



INDEX OF TEXAS ARCHAEOLOGY

Open Access Gray Literature from the Lone Star State

Volume 2014

Article 81

2014

Archeological Investigations for the FM 270 Shared Use Path from Henderson Avenue to South of the HL&P Hot Water Canal, Harris and Galveston Counties, Texas

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Archeological Investigations for the FM 270 Shared Use Path from Henderson Avenue to South of the HL&P Hot Water Canal, Harris and Galveston Counties, Texas

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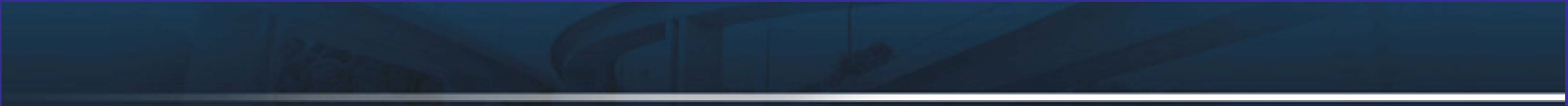
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Archeological Investigations for the FM 270 Shared Use
Path: Henderson Ave to South of HL&P Hot Water Canal

Harris and Galveston Counties, Texas

Julian A. Sitters and Rachel Feit



ARCHEOLOGICAL INVESTIGATIONS FOR THE FM 270
SHARED USE PATH FROM HENDERSON AVENUE
TO SOUTH OF THE HL&P HOT WATER CANAL,
HARRIS AND GALVESTON COUNTIES, TEXAS

by
Julian A. Sitters and Rachel Feit

TxDOT CSJ: 3312-01-008
and 3312-02-012

public version

Texas Antiquities Permit No. 6912

Technical Report No. 94

by
AmaTerra Environmental, Inc.

Austin, Texas



August 2014



ABSTRACT

In June of 2014, AmaTerra Environmental, Inc. (AmaTerra) carried out an intensive archeological investigation of the Texas Department of Transportation's proposed bicycle and pedestrian shared use path along Farm-to-Market (FM) 270 in Harris and Galveston Counties, Texas (CSJ: 3312-01-008 and 3312-02-012). The proposed project extends from Henderson Avenue to approximately 1,000 feet south of the Houston Light & Power (HL&P) Hot Water Canal and entails the construction of a 16-foot wide shared use path, which includes two bridges: one over Clear Creek and a second bridge over the HL&P Hot Water Canal. The total project length is approximately 1.1 miles and will require approximately 0.54 acres of newly proposed Right-of-Way (ROW). AmaTerra conducted the archeological survey under Texas Antiquities Permit No. 6912.

Archeological investigations involved a pedestrian survey, the excavation of 15 shovel tests, and the excavation of six backhoe scrapes across the Area of Potential Effects (APE). Three archeological sites, 41GV53, 41GV78, and 41GV152, were revisited during field investigations. Site 41GV53 is situated on a prominent knoll overlooking Clear Creek. The site, a Prehistoric shell midden, is bisected by FM 270 with site components present on both sides of the roadway and extending into the Clear Creek Nature Preserve. Site components were observed within shovel tests and backhoe scrapes placed at the outside edge of the existing ROW. AmaTerra recommends that intact deposits associated with Site 41GV53 at the edge of the ROW and on the Clear Creek Nature Preserve may be eligible for NRHP/SAL listing. However, within the actual footprint of construction (see Appendix), there is no evidence that artifacts, features, or deposits relating to Site 41GV53 are intact.

Site 41GV78 has been completely destroyed through the construction of FM 270, and no further archeological investigations at this site locale are warranted at this time.

Site 41GV152, an historic period site containing structural and domestic debris, is also bisected by FM 270 and likely extends into the Clear Creek Nature Preserve. Archeologists observed brick fragments, tabby-like mortar, hand blown glass shards, a plain porcelain sherd, and oyster shell within two shovel tests and backhoe scrapes 3 and 4. AmaTerra recommends that the overall NRHP/SAL eligibility of Site 41GV152 is still undetermined, but that within the FM 270 ROW, there are no archeological deposits that could contribute to eligibility. Based on the results of field investigations, no additional archeological investigations within the proposed APE are warranted at this time. No artifacts were collected during this survey.

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CHAPTER 1

INTRODUCTION AND MANAGEMENT SUMMARY

In June of 2014, AmaTerra Environmental, Inc. (AmaTerra) conducted an archeological survey in advance of a Texas Department of Transportation's (TxDOT) proposed bicycle and pedestrian shared use path along Farm-to-Market (FM) 270 from Henderson Avenue (Ave.) to approximately 1,000 feet south of the Houston Light & Power (HL&P) Hot Water Canal (CSJ: 3312-01-008 and 3312-02-012; **Figure 1.1**). The proposed project will consist of constructing a separate bicycle and pedestrian shared use path within the existing right-of way (ROW) along the northeast side of FM 270. The shared use path will include two bridges; one over Clear Creek and a second bridge over the HL&P Hot Water Canal. The proposed bridges and path will be 16 feet wide and include two 5-foot shared use lanes (one in each direction) with 2-foot outside shoulders. Each shared use bridge will include rails along the outside shoulders (approximately three feet eight inches in height). The shared use path will be constructed between three and 40 feet from the northeast outside shoulder of FM 270, while the shared use bridges will be constructed three feet from the outside shoulder of FM 270, running parallel to the existing main lane bridge. No alterations to FM 270 will be made to construct the shared use path or bridges.

The proposed project would be constructed primarily within existing TxDOT ROW and would require new ROW only where the project intersects the High Mast Power Line ROW, which parallels the HL&P Hot Water Canal. The proposed new ROW would be approximately 40 feet wide by 650 feet long and would include a 100-foot taper from the proposed ROW to the existing ROW at each end of the proposed new ROW.

The Area of Potential Effects (APE) for archeological resources is defined as the footprint of the proposed project to the maximum depth of impact, including all easements, and project specific locations. Thus, the APE for archeological resources will cover a total distance of approximately 1.1 miles and require approximately 0.54 acres of newly proposed ROW. The project will be built at grade; therefore, the maximum depth of impact would three feet or less, except where new bridges are proposed. At bridges, the maximum depth of impact from bridge piers would extend more than 25 feet below the surface. Proposed project schematics are attached (Appendix).

The proposed project is taking place mostly within existing ROW and will receive enhancement grant funding from the Federal Highway Administration. Therefore, the project is subject to both the Antiquities Code of Texas (ACT) and Section 106 of the National Historic Preservation Act of 1966 (Section 106). Archeological investigations were intended to identify archeological resources within the APE.

Previous investigations within the immediate vicinity of the proposed project area revealed 18 archeological sites located within one kilometer (0.62 mile) of



Figure 1.1. Project area depicted on aerial imagery.

the APE. In fact, three of the 18 archeological sites fall within the existing ROW: 41GV53, 41GV78, and 41GV152. Consultation with TxDOT and the Texas Historical Commission (THC) resulted in a recommendation that an archeological survey be conducted in areas where intact deposits were believed to exist. As a result of field investigations, all previously recorded archeological sites within the APE were assessed.

This report documents the results of the survey, which included visual inspection, shovel testing, and backhoe scraping. Shovel testing occurred within the existing ROW where soils were believed to be intact, and investigators employed backhoe scraping where the APE bisected known archeological sites. AmaTerra conducted these investigations under Texas Antiquities Permit No. 6912 in June of 2014. Rachel Feit served as Principal Investigator for this project, while Julian A. Sitters assisted with fieldwork. A total of 48 person hours were expended in the field. Remaining sections are organized in the following manner: Project Setting, Regional Chronology and Cultural Background, Cultural Resources in Proximity to the APE, Project Methodology, Results of Field Investigations, Assessment of Sites 41GV53, 41GV78, and 41GV152, and Conclusion and Recommendations.

CHAPTER 2

PROJECT SETTING

The project APE is located within the Gulf Coast Prairies and Marshes vegetative region (Stahl and McElvaney 2012). More specifically, the APE falls within the Northern Humid Gulf Coastal Prairies ecoregion (Griffith and Omernik 2013). This ecoregion is characterized by its grassland potential and relatively flat topography. Today, the Coastal Prairies have been transformed into crop, range, pasture, and urban land. The APE has relatively level terrain ranging in elevation from 15 feet above mean sea level (amsl) to 20 feet amsl. Approximately, 90 percent of the APE exhibited good surface visibility at the time of survey.

The regional climate is characterized as mild with hot to warm summers and cool winters. Annually, the APE receives 45 to 60 inches of precipitation and has a mean air temperature of 71 degrees Fahrenheit (USDA-NRCS 2014). Historic vegetation in this part of Texas was dominated by grasslands with a few clusters of oak mottes or maritime woodlands. Grasses included little bluestem (*Schizachyrium scoparium* var. *frequens*), yellow Indiangrass (*Sorghastrum nutans*), brownseed paspalum (*Paspalum plicatulum*), gulf muhly (*Muhlenbergia capillaries*), and switchgrass (*Panicum virgatum*) (Gould 1978). Trees common with the region include Live oak (*Quercus virginiana*), southern red cedar (*Juniperus virginiana* var. *silicicola*), and the Durand white oak (*Quercus sinuate*). Invasive species include the Chinese tallow tree (*Sapium sebiferum*) and Chinese privet (*Ligustrum sinense*).

By the early 1900s, most of the natural vegetation within the ecoregion had been altered for suitable crop and rangeland. The principal crops grown within this region are rice, grain sorghum, cotton, and soybeans (Griffith and Omernik 2013; Texas A&M-FS 2014). Additional landscape modifications include urban and industrial land use and oil and natural gas production. The closest natural source of water is Clear Creek, transecting the APE approximately 380 meters to the southeast of Henderson Ave. In addition, the APE crosses a manmade hot water canal (HL&P Hot Water Canal) near its southern terminus.

Topographically, the northern humid Gulf Coastal Prairies are relatively flat and underlain by Quaternary-age deltaic sands, silts, and clays of the Beaumont Formation (Qb). Soils are often described as dark, clayey soils associated with Vertisols (Griffith and Omernik 2013). According to the United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) Web Soil Survey (2014), soils within the APE include Edna fine sandy loam (Ed), Veston loam, slightly saline-strongly saline complex (Vx), Atasco fine sandy loam with one to four percent slopes (AtB), and Beaumont clay with zero to one percent slopes (Ba). Edna fine sandy loam is characterized by loamy fluviomarine deposits of late Pleistocene age with zero to one percent slopes. The Veston loam, slightly saline-strongly saline complex is described as Holocene-age eolian sands overlying loamy eolian deposits and/or alluvium of Quaternary age with zero to one percent slopes. Atasco fine sandy loam is derived from loamy fluviomarine deposits of late Pleistocene

age. Lastly, Beaumont clay is characterized by clayey fluviomarine deposits of late Pleistocene age. All soils are deep with no restrictive features found near the surface.

The APE and surrounding area consists of a maintained ROW, the Dr. Ned and Fay Dudney Clear Creek Nature Center (Clear Creek Nature Preserve), suburban development, a public boat ramp, and cultivated fields. A mix of short and tall grasses blanket most of the APE, while some shrubs and forbs are present along the northeastern ROW boundary. After crossing Clear Creek and continuing southeast on FM 270, one encounters a marsh environment. Directly south of the marsh, the landscape rises toward a natural wooded hilltop. This naturally wooded hilltop, which consists of a nature preserve, has been relatively unaltered during the last century. Continuing southeast, FM 270 intersects the HL&P Hot Water Canal, which is approximately 112 meters in width. The HL&P Hot Water Canal intersects FM 270 approximately 915 meters southeast of Clear Creek. The canal is bordered on both sides by pipelines (HL&P, Coastal, and the Mid-Con Texas) and has large power lines running overhead (**Figure 2.1**). Within the APE, archeologists observed numerous disturbances including buried utilities; paved, artificially raised and/or levelled surfaces; and a large canal.

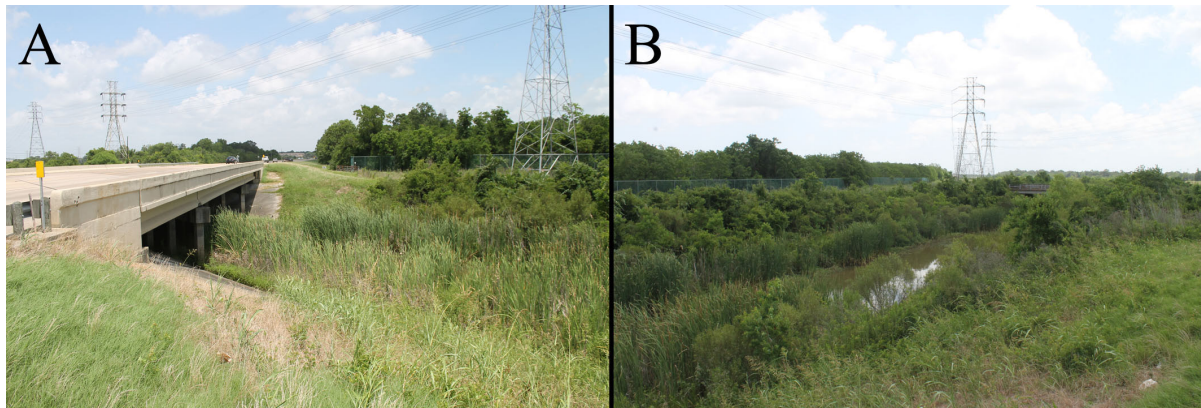


Figure 2.1. Photograph depicting the HL&P Hot Water Canal: A) photographed facing northwest; and B) photographed facing east.

CHAPTER 3

REGIONAL CHRONOLOGY AND CULTURAL BACKGROUND

Compared to other regions of Texas, little is known regarding much of the cultural prehistory along the upper Texas coast which forms a part of the Southeast Texas archeological region as defined by Perttula (2004). Even less is known about cultural groups and patterns for inland sites in the Southeast Texas archeological region, which spans the region from the Sabine River to the Brazos Delta and extends inland on the coastal plain for approximately 200 miles. The majority of knowledge that archeologists have about the prehistory of the region comes from sites along the coast and sites near and within major metropolitan areas. Several key sources of literature have been produced that have helped identify the prehistoric chronology in southeast Texas and Louisiana, including: Aten (1979, 1983), Ensor (1991), Kidder (2002), and Ricklis (1994, 2004).

