TENNESSEE ARCHAEOLOGY

Volume 1 Summer 2005 Number 2

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On the Cover: Double Brick Chimney Foundation, Doak House, Courtesy Nicholas Honerkamp

EDITORS CORNER

Welcome to the second issue of *Tennessee Archaeology.* As with any new enterprise of this magnitude, growing pains are a given. We are pleased to note the overwhelmingly positive comments on Issue 1 – even the critical reviews were supportive and constructive. A good sign for the future, we hope. Since posting of the first issue electronically (August 13, 2004), over 1300 visitors have tapped that issue – an average of over 130 per month. The true test of our experiment in electronic journal "publishing" will be citation of these articles in print publications over the coming months.

We have added the "Editors Corner" section as a formal venue for communicating about the journal. Because we are an "electronic publication," we have no official mailing list and including such a section in this and future issues of the journal seems a necessary formality. While the e-publication of Volume 1, Issue 2 is slightly behind our projected schedule, the response by contributors for forthcoming issues has been excellent. We hope that readers will find the quality of our second issue was worth the wait. Our thanks to those that have already sent articles for upcoming issues – we welcome additional submittals that will help us keep future volumes more aligned with calendar years! Amongst other things, the "Editors Corner" also provides a "place" to include corrections to errors in previous issues (see our first below!) and to highlight special happenings in Tennessee Archaeology that may not merit an "article" or "research report" – but do deserve mention in a "published place."

"Sandy" *(Courtesy, Frank H. McClung Museum)*

On August 21, 2004 the U.S. Postal Service issued a 10-stamp-panel entitled *Art of the American Indian* commemorating the opening of the new Smithsonian National Museum of the American Indian. Out of the potentially millions of objects curated by the Smithsonian and museum affiliates, an image of one of Tennessee's most spectacular prehistoric artifacts was selected to be among the ten objects illustrated on the stamps. Curated by the Frank H. McClung Museum at the University of Tennessee, Knoxville, the featured artifact is a sculpted prehistoric Native American sandstone figure (ca. A.D. 1250) from the Sellars Farm archaeological site (40WI1) in Wilson County. Popularly known as "Sandy," this statue is one of the premier creations of prehistoric Native American artisans of Middle Tennessee.

Jeff Chapman introduces dignitaries at the McClung Ceremony (*Courtesy, Kevin E. Smith)*

The issue of this postage stamp was officially celebrated at two locations in Tennessee in August and September of 2004 – the McClung Museum and the Sellars Farm State Archaeological Area. On August 22, Dr. Jeff Chapman (Director, Frank H. McClung Museum) welcomed dignitaries

including Dr. John Peterson (UTK president), State Representative Stratton Bone, officials from Tennessee State Parks and the Department of Environment and Conservation, the Eastern Band of the Cherokee, and the Knoxville Philatelic Society. Postal officials were on hand to sell the new stamp sheet along with special commemorative cancels on cards and envelopes.

On September 11, the Friends of Sellars Farm sponsored "Native American Day: Honoring the Ancient Ones" as part of Tennessee Archaeology Awareness Week -- including a stamp dedication ceremony at the discovery site of “Sandy.” An estimated crowd of 250 people were welcomed by State Representative Stratton Bone. Mack Prichard (State Naturalist, Tennessee State Parks) discussed the history of acquisition of Sellars Farm State Archaeological Area when he served as State Archaeologist in the early 1970s. The stamp was unveiled after a presentation by Tracy Mofield, Lebanon Postmaster.

Unveiling of the stamp at Sellars Farm State Archaeological Area *(Courtesy, Kevin E.Smith)*.

“Sandy” has been honored in Tennessee for many decades – serving as the emblem for the former Tennessee Archaeological Society. The statute has also been featured in dozens of publications on Mississippian art. But, none of that can match the longevity and public visibility of a “U.S. Postage Stamp” – we are fortunate that this honor has raised awareness of Tennessee archaeology and the Sellars site nationally.

These events illustrate the importance of preserving the sites and objects from Tennessee’s prehistoric past for future generations. We hope that this journal will also contribute to a broader appreciation of the significance of the prehistoric and historic archaeological sites found throughout the State of Tennessee.

ERRATA

On page 35 of Volume 1, Issue 1, an incorrect citation was included in the references for Deter-Wolf 2004. One of the external reviewers noted this typographic error in comments, but the correction did not make it into the published article. The editors apologize for this oversight.

Incorrect Citation:

Johnson, Kay J. and Samuel O. Brookes
1989 Benton Points, Turkey Tails, and Cache Blades: Middle Archaic Exchange in the Midsouth. *Southeastern Archaeology* 8(2):134–145.

Correct Citation:

Johnson, Jay K. and Samuel O. Brookes
1989 Benton Points, Turkey Tails, and Cache Blades: Middle Archaic Exchange in the Midsouth. *Southeastern Archaeology* 8(2):134–145.

ARCHITECTURAL SEQUENCING AT THE SAMUEL DOAK PLANTATION, GREENEVILLE, TENNESSEE

Nicholas Honerkamp

Archaeological testing at the Samuel W. Doak plantation (40GN257), in Greeneville, Tennessee, resulted in the discovery of two extensive architectural features adjacent to an extant plantation house and the Doak "academy," or schoolhouse. Artifacts associated with both features (a large cellar and a brick footing and chimney base, respectively) indicate that they predate the initial construction dates of buildings documented for the site. This archaeological challenge to the archival version of the plantation's history has resulted in a more accurate but at the same time more complex reconstruction of the Doak occupation.

By all accounts, the Reverend Samuel Witherspoon Doak (1785-1864) was an unusual man (Figure 1). Besides being an indefatigable educator who established Tusculum College in Greeneville, Tennessee (Fuhrmann 1986:43-54), he was a respected minister and successful planter and landowner (who did not possess slaves according to the United States Census). He created an enduring impression upon the east Tennessee landscape through construction of several buildings on his plantation on the Tusculum campus. Most notably, about 1830 he built an impressive antebellum brick house that was continuously occupied by the Doak family until its transformation into the Doak House Museum in the 1970s (Figure 2). A college, "academy," or schoolhouse, was erected five years later near his residence (Doughty 1975:174-175); oral tradition has it that a restored version of this wooden building sits on its original limestone foundations approximately 40 m south of the main house (Figure 3). A restored springhouse about 60 m east of the academy building is the third extant structure that is possibly associated with the antebellum Doak occupation, although its exact construction date is unknown. Finally, a substantial stone-foundation wooden barn (now demolished) was built northwest of the main house in an area that is currently used as a gravel parking lot.

Tusculum College plans to expand the current museum parking lot, put in new roads, landscape the surrounding area, and upgrade utilities. As part of the pre-construction planning process, George Collins, Director of Tusculum's Museum Program and Studies, requested that the University of Tennessee at Chattanooga's (UTC) Jeffrey L. Brown Institute of Archaeology undertake archaeological

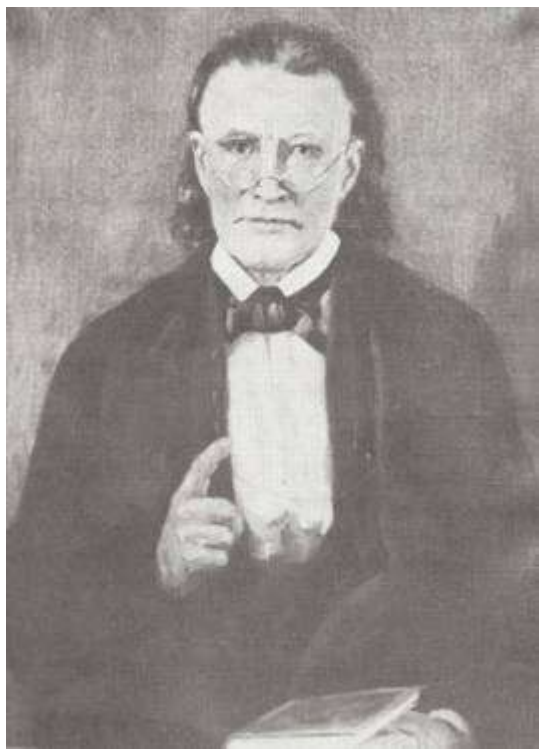

FIGURE 1. Samuel W. Doak (*Courtesy, Doak House Museum)*

FIGURE 2. The Doak House Museum, facing northwest.

survey and testing prior to any earth-moving activities. The initial project goals were to identify historic fence lines, roadways, outbuildings, and other landscape elements on the property in order to avoid destroying significant archaeological resources. An archaeological field school supervised by the author carried out a survey and testing program at the site during the summers of 2003 and 2004. These excavations revealed a much more complex record of past behavior than that derived from documents alone, and they illustrate the value of combining above- and below-ground lines of evidence for elucidating an accurate reconstruction of the past.

Site Setting

The Doak House property is bounded on the south and west by Frank Creek, on the north by Erwin Highway, and on the east by a private residence (Figure 4). This area measures roughly 140 m east-west by 150 m north-south. According to the Greene County Soil Survey (USDA 1958), there are three main types of soils appearing in the project area. A small area of Greendale silt loam appears in the north section of the site that was not surveyed. Adjacent to Frank Creek is a zone of alluvial soil known as Lindside silt loam, which is ultimately derived from eroded limestone. Although these types of soils are high in fertility (especially for growing corn and hay), water drains off slowly during periods of wet weather (such as the summer of 2003), somewhat reducing the potential for tillage. Also present in the east part of the site is Dewey silty clay loam, which characteristically develops under a deciduous forest cover and is described as well suited to the crops of the region. Except for an area just east of the main house, the site contains only scattered

FIGURE 3. The Doak Academy. Left: Undated 19th century photograph, facing southeast (*Courtesy Doak House Museum)*. Right: The restored academy today, facing southeast. A stone chimney has replaced the earlier brick version.

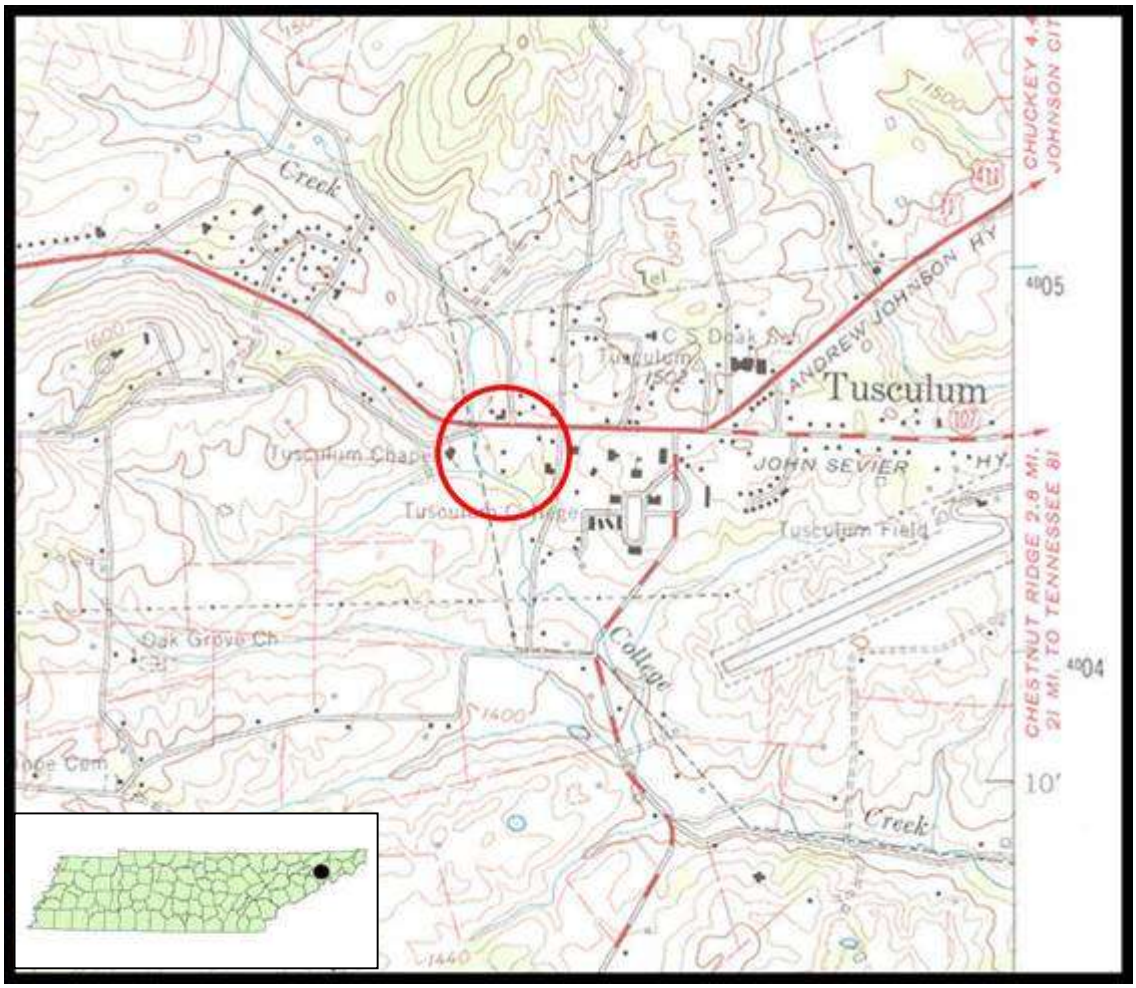

FIGURE 4. Doak Site Vicinity Map (From 1961 USGS Greeneville, TENN 181 - NE Quadrangle).

trees. Today the well-manicured lawn around the Museum belies the active agrarian life of the site that is documented by both archival and direct archaeological evidence of farming. Several historic photographs show either fields or fences in the area between the academy and main house (Figure 5), and the archaeologists positively identified plow scars in two excavation units.

Rather than fronting the relatively recent Erwin Highway as most visitors assume, the original primary entrance of the house faced south toward the academy. It is believed that an early road was located in this vicinity, although no trace of it is evident today, either visually or in a total-station-generated contour map; identifying subsurface remains associated with the hypothesized road south of the main house was an important goal during the initial fieldwork.

Initial Survey and Testing

During 2003, a total of 30 survey units, each measuring ½ m square, were excavated to sterile. As shown in Figure 6, most of the survey units were placed around the main house, academy, and the "front yard" area between these two primary buildings. Besides providing a sense of the general stratigraphy at the site, the survey identified several areas of

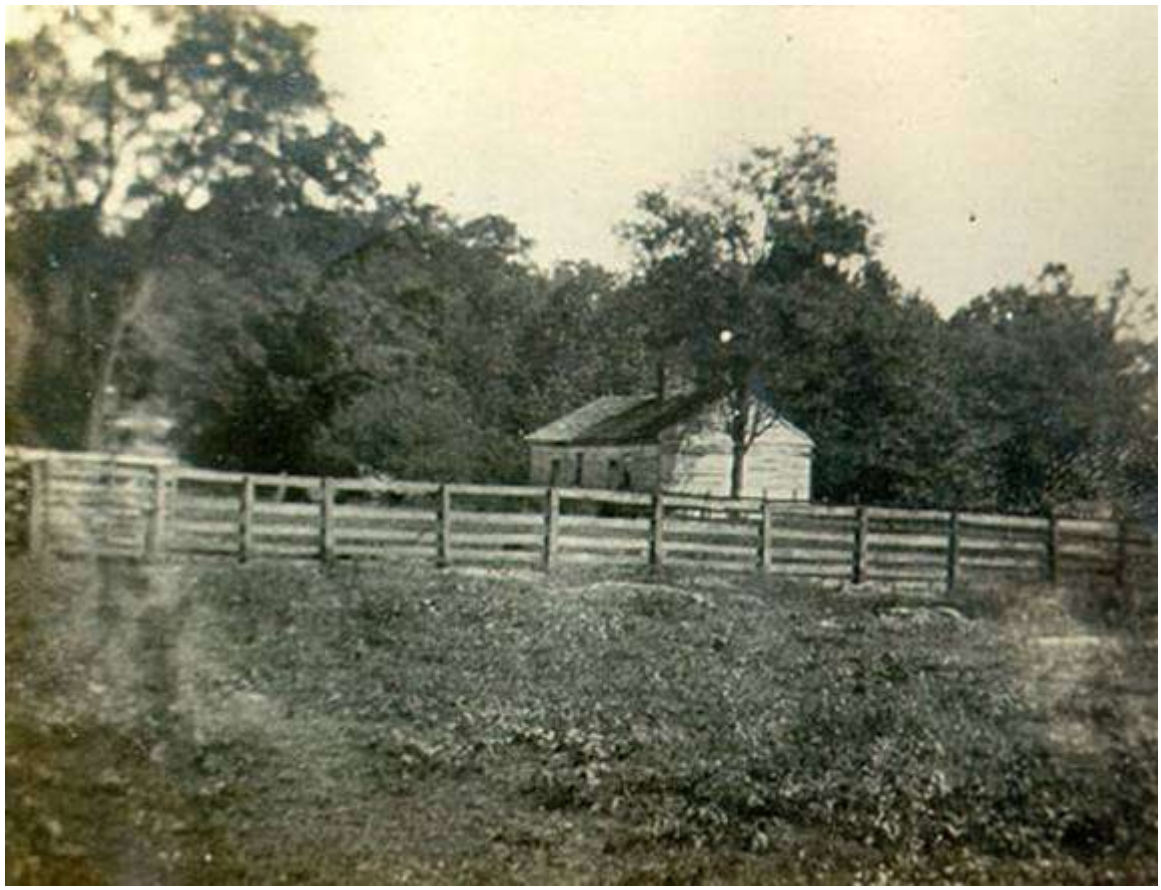

FIGURE 5. Doak Academy and Fences. Undated photograph, facing southeast (*Courtesy, Doak House Museum)*.

high archaeological potential based on artifact densities and/or the presence of features. These areas were investigated further through the excavation of a series of test units, most of which measured 1 x 2 m. A total of 12 square meters of area was opened with these screened tests; a small unscreened unit was also dug on the northwest corner of the extant main house ell in order to determine if the foundations had been restored.

Five trenches of various sizes were dug through a combination of backhoe and hand labor. The trenching was carried out to identify the suspected road, search for early fence lines, and establish the presence of a foundation associated with an earlier extension of the ell; just over 110 square meters of the site area was investigated in this manner. While fence lines and the "missing" ell foundation were uncovered, no trace of the road was seen. The failure to discern any remnant of this feature may be a consequence of either (1) extensive, long-term plowing that has occurred over much of the site, obscuring subsurface manifestations of a road, or (2) the archaeologists were looking in all the wrong places. This second possibility stems from the fact that nineteenth century houses were often located quite close to roads, and the 2003 test trenches may simply have been placed too far south to intercept one that was directly adjacent to the front of the house. A backhoe trench located closer to the main house is needed in order to test this "near-road" hypothesis.

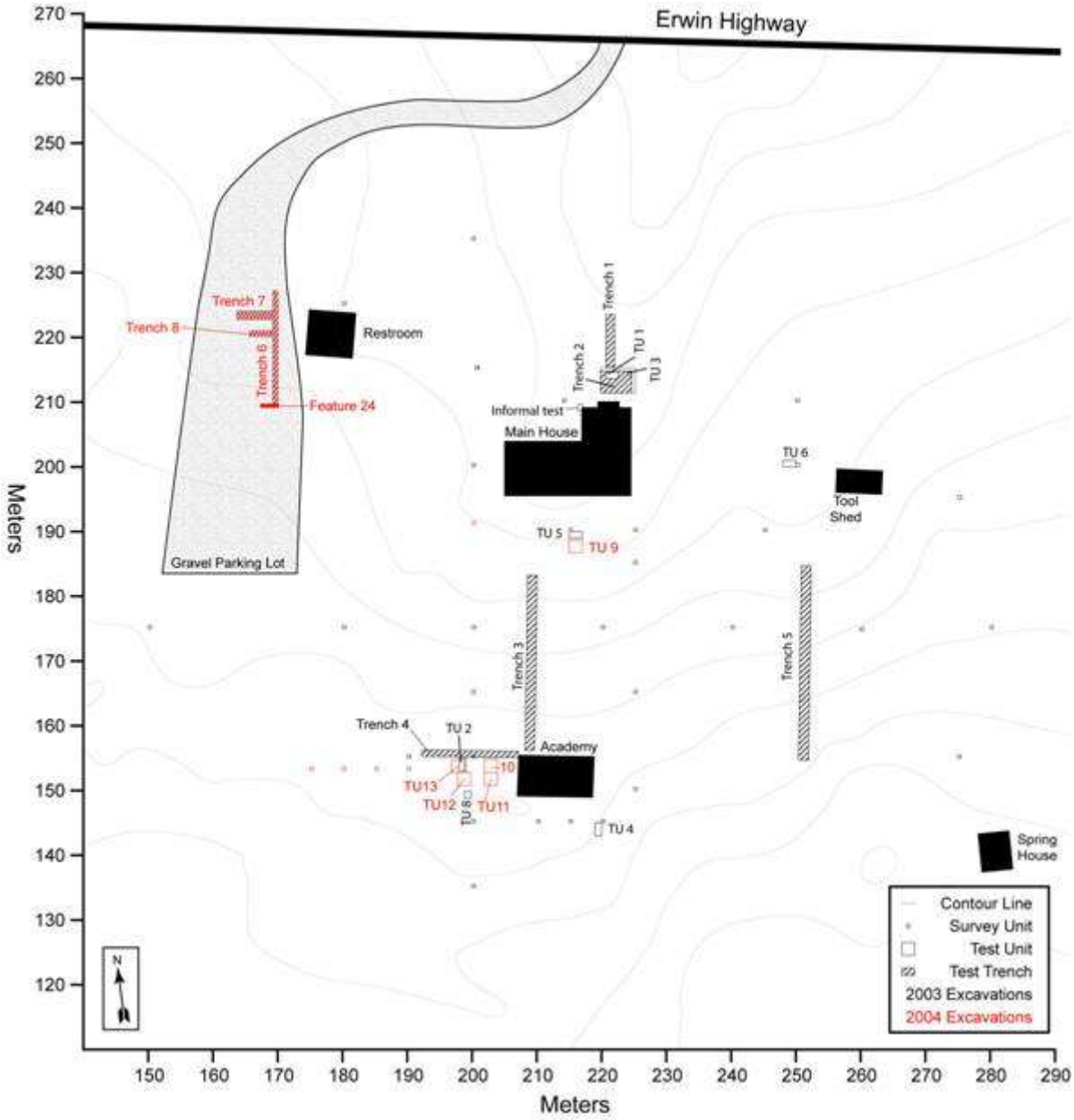

FIGURE 6. Plan of Excavations, Doak Site.

