

**MEMORANDUM OF AGREEMENT  
AMONG  
FEDERAL HIGHWAY ADMINISTRATION,  
OKLAHOMA DEPARTMENT OF TRANSPORTATION,  
AND THE OKLAHOMA STATE HISTORIC PRESERVATION OFFICE,  
REGARDING  
REPLACEMENT OF US-60 HORSE CREEK BRIDGE**

**WHEREAS**, the Oklahoma Department of Transportation (ODOT) plans to replace the existing Federal Aid New Deal Depression-Era bridge carrying US-60 over Horse Creek, a former alignment of Route 66, in Afton, Ottawa County, Oklahoma, a property listed on the National Register of Historic Places (NRHP), by constructing a new bridge on the existing alignment; and

**WHEREAS**, the Federal Highway Administration (FHWA) plans to fund the Project, thereby making the Project an undertaking subject to review under Section 106 of the National Historic Preservation Act (NHPA, 54 U.S.C. § 300101 et seq), and its implementing regulations, 36 CFR Part 800; and

**WHEREAS**, the subject bridge retains design elements and associations consistent with its association on a 1926 alignment of Route 66 and was constructed as part of a Depression-era Federal-aid Works Program WPH 8-D.

**WHEREAS**, FHWA has determined that Federal-Aid Project BRFY-158B(119), State Job J/P 24273(04) will have an adverse effect to the I-beam bridge over Horse Creek (Structure 5806 0256X [NBI 05017]) and has consulted with the Oklahoma State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800; and

**WHEREAS**, The FHWA, ODOT, Oklahoma SHPO, and the Advisory Council on Historic Preservation (ACHP) entered into a Programmatic Agreement (PA) Regarding the Streamlining of Section 106 Review for Projects Involving Bridges Constructed Under Depression Era Federal Relief Programs (1933-1945); and

**WHEREAS**, in accordance with the II(b)(v) of the PA, the FHWA, ODOT, and Oklahoma SHPO agreed that the significance of the Horse Creek bridge as a Route 66 facility necessitated the execution of this Memorandum of Agreement; and

**WHEREAS**, in accordance with 36 CFR 800.3(f) ODOT and FHWA, in consultation with the Oklahoma SHPO, identified the Route 66 Preservation Corridor Program, the Oklahoma Route 66 Association, the Oklahoma Historic Bridge & Highway Group, the Historic Bridge Foundation, Preservation Oklahoma, Afton Station, the Route 66 Alliance, and Jim Ross as consulting parties and invited them to sign this MOA; and

**WHEREAS**, the FHWA has consulted with the Caddo Nation, the Cherokee Nation, the Delaware Tribe of Indians, the Osage Nation, the United Keetoowah Band of Cherokee, and the Wichita and Affiliated Tribes in accordance with 36 CFR 800.2(c)(2), and determined that no

properties of traditional religious cultural significance will be affected by the undertaking; and

**WHEREAS**, in accordance with 36 CFR 800.2(d), ODOT held public involvement drop-in-centers at the Nowhere Restaurant, the Afton Station, and Afton City Hall in the town of Afton on September 21, 2016

**WHEREAS**, in accordance with 36 CFR Part 800.6(a)(1), the FHWA has notified the ACHP of its adverse effect determination with specified documentation and the ACHP has chosen not to participate in the consultation; and

**NOW, THEREFORE**, FHWA, ODOT, and the Oklahoma SHPO, agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

## STIPULATIONS

FHWA will ensure that the following measures are carried out. Measures will be met within the timeframes presented for each stipulation.

- I. **Documentation.** Prior to the construction of the new bridge, ODOT will record the existing bridge at the equivalent of Level II documentation as specified by the Historic American Engineering Record (HAER).
  - A. High Quality, 35 mm black and white photographs, of the bridge documenting its present appearance and major structural or decorative details, together with all negatives on archival gold CD as digital TIFF files that meet or exceed the minimum requirement for pixel depth. The photographs will be a minimum 4" x 6" and no larger than 8" x 10", and will be clearly labeled with the following information:
    - a. Name of property;
    - b. Location (county, city, state, and street address);
    - c. Name of photographer;
    - d. Date of photograph
    - e. Location of photographic negative;
    - f. Indication of direction camera is pointing; and
    - g. Number of photograph in series

Photographs are to be submitted by ODOT and approved by SHPO as meeting the conditions outlined above before any work takes place that will affect the property.

- B. The document will include photographic reproduction of selected original (as-built) construction plans and historic photographs, if they exist.
- C. The document will include a brief written technical description of the bridge and historical summary.
  - a. The summary shall include documentation of the association of the structure with Route 66 and its construction under a Federal-aid Works Program project.
    - i. ODOT will make a reasonable attempt to seek out individuals in the Afton vicinity who may have worked on construction of the bridge and who may be able to provide additional perspectives regarding the historic context of the bridge.
- D. All documentation will be edited, catalogued and packaged in a manner acceptable to the Oklahoma SHPO. The Oklahoma SHPO will be the repository for the documentation.
- E. ODOT will provide all research documentation, research materials, copies of

photographs, and HAER documentation of the bridge to the Oklahoma SHPO within three years of the execution of this MOA. HAER documentation will be posted to the ODOT Cultural Resources Program website.

**II. Public Interpretation.** ODOT will implement two interpretation measures in order to engage and educate the public on the history of Route 66 and the Horse Creek Bridge.

A. Using the *Oklahoma Route 66 Documentation Project (1926-1970): A Survey of Roadbed and Integral Structures*, as a guide, ODOT will develop a Google Earth and GIS layer of Route 66 roadbed features from the 2002 publication and will provide an update as to the status of those features. The layers will also incorporate roadbed features that may have been omitted from the 2002 publication ODOT will provide National Register of Historic Places status of these features. The Google Earth and GIS layers will be made available on ODOT's Route 66 web page: <http://www.odotculturalresources.info/route-66.html> and will be prepared as a pamphlet that can be distributed at other ODOT events. Pamphlets will be placed in the kiosk in the lobby of the ODOT central office.

B. In coordination with the Afton Station, ODOT will produce an interpretive panel presenting the history of Route 66 and the Horse Creek Bridge. The interpretive panel will be placed at the Afton Station, in Afton, Oklahoma. The design and content of the panel will be coordinated with SHPO and consulting parties. The location of the placement of the panel will be coordinated with Afton Station and Oklahoma SHPO.

**III. Mitigation.** In 2014, ODOT completed the *Historic Bridge Railing Study for Route 66 Bridges* study. The study was undertaken in accordance with goals outlined in the *Route 66 Corridor Management Plan* and the *Route 66 Economic Impact Study* to maintain the intrinsic qualities of Route 66 and identify the historic route to tourists and the travelling public. The study was also conducted to identify context-sensitive crash-tested railings for Route 66 bridge replacement projects. The report documented 32 historic-age Route 66 bridges that still retained their original railings and identified nine distinct railing types among those structures, which have already been implemented on other Route 66 bridges that were not eligible for or listed on the NRHP. The railings on the Horse Creek Bridge were identified as a single example of a concrete post and double-rail, whereby the lower rail sits on the curb. The crash-tested replacement recommendation is the Texas T66 railing

A. ODOT will incorporate the Texas T66 railing in the new bridge carrying US-60 over Horse Creek.

**IV. Duration.** This MOA will be null and void if its stipulations are not carried out within ten (10) years from the date of its execution. At such time, and prior to work continuing on the undertaking, FHWA shall either (a) execute a MOA pursuant to 36 CFR § 800.6, or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. Prior to such time, FHWA may consult with

signatories to reconsider the terms of the MOA and amend it in accordance with Stipulation VII below. FHWA shall notify signatories as to the course of action it will pursue.

**V. Post-Review Discoveries.** If potential historic properties are discovered or unanticipated effects on historic properties found, FHWA shall follow measures outlined in 36 CFR 800.13 and ODOT Spec 107.09, Protection of Archeological and Unmarked Human Burial Sites.

**VI. Dispute Resolution.** Should any signatory party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, FHWA shall consult with such party to resolve the objection. If FHWA determines that such objection cannot be resolved, FHWA will:

A. Forward all documentation relevant to the dispute, including FHWA's proposed resolution, to the ACHP. The ACHP shall provide FHWA with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FHWA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. FHWA will then proceed according to its final decision.

B. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, FHWA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, FHWA shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response.

C. FHWA's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

**VII. Amendments.** This MOA may be amended when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy signed by all of the signatories is filed with the ACHP.

**VIII. Termination.** If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per Stipulation VII, above. If within thirty (30) days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

Once the MOA is terminated, and prior to work continuing on the undertaking, FHWA must either (a) execute an MOA pursuant to 36 CFR § 800.6, or (b) request,

take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. FHWA shall notify the signatories as to the course of action it will pursue.

Execution of this MOA by FHWA and SHPO and implementation of its terms evidence that FHWA has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

**Signatory**

**MOA for BRFY-158B(119); State Job 24273(04) US-60 over Horse Creek, Ottawa County,  
Oklahoma (Structure 5806 0256X [NBI 05017])**

Federal Highway Administration

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Elizabeth Romero  
Environmental Program Manager  
Oklahoma Division

**Signatory**

**MOA for BRFY-158B(199); State Job 24273(04) US-60 over Horse Creek, Ottawa County,  
Oklahoma (Structure 5806 0256X [NBI 05017])**

Oklahoma Department of Transportation

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Siv Sundaram  
Environmental Programs Division Engineer

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Randall White  
Division VIII Engineer

**Signatory**

**MOA for BRFY-158B; State Job 24273(04) US-60 over Horse Creek, Ottawa County,  
Oklahoma (Structure 5806 0256X [NBI 05017])**

Oklahoma State Historic Preservation Office

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Melvena Heisch  
Deputy State Historic Preservation Officer

**Signatory**

**MOA for BRFY-158B(119); State Job 24273(04) US-60 over Horse Creek, Ottawa County,  
Oklahoma (Structure 5806 0256X [NBI 05017])**

Afton Station

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**Concurring Party**

**MOA for BRFY-158B(119); State Job 24273(04) US-60 over Horse Creek, Ottawa County,  
Oklahoma (Structure 5806 0256X [NBI 05017])**

Route 66 Preservation Corridor Program

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Kaisa Barthuli  
Program Manager,  
National Trails Intermountain Region

**Concurring Party**

**MOA for BRFY-158B(119); State Job 24273(04) US-60 over Horse Creek, Ottawa County,  
Oklahoma (Structure 5806 02560X [NBI 05017])**

Preservation Oklahoma

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
David Pettyjohn  
Executive Director

**Concurring Party**

**MOA for BRFY-158B(119); State Job 24273(04) US-60 over Horse Creek, Ottawa County,  
Oklahoma (Structure 5806 0256X [NBI 05017])**

Historic Bridge Foundation

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Kitty Henderson  
Director

**Concurring Party**

**MOA for BRFY-158B(119); State Job 24273(04) US-60 over Horse Creek, Ottawa County,  
Oklahoma (Structure 5806 0256X [NBI 05017])**

Oklahoma Route 66 Association

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Brad Nickson  
President

**Concurring Party**

**MOA for BRFY-158B(119); State Job 24273(04) US-60 over Horse Creek, Ottawa County,  
Oklahoma (Structure 5806 0256X [NBI 05017])**

Oklahoma Historic Bridge and Highway Group

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Weslee Kinsler  
Administrator

**Concurring Party**

**MOA for BRFY-158B(119); State Job 24273(04) US-60 over Horse Creek, Ottawa County,  
Oklahoma (Structure 5806 0256X [NBI 05017])**

Route 66 Alliance

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

Ken Busby  
Executive Director and CEO

**Concurring Party**

**MOA for BRFY-158B(119); State Job 24273(04) US-60 over Horse Creek, Ottawa County,  
Oklahoma (Structure 5806 0256X [NBI 05017])**

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
Jim Ross



## **Checklist**

### **for Section 4(f) Programmatic Evaluation of Historic Bridge Projects**

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**Bridge Name:** U.S. Highway (US) 60 Bridge over Horse Creek

**Bridge Location:** US 60, 0.41 miles northeast of Main Avenue in Afton, Oklahoma

**County:** Ottawa

**Division:** Field Division 8

**Job/Piece (J/P):** 24273(04)

**Federal-Aid Project Number:** BRFY-158B(119)

**Highway/Facility:** US 60

**Bridge Type:** Steel beam

**NBI #:** 05017

**Structure #:** 5806 0256X

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#### **I. Description of Project Scope/Need and Purpose Statement**

The project need results from the structural deficiency and functional obsolescence of the existing US 60 Bridge over Horse Creek. The bridge is structurally deficient due to deterioration of load-carrying structural elements, including the bridge's deck and superstructure. Structural deficiencies of a bridge can be rated using National Bridge Inventory (NBI) condition ratings, scored on a scale of 0-Failed to 9-Excellent Condition. The most recent bridge inspection (April 2017) rated the bridge's deck in 3-Serious Condition and the superstructure in 4-Poor Condition. The deck exhibits many spalls and cracks with exposed reinforcing steel bars. Joints in the deck have completely failed and are allowing water and debris to drain onto the steel beams and diaphragms. In addition, the concrete deck is bouncing on the steel beams when subject to traffic loads, due to a lack of physical attachments between the deck and beams. Superstructure deterioration is most severe in the steel diaphragms, with total section loss on many diaphragms and removal of the most deteriorated diaphragms. In addition, steel bearings for the beams that support the deck have moderate section loss and complete paint failure. The ends of the steel beams exhibit minor deterioration, with supplemental steel sections welded to the bottom flanges of several beam ends.

The bridge is also functionally obsolete due to its narrow width and substandard railings. The bridge currently has a clear roadway width of 24 feet. Current design standards call for a minimum clear roadway width of 40 feet for a two-way roadway, to accommodate two 12-foot travel lanes and two 8-foot shoulders, based on the functional classification of US 60 as a minor arterial highway and the roadway's Average Daily Traffic above 2,000 vehicles per day. The bridge's existing concrete railings do not meet current crash test level (TL) standards. In addition, the existing railings on the outside of the sidewalks do not meet current safety requirements for overall height and for minimum clear opening dimensions between railing elements. The bridge's current sufficiency rating is 29.9 out of a possible 100 points.

The project's purpose is to provide a structurally sound bridge over Horse Creek and to preserve Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination in Oklahoma.



## II. Determination of Applicability

All must result in a Yes answer for this checklist to be used.

Yes No

- The project requires the use of a bridge defined as historic per Section 106 regulations (36 CFR 800)
  - The historic bridge is not a designated National Historic Landmark (NHL).  
The project results in:
    - Section 4(f) use of a historic bridge, AND
    - Additional impacts to protected Section 4(f) properties (if any) are limited to *de minimis* or exception categories as specified in the Scope of Work.
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## III. Identify additional Section 4(f) properties in the project area

Either exception, *de minimis*, or another programmatic

There are no additional Section 4(f) properties in the project area.

Comments: N/A

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## IV. Alternatives Considered/Findings

**Alternative 1: No Build** (*Indicate all that apply.*)

- Structural Deficiencies**  
The No Build alternative does not correct the situation that causes the bridge to be considered structurally deficient or significantly deteriorated. These deficiencies can lead to eventual structural failure/collapse. Normal maintenance is not considered adequate to address these deficiencies.
- Functional/Geometric Deficiencies**  
The No Build alternative does not correct the situation that causes the bridge to be considered functionally/geometrically deficient. These deficiencies can lead to safety hazards to the traveling public or place unacceptable restrictions on transport and travel.
- Justification** (*Summary describing constraints posed by terrain; adverse social, economic or environmental effects, engineering and economic considerations, and preservation standards*)  
This alternative would leave the existing structure in place without bypass, rehabilitation, or replacement. The existing structure would receive cyclical or routine maintenance measures, such as annual water-washing of the bridge deck and sidewalks, at existing



levels and frequency. This alternative would avoid use of the historic bridge as a Section 4(f) property and would have the least impact on the historic integrity of the bridge in the short term.

However, the existing structural deficiencies present in the deck and superstructure will worsen and develop into more significant defects. This deterioration may lead to load posting, requiring heavy trucks to use alternate routes. The detour route length is 19.9 miles. In addition, the existing functional inadequacies related to narrow roadway width and substandard non-crash-tested railings would remain unaddressed.

This alternative would not meet the project purpose and need because it would not provide a structurally sound bridge and would not correct structural deficiencies and functional obsolescence. This alternative would meet only a portion of the project purpose, as it would preserve Historic Route 66 and Route 66 National Scenic Byway as a tourist destination in Oklahoma. However, in the long term, continued deterioration could lead to eventual failure and removal of the bridge as a historic element from Route 66.

**Recommendation (Mandatory)**

This alternative does not meet the project purpose and need. It fails the Section 4(f) prudent and feasible standard and is not recommended.

**Alternative 2: Rehabilitation of Historic Bridge**

**Structural Deficiencies**

The rehabilitation alternative would correct the situation that causes the bridge to be considered structurally deficient and significantly deteriorated. However, this alternative would result in a use of the Section 4(f) property and is not considered an avoidance alternative.

**Functional/Geometric Deficiencies**

The rehabilitation alternative would correct the situation that causes the bridge to be considered functionally/geometrically deficient. However, this alternative would result in a use of the Section 4(f) property and is not considered an avoidance alternative.

**Justification** (*Summary describing constraints posed by terrain; adverse social, economic or environmental effects, engineering and economic considerations, and preservation standards*)

This alternative would rehabilitate the existing bridge to meet current Oklahoma Department of Transportation (ODOT) and American Association of State Highway and Transportation Officials (AASHTO) design standards. The existing bridge would remain in place and continue to allow two-way vehicular traffic. It would be widened on both sides to meet current design criteria, with two 12-foot-wide travel lanes and 8-foot-wide shoulders on each side, for a clear roadway width of 40 feet. The rehabilitation would remove the existing concrete railings, sidewalks, and deck. Texas Type T66 railings would be installed on the outside edges of the bridge to meet a Test Level (TL) 3 crash-



test standard. No sidewalk would be installed on the bridge. To accommodate the wider deck, the two exterior lines of steel beams would be removed and replaced. Remaining original steel beams would be cleaned and painted. In addition, all existing riveted steel diaphragms would be removed and replaced with bolted steel diaphragms. Existing wingwalls would be removed and abutments would be widened to match the new deck width. Steel shear connectors would be added to the top flange of all steel beams to provide physical connection into the new concrete deck. The Horse Creek channel would be dredged to restore the waterway opening to near-original condition. The total cost of this alternative is estimated to be \$2,440,347.

This alternative would meet the project purpose and need to provide a structurally sound bridge by correcting the structural deficiencies and functional obsolescence now present with the existing bridge. The deteriorated deck and superstructure elements would be replaced or repaired. The bridge would meet current design standards for roadway width and would have railings that meet full-scale crash criteria. This alternative would also meet the project purpose to preserve Historic Route 66/Route 66 National Scenic Byway as a tourist destination. Alterations to the bridge's character-defining features and other historic fabric would decrease the bridge's specific appeal but would not diminish the ability of the overall route to serve as a tourist destination. The rehabilitation alternative would also have the potential to impact four bat species if construction extended into roosting season.

