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Archeological Survey For The Proposed Brazos Electric Power Cooperative, Inc., Maypearl Natural Gas Electric Generation Facility, Ellis And Hill Counties, Texas

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ARCHEOLOGICAL SURVEY FOR THE PROPOSED BRAZOS ELECTRIC POWER COOPERATIVE, INC., MAYPEARL NATURAL GAS ELECTRIC GENERATION FACILITY, ELLIS AND HILL COUNTIES, TEXAS

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Environmental Consulting

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Management Summary

On August 8 and 12, 2014, an intensive archeological survey was completed in order to evaluate potential archeological impacts associated with the proposed construction of a new natural gas generation facility within a 98.43-acre (39.8-hectare) parcel in Ellis and Hill Counties, Texas. Melissa M. Green (Principal Investigator) and Bill Bond of Cox|McLain Environmental Consulting, Inc. (CMEC) carried out the survey for Brazos Electric Power Cooperative, Inc. (BEPC) and the United States Department of Agriculture, Rural Utilities Service (USDA-RUS) under Section 106 of the National Historic Preservation Act (NHPA), as amended. A Texas Antiquities Permit was not required.

Ground surface visibility across the majority of the 98.43-acre area of potential effects (APE) was about 45 to 50 percent, although it was closer to 80 percent in the small wooded area on the south edge of the property. The bulk of the parcel consists of a dormant terraced agricultural field; 8.4 acres are on a wooded ridge above the field. A portion of ONCOR's Venus Switch to Sam Switch 345kV transmission line right-of-way crosses the property at a slightly northeast to southwest orientation. A combination of intensive pedestrian survey with reconnaissance survey was utilized with the 8.4 acres of wooded ridgeline receiving the intensive survey and the remaining 90.03 acres assessed though reconnaissance. This was due to the intensive disturbances from the terraces, which were as high as 50 centimeters and equally as wide at their tops. Two historic-age domestic archeological sites were recorded from surface scatters identified during the survey. Site 41EL266 is a low-density scatter of glass, ceramic, and metal dating to the late nineteenth/early twentieth century. Site 41EL267 consisted of a large scatter of domestic and farm-related materials dating from the early to mid-twentieth century. Neither site is recommended eligible for the National Register of Historic Places. Shovel test units were excavated in order to examine the subsurface at the sites and in the field. No further work is recommended within the APE prior to construction.

No materials were collected during the investigation; therefore, this project generated no archeological materials to be curated. Notes, photographs, administrative documents, and other project data will be made permanently available to future researchers at Texas Archeological Research Laboratory (TARL) at the University of Texas at Austin.

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 THC concurred with the findings and recommendations of this report on December 8, 2014 (see Appendix A).

ARCHEOLOGICAL SURVEY FOR THE PROPOSED MAYPEARL NATURAL GAS ELECTRIC GENERATION FACILITY, ELLIS AND HILL COUNTIES, TEXAS

Table of Contents

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

1.0 Introduction

Overview of the Project

Brazos Electric Power Cooperative, Inc. (BEPC) proposes to construct a new natural gas electric generation facility on an undeveloped tract located along the south side of Farm-to-Market (FM) Road 66 on the county line between Ellis and Hill Counties, Texas (**Figure 1**). A tributary to Valley Branch is located between 50 and 100 meters (m) west and south of the project tract. Most of the parcel is in a terraced agricultural field, with only 8.4 acres (ac) or 3.4 hectares (ha) remaining wooded and relatively undisturbed. The total archeological area of potential effects (APE) for this project covers approximately 98.43 ac (39.8 ha). A portion of ONCOR's Venus Switch to Sam Switch 345kV transmission line right-of-way (170-ft or 51.8 m wide) crosses the property from the southwest corner in a northeasterly/southwesterly direction. The generation facility is planned for construction completely on the Hill County side of the property.

