



June 21, 2018

Mr. Angel Correa
Division Administrator
Federal Highway Administration
700 West Capitol, Room 3130
Little Rock, Arkansas 72201-3298

Re: Job Number 080504
FAP Number NHPP-0049(16)
Deer Creek Str. & Apprs. (S)
Route 27, Section 7
Bridge Number 02767
Montgomery County
Tier 3 Categorical Exclusion

Dear Mr. Correa:

The Environmental Division has reviewed the referenced project and it falls within the definition of the Tier 3 Categorical Exclusion as defined by the ARDOT/FHWA Memorandum of Agreement on the processing of Categorical Exclusions. The following information is included for your review and, if acceptable, approval as the environmental documentation for this project.

The purpose of this project is to replace a substandard bridge on Highway 27 over Deer Creek in Montgomery County. Total length of the project is approximately 0.32 mile. A project location map is enclosed.

The existing roadway consists of two 11-foot wide paved travel lanes with 5-foot wide shoulders. Proposed roadway improvements maintain the two 11-foot wide paved travel lanes but will increase the paved shoulders to 6-foot wide. Approximately 2.3 acres of additional right of way will be required for this project.

The existing bridge over Deer Creek is a 202' x 27' five-span reinforced concrete deck on steel I-beams with concrete multi-column abutments and intermediate bents on spread footings.

The proposed bridge is a 282' x 37' four-span continuous composite w-beam unit with single column intermediate bents on drilled shafts and steel pile end bents. The

proposed bridge would be constructed approximately 60 feet upstream to maintain traffic on the existing bridge during construction.

Design data for this project is as follows:

Design Year	Average Daily Traffic	Percent Trucks	Design Speed
2019	900	16	40 mph
2039	1,100	16	40 mph

There are no relocations, public water supplies, mapped floodplains, or environmental justice issues associated with this project. Field inspections found no evidence of existing underground storage tanks or hazardous waste deposits. Approximately 0.6 acre of Prime Farmland will be converted to highway right of way. Form NRCS-CPA-106 is enclosed.

Noise predictions have been made for this project utilizing the Federal Highway Administration's Traffic Noise Model 2.5 procedures. A noise assessment is enclosed.

The official species list obtained through the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation website identifies the northern long-eared bat (*Myotis septentrionalis*), Rabbitsfoot (*Theliderma cylindrica*) and harperella (*Ptilimnium nodosum*) as potentially occurring in the proposed project area. A 'no effect' determination was made for the federally listed plant and mussel species. The USFWS species list and clearance are enclosed.

The Final 4(d) Rule and Programmatic Biological Opinion applies to activities that have the potential to affect northern long-eared bats. The Final 4(d) Rule exempts the incidental take of northern long-eared bats from take prohibitions in the Endangered Species Act. The exemptions apply as long as the activities do not occur within 0.25 mile of a known hibernaculum or within 150 feet of a known occupied maternity roost from June 1 to July 31. No known hibernacula or maternity roosts exist within the project limits. A winter clearing restriction will be placed on the job that prohibits the clearing of trees between April 1 and November 15. All offsite locations will require coordination with USFWS. The 4(d) Rule Streamlined Checklist is enclosed.

Approximately 0.1 acre of temporary scrub-shrub wetland impacts and 0.1 acre of temporary stream impacts are anticipated during construction. Approximately 0.1 acre of scrub-shrub wetlands will be permanently impacted for construction of the northern approach of the new bridge, and 0.5 acre of scrub-shrub wetlands will be permanently cleared for long-term maintenance purposes. Permanent stream impacts to Deer Creek resulting from pier construction are estimated at less than 0.1 acre.

Total wetland impacts are estimated at 0.7 acre, while total stream impacts are estimated at 0.2 acre. Wetland impacts will be mitigated at ARDOT's Upper Saline Mitigation Bank located in Saline County. Construction of the proposed project should be allowed under the terms of a Section 404 Nationwide Permit 23 for Approved Categorical Exclusions, as defined in the Federal Register 82(4):1860-2008.

The proposed bridge to be replaced, ARDOT bridge number 02767, was built in 1954 as part of a project to construct six bridges in preparation for the flood control project featuring Blakely Mountain Dam and the creation of Lake Ouachita as a reservoir. The bridge is eligible for the National Register of Historic Places under Criterion A for its association with the flood control project, and it is eligible for Section 4(f) protection as a historic site. The bridge was marketed by ARDOT, but no responsible entity came forward to assume ownership. A programmatic Section 4(f) evaluation for the bridge is enclosed that includes a Memorandum of Agreement requiring documentation to mitigate demolition of the bridge. No other historic or cultural resources will be impacted as part of the proposed project. The enclosed Arkansas State Historic Preservation Office concurrence is enclosed.

The proposed project will require approximately 2.1 acres of property from the U.S. Army Corps of Engineers (USACE). All material excavated from USACE property will be retained by the USACE on nearby stockpile sites shown on the enclosed figure. The NEPA evaluation for this project included these stockpile areas. Native vegetation will be planted on all Federal property.

If you have any questions, please contact the Environmental Division at 569-2281.

APPROVED

Environmental Specialist
Federal Highway Administration
Date: 7/9/2018

Sincerely,

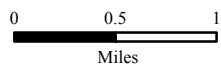
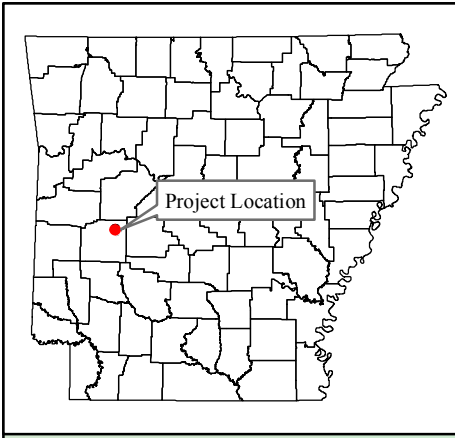


John Fleming
Division Head
Environmental Division

Enclosures

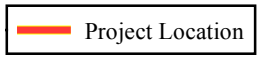
JF:SS:fc

c: Program Management
Right of Way
Roadway Design
District 8
Master File



ArDOT - Environmental GIS - Strawn
March 6, 2018

Job 080504
Deer Creek Str. & Apprs.
(Hwy. 27)
Montgomery County





THE DEPARTMENT OF ARKANSAS
HERITAGE

Asa Hutchinson
Governor

Stacy Hurst
Director

February 14, 2018

RECEIVED
ARDOT
FEB 16 2018
ENVIRONMENTAL
DIVISION

Mr. John Fleming
Division Head
Environmental Division
Arkansas State Highway and Transportation Department
PO Box 2261
Little Rock, AR 72203-2261

RE: Montgomery – General
Section 106 Review – FHWA
ARDOT Job Number 080504
Deer Creek Str. & Apprs (S)
AHPP Tracking Number 99884.02

Dear Mr. Fleming:

The staff of the Arkansas Historic Preservation Program (AHPP) has reviewed the above-referenced Phase I cultural resources report.

Based on the information presented in this report, we concur that the proposed undertaking will have no effect on historic properties.

Tribes that have expressed an interest in the area include the Caddo Nation (Mr. Phil Cross), the Osage Nation (Dr. Andrea Hunter), the Quapaw Tribe of Oklahoma (Mr. Everett Bandy), and the Shawnee Tribe of Oklahoma (Ms. Kim Jumper). We recommend that they be consulted in accordance with 36 CFR § 800.2 (c) (2).

Thank you for the opportunity to review this undertaking. Please refer to the AHPP Tracking Number listed above in all correspondence. If you have any questions, please call Tim Dodson of my staff at 501-324-9784.

Sincerely,

Scott Kaufman
Director, AHPP

cc: Mr. Randal Looney, Federal Highway Administration
Dr. Andrea Hunter, Osage Nation
Dr. Ann Early, Arkansas Archeological Survey

TD:tr

Arkansas Arts Council

Arkansas Natural
Heritage Commission

Arkansas State Archives

Delta Cultural Center

Historic Arkansas Museum

Mosaic Templars
Cultural Center

Old State House Museum



ARKANSAS HISTORIC
PRESERVATION PROGRAM



1100 North Street
Little Rock, AR 72201

(501) 324-9880
fax: (501) 324-9184
tdd: 711

e-mail:
info@arkansaspreservation.org
website:
www.arkansaspreservation.com

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**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

PART I (To be completed by Federal Agency) Job 080504		3. Date of Land Evaluation Request 3/15/18	4. Sheet 1 of
1. Name of Project Deer Creek Str. & Apprs. (Hwy. 27)		5. Federal Agency Involved FHWA	
2. Type of Project Bridge Replacement		6. County and State Montgomery AR.	
PART II (To be completed by NRCS)		1. Date Request Received by NRCS	2. Person Completing Form
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES NO		4. Acres Irrigated Average Farm Size	
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: %		7. Amount of Farmland As Defined in FPPA Acres: %
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS	

PART III (To be completed by Federal Agency)	Alternative Corridor For Segment			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly				
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres In Corridor				

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	.6			
B. Total Acres Statewide And 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				

PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)

PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))	Maximum Points				
1. Area in Nonurban Use	15	15			
2. Perimeter in Nonurban Use	10	10			
3. Percent Of Corridor Being Farmed	20	0			
4. Protection Provided By State And Local Government	20	0			
5. Size of Present Farm Unit Compared To Average	10	0			
6. Creation Of Nonfarmable Farmland	25	0			
7. Availability Of Farm Support Services	5	5			
8. On-Farm Investments	20	0			
9. Effects Of Conversion On Farm Support Services	25	0			
10. Compatibility With Existing Agricultural Use	10	0			
TOTAL CORRIDOR ASSESSMENT POINTS	160	30			

PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100	100			
Total Corridor Assessment (From Part VI above or a local site assessment)	160	30			
TOTAL POINTS (Total of above 2 lines)	260	130			

1. Corridor Selected: New Location Adjacent to existing	2. Total Acres of Farmlands to be Converted by Project: .6 acres of Prime Farmland	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>
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5. Reason For Selection:

Signature of Person Completing this Part: *Joe Bell* DATE: 7/9/18

NOTE: Complete a form for each segment with more than one Alternate Corridor

ARDOT JOB NUMBER 080504

NOISE ANALYSIS

Fundamentals of Sound and Noise

“Noise” is defined as an unwanted sound. Sounds are described as noise if they interfere with an activity or disturb the person hearing them. Sound is measured in a logarithmic unit called a decibel (dB). The human ear is more sensitive to middle and high frequency sounds than it is to low frequency sounds, so sound levels are weighted to more closely reflect human perceptions. These “A-weighted” sounds are measured using the decibel unit dB(A). Because the dB(A) is based on a logarithmic scale, a 10 dB(A) increase in sound level is generally perceived as twice as loud while a 3 dB(A) increase is just barely perceptible to the human ear.

