

Landscape Archaeology at the Doak House

A Final Report Prepared for

**The Department of Museum Program and Studies
Tusculum College
P.O. Box 5026
Greeneville, TN 37743**

By

Nicholas Honerkamp, Ph.D.
Jeffrey L. Brown Institute of Archaeology
University of Tennessee at Chattanooga
Chattanooga, TN

September, 2003

Introduction

The Doak House Museum is housed in an impressive brick structure located on the campus of Tusculum College in Greene County, Tennessee (Figures 1 and 2). Built about 1829-30, this large two-story mansion was owned until the mid-1970s by descendants of the Samuel W. Doak family, the original occupants. Doak was a minister and pioneer educator in east Tennessee who, with his father, established Tusculum Academy (later College) in 1818 (Fuhrmann 1986:43). Samuel W. Doak built a second academy adjacent to his residence in 1835; oral tradition has it that this restored wooden building sits on its original limestone foundations (George Collins: personal communication) approximately 41 m south of the house. A restored springhouse about 60.5 m east of the academy building is the third extant structure associated with the antebellum Doak occupation; its construction date is unknown.

The Tusculum College Department of Museum Program and Studies operates the Doak House Museum. Current plans by the College call for extensive modifications to the grounds surrounding the Doak House, including new parking lots, roadways, landscaping, and additional utilities. As part of the planning process, George Collins, the Department's Director, felt it would be useful to have an archaeological survey undertaken prior to any alterations to the property. The goals of the survey were to identify historic fence lines, roadways, outbuildings, and other landscape elements on the property in order to avoid destroying significant archaeological resources and to guide future restoration efforts. Collins contacted the Jeffrey L. Brown Institute of Archaeology at the University of Tennessee at Chattanooga, and it was agreed that the UTC summer archaeological field school would be held at the site during the spring of 2003. Through outside grants and the support of Tusculum College, the Doak House Museum provided housing and a modest stipend for the field school students. Fieldwork occurred from May 7 through June 5, 2003, with a crew of eight students supervised by Dr. Nicholas Honerkamp, Director of the Institute of Archaeology.

This 21-day project generated 15 pages of typed field notes, several plan view maps, over 300 digital field photos (including several dozen provided by the Doak House Museum), and 87 bags of artifacts. Cleaning, classification and analysis of the 8848 artifacts generated by this project occurred during June, July, and August at the UTC Institute of Archaeology laboratory under the direct supervision of the author. Report preparation was undertaken in August and September of 2003 and involved approximately 200 person-hours. Besides the present report, a PowerPoint presentation on the results of the archaeological research was given by the author at Tusculum College on September 29, 2003.

Site Setting and Project Goals

The Doak House is bounded on the south and west by Frank Creek, on the north by Erwin Highway (Route 107), and on the east by a private residence. This area measures roughly 137 m east-west by 146 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. While high in fertility, especially for growing corn and hay, the water table is at or near the surface during periods of wet weather (such as the summer of 2003), and water drains

off slowly, reducing its potential for tillage somewhat. 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 trees. While today the well-manicured lawn around the house belies the active agrarian life of the site, there is both documentary as well as direct archaeological evidence that part of the site was used for farming. Several historic photographs show either fields or fences in the area between the academy and main house, and the archaeologists identified plow scars in two excavation units.

Rather than facing the relatively recent Erwin Highway, as most visitors assume, the 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. When the Figure 3 aerial photograph was taken, the area between the main house and the academy (which is barely visible) was apparently being plowed (see also Figure 10). Samuel L. Doak, a seventh-generation descendent of Samuel W. Doak, remembers from his childhood in the 1930s that there was an old crossing on Frank Creek near the present bridge for Erwin Highway. This is the shallowest (and flattest) point on Frank Creek for the entire Doak property parcel. He also pointed out the remains of a paved road adjacent to the main highway and east of the creek, and the location of another Doak-related domestic structure just west of the project area across Frank Creek (see Figure 3); it was demolished in the 1960s (personal communication). Dr. Bob Davis, a Tusculum College biology teacher, reported that an archaeology class associated with Tusculum excavated the site, although no report on this project could be located. Identifying subsurface remains of the presumed original unpaved road that forded Frank Creek and fronted the main house was an important goal of the archaeologists. Three historic photographs from the late 19th or early 20th century (Figures 4, 5 and 6) indicated the presence of picket and a board fence on the south and/or east of the house and at least two styles of fences adjacent to or attached to the academy (Figures 7, 8, and 9). Locating these and earlier fence lines constituted a second project goal. These photographs also provide visual evidence that the hypothesized early road had disappeared by the time the photos were taken.

Another important objective involved investigating the ell attached to the east end of the Doak House. The Figure 4 photograph is believed to have been taken during the late 19th century and clearly shows the ell extending farther north than it does today. Cindy Lucas (personal communication) reports that a former resident in the house indicated that the northern end of the ell was demolished in the 1930s because it had rotted away, presumably from water damage to the roof. Backhoe trenching followed by hand excavation was proposed to reveal the subsurface foundation elements, if any, that still remained from the demolished portion of the ell.

In addition, the limestone foundations of a large barn west of the house, in what is now a gravel parking lot, were obvious at the time of the survey; this prominent structure appears in two aerial photographs that are believed to have been taken in the 1950s (Figures 3 and 10). Oral history accounts by local residents and Doak family members indicate that the barn was associated with the Doak plantation activities, although when it was built is unknown. At any rate, it shares the architectural feature of limestone foundations with the house, academy, and springhouse. According to Cindy Lucas, Associate Director of the Museum and project historian, S.W. Doak raised mostly corn and wheat, but apparently relied on hired labor rather than slaves to do so: no slaves are listed for Doak in the U.S. Census or on tax records that she has examined (personal communication). This is a rather remarkable state of affairs since Doak built such an elaborate house, owned 468 acres of land, and apparently cultivated much of the acreage that he

owned. While establishing the footprint of the barn was a secondary goal of the project, the archaeology team ran out of time and no testing was attempted in the gravel parking lot.

Fieldwork

A subsurface survey was initially undertaken to identify strata and features and to obtain a general sense of artifact distributions at the site. This first phase of the research also provided feedback for trenching with a backhoe (supplied by the College) to locate landscape elements such as roads, fence lines, and foundation elements. Prior to the survey and testing, a systematic metric grid system was established using a transit and chain. Grid stakes were originally placed at 25-meter intervals, although the survey pit interval was subsequently reduced to 20 meters once the fieldwork began (see Figure 11). Shorter intervals were used to determine the presence of midden and demolition deposits adjacent to the academy and main house. In most cases the southwest corner of each survey pit was located 10 cm north and 10 cm east of the survey stake or flag. The survey units were $\frac{1}{2}$ by $\frac{1}{2}$ m square and were dug to sterile, which was usually encountered within 40 cm; test pit depths were measured from the ground surface in all units.

The grid system was established by finding the center of the 8.33-meter-wide west wall of the house and placing a stake perpendicular to the wall and 5 meters west of its center. This stake was arbitrarily designated as 200N/200E. Grid north, as established from the house orientation, was approximately 10 degrees east of magnetic north. Based in part on the results of the survey, five shallow backhoe trenches were cut to search for roadbeds, foundations, and for postholes from fence lines. The systematic survey also revealed areas of the site where larger samples were desirable, and these were generated through excavation of five 1 x 2 m excavation units. A permanent transit station was established east of the Doak House for maintaining vertical control during excavation of line-of-site test units; otherwise, vertical measurements were taken below surface. Finally, small test pits (Test Units 3, 7, 8 and 9) were dug directly adjacent to buried as well as extant foundations to provide details about construction practices and sequences. The excavated surface area for the combined survey and test units was 20.5 m², while the five backhoe trenches encompassed approximately 111 m² of area at the site. Except for the trenches and Test Unit 9, all excavations were screened using 1/4" mesh. A 100% recovery policy was maintained for all classes of artifacts except brick/mortar and coal, clinker, and charcoal. For these often abundant classes of artifacts, a nonrepresentative sample was nominally collected. Although direct comparisons are meaningless as a result of this decision, it at least provided presence-absence information.

Laboratory Analysis

After the artifacts were cleaned at the UTC Institute of Archaeology, classification, data entry, analysis, and stabilization of a limited number of metal artifacts was undertaken. The primary purpose of this activity was to create an artifact inventory that could be used in an interpretation of the site's structure and function. The analysis was divided into three distinct phases. The first consisted of rough sorting the contents of each field specimen (FS) bag into preliminary material categories of artifacts. Along with provenience information, this data was recorded on hand-written notes. This was followed by a more detailed breakdown of artifact

types and frequencies; ceramics, lithics, and bone were also weighed to the nearest gram (less than a gram was recorded as one gram). All this information was coded and recorded on 5 x 8" note cards by FS number. Finally, the coded artifact data was inputted into an Excel spreadsheet that was subdivided by general provenience (survey units, separate trenches and test pits) into 21 worksheets. Besides gradually refining the coding categories, the redundancy of this three-part process helped to maintain a high degree of inventory control by cross checking and eliminating recording errors.

Individual artifacts that were thought to have illustrative value for the report as well as possible future displays at the Doak Museum were removed from the FS bags to be photographed. This group of artifacts is described below and has been transferred to the Doak Museum *en masse*. Four boxes of all the other less illustrative artifacts were also delivered to the Doak Museum.

Ceramics provide archaeologists with a powerful tool for investigating myriad questions about a site's inhabitants. Once broken, ceramic pieces are quite worthless and quickly thrown away, and a fairly rapid cycling of manufacture, use, and discard is assumed by most historical archaeologists, hand-me-downs notwithstanding. Ceramics have social and economic dimensions (expensive porcelain cups versus cheap earthenware bowls) as well as functional attributes (porcelain cups versus earthenware bowls are used differently). Inevitably, the first dimension that is explored with ceramic analysis is the temporal one. Some ceramic types have well-known manufacturing brackets that allow archaeologists to accurately date their presumed rapid deposition at a site, and thus the occupation of the site (but see Adams 2003 for a caveat concerning manufacturing/deposition lag). Other types have such long periods of manufacture and use that their temporal value is pretty much nil. Since the test units provide screened 100% ceramic samples, the mean ceramic date (MCD) formula was applied to each assemblage (South 1977). While acknowledging drawbacks in the application of this temporal tool, it at least provides empirical relative dates for comparisons of deposits in different areas of the site. Much less precisely, nails can also provide a useful dating tool at historic sites. Adams' recent work on nail chronologies (2002), which revises the chronologies of Nelson (1963) and Fontana (1965), is relied on for our date estimates.

Thus, the present artifact analysis concentrates primarily on dating various elements of the site with ceramics and other useful artifact classes. One reason that some functional questions have not been fully explored in this analysis is the highly fragmentary nature of the ceramic collection—virtually *all* the ceramic fragments that could be identified as to form are illustrated below. More in-depth analysis of the ceramics and other data is planned for the future as the subject of independent study courses by UTC students.