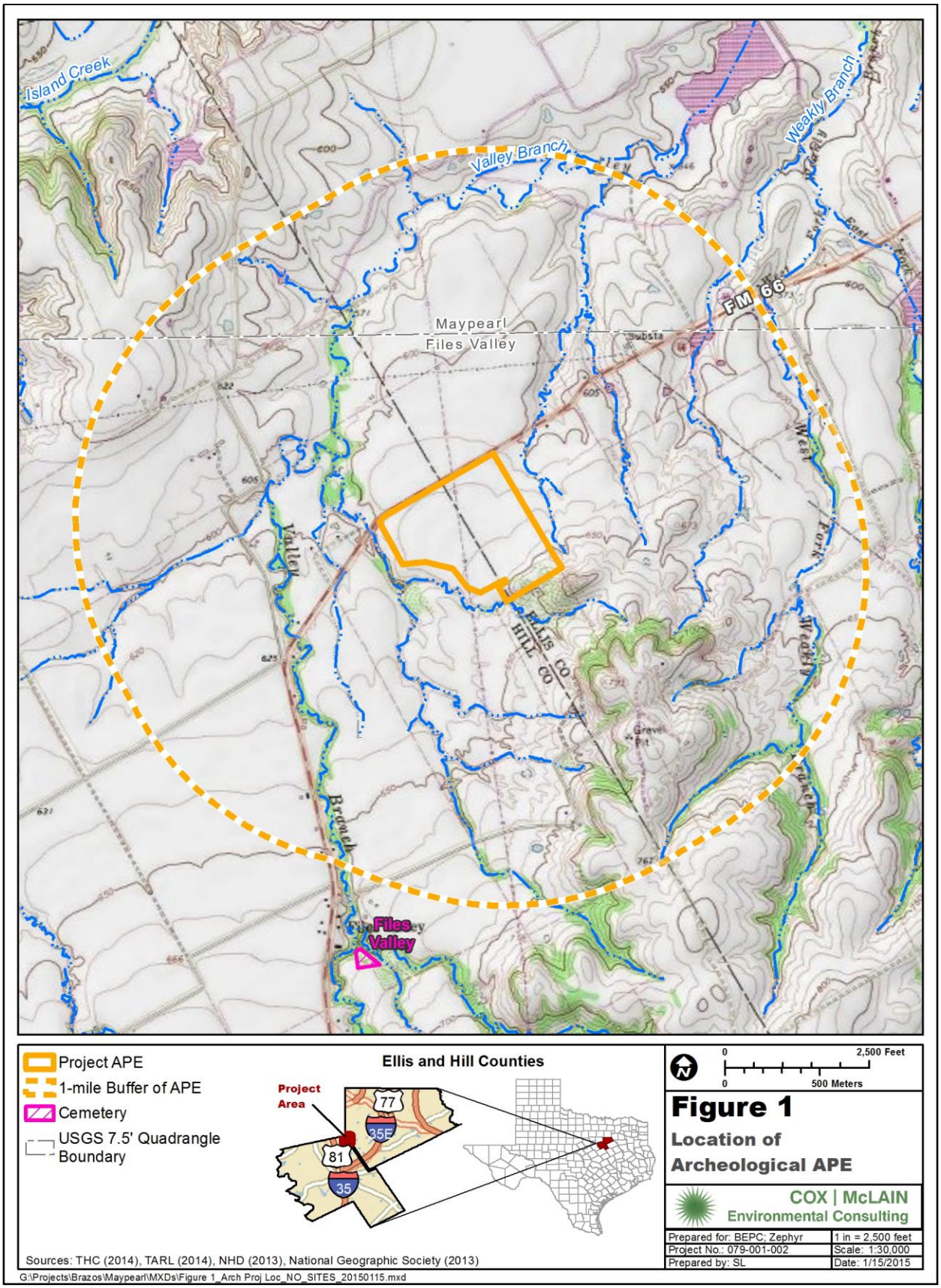
Regulatory Context

The applicable regulatory framework for this project is Section 106 of the National Historic Preservation Act (NHPA), as amended (36 CFR 800), due to funding from the United States Department of Agriculture, Rural Utilities Service (USDA-RUS). As there is no formal regulatory nexus with any political subdivisions of the State of Texas, the Antiquities Code of Texas (9 TNRC 191) does not apply. However, BEPC's activities are governed by the Public Utility Commission (PUC) of Texas, which maintains an internal policy of adherence to the Antiquities Code of Texas.

The purpose of the investigation described in this document was to conduct a survey for archeological resources within the archeological APE. The investigation included a survey for previously unidentified resources as well as attempts to revisit any previously identified resources. In addition, this investigation evaluated the eligibility of identified resources for inclusion in the National Register of Historic Places or NRHP (36 CFR 60) or for listing as State Antiquities Landmarks (SALs) (9 TNRC 191; 13 TAC 26.12). All materials generated from this work will be housed at Texas Archeological Research Laboratory (TARL) as per TAC 26.27 and 26.5.

Structure of the Report

Following this introduction, Chapter Two presents environmental parameters for the study area; Chapter Three presents a brief cultural context, including a summary of previous archeological research in and near the APE; Chapter Four discusses research goals, relevant methods, and the regulatory considerations underlying them; Chapter Five presents the results of the survey; Chapter Six summarizes the findings and provides recommendations; and Chapter Seven lists references.


Island Creek
Valley Branch
Weakly Branch
FM 66
Maypearl
Files Valley
Substa
Valley
Branch
West
Fork
Weakly
Branch
ELLIS CO
HILL CO
Gravel Pit
Files Valley
Project APE
1-mile Buffer of APE
Cemetery
USGS 7.5' Quadrangle Boundary
Ellis and Hill Counties
Project Area
77
35E
81
35
0
2,500 Feet
0
500 Meters
Figure 1
Location of Archeological APE
COX | McLAIN
Environmental Consulting
Prepared for: BEPC; Zephyr
1 in = 2,500 feet
Project No.: 079-001-002
Scale: 1:30,000
Prepared by: SL
Date: 1/15/2015
Sources: THC (2014), TARL (2014), NHD (2013), National Geographic Society (2013)
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2.0 Environmental Context

Topography and Drainage

The APE is located at approximate elevations of 605-705 ft or 184.4-214.9 m above mean sea level on gently and steeply sloping uplands between 50 and 100 m west and south of a tributary to Valley Branch. This tributary joins Valley Branch approximately 410 m north of project APE. Valley Branch eventually flows into South Fork Chambers Creek. Small ridges occur in the area overlooking broad rolling expanses.

Geology and Soils

The APE is underlain by Upper Cretaceous Eagle Ford Formation (BEG 1991). According to Natural Resources Conservation Service (NRCS) data there are six soils mapped within the APE: Houston Black clay on 0 to 1 percent slopes; Houston Black clay on 1 to 3 percent slopes; Heiden clay on 1 to 3 percent slopes; eroded Ellis and Heiden clay on 1 to 3 percent slopes; Ellis and Heiden clay on 3 to 5 percent slopes; severely eroded Ellis and Heiden clay on 5 to 12 percent slopes (NRCS 2014).

Vegetation and Land Use

The project area is located within the Blackland Prairie Ecological Region of Texas (Gould 1960), characterized by gently rolling to nearly level upland plains environments. It is distinguished from surrounding regions by clayey soils and predominately prairie potential natural vegetation with dominant grasses including little bluestem, big bluestem, yellow Indiangrass, and switchgrass; much of this region is mapped as cropland (Griffith et al. 2004). The APE is currently in a dormant, terraced agricultural field where natural and invasive grasses and young mesquite are prevalent.

3.0 Cultural Context

Archeological Chronology

The APE lies within the western part of the North-central Texas archeological region (Perttula 2004a). The standard cultural chronology for the region has changed little in the last two decades; thus, the periods and date ranges established by Peter and McGregor (1988), Prikryl (1990), and Yates and Ferring (1986) still apply (**Table 1**). The general prehistoric framework for North-central Texas is similar to that used in other areas of Texas, and indeed throughout much of North America, with the first unequivocal human occupations occurring approximately 11,500 radiocarbon years before present (BP), or approximately 13,000 calendar years ago, and most of the prehistoric record is contained within a long Archaic period lasting nearly 8,000 years.

Table 1: Archeological Chronology for North-central Texas*

Period	Years Before Present (BP)**
Paleoindian	11,500 – 9,000
Archaic	9,000 – 1,300
Early Archaic	9,000 – 6,000
Middle Archaic	6,000 – 4,000
Late Archaic	4,000 – 1,300
Late Prehistoric	1,300 – 400
Late Prehistoric I	1,300 – 700
Late Prehistoric II	700 – 400
Protohistoric	400 – 200
Historic	200 – 50

* After Peter and McGregor (1988), Prikryl (1990), and Yates and Ferring (1986).
** Based on uncalibrated radiocarbon dates, which are typical in Texas archeology (see Perttula 2004a:14, Note 1).

PALEOINDIAN PERIOD

The Paleoindian occupation is the least known period in the prehistory of North-central Texas, due primarily to three factors: the light population density of Paleoindian peoples, the great age of the occupation (up to 13,000 calendar years), and taphonomic factors such as severe erosion and deep sedimentation, depending on location (Ferring 1989, 2001; Holliday 2004). Although initially seen as narrowly specialized big-game hunters, Paleoindian groups such as Clovis are being reevaluated in light of recent discoveries such as the Aubrey site north of Dallas-Fort Worth. At Aubrey, investigators found evidence of a more balanced, flexible subsistence strategy, with remains of big game such as bison and mammoth but also fish, birds, and other small game (Ferring 2001). Generally, Paleoindian people are thought to have been more mobile than subsequent populations, utilizing lithic and other resources from broad geographic areas.

