

# **CE & SUPPORTING DOCUMENTATION**

**PROJECT FOR BRIDGE AND APPROACHES OVER SAND CREEK  
ON SH-16, 0.7 MILES EAST OF THE JUNCTION SH-48 TIED TO  
24131(04), CREEK COUNTY, OKLAHOMA**

**ODOT PROJECT NUMBER: J2-9682(004)  
ODOT JOB/PIECE NUMBERS: 29682(04)  
Guernsey Project No.: OK70333006**

**Prepared for:**



**OKLAHOMA DEPARTMENT OF TRANSPORTATION**

**Prepared by:**



**Guernsey  
5555 North Grand Blvd.  
Oklahoma City, OK  
405.416.8100**

## Programmatic/Individual Categorical Exclusion

	<b>PCE</b>	<b>X</b>	<b>ICE</b>
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Date	<b>4/29/2022</b>	Project Number	<b>J2-9682(004)</b>
County	<b>Creek</b>	State Job Piece No:	<b>29682(04)</b>
NEPA Project Manager	<b>Erin Faulkner</b>	Phone Number	<b>(405) 521-2315</b>
ODOT Field District	<b>8</b>	Bridge NBI No. <i>(For County &amp; State Projects)</i> & Location No. <i>(County Projects Only)</i>	<b>12429</b>
Project Description from JPINFO	<b>Bridge &amp; Approaches on SH-16 over Sand Creek, 0.7 Miles East of The Jct. SH-48, tied to 24131(04)</b>		
<b>This project is included in:</b> <i>(Check all applicable ones)</i>	<b>X</b>	<b>State 8 Year Construction Program</b>	
		<b>County 5 Year Construction Program</b>	
	<b>X</b>	<b>State Transportation Improvement Program</b>	
<b>This project has federal funds:</b> <i>(Check applicable one.)</i>	<b>X</b>	<b>Currently has Federal Funds</b>	
		<b>Potential for Future Federal Funds</b>	
<b>This project is in the Metropolitan Transportation Improvement Program (If applicable)</b> <i>(Check applicable one)</i>		<b>Yes</b>	
	<b>X</b>	<b>Not Applicable</b>	

The Oklahoma Department of Transportation (ODOT) has completed the environmental analysis and review of the referenced project. ODOT has determined that this project does not individually or cumulatively have a significant impact of the environment as defined by the National Environmental Policy Act (NEPA) or involve unusual circumstances as defined in 23 CFR 771.117(b) and is therefore excluded from the requirements to prepare an Environmental Assessment or Environmental Impact Assessment.

<b>Existing Conditions:</b>
The existing SH-16 bridge over Sand Creek has a clear roadway width of 25.9 ft. and an approach roadway consisting of two 12 ft. wide paved driving lanes and 4 ft. wide sod shoulders. The bridge has a sufficiency rating of 54.4 and is considered functionally obsolete. The current Annual Average Daily Traffic (AADT) is 3,100 vehicles per day (vpd) with a future 20-year AADT of 4,300 vpd.
<b>Purpose &amp; Need</b>
To correct a bridge that is functionally obsolete.

<b>Alternatives considered &amp; Proposed Improvement</b>					
The proposed improvement consists of replacing the existing bridge with a new 101.5 ft. long reinforced concrete box (RCB) along the existing alignment. The new approach roadway will consist of two 12 ft. wide paved driving lanes with 8 ft wide paved shoulders. SH-16 will remain open using a shoe-fly detour. The detour will be located on the south side of the existing alignment to avoid impacts to structures. Additional right-of-way will be needed for construction. There are relocations along this project. All improvements will be made on the existing alignment.					
<b>Did the project have public involvement</b> (Check the applicable items and include public involvement <u>summary</u> and supporting documents in the appendix)					
<b>X</b>	Property Owner Notification		Road Closure Letter		Public/Stakeholder Meeting
	Legal Notice/Website Posting		Small City Letter		None

**All documentation, analyses, and agency coordination regarding this Categorical Exclusion are attached to this document and maintained in the project file at the Oklahoma Department of Transportation, Environmental Programs Division.**

<b>Criteria Identified in Section IV.A.1.b. of the 2019 FHWA/ODOT Programmatic Agreement for Processing Categorical Exclusions that would require Individual Review and Approval by FHWA:</b>		
<b>Check Yes or No below. If the answer to any of the questions below is Yes, an Individual CE will be required.</b>		
<b>Description/Question</b>	<b>Yes</b>	<b>No</b>
i. Does the project result in capacity expansion of a roadway by addition of through lanes?		<b>X</b>
ii. Does the project involve any permanent changes limits of access control or to the operation of an Interstate highway, associated interchanges or ramps or requires an Access Justification Report (AJR)?		<b>X</b>
iii. Is the project not included in or is inconsistent with the statewide transportation improvement program, and in applicable urbanized areas, the transportation improvement program?		<b>X</b>
iv. Does the project involve acquisition of more than minor right-of-way not adjacent to the existing facility?		<b>X</b>
v. Does the project involve residential or commercial relocation?	<b>X</b>	
vi. Does the project include acquisition of land for hardship or protective purposes, or early acquisition pursuant to Federal acquisition project (23 U.S.C. § 108(d))		<b>X</b>
vii. Does the project have potential for disproportionately high and adverse impact on minority or low-income populations, based on known demographics in the project vicinity, extent of R/W, relocations, and other identified impacts?		<b>X</b>
viii. Does the project involve property in which another Federal Agency or Federally Recognized Tribe has ownership, oversight or any other encumbrance?		<b>X</b>
ix. Does the project involve a determination of adverse effect by Oklahoma State Preservation Office (SHPO) or a designated Tribal Historic Preservation Office (THPO) in accordance with Section 106?		<b>X</b>
x. Does the project involve a Programmatic Section 4(f) or de minimis finding which has not been previously approved by FHWA?		<b>X</b>
xi. Requires the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act of 1965 (54 U.S.C. § 200305), the Federal Aid in Sport Fish Restoration Act (16 U.S.C. 777-777k, 64 Stat. 430), the Federal Aid in Wildlife Restoration Act (16 U.S.C. 669-669i; 50 Stat. 917), or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property		<b>X</b>
xii. Does the project involve any impact on Noise Abatement Criteria (NAC) Category A, B,		<b>X</b>

**Criteria Identified in Section IV.A.1.b. of the 2019 FHWA/ODOT Programmatic Agreement for Processing Categorical Exclusions that would require Individual Review and Approval by FHWA:**  
**Check Yes or No below. If the answer to any of the questions below is Yes, an Individual CE will be required.**

Description/Question		Yes	No
C or D receptors?			
xiii.	Does the project involve a finding of “may effect, likely to adversely affect” determination under Section 7 of the Endangered Species Act or the Bald and Gold Eagle Protection Act and can be processed as under programmatic agreement?		X
	a. Does the project involve a Section 7 Formal Consultation Process prior to start of construction?		X
xiv.	Does the project require an Individual Section 404 Permit (This is generally for major River Crossings, waters or wetlands impact greater than 3.0 AC, Projects with Formal Consultation, structures on new alignment or others as determined by USACE.)?		X
xv.	Does the project involve construction across or adjacent to a river designated as a component in the National System of Wild and Scenic Rivers?		X
xvi.	Does the project require a Coast Guard Permit?		X
xvii.	Does the project involve an adverse impact on prime farmland where Natural Resources Conservation Agency (NRCS) has required consideration of alternatives and measures to avoid and minimize impacts?		X
xviii.	Does the project involve increase to the base 100 Year floodplain in a regulatory floodway (Zone A-E in a FEMA Map) that will require a flood map revision as determined by the appropriate state or local authority?		X
xix.	Does the project not conform to the State Implementation Plan which is approved or promulgated by the U.S. Environmental Protection Agency in air quality non-attainment areas		X
xx.	Does the project involve any known Superfund site?		X
xxi.	If the project involves road or bridge closure or ramp closure, do any of the following conditions apply? (Check the boxes ONLY if the project involves road closure)		
	a. No Access will be provided to local traffic or posted		
	b. Through traffic dependent businesses will be affected		
	c. The detour or closure will substantially alter the environmental consequences of the action, such as by creating unsafe conditions on the detour route or requiring additional work or expansion to detour routes to carry the additional traffic.		
	d. There is a public controversy associated with the detour or closure		
	e. The detour closure will interfere with special events or activities		
xxii.	Does the project have substantial public or agency controversy on environmental grounds?		X

Explanation for Individual CE (If any of the answers above are YES):	
Item for which the answer is YES	v.
Explanation that CE Classification is appropriate	
<p>The October 22, 2021 Relocation Plan, based on Right-of-Way Submission Plans dated August 2021, identified four (4) single-family residences with a potential for relocation and one (1) personal property relocation. Any properties being impacted by the proposed right-of-way on this project may be entitled to relocation benefits. The eligibility of each property impacted will be determined through the right-of-way process. Acquisition and relocation assistance will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended effective February 3, 2005. A Community Impact Assessment (CIA) report was completed in January 2022. The focus of this study centered on the possible impacts associated with the potential displacements identified in the relocation plan.</p> <p>According to the CIA, the community adjacent to the project is unincorporated and is comprised of rural development with single-family homes and no commercial businesses. Median income shown for census Block</p>	

Explanation for Individual CE (If any of the answers above are YES):	
<p>Groups located within the study area range from \$27,601 (Census Tract 210, Block Group 2) to \$40,625 (Census Tract 210, Block Group 1). According to recent Census data (2019 ACS), the census Block Groups show a minority population. According to recent Census data (2019 ACS), there is a very low percentage of persons who speak English “less than very well” in each census Block Group. Within each census geography, Census Tract 210, Block Group 2 contains roughly 0.6% persons who speak English “less than very well,” while the others (Census Tract 210, Block Groups 1 and 2) do not have any. There do not appear to be any signs of vulnerable populations present within the study area. Additionally, there were no signs of other modes of transportation observed within the study area.</p> <p>Four single-family homes would be displaced as a result of the proposed project. There are available residential properties available in the surrounding area that are comparable replacement housing.</p> <p>In addition, no commercial buildings would be displaced as a result of this project. There is, however, one personal property displacement.</p> <p>There are no proposed permanent or temporary changes to access. Travel patterns may temporarily be affected while roadway improvements are under construction. However, after bridge replacement and roadway improvements have been completed, travel patterns will be improved in the study area. There are no planned roadway closures during construction for this project, so impacts to access and travel patterns for the community are anticipated to be minimal.</p> <p>People in the community are not anticipated to be separated or isolated as a result of the proposed project. The improvements are not anticipated to limit accessibility to local services or facilities. Motorists would benefit, as paved shoulders and new guardrail would make conditions safer. There was no indication that cyclists or pedestrians used this segment of SH-16. However, if they did, cyclists and pedestrians would benefit from the proposed 8-foot paved shoulders. The proposed displacements are not anticipated to impact community cohesion within the study area.</p> <p>There are no disproportionate impacts anticipated on EJ populations. There would be no disparity of impacts to different populations in the community due to the proposed project. Additionally, none of the proposed displacements impact any readily identifiable groups of minority or low-income persons who live in geographic proximity. EJ populations and non-EJ populations within the study area would be impacted equally from the proposed improvements to SH-16.</p> <p>Based on the analysis above, the proposed project will not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of E.O. 12898 and FHWA Order 6640.23. No further Environmental Justice analysis is required.</p>	
Item for which the answer is YES	
Explanation that CE Classification is appropriate	
Pre-Construction Commitments:	
<p>Proposed construction will slightly increase the construction impact area or marginally extend to areas not evaluated in the most recent environmental studies. These changes will be evaluated at the time of Final Field Review and studies will be updated accordingly.</p> <p>The action may involve work in potentially jurisdictional waters and potentially jurisdictional wetlands. For State Projects, the 404 permit application form needs to be submitted by the Designer through Project Management Division to Environmental Programs Division at the time of Right-of-Way submittal for evaluation and</p>	

determination of the appropriate Clean Water Act Section 404 permit application for the project.

**ABB Commitment:** Minimize habitat loss by reducing the amount of ground disturbance of suitable ABB habitat within the construction footprint to only what is necessary for project construction and document in the monitoring reports to the Service. Following construction, areas of ground disturbance outside of the safety clear zone will be revegetated with native plant species where applicable and practicable. Areas where revegetation with native plant species is not practicable will be revegetated with more traditional plantings such as solid slab sodding.

**Monarch Commitment:** ODOT, as a Certificate of Inclusion partner in the Nationwide Monarch Butterfly CCAA for Energy and Transportation lands, will adhere to the conservation measures, as well as minimize threats to the monarch butterfly as stipulated in this CCAA.

The following Airport/Airfield located within 4 miles of this project. This action may require notifying the Federal Aviation Administration (FAA) of proposed construction via FAA Form 7460-1 prior to construction.  
Jones Memorial Airport

#### Right-of-Way and Utility Commitments

The following Construction Commitments requiring avoidance, restrictions or minimization of natural and human resources during Right-of-Way clearance and Utility relocation activities will be discussed with the Right-of-Way and Utility Owners at the start of Right-of-Way and Utility Process.

#### Construction Commitments

The following plan notes requiring avoidance, restrictions or minimization of natural and human resources in the project and off-site project areas will be added to the final project plans under "Environmental Mitigation Notes" per policy Directive C-201-2.

**ODOT Commitment: All operators, employees, and contractors will be made aware of all environmental commitments, including the following Plan Notes**

#### Species Plan Notes

**Non-Compliance:** Failure to implement the commitments specified in the Plan Notes can result in non-compliance issues on the project. Work activities may be suspended on the project, for an undetermined duration, while working with regulators to bring the project back into compliance. The contractor will not be compensated for time lost.

**Water Quality Conservation:** Appropriate Best Management Practices to minimize impacts from storm water discharges and sedimentation in streams, as established by the Oklahoma Department of Environmental Quality, shall be conscientiously implemented throughout the proposed construction periods, in order to minimize any potential impacts to any listed species. The effectiveness of erosion controls shall be maintained for the duration of construction activities. Hazardous materials, chemicals, fuels, lubricating oils, and other such substances shall be stored at least 100 feet outside of the ordinary high water mark (OHWM). Refueling of construction equipment shall also be conducted at least 100 feet from the OHWMs. Sediment and erosion controls shall be installed around staging areas to prohibit discharge of materials from these sites. Construction waste materials and debris shall be stockpiled at least 25 feet outside of the OHWMs, and these materials shall be removed and disposed of properly following completion of the project. Preventative measure must be taken to prohibit the discharge of contaminants into any surface waters.

**American Burying Beetle Note:** The American Burying Beetle is a large carrion burying beetle that occurs

within the project limits. Artificial lighting may be used during construction for night activities if the equipment specifications outlined in Special Provision 656-5(a-b)19 for ABB are adhered to and measures to minimize use of artificial lighting have been implemented. Carcasses and all food trash shall be removed from the permanent and temporary right-of-way throughout the duration of project activities. Pollution Prevention Requirements as specified by the Oklahoma Department of Environmental Quality General Permit OKR10 for Storm Water Discharges shall be implemented when appropriate. Additionally, all equipment will be fueled, and all fuel and motor vehicle oil will not be stored within areas of native vegetation (ie. outside of ABB habitat).

**Migratory Bird Note:** Migratory birds are protected by the federal Migratory Bird Treaty Act. Many birds commonly use bridges and culverts for nesting. The nesting season for most migratory bird species extends from March 1 to August 31. Migratory bird nesting use of the RCB culvert was observed. Painting, repair, retrofit, rehabilitation or demolition of the existing culvert shall be conducted between September 1, and February 28, when migratory bird nests are not occupied. If painting, repair, retrofit, rehabilitation or demolition cannot be completed between September 1 and February 28, the culvert shall be protected from new nest establishment prior to March 1, by means that do not result in bird death or injury. Options include the exclusion of adult birds from suitable nest sites on or within a structure by the placement of weather-resistant polypropylene netting with 0.25-inch or smaller openings, prior to March 1. Methods other than netting must be pre-approved by the ODOT Biologist.

Although no nests were observed on all other structures, the birds may occupy the structures in the future. The Resident Engineer shall contact the ODOT Biologist if any bird use of this structures is observed. If birds are observed then painting, repair, retrofit, rehabilitation or demolition of the existing bridge and culvert shall be conducted between September 1, and February 28 (when migratory bird nests are not occupied).

<b>Species (choose those that apply)</b>	<b>Seasonal Restriction Period</b>
Migratory Birds: Swallows and Phoebe (NESTS PRESENT)	March 1 – August 31

The Environmental Programs Division shall provide **the final plan sheet with the mitigation notes** to the Designer for inclusion in Final Plans and keep a copy for the project records. The mitigation measures above should be discussed at all Pre-work conferences per Policy Directive C-201-2.

All documentation, analyses, and agency coordination regarding this Categorical Exclusion are contained in a Supporting Appendix maintained in the project file at the Oklahoma Department of Transportation, Environmental Programs Division.

Development of the project including coordination and assessment of potential social, economic and environmental impacts has been considered in accordance with DOT ORDER 5610.1C, and CEQ REGULATIONS 40 CFR 1500 - 1508 as amended, 23 CFR 771.117 and the 2019 FHWA/ODOT Programmatic Agreement for processing of categorical exclusions. Implementation of this action as a “Categorical Exclusion” will satisfy the requirements of the National Environmental Policy Act.

### Preparer/Reviewer Signatures

<i>Angelikman</i>	5/3/2022	
Environmental Consultant Project Manager (If Applicable)	Date	
Guernsey	5/3/2022	
Environmental Consultant Firm Name (If Applicable)	Date	
County Commissioner or City Manager (For Local Government Projects)	Date	
<i>Erin Faulkner</i>	5/4/2022	
ODOT Environmental Project Manager	Date	
<i>Amber McIntyre</i>	5/4/2022	
ODOT Environmental Programs Interim Assistant Division Manager	Date	
<i>Joe Butata</i>	5/4/2022	
ODOT Environmental Programs Interim Division Manager	Date	
CONCLUSION:		
ODOT has reviewed the conditions identified in Section IV.A.1.b of Federal Highway Administration 2019 (FHWA)/ODOT Programmatic Agreement for Processing Categorical Exclusions (CE) and determined that an Individual CE must be submitted to FHWA for approval.	X	YES
		NO

### For Individual CEs requiring FHWA Approval:

Concurrence that this project qualifies for a Categorical Exclusion:

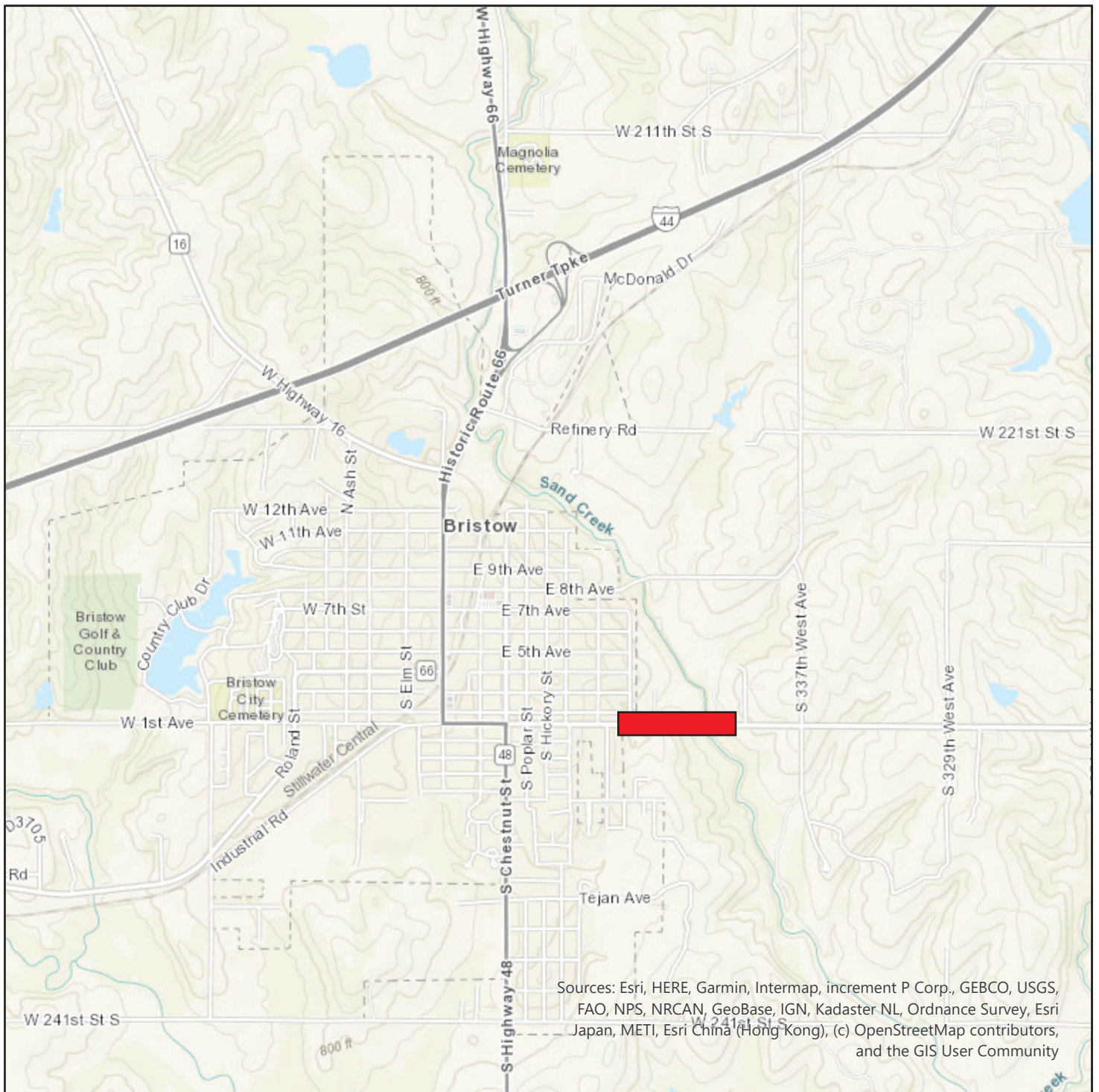
<b>KAREN D ORTON</b> Digitally signed by KAREN D ORTON Date: 2022.05.16 12:52:55 -05'00'	
Environmental Programs Manager, FHWA	Date

### Attachments:

1. Location Map
2. Current Plans and Study Footprint
3. Early Coordination
4. Studies and Coordination
5. Other Section – Initiation and Inspection Reports/NEPA Submittal Checklist, QA/QC Checklist

### Distribution List (Check Applicable Ones)

<input checked="" type="checkbox"/>	Project Management Division (All State Projects)
<input checked="" type="checkbox"/>	Roadway Design Division (All State projects with the exception of projects from Traffic Division and Special Projects)
<input checked="" type="checkbox"/>	Bridge Division (All State Bridge Projects)
<input type="checkbox"/>	Traffic Division (For projects from Traffic Division)
<input type="checkbox"/>	Local Government Division (County, City, TAP or Special Projects)
<input checked="" type="checkbox"/>	Field Division Engineer (All Projects)
<input checked="" type="checkbox"/>	Right-of-Way Division (All Projects)
<input type="checkbox"/>	Noise Specialist (For projects with noise studies)



## Legend

Project Area

# SITE LOCATION MAP

## SH-16 OVER SAND CREEK

### CATEGORICAL EXCLUSION

### CREEK COUNTY, OKLAHOMA



ENGINEERS  
ARCHITECTS  
CONSULTANTS

Prepared by: KBF  
Prepared for: ODOT  
Date: April 2022  
JP No: 29682(04)



**RIGHT-OF-WAY PLANS OR FINAL PLANS  
AND  
NEPA STUDY FOOTPRINT OR STUDY  
PLANS**

R/W UTILITY  
MEETING  
JUNE 2021FOR SURVEY CONTROL DATA,  
SEE SURVEY DATA SHEETSMANDATORY TIE:  
THIS PROJECT IS A MANDATORY TIE WITH JOB  
PIECE 24131(04) AND SHALL BE BID ACCORDINGLY.STATE OF OKLAHOMA  
DEPARTMENT OF TRANSPORTATIONPLAN OF PROPOSED  
STATE HIGHWAYFEDERAL AID PROJECT NO. J2-9682(004)  
BRIDGE & APPROACHES (3R)  
SH 16

## CREEK COUNTY

CONTROL SECTION NO. 16-19-10  
STATE JOB NO. 29682(04)  
BRIDGE "A" LOCATION NO. 1910-0066X  
EXISTING NBI NO. 12429; NEW NBI NO. XXXXX

## INDEX OF SHEETS

0001	TITLE SHEET
0002-0003	TYPICAL SECTIONS
B001-B002	GENERAL PLAN AND ELEVATION (BRIDGE "A")
B003-B005	GENERAL PLAN AND ELEVATION (RETAINING WALLS)
R001-R005	PLAN AND PROFILE SHEETS
S001-S030	SURVEY DATA SHEETS
X001-X041	CROSS SECTIONS

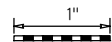
## PRELIMINARY EARTHWORK

	UNCLASSIFIED EXCAVATION 202(A)	FILL +15%	EXCESS EXCAVATION	UNCLASSIFIED BORROW 202(D)
	CY	CY	CY	CY
PHASE 1	8,496	5,278	1,929	0
PHASE 2	7,299	8,588	0	0
PHASE 3	6,563	3,990	2,573	0
TOTALS	22,358	17,856	4,502	0

UTILIZE 1,289 CY OF EXCESS EXCAVATION FROM PHASE 1 TO REDUCE  
PHASE 2 REQUIRED UNCLASSIFIED BORROW.

DESIGN DATA	
ADT 2022	= 3,100
ADT 2042	= 4,300
DHV (2-WAY)	= 516
K (DHV/ADT)	= 12%
D	= 57%
T (% DHV)	= 10%
T (% ADT)	= 13%
T3 (% ADT)	= 7%
V	= 65 MPH
DETOUR V	= 35 MPH
20YR FLEX. ESALS	= 2.8 M

## SCALES



PLAN	1" = 50'
PROFILE HOR.	1" = 50'
VER.	1" = 5'
LAYOUT MAP	1" = 1,760'

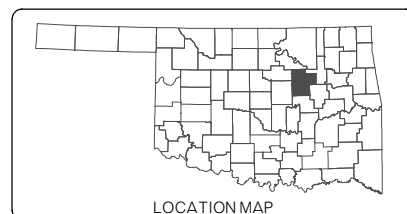
## CONVENTIONAL SYMBOLS

	PROPOSED ROAD
	RAILROADS
	RANGE & TOWNSHIP SECTION LINES
	QUARTER SECTION LINES
	FENCES
	GROUND LINE
	EXISTING ROADS
	BASE LINE
	GRADE LINES
	TELEPHONE & TELEGRAPH
	POWER LINES
	BUILDINGS
	OIL WELLS
	DRAINAGE STRUCTURES - IN PLACE
	DRAINAGE STRUCTURES - NEW
	RIGHT-OF-WAY LINES - EXISTING
	RIGHT-OF-WAY LINES - NEW
	CONTROLLED ACCESS
	RIGHT-OF-WAY FENCE

STA. 121+50 END INCIDENTAL  
CONSTRUCTION & BEGIN  
PROJECTSTA. 120+50 BEGIN  
INCIDENTAL CONSTRUCTIONCONTROL SUB-  
SECTION NO. 0.39

NOTE: PROJECT LENGTH BASED ON Q SURVEY STATIONING.

ROADWAY LENGTH	2,264.00 FT.	0.428 MI.
BRIDGE LENGTH	36.00 FT.	0.006 MI.
PROJECT LENGTH		0.434 MI.

EQUATIONS: NONE  
EXCEPTION: NONE

LOCATION MAP

TEIM DESIGN, PLLC  
3020 N.W. 149TH STREET  
OKLAHOMA CITY, OK 73134  
PH. (405) 752-1122  
FAX (405) 752-8855  
CA# 8428, RENEWAL 06-30-2023SHAY V. SMITH  
LICENSED PROFESSIONAL ENGINEER NO. 27713

DATE

OKLAHOMA  
DEPARTMENT OF TRANSPORTATION

DATE APPROVED

BY

CHIEF ENGINEER

SWO 4861(I)

F.A. PROJECT NO.

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

DATE APPROVED

BY

DIVISION ADMINISTRATOR

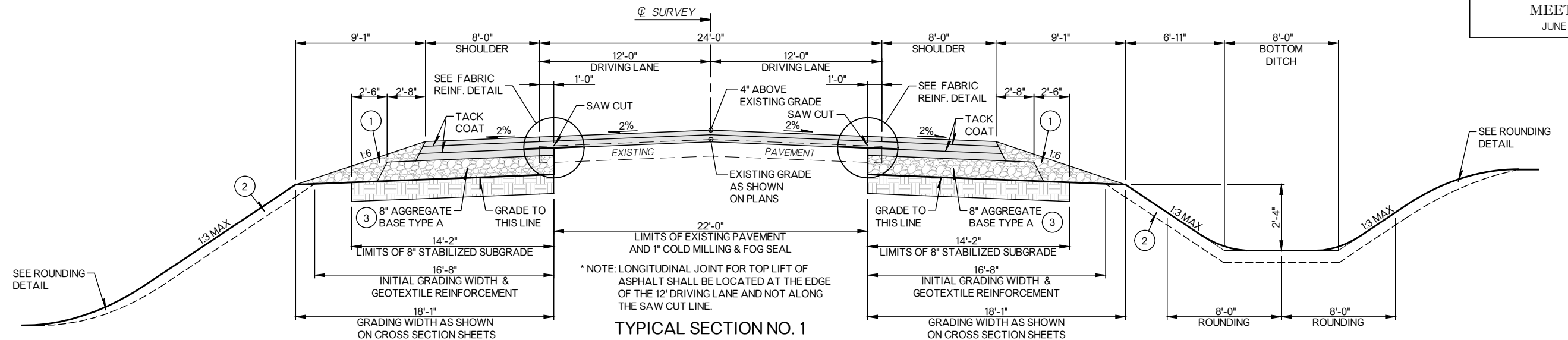
J2-9682(004)

COUNTY CREEK COUNTY

HIGHWAY

SH 16

SHEET NO. 0001



TYPICAL SECTION NO. 1  
SH 16

STA. 121+50 TO STA. 131+00  
STA. 140+10 TO STA. 144+50

PAVEMENT REQUIREMENT		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	8'-0" PAVED SHOULDER
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 64-22 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (PG 64-22 OK)	3" SUPERPAVE TYPE S3 (PG 64-22 OK)

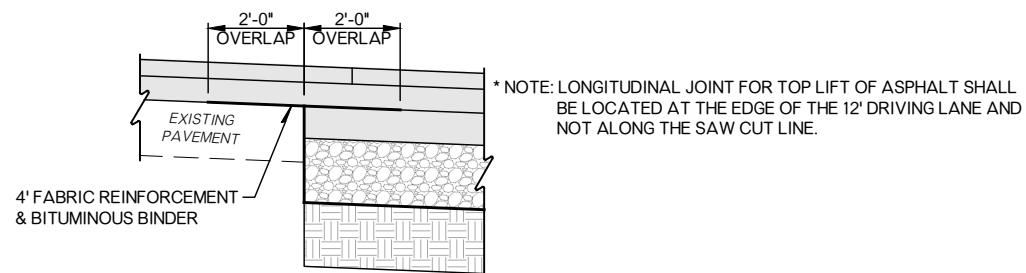
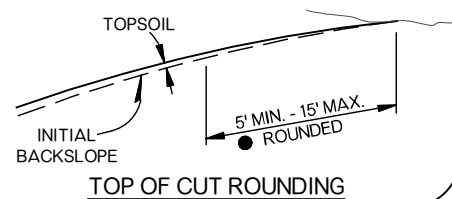
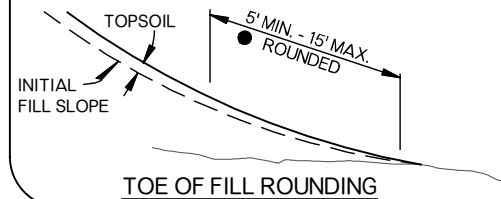
1 BACKFILL NOTE:  
TO BE BACKFILLED AS PART OF THE FINISHING OPERATIONS. QUANTITY IS MEASURED IN TBSC TYPE E.

2 TOPSOIL NOTE:  
THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL, STOCKPILE IT, AND PLACE IT BACK ON THE SECTION IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS. RESERVED TOPSOIL SHALL BE SPREAD FIRST ON THE COMPLETED SLOPES OF THE CUT SECTIONS AND THE REMAINDER ON COMPLETED FILL SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER. ALL ADDITIONAL COSTS ASSOCIATED WITH OPERATIONS SHALL BE INCLUDED IN THE PAY ITEM FOR SALVAGED TOPSOIL, LUMP SUM.

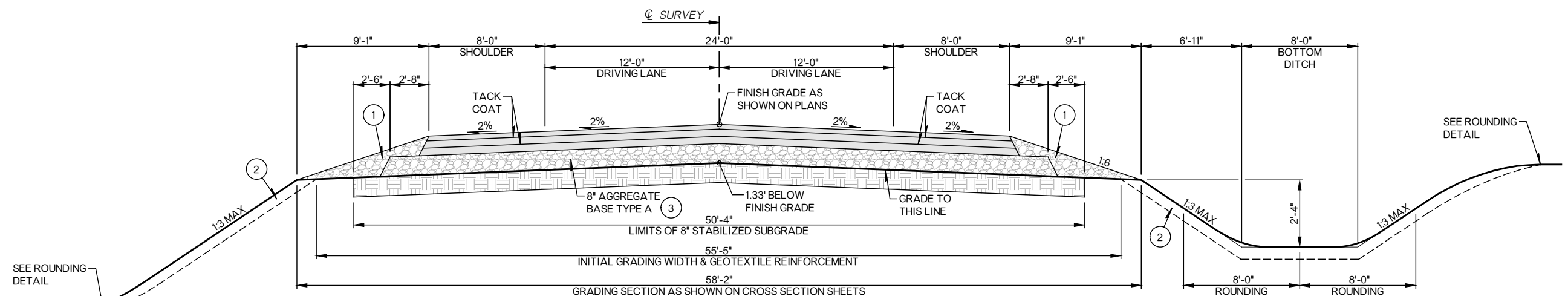
3 PRIME COAT ON TOP OF AGGREGATE BASE.

#### ROUNDING DETAIL

- INTERSECTION OF CUT AND/OR FILL SLOPES WITH GROUND LINE TO BE ROUNDED AS PART OF FINISHING OPERATIONS. ROUNDED SHALL BE 5' MINIMUM FOR SMALLER CUTS AND FILLS TO 15' MAXIMUM FOR LARGER CUTS AND FILLS OR AS DESIGNATED BY THE ENGINEER. COST OF ROUNDED TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF WORK.



FABRIC REINFORCEMENT DETAIL



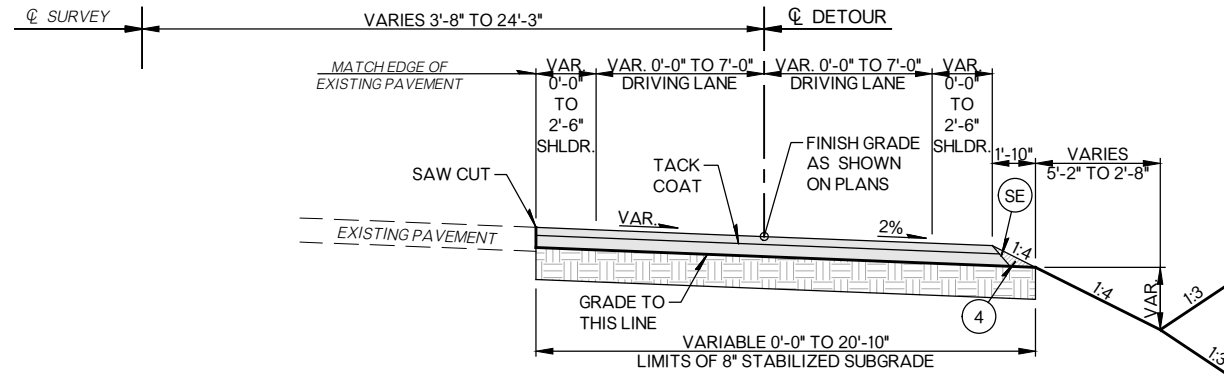
TYPICAL SECTION NO. 2  
SH 16

STA. 131+00 TO STA. 140+10

PAVEMENT REQUIREMENT		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	8'-0" PAVED SHOULDER
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 64-22 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (PG 64-22 OK)	3" SUPERPAVE TYPE S3 (PG 64-22 OK)

THIS DOCUMENT IS PRELIMINARY IN  
NATURE AND IS NOT A FINAL, SIGNED AND  
SEALED DOCUMENT.

TYPICAL SECTION

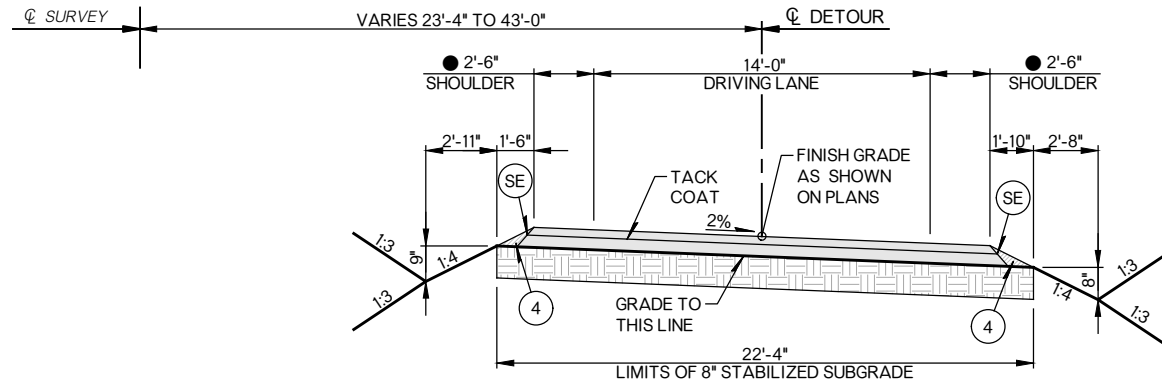


TYPICAL NO. 3

DETOUR

STA. 128+63.51 TO STA. 129+55.46  
STA. 141+57.20 TO STA. 142+42.28

PAVEMENT REQUIREMENT	
PAVEMENT STRUCTURE	14'-0" DRIVING LANE
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (PG 64-22 OK)



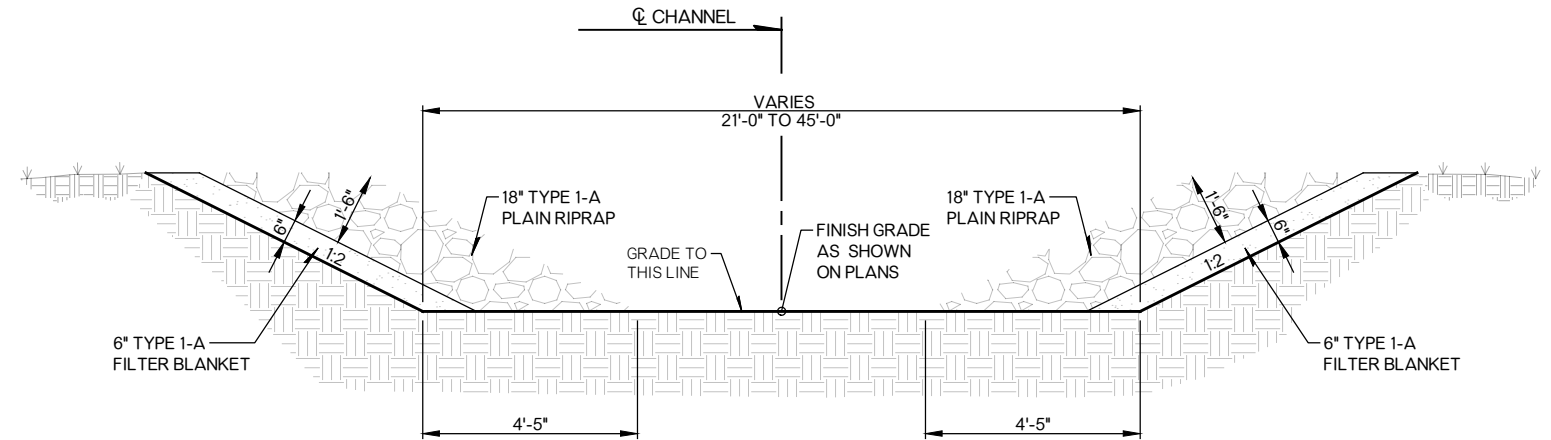
TYPICAL NO. 4

DETOUR

STA. 129+55.46 TO STA. 141+57.20

PAVEMENT REQUIREMENT		
PAVEMENT STRUCTURE	14'-0" DRIVING LANE	2'-6" SHOULDERS
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 64-22 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (PG 64-22 OK)	3" SUPERPAVE TYPE S3 (PG 64-22 OK)

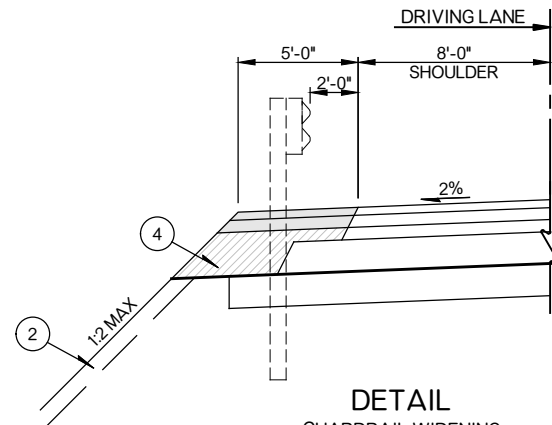
● BARRIER LT. & RT. FROM STA. 131+50 TO STA. 139+50



TYPICAL SECTION NO. 5

CHANNEL

STA. 11+15 TO STA. 11+45.64  
STA. 12+55.14 TO STA. 13+39



DETAIL

GUARDRAIL WIDENING  
STA. 134+28.87 TO STA. 138+46.70 LT.



PAVEMENT TRANSITION

STA. 121+50 TO STA. 123+50

PAVEMENT REQUIREMENT		
PAVEMENT STRUCTURE	4.25" PAVEMENT STRUCTURE	4.25" - 5" PAVEMENT STRUCTURE
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 64-22 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	2.25" SUPERPAVE TYPE S3 (PG 64-22 OK)	2.25" - 3" SUPERPAVE TYPE S3 (PG 64-22 OK)

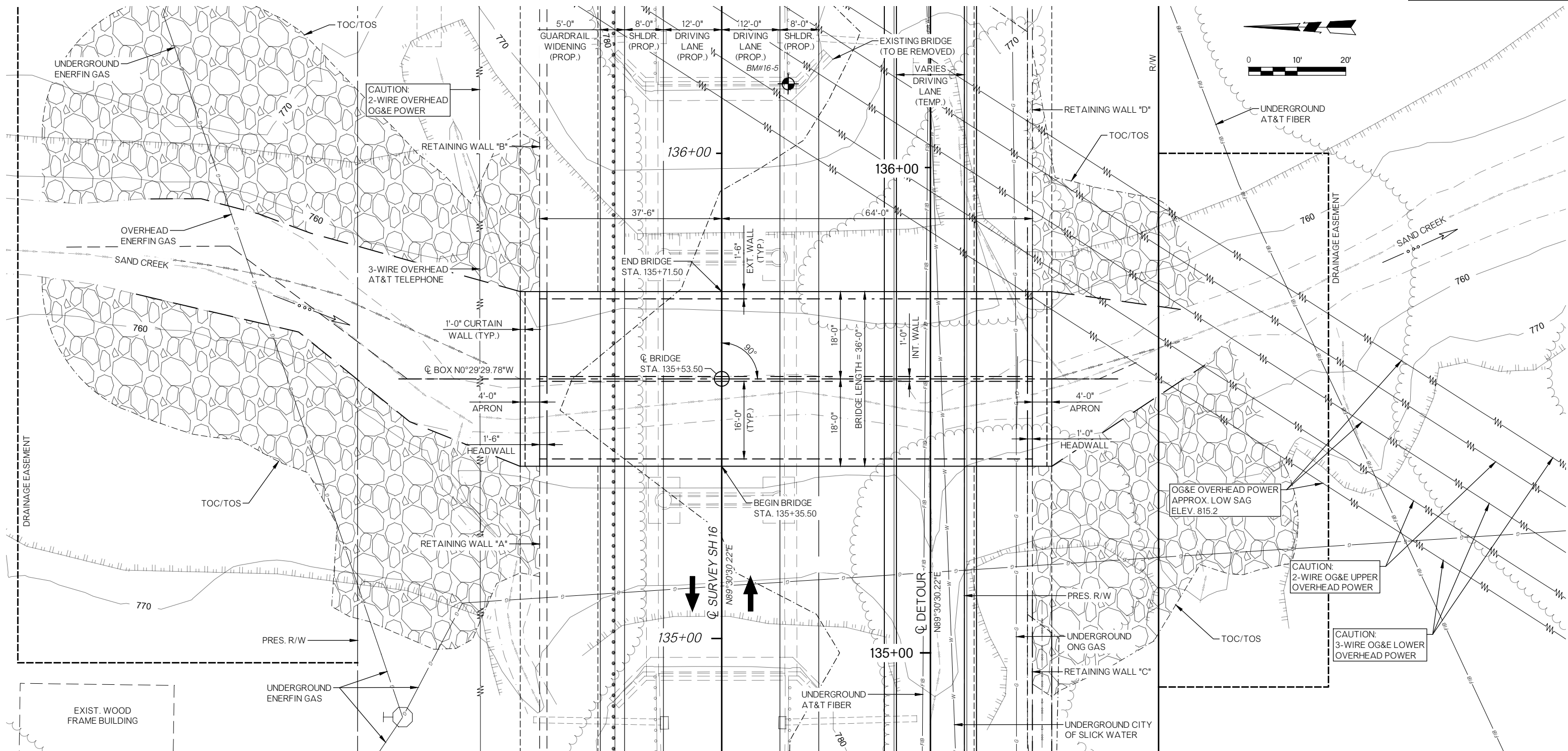
② SEE TOPSOIL NOTE 2 ON SHEET 0002.

SE PAVEMENT SAFETY EDGE.

④ BACKFILL NOTE:  
TO BE BACKFILLED AS PART OF THE FINISHING OPERATIONS. QUANTITY IS MEASURED  
IN OTHER ITEMS OF WORK.

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NATURE AND IS NOT A FINAL, SIGNED AND  
SEALED DOCUMENT.

TYPICAL SECTION



BM#16-5 - "I" ON BRIDGE WALL AT S.E. COR.  
BRIDGE OVER SAND CREEK  
Q SURVEY STA. 136+14, 14.00' RT.  
ELEV. = 784.76

NOTES  
ALL STATIONING FOLLOWS Q SURVEY SH 16, UNLESS NOTED OTHERWISE.

FOR ELEVATION VIEW, SEE SHEET NO. B002.

SEE SHEET NO. B002 FOR DESIGN DATA, FINISH GRADE DATA, HYDRAULIC DATA SUMMARY, INDEX OF SHEETS AND EXISTING BRIDGE NOTE.

FOR CHANNEL WORK DETAILS, SEE THE CHANNEL PLAN AND PROFILE SHEETS AND CROSS-SECTIONS. (ROADWAY ITEMS).

(1) TEMPORARY EARTH RETAINAGE FOR NEW RCB CONSTRUCTION.

