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Archeological Survey Of Proposed VA Outpatient Clinic In The City Of Lubbock, Lubbock County, Texas

Amy M. Goldstein

Joel Butler

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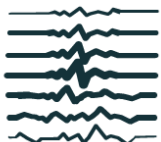
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Archeological Survey Of Proposed VA Outpatient Clinic In The City Of Lubbock, Lubbock County, Texas

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ARCHEOLOGICAL SURVEY OF A PROPOSED VA OUTPATIENT CLINIC IN THE CITY OF LUBBOCK, LUBBOCK COUNTY, TEXAS

By

Amy M. Goldstein and Joel Butler

Prepared for:

Carpenter/Robbins Commercial Real Estate, Inc.

and

U.S. Department of Veterans Affairs

Texas Antiquities Permit No. 8415

May 2018

ABSTRACT

This report documents the results of an intensive archeological survey carried out in advance of construction of a proposed U.S. Veterans Affairs (VA) outpatient clinic on 14 acres owned by Texas Tech University Health Sciences Center in Lubbock, Texas. The survey was conducted in compliance with the Antiquities Code of Texas under Permit No. 8415. Archeologists from AmaTerra Environmental, Inc. (AmaTerra) visually inspected the entire Area of Potential Effects (APE) and excavated 7 shovel tests in support of the survey. No new archeological sites were discovered as a result of the survey and no artifacts were observed within the APE. No artifacts were collected during this survey, but a field records and photographs were made during investigations. These records and photographs are to be permanently housed at the Texas Archeological Research Laboratory (TARL) in Austin. AmaTerra recommends that no further archeological work is warranted prior to construction.

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CHAPTER 1: INTRODUCTION

On May 8, 2018, AmaTerra Environmental, Inc. (AmaTerra) conducted an archeological resource survey in advance of construction of a proposed outpatient clinic in Lubbock, Texas. The goal of this survey was to identify and define any archeological resources that could be impacted by the construction of the clinic. As the project proponent, the U.S. Department of Veterans Affairs (VA) will construct the clinic on land to be leased from Texas Tech University Health Sciences Center (TTUHSC), the land owner. Because the undertaking is located on land owned by TTUHSC, a state-owned university, the archaeological investigation was regulated pursuant to the Antiquities Code of Texas (ACT); work was carried out under TAC Permit 8415. Because the project is federally funded, the project is also subject to review under the National Historic Preservation Act (NHPA) of 1966. Section 106 of the NHPA directs federal agencies to inventory and assess properties that could be affected by a federal undertaking.

The proposed VA clinic will be located northwest of 4th Street and Indiana Avenue in the City of Lubbock (**Figure 1**). The Area of Potential Effect (APE) for this undertaking was defined as the entire proposed 14-acre clinic site to a depth of three feet.

This report is divided into six chapters. The environmental setting and regional cultural overview are discussed in Chapters 2 and 3 respectively. Chapter 4 includes the field methodology implemented during the project and the results of the archeological field investigations are discussed in Chapter 5. Chapter 6 consists of the summary and recommendations. The **Appendix** contains the log of shovel test results excavated on the property.

