

Archaeological Investigations at Mounds State Park: Report of 2006 Field School and Public Archaeology



by
Beth McCord

February 23, 2007

Reports of Investigation 69

Archaeological Resources Management Service
Ball State University, Muncie, IN 47306-0435

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Introduction

Ball State University conducted archaeological investigations at several locations within Mounds State Park in 2006. The investigations were conducted as part of an archaeological field school and archaeology month activities. The purpose of the field school was to train archaeology students in field techniques. The purpose of archaeology month activities was to engage the public in the role of scientific archaeological investigations. The investigations were held at several locations within the park: the Bronnenberg House; the Union Traction Park Pavilion; a historic dump; and Earthworks D, K, G and F. The investigations documented the concentration of important Prehistoric and Historic archaeological resources that are contained within the park. The investigations were conducted under DHPA approved plans #2006029 and 2006067.

Background

Mounds State Park, located in Madison County Indiana, contains 45 archaeological sites, 12M2a through 12M2ss (Buehrig and Hicks 1982, Martin 2000) (Figures 1 & 2). The park includes one of the best preserved earthwork complexes in Indiana and the majority of the archaeological investigations conducted within the park have focused on the Early/Middle Woodland New Castle Phase earthworks (Bentley 1821, Brown 1884:37-38, Buehrig and Hicks 1982, Cochran 1988, Cochran 1996, Cochran and McCord 2001, Conover 1984, Cox 1879:129-135, Kolbe 1992, Lilly 1937:37-41, McCord 2006a, 2006b, McCord and Cochran 1996, Smith 1932, Swartz 1976, Vickery 1970, Walker 1891:51-55, White 1969). Many other prehistoric resources have been recorded within the park. Paleoindian through Late Woodland occupations are suggested (Buehrig and Hicks 1982:46-47). The park also contains several historic era resources (Buehrig and Hicks 1982). The project focused on five sites that are reviewed below.

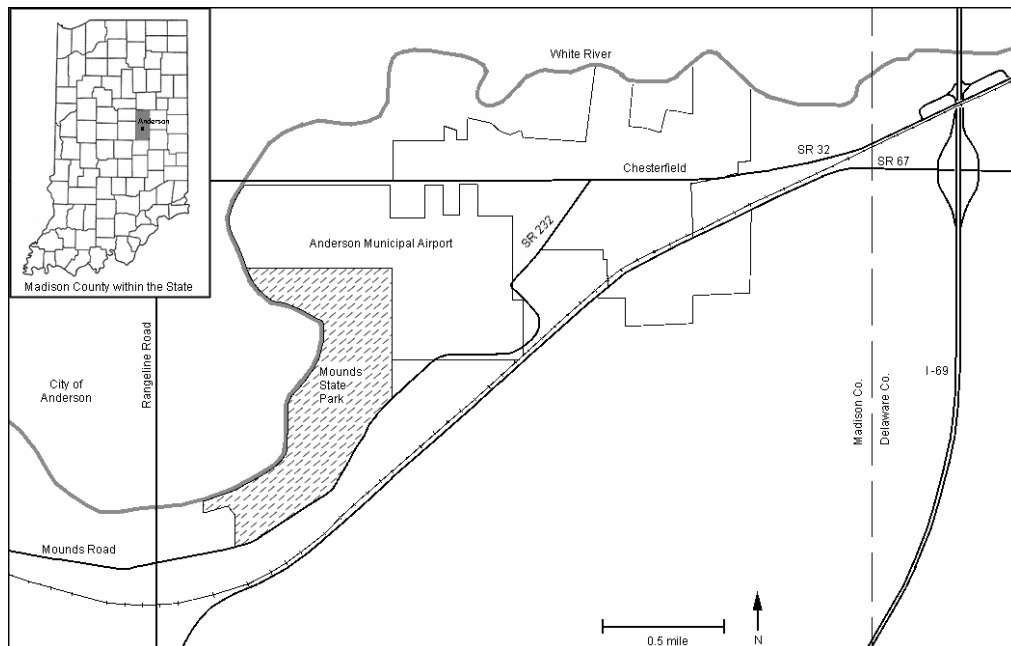


Figure 1. Location of Mounds State Park.

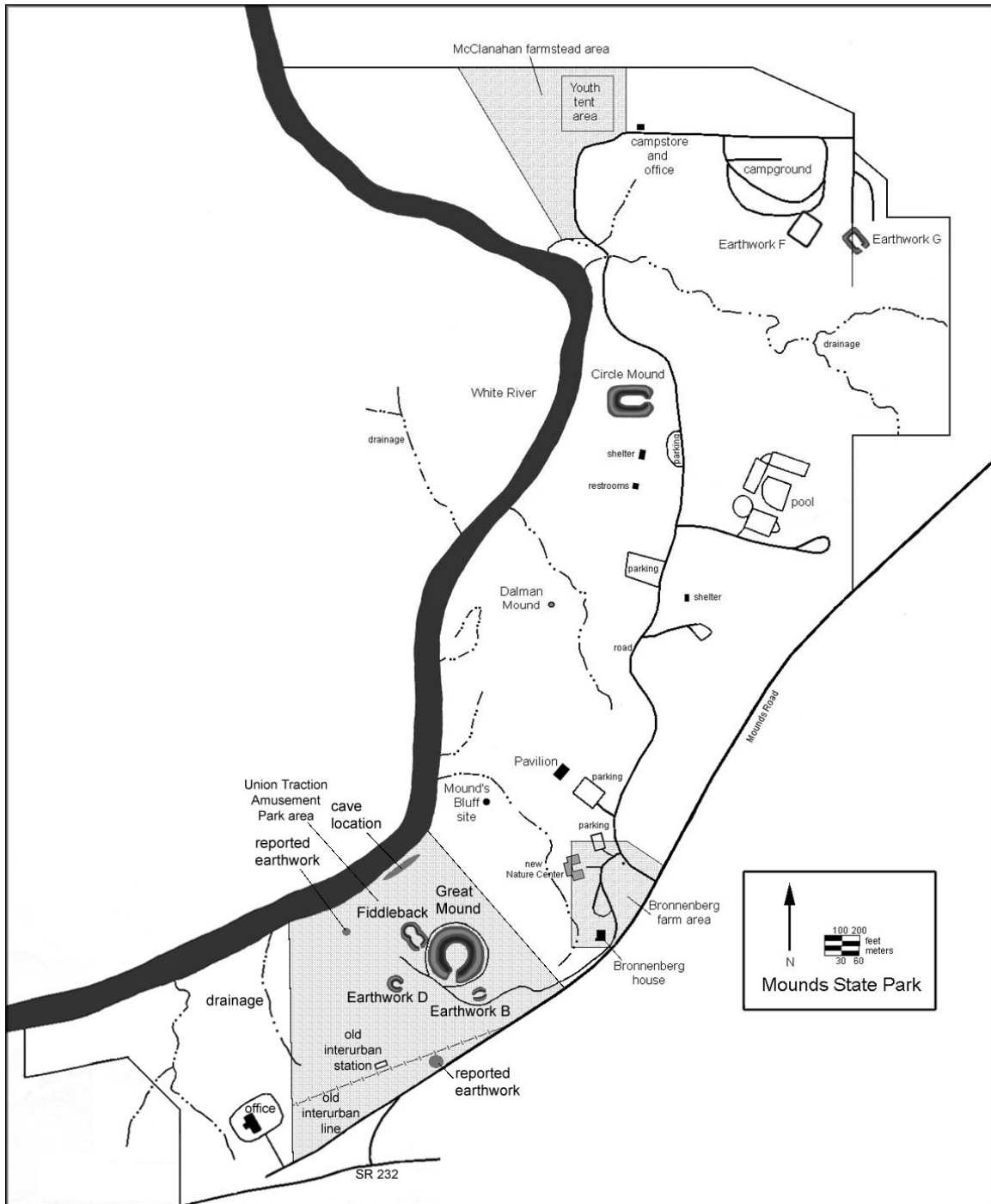


Figure 2. Some of the archaeological sites within Mounds State Park (after McCord and Cochran 2001).

Bronnenberg House

Excavations at the Bronnenberg House (12M2cc) expanded on work conducted during 2005 Archaeology Month activities (McCord 2006a). A history of the Bronnenberg settlement and occupation of the house was previously reviewed (McCord 2006a), but is summarized below.

The Bronnenbergs were some of the first pioneers that settled in what would become Madison County, Indiana (Anonymous 1880, Dittlinger 1973, Harden 1874, Netterville 1925). The family either settled in the Anderson/Cheterfield area in 1819 or 1821 (Harden 1874:214, Anonymous 1880:119). Frederick Bronnenberg Sr. began entering land in 1823 (Brown 1965:106).

Information on file at Mounds State Park relates that the land on which the house is situated in the SE ¼ of Section 16, Township 19 North, Range 8 East was given to Frederick Bronnenberg, Jr. by his father, but when this occurred was not recorded. It has long been assumed that Frederick Jr. built the house in the 1840s or 1850s (1850 Census, Hanna 1931, Louiso 1930, Swearingen 2002).

However, a county history that recorded reminisces of early settlers, relates that John Martin had the original land entry where the “mounds” are and he built a house east of them (Harden 1895:247). Frederick Jr. purchased the property from Martin, but no date was given (Harden 1895:247). When the land records were examined, John Martin entered land in the SW ¼ of Section 15 not Section 16 (Brown 1965:108)

To clarify who originally entered the SE ¼ of Section 16, a deed search of the property was attempted. Unfortunately, the Madison County Assessors office did not contain several years of deed records due to a court house fire. Resources at the Anderson Public Library Indiana Room and the Indiana State Library were consulted. The original tract entries for Section 16 did not occur until January of 1830 (Table 1). Prior to this time, Section 16 had been reserved for school use (Brown 1965:108). Unfortunately, the lot numbers are not correlated to quarter sections and it is unclear which lot later contained the Bronnenberg farm.

Table 1. Section 16 Land Entries				
Lot No.	Section	Acres	Date of Entry	Purchaser
4	16	65	January 11, 1830	Henry Shimer
9	16	97	January 11, 1830	William Pittsford
1	16	27.5	January 11, 1830	William Pittsford
3	16	74	January 11, 1830	William Pittsford
2	16	104	January 11, 1830	William Pittsford
7	16	51	January 11, 1830	William Young
8	16	80	January 11, 1830	William Young
6	16	63.25	January 11, 1830	William Young
5	16	50.5	January 13, 1830	Brazelton Noland

Compilations of deed records between 1824 and 1840 indicate that William Pittsford purchased a lot of 27.5 acres on the South side of the White River in the SW $\frac{1}{4}$ of Section 16 for the Commissioner of School Lands in Madison County on October 4, 1830 (Brown 1980:467, Seulean 1976). On December 26, 1830 he sold this lot (Lot #1) to George Sharp (Brown 1980:467, Seulean 1976). Pittsford then purchased the land back on March 22, 1831 (Brown 1980:468, Seulean 1976). No other references of Henry Shimer, William Young or Brazelton Noland having land transactions in Section 16 were noted. At least through 1840, historic documents indicate that neither Frederick Bronnenberg Sr. or Frederick Bronnenberg Jr. had purchased land in Section 16.

A tax list for Madison County in 1842, notes that Frederick Bronnenberg Jr. owned Lot 29 in Chesterfield. Property owners listed for Section 16 include Jonathan Guston of 26 acres, J.A. McClannahan of 65 acres in the NE $\frac{1}{4}$, and William Young of 300 acres in the W $\frac{1}{2}$ (Anonymous 1966:16-19). The total acreage listed in the tax list does not equal the 640 acres for a section. Several hundred acres of Section 16 are not listed.

No other records for the period between 1842 and 1870 were available that may indicate when Frederick Bronnenberg Jr. purchased the property that would become the farm or when the house was actually built. An 1880 atlas of Union Township clearly indicates, Frederick Jr. was the land owner of the house and surrounding property (Figure 3). (The McClannahan's owned the rest of the property that would become Mounds State Park). Frederick Jr. married Hulda Free in 1840 and the 1850 census indicates that he and Hulda, his son William, and two other individuals were residing in Union Township. As previously discussed (McCord 2006a), the most likely time period for the construction of the house was between 1840 and 1850.

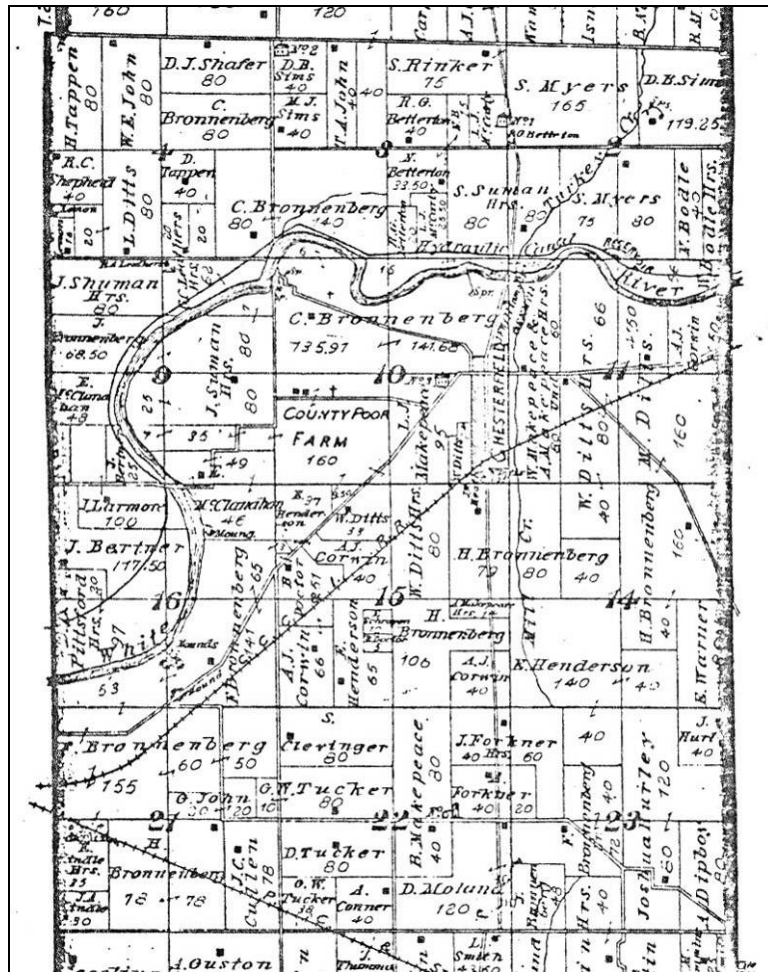


Figure 3. Portion of the 1880 atlas of Union Township (Anonymous 1880).

The research of historic documents may never tell us when the house was built and if there was an occupant prior to Frederick Jr.'s family. The documents do confirm that Frederick Jr. resided with his family in the house until circa 1870 when he retired from farming and moved to Anderson (1870, 1880, 1900 Census). Frederick Jr. continued to own the property until his death in 1901. The house was occupied by his son's, Ransom, family until circa 1899 and then his grandson's, Frederick III, family (Sylvester 2005, 1900 Census, 1910 Census). Apparently, when Frederick Jr. died, the property was divided between his heirs and some of the property was sold to the Union Traction Company (Swearington 2002).

An 1874 county history, related that the prehistoric earthworks located west of the house had attracted the attention of people from different parts of the State and "many picnics and celebrations are held here" (Harden 1874:143). About 1897, the Union Traction Company apparently leased the "picnic grounds" and later bought the property in 1901 (Swearington 2002). Unfortunately, this sale could not be confirmed in the deed records. The Union Traction Company operated several interurban lines in Indiana and

constructed an amusement park similar to one operated at Broad Ripple near Indianapolis and one at Riverside near Eaton (McDonald 1969:76).

With the increasing popularity of automobiles, the Union Traction Company revenues declined. The company eventually failed (Bailey et al. 1987:64). Under the influence of the Madison County Historical Society, the county commissioners authorized the purchase of the Union Traction land and adjacent strips of land were purchased from Fred Bronnenberg (III) (Louiso 1930). When Ransom died in 1926, Frederick III apparently inherited some property and the house and continued to live in the house until the land was transferred to the state for Mounds State Park (Swearingen 2002). The land was transferred to the State on October 7, 1930 for the creation of Mounds State Park (Louiso 1930).

When the state acquired the property, the goal was to return the land to its natural state. The amusement park structures were reportedly razed. New roads and foot paths were built and wells provided water for the tourists. The brick house was reportedly remodeled for the caretaker (Louiso 1930). The farm buildings associated with the house were apparently torn down soon after the state acquired the property (Hicks 1981:23). In the 1960s, the house was converted to the park nature center. In 2003, the new interpretative center opened, and offices were moved out of the house. The house currently serves an interpretive function of early Historic settlement for the park.

Through the years, the house served as a residence for several different families and went through several renovations and additions. The original house apparently consisted of 3 rooms on the first floor and 2 rooms on the second floor. A back addition consisting of both first and second stories were added. Several outbuildings consisting of a summer kitchen/smoke house/root cellar, privy, woodshed, barn, corn crib, granary and tool shed were torn down (Figure 4). The remnants of a milk house or spring house can still be found in the ravine below the western side of the house.

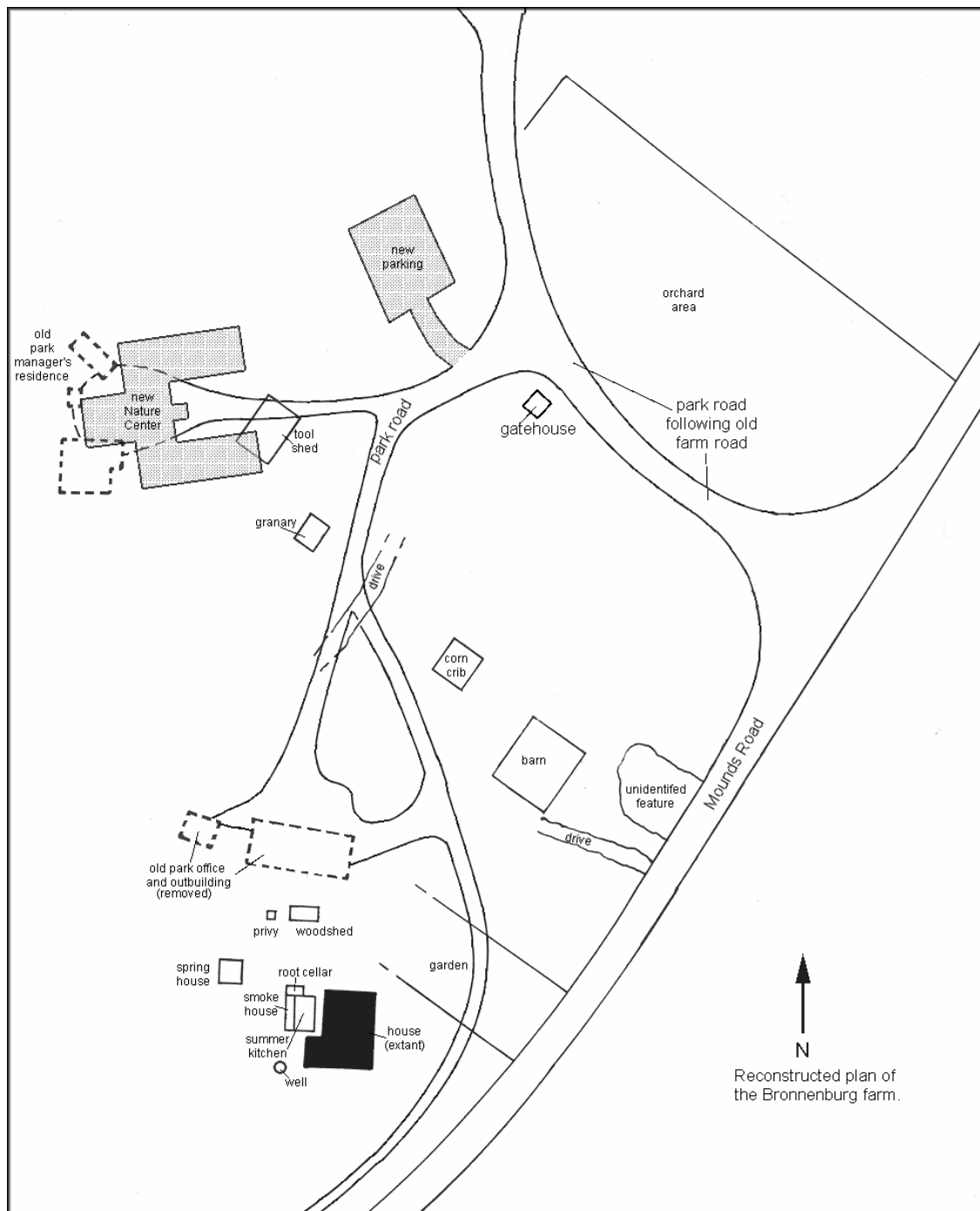


Figure 4. Reconstruction of Bronnenburg Farm (after Hicks 1981, McCord and Cochran 2001).

Union Traction Park

The Union Traction Company amusement park (12M2dd), “Mounds Park”, was extensive and facilities reportedly changed from time to time. Based on interviews, the park contained several structures including an interurban station, pavilion, roller coaster, merry-go-round, skating rink, shooting gallery, bowling alley, penny arcade, band stand,

hamburger stand, public well, boat dock, two miniature railroads and other amusement related activities (Hicks and Buehrig 1982:29-30). A newspaper article provided more details of the amusement park as told by Russell Abrams:

“My father had concessions at the park from the very first. He even had a stand that was later torn down to make way for the roller coaster, a big attraction at the park for many years.

...My father operated a shooting gallery, cane rack, ball game, bowling alley, penny arcade, tub swings and other concessions. At one time he managed the pavilion. He also had one of the first motordromes built in the United States. It was operated at the park for a season, and then my brother, Noah, moved it down south.

During World War I, one of the popular features my father had was a high striker. A figure of the German Kaiser was at the top, and everyone was eager to hit the striker hard enough so that it would send up a weight to the Kaiser a good stiff jolt.

The pavilion, merry-go-round, roller coaster and skating rink were among major attractions at the park. A miniature railroad around the big mound was very popular with the children for years. Later another miniature line was laid to circle a greater part of the grounds.

In the earliest days of the park I remember some of the big features were sham battles on holidays, band concerts, balloon ascensions, old foddlers’[?] contests, picnics and other outdoor affairs. Many people would ride out from Anderson on hot summer evenings on the open city cars operated by the traction company. The ride itself would be enjoyable and it cost only a nickel.

Sometimes people would come out on the Middletown interurban. We used to call her ‘Old Maude.’ I can remember special days when the park would be packed with visitors. At times it would be past midnight before everyone could get transportation back into town. Automobiles weren’t very numerous in those days. Some people may remember a monkey cage which was located at the Mounds for a short while. It was south of the merry-go-round.”

...About 1930, when preparations were being made for the state to take over the tract, buildings at the park were torn down. Mr. Abrams recalls that he used some of the wood from the concession stands in the erection of a home at 2427 Lincoln St., next door to his parents at 2431 Lincoln (Anonymous 1961).

Oral histories of the layout of the amusement park obtained from Cap Bronnenberg, who worked at the skating rink, and Charles Bonge Jr., are somewhat contradictory in the function of some facilities (Figure 5). However, the overall plan of the “midway” north of the interurban station and the rollercoaster behind the Fiddleback enclosure are consistent. This overall plan is also consistent with a 1930 aerial

photograph of Mounds State Park prior to the demolition of the amusement park buildings (Figure 6).