CONST. 2-16'x18' BRIDGE BOX WITH SP.  
HEADWALLS, WINGS, APRONS AND  
4' CURTAIN WALLS, SKEWED 0°

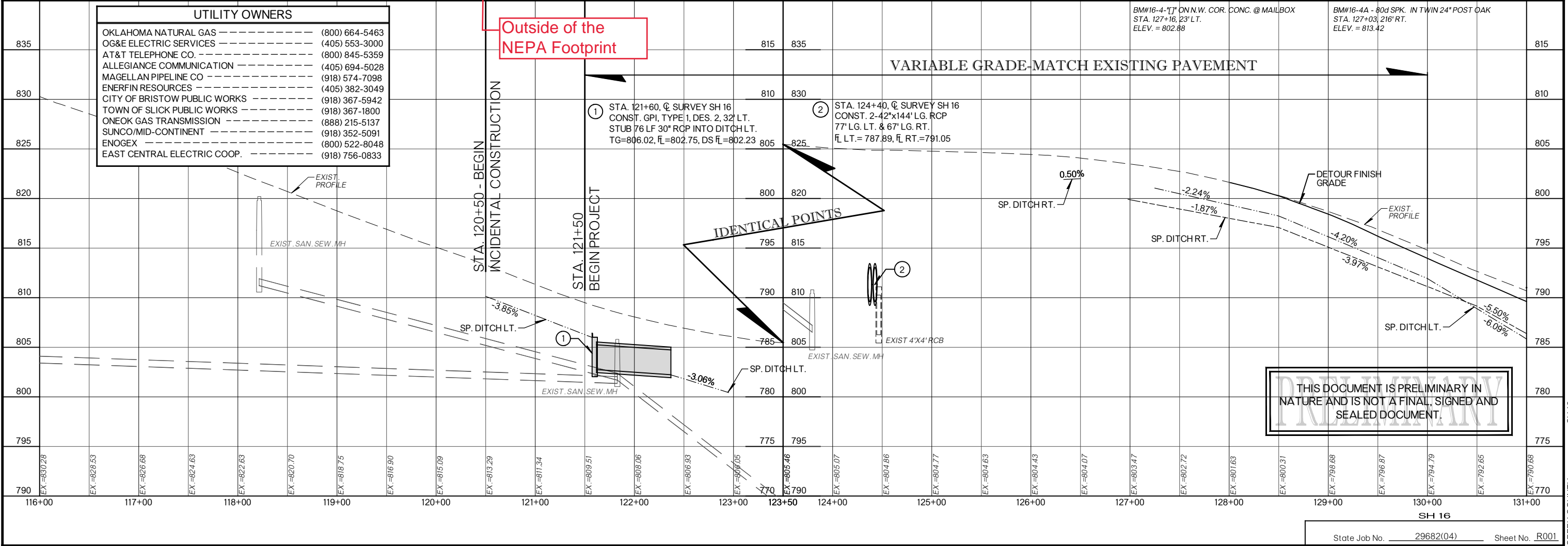
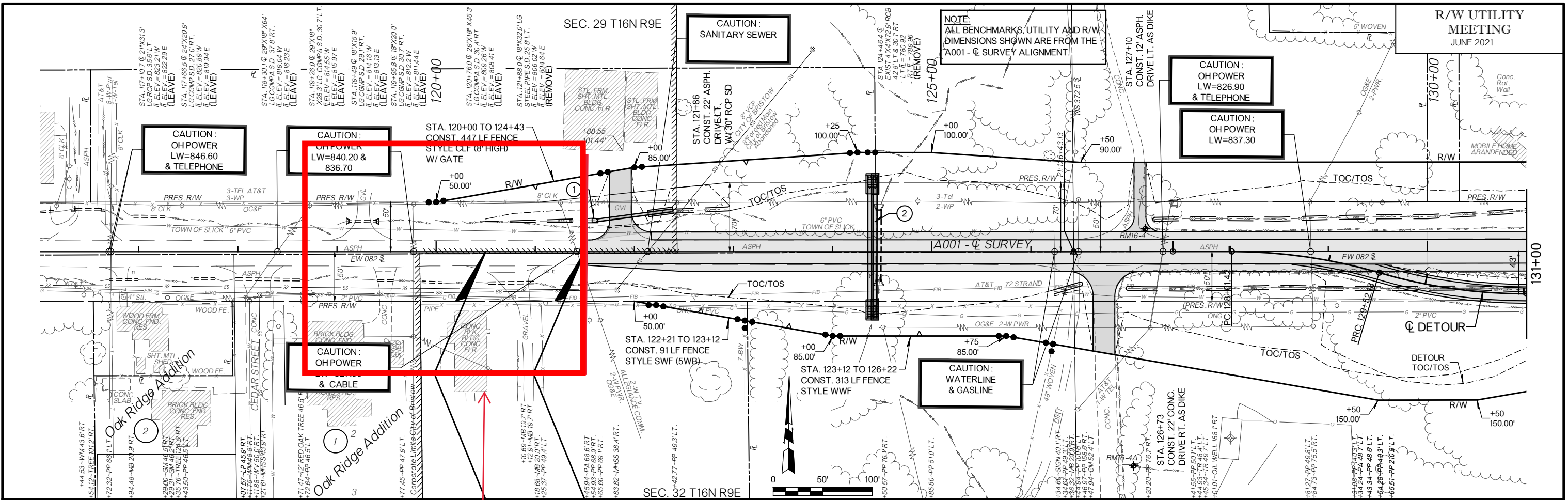
THIS DOCUMENT IS PRELIMINARY IN  
NATURE AND IS NOT A FINAL, SIGNED AND  
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BRIDGE "A"  
SH 16 OVER SAND CREEK

GENERAL PLAN AND ELEVATION  
(BRIDGE "A")(SHEET 1 OF 2)

CONST. DOUBLE 16'x18'x101.50' LG. BOX, SKEWED 0°, AT Q SURVEY STA. 135+53.50

State Job No. 29682(04) Sheet No. B001



CAUTION:  
OH TELEPHONE  
LW=821.50

OH POWER & TEL.  
LW=813.90  
& 824.30

CAUTION:  
GASLINE &  
OH TELEPHONE  
LW=813.70

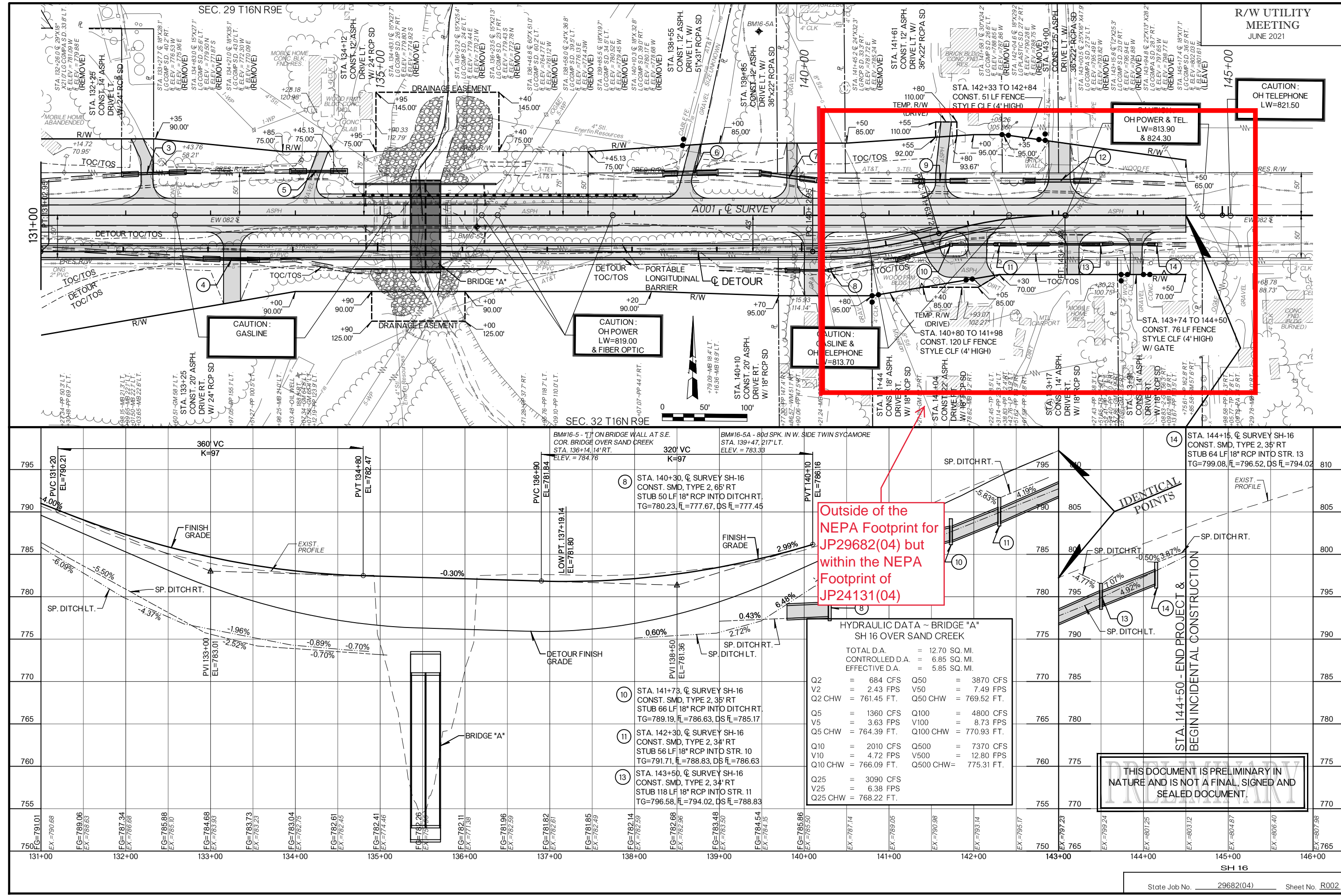
CAUTION:  
OH POWER  
LW=819.00  
& FIBER OPTIC

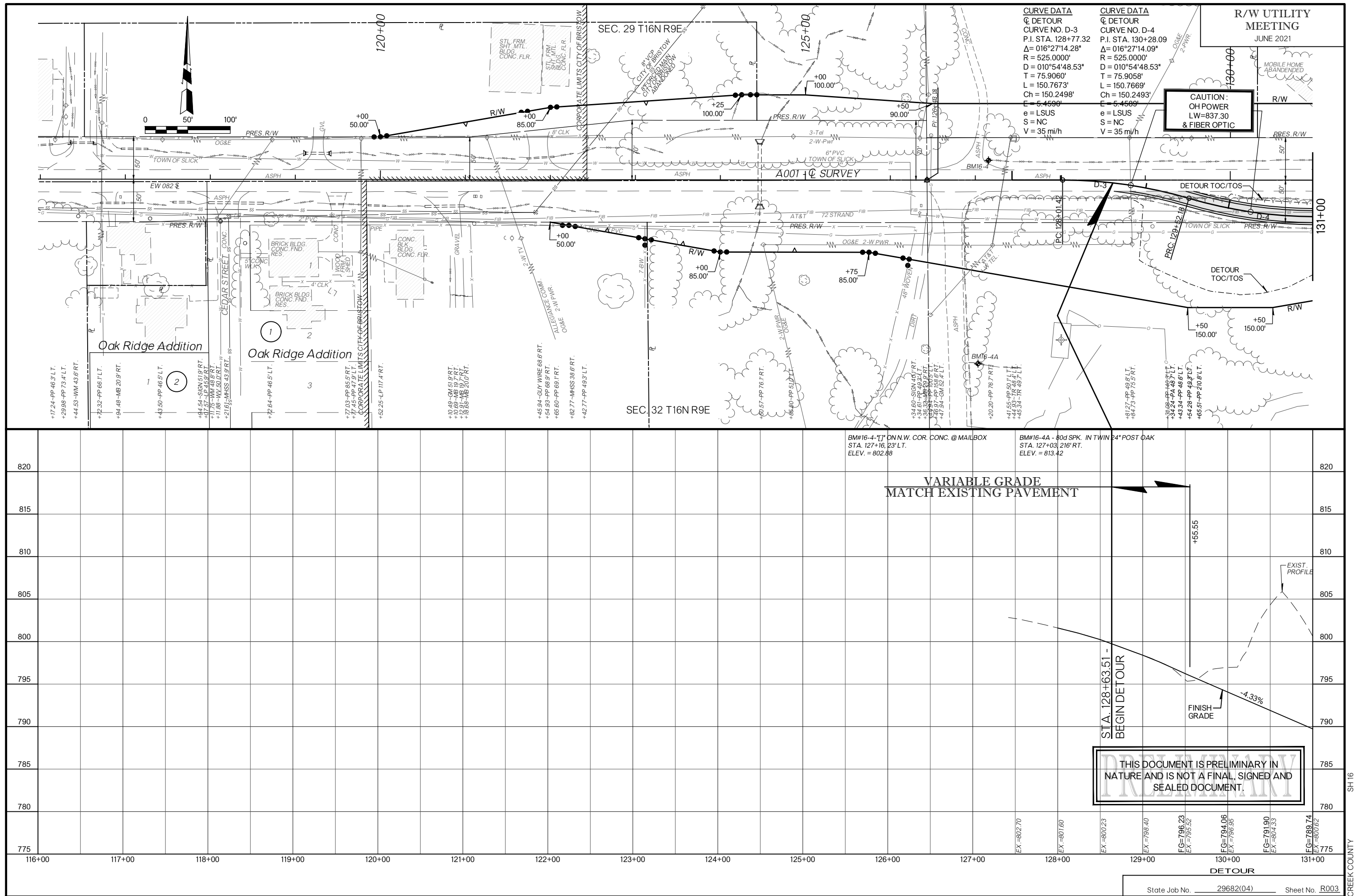
CAUTION:  
GASLINE

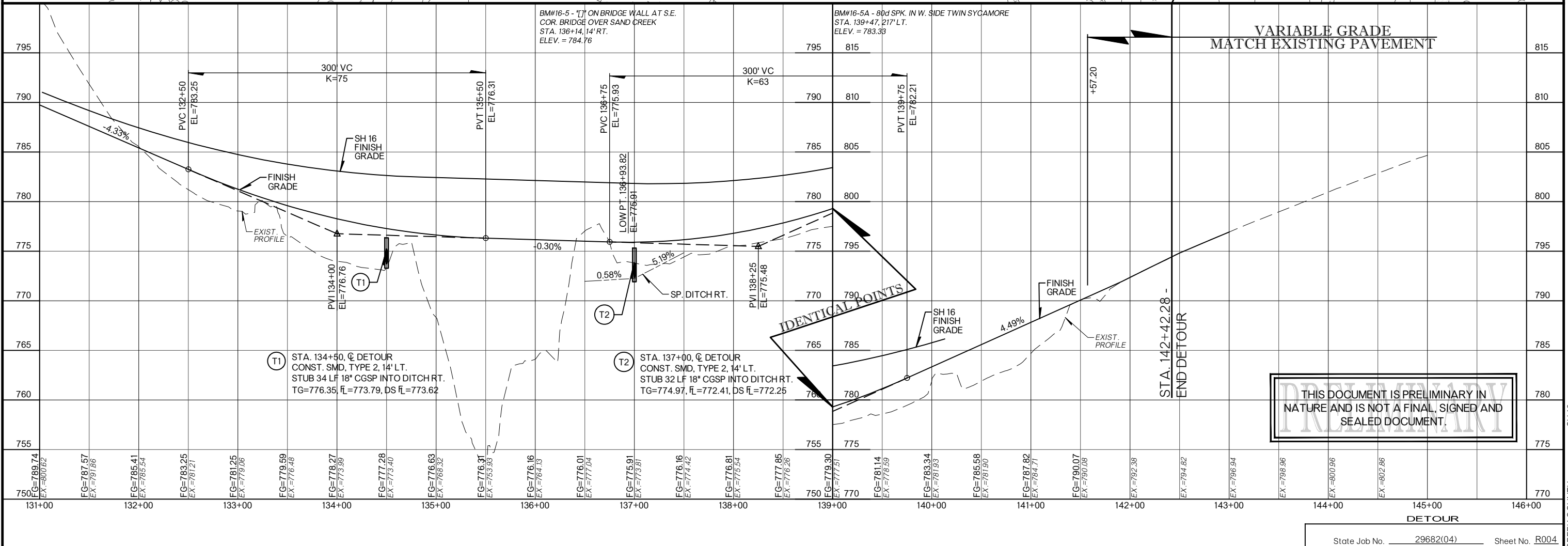
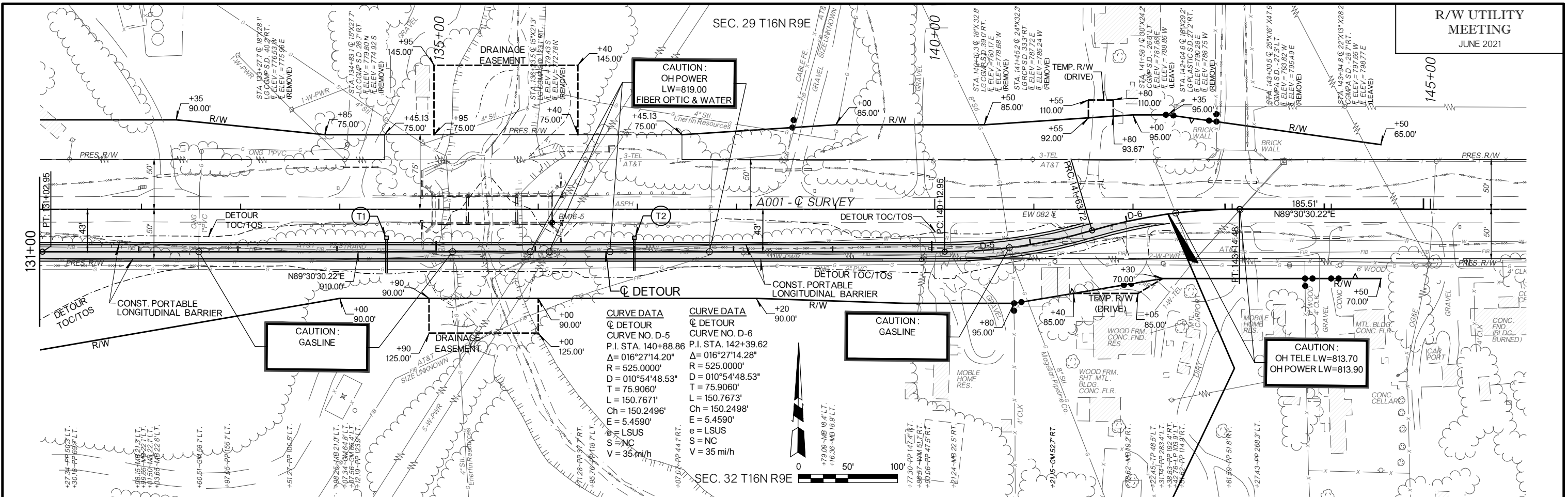
Outside of the  
NEPA Footprint for  
JP29682(04) but  
within the NEPA  
Footprint of  
JP24131(04)

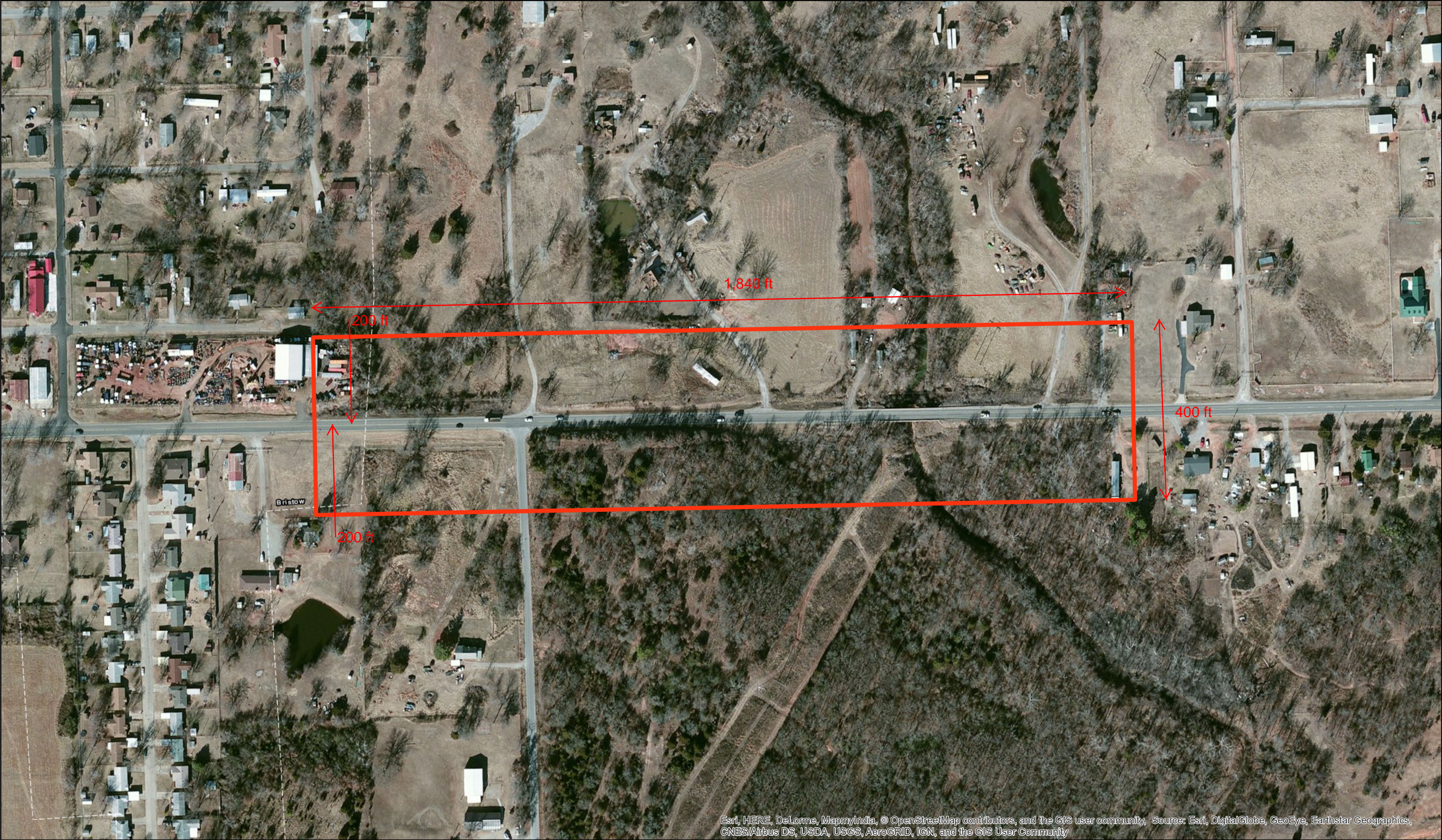
HYDRAULIC DATA ~ BRIDGE "A" SH 16 OVER SAND CREEK			
TOTAL D.A.		= 12.70 SQ. MI.	
CONTROLLED D.A.		= 6.85 SQ. MI.	
EFFECTIVE D.A.		= 5.85 SQ. MI.	
Q2	= 684 CFS	Q50	= 3870 CFS
V2	= 2.43 FPS	V50	= 7.49 FPS
Q2 CHW	= 761.45 FT.	Q50 CHW	= 769.52 FT.
Q5	= 1360 CFS	Q100	= 4800 CFS
V5	= 3.63 FPS	V100	= 8.73 FPS
Q5 CHW	= 764.39 FT.	Q100 CHW	= 770.93 FT.
Q10	= 2010 CFS	Q500	= 7370 CFS
V10	= 4.72 FPS	V500	= 12.80 FPS
Q10 CHW	= 766.09 FT.	Q500 CHW	= 775.31 FT.
Q25	= 3090 CFS		
V25	= 6.38 FPS		
Q25 CHW	= 768.22 FT.		

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SEALED DOCUMENT.









**EARLY COORDINATION LETTERS  
AND RESPONSES**



OKLAHOMA DEPARTMENT OF TRANSPORTATION

Environmental Programs Division

200 N.E. 21<sup>st</sup> Street  
Oklahoma City, OK 73105-3204  
www.odot.org

April 26, 2018

Subject: Bridge replacement on SH-16 over Sand Creek, 0.7 miles east of the junction SH-48 in Creek County, JP No: 29682(04), Project Number: J2-9682(004)

Dear Property Owner:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA), will be preparing an environmental document on a proposal to replace the Sand Creek bridge on SH-16 in Creek County. The project is scheduled for fiscal year 2024 in the current 8 Year Construction Program and ODOT is early in the project development process. The exact project scope and requirements will be clarified through the planning, environmental review, and design process, however the improvements are considered necessary to correct a functionally obsolete bridge. Issues that will be analyzed in the document include the project's effects to noise, water quality, cultural and natural resources, and other effects to the environment. In accordance with the National Environmental Policy Act, the National Historic Preservation Act, and FHWA policy, ODOT requests any information or specific concerns you have regarding this project's potential impact on the resources listed above. If you have reason to believe that there are resources such as underground oil or gas storage tanks, contaminated soil, archaeological or historic sites, human graves, places of religious or cultural importance to Native American tribes, or other sensitive resources, please respond to the contact provided below.

In accordance with Oklahoma Statute 69-702, employees or authorized agents of ODOT may enter your property for the purpose of surveying for the environmental considerations listed above. A copy of Oklahoma Statute 69-702 is provided with this letter. The results of the studies for cultural resources, biological resources, noise, and hazardous materials will be incorporated into the environmental document being prepared for this project. Minor hand digging on your property may be necessary as part of the survey. Any test holes will be filled in and cleaned up afterwards.

If you are currently leasing this property, please notify your lessee of our planned work.

Should you have any information or specific concerns, or if you have resources listed above that may be located on your property please contact our authorized agent Ms. Angela Aikman with Guernsey at 405.416.8294 or [angela.aikman@guernsey.us](mailto:angela.aikman@guernsey.us). If your concerns are related to places of traditional cultural or religious importance to Native American tribes or to burials or cemeteries affiliated with tribes, please contact Dr. Rhonda Fair, ODOT Director of Tribal Coordination, at 405-517-5670 or [rfair@odot.org](mailto:rfair@odot.org). As always, your cooperation is greatly appreciated.

Respectfully,

Siv Sundaram, P.E.  
Environmental Programs Division Engineer  
SS/DS/Guernsey

Enclosures: Location Map, Copy of Statute 69-702

Copy to:

Project Management  
Field Division Engineer  
Survey Division  
Materials Division

Right-of-Way Division  
ODOT Cultural Resources Specialist  
Tribal Coordination  
Specialists

*"The mission of the Oklahoma Department of Transportation is to provide a safe, economical, and effective transportation network for the people, commerce and communities of Oklahoma."*

AN EQUAL OPPORTUNITY EMPLOYER



OKLAHOMA DEPARTMENT OF TRANSPORTATION

Environmental Programs Division

200 N.E. 21<sup>st</sup> Street  
Oklahoma City, OK 73105-3204  
www.odot.org

April 26, 2018

Mr. Eddie Streeter  
Regional Director  
Eastern Oklahoma Regional Office  
Bureau of Indian Affairs  
P.O. Box 8002  
Muskogee, Oklahoma 74401-6201

Subject: Bridge replacement on SH-16 over Sand Creek, 0.7 miles east of the junction SH-48 in Creek County, JP No: 29682(04), Project Number: J2-9682(004)

Dear Mr. Streeter:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA) will be preparing an environmental document on a proposal to replace the Sand Creek bridge on SH-16 in Creek County. The project is scheduled for fiscal year 2024 in the current 8 Year Construction Program and ODOT is early in the project development process. The exact project scope and requirements will be clarified through the planning, environmental review, and design process, however the improvements are considered necessary to correct a functionally obsolete bridge. Issues that will be analyzed in the document include the project's effects to noise, water quality, cultural and natural resources, and other effects to the environment. In accordance with the National Environmental Policy Act, the National Historic Preservation Act, and FHWA policy, ODOT requests any information or specific concerns you have regarding this project's potential impact on the resources listed above. We have enclosed a location map and the environmental study area.

This project is in the early developmental stages and any comments relative to the social, economic, or environmental effects of this proposal will be appreciated. To allow adequate time for evaluation of your comments, we would appreciate receiving a response within **fifteen days** from the date of this letter. Your written comments should be directed to the Environmental Program Division Engineer, Oklahoma Department of Transportation, 200 N. E. 21st Street, Oklahoma City, Oklahoma 73105 or emailed to [environment@odot.org](mailto:environment@odot.org).

We sincerely appreciate your cooperation in this matter. For further information or if you have any questions, please contact Mr. David Saulsberry, Environmental Project Manager at 405.521.2315 or [dsaulsberry@odot.org](mailto:dsaulsberry@odot.org) or please contact our authorized agent Ms. Angela Aikman with Guernsey at 405.416.8294 or [angela.aikman@guernsey.us](mailto:angela.aikman@guernsey.us).

Respectfully,



Siv Sundaram, P.E.  
Environmental Programs Division Engineer

SS/DS/Guernsey

Enclosures: Location Map, Study Area Map

Copy to: Project Management Division  
Field Division Engineer

Right-of-Way Division  
ODOT Cultural Resources

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AN EQUAL OPPORTUNITY EMPLOYER



OKLAHOMA DEPARTMENT OF TRANSPORTATION

Environmental Programs Division

200 N.E. 21<sup>st</sup> Street  
Oklahoma City, OK 73105-3204  
www.odot.org

April 26, 2018

Mr. John Ledbetter  
Realty Specialist – Oklahoma Field Office  
Bureau of Land Management  
201 Stephenson Parkway, Suite 1200  
Norman, Oklahoma 73072-2037

Subject: Bridge replacement on SH-16 over Sand Creek, 0.7 miles east of the junction SH-48 in Creek County, JP  
No: 29682(04), Project Number: J2-9682(004)

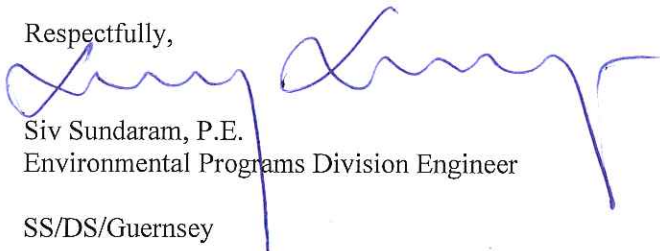
Dear Mr. Ledbetter:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA), will be preparing an environmental document on a proposal to replace the Sand Creek bridge on SH-16 in Creek County. The project is scheduled for 2024 in the current 8 Year Construction Program and ODOT is early in the project development process. The exact project scope and requirements will be clarified through the planning, environmental review, and design process, however the improvements are considered necessary to correct a functionally obsolete bridge. Issues that will be analyzed in the document include the project's effects to noise, water quality, cultural and natural resources, and other effects to the environment. In accordance with the National Environmental Policy Act, the National Historic Preservation Act, and FHWA policy, ODOT requests any information or specific concerns you have regarding this project's potential impact on the resources listed above. We have enclosed a location map and the environmental study area.

This project is in the early developmental stages and any comments relative to the social, economic, or environmental effects of this proposal will be appreciated. To allow adequate time for evaluation of your comments, we would appreciate receiving a response within **fifteen days** from the date of this letter. Your written comments should be directed to the Environmental Program Division Engineer, Oklahoma Department of Transportation, 200 N. E. 21st Street, Oklahoma City, Oklahoma 73105 or emailed to [environment@odot.org](mailto:environment@odot.org).

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Respectfully,



Siv Sundaram, P.E.  
Environmental Programs Division Engineer

SS/DS/Guernsey

Enclosures: Location Map, Study Area Map

Copy to: Project Management Division  
Field Division Engineer  
Right-of-Way Division

ODOT Cultural Resources

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AN EQUAL OPPORTUNITY EMPLOYER

**RELOCATIONS  
AND  
ENVIRONMENTAL JUSTICE**

**Oklahoma Department of Transportation – Right-of-Way Division**

Relocation Branch

Room C7 Third Floor Office 521-2648 Fax 522-1858

October 22, 2021

**To:** **Environmental Programs Division**

**Thru:** Project Management Branch

**From:** Diana Barlow, Manager, Relocation Branch

*Diana Barlow*

**Subject:** Relocation Plan – J/P 29682(04)(05) a.k.a. STP-219C(090),  
Creek County. SH-16: Over Sand Creek, .7 miles East of the Junction SH-48.

---

Attached is the Relocation Plan for the above referenced project to be included in the Environmental Document. *JG*

RELOCATION PLANNING  
SH-16  
Creek County

This pre-planning information is provided to the Environmental Programs Division to be included in the Environmental Document to satisfy Pre-planning requirements of the Federal Regulations 49 CFR, § 24.205, relocation planning, advisory services and coordination. The proposed study for Bridge and Approaches (3R) of SH-16 in Creek County is as follows:

A pre-planning drive-out was conducted in September 2021. 4-Residential Relocations and 1-Personal Property Relocation would be affected by the proposed reconstruction of SH-16.

The "Relocation Plan Inventory" table lists sites affected by the proposed Right-of-Way. Right-of-Way Plans have been "marked-up" labeling the sites inventoried.

**Relo Plan Inventory**

JP 29682(04)(05) Creek County

SH-16: Over Sand Creek, .7 Miles East of the Junction SH-48.

<b>Location</b>	<b>Stationing</b>	<b>Description</b>
A	131+00L 100' CRL	Singlewide Mobile Home <b>Residential # 1</b>
B	134+10L 180' CRL	Singlewide Mobile Home <b>Residential # 2</b>
C	135+00L 160' CRL	Wood Frame Home <b>Residential # 3</b>
D	141+20R 90' CRL 141+80R 150' CRL	Wood Frame Loafing Shed/lean-to Wood Frame Home <b>Residential # 4</b>
E	143+00R 90' CRL	Wood Frame Shed <b>PPO # 1</b>

There are (4)-Single Family Residences (**A**: Approximate 1,000 Singlewide Mobile Home, presumed to be 3bed/1bath). (**B**: Approximate 1,000 SF Singlewide Mobile Home, presumed to be 3bed/1bath). (**C**: Approximate 1,000 SF Home, presumed to be 3bed/1bath). (**D**: Approximate 2,200 SF Home, presumed to be 4bed/2bath). Web based realtor services supplied the listings of available properties in the Tulsa and surrounding area. The web-based realtor services utilized are listed in the RPRS. Decent, Safe & Sanitary (DSS) replacement housing is available around the project area.

Available Residential Replacement Properties similar to the possible displaced dwellings are as follows:

**Location “A”**

Replacement property searches were made for Location “A”.

**Location “A”**

<u>Property</u>	<u>Sq. Ft</u>
41946 W 51 <sup>ST</sup> ST, Jennings, OK 74038	1,640
Average SF:	1,640

**Location “B”**

Replacement property searches were made for Location “B”.

**Location “B”**

<u>Property</u>	<u>Sq. Ft.</u>
4505 S 265 <sup>TH</sup> Avenue West, Sand Springs, OK 74063	1,568
Average SF:	1,568

**Location “C”**

Replacement property searches were made for Location “C”.

**Location “C”**

<u>Property</u>	<u>Sq. Ft.</u>
613 S Cedar Street, Bristow, OK 74010	1,280
42400 W 131 <sup>ST</sup> . Street, Bristow, OK 74010	1,568
Average SF:	1,424

**Location “D”**

Replacement property searches were made for Location “D”.

#### Location "D"

<u>Property</u>	<u>Sq. Ft.</u>
34060 W 226 <sup>TH</sup> . Street S., Bristow, OK 74010	2,582
19523 S. 337 <sup>TH</sup> . Avenue, Bristow, OK 74010	2,600
Average SF: 2,591	

#### Commercial Relocations

At this time, Location "E" consists of 1 Wood Frame Shed that will be affected. The Shed and Contents will be considered as a Personal Property Only move. This Relocation Plan does not include any Commercial Businesses at this time.

#### Potential Relocation Problems:

Replacement Housing activity is based on the experience of the planning agent.

Replacement Dwellings are extremely limited and when there have been recent listings the properties are off the market extremely fast; the project may need to add 12 months to accommodate new construction for replacement dwellings.

If a residential or commercial property is occupied when this project begins, full relocation benefits and relocation advisory assistance will be offered to all affected displacees.

There was indication of low income or minority considerations prevalent in the community or being impacted by the project requiring special advisory services on a project that connects with this project.

(Some of the displacees may receive housing vouchers via Tulsa Housing Authority)

The Code of Federal Regulations (CFR) 49, Part 24, limits a payment not to exceed \$7,200.00 for rental assistance (RAP) or down payment assistance; and homeowner-occupant (RHP) payment may not exceed \$31,000.00. Last Resort Housing (LRH) allows for these amounts to be exceeded and will most likely be necessary to relocate persons affected by the proposed plans.

Planning Agent:

Kathy Blackwell 10/22/21

#### **Relocation Plan Resources Summary:**

##### **Web based Realtor Sites:**

Realtor.com

Zillow.com

PROPOSED  
R/W  
AUGUST 2021FOR SURVEY CONTROL DATA,  
SEE SURVEY DATA SHEETSMANDATORY TIE:  
THIS PROJECT IS A MANDATORY TIE WITH JOB  
PIECE 24131(04) AND SHALL BE BID ACCORDINGLY.STATE OF OKLAHOMA  
DEPARTMENT OF TRANSPORTATIONPLAN OF PROPOSED  
STATE HIGHWAY  
FEDERAL AID PROJECT NO. J2-9682(004)  
BRIDGE & APPROACHES (3R)  
SH 16  
CREEK COUNTYCONTROL SECTION NO. 16-19-10  
STATE JOB NO. 29682(04)  
BRIDGE "A" LOCATION NO. 1910-0066X  
EXISTING NBI NO. 12429; NEW NBI NO. 32913

## INDEX OF SHEETS

0001	TITLE SHEET
0002-0003	TYPICAL SECTIONS
B001-B002	GENERAL PLAN AND ELEVATION (BRIDGE "A")
B003-B005	GENERAL PLAN AND ELEVATION (RETAINING WALLS)
R001-R007	PLAN AND PROFILE SHEETS
S001-S030	SURVEY DATA SHEETS
X001-X041	CROSS SECTIONS

## PRELIMINARY EARTHWORK

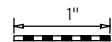
	UNCLASSIFIED EXCAVATION 202(A)	FILL +15%	EXCESS EXCAVATION	UNCLASSIFIED BORROW 202(D)
	CY	CY	CY	CY
PHASE 1	8,948	5,426	793	0
PHASE 2	6,148	8,877	0	0
PHASE 3	6,521	3,602	2,919	0
TOTALS	21,617	17,905	3,712	0

UTILIZE 2,729 CY OF EXCESS EXCAVATION FROM PHASE 1 TO REDUCE  
PHASE 2 REQUIRED UNCLASSIFIED BORROW.

## DESIGN DATA

ADT 2022	= 3,100
ADT 2042	= 4,300
DHV (2-WAY)	= 516
K (DHV/ADT)	= 12%
D	= 57%
T (% DHV)	= 10%
T (% ADT)	= 13%
T3 (% ADT)	= 7%
V	= 65 MPH
DETOUR V	= 35 MPH
20YR FLEX. ESALS	= 2.8 M

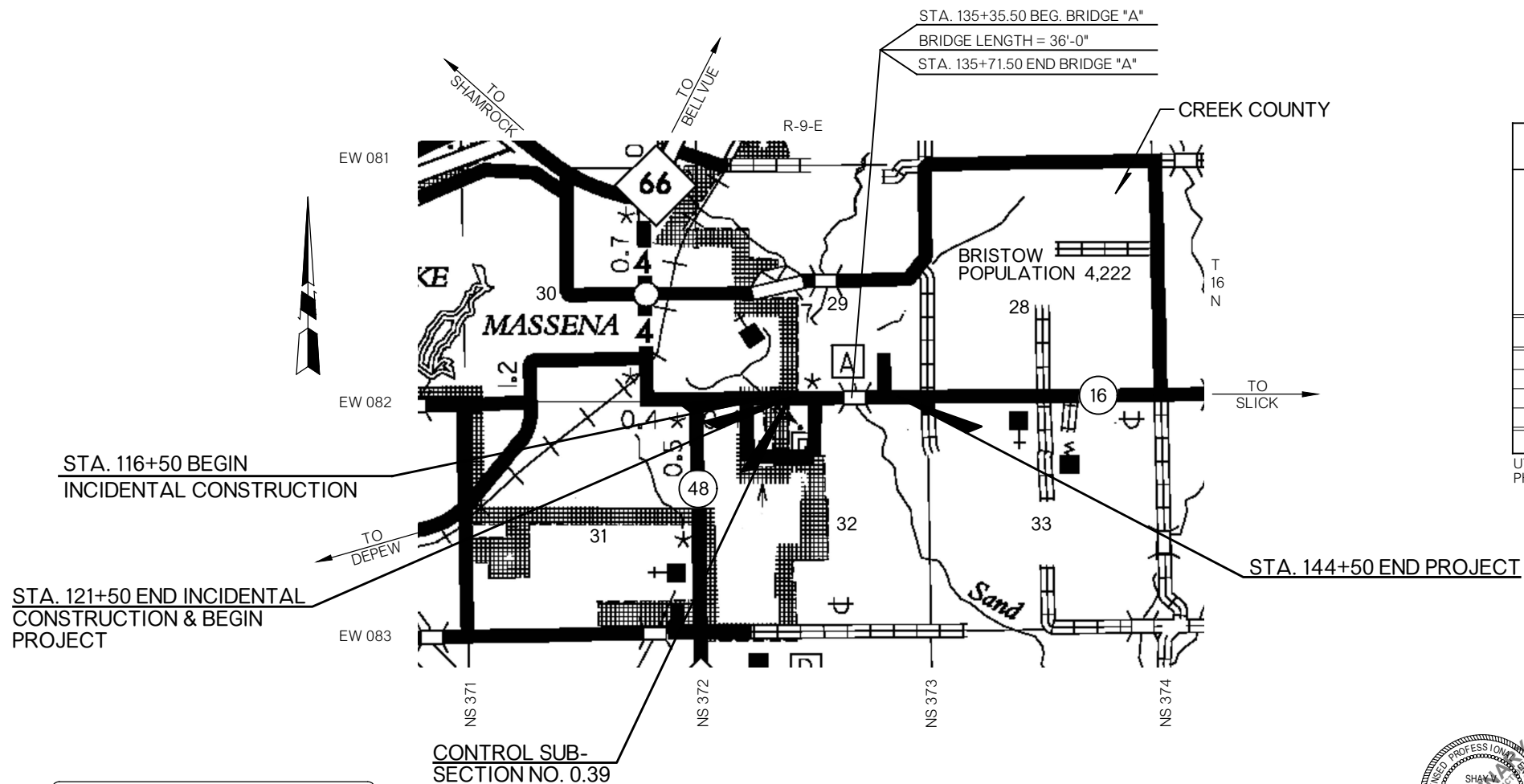
## SCALES



PLAN	1" = 50'
PROFILE HOR.	1" = 50'
VER.	1" = 5'
LAYOUT MAP	1" = 1,760'

## CONVENTIONAL SYMBOLS

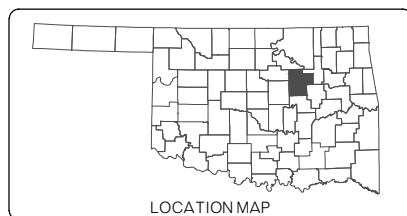
	PROPOSED ROAD
	RAILROADS
	RANGE & TOWNSHIP SECTION LINES
	QUARTER SECTION LINES
	FENCES
	GROUND LINE
	EXISTING ROADS
	BASE LINE
	GRADE LINES
	TELEPHONE & TELEGRAPH
	POWER LINES
	BUILDINGS
	OIL WELLS
	DRAINAGE STRUCTURES - IN PLACE
	DRAINAGE STRUCTURES - NEW
	RIGHT-OF-WAY LINES - EXISTING
	RIGHT-OF-WAY LINES - NEW
	CONTROLLED ACCESS
	RIGHT-OF-WAY FENCE

STA. 116+50 BEGIN  
INCIDENTAL CONSTRUCTIONSTA. 121+50 END INCIDENTAL  
CONSTRUCTION & BEGIN  
PROJECTCONTROL SUB-  
SECTION NO. 0.39

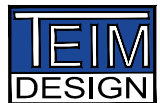
STA. 144+50 END PROJECT

NOTE: PROJECT LENGTH BASED ON Q SURVEY STATIONING.

ROADWAY LENGTH	2,264.00 FT.	0.428 MI.
BRIDGE LENGTH	36.00 FT.	0.006 MI.
PROJECT LENGTH		0.434 MI.

EQUATIONS: NONE  
EXCEPTION: NONE

LOCATION MAP

TEIM DESIGN, PLLC  
3020 N.W. 149TH STREET  
OKLAHOMA CITY, OK 73134  
PH. (405) 752-1122  
FAX (405) 752-8855  
CA# 8428, RENEWAL 06-30-2023SHAY V. SMITH  
LICENSED PROFESSIONAL ENGINEER NO. 27713

DATE

OKLAHOMA  
DEPARTMENT OF TRANSPORTATION

DATE APPROVED

BY

CHIEF ENGINEER

SWO 4861(I)

F.A. PROJECT NO.

J2-9682(004)

COUNTY CREEK COUNTY

HIGHWAY SH 16

SHEET NO. 0001

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

DATE APPROVED

BY

DIVISION ADMINISTRATOR

STA 117+10.7 Q 2"X31.3'  
S.D. 30.7' RT.  
F.ELEV. = 823.29 W.  
(LEAVE)  
STA 117+66.5 Q 24"X20.9'  
LG CMP S.D. 27.0' RT.  
F.ELEV. = 820.89 W.  
F.ELEV. = 819.94 E  
(LEAVE)

STA 118+30.1 Q 29"X18"X64'  
F.CMP S.D. 37.8' RT.  
F.ELEV. = 816.23 E  
(LEAVE)

STA 119+26.0 Q 29"X18"X28.3'  
LG CMP S.D. 30.7' LT  
F.ELEV. = 814.55 W  
F.ELEV. = 815.97 E  
(LEAVE)

STA 119+49 Q 18"X15.9'  
LG CMP S.D. 29.1' RT.  
F.ELEV. = 814.16 W  
F.ELEV. = 813.18 E  
(LEAVE)

STA 119+65.9 Q 18"X20.0'  
LG CMP S.D. 32.2' W.  
F.ELEV. = 812.21 W.  
F.ELEV. = 811.44 E  
(LEAVE)

STA 120+76.0 Q 29"X18"X46.3'  
LG CMP S.D. 30.4' RT.  
F.ELEV. = 809.26 W  
F.ELEV. = 808.41 E  
(LEAVE)

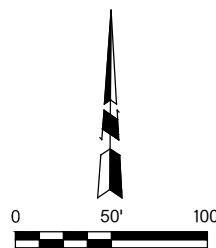
STA 121+88.0 Q 18"X32.0' LG  
STEEL PIPE S.D. 25.8' LT.  
F.ELEV. = 805.02 W  
F.ELEV. = 804.64 E  
(REMOVE)

SEC. 29 T16N R9E

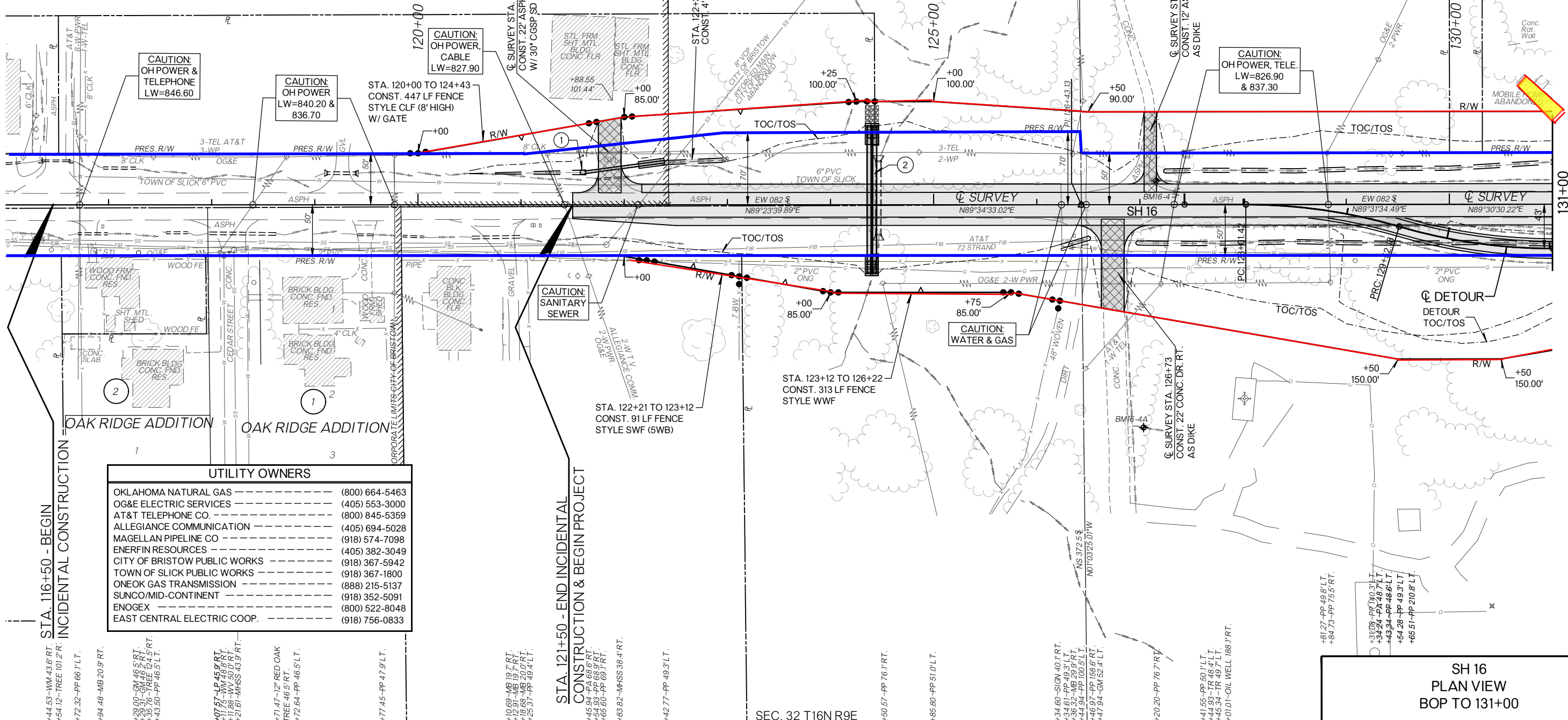
STA 124+46.4 Q  
LG CMP S.D. 30.7' RT.  
F.ELEV. = 780.92  
F.ELEV. = 789.96  
(REMOVE)

TEMPORARY DRIVE  
PROPOSED CONST. (BY OTHERS)

THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT.



PROPOSED R/W  
AUGUST 2021



UTILITY OWNERS	
OKLAHOMA NATURAL GAS	(800) 664-5463
OG&E ELECTRIC SERVICES	(405) 553-3000
AT&T TELEPHONE CO.	(800) 845-5359
ALLEGIANCE COMMUNICATION	(405) 694-5028
MAGELLAN PIPELINE CO	(918) 574-7098
ENERFIN RESOURCES	(405) 382-3049
CITY OF BRISTOW PUBLIC WORKS	(918) 367-5942
TOWN OF SLICK PUBLIC WORKS	(918) 367-1800
ONEOK GAS TRANSMISSION	(888) 215-5137
SUNCO/MID-CONTINENT	(918) 352-5091
ENOGEX	(800) 522-8048
EAST CENTRAL ELECTRIC COOP.	(918) 756-0833

SH 16  
PLAN VIEW  
BOP TO 131+00







## Community Impacts Assessment Form

Job Piece #: 29682(04)  
County: Creek County  
Project Description: Bridge and Approaches on SH-16 over Sand Creek  
Preparer: Guernsey

### PART I: COMMUNITY PROFILE

*Attach a map showing the community study area boundaries as well as the locations of any community facilities in the area (schools, places of worship, health care facilities, recreation centers, social services, libraries, etc.).*

#### I. General Information

*What is the location of the community that may be impacted?*

The proposed project is located on State Highway 16 (SH-16) in Creek County, Oklahoma over Sand Creek, 0.7 miles East of the State Highway 48 (SH-48) junction near the city of Bristow.

#### II. General Characteristics of the Community

*What is the name and general character of the community (rural, suburban, urban, mixed use)?*

The name of the community is Bristow, OK and unincorporated Creek County, and is generally rural in character. The study includes a half mile radius around the project area corridor (SH-16), which contains approximately 1.02 square miles. According to the EJSCREEN ACS Summary Report, the study area has a total population of 1,703 with a population density of 1,607 residents per square mile.

#### III. Community Facilities

*Show location of facilities on attached map.*

Name of Facility	Type of Facility	Public or Private	Population Served	Additional Comments
Advent Christian Church	Religious	Private	Bristow Area	1700 S Chestnut St Bristow, OK 74010
First Church of God	Religious	Private	Bristow Area	320 S Walnut St Bristow, OK 74010

Fellowship Church of the Nazarene	Religious	Private	Bristow Area	301 E 4th Ave Bristow, OK 74010
Sixth & Poplar Church of Christ	Religious	Private	Bristow Area	319 E 6th Ave Bristow, OK 74010
Bristow Seventh-day Adventist Church	Religious	Private	Bristow Area	401 E 6th Ave Bristow, OK 74010
United Pentecostal Church	Religious	Private	Bristow Area	621 E. 7th St Bristow, OK 74010
Pilgrim Baptist Church	Religious	Private	Bristow Area	416 N Hickory St Bristow, OK 74010

#### IV. Data

*Attach or insert tables and thematic maps detailing race, language, income, gender, and age data for the affected community study areas.*

- a. What data sources were used (U.S. Census Bureau, EPA Screening Tool, American Community Survey (ACS), Other)?

Please refer to Figures 1-9, the tables below, and the supporting documentation located at the end of this report.

The study area consists of census geographies within a .5-mile radius around the project area corridor that could contain individuals who might be affected by displacements. The study area is located in Census Tract 210, Block Groups 1, 2, and 3.

Data for the below tables was pulled from the U.S. Census Bureau, the EPA Screening Tool, and the American Community Survey (ACS) for years 2019, 2018, and 2010. The data displayed in each table is the most recent year available from each source.

**Table 2: Race and Ethnicity (2018 ACS)**

Population	State of Oklahoma	Creek County	Study Area
Total Population	3,918,137	71,160	1,703
White (Non-Hispanic or Latino)	2,586,110	54,308	1,160
Percentage of Total	66%	76.3%	68.1%
Black or African American	282,622	1,513	116
Percentage of Total	7.2%	2.1%	6.8%
American Indian and Alaska Native	280,638	7,969	304
Percentage of Total	7.2%	11.2%	17.9%
Asian	82,318	386	0
Percentage of Total	2.1%	.5%	0%
Native Hawaiian and Other Pacific Islander	3,982	40	0

Population	State of Oklahoma	Creek County	Study Area
Percentage of Total	0.1%	.06%	0%
Some Other Race	4,790	115	0
Percentage of Total	0.1%	0.16%	0%
Two or More Races	270,156	3,960	72
Percentage of Total	6.9%	5.6%	4.2
Hispanic or Latino	407,521	2,869	50
Percentage of Total	10.4%	4.0%	2.9%
Total Minority	1,332,027	16,852	542
Percentage of Total	34%	23.7%	31.8%

Source: U.S. Census Bureau, EPA EJ Screen summary, 2018 ACS 5-Year Estimates.

The above table includes data related to race and ethnicity within the State of Oklahoma, Creek County, and the study area. In general, a majority (68.1%) of the study area consists of White (Non-Hispanic or Latino) residents, which is consistent with both the State of Oklahoma and Creek County. Roughly 38.1% of the study area is classified as minority, compared to 34% for the State of Oklahoma and 23.7% for Creek County.

