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## Cultural Resources Survey of Four Frio County Bridges, Frio County, Texas

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## Cultural Resources Survey of Four Frio County Bridges, Frio County, Texas

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## **Cultural Resources Survey of Four Frio County Bridges, Frio County, Texas**

Prepared for

**Texas Department of Transportation**

Prepared by

**SWCA Environmental Consultants**

Texas Antiquities Permit 4402

SWCA Cultural Resource Report No. 07-66

January 2015





**CULTURAL RESOURCES SURVEY OF FOUR FRIO COUNTY BRIDGES,  
FRIO COUNTY, TEXAS**

Submitted to

**TCB INC.**

6800 Park Ten Blvd., Suite 180-S  
San Antonio, Texas 78213

Prepared for

**TEXAS DEPARTMENT OF TRANSPORTATION**

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Prepared by

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Principal Investigator

Kevin A. Miller

Texas Antiquities Permit 4402

SWCA Project Number 12178-143-AUS

SWCA Cultural Resources Report No. 2007-66

January 2015



## ABSTRACT

Cultural resources investigations were conducted by SWCA Environmental Consultants (SWCA) on behalf of TCB INC. and Texas Department of Transportation (TxDOT) for four proposed bridge replacements in Frio County, Texas. The investigations were conducted under Texas Antiquities Permit 4402. The cultural resources investigations were designed to identify and evaluate any archaeological sites eligible for listing on the National Register of Historic Places (NRHP) or that might warrant designation as a State Archeological Landmark (SAL).

The proposed undertaking entails the replacement and rehabilitation by TxDOT of four bridge crossings that include: 1) two bridges along Peck-Bush Road at San Miguel Creek; 2) one bridge along Applewhite Lane at Mustang Creek; and 3) one bridge along Andy Sadler Road at Live Oak Creek. SWCA investigations included a background literature and records review and an intensive pedestrian survey of the project area. All individual project locations were limited to existing right-of-ways. The area of potential effects for the four bridge replacements typically consists of 100 m along each approach with a typical vertical depth of 4 feet. Work near the bridge crossings may entail cutting the banks at the crossing to a depth of 10 feet for a distance of 25 feet from the existing edge of the banks.

The background literature and records review revealed that no archaeological sites have been documented within or immediately adjacent to the bridge replacement project areas. Only the Applewhite Lane at Mustang Creek crossing has any previously recorded sites (41FR25, 41FR40, and 41FR44) within 1.5 miles of the project area. The current proposed project will not impact any of the previously recorded sites.

SWCA's intensive survey did not encounter any evidence of cultural materials on the surface or subsurface at any of the three project areas. Therefore, no cultural resources will be affected by the proposed projects. Additionally, a visual inspection was conducted for the portions extending beyond 25 feet beyond the ROW along both sides of the road in each of the project areas. Aside from an isolated flake and a few possible burned rocks outside the Peck-Bush Road at San Miguel Creek APE, no cultural materials were observed.

In accordance with 36 CRF 800.4, SWCA has made a reasonable and good faith effort to identify archeological historic properties within the APE of the proposed undertaking. The proposed replacement of the four bridges in Frio County will impact previously disturbed areas with no significant cultural properties. Thus, the proposed project will not affect any cultural resources. As no properties were identified that meet the criteria for listing in the NRHP according to 36 CFR 60.4 or for designation as an SAL according to 13 TAC 26.12, SWCA recommends no further archaeological investigations for these project areas.

No artifacts were collected. Therefore, nothing was curated.

## MANAGEMENT SUMMARY

**PROJECT TITLE:** Cultural Resources Survey of Four Frio County Bridges, Frio County, Texas.

**SWCA PROJECT NUMBER:** 12178-143.

**PROJECT DESCRIPTION:** The project included a background literature and records review for previously conducted cultural resources surveys and recorded sites and an intensive pedestrian survey augmented with shovel testing and trenching for the proposed replacement of four rural Frio County bridges.

**LOCATION:** The project is comprised of four bridge replacement at three project area locations in Frio County. One project area encompasses the two bridges on Peck-Bush Road at the San Miguel Creek crossings located about 5 miles northwest of the intersection of Farm-to-Market (FM) 140 and FM 472 in eastern Frio County. The Applewhite Lane at Mustang Creek project area is located roughly 1 mile north of the intersection of FM 1582 and County Road (CR) 3871 in southeastern Frio County. The Andy Sadler Road at Live Oak Creek project area is located about 4 miles east of Bigfoot, Texas, near the intersection of CR 2872 and State Highway 173 in northeastern Frio County. These project areas appear on the Shattel NW, Hindes, and Bigfoot 7.5-minute topographic quadrangle maps, respectively.

**NUMBER OF ACRES SURVEYED:** A total of approximately 3 acres.

**PRINCIPAL INVESTIGATOR:** Kevin A. Miller.

**TEXAS ANTIQUITIES PERMIT:** 4402.

**DATES OF WORK:** February 1–2 and 7–8, 2007.

**PURPOSE OF WORK:** Since the construction would involve federal funds from the Federal Highway Administration and state land controlled by the San Antonio District of TxDOT, investigations were conducted in compliance with the Texas Antiquities Code; the National Historic Preservation Act; the First Amended Programmatic Agreement among the FHWA, TxDOT, the Texas State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding the implementation of transportation undertakings, and the Memorandum of Understanding between TxDOT and the Texas Historical Commission.

**NUMBER OF SITES:** None.

**CURATION:** No artifacts were observed. Thus, nothing was curated.

**COMMENTS:** The pedestrian survey utilized shovel testing and trenching in the relatively undisturbed locations of the project areas. No cultural materials were observed on the surface or in the subsurface investigations of the three project areas. Therefore, SWCA recommends that no further archaeological investigations.



## INTRODUCTION

On behalf of TCB INC. and the Texas Department of Transportation (TxDOT), SWCA Environmental Consultants (SWCA) conducted an intensive cultural resources survey of four proposed bridge replacements within three project areas in Frio County, Texas (Figure 1). Two of the bridges are located on Peck-Bush Road at San Miguel Creek, within 0.1 mile of each other. The proposed undertaking entails the replacement and rehabilitation of all these bridges by TxDOT. Since the construction would involve federal funds from the Federal Highway Administration (FHWA) and state land controlled by the San Antonio District of TxDOT, investigations were conducted in compliance with the Texas Antiquities Code; the National Historic Preservation Act; the First Amended Programmatic Agreement among the FHWA, TxDOT, the Texas State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding the implementation of transportation undertakings, and the Memorandum of Understanding between TxDOT and the Texas Historical Commission (THC). The THC issued Antiquities Permit 4402 to SWCA to conduct the cultural resource investigations with Kevin A. Miller serving as the Principal Investigator.

