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Intensive Archeological Survey for Proposed Wastewater Improvements City of Anton, Hockley County, Texas

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Intensive Archeological Survey for Proposed Wastewater Improvements City of Anton, Hockley County, Texas

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INTENSIVE ARCHEOLOGICAL SURVEY FOR PROPOSED WASTEWATER IMPROVEMENTS CITY OF ANTON, HOCKLEY COUNTY, TEXAS

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Under

Texas Antiquities Permit 7442

Cox | McLain Environmental Consulting, Inc. Archeological Report 110
(CMEC-AR-110)



December 15, 2015

Management Summary

In October 2015, an intensive archeological survey was completed in order to inventory and evaluate archeological resources within a parcel of land where wastewater improvements are planned for the City of Anton, Hockley County, Texas. The planned improvements include a new wastewater plant/pump station, facultative lagoon, holding pond, and effluent application area. The archeological area of potential effects (APE) is a triangular parcel of land that measures approximately 0.45 by 0.47 by 0.62 miles (0.72 by 0.76 by 1.0 kilometers) and covers approximately 72 acres (29 hectares). The APE is on a level upland adjacent to Yellowhouse Draw. The work was carried out under Texas Antiquities Permit 7442 by Virginia Hatfield of Cox | McLain Environmental Consulting, Inc. (CMEC), a subcontractor to Parkhill, Smith and Cooper, Inc. (PSC).

Ground surfaces within the APE were highly visible (100 percent across the entire APE) as the parcel of land has been utilized for agricultural activities, most recently hay. Six shovel tests were excavated, with a focus on southern edge due to the proximity of Yellowhouse Draw. All shovel tests were negative and revealed relatively shallow soils with the B horizon occurring at around 30 to 35 centimeters below the surface (cmbs).

All materials (notes, photographs, administrative documents, and other project data) generated from this work will be housed at the Center for Archaeological Studies (CAS) at Texas State University, where they will be made permanently available to future researchers per 13 Texas Administrative Code (TAC) 26.16-17.

If any unanticipated cultural materials or deposits are found at any stage of clearing, preparation, or construction, the work should cease and Texas Historical Commission (THC) personnel should be notified immediately. The Texas Historical Commission (THC) concurred with the findings and recommendations of this report on November 30, 2015 (see Appendix A).

Table of Contents

	Page
1.0 INTRODUCTION.....	1
Overview of the Project.....	1
Methodological and Logistical Considerations.....	1
Structure of the Report.....	1
2.0 ENVIRONMENTAL AND CULTURAL CONTEXT.....	3
Topography, Geology, and Soils	3
Vegetation, Physiography, and Land Use	3
Archeological Chronology for the Southern High Plains	3
3.0 RESEARCH GOALS AND METHODS.....	7
Purpose of the Research.....	7
Section 106 of the National Historic Preservation Act	7
The Antiquities Code of Texas.....	9
Survey Methods and Protocols.....	10
4.0 RESULTS AND RECOMMENDATIONS	11
General Field Observations	11
Recommendations.....	16
5.0 REFERENCES	17

List of Figures

Figure 1	Location of archeological APE	2
Figure 2	Location of shovel tests.....	12
Figure 3	View east of northwest portion of APE	13
Figure 4	View north of APE from southeast corner	13
Figure 5	View east of APE from eastern edge of APE	14
Figure 6	Planview of shovel test 4, showing typical deposits.....	15
Figure 7	Planview of shovel test 1, showing evidence of bioturbation.....	15

List of Tables

Table 1	Archeological Chronology for the High Plains in Texas.....	4
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Appendices

Appendix A	Regulatory Correspondence
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1.0 INTRODUCTION

Overview of the Project

The City of Anton has proposed to construct a new wastewater plant/pump station, facultative lagoon, holding pond, and effluent application area southeast of Anton, Hockley County, Texas (**Figure 1**). The archeological area of potential effects (APE) is a triangular parcel measuring approximately 0.45 by 0.47 by 0.62 miles (0.72 by 0.76 by 1.0 kilometers) and covers approximately 72 acres (29 hectares). Impacts will extend to a maximum depth of 14 feet in approximately 10 percent of the APE and will be minimal in the remaining 90 percent, since the treatment protocol calls for surface application of effluent within a cultivated field. The entire APE is in a plowed hay field that has been recently harvested.

