13, folios 453, 483, 495; JHP 1917; Warfield 1905).

By the late seventeenth century, much of Jones's property was in the possession of his stepson, James Todd (Power 1992). Todd's holdings included "Mounteneys Neck" (200 acres [81 hectares]), "Bold Venture" (380 acres [154 hectares], a resurvey of "Jones Range"), and "Coles Harbour" (550 acres [222.5 hectares]). Todd petitioned for a resurvey of "Coles Harbour" in

1698 and received a new patent in 1700. The new patent named the property as "Todds Range," giving the total acreage as 510 acres (206 hectares) (PCLR Liber DD no. 5, folio 2; Liber IB & IL no. C, folio 367). Todd began to sell his holdings in 1701. He sold a 300-acre parcel to John Hurst that included part of "Coles Harbour/Todds Range" (135.5 acres [54.8]) and part of "Mounteneys Neck" (164.5 acres [67 hectares]). The deed does not mention "Bold Venture." Todd sold the remaining acreage of "Coles Harbour/Todds Range" and "Mounteneys Neck" to Charles Carroll "the Settler" (PCLR Liber TL no. 2, folio 529, Power 1992).

4.4.2 Rural Agrarian Intensification Period, A.D. 1680–1815

The economy of seventeenth-century Maryland was based on tobacco. By 1701, tobacco plantations extended up the navigable portion of the Patapsco River. During the first three-quarters of the seventeenth century, white indentured servants were the primary source of labor on larger tobacco plantations. After 1680, importation of African slaves increased rapidly, while importation of white indentured servants decreased. In 1715, the population of Baltimore County (of which the current project area was then part) stood at about 3,000 people, approximately one-fifth or one-sixth was of African descent (Brugger 1988; Olson 1980).

The tobacco economy encouraged settlement along the Patapsco River. Each planter had access to deep water for shipping his tobacco to England. Land speculation was also a major force in the local economy. Speculator-settlers who arrived in the area included Jonathan Hansen and Edward Fell. Hansen purchased part of "Coles Harbour-Todds Range" and established the first gristmill on the Jones Falls in 1711 (Brooks and Rockel 1979; Greene 1980; McGrain 1985; Olson 1980; Power 1992). By 1725, Fell had established a store on the Patapsco (Power 1992). The increase of plantations and businesses along the Patapsco led a group of local planters to petition the Maryland General Assembly for formation of a town. The original site selected for Baltimore Town was Moales Point on the Middle Branch of the Patapsco River. However, John Moale, the tract owner, objected because iron ore deposits had been found there. Daniel Carroll of Dudington and his brother, Charles Carroll of Annapolis (the heirs of Charles Carroll "the Settler"), agreed to sell 60 acres (24 hectares) of "Coles Harbour" or "Todds Range" to the town commissioners. Lots in Baltimore Town were laid out in December 1729 and sold in January 1729/30. Two years later, Jones Town (also known as Old Town) was laid out across the Jones Falls from Baltimore Town (Greene 1980; Olson 1980).

While Baltimore was in its formative years, the economic base of Maryland underwent a profound shift. Wheat began to emerge as the cash crop of the eastern shore and of the new western piedmont settlements. Tobacco continued to be the dominant crop in southern Maryland. Wheat production encouraged the development of mills for grinding flour, which in turn proved to be a lucrative export to England and other colonies. In addition to wheat farming, iron furnaces were developed, giving Maryland an industrial base. In 1731, the Carroll brothers (Daniel and Charles), Dr. Charles Carroll, and Daniel Dulaney the Elder formed the Baltimore Iron Works Company. The furnace was located along the Gwynns Falls close to Moales Point (McGrain 1985). The diversification of Maryland's economy drove Baltimore's economy. Growth in the area prompted the merging of Jones Town with Baltimore Town in 1745. In 1752, when John Moale (son of the John Moale of Moales Point) drew a sketch of Baltimore Town it

was a small hamlet with 25 houses, St. Paul's Church, Payne and Kaminsky's taverns and a small wharf at the base of what is now Calvert Street (Greene 1980; Moale 1752). Twenty-five years later, the number of houses in Baltimore had increased from 25 to 564 (Olson 1980). Fells Point was patented, surveyed and settled between 1761 and 1770, contributing to the area's increase in population.

Population increase was fueled by the growth of Baltimore's economy. Flour and iron production meant the development of commercial outlets and warehouses on the town wharves, an increase in maritime exports, and the formation of ancillary businesses connected to maritime trade. After 1745, the economy expanded in large part due to the Seven-Years War (or "French and Indian War"). During this period, Baltimore experienced several cycles of growth. German, English, and Scottish–Irish settlers moved south from Pennsylvania. French refugees from Acadia and Santo Domingo also settled in the city. Immigration peaked between 1757 and 1793 (Greene 1980, Olsen 1980).

In 1768, Baltimore Town became the seat of Baltimore County. During the years leading up to the War of Independence, Baltimore Town grew. The town became a business center; its main economic rival was the city of Annapolis to the south. In the early 1760s, tobacco prices rose, giving the county's merchants and planters expectations of high economic returns. However, Britain began to strictly enforce its Navigation Acts, which included duties on iron. Exports of iron dropped rapidly, sending Baltimore County's economy into a decline. The Currency Act of 1764, which prohibited the issue of paper money by the colonies, also had a detrimental effect on the county's economy. The Stamp Act of 1765 precipitated the formation of a local Sons of Liberty group. The group included many of the county's prominent merchants. However, members of the planter class tended to avoid involvement. Sons of Liberty groups throughout the thirteen colonies were successful in their campaign to have the Stamp Act repealed. After the repeal of the Stamp Act, prosperity returned to Baltimore County's merchants and ironmongers. When the Townsend Acts were passed in 1767, few merchants in Baltimore raised protest because their coffers were full (Brugger 1988; Greene 1980; Olson 1980).

Economic prosperity continued until the early 1770s when grain exports to Britain began to decline. Tobacco prices also dropped. British creditors began pressing their American clients for payment of debts, and many merchants faced ruin as the economy went further into decline. On 16 April 1773, Robert Morton, a British customs official in Baltimore Town, boarded the ship "Speedwell" for inspection. Morton claimed that the ship's captain had begun to off-load his cargo before receiving clearance to do so. The ship's cargo was impounded; the merchant community reacted violently. On the night of 30 April a crowd gathered in the Fells Point section of Baltimore and began to search for Morton. They broke into his house at Fleet and Bond Streets (now the location of site 18BC138) and found only his wife Mary at home. Morton had escaped. The crowd contented themselves by grabbing two of Morton's assistants and coating them with tar and feathers. The two men were then marched through the streets of Baltimore (Brooks and Rockel 1979; Read and Anderson 2003).

Over the next few years, the various colonies met and discussed their futures. On 4 July 1776, the Continental Congress, meeting in Philadelphia, formally declared independence from Britain. In 1776, Maryland adopted a new constitution. The committee that wrote the document included

Charles Carroll of Carrollton. Carroll also signed the Declaration of Independence; he was the only Catholic to do so. While the Maryland Constitution placed the government in the hands of the propertied elite (the minimum amount of property required of a member of the lower house was £500), it did expand the suffrage. It also restored political rights to Catholics, who had been disenfranchised in 1692, and did away with the established state church (Brugger 1988).

During the War for Independence, Maryland provided a number of military leaders to the revolutionary cause. These men included John Eager Howard, who fought at Germantown and the Battle of Cowpens, and Mordecai Gist. In July 1776, Gist's troops reinforced Washington during the Battle of Long Island. Refusing to yield to the British during the battle, Gist and the Maryland Line's accomplishments earned Maryland the nickname "The Old Line State" (McCullough 2004).

By 1792, Baltimore Town had spread from the original core around the Inner Harbor, expanding east along the shoreline to join the town of Fells Point (Figure 4). In addition, the town had spread as far north as what is now Saratoga Street. In East Baltimore, streets had been laid out as far north as the current location of Fayette Street (then Pitt Street) (Folie 1792; Olson 1980). By 1793, the population of Baltimore Town had grown so large, that a group of Baltimore merchants began to lobby the General Assembly for a charter of incorporation as a city. The charter was granted in 1796 (Greene 1980).

In the early nineteenth century, economic growth in Maryland and the nation as a whole slowed due to the war between Britain and Napoleonic France. The war began in 1803, and for four years, the United States managed to remain a neutral party to the altercation. Then in July 1807, the British frigate *Leopold* opened fire on the U.S.S. frigate *Chesapeake.* The British suspected the *Chesapeake* of harboring British deserters. The *Chesapeake* sustained 22 shots in her hull and 21 casualties. She surrendered after firing one shot. The British boarded and removed four men; one man was hanged, one died in captivity, and two were freed four years later. Despite American protests, the British continued to board United States ships looking for deserters. In December 1807, Congress passed a trade embargo on all foreign countries until the sovereign rights of the United States were recognized (Brogan 1985). In ports like Annapolis, Baltimore, Joppa, and Elkridge, the embargo spelled disaster for many merchants. In the interior, crops were harvested but rotted before they could be transported to European markets.

The embargo was harder on the United States than on her trading partners. In 1809, two days before leaving office, President Thomas Jefferson reluctantly signed a repeal of the Embargo Act. It was replaced by the Non-Intercourse Act, which allowed some trade with Britain. In 1810, under President Madison, Macon's Bill Number 2 replaced the Non-Intercourse Act. Trade with both Britain and France was restored, provided that one or the other of them recognized the principles of neutral trade. Napoleon managed to convince Madison that France did indeed recognize neutral trade. Normal trade relations were restored with France, while Britain was barred (Brogan 1985, Perret 1989).

By 1811, Britain was boarding more ships (3,800 American sailors were impressed by the British before the war began). The Northwest Territory (Michigan, Wisconsin, Ohio, Illinois, and Indiana) was in turmoil with fighting between British-backed Native Americans and settlers.

President Madison concluded he had no other recourse than to declare war on Britain. He sent a war resolution to Congress on 1 June 1812. Seventeen days later, Congress passed a declaration of war. At the beginning of the war, the British entered American territory at three points: through Lake Champlain in Vermont, the Chesapeake Bay, and up the Mississippi River. In March 1813, a squadron under the command of British Rear Admiral George Cockburn began the blockade of the Chesapeake Bay. In addition to stopping all commerce in the Chesapeake, the British conducted raids on towns along the Bay's coast from Norfolk, Virginia at the mouth of the Bay to Havre de Grace, Maryland at the head.

On 4 July 1813, Joshua Barney presented Congress with a plan to counteract the British raids. He proposed building 20 barges or row-galleys as a quick response flotilla that could rapidly respond to British raids. The main British naval force departed for Bermuda in September, and Barney worked feverishly to build his ships before their return in 1814. The flotilla was launched in Baltimore in April 1814 (Shomette 1981, 1995). When the British Navy returned to the Chesapeake in the spring, they turned their attention to the two largest prizes in the Chesapeake region: the nation's capital at Washington and Baltimore, the fourth largest and third richest city in the United States (Perret 1989). For the British, Baltimore was a top target. Over the course of the war, Baltimore privateers would take over 500 British ships.

The British began their offensive in Maryland in June 1814. They engaged Barney's flotilla off Cedar Point south of the mouth of the Patuxent River. The flotilla was out-gunned and retreated into the Patuxent River. Cockburn realized that the flotilla was a potential threat. To deal with the problem, he diverted some of his ships under the command of Captain Robert Barrie to destroy the flotilla. Barney withdrew from the mouth of the Patuxent, where the British had the advantage, into St. Leonard's Creek. He engaged the British twice from this position. During the First Battle of St. Leonard's Creek (10 June), the British sailed up the creek but were forced back by heavy fire from the Americans. The British bottled the flotilla in the Creek until the Second Battle of St. Leonard's Creek on 26 June. The Americans mounted a combined land and sea attack that allowed Barney to slip out of the creek and up the Patuxent to Benedict, Maryland.

With Barney's men bottled up in the Patuxent River, the British temporarily turned their attention to preparations for the invasion of Washington and Baltimore. On 19 August, they sailed up the Patuxent to Benedict and disembarked for the march to Washington. Barney withdrew further up river to Pig Point near Jug Bay in Anne Arundel County. Barney and most of his men joined the land forces at Bladensburg. A small number of Barney's men remained behind to set fire to the vessels should the British approach. On 22 August, the flotilla was destroyed as per Barney's orders (Shomette 1981, 1995).

Major Robert Ross led the British land forces. On 24 August, they engaged the ill-prepared American forces under the command of Brigadier General William H. Winder, at Bladensburg in Prince George's County, Maryland. The first line of American defenses quickly buckled. The second line of defense, manned by Barney and his men, were the last to hold their positions. Barney was injured in the fight and was taken prisoner. An advance British guard entered the city of Washington on the 24th. The President and Mrs. Madison withdrew to the Town of Brookville in Montgomery County, Maryland, approximately 5.75 miles (9.25 kilometers) northwest of Browns Bridge. Too few in number to occupy the city, the British burned as much

of Washington as possible. The main buildings targeted were those housing the United States Treasury, the Senate and House of Representatives, and the White House. The Americans also set fire to important locations to prevent their falling into British hands. The American Naval commander Commodore Tingley ordered the Navy Yard and all ships under construction in the slips burned to prevent their capture by the British. The fires in the city burned so brightly that they were reportedly visible as far away as Baltimore and the Patuxent River. On the following day, a hurricane blew up the Chesapeake, scattering the British fleet and land forces and putting out the fires in the city (Perrett 1989). The British sailed down the Potomac and back into the bay in order to prepare for their attack on Baltimore.

On the night of 13 through 14 September, the British attacked Fort McHenry at the entrance of Baltimore's harbor. The attack was, for the British, a complete failure. Admiral Alexander Cochrane sent five bomb ships into Baltimore. As the historian Geoffrey Perret (1989:125) has commented, Cochrane's bomb ships had enough firepower, if "properly handled, to flatten any port in the world. He made only one mistake. Fearful of losing any of his ship to Fort McHenry's guns, he kept them at maximum range, two and a half miles. Cutting the fuses to fit that distance was virtually impossible. He provided the people of Baltimore with the greatest fireworks display they would ever see, and the country with a national anthem."

The War of 1812 lasted two and a half years, and ended when the Treaty of Ghent was signed on 24 December 1814. Ironically, the news of the signing of the peace treaty reached Washington at the same time as the news of the victory of the Battle of New Orleans. This final battle, fought under the leadership of Andrew Jackson, began on 23 December 1814 and concluded on 8 January 1815, 15 days after the treaty was signed (Brogan 1985; Perret 1989).

4.4.3 Agricultural-Industrial Transition Period A.D. 1815-1870

In 1816, two years after the end of the war, Baltimore City annexed additional property. The 1822 Lucas *Plan of the City of Baltimore*, shows the new territory incorporated into the city as already laid out in streets and blocks (Figure 5). For a few years after the annexation, growth in Baltimore slowed as the city incorporated physical and social changes resulting from rapid turn-of-the-century growth. By 1818, Maryland and the nation had returned to a peacetime economy. Indeed, the economy was in a boom period between 1815 and 1819 (Brogan 1985; Olson 1980).

During the second quarter of the nineteenth century, Baltimore experienced a cycle of expansion and development. This cycle began in the 1820s and lasted until the Civil War. The 1840s and 1850s were decades of intense development. Baltimore's location at the fall line had spawned a dense concentration of mills and other industries along the Jones Falls and Harford Run earlier in the century. By the middle of the century, the city was a leader in manufacturing. Her factories produced new transportation technologies (rail and steamship), furnishings, clothing, and even baked goods. Periodic increases in immigration from Ireland and Germany, among other counties, supplied labor needed for factories, rail lines, and housing construction. By 1860, "Baltimore doubled its population, its work force, the number of houses, its built-up area, and its street mileage" (Olson 1980:103). The rapid growth of Baltimore City during the mid-nineteenth century pushed the city inland from its original core along the harbor. Between 1820 and 1870,

the population of Baltimore increased from 63,000 to almost 269,000. Immigration was fairly heavy throughout this period (Browne 1980).

Textile mills were established in the county during the nineteenth century; the two earliest factories were the Union Manufacturing Company on the Patapsco River and the Powhattan mill on the Gwynns Falls. Other textile operations followed, and by the 1830s small mill towns dotted the banks of the Patapsco River, the Little Gunpowder Falls, and the Gwynns and Jones Falls. These mill towns, with names like Hampden and Dickeyville, would eventually be incorporated within the city limits.

Prior to 1801, the Bellona Powder Mill was established along the West Branch of the Jones Falls north of Baltimore Town. This powder manufacturer would become one of the largest in the nation by 1810. Production of gunpowder was dangerous, and on 28 August 1820, an explosion at the Bellona Powder Mill produced shockwaves that were felt as far away as Washington, D.C. (Brooks and Rockel 1979). In 1851, after a series of explosions at their mill, followed by the damming of their stream as part of a water works project, Bellona stopped manufacturing powder at this location (McGrain 1985).

On 27 February 1827, the Maryland Legislature granted a Charter to the Baltimore and Ohio (B&O) Railroad. Construction of the line began soon afterwards, and on 13 May 1830, the first 13 and one-half miles (21.75 kilometers) of railroad track in the United States, between Mount Clare Station in Baltimore City and Ellicotts Mills, were officially opened. In August of that year, the Tom Thumb steam locomotive made its first round-trip between Baltimore and Ellicott Mills, reaching speeds of 18 miles per hour while pushing a car holding 23 passengers (Jacobs 1995). The depot in Ellicotts Mills (which is still extant) was completed in November 1831. The advent of the railroad turned the sleepy mill town at Ellicotts Mills into a busy market hub. Merchants and millers were soon transporting their goods to Ellicott Mills and from there to the port at Baltimore. Goods were brought into the town over the Frederick Turnpike, which was the main road west. By 1851, the line was extended west through Maryland, crossing the Potomac at Harpers Ferry, which was then in the state of Virginia and continuing to the new western states (Figure 6)

The Baltimore and Susquehanna (B&S) Railroad was a north-south line that ran north from Baltimore to York (Figures 6). This railroad line was chartered in 1828; construction was underway by 1831. A portion of the line was built along what would become the western border of the village of Lutherville. The rail corporation hoped to run a line into Pennsylvania but struggled to extend its lines north of Cockeysville. The B&S eventually ran a line northwest from the Jones Falls into Westminster. After some corporate changes, track was extended from the Cockeysville area all the way into north-central Pennsylvania in the early 1850s. This rail line became part of the Northern Central Railroad (NCR) in 1854 (Gunnarsson and Harwood 1991).

The Philadelphia and Delaware County Rail-Road Company was chartered in Pennsylvania on 2 April 1831. It changed its name on 14 March 1836 to the Philadelphia, Wilmington and Baltimore Railroad Company (Figures 6).

On 5 March 1832, Chapter 188 of the 1831 Session Laws of Maryland chartered the Baltimore and Port Deposit Rail Road Company in Maryland. This company was authorized to build a railway from Baltimore to the Susquehanna River. On the 14th, the Maryland Legislature passed Chapter 296 of the 1831 Session Laws of Maryland, which chartered the Delaware and Maryland Rail Road Company. The Delaware and Maryland was authorized to build a railway from Port Deposit or any other point on the Susquehanna River to the Delaware state line. The state of Delaware had also chartered a railway in 1832. This railroad, the Wilmington and Susquehanna Rail Road Company was to continue the line to Wilmington. The Delaware and Maryland Rail Road Company and the Wilmington and Susquehanna Rail Road Company merged on 18 April 1836 to form the Wilmington and Susquehanna Railroad Company. This company merged with the Baltimore and Port Deposit Rail Road Company on 12 February 1838 to form the Philadelphia, Wilmington, and Baltimore Railroad Company (PW&B) (Figure 6).

The first section of this line opened in 1836, forming part of the line in Pennsylvania; the rest of the line was completed in 1837. In Philadelphia, the line ended at Broad Street and Washington Avenue, where it connected with the Southwark Rail-Road (built in 1835), which was used to reach the Delaware River. In Baltimore, the PW&B ended at President Street. The Baltimore and Ohio Railroad, which ended in Baltimore, worked closely with the PW&B to compete with the Philadelphia and Columbia Railroad (Pennsylvania Railroad after 1857) for travel west from Philadelphia, hauling coaches by horse down Pratt Street to reach the PW&B station. By 1853 the Camden and Amboy Railroad and New Jersey Railroad were also part of this agreement, providing through service from New York City to the west (Figure 6).

Baltimore City had been the Baltimore County seat since 1768. As early as 1835, parts of the county population outside the city began to lobby for complete separation of the city and the county. The main argument for separation was discontent with the combined functions of city and county government, which non-city residents saw as heavily biased in favor of city residents. The first referendum for separation was held in October 1837. Separation lost in a vote of 2,270 to 388. The towns near Baltimore City, where many of the city's leading merchants had homes, returned the highest percentage of no separation votes. Over the next decade, non-city residents mounted a campaign in favor of separation. In 1851, the State of Maryland called a constitutional convention. The outcome of the convention included the separation of Baltimore City and County (Brooks and Rockel 1979; Greene 1980; Olson 1980). Sydney's 1857 *Map of the city and county of Baltimore, Maryland* shows the city boundaries set in 1851 by the legislature (Figure 7).

The Civil War started on 12 April 1861 when Confederate guns fired on the Federal Fort Sumter in the harbor of Charleston, South Carolina. Seven days later, the Sixth Massachusetts Militia disembarked in Baltimore at the President Street Rail Road Station on the way south to Washington. This was the terminus of the PW&B. In order to continue south to Washington, D.C., the Sixth had to march across town to the Camden Street Station and embark on the B&O line. As they marched down Pratt Street, the Sixth was attacked by a mob of southern sympathizers. Twelve Baltimoreans were killed in the ensuing riot. The following day, General Benjamin Franklin Butler arrived in Annapolis with the 8th Massachusetts Infantry Regiment and occupied that city. His mission was to keep Maryland in the Union and to reopen communication

lines to Washington, D.C. On 13 May, Butler and his troops occupied Baltimore City and martial law was declared (Brugger 1988; Perret 1989).

Governor Thomas Hicks called a special session of the Maryland General Assembly to convene on 26 April. Rather than hold the session in recently occupied Annapolis, which was strongly Confederate in its sympathies, Hicks held the session in Frederick, Maryland, where unionism was strongest. Though the legislature did not vote to secede, it approved a resolution calling for "the peaceful and immediate recognition of the independence of the Confederate States," which Maryland "hereby gives her cordial consent thereunto, as a member of the Union." The legislature also denounced "the present military occupation of Maryland" as a "flagrant violation of the Constitution." The session adjourned on 7 August (Brugger 1988). Federal troops and the Baltimore police arrived in Frederick on that same day to arrest pro-Confederate members of the legislature. More arrests were made between 12 and 17 September to prevent pro-Confederate members from attending the session that would vote on secession. In November, state elections were held and Federal provost marshals stood guard at the polls in order to ensure the victory of Pro-Union candidates. Known Democrats and secessionists who attempted to vote were arrested. The election was further rigged by three-day furloughs granted to Maryland troops in the Union army so they could go home to vote. The result was a solidly pro-Union legislature. In early 1862, state judges instructed grand jurors to inquire into the elections, but these judges were arrested and thrown into military prisons. Fort McHenry on the Patapsco River served as a military prison during the war. In addition to Confederate prisoners of war, many of the Maryland political figures arrested during the early days of the war were also confined at the fort. Among the imprisoned were Baltimore Mayor George William Brown, the city council, and the police commissioner. In one of history's ironies, Francis Scott Key's grandson was among the political detainees.

Although Maryland remained a Union state, many young men slipped across the Potomac and joined the Confederate regiments formed in other states or joined Confederate Maryland regiments. Throughout the war, General Bradley T. Johnson, a native of Frederick, lobbied to unite all the Confederate Maryland Troops under one name. James A. Sedden, Secretary of War for the Confederate States of America, authorized the creation of the Maryland Line on 22 June 1863 (McClellan 1994[1885]). Units making up the Maryland Line included the 2nd Maryland Infantry (1st Maryland Battalion), 1st Maryland Cavalry, 2nd Maryland Cavalry, 1st Maryland Artillery (Dement's Battery), 2nd Maryland Artillery (Baltimore Light Artillery), and 4th Maryland Artillery (Chesapeake Battery). Eight days after it was formed the Maryland Line was put to the test in Gettysburg, Pennsylvania.

During the war Federal troops were stationed north of the city in Cockeysville. They patrolled the rail lines running through northern Baltimore County, as well as along the York Turnpike (Brooks and Rockel 1979). In Baltimore City, Union troops were stationed on Federal Hill in the Baltimore Harbor (Figure 8). Lookouts were also placed in the towers of Westminster Presbyterian Church and the Basilica of the Assumption of the Blessed Virgin Mary (the seat of the Archbishop of Baltimore). In Westminster Cemetery, military arms were stacked in the burial vaults and burials were permitted only with permission of the military (Read 2000b). The Union Army commandeered the estates of known southern sympathizers. One of the homes

seized was Mount Clare (now in Carroll Park), which was the home of James Carroll, a wealthy slave owner. The Union Army set up a military camp on the Mount Clare property (Read 1997).

The only incursion by Confederate troops into the Baltimore area occurred in July 1864 during General Jubal A. Early's campaign against Washington D.C. As part of this campaign, CSA Brigadier General Bradley T. Johnson was sent into Maryland with part of the Maryland Line. His orders were to detour north and east of Baltimore, where he was to cut the rail lines. From there, he was to head south to Point Lookout in southern Maryland, which was the location of a prison camp for Confederate soldiers. He was supposed to reach Point Lookout on 12 July 1864. Johnson left Frederick on the 9th and joined Early at the Battle of Monocacy (Goldsborough 1900). That evening, Johnson and Major Harry Gilmor of the Glen Ellen Estate near the Gunpowder River in Baltimore County arrived in the Glyndon area. The following day Gilmor and Johnson pushed into Cockeysville and burned several rail bridges. Johnson then moved through the Green Spring Valley and was in Painter's Mill on July 11. He and his troops entered Howard County on the 12th. Gilmor moved east to burn guarded bridges on the PW&B railroad. During his raid on one of the bridges, he was able to capture a passenger train, which included Union General William Buel Franklin as one of its passengers. Gilmor took Franklin prisoner and burned the bridge. Through the night of July 11, Union troops searched for Gilmor as he moved west to join Johnson and Early. Near Towson, Union troops skirmished with Gilmor's men without casualties on either side. Gilmor's men drove the Union troops down the York Turnpike toward Baltimore. Gilmor then moved west across Green Spring Valley, during which time General Franklin managed to escape his captors. On July 12, Gilmor and his men reached Pikesville and threatened to burn the armory. Continuing through Randallstown, they left the area by the day's end and rejoined Generals Johnson and Early near Poolesville in Montgomery County, Maryland (Brooks and Rockel 1979).

Maryland rewrote its constitution in 1864. The new constitution outlawed slavery and was put to a popular vote on 13 October. It barely passed into law, with 30,174 in favor of the change and 29,799 opposed. On 1 November, all slaves in Maryland were emancipated (Brugger 1988; Maryland Constitutional Convention 1864). Five months later on 1 April 1865, the war ended with Lee's surrender at Appomattox Courthouse.

4.4.4 Industrial Urban Dominance Period, A.D. 1870–1930

Post-Civil War industry and commerce in Baltimore City and County continued to grow rapidly. Industries in this period included clothing, canning, metal work, and shipping. A devastating flood on 24 July 1868 wiped out much of the industry on the Patapsco River and other rivers in Maryland. Close on the heels of this natural disaster was an economic disaster in the form of the panic of 1873. Economic prosperity ended nationwide and a long period of recession was ushered in (Brogan 1985). Another flood in 1889 shut the many mills along the Patapsco River, decreasing the amount of goods flowing into Baltimore for transport to foreign markets.

Numerous economic depressions throughout the nineteenth century caused a continuous flux in Baltimore City and County business and industry. Yet despite the economic turmoil, immigrants continued to pour into Baltimore City. Between immigration and annexation of new land for the

City, the population of the city increased from 332,000 in 1880 to 800,000 in 1930. They found work on the docks and in the rapidly expanding factory system of the city. These industries included garment factories, canning, and metal work. Until approximately 1880, the majority of immigrants arriving in Baltimore City were Irish or German. Many of the German immigrants were escaping revolutions and wars sweeping through the various German principalities throughout the period (Olson 1980). By 1880, the makeup of the immigrant population had changed. Between 1880 and 1920, changing social patterns in Eastern Europe and pogroms in Russia provided incentive for 2,000,000 Jews to immigrate to the United States (Dimont 1962:355, 361). Many of these immigrants were unskilled laborers who quickly entered the American factory system. In the city, the new Jewish immigrants entered East Baltimore's garment industry in large numbers.

During the 1870's rail lines were built from Baltimore City into the county. Older villages such as Lutherville, Catonsville, and Reisterstown benefited from this expansion. During that decade development in these villages tended to be in the form of summer villas and mansions for the rich. By the 1880s, smaller cottages were being built for the middle class (Brooks and Rockel 1979). Suburbanization continued in the county during the early years of the twentieth century. Unlike the older villages, these new towns were not developed as summer retreats, but were instead developed for the working class. The town of Overlea grew rapidly after the United Railway's streetcar line was extended north in 1904. Essex was also a product of the streetcar lines. The town formed in 1909 when cheap streetcar fares attracted many Germans living in the Canton area of Baltimore City out into the county. The community grew slowly until the Eastern Rolling Mill located a plant on Back River. Dundalk was also developed during this period. In 1916, Bethlehem Steel Company purchased farmland in the area to develop as a town for their shipyard workers. The town expanded rapidly during World War I as Bethlehem Steel increased production for the war effort and hired a greater number of workers.

In addition to the boom of streetcar towns, Baltimore City also grew during this period. In 1888, the city annexed 23 square miles to the north and west of the city. This annexation nearly tripled the size of the city (Figure 9). As white immigrants moved out to the new areas of the city and into the suburbs, African Americans began to move to the core area of the city in large numbers. By the last two decades of the nineteenth century, African-American laborers were beginning to concentrate in housing in the back alleys of Baltimore. Demographic profiles show an influx of rural native Maryland African-Americans into Baltimore in the late nineteenth century. Baltimore's African-American population nearly tripled from a population of 28,000 in 1860, to 79,000 in 1900 (Garonzik 1974; Hall 1912; Hayward 2008). This development in housing concentrated the city's poor into a classic "alley life" pattern, which has been described for Annapolis, Philadelphia, and Washington, D.C. in numerous site reports and studies (*q.v.* Aiello and Seidel 1995; Bochert 1980; Check 1986; Cheek and Friedlander 1990; Cheek and Seifert 1994; Greenberg 1981; Jopling 1998; Warner and Mullins 1993).

During the early twentieth century, the city of Baltimore made substantial improvements to the city's infrastructure. This included roads, storm water control, and sewer service. Much of this work was in response to the Great Fire of 1904, which destroyed a large portion of Baltimore's business and financial district (Figure 10). A commission was created to rebuild the city before the fire was completely under control. The Burn District Commission's duty was to rebuild that

area of Baltimore that had been destroyed by the fire. However, their recommendations had a direct impact on parts of the city that had not been burned. A sewage commission was set up to revamp the city's waste and storm water control. By 1906, they had built a pilot sewage plant in Walbrook and the Back River plant was up and running by 1909. "By the end of 1914 there were twenty-one thousand homes connected, and about that many drop privies were abandoned" (Olson 1980:250). The new sewers were gravity flow systems. A pumping station on Pratt Street forced the low-lying areas around the harbor to drain. Only those areas on the edges of the city and in low-lying elevations did not receive sewers.

The Maryland legislature approved the creation of the Metropolitan District, which served both the city and county's water and sewage needs. The Loch Raven Reservoir was constructed during this period and was completed in 1923. Later reservoir projects included Prettyboy Reservoir on the upper Gunpowder Falls (1933) and Liberty Reservoir on the Patapsco River (1954) (Brooks and Rockel 1979).

On 6 April 1917, the United States entered World War I. Camp Meade in Anne Arundel County was the training camp for many of the young men drafted into the United States Army. At Camp Meade, men were assigned to the 313th Infantry Regiment, nicknamed "Baltimore's Own," the 310th, 311th, and 312th Machine Gun Battalions, and the 310th Field Artillery Regiment. These regiments were all part of the 79th division that sailed for France in July 1918 and fought in the St. Mihiel and Meuse-Argonne Offensives. In rural areas, there was a loss of farm laborers as young men joined or were drafted into the armed forces. In addition, men migrated into the cities to work in the munitions factories. Women took jobs as office workers and nurses. Because of the shortage of farm and other laborers there was a reduction in farm and extractive production that resulted in shortages of food and fuel in the larger cities during the winter of 1917 thorough 1918 (Brugger 1989).

The autumn and winter of 1918 through 1919 were visited by a greater plague than food shortages. On 17 September 1918, the first case of the Spanish Influenza appeared at Camp Meade. Within 11 days, more than 1,700 cases were reported across the state. On 10 October, Baltimore City reported almost 2,000 cases; the count in the city would rise to 75,000 before the epidemic was over. The exact count for the entire state is unknown. Records for this period are incomplete due to a lack of bureaucracy and in part to the influenza itself. In some jurisdictions, there were simply not enough people to fill out death certificates or keep records because the office workers were out sick with the flu (Barry 2004; U.S. Department of Health & Human Services n.d).

At the same time that Baltimore was contending with the effects of the flu and the First World War, its boundaries were expanded. In 1918, the city annexed territory to the north and east of its boundaries, incorporating the farming villages of Govanstowne, Lauraville, Anthonyville, Hamilton, and Gardenville. The annexation also included areas such as Highlandtown within the city's borders. Highlandtown was home to German and Italian immigrants. The annexation of areas east of the city increased the diversity of the city's population. The 1918 annexation set the city's boundaries to their current appearance.

4.4.5 Modern Period, A.D. 1930–Present

The beginning of the Modern Period roughly coincides with the start of the Great Depression on 29 October 1929. Although segments of the American economy were already in a slow downturn before the market crash, the Baltimore region's economy was affected only to a minor degree. After the market crashed in 1929, the region's diversified economy resulted, at least temporarily, in a city unemployment rate that was slightly lower than the national average. Nevertheless, by 1931 there were 42,000 unemployed Baltimoreans, roughly one-eighth of the city's work force (Olson 1980). In Baltimore County, the County Children's Aid Society listed 242 families on their relief rolls in December 1931; by March 1932, the number of families had increased to 606 (Brooks and Rockel 1979). The region's high unemployment rate continued into the late 1930s. By 1937, increasing tensions in Europe were translating into a build-up in industry in Baltimore County. Companies like Glen L. Martin and Bethlehem Steel began to expand production as orders arrived from Europe. During World War II, workers moved into Baltimore City from the rural south and West Virginia. Many of these laborers found jobs in the defense plants in eastern Baltimore County. Others worked for the rail yards in Baltimore City, settling in the area around Carroll Park known as "Pig Town."

By August 1941, 50,000 Baltimoreans were employed by the defense industry. Approximately half of these jobs were in aircraft manufacture at the Martin Company. However, this build-up in wartime industry did not come without risks to the region's economy. With the end of the war in 1945, 45,000 defense workers lost their jobs at the same time that 35,000 veterans were returning home. With approximately 80,000 people looking for work simultaneously, the region's economy needed to turn quickly from a war-time to peace-time economy. Companies such as Bethlehem Steel, Westinghouse, and Western Electric successfully converted their production to peacetime commodities by the early 1950s. Baltimore's post-war economy continued to grow into the 1970s (Olson 1980).

