Archaeological Investigations of the Yorktown Enclosure (12-Dl-39)

Delaware County, Indiana Project #STP-M-710, Des. No. 9700310



Prepared for:
Indiana Department of Transportation
100 North Senate Avenue, Room N642
Indianapolis, Indiana 46204

by:
Beth McCord
Donald R. Cochran

December 20, 2007

Reports of Investigation #72

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

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Archaeological Resources Management Service Ball State University, Muncie, IN 47306-0435 Phone: 765-285-5328 Fax: 765-285-2163

Web Address: http://arms.iweb.bsu.edu/

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We would like to thank everyone who took an interest in this project. When the project began we were overwhelmed with phone calls and emails from people interested in the enclosure. Numerous descriptions of the site were posted on the internet and several Community postings were placed on Google Earth. The public reaction to the possibility of this site being a forgotten ancient enclosure was wonderful.

Several local residents deserve individual recognition for their assistance in completing this project. Mr. Larry New and Mr. Scott Ness granted us permission to conduct investigations of the site. Kyle Johnson, Laurie Stinton and Jeffery Reese of the Delaware-Muncie Metropolitan Plan Commission (DMMPC) GIS office reported the site in 2005. They shared photographs and information on the site. Ms. Toni Cecil at the Yorktown Town Manager's Office helped to bring attention to the enclosure. Mr. Jack and Mrs. Cindy Spears provided the 1930 aerial of the site. Cindy also spent several hours sharing local history. Mr. Mike Beeman was a gracious neighbor and allowed all the extra traffic in his drive. Seth Slaubaugh of the Muncie Star wrote several articles on the site and was patient in our efforts to find answers.

We would also like to thank everyone involved with the project. The Indiana Department of Transportation Office of Environmental Services, Cultural Resources Section recognized the potential importance of this site even though the enclosure is outside of the proposed construction right-of-way. Mr. Chris Koeppel and Mr. Curtis Tomak were extremely helpful in coordinating the archaeological investigations and providing us with information. Mr. John Kurtz and Dave Williams in the INDOT Aerial Engineering –Survey Section provided the survey data for the site. Dr. Rick Jones of DHPA was obliging and helpful in developing the work plan for the site. Ms. Vicki Casteel at the Indiana State Archives diligently scanned the aerial photographs. Thanks to the ARMS personnel of Chris Guillion, Rachel Klabacka and Andy Smith for your enthusiasm during the project. Dr. Ron Hicks of Ball State was a consultant and supporter of the project.

Thank you all.

Abstract

Archaeological investigations of the Yorktown Enclosure (12-Dl-39) were conducted to determine the origin and potential significance of the earthwork. Fieldwork and comparison with other earthworks in the New Castle Phase of east central Indiana revealed that the site is a 2,000 year old earthwork. While the ditch has been altered by historic modification, the original embankment remains buried under spoil removed from the ditch. The central platform also remains essentially undisturbed. The site retains integrity and is one of only two surviving examples of isolated circular enclosures in all of east central Indiana. The site should be preserved and nominated to the State and National Registers.

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Introduction

In response to a request from the Indiana Department of Transportation (INDOT), the Archaeological Resources Management Service (ARMS) at Ball State University has conducted archaeological investigations of the circular earthen enclosure located near Yorktown, Delaware County, Indiana.

Site Location Confidential Not for Public Disclosure

Figure 1. A portion of the USGS 7.5' Muncie West, Indiana Quadrangle showing the location of the enclosure.

The enclosure has been linked to a reported "fortification" in the "vicinity of Yorktown" reported in an early Delaware County history (Helm 1881:28). Even though the "fortification" was never found, it was designated as site 12-Dl-39 (Rodeffer 1967:72-73). In May of 2005, Kyle Johnson and staff of the Delaware County GIS office reported an unusual circular feature near Yorktown to ARMS. The GIS staff visited the site with the landowner's permission and took a number of photographs documenting a circular ditch (Figure 2). ARMS staff subsequently attempted to gain access to the site but landowner permission was denied. In 2007, a local resident that was concerned with protection of the ditch sent emails to the Indiana Historical Bureau who reported it to the Division of Historic Preservation and Archaeology (DHPA) who reported it to INDOT. Based on aerial photographs and the photographs taken by the Delaware County GIS staff, the site consisted of a circular ditch that was between one and two meters in depth but no embankment was visible on aerial photographs (Figure 3).



Figure 2. Photograph of the enclosure in 2005 (Courtesy of Laurie Stinton, DMMPC).

Figure 3. 2005 aerial of the enclosure.

The circular form and size of the ditch were distinctly similar to 2000 year old Native American enclosures included in the New Castle Phase of east central Indiana (Cochran and McCord 2001; McCord 1998, 1999, 2006; McCord and Cochran 1996) and Early and Middle Woodland earthen enclosures constructed across the Ohio Valley (Brose and Greber 1978, Pacheco 1996, Charles and Buikstra 2006). The site was also appropriately situated to be a component of the regional distribution of these sites (Cochran and McCord 2001, McCord 2006:101-108). A Late Prehistoric Native

American enclosure is also known from Strawtown in Hamilton County (White et al. 2003). However, several historic possibilities for the origins of the site were proposed by local residents including a fox farm, a muskrat farm and a prairie dog farm (Slabaugh 2007a, 2007b).

Given the potential significance of the site, INDOT requested an archaeological investigation, even though the enclosure was located outside of the proposed right-of-way limits of the SR 32 project. The goals of the investigation were to determine the origin of the site and evaluate its significance for listing on the State and National Registers. The investigations were conducted under DHPA approved plan #1998.

Background

Natural Setting

The enclosure lies within the New Castle Till Plains and Drainageways physiographic division of Indiana, a member of the Till Plain Section of the Central Lowland Province of the United States (Gray 2000). The New Castle Till Plains and Drainageways division is characterized as a relatively featureless plain of low relief dissected by a crisscross pattern of meltwater features. Tunnel valleys fed the West Fork of the White River, several tributaries of the East Fork of the White River and the several forks of the Whitewater River (Gray 2000).

The site is located approximately 450 m south of the White River. In this area, the White River Valley is fairly narrow, ranging between 180 and 215 m wide. The topography surrounding the enclosure is nearly level showing little variation in elevation on the USGS topographic map. The enclosure is at an elevation of 932' AMSL (284 m).

The site is located on an outwash plain with sand and gravel textures (Shurig 1974). Soils recorded at the enclosure consist of the well drained Fox silt loam, 0 to 2% slopes (FsA) and adjacent areas are recorded as the well drained Miami silt loam, 0 to 2% slopes (MmA) and Miami silt loam, gravelly subsoil, 0 t 2% slopes (MnA)(Huffman 1972:map sheet #30)(Figure 4). While the soils recorded at and around the enclosure are reportedly well drained, a wet spot symbol is designated on the soil maps at the enclosure.

Figure 4. Soils map of the enclosure (Huffan 1972: map sheet #30). The enclosure is in the woods circled in red.

The contradiction between the Fox soils and a wet location may indicate a historic change in the drainage pattern at the enclosure. The soils map indicates an intermittent drainage flows into the enclosure (Figure 4). However, a drainage map of Delaware County shows a small drainage system flowing to the west into Buck Creek with the enclosure near the head of the drainage system (Shurig 1974). Other nearby drainages flow north into the White River (Figure 5). Historic landuse has likely altered the drainage pattern around the enclosure. The 1876 (Andreas 1968) and 1887 (Griffing 1971) atlases both show the road that is now designated as SR 32 to the north of the enclosure and a railroad to the south of the enclosure. Either or both of these constructions likely altered the natural drainage pattern around the enclosure by cutting off the natural flow of surface water.

Figure 5. A portion of the Drainage Map of Delaware County (after Shurig 1974). The area of the enclosure is circled in red.

Archaeological Setting

The prehistoric culture history of the till plain region of east central Indiana is fairly well documented (e.g. McCord 2005, 2007). The earliest inhabitants of the region, Paleoindians (10,000-8,000 BC), followed the retreat of Wisconsin glaciers from the area. Paleoindian artifacts have been documented in the region although no sites have been excavated (Tankersley et al. 1990, Cochran et al. 1990). The Archaic Period (8,000-6,000 BC) followed the Paleoindian Period in the region. Early and Late Archaic artifacts and sites are common in the region although virtually nothing is on record for the Middle Archaic period (Cochran et al. 1994, McCord 2007). Following the Archaic Period, several technological innovations including ceramics, plant cultivation and the construction of earthen burial mounds and geometric earthen enclosures herald the Woodland Period (1,000 BC to AD1,200) (McCord 2005). The earlier part of the Woodland period, approximately 2,000 years ago, is most relevant to the Yorktown Circle.

