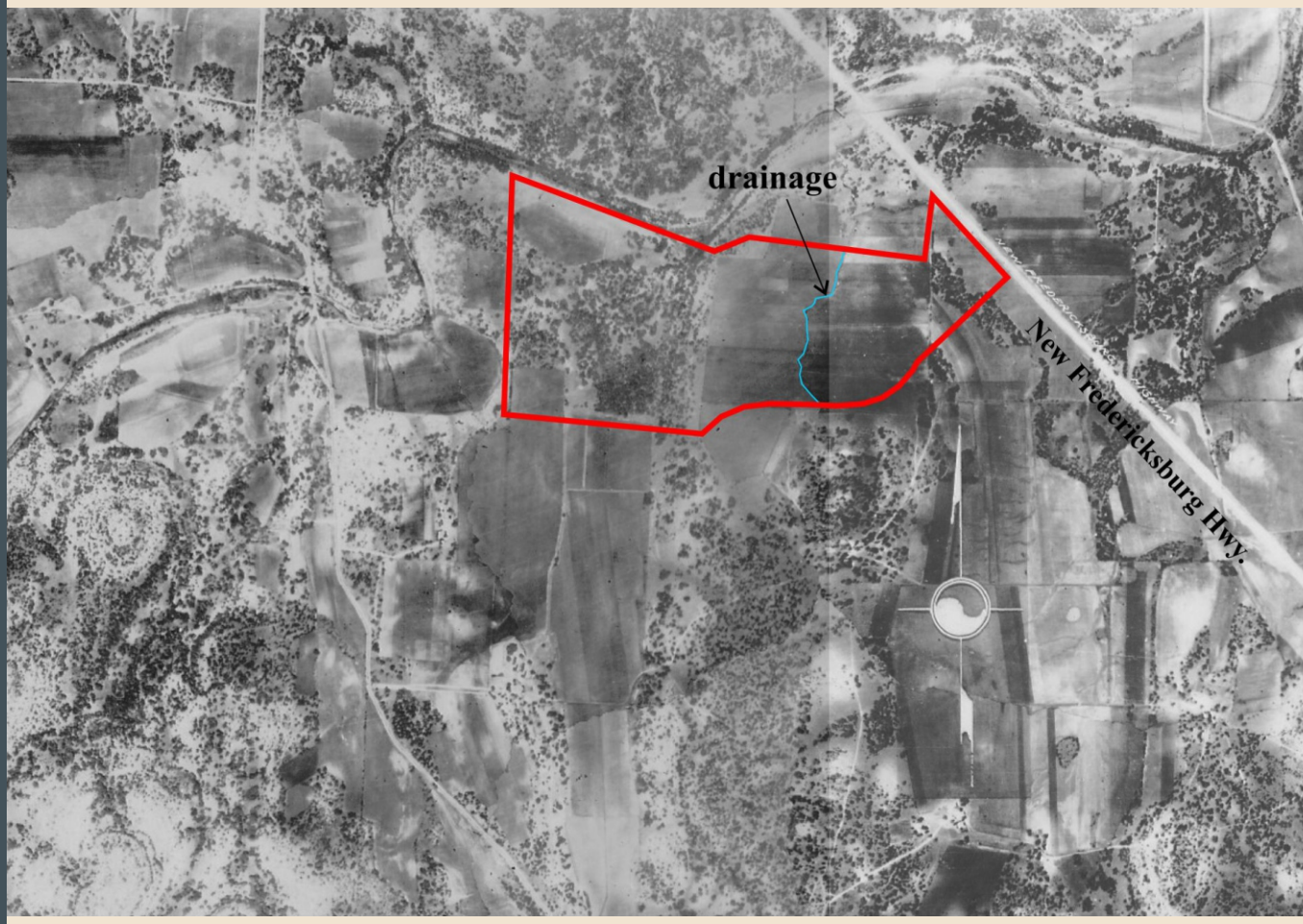
An Archaeological Survey and Resource Assessment of 145 Acres of the Proposed Alamo Community College District Campus in Northern Bexar County, Texas



by
Leonard Kemp

Texas Antiquities Permit No. 8671

REDACTED

Principal Investigator
José Zapata

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San Antonio, Texas 78249
Archaeological Report, No. 477

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Abstract:

The University of Texas at San Antonio (UTSA) Center for Archaeological Research (CAR), in response to a request from Adams Environmental, Inc. (AEI), conducted an intensive archaeological survey of a tract of land in north Bexar County, Texas. The land is owned by the Alamo Community College District (ACCD) and is the site for the proposed North Campus (ACCD-NC). The project required review by the Texas Historical Commission (THC) under the Antiquities Code of Texas (Texas Natural Resource Code, Title 9, Chapter 191, Sections 191.003(4) and 191.052(5) as amended) because ACCD is a political subdivision of Texas and the work was conducted on publicly owned lands. The THC granted Texas Antiquities Permit No. 8671, originally issued to Paul Shawn Marceaux. Dr. Marceaux served as the Principal Investigator and managed the project until his departure from CAR, at which time José Zapata took over the Principal Investigator role. Leonard Kemp served as the Project Archaeologist.

The Area of Potential Effect (APE) is a tract of land in north Bexar County, just south of the Bexar and Kendall county line. U.S. Interstate Highway 10 binds it on the east. Balcones Creek forms the northern boundary, with Balcones Creek Road forming the southern boundary. Private properties adjacent to Boerne Stage Road form the western boundary. The APE is approximately 145 acres (0.58 km^2).

The field investigation was conducted between December 13, 2018, and February 21, 2019. CAR excavated 113 shovel tests and 12 trenches within the APE. CAR defined nine new archaeological sites. There are seven prehistoric sites (41BX2299, 41BX2300, 41BX2301, 41BX2302, 41BX2303, 41BX2304, and 41BX2305) and one historical site (41BX2306). One additional site 41BX2298 has an indeterminate temporal period.

At present, no construction plans have been made available to CAR or AEI from ACCD or its representatives. Therefore, the following recommendations are provided to mitigate impacts on archaeological resources from unknown future construction events. Of the nine sites recorded by CAR, two sites (41BX2299 and 41BX2306) are recommended for listing as State Antiquities Landmarks (SAL) and eligible to the National Register of Historic Places (NRHP). Six sites (41BX2300, 41BX2301, 41BX2302, 41BX2303, 41BX2304, and 41BX2305) are recommended as not eligible for designation as SALs or inclusion to the NRHP. Lastly, not enough information was obtained from site 41BX2298 to make eligibility recommendations. Additional investigation is needed to determine its eligibility status.

The THC concurs with CAR's recommendations that 41BX2229 and 41BX2306 be designated SALs and are eligible for listing on the NRHP and with CAR's recommendation that sites 41BX2300, 41BX2301, 41BX2302, 41BX2303, 41BX2304, and 41BX2305 are not eligible for designation as SALs or for listing on the NRHP. According to the THC, site 41BX2306 should be avoided or further mitigated if it will be impacted by future construction or development activities. Furthermore, based on the density of archaeological sites CAR documented, the THC recommends archaeological monitoring of construction within the central portion of the project area.

All recovered artifacts and project-related materials, including the final report, are curated at CAR curation facility. The facility is a state certified repository.

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Acknowledgements:

The successful completion of this project would not have been possible without the support of the following individuals: Sable Kitchen and Brian Gottschalk, president and project manager of Adams Environmental Inc., respectively. CAR fielded its finest archaeologists including Sarah Wigley, Megan Brown, and Peggy Wall. In addition, Dr. Raymond Mauldin and Clint McKenzie visited the project area to discuss the findings. Clint also provided the initial archival work for the Cruz and Arocha grants. CAR Lab Director and Curator Cynthia Munoz coordinated the processing of artifacts and field documents, assisted by the renowned Megan Brown. Dr. Jessica Nowlin supported the project with her GIS and GPS expertise, as well as creating the preliminary maps used during this project. Drs. Raymond Mauldin, P. Shawn Marceaux, and Kelly Harris provided comments and reviewed this document.

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Chapter 1: Introduction

The University of Texas at San Antonio (UTSA) Center for Archaeological Research (CAR), in response to a request from Adams Environmental, Inc. (AEI), conducted an intensive archaeological survey of a tract of land in north Bexar County, Texas. The land is owned by the Alamo Community College District (ACCD) and is the site for the proposed North Campus (ACCD-NC). The project required review by the Texas Historical Commission (THC) under the Antiquities Code of Texas (Texas Natural Resource Code, Title 9, Chapter 191, Sections 191.003(4) and 191.052(5) as amended) because ACCD is a political subdivision of Texas and the work was conducted on publicly owned lands. The THC granted Texas Antiquities Permit No. 8671 to Dr. Paul Shawn Marceaux who served as the Principal Investigator until his departure from CAR. Jose Zapata then assumed the Principal Investigator role for the project. Leonard Kemp served as the Project Archaeologist and conducted the archaeological investigation.

Area of Potential Effect

The primary objective of the project was to identify and document archaeological properties that may be present within the Area of Potential Effect (APE). The APE is a tract of land in north Bexar County, just south of the Bexar and Kendall county line. It is bound on the east by U.S. Interstate Highway 10 (IH-10), on the north by Balcones Creek, on the south by Balcones Creek Road, and on the west by private properties adjacent to Boerne Stage Road. The area of the APE is approximately 145 acres (0.58 km^2). Figure 1-1 shows the APE location on an Esri topographic map.

Figure 1-2 is a Google Earth aerial (November 2018) of the APE that shows land use prior to the survey. At that time, approximately half of the APE consisted of plowed fields. At the start of the project fieldwork, these field areas were overgrown reducing surface visibility. CAR revised the original scope of work, which relied more on surface visibility, and altered its strategy to systematic shovel tests within the plowed fields (see Appendix B for a table of shovel test results).

Ground disturbing activities by the Texas Department of Transportation (TxDOT) for construction related to IH-10 frontage road and ramp improvements took place before

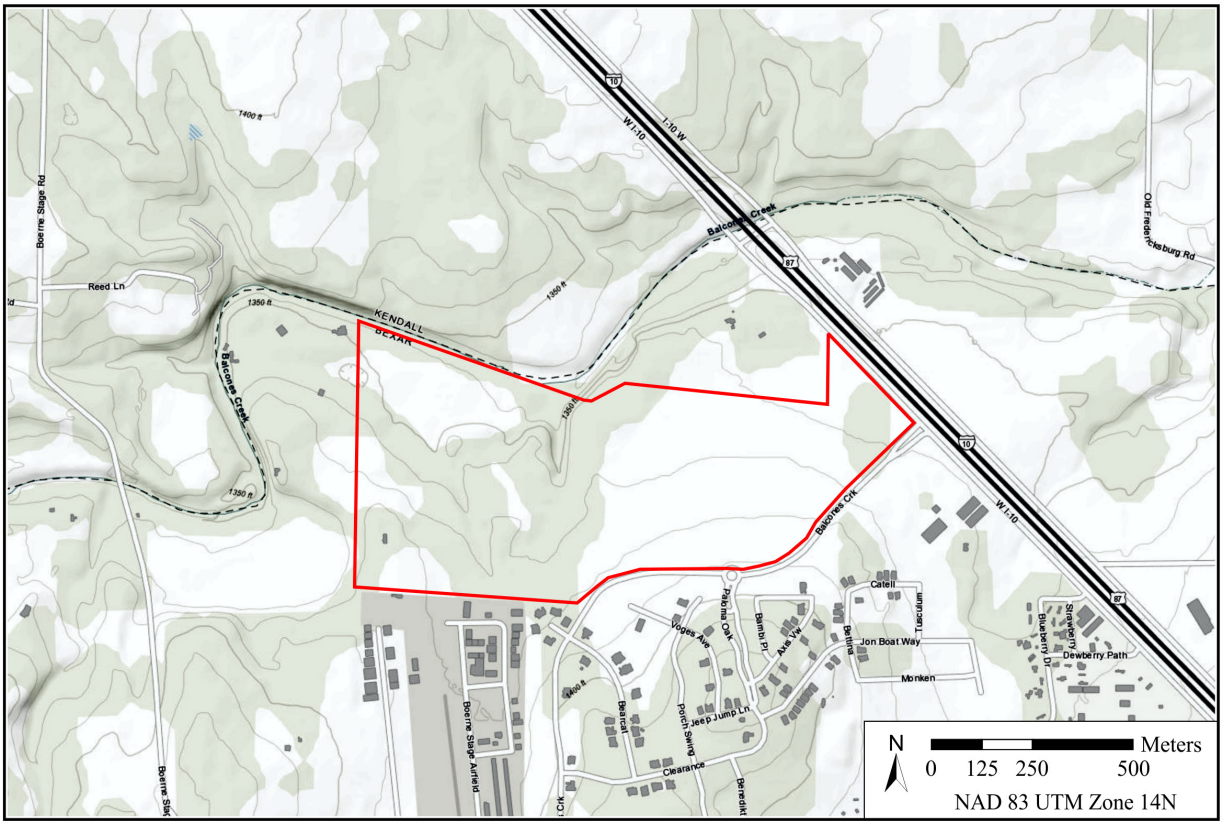

Figure 1-1. The location of the APE (in red) on Esri topographic map.

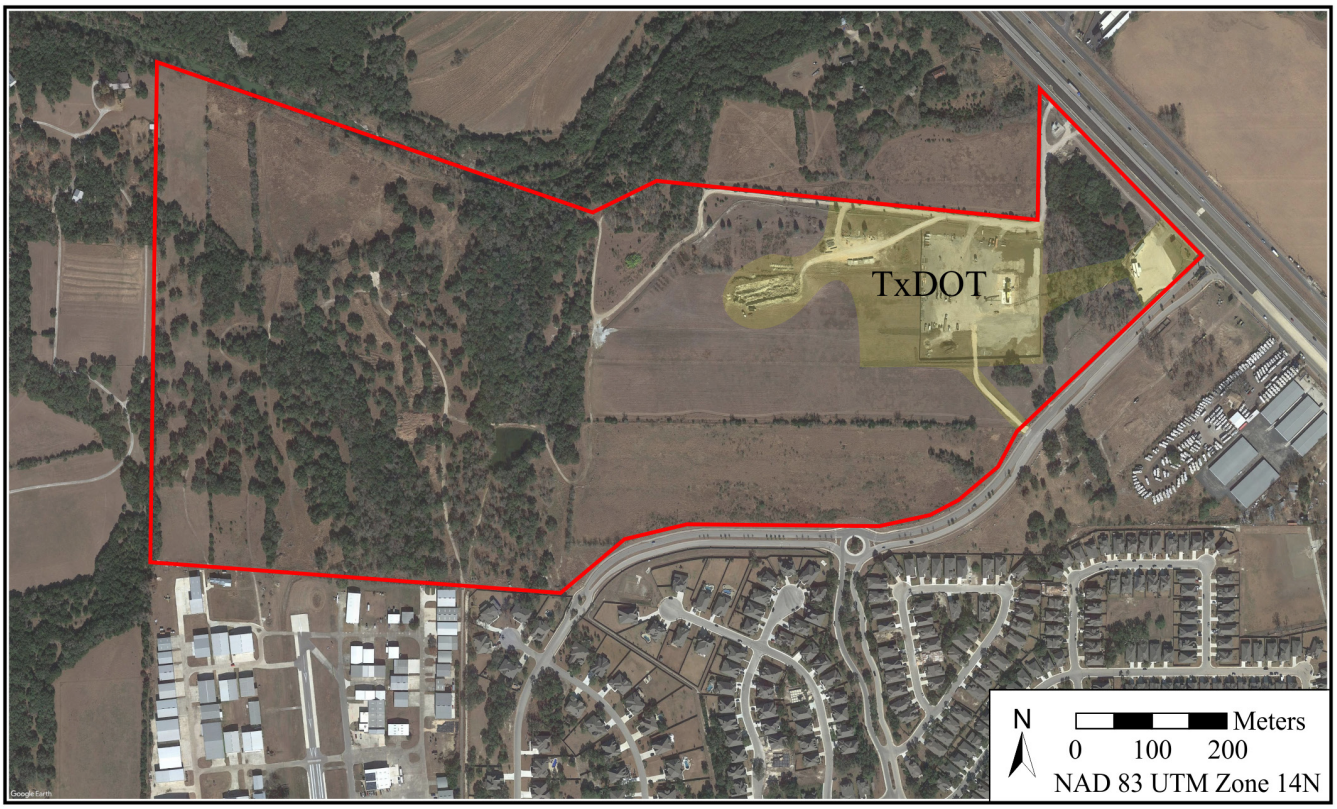

Figure 1-2. Aerial photo of the ACCD-NC APE showing recent land use patterns: plowed fields and secondary growth in former pastures. Areas impacted by TxDOT-related construction (highlighted in yellow) shown in the eastern portion of the APE (Google Earth November 2018).

the start of this project (Figure 1-2). Some of the ground disturbances and ongoing construction activity limited CAR's efforts in areas of the eastern part of the APE. In communications with the THC, it was determined that TxDOT conducted an internal review and concluded that no further archaeological work was warranted (see Appendix A). It was never made clear if or how the project APE and the TxDOT APE overlap. Therefore, the THC concluded the current project should proceed in all accessible parts of the APE.

Project Results

The field investigation was conducted between December 13, 2018, and February 21, 2019. CAR excavated 113 shovel tests and 12 trenches within the APE. CAR archaeologists defined nine new archaeological sites. There are seven prehistoric sites (41BX2299, 41BX2300, 41BX2301, 41BX2302, 41BX2303, 41BX2304, and 41BX2305), one historical site (41BX2306), and one site (41BX2298) that has an indeterminate temporal period. Site 41BX2299 is recommended as eligible for listing as a State Antiquities Landmark (SAL) and for eligibility on the National Register of Historic Places (NRHP). Site 41BX2306 contains seven features, three of those features are recommended for listing as a SAL and eligibility for listing on the NRHP. Four of those seven features are not recommended for listing as a SAL or for eligibility to the NRHP. Six sites (41BX2300, 41BX2301, 41BX2302, 41BX2303, 41BX2304, and 41BX2305) are not recommended for listing as a SAL or eligibility to the NRHP. Evidence from 41BX2298 is inconclusive to make a recommendation for listing as a SAL or eligibility to the NRHP. Further study is required to determine its status. The THC concurred with CAR's recommendations that 41BX2229 and 41BX2306 be designated SALs and are eligible for listing on the NRHP and with CAR's recommendation that sites 41BX2300, 41BX2301, 41BX2302, 41BX2303, 41BX2304, and 41BX2305 are not eligible for designation as SALs or for listing on the NRHP. According to the THC, site 41BX2306 should be avoided or further mitigated if it will be impacted by future construction or development activities. Based on the density of archaeological sites CAR documented, the THC recommends archaeological monitoring of construction within the central portion of the project area.

Report Outline

Including the current chapter, this report contains eight chapters and two appendices. Chapter 2 provides an overview of the physical environment, including aspects of climate, geology, hydrology, soils, and floral and faunal resources. Chapter 3 reviews previous archaeological projects near the project area, and it presents an overview of the prehistoric

and historic occupations in the region. Chapter 4 presents the results of archival research of the APE from 1837 to the mid-twentieth century. Chapter 5 summarizes the field and laboratory methods used in the study, including the definition of what constitutes a site and the criteria used by CAR to determine the eligibility of a site as a SAL or for listing to the NRHP and information on curation. Chapter 6 presents the results of the archaeological survey and trenching. Chapter 7 describes the archaeological sites recorded during the survey, and it presents eligibility recommendations regarding the nine sites. Chapter 8 summarizes the project findings and recommendations for subsequent work. Appendix A provides a summary of the relevant correspondence between THC and CAR concerning the change of scope of work for the project. Appendix B provides a table listing the results of the 113 shovel tests.

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Chapter 2: The Natural Environment

The APE lies in the north-central part of Bexar County on the Bexar and Kendall county line. This area of Bexar County and the southern portion of Kendall County are rapidly becoming an urbanized component of greater San Antonio. Prior to the early 1980s, the area was rural, and the economy was primarily ranching and agriculture, in addition to seasonal hunting. Kendall County is now the third fastest growing county in Texas according to the Boerne Kendall County Economic Development Corporation (2019). This chapter presents an overview of the natural environment of the area. It includes discussions of the modern climate, geology, hydrology, soils, and floral and faunal resources that were potentially important to prehistoric and historic occupants of the region.

Climate

Bexar County has a moderate, subtropical, humid climate with cool winters and hot summers (Taylor et al. 1991). The nearest weather station is in Boerne, 8.3 km to the north of the APE in Kendall County. The annual temperature in Boerne was 19.7 °C (65.7 °F) based on data collected 1981 and 2010 (National Oceanic and Atmospheric Association [NOAA] 2019). The warmest months are July and August with a mean maximum temperature 34.5 °C (94.1 °F). The coolest months are December and January with an average minimum temperature of 1.8 °C (35.4°F).

The yearly average of rainfall in Boerne from 1981 through 2010 was 96.7 cm. Rainfall is bimodal, and the initial peak often occurs during May and June, and the second peak occurs in September and October (NOAA 2019). The driest period occurs from winter to early spring in the months of December, January, February, and March.

The average growing season in Boerne is 278 days (Dittemore and Hensell 1981). There is on average, a regional water deficit throughout the calendar year (Mauldin et al. 2018; Texas Water Development Board 2019). Evaporation and precipitation data suggest that in all months of the year there is, on average, a water deficit at a regional level (see Texas Water Development Board 2017). The combined lower rainfall and higher temperature during the months of July and August can stress plant and animal resources (Riskind and Diamond 1986). The region is subject to intense, localized rainfall that may produce flash floods, and conversely, it can experience periodic multi-year droughts (see Cleveland et al. 2011; Mauldin 2003). Both floods and droughts will negatively affect agricultural yields and reduce production of many natural resources.

Geology, Hydrology, and Soils

The APE lies at the eastern boundary of the Edwards Plateau along the Balcones Fault in Central Texas. The Edwards Plateau is a karstic uplift overlaying the Edwards Aquifer (Riskind and Diamond 1986). The Edwards Aquifer is the major source of water for the San Antonio region. The APE lies at the junction of the recharging and discharging zone of the Edwards Aquifer. Numerous active and intermittent drainages contribute to the perennial Medina River to the west, the San Antonio River to the south, and the Guadalupe River to the east. Balcones Creek forms a portion of the northwest boundary of the APE (Figure 2-1). It is an intermittent tributary leading to the Cibolo Creek located approximately 4 km to the east of the APE. At present, an unnamed drainage feeds a pond in the western portion of the APE and then flows north into Balcones Creek. Further to the west is another unnamed drainage.

The Edwards Plateau is also known for the high-quality chert that is found archaeologically across the Southern High Plains (Collins et al. 2003; Hofman et al. 1991; Speer 2014). Chert cobbles were observed in the portion of the creek that is adjacent to the APE. Good knapping material, such as Edwards chert, was an important resource for Native American tool manufacture.

There are seven different soil types within the APE, and land usage was dictated in part by soil type (Figure 2-2). The most common soil types in the APE comprise the Crawford-Bexar association (Ca and Cb; Figures 2-3 and 2-4). They make up approximately 80 percent of the 145 acre APE. Crawford clay (Ca) is relatively deep (approximately 70 cm) dark-grayish to dark reddish-brown clay over broken limestone (Taylor et al. 1991). This soil type is predominant in the central and eastern portions of the APE with a minor component in the southwest portion of the APE. Crawford-Bexar stony soils (Cb) dominate the western portion of the APE. This soil is dark brown to reddish-brown chert clay loam to stony clay loam (Taylor et al. 1991).

The northwestern portion of the APE lies partially within the Balcones Creek floodplain. This area contains three soil types: Lewisville silty clay, 0 to 1 percent slopes (LvA), Venus loam, 1 to 3 percent slopes (VaB), and Tinn-Frio, frequently flooded (Tf). These soils are associated with stream terraces and floodplains (Figure 2-5). The Lewisville silty clay soil is dark-grayish silty clay over a brown silty clay. The Venus loam, 1 to 3 percent slopes, soil is a loam

Figure 2-1. View to the northwest of Balcones Creek in the northwest APE. The creek forms a portion of the northwestern boundary of the APE.

over a pale brown loam (Taylor et al. 1991). The Tinn-Frio, frequently flooded, soil is a clay loam to gravelly clay over generally clay or loam that floods at least once a year (Taylor et al. 1991). It supports native riparian vegetation including elm (*Ulmus* sp.), hackberry (*Celtis* sp.), oak (*Quercus* sp.), huisache (*Acacia farnesiana*), mesquite (*Prosopis* sp.), and thorny shrubs (Taylor et al. 1991).

In addition to these soils, there two other soils that form a relatively minor portion of the APE. The first is the Brackett-Austin complex, 1 to 5 percent slopes (BsC), found on the western portion of the APE. It is a shallow, gravelly loam over limestone bedrock (Taylor et al. 1991). The second is the Tarrant soils, gently undulating (TaB), found on the eastern and southern parts of the central portion of the APE. It is a shallow, calcareous clay loam with limestone gravels over limestone bedrock (Taylor et al. 1991).

Historically, the Crawford clay soil supports a Post Oak-Blackjack Oak Savannah and, if farmed, can support sorghum and other small grains (Taylor et al. 1991). The Crawford-Bexar stony soils, while fertile, does not support cultivated agriculture due to its rockiness (Taylor et al. 1991). However, the soil is good for pasture if properly maintained and supports a prime habitat for game animals such as deer (*Odocoileus* sp.), turkey (*Meleagris* sp.), and other wildlife (Taylor et al. 1991). The Lewisville silty clay, 0 to 1 percent slopes, soil is considered one the most productive for agriculture suitable for cotton, corn, sorghum, small grains, flax, and hay (Taylor et al. 1991). The Venus loam, 1 to 3 percent slopes, soil is considered prime soil for the moderate production of dry land crops (Taylor et al. 1991).

Floral and Faunal Resources

Gould and colleagues (1960) place Bexar County at the juxtaposition of four ecosystems. The APE falls within the Edwards Plateau ecosystem, a grassland-woodland-shrub mosaic, while the Blackland Prairie is south of the APE, and the South Texas Plains is located to the west of the APE. A small portion of the Post Oak Savannah is found in south and east Bexar County. As such, there was a wide variety of plant and products from plants available to prehistoric and historic people.

The Edwards Plateau was a fire-maintained savannah with motes of live oak (*Quercus fusiformis*) prior to European and Anglo-American settlement in the mid-to-late nineteenth century (Fowler and Dunlap 1986; Riskind and Diamond 1986). However, fire suppression and overgrazing have led to the decrease of grasses and the increase of juniper (*Juniperis ashei*) within the Edwards Plateau (Fowler and Dunlap 1986; Riskind and Diamond 1986).

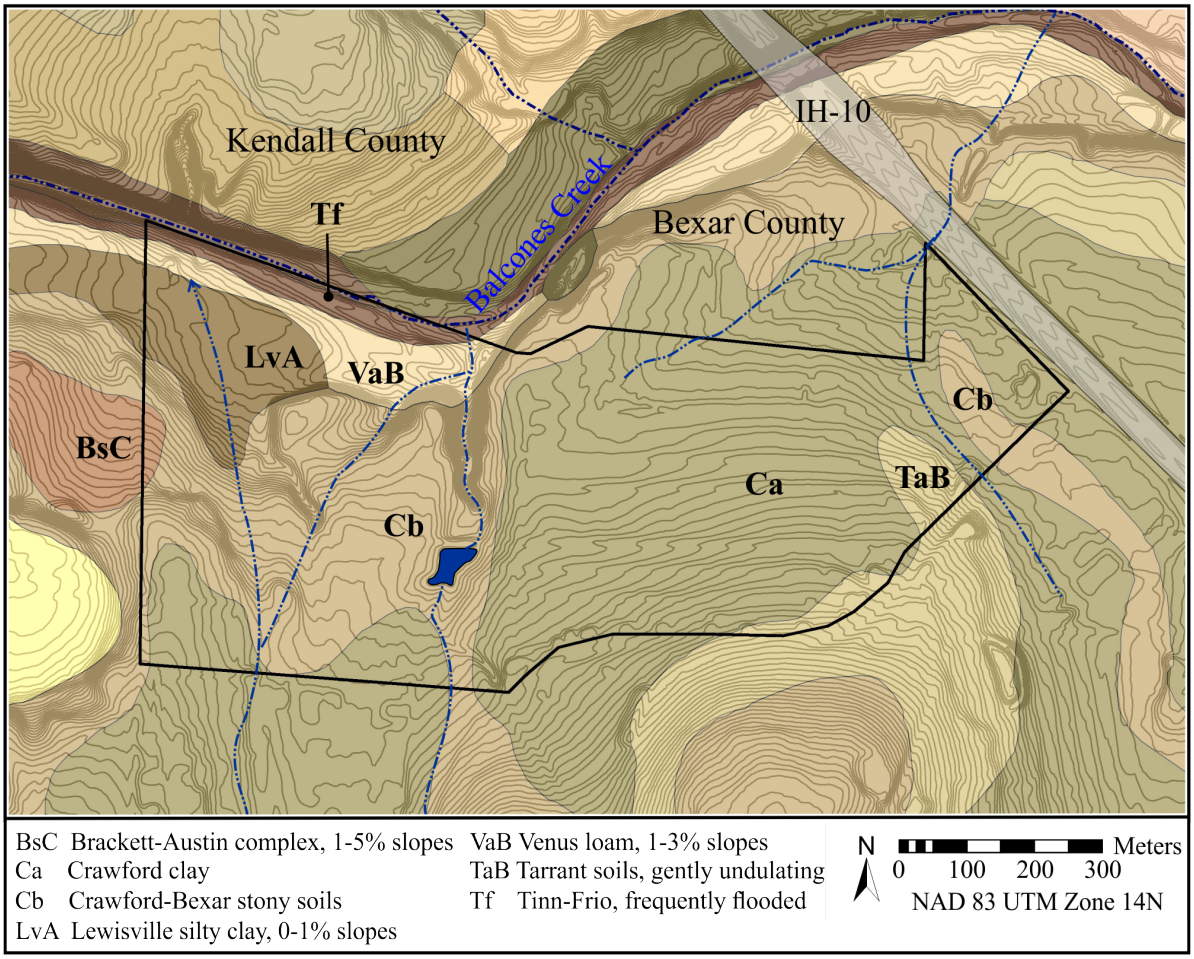

Figure 2-2. Soil series found within the APE (black outline) overlain on a 1-foot LIDAR based contour map. Soil data is derived from the National Resources Conservation Services (2017) and LIDAR data is from the San Antonio River Authority.

Figure 2-3. View of the central portion of the APE, a fallow field. Crawford clay is the dominant soil in this portion of the APE.

Figure 2-4. The western portion of the APE with secondary vegetation growing in Crawford-Bexar stony soils with limestone cobbles and gravels on the surface.

Figure 2-5. A view to the southwest from the Balcones Creek floodplain in the APE with tall grasses growing in Venus loam, 1 to 3 percent slopes, soil.

Several varieties of edible plants have been found in archaeological contexts. These include bulbs, such as wild onion (*Allium* sp.) and camas (*Camassia* sp.), and seeds, such as sunflower (*Asteraceae* sp.), mesquite (*Prosopis* sp.), and those from the goosefoot/pigweed family (Cheno-Am). In addition, nuts including acorn (*Quercus* sp.), elm (*Ulmus* sp.), and pecan (*Carya* sp.), and succulents including prickly pear (*Oputia* sp.), sotol (*Dasylirion wheeleri*), and yucca (*Yucca* sp.) have been recovered (see Acuña 2006; Black 1997; Decker et al. 2000; Dering 1997, 2003, 2008; Ellis 1997).

In Bexar County, mammals of economic importance to prehistoric and historic occupants include bison (Bison bison), white-tailed deer (*Odocoileus virgininus*), cottontail rabbit (*Sylvilagus* sp.), jackrabbit (*Lepus californicus*), and squirrel (Sciuridae; Davis and Schmidly 1997). In addition, birds, fish, reptiles, amphibians, and mollusks were part of the local prehistoric diet (Presley 2003). Accounts of the region by early travelers, including accounts of early Spanish explorers (Foster 1995; Wade 1998) and of settlers observed a diverse and abundant animal population (Doughty 1983; Weniger 1997). However, by the late nineteenth century, overgrazing and over hunting led to a decline of wildlife or eradication of some species, most notably bison (Doughty 1983; Weniger 1997).