The purpose of the work was to locate all prehistoric and historic archaeological sites in the area of potential effects (APE), establish vertical and horizontal site boundaries as appropriate with regard to the APE, and evaluate the significance and integrity of any sites recorded in the APE for eligibility for listing in the National Register of Historic Places (NRHP) or designation as a State Archeological Landmark (SAL). All work was done in accordance with the standards and guidelines of the Antiquities Code of Texas and the National Historic Preservation Act.

SWCA archaeologists Michael R. Chavez, Josh Gibbs, Ken Lawrence, and Ernest Win-gate conducted the fieldwork on January 7–8, and February 7–8, 2007.

## DEFINITION OF STUDY AREA

The proposed undertaking entails the replacement and rehabilitation of bridges by TxDOT on various roads in Frio County, Texas. The four bridge crossings include: 1) two bridges along Peck-Bush Road at San Miguel Creek; 2) one bridge along Applewhite Lane at Mustang Creek; and 3) one bridge along Andy Sadler Road at Live Oak Creek.

Although some individual project construction areas may be limited to a single approach, the APE for the bridge replacement undertakings will consist of the existing right-of-ways (ROWs) of the bridges and their approaches for a distance 100 meters along each approach. All individual project areas are limited to existing ROWs. However, SWCA will also visually inspect from the ROW an additional 25-foot wide corridor parallel to the ROWs to evaluate and address the potential for adjacent buried and/or significant archeological deposits. All work was conducted on lands owned or controlled by TxDOT.

The vertical depth of impacts has not been specified in detail. However, construction within typical roadway approaches does not impact deposits at depths greater than 4 feet. In addition, work for any required bridge crossings may entail cutting the banks at the crossing to a depth of 10 feet for a distance of 25 feet from the existing edge of the banks.

The bridges at the San Miguel Creek crossing are located about 5 miles northwest of the intersection of Farm-to-Market (FM)

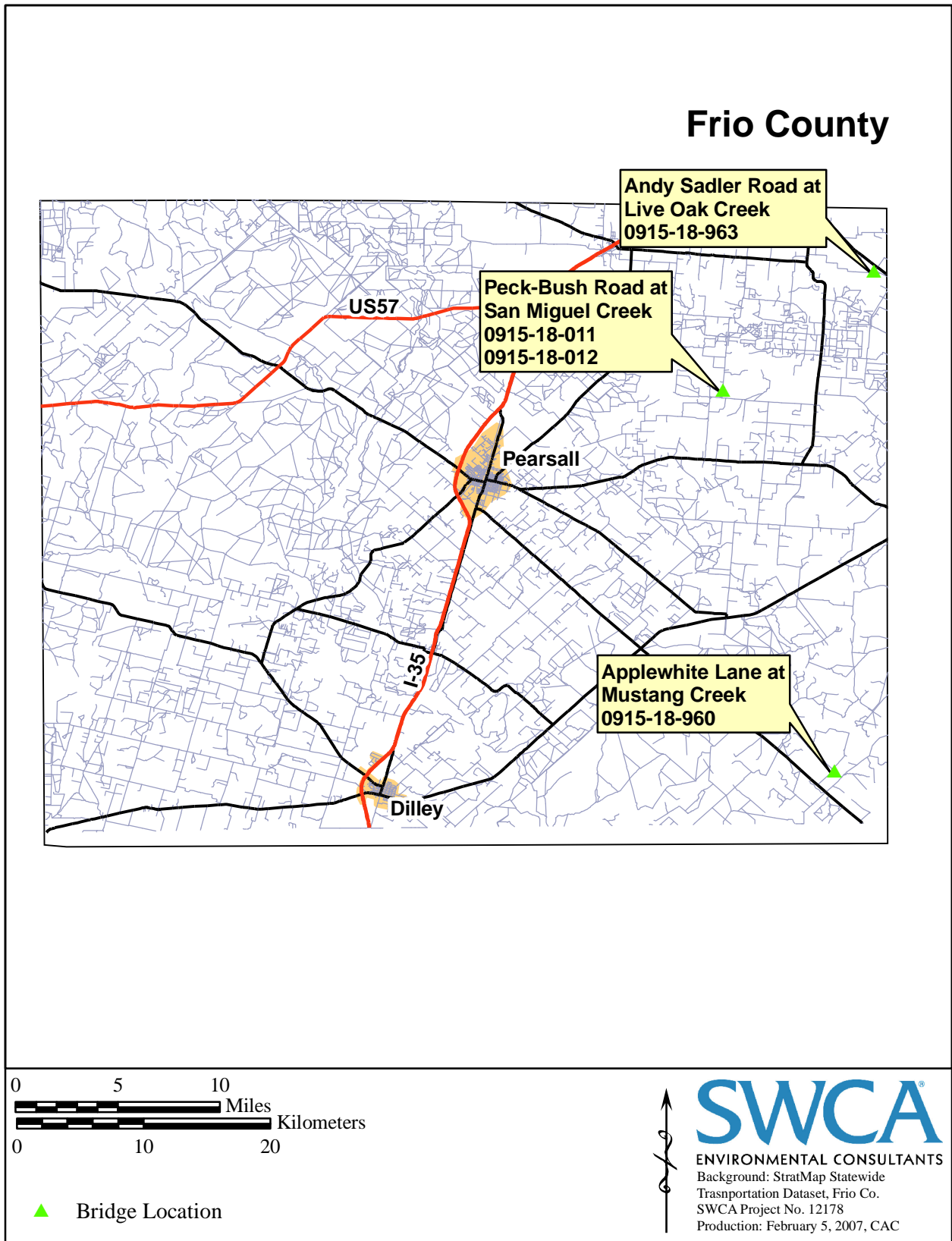


Figure 1. Project location map.

140 and FM 472, just north of the intersection of Sadler Road and Peck-Bush Road (Figure 2). The two bridges are located just downstream of a divergence of the San Miguel Creek, which is a moderate size tributary of the Frio River. The geology of the two creek crossings is mapped as Quaternary-period Alluvium. The alluvial floodplain and low terrace deposits consist of gravel, sand, clay, silt and organic material (Barnes 1976). The soils along San Miguel Creek are mapped as Divot soils that are frequently and occasionally flooded (Gabriel et al. 1992). These soils are described as very deep, loamy soils occupying flood plains along rivers and large creeks with an undulating surface due to braided channels and sloughs (Gabriel et al. 1992).