Figure 12 presents two partial vessels of refined earthenware. This figure also presents a visual metaphor on a thorny problem for historical archaeologists, that is, distinguishing between "early" pearlware and "later" whiteware. For this analysis we have followed Price's now-classic multidimensional qualitative advice (1979): besides obvious differences in glaze pooling (bluish tint pool = pearlware, clear pool = whiteware, and yellowish pool = creamware), pearlware transfer prints are darker blue or black than whiteware, while pearlware hand-painted sherds contain earthen tones of yellow, orange, brown, and green. Whiteware transfer prints are of red, green, purple and lighter blues, with hand painted sherds showing pinkish reds, and lighter blues and greens. In the absence of pooling or decorations, an overall bluish cast obtains for pearlware body sherds, with whitewares exhibiting a brighter white body. After several attempts that failed to be replicated, even by the same classifier, the laboratory crew and the author despaired of

trying to delineate ironstone from whiteware. It's *all* whiteware in this report, even when a pottery maker's mark says different. Dates of manufacture have been taken primarily from South (1977), Price (1979), Honerkamp et al. (1982), Noel Hume (1974) and Bartovics (1981).

All five green shell edged whiteware plate fragments (1826-1900) mended together in Figure 12 were recovered from a small unscreened pit (Unit 9) that was dug on the northwest corner of the extant ell, as described more fully below. Most of the 38 edged pearlware and whiteware sherds recovered from the site presumably are from plates like this one or possibly serving platters. The pearlware vessel below it, taken from Level 3 of Unit 6, is unusual in that the typical shell edge decoration occurs well below the actual rim of the vessel. It appears to have been some kind of hollowware serving vessel such as a tureen. It should be noted that of the 17 edged pearlware sherds gleaned from the site, this single vessel accounts for 12 of them.

Miscellaneous ceramics are illustrated in Figure 13. The blue on white transfer printed whiteware bowl (1831-1865) depicts what appears to be a graveyard with two crosses in the foreground and a possible castle (or ruins), complete with tower and crenellated roof, in the background. This is a somewhat odd scene to appear on the interior of a serving bowl. It was found in Unit 6, Level 4. On the top right is a fine example of a blue on white hand painted pearlware cup or small bowl (1780-1820), recovered from Trench 4. On the lower row, left, found in Level 2 of Unit 6, is the bottom of what we have classified as whiteware, despite the "W & E Corn" maker's mark that proudly proclaims the vessel to be ironstone. It is obviously a product of the British ceramic industry, as indicated by the distinctive British coat of arms. Macdonald-Taylor (1962:200) has this to say about this maker: "Corn, William and Edward (fl. 19th century). Began to make earthenware at Burslem, Staffordshire, in 1837; in the 1890s firm gave up making tablewares, and became the Henry Richard Tile Co." A survey of Gates and Ormerod (1982:8) indicate that the trade name "ironstone" was almost always used as part of maker's marks during the last 30 years of the 19th century. The appearance of the mended lead glazed earthenware jar or crock fragment on the bottom right contrasts sharply with the refined earthenwares in Figure 12, reflecting its obvious utilitarian function for food storage or preparation rather than as a serving ware. Level 3 of Unit 6 produced the four sherds comprising this piece, as well as the unique sherd in the center of the figure. Besides the granulated exterior surface, this small sherd appears to be a clouded cream-colored earthenware, sometimes known as "Whieldon ware." That would certainly be surprising, since this ceramic type was produced in the third quarter of the 18th century (1750-1775, according to Noel Hume 1974:123,125), well before the documented Doak occupation. While it might represent an heirloom, an alternative suggestion is that this unusual little sherd is a mottled Rockingham style yellow ware type (1841-1920).

Based on the site's documentary history, the later Rockingham ceramic attribution would seem to be a more likely conjecture than an 18th century type, except for what is presented in Figure 14. This pedestal base from a delftware pharmaceutical-ointment pot is the most surprising artifact found at the site. Recovered from 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, resulting in the following identifications:

<u>Component</u>	<u>Spectrographic Estimates¹</u>
Barium	Strong
Calcium	Strong
Lead	Strong
Silicon	Medium
Aluminum	Medium

Trace amounts were detected for copper, iron, magnesium, manganese, silver, and titanium. An 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 is difficult to determine. One intriguing suggestion has been a dental amalgam, but the absence of mercury is puzzling. At any rate, the presence of this unusual ceramic vessel and its baffling contents indicates that home remedies 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 19th century.

Figure 15 illustrates several buttons as well as some unusual personal items. Left to right, the four-hole and small five-hole bone buttons are from a survey test west of the academy; the large five-hole button was associated with Unit 7, directly adjacent to the academy; and the bone blank was recovered from Level 3 of Unit 1, located in the north ell area of the main house, as discussed further below. The brass button from Unit 5, Level 2 probably had a cloth face over it; the brass foot for the missing shank is well formed. Noel Hume suggests a date range of 1837-1845 for similar buttons (1974:90, 91). An eroded 1895 Indian head penny was miraculously collected from the Trench 3 fill dirt, while the small quartz fragment came from Unit 7. Although the faceted surface of this specimen looks man-made, it is natural according to UTC geologist Jonathan Meis (personal communication). Quartz is of course ubiquitous in east Tennessee, but this piece is hardly what one might expect to be associated with Lindside silt loam. This looks like just the sort of thing that would be found in a geology mineral identification kit, possibly one that was housed in the academy at one time. Unit 6, Level 2 produced the copper leaf charm that no doubt was once attached to a girl's bracelet. All of the items shown in Figure 15 were probably lost rather than purposefully discarded.

Other personal items appear in Figure 16. All three of the terra cotta stub-stemmed clay pipe fragments were found near the academy. According to Pfeiffer (1981), these pipes were used with an inserted reed stem and date from the 1840s to 1900. The ribbed example on the left is the stem portion, missing the bowl; it was discovered in survey unit 145N 220E located directly in back (south) of the academy. The ribbed fragment in the center, from Level 3 of Unit 2 on the west side of the academy, is a bowl fragment; the smooth bowl fragment on the top right was found in the fill of a posthole on the west end of Trench 4. Whether these items were used and discarded by academy students, faculty, or both cannot be determined, but *somebody* was smoking tobacco in the vicinity of that structure. A broken bone handle to a knife was found during the survey in 145N 215E, behind the academy; sadly, it did not fit an iron knife handle tang from Level 1 of Unit 2. The broken bone awl from Trench 4 that is shown below the handle is another unexpected find. That this is an actual tool and not simply a bone broken in a fortuitous shape is demonstrated by the use wear evident on the pointed end. This is the sort of artifact that would be expected from a prehistoric rather than the historic midden that Trench 4

¹ Strong = 10% or more; Medium = 1% - 10%; Weak = 0.1% - 1.0%; Trace = 0.1% or less

seems to have intersected. Two very gratifying finds are the slate pencils at the bottom of the figure. The larger is from Trench 4, while the smaller was associated with 145N 215E, a survey test located behind the academy. Perhaps nothing in the entire artifact assemblage at this site better reflects or signifies the educational *raison d'être* of the early Doak mission than do these simple, well-used slate pencils, found in the vicinity of one Tennessee's earliest institutions of higher learning.

Three iron artifacts are clearly associated with agricultural pursuits at the site. Figure 17 presents a stirrup that came from Unit 1 in the north ell of the main house. A horseshoe from Trench 4, one of two that were found, is also positive evidence of equestrian activity. A blade fragment that is probably from a harvester machine is shown at the bottom of the figure. It too was found in Trench 4. Finally, the quartz projectile point shown in Figure 18 is discussed in the next section.

Survey Results

A total of 29 survey units, each measuring ½ m square, were excavated to sterile; together they account for 7.5 square meters of the site area. As shown in Figure 11, they were arranged as an interval sample between Frank Creek and the Erwin Highway. Survey tests over the site were concentrated primarily around the main house, academy, and the “front yard” area between the two buildings.

The stratigraphy at the site varied from unit to unit, but the archaeologists typically encountered two stratigraphic zones in most of the survey tests. Just below a thin duff and humus surface layer consisting of a sod root mat (discarded), Zone 1 was interpreted as an artifact-bearing plow zone composed of light brown to brown-gray sandy clay, and usually varied in thickness from 20 to 30 cm below surface. Below it, Zone 2 was primarily orange (occasionally yellowish) sandy clay that was almost always sterile; the scant artifacts recovered from this zone were typically minute fragments of glass, nails or brick that were probably intrusive from above. Zone 2 extended to an unknown depth. Fragments of limestone were ubiquitous in both zones. Several utility lines were noted in trench and survey units. Material from these modern intrusive features was included in Zone 1 for purposes of analysis. A notable exception to the customary stratigraphy at the site was found at 175N 180E, where a 12-cm thick gravel layer was encountered at the surface. It is believed to be associated with the adjacent gravel parking lot.

Table 1 presents frequencies for the major classes of artifacts recovered during the survey (Other artifact classes and groups not included in Table 1 can be found in the Excel artifact inventory constructed during the analysis or on the hand-written analysis cards). Individual unit totals in the far right column include historic artifact groups for which a 100% collection policy was followed: ceramics, glass, nails, and bone. These groups correspond to artifacts that are commonly found in historic midden deposits. A cursory look at the composite unit totals reveals some sharp frequency distinctions between individual tests, and this in large part determined the placement of the 1 x 2 m units dug at the site, if not the trenches. Most notable are the three survey units behind the academy: they account for 27% of the all survey artifacts in these groups, and a whopping 49% of the total survey ceramics. No evidence of another structure was found in this area. Instead, it clearly was used for refuse disposal. Survey 210N 212E was offset from the standard survey interval to explicitly test the back area of the house for refuse disposal. The relatively high frequency of historic materials (particularly glass) that was derived from this pit

seems to confirm a back yard approach to trash disposal here as well. While 190N 215E, located in the front yard of the house, is equidistant from the house as 210N 212E, it has fewer artifacts than the latter unit, though a higher than average number when compared to the rest of the survey units. Both the front and back areas of the house and the back of the academy conform to the “Brunswick Pattern of Refuse Disposal” defined by Stanley South (1977) for British colonial sites in the southeast. Apparently this pre-Dempsey dumpster method of refuse disposal has wider applications in both space and time than originally proposed.

Besides providing a sense of artifact distributions at the site, the survey units produced a significant number of ceramics that could be dated to the documented early Doak occupation. Too often the present consumes the past, and continuously occupied sites contain precious little that can be associated with its earliest occupants. Happily, that is not the case here. Ceramics provide the most sensitive temporal indicators, and of the 190 sherds retrieved during the survey, 29 are classified as 4 pearlware types, with a manufacturing dates ranging from 1780-1840, while 106 sherds were identified as 9 whiteware types, most of which began to be manufactured in the second quarter of the 19th century and are consistent with early Doak occupation. The 36 fragments of lead glazed earthenware generated by the survey are not as precisely dated as the refined earthenwares, possessing 18th and 19th century attributions, and the remaining miscellaneous burned earthenwares, stonewares, and single sherd of porcelain are even less temporally diagnostic. What can be said is that the survey produced positive evidence in the form of dateable ceramics that are linked to the original Samuel W. Doak family.

