ARCHAEOLOGICAL SURVEY WITHIN THE PROPOSED

JUSTIN COMMUNITY PARK,

DENTON COUNTY, TEXAS

Texas Antiquities Permit Number 5117

Jesse Todd, MS, MA

Submitted to:

CITY OF JUSTIN
P. O. Box 129
Justin, Texas 76247

Prepared by:

AR CONSULTANTS, INC.
11020 Audelia Road, Suite C105
Dallas, Texas 75243-9085

Cultural Resources Report 2008-103
December 30, 2008
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The City of Justin intends to create an approximately 20.25 acre park southwest of downtown Justin in Denton County, Texas and north of Trail Creek. The park will contain a ballfield, two soccer fields, a playground, a multi-use trail, a pavilion, two cooking grills and benches. A first-order tributary to Trail Creek will be expanded into a bioretention area. The development of the park also will be supported in part by a grant from Texas Parks and Wildlife. During a review of this project, the Texas Historical Commission has requested that an archaeological survey be conducted. AR Consultants, Inc. was retained by the City of Justin to conduct an intensive pedestrian archaeological survey of the proposed park area. Since the City of Justin is a political entity of the State of Texas, Texas Antiquities Permit Number 5117 was issued for the archaeological survey.

The purpose of the archaeological survey was to determine if any cultural materials older than 50 years were present, and, if so, make recommendations about their significance and how they might be impacted by construction. None were found on the ground surface or uncovered in 12 shovel tests excavated during the survey. The absence of prehistoric sites is probably due to the lack of perennial water, low biotic diversity and lack of knappable lithic resources. Historic sites are not present probably due the preference to use the land for farming.

Based on the results of the archaeological survey, it is AR Consultants' recommendation that no further cultural resource investigations are warranted and that the City of Justin should be allowed to construct the community park. If buried cultural resources are uncovered during construction, work should cease in that area and the Archeology Division of the Texas Historical Commission immediately should be notified of the discovery.
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INTRODUCTION

The City of Justin intends to create an approximately 20.25 acre park southwest of downtown Justin in Denton County, Texas. The property is bounded by Trail Creek to the south, Hardeman Estates Subdivision to the northeast, the Justin Elementary School to the northwest and a child development center to the west (Figure 1). The park will contain a ball field, two soccer fields, a playground, a multi-use trail, a pavilion, two cooking grills and benches. A first-order tributary to Trail Creek will be expanded into a bioretention area. The development of the park also will be supported in part by a grant from Texas Parks and Wildlife. During a review of this project, the Texas Historical Commission has requested that an archaeological survey be conducted. AR Consultants, Inc. was retained by the City of Justin to conduct an intensive pedestrian archaeological survey of the proposed park area.

The purpose of this investigation was to locate any cultural resources present within the park area and make recommendations about their significance and how they might be impacted by construction. The Antiquities Code of Texas applies since the City of Justin is a political entity of the State of Texas and Texas Antiquities Permit Number 5117 was issued for the survey. Since the study area abuts Trail Creek which may contain Waters of the United States, possible relevant federal legislation includes the National Historic Preservation Act of 1966, as amended (PL-96-515), the National Environmental Policy Act of 1969 (PL-90-190), and the Archeological and Historical Preservation Act of 1974, as amended (PL-93-291).

This report was written in accordance with the guidelines for reports adopted by the Texas Historical Commission, Archeology Division, and developed by the Council of Texas Archeologists (ND). The following report contains a brief description of the natural environment and then a summary of previous archaeological investigations in the area as known from published sources. This is followed by the research design and methodology. The description of the results of the field investigation constitutes the majority of the report. The last chapter presents recommendations that arise from the study. A list of references cited concludes the report.
Figure 1. Proposed Justin Community Park location plotted on an enlarged portion of the Justin, Texas 7.5' USGS map.

Administrative Information

Sponsor: City of Justin
Review Agencies: Texas Historical Commission, Archeology Division
Principal Investigator: Jesse Todd
Field Crew: Lance K. Trask and Todd
Field Date(s): December 29, 2008
Field Man-Days: 2
Acres Surveyed: approximately 20.25
Sites Investigated: None
NATURAL SETTING

Denton County is located in North Central Texas. It is bisected by the sandy soil of the Eastern Cross Timbers. The western portion of the county consists, on the surface, of the black soil of the Fort Worth Prairie, in which the study area lies, while the eastern part consists of the rich, black soil of the Blackland Prairie (Odom 2003:1). The county is drained by the Elm Fork of the Trinity River and several major drainages such as Denton, Clear and Hickory creeks.