The project area for the Applewhite Lane at Mustang Creek is located roughly 1 mile north of the intersection of FM 1582 and County Road (CR) 3871 (Figure 3). The project area is situated on Mustang Creek, a small upland drainage that drains into San Miguel Creek before reaching the Frio River. The geology of the crossing is mapped as Eocene age clay and sandstone of the Cook Mountain Formation (Barnes 1976). The soils of the crossing are mapped as occasionally flooded Poteet very fine sandy loam, which are described as very deep, loamy soils found along narrow upland drainage ways, and Amphion sandy clay loam (0–1 percent slopes), which are characterized as very deep, loamy soils that occupy broad plains (Gabriel et al. 1992).

The final project area, Andy Sadler Road at Live Oak Creek, is located about 4 miles east of Bigfoot, Texas, near the intersection of CR 2872 and State Highway 173 (Figure 4). The project area is situated on Live Oak Creek, a small upland drainage that empties into Sestadero Creek, a tributary of the Atascosa River. The geology of the crossing

is mapped as Eocene age sandstone and siltstone of the Queen City Sand Formation (Barnes 1983). The soils at the crossing are mapped as occasionally flooded Poteet very fine sandy loam and Miguel very fine sandy loam (1–3 percent slopes), which is characterized as very deep, loamy soils that occupy broad, smooth plains (Gabriel et al. 1992).

## **METHODS**

### ***BACKGROUND REVIEW***

SWCA conducted a thorough archaeological literature and records search of the three project areas. An SWCA archaeologist searched site files and maps at the Texas Archeological Research Laboratory and the THC's Texas Archeological Sites Atlas, an online database, for any previously recorded surveys and historic or prehistoric archaeological sites located in or near the project areas. In addition to identifying previously recorded archaeological sites, the Atlas review included the following types of information: NRHP properties, SALs, Official Texas Historical Markers (OTHMs), Registered Texas Historic Land Marks (RTHLs), cemeteries, and local neighborhood surveys.

### ***FIELD METHODS***

Each archaeological field survey of the four proposed bridge replacement locations consisted of two SWCA archaeologists walking the entire proposed project areas to determine the nature, extent, and, if possible, potential significance of any cultural resources located within the APE. During the surveys, the archaeologists examined the ground surface and erosional profiles for cultural resources. The primary means of subsurface investigations consisted of shovel testing. However, where deposition exceeded the limits of shovel test excavations, particularly in regards to San Miguel Creek, backhoe



Figure 2. Two bridges at Peck-Bush Road (CR 2400) and Lucas Creek.

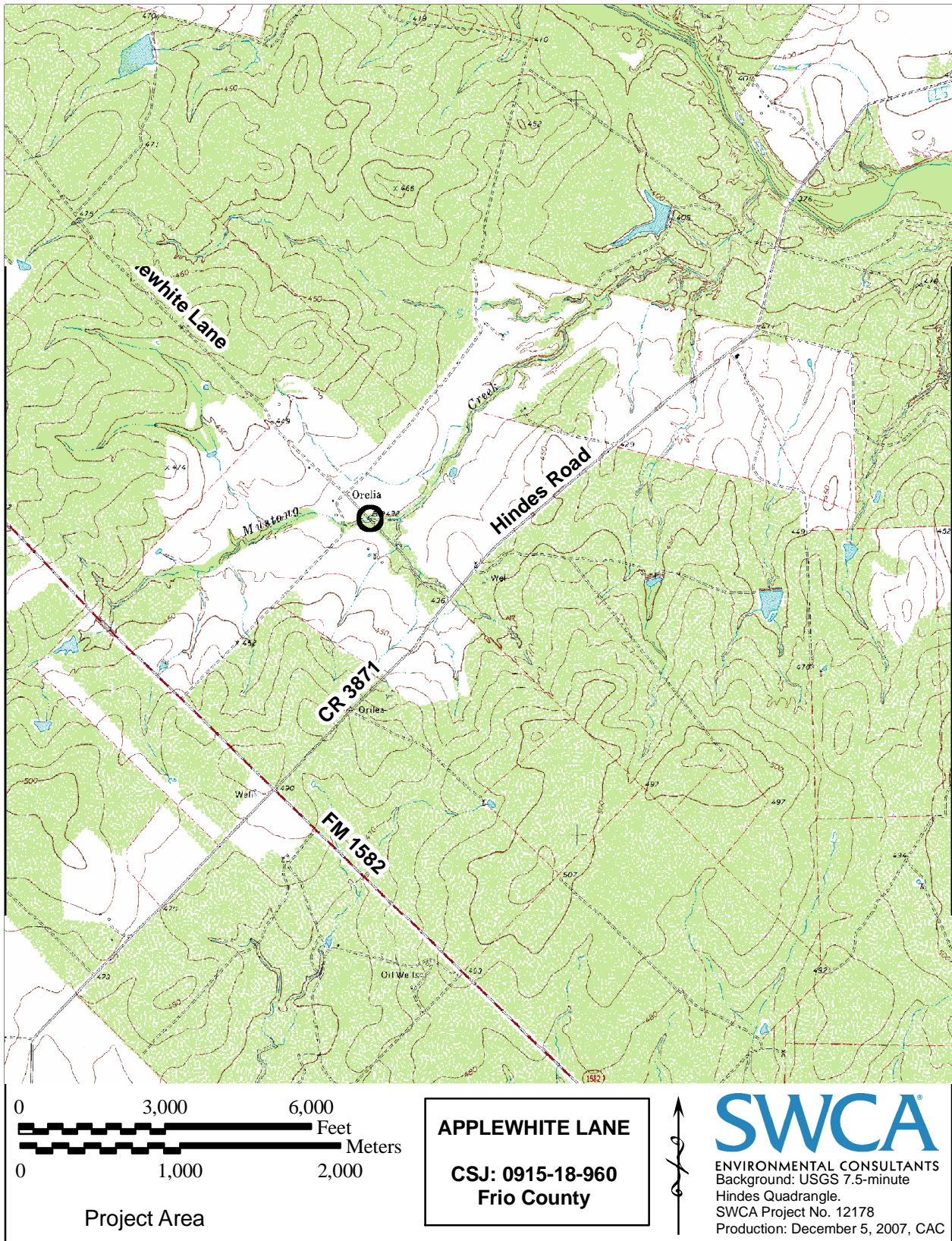


Figure 3. Applewhite Lane at Mustang Creek project location.



