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Cultural Resources Survey along Mill Creek near Magnolia, Montgomery County, Texas

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Cultural Resources Survey along Mill Creek near Magnolia, Montgomery County, Texas

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Cultural Resources Survey Along Mill Creek near Magnolia

Montgomery County, Texas

By
Rachel Feit, Principal Investigator

Texas Antiquities Permit no. 9007

Prepared for:
SMC Consulting, Inc. and Montgomery County MUD No. 131
(Project no. 170000)



September 2019

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Acacia Heritage Consulting Report No. 2



September 2019

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ABSTRACT

This report presents the results of an archeological survey for a 12-acre tract near Mill Creek, south of Farm-to-Market (FM) road 1488 in Montgomery County, Texas. The Montgomery County Municipal Utility District (MUD) 131 is proposing to build public utilities and make modifications to a tributary of Mill Creek on the 12-acre property, which requires consultation with the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act. This also necessitates compliance with Section 106 of the National Historic Preservation Act (Section 106) and the Antiquities Code of Texas (ACT). Acacia Heritage Consulting conducted the archeological survey under Texas Antiquities Permit No. 9007. The survey involved visual inspection and subsurface testing in the form of eight shovel tests. Archeologists documented no artifacts or cultural material in any of the subsurface tests. No cultural material was observed on the surface either. The majority of the project area had recently been disturbed from tree removal and burning as part of the site preparation work done by the developer. As a result, surface visibility was nearly 100 percent across the project area and no artifacts or archeological materials were observed anywhere on the surface of this property. This report recommends that no further archeological work is warranted prior to construction of the 12-acre property.

No artifacts were collected. All notes and records will be curated at the Center for Archaeological Studies in San Marcos.

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TABLE OF CONTENTS

Abstract.....	I
Table of contents	III
Table of figures	III
1. Introduction and management summary.....	1
2. Site setting and environment.....	4
NATURAL SETTING	4
SOILS AND GEOLOGY	4
3. Cultural background	7
PALEOINDIAN (CA. 11,500–8000 YEARS BEFORE PRESENT [BP])	7
ARCHAIC (CA. 8000–1850 BP)	8
EARLY CERAMIC (WOODLAND) PERIOD (1850–1350 BP)	8
LATE PREHISTORIC (1350–490 BP).....	9
CONTACT PERIOD (490 BP-PRESENT DAY)	10
ARCHEOLOGICAL SITES NEAR THE PROJECT AREA.....	11
4. Methods and results of investigations	13
FIELD METHODS.....	13
RESULTS OF PEDESTRIAN INSPECTION AND SHOVEL TESTING	13
6. Conclusions and recommendations.....	18
Works cited	19

TABLE OF FIGURES

Figure 1. Project location in Montgomery County.....	2
Figure 2. Project location near Magnolia, Texas on aerial photograph.....	3
Figure 3. The project area depicted on USGS topographical map.	5
Figure 4. Project shown in relation to Houston PALM map units.	6
Figure 5. 1939 Montgomery County Highway Map in relation to the project location..	11
Figure 6. Shovel test locations within the project area.....	14
Figure 7. Two views of the APE stripped of vegetation: A) facing south and B) facing west.....	15
Figure 8. Dense vegetation in the northwestern portion of the APE.....	16

1. INTRODUCTION AND MANAGEMENT SUMMARY

The Montgomery County Municipal Utility District (MUD) 131 is planning to build public utilities including access roads, water, and wastewater infrastructure on a 12-acre tract along Farm-to-Market (FM) 1488 near Mill Creek (**Figures 1 and 2**) in Magnolia, Texas. The project is being conducted in advance of development of the larger surrounding property for a new residential community. The work would involve modifications to a tributary drainage to Mill Creek and therefore also requires consultation with the United States Army Corps of Engineers (USACE, SWG 2019-0333). Therefore, it is subject to Section 106 of the National Historic Preservation Act (Section 106) and the Antiquities Code of Texas (ACT). Work was conducted under Texas Antiquities Permit No 9007.

The Area of Potential Effects (APE) for the project is defined as the footprint of the undertaking plus any listed or eligible National Register non-archeological properties on directly adjacent tracts. The footprint of the proposed undertaking is approximately 12 acres and the maximum depth of impact for the undertaking is presumed to be about 10 feet. As there are no listed NRHP-properties or properties greater than 50 years in age within the footprint or on adjacent tracts, the cultural resources survey focused on the footprint itself.

Approximately 90 percent of the APE had been completely de-vegetated just prior to the survey. While this activity affected the integrity of surface and near surface deposits, it also gave archeologists 100 percent surface visibility during the survey. Had any intact sites been on the near surface, evidence of them would have been readily apparent. A small portion of APE was heavily vegetated with a mix of mature trees and a dense understory of both native and invasive species. This understory vegetation was nearly impenetrable and reduced ground surface visibility to nothing.

Archeologists conducted a visual inspection of the APE, plus subsurface testing following the minimum standards set forth by the Council of Texas Archeologists (CTA). Those standards currently call for one subsurface test every two acres for projects 10-100 acres in size. Acacia archeologists excavated eight shovel tests throughout the 12-acre APE. No cultural material was observed in either shovel tests or anywhere on the surface of the project area.

Survey work was conducted over the course of one day on July 26, 2019, with approximately 8 person hours expended. Rachel Feit served as Principal Investigator with Emory Worrell assisting. This report is divided into five chapters. Chapter 2 documents the natural setting and affected environment; Chapter 3 offers a brief cultural background for this area. Chapter 4 briefly describes the methods used during

the course of the survey and details the results of field investigations. Chapter 5 summarizes the conclusions and recommendations.

