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HJN 140225 AR

Prepared for:

Land Tejas Companies, Ltd.
Houston, Texas

Prepared by:

Horizon Environmental Services, Inc.

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Austin, Texas

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MANAGEMENT SUMMARY

Horizon Environmental Services, Inc. (Horizon) was selected by Land Tejas Companies, Ltd. (Land Tejas), to conduct an intensive cultural resources inventory and assessment of the approximately 99.1-hectare (245.0-acre) Fulshear tract in northern Fulshear, Fort Bend County, Texas. Land Tejas is proposing to construct a residential subdivision on the tract. The tract is bounded on the east by County Road (CR) 359, on the south by Hunt Road, and on the west by Pool Hill Road. The project area would consist of the entire 99.1-hectare (245.0-acre) tract.

The proposed undertaking is being sponsored by a private developer on privately owned land and may require a permit issued by the US Army Corps of Engineers (USACE) under the Clean Water Act (CWA). As such, portions of the project area may fall under the jurisdiction of Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 USC §470, et seq.). As part of its due diligence practices, Land Tejas requested Horizon to conduct an intensive cultural resources survey of the entire proposed 99.1-hectare (245.0-acre) tract.

From October 28 to 29, 2014, Horizon archeological technicians Jennifer Cochran, Briana Nicole Smith, and Jared Wiersema, under the overall direction of Jeffrey D. Owens, Principal Investigator, performed an intensive cultural resources survey of the project area to locate any cultural resources properties that potentially would be impacted by the proposed undertaking. Horizon's archeologists traversed the 99.1-hectare (245.0-acre) tract in parallel, linear transects spaced approximately 30.5 meters (100.0 feet) apart and thoroughly inspected the modern ground surface for aboriginal and historic-age cultural resources. In general, the project area consisted of open pastureland covered in short to medium-height grasses with isolated copses of cedar and oak trees. Areas adjacent to drainages typically had a moderately dense ground cover of grasses, small shrubs, and weeds with thin bands of oak, hackberry, and cedar trees. Ground surface visibility was generally less than 30%, though some isolated areas were more or less clear of vegetation and offered better visibility. In addition, the Texas State Minimum Archeological Survey Standards (TSMASS) require the excavation of 1 shovel test per 3 acres for project areas of this size; thus, a total of 82 shovel tests were required within the 99.1-hectare (245.0-acre) tract to meet the TSMASS. Horizon excavated a total of 101 shovel tests during the survey, thereby exceeding the TSMASS requirements for a project area of this size.

Two newly recorded archeological sites, 41FB340 and 41FB341, were recorded within the project area during the survey.

Site 41FB340 consists of a low- to moderate-density, surficial scatter of late 19th- to mid-20th-century domestic and construction debris surrounding the southern arm of a large, artificial stock pond in the southeastern portion of the project area. Cultural materials observed on the site surface include whiteware and stoneware ceramic sherds, glass shards, several pieces of metal scrap, and a few hand-made brick fragments. The presence of a small number of solarized glass shards suggests a possible late 19th- to early 20th-century occupation, though the majority of the artifacts date to the early to mid-20th century. The artifact scatter is co-extensive with an earthen berm that serves to dam the stock pond, and most or all of the cultural materials are in heavily disturbed contexts. No subsurface cultural materials were observed in any of the 5 shovel tests excavated on the site, and no cultural features are associated with the artifact scatter. An abandoned, modified ranch house and an open-sided equipment shed or barn are located immediately west of the artifact scatter, and a second, more recent barn is located to the southeast. Examination of historic aerial photographs indicates that the currently standing house was constructed sometime after 1970 and replaced a smaller farmhouse present at the same location. The prior farmhouse is visible on historic aerial photographs from 1970 and 1953, though no earlier images were available; thus, the original date of construction of the prior farmstead is unknown. Nevertheless, the currently standing house was built after 1970 and is not of historic age. The equipment shed located north of the house was probably constructed around the same time as the 1970s-era house. The second outbuilding to the southeast was constructed sometime between 1970 and 1995 and is in relatively better condition than the other outbuilding. All 3 of these buildings are currently standing on the tract. However, the late 19th- to mid-20th-century artifact scatter appears to be associated with the previous (pre-1970s) farmstead rather than with the currently standing structures. As such, the currently standing house and the 2 outbuildings have not been included within the boundaries of site 41FB340.

Site 41FB341 consists of a low-density, surficial and shallow subsurface scatter of early to mid-20th-century domestic debris in an open cattle pasture located off the northern side of Hunt Road in the southwestern portion of the project area. Cultural materials observed on the site include whiteware ceramic sherds, glass shards, rusted metal nail fragments, and hand-made brick fragments. Cultural features on the site consist of a metal-fenced corral, a metal cow feeder, an electric water pump, 2 utility poles, and some barbed-wire fencing. The site represents the remnants of a 20th-century farmstead, though the primary residence has been demolished or removed from the site. Cultural materials were observed primarily on the modern ground surface, though subsurface cultural materials were observed in 3 of the 5 shovel tests excavated on the site extending to depths of 10.0 to 30.0 centimeters (3.9 to 9.1 inches) below surface. A house was formerly present on this farmstead a short distance northeast of the corral. Examination of historic aerial photographs indicates that this farmstead was constructed between 1953 and 1958 and is therefore of historic age. The house is evident on the 1971 USGS topographic quadrangle and is dimly visible on a Google Earth aerial photograph dating to 1995, though the next available aerial image, dated to 2003, shows that the structure had been demolished or removed from the site by this time.

Based on the highly disturbed character of the surficial and shallow subsurface archeological deposits and the lack of standing structures associated with the historic-era artifact scatters, both on sites 41FB340 and 41FB341 are recommended as ineligible for inclusion in the

National Register of Historic Places (NRHP) under Criteria C and D. The extant farm buildings on site 41FB340, including a house and 2 open-sided equipment sheds or barns, were constructed after 1970 and are therefore not of historic age, and no standing buildings are present on site 41FB341. Additional archival research would be necessary to evaluate their potential association with events or persons of historic importance under Criteria A and B of the NRHP. However, as 20th-century farmsteads are a common site type in southeast Texas, such sites must retain substantial integrity of location, design, setting, materials, workmanship, feeling, and association in order to establish significance under the NHPA. Given the highly disturbed nature of sites 41FB340 and 41FB341 and the absence of standing structures associated with the artifact scatters, it is unlikely that any possible association with persons or events of historic importance would be sufficient to establish significance under Criteria A or B of the NRHP. Thus, sites 41FB340 and 41FB341 are recommended as ineligible for inclusion in the NRHP, and no further investigations are warranted in connection with the proposed undertaking.

Based on the results of the survey-level investigations documented in this report, no potentially significant cultural resources would be affected by the proposed undertaking, and Horizon recommends that the proposed undertaking be cleared to proceed relative to the jurisdiction of Section 106 of the NHPA. However, it should be noted that human burials, both prehistoric and historic-era, are protected under the Texas Health and Safety Code. In the event that any human remains or burial objects are inadvertently discovered at any point during construction, use, or ongoing maintenance in the project area, even in previously surveyed areas, all work should cease immediately and the Texas Historical Commission (THC) should be notified of the discovery.

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1.0 INTRODUCTION

Horizon Environmental Services, Inc. (Horizon) was selected by Land Tejas Companies, Ltd. (Land Tejas), to conduct an intensive cultural resources inventory and assessment of the approximately 99.1-hectare (245.0-acre) Fulshear tract in northern Fulshear, Fort Bend County, Texas. Land Tejas is proposing to construct a residential subdivision on the tract. The proposed tract is bounded on the east by County Road (CR) 359, on the south by Hunt Road, and on the west by Pool Hill Road. The project area would consist of the entire 99.1-hectare (245.0-acre) tract (Figures 1 and 2).

The proposed undertaking is being sponsored by a private developer on privately owned land and may require a permit issued by the US Army Corps of Engineers (USACE) under the Clean Water Act (CWA). As such, portions of the project area may fall under the jurisdiction of Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 USC §470, et seq.). As part of its due diligence practices, Land Tejas requested Horizon to conduct an intensive cultural resources survey of the entire proposed 99.1-hectare (245.0-acre) tract.

From October 28 to 29, 2014, Horizon archeological technicians Jennifer Cochran, Briana Nicole Smith, and Jared Wiersema, under the overall direction of Jeffrey D. Owens, Principal Investigator, performed an intensive cultural resources survey of the project area to locate any cultural resources properties that potentially would be impacted by the proposed undertaking. The cultural resources investigation consisted of an archival review, an intensive pedestrian survey of the project area, and the production of a report suitable for review by the State Historic Preservation Office (SHPO) in accordance with the Texas Historical Commission's (THC) Rules of Practice and Procedure, Chapter 26, Section 27, and the Council of Texas Archeologists' (CTA) Guidelines for Cultural Resources Management Reports.

Following this introductory chapter, Chapters 2.0 and 3.0 present the environmental and cultural backgrounds, respectively, of the project area. Chapter 4.0 describes the results of background archival research, and Chapter 5.0 discusses cultural resources survey methods. Chapter 6.0 presents the results of the cultural resources survey, and Chapter 7.0 presents cultural resources management recommendations for the project. Chapter 8.0 lists the references cited in the report, and Appendix A summarizes shovel test data.

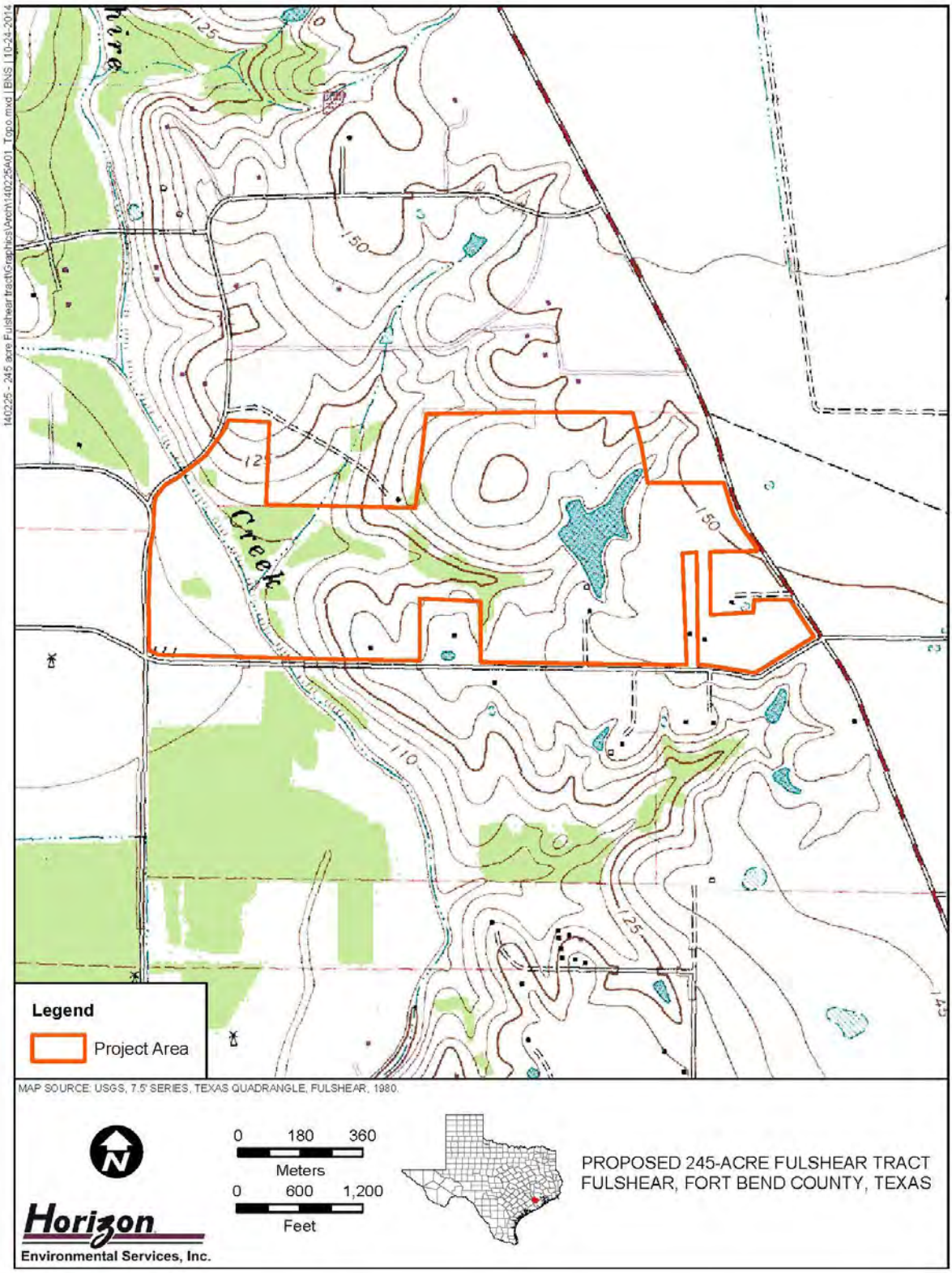

Figure 1. Location of Project Area on USGS Topographic Quadrangle

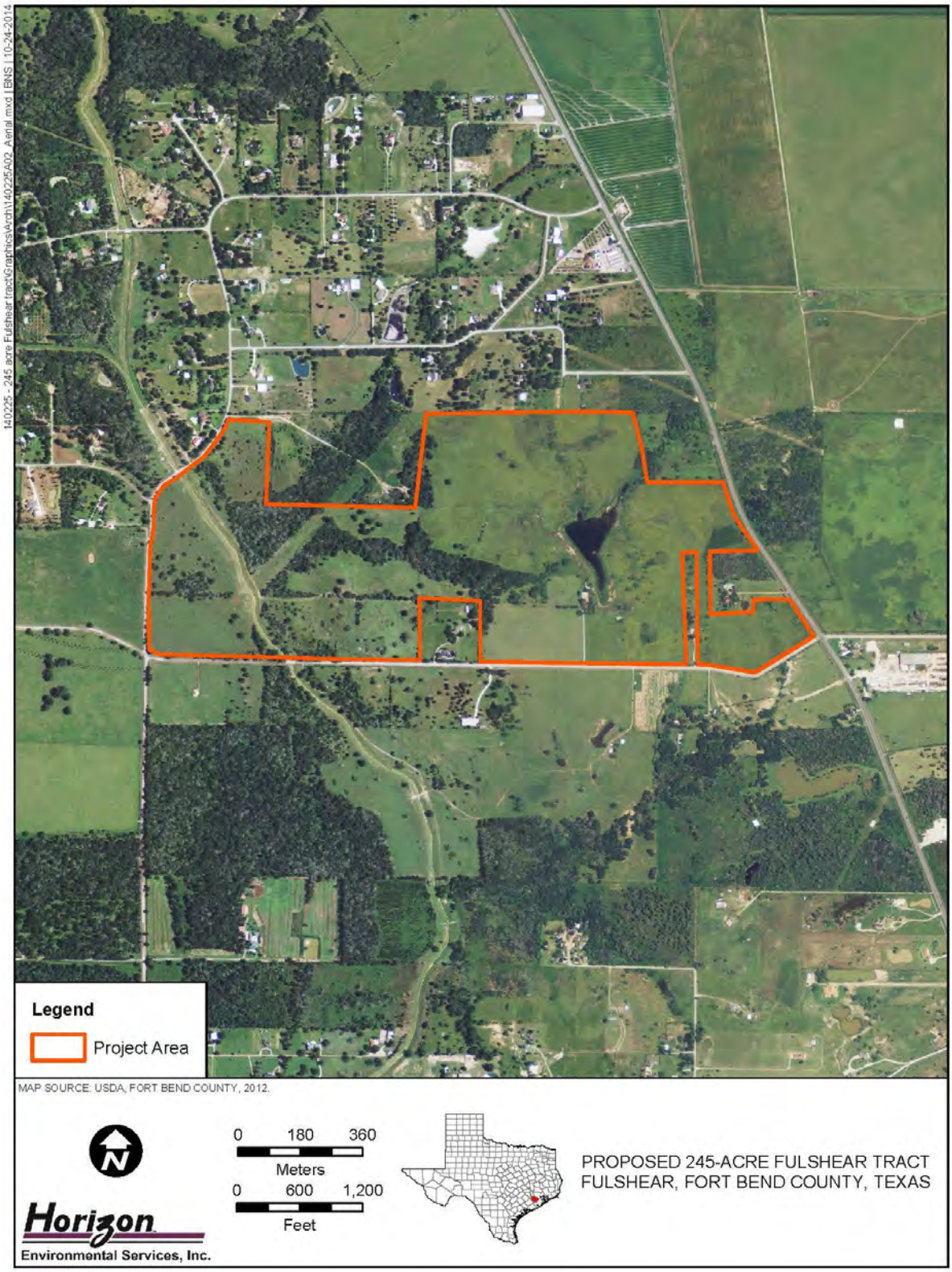

Figure 2. Location of Project Area on Aerial Photograph

2.0 ENVIRONMENTAL SETTING

2.1 PHYSIOGRAPHY AND HYDROLOGY

The project area is located in northwestern Fort Bend County, Texas, approximately midway between the cities of Richmond to the northwest and Fulshear to the southeast. Fort Bend County is situated on the Gulf Coastal Plain in southeastern Texas about 80.5 kilometers (50.0 miles) inland from the Gulf of Mexico shore. The Gulf of Mexico represents a structural basin formed by lithosphere deformation. The Texas Coastal Plain, which extends as far north as the Ouachita uplift in southern Oklahoma and westward to the Balcones Escarpment, consists of seaward-dipping bodies of sedimentary rock, most of which are of terrigenous clastic origin, that reflect the gradual infilling of the basin from its margins (Abbott 2001). The region is underlain by rocks and unconsolidated sediments that are quite young in a geological sense, ranging from modern to Miocene in age. These consist predominantly of a series of fluviodeltaic bodies arranged in an offlapped sequence, with interdigitated and capping eolian, littoral, and estuarine facies making up a relatively minor component of the lithology. Major bounding disconformities between these formations are usually interpreted to represent depositional hiatuses that occurred during periods of sea level low stand. The oldest rocks in this fill are of Late Cretaceous age. As a result of the geometry of basin filling, successively younger rock units crop out in subparallel bands from the basin margin toward the modern coastline.

