



INDEX OF TEXAS ARCHAEOLOGY

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Volume 2020


Article 114

2020

Archaeological Investigation Of Approximately Seven Acres Of The Bend Independent School District High School Campus #12-Farm To Market Road 521, Fort Bend County, Texas

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Archaeological Investigation Of Approximately Seven Acres Of The Bend
Independent School District High School Campus #12-Farm To Market Road 521,
Fort Bend County, Texas

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**ARCHAEOLOGICAL INVESTIGATIONS OF APPROXIMATELY
SEVEN ACRES OF THE FORT BEND INDEPENDENT SCHOOL
DISTRICT HIGH SCHOOL CAMPUS #12– FARM TO MARKET
ROAD 521, FORT BEND COUNTY, TEXAS**

FINAL REPORT (Redacted)

Prepared for:

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Texas Antiquities Committee Permit Number 9359

Cultural Resources Report No. 20-006

ASF20-008-00

June 2, 2020

ABSTRACT

Raba Kistner, Inc. (RKI), was contracted by the Fort Bend Independent School District (FBISD) (CLIENT) to conduct archaeological investigations for approximately 7.31-acres located near Arcola, Fort Bend County, Texas, that is proposed to be developed with a high school campus (**Figure 1-1**). In April 2019, **RKI** conducted an intensive pedestrian survey with shovel testing of approximately 80-acres immediately east, north, and south of the current 7.31-acre project area (Matthews and Ward 2019). The survey was conducted under Texas Antiquities Committee (TAC) Permit Number 8847 in advance of construction of the FBISD High School Campus #12 (Matthews and Ward 2019). After the completion of the 2019 investigations, the original location of the campus was revised and shifted north, south, and west, extending into 7.31-acres that was not previously surveyed (**Figure 1-2**). New investigations of the new 7.31-acres were undertaken to accommodate the shift in location of proposed FBISD Campus #12; the results of this survey are detailed in this report. The 7.31-acre survey was conducted under TAC Permit Number 9359. The project took place on lands to be owned and controlled by the CLIENT, an entity of the State of Texas. As such, the project fell under the jurisdiction of the Antiquities Code of Texas (ACT) (Texas Natural Resource Code, Title 9, Chapter 191), which is administered by the Texas Historical Commission (THC).

The investigations included a background review and a pedestrian survey augmented by shovel testing. The background review revealed that no archaeological sites had been previously recorded within the Area of Potential Effects (APE). **RKI** conducted an intensive pedestrian survey with shovel testing in an effort to locate cultural deposits. A total of sixteen shovel tests were attempted within the approximately 7.31-acre APE, one of which could not be completed due to dense vegetation and water covering the ground surface. All shovel tests were negative for cultural materials. Disturbances were observed throughout the APE, predominately from the construction of irrigation/drainage canals, roads, and agricultural practice.

RKI has made a good faith effort to identify cultural resources within the APE. No significant deposits or features were identified during the intensive pedestrian survey. As a result, **RKI** does not recommend further archaeological investigations within the APE. However, should changes be made to the project APE, further work may be required. All field records and photographs produced during investigations will be permanently housed at the Center for Archaeological Research at the University of Texas at San Antonio.

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CHAPTER 1. INTRODUCTION

Raba Kistner, Inc. (RKI), was contracted by the Fort Bend Independent School District (FBISD) (CLIENT) to conduct archaeological investigations for approximately 7.31-acres located near Arcola, Fort Bend County, Texas, that is proposed to be developed with a high school campus (**Figure 1-1**). In April 2019, **RKI** conducted an intensive pedestrian survey with shovel testing of approximately 80-acres immediately east, north, and south of the current 7.31-acre project area. The survey was conducted under Texas Antiquities Committee (TAC) Permit Number 8847 in advance of construction of the FBISD High School Campus #12. After the completion of the 2019 investigations, the original location of the campus was revised and shifted north and west, extending into 7.31-acres that was not previously surveyed (**see Figure 1-1**). New investigations of the new 7.31-acres were undertaken to accommodate the shift in location of proposed FBISD Campus #12; the results of this survey are detailed in this report. The 7.31-acre survey was conducted under TAC Permit Number 9359. The project took place on lands to be owned and controlled by the CLIENT, an entity of the State of Texas. As such, the project fell under the jurisdiction of the Antiquities Code of Texas (ACT) (Texas Natural Resource Code, Title 9, Chapter 191), which is administered by the Texas Historical Commission (THC).

The intensive pedestrian survey augmented by shovel testing of 7.31-acres of FBISD High School #12 was conducted on April 8, 2020. Kirsten M. Atwood, Ph.D., served as Principal Investigator and fieldwork was conducted by Project Archaeologists Jason M. Whitaker, M.A., and Archaeologists Tiffany M. Lindley, M.A. and Jason G. Vandervort. This report summarizes the results of the field investigations and provides recommendations regarding the proposed improvement project.

Area of Potential Effects

The project location is located approximately 0.32 mile (0.51 kilometer [km]) east of Farm to Market Road (FM) 521 and approximately 0.34 mile (0.54 km) south of Glendale Lakes Drive near Arcola, Texas. The project encompasses 7.31-acres of agricultural fields and roadside set in a moderately developed area of Fort Bend County. The project involves the development of a new high school campus facility, which will include associated parking and sports field facilities. The Area of Potential Effects (APE) included the entire 7.31-acre project area, with expected impacts reaching up to 6 feet (1.8 meters [m]) below surface for the installation of associated utilities. The APE is depicted on the *Juliff (2995-133) Texas* US Geological Survey

Archaeological Investigations of Approximately Seven Acres of the Fort Bend Independent School District High School Campus #12– Farm to Market Road 521, Fort Bend County, Texas

7.5-minute topographic quadrangle map (**Figure 1-2**). The APE was situated on an upland terrace of West Fork Chocolate Bayou, located 0.54 mile (0.88 km) to the north.

Archaeological Investigations of Approximately Seven Acres of the Fort Bend Independent School District High School Campus #12– Farm to Market Road 521, Fort Bend County, Texas