Summary

The APE lies within the Edwards Plateau in the north portion of Bexar County. The intermittent Balcones Creek marks the northwest boundary of the APE with springs found just south of the APE. The property landscape suggests that it has been used for farming and ranching in the recent past. Regional climate is generally considered mild with moderate rainfall and a long growing season. The region is also subject to periodic drought as well as flooding, which will affect natural and agricultural productivity. Prior to colonization and subsequent development, there were a wide variety of plants and animals available for prehistoric people who lived in this region. In addition to these resources, the region is known for its Edwards chert, a highly sought after knappable material that can be found in streams as cobbles and nearby in outcrops. The introduction of agriculture and ranching in the mid-to-late nineteenth century altered the landscape. In areas surrounding the APE, early farming and ranching practices were limited by soil type and water availability. However, as discussed in Chapters 3 and 4, agricultural technologies and infrastructure were developed in the nineteenth and early twentieth centuries that led to increased crop and livestock productivity. Currently, the region is experiencing major growth with suburban development and expansion displacing farms and ranches.

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Chapter 3: Culture History Context

This chapter provides historical and archaeological context for the nine newly recorded sites within the APE. It summarizes the culture histories that have been developed for the San Antonio region. For this report, those histories have been divided into two broad chronological periods: the prehistoric and the historic. The discussion of the regional culture history is followed by a section on the previous archaeological projects near the APE, including a brief discussion of recorded sites within a 1.6 km radius of the APE. The chapter concludes with a comparison of archaeological site density surrounding the APE relative to Camp Bullis, a military installation that is environmentally and topographically similar to the project area. Camp Bullis has been subject to intensive archaeological investigations.

Culture History

For this summary, the prehistory of Texas is separated into three broad temporal periods, and historical Texas is separated into seven periods. The area encompassing the APE falls within the southern portion of the prehistoric temporal framework developed for Central Texas (see Collins 1995, 2004). The three prehistoric periods are the Paleoindian, Archaic, and the Late Prehistoric. The historic period is divided into multiple periods: Protohistoric, the Spanish Colonial, Republic of Mexico, Republic of Texas, Early Statehood to 1865, Reconstruction to 1900, and Post-1900 (1900-1950s). This discussion focuses on San Antonio and the surrounding region with the history of the state brought in for historical context.

Paleoindian Period

The Paleoindian period (11,500 to 8800 Radiocarbon Years before Present [RCYBP]) is divided into two sub-periods termed Early and Late. The Early Paleoindian sub-period (11,500 to 10,900 RCYBP) is defined by the presence of Clovis and Folsom points (Collins 1995:381). The former is a thin, lanceolate-shaped, fluted point generally ranging in size from 7.5-11 cm in length (Howard 1990:257). Clovis points are found across the North American continent. The Folsom point is also lanceolate shaped with a broader and longer flute extending from the base to almost the tip. In a study of 42 Folsom points found in Texas, Largent and colleagues (1991:337) found Folsom points to have been smaller than Clovis, with an average length of 3.76 cm. The distribution of Folsom is focused on the Great Plains and surrounding states and is associated with adaptations that are thought to specialize on bison acquisition (Collins et al. 2011).

The Late Paleoindian sub-period (10,000 to 8800 RCYBP) is thought of as a transition to the subsequent Archaic period with the appearance of burned rock features and a wider subsistence base (Collins 1995, 2004). This sub-period is defined by multiple point styles that include lanceolate-shaped points, such as St. Mary's Hall and the Golondrina/Barber form, as well as stemmed, corner notched points such as Wilson, San Patrice, and Big Sandy (Bousman et al. 2004).

Several Paleoindian components are documented in the region. The Pavo Real site (41BX52) in Bexar County contained both Clovis and Folsom components within the same stratigraphic level. It is approximately 29 km south of the APE along Leon Creek (Collins et al. 2003; Figueroa and Frederick 2008). The St. Mary's Hall site (41BX229) is an example of a Late Paleoindian occupation. The site is located along Salado Creek in Bexar County approximately 34 km southeast of the APE (Hester 2010). Other regional sites with Paleoindian components include the Chandler site (41BX708; McKenzie and Moses 2005) near Culebra Creek and 41BX1396 (Ulrich et al. 2012) located in Brackenridge Park.

Archaic Period

The Archaic period is divided into three sub-periods: Early, Middle, and Late. Archaeological signatures develop or become better defined in the Archaic period. These signatures include a proliferation of point styles, the use of grinding stones to process plant foods, and the use of rock as heating elements in earth ovens (see Acuña 2006; Black 2003; Black and McGraw 1985; Carlson et al., eds. 2008; Collins 1998; Collins et al. 2011; Thoms and Clabaugh 2011).

The Early Archaic (8800 to 6000 RCYBP) is the least known of the three sub-periods. Projectile points associated with the Early Archaic include Angostura, Early Split Stem, and Martindale-Uvalde (Collins 1995, 2004). Other temporally diagnostic items include Guadalupe and Clear Fork tools (Collins 1995, 2004). Early Archaic populations are thought to have been relatively low in number, with small groups widely scattered during this period (Collins 1995, 2004). The Richard Beene site (41BX831) in south Bexar County along the Medina River provides a good example of the Early Archaic sub-period. The site contains evidence of sustained human occupation beginning during the Early Archaic (Carlson et al., eds. 2008; Thoms and Clabaugh 2011).

The Middle Archaic sub-period (6000 to 4000 RCYBP) is marked by the appearance of Bell-Andice, Taylor, and Nolan-Travis point styles (Collins 1995:383). It is believed that the early part of the Middle Archaic was a more mesic period with bison hunting being part of subsistence practices (Collins 1995; Collins et al. 2011). Bison populations are thought to have declined with the onset of a more xeric environment late in the Middle Archaic (Collins 1995:384). Munoz and colleagues (2011) suggest that bison remained available during the entirety of the sub-period with bison density fluctuating rather than being absent as suggested by Dillehay (1974). Characteristics of territoriality become more pronounced during this period with the development of distinctive point styles, and cooking features with burned rock middens become more common in Central Texas (Collins 1995:384). The Granberg site (41BX17/271) along Salado Creek in central Bexar County dates in part to the Middle Archaic and provides an excellent example of this sub-period (Munoz et al. 2011).

Bulverde and Pedernales point styles characterize the beginning of the Late Archaic sub-period (4000 to 1300/1200 RCYBP). Collins and colleagues (2011) describe the Pedernales point style as the quintessential Central Texas point. It was likely used for hunting bison during the initial mesic climate of this sub-period. Other point styles defined during this time include Lange, Marshall, Marcos, Montel, Castroville, Ensor, Frio, Fairland, and Darl (Collins 1995:384). Late Archaic sites are common in Central Texas and frequently are in stratified contexts with good integrity (Collins 1995). Subsistence practices include the use of succulents and geophytes processed in burned rock middens, which became abundant during this period (Collins 1995). Increasing population and territoriality are postulated by the presence of large cemeteries (Black and McGraw 1985; Munoz 2012).

Late Prehistoric Period

The Late Prehistoric (1300/1200 to 350 RCYBP) is divided into two sub-periods, Austin (1200 to 700 RCYBP) and Toyah (700 to 350 RCYBP). The Austin sub-period is often viewed as a continuation of adaptations common in the Late Archaic sub-period with the addition of the bow and arrow (Collins 1995:385). Scallorn and Edwards points are characteristic of this time with Scallorn points found throughout the state (Turner and Hester 1999; Turner et al. 2011). Toyah occupations are frequently associated with the Perdiz point, a style that is found statewide (Turner and Hester 1999; Turner et al. 2011). In Central Texas, bone-tempered pottery known as Leon Plain is occasionally recovered at Toyah-age sites. The Toyah tool kit, consisting of Perdiz points, beveled knives, and end scrapers, appears to have been designed to exploit bison (Dillehay 1974; Huebner 1991; Prewitt 1981). Other researchers (see Black 1986; Dering 2008; Mauldin et al. 2012) cite a broad-based diet including deer, small mammals, turtle, and fish, as well as a variety of plant foods.

Protohistoric Period

The Protohistoric period (AD 1528-1690) marks the beginning of the cultural interactions of Native American groups in Central and South Texas and the "discoveries" and colonization of this region by Europeans (Wade 2003). The record of those interactions between Native American groups and colonists as a whole is often missing, muddled, or tainted by bias (Collins 2004; Wade 1998, 2003). Recent scholarship has begun to rectify this situation by providing a more inclusive account of this period (Fox 1999; see also Barr 2007; Collins 1999; Wade 1998, 2003; Walters 2000).

The Native American groups of Central and South Texas are often characterized as small, kin-based groups of nomadic hunter-gatherers (Collins 2004; Wade 1998, 2003). However, some records suggest aggregations of multiple tribal groups occurring at least intermittently (Collins 2004; Wade 1998, 2003). This fluctuating dynamic, between small groups and large aggregations, may be related to the need for defense and bison acquisition during the Protohistoric. The movement of the Apache into the region from the north and the Spanish colonization of Northern Mexico in the south may have caused less powerful Native groups to come together for defensive purposes (Wade 1998, 2003). The second element is the role of bison among Native American groups (Collins 2004; Wade 1998, 2003). Bison were a significant resource not only for the large quantity of meat they provided but also for the many products that could be derived from the animal. The hunt for bison fostered interactions between Native American groups and served as a mechanism for creating social ties through alliances, marriage, and trade (Wade 2003).

Spanish Colonial Period

Initially, the area now known as Texas was claimed by Spain, but it was peripheral to Spain's primary colonial interests (Casteñada 1937; Chipman 1992). It was not until France asserted its own claims in what is now called East Texas and Louisiana in the late 1600s that Spain focused more of its attention and resources on the region. In 1690 and 1691, the Spanish established two missions in East Texas to counter the French incursions (Bannon 1974). Both missions were unsuccessful and were closed by 1693, halting these initial Spanish colonization efforts (Bannon 1974).

In 1699, the Spanish developed the San Juan Bautista mission and presidio complex near the modern city of Guerrero,

Coahuila (Wade 2003). The complex would become an operational base acting as a supply depot and military reserve for Spain's colonization of Texas. In 1718, Martín de Alarcón, the commander of Presidio San Francisco de Coahuila and governor of the province of Texas, led an expedition that established the Presidio de Béxar and Villa de Béxar near San Pedro Springs (Chipman 1992; de la Teja 1995; Ivey 2008). Mission San Antonio de Valero was established near the Alarcón settlement. Both the mission and the presidio were moved to their final locations by 1724, with the presidio on the west bank of the San Antonio River and Mission Valero on the east bank (see McKenzie et al. 2016).

The Spanish, led by Marqués de San Miguel de Aguayo who was the Governor and Captain-General of the Province of Coahuila and Texas, increased their presence in the region in the early 1720s (Chipman 1992). Aguayo recommended that the Spanish Crown provide civilian families to consolidate Spain's control of the province. In 1720, Mission San José y San Miguel de Aguayo was built approximately three leagues from Mission Valero on the east bank of the San Antonio River. Mission San José was moved three times before its final location was established in 1724 (Habig 1968; Scurlock et al. 1976).

The region developed and the population grew with the relocation of three missions from East Texas to San Antonio in 1731 (Habig 1968). In San Antonio, these missions were renamed Nuestra Señora de la Purisma Concepción de Acuña, San Juan, and San Francisco de la Espada (Habig 1968). Also contributing to the increase in population in 1731 were 15 families and four single men, 56 individuals in all, who arrived from the Canary Islands. Known as Isleños, they formally chartered Villa San Fernando de Béxar (de la Teja 1995:18-19). The Canary Islanders were granted titles, compensation, land, and livestock from the Spanish Crown for their immigration (de la Teja 1995).

One of the greatest impediments to the growth of the Spanish presence were the Apache who harassed the San Antonio settlement as early as 1721. For the next 80 years, the Apache were in ongoing conflict with Béxar and other settlements in Texas (Wade 2003). Attacks by Apache between 1720-1726 and 1731-1749 forced other Native American groups to seek protection within the missions, fostering the mission's most intense period of growth (Wade 2003). In the latter part of the eighteenth century, the Comanche displaced the Apache and began to raid Spanish outposts (Wade 2003).

During the early Spanish expeditions, cattle and horses were introduced to Texas (Jackson 2010). Individual settlers often owned some livestock for subsistence, though large-scale ranching was initially the prerogative of the missions (de la Teja 1988, 1995). The missions secured large tracts of land for livestock. In addition, they had access to cheap labor though their neophytes. Following a peace treaty with the Apache in 1749, private ranches were increasingly common and competed with the mission ranches in the sale of livestock (de la Teja 1988, 1995). During the 1770s through the 1790s, cattle from Béxar were exported to Spanish-occupied Louisiana and Coahuila, beginning the Texas ranching industry (de la Teja 1995).

By the 1780s, the Native American population at the missions had decreased, resulting in reduced revenue from farming and ranching (Hinojosa 1991). In 1793, Mission Valero was secularized, and the four remaining missions were secularized by 1824 (Habig 1968). As part of the secularization, the Church redistributed mission land to those few remaining Native American inhabitants and other occupants (Scurlock et al. 1976).

At the end of the eighteenth century, Spain engaged in several wars that had debilitating effects on its rule in North America. Because of its war with France (1793-1795), Spain lost the Louisiana territory to the French. In 1803, Napoleon sold the Louisiana territory to the United States, leading to the Spanish perception of the United States as the new regional threat. Losses in Europe increasingly undermined authority in New Spain, which led to the formation of groups advocating independence (Russell 2011). Father Manual Hidalgo y Castillo led one such group. In 1810, Father Hidalgo issued an edict (the Grito de Delores) that initiated the Mexican War of Independence (Russell 2011). Revolutionary fervor spread to the northern provinces, including Texas.

In San Antonio, two insurgencies took place, the first in 1811 and the second in 1813 (Bradley 1999; Campbell 2003). These revolts and their aftermath spurred the depopulation of Texas from over 4,000 individuals in 1803 to less than 3,000 in 1821 (Campbell 2003:93). McGraw and Hindes (1987) describe this period as one of scarcity and insecurity, due in part to the collapse of ranching that led to food shortages. This insecurity was heightened by an increase in raids by the Comanche.

During the last years of Spanish rule, the *empresario* (land agent) system was enacted to increase the number of settlers in Texas through colonization and land grants. This primarily resulted in an influx from southern states in the United States (Campbell 2003:99-100). In 1821, the first colony that resulted from this influx was established, and it consisted of 300 families and was led by Stephen Austin

(Campbell 2003:107-108). The Anglo colonists known as Texians (henceforth called Texans; Hispanic-Texans were called Tejanos) were lured by cheap land and productive soils with cotton being the dominant crop. Cotton agriculture was dependent on slave labor, which prior to the establishment of the Anglo colonies had not been a significant part of the history or culture of Texas (Campbell 2003). The *empresario* policy was judged successful because it dramatically increased the population of the province and created a self-sustaining economic base. However, these settlers had little loyalty to the Spanish Crown (Campbell 2003).

Republic of Mexico Period

Mexico won independence from Spain in 1821, and the Republic of Mexico was established in 1824. The Mexican congress passed a constitution that emphasized states' rights over the central authority of Mexico City. The new constitution merged Texas with the state of Coahuila creating Coahuila y Texas, and the provincial capital was moved from San Antonio to Saltillo. This action negated the independence that Texas had previously enjoyed, while the more populous Coahuila was able to pass legislation without significant input from citizens of Texas (Campbell 2003).

Beginning in 1831, Mexican policy towards Texas, coupled with the collection of increasingly high duties and tariffs on goods, led to several incidents in which settlers challenged the authority of Mexico City (Campbell 2003). Texans formed conventions in 1832 and 1833, both of which requested the central government to recognize Texas as a separate state within the Republic and to address a list of inequities (Fehrenbach 1968:180-182). Texas leaders described the conventions as efforts to redress what they perceived as violations of the Constitution of 1824 (Campbell 2003).

In April 1834, General Antonio Lopez de Santa Anna overthrew the government and revoked the Constitution of 1824. The state of Zacatecas revolted and was repressed by Santa Anna. The government in Coahuila also revolted, and Santa Anna sent General Martín Perfecto de Cós to restore order in April of 1835 (Fehrenbach 1968:185-186; Russell 2011). In September 1835, Cós left the city of Matamoros to regain control of Texas under the orders of Santa Anna. He arrived in San Antonio on October 9, 1835. The Battle of Concepción was fought shortly thereafter on October 28. The battle was between Mexican forces and a joint force of Texans and Tejanos (Campbell 2003). Although the Mexicans were defeated, Cós refused to withdraw from San Antonio, leading to a siege (Campbell 2003). The siege lasted until the beginning of December when Texas forces, led by Ben Milam, attacked the Mexicans. Cós surrender on December 9, 1835 (Campbell 2003; Fehrenbach 1968:193-198; Russell 2011). In February of 1836, a Mexican army under the command of Santa Anna marched north to retake rebellious Texas and pacify the region.

On March 2, 1836, the Texas Declaration of Independence from Mexico was proclaimed. The convention held at Washington-on-the-Brazos in East Texas formed a provisional government, named Sam Houston as commander-in-chief of the Texas Army, and created a constitution (Campbell 2003; Fehrenbach 1968). At roughly the same time, forces under the command of Santa Anna arrived on the outskirts of San Antonio and initiated a siege of a small contingent of remnant Texas forces led by William Travis and James Bowie at Mission Valero (the Alamo). On March 6, 1836, the Texas forces were defeated with its defenders either killed during the battle or executed afterword (Campbell 2003; Fehrenbach 1968:205-215).

Following the Battle of the Alamo, Santa Anna divided his forces in an attempt to secure the Texas coast and ports. The force led by Santa Anna was defeated at the Battle of San Jacinto on April 21, 1836, by Texas forces under the command of Houston (Campbell 2003; Fehrenbach 1968:219-233). After the defeat, Santa Anna was captured, and he agreed to terms in which all hostilities would cease, the Mexican army would withdraw to south of the Rio Grande, and all Texas prisoners would be released (Campbell 2003; Fehrenbach 1968:239-243).

Republic of Texas Period

In October of 1836, Sam Houston was elected the first president of the Republic of Texas. The Republic was officially recognized by the United States in March 1837, though not by Mexico (Campbell 2003). The eight years that the Republic existed were marked by economic debt, internal political strife, and ongoing conflict with both Native Americans and Mexico (Campbell 2003).

The Council House Fight of 1840 exemplifies the mistrust and conflict between the Native Americans and Texans. In March of 1840, the Peneteke Comanche arrived in San Antonio in an attempt to make peace with the Texans (Kavanagh 1996). A dispute led to the imprisonment of the Comanche peace delegation. When they sought to escape, the delegation was fired on by Texan soldiers, resulting in the deaths of 30 chiefs and warriors, three women, and two children. Twenty-nine Comanche were captured and held as hostages (Kavanagh 1996:263). Seven Texans were killed, and 10 were wounded in the fight. The Council House Fight led to retaliation, known as the Great Raid of 1840, by the

Comanche. They attacked the city of Victoria in south Texas and then looted and destroyed Linnville, the second largest port in Texas (Kavanagh 1996).

Tensions between the Republic and Mexico were also evident. A Mexican force briefly occupied and looted San Antonio in March of 1842 (Campbell 2003). In September of 1842, the Mexican army under General Adián Woll invaded Texas, and once again, it occupied San Antonio before returning to Mexico (Fehrenbach 1968:261). There were ongoing disputes along the southern boundary, with increasing tensions on both sides.

At that time, the population of the Republic was estimated at 50,000 (Texas Almanac 2019). Increasing the population during these turbulent times was a challenge that the Republic solved with immigration, both from southern states of the United States and European nations. Beginning in the 1830s, one of the major sources of immigrants was Germany. Germans immigrated to Texas due in part to land and opportunity as well as the economic and political crises and crop failures in Germany itself (Brister 2010). In fact, a formal organization, the Adelsverein, was formed to facilitate German immigration in Texas.

Early Texas Statehood to 1865 Period

During the United States presidential election of 1844, candidate James Polk advocated the annexation of Texas. Polk was elected president in 1845, and Texas was admitted to the Union as the 28th state on December 29, 1845.

Soon afterward, the United States declared war on Mexico following border conflicts between the United States and Mexican troops (Campbell 2003). In 1847, U.S. troops captured Mexico City. The United States and Mexico negotiated terms to end the war and signed the Treaty of Guadalupe-Hidalgo in 1848 (Campbell 2003; Fehrenbach 1968). The treaty established the Rio Grande as the boundary between the United States and Mexico (Campbell 2003; Wallace 1965). Mexico also ceded territorial claims to what is now most of Arizona, California, Colorado, Nevada, New Mexico, Texas, and Utah to the United States in exchange for $15 million (Campbell 2003; Fehrenbach 1968:272; Wallace 1965).

Following the war, the United States began its western expansion in earnest, and the proximity of San Antonio to the United States/Mexican border facilitated use of the city as a logistical center. Between 1848 and 1858, the United States built a line of forts in South, Central, and West Texas to secure the border and to protect settlements from Comanche and Kiowa attacks (Campbell 2003). In San Antonio, the military fostered the growth of a merchant economy and freight services to support the frontier infrastructure.

By 1847, the Adelsverein had ceased operation, but it had brought approximately 70,000 German immigrants to Texas (Brister 2010). Germans not only settled in the port cities of Galveston and Indianola, but also San Antonio and the surrounding region. German immigrants established the towns of New Braunfels in 1845 (Greene 2019), Fredericksburg in 1846 (Kohout 2010), Boerne in 1849 (Smyrl 2010a), and Comfort in 1854 (Lich 2010). In 1856, Kerr County, which at that time included what is currently Kendall County, was formed from Bexar County with the town of Comfort its county seat (Lich 2010). In 1862, Kendall County was formed with Boerne as its county seat (Smyrl 2010b).

Texas experienced rapid population growth prior to the Civil War from both the Europe and the southern United States. These southern immigrants brought with them ideas associated with the nativist and proslavery movements of the 1850s (Duffy 1967). The population of Texas increased from approximately 142,000 in 1847 to just over 600,000 by 1860 (Campbell 2003:207; Texas Almanac 2019). In 1850, the population of San Antonio was 3,488 (Texas Almanac 2019). According to the 1860 census, San Antonio had a population of 8,235 people and was the largest city in Texas (Texas Almanac 2019). In New Braunfels, the population increased from 1,727 in 1850 to an estimated of 3,500 in 1860 (Texas Almanac 2019).

Agriculture remained the dominant industry in Texas during this time. Approximately one-third of Texas agriculture was devoted to the cash crop, cotton, with its production based in the slave economy of East Texas (Campbell 2003). Cotton production in Bexar County was never substantial due in part to soils and topography (Dase et al. 2010). Cattle ranching remained an important component of the economy, continuing the tradition of the Spanish and Mexican rancheros (ranchers) in the county. In the 1850s, Germans and the Scots introduced sheep ranching to South Texas (Carlson 2010). George Kendall, for whom Kendall County is named, was an early advocate of the industry establishing successful sheep ranches near Boerne (Carlson 2010).

Texas formally seceded from the United States in February of 1861 and joined the Confederate States of America in March 1861. Fifteen days following secession, the U.S. Army garrison in San Antonio surrendered to Texas forces (Fox 1986). During the Civil War, the use of cattle for food and leather increased the demand for Texas cattle, which benefitted Bexar County ranchers (Dase et al. 2010). On June

2, 1865, Confederate forces in Texas surrendered to the Union with Federal troops occupying Galveston on June 19, 1865.

Reconstruction to 1900 Period

The San Antonio region emerged slowly from the economic and social collapse caused by the Civil War. Major industries developed around ranching and, to a lesser degree, farming (Campbell 2003; Sonnichsen 1950). During the 1870s, the demand for beef created the great cattle drives from South Texas, with San Antonio acting as a hub (Dase et al. 2010). In addition to cattle, the late nineteenth century saw a boom in sheep and goat ranching, with San Antonio becoming a leading wool market (Dase et al. 2010).

The number and size of farms increased in Bexar County from 266 farms in 1870 to 1,136 in 1880 (Dase et al. 2010:8). In 1870, the vast majority of farms (98 percent) were less than 100 acres; however, by 1880, this number had decreased to 49 percent (Dase et al. 2010:11). In Kendall County, there were 197 farms in 1870, and by 1880, there were 419 (Smyrl 2016b). Sheep ranching was the major industry in the county with a 611-percent increase in wool export from 1870 to 1880 (Smyrl 2016b).

Texas was readmitted to the United States in 1870, and at that time, San Antonio had a population of 12,255 people (U.S. Census 1870). In 1880, the population of San Antonio was recorded at 20,550, and by 1890 it had increased to 37,673 (Texas Almanac 2019). In 1870, the population of Kendall County was 1,536, and ethnic Germans accounted for 25 percent of the population (Smyrl 2010b). The county's population increased to 2,763 in 1880, and in 1890, the number stood at 3,826 (Texas Association of Counties [TAC] 2019). In 1884, the population of Boerne was 250, and by 1890, the population had increased to 800 (Smyrl 2010a).

In 1877, the Galveston, Harrisburg, and San Antonio Railway connected San Antonio to the national rail system (Cox 1997). San Antonio was one of the last major cities in Texas to connect to the national rail network and with it came a regional economic boom (Cox 1997). It also fostered the growth of towns centered on its depots such as Van Raub, located just to the east of the APE. It was a stop for the San Antonio and Aransas Pass (SA&AP) rail line, and in addition to the rail depot, the town had a church, a school, a cotton gin, and a post office (Hazelwood 2010). The presence of the depot in Van Raub allowed local farmers to ship produce and other perishables down the line to San Antonio. In 1887, the SA&AP Railway connected to Boerne (Smyrl 2019a). Expansion of the railroad set the stage for economic development and continued population growth in the 1900s.

Post-1900 Period

The post-1900 period of San Antonio was dominated by population growth and economic development. Much of the expansion was tied to historic events outside the region, including impacts from the Mexican Revolution (1910-1920), World War I (1917-1918), and World War II (1941-1945). In 1900, the population in San Antonio was 53,321 (Texas Almanac 2019), and by 1950, it had grown to 408,442 (Texas Almanac 2019). In Kendall County, there was a gradual increase in population. The population stood at 4,103 in 1900 gradually increasing to 5,423 in 1950 (TAC 2019).

The military played an ever-increasing role in the economy of San Antonio and the surrounding area in the early and mid-twentieth century. In 1906, the U.S. Army purchased 17,000 acres near Leon Springs, just south of the APE, to conduct artillery practice (Manguso and Leatherwood 2010). During World War I, this area would become Camps Bullis and Stanley. After 1931, the ammunition storage component of the San Antonio Arsenal was moved to Camp Stanley (Manguso and Leatherwood 2010). In 1941, Camp Bullis was enlarged to train troops, and it operated as such until 1944 (Manguso and Leatherwood 2010).

During the early twentieth century, Bexar County agriculture prospered from mechanization and transportation development (Dase et al. 2010). In Bexar County, the number of farms increased from 1,580 in 1920 to 3,664 by 1940 (Dase et al. 2010:15). Bexar County was one of the leading producers of milk, butter, pecans, potatoes, and peanuts from the 1920s through the 1940s (Dase et al. 2010).

In Kendall County, there were 542 farms in 1900 averaging 626 acres per farm (Smyrl 2010b). Cattle, sheep, and goat ranches were the major industry in Kendall County. Agriculture was focused on corn and oats in the mid-twentieth century (Smyrl 2010b). The Great Depression brought about a decline in farm ownership and an increase in farm tenancy (Smyrl 2010b). This trend was reversed by the 1950s as small tenant farms were absorbed into larger farms and ranches (Smyrl 2010b).

Archaeological Background

There are no recorded archaeological sites within 1.6 km of the center of the APE. Several archaeological sites are within 3.2 km of the APE, and one is just outside of the 1.6 km range. Table 3-1 list the sites and provides a brief description of each.

In October of 2006, Hicks and Company surveyed a 29 km section of the interstate from the intersection of Loop 1604 and IH-10 to Upper Cibola Creek Road, 4 km north of Boerne

Table 3-1. Previously Recorded Archaeological Sites within 3.2 km of the APE

Site Trinomial	Distance from APE	Time Period	Site Description
41BX493	3.0 km	Prehistoric	Lithic scatter
41BX494	3.0 km	Prehistoric	Burned rock midden with debitage
41BX495	3.0 km	Prehistoric	Lithic and burned rock scatter
41BX496	3.0 km	Historic	Root cellar foundation
41BX562	1.9 km	Prehistoric	Burned rock feature with a small number of artifacts including 3 bifaces, a mano fragment, and debitage

(King 2007). The survey crew excavated 217 shovel tests, and all shovel tests were negative for artifacts (King 2007:55). King (2007) reported that the combination of shallow soils and intensive development along IH-10 likely contributed to the lack of findings.

In 2009, SWCA Environmental Consultants (SWCA) conducted a survey along a 7.2 km stretch of Boerne Stage Road from Toutant Beauregard Road in Bexar County to Corely Road in Kendall County (Peyton 2010). A portion of the historic Maverick-Altgelt Ranch and Fenstermaker-Fromme Farm, a NRHP District, overlapped the SWCA APE; however, no historic properties were identified (Peyton 2010). The survey crew excavated 24 shovel tests. All were negative, and researchers commented that shallow soils and previous construction reduced the potential for cultural resources (Peyton 2010:7).

The lack of recorded sites in the project area may not be representative of the archaeological record in this area. Camps Bullis and Stanley (hereafter Camp Bullis) are U.S. Army training facilities located approximately 11.2 km to the southeast of the APE. Camp Bullis is approximately 29,782 acres (120.5 km^2) in size and has a similar environment as the APE. The Camp Bullis data consists of 17 investigations with GIS and archaeological data accessed from the Texas Archeological Sites Atlas (THC 2019a). There are 284 recorded sites on Camps Bullis with a site density of 2.35 sites per km^2 compared to only 42 sites or 0.34 sites per km^2 within a similar-sized area centered on the APE (Figure 3-1). This difference may be attributed to the number of archaeological investigation on Camp Bullis, as well as the lack of development on Camp Bullis since the area incorporating the installation was purchased at the beginning of both World War I and II (Manguso and Leatherwood 2010).

Summary

This chapter summarized the regional culture history beginning with the Paleoindian period through the middle of the twentieth century. It also reported on the lack of archaeological sites within a 1.6 km radius of the APE. Findings from two archaeological studies (King 2007; Peyton 2010) adjacent to the APE were negative for archaeological sites that might suggest that the APE would also lack for sites. A comparison of site density per km^2 found on Camp Bullis and a similar-sized area centered on the APE found that Camp Bullis has almost twice the number of sites as the area surrounding the APE. The difference may be attributed to the history of land use and lack of development on Camp Bullis, as well as the number of archaeological investigations on the installation.

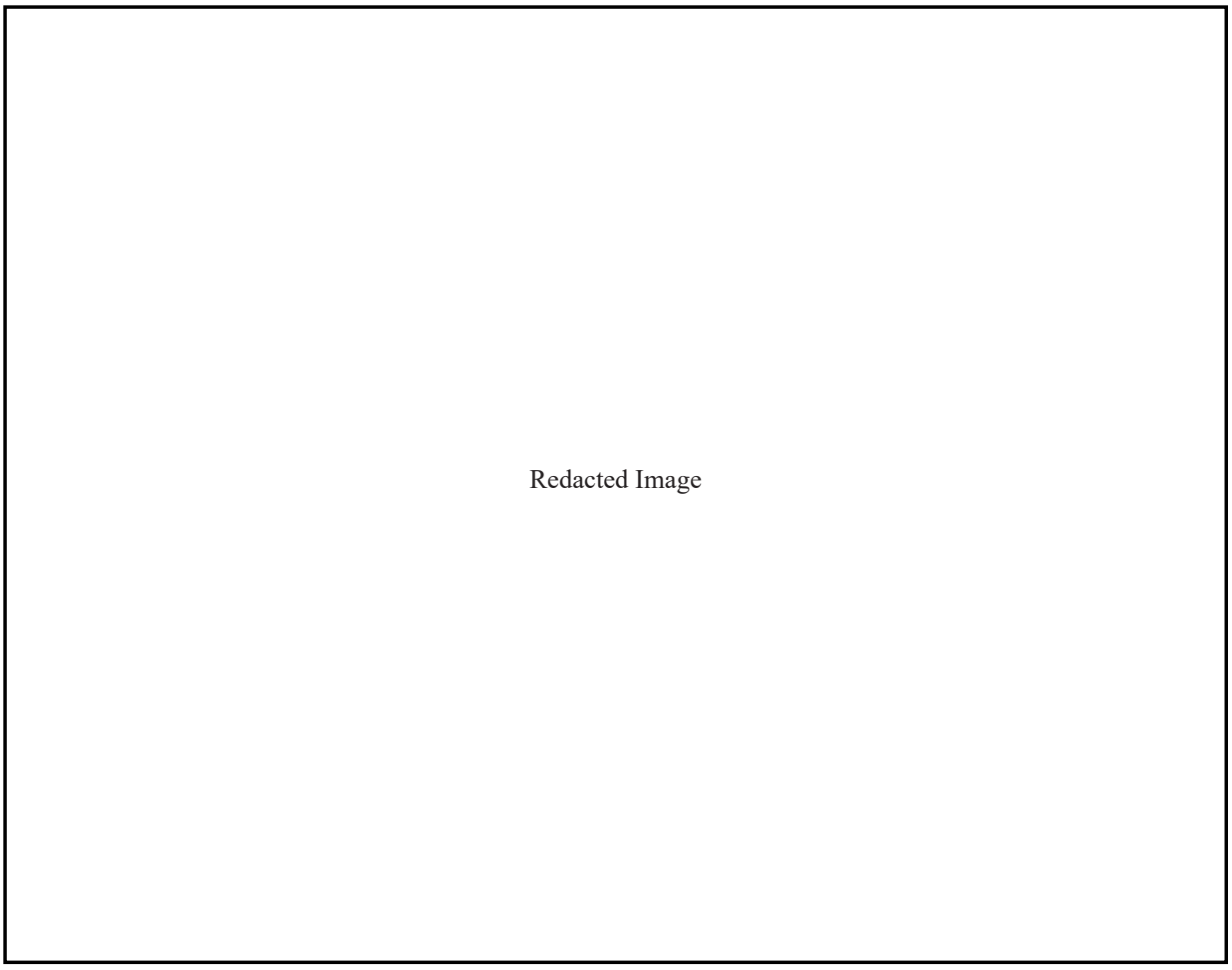

Figure 3-1. Archaeological sites recorded on Camps Bullis and Stanley as sites with a similarly sized area centered in the APE.