The bedrock consists of the Lower Cretaceous-aged undifferentiated Fort Worth Limestone, Duck Creek Formation and Caddo Limestone. The northern bank of Trail Creek is mapped as being a Quaternary terrace (Bureau of Economic Geology 1967). Soils within the study area that overlie the Lower Cretaceous-aged bedrock belong to the Ponder-Lindale Soil Association which contains nearly level to gently sloping upland savannah loams and the Slidell-Sanger Soil Association which consists of gently sloping to moderately steep upland savannah clays (Ford and Pauls 1980:General Soil Map). Soils within the study area consist of Ponder loam with 1 to 3 percent slopes and Sanger and Slidell clay with 1 to 3 percent slopes and (Ford and Paul 1980:Sheet 37).

Trail Creek is mapped as perennial on the USGS map, but as intermittent on the Soils Map for Denton County (Ford and Pauls 1980).

A consensus about the paleoenvironmental conditions of North Central Texas over the past 12,000 years has not been reached. Discussions by Prikryl (1993), Ferring and Yates (1997), Humphrey and Ferring (1994), and Brown (1998) offer disparate interpretations based on different analytical approaches. The following discussion relies heavily on Ferring’s investigations and focuses upon the past two thousand years. Correlating periods of rapid alluviation with higher precipitation and slow alluviation with drier conditions, Ferring has concluded that the Late Holocene [5000 years BP to the present] was a wet period with moderate alluviation, except for a dry period between 2000 and 1000 years B.P. [AD 1 to 1000]. It was during this dry period that the West Fork Paleosol was established on the stable surfaces of the river meanders along the Upper Trinity and its tributaries. This interpretation is supported by changing patterns seen in stable isotope analysis. Brown (1998) offers a differing interpretation based on isotopic analyses of mussel shells from a prehistoric site (41DI.270) on Denton Creek. He concludes that the period from 1500 to 2500 yr B.P. was cooler and/or wetter and that before and after, the environment was warmer and drier, but he points out that this interpretation may only be applicable for the Elm Fork tributary and not the region.

CULTURE HISTORY

The history and prehistory of Denton County are summarized in several reports prepared by the University of North Texas (Lebo and Brown 1990; Brown and Lebo 1991; Ferring and Yates 1998). Prehistoric Native American settlement in Denton County began at least 10,000 years ago as attested to by the presence of distinctively shaped dart points (Crook and Harris 1957) at the Lewisville site and the Aubrey Clovis site (Ferring 2001).
Moreover, artifact collectors report the presence of Clovis, Folsom, Scottsbluff and other Paleo-Indian points from the surface of sites in the region. The presence of exotic, i.e., non-local, lithic resources indicates that these early people traveled a territory where higher quality lithics were available or were involved in a system of raw material trading. These early people hunted now-extinct large game, but probably also foraged off the land.

The subsequent period, the Archaic, lasted from 7,000 to 6,000 B.C. to possibly as late as A.D. 700-800. The Archaic peoples lived throughout the county but particularly along the major and minor stream valleys where they were able to hunt and gather native foods. Dart points, grinding stones, fire-cracked rock, and scrapers are common artifacts found on Archaic sites. The earliest Archaic peoples continued using exotic cherts for dart points, but as time passed, there was a shift toward the use of local lithics for chipped stone tools. These local materials are described as Uvalde Gravels (Menzer and Slaughter 1971). Large Archaic sites are generally located on terraces or ridges that overlook the Elm Fork of the Trinity. Smaller lithic scatters have been recorded in upland areas throughout the county. These sites appear to be Archaic in age, but none have been thoroughly studied.

Various authors, including Peter and McGregor (1988), have attempted to create a chronology for North Central Texas. The most commonly used chronology was established by Prikryl (1990) which divides the Late Prehistoric, the time from the use of the bow and pottery to the Historic Indian, into two periods: Late Prehistoric I (A.D. 700 to 1200) and Late Prehistoric II (A.D. 1200 to 1700).

During Late Prehistoric I times, a small amount of pottery appears at the Baggett Branch site, 41DL149 (Prikryl and Perttula 1995:189). Arrowheads appear about this same time and apparently the bow and arrow had been added to the hunting tools. From A.D. 1000 to 1300, pottery appears in North Central Texas that has similarities to Caddoan pottery as well as Caddoan and Jornada Mogollon ceramics occur on sites in North Central Texas (Prikryl and Perttula 1995). In addition houses were found at the Cobb-Pool site, 41DL148, (Peter and McGregor 1988:140). Fritz (1993) mentions the use of corn for food in North Central Texas during this time and Todd (1999) suggests that the presence of mussel shell hoes in North Central Texas indicates some form of farming.

During Late Prehistoric II times, it is believed that the climate was drier. Bison may have been utilized more than in Late Prehistoric I times. The presence of bison-scapula hoes, especially in northern North Central Texas, suggests an increase in horticulture or, at least, its first appearance. This concept is supported by the presence of sites along sandy terraces instead of the floodplain area where Late Prehistoric I sites are found. Also, there is a marked Plains influence in North Central Texas during this time (Prikryl 1990:80).