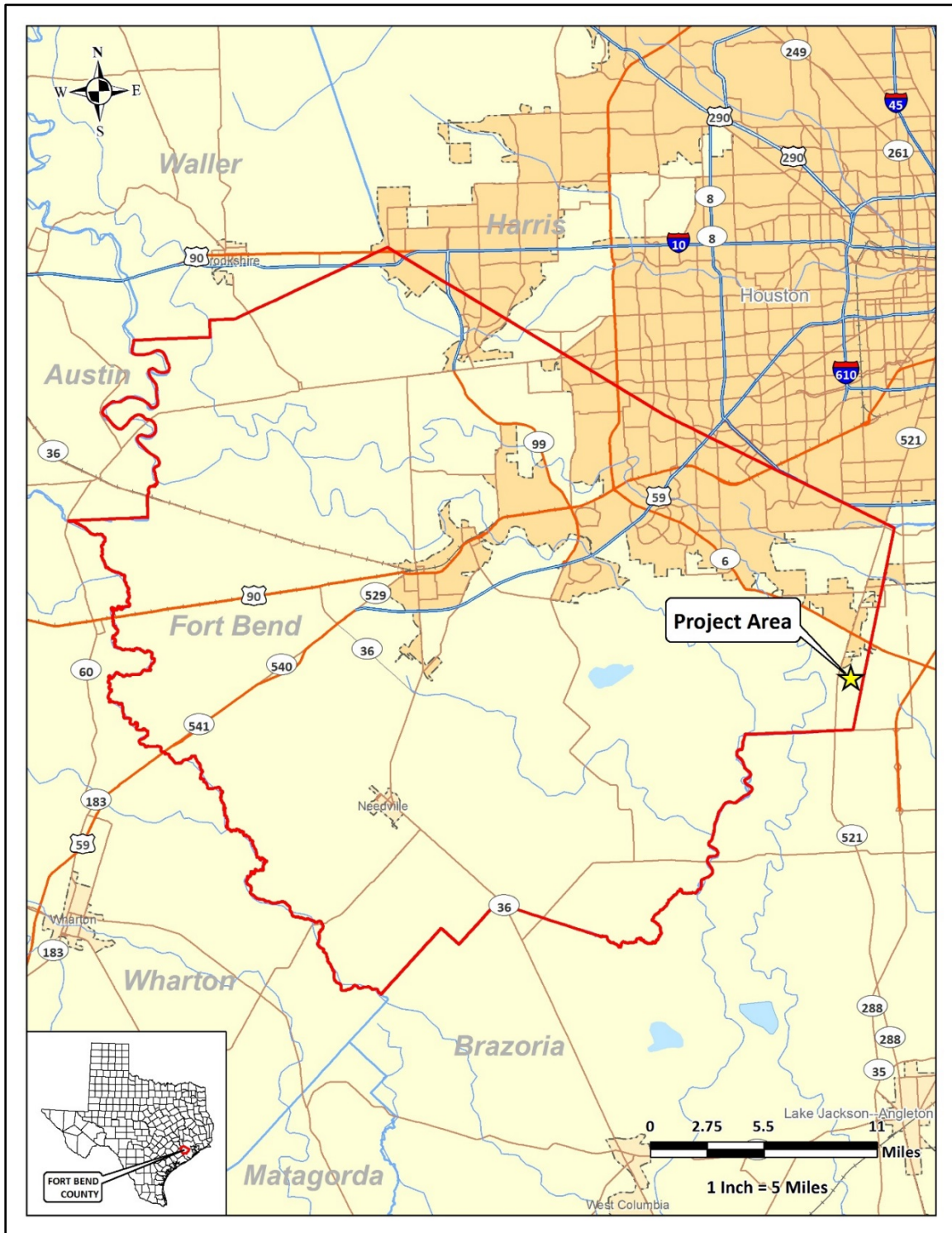


Figure 1-1. Project location map.

Archaeological Investigations of Approximately Seven Acres of the Fort Bend Independent School District High School Campus #12– Farm to Market Road 521, Fort Bend County, Texas

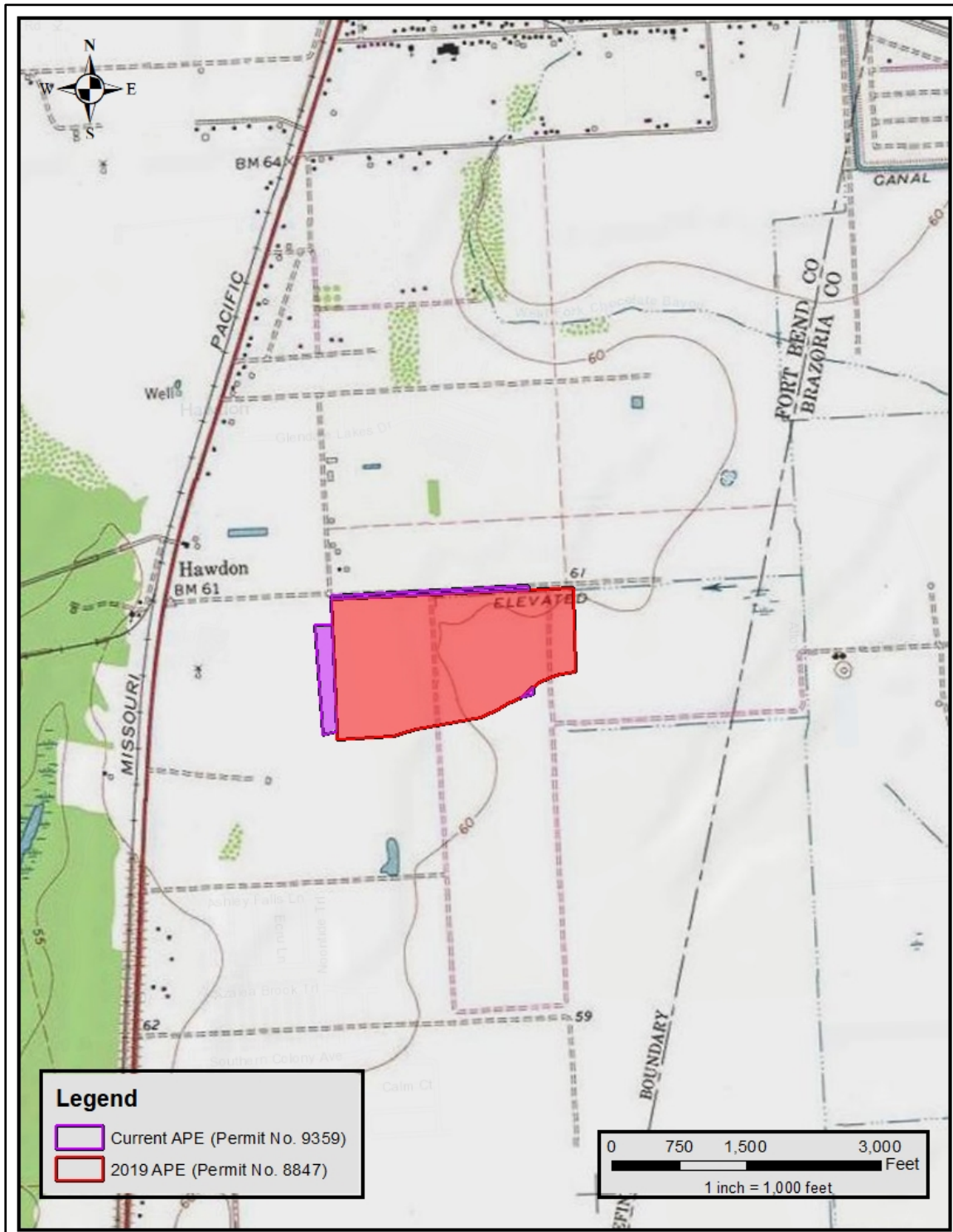


Figure 1-2. 2020 APE (purple) and 2019 APE (red) depicted on the *Juliff* (2995-133) Texas US Geological Survey 7.5-minute topographic quadrangle map.

CHAPTER 2. ENVIRONMENTAL SETTING

The APE is located in southeast Texas within the Coastal Prairies physiographic region in northeastern Fort Bend County. It is mapped within the central portion of the Northern Humid Gulf Coastal Prairies ecoregion of the Gulf Prairies and Marshes (Griffith et al. 2007). Gulf Prairies and Marshes are nearly level plains along the Gulf of Mexico with less than 150 feet in elevation above sea level. The region is dissected by streams and rivers, but also covers a wide range from the barrier islands to oak parkland and oak mottes, to woodlands in the river bottomlands. Native vegetation includes tall grasses prairies and live oak woodlands (Griffith et al. 2007).

Geology

The APE is underlain by the Late Pleistocene aged Beaumont Formation (Qbc). The Beaumont formation is dominated by clay and mud of low permeability that can range from 32 to 328 feet (10 to 100 m) thick (Barnes 1983).