Sound levels fluctuate with time depending on the sources of the sound audible at a specific location. In addition, the degree of annoyance associated with certain sounds varies by time of day, depending on other ambient sounds affecting the listener and the activities of the listener. The time-varying fluctuations in sound levels at a fixed location can be quite complex, so they are typically reported using statistical or mathematical descriptors that are a function of sound intensity and time. A commonly used descriptor of the equivalent sound level is Leq , which represents the equivalent of a steady, unvarying level over a defined period of time containing the same level of sound energy as the time varying noise environment. $Leq(h)$ is a sound level averaged over one hour. For highway projects, the $Leq(h)$ is commonly used to describe traffic-generated sound levels at locations of outdoor human use and activity (such as residences).

Noise Impact Criteria

Traffic noise impacts take place when the predicted traffic noise levels approach or exceed the noise abatement standard, or when the predicted traffic noise levels exceed the existing noise level by ten dB(A) (decibels on the A-scale). The noise abatement standard of 67 dB(A) is used for sensitive noise receptors such as residences, schools, churches, and parks. The term “approach” is considered to be one dB(A) less than the noise abatement standard.

The number of noise receptors was estimated for this project utilizing the Federal Highway Administration’s Traffic Noise Model 2.5, existing and proposed roadway information, existing traffic information, and projected traffic levels for 2039.

Traffic noise analyses

Traffic noise analyses were performed for the project utilizing a roadway cross-section for Highway 27 two 11-foot paved travel lanes with 6-foot wide paved shoulders.

Effects of Project

The traffic noise estimates resulted in a noise abatement distance of 40 feet from the centerline of the approaches to the proposed bridge. No sensitive receptors located along the proposed project location are predicted to experience noise impacts resulting from noise levels that approach or exceed 67dBA during the design year.

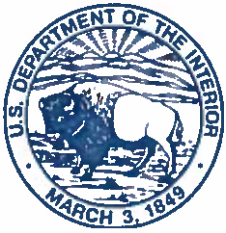
Traffic Noise Abatement

Since noise impacts are predicted within 500 feet of the proposed project, the feasibility and reasonableness of potential noise abatement measures must be evaluated. Based upon ARDOT's "Policy on Highway Traffic Noise Abatement", any noise abatement effort using barrier walls or berms is not warranted for this project. This is due to the relatively low density of development.

To avoid noise levels in excess of design levels, any future receptors should be located a minimum of 10 feet beyond the distance that the noise abatement standard is projected to occur. This distance should be used as a general guide and not a specific rule since the noise will vary depending upon the roadway grades and other noise contributions.

Any excessive project noise, due to construction operations, should be of short duration and have a minimum adverse effect on land uses or activities associated with this project area.

In compliance with Federal guidelines, a copy of this analysis will be transmitted to the West Central Arkansas Planning and Development District for possible use in present and future land use planning.



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Arkansas Ecological Service Field Office
110 South Amity Road, Suite 300
Conway, Arkansas 72032



March 20, 2018

Mr. John Fleming
c/o Kayti Ewing
Arkansas Department of Transportation
10324 Interstate 30
Little Rock, Arkansas 72209

Dear Mr. Fleming,

The Service has reviewed your assessment and determinations for Arkansas Department of Transportation (ArDOT) Job Number 080504 Deer Creek Str. & Apprs., Montgomery County, Arkansas. The project was described and assessed as follows (abbreviated):

The Arkansas Department of Transportation (ArDOT) is proposing to replace the existing bridge over Deer Creek with a new bridge, approximately 70 feet upstream, on Highway 27 in Montgomery County, see attached kmz design file. This project does involve USACE property. Approximately 0.7 acre of scrub-shrub wetlands will be cleared on the west side of Highway 27, north side of Deer Creek, and approximately 1.0 acre of oak-hickory-pine upland forest will be cleared west of Highway 27, south of Deer Creek. The USACE Lake Ouachita will require a timber sale be conducted for any marketable timber.

The official species list obtained through the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) website identifies the Northern Long-eared Bat (*Myotis septentrionalis*), Rabbitsfoot (*Theliderma cylindrica*) and Harperella (*Ptilimnium nodosum*) as potentially occurring in the proposed project area. A 'no effect' determination was made for the federally listed plant and mussel species due to lack of habitat. Montgomery County is within the consultation area for the federally listed Northern Long-eared Bat (*Myotis septentrionalis*). The project will have a winter clearing only restriction included in the job contract, which prohibits tree clearing during April 1 to October 1. Approximately 1.7 acres of forested areas will be cleared for the proposed project.

The Final 4(d) Rule and Programmatic Biological Opinion (BO) applies to the project's activities that have the potential to affect Northern Long-eared Bats. The Final 4(d) Rule exempts the incidental take of Northern Long-eared Bats from take prohibitions in the Endangered Species Act. The exemptions apply as long as the activities do not occur within 0.25 mile of a known hibernaculum or

within 150 feet of a known occupied maternity roost from June 1 to July 31. No known hibernacula or maternity roosts exist within the project limits; therefore, the project can proceed without restrictions. All offsite locations will require separate coordination with USFWS. Please see the 4(d) Rule Streamlined Checklist.

Due to the distance to known species locations and the special provision for stream conservation and sediment control measures, the Service agrees with your assessments.

The Service has reviewed your determination that the proposed action will not result in any prohibited incidental take for Northern Long-eared Bat. This project may affect the Northern Long-eared Bat; however, there are no effects beyond those previously disclosed in the Service's programmatic biological opinion for the final 4(d) rule dated January 5, 2016. Any taking that may occur incidental to this project is not prohibited under the final 4(d) rule (50 CFR §17.40(o)). This project is consistent with the description of the proposed action in the programmatic biological opinion, and the 4(d) rule does not prohibit incidental take of the Northern Long-eared Bat that may occur as a result of this project. Therefore, the programmatic biological opinion satisfies the "action agency" responsibilities under ESA section 7(a)(2) relative to the Northern Long-eared Bat for this project.

Please keep in mind that you must report any departures from the plans submitted; results of any surveys conducted; or any dead, injured, or sick Northern Long-eared Bats that are found to this office. If this project is not completed within one year of this letter, you must update your determination and resubmit the required information.

For further assistance or if you have any questions, please contact Lindsey Lewis at (501) 513-4489 or lindsey_lewis@fws.gov.

Sincerely,



Melvin L. Tobin
Field Supervisor



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Arkansas Ecological Services Field Office
110 South Amity Suite 300
Conway, AR 72032-8975
Phone: (501) 513-4470 Fax: (501) 513-4480
<http://www.fws.gov/arkansas-es>

In Reply Refer To:

March 01, 2018

Consultation Code: 04ER1000-2018-SLI-0648

Event Code: 04ER1000-2018-E-00900

Project Name: 080504 Deer Creek Str. & Apprs.

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies endangered, threatened, 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.*). **This letter only provides an official species list and technical assistance; if you determine that listed species and/or designated critical habitat may be affected in any way by the proposed project, even if the effect is wholly beneficial, consultation with the Service will be necessary.**

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. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found on our website.

Please visit our website at <http://www.fws.gov/arkansas-es/IPaC/home.html> for species-specific guidance to avoid and minimize adverse effects to federally endangered, threatened, proposed, and candidate species. Our web site also contains additional information on species life history and habitat requirements that may be useful in project planning.

If your project involves in-stream construction activities, oil and natural gas infrastructure, road construction, transmission lines, or communication towers, please review our project specific guidance at <http://www.fws.gov/arkansas-es/IPaC/ProjSpec.html>.

The karst region of Arkansas is a unique region that covers the **northern third of Arkansas** and we have specific guidance to conserve sensitive cave-obligate and bat species. **Please visit <http://www.fws.gov/arkansas-es/IPaC/Karst.html> to determine if your project occurs in the karst region and to view karst specific-guidance.** Proper implementation and maintenance of best management practices specified in these guidance documents is necessary to avoid adverse effects to federally protected species and often avoids the more lengthy formal consultation process.

If your species list includes any mussels, Northern Long-eared Bat, Indiana Bat, Yellowcheek Darter, Red-cockaded Woodpecker, or American Burying Beetle, your project may require a presence/absence and/or habitat survey prior to commencing project activities. Please check the appropriate species-specific guidance on our website to determine if your project requires a survey. We strongly recommend that you contact the appropriate staff species lead biologist (see office directory or species page) prior to conducting presence/absence surveys to ensure the appropriate level of effort and methodology.

Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service, to make "no effect" determinations. If you determine that your proposed action will have "no effect" on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally-listed threatened or endangered fish or wildlife species without the appropriate permit.

Through the consultation process, we will analyze information contained in a biological assessment that you provide. If your proposed action is associated with Federal funding or permitting, consultation will occur with the Federal agency under section 7(a)(2) of the ESA. Otherwise, an incidental take permit pursuant to section 10(a)(1)(B) of the ESA (also known as a habitat conservation plan) is necessary to harm or harass federally listed threatened or endangered fish or wildlife species. In either case, there is no mechanism for authorizing incidental take "after-the-fact." For more information regarding formal consultation and HCPs, please see the Service's Consultation Handbook and Habitat Conservation Plans at www.fws.gov/engangered/esa-library/index.html#consultations.

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.

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 to our office.**

Attachment(s):

- Official Species List

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:

Arkansas Ecological Services Field Office

110 South Amity Suite 300

Conway, AR 72032-8975

(501) 513-4470

Project Summary

Consultation Code: 04ER1000-2018-SLI-0648

Event Code: 04ER1000-2018-E-00900

Project Name: 080504 Deer Creek Str. & Apprs.

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: The Arkansas Department of Transportation proposes to replace the existing bridge over Deer Creek with a new bridge, approximately 70 feet upstream from existing, in Montgomery County.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/34.6503878303245N93.53302100216413W>



Counties: Montgomery, AR

Endangered Species Act Species

There is a total of 3 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. 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.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Clams

NAME	STATUS
Rabbitsfoot <i>Quadrula cylindrica cylindrica</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5165	Threatened

Flowering Plants

NAME	STATUS
Harperella <i>Ptilimnium nodosum</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3739	Endangered

Critical habitats

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

Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service’s (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

Information to Determine 4(d) Rule Compliance:

YES NO

Information to Determine 4(d) Rule Compliance:	YES	NO
1. Does the project occur wholly outside of the WNS Zone ¹ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Have you contacted the appropriate agency ² to determine if your project is near known hibernacula or maternity roost trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Could the project alter the entrance or interior environment of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

You are eligible to use this form if you have answered yes to question #1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant³ (Name, Email, Phone No.): Kayti Ewing, anne.ewing@ardot.gov, 501-569-2083

Project Name: 080504, Deer Creek Str. & Apprs.