East central Indiana contains a unique grouping of mounds and enclosures that date to a 500 year period that overlaps the Early Woodland and the Middle Woodland Periods. Three types of earthwork sites are recognized in the region: enclosure complexes made up of multiple enclosures and typified by Anderson Mounds; burial

mounds such as the Windsor Mound; and isolated enclosures exemplified by the Chrysler enclosure (Cochran 1992)(Figure 6). The clustering of enclosure complexes is not duplicated elsewhere in Indiana and a noticeable gap separates the east-central Indiana enclosures from those in Ohio. Early excavations of these sites led archaeologists to conclude that they represented a mixing of two archaeological cultures, the Early Woodland Adena and the Middle Woodland Hopewell (Vickery 1970, Swartz 1971, 1976). Based on excavations at Anderson Mounds (Vickery 1970) and the New Castle site (Swartz 1976), a New Castle Phase was proposed which included some of the mound and enclosure sites in east central Indiana as well as sites further south in Indiana and east into Ohio. From ongoing research with these sites (Cochran 1988, 1992, 1996: Cochran and McCord 2001; Kolbe 1992; McCord and Cochran 1996), it is apparent that they are part of an interconnected regional network. The radiocarbon dating shows that the sites were constructed and in use between cal 250 BC and AD 350. The sites contained similar types of artifacts including ceramics and chipped stone tools as well as artifacts of exotic materials such as copper and mica. Given the similarities and geographic relationships between the sites, we can view them as representing a local population of related people. The different site types suggest that they served different purposes. The overall placement of earthworks in east central Indiana shows that the sites were organized in relation to other earthwork sites in the region. We can view the distribution of earthworks in east central Indiana as a map of a sacred landscape as defined by the people living in the area. The spacing of the sites across the landscape and the arrangement of earthworks in relation to astronomical alignments suggests some of the ideas held by the people, ideas about connections with the rest of the universe as well as life, death and rebirth (Cochran and McCord 2001:47-48). The east central Indiana earthworks are part of the redefined New Castle Phase (McCord 2006). As redefined, the Phase only includes mound and enclosure sites in east central Indiana containing similarities in artifacts, chronology and landscape relationships.

Sites in the New Castle Phase are recorded in Delaware County near the Yorktown Circle. Throughout the county, 12 mound and 2 enclosure sites are reported (McCord and Cochran 1996), although several of the mounds may have been natural features. The only 2 earthworks thought to still survive in Delaware County are the Parkinson Mound (12-Dl-12) and Bell Creek or Stewart Mound (12-Dl-21). The Parkinson Mound (12-Dl-12) is located on the north side of the White River within ½ mile of the enclosure and the Bell Creek Mound (12-Dl-21) is located south within 2½ miles of the enclosure (Figure 7). Another enclosure is reported in southeastern Delaware County, 12-Dl-35, but was already destroyed when it was reported in 1881 (Phinney 1882).

Following the Early and Middle Woodland, mound and earthwork construction ended in east central Indiana. The Late Woodland (AD 500-1100) is defined by ceramics, the presence of the bow and arrow and a heavier reliance on cultivated crops. Because arable land was limited to small areas of floodplain soils along the larger rivers in east central Indiana, large Late Woodland sites are rare (McCord 2005). The same environmental limitation reduced the establishment of the succeeding Late Prehistoric Period (AD 1000-1700) in the region as well (McCord 2005). Late Prehistoric sites

occur around the margins of east central Indiana, but very few sites from this period are on record for the region.

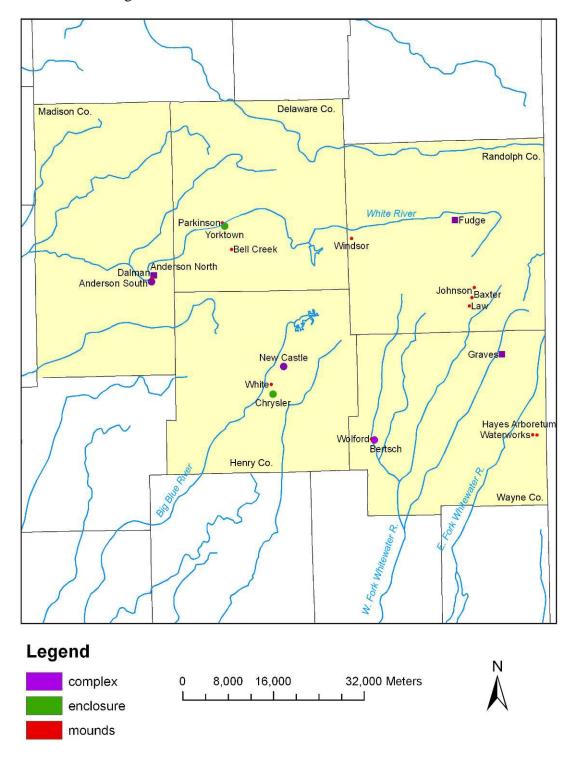


Figure 6. New Castle Phase earthworks consisting of rectangular and circular complexes, isolated enclosures and mounds.

Figure 7. The location of Parkinson and Bell Creek mounds in relation to the Yorktown Enclosure.

Investigations

ARMS proposed several methods to investigate the site to determine its nature, extent and significance. Investigations of the site were conducted between May and July, 2007. ARMS personnel included Don Cochran, Chris Guillion, Rachel Klabacka, Beth McCord and Andy Smith.

Topographic mapping of the site was conducted by INDOT staff. The locations of the excavations were recorded from a datum established by INDOT. The survey data was made available to ARMS to construct a site map using SURFER software. The excavations were recorded using a SE6 Total Station and SDR33 fieldbook. The excavations were also referenced to GPS coordinates using a Sokkia Axis³ antenna using NAD 83.

All recovered 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. Radiocarbon samples were dried, weighed and repackaged prior to submission to Beta Analytic, Inc. Soil samples were identified by Munsell color, texture and structure. All records were verified and maps were redrawn for publication.

The landowner has requested a review of the artifacts collected from his property prior to deciding on their final disposition. If the landowner decides to keep the artifacts, additional documentation will be accomplished according to DHPA guidelines. The landowner may choose to curate them at a museum or other public institution. Ball State University will curate the artifacts if the landowner so desires.

Archival Research

A review of historic documents in ARMS files, resources at Bracken Library at Ball State University and the Indiana State Archives was conducted. The information reviewed consisted of archaeological reports, county histories and atlases, and aerial photographs. Additional historical documentation and research is being carried out by Weintraut and Associates.

Background information regarding the enclosure is minimal. The site may be the "fortification" referred to in an early Delaware County history (Helm 1881:28). "In the vicinity of Yorktown, Mt. Pleasant Township, is one of those enclosures which from observations made has been pronounced to be of the class know as fortifications" (Helm 1881:28). Setzler's (1930) archaeological survey of Delaware County thought Helm's fortification might be associated with the Kilgore Village site (12-Dl-10) located in Section 24, T 20 N, R 9 E, approximately three miles to the west of the Yorktown enclosure, but doubted a shallow ditch observed there was an actual fortification. A fortification mound is mentioned in a 1934 newspaper article. The article is entitled "Mound Builders' Path Thru Eastern Indiana is Traced, Archaeologist Finds Evidence of

Fortification Mound along White River and Buck Creek" (Colton 1934). Unfortunately, the title provides most of the pertinent information as the article is more about Mound Builders than about the fortification "along the White River in Delaware County" (Colton 1934). Rodeffer's (1967:72-73) survey of Delaware county did not locate Helm's fortification, but he did assign a state site number (12-Dl-39) to the Helm reference. The site form gives the location of the enclosure at the Kilgore Village site.

