

**Intensive Archaeological Survey of the Proposed
SAWS Masterson Road Water Line Project,
Bexar County, Texas**

Antiquities Permit #8252

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Prepared for:

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Abstract

At the request of the San Antonio Water System (SAWS), an intensive archaeological survey was conducted by Pape-Dawson for the proposed Masterson Road water line project located southwest of the City of San Antonio in Bexar County, Texas. The project area's southern terminus is 6,560 feet (ft) (2,000 meters [m]) south of U.S. Highway 90 (US 90), and the linear project area extends north along Masterson Road for about 2,904 ft (885 m) before turning east and northeast along a proposed new road (Copper Crossing Street), for a total length of 6,726 ft (2,050 m). The proposed water line will be bored beneath Masterson Road where it crosses the roadway. The water line will be installed adjacent to the western side of Masterson Road within a permanent 16-ft-wide (12.2-m-wide) utility easement. The project area will also include a temporary 20-ft-wide (6.1-m-wide) construction easement that will parallel the permanent easement.

Based on SAWS' status as a political subdivision of the State of Texas, compliance with the Antiquities Code of Texas (ACT) is required. Since the project will require a 404 permit from the United States Army Corps of Engineers (USACE), compliance with Section 106 of the National Historic Preservation Act (NHPA) is also necessary.

For the purpose of the project, the area of potential effects (APE) is defined as the footprint of the proposed water and temporary construction easements. The APE will consist of a total area of 5.48 acres (2.22 hectares). The depth of vertical impacts has not yet been determined, but the maximum vertical depth of impact is considered to be up to 8 ft (2.4 m) below the current ground surface within the permanent easement based on typical utility installations, except at the bore locations where impacts may be up to 40 ft (12.2 m) beneath the ground surface. Ground disturbance within the temporary construction easement will be minimal and should not exceed 1 ft (30 centimeters [cm]) below the current ground surface.

Pape-Dawson conducted an archaeological survey for the Masterson Road project on March 6, 2018. This work was conducted under Texas Antiquities Permit No. 8252. The APE was subjected to a pedestrian survey with shovel testing with the exception of six parcels that could not be accessed because right-of-entry had not been obtained at the time of the survey. Archaeologist documented these parcels from the ROW during the survey. A total of 11 shovel tests were excavated to investigate the APE resulting in the recordation of one new archaeological site (41BX2228).

Site 41BX2228 is a surficial prehistoric lithic scatter of indeterminate temporal affiliation. Given the absence of diagnostic material and/or features, and the lack of subsurface deposits, Pape-Dawson recommends that site 41BX2228 is not eligible for NRHP listing or for SAL designation.

Based on the results of the survey, Pape-Dawson recommends that no further archaeological work is necessary for the surveyed portion of the APE. However, given the poor ground surface visibility at the time of the survey, Pape-Dawson does recommend that the 6 unsurveyed parcels be subjected to an intensive pedestrian survey once right-of-entry has been granted. Within the entire APE, if undiscovered cultural material is encountered during construction, it is recommended that all work in the vicinity should cease and that the discovery be evaluated by a qualified archaeologist who can provide guidance on how to proceed in accordance with state regulations.

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Management Summary

SAWS proposes to construct a water line in western Bexar County, Texas. The project area will have a total length of approximately 6,726 ft (2,050 m) and will be located on private and public lands. The project will consist of a total area of roughly 5.48 acres (2.22 hectares [ha]). The water line will be installed within a permanent 16-ft-wide (12.2-m-wide) utility easement totaling 2.46 acres (1 hectare [ha]) and a temporary 20-ft-wide (6.1-m-wide) construction easement comprising 3.02 acres (1.22 ha) will parallel the permanent easement. Though the vertical depths of impact are currently unknown, the maximum depth of ground disturbance within the water easement and existing road ROW is considered to be up to 8 feet (ft) (2.4 meters [m]) below the ground surface based on typical water line design, except at the bore locations where impacts may be deeper. Ground disturbance within the temporary construction easement will be minimal and should not exceed 1 ft (30 centimeters [cm]) below the current ground surface.

Based on SAWS' status as a political subdivision of the State of Texas, compliance with the Antiquities Code of Texas (ACT) is required. Pape-Dawson applied for and received Texas Antiquities Permit No. 8252. Since the project will require a 404 permit from the United States Army Corps of Engineers (USACE), compliance with Section 106 of the National Historic Preservation Act (NHPA) is also necessary.

Pape-Dawson conducted the intensive archaeological survey on March 6, 2018. Virginia Moore served as Principal Investigator and was assisted in the field by Mary Jo Galindo and Megan Veltri. As a result of the survey, one new archaeological site (41BX2228) was recorded. Site 41BX2228 is a surficial prehistoric lithic site of indeterminate temporal affiliation that spans the entire portion of the project area that was accessible for cultural survey. Based on the results of the archaeological fieldwork, Pape-Dawson recommends that site 41BX2228 is not eligible for NRHP listing or for SAL designation.

Based on the results of the survey, Pape-Dawson recommends that no further archaeological work is necessary for the surveyed portion of the APE. However, given the poor ground surface visibility at the time of the survey, Pape-Dawson does recommend that the 6 unsurveyed parcels be subjected to an intensive pedestrian survey once right-of-entry has been granted. Within the entire APE, if undiscovered cultural material is encountered during construction, it is recommended that all work in the vicinity should cease and that the discovery be evaluated by a qualified archaeologist who can provide guidance on how to proceed in accordance with state regulations.

Introduction

San Antonio Water System (SAWS) proposes to install a water line in western Bexar County, Texas. The project area's southern terminus is 6,560 feet (ft) (2,000 meters [m]) south of U.S. Highway 90 (US 90), and the linear project area extends north along Masterson Road for about 2,904 ft (885 m) before turning east and northeast along a proposed new road (Copper Crossing Street), for a total length of 6,726 ft (2,050 m) (Figures 1 and 2). The proposed water line would be bored beneath Masterson Road where it crosses the roadway. The water line will be installed adjacent to the western side of Masterson Road within a permanent 16-ft-wide (12.2-m-wide) utility easement , and a temporary 20-ft-wide (6.1-m-wide) construction easement will parallel the permanent easement.

