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Cultural Resources Investigations of the CPS Energy Research Plaza Street Light Installation Project, San Antonio, Bexar County, Texas

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CULTURAL RESOURCES INVESTIGATIONS OF THE CPS ENERGY RESEARCH PLAZA STREET LIGHT INSTALLATION PROJECT, SAN ANTONIO, BEXAR COUNTY, TEXAS

FINAL REPORT (Redacted)

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Texas Antiquities Committee Permit Number 8494

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MANAGEMENT SUMMARY

Raba Kistner Environmental, Inc. (RKEI), was contracted by CPS Energy (CPSE) to conduct an intensive cultural resources survey for the installation of 14 overhead street lights, approximately 3,285 feet (1,001 meters [m]) of underground cable, and associated pull boxes within the soon-to-be constructed Research Plaza right-of-way (ROW) in southeastern San Antonio, Texas. The new city street will connect the existing ROW of Research Plaza at Boyle Road to Corpus Christi Highway and South Presa Street within the Brooks City Base community. Investigations consisted of an intensive pedestrian survey with shovel testing of the entire 0.43-mile (0.69-kilometer [km]) stretch of new ROW. Given that the project took place within a publicly owned ROW, and because CPSE is a political subdivision of the State of Texas, the project was subject to review under the jurisdiction of Chapter 35 of the Unified Development Code of the City of San Antonio (Article VI, Historic Preservation and Urban Design, COSA UDC), as well as the Antiquities Code of Texas (Texas Natural Resources Code, Title 9, Chapter 191).

On July 11, 2018, **RKEI** archaeologists conducted an intensive pedestrian survey augmented with shovel testing for the Research Plaza Street Light Installation Project. Rhiana D. Ward, M.A., served as Principal Investigator and all field work was conducted by Archaeologists Chris Matthews and Lindy Martinez. A total of eight shovel tests were excavated within the project corridor: three shovel tests (CM01–02 and LM01) within the southern half of the APE, and five shovel tests (CM03–04 and LM02–04) within the southern half. None of the eight shovel tests were positive for subsurface cultural materials; however, asphalt fragments were observed from 20 to 40 cmbs within shovel tests LM03–LM04. The asphalt fragments were likely associated with the former Brooks Air Force air strips that were once present within the northern portion of the APE and were not considered culturally significant due to their fragmented state.

Overall, no significant prehistoric or historic materials were encountered within the APE. Given this conclusion, no significant cultural deposits will be impacted by the proposed project, and **RKEI** recommends no further archaeological investigations for the current APE. However, should additions be made to the project area, it is recommended that additional testing be conducted to determine the extent and significance of cultural deposits beyond the currently defined boundaries. All field records generated by this project will be permanently curated in accordance with the University of Texas at San Antonio Center for Archaeological Research (UTSA-CAR).

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1. INTRODUCTION

Raba Kistner Environmental, Inc. (RKEI), was contracted by CPS Energy (CLIENT) to conduct an intensive cultural resources survey for a proposed CPS Energy (CPSE) overhead street light easement along the soon-to-be constructed Research Plaza right-of-way (ROW) in southeastern San Antonio, Texas (**Figure 1-1**). The new city street will connect the existing ROW of Research Plaza at Boyle Road to Corpus Christi Highway and South Presa Street within the Brooks City Base community. Investigations consisted of an intensive pedestrian survey with shovel testing of the entire 0.43-mile (0.69- kilometer [km]) stretch of new ROW. This report summarizes the results of the investigations.

Given that the project took place within a publicly owned ROW, and because CPSE is a political subdivision of the State of Texas, the project was subject to review under the jurisdiction of Chapter 35 of the Unified Development Code (UDC) of the City of San Antonio (COSA) (Article VI, Historic Preservation and Urban Design, COSA UDC), as well as the Antiquities Code of Texas (ACT) (Texas Natural Resources Code, Title 9, Chapter 191). These legislations call for the assessment of all improvement activities that have a potential to disturb historically significant resources and significant subsurface deposits on lands owned by the State. Oversight of compliance with the UDC is provided by the COSA Office of Historic Preservation (OHP), while the ACT is administered by the Texas Historical Commission (THC).

Area of Potential Effects

The proposed undertaking will consist of the installation of 14 overhead utility poles and associated underground cable along a 0.43-mile (0.69 km) stretch of a newly proposed city street. The new city street will consist of an 85-foot (26 meter [m])-wide, two-lane roadway with a center median and associated sidewalks. The roadway will begin at the southwestern end of the existing Research Parkway ROW and direct southwest for 1,270 feet (387 m) before crossing Dave Erwin Drive and continuing south-southwest for another 1,000 feet (305 m) before connecting to South Presa Street and terminating. At the time of investigations, no construction for the new Research Plaza ROW had begun.

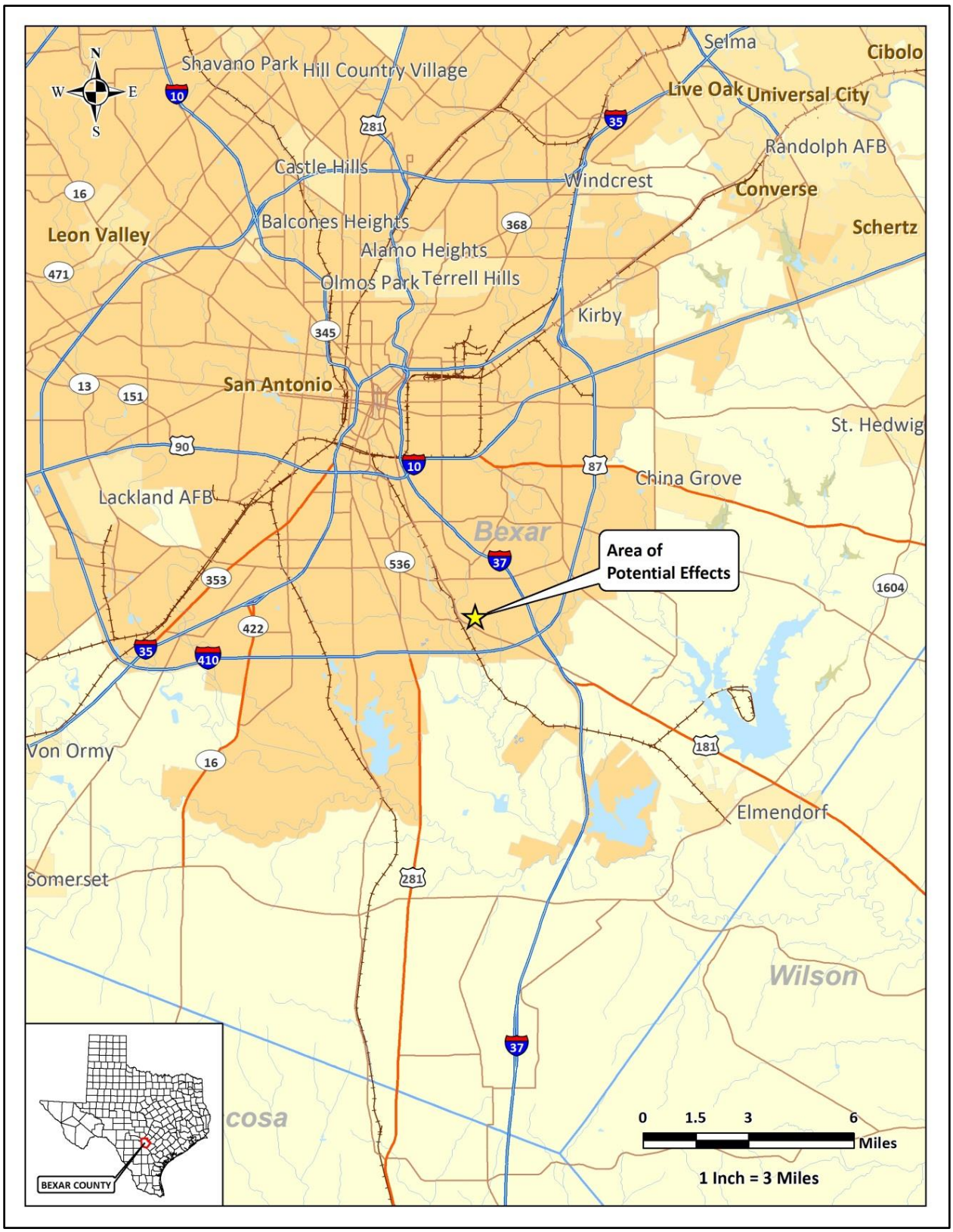

Figure 1-1. Project area location in southeastern San Antonio, Bexar County, Texas.