Another possible reference concerning the fortification identified by Helm (1881) is contained in Article 7 of the 1818 Treaty of St. Mary's involving the Lenape or Delaware,

"One half section of land shall be granted to each of the following persons, namely; Isaac Wobby, Samuel Cassman, Elizabeth Petchaka, and Jacob Dick; and one quarter of a section of land shall be granted to each of the following persons, namely; Solomon Tindell, and Benoni Tindell; all of whom are Delawares; which tracts of land shall be located, after the country is surveyed, at the first creek above the old fort on White river, and running up the river; and shall be held by the persons herein named, respectively, and their heirs; but shall never be conveyed or transferred without the approbation of the President of the United States (Kappler 1904:171)." [italics added]

Samuel Casman [Casman not Cassman] was the first to purchase land in Mt. Pleasant Township. His land entry was for the north half of Section 22 and dated September 16, 1820 (Figure 8). As the record goes, Casman's first wife died on their property. He married again, sold the land to Hon. Oliver H. Smith and moved to a reserve on the Mississinewa River. He was later found dead in a hollow log in Madison County. The second purchase made under the treaty was by Solomon Tindell for the southeast quarter of Section 15 on February 25, 1824. Benoni Tindell made his purchase of the northwest quarter of Section 23 on the same date. How long the Tindells kept the property is not recorded. The south half of Section 14 was reserved for the use of the heirs of Isaac Wobby, but their representatives disposed of it to other parties. There was no mention of land in the name of Elizabeth Petchaka or Jacob Dick in the early land grants (Ellis 1898:152-153, 159,162).

The creek mentioned in the St. Mary's treaty would be Buck Creek given the location of the land entries. "The old fort" may refer to an enclosure. However, the reference states the tracts were given "at the first creek above the old fort" which would place it further west (downstream) from Buck Creek and not at the location of the enclosure. Given the historic information, it is not clear if the Yorktown Enclosure is related to the structure described in the St. Mary's Treaty, Helm (1881), Setzler (1930) or Colton (1934). Since site 12-Dl-39 was assigned by Rodeffer (1967) to identify an enclosure near Yorktown, the site number was retained and used for the Yorktown Enclosure.

Figure 8. A portion of the USGS 7.5' Muncie West, Indiana Quadrangle showing the location of the Lenape reserves.

One of the better sources of information concerning the enclosure was found in a series of aerial photographs housed at the Indiana State Archives and a 1930 aerial provided by a local resident. As Figure 9 indicates, in 1930 the area around the enclosure had been cleared and the enclosure was covered in grass. The ditch is clearly evident and the external embankment is also visible. The fox farm mentioned by several

local residents is located west of the enclosure. No access road or obvious modifications to the enclosure are evident in the photograph. The 1939, 1941, 1956, 1961 and 1969 aerial photos housed at the Indiana State Archives show changes in the site area shifting from grass and a few trees to woods (Figure 10). The ditch is evident in all of the photos, but most clear in the 1939 and 1941 views due to the low number of trees. A gateway is not distinct in any of the photos. The 1939 photo may show a gateway on the southwest side of the enclosure or the anomaly may relate to drainage cuts documented in the area. The aerial photographs clearly demonstrate the enclosure existed prior to 1930. No apparent access, road, farming activities or modifications to the enclosure were observable within the currently wooded area.

Site Location Confidential Not for Public Disclosure

Figure 9. 1930 aerial showing the enclosure (Courtesy of Jack and Cindy Spears).

Figure 10. Aerials documenting changes through time at the enclosure (Courtesy of the Indiana State Archives).

An 1887 Atlas of Mt. Pleasant Township in Delaware County shows a historic structure near the enclosure on the property of Elizabeth Wilson (Griffing 1971) (Figure 11). The structure appears to be to the west of the site. The structure is not depicted on an earlier 1876 Atlas (Andreas 1968). The structure is not shown on any of the twentieth century aerials. The location of this structure was within the proposed right-of-way for

the widening of SR 32, but no archaeological materials were reported in the Phase Ia survey (Stillwell 2002).

Site Location Confidential Not for Public Disclosure

Figure 11. Portion of the 1887 atlas showing the structure west of the enclosure.

Visual Survey

A visual survey of the site helped to determine its similarity to earthen enclosures included in the New Castle Phase. Observations of the ditch were made and the site was examined for the presence of an embankment or gateway. In addition, any surface artifacts encountered were noted.

An initial site visit on March 14, 2007 revealed that the ditch and central platform were completely submerged from the high water level of early spring. The enclosure was contained within a wooded area that measured approximately 136 m east-west by 112 m north-south. The woods were composed of second growth deciduous trees and thick shrub understory composed primarily of honeysuckle. The trees were less than 77 years old since the site was covered in grass in a 1930 aerial photograph. It appeared that there were three successive fence rows at the edge of the woods.

On a subsequent visit to the site on May 24, 2007 the water had receded enough to observe the enclosure, but the ditch still held approximately 0.5 to 0.7 m of water

(Figure 12). The circular ditch was prominent, but no gateway was discerned. An external embankment was present around the majority of the ditch, but was better defined on the western side. An apparent internal embankment was also observed, an inconsistent feature for New Castle Phase enclosures. Three cuts through the embankment wall were found on the western side. These cuts were presumably for drainage channels allowing runoff from the field to collect in the ditch. In the surrounding woods, several small dumps of historic debris were noted on the surface. On the western side of the woods, a large metal box was observed partially buried in the ground. At each of the corners of the woods, irregular piles of earth were noted. The initial observation of three fence rows at the edge of the woods only appeared along the northern boundary.



Figure 12. Photograph of the enclosure in May 2007.

On May 31, 2007, Don Cochran met with Curtis Tomak and Chris Koeppel of INDOT and Rick Jones of DHPA at the site. Given the condition of the site, a few modifications to the original investigation plan were made.

On October 2, 2007 after some of the vegetation had lost leaves, the site was visited once again to further record the historic dumps and clarify linear features that occurred at the margin of the woods. On previous visits to the enclosure, it appeared that the remnants of three fence rows occurred along the northern woods boundary. A fence line at the edge of the woods is apparent in the 1939 aerial photo. Each "fence row"

appeared as an elevated area with a depression between the rows (Figure 13). At the northwest corner of the woods, the fence lines were distorted by earthmoving that had pushed in the fence line(s). Along the west side, three lines appeared visible, but the outer two intersected at area 4 shown on Figure 14. Those two lines then intersected at area 6 shown on Figure 13 so only one broader elevated ridge was apparent. At the southwest corner, two fence rows were visible on the south side until area 9, a drainage cut. West of this point, only one possible fence line was apparent. The elevated area was much broader, 3-3.5 m, than a fence line should appear. Along the southern side, the elevated area had the appearance of a roadway. A linear feature connecting to the residential drive east of the enclosure and continuing along the west, south and east side of the woods is visible on the 1956 aerial photo. This may represent an access road. The linear elevation could also represent a constructed berm. The feature is large enough to create a poorly drained, marshy area along the southern side of the woods that extends several feet into the current corn field. Along the east side, the single wide roadway/berm continues although it is less pronounced in elevation. Unfortunately, the survey data taken by INDOT personnel did not reach the margin of the woods and the linear features were not incorporated into a contour map. The function of these linear features as fence rows, a roadway or berm is speculative without further exploration. At a minimum the features document historic activities and disturbances.



Figure 13. Photo of possible fence lines on northern edge of woods.

Figure 14. Areas of historic disturbances.

In addition to the linear features, 12 discrete historic dumps or historic isolates were observed and documented. The dumps are shown as areas 1, 2, 3, 5, 7, 8, 10, 11, 12, 14 and 15 on Figure 14. Primarily the dumps occurred just to the interior of the linear features identified as potential fence lines and/or a roadway/berm. The dump areas appeared to be surface scatters and contained glass, metal and ceramic materials. The glass and ceramics were styles manufactured primarily between 1920 and 1950. Given the recent age of some of the materials contained within the dumps, not all of the artifacts

were collected or sampled. A more through description of the dumps is provided in Appendix A. Two unique structures were identified in ground: a large metal "box" that was partially buried (Figure 15) and a concrete basin (Figure 16) (Appendix A).



Figure 15. Partially buried metal box.



Figure 16. Concrete basin, area 2.

Pedestrian Survey

The woods that contain the enclosure is surrounded by a cultivated field. A pedestrian survey of a 15 m buffer around the woods was undertaken (Figure 17). A portion of the area north of the woods was previously surveyed for the SR 32 expansion (Stillwell 2002), and no archaeological sites were recorded in this area. The current survey was conducted by pedestrian transects spaced no more than 10 m apart. All observed artifacts, except for fire-cracked rock and bricks that were counted in the field, were collected. Site locations were recorded on an aerial map and by GPS coordinates.