Based on SAWS' status as a political subdivision of the State of Texas, compliance with the Antiquities Code of Texas (ACT) is required. Pape-Dawson applied for and received Texas Antiquities Permit No. 8252. Since the project will require a 404 permit from the United States Army Corps of Engineers (USACE), compliance with Section 106 of the National Historic Preservation Act (NHPA) is also necessary.

For the purpose of the project, the area of potential effects (APE) is defined as the footprint of the proposed water and temporary construction easements. The APE will consist of a total area of 5.48 acres (2.22 ha). The depth of vertical impacts has not yet been determined, but the maximum vertical depth of impact is considered to be up to 8 ft (2.4 m) below the current ground surface within the permanent easement based on typical utility installations, except at the bore locations where impacts may be up to 40 ft (12.2 m) beneath the ground surface. Ground disturbance within the temporary construction easement will be minimal and should not exceed 1 ft (30 centimeters [cm]) below the current ground surface.

Pape-Dawson's investigations of the 5.48-acre (2.22-ha) APE included a pedestrian survey with shovel testing. Fieldwork took place on March 6, 2018. Virginia Moore served as Principal Investigator and was assisted in the field by Mary Jo Galindo and Megan Veltri. The goals of the investigation were to: (1) locate all prehistoric and historic cultural resources, if present, within the APE; (2) establish vertical and horizontal site boundaries, as appropriate with respect to the project area; (3) evaluate the significance of recorded cultural resources with regard to State Antiquities Landmark (SAL) and National Register of Historic Places (NRHP) eligibility.

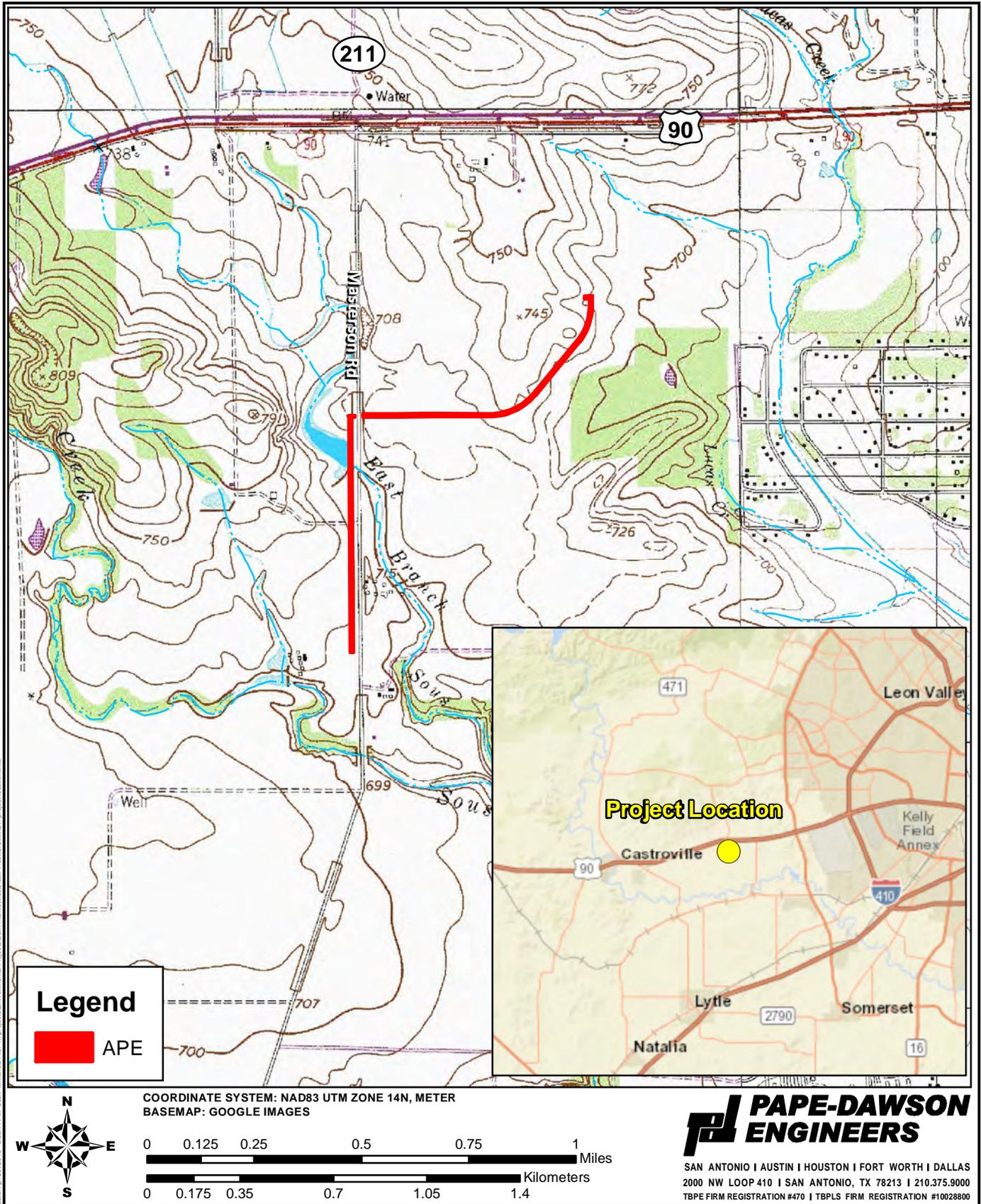


Figure 1. Project Location

Masterson Off-Site Water Line PN: 11336-07
 Bexar County, Texas
 Archaeological Report
 April 2018