ARCHAIC PERIOD

Usually divided into three more or less equal parts, the Archaic Period encompasses the bulk of North-central Texas prehistory. The Archaic record is clouded by mixed deposits (Hofman et al. 1989; Prikryl 1990) and possible large-scale erosion in the middle of the period (as has been documented further to the west by Blum and colleagues [1992]). Still, the available data show that Archaic peoples were more likely than their predecessors to make projectile points and other stone tools out of local raw materials, potentially indicating more spatially restricted territories and/or subsistence areas, perhaps reflecting seasonal rounds through a specific series of resource-gathering zones (Ferring and Yates 1997; Peter and McGregor 1988). Generally, population is thought to have increased throughout the Archaic Period, perhaps in response to stabilizing climatic conditions.

LATE PREHISTORIC PERIOD

The Late Prehistoric Period is defined technologically, with the beginning of the period typically marked by the appearance of arrow points and ceramics. Aside from the addition of these extremely important technologies, the overall trajectory of subsistence lifeways in the Late Prehistoric is usually thought to represent a continuation of trends seen in the later part of the Archaic, with even more dramatic focus on very local resources and broad-spectrum foraging (Ferring and Yates 1997). In the latter part of the period (Late Prehistoric II), the picture shifts, with ceramic and lithic evidence indicating links to Plains populations to the north and west (Prikryl 1990).

PROTOHISTORIC AND HISTORIC PERIODS

The beginning of the Protohistoric Period is marked by the first appearance of Europeans in Texas: the Spanish explorers, priests, and speculators who began moving into the state from colonies to the south and west in the sixteenth and seventeenth centuries A.D. Although technically historic (i.e., characterized by the use of writing), this earlier phase is often separated from the more formally designated Historic Period due to the relative infrequency of direct Spanish incursions into North-central Texas, in contrast to the high-profile, early Spanish occupations in South and South-central Texas (Campbell 2003). Even without the missions, military outposts, and other facilities characteristic of the Spanish presence to the south, the effects of trade, disease, and other factors on native populations were still dramatic, and indigenous groups of the Protohistoric Period are little known apart from sporadic finds of European trade goods at native sites (Stephenson 1970). The last two centuries are considered the Historic Period. In brief, the landscape and material culture of North-central Texas during this time are characterized by the overwhelming dominance of European-derived populations and the expansion of railroads, the discovery and exploitation of petroleum resources, the supplanting of small tenant farming by mechanized agriculture and urban sprawl, and various waves of commercial and industrial development, the most recent example being the rise of the service and information economy (Campbell 2003).

For further general background information, particularly regarding prehistoric periods, the reader is referred to the major reports mentioned above, as well as to Perttula's recent statewide synthesis, *The Prehistory of Texas* (Perttula 2004b). Although the latter does not include a chapter devoted specifically to North-central Texas archeology, the introductory chapter includes an invaluable side-by-side comparison of cultural chronologies from all of the archeological regions in Texas (Perttula 2004a: Table 1.1). For later periods, the reader is referred to Randolph B. Campbell's *Gone to Texas: A History of the Lone Star State* (2003).

Previous Investigations and Previously Identified Cultural Resources

A data search of the Texas Archeological Sites Atlas maintained by the Texas Historical Commission (THC) and the Texas Archeological Research Laboratory (TARL) was conducted in order to identify any previously recorded cemeteries, historical markers, National Register of Historic Places (NRHP) properties or districts, State Antiquities Landmarks (SALs), archeological sites, and previous surveys in the APE and within a one-mile buffer (the standard buffer zone for such searches) surrounding the APE.

No recorded resources or coverage areas for previous surveys were found within the APE or within the one-mile buffer (THC 2014).

4.0 Research Goals and Methods

Purpose of the Research

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

1. To identify all historic and prehistoric archeological resources located within the APE defined in Chapter One;
2. To perform a preliminary evaluation of the identified resources' potential for inclusion in the NRHP and/or for listing as a SAL (typically performed concurrently); and
3. To make recommendations about the need for further research concerning the identified resources based on the preliminary NRHP/SAL evaluation and with guidance on methodology and ethics from the THC and the Council of Texas Archeologists (CTA).

NRHP Eligibility

The National Historic Preservation Act of 1966, as amended, provides a statement of federal authority, an administrative framework for agency coordination, and general principles for the assessment of cultural resources, including archeological sites (called "historic properties" in this regulatory context, regardless of actual historic or prehistoric dates), for their eligibility for inclusion in the National Register of Historic Places (36 CFR 800; 9 TNRC 191; 13 TAC 26.24).

More specific rules relating to the NRHP nomination process, list management, relevant definitions, and other matters are described in 36 CFR 60. Most important to the present investigation are the criteria for significance (and therefore potential NRHP eligibility):

> …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 (36 CFR 60.4[d]).

SAL Eligibility

For cultural resources identified on lands owned or controlled by the State of Texas or one of its political subdivisions—as well as resources on specially designated private lands in the state—