PALEOINDIAN (CA. 11,500–8000 BP)

Traditionally, the Paleoindian period is the earliest recognized occupation in North America. The initial occupants of Southeast Texas followed now extinct Pleistocene megafauna across vast tracks of land from approximately 12,000–7000 BP (Moore 1994). Although the Paleoindian archeological record along the Southeastern Texas coast is known only through isolated finds, a few patterns can be discerned. First, high-grade lithic material from Paleoindian lanceolate points recovered along the coast illustrate a non-geographically tethered and highly mobile lifeway as with other parts of Texas. Cultures within this period are typified by the use of distinct, large lanceolate points that are commonly fluted including Clovis, Plainview, Golondrina, Meserve, Scottsbluff, and Angostura. However, due to poor preservation and almost no documented *in situ* Paleoindian components (a recently documented intact Paleoindian component site, 41HR796, is one exception, but work at that site is still on-going), little can be deduced regarding Paleoindian economies. Unlike other regions in North America, there is scant data regarding Paleoindian lifeways in Southeast Texas (Peyton 2007). Archeologists generally assume that Paleoindian lifeways in Southeast Texas mirrored those of Paleoindian groups in central Texas. Based on data from sites like Kincaid Shelter and Horn Shelter No. 2, archeologists assume that big game hunting activities were predominant and were supplemented by smaller game (Peyton 2007; Ricklis 2004; Texas Beyond History 2012a). Second, based on the current data, it appears Paleoindian cultures preferred locations along major streams and likely Pliocene coastline settings. Since the Pleistocene/early Holocene sea level was approximately 100 meters lower than present day, many intact Paleoindian sites would now be submerged (Bousman et al. 2004; Ricklis 1994, 2004). Although surface finds relating to the Paleoindian period in this region are abundant, to date, no discrete Paleoindian component has been excavated within this region (Ricklis 1994, 2004). This pattern of surface finds would seem to support the conclusion that many Paleoindian sites are indeed submerged. The McFaddin Beach Site is the most well known Paleoindian

“site” within this region. In actuality, the 32-km long beach front is not a defined site area, but a locale where artifacts and bone have been washing ashore for many years (Texas Beyond History 2012b). The majority of points recovered from inland Paleoindian sites come from the Galena Sites (41HR61–70) located approximately one mile from Buffalo Bayou along Hunting Bayou, and 41HR571, on the shoreline of Lake Houston, formerly the San Jacinto River (Bousman et al. 2004).

ARCHAIC (CA. 8000–1500 BP)

As with the Paleoindian components, few well-stratified sites dating to the Archaic period have been excavated in Southeast Texas, which has left the archeological record spotty. The thought is that as the altithermal drying trend became entrenched around 6950 BP (5000 BC), aboriginal groups drastically reoriented their lifeways across North America. Although far less pronounced than in other regions, this drying trend denotes the onset of the Archaic period within Texas that lasted to approximately 1850 BP (AD 100) (Brownlow 2003). Traditionally, the Archaic period is broken into three sub-periods: Early, Middle, and Late.

Archeological data for the Archaic in southeast Texas and coastal settings is scarce. Nonetheless, the Archaic is “generally defined by pre-or non-horticultural adaptations and pre-ceramic and pre-bow-and-arrow hunting technologies” (Ricklis 2004:184). Based on data obtained from regional comparisons, it is thought groups during the Archaic relied on diverse subsistence strategies that were practiced along a migratory seasonal round focused on procuring locally specific flora and fauna along coastal areas and inland riverine settings (Brownlow 2003; Ricklis 1994).

EARLY ARCHAIC (CA. 8000–6950 BP)

Early Archaic groups adapted to the altered climate by expanding their tool kit. Compared to the Paleoindian period, the Early/Middle Archaic assemblage is dominated by smaller points that Ensor (1991) classified as being within the expanded haft cluster. This “cluster” of points spans 4,000 years from approximately 5000–1000 BC (6950–2950 BP) and includes points like Yarbrough, Trinity, Carrollton, and Late Middle Archaic Palmillas.

MIDDLE ARCHAIC (CA. 6950–2950 BP)

During the Middle Archaic, it is believed that population levels began to rise from relatively low densities during the Early Archaic, due to the change from a cold and moist climate to a warmer and drier climate. Middle Archaic groups intensified efforts to capitalize on marine resources—in particular shellfish and fish. Numerous coastal shell midden sites have been discovered along with fishing implements, including bone fishhooks, plummets, and net sinkers (Aten 1983). Axes, nutting stones, and grinding tools from more inland sites indicate that Middle Archaic groups were also well suited for utilizing hardwood forest

resources as well. Points from this period include Palmillas, Yarbrough, Kent, Elam, and Carrollton (Brownlow 2003).

LATE ARCHAIC (CA. 2950–1550 BP)

Beginning in the Late Archaic (1000 BC–AD 400 or 2950–1550 BP), the climate began to stabilize and modern sea levels were attained, which likely aided the apparent population density increase across Texas. The greater population densities may have also facilitated long-distance trading between regions, including the Lower Mississippi Valley. Subsistence economies established earlier in the Archaic period continued during the Late Archaic and relied on repetitive exploitation along a seasonal circuit. Late Archaic points are dominated by Kent and Gary varieties and include Ensor and Godley types (Brownlow 2003; Driver 2009; Ensor 1991; Ricklis 2004).

WOODLAND PERIOD (2550–1250 BP)

One of the primary debates regarding cultural occupation during this period is over the source of influence. The introduction of ceramics into an Archaic tool kit signaled a transition to what several archeologists have called a “Woodland” occupation in southeast Texas. The Woodland tag placed by earlier archeologists, like Aten and Shafer, was to illustrate affinities to the cultural material observed in the southeastern United States, in particular the Lower Mississippi Valley (Moore 1990, 1995; Perttula 2004). Aten and Shafer use the Woodland term to identify indigenous occupations not only prior to Mississippian or Caddoan cultures, but through historic times. However, Dee Ann Story argued that there are too many differences between southeast United States Woodland groups and those occupying the Texas coastal region at the same time. Thus, Story coined the term “Mossy Grove” to describe the Woodland period of occupation along the coast and inland within southeast Texas (Story 1990). According to Story (1990:256), “Mossy Grove can be viewed as both a general and cultural pattern and as a regional tradition that partly parallels development of the Caddoan tradition to the north. And, like the Caddoan tradition/culture, it encompasses the archeological remains of what were surely different ethnic (and possibly even linguistic) groups.”

Story also explains that there is variation in the amount of Caddoan influence based on geographic location. Story states that more inland sites tend to have closer affinities to even further inland sites, e.g., the Caddo. Over time, this may have led to a peaceful expansion and assimilation of the Mossy Grove tradition into the Caddoan tradition around AD 800–900 or 1150–1050 BP (Moore 1995; Ricklis 1994; Story 1990).

Although occupation along the upper Texas coast and inland portions has been further divided into more regional specific areas, several general trends during the Mossy Grove occupation can be identified. First, ceramics are commonly associated with Mossy Grove sites. Although the manufacturing of pottery did not appear uniformly across the

region—Texas-Louisiana border around 20 BP, Galveston Bay at about 1850 BP, and the western coastal margin around 1650 BP along the coast near Galveston Bay and Sabine Lake—it appears that the earliest appearances of ceramics within southeast Texas coincide with early ceramic periods in the Lower Mississippi Valley. From these areas, Tchefuncte, grog-tempered Baytown Plain, and Marksville Stamped are common in Early Ceramic assemblages (Peyton 2007). Based on the current data, Goose Creek ceramics first appeared near the Lake Conroe area around AD 500–600 or 1450–1350 BP (Moore 1990; Story 1990). The Goose Creek Plain variety is considered a utilitarian ware that dominated the archeological ceramic record during this period. Initially, Goose Creek ceramics were constructed using a sandy paste with little to no additional temper. Later in the period, grog and bone tempers were added.

The majority of ceramics represented at any given Mossy Grove site are Goose Creek Plain—meaning they have no visible form of decoration. A small percentage (approximately <10 percent) of ceramics within any given assemblage typically demonstrates some form of decoration (Moore 1995). Additionally, it appears that after the bow and arrow was introduced around 1450 BP, the atlatl did not leave the archeological record, but overlapped until the Historic Period. Common arrow points recovered from Ceramic Period sites include Perdiz, Alba, and Catahoula, while Gary and Kent dart points are often recovered with these types. Groups within this period continued the hunter-gatherer lifeways established long ago with focus on coastal and riverine resources (Moore 1995; Ricklis 1994). With the advent of the bow and arrow came a shift in lithic manufacture, “reflecting a shift from direct core (or very large flake) reduction to the reduction of relatively small flakes” (Story 1990:256). The seasonal migratory circuit tradition continued with Mossy Grove groups. Aten suggests that smaller bands would have likely joined other bands to form larger communities during the winter months and then disperse back into smaller bands along the seasonal round (Aten 1983; Ricklis 1994).

LATE PREHISTORIC (1250–422 BP) (AD 700–1528)

Technological change and stylistic modifications in ceramics mark the change from the Archaic and Ceramic periods to the Late Prehistoric. Eastern influences in pottery making such as grog and bone tempering and elaborate decorations become apparent (Ricklis 2004). Eighteen different styles of ceramics, based on temper, paste, and design, have been documented along the Texas coast in a Late Prehistoric context (Aten 1984). The Late Prehistoric period in Texas brought intensified group dynamics across the state. As village sites appeared in the lower Pecos valley in the west, the preliminary stages of Caddo development took place in the east (Turner and Hester 1999). The bow and arrow continued to expand in use as it enabled prehistoric hunters to harvest prey from greater distances with a lesser need for brushless, wide open spaces required for atlatl maneuverability in hunting. The practice of bow and arrow hunting is indicated by smaller sized projectile points such as the Perdiz and Scallorn. Other diagnostic points in this region include the Catahoula, Alba, Bonham, and Friley styles. The culturally and materially definable manifestations of the Caddo, Atakapan, and Bidai appear during this interval.

Historical sources identify the Hasinai as one of the main groups composing the Caddo culture in the Piney Woods area (La Vere 1998). There is also evidence of early horticulture as Woodland sites continued to grow and Caddo communities thrived in East Texas (Perttula 1995). The transition from the Late Archaic Woodland to the Caddoan is evidenced by significant changes in technology and subsistence. Distinctive ceramic vessels and decorative styles, burial practices, mound architecture, and agriculture subsistence are seen in the subdivisions of the Caddoan era. Caddoan lithic tool kits consisted primarily of arrow points, drills, utilized flakes, and celt fragments (Story 1990).

HISTORIC

The APE is located 1.82 miles to the north of League City, Texas. By 1820, members of Stephen F. Austin's Old 300 arrived in the area (Magnum and Driver 2006). In fact, an 1845 and an 1864 Galveston County map shows that Stephen F. Austin and his heirs were the original patent-holders of the land containing the APE. In 1854, the Galveston, Houston, and Henderson Railroad was built through the region, promoting growth within the immediate area. The first resident, George W. Butler, arrived in 1873 and settled at the junction of Clear Creek and Chigger Bayou. Here he established a town named Butler's Ranch. Early settlers first raised cattle, and Butler was the most successful, but by 1890, most had switched to farming. Some of the crops grown included Satsuma oranges, sugarcane, strawberries, cucumbers, grapefruit, and figs (GCHM 2014; Kleiner 2014).

In 1893, the land encompassing the project area was purchased by J. C. League, for whom League City is now named after, and a townsite was born along the railroad. By the 1890s, poor and convict farms were established south of Clear Creek and in 1896 the town's first post office was built. By 1914, the population numbered 500 and multiple railroads had been constructed through the town: the International-Great Northern; the Missouri, Kansas and Texas; and the Galveston-Houston Electric Railroad. The railroads promoted the growth of the town and by 1931 League City supported a population of approximately 1,200. League City would continue to grow throughout the twentieth century, especially with the help of oil and space industries, and as a suburb of the ever-expanding Houston metropolitan area.

In 2002, approximately 112 acres of what was previously known as the "Davis Tract" was set aside for the Clear Creek Nature Preserve (GCDR. 3559/016-47-2317). The nature preserve is located adjacent to the APE between Clear Creek and the HL&P Hot Water Canal. This park is one of the last remaining vestiges of the local environment likely encountered by some of the first settlers. The undeveloped wetlands within the park support a wide variety of avian, aquatic, mammalian, and floral species (League City 2014). In addition, numerous archeological sites have been recorded and preserved within the park boundaries. Some of these sites will be discussed in the next section.

CHAPTER 4

CULTURAL RESOURCES IN PROXIMITY TO THE PROJECT AREA

Background research for this project consisted of an online records search through the THC’s Archeological Sites Atlas (Atlas; 2014). Research focused on the identification of archeological sites, Registered Texas Historic Landmarks, sites listed on the National Register of Historic Places (NRHP), sites listed as State Archeological Landmarks (SAL), or cemeteries within one kilometer (0.62 mile) of the proposed project area (**Figure 4.1**). The search identified 18 archeological sites within one-kilometer (0.62 mile) of the proposed APE. For the sake of brevity, only those archeological sites falling within the APE will be describe below, while all remaining archeological sites can be found in **Table 4.1**. Three archeological sites are located within or in the immediate vicinity of the APE: 41GV53, 41GV78, and 41GV152.

Table 4.1. Previously Recorded Archeological Sites Located within One Kilometer (0.62 mile) of the APE.

Trinomial	Site Name	Site Type	Date Recorded	Recorder	Eligibility
41HR190	Unknown	Prehistoric	1973	Paul McGuff	Ineligible
41HR189	Unknown	Prehistoric	1973	Paul McGuff	Ineligible
41HR1004	Unknown	Prehistoric	2005	James Foradas	Ineligible
41HR1005	Unknown	Prehistoric	2005	James Foradas	Undetermined
41GV149	W.G. and Helen Hall Home and Property	Historic	2004	Jennifer McWilliams	Ineligible
41GV161	Temporary Site 1	Prehistoric	2007	Brian Vagi	Ineligible
41GV157	249.00, Field Site 1	Prehistoric	2005	T. Pickering	Ineligible
41GV100	Unknown	Prehistoric	1968	Corbin and Hester	Undetermined
41GV156	Temporary Site #5	Prehistoric	2005	Randy Ferguson	Undetermined
41GV77	Unknown	Prehistoric	1984	Allinger, Howard and Stokes	Undetermined
41GV10	Spanish Moss Site	Prehistoric	1968	Corbin and Hester	Undetermined
41GV76	Unknown	Prehistoric	1984	Allinger, Howard and Stokes	Undetermined
41GV153	Temporary Site #2	Prehistoric	2005	Randy Ferguson	Undetermined
41GV154	Temporary Site #3	Prehistoric	2005	Randy Ferguson	Undetermined
41GV155	Temporary Site #4	Prehistoric	2005	Randy Ferguson	Undetermined
41GV152	Temporary Site #1	Historic	2005	Randy Ferguson	Undetermined
41GV53	Unknown	Prehistoric	1973	Hudson and McGuff	Eligible
41GV78	Unknown	Prehistoric	1984	Joe Denton	Ineligible

This figure has been redacted due to site sensitive information.