Pape-Dawson
ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

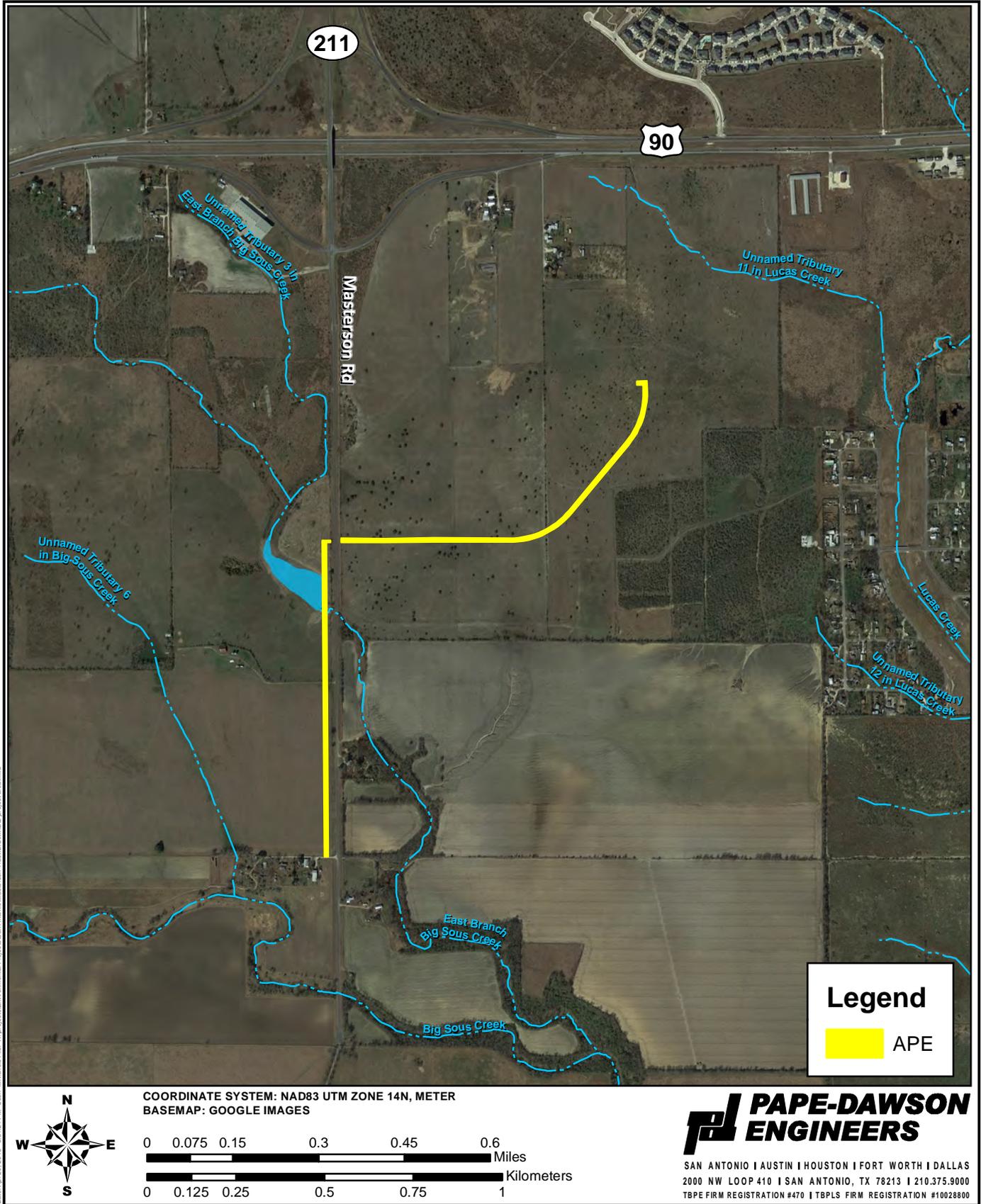


Figure 2. Project Area

Project Setting

The project area is situated within the Blackland Prairie physiographic region (Wermund 1996). The northern portion of the APE is underlain (in the western half) by the Pleistocene-era Leona Formation (Qle) while the southern portion of the APE is underlain by Upper Cretaceous-era Navarro Group and Marlbrook Marl, undivided (Kknm) (Bureau of Economic Geology [BEG] 1983). Soils mapped within the APE consist of approximately 71 percent Houston Black gravelly clay with 1 to 8 percent slopes (HuB, HuC, and HuD), 15.5 percent Rock outcrop-Olmos complex with 5 to 25 percent slopes (HgD), 8.5 percent Loire clay loam that is occasionally flooded (Fr), and 5 percent Lewisville silty clay with 1 to 3 percent slopes (LvB) (Figure 3) (Taylor et al. 1991: Map Sheet 59); U.S. Department of Agriculture, Natural Resources Conservation Service [USDA-NRCS] 2017).

The Houston Black series consists of very deep, moderately well-drained, and very slowly permeable soils that formed in clayey residuum derived from calcareous mudstone of Cretaceous Age (Taylor et al. 1991; USDA-NRCS 2017). These nearly level to strongly sloping soils occur on interfluves and side slopes on upland ridges and plains on dissected plains. Within the APE, Houston Black gravelly clay is mapped along Masterson Road and across the agricultural fields (Figure 3) (USDA-NRCS 2017). Typically, the surface layer (A Horizon) of Houston Black gravelly clay is very dark gray to black and about 38 inches (96.5 centimeters [cm]) thick with a gravel content exceeding 8 percent by volume (Taylor et al. 1991:20). Beneath the surface layer is about 12 inches (30.5 cm) of gray or dark gray clay with grayish-brown or olive-brown streaks (Bk1 Horizon), followed by very pale brown, calcareous clay or marl with olive brown and gray mottles (Bk2 Horizon) (Taylor et al. 1991:20). The location of the bore pits is mapped as Houston Black gravelly clay with 3 to 5 percent slopes.