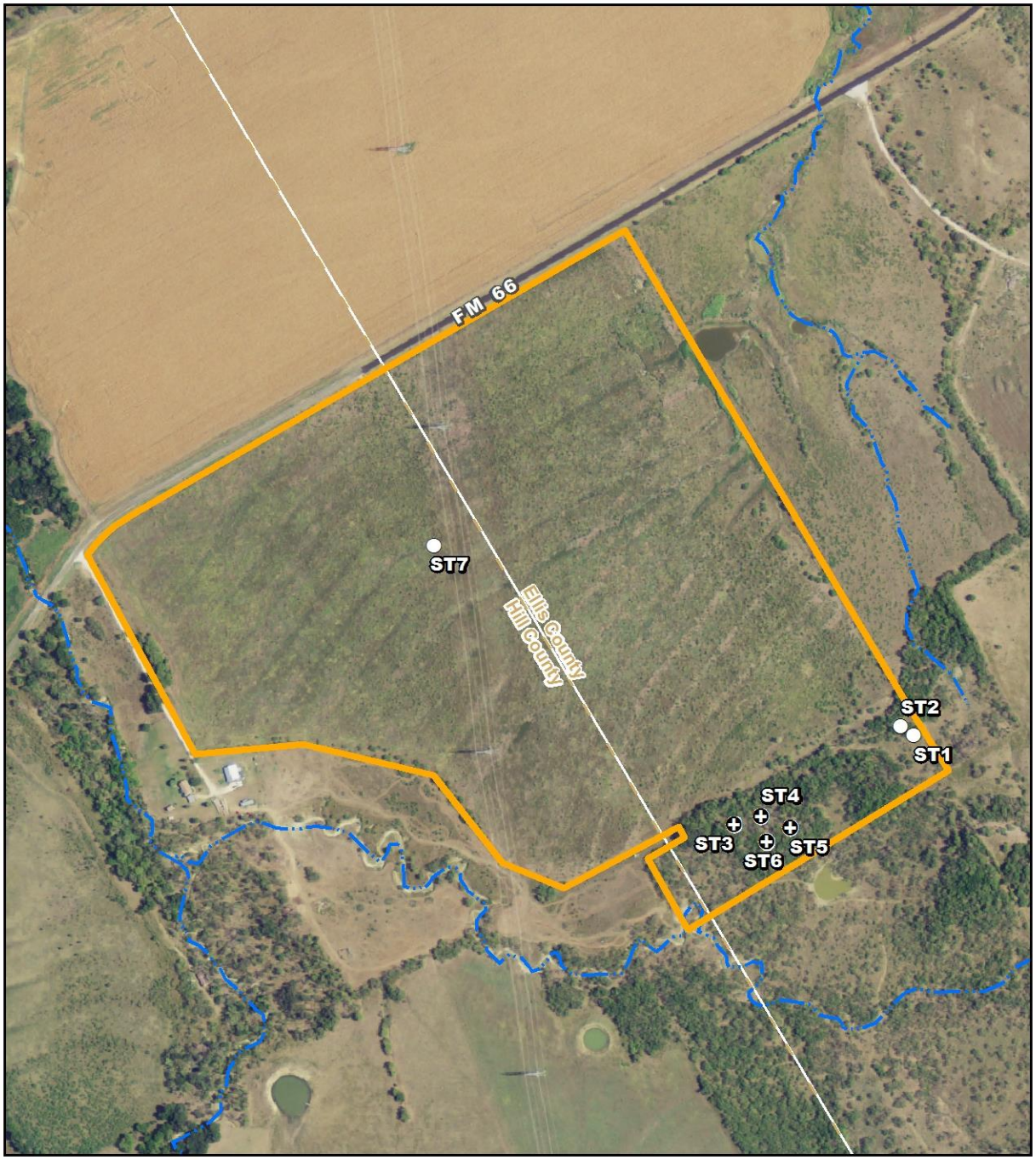
provisions of state law relating to State Antiquities Landmarks may also apply. Although this project does not directly involve lands owned or controlled by the State, SAL eligibility is usually considered concurrently with NRHP eligibility; therefore, a brief overview of SAL criteria is included below.

An archeological site 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;
(5) the high likelihood that vandalism and relic collecting has occurred or could occur, and official landmark designation is needed to insure 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 26.8).

Survey Approach and Methods

Prior to conducting fieldwork, examination of historic maps and early aerial photographs of the area was conducted to determine the recent history of land use which would guide field strategy. Field methods complied with the requirements of the guidelines as set forth by the CTA and approved by the THC, where applicable. The survey included an intensive pedestrian walkover with shovel testing and reconnaissance assessment in selective areas over the entire 98.43-acre APE (**Figure 2**). Shovel test (ST) units excavated in natural levels to major color/texture changes or restrictive features were placed where ground surface visibility is below 30 percent, soils appear to be of sufficient depth to contain subsurface cultural materials, and/or previous disturbance appears minimal. Excavated matrix was screened through 0.25-in (0.635-cm) hardware cloth, as allowed by moisture and clay content. Deposits were described using conventional texture classifications and Munsell color designations, and all observations were recorded on standardized CMEC shovel test forms.



Project APE
Negative Shovel Test
Positive Shovel Test

0 600 Feet
0 150 Meters

Figure 2
Location of Shovel Tests

COX | McLAIN Environmental Consulting

Prepared for: BEPC/Zephyr	1 in = 600 feet
Project No.: 079-001-002	Scale: 1:7,200
Prepared by: SL	Date: 8/29/2014

Source: CMEC (2014), NHD (2013), NAIP/USDA-FSA (2012)

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5.0 Results

Prior to conducting the survey, a review of available historic aerials and topographic maps on Google Earth and the Nationwide Environmental Title Research website, www.historicaerials.com, was undertaken to determine how the parcel had been utilized and whether it had contained structures at any time. In addition, 1936 and 1961 versions of the *General Highway Map, Ellis County*, which shows roads, buildings, cemeteries, and other features of interest, were also consulted. The earliest aerial available was produced in 1964; it noted that although the parcel was in crops and the ridge at the south was covered in trees, the terraces observed on later maps were not in place at that time (NETR 2014). There is an anomalous visual feature observed on the 1964 aerial which may be evidence of a structural remnant in the wooded area to the south, but no structures were noted on this parcel in the field or on any of the other maps consulted.

CMEC personnel conducted a combination intensive and reconnaissance survey over the entire 98.43-ac (39.8 ha) APE on August 8 and 13, 2014. The project parcel is located on an upland above an unnamed tributary of Valley Branch (see **Figure 1**). It is bounded by private properties on the east, south, and west, by FM 66 on the north, and sits astride the Ellis and Hill county line. Currently approximately 90.03 acres of the parcel are dormant agricultural field with invasive and native grasses and small mesquite scrub growing (**Figure 3**). It appears to have been dormant for about 3-4 years. The field is generally flat but slopes slightly toward the south. The field has been heavily impacted by erosion control modifications, with terraces as high as 50 centimeters (cm) and as wide as 50 cm across the top. Since ground surface visibility was generally 40-50 percent, well above the THC/CTA 30-percent threshold, most of the field was assessed via pedestrian reconnaissance.

Figure 3. View across field from FM 66; facing southwest.

Erosion was noted along the western side of the APE where it slopes toward the floodplain of the unnamed tributary (**Figures 4 and 5**). There is an existing 170-ft-wide ONCOR 345 kV transmission line right-of-way crossing the property at a slightly southwest/northeast direction from the southwest corner. The transmission right-of-way contains fewer mesquite trees and the grasses are not nearly as thick as elsewhere on the parcel, indicating fairly recent maintenance mowing. This is part of the Venus Switch to Sam Switch transmission line which was constructed in 1970; no archeological survey was conducted prior to its construction (Tom Yank, personal communication September 3, 2014). Evidence of the use of a brush hog was also evident along the north boundary near FM 66. One shovel test was excavated in the area proposed for the facility construction (see **Figure 2**). ST 7 yielded no artifacts or disturbances subsurface, and the soil is a very dark brown (10YR 2/2) dry but friable clay (**Figure 6**).