Numerous features and over 8000 artifacts were generated from the 2003 survey and testing (Honerkamp 2003). Based on these results, two areas warranted additional investigation in 2004: a possible cellar was uncovered approximately six meters south of the center of the main house, and a brick foundation and robber's trench was noted five meters west of the present academy. As a consequence, the 2004 field season was devoted primarily to exploring the structure, function, and temporal affiliations of these undocumented features. In addition, a series of backhoe test trenches were excavated in the gravel parking lot adjacent to the mansion as part of an unsuccessful attempt to

establish the footprint of the extensive barn that once occupied the site northwest of the main house; a limestone foundation (Feature 24) was uncovered, but no companion walls were exposed.

During both field sessions, the field school students participated in the educational program of the Doak House Museum by leading interpretive tours for visiting school groups. Each four-week field session was followed by approximately ten weeks of artifact cleaning, classification, analysis, and report preparation using students enrolled in a summer independent studies class.

Testing Results: The Manor

Excavation of a survey unit located directly in front of the house and midway between its two front doors revealed an intriguing deposit of brick rubble (if rubble can be said to possess any intrigue). A 1 x 2 m test unit (TU) was placed adjacent to the survey pit. Designated as TU 5, it was oriented east-west and dug in arbitrary 10-cm levels to further investigate the rubble-filled feature. Figure 7 shows two distinct fill events of demolition debris that appear in the south wall of the unit, separated by a layer of clay and scattered brick and mortar fragments. The demolition zones were composed of large brickbats, smaller fragments of brick and mortar, and in the upper right section of the rubble deposit, foundation stone fragments. While the presence of such a deposit was unexpected, an even more surprising discovery was the depth of the feature -- over a meter of fill was excavated. Only in the northwest corner of the unit was sterile reached sooner, at about 60 cm. The lower 80 cm of the fill contained only two small transfer printed whiteware sherds and four fragments of patinated window glass. Further corroboration that this was indeed a demolition deposit and not a trash pit was seen in the large number of cut nails (n=114) associated with it. Although 31 wire nails were also recovered, these temporally later artifacts were restricted to the upper two levels.

The depth of this feature, the brick rubble within, the sloping, uneven floor, and the absence of domestic debris presented a puzzling interpretive scenario. While this feature could have a modern origin, the complete absence of

FIGURE 7. South Profile, TU 5. Two demolition layers containing brick rubble are apparent, as is a heavy charcoal concentration on the east profile to the far left.

FIGURE 8. South Profile of TU 9. The limestone fragment in the sterile floor of the southeast corner is natural and not associated with the cellar fill. A PVC pipe for a live elctrical line appears in the foreground. Scales = 50 cm.

even a single twentieth century artifact in the bottom 80 cm of the deposit and the lack of obvious backhoe excavation scars argue against this attribution. Instead, this feature is interpreted as a basement or root cellar associated with a demolished brick structure that must predate the main house, since building a substantial brick structure directly in front of the main house makes little sense. However, there is currently not a shred of archival evidence supporting the presence of any structure prior to the construction of Samuel W. Doak's mansion. This documentary lacuna highlights the tension between negative documentary evidence (no mention of an earlier house) versus positive archaeological evidence to the contrary (a hole in the ground that was probably dug and filled in the early nineteenth century) that can occur at historic sites. There are myriad reasons why documentary data might not be available, but far fewer ways to account for why this feature exists.

In an attempt to define the horizontal and vertical limits of the feature and to collect a larger artifact sample, a 2 x 2 m square was excavated 30 cm to the south of TU 5. Once the sod was removed, excavation occurred in 10-cm levels, with all fill screened using ¼ inch mesh. Due to the nature of the fill in this unit (TU 9), which was composed entirely of clay, brick and mortar rubble, and large limestone fragments, the excavation and screening proceeded slowly and was labor intensive, requiring the use of pickaxes to loosen the compacted rubble (Figure 8). The uneven floor bottomed out at 1.13 m below surface in the southeast corner of the unit.

Eight wire nails and 75 cut or square nails were recovered in the top two excavation levels (extending about 22 cm below surface), including those from a shallow ditch-witch trench for a PVC utility line. According to Adams (2002), wire nails begin to be commonly used in the mid-1880s, which establishes a *terminus post quem* for this disturbed context. Also supporting this general date is the presence of coal and clinker in the top two levels but only charcoal in the lower levels. Coal is a hallmark fuel for domestic heating and even cooking in the late nineteenth and early twentieth centuries, although it was also used earlier. In addition, four pieces of plastic were gleaned from the top level. None of the 68 ceramic artifacts, composed of five lead glazed earthenware sherds, eight plain pearlware, four blue transfer printed pearlware, and 51 whiteware plain (23) and decorated (28) sherds provide a later *terminus post quem* than the nails. The bottom eight levels were almost completely devoid of ceramics, and as with the adjacent 1 x 2 m unit (Honerkamp 2003:17), scant historic artifacts of any kind were associated with the lower portion of the fill. Cut and square nails comprised the majority (79) of the total artifacts in the lower zones, with only 11 glass fragments being recovered, five of which were patinated window glass from the lowest level. Also recovered from this bottom context was a single bone button (FS 111 in Figure 9); three small and badly eroded iron buckle fragments came from Level 4. The single small sherd that was found was identified as transfer printed whiteware. Like the two sherds found in TU 5, it establishes a *terminus post quem* of 1826 for the filling of this feature (Bartoviks 1981).

Surprisingly, a whopping 539 flint artifacts were recovered from this unit, including five utilized flakes, a partial Greenbriar point and a nearly complete Hamilton point (Figure 10, FS 98), and a partial quartz scraper. Debitage made up

FIGURE 9. Bone Artifacts. Top, left to right: five hole buttons, FS 90, 111; four-hole button, FS 109; button halves, FS 123 (striated), 100. Bottom: broken nit comb, FS 95; engraved fork handle, FS 90.

FIGURE 10. Partial Projectile Points. Top left: probable Hamilton point, FS 98; probable Madison point base, FS 128. Bottom left: possible Greenbriar point, FS 98; unidentified point, FS 102.

the rest of the flint assemblage. These artifacts are clearly prehistoric in origin, and when added to the 235 flint fragments found in the 1 x 2, they present a remarkably high frequency, suggesting the presence of a tool manufacture-modification area that had been disturbed and redeposited with the historic fill. The quartz scraper is surely associated with the Archaic Period, as is the possible Greenbriar point, while the Hamilton is fairly firmly established in the Late Woodland (Cambron and Hulse 1990:58, 64). The flint artifacts were scattered throughout the nine excavated levels of TU 9, although the vast majority (87%) came from Levels 2 and 3.

The presence of mostly architectural-associated artifacts (nails) and the marked absence of domestic artifacts (ceramics and vessel glass) from the TU 9 feature fill once again underscores how "clean" this fill is. Using South's (1977) Mean Ceramic Date (MCD) formula on the 39 applicable upper-level sherds, a date of 1839.5 was calculated. When plain whiteware sherds are used in the calculation—a type that is notoriously inexact when used in an MCD formula because it is virtually indistinguishable from ironstone and therefore possesses a late midpoint date—the MCD is 1845.6. That the disturbed upper levels of the unit would produce a "late" MCD should not come as a surprise, given the occurrence of wire nails and plastic in the same levels. Once the feature was filled with demolition materials, this area was apparently used for Brunswick-style refuse disposal (South 1977), as indicated by nearly all the ceramics and most of the glass that was confined to Levels 1 and 2. Alternatively, the upper part of the cellar may have been filled with soils from another part of the site that already contained secondary refuse, as well as the lithic assemblage mentioned above.

Although it was assumed that the edge of the feature would be encountered in the 2 x 2 m unit, such was not the case. Instead, the feature extended an unknown distance beyond the limits of TU 9. This indicates that its north-south dimension is in excess of 3.30 m; the east–west dimension is still unknown, and is in excess of two meters. The brick and mortar rubble marks the presence of a demolished brick structure, and the

FIGURE 11. Partial Brick Foundation and Associated Robber's Trench. Facing west in Trench 4; note intrusive modern postholes in the foreground.

limestone indicates that at least some foundation elements mirrored the architectural components of the main house. It should also be noted that 21 fragments of glazed brick were found in the unit, indicating the presence of a fireplace. As was also recorded in the earlier 1 x 2 m test, the floor of the feature was uneven and sloped down to the south and east. An uneven clay floor is also present in the basement of the Doak House today. The sloping nature of the floor is illustrated in Figure 8. The compact rubble fill, complete with hefty limestone foundation stone fragments, is composed of brick and mortar materials similar to the extant main house.

A charcoal deposit occurs in the bottom of the north and east profiles along with scattered flecks of charcoal in the east profile. Charcoal was also visible in the east profile of TU 5 (see also Figure 7). After excavating to sterile deposits, none of the TU 9 profiles (including the south profile illustrated in Figure 8) presented a clear lens of charcoal, so it is doubtful that the structure associated with this possible cellar burned down.

In summary, the excavation of two test units established that the dimensions of this possible cellar exceeds 3.3 x 2 x 1 m, and that the lower cellar fill is devoid of any artifacts that would establish a modern origin. Additional testing will be required to find an edge—any edge—to this enigmatic feature. The hypotheses generated in 2003 remain stubbornly viable: this feature represents the cellar of a substantial brick structure that was demolished and filled in, and it predates the main house. Additional testing is needed to confirm or deny these

interpretations.

Testing Results: The Academy

The search for fence lines in 2003 proved much more fruitful than the search for a road. Numerous postholes were discovered in Trench 4, which targeted an east-west fence aligned to the academy's north wall that had appeared in several Victorian-period photographs of the site. More importantly, part of a brick foundation and an associated builder-robber's trench were revealed (Figure 11). Since no other structures are documented west of the academy, these features were completely unexpected. The robber's trench that the foundation segment was situated in was aligned to the north wall of the present academy, although the precise stratigraphic relationship of the trench and the academy foundation was obscured by a modern concrete pad under the academy's northeast corner. At any rate, this close alignment between a present structure and a former structure suggested they were related and possibly conjoined at one time.

A 1 x 2 m test pit designated as TU 2 was excavated and screened to sterile approximately nine meters west of the academy. It produced a large amount of brick and mortar demolition rubble, along with ceramics that suggested disposal from the first half of the nineteenth century; a mean ceramic date (MCD) of 1842.5 was calculated for this unit on the 54 sherds (T= 89) that were found. This was significantly earlier than the 1852.4 MCD (derived from 123 of 154 sherds) generated from a midden deposit encountered in a 1 x 2 m unit located five m from the back door (south) of the extant academy. Along with the mystery foundation that was aligned with the extant academy, this dating information raised a strong possibility that there may have been an *earlier* academy—or some other structure, such as a dormitory—and that the extant academy was built directly adjacent to the earlier building. When Director George Collins identified a possible door in the Victorian-era photograph of the west wall of the academy (Figure 3, top), this suggested a possible entranceway between the two structures.

The 2004 fieldwork at the west end of

FIGURE 12. Double Chimney Foundation (Features 11 and 12). Features 1 and 2 appear in Trench 4 in top left corner. A linear rodent burrow stain is seen extending east from the right chimney hearth (Feature 11). Facing northeast.

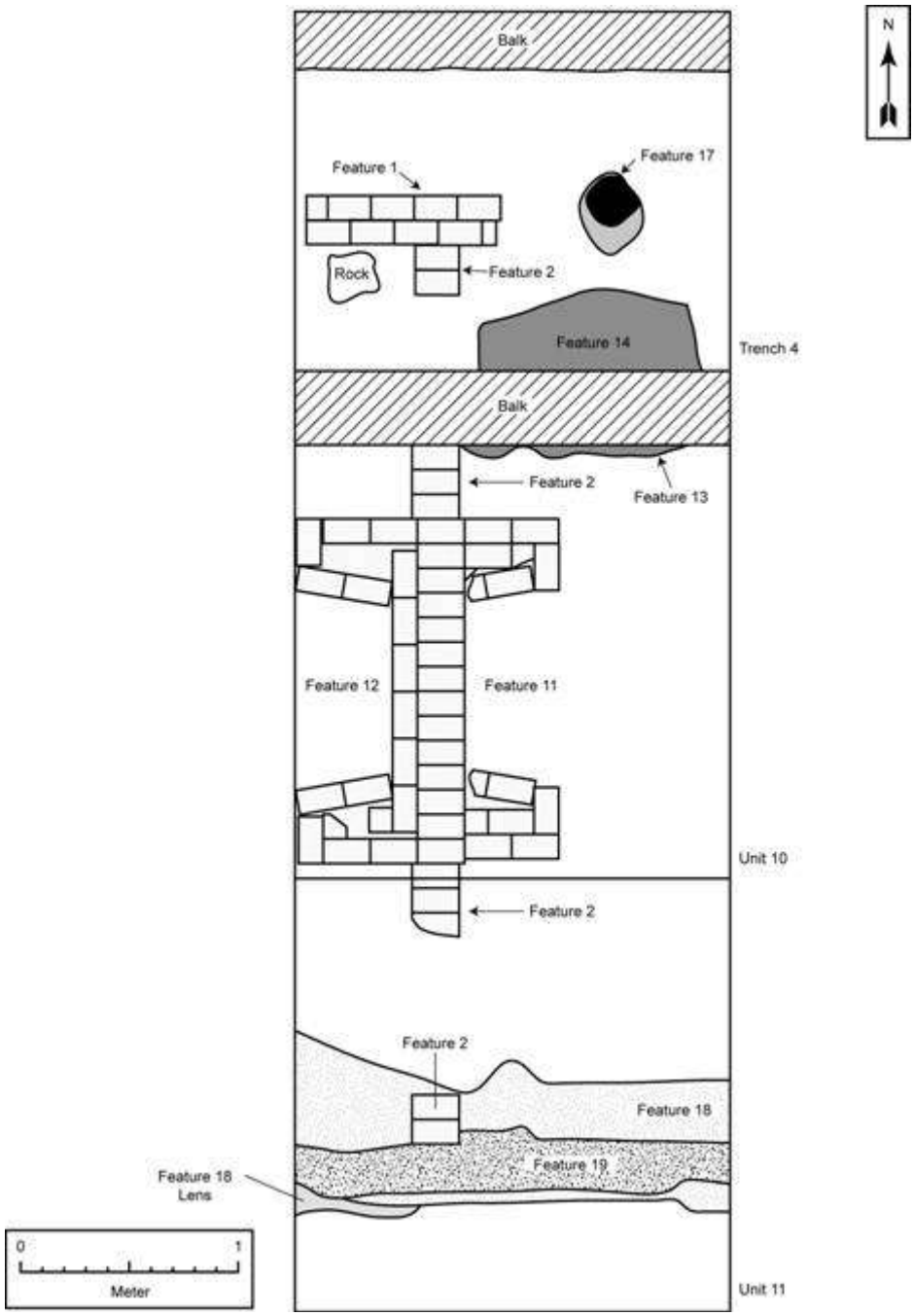

FIGURE 13. Features in Trench 4 and Units 10 and 11. Features 1, 2, 11, and 12 are all brick foundations to the early academy walls and double fireplace. Feature 18 is a builder's trench for the academy south wall, while Feature 19 represents a robber's trench within it. Feature 17 is a relatively recent posthole/postmold, one of a line of east-west postholes associated with a fence.

the extant academy was designed to follow up on these intriguing possibilities. It was initiated by hand excavating Trench 4 down to the plastic sheeting that had been placed on the trench floor during 2003. This eventually revealed the partial wall foundation defined as Feature 1, and the right-angle brick foundation connected to it, designated as Feature 2. The parallel builders/robbers trench associated with

Feature 1, labeled as Feature 3, was also revealed, as seen in Figure 11. Test Units 10 through 13, measuring 2 x 2 m each, were all excavated to confirm the presence of this foundation.

Test Unit 10. This square was placed south of Features 1 and 2, leaving a 30 cm baulk between the edge of Trench 4 and the test unit. After screening the first level, which extended about 11 cm below surface, several courses of brick were discovered adjacent to the north wall of the unit. Excavation of an additional five cm in the next level revealed the nature of the brick feature: it was the foundation of a double fireplace connected to the Feature 2 wall foundation. By coincidence, the 2 x 2 m unit just barely encompassed the remains of the complete fireplace foundation, as illustrated in Figures 12 and 13. The east firewall/hearth area on the right was designated as Feature 11, with Feature 12 assigned to its counterpart on the west. The two firewalls were basically mirror images of each other, thanks to the addition of a course of stretchers along the west edge of Feature 2, which is otherwise composed exclusively of headers. It is obvious that Feature 2 is a room partition wall, and that two interior back-to-back fireplaces were located in the structure. A single story frame or possible brick structure is suggested by the relatively modest foundation elements. The partition wall is 15 feet from the west wall of the extant academy.

As shown in Figure 12, rubble from what appears to be a brick wall section appears on the northeastern edge of TU 10. Designated as Feature 13, it may represent the collapse of part of the central partition wall. Four plain whiteware and a porcelain sherd were the only temporally diagnostic artifacts associated with this deposit. Window glass (19) and clear round- (4) and flat-section glass (1), all of it patinated, was also recovered, as were 12 cut nails. A single clinker fragment and several fragments of charcoal were also noted, although both fireplaces were clean, with no *in situ* charcoal present. Once the rubble was removed, a shallow area of dark fill (also designated as Feature 13) was mapped that was probably associated with Feature 14 in Trench 4. It was devoid of artifacts.

The measurements of the double fireplace show that the back hearth walls were 75-80 cm (about 2.5 feet) wide (Figure 13). The cheek walls extended c. 45 cm (17.5 inches) from the back walls. The approximate centers of the fireboxes were 2.17 m (a little over seven feet) from the center of Feature 1 to the north, suggesting that evidence of a companion wall to the south would be located at that same distance, assuming a symmetrical layout; this would produce a building that was about 15 feet wide on the exterior. All the bricks shown in Figures 12 and 13 are bottom courses, and their datums were all within a couple of centimeters of each other. However, Features 1 and 2 in Trench 4 are 10 cm (or about one course of bricks) deeper than the brick features in TU 10. The transition from “low” to “high” footing apparently takes place in our 30-cm-wide baulk, which was not excavated due to time constraints. Doing so in a future excavation is desirable, as this inconsistent depth for the bottom courses is certainly an architectural oddity. A tentative explanation for the greater depth

TABLE 1. Combined Artifact Group Frequencies

Test Unit	Ceramics	Glass	Nails	Lithics	Totals (Historic)
9	68	62	154	539	284
10	54	94	54	3	202
11	101	439	109	14	649
12	240	483	181	53	904
13	142	322	148	63	612

FIGURE 14. South Academy Wall Builder-Robber Trenches in Unit 11. The south edge of the double chimney is to the left; the Feature 2 foundation is discontinuous due to robbing or plowing. Facing east; Scales = 50 cm.

FIGURE 15. Feature 19 Robber's Trench in Unit 11. After reaming the robber's trench to sterile, the extent of the builder's trench (Feature 18) in which it resides is obvious. Facing east; Scales = 50cm.

is that the exterior foundations were more deeply buried than the interior features for added stability, although a spread-foot foundation would seem to be a more customary answer to any wall stability challenge.

While 54 sherds were found in TU 10, the majority (23) were plain whiteware. When combined with the other applicable types, an MCD of 1852 was generated from 28 sherds, or 10 years later than the MCD from TU 9. Since the academy is documented as occurring later than the main house and is certainly later than a house predating the present mansion, this later date is roughly consistent with the documented history of the site. Overall artifact group frequencies appear in Table 1. An unusual discovery in Zone 2 was a fragment of a broken nit comb (Figure 9, bottom left). As will be noted below, this is one of several personal items directly associated with the early academy.

Test Unit 11. Located directly adjacent and south of TU 10, this square was opened in order to intersect the projected south companion wall for Feature 1. After 10 cm of soil was removed, the faint outline of a possible builder's trench (Feature 18) was discerned in the south half of the unit. The removal of approximately five cm of Level 2 allowed this feature to be photographed and mapped (Figures 13 and 14). As predicted, the structure was 15 feet wide (4.62 m; see Figure 13), as measured from the north edge of Feature 1, corresponding to the north wall foundation, to the south edge of Feature 18, which was believed to have contained the south wall foundation before being robbed. As with most of the north wall, after the bricks were robbed from the south foundation a distinction between the builder's and robber's trenches was present (Honerkamp 2003:33).

In Figure 14 the robber's trench signature consists of the linear orange mottled fill within the darker builder's trench fill surrounding it. Note that two remnant bricks from Feature 2 are on the exact edge of the robber's trench. The relationship between Features 18 and 19 can be more clearly distinguished after the latter was excavated, as seen in Figure 15. Since Feature 19 tracks the

FIGURE 16. Slate Pencils and Smoking Pipes. Top, left to right: slate pencils, FS 100, 117, 127. Bottom: stub stem pipe fragment, FS 109; glazed stub stem pipe fragment, FS 90; white clay pipe bowl fragment, FS 102.

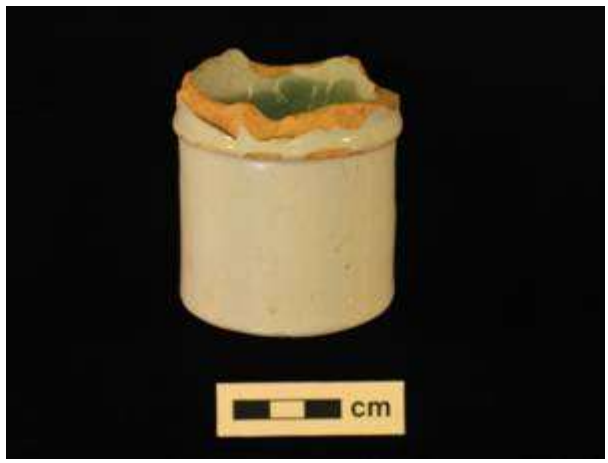

Figure 17. Delftware Apothecary Jar from TU 6.

footprint of the former south brick wall, the presence of the wider builder's trench section on the north indicates that this wall was probably built up from the interior of the structure, with the foundations nearly flush to the south edge of Feature 18. Also emerging in the Figure 15 photograph are at least eight faint "ghosts" of the footprints for individual foundation bricks, located in the eastern half of Feature 19. As with the bricks in Feature 1, they were laid in a north-south orientation. Unlike the Feature 1 bricks, they were not deeper than the chimney and partition wall foundations. Thus, in terms of vertical proveniences, the north and south walls were asymmetric, and the notion that the north wall was laid deeper than the partition wall for the sake of stability is not particularly persuasive. The uneven depths of the north and south walls remain an architectural anomaly, and a mystery.