In the last two decades of the nineteenth century, African-American laborers were beginning to concentrate in housing in the back alleys of Baltimore. Demographic profiles show an influx of rural native Maryland African-Americans into Baltimore in the late nineteenth century. Baltimore's African-American population nearly tripled from a population of 28,000 in 1860, to 79,000 in 1900 (Garonzik 1976; Hall 1912). By the 1930s, African-Americans inhabited the neighborhoods of Old Town and Upper Fells Point. Racial discrimination and the high unemployment rate of the Depression Era kept many of the area inhabitants who were employed in low-paying jobs. Real estate values in the area had been in decline since the depression of 1893. In the 1920s, property values in the area had decreased in general. During this decade, movement of the white population out of East Baltimore changed the racial composition of these neighborhoods. African-American tenants moved into the city from rural areas of Maryland and the South. This migration of African-Americans from rural to urban areas was part of a national trend that had begun early in the century. According to the 1910 Federal Census, three out of four African-Americans in the United States lived in rural areas. By 1960, 75 percent of the nation's African-American population was urban (Meier and Rudwick 1970).

In 1950 a survey of the city's 250,000 houses placed 90,000 within "blighted" areas of the city. Within the blighted areas, 45,000 houses were classified as substandard. Another 18,000

structures were classified as dilapidated. One-third of the city's population lived in these homes. In order to stimulate growth in the city, the city government embarked on a plan of urban renewal. In 1951, a twenty-seven-block area of East Baltimore was selected as a pilot area. Many of the buildings in the pilot area were condemned and razed. Subsidized housing projects for the poor were built in their place (Greene 1980; Olson, 1980).

The end of the war also spurred a rise in housing construction, particularly in the suburban Baltimore County communities ringing Baltimore City. During the 1950s, 1960s, and 1970s, there was an exodus of middle-class white families from the city to the suburbs. The shops and department stores frequented by the white middle-class also slowly left the city and were re-established in new suburban malls. The results of this twenty-year trend were the loss of business in the city's central core, particularly along Howard Street, and a diminished tax base.

Baltimore has undergone a period of rebuilding since the late 1970s. The city government and private developers both have made attempts to revitalize the city. While numerous projects have been initiated, two of the more notable past projects included the revitalization of the Inner Harbor area and homesteading. Baltimore's Inner Harbor area has been developed successfully as a tourist and shopping mecca that draws dollars back downtown. Homesteading created new homes within the city through the sale of dilapidated and abandoned properties at low cost to middle-class buyers, both white and African American. Homesteading produced a viable environment in a once hostile landscape and brought tax dollars back into the city. The most recent round of revitalization has included the Howard Street corridor. Plans for this area include the creation of cultural centers for dance, music, and the arts. These plans include the construction of the Eubie Blake Cultural Center at the corner of Howard and West Franklin Streets (Etherton and Read 1996). More recent projects include the construction of low-cost housing and rental units in the Old Town area of East Baltimore immediately west of the current project area, as well as the development of the Inner Harbor East area.

SITE SPECIFIC CONTEXT

This section presents data that is specific to the history of early Judaism in Maryland, as well as the founding of Baltimore Hebrew Congregation, the original congregation to worship in the Lloyd Street Synagogue. The section also includes data from *Before the Lloyd Street Synagogue: The Records of Ownership, Lease Holdings and Use of the Property Prior to 1845* (Anderson 2001) and *Phase II Archaeological Testing of the Archaeological Resources Associated with the Fells Point Synagogue Archaeological Project, 18BC138 Baltimore, Maryland* (Read and Anderson 2003).

4.5.1 Solomon Etting and the Fight for Jewish Civil Rights, 1797 - 1826

Sixteen years before the city charter was granted, Solomon Etting arrived in Baltimore. Etting was the son of Elijah Etting, a Jewish immigrant from Frankfrut, Germany, who in 1758 arrived in the colony of Pennsylvania. Solomon was born in York, Pennsylvania in 1764. His father died while he was still a youth and his widowed mother Judith moved the family to Baltimore. As a

young man Etting set up a hardware business. Eventually he moved into shipping and banking. By the early nineteenth century he was one of Baltimore's most prosperous merchants (Wilson 1991). As a prominent citizen, Etting should have participated in local and state government. But, under the Maryland Constitution of 1776, Etting was unable to vote, serve on a jury or to hold public office because of his religion.

Early colonial religious laws in Maryland and other colonies were discriminatory. In Maryland, a bill passed during the 1638/39 session entitled "An Act for the liberties of the People," which proclaimed that "all Inhabitants of this Province being *Christians* Shall have and enjoy all such rights liberties immunities privledges and free customs within this province as any naturall born subject of England hath or ought to have or enjoy in the Realm of England" (Everstine 1980:64, emphasis added). One of the Centerpieces of Maryland colonial policy was the famous 1649 Act of Religious Toleration. But even this legislation excluded Jews. The act provided that "persons professing to believe in Jesus Christ were not to be troubled, molested, and discountenanced for or in respect of their religion or compelled against their consent to exercise any other religion (*ibid.*:179; Papenfuse 1999). The Act of Religious Toleration lasted until 1692, when the Church of England was established as the official church in Maryland. The church retained this position until the War of Independence.

In 1776, The Maryland General Assembly passed a new Constitution. The Maryland Declaration of Rights increased suffrage to include men who held at least £30 of personal property in current money; it restored the political rights of Catholics (which had been forfeited in 1692), and did nothing to prohibit free blacks from voting, provided they met the property qualifications. However, while one clause granted the right of every man "to worship God in such manner as he thinks most acceptable to him," it only protected "persons professing the Christian religion" (Brugger 1988:122). The constitution required a profession, or test oath, of belief in the Christian Trinity of the Father, Son, and Holy Ghost. Persons failing to meet this requirement were disenfranchised. This was in direct opposition to the United States Constitution, which enabled Jews to freely hold Federal office. In Maryland, Jews were not full citizens (Read 1999b).

In 1797, Etting began a long fight for Jewish civil rights. He and others petitioned the Maryland General Assembly for the right to vote and hold office. The General Assembly did not lift the restrictions. Etting was working from a rather weak political position. In 1790, when the first United States Federal Census was enumerated, there were six Jewish families in Baltimore, with a total number of 33 individuals between them (Greene 1980). The number of Jewish families statewide was small. Etting did not have a large enough population to constitute an effective lobbying block. However, between 1797 and 1804, he continued to annually petition the General Assembly. In 1805, Etting did not present a petition to the congress. The fight was not renewed until 1818. In an ironic twist, Etting's brother Reuben was appointed in 1801 as a U.S. Federal Marshall in Maryland (Greenberg 1976; Greene 1980), despite the fact that Reuben Etting was unable to vote in state elections or hold state office.

Why did Etting and other Jewish leaders stop lobbying and petitioning for 14 years? The answer lies in world events – the Napoleonic wars, the trade embargo with England and France, and the American war with Britain that began in 1812 and ended in 1814. Etting and other Jewish leaders decided to suspend their legislative attempts until the situation had changed. During the

British bombardment of Fort McHenry, on the night of 13 through 14 September 1814, Etting was in the garrison at Fort McHenry. Other Jewish soldiers in the garrison were Philip I. Cohen, Mendes I. Cohen, Levi Collmus, Jacob Moses and Samuel Cohen (Greenberg 1976). These men would form the nucleus of Jewish leaders in the city after the war.

Within a few years of the treaty of Ghent, Etting and others felt the time was right to once again petition the General Assembly for Jewish residents to have the right to vote and hold office. In 1818, a petition from Etting and others arrived in a committee chaired by Delegate Thomas Kennedy of Washington County. The petition asked for the elimination of the test oath requiring profession of belief in the Christian trinity. After consideration, Kennedy proposed and Delegate William Pinckney of Baltimore wrote, a constitutional amendment removing the religious test (Brugger 1988, Greenberg 1976). The bill became known as the "Jew Bill" or "Kennedy's Jew Baby." It was not passed in the 1818 session, nor was it passed in subsequent sessions between 1822 and 1823. Kennedy lost his seat for a while over the issue. Finally, the bill was passed in the House of Delegates by one vote on 26 February 1825. A year later on 5 January 1826, the bill passed the Senate by a vote of 45 to 32 (Brugger 1988).

The bill stated in part that "every citizen...professing the Jewish Religion and...hereafter appointed to any office of public trust under the State of Maryland shall in addition to the oath required by the constitution and laws of the State or the United States make and subscribe a declaration of his beliefs in the future state of rewards and punishments, in the stead of the declaration now required by the Constitution and form of government of the State" (Greenberg 1976:4). Solomon Etting and Jacob Cohen were elected to the Baltimore city council shortly after passage of this bill.

4.5.2 Lloyd Street Synagogue, 1829 - 2009

4.5.2.1 Nidche Yisrael, 1829 - 1844

In the fall of 1829, a group of Jewish leaders presented a petition in the name of "sundry citizens of Baltimore," to the General Assembly of Maryland. The petition asked for permission to incorporate under the name of the "Scattered Israelites" in order to build a synagogue. So began *Nidche Yisrael,* or the scattered of Israel, which later became Baltimore Hebrew Congregation. The congregation was referred to as *Stadt Beth Hamidras,* to distinguish it from *P'nt Beth Hamidras* (Fells Point Hebrew Friendship Congregation).

The original Baltimore Hebrew Congregation consisted of 13 families. Before passage of the bill of incorporation, they met in the home of Zalme Rehine. After their incorporation in 1829, they began to look for a more permanent home. Between 1830 and 1832, Baltimore Hebrew Congregation rented a room over a grocery store on the corner of Fleet and Bond Streets (now archaeological site 18BC138). This building belonged to Thomas Presstman, who also operated the grocery (Read and Anderson 2003). By 1832, membership had more than doubled to 29 families. Baltimore Hebrew Congregation moved to a building on North Exeter Street, where they remained until 1835. By then, the congregation had increased to 41 member families and

had outgrown the building. Between 1835 and 1837, Baltimore Hebrew Congregation rented a dwelling on High Street between Fayette and Gay Streets. In 1838, they purchased a three-story brick building on the corner of Harrison Street and Etna Lane.

The majority of the Jewish population in Baltimore was Ashkenazic and was originally from Germany. There were a few Sephardic Jews, or Jews of Spanish or Portuguese descent. The latter group included the Ettings and Cohens. Baltimore Hebrew Congregation was an Ashkenazi congregation. In 1840, the congregation's first rabbi, Rabbi Abraham Rice, arrived from Bavaria. Rabbi Rice demanded strict adherence to Orthodox ritual. Within a year, liberal members of the congregation left to form *Har Sinai Verein* Society, which was incorporated in 1843 as Har Sinai Congregation. This is the oldest continuous Reform congregation in the United States. The first Reform Jewish congregation was organized in Charleston, South Carolina in 1824, but it ceased to exist in 1833 (Greenberg 1976).

Despite the loss of members in 1841, the remaining 61 member families of Baltimore Hebrew Congregation decided in 1844 to build a synagogue. The Board of the Synagogue settled on a lot on the corner of Watson and Lloyd Streets, which was owned by Susan Williams.

4.5.2.2 Chain of Title for the Synagogue Property

Susan Williams had come to possess the corner lot on Watson and Lloyd Streets after a century of purchases and conveyances had set it off from "Mounteneys Neck." In the early eighteenth century William Fell of Fells Point managed to take possession of "Mounteneys Neck." He held the 200-acre tract through a patent of Escheat land that he received on 12 July 1737 (PCLR Liber EI no 2, folio 532). How the land had gone from the Charles Carroll, "the settler" and John Hurst into Escheat is unclear. Carroll and Hurst had purchased the land in 1701 from James Todd (PCLR Liber TL no. 2, folio 529, Power 1992). Fell's 1737 patent included all the land that had been sold to these two parties. It is clear that there were conflicting claims to the property. This appears to be related to population growth in the area and associated land speculation by a few individuals who held most of the property. By subdividing the properties and selling to the new settlers, the land speculators made (and lost) small fortunes.

During this period "Mounteneys Neck" changed hands several times. William Fell devised the property to his son Edward Fell by his will, which was dated 29 January 1746 (Baltimore County Probate Records, hereinafter BCPR, Wills, Liber 3, folio 234). Twelve years later, on 10 August 1758, Edward Fell sold the 200 acre (81 hectare) tract to Thomas Sligh (BCLR, Liber B, no. G, folio 228). Sligh also took the precaution of purchasing the same property from the Carroll heirs and from John Hurst.

Sligh held a large amount of acreage in the Old Town area and was a major land speculator during the mid-eighteenth century. He began to subdivide "Mounteneys Neck" almost immediately. In November 1759, he sold 4 acres (1.62 hectare) of "Mounteneys Neck" to Colonel William Young (BCLR, Liber B, no G, folio 69). This 4-acre (1.62-hectare) parcel included the current project area. Young did nothing with the property. At his death in 1772, he left the property to his six grandchildren. In his will, he directed the division of the parcel into six

roughly equal lots, each containing approximately two-thirds of an acre (0.27 hectares) (BCPR Wills Liber 3, folio 234). Lot 6, which includes the current project area, fell to his grandson, William Young.

The subdivision and development of the land in the area surrounding the project area slowed during the War for Independence. After the war, building resumed in the neighborhood now located on East Fayette, East Baltimore and East Lombard Streets, for several blocks to the east and west of the project area. Early speculators in the area included Thomas Sligh, Archibald Campbell and Isaac McKim. These men sold or leased small lots along these streets primarily to local craftsmen. Between 1780 and 1820, the residents of the area included a potter, carpenters, glaziers, and a sea captain. While Sligh, Campbell, and McKim were developing their property, William Young appears to have made no improvements to his lot. In 1794, Young sold the property to Robert Walsh, Sr. The deed stated that it held approximately two-thirds of an acre (0.26 hectares) and was of irregular dimensions (BCLR Liber WG, no. PP, folio 36). Walsh, like Young, made no improvements to the lot and the neighborhood grew around his undeveloped land.

Walsh held the property for 37 years. At his death, his widow and administratrix, Elizabeth Walsh, and the heirs of his estate sold the property to John J. Donaldson (BCLR Liber JK, no. 216, folio 89). The lot contained approximately two-thirds of an acre (0.27 hectares). Robert Walsh, Jr. issued a Confirmation of Deed to Donaldson on 8 June 1832 (BCLR Liber JK, no. 219, folio 196). Two years later, on 4 April 1835, Donaldson granted leasehold (i.e. ground rent) to Michael J. Maguire. Maguire was a carpenter who lived in another section of Old Town. Anderson (2001) speculated that Maguire may have been the first individual to develop the property. His trade as a carpenter would have enabled him to erect a house on the lot. It may be that the Watson Street lot was an investment property for Maguire, who lived elsewhere.

Maguire did not live long after taking the lease on the property. He died intestate on 7 June 1835, just over a year after taking the lease (BCLR Liber JK, no. 251, folio 400). During the year that he held the lease, the fee simple title to the property had changed hands. John J. Donaldson sold the fee simple rights in the property to Josias Pennington on 4 April 1835 (BCLR Liber JK, no. 247, folio 331). Pennington turned the property around in a little over a month, selling the fee simple rights to Susan F. Williams on 22 September 1835 (BCLR Liber JK, no. 252, folio 326). Donaldson, Pennington, and Williams owned vast acreage in Baltimore City. It is probable that the Watson Street property represented an investment, as they were able to collect ground rents from the leaseholders.

On 20 August 1835, two and a half months after her husband's death, Margaret Maguire, Administratrix of Michael J. Maguire, assigned her leasehold to Archibald Sterling (BCLR Liber JK, no. 251, folio 400). Sterling was a banker in Baltimore, he had wealth, and he controlled a large amount of property in the city. It is unlikely that he lived on the property. Instead, it may have been a rental property and a source of income. Sterling assigned the lease to David Fowler on 13 April 1839 (BCLR Liber JK, no. 288, folio 289). Fowler was a grocer on Baltimore Street. Like Maguire and Sterling, Fowler does not appear to have occupied the property. Fowler died in 1841. His will appointed his widow, Catherine Fowler, Administratrix of the estate. On 4

January 1844, she sold the lease to Susan Williams, who held the fee simple rights to the property (BCLR Liber JK, no. 337, folio 289; BACPR Wills, Liber 18, folio 191).

On 4 January 1844, the fee simple and lease rights to the lot were reunited under the ownership of Susan Williams. The lot she held contained approximately two-thirds of an acre (0.27 hectares) and it may have contained a house built by Michael J. Maguire during 1834 and 1835. The names of actual tenants who occupied this house are unknown as no records concerning rental agreements have been located to date. On 5 January, Williams assigned the lease to the lot to the Electors of Baltimore Hebrew Congregation (BCLR Liber JK, no. 337, folio 289). The deed places the lot on the northeast corner of Lloyd and Salisbury (now Watson) Streets. It fronted Lloyd Street for 58 feet and extended east along Watson Street for 100 feet. In October 2001, the BCUA measured the dimensions of the lot currently occupied by the Lloyd Street Synagogue, and the final dimensions were the same as those given in the deed. The original 1845 synagogue, the 1860 addition, and a narrow passage or alley on the east (or rear) end of the property, were all included within these dimensions.

4.5.2.3 Baltimore Hebrew Congregation, 1844 - 1889

After securing the property for a synagogue, the Board of Electors next turned their attention to the selection of an architect. They chose Robert Cary Long, Jr., a local Baltimore architect. Cary's design was in the Greek Revival, or Neo-classical tradition. This style of architecture was popular in Baltimore from circa 1800 through 1850. The popularity of Neo-classical design in the United States owes much to the vision of Benjamin Latrobe and Thomas Jefferson. Latrobe arrived in this country in 1796. He was trained as an architect in England and was aware of the architectural trends then current in Europe. Latrobe eventually took over the building of the United States Capitol from William Thornton and served as the architect for Federal buildings during Jefferson's administration. In Baltimore, he designed the Basilica of the Assumption of Mary on Cathedral Street (built between 1804 and 1821). Latrobe and Jefferson were close friends. Jefferson saw in Latrobe's architectural style "a means of symbolic expression and of bringing about social reform and enlightenment" (Keefer 1994:83). For Jefferson, Classical forms symbolized the connection between the new Republic and Roman Democracy. In his own architectural creations, Jefferson used direct copies of Roman buildings. He convinced the state of Virginia to build their new state house as a direct copy of the Roman temple at Nimes, France.

The generation following Jefferson and Latrobe turned to Greek examples of architecture. By 1820, pattern books began to appear with plans for fully Neo-classical buildings. These included Stuart and Revett's folio, *Antiquities of Athens;* and the works of American architects such as Benjamin Asher, *The Practice of Architecture* (1833); and Minard Lafever, *The Beauties of Modern Architecture* (1835). Neo-classical buildings began to appear throughout the northeastern United States. Latrobe's assistants and students were among the next generation of architects. They included Robert Mills, architect of the United States Treasury Building and Baltimore's Washington Monument; William Strickland, architect of the Second Bank of the United States in Philadelphia; and William F. Small (Fitch 1966).

Small trained under Latrobe and completed the Basilica of the Assumption after Latrobe's death. In the early 1830s, Small teamed up with local physician and architect, William Howard, to design the McKim's Free School on the corner of Baltimore and Asiquith Streets. The building was begun circa 1833 and was completed by 1838 (Keefer 1994). The McKim's Free School is located around the corner from the Lloyd Street Synagogue and is a replica of the Greek Temple of Theseus at Athens (Latrobe 1832). "[T]he design of the McKims school building is a classic example of Greek Revival architecture. Replicating original Classical models was a trend that had its beginnings with Thomas Jefferson. The trend continued toward ever increasing exactitude of archaeological models. Structures, such as the McKims School, were produced as exact scaled copies" (Keefer 1994:86).

In 1844, when Robert Carey Long, Jr. was retained to design Lloyd Street Synagogue, Neo-classical and Greek Revival architecture were fast losing ground to new architectural styles championed by Andrew Jackson Downing and others (Keefer 1994). Yet, Long and the Congregation chose to use a style that had been popular for public buildings in Baltimore for half a century. The Lloyd Street Synagogue and its near neighbor, the McKim's Free School (now the McKim Center), were built within 6 years of one another. Both buildings have a portico in the front. Both are of the Doric order of building. Lloyd Street features four Doric columns across the portico, while McKim (which is a much smaller building) features six columns across the portico. The entablature of both buildings is remarkably similar. As constructed, both the school and synagogue had single, double-door entrances centered in their facades. In 1853, the synagogue had flanking doors added to facilitate evacuating the building in the event of a fire.

Long also designed a stained glass window bearing the *Magen David* motif (or shield or Star of David). The window was placed above the Ark. The worship space did not include room for a *Bimah* (raised platform with desk from where the Torah is read) (Greenberg 1976). The basement area of the synagogue was divided into two school rooms, used for a daily Hebrew School, and a large hall fitted as a weekday chapel (*Baltimore American and Commercial Advertiser* 27 September 1845; *The Occident,* November 1845). The archaeological evidence suggests that the floor of the basement was brick (Read 2000a). This is similar to the McKim's Free School, which also had a brick floor (currently covered over by a raised wood floor [Keefer 1994]).

Baltimore Hebrew Congregation's movement toward Reform Judaism began in the 1840s. In 1841, part of the congregation left Baltimore Hebrew Congregation to form Har Sinai, a Reform congregation. At that time, Abraham Rice was the rabbi at Baltimore Hebrew congregation. Rabbi Rice was educated in Bavaria. Although he had been exposed to Reform thought, which was current in Germany at the time, he was a strict adherent of the Orthodox rite. Rice was a Talmudic scholar and established a school for the male children of the congregation in the synagogue's basement schoolrooms. He also championed English as a language for his scholars. German was used in the services, but Rabbi Rice preached once a month in English. However, American congregants did not take well to his attempts to impose strict orthodoxy. In 1849, Rabbi Rice resigned to form a small Orthodox congregation in Baltimore (*ibid.*).

Dr. Henry Hocheimer, who was from Bavaria, replaced Rabbi Rice. Dr. Hocheimer was also a champion of education. One of his major reforms was the introduction of confirmation for girls,

which caused some of the more conservative congregants to complain. There was also some disagreement during this period over the use of English during board meetings; some members demanded that German remain the primary language (Minutes 8 February 1857, May (?) 1859). Rabbi Hocheimer resigned in 1859, as he felt that his leadership was not allowing the congregation to co-exist in peace. Rabbi Bernard Illoway was his successor. Although Illoway was born in Bohemia, and educated in Europe, he was a supporter of slavery and of the south's right to secede. His political views did not fit those of his congregation and in 1862 he left to become the rabbi of a synagogue in New Orleans (*ibid.*).

While Rabbi Illoway was with the congregation, the synagogue was expanded. In 1851, when the building was only six years old, the congregation had already swelled to such numbers that the synagogue was nearly filled to capacity during services. By 1854, membership had reached 175 families. In order to accommodate people wishing to worship on the Sabbath, membership was limited to two hundred, with an entry fee of $30.00. The minutes do not make it clear as to whether the fee was per person or per family, or if it was a one-time fee or an annual fee.

By 1859, the synagogue was too small. The Board decided to consult with an architect as to the feasibility of extending the building. The original architect, Robert Carey Long, Jr., had died. The Board hired William H. Reasin to produce new architectural plans. These were submitted to the Board in the spring of 1859. Total cost to extend the building and to make alterations to the interior came to the sum of $2,129.00. A motion was made to not extend the building, but it was defeated (Minutes, March 1859). Construction was begun in 1860. The building was extended 30 feet east from the east (or rear) wall of the synagogue. Interior alterations included a new Ark, which was installed in a niche on the east wall, and a *Bimah*. The Star of David window, designed by Long, was removed and reinstalled in the new east wall (*ibid.*).

The thirty-foot extension to the building covered the area occupied by the *mikveh* house. The *mikveh* house appears to have been closed during the summer of 1860. On 8 September 1860, the Board granted Mrs. Berliner (keeper of the *mikveh* from 1856 through 1871) three months free rent, because she was required to vacate the premises for an unstated period of time (Minutes, 8 September 1860). While the records do not clearly state when she had to vacate the *mikveh* house, it is reasonable to assume that this occurred during the summer of 1860 when construction of the addition was underway. The *mikveh* was unusable during this period because of the construction. The archaeology done in this area in Units 4, 5 and 6 (Read 200a, 2001) clearly shows that the structure surrounding the *mikveh* was razed to make room for the addition. The records do not mention the construction of new *mikveh* during the 1860 alterations. Construction was completed by September 1860, and a rededication service was held on 14 September 1860. Rabbi Illoway and Rabbi Rice led the congregation in this service (*Baltimore American and Commercial Advertiser* 15 September 1860; Greenberg 1976). The earliest known depiction of the synagogue was produced after the addition was added. It is included in the *E. Sachse, & Co.'s bird's eye view of the city of Baltimore, 1869* (Figure 11) and shows the south side, or Watson Street façade, of the synagogue.

Rabbi Illoway left Lloyd Street Synagogue in 1862. Rabbi Rice returned for a brief period in 1862. However, he died in October of that year and the congregation was without a rabbi until 1868. Rabbi Abraham Hofmann was the next leader of the congregation. Rabbi Hofmann, like

his predecessors, was from Europe (Bavaria in Hofmann's case). He led the congregation in making numerous reforms to the liturgy and ritual used in the services. These changes were not without opposition. A group of 20 members took their disputes to court, filing a petition to bar further changes in the service. The petition stated in part that the preaching of Rabbi Hofmann was not in accord with Orthodox traditions. The case was settled out of court. However, on 1 January 1871, a majority of the individuals who had filed the petition resigned from the congregation (Minutes, 1 January 1871). They formed a new congregation, *Chizuk Amuno* (Strengthening of the Faith). Their new synagogue was built on Lloyd Street one block to the south of the Lloyd Street Synagogue. The splitting off of the new congregation resulted in a decline in of the membership of Baltimore Hebrew Congregation. Membership dropped from 165 families in 1865 to 133 in 1871 (*ibid.*).

Although the congregation had lost members, the synagogue was renovated in 1871. The work included painting, frescoing, a new furnace and ventilators, new gas fittings, and plumbing. The cost of the work was over $5,000. A re-dedication of the building took place on 25 August 1871 (*Baltimore American and Commercial Advertiser*, 26 August 1871).

Rabbi Hoffman left the congregation in 1873 to become the superintendent of the Hebrew Orphan Asylum. His leaving coincided with a national economic crisis. Baltimore Hebrew Congregation found itself in serious financial trouble in 1872, a year before the national panic hit. In April 1872, the minutes reported that the congregation was indebted to the amount of $7,101.48 (Minutes, 1 April 1872). Part of the problem was the loss of members in 1871, which meant a decrease in revenue. Membership continued to decline throughout the 1870s and 1880s, from 133 families in 1871, to 61 families in 1874, and 48 families in 1884 (Greenberg 1976).

The losses in membership experienced by Baltimore Hebrew Congregation were not due to new congregations splitting off from the main congregation but were instead due to demographic shifts in the Jewish community. During the 1870s and the 1880s, the Jewish community began to leave Old Town and move into the northwest area of the city. Wealthy and established Jewish families, which included the Friendenwalds, Sonneborns, Kohns, Hutzlers, Gutmans, and Hochschilds, built new homes on Eutaw Place in Bolton Hill. As these families moved out of the area, other families followed them. Then in the 1880s, immigration of new Jewish populations began to increase rapidly. Many of these new immigrants settled in the Fells Point/Old Town areas of the city (Olson 1980).

Up to circa 1880, the majority of immigrants arriving in Baltimore were Irish or German (Olson 1980). By 1880, the makeup of the immigrant population had changed. Before 1820, Jewish immigration into Baltimore and the United States as a whole was generally by single individuals and families. Between 1820 and 1880, the American Jewish population increased from 10,000 to 250,000 individuals. Many of these immigrants were German Jews who were escaping revolutions and wars sweeping through the various German principalities. Between 1880 and 1920, changing social patterns in Eastern Europe and pogroms in Russia provided incentive for 2,000,000 Jews to immigrate to the United States (Dimont 1962). Many of these immigrants were unskilled laborers who quickly entered the American factory system. In Baltimore, the new Jewish immigrants entered East Baltimore's garment industry in large numbers.

In November 1881, seven Russian Jewish families arrived in Baltimore. They were escaping the pogroms of Czarist Russia. Within eight months, 450 Russian Jews had arrived. In 1880, the population of the Baltimore Jewish community stood at approximately 10,000. This community was almost entirely descended from German immigrants of the early nineteenth century. Between 1880 and 1890, over 24,000 Russian and Eastern European Jews arrived in Baltimore. Another 17,000 came in the 1890s (Brugger 1988, Olson 1980). Not all the immigrants who arrived stayed in Baltimore, many continued to the new western settlements. Those who stayed in Baltimore tended to settle in the Old Town section of the city. Although these new Jewish immigrants were from many different Eastern European counties, as well as from Russia, they were known collectively as the "Russian" Jews to the older German Jewish community.

The new Jewish immigrants had little in common with the established community. They formed their own congregations and did not join the older congregations. This appears to have been due to differences in the way services were conducted and adherence to ritual and traditions. The new groups had little in common with the Reform congregations in Baltimore. There were even great differences between the Orthodox, or traditional congregations, and the new arrivals. Then was the language barrier. Most of the new immigrants spoke little to no English. Finally, many in the older German Jewish community had risen from poor immigrants to become merchants and industry owners over a generation, hence, there were class barriers as well as fear that the new groups would awaken prejudice in the surrounding non-Jewish community.

The new Jewish arrivals in Baltimore did not join Baltimore Hebrew Congregation or other established congregations in Old Town. The established Old Town synagogues were beginning to lose members as families moved across town to west Baltimore. During the period from 1873 through 1886, Baltimore Hebrew Congregation was without a rabbi for all but three years (Rabbi Maurice Fluegel served the congregation from 1881 through 1884). Membership declined throughout these years. When Dr. Aaron S. Bettleheim arrived in 1886, he "found his new congregation in desperate straits" (Greenberg 1976:25).

The congregation had discussed moving at least twice during the tenure of Rabbi Fluegel. In 1881, the Board appointed a committee to explore the cost of a building lot, the prospect of obtaining new members, and what to do with the current building (Minutes 2, January 1881). In 1884, Nathan Schloss, President of the Board, reported that he had received a proposal for the purchase of the building. As there had been no formal proposal, the Board declined to act on the matter (Minutes, 29 April 1884). Between 1884, when Rabbi Fluegel left, and 1886, when Dr. Bettleheim arrived, there was no further discussion of moving. However, during those years, extensive repairs were made to the building, including painting the exterior and installing a new tin roof (Minutes, 6 July 1884, 5 April 1885, 22 November 1885, 1 January 1886, 2 August 1886, 1 September 1886, 5 and 10 October 1886).

By 1887, the congregation was once again experiencing financial problems. The Board voted "to have stock printed to the amount of $10 each to pay with them the debts of the congregation" (Greenberg 1976). On 3 April 1887 (Minutes), the Board, worried about the continued existence of the congregation, voted to appoint a committee to explore the possibility of relocating the congregation. The committee reported back in October with an estimate of between $80,000 and $100,000 to construct a new synagogue on land costing at least $10,000 to $20,000. The Board

ordered the committee to find an existing building that could be altered to meet the congregation's needs (Minutes, 11 October 1887). By June 1888, the committee had not found a building. The secretary of the Board was instructed to advertise in the *Sun* for a building to purchase in the northern or northwestern portion of the city (Minutes, 4 June 1888). In the meantime, Dr. Bettleheim began a capital campaign to raise money for a new synagogue. On *Yom Kippur* 1888, he appealed to the congregation for funding to build a new synagogue. The following day a meeting was held where $35,000 was raised by subscription. Then, on 20 February 1889, the minutes report that the Lloyd Street Synagogue had been sold to the Lithuanian congregation of St. John the Baptist Catholic Church for $12,000 (Greenberg 1976; Minutes, 20 February 1889). Baltimore Hebrew Congregation still had no place to build a new synagogue, but they had taken the first step to leave Old Town.

Dr. Bettleheim now needed to find a building for the temporary use of the congregation until a new synagogue could be erected. He approached Benjamin F. Bennett, who owned a building on the corner of Charles and Fayette Streets, regarding the use of his building by the congregation. Mr. Bennett agreed to let the congregation use the building free of charge. The last service of Baltimore Hebrew Congregation in Lloyd Street Synagogue was 6 April 1889. They worshiped in Mr. Bennett's building from 13 April 1889 until 19 September 1891 (Greenberg 1976; Minutes 12 March 1889, 1 April 1889). The Board discussed the purchase of a lot on Eutaw Place in November 1889. They voted to purchase a lot on the northeast corner of Madison Avenue and Robert Street in December 1889. At the same meeting, they gave the building contract to Henry Smith and Sons, who were to build the new synagogue to the specifications of architect Charles Carson (Minutes, 11 November 1889, 29 December 1889). The cornerstone was laid on 22 July 1890. Unfortunately, Dr. Bettleheim did not live to see the completion of the new synagogue. He died on 20 August 1890 and was replaced in April 1901 by Rev. Dr. Adolf Guttmacher. Dr. Guttmacher conducted the dedication service for the new synagogue on 25 September 1891 (Greenberg 1976).

4.5.2.4 St. John the Baptist and Shomrei Mishmeres Hakodesh, 1889 - 1959

Baltimore Hebrew Congregation was not the only German Jewish congregation to leave Old Town during the 1880s and 1890s. *Oheb Shalom* built a new synagogue on Eutaw Place at Lanvale in 1893. In 1894, *Chizuk Amuno* built at the corner of McCullough and Mosher Streets. The congregation sold their Lloyd Street building to *B'nai Israel* or the "*russische shul*." *Har Sinai* also joined in the exodus from Old Town. They built their new synagogue at Bolton and Wilson Streets. All four of these congregations were located a few blocks from one another in the heart of the new German Jewish community (Olson 1980).

During the research for this project, the records of St. John the Baptist Catholic Church were not located. Little is known about this congregation or alterations they may have made to the building. The annual *Notitiae* filed with the Archdiocese of Baltimore in 1895, simply states that "We improved the basement of the Church." No other details are given. An 1894 topographic map of the city of Baltimore shows the building occupied by St. John the Baptist. One block to the south is a building marked "Lloyd Street Synagogue." This was the synagogue of the Chizuk Amuno congregation they vacated this building in 1894.

St. John the Baptist, as a Catholic congregation, had no use for the Ark or the *Bimah*. Baltimore Hebrew congregation removed the Ark, while the St. John the Baptist congregation probably removed the *Bimah*. In addition, St. John the Baptist had no need for the *mikveh*; its fate during their tenure is unknown. Did St. John the Baptist cover over the *mikveh* when they made improvements to the basement? Or was it left in placed and ignored?

In 1902, St. John the Baptist congregation decided to leave Old Town. The Lithuanian community, like many immigrant communities before it, had begun to assimilate into the larger Baltimore community. They moved to the fashionable west side of Baltimore. A new church was built at the Corner of Saratoga and Paca Streets. In 1905, St. John the Baptist sold the Lloyd Street building to *Shomrei Mishmeres Hakodesh*, an Orthodox Jewish Congregation (Greenberg 1976).