Figure 4. Andy Sadler Road at Live Oak Creek project location.

trenching was utilized. The intensive subsurface investigations were limited to relatively undisturbed areas with disturbed portions of the project areas examined at a reconnaissance level only.

The THC's minimum survey standards for 0–2 acre projects are 3 shovel tests per acre. Thus, the Applewhite Lane at Mustang Creek project area (approx. 1-acre) and the Andy Sadler Road at Live Oak Creek project area (approx. 1-acre) required 3 shovel tests at each location. While the Peck-Bush Road at San Miguel Creek project area required 6 shovel tests. However, due to disturbances and upland topography, fewer shovel tests were utilized at the Mustang Creek (one shovel test) and the Live Oak Creek project areas (one shovel test). Due to depositional soils at the San Miguel Creek project area, four shovel tests and five backhoe trenches were utilized.

All shovel tests were excavated until bedrock or a substratum believed to predate human occupation was encountered. Excavated soil was screened through ¼-inch mesh to retrieve any cultural materials that might be present. Each test performed through the course of the survey was documented with standardized shovel test forms and recorded with a handheld GPS, which were subsequently plotted on a map of the project areas.

The backhoe trenches were excavated to a depth sufficient to determine the presence/absence of buried cultural materials and allow the complete recording of all geomorphic information to depths of project impacts. Generally, the trenches were approximately 1.5 m deep, 6 m in length, and 1.5 m wide. All trenching was monitored by an experienced archaeologist while excavations were underway. Stratigraphic profile soil descriptions were recorded for each

trench by an experienced archaeologist. All work was performed in accordance with OSHA standards (29 CFR Part 1926) and the Texas Trench Safety Act (H. B. 1569) and the entire process was thoroughly photographed. All trenches were backfilled and leveled upon completion of excavation and recording.

In addition to the subsurface investigations, the archaeological crew photographed the environment and disturbances during the survey of the project area. Also, all available exposures were examined for the presence of cultural materials.

## **RESULTS**

### ***BACKGROUND REVIEW***

The background review and environmental literature search of the project APE determined that none of the project areas have been surveyed for archaeological resources nor are there any cultural resources documented within or adjacent to the project areas. In addition, there are no NRHP properties, SALS, OTHMs, RTHLs, cemeteries, or local neighborhood surveys within one mile of the project areas. Only the Applewhite Lane at Mustang Creek crossing has any previously recorded archaeological sites within 1.5 miles of the project area; previously recorded sites (41FR25, 41FR40, and 41FR44) are located within 1.5 miles of the crossing. No information was available for 41FR25, which is located roughly 1.5 miles northeast of the crossing.

The nearest archaeological site (41FR40) is 1.0 miles northeast of the Applewhite Lane at Mustang Creek project area. Site 41FR40 was recorded in 2001 as an unknown prehistoric campsite possibly exhibiting several components of occupation on the first terrace above Mustang Creek. The site con-

tains a random scatter of burned rock and lithic debitage exhibiting early to late stage reduction. Cores, scraping tools, and bifacial fragments were also observed. The artifact assemblage was identified as eroding from a road cut about 19 inches (48 cm) below surface. No temporally diagnostic artifacts were observed on the site, no formal recommendations for further work were made, and its eligibility status has not been clearly determined (Atlas, 41FR40 site form).

The next closest archaeological site (41FR44) is 1.3 miles east of the Applewhite Lane and Mustang Creek project area. Site 41FR44 was recorded in 2001 as an unknown prehistoric campsite eroding from a small upland gully. The site contains a sparse amount of diffusely scattered lithic debitage with no predominant stage of lithic reduction recorded. No temporally diagnostic artifacts were observed on the site and no formal recommendations for further work were made, and its eligibility status has not been clearly determined (Atlas, 41FR44 site form).

### ***FIELD SURVEY***

The survey of the four proposed bridge crossing replacements in Frio County, Texas determined that the majority of the project areas are located in upland settings that have been severely disturbed. Aside from the two bridge crossings at San Miguel Creek, the project areas were investigated with minimal shovel testing. Alternatively, the soils at the Peck-Bush Road at San Miguel Creek project area exceeded the limits of shovel tests resulting in the utilization of backhoe trenches to fully assess the potential to contain intact buried cultural materials.

Two SWCA archaeologists conducted the intensive pedestrian survey of the bridge

along Applewhite Lane at Mustang Creek and the bridge along Andy Sadler Road at Live Oak Creek on February 1–2, 2007. The intensive pedestrian survey of the two bridges along Peck-Bush Road at San Miguel Creek occurred on February 7–8, 2007. The results of the investigations of each project area are discussed below.

### **PECK-BUSH ROAD AT SAN MIGUEL CREEK**

The project area encompasses two bridges located along Peck-Bush Road at a divergence of San Miguel Creek. The two crossings are approximately 0.1 mile apart and are located just north of the intersection of Sadler Road (CR 2500) and Peck-Bush Road (see Figure 2). The project area encompasses approximately 2 acres of existing 80 feet wide ROW that includes the road and the two bridges.

The project area is situated in a gently rolling upland while the San Miguel Creek is a minor upland drainage. The project area is predominately cleared ROW with maintained short grasses surrounded by scattered timber (e.g., mesquite, oaks, and elms) just outside the ROW, while the drainage has a riparian corridor with various mixed hardwoods (e.g., elms and oaks). Surface visibility was good, typically 40–60 percent.

Each of the existing bridges consist of a single span concrete beam approximately 40 feet long and 15 feet wide and supported by concrete abutments at the drainage banks (Figure 5). The Peck-Bush roadway runs north to south and consists of a 20-foot wide graded road with no shoulders. The San Miguel Creek drainages, at these crossings, trends northwest to southeast and exhibits 4-foot high cutbanks. At the time of this evaluation, the drainage contained isolated areas of standing water at low points conducive to intermittent flow.





**Figure 5.** Overview of the bridge over the southern San Miguel Creek divergence at the Peck-Bush Road crossing, facing northeast.

Disturbances to the project area include road grading and buried utilities. The road grading has imported chert and limestone gravels from areas south and north of the project area in more upland environments with exposed bedrock gravels. These areas contain abundant surficial gravels and cobbles not observed near the San Miguel Creek crossings. The lack of gravels within the project area is apparent in the trench and shovel test profiles excavated adjacent to the roadway. These profiles revealed a thin layer of disturbed road overburden consisting of the above mentioned gravels over alternating clay loam soils with minimal inclusions (Table 1).