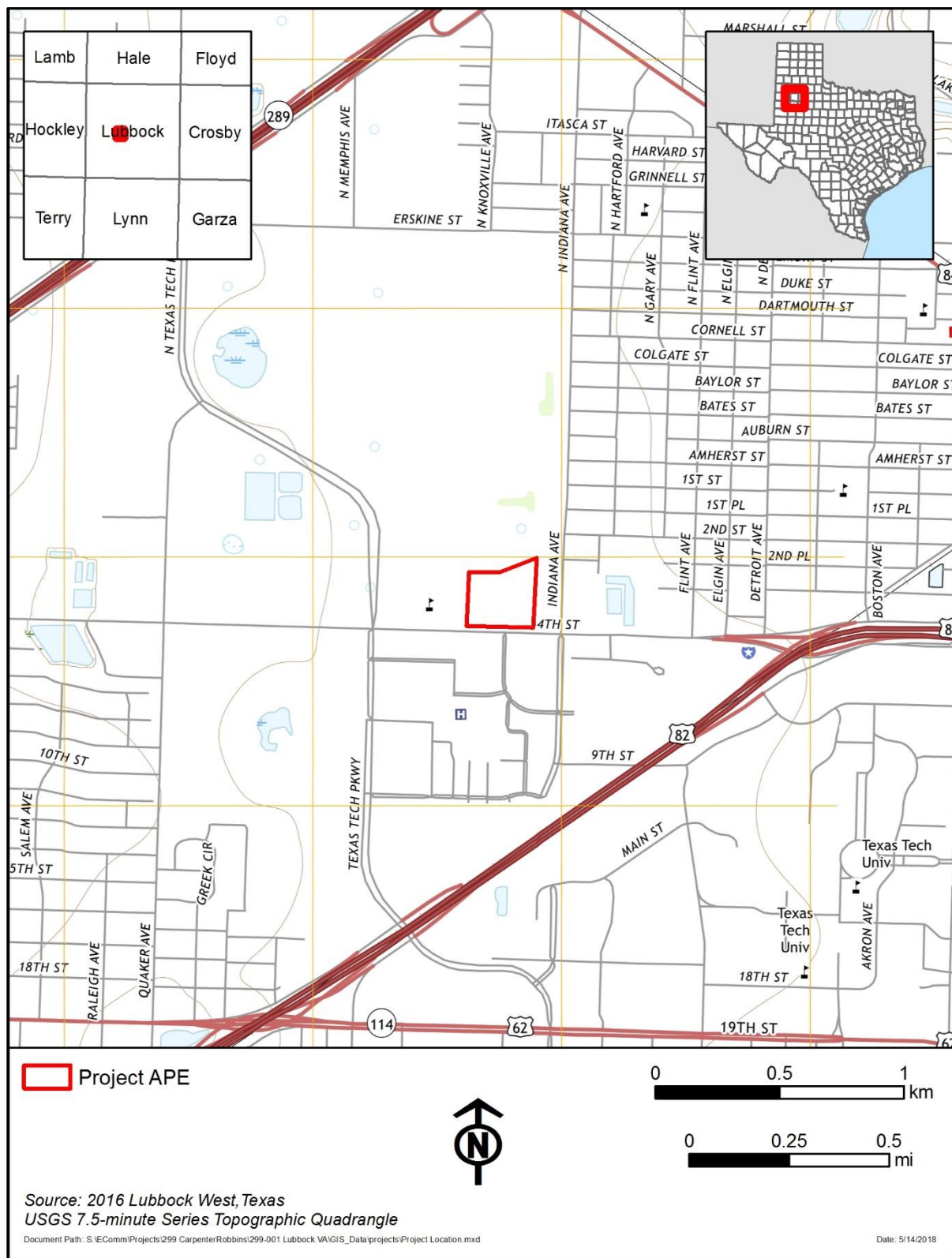


Figure 1. Project Location/APE overlaid on the 2016 USGS Lubbock West, Texas 7.5-minute topographic map.

CHAPTER 2: ENVIRONMENTAL SETTING

The project area is situated within the Llano Estacado section of the High Plains according to the Level IV Ecoregions Classification System of the U.S. Geological Survey. The Llano Estacado ecoregion is a flat, elevated plain bounded by escarpments to the north, east, and west; its southern boundary is a more gradual transition zone to the Chihuahaun Deserts (Griffith et al. 2007). The surface geology in the Llano Estacado ecoregion consists of Pleistocene eolian sediments of the Blackwater Draw Formation. This lies over Miocene-Pliocene sediments of the Ogallala Formation that eroded from the eastern Rocky Mountains. A caliche caprock forms the uppermost layer of the Ogallala Formation. (Griffith et al. 2007). The project location is on an upland surface with no visible relief west and north of two small basins which have been filled and developed. Within the project area, windblown Blackwater Draw deposits form the Amarillo series of soils, which are deep, well drained sandy loams underlain by sandy clay (**Figure 2**; USDA-NRCS 2018).

As part of the Southern High Plains, Lubbock County has a semi-arid climate, averaging only 18.41 inches of rainfall per year. The average high temperature in the county is 92 degrees Fahrenheit and the average low is 25 degrees Fahrenheit, which creates a 208-day growing season (Graves 2016a). Hundreds of playa lakes dot the region. These small, shallow lakes serve as important recharge areas for the Ogallala aquifer and as stops for migratory waterfowl. There are relatively few constant sources of surface water since there are few spring-fed creeks and the shallow draws usually only flow after heavy rains (Griffith et al. 2007). The closest water source to the project area is a playa lake located .9 miles to the northwest. Yellow House Draw is 1.7 miles to the northeast. Dams have divided Yellow House Draw into a series of reservoir lakes that connect to the Double Mountain Fork of the Brazos River southeast of the City of Lubbock.