Project Location (include coordinates if known): Montgomery County, 34.651165°, -93.532949°

Basic Project Description (provide narrative below or attach additional information): ArDOT plans to replace the existing Highway 27 bridge over Deer Creek, approximately 70 feet upstream. The existing bridge will be used for maintenance of traffic during construction. See kmz design file for more detailed information. A winter clearing restriction will be placed on the job.

¹ <http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf>

² See <http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html>

³ If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

General Project Information	YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project occur within 150 feet of a known maternity roost tree?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project include forest conversion ⁴ ? (if yes, report acreage below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Estimated total acres of forest conversion	~ 1.0 acre	
If known, estimated acres ⁵ of forest conversion from April 1 to October 31	0	
If known, estimated acres of forest conversion from June 1 to July 31 ⁶	0	
Does the project include timber harvest? (if yes, report acreage below)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Estimated total acres of timber harvest	~ 1.0 acre	
If known, estimated acres of timber harvest from April 1 to October 31	0	
If known, estimated acres of timber harvest from June 1 to July 31	0	
Does the project include prescribed fire? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature:  Date Submitted: 3/16/2018

⁴ Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).

⁵ If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.

⁶ If the activity includes tree clearing in June and July, also include those acreage in April to October.

DEER CREEK BRIDGE

BRIDGE NUMBER 02767



PROGRAMMATIC SECTION 4(F) EVALUATION FOR FEDERALLY-AIDED HIGHWAY PROJECTS THAT NECESSITATE THE USE OF HISTORIC BRIDGES

ARDOT Job Number 080504

Deer Creek Str. & Apprs.

Montgomery County

June 2018

Submitted Pursuant to 49 U.S.C. Section 303 and 23 U.S.C. Section 138 by the U.S. Department of Transportation Federal Highway Administration and the Arkansas Department of Transportation.

Programmatic Section 4(f) Evaluation – Historic Bridges

1 Why is this report being prepared?

Section 4(f) of the Department of Transportation Act of 1966 declared a national policy to make a special effort to preserve the natural beauty of the countryside, public parks and recreation lands, wildlife and waterfowl refuges, and historic sites. The current Section 4(f) legislation permits the Secretary of Transportation to approve a project that requires the use of certain historic bridge structures scheduled to be replaced or rehabilitated with Federal funds, only if a determination has been made that there is no feasible and prudent alternative to the use of the property and all possible planning has been undertaken to minimize harm to the property resulting from such use. These determinations, submitted pursuant to 49 U.S.C. Section 303 and 23 U.S.C. Section 138, are set forth in this Programmatic Section 4(f) Evaluation.

2 What would the project accomplish?

The Arkansas Department of Transportation (ARDOT; formerly the Arkansas State Highway and Transportation Department [AHTD]), in conjunction with the Federal Highway Administration (FHWA), is proposing to construct a new bridge across Deer Creek along Highway 27 in Montgomery County, Arkansas. The project will improve safety and the transportation needs in west central Arkansas. As part of the project, a historic bridge will be replaced.

ARDOT Bridge Number 02767 (Deer Creek Bridge) is a steel multi-beam bridge consisting of steel I-beams. ARDOT built the bridge, a common post-war type, in 1953. The total length of the bridge is 202 feet. It has two 11-foot wide travel lanes and a clear deck width of approximately 22 feet. According to the Bridge Inspection Report dated July 27, 2016, the historic bridge is classified as Structurally Deficient, but is still in use. The Bridge Inspection Report lists the condition of the deck as poor (code 4) and the superstructure and substructure as fair (code 5).

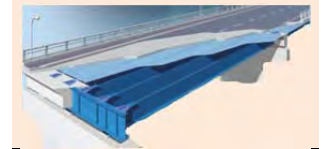
The bridge will be replaced with a concrete deck and continuous steel W-beam structure. It will measure approximately 282.2 feet long and 34 feet wide. To meet current standards, the new bridge roadway will have two 11-foot wide paved travel lanes, each with a six foot shoulder.

What properties does Section 4(f) protect?

Section 4(f) properties include significant publicly owned parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately owned historic site listed or eligible for listing in the National Register of Historic Places with national, state, or local significance. The ARDOT considers historic bridges as historic sites.

What is a steel multi-beam bridge?

The primary structure of the bridge consists of three or more parallel rolled beams.



What is meant by Structurally Deficient?

The definition from the Federal Highway Administration:

“A ‘structurally deficient’ designation does not imply that a bridge is unsafe, but such bridges typically require significant maintenance and repair to remain in service, and would eventually require major rehabilitation or replacement to address the underlying deficiency.”

A bridge classified as Structurally Deficient may or may not also be Functionally Obsolete, which means it was designed for lighter and/or smaller vehicles than today’s traffic. A bridge is considered Structurally Deficient when one or more of the condition ratings fall to a level of “poor” (code 4) or below in the bridge condition index.

3 What Section 4(f) properties are being impacted?

ARDOT Bridge Number 02767 (Deer Creek Bridge) contains five 40-foot simple spans of reinforced concrete deck on steel I-beams. The beams rest on prismatic concrete bent caps atop tapered concrete column bents. A tie beam connects the column bents midway down. The railings contain concrete posts and metal guardrails. Reinforced concrete abutments support the bridge ends (Figure 1).

The Deer Creek Bridge was determined eligible for inclusion in the National Register of Historic Places (NRHP) on January 8, 2018. It is eligible under Criterion A for its association with the development of the Blakely Mountain Dam flood control project, which created Lake Ouachita. The bridge spans the crossing of Deer Creek near the community of Washita, which predates the reservoir. It is one of six bridges built for this flood control project. In coordination with the United States Army Corps of Engineers (USACE), ARDOT built the bridge in 1953. The Deer Creek Bridge is not considered a National Historic Landmark.

Deer Creek Bridge



Figure 1

4 Does this project qualify for the Section 4(f) programmatic for historic bridges?

The FHWA may apply the programmatic Section 4(f) evaluation to projects that meet the criteria shown in Table 1.

What are the National Register Criteria for evaluation?

Properties that possess significance in American history, architecture, archeology, engineering, and culture that retain aspects of integrity, and:

- A) associated with an event, broad patterns, or trends of history;
- B) associated with an important person(s);
- C) embody typical features of a type, period, or construction method, that represent the work of a master, or possess high artistic values; or
- D) that have yielded, or will likely yield, significant information for history or prehistory.

(National Register Bulletin 15: <https://www.nps.gov/NR/PUBLICATIONS/bulletins/nrb15/>)

What are the qualifications for a National Historic Landmark?

A National Historic Landmark is a property selected by the Secretary of the Interior for its national historic significance. The property should “possess exceptional value in honoring or showing the history of the United States,” according to the National Park Service (<https://www.nps.gov/nhl/learn/intro.htm>).

Table 1

Criteria To Use Programmatic Section 4(f) Evaluation For Federally-Aided Highway Projects That Necessitate The Use of Historic Bridges

The bridge is to be replaced or rehabilitated with Federal funds.	√
The project will require the use of a historic bridge structure that is listed in or eligible for inclusion in the NHRP.	√
The bridge is not a National Historic Landmark.	√
The FHWA Division Administrator determines that the facts of the project match those set forth in the FHWA Section 4(f) Policy Paper issued March 1, 2005.	√
Agreement has been reached among the FHWA, SHPO, and the Advisory Council on Historic Preservation (ACHP) through procedures pursuant to Section 106 of the National Historic Preservation Act (NHPA).	√

5 Could the project avoid demolishing the historic bridge?

In order for a Programmatic Section 4(f) Evaluation That Necessitate the Use of Historic Bridges to be applied to a project, each of the following findings; 1) No Action, 2) Rehabilitation of the Existing Structure, and 3) Build on New Location and Retain the Existing Structure, must be supported by the circumstances, studies, and consultations on the project.

To this effect, ARDOT established a Historic Bridge Analysis Committee to evaluate viable alternatives for the preservation of historically significant bridges through retention, rehabilitation, or to justify their removal, if required. The following alternatives were evaluated to determine if a feasible and prudent alternative to the proposed impacts on the historic bridge existed.

No Action

This alternative involves no improvements to the existing facilities and would continue to provide only routine maintenance. The bridge is Structurally Deficient. This alternative does not improve the existing roadway width or conditions of the bridge and would not alleviate the safety issues. It is not prudent to leave the bridge as is, resulting in safety and/or operational issues.

Rehabilitation of the Existing Structure

Two rehabilitation alternatives were considered for this project.

Rehabilitation Alternative One rehabilitates the existing historic bridge for two-way traffic operations. This alternative is not feasible due to its location in a curve. The bridge is too narrow to meet minimum design standards. Widening the bridge would compromise its

What is meant by feasible?

Per 23 CFR 774.17, Feasible and prudent avoidance alternative definitions:

(2) An alternative is not feasible if it cannot be built as a matter of sound engineering judgment.

What is meant by prudent?

Per 23 CFR 774.17, Feasible and prudent avoidance alternative definitions:

(3) An alternative is not prudent if:

(i) It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

(ii) It results in unacceptable safety or operational problems;

(iii) After reasonable mitigation, it still causes:

(A) Severe social, economic, or environmental impacts

(B) Severe disruption to established communities;

(C) Severe disproportionate impacts to minority or low income populations; or

(D) Severe impacts to environmental resources protected under other Federal statutes;

(iv) It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;

(v) It causes other unique problems or unusual factors; or

(vi) It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

historic integrity. In evaluating the bridge rehabilitation for less than design standards, the railing does not meet current crash test requirements or *AASHTO Manual for Assessing Safety Hardware* criteria. *Rehabilitation Alternative One* is not feasible or prudent as it results in unacceptable safety and operational problems and other unique problems.

Rehabilitation Alternative Two rehabilitates the existing historic bridge for one-way traffic operations, and constructs a new bridge for one-way traffic operations in the opposite direction. Due to its location in a curve, rehabilitation of this bridge is not feasible. Splitting and rejoining the roadway for couplet bridges is not a prudent option at this location as it would increase unacceptable safety and operational problems. The historic bridge railing does not meet current crash test requirements or *AASHTO Manual for Assessing Safety Hardware* criteria. The bridge is also Structurally Deficient and the rehabilitation activities necessary would not be prudent as they would result in additional construction, maintenance, or operational costs of extraordinary magnitude. Right of way acquisition would be enlarged, thereby also increasing the cost of the project. *Rehabilitation Alternative Two* is not feasible or prudent.

Build on New Location and Retain the Existing Structure

Three new location alternatives were considered for this project.