The utilities within the project area include a buried communication line adjacent to the western ROW boundary running parallel with the roadway along the entire project area (Figure 6). An additional buried utility was unmarked and discovered in BHT 3 (Figure 7). The utility is located adjacent to the eastern ROW boundary running parallel to the roadway from the northern extent of the project area to just north of the southern creek crossing. From that point, the line appears to change direction to run perpendicular to the roadway in an unknown direction. The line, however, does not continue along the eastern ROW, south of the southern creek crossing.

Subsurface investigations within the Peck-Bush Road at San Miguel Creek project area included five backhoe trenches and four shovel tests (Figure 8). The backhoe trenches revealed a disturbed layer extending up to 44 cm below surface. This disturbed layer consists of the previously discussed road gravels and asphalt, as well as modern debris mixed within soils similar to the underlying matrix. The underlying matrix is a very dark brown (10YR 2/2) friable sandy clay loam over a firm brown (10YR

4/3) clay loam. The southern trenches (BHT 1 and 5) had an extremely firm dark yellowish brown (10YR 4/4) clay loam under the darker clay loam. This lower stratum became shallower with increased distance away from the southern San Miguel Creek drainage. The color of this deeper stratum is similar to the surficial soils away from the project area and the soils on the graded road (Figure 9). No cultural material was observed in any of the subsurface investigations. In addition, the entire project area was examined and all available cut bank exposures were inspected with no cultural materials observed.

A visual inspection of private lands up to 25 feet outside of the existing ROW was also conducted. All areas surrounding the crossing appear to be minimally disturbed and otherwise intact. Just beyond the eastern ROW near the southern creek crossing, one flake and a few possible burned rock fragments appeared to be eroding from the creek bank. The area within the ROW adjacent to the cultural material was intensively inspected with no evidence of cultural materials being observed within the ROW.

#### **APPLEWHITE LANE AT MUSTANG CREEK**

The Applewhite Lane at Mustang Creek project area is situated in a disturbed upland setting with little deposition. The project area encompasses approximately one acre which includes the road and bridge within a narrow ROW (i.e., 50 feet). The ROW within the project area is overgrown with grasses surrounded by scattered mesquite, oaks, and elms that extend beyond the ROW (Figure 10). Surface visibility was moderate, typically 20–40 percent.

Mustang Creek is a minor upland drainage that flows to the southeast through undulating upland topography. The drainage at the

**Table 1.** Shovel Test and Backhoe Trench Data for the Peck-Bush Road at San Miguel Creek Project Area.

ST	Depth (cmbs)	Soil Color (Munsell)	Sediment Texture	Artifacts Recovered	Comments
1	0-15	10YR3/3	Sandy loam	None	Located southwest of southern bridge.
	15-40	10YR2/2	Clay loam	None	Similar to BHT 4 and 5.
2	0-15	10YR4/2	Loam	None	Located northwest of the southern bridge.
	15-25	10YR3/2	Clay	None	
3	0-15	10YR4/2	Loam	None	Located southwest of the northern bridge.
	15-25	10YR3/2	Clay	None	
4	0-25	10YR3/3	Loam	None	Located northwest of the northern bridge.
	25-40	10YR2/2	Clay loam	None	

BHT	Depth (cmbs)	Soil Color (Munsell)	Sediment Texture	Artifacts Recovered	Comments
1	0-15	10YR3/3	Loam	None	Disturbed road fill.
	15-68	10YR2/2	Loam	None	Sandy mottles and microlaminates throughout.
	68-92	7.5YR3/2	Clay loam	None	Possible transition from Strat 2 and 4.
	92-142	10YR4/3	Clay loam	None	Extremely firm and blocky with CaCO <sup>2</sup> filaments.
	142-175	10YR4/4	Clay loam	None	Similar to above stratum with more yellowish color.
2	0-20	10YR4/4	Loam	None	Disturbed road fill.
	20-130	10YR2/1	Clay loam	None	
	130-150	10YR3/2	Clay loam	None	Extremely firm and blocky with CaCO <sup>2</sup> filaments.
3	0-20	10YR3/2	Loam	None	Disturbed road fill.
	20-75	10YR2/2	Clay loam	None	
	75-95	10YR4/3	Clay loam	None	BHT terminated due to encountered buried utility at 95 cm below the surface.
4	0-40	10YR4/2	Loam	None	Disturbed road fill.
	40-145	10YR2/2	Clay loam	None	
5	0-33	10YR3/3	Loam	None	Disturbed road fill.
	33-103	10YR2/2	Clay loam	None	
	103-127	10YR4/4	Clay loam	None	Extremely firm and blocky with CaCO <sup>2</sup> filaments.



**Figure 6.** Marked buried utility along the western ROW boundary near the southern Peck-Bush Road at San Miguel Creek crossing, facing north/northeast.



**Figure 7.** Exposed unmarked buried utility in BHT 3 north of the northern Peck-Bush Road at San Miguel Creek crossing.