Soils

The majority of soils within the APE are mapped as Lake Charles clay with 0 to 1-percent slopes (La); a small portion of the soils of the APE are mapped as Bernard-Edna complex, 0 to 1 percent slopes (Be) (**Figure 2-1**). Lake Charles soils are moderately well drained and were formed from clayey fluviomarine deposits derived from the Pleistocene aged Beaumont Formation (Natural Resources Conservation Service [NRCS] 2020). The soils of the northwestern extent of the APE are mapped as Bernard-Edna complex. The Bernard series formed in clayey fuviomarine deposits of the Beaumont Formation and consist of very deep (203 centimeters [cm]), somewhat poorly drained clay and clay loam. The Edna series formed in loamy fluviomarine deposits derived from Plesitocene-aged Beaumont Formation deposits and consist of very deep (203 cm), somewhat poorly drained loam, clay, clay loam, and sandy clay loam.

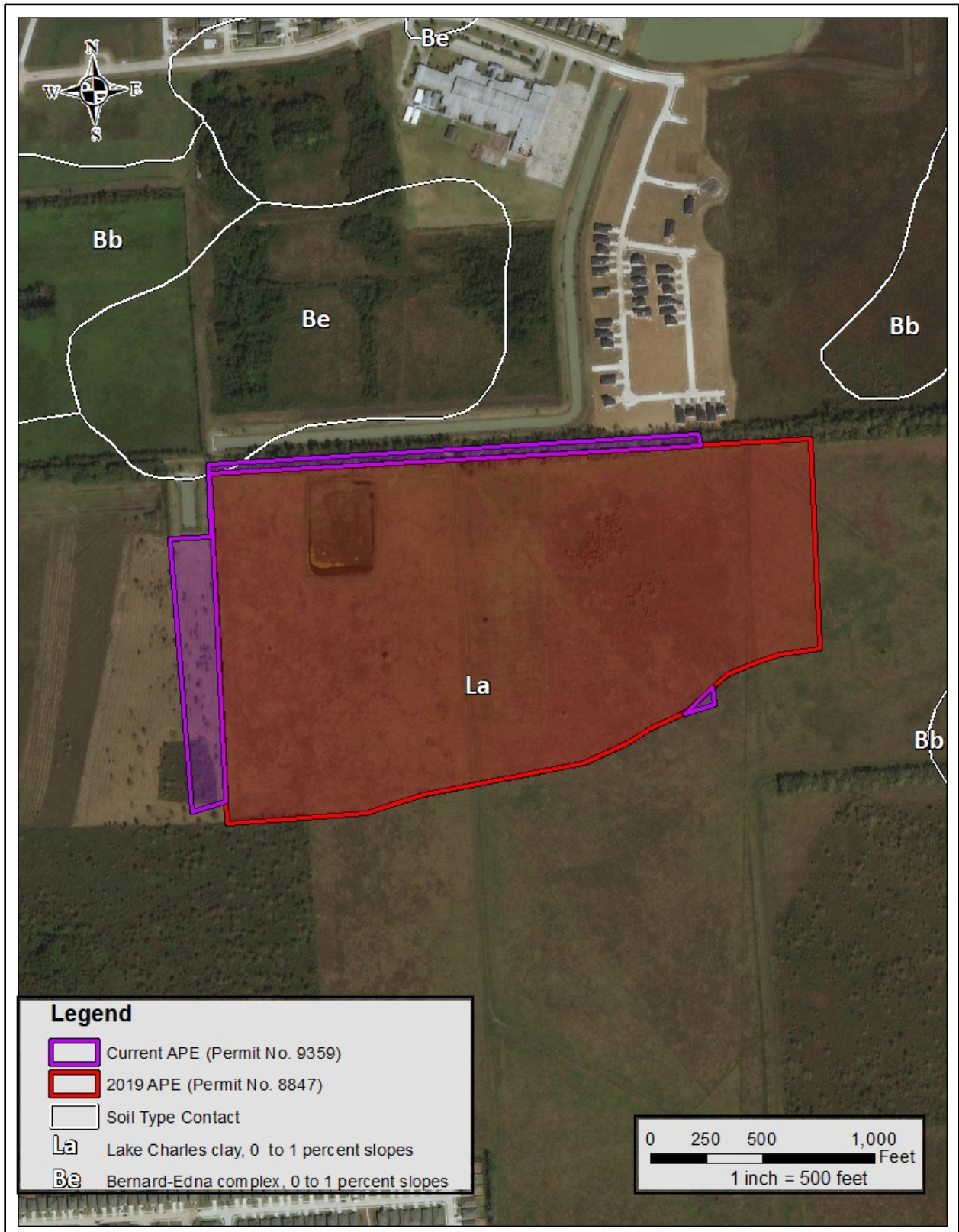


Figure 2-1. Soils mapped within the APE.

CHAPTER 3. CULTURAL CONTEXT AND PREVIOUS ARCHAEOLOGY

The Southeastern region of Texas contains an 11,500-year record of human history. This history has been shaped by human adaptation to changes in climatic and biotic conditions. Archaeologists researching long-term change in settlement structures, subsistence choices, and technological innovation have identified distinct coastal and inland adaptations in this region (Ricklis 2004; Story 1990). Southeast Texas coastal populations took advantage of the abundant resources of the coastal prairie and nearby estuaries. The cultural chronology of the region is defined by six major time periods: Paleoindian (11,500 to 7,000 BC); Archaic (7,000 to 500 BC); Transitional Late Archaic or Early Ceramic Period (500 BC to AD 700); Late Prehistoric (AD 700 to 1700); Protohistoric (AD 1528-1700) and Historic (AD 1700 to Present). Below is an overview of the sequence of human occupation within the region.

Paleoindian Period (11,500 BC – 7,000 BC)

The Paleoindian period marks the first human occupation in the New World, starting at the end of the Pleistocene epoch. This period, lasting for approximately 4,500 years, is best known for the decline of the mega fauna as continental climate became warmer and wetter. While evidence indicates that Clovis groups did traverse wide ranges in order to hunt big-game, it is disputed whether these hunters contributed to mega fauna extinction (Koch and Barnosky 2006). The diverse biotic communities present at the end of the Pleistocene in Texas may have led Paleoindian populations to practice generalized subsistence strategies, which included a reliance on smaller game and plant resources.

Unfortunately, the Paleoindian period is poorly represented across the state, including Southeast Texas. This can be attributed to two different factors: issues pertaining to projectile point temporal classifications; and climatic and geologic processes during the Pleistocene-Holocene transition. Typological issues have made it difficult to distinguish between point types and styles in the region (see Bousman et al. 2004 and Story 1990). Furthermore, the number of Paleoindian sites in Southeast Texas is small, relative to the numerous sites in the Balcones Escarpment. Geologic explorations of ancient shorelines indicate that Paleoindian sites are most likely submerged due to the advance of the Gulf of Mexico inland. The occasional Paleoindian artifact and remains of Pleistocene fauna which wash ashore at McFaddin Beach, Texas, confirms the presence of sites offshore (Abbott 2001:105-107; Story 1990:24-25).

Archaic Period (7,000 BC – 500 BC)

The Archaic period in the inland region of Southeast Texas is divided into three sub-periods: Early, Middle and Late. The divisions are based on climatic and cultural shifts. However, sub-periods can be difficult to parse out in the archaeological record due to depositional processes which mix assemblages. What is known, however, is that Archaic populations utilized mobility and subsistence strategies which took advantage of seasonal resources. A few of the settlement and subsistence strategies established during the Paleoindian period continued into the Early Archaic in the inland region. Archaeologists interpret the continuation of low site densities from this time period as an indicator of low population densities (Story 1990). Archaeological data suggests that Early Archaic people traveled in small bands, migrated seasonally, and maintained a generalized subsistence practice. The food choices of Early Archaic populations can be interpreted through their lithic assemblages. Projectile points from this time period include Neches River, Trinity, and other early stemmed points (Ricklis 2004:185; Story 1990).