The Llano Estacado ecoregion was historically shortgrass prairie consisting of buffalograss (*Bouteloua dactyloides*), blue and sideoats grama (*Bouteloua gracilis* and *B. curtipendula*, respectively) and silver bluestem (*Bothriochloa saccharoides*). Millions of bison used to roam the High Plains. Other native prairie species include black-tailed prairie dog (*Cynomys ludovicianus*), black-footed ferret (*Mustela nigripes*), burrowing owl (*Athene cunicularia*), coyote (*Canis latrans*), swift fox (*Vulpes velox*), deer (*Odocoileus* spp.), and pronghorn (*Antilocarpa americana*). The southern high plains were first used for agriculture in the late nineteenth century; however, without irrigation, it was not sustainable during droughts. Extensive plowing and overgrazing along with lack of erosion control led to severe dust storms and soil loss during the drought of the 1930s. Cropland currently makes up approximately 80 percent of this ecoregion with agriculture being the dominant land use. Primary crops are cotton, corn, sorghum, and wheat (Griffith et al. 2007).

Current Setting

The earliest available aerial photograph from 1954 (**Figure 3**) shows that the APE was a cotton field with five-acre residential lots to the east across Indiana Avenue. Evidence from other maps and aerial photographs suggest that the lot has never been developed or contained structures. Today, the APE consists of a vacant lot in the northwest corner of 4th Street and Indiana Avenue, surrounded by mixed residential and medical development to the east, south, and west, and the Rawls Golf Course to the north.