This alternative would result in a use of the bridge as a Section 4(f) property, through removal of the original concrete railings and sidewalks, the bridge's most character-defining features. The rehabilitation would also remove other historic fabric, such as exterior steel beams and diaphragms. These alterations would result in a loss of the bridge's historic integrity and would result in an adverse effect to the bridge. This alternative is therefore not considered an avoidance alternative.

**Recommendation (Mandatory)**

This alternative fails the Section 4(f) prudent and feasible standard and is not recommended.

**Alternative 3A: Build on New Location (parallel construction/conversion to one-way pair)**

**Structural Deficiencies**

The new location/one-way pair alternative would correct the situation that causes the bridge to be considered structurally deficient and significantly deteriorated. However, this alternative would result in a use of the Section 4(f) property and is not considered an avoidance alternative.

**Functional/Geometric Deficiencies**

The new location/one-way pair alternative would correct the situation that causes the bridge to be considered functionally/geometrically deficient. However, this alternative would result in a use of the Section 4(f) property and is not considered an avoidance alternative.



- ☒ **Justification** (*Summary describing constraints posed by terrain; adverse social, economic or environmental effects, engineering and economic considerations, and preservation standards*)

This alternative consists of construction of a new bridge adjacent to the historic bridge and use of each structure to carry one lane of one-way traffic plus shoulders in a single direction. The new bridge would be constructed with a total roadway width of 40 feet, with one 24-foot-wide travel lane for westbound traffic and two 8-foot-wide shoulders. The new bridge would be a three-span, prestressed-concrete girder structure with concrete deck and substructure elements. The existing bridge would be substantially rehabilitated in similar fashion to Alternative 2 above, to address structural issues and substandard railings. The existing bridge would be widened to a total roadway width of 36 feet, with one 12-foot-wide travel lane for eastbound traffic, two 8-foot-wide shoulders, and extra width to accommodate the new exterior lines of the steel beam superstructure.

The new bridge and roadway relocation would require approximately 1.47 acres of additional right-of-way, which is estimated to result in impacts to 11 properties: permanent acquisition of property from seven properties and temporary construction easements from four properties. The total cost of this alternative is estimated to be \$4,891,438.

This alternative would meet the project purpose and need to provide a structurally sound bridge by correcting the structural deficiencies and functional obsolescence now present with the existing bridge. The deteriorated deck and superstructure elements on the existing bridge would be replaced or repaired. Both bridges would meet current design standards and would have railings that meet full-scale crash criteria. This alternative would also meet the project purpose to preserve Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination. Alterations to the existing bridge's character-defining features and other historic fabric would decrease the bridge's specific appeal but would not diminish the ability of the overall route to serve as a tourist destination.

This alternative would result in a use of the existing bridge as a Section 4(f) property. Removal of the original concrete railings and elimination of the sidewalks would impact the bridge's most character-defining features. The rehabilitation of the existing bridge would also remove other historic fabric, such as exterior steel beams and diaphragms. These alterations would result in a loss of the bridge's historic integrity and would result in an adverse effect to the bridge. This alternative is therefore not considered an avoidance alternative. This alternative also results in extraordinary additional project construction costs through construction of a new bridge and roadway approaches on new parallel alignment, as well as additional maintenance and operational costs associated with retention of the existing bridge as part of a one-way pair. The alternative will cause economic impacts to adjacent property owners through additional permanent right-of-way acquisition from seven properties.



**Recommendation (Mandatory)**

This alternative fails the Section 4(f) prudent and feasible standard and is not recommended.

**Alternative 3B: Build on New Location (parallel construction/retain as monument)**

**Structural Deficiencies**

The new location/monument alternative would correct the situation that causes the bridge to be considered structurally deficient and significantly deteriorated.

**Functional/Geometric Deficiencies**

The new location/monument alternative would correct the situation that causes the bridge to be considered functionally/geometrically deficient.

**Justification** (*Summary describing constraints posed by terrain; adverse social, economic or environmental effects, engineering and economic considerations, and preservation standards*)

This alternative would construct a new bridge that would carry two-way traffic parallel to the existing bridge, with the historic bridge left in place as a monument. The new bridge would be constructed with a total roadway width of 40 feet, with two 12-foot-wide travel lanes and two 8-foot-wide shoulders. The new bridge would be a three-span, prestressed-concrete girder structure with concrete deck and substructure elements.

The roadway approach at each end of the existing bridge would be obliterated and barricades would be installed to prevent access by traffic, non-motorized vehicles, or pedestrians. Rehabilitation work to the existing bridge would be limited to modifying the existing abutments to tie into the new bridge's concrete abutments and resealing joints in the existing deck. The new location/monument alternative does not impact the bridge's character-defining features and does not remove historic fabric. This alternative avoids use of the bridge as a Section 4(f) property since its historic integrity would be retained.

The new bridge and roadway relocation would require approximately 1.47 acres of additional right-of-way, which is estimated to result in impacts to 11 properties: permanent acquisition of property from seven properties and temporary construction easements from four properties. The total cost of this alternative is estimated to be \$3,962,805.

This alternative would meet the project purpose and need to provide a structurally sound bridge through construction of a new bridge and removal of the existing structurally deficient/functionally obsolete bridge from service. This alternative would also meet the project purpose to preserve Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination, allowing the existing bridge to serve as a visible element of Route 66's history. However, in the long term the lack of rehabilitation and maintenance of the historic bridge would result in its continued deterioration and could lead to eventual failure. This alternative also results in extraordinary additional project construction costs



through construction of a new bridge and roadway approaches on a new parallel alignment. The alternative will cause economic impacts to adjacent property owners through additional permanent right-of-way acquisition from seven properties.

**Recommendation (Mandatory)**

This alternative fails the Section 4(f) prudent and feasible standard and is not recommended.

**Alternative 3C: Build on New Location (parallel construction/retain as pedestrian bridge)**

**Structural Deficiencies**

The new location/pedestrian use alternative would correct the situation that causes the bridge to be considered structurally deficient and significantly deteriorated.

**Functional/Geometric Deficiencies**

The new location/pedestrian use alternative would correct the situation that causes the bridge to be considered functionally/geometrically deficient.

**Justification** (*Summary describing constraints posed by terrain; adverse social, economic or environmental effects, engineering and economic considerations, and preservation standards*)

This alternative would construct a new bridge that would carry two-way traffic parallel to the existing bridge, with the historic bridge left in place to carry pedestrian and bicycle traffic. The new bridge would be constructed with a total roadway width of 40 feet, with two 12-foot-wide travel lanes and two 8-foot-wide shoulders. The new bridge would be a three-span, prestressed-concrete girder structure with concrete deck and substructure elements.

The existing bridge would be rehabilitated and left in place for use by pedestrians, bicycles, and non-motorized vehicles. Existing roadway approaches would remain in place. A barrier would be constructed at each end of the bridge to allow pedestrian and bicycle traffic but prevent vehicular access. Rehabilitation activities would include repair and overlay of the bridge deck, replacement of deck expansion joints, replacement of steel diaphragms with new bolt-connected steel diaphragms, cleaning and painting of entire steel superstructure, and modification of abutments with closure wall to tie into new bridge abutments. Following rehabilitation, the existing bridge is expected to have sufficient strength to meet the desired pedestrian live loading criteria of 95 pounds per square foot. Railings on the existing bridge would not meet current design criteria for height or maximum clear opening size. However, no work is proposed to the existing railings and therefore the railings do not require modification to meet current standards.

The new location/pedestrian use alternative does not impact the bridge's character-defining features. Removal of other historic fabric is limited to replacement of the diaphragms and deck joints, modifications of portions of the abutments, and placement of



## Checklist for Section 4(f) Programmatic Evaluation of Historic Bridge Projects

a concrete overlay over the existing deck. This alternative avoids use of the bridge as a Section 4(f) property since its historic integrity would be retained.

The new bridge and roadway relocation would require about 1.47 acres of additional right-of-way, which is estimated to result in impacts to 11 properties: permanent acquisition of property from seven properties and temporary construction easements from four properties. The total cost of this alternative is estimated to be \$4,548,083.

This alternative would meet the project purpose and need to provide a structurally sound bridge through construction of a new bridge and removal of the existing structurally deficient/functionally obsolete bridge from vehicular service. This alternative would also meet the project purpose to preserve Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination, allowing the existing bridge to serve as a visible element of Route 66's history.

However, this alternative results in extraordinary additional project construction costs through construction of a new bridge and roadway approaches on a new parallel alignment, in addition to partial rehabilitation of the existing bridge. The alternative will cause economic impacts to adjacent property owners through additional right-of-way acquisition from seven properties. In addition, ODOT would need to find a recipient willing to take responsibility for ongoing maintenance of the existing bridge.

While this alternative would convert the existing bridge to pedestrian/bicycle use, the structure currently receives very little pedestrian or bicycle traffic due to its location on the outskirts of the small community of Afton. No sidewalks are currently present on US 60 on either end of the existing bridge and there are no trails in the vicinity with which to connect. It is therefore expected that the existing bridge would receive almost no use in its intended pedestrian/bicycle function.

**Recommendation (Mandatory)**

This alternative fails the Section 4(f) prudent and feasible standard and is not recommended.

### Alternative 4: Replacement

**Structural Deficiencies**

The Replacement alternative corrects the situation that causes the bridge to be considered structurally deficient or significantly deteriorated.

**Functional/Geometric Deficiencies**

The Replacement alternative corrects the situation that causes the bridge to be considered functionally/geometrically deficient.



- Justification** (*Summary describing constraints posed by terrain; adverse social, economic or environmental effects, engineering and economic considerations, and preservation standards*)

This alternative would remove the existing bridge and construct a new bridge that would carry two-way traffic on the existing US 60 alignment. The new bridge would be constructed with a total roadway width of 40 feet, with two 12-foot-wide travel lanes and two 8-foot-wide shoulders. The new bridge would be a three-span, prestressed-concrete girder structure with concrete deck and substructure elements. The bridge would be constructed with context-sensitive Texas T66 open concrete railings, which meet crash-test criteria for the crossing's traffic volume and roadway speed. The new bridge will have a design life of 75 years. This alternative would not require additional right-of-way acquisition. The total cost of this alternative is estimated to be \$3,141,853.

This alternative would meet the project purpose and need to provide a structurally sound bridge through construction of a new bridge and removal of the existing structurally deficient/functionally obsolete bridge from service. This alternative would also meet the project purpose to preserve Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination. Removal of the existing bridge would remove a historic element from Route 66. However, removal of this bridge along the approximately 400-mile-long corridor would not diminish the ability of the overall route to serve as a tourist destination.

- Recommendation (Mandatory)**

This alternative is determined to meet the Section 4(f) prudent and feasible standard and **is recommended.**

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## V. Measures to Minimize Harm

*Indicate all that apply, but a minimum of one must be selected. Verify that the project includes all possible planning to minimize harm.*

- Measures taken to preserve historic integrity per preservation standards
- Measures taken to market historic bridge for alternative use:  
This bridge, with its steel beam superstructure and concrete railings, is not a marketable type. Therefore, ODOT will not pursue marketing for relocation of the bridge as an alternative use.
- Alternative design measures taken to address deficiencies that complies with codes:  
Replacement bridge will feature context-sensitive Texas T66 open concrete railings.
- Other measures taken to address deficiencies that complies with codes:
- Google Earth layer of Route 66 roadbed features
  - Interpretive panel or signage at the Afton Station Visitor Center in Afton
  - Historic American Engineering Record (HAER) Level II equivalency documentation



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## VI. Mitigation Commitment

Describe mitigation agreed to in consultation with SHPO and other consulting parties.

- Programmatic
- Customized
  - Google Earth and GIS layer of Route 66 roadbed features presented in the “Oklahoma Route 66 Documentation Project (1926-1970): A Survey of Roadbed and Integral Structures,” to be available and maintained on the ODOT Cultural Resources Program website.
  - Interpretive panel or signage on the US 60 Bridge over Horse Creek and its history, to be installed at the Afton Station Visitor Center in Afton.
  - HAER Level II equivalency documentation for the US 60 Bridge over Horse Creek.
  - Implementation of Texas T66 context-sensitive bridge rail.

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## VII. Summary and Approval

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by ODOT pursuant to 23 U.S.C. 327, and executed by the Federal Highway Administration (FHWA) and ODOT.

The proposed project meets all the applicability criteria set forth by the FHWA guidance for Programmatic Bridge Section 4(f) Evaluation. All alternatives set forth in the subject programmatic were fully evaluated and the findings made are clearly applicable to this project. There are **no feasible and prudent alternatives** to the use of the historic bridge.

The project includes all possible planning to minimize harm. ODOT will include the measures to minimize harm as environmental commitments in the applicable National Environmental Policy Act (NEPA) document.

The following **MUST** be attached to this checklist to ensure proper documentation of the Historic Bridge Programmatic Section 4(f):

- Design Analysis Report to Support the 4(f) [NOTE: The Design Analysis Report was prepared using April 2015 bridge inspection data. Condition ratings, sufficiency rating, and other measures did not appreciably change between the April 2015 and April 2017 inspection reports.]
- Photographs of the bridge detailing conditions cited in alternatives analyses
- Comparative no-use alternatives analysis chart
- Proof of Historic Bridge Marketing [NOTE: This bridge, with its steel beam superstructure and concrete railings, is not a marketable type. Therefore, ODOT will not pursue marketing for relocation of the bridge as an alternative use.]



**From:** [pathfinder66@earthlink.net](mailto:pathfinder66@earthlink.net)  
**To:** [wkinsler@wkinsler.com](mailto:wkinsler@wkinsler.com); [Scott Sundermeyer](#); [Brad Nickson](#); [Erik Erickson](#); [Ken Parker](#)  
**Cc:** [Oklahoma Route 66 Association](#); [wkinsler@wkinsler.com](mailto:wkinsler@wkinsler.com); [Kitty Henderson](#); [David Pettyjohn](#); [brad@oklahomaroute66.com](mailto:brad@oklahomaroute66.com); [Kitty Henderson](#); [Barthuli, Kaisa](#); [Jerry McClanahan](#)  
**Subject:** RE: ODOT Ottawa County US-60 Horse Creek project JP 24273(04)  
**Date:** Friday, September 01, 2017 1:50:41 PM

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Scott and All,

So far, five of the consulting parties have stated they will not sign off on the MOA. That should send a clear message. If the Horse Creek Bridge is not considered worthy of saving because of additional cost, then no bridge on Oklahoma Route 66 is worthy of saving. Will it only stop when there none remaining? Currently ODOT plans to demolish historic Route 66 bridges at **Sayre, Elk City, Clinton, Chandler, and Afton**. Afterward, there will be very few left. Doing so irrevocably removes tangible icons of our transportation history while causing negative economic impact on tourism.

Not only is the Horse Creek Bridge one-of-a-kind and listed on the National Register, it was part of the 1937 bypass of the Sidewalk Highway, which completed the final section of Route 66 paving (to standards) in the state. The bridge at the other end of that bypass, a beautiful through truss bridge on the Neosho River at Miami, was destroyed in 1995. Today, how many people are aware of interpretive materials related to the Neosho River Bridge or where to see them? My guess is nobody.

Finally, I am not alone in wondering why, as consulting parties, there has been a noticeable absence of consultation? What we have seen is periodic reports from ODOT advising us of their analyses and subsequent decisions. The process is essentially a one-way street.

I sincerely hope that ODOT will take a hard look at their decision-making process and revisit the alternatives for the Horse Creek Bridge.

Jim Ross

Sent from [Mail](#) for Windows 10

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**From:** [wkinsler@wkinsler.com](mailto:wkinsler@wkinsler.com)  
**To:** [Scott Sundermeyer](#); [Brad Nickson](#); [Erik Erickson](#); [Ken Parker](#)  
**Cc:** [pathfinder66@earthlink.net](mailto:pathfinder66@earthlink.net); [Oklahoma Route 66 Association](#); [wkinsler@wkinsler.com](mailto:wkinsler@wkinsler.com); [Kitty Henderson](#); [David Pettyjohn](#); [brad@oklahomaroute66.com](mailto:brad@oklahomaroute66.com)  
**Subject:** Re: ODOT Ottawa County US-60 Horse Creek project JP 24273(04)  
**Date:** Friday, September 01, 2017 12:32:01 PM

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"Having historical documentation of something versus actually having that "something" are two very different things. The Route 66 traveler is expecting to have/see those historic bridges. They don't want to see historical documentation or interpretive panels. And are not likely to seek that information. And they will miss some of the character of the road...

BradBrad  
NicksonPresidentOklahoma Route 66  
Association  
[www.oklahomaroute66.com](http://www.oklahomaroute66.com)"

Once the character of the road is thus changed, it becomes just like any of the other highways in the state. 12 years ago US 77 was like driving a time-capsule from state line to state line, with very lengthy sections still on first generation paved alignment, with original structures. No real traffic uses 77, because it now lurks in the shadows of I-35 which parallels it, and was easy to get a taste of what highways were like. Now it just like driving any other route. US 77 has never had the national recognition or following that the former US 66 has, but it was something to experience and was a living connection with the past. 66 has much less of its original fabric in tact compared to 77, and has been for a long time taken for granted that what was left would be preserved because it was on 66 and because of growing awareness of the highway in the last 20 years or so. Now, much of this fabric is being destroyed at an alarming accelerating rate, and the only compensation given to those who come to find and to experience 66 is some obscure collection of documents which unfortunately has been too little and too late, as some of the great portions have already been lost.

Wes Kinsler  
Oklahoma Historic Bridge & Highway Group

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On Fri, 9/1/17, Brad Nickson <[brad@thenicksons.net](mailto:brad@thenicksons.net)> wrote:

**From:** [brad.nickson@gmail.com](mailto:brad.nickson@gmail.com) on behalf of [Brad Nickson](#)  
**To:** [Scott Sundermeyer](#)  
**Cc:** [pathfinder66@earthlink.net](mailto:pathfinder66@earthlink.net); [Oklahoma Route 66 Association](#); [wkinsler@wkinsler.com](mailto:wkinsler@wkinsler.com); [Kitty Henderson](#); [David Pettyjohn](#); [brad@oklahomaroute66.com](mailto:brad@oklahomaroute66.com)  
**Subject:** Re: ODOT Ottawa County US-60 Horse Creek project JP 24273(04)  
**Date:** Friday, September 01, 2017 11:30:52 AM

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Scott,

From my email from June 2016, you already know that the Oklahoma Route 66 Association does not support the decision to replace the Horse Creek bridge. That opinion still stands.

My simplistic reading of this MOA is that the consulting parties are agreeing with the documentation stipulations of the project. I agree that, since this project is now replacing Horse Creek bridge, that it should be completely and thoroughly documented. But, based on similar MOAs and their final implementations, cannot support this MOA. Accessibility to the completed documentation is my current objection.

