PHASE I CULTURAL RESOURCES SURVEY OF APPROXIMATELY 28 ACRES AT THE LEAKE COUNTY INDUSTRIAL PARK EXPANSION CARTHAGE NORTHEAST PROJECT

Leake County, Mississippi

Terracon Project No. EB237180

October 2023

Prepared for:
Mississippi Department of Environmental Quality
2001 Summerville Avenue
Charleston, South Carolina

Prepared by:
Terracon Consultants, Inc.
Columbia, South Carolina

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DRAFT REPORT

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Project No. EB237180

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October 2023

MANAGEMENT SUMMARY

Terracon Consultants, Inc. (Terracon), on behalf of the Mississippi Department of Environmental Quality (MDEQ), has conducted a Phase I Cultural Resources Survey of approximately 28 acres at Leake County Industrial Expansion Carthage Northeast Project in Leake County, Mississippi (Township 11 North, Range 7 East, Section 25). Terracon conducted the project under contract to MDEQ (Client) in general accordance with the terms and conditions of Terracon Proposal No. PEB237149.02, dated August 24, 2023.

The purpose of the investigation was to identify and evaluate cultural resources that could be eligible for inclusion in the National Register of Historic Places (NRHP). The project is being done at the request of the Mississippi Department of Archives and History (MDAH Project Log #08-187-23) as indicated in a letter from Hal Bell of MDAH to Kyle Little of Terracon (letter dated September 22, 2023). Based on the nature of the proposed undertaking, as well as existing vegetation and land use, the Area of Potential Effects (APE) is considered to be a 0.25-mile radius around the project area.

As a result of the archaeological survey, no archaeological sites or isolated finds were identified. The architectural survey identified one resource, C-1–Pappy's Aviation (Figures 1 and 2). This resource is a ca. 1960s rural airfield that is recommended as being ineligible for inclusion in the NRHP. Based on these results, it is Terracon's opinion that no historic properties will be affected by the proposed undertaking and no additional cultural resource investigations are warranted for the project.

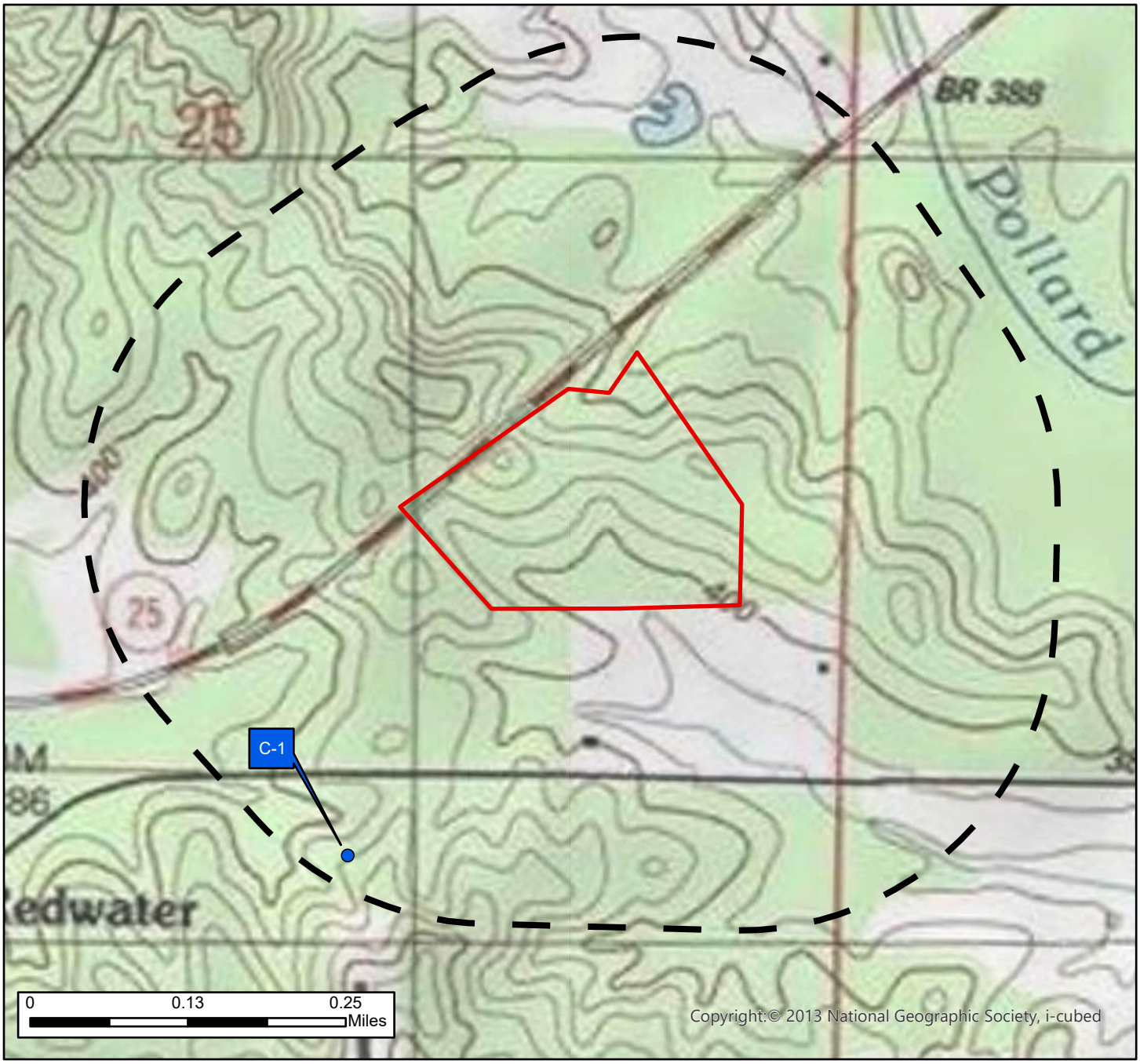
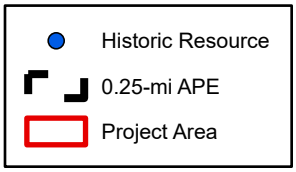
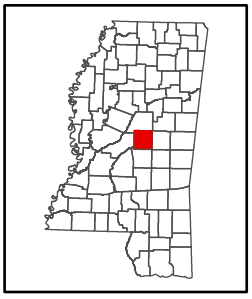
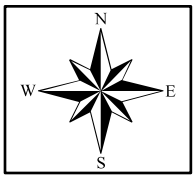


Figure 1. Project area and cultural resources within the proposed APE.
Base Map: Conway, MS (1989) 7.5' USGS topographic quadrangle.







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Reviewed By:	BGG

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CULTURAL RESOURCES

CARTHAGE NORTHEAST
LEAKE CO., MS

FIGURE

1

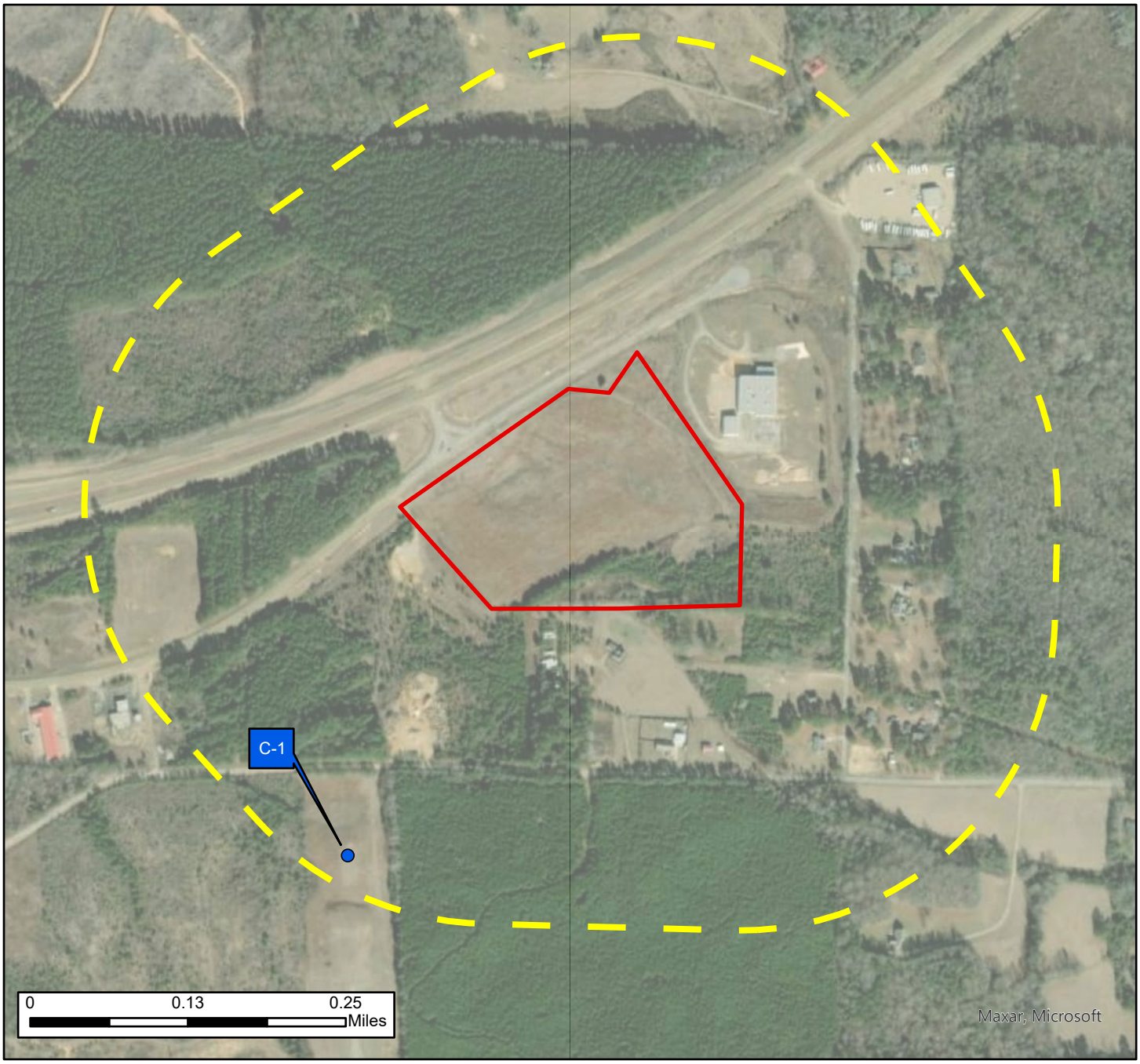
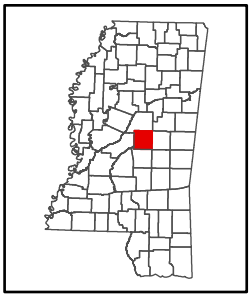


Figure 2. Aerial imagery depicting the project area and cultural resources within the proposed APE.
Base Map: ESRI World Imagery.

Historic Resource
0.25-mi APE
Project Area



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CULTURAL RESOURCES

CARTHAGE NORTHEAST
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FIGURE
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1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon), on behalf of the Mississippi Department of Environmental Quality (MDEQ), has conducted a Phase I Cultural Resources Survey of approximately 28 acres at Leake County Industrial Expansion Carthage Northeast Project in Leake County, Mississippi (Township 11 North, Range 7 East, Section 25). Terracon conducted the project under contract to MDEQ (Client) in general accordance with the terms and conditions of Terracon Proposal No. PEB237149.02, dated August 24, 2023.

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Fieldwork for the project was conducted on September 28, 2023, by Archaeologist/Field Director Barbara Gengenbach, M.A., Archaeologist Ethan Gilbert, M.A., and Crew Chief William Cothron, B.A. William Green, M.A., RPA, was the Principal Investigator for the project. Mills Dorn, M.H.P. served as the Architectural Historian for the project. The report was prepared by Barbara Gengenbach, Mills Dorn, and William Green.

This report has been prepared in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA) (54 U.S.C. § 300101 et seq.). The investigation and report meet the qualifications outlined in the Secretary of the Interior Standards and Guidelines for Archaeology and Historic Preservation (Federal Register 48:44716–44742) and the *Mississippi Standards for Archaeological Practices* (MDAH 2020). The Principal Investigator, Field Director, and Architectural Historian for the project meet the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61). The Principal Investigator and Field Director are also Registered Professional Archaeologists (RPAs).

2.0 ENVIRONMENTAL CONTEXT

2.1 PHYSICAL LOCATION AND SETTING

The project is an approximate 28-acre parcel of land located south of Frontage Road in Carthage, Leake County, Mississippi (Figures 1 and 2). Leake County, covering an area of approximately 585 square miles, is located in central Mississippi and is bordered by Attala County to the north, Neshoba County to the east, Scott County to the south, and Madison County to the west. The project area is located east of the Red Water Community of the Mississippi Band of Choctaw Indians. The Mississippi Choctaw reservation includes approximately 35,000 acres of land in 10 Mississippi counties, including Leake County. There are seven recognized communities: Bogue Chitto, Bogue Homa, Conehatta, Pearl River, Red Water, Standing Pine, and Tucker. The project area is irregular in shape and is bounded by Frontage Road to the north, and private property to the east, south and west.

2.2 GEOLOGY AND TOPOGRAPHY

The project area falls within the North Central Hills physiographic region of Mississippi. This area is underlain by diverse bands of Eocene, Oligocene, and Miocene sand, clay, and marl formations. The area is characterized by rolling topography which is predominately forest and woodland. The clayey soils only support smaller farms (Chapman et al. 2004). Topography within the project area is generally flat and appears to have been graded as the topographic map shows a sloped area. Elevations range from 390 to 430 feet above mean sea level (AMSL). The lowest elevations are along the southern boundary of the project area the highest elevations are in the northern portion of the project area (Figure 1).