The Olmos series consists of soils that are very shallow and shallow over a petrocalcic horizon. These well-drained and moderately permeable soils formed in loamy alluvium on undulating uplands (USDA-NRCS 2017). Within the APE, Olmos very gravelly loam is mapped near the APE's northern terminus (see Figure 3) (USDA-NRCS 2017). Typically, the surface layer (A Horizon) of Olmos very gravelly loam is dark grayish brown and about 13 inches (33 cm) thick. Beneath the surface layer is about 67 inches (170.2 cm) of indurated whitish to pinkish caliche that is weakly to moderately cemented (B Horizon) (USDA-NRCS 2017).

The Loire series consists of very deep, well-drained, and moderately permeable soils that formed in loamy alluvial sediments on nearly level flood plains of the upper drainage areas in the Edwards Plateau

(Taylor et al. 1991; USDA-NRCS 2017). Within the APE, Loire silty clay loam is mapped along Masterson Road at East Branch Big Sous Creek (see Figure 3) (USDA-NRCS 2017). Typically, the surface layer (A Horizon) of Loire silty clay loam is dark brown and about 8 inches (20.3 cm) thick. Beneath the surface layer is about 72 inches (183 cm) of grayish brown to light yellowish brown, silty clay loam or fine sandy loam (C Horizon) (USDA-NRCS 2017).

The Lewisville series consists of very deep, well-drained, and moderately permeable soils that formed in ancient loamy and clayey calcareous sediments found along major streams in the Blackland Prairies (Taylor et al. 1991; USDA-NRCS 2017). Within the APE, Lewisville silty clay is mapped along Masterson Road and southwest of East Branch Big Sous Creek (see Figure 3) (USDA-NRCS 2017). Typically, the surface layer (A Horizon) of Lewisville silty clay is dark or very dark grayish brown and about 16 inches (40.6 cm) thick. Beneath the surface layer is about 18 inches (45.7 cm) of grayish brown silty clay (Bk1 Horizon) followed by 28 inches (71.1 cm) of pale brown silty clay (Bk2 Horizon) (USDA-NRCS 2017).