The majority of the project area spans a series of Pleistocene-age upland terrace remnants dissected by 2 ephemeral drainages that drain to the west into Brookshire Creek, which flows northwest to southeast through the project area near its western boundary. The small portion of the project area west of Brookshire Creek is situated along the eastern margin of the broad floodplain of Bessies Creek. Brookshire Creek flows generally southward and discharges into Bessies Creek to the south of the project area. Bessies Creek, in turn, meanders generally southeastward, discharging into the Brazos River south of Fulshear. The Brazos River, in turn, flows generally southeastwards to empty into the Gulf of Mexico near Freeport. One of the 2 tributaries of Brookshire Creek that cuts across the project area has been dammed near the head of its channel to create a large, artificial stock pond. Elevations across the project area range from approximately 32.0 m (105.0 feet) above mean sea level (amsl) in the channel of Brookshire Creek in the western portion of the project area to 48.8 meters (160.0 feet) amsl on the crest of a prominent knoll in the north-central portion of the project area. Drainage within the project area is predominantly to the west toward Brookshire Creek, which flows southeastward.

2.2 GEOLOGY AND GEOMORPHOLOGY

The project area spans 2 distinct geological formations. The majority of the project area located east of Brookshire Creek is situated on the mid-Pleistocene-age Lissie Formation (Ql), and the westernmost portion of the project area located west of Brookshire Creek is situated on Holocene-age alluvium (Qal) (Fisher 1982). The Lissie Formation consists of gently rolling, fluviatile deposits of clay, silt, and sand, with a minor component of siliceous gravels, and the Holocene-age alluvium consists of clay, silt, sand, and organic matter on point bars, natural levees, stream channels, backswamps, coastal marshes, mud flats, and narrow beaches (Fisher 1982).

Specifically, the project area encompasses a mosaic of 9 distinct soil units (Figure 3; Table 1) (NRCS 2014). Seven of these 8 soil units—Brazoria clay, 0 to 1% slopes, rarely flooded (Ma); Edna fine sandy loam, 1 to 4% slopes (Eb); Fordtran loamy fine sand, 1 to 4% slopes (Ha); Katy fine sandy loam, 0 to 1% slopes (Ka); Katy fine sandy loam, 1 to 3% slopes (Kb); Katy-Waller complex (Kc); and Lake Charles clay, 2 to 5% slopes (Lb)—consist of loamy, sandy, or clayey fluviomarine deposits of Early to Late Pleistocene age found in a variety of upland settings and on coastal flats. The remaining 2 soil units—Gladewater-Nahatchie complex (Na); and Kenney-Fulshear complex, 4 to 8% slopes (Kh)—are composed of loamy alluvium of Holocene and Quaternary age found in floodplain and terrace settings.

While aboriginal cultural resources are commonly encountered in deep alluvial sediments adjacent to major streams in southeast Texas, the relative antiquity of the Pleistocene-age fluviodeltaic sediments that constitute the soils on the coastal plain, such as those that comprise the majority of the current project area, suggests that any cultural resources would be constrained to the modern ground surface, rather than in buried contexts, in erosional settings lacking integrity. Intact, buried archeological deposits may occur within alluvial sediments near major streams, though Holocene-age alluvial deposits within the project area are limited to a relatively small area surrounding the confluence of the 2 unnamed tributaries and Brookshire Creek in the western portion of the project area. Historic-age cultural resources may occur in any physiographic setting and tend to be observable on the modern ground surface.

2.3 CLIMATE

Evidence for climatic change from the Pleistocene to the present is most often obtained through studies of pollen and faunal sequences (Bryant and Holloway 1985; Collins 1995). While the paleoclimatic history of the coastal region remains unclear, Bryant and Holloway (1985) present a sequence of climatic change for nearby east-central Texas that includes 3 separate climatic periods—the Wisconsin Full Glacial Period (22,500 to 14,000 B.P.), the Late Glacial Period (14,000 to 10,000 B.P.), and the Post-Glacial Period (10,000 B.P. to present). Evidence from the Wisconsin Full Glacial Period suggests that the climate in east-central Texas was considerably cooler and more humid than at present. Pollen data indicate that the region was more heavily forested in deciduous woodlands than during later periods (Bryant and Holloway 1985). The Late Glacial Period was characterized by slow climatic deterioration and a slow warming and/or drying trend (Collins 1995). In east-central Texas, the deciduous woodlands were

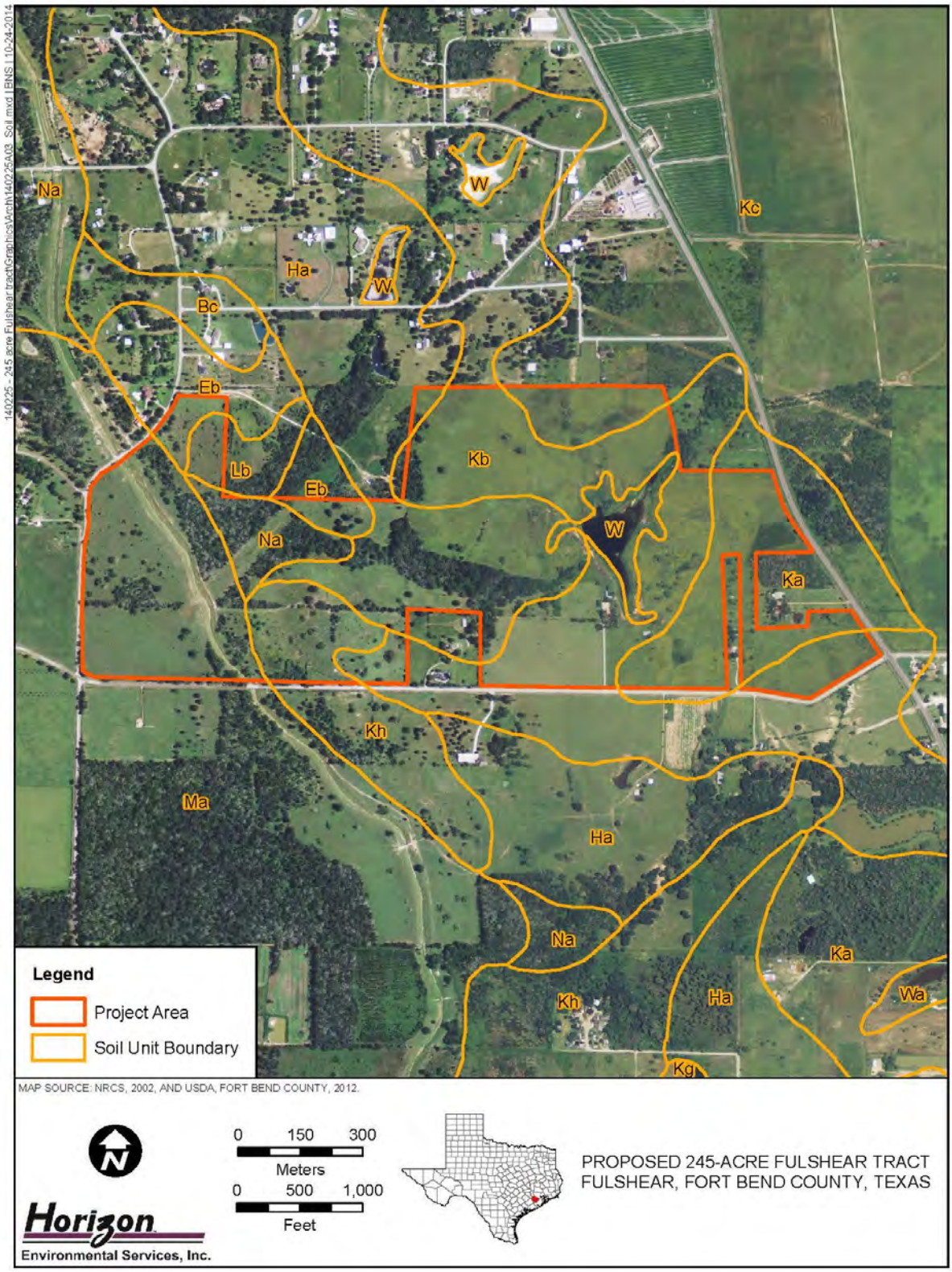

Figure 3. Distribution of Soils Mapped within Project Area

Table 1. Mapped Soils Located within Project Area

Soil Name	Soil Description	Typical Profile (inches)
Brazoria clay, 0 to 1% slopes, rarely flooded (Ma)	Clayey alluvium derived from igneous, metamorphic, and sedimentary rock on floodplains	0-6: Clay (A) 6-35: Clay (Bss1) 35-57: Clay (Bss2) 57-80: Clay (Bkss)
Edna fine sandy loam, 1 to 4% slopes (Eb)	Loamy fluviomarine deposits of Late Pleistocene age on flats	0-8: Fine sandy loam 8-36: Clay 36-50: Clay 50-65: Clay loam
Fordtran loamy fine sand, 1 to 4% slopes (Ha)	Loamy and sandy alluvium of Pleistocene age on terraces	0-14: Loamy sand 14-28: Loamy fine sand 28-52: Sandy clay 52-80: Sandy clay loam
Gladewater-Nahatche complex (Na)	Loamy alluvium of Holocene age on floodplains	0-8: Clay 8-60: Clay 60-80: Clay loam
Katy fine sandy loam, 0 to 1% slopes (Ka)	Loamy fluviomarine deposits derived from igneous, metamorphic, and sedimentary rock on flats	0-12: Fine sandy loam (A) 12-25: Fine sandy loam (E) 25-28: Loam (Bt1) 28-80: Clay loam (Bt2)
Katy fine sandy loam, 1 to 3% slopes (Kb)	Loamy fluviomarine deposits derived from igneous, metamorphic, and sedimentary rock on flats	0-17: Fine sandy loam (A) 17-30: Fine sandy loam (E) 30-40: Loam (Bt1) 40-80: Clay loam (Bt2)
Katy-Waller complex (Kc)	Loamy fluviomarine deposits of Early Pleistocene age on flats (Katy) and depressions (Waller)	Katy 0-24: Fine sandy loam 24-42: Loam 42-80: Clay loam Waller 0-12: Loam 12-52: Loam 52-62: Sandy clay loam
Kenney-Fulshear complex, 4 to 8% slopes (Kh)	Loamy alluvium of Quaternary age on terraces	Kenney 0-54: Loamy fine sand 54-60: Sandy clay loam Fulshear 0-9: Fine sandy loam 9-38: Sandy clay 38-60: Sandy clay loam
Lake Charles clay, 2 to 5% slopes (Lb)	Clayey fluviomarine deposits derived from igneous, metamorphic, and sedimentary rock in backswamps	0-4: Clay (A) 4-59: Clay (Bss) 59-65: Clay (Bkss1) 65-80: Clay (Bkss2)

Source: NRCS 2014

gradually replaced by grasslands and post oak savannas (Bryant and Holloway 1985). During the Post-Glacial Period, the east-central Texas environment appears to have been more stable. The deciduous forests had long since been replaced by prairies and post oak savannas. The

drying and/or warming trend that began in the Late Glacial Period continued into the mid-Holocene, at which point there appears to have been a brief amelioration to more mesic conditions lasting from roughly 6,000 to 5,000 B.P. Recent studies by Bryant and Holloway (1985) indicate that modern environmental conditions in east-central Texas were probably achieved by 1,500 years ago.

The modern climate of the upper Texas coast, including the region surrounding Houston, is classified as subtropical humid (Abbott 2001; Larkin and Bomar 1983), forming a transitional zone between the humid southeastern US and the semiarid to arid west. The climate reflects the influences of latitude, low elevation, and proximity to the Gulf of Mexico, which combine with the urban heat island formed by the tremendous concentration of asphalt and concrete to give the Houston area a notorious modern climate that is oppressively warm and moist throughout much of the year. As a result of proximity to the Gulf and the abundance of surface water, humidity in the early morning can approach 100 percent even on cloudless summer days, and it often exceeds 50% even on the warmest afternoons. Largely as a consequence of the relatively high humidity characteristic of the region, temperature patterns exhibit a moderate annual range and a modest diurnal range that increases slightly with distance from the coast. Average monthly high temperature ranges from a low of 17 to 19°C (59 to 63°F) in January to a high of 38 to 40°C (89 to 96°F) in August. Average monthly lows range from 4 to 9°C (38 to 47°F) in January to 25 to 29°C (72 to 79°F) in July and August. Annually, average low temperatures range from 15 to 21°C (56 to 65°F), and average high temperatures range from 27 to 29°C (75 to 79°F) (Abbott 2001; Larkin and Bomar 1983).

The region experiences 2 precipitation peaks throughout the year (Abbott 2001; Mowery et al. 1960). The first occurs in the late spring (i.e., May to June) due to the passage of infrequent cold fronts that spawn chains of powerful frontal thunderstorms. The second occurs in the late summer to early autumn (i.e., August to September) due to the incidence of tropical storms and hurricanes from the Atlantic and, occasionally, Pacific oceans. In contrast, winter and early spring are relatively dry, and high summer rainfall is dominated by convectional thunderstorms that are relatively brief and localized, albeit frequently intense. Average annual precipitation varies from a low of approximately 100 cm (40 in) to a high of more than 132 cm (52 in). Average monthly precipitation varies from less than 5 to 8 cm (2 to 3 in) in March to more than 19 cm (7.5 in) occurring locally on the coast during September. Almost all of the measurable precipitation falls as rain—snowfall is extremely rare, occurring in measurable amounts in only 1 in 10 years.

2.4 FLORA AND FAUNA

Fort Bend County is situated near the southeastern edge of the Texas biotic province (Blair 1950), an intermediate zone between the forests of the Austroriparian and Carolinian provinces and the grasslands of the Kansas, Balconian, and Tamaulipan provinces. Some species reach the limits of their ecological range within the Texas province. McMahan et al. (1984) further define 4 broad communities that characterize that portion of the Texas biotic province that lies on the Gulf Coastal Plain: (1) coastal marsh/barrier island, (2) coastal prairie, (3) coastal gallery forest, and (4) pine-hardwood forest (cf. Abbott 2001:24-26).

The coastal marsh/barrier island category includes well-drained, sandy, coastal environments and saline and freshwater wetlands in the coastal zone (Abbott 2001:24). Marsh vegetation is typical of areas that are seasonally wet and have substrates composed primarily of sands and silts, clays, or organic decomposition products. Vegetation assemblages are strongly controlled by texture, salinity, frequency and duration of inundation, and depth of the seasonal water table. Sandy, relatively well-drained, freshwater environments are typically dominated by little bluestem, switchgrass, Florida paspalum, and brownseed paspalum. Wetter environments are often dominated by marshhay cordgrass, seashore saltgrass, saggitaria, bulrushes, smooth cordgrass, seashore paspalum, seashore dropseed, olney bulrush, saltmarsh bulrush, saltmarsh aster, longtom, sprangletop, burhead, arrowhead, coastal waterhyssop, needlegrass rush, and other sedges and rushes. Slightly higher, better-drained environments are characterized by taxa like seashore saltgrass, seashore paspalum, gulfdune paspalum, shoregrass, gulf cordgrass, red lovegrass, bushy sea-oxey, and glasswort. A variety of fauna are characteristic of the shore zone. Important larger taxa include raccoon, nutria, alligators, turtles, swamp rabbit, and many birds, including ducks, geese, herons, and many smaller species. Aquatic taxa, including a wealth of fish and shellfish adapted to brackish to hypersaline conditions, are also important in the coastal zone.