**Table 3: Limited English Proficiency (2018 ACS)**

Census Tract	Block Group	Limited English Proficiency (%)
210	1	0%
210	2	0.6%
210	3	0%
Creek County		0.8%
State of Oklahoma		3.9%

Source: U.S. Census Bureau, 2019 ACS 5-Year Estimates, Table B16004, "Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over".

Table 3 includes data related to limited English-speaking proficiency households collected in the 2018 ACS 5-Year Estimates. In general, the majority of households in the study area speak English proficiently.

**Table 4: Median Household Income by Block Group (2019 ACS)**

Census Tract	Block Group	Median Household Income
210	1	\$40,625
210	2	\$27,601
210	3	\$37,167
Creek County		\$51,318
State of Oklahoma		\$52,919

Source: U.S. Census Bureau, 2019 ACS 5-Year Estimates, Table B19013, "Median Household Income".

Income in the study area is varied. The lowest median household income reported (Census Tract 210, Block Group 2) was \$27,601, while the highest median household income reported (Census Tract 210, Block Group 1) was \$40,625. However, this is lower than both Creek County (\$51,318) and the State of Oklahoma (\$52,919).

**Table 5: Household Poverty by Block Group (2019 ACS)**

Census Tract	Block Group	Total Households	Percentage of Households Living Above Poverty Line	Percentage of Households Living Below Poverty Line
210	1	344	79.1%	20.9%
210	2	559	64.0%	36.0%
210	3	500	78.0%	22.0%
Creek County		26,427	84.9%	15.1%
State of Oklahoma		1,480,061	85.0%	15.0%

Source: U.S. Census Bureau, 2019 ACS 5-Year Estimates, Table B17017, "Poverty Status in the Past 12 Months by Household Type by Age of Householder".

Poverty in the study area appears to be higher than the state and county averages. Table 5 above provides the household poverty percentages for the study area, Creek County, and the State of Oklahoma. Based on the data provided above, all census geographies in the study area have a higher percentage of households living below the poverty line than both the county and state averages, as well as lower percentages of households living above the poverty line.

**Table 6: Sex by Age by Block Group (2019 ACS)**

Census Tract	Block Group	Total Population	% Males Under 18	% Females Under 18	% Males Over 18	% Females Over 18
210	1	1,060	13.8%	19.2%	28.0%	39.0%
210	2	1,410	11.0%	18.7%	29.2%	41.1%
210	3	1,556	15.6%	13.0%	33.1%	38.2%
Creek County		71,427	12.2%	11.7%	37.2%	38.9%
State of Oklahoma		3,932,870	12.5%	11.9%	37.1%	38.6%

Source: U.S. Census Bureau, 2019 ACS 5-Year Estimates, Table B01001, "Sex by Age".

Table 6 above provides a breakdown of sex by age for the study area geographies, Creek County, and the State of Oklahoma. Percentages for males and females in both age groups for all census geographies appear to be varied. In general, all study area geographies are inhabited by residents over the age of 18, with a majority of these people being female. For those under the age of 18, a majority are female, with the exception of Census Tract 210, Block Group 3.

**Table 7: Population Aged 65 and Over Living Alone by Block Group (2019 ACS)**

Census Tract	Block Group	Total Population 65 Years & Older	Population 65 Years & Over Who Live Alone	Percentage of Population & Over Who Live Alone
210	1	173	71	41.0%
210	2	221	89	40.3%
210	3	251	52	20.7%
Creek County		12,430	2,909	23.4%
State of Oklahoma		603,394	165,221	27.4%

Source: U.S. Census Bureau, 2019 ACS 5-Year Estimates, Table B09020, "Relationship by Household Type (Including Living Alone) for the Population 65 Years and Over".

Table 7 presents the population of individuals aged 65 and over, and the percentage of that population who live alone. According to 2019 ACS data, the study area contained 545 individuals over the age of 65. Out of these individuals, roughly 39% reported that they live alone. This percentage is higher than both Creek County (23.4%) and the State of Oklahoma (27.4%).

- b. Does any of the census geographies show a median income below the DHHS poverty level? Describe:  
None of the census Block Groups show a median income below the 2020 DHHS poverty level of \$26,500. Median income shown for census Block Groups located within the study area range from \$27,601 (Census Tract 210, Block Group 2) to \$40,625 (Census Tract 210, Block Group 1).
- c. Does any of the census geographies show a minority population? Describe:  
The definition of minority population according to <https://www.transportation.gov/transportation-policy/environmental-justice/departments-transportation-order-56102a> would define a minority population in the study area. The definition found at the provided website states that “Minority Population means any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy, or activity.” Block Group 2 has the highest percentage of minority at 47%.
- d. Does any of the census geographies show presence of persons who speak English "less than very well"?  
According to Figure 7, there is a very low percentage of persons who speak English “less than very well” in the study area. Within each census geography, Census Tract 210, Block Group 2 contains roughly 0.6% persons who speak English “less than very well,” while the others (Census Tract 210, Block Groups 1 and 2) do not have any.

## V. Site Visit

*Information can be requested in the Relocation Plans or found through Google Street View if no site visit is performed.*

- a. Was a site visit conducted? If yes, attach documentation, notes, and photographs from the field visit. If no, explain why.  
A site visit was not required for this proposed project. A desktop study was conducted to obtain all relevant data.
- b. Were there any signs observed in languages other than English? *Describe the language(s) observed, frequency, and general location of signs in other languages (throughout the study area, concentrated in a particular vicinity, etc.)*  
There were no signs observed in any language other than English.
- c. Were there places of worship, businesses, or services that target or serve specific minority groups?

There are no places of worship, businesses, or services that target or serve specific minority groups located within the study area.

- d. Were there signs of disabled persons such as ramps on homes or public transportation vehicles or stops specifically designed for disabled persons?

No homes or businesses immediately adjoining the study area appeared to have ramps specifically designed for people with disabilities.

- e. Were there signs of other vulnerable populations such as children or elderly (*presence of day cares, elementary schools or assisted living facilities? (EJSCREEN, the EPA's environmental justice screening and mapping tool, can assist in locating facilities. This tool can be found at <https://www.epa.gov/environmentaljustice> or <https://www.epa.gov/ejscreen>*)

No, there were no signs of vulnerable populations present within the study area.

- f. Are there signs of other modes of transportation? Describe:

- i. Bus or train stops

There are no bus or train stops within the study area.

- ii. Marked bike lanes or bike signage

There are no marked bike lanes or bike signage within the study area.

- iii. Cyclists observed in the area

There were no cyclists observed within the study area.

- iv. Sidewalks

There are no sidewalks within the study area.

- v. "Goat paths" or dirt pathways adjacent to the project area

There are no well-defined "goat paths" or dirt pathways adjacent to the project area.

## VI. Additional Data

*Describe any additional information about this community:*

N/A

**Community Profile Summary: Based on the information above, describe the community profile.** *NOTE: This summary should be included in the NEPA write up.*

The community adjacent to the project is unincorporated and is comprised of rural development with single-family homes and no commercial businesses. Median income shown for census Block Groups located within the study area range from \$27,601 (Census Tract 210, Block Group 2) to \$40,625 (Census Tract 210, Block Group 1). According to recent Census data (2019 ACS), the census Block Groups show a minority population. According to recent Census data (2019 ACS), there is a very low percentage of persons who speak English "less than very well" in each census Block Group. Within each census geography, Census Tract 210, Block Group 2 contains roughly 0.6% persons who speak English "less than very well," while the others (Census Tract 210, Block

Groups 1 and 2) do not have any. There do not appear to be any signs of vulnerable populations present within the study area. Additionally, there were no signs of other modes of transportation observed within the study area.

## **PART II: RISK ASSESSMENT**

*Consider the community facilities and populations other than EJ populations listed in your Community Profile answers. Information will be available in Relocation Plans.*

### **I. Residential Displacements**

What type of residences will be displaced (single family homes, apartment, duplexes, etc.)?

Single-family homes would be displaced as a result of the proposed project.

- a. How many residences will be displaced or impacted in a manner that would prevent them from being occupied (*loss of parking or access*)?

Four residences would be displaced as a result of the proposed project.

- b. Is there comparable replacement housing available? Explain.

According to the Relocation Plan, dated October 22, 2021, there are available residential properties available in the surrounding area that are comparable replacement housing; however, they are very limited and when there have been recent listings the properties are off the market extremely fast. Therefore, the project may need to add 12 months to accommodate new construction for replacement dwellings.

### **II. Commercial Displacements**

- a. What types of businesses exist in the study area?

No businesses exist in the study area.

- b. How many businesses will be displaced or impacted in a manner that would prevent them from continuing to operate (*loss of parking or access*)?

No businesses will be displaced or impacted in a manner that would prevent them from continuing to operate.

- c. Are these businesses unique to the area? How far away would one have to travel to find a similar business offering similar services?

N/A

- d. Do these businesses serve a specific population (*specific ethnic group, disabled, low-income families, etc.*)? Explain.

N/A

- e. Have the businesses indicated if they would relocate? Explain.

N/A

- f. Are there comparable replacement properties available for relocation of the business(es)? Explain.  
N/A
- g. If the businesses do not relocate, how many jobs would be lost?  
N/A
- h. If the businesses do not relocate, are there comparable job opportunities for the affected employees?  
N/A
- i. What is the unemployment rate for the study area?  
According to the Bureau of Labor Statistics' most recent assessment in October 2021, the unemployment rate in Creek County, Oklahoma is 2.2 percent.
- j. If the businesses do not relocate or current employees do not remain with the employer, would there be similar jobs (*same industry, equivalent skill set, etc.*) available nearby? Explain.  
N/A
- k. Are there any measures which could be taken to mitigate the potential loss of employment opportunity? Explain.  
N/A

### III. Other Displacements

- a. What non-residential and non-commercial displacements (*parks, homeless shelters, churches, etc.*) would occur?  
No other non-residential and non-commercial displacements would occur. However, there would be one personal property relocation as a result of the proposed property.
- b. Do these facilities serve a specific population (*disabled persons, children, elderly, a specific ethnic group, a specific religious denomination, etc.*)? Explain.  
N/A
- c. Would these facilities be able to relocate? Explain.  
N/A
- d. How far would a person have to travel to find similar facilities or services?  
N/A
- e. Is there any opportunity to mitigate the impact to the facilities? Explain.  
N/A

**Displacements Summary: Based on the information above, how will displacements associated with the proposed project impact the community?** *NOTE: This summary should be included in the NEPA write up.*

Four single-family homes would be displaced as a result of the proposed project. There are available residential properties available in the surrounding area that are comparable replacement housing.

In addition, no commercial buildings would be displaced as a result of this project. There is, however, one personal property displacement.

#### **IV. Access and Travel Patterns**

- a. How do people currently access adjacent parcels (*car, walking, cycling, mass transit*)?  
Because sidewalks and access to other modes of transportation are limited, most people in the study area currently access adjacent parcels by car.
- b. Describe the permanent or temporary changes to access and/or travel patterns.  
There are no proposed permanent or temporary changes to access. Travel patterns may temporarily be affected while roadway improvements are under construction, however, the roadway will remain open to through traffic during construction. After improvements have been completed, travel patterns will be improved in the study area.
- c. What neighborhoods and businesses will be affected by these changes?  
N/A. Access to neighborhoods and businesses will be maintained, as no roadway closures are planned.
- d. Are there any community facilities affected? Are any of these facilities considered essential services (*clinics and hospitals, schools, emergency responders*)?  
No community facilities are affected.
- e. How will emergency response times be effected?  
Emergency response times may be affected during construction due to slower speed limits and narrower driving lanes; however, with the proposed project improvements response times may be decreased.
- f. For mass transit, walking, and cycling impacts, which mode(s) will be permanently impacted?  
N/A. Neither mass transit, walking, nor cycling will be permanently affected in the study area.
- g. How far will the user of each mode have to travel to find a comparable route/service?  
How much time will be added to their trips?  
N/A

- h. What businesses are located along the existing corridor? Of these, how many are primarily dependent on passing traffic for business.  
Businesses located along the existing corridor include those related to agriculture and oil and gas. None of the businesses located along the existing corridor are primarily dependent on passing traffic for business.
- i. Are frontage roads proposed as part of the project or is the project a limited access facility? Describe.  
N/A. There are no frontage roads proposed as part of this project and is not a limited access facility.
- j. Is the land adjacent to the project available for development? Describe.  
Much of the land adjacent to the study area is undeveloped and could have potential for development.
- k. Is there mitigation or design elements proposed for impacts to affected businesses?  
N/A.

**Access and Travel Patterns Summary: Based on the information above, how will the proposed project impact access and travel patterns for the community? NOTE: This summary should be included in the NEPA write up.**

There are no proposed permanent or temporary changes to access. Travel patterns may temporarily be affected while roadway improvements are under construction. However, after bridge replacement and roadway improvements have been completed, travel patterns will be improved in the study area. There are no planned roadway closures during construction for this project, so impacts to access and travel patterns for the community are anticipated to be minimal.

## **V. Community Cohesion**

- a. If there is an existing roadway or other existing separation? How will the proposed project change that separation?  
This segment of SH-16 is an existing highway. The proposed improvements include adding 8-foot paved shoulders where none currently exist, adding new guardrail, and replacing a functionally obsolete bridge. There would be no change in separation per se since the development is low-density and will not separate the community more than what already exists.
- b. How would the proposed project change the way that people within the community access other parts of the community and participate in local activities?  
The proposed project would improve safety by adding 8-foot paved shoulders where none currently exist, adding new guardrail, and replacing a functionally obsolete bridge. Overall, implementing the proposed improvements to SH-16 would make it easier, safer, and more comfortable for people to access other parts of the community and participate in local activities.

- c. How will the proposed project change the way that people use local services and facilities?  
No adverse impacts are anticipated to local services and facilities. The proposed project would improve access and mobility within the study area and thereby make it easier for people to use local services and facilities.
- d. Describe how people in the community will be separated or isolated.  
N/A. No community separation or isolation is anticipated as a result of the proposed project.
- e. How will the separated portions of the community access one another after completion of the proposed project? Consider all modes of transportation.  
N/A. No community separation or isolation is anticipated as a result of the proposed project.
- f. How will the affected people in the community access services like grocery stores, schools, parks, neighborhood amenities, places of employment, etc.? Consider all modes of transportation.  
People in the community are not anticipated to be separated or isolated as a result of the proposed project. The improvements are not anticipated to limit accessibility to the local services listed above. Motorists would benefit, as paved shoulders and new guardrail would make conditions safer. There was no indication that cyclists or pedestrians used this segment of US-16. However, if they did, cyclists and pedestrians would benefit from the proposed 8-foot paved shoulders.
- g. How is the proposed access different from the existing access? Consider all modes of transportation.  
The proposed access would not change significantly for motor vehicles. If pedestrians or cyclists use the improved roadway after construction is completed, safety would be improved due to the proposed 8-foot paved shoulders on either side of the roadway.
- h. Would displacements impact community cohesion? Explain.  
The proposed displacements are not anticipated to impact community cohesion within the study area.
- i. Is there any mitigation or design elements proposed to lessen the effects of this separation or isolation?  
N/A. People in the community would not be separated or isolated as a result of the proposed project.

**Community Cohesion Summary:** Based on the information above, how will the proposed project impact community cohesion? *NOTE: This summary should be included in the NEPA write up.*

People in the community are not anticipated to be separated or isolated as a result of the proposed project. The improvements are not anticipated to limit accessibility to local services or facilities. Motorists would benefit, as paved shoulders and new guardrail would make conditions safer. There was no indication that cyclists or pedestrians used this segment of SH-16. However, if they did, cyclists and pedestrians would benefit from the proposed 8-foot paved shoulders. The proposed displacements are not anticipated to impact community cohesion within the study area.

## **PART III: ANALYZE IMPACTS ON ENVIRONMENTAL JUSTICE POPULATION**

### **I. Negative Impacts**

- a. Will there be displacements? How many are in predominantly minority and/or low-income census geographies versus non-minority and non-low income geographies?  
There would be four residential displacements as a result of the proposed project. None of the proposed displacements will impact any readily identifiable groups of minority and/or low-income persons who live in geographic proximity.
- b. Will there be access and travel pattern impacts? What types of impacts are in predominantly minority and/or low-income census geographies versus non-minority and non-low-income geographies?  
Negative impacts to access or travel patterns are not anticipated to occur as a result of the proposed project. As mentioned in previous sections of this report, the proposed improvements are anticipated to improve access to goods and services.
- c. Will there be community cohesion impacts? What types of impacts are in predominantly minority and/or low-income census geographies versus non-minority and non-low-income geographies?  
As mentioned previously, no negative impacts to community cohesion are anticipated to occur as a result of the proposed project.
- d. Will the community experience any negative impacts to air quality or water quality from increased noise level or from hazardous materials?  
The community is not anticipated to experience any excessively/significantly negative impact to air or water quality, from increased noise levels, or from hazardous materials as a result of the proposed project. Any air or noise related impacts resulting from construction activities would be temporary. Construction of the proposed project would be carried out according to ODOT standards and subject to Oklahoma Department of Environmental Quality permitting.

- e. What types of impacts are in predominately minority and/or low-income census geographies versus non-minority and non-low-income census geographies?  
No impacts to predominantly minority or low-income census block groups will occur. The proposed project is anticipated to increase safety conditions along the roadway. Predominantly minority or predominantly low-income census geographies would equally benefit from the proposed improvements to SH-16.
- f. Has the community experienced substantial impacts from past transportation projects, such as a new roadway causing large number of displacements or introducing a barrier and separating parts of the community? Describe.  
No. The two major corridors in the area, Main Street/Route 66 and SH-16, were both constructed in the 1930s.
- g. Has the community experienced substantial impacts from any other major project, such as utilities, industry, etc.? Describe.  
There are no known projects.
- h. Does the community have a negative perception of the project or impacts? Are these opinions of the affected EJ population?  
There is not a negative perception of the proposed project. Notices of environmental surveys, written in the English language, were sent to adjacent property owners at the beginning of NEPA studies. No responses received from the public indicated significant controversy, concern, or a negative perception.

## II. Positive Impacts

- a. Would the project add capacity? Explain.  
No.
- b. Does the project substantially increase access or mobility/travel patterns (*reduce travel times, create travel options, increase reliability, etc.*)? Explain.  
The proposed project will increase reliability by improving safety conditions through the corridor. The proposed improvements include adding 8-foot paved shoulders where none currently exist, adding new guardrail, and replacing a functionally obsolete bridge.
- c. Does the project improve safety (*access management, intersection improvement, site distance, etc.*)? Explain.  
The proposed project would improve safety along the roadway by adding 8-foot paved shoulders where none currently exist, adding new guardrail, and replacing a functionally obsolete bridge.
- d. Does the project improve economic development?  
The proposed improvements facilitate mobility, accessibility, and safety – all of which promote economic development.
- e. Does the community have a positive perception of the project or impacts? Are these opinions of the affected EJ population?  
There is not a negative perception of the proposed project. Notices of environmental

surveys, written in the English language, were sent to adjacent property owners at the beginning of NEPA studies. No responses received from the public indicated significant controversy, concern, or a negative perception.

### III. Mitigation Measures

- a. Are there any design elements proposed to avoid impacts on the EJ population? Describe.  
There are no disproportionate impacts anticipated on EJ populations; therefore, no design elements were proposed to avoid impacts.
- b. Is there any mitigation proposed to specifically lessen the severity of these impacts on EJ populations? Describe.  
There are no disproportionate impacts anticipated on EJ populations; therefore, no design elements were proposed to avoid impacts.
- c. If there are any impacts to minority or low-income populations, would these impacts still be considered disproportionately high and adverse compared to the non-EJ population after mitigation has been applied? Describe.  
There are no disproportionate impacts anticipated on EJ populations. There would be no disparity of impacts to different populations in the community due to the proposed project. EJ populations and non-EJ populations within the study area would be impacted equally from the proposed improvements to SH-16.

**Analyze Impacts On Environmental Justice Population Summary: Based on the information above, how will the proposed project impact the EJ population? *NOTE: This summary should be included in the NEPA write up.***

There are no disproportionate impacts anticipated on EJ populations. There would be no disparity of impacts to different populations in the community due to the proposed project. Additionally, none of the proposed displacements impact any readily identifiable groups of minority or low-income persons who live in geographic proximity. EJ populations and non-EJ populations within the study area would be impacted equally from the proposed improvements to SH-16.

## PART IV: PUBLIC INVOLVEMENT

*Refer to the Public Involvement Plan for further guidance. Please note if material is available to view on ODOT website. If no public meeting is required, skip to Part V: Conclusion Statement.*

### I. Public Involvement

Was public involvement completed for this project? If yes, describe what measures were implemented to provide meaningful public involvement for the EJ population.

N/A.

### II. Limited English Proficiency

- a. Were there LEP persons identified in the project area? What languages do they speak?

- b. Does the percentage of LEP persons meet ODOT standards to require LEP documents/interpreter? *(Refer to the Public Involvement Plan for standards)*
- c. What public involvement techniques were used or plan to be used?
- d. Was assistance in a language other than English requested or is it anticipated to be requested? Describe.
- e. How were LEP persons accommodated during the public involvement process?
- f. Is any more public involvement planned? Will LEP persons continue to be accommodated? Describe

**Public Involvement Summary: Based on the information above and public involvement documentation, were the EJ and LEP population given the opportunity for meaningful involvement in the NEPA process?** *NOTE: This summary should be included in the NEPA write up.*

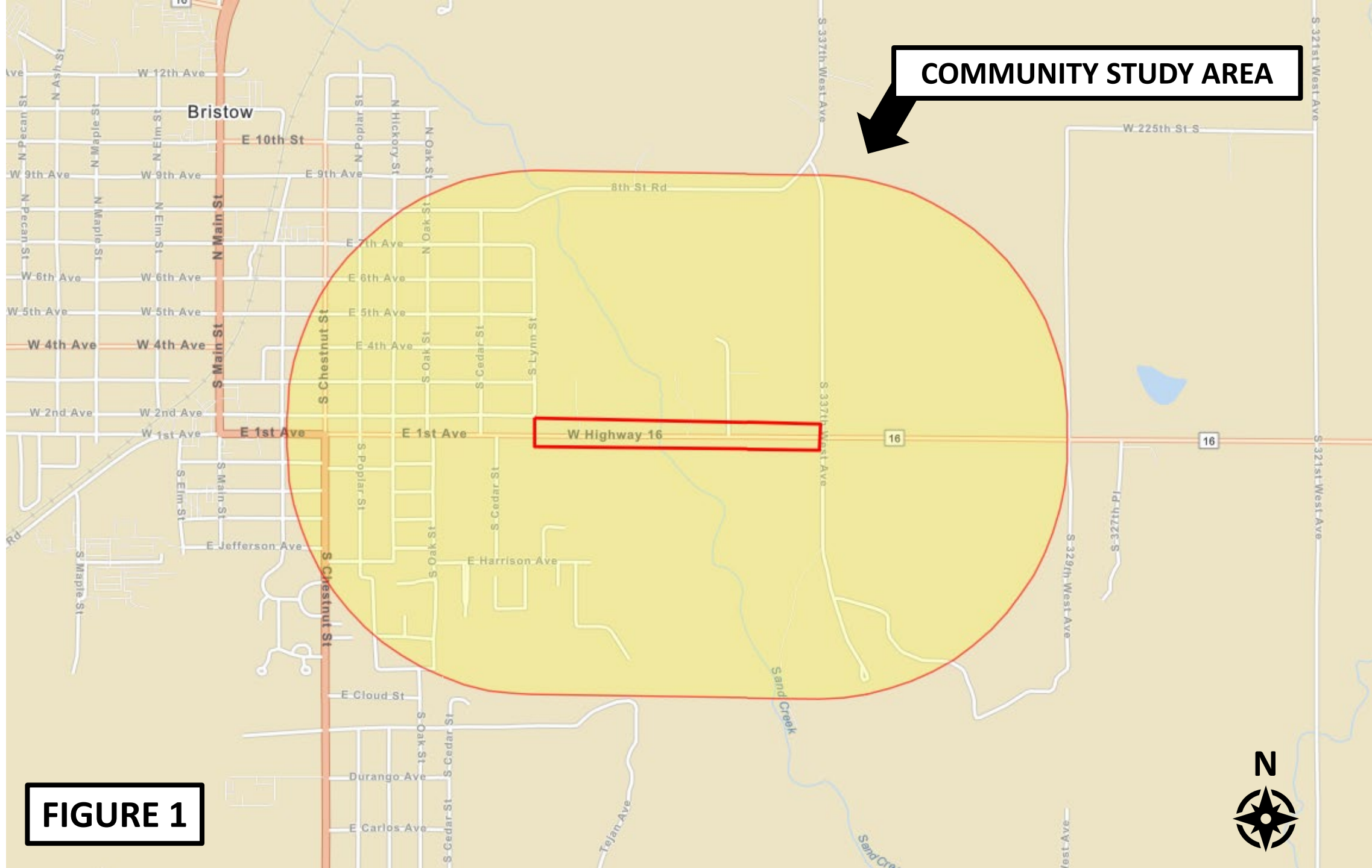
## **PART V: CONCLUSION STATEMENT**

**Conclusion: Based on the information in this form, will the proposed project have disproportionately high and adverse impacts on minority and/or low-income populations?**

*NOTE: The conclusion statement should be included in the NEPA write up.*

Based on the analysis above, the proposed project will not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of E.O. 12898 and FHWA Order 6640.23. No further Environmental Justice analysis is required.

# **ATTACHMENTS**



COMMUNITY STUDY AREA

FIGURE 1



## Legend

- Relocation A - Residential
- Relocation B - Residential
- Relocation C - Residential
- Relocation D - Residential
- Relocation E - Personal Property Only

Project Area



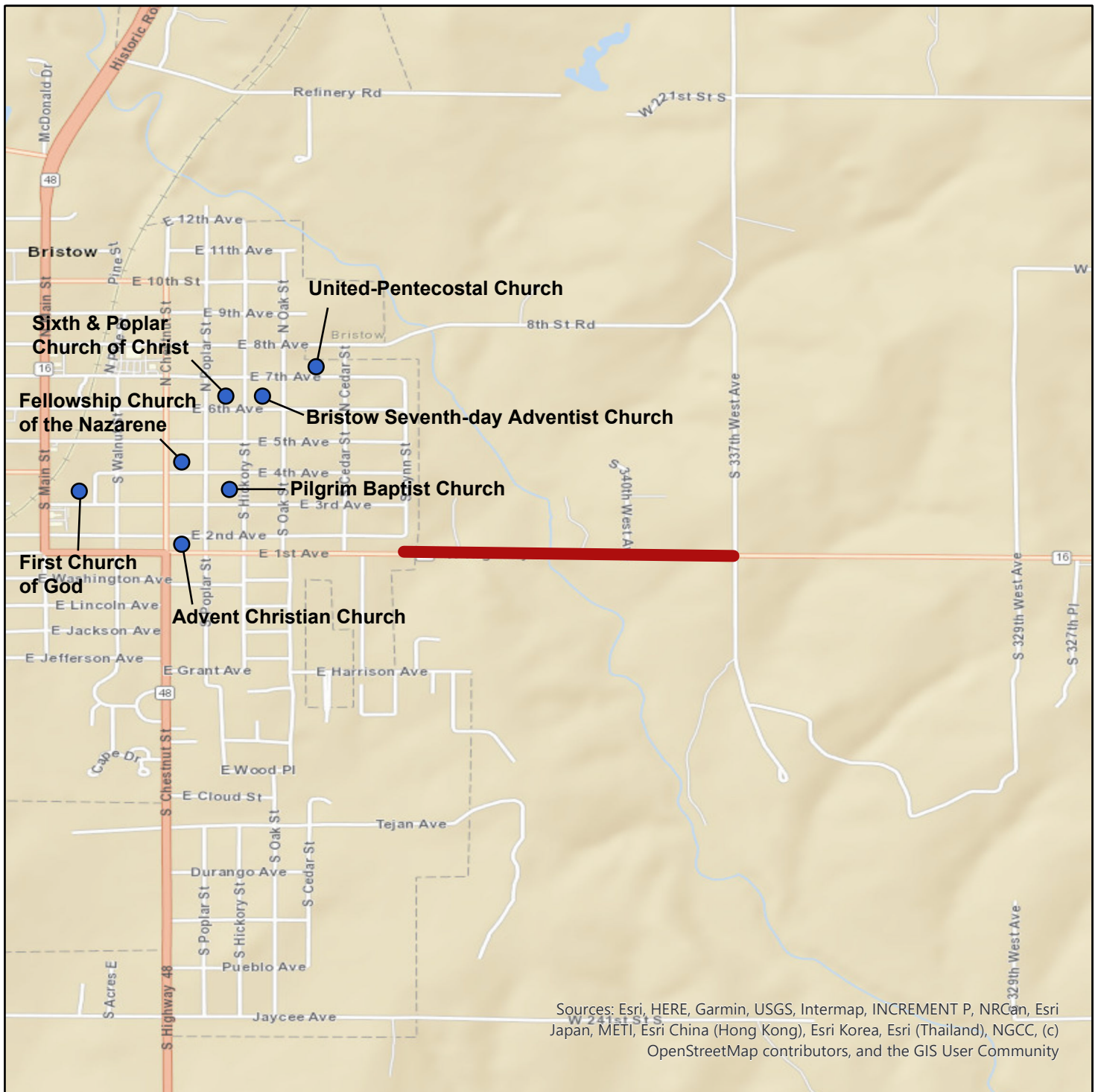
# RELOCATION MAP SH-16 OVER SAND CREEK COMMUNITY IMPACT ASSESSMENT CREEK COUNTY, OKLAHOMA



ENGINEERS  
ARCHITECTS  
CONSULTANTS

Prepared by: KBF  
Prepared for: ODOT  
Date: December 2021  
JP No.: 29682(04)

**FIGURE**  
**2**



## Legend



**Community Resource**



**Project Area**



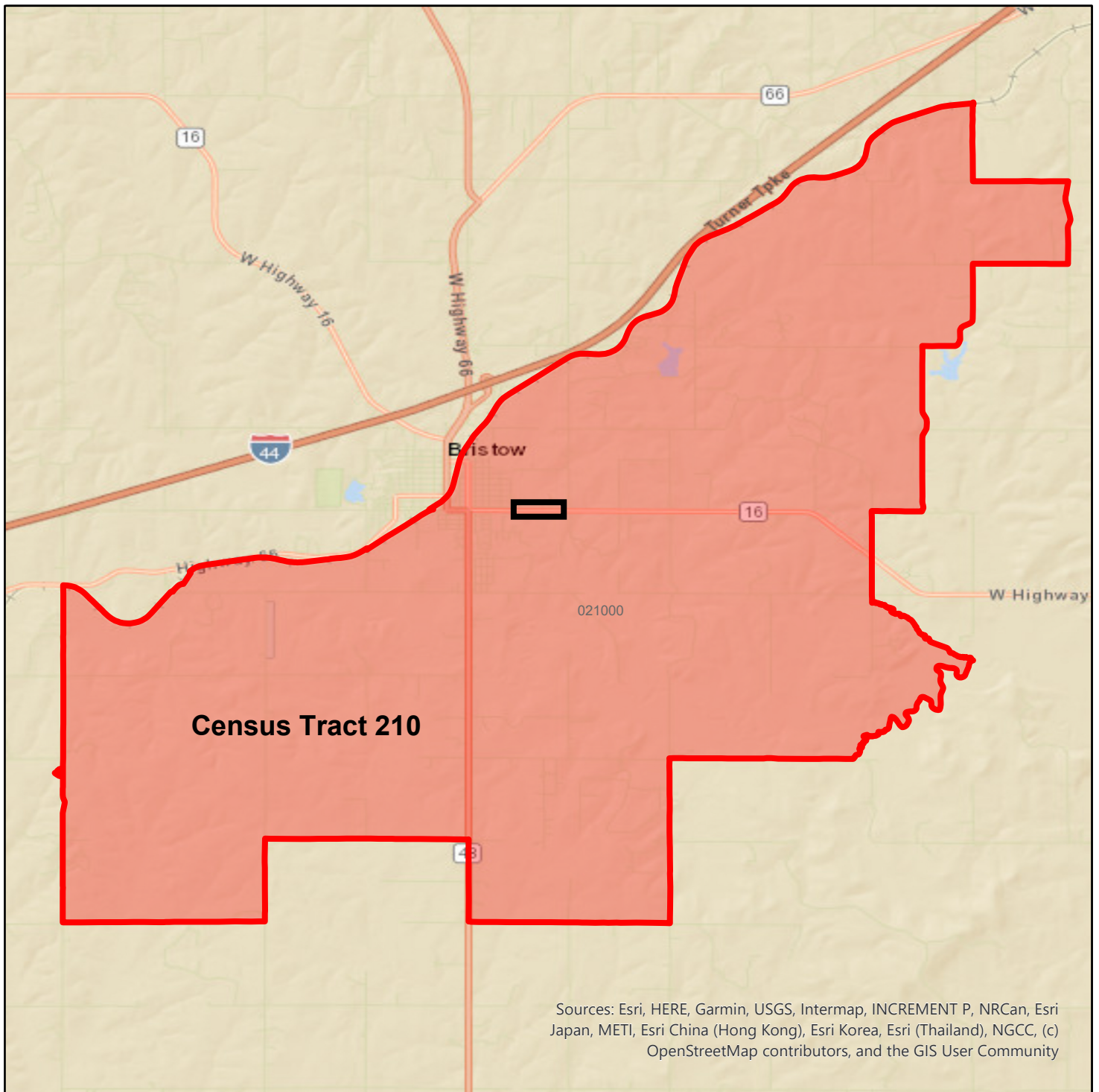
# COMMUNITY RESOURCES MAP SH-16 OVER SAND CREEK COMMUNITY IMPACT ASSESSMENT CREEK COUNTY, OKLAHOMA



ENGINEERS  
ARCHITECTS  
CONSULTANTS

Prepared by: KBF  
Prepared for: ODOT  
Date: December 2021  
JP No.: 29682(04)

**FIGURE  
3**



## Legend



**Census Tract 210**



**Project Area**



## CENSUS TRACT MAP SH-16 OVER SAND CREEK COMMUNITY IMPACT ASSESSMENT CREEK COUNTY, OKLAHOMA

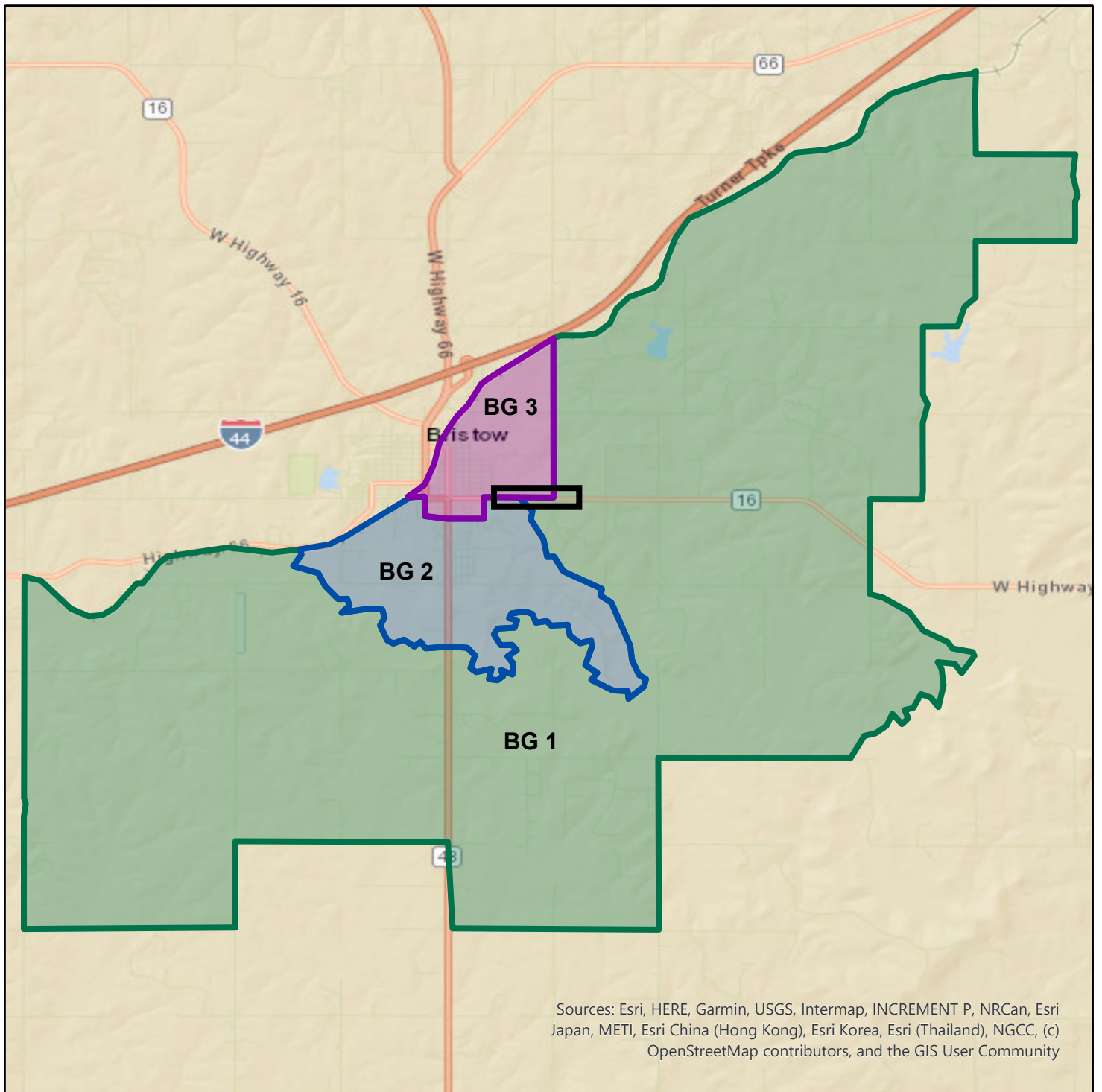


ENGINEERS  
ARCHITECTS  
CONSULTANTS

Prepared by: KBF  
Prepared for: ODOT  
Date: December 2021  
JP No: 29682(04)

**FIGURE**

**4**



### Legend

- Census Tract 210, Block Group 1
- Census Tract 210, Block Group 2
- Census Tract 210, Block Group 3

Project Area



## CENSUS BLOCK GROUP MAP

### SH-16 OVER SAND CREEK

### COMMUNITY IMPACT ASSESSMENT

### CREEK COUNTY, OKLAHOMA

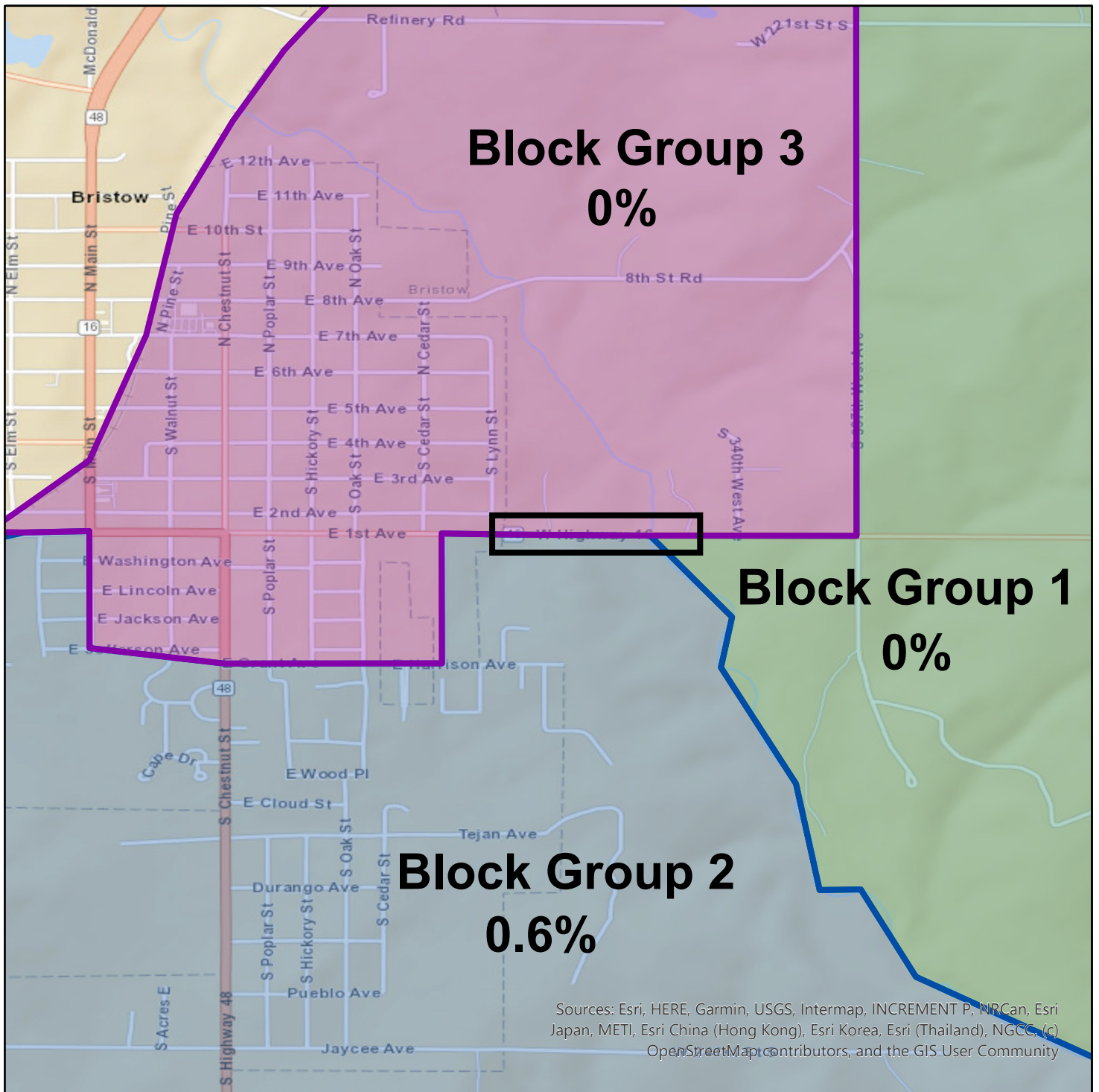


ENGINEERS  
ARCHITECTS  
CONSULTANTS

Prepared by: KBF  
Prepared for: ODOT  
Date: December 2021  
JP No: 29682(04)

**FIGURE**  
**5**





### Legend

- Census Tract 210, Block Group 1
- Census Tract 210, Block Group 2
- Census Tract 210, Block Group 3

Project Area

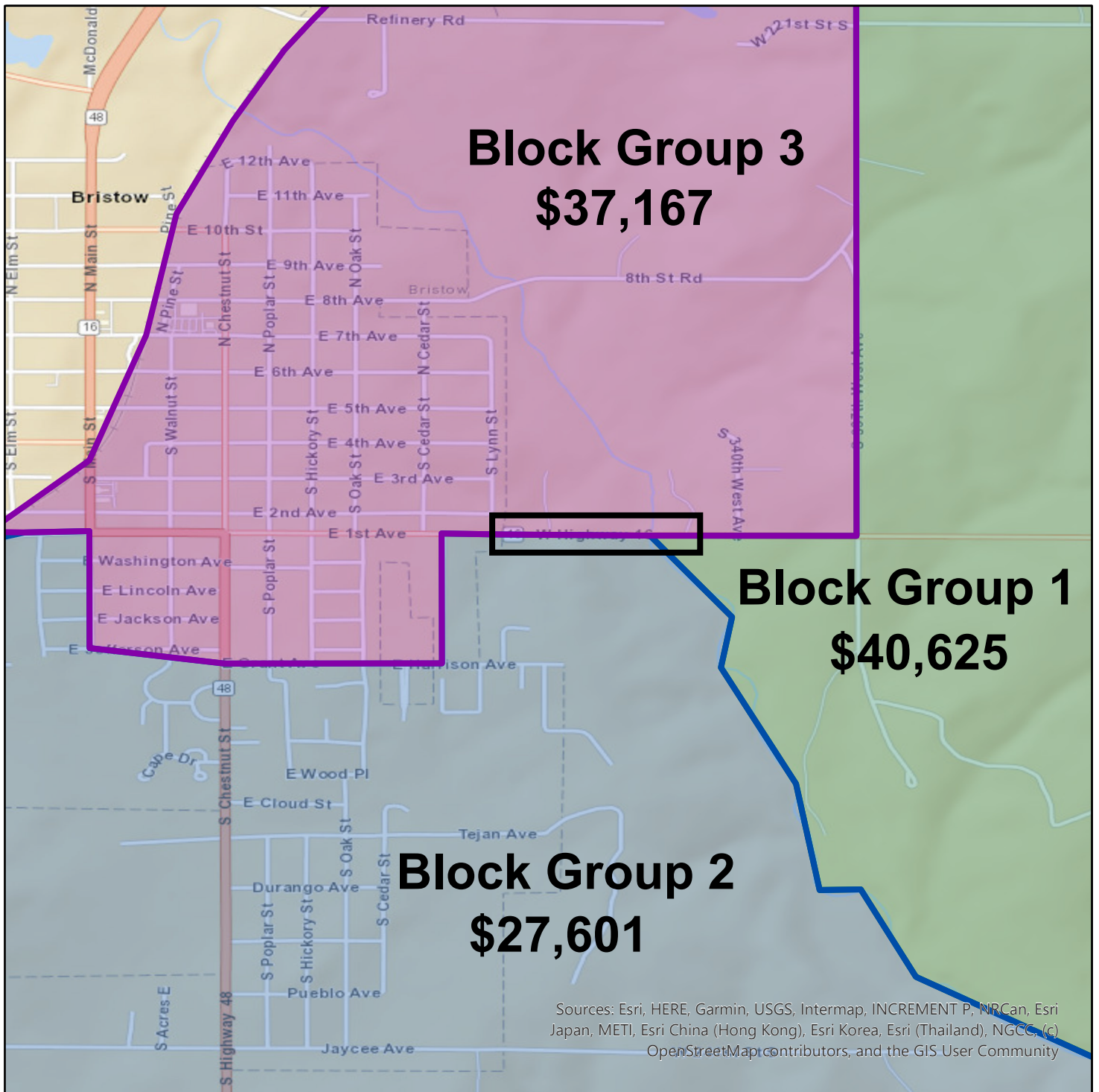


ENGINEERS  
ARCHITECTS  
CONSULTANTS

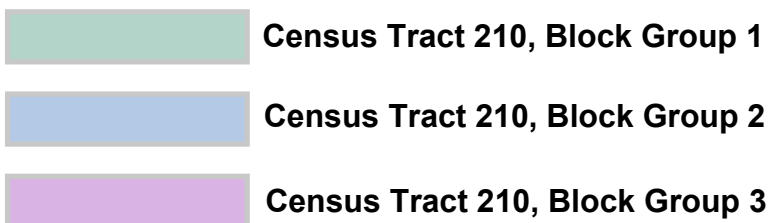
## PERCENT LEP MAP SH-16 OVER SAND CREEK COMMUNITY IMPACT ASSESSMENT CREEK COUNTY, OKLAHOMA

Prepared by: KBF  
Prepared for: ODOT  
Date: December 2021  
JP No: 29682(04)

**FIGURE**  
**7**



### Legend



ENGINEERS  
ARCHITECTS  
CONSULTANTS

## MEDIAN HOUSEHOLD INCOME MAP

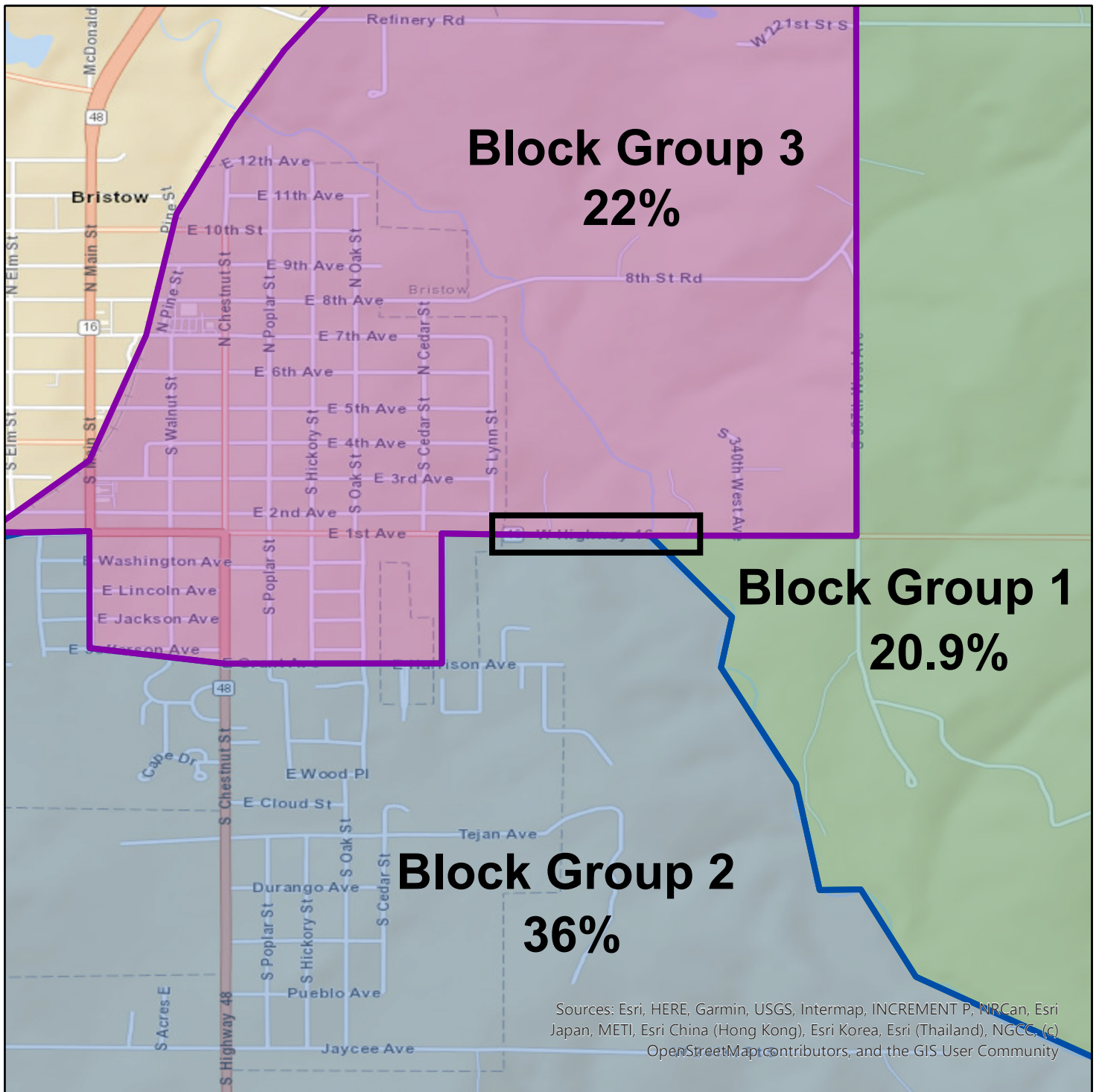
### SH-16 OVER SAND CREEK

### COMMUNITY IMPACT ASSESSMENT

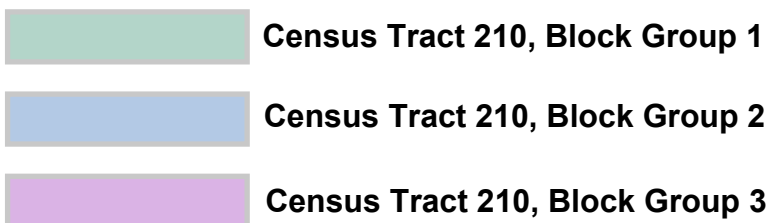
### CREEK COUNTY, OKLAHOMA

Prepared by: KBF  
Prepared for: ODOT  
Date: December 2021  
JP No: 29682(04)