One unanticipated result generated from the survey program as well as the trenches and test units was the large number of prehistoric flint fragments. Although no projectile points were found in the survey units, a total of 188 shatter fragments, that is, waste flint from tool and weapon manufacturing and reworking, were recovered. In addition, 9 modified flint cores from which flakes were derived were also recovered. In the five trenches, the debitage count was 42, while in the other test units a total of 363 shatter fragments, modified 10 cores, and 2 utilized flakes were recognized. A nearly complete white quartz projectile point was discovered in Unit 2 (Figure 18) and two quartz point fragments (Trench 3, Unit 4) are commonly associated with the Middle Archaic Period, dating roughly from 5000 to 8000 years ago (Chapman 1985:48, 49). The nearly complete absence of prehistoric ceramics—three small sand tempered sherds from Test Unit 2 were the only examples found—supports an early rather than later prehistoric presence at the site. The ubiquitous scattering of small waste chips (the mean weight of all 593 debitage fragments was only 1.4 grams each) in the project area suggests that it was used as a temporary camping area by migratory prehistoric Native Americans.

Backhoe Search Trenches

Before describing the results of the backhoe search trenches, a word about what can and can't be done with artifact samples. Conclusions drawn from artifact frequencies from the combined search trenches suffer from the nature of the sample: trench collections were unscreened and judgmental. Hence, frequency comparisons that would be meaningful for survey or test units are not reliable quantitative measures for the trenches. On the other hand, qualitative assessments are possible for certain artifacts and are offered below. Overall artifact class frequencies are presented in Table 2.

Two backhoe trenches were dug adjacent and north of the main house using a Tusculum College backhoe and operator under the watchful eyes of the UTC archaeologists. Trench 1 (9.6m x 1.25m) and Trench 2 (c. 5.0m x 2.6m) were designed to expose foundations associated with a “missing” portion of the east ell to the house. The former extend at least 0.5 m into sterile clay and revealed only a power line to an adjacent light pole. Adjoining this lackluster trench on the south was the second trench, which opened 13 square meters by removing only overburden. This backhoe search ultimately proved successful and is covered in detail below. Three more extensive trenches were also machine excavated in order to identify roadbeds and/or fence lines. Trench 3 (27m x 1.2m) and Trench 5 (30m x 1.2m) were oriented north-south and were placed in the “front” (south) of the Doak house in order to intercept a presumed east-west road between the house and academy. Despite cleaning the trench profiles and a close inspection of same, no furrows or other unambiguous indications of a road were detected in either trench (refer to Figure 11 for trench locations).

Trench 3 did produce three postholes in the south end of the excavation. The center of Posthole 1 was located 2.42 m north of the north Academy wall (Figure 19). This apparently modern feature clearly shows an extant post in its accompanying hole; a ditch with trench appears just to the north (right) of the posthole. The wooden post fragment was 67 cm long when removed. This item probably corresponds to the fence post shown just north of the academy northwest corner in Figure 7. On the west wall of the trench, at 3.17 m from the Academy, a 35-cm-deep posthole was noted, with a brickbat in the fill that was presumably used to brace the post. Four sherds of coarse lead glazed earthenware and one swirled whiteware fragment, and nothing else, were associated with the fill from this feature. The latter sherd provides a *terminus post quem* (hereafter TPQ) of 1831 for the filling of this feature, which is quite distinct from the other two postholes in terms of its form and obvious nonalignment. This feature is a likely candidate (and the *only* candidate at that, for an early posthole at the site. Posthole 3, four meters north of the academy wall, is similar in form to Posthole 1, but has a shallower bottom, no doubt due to the presence of the large rock. Fill material included several small brick fragments, a flint chip and a single sherd of alkaline glazed stoneware, a folk pottery type that is firmly dated to the 19th century (Greer 1970). Although Postholes 1 and 3 may be part of the same fence line, the historic photo in Figure 7 does not seem to show a second post to the north of the academy, and no other postholes were noted in the test trench. Either the fence line ends at Posthole 3 or it veers off of the alignment of the trench. Since Posthole 1 is rather recent, as evidenced by the post being intact, Posthole 3 is probably recent as well. But whatever their dates, the presence of Postholes 2 and 3 demonstrate use of the “front yard” area that is not previously indicated in either photographs or documents.

Although Trench 5 showed no positive evidence of a roadbed, a curious anomaly was observed in its northern half. Two discontinuous lenses of brickbats appeared about 42 cm below surface on the east wall of the trench (Figure 20). When first noted, we eagerly contemplated the possibility that the presence of these subsurface brick fragments might correspond to filled-in wagon wheel ruts. There is a faint depression adjacent to (north of) a removed concrete walkway to the springhouse (the same walkway shown in Figure 4) that might be a topographic signature of just such a hypothesized road. However, that contour dissipates as it approaches Trench 5 from the southeast, and there certainly is no evidence of it advancing toward the main house. And upon more sober reflection, the archaeological correlates for a “roadbed” attribution possess some fatal flaws: the deposits are very irregular and fairly wide (about 1.10 m and 2.40 m), and even more significantly, neither lens extends across the trench into the west profile. Instead, they

appear to be evidence of a demolition event of some kind. What they are doing in the middle of what might be described as nowhere, that is, roughly midway between the springhouse and the mansion, remains unknown without additional testing.

By chance the north half of this trench also intercepted a north-south line of unanticipated postholes, one of which is illustrated in profile in Figure 21. All were noted in profile on the west wall of the trench. Due to time constraints (they were recorded on the last day of fieldwork), no excavation of profiled posthole fills could be attempted. If this fence line was slightly angled away from the trench orientation, that would account for the absence of a fence line in the south half of the Trench 5. Although there is a faint suggestion of a second north-south fence line in Figure 8, it is very indistinct, and none of the other historic photographs of the site show this line. On the other hand, in Figure 4 the two robust and untethered cows seen munching grass next to a concrete sidewalk connecting the springhouse to the mansion required a fence behind the camera to prevent them from escaping to open range. According to George Collins (personal communication), the concrete walkways that at one time were ubiquitous at the site were laid by Charlie Doak in the mid-1890's, and the Figure 4 photograph is believed to date to about 1895. Five of the six postholes noted in Trench 5 are markedly straight-sided with flat bottoms, and all originate in the sod zone, indicating a relatively recent origin. The form of these features suggest that they may have been mechanically dug, which also points to a more modern provenance.

Trench 4 (originally 13.7m x 1.25m) was oriented east-west and was dug one meter off the northeast corner of the academy in the hope of identifying postholes from the fence line shown in Figure 9. A series of 10 regularly-spaced postholes were revealed at six-foot intervals (3 were doubled, probably due to replacement). This spacing was so consistent that we were able to predict the locations of two additional postholes by expanding the trench on its east and west ends. On the west end, the expansion consisted of shoveling about a half a meter of soil without screening. On the east end, a one-meter expansion of the trench was screened, and this was designated as Unit 7. Unfortunately, due to time constraints only these two extrapolated postholes were excavated. Artifacts from the 40-cm-deep posthole in the west end of Trench 4 did not provide much dateable material, consisting of 9 window glass fragments, 2 clear flat glass fragments, a cut nail, a brass wire, 6 small brick fragments, and a clay pipe bowl fragment (see Figure 16). The fill from the 37-cm-deep posthole identified in Unit 7, on the east end of the trench, contained a higher density of artifacts. This reflects its location in an area adjacent to the academy that was apparently used for refuse disposal, most likely in the form of sheet deposit. A sherd of dark blue transfer printed pearlware, two transfer printed whiteware sherds, and a sherd of Albany slip stoneware were found, and a whopping 41 glass fragments are associated with this features (more on glass below). Two of the 12 postholes were found to actually contain wood from former posts, leading us to conclude that the entire fence line in Trench 4 is most likely of relatively modern, that is, late 19th/early 20th century, origin.

Older, and certainly more surprising, was the discovery of a brick foundation in Trench 4 that was aligned with the current academy structure. As shown in Figure 22, an approximately 90-cm section of parallel bricks (Feature 1) abutting a single-course right angle foundation (Feature 2) was uncovered by the backhoe. These are hand-made bricks with sandy mortar that are identical with the bricks from other early architectural components at the site. Once the entire trench was hand-cleaned with shovel and trowel, a faint suggestion of a robber's trench (Feature 3) could be seen running east-west. All three features are visible in Figure 23. Our interpretation of Feature 3 is that it is a foundation trench (as opposed to a builder's trench, which is wider than the foundations) that was robbed of bricks when the building was demolished. Features 1 and 2

represent sections of the foundation where the bricks were left in place. The backhoe cut had inadvertently removed an unknown extent of Feature 3, leaving only a couple of centimeters to remain and a disappointingly small artifact sample. Including the portion of Feature 3 in Unit 7, a single sherd each of plain whiteware and porcelain was recovered, along with 32 glass fragments (mostly window glass), and 4 nail fragments, 3 of which were wire nails. The latter items begin to be commonly used in the mid-1880s, according to Adams (2002). However, they could easily be associated with the fill of one of the several modern postholes that intrude into Feature 3. Thus, dating the feature with associated artifacts is inconclusive. Instead, the remaining brick foundations speak for themselves.

We think it is significant that Features 1, 2, and 3 align very closely with the orientation of the extant academy. To determine the critical relationship between Feature 3 and the academy foundation, the 1 x 1 m Test Unit 7 was laid out and excavated. Unfortunately, modern restoration work associated with the academy included the laying of a concrete spread foot foundation, as shown in Figure 24. Labeled Feature 6, it obscured the association, if any, of the academy foundation with the Feature 3 foundation/robber's trench. As might be expected, the top 10-cm level that was screened produced several modern artifacts, including one fragment of modern porcelain, 2 Coke bottle caps, 3 pull tabs, a piece of plastic and numerous cellophane fragments. But 4 fragments of lead glazed earthenware, 2 alkaline glazed and an Albany slipped stoneware sherds (both presumably 19th century), a hand painted polychrome pearlware (1795-1840) and 3 blue transfer printed pearlware sherds, 25 plain and 3 transfer printed whiteware sherds attest to the historical component in the artifact assemblage. In addition to the Doak-period ceramics reflecting a midden-like disposal location, a remarkable 2130 fragments of glass were counted, 96% of which came from Level 1. Clearly this spot was more than simply a part of a generalized sheet deposit: it apparently was designated as a specific place to get rid of broken glass.