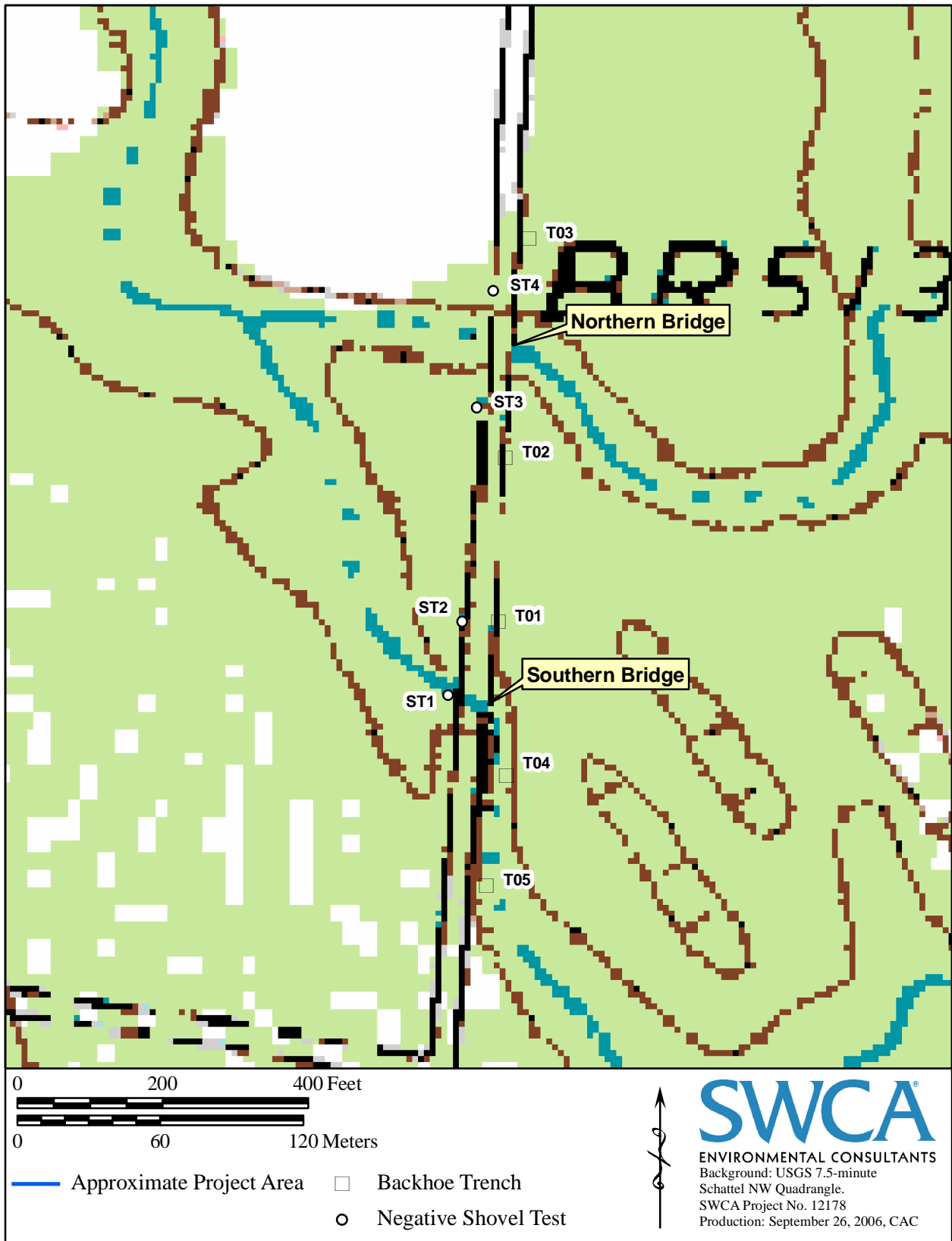


Figure 8. Backhoe trench and shovel test locations at the Peck-Bush Road bridges.



**Figure 9.** Overview of Peck-Bush Road and graded imported road fill near the southern Peck-Bush Road at San Miguel Creek crossing, facing north.



**Figure 10.** Overview of overgrown vegetation within the ROW near the Applewhite Lane at Mustang Creek crossing, facing south/southeast.



crossing displays 3–4-foot high slightly incised cutbanks. At the time of evaluation, the drainage did not have any water flowing suggesting intermittent flow. The northern bridge approach is cut below grade from 1–3 feet and the southern approach is cut below grade from 1–2 feet, leveling the undulating area. The bridge itself consists of steel girder I-beams with a steel plating deck supported by a concrete beam (Figure 11). The road along the approaches of the bridge is comprised of gravel and dirt that has been intensively bladed.

The majority of the project area exhibited severe disturbances including a buried utility and road construction activities. The buried utility consists of a telephone cable running along the western portion of the ROW, paralleling Applewhite Lane. The road construction disturbances include a shallow drainage ditch running adjacent to the buried utility, parallel to the road before veering out of the ROW, north of the creek. The other road related disturbances include the above mentioned road cuts and grading.

Due to the high amount of disturbances in the narrow APE, only one shovel test was excavated (Figure 12, Table 2). The shovel test (AW-1) revealed a disturbed silty loam layer over a slightly mottled dark brown (7.5YR 3/3) silty loam to 70 cm below surface. These soils sat atop a brown (7.5YR 4/2) basal clay loam. No cultural material was encountered. In addition, the entire project area was examined and all available cut bank exposures were inspected with no cultural materials observed.

A visual inspection of private lands up to 25 feet outside of the existing ROW was also conducted. All areas surrounding the crossing appear to be generally intact with minimal disturbances consisting of vegetation clearing along fence lines. No cultural mate-

rial was observed in these areas outside the ROW.

#### **ANDY SADLER ROAD AT LIVE OAK CREEK**

The Andy Sadler at Live Oak Creek project area is similar to the Applewhite Lane at Mustang Creek project area in that it is situated in a disturbed upland setting with little deposition. The pedestrian survey encountered a very narrow ROW (i.e., 50 feet) that has been disturbed from various construction activities and utilities. The project area encompasses approximately 1 acre which includes the road and bridge. The ROW within the project area covered by maintained grasses surrounded by scattered mesquite, oaks, and elms that extend beyond the ROW. Surface visibility was adequate, typically 40–60 percent.

Live Oak Creek is a minor upland drainage that flows north/northeast into Siestedero Creek before draining into the Atascosa River. The drainage at the crossing displays 4-foot high cutbanks and, at the time of evaluation, the drainage did not have any water flowing suggesting intermittent flow. The western bridge approach is cut below grade from 1–3 feet. The bridge itself consists of steel girder with a steel plating deck and a steel truss frame supported by two sets of concrete pillars (Figure 13). The road along the approaches of the bridge is comprised of gravel and dirt that has been intensively bladed.

The project area at Live Oak Creek exhibited severe disturbances including a buried utility and road construction activities. The buried utility consists of a water line marked along the northern portion of the ROW, west of the creek. Although the exact orientation of the waterline is unknown, it likely parallels the road. The ROW south of the road and west of the creek exhibited severe dis-