The Texas coastline stabilized during the Middle Archaic. Abundant estuarine resources led to changes in seasonal subsistence strategies among coastal hunter-gatherers (Ricklis 2004:188). Although the acidic soils have made it difficult to find botanical and faunal remains at inland sites, coastal sites in Harris County and changes in projectile point technology at inland sites have provided insight into Middle and Late Archaic subsistence strategies. The seasonal exploitation of coastal resources coupled with technological changes in the interior suggests that group size and mobility were altered during this time period. Calf Creek and Bell projectile points mark the transition into the Middle Archaic, followed by Yarborough, Bulverde, Pedernales and Travis points. The Late Archaic assemblage includes Kent, Gary, Ensor and Goldey (Ricklis 2004:185). Projectile points such as Kent, Pedernales, Morhiss, Pontchatrain, and Nechez River show that inland assemblages tend to resemble those of the Central Texas Coast, rather than those of Northeast Texas (Story 1990:222). Additionally, the shift to using local materials for lithic production may indicate that group mobility was greatly reduced during the Late Archaic (Ricklis 2004:185).

Large cemeteries located in the coastal plain have provided insight into the Middle and Late Archaic. The Harris County Boy's School site provided insight into how evolving estuaries changed site function and use over time. During the Middle Archaic, the site was located inland from the Galveston Bay estuary. Estuaries were exploited during mid-summer, but by late summer to early fall, people moved inland. The exploration of shell middens and fish otolith studies revealed that this subsistence strategy continued

through the Late Archaic (Aten 1983:158-159). The Ernest Witte Site (41AU36) provided insight into long-distance trade during the Late Archaic. Items such as sting ray spines and columella atlatl weights from either the Texas or Florida Gulf Coast, corner tang knives from the Edwards Plateau, and stone gorgets from the Ouachita Mountains of Arkansas, were found at the site (Story 1990:237-243).

Transitional Late Archaic/Early Ceramic Period (500 BC – AD 700)

Although Ricklis (2004:189) argues that the introduction of pottery into the region marks the end of the Archaic period, archaeological evidence indicates that there was cultural and technological continuity throughout this time period. The earliest pottery in Southeast Texas assemblages appears around 200 BC. Tchefuncte ceramics, typically thick-walled vessels, date to AD 200 and are found in the Galveston Bay area. In the inland region, sandy paste ceramics were adopted around AD 500 (Ricklis 2004:200). The adoption of ceramics does indicate a change in how people stored, processed, and prepared plant and animal resources. In addition, the rapid innovations of ceramic technology in the region provide further evidence of distinct ethnic groups inhabiting the coastal and the inland regions.

Late Prehistoric Period (AD 700 – AD 1528)

The beginning of the Late Prehistoric period is marked by the adoption of the bow and arrow (Patterson 1996:20; Ricklis 2004:194). Scallorn points, along with other thin arrow point types indicate that a new hunting strategy was widely practiced across the region. By the end of the Late Prehistoric, deposits of bison bone along with Perdiz arrow points, thin alternately beveled knives, scrapers, thin blades, and other tools suggest that subsistence now focused on bison hunting and processing. In the inland region, the appearance of this toolkit marks the beginning of the Toyah phase or horizon (Ricklis 2004:194-195). The Toyah (AD 1275- AD 1700) spanned from inland Southeast Texas, through Central Texas, towards the Texas and New Mexico border. The connecting of hunter-gatherer groups through similar ideas on technology, subsistence, and settlement patterns perhaps represent an emergence of sociopolitical complexity in the region (Arnn 2012).

Protohistoric (AD 1528 – 1700) and Historic Period (AD 1700 – Present)

The Protohistoric period is marked by the first European contact with indigenous populations in Texas. During this period, there was intermittent contact between the native groups and Spanish explorers. The

period encompasses the approximately 175 years before the Spanish significantly impacted the indigenous groups in the area. A few encounters between the indigenous communities and Europeans were recorded, including those of Cabeza de Vaca (1528-1536) and the French settlement of Fort Saint Louis established by Rene Robert Cavalier, Sieur de La Salle (1685-1689) (Weddle 2001).

French explorers and traders encountered Atakapan groups, including the Arkokisas (Orcoquisacs) and Bidai in the 1730s and 1740s. French trade items, including glass beads and nails, are found at Arkokisas sites from this time period (Ricklis 2004:198). From early ethnohistoric accounts, it is clear that sub-groups of the Atakapans utilized coastal and inland resources, and the confluences of streams and rivers for camps (Anderson 1999:154-176; Aulbach 2012:15). A French presence in the region spurred the Spanish to establish missions and marks the start of the Historic period. However, these settlements were short-lived and the Spanish left the region by 1756. In 1824, Stephen F. Austin issued land grants along the Brazos, Colorado, and San Bernard Rivers to English immigrants (Long 2010).

The project area is located south of Arcola, which is located at the junction of FM 521 and State Highway 6, 20 miles (32 km) east of Richmond, Texas, in southeastern Fort Bend County. The site is on part of the David Fitzgerald league, granted in 1822 as one of the Old Three Hundred.

The grant was acquired by Jonathan Dawson Waters in 1850 with Waters becoming the owner of one of the largest cotton and sugar plantations in Texas. The plantation was named Arcola. The Houston Tap Railroad was built through the plantation in 1858. After Waters' death, the plantation lands were purchased by Col. T. W. House of Houston.

The Arcola community was formed predominantly by freed slaves of the Arcola plantation. A post office was established in Arcola in 1869 and served the community off and on until 1920. Arcola became a railroad junction in 1878 when the Gulf, Colorado and Santa Fe Railroad was built through Fort Bend County. In 1914, the community had an estimated 50 inhabitants and one general store. In 1940 Arcola had a church, a school, the Riceton-Arcola cemetery, and four businesses. Arcola's population slowly grew to 120 in 1949, 299 in 1968, and 661 in 1986, when the community was incorporated. Some of its growth may be attributed to its proximity to Houston. Arcola had two churches, a school, and a number of scattered dwellings in 1980 and a population of 666 in 1990. The population grew to 1,048 in 2000 (Odintz 2010).

The project area is also located north of Juliff, Texas, which is situated on the Missouri Pacific Railroad, FM 521, and the Brazos River. The area was also a part of the antebellum Arcola Plantation, and the community was named for the early settler, John J. Juliff. In the early 1850s, Juliff was a shipping point on the Brazos River. In 1858, the Houston Tap and Brazoria Railroad built through the community. The town was granted a post office in 1891 and had a general store in 1896. The post office was closed in 1908, reopened in 1914, and closed again in 1958. In 1933, Thurman “Doc” Duke purchased several acres by the railroad line, opened a store, and leased land to others who opened a dance hall and several taverns. The small community soon became a center for drinking, gambling, and prostitution. In 1934, a local resident made up a song about the community that went, in part, “Diddy Wa Diddy, ain’t no town, ain’t no city,” and Diddy Wa Diddy, spelled in a variety of ways, became the unofficial second name for the community. Diddy Wa Diddy has appeared in a number of blues songs from the 1930s through 1950s. By 1940, Juliff had an estimated 50 inhabitants, a church, and three businesses. The population rose to 150 in the 1940s, but the bars had closed or moved to nearby Houston by 1960, and the town faded away. In the 1980s the community consisted of a number of scattered dwellings (Odintz 2010).