CPSE is proposing to install 14 overhead street lights, approximately 3,285 feet (1,001 m) of underground cable, and associated pull boxes within the new city street ROW. According to CPSE preliminary drawings dated May 25, 2018, the new street lights will be installed within the median of the new ROW, with underground cables running down the center and eastern portions of the new street. Trenching excavations are anticipated to measure 8 inches (20 centimeters [cm]) wide and 36 inches (91 cm) deep. Excavations for the new street lights should not exceed 24 inches (61 cm) in diameter at an unknown depth. Because the installation project will impact both the center and eastern portions of the new street, the Area of Potential Effects (APE) for cultural resources investigation consisted of a 40-foot (12 m) wide corridor that measured 2,270 feet (692 m) long, and encompass approximately 2 acres (**Figure 1-2**). The APE is located on the Southton (2998-132) 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle map.

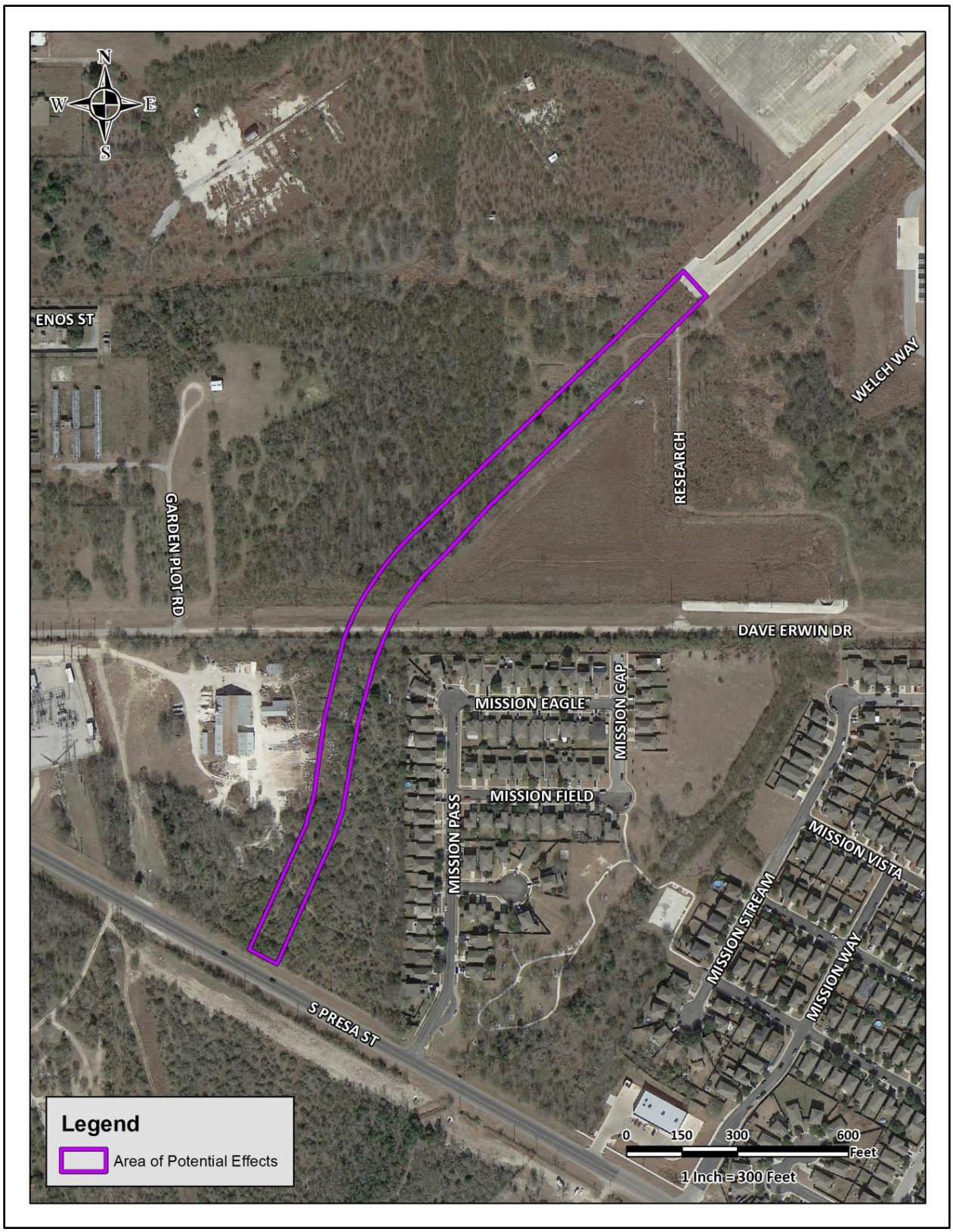

Figure 1-2. Overview of APE.

CHAPTER 2. ENVIRONMENTAL SETTING

Project Area Setting

The APE is located in the south-central Texas geographic region within the Blackland Prairie ecoregion. The Blackland Prairie is an area of low topographic relief and poor drainage, prone to frequent flooding (Collins 1995). The Blackland Prairie physiographic region is characterized by gently undulating topography and is generally defined as grasslands punctuated by riparian bands along creeks, rivers, and other drainages. Creation of the Blackland Prairie occurred during the late Tertiary, with the erosions of soils on the Edwards Plateau. These soils were deposited by eolian and colluvial processes across an existing, eroded parent material of the Gulf Coastal Plain, creating a mix of deep Tertiary and Quaternary calcareous clay soils (Black 1989a).

Geology

The underlying geology of the project area is composed predominantly as the Midway Group, undivided, of Paleocene-age; however, the southwestern terminus of the APE is mapped within the Leona Formation of Pleistocene-age (Barnes 1983).

Soils

Soils within the APE are mapped as Lewisville silty clays to the northeast and Atco loam to the southwest (**Figure 2-1**). These soils are characterized as very deep, moderately well drained clay to silty clays that range in depth from 5.2 to 8.7 feet (157 to 264 cm). These soils commonly occur within the dissected plains of the Blackland Prairie and are derived from clayey residuum mudstone or calcareous loamy clayey to clayey alluvium (NRCS 2018).

