

**AN ARCHAEOLOGICAL SURVEY FOR THE
PROPOSED OLD ORCHARD PARK
IMPROVEMENT PROJECT IN ANGELINA
COUNTY, TEXAS**

Antiquities Permit 4931



By

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**Brazos Valley Research Associates
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AN ARCHAEOLOGICAL SURVEY FOR THE PROPOSED
OLD ORCHARD PARK IMPROVEMENT PROJECT
IN ANGELINA COUNTY, TEXAS

BVRA Project Number 08-21

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ABSTRACT

On May 28, 2008, Brazos Valley Research Associates (BVRA) performed a cultural resources survey at the site of the 50-acre Old Orchard Park in central Angelina County for the City of Diboll under antiquities permit 4931. The project area was investigated by backhoe trenching. Four backhoe trenches revealed a sandy loam that varied in depth from 30 cm to 70 cm. Below this was sandy clay and clay that became wetter as the trenches approached the water table, especially in the two trenches nearest the creek. No archaeological sites were found, no artifacts were collected, and it is recommended that construction be allowed to proceed as planned. Copies of the final report are on file at the Texas Historical Commission (THC), Texas Archeological Research Laboratory (TARL), BVRA, and the City of Diboll.

ACKNOWLEDGMENTS

I appreciate the assistance of those who made this project possible. Project area maps were provided by Klotz Associates, Inc. under the supervision of James Flournoy. Kenneth Williams of the City of Diboll allowed two assistants to help during the field survey, and Patrick Miller and Eduardo Concha are thanked for their help. A copy of a previous survey report was obtained from The Texas Water Development Board (TWDB) thanks to Christopher Jurgens and Clay Schulz. The site files at TARL were checked for previously recorded sites by Jean Hughes. Lili G. Lyddon prepared the figures that appear in this report.

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INTRODUCTION

The City of Diboll plans to make improvements to an existing city park on a 50-acre site in central Angelina County, Texas (Figure 1). The existing park contains ball fields, a pavilion, volleyball court, basketball pavilion, lake, splash park, tennis courts, rest rooms, and a hike and bike trail. Planned improvements include an amphitheater, xeriscape garden, playground, an increase in the size of the lake and the addition of a pier and boardwalk, and two pavilions. Most of these improvements will involve little subsurface disturbance with the exception being the increase in the size of the lake. Because of the proximity of the project area to White Oak Creek, an archaeological survey was recommended by the THC. In order to comply with this request, the City of Diboll retained BVRA to survey the area. This project was performed under Antiquities Permit 4931 with William E. Moore the Principal Investigator and supervisor of field activities. The project area is depicted on the topographic quadrangle Diboll, Texas (3194-224) (Figure 2).