The project is subject to both the Antiquities Code of Texas (9 TNRC 191) due to the City's involvement and Section 106 of the National Historic Preservation Act (NHPA), as amended (16 USC 470; 36 CFR 800), due to funding from the U.S. Environmental Protection Agency (EPA) dispersed through the Texas Water Development Board (TWDB). All materials generated from this work will be permanently housed at the Center for Archaeological Studies (CAS) at Texas State University per Texas Administrative Code (TAC) 26.16 and 26.17.

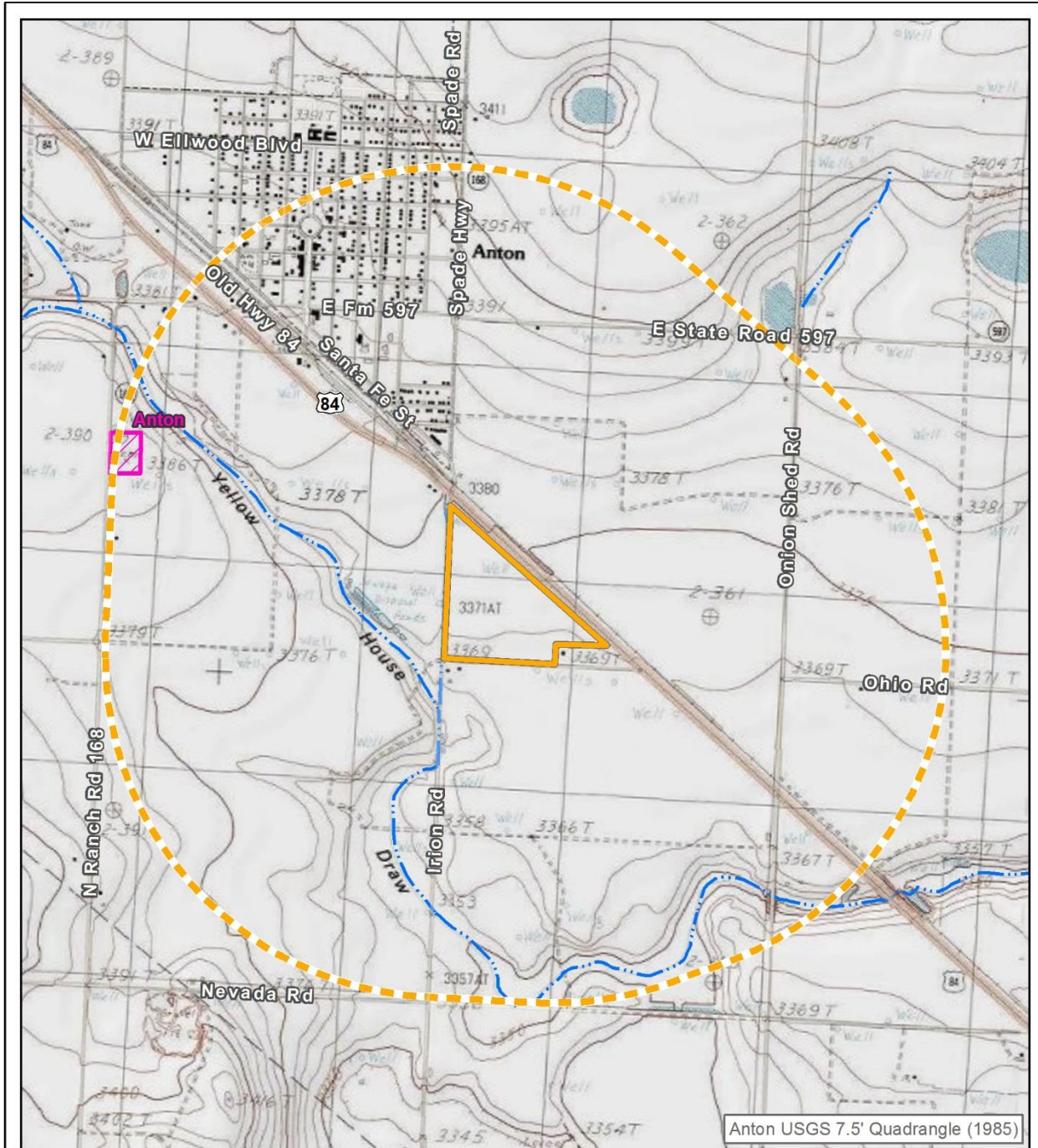
Methodological and Logistical Considerations