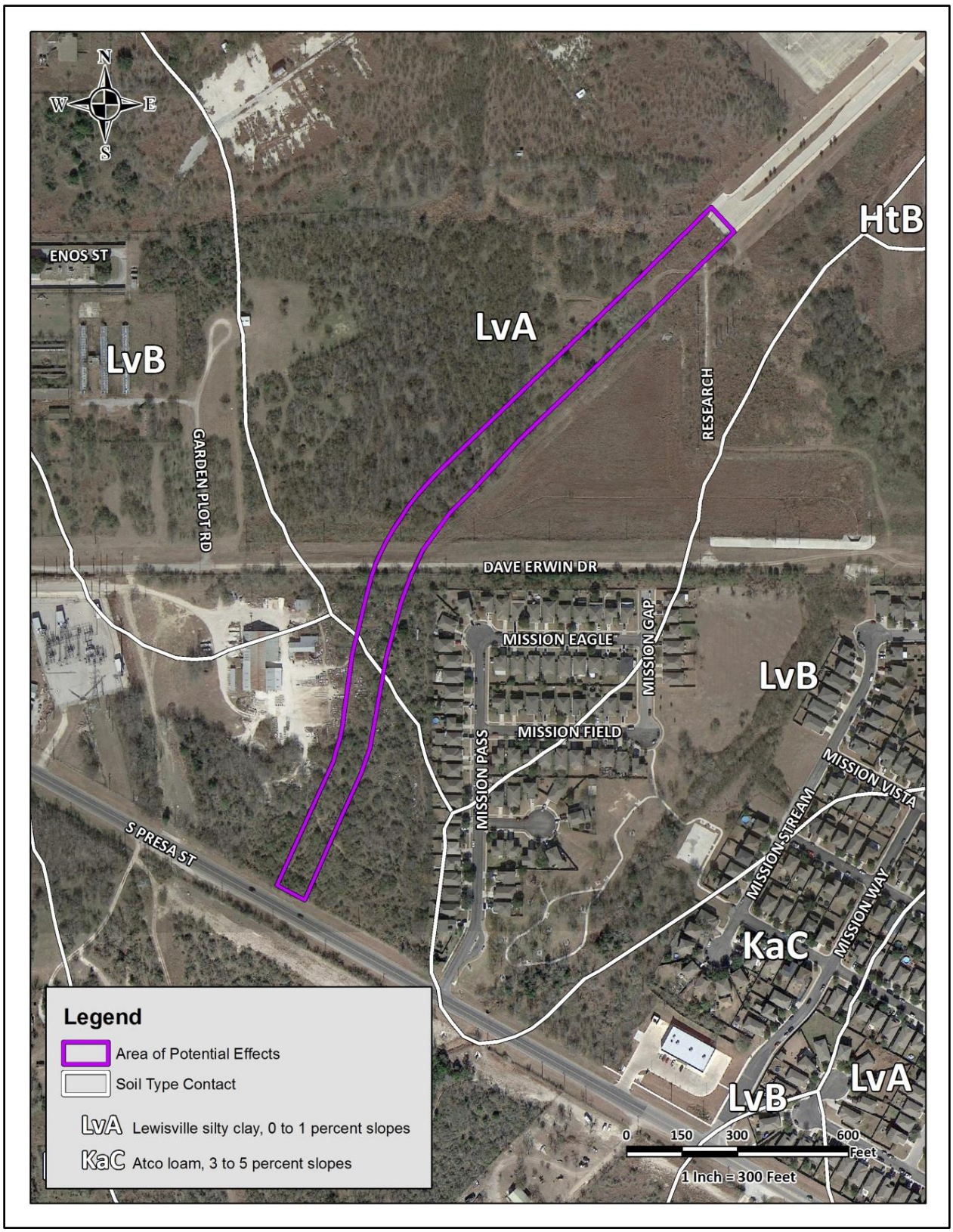

Figure 2-1. Soils mapped within the APE.

Flora and Fauna

The APE is located near the juncture of the Balconian and Taumaulipan biotic provinces (Blair 1950). The Balconian Biotic Province is associated with the Edwards Plateau, which is typically characterized by open savannah rangeland interspersed with live oak-ashe juniper woodlands and small brush (Griffith and Omernik 2018). The Texan Biotic Province, associated with the Blackland Prairie physiographic region, is characterized by gently undulating topography and generally defined as grasslands punctuated by riparian bands along creeks, rivers, and other drainages (Griffith and Omernik 2018).

Due to the location of the APE, floral and faunal resources consist of a mix of the two provinces. Common vegetation types of the area include post oak (Quercus stellate), live oak (Quercus virginiana), bald cypress (Taxodium distichum), pecan trees (Carya illinoinensis), cedar (Juniperus ashei), Texas mountain laurel (Sophora secundiflora), mesquite (Prosopis glandulosa), prickly pear (Optunia sp.), agarita (Berberis trifoliolata), cat claw (Smilax bona-nox), mustang grape (Vitis mustangensis), sotol (Dasylirion texanum), and Spanish dagger (Yucca sp.). A brief list of some of the animal species found in Bexar County includes the eastern cottontail (Sylvilagus floridianus), nine-banded armadillo (Dasypus novemcincus), white-tailed deer (Odocoileus virginianus), Virginia opossum (Didelphis virginiana), common raccoon (Procyon lotor), fox squirrel (Sciurus niger), striped skunk (Mephitis mephitis), Carolina chickadee (Poecile carolinensis), northern cardinal (Cardinalis cardinalis), great horned owl (Bubo virginianus), mourning dove (Zenaida macroura), red-shouldered hawk (Buteo jamaicensis), northern mockingbird (Mimus polyglottos), Texas rat snake (Elaphe obsoleta lindheimeri), western coachwhip (Masticophis flagellum), Texas toad (Bufo speciosus), Texas spiny lizard (Sceloporus olivaceus), and the western diamondback rattlesnake (Crotalus atrox) (Blair 1950).

South Texas Climate

The climate in south-central Texas is humid subtropical with hot and humid summers. From May through September, hot weather dominates with the cool season beginning around the first of November and extending through March. Winters are typically short and mild with little precipitation. San Antonio averages only 33 inches of rain per year (Southern Regional Climate Center 2018; based on monthly averages from 1980 to 2010). Monthly temperature averages range between 52°F in January to 85°F in August.

CHAPTER 3. CULTURAL CONTEXT

The APE is located at the cusp of Central Texas and South Texas archaeological regions (Turner and Hester 1999). Based on extensive research conducted by Black (1989b), Collins (1995, 2004), Hester (2004), Johnson et al. (1962), Prewitt (1981, 1985), Sorrow et al. (1967), Suhm (1957, 1960), Suhm et al. (1954), and Weir (1976), Central Texas has a well-established chronological sequence beginning 12,000 years ago. The sequence for South Texas is less defined, though the project area likely shares many of the attributes identified for Central Texas. Nonetheless, the chronological sequence of Bexar County and the vicinity is divided in to four cultural periods, spanning approximately 11,500 years. Archaeologists have divided the occupation of the region into four principal periods and several sub-periods: Paleoindian (11,500–8800 B.P.), Archaic (8000–1200 B.P.), Late Prehistoric (1200–400 B.P.), and Historic (400 B.P. to present). The periods are characterized by changes climatic conditions, distinct vegetation types and structure, and concomitant adaptive changes by human populations in hunting and gathering technologies and strategies, general material culture, and at the tail end of the cultural sequence, the arrival of non-indigenous populations.

Paleoindian Period

The oldest cultural materials found in the region date to the Paleoindian period. The period spans roughly from 11,500–8800 B.P. (Collins 1995, 2004). The Aubrey site in Denton County has one of the earliest occupations, with radiocarbon assays dating to between 11,542 ± 11 B.P. and 11,590 ± 93 B.P. (Bousman et al. 2004:48). Paleoclimatic proxy measures suggest that a cooler climate with increased precipitation was predominant during the Late Pleistocene (Mauldin and Nickels 2001; Toomey et al 1993), the later portion of the period.