New Location Alternative One constructs a new bridge in accordance with the approved ARDOT Project Planning Committee (PPC) recommended criteria, with the owner maintaining ownership of the historic bridge, either preserving it in place or at another location. ARDOT owns the bridge. Design of the proposed bridge on a new location is still under consideration; however, it is the policy of ARDOT to no longer retain bridges after they are removed from the highway system. This option is not prudent as it would result in additional maintenance or operational costs of extraordinary magnitude and create liability concerns.

New Location Alternative Two would construct a new bridge to current, minimum design standards in a new location with another entity accepting ownership of the historic bridge, preserving it in place. The bridge is on land belonging to the USACE. USACE determined on February 13, 2018, that it was in their best interest to have the bridge removed due to a number of safety concerns and other issues related to retaining the bridge in its current location. *New Location Alternative Two* is not prudent as it causes other unique problems or unusual factors.

New Location Alternative Three constructs a new bridge in accordance with the approved PPC recommended criteria with another entity/agency

accepting ownership of the historic bridge, while relocating it. ARDOT marketed the bridge on February 23, 2018 (see Appendix A for marketing correspondence). No responsible party expressed interest in the bridge. *New Location Alternative Three*, while feasible and prudent, proved unsatisfactory because no entity was found willing to accept title for the bridge in a new location.

6 How will the ARDOT mitigate for the harm being done to the historic property?

The FHWA and the SHPO reached an agreement through the Section 106 process (36 CFR 800) of NHPA (16 U.S.C. 470) on measures to minimize harm. These measures have been incorporated into this project. Through a Memorandum of Agreement (MOA), it was agreed that ARDOT Bridge Number 02767 would be documented to the Arkansas Historic Preservation Program’s (AHPP) architectural documentation standards and then demolished. A copy of the MOA, which includes all agreed upon mitigation stipulations, can be found in Appendix B.

7 What are the findings of the alternatives analysis and this evaluation?

Table 2 contains a summary of the analysis and decision-making information included in this evaluation.

Table 2

Section 4(f) Analysis Summary

Alternative	Feasible	Prudent	Uses Section 4(f) Property	Harm to Section 4(f) Property
No Action	Yes	No	No	None
Rehabilitation One	No	No	Yes	Adverse Effect
Rehabilitation Two	No	No	Yes	Adverse Effect
New Location One	Yes	No	No	None
New Location Two	Yes	No	No	None
New Location Three	Yes	Yes	Yes	Adverse Effect*

* No entity was found willing to take title for the bridge.

Based on the above considerations, there is no feasible and prudent alternative to the use of the historic bridge. The proposed action includes all possible planning to minimize the harm to the historic bridge resulting from such use.

Could an outside entity maintain the bridge or use it at another location?

The Surface Transportation & Uniform Relocation Assistance Act of 1987, Historic Bridges Section 123 requires states to market a historic bridge before its replacement. Following this directive, when no other alternatives are found to be feasible or prudent, the ARDOT markets historic bridges to federal and state agencies and local governments, as well as state and local historical societies. Any interested responsible parties must demonstrate willingness to accept title for, preserve the historic integrity of, and assume financial responsibility for the continued maintenance on the structure.

The ArDOT markets historic bridges to federal and state agencies, county and local governments, chambers of commerce, and state and local historical societies.

8 What are the recommendations on this project?

ARDOT recommends that the Deer Creek Bridge be documented to AHPP architectural documentation standards and demolished as agreed to under the stipulations set forth in the MOA (Appendix B).

The above documentation illustrates that the proposed project complies with all requirements of the Programmatic Section 4(f) Evaluation for Federal-aid highway projects that require the use of a historic bridge.

Appendix A: Marketing Correspondence



ARKANSAS DEPARTMENT OF TRANSPORTATION

ARDOT.gov | IDriveArkansas.com | **Scott E. Bennett, P.E., Director**

10324 Interstate 30 | P.O. Box 2261 | Little Rock, AR 72203-2261

Phone: 501.569.2000 | Voice/TTY 711 | Fax: 501.569.2400

February 23, 2018

«Name», «Title_»

«Agency»

«Address_1»

«Address_2»

«City»

Re: Historic Bridge Number 02767
Job Number 080504
Deer Creek Str. & Apprs.
Montgomery County
Historic Bridge Marketing Request

Dear «Greeting»:

The Arkansas Department of Transportation (ARDOT) is planning to replace Bridge Number 02767 (Deer Creek Bridge) on Highway 27 in Montgomery County. This bridge was determined eligible to the National Register of Historic Places (NRHP) under Job 080504 in the Request for Technical Assistance sent to the Arkansas Historic Preservation Program dated December 21, 2017. A location map and further information about the bridge is enclosed.

The Fixing America's Surface Transportation (FAST) Act, 23 USC § 144 (g)(5) states: "Any State which proposes to demolish a historic bridge for a replacement project ... shall first make the bridge available for donation to a State, locality, or responsible private entity..." As part of the mitigation process, the ARDOT is offering to donate Bridge Number 02767 to any government or entity that demonstrates a willingness to accept title for, relocate it for use at another site, preserve the historic features of, and assume the financial responsibility for the continued maintenance on the structure.

Normally the ARDOT, through the Federal Highway Administration, can reimburse costs associated with preservation up to the demolition estimate

ARDOT Bridge Number 02767
Job Number 080504
Marketing Request
Page 2 of 2

expense. However, the reimbursement funds allocated to this bridge will be exhausted during the dismantling and relocation process

If you are interested in acquiring this bridge, please respond with a letter of interest within 45 days from the date of this letter. For further information, contact Nikki Senn at (501) 569-2979.

Sincerely,



for John Fleming
Division Head
Environmental Division

Enclosures

JF:DW:NS:fc

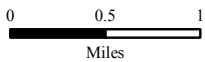
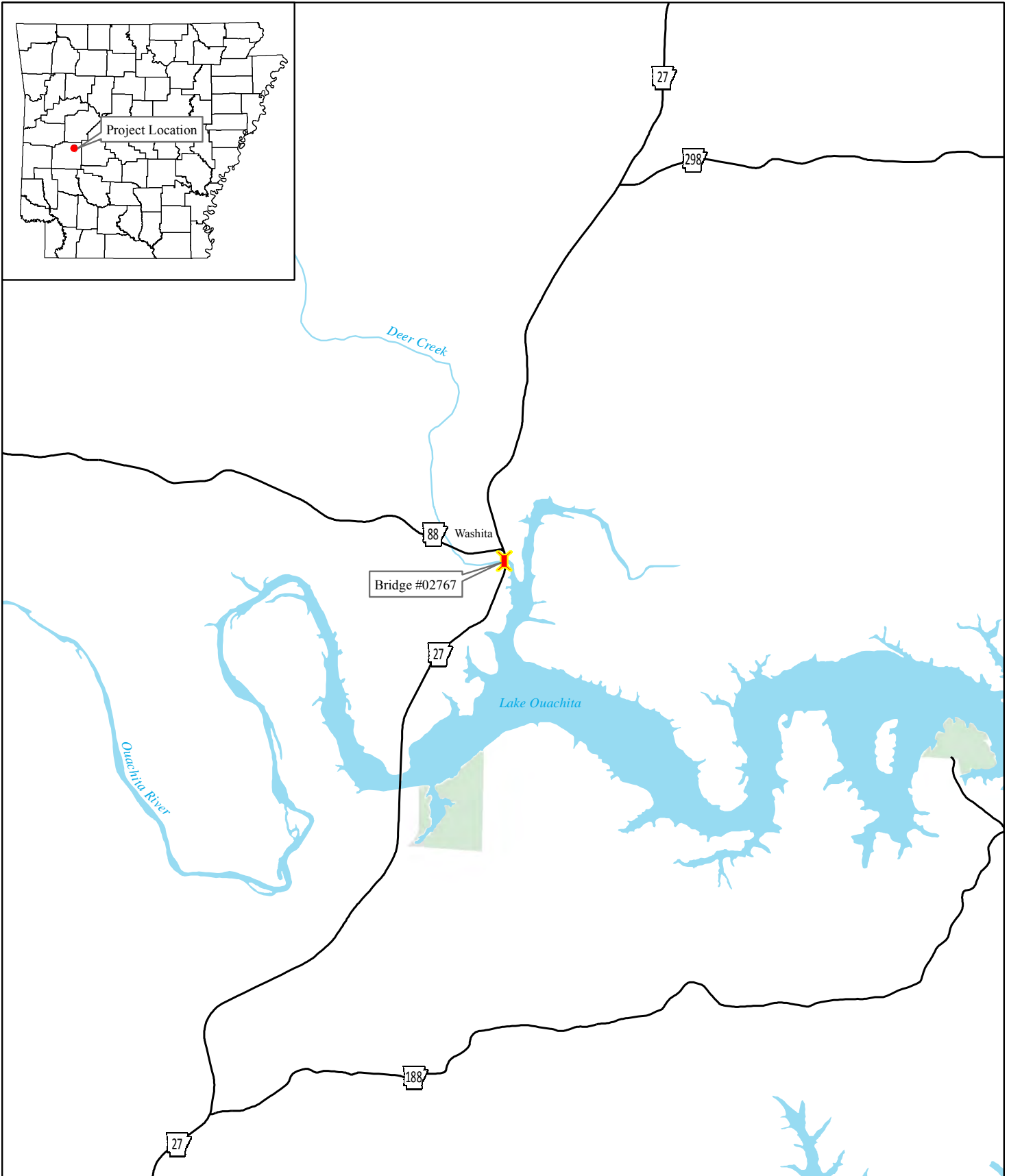
c: Assistant Chief Engineer - Planning
Bridge Division
District 8 Engineer
FHWA
SHPO

ARDOT Job Number 080504
Historic Bridge Marketing Description

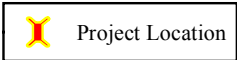


ARDOT Bridge Number 02767, on State Highway 27, was determined eligible for inclusion in the National Register of Historic Places (NRHP) under Job 080504 in the Request for Technical Assistance sent to the Arkansas Historic Preservation Program dated December 21, 2017. The bridge consists of five 40-foot I-beam spans, for a total length of 202 feet, and width of 22 feet.

Bridge Number 02767 was constructed over Deer Creek in 1953 as one of six bridges built in coordination with the U.S. Army Corps of Engineers. The bridges were constructed in preparation to fill the reservoir now known as Lake Ouachita. Bridge Number 02767 is eligible for inclusion in the NRHP under Criterion A for its association with the development of the central Arkansas Blakely Mountain Dam flood control project.



Job 080504.
Deer Creek Str. & Apprs.
(Hwy. 27).
Montgomery County.