Chapter 4: History of the Project Area

This chapter provides a discussion of the historical uses of the ACCD-NC project area. Archival research focused on the history of landowners from 1837 beginning with the platting of public lands following the Texas War of Independence and extending through the early twentieth century. The supporting materials are taken from a wide variety of resources including the Bexar County Deed and Record files, Municipal Archives, Texas Newspaper Archives, and U.S. Census data, as well as historical maps. The chapter concludes with a section on the evolution of the use of the APE from land as investment to land as a source of production.

The historical land use of the APE begins at the founding of the Republic of Texas in 1837 with a specific focus on the issue of the transfer of public lands into privately owned properties. The Texas Constitution of 1836 provided that heads of households were entitled to a league and a labor (acre) of public land (approximately 4,605 acres) and could claim (headright grants) when a land office was opened. The two stipulations for receipt of this land grant were that the recipient had not left the Republic during the conflict to avoid service and had not assisted the Mexican Republic during the conflict. The Texas Congress authorized land offices; however, county courts and boards of land commissioners assumed that function (Pitts 1966:6).

The land that comprises the APE (Figure 4-1) was granted to three individuals: Antonio Cruz (Survey No. 170), José Ramon Arocha (Survey No. 171), and W. H. Hughes (Survey No. 173) whose portion consisted of approximately 2 acres in the south-central portion belonging to Arocha. The Original Texas Land Survey (OTSL) spatial data used in this report comes from the Texas Railroad Commission and the Texas General Land Office (GLO), and both are on file at CAR. This chapter will trace only the lines of the Cruz and Arocha properties because the two form the majority of the APE using the OTSL data set. The land plat is generally referenced by the initial grantee, in this case Cruz or Arocha, or the survey number. The term grant and survey are used interchangeably in this chapter to refer to the land plat.

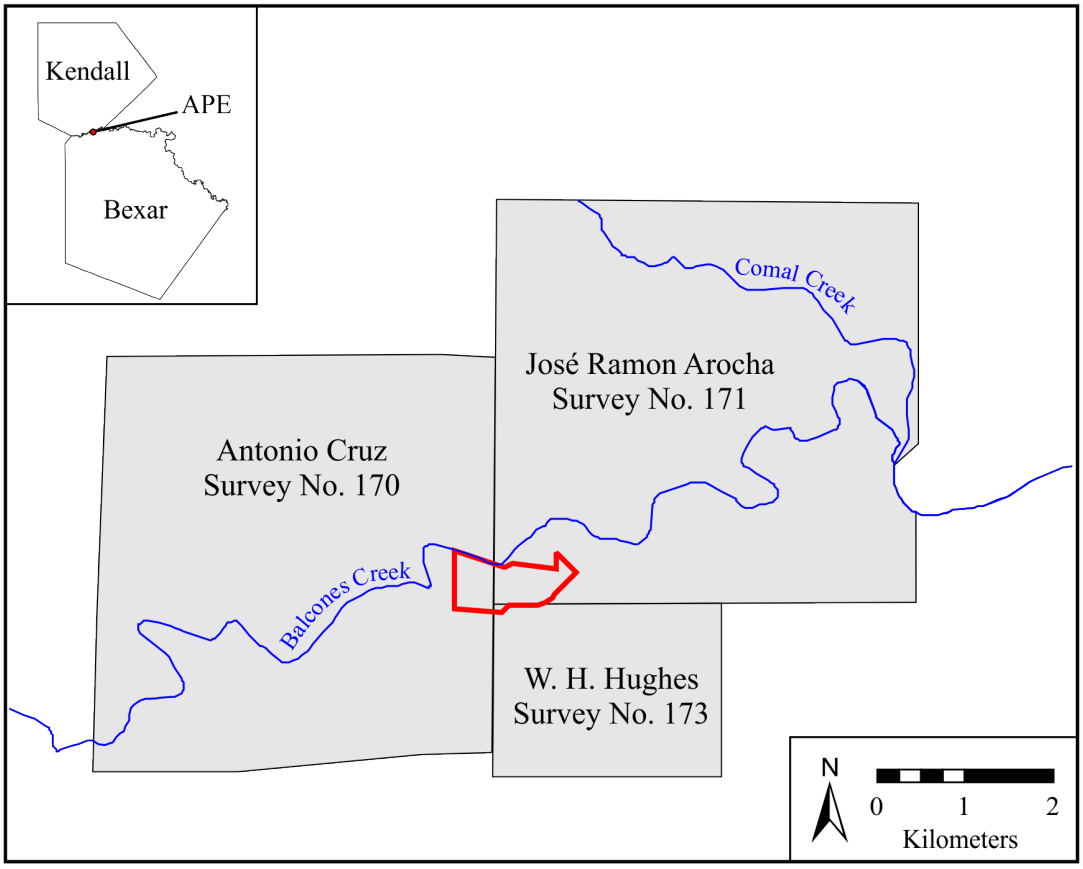

Figure 4-1. The portions of the identified grants within the APE. The inset shows the APE location relative to the Bexar and Kendall county line (OTSL 2019).

Antonio Cruz Grant (Survey No. 170)

Antonio Cruz, who is also referred to as Antonio Cruz Arocha (Matovina 1995), was given his headright consisting of a league and a labor in 1838 (Bexar County Deed Record [BCDR] 1838:A2:63; Pitts 1966:56). Cruz served as an adjutant under Captain Juan Seguin during the Texas War of Independence participating in the Siege and Battle of Bexar and the Battle of San Jacinto (Matovina 1995). In addition to the headright grant, Cruz was awarded various land grants due to his military service (Kemp 1952) He was married to María Jesusa Peña y Arocha y Cruz who was also awarded a Texas veterans land grant after his death (Kemp 1952). The Cruz property transactions to from 1838 to 1860 are summarized in Table 4-1.

In 1838, John R. Cunningham bought Cruz's headright grant for $500 (BCDR 1838:1:73). John Cunningham died in 1842 with his brother Hugh becoming the estate administrator and beneficiary of his last will and testament (BCDR 1856:O1:289-290; *Civilian and Galveston City Gazette* [*CGCG*] 21 January 1843:3). Hugh Cunningham was given the Cruz property (BCDR 1856:O1:289-290; *CGCG* 21 January 1843:3). After Hugh Cunningham's death in 1847, the grant was sold by his estate to Miles W. Johnson, a merchant in Floyd County, Georgia (BCDR 1856:O1:289-290; U.S. Census Bureau [USCB] 1850, 1860).

Johnson divided and sold interests in the grant to Geunbath Winn (1/4 interest; BCDR 1858:P2:544) and George and John Glenn (1/2 interest; BCDR 1858:R2:96-97) in 1858 and to Richard Simmons (1/4 interest; BCDR 1859:R2:148-149) in 1859. All the buyers resided in Georgia. The Glenns sold their interest to F. Schaeffer of Bexar County in 1858 (BCDR 1858:R2:97-98). A tripartite agreement (BCDR 1860:R1:234-235) between Schaeffer, Winn, and Simmons divided the property into thirds with Winn and Simmons retaining the eastern third and Schaeffer the western two-thirds of the grant. Schaffer sold a portion of his interest to Leaman Field in 1860 (BCDR 1860:S1:227-228). The division of the Cruz grant is shown in W. Friedrich's Sketch of Surveys on Leon and Balcones Creeks near Fredericksburg Road from December 7, 1860 (Figure 4-2; Friedrich 1860).

José Ramon Arocha Grant (Survey No. 171)

In 1837, José Ramon Arocha received his headright grant, which consisted of a league and labor (BCDR 1837:D1:74-76; Pitts 1966:55). No biographical information was found on Arocha. The early property transactions from 1837 to 1856 are summarized in Table 4-2.

In 1837, Ludovic Colquhoun and William H. Steele, who were partners, bought the Arocha grant for $500 (BCDR 1837:D1:74-76). Both Colquhoun and Steele were major land speculators at that time buying 71 grants totaling 267,504 acres (Pitts 1966:55). Steele sold his rights to James Pinckney Henderson in 1838 (BCDR 1838:E1:259-260). During the Texas Revolution, Henderson was commissioned a brigadier general, and later, he served as the first governor of the state of Texas (Elliott 2010). In 1847, Henderson sold his rights to Colquhoun (BCDR 1847:D2:415-419). Colquhoun sold the Arocha grant to Dr. Sterling Neblett of Lunenburg County, Virginia, in 1847 (BCDR 1847:E20:20-24). In 1856, Neblett sold the Arocha grant to James H. Claiborne of Tipton County (BCDR 1856:N2:99-101). Like the Cruz grant, the owners of the Arocha grant were out-of-state land investors and speculators.

Table 4-1. Antonio Cruz Grant (Survey No. 170) 1838-1860

Year	Grantor	Grantee
1838	Board of Land Commissioners	Antonio Cruz
1838	Antonio Cruz	John R. Cunningham of Bexar County
1856	Estate of Hugh M. Cunningham*	Miles W. Johnson of Floyd, Georgia
1858	Miles W. Johnson	Geunbath Winn of Gordan County, Georgia
1858	Miles W. Johnson	George and John Glenn of Georgia
1858	George and John Glenn of Georgia	F.W. Schaeffer of Bexar County
1859	Miles W. Johnson	Richard Simmons of Georgia
1859	F.W. Shaeffer of Texas	Geunbath Winn and Richard S. Simmons of Georgia
1860	F.W. Shaeffer	Leaman Field

*Grant inherited by Hugh Cunningham after the death of his brother John R. Cunningham date unknown but after 1843

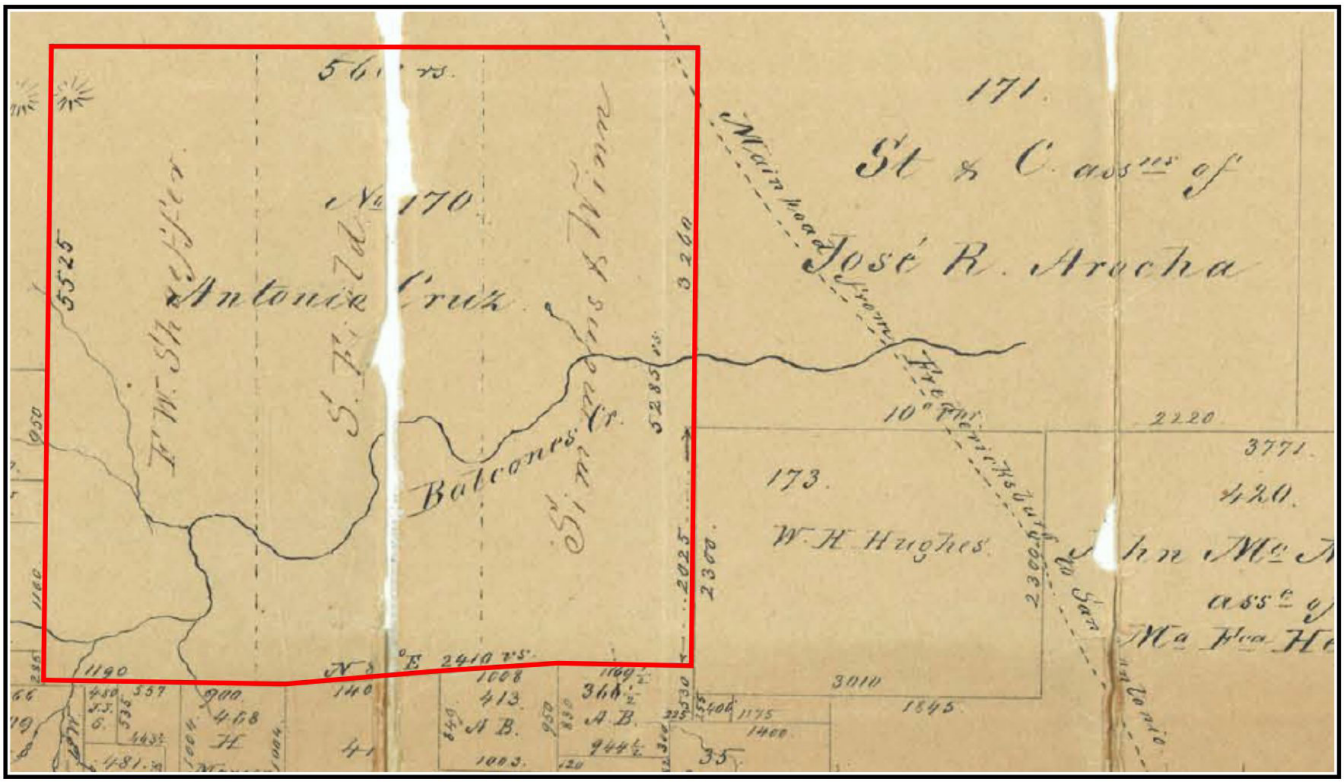

Figure 4-2. The tripartite division of the Cruz Grant in 1860 highlighted in red (Friedrich 1860).

Table 4-2. José Ramon Arocha Grant (Survey No. 171) 1837-1856

Year	Grantor	Grantee
1837	Board of Land Commissioners	José Ramon Arocha
1837	José Ramon Arocha	Ludovic Colquhoun and William H. Steele
1838	William H. Steele	J. Pinckney Henderson
1847	J.P. Henderson	Ludovic Colquhoun
1847	Ludovic and Francis (wife) Colquhoun	Sterling Neblett of Lunenburg County, Virginia
1856	Sterling Neblett	James H. Claiborne of Tipton County, Tennessee

Arocha Grant 1873 to 1901

After the 1856 transaction, there appears to be no transactions on the Arocha grant until 1873, when a civil suit brought by James H. Cooper against James H. Claiborne and Helen Sommerville was filed in Kendall County. The suit initiates the subdivision of the Arocha grant into two sections (BCDR 1871:V3:150-151; BCDR 1873:2843:194-196). Figure 4-3 shows the division of the Arocha grant as surveyed by James L. Truehart (Stewart Title Archive, UTSA Special Collections). There are some errors including its orientation (Balcones Creek runs west to east, not north to south), mislabeling the road from Fredericksburg as the road "from Bandera," and the total acreage exceeds the original grant by 487 acres. However, the image provides a means to clarify lot transactions with Sections 1 and 2 falling in the eastern portion of the APE. In the civil suit, Section 1 was awarded to Cooper, and Section 2 was awarded to Claiborne and Sommerville (BCDR 1871:V3:150-151; BCDR 1873:2843:194-196). Claiborne and Sommerville sold their portion of the Arocha grant (Section 2) to J. J. Busby for $3,000 in gold (BCDR 1873:2843:194-196).

Johann Schlather, a farmer living in Bexar County, bought Section 1 (115 acres) of the Arocha grant from the Estate of J. Cooper in 1880 for $460 (BCDR 1880:16:182-184). Given his occupation and residence, Schlather was likely the first to farm the land at least as an owner (USCB 1880). In 1887, Schlather sold the property for $1,000 to Otto Wehe, who was also a farmer (BCDR 1887:53:35-38; USCB 1900).

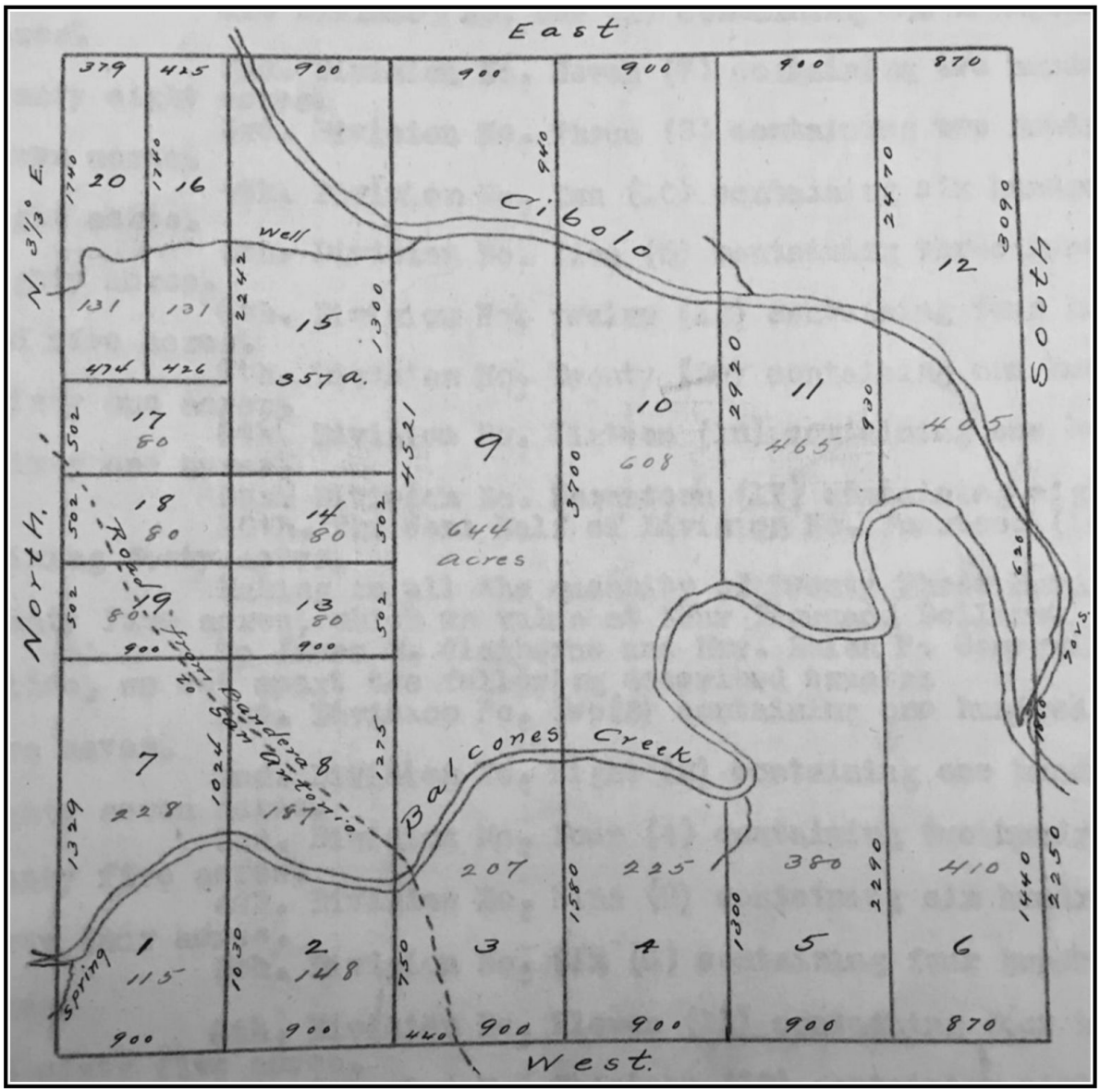

Figure 4-3. Plat map of the 1873 division of the Arocha grant (Stewart Title Archive, UTSA Special Collections).

In 1877, Dr. Benjamin L. and Jennie Knox Hester bought 1,613 acres, which included Section 2, of the Arocha grant for $5,000 (BCDR 1877:5:353). Hester is listed in the 1880 U.S. Census as a physician living in Boerne. J. Hester sold Section 2 to George Calvert, an English immigrant dairy farmer, and John Airton in 1879 for $550 (BCDR 1879:9:267; *San Antonio Light* 22 October 1961:18C; USCB 1880).

The Arocha property transactions following the court's 1873 property division to 1901 are summarized in Table 4-3. Section 1 aligns with the central portion of the APE, and Section 2 comprises the eastern portion of the APE.

Cruz Grant to the 1900s

The Estates of Winn and Simmons sold four lots (Sections 14, 18, and 22) totaling 97 acres for $182 to Mathias Baumann and Fredericke, his wife, in 1875 (BCDR 1875:2:390-393). The 1875 deed to Baumann mentions that Truehart had surveyed and subdivided the Cruz grant at an earlier point in time. Baumann sold the 97 acres to Paul and Dorothea Vogt in 1892 for $1,200 (BCDR 1892:114:173). In 1911, the Vogts sold Edward C. Vogt, their son, and his wife Meta the subdivisions of the Cruz grant (97 acres) for $2300 (BCDR 1911:373:254-255; Table 4-4). In 1900, Edward Vogt was listed as a farmer laborer working on his father's farm, and in 1910, he was listed as a farmer living in Bandera, Texas (USCB 1900, 1910). Table 4-4 provides the lists the transactions for the Cruz grant from 1873 to 1911.

In 1897, John Rullman published a map of Bexar County showing the properties of then-current landowners Vogt, Wehe, and Calvert (see Tables 4-3 and Figure 4-4). While there are some distortions that effect where the APE is plotted, the map shows the development of the area with roads and the town of Van Raub.

Arocha Grant 1901 to circa 1930

Wehe sold Section 1 of the Arocha grant, consisting of 90 acres, to Heinrich and Lina Prause in 1901 for $1,900 (BCDR 1901:199:310-313). In the 1900 census, Prause was listed as a farmer living in Boerne (USCB 1900). Prause sold the property to Rudolph and Ida Scheele in 1905 for $2,800 (BCDR 1905:374:189-190). In 1911, Scheele sold the property to Louis and Katie Stahl for $2,500 (BCDR 1911:366:454-455). The Stahls sold the property to August Stahl, Louis's younger brother (USCB 1910), in 1925 for the sum of $10 less the current crop in the field (BCDR 1925:817:289-290).

In 1909, Airton sold his half of the Arocha grant Section 1 to the Elizabeth Calvert, the wife of George Calvert, $550 (BCDR 1909:304:171-172). Following the death of Elizabeth in 1920 and George in 1924, their son James, a farmer, bought the property, which at that time was 145 acres, from his brothers and sisters for $2,400 in 1929 (BCDR 1929:1087:562-564; USCB 1920). Table 4-5 shows the transactions related to Sections 1 and 2 of the Arocha Grant from 1901 to 1929.

Table 4-3. Arocha Grant (Survey No. 171) 1873-1901

Year	Section	Grantor	Grantee
1873	2	James H. Claiborne and Helen Sommerville of Tennessee	Jesse J. Busby of Shelby County, Tennessee
1877	2	Jesse J. Busby of Shelby County, Tennessee	Dr. Benjamin and Jennie Knox Hester of Kendall County
1879	2	B.L. and Jennie Hester	George Calvert and John Airton of Nottingham, England
1880	1	Estate of J.H. Cooper	(Johann) Adam Schlather of Bexar County
1887	1	Johann and Anna (Sophia) Schlather	Otto Wehe of Bexar County

Table 4-4. Cruz Grant (Survey No. 170) 1873-1911

Year	Grantor	Grantee
1875	Estates of Geunbath Winn and Richard S. Simmons	Mathias and Fredericke Baumann
1892	Mathias and Fredericke Bauman(n) of Kendall	Paul and Dorothea Vogt
1911	Paul and Dorothea Vogt	Edward C. and Meta Vogt

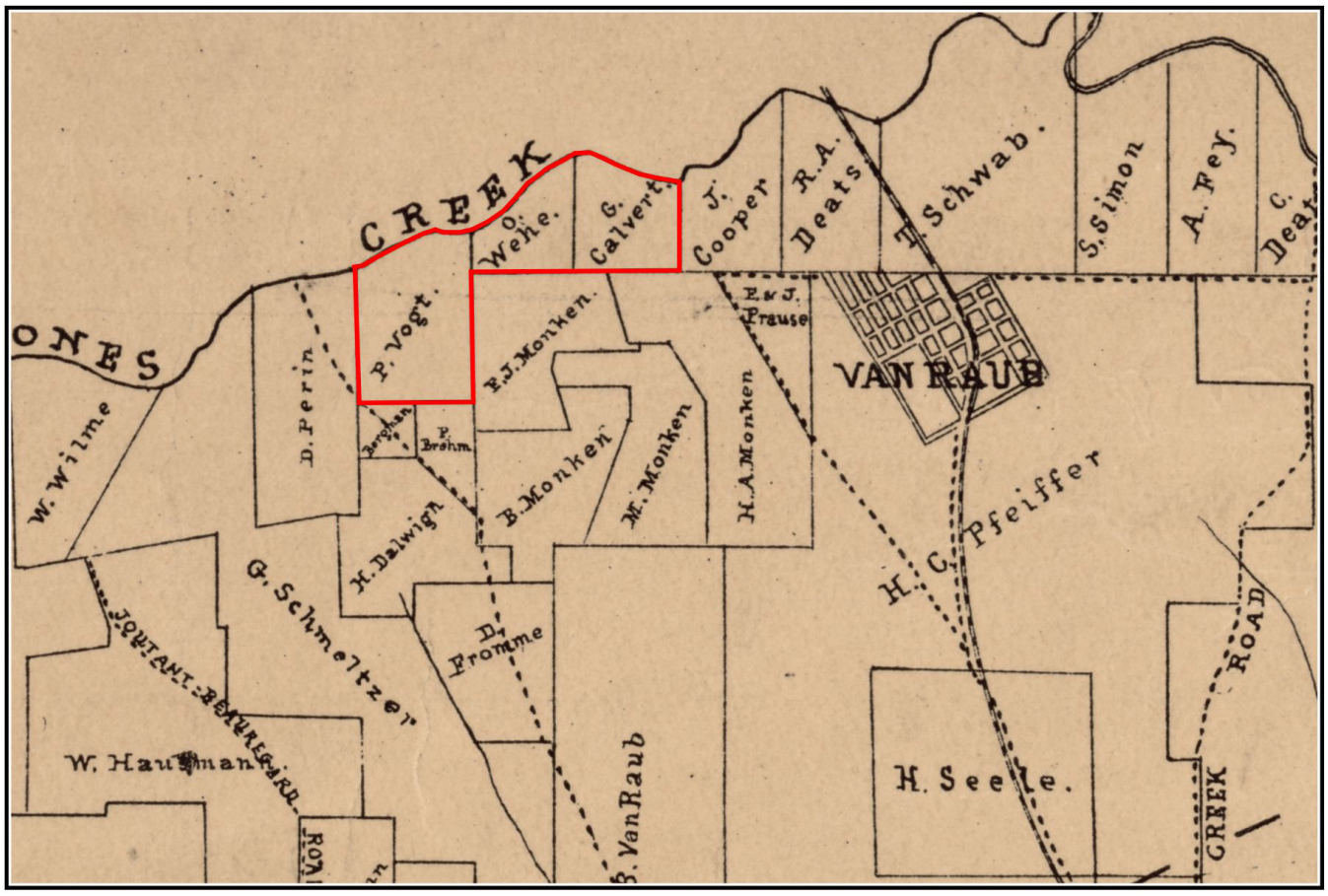

Figure 4-4. Section of the 1897 Rullman map (Library of Congress) showing properties (highlighted in red) that comprise the APE.

Table 4-5. Arocha Grant (Survey No. 171) 1901-1929

Year	Section	Grantor	Grantee
1901	1	Otto and Emma Wehe	Henry and Lina Prause (Pranse) of Kendall County
1905	1	Henry and Lina Prause	Rudolph and Ida Scheele of Kendall County
1909	2	John Airton	Elizabeth Calvert, wife of George Calvert
1911	1	Rudolph and Ida Scheele	Louis F. and Katie Stahl of Kendall County
1925	1	Louis F. and Katie Stahl of Kendall County	August Stahl of Bandera County
1929	2	George and Elizabeth Calvert Estate	James Calvert of Bexar County

Bexar County assessed land value and tax using Stoner System maps, which were based on aerial images and land abstracts (*San Antonio Express News* 7 February 1931:20B). Figure 4-5 is a Stoner System map from the 1930s that shows the majority of the APE belonging to Vogt, Stahl, and Calvert.

The Stoner System aerial shows the central portion of the APE, which would be the property of August Stahl, under cultivation (Figure 4-6). There appears to be a drainage bisecting the area that may have served as a water source. The western section belongs to Vogt. The image also shows the New Fredericksburg Highway, which was constructed in the mid-1930s (Texas Highway Man 2019), bisecting Calvert's property. Over the next 30 years, Calvert would grant easements to various public entities along the road and through his property reflecting the development of this portion of Bexar County (BCDR 1932:1323:337-338; BCDR 1939:1410:278-280; BCDR 1955:3657:443-444; BCDR 1963:4925:48-49; BCDR 1963:5015:89-90).

Members of the Vogt, Stahl, and Calvert families would own their respective properties, which formed the APE, through the mid-to-late twentieth century. Edward and Meta Vogt gifted their five daughters their property in 1947 (BCDR 1947:2395:208-209). James Calvert farmed and owned the property until his death in 1964 (BCDR 1964:5191:597-601). August Stahl owned and farmed the property until his death in 1979 (BCDR 1979:1786:769-773).

Evolution of APE Land Use

The Republic of Texas and later State of Texas used its vast land resources as capital for compensation. In turn, speculators often bought the land from the original grantees. While land speculators were disparaged for profiteering during their time and subsequently for taking advantage of illiterate and impoverished citizens, they also served a function that contributed to the economic development of the Republic (Pitts 1966:50). Pitts states that the speculators served in the capacity as land developers initiating surveys of tracts in south, central, and west Texas and also provided funds in the fund strapped Republic economy (Pitts 1966:50).