Initial reconstructions of Paleoindian adaptations typically viewed these hunter-gatherers as traversing extreme distances in pursuit of now extinct mega-fauna such as mammoth and mastodon. While these Paleoindian populations did exploit the Late Pleistocene mega-fauna when it was accessible, a number of faunal assemblages from a larger number of sites indicate that the Paleoindian diet was more varied and consisted of a wide range of resources, including small game and plants. The Lewisville (Winkler 1982) and the Aubrey sites (Ferring 2001) produced faunal assemblages that represented a wide range of taxa, including large, medium, and small species. Information on the consumption of plant resources during the

Paleoindian period is lacking. Bousman et al. (2004) reported that the late Paleoindian component at the Wilson-Leonard site reflected the exploitation of riparian, forest, and grassland species. Analysis of Paleoindian skeletal remains indicates that the diets of the Paleoindian and later Archaic hunter-gatherers may have been similar (Bousman et al. 2004; Powell and Steele 1994).

The early portion of the Paleoindian period was characterized by the appearance of Clovis and Folsom fluted projectile points that were used for hunting mega-fauna. Typical projectile points produced at sites with occupations dating to the later portion of the Paleoindian period included the Plainview, Dalton, Angostura, Golandrina, Meserve, and Scottsbluff types. Meltzer and Bever (1995) have identified 406 Clovis sites in Texas. One of the earliest, 41RB1, yielded radiocarbon assays that put the maximum age for the Paleoindian component at 11,415 ± 125 B.P. (Bousman et al. 2004:47).

Sites in Bexar County that contain Paleoindian components include St. Mary's Hall (Hester 1978, 1990), Pavo Real (Collins et al. 2003), the Richard Beene site (Thoms et al. 1996; Thoms and Mandel 2006) and 41BX1396 (Tomka 2012). St. Mary's Hall, 41BX229, was first encountered in 1972 during the construction of a house just outside the school's property. The Pavo Real site, 41BX52, is located along Leon Creek in northwest Bexar County. The site was first documented in 1970 and has been investigated several times over the past 40 years (Collins et al. 2003). The Richard Beene site, 41BX831, is located along the Medina River in southern Bexar County (Thoms et al. 1996). Site 41BX1396 is located in Brackenridge Park in San Antonio, and was encountered during installations for lighting in 2010. Dating of organic samples indicated that occupation at the site occurred as early as 10,490–10,230 B.P.

Archaic Period

The Archaic period dates between ca. 8800 to 1200 B.P. It is divided into three subperiods: Early, Middle, and Late. During the Archaic, mobility strategies may have shifted to more frequent short distance movements that allowed the exploitation of seasonal resource patches. The intermittent presence of bison in parts of Texas, combined with changes is climatic conditions and the primary productivity of the plant resources may have contributed to shifts in subsistence strategies and associated technological repertoire. When bison was not present in the region, hunting strategies focused on medium to small game along with continued foraging for plant resources. When bison was available, hunter-gatherers targeted the larger-bodied prey on a regular basis.

Early Archaic

The Early Archaic spans from 8800 to 6000 B.P. (Collins 1995, 2004). Projectile point styles characteristic of the Early Archaic include Angostura, Early Split Stem, Martindale, and Uvalde (Collins 1995, 2004). The Early Archaic climate was drier than the Paleoindian period and witnessed a return to grasslands (Bousman 1998). Mega-fauna of the Paleoindian period could not survive the new climate and ecosystems, therefore eventually dying out. Early Archaic exploitation of medium to small fauna intensified.

The excavations at the Wilson-Leonard site (41WM235) produced a wealth of cultural materials representative of a lengthy period in regional prehistory. The projectile point assemblages from the site indicate that the lanceolate Paleoindian point forms continue from the Paleoindian into the Early Archaic (Angostura). However, relatively quickly during the Early Archaic, they are replaced by corner- and basally-notched and shouldered forms (Early Triangular, Andice, Bell) that quickly become the dominant points tipping the atlatl-thrown darts. In addition, the uses of small to medium hearths similar to the previous period were noted. The appearance of earth ovens suggests another shift in subsistence strategies. The earth ovens encountered at the Wilson-Leonard site were used to cook wild hyacinth along with aquatic and terrestrial resources (Collins et al. 1998). Analyses of Early Archaic human remains encountered in Kerr County (Bement 1991) reveal diets low in carbohydrates in comparison to the Early Archaic populations found in the Lower Pecos region.

Middle Archaic

The Middle Archaic sub-period spans from 6000 to 4000 B.P. (Collins 1995, 2004; Weir 1976). Archaeological data indicates that there appeared to be a population increase during this time. The climate was gradually drying leading to the onset of a long drought period. Changes to the demographics and cultural characteristics were likely in response to the warmer and more arid conditions. Projectile point styles characteristic of this sub-period include Bell, Andice, Calf Creek, Taylor, Nolan, and Travis.

Subsistence during the Middle Archaic saw an increased reliance on nuts and other products of riverine environments (Black 1989b). The increase of burned rock middens during the Middle Archaic represented the increased focus on the use of plant resources (Black 1989b; Johnson and Goode 1994). Little is known about burial practices during the Middle Archaic. An excavation in an Uvalde County sinkhole (41UV4) contained 25–50 individuals (Johnson and Goode 1994:28).

Late Archaic

The Late Archaic spans from 4000 to 1200 B.P. (Collins 1995, 2004). It is represented by the Bulverde, Pedernales, Kinney, Lange, Marshall, Williams, Marcos, Montell, Castroville, Ensor, Frio, Fairland, and Darl projectile points. The early part of the Late Archaic exhibited fluctuations in the temperature and rainfall. There appears to have been an increase in population at this time (Nickels et al. 1998).

Some researchers believe that the use of burned rock middens decreased during the Late Archaic. Some research has challenged this notion (Black and Creel 1997; Mauldin et al. 2003). Johnson and Goode (1994) discuss the role of burned rock middens in relation to acorn processing.

Human remains from burials related to the Late Archaic in Central and South Texas suggest the region saw an increase in population. This increase may have prompted the establishment of territorial boundaries which resulted in boundary disputes (Story 1985). Human remains dating to this sub-period have been encountered near the Edwards Plateau.

Late Prehistoric Period

The Late Prehistoric period begins ca. 1200 B.P. (Collins 1995, 2004), and appears to continue until the beginning of the Protohistoric period (ca. A.D. 1700). The term Late Prehistoric is used in Central and South Texas to designate the time following the end of the Archaic period. A series of traits characterizes the shift from the Archaic to the Late Prehistoric period. The main technological changes were the shift to the bow and arrow and the introduction of pottery. The Late Prehistoric period is divided into two phases: the Austin phase and the Toyah phase.

At the beginning of this period, environmental conditions were deemed to be warm and dry. Moister conditions appear after 1000 B.P. (Mauldin and Nickels 2001). Subsistence practices appeared similar to the Late Archaic. Projectile points associated with the Austin phase include the Scallorn and Edwards types. The Toyah phase is characterized by the prominence of the Perdiz point (Collins 1995, 2004).

Most researchers concur that the early portion of the Late Prehistoric period saw a decrease in population density (Black 1989b:32). Radiocarbon dates from some sites have indicated that the middens were utilized during the Late Prehistoric. Some archaeologists feel the peak of midden use was after A.D. 1 and into the Late Prehistoric (Black and Creel 1997:273). Radiocarbon dates from Camp Bowie middens provide evidence that supports Black and Creel's arguments that burned rock middens were a primarily Late Prehistoric occurrence (Mauldin et al. 2003).