**FIGURE**  
**8**



## Legend



ENGINEERS  
ARCHITECTS  
CONSULTANTS

## PERCENT BELOW POVERTY LINE MAP

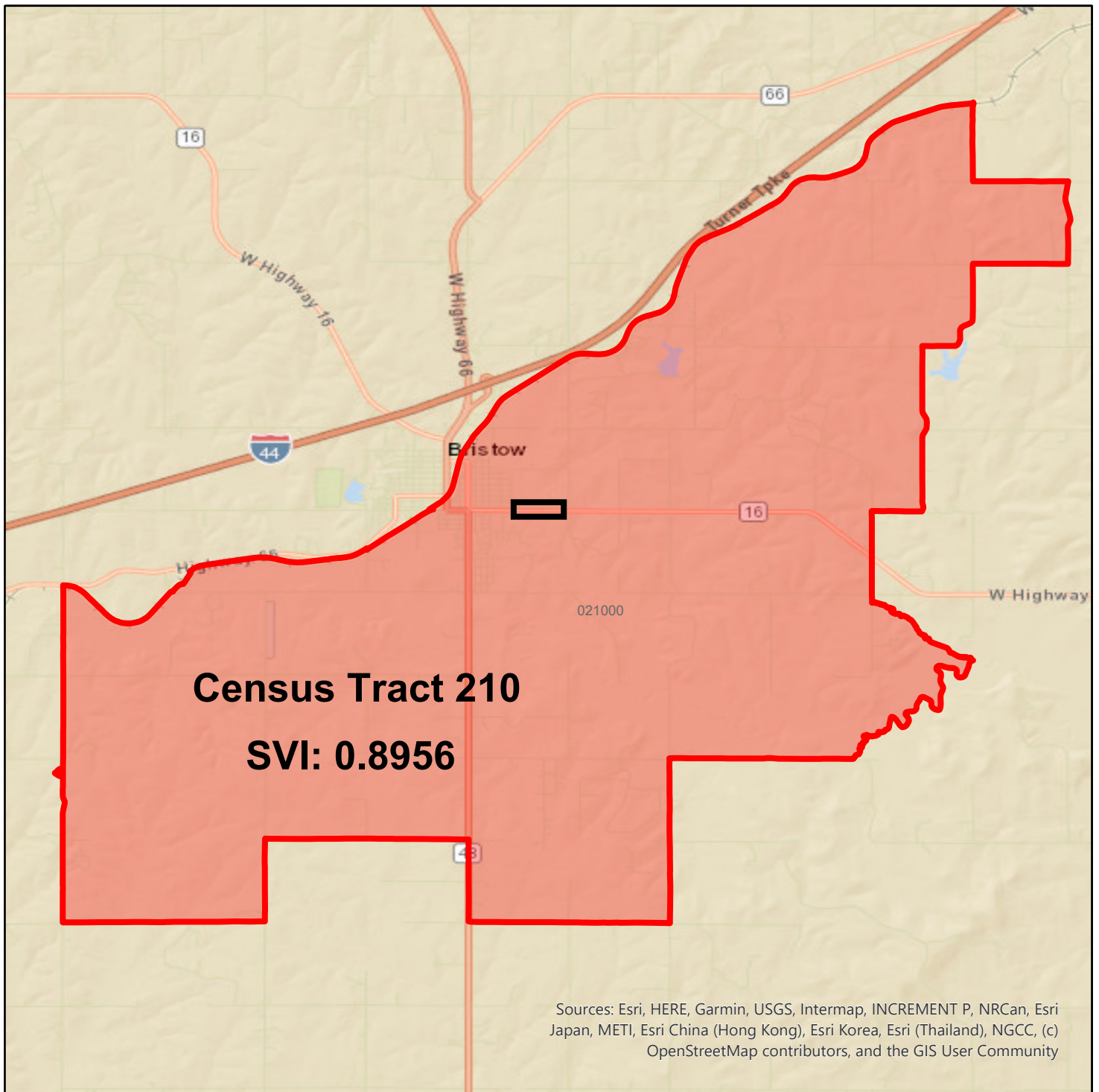
### SH-16 OVER SAND CREEK

### COMMUNITY IMPACT ASSESSMENT

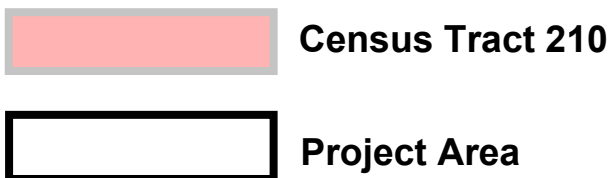
### CREEK COUNTY, OKLAHOMA

Prepared by: KBF  
Prepared for: ODOT  
Date: December 2021  
JP No: 29682(04)

**FIGURE**  
**9**



## Legend



Location: User-specified polygonal location

Ring (buffer): .5-miles radius

Description:

Summary of ACS Estimates		2014 - 2018
Population		1,703
Population Density (per sq. mile)		1,670
People of Color Population		542
% People of Color Population		32%
Households		607
Housing Units		759
Housing Units Built Before 1950		134
Per Capita Income		17,279
Land Area (sq. miles) (Source: SF1)		1.02
% Land Area		99%
Water Area (sq. miles) (Source: SF1)		0.02
% Water Area		1%

	2014 - 2018 ACS Estimates	Percent	MOE (±)
<b>Population by Race</b>			
Total	1,703	100%	224
Population Reporting One Race	1,630	96%	480
White	1,210	71%	236
Black	116	7%	60
American Indian	304	18%	157
Asian	0	0%	9
Pacific Islander	0	0%	9
Some Other Race	0	0%	9
Population Reporting Two or More Races	72	4%	69
Total Hispanic Population	50	3%	75
Total Non-Hispanic Population	1,653		
White Alone	1,160	68%	236
Black Alone	116	7%	60
American Indian Alone	304	18%	157
Non-Hispanic Asian Alone	0	0%	9
Pacific Islander Alone	0	0%	9
Other Race Alone	0	0%	9
Two or More Races Alone	72	4%	69
<b>Population by Sex</b>			
Male	788	46%	139
Female	914	54%	141
<b>Population by Age</b>			
Age 0-4	162	10%	63
Age 0-17	486	29%	113
Age 18+	1,217	71%	151
Age 65+	258	15%	75

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2014 - 2018

Location: User-specified polygonal location

Ring (buffer): .5-miles radius

Description:

	2014 - 2018 ACS Estimates	Percent	MOE (±)
<b>Population 25+ by Educational Attainment</b>			
Total	1,065	100%	151
Less than 9th Grade	14	1%	28
9th - 12th Grade, No Diploma	168	16%	65
High School Graduate	494	46%	101
Some College, No Degree	311	29%	82
Associate Degree	64	6%	50
Bachelor's Degree or more	78	7%	50
<b>Population Age 5+ Years by Ability to Speak English</b>			
Total	1,541	100%	208
Speak only English	1,528	99%	189
Non-English at Home <sup>1+2+3+4</sup>	12	1%	30
<sup>1</sup> Speak English "very well"	9	1%	28
<sup>2</sup> Speak English "well"	0	0%	9
<sup>3</sup> Speak English "not well"	0	0%	9
<sup>4</sup> Speak English "not at all"	3	0%	14
<sup>3+4</sup> Speak English "less than well"	3	0%	14
<sup>2+3+4</sup> Speak English "less than very well"	3	0%	14
<b>Linguistically Isolated Households*</b>			
Total	3	100%	14
Speak Spanish	3	100%	11
Speak Other Indo-European Languages	0	0%	9
Speak Asian-Pacific Island Languages	0	0%	9
Speak Other Languages	0	0%	9
<b>Households by Household Income</b>			
Household Income Base	607	100%	61
< \$15,000	147	24%	45
\$15,000 - \$25,000	124	20%	48
\$25,000 - \$50,000	159	26%	54
\$50,000 - \$75,000	72	12%	38
\$75,000 +	104	17%	53
<b>Occupied Housing Units by Tenure</b>			
Total	607	100%	61
Owner Occupied	338	56%	67
Renter Occupied	269	44%	56
<b>Employed Population Age 16+ Years</b>			
Total	1,255	100%	142
In Labor Force	594	47%	106
Civilian Unemployed in Labor Force	12	1%	29
Not In Labor Force	661	53%	134

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)

\*Households in which no one 14 and over speaks English "very well" or speaks English only.

Location: User-specified polygonal location

Ring (buffer): .5-miles radius

Description:

	2014 - 2018 ACS Estimates	Percent	MOE (±)
<b>Population by Language Spoken at Home*</b>			
Total (persons age 5 and above)	793	100%	245
English	787	99%	247
Spanish	6	1%	29
French	0	0%	9
French Creole	N/A	N/A	N/A
Italian	N/A	N/A	N/A
Portuguese	N/A	N/A	N/A
German	0	0%	9
Yiddish	N/A	N/A	N/A
Other West Germanic	N/A	N/A	N/A
Scandinavian	N/A	N/A	N/A
Greek	N/A	N/A	N/A
Russian	N/A	N/A	N/A
Polish	N/A	N/A	N/A
Serbo-Croatian	N/A	N/A	N/A
Other Slavic	N/A	N/A	N/A
Armenian	N/A	N/A	N/A
Persian	N/A	N/A	N/A
Gujarathi	N/A	N/A	N/A
Hindi	N/A	N/A	N/A
Urdu	N/A	N/A	N/A
Other Indic	N/A	N/A	N/A
Other Indo-European	0	0%	9
Chinese	0	0%	9
Japanese	N/A	N/A	N/A
Korean	0	0%	9
Mon-Khmer, Cambodian	N/A	N/A	N/A
Hmong	N/A	N/A	N/A
Thai	N/A	N/A	N/A
Laotian	N/A	N/A	N/A
Vietnamese	0	0%	9
Other Asian	0	0%	9
Tagalog	0	0%	9
Other Pacific Island	N/A	N/A	N/A
Navajo	N/A	N/A	N/A
Other Native American	N/A	N/A	N/A
Hungarian	N/A	N/A	N/A
Arabic	0	0%	9
Hebrew	N/A	N/A	N/A
African	N/A	N/A	N/A
Other and non-specified	0	0%	9
Total Non-English	6	1%	348

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race.

N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2014 - 2018.

\*Population by Language Spoken at Home is available at the census tract summary level and up.

Location: User-specified polygonal location  
 Ring (buffer): .5-miles radius  
 Description:

Summary	Census 2010
Population	1,753
Population Density (per sq. mile)	1,719
People of Color Population	575
% People of Color Population	33%
Households	652
Housing Units	784
Land Area (sq. miles)	1.02
% Land Area	99%
Water Area (sq. miles)	0.02
% Water Area	1%

Population by Race	Number	Percent
Total	1,753	-----
Population Reporting One Race	1,565	89%
White	1,198	68%
Black	161	9%
American Indian	193	11%
Asian	8	0%
Pacific Islander	0	0%
Some Other Race	5	0%
Population Reporting Two or More Races	188	11%
Total Hispanic Population	52	3%
Total Non-Hispanic Population	1,701	97%
White Alone	1,178	67%
Black Alone	156	9%
American Indian Alone	184	11%
Non-Hispanic Asian Alone	8	0%
Pacific Islander Alone	0	0%
Other Race Alone	0	0%
Two or More Races Alone	175	10%

Population by Sex	Number	Percent
Male	832	47%
Female	921	53%

Population by Age	Number	Percent
Age 0-4	165	9%
Age 0-17	487	28%
Age 18+	1,266	72%
Age 65+	281	16%

Households by Tenure	Number	Percent
Total	652	
Owner Occupied	358	55%
Renter Occupied	295	45%

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race.

**Source:** U.S. Census Bureau, Census 2010 Summary File 1.

**SECTION 106**  
**CULTURAL RESOURCES STUDIES**



**OKLAHOMA**  
**Transportation**

**Oklahoma Department of Transportation**

Environmental Programs Division, Office 405.521.3050 / Fax 405.522.5193

**DATE:** April 12, 2022

**TO:** Angela Aikman, Environmental Project Manager

**FROM:** Greg Maggard, Cultural Resources Program

**SUBJECT:** Creek County Project JP 29682(04): Proposed improvements to SH-16 Located Approximately 0.7 Miles East of the Junction of SH-16 and SH-48 at the Town of Bristow in Creek County, Oklahoma.

---

The Oklahoma Department of Transportation (ODOT) completed Section 106 consultation on behalf of the Federal Highway Administration (FHWA) for proposed road and bridge improvements to SH-16 over Sand Creek east of Bristow in Creek County, Oklahoma. The project begins approximately 0.38 miles east of the junction of SH-16/SH-48 in Bristow and extends east for 0.7 miles to the SH-16/S 337<sup>th</sup> W Ave intersection; 13.4 acres were surveyed. ODOT determined the proposed project will have **no effect on historic properties**.

A small portion of the project APE (the easternmost 840 feet) was previously surveyed and documented in 2020 (as part of JP 24131(04) Proposed Improvements to SH-16 [SHPO File #1425-21; OAS FY21-1432]). The portion of the APE that overlaps with the previous project was excluded from this cultural resource survey. The excluded area is described in the cultural resources report and included a total of 2.8 acres.

As a result of the cultural resources study, two early to mid-20<sup>th</sup> century archaeological sites were identified (34CR254 and 34CR255). Site 34CR254 consists of the remains of an early to mid-20th century farmstead. Features identified at the site included a buried concrete foundation (Feature 1), a water well pipe (Feature 2), concrete steps (Feature 3), and a push pile of debris (Feature 4). Recovered artifacts are generally diagnostic to the early to mid-20th century and complement the date range derived from available maps and imagery. The site has been substantially disturbed, does not contain significant archaeological features or deposits, and contains no known significant associations. Based on this information, Site 34CR254 was recommended **not eligible** for inclusion in the National Register of Historic Places (NRHP).

Site 34CR255 also consists of the remains of an early to mid-20th century farmstead. Features identified at the site included the ruins of a cellar (Feature 1), a concrete foundation (Feature 2), and a push pile of debris (Feature 3). Recovered artifacts are generally diagnostic to the early to mid-20th century and complement the date range derived from available maps and imagery. The site does not contain significant archaeological features or deposits and contains no known significant associations. Based on this information, Site 34CR255 was recommended **not eligible** for inclusion in the NRHP.

In addition, two previously recorded sites (34CR247 and 34CR248) are located within the APE. These sites were identified and assessed as part of the 2020 cultural resources survey that overlaps with the current undertaking. Because these sites were fully delineated and assessed as part of the 2020 study, they were not documented or updated as part of the current undertaking. Sites 34CR247 and 34CR248 were both recommended not eligible in 2020 and the SHPO (File #1425-21) and State Archaeologist (FY21-1432) concurred with those assessments.

Consultation with the State Historic Preservation Office (File #0993-22) and the State Archaeologist (OAS FY22-0967) resulted in concurrence with our assessment and determination.

The existing bridge carrying SH-16 over Sand Creek (ODOT Structure #1910 0066 X [NBI 12429]) is a steel I-Beam span constructed in 1950. This bridge is of the type discussed in the Advisory Council on Historic Preservation's (ACHP) Program Comment for post-1945 concrete and steel bridges, is less than 45 years of age, and required no additional documentation.

ODOT also consulted with the following tribes: Alabama Quassarte Tribal Town, Kialegee Tribal Town, Muscogee (Creek) Nation, Osage Nation, Thlopthlocco Tribal Town, United Keetoowah Band of Cherokee Indians, and the Wichita & Affiliated Tribes.

GJM



**Oklahoma Historical Society**  
**State Historic Preservation Office**

*Founded May 27, 1893*

Oklahoma History Center • 800 Nazih Zuhdi Drive • Oklahoma City, OK 73105-7917  
(405) 521-6249 • Fax (405) 522-0816 • [www.okhistory.org/shpo/shpom.htm](http://www.okhistory.org/shpo/shpom.htm)

March 11, 2022

Mr. Scott Sundermeyer, Director  
ODOT Cultural Resources Program  
3200 Marshall Avenue, Room 110  
Norman, OK 73019

RE: File #0993-22; SH-16 Improvements Project #JP-29682(04), [Properties Listed on Attachment]

Dear Mr. Sundermeyer:

We have received and reviewed the documentation submitted on the referenced project in Creek County. Additionally, we have examined the information contained in the Oklahoma Landmarks Inventory (OLI) files and other materials on historic resources available in our office. We find that there are no known historic properties affected within the referenced project's area of potential effect.

In addition to our review, you must contact the Oklahoma Archeological Survey (OAS), 111 E. Chesapeake, #102, Norman OK 73019-5111 (#405/325-7211, FAX #405/325-7604), to obtain a determination about the presence of prehistoric resources that may be eligible for the National Register of Historic Places. Should the OAS conclude that there are no prehistoric archaeological sites or other types of "historic properties," as defined in 36 CFR Part 800.16(l), which are eligible for inclusion in the National Register of Historic Places within the project area and that such sites are unlikely to occur, we concur with that opinion.

The OAS may conclude that an additional on-site investigation of all or part of the project impact area is necessary to determine the presence of archaeological resources. In the event that such an investigation reveals the presence of prehistoric archaeological sites, we will defer to the judgment of the OAS concerning whether or not any of the resources should be considered "historic properties" under the Section 106 review process. If sites dating from the historic period are identified during the survey or are encountered during implementation of the project, additional assessments by the SHPO will be necessary.

Please note that this project is located within the reservation boundaries of the Muscogee Nation and is therefore on tribal lands as defined in the National Historic Preservation Act (NHPA) and the Section 106 regulations (36 CFR Part 800).

Should further correspondence pertaining to this project be necessary, please reference the above file #. If you have any questions, please contact Kristina Wyckoff, Hist. Archaeologist, at 405/521-6381. Thank you.

Sincerely,

Lynda Ozan  
Deputy State Historic  
Preservation Officer

LO:pm

Attachment

cc: Ms. Corain Lowe-Zepeda, Muscogee Nation

FILE #            LIST OF PROPERTIES

0993-22        SH-16 PROPOSED IMPROVEMENTS  
PROJECT #JP-29682(04), BRISTOW  
VICINITY, CREEK COUNTY

1.    SH-16 APPROXIMATELY .7 MILE  
      EAST OF JCT WITH SH-48,  
      SECS 28,32 T16N R9E
2.    BRIDGE #1910-0066-X,  
      NBI-12429, ON SH-16  
      OVER SAND CREEK

SITES:

3.    34CR247 [REVIEWED IN 1425-21]
4.    34CR248 [REVIEWED IN 1425-21]
5.    34CR254
6.    34CR255



## Oklahoma Archeological Survey

THE UNIVERSITY OF OKLAHOMA

March 23, 2022

Scott Sundermeyer, Director  
ODOT Cultural Resources Program  
3200 Marshall Ave, Room 110  
Norman, OK 73019

Re: OAS FY22-0967 ODOT Proposed Improvements to SH-16 Located Approximately 0.7 Miles East of the Junction of SH-16 and SH-48 at the Town of Bristow. Report by Joshua Davis, E.C. Logan, A. Smith, Tommas Pace and Dean Afendras (Afendras Archaeology Staff).  
ODOT J/P: 29682(04)  
Legal Description: Section 29 and 32, T16N, R9E, Creek County, Oklahoma.

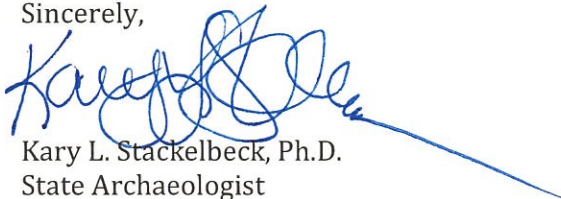
Dear Mr. Sundermeyer,

This agency received the submitted ODOT cultural resources survey report of investigations regarding the above-referenced undertaking for review and comment. From the information provided, we understand that Afendras staff surveyed the 13.4-acre study area, which encompasses the Area of Potential Effect (APE) on November 17, 2021. Two new historic sites (34CK254 & 34CK255) were identified in the proposed project area. ODOT recommends both resources as Not Eligible for listing on the National Register of Historic Places (NRHP). ODOT recommends the project as proposed will have *No Effect on Historic Properties*.

**I concur with the findings and recommendations as they pertain to prehistoric archaeological resources and defer opinion on the NRHP eligibility of 34CK254 & 34CK255 and overall project effects to the Historical Archaeologist with the State Historic Preservation Office.**

This review has been conducted in cooperation with the State Historic Preservation Office, Oklahoma Historical Society. You must also have a letter from that office to document your consultation pursuant to Section 106 of the National Historic Preservation Act.

Sincerely,



Kary L. Stackelbeck, Ph.D.  
State Archaeologist

cc: SHPO



February 22, 2022

Ms. Lynda Ozan  
Deputy State Historic Preservation Officer  
State Historic Preservation Office  
Oklahoma Historical Society  
800 Nazih Zuhdi Drive  
Oklahoma City, Oklahoma 73105-7917

Dear Ms. Ozan:

Re: Creek County FHWA Project JP 29682(04): Proposed Improvements to SH-16 Located Approximately 0.7 Miles East of the Junction of SH-16 and SH-48 at the Town of Bristow in Creek County, Oklahoma; submittal for comment under Section 106 of the National Historic Preservation Act.

Attached is a cultural resources survey report for the referenced project prepared by Afendras Archaeology. The proposed undertaking includes improvements to the existing bridge and roadway on SH-16 over Sand Creek east of Bristow in Creek County, Oklahoma. The project begins approximately 0.38 miles east of the junction of SH-16/SH-48 in Bristow and extends east for 0.7 miles to the SH-16/S 337<sup>th</sup> W Ave intersection. The existing facility has two 12-foot asphalt lanes with 4-foot sod shoulders within the existing 100-foot (50 feet north and south of the SH-16 centerline) right-of-way. The existing bridge (ODOT Structure #1910 0066 X [NBI 12429]) is being considered for replacement because it is functionally obsolete. The proposed improvements include constructing a new reinforced concrete box (RCB) on the existing alignment, reconstructing the two 12-foot paved lanes, and adding 8-foot paved shoulders.

The area of potential effect (APE) as defined by 36 CFR 800.16(d) is the NEPA study area, which is described in the report. A small portion of the project APE (the easternmost 840 feet) was previously surveyed and documented in 2020 (as part of JP 24131(04) Proposed Improvements to SH-16 [SHPO File #1425-21; OAS FY21-1432]). The portion of the APE that overlaps with the previous project was excluded from the current cultural resource survey. The excluded area is described in the report and includes 2.8 acres. In total, the APE for the currently proposed project encompasses approximately 13.4 acres.

As a result of the cultural resources study, two early to mid-20<sup>th</sup> century archaeological sites were newly identified and documented (34CR254 and 34CR255). Site 34CR254 consists of the remains of an early to mid-20<sup>th</sup> century farmstead. The site has been fully delineated with shovel testing. Features identified at the site included a buried concrete foundation (Feature 1), a water well pipe (Feature 2), concrete steps (Feature 3), and a push pile of debris (Feature 4). Recovered artifacts are generally diagnostic to the early to mid-20<sup>th</sup> century and complement the date range derived from available maps and imagery. The site has been substantially disturbed, does not contain significant archaeological features or deposits, and contains no known significant associations. Based on this information, Site 34CR254 is recommended **not eligible** for inclusion in the National Register of Historic Places (NRHP).

Site 34CR255 consists of the remains of an early to mid-20<sup>th</sup> century farmstead. The site has been fully delineated with shovel testing. Features identified at the site included the ruins of a cellar (Feature 1), a concrete foundation (Feature 2), and a push pile of debris (Feature 3). Recovered artifacts are generally diagnostic to the early to mid-20<sup>th</sup> century and complement the date range derived from available maps

and imagery. The site does not contain significant archaeological features or deposits and contains no known significant associations. Based on this information, Site 34CR255 is recommended **not eligible** for inclusion in the NRHP.

In addition, two previously recorded sites (34CR247 and 34CR248) are located within the APE. These sites were identified and assessed as part of the overlapping 2020 cultural resources survey and are located within the portion that overlaps with the current undertaking. Because these sites were fully delineated and assessed as part of the 2020 study, they were not documented or updated as part of the current undertaking. Sites 34CR247 and 34CR248 were both recommended not eligible in 2020 and the SHPO and State Archaeologist concurred with those assessments.

The existing bridge carrying SH-16 over Sand Creek (ODOT Structure #1910 0066 X [NBI 12429]) is a steel I-Beam span constructed in 1950. This bridge is of the type discussed in the Advisory Council on Historic Preservation's (ACHP) Program Comment for post-1945 concrete and steel bridges, is less than 45 years of age, and required no additional documentation.

Pursuant to 36 CFR 800.4(d)(1), and based upon the results of this study, it is our opinion that the project, as proposed, will have **no effect** on historic properties. We respectfully request your concurrence or comments to our opinion.

If you have any questions regarding this project, please contact the Cultural Resources Program project reviewer, Dr. Greg Maggard, at 405-301-9056 ([gmaggard@odot.org](mailto:gmaggard@odot.org)) or Mr. Scott Sundermeyer at 405-325-7201 ([ssundermeyer@odot.org](mailto:ssundermeyer@odot.org)).

Sincerely,



Scott Sundermeyer  
Director, ODOT Cultural Resources Program

cc: State Archaeologist

**Creek County FHWA Project JP 29682(04): Proposed Improvements to SH-16 Located Approximately 0.7 Miles East of the Junction of SH-16 and SH-48 at the Town of Bristow in Creek County, Oklahoma. Properties documented and submitted for comment.**

<b>Resource</b>	<b>Date</b>	<b>NRHP Determination</b>	<b>Description</b>	<b>Address</b>
34CR254	Early to mid-20 <sup>th</sup> century	Not eligible	Remnants of a farmstead with features	n/a
34CR255	Early to mid-20 <sup>th</sup> century	Not eligible	Remnants of a farmstead with features	n/a

# OKLAHOMA DEPARTMENT OF TRANSPORTATION

## CULTURAL RESOURCES SURVEY REPORT

Creek County 29682(04): Proposed Improvements to SH-16 Located Approximately 0.7 Miles East of the Junction of SH-16 and SH-48 at the Town of Bristow in Creek County, Oklahoma

Prepared by: Afendras Archaeology

Preparer(s): Joshua E. C. Davis, Logan A. Smith, Tommas Pace, Dean Afendras

Principal Investigator: Dean Afendras

February 9, 2022

Lead Federal Agency: Federal Highway Administration



<b>County:</b>	Creek
<b>J/P#:</b>	29682(04)
<b>Surveyed by:</b>	Tommas Pace, Chris Phillips, Kyle Baker, Josie Mythen, Cody Grenzke
<b>Survey Date:</b>	November 17, 2021
<b>Prime Consultant:</b>	Guernsey

#### MANAGEMENT SUMMARY:

On November 17, 2021, a cultural resources survey was completed for proposed improvements to the bridge (ODOT Structure #1910 0066 X [NBI 12429]) and approaches carrying SH-16 over Sand Creek in central Creek County. The existing facility has two 12-foot-wide asphalt lanes and 4-foot-wide sod shoulders within a 100-foot-wide (50 feet north and south of the SH-16 centerline) right-of-way. The bridge is being considered for replacement because it is functionally obsolete. The proposed improvements include constructing a new reinforced concrete box (RCB) on the existing alignment, reconstructing the two 12-foot-wide paved lanes, and adding 8-foot-wide shoulders. The project study area encompasses approximately 13.4 acres.

The survey resulted in the documentation of two newly identified early- to mid-twentieth century farmstead sites (34CR254 and 34CR255).

**34CR254:** This site is the remains of a destroyed early- to mid-twentieth century farmstead consisting of a buried concrete foundation (Feature 1), a water well pipe (Feature 2), concrete steps (Feature 3), a push pile of debris (Feature 4), and a surface and subsurface deposit of artifacts to a depth of 50 cm. The artifacts are generally diagnostic to the early- to mid-twentieth century and complement the date range derived from available maps and aerial imagery. According to the Chronicles of Oklahoma, Encyclopedia of Oklahoma History and Culture, the Indian-Pioneer Papers, and general internet search, no historically significant events or people were associated with the site for it to be considered eligible for inclusion in the National Register of Historic Places (NRHP) under Criteria A or B. There are no standing buildings or structures at the site. The site does not contain significant archaeological features or deposits to be eligible under Criterion D. Therefore, the site is recommended **not eligible** for inclusion in the NRHP.

**34CR255:** This site is the remains of a mostly destroyed early- to mid-twentieth century farmstead consisting of the ruins of a cellar (Feature 1), a concrete foundation (Feature 2), a push pile of debris (Feature 3), and a surface and subsurface deposit of artifacts to a depth of 50 cm. The artifacts are generally diagnostic to the early- to mid-twentieth century and complement the date range derived from available maps and aerial imagery. According to the Chronicles of Oklahoma, Encyclopedia of Oklahoma History and Culture, the Indian-Pioneer Papers, and general internet search, no historically significant events or people were associated with the site for it to be considered eligible for inclusion in the NRHP under Criteria A or B. There are no standing buildings at the site. The site does not contain significant archaeological features or deposits to be eligible under Criterion D. Therefore, the site is recommended **not eligible** for inclusion in the NRHP.

In addition, two sites that were identified as part of a separate, 2020 undertaking, 34CR247 and 34CR248, overlap with the study area for the current undertaking. Both of these sites were completely delineated and recommended not eligible for inclusion in the NRHP as part of the 2020 study. The State Historic Preservation Office (SHPO) (File #1425-21) and State Archaeologist (FY21-1432) both concurred with those assessments. Because these sites were recently documented, thoroughly investigated, and recommended not NRHP eligible, they were not revisited or updated during the current fieldwork.

Approval of the project is recommended as it is proposed, with no additional research.

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## 1. PROJECT DESCRIPTION:

This report documents the cultural resources survey concerning the proposed improvements to the bridge (ODOT Structure #1910 0066 X [NBI 12429]) and approaches carrying SH-16 over Sand Creek in central Creek County. The existing facility has two 12-foot-wide asphalt lanes and 4-foot-wide sod shoulders within a 100-foot-wide (50 feet north and south of the SH-16 centerline) right-of way. The bridge is being considered for replacement because it is functionally obsolete. The proposed improvements include constructing a new reinforced concrete box (RCB) on the existing alignment, reconstructing the two 12-foot-wide paved lanes, and adding 8-foot-wide shoulders.

The project study area begins 25 feet west of the SH-16 and S 337<sup>th</sup> W Ave intersection. From this point, the study area extends 3,295 feet west (1,575 feet west and 1,720 feet east of the Sand Creek channel). The study area width is variable across the study area. The north half of the study area ranges from 50 – 140 feet north of the SH-16 centerline and the south half ranges from 50 – 150 south of the SH-16 centerline. The project study area encompasses approximately 13.4 acres.

Afendras Archaeology completed a cultural resources survey for ODOT in 2020 as part of an adjacent project on SH-16 (Creek 24131(04)) (Davis and Afendras 2020). The western 840 feet of the study area for that project overlaps with the eastern portion of the study area for the current undertaking. The 2020 study area was systematically surveyed with pedestrian transects in no greater than 49.2-foot (15 m) intervals and shovel tests dug in 98.4-foot (30 m) intervals. Due to the systematic nature of the recent survey, the portion of the overlapping 2020 study area was excluded from the current fieldwork. The portion of the current study area excluded from the current study is approximately 2.8 acres.

Two sites that were identified during the 2020 survey, 34CR247 and 34CR248, overlap with the study area for the current undertaking. Both of these sites were completely delineated and recommended not eligible for inclusion in the NRHP as part of the 2020 study. The State Historic Preservation Office (SHPO) (File #1425-21) and State Archaeologist (FY21-1432) both concurred with those assessments. Because these sites were recently documented, thoroughly investigated, and recommended not NRHP eligible, they were not revisited or updated during the current fieldwork.

The existing bridge carrying SH-16 over Sand Creek (ODOT Structure #1910 0066 X [NBI 12429]) is a steel 35ft-50ft-35ft I-Beam span constructed in 1950. This bridge is of the type discussed in the Advisory Council on Historic Preservation's (ACHP) Program Comment for post-1945 concrete and steel bridges, is less than 45 years of age, and requires no additional documentation.

<b>Legal Location:</b>	Sections 29 and 32, T16N R9E
<b>U.S.G.S. Quadrangle:</b>	Bristow, Okla. 1973; Slick, Okla. 1973

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## 2. ENVIRONMENTAL SETTING:

### **Built Environment Setting:**

The study area is in a rural agricultural setting. Nearby buildings are associated with commercial properties, residences, and farmsteads. The three standing buildings identified within the study area were built between 1983 and 2006 and did not meet the age threshold for consideration of NRHP eligibility.

### **Geomorphology, Geology, and Soils:**

The study area is within the Eastern Sandstone-Cuesta Plains geomorphic province, an area of “West-dipping Pennsylvanian sandstones form cuestas that overlook broad shale plains” (Curtis et al. 2008). The uplands of the study area are underlain by the Barnsdall Formation which consists of alternating intervals of mudstones and fine-grained quartz arenites (Stanley 2017). The floodplains surrounding Sand Creek are underlain by Quaternary alluvium (Stanley 2017). The Tertiary Period deposits (Ogallala Formation) consists of sand, silty, clay, and gravel eroded from the Rocky Mountains which washed over the landscape possibly extending as far as eastern Oklahoma.

While most of these deposits have also eroded away, Ogallala Formation gravels are commonly found along present-day watercourses (Johnson 2008a:4-5; 2008b).

The study area is mantled by Sandy Soils of the Forested Areas association which consists of low fertility sandy soils prone to leaching with high variability in depth and poorly defined boundaries (Oakes 1959:8, General Soil Map). This association is represented within the study area by three soil complexes Bartlesville-Bigheart complex (1 – 8 percent slopes, severely eroded), Bigheart-Niotaze-Rock outcrop complex (1 – 8 percent slopes), Niotaze-Bigheart-Rock outcrop complex (3 – 15 percent slopes, very stony), and two soils, Pulaski fine sandy loam (0 – 1 percent slopes, occasionally flooded) and Dale silt loam (0 – 1 percent slopes, rarely flooded) (U.S. Department of Agriculture, Natural Resources Conservation Service [NRCS] 2021).

Bartlesville Series soil forms on crests and side slopes of hillslopes from Pennsylvanian age weathered sandstone (NRCS 2016a). The typical profile consists of a sandy loam topsoil (A) from 0 – 2 inches (0 – 5 cm) deep over a sandy loam leaching horizon (E) from 2 – 6 inches (5 – 15 cm) deep followed by well-developed sandy clay loam subsoils (Bt) from 6 – 21 inches (15 – 53 cm) deep over bedrock (R) from 21 – 31 inches (53 – 79 cm) deep (NRCS 2021). Buried surface horizons (Ab) are not noted in the typical profile or in the range of characteristics for Bartlesville series soils (NRCS 2016a).

Bigheart Series soil forms on hillslopes from Pennsylvanian age weathered sandstone (NRCS 2016b). The typical profile consists of fine sandy loam plowzone or topsoil (Ap/A) from 0 – 7 inches (0 – 18 cm) deep over a weakly-developed gravelly fine sandy loam or fine sandy loam subsoils (Bw) ranging from 3 – 19 inches (8 – 48 cm) deep followed by degrading bedrock or bedrock (Cr/R) from 11 – 29 inches (28 – 74 cm) deep (NRCS 2021). Buried surface horizons (Ab) are not noted in the typical profile or in the range of characteristics for Bigheart series soils (NRCS 2016b).

Niotaze Series soils form on hillslopes from weathered shale and colluvium from sandstone of Pennsylvanian age (NRCS 2016d). The typical profile consists of a fine to very fine sandy loam topsoil (A) from 0 – 4 inches (0 – 10 cm) deep over a fine to very fine sandy loam leaching horizon (E) from 3 – 16 inches (8 – 41 cm) deep over lithologic discontinuous (contrasting change in parent material) silty clay, well-developed subsoils or parent material horizons (2Bt/2Btss/2Cd/2Cr) from 8 – 58 inches (20 – 147 cm) deep (NRCS 2021). Buried surface horizons (Ab) are not noted in the typical profile or in the range of characteristics for Niotaze series soils (NRCS 2016d).

Dale Series soils form on flood plains from loamy alluvium (NRCS 2016c). The typical profile consists of a silt loam topsoils (Ap/A) from 0 – 21 inches (0 – 53 cm) deep over a weakly-developed silt loam subsoil (Bw) from 21 – 40 inches (53 – 102 cm) deep followed by a calcareous transitional subsoil horizon (Bck) from 40 – 79 inches (102 – 201 cm) deep (NRCS 2021). Buried surface horizons (Ab) are not noted in the typical profile or in the range of characteristics for Dale series soils (NRCS 2016c).

Pulaski Series soils form on flood plains on small tributaries from Holocene loamy alluvium (NRCS 2016e). The typical profile consists of a fine sandy loam topsoil (Ap) from 0 – 19 inches (0 – 48 cm) deep over successive fine sandy loam to stratified fine sandy loam parent material horizons (C1/C2) from 19 – 80 inches (48 – 203 cm) deep (NRCS 2021). Buried surface horizons (Ab) are noted within the range of characteristics for some pedons below 30 inches (76 cm) deep (NRCS 2016e).

#### **Vegetation:**

The historic regional vegetation is associated with the Post Oak-Blackjack Forest which consisted of primarily post oak and blackjack oak with black hickory, roughleaf dogwood, beebalm, and big and little bluestem (Hoagland 2008). In 1897, the study area was wooded. By 1941, much of the woods had been removed on the uplands and floodplains for agricultural fields. From 1941 through the present, the landuse pattern has remained the same although woods have been allowed to expand.

#### **Surface Visibility:**

XXX 0-25%

The study area west of Sand Creek consists of moderately dense woodlands with heavy leaf litter interspersed by mixed grass open pasture. Vegetation in these

		areas permitted 0 percent surface visibility.
<b>XXX</b>	25-50%	Portions of the west half of the study area and most of the study area east of Sand Creek consists of short grass open pasture with patches of exposed sandstone bedrock, permitting up to 50 percent surface visibility.
<b>XXX</b>	50-75%	The southwest quadrant contains areas of oil and gas development with bulldozed topsoils that have exposed bedrock, permitting greater than 50 percent surface visibility.
	75-100%	

### 3. CULTURAL BACKGROUND:

#### Background Research:

**XXX** State Site Files at Oklahoma Archeological Survey (OAS)

**XXX** SHPO NRHP and DOE, and OLI Files

Within the 1-mile area of interest (AOI), nine properties are listed on the NRHP, one is listed on the DOE, and over 330 are listed on the OLI (not tabulated due to large number) (Table 1). All NRHP, DOE, and OLI properties are northwest of the study area, within Bristow city limits, and associated with Bristow's commercial, religious, municipal, and residential history. The nearest NRHP or DOE property, Bristow Tire Shop (NRHP #95000033), is 3,450 feet northwest of the study area.

**Table 1. NRHP and DOE properties within 1-mile AOI.**

Listing	Property Name	Description	Eligibility	Dist/Dir (ft)
NRHP 04000522	Beard Motor Company [Route 66 & Associated Historic Resources in Oklahoma MPS], 210 East 9th	Significant under Commerce from 1947 – 1953. Also known as Bristow Chrysler Plymouth, the property consists of an automobile sales, service, parts, etc. building associated with Route 66 and constructed in the Art Moderne style.	A, C	3,460 NW
NRHP 07000912	Bristow Firestone Service Station [Route 66 & Associated Historic Resources in Oklahoma MPS], 321 North Main	Significant under Commerce, Transportation, and Architecture from 1929 – 1957. The property consists of a gas/service station constructed in Art Deco style and associated with Route 66.	A, C	3,960 NW
NRHP 79001992	Bristow Presbyterian Church, 6th & Elm	Significant under Religion and architecture (NRHP form illegible). The church, built 1922, is an outstanding example of Gothic Revival style.	C, a	4,090 NW
NRHP 95000032	Bristow Motor Company Building [Route 66 & Associated Historic Resources in Oklahoma MPS], 500 North Main	Significant under Commerce from 1926 – 1944. The property consists of an automobile dealership associated with Route 66.	A	4,440 NW
NRHP 95000033	Bristow Tire Shop [Route 66 & Associated Historic Resources in Oklahoma MPS], 115 West 4th	Significant under Commerce and Architecture from 1926 – 1944. The property consists of a gas and service station that specialized in tire sales and associated with Route 66, built in the Italian Renaissance Revival style.	A, C	3,450 NW
NRHP 95000034	Texaco Service Station [Route 66 & Associated Historic Resources in Oklahoma MPS], 201 West 4th	Significant under Commerce and Architecture from 1923, 1926 – 1944. The property consists of a service station associated with Route 66 and constructed in the Art Moderne style.	A, C	3,940 NW
NRHP 100000768	Creek Masonic Lodge #226, 417 North Main	Significant under Social History in 1918. The property consists of a building constructed in the Neo-Classical style to serve local Freemasons.	A, C	4,130 NW
NRHP 100005554	House Building, 301-305 North Main	Significant under Commerce and Architecture from 1927 – 1941. The property consists of a Tudor Revival building which housed department stores and offices.	A, C	3,800 NW
DOE	Bristow Main U.S. Post Office	Post Office	A, C	3,740 NW

Based on OAS site files, there are five previously recorded archaeological sites within the 1-mile AOI (Table 2). All the sites are mid-twentieth century farmsteads documented by Afendras Archaeology during the 2020

ODOT SH-16 improvement project (J/P 24131(04)) which overlaps with the eastern 840 feet of the current study area (Davis and Afendras 2020). Two of the sites, 34CR247 and 34CR248, are partially within the study area for the current undertaking. Both of these sites were completely delineated and recommended not eligible for inclusion in the NRHP in 2020. Because these sites were recently documented, thoroughly investigated, and recommended not NRHP eligible, they were not revisited or updated during the current fieldwork. The sites are described as follows:

34CR247: This site is the remains of a destroyed rural mid-twentieth century farmstead/homestead consisting solely of a disturbed subsurface artifact scatter from 0 – 20 cm deep. The artifacts are generally diagnostic to the mid-twentieth century and complement the date range derived from available maps and aerial imagery. The site has been investigated and assessed in its entirety and is unlikely to yield additional information. Site 34CR247 lacks integrity, does not contain significant archaeological deposits or associations, and is recommended not eligible for inclusion on the NRHP [Davis and Afendras 2021:8 - 9].

34CR248: This site is the remains of a destroyed rural mid-twentieth century farmstead/homestead consisting of a broken concrete pad (Feature 1) and abundant disturbed surface and subsurface artifacts from 0 – 70 cm deep. The entire site has been bulldozed leaving no intact deposits. The artifacts are generally diagnostic to the mid-twentieth century and complement the date range derived from available maps and aerial imagery. The site has been investigated and assessed in its entirety and is unlikely to yield additional information. Site 34CR248 lacks integrity, does not contain significant archaeological deposits or associations, and is recommended not eligible for inclusion on the NRHP [Davis and Afendras 2021:9-10].

**Table 2. Previously recorded archaeological sites within the 1-mile AOI.**

#	Culture	Description	Eligibility	Dist/Dir (ft)
34CR247	Mid-20th century	Documented by Afendras Archaeology during 2020 survey for the ODOT SH-16 Improvement project. Consists of a completely destroyed farmstead consisting solely of a subsurface deposit of artifacts between 0 – 20 cm deep.	Not eligible	555 E
34CR248	Mid-20th century	Documented by Afendras Archaeology during 2020 survey for the ODOT SH-16 Improvement project. Consists of a mostly destroyed farmstead that consists of a broken concrete pad (Feature 1) and abundant disturbed surface and subsurface artifacts from 0 – 70 cm deep.	Not eligible	1,0890 E
34CR249	Mid-20th century	Documented by Afendras Archaeology during 2020 survey for the ODOT SH-16 Improvement project. Consists of a mostly destroyed farmstead that consists of a ruined pumphouse (Building 5a), three concrete pads (Features 1 - 3), a minimal surface artifact scatter, and a disturbed subsurface artifact scatter from 0 – 40 cm deep.	Not eligible	1,050 E
34CR250	Mid-20th century	Documented by Afendras Archaeology during 2020 survey for the ODOT SH-16 Improvement project. Consists of a mostly destroyed farmstead that consists of two outbuildings (Building 3a and 3b), one modern outbuilding (Building 3c), three concrete slabs (Features 1 – 3), and five remnant stem walls (Features 4 – 8), and abundant disturbed surface and subsurface artifacts from 0 – 90 cm deep.	Not eligible	2,460 E
34CR251	Mid-20th century	Documented by Afendras Archaeology during 2020 survey for the ODOT SH-16 Improvement project. Consists of a mostly destroyed farmstead that consists of a cellar (Building 6a), one modern wood building (Building 6b), three foundations (Features 1, 2, and 5), one concrete covered metal pipe (Feature 4), and abundant disturbed surface and subsurface artifacts from 0 – 40 cm deep.	Not eligible	2,820 E

Prehistoric sites in the general area tend to be shallow lithic scatters at Ogallala gravel outcrops on prominent landforms and terraces along watercourses. Late-nineteenth and twentieth century sites tend to be in predictable locations along section line roads and visible on maps and aerial photographs, similar to the previously recorded sites in the 1-mile AOI.

Afendras Archaeology completed the only Section 106 survey within the 1-mile AOI. The survey was completed in 2020 and concerned ODOT improvements to SH-16 (J/P 24131(04)). The western 840 feet overlaps with the eastern portion of the current study area. Both study areas are not identical and there are two narrow spaces (20 – 25 feet wide) of the current study area not covered by the 2020 study area. The 2020

study area was systematically surveyed with pedestrian transects in no greater than 49.2-foot (15 m) intervals and shovel tests dug in 98.4-foot (30 m) intervals. Due to the systematic nature of the recent survey, the portion of the overlapping 2020 study area was excluded from the current fieldwork. The portion of the current study area excluded from fieldwork is approximately 2.8 acres. When discussing the study area going forward, it will refer to the portion not overlapped by the 2020 study area.

The 1897 GLO plat shows the study area, and general area, was wooded. By 1941, most of the woods had been removed and converted to agricultural fields and residential areas on the outskirts of Bristow. Most of the remaining woods were along watercourses and rugged slopes. Between 1941 and the present, the woods and associated scrubby regrowth were allowed to expand and cover approximately 25 percent of the study area.

The 1897 GLO plat and 1901 Nuyaka 30' quadrangle show crisscrossing roads near the study area, but no buildings nearby. The 1916 Bristow 30' quadrangle shows that section line roads had been established, including along the SH-16 alignment, but no buildings are plotted near the study area. Buildings are shown on the 1936 county highway map, but they only generally compare with the 1941 aerial photograph. The 1941 aerial photograph is blurry but shows two farmsteads in the center of the west half of the study area, one on the north side and one on the south side. Both farmsteads have six buildings/structures each. In the east half of the study area, southeast of the bridge, there is one farmstead with two buildings. North of the north side of the study area is a large building complex (no longer standing) surrounded by large areas of reflectivity. There appear to be square/rectangular features within the reflective areas, but the photograph is too blurry to tell what they are. Site 34CR247, documented during the 2020 survey, is within one of these areas. However, the remaining portion of the 2020 study area west of the site was also highly reflective, but no artifacts or features were found. Essentially, there is no way to tell from the aerial photograph the potential for an archaeological resource at this location. The building complex is not clearly shown until 1969 at which time the nearest building is over 50 feet north of the study area. While the three farmsteads discussed above are anticipated to be documented as archaeological sites, it is assumed the farmstead in the northeast quadrant will not be represented within the study area. There are no standing buildings within the study area greater than 45 years of age. The three standing buildings within the study area were dated from 1983 – 2006.

Based on reviewing the OAS quadrangles, there is a moderate chance for prehistoric resources. Little information is locally available on prehistoric site density, but sites tend to be found on prominent landforms and terraces along watercourses. There are ridgetops in the west and east halves of the study area overlooking Sand Creek. Tertiary gravel outcrops would increase site potential. Buried sites are possible in Pulaski soil along Sand Creek and the western drainage.

Based on available maps and aerial photographs, three mid-twentieth century archaeological sites were anticipated to be documented during fieldwork.

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#### 4. METHODOLOGY:

##### **Field Investigation Methodology: (must outline STP interval used in the project area and on sites)**

All fieldwork was conducted in accordance the ODOT CRP (2017) Cultural Resources Studies manual.

The fieldwork entailed a 100 percent survey of the entire study area, consisting of a combination of pedestrian transects, shovel testing, and auger testing. Pedestrian transects were spaced no greater than 49.2 feet (15 m) apart. Cut banks, gravel outcrops, eroded slopes, subtle rises in elevation, knolls, terraces, and rodent back dirt piles were also inspected.

##### **Method A**

Shovel testing was conducted in 98.4-foot (30 m intervals), with judgmental tests placed in areas anticipated to yield potential resources, or along unanticipated landforms not visible on topographic maps, such as knolls, rises, and benches. Each test was a roughly 11.8-inch (30 cm) diameter hole dug to culturally sterile soil, or one meter below the surface where possible, or to a restrictive element such as bedrock or clay beds. Highly

compacted or cobble-dense soils were dislodged using a tamper bar, as necessary. Fill from each test was hand-sifted through 0.25-inch hardware cloth before backfilling. Shovel turns were randomly used in areas of poor surface visibility between shovel tests and consisted of removing approximately 9.8 inches (25 cm) of soil, chopping through with a shovel or trowel to look for cultural material, and refilling.

Auger testing is used to sample for stratigraphic information which is deeper than an individual can usually dig with a shovel. An AMS 3-inch bucket auger was used. The process for auger use is as follows: 1) a shovel test is dug as deep as possible by hand and documented; 2) the auger is then used to identify the potential for deeply buried surface horizons (Ab) and sites. Fill from auger tests is screened and documented as described for shovel tests. The possibility for buried surfaces was evaluated prior to fieldwork, primarily by reviewing county soil data. The NRCS soil data lists potential buried surfaces (Ab) in the soil profiles for the Verdigris series exceeding 60 inches (152 cm).

#### **Method B**

This is a delineation methodology conducted for archaeological resources identified during fieldwork. Shovel tests were excavated in 32.8-foot (10 m) intervals around existing features or past features visible in archived aerial imagery to test for significant deposits and to establish a chronology for the site. The site was considered fully delineated by two negative tests along the boundaries that define the site. The site was described on an OAS site form that includes dimensions, observed artifacts, condition, and NRHP eligibility.

#### **Method C**

This methodology conducted for portions of the study area that exhibited clear disturbance, such as the existing right-of-way and road. Pedestrian transects in these areas followed Method A. Shovel testing also followed Method A but were dug as needed to confirm disturbance.

### **5. RESULTS OF INVESTIGATION:**

\_\_\_\_\_ No archeological sites or buildings recorded in study area.

XXX Resources recorded in study area assessed as **not eligible** for the NRHP. Forms being submitted for agency review.

XXX Oklahoma Archeological Site Survey Form(s) for State Archeologist files.

\_\_\_\_\_ Historic Preservation Resource Identification Form(s) for SHPO files.

\_\_\_\_\_ Oklahoma Bridge Survey and Inventory Form.

\_\_\_\_\_ **NRHP-eligible properties** recorded in study area.

#### **Forms being submitted for agency review.**

\_\_\_\_\_ Oklahoma Archeological Site Survey Form(s) for State Archeologist files.

\_\_\_\_\_ Historic Preservation Resource Identification Form(s) for SHPO files.

\_\_\_\_\_ Oklahoma Bridge Survey and Inventory Form.