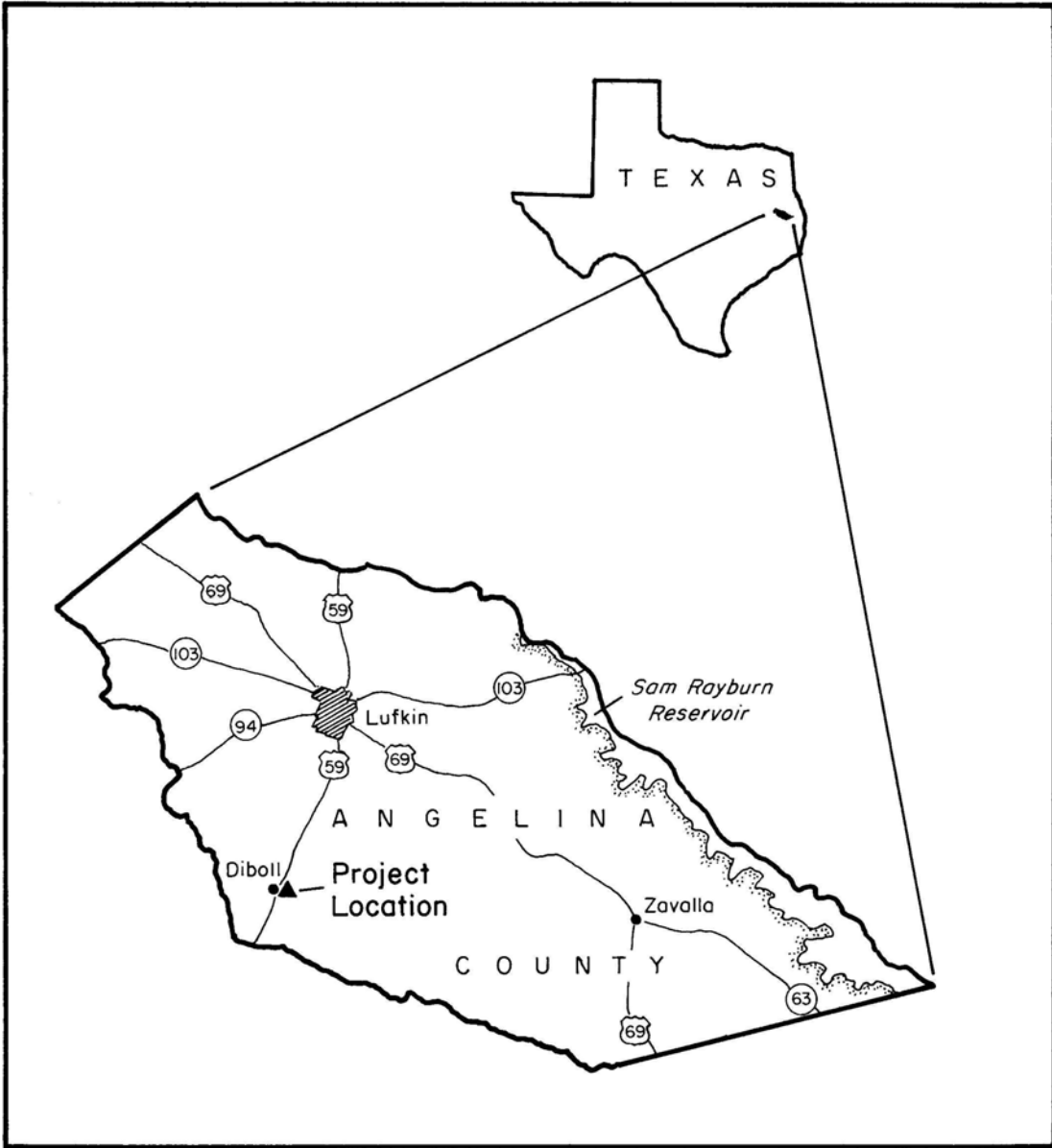


Figure 1. General Location

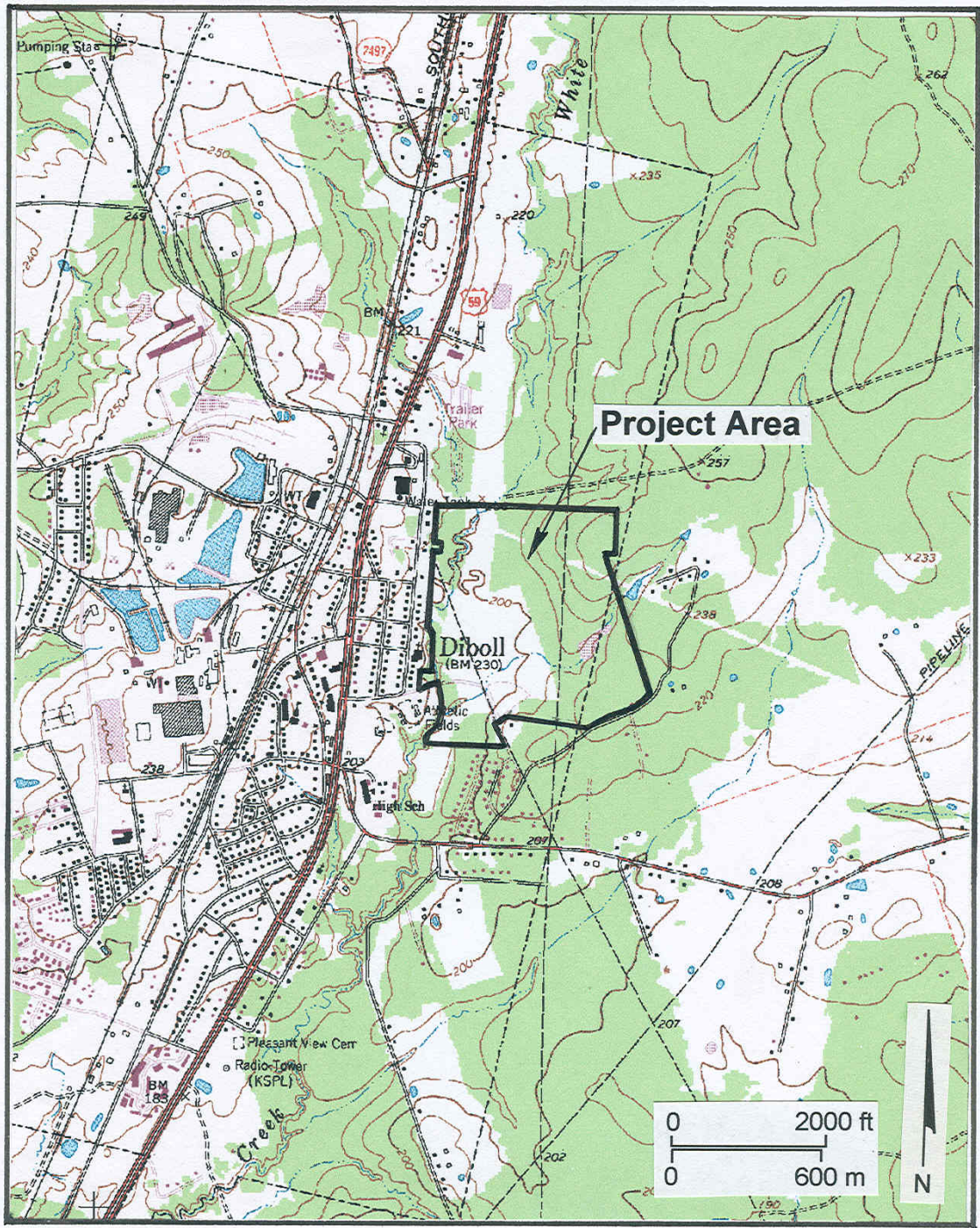


Figure 2. Project Area on Topographic Map Diboll

ENVIRONMENTAL SETTING

The following general discussion 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. The 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.

According to the soil survey (Dolezel 1988:Sheet 27), that part of the project area where the city park is located is in Koury loam, frequently flooded (Kp). According to Dolezel (1988:45), "This is a deep soil found on nearly level bottom lands along small streams and creeks, mainly south of Lufkin." The soil survey does not state a depth at which clay typically occurs, but it does say that loam exists from the surface to a depth of 45 inches in some cases. This soil is moderately well drained and moderately slowly permeable. The available water capacity is high, and runoff is slow. Flooding generally occurs annually, although these events may be for a brief duration. During the cool season, the water table is at a depth of 1.5 to 2.5 feet.

At the time of this survey the project area was divided into two recreation areas. Most of the fifty acres has been developed as a golf course, and the rest of the tract is a city park with various improvements (see *Introduction* above). The undisturbed areas are covered with well-mowed grass.

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 (Biesaart et al. 1985:107), Angelina County contained 52 recorded sites. 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 (Biesaart 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. Today, the number of sites in the county exceeds 190.

The archaeological significance of Angelina County is partially reflected in the following statistics. In 1993, the county contained the second highest number of important 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, 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 major archaeological investigation in the county performed by a professional archaeologist in a systematic manner.

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, and 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, John 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), 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. Ephemeral streams such as those in the current project area are viewed by Ippolito as low probability areas.

A check of the Texas Archeological Sites Atlas revealed one previous survey in the vicinity of the current project area. This small area survey was performed for the United States Department of Agriculture, Rural Development. There is no information on the Atlas that documents the size of the project area, name of investigating firm, or date of survey. This area is approximately 452 meters southwest of the current project area.

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 (Biesart et al. 1985), the planning document published by the THC (Kenmotsu and Perttula 1993), and other reports cited above for more detailed information regarding the archaeology of Angelina County.