Marketing Address List
Job 080504, Bridge Number 02767

Marketing Groups	Greeting	Name	Title	Agency	Address 1	Address 2	City
Mayor	Mayor McCabe	The Honorable Pat McCabe		City of Hot Springs	133 Convention Blvd.		Hot Springs, AR 71901
Mayor	Mayor Childress	The Honorable Jo Childress		City of Mount Ida	P.O. Box 239		Mount Ida, AR 71957
Chamber of Commerce	Mr. Troutman	Gary Troutman	President and CEO	Chamber of Commerce	659 Ouachita Avenue		Hot Springs, AR 71901
Chamber of Commerce	To whom it may concern			Mount Ida Area Chamber of Commerce	124 Highway 270 W.	P.O. Box 6	Mount Ida, AR 71957
County Judge	Judge Jones	The Honorable Sammy Jones		Montgomery County Judge	105 Highway 270, E #7		Mount Ida, AR 71957
County Judge	Judge Thone	The Honorable Mark Thone		Yell County Judge	P.o. Box 219		Danville, AR 72833
County Judge	Judge Davis	The Honorable Rick M. Davis		Garland County Judge	501 Ouachita		Hot Springs, AR 71901
County Historical Society	To whom it may concern		President	Montgomery County Historical Society	P.O. Box 578		Mount Ida, AR 71957
County Historical Society	Ms. Robbins	Elizabeth Robbins	Executive Director	Garland County Historical Society	P.O. Box 21335		Hot Springs, AR 71903-1335
County Historical Society	To whom it may concern		President	Yell County Historical & Genealogical Society	P.O. Box 622		Dardanelle, AR 72834
Arkansas Historical Association	Mr. Christ	Mark Christ	President	Arkansas Historical Association	Department of History, University of Arkansas	Main 416	Fayetteville, AR 72701
Preserve Arkansas	Mrs. Patton	Rachel Patton	Executive Director	Preserve Arkansas	P.O. Box 305		Little Rock, AR 72203-0305
Arkansas Department of Parks and Tourism	Mr. Webb	Kane Webb	Executive Director	Arkansas Department of Parks and Tourism	One Capitol Mall 4A-900		Little Rock, AR 72201
Arkansas Game and Fish Commission	Mr. Crow	Jeff Crow	Director	Arkansas Game and Fish Commission	2 Natural Resources Drive		Little Rock, AR 72205
US Corps of Engineers	Colonel Dixon	Colonel Robert G. Dixon	Commander and District Engineer	U.S. Army Corps of Engineers	Little Rock District, P.O. Box 867		Little Rock, AR 72203-0867
US Corps of Engineers	Colonel Derosier	Colonel Michael C. Derosier	Commander and District Engineer	U.S. Army Corps of Engineers	Vicksburg District, 4155 Clay Street		Vicksburg, MS 39183-3435
Metro Planning Org, if applicable	Mr. Pratt	Dewayne Pratt	Executive Director	West Central Arkansas Planning and Development District, Inc.	1000 Central Avenue		Hot Springs, AR 71901
Central Arkansas Water	Ms. Lawson	Raven Lawson	Watershed Protection Manager	Central Arkansas Water	221 East Capitol Avenue, P.O. Box 1789	P.O. Box 1789	Little Rock, AR 72203
United States Forest Service	To whom it may concern	Forest Supervisor's Office	Ouachita National Forests	United States Forest Service	1523 Highway 270 E		Mount Ida, AR 71957
Arkansas Trails Council	Mr. Sprague	Mike Sprague	Executive Secretary	Arkansas Trails Council, Dept. of Parks and Tourism	One Capitol Mall		Little Rock, AR 72201
City of Fayetteville	Mr. Eastin	Ken Eastin	Park Planner II	City of Fayetteville, Parks and Recreation Department	113 West Mountain Street		Fayetteville, AR 72701
City of Bentonville	Mr. Wright	David Wright	Director	City of Bentonville, Parks and Recreation Department	215 SW A Street		Bentonville, AR 72712
City of Springdale	Mr. Mock	Bill Mock	Director	City of Springdale, Parks and Recreation Department	600 Ash Street		Springdale, AR 72765
City of Paragould	Ms. Austin	Pat Austin	Director	City of Paragould, Parks and Recreation Department	3404 Linwood Drive		Paragould, AR 72450

**Marketing Address List
Job 080504, Bridge Number 02767**

Marketing Groups	Greeting	Name	Title	Agency	Address 1	Address 2	City
City of Marion	Mr. Rawls	Andy Rawls		City of Marion, Parks and Recreation Department	14 East Military Road		Marion, AR 72364
City of West Memphis	Mr. Parker	Lorenzo Parker	Director	City of West Memphis, Parks and Recreation Department	P.O. Box 1728		West Memphis, AR 72303
City of Jonesboro	Mr. Huffstetler	Wixson Huffstetler	Director	City of Jonesboro, Parks and Recreation Department	3009 Dan Avenue		Jonesboro, Arkansas 72403
City of Hot Springs	Ms. Wallace	Jean Wallace	Director	City of Hot Springs, Parks and Recreation Department	111 Opera		Hot Springs, AR 71902

Appendix B: Memorandum of Agreement

MEMORANDUM OF AGREEMENT
AMONG THE
FEDERAL HIGHWAY ADMINISTRATION,
THE ARKANSAS DEPARTMENT OF TRANSPORTATION AND THE
ARKANSAS STATE HISTORIC PRESERVATION OFFICER
REGARDING
ARKANSAS DEPARTMENT OF TRANSPORTATION
JOB NUMBER 080504
DEER CREEK STR. & APPRS. (S)
HIGHWAY 27, MONTGOMERY COUNTY, ARKANSAS
ARDOT BRIDGE NUMBER 02767

WHEREAS, the Federal Highway Administration (FHWA) and the Arkansas Department of Transportation (ARDOT) wish to construct a new bridge across Deer Creek along Highway 27 in Montgomery County; and the old Deer Creek Bridge will be demolished as part of completing ARDOT Job Number 080504; and

WHEREAS, the old Deer Creek Bridge is an historic property that is eligible for inclusion in the National Register of Historic Places (NRHP); and

WHEREAS, the FHWA has marketed the old Deer Creek Bridge to federal agencies, the Montgomery, Yell, and Garland County Judges, the Cities of Mount Ida and Hot Springs, and state and local historic societies; and

WHEREAS, during the recent marketing, no entities were found willing to accept title for preservation of the old Deer Creek Bridge for reuse at another location; and

WHEREAS, through the Programmatic Section 4(f) Evaluation process the FHWA has determined that no feasible and prudent alternative to the demolition of the historic bridge exists; and

WHEREAS, the FHWA has determined that this undertaking will have an adverse effect on a property eligible to the NRHP and in accordance with the 36 Code of Federal Regulation (CFR) Part 800, regulations implementing Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (54 U.S.C. 306108), must address this effect; and

WHEREAS, the definitions set forth in 36 CFR Part 800 are applicable throughout this Memorandum of Agreement (MOA); and

ARDOT Job Number 080504
Memorandum of Agreement
Page 2 of 7

WHEREAS, the FWHA has consulted with the Quapaw Tribe of Oklahoma, the United Keetoowah Band of Cherokee Indians in Oklahoma, the Caddo Nation, the Osage Nation, for which the old Deer Creek Bridge or sites and properties in the immediate area might have religious and cultural significance; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1), the FHWA through ARDOT has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination with specified documentation, and the ACHP has chosen not to participate in the consultation pursuant to 36 CFR § 800.6(a)(1)(iii); and

NOW THEREFORE, the FWHA, the ARDOT and the State Historic Preservation Officer (SHPO) agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the adverse effect of this undertaking on the old Deer Creek Bridge.

STIPULATIONS

The FHWA, through the ARDOT, shall ensure that the following stipulations are carried out.

I. MITIGATION OF ADVERSE EFFECT TO THE HISTORIC PROPERTY

- A. The ARDOT will produce architectural documentation for the old Deer Creek Bridge that meets the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* set forth in 48 FR 44716 and the Arkansas Historic Preservation Program's (AHPP) 2016 *Survey Procedures Manual: Guidelines for Historic and Architectural Surveys in Arkansas*. Documentation for the bridge will include the AHPP Arkansas Architectural Resources Form and color digital photographs.
- B. The documentation will be provided for curation to the AHPP, the Arkansas State Library, the Arkansas Studies Institute, the Arkansas State Archives, and the Torreyson Library at the University of Central Arkansas.
- C. The bridge will be laser scanned and a three-dimensional digital model of the bridge will be created and housed in the Historic Bridge Program Section of the ARDOT website.

ARDOT Job Number 080504
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D. As the fieldwork portions of the required mitigation have been completed, construction can be undertaken immediately.

E. The FHWA shall ensure that adequate time and funding are provided in order to carry out all aspects of the required mitigation.

II. HUMAN REMAINS

Human remains are not expected to be discovered on this undertaking; however, if they are encountered during implementation of the project, all activity in the vicinity of the discovery shall cease. The treatment of human remains shall follow the guidelines developed for the *Arkansas Burial Law* (Act 753 of 1991, as amended) and the Advisory Council on Historic Preservation's *Policy Statement Regarding Treatment of Burial Sites, Human Remains, and Funerary Objects* published February 23, 2007. As such a permit will be obtained from the AHPP prior to exaction of any remains.

III. DURATION

This MOA will expire if its terms are not carried out within ten (10) years from the date of its execution. Prior to such time, the FHWA may consult with the other signatories to reconsider the terms of the MOA and amend it in accordance with Stipulation VIII below.

IV. PROFESSIONAL QUALIFICATIONS STANDARDS

The FHWA shall ensure that all archeological investigations and other historic preservation activities to this MOA are carried out by, or under the direct supervision of, a person or persons meeting the appropriate qualifications set forth in the Secretary of the Interior's professional qualification standards (36 CFR Part 61).

V. POST-REVIEW DISCOVERY SITUATIONS

Pursuant to 36 CFR Part 800.13, if cultural material is discovered during implementation of the project, the FHWA shall ensure that all construction activities cease in the area of the discovery and the consulting parties are notified. The FHWA, in consultation with SHPO, shall determine if the discovery is eligible for inclusion in the NRHP. If so, the FHWA and the ARDOT will develop a treatment plan for historic properties which shall be reviewed by SHPO. Disputes arising from such review shall be resolved in accordance with Stipulation VI.

ARDOT Job Number 080504
Memorandum of Agreement
Page 4 of 7

VI. DISPUTE RESOLUTION

Should the SHPO or any consulting party object within thirty (30) calendar days to any findings, proposed actions or determinations made pursuant to this MOA, the FHWA shall consult with the objecting party to resolve the objection. If the FHWA determines that the objection cannot be resolved, it shall request further comments from the Advisory Council on Historic Preservation (Council) pursuant to 36 CFR Part 800.7. Any Council comment provided in response to such a request shall be taken into account by the FHWA in accordance with 36 CFR 800.7 with reference only to the subject of the dispute; the FHWA responsibility to carry out all actions under this MOA that are not subject to dispute shall remain unchanged.