Figure 17. Area covered by pedestrian survey.

The pedestrian survey consisted of a 15 m wide corridor in the agricultural field around the perimeter of the wooded area. The systematic survey was conducted at a 7 meter interval. The buffer around the woods was also covered on several different occasions and less systematically covered. Surface visibility within the agricultural field was visually estimated to be between 85 and 95%. Visibility was affected by crop residue, corn between 0.15 m and 0.60 m high, and dry conditions.

Three archaeological sites were encountered by the pedestrian survey (Figures 18 & 19). Site 12-Dl-1104 was an isolated find of one flake located in the field near the

northeast corner of the woods. Site 12-Dl-1105 was a small scatter of historic artifacts and two lithic flakes between SR 32 and the northwest corner of the woods. Site 12-Dl-1106 was a lithic scatter found on the western side of the woods. The site extended to the west outside the 15 m buffer. Site summaries are provided below. No diagnostic artifacts were recovered, so it is unclear if these sites are related to the enclosure.

Site Location Confidential Not for Public Disclosure

Figure 18. Location of the archaeological sites identified during the pedestrian survey.

Figure 19. Archaeological sites shown on a portion of the USGS 7.5' Muncie West, Indiana Quadrangle.

Site No.: 12-DI-1104 Figures: 18 & 19

Location:

Size: Isolated find

Soil: Miami silt loam, 0 to 2 % slopes (MmA)

Landform: Till plain Visibility: 90%

Artifacts:

1 edge modified flake unknown chert

Recommendation: Due to low artifact density, the site does not appear eligible for listing

on the IRHSS and NRHP.

Site No.: 12-DI-1105 Figures: 18 & 19

Location:

Size: 12 m NS x 18 m EW

Soil: Miami silt loam, 0 to 2 % slopes (MmA) and Fox silt loam, 0 to 2% slopes (FsA)

Landform: Till plain and outwash terrace

Visibility: 90%

Artifacts:

1 edge modified flake Fall Creek 1 edge modified flake HT Fall Creek 1 whiteware, body undecorated

2 stoneware, body

3 flat glass aqua 1 container glass, body clear

1 bottle glass, lip clear - machine made

1 bottle glass, lip aqua – blown

1 bottle glass, base aqua - machine made, rectangular form, embossed

1 brick Not collected

Recommendation: The majority of the historic artifacts appear to be recent in origin. The site is located adjacent to SR 32. The one aqua glass bottle lip may relate to 19th century trash disposal or historic use of the area. A historic structure is depicted on an 1887 atlas to the west of the site (Griffing 1971). Due to low artifact density, the site does not appear eligible for listing on the IRHSS and NRHP.

Site No.: 12-DI-1106 Figures: 18 & 19

Location:

Size: 28+m EW x 40 m NS (site extends to the west)

Soil: Fox silt loam, 0 to 2% slopes (FsA)

Landform: Outwash terrace

Visibility: 90%

Artifacts:

58 unmodified flake Fall Creek
17 edge modified flake Fall Creek
4 core Fall Creek
2 bipolar Fall Creek
25 fire-cracked rock not collected

Recommendation: The site boundaries were not defined during this project. The site extends to the west. The surveyed portion of the site was on eroded soils with subsoil exposed on the surface. Given the eroded conditions, the surveyed portion of the site does not appear to be eligible for listing on the IRHSS and NRHP. The western limits of the site should be defined in the future.

Shovel Testing

The wooded area that contains the enclosure was shovel tested on a 10 m grid. The surface visibility within the woods was 0%. Factors contributing to the surface visibility were leaf litter, excessive brush and a few tree falls. Shovel tests were approximately 30 cm by 30 cm wide and were excavated until the subsoil was encountered. All excavated soil was screened through 6.4 mm wire mesh. Shovel tests were then backfilled. A total of eleven shovel probe transects running north-south were completed (Figure 20). Transect 11 was short due to the angle of the tree line. The topography within the woods was slightly undulating with small rises and slopes. The density of the understory made it difficult to maintain strict transects and a few shovel tests could not be completed. Representative soil profiles of the shovel tests were recorded. All observed artifacts were collected. Digital photographs were taken to document the shovel tests.

The typical soil profile of the shovel tests consisted of a shallow A/O-horizon, approximately 6 cm deep below the ground surface. This strata was a very dark grayish brown color (10YR 3/2) with a silty texture. The A-horizon was approximately 20 cm deep below the ground surface, had a dark yellowish brown color (10YR 4/6) with a loamy texture. The B-horizon was a brown color (10YR 5/3) with a silty texture. The soils for the most part were consistent with the exception of Transects 9-11. Transects 9 and 10 had the same soil strata, but they were a bit deeper. Transect 11 had no A/O or A-horizon.

Shovel tests # 3-5 of Transect 6 and shovel tests #4-6 of Transect 5 were dug within the earthern enclosure. Again, the soils were typical but contained redoximorphic features associated with poorly drained or submerged soils. The most southern two shovel tests in these transects were also somewhat different. Shovel test #6 of Transect 5 had a shallow A/O-horizon, but the A-horizon extended to 41 cm below the ground surface. Shovel test #5 of Transect 6 had a shallow A/O-horizon, but the A-horizon extended to 45 cm below the ground surface.

Figure 20. Location of the shovel tests.

A few shovel tests were excavated that were not on the 10 meter grid. One shovel test was located on the apparent interior embankment on the central platform on the west side of the platform (Figure 20). The shovel test encountered a thin O/A horizon approximately 5 cm thick that was a dark grayish brown (10YR 4/2) loam. A mixed Bhorizon occurred between 5 and 37 cm below the ground surface and consisted of a very dark grayish brown (10YR 3/2) and dark yellowish brown (10YR 4/6) clay. At 37 to 49

cm below the ground surface a buried A-horizon was found that consisted of a dark grayish brown (10YR 4/2) silt loam. This shovel test indicated that the mixed B-horizon had been placed on top of a natural or old A-horizon. The time frame for this mixed deposit was probably fairly recent since only a thin O/A horizon was encountered and the B-horizon showed a clear mixing of soils (Figure 21).



Figure 21. Photograph of shovel test excavated in the interior embankment.

One shovel test was placed in the ditch on the western side of the enclosure (Figure 20 & 22). A very dark gray (10YR 3/1) silt loam A-horizon was encountered in the top 10 cm of the shovel test. The B-horizon was found to have a gleyed horizon indicating the depth of the water table at approximately 20 cm below the ground surface. The B-horizon was a dark gray (10YR 4/1) clay with brownish yellow (10YR 6/6) mottles. The lack of a deeper A or A/O horizon within the ditch was unusual for a precontact era enclosure. Excavations in the ditches of other regional enclosures typically have between 30 and 100 cm of organic fill in the ditch (McCord 1999:96). Water table lines are not typical of regional enclosures either, although the Great Mound ditch at Anderson which is over 3 m deep has been observed to retain standing water.



Figure 22. Photograph of shovel test excavated in the ditch.

The shovel tests were negative for prehistoric materials. The lack of prehistoric material from the enclosures is consistent with east central Indiana and Ohio Valley Middle Woodland enclosures (McCord 1999, Pacheco1996). Only one shovel test, #2 of Transect 1, encountered historic materials. A wire fragment approximately 3 cm long and 0.5 cm wide was noted in this shovel test and discarded. Historic and modern debris were found on the surface in various locations throughout the woods (Figure 14, Appendix A).

Instrument Survey

Data for a contour map of the enclosure was provided by INDOT. Additional instrument survey was conducted by ARMS to map shovel tests and excavation units. Both data sets were combined to construct maps for this report.

The maps produced have a jagged appearance with sharp peaks and valleys that are products of the mathematical functions used by SURFER. A seeming rise in the ditch elevations on the northwest side of the enclosure give a false suggestion of a gateway, but this is actually an area lacking data points.

The contour and 3D surface map of the site clearly documents the ditch, exterior embankment and interior embankment (Figures 23 & 24). The enclosure is between 65 and 70 m across from the outside edge of the embankment. The ditch is approximately 4 m wide and 1 m below the ground surface. The exterior embankment is approximately 5 m wide and 0.6 m tall. The interior embankment is most obvious on the western and northern sides of the platform and is approximately 0.5 m in height. The cross-section of the enclosure also helps demonstrates the depth of the ditch and height of the embankments (Figure 25).