Shomrei Mishmeres Hakodesh probably made alterations to the building. Records for the period of their tenure in the building (1905 through 1960) have not been located to date. However, they probably reinstalled an Ark and a *Bimah.* In addition, the congregation installed the extant matzah oven, *mikva'ot,* and claw-foot bath tubs in the basement of the synagogue (Read 2000a, 2001). In 1933, a fire damaged the interior of the synagogue. Three years later, Hyman Hurwitz, Harry Tapper and Isaac Kessler, were hired to repair the damage and to install wiring and plaster in the worship space. The congregation continued to worship in the synagogue until 1959 (Ecker and Jackson n.d.).

During the 1930s and 1940s, the "Russian Jews" began to migrate out of East Baltimore. The older German Jewish congregations began to leave Eutaw Place and Bolton Hill for new suburbs developing around Park Heights Avenue in northwest Baltimore City and portions of Baltimore County. Migration of the older German Jewish population to the northwest began in the 1920s, with the establishment of congregations in Forest Park (*ibid.*). Baltimore Hebrew Congregation moved into a new synagogue on Park Heights Avenue in 1951 (Greenberg 1976). Other congregations followed, and soon there were few Jewish institutions in Old Town or downtown Baltimore. Other immigrant communities also moved from the central city to the edges of the city or the suburbs. The community that was left behind was primarily African American and poor (Olson 1980).

4.5.2.5 A New Mission for the Synagogue, 1959 - 2009

Baltimore city's 1950s urban renewal project meant that many historic buildings in East Baltimore fell to the wrecking ball. In 1958, the Peale Museum began a HABS (Historic American Building Survey) of thirteen historic buildings in East Baltimore. One of these buildings was the Lloyd Street Synagogue. The Peale was concerned because Lloyd Street Synagogue was in the urban renewal project's pilot area and was scheduled for demolition in order to create space for a parking lot (Greenberg 1976).

The director of the Peale, Wilbur H. Hunter, Jr., contacted members of Baltimore Hebrew Congregation concerning the impending fate of the synagogue. Within a few months, a group

came together who began to negotiate with the remaining members of *Shomrei Mishmeres Hakodesh* for purchase of the building. In 1960, The Jewish Historical Society of Maryland was organized. The mission of this organization was to collect and preserve "documents and materials relating to the history of Jews in Maryland *and* to serve as the agency for the purchase, restoration and maintenance of the Lloyd Street Synagogue as a museum" (*ibid.*:27). By 1963, the funds to purchase and restore the synagogue had been raised. *Shomrei Mishmeres Hakodesh* agreed to the sale, provided the building was never again used as a place of worship. A dedication of the restored building was held on 8 November 1964. The restoration did not include the basement area with the matzah oven, *mikva'ot* and schoolrooms. This area was restored by December 1965. On 16 April 1965, Mayor Theodore R. McKeldin presented the building with a Baltimore City plaque designating the site as an historic shrine. The synagogue was listed in the National Register of Historic Places on 19 April 1978 (inventory number B-20). The Lloyd Street Synagogue was the first building erected as a synagogue in Maryland, the fifth synagogue erected in what is now the United States and is one of the three early synagogues built in this country that is still standing (*ibid.*).

4.5.3 Mikva'ot

A *mikveh* (*mikva'ot* in plural) is a ritual bath. It is an important part of the laws involving ritual purity and impurity found in the Talmud. According to Steinsaltz (1976:194), there are two main spheres "life, the most complete expression of which is anything pertaining to sanctity (regarded as the primary source of life); and death and the void, seen as the opposite of life and of sanctity. Generally speaking, it may be said that which is living and healthy contains no impurity and the impurity increases as an object becomes closer to death." The greater the degree of an object's pollution, the greater the chance of polluting another object. In general, pollution is achieved by touching the impure object. However, in some cases even carrying the impure object without touching it or remaining under the same roof with it can convey pollution. In order to escape pollution, a person or an object must be purified. "All types of purification have one factor in common—immersion in water" (*ibid.*:195).

The *mikveh mayim* then is a place where total immersion in water for purification purposes may take place. The Torah (the five books of Moses: Genesis, Exodus, Leviticus, Numbers and Deuteronomy) has an extensive list of actions that cause impurity (these will not be discussed here, and the reader is referred to the Torah, specifically Leviticus, for a broader view of what could cause impurity). By the nineteenth century, two types of impurity were the main reason for immersion in the *mikveh*. The first was *niddah*, the pollution of women by childbirth and menstruation (*cf.* Leviticus 12 and 15:19-30)[1]. Immersion in the *mikveh* allowed a woman to purify herself of ritual uncleanliness after menstruation or childbirth; this was especially important for married women, as sexual relations were prohibited, as long she remained impure. The second type of ritual impurity was brought about by contact with the dead. There are numerous references in Leviticus to the uncleanliness and pollution of the dead. Steinsaltz

[1] The author used the Revised Standard Version (RSV) of the Bible in writing the report. The major difference between the RSV and the Hebrew Bible is the numbering of the verses. Occasionally the verse numbers do not match between the two Bibles.

(1976:196) noted that among the modern Hassidim, immersion is significant as a way of spiritual purification. Immersion is also common in cases where an individual converts to Judaism.

4.5.3.1 Construction Methods

All *mikva'ot* must be built of natural materials. These include wood, stone and clay (such as ceramic tiles and terra cotta). Metal may not be used, as it is easily polluted. The water in a *mikveh* is known as the living water. It must flow into the *mikveh* and remain in motion. The water cannot run into the *mikveh* from a tap, but must come from a natural source. As most *mikva'ot* are indoors the living water may be collected and supplied through a system of pipes made of natural materials. At Lloyd Street, a system of terra cotta pipes carried rainwater into the extant *mikva'ot*. Some *mikva'ot* were supplied with living waters from a *dut*. According to the *Encyclopaedia Judaica,* a *dut* "is a cistern or tank built into the ground to store rainwater. When changing the water in the *mikveh*, it is filled each time with at least 21 *séah*[2] of rainwater from the cistern…" (Skolnik and Berenbaum 2007:226), or at least 39 gallons (148 liters) of living water. After the required level of the living water has been reached, additional water may be added to the *mikveh* by dipping it from a container into the *mikveh*. Minutes for 2 May 1852, show that water was heated in a kettle in the *mikveh* house and then added to the *mikveh*.

A *mikveh* may be emptied by dipping the water out by hand or, by pumping it out. There are no drains in the base of a *mikveh*. One of the current mikva'ot in Lloyd Street still has the pumping apparatus in place next to it. The pump is metal, as are the railings on the stairs leading down into the *mikveh*. Evidently by the beginning of the twentieth century, the period that the extant *mikva'ot* appear to have built (Read 2000a, 2002), some of the restrictions on the use of metal had been relaxed.

Mikva'ot were central to community life in the nineteenth century and remain so among Orthodox Jews today. The integral role of the *mikveh* in the community was well established in Israel and spread to Europe with the diaspora community. The remains of a *mikveh* dating to 1170 have been uncovered in Cologne. Other *mikveh* from the 1200s and 1300s have also been excavated in Germany (Skolnik and Berenbaum 2007). Jews immigrating to North America brought the use *mikva'ot* with them as part of their cultural and religious practices. *Mikva'ot* were so important to the life of the community that a *mikveh* house and *mikveh* were often built before the synagogue.

4.5.3.2 Lloyd Street Synagogue Mikva'ot

The location of the *Nidche Yisrael* Congregation's *mikveh* in relation to the 1845 synagogue is referred to in the minutes of the meetings of the synagogue's Board of Electors during the period 1851 through 1859 as the "*mikveh* house," which implies a separate building. An entry in the 7 November 1858 minutes details the complaints of Mrs. Berliner, the mikveh keeper, and of the synagogue's sexton about the "condition of the back building," again implying a separate

[2] A *séah* is equivalent to 1.86 gallons or 7.05 liters.

building. There is no known documentation concerning the appearance of the *mikveh* house. To the best of our knowledge, there is no historic documentation concerning the dimensions, number of stories, type of foundation or the fabric used to construct the *mikveh* house.

The unanswered question concerning the *mikveh* house is its date of construction. If Michael J. Maguire built a house on the lot in 1834 or 1835, the congregation may have modified the already standing structure for use as the *mikveh* house. It is also possible that they erected an entirely new structure after their purchase of the leasehold in 1844. Anderson (2001) checked through the city directories for occupants of Lloyd Street in the 1850s. There were no occupants listed in the 1850 directory. However, in 1849, a Caroline Jacobs, who was a seamstress, lived on Watson Street south of Lloyd. The earliest known keeper of the *mikveh* was a Mrs. Jacaby who left the *Mikveh* House in 1852 (Minutes 1852). If Caroline Jacobs was Mrs. Jacaby (Jacobs being a clerical error for Jacaby) then it is probable that the *mikveh* house was on the lot by at least 1849.

The first mention of a *mikveh* in the Minutes is dated 7 December 1851, when Mr. Herzberg was authorized to repair the *mikveh* steps (these were probably the steps leading down into the bath). The earliest surviving Minute book for Baltimore Hebrew Congregation begins in October 1851. However, given that the congregation was Orthodox, and that Rabbi Rice insisted that the congregants adhere strictly to the law, it is logical to assume that a *mikveh* was included in the original building of the synagogue. By 1852, the base of the *mikveh* was entirely rotten. If the original *mikveh* was built of ceramic or stone, this would not have been the case. It was probably built of wood or was wood lined. The wood had rotted after 7 years of service. In May 1852, the board appointed a committee to find out how much it would cost to fix the *mikveh* (Minutes, 9 May 1852). Evidently nothing came of this, as the minutes make no mention of monies expended on repairs. Then on 3 October 1854, the minutes indicate that a committee of five was appointed to supervise building a *mikveh*. On 18 February 1855, the board unanimously accepted the plans and specifications of a Mr. Boyd for building a new *mikveh*. Construction was soon under way, and by June the *mikveh* house was ready to be furnished and papered. In August the Board decided to place a "watertide [probably a clerical error for water tight] marblebox" in the *mikveh* house (Minutes, 7 August 1855). Construction appears to have been finished in October 1855, when Mr. Boyd received payment in the form of three $200 bonds (Minutes, 14 October 1855).

In July 1855, gas fixtures were placed in the *mikveh* house (Minutes, 3 June 1855, 10 June 1855, 1 July 1855). The gas run into the *mikveh* was probably for lighting. However, it may also have been used to heat water for the *mikveh*. On 1 November 1857, the Board voted to sell the old kettle for $15.00 (Minutes). A stove was placed in the dressing rooms of the *mikveh* sometime during the winter of 1856 through 1857 (Minutes, 7 December 1856).

Three women maintained the *mikveh* during the period between 1851 and 1871 (Minutes). Mrs. Jacaby was there in the early 1850s. She left in the fall of 1852, about the time that the *mikveh* needed repairs. Mrs. Fisher kept the *mikveh* house from October 1855 through September 1856. And finally, there was Mrs. Berliner, who arrived in October 1856 and stayed until September 1871. The minutes do not mention who kept the *mikveh* between October 1852 and October 1855. These women rented the *mikveh* house for the term of one year. It was the location of the bath and was also the dwelling of these women (*Baltimore American and Commercial Advertiser*

17 September 1845). The women collected fees for the use of the *mikveh*, which they applied toward the rent. During Mrs. Berliner's tenure the rent was $150.0 per year, plus the expense of the gas.

Most of the entries in the Minutes concerning the *mikveh* are about the rent, expenditures for repairs, and the keeper of the *mikveh*. Occasionally, however, there are references regarding how the *mikveh* was used. On 13 April 1856, the president of the Board complained that Mrs. Fisher admitted women during the day; evidently women's use of the *mikveh* was restricted to evening or night hours. The Board concluded that if this happened again, *Mr.* Fisher had to leave the house in 30 days (Minutes, 13 April 1856). In September 1856, when applications were solicited for a *mikveh* keeper, a Mrs. Berliner was selected to replace the Fishers (Minutes, 7 September 1856). In 1860, after the addition was made and the synagogue was rededicated, the Board had Mrs. Berliner agree not to open the *mikveh* except according to Rabbinical law. At the same meeting they instructed her to let female members of Baltimore Hebrew Congregation have preference over women from other congregations in the use of the baths (Minutes, 4 November 1860). From time to time, the Board sent a committee to visit Mrs. Berliner to make sure that the *mikveh* was kept according to the law. One of these visits was described in the Minutes for 20 October 1861. On 6 October 1867, the board voted to prohibit the use of the *mikveh* by any male, except officers of the congregation who wished to use it before the holidays. Mrs. Berliner may have continued to let in other males, as a condition was set in her 1870 rental contract that no males were to be admitted (Minutes, 9 October 1870). In August 1871, the board passed a motion to once again notify Mrs. Berliner that men were not to be admitted to the *mikveh*, except as stated in the 6 October 1867 by-law (Minutes, 6 August 1871). Mrs. Berliner stopped acting as the keeper of the *mikveh* in September 1871 (Minutes, 24 September 1871). The minutes indicate that she had been having problems meeting the rent since 1870 (the Board lowered the rent in 1870 so that she would stay) (Minutes, 3 October 1870).

Between 1856 and 1867 we see a change in how the *mikveh* was used. It was open to men and women, probably from 1845 to 1867. Women were restricted to use of the *mikveh* after sundown. Leviticus states that anything a woman touches during menstruation is unclean and "whoever touches anything upon which she sits shall wash his clothes, and bathe himself in water, and be unclean until evening" (Leviticus 19:22). By restricting women's use of the *mikveh* to the evening, the men of the congregation were kept from possible ritual contamination. After 1867, the *mikveh* was restricted to the use of women. Only male officers of the congregation wishing to purify themselves before the holidays were allowed to use the *mikveh*. It may be that reforms agreed to by the congregation during the period 1862-1868 no longer made it necessary for most male members to use the *mikveh*. The prohibition on their use of the bath, while reflecting changes in the rites followed by the congregation, may also be a reflection of Victorian social morals concerning the relation and segregation of the sexes.

5.0 RESULTS OF EXCAVATION

Two units were excavated during the current season of excavation. Each unit was placed to answer specific questions, which were detailed in the research design portion of this report (Section 2.0). Unit 7 (following the numbering scheme established during the 2000 excavation [Read 2000a]) was located in the interior of synagogue in the southeast corner of the basement. Unit 8 was located in the alley to the rear of the synagogue on the southeast corner of the exterior walls (Figure 12).

5.1 UNIT 7

Unit 7 was excavated in the southeast corner of the interior of the synagogue in the hallway between the *mikva'ot* rooms and the schoolroom (Figure 12). This was the former location of the secretary's office. The southeast corner will be disturbed by the planned stabilization of the building. Excavation in this area was concerned with locating remains of the west wall of the 1840s *mikveh* house (Feature 8). The unit measured 5.5 feet square and was located 11 feet to the south of Unit 5 (2001 excavation). A large safe was located on the interior side of east wall of the synagogue directly above the east wall of the unit. The south side of the unit was directly below a widow in the south wall of the synagogue. The west wall was adjacent to the floor of the room. The north wall of the unit was 0.50 feet to the south of a wood panel wall that divided the hallway from the enlarged *mikva'ot* rooms. A door into the *mikva'ot* room was located adjacent to the northeast corner of the unit.

Before excavation of this unit began the wooden wheelchair ramp leading into the *mikveh room* was disassembled, and the materials were stored in an area designated by the JMM. The brick floor and its associated concrete base (level 1) were removed with a concrete saw. When excavation of this unit was completed, two profile drawings were done of the north and west walls of the unit. The south and east profiles included the south and east walls of the existing building; these profiles were photographed but were not the subject of detailed profile drawings.

Eight levels were removed from the unit, and eight features were recorded. The unit was an average depth of 2.84 feet, with a maximum depth of 3.02 feet in the NE corner and a minimum depth of 2.60 feet in the southwest corner. Two of the features were first noted during earlier excavations (Read 2000a, 2002) the remaining six features were located during this excavation:

- Feature 4 – Pipe trench and its associated cast iron pipe.
- Feature 8 – West wall of the *Mikveh* house.
- Feature 15 – Pipe trench.
- Feature 16 – Iron pipe (active gas line)
- Feature 18 – Unknown function.
- Feature 19 – Iron pipe.
- Feature 31 – Brick wall associated with the safe in the east wall of the synagogue.
- Feature 32 – Possible hearth support Feature 32.

5.1.1 Post-1960 Levels and Features

These levels and features were located across the unit and represent fill layers associated with the 1960s rehabilitation of the synagogue.

5.1.1.1 Level 1

Level 1 was the brick floor of the secretary's office (Figure 13). Before the current excavation, it was assumed by the museum staff that the brick floor was the original floor of the room. However, when the first bricks were removed, it was discovered that they were laid on a concrete base. This floor dates from the 1965 restoration of the building by the Jewish Historical Society. After this discovery, the bricks and the floor were removed with a concrete saw. The average depth of the level was 0.49 feet, with a minimum depth of 0.38 feet in the center of the unit and a maximum depth of 0.53 feet in the southeast corner of the unit (which is also in the corner of the synagogue with the greatest amount of subsidence). No artifacts were recovered in association with the level.

Level 1 bottomed on Features 15 and 16 and on level 2, a brownish yellow sandy loam. Feature 16 was an active gas line that originated in the northeast corner of the unit and ran west to approximately the center of the west wall of the unit. Level 2 of the unit was divided into east and west halves by Feature 15, a pipe trench and its associated stand pipe that ran from the northwest corner of the unit to the center of the south wall, directly beneath the window in the west wall of the building (Figures 13 and 14). This feature was excavated before level 2.

5.1.1.2 Feature 15

Feature 15 was a pipe trench and its associated standpipe. The feature began in the northwest corner of the unit and extended southeast to the center of the south wall, directly beneath the window in the west wall of the building (Figures 13, 14, and 15, Photographic Plate 1). The feature exits the synagogue through a hole cut in the south wall of the structure. It continues below the sidewalk and street until it joins the main sewer line running beneath Watson Street. The main sewer line is located at a depth of eight feet below the street surface (Mike Walkly, personal communication, November 2008). A clean-out cap is on the top of the standpipe. The standpipe originated at the surface of the brick floor excavated as level 1. How it relates to the rest of the museum's drainage system is unknown. It was placed in the basement during the early 1960s renovation of the building.

Feature 15 was not excavated to its base; because of its tie into the Watson Street sewer the base of the feature is presumed to be several more feet below the surface of the floor. The portion of the feature that was excavated was removed in one level. Excavation was terminated when culturally sterile subsoil was reached on the feature sides. Feature 15 was 5.5 feet in length and was 3.3 feet in width. An average of 2.80 feet of fill was excavated; with a minimum of 2.62 feet of fill in the northwest corner of the unit and a maximum of 3.10 feet of fill along the south wall. The feature fill consisted of yellowish brown (10YR 5/4) sand mixed with brown (10YR 5/3)

clay with inclusions of brick bats, dressed stones, chunks of concrete, and gravel. The inclusions accounted for approximately 30 percent of the fill content. Feature 15 is intrusive through unit levels 2, 3, 5, 6, 7, and 8. It obliterated much of the pipe trench associated with Feature 19, which was located near the base of the feature in the northwest corner of the unit. Feature 15 also cut through Feature 8, the west brick wall of the 1840s *mikveh* house (Read 2000a, 2002).

A wide variety of artifacts were recovered in the feature (Lot 70; Section 11.2; Table 1). Fragments of several bottles were recovered in the feature. This included 4 colorless body sherds and a fragment of a machine-made crown top closure lip. There was one sherd of light green body glass, a sherd of a brown machine-made base, and 3 body sherds of olive green glass. There were also 3 sherds of embossed light green bottle glass. One was too worn to read, the second one was embossed with the letter "R," and the third was embossed "Goldman." Most of a machine made bottle glass fragments were part of a brown beer bottle that was found directly under the synagogue wall where the pipe exits the building. The bottle consisted of the base with an Owens scar, 4 large body sherds, and a neck with a crown top closure. A piece of a colorless pressed glass tumbler or mug was also recovered. Three sherds of unidentified flat white milk glass completed the glass portion of the assemblage.

Fourteen fragments of ceramic vessels were recovered. These were from two redware bowls, both lead glazed on the interior of the vessel, one with clear glaze and the other with brown glaze. There were 9 fragments of a Bristol glazed stoneware jug similar to those found in level 2 and Feature 4. Two sherds of whiteware plates– one plain, one blue transfer printed – and one pearlware shed of a negative blue transfer printed were also recovered. Seven iron crown caps and a tin can key were also recovered in the level. Faunal items associated with food included 3 bones (one with gnaw marks on it) and an oyster shell.

Architectural artifacts were primarily window glass (n=9). Other items included a possible fragment of plate glass, 2 fragments of flat glass, 2 fragments of slate, a blue speckled marble tile, 3 common wire nails, 3 common cut nails, and a cut finishing nail. An iron hinge and a fragment of concrete were also recovered.

Small finds included the porcelain lid to a child's tea set, a brass grommet (possibly for draperies), and several clothing items. The latter were primarily buttons and included a 2-hole shell button and 3 shell 4-hole buttons. A glass shirt stud was also recovered. The final small find was an 1886 seated liberty dime.

Finally, it appears that rats plagued the synagogue. The skulls of two rats were recovered in the pipe trench fill. They had probably invaded the building by working their way from the sewer into the pipe trench and then into the building. Rats are still a perennial problem in the city.

The Owens Scar on the beer bottle provides a *terminus post quem* (TPQ) date of 1904 for the feature (Jones *et al.* 1985:39). The feature's location directly below the brick floor and concrete pad and its intrusive nature through all the other levels in the unit suggest that it is associated with the early 1960s restoration of the building.

Number	Type	Description
2	Redware	Brown Lead Glazed
9	Domestic Buff Stoneware	Bristol Glaze
1	Pearlware	Underglaze Negative Transfer Print
1	Later Refined Earthenware	Plain
1	Later Refined Earthenware	Underglaze Blue Transfer Print
6	Machine Made Bottle Glass	Brown Beer
1	Machine Made Bottle Glass	Colorless
2	Machine Made Bottle Glass	Light Green Soda or Mineral
1	Unidentified Bottle Glass	Colorless
5	Unidentified Bottle Glass	Light Green
2	Unidentified Bottle Glass	Green
1	Unidentified Bottle Glass	Olive Green
1	Unidentified Bottle Glass	Brown
1	Table Glassware	Press Molded Tumbler
3	Faunal Remains	Bone
2	Faunal Remains	Rat Skulls
1	Faunal Remains	Oyster
1	Shell	Button – 2-hole
3	Shell	Button – 4-hole
1	Glass	Shirt Stud
1	Copper/Copper Alloy	Eyelet/Rivet
1	Coins	Penny – 1886
1	Toys	Porcelain Dolls Dish Lid
1	Lamp Part	Glass Chimney
1	Storage	Tin Can Key
7	Storage	Crown Bottle Cap
3	Unidentified Flat Glass	White Milk Glass
1	Architecture	Porcelain Tile
2	Architecture	Slate
1	Architecture	Molded Concrete
1	Architecture	Hinge
4	Architecture	Cut Nail Fragment
3	Architecture	Wire Common Nail Fragment
9	Tinted Window Glass	Window Glass
3	Unidentified Flat Glass	Unidentified Flat Glass
84	**Total**	

Table 1: Artifacts Recovered in Unit 7, Feature 15

5.1.1.3 Feature 16

Feature 16 is an iron pipe. It was first noted at the base of level 1, lying directly on the surface of level 2 and of Feature 15 (Figures 13, 14 and 15; Photographic Plate 1). Installation of the pipe resulted in a shallow disturbance of the surfaces of feature 15 and level 2. The pipe is iron and is approximately 0.15 feet in diameter (or a 2 inch pipe). The pipe originates in the northeast corner of the unit under the door between the *mikva'ot* room and the secretary's office. It runs roughly northeast to southwest and exits the unit about mid-wall on the west wall (Figures 13 and 14). There were no artifacts recovered in association with this feature. This feature was installed during the early 1960s restoration of the building. This assignment is borne out by its location directly below the brick floor and directly over Feature 15. Feature 16 is probably an active gas line.

5.1.1.4 Level 2

Level 2 was first noted directly below level 1 (Figure 13). Feature 15 is intrusive through the level and Feature 16 lies on top of both this level and Feature 15. Level 2 was divided into an east and west half. The east half of the level was removed first. Several bricks were laid on the surface of the level that is part of brick floor that dates to the period 1860 through 1960 (Read 2002:Figure 10, Stratum IV). The rest of the floor was probably removed during installation of Feature 15. The level was a fill layer of brownish yellow (10YR 6/6) sandy loam with lens of light brownish gray (10YR 6/2) ash across its surface. The soil matrix contained inclusions of brick fragments, decaying mortar, pieces of wood, and small clay nodules.

The level was excavated in two sections. The east half of the level was located to the east of Feature 15 and was an average thickness of 0.40 feet, it was a maximum of 0.60 feet thick along the south wall of the unit adjacent to the east wall of Feature 15 and a minimum thickness of 0.19 feet along the north wall of the unit adjacent to the east wall of Feature 15. The west half of the level was located to the west of Feature 15 and was an average thickness of 0.51 feet; it was a maximum of 0.61 feet thick in the center of the level and a minimum thickness of 0.26 feet along the south wall of the unit adjacent to the west wall of Feature 15. The east half of the level bottomed on level 3, a layer of white sand. The west half of the level bottomed on level 8, a yellowish-brown fill layer.

Artifacts recovered in the east half of the level (Lots 71 and 75; Section 11.2; Table 2) included kitchen items (Table 2). There were parts of three ceramic vessels. These vessels were represented by a single lid sherd of a possible green transfer printed tureen, a tiny sherd of blue transfer printed pearlware, and numerous fragments of a Bristol glaze stoneware jug. The latter included one shoulder and five body sherds and a handle, fragments of this vessel were also found in Features 4 and 15, which were intrusive through the level. There were also 2 metal crown bottle caps. Ten architectural items were recovered: 2 fragments of window glass, a fragment of slate, a cuprous wood screw, a single common wire nail and 5 cut finishing nails. Two samples of plaster were retained that still had paint adhering to their surfaces – tan and white. Numerous fragments of oilcloth with a blue checker pattern represented the furniture.

Number	Group	Type	Description
7	Kitchen	Domestic Buff Stoneware	Bristol Glaze
1	Kitchen	Pearlware	Underglaze Transfer Print
1	Kitchen	Later Refined Earthenware	Underglaze Transfer Print
1	Kitchen	Faunal	Bone
2	Clothing	Shell Button	2-hole
10+	Furniture	Floral Remains	Floor Cloth
1	Activity	Steel Hardware	Pen Nib
2	Activity	Storage	Crown Bottle Cap
1	Architecture	Slate	Slate
4	Architecture	Tinted Window Glass	
1	Architecture	Plaster	Sample
2	Architecture	Painted Plaster	Sample
5	Architecture	Cut Nail	
2	Architecture	Wire Common Nail	
2	Architecture	Unidentified Nails	
1	Architecture	Metal Fasteners	Cuprous Screw
43+	**Total**		

Table 2: Artifacts Recovered in Unit 7, Level 2

group. The oilcloth fragments were recovered on a remnant brick floor on the surface of the level. The bricks were directly below the safe on the east wall.

A metal fountain pen nib was the sole personal item recovered. Artifacts recovered in the west half of the unit (Lot 80) included architectural items – two fragments of window glass and three nail fragments (one wire and two unidentified); kitchen artifacts were represented by a fragment of bone. Two, two-hole shell buttons represented clothing items.

The Bristol Glaze Jug was manufactured between 1835 and 1920 (Joy 1997:C-5). Crown Caps were patented in the United States in 1892 (Jones et al. 1985:163). Based on the presence of the jug and the crown caps the suggested date for the level is 1892-1920, or the period of occupation by either St. John the Baptist Catholic congregation or the *Shomrei Mishmeres Hakodesh* congregation.

5.1.2 Levels and Features East of Feature 15

These levels and features were located on the interior of the *mikveh* house and represent completely different episodes of fill from those described forward in section 5.1.3.

5.1.2.1 Level 3

Level 3 was located only in the east half of the unit, to the east of Feature 15. The level consisted of white (10YR 8/1) sand; approximately 15 percent of the level consisted of inclusions of crushed mortar and plaster. The level was an average thickness of 0.43 feet, with a maximum thickness of 0.70 feet in the northeast corner of the unit and a minimum thickness of 0.05 along the south wall adjacent to the east wall of Feature 15. Level 3 bottomed on levels 4 and 5 (Figure 14).

Several domestic artifacts were recovered in the level (Lot 72; Section 11.2; Table 3). These included three kitchen items – a plain whiteware rim sherd, a redware crock rim with brown lead glazed interior, and a sherd of olive green bottle glass. Some architectural artifacts were recovered – a fragment of window glass, a fragment of slate, and 7 whole wire nails. Two samples of the mortar with plaster adhering were also retained. The plaster appears to have been covered with a coat of whitewash. A single tobacco-related item was recovered. This was a molded kaolin pipe stem. It was banded with raised letters. One portion read "...ER" with bands followed by "JAN PRINC." On the other side, the pipe was printed "GOUDA" followed by bands and "DO." The stem cross mends with a fragment recovered in Feature 4. The pipe stem was manufactured between 1835 and 1898. Hence the level could date to either the 1860 demolition of the *mikveh house* or to the period that the synagogue was owned by the St. John the Baptist Catholic congregation. Given that the level bottoms on level 4, a repair layer associated with Feature 4, it is more likely that the level is associated with the latter.

5.1.2.2 Level 4

Level 4 was located in the northeast corner of the unit, directly beneath the doorway between the *mikveh* rooms and the secretary's office (Figures 13 and 14). It consisted of a layer of yellowish brown (10YR 5/8) sand. Approximately 20 percent of the soil matrix consisted of brickbats and brick fragments. Another 30 percent of the matrix consisted of mortar and plaster. The layer appears to be an edge of a larger fill layer that extends to the north and east into unexcavated portions of the site. This edge of the fill layer was an average thickness of 1.04 feet, with a maximum thickness of 1.42 in the northwest corner of the unit. It was a minimum thickness of 0.05 feet along its western edge. Level 4 bottomed on the east edge of level 5, on a pipe trench (Feature 4) and an associated repair trench (Feature 18), which were located along the east wall of the unit, and on the west wall of the 1840s *mikveh* house (Feature 8) and a possible hearth support (Feature 32) associated with the *mikveh* house. Three artifacts were recovered in the level; a redware rim sherd with brown lead glazed interior, a plain base sherd of whiteware, and a fragment of window glass (Lot 73; Section 11.2). This demolition layer is associated with repairs to Feature 4).

5.1.2.3 Feature 4

Feature 4 was first identified in Unit 1 during the 2000 season of excavation (Read 2000a). The feature was subsequently located in Unit 5 during the second season of excavation (Read 2002). Feature 4 consists of a pipe trench and its associated cast iron pipe. The pipe trench fill in Unit 7 was similar to the fill encountered in Units 1 and 5. It consisted of yellowish brown (10YR 5/6) sandy loam. Approximately 40 percent of the feature fill consisted of brick fragments, mortar, plaster, and coal.

In Unit 7, Feature 4 measured 5.5 feet northwest to southeast . The feature was wedged shaped, measuring 1.4 feet east to west along the north wall and 0.5 feet along the south wall (Figures 13 and 15; Photographic Plate 2). The walls of the feature were straight-sided. Feature 4 was removed in one level and was a average thickness of 1.57 feet. It was a maximum thickness of 1.64 feet in the southeast corner of the unit, where the iron pipe exists the building, and a minimum thickness of 1.48 feet along the north wall of the unit. During excavation, the crew noted a strong smell of raw sewage emanating from the cast iron pipe at the base of the pipe trench. The pipe was broken at several points and appeared to have been leaking for some time prior to its abandonment. Feature 4 bottomed on the subsoil. The feature was intrusive through levels 5, 6 and 7 of Unit 7. Feature 18 was located on the southern edge of Feature 4 and appears to be a repair trench that was cut into the feature.

In Unit 1, the cast iron pipe emerges from under the reservoir tank currently located in the *mikveh* rooms. There is no direct connection between the reservoir tank and the cast iron pipe. It runs from the northwest to the southwest, and is laid over Feature 3, the hearth associated with the 1840s *mikveh* house. The pipe continues through Unit 5 (which is adjacent to the south edge of Unit 1), where it is laid directly on top of the subsoil. The pipe emerges in the northeast corner of Unit 7. It is laid adjacent to Feature 31, the brick wall associated with the safe in the east wall of the synagogue, directly above the east wall of the unit. The southeast corner of Feature 31 is set on the pipe. The pipe exits the building in the south east corner of the synagogue directly under the footer. The fact that it does not articulate with either of the *mikva'ot* or the reservoir tank in the *mikveh* rooms suggests that it was not directly associated with the *mikva'ot.* Indeed, water for the *mikveh* cannot come from a metal pipe. The water could certainly be drained from a *mikveh* through a metal pipe. The angle of the pipe suggests that it continued northwest from the *mikva'ot* room and through what is now the furnace room, possibly terminating in the rooms that currently contain the early twentieth century claw-foot bathtubs.

Kitchen artifacts recovered in the feature included several ceramic vessels (Lot 74; Section 11.2; Table 4). These included sherds from two redware vessels – one with clear glaze on the interior surface and the other with brown slip on the interior. There were 10 sherds from a Bristol glazed stoneware jug similar to those found in level 2 of the unit. Three sherds from 3 individual whiteware dining vessels were also recovered, including a body sherd from a blue transfer printed serving vessel, the rim of a light blue transfer printed dinner plate, and the marley portion of an edged vessel (two fragmentary to distinguish type). Bottle glass recovered in the feature represented at least three bottles. There were 3 sherds from a colorless bottle – 2 plain body sherds and body sherd embossed with the letter "R." There were 2 body sherds from an olive

Number	Group	Type	Description
10	Kitchen	Domestic Buff Stoneware	Bristol Glaze
1	Kitchen	Redware	Brown Lead Glazed
1	Kitchen	Redware	Clear Lead Glazed, Plain
1	Kitchen	Pearlware	Blue Edged
2	Kitchen	Later Refined Earthenware	Underglaze Blue Transfer Print
2	Kitchen	Mold Blown Bottle Glass	Light Green – Loop Seal
3	Kitchen	Unidentified Bottle Glass	Colorless
2	Kitchen	Unidentified Bottle Glass	Olive Green
4	Kitchen	Faunal Remains	Bone
1	Kitchen	Faunal Remains	Fish Scales
1	Kitchen	Utensils	Bone Table Knife Handle
1	Clothing	Shell	2-Hole Button
1	Clothing	Brass	Shirt Stud
1	Personal	Coin	Penny (1942)
1	Tobacco	Tobacco Pipe Stem	Molded Ball Clay 5/64, Peter Dorni/Jan Prince
1	Activity	Glass	Lamp Chimney
2	Activity	Storage	Crown Bottle Cap
1	Architecture	Cut Nail	
1	Architecture	Metal Fasteners	Cuprous Screw
1	Architecture	Tinted Window Glass	
10+	Religious	Leather	Prayer Box Strips
10+	Religious	Biological Remains	Paper, Hebrew Prayer Book Fragments
58+	**Total**		

Table 3: Artifacts Recovered in Unit 7, Feature 4

green bottle. And there were also 2 fragments of a light green bottle. The latter included a base fragment with a mold seam and embossed symbol and an internal loop or spring seal stopper neck and rim. Other kitchen items included a bone knife handle and 2 iron crown bottle caps. Faunal remains associated with food were 4 fragments of long bones and a fish scale.