VII. MONITORING

The consulting parties or one or more parties in cooperation may monitor the undertaking and stipulations carried out pursuant to this MOA.

VIII. AMENDING THE MEMORANDUM OF AGREEMENT

Should any of the signatories to this MOA believe that the terms of this MOA are not being met or cannot be met, that party shall immediately notify the other signatories and request consultation to amend this MOA in accordance with 36 CFR Part 800. The process to amend this MOA shall be conducted in a manner similar to that leading to the execution of this MOA.

IX. TERMINATING THE MEMORANDUM OF AGREEMENT

Any signatory to this MOA may terminate it by providing a thirty (30) calendar day notice to the other parties provided that the parties shall consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination of this MOA. In the event of termination, the FHWA shall comply with 36 CFR Part 800.4 through 800.6 with regard to the undertaking covered by this MOA.

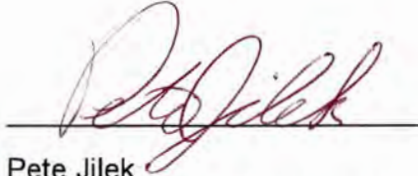
X. FAILURE TO CARRY OUT THE MEMORANDUM OF AGREEMENT

In the event that the FHWA does not carry out the terms of this MOA, the FHWA shall comply with 36 CFR Part 800.4 through 800.6 with regard to the undertaking covered by this MOA.

ARDOT Job Number 080504
Memorandum of Agreement
Page 5 of 7

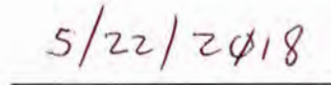
Signatory

FEDERAL HIGHWAY ADMINISTRATION



452

Pete Jilek
Acting Arkansas Division Administrator

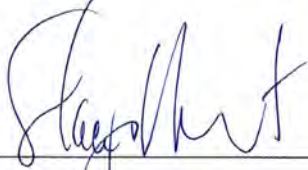


Date

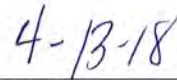
ARDOT Job Number 080504
Memorandum of Agreement
Page 6 of 7

Signatory

ARKANSAS STATE HISTORIC PRESERVATION OFFICER



Stacy Hurst
Arkansas State Historic Preservation Officer

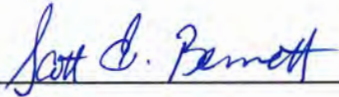


Date

ARDOT Job Number 080504
Memorandum of Agreement
Page 7 of 7

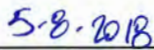
Signatory

ARKANSAS DEPARTMENT OF TRANSPORTATION



Scott E. Bennett, P.E.
Director

~~MEB~~
EB



Date

ARDOT ENVIRONMENTAL IMPACTS ASSESSMENT FORM

ARDOT Job Number 080504 FAP Number NHPP-0049(16)
 Job Title Deer Creek Str. & Apprs. (S)

Environmental Impacts	None	Minor	Significant	Comments
Air Quality	X			
Construction Impacts	X			Traffic maintained during construction
Cultural Resources		X		Existing bridge is NRHP-eligible
Economic	X			
Endangered Species	X			USFWS "No effect" determination
Energy Resources	X			
Environmental Justice/Title VI	X			
Fish and Wildlife		X		Minor loss of habitat
Floodplains				No mapped floodplains
Forest Service Property	X			
Hazardous Materials/Landfills	X			
Land Use Impacts		X		2.3 acres ROW, 2.1 acres USACE property
Migratory Birds		X		Migratory bird SP added
Navigation/Coast Guard	X			
Noise Levels	X			No impacted sensitive receptors
Prime Farmland		X		0.6 acre prime farmland
Protected Waters		X		See below*
Public Recreation Lands	X			
Public Water Supply/WHPA	X			Offsite WHPA SP added
Relocates	X			
Section 4(f)/6(f)		X		4(f) Programmatic for Historic Bridges
Social	X			
Underground Storage Tanks	X			
Visual Impacts	X			
Stream Impacts		X		0.2 acre stream impacts
Water Quality		X		Temporary during construction
Wetlands		X		0.7 acre wetland impacts
Wildlife Refuges	X			

Section 401 Water Quality Certification Required? Yes
 Short-term Activity Authorization Required? Yes
 Section 404 Permit Required? Yes Type Nationwide 23

Remarks: *The project is within one mile of Lake Ouachita, an Extraordinary Resource Waterway, and, as such, will require Section 401 Water Quality Certification.

Signature of Evaluator Susan Steffeld Date June 15, 2018

ROADWAY DESIGN REQUEST

Job Number 080504 FAP No. _____ County Montgomery

Job Name Deer Creek Str. & Apprs. (S)

Design Engineer Primary Environmental Staff _____

Brief Project Description Replace bridge on new location

A. Existing Conditions:

Roadway Width: 22' Shoulder Type/Width: 3'

Number of Lanes and Width: 2@11' Existing Right-of-Way: 100'

Sidewalks? N/A Location: _____ Width: _____

Bike Lanes? N/A Location: _____ Width: _____

B. Proposed Conditions:

Roadway Width: 22' Shoulder Type/Width: 6'

Number of Lanes and Width: 2@11' Proposed Right-of-Way: 67'

Sidewalks? N/A Location: _____ Width: _____

Bike Lanes? N/A Location: _____ Width: _____

C. Construction Information:

If detour: Where: _____ Length: _____

D. Design Traffic Data:

2019 ADT: 900 2039 ADT: 1100 % Trucks: 16
Design Speed: 40 m.p.h.

E. Approximate total length of project: 0.322 mile(s)

F. Justification for proposed improvements: Replace functionally obsolete bridge

G. Total Relocates: 0 Residences: _____ Businesses: _____

H. Have you coordinated with any outside agencies (e.g., FHWA, City, County, etc.)? N/A

Agency/Official	Person Contacted	Date

BRIDGE INFORMATION - PRELIMINARY

Job Number: 080504 FAP Number: NHPP-0049(16) County: Montgomery
 Job Name: Deer Creek Str. & Apprs. (S)
 Design Engineer: Kyle Yeary Environmental Staff: Susan Staffeld/Kayti Ewing

A. Description of Existing Bridge:

1. Bridge Number: 02767 over Deer Creek
2. Location: Rte.: 27 Section: 07 Log Mile: 9.96
3. Length: 202.0 ft Br. Rdwy. Width: 22.0 ft Deck Width (Out-to-Out): 26.6 ft
4. Type Construction: Five 40' simple spans consisting of reinforced concrete decks on steel I-beams supported by reinforced concrete multi-column abutments and intermediate bents on spread footings.
5. Deficiencies: Inadequate load capacity.
6. HBRRP Eligibility: Qualif. Code: SD Sufficiency Rating: 54.2
7. Are any Condition Component Ratings at 3 or less? No.

B. Proposed Improvements:

1. Length: 282.2 ft Br. Rdwy. Width: 34.0 ft Deck Width (Out-to-Out): 37.2 ft
2. Travel Lanes: Two 11' travel lanes.
3. Shoulder Width: 6' shoulders both sides of roadway.
4. Sidewalks? No. Location: N/A Width: N/A ft

C. Construction Information:

1. Location in relation to existing bridge: Approximately 60' upstream.
2. Superstructure Type: Continuous composite w-beam unit.
3. Span Lengths: 70'-70'-70'-70'
4. Substructure Type: Single column intermediate bents on drilled shafts, steel pile end bents.
5. Ordinary High Water Elev. (OHW): 578 No. of Bents inside OHW Contours: 3
6. Concrete Volume below OHW: TBD yd³ Vol. Bent Excavation: 0 yd³ Vol. Backfill: 0 yd³
7. Is Channel Excavation below OHW Required? No. Surface Area: N/A ft² Volume: N/A yd³
8. Is Fill below OHW Req'd.? Yes Surface Area: TBD ft² Volume: TBD yd³
9. Is Riprap below OHW required? TBD Volume: TBD yd³

D. Work Road Information:

1. Is Work Road(s) required? Yes. Location: TBD Top Width: 20.0 ft
2. Is Fill below OHW required? Yes. Surface Area: TBD ft² Volume: TBD yd³
3. Are Pipes required to meet Backwater Criteria? TBD Waterway Opening: TBD ft²

E. Detour Information:

1. Is a detour bridge required? No. Location in relation to Existing Br.: N/A
2. Length: N/A ft Br. Rdwy. Width: N/A ft Deck Elevation: N/A
3. Volume of Fill below OHW: N/A yd³ Surface Area: N/A ft²

F. Coordination with Outside Agencies (e.g., FHWA, City, County, C of E, USCG):

Has Bridge Division coordinated with any outside agencies? No.

Agency	Person Contacted	Date



DEPARTMENT OF THE ARMY
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
POST OFFICE BOX 867
LITTLE ROCK, ARKANSAS 72203-0867
www.swl.usace.army.mil

October 24, 2019

Regulatory Division

NATIONWIDE PERMIT NO. MVK 2018-00789

Mr. John Fleming
Division Head, Environmental Division
Arkansas Department of Transportation
PO Box 2261
Little Rock, Arkansas 72203-2261

Dear Mr. Fleming:

Please refer to your recent request concerning Department of the Army permit requirements pursuant to Section 404 of the Clean Water Act. You requested authorization for the placement of dredged and fill material in waters of the United States associated with replacing the structure over Deer Creek and upgrading the approaches. The new bridge will be constructed on existing alignment approximately 35 feet upstream from the existing bridge. The existing approaches consist of two 11-foot-wide travel lanes with 3-foot-wide shoulders. Approaches will be upgraded to two 11-foot-wide lanes with 6-foot-wide shoulders. Three temporary work roads will be constructed and require the discharge of approximately 1,142 yards of clean rock fill into Deer Creek. Approximately 50 linear feet of an unnamed ephemeral tributary that flows into Deer Creek will be temporarily impacted. Permanent impacts to Deer Creek will be less than 300 linear feet and 0.1 acres. The project will adversely impact approximately 0.6 acres of scrub-shrub wetlands. Construction will require the acquisition of 2.1 acres of right-of-way from the Corps of Engineers (Lake Ouachita). The project may affect the Federally threatened Northern Long-eared Bat (*Myotis septentrionalis*). Lake Ouachita is an Extraordinary Resource Water and ArDOT obtained an individual Section 401 Water Quality Certification (WQC) from the Arkansas Department of Environmental Quality (ADEQ) on January 22, 2019. The Deer Creek bridge is eligible for the National Register of Historic Places and ArDOT completed the Section 4(f) evaluation in June 2018. The project was approved as a Tier 3 Categorical Exclusion by the Federal Highway Administration on July 29, 2018. The project is located on State Highway 27 and the West side of Lake Ouachita, at the Community of Washita, in section 14, T. 1 S., R. 14 W., Montgomery County, Arkansas. A vicinity map, project location maps, temporary work road drawing and mitigation credits worksheet are enclosed.

