

# ANTIQUITIES PERMIT APPLICATION FORM ARCHEOLOGY

## GENERAL INFORMATION

### I. PROPERTY TYPE AND LOCATION

Project Name (and/or Site Trinomial) Archeological Survey of County Road 332 from Farm-to-Market Road 487 to County Road 313

County (ies) Williamson County USGS Quadrangle Name and Number Jarrell (3097-341)

UTM Coordinates (approximate) Zone 14R E 634800-635315 N 3410850-3409158

Location Extending along CR 332, with northern terminus at FM 487 to southern terminus at CR 313

Federal Involvement  Yes  No

Name of Federal Agency \_\_\_\_\_

Agency Representatives \_\_\_\_\_

### II. OWNER (OR CONTROLLING AGENCY)

Owner Williamson County

Representative Bill Gravell, Jr., County Judge

Address 710 South Main Street, Suite 101

City/State/Zip Georgetown, Texas, 78626

Telephone (include area code) 512-943-1550 Email Address ctyjudge@wilco.org

### III. PROJECT SPONSOR (IF DIFFERENT FROM OWNER)

Sponsor \_\_\_\_\_

Representative \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Telephone (include area code) \_\_\_\_\_ Email Address \_\_\_\_\_

## PROJECT INFORMATION

### I. PRINCIPAL INVESTIGATOR (ARCHEOLOGIST)

Name Alexander Menaker, PhD, RPA

Affiliation Cox/McLain Environmental Consulting, Inc.

Address 8410 Shoal Creek Blvd; Suite 100

City/State/Zip Austin, Texas 78757

Telephone (include area code) 512-338-2223 Email Address alexm@coxmcclain.com

(OVER)

ANTIQUITIES PERMIT APPLICATION FORM (CONTINUED)

II. PROJECT DESCRIPTION

Proposed Starting Date of Fieldwork December 9, 2021
Requested Permit Duration 5 Years 0 Months (1 year minimum)
Scope of Work (Provided an Outline of Proposed Work) Survey with shovel testing (see attached research design)

III. CURATION & REPORT

Temporary Curatorial or Laboratory Facility Cox|McLain Environmental Consulting, Inc.
Permanent Curatorial Facility Center for Archeological Studies (CAS) at Texas State University

IV. OWNER'S CERTIFICATION

I, \_\_\_\_\_, as legal representative of the Owner, \_\_\_\_\_, do certify that I have reviewed the plans and research design, and that no investigations will be performed prior to the issuance of a permit by the Texas Historical Commission. Furthermore, I understand that the Owner, Sponsor, and Principal Investigator are responsible for completing the terms of the permit.

Signature \_\_\_\_\_ Date \_\_\_\_\_

V. SPONSOR'S CERTIFICATION

I, \_\_\_\_\_, as legal representative of the Sponsor, \_\_\_\_\_, do certify that I have reviewed the plans and research design, and that no investigations will be performed prior to the issuance of a permit by the Texas Historical Commission. Furthermore, I understand that the Owner, Sponsor, and Principal Investigator are responsible for completing the terms of the permit.

Signature \_\_\_\_\_ Date \_\_\_\_\_

VI. INVESTIGATOR'S CERTIFICATION

I, Alexander Menaker, as Principal Investigator employed by Cox|McLain Environmental Consulting, Inc. (Investigative Firm), do certify that I will execute this project according to the submitted plans and research design, and will not conduct any work prior to the issuance of a permit by the Texas Historical Commission. Furthermore, I understand that the Principal Investigator (and the Investigative Firm), as well as the Owner and Sponsor, are responsible for completing the terms of this permit.

Signature [Handwritten Signature] Date 11/12/2021

Principal Investigator must attach a research design, a copy of the USGS quadrangle showing project boundaries, and any additional pertinent information. Curriculum vitae must be on file with the Division of Antiquities Protection.