PREVIOUS INVESTIGATIONS

A review of the Archeological Sites Atlas revealed that there are no previously recorded sites in the project area. Two linear surveys were performed by archaeologists from the Texas Department of Water Resources (TDWR) in 1981 and 1982. The first survey is outside the boundaries of Old Orchard Park. It was examined by Daniel E. Fox in 1981 for a proposed interceptor pipeline. The route was changed, and W. Hayden Whitsett examined the new route in 1982. According to the report by Whitsett (1983), most of the area investigated was immediately adjacent to the creek bed, "an area cut by numerous small meander scars and tributary streams that offers few potential occupation areas." At the time of this survey, this report was not on file at TARL. However, copies of both reports were made available to BVRA by Christopher Jurgens at the Texas Water Development Board, and they are now at TARL.

METHODS

This investigation was performed on May 28, 2008. Backhoe Trenches were excavated in areas planned for development and in two areas near the creek (Figure 3). Samples of dirt from each backhoe bucket were screened using ¼ inch hardware cloth and recorded on a log (Appendix I). In all, four backhoe trenches were excavated in the project area. All tests were terminated when clay or ground water was encountered. The trenches ranged in depth from 1.5 meters to 1.8 meters. A profile of each trench was made in the field (Appendix II). Figure 4 illustrates the excavation of Backhoe Trench 1 at the site of the proposed amphitheatre. The project was also documented by digital photography. Not all areas proposed for development were examined. A discussion of each area is presented below.

Amphitheater

The City plans to build this facility in a previously undisturbed area. This will be an above ground structure. The only ground disturbance will be some pushing to level the surface. One backhoe trench (BT 4) was dug in this area. The dimensions for this trench are presented in Appendix I, and the results are presented in the *Results and Conclusions* section of this report.

Handicapped Pier and Boardwalk

The City plans to build the piers and boardwalk adjacent to an existing lake. This will be an above ground structure except for the supports that will be placed in holes. No backhoe trenches were dug in this area.

Lake Improvements

The City plans to enlarge the lake by digging to a depth of 10 feet in an area 50 feet x 200 feet. No backhoe trench was dug in this area because the first trench (BT 1) was dug in the vicinity where the soccer fields are proposed.

Pavilions

The City plans to construct two pavilions that will be 40 feet x 60 feet in size. These will be above ground structures. No backhoe trench was dug in this area because the area had been previously disturbed when a swimming pool was built in the past. The pool is gone, and the area is currently being used as a splash park.