**Figure 11.** Overview of the Applewhite Lane at Mustang Creek bridge, facing east.

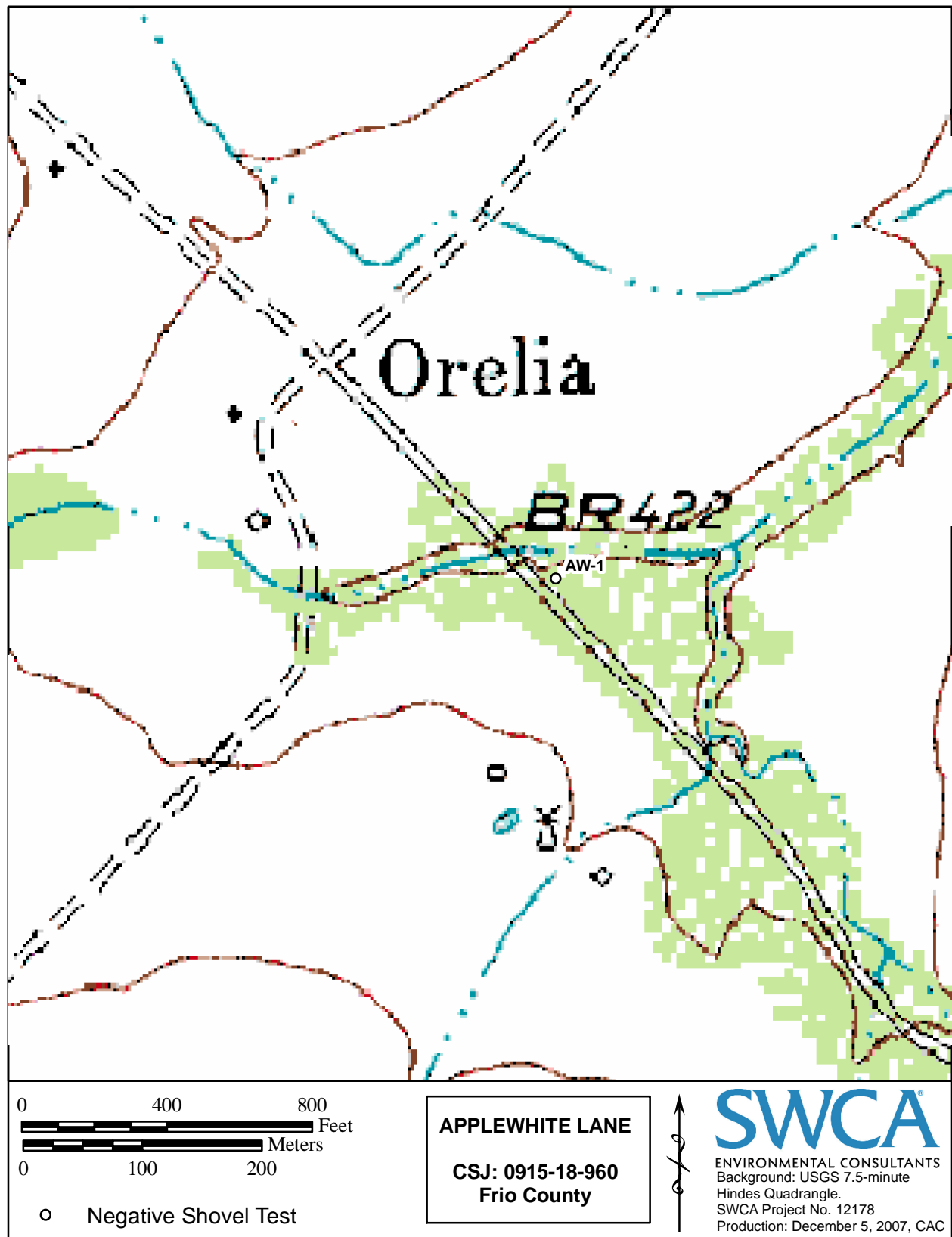


Figure 12. Shovel test location at Applewhite Lane bridge.

**Table 2.** Shovel Test Data for the Applewhite Lane at Mustang Creek Project Area.

<b>ST</b>	<b>Depth (cmbs)</b>	<b>Soil Color (Munsell)</b>	<b>Sediment Texture</b>	<b>Artifacts Recovered</b>	<b>Comments</b>
AW-1	0-35	7.5YR4/6	Silty Loam	None	Disturbed- road gravel
	35-70	7.5YR3/3	Silty Loam	None	Slightly mottled
	70-80	7.5YR4/2	Clay loam - clay	None	Basal Clay



**Figure 13.** Overview of the Andy Sadler Road at Live Oak Creek bridge, facing east/northeast.

turbances likely from grading or bulldozing activities associated with the roadway. The ROW east of the creek is extremely narrow with a maximum of 4 feet between the ROW boundary and the graded road edge. Other road related disturbances include the above mentioned road cuts and grading. The amount of disturbance accompanied with the shallow soils in the area did not lend itself to extensive subsurface investigations.

Due to the high amount of disturbances and the narrow APE, only one shovel test was excavated (Figure 14, Table 3). The shovel test (AS-1) revealed a dark brown (7.5YR 3/2) sandy loam layer over a brown (7.5YR 5/4) sandy loam to 70 cm below surface. These soils sat atop a brown (7.5YR 4/2) basal clay loam mottled with yellowish red (5YR 4/6) clays. No cultural material was encountered in the shovel test. In addition, the entire project area was examined and all available cut bank exposures were inspected with no cultural materials observed.

A visual inspection of private lands up to 25 feet outside of the existing ROW was also conducted. All areas surrounding the crossing appear to be generally intact with minimal disturbances consisting of vegetation clearing along fence lines. No cultural material was observed in these areas outside the ROW.

## **SUMMARY AND RECOMMENDATIONS**

On behalf of TCB INC. and TxDOT, SWCA conducted a background literature and records review and an intensive cultural resources survey of four proposed bridge replacements in Frio County, Texas. The investigations included a background literature and records review and an intensive pedestrian survey of the project area. Since the construction would involve federal funds from the Federal Highway Administration

(FHWA) and state land controlled by the San Antonio District of TxDOT, investigations were conducted in compliance with the Texas Antiquities Code; the National Historic Preservation Act; the First Amended Programmatic Agreement among the FHWA, TxDOT, the Texas State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding the implementation of transportation undertakings, and the Memorandum of Understanding between TxDOT and the THC. The THC issued Antiquities Permit 4402 to SWCA to conduct the cultural resource investigations with Kevin A. Miller serving as the Principal Investigator.

The background literature and records review revealed that no archaeological sites have been documented within or immediately adjacent to the bridge replacement project areas. Only the Applewhite Lane at Mustang Creek crossing has any previously recorded sites (41FR25, 41FR40, and 41FR44) within 1.5 miles of the project area. No information could be found on site 41FR25 and no temporally diagnostic artifacts were observed on sites 41FR40 or 41FR44, and no formal recommendations for further work or eligibility status were clearly determined (Atlas, 41FR40 and 41FR44 site form). However, the current proposed undertaking will not impact any of the previously recorded sites.