FOR OFFICIAL USE ONLY

Reviewer \_\_\_\_\_ Date Permit Issued \_\_\_\_\_
Permit Number \_\_\_\_\_ Permit Expiration Date \_\_\_\_\_
Type of Permit \_\_\_\_\_ Date Received for Data Entry \_\_\_\_\_



## ARCHEOLOGICAL INTENSIVE SURVEY SCOPE

### ARCHEOLOGICAL SURVEY OF COUNTY ROAD 332 FROM FARM TO MARKET ROAD 487 TO COUNTY ROAD 313, WILLIAMSON COUNTY, TEXAS

#### Project Description

The purpose of the investigation described in this scope of work is to identify cultural resources along County Road (CR) 332, extending for approximately 1.2 miles, from Farm-to-Market Road (FM) 487 to CR 313 (**Figures 1, 2, and 3a–b**). The proposed road improvements include the realignment of CR 332 and expansion of the existing roadway to a four-lane roadway with a proposed right-of-way width of 136 feet. Cox|McLain Environmental Consulting, Inc. (CMEC) has been subcontracted by Seiler Lankes Group, LLC as part of a project funded by Williamson County.

The existing CR 332 is a two-lane roadway with asphalt pavement and with varying widths of existing right-of-way (from 40 to 120 feet). The proposed road improvement project will require the acquisition of additional right-of-way along both sides of the CR 332 roadway, resulting in a new right-of-way width of 136 feet. In addition to previous road construction and associated buried utilities, other possible existing disturbances to this project area may have resulted from nearby residential and commercial development. Running along CR 332 for 1.2 miles with a project width of 140 feet, the archeological project area covers approximately 17.95 acres, including 5.26 acres of existing right-of-way and 12.69 acres of proposed right-of-way.

The project is owned and funded by Williamson County, a political subdivision of the State of Texas, rendering the project subject to the Antiquities Code of Texas. Per the provisions of the Antiquities Code of Texas, this investigation will include intensive archeological pedestrian survey augmented with shovel tests for previously unidentified resources. This investigation will evaluate the eligibility of identified resources for listing on the National Register of Historic Places (NRHP) and for designation as State Antiquities Landmarks (SAL) (9 Texas Natural Resources Code [TNRC] 191; 13 Texas Administrative Code [TAC] 26.12). Although there is no known federal nexus at this time, this project will be conducted in accordance with all applicable regulations of Section 106 of the National Historic Preservation Act (NHPA), as amended.

#### Background Information

Topographically, the project area is situated on a heavily dissected upland of the Trans-Pecos Texas and High Plains ecoregions (Griffith et al. 2004), with an elevation range of 245 feet (75 meters) above mean sea level at the northern extent and sloping upwards to 259 feet (79 meters) above sea level at the southern termination of the project area. The project area crosses three seasonally flooded and intermittent wetland streambeds, and several freshwater ponds are located adjacent to the project area. The northernmost stream is identified as a branch of Donahoe Creek in historical topographic maps (National Wetlands Inventory 2021).

Geologically, the entire project area is uniformly underlain by the Late Cretaceous Austin Chalk Formation (United States Geological Survey [USGS] 2021a). According to Natural Resources Conservation Service (NRCS) data, the project area is underlain by the following soils, presented from north to south: Houston black clay on 0 to 8 percent slopes, Austin fine silty clay loam on 0 to 8 percent slopes, and small pockets of Castephen silty clay on 1 to 8 percent slopes and Whitewright silty clay loam on 1 to 15 percent slopes across the southern half the of project area (Soil Survey Staff 2021). The soils underlying the project area are not characterized by frequent flooding or known to contain buried A horizons and thus exhibit limited potential to contain deeply buried and intact archeological deposits.

According to a review of the Texas Department of Transportation's Austin District Hybrid Potential Archeological Liability Map (HPALM) information, the majority of the project area is located within HPALM Map Units that carry low potential to contain archeological deposits. The northern extent of the project area, however, contains approximately 1.32 acres mapped as having at least moderate potential to contain archeological deposits (Abbott and Pletka 2017; see **Figure 3a**). Based on this predictive tool, there is a low to moderate potential that shallow and intact prehistoric-age cultural resources could exist within the project area, as well as a low potential to contain deeply buried intact archeological deposits.

The Texas Historical Commission's (THC) online Archeological Sites Atlas indicates that there are no archeological sites within the project area, and there are no known sites mapped within the 1-kilometer (0.62-mile) study area around the project area (THC 2021).