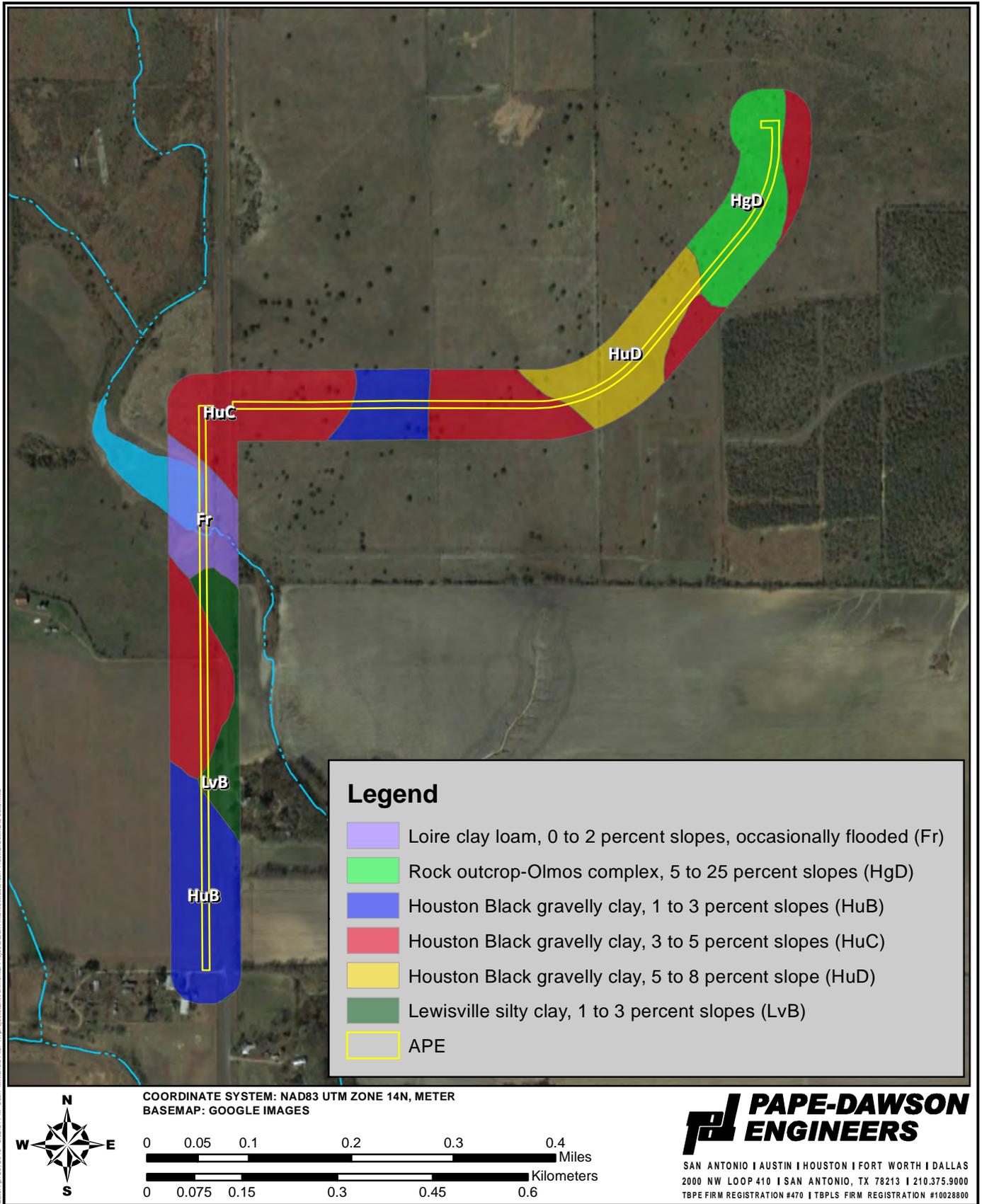


Figure 3. Soils

Cultural Chronology

Bexar County falls within the Central Texas archaeological region of the Central and Southern Planning Region as delineated by the Texas Historical Commission (THC) (Mercado-Allinger et al. 1996). Cultural developments in this region are typically classified by archaeologists according to four primary chronological time periods: Paleoindian, Archaic, Late Prehistoric, and Historic. These classifications have been defined primarily by changes in material culture and subsistence strategies over time as evidenced through information and artifacts recovered from archaeological sites. This cultural chronology provides a brief summary of each major prehistoric cultural period with reference to significant archaeological work that has occurred within the region. A summary of the Historic period is not included as no historic sites were encountered within the current project area.

PALEOINDIAN (11,500 B.P. – 8,800 B.P.)

Although there is some debate about whether pre-Clovis Paleoindian peoples lived in Texas, there is evidence of Paleoindian occupation within Texas by 11,500 B.P. Collins (1995:376, 381) has proposed dividing this period into early and late phases, with Dalton, San Patrice, and Plainview possibly providing the transition between them. Research has shown Paleoindians were gathering wild plants and hunting large mammals (mammoth, bison, etc.) as well as smaller terrestrial and aquatic animals (Collins 1995:381; Bousman et al. 2004:75). Projectile points characteristic of the Paleoindian period in Central Texas are lanceolate-shaped and include Clovis, Plainview, and Folsom (Turner and Hester 1999). In Texas, most Paleoindian sites are classified as procurement or consumption sites (Bousman et al. 2004:76-78), but a few, such as the Wilson-Leonard site in Williamson County (Collins 1995) and the Pavo Real site in Bexar County (Henderson 1980; Collins et al. 2003; Figueroa and Frederick 2008), have produced burials in context (Collins 1995:383). Other Paleoindian sites discovered within Bexar County include site 41BX47 on Leon Creek (Tennis 1996), the Richard Beene site (41BX831) (Thoms et al. 2005; Thoms and Mandel 2007), and the St. Mary's Hall site (41BX229), which has provided insight into a more diverse diet for Paleoindian groups (Hester 1978).

As the climate warmed, the Paleoindian people began to shift away from hunting large animals. The changing environment, which led to extinction of the megafauna, likely influenced their decision to focus more on hunting small game animals, including deer and rabbit, as well as gathering edible roots, nuts, and fruits (Black 1989). This change in food supply, as well as a different set of stone tools, marks the transition into the Archaic Period.

ARCHAIC (8,800 B.P. – 1,200 B.P.)

Usually divided into early, middle, late, and sometimes transitional sub-periods, the Archaic marks a gradual shift from hunting Megafauna and some smaller animals supplemented with wild plants to a focus on hunting and gathering medium and small animals and wild plants, and an eventual transition to agriculture. Beginning with Clear Fork gouges and Guadalupe bifaces in the Early Archaic (8500 B.P. – 6000 B.P.) (Turner and Hester 1999; Collins 1995), Early Archaic people produced a variety of point types. The variety of points and their scattered distribution over a large area in the Early Archaic may indicate smaller groups of people moving over larger territories (Prewitt 1981). Point types transition to Bell-Andice-Calf Creek, Taylor, and Nolan-Travis points in the Middle Archaic (6000 B.P. – 4000 B.P.) (Turner and Hester 1999; Collins 1995), and burned rock middens become an important characteristic. The Middle Archaic focus on constructing burned rock ovens to cook a diverse array of plant food (Black 1989) suggests a slightly more sedentary focus. The Bulverde, Pedernales, Ensor, Frio, and Marcos points in the Late Archaic (4000 B.P. – 1300 B.P.) (Turner and Hester 1999; Collins 1995) mirror the diversity of point types found in the Early Archaic. During the Late Archaic, cemeteries, especially associated with rock shelters, become common in central Texas (Dockall et al. 2006). In Bexar County, sites with Early Archaic components include the Housman Road site (41BX47), the Richard Beene site (41BX831) (Thoms et al. 2005; Thoms and Mandel 2007), the Higgins site (41BX184) (Black et al. 1998), and the Panther Springs site (41BX228) (Black and McGraw 1985). While the Elm Waterhole site (41BX300) is representative of a Middle Archaic site within Bexar County (McNatt et al. 2000), the Granberg site (41BX17\41BX271) in San Antonio is a multi-component site with occupations from both the Middle and Late Archaic sub-periods.

LATE PREHISTORIC (1,200 B.P. – 250 B.P.)

As the Archaic transitioned into the Late Prehistoric period, several technological changes become apparent. The most notable change is the use of the bow and arrow rather than the spear and atlatl, evidenced by smaller dart points. Another significant innovation is the creation and use of ceramic vessels. Some groups began to practice consistent agriculture during this time as well; there is some evidence that peoples in Central Texas may have incorporated agriculture into their lives, but primarily remained hunter gatherers (Collins 1995). Also during this period, there are possible indications of major population movements, changes in settlement patterns and perhaps lower population densities (Black 1989). Archaeologists divide the Late Prehistoric into two phases: the Austin phase, followed by the Toyah phase.