Beginning rather abruptly at about 650 B.P., a shift in technology occurred. This shift is characterized by the introduction of blade technology, the first ceramics in Central Texas (bone-tempered plainwares), the appearance of Perdiz arrow points, and alternately beveled bifaces (Black 1989b:32; Huebner 1991:346). Prewitt (1981) suggests this technology originated in north-central Texas. Patterson (1988), however, notes that the Perdiz point was first seen in southeast Texas by about 1350 B.P., and was introduced to west Texas some 600 to 700 years later.

Early ceramics in Central Texas (ca. A.D. 1250 to 1300) are associated with the Toyah phase of the Late Prehistoric and are referred to as Leon Plain ware. The Leon Plain ceramic types are undecorated, bone-tempered bowls, jars, and ollas with oxidized, burnished, and floated exterior surfaces (Ricklis 1995). There is notable variation within the type (Black 1986; Johnson 1994; Kalter et al. 2005). This variation can be attributed to differences in manufacturing techniques and cultural affiliation. Analysis of residues on ceramic sherds suggests that vessels were used to process bison bone grease/fat, mesquite bean/bison bone grease and deer/bison bone grease (Quigg et al. 1993).

The return of bison to South and Central Texas during the Late Prehistoric resulted from a drier climate in the plains located to the north of Texas and increased grasses in the Cross-Timbers and Post Oak Savannah in north-central Texas (Huebner 1991). The increased grasses in the two biotas formed the "bison corridor" along the eastern edge of the Edwards Plateau and into the South Texas Plain (Huebner 1991:354–355). Rock shelter sites, such as Scorpion Cave in Medina County (Highley et al. 1978) and

Classen Rock Shelter in northern Bexar County (Fox and Fox 1967), have indicated a shift in settlement strategies (Skinner 1981). Burials encountered that dated to this period often reveal evidence on conflict (Black 1989b:32).

Historic Period

The beginnings of San Antonio came about with the establishment of Mission San Antonio de Valero in 1718. Fray Antonio de San Buenaventura y Olivares had briefly visited the site several years prior, and petitioned to set up a mission at the headwaters of the San Antonio River to act as a waypoint in the journey to East Texas. The Marques de Valero, Viceroy of New Spain, granted Olivares' request and granted him permission (de la Teja 1995). Mission Valero occupied at least two locations before it settled into its current spot.

The first location of Mission Valero was located on a prominent hill along San Pedro Creek, near the modern day location of the Christopher Columbus Italian Society. The mission remained in this location for approximately a year before its relocation to the east bank of the San Antonio River in 1719. It is hypothesized that this second location is the modern day location of Saint Joseph's Church on East Commerce Street. Due to the destruction of the mission location by a disastrous storm that flooded the area, the mission was moved to its current location (Chipman 1992; Cox 1999, 2005; Habig 1968; Nichols 2015; Schoelwer 2018; Tous 1930). The final location was in use by 1724.

Five days after Mission Valero was founded, Presidio de Bexar was established. The presidio was to house the Spanish soldiers who had come along with the expedition to found the Mission. Typically, the families that followed the soldiers lived just outside the presidio.

Two years later, in 1720, Mission San José y San Miguel de Aguayo was established on the opposite bank of the San Antonio River, and to the south of Mission Valero and Presidio San Antonio de Bexar. This mission was established to help serve native groups that did not want to reside at Mission Valero because they were not on friendly terms with groups already living there. The original location of Mission San José was along the east bank of the San Antonio River, approximately three leagues from Mission Valero. The mission was then moved to the opposite bank sometime between 1724 and 1729, and relocated to its present site during the 1740s due to an epidemic (Scurlock et al. 1976:222).

In 1722, just two years after Mission San José was founded, Mission San Francisco Xavier de Nàjera was established. The mission was to serve a group of 50 Ervipiami families that came from the Brazos River area (Schuetz 1968:11). Mission San Francisco Xavier de Nàjera was located on or near the present site of Mission Concepción. The mission was unsuccessful due to a lack of funding. An attempt was made to make the mission a sub-mission of Valero, but this failed as well (Habig 1968:78–81). Its doors closed in 1726 (Schuetz 1968:11). Ivey (1984:13) argued that the closure of the mission was due to the natives' lack of interest in entering mission life.

Within the next few years, three other missions were established within the San Antonio area. The remaining three missions were established in San Antonio within weeks of each other in 1731. These three missions, Mission Nuestra Señora de la Purísima Concepción, Mission San Juan de Capistrano, and Mission San Francisco de la Espada, were originally established in east Texas. When each failed along the eastern border, they were moved to San Antonio.

In addition to the five missions, the civilian community outside of the mission and presidio, Villa San Fernando de Bexar was established by the Canary Islanders. Prior to the establishment of Villa San Fernando, Villa de Bexar had been settled by 30 presidial soldiers, seven of whom were married and brought their families. Archival research indicates that upon arrival, the Canary Islanders immediately took over the land surrounding the garrison. This land was used as pasture and was originally property of Mission Valero. There had been a lack of cleared agricultural land at the time, leading Captain Juan Antonio Pérez de Almazán to allow the Canary Islanders use of the property (de la Teja 1995). The initial plan was for additional Canary Island settlers to be sent to San Antonio after the first group was established. Due to high costs to the Spanish Crown, no more groups were brought to Texas. The Canary Islanders launched a formal complaint against Mission Valero. In 1731, the Canary Islanders established their own villa, named San Fernando de Bexar, with their own church. The arrival of the Isleños resulted in the first clearly defined civilian settlement in San Antonio.

Previous Archaeological Investigations

On June 28, 2018, **RKEI** conducted a cultural resources desktop review for the Research Plaza Street Light Installation Project (THC 2018). The review determined that the APE is located roughly 0.65 mile (1.05 km) east of the San Antonio River, within deep soil deposits known for containing intact cultural deposits. The

study also determined that nine known archaeological sites, two Official Texas Historical Markers, one National Register of Historic Places property, three National Register Districts, one cemetery, and a Spanish Colonial Acequia are located within 0.5-mile (0.8-km) of the APE. Furthermore, the APE is also located within 0.5-mile (0.8-km) of the locally designated Mission Historic District, River Improvements Overlay Zoning District 6, Mission Protection Overlay District 3 for Mission San Juan Capistrano, and two locally designated Historic Sites. **Table 3-1** details the results of the desktop review (THC 2018).

Table 3-1. Cultural Resources Located within 0.5 mile (0.8 km) of the APE

Resources	Distance/ Direction from APE	Brief Resource Description	Eligibility Determination
National Register District	110 feet south	Mission Parkway Historic District	—
Acequia	964 feet west	The San Juan Ditch is located to the west of the project area. The middle section of this same ditch system, the *Acequia en Medio*, is located approximately 0.42 mile (0.68 km) west.	—
National Register District	0.5 mile west	Espada Aqueduct Historic District	—
National Register District	0.41 mile west	Mission San Juan Capistrano	—
Cemetery	0.12 mile west	Mission San Juan Cemetery	—
41BX258	0.44 mile northwest	The Mariano Zuniga house is a small adobe and stone residential structure facing Corpus Christi Road. The house has not been investigated, but was given a trinomial to mark its unique architecture and age.	No determination
41BX259	0.40 mile northwest	The trinomial marks the oldest (possibly 1870s) portion of a stucco two-room residential structure that has been added on to.	No determination
41BX245	0.41 mile northwest	This trinomial marks the location of the Kuntz Store, which was in operation between the late nineteenth century through the 1930s. The structure is constructed of wood with stone shed/storage rooms.	No determination
41BX265	0.48 mile west	The site was identified during investigations for the Mission Parkway Historic District by the THC in 1976. The site represents the location of the Berg Brother's Mill (1879-1950). For a short period of time in the 1930s a second mill was placed in the same location to generate electricity. The site is now covered in grass near the bank of the old river channel (THC 1976).	—
41BX5	0.48 mile west	Mission San Juan Capistrano: The mission was established in 1731, on the east bank of the San Antonio River. Several archaeological investigations have been conducted at the Mission since the 1970s, and have identified a rich cultural history at the site. The site is also listed as a State Antiquities Landmark.	Listed
41BX1728	0.35 mile west	The site marks the location of the *Acequia en Medio* (Lower San Juan Ditch). Archaeological investigations tracked the *acequia* from near Berg's Mill and along the river channel. The entry point in the river was not located and may have been impacted by previous channelization efforts.	Undetermined

