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# Report for Archeological Survey

# CSJ 0923-06-056, CR 225 at Clear Creek Brown County, Brownwood District

Jon Budd - Principal Investigator, Antiquities Permit No. 7536 February 3, 2016

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 February 3, 2016, Jon Budd – TxDOT staff archeologist, conducted an intensive archeological survey of the undertaking's area of potential effects (APE) for the bridge replacement on Brown County Road 225 at Clear Creek. A new bridge is proposed to be installed on new location approximately 140 feet north of the existing bridge. The road will be realigned to align with the proposed new bridge. The existing bridge is historic and will be left in place. The investigation consisted of a one hundred percent pedestrian survey of the 3.2 acres of the project area which includes 1.0 acre of proposed new right of way. In addition, a total of four Gradall Trenches were excavated into the proposed new right of way. No archeological remains were observed. TxDOT recommended that the inventory of the APE is complete, a finding of "no historic properties affected", and no further work is warranted. Since no archeological artifacts were observed, none were collected, and none were curated.

# **Project Identification**

- Date: 02/05/2016
- Date(s) of Survey: 02/03/2016
- Archeological Survey Type: Reconnaissance □ Intensive ⊠
- Jurisdiction: Federal 🛛 State 🖾
- Texas Antiquities Permit Number: 7536
- District: Brownwood
- County: Brown
- USGS Quadrangle(s): Brookesmith 7.5 Minute USGS Topographic Quadrangle (3199-411)
- Highway: CR 225 @ Clear Creek
- **CSJ:** 0923-06-056
- Report Author(s): Jon Budd
- Principal Investigator: Jon Budd

# **Texas Historical Commission Approval**

Signature

Date

# **Project Description**

- Project Type: Replace bridge and approaches.
- Total Project Impact Acreage: 3.2 acres
- New Right of Way (ROW) Acreage: 1.0 acres
- Easement Acreage: 0.0 acres
- Area of Pedestrian Survey: 3.2 acres
- Project Description and Impacts: A new bridge on new location is proposed. The existing bridge is insufficient, but historical. Therefore, it will be left in place. The new bridge will be installed approximately140 feet north of the existing bridge. New approaches would be installed to access the new bridge and to straighten out the existing dogleg (see plan view). Approximately 1 acre of proposed new right of way (ROW) would be required.
- Area of Potential Effects (APE): The APE is defined as the 50 to 80 foot wide existing CR 225 ROW beginning 100 feet west of CR 212 and extending approximately 800 feet east. The APE also includes approximately 1.0 acre of proposed new ROW located north of the existing ROW (please see attached plan view for location details). According to typical bridge design, the depth of impacts is estimated to be up to 40 feet below the current ground surface for the bridge supports and up to four feet for the remainder of the project. The total APE is comprised of 3.2 acres.
- Parcel Number(s): 28137, 29100: Bowman, L.B., 29098: Morgan, Willie L Sr, and Mary J.
- Project Area Ownership: The existing ROW is currently owned by Brown County. The proposed new ROW is currently privately owned.
- Topography: 100% of the APE is currently an undeveloped riparian area straddling Clear Creek.
- Geology: According to the Brownwood Sheet of the Geologic Atlas of Texas, the geology underlying the APE is comprised of Holocene aged alluvium (Qal). Qal has historically demonstrated potential for presence of buried intact archeological deposits.
- Soils: According to the attached illustration of the USDA/SCS Soil Survey of Brown County, 100% of the sediments underlying the APE are comprised of Frio silty clay loam, 0 to 1% slopes, occasionally flooded (31). This sediment has historically demonstrated potential to harbour buried intact archeological deposits.
- Potential Archeological Liability Map: NA
- Historic Land Use: According to the 1936 Texas State Highway Department Map of Brown County, there were no residences or structures in the immediate vicinity of the APE in 1936.
- Land Use: Active and fallow agricultural fields surround Clear Creek. An undeveloped riparian area is located immediately adjacent to the creek. The remains of a private recreation area with

a picnic table, bench, and shack are located just beyond the APE on the northwest quad of the crossing.