Appearing in the south wall of Trench 4, at approximately 8.4 m west of the east edge of the trench (that is, 9.4 meters or 31 ft west of the academy wall) was a 40 cm wide dark stain. Tragically, no useable photograph of this feature was obtained in the field, although its location was measured and recorded in field notes and on a map. Designated as Feature 5, it appeared to be the profile of a north-south foundation trench that had been robbed. Suspecting that it might connect to an east-west foundation or foundation trench that was parallel to Feature 3 and extending from the academy's south wall, we placed a 1 x 1 m test unit at the extrapolated junction of the two hypothesized foundation lines. However, Unit 8, with its southwest corner at 148.85N 198.85E, failed to discover anything that even remotely resembled one, let alone two, foundation trenches. What we did derive from this unit was more midden, as indicated by the following artifact assemblage: 10 lead glazed earthenware, 1 plain pearlware (1780-1830), 3 sponged whiteware (1836-1870), 19 plain whiteware (1813-1900+), 10 transfer printed whiteware (1826-1875), 1 hand painted polychrome whiteware, 6 hand painted monochrome whiteware, and one sherd each of burned earthenware and stoneware. Most (85) of the 101 glass fragments were classified as window glass. Along with the occurrence of 23 cut nails, which Adams (2002:80) believes were most common at historic sites from about 1830 to 1900, this may indicate the presence of an early demolished structure in this vicinity; no "late" items of plastic and etcetera mar the temporal picture presented by the artifact profile from this unit.

So what does this combination of period artifacts and architectural elements appearing in Trench 4 represent? Nothing is documented or shown in early photographs for the area just west of the academy. The close correspondence of the line of the north academy wall with Feature 3,

and the brick foundation imbedded in the robber trench, suggest some kind of connection. We propose that these buried features represent two walls of the original 1835 academy, which was built on a brick—not stone—foundation. It included at least two rooms, as shown by the T-junction of Features 1 and 2. The size of this structure is undetermined at present. Also unknown is when the original building was demolished and the present academy was raised. It was probably built of wood on a brick foundation: certainly the diminutive foundations represented by Features 1 and 2 in Trench 4 argue for a wooden rather than brick superstructure. Apparently the “new” academy was constructed directly adjacent to and possibly even on at least part of the original foundation footprint for the “old” academy built in 1835. Rather than being restored, the second academy was rebuilt.

In Search of the Missing Ell

One of the project objectives was to locate the foundations to the northern portion of the ell attached to the house. As mentioned earlier, historic photographs and oral history indicated an unknown portion of this building extended past the extant end chimney and was believed to have been demolished in the 1930s. A backhoe trench extending north at a right angle to the north ell wall located a parallel subsurface brick end wall foundation 5.42 m (interior) from the extant wall. A second trench was machine excavated to the east to expose the northeast corner of the buried foundation. Finally, after removal of overburden, a 1 x 2 m unit adjacent and interior to the buried north ell foundation (see Figure 25) was excavated by 10 cm levels. It is argued that the extant ell and its now absent northern extension were constructed separately, so each ell segment will be referred to as the south and north ell, respectively.

When the floor of Trench 2 was carefully shoveled and troweled, a clear distinction was noted between the demolition fill and a layer of undisturbed clay adjacent to the ell foundation. The rubble fill, composed primarily of brickbats and mortar fragments—none of them modern—extended to a depth of 65 cms (Figure 26). Since the south ell possessed a crawl space but no basement, the presence of a deep rubble-filled pit inside the demolished section was unexpected. The irregular appearance of the fill outline and the depth of the deposit suggested that it was created with a backhoe, possibly during the restoration of the extant ell chimney and end wall in the 1970s (demolition of the northern ell in the 1930s would probably have been by hand). Artifacts recovered from Unit 1 confirm this temporally later attribution: besides a sherd of pearlware, two examples of lead glazed earthenware, and three fragments of whiteware, the fill contained dark cloth and plastic. Although invented more than a decade earlier (American Plastics Council 2003), this latter material establishes a disappointingly late *terminus post quem* of the early 1940s for backfilling the restoration pit, when Dupont produced the first nylon stockings to great popular acclaim; thereafter, plastic became ubiquitous in American life, and American sites. Why restoration of the ell required this pit to be dug and filled to begin with is unknown.

Other artifacts derived from Unit 1 include an iron stirrup (Figure 17), a considerable number of miscellaneous/unidentified iron fragments (including 110 band/strap pieces), part of a bed spring, and 33 bone fragments. As a matter of fact, despite the removal of part of Zone 1 without benefit of screening, more bone was found in this unit than in any other 1x 2 m test, and this no doubt can be attributed to the close proximity of the kitchen in the south ell. Of considerable interest was the bone button blank shown in Figure 15. Bone buttons are commonly

found on antebellum sites, of course, but the presence of a blank indicates that buttons were actually manufactured on-site rather than simply purchased. The presence of this item in the north ell area may point to the functional use of this room as a craft or at least storage area, although making such a link based on a single artifact is tenuous. A more confident functional statement would be this back area of the house was certainly used for refuse disposal, possibly sheet deposit rather than trash pits, although the disturbed context that was sampled compromises any statement about *when* such disposal occurred. Kitchen refuse is probably a component of this deposit, as seen in the relatively high number of bone fragments that were recovered.

The presence of an extensive chimney on the south ell, which serviced a kitchen, strongly suggests the possibility that the north ell had been built as a separate, later extension. Adding credence to this suggestion was the absence of a limestone footing, which is characteristic of the original Doak architectural style seen in the main house, academy, and barn. Instead of a spread footing, the north ell brick foundations were laid directly in a tight footing trench dug in sterile clay. Unit 3, a .5 x .5 m test pit, was placed in the interior northwest corner of the ell and clearly illustrates this footing technique. Also apparent in this test was the uneven footing depth of the north and west walls of the extension: the former was two bricks deep, while the latter was four bricks deep (Figure 27). Finally, as seen in Figure 25, the north foundation consisted of a course of exterior stretchers and a course of interior headers at the elevation at which this feature was encountered, but the west wall had three side-by-side stretchers at the same elevation. Suffice it to say that consistency was not a high architectural priority when the extension was built.

Unit 9, an informal (unscreened) test pit, was placed on the northeast external corner of the extant south ell. It measured approximately .75 m on each wall. This location unfortunately had been subject to considerable restoration disturbance, but it was still possible to confirm the four-course-deep west foundation of the north extension, similar to the companion east wall. Interestingly, although the upper courses of the extant ell north wall were somewhat carelessly restored, as seen in Figure 28, the lower courses were apparently still in their original location, with no limestone footings present. They are at least three courses deeper than the foundations for the north extension, which provides additional support for the “discontinuous construction” theory: it demonstrates a lack of consistency that would be expected with separate construction sequences. Unit 9 was also notable for producing the largest restorable vessel in the entire ceramic assemblage, the green shell edged whiteware plate shown in Figure 12.

To summarize, a north ell extension was built from early hand made bricks and mortar, but it was not constructed as part of the original southern ell. This addition varied somewhat from standard construction practices seen in earlier Doak buildings. The 18-foot extension was demolished in the 1930s, and the archaeological record of the northern ell interior was heavily impacted by architectural restoration activities, specifically backhoe excavations, in the 1970s. Along with the absence of foundation builder’s trenches—footer trenches appear instead—this limits the possibility of identifying a date of construction for the later addition. Artifacts associated with the demolition fill date from the early Doak occupation to the late 20th century. The recovery of stirrup may indicate that the ell extension served as a tack room, or less specifically, a general storage room.

A final possibility relating to the north ell needs to be mentioned. George Collins has suggested that it actually may have been built *earlier* than the south ell—as a detached kitchen. Such kitchens were a common feature of large plantation houses in order to minimize fire hazards. Sometime later the south ell “filled in” the area between the house and separate kitchen. This construction sequence might explain the lack of stylistic concordance between the main

house and north ell. However, it also generates its own difficulties. There is no evidence of a chimney on the north end of the “earlier” ell, which is where it would be expected, that is, away from the house. Possibly it was on the south end, and was rebuilt as the large south-facing fireplace that we see today. But the main problem with the “Collins Hypothesis” is why Doak would have replaced a detached kitchen with an attached one. Unfortunately it is precisely the temporal information associated with the juncture of the two ell sections that has been badly disturbed by restoration activities, so the sequence of construction may never be known.

Test Units

The three test units associated with the investigation of the missing ell—1, 3, and 9—have already been discussed, as have Test Units 7 and 8, which were dug to provide architectural information about the early academy. The remaining units measured 1 x 2 m and were located in areas of high artifact densities, as indicated from the survey. Their locations are indicated on Figure 11.

Test Unit 2. Based primarily on the heavy concentrations of brick and mortar that were found in two survey tests west of the academy, it was decided to excavate a larger unit to get a better picture of what was going on there. Test Unit 2 was oriented north-south, with the southwest corner at 153N 200E, and was directly adjacent to survey test 155N 200E. In that .5 x .5 m survey test we counted 121 hand-made brick and mortar fragments from a non-systematic recovery procedure. Ten meters to the west, in 155N 190E, a 100% collection policy was initiated for brick and mortar, generating 429 fragments. Clearly, this area was producing evidence of demolition of an early structure, one that we later identified as the first academy.

Unit 2 was excavated in 10 cm levels, and ended at about 35 cm below surface, in sterile Zone 2 clay. There was no obvious vertical sequences of artifacts that could be detected within Zone 1, as is usually the case in a plow zone. Figure 29 illustrates the sharp distinction between Zones 1 and 2, as well as the occurrence of a foundation stone at the juncture between the two layers. The ceramic assemblage provides evidence of disposal from the first half of the 19th century, and includes 24 lead glazed earthenware, 1 each of blued edged pearlware and plain creamware (1762-1820), 10 plain pearlware and 26 whiteware, 9 sponged whiteware, 7 transfer printed whiteware, and 1 alkaline glazed stoneware sherds. For the 28 sherds for which firm manufacturing dates are established—admittedly a small sample—a mean ceramic date (South 1977) of 1830 was calculated. This provides at least some confirmation for “early” disposal behavior near the academy, although excluding nearly 70% of the ceramics that were found may guarantee an early date: later types are simply omitted from the calculation because their manufacturing ranges are unknown. This drawback, as well as the problems associated with small samples in general, should be kept in mind with other MCD calculations are presented below.

As does the presence of so much brick in the Zone 1 plow layer, the recovery of 89 partial and whole nails is thought to support demolition activity in this vicinity. Seven were wire rather than cut, and indicate that later deposition took place here as well. So also does the barbwire ($n=12$) from this unit, reflecting the presence of a fence or fences. The 180 patinated window glass fragments, out of a total glass count of 204, are also evident of a former structure. Other artifacts from Unit 2 include part of an iron knife tang, the pipe bowl fragment and quartz projectile point discussed above (Figure 15), 5 bone fragments, and, curiously, a fragment of shell.

Test Unit 4. This 1 x 2 was located about 5 m south from the southeast corner of the academy and extended north to south on a slight downward slope; the southwest corner was at 143N 219E. Based on the heavy concentration of artifacts taken from the three survey units in this area, it was hoped that a larger excavation would reveal the presence of a midden deposit that had accumulated behind the extant academy. Such was the case. The 25 to 30 cm deep Zone 1 produced most all of the 127 ceramics, 227 glass, and 131 nail fragments found. The ceramic assemblage is composed of 17 lead glazed earthenware, 5 plain pearlware, 2 hand painted pearlware, 97 whiteware, 14 transfer printed whiteware, 3 banded whiteware, 1 annular/mocha pattern whiteware, 5 hand painted whiteware (2 were polychrome), 1 annular/marbled whiteware, and 3 modern porcelain fragments. With only 24 sherds (15.6%) used to calculate the MCD, it can hardly be argued that the 1842.6 date derived for this unit is beyond reproach. But it at least reflects a relatively later occupation/disposal period than do the ceramics in Unit 2. This is exactly what would be expected if there were indeed two academy structures, with Unit 4 located near the later one.