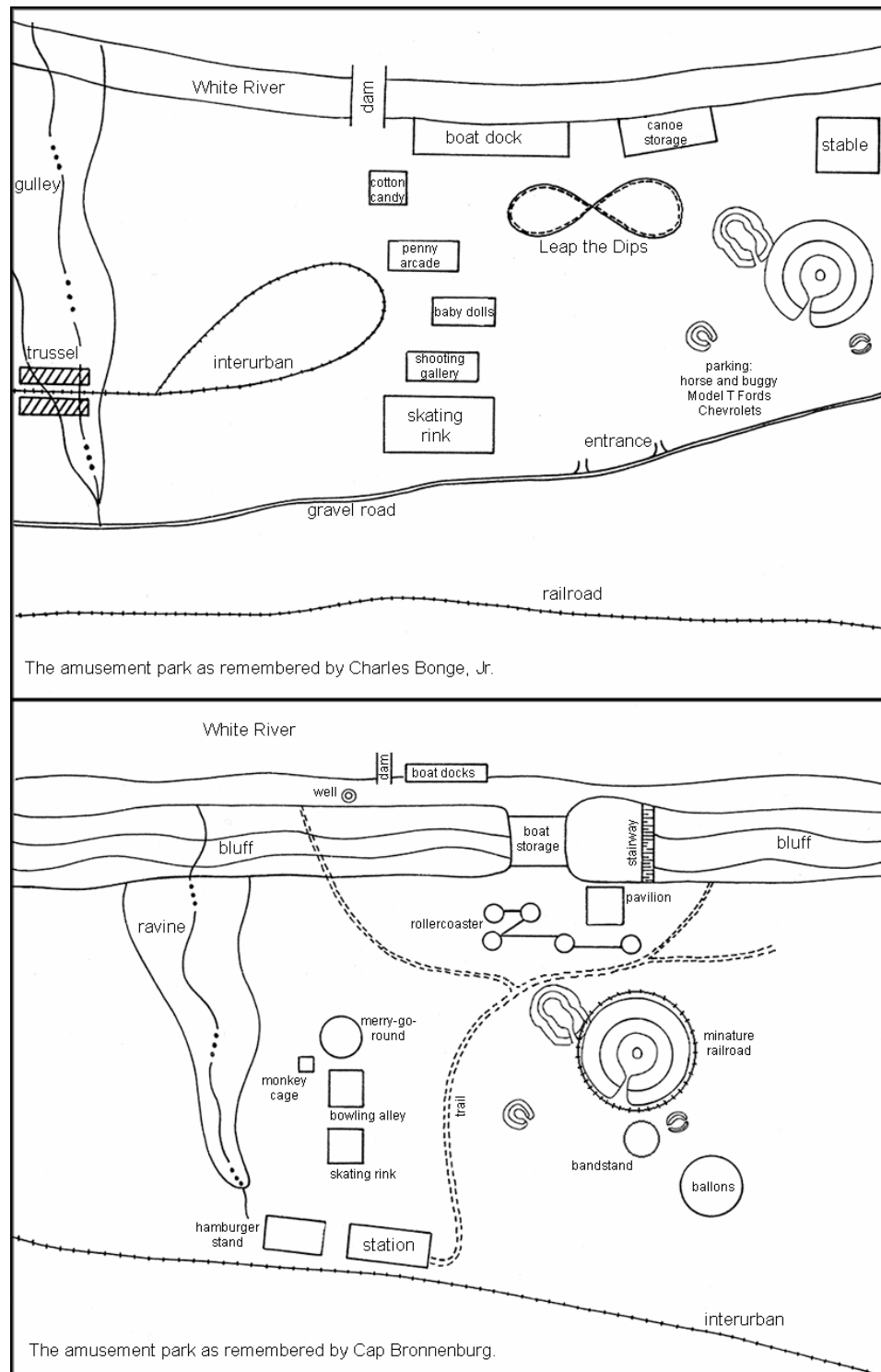


Figure 5. Reconstructions of the Amusement Park (after Buehrig and Hicks 1985, Cochran and McCord 2001).



Figure 6. A portion of the 1930 aerial showing the amusement park.

Specific to the pavilion, one of the photographs of the structure shows a sign labeled “Restaurant” and “Ice Cream Parlor” (Figure 7). Several oral histories reported the pavilion was used as a dance hall (even square dances) and ice cream, soda and pop corn were served (Bailey et al. 1987:205-211). Apparently the pavilion was open and not used in the winter. One of the sources identified a large square structure on an 1930 aerial photograph as the pavilion (Bailey et al 1987:209, Buehrig and Hicks 1982:33).

Within the Union Traction Amusement Park, archaeological investigations have been limited to defining the site area and collecting some oral histories (Bailey et al. 1987, Buehrig and Hicks 1982, Hicks 1981).



Figure 7. Photograph of the Pavilion (facing west).

Historic Dump 87F56

A historic trash pit was encountered within the Union Traction Company Amusement Park area to the west of Earthwork D during the field school. The trash pit was discovered in a ravine between the interurban station and “midway” area. A portion of this trash pit had been previously recorded by a group of architecture students (Bailey et al. 1987) and designated as Feature 87F56. Artifacts previously reported from the area include: a large metal cylinder, cinders, pottery pieces, cement, a clear triangular bottle, a rusted wrench, electric wire, green glass and bottles from the Anderson Bottling Company (Bailey et al. 1981:124).

While not indicated on a map, this dump was apparently recorded as location #92 in the 1981 survey of Mounds State Park (Bailey et al. 1987:49, Buehrig and Hicks 1982:138). The artifacts recovered from the area were: a large metal canister (not collected – this was the large metal cylinder collected in 1987), a punch cup fragment, a decorated porcelain bowl fragment, a blue-green bottle marked “KC”, a beer bottle manufactured in Indianapolis, a blue-green bottle fragment marked “IPD & Sons, Kokomo, Indiana”, 2 clear glass pop bottles marked “Eagle Bottling Company, Anderson, Indiana”, a broken distilled water bottle (Aquos), a blue-green bottle fragment, a medicine bottle and a shoe heel.

Earthwork D

Earthwork D (12M2d) is a small circular enclosure to the south of the Great Mound (Figure 2). It is situated on the western slope of a knoll and not on top of the

knoll. The enclosure is approximately 30 m in diameter. The ditch is shallow, only 0.2 m deep, and the embankment just about 0.3 m high. The central platform is approximately 13 m across and more of a square with rounded corners than truly circular in shape. The gateway opens to the southeast, but follows the incline of the natural slope and is difficult to detect. This enclosure was “lost” until 1987 when it was cleared of underbrush. This enclosure is linked to the Great Mound by an astronomical observation. On the winter solstice, when one stands in the center of the Great Mound and looks through a dip in the embankment toward Earthwork D, the sun sets through the center of this enclosure (Cochran 1988, Cochran 1992, Cochran and McCord 2001, Kolbe 1992). Excavations have been limited to a trench placed across the bank and ditch of the enclosure (Kolbe 1992).

Earthwork K

Earthwork K (12M2k) was reported to be a small circular enclosure approximately 12 m in diameter with a bank 0.6 m high (Cox 1879:132). Based on the Cox’s (1879:131) map of the enclosures, it was thought this enclosure was destroyed by the construction of the amusement park pavilion (Buehrig and Hicks 1982:53).

Earthwork G

Earthwork G (12M2g) is also a rectangular enclosure and situated just east of Earthwork F (Figure 2). The western part of the enclosure was damaged by cultivation and a gravel road and dirt trail bisect it diagonally through the center. The east side beyond the road is the best preserved and most visible when the vegetation is down in the winter. The enclosure measured approximately 30 m long and 15 m wide. The embankment is about 0.6 m high and surrounds the internal ditch and platform. The long axis of the enclosure is oriented southeast to northwest. The gateway was reported at the southeast end (Cox 1879:133-135). Previous test units were excavated in the road over the north embankment, in the middle of the enclosure on the platform and over the ditch at the south embankment. Also, a profile of the south embankment wall was obtained where it was cut and exposed by the road (Hicks 1981, Kolbe 1992). In general, none of the excavations produced information that was helpful for understanding the aboriginal construction or period of use of the enclosure. Due to historic disturbances and centuries of accumulation of loam on the forest floor, the modern configuration of the enclosure is very unlike its original condition.

Earthwork F

Earthwork F (12M2f) was first reported as a circular enclosure 45m in diameter in a cultivated field (Cox 1879:133-135) (Figure 2). Plowing had reduced the surface features of the enclosure, it was difficult to define, and the location of the gateway had been obscured. A 1930 aerial photograph clearly showed that the enclosure was rectangular and of a bank and ditch construction like the others in the site. It appeared to measure approximately 60 m long and 50 m wide (Buehrig and Hicks 1982). The enclosure was thought to be located in the park campground and surface indications of

the site obliterated. Three areas were archaeologically tested in an effort to locate the enclosure and it was thought a remnant of the ditch was found in one area and contained a few flecks of charcoal and stone tool manufacture debris (Hicks 1981). It was believed that extensive historic disturbances had essentially destroyed this enclosure.

Methods

This project had four field components including instrument survey of Earthwork G and part of Earthwork F, geophysical survey of Earthwork D and part of Earthwork F, and limited test excavations at the Union Traction Park Pavilion, Earthwork D and the Bronnenberg House. A controlled surface collection of a ravine within the Union Traction Company Park was also conducted.

The majority of the work described in this report was conducted during field school between May 22 and June 13, 2006. The field crew consisted of students Brent Alexander, Christa Barlebeen, Tiffany Bevins, Matt Collins, Monica DeCarlo and Julie Koogler. The students were supervised by Donald Cochran and Beth McCord. The excavations at the Bronnenberg House were conducted by ARMS staff and various members of the public between September 16 and 20, 2006. Public volunteers were supervised by ARMS staff of Don Cochran, Beth McCord, Jan Northam, and Mitch Zoll.

Instrument Survey

The instrument survey was conducted to produce a contour map of Earthwork G and part of Earthwork F. Neither of the earthworks had been previously mapped. The survey was conducted using a Sokkia SE 6 total station and SDR 33 fieldbook. The map datum and reference points were obtained using GPS coordinates collected from a Sokkia Axis³ receiver. The survey was conducted by collecting elevation data in lines radiating out from the central platform of Earthwork G.

Geophysical Survey

The geophysical surveys were utilized to help delimit boundaries of earthworks, detect discrete subsurface magnetic anomalies and determine the potential for sub-plowzone features. Geophysical surveys were conducted using a FM36 Gradiometer. The gradiometer surveys were conducted in combinations of either 10 or 20 m blocks. The surveys used a 0.1 nT resolution. The traverse interval was 0.5 m and readings were taken every 0.25 m. The resultant data were processed using GEOPLOT. The surveys were conducted by Beth McCord and Jan Northam.

Controlled Surface Collection

A controlled surface collection of a historic dump along a section of the ravine west of Earthwork D was undertaken. A portion of this dump had been previously recorded (Bailey et al. 1987) and designated as Feature 87F56. The extent of the scatter

was recorded by GPS coordinates from a Sokkia Axis³ receiver. A metric tape was extended along the length of the scatter and artifacts were collected within each 2 meter section. The width of the collection area varied somewhat due to the width of the ravine, but generally did not exceed 2 meters. Only artifacts that were visible on the surface were recovered.

Excavation

Limited test excavations were undertaken in several areas. Excavations were conducted by shovel tests or units.

Shovel tests and one 1 x 2 m unit at the Bronnenberg House were placed to expose portions of the brick foundation encountered in 2005 (McCord 2006a). The shovel tests varied in size depending on the location (see Results). The shovel tests were excavated in one level through the disturbed fill deposit. The excavated soil was screened through 6.4 mm wire mesh. Once the fill episode, primarily consisting of brick and mortar, was fully confirmed and a sample of artifacts recovered, portions of the brick foundation were exposed by removing fill and screening was not deemed necessary. The unit was excavated in 10 cm arbitrary levels and all soil was screened.

Shovel tests at the Union Traction Pavilion were excavated on a 5 meter grid. Shovel tests were 50 cm x 50 cm in size. The tests were excavated in 10 cm arbitrary levels and all soil was screen through 6.4 m wire mesh.

Earthworks D and G were sampled through the excavation of 1 x 1 m units. The units were excavated in 10 cm arbitrary levels until sterile subsoil was encountered. All of the excavated soil from units at Earthwork D was screened through 6.4 mm wire mesh. At Earthwork G, in level 2 the units were cut in half (0.5 m x 1 m) to expedite excavation. The soil below the A-horizon had a high clay content that did not readily screen. At level 3, only one 5 gallon bucket of excavated soil per level was screened. Based on previous excavations within the bank and ditch at earthworks within Mounds State Park and east central Indiana, artifacts are seldom recovered. It was felt that the sample screening did not sacrifice artifact data and features would still be detected.

For all excavations, level and feature forms were filled out as appropriate. Samples appropriate for radiocarbon dating and floral and faunal analysis were collected as available. Artifacts were provenienced by unit, level and/or feature. Fire-cracked rock were counted and weighed by level but were discarded in the field. The excavated shovel tests, units and all feature locations were recorded on a site plan using GPS coordinates obtained from a Sokkia Axis³ receiver. Upon completion of the excavation, all units and features were backfilled. The project was documented by digital photographs.

Laboratory

All artifacts except for fire-cracked rock were taken to the ARMS laboratory for processing and analysis. Laboratory methods followed standardized procedures used on

ARMS projects. Artifacts were cleaned, identified and catalogued. Metrical attributes and raw material identification were recorded. Historic artifacts were identified and dated using several references (Feldhues 1995, Fike 1984, IMACS 1992 and 2001, Lindsey 2007, Loftstrom et al. 1982, Majewski and O'Brien 1987, Miller 1995, Nelson 1964, Newman 1970, ODOT 1991). To assist in interpretation, individual historic artifact classes were placed in South's (1977) categories of Architectural, Kitchen, Bone, Arms, Personal, and Activities groups. A Miscellaneous category for charcoal, slag, and unidentified metal was added as well as a Prehistoric category for flakes, points and fire-cracked rock. A Modern category (post -1950) was used to distinguish modern materials such as plastic, metal pull tabs, and roofing nails, from the Bronnenberg and early 20th century occupation. Diagnostic artifacts were photographed for inclusion in the final report. Feature forms and level records were verified and maps were redrawn for publication. All artifacts acquired during this project remain the property of Mounds State Park and were curated at Ball State University. All materials collected during the field school were accessioned under #06.59 and those collected during the Bronnenberg House excavation were accessioned under #06.117.

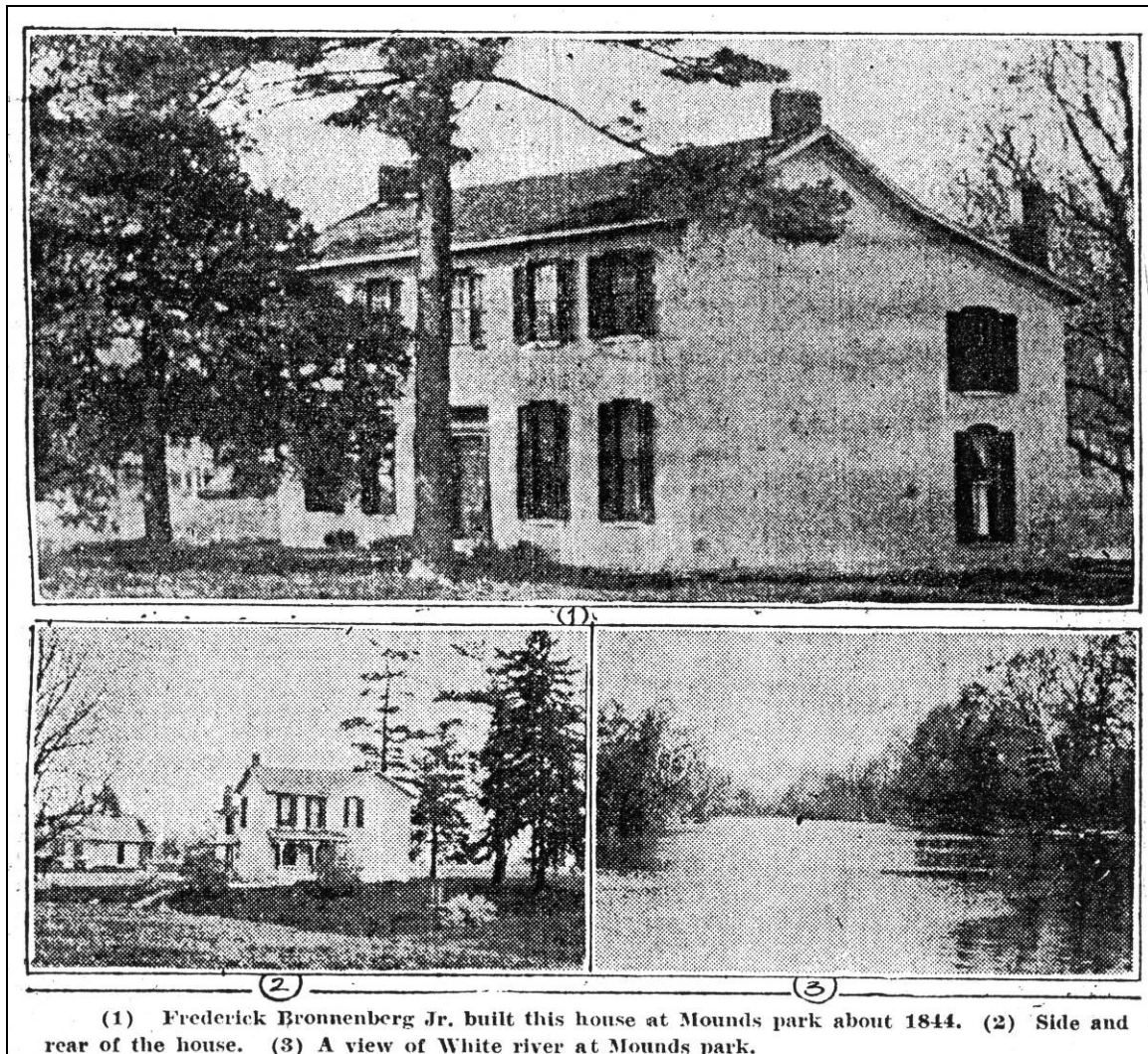
Results

Bronnenberg House

The 2006 excavations were an expansion of the 2005 work (McCord 2006a) conducted around the Bronnenberg House. Specifically, the goal for 2006 was to further explore the foundation of the reported root cellar/smoke house/summer kitchen encountered in the western (back) yard. This structure did appear on a circa 1930 photograph of the house (Figure 8), but was gone in a photograph published in 1931 (Figure 9). The exploration of the root cellar/smoke house/summer kitchen structure was recommended to determine the size and integrity of the foundation (McCord 2006a:31). The excavations at the Bronnenberg House were conducted during Indiana Archaeology Month.



Figure 8. A circa 1930 photograph of the Bronnenberg House (facing east).

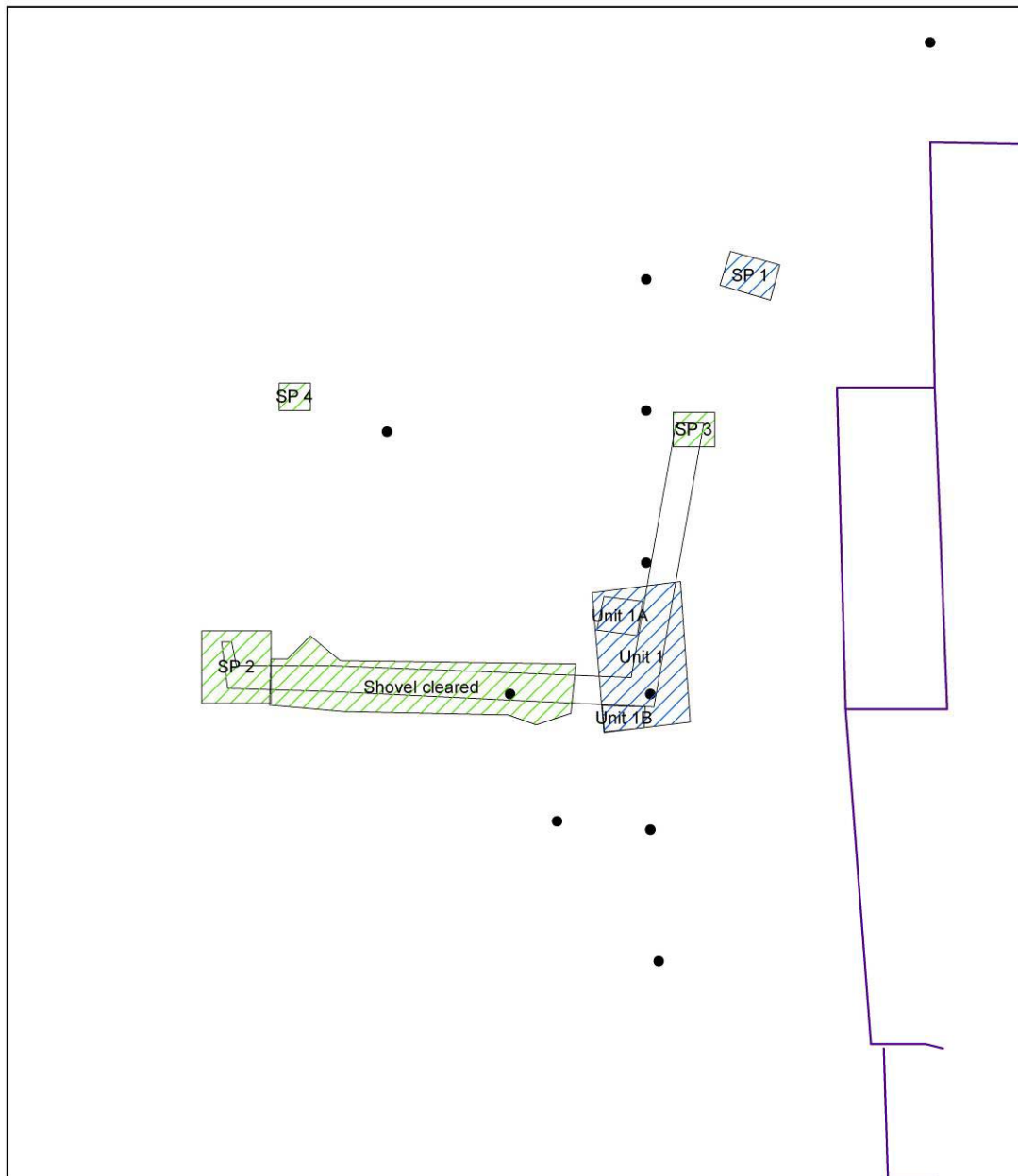


(1) Frederick Bronnenberg Jr. built this house at Mounds park about 1844. (2) Side and rear of the house. (3) A view of White river at Mounds park.

Figure 9. Photographs of the Bronnenberg House published in 1931.

Excavation

Excavations at the Bronnenberg house consisted of one 1 x 2 m unit, Unit 1, placed over a 2005 shovel test (SP #6-4) that encountered a corner of brick foundation (Feature 1). Once the wall was exposed in plan view, two smaller units (Unit 1A and 1B) were excavated to determine the depth of the brick foundation. Unit 1A was approximately 0.5 x 0.5 m in size and Unit 1B was approximately 0.42 x 0.42 m in size. Shovel test #1 was approximately 0.5 x 0.8 m in size and excavated to the north of Feature 1. Shovel test #2 was approximately 1 x 1 m size and located to expose the southwest corner of Feature 1. Shovel test #3 was approximately 0.4 x 0.5 m in size and located to expose the northeast corner of the Feature 1. Shovel test #3 was not screened. Shovel test #4 was approximately 0.4 x 0.4 m in size and located to expose the northwest corner of Feature 1. Approximately 5.25 linear meters were cleared by shovel but not screened to expose portions of the brick foundation (Feature 1) (Figure 10).



Legend

— Bronneberg House

Screened

Not screened

brick wall

• 2005 shovel probes

2 1 0 2 Meters

ARMS 2007



Figure 10. Plan of 2006 excavations at the Bronnenberg House.

