

AN ARCHAEOLOGICAL SURVEY OF THE PROPOSED REGIONAL BASIN  
NUMBER 8 IN CENTRAL ANGELINA COUNTY, TEXAS

Antiquities Permit 2392

By

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Contract Report 74

2000

AN ARCHAEOLOGICAL SURVEY OF THE PROPOSED REGIONAL BASIN  
NUMBER 8 IN CENTRAL ANGELINA COUNTY, TEXAS

BVRA Project Number 99-19

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## **ABSTRACT**

Brazos Valley Research Associates (BVRA) performed a cultural resources survey of a 38 acre proposed regional basin in central Angelina County, Texas in May 2000. This project was conducted under Texas Antiquities Committee permit number 2392. The project area was investigated by shovel testing. No archaeological sites were found within the boundaries of the project area, and it is recommended that construction be allowed to proceed as planned. Copies of the final report are on file at the Archeology Division, Texas Historical Commission and the Texas Archeological Research Laboratory (TARL) in Austin, Texas; the City of Lufkin; and BVRA in Bryan, Texas.

## **ACKNOWLEDGMENTS**

BVRA is appreciative of the assistance provided by Mr. Pat G. Oates, P.E. (Project Manager), of Goodwin-Lasiter, Inc. of Lufkin, Texas. Keith Wright, P.E. of the City of Lufkin and his assistant Debbie Fitzgerald, Engineering Designer, are thanked for their part in this endeavor. At the state level, Carolyn Spock, Head of Records at the Texas Archeological Research Laboratory (TARL) in Austin, Texas and her staff checked the TARL files for previously recorded sites in the project area. Ed Baker of the Texas Historical Commission, Archeology Division, was the reviewer for this project. All figures in this report were prepared by Lili Lyddon of Lyddon Illustrations of North Zulch, Texas. The field crew consisted of James E. Warren (Project Archeologist), Arthur F. Romine, and Bobby Jemison.

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## INTRODUCTION

The City of Lufkin proposes to construct Regional Basin Number 8, a site that will impound water from Tributary #4 of Hurricane Creek in central Angelina County, Texas (Figure 1). The project area is depicted on the topographic quadrangle, Lufkin (dated 1949 and photorevised in 1980). This is the most recent topographic map for the area (Figure 2). It should be noted that this map is out of date, as many current roads and subdivisions are not depicted. Dodson & Associates, Inc., Hydrologists and Civil Engineers, numbered the various tributaries of Hurricane Creek during their study of the proposed Regional Basin for the City of Lufkin. The size of the 100 year frequency retention pool is 11 acres; however, the total area to be acquired by the City is approximately 38 acres. Angelina County contains significant prehistoric and historic sites. Therefore, an archaeological survey was recommended by the Archeology Division, Texas Historic Commission. In order to comply with this request, the City of Lufkin retained BVRA to conduct this service which was performed under Texas Antiquities permit 2392 with William E. Moore the Principal Investigator.

The 38 acre project area is located in an urban setting in the city limits of Lufkin. Tributary Number 4 bisects the main portion of the project area in an east-west direction, and several small branches of this tributary are also present within the 100 year frequency retention pool. The site of the proposed Regional Basin Number 8 is thickly wooded and is surrounded on all four sides by private land (Figure 3).