Table 3-1 (continued)

Resources	Distance/	Brief Resource Description	Eligibility

	Direction from APE		Determination
41BX268	0.14 mile south	This portion of the San Juan Ditch was constructed sometime after 1731. The channel was cement lined sometime between 1985 and 1995, when the channel was incorporated into a drainage easement.	Eligible
41BX1785	0.36 mile south	The site represents the historic Ringelstein farmstead and a prehistoric artifact scatter. The site was identified through pedestrian survey and though an interview with the landowner. Historic-aged artifacts and features include a portion of the San Juan Ditch, a home and hand-dug well, glass, ceramics, full bottles, and other metal agricultural items. Prehistoric artifacts include lithic debitage and tools, and burned rock.	Undetermined
41BX1780	0.43 mile south	This site represents historic-aged artifacts associated with the Hierholzedr/Rankin Farmstead and Dairy, and include a portion of the lower San Juan ditch and at least one lateral, a pump house and windmill pipe, and other historic-aged artifacts (McWilliams and Boyd 2009).	Undetermined
Official Texas Historic Marker	0.45 mile west	Mission San Juan Capistrano (Marker No. 3416)	—
Official Texas Historic Marker	0.35 mile north	Edward H. White II Memorial Hangar, Brooks Air Force Base	—
National Register Property/ City Historic Landmark	0.29 mile north	Hangar 9, Brooks Air Force Base	—
City Historic Landmarks	0.27 mile to 0.5 mile	• Mission Historic District • RIO-6 River District • MPOD-3 • San Juan Capistrano • Acequia Park • Geigenmiller House	—

Historic Aerial Photography

A review of historic aerial photography was conducted in order to determine previous impacts to the APE. Aerial imagery from 1955 to 2014 was reviewed. Imagery from 1955 to 1963 depicted the southern half of the APE as situated predominately within cultivated agricultural fields, located between South Presa Street and an access road for Brooks Air Force Base (now Dave Erwin Drive). The northern portion of the APE was located within the boundaries of Brooks Air Force Base and consisted of cleared, grassy fields associated with the concrete and asphalt paved landing strips for the base. By 1966, an additional road immediately south of the APE, now identified as Boyle Road, was developed. The APE remained relatively unchanged between 1966 and 1973, with the exception of the development of a stonework's pad site (Pyramid Stone Company) immediately west of the APE, just south of Dave Erwin Drive. By 1986 the stonework's operation had expanded its storage yard east, into the APE. The northern portion of the APE in 1986 continued to consist of maintained grass field associated with the Air Force base. It was not until

2004 that aerial imagery depicted moderately dense to dense vegetation in both the northern and southern portions of the APE.

Brooks Air Force Base

Brooks Air Force Base encompasses approximately 1,300 acres of land in southeastern San Antonio, Texas (Alcott 2018). The base was established as a training field for student pilots 1917, shortly after the United States entered World War I (WWI). The purpose of the field was to train student pilots in the Gosport System, earning it the title Gosport Field. The name of the facility was changed to Signal Corps Aviation School, Kelly Field No. 5 on December 5, 1917, and renamed Brooks Field following the death of Cadet Sidney Johnson Brooks, Jr., during a training accident on February 4, 1918. By the time of Brooks' passing, the base housed 16 hangers. After WWI, the air field continued to act as an aviation school, including a pilot school for balloon and airships from 1919-1922, a primary flying school for the Army Air Corps from 1922 to 1931, and a paratrooper training facility in 1928 (Alcott 2018).

In 1926, the School of Aviation Medicine was transferred from Hazelhurst Field in New York to Brooks Field, but in 1931 both the flying school and the aviation medicine school were moved to Randolph Field in northeastern San Antonio (Alcott 2018). Throughout the 1930s and 1940s, Brooks Field served as a center for aerial-observation training and a special school for combat observers. In 1948, the facility was renamed Brooks Air Force Base after the Army and Air Force separated and the Third Air Force joined the base (Alcott 2018).

In 1959, Brooks began a transition from flight-training to medical research and education (Alcott 2018). The School of Aviation Medicine was transferred back to Brooks from Randolph Air Force Base, and by October 1959, the base had become the headquarters for the Aerospace Medical Center. By June 1960, all flying at the base had ceased. From 1960 to present the base continued to house major divisions for aerospace medicine, as well as space medicine for the Nation Space Program. The base was officially decommissioned in 2011 and is now managed by the Air Force Civil Engineer Center. The now-named Brooks City-Base houses a civilian community with state-of-the-art medical facilities, residential, and commercial development (Alcott 2018).

CHAPTER 4. METHODS OF INVESTIGATION

To ensure that the project met the requirements of the regulating agency, **RKEI** performed an intensive pedestrian survey augmented with shovel testing of the APE. All work complied with THC and the Council of Texas Archaeologists (CTA) guidelines and standards. Investigations ensured that if historic or prehistoric deposits and/or features were present within the APE, they were properly recorded and evaluated prior to negative impacts associated with the project. No archaeological sites or cultural materials were identified during the survey.

Shovel Testing

A visual inspection of the ground surface was conducted in areas of high ground surface visibility (greater than 30 percent) in order to locate cultural materials on the ground surface or evidence of cultural features beneath the ground surface. The THC minimum survey standards recommend 16 shovel tests per linear mile. The APE measured 0.43-miles (0.69 km) long, thus requiring a minimum of seven shovel tests. **RKEI** exceeded the recommended minimum number of shovel tests by excavating a total of eight shovel tests within the APE, none of which tested positive for subsurface cultural materials. Shovel tests were excavated in 328 foot (100 m) intervals, with respect to surface visibility and ground disturbance.

On average, shovel tests were excavated to a depth of 2 feet below surface (60 cm below surface [bs]). They averaged 14 inches (35 cm) in diameter and were excavated in 4 inch (10 cm) levels. All soils were screened through a ¼-inch mesh to observe artifacts. A shovel test form was completed for each excavated unit. The forms contained information on the soils encountered, any artifacts recovered, disturbances levels, and references to samples retained and/or photographs taken. A shovel test log is provided in Appendix A.

If cultural materials had been encountered during the survey, they would have been noted on appropriate level forms and collected by provenience and returned to the **RKEI** Archaeology Laboratory for processing and analysis. If archaeological features had been encountered during the survey, they would have been documented via a Global Positioning System (GPS) location, photography, drawings, and notes. No cultural materials or features were encountered during the survey.

Laboratory and Curation

No diagnostic artifacts were collected during the course of the investigations, thus, no artifacts will be curated at the completion of the project. The only materials to be processed and curated consist of documents and digital photographs produced during field investigations. Digital photographs were printed on acid-free paper, labeled with archivally appropriate materials, and placed in archival-quality plastic sleeves. Ink-jet produced maps and illustrations were placed in archival quality plastic page protectors to prevent against accidental smearing due to moisture. Field notes, field forms, photographs, and field drawings were placed into labeled archival folders and were also converted into electronic files (i.e., pdf). A copy of the report and all digital material were burned onto a CD and permanently curated with field notes and documents. All field records generated by this project will be permanently curated in accordance with the University of Texas at San Antonio Center for Archaeological Research (UTSA-CAR).