Previous Archaeological Investigations and Known Cultural Resources

RKI conducted a desktop review to determine if any previously conducted archaeological investigations or any cultural resources have been documented within the APE. Review of the Texas Archaeological Site Atlas (Atlas), as well as **RKI** records, revealed that no archaeological investigations or archaeological sites are recorded within the APE; however, two previously conducted investigations are recorded within 1 mile (1.6 km) of the APE. No known cultural resources are located within 1 mile (1.6 km) of the APE (THC 2020). (**Figure 3-1**).

In 2008, HRA Gray and Pape conducted a linear survey for the UST PRU Sienna LP Project, approximately 0.34 mile (0.5 km) northwest of the APE (THC 2018). The survey covered a 4-mile (6-km) area, approximately parallel to Scanlan Road and Scanlan Terrace East. No further information for the survey is available on Atlas, but the project does not appear to have encountered any new archaeological sites within its boundaries (THC 2020).

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In 2019, RKI conducted an intensive pedestrian survey with shovel testing of approximately 80-acres immediately south, north, and east of the APE under TAC Permit No. 8847 (Matthews and Ward 2019). The survey was conducted in advance of construction of the proposed Fort Bend Independent School District High School Campus #12. No significant cultural material was encountered during the survey.

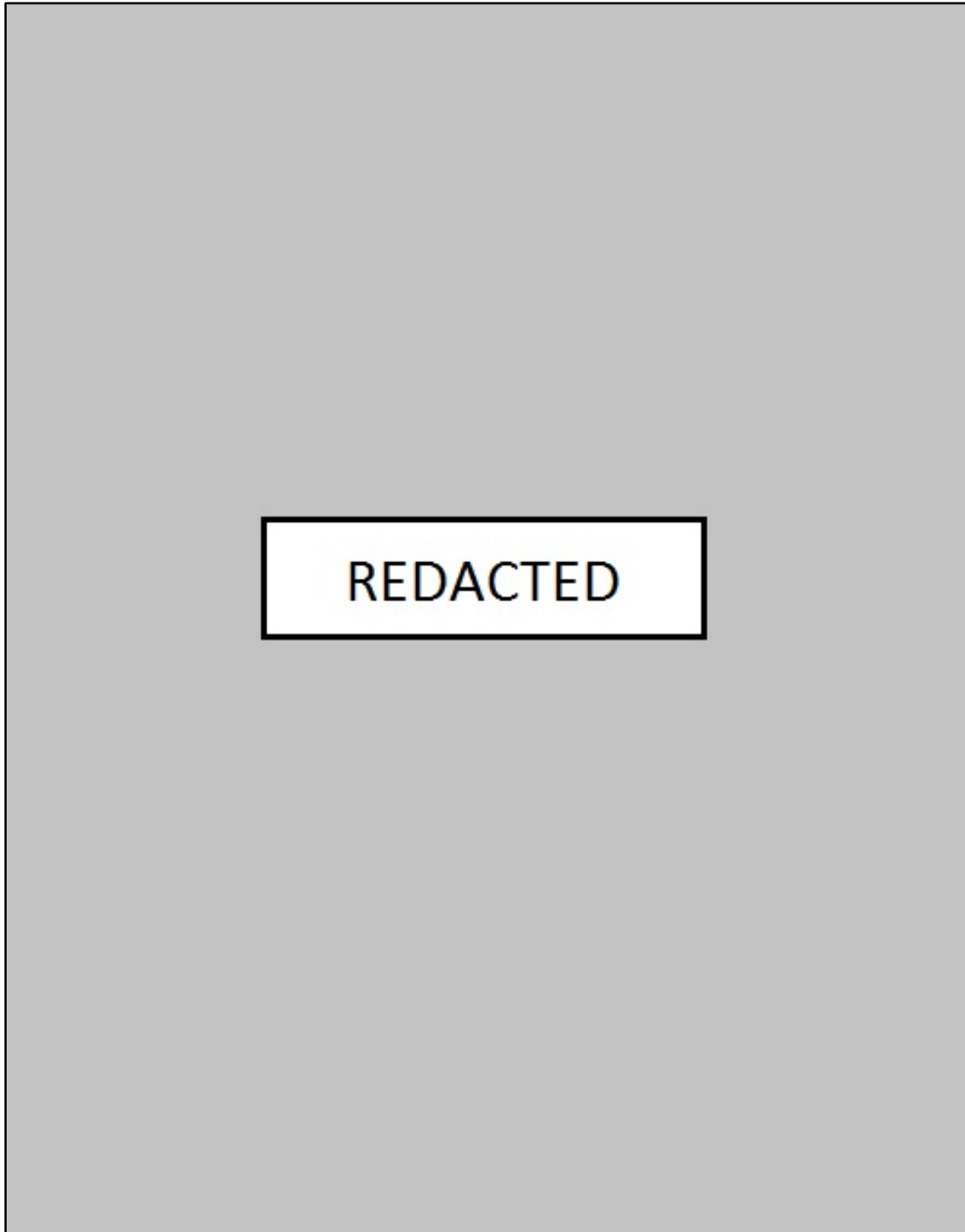


Figure 3-1. Previous archaeological investigations and known cultural resources within 1 mile (1.6 km) of the APE.

Historical Aerial Photography Review

A review of historic aerial photographs determined that the APE was heavily impacted by irrigation and agricultural practice by 1944, the earliest year for which aerial photographs could be found. The APE is shown to be cleared and cultivated agricultural fields on the 1944 imagery, intersected by narrow, straight roads, drainage canals or irrigation channels. A farmstead complex is located immediately south of the northern APE (**Figure 3-2**). By 1951, all but one of the structures associated with the farmstead complex had been eliminated. The 1951 aerial imagery also depicts a possible artificial pond at the southeastern corner of the APE. The single structure and artificial pond continue to appear on 1955 imagery, but by 1961 all evidence of any above ground resources within the APE is gone. The southeastern potential artificial pond continues to be depicted on 1961 and 1965 aerial photographs, but disappears by 1975. Aerial photographs from 1975 to 2004 consistently illustrate the project area as an agricultural field with no development, with the exception of the single north–south road and associated ditches that intersect the APE and previous road and/or irrigation impacts. Additional narrow roads, irrigation features, and/or other linear features appear on the 2008 photograph. The north–south canal adjacent to the northwestern APE first appears on a 2010 photograph as connected to a canal northeast of the APE (**Figure 3-3**). A second north–south dirt road and a detention basin connected to the east–west canal that directs through the northern APE was constructed immediately south of the APE by 2012 (see **Figure 3-3**).