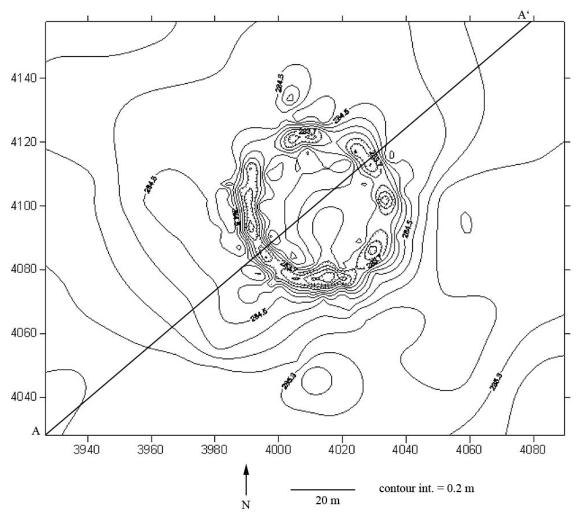


Figure 23. Contour map of the enclosure.

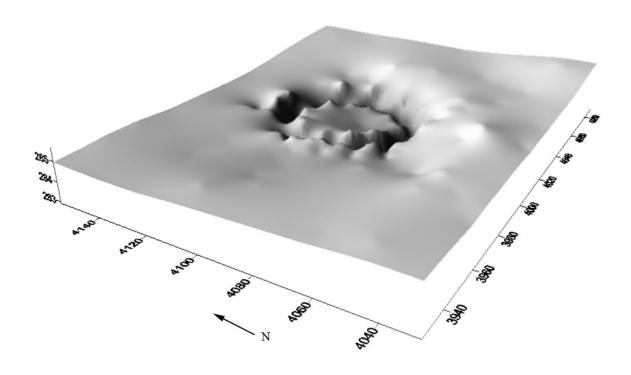


Figure 24. 3D image of the enclosure (scale in meters).



Figure 25. Cross-section of the enclosure shown on Figure 23 from A to A' (elevation in meters).

Geophysical Survey

To help identify potential archaeological resources, two areas were covered by geophysical survey (Figure 26). Both areas were surveyed with an FM36 gradiometer. One area on the central platform of the enclosure was free of enough vegetation to allow for a survey. The area within the proposed road expansion between the woods and SR 32 was also covered. All data collected from the magnetometer survey were processed with GEOPLOT software. After processing, the data were reviewed for potential archaeological anomalies. A few of the anomalies were investigated by excavating one shovel test approximately 30 cm x 30 cm over the anomaly and four radial shovel tests around the anomaly at approximately 1 meter intervals. The results of the geophysical survey helped to limit the amount of excavation necessary during the project.

Due to the density of the undergrowth within the woods, the gradiometer survey could not be conducted across the entire enclosure. The central platform contained a few trees, but the growth of small understory had been limited by the high water. An area 20 x 20 m square on the central platform was clear enough to conduct the survey. Transects were spaced at one meter intervals. Due to the vegetation, the data was collected with a manual trigger at 0.5 m intervals along each transect. Survey resolution was 0.1 nT. Areas of trees or shrubs were given dummy data values. The gradiometer survey of a portion of the central platform did detect several magnetic anomalies (Figure 27). Most of the anomalies were strong dipoles that are typical of surface or near surface metals. Five positive monopoles were investigated by shovel tests (Figure 28). The shovel tests found no prehistoric or historic evidence that would cause the anomalies. The shovel tests may have missed the anomaly or the anomaly was not visually discernable.

Site Location Confidential Not for Public Disclosure

Figure 26. Location of gradiometer survey.

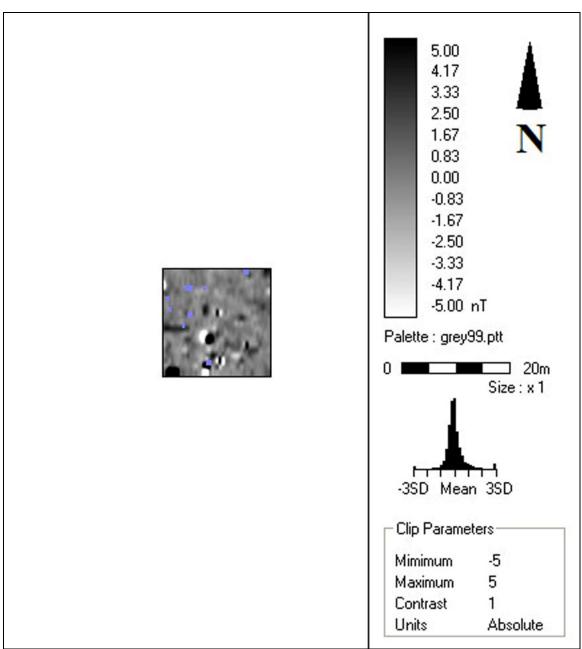


Figure 27. Gradiometer results of the central platform.

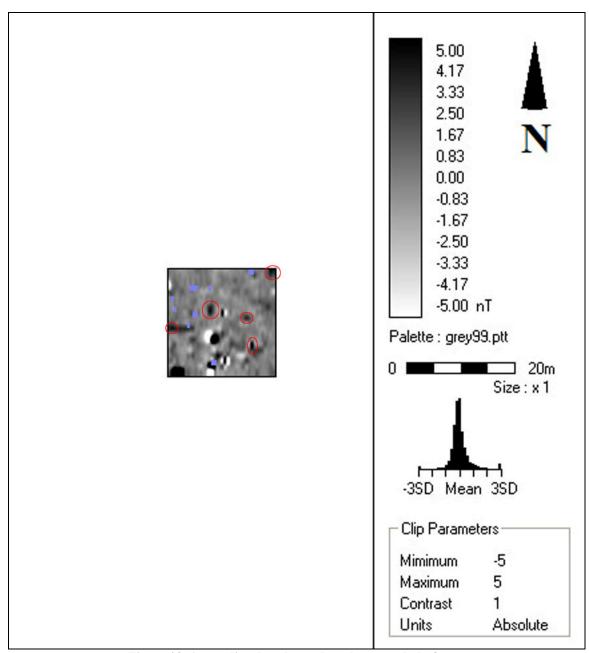


Figure 28. Anomalies shovel tested on the central platform.

The area between SR 32 and the north edge of the woods was in a cultivated field and the survey methods differed somewhat. The area examined consisted of 14 – 10 m blocks. Transects were spaced at one meter intervals. Data was collected with an external encoder at 0.25 m intervals along each transect. Survey resolution was 0.1 nT. INDOT staff conducted a resistivity survey of this area as well. The gradiometer survey of the strip between the woods and SR 32 also detected several magnetic anomalies (Figure 29). The most obvious anomaly was a linear dipole indicating a buried utility cable. Four positive monopoles were investigated by shovel tests (Figure 30). At the second anomaly from the east, four fire-cracked rock were observed. The other shovel

tests found no prehistoric or historic evidence that would cause the anomalies. The shovel tests may have missed the anomaly or the anomaly was not visually discernable.

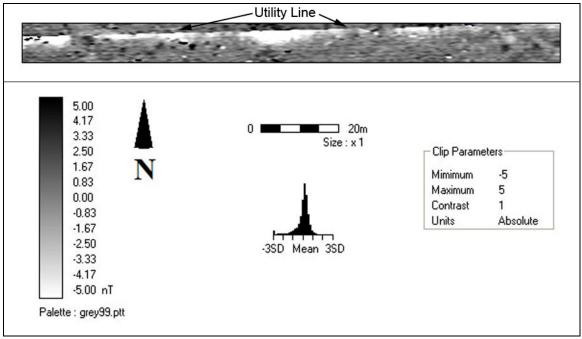


Figure 29. Gradiometer result of the agricultural strip.

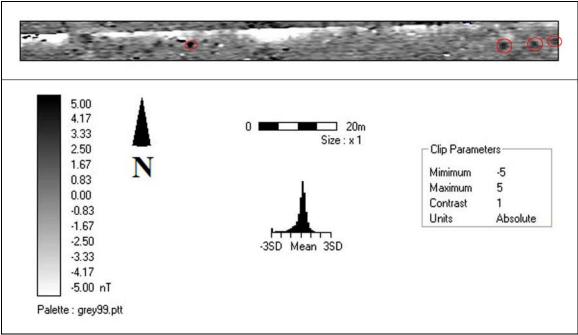


Figure 30. Anomalies shovel tested in agricultural strip.