The excavations encountered a top layer of fill in the backyard. The fill had been documented in the 2005 excavations as well (McCord 2005). The fill was between 30 and 40 cm deep below the ground surface. The fill had a loam, sandy loam or gravelly loam texture and had mixed colors of 10YR 3/2 and 10YR 4/4. The fill contained large quantities of brick, plaster and mortar in addition to recent (post 1950) historic artifacts. Below the fill zone the natural subsoil was a clay loam of 10YR 4/4 color (except in Shovel test #3). In Unit 1A, a line of mortar or plaster dust separated the fill from the natural subsoil (Figure 11). In Shovel test #3, a concrete slab was encountered at approximately 30 cm below the ground surface. The slab was encountered by Shovel test #8-2 in 2005. The concrete slab was associated with a septic tank (Feature 2). Very few artifacts were recovered that were not from the fill zone. A builder's trench (Feature 3) encountered along the brick foundation contained a few artifacts.



Figure 11. Photograph of Unit 1A showing the fill stratigraphy.

Artifacts

A total of 1925 objects were recovered from the 2006 excavations (Table 2). The historic artifacts dominated the assemblage with 1917. Prehistoric artifacts were represented by 5 unmodified flakes and three fire-cracked rocks. The fire-cracked rock could be related to the historic occupation as well. A complete listing of the materials recovered is provided in Appendix A.

Table 2. Artifacts from the Bronnenberg House					
Category	No.	Group*	Category	No.	Group*
Single tree hook	1	Activity-farming	Charcoal	5	Misc.
Brick	726	Architectural	Coal/slag	174	Misc.
Drain tile	1	Architectural	Limestone	13	Misc.
Glass, flat	73	Architectural	Unidentified metal	39	Misc.
Bolt	2	Architectural	Copper strip	1	Misc.
Gutter spike	1	Architectural	Mussel shell	3	Misc.
Nails	93	Architectural	Wax	1	Misc.
Shutter hinge	1	Architectural	Chewing gum	1	Modern
Mortar	66	Architectural	Foam	3	Modern
Plaster	483	Architectural	Foil	4	Modern
Shell casings	3	Arms	Hair roller	1	Modern
Bone	34	Bone	Screws	4	Modern
Shell button	1	Clothing	Roofing nails	10	Modern
Glass, container	93	Kitchen	Paper clip	1	Modern
Crown bottle caps	4	Kitchen	Stainless steel wire	1	Modern
Porcelain	2	Kitchen	Pencil lead	2	Modern
Stoneware	1	Kitchen	Plastic	17	Modern
Terra cotta	9	Kitchen	Shingles	15	Modern
Whiteware	7	Kitchen	Textiles	21	Modern
			Unmodified flakes	5	Prehistoric
			Fire-cracked rocks	3	Prehistoric
* South 1977					

While the majority of artifacts were from the fill zone, the artifact classes were grouped according to South (1977) with the addition of modern, prehistoric and miscellaneous categories (Figure 12). Even though the artifacts were primarily from fill, the fill is believed to be related to the Bronnenberg House and not an outside source. Therefore, the artifacts are still related to the activities occurring at the house, but lack primary context.

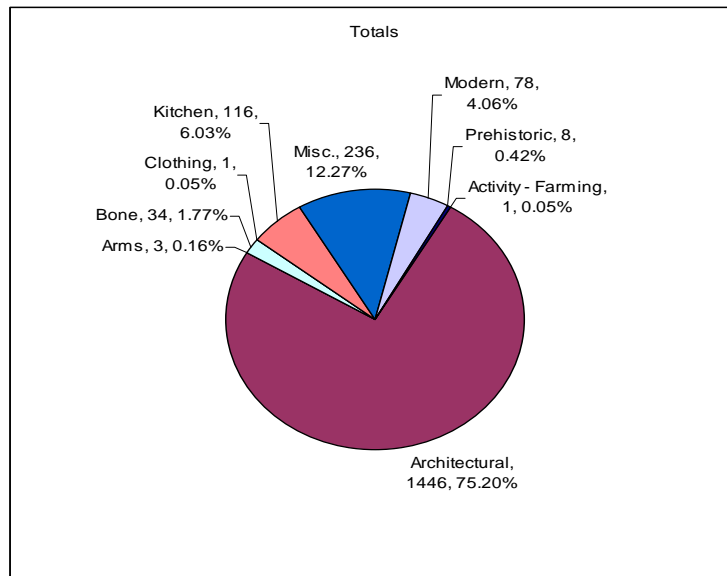


Figure 12. All artifact groups from the Bronnenberg House.

The artifacts were dominated by architectural remains. If the miscellaneous, modern and prehistoric categories are eliminated, architectural remains are even more dominant (Figure 13). The next highest category was kitchen remains and then bone. The assemblage recovered in 2006 was very similar to that recovered in 2005 (McCord 2006a).

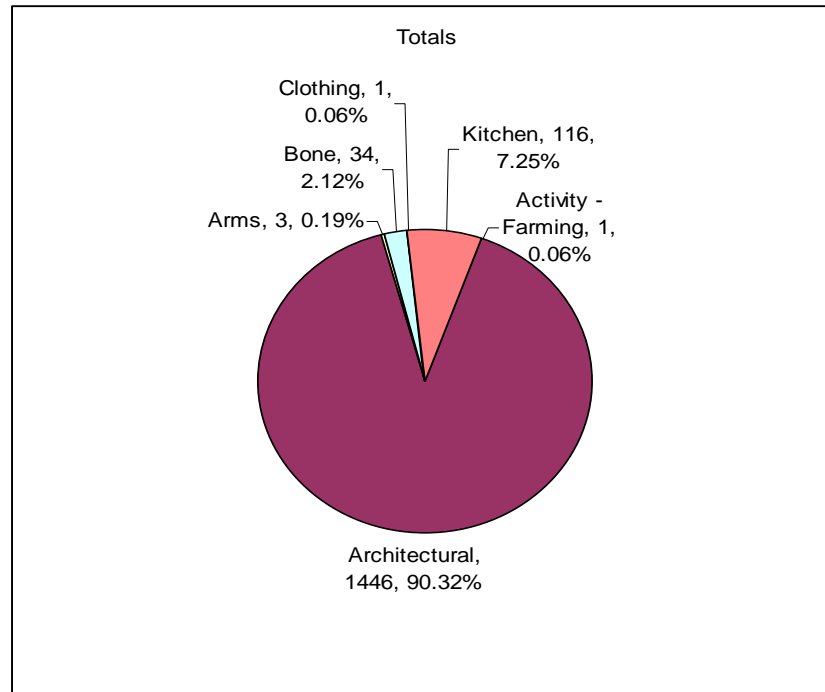


Figure 13. South's (1977) artifact groups from the Bronenberg House.

Of the 1917 artifacts, 79 were characterized as being of modern or recent origin and include modern roofing nails, plastic and textiles. The remaining artifacts were believed to be related to the Bronnenberg and early 20th century occupation. Diagnostic historic artifacts included ceramics and glass.

Only four ceramics were decorated (Figure 14). Two whiteware pieces had flow blue decoration that was manufactured between 1820 and 1870 (ODOT 1991:178). One whiteware handle fragment had a silver transferprint that was produced post-1880 (Majewski and O'Brien 1987:128). One piece of porcelain with a floral transferprint was produced between the 1830s and present (ODOT 1991:178).

The glass colors included amber, amethyst, aqua, and was dominated by clear. Amber glass was produced from ca. 1860 to present (Fike 1984), amethyst glass was produced from ca. 1880 to 1925 (Newman 1970:74), aqua from ca. 1800 to 1910 (Fike 1984), green and clear from ca. 1875 to present (Fike 1984). Several fragments of thin clear glass with a frosted pattern were also recovered (Figure 14). The fragments may be part of a lamp chimney, but production dates were not found.



Figure 14. Ceramics and glass from the Bronnenberg excavation. Top row: linear flow blue design, flow blue handle, silver gilt handle, and floral transferprint. Bottom row: frosted glass.

In addition to fragments of glass, two complete medicine bottles were recovered (Figure 15). The first bottle is of clear glass and is categorized as a machine made oval druggist. The bottle has graduated measurements embossed on the sides. This type of bottle was popular in the 1920s to the 1940s (Lindsey 2007). The second bottle is amber in color and embossed with “*Mrs. Potters* HYGENIC SUPPLY C^O. CINCINNATI, OHIO N^O. 2”. This bottle apparently contained walnut tint hair stain. The product was popular ca. 1900 to 1910 (Anonymous 2007).



Figure 15. Clear glass medicine bottle and amber glass hair stain bottle.

Features

Three features were encountered in the excavations. Feature 1, a brick wall or foundation, was first identified in Shovel test #6-4 and 7-4 in 2005. In Unit 1, the top of the foundation was between 19 and 25 cm below the ground surface. The wall is believed to part of the summer kitchen/smokehouse/root cellar and appears in a circa 1930 photograph. The southern wall of this structure and portions of the eastern wall were exposed during the investigations (Figures 10 & 16). In Units 1A and 1B along the southern and eastern wall, five courses of intact brick were revealed (Figure 17). The first row set in a builder's trench (Feature 3) was a header row (bricks crosswise) and the following courses were a running bond two bricks wide. The brick bond on the main Bronnenberg house is an American bond or common bond with every sixth course a header course (Figure 18). Since only five courses were encountered, it is unclear the type of bond of the summer kitchen structure. The Bronnenberg house is set on a field stone foundation and this structure was not.



Figure 16. Areas excavated and cleared.



Figure 17. The brick courses exposed in Unit 1A.



Figure 18. The American or common bond of the Bronnenberg House.

With the areas cleared, Feature 1 appeared to be approximately 12' NS x 16' EW (3.6 m x 4.8 m). However, there may actually be two structures represented. Along the southern wall, another line of brick was found overlying the presumed summer kitchen (Structure 1). This line of brick was set at a slightly different angle. There was no corner at this juncture though. The western wall was different as well. There was only a single line of bricks not a double row of bricks found for the southern and eastern wall. It is possible that a second structure overlies the summer kitchen or is an extension of it.

Feature 2 was a concrete slab. This feature was first documented in Shovel test # 8-2 in 2005. This represents the septic tank. Unfortunately, the construction and placement of the septic tank destroyed the northwestern corner of the presumed summer kitchen. The size of this disturbance is not known, but the 2005 gradiometer survey suggest an area approximately 4.5 m NS x 5.0 m EW was disturbed (McCord 2006a).

Feature 3 was the builder's trench documented in Units 1A and 1B (Figure 19). Unit 1A was on the inside of the structure and the builder's trench was approximately 10 cm wide. The trench was first noted at approximately 45 cm below the ground surface. A few pieces of plaster, mortar, and one fire-cracked rock were found in the trench. The bottom of the trench was approximately 62 cm below the ground surface. In Unit 1B that was located on the exterior of the structure, the builder's trench was not noted until 54 cm below the ground surface and extended to 66 cm below the ground surface. The trench was approximately 4 cm wide.

Plan of Unit 1

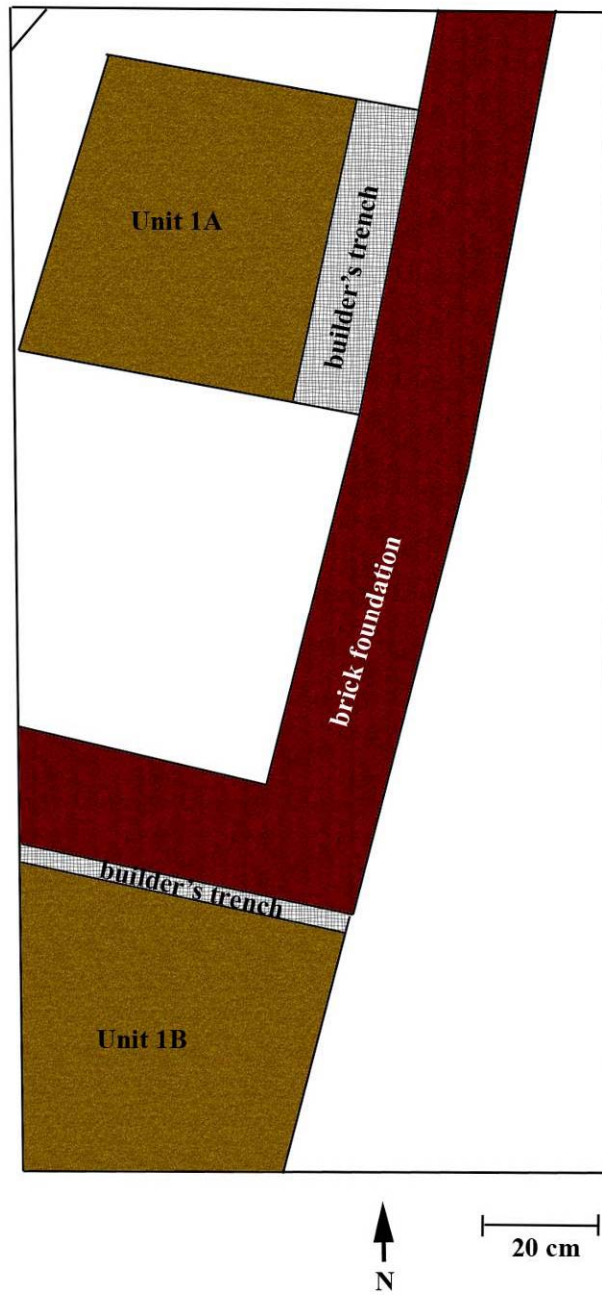


Figure 19. Plan of Unit 1 showing the brick foundation and builder's trench.

Interpretation

The project was able to uncover and document portions of the presumed summer kitchen structure. Portions of the foundation were intact; however, the extent of disturbance to the northern and western walls was unknown. The structure appears to be approximately 12' x 16' in size. However, a second structure or addition may be associated with this structure. Reports of this structure include use as a summer kitchen, smokehouse and root cellar. The variation in the brick pattern may indicate another structure or partition of different use.

A further sample of artifacts from the backyard was also recovered. Most of the artifacts were from the fill layer and lack integrity. It is therefore hard to associate the artifacts with a summer kitchen use. The overwhelming quantity of architectural remains supports a brick structure with lathe and plaster walls was torn down and a portion of the debris was scattered across the backyard. Whether this structure was truly a summer kitchen was not proven archaeologically.

The age of the presumed summer kitchen is not currently known. The artifacts recovered range in age between 1820 and recent times. The main house was most likely built between 1840 and 1850 (McCord 2005). Whether this structure was built at the same time or was a later addition is not known. A comparison of Munsell colors of the bricks of the kitchen structure and the main Bronnenberg House and the back addition were inconclusive. The presumed kitchen may have been built with the main house portion, the addition or another time.

Union Traction Park Pavilion

The area investigated for the pavilion was located by georeferencing a 1930 aerial of Mounds State Park in ARCMAP to obtain UTM coordinates (Figure 6). The aerial photograph shows a large structure assumed to be the Union Traction Pavilion (Buehrig and Hicks 1982:33, 62). Photographs of the pavilion show a 2-story timber structure that is set on brick piers (Figures 7 & 20). A brick chimney, metal gutters and electric lights are also evident in the photographs. The size of the pavilion is not reported, but the aerial image is approximately 40' (12m) x 60' (18.75m) in size and oriented approximately 60° West of North.



Figure 20. Photograph of the Pavilion (facing north).

Shovel tests

Thirteen shovel tests were excavated on a 5-meter grid across an area 25 m N/S x 35 m E/W (Figure 21). The area was in second growth woods covered with small trees and plants such as mayapples. Some shovel tests had to be shifted off grid due to trees or tree roots. The area north and west of the grid sloped toward the White River valley. To the east and south of the grid are park trails. The shovel tests were typically excavated in two or three levels when subsoil was encountered and ranged in depth between 12 and 22 cm below the ground the surface (Figure 22). Only one shovel test, #3-2, was excavated into the subsoil due to the presence of a feature.

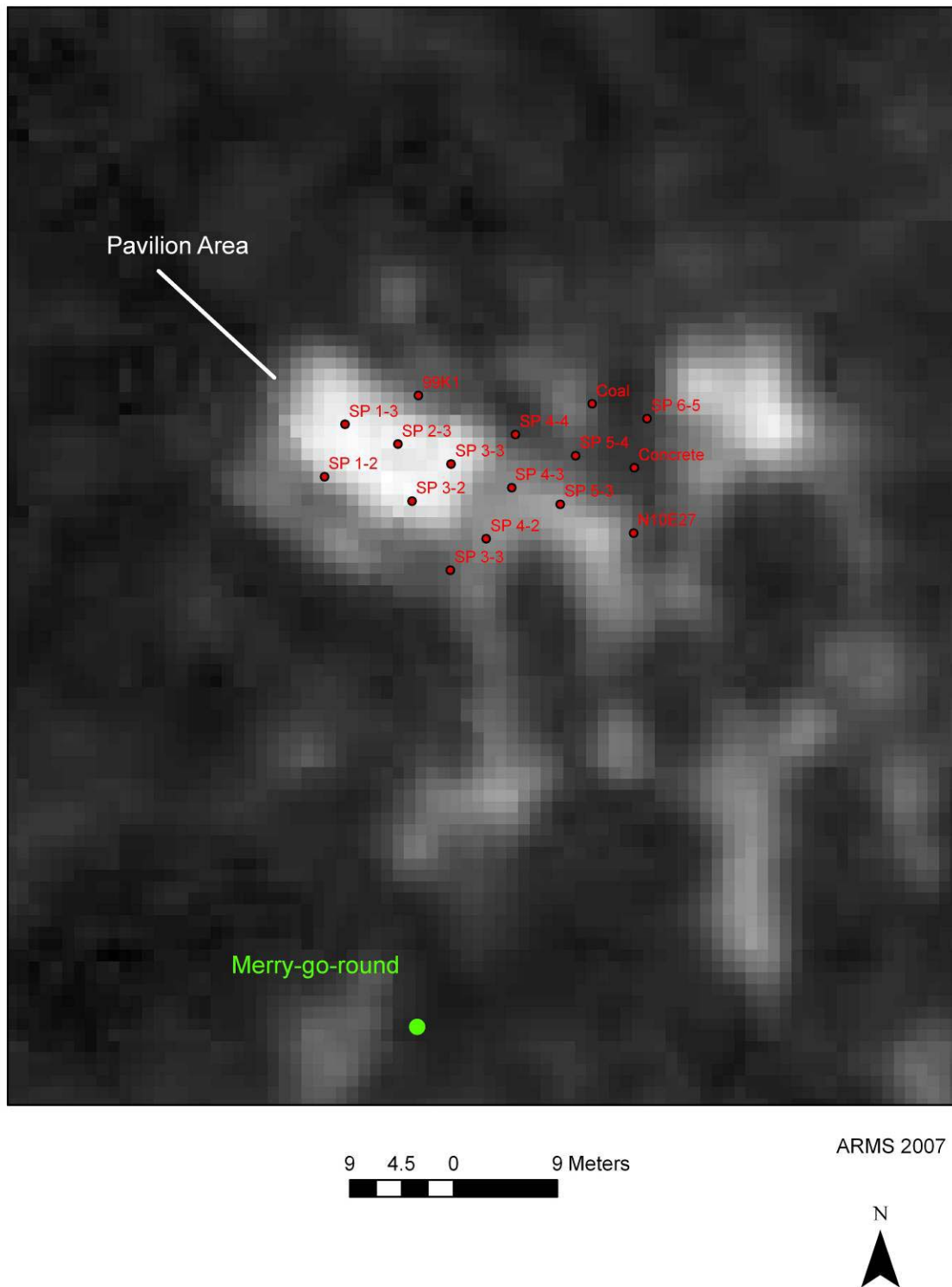


Figure 21. Plan of the shovel test at the Pavilion overlaid on 1930 aerial.

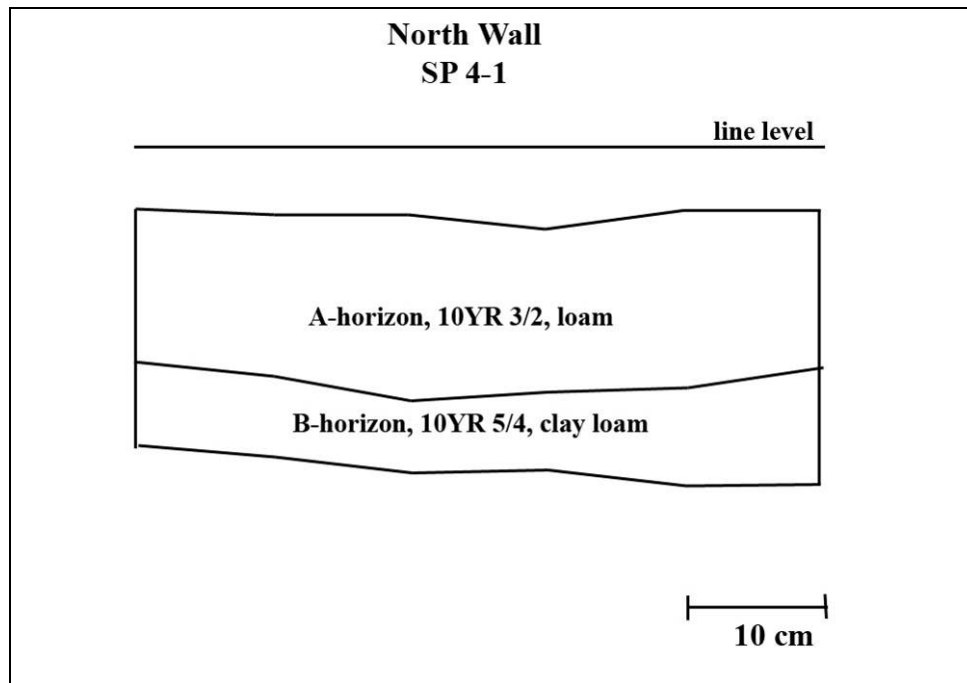


Figure 22. Representative profile of the shovel tests excavated at the Pavilion.

Artifacts

A total of 1016 artifacts were recovered from the pavilion area (Table 3). The majority (86.7%) of the artifacts were Historic in age with only 2.2% representing a Prehistoric component. The fire-cracked rock and charcoal recovered could be either Historic or Prehistoric in origin and represented 11.1% of the assemblage recovered. A complete listing of materials recovered by shovel test is provided in Appendix B.

Table 3. Artifacts from the Pavilion Area					
Category	No.	Group*	Category	No.	Group*
Bottle glass	2	Kitchen	Bullet casing	2	Arms
Container glass	79	Kitchen	Coin, "barber" dime	1	Personal
Metal can	6	Kitchen	Glass, thin -curved	12	Activities
Metal bottle closure	118	Kitchen	Metal, unidentified	334	n/a
Metal crown cap	2	Kitchen	Coal and slag	101	n/a
Porcelain	1	Kitchen			
Whiteware	2	Kitchen	Fire-cracked rock	110	n/a
Brick	65	Architectural	Modified shell	1	n/a
Cement/Mortar	10	Architectural	Charcoal	3	n/a
Flat glass	53	Architectural			
Metal electrical connector	1	Architectural	Unmodified flake	19	n/a
Metal nail	73	Architectural	Edge modified flake	2	n/a
Porcelain, light socket	3	Architectural	Point fragment	1	n/a
* South 1977					

Concentrations of historic artifacts were encountered in three shovel tests. In shovel test #6-5, 116 artifacts were recovered. Ninety-five of the artifacts were coal slag. In shovel test #5-4, 500 artifacts were recovered. The large number of artifacts (n=424) were derived primarily from metal closures and unidentified metal fragments likely representing crown bottle caps. A large number of container glass fragments (n=43) were also recovered from this shovel test. Another artifact concentration of 100 artifacts was recovered in shovel test #3-2. The artifacts were more diverse representing nails and unidentified metal, container and flat glass and fire-cracked rock. This shovel test also encountered a brick feature, Feature 1, discussed below.