A specific example... The Bird Creek/Verdigris River bridge project near Catoosa comes to mind. At one time I could easily find most of that documentation from that MOA online. After some time looking this morning (SHPO's website and ODOT Cultural Resources), I can no longer find those materials. While those past MOAs and this current one do not stipulate easy access to the documentation, I feel that going forward with current technology, that should now be stipulated.

Having historical documentation of something versus actually having that "something" are two very different things. The Route 66 traveler is expecting to have/see those historic bridges. They don't want to see historical documentation or interpretive panels. And are not likely to seek that information. And they will miss some of the character of the road...

Brad



Brad Nickson  
President  
Oklahoma Route 66 Association  
[www.oklahomaroute66.com](http://www.oklahomaroute66.com)

**From:** [pathfinder66@earthlink.net](mailto:pathfinder66@earthlink.net)  
**To:** [Scott Sundermeyer](#); [Oklahoma Route 66 Association](#); [wkinsler@wkinsler.com](mailto:wkinsler@wkinsler.com); [Kitty Henderson](#); [David Pettyjohn](#); [brad@oklahomaroute66.com](mailto:brad@oklahomaroute66.com); [Barthuli, Kaisa](#); [Brad Nickson](#); [Melvena Heisch](#)  
**Subject:** RE: ODOT Ottawa County US-60 Horse Creek project JP 24273(04)  
**Date:** Tuesday, August 29, 2017 10:10:41 AM

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Scott,

I have reviewed the February documents and can see no rationale for destroying the Horse Creek Bridge other than to save money. The recommendation stated on ODOT's Section 4(f) Checklist that building a new bridge on a parallel alignment is not "prudent or feasible" provides no explanation. The impact of obtaining new right of way and the cost of new approaches does not justify the recommendation in view of the significance of this National Register listed historic property. This bridge is far more rare than the 1935 bridge on Little Cabin Creek at Vinita, which was left in place. I am surprised that SHPO agreed to this based solely on economic concerns. I urge ODOT to revisit the alternatives and reconsider the importance of saving this unique structure.

Below are photos of four historic bridges on Route 66 that have been demolished just since my book "Route 66 Crossings" was published only eighteen months ago—three in Missouri and one in California. As mentioned, Oklahoma currently has **5** historic Route 66 bridges scheduled for demolition at Sayre, Elk City, Clinton, Chandler, and Afton. Saving the Horse Creek Bridge should be an easy decision. The tens of thousands of tourists who travel the route each year and provide significant economic impact to the eight states involved place bridges high on their list of attractions. Their removal needs to stop. Let's set an example with the Horse Creek Bridge. It's the right thing to do.

Sincerely,  
Jim Ross





Sent from [Mail](#) for Windows 10

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**From:** [wkinsler@wkinsler.com](mailto:wkinsler@wkinsler.com)  
**To:** [Scott Sundermeyer](#); [Oklahoma Route 66 Association](#); [wkinsler@wkinsler.com](mailto:wkinsler@wkinsler.com); [Kitty Henderson](#); [David Pettyjohn](#); [brad@oklahomaroute66.com](mailto:brad@oklahomaroute66.com); [pathfinder66@earthlink.net](mailto:pathfinder66@earthlink.net); [Erik Erickson](#); [Ken Parker](#)  
**Subject:** RE: ODOT Ottawa County US-60 Horse Creek project JP 24273(04)  
**Date:** Tuesday, August 29, 2017 7:41:11 AM

---

Scott,

Oklahoma Historic bridge Group seconds the opinion of Mr. Ross. There are very few of this style of bridge in general still (if there ever was many) in use on the highway system in general, and many that come to mind only have walkway on one side, thus making this example even more unique.

We cannot support the current MOA.

Wes Kinsler  
OHB&HG

-----  
On Mon, 8/28/17, <[pathfinder66@earthlink.net](mailto:pathfinder66@earthlink.net)> wrote:

**From:** Scott Sundermeyer  
**To:** ["finder66@earthlink.net"](mailto:finder66@earthlink.net); [Oklahoma Route 66 Association](#); [wkinsler@wkinsler.com](mailto:wkinsler@wkinsler.com); [Kitty Henderson](#); [David Pettyjohn](#); ["brad@oklahomaroute66.com"](mailto:brad@oklahomaroute66.com); [Barthuli, Kaisa](#)  
**Bcc:** [Siv Sundaram](#)  
**Subject:** RE: ODOT Ottawa County US-60 Horse Creek project JP 24273(04)  
**Date:** Monday, August 28, 2017 7:43:00 PM  
**Attachments:** [Ottawa Co JP 24273\(04\) US-60 consulting party 4\(f\) letter.pdf](#)  
[Ottawa 24273\(04\) Section 4f checklist.pdf](#)

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Hi Jim –

Attached is a copy of a letter I sent out in February informing the consulting parties that ODOT had elected to replace the bridge. As I indicated in the letter, any rehabilitation alternative to retain traffic would have required removal of the rails guarding the walkways. Construction of a new bridge on a new alignment would have introduced additional environmental and social impacts. The analysis is on our web site, but I have also included the summary of the analysis here.

Please let me know if you need anything or wish to discuss.

Best-  
Scott

Scott A. Sundermeyer, RPA  
Director - ODOT Cultural Resources Program  
405.325.7201

---

**From:** [pathfinder66@earthlink.net](mailto:pathfinder66@earthlink.net)  
**To:** [Scott Sundermeyer](#); [Oklahoma Route 66 Association](#); [wkinsler@wkinsler.com](mailto:wkinsler@wkinsler.com); [Kitty Henderson](#); [David Pettyjohn](#); [brad@oklahomaroute66.com](mailto:brad@oklahomaroute66.com)  
**Subject:** RE: ODOT Ottawa County US-60 Horse Creek project JP 24273(04)  
**Date:** Monday, August 28, 2017 6:36:50 PM

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Good afternoon, Scott. Can you tell me when the plan for leaving the bridge in place was abandoned? I don't recall being notified at the time that decision was made. Had that been the case, I would have objected. As the only bridge remaining on the route with original pedestrian walkways on both sides, it is not in anyone's best interest to destroy it. Therefore, I cannot support this MOA. I can think of no compelling reason for the destruction of this unique landmark.

Regards,  
Jim Ross

Sent from [Mail](#) for Windows 10

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**From:** Scott Sundermeyer  
**To:** ["finder66@earthlink.net"](mailto:finder66@earthlink.net); ["Oklahoma Route 66 Association"](#); ["wkinsler@wkinsler.com"](mailto:wkinsler@wkinsler.com); ["Kitty Henderson"](#); ["David Pettyjohn"](#); ["brad@oklahomaroute66.com"](mailto:brad@oklahomaroute66.com)  
**Subject:** RE: ODOT Ottawa County US-60 Horse Creek project JP 24273(04)  
**Date:** Monday, August 28, 2017 2:48:00 PM  
**Attachments:** [Ottawa 24273\(04\) US-60 Horse Creek bridge MOA 8-28-17.doc](#)

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Good afternoon –

We have completed the Memorandum of Agreement regarding the replacement of the Horse Creek bridge. Our mitigation consists of four items: Historic American Engineering Record of the bridge, a Google Earth and GIS layer of Oklahoma Route 66 roadway features, decorative Texas T-66 railings on the new bridge, and an interpretive panel to be housed at the Afton Station.

The Google Earth layer will be placed on ODOT's website and will include historic bridges and roadbed locations. One will be able to pull it up on a smart device so that the traveler can have access to the information while they are traveling – sort of a driving tour of the route. We will also incorporate the State Historic Preservation Office's Route 66 Mobile Tour (<http://www.okhistory.org/shpo/rt66tour.php>).

As a consulting party on this project, I am requesting your signature on the appropriate page of the agreement. If possible, email me back a scanned signed page. You'll note that all mitigation commitments are ODOT and FHWA, and that there are no commitments from the consulting parties regarding the mitigation.

Thank you –

Scott

Scott A. Sundermeyer, RPA  
Director - ODOT Cultural Resources Program  
405.325.7201

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Preserving America's Heritage

September 5, 2017

Ms. Elizabeth A. Romero  
Program Development Team Leader  
Environmental Program Manager  
Federal Highway Administration-Oklahoma Division  
5801 N. Robinson Avenue, Suite 300  
Oklahoma City, OK 73118

Ref: *Proposed Replacement of the US 60 over Horse Creek Bridge  
Afton, Oklahoma  
Federal - Aid Project BRFY-158B(119), J/P 24273(04)*

Dear Ms. Romero:

The Advisory Council on Historic Preservation (ACHP) has received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and it is determined that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the Oklahoma State Historic Preservation Officer (SHPO), and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the MOA, and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with the notification of adverse effect. If you have any questions or require further assistance, please contact MaryAnn Naber at (202) 517-0218 or via email at [mnaber@achp.gov](mailto:mnaber@achp.gov).

Sincerely,

LaShavio Johnson  
Historic Preservation Technician  
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION

401 F Street NW, Suite 308 • Washington, DC 20001-2637  
Phone: 202-517-0200 • Fax: 202-517-6381 • [achp@achp.gov](mailto:achp@achp.gov) • [www.achp.gov](http://www.achp.gov)

**From:** [Romero, Elizabeth \(FHWA\)](#)  
**To:** [Scott Sundermeyer](#); [Karen Orton - FHWA](#)  
**Cc:** [Siv Sundaram](#); [Emamian, Faria \(FHWA\)](#)  
**Subject:** RE: FHWA Oklahoma ACHP transmittal JP 24273(05) US 60 Horse Creek Bridge Ottawa CO  
**Date:** Wednesday, August 23, 2017 1:01:18 PM  
**Attachments:** [20170725 FHWA OK ACHP Transmittal JP24273\(04\) US60 HorseCreek OttawaCoun....pdf](#)  
[20170720 JP 2473\(04\) US 60 Horse Creek Bridge FHWA approval Section 4\(f\) Evaluation.pdf](#)

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Scott,

On July 27, 2017, we received this dated receipt of your submission (in accordance with 36 CFR Part 800.6(1)) for US 60 Horse Creek Bridge Ottawa County. From the original submission to the ACHP, I have attached the transmittal letter and the 4f checklist. I will put a hardcopy of the complete transmittal in the mail for your records. I was unable to forward the complete e-mail to you due to its size.

The ACHP had 15 working days to determine if it would participate in consultation to resolve adverse effects to historic properties. The ACHP has not officially responded as required for consultation, therefore FHWA Oklahoma and ODOT can proceed with this action as described in ODOT's original request for this project.

As the regulation requires, if the ACHP does not participate in consultation as requested, we still need to file the final agreement document and related documentation with the ACHP at the conclusion of the consultation process. This filing is required for our agency to complete its compliance responsibilities under Section 106 of the National Historic Preservation Act.

We look forward to working with you as this project proceeds. If you need any additional information or clarification, please let us know.

Thank you,

Liz

*Elizabeth A. Romero*

Program Development Team Leader  
Environmental Program Manager  
Federal Highway Administration – Oklahoma Division  
5801 N. Robinson Avenue, Suite 300  
Oklahoma City, OK 73118  
O: 405-254-3300  
E-mail: [elizabeth.romero@dot.gov](mailto:elizabeth.romero@dot.gov)

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## Romero, Elizabeth (FHWA)

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**From:** Romero, Elizabeth (FHWA)  
**Sent:** Tuesday, July 25, 2017 4:44 PM  
**To:** 'e106@achp.gov'  
**Cc:** Romero, Elizabeth (FHWA)  
**Subject:** FHWA Oklahoma ACHP transmittal JP 24273(05) US 60 Horse Creek Bridge Ottawa CO  
**Attachments:** 20170725 FHWA OK ACHP Transmittal JP24273(04)\_US60  
\_HorseCreek\_OttawaCounty.pdf; Ottawa 24273(04) US-60 Horse Creek Section 106  
consultation\_1\_1.pdf

Good Afternoon,

Pursuant to regulations implementing the National Historic Preservation Act, we are providing to you our adverse effect determination for the referenced FHWA undertaking in Ottawa County, OK.

This includes a cover letter from FHWA Oklahoma and the complete packet of Section 106 consultation material prepared by Oklahoma DOT that includes the completed 4(f) Checklist and Draft MOA for the undertaking between FHWA, ODOT and the Oklahoma Historic Preservation Office.

If you need additional information, please contact our office directly.

Thank you,

*Elizabeth A. Romero*

Program Development Team Leader

Environmental Program Manager

Federal Highway Administration – Oklahoma Division

5801 N. Robinson Avenue, Suite 300

Oklahoma City, OK 73118

O: 405-254-3300

E-mail: elizabeth.romero@dot.gov



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

**Oklahoma Division**

July 25, 2017

5801 N Broadway Ext., Ste. 300  
Oklahoma City, OK 73118  
Phone: 405-254-3300  
Fax: 405-254-3302  
[www.fhwa.dot.gov/okdiv](http://www.fhwa.dot.gov/okdiv)

In Reply Refer To:  
HDA-OK

Mr. Reid Nelson, Director  
Office of Federal Agency Programs  
Advisory Council on Historic Preservation  
1100 Pennsylvania Ave, NW, Suite 803  
Washington, D.C. 20004-2501

Dear Mr. Nelson:

Pursuant to 36 CFR Section 800.6(a)(1) of regulations implementing the National Historic Preservation Act, we are notifying your office of our determination that Federal-aid project BRFY-158B(119), J/P 24273(04), will have an adverse effect to the NHRP-listed bridge carrying US 60 (former alignment of Route 66) over Horse Creek in Afton, Oklahoma, by demolishing the existing bridge and constructing a new bridge on the current alignment. The Horse Creek bridge was constructed in 1936, using New Deal federal-aid forces and is located on the 1929 former alignment of Route 66. The bridge was listed in the National Register in 1994.

In consultation with the Oklahoma State Historic Preservation Officer (SHPO), the Oklahoma Department of Transportation (ODOT) has reviewed and provided to this office the National Register Bulletin 15 and applied the Criteria of Adverse Effect found in 36 CFR 800.5 to this undertaking and has determined that there will be an adverse effect to the NRHP-listed bridge due to the undertaking of demolishing the existing bridge and constructing a new bridge on the current alignment.

As you are aware, ODOT and FHWA executed a Programmatic Agreement (PA) for the streamlined treatment of adverse effects to bridges constructed under New Deal federal-aid programs. In consultation with the SHPO, we have collectively concluded that the streamlined treatment measures found in the PA are not an appropriate method to memorialize our mitigation efforts due to the association of the structure with Historic Route 66. As such, you will find a draft Memorandum of Agreement (MOA) attached to this submittal. The SHPO has reviewed the MOA and concurred with the mitigation efforts stipulated in it. The MOA has also been submitted to Section 106 consulting parties. We have had no comments to date from these parties.

In accordance with 36 CFR Part 800.4, the following identification efforts of historic properties were made:

800.4(a)(1) - The Area of Potential Effect (APE) includes the project NEPA study area as defined in the attached cultural resources report.

800.4(a)(2) - Review of existing information consisted of researching the National Register and Oklahoma Determination of Eligibility database, and the archeological files at the Oklahoma Archeological Survey. The ODOT Cultural Resources Program has also reviewed the undertaking.

800.4(a)(3) - The surrounding area public were informed of the project via landowner notification and, in accordance with 36 CFR 800.2(d), a drop-in center that was held in Afton. The results of the public involvement are included in the attached materials. In addition, the following parties were identified and consulted in accordance with 36 CFR 800.2(c)(5): The Oklahoma Route 66 Association, Preservation Oklahoma, the Oklahoma Historic Bridge and Highway Group, the Historic Bridge Foundation, the National Park Service Route 66 Corridor Preservation Program, Route 66 Alliance, Afton Station, and Mr. Jim Ross.

800.4(a)(4) – Consultation with tribes was conducted via letters containing project location and scope or in accordance with any existing agreements, MOUs or PAs FHWA and ODOT have with Native American Tribes. For this undertaking, 13 federally recognized Tribes in Oklahoma (Caddo Nation, Cherokee Nation, Eastern Shawnee Tribe, Miami Nation, Modoc Tribe, Osage Nation, Ottawa Tribe, Peoria Tribe, Quapaw Tribe, Seneca-Cayuga Tribe, Shawnee Tribe, Wichita and Affiliated Tribes, and Wyandotte Nation) have demonstrated their interest in being consulted in Ottawa County for FHWA projects. The Caddo Nation, Eastern Shawnee Tribe, Miami Nation, Osage Nation, and Quapaw Tribe responded that there were no know places of religious or cultural significance in the APE. No other responses were received.

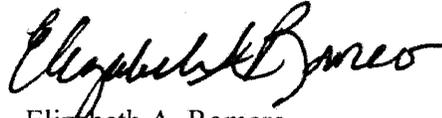
800.4(c) – ODOT Cultural Resources Program conducted cultural resources surveys and reviews within the APE to determine if properties met NRHP criteria. Except for the Horse Creek Bridge, no other historic properties were identified in the APE.

The following documentation prepared by ODOT is attached for your review and consideration.

- A Draft Section 106 MOA, which addresses the adverse effect to the property;
- An FHWA approved Programmatic Section 4(f) evaluation checklist indicating that there is no feasible and prudent alternative to the use of the historic bridge.
- The Design Analysis to support the 4(f) evaluation;
- All consultation to date with the Oklahoma SHPO and Oklahoma State Archeologist;
- Consultation with Section 106 consulting parties;
- The Cultural Resources Report;
- Copies of ODOT's tribal consultation;
- Documentation of public involvement under the Section 106 process

We look forward to your response on this determination and if you have any questions or need additional information regarding this action, please contact me at 405-254-3340, or by email at [elizabeth.romero@dot.gov](mailto:elizabeth.romero@dot.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Elizabeth A. Romero". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Elizabeth A. Romero  
Program Development Team Leader  
Environmental Programs Manager

CC: ODOT Cultural Resources Program



**OKLAHOMA DEPARTMENT OF TRANSPORTATION  
CULTURAL RESOURCES PROGRAM**

111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

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June 22, 2017

Elizabeth Romero  
Program Development Team Leader  
Federal Highway Administration  
5801 North Broadway Extension, Suite 300  
Oklahoma City, OK 73118

Re: Documentation of Consultation under Section 106 of the NHPA, Notification of Oklahoma SHPO Determination of Adverse Effect, Programmatic Section 4(f), and Draft MOA for the Cherokee County, BRFY-158B(119), J/P 24273(04); National Register of Historic Places (NRHP) listed bridge carrying US-60 (former alignment of Route 66) over Horse Creek in Afton..