Figure 4.1. The project APE depicted on 1995 7.5' League City, TX U.S.G.S. quad sheet with one- kilometer (0.62 mile) buffer illustrating the location of previously recorded archeological sites and surveys.

SITE 41GV53

Site 41GV53 is located approximately 30 meters west of Clear Creek. The site, a Late Prehistoric and Neo-American shell midden sitting atop a prominent knoll, was first recorded in 1973 by Robert Hudson and Paul McGuff. Since the site's initial recording, it has been revisited an additional three times by Prewitt & Associates, Inc. (1983, 1987, and 1992) and once by Moore Archeological Consulting, Inc. (MAC; 2005). The site consists of a large shell midden or middens containing lithic debitage, sandy paste ceramic sherds, well-preserved faunal remains, *Rangia* shell, and prehistoric human remains. The site measures approximately 240 meters (east to west) by 150 meters (north to south) and is bisected by FM 270. As a result, Site 41GV53 was divided into two areas: A and B. Area A is located to the southwest of FM 270 and has been impacted by erosion and looters; while Area B, located to the northeast of FM 270, remains relatively intact and protected within the Clear Creek Nature Preserve. In 1992, Prewitt & Associates Inc. conducted eligibility testing of Site 41GV53. Field efforts focused on Area B and included the excavation of six backhoe trenches, as well as the recovery of human remains from four burial features (Hines 1993). However, access to the site was rescinded before data recovery efforts could be completed. Site components located within the Clear Creek Nature Preserve, or outside of the existing ROW, are deemed eligible for listing on the NRHP, while those components within the existing ROW have been deemed ineligible for listing to the NRHP or as a SAL.

SITE 41GV78

Site 41GV78 is located approximately 210 meters southeast of Clear Creek along FM 270. The site, a Prehistoric shell midden, was first recorded in 1984 by Joe Denton of the State Department of Highways and Public Transportation. Following a pedestrian survey the site's size was recorded as nine meters in diameter with cultural deposits extending to a depth of 30 centimeters below the surface (cmbs). At the time of the site's recording, it was deemed eligible for listing as a SAL and the site recorder recommended additional testing prior to the widening of FM 270. However, in 2006 the State Historic Preservation Office deemed the site ineligible. Today, FM 270 ROW and road grading has completely obliterated all traces of the sites.

SITE 41GV152

Site 41GV152 is located approximately 715 meters southeast of Clear Creek along the eastern side of FM 270. The site, a historic structural and domestic debris scatter, was first recorded in 2005 by Randy Ferguson of MAC. The site consists of metal hardware (e.g., square nails), domestic debris (e.g., porcelain button, belt buckle, glass shards, and ceramic sherds), structural debris (e.g., brick and mortar fragments), and faunal remains. According to Randy Ferguson, portions of the site appear to have intact foundation or structural components. The site measures approximately 44 x 110 meters in size with cultural deposits extending to a depth of 40 cmbs. Site 41GV152 is situated mostly within the Clear Creek Nature Preserve. The site's NRHP eligibility is officially undetermined,

though recorders recommended that it has potential for listing on the NRHP and/or as a SAL.

PREVIOUSLY CONDUCTED SURVEYS

Lastly, a total of 13 area surveys and two linear surveys have been conducted within one kilometer (0.62 mile) of the APE. Of these, the APE transects five previously conducted area surveys and one linear survey. A 1973 linear survey transects the northern end of the APE. The survey was devoid of cultural remains within the APE. In 2005, MAC conducted a boat survey of Clear Creek. Their efforts did not yield any newly recorded archeological sites within the APE. In 2004, MAC performed an area survey of FM 270's eastern ROW from Clear Creek to approximately 1,600 feet southeast of the creek. This survey encompassed Site 41GV53. The survey did not yield any newly recorded archeological sites. A 1987 area survey, which also encompassed Site 41GV53, did not document any new archeological sites. Lastly, two area surveys, one conducted in 1998 and the other in 2005, covered the APE south of the HL&P Hot Water Canal. Neither survey identified any new archeological sites within the APE.

CHAPTER 5

PROJECT METHODOLOGY

Prior to field investigations, archeologists consulted the Potential Archeological Liability Mapping of the Houston District. It was determined that the APE to the north of Clear Creek did not warrant survey (**Figure 5.1**). The proposed project alignment was then overlaid on aerial based gridded maps and loaded onto hand-held DeLorme GPS units to aid in navigation. Examination of the APE consisted of pedestrian survey, the excavation of 15 shovel tests, and the excavation of six backhoe scrapes. The investigations took place within existing ROW where access was available. Areas of disturbance were thoroughly photographed, and archeologists made notes on the conditions they encountered during their investigations.

Shovel tests measured 30 centimeters in diameter and extended to a maximum depth of 80 cmbs within undisturbed portions of the landscape. The shovel tests were excavated in 10-centimeter increments and all soil was screened through a ¼-inch hardware cloth. In the event that cultural material was recovered from a shovel test in areas not designated as an archeological site, the shovel test would be delineated at 10-meter intervals until two negative shovel tests in every cardinal direction were attained, or until a project area boundary or physical hindrance was encountered. Relevant information for all shovel tests was recorded on a standardized shovel test form. Shovel tests were backfilled upon completion.

Using a Bobcat T650 operated by Buddy Nelson, six backhoe scrapes were excavated within the APE in areas where archeological sites had been previously recorded. The backhoe scrapes ranged from 1.2 to 4.2 meters in length, 2.0 to 2.3 meters in width, and extended to depths ranging from 0.4 to 0.55 meters below the surface. Samples of the soils from backhoe scrapes were screened through ¼-inch hardware cloth. Backhoe scrape information was recorded on standardized forms. Digital photographs were used to document the excavation of each backhoe scrape and soil profile. A series of profile drawings were completed for each backhoe scrape and a plan map was created of the APE illustrating the location(s) of the archeological investigations. All scrapes were mapped using a DeLorme GPS unit. Backhoe scrapes were backfilled upon completion.

Archeologists did not conduct subsurface testing in areas where disturbances were readily apparent (**Figure 5.2**). These areas included areas within or adjacent to the HL&P Hot Water Canal, where extensive excavations, grading, and clear cutting have completely altered the original landscape. To the immediate south of the hot water canal are multiple pipelines, which have also contributed to disturbances within the APE. In addition, archeologists did not conduct subsurface archeological testing north of Clear Creek. Here archeologists observed artificially raised and levelled surfaces, as well as a shallow water table all of which indicate a low potential for intact archeological deposits (**Figure 5.3**).



Figure 5.1. The APE depicted on the Potential Archeological Liability Mapping of the Houston District.



Figure 5.2. Aerial photograph depicting the areas of disturbance where subsurface testing was not conducted along the APE.

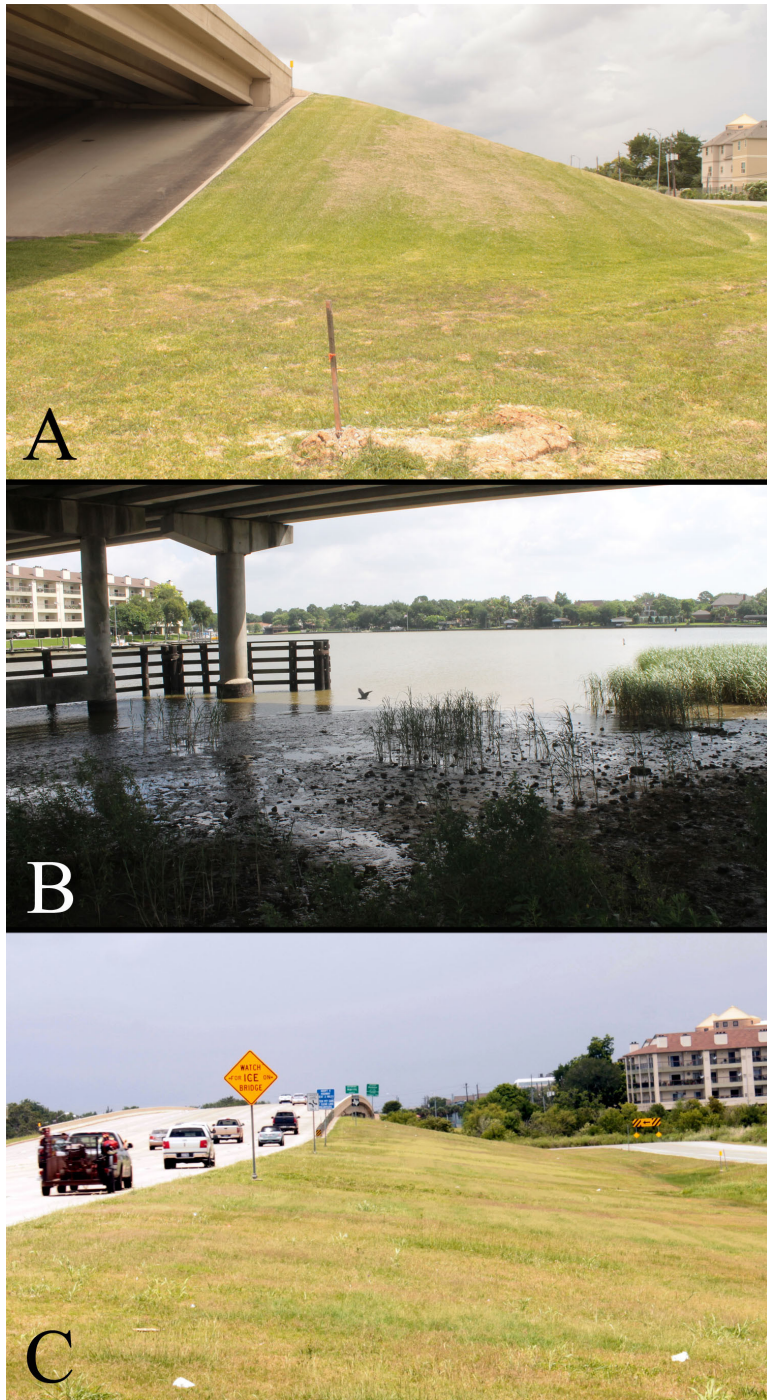


Figure 5.3. Disturbances observed to the immediate northwest and southeast of Clear Creek: A) artificially raised surface located to the northwest of Clear Creek on the eastern side of FM 270, photographed facing northwest; B) perched water table observed below FM 270, photographed facing north; and C) artificially raised surface located to the southeast of Clear Creek, photographed facing northwest.

For the purpose of this survey, an archeological site had to contain a certain number of cultural materials or features older than 50 years within a given area. The definition of a site is: (1) five or more surface artifacts within a 15-meter radius; or (2) a single cultural feature, such as a burned rock midden or cistern, observed on the surface or exposed during shovel testing; or (3) a positive shovel test containing at least five total artifacts; or (4) two positive shovel tests located within 30 meters of each other. Archeologists did not document any newly identified archeological sites; however, three previously recorded archeological sites were assessed (Sites 41GV53, 41GV78, and 41GV152). This archeological investigation was a non-collection survey; therefore, artifacts encountered during the course of the fieldwork were returned to their original location. Site forms and records have been submitted to the Texas Archeological Research Laboratory (TARL).

CHAPTER 6

RESULTS OF FIELD INVESTIGATIONS

Prior to and following field investigations, archeologists conducted archival research to establish the potential for buried historic archeological material. This research involved assessing historic period maps (Portal 2014), aerial photographs (USGS-EE 2014), and deed records at the Galveston County Tax Assessor/Collector's Office. Historic period maps (ca. 1864-1891) indicate that the land was first patented in 1831 by Stephen F. Austin's heirs. An 1883 General Land Office, Galveston County map depicts the Galveston, Houston, and Henderson Railroad bisecting the northeast corner of Austin's property, to the west of the APE. A railroad station, named Clear Creek, was situated at the intersection of the rail line and Clear Creek; however, this structure fell well outside of the APE. By 1893, J. C. League had acquired the land encompassing the APE and began to subdivide it. The APE is located in Division A, Lots 30, 31, 32, 41, and 42 (GCDR. 3559/016-47-2347). At some point Waters Davis, Sr. acquired the land, and it stayed in the Davis family until Jeremy Davis sold 112.59 acres to the City of League City in 2002. In addition, a 1932 topographical map and a 1939 general highway map were assessed for historic period structures (**Figure 6.1**). As a result, no historic period structures are depicted within the APE.

Aerial photographs suggest that the APE to the south of Clear Creek was primarily used as rangeland and cropland into the mid-twentieth century (**Figure 6.2**). However, by 1969, the HL&P Hot Water Canal had been constructed to divert water from the channel and control flooding. Then, during the late 1970s, FM 270 was built. Over time, the channel of Clear Creek has expanded significantly, either through regional subsidence, channel dredging, or both. As a result, many of the low-lying areas around the creek's channel have been inundated. However, the knoll/hilltop overlooking Clear Creek where Sites

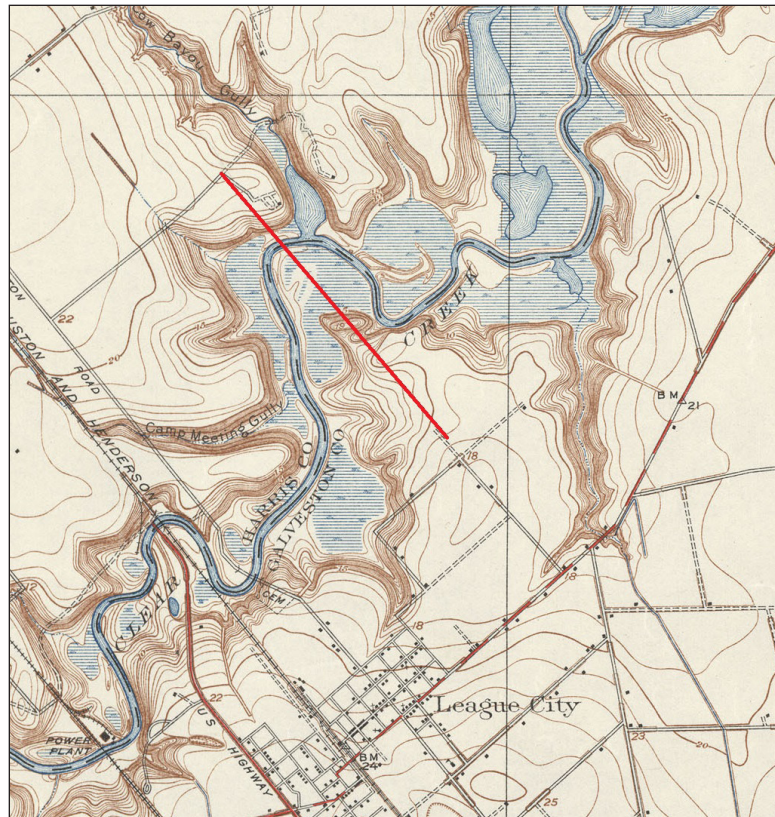


Figure 6.1. Detail from 1932 Seabrook Quadrangle map. Project area is shown in red.

