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# Archeological Survey of Three Bridge Replacements along SH 97 LaSalle and McMullen Counties, Texas.

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# Report for Archeological Survey

## Archeological Survey of Three Bridge Replacements along SH 97 LaSalle and McMullen Counties, Texas.

Christopher Ringstaff, Principal Investigator,
Antiquities Permit No. 7202

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated 12-16-14, and executed by FHWA and TxDOT.

## Abstract

On March 12, 2015, TxDOT conducted an intensive archeological survey for the proposed to replacement of three bridges along SH 97 in LaSalle and McMullen Counties. The bridges are located north of the town of Fowlerton, Texas. The first bridge crosses the Frio River, the second crosses a tributary of the Mossy Slough both in LaSalle County. The third bridge crosses the Mossy Slough just past the LaSalle County line in McMullen County. The total area of potential effects (APE) for all three bridge replacements is 8.4 acres. No new ROW or easements are proposed for the project. Although the schematic design plans show only fill being added to the existing ground surface of the roadway approaches, depth of impact for the support pilings is estimated at approximately 50 feet.

A 100 percent pedestrian survey was conducted at all three proposed bridge replacement project areas. The pedestrian survey noted significant ground disturbing impacts from prior bridge construction and utility installation. In particular, extensive fill sections are present to elevate the roadway over the broad floodplain of the Frio River Valley across which all three bridges are located.

Subsequent to the pedestrian survey, backhoe trenching was conducted at the Frio River and Mossy Slough Bridges. The Mossy Slough Tributary Bridge was not trenched based on a combination of factors including modern age, short span, and existing impacts. The observations from both the pedestrian survey and subsurface testing revealed no archeological materials or features. Although trenching at the Frio River Bridge terrace showed a relatively intact soil profile (despite the absence of archeological materials and features), trenching at the Mossy Slough did reveal extensive fill even in the spanned terrace within the APE.

A TxDOT archeologist evaluated the potential for the proposed undertaking to affect archeological historic properties (36 CFR 800.16(l)) or State Antiquities Landmarks (13 TAC 26.12) in the APE for the proposed SH 97 bridge replacements. Based on the combined pedestrian survey of the backhoe trenching, no archeological sites or materials were observed in the proposed project areas. In addition, the majority of the APE had been substantively impacted by prior transportation construction and utilities leaving only small areas of intact alluvium to examine. Based on these observed impacts and the results of the survey, any sites in the APE would likely lack sufficient integrity of location, association, and materials to be able to address important questions of prehistory or history (36CFR60.4 and would not be considered eligible for listing to the NRHP (36 CFR 60.4) or for designation as a SAL (13 TAC 26.8) and no further work is warranted for the project areas.

## Project Identification

- **Date:** 4/14/2015
- **Date(s) of Survey:** 3/12/2015
- **Archeological Survey Type:** Reconnaissance ☐ Intensive ☒
- **Report Version:** Draft ☐ **Final** ☒
- **Jurisdiction:** Federal ☒ State ☒
- **Texas Antiquities Permit Number:** 7202 **District:** Laredo
- **County or Counties:** LaSalle and McMullen
- **USGS Quadrangle(s):** Fowlerton, Texas
- **Highway:** SH 97
- **CSJ:** 0328-08-022, 0328-08-024, and 0328-08-025
- **Report Author(s):** Christopher Ringstaff and James Abbott
- **Principal Investigator:** Christopher Ringstaff

## Texas Historical Commission Approval

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|---|
| |

Signature Date

## Project Description

- **Project Type:** Bridge Replacement Projects
- **Total Project Impact Acreage:** 8.4 **New Right of Way (ROW) Acreage:** 0.0
- **Easement Acreage:** 0.0 **Area of Pedestrian Survey:** 8.4 acres

**Project Description and Impacts:** As shown in the project location map (Figure 1), TxDOT proposes to replace three bridges along SH 97 in LaSalle and McMullen Counties. The bridges are located north of the town of Fowlerton, Texas. The first bridge crosses the Frio River, the second crosses a tributary of