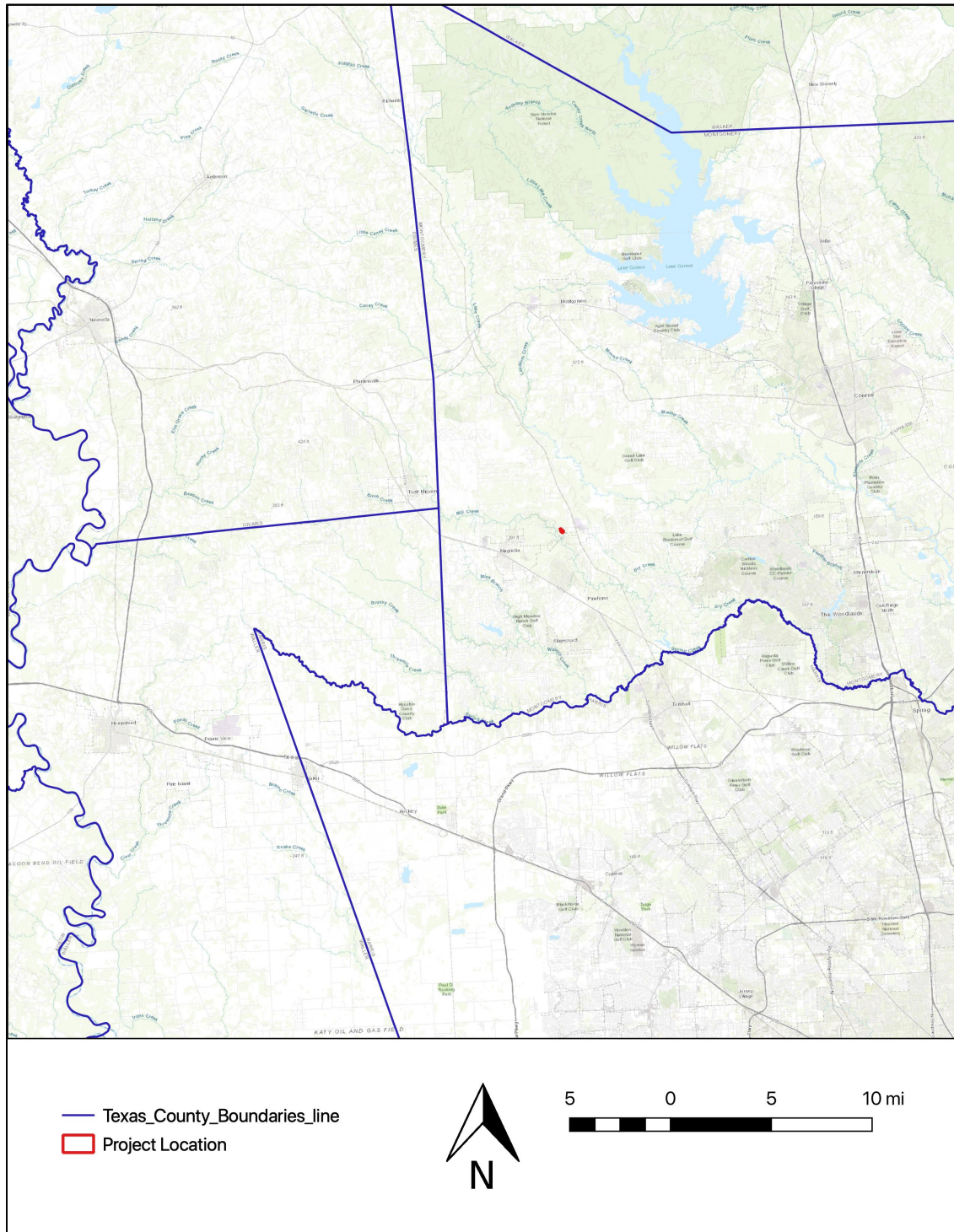


Figure 1. Project location in Montgomery County.



Figure 2. Project location near Magnolia, Texas on aerial photograph.

2. SITE SETTING AND ENVIRONMENT

Natural Setting

The project is located on the east side of Mill Creek south of FM 1488, approximately three miles east of Magnolia. The APE and surrounding areas are heavily forested and have not been previously farmed in the last century. However, new development is rapidly changing the rural character of this area. State Highway (SH) 249 was under construction a mile west of the APE at the time of survey, and the surrounding property is being planned for residential and commercial development.

The project setting falls within the flatwoods region of the Southern Coastal Plains ecoregion (Texas A&M 2008). The native vegetation in this ecoregion is a diversity of mixed pine-hardwood forest types with a mosaic of well-drained and poorly drained plant communities (Griffith et al. 2004). Common trees include shortleaf pine (*Pinus echinata*), loblolly pine (*Pinus taeda*), sweetgum (*Liquidambar styraciflua*), tulip tree (*Liriodendron*) black gum (*Nyssa sylvatic*) and water oak (*Quercus nigra*). Understory vegetation includes pinehill bluestem (*Schizachyrium scoparium* ssp. *divergens*), Sedge (*Carex*), longleaf uniola (*hasmanthium laxum* var. *sessiliflorum*) American beautyberry (*Callicarpa americana*), panicum and other shrubs (California Soil Resource Lab 2008).

Topographically the project area terrain is very gently rolling and ranges in elevation from 200-225 feet above mean sea level (amsl). The project area drains into Mill Creek, which is about 1,000 feet west and southwest of the property (**Figure 3**).

Soils and Geology

The underlying geology of the project area is dominated by Miocene and Pleistocene terrace deposits of clay, sandstone and gravelly sand belonging to the Fleming and Willis Formations (BEG 1992). Soils in the project area consist of highly permeable sands and sandy loams that derived from tertiary marine deposits. There are two individually mapped soil units within the project area: Lilbert loamy fine sand and Bibb soils, frequently flooded. Lilbert soils are sandy, well-drained and form on interfluvial deposits from loamy marine deposits. Bibb soils consist of poorly drained loamy alluvium that forms on bottomlands.

The Houston Potential Archeological Liability Map (PALM), which assesses the geoarcheological potential for buried pre-contact deposits, depicts the project area mostly within Map Unit 2 (**Figure 4** PALM overlay of the project area depicting associated Map Units.). The PALM recommends that Map Unit 2 areas have potential for shallowly buried archeological sites in areas that have not already been modified through farming (Abbott 2001).