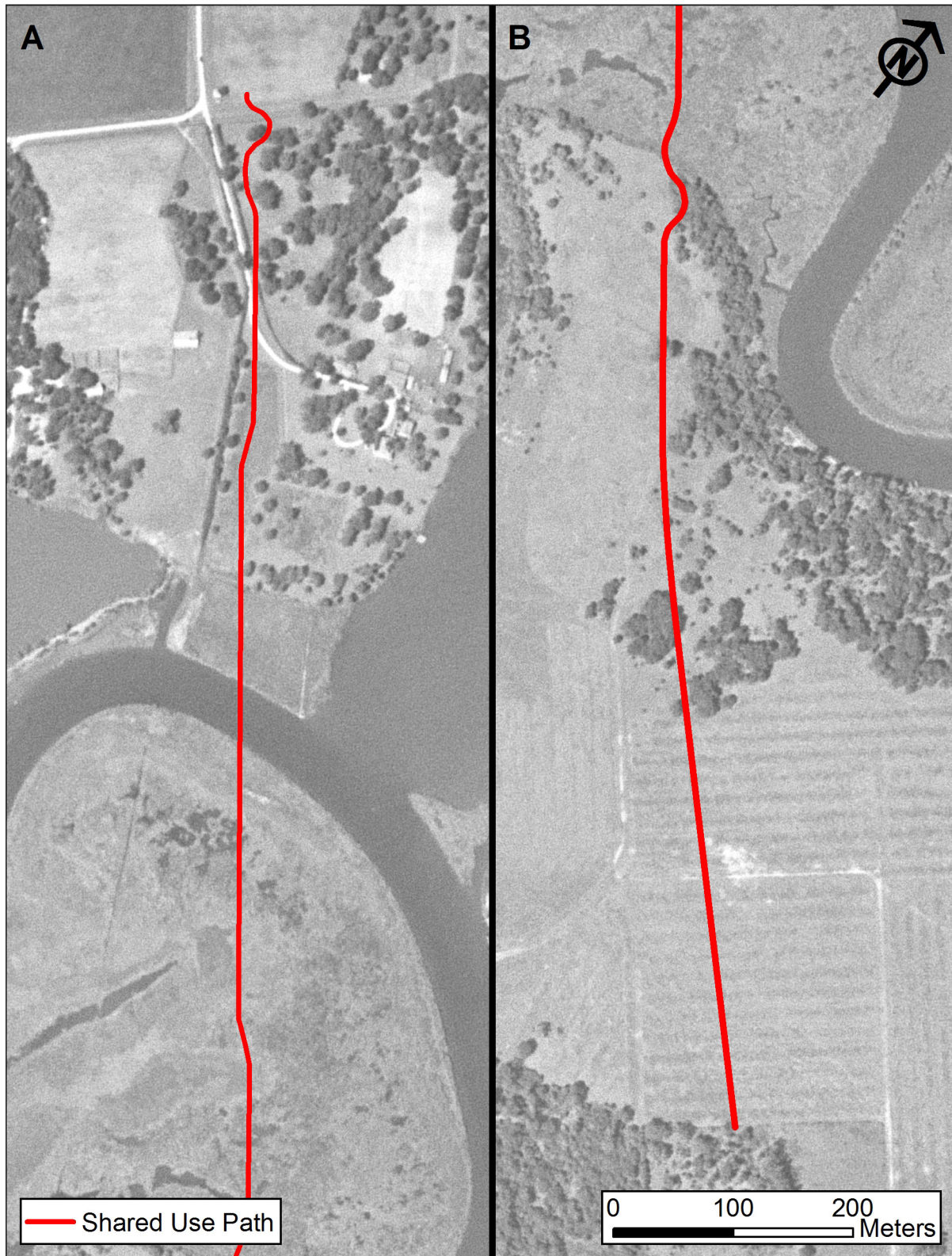


Figure 6.2. The APE depicted on a 1953 aerial photograph: A) northern extent of the APE; and B) southern extent of the APE.

41GV53 and 51GV152 are located has remained relatively unchanged since the beginning of the twentieth century. Located near the central portion of the APE, this knoll is mostly devoid of landscape modifications with the exception of FM 270 and park improvements associated with the Clear Creek Nature Preserve (**Figure 6.3**).

PEDESTRIAN SURVEY

AmaTerra inspected the entire APE on foot through visual reconnaissance where access was available. Access was not available within the proposed new ROW inside the HL&P Hot Water Canal. However, this area was completely disturbed with no possibility for intact archeological resources to be present. In addition, archeologists found most of the existing ROW to have been heavily disturbed resulting in the removal of most cultural bearing soils. Drainage ditches run alongside the roadway for the much of the project length. Other disturbances within the APE include artificial berms, buried utilities, culverts, paved surfaces, a perched water table, and road fill (see Figures 2.1 and 5.2). As a result, archeologists did not conduct subsurface testing in or around the HL&P Hot Water Canal or north of Clear Creek.



Figure 6.3. Aerial photographs depicting the prominent knoll located within the APE: A) 1953; B) 1969; C) 1976; and D) 2013.

SHOVEL TESTS

Archeologists excavated a total of 15 shovel tests in support of the survey, all of which were excavated to the south of Clear Creek (**Figure 6.4; Table 6.1**). The shovel tests were excavated to a depth of 25–80 cmbs. Four of the 15 shovel tests were excavated to the south of the HL&P Hot Water Canal. Here archeologists determined that soils within the existing ROW were heavily disturbed (**Figure 6.5**) and little to no potential for intact archeological deposits exists within this segment of the APE. The remaining eleven shovel

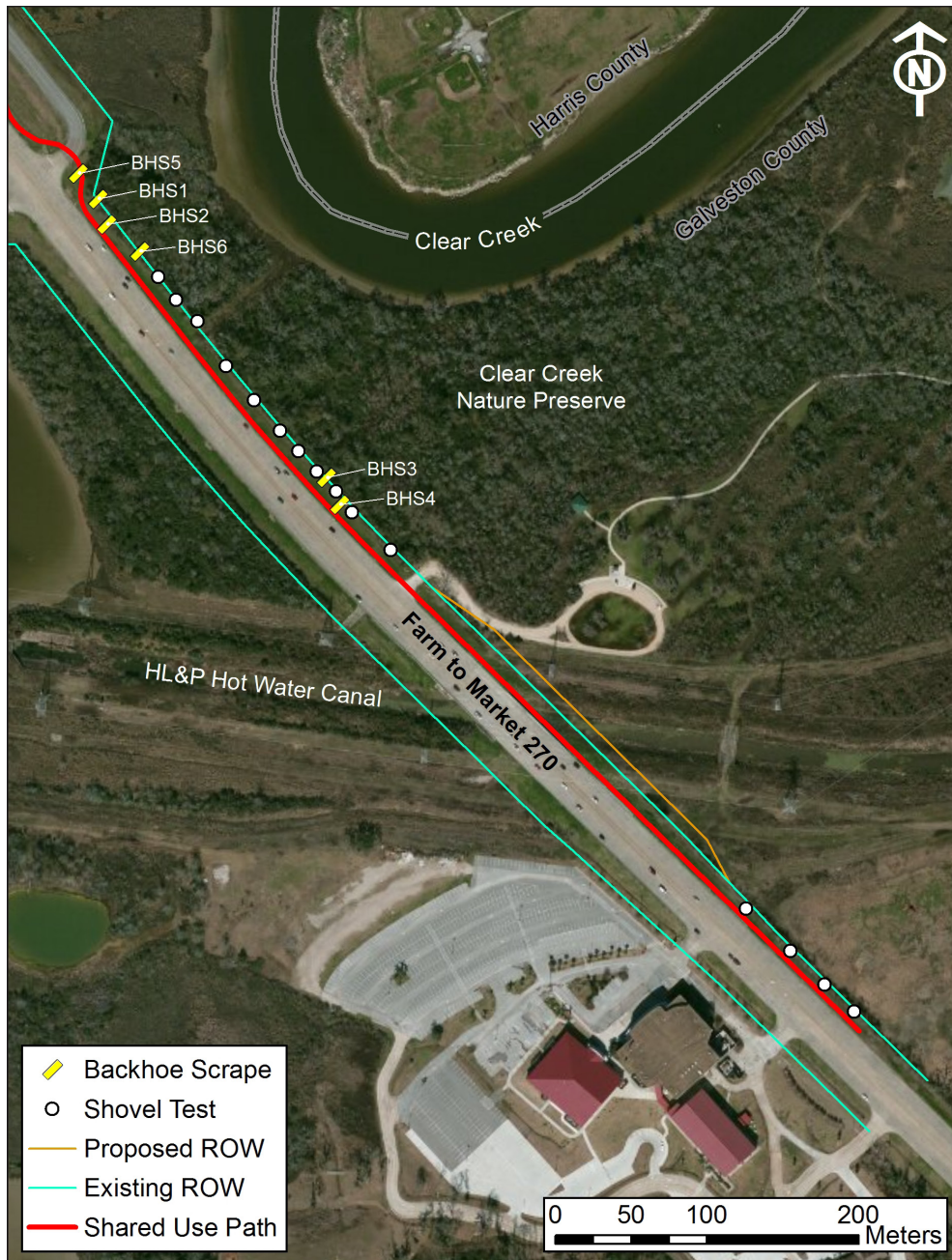


Figure 6.4. Aerial photograph of the APE depicting the location of shovel tests and backhoe scrapes.

tests were excavated in existing ROW between the HL&P Hot Water Canal and Clear Creek. Here archeologist excavated the shovel tests as close to the northeastern ROW boundary as possible where soils appeared to be most intact.

Archeologists observed a two-meter wide segment of undisturbed and elevated sediments located along the outside edge of the existing ROW, adjacent to the Clear Creek Nature Preserve (**Figure 6.6**). A typical soil profile within this stretch of undisturbed sediments consisted of 30 centimeters of light yellowish brown (10YR 6/4) silty loam overlying yellowish brown (10YR 5/6 and 5/8) silty clay loam (30 cm to depth). Five of the eleven shovel tests excavated to the north of the hot water canal contained cultural material to a maximum depth of 40 cmbs: DS04, DS09, RF02, RF03, and RF06. The positive shovel tests were used to help guide the placement of backhoe scrapes.

Table 6.1. Shovel Tests Excavated during Field Investigations.

Shovel Test	UTM	Depth	Munsell	Texture	Pos/Neg
DS01	0297745E; 3268145N	0-30 30-55 55-60	10YR 2/2 10YR 3/3 10YR 3/4	Clay, Iron Oxide	Neg
DS02	0297703E; 3268185N	0-35 35-70	10YR 4/2 10YR 4/3	Clay, Iron Oxide	Neg
DS03	0297440E; 3268450N	0-10 10-40 40-50	10YR 3/2 10YR 4/6 10YR 4/6	Clay, Iron Oxide	Neg
DS04	0297404E; 3268489N	0-50 50+	10YR 6/4 10YR 5/6 & 5/8	Silty Loam Clay Loam	Pos: Brick Fragments 18-23 cmbs
DS05	0297379E; 3268515N	0-30 30-40	10YR 4/4 & 5/8	Clay Loam Clay	Neg
DS06	0297350E; 3268549N	0-20 20-40 40+	10YR 6/6 10YR 4/6 10YR 4/6 & 5/3	Silty Clay Clay Loam Clay	Neg
DS07	0297298E; 3268615N	0-30 30-70	10YR 3/3 10YR 5/2	Silty Clay Silty Loam	Neg
DS08	0297674E; 3268214N	0-13 13-24 34-50	10YR 2/2 10YR 2/2 10YR 4/1	Clay Loam Clay Loam Clay	Neg
DS09	0297331E; 3268571N	0-20 20-30	10YR 5/4 10YR 2/6 & 4/6	Silty Loam Clay	Neg
RF01	0297727E; 3268167N	0-40 40-70	10YR 4/3 10YR 5/3	Clay, Iron Oxide	Neg
RF02	0297409E; 3268471N	0-10 10-35 35-40	5YR 5/4 5YR 6/4 7.5YR 7/4	Clay Silt Silt Silty Clay	Pos: Brick Fragments, Brown Glass, Oyster Shell
RF03	0297388E; 3268490N	0-15 15-25	5YR 6/4 7.5YR 5/4	Silty Clay Clay Loam Clay	Neg
RF04	0297361E; 3268529N	0-10 10-40	7.5YR 7/4 7.5YR 5/6	Silty Loam Clay	Neg
RF05	0297309E; 3268529N	0-40 40-80	5YR 5/4 5YR 5/6	Silty Loam Sandy Loam	Neg
RF06	0297285E; 3268629N	0-10 10-45 45-65	10YR 3/2 10YR 3/2 10YR 3/1	Silty Clay Silty Loam Clay	Pos: Clam Shell



Figure 6.5. Disturbances observed to the north of the HL&P Hot Water Canal and within the APE: A) culvert, photographed facing south; B) pipeline transecting the APE, photographed facing east; and C) artificially raised surface within the APE, photographed facing southeast.

Artifacts observed within positive shovel tests included orange and red paste brick fragments, tabby-like building material(s), oyster and clam shell fragments, lithic debitage, plain, high fired, sandy paste prehistoric ceramic sherds, and vessel glass shards (**Figure 6.7**). All cultural material was observed within the upper 40 cmbs. Archeologists also noted historic period debris (e.g., orange and red paste brick fragments and fragments of tabby-like building materials) located on the surface near shovel tests DS04, DS09, RF02, and RF03. Some of the materials were located within the Clear Creek Nature Preserve; however, archeologists did not have access or permission to enter the property to conduct archeological investigations. Thus, those artifacts within the Clear Creek Nature Preserve were not assessed.



Figure 6.6. Principal investigator Rachel Feit takes notes on the two-meter wide band of intact soils. It is within this band of sediment that archeologists observed intact deposits of archeological materials, photographed facing southeast. Note that the yellow lines are an approximation.