The 1851.3 MCD for this unit was taken from 58 of the 101 sherds that were recovered, and it compares favorably with the 1852 date derived from the adjacent unit. The two units are not exactly mirror images of each other; however, TU 11 includes some "exterior" artifacts, while TU 10 was completely within the structure's footprint. Heavy plowing in this area has probably rendered this distinction superfluous. As with TU 10, no coal or coal clinker was noted, only charcoal. A partial stemmed, corner notched flint projectile point accompanied the 13 debitage fragments that were also recovered (Figure 10, FS 102). Its temporal affiliation is unknown. A single fragment of cellophane was recovered from Zone 1 and is obviously intrusive, along with a partial .22 slug found in Zone 2. More significant than the occurrence of these intrusive items is the fact that *none* of the 109 nails associated with this unit were wire types. This indicates that these architectural-related items, and by implication the structure they were a part of, are all most likely confined to the nineteenth century.

A somewhat unusual item associated with Level 2 was the discovery of a white clay pipe bowl fragment (Figure 16, FS 102). Although white clay pipes are more commonly associated with the 18th

century, Noel Hume illustrates one variety that was common from 1820-1860 (1974: 303). Another artifact that was also associated with the 18th century, although not with the academy, is shown in Figure 17. This pedestal base from a delftware pharmaceutical-ointment pot is the most surprising artifact found at the site. Recovered in 2003 as part of a midden deposit in Unit 6, Level 3, it is similar to one illustrated by Noel Hume (1974:205), but it possesses a straight rather than inverted pedestal. Noel Hume states that "The pedestal type appears in various forms from 1730 to 1830, the later examples often for eye ointments and cosmetics, usually small, thick, and shallow." Adhering to the interior base of the pot was about 12 grams of a gray clay-like substance that had been ground in the pot when it was broken and discarded.

A spectrographic analysis of this material was conducted by Technical Laboratories, Inc. of Chattanooga (Table 2). X-ray diffraction of the sample carried out by Dr. Jonathan Mies of the Department of Physics, Geology and Astronomy at UTC showed peaks that were most consistent with hydrocerussite and cerussite (lead) and barite (barium); calcium was not evident, but it may have been hidden by the other peaks. The intended use of this unappealing concoction as a cosmetic or eye ointment is uncomfortable to imagine. An alternative function is that it was a dental amalgam, but the lack of mercury is puzzling. The presence of this unusual ceramic vessel and its baffling contents at least indicates that home remedies—for *something*—were part of plantation life during the early Doak occupation, as this item probably was made, at the latest, in the first quarter of the nineteenth century.

TABLE 2. Results of Spectrographic Analysis of Apothecary Jar Contents.

Component	Spectographic Estimates*
Barium	Strong
Calcium	Strong
Lead	Strong
Silicon	Medium
Aluminum	Medium
Copper	Trace
Iron	Trace
Magnesium	Trace
Manganese	Trace
Silver	Trace
Titanium	Trace

* Strong $\geq$ 10%; Medium = 1-10 %

Remarkably, 26 eggshell fragments were also recovered from TU 11. That such fragile items would be preserved at all is certainly surprising, particularly since 11 are associated with Feature 18, which is believed to possess an antebellum date. Unfortunately, no sherds that would establish a *terminus post quem* for the filling of this feature (and by association, the accompanying brick wall) were found. Besides eggshell, the complete list of feature artifacts include: eight window glass; nine cut nails; an iron wire fragment; eight brick and mortar fragments; two charcoal fragments; two shell fragments, probably from river mussels; one half of a bone button with parallel striations and a cast brass button (Figure 9 [FS 123] and Figure 18 [FS 123], respectively); and a small unidentified bone fragment. Many of these items were recovered from the upper part of the feature and may have been "smeared" into the top of this feature, and therefore are intrusive. However, at least some of these artifacts were already around when Feature 18 was filled—a builder's trench of clean fill would be expected if it was created prior to any refuse deposition. The recovery of the bone and brass buttons are especially

intriguing for this provenience. An additional partial bone button was found in Level 1 (Figure 9, FS 100), as was a slate pencil (Figure 7, FS 100), which is infinitely appropriate for a school building.

Feature 19, the robber's trench contained within the Feature 18 builder's trench, produced artifacts that can be used to establish a *terminus post quem* for the feature's filling. Four sherds of hand painted polychrome pearlware, with a beginning manufacturing date of 1795, are not particularly informative, but a single sherd of hand painted polychrome whiteware indicates that the bricks were removed and the resultant trench filled sometime after 1820 (Noel Hume 1970; Price 1979). This is consistent with a suspected post-1830 construction date for the academy, and a later still demolition date. So too is the MCD of 1851, which is believed to correspond to the mid-occupation span in this location. Not surprisingly, broken ceramics were apparently present by the time of the structure's demise, but not when it was being built. Also found in the feature fill were eight fragments of patinated window glass, seven cut nails, nine brick and mortar fragments, six charcoal fragments, the 11 delicate eggshell pieces, and a single small mammal bone.

What stands out in the overall artifact profile for this unit, however, is the high frequency of patinated window glass (387), which is more than four times as numerous as in the adjacent unit (*n*=79). This suggests that a window or windows were present on the south but not the north side of the structure, assuming the glass fragments were the result of primary rather than secondary depositional processes (Schiffer 1976). Other artifact classes for TU 11 are roughly double of what was recovered in TU 10. Due to the occurrence of heavy plowing, it is not possible to tell if these relatively and absolutely higher frequencies are due to primary (in place) or secondary (transported from elsewhere) deposition. The nearly identical MCDs suggest that deposition occurred at the same time in the two units, whatever the process(es) involved.

Test Unit 12. This unit was situated two meters due west of TU 11 (Figure 6). The purpose of this leapfrog approach was to try to locate the west wall to the structure, and ideally, its southwest corner. "Skipping" a square also ensured that a portion of the early academy's archaeological record would remain intact for future research. Since the center of the double fireplace was about 14-15 ft from the present academy west wall, TU 12 was strategically placed so as to intersect a foundation that was the equivalent distance to the west of the presumed central chimney. Driving this field strategy, of course, was the assumption that the

FIGURE 18. Miscellaneous Buttons. Top, left to right: copper button, FS 90; cast brass button, FS 123, four-hole copper button, FS 107; two-hole pewter button, FS 109. Middle: four-hole porcelain button, FS 107; two-hole Vulcanite (rubber) button, FS 117. Bottom: four-hole shell buttons, FS 109; four-hole faceted shell button, FS 114.

older academy was rectangular. Although they may have originally shared contiguous north walls, the two academies were not the same dimensions. The extant academy is c. 20.5 ft (6.3 m) north-south, while wall trenches for the original academy have established it as 15 ft wide. Since the north walls of both academies were clearly aligned, and old photos of the extant academy show evidence of a west wall central doorway (Figure 3), the old and current academies were probably connected. If their roofs were at the same height, both buildings would have presented a continuous façade from the main house viewscape, while the south façade would have been discontinuous but invisible from the main house.

After sod removal, Level 1 in TU 12 extended 11 centimeters. Despite careful troweling of the entire floor to enhance feature visibility, the expected foundation and/or builder's trench was not seen. Level 2 was excavated an additional 10 centimeters through alternate shovel schnitting and troweling. Even though this depth was the equivalent to the *bottom* of Feature 18 in TU 11—and a sterile zone was making an appearance in the northwest quadrant of the unit—no indication of a wall trench was detected. What did appear at the bottom of this level were five equidistant plow scars oriented roughly east-west. Indirect support for a plowing hypothesis was the presence of a horseshoe fragment in Level 1. Fearing that heavy plowing may have been responsible for the loss of visibility for the expected wall trench, Level 3 was excavated to sterile (about eight more centimeters), but no sign of a feature emerged. Finally, out of desperation, the north and east walls were excavated approximately five cm into sterile and the corresponding profiles were carefully cleaned and inspected. All was in vain: no outline of a wall trench was visible in either profile. While the TU 12 north wall profile was thought to just barely encompass the location of a north-south wall trench for the structure, the east-west extension of Features 18 and/or 19 should have been apparent. Its absence suggested the implausible (and disconcerting) possibility that the early academy was asymmetric due to an abbreviated west side, with the end wall extending through the unexcavated 2 x 2 unit that had been leapfrogged. A more likely explanation was that plowing had obscured or destroyed the presence of would-be features.

Despite these disappointing results, TU 12 possessed unusually high artifact frequencies (Table 1). In addition, an MCD of 1845.8 was generated from 155 (65% of the total 240) applicable sherds, which is notably earlier than the MCDs for TU 10 and TU 11. While no coal or clinker was recovered, eight wire nails were noted, scattered in all three levels. This is what might be expected in a heavily plowed context. As with TU 11, a significant portion of the TU 12 ceramic assemblage was composed of coarse lead glazed earthenware (23% and 26%, respectively), and 173 square-sectioned nails were found. Another similarity in the two artifact profiles is seen in the huge number of patinated window glass fragments (454). Assuming primary deposition, this again argues for the presence of a window in this area of the early academy, and perhaps also the presence of accident-prone residents. Of particular note was the occurrence of several personal items. These included six buttons (1 bone, FS 109, Figure 9; two shell, FS 109; one copper, FS 107; one porcelain, FS 107; one pewter, FS 109, Figure 18), and a stub-stemmed clay pipe

bowl fragment (Figure 16, FS 109). The 2003 program also generated three similar pipe fragments from the academy vicinity. Pfeiffer (1981) indicates this type of pipe was used with an inserted reed stem and dates from the 1840s to 1900. The 53 lithic artifacts consisted of debitage fragments only, and they increased in frequency with depth: 8, 18, and 27 were found in Levels 1, 2, and 3, respectively.

Test Unit 13. The final 2 x 2 unit was placed two m north of TU 12, but offset one meter west, as seen in Figure 6. A slightly greater depth of extant wall trenches had been observed in the northern test units and in Trench 4, and it was hoped that a slightly deeper wall trench might be present within TU 13, so that the disruptive reach of the plow had not obscured a lower portion of the feature. This unit location encompassed a 1.30 x 0.65 m portion of TU 2, excavated during the previous field session; it appeared in the northeastern section of TU 13. Once this obvious feature was defined and mapped, the fill associated with it was not screened, as it was assumed to be sterile. The rest of the unit was taken down in 10 cm levels, eventually extending to just over 25 cm in the southwest corner. Thankfully, two bricks oriented east-west were discovered on the north central wall of TU 13, as was a companion builder-robber trench (a clear distinction between the two trenches was not visible). TU 2, a 1 x two m unit excavated in 2003, missed these features by about 12 centimeters. Designated as Feature 22 (the brick foundation) and Feature 23 (the robber's trench), these features are the remains of the west wall of the early academy and are illustrated in Figure 19. At this level of definition, Feature 23 extended only two

FIGURE 19. The First Academy West Wall Foundation, TU 13. Orange mottled fill from the builder/robber trench extends from the foundation bricks (Feature 22) in the north wall of the unit south to the bottom of the photograph. Fill from TU 2 appears on the right. Facing north; scales = 50 cm.

centimeters more before sterile was encountered. Plowing apparently obliterated Feature 23 in TU 12, but the deeper topsoil in the adjacent unit preserved a portion of it. As expected, this wall section is 15 feet from the center of the double chimney. The Feature 23 fill contained a single sherd of whiteware, which is not particularly helpful for establishing a *terminus post quem* on the razing of the first academy structure (1820 or later).

The artifact profile presented in Table 1 indicates that this unit contains a high frequency of architectural items in the form of window glass (299) and square nails (140), although 18 wire nails that post-date the first academy were also recovered from Levels 1 and 2. These frequencies indicate that an end window or windows occurred in the early structure. A faceted shell button (Figure 18, FS 114) and another slate pencil (Figure 16, FS 117) were also recovered from this unit; no coal or clinker fragments were found. The 63 lithic fragments were all classified as debitage.

An unusual item derived from Level 2 was the vulcanite button shown in Figure 18. As indicated in the most commonly cited web site dealing with this esoteric type of artifact, the button provides a probable *terminus post quem* of 1851, when the process was patented in the US. According to the most commonly cited web site dealing with this esoteric type of artifact, vulcanite was originally made from natural rubber and was usually black in color; it was used to make combs, buttons, cases, jewelry, fountain pens, pipe stems, etc. It was also widely used as an electrical insulator and for chemically resistant linings (Plastics Historical Society 2005). Of course, such a diminutive artifact could easily be intrusive, particularly in a plowed context.

From a total of 142 sherds, 99 (69.7%) were applicable for the MCD calculation, which produced the earliest date of any of the academy-related units: 1843.4. On a somewhat small sample (54 sherds), the MCD for Unit 2 was recalculated by including the whiteware sherds, and the 1842.5 result was consistent with the TU 13 MCD. It thus seems apparent that the eastern half of the first academy was occupied at a later date than the western half, assuming primary deposition of ceramics. The differences in ceramic frequencies for the two rooms—155 (east) and 382 (west)—suggest a difference in room functions, with activities associated with food consumption being more common in the west room area. The breakdown of coarse lead glazed earthenwares may also support this assertion: 38 sherds are associated with the east room, while 87 were found in the west room. Such wares are often associated with food storage and preparation, as opposed to the serving function of the refined pearlwares, whitewares, and porcelain types. The possibility exists, however, that the academy lead glazed earthenwares simply functioned as less elegant, student-appropriate serving vessels, particularly as bowls: many of the sherds were thin-walled and glazed on both the exterior and interior. What is clear is that more than just classroom instruction occurred in both of the rooms.

When calculated together, ceramics from all four test units in the early academy yielded an MCD of 1846.5. The MCD for Unit 4, located behind (south of) the extant academy, was recalculated to include whiteware, and an expected later date of 1852.4 was derived from 123 sherds. The two samples are not exactly comparable, as TU 4 represents secondary refuse that was deposited

outside a south-facing door of the present academy, but the later temporal placement of the ceramic assemblage is certainly consistent with the occupation sequence proposed here.

The combined four-unit MCD of 1846.5 represents a mean occupation date that is 11 years after the presumed initial construction date of 1835 for the first academy. If this represents an approximate mid-date of occupation, the end date for the occupation would be 1857. However, there is really no way to determine the actual abandonment date of the structure without establishing a *terminus ante quem* from artifacts or documents, and this has not been possible.

Summary: The Early Academy

Architectural evidence consisting of brick foundations and foundation builder and robber trenches indicates that the early academy was a 15 by 30 ft structure with a central double fireplace. It was probably a single story frame structure, and based on its north and east wall alignments, it appears at one time to have been connected to the present academy. For some inscrutable reason the north wall foundation was constructed at a lower depth than the chimney and the south and west walls. The two academies differed in the types of foundations they possessed (current stone versus brick), though not originally in the chimney construction material. A large number of ceramic artifacts are associated with the early structure interior, indicating that behavior associated with food consumption occurred there. Of the two rooms that were tested, the western room contained earlier and more numerous ceramic assemblages, as measured by the MCD formula.

FIGURE 20. Molded Brick Cornice Fragments from Trench 4.

A provocative line of architectural evidence for the early academy comes from Trench 4. It consists of three brick fragments collected while backfilling the trench (two of which are illustrated in Figure 20). These concave and convex decorative bricks perfectly match the current eve treatment of the main house. If these specimens are in primary context, their discovery suggests two important possibilities. First, to have decorative brick eves, one must have associated brick walls to support them; a frame structure will not do. Second, this elaborate cornice treatment suggests that the double fireplace structure that we are pleased to label the original academy was a formal type of building that echoed the precedent architectural motifs established by the main house. Such formality is more in keeping with an educational rather than student housing function for the early academy, at least initially. Admittedly, this is a good deal of gossamer conjecture to be spinning out of three brick fragments, but the presence of these artifacts require some sort of explanation, and both points are at least plausible.

Numerous personal items are associated with the two academies. Besides the material generated from the

test units, such as buttons, two stubby, well-used slate pencils and two pipe bowl fragments, additional items were noted during the clearing and backfilling of Trench 4. These include an incised bone handled fork (Figure 9, bottom), a bone button (Figure 9, FS 90), a copper button (Figure 18, FS 90), a partial decorative glass button (not illustrated); and a glazed stub-stemmed pipe fragment (Figure 15, FS 90). When these artifacts and the substantial ceramic assemblage are combined with the three bone buttons, three pipe bowl fragments, a broken bone handle to a knife, and an iron knife tang, and the two slate pencils that were found in the vicinity of the two academies during 2003, it is apparent that a variety of activities occurred there. If either academy was used for educational purposes, that would certainly not preclude food consumption. The presence of ceramics, clothing-associated artifacts, and pipes simultaneously present the possibility that the academies may have served a residential function as student dormitories. A combination of educational and residential uses is also feasible. Determining which of these scenarios is the most plausible is tricky due to the ambiguous nature of the artifact assemblages and the lack of stratified deposits. In all probability only the fortuitous discovery of additional documentary data can ever lead to firmer conclusions concerning this question.

Four survey units were dug to the west of TU 13 (Figure 6), and positive evidence of artifact deposits (including a third slate pencil—see Figure 16) and demolition fill was recovered from them. Yet another undocumented structure may occur in this location. Additional testing can determine if this is the case, and will allow for direct comparison of artifact assemblages and structural elements from the other two academies.

Conclusions

Besides the structural evidence revealed at the site, the excavations generated an impressive artifact collection, with much of it possessing an antebellum association. Many personal items, such as the wide assortment of buttons, eating utensils, slate pencils, a bone comb, and fragments of smoking pipes provide a direct glimpse into the material culture of the site's early inhabitants. These artifacts also offer an opportunity for enhancing already-existing Doak House Museum displays and for developing new exhibits that contribute to the Museum's educational mission.

Systematic archaeological testing at the Doak site has revealed architectural features that have no documentary correlates. The below-ground data indicates that an earlier manor may have been built in what became the front yard of the impressive main house that stands today. Similarly, direct evidence of an earlier undocumented academy has also been unearthed. These contrasts between the real and ideal at the Doak site demonstrate the value of archaeological research in a historic setting. Instead of merely "illustrating what we already know" from the documents, excavations have instead provided new data that challenge the archival picture of the Doak occupation in some pretty fundamental ways. New questions have been raised that require additional archaeological *and* documentary research.

For instance, despite the careful excavation of a 1 x 2 m and 2 x 2 m units that established a probably early filling date, clarity has yet to be attained concerning the size and layout of the suspected cellar directly in front of the

main house. The physical connection between the extant academy and the earlier academy is also assumed but not confirmed. Contradictory data was discovered concerning the first academy's construction as either a wood frame or brick single-story building. Whatever it was constructed from, foundation footings were more deeply set on the north wall than for at least two other walls, and this odd arrangement constitutes an enduring architectural enigma. Based on the somewhat ambiguous artifact assemblages associated with it, the exact function of the early academy is uncertain: it may have served as a schoolhouse, a student dormitory, or both. Survey tests indicate that another undocumented structure may be located about 15 m west of the early academy; this too requires further research.

In essence, archaeology at the Doak Site produced an equal ratio of surprises, challenges, and coherent, interpretable archaeological remains. As soon as closure was achieved on one research problem, a multiplicity of others was generated. The fragmentary nature of the above- and below-ground lines of evidence that are available to historical archaeologists means that some of these questions may *never* be fully answered, but additional research will hopefully at least improve upon the present ratio.

Collections Information. All artifacts, project records, and reports are stored at the Doak House Museum, Tusculum College, Greeneville, Tennessee.

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WORKING ON THE RAILROAD: INVESTIGATIONS OF THE M&O AND L&N TERMINAL SITE (40SY590) MEMPHIS, TENNESSEE

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This paper summarizes the results of archaeological testing and data recovery on a block in northern downtown Memphis containing the site of the former Memphis and Ohio (M&O) and Louisville and Nashville (L&N) railroad terminals. The M&O terminal stood on the site from about 1865 to 1880, while the L&N terminal was constructed about 1880 and stood well into the twentieth century.

Archaeological data recovery focused on two major features: 1) a cistern filled about 1880 with debris from demolition of the M&O terminal; and 2) the foundations and associated deposits of a small building representing the ruins of a freight house or office building built by the L&N about 1889 and razed soon thereafter.

The investigated contexts (particularly the cistern) yielded a large, well preserved artifact collection associated with the M&O and L&N railroads. The assemblage included a number of brass baggage tags, many on their original leather straps, which provide unusual insights into the way in which baggage was handled and routed during the period. The contexts also yielded very large quantities of window glass that form the basis for a proposed window glass date adjustment for Memphis.

The documentary and archaeological investigations reported in this paper were conducted in several phases during 1995 and 1996 for the Memphis Metropolitan Area Transit Authority (MATA) in advance of proposed construction of a North End Terminal for the Main Street Trolley line. The proposed construction project encompassed one city block in downtown Memphis near the north end of the Memphis Bluff (Figure 1).

Initial literature and records research conducted in 1995 by Garrow & Associates (subsequently TRC Garrow Associates, Inc.) indicated that the tract had been designated Block 26 in the original 1819 town plat, but may not have been developed until the 1840s (Garrow et al. 1998:6). This study further indicated that facilities related to the Memphis & Ohio (M&O) Railroad were constructed on the north half of the block after the Civil War and continued in use by the Louisville & Nashville (L&N) Railroad into the twentieth century.

Phase II excavations conducted by Garrow & Associates from November 4, 1995 to January 25, 1996 were reported in preliminary form by Guy Weaver (1996). These excavations revealed significant archaeological remains on both the northern and southern halves of the block, and the entire block was recommended as eligible for the National Register of Historic Places. A plan was subsequently developed and approved that preserved archaeological deposits in the southern half of the block under parking lots with data recovery on selected features in the northern half.

Phase III data recovery was conducted by Garrow & Associates, Inc. during a two-week period in March 1996 on a cistern and a small structure designated for excavation by the Tennessee Division of Archaeology. The results of the Phase I, II, and III studies of the MATA block were reported in 1998 (Garrow et al. 1998). A second cistern on the northern half of the block was later independently excavated and reported by the University of Memphis (Weaver et al. 1997).

FIGURE 1. Location of the Study Block.

History of the Study Block

The North End Terminal project area was laid out in William Lawrence's original 1819 plan as Block 26, bounded on the north by Auction Street, on the east by Second Street, on the south by Concord Street (now North Parkway), and on the west by Main Street. This block was designed to be the eastern edge of Auction Square, one of the four original public squares included in the plan (Figure 2). Perhaps due to flooding from the nearby Bayou Gayoso, extensive development in this area languished until the 1850s. After the Civil War, the project area was afforded new life with the relocation of railroad terminals to the block.

