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Archaeological Survey of the Proposed Bear Creek Corporate Center Dallas County, Texas

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Archaeological Survey of the Proposed Bear Creek Corporate Center Dallas County, Texas

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ARCHAEOLOGICAL SURVEY OF THE PROPOSED

BEAR CREEK CORPORATE CENTER

DALLAS COUNTY, TEXAS

Molly A. Hall, M.A.
Principal Investigator

and

Allen M. Rutherford, M.A.

Submitted to:

**EVP DEVELOPMENT
AVERE REAL ESTATE**
PO Box 1527
Colleyville, Texas 76034

Submitted by:

AR CONSULTANTS, INC.
805 Business Parkway
Richardson, Texas 75081

Cultural Resources Report 2016-18
May 17, 2016

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ABSTRACT

EVP Developmental/Avere Real Estate is proposing to construct the Bear Creek Corporate Center at the southeast corner of SH161 and Conflans Road in Irving, Texas on approximately 16 acres. This is located in the Bear Creek floodplain 300 meters from the creek channel. AR Consultants, Inc. was contracted to survey the entire property. The survey and shovel testing were conducted on May 17, 2016.

The water table was relatively high at the time of survey, inundating almost a third of the property. No prehistoric or historic archaeological sites were found during the survey. This follows the predictions made prior to field work regarding prehistoric and historic sites. Given the results of this survey, AR Consultants, Inc. recommends that further cultural resource investigations are unnecessary for this project, and requests that the Texas Historical Commission and Fort Worth District of the U.S. Army Corps of Engineers concur with this recommendation.

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INTRODUCTION

EVP Developmental/Avere Real Estate is proposing to construct the Bear Creek Corporate Center at the southeast corner of SH161 and Conflans Road in Irving, Texas on approximately 16 acres (Figure 1). The project area sits in the Bear Creek floodplain, less than 10 feet higher in elevation than the channel. The channel (before it was channelized between 1985 and 1995) was less than 300 m from the property. The purpose of this investigation was to locate and evaluate any cultural resources present in the tract and to make recommendations about their significance and how they might be impacted by construction. AR Consultants, Inc. (ARC) was contracted to conduct a cultural resource survey, which included archival research, to determine the prehistoric and historic archaeological presence in the proposed development property.

Archaeological survey of these portions of the development tract was conducted on May 17, 2016 as part of the environmental review needed to meet relevant federal environmental legislative requirements. These include a Section 404 Permit for the Clean Water Act that is administered by the Fort Worth District of the US Army Corps of Engineers. Other relevant legislation includes the National Historic Preservation Act of 1966, as amended (PL-96-515), the National Environmental Policy Act of 1969 (PL-90-190), the Archeological and Historical Preservation Act of 1974, as amended (PL-93-291), Executive Order No. 11593 “Protection and Enhancement of the Cultural Environment,” and Procedures for the Protection of Historic and Cultural Properties (36CFR800), Appendix C. The Texas Antiquities Code is not applicable to this investigation, but the Texas Historical Commission (THC) will serve as the Section 106 review agency for the Corps of Engineers.

This report is written in accordance with report guidelines adopted by the Archeology Division of the Texas Historical Commission, and developed by the Council of Texas Archeologists (n.d.). The following report presents a brief description of the natural setting of the project area, followed by a discussion of the culture history and previous investigations in the region surrounding the study area. A chapter on the research design and methodology employed in the investigation is then followed by the results of the field investigation. The report concludes with recommendations followed by the references cited.