The coastal prairie category consists primarily of grasses with minor amounts of forbs and woody plants in areas that are not saturated on a seasonal basis (Abbott 2001:24-26). This community is characteristic of upland areas and grades into the pine-hardwood forest to the north and east and into the coastal marsh/barrier island to the south. A wide variety of grasses are found in the prairie environments, but the principal taxa include big bluestem, little bluestem, indiangrass, eastern grama, switchgrass, brownseed paspalum, sideoats grama, silver bluestem, buffalograss, threeawn, and Texas wintergrass. Common forbs include Maximilian sunflower, Engelman daisy, blacksalmon, penstemon, dotted gayfeather, bundleflower, yellow neptunia, snoutbean, prairie clover, tickclover, wildbean, western indigo, paintbrush, bluebonnet, ragweed, croton, milkweed, vetch, verbena, and winecup. Woody plants occurring in the coastal prairie include mesquite, honey locust, huisache, eastern baccharis, sesbania, live oak, elm, hackberry, bumelia, and coralberry. The frequency of trees increases dramatically as the coastal prairie grades into the pine-hardwood forest, forming an open woodland environment with common stands of hardwood trees and occasional pines. The coastal prairie is home to a diverse fauna, including coyote, white-tailed deer, skunks, cottontail rabbit, many small rodents, amphibians and reptiles, and a variety of permanent and migratory birds. Bison and pronghorn were also present at various times in the past.

The coastal gallery forest consists of diverse, principally deciduous, trees and associated understory in floodplains and streams that traverse the outer coastal plain (Abbott 2001:26). Important taxa include water oak, pecan, poplar, American elm, cedar elm, sugarberry, ash, loblolly pine, water oak, post oak, cherrybark oak, mulberry, swamp chestnut oak, willow oak, sweetgum, hawthorn, dogwood, hickory, bois d'arc, sassafras cypress, willow, cottonwood, and sumac. Shrubs and vines such as mustang grape, greenbrier, yaupon, coralberry, possumhaw, elderberry, honeysuckle, dewberry, and blackberry are common in the understory, as are grasses such as little bluestem, big bluestem, and indiangrass. The fauna of the gallery forest include white-tailed deer, opossum, raccoon, squirrel, turkey, a variety of small mammals and rodents,

turtles, snakes, and many birds. Black bear was also present at various times in the past, and a number of fish and a few varieties of shellfish are present in the streams.

The pine-hardwood forest is characterized by a mix of coniferous and deciduous trees, including longleaf pine, shortleaf pine, loblolly pine, post oak, red oak, white oak, blackjack oak, willow oak, and live oak (Abbott 2001:26). Riparian environments often support larger deciduous trees like pecan, cottonwood, hickory, beech, and American elm. Understory vegetation varies from relatively open to quite dense, and consists of shrubs, vines, forbs, and young trees. Common shrubs include acacia, yaupon, mayhaw, wild persimmon, myrtle, greenbrier, Virginia creeper, blackberry, dewberry, trumpet vine, gourd, and poison ivy. A variety of fauna is also present, including white-tailed deer, opossum, raccoon, squirrel, rabbit, mink, skunk, various small rodents, turtles, reptiles, and many different birds. Black bear was also present at times in the past, and bison and pronghorn were occasionally present in the transition zone to the coastal prairie environment.

According to Mowery et al. (1960), about 95% of the upland vegetation consisted of coarse bunchgrasses when Fort Bend County was first settled. However, many of the original bunchgrasses have been eliminated by heavy grazing over the past 20 or 30 years, and the vegetation is now of much lower quality. Introduced plants such as bermudagrass, dallisgrass, and burclover are now common in many pastures.

3.0 CULTURAL BACKGROUND

The project area is located within the Southeast Texas archeological region. In broad terms, much of the archeological record in Southeast Texas represents an interface between the Southern Great Plains and the Southeastern Woodlands (Aten 1983, 1984; Patterson 1995; Story 1990). Further distinctions are often made between the inland and coastal margin subregions of Southeast Texas. These 2 subregions are somewhat culturally distinct, and the inland subregion has a much longer chronological record. The coastal margin of Southeast Texas comprises a zone about 25.7 kilometers (16.0 miles) inland from the coast that covers the area influenced by Gulf tidal flows on the salinity of streams, lakes, and bays. Considerable ecological variability characterizes this subregion, including woodlands, coastal prairie, lakes, wetlands, marine coastline, and barrier islands. The inland subregion also encompasses considerable ecological diversity, including mixed woodlands, coastal prairies, and dense piney woods.

In discussions of the prehistory of Texas, Fort Bend County is often treated as part of a cultural transition zone. Following Patterson (1995), Southeast Texas is defined as a 21-county area (including Fort Bend County) that lies between the Colorado River on the west and the Sabine River on the east, extending about 199.5 kilometers (124.0 miles) inland from the coastline. Archeological research has shown that it is especially important to consider the archeology of Fort Bend and Austin counties together with the eastern part of Wharton County, as this seems to be an area in which much mixing of technologies occurred, and it has a distinctive Late Archaic mortuary tradition as well.

The human inhabitants of Southeast Texas practiced a generally nomadic hunting and gathering lifestyle throughout all of prehistory. While many of the same labels are used to denote Southeast Texas cultural/chronological periods, the timeframe and cultural characteristics of Southeast Texas culture periods are often different than in neighboring regions. For instance, the Archaic and Late Prehistoric time periods are different in Central and Southeast Texas, and Central Texas lacks the Early Ceramic period that has been defined for Southeast Texas.

Mobility and settlement patterns do not appear to have changed markedly through time in Southeast Texas. Inland sites are usually found near a water source, usually exhibit evidence of reoccupation through time, have well-defined intrasite activity areas, tend not to be associated with satellite activity sites or separate base camps, and exhibit a range of subsistence-related activities. Inland sites tend to contain modest pottery assemblages, fired clay balls (at some sites), abundant lithic material, and an absence of shell tools. Coastal sites tend to consist of

multicomponent *Rangia* shell middens that contain few lithics, oyster shell tools, large quantities of pottery (in later cultural components), and numerous bone tools.

3.1 PALEOINDIAN PERIOD (10,000 TO 5,000 B.C.)

The initial human occupations in the New World can now be confidently extended back before 10,000 B.C. (Dincauze 1984; Haynes et al. 1984; Kelly and Todd 1988; Lynch 1990; Meltzer 1989). Evidence from Meadowcroft Rockshelter in Pennsylvania suggests that humans were present in Eastern North America as early as 14,000 to 16,000 years ago (Adovasio et al. 1990), while more recent discoveries at Monte Verde in Chile provide unequivocal evidence for human occupation in South America by at least 12,500 years ago (Dillehay 1989, 1997; Meltzer et al. 1997). Most archeologists presently discount claims of much earlier human occupation during the Pleistocene glacial period.

The earliest generalized evidence for human activities in Southeast Texas is represented by the PaleoIndian period (10,000 to 5,000 B.C.) (Patterson 1995). This stage coincided with ameliorating climatic conditions following the close of the Pleistocene epoch that witnessed the extinction of herds of mammoth, horse, camel, and bison. Cultures representing various periods within this stage are characterized by series of distinctive, relatively large, often fluted, lanceolate projectile points. These points are frequently associated with spurred end scrapers, gravers, and bone foreshafts.

PaleoIndian groups are often inferred to have been organized into egalitarian bands consisting of a few dozen individuals that practiced a fully nomadic subsistence and settlement pattern. Due to poor preservation of floral materials, subsistence patterns in Southeast Texas are known primarily through the study of faunal remains. Subsistence focused on the exploitation of plants, small animals, fish, and shellfish, even during the PaleoIndian period. There is little evidence in this region for hunting of extinct megafauna, as has been documented elsewhere in North America. Rather, a broad-based subsistence pattern appears to have been practiced during all prehistoric time periods.

In Southeast Texas, the PaleoIndian stage is divided into 2 periods based on recognizable differences in projectile point styles (Patterson 1995). These include the Early PaleoIndian period (10,000 to 8,000 B.C.), which is recognized based on large, fluted projectile points (i.e., Clovis, Folsom, Dalton, San Patrice, and Big Sandy), and the Late PaleoIndian period (8,000 to 5,000 B.C.), which is characterized by unfluted lanceolate points (i.e., Plainview, Scottsbluff, Meserve, and Angostura).

3.2 ARCHAIC PERIOD (5,000 B.C. TO A.D. 100)

The onset of the Hypsithermal drying trend signals the beginning of the Archaic stage (5,000 B.C. to A.D. 100) (Patterson 1995). This climatic trend marked the beginning of a significant reorientation of lifestyle throughout most of North America, but this change was far less pronounced in Southeast Texas. Elsewhere, the changing climatic conditions and corresponding decrease in the big game populations forced people to rely more heavily upon a diversified resource base composed of smaller game and wild plants. In Southeast Texas, however, this

hunting and gathering pattern is characteristic of most of prehistory. The appearance of a more diversified tool kit, the development of an expanded groundstone assemblage, and a general decrease in the size of projectile points are hallmarks of this cultural stage. Material culture shows greater diversity during this broad cultural period, especially in the application of groundstone technology.

Traditionally, the Archaic period is subdivided into Early, Middle, and Late subperiods. In Southeast Texas, the Early Archaic period (5,000 to 3,000 B.C.) is marked by the presence of Bell, Carrollton, Morrill, Trinity, Wells, and miscellaneous Early Stemmed projectile points. The Bell point is the only type in this period that is closely associated with the Southern Plains. Many of the latter point types continue into the Middle Archaic period (3,000 to 1,500 B.C.) and several new types appear, including Bulverde, Lange, Pedernales, Williams, Travis, and probably the Gary-Kent series. The Late Archaic period (1,500 B.C. to A.D. 100) is characterized by Gary, Kent, Darl, Yarbrough, Ensor, Ellis, Fairland, Palmillas, and Marcos points.

In the western part of inland Southeast Texas, a Late Archaic mortuary tradition developed in the lower Brazos and Colorado river valleys and in the intervening area (Hall 1981; Patterson 1995). Organized burial practices actually started during the Middle Archaic period, but reached full development in the Late Archaic with the use of exotic grave goods such as boatstones and bannerstones (probably used as atlatl weights), stone gorgets, corner-tang knives, stingray spines, shark teeth, and marine shell beads and pendants. Other burial practices included the systematic orientation of burial direction, body position, use of red ochre, and use of locally made grave goods, such as longbone implements and bone pins. Most burials are found in extended supine position, though some extended prone and bundle burials are also known. Burial direction is usually consistent within single sites, but varies from site to site. Patterson et al. (1993) report that at least 11 sites are associated with this mortuary tradition in Austin, Fort Bend, and Wharton counties.

3.3 EARLY CERAMIC PERIOD (A.D. 100 TO 600)

The use of pottery did not start uniformly throughout Southeast Texas. Pottery manufacture appears to have diffused into this region from adjacent regions, primarily from the east along the coastal margin. Aten (1983:297) argues that pottery was being manufactured on the coastal margin of the Texas-Louisiana border by about 70 B.C., in the Galveston Bay area by about A.D. 100, in the western part of the coastal margin by about A.D. 300, and in the Conroe-Livingston inland area by about A.D. 500. The practice of pottery manufacture appears to have progressed first along the coastal margin and then moved inland (Patterson 1995). Southeastern Texas ceramic chronologies are best known in the Galveston Bay area, where Aten (1983) established a detailed chronological sequence.

The earliest ceramic periods in the Galveston Bay and neighboring Sabine Lake areas appear to be approximately contemporaneous with the earliest ceramic periods of the lower Mississippi Valley (Aten 1984). Early assemblages contain substantial quantities of Tchefuncte ceramics. In the Sabine Lake region, grog-tempered varieties of Baytown Plain and Marksville Stamped are common, while grog-tempered ceramics do not occur in the Galveston Bay area 128.7 kilometers (80.0 miles) to the west until several hundred years later. With the principal

exception of a few Tchefuncte ceramic types, other southern Louisiana ceramics are not found on the Gulf coast west of the Sabine Lake area.

Goose Creek sandy-paste pottery was used throughout Southeast Texas and somewhat farther north in the Early Ceramic, Late Prehistoric, and the early part of the Historic periods (Aten 1984; Patterson 1995; Pertulla et al. 1995). The Goose Creek series is the primary utility ware throughout the prehistoric sequence in Southeast Texas, though it gives way to Baytown Plain for about 200 years during the transition between the Late Prehistoric and Historic periods before once again becoming predominant into the Historic period (Aten 1984). A minor variety, Goose Creek Stamped, occurs only in the Early Ceramic period (Aten 1983). Three other minor pottery types—Tchefuncte (Plain and Stamped), Mandeville, and O'Neal Plain *variety Conway* (Aten 1983)—were used only during the Early Ceramic period. The Mandeville and Tchefuncte types are characterized by contorted paste and poor coil wedging. Mandeville has sandy paste (like Goose Creek), while Tchefuncte paste has relatively little sand. Given their technological similarities, Mandeville and Tchefuncte may represent different clay sources rather than distinct pottery types (Patterson 1995). The bone-tempered pottery that characterizes ceramic assemblages elsewhere in Texas is not common in Southeast Texas.

3.4 LATE PREHISTORIC PERIOD (A.D. 600 TO 1500)

The onset of the Late Prehistoric period (A.D. 600 to 1500) (Patterson 1995) is defined by the appearance of the bow and arrow. Elsewhere in Texas, pottery also appears during the Late Prehistoric period, but, as already discussed, ceramics appear earlier in Southeast Texas. Along the coastal margin of Southeast Texas, use of the atlatl (i.e., spearthrower) and spear was generally discontinued during the Late Prehistoric period, though they continued to be used in the inland subregion along with the bow and arrow through the Late Prehistoric period (Ensor and Carlson 1991; Keller and Weir 1979; Patterson 1980, 1995; Wheat 1953). In fact, Patterson (1995:254) proposes that use of the bow and arrow started in Southeast Texas as early as the end of the Middle Archaic period, using unifacial arrow points that consisted of marginally retouched flakes. In contrast, Prewitt (1981) argues for a generalized date of adoption of the bow-and-arrow hunting system at about the same time (ca. A.D. 600) in Central and Southeast Texas. In Southeast Texas, unifacial arrow points appear to be associated with a small prismatic blade technology. Bifacial arrow point types include Alba, Catahoula, Perdiz, and Scallorn. A serial sequence for these point types has not been established in Southeast Texas, though Scallorn points appear to predate Perdiz points throughout the rest of Texas.

Grog- (crushed sherd) tempered pottery was used in the Late Prehistoric and Protohistoric periods in Southeast Texas. The grog-tempered varieties include San Jacinto Plain and Baytown Plain *variety Phoenix Lake*. San Jacinto pottery contains a relatively small proportion of small-sized temper, while Baytown Plain has larger amounts of sherd pieces that are often visible on vessel surfaces. As previously mentioned, sandy-paste Goose Creek pottery remained in use throughout the Late Prehistoric period. Rockport Plain and Asphalt Coated pottery from the Central Texas Coast (Ricklis 1995) are found at a few sites in Southeast Texas during the Late Prehistoric and Protohistoric periods.

3.5 PROTOHISTORIC PERIOD (A.D. 1500 TO 1700)

For the most part, Protohistoric and early Historic Indian sites in Southeast Texas have not been articulated with the ethnographic record (Story 1990:258). Similarly, reconciling the ethnographic record to prehistoric Indian groups in this region is problematic. Late Prehistoric and Historic population movements further complicate this issue. Aten (1983) has reconstructed the territories of native groups present in this region in the early eighteenth century, including the Akokisa, Atakapa, Bidai, Coco (Karankawa?), and Tonkawa. The presence of the Tonkawa in Southeast Texas may be due to their rapid expansion from Central Texas in the 17th and 18th centuries (Newcomb 1993:27). The Karankawa Indians are thought to have occupied the coastal margin of this region as far east as Galveston Island and the corresponding mainland (Aten 1983). Judging by the scarcity of Rockport pottery on sites east of the San Bernard River, the ethnic association of the Karankawa Indians with the Coco tribe may be in doubt.