Methods

RECORDS REVIEW

Prior to fieldwork, Pape-Dawson archaeologists conducted a thorough background literature review and records search of the proposed project area. This research included searching the Texas Historical Commission's (THC) Texas Archeological Sites Atlas (THC 2018) online database for any previously recorded archaeological surveys and historic or prehistoric archaeological sites located within a 1-km (0.62-mile) radius of the project area. Archaeologists consulted the City of San Antonio (COSA) Historic Landmark Sites and Historic Geodatabases to locate any local historic landmarks and districts within the study radius. In addition, the review included information on the following types of cultural resources: National Register of Historic Places (NRHP)-listed properties and districts, State Antiquities Landmarks (SAL), Official Texas Historical Markers (OTHM), Recorded Texas Historic Landmarks (RTHL), cemeteries, and local historic landmarks and districts. The archaeologists also examined the U.S. Department of Agriculture Soil Survey of Bexar County (Taylor et al. 1991), Natural Resources Conservation Service (NRCS) Web Soil Survey, the Geologic Atlas of Texas-San Antonio Sheet (BEG 1983), and historic maps and aerials that depict the project area (Nationwide Environmental Title Research Online [NETR Online] 2016).

FIELDWORK

Pape-Dawson archaeologists performed a 100 percent pedestrian survey of the proposed 5.48-acre (2.22-ha) project area for which access was available. This investigation consisted of an intensive pedestrian survey, with inspection of the ground surface augmented by shovel testing along a single transect in areas with the perceived potential for buried cultural deposits and with less than 30 percent ground surface visibility. Due to access issues, six parcels, consisting of 1.1 acres (0.45 hectares) of new easement and 1.34 acres (0.54 hectares) of temporary construction easement was not available for survey. However, these parcels were visually inspected from the existing Masterson Road ROW.

A total of 11 shovel tests were excavated to investigate the approximately 6,726-ft (2,050-m) long APE. Though survey methods followed the Council of Texas Archeologists' Archeological Survey Standards for Texas, shovel test investigations did not meet the state's minimum standards, which require 16 shovel tests per mile for linear project areas, due to right of entry issues within the southern half of the project area.

Shovel tests were roughly 30 centimeters (cm) (11.8 inches) in diameter and excavated in 10-cm (3.9-inch) levels to sterile pre-Holocene-age clay, disturbed sediment, or to a maximum of 80 cm (31.5 inches) below the current ground surface. All soils were screened through ¼-inch mesh with the exception of soils with high clay content, which were sorted by hand. All shovel tests were recorded, visually described, plotted by a Global Positioning System (GPS) unit, and backfilled upon completion.

Archaeological site boundaries located on the property were defined within the APE. Sites were then recorded on TexSite forms in the field, and the forms were submitted to the Texas Archeological Research Laboratory (TARL). Artifacts observed during the survey were photographed and documented in the field, but not collected. Project records and photographs will be curated at the Center for Archaeological Research at the University of Texas at San Antonio (CAR-UTSA) following their specific standards of preparation.

Results

RECORDS REVIEW

The background review revealed that the majority of the APE has not been surveyed and there no previously recorded archaeological sites within or adjacent to it. Two surveys are within a 1-km (0.6-mile) radius (Figure 4, Table 1), but no previously recorded archaeological sites, NRHP-listed properties or districts, SALs, OTHMs, RTHLs, cemeteries, or local historic landmarks are within the study area. A survey in 2016 by SWCA for a SAWS sewer line is either within or adjacent to the current APE for 480 ft (146.3 m) along Masterson Road (Young 2016). Pape-Dawson conducted a survey about 0.5 mile (0.8 kilometer [km]) north of the project area (Moore and Young 2017).

Table 1: Previously Conducted Archaeological Surveys within 0.62 mile (1 km) of the Project Area.

Agency	Firm/Institution	Antiquities Permit #	Year Conducted	Survey Type	Location (Approximate)
Texas Historical Commission	SWCA	7540	2016	Linear	within or adjacent to 480 ft (146.3 m) of the project area along the western side of Masterson Road
Texas Historical Commission	Pape-Dawson	7917	2017	Linear	0.5 mile (0.8 km) north of the project area

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In addition to the Atlas file review, Pape-Dawson archaeologists engaged in a limited amount of additional research including a review of modern and historic aerial photographs and topographic maps (National Environmental Title Research [NETR] Online 2017). This information was used to identify potential historic high probability areas (HHPAs) within the project area. As this research did not locate any structures within or adjacent to the project area, no HHPAs were identified.

FIELDWORK

Pape-Dawson archaeologists conducted an archaeological survey of the 5.48 acre-APE on March 6, 2018. The majority of the APE falls within private property on which the permanent waterline and temporary construction easements are being acquired. Archaeologists walked the northern portion of the APE along a single transect, visually inspecting the ground surface for artifacts and features. The pedestrian survey was augmented with judgmentally placed shovel tests (Figure 5). The southern half of the APE was not surveyed for cultural resources as right-of-entry was not available at the time of the survey for six parcels. However, these parcels were visually inspected from the existing Masterson Road ROW. These six parcels are located along the western side of Masterson Road and comprise 1.1 acres (0.45 hectares) of permanent easement and 1.34 acres (0.54 hectares) of temporary construction easement. Previous impacts to the project area were photographed and noted as part of the survey effort.

The landscape of the APE consisted of level to gently sloping uplands situated along either side of the East Branch of Big Sous Creek which dissects the APE. Within the portion of the APE with right-of-entry, limestone and chert gravels and cobbles cover the surface of the mostly cleared pastureland (Figure 6). Fossilized *Exogyra Ponderosa* and *Exogyra Costata* oyster shells were observed across the surface of the landform, but were concentrated on the upland ridge in the eastern end of the APE. Vegetation primarily consisted of short grasses, cacti and a scattering of Mesquite and Huisache allowing for an average surface visibility of 65 percent. Construction of a new residential development extended into the northeastern end of the APE. Two large pits associated with the construction were documented near the top of the landform (Figure 7). The northern most pit contained an existing water line where the proposed SAWS line will tie in.