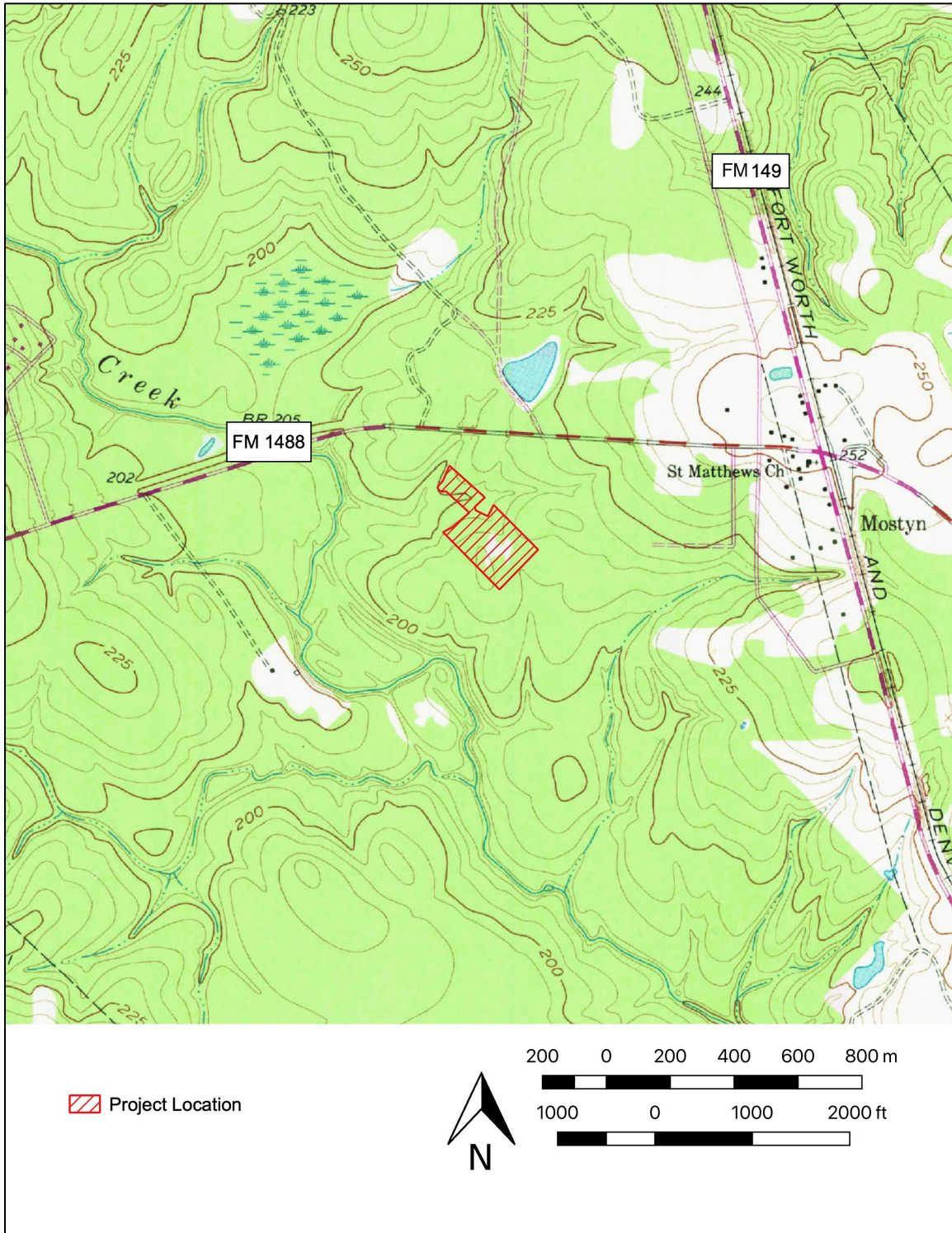


Figure 3. The project area depicted on USGS topographical map.