The concept of a railroad line connecting Memphis with Louisville, Kentucky was first promoted in October 1849 to provide a less expensive and more reliable way to ship cotton to market. After a series of political maneuverings, an alternative Nashville & Memphis Railroad was chartered by the Tennessee legislature on February 4, 1852. The company was able to subvert its political rivals by acquiring the Memphis, Clarksville, and Louisville Railroad in 1853, providing the corporation with the means to achieve the original goal of a connection to Louisville through Paris, Tennessee. The state legislature amended the railroad's charter by allowing connections to either Louisville or Nashville in December 1853 (Clark 1933:65). The Board of Directors formally adopted Louisville as the railroad's destination in January 1854 and made the final change in name to the Memphis & Ohio Railroad (Clark 1933:67). Construction began on the right-of-way in 1854, but Memphis was not connected to the L&N Railroad's Memphis Branch Line in Paris, Tennessee until April 1861. The line was completed after the Civil War began, but the M&O was largely shut down from June 1862 until the close of the war (Garrow et al. 1998:32-33).

Railroads under Union control in the south were federalized as units of the U.S. Military Railroad during the Civil War. The M&O was returned to its original investors in August 1865 after at least some repairs had been completed. The owners of the M&O received financial help from a number of sources, and resumed at least partial service during the summer of 1865 (Garrow et al. 1998:36).

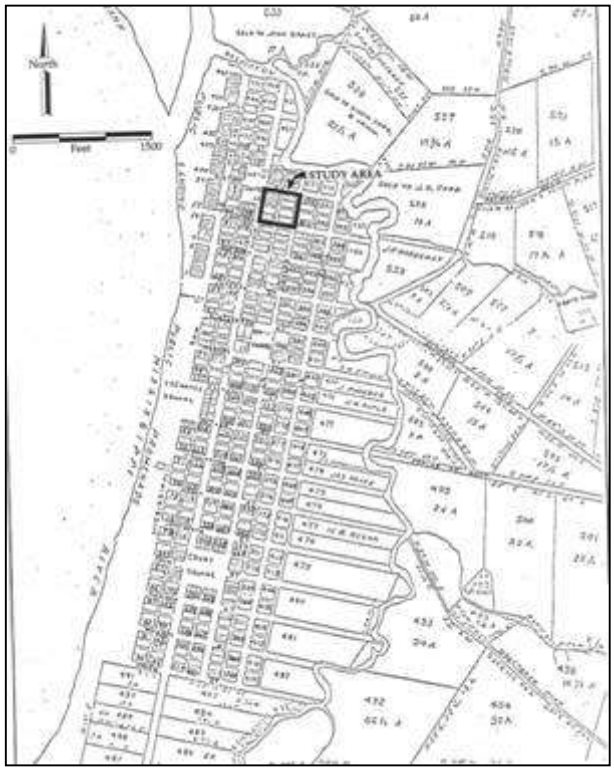

FIGURE 2. Original Town Plat of Memphis.

The M&O Railroad apparently acquired property somewhere on the study block as early as 1855, but there is no evidence of the development of any railroad facilities prior to 1865. The M&O built a depot in the old Navy Yard (where the Pyramid now stands) that served the railroad prior to 1865. The railroad apparently lost its lease with the city during the Civil War and was forced to build a new depot. The terminal building investigated during the Phase II and III studies was built in the fall of 1865, and represents the third depot used by the M&O (Garrow et al. 1998:17-32, 36).

The M&O Railroad was a profitable venture by August 1866, when complete service to Louisville was renewed. The financial position of the M&O was severely damaged, however, by the condition of its affiliate line, the Memphis, Clarksville, and Louisville Railroad (MC&L), which ran from Paris to Clarksville, Tennessee. The M&O had to take out a $400,000 loan to restore service on the MC&L. The loan costs coupled with revenue losses and increased operating expenses drove the M&O to the brink of bankruptcy. The M&O was leased to the L&N in September 1867 to avoid bankruptcy, with a lease for the MC&L signed a year later. The L&N purchased the M&O in October 1872 and continued to use the M&O depot on the study block until about 1880. The old depot was torn down and a new one built in 1880 or 1881, by which time the L&N Memphis holdings were part of the Louisville, Nashville, and Great Southern Route. The replacement depot was used until 1912, when the L&N moved to the Union Station in south Memphis. The replacement depot was demolished by 1950 (Garrow et al. 1998:42).

The M&O Railroad Structure

Several features identified during Phase II and Phase III investigations can be linked to the M&O railroad occupation (Figure 3). Included among those are major features that are believed to be part of the M&O occupation but that could predate the M&O presence on the study block.

The M&O building appears to have extended approximately 70 feet north-south along Main Street. The width of the building was not determined, but it was nearly 44 feet from the eastern edge of the wall of the structure to the modern sidewalk, and the observed width was 31 feet to the point one of the building supports went under the west profile. The 1870 Bird's Eye View Map of Memphis shows a two-story building (Anonymous 1870). Based on the archaeological evidence, the terminal sat on individual brick piers and was

thus of frame construction. The pier supports for this structure were obviously disturbed by construction of the later L&N building, and it must be assumed that a number of them were totally destroyed.

Feature 33 was an extensive sheet midden located to the rear of the former M&O structure. Although a small artifact

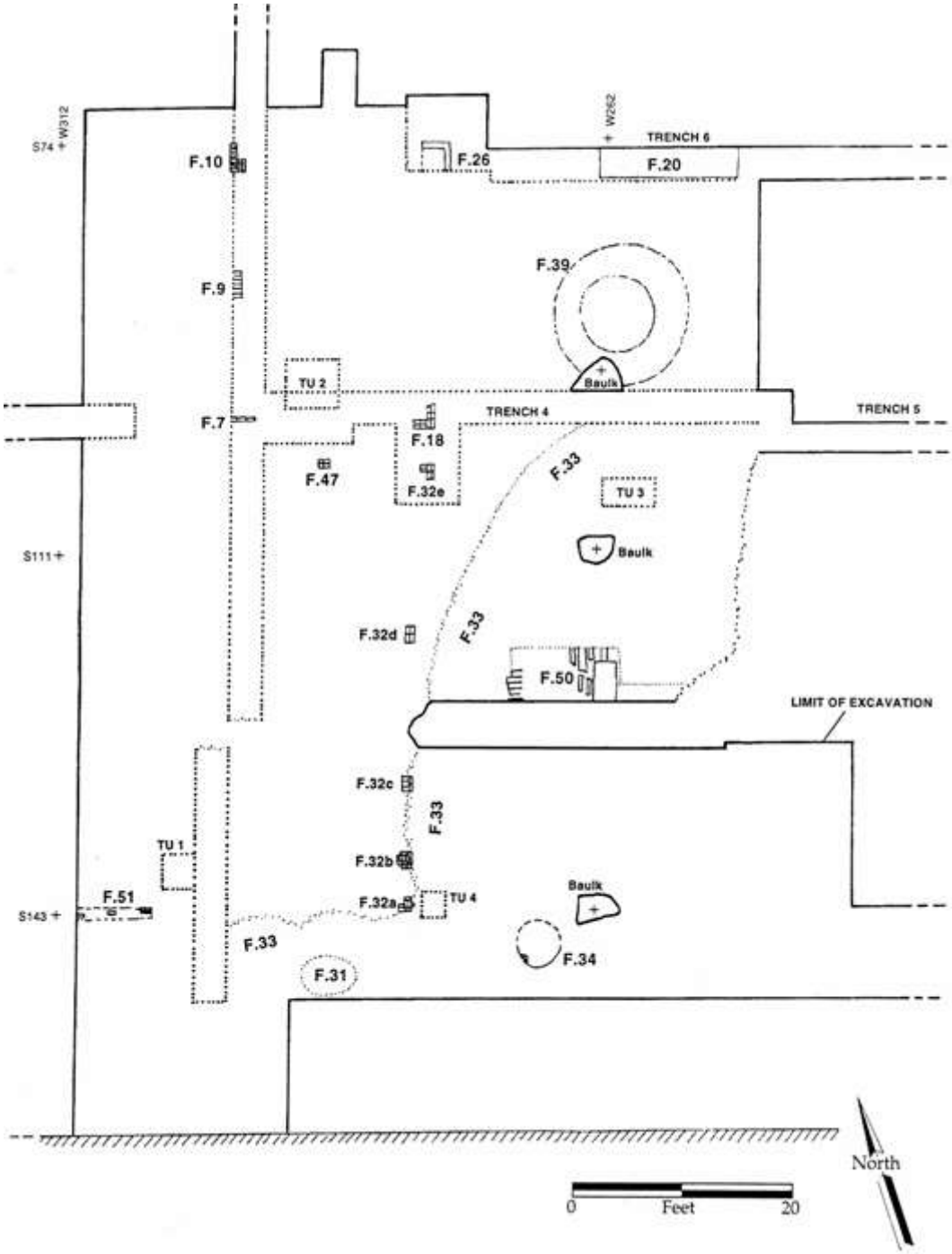

FIGURE 3. Features Interpreted as Related to the M&O Depot.

sample was recovered during Phase II excavations, none could be finely dated. Attribution of the midden to the M&O occupation is based on a window glass date of 1872.6 obtained on a sample of 22 window glass sherds from that context.

Features 20 and 50, also located to the rear of the terminal building, appear to have been privies. These features were not systematically sampled during Phase II, but the linkage to the M&O structure can be made on the position of those features in relation to the M&O terminal. Neither of these features was approved for excavation during Phase III.

Little is known about Feature 31 because it was not extensively investigated during Phase II. It is possible that it represents a well, based on its size, shape and location. If it was a well it obviously would have predated or postdated Feature 34. Based on its location between the L&N depot foundation and the end of a railroad spur, it is highly unlikely that it was related to the L&N occupation. Based on the limited available information, Feature 31 is interpreted as part of the M&O occupation or earlier.

Feature 34 was identified as a straight-sided circular feature measuring approximately five feet in diameter. Based on the size, shape, and location, Feature 34 is interpreted as a well. Artifacts recovered from the top of Feature 34 dated to the late nineteenth century, but it is not unusual for large features like wells to slump through time and continue to be used for trash disposal for decades after their original filling (cf. Garrow and Wheaton 1986). The feature probably dates to the M&O occupation, although it could have been present when the M&O structure was built. Feature 34 would have represented the second water source available during the M&O occupation. Feature 39 was a large, deep cistern that was apparently recharged with runoff of rainwater from the roof of the M&O structure. Feature 39 would have supplied water for industrial purposes, while the well supplied potable water. Feature 34 was not investigated further during Phase III and was instead filled over and presumably preserved in place.

FIGURE 4. Brick Dome above Feature 39. View to the south-southeast.

Of the numerous features identified, only Feature 39 (a large, brick-lined feature located approximately 20 feet to the rear of the M&O terminal) was approved for excavation during Phase III.

Brick Lined Cistern -- Feature 39

The brick-lined cistern was covered with a nearly intact brick dome at the time of the Phase III investigations (Figure 4). The dome was approximately 13 feet across, while the interior diameter of the cistern was 12.4 feet. The dome was constructed of broken, handmade brick.

Removal of the dome revealed deposits originating 1.3 feet below the lip of the cistern. The deposits proved to be waterlogged, which presented severe logistical challenges until the bottom of the cistern was reached approximately 12.3 feet below the lip of the cistern (Figure 5). Excavation of the feature was done in 6-inch

arbitrary levels and the water was bailed as the excavation continued. Major stratigraphic changes were recorded as the excavation proceeded, and color and texture changes were used to reconstruct the gross stratigraphy of the feature after the excavation was completed.

A second challenge during the excavation of Feature 39 was safety. A backhoe bucket was carefully lowered in to the feature at each level and level fill was shoveled directly into the bucket to avoid dangerous hand removal of the fill. All crew members wore hard hats, and the cistern liner was inspected continuously to insure that no cracks had developed and the integrity of the shaft had not been compromised. One crew member was stationed at the top of the shaft at all times to coordinate the movement of the backhoe and to insure that the top of the shaft was kept completely clear of all debris that could represent a hazard to the crew members below. Feature 39 was excavated without incident and without compromising crew safety in any fashion (Garrow et al. 1998:60).

Feature 39 proved to be a large and complex feature that contained a small primary deposit at the bottom and a thin veneer of trash on the top that had been thrown into the feature long after initial filling. The intermediate material was believed to represent demolition debris and artifacts discarded there when the M&O terminal was torn down about 1880. A large artifact assemblage was recovered from Feature 39, including many items such as leather shoes and boots that are not normally preserved in archaeological contexts. Window glass was the largest single artifact class recovered from Feature 39, and the window glass sherds were distributed through all of the levels and strata (Garrow et al. 1998:66).

The 22 excavated levels within Feature 39 spanned eight defined strata (Figure 6). Those strata were defined on the basis of color and texture differences. The deposits in a large feature such as Feature 39 are rarely level, and most often exhibit some mounding. That was the case within Feature 39, and four of the defined strata (AB, BC, CD, and CDE) contained material from both the stratum above and the stratum below. The artifacts from the transitional strata were generally grouped within the primary stratum above the transition as the analyses progressed, with the only exception being CDE, which was grouped with stratum E based on similar window glass thickness averages and shared artifact types.

FIGURE 5. Feature 39 with Level 13 Under Excavation. View to the southeast.

Window glass has been used successfully to date archaeological contexts on many historic sites. Window glass dating is based on the premise that thicker window glass was produced through time, and requires measuring the thickness of each sherd, determining the average thickness of sherds from a context, and comparing those thicknesses to predetermined date ranges. Window glass thickness date ranges were first described by Roenke (1976:166) for sites on the American west coast. Orser et al. (1987:543) has suggested date ranges based on average window glass thickness

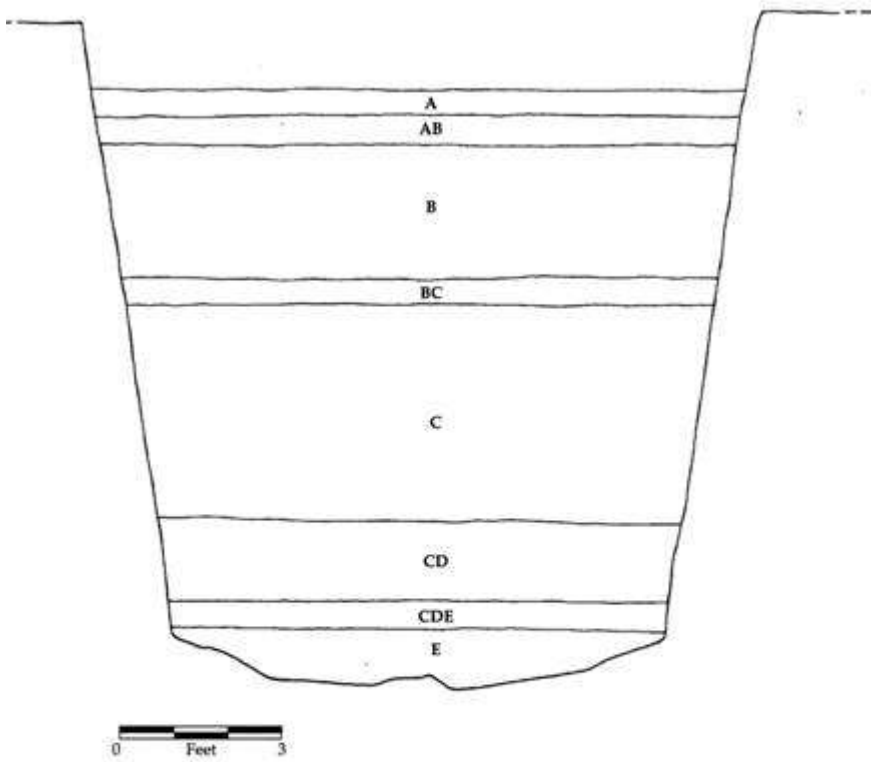

FIGURE 6. Reconstructed Cross Section of Feature 39.

by adding 53.75 years to each Roenke date. Analysis of the collections from Feature 39 indicated that Roenke was clearly too early, while Orser was equally too late to accurately date the contexts within the MATA site. A series of date ranges were derived by adding 26.89 years to the Roenke data and essentially splitting the difference between the two researchers. The Roenke, Orser, and MATA transformed dates are listed in Table 1.

The excavations yielded more than 5,000 window glass sherds. The lowest window glass total within a level was 80, while the highest total was 723. The smallest sample by stratum was 237 sherds. The sample size in each level was definitely large enough to support window glass dating. Table 2 presents the sherd data by level and stratum and the dates derived through application of the transformed date.

The artifact collection from Feature 39 totaled 16,609 items (excluding brick, plaster, mortar, cinders, unidentified wood and metal objects, and floral and faunal

TABLE 1. Glass Thickness Dating and MATA Transformed Dates

Glass Thickness	Dates*	Orser et al Transformed Dates**	MATA Transformed Dates***
1.00	1804.22	1857.97	1831.11
1.0-1.2	1804.22-1812.51	1857.97-1866.26	1831.11-1839.40
1.3-1.4	1816.66-1820.80	1870.41-1874.55	1843.55-1847.69
1.5-1.6	1824.95-1829.10	1878.70-1882.85	1851.84-1855.99
1.7-1.8	1833.24-1837.39	1886.99-1891.14	1860.13-1864.28
1.9-2.0	1841.53-1845.68	1895.28-1899.43	1868.42-1872.57
2.1-2.2	1849.83-1853.97	1903.58-1907.72	1876.72-1880.86
2.3-2.4	1858.12-1862.26	1911.87-1916.01	1885.01-1889.15
2.5-2.6	1866.41-1870.56	1920.16-1924.31	1893.30-1897.45
2.7-2.8	1874.70-1878.85	1928.45-1932.60	1901.59-1905.74
2.9-3.0	1882.99-1887.14	1936.74-1940.89	1909.88-1914.03
3.10	1891.29	1945.04	1918.18

*Roenke (1978:166); Orser et al 1987:543)
**Transformed by adding 53.75 years to the Roenke dates
***Tranformed by adding 26.89 years to the Roenke dates

TABLE 2. Window Glass Data by Level and Stratum of Feature 39

Level	Stratum	Count	Product	Average	Total Count	Total Product	Average	Date
1	A	80	194.9	2.44				
2	A&B	157	382.6	2.44	237	577.5	2.44	1890.81
3	B	98	207.4	2.12				
4	B	139	296.2	2.13				
5	B	128	273.3	2.14				
6	B	88	181.8	2.07				
7	B	128	242.6	1.90				
8	B&C	175	374.6	2.14	756	1575.9	2.08	1875.89
9	C	86	166.7	1.94				
10	C	92	192.8	2.10				
11	C	81	165.3	2.04				
12	C	80	159.7	2.00				
13	C	143	296.1	2.07				
14	C	136	270.3	1.99				
15	C	195	386.1	1.98				
16	C	247	515	2.09				
17	C&D	351	727.6	2.07				
18	C&D	567	1073.9	1.89				
19	C&D	723	1446.4	2.00	2701	5399.9	2.00	1872.57
20	C,D&E	366	782.1	2.14				
21	E	331	728.7	2.20				
22	E	686	1493.8	2.18	1383	3004.6	2.17	1879.63

material). A total of 28,836 pounds of brick was weighed and discarded in the field. The brick was unevenly distributed throughout the feature with nearly half (14,170 pounds) from Strata C and CD, and only 741 pounds from strata CDE and E. Table 3 summarizes the artifacts from this feature by artifact group and class following South (1977) and Garrow (1982).

Architecture-group artifacts account for over half of the items from each grouped strata. Strata C and CD had the highest Architecture percentage at 67.05 percent, while the lowest percentage was from

TABLE 3. Feature 39 Artifact Pattern Summary.

Group/Class	Strata A,AB		Strata B, BC		Strata C, CD		Strata CDE, E		Totals	
	Qty	%	Qty	%	Qty	%	Qty	%	Qty	%
Kitchen	275	41.79	491	24.19	1306	16.73	1800	29.43	3872	23.31
Ceramics	30	4.56	94	4.63	208	2.66	222	3.63	554	3.34
Bottle Glass	230	34.95	387	19.06	1059	13.57	1523	24.90	3199	19.26
Table Glass	7	1.06	3	0.15	19	0.24	24	0.39	53	0.32
Other Kitchen	8	1.22	7	0.34	20	0.26	31	0.51	66	0.40
Architecture	332	50.46	1183	58.28	5233	67.05	2742	44.83	9490	57.14
Window Glass	237	36.02	757	37.29	2703	34.63	1383	22.61	5080	30.59
Nails	93	14.13	409	20.15	2464	31.57	1282	20.96	4248	25.58
Other	2	0.30	17	0.84	66	0.85	77	1.26	162	0.98
Furniture	2	0.30	13	0.64	72	0.92	12	0.20	99	0.60
Arms	1	0.15	0	0.00	2	0.03	2	0.03	5	0.03
Clothing	20	3.04	89	4.38	241	3.09	376	6.05	726	4.37
Buttons	14	2.13	36	1.77	102	1.31	37	0.60	189	1.14
Leather Shoes	5	0.76	50	2.46	105	1.35	72	1.18	232	1.40
Other	1	0.15	3	0.15	34	0.44	267	4.37	305	1.84
Personal	3	0.46	6	0.30	30	0.38	17	0.28	56	0.34
Tobacco	2	0.30	5	0.25	2	0.03	6	0.10	15	0.09
Activities	23	3.50	243	11.97	919	11.77	1161	18.98	2346	14.12
Totals	658	100.00	2030	100.00	7805	100.00	6116	100.00	16609	100.00

strata CDE and E at 44.83 percent. Strata C and CD also had the highest and lowest brick weights recorded from the feature. Strata CDE and E, while composed of only three of the 22 excavation levels, contained over a third of the artifacts.

The Kitchen Artifacts from Feature 39 consist of ceramics, bottle glass, table glass, and a number of items classified as "other kitchen." Fifty-nine ceramic vessels were identified during the Feature 39 analysis (Table 4).

The ceramic vessels were defined during a minimal vessel count analysis of the collection. Under that method the ceramic sherds are organized into vessels based on a variety of criteria that include ware type, thickness, decoration, rim and base types, and vessel type. Sherds that will cross-mend are mended, and sherds that share all pertinent characteristics are assumed to be from the same vessel until more than one vessel can clearly be demonstrated to be present. The contexts of the sherds are then recorded to determine if contexts can be linked together, and a percentage of completion is assigned to each vessel based on the vessel's shape and size and the amount of the vessel represented by the sherds.

The percentage of completion study demonstrated that twenty-six of those vessels were 5 percent or less complete, while only 11 were 50 percent or more complete. This is a low overall percentage of completion for a ceramic collection, but is consistent with ceramics being discarded as secondary trash largely as part of demolition debris.