Virginia Hatfield (Project Archeologist) of Cox|McLain Environmental Consulting, Inc. (CMEC), performed the fieldwork in October 2015 as a subcontractor to Parkhill, Smith and Cooper, Inc. (PSC).




Six shovel tests were placed judgmentally within the APE based on observed disturbance levels and ground surface visibility. All shovel tests were placed based on guidelines established by the Council of Texas Archeologists (CTA) and approved by the Texas Historical Commission (THC). The methods employed during this study and relevant constraints are discussed further in Chapters 3 and 4.

Structure of the Report

Following this introduction, Chapter 2 presents environmental parameters, a brief cultural context, and a summary of previous archeological research near the APE; Chapter 3 discusses research goals, relevant methods, and the underlying regulatory considerations; Chapter 4 presents the results of the survey and summarizes the implications of the investigations, and references are in Chapter 5.



Anton USGS 7.5' Quadrangle (1985)

-  Project APE
-  1-mile Buffer of APE
-  Cemetery

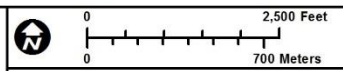
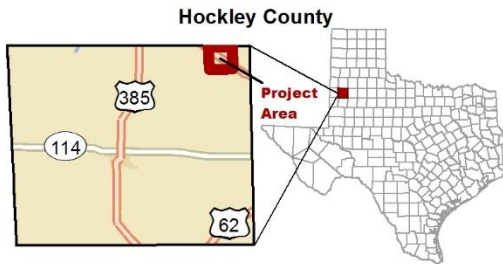


Figure 1
Location of Archeological APE

COX | McLAIN
Environmental Consulting

Prepared for: City of Anton	1 in = 2,500 feet
Prepared by: SL	Scale: 1:30,000
	Date: 8/14/2015

Sources: THC (2015), TARL (2015), NHD (2014), National Geographic Society (2013)

G:\Projects\CityofAnton\Anton_WWTP\Arch_Figure 1_20150814.mxd

2.0 ENVIRONMENTAL AND CULTURAL CONTEXT

Topography, Geology, and Soils

The APE is located at an elevation of approximately 3,400 feet above mean sea level on a level upland adjacent to Yellowhouse Draw. Surface geology consists of Pliocene sand, silt, clay, gravel, and/or caliche of the Ogallala Formation and Pleistocene windblown cover sand (USGS 2015). According to Natural Resources Conservation Service (NRCS) data, soils are mapped as Olton clay loam and Estacado loam, both on 0-1 percent slopes (NRCS 2015). Although both map units have deep overall profiles, the landscape has been relatively stable in this area throughout the Holocene and there is low potential for deeply buried deposits. Closer to Lubbock, Yellowhouse Draw widens and deepens to become one of the most archeologically important drainages in Texas, but in the vicinity of the current APE it is a minor ephemeral stream, its north bank (i.e., the bank closest to the APE) already disturbed by an existing wastewater treatment facility.

Vegetation, Physiography, and Land Use

The project is located in the High Plains ecoregion (Gould 1960), falling in the Llano Estacado sub region (Griffith et al. 2004). The High Plains are characterized by generally low topographic relief; relief on the landscape is primarily in the form of seasonal playa lakes and draws, like Yellowhouse Draw mentioned above. The area often gets little rainfall so playas are important to supporting small mammals, birds, and amphibians.