According to the Atlas, no cemeteries are mapped within 150 feet of the project area. The nearest known cemetery, Cornhill Cemetery, is located 1.8 kilometers (1.1 miles) to the southwest of the project area (THC 2021).

While a 2015 linear water line survey was conducted by M. Godwin in 2015 adjacent to the current CR 332 corridor, much of the project area falls outside the previous survey area. Another linear survey, by J. Owens in 2006, was conducted along Donahoe Creek and briefly crosses the northern extent of the study. Other surveys that are outside the study area but fall within 1-kilometer include a linear survey running along FM 487, conducted by J. Henderson in 2015, located to the north of CR 332, an areal survey north of the study area near Jarrell, and a linear water line survey along CR 313, by M. Godwin in 2005, to the south of the project area (THC 2021).

Historical aerial imagery (from the years 1963, 1981, 1995, 2004, 2008, 2010, 2021, 2014, 2016) and topographic maps (from the years 1893, 1954, 1964, 1974 and 1985) were reviewed to determine how the project area and its surroundings evolved over time (National Environmental Title Research [NETR] 2021; USGS 2021b). While it is at a coarse scale (1:125,000), the 1893 map does not depict the CR 332 road corridor and no structures are marked within or adjacent to the project area, with sparse development evident in the surrounding region. The current road corridor is illustrated on the Austin 1954 historical topographic map along with Donahoe Creek, which crosses the project area. The 1964 historical topographic map (1:24,000) offers the finest resolution of available maps and shows one structure marked in the project area, located along the turn in CR 332. In this 1964 map, a Gravel Pit is also labeled in the southern portion of the project area in addition to the depiction of the known streamways. Structures are visible in historic aerials from 1963 corresponding to the location of the one structure marked on the 1964 map. Aerial photos as recent as 2016 show the continued presence and construction of multiple structures on this property (NETR 2021; USGS 2021b).

The project area overlaps with the extant CR 332 road corridor while also continuing through undeveloped agricultural fields and surrounded by residential and commercial development. Historical topographic maps and aerial imagery suggests that the project area has low potential of historic sites, with one historic property located outside the study area. Based on the TxDOT HPALM predictive tool, the project area can be considered to have a low to moderate potential for prehistoric-age cultural resources, such as Native American archeological sites. Thus, archeological survey is warranted before the construction of the proposed road improvement project, including the realignment of CR 332, takes place. Based upon a geomorphic review of the project area, CMEC does not recommend any deep investigations, including mechanical trenching.

## **Research Design**

CMEC will conduct intensive survey of the project area per 7 TAC 26.15 and using the definitions in 13 TAC 26.3. The field methods and strategies comply with the requirements of 13 TAC 26.15 and with guidelines established by the Council of Texas Archeologists (CTA) and the THC in April 2020.

This archeological investigation will include pedestrian survey of all areas within the project area and augmented by excavation of shovel tests throughout the Project Area. CMEC proposes to excavate shovel tests in two transects not to exceed 30 meters (98.4 feet) between the transects, with shovel tests placed at intervals no greater than 100 meters (164 feet) along each transect. In the case of no findings, CMEC proposes to excavate 35–38 shovel tests throughout the project area. All shovel tests will be excavated in natural levels or in 20-centimeter-thick (7.9-inch-thick) arbitrary levels (whichever is smaller) to subsoil or 100 centimeters (39.37 inches), whichever is encountered first. Excavated matrix will be screened through 0.635-centimeter (0.25-inch) hardware cloth as allowed by moisture and clay content, which may require that the removed sediment be crumbled/sorted by hand, trowel, and/or shovel point. Deposits will be described using conventional texture classifications and Munsell color designations. Radial shovel tests will be placed at 5-meter (16-foot) intervals around each shovel test containing cultural material until two negative units have been established in each cardinal direction, within the project limits. In areas of heavy disturbances and developments already present and shovel test probes not advisable, project archeologists will comprehensively photograph and document the area. All components of the CTA standards approved in April 2020 will be rigorously followed. Based upon a geomorphic review of the project area, CMEC does not anticipate a need for any deep investigations, including mechanical trenching.

The project has a low probability of encountering human burials; however, if burials or human remains are found, work will stop immediately and the THC and Williamson County will be notified immediately. All requirements of Title 9, Ch. 191 of the TNRC, and Title 13, Part 2 of the TAC will be followed in addition to the Health and Safety Code.