Clothing items recovered in the feature included a two-hole shell button and a brass shirt stud with a mother-of-pearl face. A single sherd of lamp chimney glass was also recovered. A 1942 wheat penny was also recovered, but this appears to be intrusive from Feature 18.

A single kaolin pipe stem with molded letters represented tobacco items. The letters were "E & C^{o}" with two lines beneath the "o." This piece mends to the Peter Dorni/Jan Prince pipe stem recovered in level 3 of the unit. The pipe stem is similar to pipe stem fragments recovered from workers housing at the Harford Furnace Site in Harford County, Maryland. According to Tim Doyle, who analyzed the Harford Furnace Pipes, the fragments were identified as two separate

pipes, one by Dorni and one by prince, but it had always been suspected that they were actually from a single pipe (Timothy Doyle, personal communication 16 December 2008). The pipe recovered during the current excavation confirms Doyle's suspicions. It was both a Peter Dorni pipe and a Jan Prince pipe. Peter Dorni was probably a French pipe maker, who was in business between 1850 and 1880. The pipe style was extremely popular and was copied by Scottish and Dutch firms. Jan Prince was a Dutch pipe making firm located in Gouda in the Netherlands. This firm was in operation between 1773 and 1898. The Prince firm purchased the Dorni name in 1835 and manufactured the pipes until 1898 (Doyle 1990:177-179; Hartgen Archeological Associates, Inc., 2005).

Several items that are possibly related to the religious functional category were recovered in the corner of the feature. These included several strips of leather and pieces of paper printed with Hebrew letters. There was not enough lettering present to make out individual words. These items may have been stored in the safe, which was directly above the pipe trench.

There were three architectural items, a piece of window glass, a cut nail and a large flat head brass screw.

The 1942 wheat penny was located at the interface of Features 4 and 18. The penny is probably associated with Feature 18. Other items in the trench suggest an earlier date of construction for the cast iron pipe. These include the crown caps (TPQ 1892), the Dorni pipe fragments (1835-1898), and the loop or spring seal bottle neck (TPQ 1879). These dates suggest a construction date in the 1890s with subsequent repairs in the 1940s. This date coincides with the 1895 *Notitiae* filed by St. John the Baptist Catholic Church with the Archdiocese of Baltimore. According to the *Notitiae* the congregation made improvements to the basement that year. These improvements may have included the installation of the cast iron sewer pipe. A more likely date of construction is circa 1905 through 1914. These dates coincide with the earliest years of the *Shomrei Mishmeres* occupation of the building. Read (2000) suggested that the current *Mikva'ot* in the synagogue were installed by the *Shomrei Mishmeres;* and that they may have installed the claw footed bath tubs at the same time, as those entering the *Mikveh* for ritual purification are also required to be physically clean (no make-up, no nail polish, clean hair, clean body). The bathtubs in the Mikva'ot Rooms are similar to those that appear in the 1900, 1902 and 1908 Sears and Roebuck catalogs (Amory 1969, Schroeder 1969, 1970). At about the same time that the *Shomrei Mishmeres* were making improvements to the basement, the city of Baltimore made major improvements to the city's wastewater removal system. Between 1909 and 1914, approximately 21,000 homes in the city were hooked into the city sewer system (Olson 1980). It is possible that the cast iron pipe in Feature 4 hooked into the city sewer under Watson Street.

5.1.2.4 Feature 18

Feature 18 was located along the south wall of Unit 7 on the southern edge of unit level 5 (Figure 15). It cut into the southwestern corner of Feature 4. The feature measured 0.9 feet east/west by 0.6 feet north south and was roughly rectangular. The function of this feature is unknown, although it may have been the former location of a wood post or pier. Fill in the feature consisted of yellowish brown (10YR 5/6) sandy loam with inclusions of brick, mortar and dressed stone.

Number	Group	Type	Description
1	Kitchen	Redware	Brown Lead Glazed
1	Kitchen	Later Refined Earthenware	Plain
1	Kitchen	Unidentified Bottle Glass	Olive Green
1	Tobacco	Tobacco Pipe Stem	Molded Ball Clay 5/64 - Peter Dorni/Jan Prince
1	Activity	Slate	
2	Activity	Painted Plaster	Sample
7	Activity	Wire Nail	
14	**Total**		

Table 4: Artifacts Recovered in Unit 7, Level 3

The feature was an average thickness of 1.34 feet, with a maximum thickness of 1.73 feet along the western edge of Feature 4 and a minimum thickness of 1.03 feet along the eastern edge of Feature 5. Feature 18 bottomed on Feature 4 and on the subsoil. The ten artifacts recovered in the feature included 2 kitchen artifacts – a sherd of red transfer printed whiteware and the base of a blown-in mold colorless glass vessel base. A single sherd of oyster shell was also recovered. No samples of the mortar and dressed stone were retained. A single fragment of brick adhering to a corroded iron rod (a possible nail) was retained. Other architectural artifacts included 3 fragments of window glass and 3 corroded fragments of iron (possible nails) (Lot 78; Section 11.2). A 1942 wheat penny was located at the interface of Features 4 and 18.

5.1.2.5 Feature 31

Feature 31 was a brick support wall under the safe in the east wall of the synagogue (Photographic Plate 2). This wall was first noted during the excavation of Feature 4 as it formed the east wall of the feature. The wall was installed during the 1860 construction of the synagogue. It measures 4.5 feet north/south. The width of the wall is unknown as it extends under the safe into areas of the site that have not been excavated. The feature also sealed off a cistern or *dut* (Feature 29) from the rest of the 1860 addition. This cistern was associated with the original *mikveh* (see Section 5.3 for a detailed discussion of Feature 29).

5.1.2.6 Feature 8

Feature 8 was originally identified during the 2000 season of excavation in the synagogue basement (Read 2000a). The feature comprises of the west brick wall of the 1840s *mikveh* house (Figures 13, 14 and 15: Photographic Plate 1). It was first located in Unit 1 and then was subsequently uncovered in Unit 5 (which is adjacent to the southern edge of Unit 1) during the second season of excavation (Read 2002). Two portions of the wall are all that remain in Unit 7, as Feature 15 (the post-1960 pipe trench and stand pipe) cut through and removed the brick wall.

A section of the wall, which measures 0.70 feet east to west, is located in the north wall of the unit (Figures 13 and 14; Photographic Plate 1). Approximately 1.04 feet of the feature extends south into the unit from the unit's north wall before Feature 15 cuts through it. Feature 8 measures 1.5 feet from top to bottom. Feature 32, the possible remains of a hearth support, is located on the east side of Feature 8.

The second portion of the Feature 8 wall is visible in the south wall of the synagogue. The synagogue's south stone wall was set perpendicular to and on top of the brick *mikveh* house wall. Here Feature 8 is wider, measuring 1.7 feet east to west. It is possible that this is the remnants of both the *mikveh* house wall and the south edge of a hearth support. The probable northern edge of the hearth support is located adjacent to Feature 8 in the north wall of the unit and has been labeled Feature 32.

Both portions of Feature 8 bottomed directly on the subsoil. No artifacts were found in association with this feature. Nor was there evidence of a builder's trench associated with the brick wall. If there was a builder's trench it was destroyed by Feature 15. Excavation of this feature in Units 1 and 5 failed to locate a builder's trench on the west side of the feature. Feature 8 was adjacent to the west walls of both Units 1 and 5. Since no excavation has been done to the west of these units it is unknown whether a builder's trench is located to the west of Feature 8.

5.1.2.7 Feature 32

Feature 32 was a possible brick hearth support. The feature is located on the east side of Feature 8 and is visible only in the north wall of the unit (Figures 13 and 15; Photographic Plate 2). It measures 1.0 feet east to west and stands 1.0 feet tall. The northern most limits of the feature are unknown as it extends into an unexcavated portion of the site. Feature 32 bottomed directly on the subsoil. No artifacts were recovered in association with the feature.

5.1.2.8 Level 5

Level 5 was a fill layer located beneath levels 3 and 4, and between Features 4 (on the east), 15 (on the west) and 18 (on the south). All three features were intrusive through the level (Figures 13 and 14). The level was a fill layer of yellowish brown (10YR 5/4) sandy clay with inclusions of mortar, brick, and modules of clay. Level 5 was an average thickness of 0.78 feet. It was a maximum of 0.92 feet along the north wall of the unit adjacent to the eastern edge of Feature 5 and a minimum of 0.69 feet thick along its juncture with Features 4 and 18. Level 5 bottomed on level 6.

The majority of the artifacts recovered in the level (n=18) were kitchen items (Lot 76; Section 11.2; Table 5). There were 5 redware sherds, including a rim sherd with clear glazed interior and a slipped exterior, a body sherd with a clear glazed interior and an unglazed exterior, a clear glazed body sherd (interior and exterior), and 2 body sherds with brown glazed interiors. Other ceramics included a single plain pearlware body sherd, 2 blue transfer printed sherds (body and base), 1 sherd of plain ironstone, and a single sherd of plain whiteware. There was a single body

Number	Group	Type	Description
3	Kitchen	Redware	Clear Lead Glazed, Plain
2	Kitchen	Redware	Brown Lead Glazed
2	Kitchen	Later Refined Earthenware	Underglaze Blue Transfer Print
2	Kitchen	Pearlware	Plain
1	Kitchen	Later Refined Earthenware	Plain
1	Kitchen	Ironstone	Plain
1	Kitchen	Mold Blown Bottle Glass	Olive Green, Applied Lip
3	Kitchen	Unidentified Bottle Glass	Olive Green
1	Kitchen	Unidentified Bottle Glass	Green
1	Kitchen	Mold Blown Bottle Glass	Light Green, Glass Pontil Scar
1	Kitchen	Faunal Remains	Oyster
1	Architecture	Roofing Slate	
5	Architecture	Tinted Window Glass	
24	**Total**		

Table 5: Artifacts Recovered in Unit 7, Level 5

sherd of green bottle glass and 4 sherds of olive green bottle glass, including 3 body sherds and an applied lip. Also included in the bottle glass was a light green glass vial with a glass pontil scar. There was also a single oyster sherd. There were few architectural artifacts in the level: the corner of a slate roof shingle with a nail hole in it and 5 fragments of window glass.

The use of the pontil to hold bottles was gradually replaced after 1840. By 1870, the pontil had all but disappeared (Jones 1991:97). Adams (1969: 114) defines an applied lip as "any bottle made before 1900 where the mouth was formed after being separated from the blowpipe." The pontil would suggest a *terminus ante quem* (TAQ) of 1870 for the level. This demolition layer is associated with the 1860 destruction of the *mikveh house*.

5.1.2.9 Level 6

Level 6 was a thin fill layer located beneath level 5, between Features 4 (on the east), 15 (on the west) and 18 (on the south) (Figures 13 and 15). The northwest corner of the level abuts Features 8 (the west wall of the *mikveh* house) and 32 (a possible hearth support). This level consisted of yellowish brown (10YR 5/6) hard packed clayey sandy loam. Approximately 25 percent of the soil matrix consisted of brick fragments and mortar. The level was an average thickness of 0.26 feet, with a maximum thickness of 0.33 feet along the north wall of the unit adjacent to Feature 4 and a minimum thickness of 0.16 feet along its juncture with Features 4 and 18. The north half of level 6 bottomed on level 7, while the south half of the level bottomed on the subsoil.

Number	Group	Type	Description
6	Kitchen	Redware	Clear Lead Glazed, Plain
22	Kitchen	Redware	Brown Lead Glazed
1	Kitchen	Redware	Thick Black Glazed
1	Kitchen	Redware	Plain
1	Kitchen	Later Refined Earthenware	Plain
1	Kitchen	Unidentified Bottle Glass	Green
1	Furniture	Metal Hardware	Cuprous Knob
5	Architecture	Tinted Window Glass	
3	Architecture	Cut Nail	
2	Architecture	Spike	
1	Miscellaneous	Unidentifiable Metal	Totally Unidentifiable Metal
44	**Total**		

Table 6: Artifacts Recovered in Unit 7, Level 6

Most of the artifacts recovered in the level (n=30) were fragments of redware (Lot 77; Section 11.2, Table 6). There were at least 6 vessels represented by these sherds. The vessels included a crock with a clear glazed interior and a rolled rim (2 rims and 2 body sherds). There was a single base sherd of a flower pot with a hole for drainage. Two body sherds were from a small bowl that was clear glazed on the interior and exterior. One body sherd was from a vessel with a brown lead glazed interior and another body sherd had a mottled lead glaze on the interior. Most of the redware sherds (n= 22) were body sherds for a bowl with brown lead glaze on both the interior and exterior surfaces. There was also a single plain whiteware body sherd and a light green bottle glass body sherd. Eight architectural items were recovered, including 5 pieces of window glass, 2 cut nail fragments and two corroded iron spikes. A single cuprous finial cap or knob for a piece of furniture was also recovered.

Evidence from Units 1 and 5 (Read 2000a; 2001) and from Stone's architectural study (2002, drawing 16 annotation) suggests that this level may be the remnants of an occupational level associated with the *Mikveh House.*

5.1.2.10 Level 7

Level 7 was a fill layer located beneath level 6 on the south edge of Features 8 (the west wall of the *mikveh* house) and 32 (a possible hearth support), and between Features 4 (the cast iron pipe trench) on the east and 15 (the post 1860s pipe trench) on the west (Figure 13). The subsoil was located on the south edge of the level. Level 7 consisted of yellowish brown (10YR 5/4) sandy clay. Twenty percent of the level fill consisted of whole and fragmented brick bats, with some minor inclusions of mortar. Brick bats littered the surface of the level. The level was an average

thickness of 0.48 feet, with a maximum thickness of 0.83 feet in the northwest corner of the level adjacent to Feature 32. The level was a minimum thickness of 0.08 feet in the southwest corner along the west wall of Feature 15. The level bottomed on subsoil. All excavation in the unit to the east of Feature 15 was terminated at this point. Four window glass fragments were recovered in the level (Lot 79; Section 11.2).

Evidence from Units 1 and 5 (Read 2000a; 2001) and from Stone's architectural study (2002, drawing 16 annotation) suggests that this level may be the remnants of an occupational level associated with the *Mikveh House* and repairs that were made to the cellar wall.

5.1.3 Level and Feature West of Feature 15

This level and feature were located on the exterior of the *mikveh* house and represent completely different episodes of fill from those described in section 5.1.2. This fill was also outside of the foundations of the 1840 *mikveh* house and is associated with the area occupied by the school house.

5.1.3.1 Level 8

Level 8 was a wedge shaped level located only in the southwest corner of the unit to the west of Feature 15 (the post 1960 pipe trench), beneath the west half of level 2 (Figures 13 and 14). The fill in this level was dark yellowish brown (10YR 4/4) sandy clay with inclusions of plaster and brick. It was a thick layer, with an average thickness of 1.57 feet. It was a maximum thickness of 1.81 feet in the southwest corner of the unit, and a minimum of 1.42 feet in its northern tip along the western side of Feature 15.

Eleven artifacts were recovered in the level. There were four 4 kitchen artifacts: a single redware body sherd with clear glazed interior, a blue transfer printed sherd, and 2 bottle glass body sherds (brown and olive green); 5 architectural artifacts: 2 fragments of window glass and 3 cut nails (2 whole); one clothing item: a two-hole shell button and a single personal item: an Indian Head penny (Lot 81; Section 11.2). The penny is corroded and the obverse side is not legible. The reverse features the United State Shield over the words "ONE CENT" over a laurel wreath. Indian Head pennies were manufactured between 1859 and 1909 (United States Department of the Treasury n.d.). The level may be pipe trench fill associated with Feature 19, but this cannot currently be ascertained from the small area that was exposed during this excavation.

5.1.3.2 Feature 19

Feature 19 was an iron pipe (Figures 13, 14 and 15; Photographic Plate 2). Feature 15 was intrusive onto the pipe and had obliterated the pipe trench was found in association with this feature. Feature 19 was located along the west wall of the unit. The fill from level 8 surrounded it and it is possible that level 8 is actually the fill in an associated pipe trench. It is not known if the pipe is still active, but it may have supplied water to the bathtubs in the *mikveh* rooms. No

artifacts were found in direct association with this feature. However, the presence of the Indian Head penny in the fill of level 8 places this feature between 1859 and 1909 (United States Department of the Treasury n.d.). If this is a water pipe associated with the installation of the *mikva'ot*, the current suggested *mikva'ot* construction date of circa 1905 through 1914, would be in line with the date span for the coin.

5.2 UNIT 8

Unit 8 was excavated on the exterior of the southeast corner of the synagogue in the alley on the east side of the synagogue. This area will also be disturbed by the stabilization of the building. The location of the unit was determined based on data recovered in Unit 7 concerning the location of structural elements associated with the *mikveh* house and on the location of utility lines along the eastern edge of the synagogue property. Unit 8 measured 5.0 feet north to south and 6.5 feet east to west. It was adjacent to a gated entrance to the synagogue grounds from Watson Street.

Twelve levels were removed from the unit, and eleven features were recorded. The unit was an average depth of 5.38 feet, with a maximum depth of 6.00 feet in the northwest corner and a minimum depth of 5.00 feet in the northeast corner. All of the features in the unit were located during this excavation and included:

- Feature 20 – Drain.
- Feature 21 – East wall of the 1840s *mikveh* house.
- Features 22 and 23 – Post hole and mold.
- Features 24 and 26 – Post hole and hold.
- Feature 25 – Building stone deposit.
- Feature 27 – Drain.
- Feature 28 – Mortar deposit.
- Feature 29 – Cistern or *dut* associated with the original *mikveh.*
- Feature 30 – Drain.

The entire unit was located inside the foundations of the 1840s *mikveh* house. Three profiles were drawn after the excavation was completed. These profiles included the north and south walls (Figure 16). The west wall was profiled before the soil was cut back to expose the east wall of the synagogue. The east wall of the unit was not profiled, as it was the east brick wall of the *mikveh* house basement. The wall was photographed and recorded.

5.2.1 Post-1860 Levels and Features

5.2.1.1 Level 1

Level 1 comprised the concrete paving in the alley (Figure 16); it was removed with a concrete saw. The average depth of the level was 0.44 feet, with a maximum depth of 0.67 feet in the northwest corner of the unit and a minimum depth of 0.30 feet in the center of the unit (Figure 16). No artifacts were recovered in association with the level. Level 1 bottomed on level 2, a dark grayish brown sandy loam. A brass lighting rod was located in the southwest quadrant of the unit. It is still a functioning lighting rod and was not given a feature number.

5.2.1.2 Level 2

Level 2 was located at the base of level 1 (Figure 16); Feature 20 was intrusive into the surface of the level. The level was a dark grayish brown (10YR 4/2) sandy loam with surface gravel inclusions that possibly functioned as a former walkway behind the synagogue. The level was thin, reaching an average thickness of 0.1 feet. It was a maximum of 0.18 feet in the northwest corner of the unit and was completely absent in the southeast corner. The level bottomed on level 3, a layer of yellowish brown sand, and on Features 20 and 21. Feature 21, the brick east wall of the 1840s *mikveh* house, was on the eastern edge of the level.

Artifacts recovered in the level were primarily recent in date. These included a Plexiglas straight edge, a small iron wedge, a wire-roofing nail, a plastic washer for a nail, and 7 piece of colorless bottle glass. Older items in the level included a single piece of olive green bottle glass. A single oyster shell and a sample of coal were also recovered (Lot 82; Section 11.2).

5.2.1.3 Feature 20

Feature 20 was a former drain or silted-in erosion channel located directly beneath the drain molded in the overlaying concrete pavement (Figure 16). The feature was located adjacent to the west side of Feature 21 the east wall of the mikveh house (which also constituted the east wall of the unit), and measured 5.00 feet north to south by 0.6 feet east to west. The soil matrix was a grayish brown (10YR 5/2) sandy loam, which was an average thickness of 0.29 feet. The feature was a maximum thickness of 0.3 feet on the south and a minimum thickness of 0.27 feet on the north. Feature 20 bottomed on level 3. Two artifacts were recovered in the feature: a sherd of Rockingham and a single sherd of whiteware (Lot 83, Section 11.2). Given the position of the artifacts in the drain, it is possible that they washed in from another location. Artifacts recovered in unit Level 2, directly below this drain, were of recent date.

5.2.1.4 Level 3

Level 3 was a yellowish brown (10YR 5/6) sand layer, possibly the base for brick paving (Figure 16). Although no brick was found in association with the level, brick paving in alleys was not unusual in Baltimore. The level was 0.20 feet in thickness, with a maximum depth of 0.33 feet in the southeast corner and a minimum thickness of 0.01 feet in the northeast corner. The level bottomed on level 4, a black organic layer. Feature 21, the east brick wall of the *mikveh* house, was located along the east edge of the level. Three artifacts were recovered in the level: a sherd of whiteware, and two sherds of bottle glass (colorless and brown) (Lot 84, Section 11.2).

5.2.1.5 Level 4

Level 4 was a thin organic layer, possibly a former yard surface to the rear of the synagogue. The soil matrix in the level consisted of black (10YR 2/1) sandy loam (Figure 16). The level was an average thickness of 0.15 feet, with a maximum thickness of 0.19 feet in the southeast corner and a minimum thickness of 0.06 feet in the southwest corner. This corner was located directly beneath one of the main downspouts leading from the roof of the synagogue. Level 4 bottomed on level 5, a yellowish brown fill layer. The level also bottomed on two post hole and mold combinations (Features 22, 23, 24 and 26) that were located along the south wall of the unit. Feature 21, the east brick wall of the *mikveh* house, was located along the east edge of the level.

Of the 16 artifacts recovered in the level, 9 were architectural items (4 fragments of window glass and 5 pieces of slate). Three ceramic sherds (brown glazed redware and a sherd each of plain and brown transfer printed whiteware) and 3 pieces of bottle glass (colorless, olive green. and blue) were also recovered. A sample of coal was also retained (Lot 85, Section 11.2).

5.2.2 Circa 1860 Levels and Features

The unit was divided into two halves below level 4 due to the presence of an active gas line in the unit. The gas line was encountered at a depth of 1.35 feet below the surface of the concrete. A bulk was left for the gas line in the center of the unit.

5.2.2.1 Features 22 and 24

These features were a post mold (22) and hole (24) combination located in the southeast quadrant of the unit (Figure 17). The post mold (Feature 22) was a rounded square in plan and in profile had straight sides. The post mold was oriented northwest to southeast and measured 1 foot along that axis. The northeast to southwest axis measured 0.8 feet. The post mold was 2 feet in depth and consisted of yellowish brown (10YR 5/6) sandy loam mottled with brown (10YR 5/3) sandy clay. The northwest wall of the post mold was lined with brickbat fragments and pieces of dressed stone. The posthole (Feature 24) for the post mold (Feature 22) was roughly square, measuring 2.00 feet north to south by 1.9 feet east to west. The east wall of the post hole

Feature	Number	Group	Type	Description
Feature 22	2	Kitchen	Later Refined Earthenware	Underglaze Blue Transfer Print
	2	Kitchen	Later Refined Earthenware	Underglaze Brown Transfer Print
	6	Kitchen	Later Refined Earthenware	Plain
	1	Kitchen	Unidentified Bottle Glass	Olive Green
	10	Architecture	Window Glass	
Subtotal	21			
Feature 24	1	Kitchen	Later Refined Earthenware	Plain
	10	Architecture	Window Glass	
Subtotal	11			
Total	32			

Table 7: Artifacts Recovered in Unit 8, Features 22 and 24

was adjacent to Feature 21, the east wall of the 1840s *mikveh* house. The post hole was fairly shallow, no more than 0.4 feet in depth, except in the area adjacent to the post hole. A small area measuring 1.3 feet northwest to southeast by 0.9 feet northeast to southwest was located adjacent to the post mold. This area was 1 foot in depth and may represent an earlier post mold. The soil matrix in this area and in the surrounding posthole, were identical and consisted of dark gray (10YR 3/2) sandy loam. There was a thin layer (less than 0.25 feet) of ash across the surface of the posthole. Features 22 and 24 were intrusive into unit level 5. These features were located 1.7 feet to the east of Features 23 and 26, another post mold and hole combination that appear to be related.

Artifacts recovered in the post mold (Feature 22), were evenly divided between kitchen and architectural artifacts. The kitchen group included 4 sherds of transfer printed whiteware (blue and brown) and 6 plain sherds, as well as a single sherd of olive green bottle glass. The architectural items were all sherds of window glass (n=10). This assemblage is similar to artifacts recovered in level 5 below the feature (Lot 86, Section 11.2; Table 7). Artifacts recovered in the post hole (Feature 24) were primarily pieces of window glass (n=10). There was also a single sherd of plain whiteware (Lot 90; Section 11.2; Table 7).

5.2.2.2 Features 23 and 26

These features were also a post mold (23) and hole (26) combination located 1.7 feet to the west of Features 22 and 24 (Figure 17), another post mold and hole combination that appear to be related. The post mold (Feature 23) was circular in plan and had straight sides in profile that tapered inward toward the bottom of the post mold. The post mold was oriented north to south and measures 1.03 feet along that axis. The east to west axis measured 1 foot. The post mold was 1.75 feet in depth and consisted of yellowish brown (10YR 5/6) sandy loam mottled with brown (10YR 5/3) sandy clay. A single dressed stone fragment lay on the surface of the post mold. The

Feature 23	Number	Group	Type	Description
	1	Kitchen	Later Porcelain/Hard Paste	Plain
	2	Kitchen	Later Refined Earthenware	Plain
	1	Kitchen	Unidentified Bottle Glass	Brown
	1	Kitchen	Unidentified Bottle Glass	Olive Green
	1	Kitchen	Unidentified Bottle Glass	Light Green
	2	Kitchen	Unidentified Bottle Glass	Aqua
	1	Architecture	Roofing Slate	Roofing Slate
	2	Architecture	Unidentified Iron Nail	
	2	Architecture	Tinted Window Glass	
	1	Activity	Ironstone	Plain – Chamber Pot
	1	Activity	Ceramics	Marbles (Clay and Porcelain)
	2	Miscellaneous	Unidentifiable Metal	Totally Unidentifiable Metal
Subtotal	**17**			
Feature 26	1	Kitchen	Mold Blown Bottle Glass	Olive Green Tooled Lip
	1	Miscellaneous	Unidentifiable Metal	Unidentified Iron Nail
Subtotal	**2**			
Total	**19**			

Table 8: Artifacts Recovered in Unit 8, Features 23 and 26

post hole (Feature 26) for the post mold (Feature 23) was roughly rectangular in plan, measuring 1.6 feet north to south by 1.2 feet east to west. The south wall of the post hole was adjacent to the south wall of the unit. The post hole was fairly shallow, no more than 0.4 feet in depth, except in the area adjacent to the post hole. A small area measuring 0.9 feet northwest to southeast by 0.4 feet northeast to southwest was located adjacent to the post mold. This area was 0.65 feet in depth and may represent an earlier post mold. The soil matrix in this area and in the surrounding post hole were identical and consisted of yellowish brown (10YR 5/4) sandy clay. Features 23 and 25 were intrusive into unit level 5.

Seventeen artifacts were recovered in the post mold (Feature 23), while only 2 were recovered in the post hole (Feature 26). Half of the artifacts recovered in Feature 23 (Lot 87, Section 11.2, Table 8) were kitchen items. These included five fragments of bottle glass in four different colors and three ceramic sherds (plain porcelain and two plain whiteware). Other ceramic items recovered in the post mold were activity items and included a sherd of a chamber pot and a single ceramic marble. Five architectural items were recovered: roofing slate, 2 nails, and 2 sherds of window glass. Two corroded hunks of iron that may have once been nails were also found. The two artifacts recovered in the posthole (Feature 26) were a hunk of corroded metal and a fragment of an olive green bottle lip (Lot 93, Section 11.2, Table 8). The later cross mends to a lip recovered in the east half of level 5 of the unit. The bottle lip was made using a finishing tool. These were used between the 1820s and the 1920 (Jones *et al.*1985:43).

5.2.2.3 Level 5

Level 5 was excavated in two halves, due to the presence of an active gas line in the center of the unit (Figure 16). The level consisted entirely of yellowish brown (10YR 5/4) clay sand with inclusions of brick, mortar and dressed stone similar to the stone used in the foundation of the synagogue. The fill sloped downhill from the north side of the unit toward the south. The level was an average thickness of 0.87 feet. It was a minimum thickness of 0.53 feet in the southwest corner of the unit and reached a maximum thickness of 1.25 feet in the southeast corner of the unit. In the north half of the unit, level 5 bottomed on Feature 25, a pile of stone chips that matched the stone in the adjacent east wall of the synagogue.

Given the overall thickness of the level, relatively few artifacts were recovered (n=74 [Lots 88, 89 and 94; Section 11.2; Table 9). Three-quarters of the artifacts were kitchen group items. These included utilitarian kitchen ware, such as redware (n=10) and yellow ware (n=1). Refined dining wears included porcelain (n=1), pearlware (n=8), and whiteware (n=14). The latter two included a variety of decorative styles. The pearlware included edged and transfer printed sherds and the whiteware included transfer prints and flow blue. There was also a single sherd of press molded table glass and a table knife. Fragments of at least three bottles were recovered including brown, light green and olive green sherds. The latter included a tooled lip that cross-mended to a sherd in Feature 26, a post hole that cut into the level. In addition to the kitchen ware, there was also a single sherd of a flower pot. A molded kaolin pipe bowl was also recovered. Eighteen of the artifacts recovered in the level were architectural and included window glass, samples of painted plaster, slate, and a dressed stone piece. This was not like the stone used for the base of the building and it was more ornamental. Approximately one dozen fragments of window glass were also recovered. Other items found in this level included a piece of corroded metal and a sample of coal.

The ceramics and the bottle lip suggest a date in the mid-nineteenth century for the level. Yellow ware was introduced into America in the 1820s and the 1840s was being mass-produced in New Jersey, Pennsylvania, Ohio, Vermont, New York, and Maryland (Leibowitz 1985). Pearlware was still being produced during the 1830s, primarily in the form of annular and edged ware, both of which were recovered in the level (table 9). The whiteware sherds included green transfer prints, which were produced in between 1830 and 1850, and flow blue transfer prints, which were popular at approximately the same time (Miller 1994). The bottle lip was made using a finishing tool, which was in use between the 1820s and the 1920 (Jones *et al.*1985:43). The artifact support the conclusion reached from stratigraphy that this is a 1860 synagogue addition fill level.

5.2.2.4 Feature 25

Feature 25 was first noted in the northwest corner of the unit at the base of level 5 (Figure 16). The feature was a pile of stone chips of the same type of stone in the adjacent east wall of the synagogue. The feature is interpreted as discards and debris from dressing the stone during construction of the stone portion of the basement wall of the synagogue. The stone was piled on

Number	Group	Type	Description
3	Kitchen	Redware	Brown Lead Glazed
7	Kitchen	Redware	Clear Lead Glazed, Plain
1	Kitchen	Later Porcelain/Hard Paste	Plain
3	Kitchen	Yellow Ware	Plain
3	Kitchen	Pearlware	Plain
1	Kitchen	Pearlware	Blue Annular
2	Kitchen	Pearlware	Blue Edged
2	Kitchen	Pearlware	Blue Transfer Print
10	Kitchen	Later Refined Earthenware	Plain
2	Kitchen	Later Refined Earthenware	Blue Transfer Print
1	Kitchen	Later Refined Earthenware	Green Transfer Print
1	Kitchen	Later Refined Earthenware	Flow Blue
1	Kitchen	Mold Blown Bottle Glass	Olive Green Tooled Lip
3	Kitchen	Unidentified Bottle Glass	Olive Green
1	Kitchen	Unidentified Bottle Glass	Brown
1	Kitchen	Unidentified Bottle Glass	Light Green
1	Kitchen	Table Glassware	Press Molded Table Glass
1	Kitchen	Faunal Remains	Bone
3	Kitchen	Faunal Remains	Oyster
2	Kitchen	Utensils	Table Knife
1	Activity	Redware Flower Pot	Plain
1	Tobacco	Tobacco Pipe Bowl	Molded Ball Clay
13	Architecture	Window Glass	Tinted
1	Architecture	Building Stone	Dressed Stone
3	Architecture	Painted Plaster	Sample
1	Architecture	Roofing Slate	Sample
1	Miscellaneous	Coal	Sample
2	Miscellaneous	Unidentifiable Metal	Totally Unidentifiable Metal
74	**Total**		

Table 9: Artifacts Recovered in Unit 8, Level 5

site and was then covered over with fill. The stone was piled against the east wall of the synagogue and only a portion of the pile was uncovered in this unit. Feature 25 measured 4.1 feet east to west and 3.0 feet north to south. In plan, the feature looked like a quadrant of a circle. The feature was 1 foot thick in the northwest corner of the unit and tapered off to less than 0.10 feet along its perimeter. The feature fill consisted primarily of stone chips in a soil matrix of dark grayish brown (10YR 4/2) sandy loam. Feature 25 bottomed on level 5, a layer of fill.

Six artifacts were recovered in the feature, including blue transfer print and green edged pearlware sherds, a sherd of olive green bottle glass, a bone, a fragment of window glass, and a hunk of corroded iron. This assemblage was very similar to that recovered in level 5 of the unit (Lot 91; Section 11.2).

5.2.2.5 Level 6

Level 6 was a layer of construction fill (Figure 16). This level was also excavated in two halves due to the presence of an active gas line in the center of the unit. The fill consisted of brown (10YR 5/3) very sandy clay loam. The clay content increased with depth. Approximately 40 percent of the soil consisted of decayed mortar and plaster, brick bats and brick fragments, mortar and stone.

The level was located beneath Feature 25, a chipped stone pile that appears to have been associated with the construction of the stone foundation of the synagogue. The surface of the level was relatively flat and even, probably to provide a working platform for the masons employed in the construction of the foundation. The base of the level, however, sloped downward from the north wall to the south wall. The level was an average thickness of 1.74 feet. Along the north wall it averaged 1.43 feet in thickness. It was extremely thick in the south east corner of the unit, averaging 2.64 feet in thickness. Level 6 bottomed on level 7, a layer of crushed mortar and plaster.

As in level 5, very few artifacts were recovered overall. Only 72 non-construction debris artifacts were recovered in a level whose average thickness was 2.64 feet (Lots 95 and 98; Section 11.2; Table 10). Almost the entire assemblage consisted of kitchen group artifacts (n= 58). These artifacts included a broad range of utilitarian red and yellow wares as well as slipware. Sherds of a stoneware bottle were also recovered. Refined wares included a single sherd of a refined redware teapot, edged and hand painted pearlware, and sprig decorated and transfer printed whiteware. The latter were in blue, green, and brown and were in a variety of patterns including romantic views that were popular in the 1850s and floral designs. A sherd of willow pattern whiteware had a beaded rim. Bottle glass included part of a three-part or Ricketts-type mold olive green bottle and part of a case bottle. Other mold blown bottle sherds included a kickup with a glass pontil scar and a finish tooled lip with and applied strip rim. Fragments of unidentified bottle glass occurred in olive green, light green, brown and colorless glass. Fourteen of the artifacts recovered in the level were architectural items. These included 11 pieces of window glass, 2 nails and a very large staple.