Dear Ms. Romero:

The Oklahoma Department of Transportation (ODOT) proposes a federal-aid highway funded bridge replacement project in Afton, Oklahoma. In consultation with the Oklahoma State Historic Preservation Officer (SHPO), the Oklahoma Department of Transportation (ODOT) has reviewed National Register Bulletin 15 and applied the Criteria of Adverse Effect found in 36 CFR 800.5 to this undertaking and has determined that there will be an adverse effect to the NRHP-listed bridge by demolishing the existing bridge and constructing a new bridge on the current alignment. The Horse Creek bridge was constructed in 1936, using New Deal federal-aid forces and is located on the 1929 former alignment of Route 66. The bridge was listed in the National Register in 1994.

As you are aware, ODOT and FHWA executed a Programmatic Agreement (PA) for the streamlined treatment of adverse effects to bridges constructed under New Deal federal-aid programs. In consultation with the SHPO, we have collectively concluded that the streamlined treatment measures found in the PA are not an appropriate method to memorialize our mitigation efforts due to the association of the structure with Historic Route 66. As such, you will find a draft Memorandum of Agreement (MOA) attached to this submittal. The SHPO has reviewed the MOA and concurred with the mitigation efforts stipulated in it. The MOA has also been submitted to Section 106 consulting parties. We have had no comments to date from these parties.

In accordance with 36 CFR Part 800.4, the following identification efforts of historic properties were made:

**800.4(a)(1)** - The Area of Potential Effect (APE) includes the project NEPA study area as defined in the attached cultural resources report.

**800.4(a)(2)** - Review of existing information consisted of researching the National Register and Oklahoma Determination of Eligibility database, and the archeological files

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at the Oklahoma Archeological Survey. The ODOT Cultural Resources Program has also reviewed the undertaking.

**800.4(a)(3)** - The surrounding area public were informed of the project via landowner notification and, in accordance with 36 CFR 800.2(d), a drop-in center that was held in Afton. The results of the public involvement are included in the attached materials. In addition, the following parties were identified and consulted in accordance with 36 CFR 800.2(c)(5): The Oklahoma Route 66 Association, Preservation Oklahoma, the Oklahoma Historic Bridge and Highway Group, the Historic Bridge Foundation, the National Park Service Route 66 Corridor Preservation Program, Route 66 Alliance, Afton Station, and Mr. Jim Ross.

**800.4(a)(4)** – Consultation with tribes was conducted via letters containing project location and scope or in accordance with any existing agreements, MOUs or PAs FHWA and ODOT have with Native American Tribes. For this undertaking, 13 federally recognized Tribes in Oklahoma (Caddo Nation, Cherokee Nation, Eastern Shawnee Tribe, Miami Nation, Modoc Tribe, Osage Nation, Ottawa Tribe, Peoria Tribe, Quapaw Tribe, Seneca-Cayuga Tribe, Shawnee Tribe, Wichita and Affiliated Tribes, and Wyandotte Nation) have demonstrated their interest in being consulted in Ottawa County for FHWA projects. The Caddo Nation, Eastern Shawnee Tribe, Miami Nation, Osage Nation, and Quapaw Tribe responded that there were no know places of religious or cultural significance in the APE. No other responses were received.

**800.4(c)** – ODOT Cultural Resources Program conducted cultural resources surveys and reviews within the APE to determine if properties met NRHP criteria. With the exception of the Horse Creek Bridge, no other historic properties were identified in the APE.

The following documents are enclosed for your review and consideration:

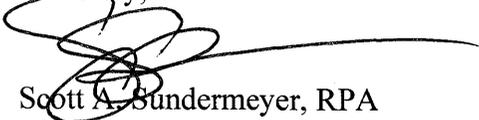
- A Draft Section 106 MOA, which addresses the adverse effect to the property;
- A Programmatic Section 4(f) evaluation checklist indicating that there is no feasible and prudent alternative to the use of the historic bridge. This document is awaiting your signature;
- The Design Analysis to support the 4(f) evaluation;
- All consultation to date with the Oklahoma SHPO and Oklahoma State Archeologist;
- Consultation with Section 106 consulting parties;
- The Cultural Resources Report;
- Copies of ODOT's tribal consultation;
- Documentation of public involvement under the Section 106 process

The above-referenced documentation regarding the referenced project should be submitted to the Advisory Council on Historic Preservation (ACHP), pursuant to Section 800.6(a)(1) of the Section 106 regulations.

Please inform our office when this information has been forwarded to the ACHP so that ODOT-CRP may provide this documentation to other consulting parties, as stipulated in 36 CFR 800.6(a)(3).

If you have any questions regarding this project, please contact me at 405-325-7201.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott A. Sundermeyer", with a long horizontal line extending to the right.

Scott A. Sundermeyer, RPA  
ODOT Cultural Resources Program Director  
attachments



# Oklahoma Historical Society

Founded May 27, 1893

## State Historic Preservation Office

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)

May 3, 2017

Mr. Scott Sundermeyer, Director  
ODOT Cultural Resources Program  
111 East Chesapeake, Rm. 102, OU  
Norman, OK 73019

RE: File #0731-17 (Former File #1662-16); Ottawa County FHWA Project #JP-24273(04);  
Proposed Replacement of the US-60 Bridge over Horse Creek

Dear Mr. Sundermeyer:

As we discussed today, we received the additional information submitted on the referenced project in Ottawa County on April 11, 2017. We understand that the bridge will be replaced with a new structure and that the historic bridge will be removed. As we have already agreed, the undertaking will have an adverse effect on Horse Creek Bridge, a property individually listed in the National Register of Historic Places (NRHP) and associated with Historic Route 66.

As we further discussed, we do not agree with your proposal to mitigate the adverse effect through provisions of Stipulation II(b)(i-vii), of the *Programmatic Agreement Among the Federal Highway Administration, the Oklahoma Department of Transportation, the Oklahoma State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Streamlining of Section 106 Review for Projects Involving Bridges Constructed Under Depression-Era Federal Relief Programs (1933-1945)*. Although we have certainly used the programmatic agreement to mitigate effects to other bridges that are individually listed in the NRHP, Route 66 was one of the exemptions from the program comment regarding post-1945 bridges, and the historic highway holds special significance. We believe, as described in Stipulation II(c) of our bridge PA, an individual Memorandum of Agreement is the appropriate mechanism for mitigation of adverse effects to any historic resource associated with Route 66.

We do believe your proposed mitigation measures as described in Appendix A, Treatment Measures C and I, are appropriate. We look forward to working with you in development of the Memorandum of Agreement once the Advisory Council on Historic Preservation has responded to your adverse effect notification.

Thank you for the opportunity to review this project. If you have any questions, please do not hesitate to call Catharine M. Wood, Historical Archaeologist, at (405) 521-6381. Please reference the above underlined file number when responding.

Sincerely,

Melvena Heisch  
Deputy State Historic  
Preservation Officer

MH:pm



**OKLAHOMA DEPARTMENT OF TRANSPORTATION  
CULTURAL RESOURCES PROGRAM**

111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

---

April 10, 2017

Ms. Melvena Heisch  
Deputy State Historic Preservation Officer  
Oklahoma History Center  
800 Nazih Zuhdi Drive  
Oklahoma City, Oklahoma 73105

Dear Ms. Heisch:

Re: SHPO File 1662-16; Ottawa County FHWA project, JP 24273(04): Replacement of the US-60 bridge over Horse Creek; explanation for prudence of Alternatives 2 and 3B2.

Thank you for your comments of March 2, 2017, and for your thorough review of the Design Analysis to support the 4(f) for this undertaking. In your correspondence, you expressed interest in ODOT and FHWA reconsideration of the rehabilitation alternative (Alternative 2) and the retention of the facility as a pedestrian bridge (Alternative 3B2).

The Design Analysis is not intended to express an opinion or preference for any of the alternatives, but is developed to provide ODOT and FHWA an analysis of the operational problems of the alternatives, the severity of other social or other environmental impacts that are protected, and costs in order to ultimately evaluate how well the project purpose and need can be met. ODOT and FHWA reviewed the alternatives that do not *use* the bridge, in consideration of the relative importance of the historic property, and ultimately determined that none of the alternatives were prudent, as defined under 23 CFR 774.17. In the case of the Horse Creek bridge, ODOT and FHWA concurred that Alternative 2 introduces unique problems or unusual factors. Alternative 3B2 introduced additional construction and maintenance costs of an extraordinary magnitude and caused other unique problems or unusual factors.

The replacement alternative, which is not presented in the Design Analysis, has a total cost of \$3,141,853. This alternative provides for a new bridge with a 75-year design life. Aesthetic treatments, including crash-tested context-sensitive Texas T-66 bridge rails will be incorporated into the new bridge.

The costs for Alternative 2 are calculated to be \$2,440,347. The rehabilitated structure has a design life of 25 to 30 years. As indicated in the Design Analysis, this alternative would still result in the *use* of the bridge, since historic fabric would be removed as part of the project. ODOT would also need to address a replacement alternative in 25 years.

While Alternative 2 does result in 4(f) use, ODOT has evaluated your comments in regards to its potential to minimize harm to the structure. We disagree that the alternations completed as part

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of a rehabilitation would be minimal. The rehabilitation that would be performed is summarized below by element, with approximations of the original historic fabric to remain. Engineering judgment from a best-case scenario (bridge rehabilitation can uncover other unanticipated issues with the structure) was used based on the described rehabilitation and cost estimates.

- Superstructure
  - Complete deck replacement proposed. None of the original fabric will remain.
  - Removal of sidewalk proposed. Final bridge will have no separate accommodations for bicycles or pedestrians. None of the original fabric will remain.
  - Interior railings (separating vehicular and bicycle/pedestrian traffic) to be removed. These will not be replaced since the proposed bridge will not have a separate bicycle/pedestrian facility. None of the original fabric will remain.
  - Outside railings (on deck edge) to be replaced with crashworthy railings. None of the original fabric will remain.
  - Steel framing
    - Shallow fascia beams (at decks edge supporting only sidewalk) and bearings to be replaced to accommodate vehicular load.
    - Interior steel beams and bearings to be rehabilitated for continued use. Beams to be made composite to deck (weld studs to top flange and cast within new deck).
    - Diaphragms to be replaced using high-strength bolts.
    - Assuming steel beams comprise 85% of the framing and diaphragms comprise 15%, approximately 65% of the original steel historic fabric will remain.
- Substructure
  - Top of the piers will be modified to accommodate new fascia beams. Majority of original fabric will remain (estimated at 95%+).
  - Abutments
    - Abutment stem will need to be modified at the top of each stem to accommodate new fascia beams.
    - Top of wingwalls will need to be modified for new geometry.
    - Spalled areas of existing abutment to be patched and cracks to be repaired via epoxy injection. This work will have minimal impact to the original fabric.
    - In total, a majority of the original fabric will remain (estimated at 95%+).

Very little of the superstructure, the portion that is visible and, arguably, conveys the significance of the bridge, will remain. While 95% of the substructure would remain, this only includes the concrete piers and abutments. In addition to the removal of historic fabric, this rehabilitation would require a road closure and shoofly detour while the bridge is being rehabilitated. Since this location was found to contain four species of bats, seasonal restriction on construction would be implemented, regardless of the alternative selected. This would introduce challenges in a rehabilitation alternative. ODOT would not be able to work on the bridge during bat roosting seasons – challenges that would be alleviated through a replacement alternative whereby the bridge would be removed when bats are not present.

Since Alternative 2 results in a *use* of the bridge and has other unique problems that include the need to revisit the project in 25 years, impacts to species, and would result in a significant portion of the historic fabric being replaced, ODOT and FHWA determined that rehabilitation is not prudent.

Alternative 3B2 involves the construction of a new bridge on an offset alignment and minimal rehabilitation of the historic bridge to allow for a pedestrian or non-motorized facility. With a total cost of \$4,891,438 this alternative was determined to be not prudent due to the additional construction costs and necessary right-of-way needed to complete the project. In addition, ODOT would need to find a recipient to retain the bridge and maintain the structure. It should be noted that the structure was built in 1936 with sidewalks that do not appear to have been justified, as no sidewalks were ever built to the bridge. The bridge receives very little pedestrian traffic now, so it does not appear to be prudent to leave the structure in place as a pedestrian facility. Indeed, sidewalks will not be constructed on the new bridge.

As you know, the State is facing challenging financial times. Through the federal-aid program, ODOT is provided funds for the construction of facilities, however maintenance of these facilities falls on the State, which requires funds and personnel – both of which are currently strained. These challenges are also factors into the decision of what is considered prudent in a 4(f) analysis.

As discussed in our January 30 correspondence, ODOT is considering several mitigation alternatives, however I failed to include that ODOT would be implementing context-sensitive Texas T-66 crash-tested railings.

We do feel that the subject bridge is a candidate for the streamlined treatment measures outlined in the Programmatic Agreement for New Deal bridges, even though it is listed on the National Register of Historic places. As you are aware, we have implemented the streamlined measures to mitigate adverse effects to two other National Register-listed bridges: the State Highway 78 over the Red River and the US-77 Canadian River bridge connecting the communities of Lexington and Purcell.

ODOT proposes four treatment measures as codified in Stipulation II(b) and Appendix A of the PA. Two of these treatment measures involve public outreach and interpretation. One measure involves documentation of the structure.

- 1) Implementation of context-sensitive Texas T-66 bridge railings, which will convey the feeling of Historic Route 66.
- 2) Treatment C, Public Interpretation: ODOT proposes to complete two measures under this treatment option.
  - a) ODOT will produce an Google Earth layer identifying Route 66 roadbed features presented in the “Oklahoma Route 66 Roadbed Documentation Project (1926 - 1970): A Survey of Roadbed and Integral Structures”. The Google Earth layer will be made

available and maintained on the ODOT Cultural Resources Program website (<http://www.odotculturalresources.info/route-66.html>). The Google Earth layer will be interactive and allow users to 'click' of Route 66 segments and roadway resources to obtain information on those particular segments, and will follow the information presented in the Roadbed Study. ODOT will also create a free smartphone application for Android and Apple devices, and make that 'app' available on the website above. ODOT will also investigate opportunities to make this available on Google Play and iTunes stores. If it is possible to do so, ODOT will place the application on these app stores.

b) ODOT will produce an interpretive panel, sign, or billboard to be housed at the Afton Station (<http://www.travelok.com/listings/view.profile/id.12293>) outlining the history of the Horse Creek bridge. ODOT will work with all Section 106 consulting parties and staff from the Afton Station in the design and information presented on the panel.

### 3) Treatment I, Historic American Engineering Record Documentation

At this time, we request any comment you have to the applicability of the streamlined review and mitigation as outlined in the PA. Once we receive comment from your office regarding the effect, FHWA will notify the ACHP of the adverse effect per 36 CFR 800.6(1) and invite their participation. If you have any questions, please do not hesitate to contact me at [ssundermeyer@odot.org](mailto:ssundermeyer@odot.org) or 405-325-7201.

Sincerely,

A handwritten signature in black ink, appearing to be 'S Sundermeyer', written over a circular scribble.

Scott Sundermeyer  
ODOT Cultural Resources Program Director



## Oklahoma Historical Society

Founded May 27, 1893

### State Historic Preservation Office

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 2, 2017

Mr. Scott Sundermeyer, Director  
ODOT Cultural Resources Program  
111 East Chesapeake, Rm. 102, OU  
Norman, OK 73019

RE: File #0731-17 (Former File #1662-16); Ottawa County FHWA Project #JP-24273(04);  
Replacement of the US-60 Bridge over Horse Creek

Dear Mr. Sundermeyer:

We have received the documentation submitted on the referenced project in Ottawa County, Oklahoma. We concur with your finding that the proposed project will have an **adverse effect** on the US-60 Bridge (NBI 05017) over Horse Creek, a property individually listed in the National Register of Historic Places (NRHP) under Criterion A for its association with historic Route 66.

As stated in your letter, ODOT in consultation with FHWA-Oklahoma has concluded that there is no feasible and prudent alternative to the use of the bridge, which includes removal of the structure and construction of a new bridge in its place. We consider it important to note that only fifteen (15) bridges and roadbed segments associated with historic Route 66 in Oklahoma are listed in the National Register of Historic Places. These properties are essential to conveying the significance of the highway, and the loss or damage to the integrity of any one of these properties requires careful consideration.

Obviously, our concurrent opinion of adverse effect on the NRHP listed bridge is in accordance with the Advisory Council on Historic Preservation (ACHP) regulations 36 CFR § 800.5(a)(1) *Assessment of adverse effects*, which states that “an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling or association.”

As described in the *Design Support Report for Programmatic Section 4(f) Alternatives Analysis: U.S. Highway 60 Bridge over Horse Creek*, prepared by Mead & Hunt, the US-60 Bridge over Horse Creek was constructed in 1936 as a three span structure with an overall length of approximately 143 feet. The bridge consists of one 60-foot long and two 40-foot long steel I-beam spans with a cast-in-place reinforced concrete deck providing a 24-foot clear roadway for two lanes of traffic and two five-foot wide sidewalks, one on each side of the roadway. The bridge is skewed at a 45-degree angle with the waterway. Locally known as the “sidewalk” bridge for its double reinforced concrete walkway design, the sidewalks and associated railings have been identified as key elements of the bridge representing a unique example of the need to accommodate pedestrians in a time when the automobile was becoming the dominate mode of transportation.

After reviewing the analysis of alternatives outlined in your cover letter and as presented in the Mead & Hunt alternatives analysis, we note two alternatives that while they do not *avoid* the adverse effect they have the potential to *minimize* the adverse effect to the bridge.

Mr. Sundermeyer  
March 2, 2017  
Page 2

RE: File #0731-17 (Former File #1662-16); Ottawa County FHWA Project #JP-24273(04);  
Replacement of the US-60 Bridge over Horse Creek

### **Alternative 2 – Rehabilitation**

Rehabilitate the existing bridge to be in conformance with current design standards and to continue vehicular service for two-way traffic. According to the design analysis, this alternative would remove the four original concrete railings and the existing sidewalks in order to accommodate the current roadway design criteria for a 24-foot wide roadway with eight-foot shoulders on each side for a clear roadway width of 40 feet. While we agree that the removal of the railings and sidewalks are considered to be an adverse effect, the alternative does minimize the adverse effect by retaining historic fabric and design elements of the structure.

However, we do not agree with the following statement by Mead & Hunt:

That this alternative would meet the project purpose to preserve Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination in Oklahoma...[and that these] changes to the bridge may decrease this bridge's appeal as a particular tourist destination; however, changes to one structure along the approximately 400-mile corridor would not diminish the ability of the overall route to serve as a tourist destination.

The argument is flawed and that the proposed project impacts to the overall Route 66 is irrelevant as the entire length of the highway is not eligible for nor listed in the National Register of Historic Places. This project is one of the many road improvement projects that is chipping away at the historic properties associated with Route 66. The US-60 bridge is listed individually on the NRHP and while the removal of the railings and the sidewalks will diminish the character of the bridge, it minimizes the adverse effect by leaving the historic features (US-60 bridge) in place.