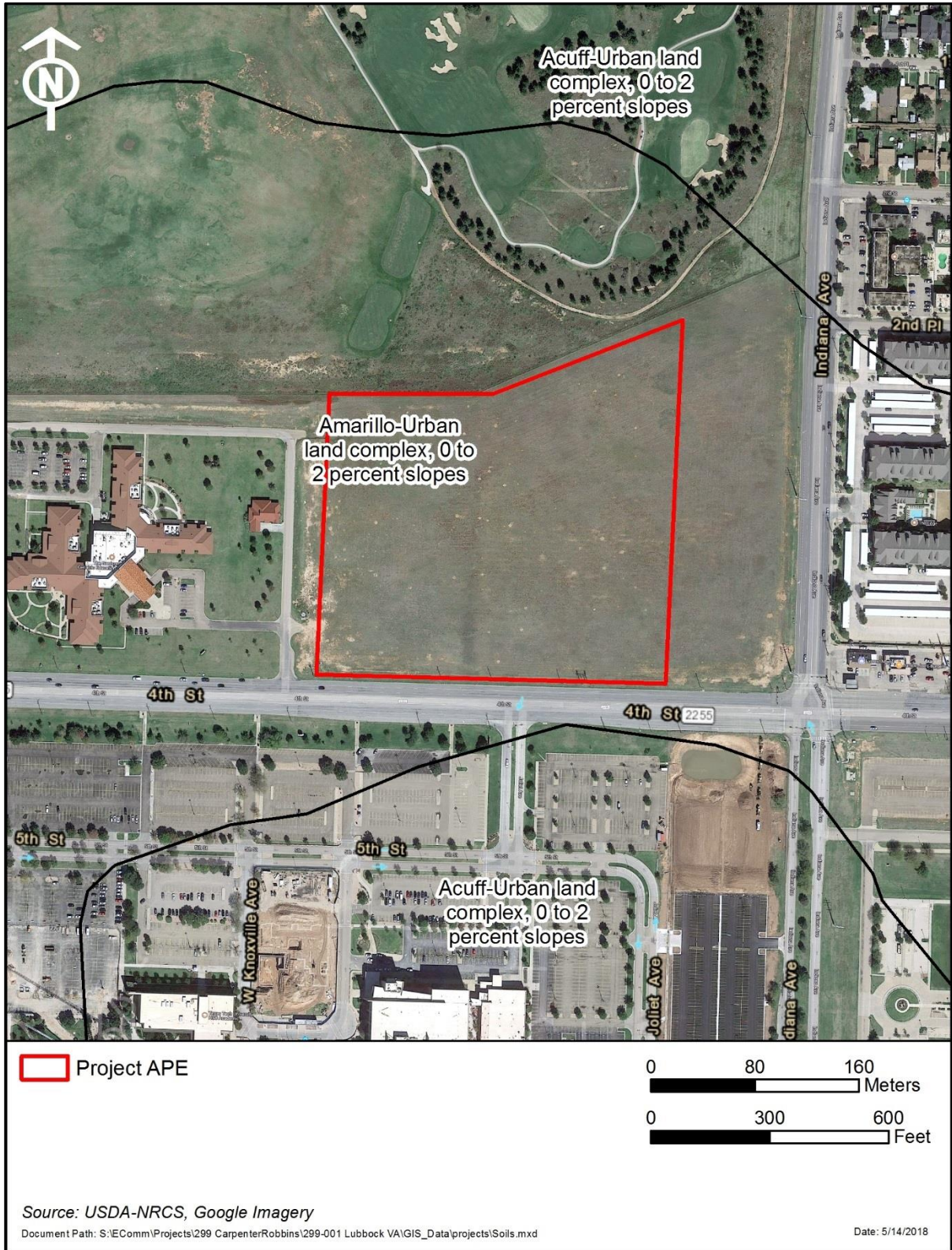


Figure 2. The project APE overlaid with USDA-NRCS soils data on recent aerial imagery.

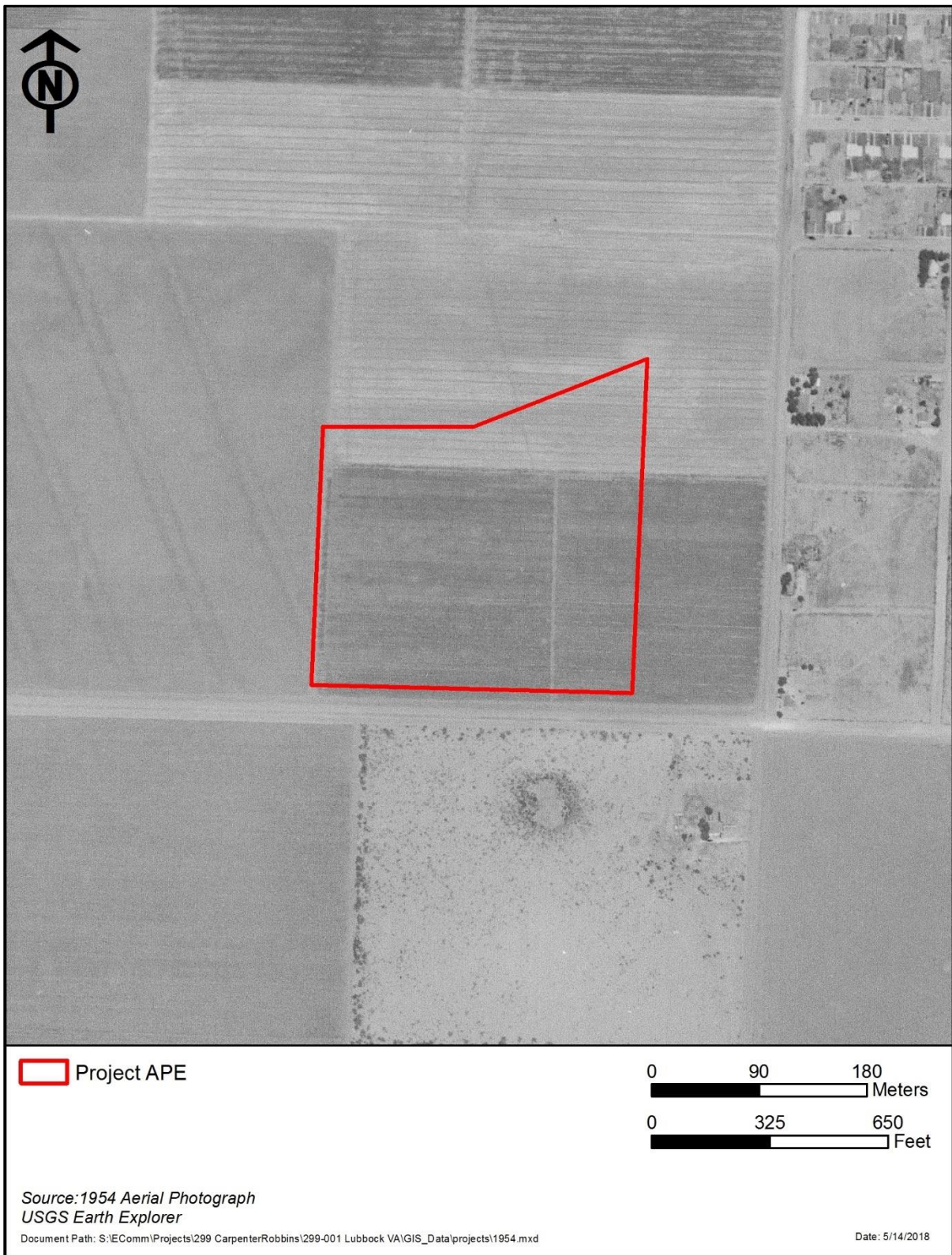


Figure 3. The project APE overlaid on a 1954 aerial photograph.