At the south end of the parcel are 8.4 acres of wooded ridgeline covered in grasses and mature mesquite and hackberry trees, several of which are definitely within a 60+ year range (**Figure 7**). There is no planned development for this area as the ridge is too narrow and the ridge edges too steep. The surface of the ridge top is flat in some places and hummocky in others. A man-made berm runs east/west along the bottom edge of ridge just north of the field (**Figure 8**). A two-track road is located about six meters from the south side of the berm (**Figure 9**). Two historic-age archeological sites were identified on this ridge top during the survey; both are located in Ellis County. These sites are both thought to be domestic sites primarily dating from the turn-of-the-twentieth century to the mid-twentieth century.

Figure 4. Erosional wash-out along the western boundary above the tributary; facing west.

Figure 5. Slope at terrace edge along the western boundary and north of wash-out; facing south.

Figure 6. Plan view of ST 7 in field.

Figure 7. View across field toward ridgeline in rear; facing southeast.

Figure 8. View of berm at north edge of ridgeline; facing east northeast.

Figure 9. View of two-track road across north edge of ridgeline; facing east southwest.

41EL266 (Maypearl CMEC-1)

A low density scatter of early nineteenth to mid-twentieth century materials was first observed within the path of a two-track road that cuts from the southeast corner of the project parcel, near the edge of the agricultural field, south onto the upland ridge. Although a few items were seen in erosional tracts of the road, the majority of the material was found around a very old mesquite tree on a small knoll at the top of the ridgeline in the southeast corner of the parcel (**Figure 10**). Assigned the trinomial 41EL266, the site is thought to be the remnants of a small farmstead/homesite (**Figure 11**). The site measures 1,351 m^2 inside of the project parcel but extends outside of the current project property to the east. No features were observed, except for the two-track road and a berm that follows the north edge of the ridgeline above the field.

Two shovel tests were excavated in an area that was fairly flat, lacked ground disturbance, and where artifacts were observed on the surface. Soil from both shovel tests consisted of a compact to very compact dark grayish brown (10YR 4/2) clay with small limestone gravels and caliche in the top 20-23 cm below surface (cmbs). At 23 cmbs in ST 2, the soil, still containing caliche, changed to a brown (10YR 5/3) clay and became extremely compact to 30 cmbs where it was terminated (**Figure 12**).

Figure 10. View across site 41EL266 from ST 1; facing west.

Materials found on site 41EL266 were extremely sparse and were all observed on the surface (**Figure 13**) and represented only Domestic and Personal items as classified by South (1977). Domestic items are those relating to food service (i.e., tableware) and food storage, while Personal items are those of individual use such as clothing, shoes, buttons, doll or toy parts, cosmetic bottles, snuff bottles, musical instruments, and smoking pipes. Other defined categories by South are Furnishing (usually included in Domestic), Architectural, Activities and a minor category of Indeterminate when function cannot be established. Furnishings generally include such items as furniture, stoves, and lamp glass. Architectural items are all those that are related to buildings or structures and can include numerous items, while Activities items are generally non-house-hold and include transportation and farm-related equipment.

These materials include natural clay interior/exterior stoneware (1875-1900, Greer 1981; Lebo 1992); semi-vitrified blue-tinted ironstone (1850-1910, Moir 1987), undecorated whiteware, a clear canning jar fragment, a ribbed manganese decolorized (solarized, 1850s-1920; Lockhart 2006) tumbler fragment, bottle glass shards (clear, manganese decolorized, aqua, amber), and two small whole bottles (one clear, one amber). The small clear bottle is 3 inches tall and half an inch wide. It is rectangular in shape with a narrow mouth screw-top lip finish over a ring on the neck at the shoulders. The base is corrugated with an Owens ring and the Owens Illinois diamond with an "I" in the center with a circle overlapping the center of the diamond. According to Toulouse, this mark dates between 1929 and 1954 (Toulouse 1971:403). It also has "DES PAT 9237" embossed on the base. The second bottle is 3.5 inches tall and 2 inches in diameter. It has a wide mouth screw-top lip finish over a ring on a short neck. It also has the corrugated base with the same Owens Illinois mark on the base, but also has the word "Duraglas" in script on the body of the bottle near the base. The "Duraglas"