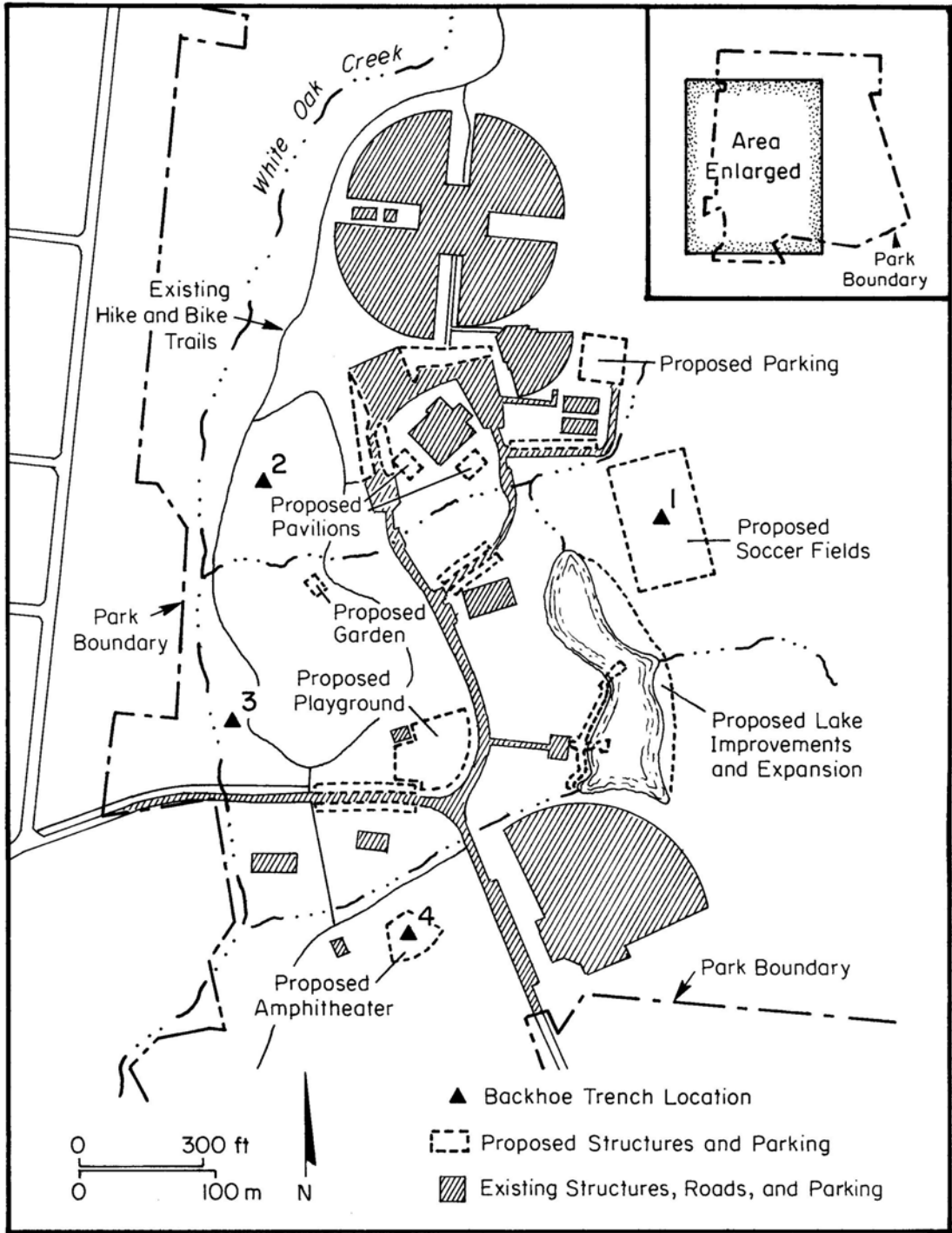


Figure 3. Backhoe Trench Locations



Figure 4. Backhoe Trench 1

Playground

The City plans to build a playground adjacent to an existing pavilion. When finished, this will be a grassy area with playground equipment. Very little subsurface disturbance will result from the construction of this facility. No backhoe trench was dug in this area due to an existing gas line.

Soccer Field

The City plans to construct one soccer field south of the existing lake and west of the existing tennis courts and parking areas. This will be an above ground facility with no storm drains. One backhoe trench (BT 1) was dug in this area. The dimensions for this trench are presented in Appendix I, and the results are presented in the *Results and Conclusions* section of this report.

Xeriscape Garden

The City plans to construct a small garden (20 feet x 40 feet) in an undisturbed area adjacent to the park road. The only subsurface disturbance will be tilling for the garden. No backhoe trench was dug in this area.

Two additional backhoe trenches (BT 2 and BT 3) were excavated. They were dug in undisturbed areas near the creek. These areas were selected because of their proximity to this stream. The dimensions for these trenches are presented in Appendix I, and the results are presented in the *Results and Conclusions* section of this report. No trenches were excavated on the west side of the creek because the area was thickly wooded.

RESULTS AND CONCLUSIONS

The records check at TARL revealed that no previously recorded sites are present within any portion of the project area as currently defined. A review of the literature revealed that significant prehistoric and historic sites are present in Angelina County. Four backhoe trenches in the project area revealed a variable depth of sandy loam between 30 cm and 1 m below the existing ground surface. Two previous surveys were conducted in the area with one passing through the park. These investigations were negative, and the area was viewed as an unlikely setting for an archaeological site, mainly because of the small meander scars and tributary streams that, according to the previous researchers, “offers few potential occupation areas.” The shallow water table in cool weather is viewed by BVRA as an indication that deeply buried sites are not likely to exist unless prehistoric groups were present in times of warmer weather. Most of 50-acre park is being used as a golf course. The remainder is a city park with a few scattered undisturbed areas. This survey was conducted according to the Minimum Survey Standards as outlined by the Texas Historical Commission, Archeology Division.