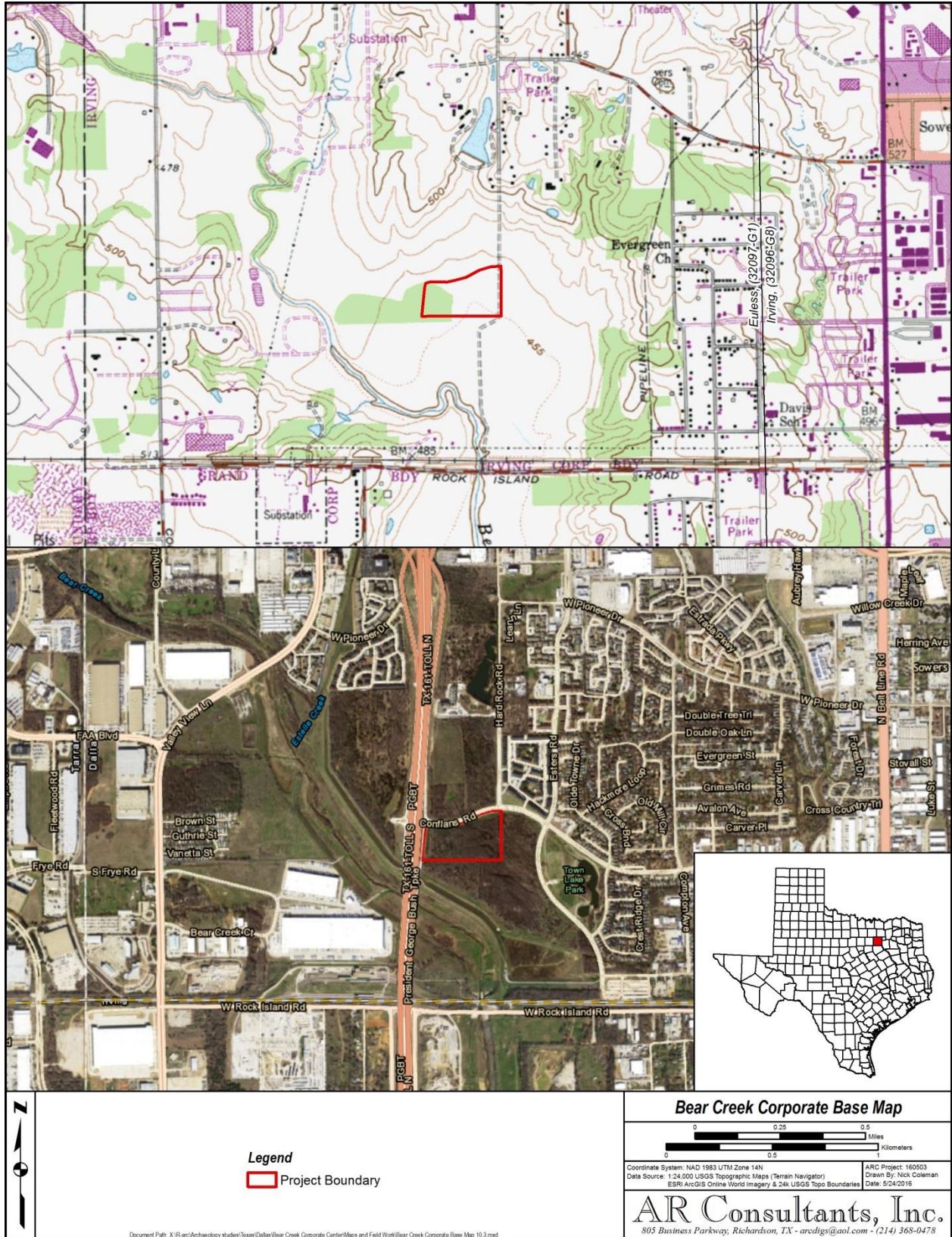


Figure 1. Bear Creek Corporate Center project area shown on a portion of the Euleus, TX 7.5' USGS topographic map and on a recent aerial photograph.

Administrative Information:

Sponsor: EVP Developmental/Avere Real Estate
Review Agency: Fort Worth District of the U.S. Army Corps of Engineers and the Archeology Division of the Texas Historical Commission.
Principal Investigator: Molly A. Hall, MA
Field Date: May 17, 2016
Field Crew: Molly Hall
Acres Surveyed: approximately 16 acres
Sites Recorded: None

NATURAL ENVIRONMENT

The project area falls within the Northern Blackland Prairie Ecoregion of Texas (Griffith et al. 2007). The Blackland Prairie was once an expanse of rolling tallgrass prairie. Some parts of this region were historically forested and stream bottoms were often wooded with bur oak, Shumard oak, sugar hackberry, elm, ash, eastern cottonwood, and pecan. Farming and urbanization in the last 150 years or more has irrevocably changed the topography and vegetation in the greater Dallas area. The current project area is located completely within the eastern Bear Creek floodplain and in a habitat that could currently be described as riparian.