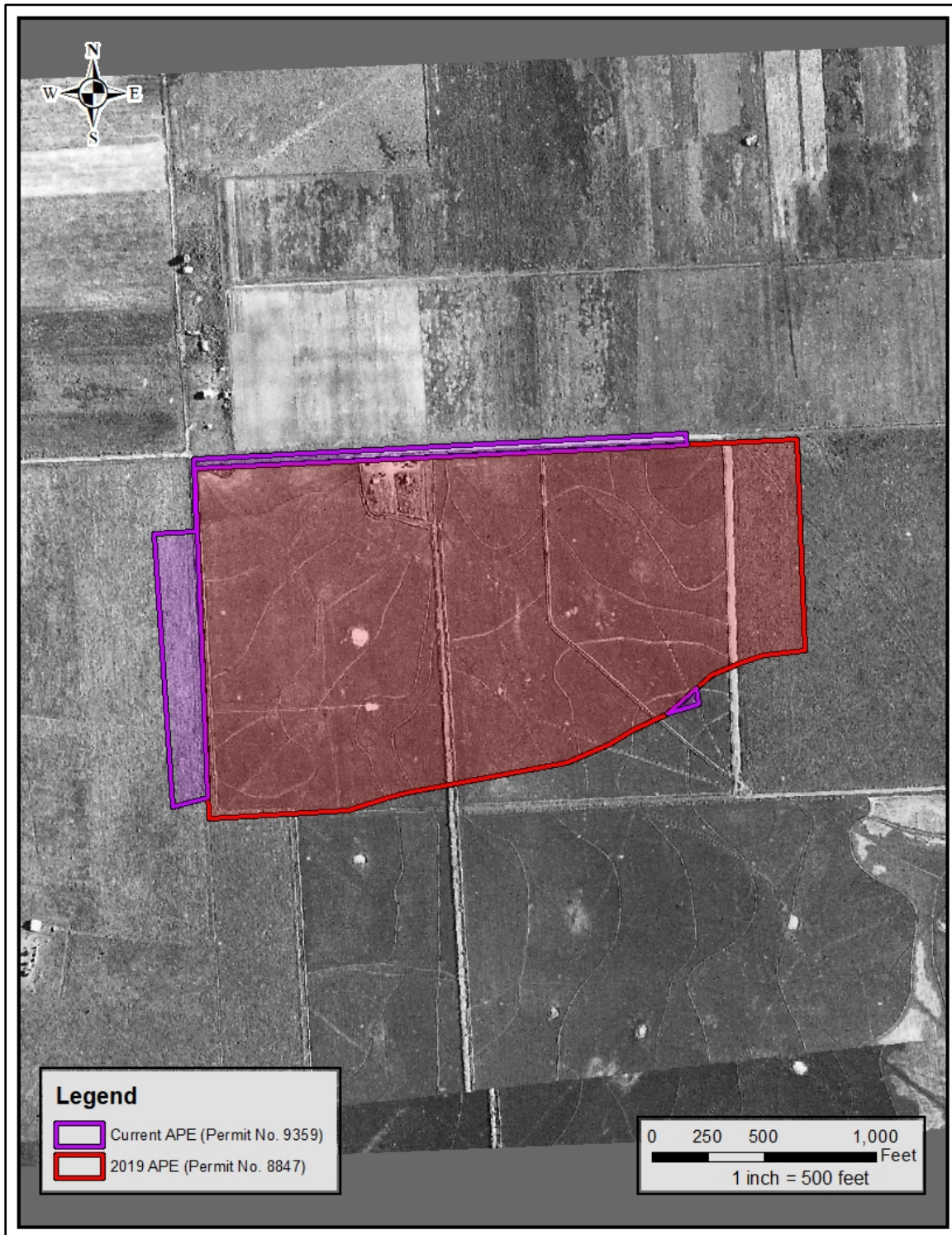


Figure 3-2. APE projected on 1944 aerial photograph.

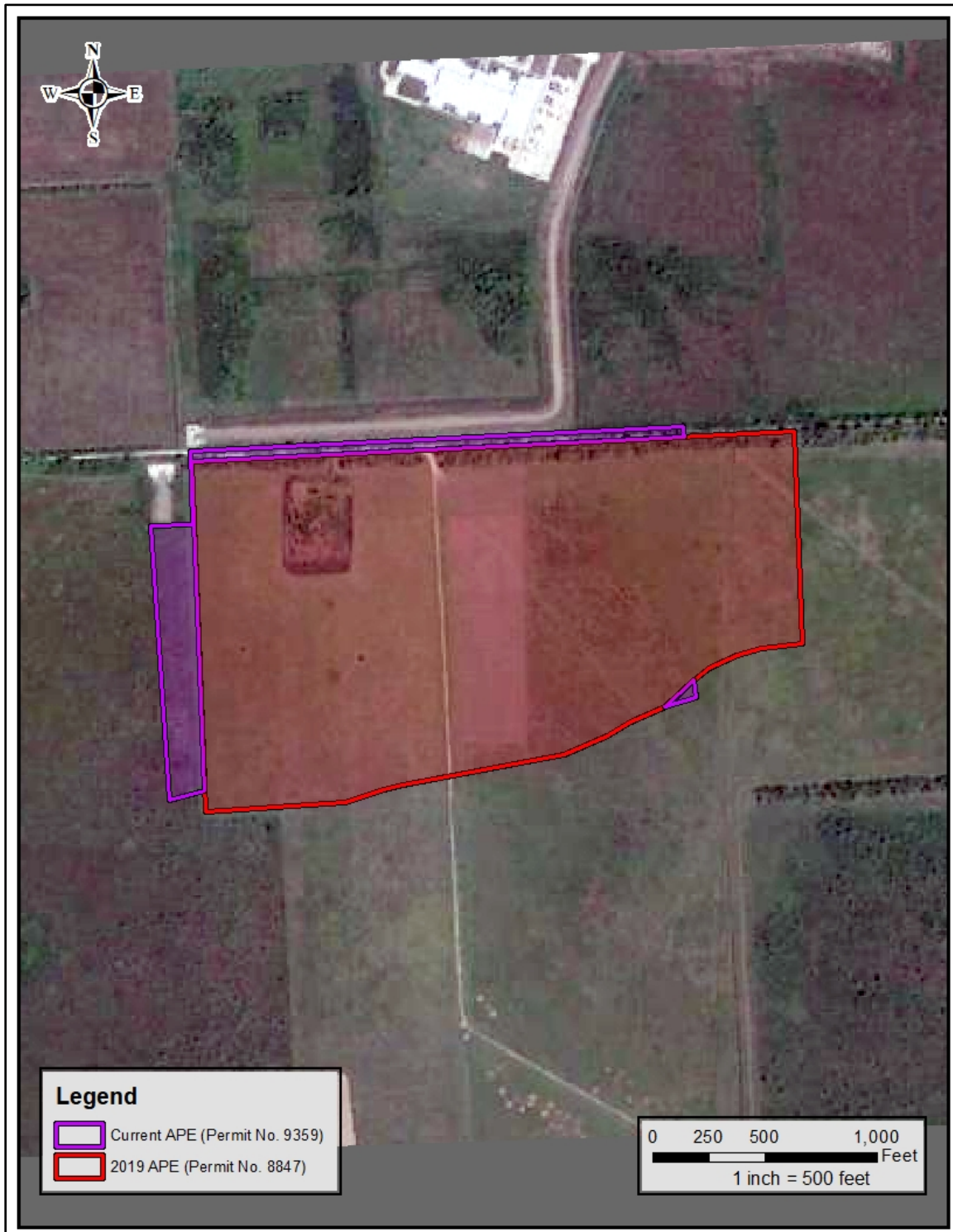


Figure 3-3. APE projected on 2014 aerial photograph.

CHAPTER 4. METHODS OF INVESTIGATION

RKI conducted a cultural resources survey consisting of a 100-percent intensive pedestrian survey augmented with shovel testing within the APE. The purpose of the investigation was to identify any surface-exposed or shallowly buried cultural deposits within the APE. Shovel tests were conducted in areas judged to have high probabilities for cultural deposits and/or when surface visibility was below 30 percent. Per requirements of THC's minimum standards for projects measuring less than 10.1 acres in size, a minimum of two shovel test were required for every acre of project area. A total of sixteen shovel tests were attempted, one of which could not be excavated due to water covering the ground surface, for this 7.31-acre project area, thus exceeding the THC's number of minimally required shovel tests. All work complied with the THC and the Council of Texas Archaeologists (CTA) survey standards for Texas.