Of the 227 glass fragments found, 119 (52%) were classified as patinated window glass, while 52 (23%) were round sectioned fragments from bottles, jars, cups, etc. Of the latter, only 10 showed definite patination, while 6 were definitely modern, again illustrating the mixing of periods that occurs in plow zones. Eight fragments of plastic, a modern loop earring, five wire nails, and a small glass button from Zone 1 reinforce this same point. Two small pieces of shell (presumably river mussel) were found, and could conceivably date to any period, even the prehistoric.

Unit 4 provided indirect evidence in support of the “earlier-later academies” hypothesis, and there was much less brick and mortar from demolition activities compared to Unit 2. On the other hand, a large number of nails were recovered, but rather than reflecting a demolition event (or events), we suggest that the nails are associated with restoration of the extant wooden superstructure: nail-bearing wood that was replaced could be thrown out with the rest of the refuse. As seen in table 3, the highest artifact per square meter calculation (257) occurs in this test unit. This is consistent with a sheet midden function for this location.

Test Unit 5. Excavation of survey unit 190N 215E, located about 6 m in front of the house and midway between its two doors, had revealed an intriguing feature in the south wall of the square. The field notes (May 20) provide a brief summary of what was found: “Besides a midden-like deposit extending to 15 cm below surface, there is a deep feature on the south wall of the unit that extends to 50 cm BS. It contains brickbats & mortar(!), suggesting a demolition event, and is quite puzzling in this location. We need to expand here w/ a 1 x 2.” Test Unit 5, oriented east west with the southwest corner at 189N 215, was dug in arbitrary 10 cm levels to further investigate the rubble-filled feature, designated as Feature 1. The survey unit was offset 10 cm north and east from the stake, creating a small baulk between the survey pit and test unit.

Figure 30 shows the extensive fill that was revealed in the southwest area of the unit, beginning but primarily beneath Zone 1. It was composed of large handmade brickbats, bits of fragmentary brick and mortar, and in the upper portion of the rubble deposit, foundation stone fragments. Not only was the presence of such a deposit completely unexpected, but an even more surprising discovery came when the extent of the demolition deposit was determined: Unit 5 did not bottom out until we had dug through over a meter of fill. Only in the northwest corner of the unit was sterile reached sooner, at about 60 cm. The bottom of Feature 1 was uneven, and the lower 80 cm of the deposit contained only two transfer printed whiteware sherds and four fragments of patinated window glass. Corroboration that this was indeed a demolition deposit

was seen in the large number of cut nails (114) associated with it. Although 31 wire nails were also found, they were restricted to the upper two levels.

Figure 31 reveals two distinct fill layers on the south profile of the test unit. A description of this stratigraphic record is appropriate because it supports an important argument that we will make concerning the interpretation of this feature. Moving from top to bottom, in reverse depositional order, Zone 1 consists of gray-brown sandy soil extending 15 cm below surface on the west and descending to 37cm on the east (left in Figure 31) end of the wall. This reflects a slumping and filling of Zone 1 into the deepest part of the feature. The next zone is tan-brown sandy clay with orange mottling and containing brickbats and large limestone fragments in the southwest corner. On the east end of the unit this layer extends 50 cm below surface, while the bottom undulates across the profile to the west end, where it bottoms out at 40 cm. Zone 3 consists of gray-brown and tan mottled clay with occasional brick fragments. It extends to 81 cm on the east and slopes upward and narrows to about 40 cm on the west, although it is difficult to discern where it ends. Our best guess is just above and to the right of the deepest limestone fragment in the next lowest layer. Zone 4 is also heavily laden with demolition fill, and as the lowest layer in the stratigraphic sequence, it represents the initial filling event on the floor of this feature. The bottom of the feature is deepest on the east end, at 1.03 m below surface, sloping upward to 62 cm on the west. Underlying it, where we have cut a step to better reveal the bottom of Zone 4, is a sterile matrix of tan brown sandy clay. Visible on the far left east wall is a distinct lens of charcoal at the top of Zone 4. Whether this represents the byproduct of an intentional (fireplace) or unintentional (burned structure) fire is unknown.

The depth of this feature, the brick rubble within, and the sloping, uneven floor, presents a puzzling interpretive scenario. We have eliminated the possibility of a modern excavation, perhaps similar to the one revealed in Unit 1, due to the complete absence of any modern artifacts in the bottom 80 cm of the feature and the lack of obvious backhoe bucket excavation scars. Relatively early ceramics are also a hallmark of Feature 1, as explained below. Instead, we propose that it is a basement or root cellar to a demolished brick structure that predates the main house. This is a fairly audacious statement to make, since there is currently not a shred of written evidence supporting the presence of a brick house prior to the construction of Samuel W. Doak's mansion. But this documentary lacuna simply highlights the tension between negative documentary evidence (no earlier house is mentioned) versus positive archaeological evidence to the contrary (a hole in the ground that was dug in the early 19th century) that can often occur at historic sites. There are multifarious reasons for why documentary data are not available, but far fewer ways to account for why Feature 1 exists.

First, the problematic sloping and uneven floor of the feature needs to be addressed. Admittedly a squared-off, brick-lined footprint with straight walls and a flat floor would be more in keeping with a basement. However, root cellars are not necessarily so formal, and possibly the basement of an early house was simply a dug-out hole beneath a wood floor supported by brick foundations/walls. It could even have been created as a post-construction modification to the house. Since only a small part of Feature 1 was revealed, it would be desirable to open up a much wider area for excavation to determine the size, shape and composition of the entire feature.

That this hypothesized house must predate the mansion is self-evident: constructing a building adjacent to and directly in front of the entrances to a Georgian structure makes no sense at all. Thus, the early house must have been built, possibly burned, and demolished prior to the siting and construction of the main house. Artifacts provide confirmation for this assertion. Lead

glazed earthenwares (10) and a wide variety of pearlwares (16 plain, 3 blue transfer printed, 8 blue hand painted, and 4 banded) comprise a significant portion (48%) of the ceramic assemblage. That said, it should be mentioned that two sherds of transfer printed whiteware were recovered from the lowest ceramic-bearing level (70-80 cm below surface), thereby establishing a *terminus post quem* of 1826 for the filling of the feature. The MCD date generated from the 40 dateable sherds from this 1 x 2 is a gratifying 1826, which is the earliest calculation from any test unit at the site. Since Feature 1 is thought to be associated with the earliest structure at the site, a corresponding early MCD would be expected.

Apparently the early structure was abandoned prior to its demolition. Relatively few artifacts occur in the lower 70 cm in Feature 1: just 2 (of 83) ceramics and 3 (of 66) glass fragments—all of them window glass—were recovered below Level 3. By contrast, 60 or over half of the machine cut nails were present below 30 cms. Suffice it to say that there is precious little in the way of domestic artifacts, as opposed to those associated with the building itself, that occur in the basal layers of Feature 1, suggesting that the root cellar or basement was cleaned out before demolition and/or a fire occurred. Even when artifacts from the upper 30cms are included, the artifact-per-square-meter calculation of 154.5 is the lowest of all units for which Zone 1 material is included.

Table 3 indicates that the Unit 5 artifact assemblage contained an unusually high frequency of flint debitage (231), in addition to a utilized flake and 2 modified cores. These artifacts were scattered throughout the excavated levels, with over half occurring below Zone 2. When factored in terms of area excavated, the resultant 117 fragments per square meter is almost four times higher than in any of the other test units. Why this area is so lithic-heavy compared to others is an enigma. Either the test unit is located in an area where prehistoric flint tool manufacturing or modification took place, or, even less plausibly, gunflint manufacturing might have occurred in this vicinity during the early historic period.

While certainly surprising, the discovery in Unit 5 of what appears to be the demolished remains of an early house does have a certain appeal when applied to a nagging question that anyone looking at the imposing Doak House might reasonably ask: where did the Doaks live when the mansion was under construction? A smaller, less formal structure, pre-dating the extensive formal manor and directly adjacent to it, provides an answer.

Test Unit 6. As with most of the other test units, this one followed on the heels of a positive survey pit. A moderate number of artifacts were derived from the 200N 250E survey unit, but Zone 1 was unusually deep, bottoming out at 45 cm below surface. A heavy concentration of coal and clinker was encountered, primarily in the top 20 cm of the pit, leading us to believe that this area (about 25 m east of the house) was a designated spot for emptying the unburned contents of a coal-fired heating furnace or and/or stoves. What caught our attention however, was a large limestone rock in the west wall of the unit. It extended 20 cm below the bottom of Zone 1, and was suspected of being a foundation element. As a result, a 1x 2 m test unit was placed in an east-west orientation adjacent to the survey pit, with the southwest corner at 200N 248E. Again, since the survey pit was offset 10 cm east and north of 200N 250E, a small baulk existed between the survey and test units. It was dug in arbitrary 10 cm levels to 45 cm below surface.

Ironically, the limestone fragment seen in the west wall of the survey unit was a skinny one, and did not extend 10 cm into the test unit excavation. But on the west end of the Test Unit 6 a linear feature was observed after Zone 1 was completely excavated. As shown in Figure 32, it angled across the west end of the unit from southeast to northwest, as photographed at 54 cm

below surface. Little was contained in the remaining fill of Feature 1, which reached a depth of 66 cm: a plain whiteware sherd, a piece of brick, an unidentified iron fragment, and a few pieces of coal and clinker is the total artifact inventory. Also noted but not collected from the fill were flecks of charcoal. A large rock at the bottom of the feature appears on the south and west walls; it is parallel with and therefore mirrors the orientation of Feature 1, as seen in Figure 33. We somewhat sheepishly must point out that this profile shows that the feature actually extends down from the dark coal/clinker lens in the top of Zone 1, a belated stratigraphic nuance that was missed during the excavation. The origin of this feature in the upper reaches of Zone 1 most likely means that it post-dates the early Doak period. What the pit and rock are doing there cannot be determined without opening up a larger area.