The proposed activities are authorized by Department of the Army Nationwide Permit (NWP) No. 23 (copy enclosed), provided that the following **Special Conditions** and General Conditions therein are met. For your convenience, we have highlighted the General Conditions

of the NWP that are the most pertinent to your project. You should become familiar with the conditions and maintain a copy of the permit at the worksite for ready reference. If changes are proposed in the design or location of the project, you should submit revised plans to this office for approval before construction of the change begins.

Special Conditions:

- 1. ArDOT agrees to mitigate for the adverse impacts to 0.6 acres of wetlands with 6.7 wetland credits at their Upper Saline River Mitigation Bank. ArDOT will provide documentation of the mitigation bank transaction to the U.S. Army Corps of Engineers Little Rock District Transportation Program Manager.**
- 2. ArDOT agrees to prohibit the clearing of trees within 150 feet of any known Northern Long-eared Bat (NLEB) occupied maternity roost tree during the pup rearing season (June 1 through July 31) or within 0.25 miles of any NLEB hibernaculum or during the winter between November 15 and April 1. All offsite tree clearing activities must be coordinated with the U.S. Fish and Wildlife Service.**

Please pay particular attention to General Condition No. 12 which stipulates that appropriate erosion and siltation controls be used during construction and all exposed soil be permanently stabilized. Erosion control measures must be implemented before, during and after construction.

We have enclosed a copy of the ADEQ Section 401 individual WQC conditions which are conditions of your permit. If you have any questions concerning compliance with the conditions of the 401 certification, you should contact Ms. Melanie Treat or Mr. Jim Wise at the ADEQ, Water Division, 5301 Northshore Drive, North Little Rock, Arkansas 72118, telephone (501) 682-0040.

Also, in order to fully comply with the conditions of the NWP, you must submit the enclosed compliance certification within 30 days of completion of the project. This is required pursuant to General Condition No. 30 of the permit.

The NWP determination will be valid until March 18, 2022. If NWP No. 23 is modified, suspended, or revoked during this period, your project may not be authorized unless you have begun or are under contract to begin the project. If work has started or the work is under contract, you would then have twelve (12) months to complete the work.

Your cooperation in the Regulatory Program is appreciated. If you have any additional questions about this permit or any of its provisions, please contact Mr. Johnny McLean at (501)

324-5295 and refer to Permit No. **MVK 2018-00789, Deer Creek Structure and Approaches on State Highway 27 at Washita (ArDOT Project No. 080504).**

Sincerely,



Sarah Chitwood
Chief, Regulatory Evaluation Branch

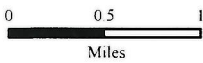
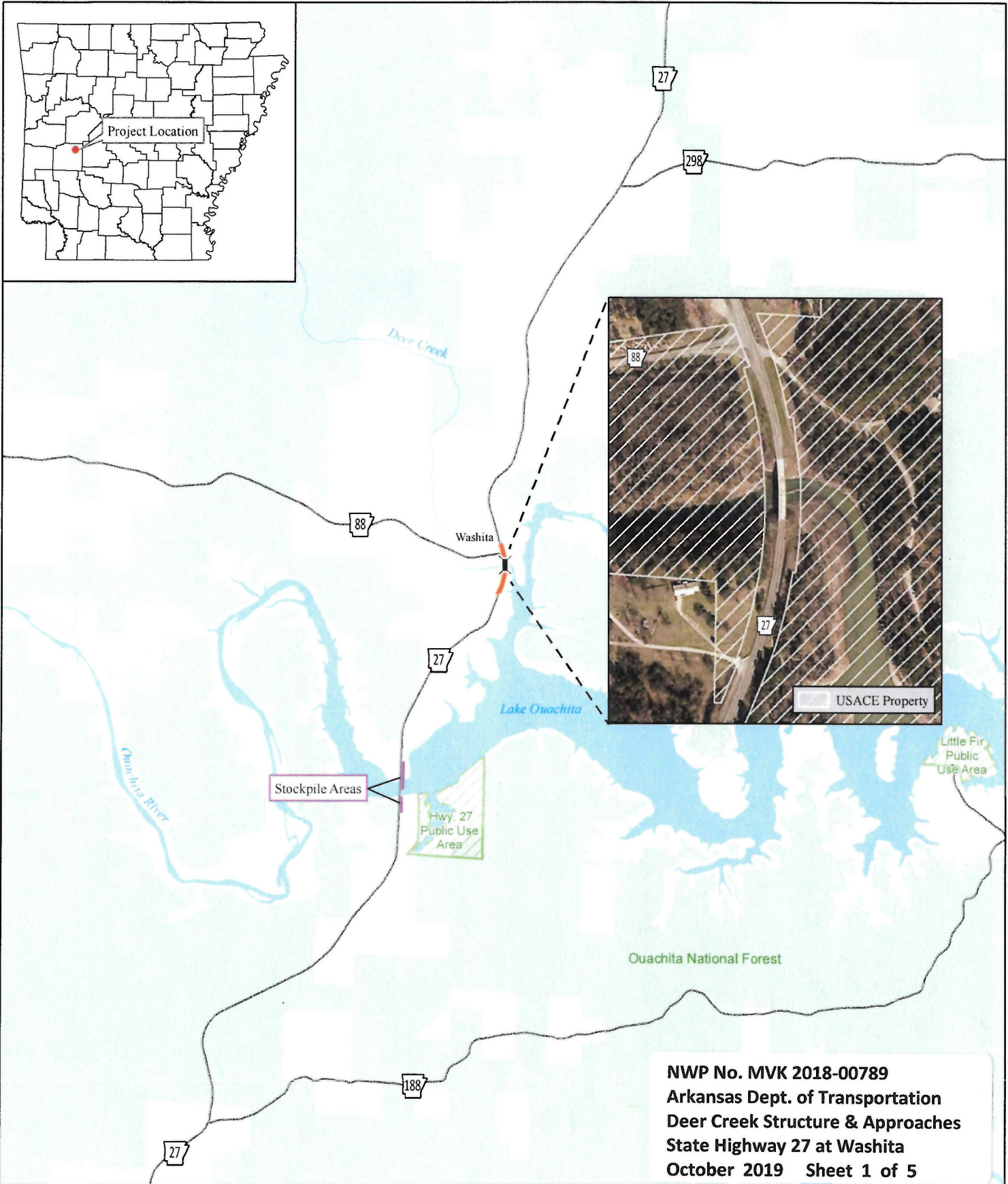
Enclosures

Copy Furnished:

Vicksburg District Regulatory, w/cy encls.


Ms. Melanie Treat, Arkansas Department of Environmental Quality, w/cy encls.

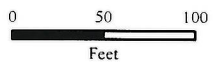
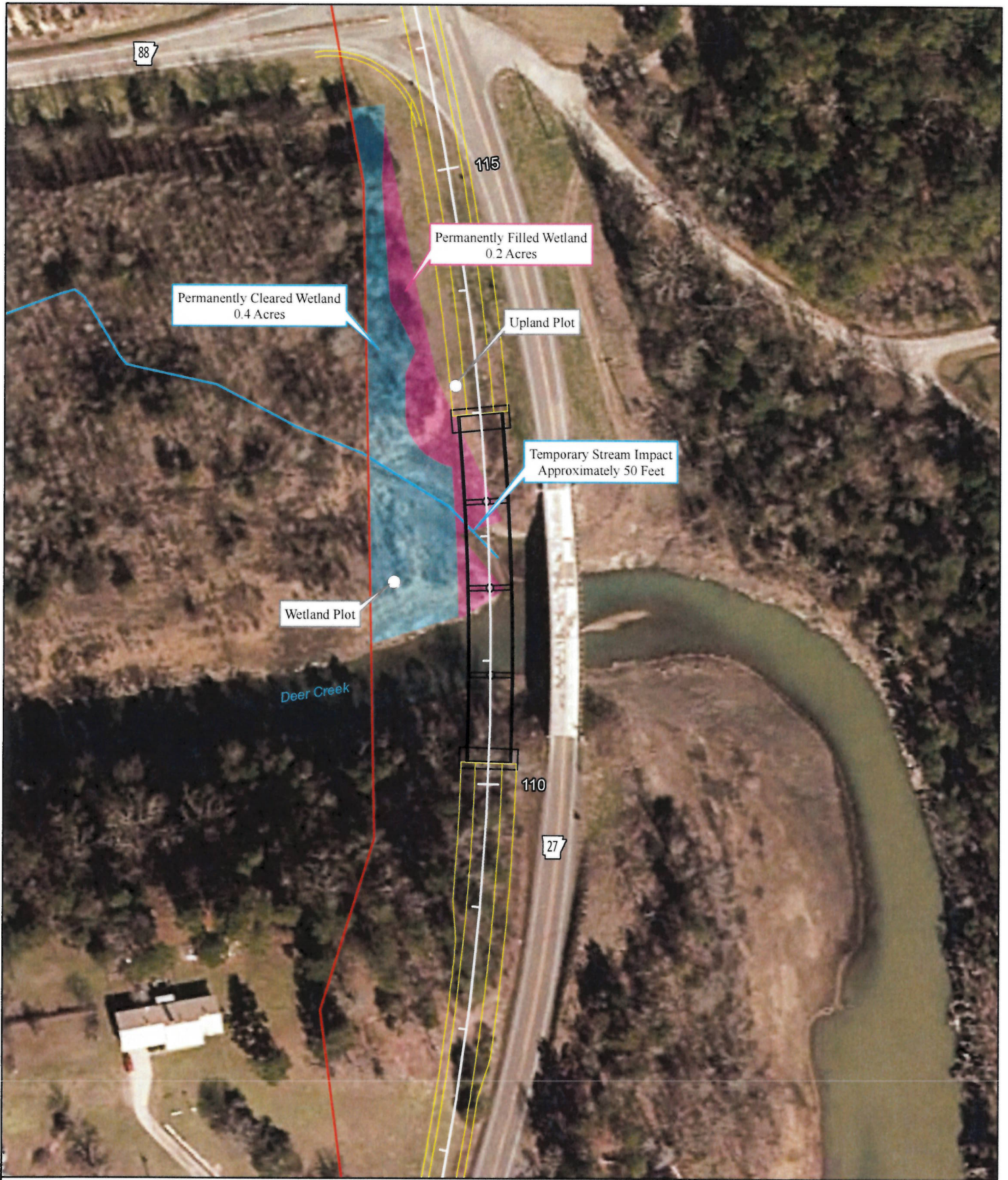
Mr. Lindsey Lewis, U.S. Fish & Wildlife Service, w/cy encls.