At the end of the Late Prehistoric periods, there appears to have been a general abandonment of the North Central Texas area. Along Red River in Montague and Cooke Counties and across Red River in Oklahoma, there is both archaeological and ethnographic evidence of historic Taovayas, Wichitas and Yscanis Indians (Bell, Jelks
and Newcomb 1967; John 1992:204). Since the Spanish could not subdue the Indians, they made them their allies with promises of help against the Osages.

There is tantalizing evidence found on the Trinity River in Dallas County of a possible visit by Spanish explorer Hernando de Soto (Bruseth 1992). Artifacts found consist of a chain-mail gauntlet, a halberd and a spur. Current research, however, seems to indicate that Anglo settlers were the first non-Indians to settle in North Central Texas.

The first established European settlement in Denton County began before the mid-1800 with the establishment of the Peter's Colony after Texas independence. These early settlers were farmers who selected bottomland along the Elm Fork of the Trinity (Bridges 1978). Commercial farming was not important until after the Civil War, and the early settlers were essentially self-sufficient. Besides the plants and animals they grew, wild animals and plants were commonly consumed. Denton became the county seat in 1856. By 1875, cotton, corn, and wheat were the main cash crops. Up to half of these crops were grown by tenant farmers who either paid rent to the land owner for their house, tools, and seed or by tenants who gave the landowner a third of the grain and a quarter of the cotton or other cash crops. By the turn of the century, all of the major communities had been established and some had passed away.

What today is Justin was originally settled by French Colonists in 1848 in what was referred to as the Icarian Colony. The settlement was abandoned the following year. Justin began in 1883 when the community became a commercial center for farmers. The Santa Fe railroad expanded its tracks near the community and residents from other areas moved to Justin to be near the railroad. By 1896, the community began to thrive as a shipping point for agricultural products. The nearby I 35 West also was a boon to the growth of Justin because residents could work either in Denton or Fort Worth. Today, Justin continues to grow due not only to an ongoing population growth but businesses as well (Minor 2008:1).

Previous Investigations

AR Consultants, Inc. (Todd and Lang 2008) tested the north bank of Oliver Creek northwest of Justin and the Denton Creek floodplain northeast of Justin but failed to discover any archaeological sites.

No sites have been recorded in or adjacent to the survey area (Texas Archeological Sites Atlas 2008). Two sites (41DN503 and 538) have been recorded on the Justin 7.5' USGS map and they are both historic trash scatters. Historic maps, including the 1918 Soil Map of Denton County (Carter and Beck 1918) and the R. King Harris' Denton County highway map (Harris 1948) were also reviewed. No historic farmsteads were shown on the maps within the study area.
RESEARCH DESIGN AND METHODOLOGY

Research Design

The purpose of the research design outlined below was to insure that fieldwork made a contribution to the better understanding of prehistoric and historic settlement in this part of Denton County. We proposed the three research problems presented below.

Based upon previous investigations in the area, it was felt that the study area had a low potential for containing prehistoric archaeological sites along intermittent tributaries that extend into the Fort Worth Prairie.

and

The potential for a historic site being present is good. Since the historic settlers did not necessarily follow existing routes and used cisterns and wells for a water supply, historic sites might be present in a variety of settings.

A third, and even more basic, research problem guided the survey work. Simply stated the question asked,

How did past people use the land, and what record of this use did they leave behind?

Most frequently, small-scale surveys of this type gather information in response to this more open-minded research question, which guides almost all archaeological surveys.

Methodology

In order to address these research questions, a comprehensive pedestrian survey of the proposed park area was conducted. The surveyors, armed with the proper USGS and soil maps, systematically inspected the tract by walking parallel transects spaced 30 meters apart. Notes on the vegetation, soil, physiography and other relevant data were made. Photographs also were taken. Twelve shovel tests were excavated within the 20.5 acre tract which exceeds the amount recommended by the Council of Texas Archeologists (2002). Shovel tests were excavated to approximately 35 cm bs and concentrated along Trail Creek. The clay matrices were broken manually and visually examined for cultural materials as were the pit walls. Deep testing was not done due to the upland setting where no alluvial sediments have buried and preserved cultural deposits.
RESULTS

In this portion of the report, study area is described and then the intensive pedestrian archaeological survey is discussed. Conclusions derived from the survey end the chapter. Shovel tests are described generally in the text and specific information is proved in Table 1. Shovel test locations are plotted on Figure 8.