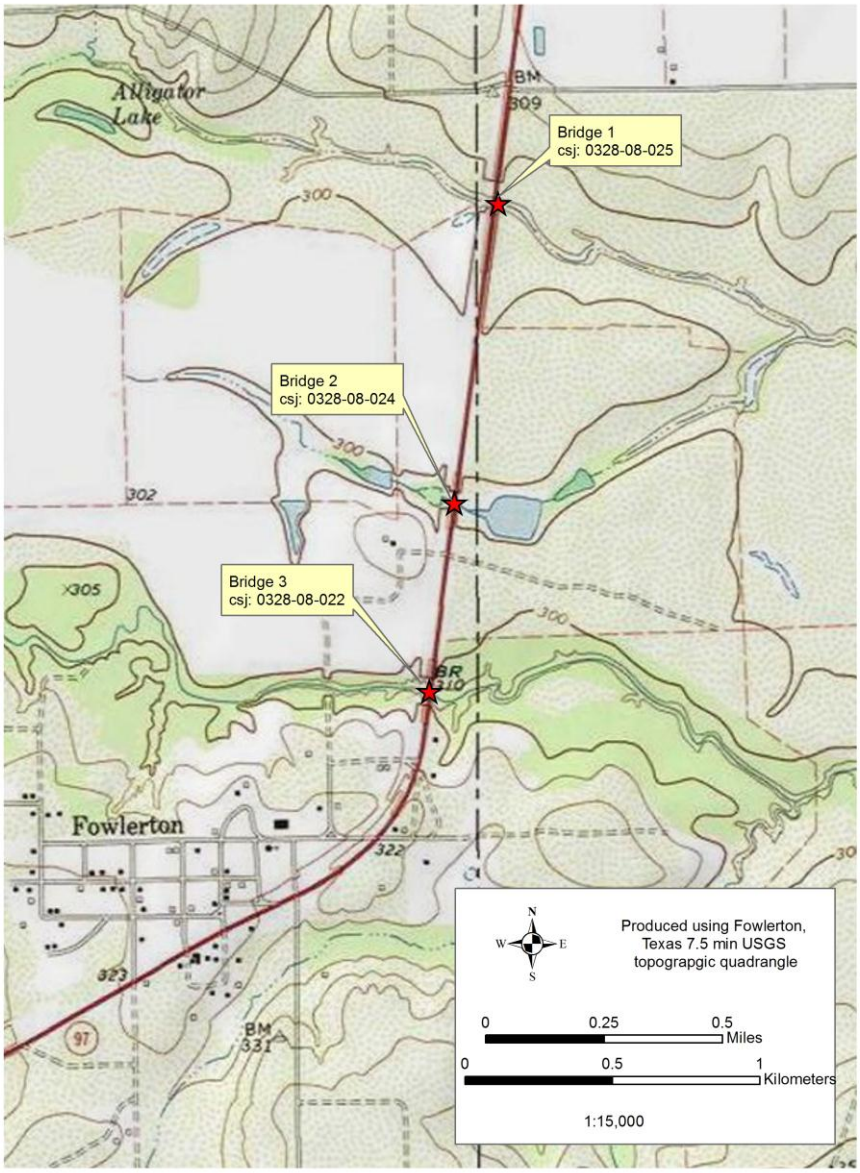


Figure 1. Project location map showing FM 97 Bridge Replacements LaSalle and McMullen Counties.

the Mossy Slough both in LaSalle County. The third bridge crosses the Mossy Slough just past the LaSalle County line in McMullen County.

**Area of Potential Effect (APE):** The Area of Potential Effect (APE) for each bridge is listed in the following by individual location and CSJ:

**The Frio River Bridge** (0328-08-022) has an APE 900 feet in length with a 130-foot ROW width and an area of 2.7 acres.

**The Mossy Slough Tributary Bridge** (0328-08-024) has an APE 800 feet in length with a 130-foot ROW width and an area of 2.4 acres.

**The Mossy Slough Bridge** (0328-08-025) has an APE 1100 feet in length with a 130-foot ROW and an area of 3.3 acres.

No new ROW or easements are proposed for the project. The depth of impact for the support pilings is estimated at approximately 50 feet, the schematic design plans shows only fill being added to the existing ground surface of the roadway approaches.