Limited Excavations

Limited testing of the enclosure consisted of shovel cuts excavated through the embankment in two locations (Figure 31). At the northernmost drainage cut along the western embankment, a narrow trench, Test Unit 1, about 0.4 m wide (east-west) and 1.2 m long (north-south), was shovel cut parallel to the axis of the embankment. Another cut through the western embankment was designated Test Unit 2. This unit was approximately 0.4 m wide (north-south), 7.4 m long (east-west) and provided a cross-section of the embankment wall. The excavated soil was not screened. Both walls were trowel cleaned to clearly define soil strata. A profile of one wall was completed. Soil samples were collected from each identified strata. Charcoal was collected as appropriate. All excavations were backfilled. Digital photographs were taken to document the excavations.

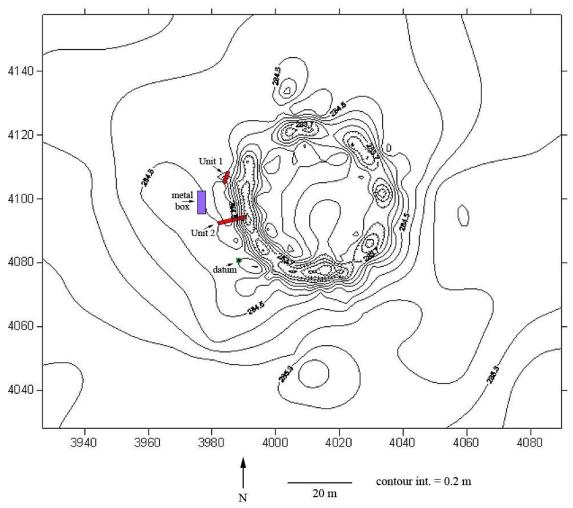


Figure 31. Location of excavation units in the embankment wall.

The profile of Unit 1 indicated a buried A-horizon at the bottom of the cut (Zone 3) that likely represents the original ground surface (Figure 32 & 33). Over this, Zone 2 would appear to be the original (older) embankment wall. Zone 1 was a mixed very dark grayish brown (10YR 3/2) and dark yellowish brown (10YR 4/6) clay just like the mixed B-horizon encountered in the shovel test on the interior embankment. Zone 1 is believed to be a recent addition. No O/A-horizon was discerned, but the unit is on a slope and erosion has likely occurred.



Figure 32. Photograph of Unit 1, looking south.

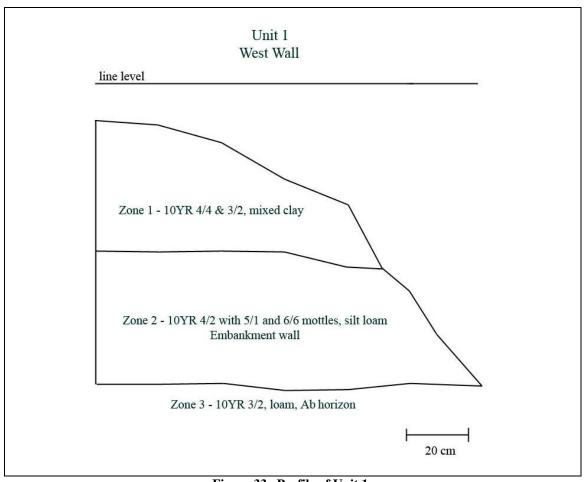


Figure 33. Profile of Unit 1.

The profile of Unit 2 revealed a buried A-horizon, Zone 4, at the base of the cut and had the same appearance as Zone 3 in Unit 1 (Figures 34 & 35). Zone 3 was also comparable to Zone 2 in Unit 1 and indicates the original embankment wall construction. Zone 2 was a mixed deposit again comparable to Zone 1 in Unit 1 and likely represents a recent addition. A thin O/A horizon approximately 5 cm thick was encountered in this profile.



Figure 34. Photo of Unit 2, looking west.

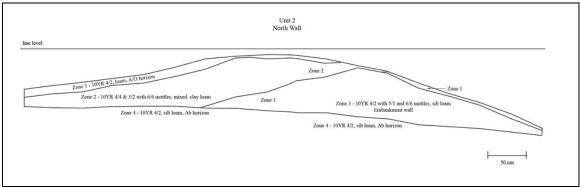


Figure 35. Profile of Unit 2.

No artifacts were recovered in embankment cuts, but the soil was not screened. Artifacts are a rare occurrence in Middle Woodland enclosures in the New Castle Phase unless mounds are present (Cochran and McCord 2001). An apparent charcoal deposit was found at the interface of Zone 2 and 3 in Unit 1 at the original ground surface. A sample was collected and upon inspection found to be incompletely burned. Given the provenience of the sample at the original ground surface, the sample was submitted for AMS dating. The resultant date was 100 ± 40 BP (Beta-233124) indicating a modern age. The sample was from a modern tree root.

Discussion

Investigations of the Yorktown Enclosure were challenging from a variety of perspectives. While the site appeared distinctly similar to Native American circular earthworks in east central Indiana, it also deviated from them. Field investigations did not produce artifacts or radiocarbon dates to directly link the earthwork with other earthworks in the New Castle Phase. Oral accounts suggested that the site had been used for raising fur-bearing mammals, but there was no direct evidence to support these claims from the investigations of the enclosure itself. In the following section, we discuss the evidence for identifying the Yorktown Enclosure as a Native American enclosure related to the New Castle Phase of east central Indiana.

The first clue to the origin of the Yorktown Enclosure is the shape of the earthwork. The shape of the earthwork, a circular ditch with a surrounding embankment, is a common form for 2,000 year old Native American enclosures in the New Castle Phase of east central Indiana (Cochran 1992, McCord and Cochran 1996, Cochran and McCord 2001). In fact, all but two enclosures in the region are constructed by excavating a circular or rectangular ditch and mounding the excavated dirt around the outside of the ditch to form an embankment. The ditch of the Yorktown Enclosure is deeper than most enclosures of a similar size in the region and there is a small embankment on the edge of the interior platform as well as around the outside of the ditch. Only one other enclosure in the region has an interior embankment, the Late Prehistoric Strawtown Enclosure 912-H-883)(White et al. 2003), but no enclosure has both an exterior and an interior embankment. However, in comparison with all other enclosures in the region, the most obvious missing element at the Yorktown Enclosure is an entranceway across the ditch to the interior platform. Thus, based on comparison with other Native American earthworks in the region, the Yorktown Enclosure fits the common attributes of circular enclosures except in two particulars: the presence of an interior and exterior embankment and the lack of an entranceway across the ditch.

In comparison to other regional circular enclosures, the Yorktown Enclosure fits within the range of sizes. Most of the circular enclosures in the region are around 30 m in diameter, but diameters of 45 m up to 100 m are known (Cochran and McCord 2001; McCord 1998, 1999). ArcScene was used to generate three-dimensional models of the Yorktown Enclosure, Chrysler Enclosure and Earthwork D at Anderson for visual comparison (Figure 36).

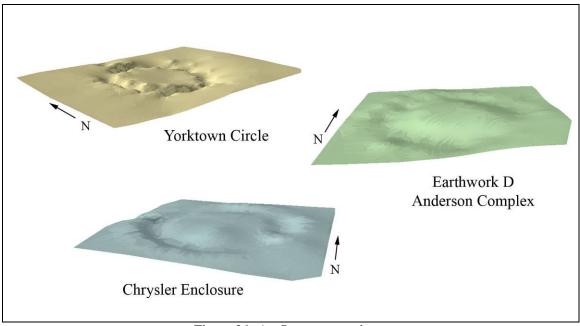


Figure 36. ArcScene comparison.

A cross section of the embankment revealed an older embankment buried beneath redeposited glacial till while a shovel test in the ditch showed that little humus was present. Compared with other enclosures in the region, the lack of humus in the ditch indicates that the current bottom of the ditch has not been exposed for very long. Taken together, these two factors suggest that the ditch was cleaned out historically and the spoil piled on top of the older embankment. The embankment on the edge of the interior platform also was composed of mixed glacial till, apparently deposited during the modification of the ditch. The historic modification apparently removed the gateway. Since historic modification is not apparent on any of the aerial photographs dating from 1930, it seems evident that the modification occurred prior to 1930. Thus, the features of the Yorktown Enclosure that are contrary to other circular enclosures in the region are most likely a result of historic modification.