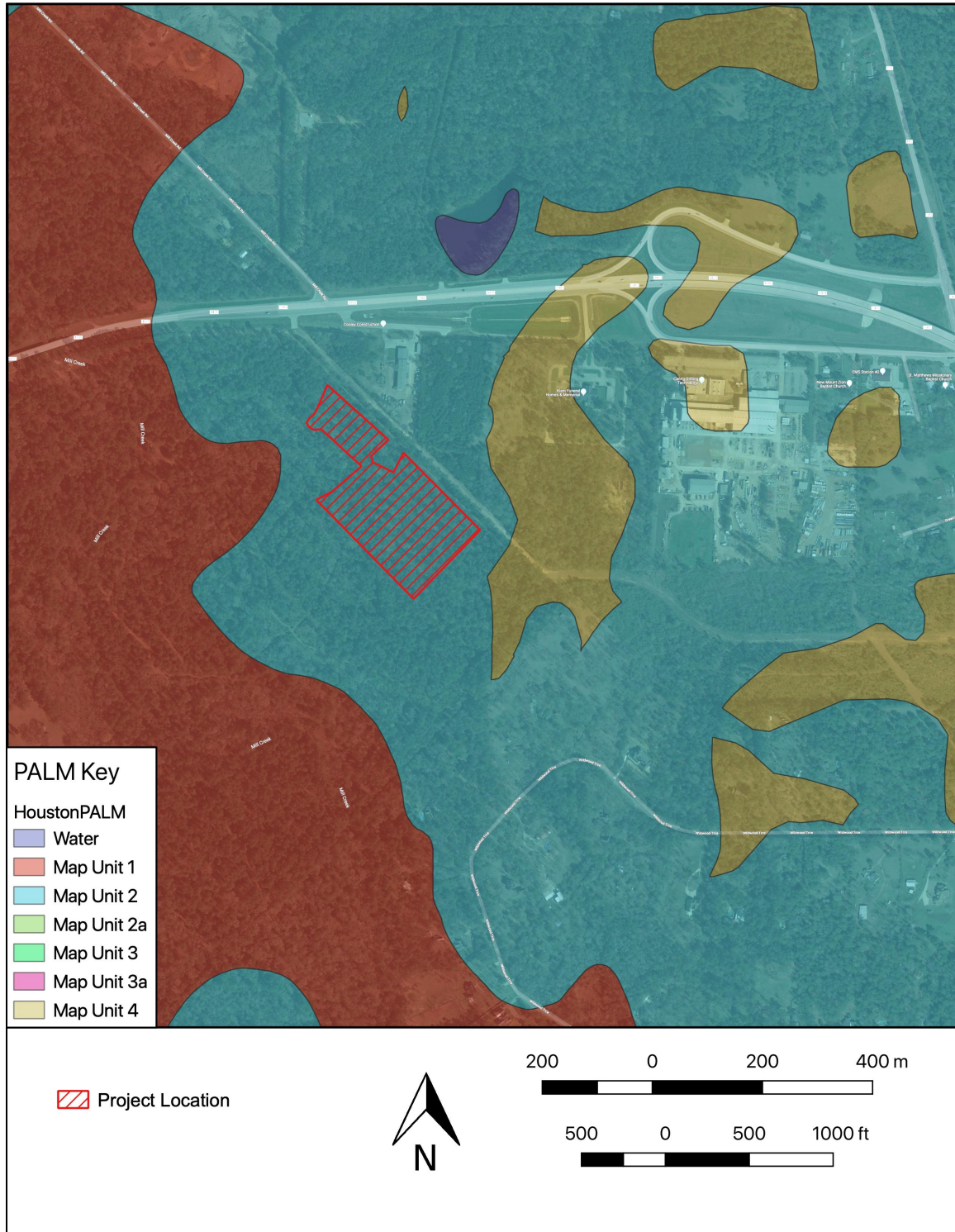


Figure 4. Project shown in relation to Houston PALM map units.

3. CULTURAL BACKGROUND

Montgomery County falls within the Upper Texas Coast, which is part of the Southeast Texas archeological region (Perttula 2004). The Southeast Texas archeological region spans from the Sabine River to the Brazos Delta, and extends inland on the coastal plain for approximately 200 miles. The majority of what archeologists know about the prehistory of this region comes from sites along the coast and sites near and within major metropolitan areas. From these sites several key sources of literature have developed a prehistoric chronology for the region, including: Aten (1979, 1983); Ensor (1991); Patterson (1995) Kidder (2002); and Ricklis (1994, 2004). These sources generally agree that, except for minor changes in tool technology, pre-contact period Native American lifeways probably remained relatively constant for the 10,000 or so years prior to first European contact. Native American culture was characterized by small bands of semi-mobile hunter-gatherers that generally followed streams and waterways in their seasonal movement. Nonetheless the pre-contact period is generally divided into four subperiods based on identified changes in tool technology, subsistence focus, mobility, and mortuary patterns.

Paleoindian (ca. 11,500–8000 Years Before Present [BP])

Traditionally, the Paleoindian period is the earliest recognized occupation in North America. Paleoindians manufactured distinct, large lanceolate points that are commonly fluted. These points include Clovis, Plainview, Golondrina, Meserve, Scottsbluff, and Angostura projectile points. Archeologists generally assume that Paleoindian lifeways in Southeast Texas mirrored those in other parts of Texas. Most researchers believe that initial occupants of Southeast Texas practiced a highly mobile lifestyle, following migrations of now extinct Pleistocene megafauna and other animals (Moore 1994).

Although the Paleoindian archeological record along the Southeastern Texas coast is known mostly through isolated finds, a few patterns are known. The use of high-grade lithic material in Paleoindian lanceolate point production does suggest highly mobile lifeways. However, a recent distribution study of raw material used on Clovis points suggests that mobility was lower than previously believed, and that even in the Paleoindian period, groups were starting to form home ranges and geographic territories (Bever and Meltzer 2007:85). Furthermore, increasing data from archeological investigations suggest that Paleoindian subsistence was broad-based and included a variety of large and small game, as well as many different plant resources. Based on the current data, it appears Paleoindian cultures preferred locations along major streams and likely Pleistocene coastline settings. Since the Pleistocene/early Holocene sea level was approximately 100 meters lower than present day, many intact Paleoindian sites would now be submerged (Bousman et al. 2004; Ricklis 1994, 2004). However, one

significant inland site to be recently investigated is the Dimond Knoll site (41HR796) along Cypress Creek.

Archaic (ca. 8000–1850 BP)

As with the Paleoindian components, few well-stratified sites dating to the Archaic Period have been excavated in Southeast Texas, which has left the archeological record incomplete. Nonetheless, the Archaic is “generally defined by pre-or non-horticultural adaptations and pre-ceramic and pre-bow-and-arrow hunting technologies” (Ricklis 2004:184). As with the Paleoindian period, Archaic period groups relied on diverse subsistence strategies that were practiced along a migratory seasonal round focused on procuring locally specific flora and fauna along coastal areas and inland riverine settings (Ricklis 1994). The most notable manifestation of cultural change between the Paleoindian and Early Archaic period can be seen in lithic technologies. Early Archaic groups adapted to the altered climate by expanding their tool kit. Compared to the Paleoindian period, the Early/Middle Archaic assemblage is dominated by smaller points that Ensor (1991) classified as being within the expanded haft cluster. This “cluster” of points spans 4,000 years from approximately 5000–1000 BC (6,950–2,950 BP) and include Bell, Andice, and Early Triangular points (Texas Beyond History 2019).

During the Middle Archaic, it is believed that population levels began to rise from relatively low densities during the Early Archaic due to the change from a cold and moist climate to a warmer and drier climate. Middle Archaic groups intensified efforts to capitalize on marine resources; in particular shellfish and fish. Numerous coastal shell midden sites have been discovered along with fishing implements including bone fishhooks, plummets, and net sinkers (Aten 1983). Axes, nutting stones, and grinding tools from more inland sites indicate that Middle Archaic groups were also well suited for utilizing hardwood forest resources as well. Points from this period include Palmillas, Yarbrough, Kent, Elam, and Carrollton.

The Late Archaic (1500 BC–AD 100 or 2,950–1,850 BP) corresponds to the most recent period of sea level rise, which created the modern coastline. The warmer, drier climate likely resulted in a population increase across Texas. The greater population densities may have also facilitated long-distance trading between regions, including the Lower Mississippi Valley. Subsistence economies established earlier in the Archaic Period continued during the Late Archaic and relied on repetitive exploitation along a seasonal circuit. Late Archaic points include Morhiss, Ensor and Godley types (Driver 2009; Ensor 1991; Ricklis 2004).