- Vegetation: Mesquite, hackberry, junipers, prickly pear cacti, rabbit brush, and miscellaneous weeds and grasses were observed within the proposed new ROW. Introduced grasses were observed within the existing ROW.
- Estimated Ground Surface Visibility: Due to dense vegetation, only approximately 50% of the ground surface was visible.
- Previous Investigations and Known Archeological Sites: According to the Brookesmith quad of the Texas Archeological Sites Atlas, the APE was subject to a previous archeological survey in 1994 by TxDOT. No archeological sites were observed within the APE or within 1 kilometer of the APE. However, the utilization of backhoe trenching to discover deeply buried archeological deposits did not come into vogue until 2000. Therefore, this survey utilizing backhoe trenching was recommended and implemented.
- Comments on Project Setting: Both the Geologic Atlas of Texas and the Soil Survey of Brown County illustrate the presence of Holocene aged sediments that could harbour deeply buried intact archeological deposits underlying the APE. Coupled with the new location of the proposed new ROW, survey with mechanical trenching was recommended.

# **Survey Methods**

- Surveyors: Jon Budd TxDOT Staff Archeologist.
- Methodological Description: One hundred percent of the APE was subject to pedestrian survey. In addition, a total of three backhoe trenches were excavated into the proposed new ROW. Sidewalls of the backhoe trenches as well as samples from the excavated sediments were visually inspected for archeological remains. Photographs were taken of the project area as well as the backhoe trenches.

Ρ.	Subsurface	Probes -	(attach	map	)
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Method	Quantity in Existing ROW	Quantity in Proposed New ROW	Quantity in Proposed Easements	Total Number per Acre
Shovel Test Units				
Auger Test Units				
Mechanical Trenching		4		1.25

- Other Methods: None
- Collection and Curation: NO 🛛

YES I If yes, specify facility.

 Comments on Methods: The entire 3.2 acres of the APE was subject to 100% pedestrian survey. THC/CTA survey standards stipulate one backhoe trench per acre. This project is comprised of 3.2 acres. A total of four backhoe trenches were excavated. Therefore, THC/CTA survey standards were more than met.

## **Survey Results**

Project Area Description: This investigation confirmed that the APE is comprised of the 2.2 acres of existing CR 225 ROW as well as 1 acre of relatively undeveloped riparian area. Backhoe trenching confirmed that Holocene sediments that have historically demonstrated potential for the presence of buried intact archeological deposits underlie the APE. These deposits extend to a depth of approximately five feet (1.5 meters) where hard packed clay with carbonate concretions were encountered (pre-Holocene aged sediments).

Gradall	Dimensions	Stratigraphy (centimeters)	Comments	Photograph #s
Trench	(meters)		1	
Number	ļ			
1	8 x 5 x 0.92	00-60: Organic sandy loam	West side of creek. Placed to investigate large	1-3
		61-92: Clay loam	upright limestone slab with a scatter of	
		Terminated on clay loam with	limestone boulders (possible grave). Negative	
	1	carbonate nodules	for archeological remains including human	
			remains, coffin hardware, etc.	
2	12 x 4 x 0.90	00-60: Organic sandy loam	West side of creek. Negative for archeological	4-5
		61-90: Clay loam	remains.	
	1	Terminated on clay loam with		
		carbonate nodules		
3	12 x 4 x 1.30	00-40: Organic sandy loam	West side of creek. Negative for archeological	6-7
		41-70: Sandy loam	remains.	
		71-100: Sandy clay		
		101-130: Hard pack clay		
		Terminated on hard packed		
		clay with carbonate nodules		
4	10 x 4 x 160	00-30: Organic sandy loam	East side of creek. Negative for archeological	9-10
		31-60: Sandy loam	remains.	
		61-100: Sandy clay		<i>4</i> 2
		101-160: Hard pack clay		
		Terminated on hard packed		
		clay with carbonate nodules		

Gradall Trench Data

- Archeological Materials Identified: No archeological remains were observed. One large upright limestone slab (see attached photo #1) along with a diffuse scatter of limestone cobbles was observed. In order to confirm that these stones did not delineate an historic grave, Gradall Trench (GAT) #1 was excavated. No archeological remains including human remains, coffin hardware, etc. was observed. It was determined that the limestone scatter did not warrant designation as an archeological site.
- APE Integrity: The APE located outside of the existing CR225 ROW was relatively intact. However, despite a total of four Gradall Trenches, no archeological remains were observed.