The ceramics suggest a mid-nineteenth century date for the level (see the ceramics discussion under 5.2.2.3 [Leibowitz 1985; Miller 1994]). The finish tooled lip with and applied strip rim also suggest a mid-nineteenth century date. Adding glass to form a string rim began in the production of "wine" bottles in late-eighteenth century England. By the mid-nineteenth century, this had become the accepted technique for all types of bottles, particularly those formed by finishing tools (Jones et al. 1985:75). The use of the pontil to hold bottles was gradually replaced after 1840. By 1870, the pontil had all but disappeared (Jones 1991:97). The three part mold bottle also suggests a mid-nineteenth century date. Henry Ricketts was granted a patent in 1821

Number	Group	Type	Description
1	Kitchen	Redware	Refined Red, Glazed
7	Kitchen	Redware	Clear Lead Glazed, Plain
4	Kitchen	Redware	Brown Lead Glazed
2	Kitchen	Redware	Plain
1	Kitchen	Slipware	Combed Clear Slip
2	Kitchen	Industrial Stone Bottle	Grey, Salt Glaze
1	Kitchen	Yellow Ware	Plain
1	Kitchen	Pearlware	Blue Edged
1	Kitchen	Pearlware	Blue Underglaze Painted
1	Kitchen	Later Refined Earthenware	Willow Pattern with beaded rim
5	Kitchen	Later Refined Earthenware	Blue Transfer Print
1	Kitchen	Later Refined Earthenware	Green Transfer Print
1	Kitchen	Later Refined Earthenware	Brown Transfer Print
1	Kitchen	Later Refined Earthenware	Sprigged
8	Kitchen	Later Refined Earthenware	Plain
1	Kitchen	Mold Blown Bottle Glass	Olive Green Tooled Lip w/ String Rim
2	Kitchen	Mold Blown Bottle Glass	Olive Green Kickup w/Glass Pontil Scar
1	Kitchen	Mold Blown Bottle Glass	Olive Green 3-Part Mold
1	Kitchen	Mold Blown Bottle Glass	Olive Green Case Bottle
10	Kitchen	Unidentified Bottle Glass	Olive Green
1	Kitchen	Unidentified Bottle Glass	Colorless
4	Kitchen	Unidentified Bottle Glass	Light Green
1	Kitchen	Unidentified Bottle Glass	Brown
11	Architecture	Tinted Window Glass	
2	Architecture	Cut Nail	
1	Architecture	Metal Fasteners	Large Staple
72	**Total**		

Table 10: Artifacts Recovered in Unit 8, Level 6

for his three-part bottle mold. By the mid-nineteenth century this type of mold was preferred for alcohol, pharmaceutical, and toiletry bottles. However, by the late nineteenth century this mold was rarely used to produce alcohol bottles. It continued to be used for pharmaceuticals, toiletries, and inks until the 1920s (Jones et al. 1985:30).

Number	Group	Type	Description
2	Kitchen	Redware	Clear Lead Glazed, Plain
4	Kitchen	Industrial Stone Bottle	Grey, Salt Glaze
1	Kitchen	Later Refined Earthenware	Sponged Red
2	Kitchen	Later Refined Earthenware	Plain
1	Kitchen	Yellow Ware	Rockingham/Bennington
1	Kitchen	Table Glassware	Molded Tumbler
1	Kitchen	Table Glassware	Unidentified
1	Kitchen	Unidentified Bottle Glass	Olive Green
4	Activity	Redware	Flower Pot
5	Architecture	Tinted Window Glass	
6	Architecture	Cut Nail	
28	**Total**		

Table 11: Artifacts Recovered in Unit 8, Level 7

5.2.2.6 Level 7

Level 7 was associated with the demolition of the 1840s *mikveh* house that formerly stood at this location. The level fill consisted entirely of very pale brown (10YR 8/3) crushed plaster and mortar (Figure 16). The lack of organic matter in the level suggests that the demolition contractor salvaged the framing of the mikveh house. The level was an average thickness of 0.92 feet. It reached its maximum thickness in the northeast corner of the unit where it was 1.79 feet thick. It was a minimum thickness of 0.09 feet in the southeast corner of the unit. Level 7 bottomed on level 8, another layer of fill.

As in levels 5 and 6, very few artifacts were recovered in this level. Twenty-eight non-construction/demolition debris artifacts were recovered in the level (Lots 96 and 99; Section 11.2; Table 11). Almost the entire assemblage consisted of kitchen group artifacts (n= 19); the remaining 11 artifacts were all architectural items. The kitchen items included sherds for utilitarian vessels. These sherds were Rockingham, sponged whiteware, redware, and parts of a gray stoneware pottery bottle that is probably part of the vessel that was recovered in level 6. There were also sherds of a molded tumbler and of an olive green bottle. A single piece of flower pot was recovered in the west half of the level. Nails (n=6) and window glass (n=5) accounted for the remainder of the assemblage. The ceramics in this level indicate a mid-nineteenth century date.

Number	Group	Type	Description
2	Kitchen	Redware	Clear Lead Glazed, Plain
6	Kitchen	Slipware	Combed Clear Slip
1	Kitchen	Domestic Grey Stoneware	Blue Decorated, Grey Salt Glaze
2	Kitchen	Later Refined Earthenware	Blue Transfer Print
2	Kitchen	Later Refined Earthenware	Blue Willow Pattern
1	Kitchen	Later Refined Earthenware	Blue Sponged
1	Kitchen	Table Glassware	Molded Tumbler
3	Kitchen	Faunal Remains	Bone
1	Kitchen	Faunal Remains	Oyster (Covered With Mortar)
1	Kitchen	Table Glassware	Press Molded Tumbler
2	Personal	Biological Remains	Bone Toothbrush
5	Architecture	Tinted Window Glass	>5 - 6 mm Thick
5	Architecture	Stone	Slate
2	Architecture	Stone	Painted Plaster
1	Architecture	Cut Nail	Fragment
2	Architecture	Floral Remains	Wooden Peg
1	Miscellaneous	Unidentifiable Metal	Totally Unidentifiable Metal
38	**Total**		

Table 12: Artifacts Recovered in Unit 8, Level 8

5.2.2.7 Level 8

Level 8 was the final layer of fill in the basement of the *mikveh* house. The fill consisted of yellowish brown (10YR 5/4) sandy clay mottled with Gley chart 2 4/1 dark bluish gray clay. There was a narrow band of brown (10YR 5/3) sandy clay mottled with yellowish brown (10YR 5/6) in the north east corner of the unit (Figure 16). The level was an average thickness of 0.91 feet. It reached a maximum thickness of 1.13 feet in the northwest corner and a minimum thickness of 0.61 feet in the southeast corner. Level 8 bottomed on the clay subsoil below the base of Feature 21, the east brick wall of the former 1840s *mikveh* house. The level also bottomed on a brick drain (Feature 27), a mound of mortar (Feature 28), a cistern or *dut* (Feature 29) and the remnants of a wooden drainpipe (Feature 30) all of which were associated with the original *mikveh.*

As in levels 6 and 7, very few non-construction artifacts were recovered from this level (n=37 [Lots 97 and 100; Section 11.2; Table 12]). Most of these were kitchen group artifacts (n=20). Almost half of these were utilitarian wares (Slipware, redware, and part of a blue and gray salt glaze vessel). Approximately one-quarter were whiteware sherds (transfer printed and sponged). The remaining kitchen items consisted of a single piece of a press molded tumbler, several animal bones, and an oyster shell. However, since the oyster shell is covered with mortar it is

more likely that it was used in some sort of construction activity. Architecture artifacts (n=15) included samples of painted plaster and slate, cut nail fragments, and window glass. A bone toothbrush handle and a wooden peg were also recovered. The ceramics recovered in this level also indicate a mid-nineteenth century date for the fill in the basement of the 1845 *mikveh* house.

5.2.2.8 Feature 28

Feature 28 was a mound of mortar (Figure 18). It was located on the floor of the basement of the *mikveh* house and may have been a bag that was dumped into the basement during the time that it was being filled. The mortar was adjacent to the east wall of the *mikveh* house. It measured 1.8 feet north to south and 1.55 feet east to west. It was a maximum thickness of 0.65 feet. No artifacts were recovered in association with the feature.

5.2.3 Pre-1860 Features

5.2.3.1 Feature 21

Feature 21 was the brick east wall of the former 1840s *mikveh* house (Figures 16, 17, and 18; Photographic plates 7 and 8). Located along the east wall of the unit, it was first noted at the interface of levels 1 and 2. It bottomed on culturally sterile clay subsoil. The wall was laid in English bond. Excavation of the unit revealed a section of wall measuring 5 feet in height by 5 feet in length by 0.8 feet in width. No artifacts were recovered in association with the feature.

5.2.3.2 Feature 27

Feature 27 was a brick-lined drain (Figures 16 and 18; Photographic Plate 3). The feature was located in the northeast quadrant of the unit. It was oriented east to west. The bricks were laid on their sides in a trench measuring 1.9 feet east to west and 0.9 feet north to south. The drain continued under the balk for the gas line. It did not appear as a brick-lined drain in the northwest quadrant; instead, a large stone was located in the northwest quadrant that measured 1 foot east to west and 0.90 feet north to south. The drain emptied into Feature 29, a brick lined cistern or *dut*. Feature 27 was located at a depth of 5.87 feet below surface in the northeast quadrant. The elevation of the feature where it intersected with Feature 29 (the cistern) was 6.01 feet below datum. The feature was 0.2 feet in depth and was excavated into the subsoil. Feature 27 was associated with Features 30, a wooden pipe or drain that ran along the east wall of the 1840s *mikveh* house. No artifacts were recovered in association with the feature.

5.2.3.4 Feature 30

Feature 30 was the remains of a wood pipe or drain that feed into the southeast corner of Feature 27 (Figures 16 and 18; Photographic Plate 3). The feature was located along the east wall of the 1840s *mikveh* house and extended 3.75 feet north to south by 0.30 feet east to west. It was straight sided and was excavated into the subsoil. The feature contained a few brick bats and pieces of rotten wood. It intersected Feature 27, a brick lined drain that fed into Feature 29, the cistern or *dut*. During a period of rain, the drain was observed to fill with water and to empty into Feature 27. It may have originally been fed by a downspout of the *mikveh* house. Feature 30 was 0.2 feet in thickness. Nine artifacts were recovered in the level. These included a sherd of blue transfer printed whiteware, a sherd of olive green bottle glass, 3 sherds of window glass, 3 cut nails, and a sample of coal (Lot 101; Section 11.2).

5.3 FEATURE 29, THE *DUT*

Feature 29 was a brick-lined cistern or dut that was uncovered at the base of the unit in the northwest corner. The *dut* measured 4 feet east to west, 4 feet north to south (interior brick to interior brick) and was approximately 8 feet in depth. The base of the feature was not reached due to the presence of bricks near the base of the feature. These bricks had fallen from the sides of the *dut* into the cistern. The walls were lined with a single course of brick, and the top of the *dut* was capped with a large stone slab (Figures 16 and 18; Photographic Plates 4, 5, and 6).

A portion of the *dut* is located beneath the east wall of the synagogue. Approximately half the *dut* is located beneath the safe in the east wall of the synagogue interior. There is no access to the *dut* on the interior of the synagogue as a brick foundation is located under the safe. Only a tiny portion of the *dut* was exposed in the northwest corner at the base of Unit 8. Entrance into the *dut* in Unit 8 was initially limited to an area measuring 1.9 feet north to south by 0.8 feet east to west. The hole was widened by the removal of several courses of bricks along the southeast quadrant of the *dut*. This was done in order to drop a pump into the *dut* and remove the four feet of standing water that was found in it when the capstones on the southeast quadrant of the *dut* were removed.

After the *dut* was pumped, a photographic record was made of its interior. Copies of these photographs are archived at the JMM. The walls are brick-lined. At several points around its circumference, wooden pipes enter the *dut*. These pipes were noted on the north and east walls. Whether these pipes conveyed water into the *dut* or from the *dut* into the *mikveh* is currently unknown. Feature 27, a brick lined drain is certainly associated with this feature, as the drain empties directly into the top of *dut* along the southeast edge of the quadrant. No pipes were noted in Unit 7 on the interior of the building. This unit was adjacent to the western side of the *dut*.

The walls of the *dut* are in a state of collapse (Photographic Plate 5). This slow collapse probably explains the subsidence of the southeast corner of the synagogue, which is directly on top of the *dut.* Because of the constricted entry into the *dut* (Photographic Plate 4) and the unstable

condition of its walls, none of the archaeological staff entered the interior of the *dut.* All photographs and measurements were taken from the entry point in Unit 8.

There was a layer of yellowish brown (10YR 5/6) fine silt over the bricks at the base of the dut. No soil samples were taken, nor were any artifacts retrieved from the base of the *dut.* An effort was made to pump the silt from the base of the *dut*, but the brickbats at the base prevented the pump from retrieving the soil. No artifacts were recovered in association with the feature.

The *dut* is inside the foundations for the 1840s *mikveh* house and is directly below the safe (Photographic plate 1). The door for this safe was above the west wall of Unit 7. Therefore the dut is located between units 7 and 8. It was not filled in when the addition to the synagogue was constructed in 1860. Further, the builders had to have known that this feature was there when the addition was built as the granite slabs over the top of the *dut* are massive and were clearly intended to act as structural supports. This probably means that the *dut* continued to function as the collection point for the living waters after the 1860 addition to the synagogue was built. The 1860 addition destroyed the *mikveh* house and relocated the *mikveh* inside the synagogue basement.

5.4 FEATURE 33, SOUTH WALL OF THE MIKVEH HOUSE

In November 2008, after excavation of Unit 8 was completed, the sidewalk on the south edge of unit 8 was removed. This section of the sidewalk abutted the granite blocks along the north edge of Watson Street. The southeast corner of the *Mikveh* house was located beneath the sidewalk. This corner comprised Feature 21 (the east wall of the *Mikveh* house) and Feature 33 (the south wall of the *Mikveh* house) (Photographic Plates 7 and 8).

Approximately 4.5 feet of Feature 21 was exposed running north/south under the sidewalk. A shorter section of Feature 33, measuring approximately 2.3 feet east/west, was exposed along the granite block on the north edge of Watson Street. Both features were 0.8 feet in width and were constructed of mortared brick that was two courses in width. No artifacts were recovered in association with the feature.

The southeast corner of the *Mikveh* house is even with the edge of Watson Street and not with the south wall of the synagogue. The south wall of the *Mikveh* house is at least 4 feet to the south of the south wall of the synagogue. The term “at least” is used as the two building are not aligned at exactly the same angle. The walls of the Mikveh house are at an angle of approximately 358 degrees to the east of the synagogue wall.

The *Mikveh* House is not oriented to the original street grid in Old Town/Jones Town, but instead to the grid laid down by the Presbury plan of 1783. On 7 August 1732, the Maryland Assembly passed an act for the erection of Jones Town on the east bank of the Jones Falls. The town was laid out as a rectangle, with a greater length than width so that it was "convenient to the water" as required by the Act of Assembly. The main streets were laid out across the width of the town. Front, Short and Jones Streets were along the Jones Falls. Essentially forming one continuous street, they extended north from what is now Fayette Street to Bath Street. High Street was laid

out parallel to this street and cut Old Town into two halves. The third street, Green Street (now Exeter) ran along the eastern edge of the town. The cross street was Gay Street. This street plan was oriented to the Jones Falls and not to the harbor, as was the street plan of Baltimore Town. In 1745, the two towns were joined together as Baltimore Town (Scharf 1881).

One of the original landowners in the town included Thomas Sligh. In 1759, Jonathan Plowman bought land from Sligh that was just outside the eastern boundary of Jones Town at the northeast corner of what is now East Baltimore and High Streets. The following year, Brian Philpot purchased most of the peninsula between the Jones Falls and Harford Run that lay south of what is now East Baltimore Street. Three years later, Plowman and Philpot laid out streets on their properties that ran northwest to southeast, nearly parallel with the Jones Falls. Other perpendicular streets intersected these streets. In 1773, these additions were added to Baltimore Town (Scharf 1881).

In November 1759, Thomas Sligh sold 4 acres (1.62 hectare) of land south of the original Old Town boundaries to Colonel William Young (BCLR, Liber B, no G, folio 69). At his death in 1772, Young he left the property to his six grandchildren and ordered the parcel divided into six roughly equal lots, each containing approximately two-thirds of an acre (0.27 hectares) (BCPR Wills Liber 3, folio 234). The lots were surveyed in 1783 by George Presbury and followed the street lines as laid out in 1763 by Plowman and Philpot (BCLR Liber WG, no. PP, folio 36). A check of the 1792 Folie *Plan of Baltimore* (Figure 4) shows the small piece of Watson Street that was laid out at the time that the map was made. Watson Street is shown as parallel to Baltimore Street on the north, although Baltimore Street was laid out following the original Old Town street plan. However, the *Mikveh* house line is at a right angle (or perpendicular to) Lombard Street one block south of Watson (Figure 4). This would indicate that the property was laid out according to the 1783 Presbury survey and not according to the orientation of Watson Street, which was laid out by the Old Town Street Plan.

5.5 MONITORING OF UTILITY TRENCH INSTALLATION

The utility trench for a new water line into the synagogue was excavated in the alley to the rear of the synagogue on 22 and 23 September 2009. The BCUA monitored the excavation of the trench by workmen who were not professional archeologists. Earlier trench work in Watson Street was not monitored. Monitoring of the alley utility trench failed to recover significant archaeological artifacts, as the trench was excavated entirely through fill. However, the monitoring did uncover several architectural remains that are significant to understanding the history of the *Mikveh* House. The trench was approximately 23 feet in length and measured between 2 and 2.5 feet in width. It extended to a depth of approximately 4.5 feet below the surface of the concrete paving in the alley. Because of time and budget constraints we were unable to enter the trench and make profile drawings of the strata encountered during the excavation. A photographic and video record was made during the excavation of the trench.

The utility line leaves the water line on Watson Street and heads north up the alley behind the synagogue. It enters the synagogue through a hole approximately 2.5 feet in diameter at the base of apse. The hole is located approximately 4.5 feet below the surface of the concrete surface of

the alley. The utility line cut through part of Feature 33, the south wall of the synagogue. The original plan for the utility trench called for it to be excavated parallel with the north/south axis of the synagogue. However, because Feature 21 (the east wall of the *Mikveh* house) continued north in the alley along the proposed alignment of the trench, the utility line would have cut into or caused the removal of a portion of the feature. The utility trench was reoriented so that it ran parallel to the feature and not the north/south axis of the synagogue.

The initial 13 feet of the trench extending from Feature 33 (the south wall of the *Mikveh* house) exhibited the same fill layers as those that were encountered in unit 8. At this point evidence of an east/west vertical wooden partition or wall was noted. This partition bisected the entire trench and appeared to continue to an unknown depth beyond the base of the trench. Decayed wood remnants clinging to Feature 21, the east wall of the *Mikveh* house, suggest that the wooden partition was originally 0.50 to 0.60 feet thick. This thickness suggests that the partition was framed of 4-inch thick members boarded on both sides.

North of this point in the trench the strata encountered were completely different from the strata south of the partition. The section between the partition and the wall of the apse measured approximately 10 feet in length. Four main strata were recognized, a surface of concrete that was approximately 0.25 feet in thickness. Beneath was a layer of pea gravel that acted as a base for the concrete. The pea gravel was approximately 0.20 feet in thickness. The third stratum was a layer of partially organic sandy loam that was approximately 0.40 feet in thickness. There was extensive evidence of rodent disturbance within this layer. The final layer in the trench was approximately 3.65 feet thick across the length of the trench. It was primarily clay and mortar mixed with small stones and broken brickbats. There were very few artifacts in this fill; none were temporally diagnostic. Feature 21, the east wall of the *Mikveh* house, exhibited distinctly different wall treatments on the north and south sides of the wood partition. To the south of the partition, the brick walls were plain exposed brick. To the north of the partition, the walls were parged with mortar or plaster and retained remnants of whitewash.

6.0 SUMMARY AND INTERPRETATIONS

The two units excavated during the current project are related to one another temporally. Both contain levels associated with the original *Mikveh* house that was located to the rear of synagogue before the addition of 1860. The house was probably leveled in the summer of 1860. Both units also contain levels associated with the in-filling of the *Mikveh* house basement prior to the construction of the addition. These levels were also noted in the utility trench that was installed in September 2009. The following sections summarize the results of the excavation of the units and the utility trench.

6.1 SCHOOL HOUSE LEVELS

The features and levels excavated in Unit 7 indicate that the unit straddled the wall between the school house and the Mikveh house that were located to the rear of the synagogue before the 1860 addition was made. The west side of the unit 7 contained two levels (2 and 8) and one feature (19) below the former schoolhouse. All three strata are related to the demolition of the mikveh house and the construction of the synagogue addition. The date of Feature 19, a utility pipe is unknown as the pipe trench associated with the feature was partially destroyed by the excavation of the trench for Feature 15, a circa 1965 utility pipe. Feature 19 appears to have been installed during the construction of the addition before the mikveh house cellar was completely filled as it is sealed under level 2. Level 8 contained one diagnostic artifact, an Indian Head penny. The date on this penny is not legible. Pennies of this type were in circulation between 1859 and 1909 (United States Department of the Treasury n.d.). The level could have been deposited at any time between 1859 and 1909. It is entirely possible that the level is actually the trench for Feature 19. It is also possible that this fill was deposited in 1860 when the area was filled and leveled prior to the construction of the addition. As only a small corner of the level was excavated in this unit, no interpretation as to the function of the level, or as to its temporal position can be made. Further excavation to the west or north of the unit may answer this question.

6.2 CIRCA 1854-1860 MIKVEH HOUSE

Features 8, 21, 32 and 33 in east half of the unit are the remnants of the 1840s Mikveh House. These are the west, east and south walls of the Mikveh House (Features 8, 21 and 33 respectively) and the base of a possible hearth support (Feature 32). Excavation in 2000 (Read 200a) also recovered the remains of a hearth (Feature 3). This would indicate that the Mikveh House had two hearths, one in the front room of the house and the second in a room behind the front room. This type of hearth configuration is typical for houses mid-nineteenth century house in Fells Point. The author has viewed the floor plan of one of these houses in a row that was built in the 1840s.

The *Mikveh* House contained a *Mikveh,* the remnants of which may have been located during the 2001 excavation (Read 2001, see figure 5). The *Mikveh* was represented by Feature 13 and by its associated builders trench (Feature 11). The *mikveh* were supplied with living waters from a *dut* (Feature 27). As described in Section 4.5.3.1, a *dut* "is a cistern or tank built into the ground to store rainwater. When changing the water in the *mikveh,* it is filled each time with at least 21 *séah* of rainwater from the cistern…" (Skolnik and Berenbaum 2007:226), or at least 39 gallons (148 liters) of living water. Another source gives the amount as 40 *séah* (500 liters) (Gawronski and Jayasena 2007). The hearths in the basement probably were used to heat water to dip into the *mikveh* after the correct level of living waters was placed in the bath. Minutes for 2 May 1852, show that water was heated in a kettle in the *mikveh* house and then added to the *mikveh*. Historical records for the *mikveh* associated with the Ashkenazi Great Synagogue in Amsterdam (1671-1752) mention the use of a hearth to heat water before it was added to the *mikveh.* A Mikveh house and a sacristan's house flanked the synagogue (*ibid.*)

The *Dut,* which measured approximately 5.2 feet in diameter (including the brick lining, 4 feet in diameter without the brick lining), was located approximately 2.2 feet north of the south wall of the *Mikveh* house (Feature 33), 4.4 feet west of the east wall (Feature 21) and 4.4 feet east of the west wall. Monitoring of the utility trench of in the alley indicates that the basement of the *Mikveh* House was divided into at least two rooms. The southernmost room measured approximately 14 feet square (from the exterior of the brick walls to the north side of the partition, or approximately 13 feet square on the interior, for an interior space of 169 square feet. The walls of this room do not appear to have been finished, no parging was noted on the east wall (Feature 21). Nor was parging noted on the west wall (Feature 8). However, it should be noted that most of the west wall in Unit 7 add been destroyed by a later utility trench (Feature 15). Only the surface of the south wall was exposed during the current excavation, hence it is not known if this wall was given a finish treatment.

The *dut* was located in the south, or front, room of the basement. It is assumed that the partition wall noted in the utility trench was located approximately 6.2 feet to the north of the northern edge of the dut. The *mikveh* was located in the north room, or the room that appear to have finished walls. This set up is similar to that of the New Synagogue constructed next to Amsterdam's Great Synagogue in 1752. The Mikveh in the synagogue is described as "situated in a basement separated from the street by a front room with a well") (Gawronski and Jayasena 2007:217). This setting matches that suggested for the Lloyd Street Synagogue's *mikveh* house and probably for the *mikveh* rooms once the synagogue addition was added.

Gawronski and Jayasena (2007) point out that the architectural roots for the *mikveh* at Amsterdam's New Synagogue go back to medieval Germany where construction of *mikva'ot* in began by at least the twelfth century. These *mikva'ot* have been found at Worms, Speyer, Cologne and Friedberg. By the sixteenth century, *mikva'ot* in Germany were found both in private basements and in synagogues. The Ashkenazi took this template with them to Amsterdam and it is probable that they brought it to America as well. The Lloyd Street congregation was Ashkenazim.

The *dut* appears to have been fed by a system of wood pipes and drains that ran on the floor of the basement. These pipes and drains included Feature 30 in Unit 8, which was located along the

east wall of the *Mikveh* house (Feature 21) and hooked into a brick lined drain (Feature 27) that was located between Features 21, 27 and 30. Artifacts recovered in Features 27 and 30 were ambiguous in terms of age, although a fragment of blue transfer printed whiteware recovered in Feature 30 suggests a nineteenth century date. Wood pieces recovered on the subsoil floor of the basement in Unit 1 during excavation in 2000 (Read 200a) may have been part of the wood drain system. The drains probably brought rain water into the *dut* from the roof of the *Mikveh* House. Ground water would have seeped into the *dut* through the unmortared brick lining of the cistern. The use of ground water to fill mikva'ot dates to twelfth century Germany and was part of the cultural template brought to the United States by the Ashkenazim (Gawronski and Jayasena 2007). In addition to the drains and the ground water, there appeared to be possible wood pipes entering the *dut* at points around its circumference. Although we were unable to access these pipes during the current excavation, it is possible that future excavation on the exterior of Feature 27 may be able to trace these pipes and to determine where they hook into other parts of the drain system.

The *dut* was beneath a brick enclosure (Feature 31, Plate 1) that was first noted in Unit 7. This enclosure sealed the dut off when the addition was built in 1860 and supported the safe located in the wall above the *dut.*

6.3 SYNAGOGUE ADDITION CONSTRUCTION LEVELS

The *Mikveh* house was leveled in 1860 and low portions of the basement walls (Features 8, 21, and 33) and hearth supports (Features 3 and 32) were left intact below the base level of the new addition to the synagogue. The south wall of the addition was actually built on top of a section of Feature 8, the west *Mikveh* house wall (Unit 7).

Fill was placed in the basement of the *Mikveh* house after the walls of the synagogue addition were started. Evidence from Unit 8 suggests that the stone walls were only partially erected before filling began. The fill layers are represented in Unit 7 by levels 3, 4, and 5. In Unit 8, levels 6, 7 and 8 represent the fill layers. None of these levels is similar from one unit to the next. They appear to have been discrete wagon loads brought in and dumped in the basement. They are analogous to Stratum V as defined during the 2001 excavation (Read 2001).

There was almost a complete absence of temporally diagnostic artifacts in the Unit 7 levels. The presence of a single glass pontil in level 5 suggests a TAQ of 1870 (Jones 1991:97). This date is problematic at best as it is represented by a single piece and as bottles with pontils continue to be made today, albeit in very limited quantities. Level 6 in Unit 8 yielded a three-part of Ricketts type mold olive green bottle which was patented in 1821 and reached its height of usage on alcohol bottles at the mid-century mark (Jones et al. 1985:30). The ceramics in this level and in the two levels below (7 and 8) also suggested a mid-century date for the fill (see discussion in sections 5.2.2.5, 5.2.2.6, and 5.2.2.7.

In unit 8, Feature 25, a pile of stone chipped from the stone used in the addition's foundation was found on the surface of a fill layer (Level 6). This would suggest that the stone walls were raised to at least this level and that the infill of the basement was completed before the stone portion of

the wall was completed. Once this wall was completed, Feature 25 and Level 5 were covered by another layer of fill that based on the ceramics present in the level, also dated to the mid-nineteenth century. Two post holes were excavated into this fill (Features 22, 23, 24 and 26), that probably supported scaffolding used during the construction of the brick walls that form that the upper stories of the synagogue.

6.4 POST-1860 SYNAGOGUE ADDITION INTERIOR

6.4.1 1860 through circa 1910

Layers associated with the occupation of the synagogue addition by Baltimore Hebrew Congregation were missing from this unit. The brick floor that once covered the floor of *Mikva'ot* room (Stratum IV, Reed 2001:Figure 10) was removed by the JMM during the 1965 reconstruction of the brick floor on a concrete base. Part of a repair to this floor survived above the sunken fill of a cast iron sewer pipe (Feature 4).

6.4.2 circa 1892 – circa 1942

Feature 4 was first located in 2000 and was further exposed in 2001 (Read 200a, 2001). Precise dating the feature was not achieved during either of those excavations. However, evidence recovered in the pipe trench during the current excavation suggest that the pipe was placed in the synagogue sometime in the late 1890s or during the first decade of the twentieth century. Numerous crown caps for soda or beer bottles were recovered in the trench. This provides a TPQ of 1892 for the pipe. There are two possible scenarios for the placement of the pipe in the basement of the synagogue addition.

The 1892 TPQ roughly coincides with the 1895 Notitiae filed by St. John the Baptist Catholic Church with the Archdiocese of Baltimore. According to the Notitiae the congregation made improvements to the basement in that year. These improvements may have included the installation of the cast iron sewer pipe. One of the items that the church would have needed, that was not present when they purchased the property was a *sacrarium.* A *sacrarium* is located in the Sacristy of the church. It is a wash basin that is used to wash linens used during the celebration of the Mass and purificators used during Holy Communion. The drain of *sacrarium* flows directly into the ground to prevent sacred items such as used baptismal water from being washed into the sewers or septic tanks. If the pipe flowed into the ground outside of the building is possible that the pipe was connected to a *sacrarium.* However, the terminus (as well as the starting point) of the pipe is unknown. Current evidence suggests that the cast iron pipe connects to the sewer line in Watson Street after it exits the building. Given the length of the pipe it is more likely that it was a sewer pipe and not a pipe associated with a *sacrarium.*

The second scenario places responsibility for installation of the cast iron pipe on the *Shomrei Mishmeres Hakodesh,* the second Jewish congregation to use the synagogue. The *Shomrei Mishmeres Hakodesh* probably installed the extant *Mikva'ot* and claw footed bathtubs in the synagogue between 1905 and 1914. The tubs are similar to those that appear in Sears and

Roebuck catalogs during the first decade of the twentieth century (Amory 1969, Schroeder 1969, 1970). The pipe may have been the original drain for the bathtubs. It was not hooked into the extant *Mikva'ot* as they do not have drains. These dates also coincide with major improvements to the city's wastewater removal system that were made between 1909 and 1914 (Olson 1980). The cast iron pipes exits the building in the southeast corner of the building and, as noted in the foregoing paragraph, it may have hooked into the city sewer under Watson Street.

Artifacts on the surface of the trench tend to support the *Shomrei Mishmeres Hakodesh* hypothesis. Tiny scraps of paper bearing Hebrew letters and pieces of leather, that may be parts of *Telfillin* were recovered. *Telfillin* are boxes containing Biblical verses that are worn during morning-prayer services by observant Jews starting at the age of 13. They are proscribed in Deuteronomy, 6:4-8: "And you shall bind them for a sign upon your hand, and they shall be an ornament for your head between your eyes." Two leather boxes are worn during prayers, the headpiece, or *Shel Rosh* (belonging to the head) is worn between the eyes and the *Shel Yad* (belonging to the hand) is worn on the arm opposite the heart. Worn or damaged *Telfillin* would have been stored in the safe above the feature before they were removed for burial. It is possible that fragments from worn or damaged *Telfillin* accidentally fell to the floor and worked their way through the brick floor that was once located below the safe unto the surface of Feature 4.

Regardless of which congregation placed the cast iron pipe in the synagogue, the pipe required repairs sometime after 1942. A 1942 wheat penny found at the interface of the pipe trench (Feature 4) and a repair trench (Feature 18) supports this interpretation. It is also possible that pieces of worn or damaged *Telfillin* found their way into the feature during the period that it was open for repairs.

Levels 3, and 4 in the unit are probably the upper levels of Feature 4. These are all fill layers that date to the period 1892 through the mid-1920s. Levels 2 and that were located on top of Feature 4. None of these layers match stratum previously identified in Units 1 and 5 (Read 200a and 2001). These levels contained crown caps and sherds of a Bristol Glaze jug. The crown caps post date 1892. Manufacture of Bristol jugs began in the late nineteenth century. They continued to be manufactured in large numbers through the 1920s (Joy 1997:C-5).

6.4.3 Post 1942–1964

A single layer represents this period. The layer is over the cast iron pipe trench (Feature 4) and its associated repair trench (Feature 18), therefore it post dates 1942 (the date of the penny found in Feature 18. Remnants of a brick floor, that match that found in Stratum II of Unit 5 were recovered directly under the safe. Oil Cloth fragments were found on the surface of this brick. The artifacts were a mixture of artifacts found in earlier levels and were probably churned up during the repair of the cast iron pipe. The level may even be associated with the 1964 through 1965 restoration of the synagogue basement. During this period Feature 15, a clean out pipe and its associated trench were placed in the basement. This trench was intrusive through much of the unit.

The upper most level in the unit, level 1, was a concrete pad and associated brick floor that was placed in the basement during restoration in 1964 and 1965. The brick floor was the surface of the unit when the current excavation began.

POST-1860 SYNAGOGUE ADDITION EXTERIOR

At least four yard layers were deposited in the alley after construction of the synagogue addition was completed. Due to the almost complete lack of temporally diagnostic artifacts, none of these layers (except level 2) could be dated.

Level 4, the earliest of the yard layers was probably deposited immediately after the construction of the synagogue addition. It was a thin organic layer that covered over the upper fill level placed in the former *Mikveh* House basement and the post holes associated with the scaffolding. Level 3, directly above it was a yellow sand layer and may have been the base of a brick walkway, although there was no brick in the level. These two layers probably pre-date the 1960s restoration of the synagogue.

Levels 2 and Feature 20, an associated drain may have been the exposed level at the time that the restoration work was done. A plastic straight edge and a plastic washer for a nail were found in level 2. This level and the drain running across its surface were covered over by the sidewalk that was one the surface of the unit when the current excavation project began.