Early Ceramic (Woodland) Period (1850–1350 BP)

In the inland portion of Southeast Texas, the introduction of ceramics into the Archaic tool kit signaled a transition to what several archeologists have called a Woodland or Early Ceramic period. The Woodland tag placed by earlier archeologists like Aten and Shafer was intended to illustrate cultural affinities to indigenous peoples of the

southeastern United States, in particular the Lower Mississippi Valley (Moore 1990, 1995; Perttula 2004). However, Dee Ann Story argued that there are too many differences between southeast United States Woodland groups and those occupying the East Texas region at the same time. Story coined the term “Mossy Grove” to describe the Early Ceramic/Woodland period of occupation along the coast and inland Southeast Texas (Story 1990). According to Story (1990:256) “Mossy Grove can be viewed as both a general and cultural pattern, as well as a regional tradition that partly parallels development of the Caddoan tradition to the north. And, like the Caddoan tradition/culture, it encompasses the archeological remains of what were surely different ethnic (and possibly even linguistic) groups.”

Although the manufacturing of pottery did not appear uniformly across the region (on the Texas–Louisiana border around 2000 BP, Galveston Bay at about 1850 BP, and the western coastal margin around 1650 BP along the coast near Galveston Bay and Sabine Lake) the Early Ceramic period of southeast Texas generally coincides with Early Ceramic periods in the Lower Mississippi Valley. Tchefuncte, grog-tempered Baytown Plain, and Marksville Stamped are common among the earliest Ceramic assemblages (Patterson 1995). These ceramics tend to be thick-walled and crudely made, with little to no decoration. The Goose Creek Plain another variety is a utilitarian ware that dominates the archeological ceramic record during the later Woodland period. Initially, Goose Creek ceramics were constructed using a sandy paste, with little to no additional temper. Later, grog and bone tempers were added.

During the Woodland period native Americans practiced a similar hunter-gatherer lifestyle of seasonal migrations as that of previous periods, though there is evidence of an increasingly diverse resource base and increased populations (Patterson 1995). Early Ceramic period peoples hunted for bison, deer, alligators, rabbits and other small animals, while also procured turtles and fish from rivers. They collected nuts, acorns, berries, roots and tubers, which were ground and mixed in a variety of foodstuffs (Patterson 1995). Further north in the Piney Woods, there is evidence for incipient agriculture and permanent structures (Perttula 1995), although no sites with these features have been identified to date in Montgomery County.

Late Prehistoric (1350–490 BP)

Radical technological change and stylistic modifications in ceramics mark the change from the Early Ceramic to the Late Prehistoric Period. Eastern influences in pottery making such as grog and bone tempering, as well as elaborate decorations become more common (Ricklis 2004). Eighteen different styles of ceramics, based on temper, paste, and design, have been documented along the Texas coast in a Late Prehistoric context (Aten 1984). The Late Prehistoric Period in Texas brought intensified group dynamics as well. The bow and arrow was introduced around 1450 BP, although it did not replace the atlatl, but overlapped it. The introduction of the bow and arrow resulted in smaller, lighter projectile points. Common stone points recovered from Late

Prehistoric Period sites include Perdiz, Alba, and Catahoula. Groups within this period continued the hunter-gatherer lifeways established long ago, with a focus on coastal and riverine resources (Moore 1995; Ricklis 1994). There is increasing evidence for longer occupations designed to exploit and even cultivate certain seasonal resources, and greater territoriality among native groups. Aten (1983) suggests that smaller bands may have joined together to form larger communities during the winter months and then dispersed back into smaller bands along the seasonal round (Ricklis 1994).

Contact Period (490 BP-Present day)

Rene Robert Cavelier, Sieur de La Salle probably passed through present day Montgomery County in 1687 on his trek northward to find the source of the Mississippi River. Alarmed over French incursions in what they perceived as Spanish Territory, the Spanish authorities dispatched expeditions to the region to reclaim it. They unsuccessfully attempted to establish missions along Spring Creek in the eighteenth century, but the settlements were abandoned by 1756. People of European descent settled Montgomery County more permanently in the early nineteenth century, with 42 of Stephen F. Austin's "Old Three Hundred" obtaining land titles in what would become western Montgomery County. Among them was Andrew Montgomery who established a trading post at the crossroads of the Loma del Toro and lower Coushatta traces. This trading post eventually became the town of Montgomery. The county was organized in December, 1837 and named for the region's largest settlement (Long 2010).

The town of Magnolia was founded in the 1850s as small farming village, and first named Mink's Prairie or Mink after one of the early residents. In 1902 the International and Great Northern Railroad built a line and stop near Mink, and the community moved its commercial center to be closer to the station. At that time the name was changed to Melton, then shortly afterward changed again to Magnolia after the magnolia trees that lined the creek bottoms. The local economy centered on agriculture, lumbering, and beginning in the 1940s, oil. Unlike other nearby communities, Magnolia never became a boomtown and has always remained a small rural community (Branch 2010a).

The community of Mostyn, located at what is now the intersection of FMs 1488 and 149 developed in the early twentieth century as a railroad stop along the Trinity and Brazos Valley Railway. A lumber mill helped support the community in the early twentieth century, but it never developed a population of more than 100 or so (Branch 2010b).

A review of historic maps suggests that the 12-acre property has remained unchanged since the early twentieth century and likely longer. A 1939 Montgomery County Highway map depicts FM 1488 in roughly its current alignment, but there are no structures within or near Mill Creek (**Figure 5**). Topographical maps from the early 1960s likewise show the area as forested with no structures nearby.