Protohistoric and Historic Indian sites may not be systematically recognized as such because few aboriginal artifact types changed from the Late Prehistoric to the Historic periods (Patterson 1993; 1995). Only a few non-European artifact types are useful in identifying Historic Indian sites, including Bulbar Stemmed and Guerrero arrow points and possibly Fresno and Cuney points after A.D. 1500 (Hudgins 1986). Historic period Indian sites are usually identified by the presence of glass and metal artifacts, gunflints, and European types of pottery.

3.6 HISTORIC PERIOD (A.D. 1700 TO PRESENT)

The first European incursion into what is now known as Texas was in 1519, when Álvarez de Pineda explored the northern shores of the Gulf of Mexico. In 1528, Cabeza de Vaca crossed South Texas after being shipwrecked along the Texas Coast near Galveston Bay. However, European settlement did not seriously disrupt native ways of life until after 1700. The first half of the 18th century was the period in which the fur trade and mission system, as well as the first effects of epidemic diseases, began to seriously disrupt the native culture and social systems. This process is clearly discernable at the Mitchell Ridge site, where the burial data suggest population declines and group mergers (Ricklis 1994), as well as increased participation on the part of the Native American population in the fur trade. By the time that heavy settlement of Texas began in the early 1800s by Anglo-Americans, the indigenous Indian population was greatly diminished. The Alabama/ Coushatta Indians who currently reside in Southeast Texas are migrants who were displaced from the east in the late eighteenth to early nineteenth centuries (Newcomb 1961).

The settlement of Fort Bend County began in the early 1820s as part of the Anglo-American colonization of Texas under the auspices of the Spanish government.[1] Authorization to settle 300 families in the valleys of the Brazos and Colorado rivers was initially granted to Moses Austin, but plans were delayed by his death in June 1821 and by Mexican independence from Spain. Stephen F. Austin assumed the responsibility of leadership from his father and gained confirmation of the original Spanish grants from the newly established Mexican government in

[1] The following history of Fort Bend County has been adapted from TSHA (2014).

1823. Following arrangements with Austin, a group of colonists sailed from New Orleans in November 1821 on the schooner *Lively* and anchored near the mouth of the Brazos River on the Texas coast, a few miles south of the project area. In 1822, a small party from this group left the ship and traveled inland some 90 mi and, on a bluff near a deep bend in the river, built a 2-room cabin. As the settlement grew, the cabin became known as both Fort Settlement and Fort Bend; the latter name, in time, prevailed. In 1824, the Mexican government issued documents officially granting to the colonists their leagues of land. Of the 297 grants, 53 were issued to Fort Bend settlers. Karankawa Indians lived near the new colonial settlements. The first settlers had a few skirmishes, but as the colonies increased, the Karankawas began moving out of the area. By the 1850s, they had migrated as far south as Mexico.

In May 1837, the Congress of the Republic of Texas passed an act incorporating 19 towns, including Richmond. Robert Eden Handy of Pennsylvania and William Lusk of Richmond, Virginia, both of whom had arrived in Texas shortly before the war for independence from Mexico, founded and named the town with 8 other proprietors, including Branch T. Archer, Thomas Freeman McKinney, and Samuel May Williams. An act establishing Fort Bend County and fixing its boundaries was passed on December 29, 1837, and Wyly Martin was appointed the first chief justice. On January 13, 1838, the citizens voted to make Richmond the county seat. The county was formed from portions of Austin, Brazoria, and Harris counties. Its irregular shape was, in part, the result of using waterways to form the western and segments of the southern and eastern boundaries. Several efforts have been made to change the lines but they have met with little success.

Some of the first settlers in Fort Bend County played prominent roles in early Texas history. Nathaniel F. Williams and Matthew R. Williams cultivated and milled sugar on their Oakland Plantation near Oyster Creek in the early 1840s, thus laying the groundwork for an industry that continued to develop and thrive in Sugar Land; in 1837, Jane Long opened a boarding house in Richmond, where she lived until her death in 1880; and Mirabeau B. Lamar moved to Richmond in 1851 and built a plantation home on land purchased from Jane Long. Both Mrs. Long and Lamar are buried in Morton Cemetery, Richmond. During the Texas Revolution, many of the people of Fort Bend fled in great haste as Antonio López de Santa Anna's army marched through the area. Part of this army camped at Thompson's Ferry on the Brazos River while part marched on to meet defeat at the battle of San Jacinto. Fort Bend settlers returned from the Runaway Scrape to find their homes plundered or burned and their livestock scattered or dead.

Soon after its founding, Richmond developed into a prosperous trade center for the surrounding agricultural region of the lower Brazos valley. Barges and steamboats plied the Brazos River, transporting cotton and other products to the port at Galveston, as merchants of Richmond and other river towns vied with Houston for the lucrative agricultural trade. Transportation facilities were greatly improved in 1853, when the Buffalo Bayou, Brazos, and Colorado Railway was completed to Stafford's Point from Harrisburg, which was located on Buffalo Bayou's navigable channel to Galveston. The prosperity of the 1840s and 1850s, however, ended with the Civil War.

In antebellum Texas, slaves were essential to the development of the valley plantations. As early as 1840, there were already 572 slaves in Fort Bend County, and by 1845 that number had risen to 1,172, placing Fort Bend near the top of counties with the largest slave populations. In 1850, Fort Bend was 1 of only 6 counties in the state with a black majority. The labor provided by the burgeoning slave population made possible the growth of the plantation economy. In 1860, there were 159 farms in Fort Bend County, with about 12,000 acres in cotton, 7,000 acres in corn, and 1,000 acres in sugarcane; the slave population totaled 4,127, more than twice that of the 2,016 whites. Fort Bend planters, believing that their economic and social successes, among other reasons, justified the institution of slavery, strongly supported the Confederacy, and in 1861 voted 486 to 0 for secession from the United States. Most of the county's men volunteered for Confederate service; many joined the Eighth Texas Cavalry (Terry's Texas Rangers), a regiment organized by Benjamin Franklin Terry, a wealthy sugar planter from Sugar Land.

Although battle never reached Fort Bend, the war's duration and ultimate loss imposed economic hardships and social and political stress on the community. During Reconstruction, efforts to live in peace with politics dominated by Radical Republicans and black officeholders brought no more than an uneasy compromise. White Democrats, outnumbered by blacks more than 2 to 1, were unable to regain control of local government until the late 1880s, when their all-out campaign to attract black as well as white votes led to the Jaybird-Woodpecker War. This brief but violent conflict, which took place on August 16, 1889, abruptly ended the Republican, or "Woodpecker" rule, and the Democrats quickly formed the Jaybird Democratic Association. With a constitution that declared as its purpose the "protection of the white race" and "an honest and economical government," the association controlled local politics mainly through the white primary, which excluded blacks until the US Supreme Court supported a lower court's ruling forbidding the practice in 1953. The Jaybird Association accepted the ruling, continued for a few years, and then disbanded in 1959.

Fort Bend County remained a state Democratic party stronghold until the 1970s, when the combination of population growth and the growing association of conservative political ideas with the Republican party broke the trend. In a special election held in April 1976, the people of the county elected Ron Paul, a physician from Lake Jackson in Brazoria County, as congressman, the first Republican elected to office in Fort Bend County since Reconstruction. Paul focused his campaign on the evils of "big government" and the "ultraliberalism" of his Democratic opponent.

New towns and a new demography began to develop in the last quarter of the 19th century as railroads branched out across the county. In 1878, the Gulf, Colorado, and Santa Fe line from Galveston crossed the Galveston, Harrisburg, and San Antonio (the former Buffalo Bayou, Brazos, and Colorado) line 1.6 km (1 mi) west of Richmond. This junction, called Rosenberg, became a community when the developers of the New York, Texas, and Mexican Railway made it their headquarters in 1882. With the addition of the San Antonio and Aransas pass and the Texas and New Orleans railroads, all parts of the county were served. The new lines, with routes passing through potentially productive farmlands, attracted new settlers, many of whom were immigrants from Central Europe. Germans, Austrians, and Bohemians (i.e., Czechs) comprised 400 of the 5,259 new residents entering the county from 1890 to 1900. They were primarily agrarian in orientation—small farmers or merchants serving farmers—and many were Catholic.

Their distinctly different cultural and linguistic characteristics added a new dimension to the established Anglo-Protestant community, and their agricultural achievements contributed to the county's economic stability and development. Among the many towns founded in the 1890s by or for these immigrants were Beasley, Needville, and Orchard, which still exist as small rural communities serving farmers.

Missouri City, on the far eastern edge of the county near Houston, was founded in 1894; Katy, a tri-county town in Fort Bend, Waller, and Harris counties, developed after the Missouri, Kansas, and Texas (Katy) Railroad was completed to that point. In the 1890s, a million-dollar refinery was built at Sugar Land and a new cane mill was constructed; in 1907, they were purchased by the Imperial Sugar Company, a major industry in the county and the only cane-sugar refinery in Texas.

In 1920, Rosenberg's population edged past Richmond's by the thin margin of 1,279 to 1,273; by 1950, Rosenberg residents overshadowed those of Richmond 6,210 to 2,030. Two decades later, Rosenberg-Richmond, as the "twin cities" population center, had counts of 12,098 and 5,777, respectively, in a county of 52,134 residents. Fort Bend County's population declined between 1940 and 1950; however, in the same period, Rosenberg grew by nearly 1/3 and Richmond held steady, a fact that reflects the national rural-to-urban movement.

Fort Bend County produces substantial quantities of minerals. Throughout the county, subterranean salt domes hold concentrated deposits of oil, gas, sulfur, and salt that made early development possible. Gulf Oil Company brought in the first commercially producing oil well in 1919 at Blue Ridge and located another major field at Big Creek 3 years later. Thompsons had a major oilfield in 1921. In 1926, Gulf discovered a major sulfur and gas deposit in Orchard; the Humble Oil Company (now Exxon Company, U.S.A.) opened a high-producing gas field near Katy in 1935 and later built a gas plant that produced 450 million cubic feet of gas daily in the mid-1980s. Between 1954 and 1957, oil production in the county averaged 30,000 barrels per day, as compared to the 21,600 barrels per day in 1963. As demand for petroleum increased in the mid-1970s, developers managed to bring in 40 new wells in 1976 and 1977, providing the county with $121 million from the sale of crude oil. Since that time, a recession in the petroleum industry has caused development in the county to drop sharply. In 1976, the top 3 taxpayers in the county were, in order, Exxon, Gulf, and Houston Lighting and Power Company; in 1983, the top 3 taxpayers were Houston Lighting and Power, Exxon, and Utility Fuels. Gulf had dropped to fourth place.

Farming and ranching have been the central focus of Fort Bend County's economic and social life since its inception. The influx of new settlers in the 1880s and 1890s helped county agriculture to change from antebellum plantations to productive small farms. The county had 2,365 farms with 183 acres each in 1900, in contrast to 995 farms with 154 acres each in 1890. The national recession of the 1890s, a major flood on the Brazos River in June 1899, and the great Galveston hurricane of 1900 forced many farmers into tenantry. By 1910, 61% of the county's farmers were working as cash or share tenants. By 1925, of the 3,659 farms in the county, approximately 72% were operated by tenants, a partial result of a statewide economic recession and adverse summer weather from 1919 to 1922. During the World War II years, with the rural to urban movement and military service, farm tenantry dropped, and full ownership of

farms increased. Since the 1960s, home developments, industry, business, and commerce in the county have forced a trend toward fewer commercial farms. The 1974 Census of Agriculture reported 1,340 farms in the county, but only 758 of these reported cash sales in excess of $2,500. Among the 4 top agricultural commodities for cash income in the mid-1980s were cotton, sorghum, beef cattle, and rice. Cotton culture, a source of income for nearly 700 families in the county, varies greatly with seasonal weather, allocated acreage, and selling prices. Sorghum culture has increased in recent years due to favorable selling prices and more consistent profit. The total value of the crop in the county in 1976 was $11 million. Rice culture began as early as 1901 with plantings on acreage once considered worthy only of grazing; rice yielded 18 to 20 bags per acre in 1903. The 1990 annual acreage was just above 25,000 acres, with a yield of 4,488 pounds per acre. In 1982, agriculture provided more than $90 million in average annual income for the county.

Ample grazing land and free-roaming herds of longhorn cattle encouraged the first settlers in Fort Bend County to combine cattle raising with farming. The Fort Bend County Book of Brands indicates that landowners with minimal acreage tried to turn a profit in the cattle business. As elsewhere in Texas, the boom years of the 1870s and early 1880s culminated in the bottom falling out of the market by 1886. Local cattlemen began fencing their pastures and upgrading their herds with shorthorns, Brahmans, and Herefords. Today, more farms in the county produce cattle than any other cash crop.

Transportation facilities for Fort Bend County include the Southern Pacific and the Santa Fe railroad systems, 2 commercial lines of motor-freight services, and 2 airports for private and commercial aircraft. The major highways are Interstate 59, which joins US Highway 90 Alternate in the county and runs northeast to southwest; Interstate 10, an east-to-west route through Katy; State Highway 6, which runs north-to-south through Sugar Land; and State Highway 36, which runs north-to-south through Rosenberg. Numerous farm roads serve the rural areas.

Until the last decade, commerce and industry have been associated with the development and transport of oil, gas, and sulfur in the county. Local businesses provided agricultural needs and products and services for the communities. As the population increased in east Fort Bend County as a result of Houston's westward expansion, industry and commerce became more diverse. Among the top 10 commercial taxpayers in Fort Bend County in 1983 were 3 property-development corporations and 2 high-technology corporations.

In the last decades of the 20th century Fort Bend was among the fastest-growing counties in the US. Between 1980 and 1990, the population nearly doubled, from 130,960 to 225,421. In 1990, 62.6% of the population was white, 20.7% black, 19.5% Hispanic, 6.4% Asian, and 0.2% American Indian. The largest communities were Rosenberg (20,183), Houston (with 27,027 in Fort Bend County), Missouri City (32,219 in Fort Bend County), and Sugar Land (24,529). Two major social and cultural events characteristic of the county and its people are the Fort Bend County Fair, first held in 1933 and still held annually each October, and the Fort Bend County Czech Fest, first held in 1976 as a spring tourist attraction and continued annually each May.

4.0 ARCHIVAL RESEARCH

Prior to initiating fieldwork, Horizon personnel reviewed records on file at the Texas Historical Commission's (THC) online *Texas Archeological Sites Atlas* (Atlas), the National Park Service's (NPS) online *National Register Information System* (NRIS), the Texas Archeological Research Laboratory (TARL), and the Texas State Historical Association's (TSHA) *The Handbook of Texas Online* for information on previously recorded cultural resources sites and previous archeological investigations conducted within a 1.6-kilometer (1.0-mile) radius of the project area. Based on this archival research, 1 previously recorded archeological site and 1 cemetery have been recorded within the archival review area (Figure 4; Table 2) (THC 2014; NPS 2014). Both of these known cultural resources are located well beyond the boundaries of the project area and would have no potential to be disturbed as a result of the proposed undertaking. No previous cultural resources surveys have been conducted within the project area.

In addition to the known archeological site and cemetery depicted on the THC's Atlas, the TSHA's *The Handbook of Texas Online* contains a record regarding the former community of Pittsville, Texas (TSHA 2015). This rural farming community was located in the vicinity of the intersection of FM 359 and Hunt Road, which is the road intersection that marks the southeastern corner of the project area. Pittsville was first settled in the 1840s and appears to have reached its peak around 1860 to 1870. However, the community began to decline in 1888 when the San Antonio and Aransas Pass Railroad was constructed through Fulshear to the south and people began to move to Fulshear to be near the railroad. The last residents of Pittsville, Alice Nesbitt and her daughter, Doris, moved away in 1947. At this time, the only extant evidence of the former community of Pittsville reportedly consists of an abandoned cistern and a clump of trees.

The Texas State Historical Association's (TSHA) *The Handbook of Texas* Online contains the following short article about the community of Pittsville:

> Pittsville was located three miles north of Fulshear at the junction of what is now Farm Road 359 with Hunt-Jordan Road in north Fort Bend County. The settlement began to grow when early plantation owners, finding it impossible to live in the swampy, though fertile, Brazos River bottoms, built their homes on the high prairie lands away from the threat of floods. The settlement was named for the Pitts family, who operated a store and distributed the mail. All the people up the Brazos River who did not get their mail at Richmond were included in Pittsville. The 1860 census listed some 240 people living in Pittsville. Farming and stock raising were the main occupations, but also listed were

Sensitive site data omitted

Figure 4. Previously Recorded Cultural Resources within 1.0 Miles of Project Area

Table 2. Previously Recorded Cultural Sites within 1.0 Miles of Project Area

Site No./Name	Site Type	NRHP Eligibility Status	Distance/Direction from Project Area	Potential to be Impacted by Project?
Archeological Sites				
41FB20	Aboriginal lithic scatter (Late Prehistoric)	Undetermined	0.5 miles northwest	No
Cemeteries				
Gordon-Taylor Cemetery (FB-C142)	Cemetery	N/A	0.6 miles south	No

NRHP National Register of Historic Places

> wagoners, carpenters, schoolteachers, a brick mason, an engineer, a minister, a merchant, a clerk, a physician, a wheelwright, a machinist, an artesian-well borer, and other workers. As the years passed the town had several general stores, as well as a blacksmith shop, a millinery shop, a photo studio, and a two-story school or academy. Pittsville acquired a post office on May 31, 1870, with Mrs. Lucy Upton and [sic] postmistress. The post office was discontinued on June 15, 1889, because the San Antonio and Aransas Pass Railroad had bypassed the community, the town of Fulshear had been established, and the people of Pittsville were moving to Fulshear to be near the railroad. The last residents of Pittsville were Mrs. Alice (J. R.) Nesbitt and her daughter, Doris, who moved away in 1947. Since that time the only evidences of Pittsville are an abandoned cistern and a clump of trees (TSHA 2015).