CHAPTER 5. RESULTS OF INVESTIGATIONS

On July 11, 2018, **RKEI** archaeologists conducted an intensive pedestrian survey augmented with shovel testing for the Research Plaza Street Light Installation Project (**Figure 5-1; Appendix A**). Rhiana D. Ward, M.A., served as Principal Investigator and all field work was conducted by Archaeologists Chris Matthews and Lindy Martinez. A total of eight shovel tests were excavated within the project corridor, none of which tested positive for subsurface cultural materials.

The survey began at the southern terminus of the APE, between South Presa Street and Dave Erwin Drive. The southern half of the APE is situated on generally level terrain covered with dense, mixed hardwood trees underlain with cacti, vines, and briars (**Figure 5-2**). Ground surface visibility was zero percent with short to medium grasses as ground cover. Soils in the southern half of the APE consisted of compact, dark yellowish-brown (10YR3/4) silty loam and silty clay soils with gravel inclusions that increased with depth (**Figure 5-3**). Three shovel tests (CM01–02 and LM01) were conducted within the southern half of the APE, which ranged from 20 to 60 cmbs and terminated due to compact gravels, the presence of over 5 percent calcium carbonate inclusions, or at depth (60 cmbs). None of the shovel tests encountered cultural materials or features.

Disturbances within the southern portion of the APE were associated with the construction of existing street ROWs and the use of the property as a stonework's storage yard. South Presa Street is a two-lane highway (State Highway 122) with wide, maintained shoulders and associated overhead and underground existing utilities, while Dave Erwin Drive consists of a degrading asphalt drive flanked by wide shoulders, property fence lines, and overhead utility corridors. The portion of Dave Erwin Drive located within the APE is currently used as a private property drive, but will likely be repaved and opened as a public ROW. Other disturbances observed within the southern half of the APE consisted of sporadic piles of discarded concrete, stone, and wood pallets (**Figure 5-4**). The piles are likely associated with the Pyramid Stone Company, which is located immediately west of the APE (**Figure 5-5**).

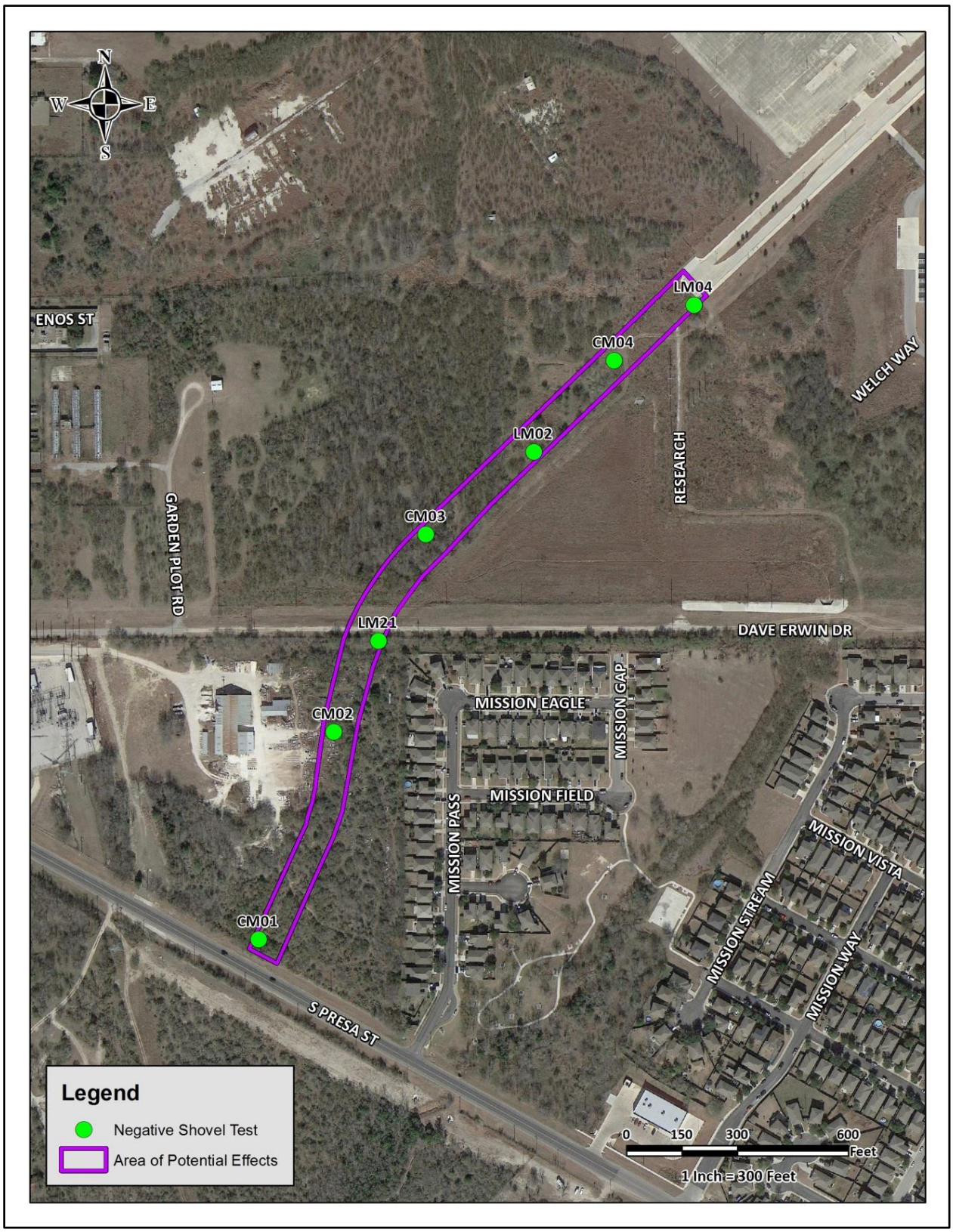

Figure 5-1. Results of cultural resources investigations.

Figure 5-2. Example of vegetation within the southern half of the APE, facing north.

Figure 5-3. Average soil profile for the southern portion of the APE, CM01.

Figure 5-4. Example of wood and concrete piles observed throughout the southern half of the APE, facing northeast.

Figure 5-5. Pyramid Stone Company warehouse to the west of southern APE, facing west.

Investigations continued into the northern portion of the APE, between Dave Erwin Drive and the existing terminus of Research Plaza. Research Plaza is an 85-foot (26 m) wide, two-lane roadway with a center median and associated sidewalks and crosswalks. The ROW also has 35-foot (10 m) wide shoulders covered with short, maintained grasses and newly planted trees. Existing utilities, such as underground water and sewer and overhead electric and street lights were also observed within the existing Research Plaza ROW, extending to the southwest into the APE (**Figure 5-6**).

Figure 5-6. Sewer manhole near northwest corner of APE, facing southwest.

Topography within the northern portion of the APE was generally level, with vegetation consisting of moderately dense mesquite scrub, low-lying shrubs, and tall grasses (**Figure 5-7**). Ground surface visibility was zero percent. Soils within the northern APE consisted of compact to very hard, very dark brown and black silty clays with 10 to 25-percent grave and cobble inclusions (**Figure 5-8**).

Figure 5-7. Overview of vegetation north of Dave Erwin Drive, facing north.

Figure 5-8. Average soil profile for the northern half of the APE, LM03.