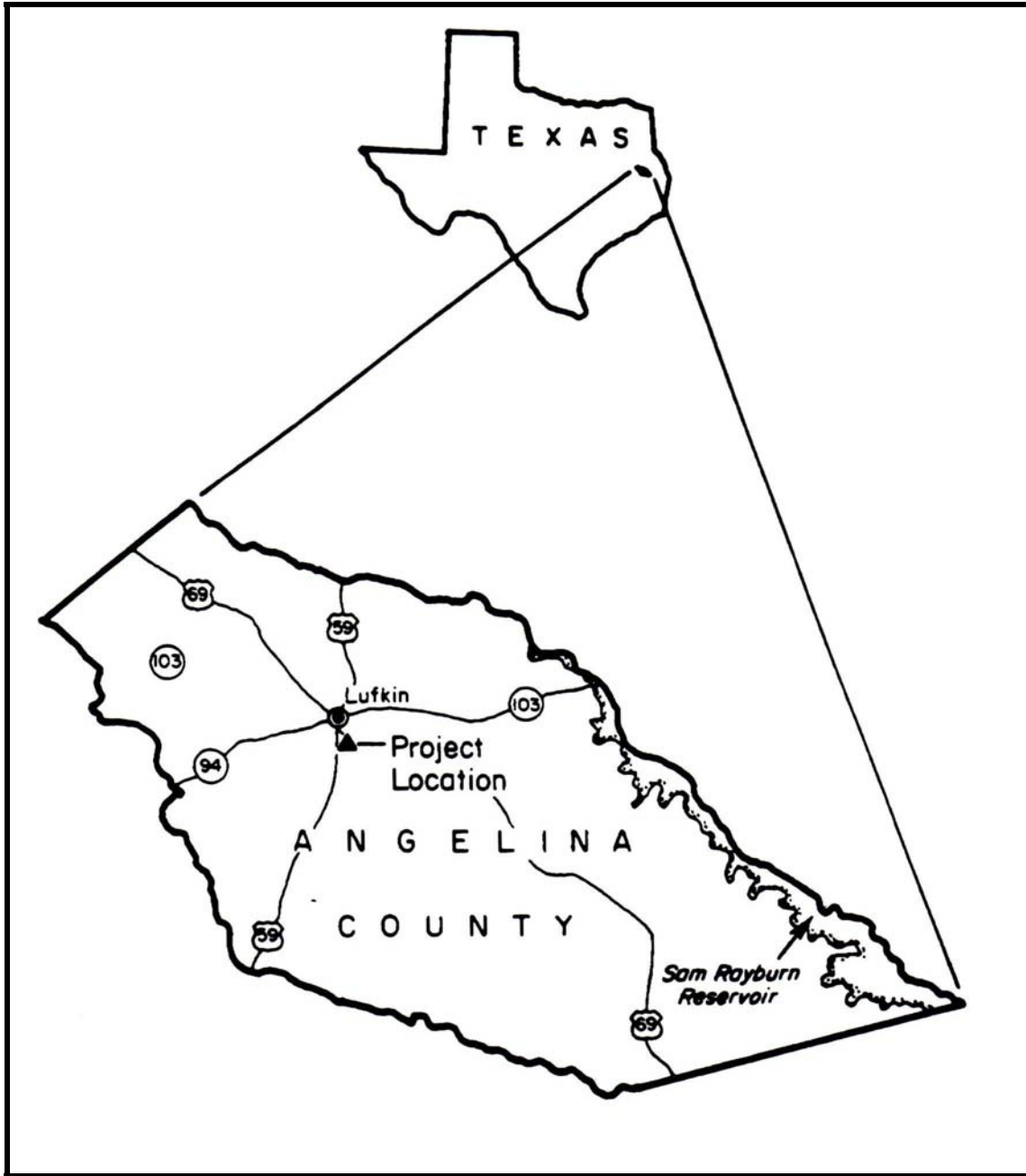


Figure 1. General Location of Project Area

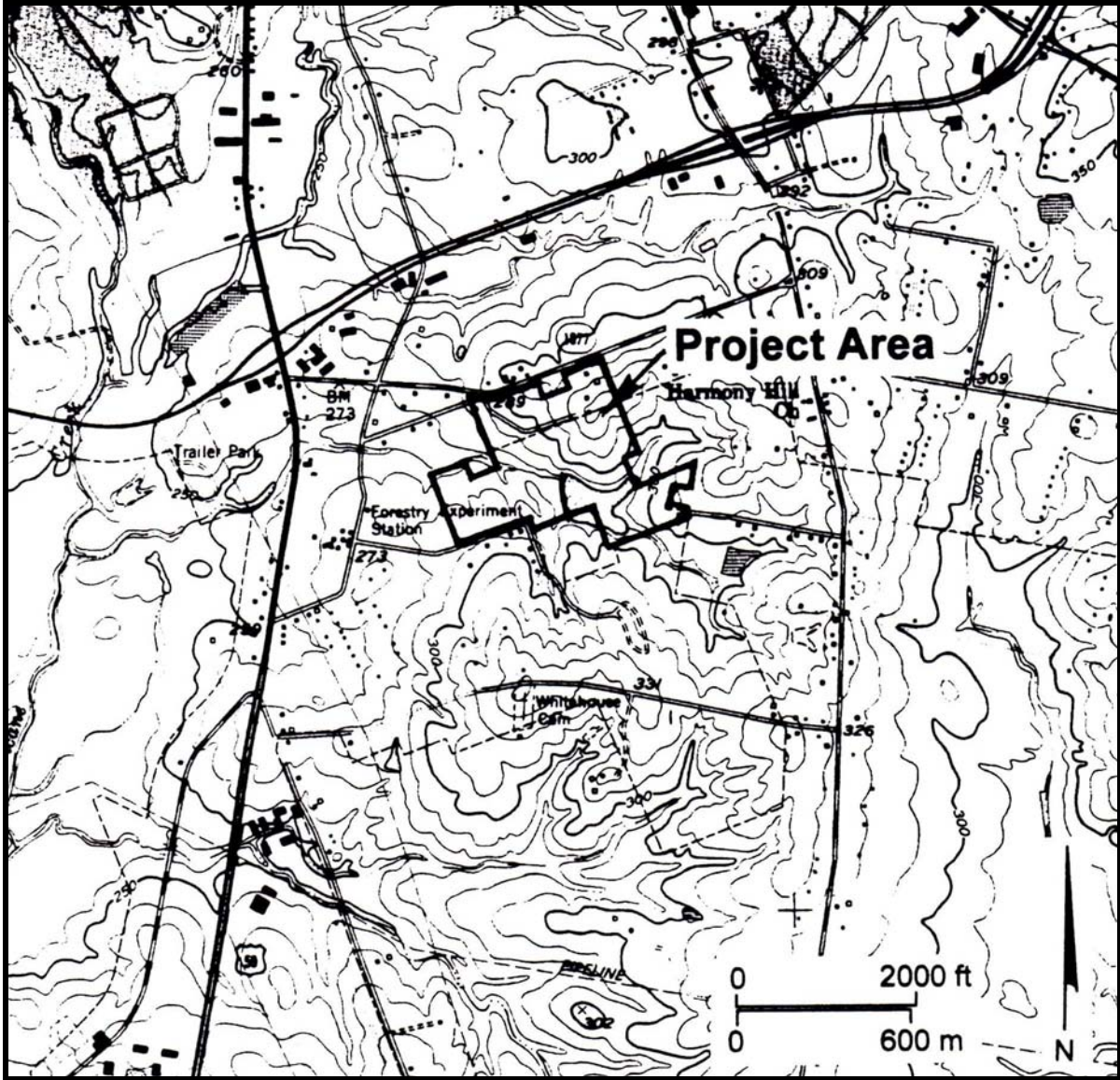


Figure 2. Project Area on Lufkin Quadrangle



## ENVIRONMENTAL SETTING

The following general discussion of Angelina County was taken from the Soil Survey of Angelina County (Dolezel (1988:1-4). Angelina County is located in the central part of East Texas. The northern and southern parts of the county have a dendritic drainage system with many large streams. Two rivers, Neches and Angelina, drain the county. Elevation ranges from about 100 feet in the south near the Neches River to about 460 feet in the northern part of the county. Angelina County is in the East Texas Timberlands Land Resource Area and forest products are a major part of the local economy. Soils in this area formed mainly under forest vegetation in a humid environment, and most are light in color and low in natural fertility. Nearly level areas are often wet, and moderately steep to steep areas tend to erode easily. Descriptions of soils specific to the project area appear in the *Results and Conclusions* section of this report. Angelina County has long, hot summers because of moist tropical air from the Gulf of Mexico persistently covers the area. Winters are cool and fairly short. Rainfall is fairly heavy throughout the year, and prolonged droughts are rare. The total annual precipitation is 41 inches. Of this, 21 inches (50%) usually falls in April through September. In winter, the average temperature is 50 degrees Fahrenheit, and the average daily minimum temperature is 39 degrees. In summer, the average temperature is 82 degrees, and the average daily maximum temperature is 93 degrees.