There is a Texas historical marker located off the west side of FM 359 approximately 0.6 kilometers (0.4 miles) north-northwest of the intersection of FM 359 and Hunt Road that offers the following narrative (Figure 5):

> Planters preferring the prairie to the hazardous Brazos River bottoms settled this village in the 1840s. Named for store owners A. R. and Amanda (Wade) Pitts, it was a major commercial center by 1860. During the Civil War, the Pittsville home guard and Confederate cavalry units, which helped recapture Galveston, camped in the area. Notable residents included Robert Locke Harris and A. A. Laurence, Confederate surgeons; William Sheriff and J. Wesson Parker, Texas legislators and Fort Bend County judges; and John Huggins, innovator of horseracing techniques. The arrival of a new railroad to the south in 1888, and the subsequent founding of Fulshear, resulted in the gradual decline and eventual disappearance of Pittsville by the late 1940s.

Horizon performed a brief reconnaissance of the tract located off the west side of FM 359 believed to represent the location of the cistern mentioned in the TSHA (2015) article. The cistern was observed just south of a small copse of trees in an open pasture approximately 40.0 meters (131.2 feet) west of FM 359 behind the historical marker (Figures 6 and 7). This cistern is constructed of limestone masonry, with 7 courses of mortared limestone bricks visible above the ground surface, and measures approximately 1.5 meters (5.0 feet) in diameter. This cultural

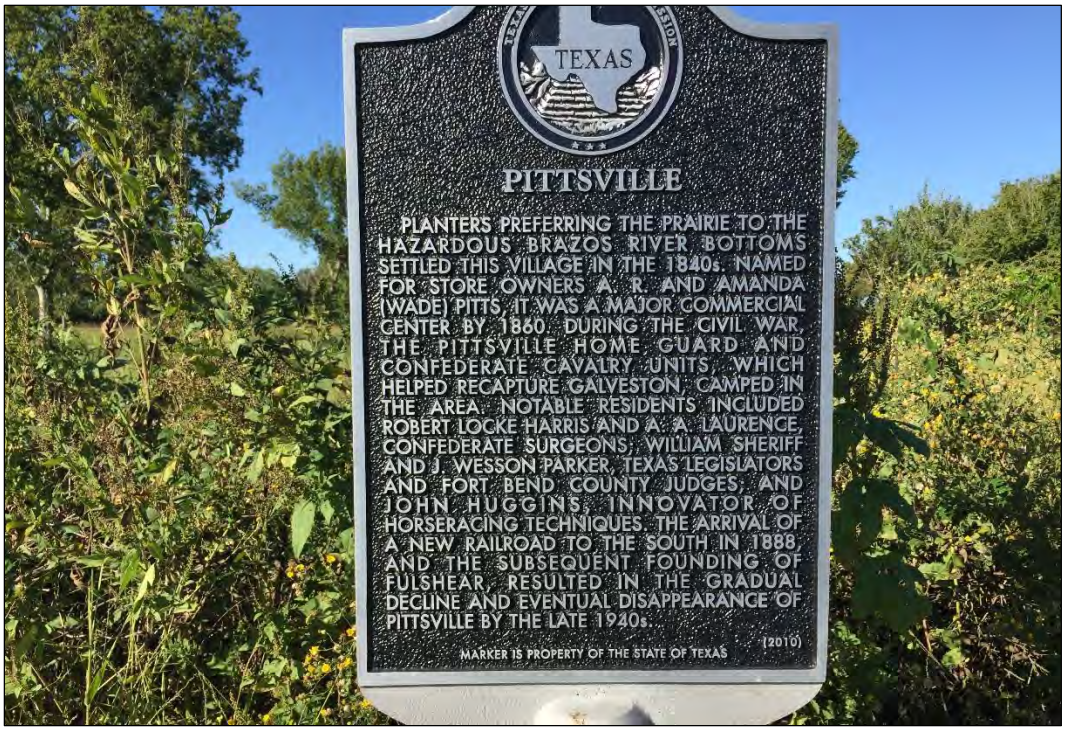

Figure 5. Historical Marker Located Outside of Project Area near Location of Cistern

Figure 6. Location of Pittsville Cistern Outside of Project Area

Figure 7. Limestone Cistern Located Outside of Project Area Associated with Former Community of Pittsville (Facing East)

feature is located beyond the northeastern boundary of the current project area and would not be disturbed as a result of the current undertaking. It is mentioned here simply to document its location for future researchers.

5.0 SURVEY METHODOLOGY

From October 28 to 29, 2014, Horizon archeological technicians Jennifer Cochran, Briana Nicole Smith, and Jared Wiersema, under the overall direction of Jeffrey D. Owens, Principal Investigator, performed an intensive cultural resources survey of the project area to locate any cultural resources properties that potentially would be impacted by the proposed undertaking. The survey consisted of pedestrian walkover of the project area with systematic shovel testing. Horizon's archeologists traversed the 99.1-hectare (245.0-acre) tract in parallel, linear transects spaced approximately 30.5 meters (100.0 feet) apart and thoroughly inspected the modern ground surface for aboriginal and historic-age cultural resources.

The majority of the project area spans a series of Pleistocene-age upland terrace remnants dissected by 2 ephemeral drainages that drain to the west into Brookshire Creek, which flows northwest to southeast through the project area near its western boundary. The small portion of the project area west of Brookshire Creek is situated along the eastern margin of the broad floodplain of Bessies Creek. One of the 2 tributaries of Brookshire Creek that cuts across the project area has been dammed near the head of its channel to create a large, artificial stock pond. In general, the project area consists of open pastureland covered in short to medium-height grasses with isolated copses of cedar and oak trees. Areas adjacent to drainages typically had a moderately dense ground cover of grasses, small shrubs, and weeds with thin bands of oak, hackberry, and cedar trees. Ground surface visibility was generally less than 30%, though some isolated areas were more or less clear of vegetation and offered better visibility. Representative photographs of the project area are presented in Figures 8 to 14.

In addition, the Texas State Minimum Archeological Survey Standards (TSMASS) require the excavation of 1 shovel test per 3 acres for project areas of this size unless field conditions warrant excavation of more probes (e.g., due to the presence of culturally sensitive areas) or less probes (e.g., due to extensive prior disturbances or cultural low-probability areas). Thus, a minimum of 82 shovel tests were required within the 99.1-hectare (245.0-acre) tract to meet the TSMASS. Horizon excavated a total of 101 shovel tests during the survey, thereby exceeding the TSMASS requirements for a project area of this size (Figure 15). In general, shovel tests measured approximately 30.0 centimeters (11.8 inches) in diameter and were excavated to a target depth of 1.0 meters (3.3 feet) below ground surface, to the top of pre-Holocene deposits, or to the maximum depth practicable, and all sediments were screened through 6.35-millimeter (mm) (0.25-inch) hardware cloth. In practice, most shovel tests were terminated at depths ranging from 30.0 to 90.0 centimeters (11.8 to 35.4 inches) below surface due to the presence of dense,

Figure 8. Typical View of Western Portion of Fulshear Tract (Facing North)

Figure 9. Typical View of Central Portion of Fulshear Tract (Facing North)

Figure 10. Typical View of Northern Portion of Fulshear Tract (Facing South)

Figure 11. Typical View of Southern Portion of Fulshear Tract (Facing East)

Figure 12. Typical View of Brookshire Creek Channel (Facing South)

Figure 13. Typical View of Unnamed Tributary of Brookshire Creek (Facing Northeast)

Figure 14. View of Artificial Stock Pond (Facing Northwest)

nearly impenetrable clay sediments. A small number of shovel tests reached the target depth of 1.0 meters (3.3 feet), while a few were terminated at depths of 5.0 to 20.0 centimeters (2.0 to 7.9 inches) below surface due to the presence of dense clay sediments in surficial contexts. Holocene-age alluvial sediments were detected in a few isolated pockets along the course of one of the unnamed drainages extending between the artificial stock pond in the eastern portion of the project area and its confluence with Brookshire Creek in the western portion of the project area. Shovel tests in these areas typically revealed deep sandy sediments. These sediments may not have been fully penetrated via shovel testing, which were terminated at a depth of 1.0 meters (3.3 feet) below surface in these soils, though these pockets of Holocene-age alluvium were so small and unevenly distributed that the shovel testing is considered to be an adequate technique for assessing the cultural resources potential of Holocene-age sediments. Soils in the western portion of the project area adjacent to Brookshire Creek and on the floodplain of Bessies Creek in the western portion of the project area consisted of mature, dense clay sediments that are believed to be pre-Holocene in age. Specific shovel testing data are presented in Appendix A.

During the survey, field notes were maintained on terrain, vegetation, soils, landforms, survey methods, and shovel test results. Digital photographs were taken, and a photographic log was maintained. Horizon employed a non-collection policy for cultural resources. Diagnostic artifacts (e.g., projectile points, ceramics, historic materials with maker's marks) and non-diagnostic artifacts (e.g., lithic debitage, burned rock, historic glass, and metal scrap) were described, sketched, and/or photo-documented in the field and replaced in the same location in which they were found.

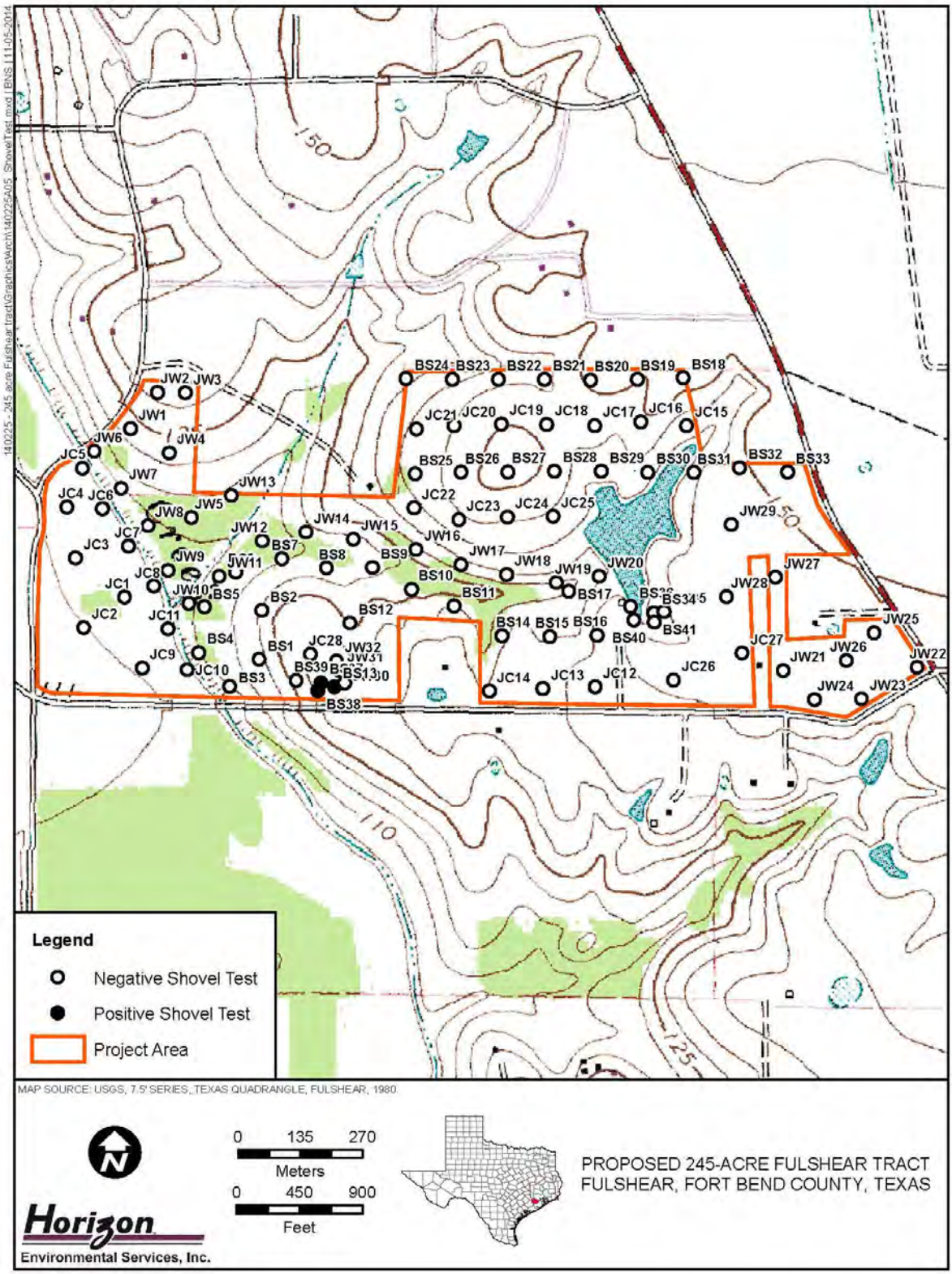

Figure 15. Locations of Shovel Tests Excavated within Project Area

6.0 RESULTS OF INVESTIGATIONS

Two newly recorded archeological sites—41FB340 and 41FB341—were recorded during the cultural resources survey of the Fulshear tract (Figure 16). Both of these newly recorded sites are described separately below.

6.1 SITE 41FB340

General Description

Site 41FB340 consists of a low- to moderate-density surficial scatter of late 19th- to mid-20th-century domestic and construction debris surrounding the southern arm of a large, artificial stock pond in an upland setting in the southeastern portion of the project area (Figure 17; also see Figure 16). The site is situated in an open pasture area to the east of an abandoned farmhouse and equipment shed or barn. An ephemeral, unnamed drainage flows southwestward to the north of the site, and this drainage has been dammed to create an artificial stock pond associated with a nearby modern farmstead. The artifact scatter is co-extensive with the portion of this earthen berm that serves to dam the southern arm of the stock pond, and the cultural materials are in heavily disturbed contexts. Vegetation within the site boundaries consists of short grasses. Elevations across the site range from approximately 42.7 to 44.2 meters (140.0 to 145.0 feet) amsl, with the majority of the topographic variation accounted for by the artificial earthen berm that serves to contain the southern arm of the stock pond. As documented during the survey, the site boundaries define a horseshoe- or U-shaped area measuring approximately 88.2 meters (289.3 feet) north to south by 72.3 meters (237.1 feet) east to west. Representative photographs of the site are provided in Figures 18 to 21.

Horizontal and Vertical Extents of Cultural Materials

Cultural materials on site 41FB340 were observed exclusively in surficial contexts. The soil unit mapped within the site's boundaries—Katy fine sandy loam, 1 to 3% slopes (Kb)—consists of loamy fluviomarine deposits. Shovel testing on site 41FB340 revealed surficial deposits of dense yellowish-brown, reddish-brown, and mottled yellowish-brown and reddish-brown sandy clay. As the surficial scatter of cultural materials is co-extensive with an earthen berm surrounding the southern arm of an artificial stock pond, soils within the site area are uniformly disturbed, and the artifact scatter possesses minimal to no integrity. No subsurface cultural materials were observed in any of the 5 shovel tests excavated on the site.