To assist in interpreting the possible historic activities and functions of the structure in the area examined, artifact classes were grouped according to South (1977) (Figure 23). Artifacts such as unidentified metal, fire-cracked rock, coal and charcoal were not included. The artifact groups were nearly evenly divided between kitchen and architectural categories. The artifacts groups were not inconsistent with the function of the structure as a pavilion that served ice cream, soda and popcorn. As shown in Table 3, very little tableware such as whiteware was recovered. This may confirm the notion of “park or fair” food being served rather than sit down meals. One of the oral histories recorded mentioned that most people usually took a picnic basket (Bailey et al. 1981:207).

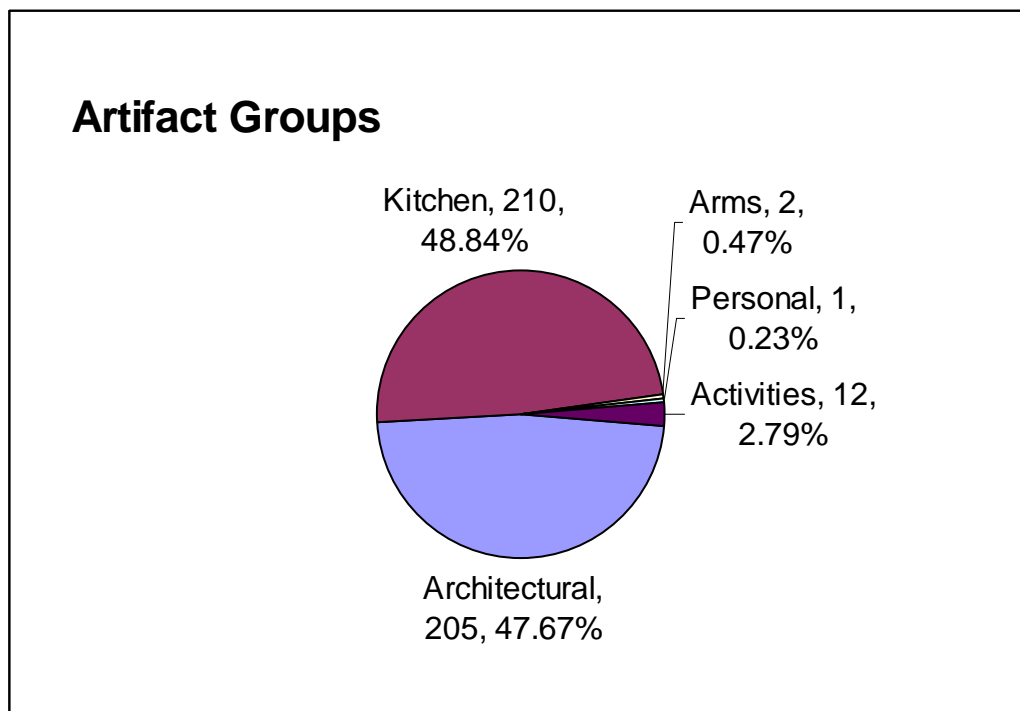


Figure 23. South's (1977) artifact groups at the Pavilion.

To date of the use for the historic structure, manufacture dates were obtained from the coin, the colors of the container glass and the porcelain light bulb sockets. The coin was an 1897 Barber dime (Figure 24). This provided the best chronological marker. The

amusement park was reportedly opened in 1897. The glass colors were dominated by clear and included amethyst, aqua, and green. Amethyst glass was produced from ca. 1880 to 1925 (Newman 1970:74), aqua from ca. 1800 to 1910 (Fike 1984), green from ca. 1860 to present (Fike 1984) and clear from ca. 1875 to present (Fike 1984). The manufacturing dates of the glass all overlap with the reported 1897 to 1930 amusement park era. The photographs of the pavilion show electric lights strung outside of the pavilion. The recovery of the porcelain insulated light bulb sockets suggests the thin, clear glass is light bulb glass (Figure 24). Between 1895 and 1910 a rapid growth in the use of electric lights occurred and the manufacturing industry went through several varieties of electrical components (Crist 2005). Specific dates for the light sockets were not obtained, but appear similar to styles in use between 1900 and 1920 (Crist 2005). The historic artifacts recovered support the use of the historic structure between 1897 and 1930.



Figure 24. The 1897 dime and light bulb sockets recovered from the Pavilion.

Features

One feature was recorded during the excavation. In shovel test #3-2 at the top of the subsoil, a cluster of bricks and mortar was found extending into the subsoil (Figure 25). The bricks were within a darker (10YR 4/3) soil matrix than the undisturbed subsoil (10YR 5/4). The feature was interpreted as the remains of a brick foundation pier that had been set into the subsoil. Due to the small size of the shovel test, the top of the feature was exposed, but not excavated further.



Figure 25. Photograph of the brick pier encountered in shovel test #3-2.

Interpretation

Field school investigations at the suspected location of the Union Traction pavilion, confirmed the presence of historic activity. From the artifacts recovered and the brick feature, a structure did exist at this location. The function of this structure is more difficult to ascertain, but the artifacts are consistent with the reported functions of the pavilion. The large quantity of crown caps supports the presence of bottled beverages. Ice cream and pop corn were likely served in disposable containers. (Edible ice cream cones were first adopted in America at the 1904 Saint Louis World's Fair (Bellis 2007)).

There are no oral histories that suggest the restaurant served meals and very few fragments or whiteware or other possible tableware were encountered. The remnant of the brick pier is also consistent with the architecture of the pavilion. From the photographs of the pavilion, the topography also fits with the location of the investigations. The location of the pavilion can, therefore, be confirmed.

Historic Dump

The historic dump sampled during the field school was located within a ravine on the south side of the amusement park (Figure 26). The ravine is between the interurban station and the majority of the amusement park concessions. The dump had been recorded and sample on two previous occasions (Bailey et al 1981:124, Buehrig and Hicks 1982:138). This dump is one of several recorded within the amusement park area.



Figure 26. Location of the historic dump, 87F56.

Collection

Only visible artifacts were collected from the surface. The topography of the ravine suggests large piles of artifacts underlie the forest litter in some areas of the ravine. Artifacts were recovered from a 70 meter long stretch of the ravine. Artifact concentrations occurred in two locals between 4 and 6 m West (n=46) and between 22 and 30 m West (n=86). No artifacts were recovered from the areas between 0 and 2 m West or between 44 and 50 m West. The concentrations and lack of artifacts suggests there were actually two main dump areas with artifacts scattered between.

Artifacts

A total of 247 historic artifacts were recovered (Table 4)(Appendix C). The majority of artifacts were fragments of glass containers or bottles. A full analysis of bottle styles and not types were not performed. However, most of the bottles appeared to be soda bottles and a few were embossed with “Anderson Bottling Works”, “Coca Cola”, “Chero Cola”, and “HENRY S--- PERU ILL”. An amber beer bottle with “BREWING CO IND” embossing was also recovered (Figure 27).

Table 4. Artifacts from 87F56			
Category	No.	Category	No.
Bottle glass	54	Bullet casing	1
Container glass	151	Metal door handle/lock	1
Flat glass	6	Metal, unidentified	1
Glass, thin – curved	2	Porcelain	10
Glass insulator	4	Stoneware	2
Melted glass	1	Whiteware	13



Figure 27. Select bottles from the historic dump.

The colors of the glass recovered included amber, amethyst, aqua, green and was dominated by clear. Amber glass was produced from ca. 1860 to present (Fike 1984), amethyst glass was produced from ca. 1880 to 1925 (Newman 1970:74), aqua from ca. 1800 to 1910 (Fike 1984), green from ca. 1860 to present (Fike 1984) and clear from ca. 1875 to present (Fike 1984). The variety of glass colors is consistent with turn of the century containers.

Beyond the glass artifacts, the other artifacts were few in number (11.7%). Similar to the artifact assemblage recovered from the pavilion area, little kitchenware was recovered. A few of the ceramics were decorated (Figure 28). One piece of stoneware had a blue sponge decoration (ca. 1840 to 1860 (ODOT 1991:178)), one whiteware rim had a flow blue decoration (ca. 1820 to 1870 (ODOT 1991:178)), one whiteware rim had a gilt band (post 1880 (Majewski and O'Brien 1987:128)), and two whiteware and seven porcelain fragments had decalcomania decoration (post 1890 (ODOT 1991:178)). The production dates for most of the ceramics fit with the amusement park era. However, the flow blue and sponge decorations are earlier. These fragments could represent the pre-amusement park interests in the prehistoric earthworks (Harden 1874:143) or curated ceramics.



Figure 28. Select ceramics from the dump.

Interpretation

The majority of the artifacts recovered from this dump relate to the consumption of bottled soda within the amusement park. The ceramics may relate to picnic activities or perhaps to prizes won from the game concessions. The metal door handle and lock also suggest some remnants of a structure were also discarded in the refuse.

The pattern of artifact disposal within the ravine suggests two dump areas and artifacts scattered in the remainder of the ravine. Since this was a surface collection the vertical extent of the dump areas was not determined, but at least the two areas are believed to have some depth. When the dumping episodes occurred is not clearly known at this time. The dump may have accumulated during the amusement park era or it may have been created in more isolated episodes following the closure of the park and demolition of the buildings.

Earthwork D

The only previous excavation at Earthwork D consisted of one - 1 x 5 m trench placed across the western ditch and bank (Kolbe 1992). The excavation documented the ditch depth at approximately 80 cm below the ground surface and recovered over 200 artifacts. Approximately 100 chipped stone artifacts, 7 pieces of daub/burned clay, 1 hammerstone, 35 fire-cracked rocks, 37 glass fragments and one nail were recovered. The excavation did not recover carbon material suitable for dating. The 2006 field school

excavations conducted a geophysical survey of the earthwork and selected magnetic anomalies for excavation to hopefully recover material suitable for carbon dating.

Geophysical survey

The gradiometer survey of four – 20 x 20 m blocks covered the extent of the earthwork except for the western side where a pile of brush made the survey impossible. The magnetic differences between the ditch and bank were clearly evident on the processed image (Figure 29). In addition numerous discrete magnetic anomalies were revealed. Several of the anomalies were magnetic dipoles with strong magnetic readings and likely represent surface or near surface metals. Several other anomalies were good candidates for prehistoric features and four were selected for excavation.

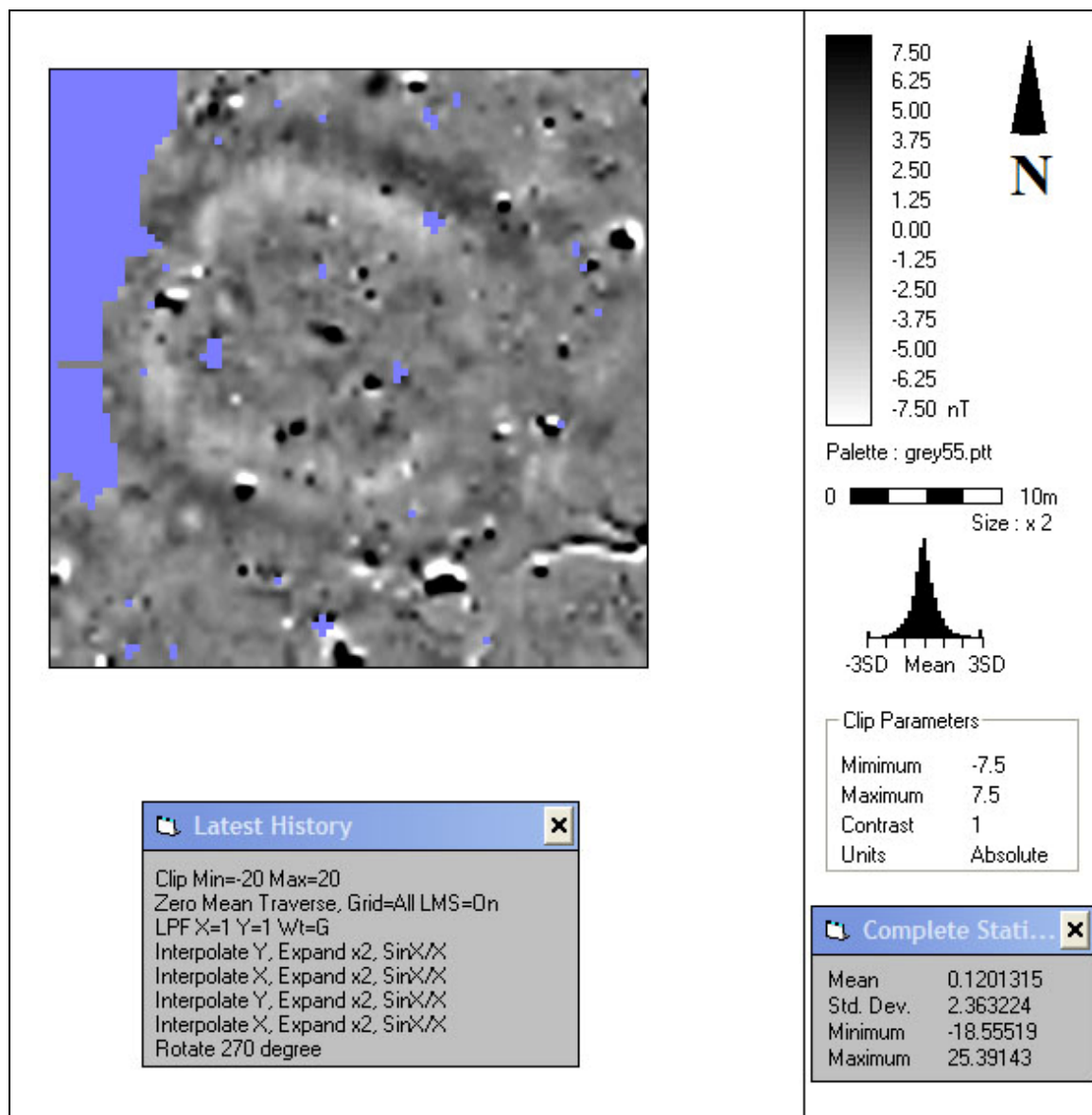


Figure 29. Gradiometer survey of Earthwork D.

Excavation

Four 1 x 1 m units were excavated at Earthwork D (Figure 30). The earthwork is located in second growth woods. The top of the embankment, ditch and central platform are mowed and devoid of small understory. Several large trees are dispersed across the enclosure.

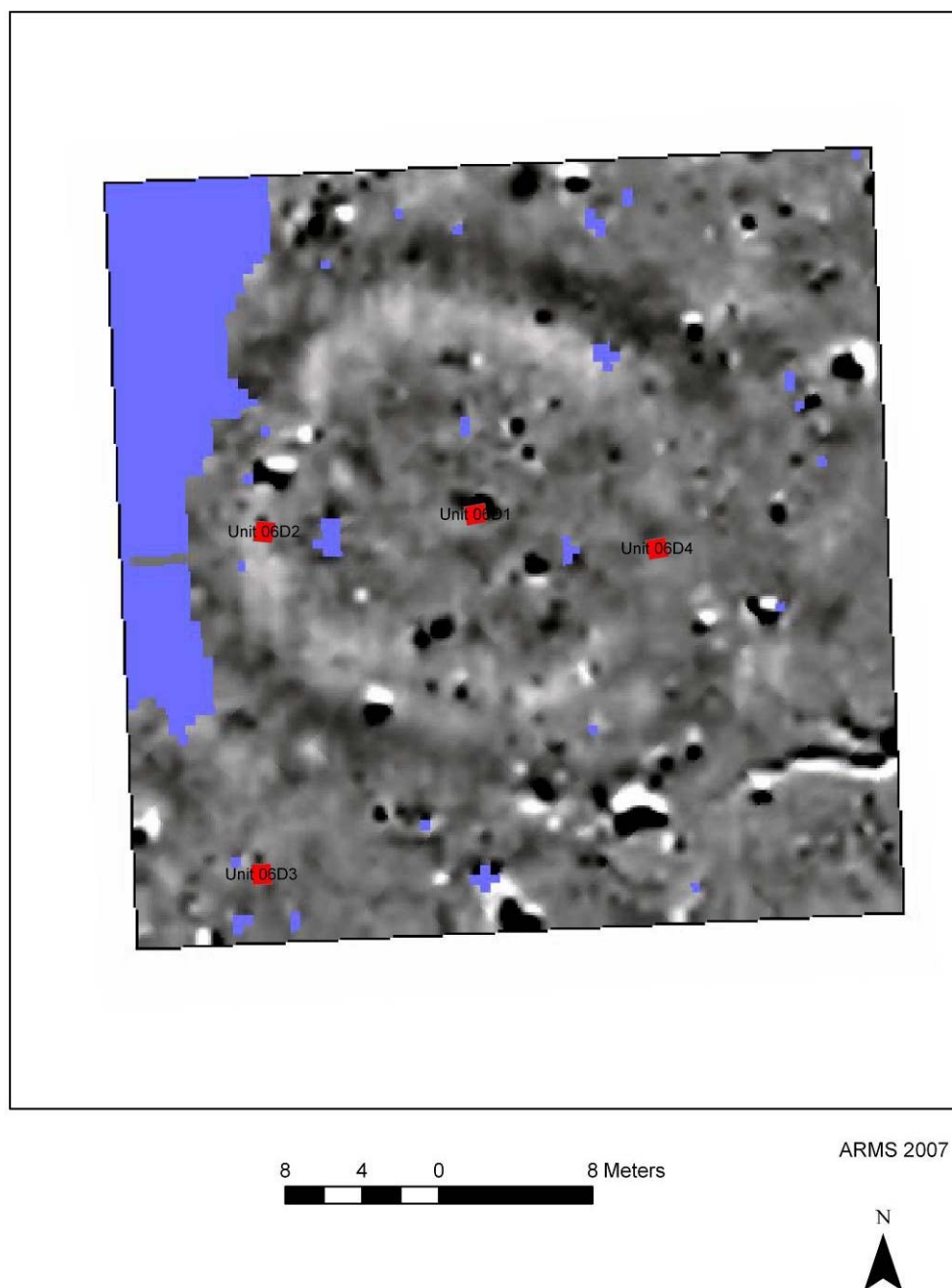


Figure 30. Location of units excavated at Earthwork D.

Unit 06D1 was located near the center of the central platform. A large oblong positive monopole anomaly was discovered at this location. A few oakfield probes placed over the anomaly encountered rocks just below the surface. The unit was excavated to 20 cm below the ground surface. A linear deposit of fire-cracked rocks was encountered within the A-horizon. This deposit was designated Feature 1 and will be described in more detail below. This deposit of fire-cracked rock is the likely source of the magnetic anomaly. A total of 43 artifacts, primarily fire-cracked rock and burned clay, and 2 small pieces of charcoal were recovered from the unit (Table 5). The fire-cracked rocks recovered were primarily associated with Feature 1. The stratigraphy recorded for the unit displays a natural soil development of an A-horizon overlying a B-horizon (Figure 31).

Table 5. Artifacts from Unit 06D1					
Identification	Material/Color	Unit	Level	No.	Wt.(g)
Burned clay		06D1	1	11	12.0
unmodified flake	Fall Creek	06D1	1	1	
FCR		06D1	1	14	415.1
Burned clay		06D1	2	7	20.6
Pottery, body	grit temper	06D1	2	1	
Charcoal		06D1	2	2	0.5
unmodified flake	Unknown	06D1	2	1	
FCR		06D1	2	8	247.7
Soil samples		06D1	wall	4	

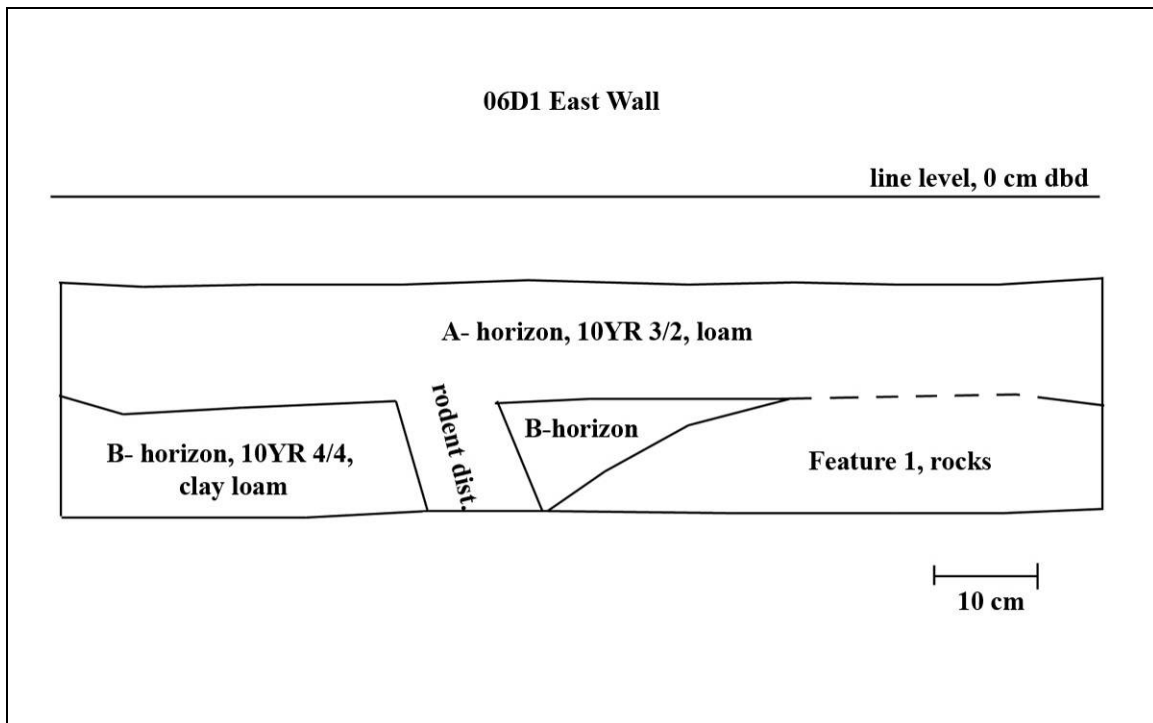


Figure 31. Profile of Unit 06D1.

Unit 06D2 was located in the ditch of the earthwork on the western side and south of the 1988 trench. The unit was excavated to approximately 28 cm below the ground surface. The unit followed the contours of the artificial ditch and did not excavate the intact subsoil. Tree roots were a hindrance to excavation. The ditch was shallower in this location than reported by the 1988 excavations (Kolbe 1992). The difference may be attributed to Unit 06D2 not being placed in the deepest part of the ditch. A profile of the ditch was obtained (Figure 32). Twenty-one prehistoric and historic artifacts and a few pieces of charcoal were recovered by the excavation (Table 6). The historic coins and nail were the likely cause of the magnetic anomaly. No features were encountered.