### **Alternative 3B2 – Retain historic bridge as a non-motorized vehicle/pedestrian/bicycle facility**

Although Alternative 3B2 removes motorized traffic from the bridge, we are of the opinion that this alternative minimizes the adverse effect to the bridge's integrity and its association with Route 66 because of the bridge's original design to accommodate both motorized and non-motorized use, as illustrated by the inclusion of sidewalks in the original design.

We welcome the opportunity to continue consultation with you to determine if one of the two alternatives that minimizes the adverse effect of the proposed project can be reconsidered. However, if we are unable to minimize or eliminate the adverse effect of the project, the Federal Highway Administration (FHWA) will need to contact and invite the participation of the Advisory Council on Historic Preservation (ACHP) in order to complete the Section 106 process as outlined in 36 CFR Part 800. Should the ACHP choose not to participate in the consultation, FHWA and the SHPO may execute a Memorandum of Agreement (MOA). Upon the execution of an MOA, a copy must be filed with the ACHP to complete the Section 106 process.

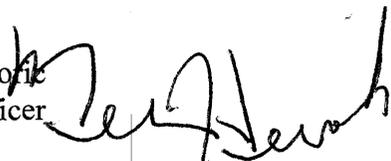
Mr. Sundermeyer  
March 2, 2017  
Page 2

RE: File #0731-17 (Former File #1662-16); Ottawa County FHWA Project #JP-24273(04);  
Replacement of the US-60 Bridge over Horse Creek

Thank you for the opportunity to review this project. If you have any questions, please do not hesitate to call Catharine M. Wood, Historical Archaeologist, at 405/521-6381. Please reference the above underlined file number when responding.

Sincerely,

Melvena Heisch  
Deputy State Historic  
Preservation Officer

A handwritten signature in black ink, appearing to read 'Melvena Heisch', is written over the typed name and title. The signature is cursive and somewhat stylized.

MH:pm



**OKLAHOMA DEPARTMENT OF TRANSPORTATION  
CULTURAL RESOURCES PROGRAM**

111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

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January 30, 2017

Ms. Melvena Heisch  
Deputy State Historic Preservation Officer  
Oklahoma History Center  
800 Nazih Zuhdi Drive  
Oklahoma City, Oklahoma 73105

Dear Ms. Heisch:

Re: SHPO File 1662-16; Ottawa County FHWA project, JP 24273(04): Replacement of the US-60 bridge over Horse Creek

Thank you for your comments of June 20, 2016 regarding the proposed undertaking. As discussed in our most recent correspondence, ODOT has been reviewing alternatives to address and correct deficiencies in the subject bridge, which carries U.S. Highway (US) 60 over the Horse Creek, near Afton, Oklahoma. The existing bridge (ODOT Structure 5806 0256X [NBI 005017]) is a steel stringer/girder structure, constructed in 1936 under a Federal-Aid New Deal Program (U.S. Works Program Highway Project 8-D). The bridge is listed on the National Register of Historic Places (NRHP) under criterion A (NR ID 95000040). The bridge is a federal-aid New Deal structure subject to the recent Programmatic Agreement (PA) for the treatment of New Deal era bridges in Oklahoma. The bridge is common type and, with the exception of its association with a New Deal program and Route 66 and its unique sidewalks, is not significant for its design elements.

ODOT has completed an analysis of the alternatives to the removal of the subject bridge and, in consultation with FHWA-Oklahoma, has concluded that there is no feasible and prudent alternative to the *use* of the bridge, which includes replacement and removal of the structure and construction of a new bridge. Pursuant to 36 CFR 800.5, it is our assessment that the proposed undertaking will have an adverse effect to the existing bridge.

The alternatives analysis is presented in the form of a Design Support Report for Programmatic Section 4(f) Alternatives Analysis. In accordance with 23 CFR 774, Section 4(f) of the U.S. Department of Transportation (DOT) Act, a property subject to Section 4(f) is a publicly owned land that is part of a park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance. Pursuant to 23 CFR 774.17, the attached report document is being provided, as your office is the official with Jurisdiction for 4(f) historic properties.

The report documents the prescribed alternatives that typically do not "use" the bridge, pursuant to the *Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate*

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*the Use of Historic Bridges.* As indicated in a matrix provided in Section 5 of the report, it would not be possible to address the deficiencies of the structure and retain the features that convey the significance of the bridge. Integrity of association would all be compromised by any of the prescribed alternatives. Integrity of design and materials would be critically altered due to the fact that the rails and sidewalks would need to be removed. As such, all alternatives would have an adverse effect to the structure, and would result in a bridge with a reduced design life – compared to a new structure. For comparison, we have also included a separate cost estimate for construction of a new bridge. These are all critical factors in the decision to replace the bridge.

Recognizing the historic significance of the bridge, pursuant to 36 CFR 800.2(d), ODOT conducted public involvement in the form of a drop-in-center. Three locations were in Afton were staffed by cultural resources personnel on September 26, 2016. In addition to this public involvement, ODOT's Cultural Resources Program has also invited Preservation Oklahoma, the Historic Bridge Foundation, the Oklahoma Historic Bridge and Highway Group, the Oklahoma Route 66 Association, and the Route 66 Corridor Preservation Program to participate as consulting parties for this project. ODOT also maintained a website with project information and a comment form (<http://www.odotculturalresources.info/>). The comments received from the public and consulting parties are attached here.

Copies of the Design Analysis are being submitted to consulting parties for their review. In consideration of the recently executed PA for New Deal bridges, and that the significance of the structure lies in its association with Route 66, ODOT would like to propose three treatment measures as codified in Stipulation II(b) and Appendix A of the PA. Two of these treatment measures involve public outreach and interpretation. One measure involves documentation of the structure.

1) Treatment C, Public Interpretation: ODOT proposes to complete two measures under this treatment option.

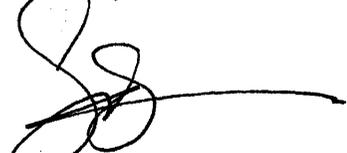
a) ODOT will produce an Google Earth layer identifying Route 66 roadbed features presented in the "Oklahoma Route 66 Roadbed Documentation Project (1926 - 1970): A Survey of Roadbed and Integral Structures". The Google Earth layer will be made available and maintained on the ODOT Cultural Resources Program website (<http://www.odotculturalresources.info/route-66.html>). The Google Earth layer will be interactive and allow users to 'click' of Route 66 segments and roadway resources to obtain information on those particular segments, and will follow the information presented in the Roadbed Study.

b) ODOT will produce an interpretive panel, sign, or billboard to be housed at the Afton Station (<http://www.travelok.com/listings/view.profile/id.12293>) outlining the history of the Horse Creek bridge. ODOT will work will all Section 106 consulting parties and staff from the Afton Station in the design and information presented on the panel.

2) Treatment I, Historic American Engineering Record Documentation

At this time, we request any comment you have to the applicability of the streamlined review and mitigation as outlined in the PA. Once we receive comment from your office regarding the effect, FHWA will notify the ACHP of the adverse effect per 36 CFR 800.6(1) and invite their participation. If you have any questions, please do not hesitate to contact me at [ssundermeyer@odot.org](mailto:ssundermeyer@odot.org) or 405-325-7201.

Sincerely,

A handwritten signature in black ink, appearing to be 'S Sundermeyer', with a long horizontal line extending to the right.

Scott Sundermeyer  
ODOT Cultural Resources Program Director

**From:** Scott Sundermeyer  
**To:** ["Oklahoma Route 66 Association"](#)  
**Subject:** RE: Ottawa 24273(04) Horse Creek project  
**Date:** Tuesday, February 07, 2017 6:21:00 AM  
**Attachments:** [Ottawa 24273\(04\) Design Support for 4f analysis \(without appendices\).pdf](#)  
[Ottawa Co JP 24273\(04\) US-60 consulting party 4\(f\) letter.pdf](#)

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Hi Marilyn –

You bet. Please find the Horse Creek materials attached here. The full 4(f) analysis with the appendices is located here: <http://www.odotculturalresources.info/horse-creek-bridge.html>

I know Brad took time to submit a specific comment about this bridge, and we really appreciate it. The analysis shows that any attempt we would make to correct the deficiencies in the bridge would alter the feature that is most notable about it – the double-railed sidewalks. In addition, the heavy and frequent truck traffic requires a more substantial and wider bridge.

Captain Creek materials to follow in a separate email.

Best-  
Scott

Scott A. Sundermeyer, RPA  
Director - ODOT Cultural Resources Program  
405.325.7201

---

**From:** Oklahoma Route 66 Association [mailto:okrt66association@sbcglobal.net]  
**Sent:** Monday, February 06, 2017 4:39 PM  
**To:** Scott Sundermeyer <SSundermeyer@odot.org>  
**Subject:** Horse Creek and Captain Creek projects

Scott,  
I have received hard copies of information on the Horse Creek and Captain Creek ODOT projects. Do you have electronic versions you can send me that I can send to Brad?

Thanks, Marilyn

**From:** [Kitty Henderson](#)  
**To:** [Scott Sundermeyer](#)  
**Subject:** Re: Ottawa 24273(04) US-60 Horse Creek Design Analysis for 4(f)  
**Date:** Wednesday, February 15, 2017 4:10:56 PM

---

Thanks for the quick turnaround

Kitty Henderson  
Executive Director  
Historic Bridge Foundation  
PO Box 66245  
Austin, Texas 78766  
512 407 8898

On Feb 15, 2017, at 3:25 PM, Scott Sundermeyer <[SSundermeyer@odot.org](mailto:SSundermeyer@odot.org)> wrote:

Hi Kitty –

The document is attached. It is also available on our website here:  
<http://www.odotculturalresources.info/horse-creek-bridge.html>

Thanks!

Scott A. Sundermeyer, RPA  
Cultural Resources Program Director  
Oklahoma Department of Transportation

Oklahoma Archeological Survey  
111 E. Chesapeake Avenue, Rm. 102  
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<Ottawa 24273(04) Design Support for 4f analysis.pdf>



## OKLAHOMA DEPARTMENT OF TRANSPORTATION CULTURAL RESOURCES PROGRAM

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February 2, 2017

Dear Consulting Party:

Re: Ottawa County FHWA project, JP 24273(04): Replacement of the US-60 bridge over Horse Creek.

Thank you for your interest in Route 66 and for your participation as a consulting party for the referenced Oklahoma Department of Transportation (ODOT) project. As discussed in May of 2016, ODOT has been reviewing alternatives to address and correct deficiencies in the subject bridge, which carries U.S. Highway (US) 60 over the Horse Creek, near Afton, Oklahoma. The existing bridge (ODOT Structure 5806 0256X [NBI 005017]) is a steel stringer/girder structure, constructed in 1936 under a Federal-Aid New Deal Program (U.S. Works Program Highway Project 8-D). The bridge is listed on the National Register of Historic Places (NRHP) under criterion A (NR ID 95000040) for its association with historic Route 66. The bridge was constructed under a federal-aid New Deal program, and is therefore subject to the recent Programmatic Agreement (PA) for the treatment of New Deal era bridges in Oklahoma (see our web page: <http://www.odotculturalresources.info/depression-era-works-programs.html>). As a steel stringer/girder, the bridge is common type and is not significant for its design elements. As you know, the structure does retain unique double-railed sidewalks, however there are no sidewalks from Afton to the bridge.

In accordance with regulatory policy, ODOT has completed an analysis of the alternatives to the *removal* of the historic bridge and, in consultation with FHWA-Oklahoma, has concluded that there is no feasible and prudent alternative to the *use* of the bridge. In this case, a *use* is equivocated to replacement and removal of the structure and construction of a new bridge. ODOT and FHWA have elected to replace the bridge with a new structure. It is our assessment that the proposed undertaking will have an adverse effect to the existing bridge.

The alternatives analysis is presented in the form of a *Design Support Report for Programmatic Section 4(f) Alternatives Analysis*. In accordance with 23 CFR 774, Section 4(f) of the U.S. Department of Transportation (DOT) Act, a property subject to Section 4(f) is a publicly owned land that is part of a park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance.

The report documents the prescribed alternatives that typically do not “use” the bridge, pursuant to the *Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges*. As indicated in a matrix provided in Section 5 of the attached report, it would not be possible to address the deficiencies of the structure, namely the roadway width, the bridge rails (which are not crash-tested), and the structural deficiencies of the bridge itself, and retain the unique features that convey the significance of the bridge. In any rehabilitation alternative, integrity of association would all be compromised by any of the

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prescribed alternatives. Integrity of design and materials would be critically altered due to the fact that the rails and sidewalks would need to be removed. As such, all alternatives would have an adverse effect to the structure, and would result in a bridge with a reduced design life – compared to a new structure. For comparison, we have also included a separate cost estimate for construction of a new bridge. These are all critical factors in the decision to replace the bridge. The complete Design Analysis report with appendices and photographs is available on our web site (<http://www.odotculturalresources.info/horse-creek-bridge.html> ).

Recognizing the historic significance of the bridge, ODOT conducted public involvement in the form of a drop-in-center. Three locations were in Afton were staffed by cultural resources personnel on September 26, 2016. In addition to this public involvement, ODOT’s Cultural Resources Program has also invited your organization to participate as consulting parties for this project. ODOT also maintained a website with project information and a comment form (<http://www.odotculturalresources.info/>).

In consideration of the recently executed PA for New Deal bridges, and that the significance of the structure lies in its association with Route 66, ODOT would like to propose three treatment measures as codified in Stipulation II(b) and Appendix A of the PA. Two of these treatment measures involve public outreach and interpretation. One measure involves documentation of the structure. We are asking for your comments regarding these treatment (mitigation) measures.

1) Treatment C, Public Interpretation: ODOT proposes to complete two measures under this treatment option.

a) ODOT will produce an Google Earth layer identifying Route 66 roadbed features presented in the “Oklahoma Route 66 Roadbed Documentation Project (1926 - 1970): A Survey of Roadbed and Integral Structures”. The Google Earth layer will be made available and maintained on the ODOT Cultural Resources Program website (<http://www.odotculturalresources.info/route-66.html>). The Google Earth layer will be interactive and allow users to ‘click’ of Route 66 segments and roadway resources to obtain information on those particular segments, and will follow the information presented in the Roadbed Study.

b) ODOT will produce an interpretive panel, sign, or billboard to be housed at the Afton Station (<http://www.travelok.com/listings/view.profile/id.12293>) outlining the history of the Horse Creek bridge. ODOT will work will all Section 106 consulting parties and staff from the Afton Station in the design and information presented on the panel.

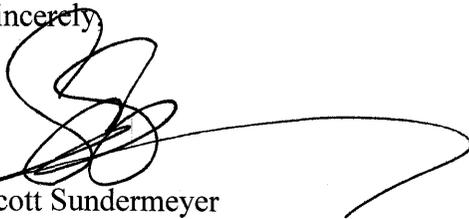
2) Treatment I, Historic American Engineering Record Documentation

In addition to the above-referenced measures, ODOT will review options for historically compatible bridge rails to be used on the new structure. ODOT has completed a study of the Route 66 bridges in Oklahoma that still retain their original bridge rails in an effort to identify modern crash-tested rails that are historically compatible with the original railings. The recommendations for appropriate replacement railings are meant to identify replacement options

that are acceptable in terms of safety requirements and visual compatibility. This report is available at the following link <http://www.odotculturalresources.info/route-66.html>.

At this time, we request any comment you have to the applicability of the streamlined review and mitigation as outlined in this letter. If you have any questions, please do not hesitate to contact me at [ssundermeyer@odot.org](mailto:ssundermeyer@odot.org) or 405-325-7201.

Sincerely,

A handwritten signature in black ink, appearing to be 'SS' with a long horizontal flourish extending to the right.

Scott Sundermeyer  
ODOT Cultural Resources Program Director

cc. Jim Riss  
Kaisa Bartheli  
Brad Nickson  
Afton Station  
Preservation Oklahoma  
Oklahoma Historic Bridge + Highway Group  
Historic Bridge Foundation



# Design Support Report for Programmatic Section 4(f) Alternatives Analysis

## U.S. Highway 60 Bridge Over Horse Creek

Afton, Ottawa County

Job Piece No.: 31715(05)

NBI Bridge No.: 05017

Structure No.: 5806 0256 X

Prepared for

**Federal Highway Administration**

and

**Oklahoma Department of  
Transportation**

Prepared by

**Mead  
& Hunt**

[www.meadhunt.com](http://www.meadhunt.com)

September 2016

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## Table of Contents

	Page
<b>1. Introduction .....</b>	<b>1</b>
<b>2. Existing Conditions .....</b>	<b>3</b>
A. Description.....	3
B. Current bridge sufficiency rating.....	4
C. Structural deficiencies and condition .....	4
D. Functionally obsolete .....	6
<b>3. Purpose and Need.....</b>	<b>7</b>
<b>4. Alternative Analysis.....</b>	<b>9</b>
A. Alternative 1 – Do nothing .....	9
B. Alternative 2 – Rehabilitation.....	9
C. Alternative 3 – Build on new location without using historic bridge.....	12
(1) Option A – Retain the historic bridge in vehicular service as one half of a one-way couplet.....	13
(2) Option B1 – Retain the historic bridge as a monument ...	16
(3) Option B2 – Retain the historic bridge as a non- motorized vehicle/pedestrian/ bicycle facility .....	17
<b>5. Summary of Findings .....</b>	<b>21</b>
<b>Works Cited.....</b>	<b>41</b>

### Tables

1	US 60 Bridge over Horse Creek NBI ratings.....	4
2	Summary of alternative analysis .....	23

**Appendices**

- A Oklahoma Department of Transportation Bridge Inspection Report  
(April 6, 2015)
- B Project Location Map
- C Photographs (April 2016)
- D 1935 Design Plans for U.S. Highway 60 and Horse Creek Bridge  
(Select Sheets)
- E Hydraulic Analysis, 2016
- F Preliminary Plans for Bridge and Approaches, US 60 over Horse  
Creek, 2016 (Select Sheets)

## 1. Introduction

According to Section 4(f) regulations (23 CFR 774), the Federal Highway Administration (FHWA) may not approve an action that uses publicly owned parks, recreation areas, wildlife and waterfowl refuges, or historic sites, including historic bridges, when there is a feasible and prudent alternative to the action. Actions that “use” a historic bridge are those that result in the demolition or removal of the structure or that reconstruct it to such an extent that the character-defining features that give it historic significance are eliminated or substantially impaired.<sup>1</sup> As established by the Programmatic Section 4(f) Evaluation for Historic Bridges, a limited number of avoidance alternatives must be evaluated and rejected before the FHWA can approve an action that uses a historic bridge.<sup>2</sup> The purpose of this report is to present the alternatives analysis for the U.S. Highway (US) 60 Bridge over Horse Creek to enable the FHWA and the Oklahoma Department of Transportation (ODOT) to assess the feasibility and prudence of the alternatives.