7.0 NATIONAL REGISTER RECOMMENDATION AND RECOMMENDATIONS FOR FUTURE WORK

7.1 NATIONAL REGISTER RECOMMENDATIONS

The archaeological features located the current excavation and during the 2000 and 2001 excavations that are associated with the *Mikveh* house and the *Mikveh* are considered contributing resources to the Lloyd Street Synagogue, which is listed on the National Register of Historic Places. These features include the walls of the *Mikveh* house: Features 8 (west wall), Feature 21 (east wall), and Feature 33 (the south wall); the hearth supports (Features 3 and 32), and the *dut* (Feature 29) and its associated drains and drains pipes (Features 27 and 30). The wall enclosing the dut and supporting the safe (Feature 31) should also be considered a contributing resource.

These resources are significant under criterion D as they "have yielded, or may be likely to yield, information important in prehistory or history." They may also be considered under criterion A because of their association "with events that have made a significant contribution to the broad patterns of our history." In this case their association with the Jewish community in Baltimore can make contributions to understanding the development of the Jewish community both locally and nationally through the nineteenth and twentieth century in terms of changes to ritual (orthodox to reform); the shift in immigration patterns from the earlier German population to the later Eastern European populations; the continuation of European traditions (as in the similarity of the earlier mikveh and dut to those in Holland) and the introduction of newer "American" lifestyles as evidenced through changes in the building through time.

These features, additional features on public display in the extant *Mikva'ot* rooms, as well as the extant *Mikva'ot* and Matzah oven in the western end of the synagogue (Read 2000a, 2001), are important remnants of two immigrant populations who made Baltimore their home, who assimilated "American" culture, but at the same time established institutions that would allow them to retain the core of their religious and ethnic identity.

RECOMMENDATIONS FOR FUTURE WORK

The excavation of the two units was done in order to ensure that no significant archaeological resources would be harmed during stabilization of the southeast corner of the synagogue. The proposed method of stabilization was the injection of grout into the ground beneath and around the southeast corner. During the current excavation numerous fill layers were identified that were associated with the construction of the 1860 addition to the synagogue. These layers were all secondary deposits and are not considered significant. Other levels associated with the use of the addition after 1860 were either associated with the installation of utility pipes or with repairs or renovation work done in the synagogue. These layers were either disturbed or did not contain

significant archaeological deposits. The proposed stabilization work will not have an effect on these remains.

With the exception of the *dut* (Feature 29), the proposed work will not have an adverse effect on any of the features listed as contributing resources to the Lloyd Street Synagogue National Register nomination (see section 7.1).

The *dut*, as stated above is considered a contributing resource to the Lloyd Synagogue. However, as noted earlier in the report, the dut was slowly collapsing under the weight of the southeast corner of the synagogue, causing major subsidence in this corner of the structure. Injection of the grout into the ground surrounding the southeast corner will have an adverse effect on the dut as it will fill the dut, making further investigation of this feature impossible.

On 18 November 2008, the JMM sent the MHT a letter outlining the recommended mitigation treatment for the *dut* and the southeast corner of the building. The proposed plan called for completing filling the *dut* with grout. The following paragraphs explain why grout is the preferred option, this section is extracted from the letter.

> *There are at least three potential means of stabilizing the foundation of the synagogue extension. The least invasive and least expensive is grouting—injecting cement into the soil to fill voids and stop water from eroding porous strata. Grout injection was used successfully to stabilize a failing portion of the foundation of the near-by B'nai Israel Synagogue (1876). The other two methods of stabilizing the Lloyd Street Synagogue foundation—underpinning and driving pilings—are more expensive, more invasive, and would require destroying all or most of the dut.*
>
> *Supporting the addition foundation through underpinning or with pilings would have similar effects on the archaeology of the synagogue and mikveh house. Both require inserting new concrete footings under the existing stone footing for the stone cellar walls. The difference between the two methods is only the support mechanism. Underpinning requires installing a new footing that will reach down into stable soil. Pilings require only a steel-reinforced concrete grade beam beneath the stone footing, a grade beam to which the pilings are attached after they are driven into stable soil. Both methods require excavating completely around one face of the foundation. This would require disassembling the 1860 granite steps that leading down into the basement areaway. These excavations would also destroy all or most of the dut. Should underpinning be selected, the only way the west side of the dut could be preserved would be by filling it with grout before excavation for the new footing or grade beam is begun. The east side of the dut would be destroyed by the excavation.*
>
> *The underpinning or piling options also are undesirable as they pose greater risk to the synagogue. Both require excavation beneath the existing stone footing. While only short sections are dug before filling them with concrete, this still creates the possibility of additional foundation subsidence. To prevent this, it might be necessary to cut holes through the basement walls of the addition in order to shore the upper portion of the walls above.*

The grout will form a column that will support the overlying basement wall, while also preventing further collapse of the *dut* walls. While the grout will permanently alter the interior of the *dut*, stabilizing the interior will preserve the exterior form of the dut and allow future archaeological investigation along the exterior of the *dut* in the unexcavated area between it and the *mikveh* in order to clarify the means by which water was conducted from the dut to the mikveh. Historic documents indicate that there should be a series of wood or ceramic pipes leading from the dut to the mikveh. Pipes and drains conducting water into the dut were uncovered during the current excavation, but to date pipes conveying water into the mikveh from the dut have not been uncovered.

The letter further recommended that before the *dut* was filled the feature should be recorded and photographed as far as was possible from the exterior of the feature. It was further recommended that the dut be filled with grout immediately to stabilize the southeast corner before the winter set in. After consultation with the MHT Easement Committee these recommendations were implemented in November 2008. Because access to the interior of the *dut* was limited to an extremely restricted entrance measuring approximately 2 feet north/south by 1.5 feet east/west, no project or JMM personnel were placed inside the feature. In order to enter the *dut* the entrance hole would have had to be enlarged, and there was risk of further destabilizing the walls of both the dut and the synagogue if this course of action was followed. Recordation of the feature included measuring the diameter and depth of the *dut*, fiber optic filming of the interior after the water was pumped out, and still photography. The results of this recordation are presented in Section 5.3 of this report.

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9.0 FIGURES

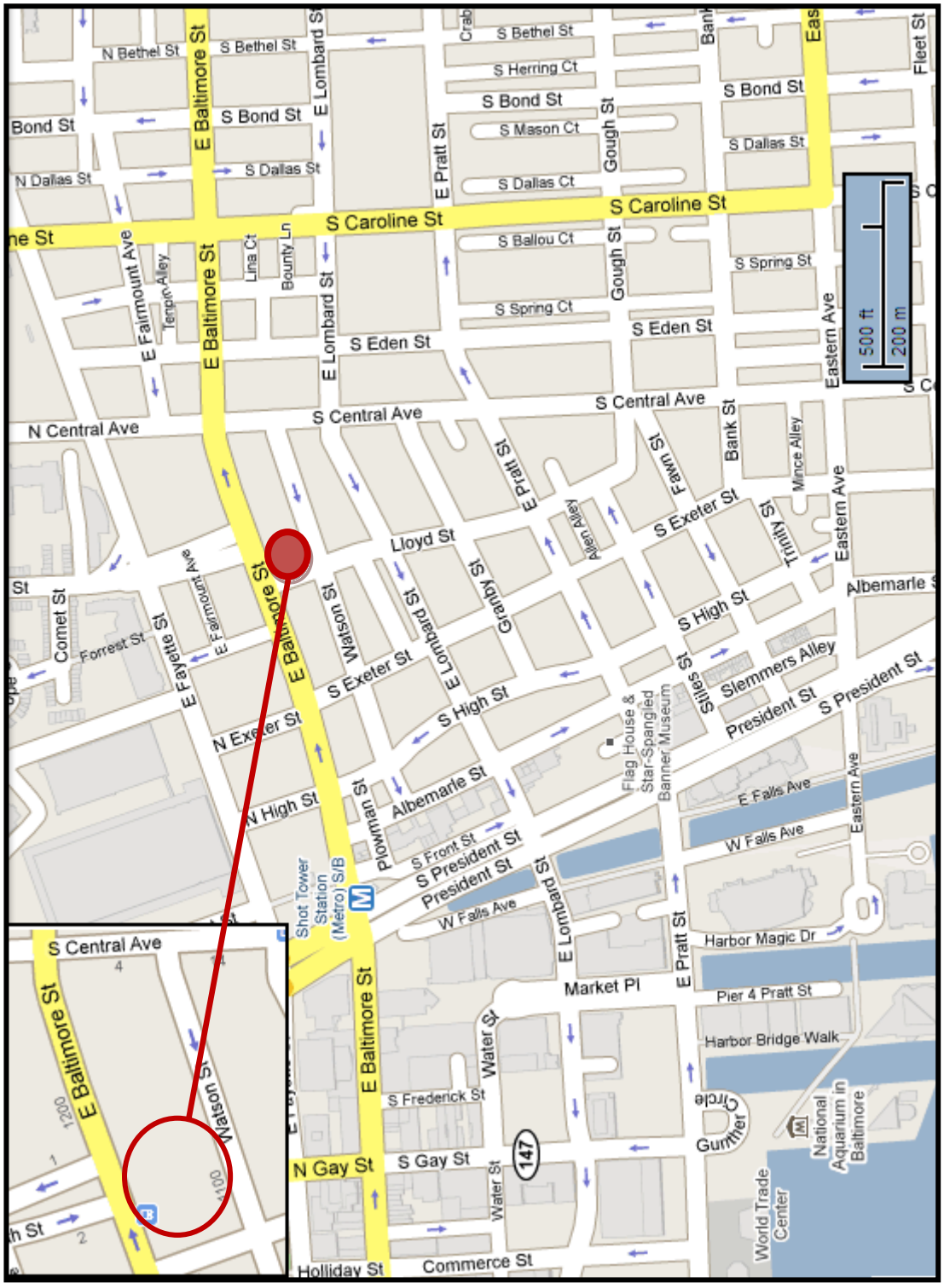


Figure 1: Archaeological Study Area Location

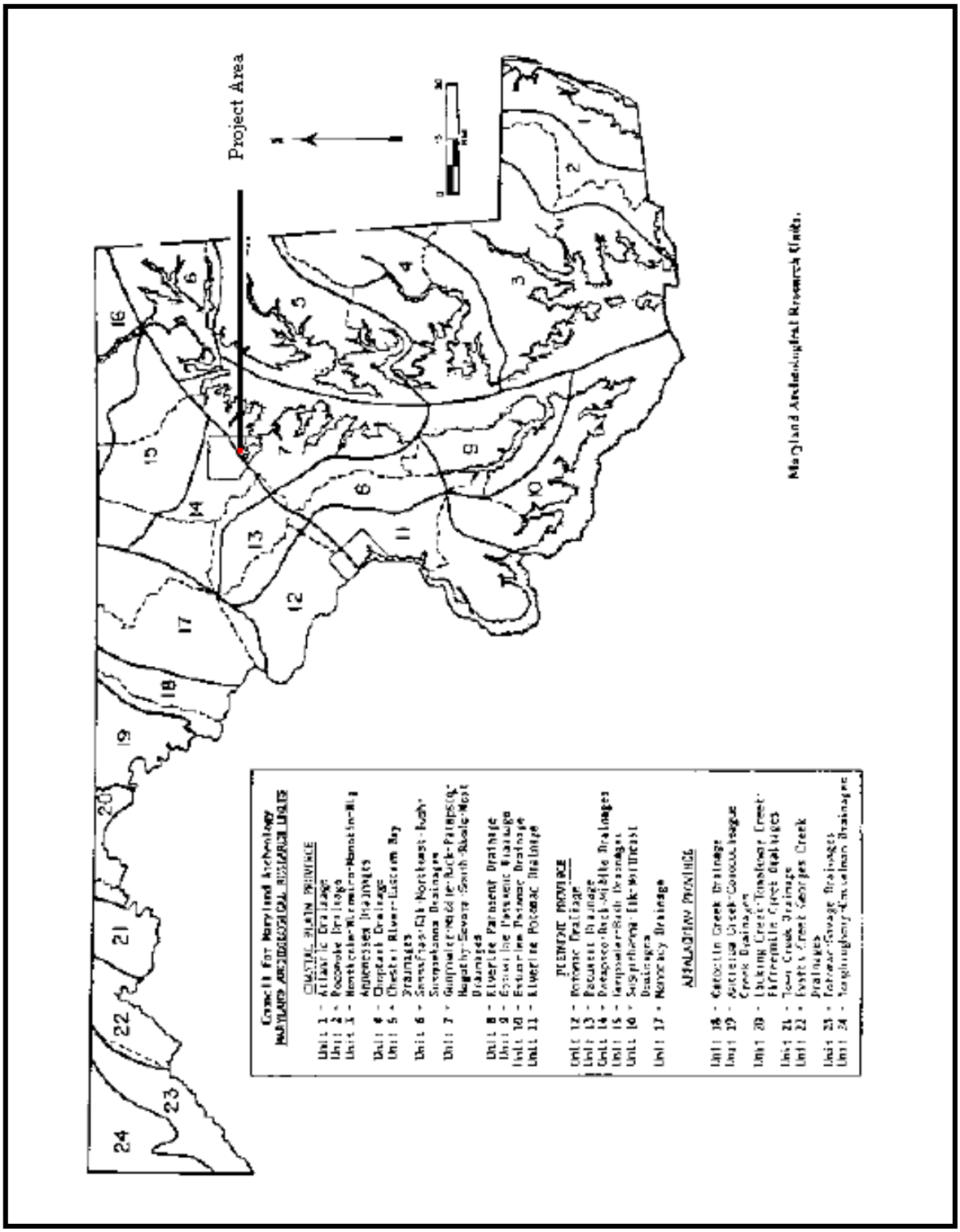


Figure 2: Maryland Archaeological Research Units

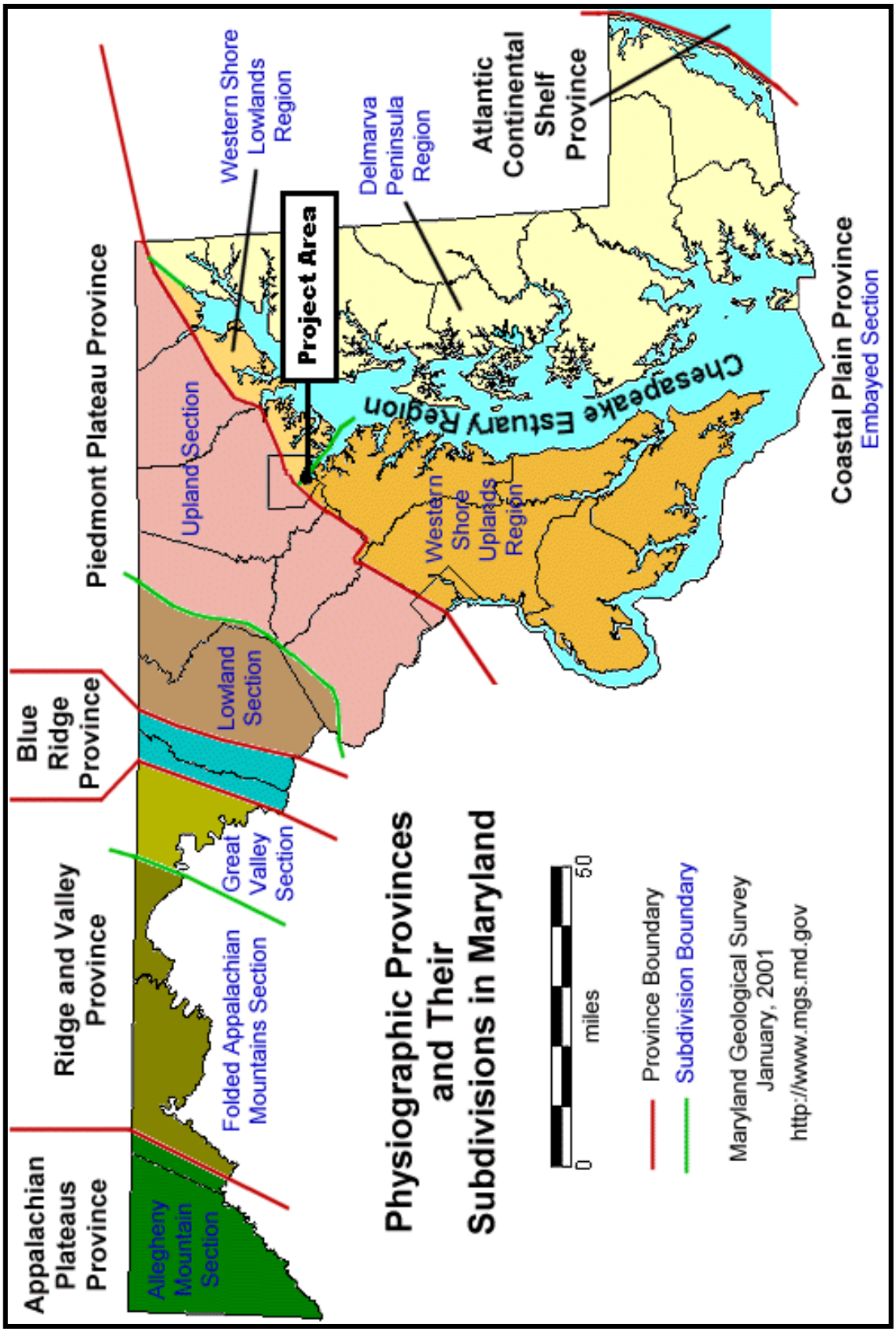


Figure 3: Physiographic Provinces of Maryland

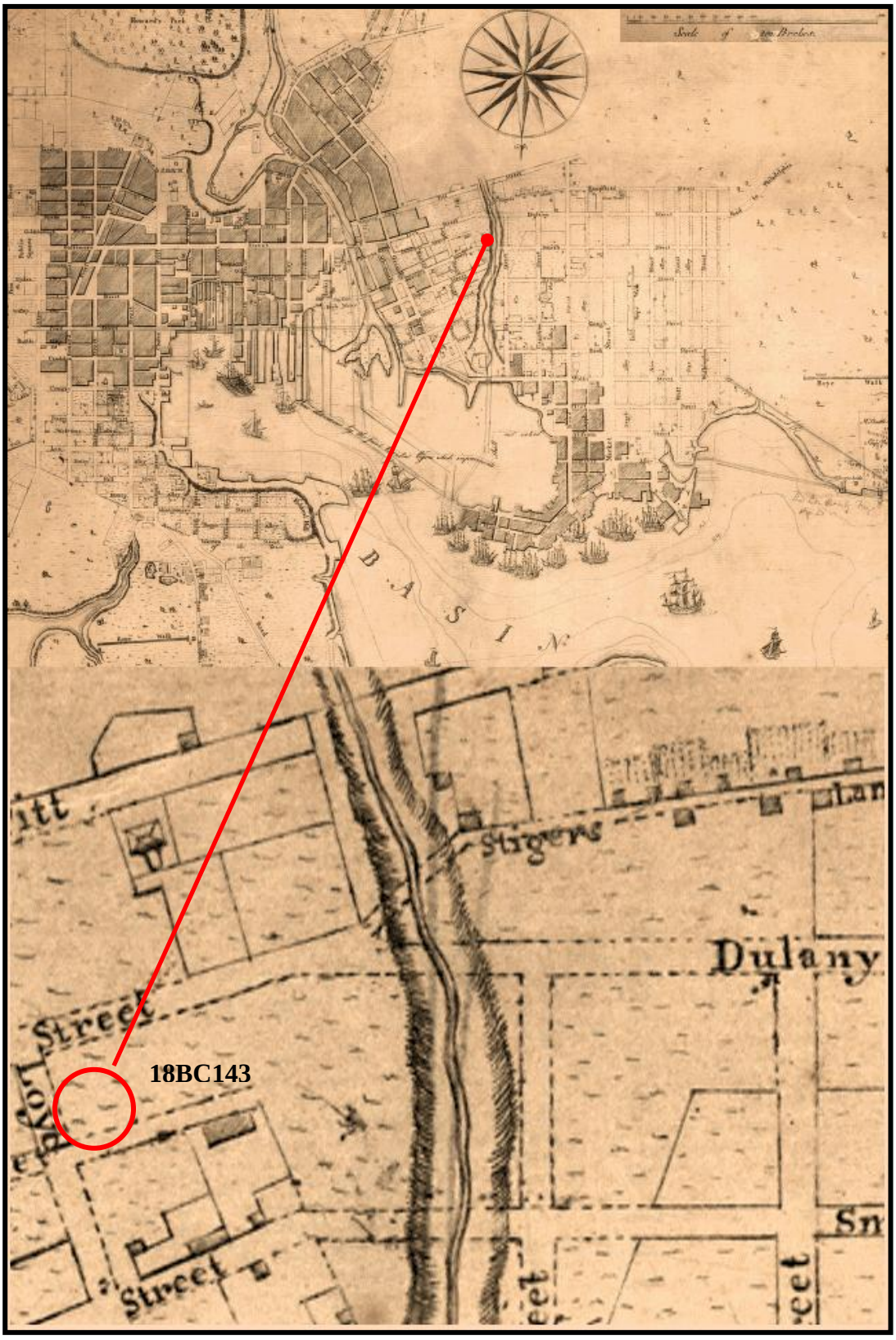


Figure 4: Portion of the 1792 Folie Plan of the town of Baltimore and it's [sic] environs.

Figure 5: 1822 Fielding Lucas, Jr., *Plan of the City of Baltimore*

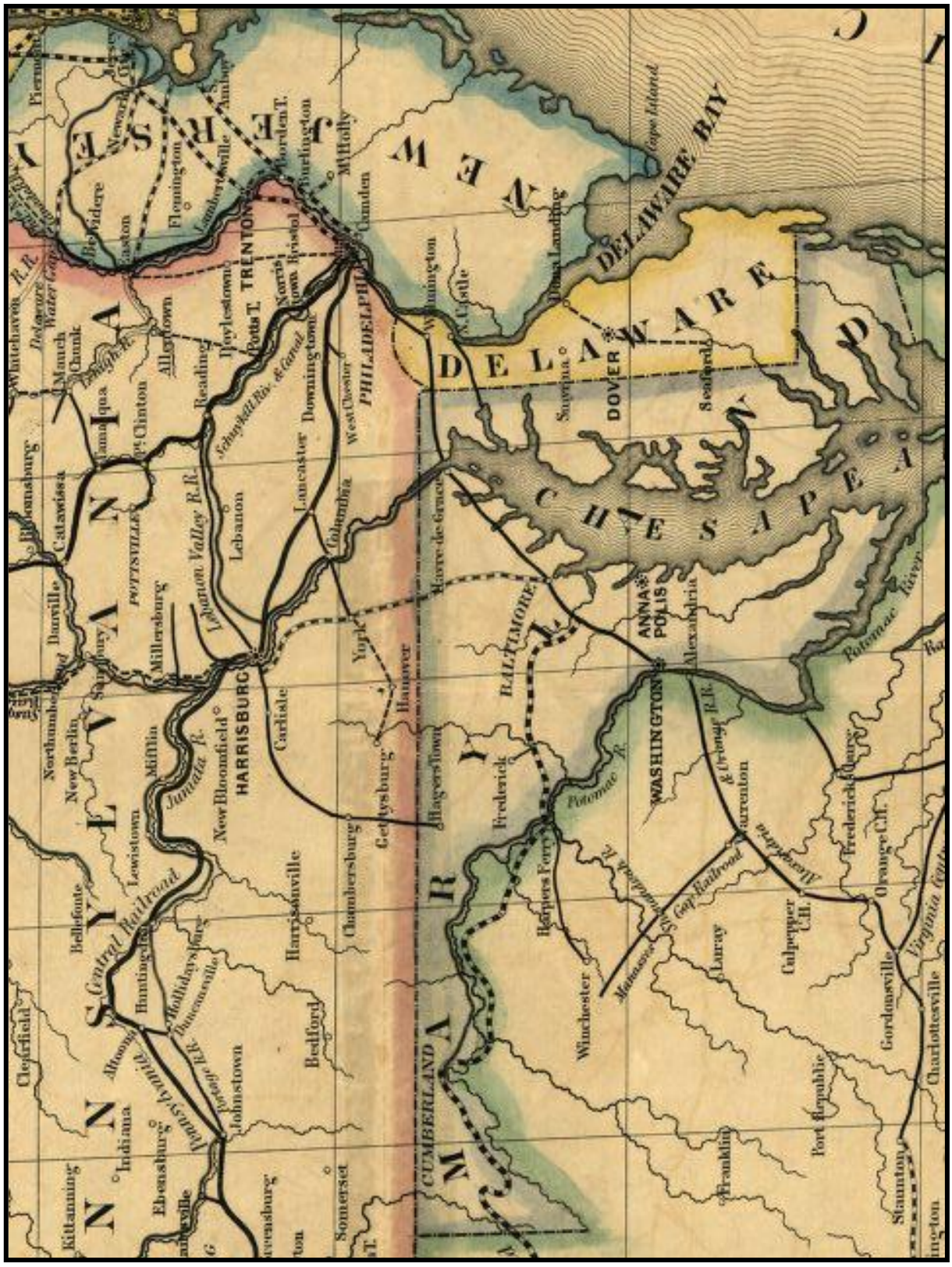


Figure 6: Portion of the 1851 Ellet, *Map of the western railroads tributary to Philadelphia*

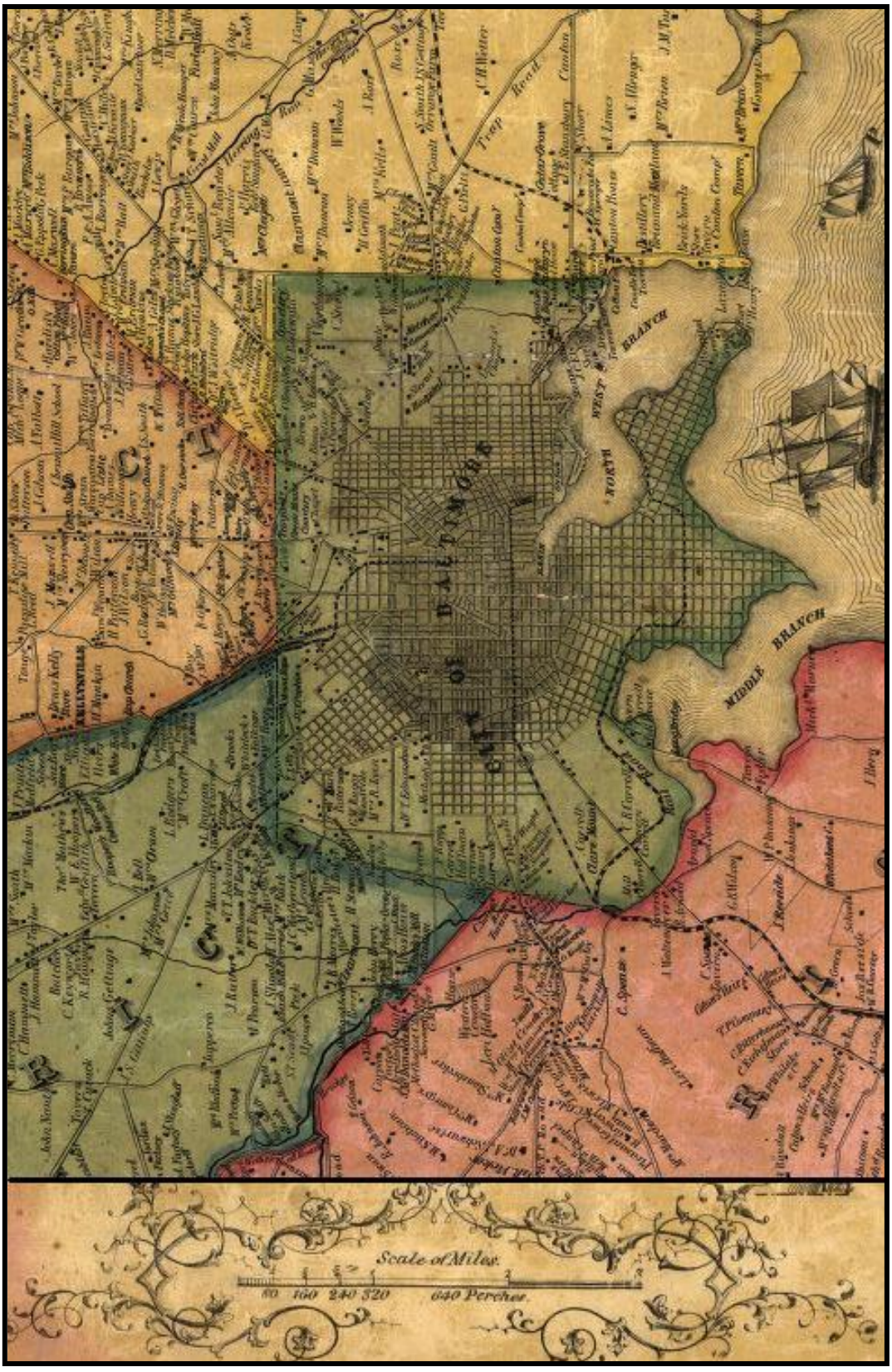


Figure 7: Portion of the 1857 Sydney *Map of the city and county of Baltimore, Maryland*

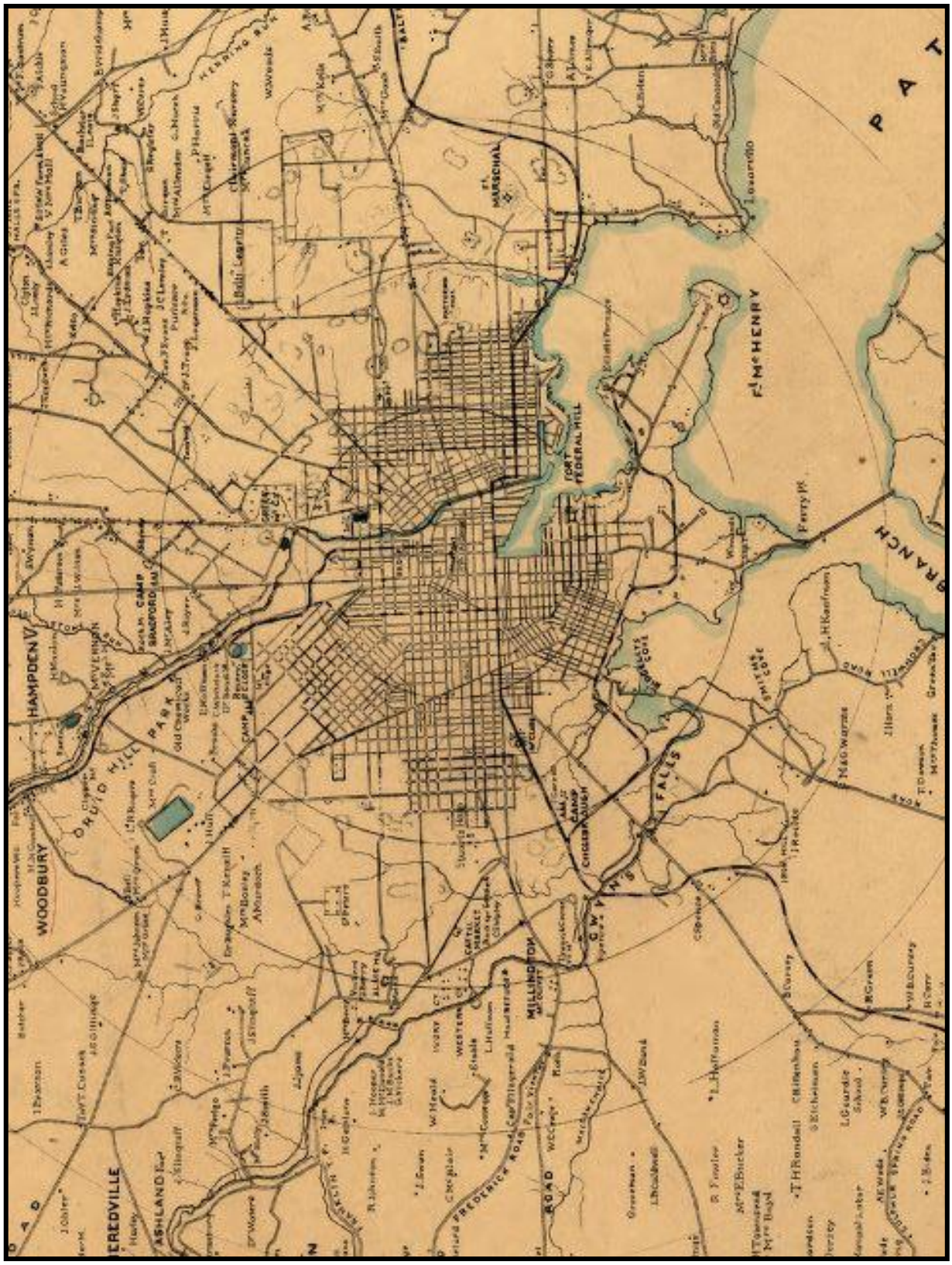


Figure 8: Portion of the Kaiser 1863 8th Army Corps *Military map, Baltimore Co., Md*