The geology of the project area is Holocene alluvium formed by occasional flooding of Bear Creek (Bureau of Economic Geology 1988). This formation consists mostly of gravel, sand, silt, silty clay, and organic material. All of the project area is mapped on Trinity clay, most of which is frequently flooded with the exception of the northeast corner of the project area which is occasionally flooded (Natural Resources Conservation Service 2016). Trinity series clays consist of a 15cm thick top layer of very dark gray A-horizon clay underlain by a 26cm thick very dark gray buried A-horizon clay. The final three layers are B-horizon soils down to 191cm ranging from very dark gray to dark olive gray in the terminal B-horizon layer. The West Fork Paleosol has not been thoroughly studied in drainages that feed into the West Fork of the Trinity River. It is possible that layer could extend up the major drainages, such as Bear Creek, near their confluences with the West Fork.

CULTURAL HISTORY

A prehistoric chronology, based on Prikryl (1990), with an added historic period, for North Central Texas is presented below to provide the reader with a temporal framework for the culture history of the region.

Historic European	A.D. 1800 to Present
Protohistoric	A.D. 1600 to A.D. 1800 (Historic Native American)
Late Prehistoric	A.D. 700 to A.D. 1600
Late	A.D. 1400 to A.D. 1600
Middle	A.D. 1000 to A.D. 1400
Early	A.D. 700 to A.D. 1000
Archaic	6,000 B.C. to A.D. 700
Paleoindian	ca. 11,000 B.C. to 6,000 B.C.

The Paleoindian period is characterized as having small, nomadic bands of hunter-gatherers whose primary emphasis was the exploitation of now-extinct megafauna, such as mammoth and bison. Smaller game and plant gathering likely supplemented the Paleoindian diet (Meltzer and Bever 1995:59). As such, the archaeological record for the region consists of several distinctive styles of projectile points, such as the Clovis, Plainview, and Folsom. Currently, no Clovis points have been reported in Dallas County, but numerous have been found in the surrounding counties (Bever and Meltzer 2007:67-70). Subsistence patterns began to change as a general drying climatic trend swept the region, leading to extinction of many of the area's large mammals toward the end of the Paleoindian period.

The Archaic period is characterized by increased alluviation of water channels and a generally wetter environment than the previous period. This change in climate resulted in modification of Native American subsistence patterns, with broad exploitation of bottomland food resources. This, in turn, resulted in clusters of seasonal settlements along large drainages, including the Trinity River and its various forks and tributaries, and a marked increase in population density. With the advent of repeated, seasonal occupation of sites along drainages came a perceived increase in territorial constrictions among different groups in the region, with several authors citing the limited use of regional lithic resources as evidence of this trend (Skinner 1981; Prewitt 1983). Prikryl dates the West Fork Paleosol to the Late Archaic and states that deeply buried prehistoric sites may be found in major stream floodplains (1990:77).

The Late Prehistoric period is interpreted as a dryer period, with a focus on procurement of faunal resources, agriculture, and food preservation. The appearance of pottery and the bow and arrow help date artifact assemblages to this period (Shafer 1977). The Protohistoric period is characterized by Native American abandonment of north central Texas in the period around 1500/1600, with almost no archaeological evidence found in the region dating to this time (Skinner 1988).

The Historic European period saw widespread Anglo settlement of north central Texas beginning in the 1830s. This expansion often resulted in brutal conflicts between settlers and nomadic bands of Native Americans (Garrett 1972:24). These early conflicts gave way to various Anglo

strategies aimed at cohabitation, including peace treaties signed as early as 1843. Eventually, the entirety of north central Texas was settled, with numerous Anglo military installations established in the region.

The Anglo-American history of the Upper Trinity River Basin has been divided into the Frontier, Initial Cash Crop, Tenant Farming, and Agribusiness periods by Richner and Lee (1976:125-133). The Frontier period lasted from about 1820 to 1850 and was followed by the Initial Cash Crop period which lasted until 1870. Tenant Farming began at 1870 and continued to about 1940. Agribusiness began after the Great Depression and continues through the present. In addition to agribusiness, numerous wartime industries were established in North Central Texas during World War II (McElhaney and Hazel 2016). These industries additionally helped to bolster a diversified and prosperous post-war economy, which had the added effect of increasing the regional population. Today North Central Texas continues to be a growing area.