Five shovel tests (CM03–04 and LM02–04) were excavated to depths that ranged from 20 to 60 cmbs. Shovel tests were terminated due to compact gravels or at depth (60 cmbs) and none tested positive for subsurface cultural materials; however, asphalt fragments were observed from 20 to 40 cmbs within shovel tests LM03 and LM04 (**Figure 5-9**). The asphalt fragments were likely associated with the former Brooks Air Force air strips that were once present within the northern portion of the APE and were not considered culturally significant due to their fragmented state.

Figure 5-9. Example of asphalt fragments observed within LM03 and LM04.

Disturbances to the northern APE consisted predominately of existing utilities. Underground water and sewer lines were observed near the existing Research Plaza ROW and continued southwest, along an existing two-track access road that paralleled the northern APE. Furthermore, it is likely that the northern portion of the APE has been heavily impacted from vegetation clearing and maintenance from its historic use as an air field for the former Brook Air Force Base. Evidence of vegetation clearing and maintenance was observed from secondary mesquite scrub growth and compact, gravelly soils.

CHAPTER 6. SUMMARY AND RECOMMENDATIONS

RKEI was contracted by CPSE to conduct an intensive cultural resources survey for a proposed overhead street light easement along the soon-to-be constructed Research Plaza ROW in southeastern San Antonio, Texas. The new city street will connect the existing ROW of Research Plaza at Boyle Road to Corpus Christi Highway and South Presa Street within the Brooks City Base community. Investigations consisted of an intensive pedestrian survey with shovel testing of the entire 0.43-mile (0.69-km) stretch of new ROW.

On July 11, 2018, **RKEI** archaeologists conducted an intensive pedestrian survey augmented with shovel testing. A total of eight shovel tests were excavated within the project corridor: three shovel tests (CM01–02 and LM01) within the southern half of the APE, and five shovel tests (CM03–04 and LM02–04) within the southern half. None of the eight shovel tests were positive for subsurface cultural materials; however, asphalt fragments were observed from 20 to 40 cmbs within shovel tests LM03 and LM04. The asphalt fragments were likely associated with the former Brooks Air Force air strips that were once present within the northern portion of the APE and were not considered culturally significant due to their fragmented state.

Overall, no significant prehistoric or historic materials were encountered within the APE. Given this conclusion, no significant cultural deposits will be impacted by the proposed project, and **RKEI** recommends no further archaeological investigations for the current APE. However, should additions be made to the project area, it is recommended that additional testing be conducted to determine the extent and significance of cultural deposits beyond the currently defined boundaries.

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APPENDIX A
SHOVEL TEST LOG

Shovel Test No.	Depth (cm)	Munsell	Soil Color	Soil Texture	Inclusions	Positive/ Negative	Cultural Materials	Reason for Termination/ Comments
CM01	0-10	10YR3/4	Dark Yellowish Brown	Compact Silty Loam	Over 5% gravels	Negative	—	—
	10-20	10YR3/4	Dark Yellowish Brown	Compact Silty Loam	Over 5% gravels	Negative	—	—
	20-30	10YR3/4	Dark Yellowish Brown	Compact Silty Loam	Over 5% gravels	Negative	—	—
	30-40	10YR3/4	Dark Yellowish Brown	Compact Silty Loam	Over 10% gravels	Negative	—	Over 5% CaCo
	40-50	10YR3/4	Dark Yellowish Brown	Compact Silty Loam	Over 10% gravels	Negative	—	Over 5% CaCo
	50-60	10YR3/4	Dark Yellowish Brown	Compact Silty Loam	Over 10% gravels	Negative	—	Termination due to depth. Over 5% CaCo
CM02	0-10	10YR2/2	Very Dark Brown	Compact Silty Clay	Over 10% gravels	Negative	—	—
	10-20	10YR2/2	Very Dark Brown	Compact Silty Clay	Over 25% gravels	Negative	—	—
	20-30	10YR2/2	Very Dark Brown	Compact Silty Clay	Over 50%% gravels and cobbles	Negative	—	Terminated due to compact gravels
CM03	0-10	10YR2/2	Very Dark Brown	Compact Silty Clay	—	Negative	—	—
	10-20	10YR2/2	Very Dark Brown	Compact Silty Clay	—	Negative	—	—
	20-30	10YR2/2	Very Dark Brown	Compact Silty Clay	—	Negative	—	—
	30-40	10YR2/2	Very Dark Brown	Very Hard Silty Clay	—	Negative	—	—
	40-50	10YR2/2	Very Dark Brown	Very Hard Silty Clay	—	Negative	—	Less than 50% mottling 10YR 5/2 Grayish Brown Silty Clay
	50-60	10YR2/2	Very Dark Brown	Very Hard Silty Clay	—	Negative	—	Termination due to depth. Less than 50% mottling 10YR 5/2 Grayish Brown Silty Clay
CM04	0-10	10YR3/3	Very Dark Grayish Brown	Very Hard Silty Clay	—	Negative	—	—
	10-20	10YR2/2	Very Dark Grayish Brown	Very Hard Silty Clay	—	Negative	—	—
	20-30	10YR2/2	Very Dark Grayish Brown	Very Hard Silty Clay	—	Negative	—	—
	30-40	10YR2/2	Very Dark Grayish Brown	Very Hard Silty Clay	Less than 25% cobbles and gravels	Negative	—	—
	40-50	10YR2/2	Very Dark Grayish Brown	Very Hard Silty Clay	Over 50% gravels	Negative	—	Termination due to compact gravels

Shovel Test No.	Depth (cm)	Munsell	Soil Color	Soil Texture	Inclusions	Positive/ Negative	Cultural Materials	Reason for Termination/ Comments
LM01	0-10	10YR3/4	Dark Yellowish Brown	Soft Silty Loam	—	Negative	—	—
	10-20	10YR3/4	Dark Yellowish Brown	Soft Silty Loam	—	Negative	—	—
	20-30	10YR3/4	Dark Yellowish Brown	Soft Silty Loam	—	Negative	—	—
	30-40	10YR3/4	Dark Yellowish Brown	Compact Silty Loam	—	Negative	—	Less than 5% CaCo
	40-50	10YR3/4	Dark Yellowish Brown	Compact Silty Loam	—	Negative	—	Less than 5% CaCo
	50-60	10YR3/4	Dark Yellowish Brown	Compact Silty Loam	—	Negative	—	Termination due to depth. Less than 5% CaCo
LM02	0-10	10YR3/2	Very Dark Grayish Brown	Compact Silty Clay	10% gravels	Negative	—	—
	10-20	10YR3/2	Very Dark Grayish Brown	Compact Silty Clay	Over 25% gravels	Negative	—	Termination due to compact gravels
LM03	0-10	10YR2/1	Black	Soft Silty Clay	—	Negative	—	5% mottling with 10YR4/3 brown Silty Clay
	10-20	10YR2/1	Black	Compact Silty Clay	—	Positive	—	Asphalt fragments noted.
	20-30	10YR2/1	Black	Hard Silty Clay	—	Negative	—	—
	30-40	10YR2/1	Black	Hard Silty Clay	—	Positive	—	Asphalt fragments noted; Less than 10% CaCo
	40-50	10YR2/1	Black	Hard Silty Clay	—	Negative	—	Less than 10% CaCo
	50-60	10YR2/1	Black	Hard Silty Clay	—	Negative	—	Termination due to depth. Less than 10% CaCo
LM04	0-10	10YR3/2	Black	Compact Silty Clay	Over 10% gravels	Positive	—	Asphalt fragments noted; Less than 25% mottling 10YR 5/2 Grayish Brown Silty Clay
	10-20	10YR3/2	Black	Compact Silty Clay	Over 25% gravels	Positive	—	Asphalt fragments noted; Termination due to compact gravels. Less than 25% mottling 10YR 5/2 Grayish Brown Silty Clay