#### Recommendations

- Archeological Site Evaluations: Not applicable. No archeological remains were observed.
- Comments on Evaluations: Not applicable. No archeological remains were observed.
- Further Work: No further work is warranted.
- Justification: No archeological remains were observed (see attached maps and photos).

Although the APE contained Holocene aged alluvium that has historically demonstrated potential for the presence of buried intact archeological deposits, this intensive archeological survey including four Gradall Trenches confirmed that there are no archeological sites present. TxDOT therefor recommends that the inventory of the APE is complete, for a finding of "no historic properties affected", and no further work is warranted.

References Cited
Geologic Atlas of Texas
2012 <u>http://www.twdb.state.tx.us/GwRD/GTA/GAT/index.htm</u> - Brownwood Sheet

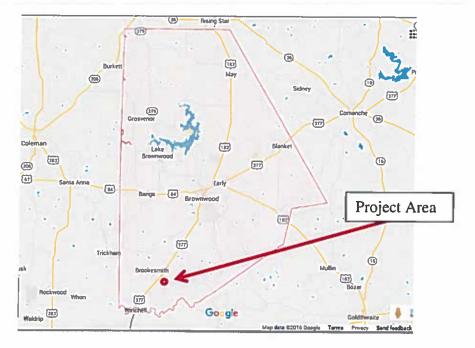
McMahon, Craig A., Roy G. Frye, and Kirby L. Brown 1984 The Vegetation Types of Texas. Texas Parks and Wildlife Department

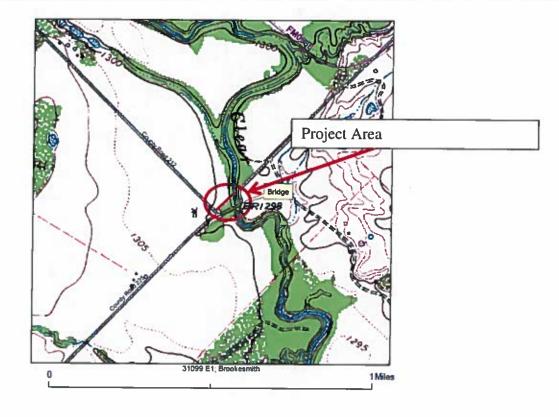
USDA/SCS Soil Survey of Brown County 2012 <u>http://websoilsurvey.nrcs.usda.gov/app/</u>

## Attachments

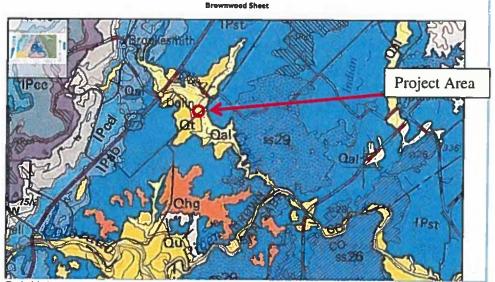
Project Location Map, Brown County Project Location Map: Brookesmith 7.5 Minute USGS Topographic Quadrangle Project Location Map: Brownwood Sheet of the Geologic Atlas of Texas Project Location Map: USDA/SCS Soil Survey of Brown County Project Location Map: Texas Archeological Sites Atlas Project Location Map: 1936 Texas State Department of Highway Map of Brown County Project Location Map: Bridge Installation Plan View and Gradall Trench Location Map Field Photographs of the Intensive Archeological Survey

#### Brown County Project Location Project





Brookesmith 7.5 Minute USGS Topographic Quadrangle (3199-411)



Qal: Holocene aged alluvial deposits. Qal has historically demonstrated potential for the presence of buried intact archeological deposits.