While the feature in this unit is ambiguous, the artifact assemblage is impressive. Unit 6 contains a relatively high number of ceramics, glass and bone, but fewer nails than in any other unit. One wire nail was found in the lowest 5 cm of the zone. Glass artifacts include 94 round-sectioned and 103 patinated window fragments. Interestingly, in the top 20 cms of the unit only 14 sherds (3 lead glazed earthenware, 9 plain whiteware, and 1 porcelain) were recovered, compared to 173 glass fragments. A wide variety of ceramics was found in the lower 25 cm, including almost all the illustrated ceramic pieces shown in Figure 13 and discussed earlier in the Laboratory Analysis section. The temporal and functional significance of the possible Whieldon ware sherd and delftware pharmaceutical pot base have already been covered. A list of other ceramics includes: 12 lead glazed earthenware (Figure 13); 2 plain and 12 blue edged pearlware; 68 plain and 2 blue edged whiteware; 27 transfer printed whiteware; 1 each of banded whiteware and hand painted polychrome whiteware, and 2 blue hand painted whiteware. The banded whiteware establishes a *terminus post quem* of 1865. Several clearly ultramodern artifacts were associated with the top of the zone, such as a cellophane FritoLay sunflower seed bag; this item was *not* retained. As might be predicted from such a mixed provenience, the MCD for applicable ceramics from this unit is later than the other units: 1835. That this date was generated from a ceramic collection that includes the two earliest ceramic types only emphasizes the point that the Zone 1 deposit is of a more recent origin. Other items from this unit consist of a small copper leaf charm (Figure 15), 3 shoelace eyes, several springs from clothes line pins, and numerous fragments of strap iron and unidentified pieces.

In combination with the cinder layer, this hodge-podge artifact assemblage simply indicates a trash disposal location, but one that may have been used over a considerable period of time, as both the earliest and latest ceramic types from the site occur here. Perhaps Feature 1 is some sort of modern trash pit that is intrusive into an older trash disposal area, resulting in the mixed temporal bag produced by the artifacts. What the large stone is doing in such a feature is unknown.

Recommendations

Several locations within the project area held major archaeological surprises. Of critical importance for creating an accurate interpretation of the site are the architectural elements and artifacts associated with the hypothesized early house and the early academy. That these structures are missing from the documentary picture of the Doak family underscores the value of the dirt-based data generated from archaeological testing. In both areas, it is recommended that impacts from future landscaping and construction activities be avoided or minimized if at all

possible. Ideally an area directly south of the house that extends 15 meters from the south wall should be preserved intact. Further archaeological testing to determine the extent and nature of the demolition-filled cellar would also be valuable. Similarly, preservation and additional archaeological testing is recommended for a rectangular area west of the academy in an area measuring roughly 20m east-west by 15 m north-south from the west wall of the building. Relocating Feature 1 and 2 in Trench 4 would be a high priority. It is recommended that excavation be carried out in larger units, such as 2 x 2 m, in order to maximize visibility of the foundation/robber's trench that is hopefully associated with these features.

Another area of critical archaeological importance is the artifact-rich midden behind (south of) the academy. With the highest artifact-per-square-meter total of any of the test units, Unit 4 demonstrates the potential for reconstructing the material conditions of 19th century life at the site. Preservation and additional excavation is therefore recommended for a roughly 15 by 15 m area adjacent to the academy. It may also be possible to further investigate the juncture of the north and south ells to try to determine which foundation was built first. The success of such an investigation will depend on how disturbed the foundation elements and surrounding matrix are.

Survey units and test trenches in the front area of the academy and house (excluding those sections mentioned above) did not encounter significant archaeological remains. Not surprisingly, this roughly corresponds to the plowed area shown in Figure 10. An area south of the tool shed, where Unit 6 was placed, is also of archaeological interest based on the early and unusual artifacts recovered there. Although mixing with later time periods has occurred to some extent, a larger sample is certainly desirable, as is a further exploration of the mystery of Feature 1 in Test Unit 6. If possible, a roughly 10 x 10 m area south of Unit 6 should be preserved.

While in-place preservation is an ideal goal, reality is likely to intrude at some point in the form of earth-moving activities associated with future development at the site. Given the high research potential of the subsurface archaeological record that has been demonstrated at the Doak House, archaeological monitoring of any landscaping or construction activities by a qualified archaeologist is recommended. This would allow minimal recording and data collection to occur without seriously slowing the construction schedule. It also is desirable to pursue future testing in the barn area of the gravel parking lot. Gravel overburden can be efficiently removed using a backhoe, to be followed by hand excavation. Finally, additional backhoe trenching is called for in order to locate the elusive road in front of the house. Each trench should be accompanied by meticulous hand cleaning of all profiles to identify any faint subsurface signatures corresponding to the presence of a road. If it exists, it is possible that plowing has destroyed or obscured much of it, so that the more trenches dug, the better.

The Doak House has proved to be a fascinating and challenging archaeological puzzle. Hopefully future research at the site will result in answers to some important questions that we have identified about the history of the Doak family, just as additional unexpected discoveries generate new questions to pursue.

Acknowledgements

I wish to thank George Collins, Director of the Tusculum College Department of Museum Program and Studies, for inviting the UTC Archaeological Field School to investigate this fascinating site. His sensitivity to the historical significance of the Doak House landscape is illustrated by his ceaseless effort at coordinating this project and in generating funding and support that allowed the UTC excavators to carry out research there. It has been a pleasure to work with him on this project. I also appreciate the assistance of Associate Director Cindy

Lucas, who provided extensive documentary and oral history background material relating to the Doak House. She also graciously provided digital copies of the historic photographs of the site that are used in this report.

None of the research that appears in this report would have been possible without the diligent efforts of the students enrolled in the UTC field school. I am fortunate to have worked with Juli Downum, Jim Greene, Steve Kilgore, Megan Neely, Dusty Norman, Brooke Persons, David Rutledge, and Matthew Speigel on this project and I gratefully acknowledge their energy, responsibility to the data, and good cheer at work and at play. These qualities added immeasurably to the success of this project. In addition, Josh Carter, Steve Kilgore , and Dusty Norman provided invaluable assistance during the analysis and report preparation phases of the project.

I thank you one and all.

Nicholas Honerkamp

Bibliography

http://www.americanplasticscouncil.org/benefits/about_plastics/history.html. Accessed 7-3-03.

Adams, William H.

2002 Machine Cut Nails and Wire Nails: American Production and Use for Dating 19th-Century and Early-20th-Century Sites. *Historical Archaeology* 36(4):66-88.

2003 Dating Historical Sites: The Importance of Understanding Time Lag in the Acquisition, Curation, Use, and Disposal of Artifacts. *Historical Archaeology* 37(2):38-64.

Bartovics, Albert F.

1981 *The Archaeology of Daniels Village: An Experiment in Settlement Archaeology*. Ph.D. dissertation, Department of Anthropology, Brown University. University Microfilms, Ann Arbor.

Chapman, Jeff

1985 *Tellico Archaeology: 12,000 Years of native American History*. University of Tennessee Press, Knoxville.

Fontana, Bernard

1965 The Tail of a Nail: On the Ethnological Interpretation of Historic Artifacts. *The Florida Anthropologist* 8:85-96.

Fuhrmann, Joseph T.

1986 *The Life and Times of Tusculum College*. Tusculum College, Greeneville, Tennessee.

Gates, William C., Jr. and Dana E. Ormerod

1982 The East Liverpool Pottery District: Identification of Manufacturers and Marks. *Historical Archaeology* 16(1-2).

Greer, Georgianna H.

1970 Preliminary Information on the Use of the Alkaline Glaze for Stoneware in the South, 1800-1970. *The Conference on Historic Site Archaeology Papers* 6:220-229.

Honerkamp, Nicholas, R. Bruce Council, and Charles H. Fairbanks

1983 *The Reality of the City: Urban Archaeology at the Telfair Site, Savannah, Georgia*. Report on file, Archeological Services Branch, National Park Service, Atlanta.

Macdonald-Taylor, Margaret

1962 *A Dictionary of Marks: The Identification Handbook for Antique Collectors*. Hawthorn Books, New York.

Nelson, Lee H.

1963 Nail Chronology as an Aid to Dating Old Buildings. *History News* 19:25-27.

Noel Hume, Ivor

1974 A Guide to Artifacts of Colonial America. New York: Alfred A. Knopf.

Pfeiffer, Michael A.

1981 Notes on Unusual Clay Tobacco Pipes Found in Seattle. *Historical Archaeology* (15:1):109-112.

Price, Cynthia R.

1979 19th Century Ceramics in the Eastern Border Region. Monograph No. 1, Center for Archaeological Research, Southwest Missouri State University, Springfield.

South, Stanley

1977 *Method and Theory in Historical Archaeology*. Orlando: Academic Press.

USDA

1958 Soil Survey, Greene County, Tennessee. Series 1947, No. 7. United States Printing Office, Washington, D.C.



Figure 1. The Doak House Museum. Facing northeast.

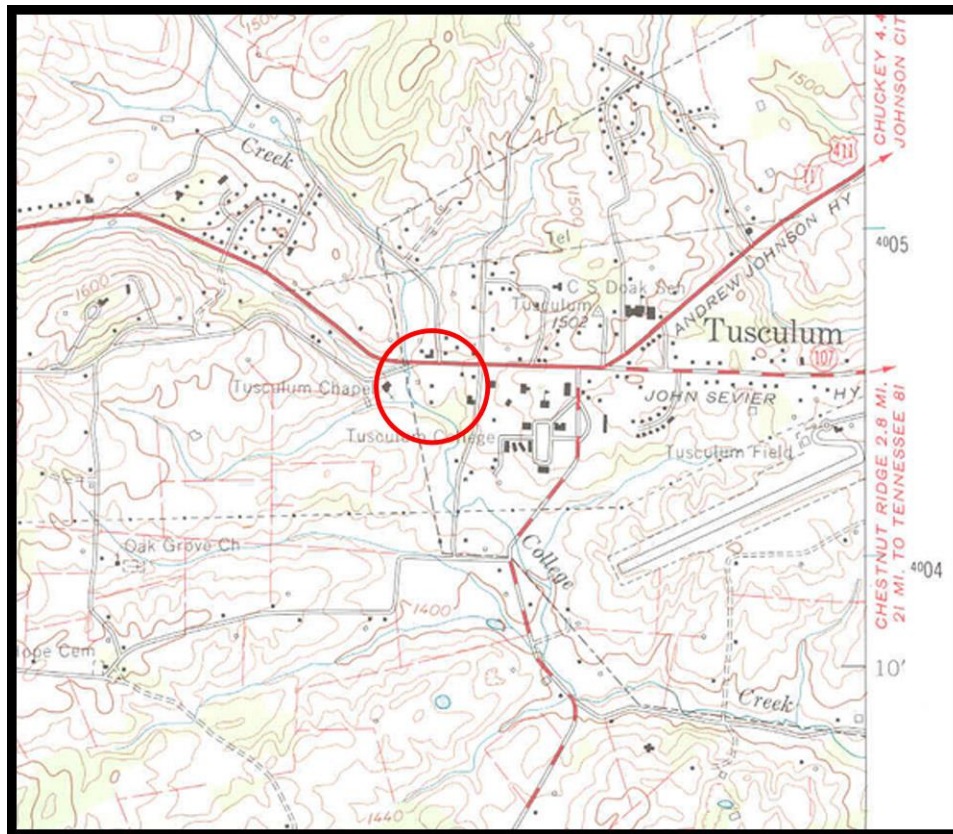


Figure 2. Project Vicinity Map. (From 1961 USGS Greeneville, TENN 181 – NE Quadrangle)