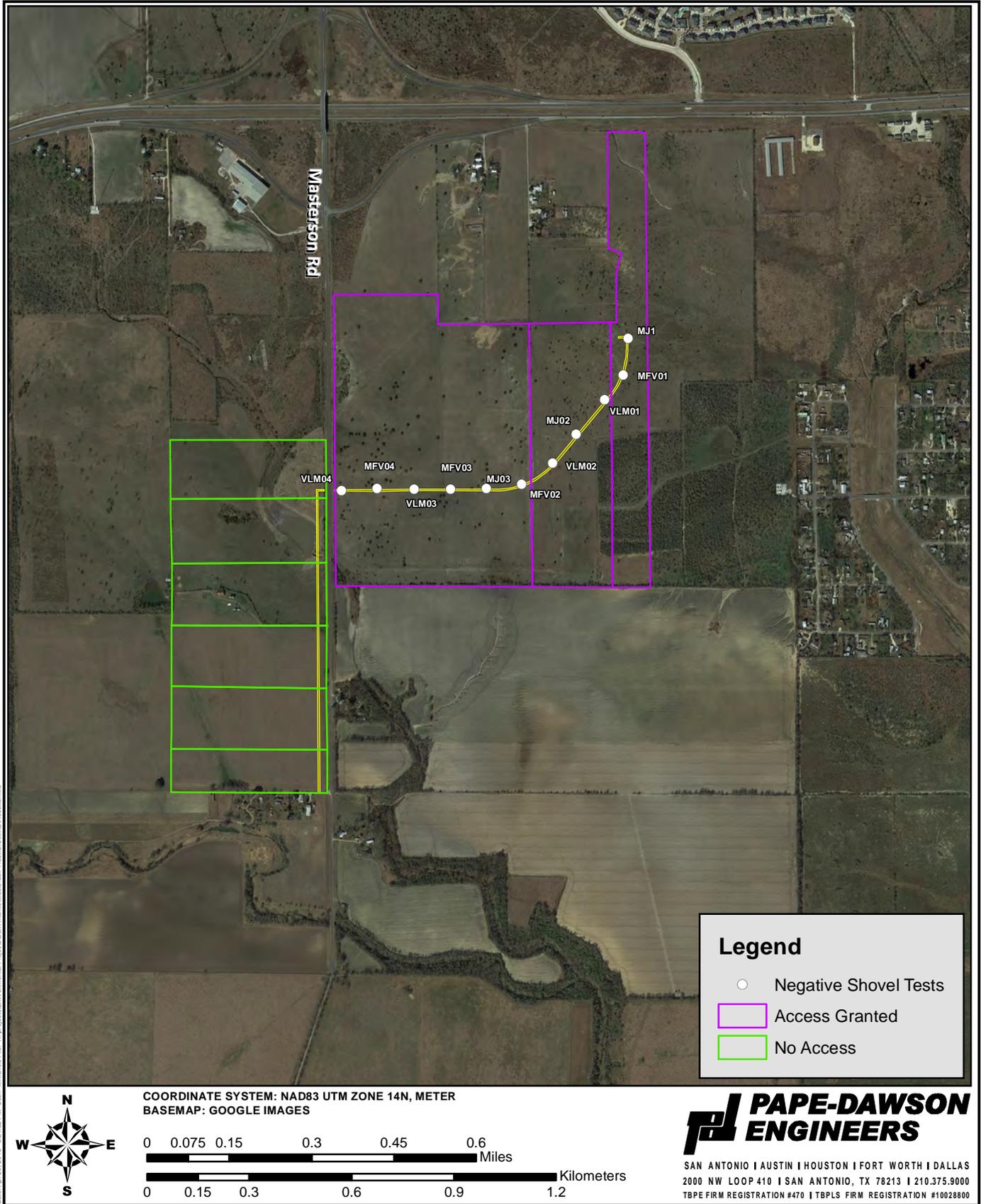


Figure 5. Results Map



Figure 6. Overview of APE east of Masterson Road, looking west.



Figure 7. Example of disturbed area near large pit, looking east.

Six parcels within the APE could not be surveyed due to access issues at the time of the field investigations (see Figure 5). These parcels were visually inspected and photographed from the existing Masterson Road ROW. Vegetation within the new easements varied depending on land use. The northern three tracts are undeveloped rangeland. Vegetation primarily consisted of dense native grasses, scrub and a scattering of mesquite, allowing for an average surface visibility of 15 percent (Figure 8). Vegetation in the southern three tracts consists of dense grasses in open field. Ground surface visibility in these areas was generally less than 5 percent. Disturbances observed in these parcels include the construction of a large pond along the East Branch of Big Sous Creek. The downstream berm of the pond extends roughly 427 ft (130 m) north to south within the APE (Figure 9). Additional disturbance observed, include the construction of a gravel driveway approximately 170 m south of the pond.



Figure 8. Overview of APE west of Masterson Road, looking southwest.



Figure 9. View of large berm on the south side of the pond, looking northwest.

During the current survey effort, a total of 11 shovel tests was excavated, none of which were positive for cultural material. These shovel tests were placed within an observed prehistoric lithic scatter that is limited to the ground surface. The prehistoric lithic scatter was recorded as site 41BX2228. The majority of the shovel tests encountered very brown to very dark gray clay loam with common gravels and cobbles. This generally corresponds to either the Houston Black soil or the Rock outcrop-Olmos complex mapped within the APE. Shovel tests were terminated at an average depth of 19 inches (47 cm) below surface due to the presence of pre-Holocene-age upland clay.

SITE 41BX2228

Setting and Description

Site 41BX2228 is situated on a gently sloping ridge that runs between Lucas Creek to the east and the East Branch of Big Sours Creek to the west within the eastern half of the APE (Figure 10). The site overlooks the confluence of the East Branch of Big Sours Creek and an unnamed tributary roughly 604 ft (184 m) to the east. Vegetation at the site within the APE consists of a scatter of mesquite, and huisache, and a mix of native grasses (Figure 11). The western three pastures are overgrazed, with very

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short grasses throughout, while the northeastern most pasture contains medium grasses mixed with more small scrub and mesquite. Ground surface visibility averaged 65 percent at the time of the current survey.