2.3 HYDROLOGY

The project area lies within the upper portion of the Pearl River drainage basin of Mississippi. The river flows south for 444 miles from its origin in Neshoba County before emptying into Mississippi Sound and then the Gulf of Mexico. The closest natural water source to the project area is an unnamed tributary of Pollard Creek, located approximately 120 meters south of the project area at its closest point (Figure 1). Pollard Creek joins the Pearl River approximately four miles south of the project area.

2.4 SOILS

Soils in the project area are primarily composed of sandy loams formed in loamy fluviomarine deposits. Soil types in the project area are listed in Table 1 and depicted in Figure 3 (NRCS Web Soil Survey 2023). Approximately 89 percent (≈25 acres) of the project area contains moderately well to well drained soils, while 11 percent (≈3 acres) is poorly drained. Archaeological sites are expected to be located primarily in areas containing well and moderately well drained soils such

as Ora, Savannah, and Smithdale soils (Table 1, Figure 3). Ora and Smithdale soils are eroded, which limits the archaeological potential for containing significant sites.

Table 1. Soils in the project area.

Soil Type	Slope	Drainage Class	Notes
Ora fine sandy loam	5–8%	Moderately well	Eroded
Rosebloom and Arkabutla soils	n/a	Poor	Frequently flooded
Savannah fine sandy loam	2–5%	Moderately well	
Smithdale fine sandy loam	8–35%	Well	Eroded

2.5 CLIMATE

Cold climate during the late Pleistocene (approximately 12,000 B.P.) gradually transitioned to a more temperate climate by about 8500 B.P., when conditions became warmer and drier than present. By 4000 B.P., the average temperatures cooled while moisture increased, gradually leading to the current climactic conditions of the region (Delcourt and Delcourt 1985). Today, Mississippi is classified as humid subtropical, and is characterized by mild winters, and long, hot, summers. Precipitation is relatively evenly distributed throughout the year. Leake County has hot, humid summers and generally temperate to cool winters. The average high temperature in summer is 91°F, with an average low of 34°F in winter. Precipitation averages around 57 inches annually and the growing season lasts from April through October (NRCS).

2.6 VEGETATION

Throughout the latter half of the twentieth century, forests of the eastern U.S. were typically categorized according to the classification system based on the work of Lucy Braun (1950), which placed the project area in the Oak-pine region. In 2006, Dyer revised these forest regions, with the project area now being located in the Oak-pine section of the Southern-mixed region (Dyer 2006: Figure 3; ArcGIS shapefile available at https://people.ohio.edu/dyer/ forest_regions.html). This reclassification was done to acknowledge the diversity of deciduous trees that characterize the region, and to distinguish it with greater clarity from the subtropical evergreen forest. Vegetation of the southern mixed forest is described as diverse with no species assuming canopy dominance (Dyer 2006: 347). The southern mixed forest is composed of a variety of trees including loblolly pine, sweetgum, water oak, southern red oak, and red maple. Vegetation in the project area consists of a large, mowed field and a small section of planted pine in the southern portion of the project area (Figures 4 and 5).

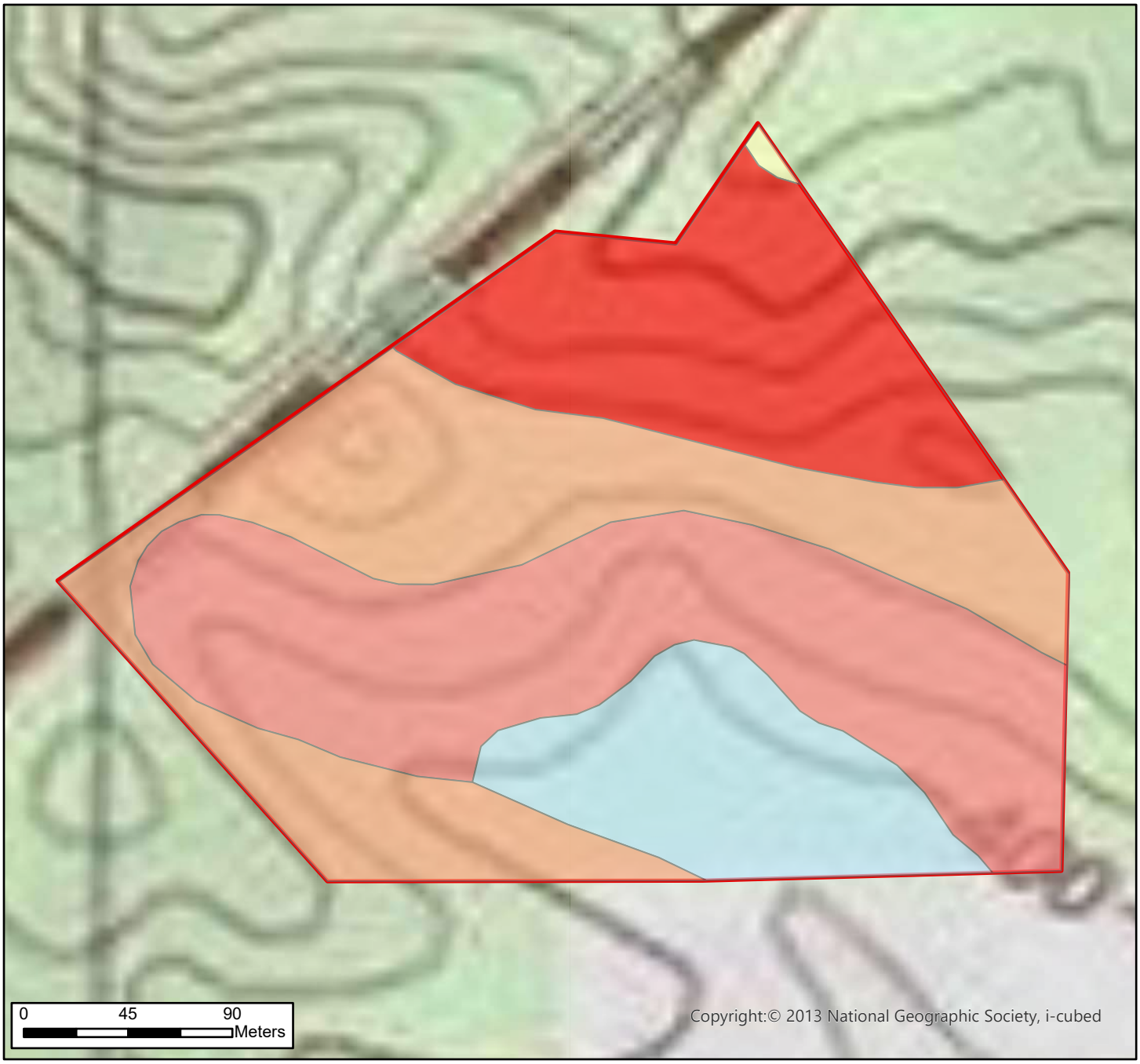

Figure 3. Soils in the project area. Soil data obtained from NRCS Web Soil Survey (SSURGO). Soils depicted in yellow are well drained, soils in red are well drained and eroded, and soils in blue are poorly drained.
Base Map: Conway, MS (1989) 7.5' USGS topographic quadrangle.

Soil Types

- Ora find sandy loam, 5-8% slopes, eroded
- Rosebloom and Arkabutla soils, frequently flooded
- Savannah fine sandy loam, 2-5% slopes
- Smithdale fine sandy loam, 8-15% slopes, eroded
- Smithdale fine sandy loam, 15-35% slopes, eroded

N W E S

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SOIL TYPES

CARTHAGE NORTHEAST
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FIGURE

3

Figure 4. Typical vegetation in project area, facing southwest.

Figure 5. Planted pine in southeastern portion of project area, facing south.

3.0 CULTURAL CONTEXT

The cultural history of North America can be divided into two general eras: prehistoric and historic. The prehistoric era spans at least 13,000 years of human activity, predating the arrival of Europeans on the North American continent. The historic era is brief by comparison and includes the time of initial European exploration and settlement through colonization, industrialization, and emergence of the modern era. The following discussion summarizes the various periods of prehistoric and historic occupation in the region.

3.1 PREHISTORIC CONTEXT

Since the late twentieth century there has been a growing debate over when humans first arrived in North America. The traditional interpretation is that Clovis Period humans first arrived in the new world by way of the Bering land bridge that connected Alaska to Siberia at the end of the Pleistocene, approximately 13,500 years ago (Haynes 2005; Martin 1973). From Alaska and northwestern Canada, these people moved southward through an ice-free corridor separating the Cordilleran and Laurentide ice sheets to eventually settle in North and South America. A variation of this theme is that humans travelled along the Pacific Coast of North America from northeast Asia during this time rather than going through an ice-free corridor (Erlandson et al. 2007; Fladmark 1979). Recently these interpretations have been called into question, with several sites providing possible evidence for earlier (Pre-Clovis) occupations. These sites include Monte Verde in southern Chile, Meadowcroft Rockshelter in Pennsylvania, Paisley Caves in south central Oregon, Bluefish Caves, Canada, the Buttermilk Creek Complex and Debra L. Friedkin Site in Texas, the Cactus Hill and Saltville sites in Virginia, and the Topper Site in South Carolina (Adovasio and Pedler 2013; Adovasio et al. 1979, 1980a, 1980b, Bourgeon et al. 2017; Dillehay 1989; Gilbert et al. 2008; Goodyear 2005; Goodyear and Sain 2018; McAvoy and McAvoy 1997; Meltzer et al. 1997; Shillito et al 2020).

Suggested dates for some of these sites (e.g., Topper) go back more than 50,000 years, although the evidence for this is strongly contested. The majority of these sites offer possible evidence for a human presence in the New World between 13,500 and 15,000 years ago. Although far from numerous, these sites are scatted across North and South America. Thus, it does appear that humans may have been in the New World as far back as 15,000 years ago, although more research is needed to validate this claim.

3.1.1 PALEOINDIAN PERIOD (CA. 13,500–10,000 B.P.)

The Paleoindian Period can be tentatively dated from about 13,500–10,000 B.P, possibly extending as far back as 15,000 years ago. At the beginning of this period, much of northern Mississippi was covered by a mesic forest. As temperatures warmed, the region became much drier, and eastern Mississippi showed evidence of aridity in the form of lowered water levels by the early Holocene (ca. 8000 cal. yr. B.P.) (Whitehead and Sheehan 1985).

During the Late Pleistocene, Paleoindians followed a semi-nomadic lifeway that included a subsistence strategy based on generalized foraging and supplemented by the hunting of megafauna (Walker et al. 2001; Walker 2007; Hollenbach 2007). Shortly after this time the megafauna, which included mammoth, mastodon, giant sloth and bison, became extinct throughout North America (Winters 1964). It is still not clear whether humans or the climate played a more prevalent role in the extinction of these large animals, although it is likely that both contributed to their extinction. Another recent hypothesis is that a meteor or comet impact occurred roughly 12,900 years ago that may have led to the extinction of both the megafauna and some Clovis populations (West and Goodyear 2008). This hypothesis, however, is still highly controversial.

Most of our knowledge about the Paleoindian Period in Mississippi and the Southeast in general is based on surface collections and inference rather than controlled subsurface excavations. The limited information we do have, however, suggests that the earliest Native Americans had a mixed subsistence strategy based on the hunting (or scavenging) of the megafauna and smaller game combined with the foraging of wild plant foods. Groups are thought to have consisted of small, highly transient bands made up of several nuclear and/or extended families

The archaeological record of Mississippi's Paleoindian period is primarily characterized by small lithic scatters and isolated finds of diagnostic, fluted projectile points rather than larger scatters and habitation sites. Fluted point surveys have produced high densities of Clovis and Late Paleoindian Beaver Lake/Barnes and Cumberland points throughout much of Mississippi, although distributions of different point styles have been found to vary across the area (McGahey 2000). Paleoindian settlements in Mississippi appear to have been concentrated primarily in the northeast portion of the state and along the Mississippi delta where intact Pleistocene age sediments are widespread. McGahey (2000) has provided one of the most comprehensive systematic studies on Paleoindian settlement patterns in Mississippi by analyzing the distribution of more than 2,100 fluted projectile point types across the state. Clovis and Beaver Lake/Barnes varieties are typically found in higher concentrations on bluffs along the margins of the Mississippi River delta in the west-central part of the state, while Cumberland points tend to be restricted to the northeast corner of the state along the Tennessee River (Anderson and Miller 2015). In comparison, Dalton and later Archaic side-notched point types are ubiquitous across the state. It is almost certain, however, that many sites located along the coast have been inundated by the rise of sea level that has occurred since the end of the Pleistocene (Anderson and Sassaman 1996). Raw materials used in the manufacture of Early Paleoindian projectiles and other lithic tools primarily consist of Ft. Payne and Dover chert from northern Alabama and middle Tennessee respectively.

Among the notable Paleoindian sites in Mississippi is the Hester Site (22MO569 and 22MO1011) located in nearby Monroe County. Excavations at the Hester Site have revealed the presence of deeply buried, intact stratified Late Paleoindian deposits containing fluted projectile points (Brookes 1979; McGahey 1996:371–372, 2000:2). Moreover, the Hester Site provides some of

the earliest subsistence data in the state. Excavations at Hester have recovered evidence of hickory nut, walnut, and hackberry from within a Dalton horizon indicating a reliance on mast-bearing arboreal species (Lentz 1985). The Dalton culture is considered transitional between the Paleoindian and Archaic Periods, and archaeological evidence in Mississippi supports the likelihood of a wide-ranging Dalton population with a diversified subsistence base that became more intensified and varied into the Archaic Period.