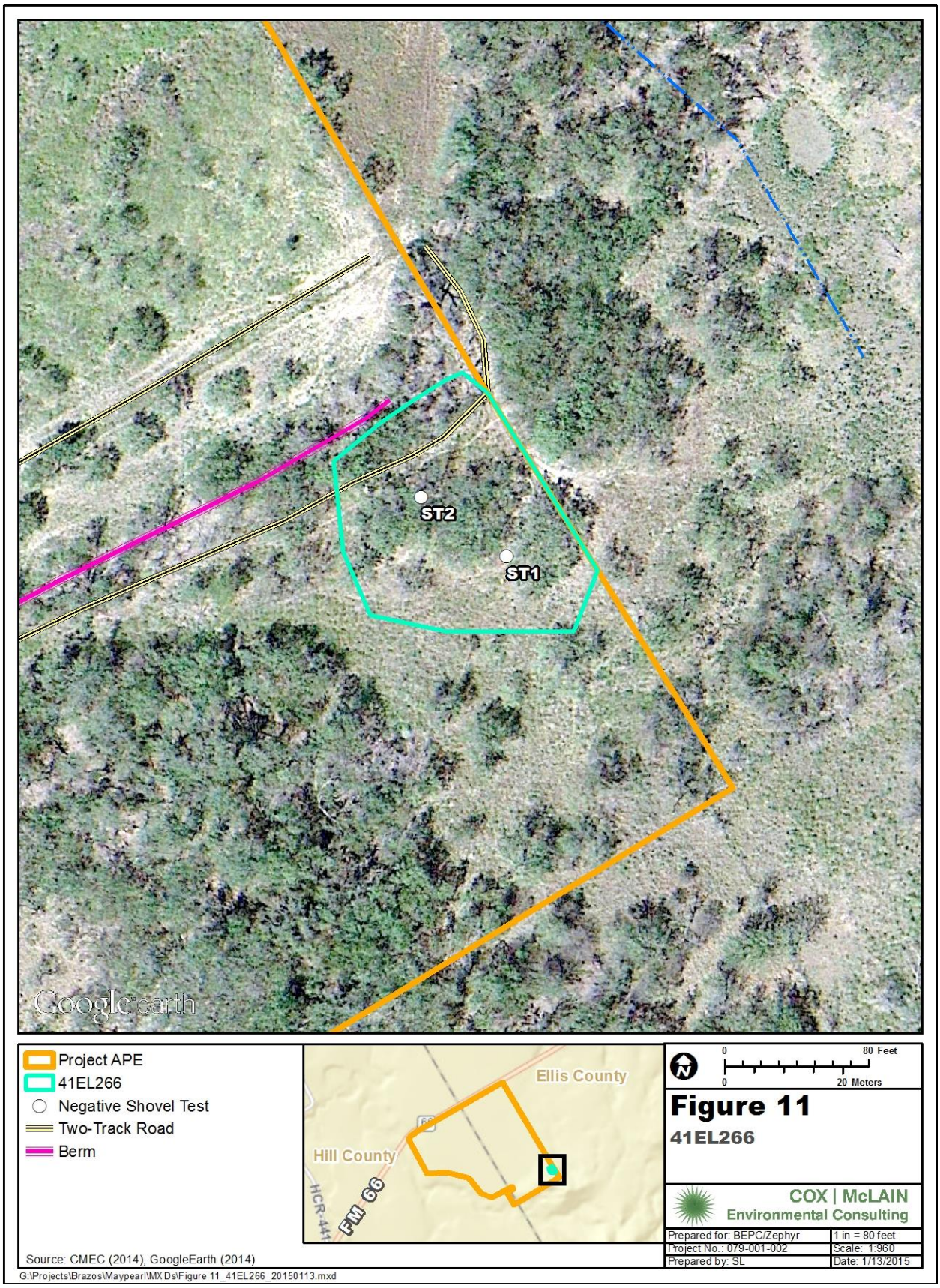
ST2
ST1
Google earth
Project APE
41EL266
Negative Shovel Test
Two-Track Road
Berm
Ellis County
Hill County
FM 66
HCR-441
0
80 Feet
0
20 Meters
Figure 11
41EL266
COX | McLAIN
Environmental Consulting
Prepared for: BEPC/Zephyr
1 in = 80 feet
Project No.: 079-001-002
Scale: 1:960
Prepared by: SL
Date: 1/13/2015
Source: CMEC (2014), GoogleEarth (2014)
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Figure 12. Plan view of ST 2.

mark dates post 1940 (Toulouse 1971:403). These two bottles are considered representing the Personal items category as they were likely medicinal bottles.

No features were observed on the site and some ground disturbances were noted. Most of the ground disturbance is attributed to animal burrowing and cattle grazing, although there is evidence of mechanical ground movement along the two-track road as it comes up the ridge and along the east side of the site and property boundary. The berm, although not directly on the site, is certainly man-made and soil from the edge of the site was used in its construction.

Site 41EL266 contains no spatial (horizontal and vertical) integrity, has no associated structural features, and no subsurface deposits. The research value is poor and redundant for this time period and area. Based on this data, site 41EL266 is recommended as not eligible for inclusion in the NRHP and no additional investigations are necessary. The site appears to extend outside the project APE; however, the part of the site within the APE would likely not contribute to NRHP eligibility even if other parts of the site were later determined eligible.

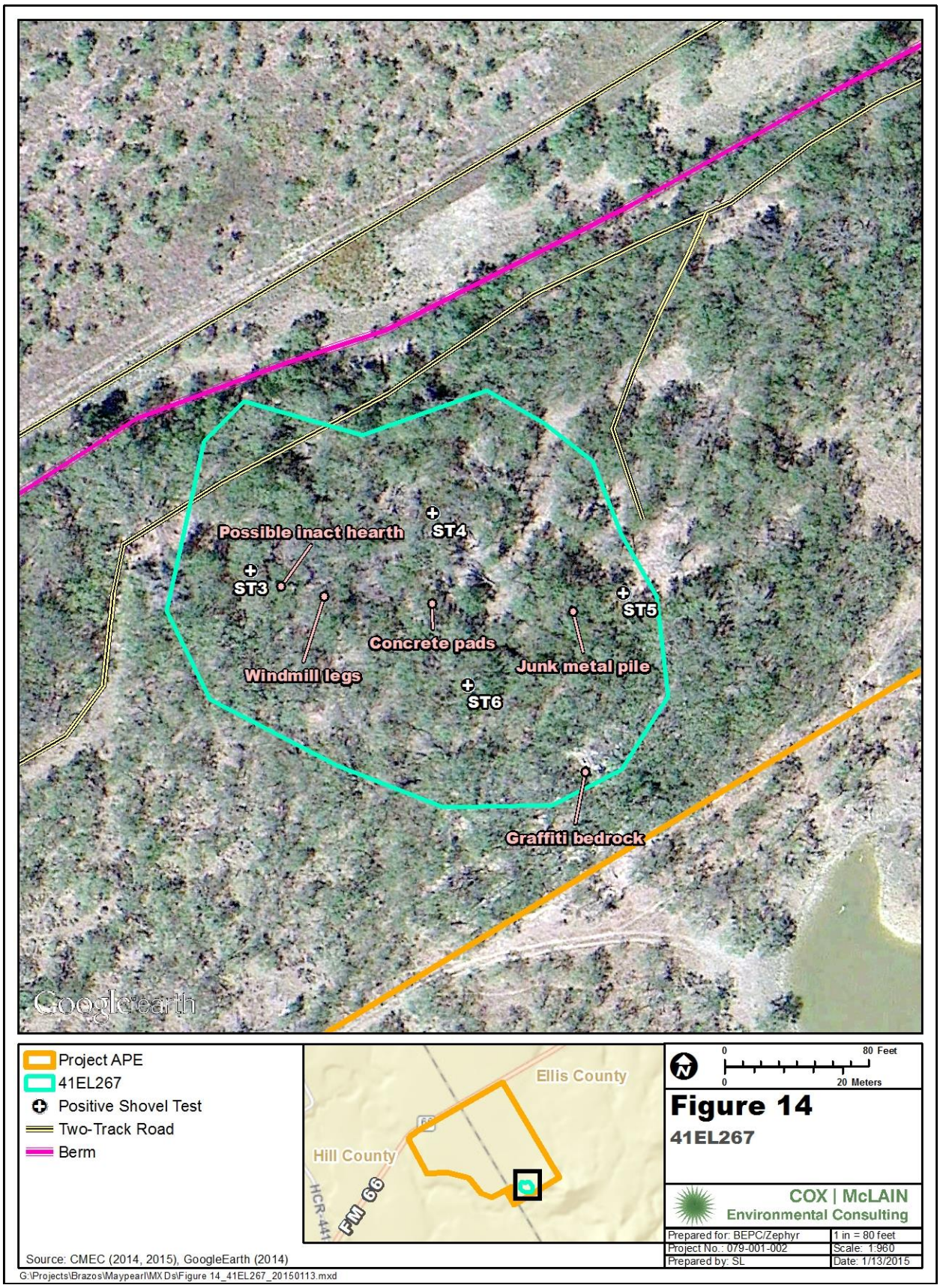
41EL267 (Maypearl CMEC-2)