Following statehood and the Treaty of Guadalupe Hidalgo, there was a period of relative economic security in Texas initiating land speculations from outside the state. Although given the amount of available land for distribution, the price of land remained relatively low (Miller 1972). However, the proximity to San Antonio and the developing communities of Fredericksburg, New Braunfels, and Boerne would have

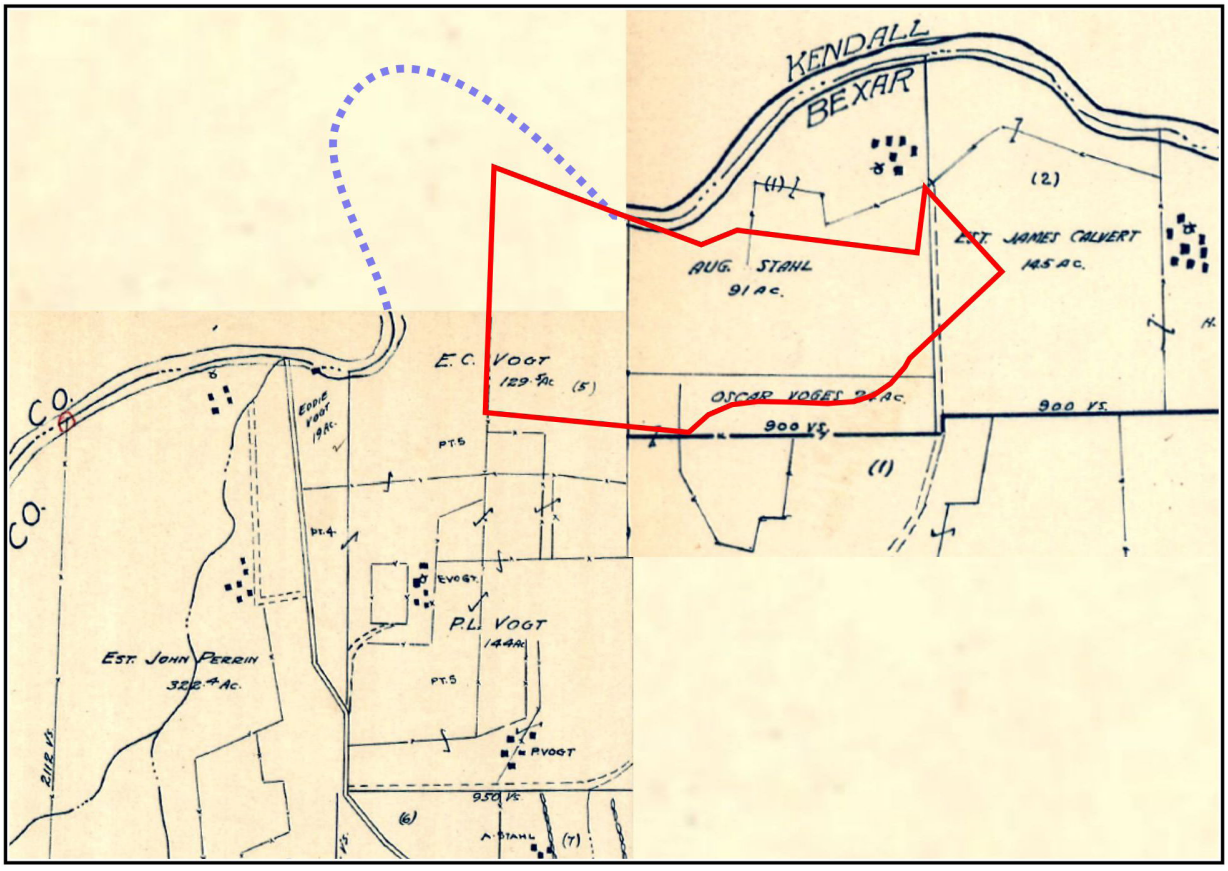

Figure 4-5. The Stoner System map showing property ownership in 1930s. The APE is marked in red with the meander of Balcones Creek marked by the blue-dashed line.

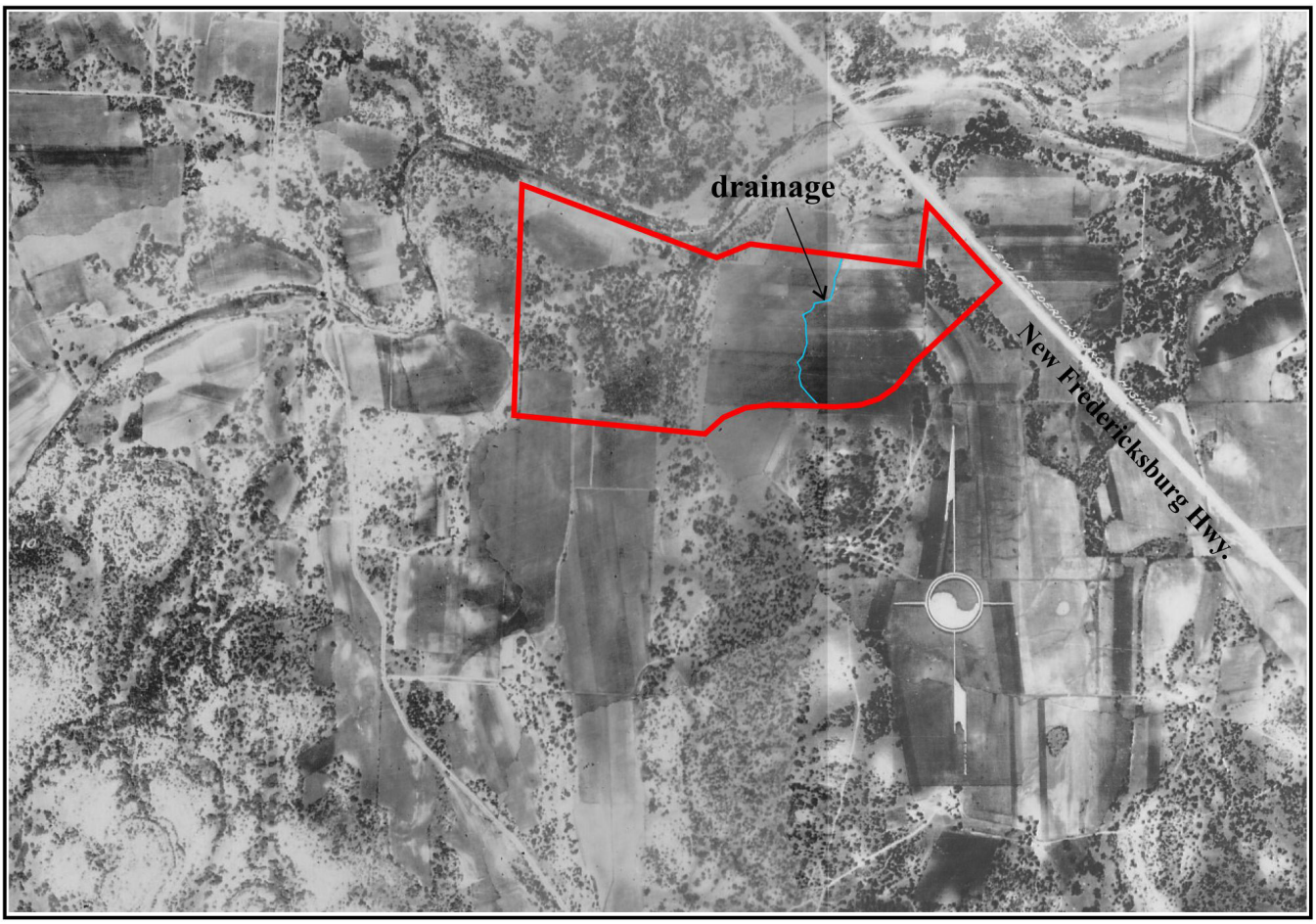

Figure 4-6. The Stoner System aerial showing land use in 1930s. The APE is marked in red with a drainage (in blue) in the central portion of it. The image also shows the New Fredericksburg Highway.

attracted interested parties to the land located within the APE. There is no documentation that the land of either grant was occupied or farmed during the Republic or Early Statehood periods; therefore, both were essentially investment properties as shown by the out-of-state owners.

Following Reconstruction, the grants that formed the APE became working farms. This is due in part to immigrants who settled the sparsely populated region outside of San Antonio in the mid-to-late nineteenth century. Germans comprise the largest group of European immigrants in Bexar County (Dase et al. 2012), and primarily, they were the farmers who settled this area of the county (Brookings 2013; Dase et al. 2012).

Coupled to German immigration is the beginning of modern agricultural production in Texas. This period is marked by the arrival of railroad service in San Antonio in 1877. The immediate benefit of rail service was the ability to deliver food items to the major ports of Galveston and Indianola (Dase et al. 2012). In addition to the rail, agricultural innovations, such as the use of commercial fertilizer, enhanced crop productivity, and the mechanization of planting and harvesting allowed farmers produce more crops. The farms that formed the APE in the late nineteenth and early twentieth century were family owned and operated, and generally, the farms were held and sold within that social network. The lands of the APE remained family owned through the 1950s.

Chapter 5: Field and Laboratory Methods

This chapter presents the field and laboratory methods used during this investigation. Prior to the start of the project, in consultation with AEI and the THC, a scope of work was prepared to define procedures associated with the archaeological investigations and historical research work. The scope of work forms the basis of what is presented in this chapter.

Proposed Field Methods

Based on current land use and the environmental setting of the APE, CAR initially proposed a survey strategy that was similar to one used on a previous project (Mauldin et al. 2018). Portions of the ACCD-NC property had been used for agricultural purposes at least since the early 1900s, and it appeared that half of it had been plowed recently. CAR staff conducted a site visit and used Google aerial imagery to divide the project area into a three portions (western, central, and eastern) based on two different land use classifications: 1) cultivated fields and former pastures and 2) fallow fields (Figure 5-1).

Unfortunately, by the time the project began, the plowed fields were overgrown preventing the intensive pedestrian survey slated for those portions of the APE. The survey strategy was revised to substitute an increase in the number of shovel tests in all three portions in place of the intensive pedestrian survey.

CAR proposed this change of strategy to THC and received its approval (see Appendix A for a summary of relevant correspondence). THC standards for a project area greater the 101 acres and less than 200 acres require, at a minimum, one shovel test for every three acres, or approximately 47 shovel tests for a 145 acre APE. Prior to fieldwork, CAR archaeologists systematically plotted the proposed shovel test locations spaced at approximately 90 m intervals, which resulted in 81 proposed shovel tests (Figure 5-2). Due to the impact of TxDOT-sponsored facilities in the northeastern part of the APE, the eight shovel tests slated for that area were not excavated, reducing the total number of proposed shovel tests to 73.

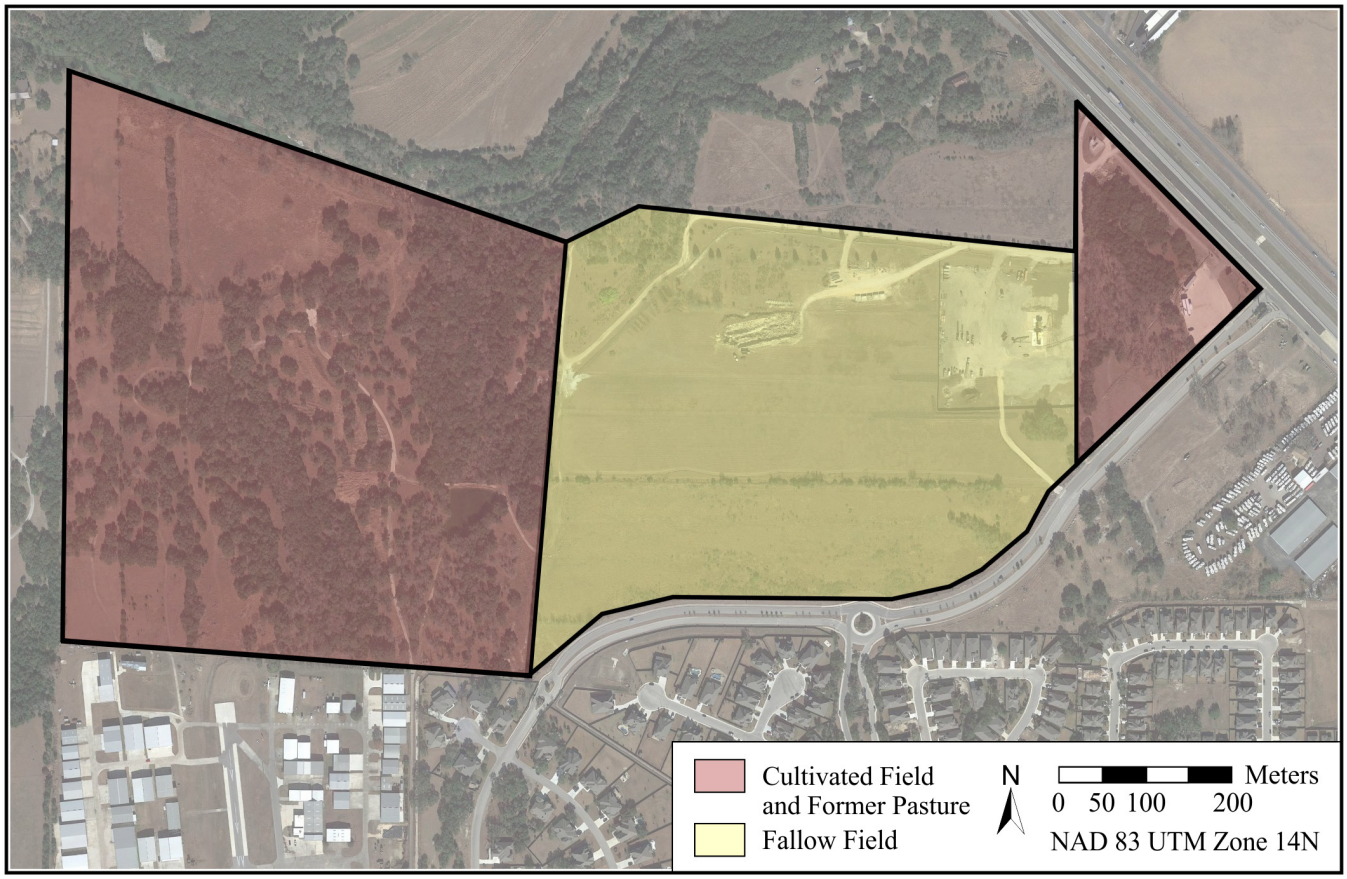

Figure 5-1. The APE divided into three portions (western, central, and eastern) based on past and current land use.

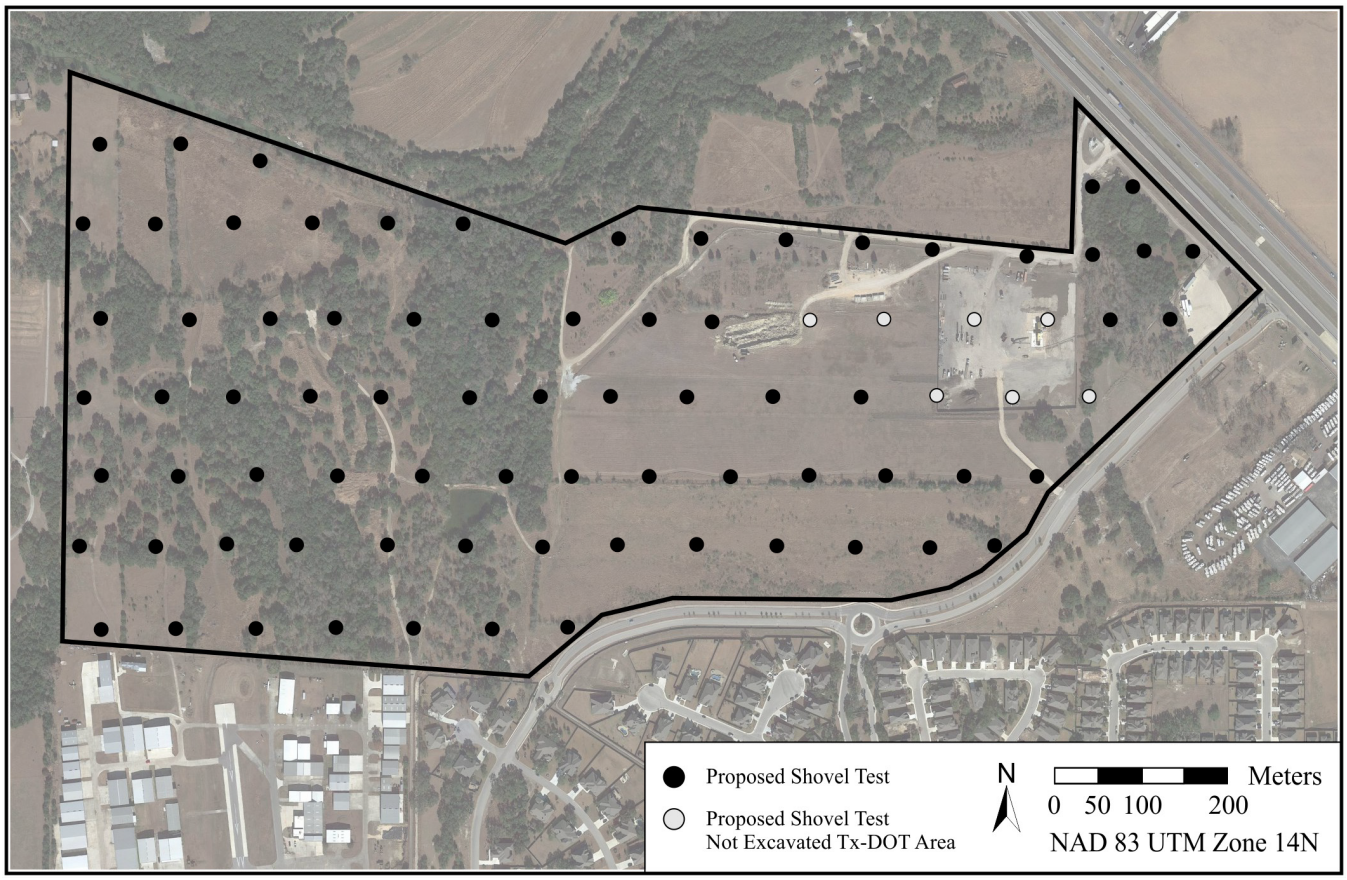

Figure 5-2. Proposed distribution of shovel tests within the ACCD-NC APE. Shovel tests shown in gray were not excavated because that area of the APE had been impacted by TxDOT-sponsored facilities.

Shovel Testing

In total, 113 shovel tests were excavated during the survey (n=79) and subsequent site delineation phase (n=34). Shovel tests were 30 cm in diameter and excavated to a maximum depth of 60 cm below the surface (cmbs). Shovel tests were terminated prior to 60 cmbs if large rock(s), extensive disturbances, or other impediments were encountered. Shovel tests were excavated in arbitrary 10 cm levels, and all soil matrixes were screened through one-quarter inch hardware cloth. All artifacts found in the shovel test were collected, tagged, and returned to the CAR laboratory for further analysis. For each shovel test, archaeologists completed a standard shovel test form, and the location and attribute data were recorded on the Trimble Juno 3B.

Trenching

CAR also proposed trenching as a method to uncover deeply buried archaeological deposits. Following shovel testing, CAR excavated 12 trenches using a backhoe equipped with a flat bucket. The trenching was monitored and documented by the Project Archaeologist and a Field Technician. Trench locations were determined by soil depth and positive shovel test locations. The dimensions were generally 4-5 m long, 0.8-1 m wide, and 1-1.5 m deep. All trench walls and backfill were examined for artifacts. Photographs were taken of each trench wall, and measured drawings of a representative wall of each trench were created to document soil stratigraphy and the presence of artifacts and/or features.

Documentation, Collection Policy, and Site Recording

During fieldwork, the Project Archaeologist maintained a daily field log. In addition, all field activities and discoveries were documented and supported by digital data. This included photographs, where appropriate, and GPS recordings.

CAR archaeologists collected all artifacts recovered from shovel tests. In addition, temporal diagnostics found on the surface were recorded either within the context of a site or as isolated finds. Their locations were recorded with GPS.

For the purposes of this survey, an archaeological site was defined as containing cultural materials or features that are at least 50 years in age or older. More specifically, a site was

defined as: (1) five or more surface artifacts within a 15 m radius, a minimum density of at roughly 1 artifact per 141 m^2; (2) a single cultural feature, such as a hearth, observed on the surface or exposed in shovel testing; (3) a positive shovel test containing at least three artifacts within a given 10 cm level; (4) a positive shovel test containing at least five total artifacts; or (5) two positive shovel tests located within 30 m of each other.

If the minimum site criteria were met, shovel tests were excavated at close intervals to define the extent and distribution of archaeological material. Per THC standards, a minimum of six shovel tests are necessary to define a site's extent; however, this minimum was modified based on soil depth, surface visibility, location of previously excavated shovel tests, and proximity of one site to another. The extent of positive shovel tests was used to define each site boundary. Each site's boundary was plotted on an aerial photograph and recorded using Esri ArcGIS software. Digital photographs were taken of each site, and notes were taken to describe landform, current vegetation, and surface visibility. Following completion of the fieldwork, CAR submitted Texas Archeological Sites Atlas forms for all newly discovered archaeological sites.

State Antiquities Landmark and National Register Eligibility Criteria

Upon defining an archaeological site, CAR made eligibility recommendations as to whether the site warrants protection and/or further study or no protection and/or study as determined by its eligibility as a SAL)and/or its eligibility for inclusion to the NRHP.

Guidance for designation as a SAL is found in the Rules of Practice and Procedure for the Antiquities Code of Texas, Texas Administrative Code, Title 13, Part 2, Chapter 26, Subchapter C, Rule §26.10 for archaeological sites. It states that the archaeological site must meet one or more of the following criteria:

1) the site has the potential to contribute to a better understanding of the prehistory and/or history of Texas by the addition of new and important information;

2) the site's archeological deposits and the artifacts within the site are preserved and intact, thereby supporting the research potential or preservation interests of the site;

3) the site possesses unique or rare attributes concerning Texas prehistory and/or history;

4) the study of the site offers the opportunity to test theories and methods of preservation, thereby contributing to new scientific knowledge; and/or

5) there is a high likelihood that vandalism and relic collecting has occurred or could occur, and official landmark designation is needed to ensure maximum legal protection, or alternatively, further investigations are needed to mitigate the effects of vandalism and relic collecting when the site cannot be protected.

The National Park Service (NPS) lists four criteria, A through D, to assess the eligibility of a historic property to the NRHP as required under Section 106 of the National Historic Preservation (NHPA) Act 1966, as amended. While there are no federal funds associated with the project, these criteria are:

A) properties that are associated with events that have made a significant contribution to the broad patterns of our history;

B) properties that are associated with the lives of persons significant in our past;

C) properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose component may lack individual distinction;

D) properties that have yielded, or may be likely to yield, information important to prehistory or history [36 CFR§60].

Pertinent to this report are criteria A and D. In addition, a property must have integrity defined by location, design, setting, materials, workmanship, feeling, and association (NPS 2002).

Laboratory Methods

All cultural materials and records obtained and/or generated during the project were prepared in accordance with federal regulation 36 CFR part 79 and THC requirements for State Held-in-Trust collections. Collected artifacts were tagged with an individual field sack number along with a description, quantity, feature number (if applicable), and location. The Project Archaeologist checked all artifacts in the field before turning them over to the Laboratory Director for processing. Artifacts were washed, air-dried, and stored in separate bags by provenience. All recovered artifacts were analyzed, and their pertinent information (i.e., provenience, artifact type, metrics, etc.) were entered into an Excel database.

Prior to final curation, in accordance with Chapter 26.27(g)(2) of the Antiquities Code of Texas, CAR requested permission from the THC to discard artifact classes that have no remaining scientific or historical value. These artifacts

may include, but are not limited to, unidentified metal, non-diagnostic glass, plastics, construction material, and non-feature burned rock. CAR will curate all records related to the discarded material and the discard procedure.

All remaining artifacts were labeled with laser printed tags containing the artifact's site number or its accession number (if it was not within a site context), and a catalog number was placed on the artifact over a clear coat of acrylic and covered by another acrylic coat. Artifacts were placed in individual 4 mil zip-locking, archival-quality bags with a laser printed label containing provenience information and a corresponding lot number. Artifacts were separated by class and stored in acid-free boxes that were labeled with standard tags. Any materials needing extra support were double-bagged, and acid-free labels were placed in all artifact bags. Each laser printed label contains provenience information and a corresponding lot number. If necessary, these artifacts were separated by class and stored in acid-free boxes that were labeled with standard tags.

All field notes, forms, photographs, and drawings were placed in labeled archival folders. Digital photographs were printed on acid-free paper and placed in archival-quality page protectors to prevent accidental smearing due to moisture. Finally, following completion of the project, all recovered artifacts and project-related materials, including the final report, will be permanently stored at the CAR curation facility.

Chapter 6: Results of Archaeological Testing

CAR archaeologists conducted an intensive archaeological survey with shovel testing and trenching on 145 acres (0.58 km^2) within the ACCD-NC APE. As a result of this work, CAR staff recorded nine new archaeological sites in the APE that will be discussed in Chapter 7. This chapter presents a summary of shovel testing and trenching. In addition, CAR recorded the locations of 14 isolated surface finds during survey and trenching. These items are summarized at the close of this chapter.

Shovel Testing

Figure 6-1 shows the locations of the 113 shovel tests excavated during the project. Information (terminal depth, artifact recovery, and soil type) for the shovel tests can be found in Appendix B. Overall, only nine (7.9 percent) of the 113 shovel tests were positive for cultural material. The positive shovel tests were all located in the western portion of the APE.

CAR collected 52 artifacts or samples from shovel tests (STs). Table 6-1 summarizes the type and number of findings from shovel tests. Prehistoric artifacts were found in five shovel tests. Artifacts from these shovel tests included debitage (n=3), a burned rock fragment, and one biface fragment. Historical artifacts were found in only one shovel test (ST 52). Artifacts from ST 52 included glass, melted glass, ceramics, a bedspring, a metal furniture caster, and slag.

The depth of the different soil types had a strong influence on the depth of shovel tests with less than half of the shovel tests (51 or 45.13 percent) excavated to the target depth of 60 cm (Figure 6-2). The shovel tests reaching 60 cmbs were primarily located in the Crawford clay soil group (Ca) in the central portion of the APE. In addition, shovel tests in the Lewisville silty clay (LvA) and Venus loam (VaB) soil groups along the terrace of Balcones Creek reached their targeted depth. The shovel tests in the Crawford-Bexar stony soils (Cb) group, a shallow and rocky soil, were consistently

Redacted Image

Figure 6-1. A recent aerial image (Google Earth 2019) showing the distribution of shovel tests in the ACCD-NC APE. Shovel tests shown in gray were not excavated because that area of the APE had been impacted by TxDOT-sponsored facilities.

Table 6-1. Summary of Artifacts Found in Shovel Tests

Artifact Type	Number	Description
Lithic Tools	1	biface
Debitage	3	
Historical Ceramics	1	European semi-porcelain rim
Household Items	2	bedspring (1); furniture caster (1)
Construction Material	3	tile
Glass (clear)	2	
Radiocarbon Samples	3	
Fauna	2	total weight 2.4 g
Burned/Fire-Cracked Rock	31	total weight 341.1 g
Burned Clay	1	total weight 5.5 g
Slag	3	

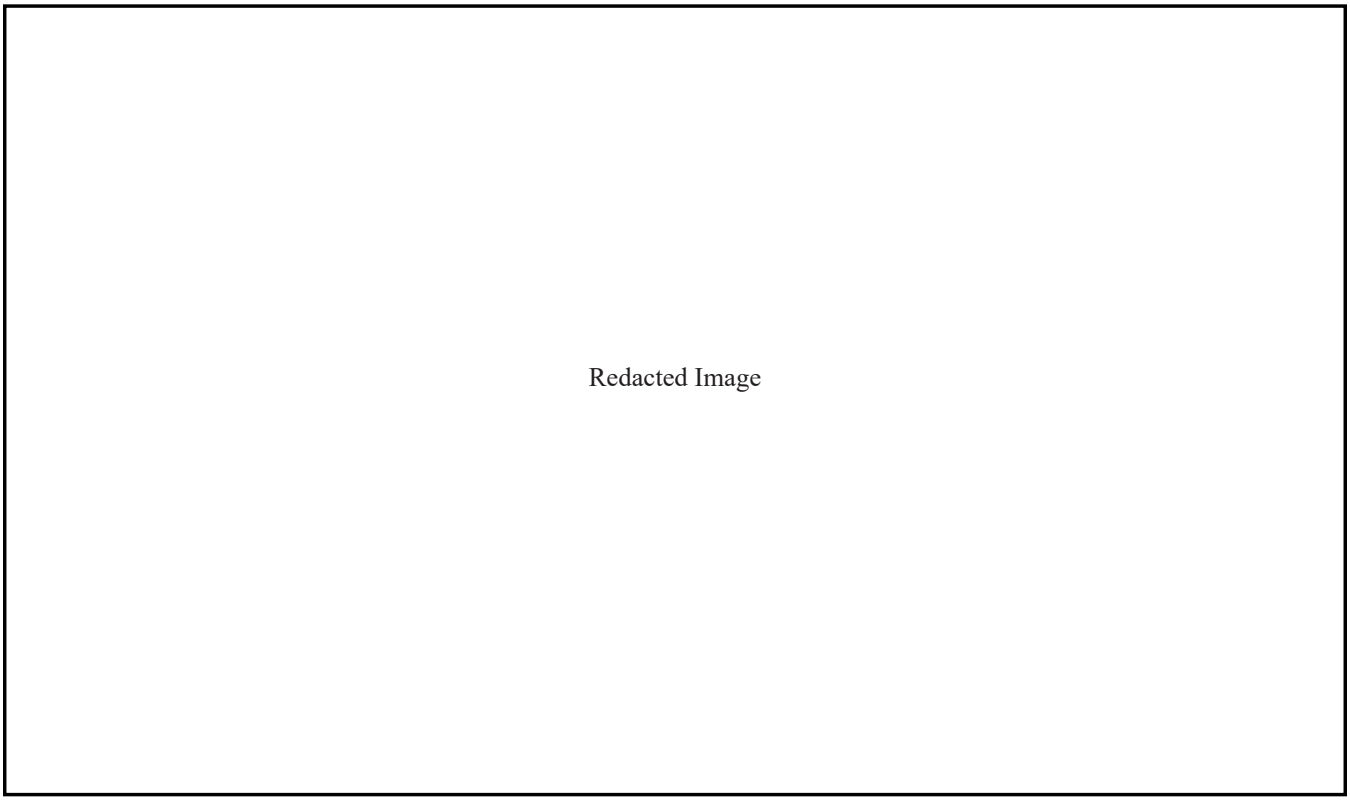

Figure 6-2. Map of shovel tests marked by depth overlain on a soil map of the APE on an Esri topographic map with 1 m contours. Shovel tests shown in gray were not excavated because that area of the APE had been impacted by TxDOT-sponsored facilities.

less than 60 cmbs with an average depth of just 30 cmbs. Figure 6-3 shows selected examples of shovel tests excavated in these three areas.

Trenching

CAR excavated 12 trenches from January 16-17, 2019. The distribution of these trenches is shown in Figure 6-4. Trenches 1 and 2 were placed in the central portion of the APE within the Crawford clay soils series (Ca). A burrow pit excavated for the TxDOT-related construction in the central portion of the APE was also examined for artifacts and features. The remaining 10 trenches were placed in the northwest corner of the APE on the floodplain of Balcones Creek. The trench locations placed within the of Balcones Creek floodplain had a greater likelihood of finding intact subsurface features. The soils in this area are classified as Lewisville silty clay, 0 to 1

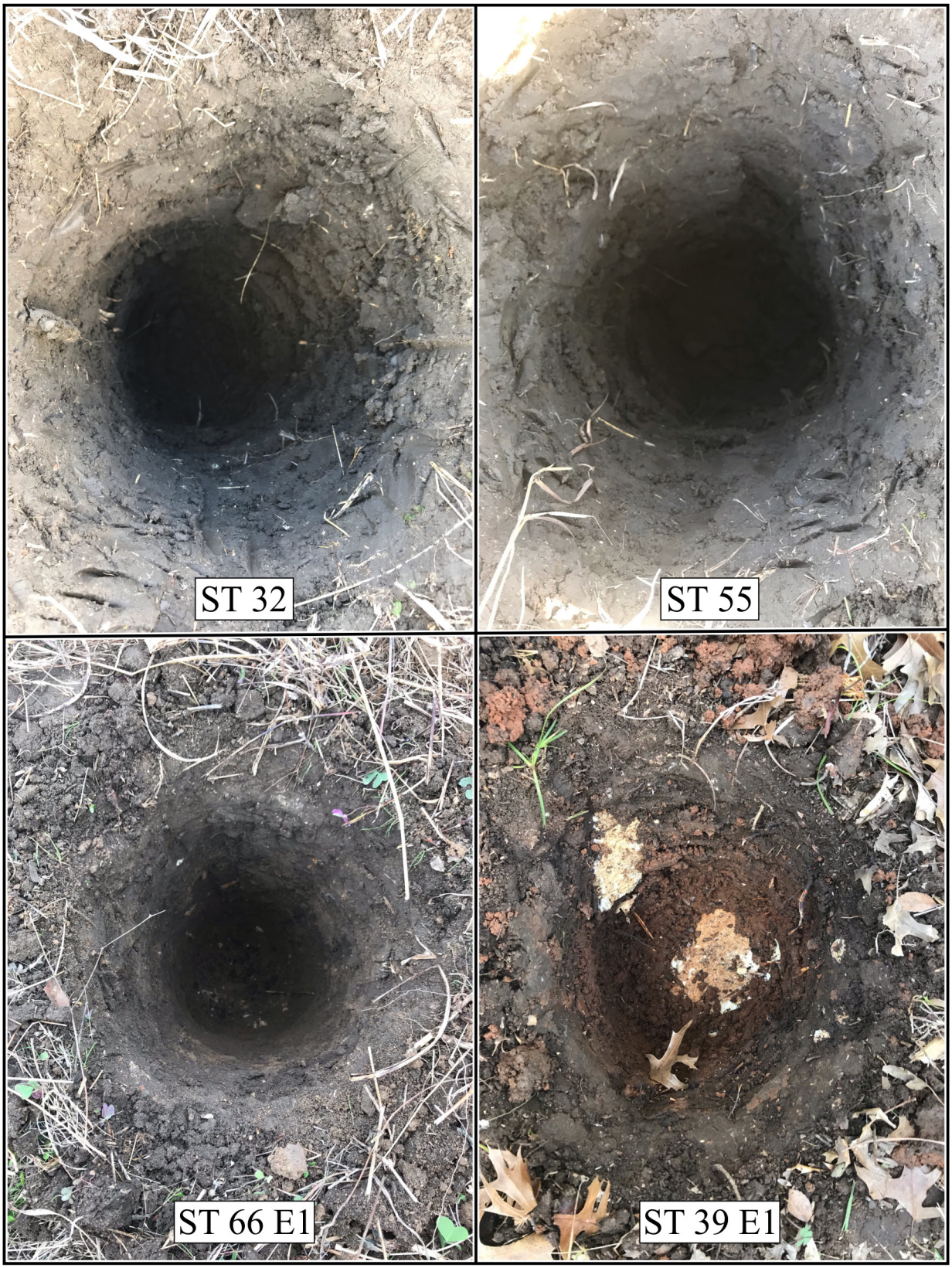

Figure 6-3. Selected examples of shovel tests from the three major soil groups. Shovel Tests 32 and 55 were excavated to 60 cmbs in Crawford clay soils. Shovel Test 66 E1was excavated to 60 cmbs in Venus loam soils. Shovel Test 39 E1 was excavated to only 23 cmbs due to shallow bedrock of the Crawford-Bexar stony soils group.