## ARCHAEOLOGICAL BACKGROUND

According to a recently published planning document for the Eastern Planning Region of Texas (Kenmotsu and Perttula 1993:Figure 1.1.2), Angelina County is situated within the Northeast Texas archeological study region. In 1985, according to a statistical overview prepared by the Texas Historical Commission (Biesart et al. 1985:107), Angelina County contained 52 recorded sites. The site files at TARL revealed 172 recorded sites at the time of this survey. In 1985, 1 site in the county had been excavated, 21 had been tested by hand, 1 had been tested by machine, 30 sites had been dug by collectors, and 46 had been surface collected. Nine recorded prehistoric sites in the county were listed as Archaic, and 41 sites were listed as Late Prehistoric (Biesart et al. 1985:108). Five sites contained burials.

In 1991, an evaluation was made of significant sites in the Northeast Texas Archeological Region (Kenmotsu and Perttula 1993:Table 2.1.1). At this time Angelina County contained 121 recorded prehistoric sites; of this number 19 were listed as not significant, 67 as unknown significance, 35 as probably significant, and 22 as significant.

The archaeological significance of Angelina County is partially reflected in the following statistics. In 1993, the county contained the second highest number of important known hunter-gatherer sites in Northeast Texas (n=3) (Kenmotsu and Perttula 1993:Figure 2.3.3) and also contained at least 13 important Late Caddoan sites (n=13) (Kenmotsu and Perttula 1993:Figure 2.5.2). Unfortunately, there are major forces that continue to threaten the integrity of archaeological sites in Angelina County. These include population growth (City of Lufkin and surrounding area), highway construction, surface lignite mining, Sam Rayburn Reservoir (formerly McGee Bend), and the lumbering industry.

Although private contract archaeology firms have played a part, most of the archaeological sites known to exist in Angelina County have been identified by surveys associated with reservoir construction and in-house projects by National Forest personnel. The earliest archaeological research in the area was performed in the late 1930s and early 1940s by researchers from The University of Texas at Austin. At that time prehistoric cemeteries and mound sites were considered to be of primary importance. From the late 1940s until the mid 1970s, most of the archaeological research in East Texas was carried out in connection with reservoir construction. In 1948, for example, Robert L. Stephenson published the results of his work at the proposed McGee Bend Reservoir in Angelina, Jasper, Nacogdoches, Sabine, and San Augustine counties (Stephenson 1948a, 1948b). At the time this was the only systematic professional major archaeological investigation in the county.

In the 1970s, Ross Fields (1979) presented an overview of the cultural resources of the Davy Crockett, Sam Houston, Angelina, and Sabine National Forests of Texas. This document provides a brief discussion of all sites in each forest; 23 sites in Angelina County are mentioned. Another important document for this area is a cultural resource overview of the National Forests in Texas by John Ippolito (1983). Of particular relevance to this project is Ippolito's Figure 21 entitled "Drainage Systems & Probability Zones, Angelina National Forest, Texas."

Although no part of the project area is within the Angelina National Forest, Ippolito's figure covers areas within 10 miles of the City of Lufkin. He considers the Neches and Angelina rivers to be high probability areas with several streams in the county listed as medium probability areas. According to Ippolito (personal communication, July 15, 1999), there are several drainages in the county such as Hurricane Creek and Biloxi Creek that should be considered to be medium to high probability areas. Ippolito views ephemeral streams such as those in the current project area as low probability areas.

Most recently, three surveys of detention ponds have been performed in the general area (Murin 1999; Moore 2000). Not one of these proposed detention pond sites contained cultural materials. It is beyond the scope of this report to discuss in detail the archaeological background of Angelina County, especially when numerous contract reports are available. The interested reader is referred to the statistical overview (Biesaart et al. 1985), the planning document published by the Texas Historical Commission (Kenmotsu and Perttula 1993), and other reports cited above for more detailed information regarding the archaeology of Angelina County.