Artifacts identified in shovel tests and surface contexts will be noted, described, photographed, and returned to their original contexts by archeologists who meet or exceed the Secretary of Interior’s (SOI) qualifications for professional archeologists. Descriptions will include, at minimum: artifact dimensions, artifact material type(s), artifact functional class (if apparent), Munsell colors, and provenience. All descriptions will be approved in field by the Project Archeologist. Following their description, all artifacts will be photographed from the maximum number of sides available (e.g., 4 for an intact bottle) prior to being returned to their original contexts. Additional in-field analysis will depend on certain artifact classes: for example, a historic-age bottle with embossed markings that are not easily photographable may be sketched or drawn.

Any site recorded during the investigation will be identified by a temporary marker placed on the site. The marker will have an identifying number in the form of a field site (or FS) designation, followed by a consecutively assigned number in order of site discovery (e.g., FS-01, FS-02, etc.). This number is a temporary field number to be superseded by a formal site trinomial obtained following the completion of fieldwork (see below). CMEC defines an archeological site based on content and extent. When a shovel test yields cultural material, additional shovel tests will be excavated in a cruciform pattern at 5-meter (16.4-foot) intervals around the initial test, until two sterile shovel tests are encountered. A prehistoric site is defined as five or more cultural items (e.g., prehistoric stone tool manufacturing debris of different raw materials, or manufacturing debris in combination with stone tools) or one or more stationary and immovable objects – such as firepits or posthole molds – within a 20-meter (65.6-foot) square; for historic sites, a site is defined as five or more cultural items from at least two material types or artifact classes, or one or more stationary and immovable objects and at least one cultural item within a 20-meter (65.6-foot) square. A site’s boundaries are defined within the extent of positive shovel tests and/or surface remains.

Conversely, isolated finds of individual artifacts or small groups of similar non-diagnostic artifacts (for example, fewer than five flakes composed of the same material) not meeting the above site definition criteria will be recorded as an “Isolated Find” and given an Isolated Find number but not assigned a locus number or considered for listing in the NRHP. Likewise, a stationary and unmovable object – such as brick piers, etc. – with no associated cultural materials and not meeting the above definition criteria will be designated a “Locality,” and as with Isolates, given a Locality number but not considered for eligibility in the NRHP. The locations of both Isolates and Localities will be recorded. All encountered cultural resources will be treated as potential sites until proven otherwise.

CMEC personnel will keep a complete record of field notes with observations including (but not limited to) identified sites, cultural materials, location markers, contextual integrity, estimated time periods of occupations, vegetation, topography, hydrology, land use, soil exposures, general conditions at the time of the survey, and field techniques employed. The field notes will be supplemented by digital photographs.

## Reporting and Curation

Any sites discovered will be photographed and recorded on State of Texas Archeological Site Data Forms for subsequent submittal in TexSite format to the Texas Archeological Research Laboratory. All site locations will be plotted using a hand-held Garmin Global Positioning System unit. CMEC will prepare and submit a report on the results of the archeological work suitable for consultation with the THC. The survey will be conducted under a no-collection policy. Hence, the project will not generate any artifacts requiring curation. Following completion of the fieldwork, an analysis of the information recovered and preparation of a report providing discussions of background research, work accomplished, results of field investigations, a list of all sites identified and ownership of lands containing sites, recommendations concerning eligibility for SAL designation and listing in the NRHP (including appropriate evaluation criteria), and recommendations concerning the need for further work with justifications based on 13 TAC 26.16 will be produced. The report will meet the requirements of 13 TAC 26.13–26.18 and the CTA reporting guidelines; it will be submitted for review by the THC. After receipt of any review comments, the report will be modified as necessary, and a final report will be produced; it will be submitted in the quantity and formats required by the project Antiquities permit. Per 13 TAC 26.16, the final permit closure submittal will include a transmittal letter, abstract form, project area shapefile, tagged PDF files of the report in both restricted (with site locations) and public (without site locations) versions, as applicable.

Upon completion of the fieldwork and reporting, CMEC will make all materials and forms generated by this project available to future researchers through curation at the Center for Archaeological Research (CAS) at Texas State University per 13 TAC 26.16 and 26.17. A curation form filed at both CAS and THC will accompany the collections.