In addition to the shape of the earthwork, the location of the Yorktown Enclosure in relation to other earthworks in the region also offers clues to its origin. Native American earthworks in east central Indiana are distributed across the landscape in definite patterns. The even distribution of the 5 earthwork complexes shows that the region was segmented into at least 5 subdivisions (Figure 37). An equivalent space equal to the 5 subdivisions exists between the Anderson Mounds and Fudge complexes although no earthwork complex has been recorded there (Figure 37). Circular earthwork complexes are separated from rectangular earthwork complexes (Figure 6). Half-way between the rectangular complexes (north end of Anderson Mounds, Fudge and Graves) are situated individual mounds and enclosures. In at least one instance, between the Fudge and Graves enclosures, three mounds mark the half-way point (Figure 37). The half-way point between the Anderson Mounds complex, the unmarked subdivision and half-way point with the Fudge enclosure subdivision are marked by mounds and enclosures (Figure 37).

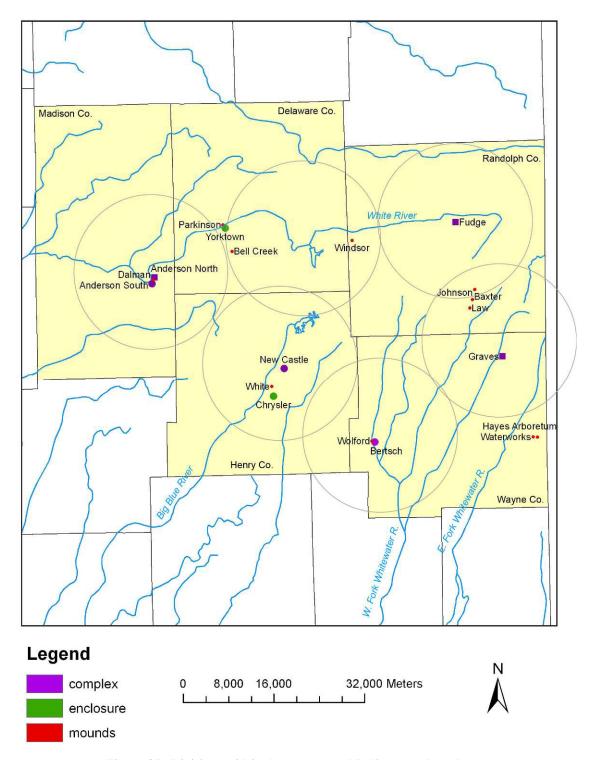


Figure 37. Divisions within the east central Indiana earthworks.

The Yorktown Enclosure fits this distribution pattern since it is situated on the half-way point between the Anderson Mounds complex and the unmarked subdivision upstream on the White River. The Yorktown Enclosure is also associated with the Parkinson Mound and the Bell Creek mound on this half-way line and is situated between

the two mounds (Figure 37). The three earthworks are not aligned: the Yorktown Enclosure is about 200 m to the east of a line connecting Bell Creek Mound and Parkinson Stone Mound (Figure 38). Although the three earthworks are not directly aligned, they are aligned with other regional earthworks.

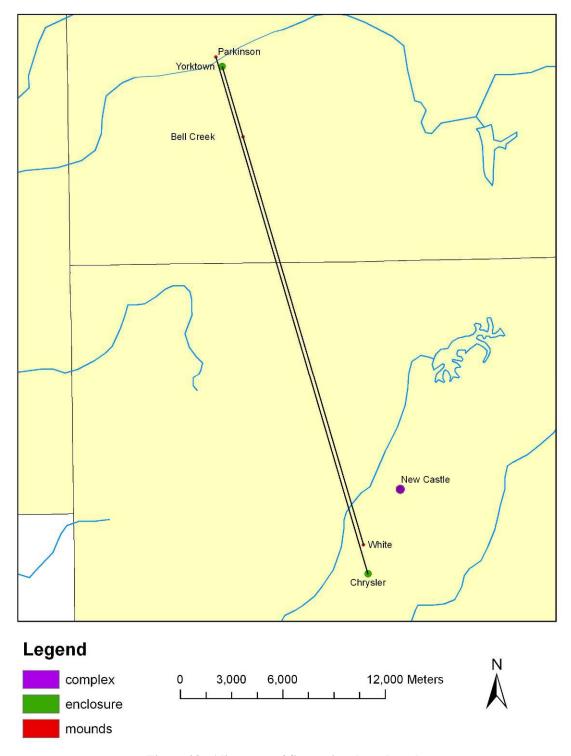


Figure 38. Alignment of five regional earthworks.

If a line is extended to the southeast connecting Parkinson Mound and the Chrysler Enclosure at New Castle, there are 5 earthworks that fall within 200 m of the line. More impressive, however, than this near alignment of five earthworks is the alignment between the White site at New Castle and the Yorktown Enclosure. A connecting line between the two earthworks falls directly across the Bell Creek mound. The Yorktown Enclosure is also connected to the Anderson Mounds complex along two alignments (Figure 39). A line extending from the Yorktown Enclosure to Circle Mound falls directly across Earthwork G. The Yorktown Enclosure also connects with Earthwork D directly across the center of the Great Mound. The Great Mound-Yorktown Enclosure alignment duplicates the astronomical alignment of sunset at winter solstice and sunrise at summer solstice documented at Anderson Mounds and elsewhere in the region (Cochran and McCord 2001, McCord 2006). The alignments that connect the location of the Yorktown Enclosure with earthwork complexes and nearby mounds thus duplicates and reinforces patterns recorded with other earthworks in the region (Cochran and McCord 2001, McCord 2006).

An additional element of the location of the Yorktown Enclosure that has been observed at sites in the region is the exact placement of the circle in relation to other features of the immediate landscape. The Yorktown Enclosure ditch and embankment are primarily located in a swale, but the east side of the enclosure extends into a small rise. In constructing the enclosure, a slight shift to the west would have placed the whole structure within the swale and avoided the extra effort of digging the ditch into the hillside. In several other instances we have observed that enclosures are similarly situated on the landscape regardless of landscape features. For instance, at Anderson Mounds, Earthwork D is placed on the slope of a small rise and not on the crest of the rise as might be expected (Cochran and McCord 2001:19). The Fiddleback enclosure was built to extend out over the ravine on the west edge of the enclosure and the embankment abuts the embankment of the Great Mound (Cochran and McCord 2001;15). At the New Castle site, Earthwork 2 partially crosses a small swale at the head of a ravine. The embankment of Fudge Mound cut off shallow drainages although the embankment could have been shifted a short distance to the south to avoid this (McCord 2006). It seems apparent that enclosures were constructed at particular locations and that the setting was not dictated by landscape features but by the preference of the builders. Given the alignment data presented in the preceding paragraph, and as stated previously (Cochran 1992:40), earthworks were constructed to align both internally and externally with other earthworks, astronomical events and other phenomenon.

Given the shape of the Yorktown Enclosure, its size, the placement of the enclosure on the landscape, and relationship with other regional earthworks, it appears clear that the earthwork is of Native American origin and fits with other earthworks in the New Castle Phase of east central Indiana. While the ditch was apparently deepened and possibly widened during historic times, the earlier embankment and the central platform retain their original integrity. While historic sources cannot confirm the presence of an "old fort" at the location of the enclosure, given the aboriginal origin of the enclosure, the site was designated as 12-Dl-39.

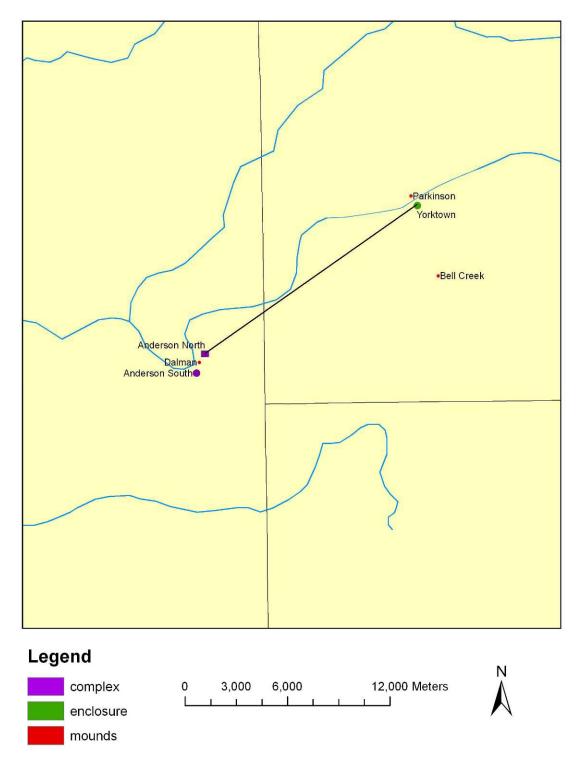


Figure 39. Alignment between Anderson Mounds and the Yorktown Enclosure.