The survey of the Peck-Bush Road at San Miguel Creek project area encountered depositional soils in an area that has been extensively disturbed by underground utilities and road related construction activities. The survey of the Applewhite Lane at Mustang Creek project area and the project area along Andy Sadler Road at Live Oak Creek encountered extensively disturbed, narrow ROW crossings of the upland drainages. Evidence of significant disturbances was

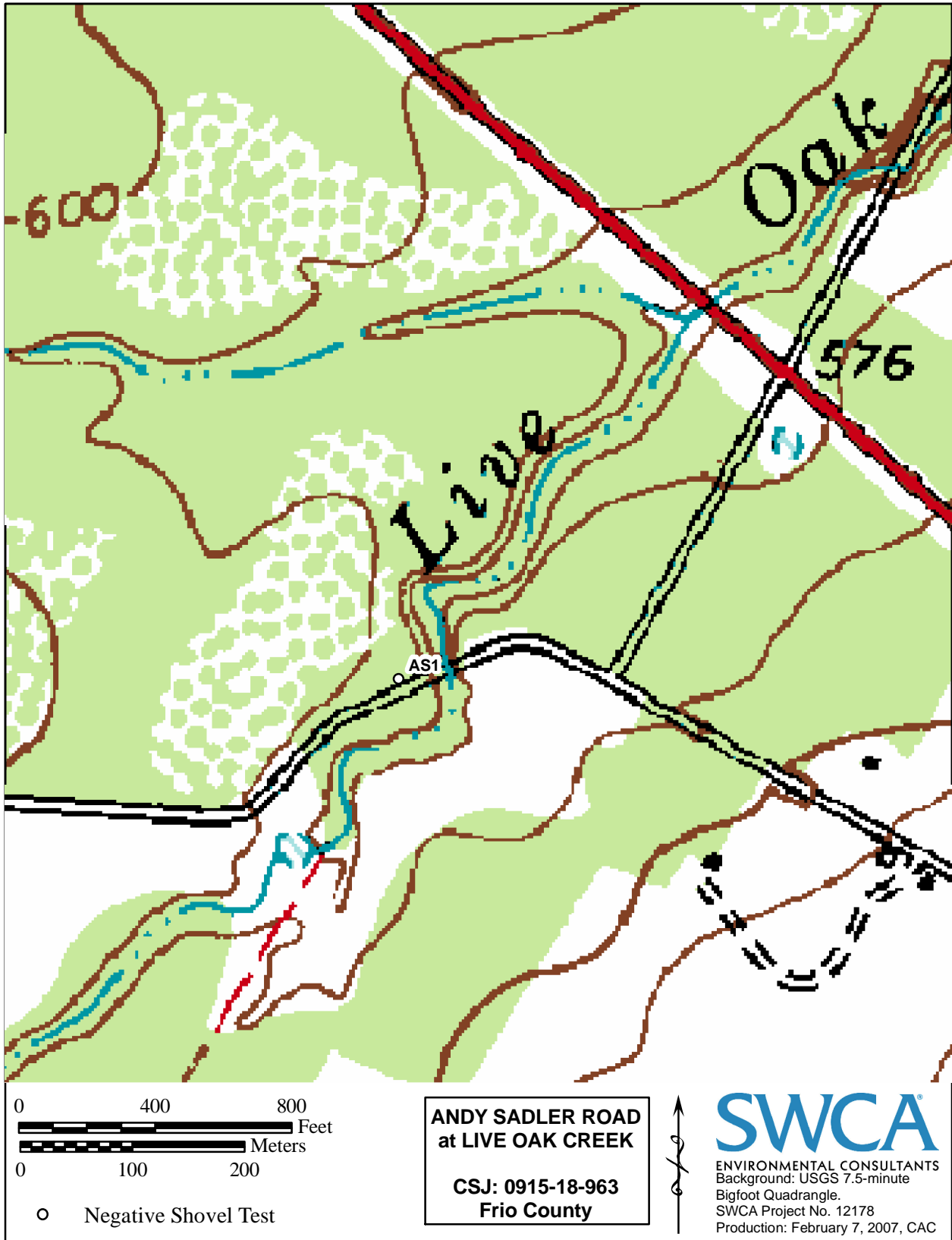


Figure 14. Shovel test location at Andy Sadler Road bridge.

**Table 3.** Shovel Test Data for the Andy Sadle at Live Oak Creek Project Area.

ST	Depth (cmbs)	Soil Color (Munsell)	Sediment Texture	Artifacts Recovered	Comments
AS-1	0-55	7.5YR3/2	Sandy Loam	None	Located in Quad C
	55-70	7.5YR5/4	Sandy Loam	None	No inclusions
	70-75	7.5YR5/4 mottled with 5YR4/6	Clay	None	Basal Clay



observed at both project areas primarily associated with the construction of the respective roadways and various utilities.

Due to the presence of depositional soils in the Peck-Bush Road at San Miguel Creek project area, a total of four shovel tests and five backhoe trenches were conducted within the undisturbed portions of the ROW. At the Applewhite Lane at Mustang Creek and the Andy Sadler Road at Live Oak Creek project areas, only one shovel test excavation was conducted at each location due to the narrow width of the ROW corridor and the amount of disturbances. SWCA's intensive survey did not encounter any evidence of cultural materials on the surface or subsurface at any of the three project areas. Therefore, no cultural resources will be affected by the proposed projects. Additionally, a visual inspection was conducted for the portions extending beyond 25 feet beyond the ROW along both sides of the road in each of the project areas. Aside from an isolated flake and a few possible burned rocks outside the Peck-Bush Road at San Miguel Creek APE, no cultural materials were observed. However, should construction activities extend beyond the fence lines in either project area, then further investigations are recommended. Due to the high probability nature of the undisturbed river terraces observed at the Peck-Bush Road at San Miguel Creek crossing, any further investigations should be conducted with backhoe trench excavations.

In accordance with 36 CFR 800.4, SWCA has made a reasonable and good faith effort to identify archeological historic properties within the APE. As no properties were identified that meet the criteria for listing in the NRHP according to 36 CFR 60.4 or for designation as a SAL according to 13 TAC 26.12, SWCA recommends no further work.

In the event that previously undiscovered archaeological remains are discovered during construction, work in the area of discovery shall cease and emergency discovery procedures will be implemented under the terms and conditions of the First Amended Programmatic Agreement among the FHWA, TxDOT, the Texas State Historic Preservation Officer, and the Advisory Council on Historic Preservation and the Memorandum of Understanding between TxDOT and the THC.

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