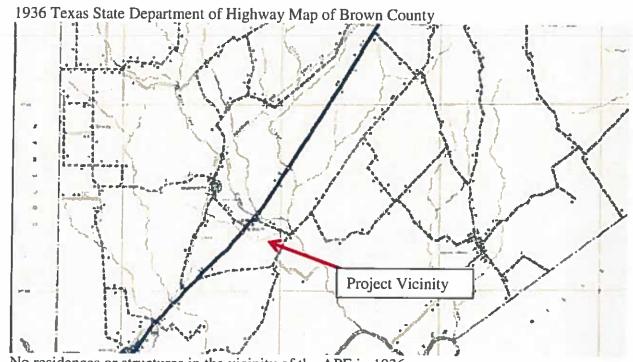
USDA/SCS Soil Survey of Brown County http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx Man Unit Lenen G a (TX602) of AO1 In AOI Frio silty day loam, 0 to 1 2.6 100.0% 31 percent slopes, occasionally flooded **Totals for Area of Interest** 2.6 100.0%

Frio silty clay loam, 0 to 1% slopes, occasionally flooded: Potential to harbor buried intact archeological deposits.

Texas Archeological Sites Atlas Brookesmith 7.5 Minute USGS Topographic Quadrangle (3199-411)



The APE was previously surveyed in 1994 by TxDOT. No archeological sites were encountered. However, the utilization of backhoe trenching to discover deeply buried archeological deposits did not come into vogue until 2000.



No residences or structures in the vicinity of the APE in 1936.

Bridge Installation Plan View

Gradall Trench Location MAP 2.3-2016

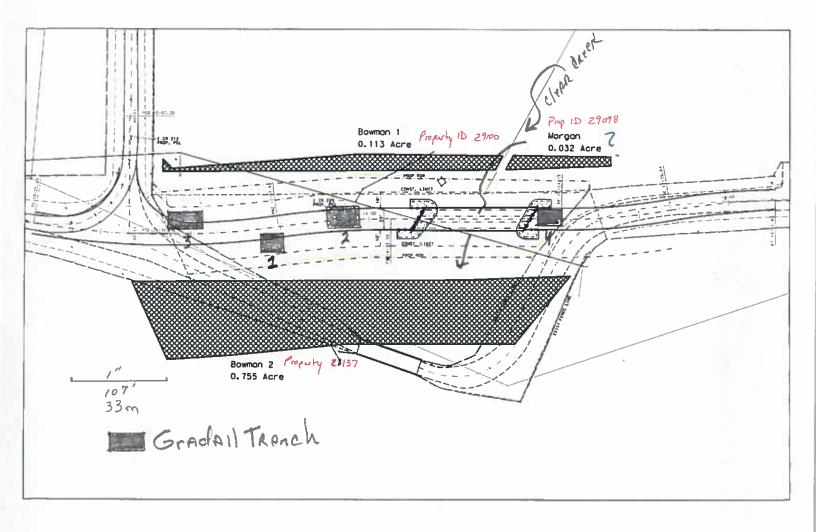




Photo 1: Facing west toward upright limestone slab. Gradall Trench (GAT) #1 was placed here under the slab to confirm that it was not a grave stone marker.



Photo 2: Facing west just beyond the limestone slab noted above. Note the old oak tree and smaller limestone cobbles. GAT #1 was placed here to investigate whether these marked a gravesite.



Photo 3: Facing west toward GAT #1 in process. It was negative for archeological remains including human remains, coffin hardware, etc.



Photo 4: Facing east toward GAT #2. It was negative for archeological remains.



Photo 5: Facing southwest toward sidewall of GAT #2 illustrating stratigraphy.



Photo 6: Facing west towards GAT #3 in process. It was also negative for archeological remains.

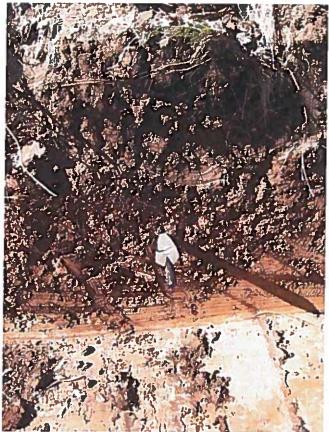


Photo 7: Facing northwest toward side wall in GAT #3 illustrating stratigraphy.



Photo 8: Facing north toward Clear Creek from existing bridge. The proposed new bridge would be place in the foreground.



Photo 9: Facing west toward dense brush and gate on the east side of Clear Creek. GAT #4 was placed just on the other side of this fence gate.



Photo 10: Facing east toward GAT #4. This trench was excavated into the east side of the creek. It was negative for archeological remains.