\_\_\_\_\_ Archeological sites requiring further assessment (i.e., evaluative testing)

### **COMMENTS AND DESCRIPTION OF FINDINGS:**

#### **General Observations**

The study area consists primarily of upland ridges overlooking the deeply incised channel of Sand Creek. Vegetation west of Sand Creek consists of moderately dense woodlands of oak trees and heavy leaf litter. Scrubby vegetation regrowth is present in the southwest quadrant in areas of recent oil and gas development.

East of Sand Creek, the study area consists of a mixture of open short grass pasture and manicured short grass in residential yards. The banks of Sand Creek contain tall grass vegetation with a small swampland located in the southeast quadrant from poor drainage. Exposed bedrock sandstone is visible across the eastern half of the study area, with small patches visible in the western half where prior oil and gas development has cleared the topsoil. Other noted disturbances include a deeply incised right-of-way that has cut into the bedrock in areas as deep as eight feet, along with utility right-of-way in the north half of the study area for underground cable and petroleum pipelines.

The soils encountered from shovel test excavations were generally comparable to those anticipated by the soil survey. The westernmost and easternmost portions of the study area contained shallow sandy loam topsoil (A) that terminated in sandstone bedrock (R), corresponding to the Niotaze and Bigheart soil series. The soils closer to Sand Creek reflected flood plain soils, with deep deposits of sand topsoil (A) over either weakly developed sandy loam subsoils (Bw1/Bw2) or sandy loam parent material (C1/C2), corresponding to the Dale and Pulaski soils. Deep auger testing in the Pulaski soils did not yield buried surface horizons (Ab) and terminated in either parent material (C) or bedrock (R). Sandstone gravels and granules were prevalent across all shovel and auger tests. No knappable material was observed in any shovel or auger test.

### **Cultural Resources**

The survey resulted in the documentation of two newly identified early- to mid-twentieth century farmstead sites (34CR254 and 34CR255).

**34CR254:** This site is an early- to mid-twentieth century farmstead that consists of a buried concrete foundation (Feature 1), a water well pipe (Feature 2), concrete steps (Feature 3), a push pile of debris (Feature 4), and a surface and a subsurface deposit of artifacts to a depth of 50 cm. The site was identified on historic maps and aerial photographs while conducting background research and was confirmed in the field during survey. The site is 1,585 feet east SH-16 and S. Oak St. intersection and 45 feet north of the SH-16 centerline. The maximum dimensions of the site measure 140 feet north - south and 315 feet east - west or 0.79 acres. The site has been completely delineated to the west, east, northwest and south by the maximum extent of artifacts and features in shovel testing. The site is delineated to the northeast by well-established property boundaries.

The site is located on an upland ridge that consists of a short and mixed grass environment, averaging 10 percent surface visibility.

*Feature 1:* This is a buried concrete foundation that was identified in a single shovel test (P5005), located 70 feet north of the SH-16 centerline. Feature 1 measures 15 feet north – south by 20 feet east – west, based on soil probes. Feature 1 is constructed of poured concrete. Feature 1 is visible on aerial imagery as a building from 1941 – 1995. No artifacts were observed at the surface of Feature 1, but shovel testing at Feature 1 yielded artifacts (n = 49) to a depth of 20 cm.

*Feature 2:* This is a water well pipe located 138 feet east of Feature 1. Feature 2 is a steel pipe that measures 7 inches in diameter. Due to the size and nature of Feature 2, it is not visible on aerial imagery. No artifacts were observed at the surface of Feature 2.

*Feature 3:* This is the remains of concrete steps located 157 feet northeast of Feature 1. Feature 3 measures 3 feet northwest-southeast and is 1 foot wide and 6 inches in height. Two structures are visible at the location of Feature 3 on aerial imagery from 1941 – 1972. Artifacts observed at the surface of Feature 3 (n = 1) include 1 mirror glass shard.

*Feature 4:* This is a push pile of debris located 120 feet northeast of Feature 1. Feature 4 measures approximately 35 feet in diameter. Feature 4 is not visible on aerial imagery until after the site is destroyed in 2008. Artifacts observed at the surface of Feature 4 (n ~ 100+) are approximated and include numerous timber planks, metal pipes, hog panel fence, fencing wire, unidentifiable ferrous metal fragments, 1 Igloo cooler, and 1 bicycle.

Artifacts observed at the surface were found in a scatter located 35 feet east of Feature 1. The surface scatter measures 60 feet southwest – northeast by 20 feet northwest – southeast. Artifacts observed at the surface of that scatter (n = 12) include 1 whiteware plate fragment, 1 crockery sherd, 5 clear curved glass, 3 clear flat glass, 1 amethyst glass, and 1 milk glass. Additional surface artifacts were identified at Features 3 and 4. Of the 59 shovel tests excavated, 28 were positive for artifacts. Artifacts documented in shovel testing (n = 233) consist of 68 clear curved glass, 57 clear flat glass, 2 amethyst glass, 2 aqua glass, 1 pink glass, 2 amber glass, 1 cobalt glass, 1 green Cola glass, 1 brown flat glass, 13 brown curved glass, 4 green curved glass, 4 milk glass, 1 clear curved bottle vase fragment, 1 clear glass jar rim, 1 clear rim glass, 1 clear glass bottle base fragment without marks or ribbing, 1 decorative clear flat glass, 1 decorated glass, 2 melted clear glass, 9 whiteware, 1 whiteware bowl fragment, 2 blue transfer print sherd, 1 glazed ware, 1 ceramic pipe fragment, 20 brick fragments, 5 cut nails, 9 wire nails, 1 metal rod, 1 iron plumbing pipe segment, 1 machinery collar, 1 steel fragment, 1 metal siding, 2 metal sheet fragments, 2 aluminum fragments, 3 unidentified metal fragments, 1 PVC fragment, 1 plastic spice shaker cap, 3 plastic fragments, and 3 coal. Artifacts were found between 0 – 50 cm below the surface, with most artifacts found between 0 – 10 cm. The soils typically consisted of a sandy loam topsoil (A) to a depth of 15 cm, over a well-developed sandy clay loam subsoil (Bt) to depths of 40 cm, terminating in bedrock (R). Some soils were disturbed, with mixed horizons terminating in bedrock.

The site was identified prior to fieldwork on maps and aerial photographs from 1941 – 1995. No buildings are marked at the location of the site on the 1936 Creek County General Highway and Transportation map. Four separate buildings or structures are first visible at the site in 1941. The site remains relatively unchanged until several buildings are destroyed and replaced with another in 1969. One building is destroyed by the 1995 aerial photograph and the remaining structures are removed by 2008.

According to Creek County deed research the property containing the site was purchased by Charles Ellison in 1910, prior to the timeframe of when the site first appears on maps and aerial imagery. The property remains in the Ellison family name until 1955, when it is sold to Burl Mercer by James Ellison. Mercer sells the property to Alton Strickland in 1957. Strickland is the owner of the property until 1992, when it is sold to Clarence and Willa Marcum. Based on county courthouse documentation, the site was owned by several individuals and their families and cannot be associated with any single person.

Site 34CR254 is the remains of a destroyed early- to mid-twentieth century farmstead consisting of a buried concrete foundation (Feature 1), a water well pipe (Feature 2), concrete steps (Feature 3), a push pile of debris (Feature 4), and a surface and subsurface deposit of artifacts to a depth of 50 cm. The artifacts are generally diagnostic to the early- to mid-twentieth century and complement the date range derived from available maps and aerial imagery. According to the *Chronicles of Oklahoma*, *Encyclopedia of Oklahoma History and Culture*, the *Indian-Pioneer Papers*, and general internet search, no historically significant events or people were associated with the site for it to be considered eligible for inclusion in the NRHP under Criteria A or B. There are no standing buildings at the site. The site does not contain significant archaeological features or deposits to be eligible under Criterion D. Therefore, the site is recommended **not eligible** for inclusion in the NRHP.

**34CR255:** This site is the remains of a mostly destroyed early- to mid-twentieth century farmstead that consists of the ruins of a cellar (Feature 1), a concrete foundation (Feature 2), a push pile of debris (Feature 3), and a surface and subsurface deposit of artifacts to a depth of 50 cm. The site was identified on historic maps and aerial photographs while conducting background research and was confirmed in the field during survey. The site is 1,530 feet east of SH-16 and S. Oak St. intersection and 83 feet south of the SH-16 centerline. The maximum dimensions of the site measure 225 feet north - south and 410 feet east - west or 0.81 acres. The site has been completely delineated to the west, east, north, and south by the maximum extent of artifacts and features in shovel testing.

The site is located on an upland ridge that consists of a combination of heavily disturbed oil and gas development and scrubby woodland regrowth. Visibility ranged to as high as 100 percent in areas of oil and gas development due to exposed soils and to as low as 10 percent, due to woodland understory and mixed grass vegetation. Noted disturbances include several oil and gas well pads, two-tracks, and exposed soil from mechanical earth-moving. A large earthen berm over seven feet in height and a push pile of trees is present in the southwest portion of the site where land has been cleared for oil and gas activity.

*Feature 1:* This is the ruins of a cellar that is located 118 feet south of the SH-16 centerline. Feature 1 measures 30 feet north – south by 10 feet east – west. Feature 1 is constructed of sandstone masonry and has poured concrete steps and a collapsed concrete roof. The concrete steps measure 6 feet wide. A structure is visible at the location of Feature 1, beginning in the 1941 aerial photograph. Artifacts observed on the interior of Feature 1 (n ~ 100+) include metal pipes, steel cable, and numerous unidentifiable ferrous metal fragments.

*Feature 2:* This is a poured concrete foundation located 3 feet west of Feature 1. Feature 2 measures 9 feet east - west by 6 feet north – south. Feature 2 is constructed of poured concrete. A structure is visible at the location of Feature 2, beginning in the 1941 aerial photograph. No artifacts were observed at the surface of Feature 2.

*Feature 3:* This is a debris push pile located 40 feet east of Feature 1. Feature 3 measures 10 feet in diameter. No structures appear to be visible at the location of Feature 3 in aerial imagery. Artifacts observed at the surface of Feature 3 (n = 20) include 8 glass jars, 1 glass bottle, 1 metal bucket, 5 metal cans, 2 metal tubs, and 3 unidentifiable ferrous metal fragments.

Artifacts observed at the surface were located 240 feet west of Feature 1. The surface scatter measures approximately 10 feet in diameter and is in a disturbed context of an existing oil and gas well pad. Artifacts observed at the surface of this scatter (n = 10) include 3 whiteware sherds and 7 clear curved glass. Of the 48 shovel tests excavated, 11 were positive for artifacts. Artifacts documented in shovel testing (n = 89) consist of 43 clear flat glass, 8 clear curved glass, 1 clear curved glass jar base, 1 clear bottle screw-top lip, 1 clear curved glass rim, 2 square clear glass jar base, 2 clear curved glass jar fragments, 2 green glass, 2 aqua curved glass, 1 cobalt glass, 1 cobalt glass base fragment, 1 milk glass, 2 whiteware base sherd with floral pattern, 6 whiteware, 1 metal nail, 1 unidentified metal fragment, 11 asbestos tile fragments, 2 brown plastic fragments, and 1 black plastic fragment. Artifacts were found between 0 – 50 cm below the surface. The soils were disturbed, with some tests consisting of subsoils at the surface that terminated immediately into bedrock (R) along the southwest end of the site and the remainder of the site consisting of mottled topsoil consisting of sands and sandy clays, terminating in bedrock (R).

The site was identified prior to fieldwork on maps and aerial photographs from 1936 – 1995. It first appears as a single structure sketched west of Sand Creek on the 1936 Creek County General Highway and Transportation map. Five separate buildings or structures are visible at the site in 1941. The site remains relatively unchanged until it appears destroyed in the 1995 aerial photograph. The largest building is visible at the location of Features 1 and 2 from 1941 until the site's destruction in 1995. Two-tracks are visible across the site in 1995 and the entirety of the site appears to have been bulldozed some time in 2021 with several oil and gas well pads installed south and southwest of the site.

According to Creek County deed research the property containing the site was purchased by Roxie Schmidt in 1926, prior to the timeframe of when the site first appears on maps and aerial imagery. The property remains in Roxie Schmidt's name in 1939, but by 1998, the property is listed as belonging to the Estate of Elizabeth Barter. It is unclear of when the property was no longer in Roxie Schmidt's name and transferred to Elizabeth Barter. Based on county courthouse documentation, the site is associated with Roxie Schmidt, but possibly also Elizabeth Barter.

Site 34CR255 is the remains of a mostly destroyed early- to mid-twentieth century farmstead consisting of the ruins of a cellar (Feature 1), a concrete foundation (Feature 2), a push pile of debris (Feature 3), and a surface and subsurface deposit of artifacts to a depth of 50 cm. The artifacts are generally diagnostic to the early- to mid-twentieth century and complement the date range derived from available maps and aerial imagery. According to the Chronicles of Oklahoma, Encyclopedia of Oklahoma History and Culture, the Indian-Pioneer Papers, and general internet search, no historically significant events or people were associated with the site for it to be considered eligible for inclusion in the NRHP under Criteria A or B. There are no standing buildings or structures at the site. The site does not contain significant archaeological features or deposits to be eligible under Criterion D. Therefore, the site is recommended **not eligible** for inclusion in the NRHP.

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## 6. RECOMMENDATIONS:

\_\_\_\_\_ **Plan Notes** requiring avoidance of cultural resources in off-project areas

\_\_\_\_\_ **XXX Approval Recommended** with the proposed project as planned with no additional research. If subsurface archaeological materials are exposed during construction, the Contractor and Resident Engineer shall notify the Department Archaeologist in accordance with Section 202.04(a), Standard Specifications for Highway Construction.

\_\_\_\_\_ **Approval NOT Recommended**, until one or more of the following measures are completed.

\_\_\_\_\_ **Additional consultation with SHPO** regarding NRHP-eligible Properties

\_\_\_\_\_ **Revise design** to avoid/protect resources

\_\_\_\_\_ **NRHP Eligibility Archaeological Test Excavations**

\_\_\_\_\_ **Implementation of MOA** with SHPO regarding Mitigation of Adverse Effects to Historic Properties

#### ***SUMMARY AND COMMENTS REGARDING RECOMMENDATIONS:***

The survey resulted in the documentation of two newly identified early- to mid-twentieth century farmstead sites (34CR254 and 34CR255).

**34CR254:** This site is the remains of a destroyed early- to mid-twentieth century farmstead consisting of a buried concrete foundation (Feature 1), a water well pipe (Feature 2), concrete steps (Feature 3), a push pile of debris (Feature 4), and a surface and subsurface deposit of artifacts to a depth of 50 cm. The artifacts are generally diagnostic to the early- to mid-twentieth century and complement the date range derived from available maps and aerial imagery. According to the Chronicles of Oklahoma, Encyclopedia of Oklahoma History and Culture, the Indian-Pioneer Papers, and general internet search, no historically significant events or people were associated with the site for it to be considered eligible for inclusion in the NRHP under Criteria A or B. There are no standing buildings or structures at the site. The site does not contain significant archaeological features or deposits to be eligible under Criterion D. Therefore, the site is recommended **not eligible** for inclusion in the NRHP.

**34CR255:** This site is the remains of a mostly destroyed early- to mid-twentieth century farmstead consisting of the ruins of a cellar (Feature 1), a concrete foundation (Feature 2), a push pile of debris (Feature 3), and a surface and subsurface deposit of artifacts to a depth of 50 cm. The artifacts are generally diagnostic to the early- to mid-twentieth century and complement the date range derived from available maps and aerial imagery. According to the Chronicles of Oklahoma, Encyclopedia of Oklahoma History and Culture, the Indian-Pioneer Papers, and general internet search, no historically significant events or people were associated with the site for it to be considered eligible for inclusion in the NRHP under Criteria A or B. There are no standing buildings or structures at the site. The site does not contain significant archaeological features or deposits to be eligible under Criterion D. Therefore, the site is recommended **not eligible** for inclusion in the NRHP.

In addition, two sites that were identified as part of a separate, 2020 undertaking, 34CR247 and 34CR248, overlap with the study area for the current undertaking. Both of these sites were completely delineated and recommended not eligible for inclusion in the NRHP as part of the 2020 study. The State Historic Preservation Office (SHPO) [File #1425-21] and State Archaeologist (FY21-1432) both concurred with those assessments. Because these sites were recently documented, thoroughly investigated, and recommended not NRHP eligible, they were not revisited or updated during the current fieldwork.

Approval of the project is recommended as it is proposed, with no additional research.

## REFERENCES CITED

### *Maps and Aerial Photographs*

- 1874 General Land Office Plat T16N R9E
- 1901 Nuyaka, Okla. 30' quadrangle
- 1916 Bristow, Okla. 30' quadrangle
- 1936 (rev. 1937), 1950 (rev. 1957), 1963 (rev. 1968, 1972), 1980 (rev. 1983) Creek County Highway Map
- 1941, 1955, 1956, 1969, 1972, 1980, 1995, 2003 - 2006, 2008, 2010, 2013, 2015, 2017, 2019 USDA Aerial Image
- 1973 Bristow, Okla. 7.5' quadrangle
- 2012, 2014, 2015, 2017, 2018 Google Earth Aerial Image

### *Publications*

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Davis, Josh, and Dean Afendras

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- 2016a Bartlesville Series. Official Soil Series Descriptions. Electronic document, [https://soilseries.sc.egov.usda.gov/OSD\\_Docs/B/BARTLESVILLE.html](https://soilseries.sc.egov.usda.gov/OSD_Docs/B/BARTLESVILLE.html), accessed September 22, 2021.

- 2016b Bigheart Series. Official Soil Series Descriptions. Electronic document, [https://soilseries.sc.egov.usda.gov/OSD\\_Docs/B/BIGHEART.html](https://soilseries.sc.egov.usda.gov/OSD_Docs/B/BIGHEART.html), accessed September 22, 2021.
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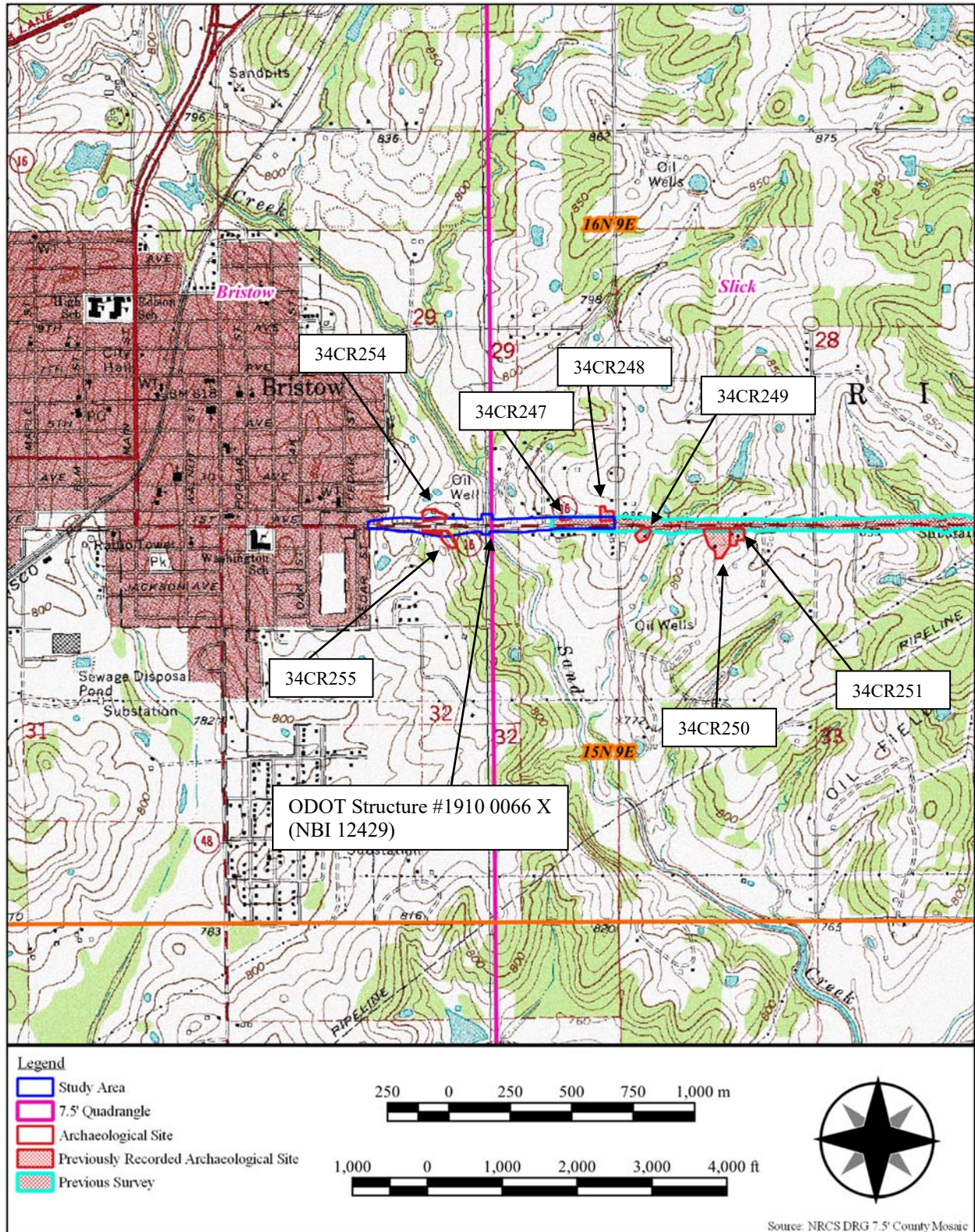


Figure 1. Creek 29682(04): Proposed Improvements to SH-16.

Basemap: Bristow, Okla. (1973) USGS 7.5' Quadrangle, Sections 29 and 32, T16N R9E.

March 29, 2022

To: ODOT Cultural Resources Program

From: Rhonda S. Fair, Director – Tribal Coordination

Re: Summary of tribal consultation for Creek County JP# 29682(04) - Bridge replacement and approach improvements on State Highway 16 over Sand Creek, 0.7 miles east of the SH-48 junction

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A file search conducted on 5/4/2018 and found no known potentially sensitive areas in the project area or its vicinity.

The following tribes were consulted on 5/4/2018 and 2/23/2022:

- Alabama Quassarte Tribal Town
- Kialegee Tribal Town
- Muscogee (Creek) Nation
- Osage Nation
- Thlopthlocco Tribal Town
- United Keetoowah Band of Cherokee Indians
- Wichita and Affiliated Tribes

The following comments were received:

- Muscogee (Creek) Nation: No objections to the project and concurs that no historic properties will be affected (5/17/2018). No historic or traditional cultural properties are affected (6/1/2018).
- Osage Nation: No known Osage resources in the project area (6/19/2018).



OKLAHOMA DEPARTMENT OF TRANSPORTATION

**Tribal Coordination**  
200 N.E. 21<sup>st</sup> Street, Room 3A8  
Oklahoma City, OK 73105-3204  
www.odot.org

May 4, 2018

Alabama Quassarte Tribal Town  
Attn: Chief Nelson Harjo  
Post Office Box 187  
Wetumka, OK 74883

Dear Chief Harjo:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Creek County, Oklahoma; JP# 29682(04)

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is initiating consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following project.

<b>County</b>	Creek	<b>Job Piece #</b>	29682(04)	<b>Anticipated Let Date</b>	2024
<b>Project description</b>	Bridge replacement and approach improvements on State Highway 16 over Sand Creek, 0.7 miles east of the SH-48 junction				
<b>Location</b>	Sec 29 & 32 T16N R9E. See enclosed map.				
<b>Additional information</b>	This project is on a new alignment: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no This project will require new or temporary right of way: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no This project involves ground disturbance: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no				

If this undertaking may affect burials, cemeteries, or properties of religious and cultural significance to your tribe, please notify me as soon as possible. Likewise, if this undertaking occurs on land held in trust for the tribe and the tribe has 101(d)(2) status from the National Park Service, please make this office aware of the location of the trust property. In order to provide the most thorough consideration of these properties in the planning process, we appreciate receiving your response to this request within 30 days. Please rest assured that we will respect your wishes regarding the confidentiality of any information that you provide.

The proposed project area will be subject to a cultural resources survey. The goal of this survey is to make a reasonable and good faith effort to identify historic properties within the area of potential effect, in accordance with 36 CFR Part 800.4. The survey will be performed in consultation with the Oklahoma State Historic Preservation Office and other consulting parties as appropriate. You will be provided a copy of the cultural resources report upon its completion.

If you have any questions or would like to meet regarding this project, please contact me by telephone at 405.521.3632 or email at rfair@odot.org.

Sincerely,

Rhonda S. Fair, Ph.D.  
Director  
ODOT Tribal Coordination

cc: Samantha Robison

*"The mission of the Oklahoma Department of Transportation is to provide a safe, economical, and effective transportation network for the people, commerce and communities of Oklahoma."*

AN EQUAL OPPORTUNITY EMPLOYER

February 23, 2022

Alabama Quassarte Tribal Town  
Attn: Chief Wilson Yargee  
P.O. Box 187  
Wetumka, OK 74883

Dear Chief Yargee:

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is conducting Section 106 consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following Federal-Aid undertaking.

County	Creek	Job Piece #	29682(04)	Anticipated Let Date	2026
<b>Project description</b>	Bridge replacement and approach improvements on State Highway 16 over Sand Creek, 0.7 miles east of the SH-48 junction				

In accordance with 36 CFR Part 800.4, the area of potential effect (APE) was surveyed for cultural resources in order to identify historic properties that may be affected by the undertaking. A copy of this report is enclosed.

The cultural resources study identified and documented two early to mid-20<sup>th</sup> century archaeological sites, both consistent with farmsteads and recommended as not eligible for the National Register of Historic Places. An overlapping 2020 cultural resources study identified two archaeological sites in this project's area of potential effect; both were assessed as not eligible. Ongoing tribal consultation has not identified any areas of concern. Pursuant to 36 CFR 800.4(d)(1), and based upon the results of this study, our opinion is that the project, as proposed, will have no effect on historic properties.

If this undertaking may affect properties of religious and cultural significance to your tribe or tribal trust land, please notify me as soon as possible. In order to provide the most thorough consideration of these properties in the planning process, we appreciate receiving your response to this request within 30 days. Please rest assured that we will respect your wishes regarding the confidentiality of any information that you provide.

If you have any questions or would like to meet regarding this project, please contact me by telephone at 405.517.5670 or email at [rfair@odot.org](mailto:rfair@odot.org).

Sincerely,



Rhonda S. Fair, Ph.D.  
Director - Tribal Coordination

cc: Historic Preservation Office



OKLAHOMA DEPARTMENT OF TRANSPORTATION

**Tribal Coordination**  
200 N.E. 21<sup>st</sup> Street, Room 3A8  
Oklahoma City, OK 73105-3204  
www.odot.org

May 4, 2018

Kialegee Tribal Town  
Attn: Mekko Jeremiah Hobia  
Post Office Box 332  
Wetumka, OK 74883

Dear Mekko Hobia:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Creek County, Oklahoma; JP# 29682(04)

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is initiating consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following project.

<b>County</b>	Creek	<b>Job Piece #</b>	29682(04)	<b>Anticipated Let Date</b>	2024
<b>Project description</b>	Bridge replacement and approach improvements on State Highway 16 over Sand Creek, 0.7 miles east of the SH-48 junction				
<b>Location</b>	Sec 29 & 32 T16N R9E. See enclosed map.				
<b>Additional information</b>	This project is on a new alignment: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no This project will require new or temporary right of way: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no This project involves ground disturbance: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no				

If this undertaking may affect burials, cemeteries, or properties of religious and cultural significance to your tribe, please notify me as soon as possible. Likewise, if this undertaking occurs on land held in trust for the tribe and the tribe has 101(d)(2) status from the National Park Service, please make this office aware of the location of the trust property. In order to provide the most thorough consideration of these properties in the planning process, we appreciate receiving your response to this request within 30 days. Please rest assured that we will respect your wishes regarding the confidentiality of any information that you provide.

The proposed project area will be subject to a cultural resources survey. The goal of this survey is to make a reasonable and good faith effort to identify historic properties within the area of potential effect, in accordance with 36 CFR Part 800.4. The survey will be performed in consultation with the Oklahoma State Historic Preservation Office and other consulting parties as appropriate. You will be provided a copy of the cultural resources report upon its completion.

If you have any questions or would like to meet regarding this project, please contact me by telephone at 405.521.3632 or email at rfair@odot.org.

Sincerely,

Rhonda S. Fair, Ph.D.  
Director  
ODOT Tribal Coordination

cc: Historic Preservation Office

*"The mission of the Oklahoma Department of Transportation is to provide a safe, economical, and effective transportation network for the people, commerce and communities of Oklahoma."*

AN EQUAL OPPORTUNITY EMPLOYER

February 23, 2022

Kialegee Tribal Town  
Attn: Mekko Brian Givens  
P.O. Box 332  
Wetumka, OK 74883

Dear Mekko Givens:

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is conducting Section 106 consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following Federal-Aid undertaking.

County	Creek	Job Piece #	29682(04)	Anticipated Let Date	2026
Project description	Bridge replacement and approach improvements on State Highway 16 over Sand Creek, 0.7 miles east of the SH-48 junction				

In accordance with 36 CFR Part 800.4, the area of potential effect (APE) was surveyed for cultural resources in order to identify historic properties that may be affected by the undertaking. A copy of this report is enclosed.

The cultural resources study identified and documented two early to mid-20<sup>th</sup> century archaeological sites, both consistent with farmsteads and recommended as not eligible for the National Register of Historic Places. An overlapping 2020 cultural resources study identified two archaeological sites in this project's area of potential effect; both were assessed as not eligible. Ongoing tribal consultation has not identified any areas of concern. Pursuant to 36 CFR 800.4(d)(1), and based upon the results of this study, our opinion is that the project, as proposed, will have no effect on historic properties.

If this undertaking may affect properties of religious and cultural significance to your tribe or tribal trust land, please notify me as soon as possible. In order to provide the most thorough consideration of these properties in the planning process, we appreciate receiving your response to this request within 30 days. Please rest assured that we will respect your wishes regarding the confidentiality of any information that you provide.

If you have any questions or would like to meet regarding this project, please contact me by telephone at 405.517.5670 or email at [rfair@odot.org](mailto:rfair@odot.org).

Sincerely,



Rhonda S. Fair, Ph.D.  
Director - Tribal Coordination

cc: Historic Preservation Office



OKLAHOMA DEPARTMENT OF TRANSPORTATION

**Tribal Coordination**  
200 N.E. 21<sup>st</sup> Street, Room 3A8  
Oklahoma City, OK 73105-3204  
www.odot.org

May 4, 2018

Muscogee (Creek) Nation  
Attn: Principal Chief James Floyd  
Post Office Box 580  
Okmulgee, OK 74447

Dear Principal Chief Floyd:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Creek County, Oklahoma; JP# 29682(04)

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is initiating consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following project.

<b>County</b>	Creek	<b>Job Piece #</b>	29682(04)	<b>Anticipated Let Date</b>	2024
<b>Project description</b>	Bridge replacement and approach improvements on State Highway 16 over Sand Creek, 0.7 miles east of the SH-48 junction				
<b>Location</b>	Sec 29 & 32 T16N R9E. See enclosed map.				
<b>Additional information</b>	This project is on a new alignment: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no This project will require new or temporary right of way: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no This project involves ground disturbance: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no				

If this undertaking may affect burials, cemeteries, or properties of religious and cultural significance to your tribe, please notify me as soon as possible. Likewise, if this undertaking occurs on land held in trust for the tribe and the tribe has 101(d)(2) status from the National Park Service, please make this office aware of the location of the trust property. In order to provide the most thorough consideration of these properties in the planning process, we appreciate receiving your response to this request within 30 days. Please rest assured that we will respect your wishes regarding the confidentiality of any information that you provide.

The proposed project area will be subject to a cultural resources survey. The goal of this survey is to make a reasonable and good faith effort to identify historic properties within the area of potential effect, in accordance with 36 CFR Part 800.4. The survey will be performed in consultation with the Oklahoma State Historic Preservation Office and other consulting parties as appropriate. You will be provided a copy of the cultural resources report upon its completion.

If you have any questions or would like to meet regarding this project, please contact me by telephone at 405.521.3632 or email at rfair@odot.org.

Sincerely,

Rhonda S. Fair, Ph.D.  
Director  
ODOT Tribal Coordination

cc: Corain Lowe-Zepeda, THPO

*"The mission of the Oklahoma Department of Transportation is to provide a safe, economical, and effective transportation network for the people, commerce and communities of Oklahoma."*

AN EQUAL OPPORTUNITY EMPLOYER

## Rhonda Fair

---

**From:** Section106 <Section106@mcn-nsn.gov>  
**Sent:** Friday, June 01, 2018 4:42 PM  
**To:** Rhonda Fair  
**Subject:** Bridge Replacement and Approach Improvements on State Highway 16 over Sand Creek, Creek County, Oklahoma

Ms. Fair,

Thank you for contacting the Muscogee (Creek) Nation concerning the Bridge Replacement and Approach Improvements on State Highway 16 over Sand Creek, Creek County, Oklahoma. This project is located within our historic area of interest and is of importance to us. After reviewing the material provided, it has been determined that the Muscogee (Creek) Nation has no objections to the proposed project. Please consider this letter as our concurrence to your request and findings of **no historic or traditional cultural properties affected**. However, should cultural material or human remains be encountered during ground disturbance, construction or demolition, we request to be notified. Also, if there are any additional updates, we ask to be informed of these. Should further information or comment be needed, please do not hesitate to contact me at (918) 732-7852 or by email at [lwendt@mcn-nsn.gov](mailto:lwendt@mcn-nsn.gov).

Regards,  
LeeAnne Wendt

**LeeAnne Wendt**, M.A., RPA  
Historic and Cultural Preservation Department, Tribal Archaeologist  
Muscogee (Creek) Nation  
P.O. Box 580 / Okmulgee, OK 74447  
T 918.732.7852  
F 918.758.0649  
[lwendt@MCN-nsn.gov](mailto:lwendt@MCN-nsn.gov)  
<http://www.muscogeenation-nsn.gov/>

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THIS MESSAGE AND ANY ATTACHMENTS ARE COVERED BY THE ELECTRONIC COMMUNICATIONS PRIVACY ACT, 18 U.S.C. §§2510 et seq. AND CONTAIN INFORMATION THAT IS HIGHLY CONFIDENTIAL, PRIVILEGED AND EXEMPT FROM DISCLOSURE. ANY RECIPIENT OTHER THAN THE INTENDED RECIPIENT IS ADVISED THAT ANY DISSEMINATION, RETENTION, DISTRIBUTION, COPYING OR OTHER USE OF THE MESSAGE WITHOUT PRIOR WRITTEN CONSENT IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS MESSAGE IN ERROR, PLEASE NOTIFY THE SENDER IMMEDIATELY.

## Rhonda Fair

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**From:** Section106 <Section106@mcn-nsn.gov>  
**Sent:** Thursday, May 17, 2018 10:51 AM  
**To:** Rhonda Fair  
**Subject:** RE: Creek County JP# 29682(04) initial consultation

Ms. Fair,

Thank you for contacting the Muscogee (Creek) Nation concerning the Proposed Bridge Replacement and Approach Improvements on State Highway 16 over Sand Creek, 0.7 miles east of the SH-48 Junction in Creek County, Oklahoma. This project is located within our historic area of interest and is of importance to us. After reviewing the material provided, it has been determined that the Muscogee (Creek) Nation has no objections to the proposed project. Please consider this letter as our concurrence to your request and findings of **no historic or traditional cultural properties affected**. However, should cultural material or human remains be encountered during ground disturbance, construction or demolition, we request to be notified. Also, if there are any additional updates, we ask to be informed of these. Should further information or comment be needed, please do not hesitate to contact me at (918) 732-7852 or by email at [lwendt@mcn-nsn.gov](mailto:lwendt@mcn-nsn.gov).

Regards,  
LeeAnne Wendt

**LeeAnne Wendt**, M.A., RPA  
Historic and Cultural Preservation Department, Tribal Archaeologist  
Muscogee (Creek) Nation  
P.O. Box 580 / Okmulgee, OK 74447  
T 918.732.7852  
F 918.758.0649  
[lwendt@MCN-nsn.gov](mailto:lwendt@MCN-nsn.gov)  
<http://www.muscogeenation-nsn.gov/>

---

**From:** Rhonda Fair [<mailto:RFair@odot.org>]  
**Sent:** Friday, May 04, 2018 12:42 PM  
**To:** Section106  
**Subject:** Creek County JP# 29682(04) initial consultation

Please see the attached project notification. Just let me know if you have any questions.

Thanks!

Rhonda

**Rhonda S. Fair, Ph.D.**  
Director – Tribal Coordination

Oklahoma Department of Transportation

February 23, 2022

Muscogee Nation  
Attn: Principal Chief David Hill  
P.O. Box 580  
Okmulgee, OK 74447

Dear Principal Chief Hill:

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is conducting Section 106 consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following Federal-Aid undertaking.

County	Creek	Job Piece #	29682(04)	Anticipated Let Date	2026
<b>Project description</b>	Bridge replacement and approach improvements on State Highway 16 over Sand Creek, 0.7 miles east of the SH-48 junction				

In accordance with 36 CFR Part 800.4, the area of potential effect (APE) was surveyed for cultural resources in order to identify historic properties that may be affected by the undertaking. A copy of this report is enclosed.

The cultural resources study identified and documented two early to mid-20<sup>th</sup> century archaeological sites, both consistent with farmsteads and recommended as not eligible for the National Register of Historic Places. An overlapping 2020 cultural resources study identified two archaeological sites in this project's area of potential effect; both were assessed as not eligible. Ongoing tribal consultation has not identified any areas of concern. Pursuant to 36 CFR 800.4(d)(1), and based upon the results of this study, our opinion is that the project, as proposed, will have no effect on historic properties.

If this undertaking may affect properties of religious and cultural significance to your tribe or tribal trust land, please notify me as soon as possible. In order to provide the most thorough consideration of these properties in the planning process, we appreciate receiving your response to this request within 30 days. Please rest assured that we will respect your wishes regarding the confidentiality of any information that you provide.

If you have any questions or would like to meet regarding this project, please contact me by telephone at 405.517.5670 or email at [rfair@odot.org](mailto:rfair@odot.org).

Sincerely,



Rhonda S. Fair, Ph.D.  
Director - Tribal Coordination

cc: Tribal Historic Preservation Office



OKLAHOMA DEPARTMENT OF TRANSPORTATION

**Tribal Coordination**  
200 N.E. 21<sup>st</sup> Street, Room 3A8  
Oklahoma City, OK 73105-3204  
www.odot.org

May 4, 2018

Osage Nation  
Attn: Principal Chief Geoffrey Standing Bear  
627 Grandview  
Pawhuska, OK 74056

Dear Principal Chief Standing Bear:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Creek County, Oklahoma; JP# 29682(04)

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is initiating consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following project.

<b>County</b>	Creek	<b>Job Piece #</b>	29682(04)	<b>Anticipated Let Date</b>	2024
<b>Project description</b>	Bridge replacement and approach improvements on State Highway 16 over Sand Creek, 0.7 miles east of the SH-48 junction				
<b>Location</b>	Sec 29 & 32 T16N R9E. See enclosed map.				
<b>Additional information</b>	This project is on a new alignment: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no This project will require new or temporary right of way: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no This project involves ground disturbance: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no				

If this undertaking may affect burials, cemeteries, or properties of religious and cultural significance to your tribe, please notify me as soon as possible. Likewise, if this undertaking occurs on land held in trust for the tribe and the tribe has 101(d)(2) status from the National Park Service, please make this office aware of the location of the trust property. In order to provide the most thorough consideration of these properties in the planning process, we appreciate receiving your response to this request within 30 days. Please rest assured that we will respect your wishes regarding the confidentiality of any information that you provide.

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If you have any questions or would like to meet regarding this project, please contact me by telephone at 405.521.3632 or email at rfair@odot.org.

Sincerely,

Rhonda S. Fair, Ph.D.  
Director  
ODOT Tribal Coordination

cc: Tribal Historic Preservation Office

*"The mission of the Oklahoma Department of Transportation is to provide a safe, economical, and effective transportation network for the people, commerce and communities of Oklahoma."*

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## Osage Nation Historic Preservation Office

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Date: June 19, 2018

File: 1718-2739OK-5

RE: ODOT, 29682(04), Bridge Replacement and Approach Improvements on SH-16 over Sand Creek, Creek County, Oklahoma

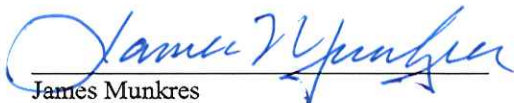
Oklahoma Department of Transportation  
Rhonda Fair  
200 NE 21<sup>st</sup> Street, Room 3A8  
Oklahoma City, OK 73105-3204

Dear Dr. Fair,

The Osage Nation Historic Preservation Office has received notification and accompanying information for the proposed project ODOT, 29682(04), Bridge Replacement and Approach Improvements on SH-16 over Sand Creek, Creek County, Oklahoma. There are no known Osage resources within the project area. This office looks forward to reviewing the final report.

Should you have any questions or need any additional information, please feel free to contact me at the number listed below. Thank you for consulting with the Osage Nation on this matter.

Sincerely,

  
James Munkres  
Archaeologist

February 23, 2022

Osage Nation  
Attn: Principal Chief Geoffrey Standing Bear  
627 Grandview  
Pawhuska, OK 74056

Dear Principal Chief Standing Bear:

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is conducting Section 106 consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following Federal-Aid undertaking.

County	Creek	Job Piece #	29682(04)	Anticipated Let Date	2026
<b>Project description</b>	Bridge replacement and approach improvements on State Highway 16 over Sand Creek, 0.7 miles east of the SH-48 junction				

In accordance with 36 CFR Part 800.4, the area of potential effect (APE) was surveyed for cultural resources in order to identify historic properties that may be affected by the undertaking. A copy of this report is enclosed.

The cultural resources study identified and documented two early to mid-20<sup>th</sup> century archaeological sites, both consistent with farmsteads and recommended as not eligible for the National Register of Historic Places. An overlapping 2020 cultural resources study identified two archaeological sites in this project's area of potential effect; both were assessed as not eligible. Ongoing tribal consultation has not identified any areas of concern. Pursuant to 36 CFR 800.4(d)(1), and based upon the results of this study, our opinion is that the project, as proposed, will have no effect on historic properties.

If this undertaking may affect properties of religious and cultural significance to your tribe or tribal trust land, please notify me as soon as possible. In order to provide the most thorough consideration of these properties in the planning process, we appreciate receiving your response to this request within 30 days. Please rest assured that we will respect your wishes regarding the confidentiality of any information that you provide.

If you have any questions or would like to meet regarding this project, please contact me by telephone at 405.517.5670 or email at [rfair@odot.org](mailto:rfair@odot.org).

Sincerely,



Rhonda S. Fair, Ph.D.  
Director - Tribal Coordination

cc: Andrea Hunter, THPO



OKLAHOMA DEPARTMENT OF TRANSPORTATION

**Tribal Coordination**  
200 N.E. 21<sup>st</sup> Street, Room 3A8  
Oklahoma City, OK 73105-3204  
[www.odot.org](http://www.odot.org)

May 4, 2018

Thlopthlocco Tribal Town  
Attn: Mekko Ryan Morrow  
Post Office Box 188  
Okemah, OK 74859

Dear Mekko Morrow:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Creek County, Oklahoma; JP# 29682(04)

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is initiating consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following project.

<b>County</b>	Creek	<b>Job Piece #</b>	29682(04)	<b>Anticipated Let Date</b>	2024
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<b>Location</b>	Sec 29 & 32 T16N R9E. See enclosed map.				
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If this undertaking may affect burials, cemeteries, or properties of religious and cultural significance to your tribe, please notify me as soon as possible. Likewise, if this undertaking occurs on land held in trust for the tribe and the tribe has 101(d)(2) status from the National Park Service, please make this office aware of the location of the trust property. In order to provide the most thorough consideration of these properties in the planning process, we appreciate receiving your response to this request within 30 days. Please rest assured that we will respect your wishes regarding the confidentiality of any information that you provide.

The proposed project area will be subject to a cultural resources survey. The goal of this survey is to make a reasonable and good faith effort to identify historic properties within the area of potential effect, in accordance with 36 CFR Part 800.4. The survey will be performed in consultation with the Oklahoma State Historic Preservation Office and other consulting parties as appropriate. You will be provided a copy of the cultural resources report upon its completion.

If you have any questions or would like to meet regarding this project, please contact me by telephone at 405.521.3632 or email at [rfair@odot.org](mailto:rfair@odot.org).

Sincerely,

Rhonda S. Fair, Ph.D.  
Director  
ODOT Tribal Coordination

cc: Terry Clouthier, THPO

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AN EQUAL OPPORTUNITY EMPLOYER

February 23, 2022

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Attn: Mekko Ryan Morrow  
P.O. Box 188  
Okemah, OK 74859

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Sincerely,



Rhonda S. Fair, Ph.D.  
Director - Tribal Coordination

cc: Galen Cloud, THPO

May 4, 2018

United Keetoowah Band of Cherokee  
Attn: Chief Joe Bunch  
Post Office Box 746  
Tahlequah, OK 74465

Dear Chief Bunch:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Creek County, Oklahoma; JP# 29682(04)

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is initiating consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following project.

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If you have any questions or would like to meet regarding this project, please contact me by telephone at 405.521.3632 or email at rfair@odot.org.

Sincerely,



Rhonda S. Fair, Ph.D.  
Director  
ODOT Tribal Coordination

cc: Sheila Bird

February 23, 2022

United Keetoowah Band of Cherokee Indians  
Attn: Chief Joe Bunch  
P.O. Box 746  
Tahlequah, OK 74465

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Sincerely,



Rhonda S. Fair, Ph.D.  
Director - Tribal Coordination

cc: Acee Watt



OKLAHOMA DEPARTMENT OF TRANSPORTATION

**Tribal Coordination**  
200 N.E. 21<sup>st</sup> Street, Room 3A8  
Oklahoma City, OK 73105-3204  
www.odot.org

May 4, 2018

Wichita and Affiliated Tribes  
Attn: President Terri Parton  
Post Office Box 729  
Anadarko, OK 73005

Dear President Parton:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Creek County, Oklahoma; JP# 29682(04)

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Sincerely,

Rhonda S. Fair, Ph.D.  
Director  
ODOT Tribal Coordination

cc: Gary McAdams, THPO

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AN EQUAL OPPORTUNITY EMPLOYER

February 23, 2022

Wichita and Affiliated Tribes  
Attn: President Terri Parton  
P.O. Box 729  
Anadarko, OK 73005

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Sincerely,



Rhonda S. Fair, Ph.D.  
Director - Tribal Coordination

cc: Gary McAdams, THPO

# **BIOLOGICAL STUDIES**

**BIOLOGICAL STUDIES TRACKING FORM**

NEPA Project Manager	Angela Aikman / Erin Faulkner
State or Local Government Project	State
USFWS TAILS #	<b>02EKOK00-2018-SLI-2176</b>
Original IPaC List	7/20/2018
Email used to request IpaC official species list	cmporter@pldi.net
Last Updated Species List Date	11/9/2021
ROW	Click here to enter a date.
Let Date	2024
90 Day Prior to Let IpaC List	Click here to enter a date.
Duration expected	Click here to enter text.
Original Biological Assessment and Waters and Wetlands Report Prepared By:	Guernsey / Blackbird
Most Recent Field Date:	11/10/2021
Original Report Date:	8/2/2018
USFWS Consultation Submittal:	ABB Only
USFWS Concurrence:	None required
Original Tracking Form Prepared by :	Elizabeth Nichols
Original Tracking Form date:	8/20/2018
Update Reason	Change in Footprint
Updated By Whom:	Blackbird
Updated Report Date:	11/12/2021
Amended USFWS Consultation Submittal:	1/13/2022
Amended USFWS Concurrence:	1/18/2022
Tracking Form Updated By Whom:	Elizabeth Nichols
Tracking Form Updated Date:	1/18/2022
<b><i>ADD MORE LINES AS NEEDED FOR EACH TIME PROJECT IS UPDATED</i></b>	

Form Date: May 2018

**Project Name from Oracle**

SH-16 over Sand Creek, approximately 0.7 mile east of the SH-58 junction (tied to JP 24131(04))

**Project Description**

Bridge and Approaches or bridge widening/structure extension

Check if any of the following is expected as part of the proposed action

- |  |                                     |
|--|-------------------------------------|
| Work within the OHWM is expected                                       | <input checked="" type="checkbox"/> |
| Project is OFF-SET alignment <input type="checkbox"/> or NEW alignment | <input type="checkbox"/>            |
| Project involves <b>NO OFF EXISTING PAVEMENT</b> work                  | <input type="checkbox"/>            |
| Project requires new ROW (permanent &/or temporary)                    | <input checked="" type="checkbox"/> |

**2. FEDERALLY LISTED SPECIES AND DESIGNATED CRITICAL HABITAT**

Species	Listing Status	IPaC	Effect Determination for IPaC listed species
		Check if Yes	
Red-cockaded Woodpecker	Endangered	<input type="checkbox"/>	Choose an item.
Whooping Crane	Endangered	<input type="checkbox"/>	Choose an item.
Gray Bat	Endangered	<input type="checkbox"/>	Choose an item.
Indiana Bat	Endangered	<input type="checkbox"/>	Choose an item.
Ozark Big-eared Bat	Endangered	<input type="checkbox"/>	Choose an item.
Neosho Mucket	Endangered	<input type="checkbox"/>	Choose an item.
Ouachita Rock Pocketbook	Endangered	<input type="checkbox"/>	Choose an item.
Scaleshell Mussel	Endangered	<input type="checkbox"/>	Choose an item.
Winged Mapleleaf	Endangered	<input type="checkbox"/>	Choose an item.
Harperella	Endangered	<input type="checkbox"/>	Choose an item.
American Burying Beetle	Threatened	<input checked="" type="checkbox"/>	Final Effect Analysis and Determination covered in the BO for the final 4(d) rule
Piping Plover	Threatened	<input checked="" type="checkbox"/>	No Effect
Red Knot	Threatened	<input checked="" type="checkbox"/>	No Effect
Northern Long-eared Bat	Threatened	<input type="checkbox"/>	Choose an item
Arkansas River Shiner	Threatened	<input type="checkbox"/>	Choose an item.
Leopard Darter	Threatened	<input type="checkbox"/>	Choose an item.
Neosho Madtom	Threatened	<input type="checkbox"/>	Choose an item.
Ozark Cavefish	Threatened	<input type="checkbox"/>	Choose an item.
American Alligator	Threatened	<input type="checkbox"/>	Choose an item.
Rabbitsfoot Mussel	Threatened	<input type="checkbox"/>	Choose an item.
Monarch Butterfly	Candidate	<input checked="" type="checkbox"/>	Not likely to jeopardize the continued existence
Rattlesnake-master Borer Moth	Candidate	<input type="checkbox"/>	Choose an item.
Whooping Crane Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.
Arkansas River Shiner Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.
Leopard Darter Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.
Neosho Mucket Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.
Rabbitsfoot Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.

	NEPA Footprint	Construction Footprint
Number of acres within the NEPA Study Footprint & Construction Footprint (if known)	19.33	Click here to enter text.
Number of acres of perennial plant vegetation (ABB habitat) within the NEPA Footprint & Construction Footprint (if known)	19.33	Click here to enter text.

ABB Conservation Lands adjacent	NO
Presence of milkweed and nectar plants	NO

Bald Eagle Assessment	Not expected to impact
Migratory Bird Assessment of Transportation Structures	Migratory birds found nesting on transportation structures
Migratory Bird Impacts	nesting habitat for migratory birds will be impacted
Birds of Conservation Concern	No BCC listed
Interior Least Tern (MBTA)	not expected to impact

<b><u>Species (choose those that apply)</u></b>	<b><u>Seasonal Restriction Period</u></b>
Migratory Birds: Swallows and Phoebe (NESTS PRESENT)	March 1 – August 31

### **Conservation Commitments**

**ODOT Commitment:** All operators, employees, and contractors will be made aware of all environmental commitments, including the following Plan Notes.