**Project Area Ownership:**

The three proposed bridge replacement projects are located completely within existing ROW of SH 97.

## Physiographic Setting

**Topography:** The proposed project area is located in the Rio Grande Plains physiographic region of South Texas. A detailed geomorphic assessment of the APE is presented in Appendix A.

**Geology:** An overlay analysis using the review of the Bureau of Economic Geology Geologic Atlas of Texas depicts the project area as Holocene age Quaternary Alluvium and Quaternary Terrace Deposits (Figure 2a).

**Soils:** A Geographic Information System (GIS) overlay analysis using the United States Department of Agriculture (USDA) State Soil Survey Geographic Database (STATSGO), maps soils in the project area as Cochina-Divot-Brundage Association formed in the mapped alluvial deposits (Figure 2b). Archeological sites found in this geomorphic setting can be surficial or shallowly to deeply buried.

**Land Use:** Land use across areas the project areas consists of transportation ROW.

**Vegetation:** Vegetation across the project areas consists largely of post-clearing secondary growth mesquite with brush, cacti, and short grasses.

**Estimated Ground Surface Visibility:** Poor to moderate 20-50 %

**Previous Investigations and Known Archeological Sites:**
A record search of the Texas Historical Commissions Archeological Sites Atlas (Atlas) was conducted on 3/4/2015 and revealed no archeological sites and archeological projects conducted within one