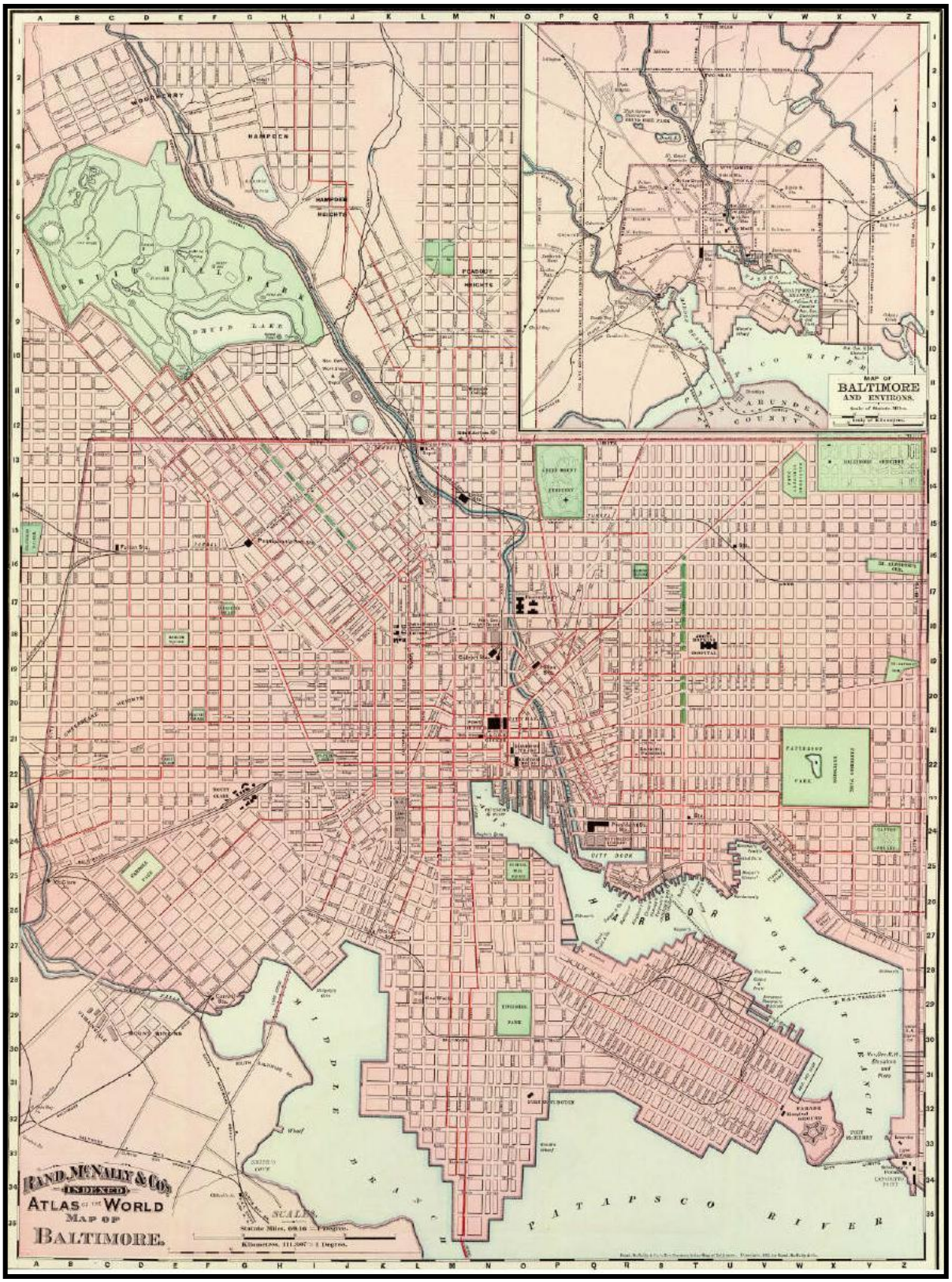


Figure 9: Rand McNally & Co. 1897 *Map of Baltimore*

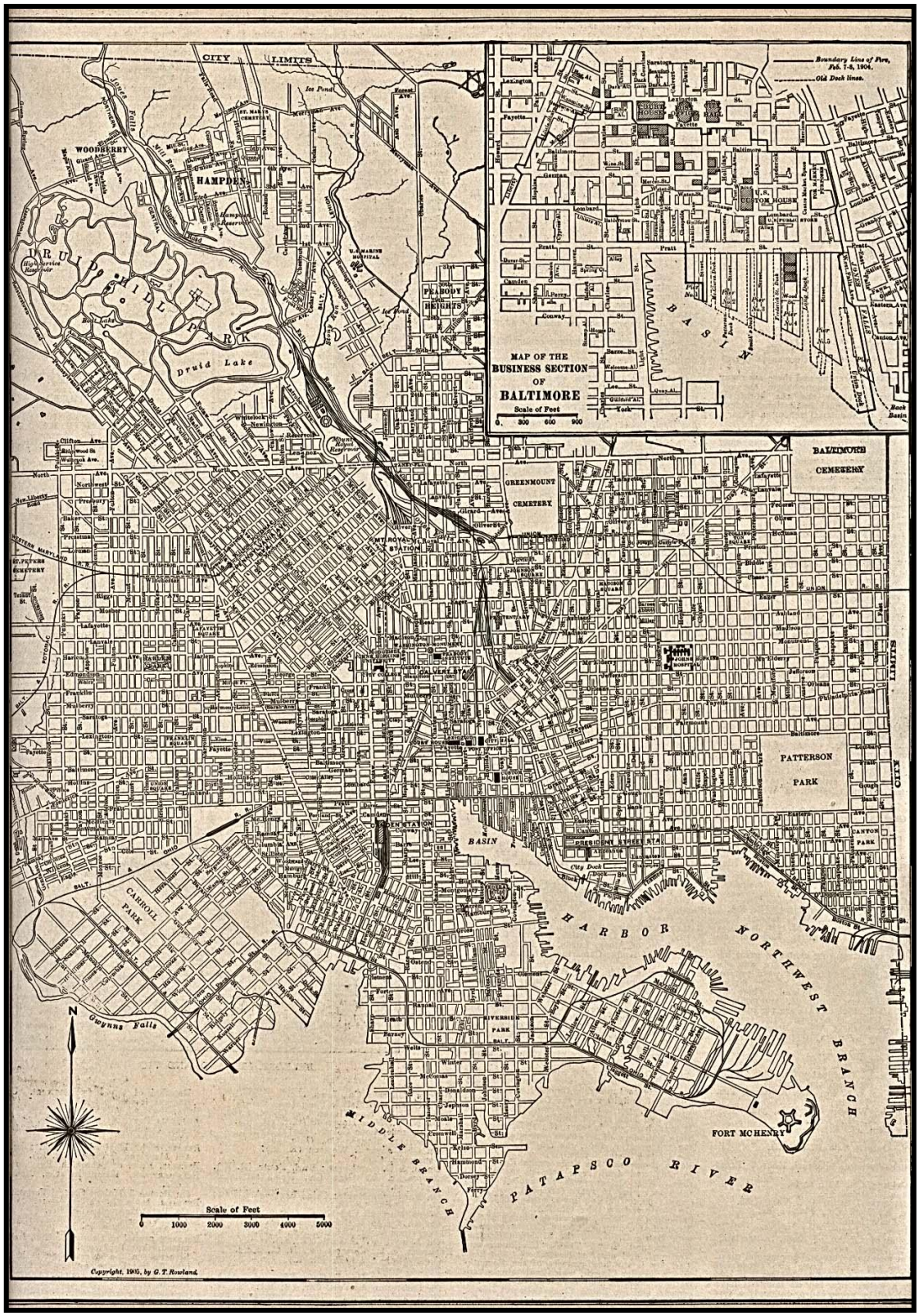


Figure 10: ***Baltimore, Maryland 1905*****. Includes outline of Burn District. Reprinted from the 1917 Collier The New Encyclopedic Atlas and Gazetteer of the World**

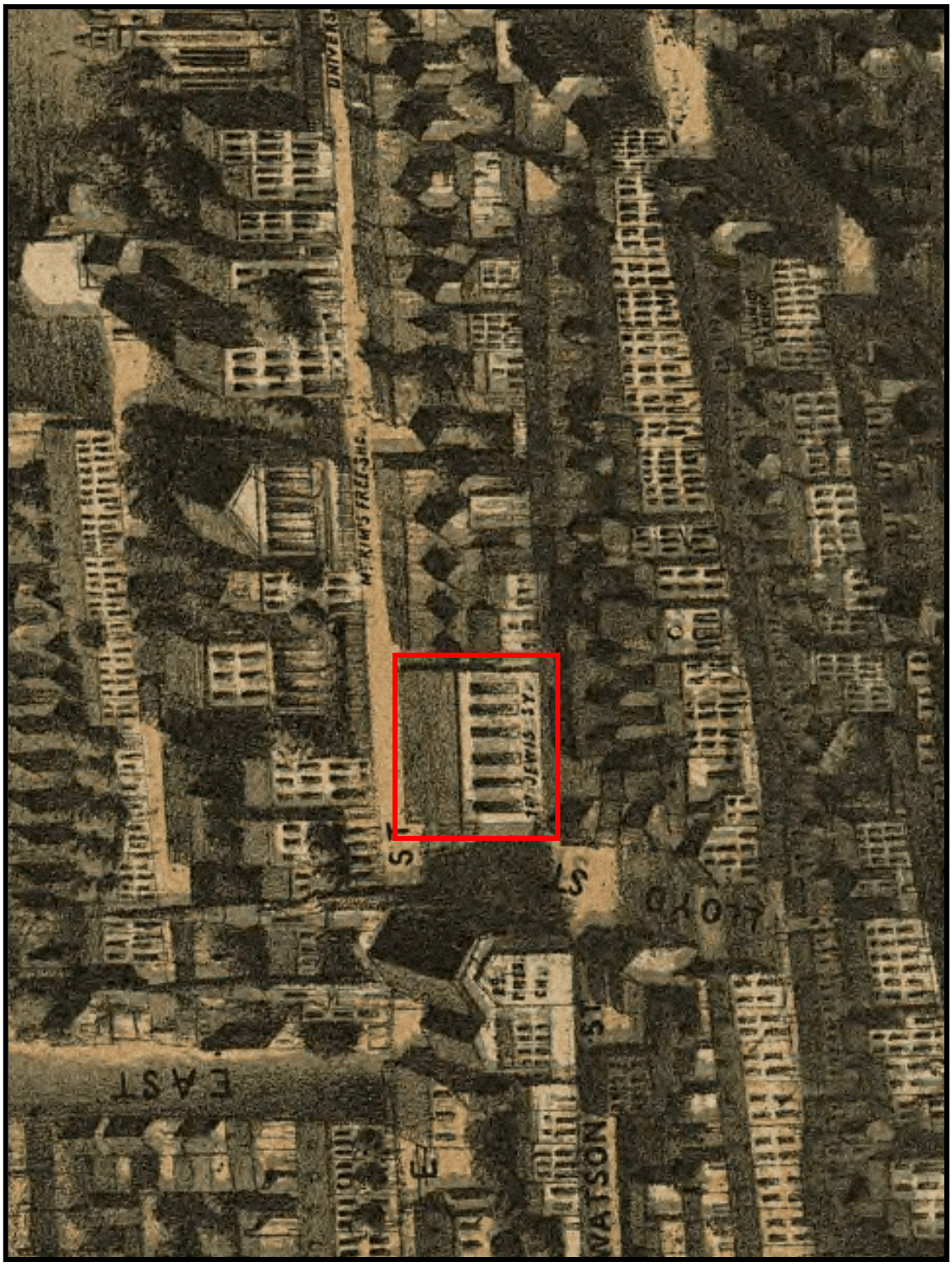


Figure 11: Portion of the E. Sachse, & Co.'s bird's eye view of the city of Baltimore, 1869

Figure 12: Unit Location Map

Placeholder for pull out map, figure 11

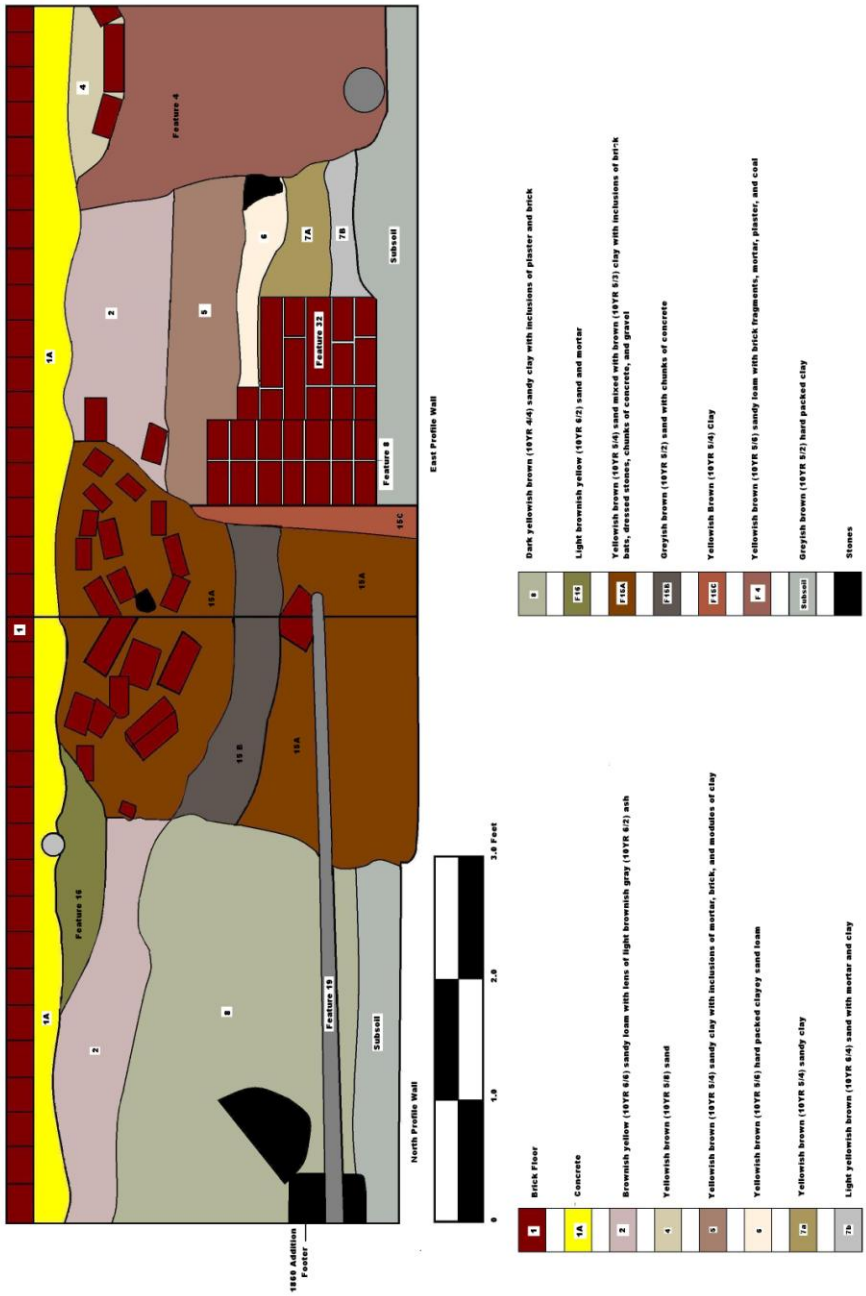


Figure 13: North and West Profile Walls of Unit 7

PLACE HOLDER – 11 X 17 INSERT HERE.

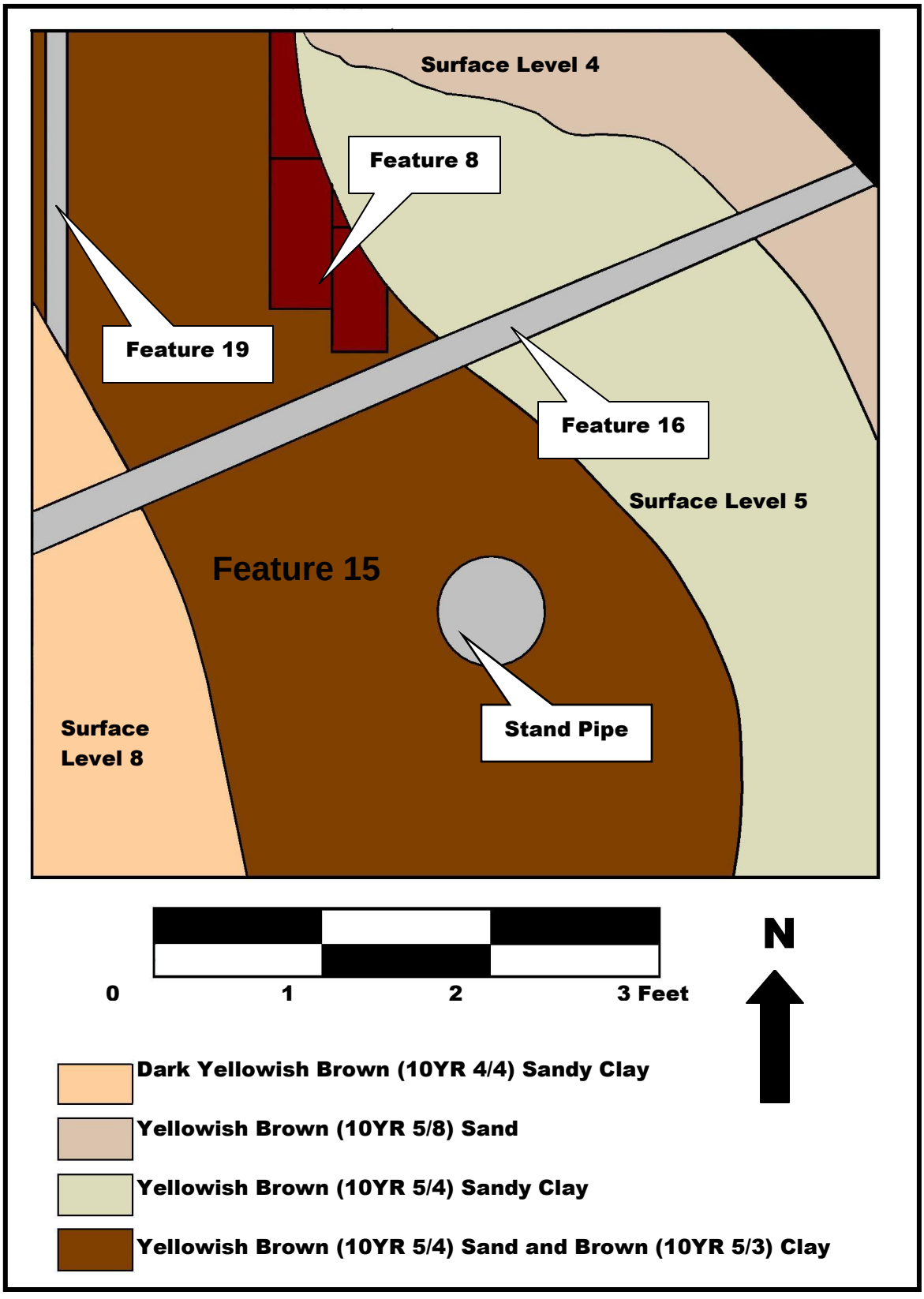


Figure 14: Unit 7, Base of Feature 15 and Level 3

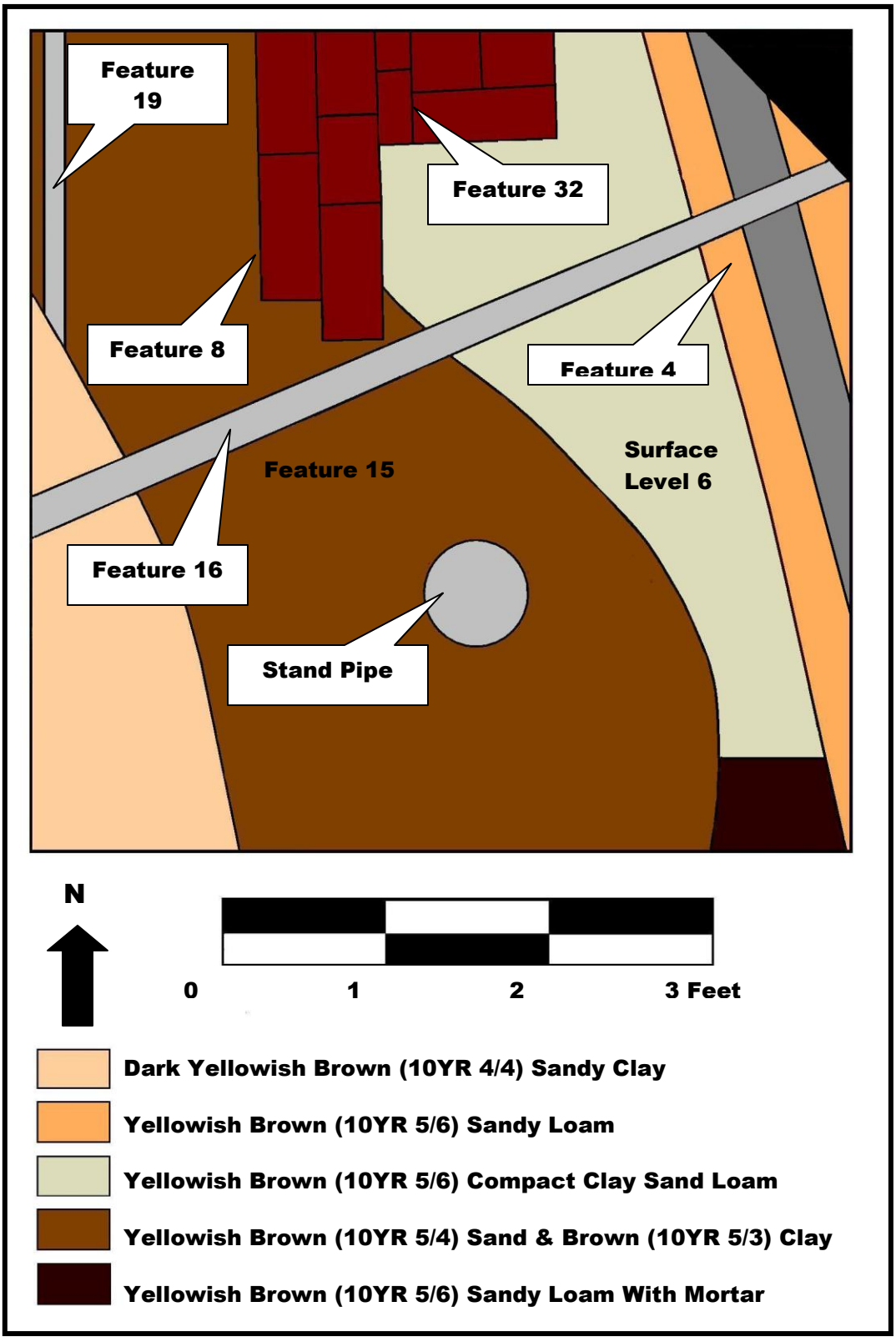


Figure 15: Unit 7, Base of Level 5

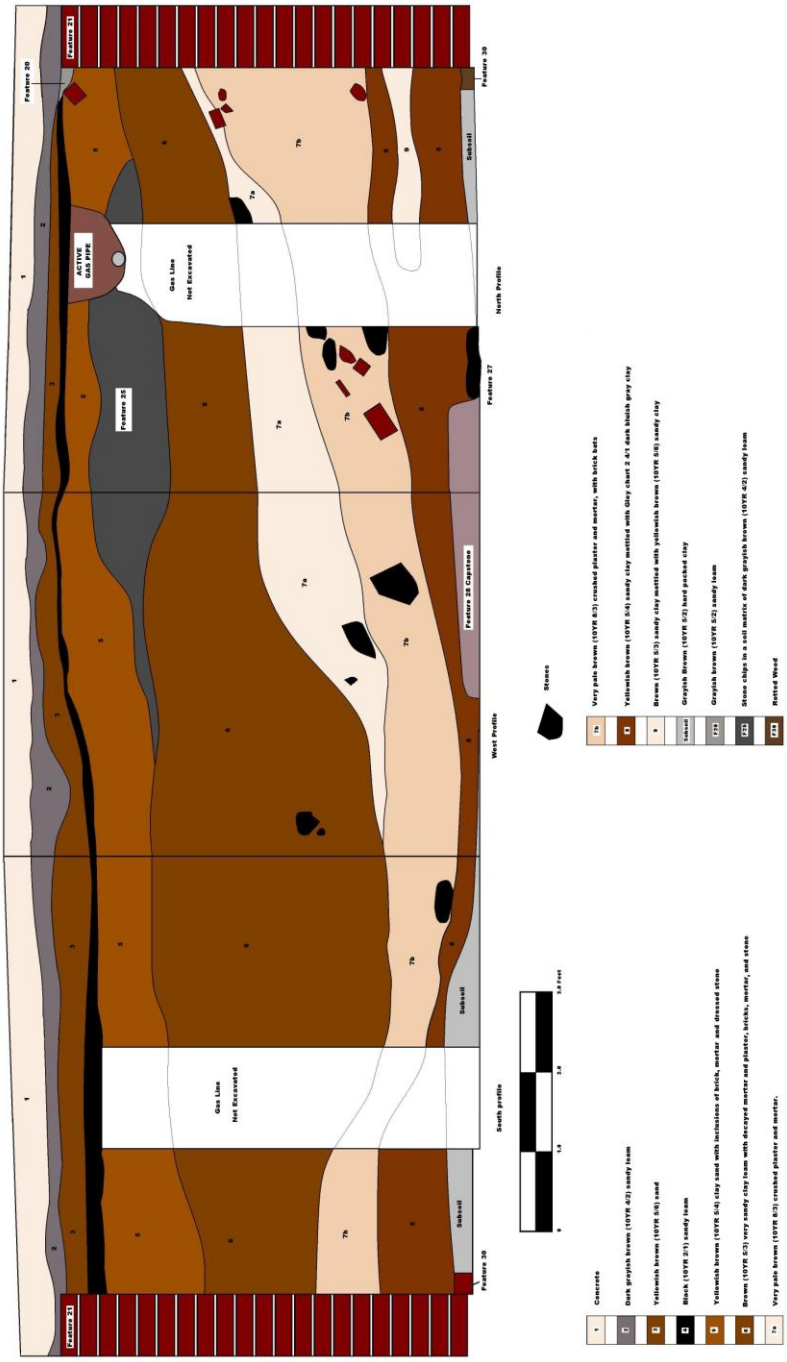


Figure 16: Unit 8, South, West and North Profiles.

Place holder for 11x17

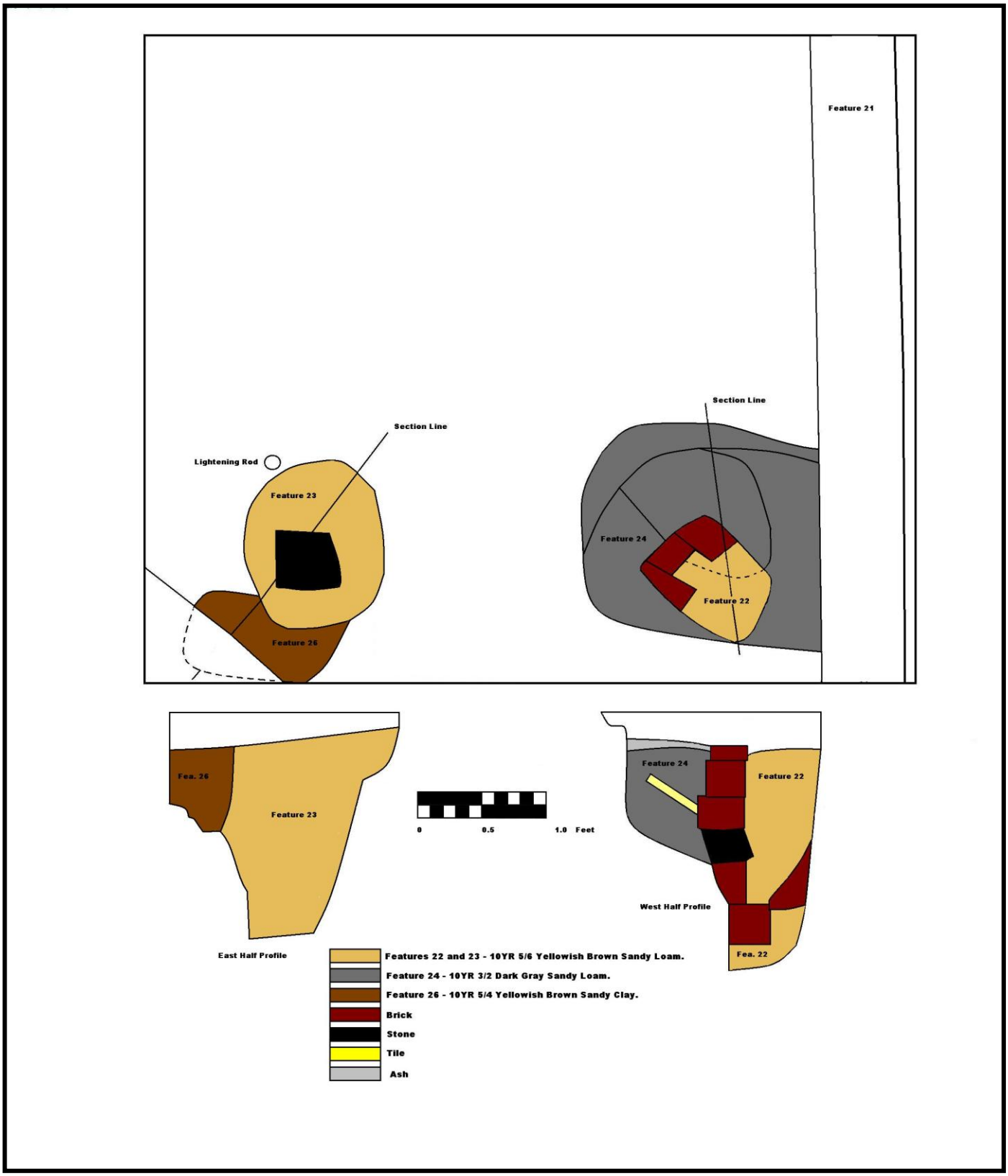


Figure 17: Plan View and Profiles of Features 22, 23, 24 and 26.

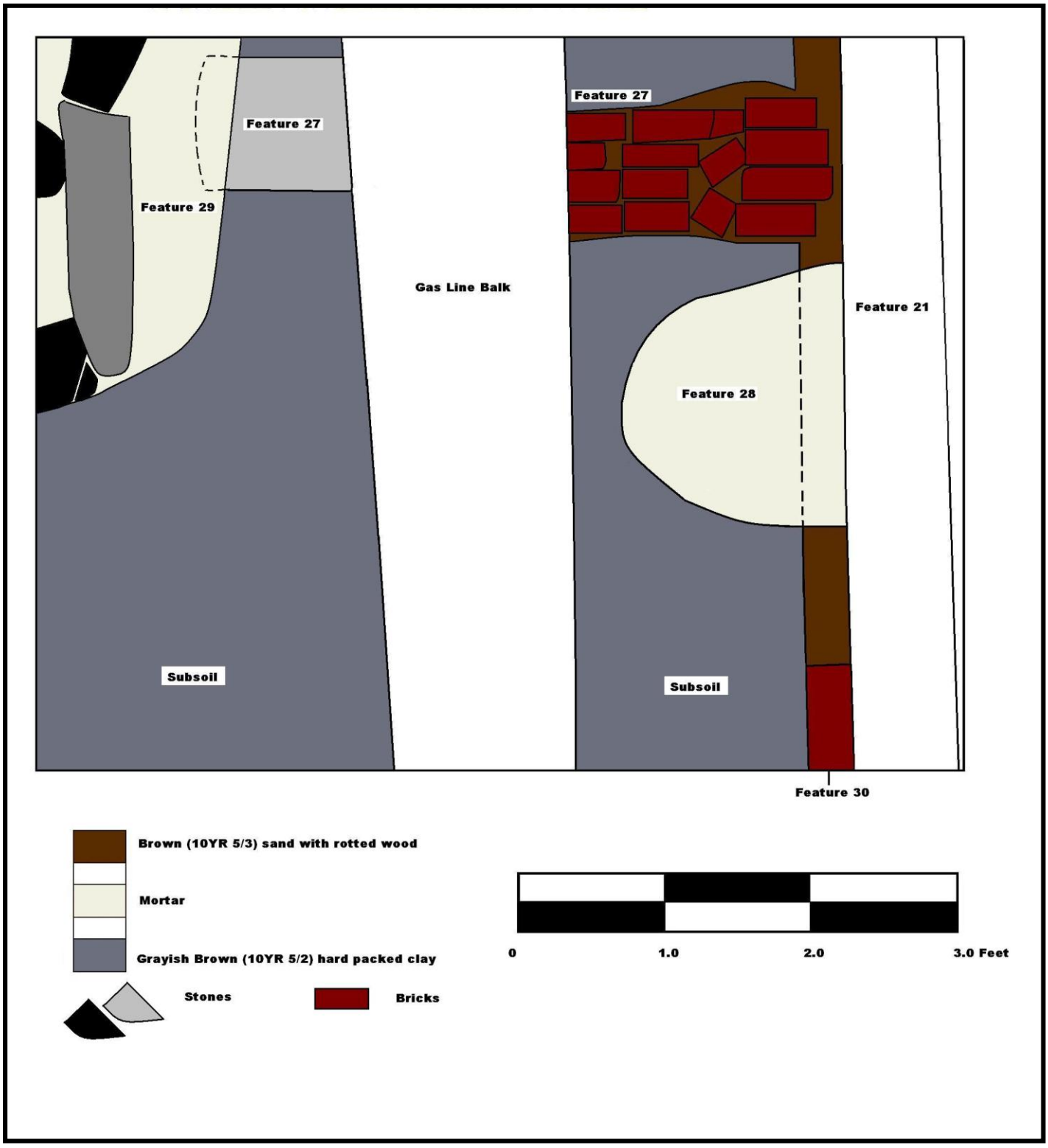
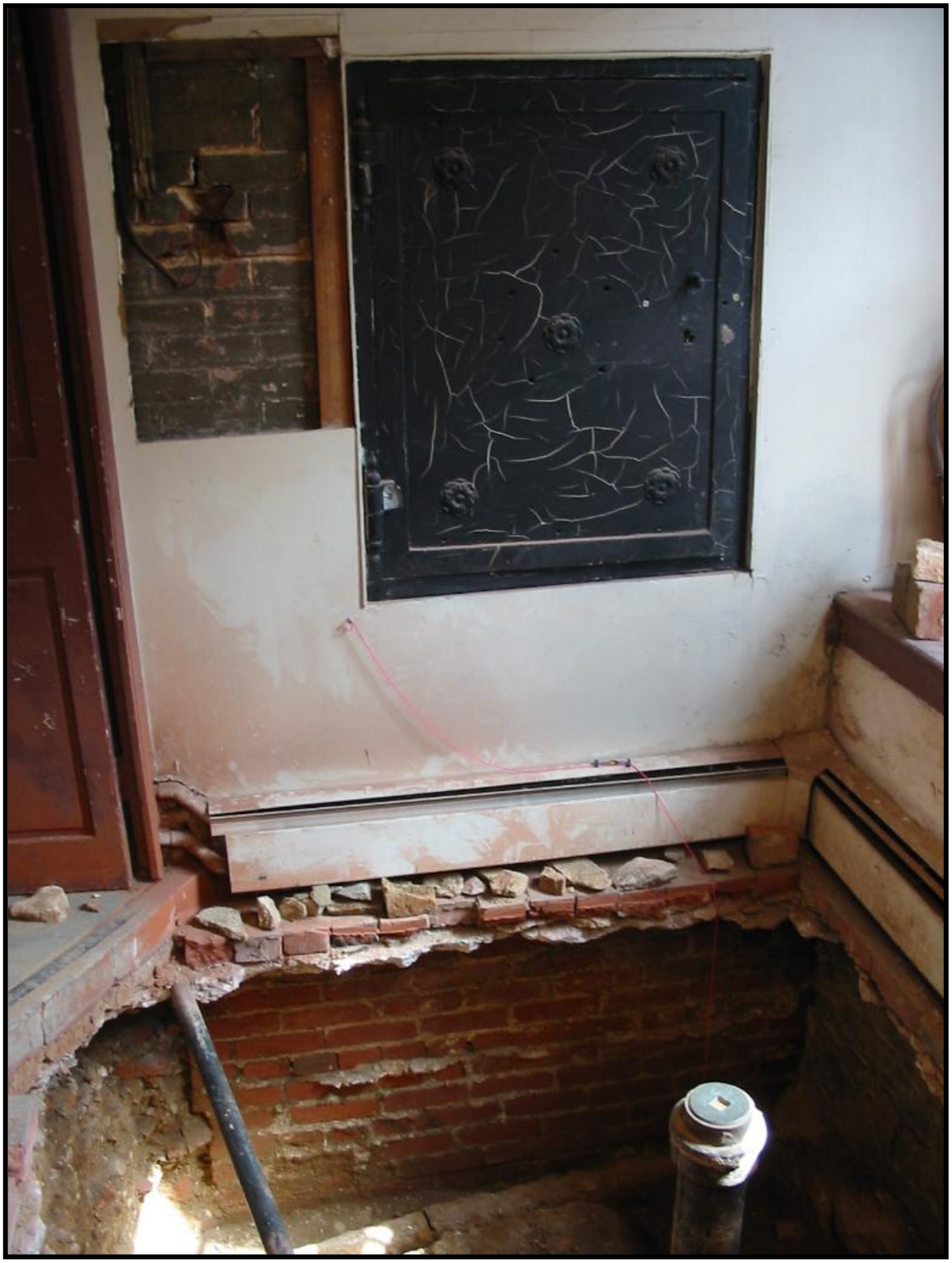


Figure 18: Base of Unit 8, Features 21, 27, 28, 29 and 30

10.0 PHOTOGRAPHIC PLATES

Photographic Plate 1: Unit 7, Features 8, 15, 16, 19, and 32. Photo facing north, 29 October 2008.