Paleoindian artifact assemblages in Mississippi consist of diagnostic lanceolate projectile points, scrapers, gravers, bola stones, unifacial and bifacial knives, gouges, and burins. Projectile point types included fluted and unfluted forms such as Clovis, Redstone, Cumberland, Barnes, and Simpson (Anderson et al 1992). Tools were typically well-made and manufactured from high quality cryptocrystalline rock. Paleoindians traveled long distances to acquire these desirable raw materials, and it is likely that particularly favored quarries were included in seasonal rounds, allowing them to replenish their stock of raw material on an annual basis.

3.1.2 ARCHAIC PERIOD (CA. 10,000–2,500 B.P.)

Environmental changes at the end of the Pleistocene led to changes in settlement patterns, subsistence strategies, and technology. As the climate warmed and the Laurentide glacier retreated northward, megafauna became extinct and coniferous forests were replaced by a more temperate deciduous forest biome. Human population size increased during this time, while territory size and settlement range decreased. Artifact assemblages from Archaic sites display a broad range of tool types in comparison to those from the Paleoindian Period, some of which have specialized functions for processing a larger variety of plant and animal resources (Griffin 1977). Other changes at this time included changes in human social organization in response to expanded food procurement strategies. These changes included restricted group mobility, larger population aggregations, inter-regional exchange systems, and initial attempts at plant domestication (Ford 1974). Other adaptations during the Archaic included restricted group territories, longer duration of site occupation, and more frequent intervals of site use. Much of the Southeast during this early part of this period consisted of a mixed oak-hickory forest. Later, during the Hypsithermal interval between 8000 and 4000 B.P., southern pine communities became more prevalent in the inter-riverine uplands, and extensive riverine swamps were formed (Delcourt and Delcourt 1985).

The Archaic Period has typically been divided into three subperiods, Early Archaic (ca. 10,000–8000 B.P.), Middle Archaic (8000–5500 B.P.), and Late Archaic (5500–3000 B.P.), based on changes in projectile point morphology, settlement patterns, and subsistence practices. Each of the Archaic subperiods appears to have been lengthy and successful in adapting technology to prevailing climatic and environmental conditions of the time.

3.1.2.1 EARLY ARCHAIC (10,000–8000 B.P.)

The Early Archaic Period reflects a continuation of the semi-nomadic hunting and gathering lifeway seen during the preceding Paleoindian Period; however, focus shifted to hunting modern game after the megafauna became extinct. During the Early Archaic, there appears to be a gradual increase in population and a shift in settlement patterns, as seasonally oriented hunting and gathering activities focused more on smaller, repeatedly used territories. Rather than moving from place to place utilizing readily available resources, humans became more sedentary, exploiting seasonally available foods. This is partly the result of a climactic phenomenon starting in the Middle Archaic known as the Hypsithermal interval, which resulted in the gradual warming of the southeastern United States. During most of the year, small kin groups roamed the landscape occupying short-term base camps and using resource extraction camps. During the fall, when resources such as nuts and white-tailed deer were more plentiful, groups gathered together to occupy larger base camps (Bense 1994). Increased sedentism during the Early Archaic reflects the expansion of deciduous forests throughout the region, which yielded more favorable habitat for exploitable species (Chapman 1975). Based on data from east central Mississippi, Jenkins (1982:22) has speculated that Early Archaic people were organized in small, band level groups of conjugal or extended families.

During the Early Archaic, hunters switched from using lanceolate spear points that were ideal for hunting larger game, to a series of smaller, more diversified variety of notched and stemmed points, along with scrapers, knives, drills, and ovoid blades. Diagnostic artifacts of the Early Archaic include a variety of side- and corner-notched projectile points that include Angelico, Big Sandy, Boggy Branch, Bolen, Dalton, and Hardaway, and bifurcates such as a MacCorckle, Cave Springs, Gadsden, and LeCroy. Other point types of the Early Archaic in Mississippi include Greenbriar, Lost Lake, Plevna, Decatur, Jude, and Pine Tree. The proliferation of new stone tool technologies in the Early Archaic is demonstrated by a survey of valley alluvial landforms on the eastern perimeter of the Yazoo Basin (Connaway 1988; Stallings 1997).

Other tools of the Early Archaic Period include hafted and non-hafted unifacial scrapers, adzes, perforators, drills, gravers, and grinding stones. Woodworking and food preparation tools that first appear in the archaeological record during the Early Archaic include axes, adzes, mortars and pestles, awls, gouges, and grinding stones (Chapman 1975).

A large number of Early Archaic sites have been recorded in the Upper and Central Tombigbee Valley of northeast Mississippi, with some having been subjected to intensive archaeological investigations. The Hester Site has yielded significant data on the Early Archaic Period, and in the Gainesville Lake area along the Mississippi-Alabama border Early Archaic components have been found in the lower levels of several multicomponent sites (Brookes 1979; Jenkins 1975a).

3.1.2.2 MIDDLE ARCHAIC (8000–5000 B.P.)

Based on available data, there seems to have been a significant change in settlement and subsistence practices and the technological organization of people during the Middle Archaic in Mississippi. The Middle Archaic subperiod (ca. 8000–5000 B.P.) coincides with the start of the Hypsithermal (a.k.a. Altithermal), a significant warming and drying trend that led to regional changes in the composition of forests and in the hydrology of river valley floodplains (Bense 1994:74). During the Hypsithermal, pine forests replaced the oak-hickory forests of the terminal Pleistocene. By the end of the Mid-Holocene, a Mixed mesophytic forest was established (Delcourt 1979). It was also during the Middle Archaic that extensive riverine swamps were formed, and the river and estuary systems attained their modern configuration.

Although subsistence was likely based on a wide variety of resources such as white-tailed deer, turkey, squirrel, and migratory birds, the Middle Archaic in Mississippi is characterized by a shift in subsistence to a heavier reliance on fishing and the gathering of wild plants. This is reflected in larger, more nucleated settlements in the floodplains, with smaller outlying camps being used on a seasonal basis. In northeast Mississippi, the percentage of Middle Archaic components found along major streams increases from approximately 68 percent during the Paleoindian period to 80 percent by the Middle Archaic (Raferty et al, 1980). Sedentism is indicated by the introduction of storage pits and possible houses, as well as burials (Bense 1987:15; Rafferty et. al. 1980:285). Concerning subsistence resources, there is a substantial increase in shellfish remains at sites with Middle Archaic components throughout the region. Sites with shellfish are most notable along the Tennessee River, although the Vaughan Mound located near the Tombigbee River has yielded considerable mussel shell from a series of Middle Archaic components.

Middle Archaic material culture also reflects a change in economy. During this time, Early Archaic point types were replaced by side-notched and stemmed lanceolates including Abbey, Beachum, Benton, Brewerton, Clay, Elk River, Guilford, Kirk Stemmed, Morrow Mountain, Cypress Creek, Eva, and White Springs–Sykes (McGahey 2000). Ground stone tools such as axes, adzes, grinding stones, and atlatl weights also become more common in the Middle Archaic. Such artifacts appear earlier in the east, with nutting stones being recorded throughout the entire Early Archaic sequence at the Hester Site. By contrast, the initial appearance of ground and polished stone and stone drilling implements mark the beginning of the Middle Archaic in the Yazoo Basin of western Mississippi.

One of the most significant changes that occurred during the Middle Archaic in the Southeast is the introduction of mounds (Russo 2004). Both earthen and shell mounds appear in the archaeological record in Mississippi at this time, although mound building would not become widespread and intensive until later. It is also during the Middle Archaic that exotic lithic materials are first introduced to Mississippi. In all, evidence for increased long-distance trade networks, warfare and interpersonal violence, the appearance of mounds, increased territoriality and

regional diversity, and new tool forms all indicate that local cultures were growing in both scale and complexity during the Middle Archaic (Anderson and Sassaman 2004).

3.1.2.3 LATE ARCHAIC (5000–3000 B.P.)

The end of the Hypsithermal warming event led to the establishment of modern climate conditions and marks the transition from the Middle Archaic to the Late Archaic Period (5000–2500 B.P). The Late Archaic saw a number of important developments in Mississippi, including population growth, increasing sedentism, the introduction of ceramic vessel technology, changes in lithic technology, elaboration of mound construction, and possibly the beginnings of small-scale horticulture. By the Late Archaic, peoples of the region learned to maximize the use of their natural environment, or what Caldwell (1958) has termed “primary forest efficiency.” By the end of this period, the appearance of sunflower, squash, and other native starchy seed annuals implies a greater emphasis placed on cultivation. Other changes in subsistence practices are reflected in the appearance of shell mounds. Both earthen and shell mounds appear in the archaeological record in Mississippi at this time, although mound building would not become a widespread and intensive activity until later in the prehistoric sequence (McGahey 2000:136). Late Archaic population increases inferred from projectile point distributions suggest the occupation of more widespread and diverse environments.

The distribution of Late Archaic material culture in Mississippi varies by region, and was likely influenced by a number of settlement and subsistence practices, as well as by variables such as prior environmental setting, number of investigations, and level of detailed analyses undertaken in these areas. The Yazoo Basin of western Mississippi offers a unique environmental setting for possible cultural development and is one of the most extensively studied regions in southeastern archaeology. The river systems of the region appear to have become more stable throughout the Holocene, leading some to consider the valley floor to be too young to contain evidence of pre-ceramic sites (Brain 1971:23). Moreover, a significant proportion of the most intensively investigated sites do not contain appreciable quantities of pre-ceramic period artifacts. As a consequence, very little data concerning Late Archaic culture in this region is available (Williams and Brain 1983). In fact, the southern portion of the Yazoo Basin contains very few, if any Late Archaic sites at all, a finding thought to result from the recent age of the landforms in this region.

Recent investigations on the coast have also added little new archaeological data concerning the Late Archaic. By contrast, Late Archaic sites of the Tombigbee Hills physiographic region of northeastern Mississippi are well studied. Sites with Late Archaic components identified from the Tombigbee Hills region include the Brinkley Site (22TS729), Cofferdam Site (22LO599), the Birthday Site (22LE582), the A.C. Nelson II Site (22TS758), the Kellogg Village Site (22Cl527), the Self Site (22MO586), the East Aberdeen Site (22MD819), the Okashua Site (22MO651), the Vaughn Mound (22LO538), the Barnes Mound (22LO564), and the Yarborough Site (22Cl814) (Bense 1987; Rafferty et al. 1980; Thorne 1976; Wynn and Atkinson 1976). Many of these sites have components that also predate the Late Archaic.

The Late Archaic Period in Mississippi can be subdivided into three phases: Benton, Poverty Point, and Gulf Formational. Although some researchers recognize the Benton point tradition as part of the Middle Archaic, McNutt (1996) considers it a formative Late Archaic cultural expression. Subsequent Late Archaic occupations in much of Mississippi are typically attributed to either the Poverty Point tradition or the Gulf Formational stage.

BENTON POINT TRADITION

In Mississippi, evidence of the Benton point tradition is found along the upper Tombigbee River Walley and extends northward into the middle Cumberland drainage of middle and western Tennessee. People of the Benton point tradition are thought to have engaged in an extensive seasonal subsistence cycle whereby hunting and gathering forays were undertaken, emphasizing the exploitation of resources within the valleys and associated tributaries of northern Alabama, northern Mississippi, and western Tennessee (McNutt 1996). Johnson and Brookes (1989:142) have used the presence and distribution of oversized chipped-stone blades and Benton points found throughout this region to reflect evidence of a “nonceremonial exchange network.” However, occurrences of these artifacts found within burials have led some to form alternative hypotheses regarding their function. The presence of cremated interments with well-manufactured, cached Benton points and large blades is one such example of Late Archaic burial ceremonialism (McNutt 1996).

POVERTY POINT TRADITION

The Poverty Point tradition consist of a series of midden mounds, monumental earthworks, and gathering camps that appear in the archaeological record between 3700 and 3100 B.P. The Earthworks of Poverty Point were created and used for residential and ceremonial purposes by a semi-sedentary population of hunter gatherers (McNutt 1996). Located within the Lower Mississippi Valley, the poverty point tradition is distinguished by the appearance of large mounds and other earthworks, clay balls referred to as “Poverty Point Objects,” microlithics, lapidary work, raw material trade, and the appearance of specialized manufacturing sites. Poverty Point, the type site for which the tradition is named, was constructed around 3800 B.P. and is one of the most well-known archaeological sites in the region. The earthworks at Poverty Point are much larger and more complex than any construction for some 2000 years after the site was abandoned. Although Poverty Point is known for its vast trade network, this is not well-represented in northeastern Mississippi.

THE GULF FORMATIONAL PERIOD

The Gulf Formational Period is transitional between the Late Archaic and Early Woodland in Mississippi and can be subdivided into three phases: Early (4,500–3,200 B.P.); Middle (3,200–2500 B.P.); and Late (2500–2100 B.P), with each subperiod distinguished by differences in ceramic technology (Walthall and Jenkins 1976). Projectile points display little differences between these periods and the preceding early Late Archaic (Bense 1987:16). The Early Gulf

Formational culture, centered on the eastern coastal plain, is defined by the presence of fiber-tempered Stallings Island and Orange series ceramics. The Late Gulf Formational period is characterized by the end of fiber-tempered pottery and the development and expansion of Alexander and Tchefuncte series ceramics across the western coastal plain. Other than the use of pottery, the general cultural expressions between the early Late Archaic and Gulf Formational Phase is not thought to be "significantly different" (Atkinson et al. 1980:14).