BACKHOE SCRAPING

In an attempt to identify and assess potential for intact archeological material within the existing ROW, six backhoe scrapes were excavated within and adjacent to previously recorded archeological sites (41GV53 and 41GV152; see Figure 6.4; **Table 6.2**). Wide and shallow backhoe scrapes were chosen over narrow, deep backhoe trenches due to the presence of shallow cultural deposits (0–40 cmbs), the low

potential for deep soils containing cultural material within the existing ROW, and shallow impacts expected from the proposed project in that area. All but one of the backhoe scrapes were placed along the outside edge of the existing ROW. Four of the scrapes contained cultural material relating to Sites 41GV53 or 41GV152, while two trenches were devoid of cultural material (see Table 6.2)

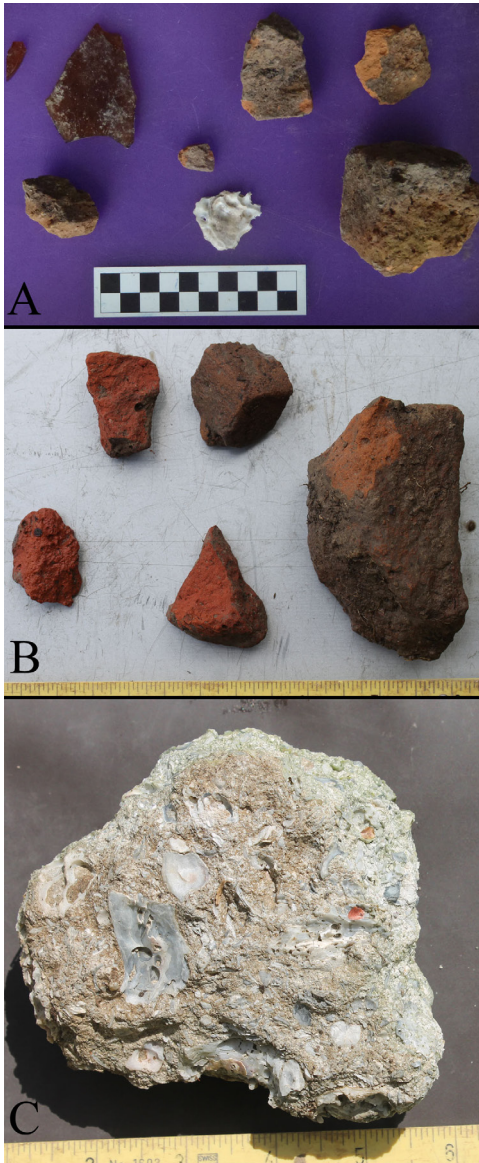


Figure 6.7. Artifacts observed during shovel testing: A) brown, possibly handblown, vessel glass shards, red and orange paste brick fragments, and oyster shell excavated from ST RF03; B) red and orange paste brick fragments excavated from ST DS04; and C) tabby-like building material recovered from the surface near ST DS05.

Archeologists excavated BHS5 within what appeared to be a graded and maintained portion of the ROW to assess the potential for site components within those areas. The scrape measured 2.7 meters in length, 2.3 meters in width, and extended to a depth of 55 cmbs (**Figure 6.8**). The soil profile consisted of very dark brown (10YR 2/2) clay loam containing crushed oyster shell and calcium carbonate gravels characteristic of road base or fill (0–25 cmbs). This overlay brownish yellow (10YR 6/6) silty loam containing roots (25–29 cmbs), overlying black (10YR 2/1) mottled clay. These results, coupled with those from the shovel tests, indicated that any cultural bearing deposits once located within the maintained ROW and APE have been removed and, in some cases, replaced with road fill.

Backhoe Scrape 6 (BHS6) was also negative. This scrape was placed to help delineate the southern boundary of Site 41GV53 within the existing ROW. Excavation began against the barbed wire fence along the edge of the ROW. The trench measured 3.5 meters in length, 2.1 meters in width, and

Table 6.2. Backhoe Scrapes Excavated during Field Investigations.

BHS No.	UTM	Length (m)	Width (m)	Depth (m)	Pos/ Neg
BHS1	0297247E; 3268682N	4.2	2.1	0.4	P
BHS2	0297232E; 3268665N	3.5	2.1	0.3	P
BHS3	0297397E; 3268498N	2.2	2.1	0.4	P
BHS4	0297406E; 3268480N	1.2	2.0	0.3	P
BHS5	0297233E; 3268698N	2.7	2.3	0.55	N
BHS6	0297274E; 3268647N	3.5	2.1	0.3	N



Figure 6.8. Overview of BHS5, photographed facing southwest.

extended to a depth of 30 cmbs (**Figure 6.9**). The soil profile within BHS6 consisted of dark grayish brown (10YR 4/2) silty loam interlaced with roots (0–25 cmbs) overlying yellowish brown (10YR 5/4) silty clay (25–30 cmbs). Although soils closest to the edge of the ROW appeared to be relatively undisturbed from road construction and maintenance, no cultural materials were observed within BHS6.

Details of backhoe scrapes exposing components of Sites 41GV53 and 41GV152 will be described in the following chapter.



Figure 6.9. Overview of BHS6, photographed facing northeast.

CHAPTER 7

ASSESSMENT OF SITES 41GV53, 41GV78, AND 41GV152

SITE 41GV53

As was mentioned in Section 3.3, Site 41GV53 was previously recorded as a Late Prehistoric and Neo-American shell midden. Following the construction of FM 270, the site was bisected into two areas: A and B. Current field investigations focused on those site components affiliated with Area B. Site components were observed within BHS1, BHS2, and one shovel test (RF06), placed along the outer 1.2 meters of the existing ROW. Site components included a large *Rangia* clam shell midden containing faunal remains, Goose Creek Plain ceramic sherds, and lithic debitage.

BACKHOE SCRAPE 1

Backhoe Scrape 1 (BHS1) was excavated just south of Clear Creek (see Figure 6.3) at the top of a natural knoll that rises above the marsh lying along the banks of Clear Creek. BHS1 was situated within the boundaries of Site 41GV53 along the outer edge of the existing FM 270 ROW. Excavation began against the barbed wire fence separating the existing ROW and the Clear Creek Nature Preserve. The trench measured approximately 4.2 meters in length, 2.10 meters in width, and extended to a depth of 40 cmbs (**Figure 7.1**). Excavations of BHS1 ended once sterile subsoil was encountered. The soil profile within this backhoe scrape revealed a dense shell midden consisting of very dark grayish brown (10YR 3/2) silty clay loam (0–35 cmbs) containing a *Rangia* clam midden overlying reddish brown (2.5YR 5/4) mottled yellowish gray clay. Clam shell density dropped drastically in this lower zone. The observed shell midden is located just below the surface and is thickest closest to the barbed wire fence before thinning out toward the roadway where no natural soil remains. The midden contains dense *Rangia* clam shell, faunal remains consisting of small to medium sized game animals (e.g., deer and turtle; n=10+; **Figure 7.2**), and Goose Creek Plain, sandy paste ceramic sherds (n=10+; **Figure 7.3**).

BACKHOE SCRAPE 2

Backhoe Scrape 2 (BHS2) was excavated approximately 17 meters south of BHS1 (see Figure 6.3). Like BHS1, BHS2 was situated within the boundaries of Site 41GV53. Excavation of the trench began against the barbed wire fence separating the existing ROW and the Clear Creek Nature Preserve where intact soils exist. The trench measured approximately 3.5 meters long, 2.1 meters wide, and extended to a depth of 30 cmbs (**Figure 7.4**). Excavation of BHS2 stopped once sterile soils were encountered. The soil profile within this backhoe trench



Figure 7.1. Overview of BHS1, photographed facing northeast.



Figure 7.2. Sample of faunal remains recovered from BHS1: A) tooth and vertebra; and B) *Rangia* shell.



Figure 7.3. Sample of ceramic sherds recovered from BHS2. A cross section illustrating the temper is depicted in the upper left hand corner of the figure.



Figure 7.4. Overview of BHS2, photographed facing northeast. Note the intact deposits indicated by the yellow arrow. As you move southwest towards FM 270, away from the Clear Creek Nature Preserve, artificially levelled and mottled sediments are prevalent, indicated by the red arrow.

consisted of dark grayish brown (10YR 3/2) silty clay loam (0–30 cmbs) with roots overlying pale yellow (2.5Y 7/4) mottled clay (30+ cmbs). The upper 30 cmbs contained an abundance of *Rangia* clam shell, ceramic sherds, faunal remains, and lithic debitage. From a small sample of screened sediment, archeologists identified faunal remains consisting of small to medium sized game mammals (e.g., deer; n=10+), Goose Creek Plain, sandy paste ceramic sherds (n=7+), and lithics (n=3). Lithics included a cortical flake, a tested cobble, and a possible exhausted flake core (**Figure 7.5**). Like BHS1, BHS2 demonstrated a narrow (ca. 1.5 meter) band of intact site components along the outer edge of the ROW, however, further into the maintained ROW and closer to the existing roadway, all native soils have been stripped away with no evidence of Site 41GV53 (see Figure 7.4).

The site's eligibility within the existing ROW was deemed ineligible. However, current investigations suggest that a narrow band (ca. 1.2 meters) of intact deposits associated with Site 41GV53 exist within the ROW, though much of what remains of the site probably lies within the Clear Creek Nature Preserve. Based on the density and variety of cultural materials, these remains could be significant and a contributing element to Site 41GV53's eligibility for listing in the NRHP or as a SAL. However, it should also be noted that the

proposed shared use path will largely avoid any intact portions of the site within the existing ROW. According to the project's schematics (see Appendix) the shared use path will abut the existing roadway for the majority of its length, thus avoiding site components.



Figure 7.5. Lithic debitage observed in BHS2.

SITE 41GV78

Site 41GV78 was first recorded as a Prehistoric shell midden. The site measured approximately nine meters in diameter and extended below the surface to a depth of approximately 30 centimeters. Archeologists observed major disturbances within the previously recorded site area (see Figure 5.2C). These disturbances include the construction and widening of FM 270, as well as the construction of a huge fill section for the Clear Creek bridge, both of which overlie the site area. These disturbances have left no potential for intact remains associated with the site. Thus, archeologists believe Site 41GV78 to be completely destroyed and as a result no subsurface testing was deemed warranted at the time of field investigations.

SITE 41GV152

Site 41GV152 was originally recorded as the remains of a historic period structure once situated on two naturally occurring sandy mounds. In addition to the structural remains—which included bricks, mortar, and square nails—site recorders also observed domestic debris including glass, ceramics, a belt buckle, and a china button. The cultural materials were observed 5 to 40 cmbs and were reportedly overlying oyster shell. Original site recorders also noted that artifacts were less prolific away from the mounded areas. According to site records the site measures 44 x 110 meters and is bisected by FM 270's ROW.

Current field investigations at Site 41GV152 were confined to the existing FM 270 ROW and involved visual inspection, shovel testing, and the excavation of two backhoe scrapes (BHS3 and BHS4). Visual inspection revealed brick fragments and tabby-like mortar scattered along the outside edge of the ROW and extending onto the Clear Creek Nature Preserve outside of the existing ROW. Shovel testing within the mapped site area also resulted in two positive shovel tests containing brick fragments, one hand-blown brown glass shard and oyster shell in the upper 50 centimeters. Two backhoe scrapes were placed adjacent to the barbed wire fence separating the existing ROW from the Clear Creek Nature Preserve.

BACKHOE SCRAPE 3

BHS3 was situated near the previously recorded Site 41GV152. Excavation of the scrape began against the barbed wire fence separating the existing ROW and the Clear Creek Nature Preserve. The trench measured 2.2 meters in length, 2.1 meters in width, and extended to a depth of 40 cmbs (**Figure 7.6**). Excavation of BHS3 stopped once sterile soils were encountered. The soil profile within this backhoe trench consisted of light gray (2.5Y 7/2) sandy silt (0–40 cmbs) overlying pale yellow (2.5Y 7/4) mottled clay (40+ cmbs). The upper 30 cmbs contained handmade, orange and red paste brick fragments (n=15), one plain porcelain sherd, and burned oyster shell (n=7). No patterning or intact features were observed.



Figure 7.6. Overview of BHS3, photographed facing northeast.



Figure 7.7. Overview of BHS4, photographed facing northeast.

BACKHOE SCRAPE 4

Excavations at BHS4 began against the barbed wire fence separating the existing ROW and the Clear Creek Nature Preserve. The trench measured 1.2 meters in length, 2.0 meters in width, and extended to a depth of 30 cmbs (**Figure 7.7**). Excavation of BHS4 stopped once sterile soils were encountered. The soil profile within this backhoe trench consisted of dark brown (10YR 3/3) loam containing roots (0–10 cmbs) overlying mottled dark yellowish brown and yellowish brown (10YR 4/6 and 5/8) clay loam (10–20 cmbs) overlying grayish brown (10YR 5/2) silty clay loam (20–30 cmbs). The upper 10 cmbs contained handmade orange and red paste brick fragments (n=7) and a hand-blown olive glass wine bottle base fragment (n=1; **Figure 7.8**). No patterning or features were observed within the scraped area.

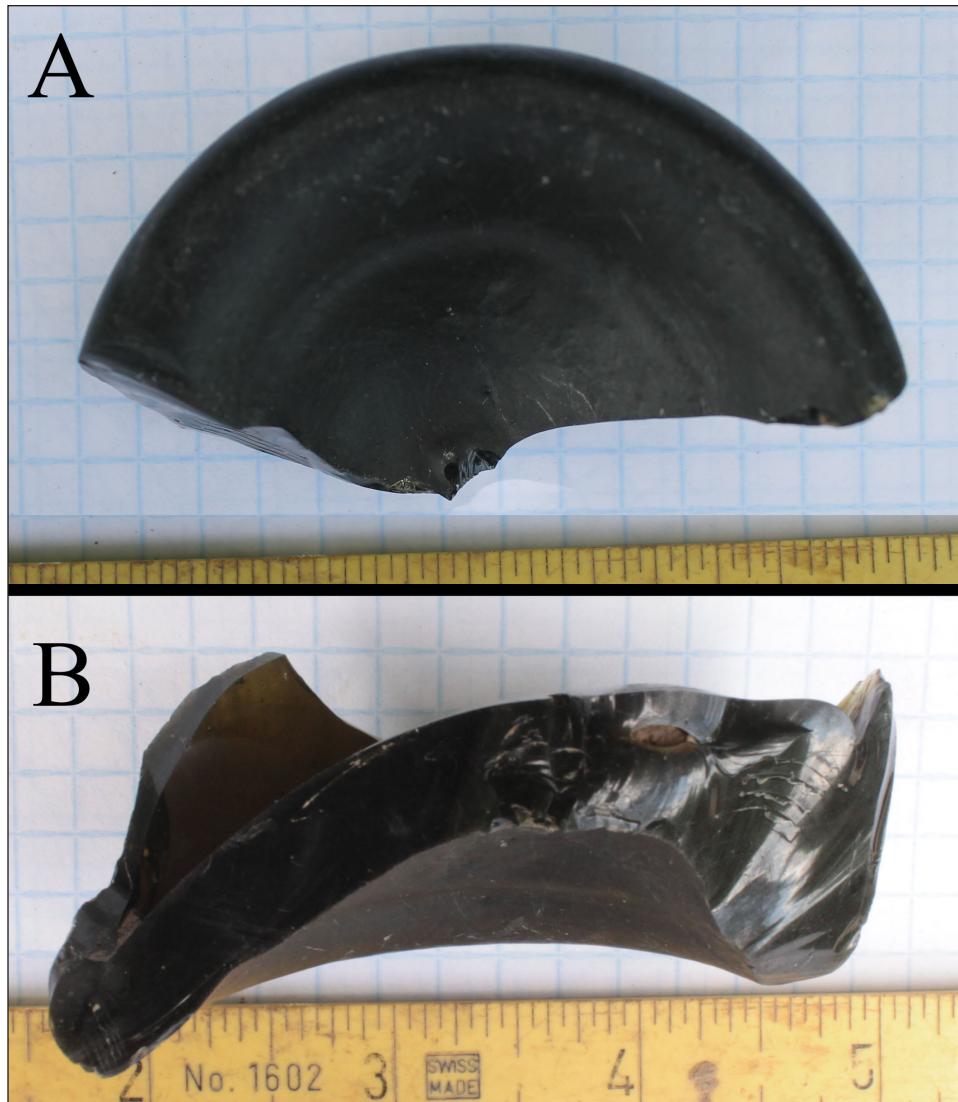


Figure 7.8. Olive vessel glass fragment excavated from BHS4: A) base of vessel; and B) profile of vessel fragment.