## References Cited

Abbott, J. T. and S. Pletka

2017 *The Austin District HPALM Model*. Texas Department of Transportation, Environmental Affairs Division, Austin. Accessed March 11, 2021.

Google Earth™ Pro

2021 Historic Aerial Imagery viewed through Google Earth. Google. Available at <https://www.google.com/earth/>. Accessed March 11, 2021.

Griffith, G. E., S. A. Bryce, J. M. Omernik, J. A. Comstock, A. C. Rogers, B. Harrison, S. L. Hatch, and D. Bezanson

2004 *Ecoregions of Texas*. United States Geological Survey. Available at [ftp://ftp.epa.gov/wed/ecoregions/tx/tx\\_front.pdf](ftp://ftp.epa.gov/wed/ecoregions/tx/tx_front.pdf). Accessed March 11, 2021.

Nationwide Environmental Title Research (NETR)

2021 *Historic Aerials Database*. Nationwide Environmental Title Research. Available at <http://historicaerials.com>. Accessed March 11, 2021.

Soil Survey Staff, United States Department of Agriculture

2021 NRCS SSURGO and STATSGO soil data viewed through SoilWeb KMZ interface for Google Earth. Available at <http://casoilresource.lawr.ucdavis.edu/soilweb/>. U.S. Department of Agriculture and California Soil Resource Laboratory, University of California, Davis. Accessed March 11, 2021.

Texas Historical Commission (THC)

2021 *Texas Archeological Sites Atlas*. Texas Archeological Research Laboratory and the Texas Historical Commission. Available at <https://atlas.thc.state.tx.us/>. Accessed March 11, 2021.

U.S. Fish & Wildlife Service National Wetlands Inventory (NWI)

2021 *Wetlands Mapper*. National Wetlands Inventory, U.S. Fish & Wildlife Service. Available at <https://www.fws.gov/wetlands/data/mapper.html>. Accessed March 11, 2021.

U.S. Geological Survey (USGS)

2021a *Texas Geology Map Viewer*. United States Geological Survey. Available at <http://txpub.usgs.gov/dss/texasgeology/>. Accessed March 11, 2021.