Late Archaic projectile points reflect population increase throughout the region as well as technological adaptation based on the wide variety of forms. Diagnostic Late Archaic projectile point types include McIntire, Pickwick, Ledbetter, Gary, Tangipahoa, Little Bear Creek, Cotaco Creek, Kent, Pontchartrain, Mud Creek, Wade, Delhi, Motley, Epps, Macon, and an assortment of barbed varieties. McGahey (2000) lists Pontchartrain, Shumla, and Evans points as being indicators of the Late Archaic of southern Mississippi. The most common diagnostic stone tool of the Late Archaic period, however, is a broad-bladed stemmed point found under a variety of names from Florida to Canada. In Mississippi, this point is referred to as Ledbetter Stemmed and sometimes Savannah River Stemmed. The Bear Creek, Flint Creek, and Tombigbee Stemmed points have been assigned to the Gulf Formational Phase. Other Late Archaic artifacts include ground and polished stone tools, ornaments, and soapstone cooking vessels.

The earliest pottery in the Southeast, Stallings, is found in coastal Georgia and South Carolina. This pottery dates from about 4500–3000 B.P. (Sassaman et al. 1990). In Mississippi, fiber-tempered pottery can be found starting at around 3,500 years ago. The earliest pottery in the Tombigbee basin is the fiber-tempered Wheeler series (Sparks 1987). The Wheeler Series is the only fiber-tempered pottery that is limited to the Coastal Plain. Wheeler pottery is characterized as a fiber-tempered ware that is mostly undecorated, although some examples have punctations or stamped design motifs. The Wheeler series continues to be made into the Early Woodland Period.

3.1.3 WOODLAND PERIOD (CA. 3000–1000 B.P.)

The Woodland Period saw a number of important developments throughout the Southeast, including an increase in population and sedentism; the widespread adoption of ceramic vessel technology; the introduction of the bow and arrow; the intensification of horticultural activities; and the use of conical burial mounds for interring the dead. Projectile points of the Woodland Period include Perkiomen, Lehigh, and Ashtabula, as well as a variety of large well-made contracting stemmed points (Justice 1987).

Like the preceding Archaic Period, the Woodland has traditionally been divided into three subperiods: Early Woodland (2500–1000 B.P.), Middle Woodland (1800–1400 B.P), and Late Woodland (1400–1000 B.P.). Within these periods, local phases have been defined for different physiographic regions of the state (Rafferty 2017).

3.1.3.1 EARLY WOODLAND (3000–2500 B.P.)

The Early Woodland subperiod in Mississippi is represented by the widespread adoption of pottery, specifically the Wheeler and Alexander Phases in northeast Mississippi. Some researchers, however, consider the Alexander Phase as part of the preceding Gulf Formational portion of the Late Archaic (Jenkins and Krause 1986; Meredith 2007). The Wheeler Phase is widely considered to reflect an introduction of fiber-tempered ceramics into northern and eastern Mississippi from the Gulf Coast (Jenkins 1975b). Other research suggests that Wheeler Pottery of the Tombigbee Valley was simply a local expression of the southeastern fiber tempering tradition (Atkinson et al. 1980). In either case, Wheeler ceramics are the earliest ceramic types manufactured in the Upper and Central Tombigbee River Valley and are considered to be affiliated with the Gulf Formational Tradition (Caldwell 1958). Surface treatments typically identified on Wheeler pottery include dentate stamped, punctate, and simple stamped varieties. Extensive trade networks established by the inhabitants of northeast Mississippi and by members of the Poverty Point Culture to the west indicate that the earliest ceramics at Poverty Point were of the Wheeler Phase, and were transported to the region along with steatite from the Alabama/Georgia Piedmont (Cropley 2014).

Following directly from the Wheeler Phase, the Alexander Phase is characterized by sand-tempered pottery with decorative treatments that include punctating, pinching, incising, rocker stamping, and fingernail impressions, with these methods typically applied to a smooth surface (Meredith 2007). Subphases of the Alexander ceramic tradition include the Hardin Phase of the Middle Tennessee River drainage, the Henson Spring Phase of the Tombigbee River drainage, the Dry Branch Phase of the Coosa River drainage, and the Ivy Knoll Phase found at a few sites along the Alabama River in central Alabama (Jenkins and Krause 1986; Meredith 2007:9–17). Although most archaeological research has emphasized ceramic typology, a number of diagnostic flaked stone tools have also been attributed to the Alexander Phase (Dye 1973; Meredith 2007). Projectile point types include Flint Bear Creek and Little Bear types (Dye and Galm 1986:29–32; Cambron and Hulse 1975). Other stone tools found at Alexander Phase sites include scrapers, utilized flakes, and an assortment of ground stone tools. Subsistence practices of the Alexander Phase are not well understood. However, the recovery of faunal remains including opossum, snake, bird, small mammals, fish, and shellfish from contexts attributed to the Henson Springs subphase in the Tombigbee region offer an indication of the types of game that were procured during this time (Jenkins and Krause 1986:46).

Another characteristic of the Early Woodland in Mississippi and the Southeast is the construction of mounds for interring the dead. Conical burial mounds are the most common type of Early Woodland mound. These mounds are thought by some to have been constructed to cover log tombs, or to serve as mortuary platforms. Excavations from the Bynum Mound complex near Houston in Chickasaw County, Mississippi have revealed evidence of decorated pots that derive from the Mississippi River Valley and axes made of greenstone from central Alabama. These discoveries suggest that people traveled great distances during this period for ceremonial items.

However, other research suggests the Early Woodland is largely a period of social isolation and decreased interaction (Anderson and Mainfort 2002:8).

Although cultigens such as chenopod, sumpweed, sunflower, knotweed, and maygrass had their beginnings during the Late Archaic, many were produced in much larger quantities throughout the Early Woodland (Anderson and Mainfort 2002). Agriculture was not evenly distributed throughout the Southeast during the Early Woodland and in some areas, including the lower Mississippi Valley, only minimal evidence for agriculture has been found (Anderson and Mainfort 2002:9). Thus, it appears that determining the role that agriculture played in Early Woodland settlement subsistence systems has been a major challenge for regional archaeologists.

3.1.3.2 MIDDLE WOODLAND (2200–1500 B.P.)

The Middle Woodland Period in the Southeast is characterized by changes in technology, an increase in mound construction, and the widespread expansion of trade networks and regional ceremonialism. During this period, people in some areas of the Southeast constructed platform mounds. The construction and use of these mounds is thought to have been related to mortuary and ritual activity. Examples of Middle Woodland mound centers in the Southeast include the Ozier Mound at Pinson and Kolomoki in southern Georgia (Anderson and Mainfort 2002).

In Mississippi, Middle Woodland pottery is recognized by the presence of sand- or grog-tempered fabric and cordmarked surface treatments (Walthall 1990). Grog-tempered pottery was prevalent along the uplands to the east of the Mississippi River. By contrast, sand-tempered pottery was more common along the Tombigbee River of east-central Mississippi. Projectile point types of the Middle Woodland in Mississippi include small to medium sized stemmed projectile points with small, unmodified bases (Anderson and Manifort 2002).

Research along the Tombigbee River drainage of northern and eastern Mississippi has resulted in the development of a chronological sequence for the Middle Woodland subperiod. The Middle Woodland in northeastern Mississippi is characterized by the Miller ceramic tradition (Walthall 1990). Originally devised by Miller (1941), the Miller I (2300 B.P–1800 B.P.) and Miller II (1800–1350 B.P.) subphases comprise the Middle Woodland cultures of the region. The Miller I subphase is characterized by sand-tempered, fabric impressed ceramics such as those found at the Pinson Mounds. Other defining attributes of the Miller I tradition include the introduction of burial mound ceremonialism and evidence for interregional trade. Contracting stemmed projectile points appear to have been the point type of choice during this period. Sites with Miller I components range in age from (2000–1800 B.P.) and include the Pharr Earthwork Mounds complex of Itawamba and Prentiss counties, the Cork Site located in Oktibbeha County in east central Mississippi, the Bynum Mounds located just east of Houston in Chickasaw County, and the Miller Site located approximately 40 miles north of Bynum.

With six conical burial mounds and a village recorded at the site, the Bynum mounds complex also contains several bent-pole houses, postmolds, and pits that were excavated at the site,

indicating long-term use by a large social group (Walling et al. 1991). The Miller Site is the type site for the Miller Phase and consists of two conical mounds and a substantial midden (Walling et al. 1991). Subsistence practices inferred from Miller I sites indicates a reliance primarily on intensive seasonal hunting and gathering in combination with minimal use of domesticated native plants. Widespread use of maize agriculture was not adopted until the very end of the Woodland Period. Hunting, shellfish collecting, and the gathering of edible plant foods were the primary subsistence-related activities of the period. In the Central and Upper Tombigbee Valleys, the Miller II Phase has been divided into two subphases based on ceramic attributes (Jenkins 1981; Walthall 1990). Early Miller II consists of Baldwin Plain and Saltillo fabric-impressed pottery. These are largely replaced in favor of Baytown plain, Mulberry Creek cordmarked, Withers fabric-impressed, Wheeler check stamped, Yates net-impressed, Gainesville complicated stamped, and Solomon brushed types, which appear during the Late Miller II subphase. Miller II projectile point forms are represented by bifaces with straight blades, and straight to contracting stems and haft elements with tapered shoulders. The type Tombigbee Stemmed possibly overlaps with the earlier Miller I type.

3.1.3.3 LATE WOODLAND (1500–1100 B.P.)

The Late Woodland Period is characterized by the Miller III Phase. Jenkins (1979: 263–271) has divided the Miller III into four subphases based on ceramic typology. These include the early Miller III Vienna subphase, the middle Miller III Cofferdam subphase, the late Miller III Catfish Bend subphase, and the terminal Miller III Gainesville subphase. Overall, Miller III is characterized by the introduction of clay as a dominant ceramic tempering agent and by the presence of bow and arrow technology.

The Vienna subphase is characterized by grog-tempered ceramics with minor amounts of sand-tempered wares. Baytown Plain is the dominant ceramic type, while Mulberry Creek cordmarked and Withers fabric-impressed pottery are minority types. Point types of the Vienna subphase include the Late Woodland-Mississippian Triangular point (Ensor 1979:145–149).

The Cofferdam subphase is characterized by increases in Mulberry Creek cordmarked, Baytown Plain, and Withers fabric-impressed ceramics (Jenkins 1979:266–268), with Gainesville simple stamped, Solomon brushed, and Alligator incised wares comprising minority types. A small amount of shell-tempered pottery also seems to be associated with the Cofferdam subphase. Projectile points of the Cofferdam subphase include Hamilton and Madison Late Woodland-Mississippian Triangular types (Ensor 1979:145–149). Hamilton points have an incurvate base, incurvate to occasionally straight blade, and finely flaked margins. Madison points have straight margins and straight to slightly incurvate basal margins.

The late Miller III Catfish Bend subphase is characterized by many of the same ceramic types as found in the contemporaneous Cofferdam subphase, albeit with the addition of Gainesville cob-impressed pottery as a minority type. There is also a noticeable lack of sand-tempered pottery associated with late Miller III components. The Madison point is the most frequent projectile point

of the Catfish Bend subphase (Bense et al. 1983). The Gainesville subphase represents the terminal Miller III period and is characterized by the appearance of shell-tempered pottery, increases in plain pottery, and decreases in Withers fabric-impressed pottery. Projectile points consist predominantly of Madison points (Ensor 1979:145–149).

Apart from ceramic and lithic technology, other traits that define the Late Woodland of Mississippi include the construction of small semi-subterranean, rectangular structures that served as dwellings; a transition in burial practices away from tightly flexed inhumations with no consistent orientation to semi-extended burials placed on the back or side with the head oriented to the east; and changes in dietary practices that include a decline in the exploitation of deer and an increase in the exploitation of other mammals, fish, turtles, and shellfish. Although corn was present, it never forms a large portion of any Late Woodland ethnobotanical assemblages, with wild plants remaining dominant at many Late Woodland sites of the region.

3.1.4 MISSISSIPPIAN PERIOD (CA. 900–450 B.P.)

The Mississippian Period saw dramatic changes across most the Southeast. Mississippian societies were complex sociopolitical entities that were based at mound centers, usually located in the floodplains along major river systems. The flat-topped platform mounds served as both the literal and symbolic manifestation of a complex sociopolitical and religious system that linked chiefdoms across a broad network stretching from the Southeastern Atlantic Coast to the Spiro Mounds in Oklahoma in the west, to as far north as Aztalan in Wisconsin. Mound centers were surrounded by outlying villages that usually were built along major rivers to take advantage of the rich floodplain soils. Smaller hamlets and farmsteads dotted the landscape around villages and provided food, tribute, and services to the chief in return for protection and inclusion in the sociopolitical system. While Mississippian subsistence was focused to a large extent on intensive maize agriculture, the hunting and gathering of aquatic and terrestrial resource supplemented Mississippian diets.