No patterning of the artifacts exists to indicate the presence of any intact features within the existing ROW, and observations from the fence suggest that more intact components of the site could exist outside the existing ROW and within the Clear Creek Nature Preserve. Handmade bricks and hand-blown bottle glass generally suggest that the site could date to the mid to late nineteenth century.

Although deed research was conducted to possibly illuminate the history of ownership and land use of this area, researchers were not able to determine who owned the property between 1843 and 1893. What is known is that the land was patented to heirs of Stephen F. Austin in 1830 and sold to James Perry in 1843 (GCDR. C/119). After that, the chain of title breaks. However, it is known that the area encompassing Site 41GV152 was subdivided by J. C. League in 1893 as Division A, Lots of League City (described in GCDR. 2533/543). Sometime after that, Waters Davis, Sr., a resident of Galveston City,

acquired the land, which remained in the Davis family until 112.59 acres were sold to the City of League City in 2002 (GCRR 3559/016-47-2347). The Davis family likely never lived on this property, as neither the 1932 topographical map, the 1939 Galveston County highway map, nor historic aerial photographs, show any structures at this location. Thus, the remains representing the site may relate to a residence that pre-dates the League City subdivision.

The site's eligibility is currently "undetermined." However, the current study suggests that within the existing ROW, Site 41GV152 lacks features, patterning, and a diagnostic artifact assemblage that could contribute to the site's overall eligibility. Thus, AmaTerra recommends that within the existing ROW Site 41GV152 is ineligible for listing to the NRHP or as a SAL.

CHAPTER 8

CONCLUSIONS AND RECOMMENDATIONS

Archeologists from AmaTerra conducted an intensive area survey of the Texas Department of Transportation's (TxDOT) proposed 1.1-mile long bicycle and pedestrian shared use path along FM 270 in League City, Harris and Galveston Counties, Texas. The survey consisted of fifteen shovel tests and six backhoe trenches near two previously recorded archeological sites: 41GV53 and 41GV152. The survey did not document any newly recorded archeological sites; however, both Sites 41GV53 and 41GV152 were revisited, and cultural materials affiliated with both sites were identified within the existing ROW, though not within the footprint of the proposed share use path.

The artifacts observed within BHS1, 2, 3, and 4 were all situated adjacent to or within 1.2 meters of the barbed wire fence denoting the boundary between the existing FM 270 ROW and the Clear Creek Nature Preserve Park. Disturbances affecting the archeological integrity of the proposed APE (that is, the actual footprint of the shared use path) include buried utilities, culverts, berms, drainage ditches, paved surfaces, a perched water table, and road fill.

Those artifacts affiliated with Site 41GV53 consist of *Rangia* clam shell, faunal remains, Goose Creek Plain ceramic sherds, and lithic debitage that make up a large shell midden. The artifacts and features associated with the site are in context and undisturbed at the outermost edge of the existing ROW and appear to extend outside the existing ROW onto the Clear Creek Nature Preserve for an unknown distance. Previous investigations documented human remains at the site, but the current investigations did not uncover any such remains within the existing ROW. AmaTerra recommends that intact deposits associated with Site 41GV53 at the edge of the ROW and on the Clear Creek Nature Preserve may be eligible for NRHP/SAL listing. However, within the actual footprint of construction (see Appendix), there is no evidence that artifacts, features, or deposits relating to Site 41GV53 are intact. Therefore, AmaTerra recommends that no further work at Site 41GV53 within the proposed project footprint is warranted, as long as intact site deposits can be avoided.

Artifacts affiliated with the historic Site 41GV152 include the red and orange paste handmade brick fragments, burned oyster shell, tabby-like building materials, and potentially hand-blown glass shards representing a mid to late nineteenth century occupation locale. The artifacts within the FM 270 ROW do not show any signs of patterning and are likely no longer in their original context. Like Site 41GV53, Site 41GV152 probably extends outside the ROW and onto the Clear Creek Nature Preserve. AmaTerra recommends that the overall NRHP/SAL eligibility of Site 41GV152 is still undetermined, but that within the FM 270 ROW, there are no archeological deposits that could contribute to eligibility. Hence, no further work is recommended at Site 41GV152 within the ROW.

Site 41GV78, which was also recorded within the existing ROW, is completely destroyed with no potential for intact deposits, and therefore, no further work at this site is warranted. Furthermore, no new sites were documented in the APE of the shared use bike path, which is generally characterized by extensive landscape modifications resulting from road construction and maintenance, utility corridors, and the hot water canal.

AmaTerra recommends project related activities be confined to maintained portions of the existing ROW. AmaTerra also recommends that TxDOT takes steps towards avoiding the outermost two meters of the existing ROW where the project passes through intact portions of Site 41GV53. If avoidance is not feasible, then monitoring or formal eligibility testing of the archeological deposits associated with Site 41GV53 may be warranted. If the footprint, size, or scope of the project changes, AmaTerra must be contacted prior to construction. Also, for in the event that unanticipated cultural materials and/or human remains are uncovered during construction, all project-related construction should cease and TxDOT should be contacted. This project was conducted under Antiquities Permit No. 6912. All project records, photos, and documents will be curated at TARL.

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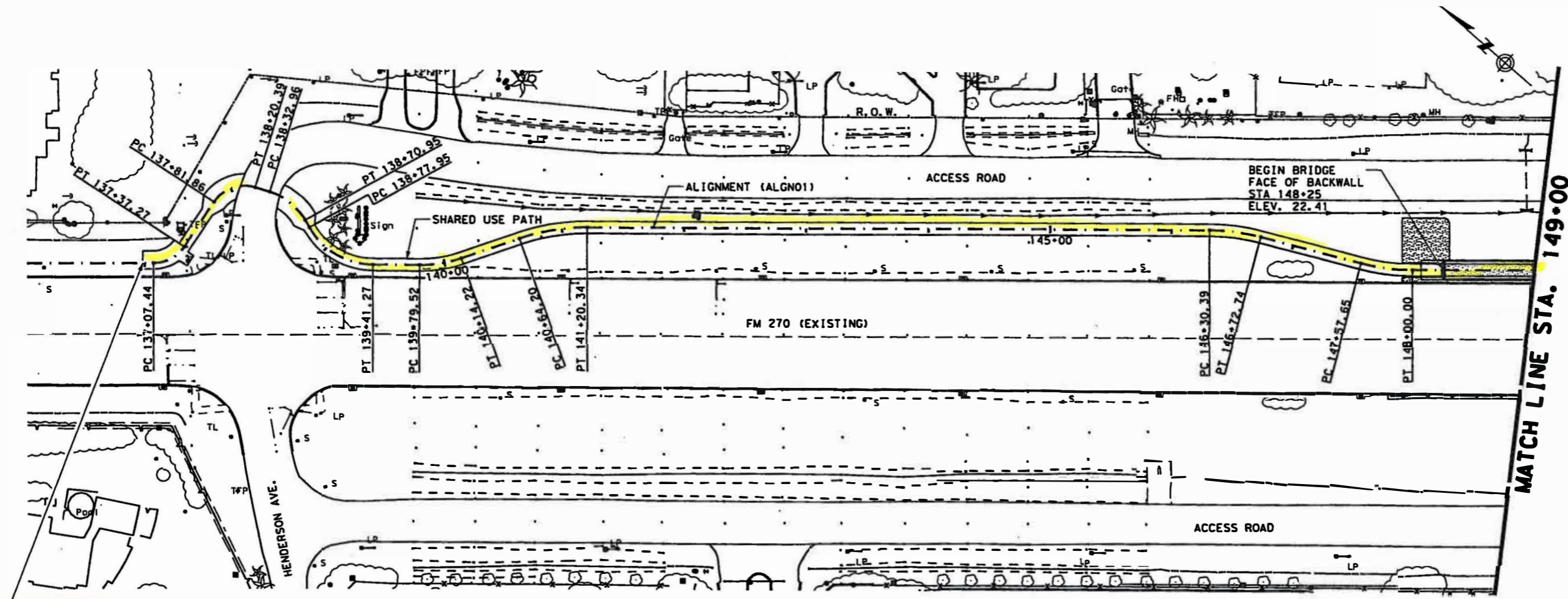
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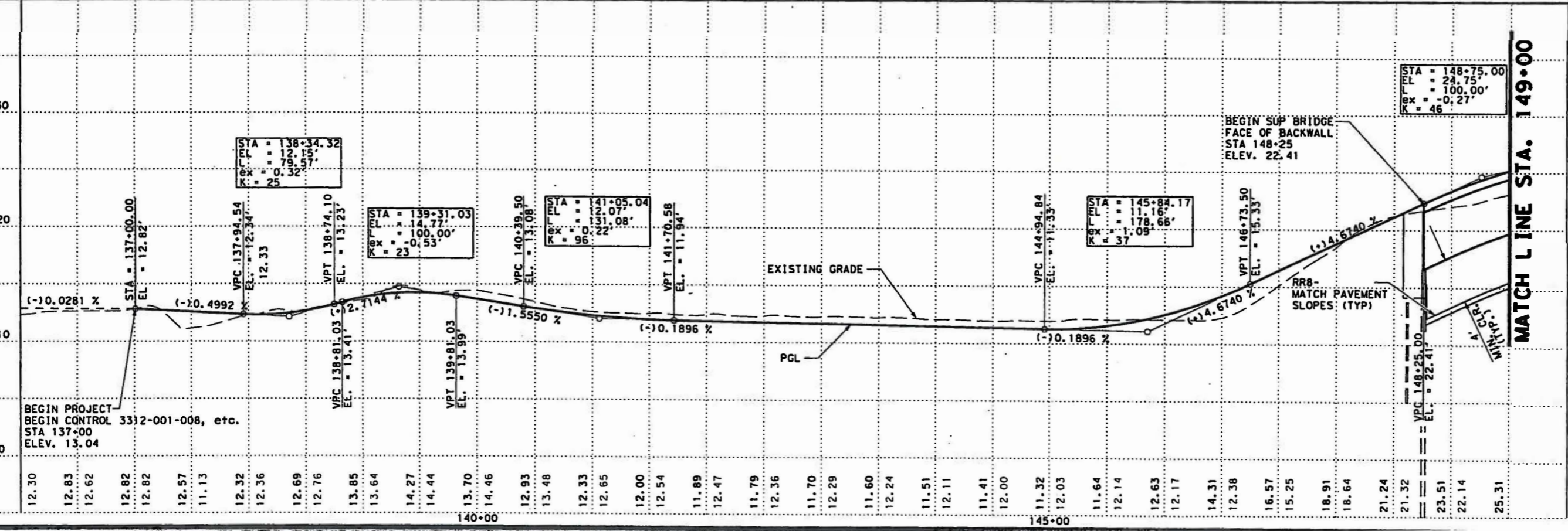
APPENDIX