Figure 11. Overview of site 41BX2228, looking north.

Site 41BX2228 is a large prehistoric lithic scatter of indeterminate temporal affiliation. Chert covers the landscape as it erodes from the surface. Large chunks of non-cultural lithic material litter the surface, much of it resulting from livestock trampling given that the area is currently a cattle pasture. However, during the pedestrian survey, archaeologists identified a sprawling but sparse scatter of lithic debitage and a few tools amongst the non-cultural material beginning at Masterson Road and continuing to the eastern end of the APE. Disturbances within the site have resulted from both natural and artificial impacts. Artificial impacts include the construction of Masterson Road, land clearing within pastureland, and a current residential development within the northeastern end. Natural impacts include erosion and bioturbation in the form of cattle wallows and numerous animal burrows.

Work Performed and Recommendation

Pape-Dawson archaeologists recorded site 41BX2228 during the course of the current survey. The site was initially discovered based on its surface expression. Eleven shovel tests were excavated within the

observed lithic surface scatter to investigate the potential for intact subsurface deposits. Shovel tests exposed very dark gray to black gravelly clay. Most of these shovel tests were terminated at a maximum depth of 22 inches (55 cm) within this Houston Black gravelly clay before encountering very compact clay. Three shovel tests excavated in Olmos series soils encountered brown cobbly clay to a depth of 12 inches (30 cm) before terminating at impenetrable cobbles (Figure 12). None of the shovel tests were positive for buried cultural deposits.



Figure 12. Example of shovel test excavated in Olmos series soils.

Site 41BX2228 comprises a sprawling, moderate-density lithic scatter, with two discernable high artifact concentration areas noted during the course of the survey (Figure 10). These concentration areas largely coincide with areas of good ground surface visibility. The first was identified in the two fenced pastures east of Masterson Road. Observed artifacts within this area includes many primary and secondary flakes, two early-stage bifaces, two edge-modified flakes, one scraper, one hand butted axe, and a light scatter of fire-cracked rock (Figures 13 to 16). The second concentration area, situated on the upland ridge in the eastern end of the project area, contained a large quantity of secondary, primary, and tertiary flakes (in descending order from most to least common), two cores, one early-stage biface, one late-stage biface fragment, one edge-modified flake, and one unifacial adze-like tool (Figures 17 to 20). On the

slope between these two areas a light scatter of lithic material was observed on the surface including one early-stage biface.



Figure 13. Example of debitage observed in concentraion area one at 41BX2228.



Figure 14. Example of biface observed in concentraion area one at 41BX2228.



Figure 15. Edge modified flake observed in concentraion area one at 41BX2228.



Figure 16. Core observed in concentraion area one at 41BX2228.



Figure 17. Example of debitage observed in concentraion area two at 41BX2228.



Figure 18. Late-stage biface fragment observed in concentraion area two at 41BX2228.



Figure 19. Unifacial tool observed in concentraion area two at 41BX2228.



Figure 20. Core observed in concentraion area two at 41BX2228.

Summary and Recommendations

Pape-Dawson conducted an intensive archaeological survey of the proposed Masterson Road Water Line Project in Bexar County, Texas, on behalf of SAWS on March 6, 2018. The APE was defined as a permanent 16-ft-wide (12.2-m-wide) utility easement totaling 2.46 acres (1 hectare [ha]) and a temporary 20-ft-wide (6.1-m-wide) construction easement comprising 3.02 acres (1.22 ha). Thus, the total APE encompasses approximately 5.48 acres (2.22 ha). The APE's southern terminus is 6,560 ft (2,000 m) south of US 90, and the linear project area extends north along Masterson Road for about 2,904 ft (885 m) before turning east and northeast along a proposed new road (Copper Crossing Street), for a total length of 6,726 ft (2,050 m). The proposed water line will be bored beneath Masterson Road where it crosses the roadway. Though the vertical depths of impact are currently unknown, the maximum depth of ground disturbance within the water easement and existing road ROW is considered to be up to 8 ft (2.4 m) below the ground surface based on typical water line design, except at the bore location where impacts may be deeper. Ground disturbance within the temporary construction easement will be minimal and should not exceed 1 ft (30 cm) below the current ground surface.

Based on SAWS' status as a political subdivision of the State of Texas, compliance with the Antiquities Code of Texas (ACT) is required. Pape-Dawson applied for and received Texas Antiquities Permit No. 8252. Since the project will require a 404 permit from the United States Army Corps of Engineers (USACE), compliance with Section 106 of the National Historic Preservation Act (NHPA) is also necessary.

Pape-Dawson conducted an archaeological survey for the Masterson Road project on March 6, 2018. This work was conducted under Texas Antiquities Permit No. 8252. The APE was subjected to a pedestrian survey with shovel testing with the exception of six parcels that could not be accessed because right-of-entry had not been obtained at the time of the survey. Archaeologist documented these parcels from the existing Masterson ROW during the survey. A total of 11 shovel tests were excavated to investigate the APE resulting in the recordation of one new archaeological site (41BX2228).

Site 41BX2228 is a surficial prehistoric lithic scatter of indeterminate temporal affiliation. Given the absence of diagnostic material and/or features, and the lack of subsurface deposits, Pape-Dawson recommends that the portion of site 41BX2228 within the current project area is not eligible for NRHP listing or for SAL designation.

Based on the results of the survey, Pape-Dawson recommends that no further archaeological work is necessary for the surveyed portion of the APE. However, given the poor ground surface visibility at the time of the survey, Pape-Dawson does recommend that the 6 unsurveyed parcels be subjected to an intensive pedestrian survey once right-of-entry has been granted. Within the entire APE, if undiscovered cultural material is encountered during construction, it is recommended that all work in the vicinity should cease and that the discovery be evaluated by a qualified archaeologist who can provide guidance on how to proceed in accordance with state regulations.

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