According to the Texas Parks and Wildlife Department's (TPWD) *Vegetation Types of Texas* map and accompanying descriptions the APE, and in fact nearly all of Hockley County, is mapped as cropland (McMahan et al. 1984). Average annual precipitation in this region is reported to be between 16 and 20 inches from 1981 to 2010 (SCAS 2000). Although rainfall likely fluctuated throughout prehistory (detailed below), the region generally tends to be dry.

Archeological Chronology for the Southern High Plains

The APE is in the Southern High Plains archeological region, which extends into eastern New Mexico (Johnson and Holliday 2004; Perttula 2004). The Southern High Plains is also known as the Llano Estacado. The Llano Estacado is a large plateau that is bounded by the Caprock Canyonlands to the east, the Canadian River to the north, and the Mescalero Escarpment to the west.

Table 1 presents the chronology of the Southern High Plains. Following Perttula (2004:9), **Table 1** combines the chronology of the Southern High Plains and the Panhandle into one region, simply known as the "High Plains."

Table 1: Archeological Chronology for the High Plains in Texas*

Period	Years Before Present (BP)**
Early Paleoindian	11,500–10,500
Late Paleoindian	10,500–8,500
Archaic	8,500–2,000
Ceramic (Late Prehistoric)	2,000–1,000
Antelope Creek	1,000–500
Protohistoric	500–250

* After Perttula 2004: 9, Table 1.1
 ** Based on uncalibrated radiocarbon dates, which are typical in Texas archeology (see Perttula 2004:14, Note 1).

Johnson and Holliday (2004:294-295) note that the Late Quaternary paleoenvironmental records of the Southern Plains are well preserved in the draws, dunes, and lake basins, with draws providing the most complete and sensitive environmental record available. Likewise, the known archeological record provides a lengthy and rich heritage for the region with people living on and using the Southern Plains for at least 11,000 years and possibly longer due to the ample and varied natural resources available. Climate changes over the millennia determined the availability and variety of resources, but the occupation of the Southern Plains generally consisted of small, mobile groups making repeated, short-duration, seasonal visits to resource gathering and residential areas. Below more specific information about the Paleoindian, Archaic, Ceramic, and Historic Periods is presented.

Paleoindian finds are common on the upland areas in the region, but usually have poor context (Johnson and Holliday 2004). There are just over a dozen documented Clovis sites known in the region. Lubbock Lake is probably one of the best known sites in the region and is approximately 30 km or 19 miles southeast of the APE. As mentioned above, the Lubbock Lake site, is located along Yellowhouse Draw, like the current APE, although the draw is a far more substantial drainage at Lubbock Lake. The majority of the draws that cross this region are expected to have developed in the Late Pleistocene or Early Holocene (Johnson and Holliday 2004). These streams likely flowed until around 9500 B.P. From around the beginning of the Paleoindian Period there is a general warming trend in the region; this warming and drying trend continued into Archaic Period. During warmer, drier periods, finding potable water in this region is one of the biggest limitations to occupation. Water would likely only be seasonally available in larger playas or salinas and that water could be brackish or salinized (Johnson and Holliday 2004). This climatic change is reflected in the Archaic record as very few Archaic sites are known in the region. There are only two documented sites in the region that were found to have intact Archaic Period deposits and have also been excavated. Lubbock Lake is one of the two (San Jon is the other and is located in eastern New Mexico). Although the region was likely a harsh place to live at that time, there is evidence at Lubbock Lake that at least *that* site was intensely used. That is shown by the presence of camping areas, bison kill and butchery areas, and at least one oven (Johnson and Holliday 2004). At the end of Archaic Period cooler and moister conditions returned, the vegetation changed, and potable water was more readily available.

From 2000 to 1000 B.P. there is a transition in the region from Archaic Period to what is called the Ceramic Period, demonstrated by the presence of ceramics and the bow and arrow (Johnson and Holliday 2004). This transition took place over time as demonstrated by the instances of Archaic dart points found with arrow points and ceramics. Ceramics are not present at every Ceramic Period site in the region, including Lubbock Lake, where radiocarbon assays and stratigraphy indicate that it was occupied during the Ceramic Period. Johnson and Holliday's chronology for the region varies slightly than the chronology presented in **Table 1**, generally Johnson and Holliday (2004:284) combine the Ceramic Period and the Antelope Creek Period into one longer Ceramic Period dating from 2000 BP to AD 1450. The Antelope Creek Phase is not discussed herein as is defined to the most northern portion of the Texas Panhandle and is not known to extend into Hockley County; for a discussion on Antelope Creek, see Brooks 2004.