## FIELD METHODS

This investigation was performed on May 21 and 22, 2000. Shovel tests were excavated in high probability areas and randomly across the project area that is heavily wooded; no surface exposures were present along the creek bank that was sloping and covered with grass and weeds. All excavated matrix was screened using 1/4 inch hardware cloth and recorded on a shovel test log (Appendix I). In all, 19 shovel tests were excavated in the 38 acre project area (Figure 3). All shovel tests were excavated to clay and ranged in depth from 10 to 100 cm. Because the total area of the project area is 38 acres, the numbers of shovel tests (n=19) meets the number per acre required by the *Archeological Survey Standards for Texas* as recommended by the Texas Historical Commission (1 test per 2 acres). Since clay was reached through shovel testing backhoe trenching was not necessary. Because of the dense vegetation no attempts were made to photograph portions of the project area.

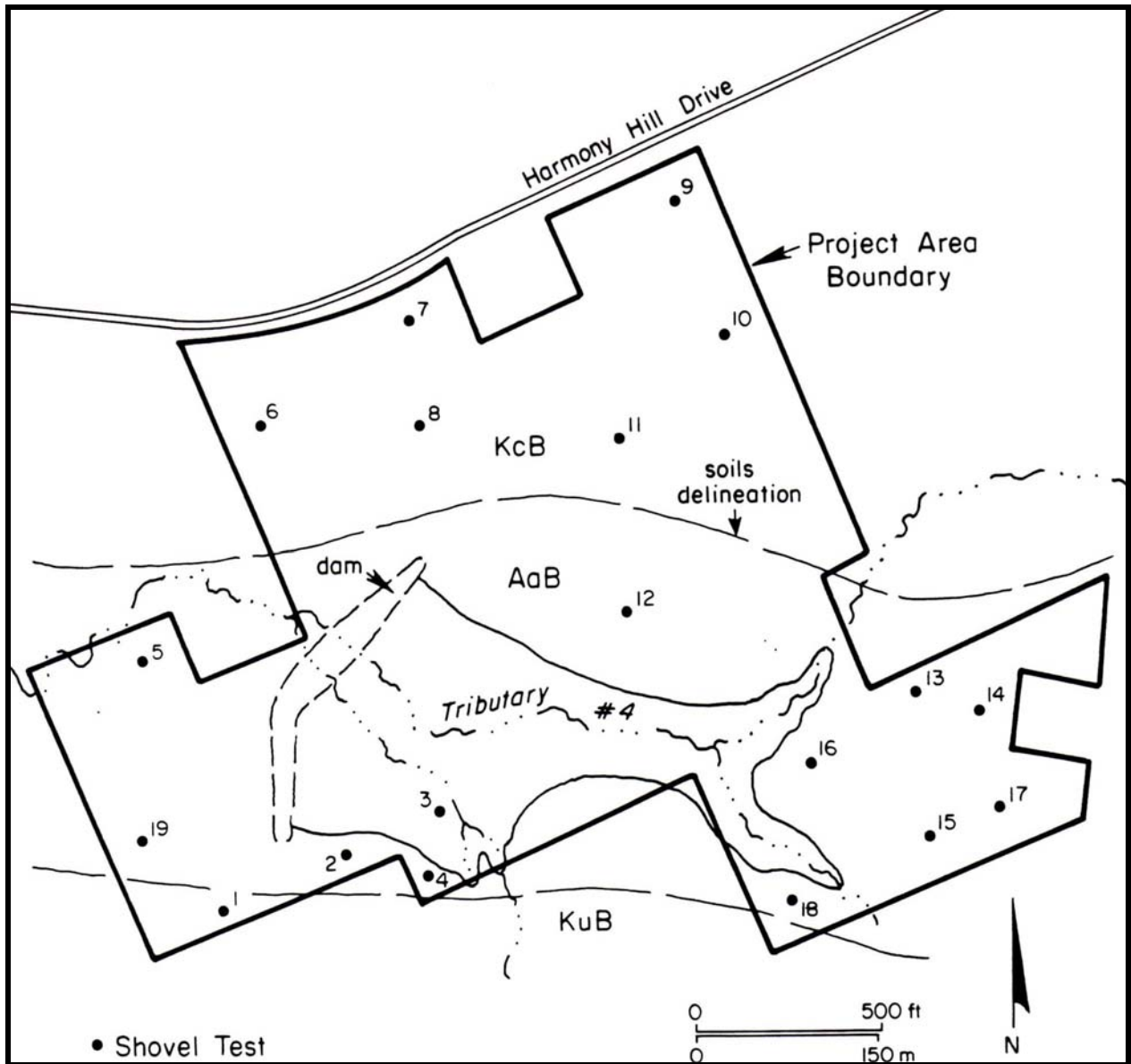


Figure 3. Shovel Tests

## RESULTS AND CONCLUSIONS

The site records at TARL yielded no previously recorded archaeological sites in the project area. A review of the literature revealed that significant prehistoric and historic sites are present in Angelina County. One previously recorded prehistoric site (41AG21) is located on Cedar Creek near the confluence of this stream and Hurricane Creek. This site, recorded by Gus Arnold of the University of Texas at Austin in 1939 during his informal survey of East Texas, is the closest recorded site to the current project area. This prehistoric site is stated on the site form as about one acre in size on the top of a sandy ridge (250 foot contour) that slopes into "bottom land and creeks to the west and north." The age of this site is unknown; however, ceramics and projectile points suggest a Late Prehistoric or Caddoan component.

The project area was found to be in an area composed of three soil types (see Figure 3). These are Alazan very fine sandy loam, 0 to 4 percent slopes (AaB), Keltys fine sandy loam, 1 to 5 percent slopes (KcB), and Kurth fine sandy loam, 0 to 4 percent slopes (KuB). The majority of the project area contains AaB and KcB soils; only a small portion of the project area contains KuB soils. AaB soils are found on terraces and low uplands