Table 6. Artifacts from Unit 06D2					
Identification	Material/Color	Unit	Level	No.	Wt.(g)
glass, molded	Clear	06D2	1	1	
container glass	Aqua	06D2	1	1	
container glass	Green	06D2	1	1	
container glass	Clear	06D2	1	1	
FCR		06D2	1	2	12.3
unmodified flake	Fall Creek	06D2	1	1	
unmodified flake	HT Fall Creek	06D2	1	1	
Charcoal		06D2	1		50.5
Pennies	1975, 1976 & unknown	06D2	1	4	
Nickel	1973	06D2	1	1	
Quarter	1974 & 1980	06D2	1	2	
Charcoal		06D2	2		8.0
Nail		06D2	2	1	
container glass	Clear	06D2	2	1	
FCR		06D2	2	2	18.8
FCR		06D2	3	2	27.7
Charcoal		06D2	3		3.0

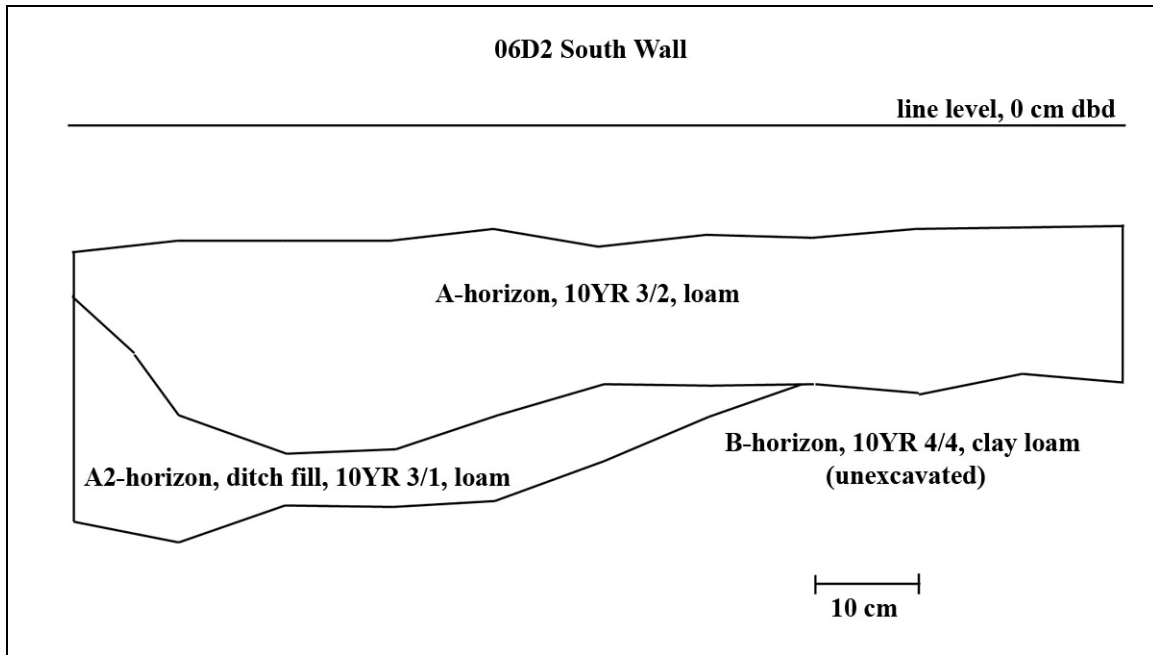


Figure 32. Profile of Unit 06D2.

Unit 06D3 was located outside of the enclosure to the southwest. This unit was selected to test an oblong series of magnetic anomalies. While dipoles were evident in the gradiometer survey, it was unclear if these anomalies were historic or prehistoric in nature. The unit was excavated to approximately 17 cm below the ground surface. A natural soil profile of a thin A-horizon overlying the B-horizon was recorded (Figure 33). Thirteen artifacts, all historic except for possibly the fire-cracked rocks, were recovered from the unit (Table 7). No features were encountered and the nail found in the unit was the likely cause of the magnetic anomaly.

Table 7. Artifacts from Unit 06D3				
Identification	Material/Color	Unit	Level	No.
porcelain insulator		06D3	surface	1
FCR		06D3	1	2
unmodified flake	Unknown	06D3	1	3
container glass	Clear	06D3	1	1
thin curved glass	Clear	06D3	1	2
container glass	Amethyst	06D3	1	1
Nail		06D3	2	1
container glass	Clear	06D3	2	2

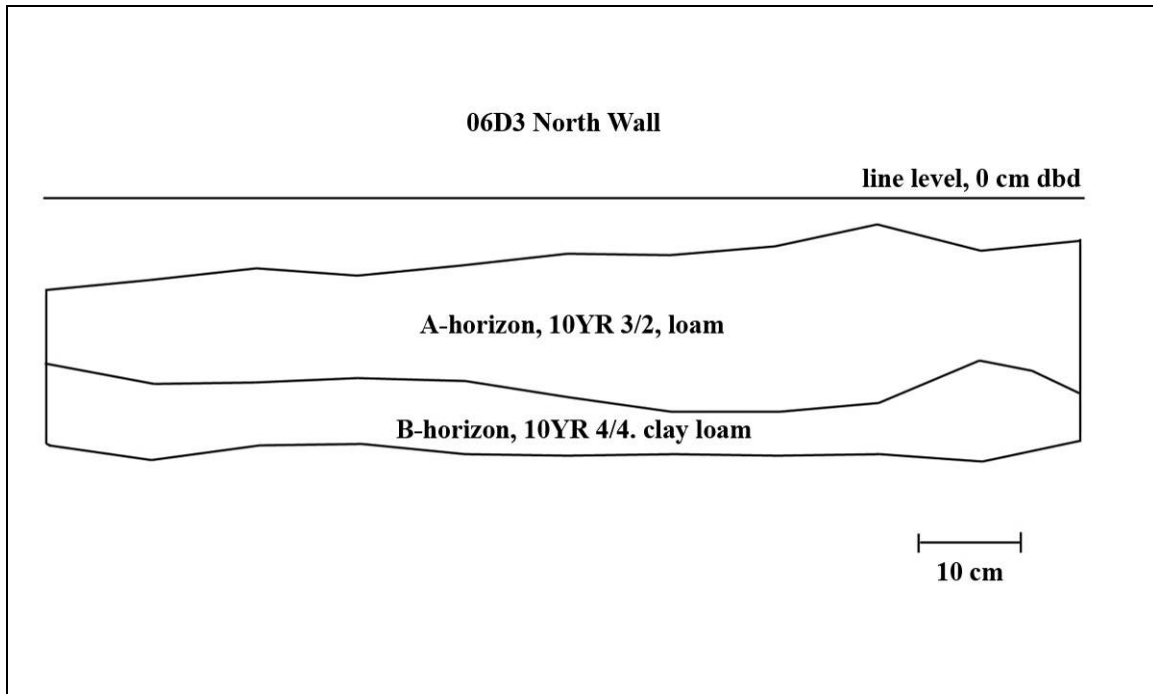


Figure 33. Profile of Unit 06D3.

Unit 06D4 was located on the northern edge of the gateway. A small and weak magnetic anomaly was encountered here. The unit was excavated to approximately 10 cm below the ground surface and the subsoil was apparent (Figure 34). Only six artifacts were recovered (Table 8). No features were apparent. The magnetic anomaly was likely caused by the shell casing.

Table 8. Artifacts from Unit 06D4				
Identification	Material/Color	Unit	Level	No.
FCR		06D4	1	4
unmodified flake	Fall Creek	06D4	1	1
shotgun shell casing		06D4	1	1

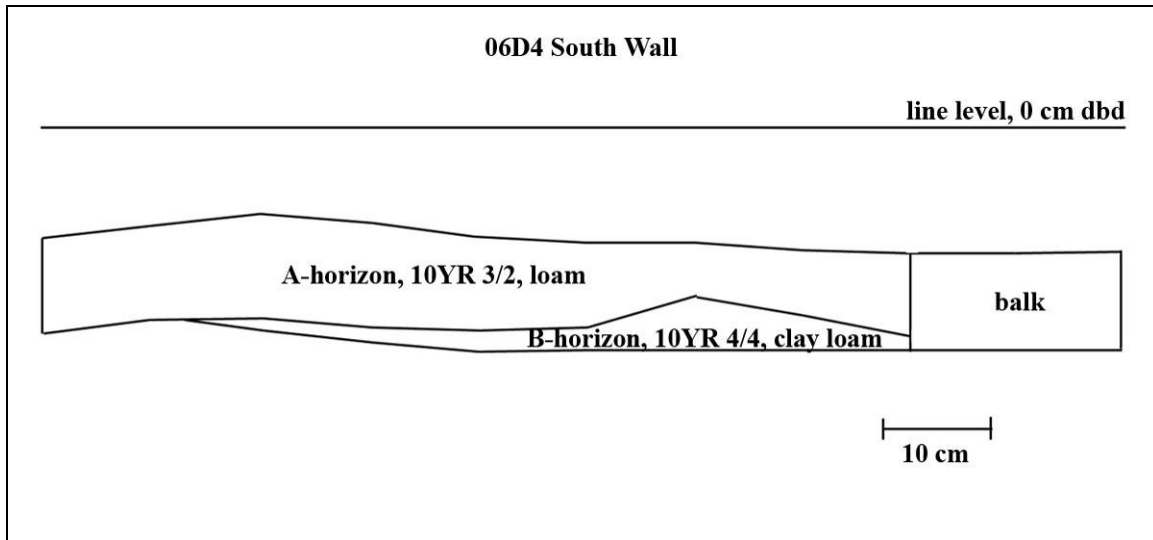


Figure 34. Profile of Unit 06D4.

Artifacts

In total 83 artifacts and charcoal pieces were recovered from the excavation (Table 9) (Appendix D). None of the charcoal was from a clearly undisturbed prehistoric context and no samples were submitted for dating. The artifacts recovered demonstrate the prehistoric and historic use of the enclosure.

Table 9. Total Artifacts from Earthwork D

Identification	No.	Identification	No.
Burned clay	18	Container glass	8
Pottery, body	1	Glass, molded	1
Unmodified flake	8	Glass, thin – curved	2
FCR	34	Nails	2
Charcoal		Coins	7
		Porcelain insulator	1
		Shell casing, shotgun	1

Only one very small pottery sherd was recovered. The sherd was grit tempered. It was too small to compare with other ceramics recovered from the Great Mound and Fiddleback enclosure (Kolbe 1992, Vickery 1971, White 1970).

No diagnostic lithic material was recovered. The identified raw material utilized was local Fall Creek chert.

Features

Of the four magnetic anomalies excavated, only one was a prehistoric feature. Feature 1 was discovered in Unit 06D1. The gradiometer survey encountered an oblong

positive monopole at this location (Figure 29). The anomaly was approximately 1 m wide x 2.5 m long.

Feature 1 was a linear deposit of fire-cracked rock that was placed on top of the subsoil (Figure 35). The feature extended diagonally across the unit and extended to the east and west outside of the unit. The eastern 30 cm of the feature was removed to determine stratigraphy and construction. The rock pile was one or two rocks deep and approximately 20 cm thick. No pit outline was evident in the unit floor or in the wall profile. A few flecks of charcoal were found within the rocks, but no substantial amounts were encountered. A few pieces of burned clay were also associated with the feature, but no evidence of *in situ* heating or burning was evident.



Figure 35. Unit 06D1, Feature 1 before and after excavation.

The lack of a pit outline may indicate two possibilities for context. 1). A pit was actually present, but was not discernable by soil color or texture. 2). The central platform of the enclosure was modified by removal of the topsoil, deposition of the fire-cracked rock feature and backfilled by either human or natural processes. Either scenario is possible. The removal of topsoil in preparation for other construction episodes has been documented at the Great Mound (Vickery 1971) and at the Fudge enclosure (McCord 2006b) and other Middle Woodland earthworks. The topsoil encountered in Units 06D1, 06D3 and 06D4 is relatively shallow (10 cm deep).

The function or purpose of this feature is curious. Based on the portion exposed in Unit 06D1 and the gradiometer data, the feature shape does not suggest a rock “altar”. There was no indication of burning, so the feature does not appear to be a hearth. Given the contorted fracture of the rocks and the lack of associated carbon, the rocks may be the result of stone boiling, but no faunal material was recovered that would suggest feasting activities. The easiest solution for assigning function is to say the feature was ceremonial.

The archaeological literature provides little data on the function of piles of rock. Stone piles have been noted within mound constructions such as Mound 4 at the New Castle site, Indiana (Swartz 1976) and the Cresap Mound, West Virginia (Dragoo 1963). Stone piles may have been overlooked or unreported in many of the early excavations of Adena and Hopewell sites in favor of the more ostentatious qualities of copper and mica cutouts, pipes and ceremonial blades. While a few references report the existence of stone piles in mound contexts, a review of enclosures without mound features did not produce any instances of stone piles on the central platform.

Interpretation

The excavations at Earthwork D resulted in the recovery of new data, but unfortunately no material suitable for radiocarbon dating was encountered. It was hoped that one of the magnetic anomalies tested would represent a thermal feature and contain associated carbon. As typical of the small circular enclosures, very few artifacts were recovered. The paucity of artifacts may be associated with ritual cleaning of the enclosure space.

Feature 1 represents a curious indication of prehistoric activity. The fire-cracked rocks appear to have been deposited on the subsoil and may indicate that the topsoil from the central platform had been removed. A specific interpretation of the purpose of this stone pile is lacking and may be more related to ceremonial activities. The excavations of mound and earthwork sites in the Midwest have produced a myriad of ceremonial objects and features. While the assignment of a ceremonial purpose to the fire-cracked rock pile is probably quite accurate, it does little to satisfy the curiosity of the specific roles or acts this feature symbolizes. To glean such an understanding, we must look at the larger context of this rock pile in relation to the other earthworks. The location of this feature near the center of the central platform suggests this may have been a focal point within the enclosure. Earthwork D has been recognized as the sightline for the sunset at

winter solstice from the central platform of the Great Mound through a dip in the embankment (Cochran 1992). The stone pile encountered in Unit 06D1 is along this sightline. When connected to the other enclosures within this earthwork complex, this rock pile may have been an important component for ceremonies conducted for world renewal, creation, death and rebirth, rites of passage, reincorporation, renewing and creating kinship ties and ancestor worship (Brown 1997, Carr 2005, DeBoer 1997, Hall 1979, Miller 2001, Romain 2000, Seeman 1979).

Earthwork K

While conducting work at Earthwork D and identifying historic resources associated with the amusement park, a potential earthwork was discovered. It is known that the Cox (1879:131) map of the southern enclosures is inaccurate. It is believed that Earthwork K was re-discovered to west-north-west of Earthwork D (see Figure 26). A circular enclosure approximately 20 to 30 meters in diameter with a low bank was evident in this area. The potential enclosure was not explored further.

Earthwork G

Previous investigations of Earthwork G consisted of a test unit in the road over the north embankment, a test unit on the road in the central platform, a test unit over the southern ditch and a profile along the road cut of the southern embankment wall (Hicks 1981). Most of the data recovered documented historic disturbance of the enclosure and did not clarify the aboriginal construction or use of the enclosure (Hicks 1981, Kolbe 1992). While the enclosure has definitely been disturbed, prehistoric artifacts including lithics and a few pottery sherds have been recovered. The primary goal of the 2006 field school was to create a contour map of the enclosure and obtain carbon for a radiocarbon date. Due to the historic disturbances of the road and fence lines that cross the enclosure, a geophysical magnetic survey was not conducted.

Instrument survey

The instrument survey resulted in a contour map of the enclosure (Figure 36). The map clearly shows a sub-rectangular shape of the ditch and embankment of the enclosure. A gateway may be present on the southeast side, but it is not entirely clear. The old county road is clearly evident as well as a parallel park trail.

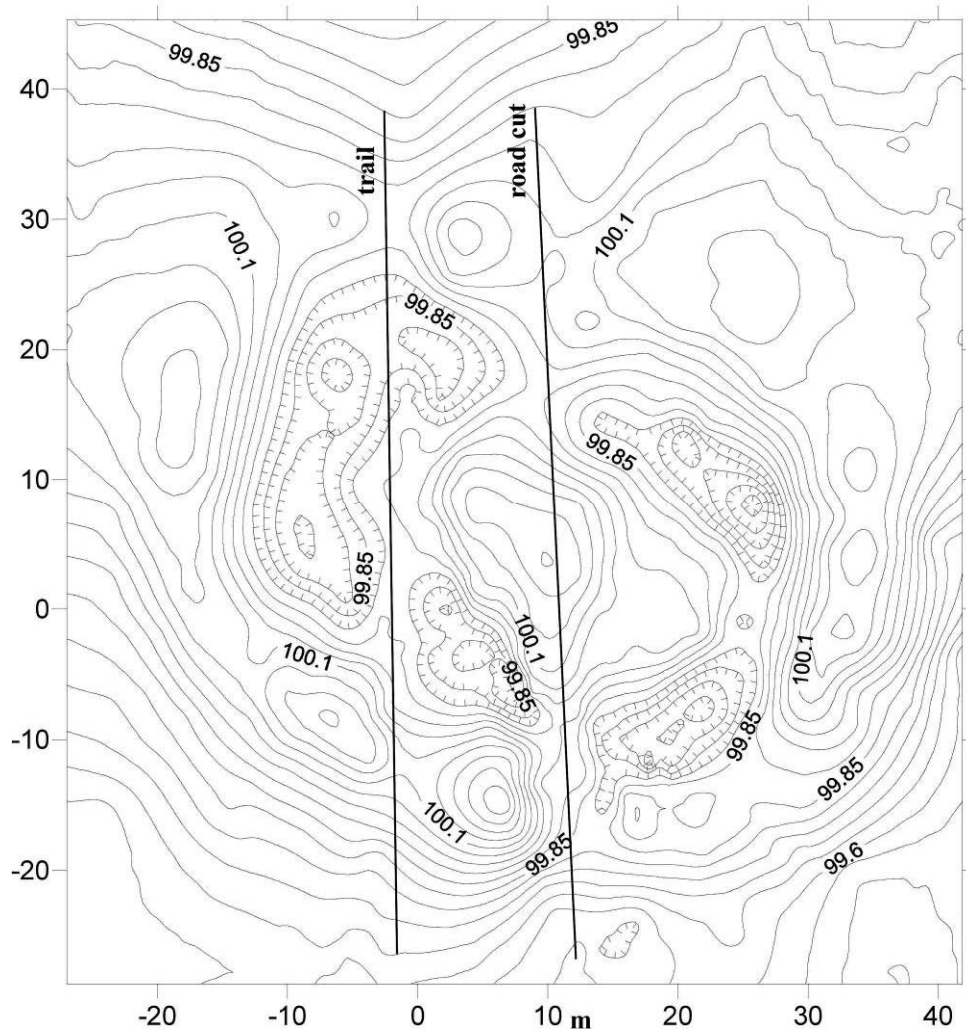


Figure 36. Contour map of Earthwork G. (contour interval 5 cm).

Surprisingly, the western embankment wall of the enclosure had higher elevations than the eastern wall (Figure 37). The western half of the enclosure was reportedly cultivated and deflation was expected. Another surprise was the higher elevations recorded on the central platform. No mound was reported on the central platform, but the high elevations suggest a mound may have existed on the central platform. A gateway to the southeast was not clear. There is a higher elevation in the ditch in the southeast portion, but there is also a corresponding higher elevation in the bank that is not typical of gateway construction.

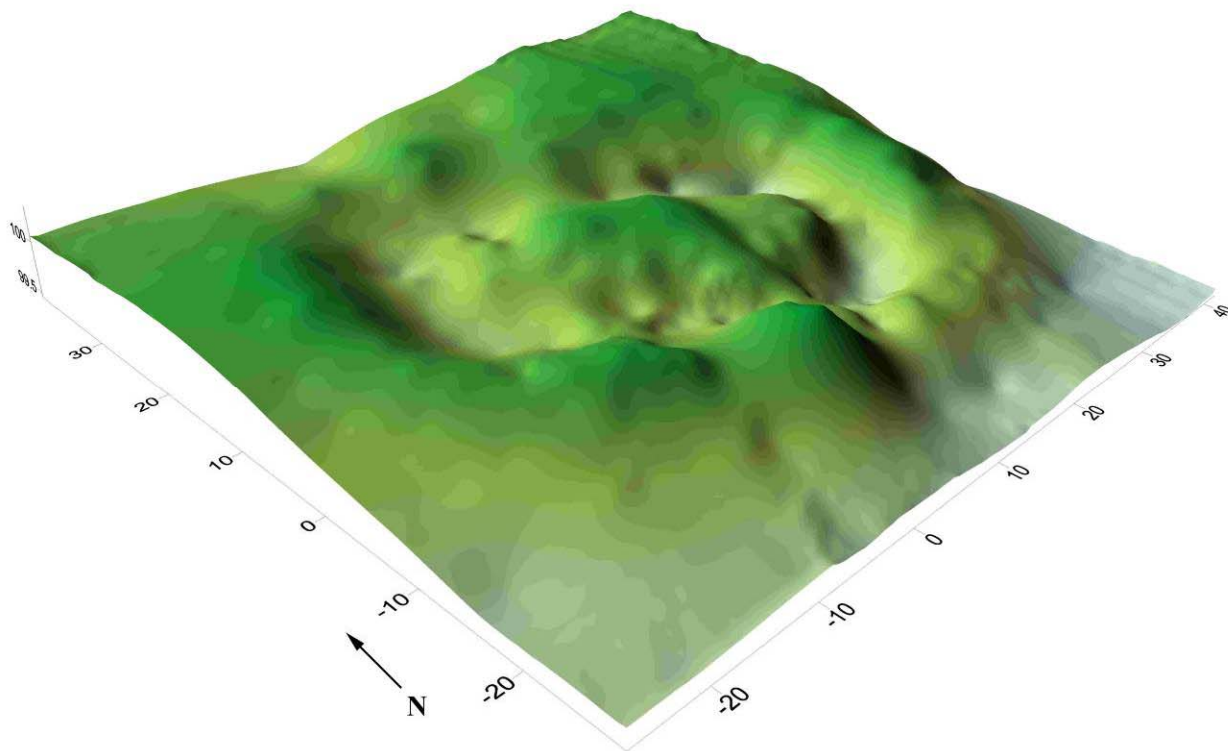


Figure 37. Three-dimensional rendering of Earthwork G.

Excavation

Two 1 x 1 units were excavated on the western side of the enclosure (Figure 38). One unit, 06G1, was placed on the embankment wall and the other unit, 06G2, was placed in the ditch. The area was covered in second growth woods and small weedy understory.

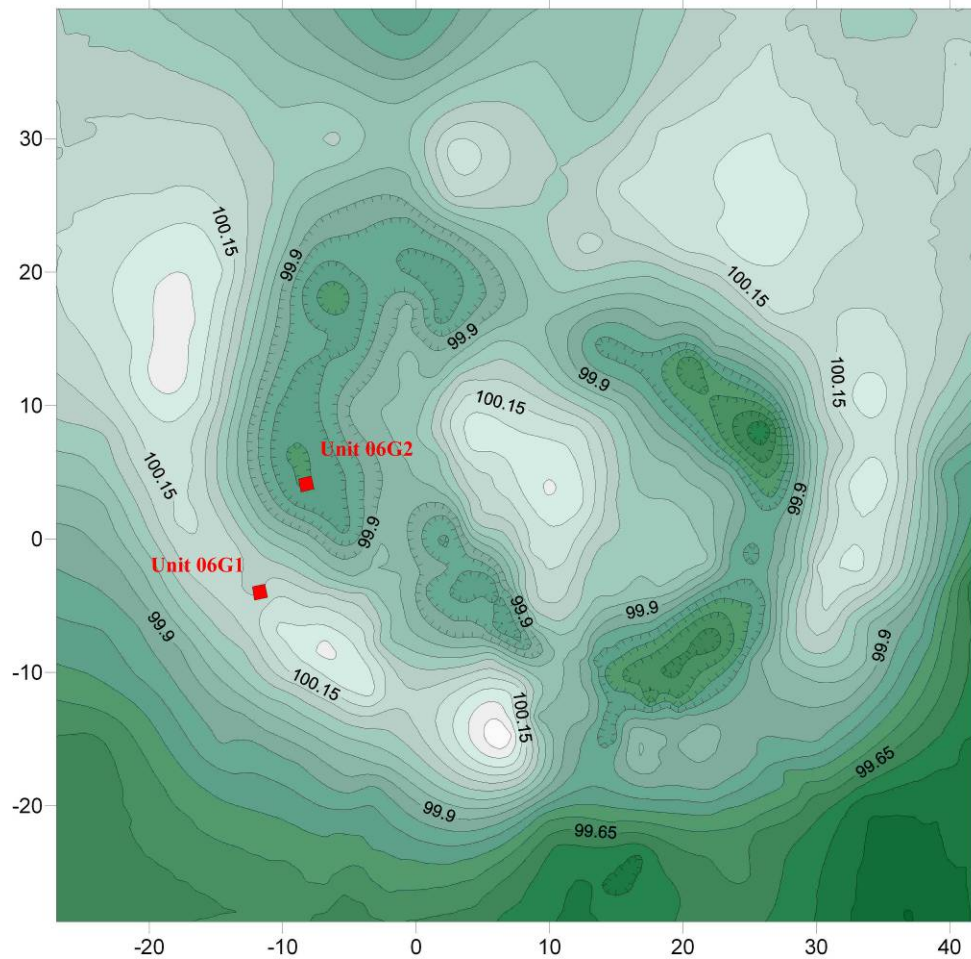


Figure 38. Location of units at Earthwork G.