ARDOT - Environmental GIS - Strawn
March 6, 2018

Job 080504
Deer Creek Str. & Apprs.
(Hwy. 27)
Montgomery County

 Project Location



ArDOT - Environmental GIS - Strawn
August 25, 2017

Job 080504
Wetland and Stream Impacts

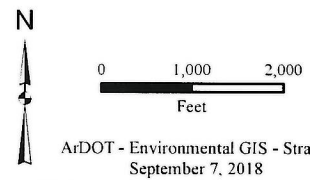
Sheet 2 of 5

- Proposed Right of Way
- Proposed Roadway

Photography: ADOP 2017



Bridge
 UTM NAD83
 Northing: 3834493
 Easting: 451159

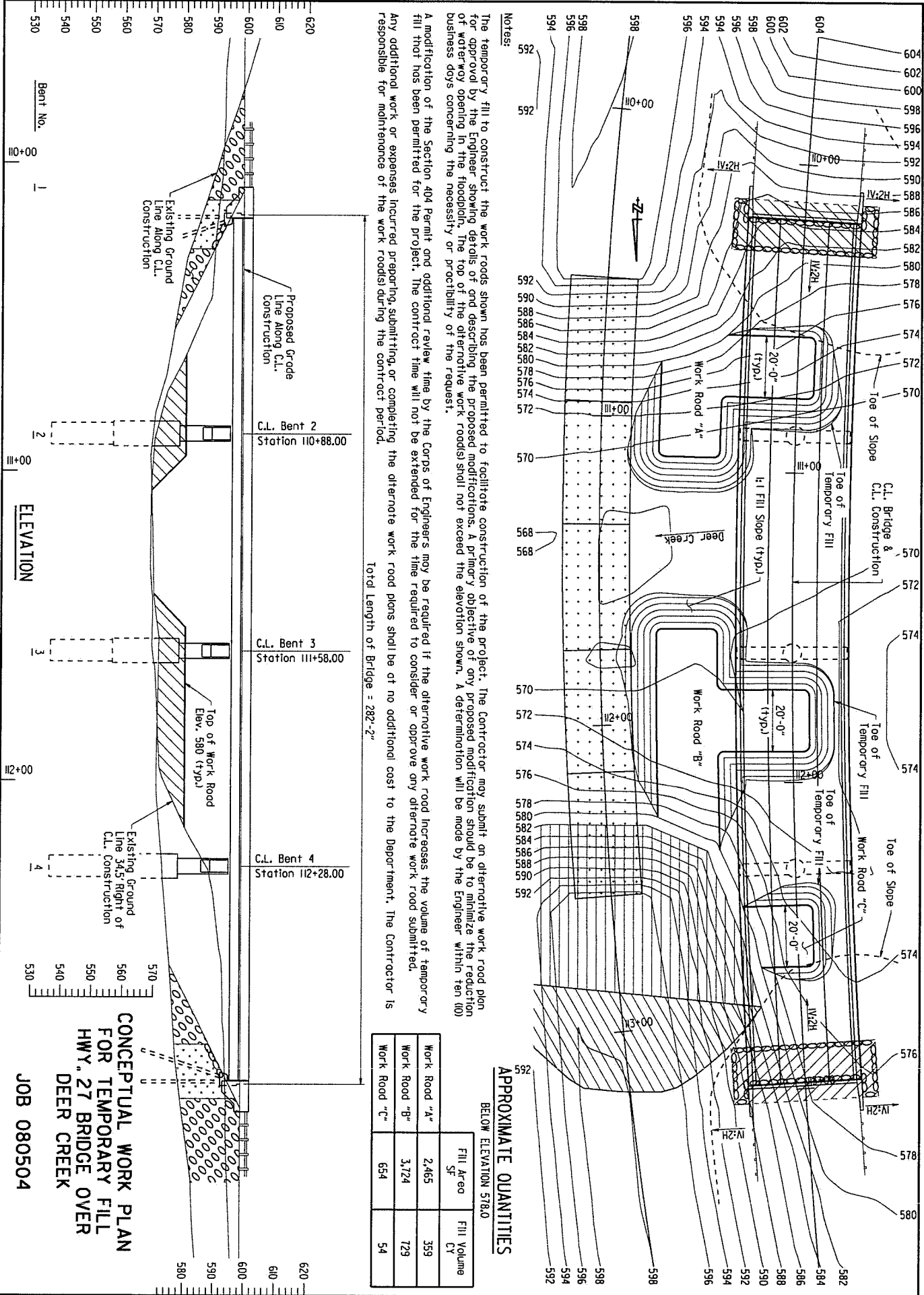


Job 080504
 Deer Creek Str. & Apprs.
 (Hwy. 27)
 Montgomery County

Sheet 3 of 5

Project Location

USGS Topographic Map:
 Story 1988

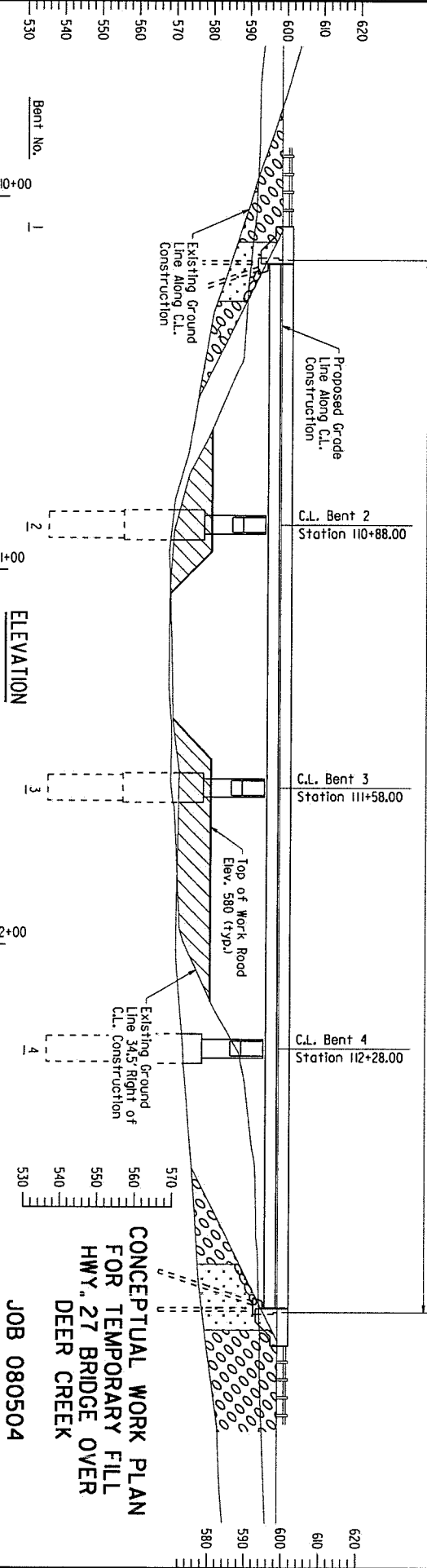


APPROXIMATE QUANTITIES

BELOW ELEVATION 578.0

Work Road	Fill Area SF	Fill Volume CY
Work Road "A"	2,465	359
Work Road "B"	3,724	729
Work Road "C"	654	54

Notes:
 The temporary fill to construct the work roads shown has been permitted to facilitate construction of the project. The Contractor may submit an alternative work road plan for approval by the Engineer showing details of and describing the proposed modifications. A primary objective of any proposed modification should be to minimize the reduction of waterway opening in the floodplain. The top of the alternative work roads shall not exceed the elevation shown. A determination will be made by the Engineer within ten (10) business days concerning the necessity or practicability of the request.
 A modification of the Section 404 Permit and additional review time by the Corps of Engineers may be required if the alternative work road increases the volume of temporary fill that has been permitted for the project. The contract time will not be extended for the time required to consider or approve any alternative work road submitted.
 Any additional work or expenses incurred preparing, submitting, or completing the alternate work road plans shall be at no additional cost to the Department. The Contractor is responsible for maintenance of the work roads during the contract period.
 Total Length of Bridge = 282'-2"



CONCEPTUAL WORK PLAN FOR TEMPORARY FILL FOR HWY. 27 BRIDGE OVER DEER CREEK

JOB 080504

ADVERSE IMPACT FACTORS FOR WETLANDS AND OTHER WATERS OF THE U.S. EXCLUDING STREAMS

FACTORS	OPTIONS					
Lost Type	Type C 0.2		Type B 2.0		Type A 3.0	
Priority Category	Tertiary 0.5		Secondary 1.5		Primary 2.0	
Existing Condition	Very Impaired 0.1	Impaired 1.0		Slightly Impaired 2.0		Fully Functional 2.5
Duration	Seasonal 0.1	0 to 1 0.2	1 to 3 0.5	3 to 5 1.0	5 to 10 1.5	Over 10 2.0
Dominant Impact	Shade 0.2	Clear 1.0	Dredge 1.5	Drain 2.0	Impound 2.5	Fill 3.0
Cumulative Impact	0.05 x $\sum AA_i$					
Location	On Site 0.0			Off Site 3.0		

REQUIRED MITIGATION CREDITS WORKSHEET

Factor	Scrub-Shrub Wetlands	Scrub-Shrub Wetlands
Lost Type	Type B 2.0	Type B 2.0
Priority Category	Tertiary 0.5	Tertiary 0.5
Existing Condition	Slightly Impaired 2.0	Slightly Impaired 2.0
Duration	Over 10 2.0	Over 10 2.0
Dominant Impact	Permanent Fill 3.0	Permanent Clear 1.0
Cumulative Impact	0	0
Location	Off Site 3.0	Off Site 3.0
Sum of r Factors	R ₁ = 12.5	R ₂ = 10.5
Impacted Area	AA ₁ = 0.2	AA ₂ = 0.4
R x AA=	2.5	4.2

Total Required Credits = $\sum (R \times AA) = \underline{6.7}$

The average credit per acre at the Upper Saline Mitigation Bank is 4.2 (1.5 acres). The equivalent acreage ratio is 2.5:1.

PERMITTEE COMPLIANCE CERTIFICATION

PERMIT NO.: MVK 2018-00789, Deer Creek Structure and Approaches on State Highway 27 at Washita (ArDOT Project No. 080504)

NWP/S NO.: 23

PERMITTEE NAME: ArDOT

DATE OF ISSUANCE: 10/24/19

PROJECT MANAGER: Johnny McLean

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

**US Army Corps of Engineers, Little Rock
ATTENTION: CESWL-RD
PO Box 867
Little Rock, Arkansas 72203-0867**

Please note that your permitted activity is subject to a compliance inspection by a US Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

DATE WORK COMPLETED: _____

SIGNATURE OF PERMITTEE

DATE