Photographic Plate 2: Unit 7, Feature 31 (brick wall) and the safe. Features 4 (the broken pipe), 15 (the clean out) and 16, the uppermost pipe, all also visible. Photo facing east, 19 September 2008.

Photographic Plate 3: Unit 8, Features 27 and 30 (Feature 21 is the brick wall on the right). Photo facing north, 20 November 2008.

Photographic Plate 4: Unit 8, Feature 29 (the *Dut*) after removal of capstone. The stone wall is the east wall of the 1860 addition after the east profile wall balk had been removed. Photo facing west, 5 November 2008.

Photographic Plate 5: Interior of Feature 29, the *Dut,* showing collapsed brick. Photo facing north, 24 November 2008.

Photographic Plate 6: Interior of Feature 29, the *Dut.* Photo facing west, 24 November 2008.

Photographic Plate 7: Exposed southeast corner of the *mikveh* house, Features 21 and 33. Photo facing east, 13 January 2009.

Photographic Plate 8: East (Feature 21) and south (Feature 33) walls of the *mikveh* house, Unit 8 is in the foreground. Photo facing south, 13 January 2009.

11.0 APPENDICES

11.1 INVESTIGATOR QUALIFICATIONS

Esther Doyle Read has over 30 years experience in archaeology that includes both prehistoric and historic era research. Her prehistoric experience includes Archaic, Woodland, and contact Period sites in the Middle Atlantic Coastal Plain, Piedmont, and Ridge and Valley Provinces. She has worked with Woodland Period materials in the Ohio and Mississippi Valley Culture areas, and with Archaic and Caddoan Period sites in East Texas. These Investigations have included Phase I, II, and III CRM projects, survey and testing projects for the development of predictive models in the Middle Atlantic Coastal Plain and Ridge and Valley Provinces, and synthesis of previous research for the development of a Multi-property nomination for the National Register of Historic Places. Ms Read's historic era experience includes 17th-century settlements in Maryland, 18th-century farmsteads, plantations, and towns in Maryland and Washington D.C., 19th-century plantations and farmsteads in the Mid-Atlantic, South, Mid-West, and East Texas and urban contexts spanning the 18th through the 20th century in Baltimore and Annapolis, Maryland. She has also directed the excavation of two late-18th- through early 19th-century cemeteries in Baltimore, Maryland. These investigations have included Phase I, II, and III CRM projects, research projects sponsored by universities and museums and summer field schools where she was the director. These projects also included the collection and synthesis of data for the production of Historic Contexts and of Multi-property and Historic District nominations to the National Register of Historic Places.

11.2 ARTIFACT CATALOG

18BC143, Lloyd Street Synagogue Project Season III, Artifact Catalog

Unit	Lvl	Fea	Lvl	Lot	Cat#	#	G	C	Type	Subtype	Part/Color	Comments
7		15	1	70	1	1	K	G	Machine Made Bottle Glass	Brown	Lip & Neck. Crown top	Beer
7		15	1	70	2	1	K	G	Machine Made Bottle Glass	Brown	Base. Owings Ring	Beer
7		15	1	70	3	3	K	G	Machine Made Bottle Glass	Brown	Body. Mold Seams	Beer
7		15	1	70	4	1	K	G	Machine Made Bottle Glass	Brown	Shoulder	Beer
7		15	1	70	5	1	K	C	Redware	Brown Lead Glazed	Base	Interior Glaze
7		15	1	70	6	1	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior Glaze
7		15	1	70	7	1	K	C	Domestic Buff Stoneware	Bristol Glaze	Shoulder	Same Vessel As 8
7		15	1	70	8	8	K	C	Domestic Buff Stoneware	Bristol Glaze	Body	Same Vessel As 7
7		15	1	70	9	1	K	C	Pearlware	Underglaze Transfer Print	Body. Blue	Negative Transfer Print
7		15	1	70	10	1	K	C	Later Refined Earthenware	Plain	Body	
7		15	1	70	11	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Body. Blue	
7		15	1	70	12	1	K	G	Machine Made Bottle Glass	Colorless	Lip & Neck. Crown top	
7		15	1	70	13	2	K	G	Machine Made Bottle Glass	Light Green	Body. Embossed	Soda or Mineral Water
7		15	1	70	14	1	K	G	Unidentified Bottle Glass	Colorless	Body.	
7		15	1	70	15	5	K	G	Unidentified Bottle Glass	Light Green	Body.	
7		15	1	70	16	2	K	G	Unidentified Bottle Glass	Green	Body.	
7		15	1	70	17	1	K	G	Unidentified Bottle Glass	Olive Green	Body.	
7		15	1	70	18	1	K	G	Unidentified Bottle Glass	Brown	Base.	
7		15	1	70	19	1	K	G	Table Glassware	Molded Tumbler	Press Molded.	Body, Colorless
7		15	1	70	20	3	K	B	Faunal Remains	Bone		
7		15	1	70	21	2	M	B	Faunal Remains	Bone		2 Rat Skulls
7		15	1	70	22	1	K	B	Faunal Remains	Oyster		
7		15	1	70	23	1	C	B	Shell	Button		2-hole
7		15	1	70	24	3	C	B	Shell	Button		4-hole
7		15	1	70	25	1	C	G	Glass	Shirt Stud		
7		15	1	70	26	1	C	M	Copper/Copper Alloy	Eyelet/Rivet		
7		15	1	70	27	1	P	M	Coins	Penny		1886
7		15	1	70	28	1	Z	C	Ceramics	Porcelain Dishes	Lid	
7		15	1	70	29	1	Z	G	Glass	Lamp Parts	Body	Chimney
7		15	1	70	30	1	Z	M	Storage	Tin Can		Can Key
7		15	1	70	31	7	Z	M	Storage	Crown Bottle Cap		
7		15	1	70	32	3	M	G	Miscellaneous Glass	Unidentified Flat Glass		White Milk Glass
7		15	1	70	33	1	A	C	Ceramics	Porcelain Tile		
7		15	1	70	34	2	A	S	Stone	Slate		
7		15	1	70	35	1	A	S	Stone	Molded Concrete		
7		15	1	70	36	1	A	M	Metal Hardware	Hinge		

7		15	1	70	37	4	A	M	Cut Nail	Fragment		
7		15	1	70	38	3	A	M	Wire Common Nail	Fragment		
7		15	1	70	39	3	A	G	Tinted Window Glass	>6 - 7 mm Thick		
7		15	1	70	40	2	A	G	Tinted Window Glass	>7 - 8 mm Thick		
7		15	1	70	41	3	A	G	Tinted Window Glass	>8 - 9 mm Thick		
7		15	1	70	42	1	A	G	Tinted Window Glass	>9 - 10 mm Thick		
7		15	1	70	43	2	A	G	Unidentified Flat Glass	Unidentified Flat Glass		Tinted, >10 mm Thick
7		15	1	70	44	1	A	G	Unidentified Flat Glass	Unidentified Flat Glass		Colorless, >10 mm Thick
7	2			71	1	1	K	C	Domestic Buff Stoneware	Bristol Glaze	Shoulder	Same Vessel as 2, 3, 4
7	2			71	2	2	K	C	Domestic Buff Stoneware	Bristol Glaze	Body	Same Vessel as 1, 3, 4
7	2			71	3	3	K	C	Domestic Buff Stoneware	Bristol Glaze	Body	Same Vessel as 1, 2, 4
7	2			71	4	1	K	C	Domestic Buff Stoneware	Bristol Glaze	Handle	Same Vessell as 1, 2, 3
7	2			71	5	1	K	C	Pearlware	Underglaze Transfer Print	Body	Negative Transfer Print
7	2			71	6	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Lid, Green	Floral
7	2			71	7	1	Z	M	Steel Hardware	Pen Nib		
7	2			71	8	2	Z	M	Storage	Crown Bottle Cap		
7	2			71	9	1	A	S	Stone	Slate		
7	2			71	10	2	A	G	Tinted Window Glass	>6 - 7 mm Thick		
7	2			71	11	1	A	S	Stone	Plaster		Sample
7	2			71	12	1	A	S	Stone	Painted Plaster		Sample
7	2			71	13	5	A	M	Cut Nail	Fragment		
7	2			71	14	1	A	M	Wire Common Nail	>4 - 4.5 Inches Long		
7	2			71	15	1	A	M	Metal Fasteners	Screw		Cuprous
7	3			72	1	1	K	C	Redware	Brown Lead Glazed	Rim	Interior Glaze
7	3			72	2	1	K	C	Later Refined Earthenware	Plain	RIm	
7	3			72	3	1	K	G	Unidentified Bottle Glass	Olive Green	Body	
7	3			72	4	1	T	C	Tobacco Pipe Stem	Molded Ball Clay 5/64	Makers Mark	Peter Dorni/Jan Prince Mends to Lot 74
7	3			72	5	1	A	S	Stone	Slate		
7	3			72	6	3	A	S	Stone	Painted Plaster		Sample
7	3			72	7	5	A	M	Cut Nail	>3 - 3.5 Inches Long		
7	3			72	8	3	A	M	Cut Nail	Fragment		
7	4			73	1	1	K	C	Redware	Brown Lead Glazed	Rim	Interior Glaze
7	4			73	2	1	K	C	Later Refined Earthenware	Plain	Body	
7	4			73	3	1	A	G	Tinted Window Glass	>5 - 6 mm Thick		
7		4	1	74	1	1	K	C	Domestic Buff Stoneware	Bristol Glaze	Base	Same Vessel as 2, 3, 4
7		4	1	74	2	2	K	C	Domestic Buff Stoneware	Bristol Glaze	Shoulder	Same Vessel as 1, 3, 4
7		4	1	74	3	5	K	C	Domestic Buff Stoneware	Bristol Glaze	Body	Same Vessel as 1, 2, 4
7		4	1	74	4	2	K	C	Domestic Buff Stoneware	Bristol Glaze	Body	Same Vessell as 1, 2, 3

7		4	1	74	5	1	K	C	Redware	Brown Lead Glazed	Body	Interior Glaze
7		4	1	74	6	1	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior Glaze
7		4	1	74	7	1	K	C	Pearlware	Edged	Marley, Blue	
7		4	1	74	8	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Rim, Blue	Geometric
7		4	1	74	9	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Body. Blue	Floral
7		4	1	74	10	1	K	G	Mold Blown Bottle Glass	Light Green	Lip, Blob Top	Loop Seal
7		4	1	74	11	1	K	G	Mold Blown Bottle Glass	Light Green	Kickup, Mold Seam	
7		4	1	74	12	1	K	G	Unidentified Bottle Glass	Colorless	Body, Embossed	
7		4	1	74	13	1	K	G	Unidentified Bottle Glass	Colorless		
7		4	1	74	14	2	K	G	Unidentified Bottle Glass	Olive Green		
7		4	1	74	15	4	K	B	Faunal Remains	Bone		
7		4	1	74	16	1	K	B	Faunal Remains	Fish Scales		
7		4	1	74	17	3	K	M	Utensils	Table Knife		Bone and Iron
7		4	1	74	18	1	C	B	Shell	Button		2-hole
7		4	1	74	19	1	C	M	Glass	Shirt Stud		
7		4	1	74	20	1	P	M	Coins	Penny		1942
7		4	1	74	21	1	T	C	Tobacco Pipe Stem	Molded Ball Clay 5/64		Peter Dorni/Jan Prince Mends to Lot 72
7		4	1	74	22	1	Z	G	Glass	Lamp Parts	Body	Chimney
7		4	1	74	23	2	Z	M	Storage	Crown Bottle Cap		
7		4	1	74	24	1	A	M	Cut Nail	>1 - 1.5 Inches Long		
7		4	1	74	25	1	A	M	Metal Fasteners	Screw		Cuprous
7		4	1	74	26	1	A	G	Tinted Window Glass	>6 - 7 mm Thick		
7		4	1	74	27	0	C	B	Leather	Fabric		Prayer Box Strips in JMM Refrigerator
7		4	1	74	28	0	Z	B	Biological Remains	Paper		Hebrew Letters in JMM Refrigerator
7	2			75	1	0	F	B	Floral Remains	Floor Cloth		10 or More Tiny Frags
7	5			76	1	1	K	C	Redware	Clear Lead Glazed, Plain	Rim	Interior Glaze
7	5			76	2	1	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior Glaze
7	5			76	3	1	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior/Exterior Glaze
7	5			76	4	1	K	C	Redware	Brown Lead Glazed	Base	Interior Glaze
7	5			76	5	1	K	C	Redware	Brown Lead Glazed	Body	Interior Glaze
7	5			76	6	2	K	C	Later Refined Earthenware	Underglaze Transfer Print	Body. Blue	Floral
7	5			76	7	2	K	C	Pearlware	Plain	Body	
7	5			76	8	1	K	C	Later Refined Earthenware	Plain	Rim	
7	5			76	9	1	K	C	Ironstone	Plain	Body	
7	5			76	10	1	K	G	Mold Blown Bottle Glass	Olive Green	Lip, Applied Lip	
7	5			76	11	3	K	G	Unidentified Bottle Glass	Olive Green	Body	

7	5			76	12	1	K	G	Unidentified Bottle Glass	Green	Body	
7	5			76	13	1	K	G	Mold Blown Bottle Glass	Light Green	Kickup Base With Pontil Mark	Glass Pontil Scar, Vial
7	5			76	14	1	K	B	Faunal Remains	Oyster		
7	5			76	15	1	A	S	Stone	Roofing Slate		Nail Hole
7	5			76	16	2	A	G	Tinted Window Glass	>6 - 7 mm Thick		
7	5			76	17	3	A	G	Tinted Window Glass	>7 - 8 mm Thick		
7	6			77	1	2	K	C	Redware	Clear Lead Glazed, Plain	Rim	Interior Glaze
7	6			77	2	2	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior Glaze
7	6			77	3	2	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior/Exterior Glaze
7	6			77	4	22	K	C	Redware	Brown Lead Glazed	Body	Interior Glaze
7	6			77	5	1	K	C	Redware	Thick Black Glzaed	Body	Interior Glaze
7	6			77	6	1	K	C	Redware	Plain	Base	
7	6			77	7	1	K	C	Later Refined Earthenware	Plain	Body	
7	6			77	8	1	K	G	Unidentified Bottle Glass	Green		
7	6			77	9	1	F	M	Metal Hardware	Knob		Cuprous
7	6			77	10	2	A	G	Tinted Window Glass	>6 - 7 mm Thick		
7	6			77	11	3	A	G	Tinted Window Glass	>7 - 8 mm Thick		
7	6			77	12	3	A	M	Cut Nail	Fragment		
7	6			77	13	1	A	M	Metal Fragments	Spike		
7	6			77	14	1	M	M	Unidentifiable Metal	Totally Unidentifiable Metal		
7		18	1	78	1	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Marley, Red	Geometric
7		18	1	78	2	1	K	G	Mold Blown Bottle Glass	Colorless		Square Bottle
7		18	1	78	3	1	K	B	Faunal Remains	Oyster		
7		18	1	78	4	1	A	G	Tinted Window Glass	>3 - 4 mm Thick		
7		18	1	78	5	2	A	G	Tinted Window Glass	>6 - 7 mm Thick		
7		18	1	78	6	3	A	M	Cut Nail	Fragment		
7		18	1	78	7	1	A	M	Cut Nail	Fragment		Attached To Brick
7	7			79	1	2	A	G	Tinted Window Glass	>4 - 5 mm Thick		
7	7			79	2	1	A	G	Tinted Window Glass	>5 - 6 mm Thick		
7	7			79	3	1	A	G	Tinted Window Glass	>6 - 7 mm Thick		
7	2W			80	1	1	K	B	Faunal Remains	Bone		
7	2W			80	2	2	C	B	Shell	Button		2-hole
7	2W			80	3	1	A	G	Tinted Window Glass	>6 - 7 mm Thick		
7	2W			80	4	1	A	G	Tinted Window Glass	>9 - 10 mm Thick		
7	2W			80	5	3	A	M	Unidentifiable Metal	Unidentified Iron Nail		
7	8			81	1	1	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior Glaze
7	8			81	2	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Body, Blue	Floral
7	8			81	3	1	K	G	Unidentified Bottle Glass	Brown	Body	

7	8			81	4	1	K	G	Unidentified Bottle Glass	Green	Body	
7	8			81	5	1	C	B	Shell	Button		2-hole
7	8			81	6	1	P	M	Coins	Penny		1859-1909
7	8			81	7	2	A	G	Tinted Window Glass	>6 - 7 mm Thick		
7	8			81	8	3	A	M	Cut Nail	Fragment		
8	2			82	1	7	K	G	Unidentified Bottle Glass	Colorless	Body	
8	2			82	2	1	K	G	Unidentified Bottle Glass	Olive Green	Body	
8	2			82	3	1	K	B	Faunal Remains	Oyster		
8	2			82	4	1	A	M	Wire Roofing Nail	>1 - 1.5 Inches Long		
8	2			82	5	2	A	G	Tinted Window Glass	>7 - 8 mm Thick		
8	2			82	6	1	A	G	Unidentified Flat Glass	Unidentified Flat Glass		
8	2			82	7	1	A	P	Plastic	Washer		
8	2			82	8	1	Z	M	Iron/Steel Construction Tools	Small Wedge		
8	2			82	9	1	Z	P	Plastic	Plexiglass Drafting Instrument		
8	2			82	10	1	M	B	Coal/Charocal	Coal		Sample
8		20	1	83	1	1	K	C	Yellow Ware	Rockingham/Bennington	Body	
8		20	1	83	2	1	K	C	Later Refined Earthenware	Plain	Body	
8	3			84	1	1	K	C	Later Refined Earthenware	Plain	Body	
8	3			84	2	1	K	G	Unidentified Bottle Glass	Light Green	Body	
8	3			84	3	1	K	G	Unidentified Bottle Glass	Brown	Body	
8	4			85	1	1	K	C	Redware	Brown Lead Glazed	Body	
8	4			85	2	1	K	C	Later Refined Earthenware	Plain	Body	
8	4			85	3	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Body, Brown	
8	4			85	4	1	K	G	Unidentified Bottle Glass	Colorless	Body	
8	4			85	5	1	K	G	Unidentified Bottle Glass	Olive Green	Body	
8	4			85	6	1	K	G	Unidentified Bottle Glass	Blue	Body	
8	4			85	7	5	A	S	Stone	Roofing Slate		
8	4			85	8	2	A	G	Colorless Window Glass	>7 - 8 mm Thick		
8	4			85	9	2	A	G	Tinted Window Glass	>8 - 9 mm Thick		
8	4			85	10	1	M	B	Coal/Charocal	Coal		Sample
8		22	1	86	1	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Rim, Blue	Mends to #2
8		22	1	86	2	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Body, Blue	Mends to #1
8		22	1	86	3	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Rim, Brown	Mends to #4
8		22	1	86	4	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Body, Brown	Mends to #3
8		22	1	86	5	3	K	C	Later Refined Earthenware	Plain	Rim	
8		22	1	86	6	2	K	C	Later Refined Earthenware	Plain	Body	
8		22	1	86	7	1	K	C	Later Refined Earthenware	Plain	Base	
8		22	1	86	8	1	K	G	Unidentified Bottle Glass	Olive Green	Body	
8		22	1	86	9	2	A	G	Tinted Window Glass	>6 - 7 mm Thick		

8		22	1	86	10	7	A	G	Tinted Window Glass	>7 - 8 mm Thick		
8		22	1	86	11	1	A	G	Colorless Window Glass	>7 - 8 mm Thick		
8		23	1	87	1	1	K	C	Later Refined Earthenware	Plain	Body	
8		23	1	87	2	1	K	G	Unidentified Bottle Glass	Olive Green	Body	
8		23	1	87	3	1	K	G	Unidentified Bottle Glass	Light Green	Body	
8		23	1	87	4	2	K	G	Unidentified Bottle Glass	Aqua	Body	
8		23	1	87	5	1	A	S	Stone	Roofing Slate		
8		23	1	87	6	1	A	M	Unidentifiable Metal	Unidentified Iron Nail		
8	5N			88	1	1	K	C	Redware	Brown Lead Glazed	Rim	Interior Glaze
8	5N			88	2	1	K	C	Redware	Brown Lead Glazed	Body	Interior Glaze
8	5N			88	3	1	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior Glaze
8	5N			88	4	3	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior/Exterior Glaze
8	5N			88	5	3	K	C	Yellow Ware	Plain	Body	
8	5N			88	6	2	K	C	Pearlware	Plain	Body	
8	5N			88	7	1	K	C	Later Refined Earthenware	Plain	Rim	
8	5N			88	8	1	K	C	Later Refined Earthenware	Plain	Body	
8	5N			88	9	1	K	C	Later Refined Earthenware	Plain	Base	
8	5N			88	10	1	K	G	Unidentified Bottle Glass	Olive Green	Body	
8	5N			88	11	1	K	B	Faunal Remains	Bone		
8	5N			88	12	2	K	B	Faunal Remains	Oyster		
8	5N			88	13	2	K	B	Utensils	Table Knife		Copper And Iron
8	5N			88	14	1	T	C	Tobacco Pipe Bowl	Molded Ball Clay		
8	5N			88	15	1	A	G	Tinted Window Glass	>5 - 6 mm Thick		
8	5N			88	16	2	A	G	Tinted Window Glass	>6 - 7 mm Thick		
8	5N			88	17	1	A	G	Colorless Window Glass	>6 - 7 mm Thick		
8	5N			88	18	1	A	S	Stone	Building Stone		Dressed Stone
8	5N			89	1	1	K	C	Redware	Brown Lead Glazed	Base	Interior Glaze
8	5N			89	2	1	K	C	Later Refined Earthenware	Flow Blue	Body	
8	5N			89	3	1	K	C	Later Refined Earthenware	Plain	Rim	
8	5N			89	4	2	K	C	Later Refined Earthenware	Plain	Body	
8	5N			89	5	1	K	C	Later Refined Earthenware	Plain	Base	
8	5N			89	6	1	K	G	Unidentified Bottle Glass	Olive Green	Body	
8	5N			89	7	5	A	G	Tinted Window Glass	>5 - 6 mm Thick		
8	5N			89	8	1	M	B	Coal/Charocal	Coal		Sample
8		24	1	90	1	1	K	C	Later Refined Earthenware	Plain	Body	
8		24	1	90	2	1	A	G	Tinted Window Glass	>5 - 6 mm Thick		
8		24	1	90	3	6	A	G	Tinted Window Glass	>6 - 7 mm Thick		
8		24	1	90	4	3	A	G	Colorless Window Glass	>7 - 8 mm Thick		
8		25	1	91	1	1	K	C	Pearlware	Underglaze Painted	Body, Blue	Floral

8		25	1	91	2	1	K	C	Pearlware	Edged	Rim, Green	Scalloped, Straight Lines
8		25	1	91	3	1	K	G	Unidentified Bottle Glass	Olive Green	Body	
8		25	1	91	4	1	K	B	Faunal Remains	Bones		
8		25	1	91	5	1	A	G	Tinted Window Glass	>6 - 7 mm Thick		
8		25	1	91	6	1	A	M	Unidentifiable Metal	Unidentified Iron Nail		
8		23	1	92	1	1	K	C	Later Porcelain/Hard Paste	Plain	Body	
8		23	1	92	2	1	K	C	Later Refined Earthenware	Plain	Body	
8		23	1	92	3	1	K	C	Ironstone	Plain	Rim	Chamber Pot
8		23	1	92	4	1	K	C	Ironstone	Plain	Body	
8		23	1	92	5	1	K	G	Unidentified Bottle Glass	Brown	Body	
8		23	1	92	6	1	Z	C	Ceramics	Marbles (Clay and Porcelain)		Clay
8		23	1	92	7	1	A	G	Tinted Window Glass	>4 - 5 mm Thick		
8		23	1	92	8	1	A	G	Tinted Window Glass	>9 - 10 mm Thick		
8		23	1	92	9	1	A	M	Unidentifiable Metal	Unidentified Iron Nail		
8		23	1	92	10	2	M	M	Unidentifiable Metal	Totally Unidentifiable Metal		
8		26	1	93	1	1	K	G	Mold Blown Bottle Glass	Olive Green	Lip, Tooled Lip	Mends to Lot 94
8		26	1	93	2	1	A	M	Unidentifiable Metal	Unidentified Iron Nail		
8	5E			94	1	2	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior Glaze
8	5E			94	2	1	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior/Exterior Glaze
8	5E			94	3	1	K	C	Later Porcelain/Hard Paste	Plain	Body	
8	5E			94	4	1	K	C	Pearlware	Annular	Rim, Blue	
8	5E			94	5	1	K	C	Pearlware	Edged	Rim, Blue	Scalloped, Curved Lines
8	5E			94	6	1	K	C	Pearlware	Edged	Rim, Blue	Scalloped, Straight lines
8	5E			94	7	1	K	C	Pearlware	Underglaze Transfer Print	Body, Blue	Chinese Pattern
8	5E			94	8	1	K	C	Pearlware	Underglaze Transfer Print	Body, Blue, Burned	Chinese Pattern
8	5E			94	9	1	K	C	Pearlware	Plain	Body	
8	5E			94	10	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Rim, Blue	Unknown Pattern
8	5E			94	11	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Body, Blue	Unknown Pattern
8	5E			94	12	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Body, Green	Unknown Pattern
8	5E			94	13	2	K	C	Later Refined Earthenware	Plain	Rim	
8	5E			94	14	1	K	C	Later Refined Earthenware	Plain	Body	
8	5E			94	15	1	K	G	Mold Blown Bottle Glass	Olive Green	Lip, Tooled Lip	Mends to Lot 93
8	5E			94	16	1	K	G	Unidentified Bottle Glass	Olive Green	Neck	
8	5E			94	17	1	K	G	Unidentified Bottle Glass	Brown	Body	
8	5E			94	18	1	K	G	Unidentified Bottle Glass	Light Green	Body	
8	5E			94	19	1	K	G	Table Glassware	Molded Table Glass	Press Molded.	Body, Light Green
8	5E			94	20	1	K	B	Faunal Remains	Oyster		
8	5E			94	21	1	Z	C	Redware	Plain	Base	Flower Pot
8	5E			94	22	3	A	S	Stone	Painted Plaster		Sample

8	5E	94	23	1	A	S	Stone	Roofing Slate		
8	5E	94	24	3	A	G	Tinted Window Glass	>5 - 6 mm Thick		
8	5E	94	25	1	A	G	Tinted Window Glass	>6 - 7 mm Thick		
8	5E	94	26	2	M	M	Unidentifiable Metal	Totally Unidentifiable Metal		
8	6E	95	1	1	K	C	Redware	Clear Lead Glazed, Plain	Base	Interior/Exterior Glaze
8	6E	95	2	4	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior/Exterior Glaze
8	6E	95	3	2	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior Glaze
8	6E	95	4	1	K	C	Redware	Brown Lead Glazed	Body	Interior Glaze Chip
8	6E	95	5	2	K	C	Industrial Stone Bottle	Grey, Salt Glaze	Body	Interior Brown Lead Glaze Same as #2 & Lot 96
8	6E	95	6	1	K	C	Yellow Ware	Plain	Rim	
8	6E	95	7	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Rim, Blue	Unknown Pattern
8	6E	95	8	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Body, Blue	Floral
8	6E	95	9	1	K	C	Later Refined Earthenware	Plain	Body	
8	6E	95	10	1	K	G	Mold Blown Bottle Glass	Olive Green	Lip, Tooled Lip	String Rim
8	6E	95	11	4	A	G	Tinted Window Glass	>5 - 6 mm Thick		
8	6E	95	12	2	A	G	Tinted Window Glass	>6 - 7 mm Thick		
8	6E	95	13	4	A	G	Tinted Window Glass	>7 - 8 mm Thick		
8	6E	95	14	2	A	M	Cut Nail	Fragment		
8	6E	95	15	1	A	M	Metal Fasteners	Staple		Very Large
8	7E	96	1	1	K	C	Redware	Clear Lead Glazed, Plain	Pour Rim	Interior/Exterior Glaze
8	7E	96	2	2	K	C	Industrial Stone Bottle	Grey, Salt Glaze	Body	Interior Brown Lead Glaze Cross Mend, Same As #3
8	7E	96	3	2	K	C	Industrial Stone Bottle	Grey, Salt Glaze	Body	Interior Brown Lead Glaze Same as #2 & Lot 95
8	7E	96	4	1	K	C	Later Refined Earthenware	Plain	Body	
8	7E	96	5	1	K	C	Yellow Ware	Rockingham/Bennington	Body	
8	7E	96	6	1	K	G	Table Glassware	Molded Tumbler	Blown in Mold	Rim, Colorless
8	7E	96	7	1	K	G	Table Glassware	Unidentified		Body, Colorless
8	7E	96	8	2	A	G	Tinted Window Glass	>5 - 6 mm Thick		
8	7E	96	9	1	A	G	Tinted Window Glass	>7 - 8 mm Thick		
8	7E	96	10	1	A	G	Tinted Window Glass	>8 - 8 mm Thick		
8	7E	96	11	6	A	M	Cut Nail	Fragment		
8	8E	97	1	5	K	C	Slipware	Combed Clear Slip	Rim	
8	8E	97	2	1	K	C	Domestic Grey Stoneware	Blude Decorated, Grey Salt Glaze	Handle	
8	8E	97	3	3	K	B	Faunal Remains	Bone		
8	8E	97	4	1	K	B	Faunal Remains	Oyster		Covered with mortar
8	8E	97	5	5	A	S	Stone	Slate		
8	8E	97	6	2	A	S	Stone	Painted Plaster		

8	8E	97	7	1	A	M	Cut Nail	Fragment		
8	8E	97	8	2	A	B	Floral Remains	Wooden Peg		
8	8E	97	9	1	M	M	Unidentifiable Metal	Totally Unidentifiable Metal		
8	6W	98	1	1	K	B	Redware	Refined Red, Glazed	Body	Interior/Exterior Glaze
8	6W	98	2	1	K	C	Redware	Brown Lead Glazed	Base	Interior Glaze
8	6W	98	3	1	K	C	Redware	Brown Lead Glazed	Body	Interior Glaze
8	6W	98	4	1	K	C	Slipware	Combed Clear Slip	Rim	
8	6W	98	5	2	K	B	Redware	Plain	Body	Slipped Exterior
8	6W	98	6	1	K	C	Redware	Brown Lead Glazed	Body	Interior Glaze, Bowl
8	6W	98	7	1	K	C	Pearlware	Edged	Rim, Blue	Scalloped, Curved Lines
8	6W	98	8	1	K	C	Pearlware	Underglaze Painted	Body, Blue	Bud
8	6W	98	9	2	K	C	Later Refined Earthenware	Underglaze Transfer Print	Base, Blue	Romantic View
8	6W	98	10	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Base, Blue	Partial Marker's Mark
8	6W	98	11	1	K	C	Later Refined Earthenware	Willow Pattern	Rim, Blue	Beaded Edge
8	6W	98	12	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Rim, Green	Floral, Scalloped Rim
8	6W	98	13	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Body, Brown	
8	6W	98	14	1	K	C	Later Refined Earthenware	Sprigged	Body, Red, Green	Tea Cup Rim
8	6W	98	15	1	K	C	Later Refined Earthenware	Plain	Rim	
8	6W	98	16	6	K	C	Later Refined Earthenware	Plain	Body	
8	6W	98	17	1	K	G	Mold Blown Bottle Glass	Olive Green	Kickup	Glass Pontil Scar
8	6W	98	18	2	K	G	Mold Blown Bottle Glass	Olive Green	Base With Pontil Mark Kickup	
8	6W	98	19	1	K	G	Mold Blown Bottle Glass	Olive Green	Body, 3-Part Mold	
8	6W	98	20	9	K	G	Unidentified Bottle Glass	Olive Green	Body	
8	6W	98	21	1	K	G	Unidentified Bottle Glass	Olive Green	Neck	
8	6W	98	22	1	K	G	Mold Blown Bottle Glass	Olive Green	Body	Case Bottle
8	6W	98	23	1	K	G	Unidentified Bottle Glass	Colorless	Body	
8	6W	98	24	2	K	G	Unidentified Bottle Glass	Light Green	Body	
8	6W	98	25	2	K	G	Unidentified Bottle Glass	Light Green	Kick-up	
8	6W	98	26	1	K	G	Unidentified Bottle Glass	Brown	Base	
8	6W	98	27	1	A	G	Tinted Window Glass	>7 - 8 mm Thick		
8	7W	99	1	1	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior/Exterior Glaze
8	7W	99	2	1	K	C	Later Refined Earthenware	Sponged	Body, Red	
8	7W	99	3	1	K	C	Later Refined Earthenware	Plain	Body	
8	7W	99	4	1	K	G	Unidentified Bottle Glass	Olive Green	Body	
8	7W	99	5	4	Z	C	Redware	Plain	Rim	Flower Pot
8	7W	99	6	1	K	G	Tinted Window Glass	>8 - 9 mm Thick		
8	7W	99	7	1	Z	M	Iron/Steel Hardware	Hook		

8	8W			100	1	1	K	C	Redware	Clear Lead Glazed, Plain	Body	Interior/Exterior Glaze
8	8W			100	2	1	K	C	Redware	Clear Lead Glazed, Plain	Base	Interior Glaze
8	8W			100	3	1	K	C	Slipware	Combed Clear Slip	Rim	
8	8W			100	4	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Base, Blue	Unknown Pattern
8	8W			100	5	1	K	C	Later Refined Earthenware	Willow Pattern	Rim, Blue	
8	8W			100	6	1	K	C	Later Refined Earthenware	Willow Pattern	Body, Blue	
8	8W			100	7	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Base, Blue	Floral
8	8W			100	8	1	K	C	Later Refined Earthenware	Sponged	Body, Blue	
8	8W			100	9	1	K	G	Table Glassware	Molded Tumbler	Press Molded.	Body, Colorless
8	8W			100	10	2	P	B	Biological Remains	Bone Toothbrush	Handle	
8	8W			100	11	1	A	G	Tinted Window Glass	>5 - 6 mm Thick		
8	8W			100	12	2	A	G	Tinted Window Glass	>6 - 7 mm Thick		
8	8W			100	13	2	A	G	Tinted Window Glass	>7 - 8 mm Thick		
8	8W			100	14	1	Z	M	Iron/Steel Construction Tools	Small Wedge		
8		30	1	101	1	1	K	C	Later Refined Earthenware	Underglaze Transfer Print	Rim, Blue	Molded Rim
8		30	1	101	2	1	K	G	Unidentified Bottle Glass	Olive Green	Body	
8		30	1	101	3	1	A	G	Tinted Window Glass	>4 - 5 mm Thick		
8		30	1	101	4	2	A	G	Tinted Window Glass	>6 - 7 mm Thick		
8		30	1	101	5	3	A	M	Cut Nail	Fragment		
8		30	1	101	6	1	M	B	Coal/Charocal	Charcoal		