The Mississippian Period in Mississippi is typically subdivided into three subperiods: Early (900–770 B.P.), Middle (770–600 B.P.), and Late Mississippian (600–480 B.P.) (Bense at al. 1983). In the Tombigbee Valley of northeastern Mississippi, the Early Mississippian is associated with the Moundville I Phase. Moundville I Phase sites have been reported from the Central Tombigbee Valley (Jenkins 1979:275–277) and the Middle Tennessee Valley (Peebles 1978:370). These sites are characterized by ceramic assemblages consisting of Moundville incised and Mississippi plain as the dominant ceramic types. Mound Place incised, Bell plain, and Carthage incised are the minority wares for this period.

The Middle Mississippian Period in the Tombigbee Valley is represented by the Moundville II Phase. The Moundville II Phase is characterized by Moundville incised, Carthage incised, and Mound Place incised ceramics (Jenkins 1979:276). The Late Mississippian of the region is represented by the Moundville III Phase and is characterized by a dominance of Moundville

incised and Carthage incised ceramics, with Mound Place incised and Moundville engraved representing minority wares.

There was very little variation in lithic technology during the Mississippian Period. The predominant projectile point style is the Late Woodland-Mississippian Triangular, as well as the Madison type (Ensor 1979:145–149). In addition to lithic and ceramic artifacts, a variety of tools were produced from shell and bone. Shell tools include beads made from small, ground freshwater and marine gastropods; cut, drilled, and ground cylindrical shaped beads; drilled pearls; small, drilled and ground, disk shaped; and drilled and ground marine gastropod amulets (Curren 1981). Bone artifacts from this Mississippian Period consist of turkey and mammal bone awls, mountain lion bone amulets, mammal bone fishhooks, antler projectile points, beaver incisor chisels, and drilled black bear canine pendants (Curren 1981). A variety of items have been found in association with Mississippian burials. These include amulets, awls, fishhooks, necklaces, bracelets, chisels, projectile points, pendants, and dippers (Bense et al. 1983).

Faunal remains associated with Mississippian sites in the central Tombigbee valley include white-tailed deer, small mammals, turtle, and fish. Botanical remains recovered from Mississippian sites include corn, beans, pine, hickory nut, acorn, persimmon, loblolly pine, grape, maypop, chickweed, pigweed, goosefoot, and tuber fragments (Caddell 1981). Although hickory nuts formed a role in the diet, Caddell notes that corn forms a higher percentage of food plant remains from Mississippian features (Caddell 1981). The Upper Tombigbee Valley seems to have been sparsely occupied during the Mississippian Period.

3.2 HISTORIC CONTEXT

3.2.1 SPANISH CONTACT

The first European exploration in what would later become the state of Mississippi was the expedition of Hernando de Soto, which began in 1539. Commissioned by King Charles I of Spain, de Soto launched his operation from Havana, Cuba on May 18, 1539, with a force of 620 men and women that included soldiers, priests, craftsmen, engineers, farmers, and merchants. The purpose of the expedition was twofold: explore and exploit resources and spread Christianity to any local natives they would contact.

De Soto's entrada through the Southeast was well documented by its chroniclers—Garcilaso de la Vega, Rodrigo Ranjel, Luys Hernandez de Biedma, and the anonymous Portuguese observer known as the Gentleman of Elvas—and has been the interest of scholarly pursuit for much of the last century (e.g., Clayton et al. 1993; Hudson 1997; Swanton 1939). Consequently, much of his army's route is known with a good degree of certainty and many of the villages and towns that he visited have been identified archaeologically.

De Soto landed in Charlotte Harbor on Florida's west coast in May of 1539. De Soto made his way north through present day Florida and encountered numerous Indian tribes including the

Ucita, Mocozo, Ocale, Aute, Uzachile, and Apalachee. The Spanish expedition relied on native guides that were captured from tribes they encountered as well as Juan Ortiz, a Spaniard who was discovered living with the Ucita after being captured during the previous Pánfilo de Narváez expedition in 1527. As they made their way north, the de Soto expedition stopped to trade with many of the tribes to resupply and rest. Some of the encounters were peaceful, with tribes willingly offering assistance. However, some encounters turned violent as the Spanish practice of capturing tribal members to be used as guides or hostages was seen as threatening. The Uzachile, for instance, were threatened by the recent capture of a neighboring chief, Aguacaleyquen, who trapped and surrounded the Spaniards in hopes of freeing the captured chief. A skirmish ensued and de Soto was eventually able to convince the insurgents to surrender after which they were all put to death. After leaving Uzachile, de Soto headed to Apalachee in the Florida panhandle. The expedition reached Apalachee in the fall of 1539 and camped there for the winter (Green 2009).

After travelling through present-day Florida, Georgia, South Carolina, North Carolina, Tennessee, and back to Georgia, de Soto crossed into what is now Alabama from the Chiefdom of Coosa in northern Georgia in September 1540. He traveled southwest through the towns of Talisi, Caxa, Atahachi, and Piachi before reaching the town of Mabila on October 18. Mabila was described as follows:

> Situated upon a very beautiful plain, the town of Mauvila was surrounded by a wall as high as three men and constructed of wooden beams as thick as oxen. These beams were driven into the ground so close together that each was wedged to the other; and across them on both the outside and inside were laid additional pieces, not so thick but longer, which were bound together with strips of split cane and strong ropes. Plastered over the smaller pieces was a mixture of thick mud tamped down with long straw, filling up all of the holes and crevices in the wood and its fastenings, so that … the wall appeared to be coated with a hard finish such as one might apply with a mason's trowel. At every fifty feet there was a tower capable of holding seven or eight persons who might fight within it, and the lower part of the wall, up to the height of a man, was filled with the embrasures of a battery designed for shooting arrows at those outside. There were only two gates to the town, one on the east and the other on the west, and in its center, there was a great plaza around which were grouped the largest and most prominent houses (Varner and Varner 1988:353–354).

Tazcaluza, the Principal Chief of Mabila, warned de Soto to leave the town, but an incident ensued where one of Tazcaluza's high ranking leaders grabbed one of de Soto's men, who subsequently cut off the man's arm. This resulted in one of the bloodiest battles in recorded North American history. Nearly 3,000 Indians were killed, not including many others that were wounded and later found dead in their cabins and along the road. Tazcaluza's son was found dead with a lance thrust through his chest, but Tazcaluza and 15 to 20 of his men managed to escape early in the fray with some of the Spaniards supplies. Twenty-two Spaniards were killed as well, including two of de Soto's nephews and his brother-in-law, while another 148 were seriously injured. In addition, seven horses were killed, and 29 others were injured, which was a big blow to the Spaniards as they needed the horses to carry supplies (Green 2009).

De Soto and his army left Mabila on November 14, 1540, and traveled northwest through several towns before reaching the present-day Mississippi border in mid-December. The first town they came to was Chicaza, a small town of only 20 houses that was deserted, probably because they knew de Soto was coming. As with Mabila, a battle between the Indians and de Soto ensued in March 1541. The Spaniards were caught off guard; 11 men were killed, and many supplies were lost.

In late April 1541, de Soto arrived at the town of Alibamo. The town was deserted, and the corn had been hidden, but nearby was a fortress where the Indians had erected a strong barricade across the road. It was manned by 300 warriors painted red, with black, white, yellow, and vermilion stripes. Although the Spaniards were successful in breaking through the barrier, eight Spaniards were killed and another 26 were wounded. They left the area on April 30, 1541, and traveled for nine days through deserted country before reaching the town of Quizquiz, probably near present-day Memphis Tennessee. From there de Soto's army traveled through western Tennessee, Arkansas, and Texas before heading back to the Mississippi River. On May 21, 1542, de Soto died of an unspecified illness and his body was disposed of in the Mississippi River to prevent the Indians from finding it. For nearly another year the army continued wandering portions of the Southeast and Texas, eventually arriving back at the Mississippi River where they traveled through the Chiefdom of Quigualtam and another unspecified chiefdom before arriving at the Gulf of Mexico. On July 18, 1543, what remained of de Soto's broken and tattered army set sail for New Spain (Mexico).

De Soto and his original army of over 600 soldiers, in addition to Indian porters, slaves, and guides, horses, pigs, and war goods, had a devastating impact on the aboriginal peoples of the Southeast. Hudson (1997) points out that this impact was both direct and indirect. The direct consequences were from warfare, the disruption of agricultural activities, and the appropriation of agricultural produce and other goods. The indirect consequences were shifts in the balance of power between rival politics, disruption of exchange and alliance systems, and possibly the introduction of Old-World diseases for which indigenous populations had no immunity. In the end, tens of thousands of Native American lives were lost, as were the lives of more than 300 Spaniards, and Mississippian lifeways had been changed forever (Green 2009). Despite their defeat, for most of the next 150 years much of Alabama and Mississippi became part of Spanish La Florida.

3.2.2 EARLY FRENCH INFLUENCE

The French influence in what is now the states of Mississippi and Louisiana began in 1682, when French explorer René-Robert Cavelier, sieur de La Salle navigated the Mississippi River south to the mouth of the river. With the favor of the French royals, La Salle organized an expedition to sail back to America in the hopes of establishing a colony. In 1685, La Salle arrived in America to establish the French colony. However, with the Spanish antagonizing his fleet, La Salle became lost and landed in Matagorda Bay, in what is now Texas. La Salle established Fort St. Louis here,

but it was an ill-fated endeavor, as disease, loss of tools, the hostility of the Indians, and the loss of the remaining ships combined to defeat the enterprise (Holtman and Conrad 1989).

By 1698, King Louis XIV had arranged for another attempt to establish a French presence around the Gulf of Mexico. Pierre Le Moyne d'Iberville and his brother Jean-Baptiste Le Moyne de Bienville were chosen to lead the expedition and the pair sailed from Brest and arrived in present-day Ocean Springs, Mississippi. Here, they founded Fort Maurepas. The brothers made an effort to explore the region; they were able to locate the mouth of the Mississippi River and explore up to the Red River and Lake Pontchartrain, Lake Maurepas, and Iberville Bayou. By 1702, the French had relocated their base to the Mobile River and later to present-day Mobile, Alabama. During this time the French continued their exploration efforts and launched expeditions further north into the interior of their claimed land as far north as present-day Arkansas and Tennessee in search of raw materials (Holtman and Conrad 1989).

By 1718, the French had founded New Orleans. Additionally, the French began establishing forts along the Mississippi River north towards their claimed Illinois Country. These forts became well established trading ports for goods, especially agricultural products farmed from pioneer lands in the interior destined for the New Orleans port (Holtman and Conrad 1989). In 1719, the French Louisiana capital moved to Biloxi in present-day Mississippi until 1722, when it was moved again to New Orleans. To support its interior land holdings, the French constructed Fort Rosalie in Natchez in 1716. The strained relationship with the Natchez Indians in the area intensified and on November 28, 1729, the Natchez attacked the fort and killed approximately 300 people and took women, children, and slaves captive (Bunn and Williams 2007). The French military command would order the massacre of the Natchez in 1732. Remnants of the Natchez would disperse amongst other tribes or were sold into slavery in the Caribbean. As a result of the massacre, the Chickasaw began violent attacks on local French military regiments. A military campaign was launched by French governor Jean-Baptiste Le Moyne de Bienville with the help of the Choctaw allies. Chickasaw encampments were attacked throughout Mississippi and Alabama. The Chickasaw were able to hold off the attacks and were ultimately successful in defeating the French and Choctaw forces ending the conflict in 1736 (Pickett 1896).

During the French and Indian War (1754–1763), the colonies in present-day Louisiana and Mississippi saw little fighting. However, the result of the war had serious consequences for French Louisiana including ceding the Louisiana territory to the Spanish in the Treaty of Fontainebleau. This treaty ceded the French territorial claims west of the Mississippi River to the Spanish. The Treaty of Paris ceded present-day Mississippi to the British. During the French and Indian War, the British began expelling French settlers from Acadia in present-day Nova Scotia in Canada. These settlers migrated south to French Louisiana and would become known as Arcadians or “Cajuns” (Holtman and Conrad 1989).

3.2.3 LOUISIANA AND MISSISSIPPI DIVIDED

Due to the two treaties signed as the result of the French and Indian War, Louisiana came under Spanish rule and Mississippi came under British rule. After the Royal Proclamation of 1763, Britain began its colonial administration of its newly acquired lands. The Royal Proclamation of 1763 established separate governments in Quebec, East Florida, and West Florida, and set aside the remainder of the land as an Indian Reserve. West Florida included the southern half of the present-day state of Mississippi. The seat of government for West Florida was Pensacola and Britain named George Johnstone as the first governor of the colony. Johnstone's tenure would be short lived, however, and his replacements did not fare much better. During this time, West Florida experienced political instability until 1770, when Peter Chester was named governor of the colony. Chester initiated economic changes in the colony, the most notable of which was a shift away from commerce. More attention turned to agriculture, especially in fertile areas along the vast river systems in the region. The British also devised a system of land distribution with the intent to entice families to immigrate to the region (Haynes 2000).