To prepare this report, a Mead & Hunt, Inc. (Mead & Hunt) qualified professional historian and professional structural engineer conducted a site visit to the bridge on April 20, 2016; reviewed bridge inspection reports, bridge plans, and other documents related to the bridge; and participated in conference calls with representatives from ODOT and the design consultant.

Constructed in 1936, the US 60 Bridge over Horse Creek is listed in the National Register of Historic Places (NRHP) under *Criterion A: Transportation*. The bridge is significant as a unique example of the need to accommodate pedestrians in a time when the automobile was becoming the dominant mode of transportation. The 143-foot-long steel I-beam bridge is known locally as “the side-walk” bridge for its double reinforced-concrete walkway design.<sup>3</sup> The sidewalks and associated railings are the key elements of the US 60 Bridge that represent its significance and therefore are its character-defining features.

The remainder of this report is organized to present a description of the bridge and its existing conditions, identify the proposed project’s purpose and need, and discuss the analysis of three primary avoidance alternatives. The three primary alternatives under consideration in this document are:

1. Do nothing;
2. Rehabilitate the historic bridge for continued vehicular service for two-way traffic; and
3. Construct a structure on new location without adversely affecting the historic bridge’s integrity.

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<sup>1</sup> Federal Highway Administration, Office of Planning, Environment, and Realty, Project Development and Environmental Review, “Section 4(f) Policy Paper,” 20 July 2012, <http://www.environment.fhwa.dot.gov/4f/4fpolicy.pdf> (accessed 20 December 2013).

<sup>2</sup> Federal Highway Administration and Oklahoma Department of Transportation, “Design Support for Section 4(f) Analysis for Historic Bridges,” 25 March 2013 (updated).

<sup>3</sup> National Register of Historic Places, Horse Creek Bridge, Afton, Ottawa County, Oklahoma. National Register #95000040.

Alternative 3 identified above is subdivided into three options:

- Option A – Retain the historic bridge in vehicular service as half of a one-way couplet.
- Option B1 – Retain the historic bridge as a monument with a new bridge constructed on an offset highway alignment.
- Option B2 – Retain the historic bridge as a non-motorized vehicle/pedestrian/bicycle facility with a new bridge constructed on an offset highway alignment.

The American Association of State Highway and Transportation Officials (AASHTO)'s *A Policy on Geometric Design of Highways and Streets 2011* (AASHTO Green Book) was used to complete the alternatives analysis in accordance with FHWA and ODOT guidelines for the Design Support for Section 4(f) Analysis for Historic Bridges.

## **2. Existing Conditions**

This section addresses the existing condition of the US 60 Bridge, including a description of the structure and its setting. Two primary considerations in this section for the US 60 Bridge are structural deficiency and functional obsolescence. A discussion of the bridge's current sufficiency rating, which is determined during each bridge inspection, is also presented to provide a framework for understanding the bridge's structural deficiency and functional obsolescence. The latest ODOT Bridge Inspection Report, based on an inspection performed on April 6, 2015, is included in Appendix A.

### **A. Description**

The US 60 Bridge over Horse Creek is located in ODOT Division 8, in the northeast area of the city of Afton, Ottawa County, Oklahoma, 2.6 miles north of the Delaware County Line (see Appendix B for a project location map). Residential and commercial properties are located to the west of the bridge on both sides of US 60.

The US 60 Bridge over Horse Creek is a three-span structure with an overall length of approximately 143 feet, as measured from the back of the abutments. The bridge consists of one 60-foot-long and two 40-foot-long steel I-beam spans, with a cast-in-place reinforced-concrete deck providing a 24-foot clear roadway for two lanes of traffic and two 5-foot-wide sidewalks, one on each side of the roadway. The bridge has reinforced-concrete railings on each side of the sidewalks, for a total of four railings. The bridge is skewed at a 45-degree angle with the waterway.

The steel I-beam spans are supported on two cast-in-place reinforced-concrete abutments (each with two cast-in-place reinforced-concrete wingwalls) and on two cast-in-place reinforced-concrete piers with concrete web walls between concrete columns. The foundations for the abutments and piers are supported on limestone bedrock. See Appendix C for photographs of the bridge and Appendix D for select original plans for this bridge.

The bridge was originally designed for an AASHTO H 20 (20-ton truck) live load. The bridge is not load posted/weight restricted. The bridge inspection report (April 2015) indicates that this bridge was last load rated on August 1, 2006, using the Load Factor (LF)-Ton inventory rating method. The results of that rating indicate a Posting of 5: At/Above Legal Loads.

US 60 at the project site is classified as a rural minor arterial highway. The highway is not on the National Highway System and is not part of a national truck route. The 2016 average annual daily traffic (AADT) on the bridge is 7,000 vehicles; the projected 2036 AADT is 11,200 vehicles. The truck percentage as a measure of AADT is approximately 23 percent. The posted speed limit at the bridge location is 35 miles per hour (mph) and increases to 45 mph east of the bridge. There have been several crashes at this bridge in recent years, as evidenced by repairs to three sections of the concrete bridge railings. These crashes appear to have been single vehicle collisions with the concrete railings, as documented in ODOT's Collision Analysis Report for the period January 2004 to December 2006.

Several items impact the hydraulics of Horse Creek. An active railroad bridge is located approximately 650 feet upstream (north) of the existing bridge. In addition, there are remnants of the old Route 66 Bridge and abandoned highway fill to the north of the existing bridge. The old concrete west abutment remains surrounded with vegetation. Portions of two concrete pier foundations remain in the waterway. These old substructure remnants and highway fill appear to partially obstruct the Horse Creek waterway flow.

**B. Current bridge sufficiency rating**

The bridge’s current sufficiency rating is 29.9 out of a possible 100 points. The sufficiency rating measures a bridge’s capability to remain in vehicular service, based on a mathematical formula incorporating condition ratings, load capacity, roadway and structure geometrics, traffic counts, presence of suitable detour routes, and other bridge inspection factors. A bridge with a sufficiency rating of 80 or less is eligible for federal bridge rehabilitation funding. A bridge with a sufficiency rating of 50 or less is eligible for federal bridge replacement funding.

The bridge is structurally deficient (SD) and functionally obsolete (FO) with the following National Bridge Inventory (NBI) ratings on a scale of 9 = Excellent Condition to 0 = Failed Condition as shown in Table 1, in accordance with the current Bridge Inspection Report (April 2015) (see Appendix A). This report will be referred to herein after as “Bridge Inspection Report.”

**Table 1. US 60 Bridge over Horse Creek NBI ratings**

Item	Current Rating (April 2015)
NBI Item 58 (Deck)	3 = Serious
NBI Item 59 (Superstructure)	4 = Poor
NBI Item 60 (Substructure)	5 = Fair
NBI Item 61 (Channel)	7 = Minor Damage
Overall Sufficiency Rating	29.9 (SD, FO)

**C. Structural deficiencies and condition**

Bridges are considered structurally deficient if significant load-carrying elements are found to be in poor condition due to deterioration and/or damage. Structural deficiency is numerically defined as a bridge component (deck, superstructure, or substructure) having an NBI general condition rating of 4 (poor condition) or less. The concrete deck for this bridge has a rating of 3, and the superstructure has a rating of 4.<sup>4</sup> Based on the Bridge Inspection Report and field verification, the structural deficiencies and conditions are listed below according to NBI item, along with the condition state for individual elements.<sup>5</sup>

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<sup>4</sup> According to the *Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation’s Bridges*, “Rating 3 - Serious Condition” means that structural elements show loss of section, deterioration, spalling or scour having seriously affected primary structural components. Local failures are possible.

<sup>5</sup> NBI element-level inspection condition state for individual components of a bridge are defined as follows: 1 = Good; 2 = Fair; 3 = Poor; 4 = Severe; and 5 = (undefined, but is critical or imminent failure).

## Section 2 Existing Conditions

- NBI Item 36A-Bridge Rail, Item 36B-Rail Transition, Item 36C-Approach Rail, and Item 36D-Approach Rail Ends: These items rate as 0-Substandard. The concrete railings between the roadway and the sidewalks do meet current crash rating test level (TL) standards.<sup>6</sup> The concrete railings on the outside of the sidewalks do not meet current geometric and safety requirements for overall height and for minimum clear opening dimensions between elements of the railing. There is no approach railing to the bridge, nor are there any approach railing ends.
- NBI Item 58 – Deck (3, serious condition): The entire reinforced-concrete deck is rated in Condition State 3 – Poor. The concrete deck has many cracks, patched areas, spalls, and impending potholes with exposed reinforcing steel bars. Joints in the concrete deck have completely failed and are allowing water and debris to drip on to the steel beams and steel diaphragms below the joints. The deck was observed to be pumping or bouncing on the steel beams when traffic passed over. This is because the concrete deck is not physically attached to the steel beams. The reinforced-concrete sidewalks are in fair condition without any potholes or spalled areas. The longitudinal joints between the sidewalks and the bridge railings are unsealed, allowing water to drip on the steel beams below.
- NBI Item 59 – Superstructure (4, poor condition): The steel beams that support the roadway concrete deck and concrete sidewalks are in Condition State 2 – Fair. The paint system has failed in approximately 25 percent of the surface area of the steel beams, primarily at the ends over the bearings. Minor deterioration of the steel was observed at the ends of the beams; several of the beams have supplemental steel sections welded to them on the bottom flanges at the ends. Steel diaphragms between the beams over the piers and abutments have failed. Many of the steel diaphragms have completely deteriorated with total loss of section; several of the most deteriorated diaphragms have been removed. Steel bearings for the beams have complete paint failure and moderate loss of section.
- NBI Item 60 – Substructure (5, fair condition): The reinforced-concrete piers and abutments are in Condition State 2 – Fair. The west abutment and east abutment have minor spalls and cracks with exposed reinforcing steel; several of the cracks have efflorescence. Other than very minor spalling on top of the concrete caps, the reinforced-concrete piers did not exhibit structural deficiencies.
- NBI Item 61 – Channel and Channel Protection (7 = minor damage): The north embankment for the west abutment is protected with riprap consisting of chunks of concrete and large segments of asphalt. This protection appears to be stable, with only a few chunks dislodged and resting in the waterway. The north embankment of the east abutment is protected with segments of asphalt and layers of crushed asphalt. This protection appears to be stable. Plans for the original bridge construction indicate that stone riprap was provided at each of these locations.

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<sup>6</sup> TL 3 for speeds less than 50 mph with approach guardrail or TL 4 for speeds less than 50 mph without approach guardrail.

- NBI Item 71 – Waterway Adequacy (7, above minimum): The bridge crosses over Horse Creek at a 45-degree skew angle. The westerly portion of the river channel under the westerly span of the bridge has filled itself in over the years, and is currently a blockage to the full hydraulic opening through the bridge. The main water channel passes under the center span of the bridge for low flow events. At the time of the site visit, water was flowing only in the channel under the center span, and this was after a moderate rain event the night before. A hydraulic analysis and summary for this bridge was completed assuming a waterway opening equivalent to that which existed when the bridge was originally constructed (see Appendix E). The hydraulic analysis indicated that this bridge is able to pass the 100 year flood frequency event without overtopping the roadway. The hydraulic summary also indicates that the roadway would overtop during a 255-year frequency event.
- NBI Item 72 – Approach Roadway (8, equals desirable criteria): The asphalt roadway approaches at each end of the bridge are in good condition. The shoulders are not paved.
- NBI Item 113 – Scour Rating (8, stable above footing): The foundations of the substructure units were not visible during the field visit. Original design plans indicate that foundations are supported on bedrock.

#### **D. Functionally obsolete**

Bridges are considered functionally obsolete when the deck geometry, load carrying capacity (comparison of the original design load to the current legal loads), clearance, or approach roadway alignment do not meet current design criteria. In general, functionally obsolete means that the bridge was built to standards that are no longer used today.

This bridge, designed for an AASHTO H-20 (20-ton truck) live load, meets current load criteria. However, this bridge is considered functionally obsolete because its clear roadway width and approach roadway width do not meet current criteria for the current and projected AADT.

The bridge's clear roadway width of 24 feet does not meet current criteria. The bridge has two 12-foot-wide lanes with no outside shoulders. Current roadway design standards outline that the minimum clear roadway width across a bridge with two-way traffic is 40 feet (two 12-foot traffic lanes and two 8-foot shoulders) for an arterial functional class and an AADT greater than 2,000 vehicles per day.

The width of the roadway at each end of the bridge is also substandard. Current roadway design standards are for two 12-foot-wide traffic lanes with 8-foot-wide shoulders at each end of the bridge for a roadway with an arterial functional classification. The horizontal alignment and vertical profile geometry of the roadway approaches at each end of the bridge are acceptable. West of the bridge, US 60 passes through Afton on a tangent alignment with a posted speed limit of 35 mph. East of the bridge, US 60 has a horizontal curve with a posted speed limit of 45 mph.

### **3. Purpose and Need**

The project need describes the transportation deficiency. It is the foundation of the entire decision-making process. The need provides information to support the purpose and explains why the project is needed.

The need for the project is as follows:

- The existing bridge over Horse Creek is structurally deficient.
- The existing bridge is functionally obsolete and is of substandard width.
- The existing bridge rails do not meet full-scale crash criteria.

The project purpose defines the problem to be solved. Defining the purpose is necessary to determine the range of alternatives that will be considered.

The purpose of this project is as follows:

- Provide a structurally sound bridge over Horse Creek.
- Preserve Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination in Oklahoma.

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## **4. Alternative Analysis**

This section addresses the alternatives that are required to be considered for the Programmatic Section 4(f) Evaluation for Historic Bridges. Each alternative is assessed for its ability to meet project purpose and need, and to avoid effects to the character-defining features that give the bridge its historic significance.

### **A. Alternative 1 – Do nothing**

Alternative 1 would leave the existing structure in place, without bypass, rehabilitation, or replacement. Under this alternative, there would be no use of the Section 4(f) property since character-defining features that make the bridge significant would not be removed or substantially altered.

Previous cyclical or routine maintenance activities have been minimal and limited to activities like annual water-washing of the bridge deck and sidewalks. The bridge is currently on a 24-month inspection schedule. Condition-based maintenance activities have included repairing damaged concrete railing sections due to vehicular impact.

Under this alternative the bridge would be left in place and the structural and functional deficiencies discussed earlier in this evaluation would remain unresolved and potentially lead to unacceptable safety hazards for the traveling public. Efforts to correct the structural deficiencies of the bridge are beyond what is considered routine maintenance. No increased costs associated with routine maintenance or inspections are anticipated under this alternative. Routine maintenance would continue at existing levels and inspections would continue according to their current frequency.

With this alternative, the bridge will continue to deteriorate and may need to be load posted at some time. Such load posting would require heavy trucks to use alternate routes.

The “Do Nothing” alternative would avoid use of the historic bridge as a Section 4(f) property and have the least impact on the historic integrity of the bridge, at least in the short term. However, if left untreated, the existing structural deficiencies will worsen and develop into more significant defects. The existing functional inadequacies related to roadway width and substandard non-crash tested railings would also remain unaddressed. This alternative would not meet the project purpose and need because it would not provide a structurally sound bridge. It does not correct the structurally deficient and functionally obsolete bridge. In the near term, this alternative would meet the project purpose to preserve Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination in Oklahoma. However, in the long term, the lack of rehabilitation and maintenance of the historic bridge would result in its continued deterioration and could lead to eventual failure. Failure and removal of the bridge would remove a historic element from Route 66.

### **B. Alternative 2 – Rehabilitation**

This alternative would rehabilitate the existing bridge to be in conformance with current design standards and to continue vehicular service for two-way traffic. This alternative would leave the existing bridge in place and continue to allow two-way traffic on the structure. The structure would be widened on both

sides to meet current roadway design criteria: a 24-foot-wide roadway with 8-foot shoulders on each side, for a clear roadway width of 40 feet, with or without sidewalks.

To rehabilitate the structure for continued vehicular use, the following work would need to be undertaken:

- Construct temporary bypass roadway (shoofly) with culvert pipes on the south side of the existing road.
- Detour traffic to the temporary bypass roadway (shoofly).
- Remove the four lines of concrete railings, two lines on each side of the roadway.
- Remove both concrete sidewalks.
- Remove the existing, original, 8-inch, non-composite, cast-in-place, reinforced-concrete deck.
- Remove the two exterior steel beams that support the outer edges of the sidewalks.
- Remove steel diaphragms.
- Remove the two reinforced-concrete wingwalls at each abutment.
- Modify each abutment to match the desired bridge beam and deck geometry.
- Modify top of wingwalls to match revised bridge deck geometry.
- Modify top of each pier to match the desired bridge beam geometry.
- Remove, clean, and paint, then reinstall, existing bearings at ends of existing six interior steel beams.
- Clean and paint the existing steel beams. This operation will require containment of material and old paint from the cleaning and painting operations.
- Add two lines of steel beams, one line each side of the bridge, with new bearings. These new beams would be fully painted before shipment to the project site. These new steel beams would also have stud shear connectors that would project into the new concrete deck.
- Erect new steel diaphragms between steel beams, and connect with high-strength bolts.
- Weld new stud shear connectors to the top flanges of the existing steel beams so that the new concrete deck will act compositely with the steel beams.

**Section 4**  
**Alternative Analysis**

- Construct new cast-in-place reinforced-concrete deck with epoxy coated rebars. This would include construction of sealed expansion joints over the substructure units.
- Construct new crash-tested concrete railings (Texas Type T66 or ODOT Std TR4-2) on the outside edges of the bridge to meet TL 3 standard. The railing can be matched in material but no standard crash-tested railing matches the historic railing in appearance.
- Patch spalled areas of the faces of both abutments.
- Dredge the creek channel under the westerly span of the bridge and restore the waterway opening through the entire bridge to its originally constructed condition.
- Add supplemental stone riprap on the north side of the west abutment and the north side of the east abutment.
- Construct new roadway segments on each side of the bridge, and transition to match the existing roadway.
- Construct approach guardrail with transitions according to current design standards on each end of the bridge.
- Paint pavement markings (lane line striping) on the bridge and the roadway approaches.
- Switch traffic back to the original roadway, and remove the temporary bypass.

The estimated cost of this alternative is \$2,440,347. The estimated cost includes the following:

- Right-of-way acquisition and utility relocation costs: \$312,900.
- Roadway costs, including temporary shoofly detour: \$1,174,860.
- Bridge rehabilitation costs: \$952,587.<sup>7</sup>

This alternative would remedy most of the existing functional and structural deficiencies in the bridge's substructure and superstructure. The rehabilitation would accomplish the following:

- Remedy the deterioration in the concrete deck and deck expansion joints.
- Alleviate the deteriorated condition of the steel beams, bearings, and diaphragms.

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<sup>7</sup> The rehabilitation costs do not include a sidewalk as part of the widening and assume an ODOT Std TR4-2 railing.

- Resolve the deteriorated condition of the paint system.
- Provide a crash-tested railing that meets current crash testing test level TL 3(TL) criteria.
- Improve the waterway opening and hydraulics through the bridge to nearly its original condition.
- Correct deficiencies leading to functional obsolescence by widening the bridge to current roadway standards.