The Survey Area

The survey area consisted mainly of recently mowed to unimproved pasture (Figure 2). Trees were present along Trail Creek and along an old fence line. Understory vegetation along the creek included saw greenbriar, hog brush, prickly pear cactus, rabbit grass and other grass species. Trees along the creek and fence line were hackberry, eastern red cedar and elm. Vegetation in the pasture consisted of rabbit grass, bunch grass and other grass species. The terrain ranged from generally level to moderately sloping. Limestone gravel, cobbles and boulders were present on the ground surface. Eye-height visibility was excellent and the ground visibility ranged from less than 5 to 30 percent (Figure 3). Trail Creek ranges from 2 to 3 meters deep and 2 meters wide. Shallow water from recent rains was flowing over a limestone bedrock substrate (Figure 4). No knappable lithic resources were noted in the channel or buried cultural deposits in the vertical creek bank walls.

Disturbance to the area consisted of a sewer pipeline route that paralleled the north bank of Trail Creek (Figure 5). Also a sewer line crosses the creek and runs north through the study area and there is a pipeline in the pasture that runs from northwest to southeast. Usually a ditch indicated the presence of the pipeline. The ditch that runs northwest/southeast is about a meter wide and 0.5 meters deep. The ditch that runs north through the study area is about 2 meters wide and deep (Figure 6). No buried cultural materials were noted in the vertical banks. Piles of dirt were placed along Trail Creek in the eastern portion of the study area (Figure 7).

The Survey

Survey began in the southwest corner and went east. Twelve shovel tests were excavated within the study area. Shovel test 1 was placed in encountered 36 cm of black clay while shovel tests 3 and 4 uncovered 11 and 9 cm of very dark grayish-brown clay overlying limestone bedrock. The rest of the shovel tests encountered very dark grayish-brown clay ranging from 35 to 38 cm bs.

No cultural materials older than 50 years were found on the ground surface or uncovered in the 12 shovel tests.
Figure 2. Unimproved pasture within the study area. Apartments in background mark the study area's eastern border. Note the large ditch in the left portion of the picture. View is to the northeast.

Figure 3. Ground visibility in the improved pasture. View is to the north.
Figure 4. Trail Creek. View is to the southeast.

Figure 5. Manhole from sewer pipeline paralleling the north bank of Trail Creek. View is to the east.
Ditch marking pipeline running north and north of Trail Creek. This is the ditch shown in Figure 2. View is to the northeast.

Dirt and bedrock limestone piles in along Trail Creek’s north bank in the eastern portion of the study area. View is to the north.
Conclusions

The absence of prehistoric sites is probably due to the lack of perennial water, low biotic diversity and lack of knappable lithic resources. The results of the survey are similar to other archaeological surveys in the Fort Worth Prairie in areas away from perennial water. Historic sites are not present probably due the preference to use the land for farming.

Table 1. Shovel test descriptions.

<table>
<thead>
<tr>
<th>ST No.</th>
<th>Depth (cm)</th>
<th>Description *</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0-36+</td>
<td>Dark (10YR2/1) gravelly clay</td>
</tr>
<tr>
<td>2</td>
<td>0-35+</td>
<td>Very dark grayish-brown (10YR3/2) clay</td>
</tr>
<tr>
<td>3</td>
<td>0-11</td>
<td>Very dark grayish-brown gravelly clay</td>
</tr>
<tr>
<td></td>
<td>11+</td>
<td>Limestone bedrock</td>
</tr>
<tr>
<td>4</td>
<td>0-9</td>
<td>Very dark grayish-brown gravelly clay</td>
</tr>
<tr>
<td></td>
<td>9+</td>
<td>Limestone bedrock</td>
</tr>
<tr>
<td>5</td>
<td>0-5</td>
<td>Very dark grayish-brown clay</td>
</tr>
<tr>
<td>----</td>
<td>-------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>5-36+</td>
<td>Very dark grayish-brown gravelly clay</td>
</tr>
<tr>
<td>6</td>
<td>0-36+</td>
<td>Very dark grayish-brown gravelly clay</td>
</tr>
<tr>
<td>7</td>
<td>0-37+</td>
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</tr>
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<td>8</td>
<td>0-38+</td>
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<td>11</td>
<td>0-35+</td>
<td>Very dark grayish-brown gravelly clay</td>
</tr>
<tr>
<td>12</td>
<td>0-36+</td>
<td>Very dark grayish-brown gravelly clay</td>
</tr>
</tbody>
</table>

* Note: Munsell Color Chart Numbers listed only first time used.

**RECOMMENDATIONS**

The purpose of this investigation was to determine if significant cultural resources were present within the proposed park area. None were found. Based upon the absence of archaeological sites, AR Consultants, Inc. recommends that further cultural resource investigations are unwarranted and that the City of Justin be allowed to construct the community park. We further recommend that construction supervisors be advised that if buried archaeological materials could be uncovered during construction, work should immediately cease in that area and the Archeology Division of the Texas Historical Commission be notified of the discovery.

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