The shifts between wetter and drier conditions has been occurring at a faster rate during the last two thousand years (Ceramic to Historic Period) than in the years preceding (Paleoindian to Archaic Period). These drier periods have led to a decrease in vegetation during the drier times, which can increase levels of erosion, which in turn leads to less preserved archeological record. This is also true in the Protohistoric and Historic Period. Documented aboriginal sites from the Protohistoric and Historic Period (like the Ceramic Period that precedes them) are poorly stratified and far and few between (Johnson and Holliday 2004). One exception is, again, the Lubbock Lake site, where stratified Protohistoric and Historic aboriginal occupations are present. Other aboriginal historic sites include rock art sites and several Comanche occupations. Historic aboriginal sites are marked by the appearance of European trade goods, like seed beads, and the appearance of the horse.

Further, detailed descriptions of the archeological chronology will not be presented here; for further discussion regarding the prehistory of the Llano Estacado the reader is referred to Hofman et al. (1989) and Johnson and Holliday (1995; 2004).

Historic Context

The project area lies at the southern end of the Great Plains, which was often home to large, grazing bison (or buffalo) herds. Large bison herds were first documented by the Spanish when they passed through the Panhandle region (north of the APE) in 1521 on Francisco Vazquez de Coronado's expedition (Newcomb 1961; Rathjen 2014). European occupation in the Southern High Plains began with the arrival of bison hunters in the mid- to late nineteenth century (Johnson and Holliday 2004), although it is possible the Spanish entered Hockley County earlier in the sixteenth century (Leffler 2015). Much of the history, like the prehistory, of the area revolves around Yellowhouse Draw (Canyon). The name "Yellowhouse" comes from a feature of the draw in Hockley County where yellow cliff faces are exposed and were given the name Casas Amarillas or yellow houses as the cliffs resemble a city from the distance. The canyon was the scene of a battle between Comanches and buffalo hunters in March of 1877 (Davis 2015). The hunters, likely drunk on

whiskey, tracked the Comanches to the Canyon and instigated a battle. Although few were killed, the battle sparked retaliation by the U.S. military against the natives in the area.

In 1877 John and Thomas Causey established a base at Yellowhouse Canyon for their bison hunting operation (Leffler 2015). Thomas Causey was also a participant in the above mentioned Comanche battle; after the battle Causey and others set up occupations in the Canyon as a stance against the Comanche (Davis 2015). After the bison population was depleted, the Causeys went into the bone business (bison bones were used for various industries, ceramic manufacture and button making are examples). The Causeys later established a ranch, but when the XIT Ranch moved into the area, they were forced to move. The expansive XIT ranch included nearly a third of Hockley County; other large cattle ranches were soon established and these few ranchers owned nearly all the land in the county (Leffler 2015). Most small scale farms or ranches were established along the southern boundary of the county a band of land along the southern edge of the county was not included in the original survey and thus not included in the large land areas owned by the ranches.

Other than the largescale ranches, the settlement of the county was quite slow until the Sante Fe Railroad reached the area in the early 1920s (Leffler 2015). Although the Great Depression had negative impacts in the region, surprisingly the establishment of farms increased; these farms focused on cotton and sorghum. Late in the 1930s oil was discovered in the county and the economy expanded rapidly.

The City of Anton was platted from a portion of the Spade Ranch in 1924 at the site of Danforth Switch, a spur of the Pecos and Northern Texas Railway (Jenkins 2015). Early businesses included a depot, several lumber companies, a gin, a hotel and a newspaper. The next year the school was established and following that several churches were established. By 1929, the town had a bank. Like the region and Hockley County, cotton and oil were central to the economy.