throughout most of the county. In the project area this soil covers the 11 acre retention pool and the uplands to the south. Eleven shovel tests were excavated in this soil type. This soil is discussed in detail in Dolezel (1988:23-24). KcB soils are found on broad, gently sloping, slightly convex, low ridges in nearly all upland parts of the county south of Texas Highway 103. These areas are probably old alluvial fans or natural levees deposited by ancient stream meanders. Seven shovel tests were excavated in this soil type. This soil is discussed in detail in Dolezel (1988:40). KuB soils are found on broad, nearly level to gently sloping, slightly convex, long, low ridges. Areas of this soil are on old natural levees deposited by ancient streams. One shovel test was excavated in this soil type. This soil is discussed in detail in Dolezel (1988:45-46).

Nineteen shovel tests in the project area revealed a variable depth of clay between 10 and 100 cm below the existing ground surface. Although the project area was bisected by a tributary of Hurricane Creek, it appears that this area was not considered a suitable location for prehistoric occupation. This tributary may not have been a dependable source of water in the past, and other areas along this stream may have been selected instead.

## **RECOMMENDATIONS**

Based on the absence of archaeological sites in the project area, it is recommended that construction be allowed to proceed as planned. It is always possible that archaeological sites are missed during any archaeological survey. Should evidence of a prehistoric or historic site in the project area right-of-way be discovered during construction, all work in this area should cease immediately until the Texas Historical Commission can evaluate the situation.

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## APPENDIX I: SHOVEL TEST LOG\*

Shovel Test 1 was dug through fine sandy loam to a depth of 80 cm where yellow clay was encountered. The first 50 cm was a fine sandy loam (10YR 5/1), and the remaining 30 cm was also a fine sandy loam (10YR 7/3). This test was sterile.

Shovel Test 2 was dug through fine sandy loam to a depth of 60 cm where yellow clay was encountered. The first 40 cm was a fine sandy loam (10YR 5/1), and the remaining 20 cm was also a fine sandy loam (10YR 7/3). This test was sterile.