Previous Investigations

Prior to survey, a background review was conducted to determine if any previously conducted archaeological surveys and recorded archaeological sites were located in or near the project area. There is one historic marker and three cemeteries recorded within a mile of the project area (TASA 2016). The historic marker commemorates the Haley Memorial cemetery which was established in 1875 after the death of William Haley. He and his wife Lucinda Catherine settled on a farmstead in the area in 1857 and later opened a general store. The cemetery includes members of Haley's family as well as other related families (TASA 2016). The second cemetery is Bear Creek Cemetery which was associated with the Old Bear Creek African-American community in the late 19th Century until 1934. The third cemetery, Shady Oak, was identified on USGS maps but no other information is available. There are no other sites, cemeteries, historical markers, National Register of Historic Places (NRHP) properties, or State Antiquities Landmarks reported within a mile of the project area.

A TASA (2016) review show that five highway surveys have been conducted within a mile of the project area between 1983 and 2005. No archaeological sites were identified during any of these surveys. Linder-Linsley Consulting conducted a 78-acre area survey of Running Bear Park approximately three miles southeast of the current project area on the eastern terrace of Bear Creek (2000). Results from this survey were negative as well. Many of the projects in the Bear Creek watershed, particularly those with positive results for prehistoric cultural resources, have occurred as a result of DFW airport expansion. The surveys which resulted in recording of sites are detailed below. During these investigations, sites ranging in time from the Paleoindian to the Historic Period have been recorded.

ARC surveyed 1,210 acres of DFW airport property that is mostly in the Bear Creek Watershed (Shelton et al. 2008). This survey resulted in recording 23 archaeological sites, most of which had been disturbed and, therefore, were not recommended eligible for the NRHP. The prehistoric Armadillo site (41TR219), which is located in the uplands overlooking Bear Creek, and historic Morgan Hood Survey Pioneer Cemetery (41TR221) required further testing; however, both were ultimately determined ineligible. Based on the results of the surveys previously conducted near Bear Creek, it appears that prehistoric archaeological sites in the area tend to occur on terraces out of the floodplain or in uplands adjacent to tributaries. In addition to ARC's work, Integrated

Environmental Solutions is conducting an ongoing large area survey south of DFW as part of new airport expansion (TASA 2016). The survey has yielded positive results, though the majority of the sites are 20th century historic artifact scatters and none of the sites currently listed on TASA are eligible for the NRHP or as an SAL.

Several historic maps, including the 1894 Fort Worth 30' USGS topographic map, 1920 USDA Dallas County Soil Map, 1931 and 1959 Grapevine, TX 15' USGS maps, 1936 and 1954 Dallas County General Highway maps, and six versions of the Euless, TX 7.5' USGS map dating from 1951 through 1995 were reviewed prior to the survey and no structures or features were mapped within the proposed Bear Creek Corporate Center tract. Additionally, no structures are visible in the project area on 1958 or more recent aerial photos.

RESEARCH DESIGN

Research Design

Based on the research conducted prior to the survey, two hypotheses were developed. First, it was hypothesized that it is unlikely to encounter prehistoric archaeological sites in the property, unless unmapped landforms such as overbank levees are present. This is because the property is a low-lying area on either side of a tributary of Bear Creek where there is no protection from seasonal flooding. The several prehistoric sites that have been recorded previously near Big Bear Creek have been on the first terrace of Big Bear Creek.

The second hypothesis states that there was low potential for encountering historic sites in the project area. There are no structures or features shown on the historic maps in the project area and residential features are not expected to have been built in floodplains. However, historic trash scatters may be located in the drainages.

Methodology

Survey was conducted in accordance with the standards set forth by the THC (n.d.). Eight shovel tests were planned for the property (giving coverage of two shovel tests per acre, as recommended by the THC), but approximately one-third of the property was too wet to shovel test, so three of the planned shovel tests (near the southeast corner and north-central portions of the property) were not excavated. Shovel tests averaged 30 cm in diameter. All sandy and loamy soils were screened through 1/4" screens. The clay fill was inspected visually and broken into smaller chunks in order to determine if cultural materials were present. Shovel test matrices were described on the basis of composition, texture, and color. The Munsell Soil Color Chart (2009) was used to identify soil colors. Field personnel made notes about the ground exposure, drainages, soil types, and disturbed areas where subsoil was exposed. Photographs were taken during the survey using a GPS-equipped digital camera. Shovel test and project boundary locations were marked with a handheld GPS receiver. Deep testing was not an options due to the low elevation of the property combined with seasonal wetness at the time of the survey.