Unit 06G1 was excavated to approximately 59 cm below the ground surface. After the first 15 cm the unit was cut down to a 0.5 m x 1 m unit due to the high clay content of the soil. The original ground surface was encountered at approximately 38 cm below the ground surface (Figure 39). An A-horizon had developed at the top of the profile. The embankment wall consisted of loamy clay deposit and a developed A/B-horizon. No features were encountered in the unit. Only one unmodified flake was recovered from the first level, along with pieces of wire fence. The only other artifacts recovered were six fire-cracked rocks.

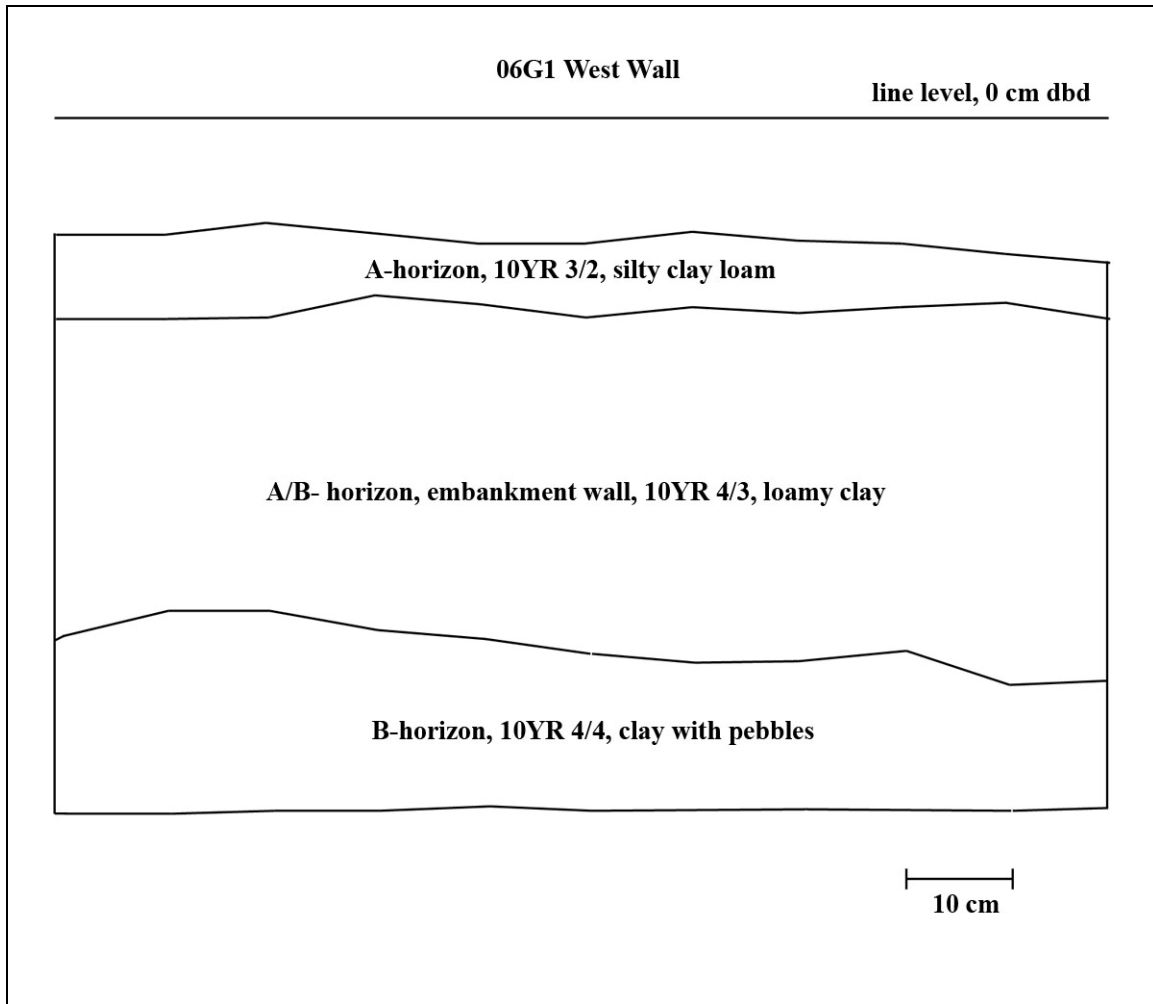


Figure 39. Profile of Unit 06G1.

Unit 06G2 was excavated to approximately 48 cm below the ground surface where the bottom of the original ditch was defined. The unit was not excavated further. After the first 15 cm, the unit was cut down to a 0.5 m x 1 m unit due to the high clay content of the soil. An A-horizon had developed at the top of the profile (Figure 40). The remainder of the ditch fill consisted of a loamy clay deposit similar to the embankment wall. At the deepest part of the ditch the soil texture was a clay loam and more consistent with an A-horizon. Historic artifacts and fire-cracked rocks were recovered from the first level. No discrete features were encountered in the unit, but burned clay was encountered in the final level. A few charcoal flecks were also noted at the bottom of the ditch.

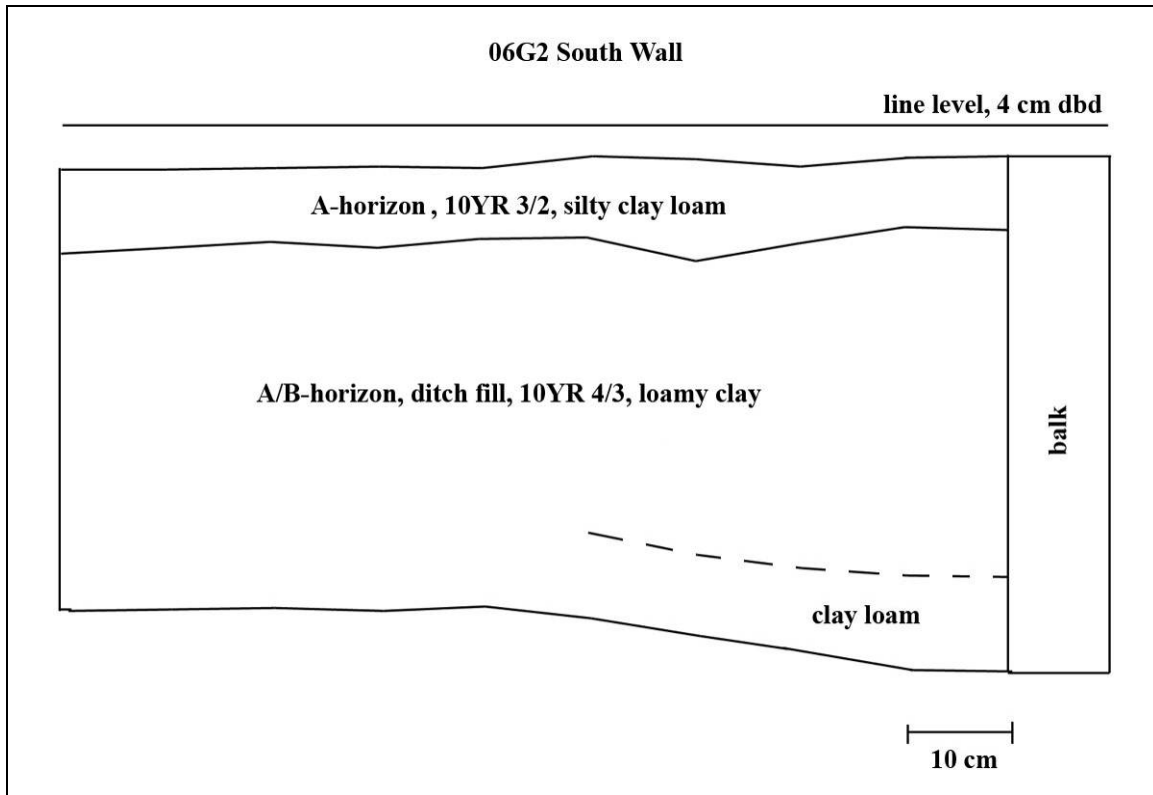


Figure 40. Profile of Unit 06G2.

Artifacts

Very few artifacts were recovered from the excavation at Earthwork G (Table 10) (Appendix E). Historic artifacts were encountered near the surface of both units. No diagnostic prehistoric artifacts were recovered. Fire-cracked rocks were the most numerous artifacts recovered. None of the charcoal encountered was large enough for dating.

Table 10. Total Artifacts from Earthwork G

Identification	No.	Identification	No.
Burned clay	11	Container glass	1
Charcoal		Flat glass	1
FCR	12	Metal wire – fence	2
Unmodified flake	1	Zinc fragments	2

Interpretation

Investigations of Earthwork G did produce a contour map of the enclosure. The map confirmed the sub-rectangular shape of the enclosure and the suggestion of a gateway to the southeast. A potential mound was identified on the central platform. The

western portion of the enclosure, while cultivated, was more intact than previous thought. Unit 06G1 documented approximately 0.4 m of intact embankment wall. Unit 06G2 documented nearly 0.5 meters of fill in the ditch. Unfortunately the excavation did not produce carbon for dating. Ritual cleaning or ashes from a fire may explain the charcoal flecks found in the ditch.

Earthwork F

While doing the instrument survey at Earthwork G, unusual contours were noted to the west. Earthwork F, another enclosure was reported to the west of Earthwork G, but it was thought the park campground had been constructed on the enclosure since no surface indications of the enclosure were found (Hicks 1981). The area west of Earthwork G and south of the campground was walked and a large enclosure was identified. The enclosure is in the position shown on the 1930 aerial (Figure 41). It has been plowed and is hard to define in some areas. The eastern and northern ditch and bank are more difficult to discern than the southern and western ditch and bank. Part of the eastern wall was mapped during the instrument survey of Earthwork G and 3 – 10 x 20 m blocks of the southeastern corner were surveyed with a gradiometer.

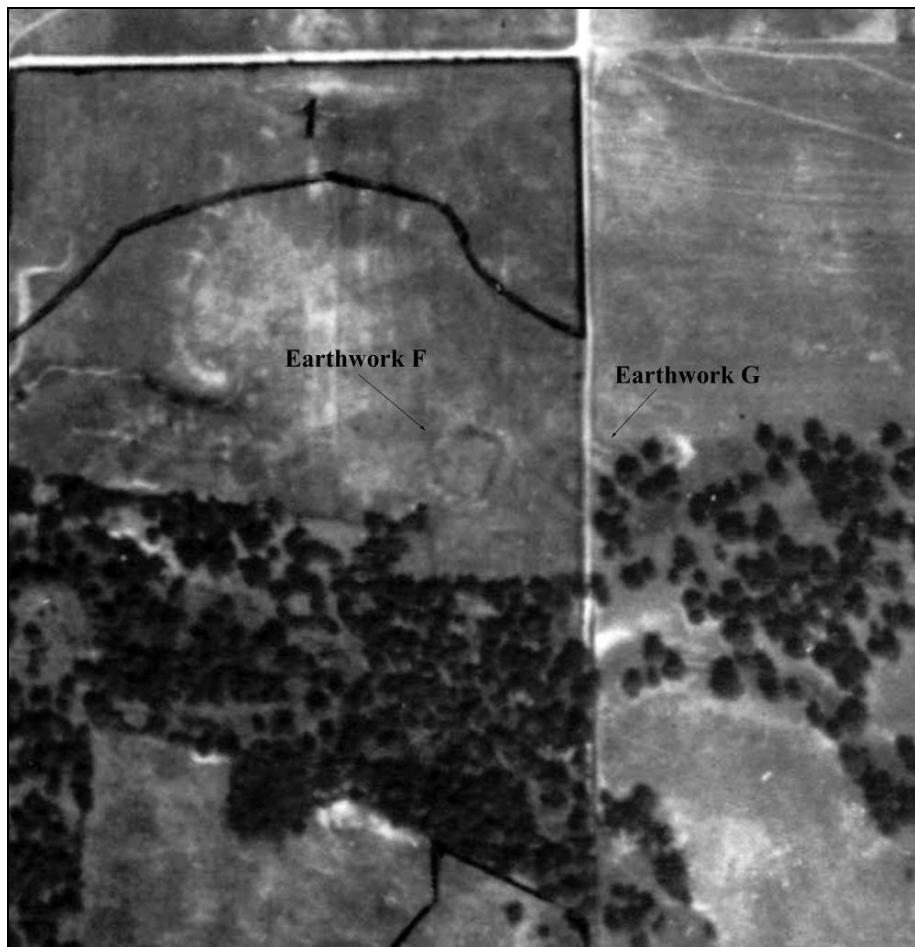


Figure 41. A portion of the 1930 aerial map showing the location of Earthworks G and F.

Instrument survey

Only a small portion of the south and eastern part of enclosure was surveyed at the same time as Earthwork G (Figure 42). Due to a natural drainage that separates the two enclosures, the bank and ditch of Earthwork F was not clearly indicated on the contour map. The corner is barely discernable on a wireframe rendering of the data (Figure 43).

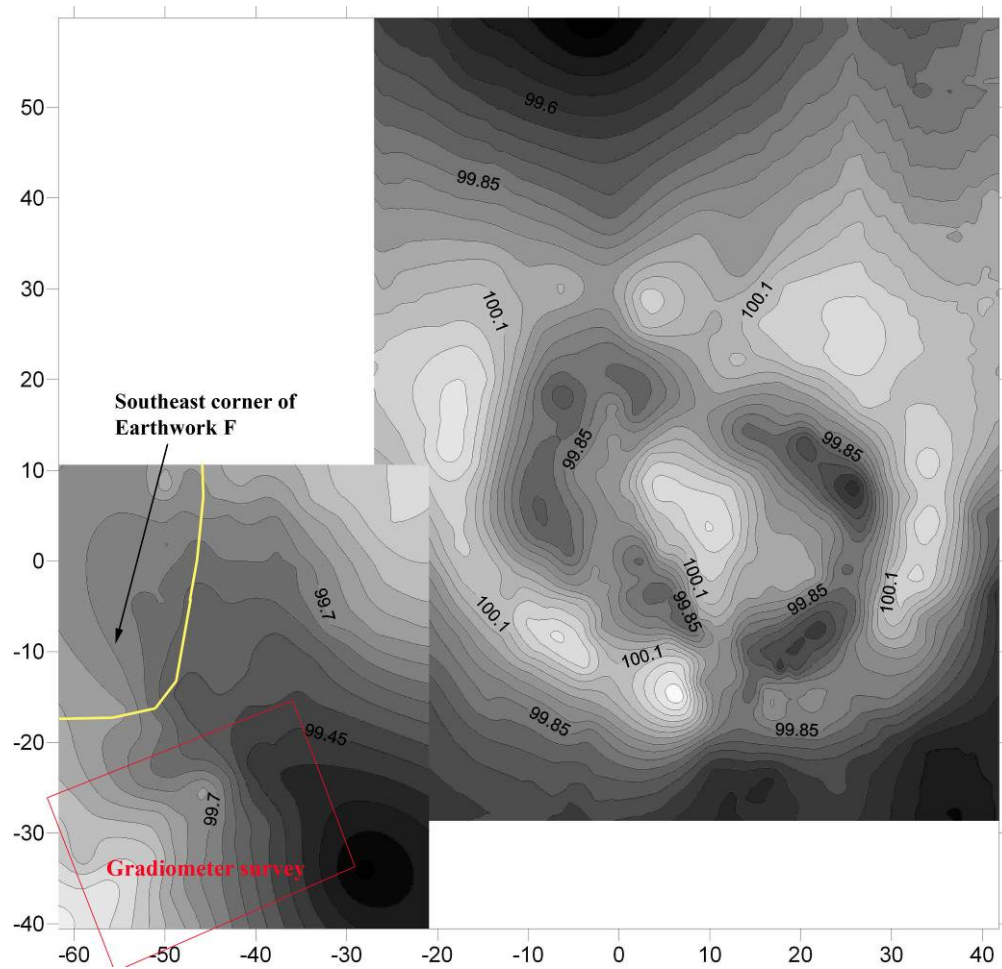


Figure 42. Contour map of the southeast corner of Earthwork F.

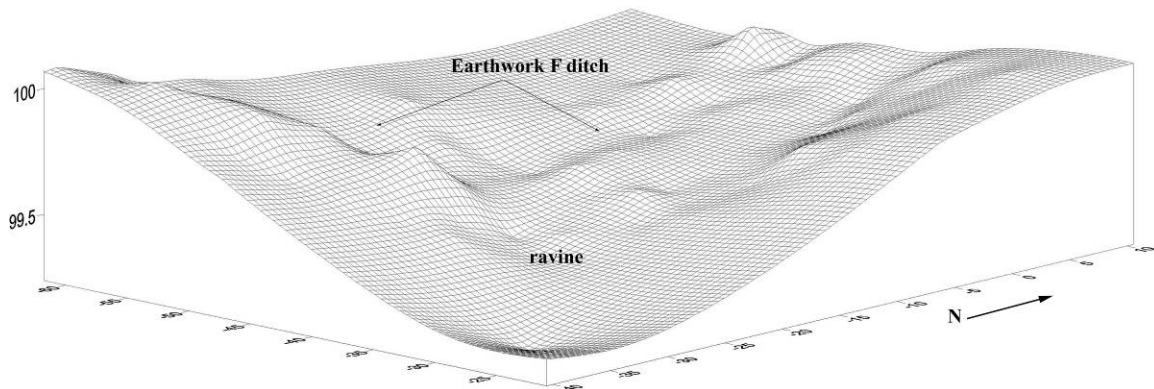


Figure 43. Three-dimensional rendering of the southeast corner of Earthwork F.

Geophysical survey

The geophysical survey of the southeastern corner did not show a magnetic difference between the ditch and bank like that found at Earthwork D (this report) and Earthwork B (ARMS files) (Figure 44). Several discrete anomalies were detected, but were most commonly magnetic dipoles that are likely the result of near surface metals. Two other positive monopoles encountered are worthy of further investigation.

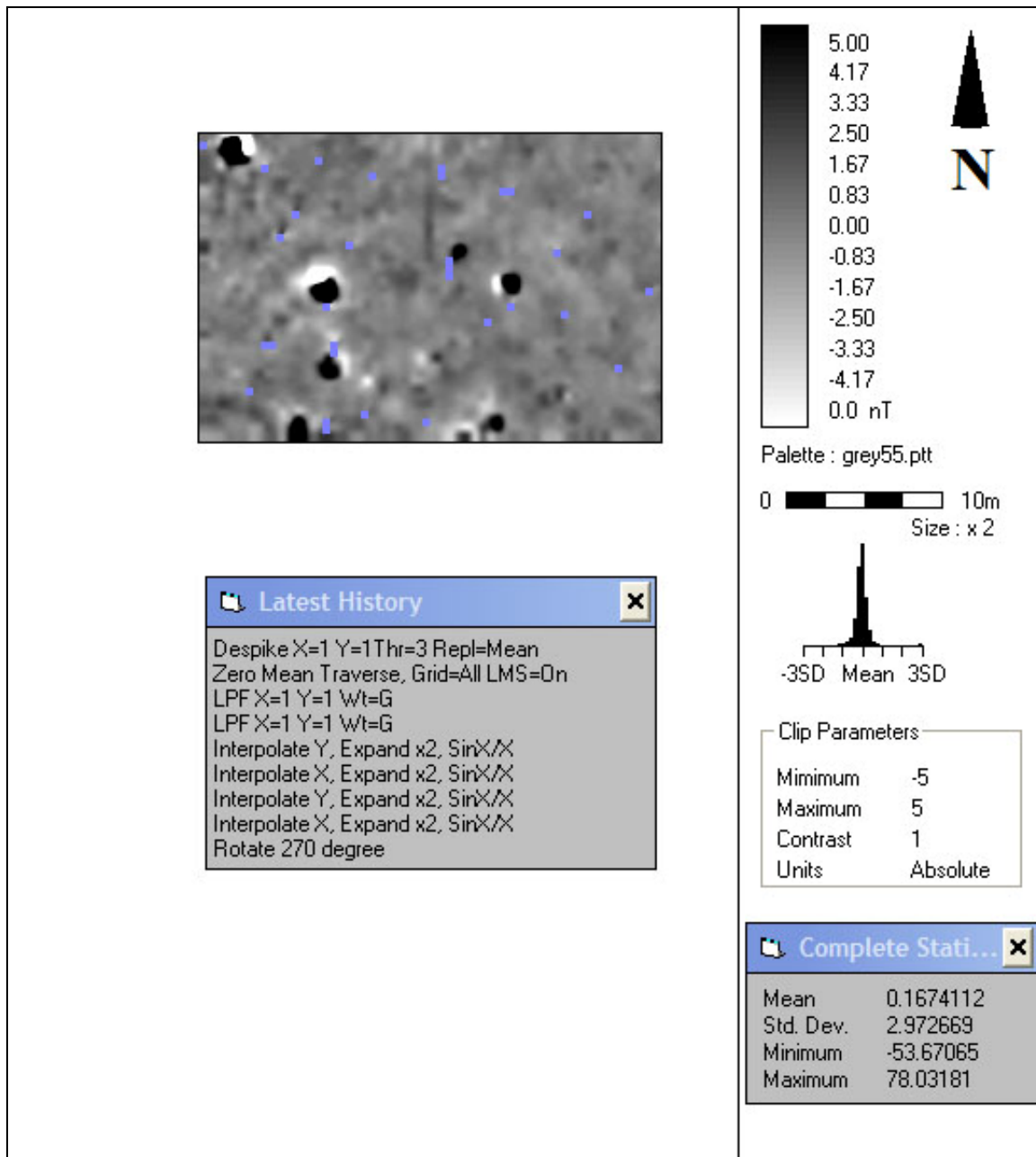


Figure 44. Gradiometer survey of the southeast corner of Earthwork F.

Interpretation

The re-discovery of Earthwork F was unplanned and investigations were minimal. Efforts to map a portion of the enclosure did not produce a notable contour representation or magnetic signature. Other portions of the enclosure are more visible and future work should be able to construct a descent map of the enclosure. All three of the northern rectangular enclosures exist within Mounds Park. The campground did not extend over this enclosure and its existence opens opportunities of research thought to be lost.

Summary and Recommendations

The 2006 archaeological investigations at Mounds State Park once again showed the depth and variety of important archaeological resources that are contained within the park. The public excavations at the Bronnenberg House uncovered and documented portions of the presumed summer kitchen. A sample of artifacts from the fill was also recovered. The Union Traction Company amusement park Pavilion was located and some integrity of the structure was documented. In addition, numerous associated historic artifacts were recovered. From the historic dump, a sample of historic artifacts associated with the amusement park provided clues to the activities occurring during the amusement park era. The work at the Middle Woodland earthworks did not provide any further radiocarbon dates, but did provide further evidence of the ceremonial activities conducted within the park. The curious rock feature at Earthwork D is a simple expression of a complex system of activities that are related to the New Castle Phase (McCord 2006b) and Hopewell phenomena. The discovery of a possible mound at Earthwork G and the re-discovery of Earthwork F and potentially Earthwork K when they were thought to be destroyed are further examples of the vast resource base that has yet to be explored within the park.

All of the investigations conducted in 2006 could and should be expanded in the future. For the Bronnenberg House, the brick foundation in the backyard should be further explored. It is still unclear how much disturbance occurred on the northern and western sides of the foundation. It is also unclear whether one or two structures are represented. Future investigations should also attempt to determine the function(s) of the structure(s).

The Union Traction Amusement Park is a wonderful resource for industrial archaeology. The pavilion, interurban station and the carousel locations have been identified, but other concessions such as the rollercoaster have not. Explorations of the pavilion could benefit from a geophysical survey to help identify the extent of the structure and identify structural features or associated activity areas, prior to further excavations. Further exploration of historic dumps within the pavilion could also provide information on activities and potentially recover information from razed structures associated with the amusement park era. The surface collection of any historic artifacts within the amusement park boundaries should be documented by location to potentially identify concession and activity areas.