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 be discovered during construction, all work in this area should cease immediately until the Texas Historical Commission can evaluate the situation. This study followed the minimum survey standards

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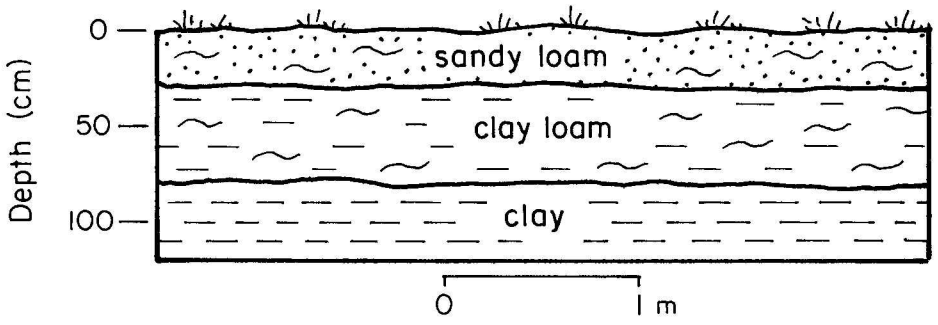
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APPENDIX I: BACKHOE TRENCH LOG

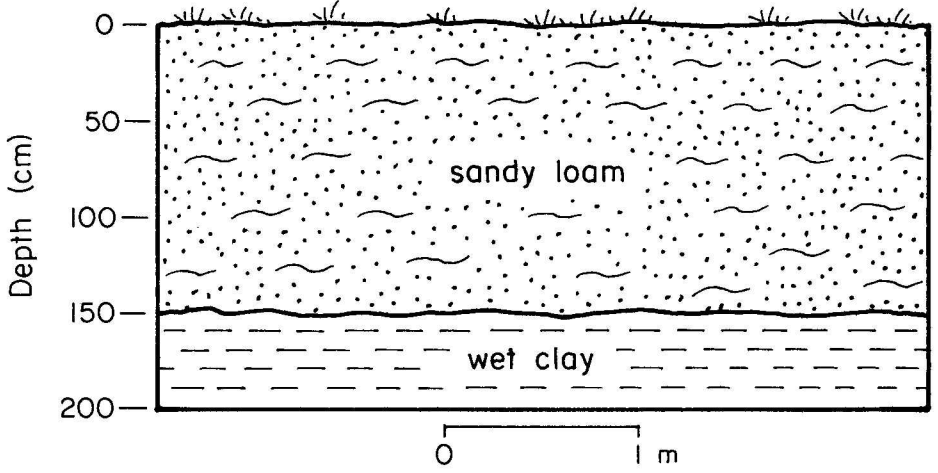
Backhoe Trench	Depth	Length	Width	Comments
1	1.2 m	4 m	1 m	dug through sandy loam and clay. No artifacts or features observed.
2	2 m	4 m	1 m	dug through sandy loam and clay loam. Soil becoming wet at 1 m. No artifacts or features observed.
3	1.5 m	4 m	1 m	dug through sandy loam and clay. Soil becoming wet at 1 m. No artifacts or features observed.
4	1.8	4 m	1 m	dug through sandy loam and sandy clay. Wet clay 1 m. No artifacts or features observed.

APPENDIX II
BACKHOE TRENCH PROFILES

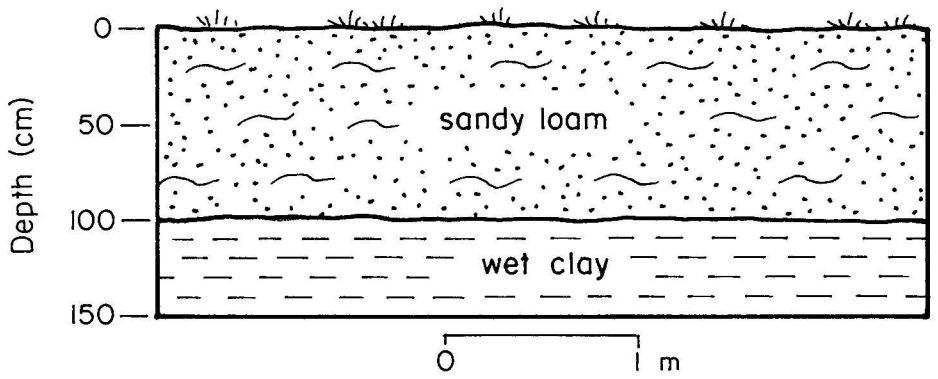
Backhoe Trench 1



Backhoe Trench 2



Backhoe Trench 3



Backhoe Trench 4