Vessel analysis demonstrates that the strata within Feature 39 were closely linked, and one vessel (Vessel 12) included sherds from all four grouped strata. Three vessels link the bottom three strata together, while three others link the top strata to the third strata. There is little question based on the ceramic minimum vessel and cross-mend analyses that, as

TABLE 4. Ceramic Vessels from Feature 39

Ware Type	Vessel #	Decoration	Function	% Complete	Strata	Marks
White Bodied Ironstone	1	Molded	Platter	50	B; C, CD; CDE, E	None
	2	Molded Wheat	Platter	70	B, BC; CD	1862
	3	Plain	Egg Cup	70	B; E	None
	4	Plain	Cup	10	E	None
	5	Plain	Cup	20	E	None
	6	Plain	Lid	90	B	None
	7	Plain	Saucer	25	E	Unknown
	8	Plain	Saucer	20	E	None
	9	Plain	Saucer	10	E	None
	10	Molded Panels	Saucer/Plate	10	B;C	None
	11	Molded Floral	Saucer/Plate	10	A;C	None
	12	Plain	Large pitcher	80	All	None
	13	Plain	Cup	15	E	None
	30	Polychrome Painted	Figurine	60	C	None
Blue Bodied Ironstone	14	Molded Floral	Large pitcher	30	C&CD; E	Fragment
	15	Molded Flutes	Small Pitcher	65	E	None
	16	Plain	Pitcher	40	CD; CDE&E	Fragment
	17	Plain	Saucer	10	A	None
	18	Molded Human Head	Unknown	<5	E	None
	19	Plain	Saucer	10	C	None
	20	Plain	Basin	<5	E	None
	21	Molded Lines	Saucer	<5	E	None
	22	Molded Rim	Saucer	<5	CD	None
	23	Molded Panels	Saucer	<5	E	None
	24	Molded Flutes	Cup	<5	C	None
	25	Molded Panels	Saucer/Plate	<5	C	None
	26	Molded Line	Cup	<5	A	None
CC Ware	27	Plain	Saucer	60	E	None
	28	Plain	Bowl	45	B	None
	29	Plain	Saucer/Plate	10	E	None
Basalt	31	Glazed & Molded	Teapot lid	40	CDE&E	None
Yellowware	32	Rockingham	Lid	20	AB	None
	33	Rockingham	Pitcher (?)	<5	CDE	None
	34	Plain	Bowl	10	C;E	None
	35	Plain	Large Bowl ?	<5	C	None
	36	Plain	Unknown	<5	C&CD	None
	37	Banded	Bowl	<1	AB	None
Late Refined Earthenware	38	Blue Edged	Plate	15	B;C;E	None
	39	Blue Edged	Saucer/Plate	<5	AB	None
	40	Banded (Dipped)	Bowl	5	B;C;CDE&E	None
	41	Polychrome	Saucer	<5	AB;B;C	None
	42	Blue Transfer Print	Unknown	<5	B;C	None
	43	Sponged	Saucer	5	B;CD;E	None
	44	Blue Painted	Saucer	5	B	None
	45	Red Transfer Print	Unknown	<5	C	None
	46	Blue Transfer Print	Cup	<5	B;E	None
Hard Paste Porcelain	47	Pink Luster	Saucer	<1	E	None
	48	Gilded Bands	Cup/bowl	5	CD	None
	49	Plain	Saucer	<5	A	None
	50	Painted	Unknown	<5	B	None
	51	Polychrome	Cup/Bowl*	25	B	None
Stoneware	52	Salt Glazed	Jug	60	CDE&E	None
	53	Albany Slip	Jug	20	AB;C	None
	54	Salt Glazed	Storage	20	C	None
	55	Industrial	Ginger Beer	20	B;C;CDE&E	None
	56	Industrial	Ink Bottle	<5	CD;E	None
	57	Industrial	Ink	100	E	None
	58	Bristol Glaze	Bottle	99	CD	1866-1929
	59	Brown Glaze	Unknown	<5	E	None

the window glass dates indicated, the entire feature was filled relatively quickly.

Few ceramic maker's marks were found on the Feature 39 ceramics, and the few that were present were not very informative. Vessel 2 contained the im-

pressed mark "Ironstone Wedgwood China" and a British registry mark with the year code for 1862. The Wedgwood mark lacked the three-letter Wedgwood date code (Godden 1964:527, 658). Vessel 7 was marked with a stamped Lion and Unicorn mark and the partial maker's mark of "aylor and Davis." This mark could not be identified during the current research, although the Lion and Unicorn mark was used by a number of potters during the second half of the nineteenth century. Fragmentary marks were found on Vessels 14 and 16, but those were too incomplete for identification. Vessel 58, which was virtually complete, contained the impressed mark "Kennedy Barrowfield Pottery Glasgow." Henry Kennedy & Sons (Ltd) used this mark at their Barrowfield Potteries in Glasgow, Scotland from 1866 to 1929 (Godden 1964:369).

The most common vessel type in the Feature 39 collection was ironstone (27 vessels), and all but one of those vessels lacked colored decoration. The only other ceramic types with vessels over 25 percent complete were basalt, cc-ware, and stoneware. The basalt vessel was a glazed lid for a teapot, and it is unclear whether or not that vessel was an heirloom piece. The other ware types represented by vessels more than 25 percent complete were types that were in common usage in 1880. Semi-vitreous ware, a distinctive ceramic type that was introduced about 1895, is totally missing from the collection (Garrow 1995).

The vessel types represented in Feature 39 are heavily weighted towards cups, saucers, and pitchers. Only two platters and one clear plate are present. A few bowls are present, but most are less than 10 percent complete. Overall, the assemblage appears to reflect heavy consumption of hot liquids, with no evidence of full food service.

FIGURE 7. Glass Bottles from Strata A/AB/B, Feature 39. Vessel Numbers (l-r): 1, 5, 2, 17, 10, 12, 30.

FIGURE 8. Glass Bottles from Strata C/CD, Feature 39. Vessel numbers – Back row (l-r)): 78, 77, 44, 57, 67. Front row (l-r): 66, 90, 50, 45, 75.

FIGURE 9. Glass bottles from Strata CDE/E, Feature 39. Vessel numbers (l-r): 95, 97, 94, 93, 96, 92.

A total of 3,199 bottle glass sherds was recovered from Feature 39, which represented 83 percent of the Kitchen group total from that context (Figures 7-9).

TABLE 5. Embossments and Maker's Marks on the Feature 39 Bottles

#	Context	Function	Embossment	Maker's Mark	Date
1	A	Soda	(Shoulder) Whistle WhistLe Registered 6 ½ FLD OZS (Waist) Whistle Whistle Bottle Pat Applied For Reg US Pat Off	None	
2	A	Soda	(Waist) OC Beverages 7 FL OZ (other side) Pat d'July 20, 1920 Orange Crush Co Bottle (base) Covington, Tenn	None	1920+
3	A	Soda	(see Orange Crush, above)	None	1920+
4	A	Soda	(see Orange Crush, above)	None	1920+
5	A	Whiskey	(shoulder) Federal Law Forbids Sale or Re-Sale of this Bottle	D9 (0ver) 56-8	
7	A	Whiskey		D491 (over) 70-41	
10	AB	Beer		18 Circle A 3 (diamond & circle) (over) 9 (over) G 6	
11	AB/B	Soda	(see Orange Crush, above)	None	1920+
12	AB	Lin./Hair		K 1	
13	AB	Medicine		6 (circle in square) 4	
14	AB	Soda	(front panel) O-L Beverages (base) Memphis Tenn	None	
17	B	Canning	(base) Patented 107 Jung 03 June 23, 03	None	1903+
18	B	Soda	(see Orange Crush, above)	None	1920+
19	B	Soda	(see Orange Crush, above)	None	1920+
20	B	Soda	(see Orange Crush, above, "Memphis Tenn" on base)	None	1920+
22	B	Soda	(see Orange Crush, above, "M---phis Tenn" on base)	None	1920+
30	B	Whiskey	"C" or "G" (on face of vessel above base)	None	
37	BC	Unknown	.S.Smith ..ville Ky	None	
38	BC/C	Unknown	Phil …	None	
44	C	Mineral	(front panel) E. Schroeder East St. Louis III	A&D.H.C.	
46	E	Mineral	(front panel) Syracuse Springs (over) D (over) Excelsior A. J. Delatour New York	None	
59	AB/B/C/CD	Bitters	(front panel) D.J. Hostetler's Celebrated Stomach	None	
63	C/CD/E	Medicine	Bitters (front panel) ..ield & Co	None	
65	CD/CDE/E	Whiskey	(both sides) (embossed) eagle (over) oval	None	
72	CD/CDE	Unknown	(front panel) John J. Smith ---uisville, Ky	None	
75	CD	Medicine	(front panel) Tarrant & Co. Druggists New York	None	
84	C	Spirit/Chem	(side) ..lders ---& Potash	None	
85	CD/CDE/E	Whiskey	(front panel) "for Pike's Peak" (embossed) hiker & backpack (rear) (embossed) hunter shooting deer	None	
87	C	Bitters	(front panel) Dr. Hostetler's Stomach B-tters	L&W (over) L	
94	CDE	Bitters	(front panel) J. Walkers (over) 7 (over) V.B.	None	
96	E	Medicine	(side) Edward Wilder & Co. Wholesale Druggists Louisville, Ky.	None	
98	E	Bitters	(front panel) Dr. J Hostetler's Stomach Bitters	L&W (over) 14	
99	CD/CDE/E	Mineral	(front panel) Dieh---Lord Nashville, Tenn	T.W. & Co.	
100	CD/CDE/E	Mineral	(front panel) Diehl & Lord Nashville Tenn	T.W. & Co.	
101	CD/CDE/E	Mineral	(front panel) Lords & Diehl Memphis Tenn	T.W. & Co.	
128	E	Perfume	(vertical front or back panel) C (possibly O or G) HT	None	
129	E	Medicine	(1st side panel) H.T. Helmbold (front panel) Genuine Fluid Extracts (2nd side) Philadelphia	None	

Nearly half of the recovered sherds were clear, while almost a quarter were aqua. Only five sherds of identifiable manganese glass were recovered, three of which came from Strata C and CD. Manganese glass, or amethyst colored glass when it is solarized, was not produced until the late 1870s, and the rarity of the type within the feature may reflect the approximate fill date of 1880 for the feature.

Machine made bottles were recovered from strata A and AB, and the upper two levels of Stratum B. Machine-made bottles clearly date to the twentieth century (Miller and Sullivan 1984; Jones and Sullivan 1985), but the presence of twentieth century artifacts at the top of the deposits in an older major feature is to be expected in a continuously occupied site (Garrow 1999). No machine made bottles were re-

covered from below level 4, and all of the bottles from levels 5 through 22 were made using technology that was in general use in 1880. Embossment or marker's marks were noted on 37 bottles (Table 5). The majority of strata A and AB, as well as portions of the first two levels of stratum B clearly received trash until after 1920. Most of the bottles discarded there in the twentieth century appear to be soda, beer or whiskey bottles, although a single liniment or hairdressing bottle, one medicine bottle, and one canning jar were also found (Table 6). The machine made bottles date to the twentieth century, while the non-machine bottles are believed to have been a part of the circa 1880 or pre-1880 fill. The majority of the bottles where the manufacture type could not be determined were probably non-machine made.

The functions of the machine made bottles were markedly different from those made earlier. Ten of the 19 machine made bottles were sodas, while only one was medicine. Only five of the 74 non-machine made bottles were mineral water, while as many as 27 may have contained some type of medicine. Given the state of public health in Memphis at the time the cistern was filled, it is not surprising that so many of the bottles had contained medicine. At the same time, national soda brands became extremely popular in the twentieth century while the improved city infrastructure had greatly improved public health.

One of the most remarkable discoveries made in Feature 39 is a wadded-up broadside that had been used as a cork. The bottle is embossed "J. Walker's V.B.", which might have been confused for a spirits distiller except for the broadside. The broadside is in English, German, French, and Spanish and advertised Dr. J. Walker's Vinegar Bitters. The English portion states, in part:

TABLE 6. Glass Bottle Functions by Manufacture Type (Feature 39)

Function	Machine	Non-Machine	Unknown
Soda	10		
Mineral Water		5	
Whiskey	2	8	2
Beer	1	1	
Wine		4	5
Wine/Spirit		1	
Spirit/Chemical		1	
Liniment/Hair	1		
Medicine	1	21	2
Bitters		4	
Perfume/Medicine		2	
Perfume		1	1
Canning	1		
Food		2	
Condiment/Food			1
Snuff			1
Vial, Function Unknown		1	2
Unknown	3	23	22
Totals	19	74	36

To be Dyspeptic *is to be miserable, hopeless, depressed, confused, weak, languid, and useless. Dyspepsia invariably yields to the vegetable remedies in Vinegar Bitter, the great purifier of the blood and restorer of health.*

Indigestion destroyed the teeth*, complexion, strength, peace of mind, and bodily ease. Is it not amazing that any human being should continue to suffer from it when Vinegar Bitters will give immediate and permanent relief in the most distressing cases. Headache, pain in the shoulders, coughs, tightness of the chest, dizziness, sour eructations [belching] of the stomach, bad taste in the mouth, bilious attacks, palpitation of the heart, inflammation of the lungs, pain in the region of the kidneys, and a hundred other painful symptoms, are the offsprings of Dyspepsia. In these complaints it has no equal, and one bottle will prove a better guarantee of its merits than a lengthy advertisement.*

TABLE 7. Feature 39 Footware (Part I).

#	Context	Type	Sex/Age	%	Condition	Recycled	Comments
1	A	Unknown	Man	15	Poor	No	Left sole and vamp
2	AB	Unknown	Man	15	Poor	No	Straight sole & heel
3	B	Brogan?	Man	15	Poor	No	Left sole & heel
4	B	Boot/shoe	Unknown	95	Poor	No	Nearly complete left
5	B	Shoe	Unknown	90	Poor	No	Missing half sole
6	BC	Unknown	Man	15	Poor	No	Left sole & part heel
7	C	Unknown	Man	30	Poor	Yes	Left sole & part vamp
8	C	Brogan	Man	75	Poor	No	Left, lacks heel
9	C	Brogan	Man	60	Good	Yes	Right, vamp missing
10	C	Boot/shoe	Man	?	Fair	Yes	Left upper vamp harvested, very worn
11	C	Shoe	Man	95	Good	No	Left ankle high shoe
12	C	Shoe	Man	80	Good	No	Right-mate to #11
13	C	Boot	Man	90	Good	No	Left elastic sided
14	C	Unknown	Man	15	Fair	Yes	Right sole & heel
15	CD	Unknown	Man	10	Poor	No	Sole & heel
16	CD	Brogan	Man	70	Good	Yes	Right, vamp missing, cut down boot
17	CD	Brogan	Man	98	Good	No	Buckle closure, finely made brogan
18	CD	Brogan	Man	90	Good	Yes	Mate for #17, buckle strap harvested
19	CD	Boot	Man	95	Good	No	High boot, heel missing, disassembled
20	CDE	Boot	Man	?	Good	Yes	Right boot, upper section harvested
21	CDE	Boot/Brogan	Man	?	Fair	Yes	Entire quarter section harvested
22	CDE	Boot	Unknown	20	Fair	Yes	Left, elastic sided, sole repaired
23	CDE	Brogan	Man	90	Good	No	Left, rodent gnawed, extra punched holes
24	CDE	Boot	Man	25	Fair	Yes	Left, part vamp & quarter section harvested
25	CDE	Boot	Man	15	Fair	Yes	Left vamp missing, quarter section cut
26	E	Boot	Man	20	Good	Yes	Right, mate to #27, largely harvested
27	E	Boot	Man	20	Good	Yes	Left, harvested exactly like #26
28	E	Boot	Man	98	Fair	No	Mate to #19, crushed by weight of fill
29	E	Boot	Man	20	Good	Yes	Left, largely harvested
30	E	Unknown	Woman/child	25	Good	Yes	Left straight last, heavily harvested
31	E	Unknown	Woman/child	10	Good	Yes	Straight last, heel & part of sole
32	E	Unknown	Woman/child	20	Poor	Yes	Straight last, square toe
33	E	Unknown	Woman/child	10	Fair	?	Straight last heel & sole
34	E	Boot	Man	20	Good	Yes	Straight last, rubber heel, harvested

Pin, tape, and other worms*, lurking in the system of so many thousands, are effectually destroyed and removed. Says a distinguished physiologist: There is scarcely a person on the face of the earth whose body is exempt from the presence of worms. It is not upon the healthy elements of the body that worms exist, but upon the diseased humors and slimy deposits that breed these living monsters of disease. No system of medicine, no vermifuges, no anthelmintics will free the system from worms like these Bitters.*

The broadside continues by claiming that the bitters could effect the amazing cures for all of the above symptoms and conditions in a single week. It further states:

"You claim too much for your Vinegar Bitters," *says a skeptic. "How can one medicine be a specific for Dyspepsia, Rheumatism, Liver Complain, and fifty other disorders?" Simply, Mr. Cavalier, because the virus of all disease is in the blood, and this fine vegetable antiseptic neutralizes it there.*

The broadside concludes by stating

that prior to 1867 Vinegar Bitters was distributed only in San Francisco but that since then it had become available nationally. The broadside was signed for R.H. McDonald & Co. as general agents, who were indicated as "Druggists, San Francisco, California, and cor. Washington and Charleston, S.C., New York".

The Clothing group artifacts recovered from Feature 39 proved to be quite interesting. A total of 718 Clothing group artifacts were recovered, of which the largest classes proved to be buttons (n=189) and leather shoes and shoe parts (n=232). The buttons proved to include a broad range of sizes and types, but matched sets of buttons were absent. The buttons appear to have been from rags used for cleaning on the trains, in the depot, or in support facilities.

The shoes and shoe parts were primarily recovered from stratum C and below (Figure 10; Tables 7-8). Feature 39 was in an area of extremely high groundwater, and it appears that the deposits in Stratum C and below had remained waterlogged from the time the cistern was filled to the point at which it was excavated. The shoes and boots included a number of examples that had been partially harvested for leather. Further, many of the recovered shoes and boots were

TABLE 8. Feature 39 Footware (Part II).

#	Construction	Lace Holes	Sole Length (feet)	Ht. of Heel (feet)	Quarter/Upper Ht (feet)	Half soled?
1	Pegged Sole	NA	NA	NA	NA	No
2	Pegged?	NA	NA	0.31	NA	No
3	Pegged	NA	NA	0.05	NA	Yes
4	Pegged	Eyelets	0.81	NA	0.31	No
5	Pegged Sole	Eyelets	0.86	0.05	0.36	Yes
6	Pegged Sole	NA	0.87	NA	NA	Yes
7	Pegged Sole	NA	0.89	NA	NA	No
8	Pegged Sole	Punched	1.0	NA	0.23	No
9	Pegged Sole	Punched	0.95	0.04	0.27	No
10	Pegged Sole	NA	0.9	0.05	NA	Yes
11	Pegged Sole	Eyelets	0.84	NA	0.45	Yes
12	Pegged Sole	Eyelets	0.84	0.02	0.45	Yes
13	Sewn Sole	NA	0.98	0.06	0.58	No
14	Pegged?	NA	0.82	0.03	NA	No
15	Pegged Sole	NA	0.89	0.06	NA	No
16	Pegged Sole	Punched	0.89	0.07	0.28	No
17	Pegged Sole	NA	0.89	0.06	0.41	No
18	Pegged Sole	NA	0.91	0.06	0.45	No
19	Pegged Sole	NA	0.97	NA	1.1	No
20	Unknown	NA	0.89	0.08	NA	No
21	Pegged Sole	NA	0.90	0.04	NA	No
22	Sewn/Pegged	NA	NA	NA	0.5	No
23	Pegged	Punched	0.85	NA	0.35	No
24	Sewn/Pegged	NA	0.85	0.07	NA	Yes
25	Unknown	NA	0.85	0.04	NA	Yes
26	Sewn	NA	0.80	NA	NA	Yes
27	Sewn	NA	NA	NA	NA	Yes
28	Pegged	NA	0.90	NA	1.0	No
29	Sewn	NA	0.89	0.06	NA	No
30	Sewn	Eyelets	0.60	0.04	NA	Unknown
31	Sewn	NA	NA	0.04	NA	No
32	Sewn	NA	0.63	0.04	NA	No
33	Sewn	NA	0.58	0.04	NA	Unknown
34	Nailed	NA	0.90	0.03	NA	Yes

quite old by 1880, as nailing had begun to replace pegging by 1862. Sewing became common in the 1860s, and even more common with automation of sewing by about 1875 with the invention of the Goodyear welt stitcher (Weaver et al. 1996:186-200). The shoes and boots were probably dumped in the cistern from Patrick O'Day's cobbler's shop, which is known to have been in or near the depot.

The Activities group accounted for 14.12 percent of all of the pattern artifacts recovered from Feature 39. The Activities group included both railroad and non-railroad artifacts.

Almost 57 percent (n=1330) of the Activities artifacts (n=2346) were from lanterns or lamp globes (Figure 11). The railroad lamp globe glass from Feature 39 is of interest because a number of the sherds were etched with letters that apparently signified the railroads that had owned and used the lanterns. The etched lamp globe glass included sherds attributed to the M&O Railroad, the L&N Railroad, and the L&N and Great Southern Railroad. The name L&N and Great Southern Railroad was first used shortly before the old M&O terminal was torn down and the new L&N terminal was built, which means that all of the etched lamp globe glass was of the proper age for disposal in a feature about 1880.

Brass baggage tags and the leather tag straps recovered from Feature 39 are also of

FIGURE 10. Examples of Footware from Feature 39.

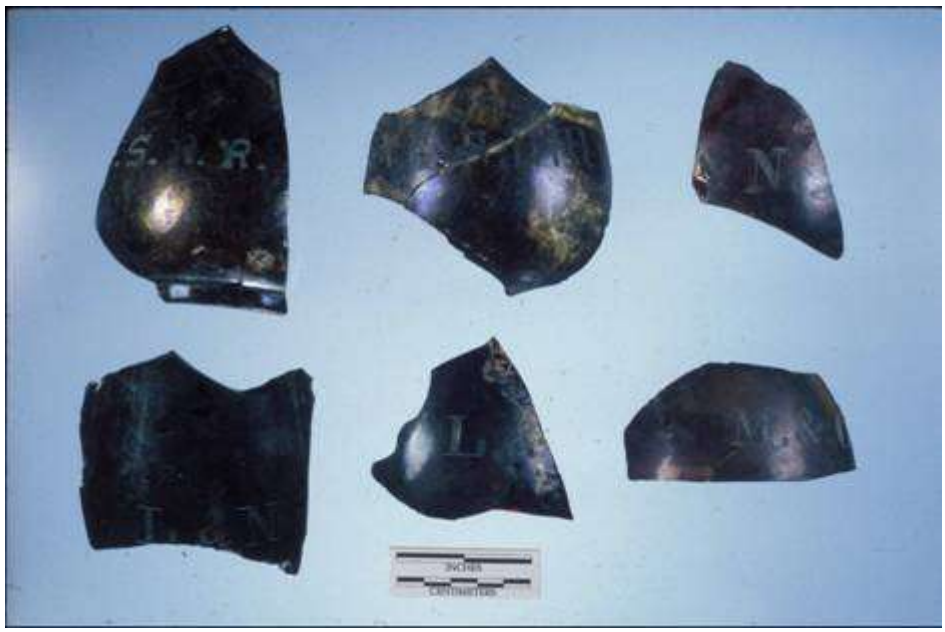

FIGURE 11. Lamp Globe Glass from Feature 39. Top row (l-r): L&N & Great S.R.R. (2), L&N. Bottom row (l-r): L&N (2), M&0.