PROJECT SCHEMATICS



BEGIN PROJECT
 BEGIN CONTROL 0912-001-008, etc.
 STA 137+00
 ELEV. 13.04

MATCH LINE STA. 149+00



BEGIN PROJECT
 BEGIN CONTROL 3312-001-008, etc.
 STA 137+00
 ELEV. 13.04

BEGIN SUP BRIDGE
 FACE OF BACKWALL
 STA 148+25
 ELEV. 22.41

STA = 148+75.00
 EL = 24.75'
 RFX = 100.00'
 K = 46

MATCH LINE STA. 149+00

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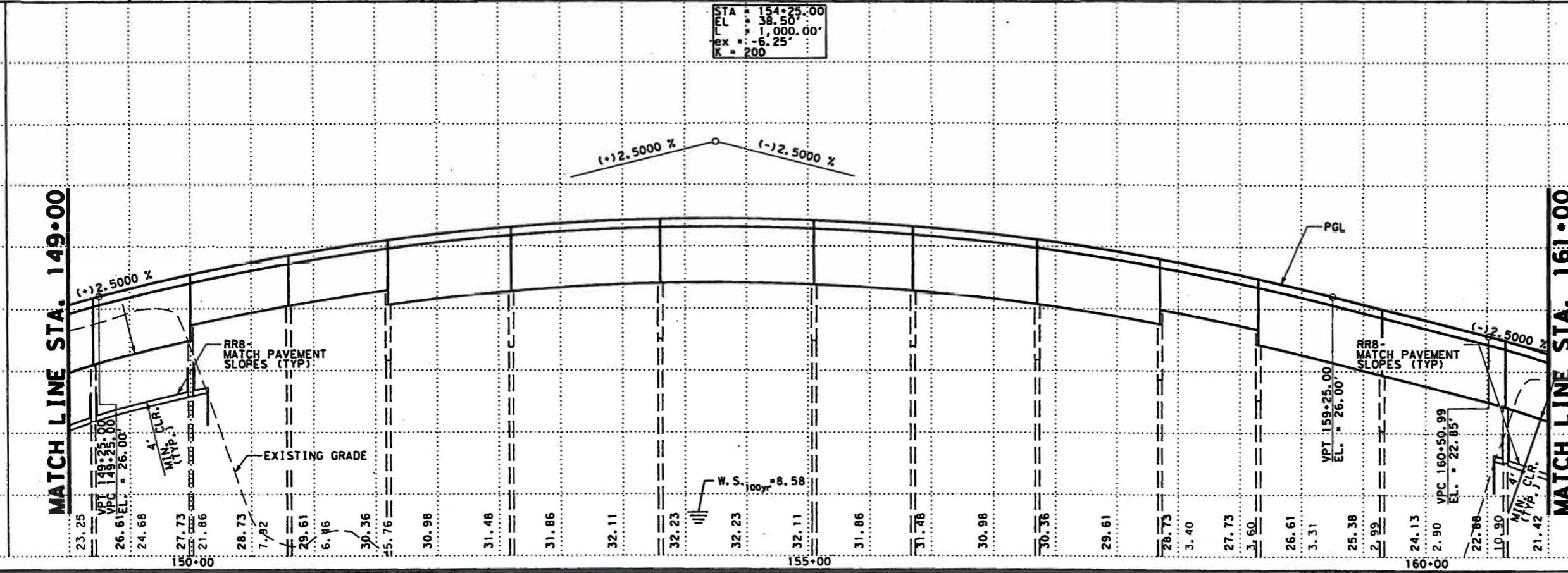
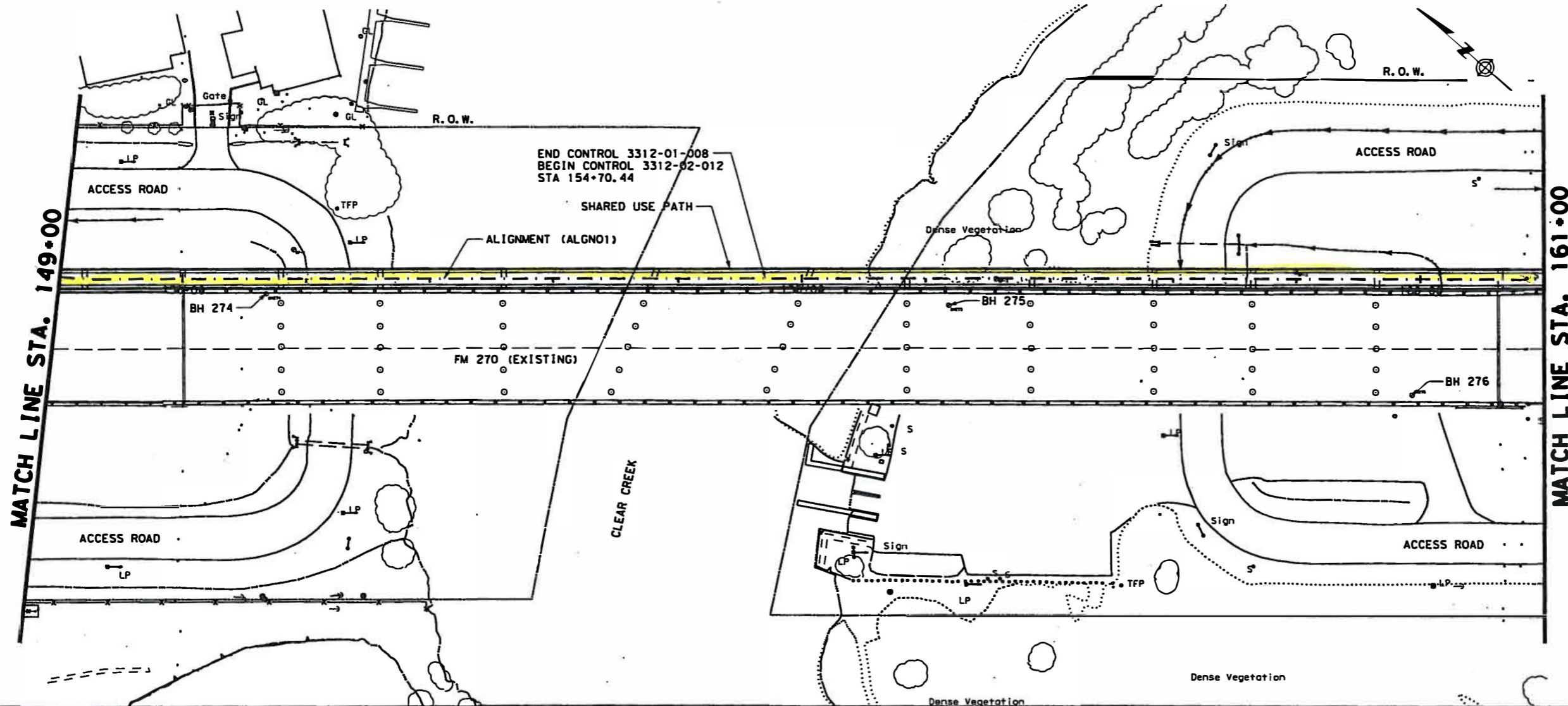
**FM 270
 SHARED USE PATH
 (BICYCLE & PEDESTRIAN)**

PLAN AND PROFILE

SCALE: 1"=100' HORIZ
 1"=10' VERT

Texas Department of Transportation
 SHEET 1 OF 6

STATE	DISTRICT	COUNTY
TEXAS	12	HARRIS
CONTROL	SECTION	JOB ROADWAY
3312	01	008, etc. FM 270



STA = 154+25.00
 EL = 38.50'
 L = 1,000.00'
 ex = -6.25'
 K = 200

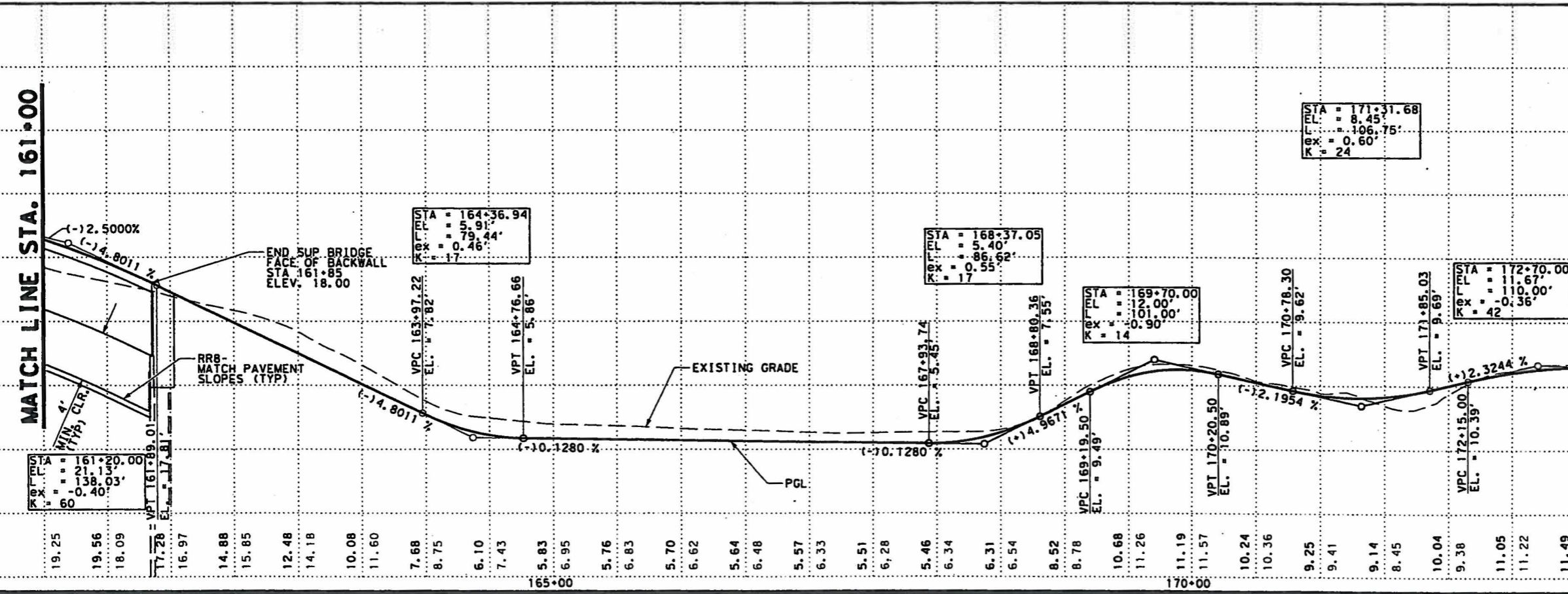
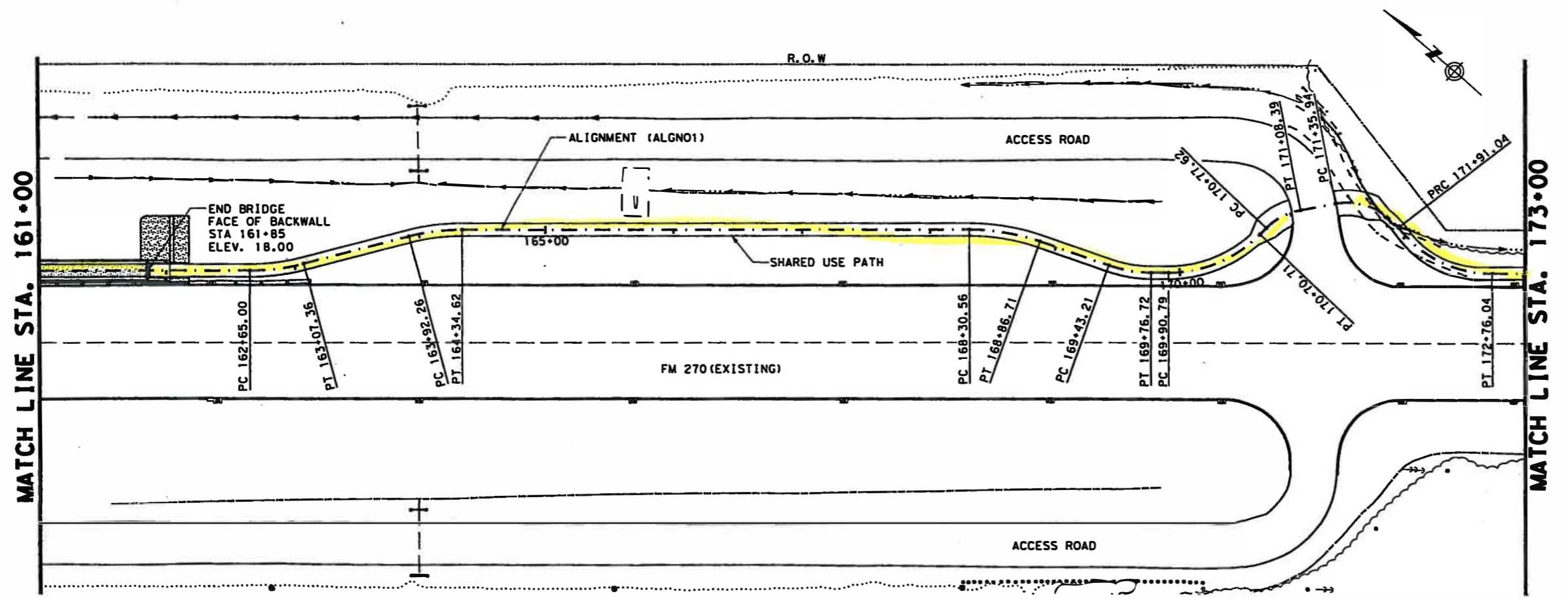
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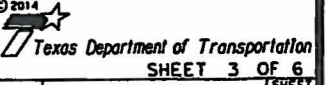
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SHEET 3 OF 6

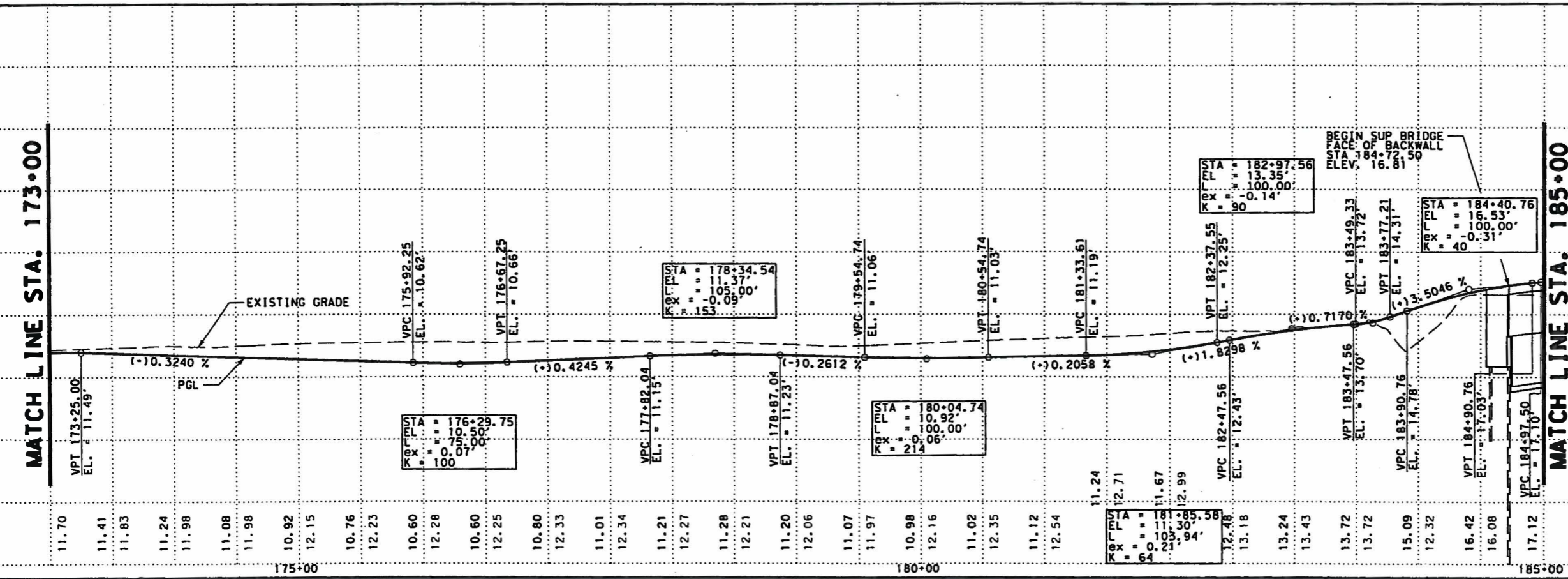
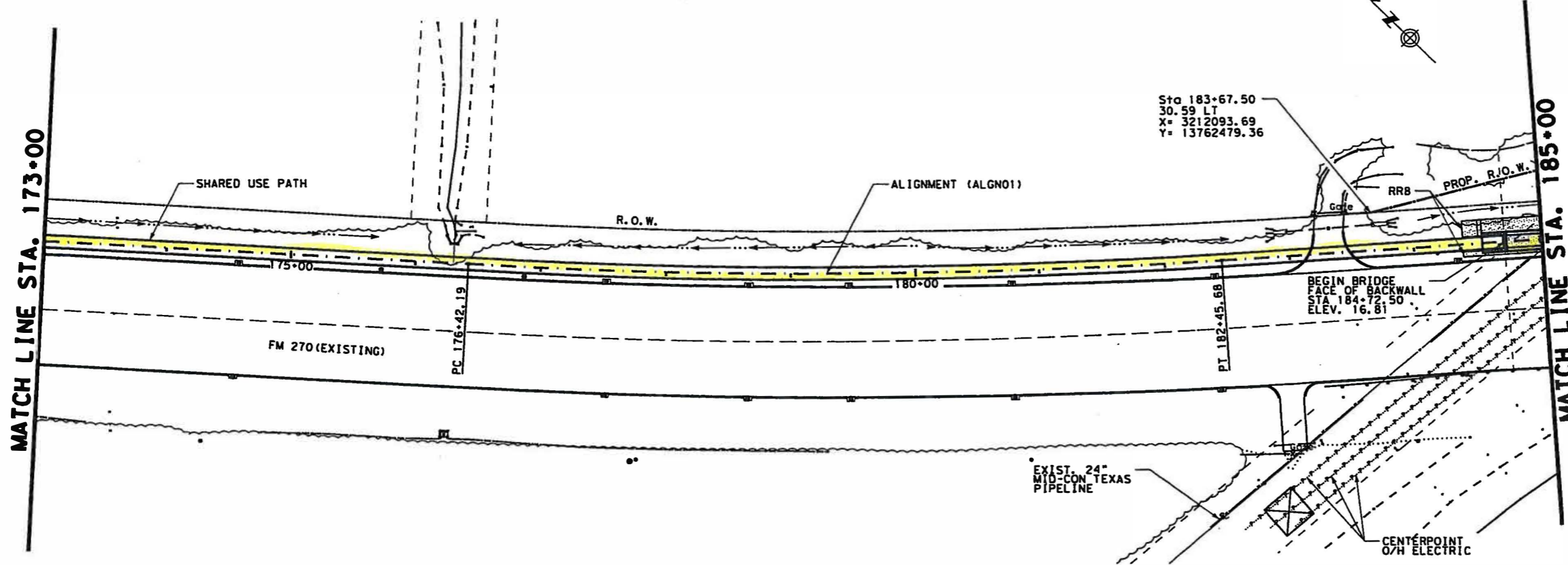
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MATCH LINE STA. 173+00