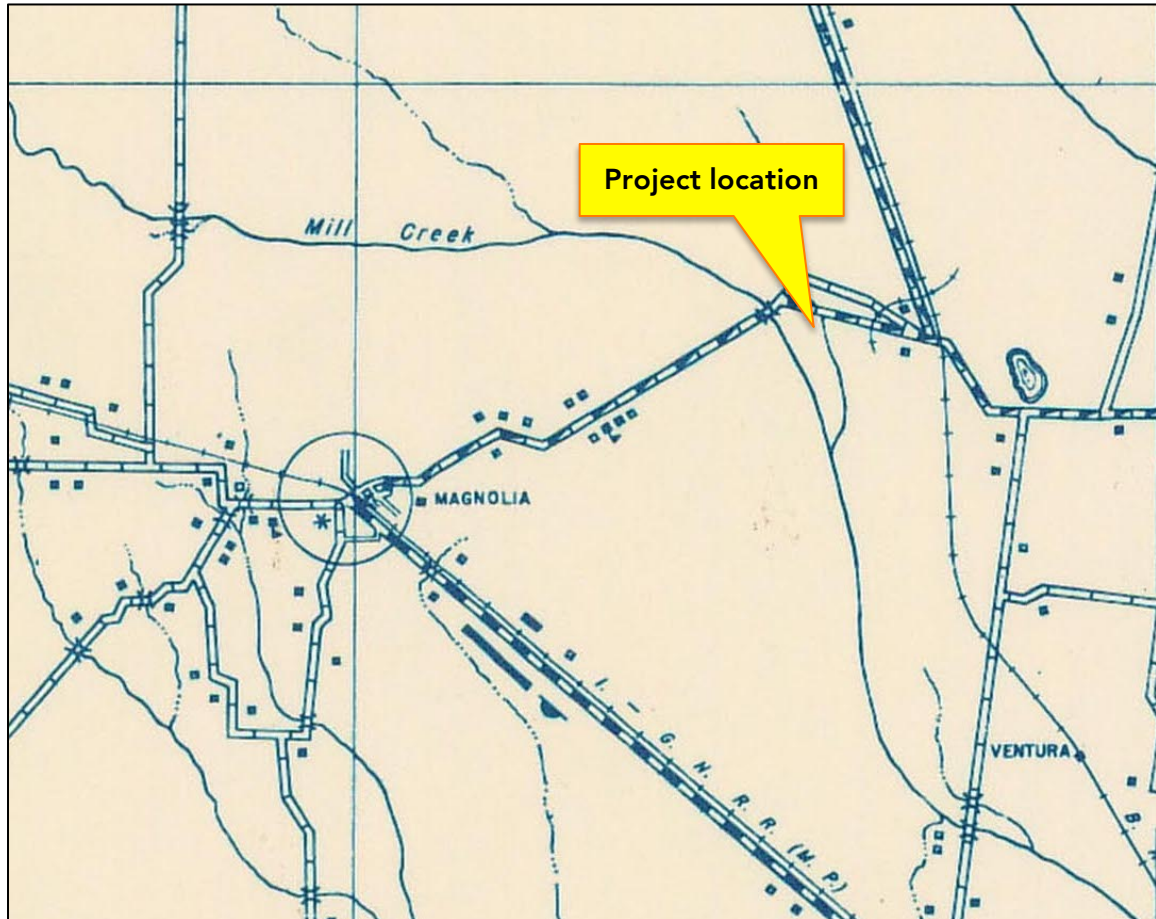


Figure 5. 1939 Montgomery County Highway Map in relation to the project location.

Archeological Sites Near the Project Area

Background research consisted of a search of the online records of the Texas Historical Commission (THC) and the Texas Archeological Research Laboratory (TARL) for archeological sites, sites listed on the National Register of Historic Places (NRHP), State Archeological Landmarks (SALs), cemeteries, Official State Historical Markers (OSHM), and archeological projects within one kilometer (0.62 miles) of the proposed project area. The search no previous surveys, and no archeological sites within one kilometer of the project area.

The closest archeological sites to the APE are Sites 41MQ331, 41MQ114, and 41MQ115, located more than a mile from the APE along Lake Creek. These three sites are all similar in that they occupy small rises on the edge of the Lake Creek floodplain and are within sandy soils. Two of the sites (41MQ331 and 41MQ115) were recorded as lithic scatters of unknown pre-contact age. The third (41MQ114) contained a single ceramic sherd as well as a variety of lithic debris likely representing the Early Ceramic or

Late Prehistoric period. However, in all cases cultural material was sparse and lacked integrity. Generally speaking the distribution of sites in this region suggests that pre-contact peoples chose high spots overlooking major creeks and waterways, not unlike the environment of the current project area.

4. METHODS AND RESULTS OF INVESTIGATIONS

Field Methods

Prior consultation with the USACE (SWG-2019-0333) resulted in a request for a cultural resources survey of the APE to comply with Section 106. Acacia prepared a scope of work and submitted it to the USACE on June 4, 2019. The scope proposed that, given that no eligible or listed cultural resources were known within one mile of the project location, the APE should be limited to the footprint of the proposed disturbances. The USACE concurred with the scope as proposed. The same scope was proposed for Antiquities Permit No. 9007.

The background research suggested that project area could have moderate potential for prehistoric archeological sites due to its proximity to Mill Creek, although the APE falls outside of the floodplain where sites could be deeply buried. Therefore, Acacia proposed visual inspection and shovel testing to assess whether any archeological sites are present. Backhoe trenching was not proposed for the project because review of the Houston PALM and other sources suggested that sites would be shallowly buried. The archeological survey conformed to the minimum standards and guidelines for archeological surveys adopted by the Texas Historical Commission. These standards recommend one test every two acres for surveys of less than 100 acres in size.

Archeologists walked and visually inspected the entire-acre 12-acre APE, making notes of surface or near surface archeological features. Shovel testing was conducted at a rate of 1.3 tests every two acres within the footprint of the proposed improvements, or a total of eight shovel tests. This exceeds the CTA's minimum standards. (**Figure 6**). Shovel tests were excavated to 80 centimeters, or ancient soils, whichever was encountered first.

Soil from all shovel tests was screened through 1/4-inch wire mesh. Investigators took photographs of the APE and made notes on site conditions.

Acacia proposed to field-record any artifacts observed during the survey and return them to their find location. However, no artifacts or cultural material of any sort was found during the course of the survey.

Results of Pedestrian Inspection and Shovel Testing

Until very recently the project area was heavily wooded; however, just prior to the survey, the developer cleared almost the entire APE in anticipation of the proposed construction. Mature trees were cut down for timber, understory vegetation was cleared and burned, leaving the APE about 90 percent accessible and clearly visible to surface inspection (**Figure 7**). These activities affected the integrity of the surface and upper

25 centimeters of sediment throughout the APE. Nonetheless, if any archeological sites had been present on the surface or near surface, evidence of them would have been readily apparent to investigators during the survey. In fact, investigators found through visual inspection no evidence that any archeological resources were ever present on the property prior to land clearing. The only human-made artifact to be observed anywhere on the property was a golf ball, which was clearly of modern manufacture.