**ABB Commitment:** Minimize habitat loss by reducing the amount of ground disturbance of suitable ABB habitat within the construction footprint to only what is necessary for project construction and document in the monitoring reports to the Service. Following construction, areas of ground disturbance outside of the safety clear zone will be revegetated with native plant species where applicable and practicable. Areas where revegetation with native plant species is not practicable will be revegetated with more traditional plantings such as solid slab sodding.

**Monarch Commitment:** ODOT, as a Certificate of Inclusion partner in the Nationwide Monarch Butterfly CCAA for Energy and Transportation lands, will adhere to the conservation measures, as well as minimize threats to the monarch butterfly as stipulated in this CCAA.

### **Species Plan Notes**

**Non-Compliance:** Failure to implement the commitments specified in the Plan Notes can result in non-compliance issues on the project. Work activities may be suspended on the project, for an undetermined duration, while working with regulators to bring the project back into compliance. The contractor will not be compensated for time lost.

**Water Quality Conservation:** Appropriate Best Management Practices to minimize impacts from storm water discharges and sedimentation in streams, as established by the Oklahoma Department of Environmental Quality, shall be conscientiously implemented throughout the proposed construction periods, in order to minimize any potential impacts to any listed species. The effectiveness of erosion controls shall be maintained for the duration of construction activities. Hazardous materials, chemicals, fuels, lubricating oils, and other such substances shall be stored at least 100 feet outside of the ordinary high water mark (OHWM). Refueling of construction equipment shall also be conducted at least 100 feet from the OHWMs. Sediment and erosion controls shall be installed around staging areas to prohibit discharge of materials from these sites. Construction waste materials and debris shall be stockpiled at least 25 feet outside of the OHWMs, and these materials shall be removed and disposed of properly following completion of the project. Preventative measure must be taken to prohibit the discharge of contaminants into any surface waters.

**American Burying Beetle Note:** The American Burying Beetle is a large carrion burying beetle that occurs within the project limits. Artificial lighting may be used during construction for night activities if the equipment specifications outlined in Special Provision 656-5(a-b)19 for ABB are adhered to and measures to minimize use of artificial lighting have been implemented. Carcasses and all food trash shall be removed from the permanent and temporary right-of-way throughout the duration of project activities. Pollution Prevention Requirements as specified by the Oklahoma Department of Environmental Quality

General Permit OKR10 for Storm Water Discharges shall be implemented when appropriate. Additionally, all equipment will be fueled, and all fuel and motor vehicle oil will not be stored within areas of native vegetation (ie. outside of ABB habitat).

**Migratory Bird Note:** Migratory birds are protected by the federal Migratory Bird Treaty Act. Many birds commonly use bridges and culverts for nesting. The nesting season for most migratory bird species extends from March 1 to August 31. Migratory bird nesting use of the RCB culvert was observed. Painting, repair, retrofit, rehabilitation or demolition of the existing culvert shall be conducted between September 1, and February 28, when migratory bird nests are not occupied. If painting, repair, retrofit, rehabilitation or demolition cannot be completed between September 1 and February 28, the culvert shall be protected from new nest establishment prior to March 1, by means that do not result in bird death or injury. Options include the exclusion of adult birds from suitable nest sites on or within a structure by the placement of weather-resistant polypropylene netting with 0.25-inch or smaller openings, prior to March 1. Methods other than netting must be pre-approved by the ODOT Biologist.

Although no nests were observed on all other structures, the birds may occupy the structures in the future. The Resident Engineer shall contact the ODOT Biologist if any bird use of this structures is observed. If birds are observed then painting, repair, retrofit, rehabilitation or demolition of the existing bridge and culvert shall be conducted between September 1, and February 28 (when migratory bird nests are not occupied).

#### **Waters and Wetlands Delineation Status**

Updated 2021 delineation

#### **Wetlands and Ponds**

<b>Total Number of Sites</b>	<b>Water Body Type</b>	<b>Potential Jurisdiction Status</b>	<b>Acres within the NEPA Footprint</b>
None	Choose an item.	Choose an item.	0

#### **Streams and Drainages**

<b>Total Number of sites</b>	<b>Water body name</b>	<b>USGS Designation</b>	<b>Potential Jurisdictional Status</b>	<b>Acres within the NEPA Footprint</b>	<b>Liner Feet within the NEPA Footprint</b>
1	Sand Creek	mapped perennial	Likely Jurisdictional	0.344	428
3	drainages	unmapped ephemeral drainages	Unlikely Jurisdictional	0.102	1,191

## Nichols, Elizabeth

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**From:** Echo-Hawk, Patricia <Patricia\_Echo-Hawk@fws.gov>  
**Sent:** Tuesday, January 18, 2022 1:23 PM  
**To:** Nichols, Elizabeth  
**Cc:** Amber McIntyre; Vonceil Harmon  
**Subject:** 02EKOK00-2018-SLI-2176 ODOT Creek JP 29682(04) Consultation Review Package

Hello Liz,

The Service has reviewed consultation package 02EKOK00-2018-SLI-2176 Creek JP 29682(04).

Based on the information provided, the project will occur within the range of the American burying beetle (*Nicrophorus americanus*; ABB) and you have concluded that the project may affect the species. The Service agrees with this determination. Any take that may occur as a result of the project is not prohibited under the Endangered Species Act of 1973 (Act; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), Section 4(d) rule adopted for this species at 50 CFR 17.47(d) (85 FR 65241). The Service asks that the conservation measures as articulated in the assessment, and in conjunction with the guidelines set forth by the Federal Highway Administration, be implemented and maintained.

You have further determined that the project will have no effect on the threatened piping plover (*Charadrius melodus*), and red knot (*Calidris canutus rufa*).

Additionally, regarding the potential for migratory and existing birds/nests involved in this project, the Services asks that ODOT proceed in conjunction with guidance set forth by the Federal Highway Administration to avoid and minimize potential impacts to migratory birds, nests, and/or eggs.

In order to avoid impacts to Bald Eagles, if Bald Eagles or their habitat are observed during the biological assessment, a survey for eagles and their nests will be conducted within 660 feet of the work zone, during the winter prior to, and within one year of, the start of construction. If a nest is found, appropriate conservation measures based on the National Bald Eagle Management Guidelines will be implemented.

The Service also recommends ODOT/FHWA replace box culverts with structures that are fish passage friendly, as suggested in the Service email to ODOT dated 8/16/2021. This applies to project culverts (being demolished, repaired, retrofitted, maintained or rehabilitated) along perineal or intermittent streams still providing habitat to native fish species.

The online project review concurrence letter signed by the Field Supervisor is now valid, and the project may proceed accordingly. The Service asks that, within 90 days prior to construction, a new species list be obtained to see if any changes have occurred. If changes have occurred, please verify

with the Oklahoma Ecological Services Field Office to determine if further consultation is needed. If you have any questions, please contact the Field Office.

Best Regards,

Patricia

Patricia D. Echo-Hawk  
Fish and Wildlife Biologist  
IR 6, New Mexico and Arizona Dive Officer

U.S. Fish and Wildlife  
Oklahoma Ecological Services Field Office  
9014 E. 21st Street  
Tulsa, OK, 74129  
phone # 918-382-4505

Only when the last tree has died, the last river poisoned and the last fish caught, will we realize we can't eat money. -Cree Proverb

Character is doing the right thing when nobody's looking. There are too many people who think that the only thing that's right is to get by, and the only thing that's wrong is to get caught. - J.C. Watts

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August 2015



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Division of Ecological Services  
9014 East 21<sup>st</sup> Street  
Tulsa, Oklahoma 74129  
918/581-7458 / (FAX) 918/581-7467



### Online Project Review Concurrence Letter

To:

Project Name:

'Eqpuwncwqp'Eqf g<

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Oklahoma Ecological Services Field Office (ESFO) online project review process. By providing this letter in conjunction with your complete project review package, you are certifying that you have accurately completed the online project review process for the referenced project in accordance with all instructions provided, using the best available information to reach your conclusions. Concurrence with “not likely to adversely affect” determinations does not provide any exemption for violations of section 9 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA) or “take” of federally-listed species. The Federal action agency is ultimately responsible for ensuring compliance with the ESA and any take that occurs due to your proposed action would be considered a violation under section 9 of the ESA.

This letter and the enclosed project review package complete the review of your project in accordance with the ESA. This letter also provides information for your project review under the National Environmental Policy Act (National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C.4321-4347, 83 Stat. 852), as amended.

A copy of this letter and the project review package must be emailed to **okprojectreview@fws.gov** for this certification to be valid. This letter and the project review package will be maintained in Service records. **Please allow the Oklahoma ESFO 60 days to review your information. If the Oklahoma ESFO determines that the package is not complete, or that additional coordination is necessary, we will contact your office. If, after 60 days from the date of your email submittal of your project review package, the Oklahoma ESFO has not contacted your office, consider your section 7 consultation complete.**

The proposed action consists of:

Project start and completion dates:

Federal agency or federal program providing a permit, funding, grant, authorization, loan, etc. associated with the proposed project and how that agency is associated with your project:

Federal Agency/Program Point of contact (Name, phone, and email address):

The species conclusions table in the enclosed project review package summarizes your ESA conclusions. These conclusions resulted in “not likely to adversely affect/modify” determinations for listed species and critical habitat in relation to potential effects of your proposed project. We certify that the use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with determinations of “not likely to adversely affect” for listed species and critical habitat reached by proper use of this process. For projects where this particular determination is reached, additional coordination with this office is not needed.

Candidate species are not legally protected pursuant to the ESA. However, the Service encourages efforts to avoid or minimize adverse impacts to them from project effects. Some federal agencies have standing policies that grant limited protections to candidate species. Conservation of candidate species now may preclude future needs to federally list them as endangered or threatened, at which point their legal protection would become required. Please contact this office for additional coordination if your project action area contains candidate species.

Should project plans change or if additional information on the distribution of listed species or critical habitat becomes available, this determination may be reconsidered. You should re-visit the Service's Information, Planning, and Conservation (IPaC) website at <http://ecos/fws.gov/ipac/> within 90 days of project initiation to ensure species information is correct. If new species or critical habitat is identified, this letter is no longer valid and a new project package should be submitted to the Oklahoma ESFO.

Information about the online project review process including instructions and use, species information, and other information regarding project reviews within Oklahoma is available at our website: <<http://www.fws.gov/southwest/es/oklahoma/>>. If you have any questions, please call 918-581-7458 or send an email message to [OKProjectReview@fws.gov](mailto:OKProjectReview@fws.gov).

Sincerely,  
/s/ Jonna Polk  
Field Supervisor  
Oklahoma Ecological Services Field Office

Enclosures:

- 1) ENTIRE PROJECT REVIEW  
    PACKAGE: Species Conclusion Table  
    IPaC Species List and Action Area map  
    This letter (Online Concurrence Letter)  
    (Optional) Additional maps
- 2) Other relevant project data/documents

**ENDANGERED, THREATENED AND CANDIDATE SPECIES, DESIGNATED  
CRITICAL HABITAT, BALD EAGLE AND MIGRATORY BIRD ASSESSMENTS**

**For**

<b>USFWS TAILS #</b>		<b>02EKOK00-2018-SLI-2176</b>			
Email used to request IPaC official species list			cmporter@pldi.net		
County	Creek	JP Number	29682(04)	Project Number	J2-9682(004)
Road Number	State Highway 16 (SH-16)	Waterbody Name		Sand Creek	
ROW Date		Let Date	2024	Project Length	Approximately 2,120 Feet
Project General Location		SH-16 approximately 0.7 mile east of the SH-58 junction tied to JP 24131(04)			
Project Statement From Oracle		Bridge and Approaches on SH-16 over Sand Creek			

Prepared for:  
Oklahoma Department of Transportation  
Environmental Programs Division  
200 NE 21<sup>st</sup> Street  
Oklahoma City, OK 73105

Prepared by:

Biologist Name	Clint M. Porter
Company/Agency Name	Blackbird Environmental, LLC
Address	PO Box 720100
City, State Zip	Norman, Oklahoma 73070

Report Date:	November 12, 2021
Field Survey Date	November 10, 2021
Field Survey Biologist(s)	Clint M. Porter

Form Date: September 2021

## 1. PROJECT OVERVIEW

### 1.1 Federal Nexus

This biological assessment, prepared by the above named Company/Agency for the Oklahoma Department of Transportation (ODOT), addresses the above named project in compliance with Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended. Section 7 of the ESA requires that, through consultation with the U.S. Fish and Wildlife Service (Service), federal actions do not jeopardize the continued existence of any threatened, endangered, or proposed species or result in the destruction or adverse modification of critical habitat. This assessment evaluates the potential effects of the proposed transportation project on species that are federally listed under the ESA. Specific project design elements are identified that avoid or minimize adverse effects of the proposed project on listed species and designated critical habitat.

### 1.2. Project Description

Bridge and Approaches or bridge widening/structure extension

#### Description of the **existing** bridge/roadway facility and reason for proposed project

The typical section included two 12-foot wide paved lanes with 4-foot wide sod shoulders. One bridge and one reinforced concrete box (RCB) culvert were included within the study area. NBI: 12429 [N 35.82819, W 96.37527, NAD83] (Sta. 134+90 to 136+15) included three steel I-beam spans (35-foot, 50-foot and 35-foot) and was constructed in 1950. The present traffic ADT (vehicles per day) was estimated at 2,200. The future ADT (20-year projection) was not available. The proposed action will replace a functionally obsolete bridge to improve traffic safety.

#### Description of **proposed** improvements

The proposed action includes activities associated with bridge and approaches construction project. The project will entail phased construction under traffic and no detour for bridge replacement. The propose structure will include two 16-foot by 18-foot by 101.5-foot RCBs (Sta. 135+35.50 to 135+71.50). The new typical section will include two 12-foot wide paved lanes with 8-foot wide paved shoulders.

#### Check if any of the following is expected s part of the proposed action

Work within OHWM is expected	X
Project is OFF-SET alignment <input type="checkbox"/> or NEW alignment	<input type="checkbox"/>
Project involves <b>NO OFF EXISTING PAVEMENT</b> work	<input type="checkbox"/>
Project requires new ROW (permanent &/or temporary)	X

### 1.3. Project Area and Setting

Project Location		Environmental Study Footprint		Ecoregion & Game Type	
<u>Section Range &amp; Township</u>	<u>Lat/Long NAD 83)</u>	<u>Dimensions</u>	<u>Acreage</u>	<u>Level IV Ecoregion (Woods et al. 2005)</u>	<u>Game Type (Duck and Fletcher 1943)</u>
S 29 & 32, T16N, R9E	west end: N 35.82825, W 96.38069; East end: N 35.82824, W 96.37358	The study area included 200 north and south of the centerline and included approximately 2,120 feet of State Highway 16 (SH-16)	19.33 Acres	Northern Cross Timbers of Cross Timbers ecoregion	Post Oak/Black Jack Oak Forest

#### Action Area:

The action area includes the NEPA study area.

## 2. FEDERALLY LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

### Species Range and Occurrence Evaluation (Check ☒ all that apply)

Species	IPaC <sup>1</sup>	Watershed <sup>2</sup>	Water Body <sup>3</sup>	Records <sup>4</sup>
	Check if Yes	Check if YES	Check if Yes	Check if Yes
Red-cockaded Woodpecker	<input type="checkbox"/>			<input type="checkbox"/>
Whooping Crane	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Gray Bat	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Indiana Bat	<input type="checkbox"/>			<input type="checkbox"/>
Ozark Big-eared Bat	<input type="checkbox"/>			<input type="checkbox"/>
Neosho Mucket	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ouachita Rock Pocketbook	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scaleshell Mussel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Winged Mapleleaf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Harperella	<input type="checkbox"/>			<input type="checkbox"/>
American Burying Beetle	X			X
Eastern Black Rail	<input type="checkbox"/>			<input type="checkbox"/>
Piping Plover	X			<input type="checkbox"/>
Red Knot	X			<input type="checkbox"/>
Northern Long-eared Bat	<input type="checkbox"/>			<input type="checkbox"/>

Species	IPaC <sup>1</sup>	Watershed <sup>2</sup>	Water Body <sup>3</sup>	Records <sup>4</sup>
	Check if Yes	Check if YES	Check if Yes	Check if Yes
Arkansas River Shiner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leopard Darter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Neosho Madtom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ozark Cavefish	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
American Alligator	<input type="checkbox"/>			<input type="checkbox"/>
Rabbitsfoot Mussel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monarch Butterfly	X			<input type="checkbox"/>
Peppered Chub	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Rattlesnake-master Borer Moth	<input type="checkbox"/>			<input type="checkbox"/>

<sup>1</sup>Species is on the Proposed Project's IPaC List

<sup>2</sup>Action Area is within a watershed associated with occupied water bodies

<sup>3</sup>Action Area includes an occupied water body

<sup>4</sup>Project site within 5 miles of known records

Designated or Proposed Critical Habitat	Action Area includes Designated Critical Habitat (Check <input checked="" type="checkbox"/> if Yes)
Whooping Crane	<input type="checkbox"/>
Arkansas River Shiner	<input type="checkbox"/>
Leopard Darter	<input type="checkbox"/>
Neosho Mucket	<input type="checkbox"/>
Rabbitsfoot	<input type="checkbox"/>
Peppered Chub	<input type="checkbox"/>

Action area is adjacent to McAlester Army Ammunition Plant or Camp Gruber/Cherokee WMA ☐

All of part of the action area is within the 10 mile **gray bat** priority area (ODOT will check) ☐

All of part of the action area is within the 2 mile **gray bat** priority area (ODOT will check) ☐

Action area is within what percentage **Whooping Crane** migratory corridor

Action area is within 15 miles of Salt Plains NWR, Hackberry Flat, or Foss Reservoir. ☐

Action area is within the historic range of the **Red-cockaded Woodpecker** ☐

Action area is within 10 miles of the McCurtain County Wilderness Area ☐

Action area is within 10 miles of the Pushmataha Wildlife Management Area ☐

### 3. ENVIRONMENTAL BASELINE

#### 3.1. Ecological Processes and Conditions

Soils (Use Soil Map of Oklahoma by Carter and Gregory 2008)

Soil Class	Northern Cross Timbers
Soil Name	Stephenville-Darnell-Niotaze
Soil Type	Alfisols and Inceptisols
Soil Characteristics	Shallow, Moderately Acidic and Humus-Poor Soils on Steeps Slopes (18%)

Climate (Use Woods et al. 2005)

Precipitation	Mean annual inches (Northern Cross Timbers)	36 to 46
Growing Season	Number of days (Northern Cross Timbers)	195 to 235
Mean Temperatures	Summer min/max (Northern Cross Timbers)	70/94
	Winter min/max (Northern Cross Timbers)	26/49

#### River System

Sand Creek (perennial stream) was mapped within the study area. Sand Creek is a tributary to Little Deep Fork Creek and Little Deep Fork Creek is a tributary to Deep Fork River. Deep Fork River is a tributary to Canadian River. Canadian River is a tributary to Arkansas River; therefore, part of the Arkansas River drainage basin. Eufaula Lake (impoundment of Deep Fork River, North Canadian River and Canadian River) exists between the study area and Deep Fork River confluence with Canadian River.

#### Land Use and Land Ownership

From Woods et al. 2005	According to Woods et al. (2005), land use is a mixture of woodland, grassland, rangeland, pastureland and limited cropland. The main crops are small grains, grain sorghum, hay and soybeans. Abandoned farmland is common.
From Field investigation	Habitat within the general vicinity of the study area included rangeland, mature forest, residential and commercial development. The study area appeared to contain privately owned lands and right-of-way. Live stock grazing was evident within and around the study area.

#### Terrestrial and Aquatic Community Descriptions (based on field site visit)

The study area was dominated by three (3) general habitat types. Upland forest, mixed grass field and bottomland forest were the habitat types identified within the study area.

Upland forest included elm (*Ulmus* spp.), hackberry (*Celtis* spp.), post oak (*Quercus stellata*), eastern red cedar (*Juniperus virginiana*), western soapberry (*Sapindus saponaria*) and pecan

(*Carya illinoensis*). Other common species along the open edges and understory included green briar (*Smilax* spp.), poison ivy (*Toxicodendron radicans*), coral berry (*Symphoricarpos orbiculatus*), bristle grass (*Setaria* sp.) and panic grasses (*Panicum* spp.).

The second general habitat type was mixed grass field. Common grass species within the mixed grass field included bermuda (*Cynodon dactylon*), little bluestem (*Schizachyrium scoparium*), Johnson grass (*Sorghum halepense*), silver bluestem (*Bothriochloa saccharoides*), fescue (*Lolium* spp.), paspalum grasses (*Paspalum* spp.), switch grass (*Panicum virgatum*), brome grasses (*Bromus* spp.) and bristle grasses (*Setaria* spp.). Annual ragweed (*Ambrosia artemisiifolia*), nightshade (*Solanum* spp.), green briar (*Smilax* spp.), goldenrod (*Solidago* sp.), poison ivy (*Toxicodendron radicans*), trumpet creeper (*Campsis radicans*) and great ragweed (*Ambrosia trifida*) were also common within these areas. The mixed grass field was primarily maintained right-of-way, maintained lawn and mixed pasture/hayland.

Bottomland forest included elm (*Ulmus* spp.), hackberry (*Celtis* spp.), green ash (*Fraxinus pennsylvanica*), pecan (*Carya illinoensis*), box elder (*Acer negundo*), western soapberry (*Sapindus saponaria*) and American sycamore (*Platanus occidentalis*). Other common species along the open edges and understory included wood oats (*Chasmanthium latifolium*), trumpet creeper (*Campsis radicans*), honey suckle (*Lonicera* sp.), green briar (*Smilax* spp.), poison ivy (*Toxicodendron radicans*), coral berry (*Symphoricarpos orbiculatus*), bristle grass (*Setaria* sp.) and panic grasses (*Panicum* spp.).

Sand Creek (FS-3) was dominated by silt, clay and hardpan clay substrates with a mature, forested riparian corridor. Flowing water was observed within the stream channel. The pool and run habitat supported *Gambusia affinis* and *Notropis* spp. The stream embeddedness was estimated at five (5) to 10 percent at cobble and boulder rip rap beneath the bridge. No indicators (sediment bars/islands) of significant sediment accumulation were observed. Some wetland vegetation was growing within the silt/clay sediment of the stream bed. The stream exhibited characteristics of a perennial waterbody and was associated with NBI: 12429.

Three (3) non-mapped drainage features (FS-1, FS-2 and FS-4) were delineated within the study area. These features appear to convey storm water (surface run off) from SH-16 and the adjacent agricultural/residential land. The features were dominated by silt and clay substrates and exhibited characteristics of ephemeral, upland drainages.

### 3.2 Species Habitat Analysis

Pedestrian survey of entire NEPA study footprint (including 300-foot work zone buffer in karst areas) ☒ X  
Bridge/Structure inspected for bat use (Complete the Bridge Inspection Form) ☐

SPECIES	HABITAT	
American Burying Beetle	Number of acres of native perennial plant vegetation (where native perennial vegetation is the dominant vegetation) within the NEPA Environmental Study Footprint (include shapefiles).	19.33 Acres

SPECIES	HABITAT	
Piping Plover	Sparsely vegetated sandy or gravelly shorelines and islands associated with the major river systems occur within the <b>0.25 miles of the NEPA Environmental Study Footprint.</b>	<input type="checkbox"/>
	Salt flats or mudflats associated with reservoirs occur within the <b>0.25 miles of the NEPA Environmental Study Footprint.</b>	<input type="checkbox"/>
Red Knot	Mudflats associated with reservoirs occur within the <b>0.25 miles of the NEPA Environmental Study Footprint.</b>	<input type="checkbox"/>
Monarch Butterfly	Presence of milkweed ( <i>Asclepias sp.</i> ) species within the <b>NEPA Environmental Study Footprint.</b>	<input type="checkbox"/>
	Presence of flowering or potentially flowering nectar plants ( <i>defined as forbs that can provide nectar for monarchs at some point in the growing season</i> ) within the <b>NEPA Environmental Study Footprint.</b>	X
	Presence of additional native habitat within the <b>NEPA Environmental Study Footprint.</b>	X

#### 4. ANALYSIS OF EFFECTS

##### 4.1 Direct Effects

Species/ Resource	Habitat impacts expected from project activities	<u>Describe specific ACTIONS of the project and the results of those actions on species habitats, including indirect impacts to prey or drinking water, as well as improvements to habitat as a result of specific actions.</u> <u>If habitat within the action area identified above will not be impacted, describe why.</u>
American Burying Beetle	X	The proposed construction could occur within potentially suitable reproductive and foraging habitat. The placement of construction material or construction equipment on suitable habitat could result in permanent and temporary loss of habitat.
Monarch Butterfly	X	Areas of mixed native grasses and flowering forbs were observed within the study area. The placement of construction material or construction equipment on suitable habitat could result in loss of habitat.

#### 4.2 Indirect Effects

##### Long-term habitat alterations

Species/ Resource	<u>Identify long-term, permanent changes in habitat</u>
American Burying Beetle	Most habitat disturbance will likely be temporary. Any temporary storage of equipment and/or materials could be considered temporary disturbance. Any conversion of mature forest to maintained grass field will result in permanent cover change. The proposed construction could result in limited permanent habitat loss.
Monarch Butterfly	Most habitat disturbance will likely be temporary. Any temporary storage of equipment and/or materials could be considered temporary disturbance. Any conversion of mature forest to maintained grass field will result in permanent cover change. The proposed construction could result in limited permanent habitat loss.

##### Indirect land use impacts

None
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#### 4.3 Interrelated and Interdependent Actions and Activities

The proposed action involves highway and bridge construction on existing alignment, with no capacity expansion. No interrelated and interdependent actions are expected from the proposed construction activities.
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<b>USFWS TAILS Number:</b>	<b>02EKOK00-2018-SLI-2176</b>
<b>ODOT Project JP Number:</b>	<b>JP 29682(04)</b>

<b>SPECIES / DESIGNATED CRITICAL HABIT</b>	<b>CONCLUSION</b>		<b>ESA SECTION 7</b>			<b>NOTES AND DOCUMENTATION</b> Check <input checked="" type="checkbox"/> all that apply			
	Species Habitat present within the action area	Project Activities expected to impact habitat	No Effect	May affect, not likely to adversely affect	May affect, Likely to adversely affect	Field Studies	ONHI database / ABB	USFWS occupied waterbodies & watersheds	Whooping Crane Migration Corridor
American Burying Beetle	X	X	<input type="checkbox"/>	X	Project uses the BO for the final 4(d) rule	X	X	<input type="checkbox"/>	<input type="checkbox"/>
Piping Plover	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Red Knot	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monarch butterfly	X	X	<input type="checkbox"/>	X	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## CONCLUSIONS

No Effect	Piping Plover and Red Knot
May affect	American Burying Beetle
May affect, not likely to adversely affect	
May affect, likely to adversely affect	
Not likely to jeopardize the continued existence of the species – Candidate species only	Monarch Butterfly
Appropriate Effect Determination for ABB has been made under the BO for the final 4(d) rule	X

## RECOMMENDED AVOIDANCE AND MINIMIZATION MEASURES

Suitable habitat for the **American Burying Beetle** occurs within the immediate vicinity of the proposed project. In order to minimize adverse impacts to the ABB, the following conservation measures will be implemented:

- The areas of suitable habitat will be field mapped.
- The amount of ground disturbance to suitable ABB habitat within the construction footprint will be minimized to only what is necessary for project construction.
- Following construction, areas of ground disturbance outside of the safety clear zone will be revegetated with native plant species where applicable and practicable. Areas where revegetation with native plant species is not practicable will be revegetated with more traditional planting such as solid slab sodding.
- Pollution Prevention Requirements as specified by the Oklahoma Department of Environmental Quality General Permit OKR10 for Storm Water Discharges shall be implemented. Additionally, all equipment will be fueled, and all fuel and motor vehicle oil will be stored outside ABB habitat.
- The use of artificial lighting will be minimized. If night construction is necessary, direct light will be shielded to the work area and prevent light from projecting upwards. A special provision will be included in the project contract which outlines approved lighting for use during night work.
- Carcasses and trash will continuously be removed from any permanent and temporary construction rights-of-way, throughout the duration of the project.

ODOT, as a Certificate of Inclusion partner in the Nationwide **Monarch Butterfly** CCAA for Energy and Transportation lands, will adhere to the conservation measures, as well as minimize threats to the monarch butterfly as stipulated in this CCAA.

## 5. BALD AND GOLDEN EAGLE PROTECTION ACT ASSESSMENT

### 5.1. Bald Eagle Assessment

The Bald Eagle (*Haliaeetus leucocephalus*) is a large predatory bird protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Activities that would disturb eagles are prohibited under the Bald and Golden Eagle Protection Act. "Disturb" means to agitate an eagle to the degree that causes or is likely to (1) cause injury, (2) interfere with breeding, feeding or sheltering behavior, or (3) nest abandonment.

Potential Bald Eagle Habitat Present	w/in NEPA Footprint	w/in 660 ft Buffer of NEPA Footprint	DO NOT LEAVE BLANK
Presence of Cottonwood, Sycamore, Pecan or Pine	X	X	Large pecan ( <i>Carya illinoensis</i> ) and American sycamore ( <i>Platanus occidentalis</i> ) trees were observed within the study area.
Open foraging areas with large trees	X	X	Large areas of open hayland and rangeland were observed along large pecan ( <i>Carya illinoensis</i> ) and American sycamore ( <i>Platanus occidentalis</i> ) trees.
Distance to closest perennial water body	River or Lake	1.5 mi W & S	Sand Creek is located within the study area. Little Deep Fork Creek is located approximately 1.5 miles south of the study area. Lake Massenu is located approximately 1.5 miles west of the study area.
	Stream or Pond	crosses	
Potential Bald Eagle Nests Observed	<input type="checkbox"/>	<input type="checkbox"/>	None observed
Bald Eagles Observed in the general vicinity	<input type="checkbox"/>	<input type="checkbox"/>	None observed
General Description of Bald Eagle Nesting Habitat and Impact Determination, within the NEPA Footprint and within 660-ft of the NEPA Footprint	The only area supporting potential Bald Eagle habitat was observed along Sand Creek. This mature riparian corridor was adjacent to rangeland and hayland creating a preferred nesting site with optimal viewing along the forest edge. However, significant residential activity within the area would limit the quality of preferred habitat. No nests were observed during November 2021 field reconnaissance. In addition, Sand Creek is a small perennial stream that does not provide preferred open canopy foraging and perching habitat. Much more suitable habitat is located within a few miles along Little Deep Fork Creek and surrounding lowlands, as well as at some of the larger ponds in the area. This broader region is not known to be occupied by eagles and they would likely nest within more suitable habitat prior to choosing to nest in this area. No survey suggested.		
Station #s for Buffered Bald Eagle Habitat	NA		

## 6. MIGRATORY BIRD TREATY ACT (MBTA) ASSESSMENT

### 6.1 Structure Assessment

Cliff Swallows (*Petrochelidon pyrrhonota*) and Barn Swallows (*Hirundo rustica*) are small colonial and semi-colonial nesting birds protected by the federal Migratory Bird Treaty Act. Barn Swallows use man-made structures for nesting and live in close association with humans. Both species commonly use bridges and culverts in Oklahoma for nesting. Other migratory birds can also nest on transportation structures.

Identify <u>ALL</u> structures including pipe culverts and whether positive or negative for migratory birds (identify named streams where possible rather than just FS#). Provide shapefiles and map of structures identifying pos/neg swallow structures.	Approx. Number of Cliff Swallow Nests	Approx. Number of Barn Swallow Nests	Approx. Number of Eastern Phoebe Nests
(NBI: 12429) Bridge over Sand Creek (FS-3) [N 35.82819, W 96.37527, NAD83] (Sta. 134+90 to 136+15).	0	0	1
RCB over FS-2 [N 35.82821, W 96.3790, NAD83] (Sta. 124+46.4).	0	0	0
Other MB and Nests Observed			
Based on existing plans, no work on suitable drainage structures will occur			<input type="checkbox"/>
In order to avoid impacts to migratory birds, if structures are being used by these birds, any activities that may destroy active nests, eggs or birds shall be completed between September 1, and February 28, when nests are not occupied. If seasonal avoidance cannot be accomplished, structures shall be protected from new nest establishment prior to March 1, by means that do not result in death or injury to these birds.			

### 6.2 Birds of Conservation Concern

<u>Species Identified on IPaC list</u>	<u>Breeding Season</u>
None listed	None

### 6.3 Interior Least Tern

Sparsely vegetated islands or sandbars along large rivers, with nearby areas of shallow water, occur within the 0.25 miles of the NEPA Environmental Study Footprint.	<input type="checkbox"/>
No habitat	

**7. REFERENCES:**

- Carter, B.J. and M.S. Gregory. 2008. Earth sciences and mineral resources of Oklahoma: educational publication 9. K.S. Johnson and K.V. Luza, Ed. Oklahoma Geological Survey, University of Oklahoma.
- Duck, L. G., and J. B. Fletcher. 1945. A survey of the game and furbearing animals of Oklahoma; Chapter 2, The Game Types of Oklahoma. Oklahoma Game and Fish Commission, Division of Wildlife Restoration and Research. Oklahoma City.
- Woods, A.J., Omernik, J.M., Butler, D.R., Ford, J.G., Henley, J.E., Hoagland, B.W., Arndt, D.S., and Moran, B.C. 2005. Ecoregions of Oklahoma (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,250,000).

**Figure 1: General Location Map**

Source: USDA NAIP Data (2013)

JP: 29682(04); SH-16 over Sand Creek  
Sections 29 and 32, T16N, R9E  
Creek County, Oklahoma

JP: 29682(04); SH-16 over Sand Creek  
Sections 29 and 32, T16N, R9E  
Creek County, Oklahoma

Figure 2: Action Area Map

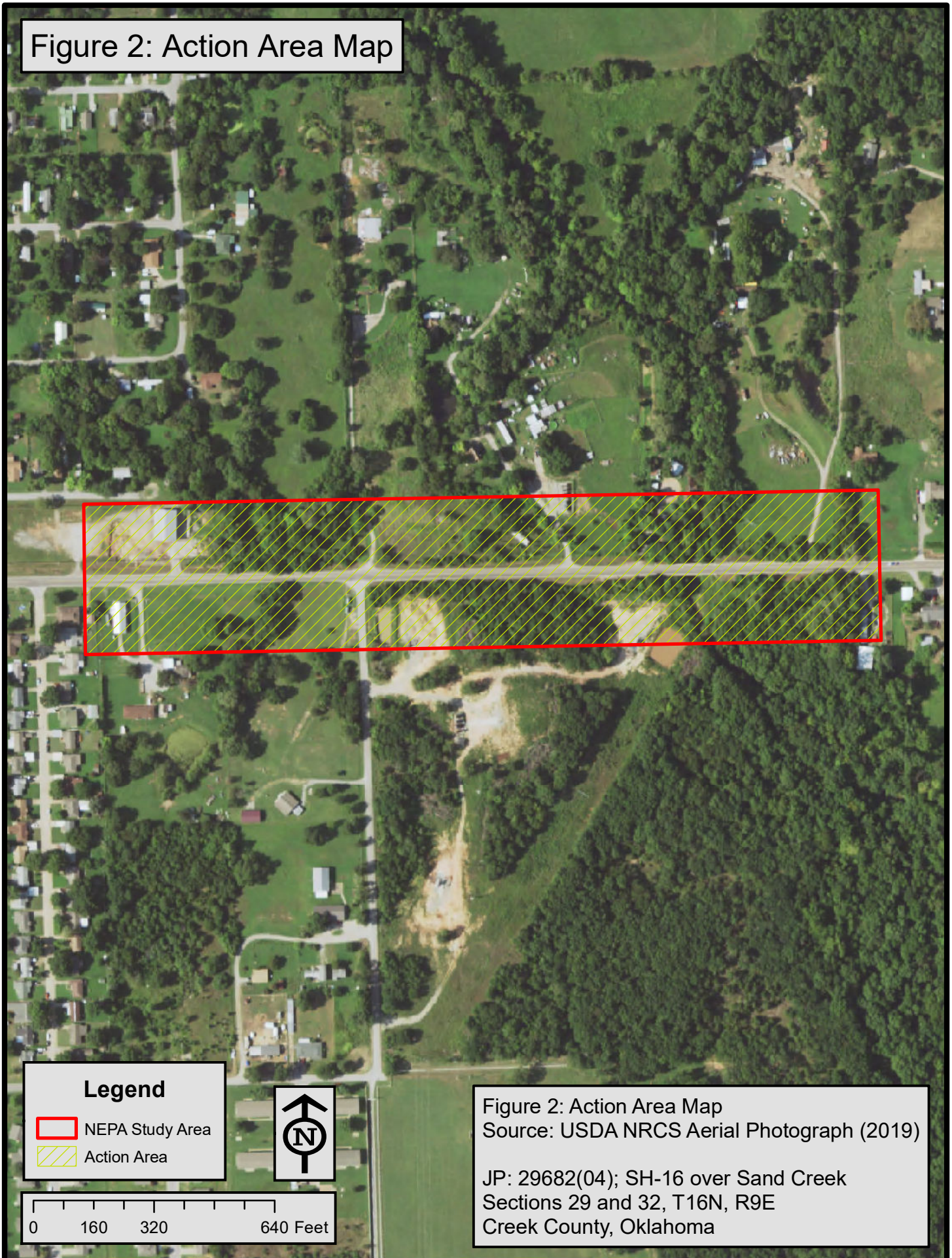
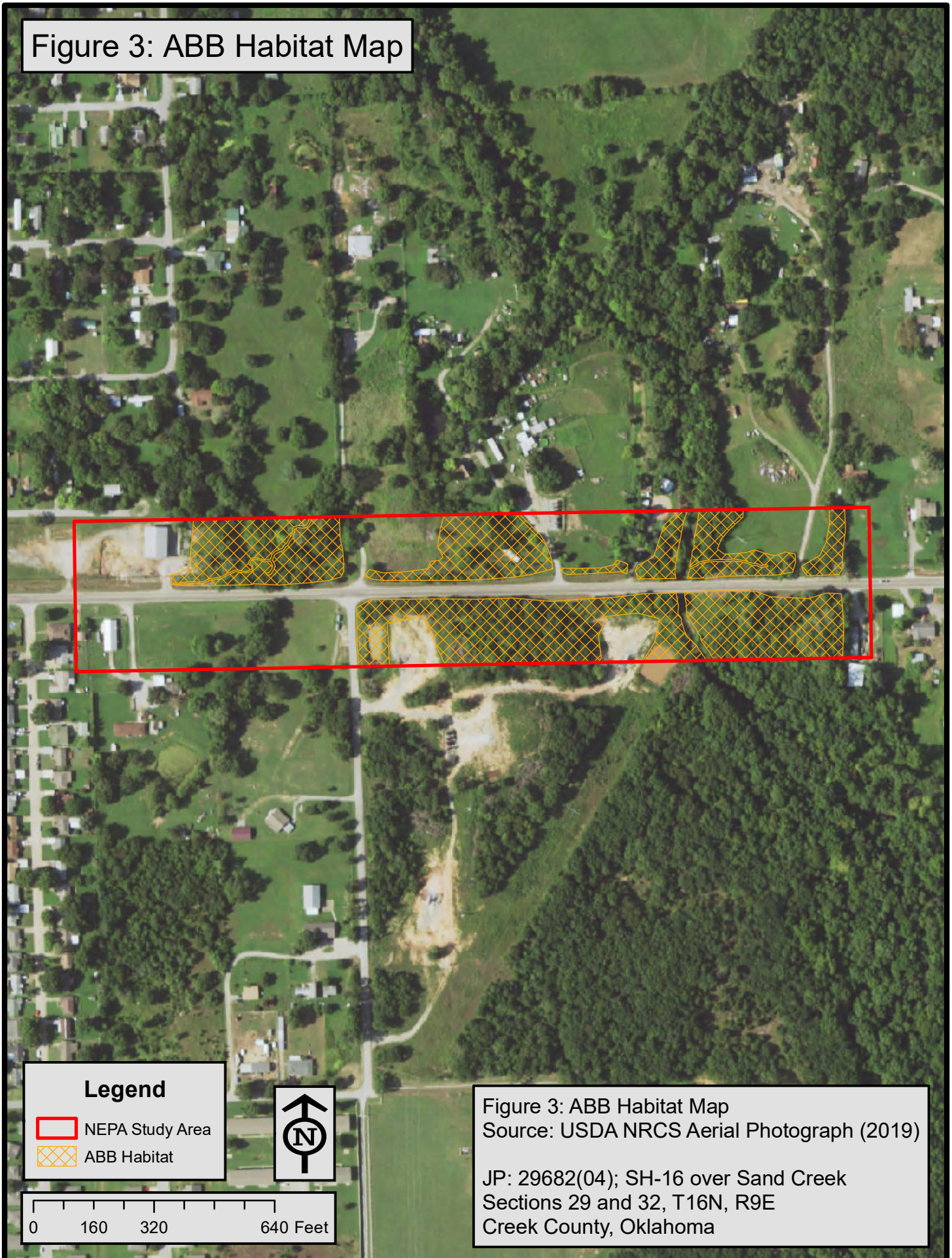




Figure 3: ABB Habitat Map



**Legend**

-  NEPA Study Area
-  ABB Habitat



0 160 320 640 Feet

Figure 3: ABB Habitat Map  
Source: USDA NRCS Aerial Photograph (2019)

JP: 29682(04); SH-16 over Sand Creek  
Sections 29 and 32, T16N, R9E  
Creek County, Oklahoma

Figure 4: Occupied Structure Map

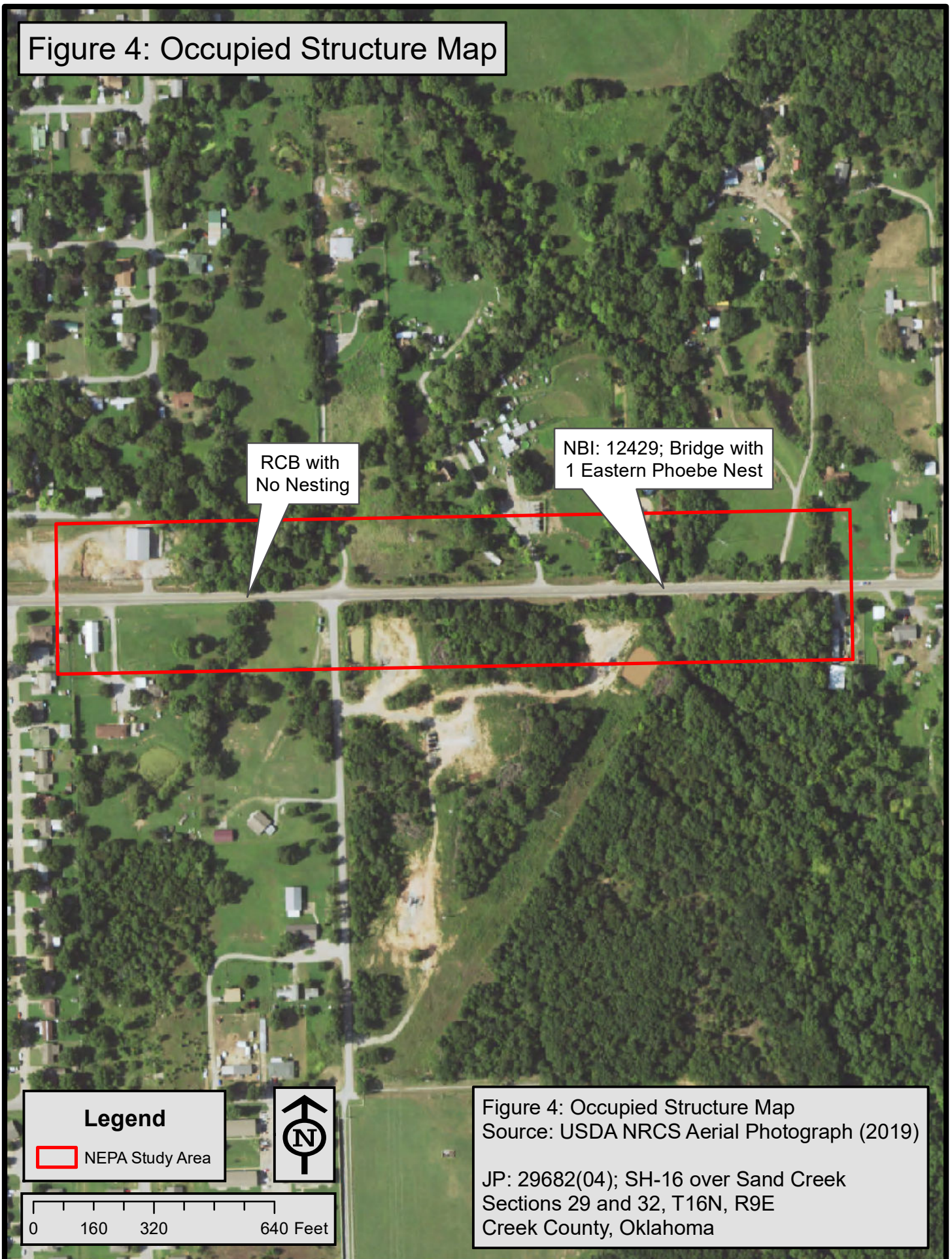
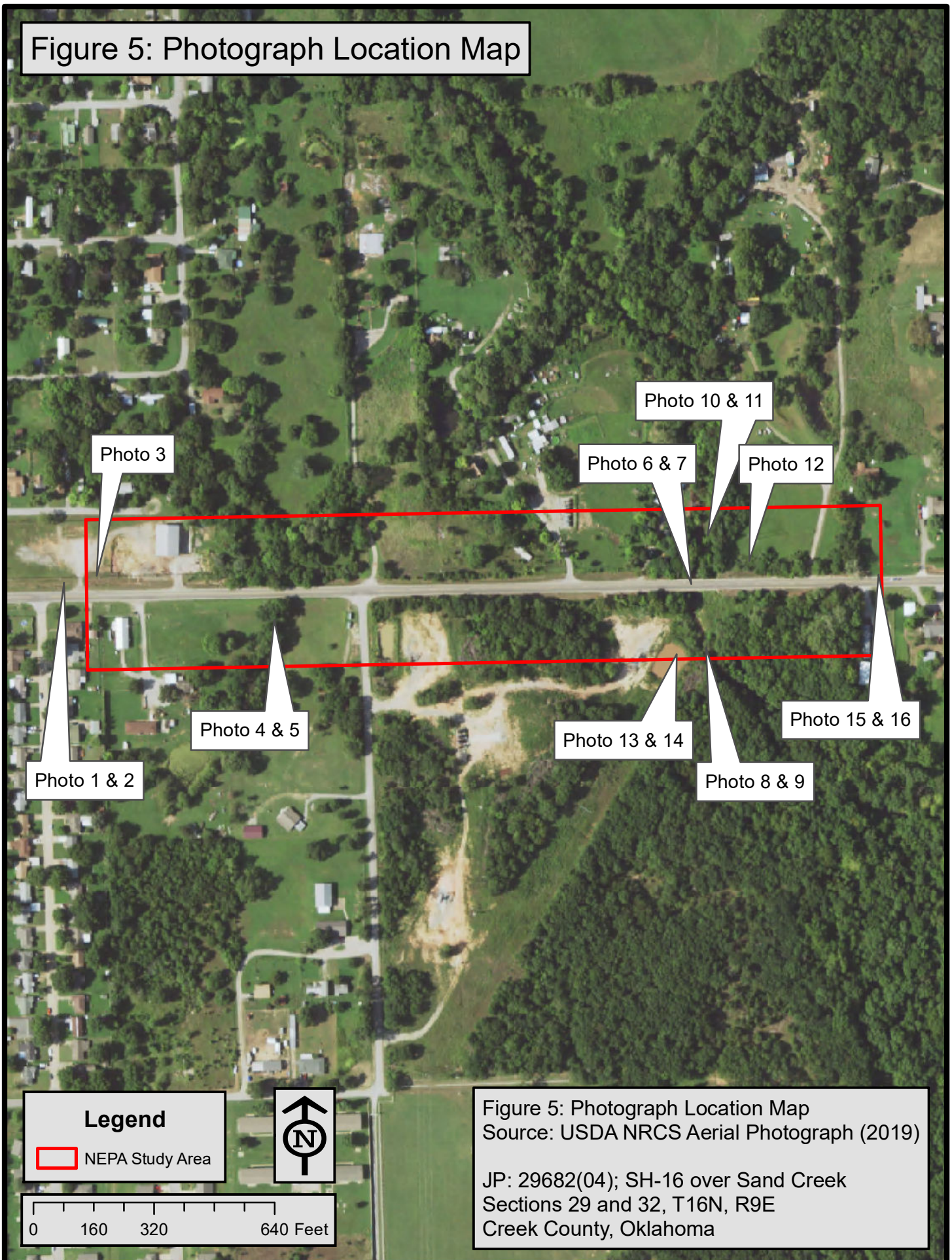


Figure 5: Photograph Location Map





**Photograph 1:** Facing west along SH-16 near western edge of study area.



**Photograph 2:** Facing east along SH-16 near western edge of study area.



**Photograph 3:** Facing east from within FS-1.



**Photograph 4:** Facing north from within FS-2.



**Photograph 5:** Facing south from within FS-2.



**Photograph 6:** Facing south along FS-3 from existing SH-16 bridge.



**Photograph 7:** Facing north along FS-3 from existing SH-16 bridge.



**Photograph 8:** Facing south from within FS-3.



**Photograph 9:** Facing north from within FS-3 toward SH-16 bridge.



**Photograph 10:** Facing north from within FS-3.



**Photograph 11:** Facing south from within FS-3 toward SH-16 bridge.



**Photograph 12:** Facing east from within FS-4.



**Photograph 13:** Facing west from former pit associated with drilling well.



**Photograph 14:** Facing north from former pit associated with drilling well.



**Photograph 15:** Facing west along SH-16 near eastern edge of study area.



**Photograph 16:** Facing east along SH-16 near eastern edge of study area.



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Oklahoma Ecological Services Field Office  
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Tulsa, OK 74129-1428  
Phone: (918) 581-7458 Fax: (918) 581-7467  
<http://www.fws.gov/southwest/es/Oklahoma/>

In Reply Refer To:

November 09, 2021

Consultation Code: 02EKOK00-2018-SLI-2176

Event Code: 02EKOK00-2022-E-01047

Project Name: JP 2983(04); SH-16 over Sand Creek; Creek County, Oklahoma

Subject: Updated list of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Non-federal entities conducting activities that may result in take of listed species should consider seeking coverage under section 10 of the ESA, either through development of a Habitat Conservation Plan (HCP) or, by becoming a signatory to the General Conservation Plan (GCP) currently under development for the American burying beetle. Each of these mechanisms provides the means for obtaining a permit and coverage for incidental take of listed species during otherwise lawful activities.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

[www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html).

[http://](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html)

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit through our Project Review step-wise process <http://www.fws.gov/southwest/es/oklahoma/OKESFO%20Permit%20Home.htm>.

Attachment(s):

- Official Species List

- USFWS National Wildlife Refuges and Fish Hatcheries
  - Migratory Birds
  - Wetlands
-

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Oklahoma Ecological Services Field Office**

9014 East 21st Street

Tulsa, OK 74129-1428

(918) 581-7458

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## Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Birds

NAME	STATUS
<b>Piping Plover</b> <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/6039">https://ecos.fws.gov/ecp/species/6039</a>	Threatened
<b>Red Knot</b> <i>Calidris canutus rufa</i> There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/1864">https://ecos.fws.gov/ecp/species/1864</a>	Threatened

## Insects

NAME	STATUS
<b>American Burying Beetle</b> <i>Nicrophorus americanus</i> Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/66">https://ecos.fws.gov/ecp/species/66</a>	Threatened
<b>Monarch Butterfly</b> <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## **Critical habitats**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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# Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

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1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

THERE ARE NO FWS MIGRATORY BIRDS OF CONCERN WITHIN THE VICINITY OF YOUR PROJECT AREA.