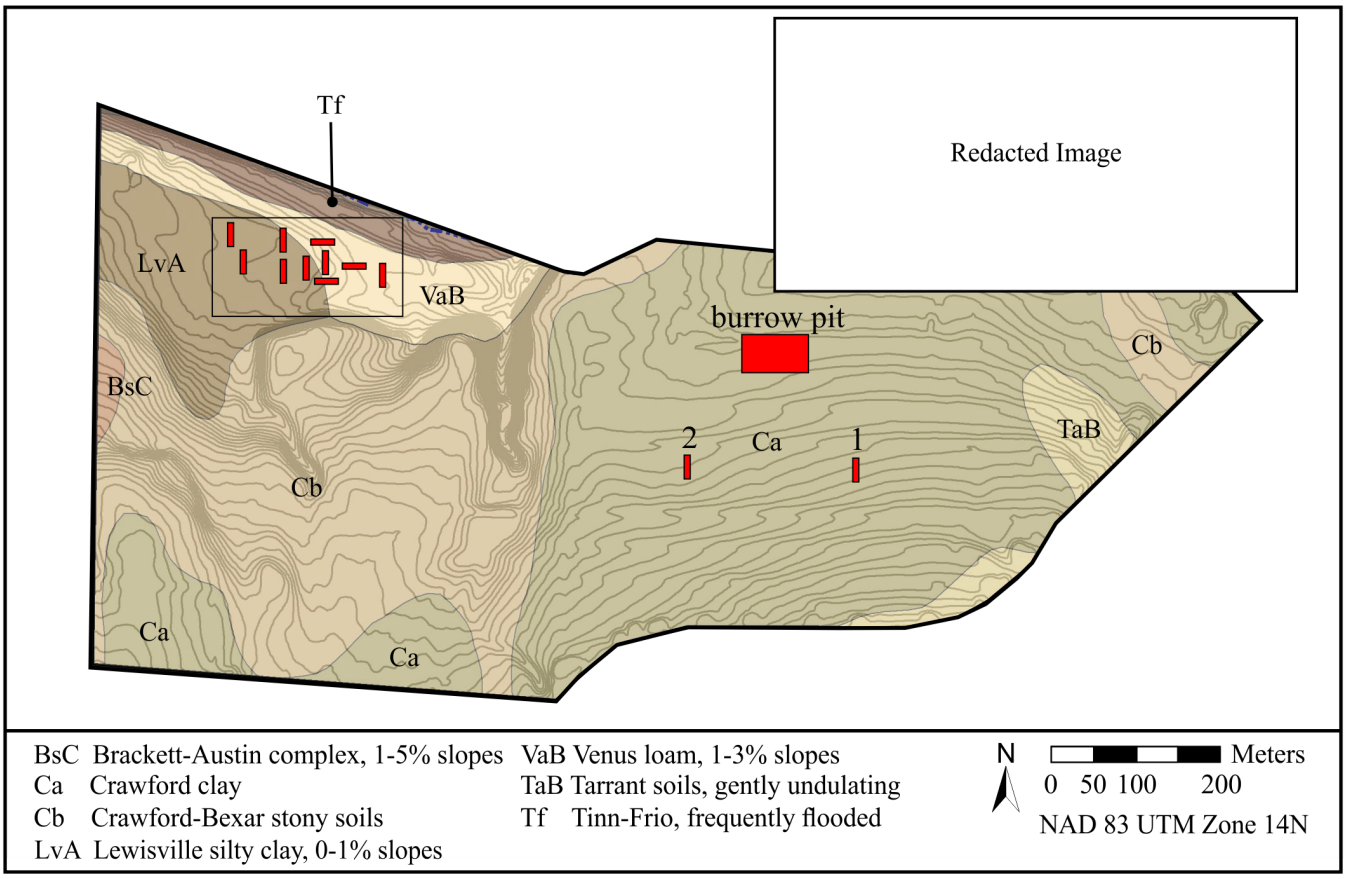

Figure 6-4. Map of trenches overlain on a soil map of the APE. Inset shows trench distribution in the northwest portion of the APE.

percent slopes (LvA), and Venus loam, 1 to 3 percent slopes (VaB). No trenches were excavated in the Crawford-Bexar stony soils (Cb), due to the shallow nature of this soil.

Trenches 1 and 2

Trench 1 was oriented north to south, 4 m in length, 80 cm in width, and 90 cm in depth. Trench 2 was oriented north to south, 4.5 m in length, 80 cm in width, and 95 cm in depth. The soils of Trenches 1 and 2 were similar in stratigraphy with two distinct horizons. The upper 0-65 cmbs is a dark grayish brown (10YR 4/2) silty clay, and the lower 60-90 cmbs is a yellowish brown (10YR 5/6) sandy clay with gravels (Figure 6-5). The burrow pit exhibited similar soil stratigraphy as the trenches and terminated with limestone bedrock (Figure 6-6). No artifacts or features were observed in either the trenches or the burrow pit.

Trench 3

Trench 3 was oriented north to south, 13 m in length, 80 cm in width, and varied from 40 to 70 cm in depth (Figure 6-7). Two burned rock features (Features 1 and 2) were found on the trench floor. No further excavation was conducted below the level of either feature. In general, three stratigraphic horizons were delineated within the trench profile. Horizon 1 is a very dark grayish (10YR 3/3) sandy loam extending to a depth of 20 cmbs. There is a gradual boundary transition to Horizon 2 (20-40 cmbs), a very dark brown to very dark grayish brown (10YR 2/2 to 10YR 3/2). It is followed by a gradual transition to Horizon 3, a dark yellowish brown (10YR4/4 to 4/6) clay loam beginning at 40 cmbs. A charcoal sample was collected from Feature 2.

Trench 4

Trench 4 was oriented north to south, 6 m in length, 80 cm in width, and 120 cm in depth. It is 50 m west of Trench 3. Trench 4 contained four stratigraphic horizons (Figure 6-8). The upper 30 cm is a very dark grayish brown (10YR 3/2) silty clay loam. There is an abrupt transition to a mottled brown (10YR 4/3) to dark yellowish brown (10YR 4/4) silty clay at 30 cmbs. At 60-70 cmbs, there is a gradual boundary change to a yellowish brown (10YR 5/6) silty clay with calcium carbonate nodules. At 110 cmbs, there is a clear break to a yellow brown silty clay with 10 percent gravels. The trench was terminated at this horizon. No artifacts or features were found in the trench.

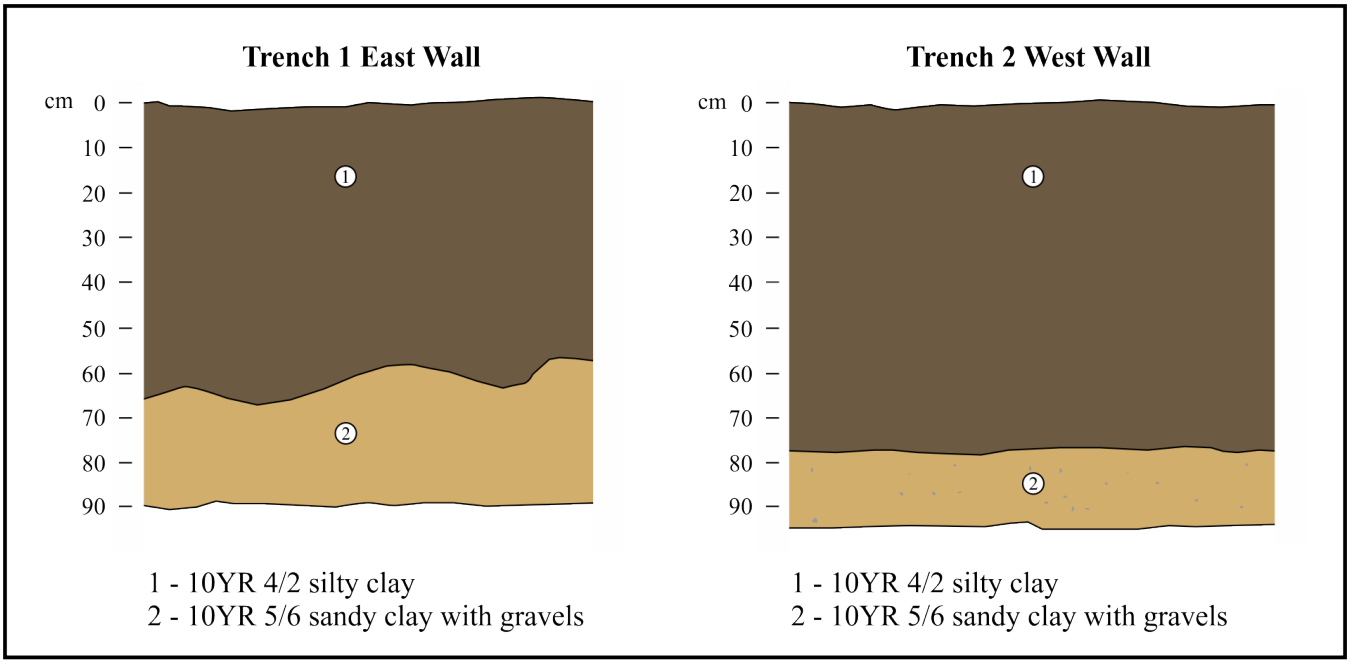

Figure 6-5. Wall profiles of Trenches 1 and 2.

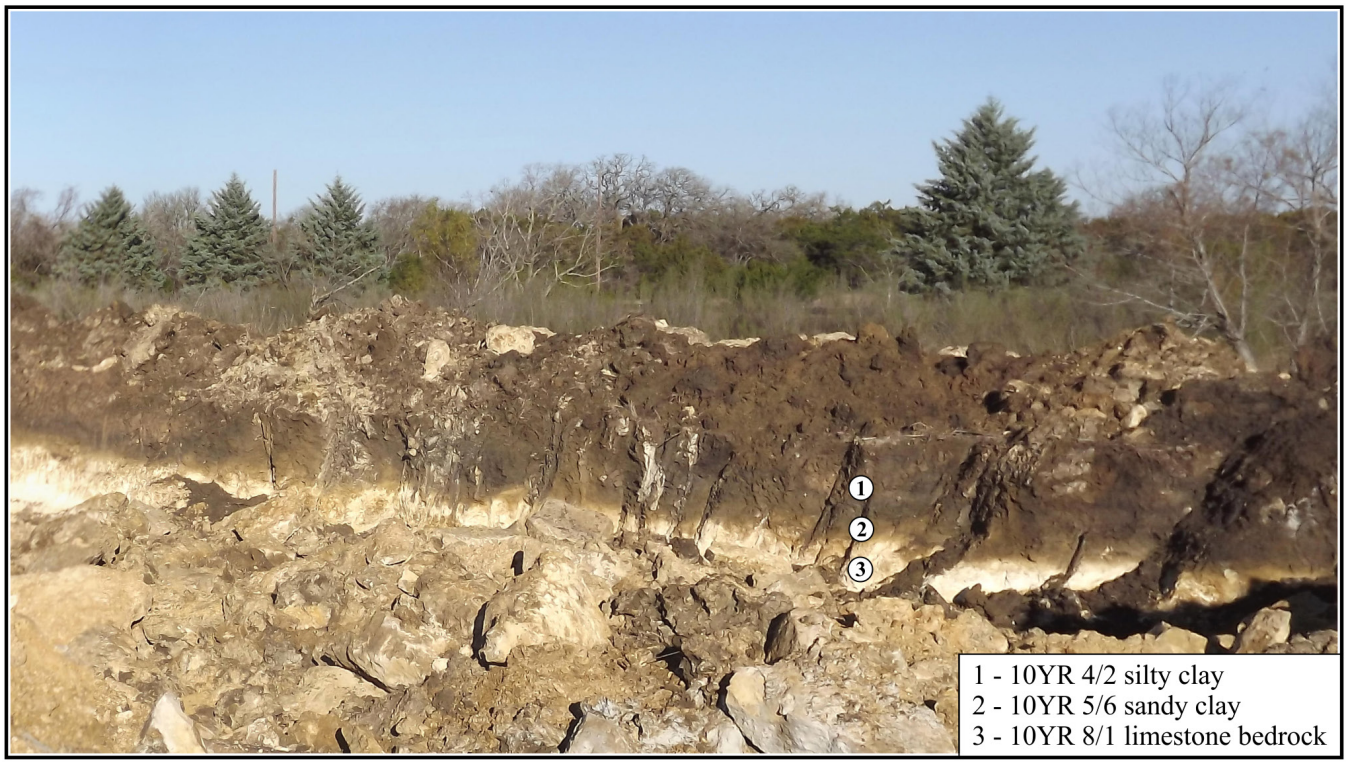

Figure 6-6. North wall profile of burrow pit within the central portion of the APE.

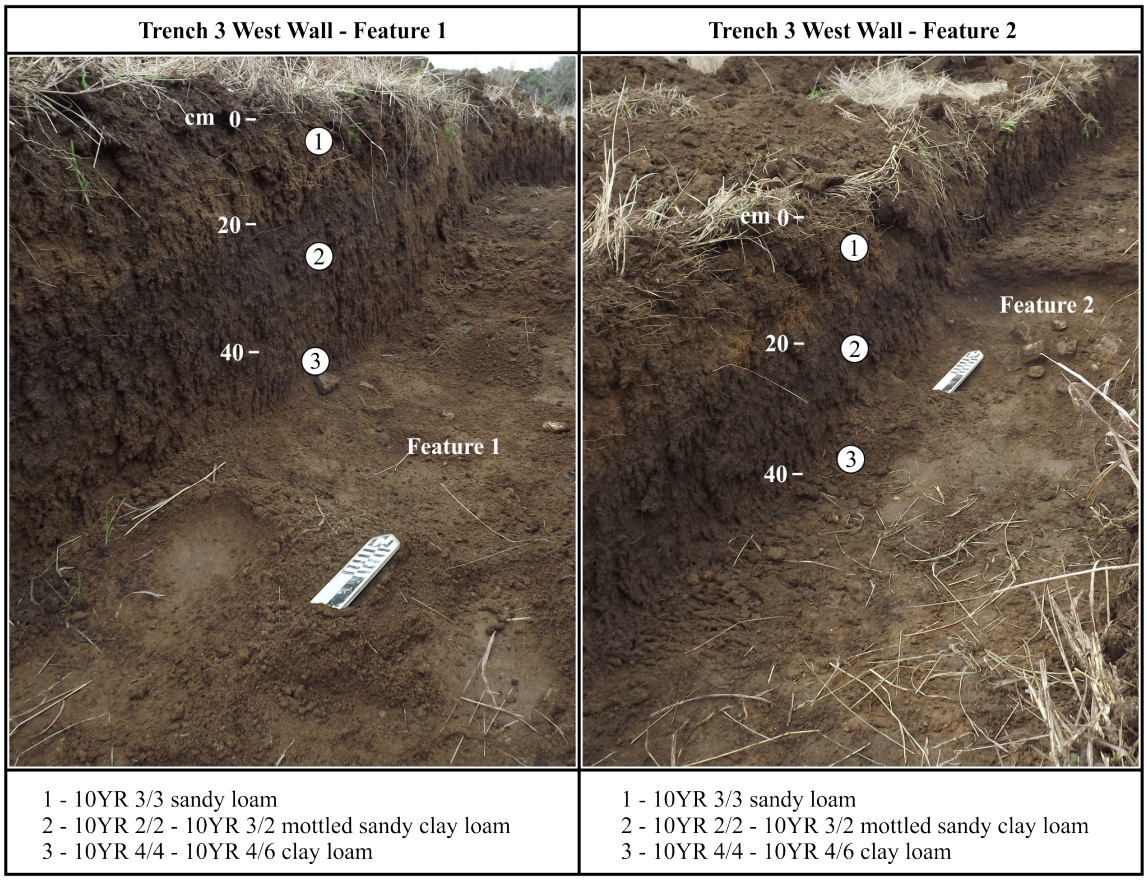

Figure 6-7. Wall profiles of Trench 3 relative to Features 1 and 2.

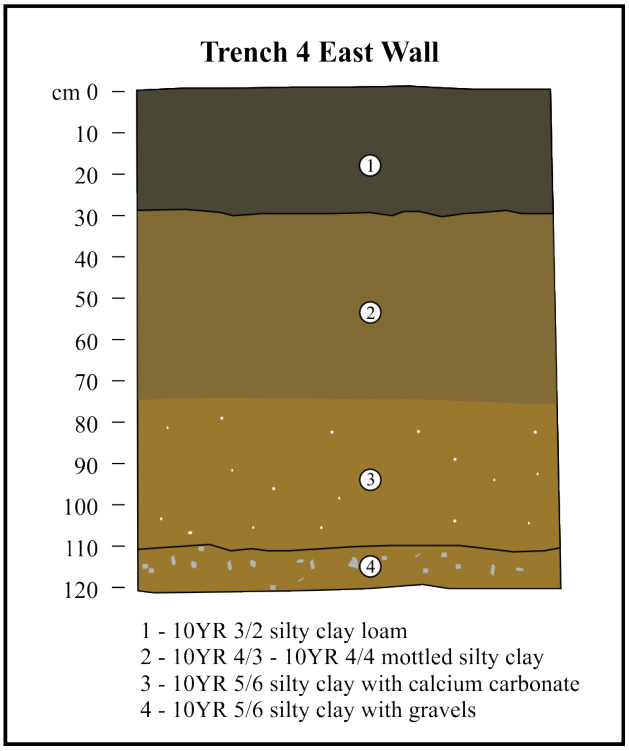

Figure 6-8. Wall profile of Trench 4.

Trench 5

Trench 5 was oriented north to south, 5 m in length, 80 cm in width, and 115 cm in depth. It is 28 m to the west of Trench 4. It contains three stratigraphic horizons (Figure 6-9). The first horizon extends to 20-25 cmbs and is a dark grayish brown (10YR 4/2) silty clay loam. There is gradual change to a dark yellowish brown (10YR 4/4) silty clay. The third horizon occurs at approximately 110 cmbs, when there is an abrupt change to a yellowish brown (10YR 5/8) silty clay with gravels. No artifacts or features were found in the trench.

Trench 6

Trench 6 was oriented north to south, 5 m in length, 80 cm in width, and 70 cm in depth. It is 40 m to the north of Trench 5 and 60 m south of Balcones Creek. It contains three stratigraphic horizons (Figure 6-10). The first horizon is a very dark grayish brown silty clay (10YR 3/2) extending to a depth of 22-25 cmbs. It is followed by a silty dark yellowish brown (10YR 4/4) silty sandy clay to 70 cmbs with 30 percent gravels. The third horizon is the trench floor with a yellowish brown (10YR 5/6) silty sand with 75 percent gravels. No artifacts or features were found in the trench.

Trench 7

Trench 7 was oriented at north to south, 5.5 m in length, 80 cm in width, and 100 cm in depth. It is 45 m to the west of Trench 5. It contains four stratigraphic horizons (Figure 6-11). Horizon 1, a dark gray (10YR 4/1) silty clay loam, extends to a depth 25 cmbs. There is gradual boundary transition to brown (10YR 5/3) silty clay loam followed by a gradual transition to yellowish brown (10YR 5/8) clay with 1 percent gravels and 5 percent calcium carbonate nodules. There is clear transition to the final horizon, a yellowish brown (10YR 5/8) clay with 75 percent gravels. No artifacts or features were found in the trench.

Trench 8

Trench 8 was oriented north to south, 4 m in length, 80 cm in width, and 150 cm in depth. It is 27 m to the northwest of Trench 7 and 90 m south of Balcones Creek. It contains four stratigraphic horizons (Figure 6-12). The upper 25-28 cm is a very dark grayish brown (10YR 2/2) clay loam. There is a diffuse transition to a dark brown (10YR 3/3) sandy clay that continues to 58-65 cmbs followed by a gradual transition to dark yellowish brown (10YR 5/6) sandy clay. The trench terminates at 150 cmbs with an alluvial sandy clay with gravel layer. No artifacts or features were found in the trench.

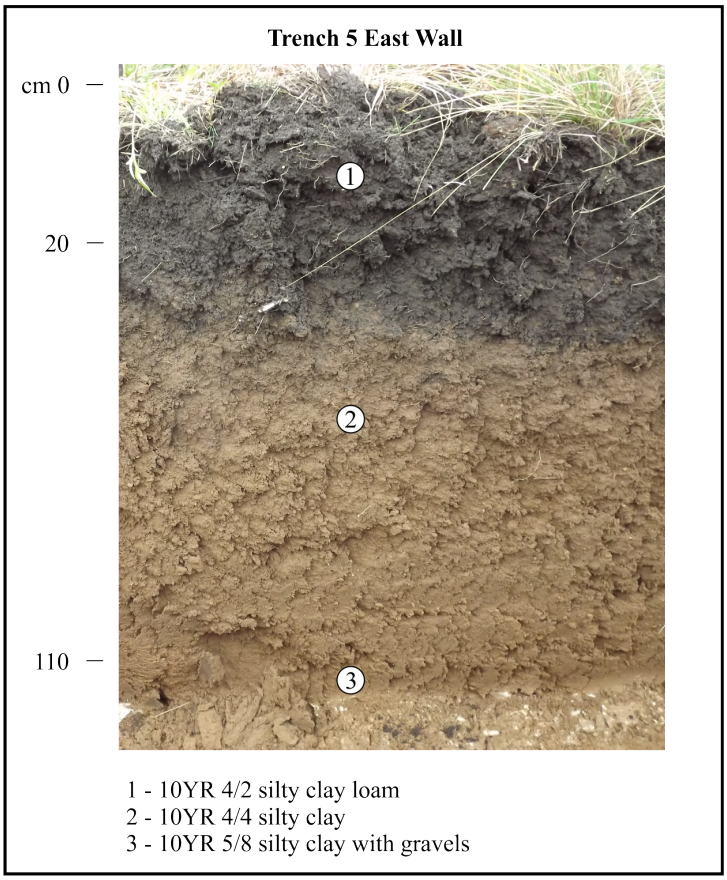

Figure 6-9. Wall profile of Trench 5.

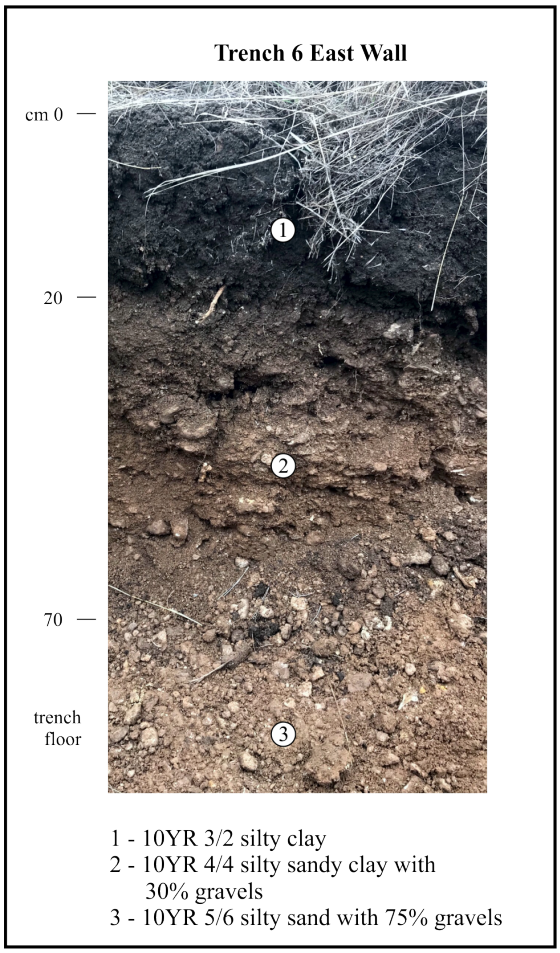

Figure 6-10. East wall profile of Trench 6.

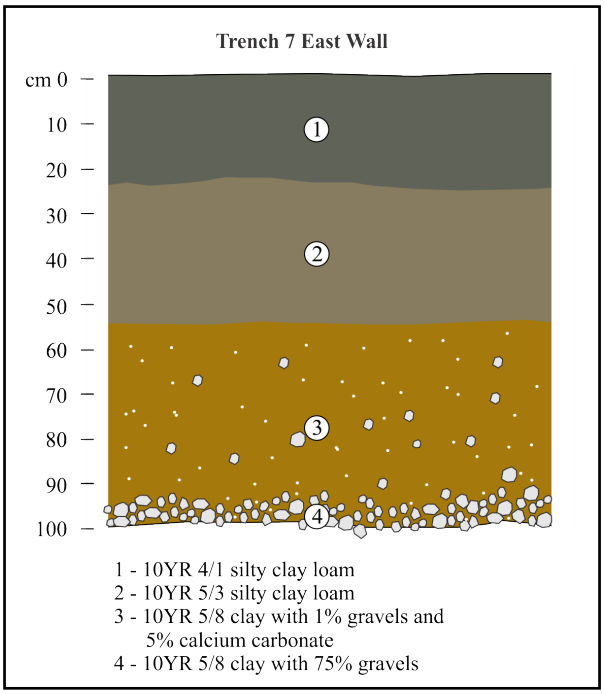

Figure 6-11. East wall profile of Trench 7.

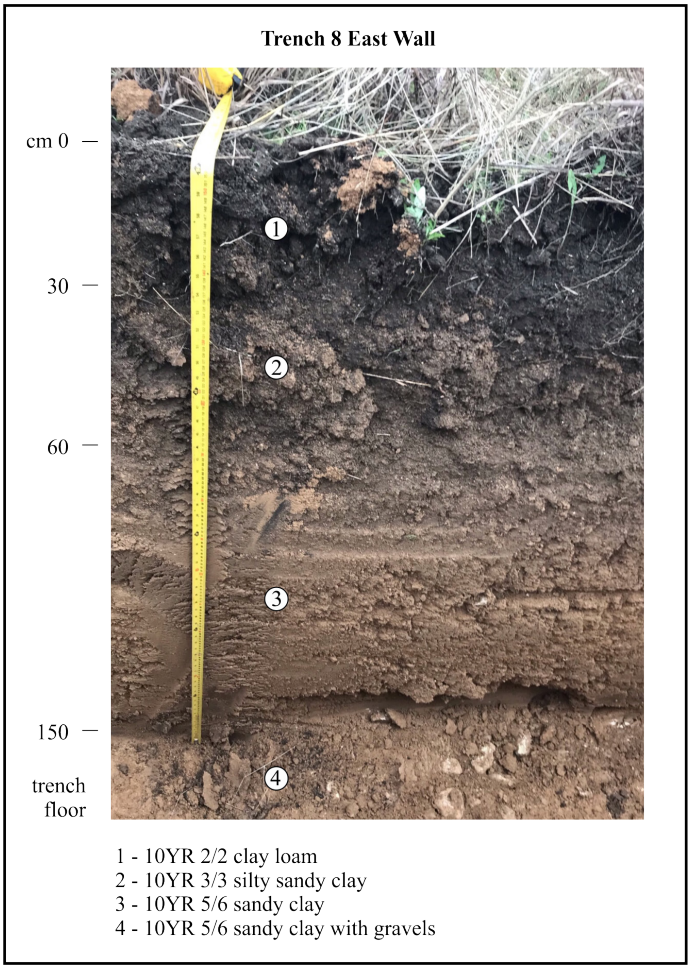

Figure 6-12. East wall profile of Trench 8.

Trenches 9 and 10

Trenches 9 and 10 were orientated perpendicular to the north and south ends of Trench 3, respectively. Trench 9 is 1 m north of Trench 3. It was oriented at east to west, 6 m in length, 80 cm in width, and 95 cm in depth. It contained three stratigraphic horizons (Figure 6-13, left). The upper 25 is a very dark grayish brown (10YR 3/2) silty clay loam. There is a clear transition to a yellowish brown (10YR 5/6) silty clay that continues to 88 cmbs. It is followed by a yellowish brown (10YR 5/6) sandy clay with 75 percent alluvial gravels.

Trench 10 is 9 m southwest of Trench 3. It was oriented at east to west, 4 m in length, 80 cm in width, and 122 cm in depth. It consists of four stratigraphic horizons (Figure 6-13, right). The first horizon is very dark grayish brown (10YR 3/2) clay loam to 12-15 cmbs. It is followed by dark brown (10YR 3/3) silty clay that continues 34-35 cmbs. The third horizon is brown (10YR 5/3) silty clay. It is followed by a yellowish brown (10YR 5/6) clay with alluvial gravels that begins at 115 cmbs. No artifacts or features were found in either trench.

Trench 11

Trench 11 was oriented north to south, 4 m in length, 80 cm in width, and 135 cm in depth. It is 25 m east of Trench 3. Trench 11 contained three stratigraphic horizons (Figure 6-14). The upper 25-30 cm is a dark brown (10YR 3/3) clay loam. There is a transition to a yellowish brown (10YR 5/4) sandy clay that continues to 120 cmbs. It is followed by a yellowish brown (10YR 5/6) clay with calcium carbonate nodules. No artifacts or features were found in the trench.

Trench 12

Trench 12 was oriented north to south, 5 m in length, 80 cm in width, and 140 cm in depth. Trench 12 contained four stratigraphic horizons (Figure 6-15). The upper 40 cm is a very dark grayish brown (10YR 3/2) silty clay loam. It is followed by a grayish brown (10YR 5/2) clay loam to 60 cmbs. A yellowish-brown sandy clay (10YR 5/6) continues to 145 cmbs followed by alluvial gravels. One piece of fire-cracked rock (FCR) was observed in the east wall at 40 cmbs. No other artifacts or features were found in Trench 12.