CHAPTER 3: CULTURAL BACKGROUND

The project area is situated within the Llano Estacado archaeological sub region of the Southern High Plains as defined by Perttula (2004). With few trees, natural shelters, or water sources, the Llano Estacado has always offered a harsh environment for human occupants. However, rich animal resources such as bison (*Bison bison*^[JD1]), pronghorn (*Antilocapra americana*), elk (*Cervus canadensis*), and mule deer (*Odocoileus hemionus*) have drawn humans to the region for millennia. Containing several sites with near-continuous human occupations across most of the breadth of human history in the Americas, the Southern High Plains have a rich, well delineated chronology. However, well-stratified sites are rare, and when encountered, are of great value for future research potential.

Four major intervals or periods are identified in the archeological chronology for the Southern High Plains: Paleoindian, Archaic, Late Prehistoric, (which is regionally subdivided into the Ceramic and Protohistoric) and Historic periods (Perttula 2004). Each of these are briefly summarized below.

Paleoindian Period

Until recently, it was generally accepted that the first humans in the New World were Clovis peoples who walked into the continent via the ice-free corridor. It was similarly assumed that Clovis hunter-gatherers were the first to arrive in Texas around 12,000 years Before Present (BP; Perttula 2004). But new evidence from sites in North and South America suggests that humans may have arrived in the Americas as early as 16,000 BP (Gilbert et al. 2008; Jennings and Waters 2014; Pitblado 2011). Evidence from the Debra Friedkin and Gault sites in Central Texas have brought the date of earliest occupation of Texas into question as well. At both sites lithic artifacts were found in strata beneath Clovis that indicated a different type of technology was used to produce them. Optically stimulated luminescence dating from these contexts at both sites suggested a date of about 15,000 BP (Swaminathan 2014; Gault School 2016).

The Paleoindian period (12,000–8000 BP) on the southern Great Plains is characterized by highly mobile groups focused on procurement of now-extinct megafauna (large ancestors of modern, primarily mammal, species such as the mammoth [*Mammuthus primigenius*], mastodon [*Mammut spp.*], and Bison antiquus [*Bison antiquus*]). The appearance of groundstone tools and remains of smaller game species during this period indicates a generalized subsistence strategy (Perttula 2004), but an emphasis on hunting large plains game is most conspicuous within the archaeological record (Holliday 1997). Chronological divisions within the Paleoindian period are based on varied morphology of lanceolate projectile point forms and include Clovis, Folsom, and the late Paleoindian period or Plano complex.

Though dates of occupation on the continent may extend to earlier millennia, the earliest, widely accepted, human presence with defined characteristics in North America occurred about 12,000 years ago (ca. 10,000–9000 BC) and is referred to as the Clovis culture (Holliday 1997).

Although archaeological sites attributable to Clovis are exceptionally rare, this period is well represented at Blackwater Draw in eastern New Mexico near Clovis, where it was first identified. The Folsom tradition (ca. 11,000–10,000 BP) follows Clovis and is also well represented at the Blackwater Draw site, as are several point forms attributable to the Plano complex. A variety of tool traditions have been attributed to the late Paleoindian period, which extends from about 10,000

to 8000 BP. Collectively known as the Plano complex, these traditions are identified by point types such as Plainview, Meserve, Eden, Angostura, and Scottsbluff. Although these points lack the longitudinal fluting characteristic of the preceding Clovis and Folsom examples, their lanceolate forms are indicative of a continued focus on big-game hunting.

As the Paleoindian period began on the heels of the last major glaciation, it included drastic environmental changes. The climate gradually became drier and warmer during this period and multiple game species became extinct. These environmental shifts also led to changes in plant communities and ultimately, human subsistence practices.

The more intact examples Paleoindian sites in the region tend to be deeply buried along the few major drainages that transect the Llano Estacado (especially Lubbock Lake at Yellow House Draw, the Plainview Site at Running Water Draw, and the Clovis Site at Blackwater Draw), on the margins of playa basins (Ryan Site), and within the canyons that punctuate the margins of the Caprock, such as at the Lake Theo site in Caprock Canyons State Park (Johnson and Holliday 2004). Projectile points affiliated with this period are occasionally encountered as isolated finds or in eroded contexts, often mixed with artifacts from later occupations.