Field Methods

The ground surface inspection of the APE was accomplished with transects placed approximately 30 m apart and shovel tests placed at approximately 100-m intervals within those transects. **RKI** attempted a total of 16 shovels tests within the 7.31-acre APE; however, only 15 shovel tests were fully executed due to dense vegetation and water on the ground surface of the APE. All shovel tests were approximately 32 to 35 cm in diameter, and, unless prevented by obstacles or buried features, extended to a maximum depth of 100 cm below surface. Each shovel test was excavated in 20-cm intervals. All soils from each level were screened through ¼-inch mesh. A shovel test form was completed for each excavated shovel test. Data collected from the shovel test included the final excavation depth, a tally of all materials observed from each 20-cm level, and a brief soil description (texture, consistency, Munsell color, inclusions). The location was recorded using a sub-meter accurate, hand-held Trimble GPS unit. Any additional observation considered pertinent was included as comments on the standard shovel test excavation form.

Laboratory Methods

The project adhered to a temporally diagnostic artifact collection only policy. No diagnostic artifacts were identified during the course of the investigations, thus, no artifacts were collected. All project-related documentation produced during the survey were prepared in accordance with federal regulation 36 CFR Part 79, and THC requirements for State Held-in-Trust collections. Field notes, field forms, photographs,

and field drawings were placed into labeled archival folders and converted into electronic files. Digital photographs were printed on acid-free paper, labeled with archivally-appropriate materials, and were placed in archival-quality plastic sleeves when needed. All field forms were completed with pencil. Ink-jet produced maps and illustrations were placed in archival quality plastic page protectors to prevent against accidental smearing due to moisture. A copy of the report and all digital materials were saved onto a CD and stored with field notes and documents. Records will be permanently housed at the Center for Archaeological Research at the University of Texas at San Antonio.

CHAPTER 5. RESULTS OF INVESTIGATIONS

On April 8, 2020, RKI conducted investigations of the current APE under TAC Permit No 9359 in order to accommodate the revised footprint of Fort Bend Independent School District High School #12, which included 7.31-acres of never-before-surveyed land to the north, west, and south of the 2019 project area (**Figure 5-1**). The current investigation consisted of a pedestrian survey augmented by shovel testing. Fifteen shovel tests were successfully executed; a sixteenth shovel test (JV4) was attempted but not excavated due to dense vegetation and water covering the ground surface (**Figure 5-2**). No cultural materials were encountered within the APE during this investigation.

The 7.31-acre APE was situated within a predominantly undeveloped rural area of Fort Bend County, Texas. The primary vegetation of the western APE was 1–5-foot-tall grasses that reduced ground surface visibility to less than 30-percent (**Figure 5-3**). Tree and bush density was noted to increase as one travelled south within the western APE. A linear growth of black willow, sweetgum, and Chinese tallow trees paralleled the northern boundary of the APE (**Figure 5-4**). The southeastern APE was largely vegetated with grasses (**Figure 5-5**).

During the pedestrian survey, multiple disturbances were observed throughout the APE. From north to south, the northern APE comprised an east–west two-track dirt road, an area vegetated with grasses and trees, a similarly vegetated berm, and an east–west earthen canal or ditch (**see Figure 5-4**). The northern APE has been developed with a changing configuration of an east–west road and canal since at least 1944. (**see Figure 3-2**). Additional disturbances in or adjacent to the northern APE included a north–south dirt road that spans the canal to provide access to the field south of the APE that was also present by 1944 (**Figure 5-6**), and a second north–south dirt path or road that spans the canal that was constructed by 2012 to provide access to the field south of the APE. The northern extent of the western APE was noted to have been impacted from construction of a circa 2010 north–south canal (**Figure 5-7**).

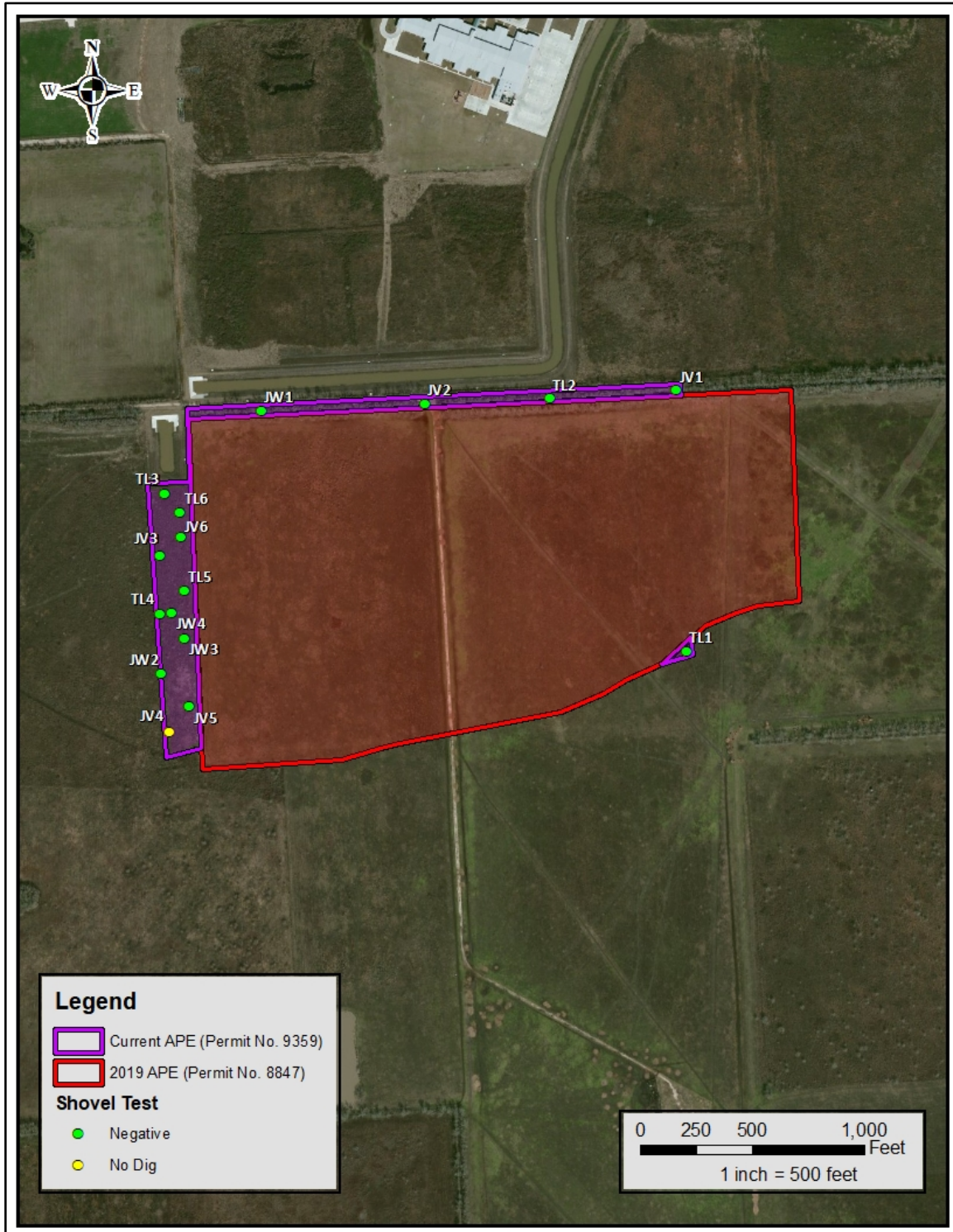


Figure 5-1. Results of the 2020 investigations.