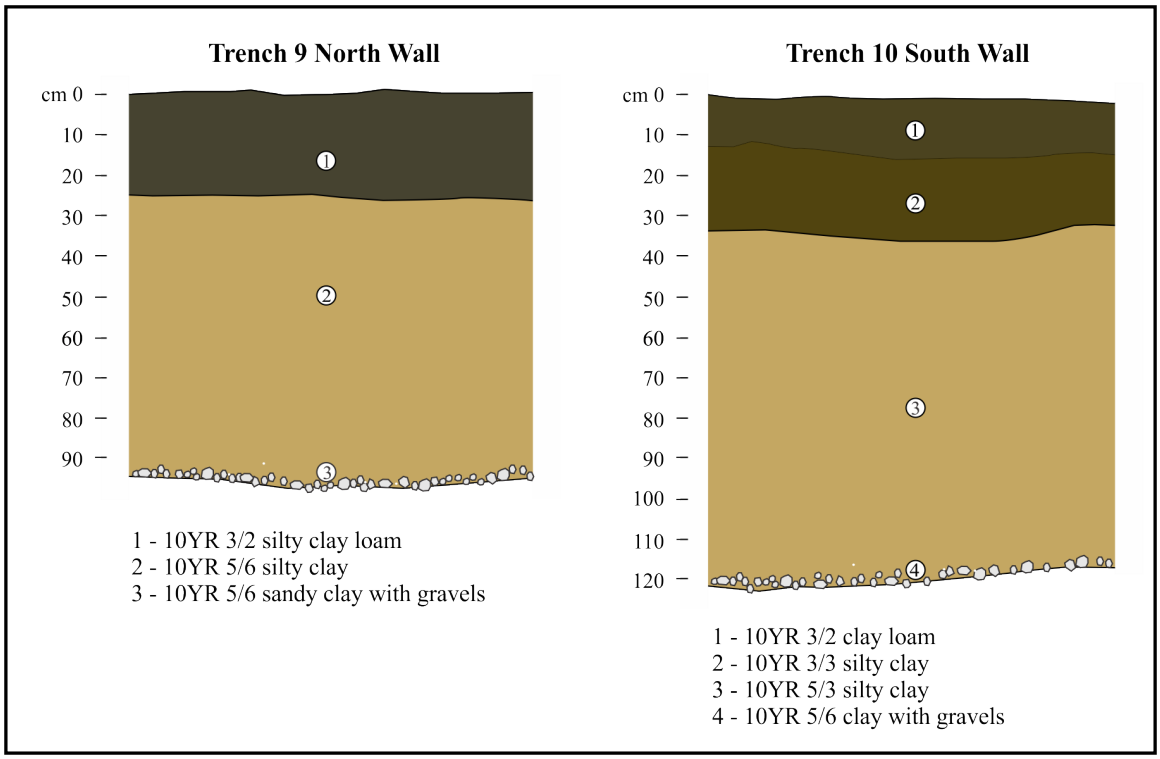

Figure 6-13. Wall profiles of Trenches 9 and 10.

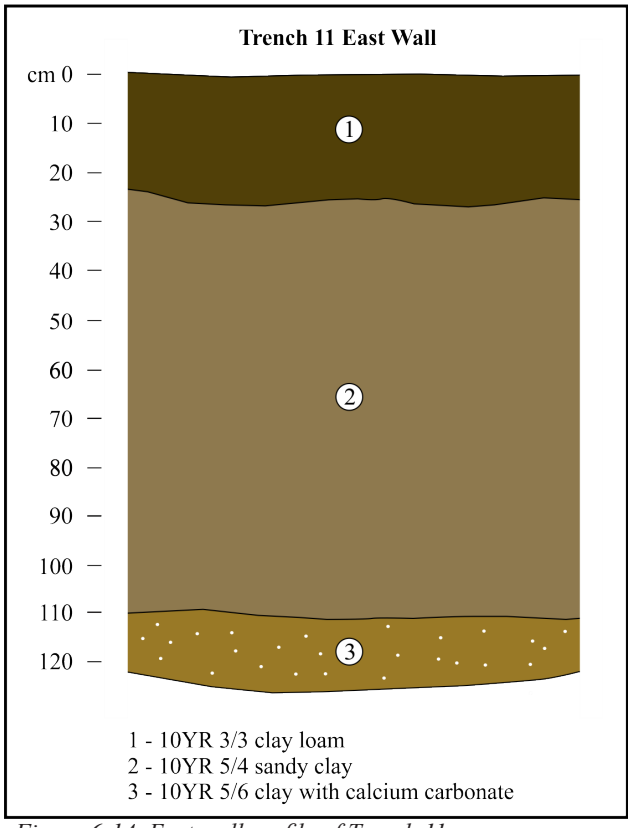

Figure 6-14. East wall profile of Trench 11.

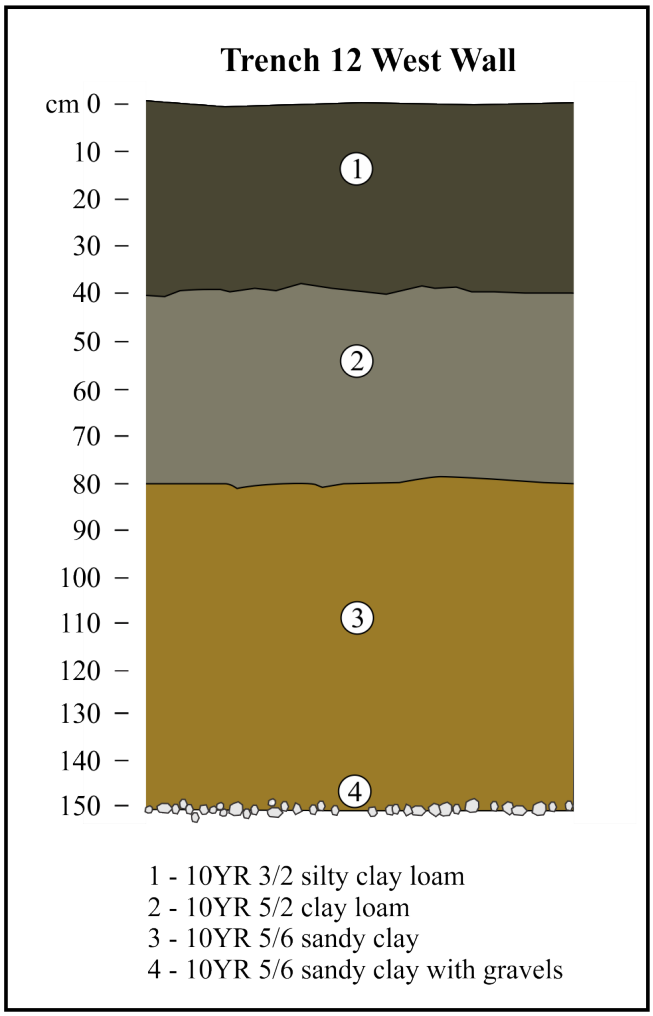

Figure 6-15. West wall profile of Trench 12.

Isolated Surface Finds and Features

The locations of artifacts that did not meet the criteria for a site were recorded as isolated surface finds, or isolates. CAR recorded 14 isolates within the APE. The locations of these isolates were recorded and are stored at CAR. Isolates consisted of a biface fragment, an edge modified tool, debitage (n=8), FCR (n=3), and a historical brick.

In addition to isolates, three features consisting of architectural and engineered components dating to the mid-to-late twentieth century were identified in the western portion of the APE (Figure 6-16). They include the remnant sections of a mortared terrace wall (Feature 1) and two water-control features built in the 1960s (Features 2 and 3). The locations of the three features are shown on Figure 6-12. In addition to these features, three modern wellheads were found during the survey. These are likely associated with the late twentieth century use of the property.

Feature 1

Feature 1 (Figure 6-17) consists of mortared limestone terrace walls on an embankment overlooking a field adjacent to Balcones Creek. It was associated with a house as shown on Google Earth aerials from 1995 and 2004. The walls measure 0.9-1 m in height, 30-40 cm in width, and 143 m in length. The terrace walls are parallel to each other with upper and lower segments. A set of limestone stairs centered within the feature descends from the terrace above to the floodplain below.

Feature 2

Feature 2 (Figure 6-18) is one of two dams constructed along a drainage on the west side of the APE. Feature 2 appears to be an earth/rock dam constructed in the 1960s or early 1970s based on a review of historical aerials (Historic Aerial 1963, 1966, 1969, 1973). It measures approximately 2-3 m in height, 3 m in width, and 18 m in length. During the time of the survey, the dam created a shallow water hole. A spillway from the dam allows drainage to Balcones Creek.

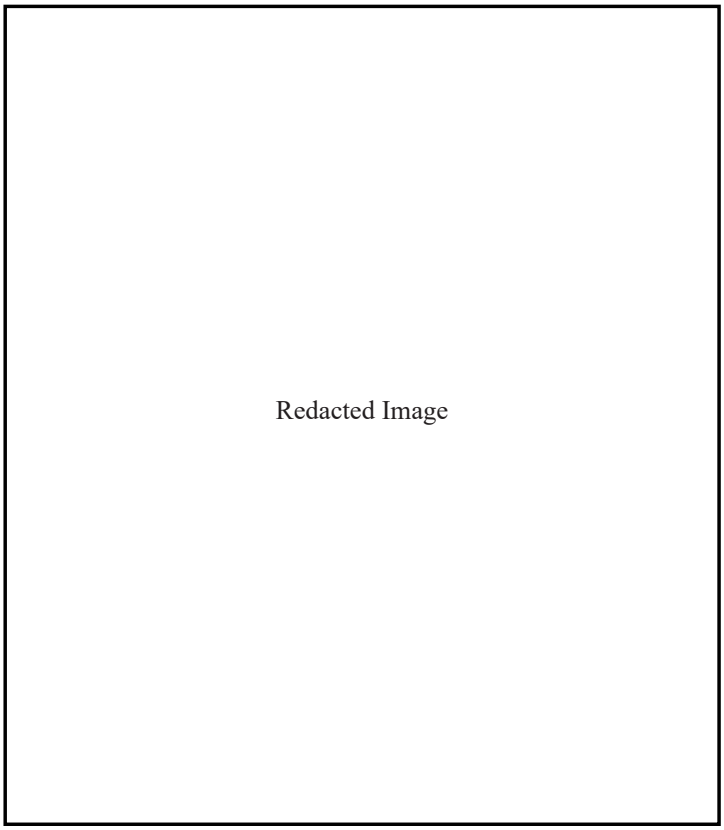

Figure 6-16. Map showing the locations of recorded features (in red) dating to the mid-to-late twentieth century on an Esri topographic map with 1 m contour.

Figure 6-17. A view to the south of Feature 1 centered on the stairs (top). A view to the east of the lower segment of the terrace wall.

Figure 6-18. A view to the northwest of Feature 2.

Feature 3

Feature 3 (Figure 6-19) is the second earth/rock dam located along the same drainage. It is 125 m to the south of Feature 2. It measures approximately 3-4 m in height, 4 m in width, and 70 m in length. A dirt two-track road runs from the west to the central portions of the APE along the top of the berm. The dam forms a pond measuring approximately 4,000 m^2.

A comparison of U.S. Geological Survey (USGS) Van Raub topographic maps from 1953 and 1967 suggests development of these features began in the 1960s (Figure 6-20). While there is no evidence of the features on the 1953 map, the 1967 Van Raub topographic map shows a two-track road leading to the house in the area south of where the terrace walls (Feature 1) are located. Another structure (likely a barn or shed) is shown at the termination of the road on the western edge of the APE. Historical aerials dating after 1963 and topographic maps show the development of other structures on the western portion of the APE, including Feature 3 (Historic Aerials 2019). Due to the tree cover in these aerials, Feature 2 cannot be identified. The aerials and topographic maps suggest construction began in the 1960s and continued through the 1970s likely in association with a farm or ranch. Features that post-date 1955 are not considered an archaeological site by the THC (THC 2019b).

Summary

CAR excavated 113 shovel tests within the ACCD-NC APE, and nine of those shovel tests were positive for artifacts. Six of the nine shovel tests were part of archaeological sites identified during this project. The remaining three shovel tests did not meet the site designation criteria. Fifty-two artifacts were collected from the shovel tests. Five shovel tests contained prehistoric artifacts, and one shovel test contained historical artifacts. CAR also excavated 12 trenches. Two burned rock features were found in one trench (Trench 3). The remaining 11 trenches were negative for cultural material. Fourteen isolated surface finds and three late twentieth-century features were recorded during the survey. In addition, three modern wellheads were also recorded.

Figure 6-19. A view to the northwest of Feature 3.

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Figure 6-20. The 1953 topographic map (top) showing no development (i.e., house and other structures) within the APE (outlined in black). The 1967 topographic map (bottom) shows the presence of a house, a barn or shed structure, and a two-track road.

Chapter 7: Archaeological Sites

Using the site definition criteria outlined in the Chapter 5, CAR recorded nine sites: 41BX2298, 41BX2299, 41BX2300, 41BX2301, 41BX2302, 41BX2303, 41BX2304, 41BX2305, and 41BX2306. Figure 7-1 shows the locations of the nine sites identified within the APE. This chapter provides an overview of these sites, discusses the work completed during the investigation, and provides a summary of the recovered cultural material.

41BX2298

Site 41BX2298 was recorded on the western side of the APE (Figure 7-2) along an abandoned two-track road during shovel testing. The site is 80 m^2 in area. The site is located within the Crawford-Bexar stony soils group. The site was initially identified by a surface concentration of FCR (Feature 1) that measures 1 m east to west and 1.5 m north to south (Figure 7-3).

Four shovel tests were excavated to delineate the site, with one (ST 101) excavated within the FCR concentration identified as Feature 1 (Figure 7-4). Shovel Test 101 was positive for a small quantity of FCR (n=23; 152 g), charcoal, and burned clay. Charcoal and charred material were evident from the ground surface to 40 cmbs (Figure 7-5). Shovel Test 101 encountered bedrock at 48 cmbs. The remaining three shovel tests (STs 10,101 N1, and 101 S1) were negative for cultural material (Table 7-1).

One sample of charcoal was processed for radiocarbon dating. It has not been analyzed and will be curated with the collection at CAR. A thorough examination of the feature and the surrounding area revealed no additional prehistoric, historic or modern artifacts. Additional shovel tests were not excavated given the small, isolated nature of the feature and the negative test results away from the feature.

A FCR concentration measuring approximately 1-x-1.5 m is at the center of site 41BX2298. A shovel test excavated in the feature contained FCR, charcoal, charred material, and burned clay. The remaining three shovel tests were negative

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Figure 7-1. New sites identified on the ACCD-NC APE. Site 41BX2306 contains multiple linear components.

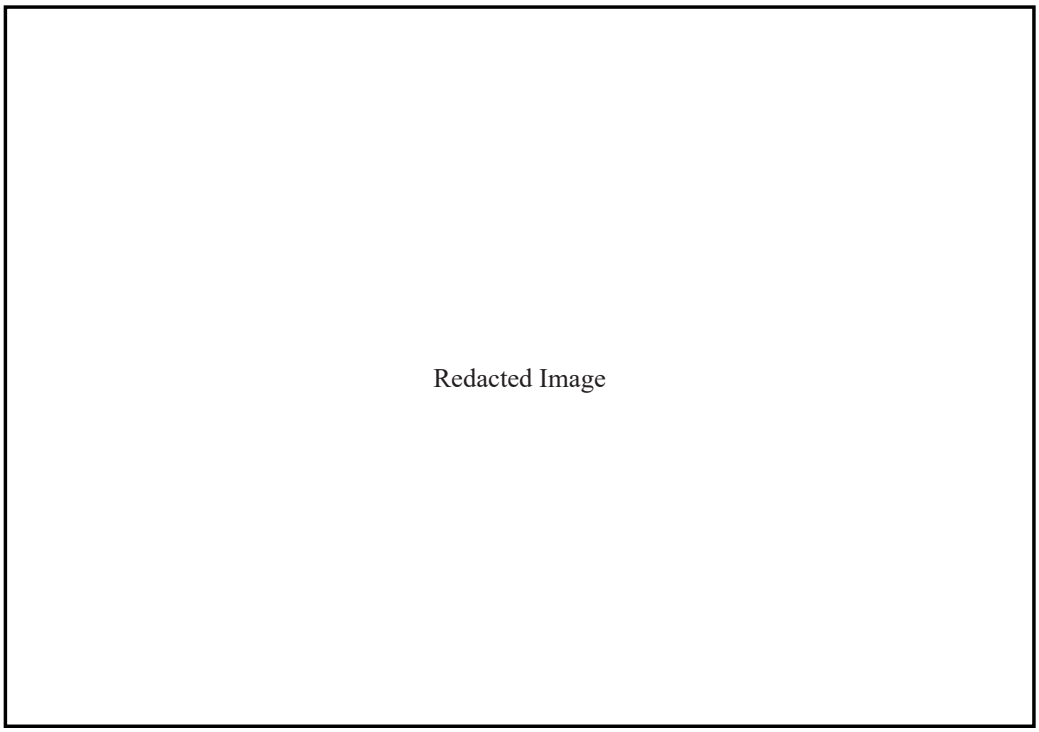

Figure 7-2. Google Earth aerial of site 41BX2298.

Figure 7-3. View to the northeast of Feature 1, a FCR concentration.

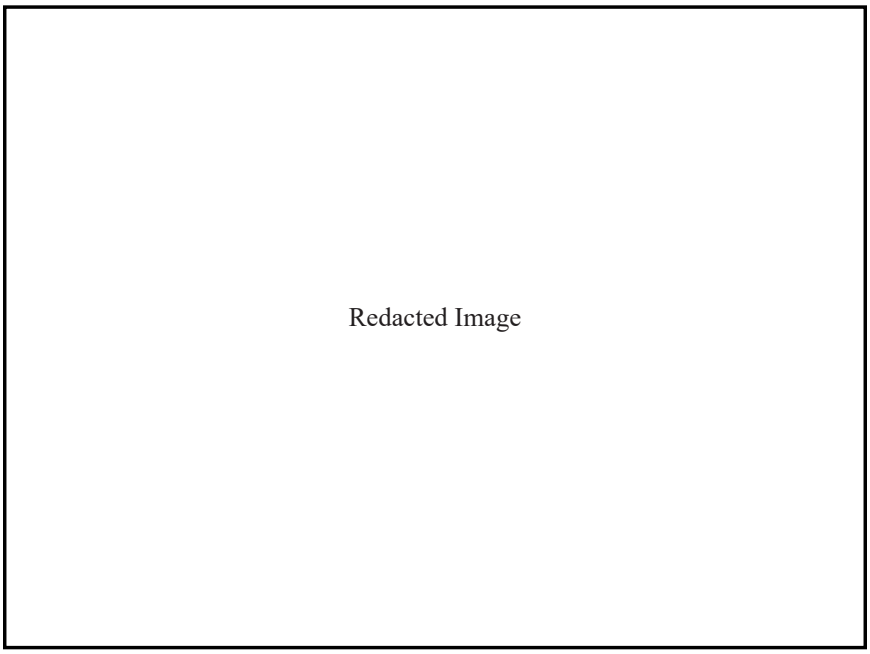

Figure 7-4. Site map of 41BX2298 showing location of shovel tests and site boundary on an Esri topographic map with 1 m contours.

Figure 7-5. Shovel Test 101 excavated in the FCR concentration.

Table 7-1. Shovel Test Results at 41BX2298*

Depth (cm)	ST 101	ST 101 N1	ST 101 S1	ST 10
0-10	FCR, Charcoal	-	-	-
10-20	FCR, Charcoal	-	-	-
20-30	FCR, Charcoal	-	-	-
30-40	FCR, Charcoal	-	-	-
40-50	-	-		
50-60		-		

*Gray-filled levels were not excavated

for artifacts, and no artifacts were found on the surface. It is unclear whether this feature is modern, historic, or prehistoric based on the lack of temporal diagnostics. CAR recommends future analysis of the radiocarbon sample to determine the age of the feature. The deposition of the charcoal and FCR suggests 41BX2298 has some degree of site integrity, and the potential for radiocarbon dates. Additional information is needed to determine the eligibility of site 41BX2298 for listing as a SAL or for nomination for the NRHP.

41BX2299

Site 41BX2299 is located in the northwest portion of the APE (Figure 7-6). The site covers an area of approximately 535 m^2. It is located 70 m south of Balcones Creek and within the 100-year floodplain. The dominant vegetation is tall grasses (Figure 7-7). An analysis of historical aerials suggest that the site has likely been impacted by plowing (see Figure 4-6).

One shovel test (ST 66) contained a piece of FCR and a biface fragment (Figure 7-8; Table 7-2). The FCR was found in Level 5 (40-50 cmbs) and the biface (Figure 7-9) was in Level 6 (50-60 cmbs). Seven additional shovel tests were placed around ST 66, and one (ST 66 N1) was positive for FCR at 30 cmbs. Burned/fire-cracked rock were observed in the shovel test wall at 30 cmbs (see Figure 6-3, ST 66 E1, for an example of shovel tests found at this site).

Three trenches (3, 9, and 10) were excavated to delineate the site and determine the depth of cultural material (Figure 7-9). Two FCR features (Features 1 and 2) were found in Trench 3 (Figure 7-10). Trenches 9 and 10 were negative for artifacts and features. During trenching, a lithic and FCR scatter was recorded to the southeast of Trench 3.

Feature 1 is a small scatter of FCR (n=6) recognized at 55-60 cmbs (Figure 7-11, left). It was impacted to a degree by the excavation. It measures 30 cm north to south and 80 cm east to west. Feature 2 (Figure 7-11, right) was found approximately 4 m to the north of Feature 1 at 40 cmbs. It appears to be a tighter cluster of FCR (n=12) measuring 40 cm north to south and 40 cm east to west. No artifacts were associated with either feature. One charcoal sample was collected from Feature 2 and processed at CAR. The sample has not been analyzed and will be curated with the collection at CAR.

Burned rock that may be related to Feature 2 was also observed in the spoil. As a result, CAR screened four 5-gallon buckets of sediment from the spoil pile; however, no additional artifacts were observed. Both features were left in situ. Based on shovel test artifacts and features, it appears the deposit is situated between 30-60 cmbs, and it is distinct and relatively intact. During trench excavation, a scatter of debitage and burned/fire-cracked rock found southeast of Trench 3 was recorded and placed within the site boundary.

Site 41BX2299 consists of two FCR features found in an excavated trench. In addition, two shovel tests (ST 66 and ST 66 N1) were positive for artifacts. Both the features and the artifacts were found in a level between 30-60 cmbs suggesting some continuity between the positive shovel tests and the features found in the trenches. A small surface scatter of debitage and FCR was found during trenching. While no temporal diagnostics were found, one feature contained sufficient material for a radiocarbon date. CAR recommends future analysis of the radiocarbon sample to determine the age of the feature. Site 41BX2299 contains two FCR features and a strong potential for radiocarbon dates, and it may contribute to the knowledge of regional prehistory. The site is recommended for listing as a SAL under two criteria. First, the site has the potential to contribute to a better understanding of the prehistory of Texas by the addition of new and important information. Second, the archeological deposits and artifacts within the site are preserved and intact, thereby supporting the research potential or preservation interests of the site (see Chapter 5). CAR also recommends that the site is eligible for inclusion to the NRHP under Criterion D: the property may be likely to yield, information important to prehistory (see Chapter 5).

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Figure 7-6. Google Earth aerial of site 41BX2299.

Figure 7-7. View to the south of site 41BX2299 during shovel testing.

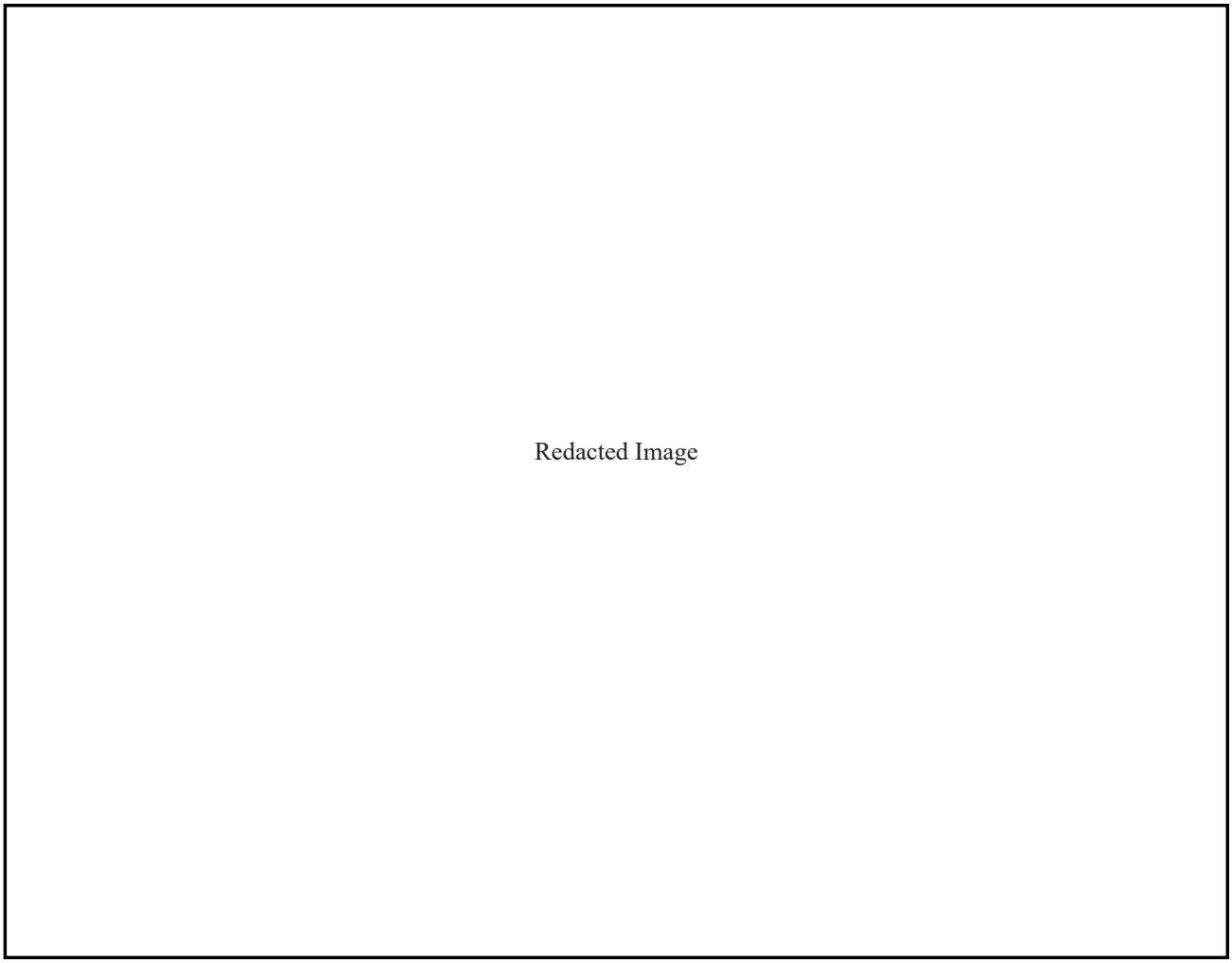

Figure 7-8. Site map of site 41BX2299 showing shovel tests, trenches, features, and the site boundary on an Esri topographic map with 1 m contours.

Table 7-2. Shovel Test Results at 41BX2299*

Depth (cm)	ST 66	ST 66 N1	ST 66 N2	ST 66 S1	ST 66 E1	ST 66 E2	ST 66 W1	ST 66 W2
0-10	-	-	-	-	-	-	-	-
10-20	-	-	-	-	-	-	-	-
20-30	-	FCR	-	-	-	-	-	-
30-40	-		-	-	-	-	-	-
40-50	FCR		-	-	-	-	-	-
50-60	Biface		-	-	-	-	-	

*Gray-filled levels were not excavated

Figure 7-9. Biface found at 41BX2299 in ST 66 at 50 to 60 cmbs.

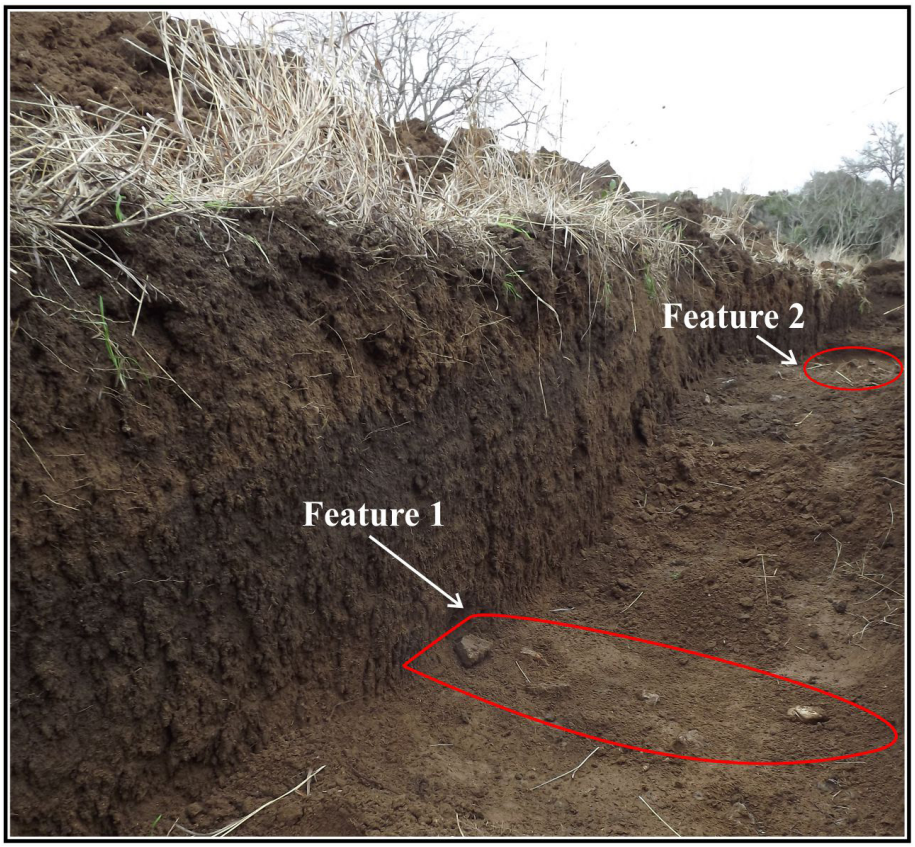

Figure 7-10. View of Trench 3 showing Features 1 and 2.

Figure 7-11. Feature 1 is on the left and Feature 2 is on the right.

41BX2300

Site 41BX2300 is a surface scatter of lithics found in the wooded portion of the APE, and it covers an area of roughly 344 m^2 (Figure 7-12). The site contained surface limestone cobbles and was covered with leaf litter (Figure 7-13). The site is in an upland overlooking an unnamed drainage to the east, and it may have been impacted by the construction of a dam to the east.

The site boundary was based on the surface distribution of artifacts and eight shovel tests (Figure 7-14). The site is located in the Crawford-Bexar stony soils group resulting in shallow shovel tests. Table 7-3 presents the results of the shovel tests. The depth of most shovels test was 20-30 cmbs, and only one shovel test (ST 39 S2) was excavated to 40 cmbs (see Figure 6-3, ST 39 E1, for an example of the shallow depth of the shovel tests found at this site). Three of the shovel tests (STs 39, 39 E1, and 39 S1) were positive with artifacts, but they were found only in the first level of each shovel test. The subsurface artifacts consisted of two pieces of chipped stone and a FCR. The surface assemblage consisted of two edge modified flakes, three pieces of debitage, and 12 FCR, resulting in 0.04 artifacts per m^2.

Site 41BX2300 is a low-density site primarily composed of surface artifacts including two edge modified flakes, debitage, and FCR. The site did not contain any temporal diagnostics or features that could be radiocarbon dated. The majority of shovel tests were shallow with bedrock commonly found at 20 cmbs, and all artifacts were found on the surface or the first level of the shovel tests. The low density of artifacts, lack of temporal diagnostics and/or the potential for radiocarbon dates, and the lack of deposition suggests that 41BX2303 is not likely to yield additional information to the understanding of prehistory. It is not recommended for listing as a SAL, and it is not recommended eligible for inclusion to the NRHP.

41BX2301

Site 41BX2301 is a surface scatter of lithic tools, debitage, and FCR found on the western edge of the central portion of the APE (Figure 7-15). The site covers an area of roughly 315 m^2. The site is located in the Crawford clay soils group. The site is in a water-saturated area with a north to south, two-track dirt road running to the west of it. The discovery of the site was in part a result of surface erosion due to vehicle traffic as shown on Figure 7-16.

The site boundary was created by the distribution of surface artifacts and the excavation of four shovel tests (Figure 7-17). Additional shovel tests were not excavated due to the water-saturated areas surrounding the site. Only one shovel test (ST 100) was excavated to 60 cmbs, and the remaining shovel tests were terminated at 40 cmbs due to small gravels and saturated soil. All shovel tests were negative for cultural material. The surface artifacts consisted of two projectile points, one biface fragment, one edge modified flake, one core, 12 pieces of debitage, and one FCR. The projectile points (Figure 7-18) are identified as a Frio point dating to the Late Archaic period and a Fresno-like point style dating to the Late Prehistoric (Turner et al. 2011). The artifact density was 0.05 artifacts per m^2. The surface assemblage may have been moved to the edge of the field by plowing and uncovered by erosion due to vehicle traffic as shown in Figure 7-16.

Site 41BX2301 is a low-density site of lithic tools, debitage, a core, and FCR. All artifacts were found on the eroded surface, and none of the four shovel tests contained subsurface artifacts or features. These factors suggest that the site lacks integrity due to the lack of deposition. The site did contain two temporal diagnostics suggesting a Late Archaic to Late Prehistoric context. While the site contained temporal diagnostics, the low density of artifacts and the lack of site integrity suggest that 41BX2301 is not likely to yield

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Figure 7-12. Google Earth aerial of site 41BX2300.