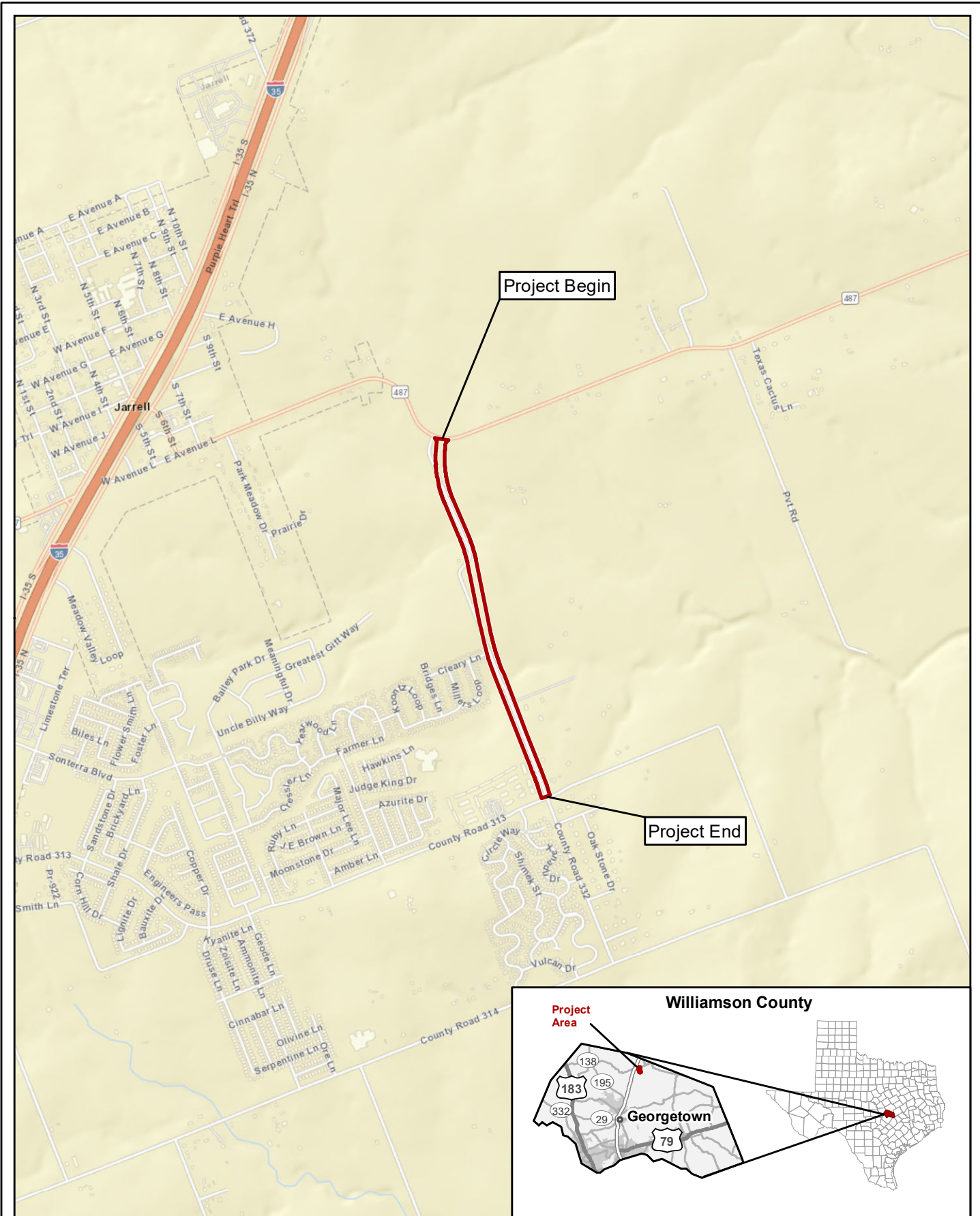
2021b *Historical Topographical Map Explorer*. United States Geological Survey. Available at <http://historicalmaps.arcgis.com/usgs/index.html>. Accessed March 11, 2021.

## Figures

Figure 1: Project Location

Figure 2: Location of Archeological APE

Figure 3a–b: HPALM Map



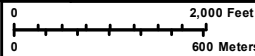
**Figure 1.**  
**Project Location (Road Base)**