Located about 140 m due west of 41EL266 is a dense scatter of early to mid-twentieth century materials spread over approximately 4,528 m^2 of hummocky ground and on a slight slope. Designated 41EL267, the site extends on the south to the ridge edge where several large boulders were sitting above the 30+-ft (9.1+ m) drop to a flat field outside of the project APE (see **Figure 2** and **Figure 14**). Ground visibility is approximately 75 to 90 percent with only a few native and invasive grasses and some leaf litter occasionally obscuring the surface. The site contains the large

artifact scatter, a metal trash pile, a scatter of handmade and machine-made brick around an intact hearth area, four metal guide wire tie-downs that may have been associated with a windmill, and several large slabs of concrete with bolts in them. It is thought that these large slabs of concrete were associated with the windmill and have been redeposited near the east side of the site after dismantling. Several large ornamental shrubs/trees were observed around the tie-downs and near the brick scatter suggesting a designated yard around the house. Other than the hearth area, no foundation remnants were observed.

Figure 13. Representative sample of artifacts from 41EL266.

There was no evidence of a well or cistern, although fragments of a large natural clay interior/exterior pipe (about 12 inches in diameter) were observed on the east side of the site, indicating some water access of some type. It is unknown where that water source was located and may have even occurred downslope of the site. The large boulders on the south edge of the site contained several carved initials and names (W.W., BERT, MARY, WPH, T.W.W., JPW, B.T.W, TEW, J.B.W, among others), but no dates were noted (**Figures 15-16**).


Possible inact hearth
ST4
ST3
ST5
Concrete pads
Junk metal pile
Windmill legs
ST6
Graffiti bedrock
Google earth
Project APE
41EL267
Positive Shovel Test
Two-Track Road
Berm
Ellis County
Hill County
FM 66
HCR-441
0
80 Feet
0
20 Meters
Figure 14
41EL267
COX | McLAIN
Environmental Consulting
Prepared for: BEPC/Zephyr
1 in = 80 feet
Project No.: 079-001-002
Scale: 1:960
Prepared by: SL
Date: 1/13/2015
Source: CMEC (2014, 2015), GoogleEarth (2014)
G:\Projects\Brazos\Maypearl\MXDs\Figure 14_41EL267_20150113.mxd

Four shovel tests were excavated across the site in order to determine depths of deposits (**Table 2**). All artifacts were recovered in the top 10 cm of each shovel test. Since the site's limits were easily identified on the north, south, and west sides due to topography constraints, only the east side was considered questionable. However, a segment of the two-track road turned up into the trees and adjacent to the site on the east end, basically delimiting the east boundary. No materials were noted east of that portion of the two-track road.

Artifacts found on the surface of the site represented all of the categories classified by South (1977): Domestic, Furnishings, Personal, Architectural, and Activities items (**Figure 17**).

Table 2: 41EL267 Shovel Tests Results

Shovel Test (ST) Unit Number	Site Location	Depth (cmbs*)	Soil/Sediment Observations	Cultural Materials Observed/Collected	Notes
3	41EL267	0-20	10YR 4/2 (dark grayish brown) compact clay	1 light green flat glass shard, 1 clear bottle glass shard, 1 whiteware sherd, threaded iron pipe, 2 wire nails, a 3-prong electrical socket, flat thin iron/None	Limestone gravel with minor caliche Shovel test terminated due to compact clay All artifacts in 10 cmbs
4	41EL267	0-23	10YR 4/2 (dark grayish brown) very compact clay	3 clear bottle glass shards, 1 wire nail/None	Minor caliche Shovel test terminated due to compact clay
5	41EL267	0-15	10YR 4/2 (dark grayish brown) very compact clay	1 fence staple/None	Few limestone gravels and caliche Shovel test terminated due to compact clay
6	41El267	0-25	10YR 4/2 (dark grayish brown) compact clay	3 pieces of flat thin iron	Few limestone gravels and caliche Shovel test terminated due to compact clay

Figure 15. Initials and names carved in boulders at south edge of 41EL267.

Figure 16. Close-up of initials and names carved in boulders at south edge of 41EL267.

Figure 17. Representative sample of artifacts from 41EL267.

Ceramics from the Domestic category included plain and decorated whiteware (post 1880) and ironstone (1850-1910) sherds, Bristol stoneware, bottle and jar glass, table glass, and a cast iron stove part. Both white and blue-tinted ironstone sherds were noted, with only a blue-tinted sherd observed with molded decoration; all others were undecorated. Decalcomania, transfer print, and molding was used to decorate many of the white and ivory-tinted whitewares. Both over-the-glaze (1880-1920) and under-the-glaze (1900-1950) decalcomania were used and consisted of polychrome floral motifs, while the transfer print noted was monochrome bluish-green (**Figure 18**). One sherd was found with a maker's mark (see **Figure 18**); "Thompson/Madison" which is attributed to the C.C. Thompson Pottery Co. of East Liverpool, Ohio, operating between 1868 and 1938 (Lehner 1988). The mark was used between ca. 1916-1938 (Kovel and Kovel 1986). In addition, one ivory-tinted whiteware sherd exhibited a molded decorative motif along the rim. Stoneware consisted of numerous Bristol slipped interior/exterior wares (post ca. 1890, Greer 1981; Lebo 1992) all of which were utilitarian. These included body, base, and rim sherds comprising a collection of churn, crock, jar, and possibly bowl shapes.

A variety of glass jar and bottle types from the Domestic category were represented in the shards observed. Most of the glass was fragmentary but represented a number of bottles, jars, and jugs. These shards were found in clear, manganese decolorized (solarized), aqua, light green, cobalt, and amber. A whole clear glass canning jar lid made to sit inside a zinc continuous-thread screw top lid and an opalescent inset cap fragment was observed as well as numerous fruit jar clear and aqua body shards. Of the lip and neck fragments observed, most were machine-made continuous-thread screw tops (post 1890). Only a small number of cork closure bottle lip finishes were identified, and these were either non-applied turn molded (1880-1910) or machine-made (1910-1940).

Figure 18. Representative sample of domestic ceramics from 41EL267.