Figure 7-13. Site overview of 41BX2300 showing surface cobbles and leaf litter.

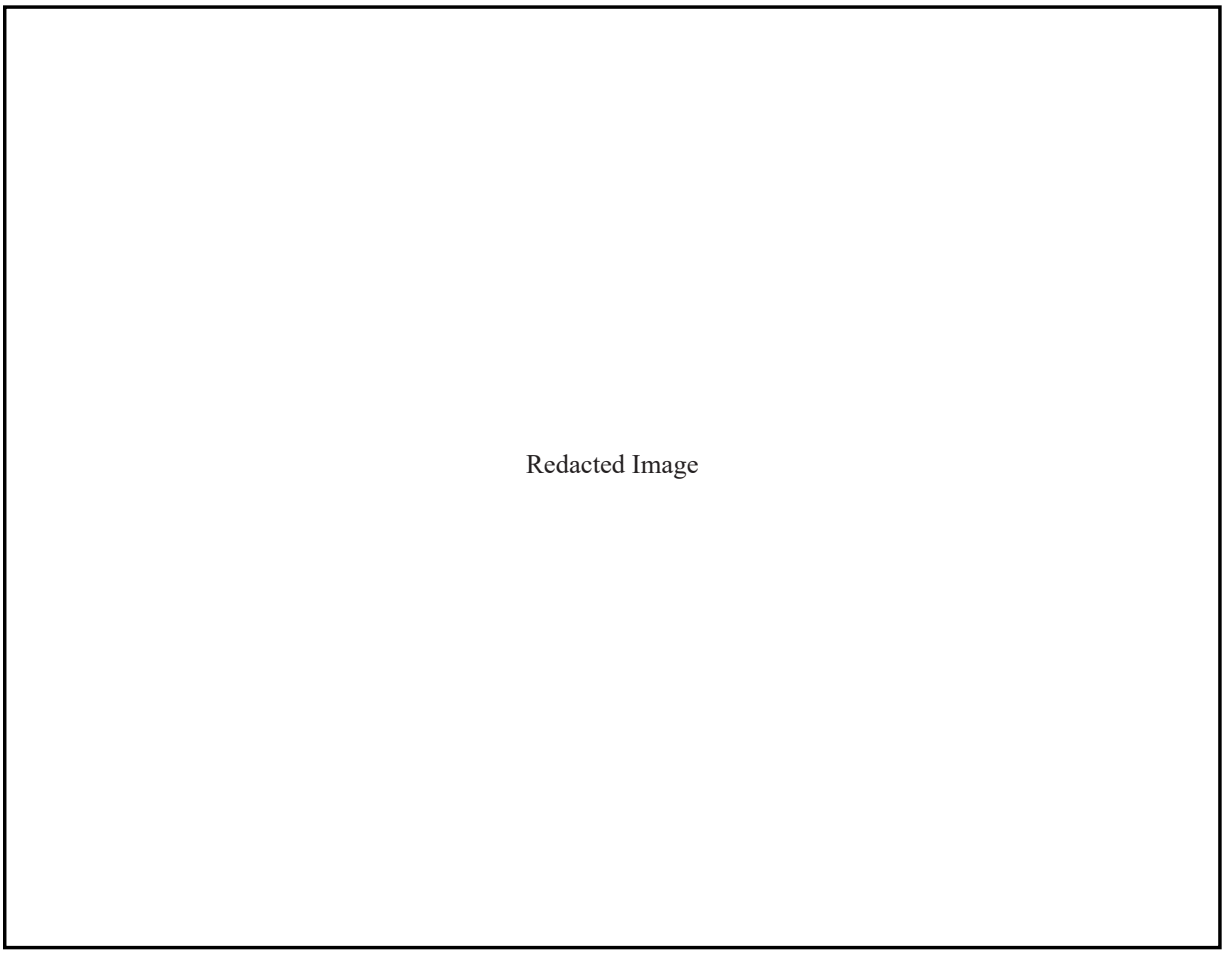

Figure 7-14. Site map of 41BX2300 showing distribution of shovel tests and surface artifacts on an Esri topographic map with 1 m contours.

Table 7-3. Shovel Test Results at 41BX2300*

Depth (cm)	ST 39	ST 39 N1	ST 39 N2	ST 39 S1	ST 39 S2	ST 39 E1	ST 39 E2	ST 39 W1
0-10	FCR, Chipped Stone	-	-	Chipped Stone	-	Chipped Stone	-	-
10-20	-	-	-	-	-	-	-	-
20-30		-	-	-	-	-		
30-40					-			
40-50								
50-60								

*Gray levels were not excavated

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Figure 7-15. Google Earth aerial of site 41BX2301. Eroded tire tracks can be observed throughout the site. A portion of 41BX2302 is shown to the northeast.

Figure 7-16. Site overview of 41BX2301 showing the impact of vehicle traffic. View is to the southwest.

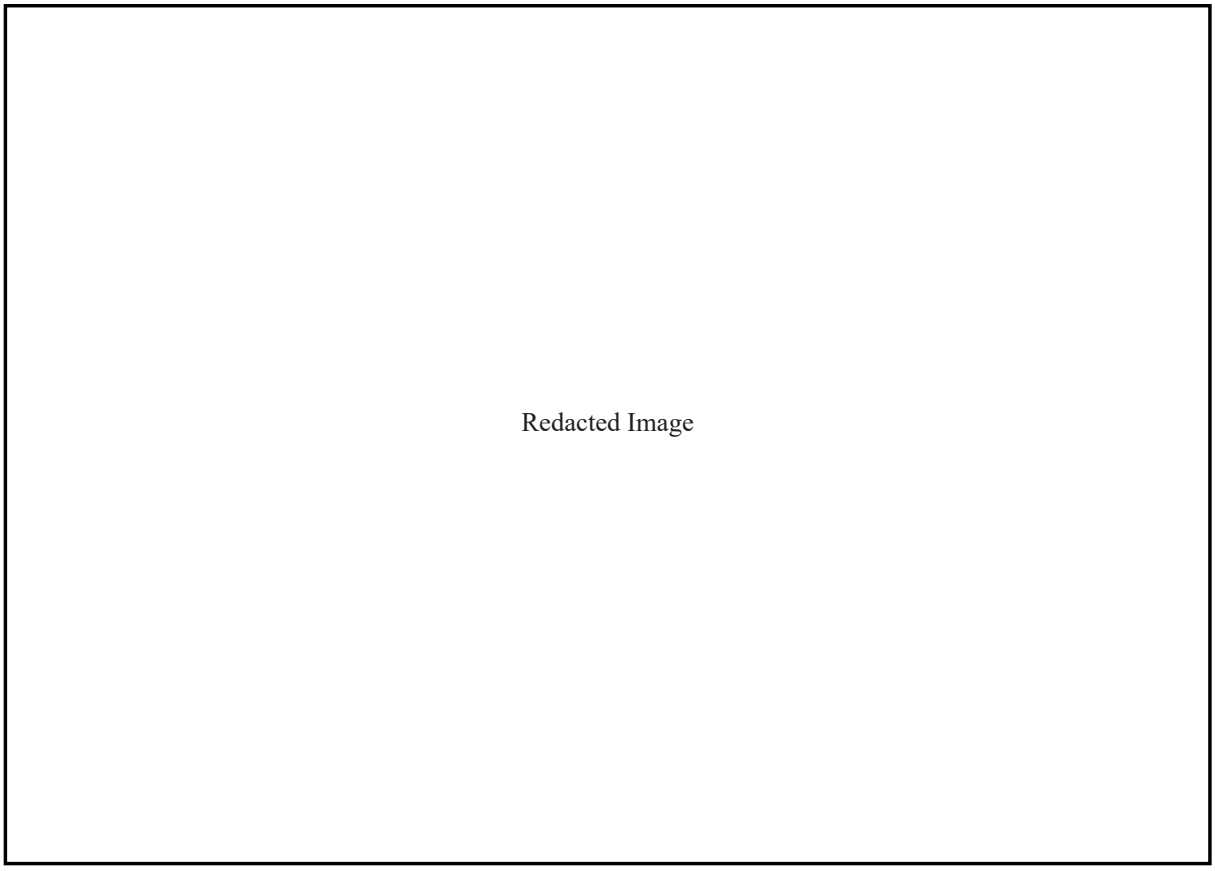

Figure 7-17. Site map of 41BX2301 showing distribution of shovel tests and surface artifacts on an Esri topographic map with 1 m contours.

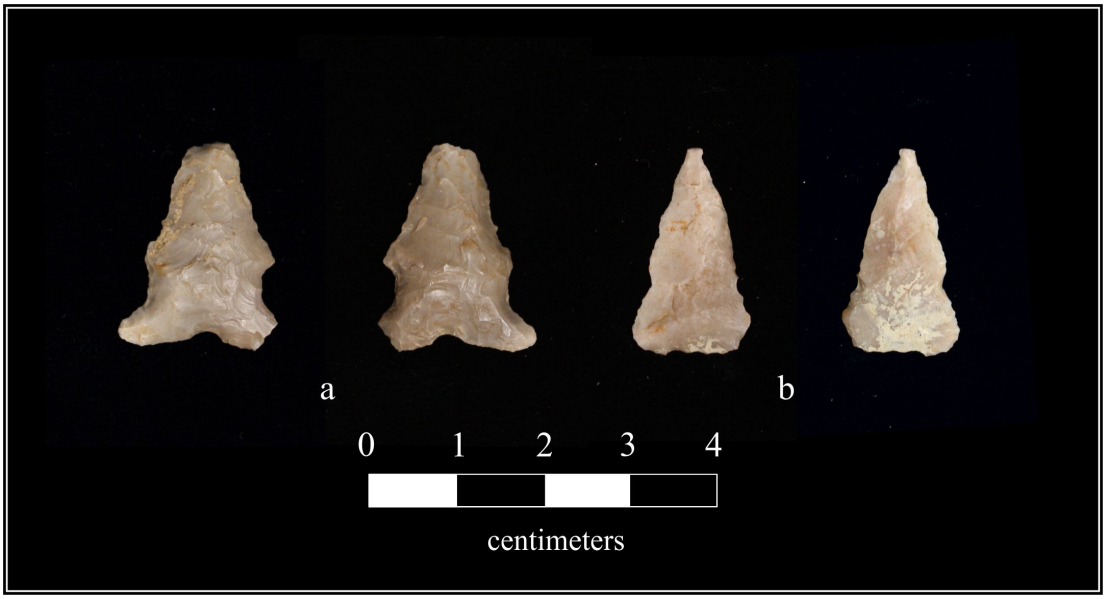

Figure 7-18. Projectile points identified as Frio (a) and Fresno-like (b) found on the surface of 41BX2301.

additional information to the understanding of prehistory. The site is not recommended for listing as a SAL and is not recommended as eligible for inclusion to the NRHP.

41BX2302

Site 41BX2302 is a surface scatter of lithic tools, debitage, and FCR found on the northwestern edge of the plowed field section of the APE (Figure 7-19). The site covers an area of roughly 2,473 m^2. The site is north of a water-saturated area, and a two-track road runs to the north and west (Figure 7-20). The site is bisected by a berm used to divert water from the road (Figure 7-20). This site and the three other lithic scatter sites (41BX2303, 41BX2304, and 41BX2305) were impacted by construction related to the TxDOT-sponsored project.

The site boundary was created by the distribution of surface artifacts (Figure 7-21). The site is located in the Crawford clay soils group. CAR excavated six shovel tests within the boundary of the site. One shovel test (ST 55) was excavated to 60 cmbs, and the remaining shovel tests terminated at 30-40 cmbs due to bedrock or calcium carbonate nodules (see Figure 6-3 for an image of ST 55). All shovel tests were negative for cultural material. Additional shovel tests were not excavated due to the water-saturated areas surrounding the site. The surface artifacts consisted of two biface fragments, one uniface fragment, one core, 17 pieces of debitage, and 14 FCR. In addition, the site contained historical artifacts including one piece of clear glass and one piece of white earthenware. The density of artifacts is 0.01 artifacts per m^2. It is similar to 41BX2301 in that the surface assemblage may have been moved to the edge of the field by plowing and uncovered by erosion and/or the construction of the berm.

Site 41BX2302 is a low-density site of lithic tools, debitage, a core, and FCR. All artifacts were found on the eroded surface. None of the six shovel tests revealed any subsurface artifacts or features. These factors suggest that the site lacks integrity. The site did not contain any temporal diagnostics. The lack of temporal diagnostics and/or the potential for radiocarbon dates, the low density of artifacts, and the lack of site integrity suggests that 41BX2302 is not likely to yield additional information to the understanding of prehistory. It is not recommended for listing as a SAL, and it is not recommended eligible for inclusion to the NRHP.

41BX2303

Site 41BX2303 is a surface scatter of lithic tools, debitage, and FCR found on the northwestern edge of the central portion of the APE (Figure 7-22). The site covers an area of roughly 389 m^2. The site is located in the Crawford clay soils group. Like 41BX2302, the site is also bisected by the berm (Figure 7-23).

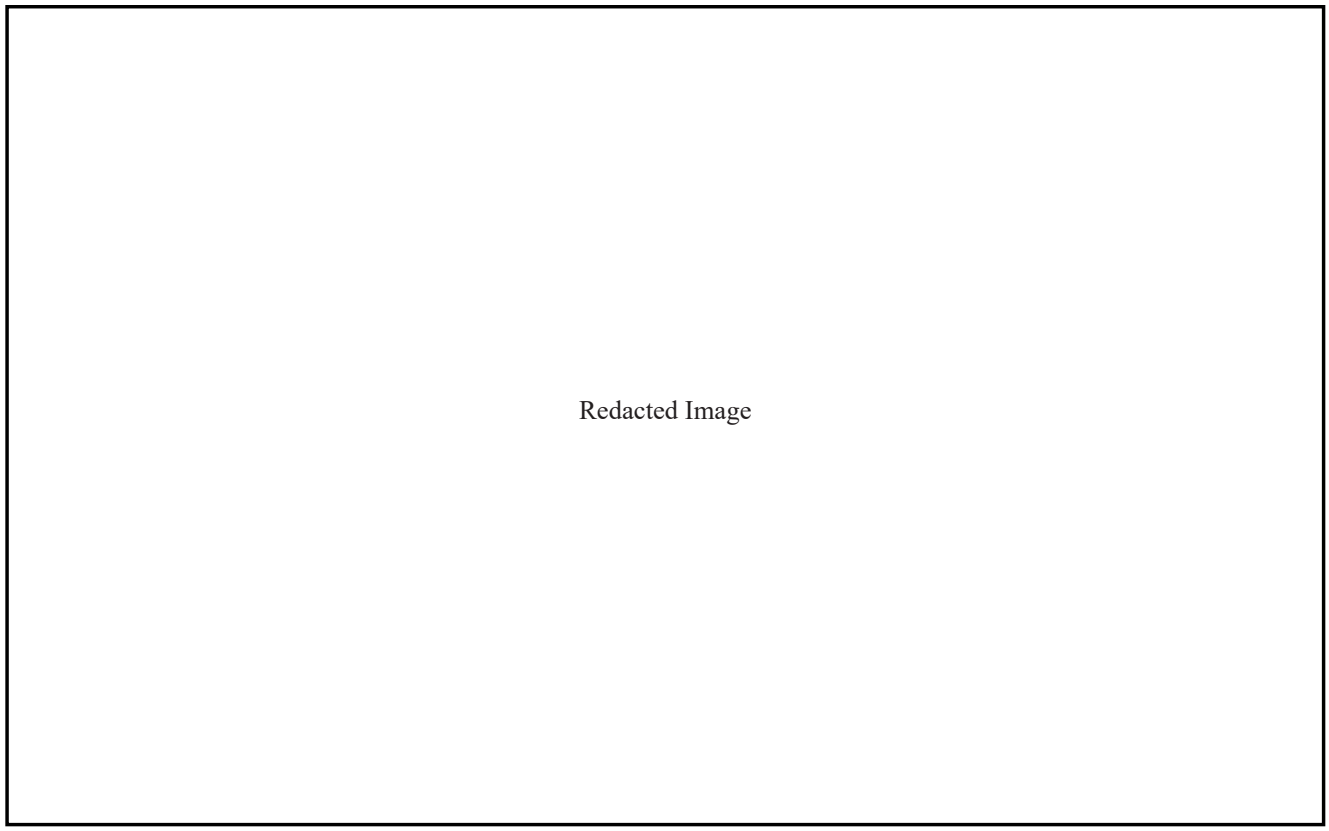

Figure 7-19. Google Earth aerial of site 41BX2302. A berm used to divert rainfall from the road runs the length of the site.

Figure 7-20. Site overview of 41BX2302 with the view oriented to the northeast. Note the berm and the water-saturated field to the south. Artifacts were found within the scraped portion of the photo.

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Figure 7-21. Site map of 41BX2302 showing distribution of shovel tests and surface artifacts on an Esri topographic map with 1 m contours.

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Figure 7-22. Google Earth aerial of site 41BX2303. A berm runs the length of the site.

Figure 7-23. Site overview of 41BX2303 with view oriented to the northeast. Artifacts were found within the scraped portion of the site resulting from the creation of the berm.

The site boundary was created by the distribution of surface artifacts and the excavation of four shovel tests (STs 70, 200, 201, and 202; Figure 7-24). Surface visibility was excellent, and the area was thoroughly examined for artifacts. Shovel Tests 200, 201, and 202 were excavated to 60 cmbs, but ST 70 was only excavated to 30 cmbs due to cobbles. All shovel tests were negative for cultural material. No additional shovel tests were excavated given the high visibility of the surface and the proximity to the project boundary. The surface artifacts consisted of two edge modified flakes, two pieces of debitage, and two FCR, resulting in an artifact density of 0.01 artifacts per m^2. It is likely that the surface assemblage may have been displaced by plowing and uncovered by erosion due to the construction of the berm, as suggested for the assemblage at 41BX2302.

Site 41BX2303 is a low-density site of lithic tools, debitage, and FCR. All artifacts were found on the eroded surface. None of the shovel tests revealed any subsurface artifacts or features. These factors suggest that the site may lacks integrity. The site did not contain any temporal diagnostics or features that could be radiocarbon dated. The low density of artifacts, the lack of site integrity, and the lack of temporal diagnostics and/or the potential for radiocarbon dates suggest that 41BX2303 is not likely to yield additional information to the understanding of prehistory. It is not recommended for listing as a SAL, and it is not recommended eligible for inclusion to the NRHP.

41BX2304

Site 41BX2304 is a surface scatter of lithic tools, cores, debitage, and FCR found on the northwestern edge of the central portion of the APE (Figure 7-25). The site covers an area of roughly 560 m^2. The site is located in the Crawford clay soils group. Like 41BX2302 and 41BX2303, the site is bisected by the berm (Figure 7-26).

The site boundary was created by distribution of surface artifacts and the excavation of five shovel tests (STs 71, 72 W1, 200, 201, and 202; Figure 7-27). No additional shovel tests were excavated because the site was located just south of the APE and a gravel road and was bisected by a berm. This site, like others in this strip, was in an area of high surface visibility, and the area was thoroughly examined for artifacts. All but one (ST 72 W1) of the five shovel tests

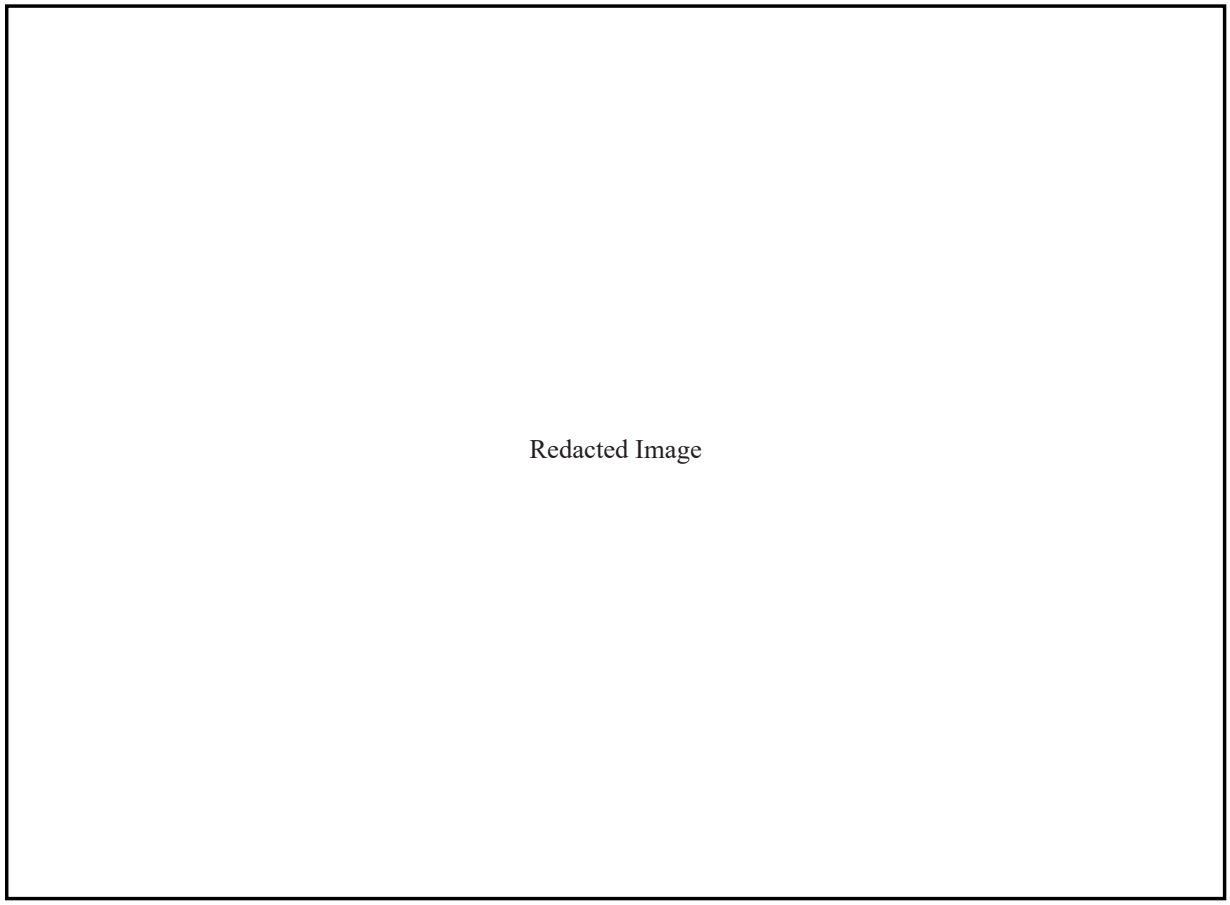

Figure 7-24. Site map of 41BX2303 showing distribution of shovel tests and surface artifacts on an Esri topographic map with 1 m contours.

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Figure 7-25. Google Earth aerial of site 41BX2304. A berm bisects the length of the site.

Figure 7-26. Site overview of 41BX2304 is outlined in red with the view oriented to the southwest. The berm is visible in the middle ground.

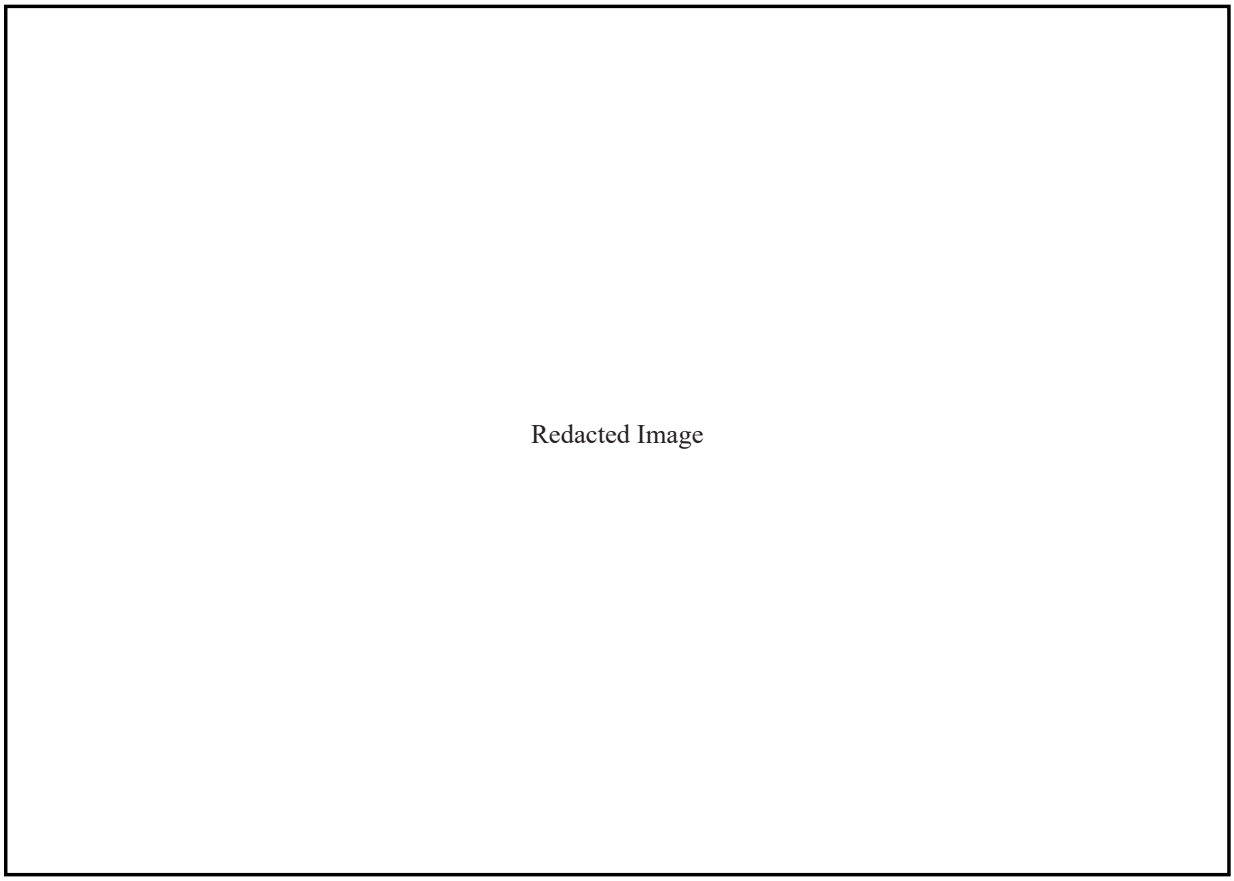

Figure 7-27. Site map of 41BX2304 showing distribution of shovel tests and surface artifacts on an Esri topographic map with 1 m contours.

were excavated to the terminal depth of 60 cmbs. The surface artifacts consisted of one biface, three cores, three pieces of debitage, and two FCR resulting in an artifact density of 0.01 artifacts per m^2. Like the previous two sites, the surface artifacts appear to be displaced to this location by plowing and revealed by the construction of the berm and resulting erosion.

Site 41BX2304 is a low-density site of lithic tools, debitage, and FCR. All artifacts were found on the eroded surface. None of the five shovel tests revealed any subsurface artifacts or features. These factors suggest that the site lacks integrity. The site did not contain any temporal diagnostics or features that could be radiocarbon dated. The low density of artifacts, the lack of site integrity, and lack of temporal diagnostics and/or the potential for radiocarbon dates suggests that 41BX2304 is not likely to yield additional information to the understanding of prehistory. It is not recommended for listing as a SAL, and it is not recommended eligible for inclusion to the NRHP.

41BX2305

Site 41BX2305 is a surface scatter of lithic tools, debitage, and FCR found on the northern edge of the central portion of the APE (Figure 7-28). The site covers an area of roughly 843 m^2. The site is located in the Crawford clay soils group. The site is located within the working boundary of the TxDOT staging yard related to current construction (Figure 7-29).

The site boundary was created based on the distribution of surface artifacts and the excavation of three shovel tests (STs 72, 72 E1, and 72 W1; Figure 7-30). One shovel test (ST 72) was excavated to 60 cmbs, and the remaining two shovel tests were terminated at 20 cmbs (ST 72 W1) and at 40 cmbs (ST 72 E1). All shovel tests were negative for cultural material. Additional shovel tests were not excavated due to the proximity of the two-track road and the staging yard. The surface artifacts consisted of four biface fragments, three uniface fragments, one edge modified flake, one core, and one FCR. The density of artifacts is 0.01 artifacts per m^2. In addition to the shovel tests, CAR collected 114 liters of soil from a spoil pile created as a result of the staging yard, the road next to it, and the berm. This sample was water screened at CAR recovering 14 pieces of debitage and a FCR fragment weighing 58.63 g. The artifacts appear to have been displaced by plowing impacted by surface scraping followed by erosion.

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Figure 7-28. Google Earth aerial of 41BX2305 showing the relationship of the staging yard and berm to the site. The yellow circle is the location of the tested spoil pile.

Figure 7-29. Site overview of 41BX2305 from the southern portion of the staging yard. The view is to the northwest. Archaeologist Sarah Wigley is on the eastern edge of the site.

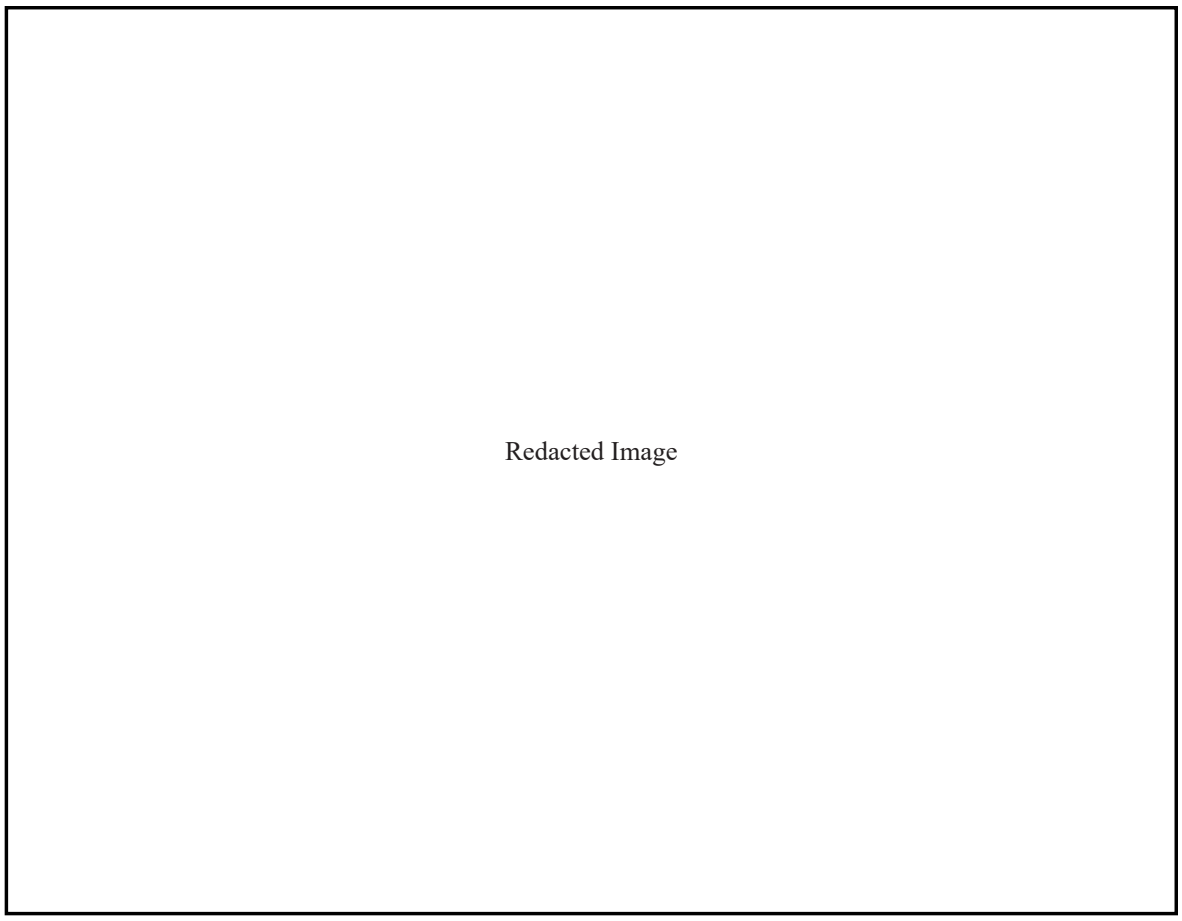

Figure 7-30. Site map of 41BX2305 showing distribution of shovel tests and surface artifacts on an Esri topographic map with 1 m contours.