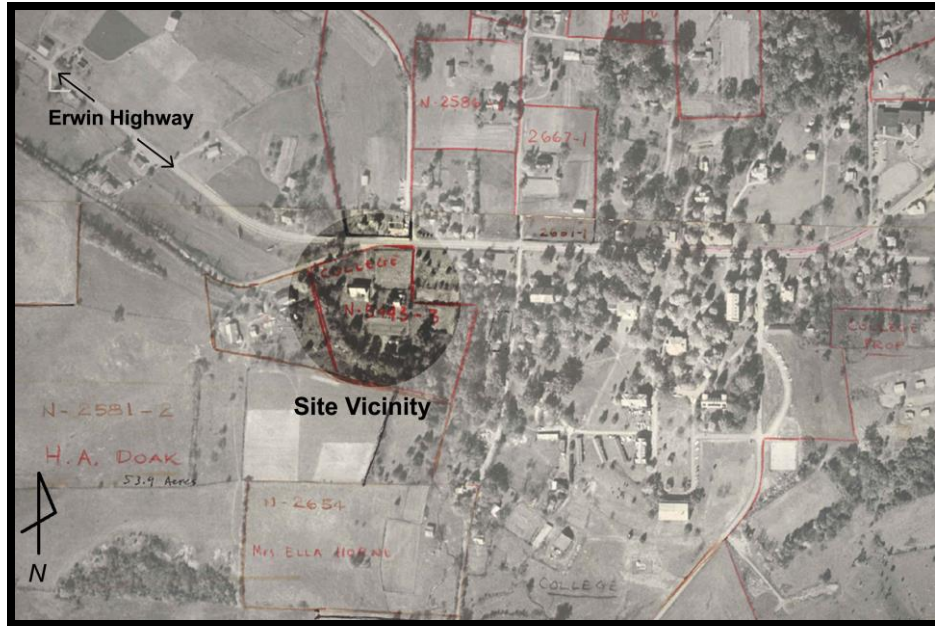


Figure 3. Doak House Project Area. From c. 1950s aerial photograph.



Figure 4. Doak House and Ell, facing northwest. The “full” ell is shown in this pre-1930s image.



Figure 5. Doak House and Barn, facing northwest.

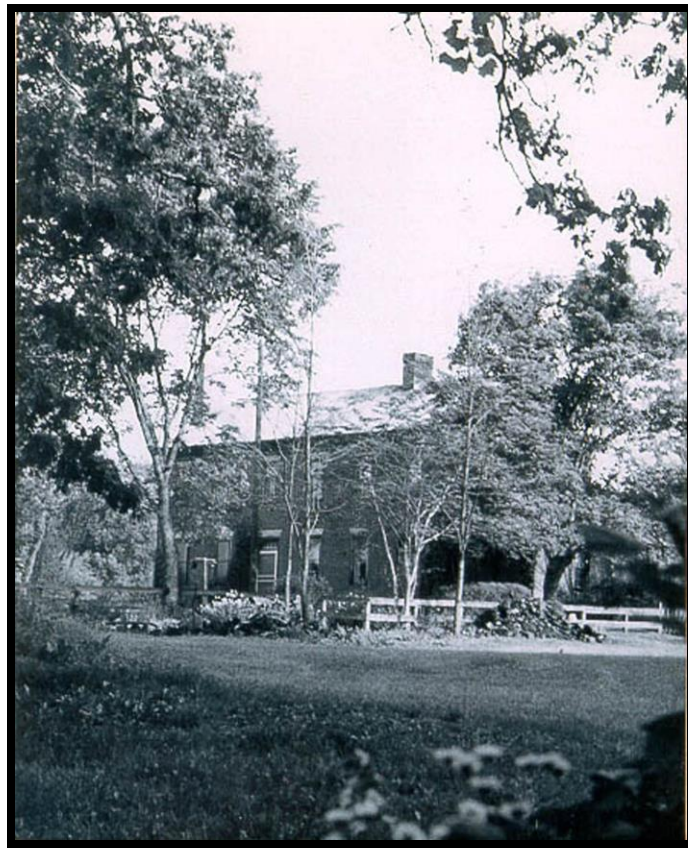


Figure 6. Doak House, Facing Northwest. Coal pile is in front of fence.



Figure 7. The Doak Academy. Undated photograph, facing southeast.



Figure 8. Doak Academy and Fences. Undated photograph, facing southeast.



Figure 9. Doak Academy and Springhouse. Undated photograph, facing southeast.



Figure 10. Aerial Photograph (c. 1950) of Tusculum College Vicinity. View is to the southeast. Note large barn and plowed fields on each side of main house, located in the bottom right corner.

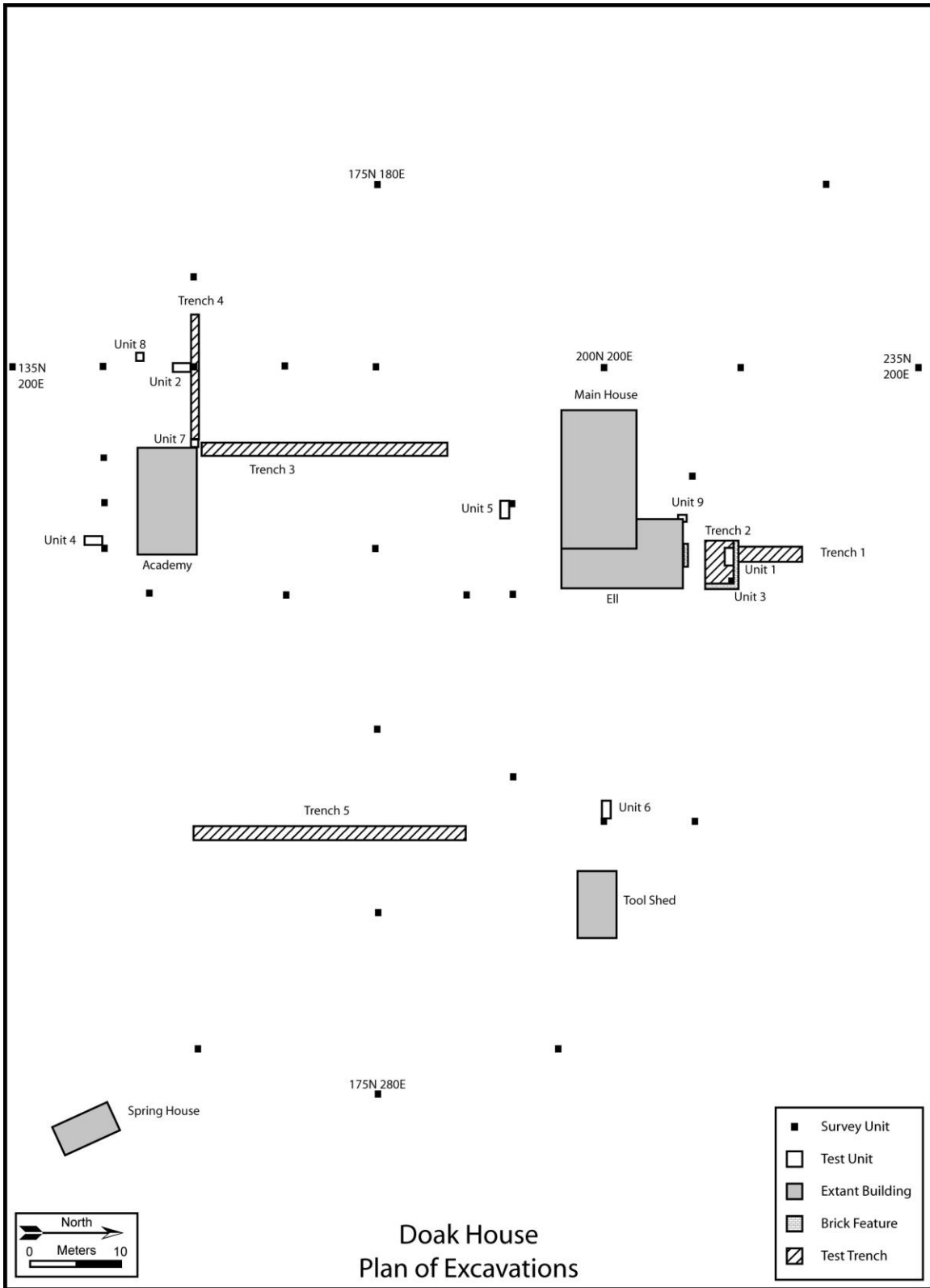


Figure 11. Composite Plan View Map Of Excavations.

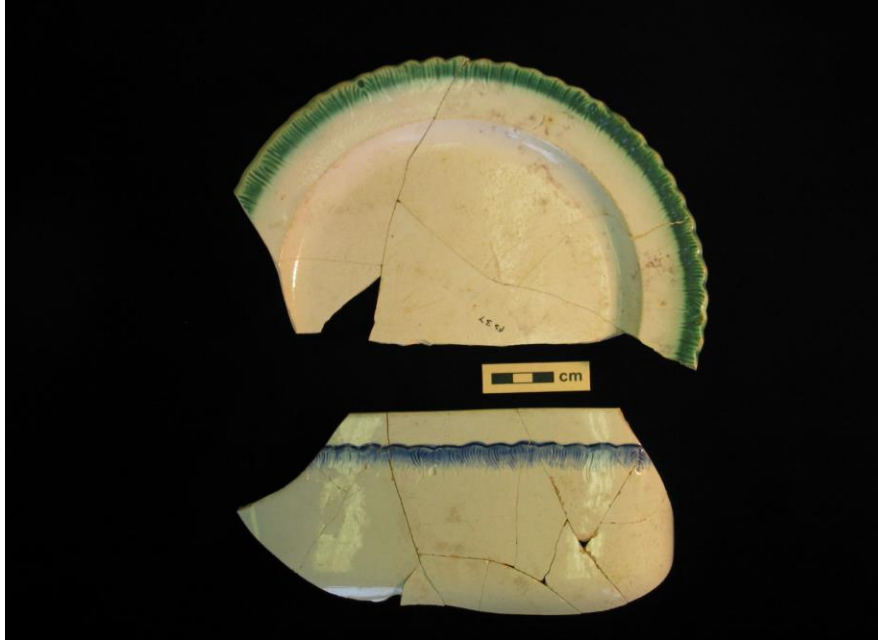


Figure 12. Refined Earthenware Vessels. Top, green shell edged whiteware plate (FS 37). Bottom, Blue edged pearlware tureen(?) (FS 62).



Figure 13. Miscellaneous Ceramics. Top, left, blue on white transfer print whiteware (FS 68); center, unidentified refined earthenware (FS 62); right, blue on white hand painted pearlware (FS 57). Bottom, left, plain whiteware with maker's mark (FS 58); right, brown lead glazed earthenware jar fragment (FS 62). All except FS 57 are from Test Unit 6.