## Migratory Birds FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

---

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

**Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical](#)

---

[Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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# Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

## FRESHWATER FORESTED/SHRUB WETLAND

- [PFO1Ch](#)

## FRESHWATER POND

- [PUBHh](#)

## RIVERINE

- [R4SBC](#)
  - [R5UBH](#)
-



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
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Phone: (918) 581-7458 Fax: (918) 581-7467  
<http://www.fws.gov/southwest/es/Oklahoma/>

In Reply Refer To:

January 13, 2022

Consultation code: 02EKOK00-2018-TA-2176

Event Code: 02EKOK00-2022-E-02684

Project Name: JP 2983(04); SH-16 over Sand Creek; Creek County, Oklahoma

Subject: Verification letter for 'JP 2983(04); SH-16 over Sand Creek; Creek County, Oklahoma' project under the October 15, 2020, Programmatic Biological Opinion on Final 4(d) Rule for the American burying beetle and Activities Excepted from Take Prohibitions (50 CFR § 17.47(d), Federal Register Citation 85 FR 65241).

Dear Elizabeth Nichols:

The U.S. Fish and Wildlife Service (Service) received on **January 13, 2022** your effect determination(s) for the 'JP 2983(04); SH-16 over Sand Creek; Creek County, Oklahoma' (the Action) using the American burying beetle (*Nicrophorus americanus*) determination key within the Information for Planning and Consultation (IPaC) system.

This determination key assists users in determining whether a Federal action is consistent with the activities analyzed in the Service's October 15, 2020, Programmatic Biological Opinion (PBO). The PBO addresses activities excepted from incidental "take"<sup>[1]</sup> prohibitions applicable to the American burying beetle under the Endangered Species Act of 1973 (Act) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, the Action is consistent with activities analyzed in the PBO. The Action may affect the American burying beetle; however, any incidental take that may occur as a result of the Action is not prohibited under the Act Section 4(d) rule adopted for this species at 50 CFR §17.47(d). **Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the PBO satisfies and concludes your responsibilities for this Action under Act Section 7(a)(2) with respect to the American burying beetle.**

Please report any changes to the information about the Action that you submitted in IPaC, the results of any American burying beetle surveys conducted in the Action area, and any dead, injured, or sick American burying beetles that are found during Action implementation. If the

Action is not completed within one year of the date of this letter, you must update and resubmit the information required in the IPaC key.

This IPaC-assisted determination allows you to rely on the PBO for compliance with Act Section 7(a)(2) only for the American burying beetle.

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[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct (Act, Section 3(19)).

This letter covers only the American burying beetle. It **does not** apply to the following ESA-protected species that also may occur in the Action area:

- Monarch Butterfly *Danaus plexippus* Candidate
- Piping Plover *Charadrius melodus* Threatened
- Red Knot *Calidris canutus rufa* Threatened

If your project may affect additional listed species, you must evaluate additional DKeys for other species, or submit a request for consultation for the additional species to your local Ecological Services Field Office.

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**Action Description**

You provided to IPaC the following name and description for the subject Action.

**1. Name**

JP 2983(04); SH-16 over Sand Creek; Creek County, Oklahoma

**2. Description**

The following description was provided for the project 'JP 2983(04); SH-16 over Sand Creek; Creek County, Oklahoma':

Proposed Bridge Replacement Construction Project

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@35.82817384361894,-96.37460141573169,14z>



## Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

Yes

2. Have you determined that the proposed action will have “no effect” on the American burying beetle? (If you are unsure select "No")

No

3. Will your activity **purposefully take** American burying beetles?

No

4. Is your project wholly inside the 4d rule Analysis Area? For areas of your project occurring inside the Analysis Area (New England, Northern Plains, Southern Plains), your project may qualify for exemptions. For areas of your project occurring outside the Analysis Area, all incidental take is exempted according to the ABB 4d Rule.

**Automatically answered**

Yes

5. Is American burying beetle [suitable habitat](#) present within the action area?

Yes

6. Will suitable habitat be affected by the proposed action? Suitable habitat may be impacted if the action involves soil disturbance, use of vehicles or heavy equipment, artificial lighting, vegetation removal, use of herbicides, pesticides, other hazardous chemicals.

Yes

---

## Project Questionnaire

Please select the activity that best matches your proposed action.

*8. Soil disturbance related to road construction and maintenance*

If you chose 13 above, please describe below. If you did not choose 13 above, please type "0".

0

Estimate the total acres of suitable American burying beetle habitat that may be affected.

19.33

Please estimate the total number of acres of **temporary impacts** to American burying beetle habitat. See definitions

19.33

Please estimate the total number of acres of **permanent impacts** to American burying beetle habitat. See definitions

19.33

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## **WATERS AND WETLANDS EVALUATION REPORT**

### **For**

County	Creek	JP Number	29682(04)	Project Number	J2-9682(004)
Road Number	State Highway 16 (SH-16)	Waterbody Name		Sand Creek	
ROW Date		Let Date	2024	Project Length	Approximately 2,120 Feet
Project General Location		SH-16 approximately 0.7 mile east of the SH-58 junction tied to JP 24131(04)			
Project Statement From Oracle		Bridge and Approaches on SH-16 over Sand Creek			

Prepared for:  
Oklahoma Department of Transportation  
Environmental Programs Division  
200 NE 21<sup>st</sup> Street  
Oklahoma City, OK 73105

### **Prepared by:**

Biologist Name	Clint M. Porter
Company/Agency Name	Blackbird Environmental, LLC
Address	PO Box 720100
City, State Zip	Norman, OK 73070

Report Date:	November 12, 2021
Field Date:	November 10, 2021

## PROJECT OVERVIEW

Project Type (Choose one)	Check <input checked="" type="checkbox"/>
Bridge and Approaches or bridge widening/structure extension	X
Grade, Drain, Surface and Bridge	
Grade, Drain and Surface	
Asphalt Overlay Resurfacing	
Widen and Resurface existing lanes	
Pavement Reconstruction or rehabilitation	
Bridge Rehabilitation	
Safety Improvements (Cable Barrier, Guardrail, signage)	
Intersection Modifications	
Safe Routes to School (Describe)	
Enhancements (Describe)	
Other (Describe)	

### Description of the **existing** bridge/roadway

The typical section included two 12-foot wide paved lanes with 4-foot wide sod shoulders. One bridge and one reinforced concrete box (RCB) culvert were included within the study area. NBI: 12429 [N 35.82819, W 96.37527, NAD83] (Sta. 134+90 to 136+15) included three steel I-beam spans (35-foot, 50-foot and 35-foot) and was constructed in 1950. The present traffic ADT (vehicles per day) was estimated at 2,200. The future ADT (20-year projection) was not available. The proposed action will replace a functionally obsolete bridge to improve traffic safety.

### Description of **proposed** improvements

The proposed action includes activities associated with bridge and approaches construction project. The project will entail phased construction under traffic and no detour for bridge replacement. The proposed structure will include two 16-foot by 18-foot by 101.5-foot RCBs (Sta. 135+35.50 to 135+71.50). The new typical section will include two 12-foot wide paved lanes with 8-foot wide paved shoulders.

## Project Environmental Study Footprint

Project Location		Environmental Study Footprint	
Section Range & Township	Lat/Long (NAD 83)	Dimensions	Acreage
S 29 & 32, T16N, R9E	west end: N 35.82825, W 96.38069; East end: N 35.82824, W 96.37358	The study area included 200 north and south of the centerline and included approximately 2,120 feet of State Highway 16 (SH-16)	19.33 Acres

## Environmental Study Footprint Soils (NRCS Soil Survey Map) (NRCS, 2021a)

Map Unit Name	Percent Slope	Drainage Class	Hydric Rating		Description (NRCS, 2021b)
			YES	NO	
Bartlesville-Bigheart complex, severely eroded (BBgD3)	1 to 8	Moderately Well Drained to Somewhat Excessively Drained		<b>X</b>	The Bartlesville series consists of moderately deep and moderately well drained soils that formed in material weathered from sandstone of Pennsylvanian age.
Bigheart-Niotaze-Rock outcrop complex (BNRD)	3 to 5	Somewhat Poorly Drained to Somewhat Excessively Drained		<b>X</b>	The Bigheart series consists of shallow and well drained to somewhat excessively drained soils formed in material weathered from sandstone of Pennsylvanian age.
Niotaze-Bigheart-Rock outcrop complex, very stoney (NBRE)	3 to 15	Somewhat Poorly Drained to Somewhat Excessively Drained		<b>X</b>	The Niotaze series consists of moderately deep, somewhat poorly drained, slowly permeable soils that formed in residuum from weathered shale and colluvium from sandstone of Pennsylvanian age.
Dale silt loam, rarely flooded (Mb)	0 to 1	Well Drained		<b>X</b>	The Dale series consists of very deep and well drained soils that formed in material weathered from loamy alluvium.

Map Unit Name	Percent Slope	Drainage Class	Hydric Rating		Description (NRCS, 2021b)
			YES	NO	
Pulaski fine sandy loam, occasionally flooded (Pb)	0 to 1	Well Drained		X	The Pulaski series consists of very deep, well drained, moderately rapidly permeable flood plain soils that formed in loamy alluvial sediments of Holocene age.

### Environmental Study Footprint General Description and Vegetation Present

The study area was located within the Northern Cross Timbers of the Cross Timbers ecoregions.

The localized general vicinity of the study area included agricultural land and single-family, rural residences. The study area exhibited characteristics of the post oak/black jack oak game type (Duck and Fletcher, 1945).

The study area was dominated by three (3) general habitat types. Upland forest, mixed grass field and bottomland forest were the habitat types identified within the study area.

Upland forest included elm (*Ulmus* spp.), hackberry (*Celtis* spp.), post oak (*Quercus stellata*), eastern red cedar (*Juniperus virginiana*), western soapberry (*Sapindus saponaria*) and pecan (*Carya illinoensis*). Other common species along the open edges and understory included green briar (*Smilax* spp.), poison ivy (*Toxicodendron radicans*), coral berry (*Symphoricarpos orbiculatus*), bristle grass (*Setaria* sp.) and panic grasses (*Panicum* spp.).

The second general habitat type was mixed grass field. Common grass species within the mixed grass field included bermuda (*Cynodon dactylon*), little bluestem (*Schizachyrium scoparium*), Johnson grass (*Sorghum halepense*), silver bluestem (*Bothriochloa saccharoides*), fescue (*Lolium* spp.), paspalum grasses (*Paspalum* spp.), switch grass (*Panicum virgatum*), brome grasses (*Bromus* spp.) and bristle grasses (*Setaria* spp.). Annual ragweed (*Ambrosia artemisiifolia*), nightshade (*Solanum* spp.), green briar (*Smilax* spp.), goldenrod (*Solidago* sp.), poison ivy (*Toxicodendron radicans*), trumpet creeper (*Campsis radicans*) and great ragweed (*Ambrosia trifida*) were also common within these areas. The mixed grass field was primarily maintained right-of-way, maintained lawn and mixed pasture/hayland.

Bottomland forest included elm (*Ulmus* spp.), hackberry (*Celtis* spp.), green ash (*Fraxinus pennsylvanica*), pecan (*Carya illinoensis*), box elder (*Acer negundo*), western soapberry (*Sapindus saponaria*) and American sycamore (*Platanus occidentalis*). Other common species along the open edges and understory included wood oats (*Chasmanthium latifolium*), trumpet creeper (*Campsis radicans*), honey suckle (*Lonicera* sp.), green briar (*Smilax* spp.), poison ivy (*Toxicodendron radicans*), coral berry (*Symphoricarpos orbiculatus*), bristle grass (*Setaria* sp.) and panic grasses (*Panicum* spp.).

According to review of the United States Geological Survey (USGS) 7.5-Minute Topographic Map, elevations within the study area varied between 760 and 840 feet. Sand Creek (perennial stream) was mapped within the study area (Figure 2).

Sand Creek is a tributary to Little Deep Fork Creek and Little Deep Fork Creek is a tributary to Deep Fork River. Deep Fork River is a tributary to Canadian River. Canadian River is a tributary to Arkansas River; therefore, part of the Arkansas River drainage basin. Eufaula Lake (impoundment of Deep Fork River, North Canadian River and Canadian River) exists between the study area and Deep Fork River confluence with Canadian River.

Five (5) soils were mapped by the Natural Resource Conservation Service (NRCS) within the study area (NRCS, 2021a) (Figure 3). No soils were mapped by the NRCS as hydric soil within the study area (NRCS, 2021a and NRCS, 2021c).

According to review of the USFWS National Wetland Inventory (NWI) map, one (1) riverine, lower perennial, unconsolidated bottom, permanently flooded (R2UBH) feature was mapped within the study area (Figure 4).

## WATERS AND WETLANDS EVALUATION

### Data Sources Reviewed (list)

USGS 7.5 minute Quad	NWI Map	USACE Wetland Regional Supplement	Additional Resources Reviewed
Bristow, OK (1973) Slick, OK (1973)	Bristow, OK (1980) Slick, OK (1980)	Great Plains	Additional resources cited within the text and listed within the Literature Cited.

### Streams and Drainages Summary Table

Field Sites	Stream Name <sup>A</sup>	USGS Mapped Status <sup>A</sup>	Potential Jurisdictional Status	Acres within Environmental Study Footprint	Linear Feet within Environmental Study Footprint
FS-3	Sand Creek	Perennial Stream	Likely Jurisdictional	35 wide at 5 deep (0.344 Acre)*	428 Linear Feet
FS-1	Unnamed Drainage	Non-Mapped Feature	Potentially Non-Jurisdictional	4 wide at 1 deep (0.028 Acre)	544 Linear Feet
FS-2	Unnamed Drainage	Non-Mapped Feature	Potentially Non-Jurisdictional	5 wide at 1 deep (0.050 Acre)	433 Linear Feet

Field Sites	Stream Name <sup>A</sup>	USGS Mapped Status <sup>A</sup>	Potential Jurisdictional Status	Acres within Environmental Study Footprint	Linear Feet within Environmental Study Footprint
FS-4	Unnamed Drainage	Non-Mapped Feature	Potentially Non-Jurisdictional	5 wide at 2 deep (0.024 Acre)	214 Linear Feet

<sup>A</sup> Waterbody Name and Map Status refer to the USGS 7.5-Minute Topographic Map.

\* Surface area calculated from data collected with Trimble GEOXH.

### *Streams and Other Linear Aquatic Features*

Blackbird characterized the lotic waterbodies within the study area as riverine, lower perennial, unconsolidated bottom (R2UB) (Cowardin *et al.*, 1979) and non-mapped drainage feature (NDF). The locations of the lotic waterbodies are identified on Figure 5 and described within the above table. Photographs of the delineated waterbodies are provided.

Sand Creek (FS-3) (R2UB) was dominated by silt, clay and hardpan clay substrates with a mature, forested riparian corridor. Flowing water was observed within the stream channel. The pool and run habitat supported *Gambusia affinis* and *Notropis* spp. The stream embeddedness was estimated at five (5) to 10 percent at cobble and boulder rip rap beneath the bridge. No indicators (sediment bars/islands) of significant sediment accumulation were observed. Some wetland vegetation was growing within the silt/clay sediment of the stream bed. The stream exhibited characteristics of a perennial waterbody and was associated with NBI: 12429. According to review of the USGS Topographic Map, FS-3 was directly connected to a jurisdictional waterbody. Therefore, the feature is likely jurisdictional. The placement and/or redistribution of fill material into the lotic waterbody will likely require a Clean Water Act, Section 404 Permit.

Three (3) non-mapped drainage features (FS-1, FS-2 and FS-4) (NDF) were delineated within the study area. These features appear to convey storm water (surface run off) from SH-16 and the adjacent agricultural/residential land. The features were dominated by silt and clay substrates and exhibited characteristics of ephemeral, upland drainages. The non-mapped drainage features (FS-1, FS-2 and FS-4) exhibited characteristics of upland drainage features and are potentially non-jurisdictional.

### *Wetlands and Other Lentic Waterbodies*

No sites within the study area exhibited hydric soils, hydrophytic vegetation and indicators of hydrology. Therefore, no wetlands were delineated within the study area. Furthermore, no lentic waterbodies were delineated within the study area.

## LITERATURE CITED

- Cowardin, L.M., V. Carter, F.C. Colet, E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, ND: Northern Prairie Wildlife Research Center Home Page. <http://www.npwrc.usgs.gov/resource/1998/classwet/classwet.htm> (Version 04DEC98).
- Duck, L. G., and J. B. Fletcher. 1945. A survey of the game and furbearing animals of Oklahoma; Chapter 2, The Game Types of Oklahoma. Oklahoma Game and Fish Commission, Division of Wildlife Restoration and Research. Oklahoma City.
- NRCS. November 11, 2021a. Web Soil Survey. <http://websoilsurvey.nrcs.usda.gov/app/>.
- NRCS. November 11, 2021b. Soil Series Name Search Query Facility. <https://soilseries.sc.egov.usda.gov/osdnamequery.asp>.
- NRCS. November 11, 2021c. National hydric soils list by state. [https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcseprd1316619.html](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316619.html)
- USACE. 1987. Corps of Engineers, Wetland Delineation Manual. Wetlands Research Program Technical Report Y-87-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS. 100pp.
- USACE. March 2010. Regional supplement to the Corps of Engineers Wetland Delineation Manual: great plains region (version 2.0), ed. J.S. Wakely, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08012. Vicksburg, MS. U.S. Army Engineer Research and Development Center.
- Woods, A.J., Omernik, J.M., Butler, D.R., Ford, J.G., Henley, J.E., Hoagland, B.W., Arndt, D.S., and Moran, B.C. 2005. Ecoregions of Oklahoma (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,250,000).

[illegible]

JP: 29682(04); SH-16 over Sand Creek  
Sections 29 and 32, T16N, R9E  
Creek County, Oklahoma

Figure 2: Topographic Map

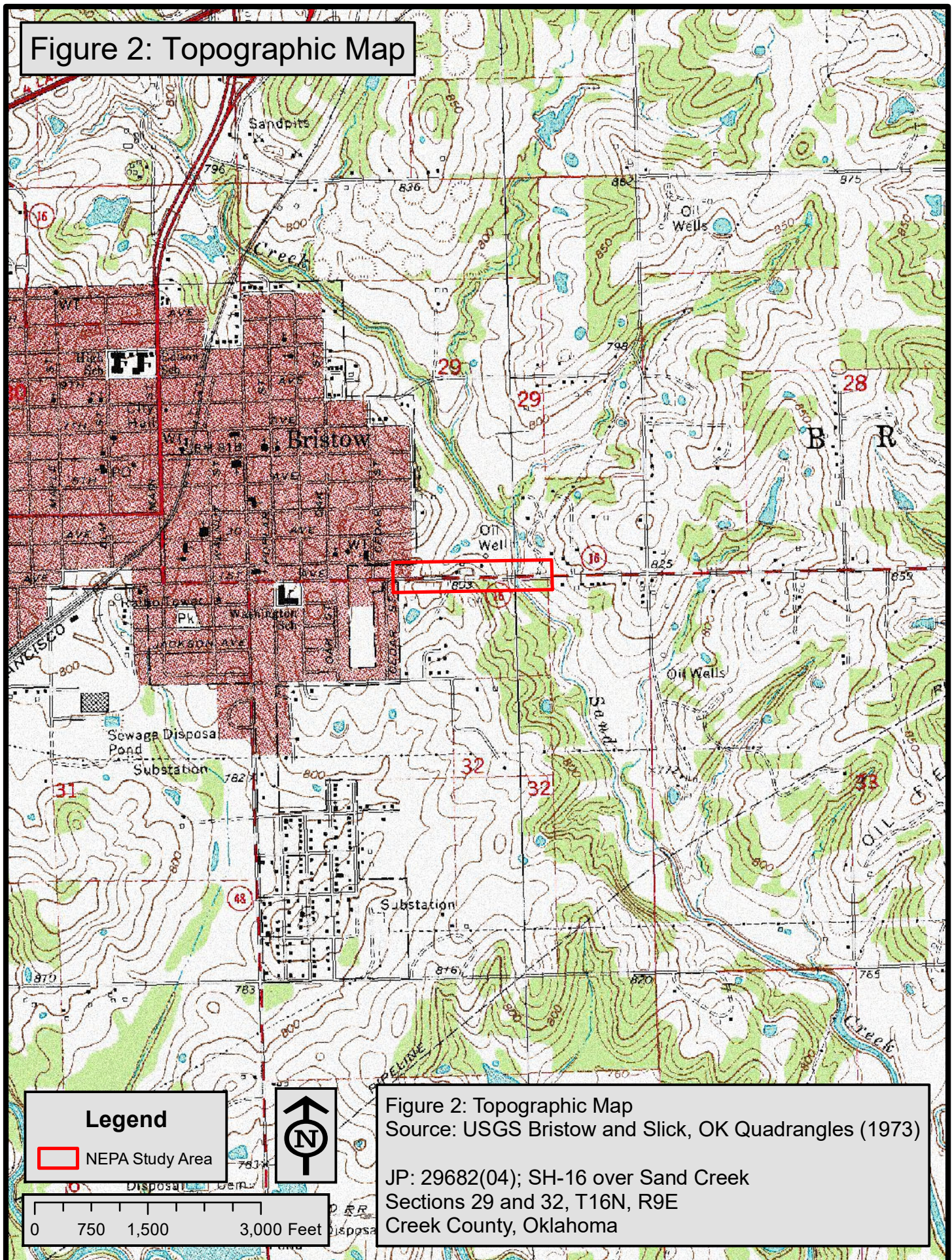


Figure 3: Soil Survey Map

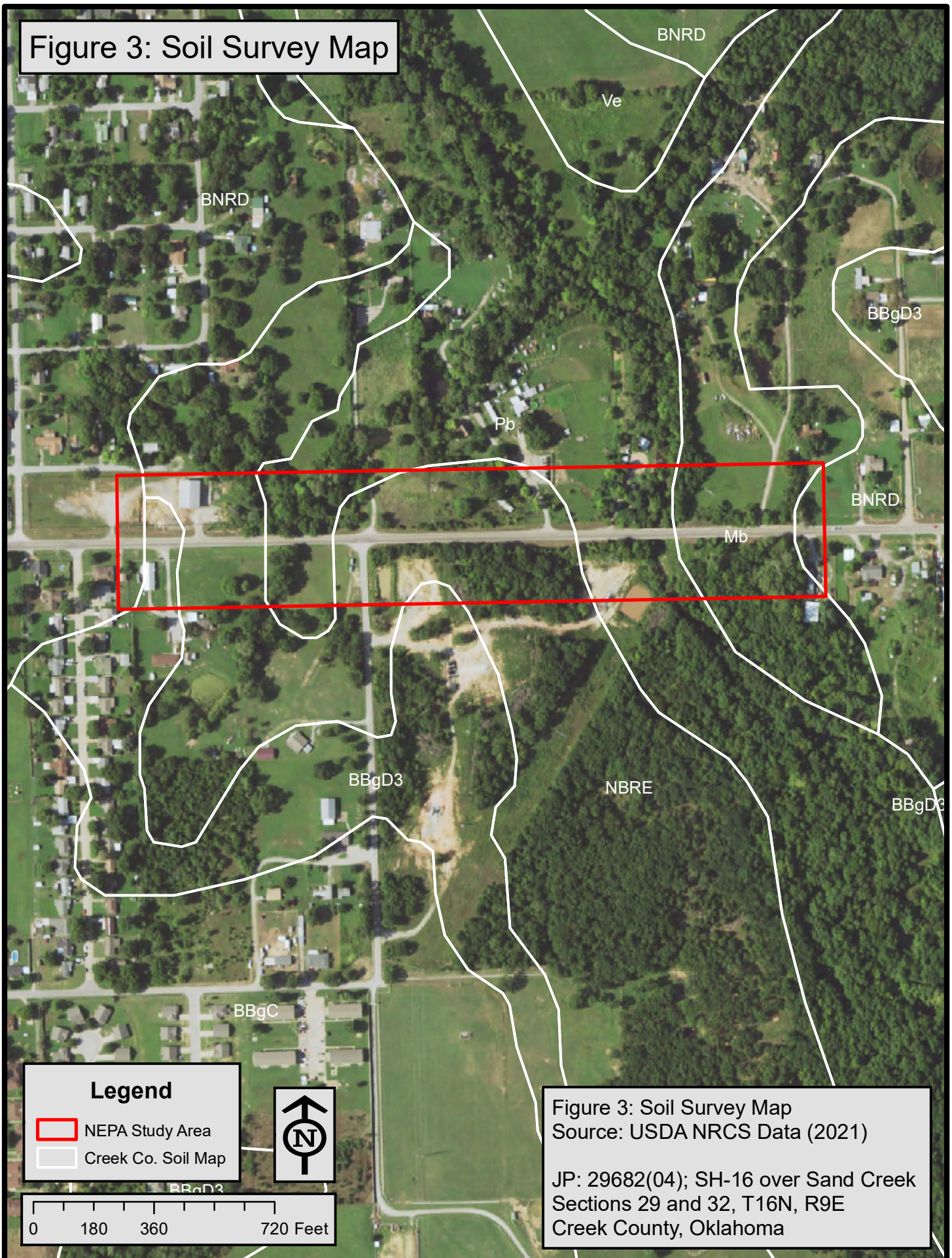


Figure 4: National Wetland Inventory Map

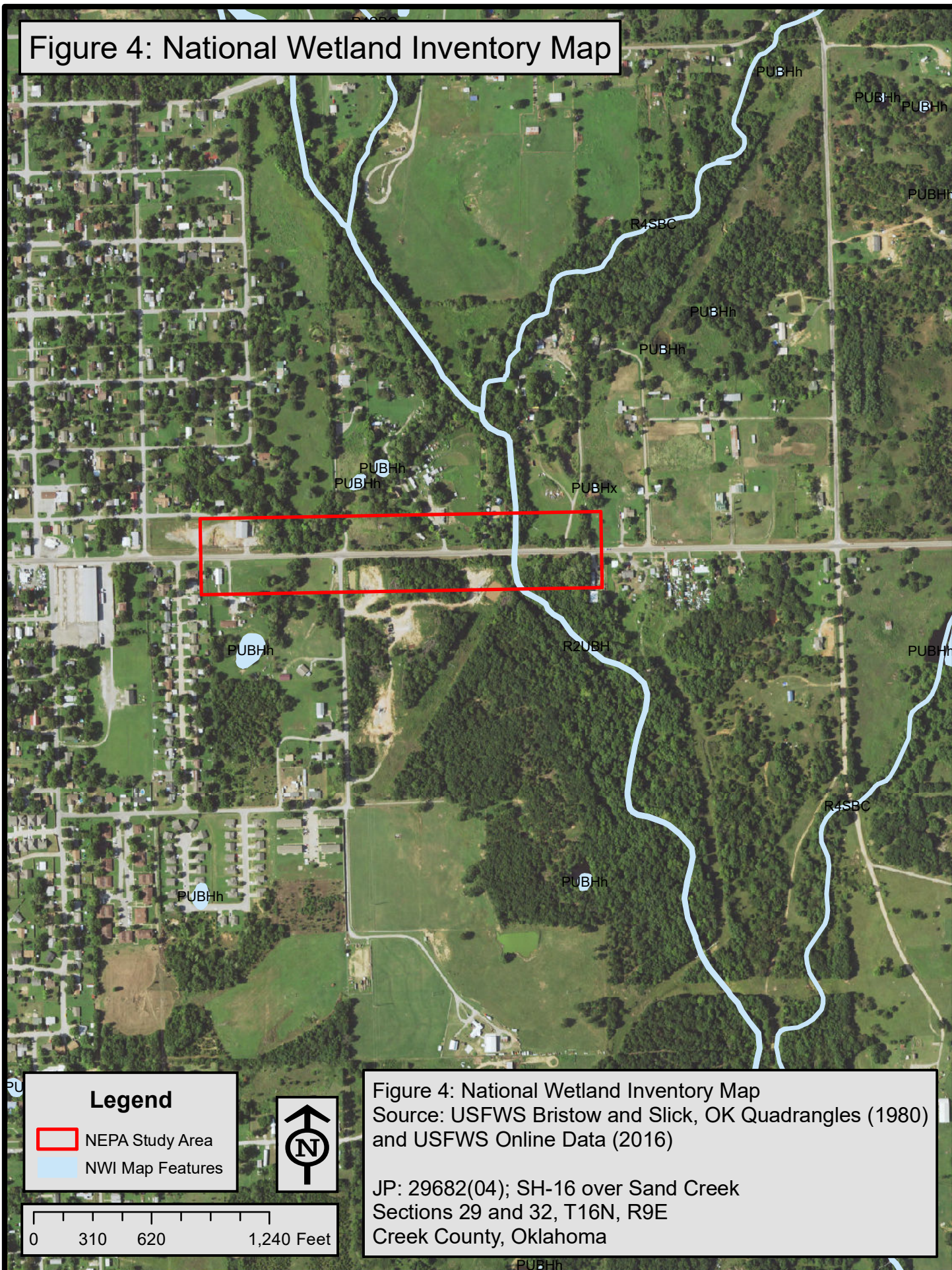
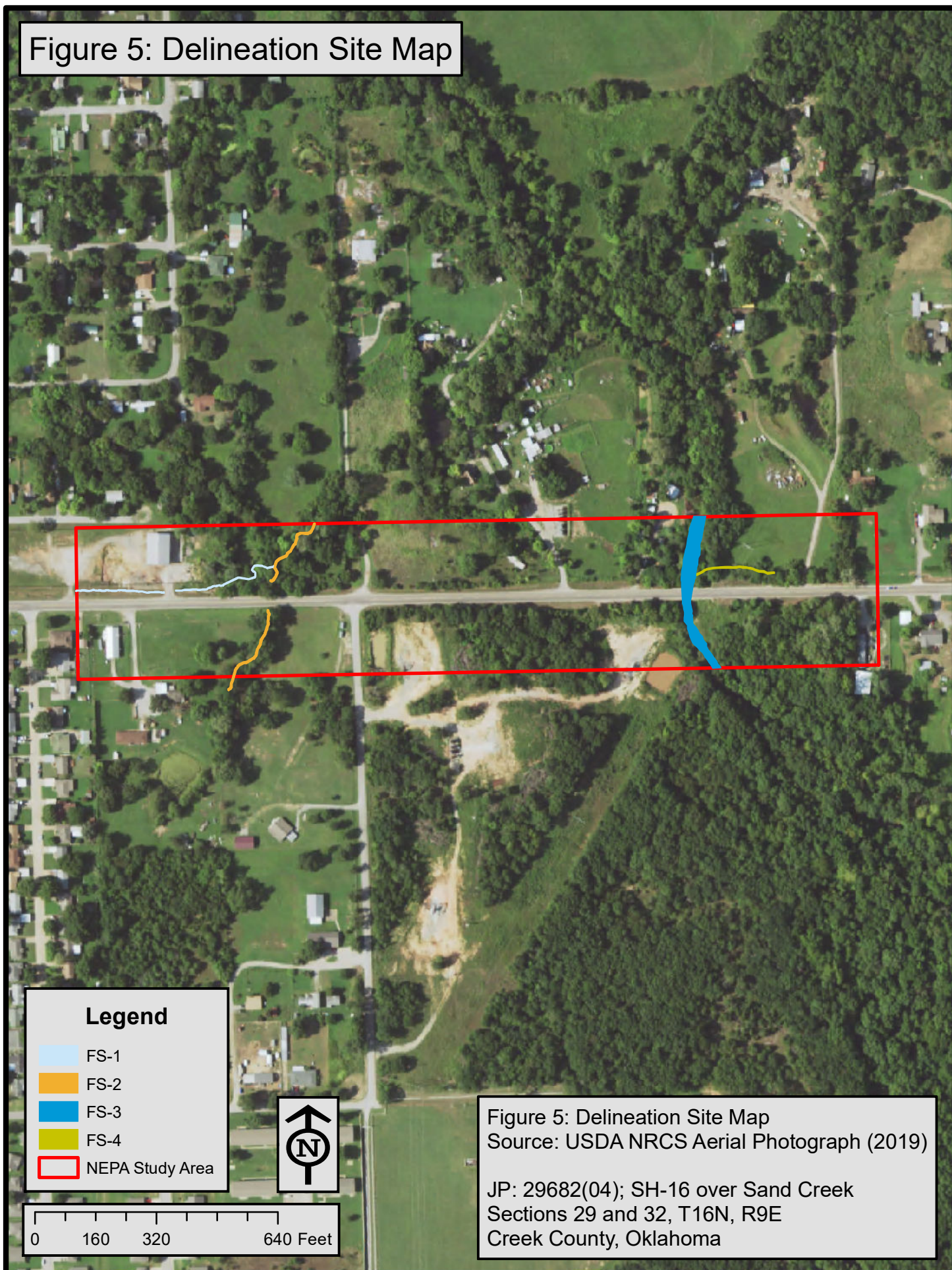


Figure 4: National Wetland Inventory Map  
Source: USFWS Bristow and Slick, OK Quadrangles (1980)  
and USFWS Online Data (2016)

JP: 29682(04); SH-16 over Sand Creek  
Sections 29 and 32, T16N, R9E  
Creek County, Oklahoma

Figure 5: Delineation Site Map





**Photograph 1:** Facing west along SH-16 near western edge of study area.



**Photograph 2:** Facing east along SH-16 near western edge of study area.



**Photograph 3:** Facing east from within FS-1.



**Photograph 4:** Facing north from within FS-2.



**Photograph 5:** Facing south from within FS-2.



**Photograph 6:** Facing south along FS-3 from existing SH-16 bridge.



**Photograph 7:** Facing north along FS-3 from existing SH-16 bridge.



**Photograph 8:** Facing south from within FS-3.



**Photograph 9:** Facing north from within FS-3 toward SH-16 bridge.



**Photograph 10:** Facing north from within FS-3.



**Photograph 11:** Facing south from within FS-3 toward SH-16 bridge.



**Photograph 12:** Facing east from within FS-4.



**Photograph 13:** Facing west from former pit associated with drilling well.



**Photograph 14:** Facing north from former pit associated with drilling well.



**Photograph 15:** Facing west along SH-16 near eastern edge of study area.



**Photograph 16:** Facing east along SH-16 near eastern edge of study area.

## **N R C S COORDINATION**



November 23, 2021

**Guernsey** did not receive a response from the NRCS.

**REALIZE** THE DIFFERENCE

5555 North Grand Boulevard  
Oklahoma City, OK 73112-5507  
405.416.8100

**guernsey.us**



May 7, 2018

Mr. Nicholas Jones  
District Conservationist  
Natural Resources Conservation Service  
Bristow Service Center  
203 S Elm St  
Bristow, Oklahoma 74010

**RE: Site Assessments for Farmland Protection Policy Act (FPPA) Bridge and Roadway Improvements on SH-16 over Sand Creek, 0.7 miles East of the junction SH-48, Creek County, Project Number: J2-9682(004), Job Piece Number: 29682(04) and Identification of any NRCS Structures or Properties within the Study Area**

Dear Mr. Jones:

The Oklahoma Department of Transportation is in the early developmental stages of the bridge and roadway improvements on SH-16 over Sand Creek, 0.7 miles East of the junction SH-48, Creek County.

Please find attached two copies of USDA Form AD-1006 and plans/footprint for the following federal actions in Creek County, Oklahoma.

In accordance with the current 7 CFR Part 658 - Farmland Protection Policy Act, Parts 1 and III of Form AD-1006 have been completed. Please complete the NRCS portions of this form within the next 45 days and return one copy to:

Angela Aikman, CIE  
Project Manager/Environmental Scientist  
**Guernsey**  
5555 N Grand Blvd  
Oklahoma City, OK 73112

In addition, please let us know if the proposed project would impact any NRCS structures or properties such as flood control dams, wetlands, etc.

Your assistance is greatly appreciated. If you have any questions, please call me at 405.416.8294 or [angela.aikman@guernsey.us](mailto:angela.aikman@guernsey.us).

Sincerely,



Angela Aikman, CIE  
**Guernsey**

Enclosures: Plans and Form AD-1006

Copy to: Oklahoma Department of Transportation – Environmental Division

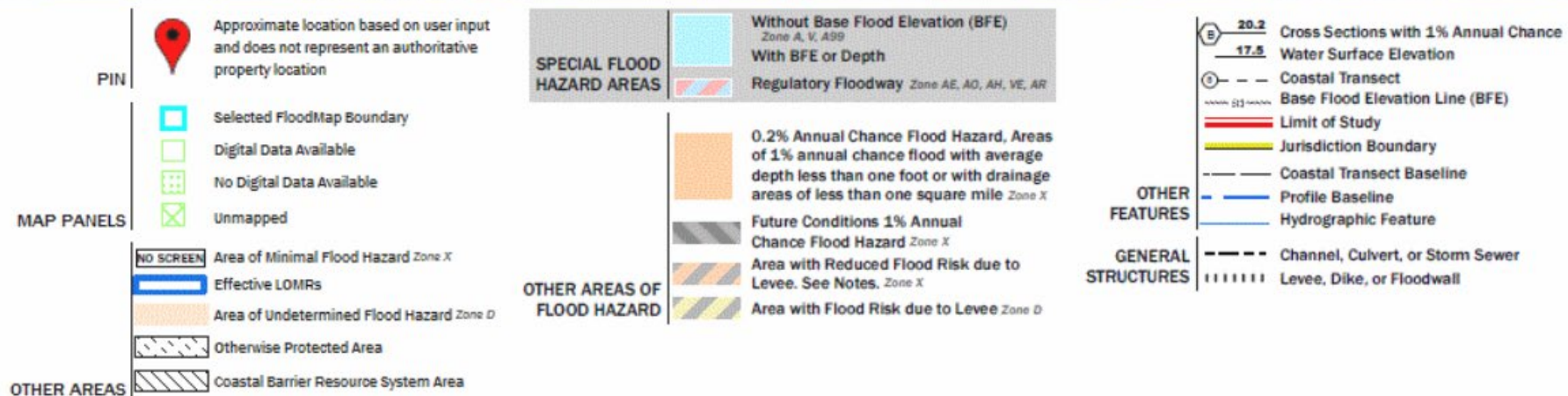
**FARMLAND CONVERSION IMPACT RATING**

<b>PART I</b> (To be completed by Federal Agency)		Date Of Land Evaluation Request			
Name of Project		Federal Agency Involved			
Proposed Land Use		County and State			
<b>PART II</b> (To be completed by NRCS)		Date Request Received By NRCS		Person Completing Form:	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)		YES <input type="checkbox"/>	NO <input type="checkbox"/>	Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres:                      %		Amount of Farmland As Defined in FPPA Acres:                      %		
Name of Land Evaluation System Used	Name of State or Local Site Assessment System		Date Land Evaluation Returned by NRCS		
<b>PART III</b> (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly					
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site					
<b>PART IV</b> (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland					
B. Total Acres Statewide Important or Local Important Farmland					
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
<b>PART V</b> (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)					
<b>PART VI</b> (To be completed by Federal Agency) Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)		Maximum Points	Site A	Site B	Site C
1. Area In Non-urban Use		(15)			
2. Perimeter In Non-urban Use		(10)			
3. Percent Of Site Being Farmed		(20)			
4. Protection Provided By State and Local Government		(20)			
5. Distance From Urban Built-up Area		(15)			
6. Distance To Urban Support Services		(15)			
7. Size Of Present Farm Unit Compared To Average		(10)			
8. Creation Of Non-farmable Farmland		(10)			
9. Availability Of Farm Support Services		(5)			
10. On-Farm Investments		(20)			
11. Effects Of Conversion On Farm Support Services		(10)			
12. Compatibility With Existing Agricultural Use		(10)			
TOTAL SITE ASSESSMENT POINTS		160			
<b>PART VII</b> (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100			
Total Site Assessment (From Part VI above or local site assessment)		160			
<b>TOTAL POINTS (Total of above 2 lines)</b>		260			
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>			
Reason For Selection:					
Name of Federal agency representative completing this form:					Date:

(See Instructions on reverse side)

Form AD-1006 (03-02)

# **FLOOD PLAIN INFORMATION**



# **HAZARDOUS WASTE STUDIES**

# OKLAHOMA DEPARTMENT OF TRANSPORTATION CONSULTANT REPORT REVIEW – HAZARDOUS WASTE

**Reviewed By:** Evan Mace  
**Review Date:** 1/3/2022  
**Consultant:** Guernsey

**County:** Creek  
**J/P Number:** 29682(04)

---

**1. PROJECT DESCRIPTION:** BRIDGE & APPROACHES: SH-16: OVER SAND CREEK, 0.7 MILES EAST OF THE JCT. SH-48

**2. LEVEL OF INVESTIGATION:**    ☐ Recon                      ☒ Assessment                      ☐ Sampling

## 3. SUMMARY OF INVESTIGATION

- A. Relative risk of contamination in study footprint:    ☒ Low    ☐ Moderate    ☐ High  
B. Potential for contamination, if present, to affect project: ☒ Low    ☐ Moderate    ☐ High  
C. Did Consultant recommend additional work?    ☒ No    ☐ Yes (describe below):

## 4. RECOMMENDATIONS\*:

- ☒ Approval to Proceed (No Further Action)  
☐ Approval to Proceed, Pending:  
    ☐ Avoidance of described site(s)  
    ☐ Plan Notes regarding described site(s) (See Section 5)  
    ☐ Additional investigation by ODOT  
☐ Approval NOT Recommended

\* - If different from Consultant, explain in Section 6 General Comments

**5. PLAN NOTES:** None needed.

**6. GENERAL COMMENTS:** An ISA was performed by Guernsey in November 2021 which identified numerous sites within the project corridor. None of these sites were determined to be RECs to the project due to the scope of work and their distance from the project. There are no hazardous waste concerns associated with this project. No further action is necessary to proceed.

**ATTACH EXCERPTS FROM REPORT, AS APPROPRIATE.\***

\*The full document is on file with ODOT's Environmental Programs Division. Please contact David Edwards at (405) 521-2673 or [daedwards@odot.org](mailto:daedwards@odot.org) for more information.

**INITIAL SITE ASSESSMENT  
PROJECT FOR BRIDGE REPLACEMENT ON SH-16 OVER SAND CREEK  
CREEK COUNTY, OKLAHOMA**

**ODOT CONTRACT NUMBER: EC-1766D  
ODOT PROJECT NUMBER: J2-9682(004)  
ODOT JOB/PIECE NUMBER: 29682(04)  
GUERNSEY PROJECT NO.: OK70333006**

**Prepared For:**



**OKLAHOMA DEPARTMENT OF TRANSPORTATION  
Environmental Programs Division  
Oklahoma City, OK**

**Prepared by:**



**Guernsey  
5555 North Grand Blvd.  
Oklahoma City, OK  
405.416.8100**

**CERTIFICATION PAGES  
FOR:  
INITIAL SITE ASSESSMENT  
PROJECT FOR BRIDGE REPLACEMENT ON SH-16 OVER SAND CREEK  
CREEK COUNTY, OKLAHOMA**

**ODOT CONTRACT NUMBER: EC-1766D  
ODOT PROJECT NUMBER: J2-9682(004)  
ODOT JOB/PIECE NUMBER: 29682(04)  
GUERNSEY PROJECT NO.: OK70333006**

"We declare that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312" and

"We have the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the subject *property*. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312."



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Angela Aikman, CIE  
Vice President  
Manager, Environmental

## **Petroleum Storage Tank Work Scope Certification Sheet**

I have performed review of Petroleum Storage Tank findings within a Phase I Environmental Site Assessment in accordance with the scope and limitations of ASTM Practice E 1527-13 of the **Project for Bridge Replacement on SH-16 Over Sand Creek, Creek County, Oklahoma.**

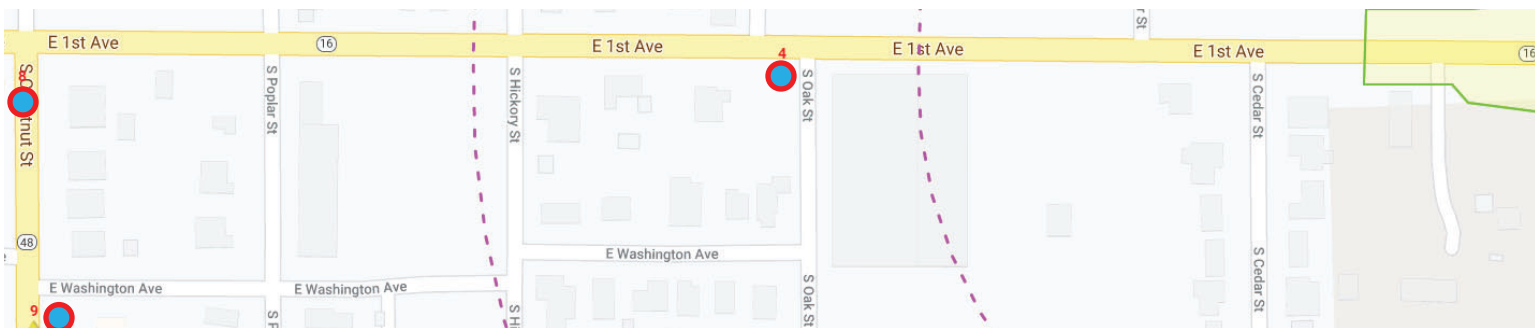
The work scope was limited to review of Petroleum Storage Tank issues by an Oklahoma Corporation Commission (OCC) - Licensed Consultant. Pursuant to Oklahoma Administrative Code (OAC) Title 165, Chapter 26, the definition of “Regulated substances” does not include compressed natural gas, liquid natural gas, or propane. Above-ground petroleum storage tanks with capacity over 110 gallons must be registered, except for farm and ranch tanks, emergency generator tanks, or tanks at fleet and commercial facilities less than 2,100 gallons individual storage capacity. Oil and gas tanks are not regulated under OAC Title 165, Chapter 26.

The primary focus of review was information included within Sections 3.4.21, 3.4.22, 3.4.23, 3.4.24, 3.4.25, 3.4.26, Section 5, Figure 1, Figure 2, Table 2, Appendix A (Photos), Appendix B (ERIS Historical Aerials), Appendix C (ERIS Topographic Maps), and Appendix G (ERIS Regulatory Database Report) of the INITIAL SITE ASSESSMENT (Guernsey Project No. OK70333006 draft report).

Two Leaking Underground Storage Tank sites (Ontrac LLC at 606 S Chestnut is ERIS Location 8, and Bristow Junction at 703 S Chestnut is ERIS Location 9) were reported approximately 2000 feet west of the Area of Investigation (AOI) by ERIS. These sites were reported to be outside of the AOI during site reconnaissance on November 4, 2021. Due to distance and topography, these sites are not considered Recognized Environmental Conditions (REC).

PJ Mini Mart Station was reported as an “Other Petroleum Storage Tank Site” at 602 E 1<sup>st</sup> approximately 860 feet west of the AOI. This site was not observed within or adjacent to the AOI during site reconnaissance on November 4, 2021. Due to distance and topography, this site is not considered a REC.

These sites are depicted on the following maps.



This review has revealed no evidence of Recognized Environmental Conditions associated with Petroleum Storage Tanks for the AOI.

*Sheila E. Baber*

Sheila E. Baber, PG  
Senior Geologist, Licensed OCC Consultant #0042

## 1 EXECUTIVE SUMMARY

The Oklahoma Department of Transportation (ODOT) requested that Guernsey update the August 2018 Initial Site Assessment (ISA) for bridge replacement on SH-16 over Sand Creek, near the Town of Bristow, Creek County, Oklahoma. The proposed work will include replacing the bridge over Sand Creek 0.7 miles East of SH-48 junction, Sections 27, 28, 33, and 34, Township 16 North; Range 9 East, Creek County, Oklahoma. Figure 1, Site Location Map, depicts the general location of the Area of Operation (AOI). ODOT has requested the ISA realizing the potential presence of hazardous waste or soil/groundwater contamination within or adjoining the proposed project area, could lead to project delays and escalated construction costs.

The purpose of the ISA is to identify potential environmental concerns by reviewing historical data and regulatory information, performing interviews, and conducting a visual inspection of the site and surrounding area.

The potential environmental concerns were developed from the available historical information and other data obtained during the site reconnaissance. A list of contacts is identified on Table 1. Site photographs are provided in Appendix A.

Fourteen potential environmental concerns were determined by this updated ISA and are listed below:

- Overhead electric lines were observed throughout the AOI
- Buried fiber-optic cables were observed along the south side of the AOI; these cables are owned by AT&T
- Pole-mounted transformers were located throughout the AOI
- A petroleum pipeline owned by Magellan was observed crossing the AOI
- A natural gas pipeline owned by Oklahoma Natural Gas was observed within the AOI
- According to the National Priorities List (NPL) database, there is one mapped site identified:
  1. WILCOX OIL COMPANY, WEST 221ST STREET SOUTH/REFINERY ROAD  
0.35 MILE EAST OF U.S. HIGHWAY 66 CREEK COUNTY OK 74010
- According to the Superfund (SUPERFUND) database, there is one mapped site identified:
  1. WILCOX OIL COMPANY, -96.384387, 35.842328

- According to the Leaking Underground Storage Tank List (LUST) database, there are two mapped sites identified:
  1. Ontrac LLC, 606 S Chestnut Bristow, OK 74010
  2. Bristow Junction, 703 S Chestnut Bristow, OK 74010
- According to the Oklahoma Corporation Commission (OCC) Other Petroleum Storage Tank Sites (TANK OTHER) database, there is one mapped site identified:
  1. P J Mini Mart Station, 602 E 1ST Bristow, OK 74010
- According to the Oklahoma Conservation Commission Pollution Complaint System Database (OK COMPLAINT), there is one mapped site identified:
  1. Open Dumping Complaint, -96.375251, 35.828725
- According to the Mineral Resource Data System (MRDS) database, there is one mapped site identified:
  1. UNKNOWN SAND PIT, --96.367798, 35.817322
- According to the Tier 2 Report (Tier 2) database, there is one mapped site identified:
  1. W.R. EARNHARDT - PATSY WILSON, S29-T16N-R9E BRISTOW OK 74010
- According to the Comprehensive Environmental Response, Compensation, and Liability Information System (CERLCIS) No Further Remedial Action Planned (CERLCIS - NFRAP) database, there is one mapped site identified:
  1. NU-CHROME PLATING, 501 SOUTH CHESTNUT BRISTOW, OK 74010
- According to the Underground Injection Control Wells (UIC) database, there are five mapped sites identified
  1. E O K OPERATING LLC, -96.377027000, 35.827105000
  2. RED STONE RESOURCES LLC, -96.376940000, 35.832928000
  3. HAWK, -96.370800000, 35.819780000
  4. EARNHARDT WILLIAM R COMPANY, -96.370820000, 35.817970000
  5. BRISTOW CITY DUMP, -96.373050000, 35.814345000

The recommendations to mitigate these possible concerns are listed below:

- The owners of the overhead electric, petroleum pipeline, and natural gas line, as well as those owning the buried fiber-optic cables should be contacted regarding the upcoming activities.
- The electric utility owner should be contacted to determine if the pole-mounted transformer contains polychlorinated biphenyls (PCBs).
- During the site reconnaissance on November 4, 2021, the NPL site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.
- During the site reconnaissance on November 4, 2021, the SUPERFUND site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.
- During the site reconnaissance on November 4, 2021, the LUST sites were observed. However, no stressed or strained vegetation or soil was observed, and they are outside of the AOI. Maintaining awareness of these facilities is recommended.
- During the site reconnaissance on November 4, 2021, the TANK OTHER site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.
- During the site reconnaissance on November 4, 2021, the OK COMPLAINT site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.
- During the site reconnaissance on November 4, 2021, the MRDS site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.
- During the site reconnaissance on November 4, 2021, the TIER 2 site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.
- During the site reconnaissance on November 4, 2021, the CERCLIS NFRAP site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.
- During the site reconnaissance on November 4, 2021, the UIC sites were not observed within or adjacent to the AOI. Maintaining awareness of these off-site facilities is recommended.