A stem and partial base of a manganese decolorized (solarized) stemmed vessel made of heavy glass and a clear small bottle that may have been a salt/pepper dispenser (see **Figure 17**) were the only pieces of table glass observed.

Some of the Personal items noted at the site included a white ironstone chamber pot fragment, porcelain doll parts (shoulder and neck with pink coloring at neck and a leg), and a blue and white swirl glass marble. The porcelain doll parts are possible heirloom pieces as they would date earlier than the occupation. The marble is an opaque swirl made of blue and white glass, also known as "slags" in the 1920s and 1930s; they were not common after the 1940s but were produced again between 1955 to 1976 (Randall 1979:31). Some of the bottle glass observed may also be attributed to personal items. These would consist of medicinal, cosmetic, and whiskey or liquor bottle fragments. Several of the cobalt, clear, and aqua shards observed fall into these categories.

Architectural items consisted of both machine-made and handmade brick, wire nails, window glass, and decorative fencing. The brick, though manufactured differently, appeared to be made from the same dark red clay with hematite inclusions (**Figure 19**)—it is thought that these were made at one of the many local Ellis County brick yards. The Activities category of items included blades for a windmill, wash tubs and pails, barbed wire fencing, and miscellaneous cans that were found in the metal trash pile. Also noted were fence staples, electrical parts (industrial porcelain insulators and a 3-prong metal plug part made of alloy), and heavy cast iron machinery parts. Three styles of porcelain insulators for residential use were noted.

Figure 19. Machine-made and handmade bricks from 41EL267. Note hematite inclusion.

Although the Rural Electrification Administration, which was established in 1935 to bring electricity to rural areas across the country, and Brazos Electric Power Cooperative began its service in 1941, Ellis County was not fully electrified until 1954 (Haaser 2010). Hill County was ahead of Ellis County with the establishment of the Hill County Electric Cooperative in Itasca in 1937 (Austin and Austin 2010). Although the APE is about equidistant (ca. 8 miles) from both Maypearl in Ellis County and Itasca in Hill County, it is likely that this site was not electrified until the late 1940s or early 1950s.

Very limited archival information indicates that the Hill County portion of the property was owned by members of the Weir family in 1946 and likely earlier. E.P. Watson is shown as owning the Ellis County portion of the property in 1963. By 1970, he acquired some of the Hill County portion from the estate of Jane W. Ballard, possibly his mother and possibly a Weir, as well as another portion from Joann Weir Ellison et al. It is very possible that the initials found on the boulders at the edge of the site are from children and grandchildren of the Weir and Watson families.

Site 41EL267 contains a large variety of materials that strongly suggest the site was occupied most intensely after the 1920s and probably was abandoned in the late 1950s. Some items observed are of an older age, but were likely heirloom pieces. The existence of three different types of porcelain insulators indicates the house was electrified sometime in the late 1940s or early 1950s. However, the site will not provide additional information concerning life on a farm in the early to mid-twentieth century as much of the data would be redundant for the area and time period. The site has minimal spatial integrity as it appeared that there was movement of soil on the site, probably during the dismantling of the house and windmill, and subsurface deposits are extremely shallow to non-existent. Only two features were identified, the hearth and the graffiti-marked boulders, and no evidence of a

water source identified. Therefore, no additional archeological investigations are recommended for site 41EL267.

6.0 Summary and Recommendations

A combination intensive and reconnaissance survey was completed in order to evaluate potential archeological impacts associated with the construction of a new natural gas generated electrical substation in rural Ellis/Hill counties. The APE is a large dormant agricultural field with a small wooded ridgeline at the south end. Two historic-age archeological sites were identified during the survey.

Site 41EL266 is a small, low density scatter of turn-of-the-twentieth century to mid-twentieth century artifacts indicative of a small farmstead/homesite. The site extends outside of the current APE to the east, so the site's full extent is currently unknown. However, the portion of the site within the APE lacks research value as it contains no features, lacks spatial (horizontal and vertical) integrity, and contains artifact remains that would be redundant to the time period and area based on other larger projects conducted in North-central Texas. No additional archeological investigations are recommended for the portion of the site within the current archeological APE.

Site 41EL267, located about 140 m due west of 41EL266, is a dense scatter of early to mid-twentieth century materials also indicating a farmstead/homesite. Although there are a variety of numerous artifacts across site 41EL267, the site will not provide additional information concerning life on a farm in the early to mid-twentieth century as much of the data would be redundant for the area and time period. The site has minimal spatial (horizontal and vertical) integrity as there has been soil movement on the site, most likely during the dismantling of the house and windmill, and subsurface deposits are extremely shallow to non-existent. Only two features were identified, with no clear evidence of a water source. No additional archeological investigations are recommended for site 41EL267.

As there are no plans to develop this part of the APE, no artifacts were collected from the sites, and none were identified during the survey of the agricultural field. However notes, photographs, administrative documents, and other project data will be made permanently available to future researchers at TARL per TAC 26.27 and 26.5.

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

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Appendix A – Regulatory Correspondence

RECEIVED
15 Dec 14
CMEC

December 8, 2014

Melissa M. Green
Cultural Resources
Cox/McLain Environmental Consulting, Inc.
600 East John Carpenter Freeway, Suite 380
Irving, Texas 75062

Re: Project review under Section 106 of the National Historic Preservation Act of 1966
Draft report: *Archeological Survey for the Proposed Brazos Electric Cooperative, Inc., Maypearl Natural Gas Electric Generation Facility, Ellis and Hill Counties, Texas.*
(PUC)

Dear Ms. Green:

Thank you for allowing us to review the above referenced report. This letter serves as comment on the proposed undertaking from the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission. As the state agency responsible for administering the Antiquities Code of Texas, these comments also provide recommendations on compliance with state antiquities laws and regulations.

The review staff, led by Bill Martin, has completed its review. After examining the documentation, we concur with your conclusion that the portion of site 41EL266 that falls within the project footprint is not eligible for inclusion in the National Register of Historic Places. We also concur that site 41EL267 is not eligible for inclusion in the National Register of Historic Places. The project will have no effect on historic properties. Construction activities may proceed without further consultation with this office.

We have one comment on the report that should be addressed in the final. Figure 14, which shows the site boundaries and shovel test locations for site 41EL267, should also show the locations of the concrete pads, possible windmill and the rock illustrated in Figures 15 and 16. Please also submit shapefiles of the project area to archeological_projects@thc.state.tx.us.

Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. **If we may be of further assistance, please call Bill Martin of our staff at 512/463-5867.**

Sincerely,

for
Mark Wolfe, State Historic Preservation Officer

MW/wam