Conclusions and Recommendations

Archaeological investigations of the Yorktown Enclosure were carried out by the Archaeological Resources Management Service to determine whether the enclosure was a Native American earthwork and to evaluate the potential significance of the site. Field investigations included mapping, survey, geophysical prospecting and limited test excavations. The most conclusive evidence for the age of the site included the documentation of an older embankment underneath more recently deposited mixed glacial till and comparison with other earthworks in the New Castle Phase. The older embankment shows that the site is of bank and ditch construction. The depth of the ditch and the sediment deposited on the older embankment indicates that the earthwork was modified historically. The size, shape and location of the earthwork clearly relate it to other earthworks in the New Castle Phase.

Given that the older embankment is preserved underneath more recent sediment and the lack of modification to the interior platform, the enclosure retains integrity in spite of the modification to the ditch. Virtually all of the earthworks in the New Castle Phase have been damaged to some extent (McCord and Cochran 1996). In addition, the Yorktown Enclosure is one of only two isolated circular enclosures that have survived in the region. It is therefore clear that the Yorktown Enclosure is an important archaeological site and should be nominated to both the State and National Registers of Historic Places. While the site is situated just outside the proposed new right-of-way for the reconstruction of SR 32, it is vulnerable to secondary impacts related to the road reconstruction and development along the improved road corridor. Ideal use of the site location would be as a park or greenspace if the drainage issues can be resolved.

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Appendix A Descriptions of Historic Dumps

Area 1 was a scattered dump that extends to area 2 approximately 11 m east (Figure 1). The scatter of materials included a piece of cement that was 0.24 m x 2.5 m long), chunks of cement, brick, a metal box, metal, and metal rings. The scatter also contained chicken wire and barbed wire that might have been a gate 4' x 4' in size. This dump is in between the innermost and middle fence lines.

Area 2 was the eastern side of the scatter from area 1. An in-ground cement basin was encountered that was 1.5 m EW x 2 m NS x 0.3 m deep (Figure 2). Associated with the basin was galvanized chicken wire. Just to the south west of the basin more chicken wire and metal was encountered over an area 1.2 m x 6 m. The wire and metal may have been part of a possible animal pen or run. A ceramic tile piece with cement at one end was also noted.

Area 3 is at the northwest corner of the woods. The area contained several piles of dirt and debris that looked like a fence row had been removed by machinery. A 4" diameter metal fence post (Figure 3) was encountered along with other metal angle iron posts and wooden posts. Fragments of 4" x 4" opening woven wire field fencing was also observed.

Area 4 consisted of a square shape stone pile. At this area the two outer fence lines appeared to intersect and only two fence lines were continued.

Area 5 contained two objects. One of the objects was a metal truck and the other was possible the front to a metal train. These objects were collected (Figure 4). The toys are similar to Marx styles that date to the 1930s (O'Brien 1979).

At area 6 the 2 "fence rows" intersect into 1 row.

Area 7 was a dump covering an area 3 m NS x 5 m EW (Figure 5). This dump contained the oldest historic artifacts observed and was therefore sampled. The objects collected are included in Table 1 (Figures 6 & 7). Manufacturing dates for the artifacts range from the 19th and 20th centuries. Most of the artifacts appear to relate to the early 20th century. The actually dumping of the artifacts likely occurred during the mid 20th century.

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Figure 1. Areas of historic dumps and isolates.



Figure 2. Cement basin at area 2.



Figure 3. Metal fence post in earthern pile at area 3.



Figure 4. Metal toys at area 5.



Figure 5. Historic dump at area 7.

Table 1 Area 7 Artifacts				
Identification	Description/Material	No.	Date Range	Reference
hinge	metal	1		
lantern part	metal	1		
shoe part	leather	2		
can	metal, tin - crimped with hole in top	1	post 1880	IMACS 1984
whiteware cup		1	1820 - present	ODOT 1991:178
whiteware vessel	molded, with handle	1	1820 - present	ODOT 1991:178
whiteware cup	with painted orange decoration- linear	1	1820 - present	ODOT 1991:178
whiteware	handpainted orange, yellow & red	1	1820 - present	ODOT 1991:178
whiteware	decalcomania, rose pattern	2	1890 - present	ODOT 1991:178
whiteware	decalcomania, floral pattern	1	1890 - present	ODOT 1991:178
whiteware	yellowed color	1	1820 - present	ODOT 1991:178
whiteware	gilt edge	1	post 1880	Majewski and O'Brien 1987:128
stoneware	brown interior glaze	1		
glass canning jar	aqua glass, base	2	mid 19th to mid 20th c	Lindsey 2007
glass canning jar	aqua glass, top with lightning closure	1	1908-1960	Lindsey 2007
canning jar lid	zinc with milk glass liner	2	1858 to mid 20th c	Lindsey 2007
glass jug	clear glass, top - bleach jug?	1		
glass canning jar	amber, top - lever closure	1	1895-1930	Lindsey 2007
glass bottle	green glass, base, molded - Depression glass	1	mid 20th c	
glass container	iridescent glass, base, molded - Carnival glass	1	1908-1925	Bowrey 2006
glass bottle	green glass, complete - soda bottle	1	mid 20th c	Lindsey 2007
glass bottle	green Coca-Cola glass, base - 1917 to 1928	1	1917-1928	Lynch 2007
glass bottle	clear embossed Nehi, top	1	post 1924	Wikipedia 2007
glass bottle	clear medicine bottle, machine seam	1	post 1875	IMACS 1984
glass bottle	clear, base - Patent design	1	1929 Patent Design	Odell 2007
glass bottle	clear medicine bottle, complete, screw top - "Great Seal" aqua medicine bottle, complete,	1		
glass bottle	cork top - "National Remedy Company"	1	1884-	Odell 2007



Figure 6. Historic artifacts collected from area 7.



Figure 7. Historic artifacts collected from area 7.

Area 8 was a rock pile just north of area 7. Within the rocks, metal posts, a large piece of concrete with a metal hook and a radiator were observed (Figure 8).

Area 9 consisted of a drainage cut through fence lines/roadway/berm. Along the south edge of the woods two fence rows appeared to be spaced 6' apart west of this drainage cut. East of the drainage cut, the fence rows appeared to be more like an elevated road or berm that is 3 to 3.5 m wide and 0.5 m higher than the surrounding terrain.

Area 10 consisted of a large mass of woven wire fencing (Figure 9).

Area 11 was a dump approximately 3 m x 3m in size (Figure 10). The dump contained milk bottles, roofing slate, an insulator, baby food jars, plastics and coal. All of the glass containers had screw top lids. A corroded license plate also observed had a date of 1948. The dump appears to contain materials dating from the mid to late 1940s.

Area 12 consisted of two rock piles (area 12a and 12b). A metal stake was observed in the rock pile in area 12b (Figure 11).

Area 13 was a dump approximately 3 m EW x 4 m NS in size (Figure 12). The dump contained coal, screw top bottles, a brake fluid can, Depression era glass, metal, enamel pans and kid size leather soles. The dump primarily contained materials dating between the 1950s and 1960s, however the Depression glass would be earlier.

Area 14 was a dump approximately 4 m x 4 m in size (Figure 13). The dump contained screw top bottles, a rubber shoe sole, a restaurant ware cup, mussel shell, and coal. A rock pile was located at the northwest corner of the woods to the northwest of the dump.

A large metal box was also encountered on the west side of the enclosure (Figure 14). The box was partially buried.



Figure 8. Metal post and radiator in rock pile at area 8.



Figure 9. Wire fencing at area 10.



Figure 10. Dump at area 11.



Figure 11. Metal stake in rock pile at area 12b.



Figure 12. Dump at area 14.



Figure 13. Dump at area 15.



Figure 14. Metal box.

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