TABLE 9. Brass Baggage Tags from Feature 39.

Context	Qty	Notes and Stamped Lettering
B&BC	1	"Memphis and Baltimore 668, M&L Jeff O&M M&O B&O" on reverse side: "Check for baggage in consideration of free carriage its value is agreed to be limited to one hundred pounds"
C&CD	1	"M.C.T. CO. Worsham 27 house" the backside of tag has an illegible maker's mark
C&CD	2	"MEM&O.R.R." over "45" over "CAIRO" over a star over "VIA HUMBOLDT," one doesn't have the star.
C&CD	1	"123 "MEMPHIS TO CLEVELAND M&L.U-S-M-LINE,L*M-&C-C&C" (on reverse side) HOO1_PATOCTS CLEVELAND TO MEMPHIS C-C&C L-N" over "U.S.M. LINE&M&L" over "123"
C&CD	1	Baggage tag, brass
C&CD	1	"W.W. WILCOX. CHICAGO MEMPHIS AND CAIRO ILL. 526 L.N.&G.S. & M.C."
C&CD	1	"CAIRO TO MEMPHIS M.C.&L.N.&GTS.RRs. 526" (on the reverse) "526 MEMPHIS TO CAIRO ILL. L.N.&GTS.&MCRRs."
C&CD	2	"CINCINNATI AND MEMPHIS 2121 LC&L.M&L"
C&CD	1	MEMPHIS" over "529 ARGENTA VIA M&LR RR" (on the reverse) "JAS MURDOCK JR STAMPS SEAL PRESSES STENCILS &c 139 WEST 5th CIN TI"
C&CD	1	"JAS MURDOCK JR M&LR-RR 31 LOCAL" (on the reverse) "MURDOCK"
C&CD	1	"MEMPHIS TO LOUISVILLE 1558 VIA CLARKSVILLE" (on the reverse) "LOUISVILLE TO MEMPHIS 1558 VIA CLARKSVILLE"
C&CD	1	"WWWILCOX CHICAGO MEMPHIS AND JACKSON TENN 791 LN & GTS & M.C."
C&CD	2	(on leather strap) "MEM&O.R.R. 54 CAIRO (STAR) VIA HUMBOLDT" (one tag does not have a star)
C&CD	1	(broken) "HIS 9 O.R.R. CAL"
C&CD	1	(on leather strap) "791 MEMPHIS TO JACKSON TENN. L.N. & GTS & M.C. RRs." (on the reverse) "W.W. WILCOX, CHICAGO JACKSON TO MEMPHIS M.C. & LN & GTS RRs. 791"
C&CD	1	MEMPHIS *237* MEM.&O.R.R. LOCAL"
C,D&E	1	(broken) "MOB 302 MEMPHIS (STAR) VIA HUMBOLDT"
E	1	Brass plated, 4 ¾ inch long "369" embossed on both sides, possible baggage tag
E	1	"JAS. MURDOCK JR. M&LR-RR 71 *LOCAL*" (on the reverse) "JAS MURDOCK JR STAMPS BURNING BRANDS STENCILS &c 139 WEST 5th ST. CIN. O."

TABLE 10. Marked Lead Railroad Car Seals from Feature 39.

Context	Qty	Marks
A&AB	1	(both sides) "L&N R.R. LOUISVILLE H.D. PATENT 1857 PATENT"
B&BC	1	"Louisville K.Y." on the reverse "Baggage Agent"
C&CD	1	"L&N RR LOUISVILLE" on the reverse "GEN BAGGAGE AGENT"
C&CD	1	"MEMPHIS TENN" (reverse is illegible)
C&CD	1	"P.S.JUSTICE PHILAD." (surrounds STAR) (on the reverse) "LOU.&NASH RR LOUISVILLE, KY UP.S. OFFICE"
C&CD	1	"L&N RR LOUISVILLE" (on the reverse) "GEN BAGGAGE AGENT"
C&CD	2	"MEMPHIS" over "TENN" (on the reverse) "GEN. BAG AGENT"
C&CD	1	"60 AL"
CDE&E	1	"M&O RR HUMBOLDT TENN," (on the reverse) "STATION 103" or "108" (illegible)
CDE&E	1	"MEMPHIS TENN" (on the reverse) "FREIGHT DEPT"
CDE&E	2	"M&_RR" over "HUMBOLDT TENN" (on the reverse) "GEN. BAG. AGENT"
CDE&E	1	"SVILLE KY" (on the reverse) "AGENT"
CDE&E	4	"60 91 (or) 16 09"
CDE&E	1	Stamped with "STATION" over "106," includes wire
CDE&E	2	Stamped: 60 over 1
CDE&E	6	"62 1"
CDE&E	6	"60 A1"

special interest. Twenty-one brass baggage tags were recovered, and in some cases they were still on their original leather straps (Table 9; Figure 12). Seventeen of the 21 tags were recovered from strata C and CD, which means they were discarded from the depot structure as it was being demolished.

FIGURE 12. Examples of Brass Baggage Tags from Feature 39.

Three types of baggage checks were manufactured, and those three types came in many shapes and sizes. The three basic types of tags were local checks, station checks, and reversible checks. Two identical checks were kept together on the same leather strap until needed to check a piece of luggage. At that point, one check was attached to the piece of luggage with a leather strap, and the other was given to the passenger so that he or she could reclaim their baggage

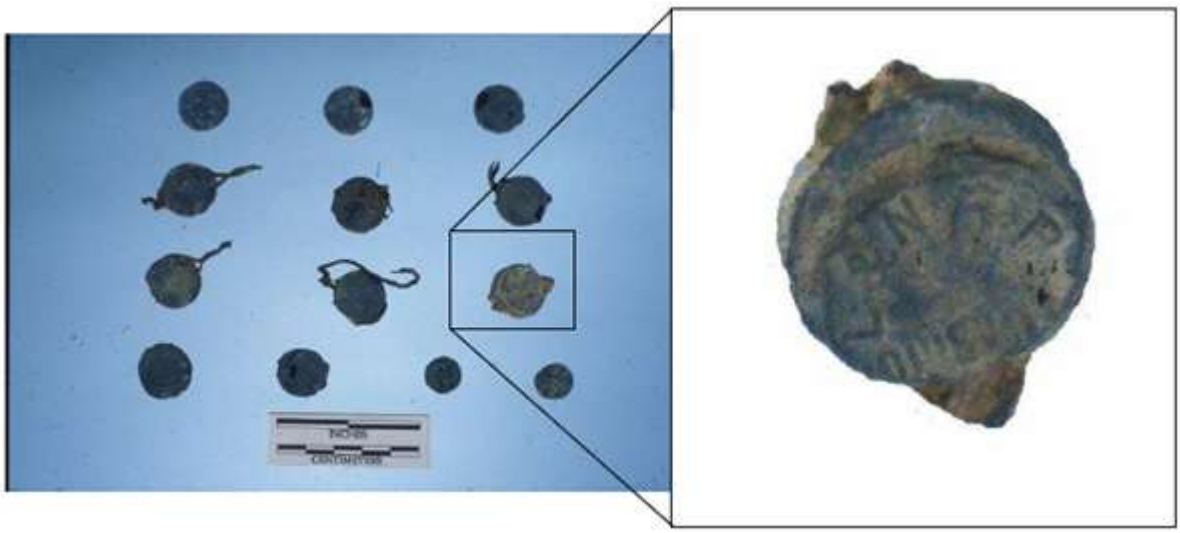

FIGURE 13. Lead Car Door Seals from Feature 39. Top row: Unused. Bottom Rows: Used.

upon arrival at their destination. Upon arrival, the passenger surrendered their claim tag, the number on the tag was compared to the number affixed to the baggage, and the passenger was given their baggage (Sullivan 1996b:13-14). Brass baggage tags were in use by about 1835, and were replaced by brass card holders which were invented about 1880 (Sullivan 1996a:12-13, 1996b:12).

The earliest baggage tag recovered from Feature 39 probably dated to the Civil War, as one is stamped in part with "U.S.M. Line," which probably stands for the U.S. Military Railroad. The youngest tag in the collection probably is the example that is stamped in part "LN & GTS," which stands for the L&N and Great Southern Route, which was created shortly before 1880.

An additional artifact class from the Activities Group that is of special interest includes marked lead railroad car seals (Figure 13; Table 10). Each of those seals had been crimped with a special tool that impresses a mark on the seal. The lead seal was crimped over the end of a sealing wire that had been threaded through holes in the handle mechanism of a railroad car and then threaded through holes on each side of the lead seal. Once the seal was crimped, it was not possible to open the railroad car door without breaking the wire or the seal. Cars were sealed at their point of shipment, and the seal broken when the car arrived at its destination to be unloaded.

The remaining activities artifacts present at least some insights into the nature of the old M&O depot. Brass and ceramic gas light jets were recovered from strata C and CD, indicating that the building was outfitted with gas lighting. A chandelier crystal recovered from strata B and BC suggests that at least one chandelier was present in the building. A possible bakelite telegraph part and glass insulators from strata B and BC, C and CD, and CDE and E indicate that there was a telegraph either in the depot or in a nearby support facility.

The faunal collection that was analyzed from Feature 39 consisted of 871 bone fragments that weighed 9,483.4 g. That collection represented the bones from levels 11 through 22, which were the permanently saturated levels in the feature. Bone preservation was excellent

TABLE 11. Comparison of Faunal Composition of Feature 39 (40SY590) and Feature 1 (40KN145)

	Feature 1 (40KN145)		**Feature 39 (40SY590)**	
	Qty	**%**	**Qty**	**%**
Cow	149	7.3	68	7.8
Pig	437	21.6	239	27.4
Sheep	4	0.1	3	0.3
Opossum	3	0.1		
Squirrel	2	<0.1		
Raccoon	2	<0.1	2	0.2
Rabbit	59	2.9	3	0.3
Rat	3	0.1	33	3.7
Rodent	2	<0.1	8	0.9
Sm. Mammal	113	5.5	7	0.8
Md. Mammal			5	0.5
Lg. Mammal	210	10.3		
Mammal	870	43	308	35.4
Turkey	6	0.2	36	4.1
Chicken	55	2.7		
Bird	51	2.5	93	10.6
Shark	1	<0.1		
Boney Fish	14	0.6	50	5.7
Unid	39	1.9	15	1.7
Eggshell	Present		Present	
Oyster			Present	
Mussel			Present	
TOTAL	2020	98.8	870	99.4

TABLE 12. Comparison of Beef and Pork Cuts from Feature 39 (40SY590) and Feature 1 (40KN145)

	Feature 39 (40SY590)			Feature 1 (40KN145)		
Beef Cut	Qty	Roast	Steak	Qty	Roast	Steak
Short Loin	8			4		4
Rib	10			2		
Round	7	2	5	17	7	2
Rump	6	3	3	4	4	
Chuck	10		9	1	1	
Arm	4	3	1	42	23	
Neck	4					
Hindshank	6	3		14	10	
Foreshank	7	6		19		
Pork Cut						
Head	4			79		
Boston Butt	1		1		10	
Picnic Shoulder	10	10		11		1
Loin	6		2	20		
Rib/Belly	4			8		
Ham/Leg	38	36	1	21	2	15
Feet	168			298		

within the analyzed collection.

The faunal collection from Feature 39 was analyzed by species, minimum number of individuals (MNI), butchering units, and age profiles. The collection was then compared to a collection from Feature 1 on the Knoxville Courthouse Project (Garrow et al. 1996).

Table 11 summarizes the faunal composition of MATA Feature 39 and Knoxville Courthouse Feature 1. Table 12 compares the beef and pork cuts from the two features. Feature 1 was a late nineteenth to early twentieth century privy filled with debris discarded from a restaurant and bar. That faunal material from Feature 1 was analyzed and reported by the same analyst who dealt with the Feature 39 material, insuring analytical comparability between the samples.

The faunal assemblages from Feature 39 at the MATA Terminal Site and Feature 1 of the Knoxville Courthouse block proved to be very similar. Cow and pig dominate both assemblages, and commercially slaughtered and butchered animals characterize both assemblages. A few species such as chicken, opossum, and shark were present in Feature 1 and not in Feature 39, but those differences were minor. The primary difference between the assemblages is that Feature 1 contained meat cuts that were generally less expensive than Feature 39. The Feature 1 assemblage came from a blue collar restaurant located in the commercial district of Knoxville, while the Feature 39 assemblage likely came from a restaurant

TABLE 13. Ethnobotanical Remains from Feature 39 (Levels 11-22)

Taxon	Level												Totals
	11	12	13	14	15	16	17	18	19	20	21	22	
Pecan	220	47	293	130	143	42	54	52	60	44	37	78	1200
Black Walnut	3	3	10	7	7	5	8	15	21	5	15	32	131
English Walnut	2	1	6	3								7	19
Peanut	1	1	2		3	1	4		16	15	20	32	95
Hickory	4	5	1	8	7	1	3	6	1		8	10	54
Coconut				2							2	10	14
Hazel									1			3	4
Acorn	8		7	1	1			2	1		2	1	23
Chestnut			6		4	1			11	28	29	35	114
Brazil Nut				1	1				2	1	2	2	9
Unidentified Nut				1	2			1		3	3	1	11
Watermelon	2		1	1	2	2		1	4	5	40	93	151
Cherry					1			1		1	1	1	5
Peach	6	4	17	19	10	5	11	44	102	128	147	271	764
Grape									1		3	2	6
Paw Paw										1		3	4
Hedge Parsley	5		3	1		1					1	1	12
TOTALS	251	61	346	174	181	58	80	122	220	231	310	582	2616

located in the old M&O depot.

A large ethnobotanical assemblage was recovered from Feature 39. The ethnobotanical materials from levels 11 through 22 were analyzed and the results are summarized in Table 13.

Nearly a third of all of the recovered ethnobotanical material came from the bottom two levels of the feature. Those two levels contained most of the primary deposit within the feature, while the other levels included in the analyses contained demolition debris. The ethnobotanical assemblage contained fruits and nuts that were portable and could serve as snack food during a train ride. It is likely that the majority of the ethnobotanical assemblage came from cleaning the railroad passenger cars, although the same snack foods could have been consumed in the depot.

The L&N Depot

The features related to the L&N depot consisted primarily of brick foundations (Figure 14). Available photographs of the L&N depot indicate that the building was a six-bay, two-story brick structure. The six bays evident in the photographs are reflected in the internal foundations, which divided the structure into three equal sections. The northern section was further subdivided into four unequal sized spaces. Based on the locations of utility trenches, restrooms were probably located in the eastern half of the northern section. The southern section appears to have been divided into two rooms, while the central section may have been an open hall with a stairway to the second floor.

The L&N foundations were made of machine-made brick with alternating courses of headers and stretchers. The mortar was white and dense and may have been a form of Portland cement. Small sections of the foundations were clearly missing and had either been destroyed during demolition or inadvertently removed during the Phase II excavations. The outside dimensions of the L&N depot, based on the foundation, was 56 feet north-south by approximately 75 feet east-west.

Five unnumbered posts treated with creosote and four wooden pads were

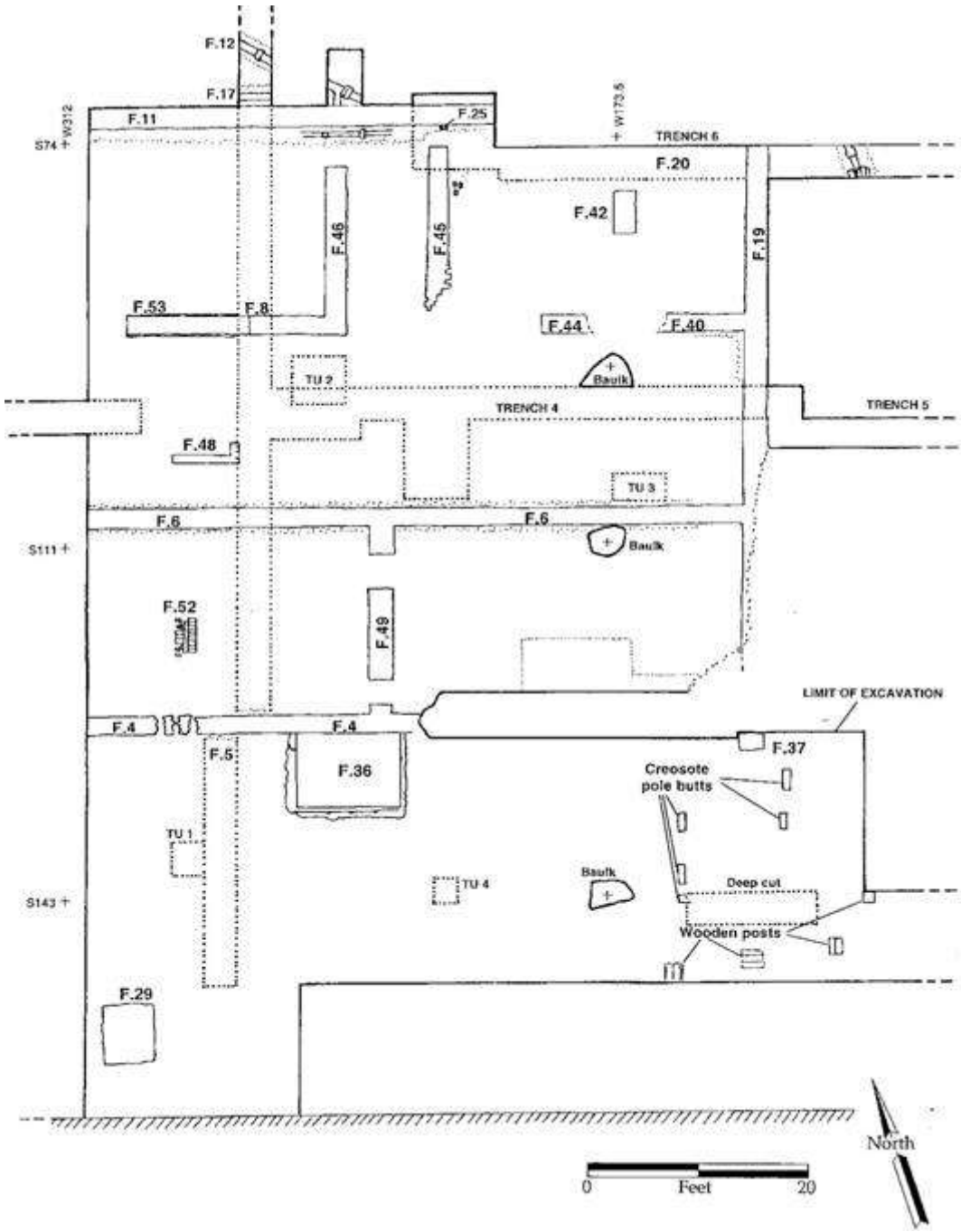

FIGURE 14. Features Interpreted as Related to the L&N Depot.

found south of the L&N depot structure during the Phase II excavations. Those posts and pads appear to have been part of a platform that was situated immediately north of a railroad spur and was probably used to unload cars placed on that spur (Garrow et al. 1998:50).

Feature 29 appears to have been a "deadman" or embedded railroad ties placed at the end of a railroad spur. The west end of the iron L&N rails that were part of that spur was apparently adjacent

FIGURE 15. Portion of Feature 38 Foundation.

to Feature 29. The deadman, platform, and spur all appear to have been used at the same time.

Feature 36 was identified immediately adjacent to and south of the southern foundation of the L&N depot. This feature was not built into the south foundation and was constructed separately from the building. The total feature measured 11.5 feet east-west by 9.4 feet north-south, while the concrete cap measured 9.4 feet by 7 feet. A conical hole in the center of the cap measured 11.7 feet across the top by 1 foot across at the bottom. Feature 36 was interpreted in the Phase II notes to be a possible cistern, latrine or septic tank. Although recommended for Phase III data recovery, Feature 36 was not approved for additional investigations. While it is impossible to determine the function of this feature based on the Phase II data, observations concerning its potential function are in order. First, no utility trenches were observed during the Phase II work in the vicinity of Feature 36. Further, the restrooms inside the building, at least at some point in time, were located on the opposite side of the structure. Third, there was no evidence of a drain field associated with this feature.

Feature 36 was clearly used for liquid storage, with the liquids placed in the tank and removed through the center hole. The tank probably replaced Feature 39 as a cistern to store rainwater collected through gutters from the top of the structure. The water collected in Feature 36 would have been used for industrial purposes, while potable water was piped into the structure on the north side of the building.

Feature 37 was located on the southeast corner of the L&N depot and probably was a drain. Feature 37 could date to any point when the L&N depot was in use, but probably postdates Feature 36.

Feature 38

Feature 38 represents a former structure found east of the main excavation blocks. That structure was believed to have been part of the M&O occupation at the close of the Phase II study and was subsequently excavated during the Phase III investigations.

Feature 38 consisted of a brick structural foundation and its associated features (Figures 15-16). Based on the Phase II data, it was assumed that Feature 38 was associated with the M&O depot, and it was included in the excavation plan based on that assumption. Preliminary field inspection of the artifacts recovered from Feature 38 appeared to support an early date for that structure. The recovered artifacts included Civil-War era military buttons and two brass baggage tags from the U.S. Military Railroad that suggested the building was used during the Civil War (Figure 17).