The administration of the land designated as the Indian Reserve was not clearly defined in the in the Royal Proclamation of 1763, and no formal boundary line was demarcated through this act. This proclamation, however, acknowledged the necessity of preserving native hunting grounds by forbidding colonies from acquiring and annexing these lands. The separation of the Indian Reserve from the remaining colonies allowed the fur trade to continue uninterrupted, but it also defined a segregation policy precedent that would have impacts not only in North America, but in other British colonial holdings around the world and for future administrations of the United States. The Indian Reserve, therefore, acted as a means to monitor Indian affairs, which was more efficiently managed by confining them to one specific area. The land was managed by the Commissioners for Trade and Plantations under administrators Sir William Johnson and Captain John Stuart. The two superintendents of Indian affairs were approached to determine a formal boundary line for the Indian Reserve. A formal article was drafted by the Commissioners for Trade and Plantations and approved by Johnson and Stuart in 1764. The article outlined the basic administration of the Indian Reserve, but the most important provision outlined the formation of the boundaries that would be negotiated with the various tribes. Parliament, however, failed to act on the articles. Johnson and Stuart, under the assumption that the articles would eventually be approved by Parliament, began the process of negotiating with the tribes to establish a formal boundary line. The treaty of Augusta in 1763 established the southern boundary lines of the Indian Reserve, though in some areas the exact extent of the boundary line was dubious. In March 1768, the articles were approved, and instruction was given to confirm a continuous boundary from north to south. Stuart negotiated treaties with the Cherokee and Creeks in 1768, and the southern boundary lines were formally confirmed. Johnson was able to confirm the northern boundary in July 1770. Stuart had to modify the boundary line in the south due to a Cherokee settlement that was confirmed to be west of the previously determined boundary line but by October 22, 1770, the final boundary lines in the south were established with the Treaty of Lochabor. The final boundary lines included parts of present-day Vermont, New York, Pennsylvania, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, Georgia, and Alabama. The northern half of

Mississippi was also included in the Indian Reserve, with the western boundary defined by the Mississippi River. With these established borders, Britain had acknowledged a boundary that separated its colonial holdings from the independent Indian nations. The success or failure of this process, however, could not be properly gauged, as the Britain faced yet another setback to its North American political formation as "the troubles that culminated in the Revolution were already absorbing the attention of both England and the colonies" (Farrand 1905).

3.2.4 THE AMERICAN REVOLUTION AND AFTERMATH

The American Revolution saw the Florida colonies become sanctuaries for British sympathizers who moved to the region to escape the harsh treatment brought on by revolutionary supporters. The resulting win by revolutionary patriots brought independence and the acquisition of territory east of the Mississippi River between the Great Lakes and the thirty-first parallel. However, Spain refused to recognize the United States' claims of land south of the thirty-first parallel until the Pinckney Treaty of 1795 (Haynes 2000). As was the case in the French and Indian War, the Revolutionary War forced some Indian tribes to take sides. The Catawba, for instance, fought on the side of the Patriots while the Cherokee waged their own war against any white settlements they felt had encroached on their lands (O'Brien 2007). The Chickasaw, longtime allies of the British, opted for a more neutral stance during the Revolutionary War and decided that their own self-interests were better served by remaining neutral than aligning with any one power. The only time the Chickasaw engaged was when American forces, under the command of Colonel George Rogers Clark, attempted to establish Fort Jefferson on Chickasaw land. The Chickasaw were able to surround the fort and cut the fort off from receiving essential supplies. The siege of the fort was eventually broken when American reinforcements arrived, but the Chickasaw harassment convinced Clark to abandon the fort in June 1781. Despite their neutrality throughout the war, the Chickasaw, perhaps recognizing the need to establish friendly trade relations with the newly established independent United States, requested to negotiate a peace treaty. The Virginia-Chickasaw Treaty was signed in November 1783, thus ending any previous hostilities between the two nations. The language of the treaty is noteworthy because it did not include any ceding of Chickasaw land but, instead, established a land boundary to be controlled by the Chickasaw within Virginia (Cotterill 1942).

3.2.5 LAND ACQUISITION AND STATEHOOD

In 1803, the United States came into possession of an unprecedented amount of land via the Louisiana Purchase. President Thomas Jefferson negotiated the price of $15 million dollars for the purchase of this territory from the French for land extending from the present-day state of Louisiana to the present-day states of North Dakota and Montana. With this newly acquired land, the United States was now in control of the Mississippi River in its entirety, as well as the port city of New Orleans. However, the boundaries of the purchase were not clearly defined in the agreement. Spain still held claims to remnants of West Florida, specifically land along the Gulf Coast in present-day Alabama and Mississippi; the United States had assumed these lands were included in the purchase agreement. In 1810, President James Madison ordered the annexation

of these lands along the Gulf Coast and they were incorporated into the Mississippi Territory. The Territory of Orleans was formally organized in 1804 and included much of what is the present-day state of Louisiana. The War of 1812 erupted when British forces invaded the United States in June of that year. In 1814, the British launched a campaign to invade the land along the Gulf Coast and specifically the key port of New Orleans. On January 8, 1815, United States forces, under the command of Brevet Major General Andrew Jackson, defeated the British Army at New Orleans and, with the signing of The Treaty of Ghent, the War of 1812 was ended (Kastor 2021).

On March 1, 1817, President James Madison signed the enabling act that granted statehood to the western half of the Mississippi Territory. In July of 1817, delegates from Mississippi's 14 counties met to draft the state's constitution and named Natchez the state's capitol. David Holmes, the territorial governor, won the election becoming the first governor of Mississippi. On December 10, 1817, President James Madison signed the resolution granting Mississippi statehood, making it the twentieth state to enter the Union (Bunn and Williams, n.d.).

While Mississippi celebrated its statehood, Indian tribes who lived on the same land were beginning to see their claims to the land stripped through a series of treaties. By 1818, the Chickasaw saw their land dwindle down to roughly the northern portion of the state of Mississippi. The final treaty in 1818 was especially beneficial to General Andrew Jackson, who controlled an interest in the land acquired in this treaty. On May 28, 1830, President Jackson signed the Indian Removal Act, which authorized the United States government to negotiate for the removal of southern Indian tribes from their remaining ancestral lands to federal reservations west of the Mississippi River. In 1830, the Choctaw were the first nation to be removed. On October 20, 1832, Chickasaw representatives signed the Treaty of Pontotoc Creek and by 1836, the federal government began the process of physically removing the Chickasaw nation from their lands. The Chickasaw chose to settle in a territory controlled by the Choctaw in present-day Oklahoma. A treaty was signed by both nations and the Choctaw were compensated to the sum of $530,000 dollars (Malone 1922).

3.2.6 THE CIVIL WAR

The issue of slavery would reach a boiling point with the onset of the Civil War in 1861. Slavery was the main point that drove the conflict as the southern states pushed to allow the expansion of slavery. Mississippi declared its secession from the Union on January 9, 1861, and Louisiana joined by seceding on January 26, 1861. The states soon mobilized for war. The war took a toll on every aspect of life in these states and, most notably, the economy. With many of the men serving in the military, plantation life struggled to survive. Mississippi and Louisiana were the scene of several significant military engagements, which further depleted resources in the states. Most of the battles occurred along waterways within the states as they served as major trade routes for the Confederacy. The City of New Orleans fell early in the war in April 1862, when the Union Navy moved up the Mississippi River and into the city with minimal effort. The city was left virtually undefended as troops were mobilized to other fronts. With the loss of New Orleans, the Confederacy lost a significant port for the movement of not only important trade goods, but also

troops and supplies needed to support the war effort (Sacher n.d.). Perhaps the most important campaign in the region occurred in the summer of 1863, with the Union's campaign to capture the city of Vicksburg on the banks of the Mississippi River. By capturing the city, the Union wagered that they would ultimately control the Mississippi River and with it a key means of commerce for the Confederacy. On July 4, 1863, the city capitulated after an almost two-month long siege. The fall of Vicksburg also cut off the states west of the Mississippi from the eastern Confederate states (Ballard 2004). With its depleted resources, the Confederacy surrendered in 1865. The war took a heavy toll on Louisiana and Mississippi as schools and churches closed, infrastructure was destroyed or in disrepair, and the economy, once driven by plantation life, was barely intact. Slavery was over, and the South, unable to maintain its massive plantation system, would need to reconfigure its economic structure to recover from the ravages of war (Sacher n.d.).

3.2.7 LATE NINETEENTH AND TWENTIETH CENTURIES

After the Civil War, Mississippi aimed to reestablish itself. Farmers once again returned to their fields and resumed growing cotton. Sharecropping became a focus of the labor system as freed African Americans were used to produce the staple crop. The system produced an indebted economic class of producers that served to economically depress African Americans. Additionally, Jim Crow laws were enacted that aimed to disenfranchise African Americans through political control. Democrat control of state politics established laws that would physically separate African Americans from the rest of the population by requiring them to use separate facilities (bathrooms, schools, etc.) and also forced potential voters to pay poll taxes. Lynchings were common during this time and provided a horrifying means of control through fear and intimidation. The combined economic, social, and political disruptions severely crippled any upward momentum for African Americans in the state. Despite the overwhelming support the Democrats gave to large planters, bankers, and merchants, the party was able to maintain the support of the lower-class whites by exploiting their fear of African Americans. Populist movements, popular in surrounding southern states, could not gain momentum in Mississippi due to the system firmly controlled by the Democrat political machine (Skates 1979).

The self-serving politics of the ruling class during this time severely crippled any kind of advancements in the state. The school system and infrastructure suffered from lack of support. Relief came slowly starting with Governor James Kimble Vardaman and later with Theodore Gilmore Bilbo. These governors initiated reforms aimed at curtailing corruption among the elitist practitioners. Elected in 1904, Vardaman enacted regulatory legislation aimed at insurance companies, railroads, utilities, and banks and arranged for increased spending to go towards the education system. Governor Bilbo, elected to office in 1916, continued to enhance the public education system, began a system to equalize taxes, and provided assistance to the public health system by creating a tuberculosis sanatorium. Of course, these policies all benefitted the white citizenry and in no way aided African American citizens. The plight of African Americans in Mississippi would continue to trend in a downward spiral as firmly implanted economic, social, and political policies continued to control and suppress them (Skates 1979).

Despite the attempt at reform, Mississippi remained largely focused on agriculture and was, therefore, hardly diversified. The economy, unable to tap into alternate markets, struggled even as the rest of the nation experienced a considerable economic boom into and throughout the 1920s. Realizing the need for economic diversity, Mississippi's economy began a transitional phase and in 1936, the state government initiated the "Balance Agriculture with Industry" initiative to attract industry to the state. Though it did little to attract industry, it set a precedent and created a public realization that Mississippi needed to modernize its economy. During World War II, Mississippi experienced an economic boom and, although temporary, it brought added awareness to the state's need to modernize.

The period after World War II saw a decrease in the number of farms in Mississippi, but also saw the average acreage of single farms increase. During this time, the practice of tenant farming completely disappeared spurred on by advancements in mechanization that eliminated the farm's need for numerous farmhands to work the land. Rural workers instead turned to manufacturing jobs and by 1960 jobs in manufacturing outnumbered agricultural jobs in the state. Despite the economic advancements, Mississippi politics still played an active role in suppressing African American rights. Opposition to the *Brown vs. the Board of Education* ruling was widespread and lawmakers acted to suppress any advancements in race relations. Activism, though not widespread at first, began to grow in local communities. Tensions came to a head in 1964 when three civil rights activists were murdered, and a Federal Bureau of Investigation (FB) inquiry discovered the murders had been carried out by members of the Ku Klux Klan. This event sparked interest not only locally but nationally as President Lyndon B. Johnson used this and numerous other racially motivated violent events to gain support for the Civil Rights Act of 1964 (Skates 1979).

3.3 BACKGROUND RESEARCH

3.3.1 PREVIOUSLY RECORDED CULTURAL RESOURCES

Background research was conducted on September 22, 2023, by William Cothron, B.A., using the Mississippi Department of Archives and History's (MDAH) online database, a GIS program depicting previously recorded archaeological and historic resources in Mississippi. The area examined was a 0.5-mile radius around the project area. Based on the results of the background research, there is one previously recorded archaeological site, 22LK555, and no previously recorded historic resources within a 0.5-mile radius. (Figure 6). Site 22LK555, North Jordan Road, is a mid to late twentieth century road that was recommended as being ineligible for inclusion in the NRHP. In addition, one prior cultural resources survey included a small area of the western portion of the project (McCarty and Flynt 2018). This survey did not identify any cultural resources. Based on our knowledge of southeastern archaeology, there are expected to be relatively few archaeological resources on the property, primarily due to its distance from a permanent water source.