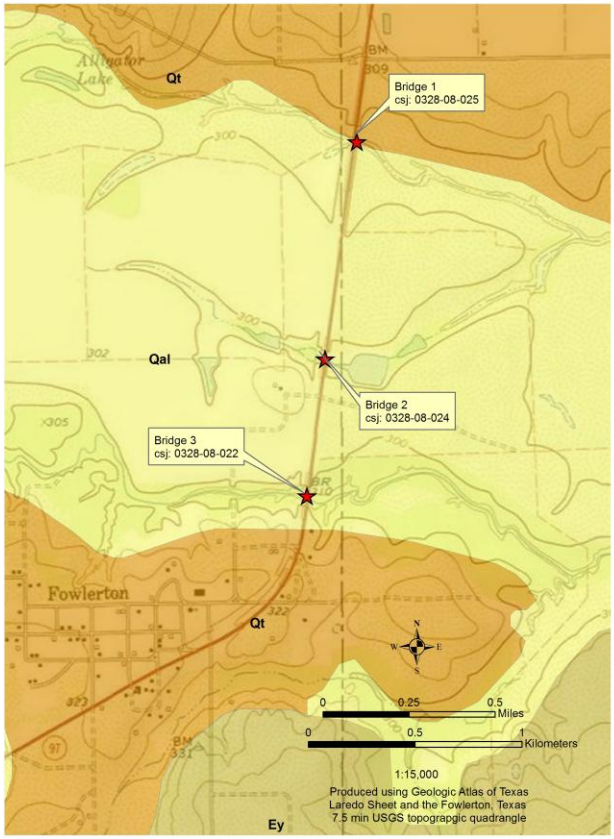


Figure2a. SH 97 Project Area Geology

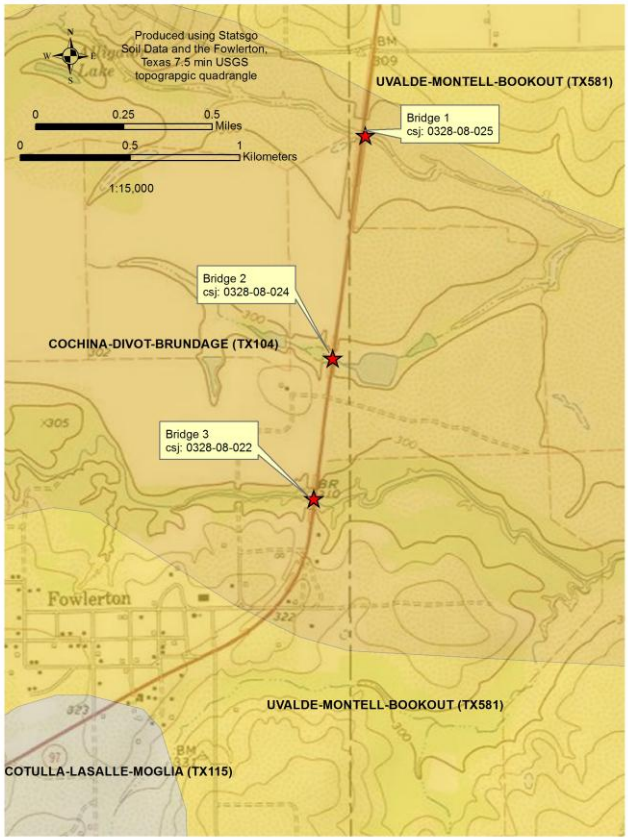


Figure2b. SH 97 Project Area Soils

kilometer of the proposed project APE. TxDOT conducted and archeological survey of the above proposed bridge replacements on 3/12/2015. The survey revealed no archeological sites within the APE and no additional investigations are recommended.

A GIS query utilizing data using the **Texas Historic Overlay** (THO) revealed two maps with sufficient large-scale project-level resolution to be useful for the background review. These maps included the Fowlerton 1942 USACE 1:62.000 topographic quadrangle and the Nueces River 1918 USACE 1:125,000 topographic quadrangle. In addition, the 1936 Highway maps of LaSalle and McMullen Counties were reviewed. No historic structures, features or cemeteries were observed within the APE.

## Survey Methods

**Surveyors:** Christopher Ringstaff and James Abbott

**Survey Methods:** The survey utilized pedestrian survey with backhoe trenching. As shown in Figure 3, the extensive fill sections elevating the existing bridges provided justification for deviation from the CTA/THC Survey Standards since it decreased the overall project area that actually had potential for archeological preservation. Only intact portions of the Mossy Slough and Frio River terraces where examined by mechanical trenching. Based surficial geomorphic observations, span length, and impacts at the modern Mossy Slough Tributary (Figure 4), the crossing was not trenched (see Appendix A).

Figure 3. Fill section on northeast quadrant of the Frio River Bridge at SH97.

Figure 4. Mossy Slough Tributary Bridge at SH97 note shallow channel and fill section.

**Collection:** **NO ☒** YES ☐ If yes, specify facility

## Survey Results

A 100 percent pedestrian survey was conducted at all three proposed bridge replacement project areas. The pedestrian survey noted significant ground disturbing impacts from prior bridge construction and utility installation. In particular, extensive fill sections are present to elevate the roadway over the broad floodplain of the Frio River Valley across which all three bridges are located.

Subsequent to the pedestrian survey, backhoe trenching was conducted at the Frio River and Mossy Slough Bridges. As discussed in the methods section, the Mossy Slough Tributary Bridge was not trenched based on a combination of factors including modern age, short span, and existing impacts. This assessment as well as the detailed profile descriptions from trenching at the Frio River and the Mossy Slough Bridges, are presented in Appendix A.

The observations from both the pedestrian survey and subsurface testing revealed no archeological materials or features. Although trenching at the Frio River Bridge terrace showed a relatively intact soil profile (despite the absence of archeological materials and features), trenching at the Mossy Slough did reveal extensive fill even in the spanned terrace within the APE (see Appendix A)

## Recommendations

A TxDOT archeologist evaluated the potential for the proposed undertaking to affect archeological historic properties (36 CFR 800.16(l)) or State Antiquities Landmarks (13 TAC 26.12) in the area of potential effects (APE) for the proposed SH 97 bridge replacements. Based on the combined pedestrian survey of the backhoe trenching, no archeological sites or materials were observed in the proposed project areas. In addition, the majority of the APE had been substantively impacted by prior transportation construction and utilities leaving only small areas of intact alluvium to examine. Based on these observed impacts and the results of the survey, any sites in the APE would likely lack sufficient integrity of location, association, and materials to be able to address important questions of prehistory or history (36CFR60.4) and would not be considered eligible for listing to the NRHP (36 CFR 60.4) or for designation as a SAL (13 TAC 26.8) and no further work is warranted for the project areas.

# APPENDIX A

## Geoarcheological Observations of Three Proposed Bridge Replacements along SH 97, LaSalle and McMullen Counties, Texas