An intact brick cistern designated Feature 85 that appeared to be related to Feature 38 was discovered during the Phase III investigations. Feature 85 was located 15 feet east of the eastern wall of the Feature 38 structure. The feature was recommended for Phase III data recovery based on its presumptive association with

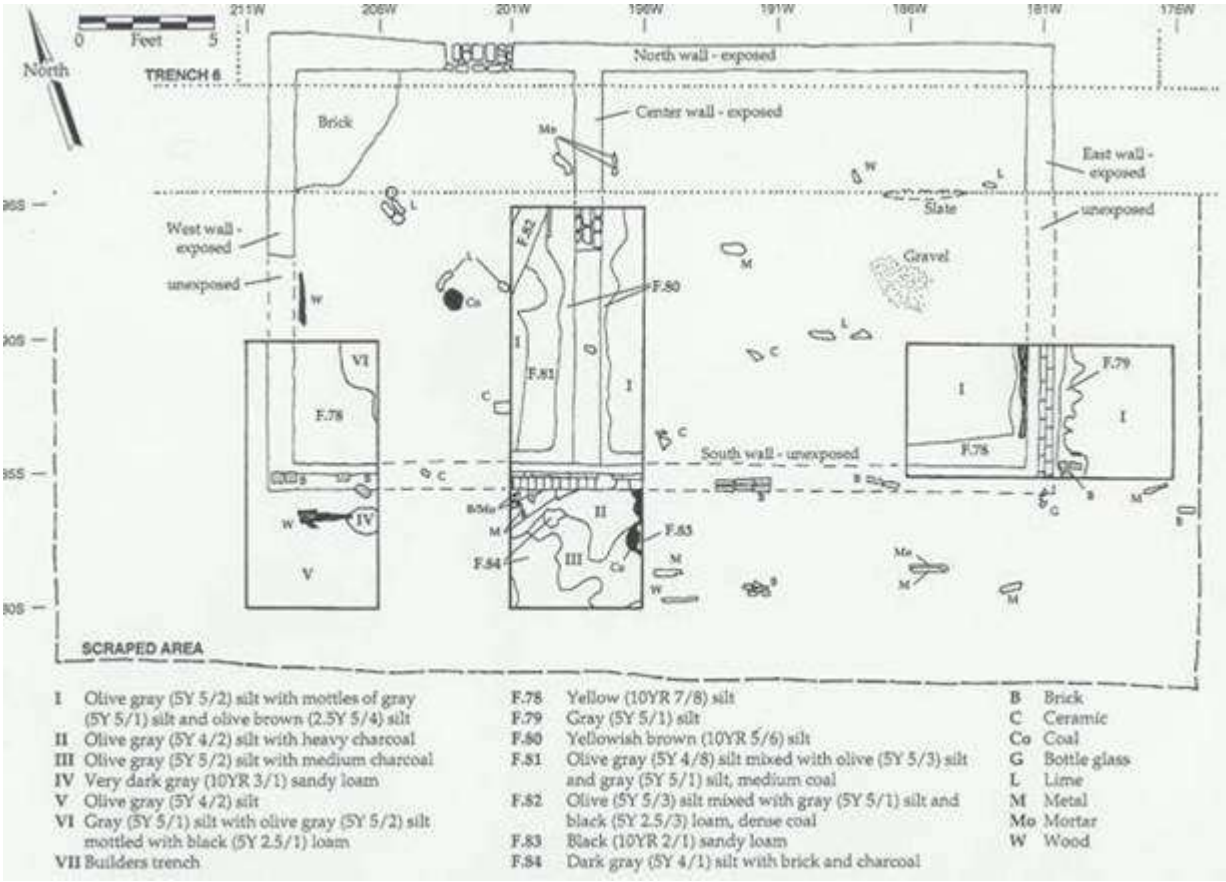

FIGURE 16. Plan View of Feature 38.

the Feature 38 structure. MATA decided to put the excavation and analysis of Feature 85 out for competitive bids, and the contract was awarded to the University of Memphis. Feature 85 was excavated by the University of Memphis using a combination of machine and hand excavation, with significant portions of the fill removed by machine without screening. The dissimilar excavation methods prevent meaningful comparison of Features 38 and 39 with Feature 85.

FIGURE 17. Clothing, Personal, and Activities Artifacts from Feature 38. Top row: Buttons. Second row (l-r): Bakeline hair pin, brass key, locket. Bottom row: U.S. military railroad brass baggage tags.

TABLE 14. Window Glass Data Related to the Feature 38 Structure.

Unit #	Level	Count	Product	Average	Total Count	Total Product	Average	Date
Units Outside Structure								
85S 176W	1	30	83.7	2.79				
	2	1	1.7	1.70				
90S 196W	1	0	0	0.00				
90S 206W	1	3795	9178.7	2.42	3,826	9264.1	2.42	1889.36
Units Inside Structure								
85S 181W	1	0	0					
	2	30	97.2	3.24				
	3	12	30.7	2.56				
	4	1	1.9	1.90				
85S 196W	1	1136	2787.1	2.45				
	2	71	188.4	2.65				
80S 196W	1	63	173.7	2.76				
	2	68	169.6	2.49				
85S 206W	1	401	1032.9	2.58				
	2	6	11.5	1.90				
	3	9	22.8	2.53	1797	4515.8	2.51	1893.72
Builder's Trenches								
F78		4	7.3	1.83				
F79		84	201.8	2.40				
F80		45	104.8	2.33				
F81		88	215.1	2.44	221	529	2.39	1888.75
All Contexts					5844	14308.9	2.45	1891.23

Weaver et al. (1997) estimated the fill date of Feature 85 between 1880 and 1888 based on map data. That interpretation conflicts with the dates derived from Feature 38 as discussed below.

Window glass dating provided the best insights into the construction and demolition dates of the Feature 38 structure. Table 14 summarizes the window glass dates from the units inside and outside the structure and the builder's trenches.

The dates from the builder's trenches affix the date of construction as about 1889. Destruction of the structure, probably by fire based on the recovery of burned artifacts, may have followed by about 1894, as indicated from the window glass dates from the units inside the structure. The window glass dates for the construction and demolition of the building place both events within a gap in the available mapping on the site. Historic maps that include the study block up to 1888 do not show the Feature 38 structure, and the structure is not shown on the 1897 or subsequent Sanborn Insurance maps of the area (Sanborn Fire Insurance Company 1888, 1897).

The artifact patterns for the Feature 38 units and features are summarized in Ta-

TABLE 15. Artifact Patterns from the Feature 38 Units and Features.

Group/Class	Units		Features	
	Qty	%	Qty	%
Kitchen				
Ceramics	492	6.12	16	2.83
Bottle Glass	1208	15.02	84	14.87
Table Glass	1	0.01	0	0.00
Total	**1701**	**21.15**	**100**	**17.70**
Architecture				
Window Glass	5568	69.22	225	39.82
Nails	296	3.68	73	12.92
Other	26	0.32	16	2.83
Total	**5890**	**73.22**	**314**	**55.58**
Furniture	5	0.06	5	0.88
Arms	2	0.02	0	0.00
Clothing				
Buttons	20	0.25	3	0.53
Leather Shoes	3	0.04	2	0.35
Other	11	0.14	26	4.60
Total	**34**	**0.42**	**31**	**5.49**
Personal	4	0.05	2	0.35
Tobacco	9	0.11	1	0.18
Activities	399	4.96	112	19.82
Grand Totals	**8044**	**100.00**	**565**	**100.00**

ble 15. Those patterns clearly reflect that the structure did not serve a domestic function. Over 73 percent of the artifacts recovered from the excavation units and over 55.5 percent of those from the features were architectural, as opposed to a unit percentage of over 21 percent and a feature percentage of nearly 18 percent for Kitchen artifacts. A number of railroad-related artifacts from the structure clearly link it to the L&N use of the property. Perhaps the best clue to the function of the building came from the recovery of a large number of stoneware sherds and complete stoneware bottles that had contained ink (Figure 18). The large number of ink bottles and the definite railroad affiliation of the structure suggest that it functioned as a freight house or office.

FIGURE 18. Ceramic and Glass Bottles from Feature 38. Left to right: Partial ink bottle from backhoe stripping, whole ink bottle from Unit 85S 196W Level 1, soda/mineral water bottle from Unit 90S 206W Level 1.

Conclusions

The research design for this project was compiled in two parts. The first part dealt with the Phase I and II studies and posed three objectives for research (Garrow et al 1998):

1) To identify past occupations, buildings, and events which might contribute to the historical significance of the site;
2) To identify the types of archaeological resources that might reasonably be expected to be preserved in the project area; and
3) To delineate those areas with a high potential of containing significant archaeological resources.

Those research objectives were met for the northern half of the block during the combined project phases. For the southern portion of the block, substantive uninvestigated traces of the occupations presumably are still preserved beneath the MATA parking lot on the southern half of the block.

The research design prepared for the Phase III studies delineated specific types of information that would be sought during the data recovery.

1) Nineteenth-century building techniques for domestic and railroad construction;
2) Intra-site spatial activity relating to nineteenth-century domestic occupations and railroad uses;
3) Changes in water procurement and waste disposal in nineteenth-century Memphis;
4) Evolution of industrial and engineering technology;
5) Social ramifications of industrialization, especially: a) work place conditions; b) labor organization and relationships; c) level of technology represented in buildings and machinery; and d) scale of operations or market area;
6) Dietary patterns;
7) Material correlates of socioeconomic status, ethnicity, and consumer behavior; and,
8) Site formation processes

The Phase III research design was

prepared at a time when it was thought that the features to be investigated would include privies and a well in addition to the Feature 39 cistern and the Feature 38 structure. Removing the privies and well from the data recovery priorities diminished the types and range of information that could be recovered from this site, and reduced the research value of the site. Those data sets that could still be addressed after the scope of investigations narrowed are discussed below.

Nineteenth Century Building Techniques

The data sets that pertained to illuminating nineteenth century building techniques were limited to the railroad-related construction for the M&O and later L&N occupations. The Phase II investigations clearly demonstrated that the M&O depot that was torn down in about 1880 sat on brick foundation piers and was therefore of frame construction. Excavation of the cistern indicated that the structure had plastered interior walls, and observation of the plaster indicated the walls had been painted white or off-white. Application of window glass dating on a level-by-level and stratum-by-stratum basis in Feature 39 suggests that the windows had been replaced when the L&N purchased the M&O in 1872, with additional replacement repairs after the 1873 yellow fever epidemic.

The cistern that comprised Feature 39 was constructed of brick faced with hydraulic cement. The cistern was wider at the mouth than at the base, and was as deep as it was wide at the mouth. The cistern was built into unstable silts that currently feature very high ground water, and must have represented a minor engineering and construction feat in its own right. The cistern gathered roof runoff from the depot building that was directed into the cistern through a tin drain or pipe.

The L&N depot built about 1880 was a two-story brick building. Photographs of the building have survived, and the photographic images, the available detailed maps, and the archaeological data are consistent concerning the size and construction of that building. The construction methods and the materials used in the L&N depot are certainly more permanent than those used for the M&O depot, and probably reflect the relative financial health of each railroad when its depots were built. The M&O was nearly bankrupt within a couple of years after the depot was constructed, and the L&N is still in operation.

Feature 38 was an L&N freight house or office that was built about 1889 and gone by 1897. The structure was of brick construction, and hand made brick was used in the construction. The Feature 38 structure exhibited the same careful and permanent construction as the L&N depot, and may have been destroyed by fire not long after it was built.

Intrasite Spatial Activity Analyses

The space on the northern half of the block was organized by function, although the degree and extent of that organization remains unknown. The M&O depot appears to have supported a number of functions, as it included a restaurant of some type and a cobbler's shop. The depot apparently included a baggage facility, based on the recovery of brass baggage tags and leather baggage tag straps from the demolition debris in Feature 39.

The L&N operation may have been somewhat less centralized than that of the M&O. The Feature 38 structure probably separated freight functions from the depot, while the depot probably continued to shelter the baggage handling facility and a

restaurant of some sort for travelers. Alternatively, the Feature 38 structure may have served as an office, as a large freight warehouse was standing elsewhere on the block by the late nineteenth century.

The Evolution of Industrial and Engineering Technology

The Phase III investigations did not yield large collections of railroad tools or running gear that could be used to study technological change in the railroad industry. However, the excavations did produce brass baggage tags and lead railroad car seals that provided insights into the manner in which railroad baggage was handled during the second half of the nineteenth century and security was maintained on loaded railroad cars.

Excavation of Feature 39 yielded a number of reusable stamped brass baggage claim checks, including examples that were still on their original leather straps. The baggage claim checks contained the starting point and destination for the baggage and the abbreviations for the railroad along which the baggage would be routed while in transit. The baggage tag also contained a unique number. The baggage checks were produced in sets of two, with one attached to the bag to be shipped with a leather strap and the other given to the passenger to serve as a claim check at the end of the journey. The baggage checks were back together on the leather luggage strap at the end of the trip to be reused by another passenger. Some tags were made as two-way claim checks that could be turned over and used to route a new bag back to the original starting point of the claim checks. Others were one-way checks that had to be returned to their starting point to be reused. Brass baggage tags of this type found during this project were used until some point in the late nineteenth century when they were replaced by brass cardholders that had replaceable cardboard inserts. The brass cardholders were reportedly patented about 1880. Brass tags of all types were ultimately replaced by the familiar cardboard baggage checks that are still used today.

The lead baggage car seals recovered during this project were used to seal loaded railroad cars at their origin point to serve as visible proof that the cars had not been entered and tampered with en route. The (apparently) older seals were crimped with a tool that stamped the city and department of origin directly into the lead seals. All but one of the seals found in Feature 39 was recovered from the debris layers from the demolition of the M&O depot. This style of crimping tool appears to have been replaced by one that stamped an alphanumeric or numerical code into the seal. Eighteen of the 19 seals with alphanumeric or numerical codes were recovered from the primary deposit at the bottom of that feature, indicating that use of the code system probably became common shortly before the cistern was filled.

Dietary Patterns

A large well preserved collection of faunal and ethnobotanical material was recovered from Feature 39. The portion of the sample beneath the levels containing twentieth century material had remained waterlogged since the original filling and was analyzed during this project. Analysis of the faunal material indicated that the collection was very similar to a late nineteenth to early twentieth century assemblage from the Knoxville Courthouse site (Garrow et al. 1996) that was recovered form a privy associated with a restaurant

and bar. The Feature 39 faunal material appears to have been derived from more expensive cuts of meats than the Knoxville example, however. The Knoxville restaurant and bar was hypothesized to have been a working class establishment, while the Feature 39 material probably came from a restaurant or sandwich shop in the depot that catered to railroad passengers.

The ethnobotanical material recovered from Feature 39 included an array of nutshells, as well as cherry and watermelon seeds and peach pits. The mixture of nuts and fruits in that feature suggest that the ethnobotanical collection was primarily made up of highly portable foods that could have been carried on a train and eaten as snack foods.

Consumer Behavior

The artifacts recovered from the Phase III excavations are not particularly helpful to reconstructing consumer patterns in Memphis in the second half of the nineteenth century, as they probably consist of items used by the railroads or by passengers who were in transit. Many of the artifacts marked with the address of a retailer or manufacturer came from somewhere further north or east along the railroad route. No materials were found that came from south of Memphis, and the only artifact recognized as coming from the west was J. Walker's Vinegar Bitters from San Francisco, which also had eastern distributors.

Site Formation Processes

Careful stratigraphic study of Feature 39 revealed information concerning the fill history of that feature that will be used on future urban projects that contain large, deep features. It is clear that the fill history of Feature 39 can be broken down into three distinct phases. First, after the feature was no longer used as a water source, primary trash was thrown into the feature that became the constituents of the bottom three levels of the feature. The feature apparently did not receive primary trash long before the M&O depot was torn down and demolition debris and trash from the depot were used to fill the feature to the top of its brick dome. Over time the shaft fill subsided through settling and decay of organic fill constituents. At some point after about 1920 the feature was once again accessible from above, and a layer of twentieth century trash was thrown in. That trash was contained in the top two feet of the cistern.

The process observed in Feature 39 appears to be the normal process that any large, lined feature undergoes through time (Garrow 1999). Care should be exerted in the excavation of similar features in the future to insure that critical data are not lost.

Acknowledgements. The success of the MATA project is due to the efforts of several people. Thomas Fox, Director of Service Development for MATA, was the client liaison throughout the project and gave excellent support. Nick Fielder, the Tennessee State Archaeologist, was actively involved in the project decision-making and determined the scope of the Phase III investigations. Kevin Atkins of Sarge Backhoe Company, who operated the backhoe during the Phase III work, was critical to the success of the field phase. Excavation of Feature 39 would not have been possible in the budgeted time frame without his expertise and effort, and the project team is indebted to him for his attention to both safety and excavation details. The MATA North End Terminal Project began in 1995 with initial background research by John Hopkins and Guy Weaver. The Phase II testing was directed by Guy Weaver as the Principal Investigator with Mary Evelyn Starr as Field Director and Brian Collins as Assistant Field Director. Technicians on the Phase II testing included Jane Kowalewski, K. Walker-Montgomery, Alison E. Helms, John C. Cox, Victor Raharojoana, and Edward A. Wood. Guy Weaver left TRC Garrow's employ prior to the Phase III work and Patrick H.

Garrow became Principal Investigator. He directed the Phase III field studies with the assistance of Charles H. McNutt Jr., Mary Evelyn Starr, and Brian Collins. Victor Raharojoana, Sterling Howard, Mike Hayden, Lacy Hicks, and Janet Middleton were the Field Technicians. Laboratory analysis of the Phase II and III materials was conducted under the supervision of the Principal Investigator and Thomas P. Garrow. Brandy Garrow was Laboratory Coordinator. Laboratory technicians who assisted the analyses include Brad Martin, Leslie Perry, Kim Copeland, David Mallett, Sterling Howard, Beth Eley, Janet Middleton, Barbara Hudson, Mike Hayden, and Mark Bracken. The metals conservation was done by Thomas P. Garrow, and the leather and wood conservation was done by David Mallett, who also did the footwear analysis that appears in this report. The project graphics were ably prepared by Vince Macek. Barbara Garrow and Tami Willadsen provided administrative support throughout the project. Kevin E. Smith did an excellent job of editing this article.

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THE EUGENE WOODS CLOVIS POINT

Charles H. McNutt

This research report presents information on a fluted Clovis point recovered below the Fourth Chickasaw Bluff in Tipton County, Tennessee during the late 1930s. This specimen comprises one of the few fluted points recorded from the west Tennessee bluffs.

In the late 1930s, Mr. Eugene Woods found a fluted Clovis point below the Fourth Chickasaw Bluff in Tipton County, Tennessee. The point was recovered some three miles north of Millington in a plowed field west of Herring Road and south of a small creek (Figure 1). This location is very near the Rast site (40SY75), a late prehistoric occupation overlooking the Mississippi River floodplain. This Clovis specimen is currently in the possession of Mr. Woods' daughter, whose wide-ranging interests alerted her to the significance of the find and motivated her to contact the author.

The point is made from a fine-grained, waxy chert with sparse, very small, cryptocrystalline inclusions; its color is a dark brownish gray (10YR4/1-5/1). This material appears to be Indiana hornstone, most probably Harrison County chert (DeRegnaucourt and Georgiady 1998: 111-112; Plate 20).

In the description that follows, the face shown on the left side of Figure 2 is regarded as the "obverse", with that to the right the "reverse." The point is 63.3 mm long, 28.9 mm wide, and 7.4 mm thick at the distal end of the obverse flute. The basal concavity measures 5.0 mm. The projectile weighs 4.8 g. Light grinding is apparent on the lower 29.4 mm along the right obverse edge, the lower 31.5 mm of the left edge, and along the ears and base.

The basal concavity is quite sharp, and bears what appear to be small secondary retouch scars that were subsequently ground. The bulb of percussion of the slightly slanted flute on the obverse extends into these retouch scars and is relatively pronounced. The obverse flute extends 24.8 mm from the basal concavity, is 12.5 mm wide at its mid-point, and ends in a very tentative hinge fracture. Flute depth at the base (i.e. the remaining flake scar) is 1.4 mm, with a mid-point depth of 0.5 mm.

The reverse flute is relatively shallow and terminates at the basal retouch scars. This was likely the initial flute, with the base subsequently retouched to produce the striking platform for the obverse flute. The reverse flute extends 12.0 mm from

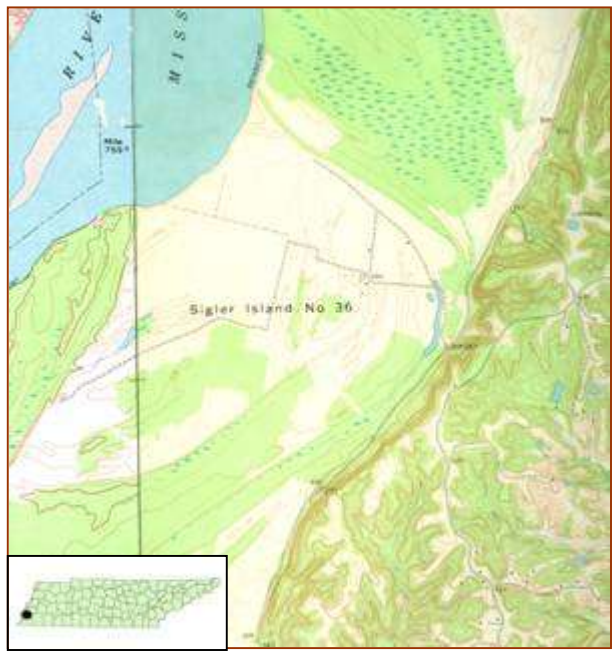

FIGURE 1. General Location of Find Spot (Map Source: USGS 408NW and 408NE 7.5 Minute Quadrangles).

the basal concavity, is 10.0 mm wide at its mid-point, and has depths of 0.5 mm at both the base and its mid-point. The flute does not end in a hinge fracture; it simply feathers out.

Very few fluted points have been recorded from the west Tennessee bluffs area. John Broster (personal communication 2005) reminded me that Charles Nash reported a (very different) specimen in *Tennessee Archaeologist* (Nash 1958:34-35). Nash stated, "other Clovis points have been found on the Chickasaw Bluffs, particularly the upper bluffs. Some specimens have also been picked up along the small drainage streams of the area" (1958:35).

Acknowledgements. I am delighted to be able to add this specimen to our database, and wish to thank Mr. Woods' daughter Eugenia for bringing it to my attention. I also would like to thank Mark Norton (Tennessee Division of Archaeology) and Guy Weaver (Weaver & Associates, LLC) for raw material identification and photography.

FIGURE 2. Eugene Woods Clovis point.

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SALVAGE OF AN ERODING FEATURE AT THE TELLICO BLOCKHOUSE, TELLICO RESERVOIR, MONROE COUNTY, TENNESSEE

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On March 12, 2004, personnel from the Archaeology Research Laboratory (ARL) excavated a feature that was eroding out of the bank on the Tellico Reservoir near the site of the Tellico Blockhouse. A total of 358 artifacts were recovered, including late-eighteenth and early-nineteenth century Euro-American ceramics, faunal remains, wrought nails, and a small amount of curved glass. The recovered artifacts suggest this feature was likely associated with a domestic structure during the Federal occupation of Tellico Blockhouse.