Figure 5-2. Overview of JV4, not excavated due to dense vegetation and water covering the ground surface, facing south.



Figure 5-3. Overview of western APE, facing southwest.



Figure 5-4. Overview of the northern APE. From right to left (north-to-south): two-track dirt road, vegetation, vegetated berm, earthen canal, facing northwest.



Figure 5-5. Overview of the southwestern APE, facing northwest.



Figure 5-6. Intersection of two-track dirt road directing east–west within the northern APE and north–south dirt road spanning the canal, facing southeast.



Figure 5-7. Overview of the western APE, north–south canal to right, facing southwest.

As part of the pedestrian survey, RKI attempted 16 shovel tests within the 7.31-acre APE (see **Figure 5-1, Appendix A**). Of the 16 attempted shovel tests, eight were terminated from 30 to 40 cm below surface (bs) due to meeting the water table, seven were terminated from 10 to 60 cmbs due to encountering compact soils or compact gravels, and one (JV4) was not excavated due to dense vegetation and water covering the ground surface. THC standards for area surveys of project areas less than 10.1 acres in size require a minimum of two shovel tests per acre; therefore, this project exceeded the THC's minimum standards for area surveys. No cultural material, subsurface features, or above-ground structures were encountered.

Soils encountered during shovel testing were predominantly dark gray (10YR 4/1) silty clays. The average shovel test exhibited a profile comprised of moist to saturated dark gray (10YR 4/1) silty clay underlain by the water table (**Figure 5-8**). Redoximorphic features were present in many of the shovel tests, with the soils appearing to be hydric. All shovel tests were negative for prehistoric and historic subsurface cultural materials.



Figure 5-8. Shovel test TL5 terminated at 30 cmbs due to water table, facing north.

CHAPTER 6. SUMMARY AND RECOMMENDATIONS

RKI was contracted by the CLIENT to conduct archaeological investigations for a proposed high school campus located near Arcola, Fort bend County, Texas. Kirsten M. Atwood, Ph.D. served as Principal Investigator for the 2020 investigation. Fieldwork was conducted by Project Archaeologist Jason M. Whitaker, M.A., and Archaeologists Tiffany M. Lindley, M.A. and Jason G. Vandervort. Investigations included a background review and pedestrian survey augmented by shovel testing. The background review determined that no previously recorded sites were located within the APE, and no known cultural resources were identified within 1 mile (1.6 km) of the APE.

Field investigations for the APE were conducted on April 8, 2020. **RKI** attempted to excavate a total of 16 shovel tests within the 7.31-acre APE; however, only 15 shovel tests were successfully excavated. The single unexcavated shovel test was not excavated due to the presence a densely vegetated, swampy area. None of the executed shovel tests were positive for prehistoric or historic cultural materials. Soils throughout the APE were predominantly moist-to-saturated dark gray (10YR 4/1) silty clays. Shovel tests extended up to 60 cmbs, and were most often terminated around 40 cmbs due to compact soils or gravels, or due to meeting the water table.

The pedestrian survey documented multiple disturbances that appear to be associated with the construction of irrigation canals, a detention basin, and general agricultural practice throughout the APE. Specific disturbances observed include a circa 2010 north–south canal near the northwestern corner of the APE, as well as the east–west two-track dirt road, canal, and associated berms that comprise the northern APE. A review of historic aerial imagery confirmed that the northern APE has been composed of a changing configuration of road and canal since at least 1944. Although historic in age, earthen canals are a common structural feature throughout the vicinity of the APE and do not further contribute to the understanding of the region.

RKI made a good faith effort to identify cultural resources within the APE. No cultural material, above-ground structures, or subsurface features were encountered during the intensive pedestrian survey. As a result, **RKI** does not recommend further archaeological investigations within the APE. However, should changes be made to the extent of the project APE, further work may be required.

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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
JW1	0–20	10YR 3/1	Very Dark Gray	Silty Clay	Gravels 2%	Negative	–	–
	20–40	10YR 3/1	Very Dark Gray	Silty Clay	–	Negative	–	Compact Soils
JW2	0–20	10YR 3/1	Very Dark Gray	Silty Clay	–	Negative	–	–
	20–40	10YR 3/1	Very Dark Gray	Silty Clay	–	Negative	–	Water Table at 40 cmbs
JW3	0–20	10YR 3/1	Very Dark Gray	Silty Clay	Redoximorphic features present	Negative	–	–
	20–40	10YR 3/1	Very Dark Gray	Silty Clay	Redoximorphic features present	Negative	–	Water Table at 40 cmbs
JW4	0–20	10YR 3/1	Very Dark Gray	Silty Clay	Redoximorphic features present	Negative	–	–
	20–40	10YR 3/1	Very Dark Gray	Silty Clay	Redoximorphic features present	Negative	–	Water Table at 30 cmbs
JV1	0–20	10YR 4/1	Dark Gray	Clay	–	Negative	–	–
	20–40	10YR 4/1	Dark Gray	Clay	–	Negative	–	Compact Soils
JV2	0–20	10YR 2/1	Black	Clay Loam	Redoximorphic features present	Negative	–	Compact gravels at 10cmbs
JV3	0–20	10YR 5/1	Gray	Clay	Redoximorphic features present	Negative	–	–
	20–40	10YR 5/1	Gray	Clay	Redoximorphic features present	Negative	–	Water table at 35 cmbs
JV4	–	–	–	–	–	–	–	No Dig
JV5	0–20	10YR 4/1	Dark Gray	Clay	–	Negative	–	–
	20–40	10YR 4/1	Dark Gray	Clay	–	Negative	–	Water Table at 40 cmbs
JV6	0–20	10YR 4/1	Dark Gray	Clay	–	Negative	–	–
	20–40	10YR 4/1	Dark Gray	Clay	–	Negative	–	Compact Soils
TL1	0–20	10YR 4/1	Dark Gray	Silty Clay	–	Negative	–	–

Archaeological Investigations of Approximately Seven Acres of the Fort Bend Independent School District High School Campus #12– Farm to Market Road 521, Fort Bend County, Texas

Shovel Test No.	Depth (cm)	Munsell	Soil Color	Soil Texture	Inclusions	Positive/Negative	Cultural Materials	Reason for Termination/Comments
	20–40	10YR 4/1	Dark Gray	Silty Clay	–	Negative	–	Water Table at 30 cmbs
TL2	0–20	10YR 4/1	Dark Gray	Silty Clay	–	Negative	–	–
	20–40	10YR 4/1	Dark Gray	Silty Clay	–	Negative	–	Compact Soils
TL3	0–20	10YR 4/1	Dark Gray	Silty Clay	–	Negative	–	–
	20–40	10YR 4/1	Dark Gray	Silty Clay	–	Negative	–	Compact Soils
TL4	0–20	10YR 4/1	Dark Gray	Silty Clay	–	Negative	–	–
	20–40	10YR 4/1	Dark Gray	Silty Clay	–	Negative	–	–
	40–60	10YR 4/1	Dark Gray	Silty Clay	–	Negative	–	Compact Soils
TL5	0–20	10YR 4/1	Dark Gray	Silty Clay	–	Negative	–	–
	20–40	10YR 4/1	Dark Gray	Silty Clay	–	Negative	–	Water table at 35 cmbs
TL6	0–20	10YR 4/1	Dark Gray	Silty Clay	–	Negative	–	–
	20–40	10YR 4/1	Dark Gray	Silty Clay	–	Negative	–	Water Table at 30 cmbs