Archaic Period

The Archaic Period (8000–1800 BP) began with the onset of more stable modern climatic conditions and exhibited a slow shift from more mobile hunting strategies to a heavier reliance on a broader spectrum of local plants and animals (Miller and Kenmotsu 2004). The Archaic was a period of eolian deposition associated with warmer and drier conditions, which resulted in the infilling of many playa basins and drainage valleys (Johnson and Holiday 1995). Although groundstone occurred sporadically during the Paleoindian Period, the Archaic marks the beginning of its common use in processing plant matter and seeds, often in association with thermal earth oven features. Additionally, the first widespread use of thermally-altered lithic material for tool production occurred during the Archaic. This potentially indicates a decrease in higher-quality materials traded from more distant locations and the need for people to utilize local resources (Hofman 1989).

The Early Archaic, ranging from the terminal Paleoindian Period (8000 BP) through approximately 6500 BP regionally, is poorly documented on the Southern High Plains with few stratified sites having been excavated to date. Although the record is sparse, based upon the presence of bison butchering activity areas, Early Archaic subsistence strategies were similar to those of the Late Paleoindian with a continued reliance on large game (Johnson and Holliday 2004). Early Archaic sites on the Llano Estacado are rare and are presently limited to the draws and eastern canyonlands.

The Middle Archaic (6500–4500 BP) on the Southern High Plains was a time of excessively dry and warm climate, demonstrated by the acceleration of eolian deposition throughout the region. Archeological sites of this subperiod are more numerous and the depositional sequence is better understood thanks to work done at sites such Blackwater Draw, Mustang Springs, and Lubbock Lake (Johnson and Holliday 1995). Middle Archaic sites in the region include well-digging sites like Mustang Springs near the City of Midland (Meltzer 1991). Lubbock Lake contains an abundance of information from features that date to this timeframe including hearths, butchering locations, and a burned-caliche earth oven (Johnson and Holliday 1986, 2004). Tools typical of the Middle Archaic include Clearfork Gouges and Williams points (Turner et al 2011).

The Late Archaic (4,500- 2,000 BP) on the Llano Estacado was a period of wetter and cooler conditions, as evidenced by a decrease in stratified deposits regionally due to slowdown in eolian deposition. The San Jon and Lubbock Lake sites provide some of the only archeological information for this region and period. These sites revealed campsites concentrated along the margins of drainages as well as evidence of bison processing (Johnson and Holliday 2004). Lithic technology seen on the Late Archaic High Plains is similar to that seen in other regions of Texas, with corner and side-notched projectile points such as Edgewood, Ellis, and Castroville types occurring regularly throughout the region (Hofman 1987, Turner et al 2011).

Late Prehistoric Period

The Late Prehistoric or Woodland Period (2,000 BP-ca. AD 1700) began with the slow introduction of ceramic and bow and arrow technologies to the region. Arrow points and ceramic sherds both appear in archaeological sites within the region soon after the beginning of the Late Prehistoric Period, though often in association with dart points, which did not fully disappear from the region for another thousand years (Johnson and Holliday 2004). Broken into several localized complexes and foci, the Ceramic subperiod (2000 BP–AD 1540) generally is represented by an increase in sedentism and foraging while shifting away from concentrated big game hunting (Boyd 2004). Sites on the Llano Estacado of Ceramic Period age include increasing indications of agricultural activities and permanent adobe dwellings associated with middens (Johnson and Holliday 2004, Collins 1966). Artifacts specific to the Ceramic subperiod include Scallorn, Edwards, and Perdiz arrow points, and Ochoa plainware and Jornada polychrome and brown ceramics (Collins 1966, Shedd 1968, Hofman 1987, Turner et al 2011).

The Protohistoric subperiod began in ca. 1540 with the first contact of Europeans in the region. Two written records of Francisco Vásquez de Coronado’s 1540–1542 entrada from New Mexico into the Southern High Plains exist but tracing his route and finding physical remains have proven difficult. However, discoveries in Blanco Canyon along the eastern edge of the Llano Estacado have solidly identified an extended campsite used by the Spanish and their large Native American contingent for a period during their search for gold on the Great Plains (Hofman 1987, Morris 1997). The Jimmy Owens site, located within Blanco Canyon below the Caprock in Floyd County, contains numerous crossbow bolts, Spanish “7” nails, and fragments of contemporary Puebloan ceramics (Blakeslee 2003, THC 2018). After Coronado’s departure, the remainder of the Protohistoric subperiod consisted of infrequent contact between Native Americans and Europeans, and for Native Americans, a continuation of lifeways similar those from before European arrival (Perttula 2004). Within the Llano Estacado, the Garza complex features prominently during the Protohistoric. This complex is comprised of distinctive Garza and Lott projectile points, polychrome ceramics, and evidence of trade between the Llano and New Mexican tribes (Hogan 2006, Mercado-Allinger 2004).