CR 332 from FM 487 to CR 313

 Project Location

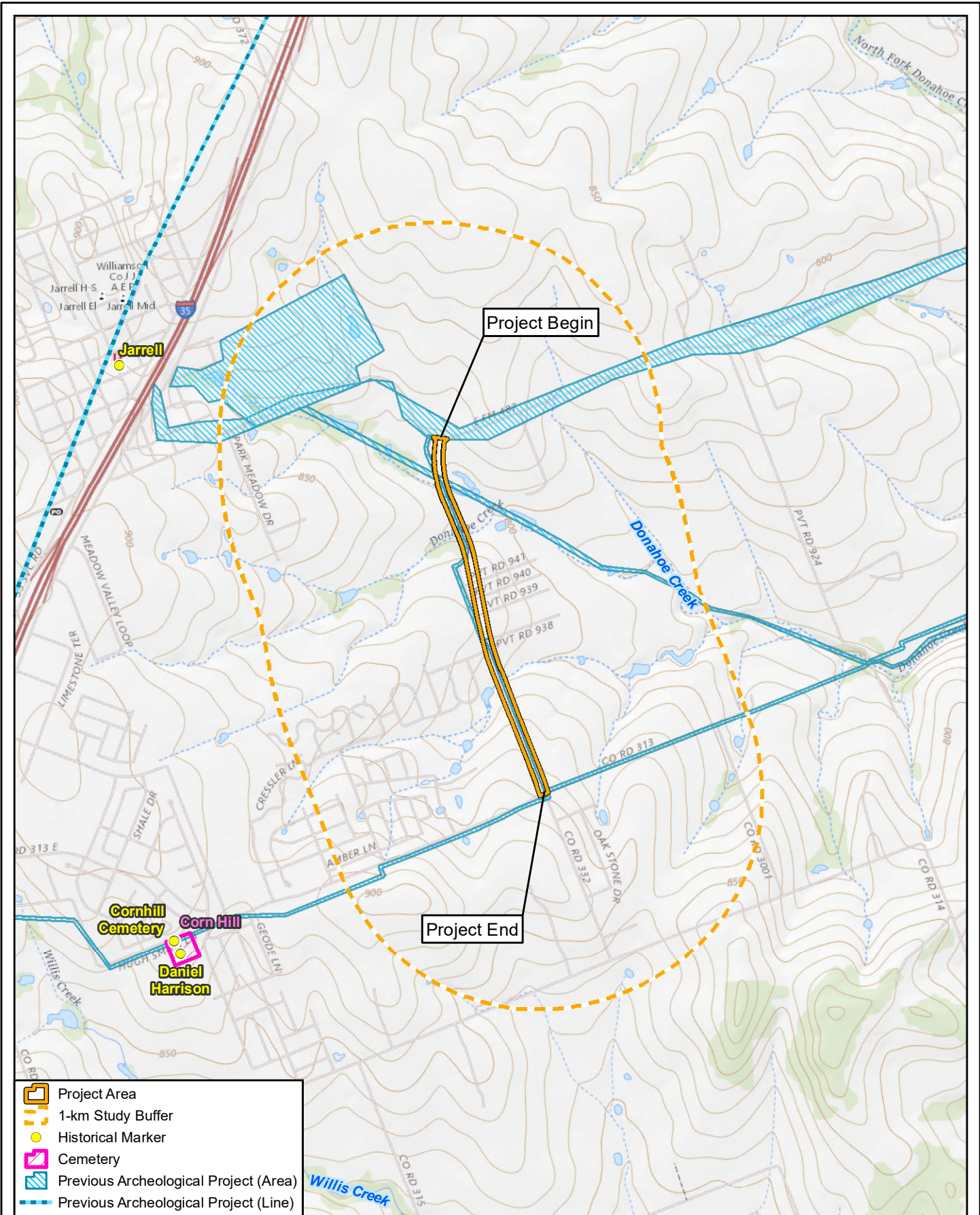








**COX | McLAIN**  
 Environmental Consulting



Scale: 1:24,000  
 Date: 3/8/2021

Basemap Source: Esri (2021)




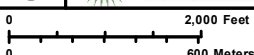

-  Project Area
-  1-km Study Buffer
-  Historical Marker
-  Cemetery
-  Previous Archeological Project (Area)
-  Previous Archeological Project (Line)