## 5 FINDINGS AND RECOMMENDATIONS

Based on the information contained within this ISA, there are 14 potential environmental concerns associated with the AOI. These concerns and appropriate recommendations are as follows:

### 1. Overhead Electric Lines:

During the site reconnaissance on November 4, 2021, overhead electric lines were observed throughout the AOI

**Recommendation:** *These lines are located in the AOI; therefore, the owner/operator of these lines should be contacted regarding the upcoming activities.*

### 2. Buried Fiber-Optic Cables:

During the site reconnaissance on November 4, 2021, buried fiber-optic cables were observed along the south side of the AOI; these cables are owned by AT&T

**Recommendation:** *These cables are located in the AOI; therefore, the owner/operator of these cables should be contacted regarding the upcoming activities.*

### 3. Transformers:

During the site reconnaissance on November 4, 2021, pole-mounted transformers were observed throughout the AOI.

**Recommendation:** *These pole-mounted transformers are located in the AOI; therefore, the electric utility owner should be contacted to determine if the pole-mounted transformers contain PCBs.*

### 4. Petroleum Pipelines:

During the site reconnaissance on November 4, 2021, a petroleum pipeline owned by Magellan was observed crossing the AOI.

**Recommendation:** *This pipeline is located in the AOI; therefore, the owner/operator of this pipeline should be contacted regarding the upcoming activities.*

### 5. Natural Gas Line:

During the site reconnaissance on November 4, 2021, a natural gas line owned by Oklahoma Natural Gas was observed within the AOI.

**Recommendation:** *This pipeline is located in the AOI; therefore, the owner/operator of this pipeline should be contacted regarding the upcoming activities.*

**6. ERIS NPL Finding:**

According to the NPL database, there is one mapped site identified:

1. WILCOX OIL COMPANY, WEST 221ST STREET SOUTH/REFINERY ROAD  
0.35 MILE EAST OF U.S. HIGHWAY 66 CREEK COUNTY OK 74010

**Recommendation:** During the site reconnaissance on November 4, 2021, this site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.

**7. ERIS SUPERFUND Finding:**

According to the SUPERFUND database, there is one mapped site identified:

1. WILCOX OIL COMPANY, -96.384387, 35.842328

**Recommendation:** During the site reconnaissance on November 4, 2021, this site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.

**8. ERIS LUST Finding:**

According to the LUST database, there are two mapped sites identified:

1. Ontrac LLC, 606 S Chestnut Bristow OK 74010
2. Bristow Junction, 703 S Chestnut Bristow OK 74010

**Recommendation:** During the site reconnaissance on November 4, 2021, these sites were observed. However, no stressed or strained vegetation or soil was observed and they are outside of the AOI. Maintaining awareness of these facilities is recommended.

**9. ERIS TANK OTHER Finding:**

According to the OCC TANK OTHER database, there is one mapped site identified:

1. P J Mini Mart Station, 602 E 1ST Bristow OK 74010

**Recommendation:** During the site reconnaissance on November 4, 2021, this site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.

**10. ERIS OK COMPLAINT Finding:**

According to the OK COMPLAINT database, there is one mapped site identified:

1. Open Dumping Complaint , -96.375251, 35.828725

**Recommendation:** During the site reconnaissance on November 4, 2021, this site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.

#### 11. ERIS MRDS Finding:

According to the MRDS database, there is one mapped site identified:

1. UNKNOWN SAND PIT, --96.367798, 35.817322

**Recommendation:** During the site reconnaissance on November 4, 2021, this site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.

#### 12. ERIS TIER 2 Finding:

According to the Tier 2 database, there is one mapped site identified:

1. W.R. EARNHARDT - PATSY WILSON, S29-T16N-R9E BRISTOW OK 74010

**Recommendation:** During the site reconnaissance on November 4, 2021, this site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.

#### 13. ERIS CERCLIS NFRAP Finding:

According to the CERLCIS - NFRAP database, there is one mapped site identified:

1. NU-CHROME PLATING, 501 SOUTH CHESTNUT BRISTOW OK 74010

**Recommendation:** During the site reconnaissance on November 4, 2021, this site was not observed within or adjacent to the AOI. Maintaining awareness of this off-site facility is recommended.

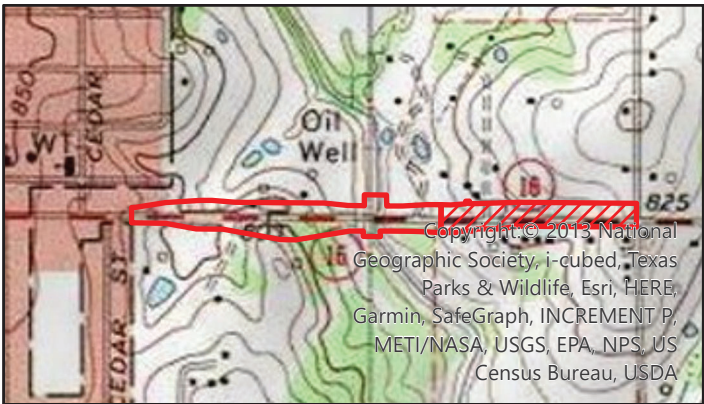
#### 14. ERIS UIC Finding:

According to the UIC database, there are five mapped sites identified:

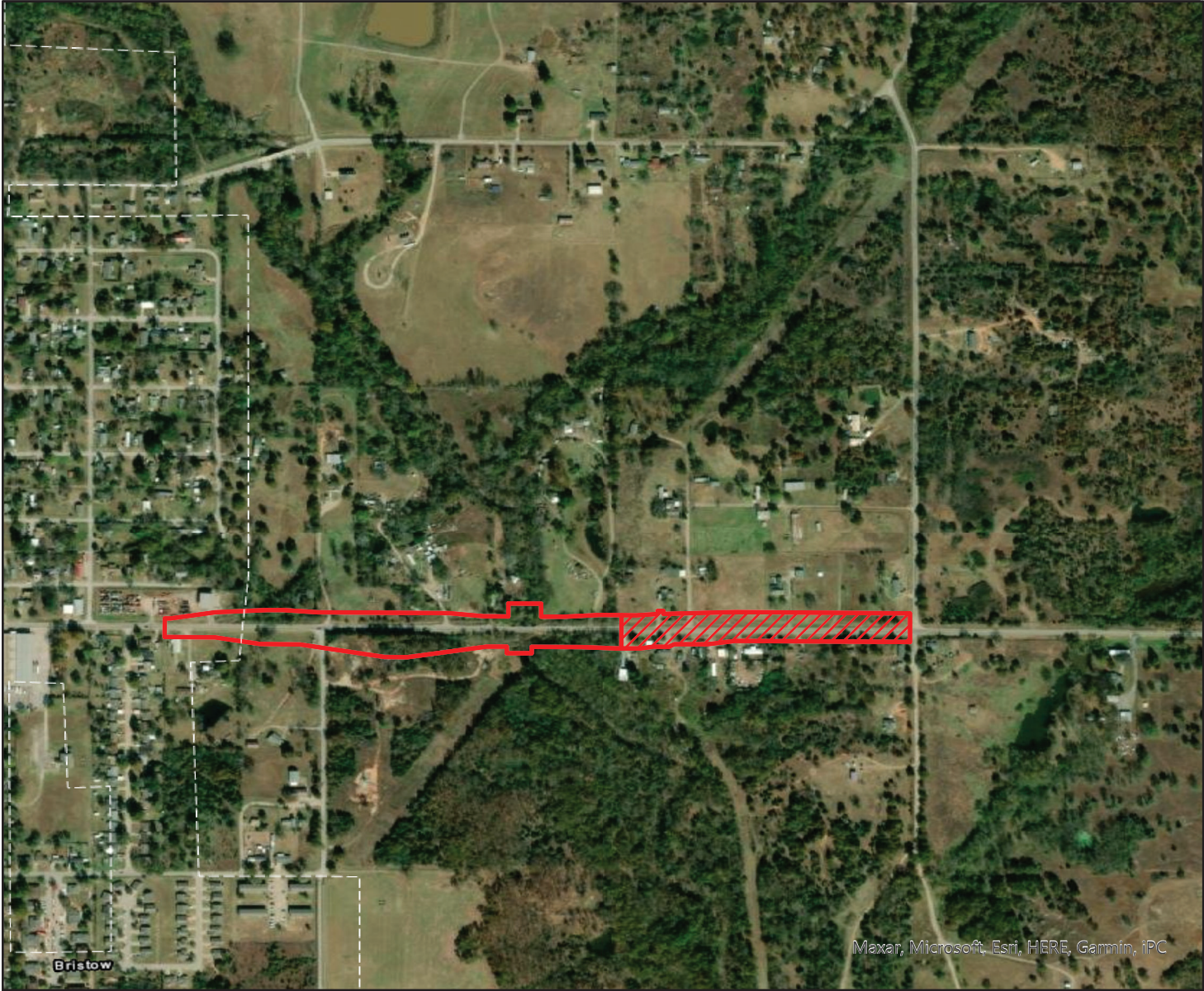
1. E O K OPERATING LLC, -96.377027000, 35.827105000
2. RED STONE RESOURCES LLC, -96.376940000, 35.832928000
3. HAWK, -96.37080000, 35.819780000
4. EARNHARDT WILLIAM R COMPANY, -96.370820000, 35.817970000

5. BRISTOW CITY DUMP, -96.373050000, 35.814345000

**Recommendation:** During the site reconnaissance on November 4, 2021, these sites were not observed within or adjacent to the AOI. Maintaining awareness of these off-site facilities is recommended.



Local Area Map



GENERAL VICINITY MAP



ENGINEERS  
ARCHITECTS  
CONSULTANTS

### SITE LOCATION MAP

PROJECT FOR BRIDGE REPLACEMENT OVER SAND CREEK ON SH-16  
INITIAL SITE ASSESSMENT  
CREEK COUNTY, OKLAHOMA

Prepared by: GTA

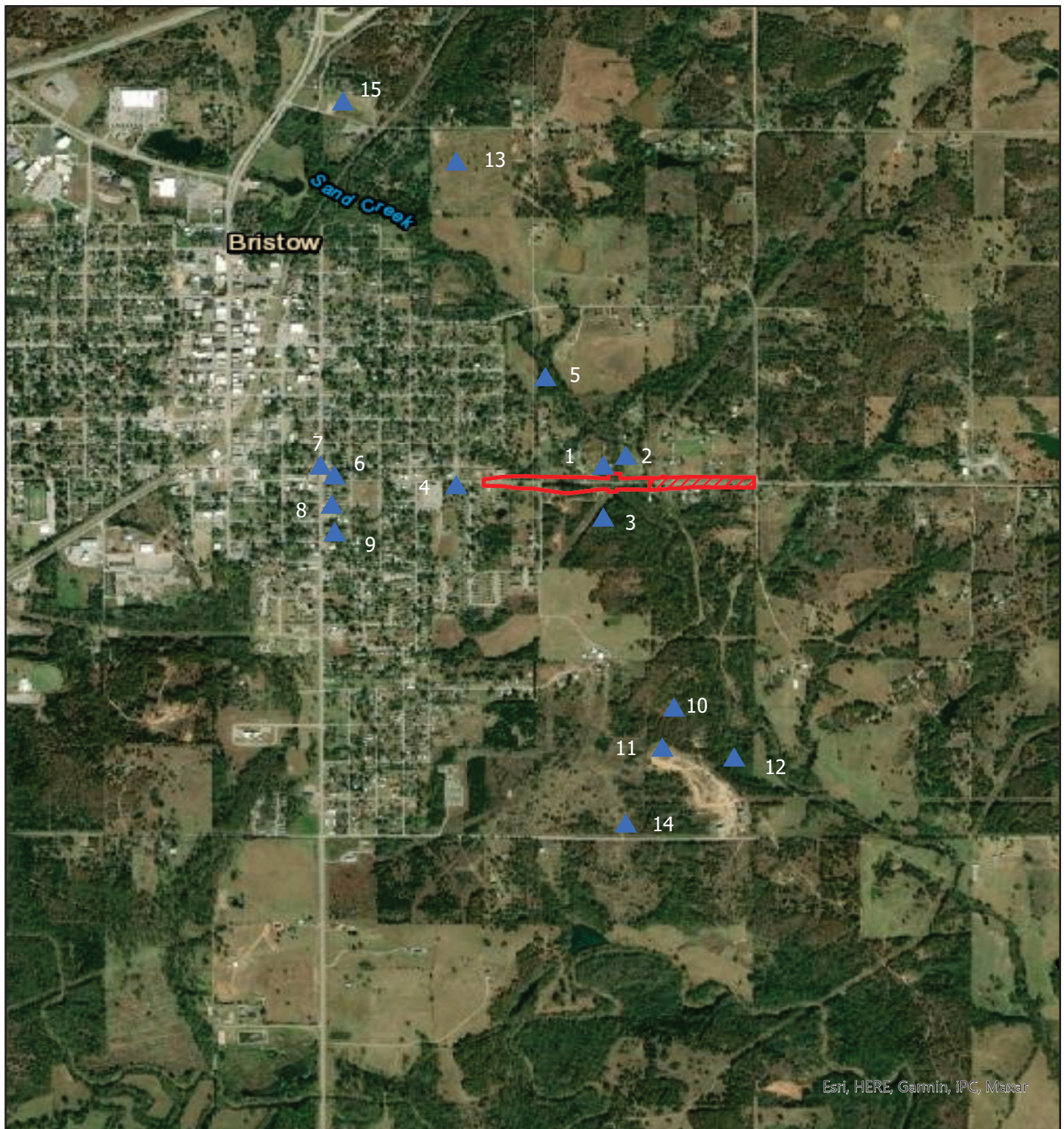
Approved by: ALA

Date: NOVEMBER 2021

Job No: OK70333006

FIGURE

1



Legend

- ▲ Recognized Environmental Concern (REC)
- Area of Interest (AOI)



**TABLE 2**  
**RECOGNIZED ENVIRONMENTAL CONCERNS TABLE**  
**PROJECT FOR BRIDGE AND APPROACHES ON SH-16**  
**CREEK COUNTY, OKLAHOMA**

SOURCE	MAP ID	NAME	ADDRESS	RISK POTENTIAL	DIFFERENCE IN ELEVATION (FT)	OBSERVED DURING SITE RECONNAISSANCE (YES/NO)
TIER 2	1	W.R. EARNHARDT - PATSY WILSON	S29-T16N-R9E, Bristow, OK 74010	Low	16	No
OK COMPLAINT	2			Low	-2	No
UIC	3	CRYSTAL SWD	Bristow, OK 74010	Low	60	No
TANK OTHER	4	P J Mini Mart Station	602 E 1ST, Bristow, OK 74010	Low	81	No
UIC	5	FOX	Bristow, OK 74010	Low	10	No
CERCLIS	6	NU-CHROME PLATING	501 SOUTH CHESTNUT, Bristow, OK 74010	Low	53	No
SEMS ARCHIVE	7	NU-CHROME PLATING	501 SOUTH CHESTNUT, Bristow, OK 74010	Low	53	No
LUST	8	Ontrac LLC	606 S Chestnut, Bristow, OK 74010	Low	51	Yes
LUST	9	Bristow Junction	703 S Chestnut, Bristow, OK 74010	Low	51	Yes
UIC	10	HAWK	Bristow, OK 74010	Low	-15	No
UIC	11	HAWK	Bristow, OK 74010	Low	1	No

**TABLE 2**  
**RECOGNIZED ENVIRONMENTAL CONCERNS TABLE**  
**PROJECT FOR BRIDGE AND APPROACHES ON SH-16**  
**CREEK COUNTY, OKLAHOMA**

SOURCE	MAP ID	NAME	ADDRESS	RISK POTENTIAL	DIFFERENCE IN ELEVATION (FT)	OBSERVED DURING SITE RECONNAISSANCE (YES/NO)
MRDS	12	UNKNOWN SAND PIT	CREEK COUNTY, Bristow, OK 74010	Low	6	No
NPL	13	WILCOX OIL COMPANY	WEST 221ST STREET SOUTH/REFINERY ROAD 0.35 MILE EAST OF U.S. HIGHWAY 66, CREEK COUNTY, OK 74010	Low	54	No
UIC	14	BRISTOW CITY DUMP	Bristow, OK 74010	Low	26	No
SUPERFUND	15	Wilcox Oil Company Superfund Site		Low	45	No



**OTHER**



# Oklahoma Department of Transportation

Project Management Division

(405)522-7601

Fax (405) 522-7612

Room 3C9

**DATE:** October 16, 2016

**TO:** Distribution List

**FROM:** Joe Brutsché , Project Management Division

**SUBJECT:** Revised – Final Project Initiation

J/P Number: 29682(04)

County: Creek

Highway: SH-16

Division: 8

Let Date: FFY 2022

R/W Date : FFY 2019

Drive-out Date: 03/25/2013

Programmed Estimate: \$ 2,500,000.00

Project Description: SH-16 over Sand Creek, 0.7 miles East of the SH-48 Jct.

## FUNCTIONAL CLASSIFICATION

Area Type: ☐ Urban ☐ Suburban ☒ Rural  
Terrain Type: ☐ Flat ☒ Rolling ☐ Mountainous  
Access Control: ☐ Full ☐ Partial ☒ None  
Highway Type: ☐ Freeway ☐ Principal Arterial ☐ Minor Arterial ☒ Collector  
☐ NHS ☐ Non-NHS ☐ STRAHNET ☐ Scenic Hwy

## EXISTING INFORMATION

Current ADT: 2200

% Trucks: 17%

Number of Lanes: 2

Lane Width: 12'

Outside Shoulder Width: 4'

Inside Shoulder Width:

☒ Open Section

☐ Curb & Gutter

☐ Divided, median width:

☐ Other (describe):

Pavement Type: Asph.

Pavement Condition: ☐ Good ☒ Fair ☐ Poor

Shoulder Type: Sod

Shoulder Condition: ☒ Good ☐ Fair ☐ Poor

Storm Sewer ☒ No ☐ Yes

Storm Sewer Condition: ☐ Good ☐ Fair ☐ Poor

Sidewalks ☒ No ☐ Yes

Sidewalk Width:

Bridge One Description: 35'-50'-35' I-BM. Iw/ 2-18" Safety Curbs

Bridge Two Description:

Bridge Three Description:

Feature Intersected:

Bridge One

Bridge Two

Bridge Three

NBI Number:

Sand Creek

12429

Location Number:

1910 0066 X

Sufficiency Rating:

54.8

Year Built:

1950

Bridge Width:

30.8'

Bridge Length:

121.1'

Posted Clearance:

Posted:

Health Index:

85.0

Steel Beam Bridge:

## ENVIRONMENTAL CONSIDERATIONS

- Historic Properties, list: Low NRHP potential bridge, 6 low NRHP potential homesteads
  - Archeological Sites, list: None
  - Cemeteries, list: None
  - Hazardous Waste / LUST Sites, list: None
  - Endangered Species, list: ABB, Interior Least Tern, Piping Plover
  - Section 4F or 6F Properties, list:
  - Farmland    ■ Wetlands    □ Scenic and Protected Aquifers    □ 100 Year Flood Plain
- Small area of wetlands south of bridge

## ALTERNATIVE IMPACTS

- Other Agencies    List:
  - Turnpike Involvement
  - Metropolitan Planning Organizations    List:
- 

## PERMIT INFORMATION

Design Exception Anticipated:    □ No    □ As required by design    □ Yes, type:  
Maintenance Agreements (Lighting, Signals, etc.):    □ No    □ Yes, type:  
Permits required: □ FAA    ■ USACE    □ OWRB    □ Railroad    □ Other, type:  
Additional: 404 permit required for potential jurisdictional waters & wetland impact.

## PROPOSED IMPROVEMENT

Project Intent: Replace functionally obsolete bridge.

Special Considerations:

Description of Proposed Improvements:

The existing span bridge will be replaced on alignment (half at a time) with an RCB structure.  
The RCB will not extend to clear zone, therefore guardrail widening will be required.  
The first phase of construction will be towards the South.

Design Speed:    65 mph

Potential to transfer steel bridge beams to County ( Oklahoma Statute Title 69 subsection 1001)

- Yes    ■
- No    □    Fully document specific reasons preventing transfer:
- NA    □

### Project Termini

Beginning of Project: Approximately 1,340' West of existing bridge at the commercial drive LT.  
(approximately 140' west of Bristow City limits)

End of Project: 500' East of existing bridge. Tie to J/P 24131(04) at this location.

Limits of Survey: This bridge is within the limits of the Survey for the SH 16 corridor, from SH 48, East 6 miles: SWO 4861(1)-J/P 24131(04). Stand alone Survey Limits for the bridge, are as follows: From North Cedar Street in Bristow, the survey will extend East, along the existing SH 16, to a point 300 feet East of the NS 373 Section Line. Total survey length approximately 0.8 miles. Survey width will be 250 feet Right and Left, widening to 500 feet Right and Left, from 500 feet before the bridge, to 500 feet after the bridge. Flowline profile will extend 1000 feet upstream and downstream. Floor elevations will be obtained on buildings lying in the potential flood plain. Multiple buildings exist, constructed very near the creek, extending up to a quarter mile upstream (North) of the bridge.

Limits of NEPA Survey Area: 150' Lt. & Rt. of center, same length as the survey.

### Typical Section

<input checked="" type="checkbox"/> Open Section	<input type="checkbox"/> Curb & Gutter	<input type="checkbox"/> Divided, median width:
<input type="checkbox"/> Other (describe):		
Number of Lanes: 2	Lane Width: 12'	
Outside Shoulder Width: 8'	Inside Shoulder Width: '	
Storm Sewer <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes Sidewalks <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes, width: '
Overlay <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes, thickness:	
Coldmill <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes, thickness:	
Add Shoulders <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes, width: 8'	
Bridge Width: '		

### Alignment

<input checked="" type="checkbox"/> Existing				
<input type="checkbox"/> New, located	<input type="checkbox"/> North or	<input type="checkbox"/> South or	<input type="checkbox"/> East or	<input type="checkbox"/> West of existing
<input type="checkbox"/> Parallel Lanes, located	<input type="checkbox"/> North or	<input type="checkbox"/> South or	<input type="checkbox"/> East or	<input type="checkbox"/> West of existing
<input type="checkbox"/> Spot Improvements				
<input type="checkbox"/> Horizontal, Description:				
<input type="checkbox"/> Vertical, Description:				

### Detour

<input type="checkbox"/> Shoo-fly, located	<input type="checkbox"/> North or	<input type="checkbox"/> South or	<input type="checkbox"/> East or	<input type="checkbox"/> West of existing
<input type="checkbox"/> Widening, located	<input type="checkbox"/> North or	<input type="checkbox"/> South or	<input type="checkbox"/> East or	<input type="checkbox"/> West of existing
<input type="checkbox"/> Crossovers				
<input type="checkbox"/> Close Road				
<input type="checkbox"/> Signed Detour, Route Description:				

☒ Phased Construction, Description: RCB will be constructed half at time, with the first phase to the South.

### Traffic Items

Traffic Management Plan	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Median Barrier	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
New Guardrail	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
End Treatment	<input type="checkbox"/> No	<input type="checkbox"/> Type:
Highway Lighting	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Outside or <input type="checkbox"/> Median
Traffic Signals	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Location(s):

### Right-of-Way

Additional RW Required	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes, describe:
Utility Conflicts	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes, describe:

### Miscellaneous

Channel Re-Alignment	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes, describe:
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### **INITIATION ESTIMATE**

Roadway:	\$ 270,000.00	Total Construction:	\$ 475,200.00
Bridge:	\$ 130,000.00		
Traffic Control:	\$	Right-of-Way:	\$ 371,000.00
Signing and Striping:	\$	Utility:	\$ 189,284.00
Highway Lighting:	\$ 0.00		
Traffic Signals:	\$ 0.00	Total Estimate:	\$ 1,035,484.00
Mobilization:	\$ 40,000.00		
Staking:	\$ 8,800.00		
E & C:	\$ 26,400.00		

### **PROGRAM REVISIONS**

Estimate: \$	Letting Date:	Project Length:
Work Type:		
Description:		

Attachments (Aerial with Preliminary RW & County Map)

### Distribution List:

- Director of Engineering
- Director of Capital Projects and Information Management
- Bridge Division
- Environmental Programs Division
- FHWA
- Field Division
- Project Management Division
- Right-of-Way Division
- Roadway Design
- Survey Division
- Planning Division
- Traffic Engineering

**SCOPING MEETING MINUTES  
FOR  
SH-16 OVER SAND CREEK, 0.7 MILES EAST OF THE JUNCTION SH-48 TIED TO 24131(04), CREEK COUNTY,  
JP 29682(04)**

<b>Project Need/Intent and Proposed Project Description</b>
<ul style="list-style-type: none"> <li>• Replace functionally obsolete bridge</li> <li>• Replaced on the existing alignment</li> <li>• Study footprint is 200 ft. left and right of centerline</li> </ul>
<b>Cultural Resources Issues – Archeological Sites/Cemeteries/Historic Structures</b>
<ul style="list-style-type: none"> <li>• Diane Cargill will perform the studies</li> </ul>
<b>Property Owner Notification/Potential Federal or Tribal Properties</b>
<ul style="list-style-type: none"> <li>• No tribal properties</li> <li>• Need to obtain new property cards and re-send letters</li> </ul>
<b>Section 4(f) Coordination if applicable</b>
<ul style="list-style-type: none"> <li>• Not applicable for this project</li> </ul>
<b>Jurisdictional Waters and Wetlands and 404 Permits</b>
<ul style="list-style-type: none"> <li>• Based on the recon, there are several wetlands along the project alignment</li> </ul>
<b>Endangered Species – Survey and Restrictions</b>
<ul style="list-style-type: none"> <li>• Based on desktop review, there were several major threatened and endangered species (Least Tern, Piping Plover, Red Knot, and American Burying Beetle) in the vicinity, no critical habitats</li> <li>• Biological studies to be completed by Clint</li> </ul>
<b>Hazardous Waste</b>
<ul style="list-style-type: none"> <li>• ISA to be completed by Guernsey</li> <li>• Need to send the ISA cost estimate to Jeff for review and approval</li> </ul>
<b>Noise Studies if applicable</b>
<ul style="list-style-type: none"> <li>• Not applicable for this project</li> </ul>
<b>Public Meeting if applicable</b>
<ul style="list-style-type: none"> <li>• Not applicable for this project</li> </ul>
<b>Project Schedule – Let date/year</b>
<ul style="list-style-type: none"> <li>• Let Year of 2024</li> </ul>
<b>Listing in TIP/STIP/Long Range Plan if applicable</b>
<ul style="list-style-type: none"> <li>• 8 Year Construction Program</li> </ul>
<b>R/W Acquisition</b>
<ul style="list-style-type: none"> <li>• Additional right-of-Way will be required</li> </ul>
<b>Timeline &amp; Monthly Status Reports &amp; Availability of Plan</b>
<ul style="list-style-type: none"> <li>• Monthly Status Report will be submitted on the 15<sup>th</sup> of each month</li> </ul>
<b>Miscellaneous Items</b>
<b>Action Items</b>

## Updated Monthly Status Report

NEPA Consultant: **C.H. Guernsey** Eng Contract/Task Order: **EC 1776D TO 6**  
**29682(04), CREEK County, SH-16 OVER SAND CREEK, 0.7 MILES EAST OF THE JCT. SH-48 TIED TO 24131(04)**

Project:

Step ID		Duration in Calendar days	Target Start from Task Order	Target Completion Date from Task Order	Actual Start Date:	Actual Completion	Responsible Party	Comments
1.1	Scope Clarification	0	12/1/2017	12/1/2017			Contract Administrator	
1.2	Task Order Request	90	12/1/2017	3/1/2018			Contract Administrator	
1.3	Task Order Approval	35	3/1/2018	4/5/2018		4/4/2018	Contract Administrator	
1.4	Notice to Proceed Date	1	4/5/2018	4/6/2018		4/4/2018	Contract Administrator	
3.1	Provide NEPA Study Footprint	10	4/6/2018	4/16/2018	4/4/2018	4/12/2018	Designer	
3.2	Approved Study Footprint and Location Map	10	4/16/2018	4/26/2018	4/12/2018	4/30/2018	EPD	
4.1	Send out Property Owner Notification	10	4/26/2018	5/6/2018	4/7/2018	4/30/2018	Consultant	
4.2	Tribal Property Notification	0	4/26/2018	4/26/2018	NA	NA	Consultant	
5.1	Cultural Resources & Tribal Coordination Initiation	15	4/26/2018	5/11/2018	4/30/2018	5/4/2018	Consultant	
5.2	Tribal Coordination 30 Day Waiting Period prior to Start of Specialist Studies	45	5/11/2018	6/25/2018	5/4/2018	6/3/2018	Consultant	
6.1	Cultural Resources Study	60	4/30/2021	6/29/2021			Consultant	Wait for 30% Plans for 24131(04) to refine scope and conduct field studies
6.2	T&E & Wetland Studies	60	6/25/2018	8/24/2018	6/3/2018	8/2/2018	Consultant	
6.3	Hazardous Waste Studies	60	6/25/2018	8/24/2018	6/3/2018	8/2/2018	Consultant	
6.4.1	Receive Preliminary Plans	0	4/15/2021	4/15/2021	4/30/2021	4/30/2021	PMD	
6.4.2	Review Plans with Footprint	15	4/15/2021	4/30/2021	4/30/2021	5/5/2021	Consultant	
6.4.3	Request Relocation Plan	10	4/15/2021	4/25/2021			ODOT NEPA PM	6/15/2021: Will submit request once the design criteria is determined and new set of plans is available.
6.4.4	Relocation Plan	60	4/25/2021	6/24/2021			Right-of-Way	
6.5	NRCS coordination	60	5/2/2018	7/5/2018	5/7/2018		Consultant	
7.1	ODOT Review of Cultural Resources Studies	60	6/29/2021	8/28/2021			ODOT Specialists	
7.2	ODOT Review of Biological Studies	60	8/24/2018	10/23/2018	8/2/2018	8/20/2018	ODOT Specialists	
7.3	ODOT Review of Haz Waste Studies	60	8/24/2018	10/23/2018	8/2/2018	9/19/2018	ODOT Specialists	
8	USFWS	45	10/23/2018	12/7/2018	NA	NA	ODOT Specialists	
9	SHPO Coordination	60	8/28/2021	10/27/2021			ODOT Specialists	
10.1	Receive R/W & Utility Meeting Plans	0	6/15/2021	6/15/2021			PMD	
10.2	Review Revised Plans with Footprint	5	6/15/2021	6/20/2021			Consultant	
10.3	Attend Plan In Hand	15	6/20/2021	7/5/2021			Consultant	
11.1	Receive R/W Submittal Plans	0	8/15/2021	8/15/2021			PMD	
11.2	Review R/W Submittal Plans with Footprint	5	8/15/2021	8/20/2021			Consultant	
12.1	Draft CE Preparation	15	8/20/2021	9/4/2021			Consultant	
12.2	ODOT Review	15	9/4/2021	9/19/2021			ODOT Environmental Contract Manager	
12.3	Final CE Preparation	5	9/19/2021	9/24/2021			Consultant	
12.4	FHWA Review of CE Document	5	9/24/2021	9/29/2021			FHWA	
12.5	Completion of CE Document	5	9/29/2021	10/4/2021			ODOT Environmental Contract Manager	

## Oklahoma Dept. of Transportation - Bridge Inspection Report

<b>NBI No.:</b> 12429	<b>Structure No.:</b> 1910 0066 X	<b>Local ID:</b> -1	<b>Suff. Rating:</b> 54.40	<b>FO</b>
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<b>Bridge Description:</b> 35ft.-50ft.-35ft. I-BM. SPANS WITH 2-18ft. SAFETY CURBS	<b>INSPECTION</b> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Type</th> <th>Insp. Req.</th> <th>Insp. Done</th> <th>Freq.</th> <th>Insp. Date</th> <th>Next Insp.</th> </tr> <tr> <td>NBI:</td> <td></td> <td>1</td> <td>24 months</td> <td>3/8/2022</td> <td>03/08/2024</td> </tr> <tr> <td>FC:</td> <td>N</td> <td>0</td> <td></td> <td>NA</td> <td>NA</td> </tr> <tr> <td>UW:</td> <td>N</td> <td>0</td> <td></td> <td>NA</td> <td>NA</td> </tr> <tr> <td>OS:</td> <td>N</td> <td>0</td> <td></td> <td>NA</td> <td>NA</td> </tr> </table>	Type	Insp. Req.	Insp. Done	Freq.	Insp. Date	Next Insp.	NBI:		1	24 months	3/8/2022	03/08/2024	FC:	N	0		NA	NA	UW:	N	0		NA	NA	OS:	N	0		NA	NA
Type	Insp. Req.	Insp. Done	Freq.	Insp. Date	Next Insp.																										
NBI:		1	24 months	3/8/2022	03/08/2024																										
FC:	N	0		NA	NA																										
UW:	N	0		NA	NA																										
OS:	N	0		NA	NA																										

<b>IDENTIFICATION</b> 1. State: Oklahoma 2. Division: Division 8 3. County: CREEK 4. City: BRISTOW Admin Area: Unknown 5a. On/Under: Route On Structure 5b. Kind of Hwy: State Hwy 5c. Lvl of Svc: Mainline 5d. Route No.: 00016 5e. Dir. Sufx: N/A (NBI)	7. Facility Carried : S.H. 16 6. Feat. Intersect: SAND CREEK 9. Location: 0.7 MI E JCT SH 48 11. Mile Post: 0.660 mi 13. LRS Inv. / Sub Rte: -1 / -1 16. Latitude: 35° 49' 41.39" 17. Longitude: 096° 22' 31.72" 98. Border Brdg: Unknown (P) % Responsible: 0.00 99. Border Brdg #: Unknown
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<b>STRUCTURE TYPE AND MATERIALS</b> 43a/b. Main Span: Steel / Stringer/Girder 44a/b. Appr. Span: Unknown / Unknown (P) 45. # of Main Spans: 3 46. # of Appr. Spans: 0 107. Deck Type: Concrete-Cast-in-Place 108a. Wearing Surface: Bituminous 108b. Membrane: Unknown 108c. Deck protection: Unknown	<b>CONDITION</b> 58. Deck: 5 Fair 59. Sup.: 5 Fair 60. Sub: 6 Satisfactory 62. Culvert: N/A (NBI) 61. Chan./Chan. Prot.: 7 Minor Damage <b>Flowline Notes</b> NOTE: MID CHAN., UPSTREAM, TOP CURB. DEPTH 1 FT 7 IN.
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<b>AGE AND SERVICE</b> 19. Detour Length: 41.0 mi 27. Year Built: 1950 28a/b. Lanes on/und: 2 / 0 29. ADT: 2,200 30. Year of ADT: 2020 42a/b. Type of Svc on/und: Highway / Waterway	106. Year Reconst.: 109. Truck ADT: 15%
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<b>GEOMETRIC DATA</b> 10. Vert. Clearance: 99.99 ft 32. Appr Rwy Width: 26.00 ft 33. Median: No median 34. Skew: 0.00° 35. Struct. Flared: No flare 47. Horizontal Clr: 25.92 ft 48. Length Max Span: 49.87 ft 49. Struct. Length: 121.06 ft	50a. Curb/Sdwk Width L: 1.64 ft 50b. Curb/Sdwk Width R: 1.64 ft 51. Width Curb to Curb: 25.92 ft 52. Width Out to Out: 30.84 ft Deck Area: 3,735.08 sq. ft 53. Min. Vert. Cl. Ovr Brg: 99.99 ft 54a. Min. Vt. Undclr. Ref.: N Feature not hwy c 54b. Min. Vert. Undclr.: 0.00 ft 55a. Min. Lat. Undclr. Ref.: N Feature not hwy 55. Min. Lat. Underclr. R: 0.00 ft 56. Min. Lat. Underclr. L: 0.00 ft
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<b>OKLAHOMA ITEMS</b> 200c. Temperature: 34 200d. Weather: Cloudy 201. Struc. Stl. ASTM Desig.: -1 / -1 202. Waterprf. Membrane: -1 Date Installed: 01/01/1901 203. Type Exp. Device: Pourable 204. Type of Railing: Parapet Retrofit 205. Material Quantity: 423.00 208a. Type of Abutment: Skeleton b. Type of Found.: Concrete Piling 209. Type of Pier/Found.: 2 / Yes Concrete Piling 210. Foundation Elev.: <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>-1.00</td> <td>-1.00</td> </tr> <tr> <td>7,320.00</td> <td>7,200.00</td> </tr> <tr> <td>-1.00</td> <td></td> </tr> </table> 211. Wear. Surf. Prot. Sys.: None Date Installed: 01/01/1901 211c. Silane Reapplied 211d. Date : 213. Utilities Attached:	-1.00	-1.00	7,320.00	7,200.00	-1.00		214a. Posted Weight Limit: NR b. Posted Speed Limit: c. Narrow/1way Brdg Sign: NA d. Vertical Clr. Sign: NA Adv. Warning Sign: NA e. Navigation Lights?: NA Working/Not Working: NA 215. Overpass: STATE HIGHWAY 218. Functionally Obsolete : FO 220. Bridge Redecked: - 221. Substr. Cond. (UW): - 222. Fill Over RCB: 223. Appr. Slab/Rwy Cond.: 3 225. Paint Type/Ovrct: Red Lead 3 Coat System N/A 226. Date Painted: 1999 227. Paint Color: Gray 233. Deck Forming: Conventional Forming 238. School Bus Rte.: Current & Desired route 240. Appr. Rwy Type.: Asphalt/Bituminous 243. Grdr Spacing/No.: /
-1.00	-1.00						
7,320.00	7,200.00						
-1.00							

<b>LOAD RATING AND POSTING</b> 31. Design Load: M 18 (H 20) 41. Post. Status: A Open, no restriction 70. Posting: 5 At/Above Legal Loads 63. Op / 65. Inv. Rating Meth.: 1 LF Load Factor / 1 LF Load Factor <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th></th> <th>H</th> <th>HS</th> <th>3-3</th> <th>EV3</th> <th>SHV</th> </tr> <tr> <td>64. Operating Rating (tons):</td> <td>37.00</td> <td>47.00</td> <td>83.00</td> <td>58.00</td> <td>46.00</td> </tr> <tr> <td>66. Inventory Rating (tons):</td> <td>22.00</td> <td>28.00</td> <td>50.00</td> <td>35.00</td> <td></td> </tr> </table>		H	HS	3-3	EV3	SHV	64. Operating Rating (tons):	37.00	47.00	83.00	58.00	46.00	66. Inventory Rating (tons):	22.00	28.00	50.00	35.00		<b>APPRAISAL</b> 36a. Brdg Rail: 1 Meets Standards 36b. Transition: 0 Substandard 36c. Appr. Rail: 0 Substandard 36d. Appr. Rail Ends: 1 Meets Standard 67. Str Evaluation: 5 Above Min Toler 68. Deck Geom.: 3 Intolerable - Correct 69. Vert./Horiz. Undclr: Not applicable (NB) 71. Waterway Adeq: 7 Above Minimum 72. Appr. Alignment: 8 Equal Desirable Crit 113. Scour Critical: 8 Stable Above Footin
	H	HS	3-3	EV3	SHV														
64. Operating Rating (tons):	37.00	47.00	83.00	58.00	46.00														
66. Inventory Rating (tons):	22.00	28.00	50.00	35.00															

<b>PROPOSED IMPROVEMENTS</b> 94. Bridge Cost: \$581,159 95. Roadway Cost: \$958,912 96. Total Cost: \$1,627,245 97. Yr. of Cost Est.: 2015	75. Type of Work: 31 Repl-Load Capacity 76. Lngth of Improvement: 226.2 ft 114. Future ADT: 3,520 115. Yr. of Future ADT: 2040
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<b>NAVIGATION DATA</b> 38. Nav. Control: Permit Not Required 39. Vert. Clearance: 0.0 ft 40. Horiz. Clearance: 0.0 ft	111. Pier Protect.: 1 Not Required 116. Lift Bridge Vert. Clr.: 0.0 ft
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244. Span Lengths: <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 30px; text-align: center;">35</td> <td style="width: 30px; text-align: center;">50</td> <td style="width: 30px; text-align: center;">35</td> </tr> </table>	35	50	35	245. Girder Depth: 26.00 246a. Type of Overlay: AC Overlay b. Overlay Thickness: 2.00 c. Overlay Date: 01/01/1968 d. Ovl Depth Changed >1": - 247. Protective Systems:
35	50	35		

248. # Field Splices w/ Corrosion: 249. Scour Crit. POA Exists?: - 250. Headwall: 258. Plans w/Found. in ODOT File: - 259. Scour Eval. in ODOT File: - 263. Interchange at Intersection: No 264. Interstate Milepoint: -1.00	247. Protective Systems:
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# Oklahoma Dept. of Transportation - Bridge Inspection Report

**NBI No.:**  
**12429**

**Structure No.:**  
**1910 0066 X**

**Local ID:**  
**-1**

**Suff. Rating:**  
**54.40**

**FO**

Inspection Date: 3/8/22

Ryan Braggs

Invoice No.: CREEK2022RJ

Inspected With:

Jonathan Steinbach

**BRIDGE NOTES:**

**INSPECTION NOTES:** 3/8/22

< none >

**ELEMENT CONDITION STATE DATA**

Elem. / Env	Description	Unit	Total Qty	% 1	Qty. 1	% 2	Qty. 2	% 3	Qty. 3	% 4	Qty. 4
12 / 4	Re Concrete Deck	sq.ft	3,146.00	0%	0.00	0%	0.00	100%	3,146.00	0%	0.00
FX: SPALLS WITH HOLE AT EXP. JTS. FX: BOTH CURBS SEVERE SPALLING. FX: ASPHALT HAS FAILED.											
510 / 4	Wearing Surfaces	sq.ft	3,146.00	0%	0.00	0%	0.00	100%	3,146.00	0%	0.00
FX: SEVERE CRACKING WITH POTHOLE FORMING.											
107 / 4	Steel Opn Girder/Beam	ft	545.00	0%	0.00	100%	545.00	0%	0.00	0%	0.00
-1											
515 / 4	Steel Protective Coating	sq.ft	3,198.00	0%	0.00	0%	0.00	100%	3,198.00	0%	0.00
FX: PAINT FAILED @ BM.ENDS AND FLANGES.											
205 / 4	Re Conc Column	each	4.00	0%	0.00	100%	4.00	0%	0.00	0%	0.00
FX: MINOR SCALING TO ALL COLUMNS.											
215 / 4	Re Conc Abutment	ft	62.00	0%	0.00	97%	60.00	3%	2.00	0%	0.00
FX: BOTH ABUTMENTS HAVE BACKFILL ERODING, SPALLS WITH EXPOSED REBAR AND LIGHT SCALING WITH SECURE AGGREGATE.											
227 / 4	Re Conc Pile	(EA)	17.00	0%	0.00	100%	17.00	0%	0.00	0%	0.00
FX: EROSION HAS EXPOSED 17 TOTAL CONCRETE PILES. 8 ARE EXPOSED UNDER ABUT. #1 AND ITS WINGS AND 9 UNDER ABUT. #2 AND ITS WINGS.											
234 / 4	Re Conc Pier Cap	ft	62.00	0%	0.00	81%	50.00	19%	12.00	0%	0.00
FX: BOTH PIER CAPS SPALLS WITH EXPOSED REBAR.											
301 / 4	Pourable Joint Seal	ft	60.00	0%	0.00	0%	0.00	100%	60.00	0%	0.00
FX: GLANDS LOOSING ADHESION.											
311 / 4	Moveable Bearing	each	18.00	0%	0.00	0%	0.00	100%	18.00	0%	0.00
PX: ROLLERS MOD. TO HEAVY CORROSION WITH SECTION LOSS. CLEAN, PAINT, OR REPLACE.											
313 / 4	Fixed Bearing	each	18.00	0%	0.00	0%	0.00	100%	18.00	0%	0.00
FX: FIXED BEARINGS MOD. TO SEVERE CORROSION WITH MEASURABLE SECTION LOSS. CLEAN, PAINT, OR REPLACE.											
321 / 4	Re Conc Approach Slab	sq.ft	2.00	0%	0.00	100%	2.00	0%	0.00	0%	0.00
NOTE: OVERLAID WITH ASPHALT.											
331 / 4	Re Conc Bridge Railing	ft	243.00	97%	236.00	3%	7.00	0%	0.00	0%	0.00
FX: MINOR POPOUTS AND SPALLS.											
859 / 4	Soffit	(EA)	1.00	0%	0.00	0%	0.00	100%	1.00	0%	0.00
FX: SPALLS WITH EXPOSED REBAR & SPALLING WITH MOD. EFFLORESCENCE AND LEACHING.											
865 / 4	St.Open Gird End(5Ft)	(LF)	180.00	0%	0.00	0%	0.00	100%	180.00	0%	0.00
FX: ALL BM. ENDS MOD.CORROSION WITH SECTION LOSS.											
870 / 4	Concrete Wingwall	(EA)	4.00	0%	0.00	100%	4.00	0%	0.00	0%	0.00
FX: ALL WINGS UNDERMINED.											
909 / 4	Pourable Fix Jt.Seal	(LF)	60.00	0%	0.00	0%	0.00	100%	60.00	0%	0.00
FX: JOINTS ARE LEAKING.											
963 / 4	Steel Section Loss SF	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
PX: MOD. TO HEAVY SECTION LOSS BEARINGS & BEAM ENDS.											
968 / 4	Erosion SF	(EA)	1.00	0%	0.00	100%	1.00	0%	0.00	0%	0.00
FX: BACKFILL ERODED FROM UNDER BOTH ABUTMENTS AND ALL 4 WINGS. 17 CONC. PILES EXPOSED											
974 / 4	Straight Gird.Diaphr	(EA)	1.00	0%	0.00	0%	0.00	100%	1.00	0%	0.00
FX: SEVERE SECTION LOSS OVER PIERS.											

### CE Document Checklist (Updated 01/31/2022)

Should be included in the Other Section of all projects

JP No:	29682(04)	Prepared by	M. Harris
County:	Creek	Checked by	A. Aikman
Date Checked:	4/29/2022		
No	Description		Checked?
<b>1</b>	<b>Project Information</b>		
1.1	Correct Project No? (Check against Oracle info)		X
1.2	Correct NBI No.? - Check against initiation report, Oracle, and plans		X
1.3	Location No. for County projects only?		NA
1.4	Correct Field District and County?		X
1.5	Correct Project Description? (Check against Oracle info and make sure it matches project extent on the plans. If it doesn't match, get the PM to fix the Oracle )		X
1.6	Construction Program/STIP/TIP Checked?		X
<b>2</b>	<b>Existing Conditions</b>		
2.1	If it is a roadway project, is the roadway described first, then mention any bridges mentioned within the project extent		X
2.2	Are the existing bridge type (span or box), width for span bridges (or length for box) and structural conditions for each bridge correct ? Check against Bridge Report.		X
2.3	Correct approach roadway width?		X
2.4	Any roadway geometric deficiencies?		NA
2.5	Traffic data from plans - existing and projected?		X
<b>3</b>	<b>Purpose &amp; Need</b>		

3.1	Why is the project needed ( <b>NEVER</b> what is proposed – REPLACE BRIDGE or WIDEN ROADWAY or ADD SHOUDERS is <b>NOT</b> the Purpose & Need)	X
<b>4</b>	<b>Alternatives &amp; Proposed improvement</b>	
4.1	Proposed roadway and bridge width	X
4.2	Existing or offset alignment – reason for offset	X
4.3	Replacement, Rehab, Removal or new bridge where there was none. Removal of bridge or wideing of bridge.	X
4.4	Road open to traffic during construction (If there is a shoofly, it is considered open to traffic. Closed to traffic is only if there is a posted detour on a different route)	X
4.5	Mention if everthing is within existing R/W	X
<b>4</b>	<b>Public Involvement</b>	
4.1	Check appropriate public involvement box. Include Road Closure letter, Early Coordination letters, Public Notices and Public/Stakeholder Meeting material in the appropriate Appendixes	X
<b>5</b>	<b>CE Questions &amp; Studies</b>	
5.1	Is the NEPA on Hold Memo included?	Not Needed.
5.2	Are the R/W submittal or Final Plans with <b>DATE STAMP</b> included in the Plans & Footprint Section?	X
5.3	Did the preparer verify that the plans were within study limits?	X
5.4	Is the offset alignment far enough away so that R/W not immediately adjacent to existing R/W is needed?	NA
5.5	Are the following early coordination letters and responses included <b>in Early oordination setion</b> ? (1) Property owner letter with list of property owners or letter from County Commissioner with list of property owners, (2) BLM Letter and for state projects, (3) BIA Letters, (4) Small City Letter, (5) Department of Mines	X

5.6	Were there Tribal or Federal properties identified (from plans and recon data)? If there are tribal, include all the tribal consent letters, signed permission letters and any other related permission information. If there are federal properties identified, include complete coordination information. If there are federal properties identified as a 4(f) property, this information will be included in the 4(f) appendix instead. <b>If there are BIA properties, the project is in Osage Nation or there are federal properities, it will be an ICE.</b>	NA
5.7	Are the studies arranged in the same order as the CE Questions?	X
5.8	CR Report complete & arranged in the chronological order from latest to oldest- includes letter to and from SHPO & OAS, CR report, Initial letters to and responses from Tribes, Final letters to and responses from Tribes? Do the CR Notes match the report? Are the notes checked in	X
5.9	Have the 4(f) properties been identified (from Recon, county map, and plans)? If there are 4(f) properties, is the complete Section 4(f) coordination included in the Section 4(f) section?	NA
5.10	Was Section 6(f) properties verified with Dept. of Tourism for any parks?	NA
5.11	Is a noise study needed (offset alignments, capacity increase, or major vertical grade change)? If yes, is it included in the Noise Section and any commitments listed in the CE	NA
5.12	Is the biological studies included and any notes for species included in the commitments.	X
5.13	Was there a Preliminary 404 Review done by the 404 permit coordinator for any projects which had > 0.1 streams or > 0.5 AC of wetlands in the initial study? Is the 404 permit box checked ( <b>should be yes for all projects involving a bridge crossing a blue line</b> ).	X
5.14	Does the project involve navigable waters (check USACE Section 10 waters and then verify with Coastguard) and requires Coastguard coordination? If so, is it listed in the Commitment?	NA
5.15	Does the project involve one of the scenic rivers or streams (Check Oklahoma Scenic Rivers website)? If so, include coordination with Scenic Rivers in the "Other Section"	NA

5.16	Was there coordination done with NRCS for projects involving new R/W and not in an urban area? Letter to NRCS, AD-1066 Form completed partially (if no response from NRCS) or completely (if NRCS completed their portion), and statement of nor response from NRCS if applicable	X
5.17	Is the project location circled on the FEMA map or printout from FEMA site saying no map is available included? If the project is in zone A-E, is the coordination with the Designer to determine the need for map revision included?	X
5.18	Is the haz waste note mentioned and included at the end of the CE if applicable? If the haz waste specialist required plans to complete studies, were the plans provided and a revised memo obtained?	X
5.19	Were the plans checked for road closure? Include sheets (Round Robin) which say road will not be closed for bridge joint, paint, etc. projects, letters sent and any responses. If there is road closure, were letters sent	X
5.20	Does the "Other Section" include (1) initiation report for state projects or NEPA Checklist for Local Govt. projects, (2) Any additional project coordination, (3) bridge reports, <del>(4) Project Oracle information sheet with NEPA document information,</del> (4) Completed CE Review Checklist	X