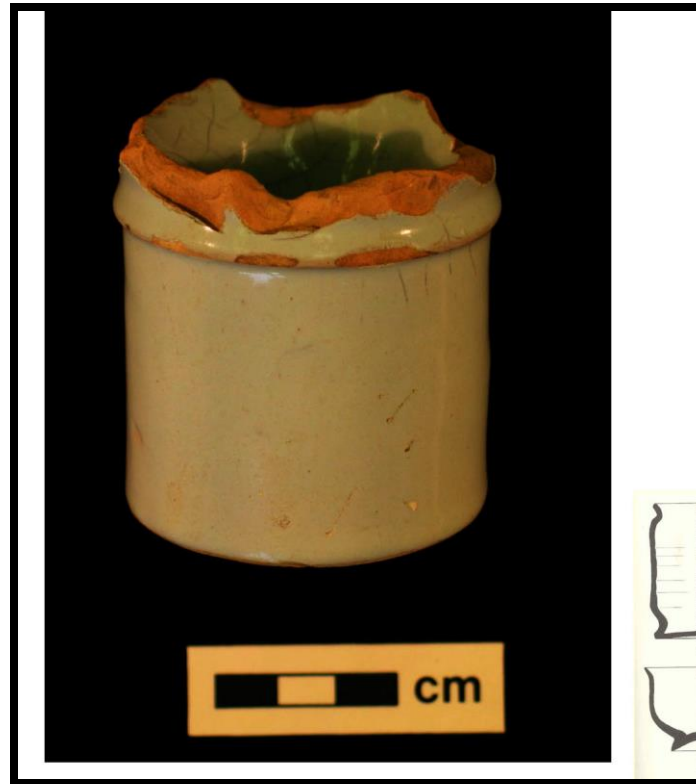
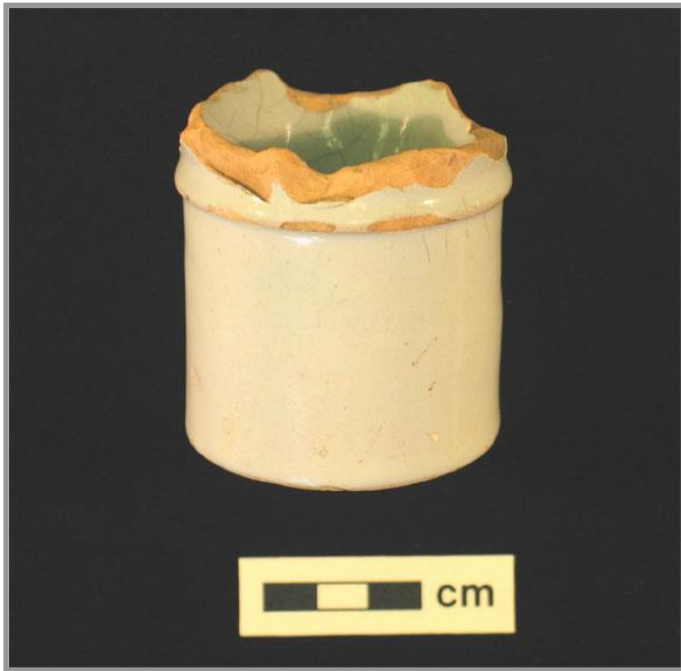


Figure 14. Delftware Apothecary Jar (FS 62). Examples on right are from Noel Hume 1974:205; lower right example is dated 1730-1830.

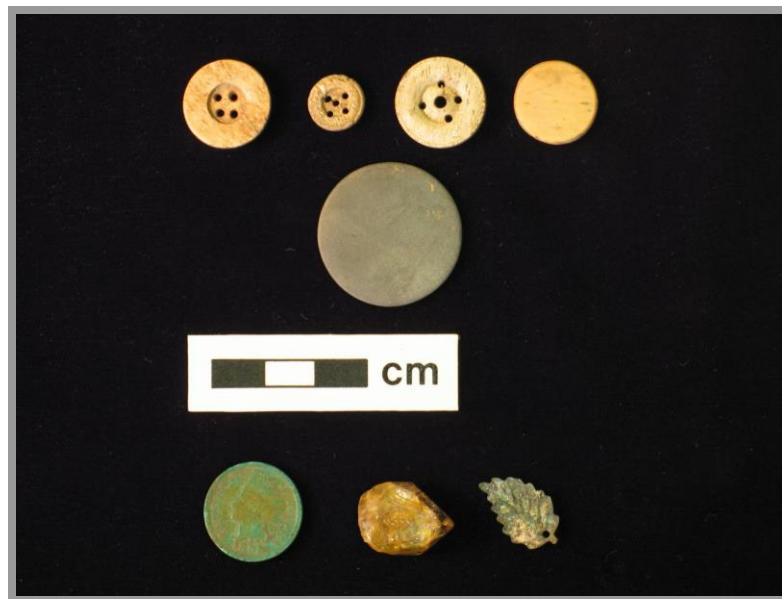


Figure 15. Buttons and Miscellaneous Personal Items. Top, left and center, drilled bone buttons (FS 12, 12, 72); right, bone button blank (FS 28). Center, brass button (FS 55). Bottom, left, 1895 Indian head penny (FS 56); center, faceted quartz stone (FS 72); right, copper charm (FS 58).



Figure 16. Miscellaneous Personal Items. Top, left and center, terra cotta stub-stemmed ribbed pipe stem and bowl fragments (FS 22, 44); right, smooth stub-stemmed bowl fragment (FS 81). Center top, bone handle from knife (FS 23), center bottom, bone awl (FS 57). Bottom, slate pencils (FS 57, 23).



Figure 17. Miscellaneous Iron Artifacts. Top, left, iron stirrup (FS 33); right, horseshoe (FS 57). Bottom, harvester blade fragment (FS 57).



Figure 18. Middle Archaic Quartz Projectile Point (FS 42).



Figure 19. Postholes in Trench 3. Facing west, Posthole 1 (left) contains an extant wooden post; a brickbat appears in the center of Posthole 2 on the trench west wall. The bottom of Posthole 3 (right) abuts a naturally occurring rock.



Figure 20. Brickbat Deposits, East Wall of Trench 5.



Figure 21. Posthole 1 Profile, Trench 5. Bottom is 80 cm below surface. Facing west.



Figure 22. Trench 4 Brick Foundations. The “T” shape of this foundation indicates an interior wall division. The bright orange appearance of some of the bricks was produced by the backhoe. The function of the limestone rock, if any, is unknown. Facing south.



Figure 23. Brick Foundations and Robber's Trench Feature, Trench 4. Facing west; note intrusive modern postholes in the foreground.



Figure 24. Unit 7 Features in Trench 4. From top, extant academy wall and stone foundation; Feature 6 modern concrete footing pad; Posthole 12; Feature 3 robber's trench with brickbat. The extent of the Unit 7 excavation area is indicated by the stepped shelf. Facing east.



Figure 25. Excavation in the Missing Ell Foundation. Field school student Jim Greene trowels out a feature in Unit 1. Facing north.



Figure 26. Unit 1, North Ell Foundation. The north brick foundation, adjacent sterile brown clay, and rubble-filled demolition pit are clearly visible in this view. Facing south.



Figure 27. Northeast Foundation Corner of Ell Extension. View is to the east in Unit 3.



Figure 28. North Foundation of the Extant Ell. Note the bottom courses in their original locations, and the later displaced restored courses above. Facing south in Unit 9.



Figure 29. Unit 2 North Profile. Note brick demolition fill in Zone 1.



Figure 30. Unit 5 Demolition Fill. Facing west.



Figure 31. South Profile, Unit 5. Two demolition layers containing brick rubble are apparent, as is a heavy charcoal concentration on the east profile to the far left.



Figure 32. West Profile, Test Unit 6. Feature 1 is apparent as the darker-stained clay extending north-south across the floor. Photo taken at 54 cm below surface.



Figure 33. Test Unit 6 Southwest Corner. The Feature 1 pit is clearly visible in the south wall.

Table 1. Combined Artifact Frequencies for Survey Units.

<u>Unit</u>	Artifact Groups							<u>Totals*</u>
	<u>Ceramics</u>	<u>Glass</u>	<u>Nails</u>	<u>Brick/Mortar</u>	<u>Coal/Clinker</u>	<u>Lithics</u>	<u>Bone</u>	
135N 200E	1	2	4	2	2	5	0	7
145N 200E	2	3	1	10	1	2	0	6
145N 210E	1	3	2	32	1	1	0	6
145N 215E	22	23	18	0	0	16	1	64
145N 220E	50	32	29	16	0	7	1	112
150N 225E	24	39	10	34	6	3	0	73
155N 190E	4	11	4	429	4	11	2	21
155N 200E	3	22	14	121	0	5	1	40
155N 275E	0	9	0	0	1	2	0	9
165N 200E	3	2	0	3	0	7	1	6
165N 225E	3	1	3	14	18	1	0	7
175N 150E	1	8	1	18	6	1	0	10
175N 180N	2	2	0	29	2	5	0	4
175N 200E	0	1	0	16	8	10	0	1
175N 220E	6	4	6	23	139	4	1	17
175N 240E	5	0	0	15	9	2	1	6
175N 260E	1	2	0	146	19	0	0	3
175N 280E	0	3	0	0	131	0	0	3
185N 225E	1	3	2	0	6	0	0	6
190N 215E	11	25	9	8	24	9	10	55
190N 225E	5	1	3	11	5	3	0	9
190N 245E	0	1	2	1	1	0	0	3
195N 275E	0	1	0	0	5	0	0	1
200N 200E	4	6	4	20	1	25	0	14
200N 250E	11	7	22	7	115	1	0	40
210N 212E	19	46	16	93	10	29	0	81
210N 250E	1	52	8	1	1	2	0	61
215N 200E	9	9	5	50	17	26	0	23
225N 180E	1	1	5	2	18	9	0	7
235N 200E	0	0	7	8	11	7	0	7
Group Totals	190	319	175	1109	561	193	18	T* = 702

*(T ≠ brick, coal, and lithic categories)

Table 2. Combined Artifact Frequencies for Trenches.

<u>Trench</u>	<u>Ceramics</u>	<u>Glass</u>	<u>Nails</u>	<u>Brick/Mortar</u>	<u>Coal/Clinker</u>	<u>Lithics</u>	<u>Bone</u>	<u>Totals*</u>
1	112	11	1	5	8	11	2	137
2	32	39	4	4	0	1	4	80
3	63	134	24	12	2	29	0	250
4	90	103	23	17	0	3	4	223
5	9	7	0	0	0	3	5	24
Totals	306	294	52	38	10	47	15	T* = 714

*(T excludes brick, coal, and lithic categories)

Table 3. Test Unit (1 x 2 m) Combined Artifact Frequencies.

<u>Unit</u>	<u>Ceramics</u>	<u>Glass</u>	<u>Nails</u>	<u>Brick/Mortar</u>	<u>Coal/Clinker</u>	<u>Lithics</u>	<u>Bone</u>	<u>Totals*</u>	<u>Per m²</u>
1	7	3	46	20	13	7	33	89	44.5
2	89	204	87	48		61	5	385	192.5
4	154	227	131	70	9	61	2	514	257
5	85	66	144	56	10	234	14	309	154.5
6	144	218	40	4	56	2	27	429	214.5
Totals	479	718	448	198	88	365	81	T* = 1726	

*(T and m² excludes brick, coal and lithic categories)