The focus of the archaeology conducted at Mounds State Park has been on the earthworks. The extent of excavations has in total been quite limited and a multitude of research objectives could still be explored. The recovery of carbon samples from each of the undated enclosures should take precedence. The uses of geophysical surveys such as a gradiometer survey have proven to be of utility in identifying remnant ditch and bank constructions and discrete features. With the identification of Earthwork F is the realization that the Middle Woodland resources are still not fully known or documented. Earthwork K was potentially re-discovered and other earthworks (C and I) have also been reported destroyed.

In consultation with Mounds State Park staff, a management plan should be developed for systematically investigating the archaeological resources located within the park. At a minimum, new maps of individual earthworks should be constructed and integrated into a GIS database. Contour maps and geophysical maps can provide useful archaeological information without excavation. The location of the amusement park resources should also be integrated into a GIS database. The prehistoric and historic resources available for research and public education are unparalleled in east central Indiana. Even with the long history of archaeological work conducted in the park, some of the resources are virtually untapped.

References Cited

Anonymous

- 1880 History of Madison County, Indiana. Kingman Brothers, Chicago.
- 1961 Man About Town: Abrams Recalls Cave Experience of Father. *Anderson Bulletin*, February 28, 1961.
- 1966 Tax List, Madison County, Indiana, 1842. Fort Wayne and Allen County Public Library. Manuscript on file at the Anderson Public Library, Anderson, Indiana.
- 2007 Mrs. Potter's Walnut Juice Hair Stain. <http://www.hairraisingstories.com/Products/POTTER.html> Accessed 2/7/2007.

Bailey, Charlene, Martha Blazkiewicz, Diana R. Conover, Susan Green, James Hixon, Donna Oliva and Brenda Rubach

- 1987 A Survey of the Historic Remains in the Southern Part of Mounds State Park, Anderson, Indiana. Edited by Andrew Seager, Department of Architecture. MS on file at Archaeological Resources Management Service, Ball State University, Muncie.

Bellis, Mary

- 2007 The History of the Ice Cream Cone. http://inventors.about.com/od/foodrelatedinventions/a/ice_cream_cone.htm Accessed 2/7/2007.

Bently, B.

- 1821 Survey Map of Township 19 North, Range 8 East. General Land Office Survey Notes for Madison County Indiana. Microfilm on file, Archaeological Resources Management Service, Ball State University.

Brown, Ryland T.

- 1884 Geological and Topographical Survey of Hamilton and Madison Counties, Indiana. Fourteenth Annual Report, Indiana Department of Geology and Natural History, Indianapolis.

Brown, Immogene B.

- 1965 Land Records of Indiana (Recorded in the District Land Offices), Madison County. Compilation on file at the Anderson Public Library, Anderson, Indiana.
- 1980 Madison County, Indiana. Information Abstracted from Deed Records 1824 to 1840. Manuscript on file at the Anderson Public Library, Anderson, Indiana.

Brown, James A.

- 1997 The Archaeology of Religion in the Eastern Woodlands. In, *Annual Review of Anthropology* 26:465-485.

Buehrig, Jeanette E. and Ronald Hicks

- 1982 A Comprehensive Survey of the Archaeological Resources of Mounds State Park, Anderson, Indiana. Reports of Investigations 6. Archaeological Resources Management Service. Ball State University, Muncie, Indiana.

Carr, Christopher

- 2005 Salient Issues in the Social and Political Organizations of Northern Hopewellian Peoples. In *Gathering Hopewell*, edited by Christopher Carr and D. Troy Case, pp. 73-118. Kluwer Academic/Plenum Publishers, New York.

Cochran, Donald R.

- 1988 Excavations at Mounds State Park. Reports of Investigation 23, Archaeological Resources Management Service, Ball State University, Muncie, Indiana.
- 1992 Adena and Hopewell Cosmologies: New Evidence from East Central Indiana. Proceedings of the East Central Indiana Native American Cultural Symposium. Minnetrista Cultural Center, Muncie, Indiana.
- 1996 The Adena/Hopewell Convergence in East Central Indiana. In, *A View From the Core: A Conference Synthesizing Ohio Hopewell Archaeology*, edited by Paul Pacheko. Ohio Archaeological Council, Columbus, Ohio.

Cochran, Donald R. and Beth K. McCord

- 2001 The Archaeology of Anderson Mounds, Mounds State Park, Anderson, Indiana. Reports of Investigation 61, Archaeological Resources Management Service, Ball State University, Muncie, Indiana.

Conover, Diana R.

- 1984 Mounds in the Upper White River Drainage Study Area. In, *The Archaeological Resources of the Upper White River Drainage*, by P. Ranel Stephenson. Reports of Investigation 12, Archaeological Resources Management Service, Ball State University, Muncie, Indiana.

Cox, E. T.

- 1879 Eight, Ninth and Tenth Annual Reports of the Geological Survey of Indiana. Indiana Department of Geology and Natural History, Indianapolis.

Crist, Paul

- 2005 Socket Tutorial. <http://www.mosaicshades.com/antique2005/sockets/index.htm>
Accessed 1/17/07.

DeBoer, Warren R.

- 1997 Ceremonial Centers from the Cayapas (Esmeraldas, Ecuador) to Chillicothe (Ohio). *Cambridge Archaeological Journal* 7(2):225-253.

Dittlinger, Esther

1973 *Madison County sesquicentennial, 1823-1973*. Anderson Chamber of Commerce, Anderson, Indiana.

Dragoo, Don W.

1963 *Mounds for the Dead: An Analysis of the Adena Culture*. Annals of the Carnegie Museum, Carnegie Museum of Natural History, Pittsburgh.

Feldhues, William J.

1995 Guide to Identifying and Dating Historic Glass and Ceramics. Manuscript on file at the Archaeological Resources Management Service, Ball State University, Muncie.

Fike, Rich

1984 Chronological Implications of Glass Coloring. *In*, Intermountain Antiquities Computer System (IMACS) User Guide. Bureau of Land Management.

Hall, Robert L.

1997 *An Archaeology of the Soul: North American Indian Belief and Ritual*. University of Illinois Press, Urbana, Ill.

Hanna, Agnes McCulloch

1931 Bronnenberg Family Bought Lands to Preserve Anderson Indian Mounds. *Muncie Star* 24 May.

Harden, Samuel

1874 History of Madison County, Indiana, From 1820-1874. Markleville, Indiana.

Hicks, Ronald

1981 Final Report of an Archaeological Reconnaissance and Test Excavation, Mounds State Park, Madison County, Indiana, July-August 1979. Manuscript on file, Archaeological Resources Management Service, Ball State University.

IMACS

1984 Intermountain Antiquities Computer System (IMACS) User Guide. Bureau of Land Management.

2001 <http://www.anthro.utah.edu/imacs.html>

Kolbe, Beth

1992 1988 Excavations at Mounds State Park. Reports of Investigation 34, Archaeological Resources Management Service, Ball State University, Muncie, Indiana.

Lilly, Eli

1937 *Prehistoric Antiquities of Indiana*. Indiana Historical Society, Indianapolis.

Lindsey, Bill

2007 BLM Historic Bottles. http://www.blm.gov/historic_bottles/index.htm
Accessed 2/8/2007.

Loftstrom, Ted, Jeffery P. Tordoff, and Douglas C. George

1982 A Seriation of Historic Earthenwares in the Midwest, 1780-1870. *The Minnesota Archaeologist* 41(1):3-29.

Louiso, Byron E.

1930 Anderson Mounds to be accepted by Governor for State Park. *Muncie Star* 5 October.

McCord, Beth K.

2006a The Bronnenberg House and 2005 Archaeological Investigations at Mounds State Park, Madison County, Indiana. Reports of Investigation 68, Archaeological Resources Management Service, Ball State University.

2006b The Fudge Site: A New Look at an Ancient Monument, Randolph County, Indiana. Reports of Investigation 67, Archaeological Resources Management Service, Ball State University.

McCord, Beth Kolbe and Donald R. Cochran

1996 Woodland Sites in East Central Indiana: A Survey and Evaluation. Reports of Investigation 43. Archaeological Resources Management Service, Ball State University, Muncie.

McDonald, William S.

1969 The Union Traction Company of Indiana. PhD in History. Ball State University, Muncie, Indiana.

Majewski, Teresita and Michael J. O'Brien

1987 The Use and Misuse of Nineteenth-Century English and American Ceramics in Archaeological Analysis. In, *Advances in Archaeological Method and Theory* Vol. 11, edited by Michael B. Schiffer. Academic Press, Inc., San Diego.

Martin, Andrew

2000 Mounds State Park Nature Center, Madison County, Indiana: Archaeological Field Reconnaissance. Manuscript on file at the Archaeological Resources Management Service, Ball State University.

Miller, Jay

2000 Instilling the Earth: Explaining Mounds. *American Indian Culture and Research Journal* 25:3(161-177).

Miller, Orloff

- 1995 The 1994 Archaeological Investigations at Fort Benjamin Harrison, Marion County, Indiana. Gray & Pape, Inc., Cincinnati, Ohio.

Nelson, Lee H.

- 1964 Nail Chronology as an Aid to Dating Old Buildings. Technical Leaflet 48. American Association for State and Local History, Nashville, Tennessee.

Netterville, James J.

- 1925 Centennial History of Madison County, Indiana. Historians' Association, Anderson.

Newman, T. Stell

- 1970 A Dating Key for Post-Eighteenth Century Bottles. *Historical Archaeology* 4:70-75.

ODOT

- 1991 Coding System Manual for the East Liverpool, Ohio Urban Archaeology Project. Archaeology Series No. 1, Ohio Department of Transportation, Columbus.

Romain, William F.

- 2000 *Mysteries of the Hopewell: Astronomers, Geometers and Magicians of the Eastern Woodlands*. University of Akron Press, Akron, Ohio.

Seeman, Mark F.

- 1979 Feasting with the Dead: Ohio Hopewell Charnel House Ritual as a Context for Redistribution. In *Hopewell Archaeology: The Chillicothe Conference*, edited by David S. Brose and N'omi Greber, pp. 39-46. Kent State University Press.

Seulean, Anita Roseberry

- 1976 Abstract of Deed, Madison County, Indiana. Deed Record I, September 1826 to July 1833. Manuscript on file at the Anderson Public Library, Anderson, Indiana.

Smith, Dudley

- 1932 The Mound Builders of Indiana and Mounds State Park. Indiana Department of Conservation Publication 15.

South, Stanley

- 1977 *Method and Theory in Historical Archaeology*. Academic Press: New York.

Swartz, B.K. Jr.

- 1976 New Castle Site: A Hopewell Ceremonial Complex in East Central Indiana. Contribution to Anthropological History, No. 2. Ball State University, Muncie, Indiana.

Swearington, John, Jr.

2002 House Timeline. Manuscript on file at Mounds State Park, Anderson, Indiana.

Sylvester, Thomas D.

2005 Sylvester Family Genealogical History. <http://www.thesylvesterfamily.com>
Accessed 9/29/2005.

Vickery, Kent D.

1970 Excavations at Mounds State Park, 1969 season. MS on file at Archaeological Resources Management Service. Ball State University, Muncie, Indiana.

Walker, Francis A.

1892 Ancient Earthworks Near Anderson, Indiana. Proceedings of the Indiana Academy of Science, 2:51-54, Indianapolis.

Wepler, William R. and Ronald Hicks

1981 1979 Field School, Mounds State Park: The Historic Phases. Archaeological Reports 16:48-55, edited by B.K. Swartz, Jr., Ball State University.

White, Claude F.

1969 Report on the 1968 Field Season at Mounds State Park. MS on file at Archaeological Resources Management Service. Ball State University, Muncie, Indiana.

Appendix A

Catalog of Artifacts from the Bronnenberg House

Appendix A
Catalog of Artifacts from the Bronnenberg House

Catalog No.	Identification	Description	Material/Color	Unit/SP	Level	Provenience	No.	Wt. (g)	Storage	Class
06.117.001	brick			Unit 1	1		279	2070	10% sample (by count)	Architecture
06.117.002	plaster			Unit 1	1		219	1068	10% sample (by count)	Architecture
06.117.003	mortar			Unit 1	1		3	35.4		Architecture
06.117.004	coal			Unit 1	1		22	33.1	10% sample (by count)	Misc.
06.117.005	shingle	asphalt		Unit 1	1		6			Modern
06.117.006	pencil lead			Unit 1	1		2			Modern
06.117.007	metal	paper clip	corroded	Unit 1	1		1			Modern
06.117.008	metal	gutter spike	corroded	Unit 1	1		1			Architecture
06.117.009	metal	nail fragments	corroded	Unit 1	1		7			Architecture
06.117.010	metal	screw	corroded	Unit 1	1		4			Modern
06.117.011	metal	nail, roofing	modern	Unit 1	1		3			Modern
06.117.012	metal	16 gauge shotgun shell primer cap and rim wire		Unit 1	1		1			Arms
06.117.013	stainless steel			Unit 1	1		1			Modern
06.117.014	plastic		yellow	Unit 1	1		1			Modern
06.117.015	plastic		clear	Unit 1	1		1			Modern
06.117.016	plastic	hairpin, roller	black	Unit 1	1		1			Modern
06.117.017	glass	container fragment	clear	Unit 1	1		4			Kitchen
06.117.018	glass	container fragment	amber	Unit 1	1		1			Kitchen
06.117.019	glass		milk glass	Unit 1	1		1			Kitchen
06.117.020	glass	flat	aqua	Unit 1	1		12			Architecture
06.117.021	whiteware	body	flow blue line	Unit 1	1		1			Kitchen
06.117.022	porcelain			Unit 1	1		1			Kitchen
06.117.023	terra cotta			Unit 1	1		1			Kitchen
06.117.024	bone	mammal		Unit 1	1		8	0.5		Bone
06.117.025	teeth	mammal (rodent)		Unit 1	1		1	0.1		Bone
06.117.026	chewing gum			Unit 1	1		3			Modern
06.117.027	FCR			Unit 1	1		1			Prehistoric
06.117.028	flake	unmodified		Unit 1	1		2			Prehistoric
06.117.029	brick			Unit 1	2	Fall Creek	223	3093	10% sample (by count)	Architecture
06.117.030	brick with plaster			Unit 1	2		2	48.4		Architecture
06.117.031	drain tile			Unit 1	2		1			Architecture
06.117.032	plaster			Unit 1	2		213	2911	10% sample (by count)	Architecture
06.117.033	plaster	melted section		Unit 1	2		1	3.2		Architecture
06.117.034	coal			Unit 1	2		25	35.5	10% sample (by count)	Misc.
06.117.035	textile	elastic band		Unit 1	2		1	0.1		Modern
06.117.036	bone			Unit 1	2		2	0.3		Bone
06.117.037	metal	nail, wire	corroded	Unit 1	2		5			Architecture
06.117.038	metal	nail, cut	corroded	Unit 1	2		1			Architecture
06.117.039	metal	nail	corroded	Unit 1	2		23			Architecture
06.117.040	metal	nail, roofing	modern	Unit 1	2		4			Modern
06.117.041	metal	unidentified	corroded	Unit 1	2		17			Misc.
06.117.042	metal	crown caps	corroded	Unit 1	2		3			Kitchen
06.117.043	glass	container (pickle jar)	clear	Unit 1	2		6			Kitchen
06.117.044	glass	container	clear	Unit 1	2		20			Kitchen
06.117.045	glass	container	aqua	Unit 1	2		1			Kitchen
06.117.046	glass		milk glass	Unit 1	2		1			Kitchen
06.117.047	glass	flat	aqua	Unit 1	2		45			Architecture
06.117.048	whiteware	handle	silver finish	Unit 1	2		1			Kitchen
06.117.049	whiteware	rim		Unit 1	2		2			Kitchen
06.117.050	whiteware	handle	flow blue	Unit 1	2		1			Kitchen
06.117.051	plastic		grey	Unit 1	2		1			Modern
06.117.052	plastic	lid	yellow	Unit 1	2		1			Modern
06.117.053	mussel shell			Unit 1	2		1			Misc.

Appendix A
Catalog of Artifacts from the Bronnenberg House

06.117.054	shell button	2- hole	Unit 1	2	1	Clothing
06.117.055	foam		Unit 1	2	1	Modern
06.117.056	flake	unmodified	Unit 1	2	3	Prehistoric
06.117.057	brick		Unit 1A	3	8	Architecture
06.117.058	plaster	melted side	Unit 1A	3	4	Architecture
06.117.059	mortar		Unit 1A	3	25	Architecture
06.117.060	metal	nail	Unit 1A	3	2	Architecture
06.117.061	metal	unidentified	Unit 1A	3	1	Misc.
06.117.062	plaster		Unit 1A	4	5	Architecture
06.117.063	charcoal		Unit 1A	4	5	Misc.
06.117.064	plaster		Unit 1A	4	5	Misc.
06.117.065	mortar		Unit 1A	4	2	Architecture
06.117.066	FCR		Unit 1A	Feature 3	4	Architecture
06.117.067	brick		Unit 1A	Feature 3	1	Prehistoric
06.117.068	mortar		Unit 1B	3	11	Architecture
06.117.069	limestone		Unit 1B	3	4	Architecture
06.117.070	mussel shell		Unit 1B	3	9	Architecture
06.117.071	bone		Unit 1B	3	1	Misc.
06.117.072	tooth fragment		Unit 1B	3	1	Misc.
06.117.073	brick		Unit 1B	3	8	Bone
06.117.074	plaster		Unit 1B	3	1	Bone
06.117.075	limestone		Unit 1B	4	5	Architecture
06.117.076	metal	nails	Unit 1B	4	4	Architecture
06.117.077	brick		Unit 1B	4	2	Misc.
06.117.078	plaster		Unit 1B	4	2	Architecture
06.117.079	brick		Unit 1B	5	3	Architecture
06.117.080	brick with plaster		Unit 1B	6	11	Architecture
06.117.081	brick with mortar		SP 1		50	Architecture
06.117.082	plaster		SP 1		192	10% sample (by count)
06.117.083	mortar		SP 1		57.7	Architecture
06.117.084	coal		SP 1		2	Architecture
06.117.085	metal	unidentified	SP 1		2	Architecture
06.117.086	metal	shutter hinge	SP 1		6	Architecture
06.117.087	metal	nails	SP 1		62	Misc.
06.117.088	metal	nails, wire	SP 1		21	Misc.
06.117.089	metal	nails, roofing	SP 1		1	Architecture
06.117.090	metal	crown cap	SP 1		12	Architecture
06.117.091	metal	single tree hook	SP 1		4	Architecture
06.117.092	glass	flat	SP 1		3	Architecture
06.117.093	glass	container	SP 1		1	Kitchen
06.117.094	glass	container, frosted pattern	SP 1		1	Activities - Farm
06.117.095	glass	container	SP 1		7	Architecture
06.117.096	glass	container	SP 1		6	Kitchen
06.117.097	glass	container	SP 1		15	Kitchen
06.117.098	glass	container	SP 1		4	Kitchen
06.117.099	wax		SP 1		1	Kitchen
06.117.100	foil	wrapper	SP 1		1	Kitchen
06.117.101	bone	mammal	SP 1		2	Misc.
06.117.102	bone	cut, mammal	SP 1		1	Modern
06.117.103	plastic	threaded	SP 1		6	Bone
06.117.104	plastic	flat	SP 1		6	Bone
06.117.105	plastic	threaded	SP 1		1	Modern
06.117.106	plastic	threaded	SP 1		1	Modern
06.117.107	plastic	threaded	SP 1		2	Modern

Appendix A
Catalog of Artifacts from the Bronnenberg House

06.117.108	plastic	wire insulation	green/white	SP 1	1	Modern
06.117.109	plastic	hairpin, roller	white	SP 1	1	Modern
06.117.110	plastic	hanger	black	SP 1	1	Modern
06.117.111	metal	hair roller		SP 1	1	Modern
06.117.112	metal, copper	strip		SP 1	1	Misc.
06.117.113	metal, brass	.22 shell		SP 1	1	Arms
06.117.114	brick			SP2	141	799 10% sample (by count)
06.117.115	plaster			SP2	22	Architecture
06.117.116	mortar			SP2	24	155.4 10% sample (by count)
06.117.117	limestone			SP2	2	Architecture
06.117.118	terra cotta			SP2	2	Misc.
06.117.119	FCR			SP2	1	Kitchen
06.117.120	shingle	asphalt		SP2	1	Prehistoric
06.117.121	foil	aluminium		SP2	9	Modern
06.117.122	metal	nails		SP2	1	Modern
06.117.123	metal	nails, wire	corroded	SP2	29	Architecture
06.117.124	metal	carriage bolt	corroded	SP2	8	Architecture
06.117.125	metal	bolt and nut	corroded	SP2	1	Modern
06.117.126	metal, brass	nut	corroded	SP2	1	Modern
06.117.127	coal/slag	.22 shell		SP2	1	Arms
06.117.128	textile	elastic band		SP2	65	150.3 10% sample (by count)
06.117.129	textile	cloth, synthetic		SP2	13	Misc.
06.117.130	textile	yarn		SP2	6	Modern
06.117.131	textile	single crochet, nylon		SP2	1	Modern
06.117.132	foam			SP2	2	Modern
06.117.133	bone	mammal		SP2	2	Bone
06.117.134	tooth fragment	bird		SP2	2	Bone
06.117.135	bone	cut, mammal		SP2	1	Bone
06.117.136	bone			SP2	2	Bone
06.117.137	whiteware			SP2	2	Bone
06.117.138	porcelain	floral, transferprint		SP2	2	Kitchen
06.117.139	glass	container	clear	SP2	12	Kitchen
06.117.140	glass	container	aqua	SP2	6	Kitchen
06.117.141	glass	flat	aqua	SP2	9	Kitchen
06.117.142	glass	container	amber	SP2	1	Architecture
06.117.143	glass	container	milk glass	SP2	1	Kitchen
06.117.144	glass	jar, condiment - mustard	clear	SP2	6	Kitchen
06.117.145	glass	bottle	amethyst	SP2	1	Kitchen
06.117.146	plastic		yellow	SP2	1	Modern
06.117.147	plastic		clear	SP2	1	Modern
06.117.148	stoneware			SP2	1	Kitchen
06.117.149	glass	medicine bottle, embossed measurements	clear	SP2	1	Kitchen
06.117.150	glass	medicine bottle, embossed "Mrs. Potters"		SP2	1	Kitchen
06.117.151	metal	nail	corroded	SP2	1	Architecture
06.117.152	mussel shell	jar lid, embossed "Presto"		SP2	1	Misc.
06.117.153	glass		clear		1	Kitchen

25 cm bgs - N. segment
25 cm bgs - N. segment
25 cm bgs - N. segment
25 cm bgs - N. segment
on trail going to spring house