Historic Period

The Historic Period (AD 1700-1968) on the Llano Estacado begins with the general arrival of European and European-American trade goods and the horse in the archeological record (Johnson and Holliday 2004). Archeological sites prior to the 20th Century are rare, especially in a preserved context (Johnson and Holliday 1995). Petroglyphs and pictographs from the region during the early Historic depict riders on horses and cattle (Newcomb Jr. 1967, Johnson and Holliday 2004). With the arrival and availability of the horse, Native American tribes on the Great Plains quickly adapted and changed their lifestyles to a more nomadic strategy based on bison hunting. Quickly-erected

and removed wickiups and tipis amplified these peoples' mobility as well (Chipman 1992). During the early 18th Century, the Comanche began appearing on the Llano Estacado, quickly displacing the resident Apache bands and becoming the force of Native Americans that would shape much of Texas history (Gwynne 2010).

As Texan settlers and ranchers moved west, interactions with Apache, Kiowa, and Comanche bands became common and increasingly violent, culminating in the near extinction of bison from purposeful overhunting and the subsequent expulsion of Plains tribes from the Llano to reservations in Oklahoma by the end of the 1870s (Fox 1983). Following the forced removal of Native American tribes from the region, ranching became the first important post-Native American economy, though it grew slowly. The Census of 1880 only listed 25 people living in Lubbock County, most of them ranchers; by 1890 the number had only increased to 33 (Graves 2016a). That number quickly grew, however, when town promoters Frank E. Wheelock and W.E. Rayner decided to combine their competing settlements and formed the town of Lubbock in 1890 (Graves 2016b). The population grew as farmers moved to the area, attracted by fertile soil and readily available land. In 1909 the Atchison, Topeka, and Santa Fe Railway built south through the county; other rail lines soon followed, leading to a major population increase. In 1900 Lubbock County only had 293 residents and by 1910 it had 3,624. Texas Technical College (Now Texas Tech University) opened in Lubbock in 1925, which also drew residents to the city; by 1930 Lubbock County's population had risen to 39,104 (Graves 2016a).

Between the 1880s and 1920s the agricultural economy of Lubbock County had shifted from mostly ranching to farming. Sorghum cane, millet and wheat were important early crops in the region as were sheep, hogs, horses, and chickens. By the 1930s cotton had taken over as the primary crop, thanks to increasing irrigation from the Ogallala aquifer (Graves 2016a). Cotton continues to be an important crop in the region today. Sorghum became increasingly important after World War II since it was used as cattle feed in the growing feedlot industry in the Southern High Plains.

Throughout the second half of the twentieth century, the City of Lubbock and the county surrounding it have grown exponentially in both economic and population. Today, Lubbock is the only large city in Lubbock County or the surrounding area and therefore serves as an important metropolitan hub. Today the city has two universities (Texas Tech and Lubbock Christian), seven hospitals, 14 banks, dozens of parks, and hundreds of businesses. As of 2014 Lubbock County had a population of 293,974 and 243,994 of those people lived in the City of Lubbock (Graves 2016a).

Previous Cultural Resource Investigations

Background research for this project included an online records search through the Texas Historical Commission's Archeological Sites Atlas for previously recorded cultural resources or archeological surveys within one kilometer of the APE. This search indicated that no NRHP properties, SALs, cemeteries or archeological sites have been recorded within one kilometer of the APE. One historical marker is located approximately half a kilometer southeast of the APE, in front of the National Ranching Heritage Center. The marker was placed in 1970 and commemorates the free-range era of ranching in northwest Texas between 1878 and 1885 (Atlas 2018). One archaeological survey, located 800 meters south of the APE, was carried out by TxDOT in 1992 in preparation for construction of the Marsh Sharp Freeway but documented no sites. The closest archaeological sites to the project area are within the canyon formed by Yellowhouse Draw, a mostly dry drainage two kilometers to the north, which stretches from Clovis New Mexico to

east Lubbock where it opens into Buffalo Canyon. Among the closest sites is 41LU1, the well-known Lubbock Lake Site, where 12,000 years of North American prehistory are preserved in well stratified deposits.

CHAPTER 4: METHODS

AmaTerra personnel performed an intensive survey, as outlined in 13 TAC 26.20 (2) and defined in 13 TAC 26.5. The survey took place within publicly owned property. The field survey was carried out in compliance with the Antiquities Code of Texas under Texas Antiquities Permit No. 8415. This survey included pedestrian survey supplemented by shovel testing, following the Council of Texas Archeologists' (CTA) guidelines for intensive surveys.