The hydraulic analysis performed (see Appendix E) indicates that the existing bridge can pass the 255-year storm event without overtopping the roadway. This analysis is based on the assumption that the westerly portion of the water channel is dredged to provide the waterway opening similar to that when the bridge was constructed. After the rehabilitation is completed, this bridge is expected to continue to serve in its present capacity for 25 to 30 years or longer with proper maintenance, stabilization, and preservation activities.

This rehabilitation alternative would meet the project purpose and need to provide a structurally sound bridge since it will correct the structurally deficient and functionally obsolete bridge and provide new railings that meet full-scale crash criteria. This alternative would also meet the project purpose to preserve Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination in Oklahoma. This alternative does impact character-defining features and remove historic fabric of the bridge, including the removal of four original concrete railings and the elimination of the sidewalks. These changes to the bridge may decrease this bridge's appeal as a particular tourist destination; however, changes to one structure along the approximately 400-mile corridor would not diminish the ability of the overall route to serve as a tourist destination. This alternative would not avoid the use of the bridge as a Section 4(f) property since the rehabilitation would diminish the structure's historic integrity.

### **C. Alternative 3 – Build on new location without using historic bridge**

Alternative 3 involves the construction of a new bridge and various options for the historic bridge. For the three options in Alternative 3, consideration of the location of the new bridge included an assessment of local constraints. Engineers working on preliminary design options for a new bridge assessed the orientation of a new bridge on both the north (upstream) and south (downstream) sides of the historic bridge. This analysis determined that constructing a new bridge on the south side would result in greater impacts to wetlands and private property; a new bridge located north of the existing structure would minimize these impacts. Also, a new bridge located north of the existing structure would provide better geometric alignment of the highway at the curve at the east end of the project, and minimize right-of-way acquisition at both the west and east ends of the project. (Preliminary plans are included in Appendix F.)

The new bridge and roadway relocation would require approximately 1.47 acres of additional right-of-way. This is estimated to result in impacts to 11 properties: seven properties would be infringed upon (acquiring property) and an additional four properties would be affected (temporary construction easements).

With the construction of a new bridge, a hydraulic analyses would need to be conducted with both bridges in place, to determine the adequacy of the waterway opening through both bridges. This analysis would be based on the assumption that the westerly portion of the water channel through the existing bridge is dredged to provide the waterway opening similar to that when the bridge was constructed. Such hydraulic analysis is beyond the scope of this report.

**(1) Option A – Retain the historic bridge in vehicular service as one half of a one-way couplet**

Alternative 3, Option A consists of constructing a new bridge adjacent to the historic bridge and using each structure to carry one lane of one-way traffic plus shoulders in a single direction. The centerline of the new US 60 alignment would be 50 feet north of the existing centerline, resulting in a clearance of approximately 10 feet between the edges of the bridges. The width of the new bridge would be constructed to accommodate one 24-foot-wide traffic lane plus two 8-foot shoulders, for a total clear roadway width of 40 feet. If necessary in the future, the new bridge could carry two-way traffic with two 12-foot traffic lanes with 8-foot shoulders, should the historic bridge be taken out of service. Under this alternative, the historic bridge would be left in place and would carry one lane of one-way traffic in the opposite direction.

Rehabilitation of the existing bridge as half of a one-way couplet would require the following repairs:

- Construct a new bridge to the north of the existing bridge, located so there would be 2 feet clear distance between the outside edge of the new bridge and the outside edge of the existing bridge. The new bridge would be 240 feet long, with spans of 70, 100, and 70 feet, and have Type IV precast prestressed concrete girders with a cast-in-place reinforced-concrete deck. New cast-in-place reinforced-concrete abutments and piers would be constructed for the new bridge substructure. This new bridge would have a 40-foot clear roadway width and crash-tested barrier railings on each side, without sidewalks. Traffic would continue to operate on the existing bridge while the new bridge is constructed. This bridge would be designed as described above to accommodate two lanes of traffic with shoulders in the future, should the existing bridge need to be removed.
- Construct new US 60 roadway approaches on each side of the new bridge, with roadway width of 24 feet for two 12-foot traffic lanes, plus 8-foot shoulders on each side. Tie this new road to the existing road on each side of the bridge, using 45 mph as the design criteria for geometric alignment.

- Construct signage and pavement markings for the roadway split on approaches at each end of the bridges.
- Switch two-way US 60 traffic to the new bridge after the new roadway approaches are constructed.
- Perform the following work on the existing bridge; the bridge would retain its existing width, but the sidewalks and railings would be removed, and a wider roadway deck would be constructed. The clear roadway width would be approximately 36 feet, which is wide enough for one 12-foot traffic lane plus 8-foot shoulders on each side, plus an allowance for extra width to accommodate the steel I-beam framing:
  - Remove the four lines of concrete railings, two lines on each side of the roadway.
  - Remove both concrete sidewalks.
  - Remove the existing, original, 8-inch, non-composite, reinforced-concrete deck.
  - Remove the two exterior steel beams that support the outer edges of the sidewalks. Also remove all bearings for these steel beams.
  - Remove all steel diaphragms.
  - Remove the north reinforced-concrete wingwall at each abutment; retain the south wingwalls.
  - Modify each abutment to receive one new line of exterior steel beams on each side of the bridge, and revise geometry to match new deck.
  - Modify top of existing concrete wingwalls on the south side of each abutment; construct a concrete closure wall at each abutment between the existing bridge and the new bridge.
  - Modify each pier cap to receive one new line of exterior steel beams on each side of the bridge.
  - Remove, clean, and paint, then reinstall, existing bearings at ends of existing six interior steel beams.
  - Clean and paint the existing steel beams. This operation will require containment of material and old paint from the cleaning and painting operations.
  - Add two lines of steel beams, one line each side of the bridge, with new bearings. These new beams would be fully painted before shipment to the

project site. These new steel beams would also have stud shear connectors which would project into the new concrete deck.

- Erect new steel diaphragms between all steel beams, and connect with high-strength bolts.
- Weld stud shear connectors to the top flanges of the existing steel beams so the new concrete deck will act compositely with the steel beams.
- Construct new cast-in-placed reinforced-concrete deck with epoxy coated rebars. This would include construction of sealed expansion joints over the substructure units.
- Construct new crash-tested concrete railings (Texas Type T66 or ODOT Std TR4-2) on the outside edges of the bridge to meet TL 3 standard. The railing can be matched in material but no standard crash-tested railing matches the historic railing in appearance.
- Patch spalled areas of the faces of both abutments.
- Dredge the creek channel under the westerly span of the bridge and restore the waterway opening through the entire bridge to its originally constructed condition.
- Reconstruct US 60 roadway approaches at each end of the bridge.
- Construct approach guardrail with transitions according to current design standards.
- Paint pavement markings (lane line striping) on the bridge and the roadway approaches.
- Switch eastbound US 60 traffic back to the original roadway, and keep westbound US 60 traffic on the new bridge.

The total cost for this alternative is estimated at \$4,891,438 and includes the following:

- Right-of-way acquisition and utility relocation costs: \$1,300,000.
- Roadway costs: \$1,110,660.
- Bridge rehabilitation costs: \$955,155.<sup>8</sup>
- New bridge costs: \$1,525,623.

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<sup>8</sup> The rehabilitation costs do not include a sidewalk as part of the widening and assume an ODOT Std TR4-2 railing.

With the construction of a new vehicular bridge, this alternative meets the project's purpose and need to provide a structurally sound bridge.<sup>9</sup> Rehabilitation of the historic bridge as a one-way couplet also addresses the purpose and need to provide a structurally sound bridge since it will correct the structurally deficient and functionally obsolete bridge and provide new railings that meet full-scale crash criteria. After the rehabilitation is completed, this bridge is expected to continue to serve similar to its present capacity for 25 to 30 years or longer with proper maintenance, stabilization, and preservation activities.

This alternative would also meet the project purpose to preserve Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination in Oklahoma. This alternative impacts character-defining features and removes historic fabric of the bridge, including the four original concrete railings and the elimination of the sidewalks. These changes may decrease this bridge's appeal as a particular tourist destination; however, changes to one structure along the approximately 400-mile corridor would not diminish the ability of the overall route to serve as a tourist destination. This alternative would not avoid the use of the bridge as a Section 4(f) property since the rehabilitation of the bridge as a one-way couplet would impact the structure's historic integrity.

**(2) Option B1 – Retain the historic bridge as a monument**

This alternative would construct a new structure that would carry two-way traffic parallel to the existing bridge. The new structure and associated US 60 roadway realignment would be as described in Alternative 3, Option A above, but would carry two-way traffic rather than one-way traffic. The new structure would meet current design criteria with a clear roadway width of 40 feet and would require additional right-of-way costs and utility relocation costs as described for Option A. The historic bridge would remain in use until the construction of the new bridge is complete. Once the new bridge is open, traffic would be diverted onto the new bridge and the historic bridge would be left in place as a monument. The road at each end of the historic bridge would be obliterated with the grade restored to its original condition. The bridge ends would also be barricaded to prevent access by traffic, non-motorized vehicles, pedestrians, and bicyclists. Rehabilitation work would be limited to removing the north wingwalls at each abutment, constructing a concrete closure wall between the existing bridge and the new bridge, resealing the joints in the existing concrete deck, and dredging the creek channel under the westerly span of the bridge to its originally constructed condition. Under this alternative, periodic inspection of the historic bridge would be required to monitor the bridge's condition, as is currently done on a bi-annual basis.

The total cost of constructing a new bridge and leaving the historic bridge in place as a monument is estimated at \$3,962,805, which is broken down as follows:

- Right-of-Way Acquisition and Utility Relocation Costs: \$1,300,000.
- Roadway Costs: \$1,027,200.

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<sup>9</sup> Construction of the new bridge would require additional hydraulic studies to determine potential impacts to the river, in terms of hydraulic capacity with two bridges in place.

- Bridge Rehabilitation Costs: \$109,982.
- New Bridge Costs: \$1,525,623.

With the construction of a new vehicular bridge, this alternative meets the project purpose and need to provide a structurally sound bridge.<sup>10</sup> However, in the long term the lack of rehabilitation and maintenance of the historic bridge may equate to an adverse effect to its historic integrity since the superstructure elements and substructure would likely continue to deteriorate and could lead to eventual failure. It is estimated that this bridge could serve as a monument for 30 to 40 years or longer with proper maintenance and preservation activities.

This alternative would also meet the project purpose to preserve Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination in Oklahoma. The bridge would remain in place as a monument adjacent to the new bridge allowing it to continue to serve as a visible element of the history of Route 66. However, in the long term the lack of rehabilitation and maintenance of the historic bridge would result in its continued deterioration and could lead to eventual failure. Failure and removal of the bridge would remove a historic element from Route 66. The construction of a new bridge next to the historic bridge would not diminish the integrity of the overall route as a tourist destination.

This alternative does not impact the bridge's character-defining features and does not remove historic fabric. This alternative avoids use of the bridge as a Section 4(f) property since its historic integrity would be retained.

**(3) Option B2 – Retain the historic bridge as a non-motorized vehicle/pedestrian/bicycle facility**

This alternative would construct a new structure of the same type described in Alternative 3, Option B1 above, that would handle both directions of traffic and would be located parallel to, and upstream (north) of, the existing bridge. The new structure would meet current design criteria with a clear roadway width of 40 feet and would require additional right-of-way acquisition costs and utility relocation costs as described for Alternative 3, Option A. The historic bridge would remain in use during construction of the new bridge. Once the new bridge was opened, traffic would be diverted to the new bridge and the historic bridge would be rehabilitated and left in place for pedestrians, bicyclists, and non-motorized vehicles. The existing roadway approaches at each end of the historic bridge would be retained to accommodate pedestrians and bicyclists. A barrier would be constructed at each end of the historic bridge to allow pedestrians and bicyclists through but prevent vehicular access to the bridge.

As a non-motorized vehicle/pedestrian/bicycle bridge, the historic bridge would not carry vehicular traffic. The bridge would need to be load rated for the desired current pedestrian live loading of 95 pounds per square foot of bridge deck area, with appropriate reduction factors based on the

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<sup>10</sup> Construction of the new bridge would require additional hydraulic studies to determine potential impacts to the river, in terms of hydraulic capacity with two bridges in place.

area of the deck. It is expected that the historic bridge would have sufficient strength to handle this pedestrian live loading, although some rehabilitation work would be necessary, including:

- Patch spalled concrete in bridge deck, estimated at 40 percent of the total deck surface. Overlay entire bridge deck with a 2-inch-thick, non-shrink, concrete overlay. This work includes replacing all of the deck expansion joints between the spans with new sealed expansion joints.
- Replace all steel diaphragms between the existing steel beams with new, painted steel diaphragms connected with high-strength bolts.
- Clean and paint entire steel superstructure. This includes all steel beams and bearings.
- Remove wingwalls at north side of each abutment, and construct a concrete closure wall between the existing bridge and the new bridge.
- Patch spalled concrete surfaces in the faces of the abutments and wingwalls.
- Dredge the creek channel under the westerly span of the bridge and restore the waterway opening through the entire bridge to its originally constructed condition.

The existing four lines of bridge railings would remain in place without modification. The railings adjacent to the roadway do not meet current crash impact load standards. The exterior railings on the outside edges of the sidewalk do not meet current criteria for height and maximum clear openings. The top of the top railing is 39.5 inches above the sidewalk surface; current criteria is 42-inch-high railings. The clear opening between the two lines of horizontal railings is approximately 8 inches. Current criteria outlines that openings must not allow a 4-inch-diameter sphere to pass through the lower portion of a railing and a 6-inch-diameter sphere to pass through the upper portion of the railing. Since no work is being proposed to the existing railings for this lower use option for the bridge, the railings do not need to be modified to meet current standards.

The total cost of constructing a new bridge and leaving the historic bridge in place as a non-motorized vehicle/pedestrian/bicycle bridge is estimated at \$4,548,083, which is broken down as follows:

- Right-of-way acquisition and utility relocation costs: \$1,300,000.
- Roadway costs: \$1,091,400.
- Bridge rehabilitation costs: \$631,060.
- New bridge costs: \$1,525,623.

With the construction of a new vehicular bridge, this alternative meets the project purpose and need to provide a structurally sound bridge.<sup>11</sup> Rehabilitation of the historic bridge for pedestrians, bicycles, and non-motorized vehicles addresses the need to correct a structurally deficient and functionally obsolete bridge. While this bridge is located on the outskirts of Afton, there is generally no need to provide pedestrian, bicycle, or non-motorized vehicle access across Horse Creek, and there are no trails in the vicinity with which to connect.

This alternative would also meet the project purpose to preserve Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination in Oklahoma. The bridge would remain in place for pedestrians, bicycles, and non-motorized vehicles, allowing it to continue as a visible element of the history of Route 66. The construction of a new bridge next to the historic bridge would not diminish the integrity of the overall route as a tourist destination.

This alternative does not impact the bridge's character-defining features and does not remove historic fabric. This alternative avoids use of the bridge as a Section 4(f) property since its historic integrity would be retained. It is estimated that this bridge could function as a non-motorized pedestrian/bicycle facility for 30 to 40 years or longer with proper periodic maintenance, stabilization, and preservation activities.

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<sup>11</sup> Construction of the new bridge would require additional hydraulic studies to determine potential impacts to the river, in terms of hydraulic capacity with two bridges in place.

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## **5. Summary of Findings**

Table 2 summarizes the analysis of three primary alternatives (Alternative 3 subdivided into three options). Detailed cost estimates for each alternative, except the No Build alternative, are also included below. ODOT and the FHWA will use this analysis to assess the feasibility and prudence of avoidance alternatives.

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Table 2. Summary of alternative analysis

Avoidance Alternative	Meets Need and Purpose for the Project?	Costs			Preliminary understanding of Social, Economic, Environmental Impacts?	Section 4ff) use?
		Construction (\$)	ROW & Utility Relocation Costs (\$)	Total cost (\$)		
1. No-Build.	No, does not address structural deficiencies or functional inadequacies and does not provide a structurally sound bridge.	NA.	NA	NA	None	NA
2. Rehabilitation Alternative for continued 2-way vehicle use.	Yes, rehabilitation addresses structural and functional inadequacies and provides a structurally sound bridge. Also preserves Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination in Oklahoma.	\$2,127,447	\$312,900	\$2,440,347	None	Yes, this alternative impacts character-defining features and removes historic fabric of the bridge, including the removal of four original concrete railings and the elimination of the sidewalks. This alternative would not avoid the use of the bridge as a Section 4(f) property since the rehabilitation would impact the structure's historic integrity. Design life of 25-30 years.
3A. Retain historic bridge in vehicular service as one half of one-way couplet; construct new bridge parallel to existing bridge with two lanes of traffic and shoulders.	Yes, addresses structural and functional inadequacies of historic bridge and paired with a new bridge provides a structurally sound bridge. Also preserves Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination in Oklahoma.	\$3,591,438	\$1,300,000	\$4,891,438	Construction of a new bridge is expected to pose impacts to private property, wetlands, endangered species, and utilities.	Yes, this alternative impacts character-defining features and removes historic fabric of the bridge, including the four original concrete railings and the elimination of the sidewalks. This alternative would not avoid the use of the bridge as a Section 4(f) property since the rehabilitation of the bridge as a one-way couplet would impact the structure's historic integrity. Design life of 25-30 years.
3B1. Retain historic bridge as a monument; construct new bridge parallel to existing bridge with two lanes of traffic and shoulders.	Yes, with new structure a structurally sound bridge is provided. Also preserves Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination in Oklahoma.	\$2,662,805	\$1,300,000	\$3,962,805	Construction of a new bridge is expected to pose impacts to private property, wetlands, endangered species, and utilities.	No, this alternative does not impact the bridge's character-defining features and does not remove historic fabric. This alternative avoids the use of the bridge as a Section 4(f) property since its historic integrity would be retained.  With this alternative, the lack of rehabilitation and maintenance of the historic bridge may equate to an adverse effect to its historic integrity since the superstructure elements and substructure would likely continue to deteriorate and could lead to eventual failure. Design life of 30-40 years.
3B2. Retain historic bridge as a non-motorized pedestrian or bicycle facility; construct new bridge parallel to existing bridge with two lanes of traffic and shoulders.	Yes, with new structure a structurally sound bridge is provided. Structural deficiencies and functional inadequacies of historic bridge would be addressed in rehabilitation for non-motorized use. Also preserves Historic Route 66 and the Route 66 National Scenic Byway as a tourist destination in Oklahoma.	\$3,248,083	\$1,300,000	\$4,548,083	Construction of a new bridge is expected pose impacts to private property, wetlands, endangered species and utilities.	No, this alternative does not impact the bridge's character-defining features and does not remove historic fabric. This alternative avoids use of the bridge as a Section 4(f) property since its historic integrity would be retained. Design life of 30-40 years.