Appendix B

Catalog of Artifacts from the Pavilion

Appendix B
Catalog of Artifacts from the Pavilion

Catalog No.	Identification	Material/Color/Decoration	Unit	Level	Provenience	No.	Wt. (g)	Association	Storage
06.59.1.001	metal, nail		row 1 #2	1		6			
06.59.1.002	flat glass	aqua	row 1 #2	1		3			
06.59.1.003	FCR		row 1 #2	1		11	75.9		discarded
06.59.1.004	metal, nail		row 1 #2	2		1			
06.59.1.005	metal, unknown		row 1 #2	2		2	1.7		
06.59.1.006	flat glass	clear	row 1 #2	2		3			
06.59.1.007	FCR		row 1 #2	2		17	46.9		discarded
06.59.1.008	metal, nail		row 1 #3	1		1			
06.59.1.009	metal, electrical connector		row 1 #3	1		1			
06.59.1.010	cement/mortar		row 1 #3	1		5			
06.59.1.011	brick		row 1 #3	1		10			
06.59.1.012	metal, nail		row 1 #3	2		2			
06.59.1.013	cement/mortar		row 1 #3	2		1			
06.59.1.014	brick		row 1 #3	2		17			
06.59.1.015	FCR		row 1 #3	2		6	134.0		discarded
06.59.1.016	thin, curved glass	clear	row 2 #3	1		2			
06.59.1.017	metal, nail		row 2 #3	1		1			
06.59.1.018	flat glass	clear	row 2 #3	1		2			
06.59.1.019	container glass	aqua	row 2 #3	1		1			
06.59.1.020	FCR		row 2 #3	1		2	129.4		discarded
06.59.1.021	FCR		row 3 #2	1		2	80.4		discarded
06.59.1.022	container glass	clear	row 3 #2	1		2			
06.59.1.023	metal, nail		row 3 #2	2		6			
06.59.1.024	FCR		row 3 #2	2		4	387.0		discarded
06.59.1.025	brick		row 3 #2	2		1			
06.59.1.026	flat glass	aqua	row 3 #2	2		5			
06.59.1.027	container glass	clear	row 3 #2	2		4			
06.59.1.028	flat glass	clear	row 3 #2	2		3			
06.59.1.029	charcoal		row 3 #2	3					
06.59.1.030	FCR		row 3 #2	3		5	196.9		discarded
06.59.1.031	brick		row 3 #2	3		1			
06.59.1.032	flat glass	clear	row 3 #2	3		1			
06.59.1.033	flat glass	aqua	row 3 #2	3		1			
06.59.1.034	container glass		row 3 #2	3		1			
06.59.1.035	metal, nail		row 3 #2	3		10			
06.59.1.036	metal, unidentified		row 3 #2	3		12			

Appendix B
Catalog of Artifacts from the Pavilion

06.59.1.037	metal, nail	row 3 # 2	4	6	
06.59.1.038	cement/mortar	row 3 # 2	4	1	
06.59.1.039	container glass	row 3 # 2	4	1	
06.59.1.040	porcelain insulator	row 3 # 2	4	1	
06.59.1.041	flat glass	row 3 # 2	4	6	
06.59.1.042	bullet casing	row 3 # 2	4	1	
06.59.1.043	thin, curved glass	row 3 # 2	4	2	
06.59.1.044	flat glass	row 3 # 2	4	1	
06.59.1.045	FCR	row 3 # 2	4	10	discarded
06.59.1.046	brick	row 3 # 2	4	1	1045.0
06.59.1.047	coal	row 3 # 2	4	1	
06.59.1.048	unmodified flake	row 3 # 2	4	1	
06.59.1.049	container glass	row 3 # 2	4	9	
06.59.1.050	edge modified flake	row 3 # 3	1	1	
06.59.1.051	unmodified flake	row 3 # 3	1	3	
06.59.1.052	cement/mortar	row 3 # 3	1	1	
06.59.1.053	container glass	row 3 # 3	1	1	
06.59.1.054	thin, curved glass	row 3 # 3	1	1	
06.59.1.055	FCR	row 3 # 3	1	9	discarded
06.59.1.056	FCR	row 3 # 3	2	3	discarded
06.59.1.057	cement/mortar	row 3 # 3	2	1	
06.59.1.058	unmodified flake	row 3 # 3	2	1	
06.59.1.059	metal, nail	row 3 # 3	2	1	
06.59.1.060	point fragment	row 3 # 3	2	1	
06.59.1.061	FCR	row 3 # 3	2	5	discarded
06.59.1.062	FCR	row 3 # 3	3	5	discarded
06.59.1.064	metal, nail	row 4 # 1	1	1	
06.59.1.065	container glass	row 4 # 1	1	3	
06.59.1.066	flat glass	row 4 # 1	1	1	
06.59.1.067	thin, curved glass	row 4 # 1	1	1	
06.59.1.068	flat glass	row 4 # 1	1	1	
06.59.1.069	FCR	row 4 # 1	2	3	discarded
06.59.1.070	container glass	row 4 # 1	2	1	
06.59.1.071	flat glass	row 4 # 1	1	2	
06.59.1.072	unmodified flake	row 4 # 2	1	1	
06.59.1.073	FCR	row 4 # 2	1	4	discarded
06.59.1.074	container glass	row 4 # 2	1	1	

Appendix B
Catalog of Artifacts from the Pavilion

06.59.1.075	coal		row 4 # 2	1	1	
06.59.1.076	brick		row 4 # 2	1	1	
06.59.1.077	flat glass	clear	row 4 # 2	1	1	
06.59.1.078	metal, nail		row 4 # 2	1	3	
06.59.1.079	metal, unidentified		row 4 # 2	1	1	
06.59.1.080	FCR		row 4 # 2	2	6	173.1
06.59.1.081	container glass	green	row 4 # 2	2	1	
06.59.1.082	thin, curved glass	clear	row 4 # 2	2	1	
06.59.1.083	unmodified flake	HT Fall Creek	row 4 # 2	2	1	
06.59.1.084	FCR		row 4 # 2	2	1	
06.59.1.085	metal, unidentified		row 4 # 2	2	7	16.5
06.59.1.086	metal, nail		row 4 # 2	2	4	
06.59.1.087	FCR		row 4 # 2	3	1	
06.59.1.088	metal, unidentified		row 4 # 2	3	1	
06.59.1.089	metal, nail		row 4 # 3	1	3	
06.59.1.090	container glass	clear	row 4 # 3	1	1	
06.59.1.091	brick		row 4 # 3	1	8	
06.59.1.092	FCR		row 4 # 3	2	2	159.6
06.59.1.093	porcelain insulator		row 4 # 3	2	1	
06.59.1.094	bullet casing, .32 caliber		row 4 # 3	2	1	
06.59.1.095	metal, nail		row 4 # 3	2	1	
06.59.1.096	container glass	clear	row 4 # 3	2	1	
06.59.1.097	unmodified flake	Fall Creek	row 4 # 3	2	4	
06.59.1.098	brick		row 4 # 3	2	3	
06.59.1.099	FCR		row 4 # 3	3	3	128.6
06.59.1.100	container glass	clear	row 4 # 4	1	5	
06.59.1.101	metal, nail		row 4 # 4	1	3	
06.59.1.102	FCR		row 4 # 4	1	3	
06.59.1.103	unmodified flake	Fall Creek	row 4 # 4	1	1	
06.59.1.104	brick		row 4 # 4	1	6	
06.59.1.105	brick		row 5 # 3	1	13	
06.59.1.106	metal, nail		row 5 # 3	1	3	
06.59.1.107	edge modified flake	Quartzite	row 5 # 3	1	1	
06.59.1.108	metal, unidentified		row 5 # 3	1	3	
06.59.1.109	porcelain		row 5 # 3	1	1	
06.59.1.110	unmodified flake	Fall Creek	row 5 # 3	1	2	
06.59.1.111	cement/mortar		row 5 # 3	1	1	

Appendix B
Catalog of Artifacts from the Pavilion

06.59.1.112	FCR		unknown	row 5 # 3	1	2	19.5	discarded
06.59.1.113	unmodified flake		Fall Creek	row 5 # 3	2	1		
06.59.1.114	unmodified flake			row 5 # 3	2	2		
06.59.1.115	FCR			row 5 # 3	2	2	43.2	discarded
06.59.1.116	metal, crown cap			row 5 # 4 surface	next to SP	2		
06.59.1.117	container glass, rim		clear	row 5 # 4 surface		3		
06.59.1.118	container glass, base		clear	row 5 # 4 surface		1		
06.59.1.119	metal, nail			row 5 # 4 surface		1		
06.59.1.120	container glass, base		clear	row 5 # 4 surface		1		
06.59.1.121	container glass		clear	row 5 # 4 surface		3		
06.59.1.122	container glass, neck		clear	row 5 # 4 surface		1		
06.59.1.123	bottle glass, neck		clear	row 5 # 4 surface		1		
06.59.1.124	bottle glass, lip		clear	row 5 # 4	1	1		
06.59.1.125	charcoal			row 5 # 4	1	3		
06.59.1.126	container glass		milk glass	row 5 # 4	1	1		
06.59.1.127	flat glass		clear	row 5 # 4	1	2		
06.59.1.128	coin - "Barber dime"			row 5 # 4	1	1		
06.59.1.129	modified shell			row 5 # 4	1	1		
06.59.1.130	coal slag			row 5 # 4	1	1		
06.59.1.131	container glass		clear	row 5 # 4	1	20		
06.59.1.132	container glass		green	row 5 # 4	1	3		
06.59.1.133	thin, curved glass		clear	row 5 # 4	1	3		
06.59.1.134	container glass, base		clear	row 5 # 4	1	3		
06.59.1.135	container glass, rim		clear	row 5 # 4	1	7		
06.59.1.136	unmodified flake		Fall Creek	row 5 # 4	1	1		
06.59.1.137	brick			row 5 # 4	1	4		
06.59.1.138	metal, nail			row 5 # 4	1	10		
06.59.1.139	whiteware, rim		iron stained	row 5 # 4	1	1		
06.59.1.140	whiteware		iron stained	row 5 # 4	1	1		
06.59.1.141	metal, unidentified			row 5 # 4	1	4		
06.59.1.142	metal, closure			row 5 # 4	1	118		
06.59.1.143	metal, unidentified			row 5 # 4	1	300		
06.59.1.144	coal			row 5 # 4	1	2		
06.59.1.147	metal, can frags			row 6 # 5	1	6		
06.59.1.148	metal, nail			row 6 # 5	1	6		
06.59.1.149	coal			row 6 # 5	1	95		
06.59.1.150	thin, curved glass		clear	row 6 # 5	1	2		

Appendix B
Catalog of Artifacts from the Pavilion

06.59.1.151	unmodified flake	Fall Creek	row 6 # 5	1	1	
06.59.1.152	container glass	clear	row 6 # 5	1	3	
06.59.1.153	FCR		row 6 # 5	1	3	discarded
06.59.1.154	container glass	clear	row 3 # 2	surface	1	
06.59.1.155	container glass, base	amber with embossed letters	"I"	surface	1	
06.59.1.156	flat glass	clear	"J"	surface	2	
06.59.1.157	flat glass	clear	"G"	surface	1	
06.59.1.158	container glass	amethyst	"K"	surface	2	
06.59.1.159	porcelain insulator		"D"	surface	2	
06.59.1.160	porcelain insulator		"A"	surface	1	
06.59.1.161	porcelain insulator		"B"	surface	1	
06.59.1.162	flat glass	clear	"H"	surface	1	
06.59.1.163	brick		"F"	surface	1	
06.59.1.164	flat glass	clear	"E"	surface	1	
06.59.1.165	flat glass	clear	"C"	surface	2	
06.59.1.166	metal, nail		N10E27	1	4	
06.59.1.167	FCR		N10E27	1	1	discarded
06.59.1.168	metal, unidentified		N10E27	1	1	
06.59.1.169	coal		N10E27	1	1	
06.59.1.170	flat glass	clear	N10E27	1	17	
06.59.1.171	flat glass	aqua	N10E27	1	1	
06.59.1.172	porcelain insulator		N10E27	1	1	
06.59.1.173	flat glass	aqua	N10E27	2	1	
06.59.1.174	metal, unidentified		N10E27	2	3	
06.59.1.175	flat glass	clear	N10E27	2	2	

Appendix C

Catalog of Artifacts from the Dump, 87F56

Appendix C
Catalog of Artifacts from Dump, 87F56

Catalog No.	Identification	Material/Color/Decoration	Unit Level	Provenience	No.	Association	Storage
06.59.4.001	container glass	clear		2-4 m	1		
06.59.4.002	glass bottle, base	amber		2-4 m	1		
06.59.4.003	glass insulator	aqua		2-4 m	1		
06.59.4.004	stoneware	blue sponge decoration		2-4 m	1		
06.59.4.005	glass bottle, base	aqua - Henry's Peru, III		2-4 m	1		
06.59.4.006	porcelain, rim	decals with molded rim		4-6 m	1		
06.59.4.007	porcelain, rim	molded rim		4-6 m	1		
06.59.4.008	whiteware, base	decals		4-6 m	2		
06.59.4.009	whiteware, base	undecorated		4-6 m	1		
06.59.4.010	container glass	amethyst		4-6 m	1		
06.59.4.011	glass bottle, neck	aqua, crown neck		4-6 m	1		
06.59.4.012	container glass, base	aqua		4-6 m	1		
06.59.4.013	glass bottle, neck/body	amber		4-6 m	1		
06.59.4.014	container glass, rim/neck/body	clear		4-6 m	1		
06.59.4.015	container glass, neck/body	clear		4-6 m	1		
06.59.4.016	container glass	clear		4-6 m	2		
06.59.4.017	melted glass	clear		4-6 m	1		
06.59.4.018	container glass	clear with embossed letters		4-6 m	1		
06.59.4.019	porcelain, rim	undecorated		4-6 m	1		
06.59.4.020	porcelain	decals with molded edge		4-6 m	1		
06.59.4.021	container glass	amethyst		4-6 m	5		
06.59.4.022	glass bottle neck	amethyst, collared ring		4-6 m	1		
06.59.4.023	container glass	aqua		4-6 m	2		
06.59.4.024	container glass	aqua with embossed letters		4-6 m	1		
06.59.4.025	glass bottle, base	amber with embossed letters		4-6 m	1		
06.59.4.026	container glass	amber		4-6 m	3		
06.59.4.027	container glass	clear, molded		4-6 m	1		
06.59.4.028	container glass	clear		4-6 m	1		
06.59.4.029	glass bottle, base	clear, round cornered base		4-6 m	1		
06.59.4.030	glass bottle, neck	clear, melted		4-6 m	1		
06.59.4.031	container glass, base	clear		4-6 m	1		
06.59.4.032	container glass, base	clear		4-6 m	1		
06.59.4.033	glass bottle, neck	clear, collared ring		4-6 m	1		
06.59.4.034	glass bottle neck	clear, crown neck		4-6 m	1		
06.59.4.035	container glass	clear		4-6 m	5		
06.59.4.036	container glass	clear, melted		4-6 m	1		
06.59.4.037	container glass, base	amethyst with embossed letters		4-6 m	1		

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Catalog of Artifacts from Dump, 87F56

06.59.4.038	container glass	amethyst with embossed letters	4 - 6 m	1
06.59.4.039	container glass	amethyst	6 - 8 m	1
06.59.4.040	glass bottle, base	clear	6 - 8 m	1
06.59.4.041	container glass	clear	6 - 8 m	1
06.59.4.042	glass bottle, base	amethyst with embossed letters	8 - 10 m	1
06.59.4.043	glass bottle, neck	clear, brandy or wine	8 - 10 m	1
06.59.4.044	glass bottle, neck	clear, collared ring	8 - 10 m	1
06.59.4.045	glass bottle, base	clear with embossed measurement	8 - 10 m	1
06.59.4.046	glass bottle, base	clear, round	8 - 10 m	1
06.59.4.047	container glass	clear	8 - 10 m	3
06.59.4.048	stoneware	smoked	8 - 10 m	1
06.59.4.049	glass bottle, neck	amethyst, crown neck	8 - 10 m	1
06.59.4.051	glass insulator	aqua	10 - 12 m	1
06.59.4.052	container glass, base	clear with embossed letters	10 - 12 m	1
06.59.4.053	container glass	clear with embossed letters	12 - 14 m	2
06.59.4.054	container glass	clear	12 - 14 m	1
06.59.4.055	whiteware	undecorated, burned	12 - 14 m	1
06.59.4.056	glass insulator	aqua with embossed letters	12 - 14 m	1
06.59.4.057	container glass	aqua	12 - 14 m	1
06.59.4.058	glass bottle	clear, "Coca-Cola"	12 - 14 m	1
06.59.4.059	container glass	amber	14 - 16 m	1
06.59.4.060	glass bottle	clear, "Anderson Eagle Bottling Works"	14 - 16 m	1
06.59.4.061	glass bottle	clear, "Coca-Cola"	14 - 16 m	1
06.59.4.062	container glass, neck	clear	14 - 16 m	1
06.59.4.063	container glass	aqua	14 - 16 m	1
06.59.4.064	container glass	clear with embossed letters	14 - 16 m	1
06.59.4.065	container glass	clear	16 - 18 m	2
06.59.4.066	container glass, lip/neck	clear	16 - 18 m	1
06.59.4.067	container glass	clear	16 - 18 m	1
06.59.4.068	container glass, base	aqua	16 - 18 m	1
06.59.4.069	metal door handle/lock	amethyst	16 - 18 m	1
06.59.4.070	metal, unidentified		16 - 18 m	1
06.59.4.071	metal, unidentified		16 - 18 m	1
06.59.4.072	container glass, base	clear	18 - 20 m	1
06.59.4.073	glass bottle	clear, "CheroCola"	18 - 20 m	1
06.59.4.074	flat glass	clear	18 - 20 m	1
06.59.4.075	container glass	amethyst	18 - 20 m	1
06.59.4.076	glass bottle	aqua with embossed letters	22 - 24 m	5

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06.59.4.077	glass bottle	amethyst with embossed letters	22 - 24 m	6
06.59.4.078	container glass	clear with embossed letters	22 - 24 m	1
06.59.4.079	whiteware	undecorated, burned	22 - 24 m	1
06.59.4.080	container glass	clear	22 - 24 m	2
06.59.4.081	glass bottle, base	clear, molded	22 - 24 m	1
06.59.4.082	glass insulator	aqua	22 - 24 m	1
06.59.4.083	container glass, lip	aqua	22 - 24 m	1
06.59.4.084	glass bottle	amber, "Brewing Co."	22 - 24 m	3
06.59.4.085	glass bottle	amber	22 - 24 m	5
06.59.4.086	flat glass	green	24 - 26 m	1
06.59.4.087	container glass, neck	clear, melted	24 - 26 m	1
06.59.4.088	container glass	clear	24 - 26 m	10
06.59.4.089	container glass, base	amethyst	24 - 26 m	1
06.59.4.090	container glass, neck	aqua	24 - 26 m	1
06.59.4.091	container glass	clear, melted	24 - 26 m	1
06.59.4.092	container glass, neck	amethyst	24 - 26 m	1
06.59.4.093	container glass, neck	amethyst	24 - 26 m	1
06.59.4.094	container glass	amethyst with embossed letters	24 - 26 m	2
06.59.4.095	container glass, base	aqua	24 - 26 m	1
06.59.4.096	flat glass	aqua	24 - 26 m	1
06.59.4.097	container glass	aqua	24 - 26 m	3
06.59.4.098	container glass	aqua with embossed letters	24 - 26 m	2
06.59.4.099	container glass	amethyst	24 - 26 m	4
06.59.4.100	container glass	amber	24 - 26 m	3
06.59.4.101	container glass, base	amethyst	24 - 26 m	4
06.59.4.102	porcelain	decals and painted	24 - 26 m	2
06.59.4.104	container glass	amethyst	26 - 28 m	1
06.59.4.105	container glass, base	clear	26 - 28 m	1
06.59.4.106	porcelain	undecorated	26 - 28 m	1
06.59.4.107	flat glass	clear	26 - 28 m	1
06.59.4.108	container glass	clear	28 - 30 m	1
06.59.4.109	whiteware	undecorated	28 - 30 m	1
06.59.4.110	flat glass	clear	28 - 30 m	1
06.59.4.111	.22 bullet casing	decals	28 - 30 m	1
06.59.4.112	porcelain, base	aqua with embossed letters	28 - 30 m	1
06.59.4.113	glass bottle, lip	aqua with embossed letters	28 - 30 m	1
06.59.4.114	glass bottle	clear	28 - 30 m	1
06.59.4.115	curved thin glass		28 - 30 m	2

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06.59.4.154	whiteware, rim	molded rim	66 - 68 m	1
06.59.4.155	glass bottle, base	clear	66 - 68 m	1
06.59.4.156	container glass	amber	68 - 70 m	1
06.59.4.157	container glass	green	68 - 70 m	1
06.59.4.158	container glass	amethyst with embossed letters	68 - 70 m	1
06.59.4.159	whiteware, rim	undecorated	68 - 70 m	1
06.59.4.160	container glass	clear	68 - 70 m	1
06.59.4.161	container glass, base	amber	70 - 72 m	1
06.59.4.162	container glass	green	70 - 72 m	1
06.59.4.163	container glass	clear	70 - 72 m	1

Appendix D

Catalog of Artifacts from Earthwork D

Appendix D
Catalog of Artifacts from Earthwork D

Catalog No.	Identification	Material/Color	Unit	Level	Provenience	No.	Wt.(g)	Association	Storage
06.59.2.01	burned clay		06D1	1		11	12.0		
06.59.2.02	unmodified flake	Fall Creek	06D1	1		1			
06.59.2.03	FCR		06D1	1		14	415.1		discarded
06.59.2.04	burned clay		06D1	2		7	20.6		
06.59.2.05	pottery, body	grit temper	06D1	2		1			
06.59.2.06	charcoal		06D1	2		2	0.5		
06.59.2.07	unmodified flake	unknown	06D1	2		1			
06.59.2.08	FCR		06D1	2		8	247.7		discarded
06.59.2.09	soil samples		06D1	wall		4			
06.59.2.10	glass, molded	clear	06D2	1		1			
06.59.2.11	container glass	aqua	06D2	1		1			
06.59.2.12	container glass	green	06D2	1		1			
06.59.2.13	container glass	clear	06D2	1		1			
06.59.2.14	FCR		06D2	1		2	12.3		discarded
06.59.2.15	unmodified flake	Fall Creek	06D2	1		1			
06.59.2.16	unmodified flake	HT Fall Creek	06D2	1		1			
06.59.2.17	charcoal		06D2	1			50.5		
06.59.2.18	pennies	1975, 1976 & unknown	06D2	1		4			
06.59.2.19	nickel	1973	06D2	1		1			
06.59.2.20	quarter	1974 & 1980	06D2	1		2			
06.59.2.21	charcoal		06D2	2			8.0		
06.59.2.22	nail		06D2	2		1			
06.59.2.23	container glass	clear	06D2	2		1			
06.59.2.24	FCR		06D2	2		2	18.8		discarded
06.59.2.25	FCR		06D2	3		2	27.7		discarded
06.59.2.26	charcoal		06D2	3			3.0		
06.59.2.27	porcelain insulator		06D3	surface		1			
06.59.2.28	FCR		06D3	1		2			
06.59.2.29	unmodified flake	unknown	06D3	1		3			
06.59.2.30	container glass	clear	06D3	1		1			
06.59.2.31	thin curved glass	clear	06D3	1		2			
06.59.2.32	container glass	amethyst	06D3	1		1			
06.59.2.33	nail		06D3	2		1			
06.59.2.34	container glass	clear	06D3	2		2			
06.59.2.35	FCR		06D4	1		4	38.5		discarded
06.59.2.36	unmodified flake	Fall Creek	06D4	1		1			
06.59.2.37	shotgun shell casing		06D4	1		1			

Appendix E

Catalog of Artifacts from Earthwork G

Appendix E
Catalog of Artifacts from Earthwork G

Catalog No.	Identification	Material/Color	Unit	Level	Provenience	No.	Wt. (g)	Association	Storage
06.59.3.01	soil samples		06G1	wall		1			
06.59.3.02	FCR		06G1	1		1	1.8		discarded
06.59.3.03	unmodified flake	Fall Creek	06G1	1		1			
06.59.3.04	metal wire - fence		06G1	1		2			
06.59.3.05	FCR		06G1	2		1	73.0		discarded
06.59.3.06	FCR		06G1	4		4	813.6		discarded
06.59.3.07	contatiner glass	clear	06G2	1		1			
06.59.3.08	zinc fragments		06G2	1		2			
06.59.3.09	flat glass	clear	06G2	1		1			
06.59.3.10	FCR		06G2	1		5	37.7		discarded
06.59.3.11	FCR		06G2	2		1	103.4		discarded
06.59.3.12	burned clay		06G2	4		1			
06.59.3.13	burned clay		06G2	5		10			
06.59.3.14	charcoal		06G2	5		1			
06.59.3.15	soil samples		06G2	wall		7			