Shovel Test 3 was dug through fine sandy loam to a depth of 60 cm where yellow clay was encountered. The first 40 cm was a fine sandy loam (10YR 5/1), and the remaining 20 cm was also a fine sandy loam (10YR 7/3). This test was sterile.

Shovel Test 4 was dug through fine sandy loam to a depth of 60 cm where yellow clay was encountered. The first 40 cm was a fine sandy loam (10YR 5/1), and the remaining 20 cm was also a fine sandy loam (10YR 7/3). This test was sterile.

Shovel Test 5 was dug through fine sandy loam to a depth of 60 cm where yellow clay was encountered. The first 40 cm was a fine sandy loam (10YR 4/1), and the remaining 20 cm was also a fine sandy loam (10YR 6/1). This test was sterile.

Shovel Test 6 was dug through fine sandy loam to a depth of 90 cm where yellow clay was encountered. The first 50 cm was a fine sandy loam (10YR 4/1), and the remaining 40 cm was also a fine sandy loam (10YR 6/1). This test was sterile.

Shovel Test 7 was dug through fine sandy loam (10YR 4/1) to a depth of 10 cm where red clay was encountered. This test was sterile.

Shovel Test 8 was dug through fine sandy loam to a depth of 70 cm where yellow clay was encountered. The first 40 cm was a fine sandy loam (10YR 4/1), and the remaining 50 cm was also a fine sandy loam (10YR 6/1). This test was sterile.

Shovel Test 9 was dug through fine sandy loam to a depth of 80 cm where yellow clay was encountered. The first 30 cm was a fine sandy loam (10YR 7/3), and the remaining 50 cm was also a fine sandy loam (10YR 7/1). This test was sterile.

Shovel Test 10 was dug through fine sandy loam (10YR 6/4) to a depth of 50 cm where yellow clay was encountered. This test was sterile.

Shovel Test 11 was dug through fine sandy loam (10YR 6/4) to a depth of 40 cm where yellow clay was encountered. This test was sterile.

Shovel Test 12 was dug through fine sandy loam (10YR 6/4) to a depth of 50 cm where yellow clay was encountered. This test was sterile.

Shovel Test 13 was dug through fine sandy loam to a depth of 60 cm where red clay was encountered. The first 15 cm was a fine sandy loam (10YR 5/1), and the remaining 45 cm was also a fine sandy loam (10YR 7/1). This test was sterile.

Shovel Test 14 was dug through fine sandy loam to a depth of 50 cm where red clay was encountered. The first 15 cm was a fine sandy loam (10YR 5/1), and the remaining 35 cm was also a fine sandy loam (10YR 7/1). This test was sterile.

Shovel Test 15 was dug through fine sandy loam to a depth of 100 cm where red clay was encountered. The first 20 cm was a fine sandy loam (10YR 5/1), and the remaining 80 cm was also a fine sandy loam (10YR 7/1). This test was sterile.

Shovel Test 16 was dug through fine sandy loam to a depth of 40 cm where red clay was encountered. The first 15 cm was a fine sandy loam (10YR 5/1), and the remaining 25 cm was also a fine sandy loam (10YR 7/1). This test was sterile.

Shovel Test 17 was dug through fine sandy loam (10YR 6/4) to a depth of 20 cm where red clay was encountered. This test was sterile.

Shovel Test 18 was dug through fine sandy loam to a depth of 50 cm where red clay was encountered. The first 15 cm was a fine sandy loam (10YR 5/1), and the remaining 35 cm was also a fine sandy loam (10YR 7/1). This test was sterile.

Shovel Test 19 was dug through fine sandy loam to a depth of 60 cm where yellow clay was encountered. The first 40 cm was a fine sandy loam (10YR 5/1), and the remaining 20 cm was also a fine sandy loam (10YR 7/3). This test was sterile.

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\* All shovel tests were 30 x 50 cm in diameter and excavated in arbitrary 10 cm levels.