At the request of the Tennessee Valley Authority (TVA), the University of Tennessee Archaeological Research Laboratory (ARL) conducted the salvage excavation of a feature eroding out of the cut bank on the Tellico Reservoir near the site of the Tellico Blockhouse (40MR50). The Tellico Blockhouse is a Federal Period military installation located on the left bank of the Little Tennessee River at River Mile 20.0 (Figure 1). Excavations at the site in the 1960s and 1970s uncovered numerous features and structural remains relating to the blockhouse's use and occupation from 1794 to 1807 (Polhemus 1977). At present, a combination of reconstructed and restored foundations depict where the Blockhouse stood during its occupation. In early 2004 staff from nearby Fort Loudoun State Park identified a cultural feature eroding from the cut bank and notified TVA staff archaeologist Eric Howard, who contacted the ARL to conduct salvage excavations of the feature. The results of the excavation are presented here as well as an interpretation of the feature's function.

Tellico Blockhouse History

The Cherokee headman The Hanging Maw was one of several headmen who pursued amicable relations between the Cherokee and Euro-Americans (Polhemus 1977). With the attack on his camp by a militia in 1793 causing him and his party to abandon the camp and hide in the woods, Hanging Maw turned to Governor William Blount for assistance. The Tellico Blockhouse was established in 1794 by Blount in order to protect Hanging Maw's party from Euro-American incursion into the area as well as keep the Cherokee in check. The Blockhouse quickly became an important location serving as an intermediary between the American government and Cherokee leaders and as the home base of the Indian agents through 1801. The Tellico Blockhouse was also the home for the Tellico Factory, a fur processing facility meant to foster and encourage interaction and communication with American Indians. The Blockhouse community not only consisted of a small corps of United States military and Indian Agents, but also included women, children, non-military personnel, Cherokee, and African-Americans (Polhemus 1977:8-13, 258, 282). As the fur trade diminished in the area and the Cherokee were pushed further south, the military installation and Tellico Factory at the Blockhouse were

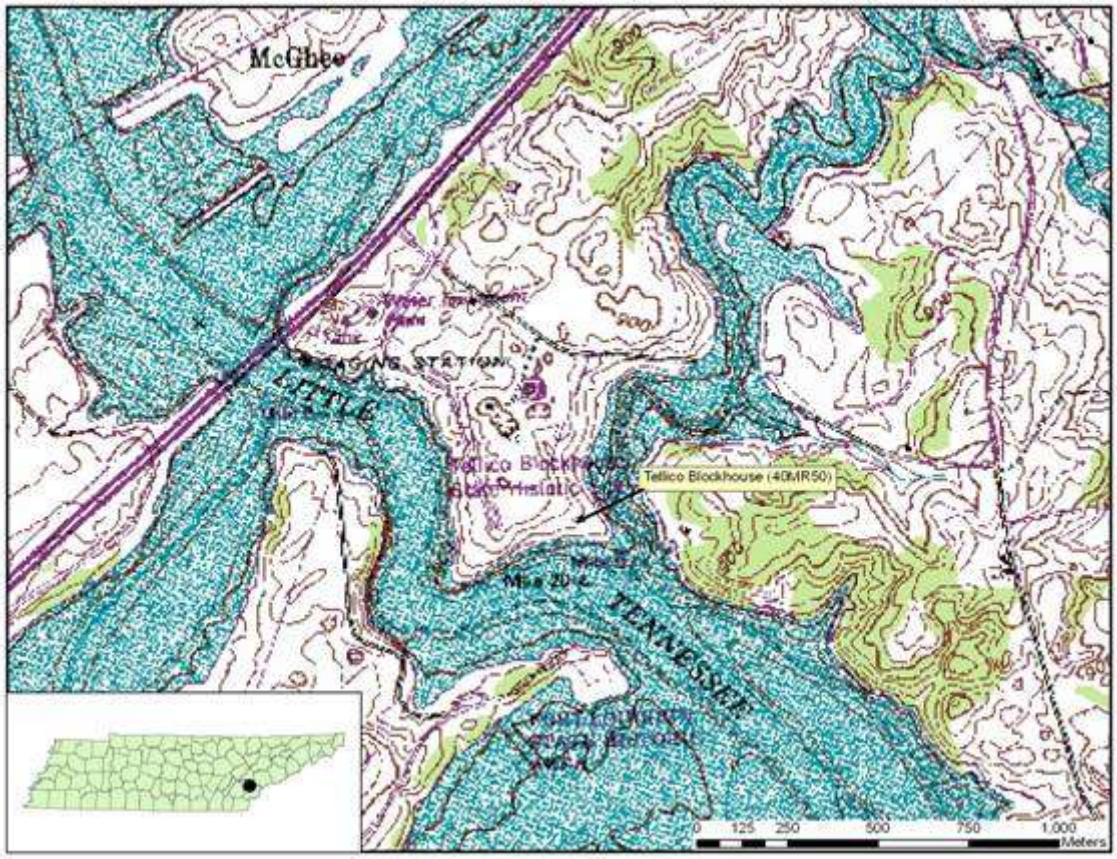

FIGURE 1. Location of Tellico Blockhouse (40MR50)

moved to the Hiwassee Garrison at the mouth of the Hiwassee River in 1807.

Previous Investigations

James H. Polhemus and Richard Myers first conducted archaeological investigations at the Tellico Blockhouse site in the early 1960s and were able to confirm the presence of Federal Period artifacts (Polhemus 1977:17). Richard Polhemus (1977) conducted further and extensive excavations at the Tellico Blockhouse site for three seasons (1972-1974) and a follow-up season in 1977 in advance of the impoundment of Tellico Reservoir. Investigations were focused on the immediate remains of the blockhouse within the latest palisade, where 13 structures, a blacksmith shop, a well, parade ground, brick walks, drains, refuse deposits, palisades, privies and five pits (Pits A through E) were uncovered. Limited excavations outside of the palisades encountered the remains of a "Hotel." Mid-nineteenth century disturbances in the form of two limekiln pits were also excavated.

A total of 79,895 artifacts, including 39,655 bone fragments, were recovered during Polhemus' excavations. Other than bone, the most frequent artifacts included architectural items (window glass, nails, construction hardware) followed by ceramics and other kitchen related artifacts. Of particular interest is the occurrence of what Polhemus (1977) called Colono-Indian ware in several

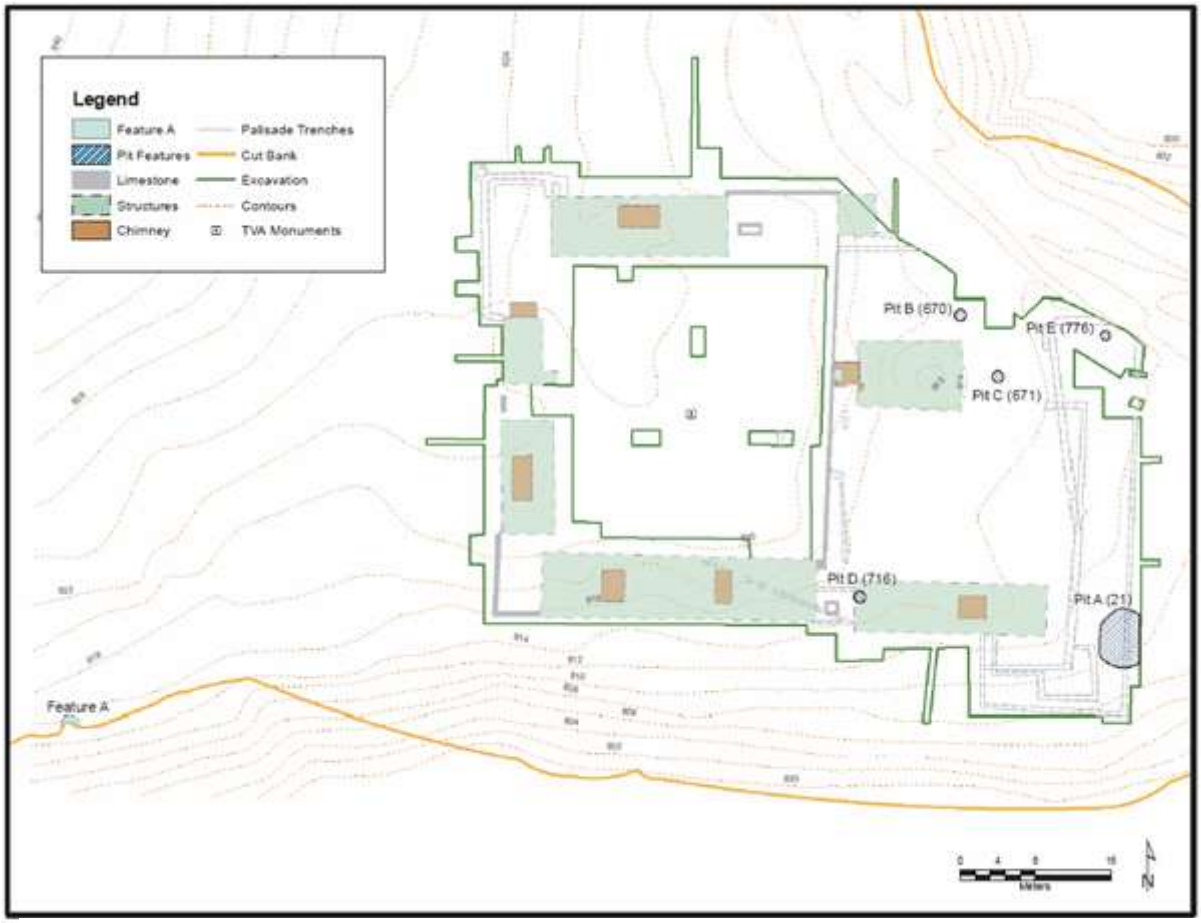

FIGURE 2. Location of Feature A.

contexts across the site. Colono-Indian ware today is more commonly known as Colonoware and is a soft-paste ceramic made by either American Indians or enslaved African-Americans. This ware is thought to have been used by enslaved African-Americans in some eighteenth and early nineteenth century contexts (Ferguson 1992). Polhemus (1977:258) described the Colonoware from the Tellico blockhouse as being fine sand tempered and having plain or smoothed surfaces. The vessel forms are European in nature and have loop handles, foot rings (see Polhemus 1977: Figure XXXV), and flattened bases. Polhemus (1977:259) notes that the Colonoware found at the Tellico Blockhouse site did "not resemble any other pottery recovered during intensive investigations of the Tellico Reservoir area." These wares should not be confused with contemporaneous Historic Cherokee wares that were tempered with shell (Overhill Cherokee) and grit (Middle and Lower Town Cherokee).

In addition to Overhill Cherokee artifacts directly attributable to the Federal Period occupation of the Blockhouse site, prehistoric American Indian features and artifacts dating to the Archaic, Woodland, and Early Mississippian periods were also discovered.

Summary of Field Methods

A total station was first used to locate the feature with respect to local

permanent landmarks, TVA survey markers, and Blockhouse foundations (Figure 2). The feature was located at the reservoir's cut bank and approximately one-half had eroded away. The overburden above the feature was removed with a shovel and trowel and hand-sorted for any artifacts. Once the surface of the feature had been defined, excavation of the southeast portion of the feature was accomplished with shovel and trowel with all recovered fill being screened through 0.25 in (6.35 mm) mesh (Figure 3). A west profile of the southeast portion of the feature was drawn before excavation of the southwestern portion (Figure 4), which was taken as flotation samples for Zones I and II while Zone III was dry screened. A north profile of the entire feature was drawn before excavation of the feature (Figure 4).

FIGURE 3. Feature A Plan View (top) and Profile (bottom).

Results

Feature A was located on the cut bank of the Tellico Reservoir approximately 50 m west of the Tellico Blockhouse excavations performed by Richard Polhemus (1977). The feature was eroding out of the cut bank and it appeared that approximately one-half of the feature had eroded away. Feature A originated approximately 39 cm below present ground surface (cmbs) and continued until 126 cmbs. In plan view, Feature A was a truncated oval measuring 103 cm east-west and 72 cm

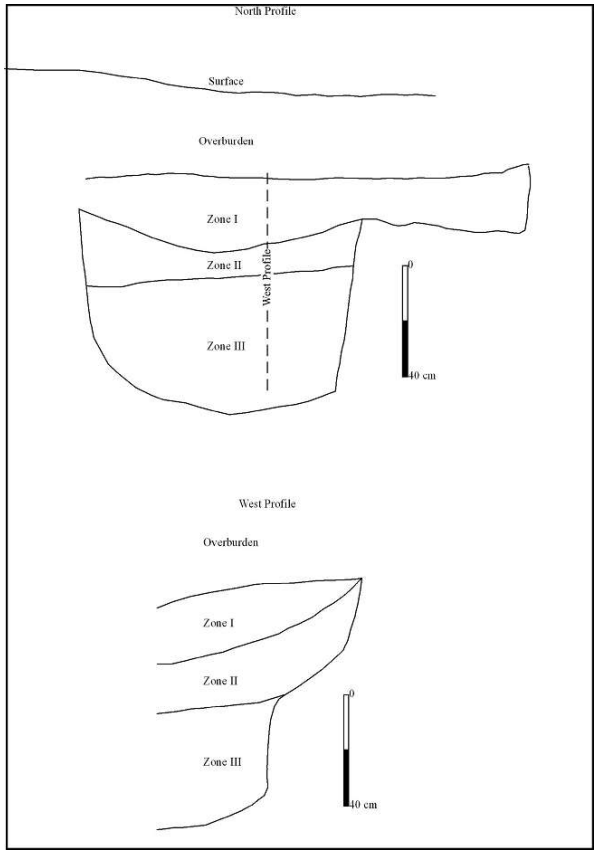

FIGURE 4. Feature A Profile Drawings. Top: North Profile. Bottom: West Profile.

north-south.

During feature excavation three zones were apparent (Figure 4): Zone I a dark brown (7.5YR 3/3) silty loam with coarse sand fragments from 39-69 cmbs; Zone II a strong brown (7.5YR 4/6) fine silty clay loam from 69-80 cmbs; and Zone III a strong brown (7.5YR 4/6) silty clay from 80-126 cmbs. A total of 358 artifacts were recovered during excavation of the feature (Table 1). Of this total 13 (3.6%) were recovered from the ground surface above the feature or on the shoreline below the feature, 13 (3.6%) were recovered during removal of overburden above the feature, 329 (92.2%) were recovered from Zone I of the feature, and three (0.6%) were recovered from Zone II of the feature. No artifacts were recovered from Zone III. Artifacts recovered from the surface and shoreline included nine historic ceramic sherds (69.2%), one nail (7.7%), one prehistoric (7.7%) and two miscellaneous artifacts (15.4%). Artifacts recovered from the overburden included seven historic ceramic sherds (53.8%), five glass sherds (38.5%), and one nail (7.7%). Artifacts recovered from Zone I included 15 historic ceramic sherds (4.6%), 12 glass sherds (3.6%), 11 nails (3.3%), 14 prehistoric artifacts (4.3%), 267 faunal pieces (81.2%), and ten miscellaneous artifacts (3.0%). The majority of the artifacts from Zone I were recovered from the southeastern portion of the feature. Few artifacts were found in the flotation samples from the southwestern portion of the feature and the majority of these were relatively small (i.e., <1/4 inch in size). Most of the bone from this zone was fragmentary and burnt (or calcined) and could not be identified as to taxa and/or species. Artifacts recovered from Zone II included two prehistoric artifacts (66.7%) and one faunal piece (33.3%).

Conclusions

Feature A was located approximately 50 meters west of the main area of excavations conducted by Richard Polhemus (1977) and outside the Blockhouse walls (Figure 2). The temporally diagnostic artifacts are contemporaneous with those recovered by Polhemus indicating the feature was filled while the Tellico Blockhouse was occupied. While only a portion of Feature A was intact at the time it was salvaged, its size and morphology are well in line with the pits identified inside the Blockhouse palisade. The five pits (Pits A-E) identified by Polhemus (1977:90-92) within the Blockhouse palisade were slightly oval in shape and ranged in diameter from 128 to 154 cm with artifact

TABLE 1. Artifacts Recovered from Feature A.

ARTIFACT TYPE	Surface	Overburden	Zone I	Zone II	Totals
CERAMIC					
Undecorated ironstone platter body sherd		1			1
Undecorated creamware plate marley sherd		1			1
Underglaze polychrome fineline hand painted pearlware hollow-ware body sherd		1			1
Undecorated creamware indeterminate body sherd		1	3		4
Blue shell edged pearlware plate rim sherds	1	2			3
"Royal" pattern creamware plate rim sherd		1			1
Undecorated creamware teabowl body sherds	4				4
Undecorated creamware tea bowl rim sherds	3				3
Undecorated whiteware indeterminate body sherd	1				1
Undecorated pearlware holloware body sherds			3		3
Undecorated pearlware large holloware body sherd			1		1
Underglaze polychrome fineline hand painted pearlware saucer body sherds			2		2
Underglaze polychrome fineline hand painted pearlware teacup body sherd			1		1
Underglaze polychrome fineline hand painted pearlware indeterminate body sherd			1		1
Historical blue transfer print pearlware teacup body sherd			1		1
Undecorated pearlware indeterminate body sherd			1		1
Undecorated creamware holloware rim sherd			1		1
Lead glazed redware unidentifiable body sherd			1		1
Subtotal Ceramic	9	7	15	0	31
GLASS					
Colorless curved		2	3		5
Colorless container		1			1
Blue-green curved		2			2
Burned			2		2
Melted			3		3
Light green curved			4		4
Subtotal Glass	0	5	12	0	17
NAILS					
Unaltered wrought nail		1	1		2
Clinched wrought nails	1		2		3
Wrought 'L' head nail			1		1
Wrought horseshoe nail			1		1
Proximal wrought nail fragment			1		1
Medial wrought nail fragment			1		1
Distal wrought nail fragment			1		1
Pulled wrought nails			3		3
Subtotal Nails	1	1	11	0	13
PREHISTORIC					
Chalcedony debitage	1				1
Daub			5		5
Limestone tempered sherds			6	1	7
Sand tempered sherd			1		1
Knox chert debitage			1	1	2
Fort Payne chert debitage			1		1
Subtotal Prehistoric	1	0	14	2	17
FAUNAL					
Unidentifiable burned mammal bone fragments			6		6
Unidentifiable calcined mammal bone fragments			247	1	248
Large mammal bone fragments			11		11
Calcined large mammal distal phalange fragment			1		1
Anas sp. (ducks) right proximal femur fragment			1		1
Unidentifiable fish vertebra			1		1
Subtotal Faunal	0	0	267	1	268
MISCELLANEOUS					
Horseshoe	1				1
Wrought 'U' staple	1				1
Burned limestone			3		3
Handmade brick fragment			1		1
Mortar fragments			2		2
Unidentifiable metal			2		2
Pewter spoon bowl			1		1
Screw			1		1
Subtotal Miscellaneous	2	0	10	0	12
TOTALS	13	13	329	3	358

bearing zones ranging in depth from 18.3 to 45.75 cm. The main artifact bearing zone of Feature A (Zone I) is also in line with these depths; however, Feature A had an inclusive depth much deeper than these pits.

The artifact assemblage from the feature is relatively small (N=332)

compared to the pits identified by Polhemus (1977:117), but this is not surprising given only a portion of the feature was intact and able to be excavated. The number of non-faunal artifacts from Feature A, however, is greater than three of those pits (Pits B, D, and E) suggesting the overall artifact quantity from the feature may have exceeded all of the pits Polhemus identified. The artifacts from the five pits excavated by Polhemus (1977:93) were mostly kitchen (61.2 percent) followed by architectural artifacts (17.2 percent) (based on South's [1977] Functional Groups) with lesser amounts of miscellaneous artifacts (furniture, arms, clothing, personal, tobacco pipes, and activities). There is a similar artifact distribution from Feature A with mostly kitchen artifacts (70 percent) followed by architectural (27.5 percent) and activity (2.5 percent) related artifacts. Feature A is most similar in artifact distribution to Pits A, B, and E from Polhemus' excavations with the most similarity to Pit E.

Polhemus did not assign a function to the pits he identified making the determination of the function of Feature A difficult as only a portion of this feature was intact at the time of excavation and the area around the feature was not investigated. The types of artifacts recovered during the salvage excavations of Feature A, however, do suggest it is domestic related rather than military or industrial related. For instance, nine (60 percent) of the 15 ceramics sherds from the feature's Zone I and 17 (54.8 percent) of the 31 total recovered sherds are from tea wares (cups, saucers, and other hollow wares) suggesting domestic use. No military artifacts were recovered from Feature A, unlike four of the five pits within the Blockhouse palisade. The faunal assemblage consists almost entirely of unidentifiable burned and calcined mammal bones suggesting final cooking stages rather than initial butchering and processing. The presence of duck and fish bones indicates the acquisition of local wild game to supplement the diet.

All available evidence suggests that Feature A is related to a domestic structure inhabited or used by Euro-Americans and/or enslaved African-Americans. The similarity in shape, size, and artifact distribution seen in the pit features identified by Polhemus suggests that these pits had similar functions and associations as Feature A. Polhemus, however, does not directly associate these pit features with domestic structures and no evidence was found to directly associate Feature A with a specific structure because the area around it was not investigated. It is possible these features (Feature A and Pits A-E) were shallow disposal pits outside of a structure rather than pit cellars situated directly under a structure that were filled with domestic debris. In addition, these pits may have served several structures as disposal locations and the assemblages represent the domestic debris from several residences.

None of the recovered aboriginal artifacts appear to be of Historic Cherokee manufacture. These artifacts are likely significantly older than the Federal Period occupation of the area and were incorporated into the feature during filling. The one sand tempered sherd, however, may be Colonoware. As mentioned previously, Polhemus (1977) notes the presence of 43 fine sand tempered Colonoware sherds in the assemblage with 35 coming from pit feature contexts. The manufacture and use of Colonoware has been closely tied to enslaved African-Americans (Ferguson 1992) and its

presence at the Tellico Blockhouse is a testament to the slaves who lived and worked there. Without closer comparison to the sherds identified as Colonoware by Polhemus, it is impossible to tell if this sherd is Colonoware or not.

The presence of this feature outside of the Blockhouse palisade indicates that it is highly likely that additional features are present that were not identified or investigated by Polhemus (1977). Additional excavation and geophysical survey should be employed to identify and recorded these features. In addition, more such features are likely to be exposed along the cut bank by seasonal draw down and wave action. Further monitoring of the cut bank is necessary to identify these eroding features and salvage them before important information is lost.

Collections Information. All artifacts, project records, and photographs are curated at the University of Tennessee, Department of Anthropology, Knoxville, Tennessee.

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