Previous Investigations and Previously Identified Resources

A search of the *Texas Archeological Sites Atlas* (Atlas), maintained by the Texas Historical Commission (THC) and the Texas Archeological Research Laboratory (TARL), was conducted in order to identify archeological sites, historical markers (Recorded Texas Historic Landmarks, or RTHLs), properties or districts listed in the National Register of Historic Places (NRHP), State Antiquities Landmarks (SALs), cemeteries, or other cultural resources that may have been previously recorded in or near the APE, as well as previous surveys undertaken in the area.

According to Atlas survey coverage data, the APE has not been surveyed. No surveys were noted in the surrounding one-mile buffer surrounding the APE either. One resource was found in the Atlas search: approximately 0.9 miles west of the APE is the Anton Cemetery (HQ-C001), which contains approximately 400 burials from the 1930s to the present (THC 2015).

3.0 RESEARCH GOALS AND METHODS

Purpose of the Research

The present study was carried out to accomplish three major goals:

1. Identify all historic and prehistoric archeological resources located within the APE defined in Chapter 1.
2. Perform a preliminary evaluation of the identified resources' potential for inclusion in the NRHP and/or for designation as a SAL (typically performed concurrently).
3. Make recommendations for further research concerning the identified resources based on the preliminary NRHP/SAL evaluation and guidance on methodology and ethics from the THC and CTA.

Section 106 of the National Historic Preservation Act

Section 106 of the NHPA of 1966, as amended (16 USC 470; 36 CFR 800), directs federal agencies and entities using federal funds to “take into account the effect of their undertakings on historic properties” (36 CFR 800.1a), with “historic property” defined as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places [NRHP] maintained by the Secretary of the Interior” (36 CFR 800.16).

In order to determine the presence of historic properties (with this phrase understood in its broad Section 106 sense) an APE is first delineated. The APE is the area in which direct impacts (and in a federal context, indirect impacts as well) to historic properties may occur. Within the APE, resources are evaluated to determine if they are eligible for inclusion in the NRHP, and to determine the presence of any properties that are already listed on the NRHP. To determine if a property is significant, cultural resource professionals and regulators evaluate the resource using these criteria:

...The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association and

- a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
- b. that are associated with the lives of persons significant in our past; or
- c. 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 components may lack individual distinction; or

- d. that have yielded or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Note that significance and NRHP eligibility are determined by two primary components: integrity *and* one of the four types of association and data potential listed under 36 CFR 60.4(a-d). The criterion most often applied to archeological sites is the last—and arguably the broadest—of the four; its phrasing allows regulators to consider a broad range of research questions and analytical techniques that may be brought to bear (36 CFR 60.4[d]).

Occasionally, certain resources fall into categories which require further evaluation using one or more of the following Criteria Considerations. If a resource is identified and falls into one of these categories, the Criteria Considerations listed below may be applied in conjunction with one or more of the four National Register criteria listed above:

- a. A religious property deriving primary significance from architectural or artistic distinction or historical importance, or
- b. A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event, or
- c. A birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or building directly associated with his or her productive life, or
- d. A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events, or
- e. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived, or
- f. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance, or
- g. A property achieving significance within the past 50 years if it is of exceptional importance (36 CFR 60.4).

Resources that are listed in the NRHP or are recommended eligible are treated the same under Section 106, and are generally treated the same at the state level as well.

After cultural resources within the APE are identified and evaluated, effects evaluations are completed to determine if the proposed project has no effect, no adverse effect, or an adverse effect on these resources. Effects are determined by assessing the impacts that the proposed project will have on the characteristics that make the property eligible for listing in the NRHP as well as its integrity. Types of potential adverse effects considered include physical impacts, such as the destruction of all or part of a resource; property acquisitions that adversely impact the historic

setting of a resource, even if built resources are not directly impacted; noise and vibration impacts evaluated according to accepted professional standards; changes to significant viewsheds; and cumulative effects that may occur later in time. If the project will have an adverse effect on cultural resources, measures can be taken to avoid, minimize, or mitigate this adverse effect. In some instances, changes to the proposed project can be made to avoid adverse effects. In other cases, adverse effects may be unavoidable, and mitigation to compensate for these impacts will be proposed and agreed upon by consulting parties.