MATCH LINE STA. 185+00

MATCH LINE STA. 185+00



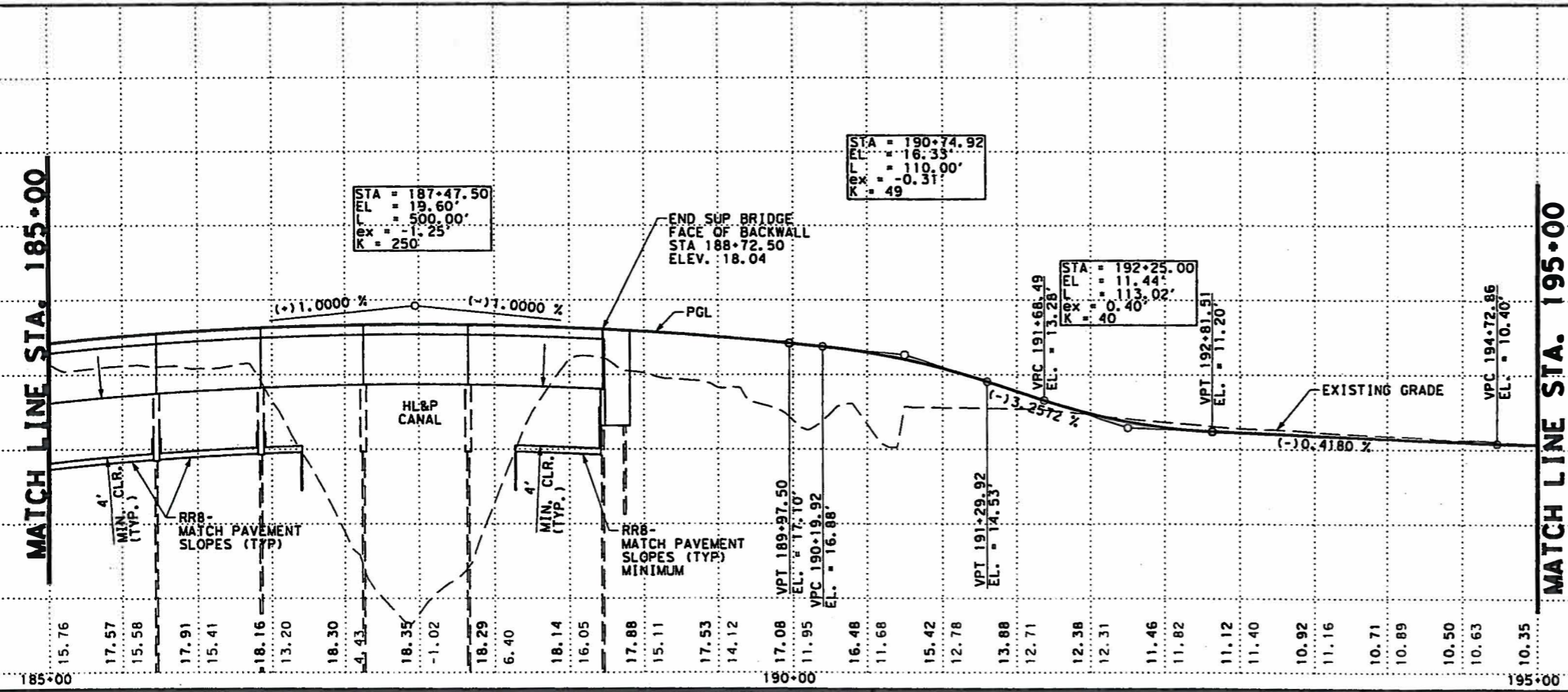
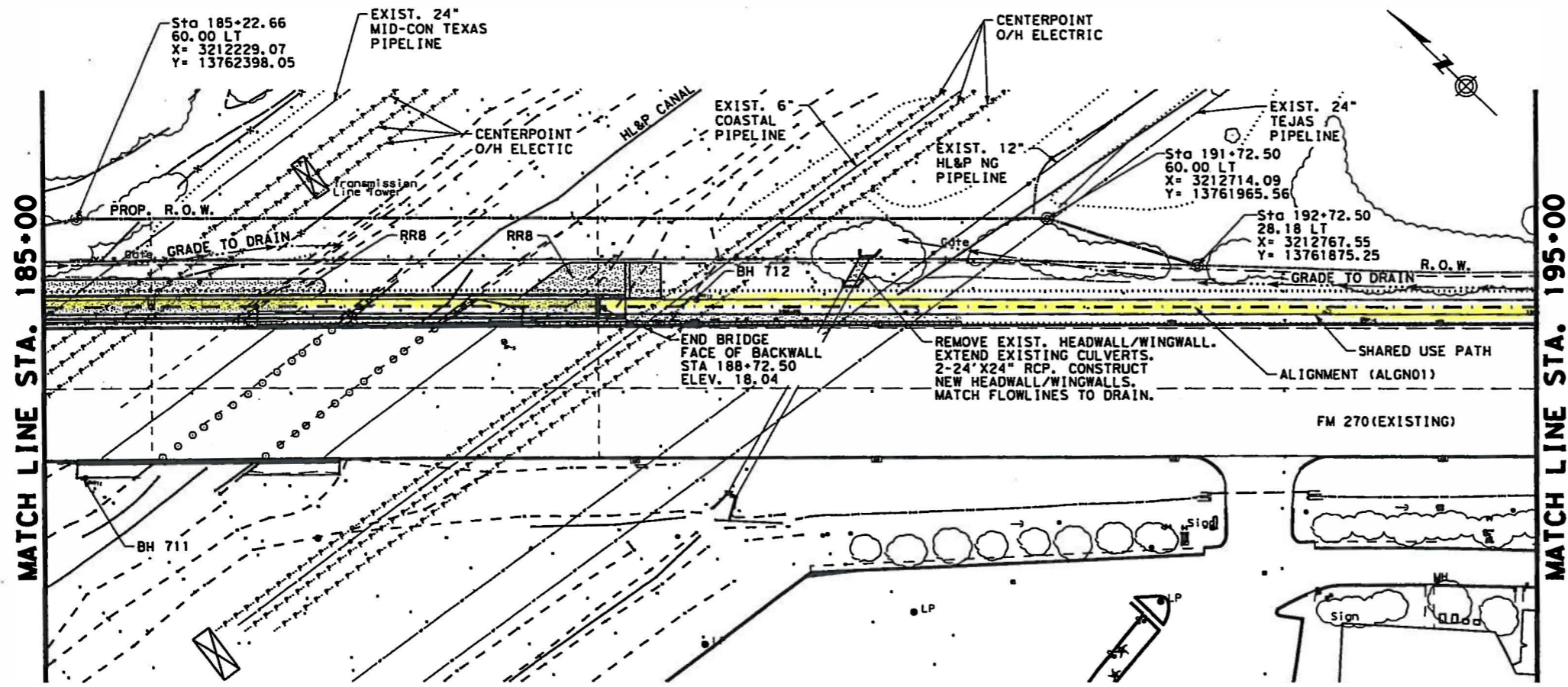
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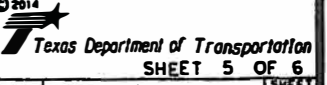
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CONTROL	SECTION	JOB
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		FM 270



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 PLAN AND PROFILE

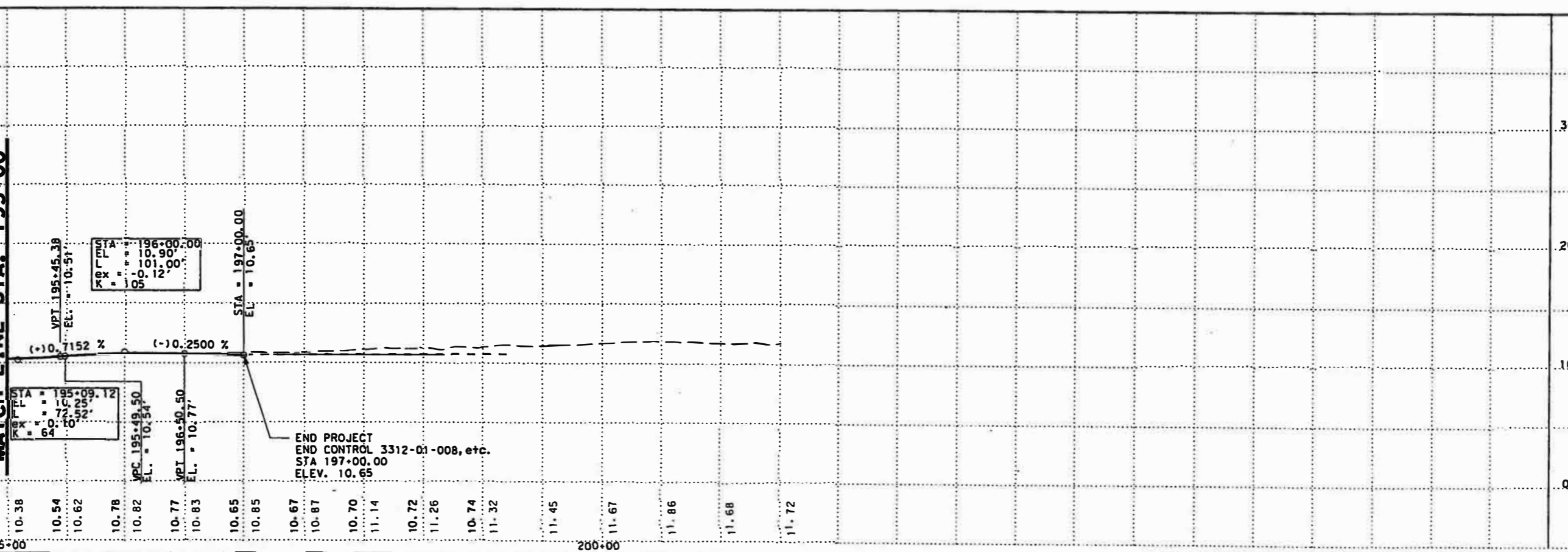
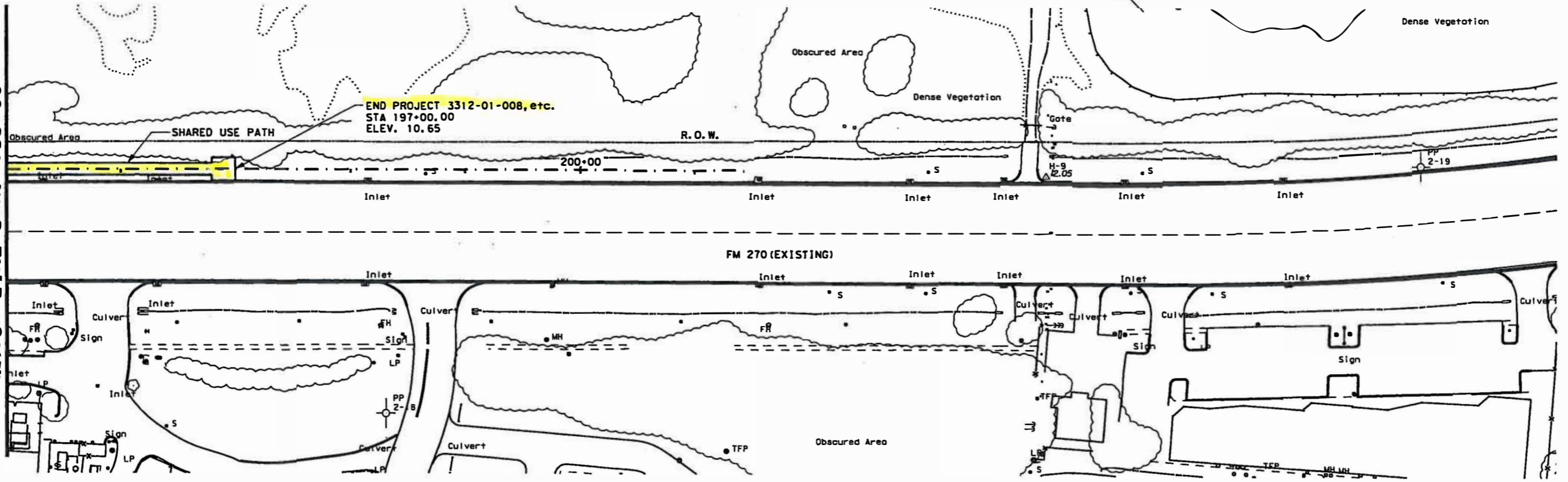
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MATCH LINE STA. 195+00



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 1" = 10' VERT

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 SHEET 6 OF 6

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Technical Report No. 94

AmaTerra Project No. 233-004