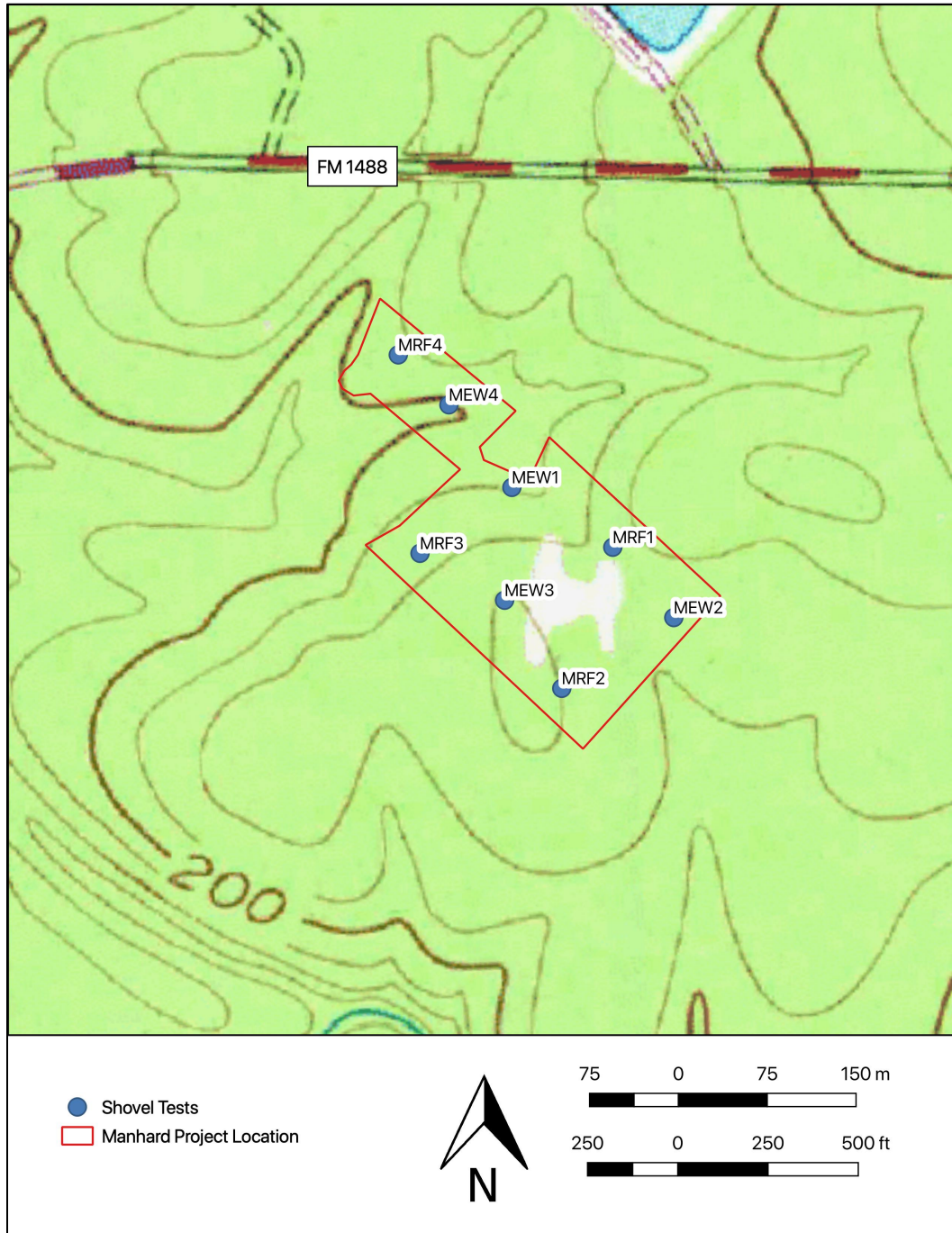


Figure 6. Shovel test locations within the project area.



Figure 7. Two views of the APE stripped of vegetation: A) facing south and B) facing west.

The remaining 10 percent of the APE was not cleared and in this area, vegetation was so thick, it was nearly impenetrable. Trees identified were mainly native pines, water oak and sweetgum, interspersed with a dense understory of Yaupon holly, greenbrier, mustang grape and other woody undergrowth (Figure 8).



Figure 8. Dense vegetation in the northeastern portion of the APE.

Eight shovel tests were distributed throughout the APE (Table 1). These shovel tests all revealed similar soil profiles, both within wooded and in the cleared areas. An average shovel test contained pale yellow-brown (7.5YR 6/6) silty sand to depths of about 60-70 centimeters below ground surface. This overlay mottled orange and pale silty sand (7.5YR 5/8 and 7.5YR 6/6) containing small ironite gravels. This lower zone was interpreted to be part of the underlying Fleming and Willis formations and therefore was considered pre-cultural. The soil of all but one shovel test (RF4) contained burned wood from the recent deforestation in the upper 30 centimeters of the sediment profile.

None of the shovel tests contained any artifacts or archeological material. No new sites were recorded during this survey.

Table 1. Shovel test log details.

ST#	Depth (cmbs)	UTM	Soil Color	Soil Description	Cultural Material/ Notes
MEW1	0-55	15R, 239867E, 3346923 N	10YR 7/6	Gravelly sandy loam	none
	55-60		5YR 6/8	Gravelly sandy clay	
MEW2	0-55	15R, 239997E, 3346805 N	10YR 7/6	Gravelly sandy loam	Burned material to depths of 50 cmbs
	55-60		5YR 6/8	Gravelly sandy clay	
MEW3	0-45	15R, 239856E, 3346829 N	10YR 7/6	Gravelly sandy loam	none
	45-50		5YR 6/8	Gravelly sandy clay	
MEW4	0-55	15R, 239819E, 3346996 N	10YR 7/6	Gravelly sandy loam	5 m north of small drainage
	55-60		5YR 6/8	Gravelly sandy clay	
MRF1	0-75	15R, 239950E, 3346868 N	7.5YR 6/6	Pale brown silty sand	none
	75-80+		7.5YR 5/8 and 7.5YR 6/6	Mottled silty sand with gravels	
MRF2	0-60	15R, 239899E, 3346751 N	7.5YR 6/6	Pale brown silty sand	none
	60-70+		7.5YR 5/8-7.5YR 6/6	Mottled silty sand with gravels	
MRF3	0-70	15R, 239787E, 3346873 N	7.5YR 6/6	Pale brown silty sand	none
	70-80+		7.5YR 5/8-7.5YR 6/6	Mottled silty sand with gravels	
MRF4	0-70	15R, 239771E, 3347019 N	7.5YR 6/6	Pale brown silty sand	None. In dense veg.
	70-80		7.5YR 5/8-7.5YR 6/6	Mottled sandy loam with gravels	