The Antiquities Code of Texas

Because the project is proposed by the City of Anton, a political subdivision of the State of Texas, the project is subject to the Antiquities Code of Texas (9 TNRC 191), which requires consideration of effects on properties designated as—or eligible to be designated as—SALs, which are defined as:

... sites, objects, buildings, structures and historic shipwrecks, and locations of historical, archeological, educational, or scientific interest including, but not limited to, prehistoric American Indian or aboriginal campsites, dwellings, and habitation sites, aboriginal paintings, petroglyphs, and other marks or carvings on rock or elsewhere which pertain to early American Indian or other archeological sites of every character, treasure imbedded in the earth, sunken or abandoned ships and wrecks of the sea or any part of their contents, maps, records, documents, books, artifacts, and implements of culture in any way related to the inhabitants, prehistory, history, government, or culture in, on, or under any of the lands of the State of Texas, including the tidelands, submerged land, and the bed of the sea within the jurisdiction of the State of Texas (13 TAC 26.2).

Guidelines for the evaluation of cultural resources as SALs and/or for listing in the NRHP, which is also explicitly referenced at the state level, are detailed in 13 TAC 26. An archeological site identified on lands owned or controlled by the State of Texas may be of sufficient significance to allow designation as a SAL if at least one of the following criteria applies:

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; or
5. The high likelihood that vandalism and relic collecting has occurred or could occur, and official landmark designation is needed to insure [sic] maximum legal protection, or alternatively further investigations are needed to mitigate the effects of vandalism and relic collecting when the site cannot be protected (13 TAC 26.10).

For archeological resources, the state-level process requires securing and maintaining a valid Texas Antiquities Permit from the THC, the lead state agency for Antiquities Code compliance, throughout all stages of investigation, analysis, and reporting.

Survey Methods and Protocols

With the goals and guidelines above in mind, CMEC personnel conducted an intensive survey in October 2015, per category 6 under 13 TAC 26.15, and using the definitions in 13 TAC 26.3, searching for previously identified and unidentified archeological sites. Field methods complied with the coverage requirements of 13 TAC 26.15, as elaborated by the THC and CTA.

Shovel tests were excavated in natural levels to major color/texture changes or restrictive features, as allowed by compaction and hardness of the deposits. Excavated matrix was screened through 0.635-centimeter (0.25-inch) hardware cloth as allowed by moisture and clay content, which often required that the removed sediment be crumbled/sorted by hand, trowel, and/or shovel point. Deposits were described using conventional texture classifications and Munsell color designations, and all observations were recorded on standard CMEC shovel test forms. The shovel testing protocol detailed in the approved scope for Texas Antiquities Permit 7442 called for radial shovel tests to be placed at 5-meter (16-foot) intervals around each shovel test positive for cultural material until two negative units were established in each cardinal direction.

No artifacts were collected during the investigation; therefore, only project field notes, forms, and other data will be permanently curated and made available to future researchers at the CAS at Texas State University per 13 TAC 26.16 and 26.17.

4.0 RESULTS AND RECOMMENDATIONS

General Field Observations

Prior to conducting the survey, a review of available historic aerials and topographic maps on Google Earth and the Nationwide Environmental Title Research (NETR) website, www.historic.aerials.com, was undertaken to determine how the parcel had been utilized over time. The earliest aerial photograph available was produced in 1996; the parcel was an agricultural field at that time too (NETR 2015). The earliest available topographic map was from 1958; no structures were shown to be present on the parcel at that time.

In October 2015, CMEC personnel conducted an intensive survey of the 24.3-hectare (60-acre) APE (**Figure 2**). The entire parcel is a plowed field, currently being used for hay production (**Figures 3-5**). The field had been harvested and turned over just before fieldwork and the ground surface visibility was 100 percent across the entire parcel.