RESULTS

This chapter is divided into two sections. The first describes the project area's natural setting along with results of the pedestrian survey. Conclusions derived from the survey close the

chapter. Shovel tests are described generally throughout the text and are detailed in



Figure 5. Bear Creek Corporate Center project boundary and shovel test locations shown on a recent aerial photograph.

at the end of the Survey Results section.

Survey Results

The west side of the project area is covered in large trees, shrubs, vines, and grasses (Figure 2). An unmapped tributary of Big Bear Creek weaves through the project area from east to west. It is most easily observed on a 1958 aerial photograph of the property (Figure 3). Also visible on this photo is a drainage that flows into the tributary from the north-central portion of the property. These drainages are low and broad, allowing for a wide strip of land on either side of the channel to be inundated, as is visible on the 1958 aerial photograph. Since 1958, another low, north-south drainage has formed along the property's east boundary. The north-central and eastern portions of the property were inundated at the time of the survey. These broad, wet areas have much less grass and lower vegetation than the rest of the property (Figure 4).



Figure 2. The Big Bear Creek tributary where it crosses the western project boundary, facing southeast.



Figure 3. Bear Creek Corporate Center project boundary shown on a 1958 aerial photograph.



Figure 4. Wet area near southeast portion of the property, facing east.

Five shovel tests (STs) were excavated in the project area. The north-central and southeast portions of the property were not shovel tested because they were too wet. The shovel tests were excavated through the dark gray loamy clay A horizon until the very dark gray clay B horizon was reached between 32 and 52 cm below the surface (cmbs). ST1 and ST3 were excavated near the north side of the unnamed tributary. ST4 was terminated prior to reaching the subsoil because the clay was too wet to continue. No artifacts or features were identified in the shovel tests or on the surface of the property. Additionally, no landforms such as overbank levees were identified in association with the tributary. Similar landforms are known to have high potential for having prehistoric archaeological sites.

Table 1. Shovel Test Descriptions.

ST#	Depth (cmbs)	Description	Comments/Artifacts
1	0-48 48-51	Dark gray (10YR4/1) loamy clay Very dark gray (10YR3/1) clay	None
2	0-52 52-57	Dark gray (10YR4/1) loamy clay Very dark gray (10YR3/1) clay	None
3	0-32 32-34	Dark gray (10YR4/1) loamy clay Very dark gray (10YR3/1) clay	None
4	0-38	Dark gray (10YR4/1) loamy clay	Too wet to continue
5	0-47 47-53	Dark gray (10YR4/1) loamy clay Very dark gray (10YR3/1) clay	None



Figure 5. Bear Creek Corporate Center project boundary and shovel test locations shown on a recent aerial photograph.

Conclusions

Based on the natural environment, previous investigations and recorded archaeological sites in the area it was expected that there was low potential for encountering cultural resources within the project area. No archaeological sites, features, or artifacts were identified during the survey. The project lies in the low floodplain and without elevated land on which to live would not have been a favorable location for prehistoric or historic settlement.

RECOMMENDATIONS

The purpose of this investigation was to determine if significant cultural resources are present in the Bear Creek Corporate Center property in Dallas County, Texas. No archaeological sites were recorded during the field investigation. AR Consultants, Inc. concludes that further cultural resource investigations are unwarranted within the proposed project area and recommends that the Texas Historical Commission and Ft. Worth District of the USACE concur with this assessment. However, if buried cultural materials are discovered during construction, the Ft. Worth District of the USACE and the Archeology Division of the Texas Historical Commission should be notified.

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1959a *Eules, TX* 1:24,000 topographic map.

1959b *Grapevine, TX* 1:62,500 topographic map.

1963 *Eules, TX* 1:24,000 topographic map.

1968 *Eules, TX* 1:24,000 topographic map.

1973 *Eules, TX* 1:24,000 topographic map.

1981 *Eules, TX* 1:24,000 topographic map.

1995 *Eules, TX* 1:24,000 topographic map.