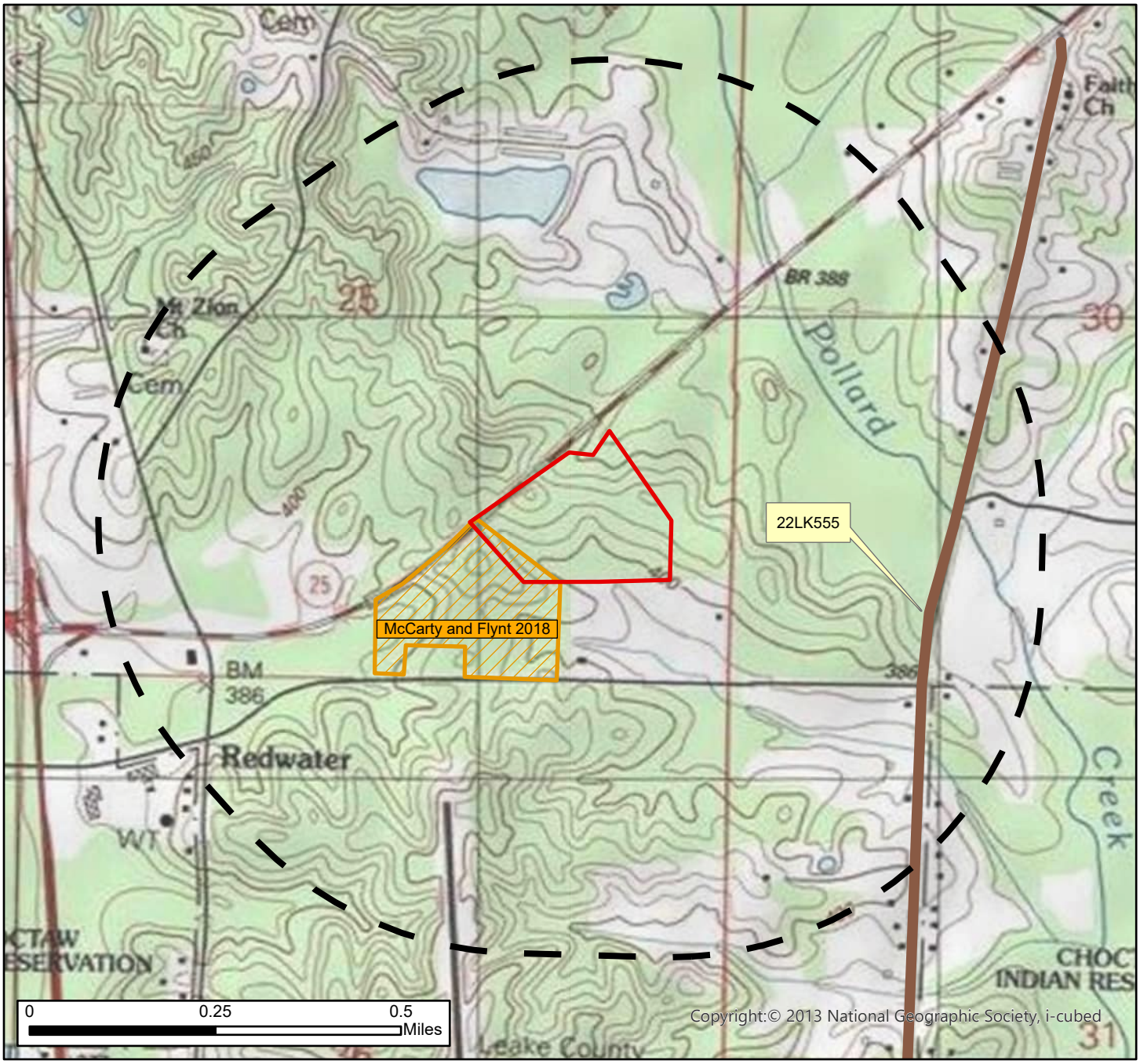
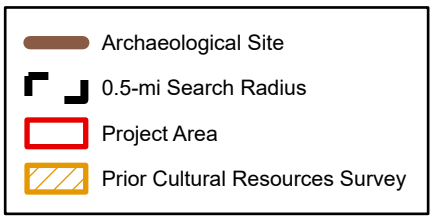
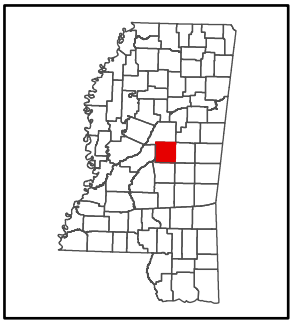
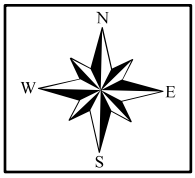


Figure 6. Previously recorded cultural resources within a 0.5-mile of the project area.
Base Map: Conway, MS (1989) 7.5' USGS topographic quadrangle.







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Date:	October 2023
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PREVIOUSLY RECORDED SITES

CARTHAGE NE
LEAKE CO., MS

FIGURE

6

3.3.2 HISTORIC MAP RESEARCH

In addition to the records search, General Land Office Records (GLO) surveys and patents (Table 2), and eighteenth through twentieth century maps were examined to determine whether historic resources were likely to be present within or near the proposed project area. De'Lisle's 1718 *Carte de la Louisiane* … shows the project area east of the "Route de H de Tonty en 1702" and near the territory of the Yasous (Yazoo) and Les Chicachas (Chickasaw) tribes (Figure 7). While several villages are depicted on this map, none are depicted in the vicinity of the project area. In the early nineteenth century, Lucas Fielding Jr.'s 1823 of Mississippi shows the project within the territory of the Choctaw, north of a trail that ran from the Pierre River to Nashville, Tennessee (Figure 8). An 1866 U.S. General Land Office map shows the project area in the SE ¼ of Section 25, T11N, R7E (Figure 9). The 1962 USGS Thomastown, Mississippi topographic map shows no structures in or near the project area (Figure 10).

Table 2. General Land Office Surveys and Patents.

Name	Meridian	Township	Range	Section(s)	Date(s)
McDaniel, William Pearl, Sylvester	Choctaw	11N	7E	25	2-27-1841
Adams, Lemuel C.	Choctaw	11N	7E	25	2-27-1841

Figure 7. Delisle 1718 map showing the approximate location of the project area in red.

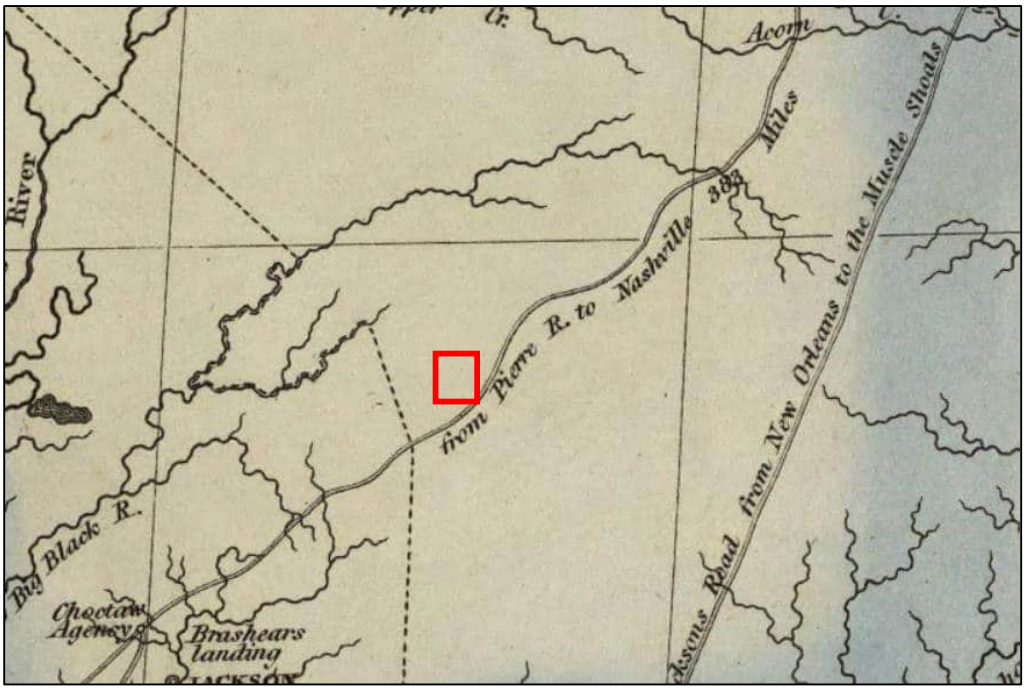


Figure 8. Fielding Jr.'s (1823) map of Louisiana showing the approximate location of the study area in red.

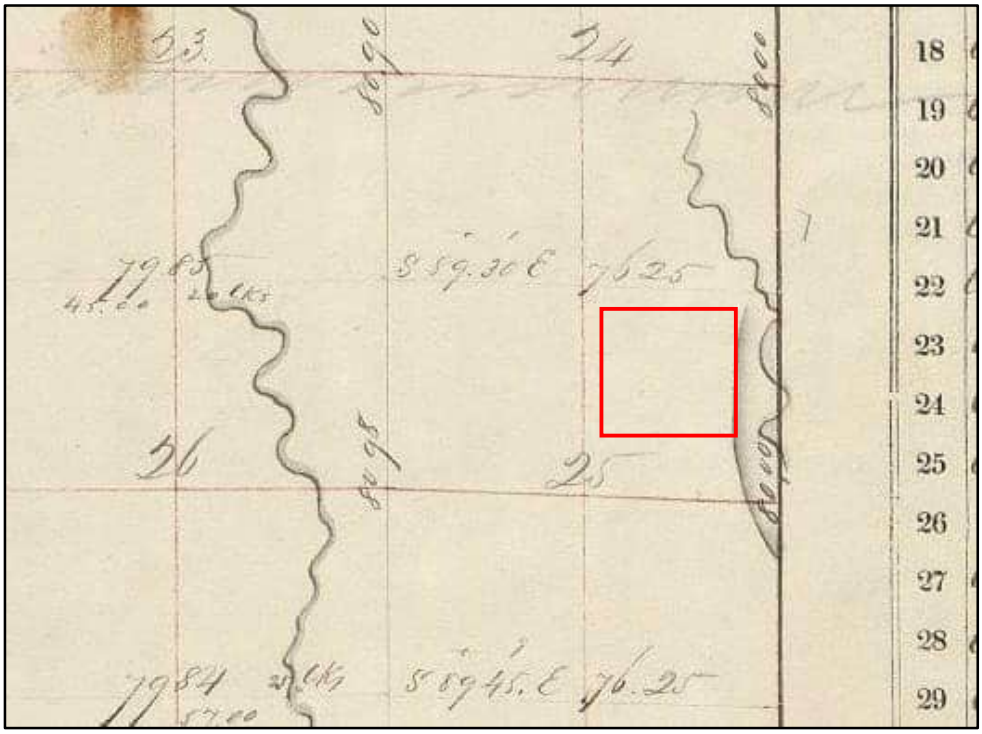


Figure 9. U.S. General Land Office (1834) map of Mississippi and showing the approximate location of the project area in red.

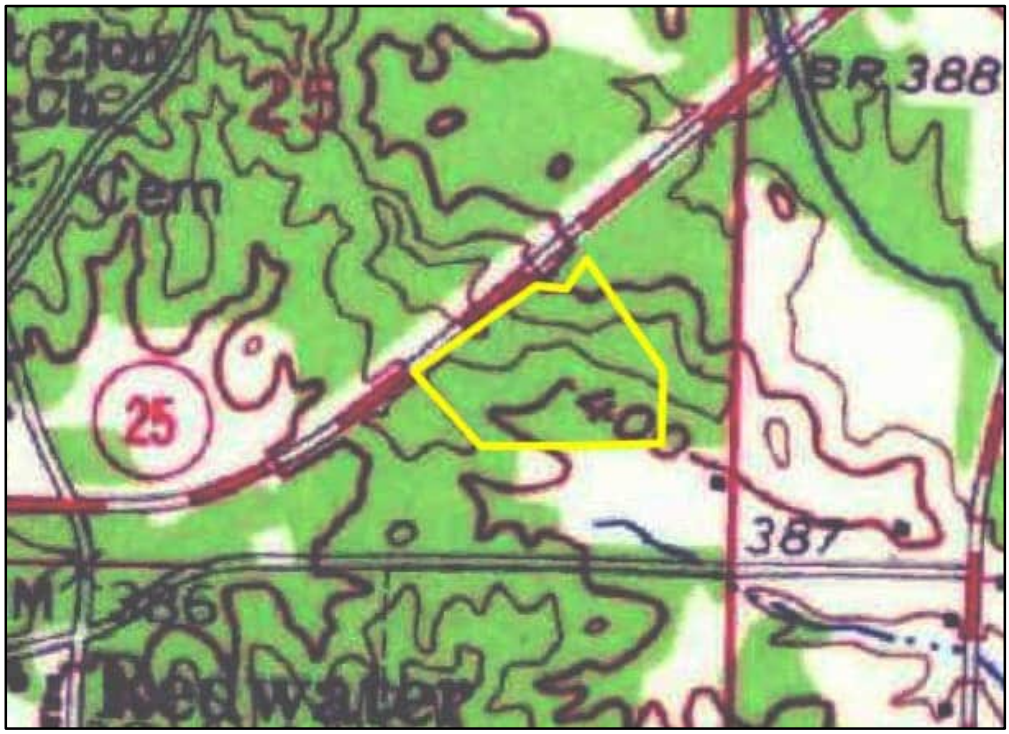


Figure 10. USGS Thomastown, MS (1962) 1:62,500 quadrangle showing the approximate location of the project area in yellow.

4.0 FIELD AND LABORATORY METHODS

4.1 ARCHAEOLOGICAL FIELD METHODS

On September 28, 2023, Terracon conducted a Phase I Cultural Resources Survey of approximately 28 acres at the Leak County Industrial Park Expansion Carthage Northeast property in Leake County, Mississippi (Figure 1). The survey followed guidelines contained in the *Mississippi Standards for Archaeological Practices* (MDAH 2020). Based on these guidelines, shovel testing was conducted at 30-meter intervals across the project area. A total of 89 shovel tests were excavated during the project. An additional 10 shovel tests were not excavated due to slope. Approximately three person days (24 hours) were spent conducting the survey.

Each shovel test excavated during the project was at least 30 cm in diameter and excavated to a depth of at least 70 cm below surface (cmbs) or until culturally sterile subsoil, the water table, bedrock, or an impenetrable obstacle was encountered. Soil from the shovel tests was screened through 1/4-inch wire mesh. Information for each shovel test regarding artifact content, shovel test depth, soil texture and color (using the Munsell soil color chart) and other relevant environmental factors was kept in a field journal.

Artifacts recovered during the survey were bagged by site and relative provenience within each site. Sites were located using an Arrow Gold GNSS receiver (using UTM Zone 16R, NAD 27) and plotted on USGS 7.5-minute topographic maps. Sites were recorded in the field using field journals, detailed site maps, and Terracon site forms, and photographed using a high-resolution digital camera (10 megapixel or higher resolution).