- Project APE
- Negative Shovel Test

Data Sources: CMEC (2015), NHD (2014)
 Aerial Source: NAIP (2014)

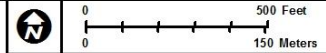



Figure 2
 Location of Shovel Tests

 COX McLAIN Environmental Consulting	
Prepared for: City of Anton	1 in = 500 feet
	Scale: 1:6,000
Prepared by: MCS	Date: 10/16/2015

G:\Projects\CityofAnton\Anton_WWTP\Figure 2_Arch STs_20151016.mxd



Figure 3: View east of northwest portion of APE.



Figure 4: View north of APE from southeast corner.



Figure 5: View east of APE from eastern edge of APE. Note round hay bales at right.

The APE was surveyed in 30 meter transect intervals to examine the surface. No materials were noted. Six shovel tests were excavated at fairly random locations, although more were placed along the southern portion of the APE given its proximity to Yellowhouse Draw (see **Figure 2**). All shovel tests were negative and revealed the presence of a B Horizon at around 30 to 35 centimeters below surface (cmb). The Ap Horizon was found to be a loam in shovel tests 1-3, and 6 and was silty clay loam in shovel tests 4 and 5 (**Figure 6**). The Ap Horizon was generally 7.5YR3/2 (dark brown) or 7.5YR4/2 (brown) with an instance of 7.5 YR 3/1 (very dark gray). In addition to disturbance by plowing, one shovel test revealed a large amount of bioturbation as well (**Figure 7**).



Figure 6: Planview of shovel test 4 showing typical deposits.



Figure 7: Planview of shovel test 1 showing bioturbation evidence.

Recommendations

No evidence was found of preserved deposits with a high degree of integrity; associations with distinctive architectural and material culture styles; rare materials and assemblages; the potential to yield data important to the study of preservation techniques and the past in general; or potential attractiveness to relic hunters (13 TAC 26.10; 36 CFR 60.4).

No artifacts were collected during the survey. However, all notes, photographs, administrative documents, and other pertinent project data generated from this investigation will be housed at CAS at Texas State University-San Marcos, where they will be made permanently available to future researchers per 13 TAC 26.16-17.

If any unanticipated cultural materials or deposits are found at any stage of clearing, preparation, or construction, the work should cease and Texas Historical Commission (THC) personnel should be immediately notified.

5.0 REFERENCES

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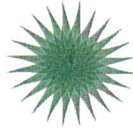
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APPENDIX A – REGULATORY CORRESPONDENCE



TRANSMITTAL MEMO

To: Tiffany Osburn, THC

RECEIVED

From: Chris Dayton, CMEC

NOV 03 2015

Date: 11/03/15

Cox|McLain Environmental Consulting, Inc.

6010 Balcones Drive, Suite 210

Austin, TX 78731

www.coxmclain.com

(512) 338-2223

RE: Draft Report Submittal: *Intensive Archeological Survey for Proposed Wastewater Improvements, City of Anton, Hockley County, Texas* (Permit 7442)

Dear Ms. Osburn:

Please find enclosed one (1) unbound copy of the draft report *Intensive Archeological Survey for Proposed Wastewater Improvements, City of Anton, Hockley County, Texas*. The work was carried out on behalf of the City of Anton under Texas Antiquities Permit 7442. The archeological area of potential effects (APE) includes the footprints of a new wastewater plant/pump station, facultative lagoon, holding pond, and effluent application area, covering a total of 72 acres.

The ground surface within was 100 percent visible throughout the APE, as the parcel is an active agricultural field. Six shovel tests were excavated, with a focus on southern edge due to the proximity of Yellowhouse Draw. All shovel tests were negative and revealed relatively shallow soils with the B horizon occurring at around 30 to 35 centimeters below the surface (cmbs).

No archeological materials or deposits of any kind were observed within the APE, and no further work is recommended within the APE prior to the construction of the proposed wastewater improvements.

Please do not hesitate to call or email if you have any questions or comments.

Sincerely,

Chris Dayton, PhD, RPA
chris@coxmcclain.com
(512) 338-2223

ANTIQUITIES CODE OF TEXAS REVIEW
NO SIGNIFICANT SITES
PROJECT MAY PROCEED
By:
Mark Wolfe
Executive Director, THC
Date: 11/30/15
Track#