Sensitive site data omitted

Figure 16. Locations of Archeological Sites 41FB340 and 41FB341

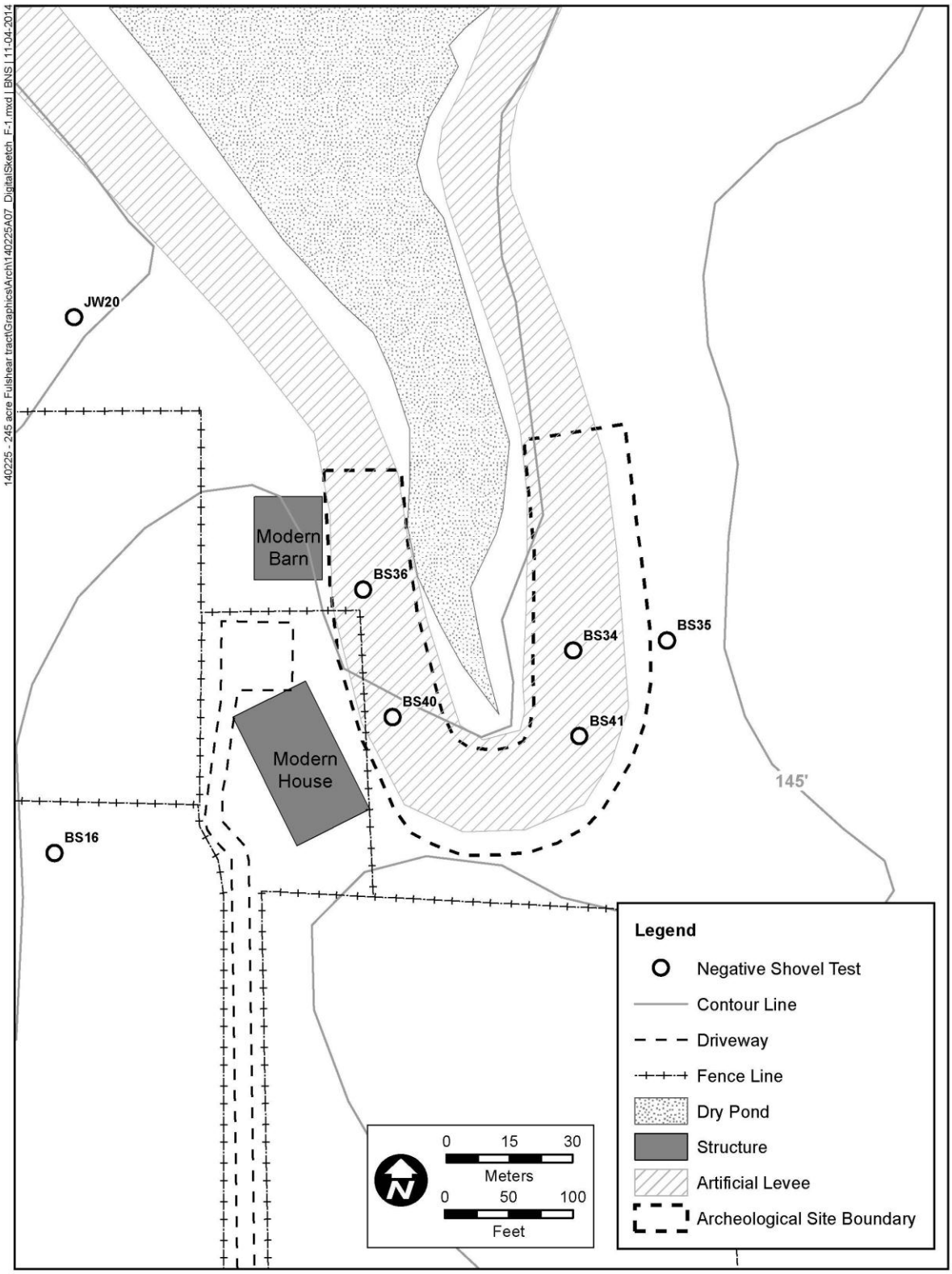

Figure 17. Sketch Map of Site 41FB340

Figure 18. Overview of Site 41FB340 *(Note Stock Pond in Background)* (Facing North)

Figure 19. Overview of Site 41FB340 *(Note Metal Barn/Shed at Left)* (Facing Northwest)

Figure 20. Overview of Site 41FB340 *(Note Residence in Trees at Center)* (Facing West)

Figure 21. Overview of Western Margin of Site 41FB340 *(Note Residence at Right and Wood-Paneled Barn/Shed at Back Left)* (Facing South)

Observed Cultural Materials

Cultural materials observed on site 41FB340 included whiteware ceramic sherds (approximately 17 thin, bright white sherds and 3 thick, cream-colored sherds) and 2 thick stoneware sherds with brown glaze; bottle glass shards (5 brown, 1 green, 5 amethyst, 3 blue, 5 clear, 1 black); a few small fragments of unidentified metal scrap, and 5 hand-made brick fragments (Figures 22 to 25). While the presence of a small number of solarized glass shards suggests a possible late 19th- to early 20th-century occupation, the majority of the artifacts date to the early to mid-20th century.

Cultural Features

No cultural features were observed on the modern ground surface of site 41FB340 or within any of the 5 shovel tests excavated during delineation of the site. An abandoned 1970s-era- modified ranch house and an open-sided equipment shed or barn are located immediately west of the artifact scatter, and a second, more recent barn is located to the southeast. Examination of historic aerial photographs indicates that these structures were constructed after 1970 and replaced an earlier farmstead present at the same location (NETR 2015) (see Chapter 6.3, Modern Structures). The second outbuilding was built between 1970 and 1995 and is in relatively better condition, suggesting it was built after the other buildings. All 3 of these buildings are currently standing on the tract. However, the late 19th- to mid-20th-century artifact scatter appears to be associated with the previous (pre-1970s) farmstead rather than with the currently standing structures. As such, the currently standing house and the 2 outbuildings have not been included within the boundaries of site 41FB340.

Summary and Recommendations

Site 41FB340 consists of a low- to moderate-density surficial scatter of late 19th- to mid-20th-century domestic and construction debris associated with an earthen berm that serves to dam an ephemeral, unnamed tributary of Brookshire Creek to create an artificial stock pond. Based on the highly disturbed character of the surficial artifact scatter on site 41FB340 and the lack of standing structures associated with the historic-era artifact scatter, the site is recommended as ineligible for inclusion in the NRHP under Criteria C and D. Additional archival research would be necessary to determine whether or not any persons or events of historic importance are associated with the site. However, as 20th-century farmsteads are a common site type in southeast Texas, such sites must retain substantial integrity of location, design, setting, materials, workmanship, feeling, and association in order to establish significance under the NHPA. Given the highly disturbed nature of site 41FB340 and the absence of a primary residential structure associated with the artifact scatter, it is unlikely that any possible association with persons or events of historic importance would be sufficient to establish significance under Criteria A or B of the NRHP. Thus, site 41FB340 is recommended as ineligible for inclusion in the NRHP, and no further investigations are warranted in connection with the proposed undertaking.

Figure 22. Whiteware Ceramic Sherds Observed on Site 41FB340

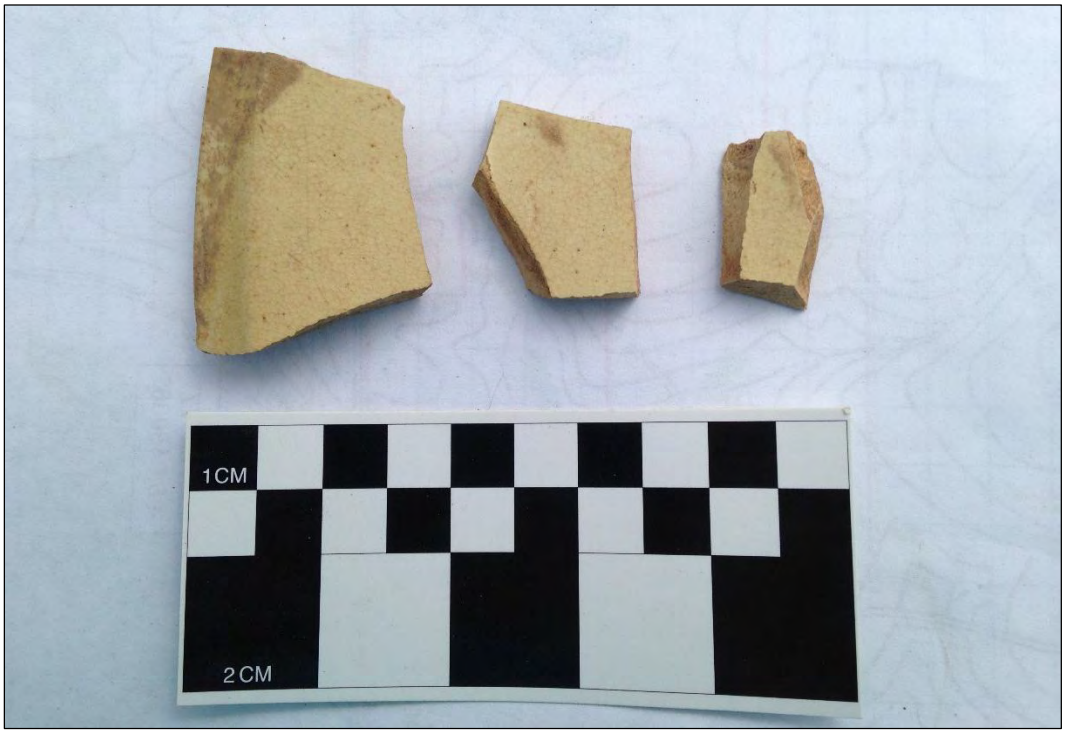

Figure 23. Cream-Colored Ceramic Sherds Observed on Site 41FB340

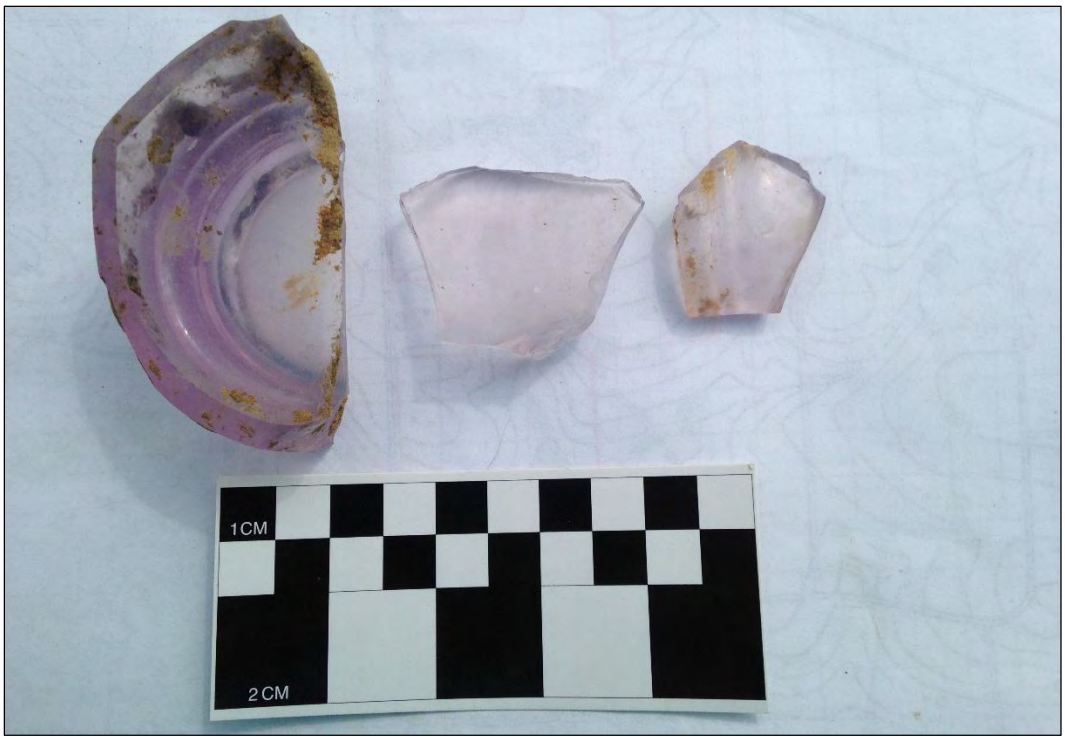

Figure 24. Amethyst Glass Shards Observed on Site 41FB340

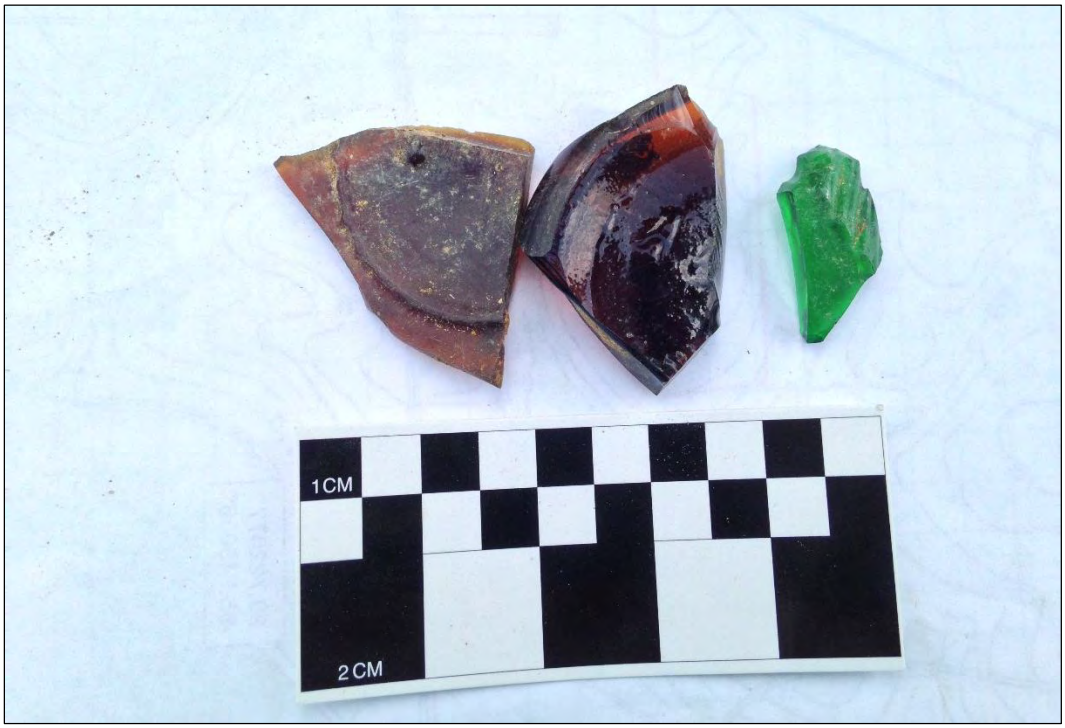

Figure 25. Miscellaneous Colored Glass Shards Observed on Site 41FB340

6.2 SITE 41FB341

General Description

Site 41FB341 consists of a low-density surficial and shallow subsurface scatter of early to mid-20th-century domestic debris, a metal-fenced corral, a metal cow feeder, an electric water pump, 2 utility poles, and some barbed wire fencing that represents the remnants of a small historic-era farmstead, though the primary residence has been demolished or removed from the site (Figure 26; also see Figure 16). The site is situated in an open cattle pasture located off the northern side of Hunt Road in an upland setting in the southwestern portion of the project area. Vegetation within the site boundaries consists of somewhat overgrown medium-height grasses, weeds, and small shrubs. Elevations across the site reflect the overall topography of the upland terrace remnant upon which the site is located, and elevations range from approximately 38.7 to 41.8 meters (127.0 to 137.0 feet) amsl. Representative photographs of the site are provided in Figures 27 to 30.

Horizontal and Vertical Extents of Cultural Materials

Cultural materials were observed primarily on the modern ground surface, though subsurface cultural materials were observed in 3 of the 5 shovel tests excavated on the site extending to depths of 10.0 to 30.0 centimeters (3.9 to 9.1 inches) below surface. The soil units mapped within the site's boundaries—Kenney-Fulshear complex, 4 to 8% slopes (Kh); and Katy fine sandy loam, 1 to 3% slopes (Kb)—consist of loamy, Pleistocene-age fluviomarine deposits and loamy, Quaternary-age alluvial sediments, respectively. Shovel testing on site 41FB341 typically revealed 20.0 to 30.0 centimeters (7.9 to 11.8 inches) of fine brown sandy loam underlain by mottled dark grayish-brown, brown, and yellowish-red sandy clay. Subsurface archeological deposits are associated with the surficial fine brown sandy loam horizon in the 3 positive (i.e., culture-bearing) shovel tests. Sediments on site 41FB341 appeared to be somewhat disturbed, presumably via historic-era farming and ranching activities on this small farmstead, and archeological deposits possessed low to moderate integrity.

Observed Cultural Materials

Cultural materials observed on site 41FB341 included approximately 10 whiteware ceramic sherds, bottle glass shards (1 amethyst, 3 brown, 5 clear, 1 aqua, and 2 opaque); several heavy rusted metal nail fragments, and 2 hand-made brick fragments (Figures 31 to 34). While the presence of 1 solarized glass shard suggests a possible late 19th- to early 20th-century presence, the majority of the artifacts date to the early to mid-20th century.