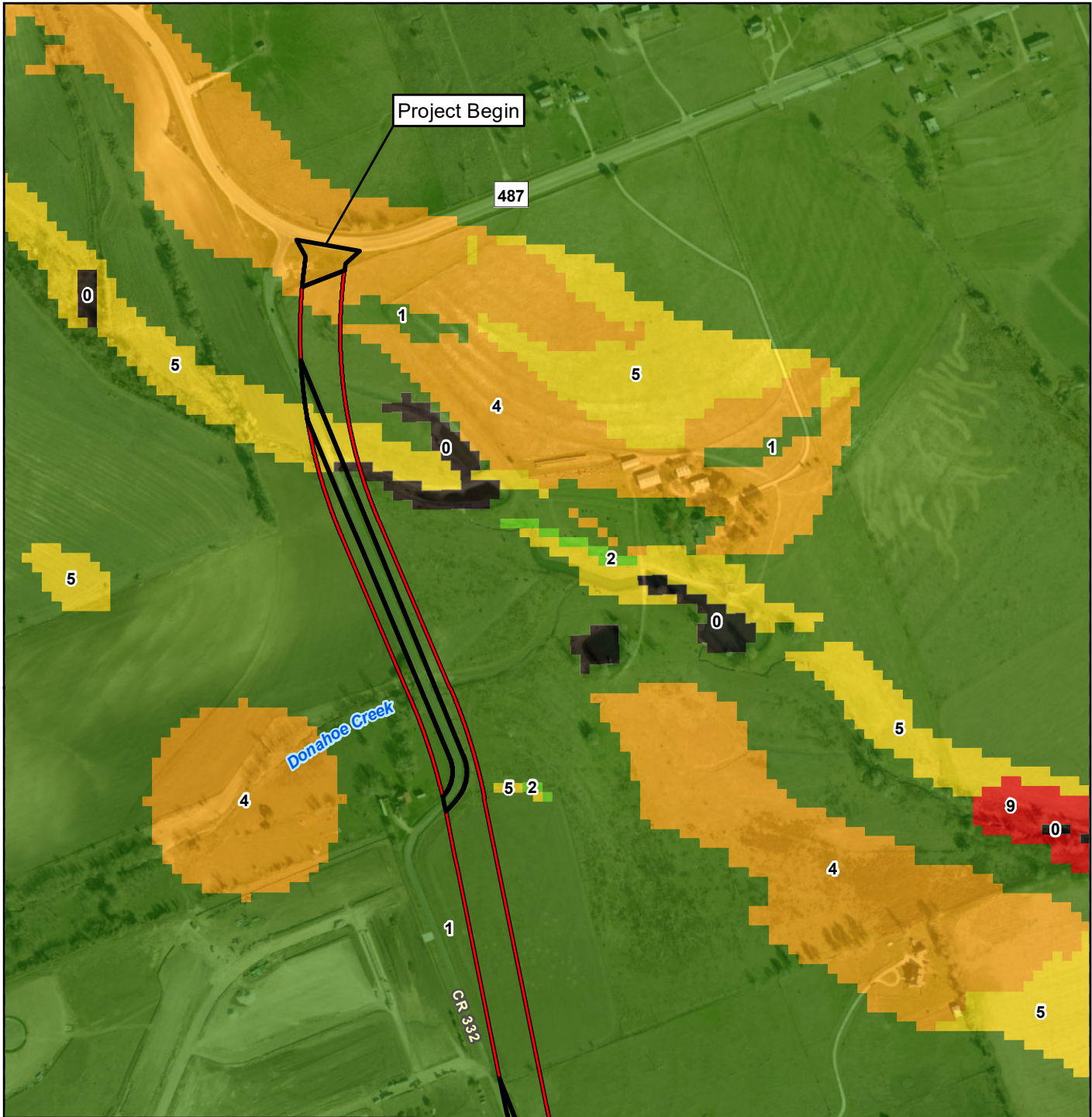
**Figure 2.**  
**Location of Archeological Project Area**

CR 332 from FM 487 to CR 313

G:\Projects\Williamson County\CR\_332\CR332\_Arch\_Figure 2\_APE\_20210510\_slh.mxd

Data Sources: THC (2021), TARI (2020), NHD (2020) Topographic  
 Source: USGS (2020) USGS 7.5' Quadrangle: Jarrell

 		<b>COX   McLain</b> <b>Environmental Consulting</b>
	2,000 Feet 600 Meters	1 in = 2,000 feet Scale: 1:24,000 Date: 5/10/2021



Existing Right-of-Way  
 Proposed Right-of-Way  
 Sheet Limits

**HPALM Score**

- 0-negligible potential
- 1-low potential
- 2-low shallow potential, moderate deep potential
- 4-moderate shallow potential, low deep potential
- 5-moderate potential
- 9-high potential

**Figure 3a.**  
**HPALM Map**

CR 332 from FM 487 to CR 313

G:\Projects\Williamson County\CR\_332\CR332\_Arch\_Figure 3 HPALM 20210310\_slh.mxd

Data Source: TxDOT (2017)  
Aerial Source: Williamson County (2019)

**COX | McLAIN**  
 Environmental Consulting

0 500 Feet 1 in = 500 feet  
 0 100 Meters Scale: 1:6,000  
 Date: 3/10/2021



Existing Right-of-Way
   
 Proposed Right-of-Way
   
 Sheet Limits
   
**HPALM Score**
  
  
 0-negligible potential
   
 1-low potential
   
 4-moderate shallow potential, low deep potential

**Figure 3b.**  
**HPALM Map**

CR 332 from FM 487 to CR 313

G:\Projects\Williamson County\CR\_332\CR332\_Arch\_Figure 3 HPALM 20210310\_sh.mxd

Data Source: TxDOT (2017)  
Aerial Source: Williamson County (2019)

**COX | McLain**  
 Environmental Consulting
   
 0 500 Feet 1 in = 500 feet
   
 0 100 Meters Scale: 1:6,000
   
 Date: 3/10/2021