6. CONCLUSIONS AND RECOMMENDATIONS

Acacia Heritage Consulting conducted an archeological survey of 12 acres along Mill Creek in Montgomery County, Texas. The survey was conducted for compliance with Section 106 and the ACT under Permit No. 9007 prior to construction of public utilities to support a private residential development. Archeologists visually inspected the APE and excavated eight shovel tests. About 90 percent of the project area was stripped and cleared prior to the survey. However, no artifacts or cultural materials of any kind were encountered during visual inspection of the property or through subsurface testing. Had sites been present prior to deforestation, evidence of them would have been visible on the surface of the property. No new archeological sites were documented within the APE and there are no previously recorded sites. This report recommends that no further work is warranted prior to construction of the proposed detention basin and outfall.

No artifacts were collected during the survey and all notes and records will be permanently curated at the Center for Archaeological Studies in San Marcos in compliance with the terms of Permit No 9007.

WORKS CITED

Abbott, James

2001 *Houston Area Geoarcheology: A Framework for Archeological Investigation, Interpretation and Cultural Resource Management in the Houston Highway District*. Archeological Studies Report No. 27. Texas Department of Transportation, Environmental Affairs, Austin.

Aten, L. E.

1983 *Indians of the Upper Texas Coast*. Academic Press, New York.

1984 Woodland Cultures of the Texas Coast. In *Perspectives on Gulf Coast Prehistory*, pp 72–93. Ripley P. Bullen Monographs in Anthropology and History, No. 5, The Florida State Museum, Gainesville.

Bever, Michael and David Melzter

2007 Exploring Variation in Paleoindian Lifeways: the Third Revised Edition of the Texas Clovis Fluted Point Survey. *Bulletin of Texas Archeology*. 78:65-100.

Bousman, C. B., B. W. Baker, and A. C. Kerr

2004 Paleoindian Archeology in Texas. In *The Prehistory of Texas*, edited by Timothy K. Pertulla, pp 15–97. Texas A&M University Press, College Station.

Branch, Will

2010a MAGNOLIA, TX (MONTGOMERY COUNTY), *Handbook of Texas Online* <http://www.tshaonline.org/handbook/online/articles/hlm23>, accessed May 2019.

2010b MOSTYN, TX (MONTGOMERY COUNTY), *Handbook of Texas Online* <http://www.tshaonline.org/handbook/online/articles/htm24>, accessed May 2019.

Bureau of Economic Geology (BEG)

1992 Geologic Atlas of Texas, Houston Sheet. <http://www.twdb.texas.gov/groundwater/aquifer/GAT/>, accessed online May 2019.

California Soil Resource Lab

2008 Soil Survey. University of California, Davis. <https://casoilresource.lawr.ucdavis.edu>, accessed may 2019.

Ensor, B.

1991 *National Register Eligibility Testing and Assessment at the Al Soloman I and Al Soloman II Sites, Cypress Creek, Harris County, Texas*. Reports of Investigation No. 12. Archeological Research Laboratory, Texas A&M University, College Station.

Kidder, T. R.

2002 Woodland Period Archeology of the Lower Mississippi Valley. In *The Woodland Southeast*, edited by David G. Anderson and Robert C. Mainfort, Jr., pp. 66–90. University of Alabama Press, Tuscaloosa.

Long, Christopher

2010 MONTGOMERY COUNTY. *Handbook of Texas Online*, <http://www.tshaonline.org/handbook/online/articles/hcm17>, accessed May 08, 2019.

Moore, R.

1994 *Archeological Data Recovery Excavations at the Kingwood Site, 41HR616: Harris County, Texas*. Moore Archeological Consulting, Houston.

1995 *The Mossy Grove Model of Long-Term Forager-Collector Adaptations in Inland Southeast Texas*. Unpublished Ph.D. dissertation, Department of Anthropology, Rice University, Houston.

Griffith, J.E. et al.

2004 *Ecoregions of Texas (EPA)* – The Encyclopedia of Earth. Electronic document, <http://www.eoearth.org/view/article/152207/>, accessed May 2019.

Patterson, Leland

1995 The Archeology of Southeast Texas. *Bulletin of Texas Archeology*. 66:239-264.

Perttula, T. K. (editor)

2004 *The Prehistory of Texas*. Texas A&M University Press, College Station.

Ricklis, R.

1994 *Aboriginal Life and Culture on the Upper Texas Coast: Archeology at the Mitchell Ridge Site, 41GV66, Galveston Island*. Coastal Archeological Research, Inc., Corpus Christi, Texas.

2004 The Archeology of the Native American Occupation of Southeast Texas. In *The Prehistory of Texas*, edited by Timothy K. Perttula, pp 181–202. Texas A&M University Press, College Station.

Story, D. A.

1990 Cultural History of the Native Americans. In *The Archeology and Bioarcheology of the Gulf Coastal Plain: Volume 1*, by D. A. Story, J. A. Guy, B. A. Burnett, M. D Freeman, J. C. Rose, D. G. Steele, B. W. Olive, and K. J. Reinhard, pp. 163–366. Research Series No. 38. Arkansas Archeological Survey, Fayetteville.

Texas A&M Forest Service

2008 Texas Eco-Regions: Western Gulf Coastal Plain – Trees of Texas. Electronic document, <http://texastreeid.tamu.edu/content/texasEcoRegions/WesternGulfCoastalPlain/>, accessed July 2019.

Texas Beyond History

2019 Coastal Prairies and Marshlands: Native Peoples of the Coastal Prairies and Marshlands in Early Historic Times. Electronic document <https://www.texasbeyondhistory.net/coast/peoples/index.html>, accessed July 2019.

Texas Historical Commission

2019 Texas Archeological Sites Atlas Online. Electronic document, <http://nueces.thc.state.tx.us/>, accessed May 2019.