Cultural Features

Cultural features on the site consist of a metal-fenced corral, a metal cow feeder, an electric water pump, 2 utility poles, and some barbed-wire fencing. A house was formerly present on this farmstead a short distance northeast of the corral. Examination of historic aerial photographs indicates that this farmstead was constructed between 1953 and 1958 and is therefore of historic age. The house is evident on the 1971 US Geological Survey (USGS)

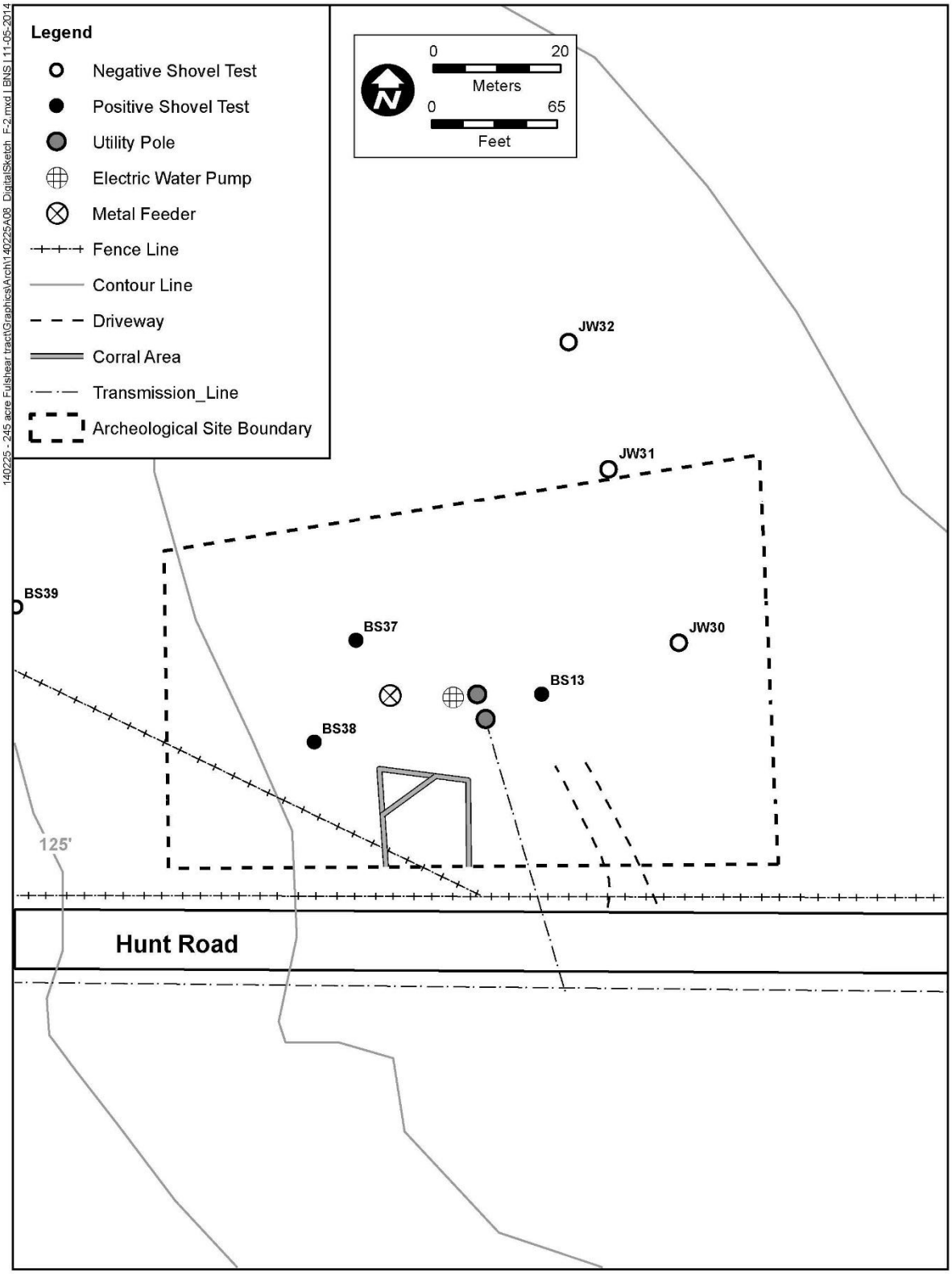

Figure 26. Sketch Map of Site 41FB341

Figure 27. Overview of Site 41FB341 (Facing North)

Figure 28. View of Corral on Site 41FB341 (Facing South)

Figure 29. Metal Water Tank and Barbed Wire Fence on Site 41FB341 (Facing Northeast)

Figure 30. Utility Poles, Electric Water Pump, and Metal Fence Gate on Site 41FB341 (Facing Northwest)

Figure 31. Whiteware Ceramic Artifacts Observed on Site 41FB341

Figure 32. Glass Shards Observed on Site 41FB341

Figure 33. Metal Artifacts (Probably Nail Fragments) Observed on Site 41FB341

Figure 34. Brick Fragments Observed on Site 41FB341

topographic quadrangle and is dimly visible on a Google Earth aerial photograph dating to 1995, though the next available aerial image, dated to 2003, shows that the structure had been demolished or removed from the site by this time.

Summary and Recommendations

Site 41FB341 consists of a low-density surficial and shallow subsurface scatter of early to mid-20th-century domestic debris, a metal-fenced corral, a metal cow feeder, an electric water pump, 2 utility poles, and some barbed wire fencing that represents the remnants of a small historic-era farmstead, though the primary residence has been demolished or removed from the site. Based on the generally disturbed character of the surficial and shallow subsurface artifact scatter on site 41FB341 and the lack of standing structures associated with the historic-era artifact scatter and extant cultural features, the site is recommended as ineligible for inclusion in the NRHP under Criteria C and D. Additional archival research would be necessary to determine whether or not any persons or events of historic importance are associated with the site. However, as 20th-century farmsteads are a common site type in southeast Texas, such sites must retain substantial integrity of location, design, setting, materials, workmanship, feeling, and association in order to establish significance under the NHPA. Given the generally disturbed nature of site 41FB341 and the absence of a primary residential structure clearly associated with the artifact scatter, it is unlikely that any possible association with persons or events of historic importance would be sufficient to establish significance under Criteria A or B of the NRHP. Thus, site 41FB341 is recommended as ineligible for inclusion in the NRHP, and no further investigations are warranted in connection with the proposed undertaking.

6.3 MODERN STRUCTURES

One standing rural farm house was observed within the project area just west of site 41FB340 (Figures 35 to 38). This structure is a modified 1970s-era ranch-style house located at the end of an asphalt and gravel driveway at the southern end of a large, artificial stock pond. The house has been abandoned and is not currently inhabited, yet almost all of the interior furnishings and décor were left in the house and are still present. An open-sided barn or equipment storage shed located immediately north of the house (Figures 39 to 40) likely was constructed at approximately the same time as the house. A similar, though clearly more recent, open-sided barn or equipment storage shed (Figure 41) is located a short distance to the southeast.

Examination of historic aerial photographs indicates that the currently standing house was constructed sometime after 1970 and replaced a smaller farmhouse present at the same location (NETR 2014). The prior farmhouse is visible on historic aerial photographs from 1970 and 1953, though no earlier images were available; thus, the original date of construction of the prior farmstead is unknown. Nevertheless, the currently standing house was built after 1970 and is not of historic age. The equipment shed located north of the house was probably constructed around the same time as the 1970s-era house. The second outbuilding to the southeast was constructed sometime between 1970 and 1995 and is in relatively better condition than the other outbuilding.

Figure 35. Side (Northern) Façade of Residence (Facing Southeast)

Figure 36. Back (Western) Façade of Residence (Facing East)

Figure 37. Side (Southern) Façade of Residence (Facing Northeast)

Figure 38. Front (Eastern) Façade of Residence (Facing Northwest)

Figure 39. Front (Western) Façade of Metal Barn/Equipment Shed (Facing Northeast)

Figure 40. Back (Eastern) and Side (Southern) Façades of Metal Barn/Equipment Shed (Facing Northwest)

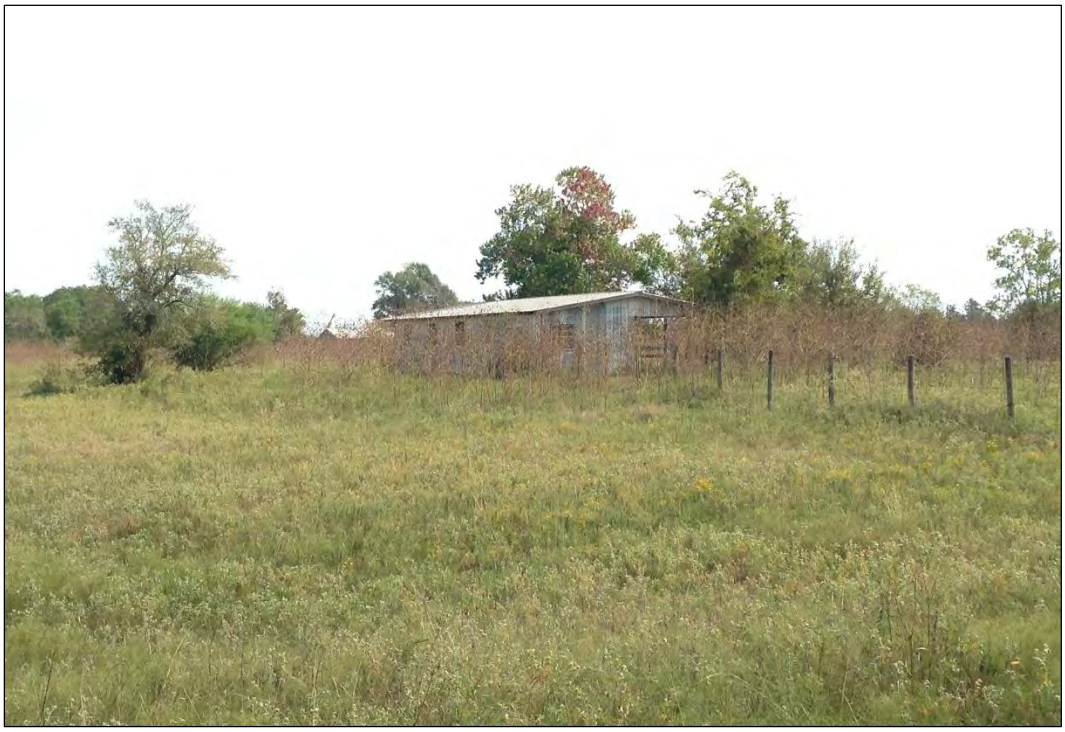

Figure 41. View of Wood-Paneled Barn/Equipment Shed (Facing Southeast)

7.0 SUMMARY AND RECOMMENDATIONS

7.1 CONCEPTUAL FRAMEWORK

The archeological investigations documented in this report were undertaken with 3 primary management goals in mind:

- Locate all historic and prehistoric archeological resources that occur within the designated survey area.
- Evaluate the significance of these resources regarding their potential for inclusion in the NRHP.
- Formulate recommendations for the treatment of these resources based on their NRHP evaluations.

At the survey level of investigation, the principal research objective is to inventory the cultural resources within the project area and to make preliminary determinations of whether or not the resources meet one or more of the pre-defined eligibility criteria set forth in the state and/or federal codes, as appropriate. Usually, management decisions regarding archeological properties are a function of the potential importance of the sites in addressing defined research needs, though historic-age sites may also be evaluated in terms of their association with important historic events and/or personages. Under the NHPA, archeological resources are evaluated according to criteria established to determine the significance of archeological resources for inclusion in the NRHP.

Analyses of the limited data obtained at the survey level are rarely sufficient to contribute in a meaningful manner to defined research issues. The objective is rather to determine which archeological sites could be most profitably investigated further in pursuance of regional, methodological, or theoretical research questions. Therefore, adequate information on site function, context, and chronological placement from archeological and, if appropriate, historical perspectives is essential for archeological evaluations. Because research questions vary as a function of geography and temporal period, determination of the site context and chronological placement of cultural properties is a particularly important objective during the inventory process.

7.2 ELIGIBILITY CRITERIA FOR INCLUSION IN THE NATIONAL REGISTER OF HISTORIC PLACES

Determinations of eligibility for inclusion in the NRHP are based on the criteria presented in the Code of Federal Regulations (CFR) in 36 CFR §60.4(a-d). The 4 criteria of eligibility are applied following the identification of relevant historical themes and related research questions:

> The quality of significance in American history, architecture, archeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
>
> a. [T]hat are associated with events that have made a significant contribution to the broad patterns of our history; or,
>
> b. [T]hat are associated with the lives of persons significant in our past; or,
>
> c. [T]hat embody the distinctive characteristics of a type, period, or method of construction, or that represent a significant and distinguishable entity whose components may lack individual distinction; or,
>
> d. [T]hat have yielded, or may be likely to yield, information important in prehistory or history.

The first step in the evaluation process is to define the significance of the property by identifying the particular aspect of history or prehistory to be addressed and the reasons why information on that topic is important. The second step is to define the kinds of evidence or the data requirements that the property must exhibit to provide significant information. These data requirements in turn indicate the kind of integrity that the site must possess to be significant. This concept of integrity relates both to the contextual integrity of such entities as structures, districts, or archeological deposits and to the applicability of the potential database to pertinent research questions. Without such integrity, the significance of a resource is very limited.

For an archeological resource to be eligible for inclusion in the NRHP, it must meet legal standards of eligibility that are determined by 3 requirements: (1) properties must possess significance, (2) the significance must satisfy at least 1 of the 4 criteria for eligibility listed above, and (3) significance should be derived from an understanding of historic context. As discussed here, historic context refers to the organization of information concerning prehistory and history according to various periods of development in various times and at various places. Thus, the significance of a property can best be understood through knowledge of historic development and the relationship of the resource to other, similar properties within a particular period of development. Most prehistoric sites are usually only eligible for inclusion in the NRHP under Criterion D, which considers their potential to contribute data important to an understanding of prehistory. All 4 criteria employed for determining NRHP eligibility potentially can be brought to bear for historic sites.

7.3 SUMMARY OF INVENTORY RESULTS

Two newly recorded archeological sites, 41FB340 and 41FB341, were recorded within the project area during the survey (Table 3).

Table 3. Summary of Cultural Resources Recorded During Survey

Permanent Trinomial	Cultural Affiliation	Site Type	Recommended NRHP Eligibility	Recommendations
41FB340	Late 19th- to mid-20th centuries	Scatter of domestic debris (remnants of historic-era farmstead)	Ineligible	No further work
41FB341	Early to mid-20th century	Historic-era farmstead	Ineligible	No further work

Site 41FB340 consists of a low- to moderate-density, surficial scatter of late 19th- to mid-20th-century domestic and construction debris surrounding the southern arm of a large, artificial stock pond in the southeastern portion of the project area. Cultural materials observed on the site surface include whiteware and stoneware ceramic sherds, glass shards, several pieces of metal scrap, and a few hand-made brick fragments. The presence of a small number of solarized glass shards suggests a possible late 19th- to early 20th-century occupation, though the majority of the artifacts date to the early to mid-20th century. The artifact scatter is co-extensive with an earthen berm that serves to dam the stock pond, and most or all of the cultural materials are in heavily disturbed contexts. No subsurface cultural materials were observed in any of the 5 shovel tests excavated on the site, and no cultural features are associated with the artifact scatter. An abandoned, modified ranch house and an open-sided equipment shed or barn are located immediately west of the artifact scatter, and a second, more recent barn is located to the southeast. Examination of historic aerial photographs indicates that the currently standing house was constructed sometime after 1970 and replaced a smaller farmhouse present at the same location. The prior farmhouse is visible on historic aerial photographs from 1970 and 1953, though no earlier images were available; thus, the original date of construction of the prior farmstead is unknown. Nevertheless, the currently standing house was built after 1970 and is not of historic age. The equipment shed located north of the house was probably constructed around the same time as the 1970s-era house. The second outbuilding to the southeast was constructed sometime between 1970 and 1995 and is in relatively better condition than the other outbuilding. All 3 of these buildings are currently standing on the tract. However, the late 19th- to mid-20th-century artifact scatter appears to be associated with the previous (pre-1970s) farmstead rather than with the currently standing structures. As such, the currently standing house and the 2 outbuildings have not been included within the boundaries of site 41FB340.