Pedestrian survey involved inspecting the ground surface for evidence of archeological sites. Documentation included narrative notes, maps, and photographs. Per CTA guidelines, the 14-acre project area required a minimum of seven shovel tests (one test per two acres). Shovel tests measured 30 centimeters (cm) in diameter and extended to a maximum depth of 80 cm below surface (cmbs). The shovel tests were excavated in 20-cm increments and all soil was screened through ¼-inch hardware cloth. Relevant information for all shovel tests (UTM coordinates, soil color, type, stratigraphic sequence, and findings) was recorded on standardized forms.

Because the project area is in an upland setting not associated with deep lunette dune deposits or alluvial deposition, backhoe trenching was not used as a survey method during fieldwork.

No artifacts or other materials were collected during the survey. Archeologists documented the work through notes and photographs, which will be housed permanently at the Texas Archeological Research Laboratory (TARL) in Austin.

CHAPTER 5: RESULTS

Fieldwork was carried out on May 8, 2018 by AmaTerra archeologist Amy Goldstein. Conditions were fair and warm, and no complications or access issues were encountered during the survey. The APE is presented on current aerial imagery with survey results in **Figure 4**.

Surface Inspection

The entire parcel was transected in 15-meter intervals prior to shovel testing to inspect the surface for artifacts. The surface of the project area was completely grass-covered, but an ongoing regional drought had thinned the grass to about 20–30-percent surface visibility (**Figures 5 through 8**). Other than probable utilities trenching along the edges of the parcel, no previous human disturbances to the surface were apparent. However, prairie dog burrows were in evidence throughout the property (**Figure 9**), which are known to extend from 30 cm to 4 meters deep depending on climate, water table depth, and local soil conditions (Gano and States 1982).

Shovel Testing

Seven shovel tests were spaced approximately evenly within the APE (see **Figure 4, Appendix**), extending to depths of 30 to 70 cmbs. Soils were found to be extremely dry brown clay loams overlying yellowish red clays, where tests were terminated. No artifacts were discovered on the surface of the APE or within shovel tests and no archeological resources were identified in the APE for the proposed VA outpatient clinic.



Figure 4. Archeological survey results within the project APE overlaid on recent aerial imagery.



Figure 5. Photograph of the APE from west side, facing east.



Figure 6. Photograph of the APE from the south side, facing north.



Figure 8. Photograph of the APE from the east side, facing west.



Figure 7. Photograph of the APE from north side, facing southwest.



Figure 9. Prairie dog burrow entrance along west side of APE.

CHAPTER 6: SUMMARY AND RECOMMENDATIONS

On May 8, 21018 AmaTerra archeologist Amy Goldstein carried out an intensive survey under Texas Antiquities Permit 8415 in advance of construction of a proposed VA outpatient clinic on property owned by Texas Tech University Health Sciences Center in Lubbock, Texas. A 100-percent surface inspection and seven shovel tests were excavated in the APE, finding no archeological resources above or below the surface.

Because no archeological resources were identified within the APE, AmaTerra recommends that construction proceed with no further archeological work. No artifacts or other materials were collected during fieldwork, and all notes and paperwork generated during the investigation will be permanently housed at TARL in Austin, Texas.

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APPENDIX: SHOVEL TEST DATA

Shovel Test	Positive/ Negative	Northing	Easting	Depth	Color	Texture	Observations
AG-1	neg	3720772	231664	0-65	7.5YR 4/4	Clay Loam	flat field, short grass GSV10-25%
AG-2	neg	3720761	231887	0-60	7.5YR 4/4	Clay Loam	compact flat field, sort grass GSV10-25%
				60-70	5 YR 4/4	Clay	
AG-3	neg	3720780	231887	0-40	7.5YR 4/4	Clay Loam	w cobbles at 30 cm, flat field, short grass GSV10-25%
AG-4	neg	3720890	231836	0-25	7.5YR 4/4	Clay Loam	flat field, short grass GSV10-25%
				25-35	5 YR 4/6	Clay	
AG-5	neg	3720971	231880	0-30	7.5YR 4/4	Clay Loam	flat field, short grass GSV10-25%
				30-35	5 YR 4/6	Clay	
AG-6	neg	3720886	231747	0-45	7.5YR 4/4	Clay Loam	flat field, short grass GSV10-25%
				45-60	5 YR 4/4	Clay	
AG-7	neg	3720885	231650	0-30	7.5YR 4/4	Clay Loam	flat field, short grass GSV10-25%