Site 41BX2305 is a low-density prehistoric site consisting of lithic tools, a core, and FCR. All artifacts were found on the eroded surface. None of the three shovel tests revealed any subsurface artifacts or features. These factors suggest that the site lacks integrity. The site did not contain any temporal diagnostics or features that could be radiocarbon dated. The low density of artifacts, the lack of site integrity, and the lack of temporal diagnostics and/or the potential for radiocarbon dates suggest that 41BX2305 is not likely to yield additional information to the understanding of prehistory. It is not recommended for listing as a SAL, and it is not recommended eligible for inclusion to the NRHP.

41BX2306

Site 41BX2306 consists of dry-stacked limestone walls delineating historical property boundaries and, possibly, land use within the APE. In addition, a corral and animal pen are included within the components of this site due to similar construction and material. During the survey, five features (1-5) and two sub-features (3.1 and 3.2) were identified (Figure 7-31).

Feature 1

Feature 1 (Figure 7-32) is a north to south oriented wall of dry-stacked field limestone and cobbles. The feature is approximately 40 cm in height, 75 cm in width, and 100 m in length. It is located on the western boundary of the APE. The lack of wall height and continuity suggests that significant portions of the wall have been scavenged in the past. The feature lacks structural integrity.

Feature 2

Feature 2 (Figure 7-33) is a corral or pen-like structure constructed of dry-stacked field and cut limestone. The feature is located in the northeastern part of the western portion of the APE overlooking a drainage. The L-shaped structure is heavily overgrown with brush and trees. It measures approximately 1 m in height, 35-45 cm in width, and 32 m in length. If it is a pen, the northern and eastern portions of the feature no longer exist and lack structural integrity. However, the western section appears to retain some structural integrity through its wall height. Overall, the feature has moderate structural integrity.

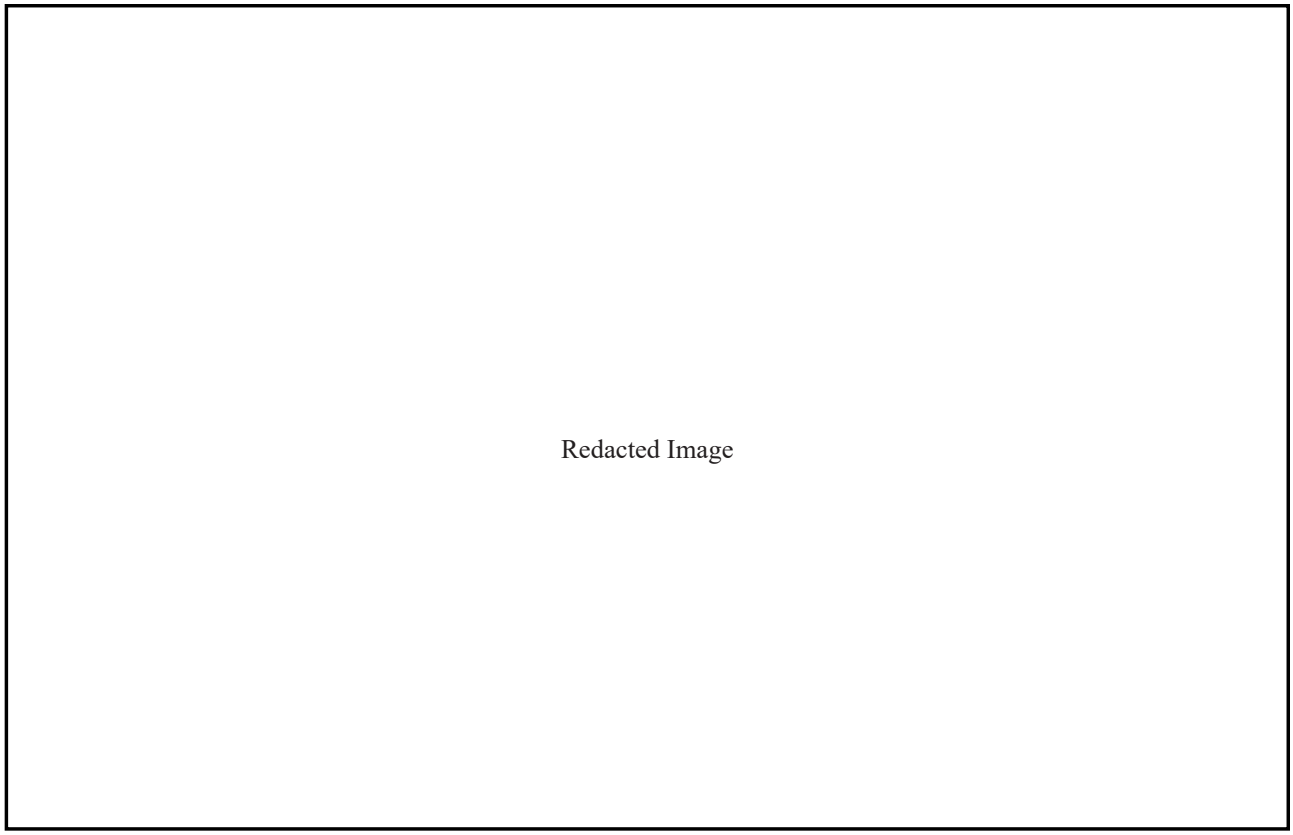

Figure 7-31. Site map of 41BX2306 showing the locations of dry-stacked stone features found during the survey on an Esri topographic map with 1 m contours.

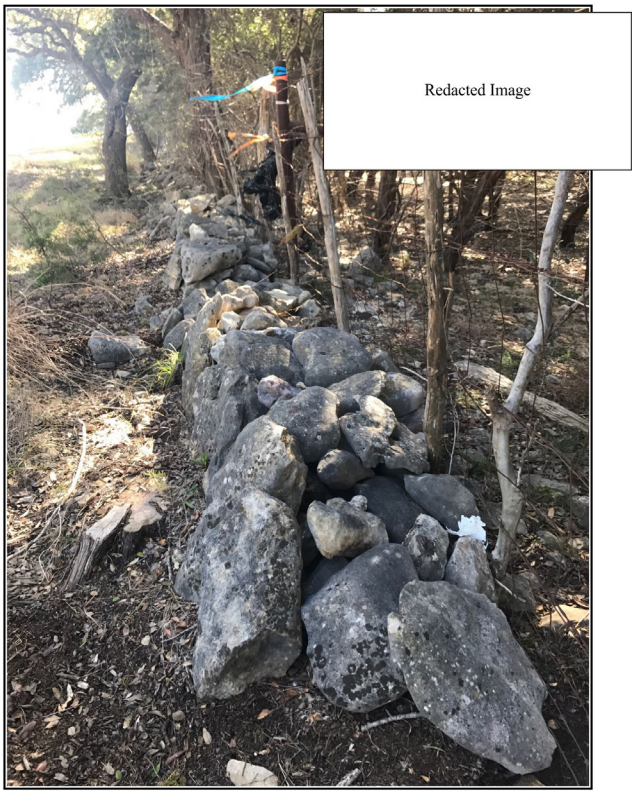

Figure 7-32. View to the north of 41BX2306 Feature 1.

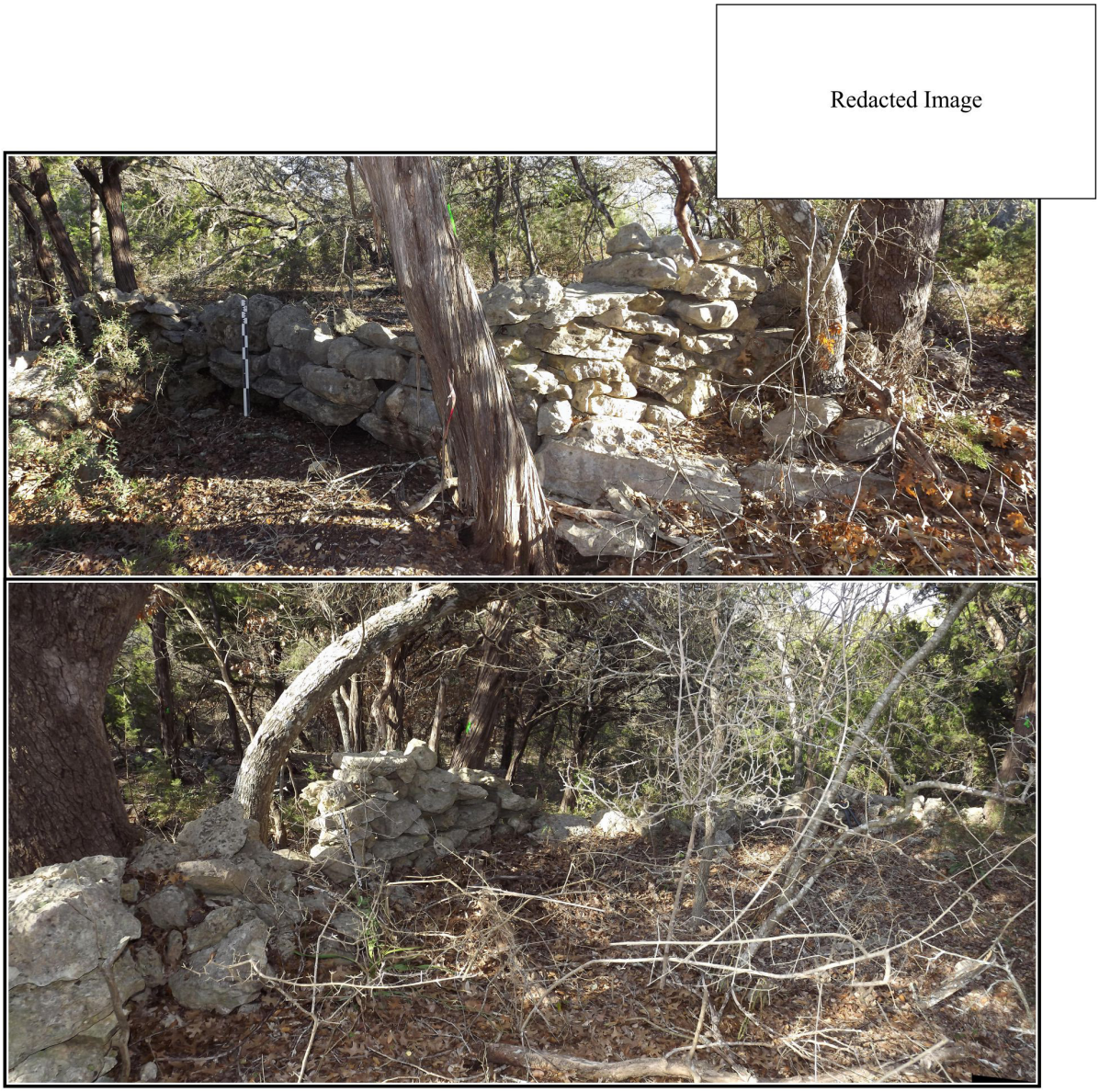

Figure 7-33. Views of 41BX2306 Feature 2. The top image is an exterior view orientated to the northwest. The bottom image is an interior view to the southeast.

Feature 3

Feature 3 is a north to south oriented wall dividing the western and central portions of the APE, which are a mixture of overgrown pasture and plowed field (Figure 7-34). The feature is a dry-stacked field limestone 1-3 courses high. It measures approximately 20-40 cm in height, 30 to 45 cm in width, and 405 m in length. There are several breaches in the wall, and the northern section is heavily overgrown with brush and trees. It appears that significant portions of the wall have been scavenged in the past as characterized by its low height. However, the length of the feature suggests some integrity. Overall, the feature has moderate to low structural integrity.

Features 3.1 and 3.2

Features 3.1 and 3.2 are components of Feature 3 because they are located adjacent and within Feature 3. Feature 3.1 is an L-shaped pen constructed of dry-stacked field limestone with a sheet metal/wood hutch (Figure 7-35). Feature 3.1 is formed from an east wall section of Feature 3 and a south wall placed perpendicular to it running 20 m to the west. The north and west walls of Feature 3.1 were not found and may have been destroyed. Feature 3.1 appears to have been severely damaged by unknown processes and lacks structural integrity.

Feature 3.2 (Figure 7-36) consists of two parallel, east to west oriented walls approximately 10 m in length with a gully

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Figure 7-34. Views of 41BX2306 Feature 3. The top image is a view to the north of the wall. The bottom image is a view to the east of the feature.

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Figure 7-35. Views of 41BX2306 Feature 3.1. The top image is a view to the northwest showing the hutch of the wall. The bottom image is an interior view to the southeast.

Figure 7-36. View to the east of 41BX2306 Feature 3.2. It shows two toppled or collapsed wall alignments oriented east to west.

between them. The walls are orientated perpendicular to the eastern side of Feature 3. The feature may serve to direct excess water from the field to the drainage. Both walls appear to have toppled or collapsed and lack structural integrity.

Feature 4

Feature 4 (Figure 7-37) is a north to south oriented wall located in the eastern portion of the APE. It is constructed of multiple courses of dry-stacked field limestone. It measures approximately 1-1.2 m in height, 40-50 cm in width, and 320 m in length. There are several breaches in the wall, and the northern section of the feature appears to have been destroyed by previous road construction. However, there are sections of the feature that retain structural integrity as characterized by the height of the wall and by its intact length.

Feature 5

Feature 5 (Figure 7-38) is an east to west oriented wall located in the eastern portion of the APE. The area is heavily overgrown with brush and briar. Its construction consists of one to two courses of dry-stacked field and quarried limestone. It measures 15-30 cm in height, 30-40 cm in width, and 40 m in length. It appears to have been impacted by unknown processes, including removal of sections of the feature, suggesting it no longer has structural integrity.

The features of 41BX2306 are believed to date from the mid-to-late nineteenth century to the early twentieth century. They are commonly referred to as "German fences" because German immigrants constructed stone fences in lieu of wooden fences in the Hill Country region of Texas (Jordan 1966; Knott 2004). The popularity of this construction method was in part due to limestone's abundance. The stone walls also served the dual purpose of clearing land intended for agriculture. Jordan (1966) describes the construction as a family effort, which included children, to enclose property, fields, gardens, corrals, and pastures (Jordan 1966:165). Knott (2004) suggests that so-called "German fences" are an integral part of the cultural and historical landscape of Texas deserving of protection.

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Figure 7-37. View to the northeast of 41BX2306 Feature 4.

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Figure 7-38. View to the northwest of 41BX2306 Feature 5.

Figure 7-39 shows the relationship of the five features (41BX2306) to identified properties overlain on the Stoner System map. Feature 1 falls with a subdivision in Vogt's property, and Feature 4 aligns with the property boundary between Calvert and Stahl. Features 2 and 3 fall within Stahl's property, but they do not appear on the Stoner System map. These features may delineate land use between farmed (cultivated) and pasture, which may also be the case for Feature 5 on Calvert's property.

Based on deed research, the features associated with 41BX2306 likely represents agricultural practices ascribed to German ethnic farmers of the late nineteenth and early twentieth centuries. All the features that comprise the site have been impacted to some degree by past activities and lack of maintenance. However, Features 2, 3, and 5 appear to have sufficient integrity for listing as a SAL, as they suggest the site possesses unique or rare attributes concerning Texas history (Dase et al. 2010). The three features also appear to warrant inclusion to the NRHP under Criterion A, as an example of an ethnic group's adaptation and use of vernacular architecture (Dase et al. 2010). Features 1, 3.1, 3.2, and 5 lack sufficient structural integrity and do not contribute to recommendations of the site's eligibility listing as a SAL or for inclusion to the NRHP.

Summary

CAR recorded nine new archaeological sites in the ACCD-NC APE: 41BX2298, 41BX2299, 41BX2300, 41BX2301, 41BX2302, 41BX2303, 41BX2304, 41BX2305, and 41BX2306. The majority of the sites are prehistoric lithic scatters (41BX2299, 41BX2300, 41BX2301, 41BX2302, 41BX2303, 41BX2304, and 41BX2305). One site (41BX2299) contained two subsurface FCR features, FCR, and a biface fragment. One historical site (41BX2306) consists of rock walls and a pen that may reflect regional agricultural heritage of the late nineteenth and early twentieth centuries. The ninth site (41BX2298) consists of a FCR feature of unknown temporal contexts. Table 7-4 summarizes their characteristics, the investigations conducted in association with them, and CAR's SAL and NRHP eligibility recommendations.

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Figure 7-39. Identified features from 41BX2306 overlain on the Stoner map. The APE is highlighted in red.

Table 7-4. Summary of Archaeological Sites and SAL/NRHP Eligibility Recommendations

			Chronological Potential		Site Integrity	Site Content		
Site (41BX…)	**Site Size m²**	**No. of Shovel Tests Excavated**	**Temporal Diagnostics**	**Radiocarbon Potential**	**Soil Deposition**	**Number of Features**	**Surface Artifact Density per m²**	**SAL and NRHP Eligibility Recommendations**
2298	80	4	none	yes	subsurface deposits	1	low	Unknown
2299	535	8 + 3 trenches	none	none	subsurface deposits	2	low	Eligible
2300	344	8	none	none	poor, no subsurface deposits	0	low	Not Eligible
2301	315	4	yes; projectile points	yes	poor, no subsurface deposits	0	low	Not Eligible
2302	2473	6	none	none	poor, no subsurface deposits	0	low	Not Eligible
2303	389	4	none	none	poor, no subsurface deposits	0	low	Not Eligible
2304	560	5	none	none	poor, no subsurface deposits	0	low	Not Eligible
2305	843	3	none	none	poor, no subsurface deposits	0	low	Not Eligible
2306	n/a	n/a	yes; Stoner System aerials, deeds	n/a	n/a*	5 features	n/a	Portions of the Site are Eligible

*Portions of the overall of the site retain some structural integrity; see feature description in this chapter

Chapter 8: Summary and Recommendations

This final chapter presents a summary of the ACCD-NC project and its findings. The chapter provides recommendations for future work related to the nine new archaeological sites recorded during this project.

Project Summary

From December 13, 2018, through February 21, 2019, CAR conducted an intensive pedestrian survey of a 145 acre tract of land in northern Bexar County. The objective of the survey was to identify and document archaeological and historical properties. The property is owned by ACCD, a political subdivision of Texas. The work was done under contract with Adams Environmental, Inc.

CAR excavated 113 shovel tests during the survey. Only nine of the tests were positive for archaeological material. Twelve trenches were also excavated. Only one of the 12 trenches contained archaeological material. That trench had two burned rock features.

Based primarily on surface finds, CAR identified nine sites: 41BX2298, 41BX2299, 41BX2300, 41BX2301, 41BX2302, 41BX2303, 41BX2304, 41BX2305, and 41BX2306. Seven of the nine sites date to the prehistoric period with six of those characterized as surface lithic scatters. The other two sites included a historical site (41BX2306), consisting of late nineteenth and early twentieth century walls, and a surface FCR feature (41BX2298) of indeterminate age. CAR archaeologists documented 14 isolated finds, including prehistoric and historical artifacts that were not associated with any site. CAR also documented three features, two dams and a mortared limestone wall, constructed in the late twentieth century as reported in Chapter 6. Given their recent age, these features were not given a site designation.

Recommendations

At present, no current construction plans have been made available to CAR or Adams Environmental, Inc. from ACCD or their design team. Therefore, the following recommendations are presented without an understanding of potential construction impacts.

Site 41BX2298 consists of an FCR feature of indeterminate age identified on the surface. One shovel test excavated in the feature contained FCR, charcoal, charred material, and burned clay, but adjacent shovel tests were negative. Not enough information was obtained from 41BX2298 to make a recommendation for listing to the NRHP or as a SAL. However, FCR was present at 40 cmbs, and charcoal sufficient for conducting radiocarbon analysis was collected from the feature. If future construction or other proposed development activities will impact the site, CAR recommends the processed charcoal sample be submitted to a radiocarbon laboratory for analysis to determine its age prior to any ground disturbing activities. If the radiocarbon results determine it is prehistoric, CAR recommends further testing to determine the status of the site's eligibility for listing as a SAL or for listing on the NRHP.

Site 41BX2299 is one of the seven prehistoric sites documented during the investigation. The site contained two subsurface FCR features identified during trench excavations. One of the features contained sufficient charcoal to collect a sample for radiocarbon processing. In addition, a biface and FCR were found in two associated shovel tests. Based on shovel test artifacts features, it appears the deposit of archaeological material is situated between 30-60 cmbs and is distinct and relatively intact. Based on the site's integrity, the presence of features, and the strong potential for radiocarbon dates, CAR recommends that site 41BX2299 is eligible for listing as a SAL under Criteria 1 and 2 and listing on the NRHP under Criterion D. CAR recommends avoiding the site, if possible. If future construction or other development activities will impact the site, CAR recommends the processed charcoal sample be submitted to a radiocarbon laboratory for analysis to determine the temporal placement of the deposits, as well as additional archaeological investigation to mitigate adverse effects to the site.

Six of the sites (41BX2300, 41BX2301, 41BX2302, 41BX2303, 41BX2304, and 41BX2305) are surficial lithic scatters with little research potential. CAR recommends these sites are not eligible for listing as SALs or listing on the NRHP. No further investigation is warranted at these site locations. However, note that many of these archaeological sites were identified in the central portion of the APE, suggesting a strong potential for additional archaeological sites in this area. CAR recommends monitoring ground disturbing activities in the central portion of the APE.

Lastly, CAR recorded site 41BX2306 that consisted of multiple late nineteenth- and early twentieth-century stone walls. The dry-stacked limestone walls delineated property boundaries and possible land use within the APE. As noted, this type of wall construction was commonly referred to as

"German fences" because German immigrants to the Hill Country constructed stone fences in lieu of wooden fences (Jordan 1966; Knott 2004). The stone walls are a reminder of past land use, and they are an integral part of the cultural and historical landscape. CAR recommends that portions of the site, Feature 2, 3, and 4 retain sufficient structural integrity for listing as a SAL and are eligible to the NRHP under Criterion A. CAR recommends that those portions lacking structural integrity, Features 1, 3.1, 3.2, and 5, do not contribute to its eligibility for listing as a SAL or NRHP. If future construction or other development activities will impact the site, CAR recommends representative portions of the site be avoided or incorporated into the final project design with signage explaining the historical significance of the features. If this is not possible, in consultation with the THC, representative portions of the site could be selected and documented in detail by a qualified architectural historian as a means to mitigate adverse effect to those features having structural integrity.

The THC concurs with CAR's recommendations that 41BX2299 and 41BX2304 be designated SALs and eligible for listing on the NRHP and with CAR's recommendation that sites 41BX2300, 41BX2301, 41BX2302, 41BX2303, 41BX2304, and 41BX2305 are not eligible for designation as SALs or for listing on the NRHP. According to the THC, site 41BX2306 should be avoided or further mitigated if it will be impacted by future construction or development activities. Finally, based on the density of archaeological sites CAR documented, the THC recommends archaeological monitoring of construction within the central portion of the project area.

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Bexar County Deed Record (BCDR)
On file at Bexar County Courthouse, San Antonio, Texas. Electronic documents, http://gov.property.info.com/TX-Bexar/Default/aspx, accessed August 2019.

Year	Vol.:Page(s)	Instrument	Grantor	Grantee
1837	D1:74-76	Deed	Board of Land Commissioners	José Ramon Arocha
1837	D1:74-76		José Ramon Arocha	Ludovic Colquhoun and William H. Steele
1838	E1:259-260	Assignment	William H. Steele	J. Pinckney Henderson
1838	A2:63	Assignment	Board of Land Commissioners	Antonio Cruz
1838	1:73	Certificate	Antonio Cruz	John R. Cunningham
1847	D2:415-419	Deed	J.P. Henderson	Ludovic Colquhoun
1847	E2:20-24	Deed	Ludovic and Francis (wife) Colquhoun	Sterling Neblett
1856	N2:99-101	Deed	Sterliing Neblett	James H. Claiborne
1856	O1:289-290	Deed	Estate of Hugh M. Cunningham	Miles W. Johnson
1858	P2:544	Deed	Miles W. Johnson	Geunbath Winn
1858	R2:96-97	Deed	Miles W. Johnson	George and John Glenn
1858	R2:97-98	Deed	George and John Glenn	F.W. Schaeffer
1859	R1:148-149	Deed	Miles W. Johnson	Richard Simmons
1859	R1:234-235	Deed	F.W. Schaeffer	Guenbath Winn and Richard Simmons
1860	S1:227-228	Deed	F.W. Schaeffer	Leaman Field
1871	V3:150-151	Deed of Trust	J.H. Claiborne and Helen Sommerville	J.H. Cooper
1873	2843:194-196	Deed	James H. Claiborne and Helen Sommerville	Jesse J. Busby
1875	2:390-393	Deed	Estates of Geunbath Winn and Richard S. Simmons	Mathias and Fredericke Baumann
1877	5:353	Deed	Jesse J. Busby	Dr. Benjamin and Jennie Knox Hester
1879	9:267	Deed	B.L. and Jennie Hester	George Calvert and John Airton

1880	16:182-184	Deed	Estate of J.H. Cooper	(Johann) Ada Schlather
1887	53:35-38	Deed	Johann and Anna (Sophia) Schlather	Otto Wehe
1892	114:173	Deed	Mathias and Fredericke Bauman(n)	Paul and Dorothea Vogt
1901	199:310-313	Deed	Otto and Emma Wehe	Henry and Lina Prause
1905	374:189-190	Deed	Henry and Lina Prause	Rudolph and Ida Scheele
1909	304:171-172	Deed	John Airton	Elizabeth Calvert
1911	366:454-455	Deed of Trust	Rudolph and Ida Scheele	Louis F. and Katie Stahl
1911	373:254-255	Deed	Paul and Dorothea Vogt	Edward C. and Meta Vogt
1925	817:289-290	Deed	Louis F. and Katie Stahl	August Stahl
1929	1087:562-564	Deed	George and Elizabeth Calvert	James Calvert
1932	1323:337-338	Deed	James Calvert	Bexar County
1939	1410:278-280	Deed	James Calvert	San Antonio Public Service Company
1947	2395:208-209	Deed	Edward and Meta Vogt	Z. Clamp, L. Goodwin, H. Farrish, V. Wilke, and W. Zimmermann
1955	3657:443-444	Deed	James Calvert	Bexar County
1963	4925:48-49	Deed	James Calvert	State of Texas
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1979	1786:769-773	Affidavit	August Stahl	Public

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Appendix A:
Summary and Relevant Correspondence

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The following summarizes relevant correspondence between the Center for Archaeological Research (CAR) and the Texas Historical Commission (THC) concerning the Alamo Community College District's (ACCD) plan to develop a campus in north Bexar County. Dr. P. Shawn Marceaux, former director of CAR, was granted Antiquities Permit No. 8671 to conduct an intensive survey with shovel testing of 145 acres for the proposed campus.

The fieldwork was slated to begin on December 11, 2018, with Leonard Kemp as the Project Archaeologist. Upon arrival to the property, a significant portion of the central and eastern portion of the project area had been impacted by recent construction of a field office, parking area, staging area, enclosed work yard, and a burrow pit for the TxDOT Interstate 10 project. Dr. Marceaux informed the then project reviewer for THC, Dr. Casey Hansen, of this situation and initiated email correspondence (dated December 11 and 12, 2018) with Adams Environmental, Inc. (AEI), the contractor for environmental and cultural resources investigations, and Bain-Medina-Bain, Inc. who contracted AEI, the construction company J3, LLC (the occupants of these facilities), and ACCD.

J3, LLC responded that construction was conducted under the authority of the Texas Department of Transportation (TxDOT project CSJ-0072-06-074 and CSJ-0072-07-070). In a December 11, 2018, email to AEI and BMB, Marceaux states that: "In terms of the archaeological work, we [CAR] will complete the survey to the extent we can. We plan to restart on Thursday. We will let you and the THC know if the scope [of work] needs significant changes."

An email (December 11, 2018) sent by Kemp to CAR's GIS technician concerning project changes shows the shovel test distribution used during the investigation. No further emails concerning changes in the scope of work implemented by CAR have been found. It appears that most of the discussion with THC concerning any scope of work changes took place over the telephone.

The following are emails from Bill Martin of THC and Scott Pletka of TxDOT concerning the TxDOT project on the ACCD property.

From: Bill Martin

Sent: Wednesday, December 19, 2018 1:03 PM

To: Casey Hanson <Casey.Hanson@thc.texas.gov>; Pat Mercado-Allinger <Pat.Mercado-Allinger@thc.texas.gov>

Subject: FW: TXDOT project question

I did ask Scott about this, but he just now got back to me. I assume this is the same project we talked about earlier.

From: Scott Pletka <Scott.Pletka@txdot.gov>

Sent: Wednesday, December 19, 2018 1:00 PM

To: Bill Martin <Bill.Martin@thc.texas.gov>

Subject: RE: TXDOT project question

007207070 is not a standalone project. This CSJ is associated with another CSJ, 007206074. We completed our review of project 007206074 back in 2016, concluding that the project didn't warrant survey based on a background study.

-Scott

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Appendix B:
Shovel Test Results

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Table A-1. Shovel Test Results

Shovel Test Number	Terminal Depth	Artifact Recovery	Soil Type
1	60	0	Ca
2	60	0	Ca
3	60	0	Cb
4	60	0	Ca
5	60	0	Ca
6	35	0	Cb
7	60	0	Ca
8	18	0	Cb
10	25	0	Cb
11	19	0	Cb
12	23	0	Cb
13	30	0	Cb
14	60	0	Ca
15	60	0	Ca
16	60	0	Ca
17	60	0	Ca
18	60	0	Ca
19	60	0	Ca
20	27	0	TaB
21	15	0	Cb
22	45	0	Cb
23	15	0	Cb
24	10	0	Cb
25	40	0	Cb
26	45	0	Cb
27	60	0	Ca
28	60	0	Ca
29	60	0	Ca
30	60	0	Ca
31	60	0	Ca
32	60	0	Ca
33	60	0	Ca
34	42	0	BsC
35	40	0	Cb
36	30	0	Cb
37	25	0	Cb
38	20	0	Cb
40	29	0	Ca
41	60	0	Ca
42	60	0	Ca
43	60	0	Ca

Table A-1. Shovel Test Results, continued...

Shovel Test Number	Terminal Depth	Artifact Recovery	Soil Type
44	60	0	Ca
48	20	0	Cb
49	10	0	LvA
51	60	0	VaB
53	20	0	Cb
54	60	0	Ca
55	60	0	Ca
56	60	0	Ca
61	28	0	Cb
63	35	0	LvA
64	60	0	LvA
65	60	0	LvA
67	60	0	VaB
68	60	0	VaB
69	60	0	Cb
70	30	0	Ca
71	60	0	Ca
72	60	0	Ca
73	60	0	Ca
74	60	0	Ca
75	60	0	Ca
76	50	0	Ca
77	50	0	LvA
78	49	0	VaB
79	60	0	Tf
80	60	0	Ca
100	60	0	Ca
102	28	0	Ca
103	30	0	Ca
200	60	0	Ca
201	60	0	Ca
202	60	0	Ca
203	60	0	Ca
100 E1	40	0	Ca
100 S1	40	0	Ca
100 W1	40	0	Ca
101 N1	55	0	Ca
101 S1	35	0	Ca
102 E1	40	0	Ca
102 N1	40	0	Ca
102 W1	30	0	Ca

Table A-1. Shovel Test Results, continued....

Shovel Test Number	Terminal Depth	Artifact Recovery	Soil Type
39 E2	20	0	Cb
39 N1	25	0	Cb
39 N2	24	0	Cb
39 S2	35	0	Cb
39 W1	20	0	Cb
52 N1	60	0	VaB
52 S1	48	0	Cb
52 W1	10	0	VaB
66 E1	60	0	VaB
66 E2	52	0	VaB
66 N2	60	0	VaB
66 S1	60	0	VaB
66 W1	60	0	VaB
66 W2	49	0	VaB
72 E1	40	0	Ca
72 W1	20	0	Ca
74 E1	40	0	Ca
74 W1	40	0	Ca
9 E1	43	0	Cb
9 N1	40	0	Cb
9 S1	41	0	Ca
9 W1	30	0	Ca
9	49	1	Cb
39	20	1	Cb
50	19	1	Cb
52	60	1	VaB
66	60	1	VaB
101	48	1	Cb
39 E1	23	1	Cb
39 S1	29	1	Cb
66 N1	30	1	VaB
45	not excavated		TxDOT
46	not excavated		TxDOT
47	not excavated		TxDOT
57	not excavated		TxDOT
58	not excavated		TxDOT
59	not excavated		TxDOT
60	not excavated		TxDOT
62	not excavated		TxDOT