Based on the *Mississippi Standards for Archaeological Practices* (MDAH 2020) an archaeological site is defined as the physical remains of an area of concentrated human activity for which a boundary can be established. For the purposes of this project, an archaeological site is defined as an area yielding three or more prehistoric or historic artifacts, related either temporally or functionally, within a 30-meter radius, or an area with other indications of archaeological remains (e.g., landscape features). One or two artifacts within a 30-meter area were defined as “isolated finds.”

4.2 LABORATORY METHODS AND CURATION

Artifacts, if recovered during the survey, were cleaned, identified, and analyzed using the methods summarized below. Following completion of the analyses, artifacts were bagged according to site, provenience, and catalog number and the information was entered into an Excel spreadsheet. Acid-free plastic bags and artifact tags were used for curation purposes.

Lithic artifacts were initially identified as either debitage (flakes and shatter) or tools. Debitage was sorted by raw material type, presence/absence of cortex, and size graded using a modified form of the mass analysis method described by Ahler (1989). Tools were classified as either being

flaked or ground stone, with flaked tools being subdivided into bifaces, unifaces, or expedient tools (i.e., retouched or utilized flakes). Formal tools were classified by type (where possible), and the length, width, and thickness were recorded for each unbroken tool. Projectile point typology generally followed those contained in McGahey (2000) and Justice (1987).

Prehistoric ceramics greater than 2 cm^2 were sorted by vessel portion (rim or body), surface treatment, and temper (using the Wentworth scale). Once sorted, the sherds were analyzed for other diagnostic attributes such as paste texture, thickness, interior treatment, rim form, and rim/lip decoration. When possible, this data was used to place the sherds within established regional types. Information on the ceramic typology of the project area will be derived primarily from Futato (1977), and Walthall and Jenkins (1976). Sherds less than 2 cm^2 were classified as "residual sherds" and only their count and weight were recorded.

Historic artifacts were first sorted by material (e.g., ceramics, glass, and metal), and then into classes (e.g., earthenware, container glass, nails) and types (e.g., whiteware, amethyst, hand wrought). Technological attributes, decorations, maker's marks, and other chronologically sensitive indicators were then used to help establish a temporal framework for the artifacts using such references as Noel Hume (1970), and South (1977), as well as the Florida Museum of Natural History's on-line digital type collection (http://www.flmnh.ufl.edu/histarch/ /gallery_types/).

The artifacts, notes, maps, photographs, and other materials generated as a result of this project will be temporarily curated at the Terracon office in Columbia, South Carolina.

4.3 ARCHITECTURAL SURVEY METHODS

In addition to the archaeological survey, standing structures more than 50 years old within a 0.25-mile radius of the project (the proposed APE) were photographed and described. Each identified resource was photographed using a high-resolution digital camera (10 megapixel or greater), marked on applicable USGS topographic maps, and assessed for National Register eligibility using the Criteria established by the National Park Service (36 CFR Part 60.4). Photographs were also taken from each resource toward the project area to help assess possible visual effects caused by the undertaking. Structures whose integrity was highly compromised were excluded from the survey. National Register recommendations and a Mississippi Statewide Survey form was provided for each surveyed structure.

4.4 NATIONAL REGISTER ELIGIBILITY ASSESSMENT

For a property to be considered eligible for the NRHP, it must retain integrity of location, design, setting, materials, workmanship, feeling, and association (National Register Bulletin 15:2). In addition, there are four evaluative criteria for determining the significance of a resource and its eligibility for inclusion in the NRHP (36 CFR Part 60.4). Any building, structure, site, object, or district may be eligible if it:

A. is associated with events that have made a significant contribution to the broad patterns of our history; or

B. is associated with the lives of persons significant in our past; or

C. embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. has yielded or may be likely to yield information important in history or prehistory.

A resource may be eligible under one or more of these criteria. Criteria A, B, and C are most frequently applied to historic buildings, structures, objects, non-archaeological sites (e.g., battlefields, cemeteries, natural features, and designed landscapes), or districts. Also, a general guide of 50 years of age is used to define “historic” in the NRHP evaluation process. A resource may, however, be eligible for the National Register even if it is less than 50 years of age but has exceptional significance.

The most frequently used criterion for assessing the significance of an archaeological site is Criterion D, although other criteria were considered where appropriate. For an archaeological site to be considered significant, it must have potential to add to the understanding of the area's history or prehistory. A commonly used standard to determine a site's research potential is based on a number of characteristics including artifact variety and quantity, site integrity, clarity, and environmental context (Glassow 1977). Another important factor is the uniqueness of the site. Sites that are commonly found should exhibit exceptional integrity and research potential to be eligible for inclusion in the NRHP. Site types that are rarely found (e.g., Clovis Period sites), or those that have strong cultural significance to descendant populations (e.g., burial mounds or Civil War battlefields), may have less stringent requirements for inclusion in the NRHP.

5.0 RESULTS

5.1 ARCHAEOLOGICAL SURVEY

On September 28, 2023, Terracon conducted a Phase I Cultural Resources Survey of approximately 28 acres at the Leake County Industrial Expansion Carthage Northeast property in Leake County, Mississippi (Figure 1). The field crew consisted of Archaeologist/Field Supervisor Barbara Gengenbach, Archaeologist Ethan Gilbert, and Crew Chief William Cothron. Approximately three person days (24 hours) were spent conducting the survey. During the archaeological survey, a total of 89 shovel tests were excavated along 14 transects (Figure 11). An additional 10 shovel tests were not excavated in the eastern and southern portion of the project area due to presence of a large berm (Figure 12).

Shovel tests ranged in depth from 15–20 cmbs. All soils were compact. A typical soil profile consisted of approximately 10 cm of light brownish grey (10YR 6/2) silty loam (Ap horizon), overlying 10+ cm (10–20+ cmbs) of mottled very pale brown (10YR 8/3) and reddish yellow (7.5YR 6/8) silty clay loam (Bt horizon) (Figure 13). As a result of the survey no archaeological sites were identified.

5.2 ARCHITECTURAL SURVEY

An architectural survey was conducted to record structures more than 50 years old within a 0.25-mile radius of the project. Based on the architectural survey, one historic resource over 50 years of age was identified within the proposed APE.

5.2.1 RESOURCE NO. C-1 – PAPPY'S AVIATION

Pappy's Aviation (Resource No. C-1) is a ca. 1960 airfield located at 100 Airport Road, approximately 280 meters southwest of the project area (Figure 14 and 15). The Airfield consists of a single paved 3,000 ft runway oriented at 350 degrees north and 170 degrees south. Located along the south end of the airfield is a large, paved parking apron with taxiways providing access to three large hangars and two clusters of single hangars. These buildings are constructed from steel or wood framing and enclosed by pressed sheet metal siding and roofing. South of the parking apron is a raised circular area outlined in white stone with a wind direction indicator in the center. The entire property is enclosed by a chain link fence and surrounded by large pine trees.

Pappy's Aviation retains a majority of its original design and materials. It still exhibits an industrial workmanship style, has remained on its original site of construction, is still located in a rural setting, and evokes the feeling of a hydroelectric power facility. Therefore, it has retained integrity in design, materials, location, setting, and feeling.

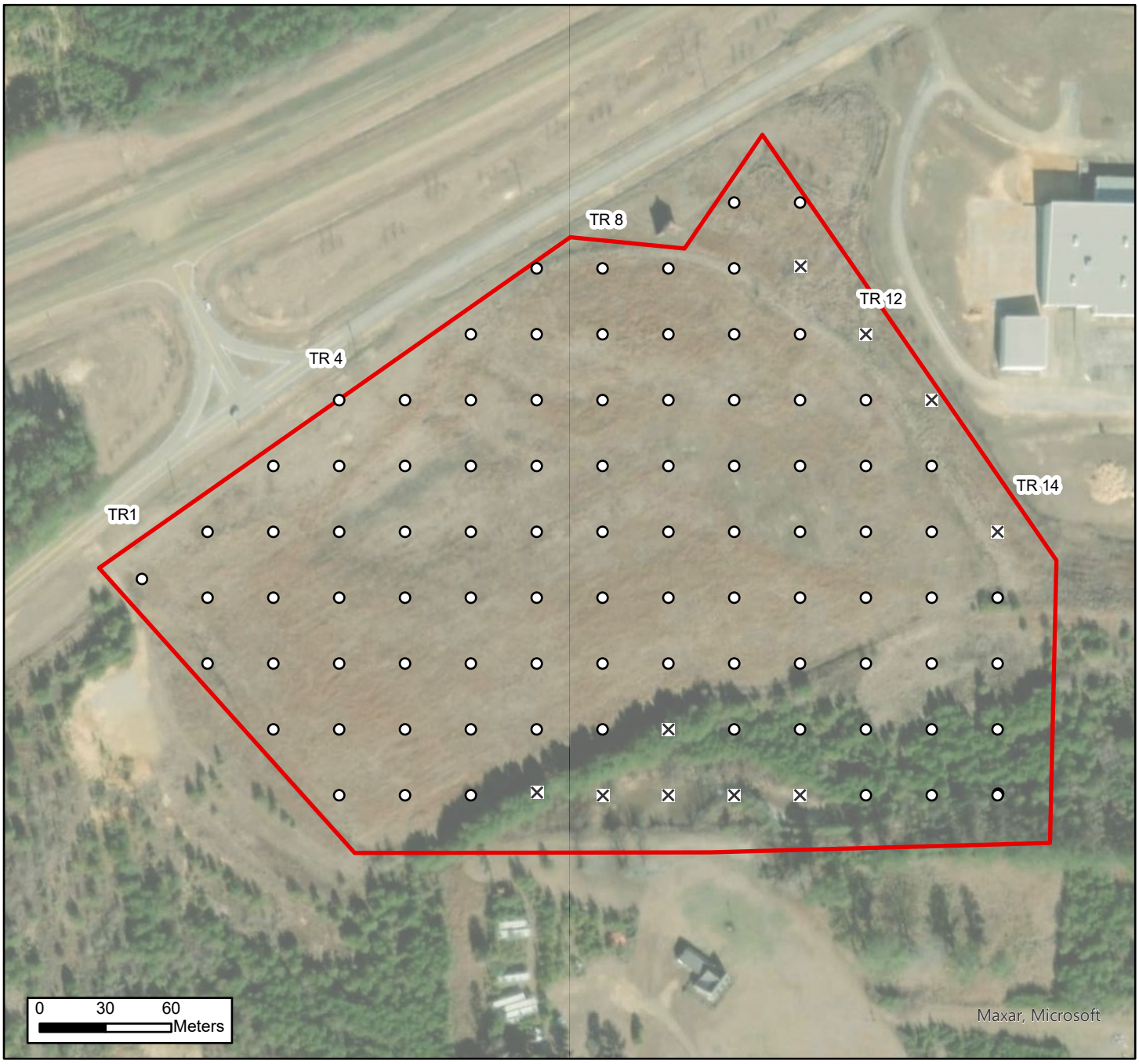
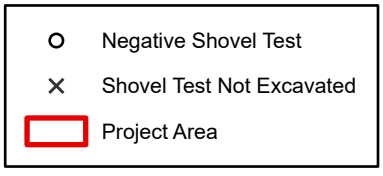
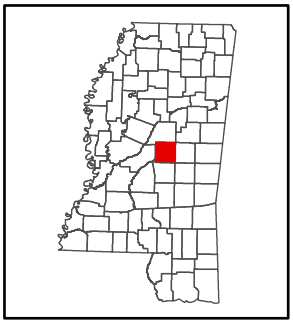
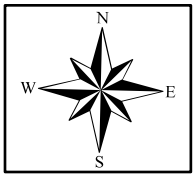


Figure 11. Shovel test locations.
Base Map: ESRI World Imagery.







Project No.	EB237180
Date:	October 2023
Drawn By:	BEG
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SHOVEL TESTS

CARTHAGE NORTHEAST
LEAKE CO., MS

FIGURE

11

Figure 12. Berm on eastern boundary of project area, facing northwest.

Figure 13. Typical shovel test, STP 7-4.

In regard to the National Register Criteria for Evaluation (National Register Bulletin 15):

Criterion A – This resource has no known association with events that have made a significant contribution to the broad patterns of our history.

Criterion B – This resource has no known association with the lives of significant persons in our past.

Criterion C – This resource does not represent a significant example of a ca. 1960s airfield.

Criterion D – This resource is unlikely to yield significant information about the history of Leake County.

This property retains a majority of its character defining features but does not represent a significant example of a ca. 1960s Airfield. Due to this, Resource No. C-3 is recommended as being ineligible for inclusion in the NRHP.

Figure 14. Resource No. C-1, facing north.

Figure 15. Resource No. C-1, facing southeast.

6.0 SUMMARY AND RECOMMENDATIONS

Terracon has completed a Phase I Cultural Resources Survey of approximately 28 acres at the Leake County Industrial Park Expansion Carthage Northeast Project in Leake County, Mississippi (Township 11 North, Range 7 East, Section 25) (Figures 1 and 2). As a result of the archaeological survey, no archaeological sites or isolated finds were identified. The architectural survey identified one historic resource, Resource No. C-1–Pappy's Aviation, a ca. 1960s Airfield (Figures 1 and 2). Resource No. C-1 is as recommended as being ineligible for inclusion in the NRHP. Based on these results, it is Terracon's opinion that no historic properties will be affected by the proposed undertaking and no additional cultural resource investigations are warranted for the project.

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