Site 41FB341 consists of a low-density, surficial and shallow subsurface scatter of early to mid-20th-century domestic debris in an open cattle pasture located off the northern side of Hunt Road in the southwestern portion of the project area. Cultural materials observed on the site include whiteware ceramic sherds, glass shards, rusted metal nail fragments, and hand-made brick fragments. Cultural features on the site consist of a metal-fenced corral, a metal cow feeder, an electric water pump, 2 utility poles, and some barbed-wire fencing. The site represents the remnants of a 20th-century farmstead, though the primary residence has been demolished or removed from the site. Cultural materials were observed primarily on the modern ground surface, though subsurface cultural materials were observed in 3 of the 5 shovel tests excavated on the site extending to depths of 10.0 to 30.0 centimeters (3.9 to 9.1 inches) below surface. A house

was formerly present on this farmstead a short distance northeast of the corral. Examination of historic aerial photographs indicates that this farmstead was constructed between 1953 and 1958 and is therefore of historic age. The house is evident on the 1971 USGS topographic quadrangle and is dimly visible on a Google Earth aerial photograph dating to 1995, though the next available aerial image, dated to 2003, shows that the structure had been demolished or removed from the site by this time.

Based on the highly disturbed character of the surficial and shallow subsurface archeological deposits on sites 41FB340 and 41FB341 and the lack of standing structures associated with the historic-era artifact scatters, both sites are recommended as ineligible for inclusion in the NRHP under Criteria C and D. Additional archival research would be necessary to determine whether or not any persons or events of historic importance are associated with the sites. However, as 20th-century farmsteads are a common site type in southeast Texas, such sites must retain substantial integrity of location, design, setting, materials, workmanship, feeling, and association in order to establish significance under the NHPA. Given the highly disturbed nature of sites 41FB340 and 41FB341 and the absence of primary residential structures associated with the artifact scatters and extant cultural features, it is unlikely that any possible association with persons or events of historic importance would be sufficient to establish significance under Criteria A or B of the NRHP. Thus, sites 41FB340 and 41FB341 are recommended as ineligible for inclusion in the NRHP, and no further investigations are warranted in connection with the proposed undertaking.

One residential structure of possible historic-age was observed within the project area just west of site 41FB340. This structure is a modified 1960s- or 1970s-era ranch-style house located at the end of an asphalt and gravel driveway at the southern end of a large, artificial stock pond. The house has been abandoned and is not currently inhabited, yet almost all of the interior furnishings and décor were left in the house and are still present. An open-sided barn or equipment storage shed located immediately north of the house may have been constructed at approximately the same time as the house as both structures are visible on the 1971 USGS topographic map; as such, these 2 structures may be of historic age. A similar, though clearly more recent, open-sided barn or equipment storage shed is located a short distance to the southeast that does not appear on the 1971 USGS topographic map; this structure is not of historic age. The 2 possibly historic-age structures possess minimal to no potential research value that would establish their significance under Criterion D of the NRHP. Additional archival research and/or an architectural assessment of the standing structures would be necessary to evaluate their potential significance under Criteria A, B, and C of the NRHP. Thus, at this time, the house and the outbuilding to the north are considered to be of undetermined eligibility for inclusion in the NRHP pending the results of supplemental historical research and/or a formal architectural evaluation. As such, Horizon recommends avoidance of these structures in connection with the proposed undertaking pending the results of supplemental investigations.

7.4 MANAGEMENT RECOMMENDATIONS

Based on the results of the survey-level investigations documented in this report, 2 standing structures, including a 1960s- or 1970s-era ranch-style farmhouse and an associated

equipment shed, may be of historic age; however, the eligibility of these structures for inclusion in the NRHP has not been assessed. As such, these 2 structures are currently considered to be of undetermined eligibility for inclusion in the NRHP pending the results of supplemental historical research and/or a formal architectural assessment. Horizon recommends that these 2 structures be avoided in connection with the proposed undertaking pending the results of supplemental historical studies. Regarding the remainder of the project area, no potentially significant cultural resources would be affected by the proposed undertaking, and Horizon recommends that the proposed undertaking be cleared to proceed relative to the jurisdiction of Section 106 of the NHPA. However, it should be noted that human burials, both prehistoric and historic-era, are protected under the Texas Health and Safety Code. In the event that any human remains or burial objects are inadvertently discovered at any point during construction, use, or ongoing maintenance in the project area, even in previously surveyed areas, all work should cease immediately and the THC should be notified of the discovery.

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APPENDIX A:

Shovel Test Data

Table A-1. Shovel Test Summary Data

ST No.	UTM Coordinates[1]		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
BS1	215596	3291692	0-25	Mottled very dark brown and dark yellowish-brown sandy clay	None
			25-30+	Mottled very dark brown, grayish-brown, and dark yellowish-brown clay	None
BS2	215602	3291799	0-30+	Very dark grayish-brown clay	None
BS3	215532	3291635	0-30+	Mottled very dark brown and dark yellowish-brown clay	None
BS4	215464	3291708	0-30	Mottled very dark brown and yellowish-red compact sandy clay	None
			30-40+	Dark reddish-brown clay	None
BS5	215477	3291807	0-30+	Mottled very dark brown and dark reddish-brown clay	None
BS6	215544	3291882	0-50	Brown sandy loam	None
			50-55+	Mottled very dark grayish-brown and dark reddish-brown clay	None
BS7	215645	3291912	0-35+	Brown compact silty clay	None
BS8	215742	3291891	0-25	Brown compact silty clay loam	None
			25-30+	Mottled brown and dark grayish-brown compact silty clay	None
BS9	215842	3291892	0-60	Brown sandy loam	None
			60-65+	Mottled grayish-brown, brown, and dark reddish-brown sandy clay	None
BS10	215927	3291844	0-55	Brown sandy loam	None
			55-60+	Mottled pale brown, yellowish-red, red, and grayish-brown clay	None
BS11	216019	3291809	0-30	Pale brown sandy loam	None
			30-40+	Mottled yellowish-red and red clay	None
BS12	215794	3291771	0-30	Brown sandy loam	None
			30-40+	Very dark grayish-brown clay	None
BS13	215759	3291633	0-20	Brown fine sandy loam	1 clear glass shard, 1 wire nail fragment
			20-30	Brown fine sandy loam	1 wire nail fragment
			30-40+	Mottled grayish-brown, brown, and yellowish-red clay	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates[1]		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
BS14	216123	3291744	0-60	Brown sandy loam	None
			60-70+	Mottled yellowish-brown, brown, and very dark brown clay	None
BS15	216227	3291742	0-55	Brown sandy loam	None
			55-60+	Mottled very dark brown, yellowish-red, and dark yellowish-brown clay	None
BS16	216330	3291745	0-60	Brown sandy loam	None
			60-70+	Mottled yellowish-brown, brown, and yellowish-red clay	None
BS17	216269	3291841	0-20	Light grayish-brown sandy loam	None
			20-70	Brown loamy sand	None
			70-75+	Mottled brown, very dark brown, and yellowish-red clay	None
BS18	216517	3292304	0-70	Brown sandy loam	None
			70-100+	Mottled brown, pale brown, yellowish-red, and dark yellowish-brown sandy clay loam	None
BS19	216418	3292301	0-80	Brown loamy sand	None
			80-90+	Mottled pale brown, dark yellowish-brown, yellowish-red, and grayish-brown clay	None
BS20	216316	3292299	0-45	Mottled brown, grayish-brown, and dark yellowish-brown sandy clay loam	None
			45-50+	Mottled brown, grayish-brown, dark yellowish-brown, and yellowish-red clay	None
BS21	216215	3292301	0-50	Mottled grayish-brown and dark reddish-brown sandy clay loam	None
			50-55+	Mottled very dark gray and yellowish-red clay	None
BS22	216116	3292301	0-80	Brown loamy sand	None
			80-100+	Mottled pale brown and yellowish-brown moist sandy clay	None
BS23	216015	3292301	0-35+	Very dark brown clay	None
BS24	215915	3292302	0-30	Brown sandy loam	None
			30-40+	Mottled very dark brown and yellowish-red clay	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates[1]		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
BS25	215935	3292096	0-55	Brown sandy loam	None
			55-60+	Mottled pale brown, brown, dark yellowish-brown, and yellowish-red clay	None
BS26	216035	3292099	0-45	Brown sandy loam	None
			45-50+	Mottled very dark brown and yellowish-red clay	None
BS27	216136	3292100	0-50	Pale brown sandy loam	None
			50-55+	Mottled brown, dark grayish-brown, and yellowish-red clay	None
BS28	216238	3292102	0-45	Pale brown sandy loam	None
			45-50+	Mottled very dark brown, yellowish-red, and grayish-brown clay	None
BS29	216339	3292101	0-65	Brown loamy sand	None
			65-70+	Mottled brown, yellowish-brown, and reddish-brown clay	None
BS30	216441	3292099	0-30	Brown sandy loam	None
			30-40+	Mottled brown, dark grayish-brown, and yellowish-red clay	None
BS31	216540	3292099	0-85	Brown loamy sand	None
			85-100+	Mottled pale brown, grayish-brown, yellowish-red, and yellowish-brown loamy sand	None
BS32	216640	3292109	0-50	Brown sandy loam	None
			50-55+	Mottled yellowish-brown, pale brown, grayish-brown, and yellowish-red clay	None
BS33	216744	3292099	0-90	Brown sandy loam	None
			90-100+	Mottled pale brown, yellowish-brown, and grayish-brown sandy clay	None
BS34	216453	3291793	0-15+	Yellowish-brown sandy clay	None
BS35	216476	3291796	0-15	Yellowish-brown sandy clay	None
			15+	Mottled yellowish-red and yellowish-brown clay	None
BS36	216404	3291808	0-20+	Reddish-brown sandy clay	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates[1]		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
BS37	215730	3291642	0-20	Brown fine sandy loam	1 wire nail fragment, 1 brown glass shard
			20-30	Brown fine sandy loam	None
			30-35+	Mottled dark grayish-brown and brown sandy clay	None
BS38	215723	3291626	0-10+	Brown compact sandy clay	1 red brick fragment
BS39	215676	3291647	0-5+	Brown compact sandy clay	None
BS40	216410	3291778	0-15+	Yellowish-brown sandy clay	None
BS41	216454	3291773	0-15+	Yellowish-brown sandy clay	None
JC1	215303	3291828	0-30+	Dark reddish-brown clay	None
JC2	215215	3291762	0-30+	Dark reddish-brown clay	None
JC3	215197	3291913	0-35	Dark reddish-brown clay	None
			35+	Yellowish-red clay	None
JC4	215178	3292025	0-20+	Dark brown clay	None
JC5	215212	3292109	0-10	Dark yellowish-brown sand	None
			10-30+	Dark reddish-brown clay	None
JC6	215256	3292020	0-10	Dark yellowish-brown sand	None
			10-30+	Dark reddish-brown clay	None
JC7	215312	3291939	0-30	Dark yellowish-brown sand	None
			30-40+	Dark reddish-brown clay	None
JC8	215367	3291852	0-30	Dark yellowish-brown sand	None
			30-40+	Dark reddish-brown clay	None
JC9	215342	3291674	0-35+	Dark reddish-brown clay	None
JC10	215440	3291671	0-30+	Mottled dark reddish-brown clay with dark yellowish-brown sand	None
			30+	Dark reddish-brown clay	None
JC11	215398	3291759	0-30	Mottled dark reddish-brown clay with dark yellowish-brown sand	None
			30+	Dark reddish-brown clay	None
JC12	216327	3291633	0-40	Reddish-brown sandy loam	None
			40-75	Light reddish-brown sand	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates[1]		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
			75+	Grayish-brown sandy clay	None
JC13	216213	3291630	0-40	Reddish-brown sandy loam	None
			40-65	Light reddish-brown sandy loam	None
			65+	Mottled grayish-brown and yellowish-red sandy clay	None
JC14	216096	3291624	0-20	Grayish-brown sandy loam	None
			20-35+	Mottled grayish-brown and dark yellowish-brown sandy clay	None
JC15	216526	3292201	0-40	Reddish-brown sandy loam	None
			40-70	Light reddish-brown sandy loam	None
			70+	Mottled gray and dark yellowish-brown clay	None
JC16	216426	3292209	0-20	Light reddish-brown sand	None
			20-35+	Mottled gray and dark yellowish-brown clay	None
JC17	216326	3292201	0-50	Reddish-brown sandy loam	None
			50+	Mottled grayish-brown and dark yellowish-brown clay	None
JC18	216221	3292204	0-20	Grayish-brown silty clay loam	None
			20-35+	Very dark gray clay	None
JC19	216123	3292205	0-35+	Grayish-brown compact silty loam	None
JC20	216020	3292201	0-35	Reddish-brown sandy loam	None
			35-65	Light yellowish-brown sandy loam	None
			65+	Mottled light yellowish-brown, yellowish-red, and dark yellowish-brown clay	None
JC21	215938	3292194	0-30	Grayish-brown silty loam	None
			30-40+	Very dark gray clay	None
JC22	215932	3292022	0-50	Reddish-brown sandy loam	None
			50-80	Pale brown sandy loam	None
			80-90+	Mottled light gray, dark yellowish-brown, and yellowish-red clay	None
JC23	216030	3291997	0-50	Reddish-brown sandy loam	None
			50-60+	Strong brown clay	None
JC24	216136	3292002	0-30	Grayish-brown silty loam	None
			30-35+	Mottled dark grayish-brown and dark yellowish-brown clay	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates[1]		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
JC25	216235	3292004	0-15	Grayish-brown silty loam	None
			15-30+	Dark grayish-brown silty clay	None
JC26	216497	3291648	0-40	Reddish-brown sandy loam	None
			40-60	Yellowish-brown sandy loam	None
			60-65+	Mottled yellowish-brown and light gray clay	None
JC27	216646	3291707	0-60	Reddish-brown sandy loam	None
			60-65+	Mottled grayish-brown and yellowish-brown clay	None
JC28	215708	3291704	0-25	Yellowish-brown silty loam	None
			25-30	Grayish-brown silty clay	None
JW1	215317	3292195	0-20	Reddish-brown sandy loam	None
			20+	Reddish-brown sandy clay	None
JW2	215375	3292273	0-20	Pale brown silty loam	None
			20+	Dark brown clay	None
JW3	215435	3292272	0-50	Pale brown sandy loam	None
			50+	Dark brown sandy clay	None
JW4	215401	3292142	0-20+	Black rocky clay	None
JW5	215449	3292001	0-20+	Black rocky clay	None
JW6	215238	3292145	0-20+	Yellowish-brown clay	None
JW7	215296	3292065	0-10+	Reddish-brown clay	None
JW8	215355	3291983	0-10+	Reddish-brown clay	None
JW9	215398	3291886	0-10+	Reddish-brown clay	None
JW10	215443	3291815	0-15+	Reddish-brown clay	None
JW11	215510	3291873	0-10	Reddish-brown silty loam	None
			10-20+	Reddish-brown clay	None
JW12	215603	3291950	0-30	Reddish-brown silty loam	None
			30+	Reddish-brown clay	None
JW13	215536	3292049	0-20+	Reddish-brown clay	None
JW14	215698	3291969	0-40	Pale brown sand	None
			40+	Orange brown sandy clay	None
JW15	215801	3291954	0-100+	Pale brown sand	None
JW16	215937	3291932	0-100+	Pale brown sand	None
JW17	216035	3291899	0-100+	Pale brown sand	None

Table A-1. Shovel Test Summary Data (cont.)

ST No.	UTM Coordinates[1]		Depth (cmbs)	Soils	Artifacts
	Easting	Northing			
JW18	216134	3291877	0-100+	Reddish-brown sand	None
JW19	216242	3291860	0-70	Grayish-brown sandy loam	None
			70+	Grayish-brown wet sand	None
JW20	216335	3291873	0-60	Brown sandy loam	None
			60+	Mottled red and orange clay	None
JW21	216736	3291669	0-100+	Reddish-brown sandy loam	None
JW22	217027	3291676	0-100+	Brown sandy loam	None
JW23	216906	3291607	0-85+	Reddish-brown compact sandy loam	None
JW24	216804	3291605	0-85+	Reddish-brown compact sandy loam	None
JW25	216933	3291751	0-100+	Pale brown sand	None
JW26	216873	3291690	0-60	Reddish-brown sandy loam	None
			60+	Reddish-brown sandy clay	None
JW27	216719	3291871	0-30	Reddish-brown sandy loam	None
			30+	Reddish-brown sandy clay	None
JW28	216623	3291794	0-100+	Pale brown sand	None
JW29	216631	3292017	0-75+	Pale brown compact sand	None
JW30	215782	3291642	0-15+	Brown compact sandy clay	None
JW31	215771	3291669	0-20+	Brown compact sandy clay	None
JW32	215764	3291689	0-20+	Brown compact sandy clay	None

[1] All UTM coordinates are located in Zone 15 and utilize the North American Datum of 1983 (NAD 83)
cmbs = Centimeters below surface
ST = Shovel test
UTM = Universal Transverse Mercator