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Design Support Report for Programmatic Section 4(f) Alternatives Analysis

United States (US) Highway 60 Bridge Over Horse Creek

Ottawa County, Oklahoma

Project Number SSP-2991(079)EC

NBI Bridge No.: 05017

Structure No.: 5806 0256X

Prepared for the Federal Highway Administration

And

Oklahoma Department of Transportation

August 2016

**Opinions of Probable Construction Costs**

The opinions of probable construction costs provided herein are presented in third quarter 2016 dollars. These costs were developed by using data previously prepared by others, such as preliminary plans for a proposed new bridge and associated roadway work, bridge inspection reports and hydraulic analysis reports, and site investigations conducted by Mead & Hunt. They were developed without a detailed hands-on bridge inspection or completion of preliminary design for the rehabilitation of the existing historic bridge for the alternatives considered. The estimated costs represent an opinion based on related experience and background knowledge of historic unit prices and comparable work performed on other structures. The opinions of cost are intended to provide a programming level of estimated cost. These costs will require refinement and may require adjustments as further analysis is completed in determining the course of action for future improvements to the structure. A 20% contingency and 7% mobilization allowance have been included in the cost estimates. No administrative or engineering costs have been included.



Darrell J. Berry, PE

Oklahoma PE 26371



Date

**ALTERNATIVE 2-REHABILITATION OF EXISTING BRIDGE**

August 26, 2016

			ESTIMATED QUANTITIES AND COST		
ITEM NO.	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL ESTIMATE
<b>RIGHT-OF-WAY ACQUISITION &amp; UTILITY RELOCATION COSTS</b>					
1	RIGHT-OF-WAY ACQUISITION COSTS	LUMP SUM	1	\$75,900	\$75,900
2	UTILITY RELOCATION COSTS	LUMP SUM	1	\$237,000	\$237,000
<b>ESTIMATED ROW &amp; UTILITY COSTS</b>					<b>\$312,900</b>
<b>ROADWAY COSTS</b>					
	MOBILIZATION @ 7%	LUMP SUM	1	\$76,860	\$76,860
1	TEMPORARY DETOUR (SHOOFLY TO SOUTH) WITH TEMPORARY BRIDGE	LUMP SUM	1	\$500,000	\$500,000
2	APPROACH ROADWAY WORK FOR TRANSITIONS EACH END OF EXISTING BRIDGE	LUMP SUM	1	\$400,000	\$400,000
2	GUARDRAIL ON ROADWAY APPROACHES TO BRIDGE, 4 QUADRANTS	LUMP SUM	1	\$15,000	\$15,000
	20% CONTINGENCY	LUMP SUM	1	\$183,000	\$183,000
<b>ESTIMATED ROADWAY COSTS</b>					<b>\$1,174,860</b>
<b>BRIDGE REHABILITATION COSTS</b>					
	MOBILIZATION @ 7%	LUMP SUM	1	\$62,319	\$62,319
1	DEMOLITION OF RAILINGS, SIDEWALKS, DECK, 2 LINES OF BEAMS, ALL STEEL DIAPHRAGMS	LUMP SUM	1	\$75,000	\$75,000
2	NEW STRUCTURAL STEEL BEAMS, STUD SHEAR CONNECTORS, DIAPHRAGMS, BOLTS	LB	43,000	\$3	\$129,000
3	STUD SHEAR CONNECTORS WELDED TO EXISTING STEEL BEAMS	EACH	1,692	\$5	\$8,460
4	CLEAN AND PAINT EXISTING STEEL BEAMS & BEARINGS (INCL CONTAINMENT)	LUMP SUM	1	\$250,000	\$250,000
5	CAST-IN-PLACE REINFORCED CONCRETE DECK WITH EPOXY COATED REBARS	CY	155	\$1,200	\$186,000
6	NEW OK STD. TR 4-2 RAILING	LF	290	\$125	\$36,250
7	MODIFY BEARING SEATS ON PIERS AND ABUTMENTS	LUMP SUM	1	\$10,000	\$10,000
8	PATCH SPALLED CONCRETE AND EPOXY INJECT CRACKS FOR ABUTMENTS & WINGS	LUMP SUM	1	\$25,000	\$25,000
9	DREDGE CREEK CHANNEL	LUMP SUM	1	\$15,000	\$15,000
10	ADD LARGE STONE RIPRAP NORTH OF EACH ABUTMENT	CY	100	\$50	\$5,000
11	4-INCH EPOXY PAINT LINES, BRIDGE AND ROADWAY	LF	2180	\$1	\$2,180
	20% CONTINGENCY	LUMP SUM	1	\$148,378	\$148,378
<b>ESTIMATED BRIDGE REHABILITATION COSTS</b>					<b>\$952,587</b>
<b>NEW BRIDGE COSTS</b>					
	NO NEW BRIDGE COSTS				
<b>ESTIMATED NEW BRIDGE COSTS</b>					<b>\$0</b>
<b>ALTERNATIVE TOTAL COSTS</b>					<b>\$2,440,347</b>

**ALTERNATIVE 3 OPTION A-RETAIN HISTORIC BRIDGE IN VEHICULAR SERVICE AS ONE HALF OF A ONE-WAY COUPLET; CONSTRUCT NEW BRIDGE PARALLEL TO EXISTING BRIDGE**

August 26, 2016

			ESTIMATED QUANTITIES AND COST		
ITEM NO.	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL ESTIMATE
<b>RIGHT-OF-WAY ACQUISITION &amp; UTILITY RELOCATION COSTS</b>					
1	RIGHT-OF WAY ACQUISITION COSTS	LUMP SUM	1	\$1,000,000	\$1,000,000
2	UTILITY RELOCATION COSTS	LUMP SUM	1	\$300,000	\$300,000
<b>ESTIMATED ROW &amp; UTILITY COSTS</b>					<b>\$1,300,000</b>
<b>ROADWAY COSTS</b>					
	MOBILIZATION @ 7%	LUMP SUM	1	\$72,660	\$72,660
1	EARTHWORK FOR NEW ROAD AND APPROCHES FOR EXISTING ROAD AT BRIDGE	LUMP SUM	1	\$350,000	\$350,000
2	2-LANE ROADWAY WITH SHOULDERS ON NEW ALIGNMENT & RECONSTRUCT APPROACH ROADWAYS TO EXISTING BRIDGE	LUMP SUM	1	\$500,000	\$500,000
3	INSTALL GUARDRAIL ON ROADWAY APPROACHES TO EXISTING BRIDGE, 4 QUADRANTS	LUMP SUM	1	\$15,000	\$15,000
	20% CONTINGENCY	LUMP SUM	1	\$173,000	\$173,000
<b>ESTIMATED ROADWAY COSTS</b>					<b>\$1,110,660</b>
<b>BRIDGE REHABILITATION COSTS</b>					
	MOBILIZATION @ 7%	LUMP SUM	1	\$62,487	\$62,487
1	DEMOLITION OF RAILINGS, SIDEWALKS, DECK, 2 LINES OF BEAMS & ALL STEEL DIAPHRAGMS, & 2 WINGWALLS	LUMP SUM	1	\$80,000	\$80,000
2	NEW STRUCTURAL STEEL BEAMS, STUD SHEAR CONNECTORS, DIAPHRAGMS, BOLTS	LB	43000	\$3	\$129,000
3	STUD SHEAR CONNECTORS WELDED TO EXISTING STEEL BEAMS	EACH	1692	\$5	\$8,460
4	CLEAN AND PAINT EXISTING STEEL BEAMS & BEARINGS (INCL CONTAINMENT)	LUMP SUM	1	\$250,000	\$250,000
5	CAST-IN-PLACE REINFORCED CONCRETE DECK WITH EPOXY COATED REBARS	CY	140	\$1,200	\$168,000
6	NEW OK STD. TR 4-2 RAILING	LF	290	\$125	\$36,250
7	MODIFY BEARING SEATS ON PIERS AND ABUTMENTS	LUMP SUM	1	\$10,000	\$10,000
8	PATCH SPALLED CONCRETE AND EPOXY INJECT CRACKS FOR ABUTMENTS & WINGS	LUMP SUM	1	\$25,000	\$25,000
9	CONSTRUCT CONCRETE CLOSURE WALLS AT EACH ABUTMENT	EACH	2	\$10,000	\$20,000
10	DREDGE CREEK CHANNEL	LUMP SUM	1	\$15,000	\$15,000
11	4-INCH EPOXY PAINT LINES, EXISTING BRIDGE AND EXISTING ROADWAY	LF	2180	\$1	\$2,180
	20% CONTINGENCY	LUMP SUM	1	\$148,778	\$148,778
<b>ESTIMATED BRIDGE REHABILITATION COSTS</b>					<b>\$955,155</b>
<b>NEW BRIDGE COSTS</b>					
	MOBILIZATION @ 7%	LUMP SUM	1	\$99,807	\$99,807
1	3 SPAN (70-100-70) TYPE IV PRECAST PRESTRESSED CONCRETE GIRDER BRIDGE	SQ FT	10332	\$115	\$1,188,180
	20% CONTINGENCY	LUMP SUM	1	\$237,636	\$237,636
<b>ESTIMATED NEW BRIDGE COSTS</b>					<b>\$1,525,623</b>
<b>ALTERNATIVE TOTAL COSTS</b>					<b>\$4,891,438</b>

**ALTERNATIVE 3 OPTION B1-RETAIN HISTORIC BRIDGE AS A MONUMENT; CONSTRUCT NEW BRIDGE PARALLEL TO EXISTING BRIDGE WITH 2-LANES OF TRAFFIC**

August 26, 2016

			ESTIMATED QUANTITIES AND COST		
ITEM NO.	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL ESTIMATE
<b>RIGHT-OF-WAY ACQUISITION &amp; UTILITY RELOCATION COSTS</b>					
1	RIGHT-OF-WAY ACQUISITION COSTS	LUMP SUM	1	\$1,000,000	\$1,000,000
2	UTILITY RELOCATION COSTS	LUMP SUM	1	\$300,000	\$300,000
<b>ESTIMATED ROW &amp; UTILITY COSTS</b>					<b>\$1,300,000</b>
<b>ROADWAY COSTS</b>					
	MOBILIZATION @ 7%	LUMP SUM	1	\$67,200	\$67,200
1	EARTHWORK FOR NEW ROAD	LUMP SUM	1	\$350,000	\$350,000
2	2-LANE ROADWAY WITH SHOULDERS ON NEW ALIGNMENT	LUMP SUM	1	\$450,000	\$450,000
	20% CONTINGENCY	LUMP SUM	1	\$160,000	\$160,000
<b>ESTIMATED ROADWAY COSTS</b>					<b>\$1,027,200</b>
<b>BRIDGE REHABILITATION COSTS</b>					
	MOBILIZATION @ 7%	LUMP SUM	1	\$6,062	\$6,062
1	OBLITERATE OLD ROAD PAVEMENT EACH END OF BRIDGE	LUMP SUM	1	\$30,000	\$30,000
2	CONSTRUCT PERMANENT BARRICADES EACH END OF BRIDGE	EA	2	\$2,500	\$5,000
3	REMOVE NORTH WINGWALLS AT EACH ABUTMENT	LUMP SUM	1	\$15,000	\$15,000
4	CONSTRUCT CONCRETE CLOSURE WALLS AT EACH ABUTMENT	EACH	2	\$10,000	\$20,000
5	RESEAL JOINTS IN EXISTING BRIDGE DECK	LF	160	\$10	\$1,600
6	DREDGE CREEK CHANNEL	LUMP SUM	1	\$15,000	\$15,000
	20% CONTINGENCY	LUMP SUM	1	\$17,320	\$17,320
<b>ESTIMATED BRIDGE REHABILITATION COSTS</b>					<b>\$109,982</b>
<b>NEW BRIDGE COSTS</b>					
	MOBILIZATION @ 7%	LUMP SUM	1	\$99,807	\$99,807
1	3 SPAN (70-100-70) TYPE IV PRECAST PRESTRESSED CONCRETE GIRDER BRIDGE	SQ FT	10332	\$115	\$1,188,180
	20% CONTINGENCY	LUMP SUM	1	\$237,636	\$237,636
<b>ESTIMATED NEW BRIDGE COSTS</b>					<b>\$1,525,623</b>
<b>ALTERNATIVE TOTAL COSTS</b>					<b>\$3,962,805</b>

**ALTERNATIVE 3 OPTION B2-RETAIN HISTORIC BRIDGE AS A NON-MOTORIZED PEDESTRIAN OR BICYCLE FACILITY; CONSTRUCT NEW BRIDGE PARALLEL TO EXISTING BRIDGE WITH 2-LANES OF TRAFFIC**

August 26, 2016

			ESTIMATED QUANTITIES AND COST		
ITEM NO.	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL ESTIMATE
<b>RIGHT-OF-WAY ACQUISITION &amp; UTILITY RELOCATION COSTS</b>					
1	RIGHT-OF-WAY ACQUISITION COSTS	LUMP SUM	1	\$1,000,000	\$1,000,000
2	UTILITY RELOCATION COSTS	LUMP SUM	1	\$300,000	\$300,000
<b>ESTIMATED ROW &amp; UTILITY COSTS</b>					<b>\$1,300,000</b>
<b>ROADWAY COSTS</b>					
	MOBILIZATION @ 7%	LUMP SUM	1	\$71,400	\$71,400
1	EARTHWORK FOR NEW ROAD	LUMP SUM	1	\$350,000	\$350,000
2	2-LANE ROADWAY WITH SHOULDERS ON NEW ALIGNMENT & MODIFY EXISTING ROAD AS A TRAIL TO EXISTING BRIDGE	LUMP SUM	1	\$500,000	\$500,000
	20% CONTINGENCY	LUMP SUM	1	\$170,000	\$170,000
<b>ESTIMATED ROADWAY COSTS</b>					<b>\$1,091,400</b>
<b>BRIDGE REHABILITATION COSTS</b>					
	MOBILIZATION @ 7%	LUMP SUM	1	\$41,284	\$41,284
1	PATCH SPALLED CONCRETE IN BRIDGE DECK	SQ FT	1344	\$20	\$26,880
2	CONSTRUCT NEW 2-INCH CONCRETE OVERLAY	SQ FT	3360	\$20	\$67,200
3	CONSTRUCT NEW DECK EXPANSION JOINTS	EACH	4	\$10,000	\$40,000
4	REMOVE AND REPLACE ALL STEEL DIAPHRAGMS WITH PAINTED STEEL MEMBERS	LB	9600	\$3	\$28,800
5	CLEAN AND PAINT EXISTING STEEL BEAMS & BEARINGS (INCL CONTAINMENT)	LUMP SUM	1	\$250,000	\$250,000
6	REMOVE NORTH WINGWALLS AT EACH ABUTMENT	LUMP SUM	1	\$15,000	\$15,000
7	CONSTRUCT CONCRETE CLOSURE WALLS AT EACH ABUTMENT	EACH	2	\$10,000	\$20,000
8	PATCH SPALLED CONCRETE AND EPOXY INJECT CRACKS FOR ABUTMENTS & WINGS	LUMP SUM	1	\$25,000	\$25,000
9	DREDGE CREEK CHANNEL	LUMP SUM	1	\$15,000	\$15,000
10	CONSTRUCT CONCRETE FILLED BOLLARDS AT EACH END OF BRIDGE	EACH	12	\$300	\$3,600
	20% CONTINGENCY	LUMP SUM	1	\$98,296	\$98,296
<b>ESTIMATED BRIDGE REHABILITATION COSTS</b>					<b>\$631,060</b>
<b>NEW BRIDGE COSTS</b>					
	MOBILIZATION @ 7%	LUMP SUM	1	\$99,807	\$99,807
1	3 SPAN (70-100-70) TYPE IV PRECAST PRESTRESSED CONCRETE GIRDER BRIDGE	SQ FT	10332	\$115	\$1,188,180
	20% CONTINGENCY	LUMP SUM	1	\$237,636	\$237,636
<b>ESTIMATED NEW BRIDGE COSTS</b>					<b>\$1,525,623</b>
<b>ALTERNATIVE TOTAL COSTS</b>					<b>\$4,548,083</b>

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## US60 Horse Creek Bridge

### Cost estimates:

→ Cost estimates use 20% contingency, and 7.0% Mobilization

per ODOT 4/25/16:

programmed project costs:

- Construction: \$1,733,154
- Right-of-way: \$75,905
- Utilities: \$237,000

TOTAL: \$2,046,059, say \$2,046,000

### Assumptions:

- 1) Remove existing bridge
- 2) Construct new bridge on exist. align
- 3) Temporary detour road w/ large culvert pipes temporary bridge

(does not include design engineering or construction engineering, not ODOT administrative costs)

Note: Benham Estimate 8/19/16 Construction = \$3,141,853, provided backup calculations

### New bridge per Leidos plans:

length = 246' (spans 73'-100'-73')

width = 42'

Type IV P.C. Beams w/ 40' clear roadway, skew 45° RF, TR4 concrete Rail.

effective unit cost w/ 20% contingency and 7% mobilization:  $\$115/\text{sf} \times 1.20 \times 1.07 = \$147.66$

⇒ Approx. bridge cost:

$$246' \times 42' = 10,332 \text{ sq}' \times \$115/\text{sq}' = \$1,188,180$$

$$\times \$120/\text{sq}' = \$1,240,000$$

WisDOT Bridge Manual: end of 2015: \$145/sq'   
 use this!! w/ 20% contingency

### Per Benham (Leidos) Preliminary Design Report Oct. 12, 2010:

Option 3: New bridge and roadway construction on offset alignment to the north, full 6% superelevation across the Bridge 1.47 AC; 7 properties infringed; 4 properties affected.

R/W Acquisitions: \$977,200

Utility Relocations: \$298,700

Roadway: \$270,000

Earthwork: \$306,880

Bridge: \$1,751,600

Detour (shoofly): \$260,400

Total = \$3,864,780

(302' x 42' x \$138/sq') maybe high, even from Oct. 2010

Alternative 2 - Rehabilitation of existing bridge

Existing bridge is 143' long, 24' clear roadway, two-5'-0" sidewalks, 4 lines of concrete railing, total width out-to-out is 38'-10"

per Preliminary Plan and Field Review Meeting March 2016 plans by Leidos: (and from programmed costs)

R/W Acquisitions : \$75,900 (includes temp. constr. easements)

Utility Relocations : \$237,000

Subtotal : \$312,900

Temporary Detour (shoofly) = \$260,400, round to \$350,000;  
(2010)

→ based on Behnam 8/2016 estimate, use \$500,000, to include temp. bridge (2016)

Roadway Work for Transitions at each end of bridge, allow : \$170,000, round to \$215,000

(includes guardrail) earthwork : allow = \$100,000  
 150' x 4 = 600' x \$25 = 15,000 include

Subtotal = \$375,000

Demolition of 4 bridge railings, concrete sidewalks, bridge deck, 2 lines of steel beams, allow - - - - - \$75,000

2 lines of steel beams, plus diaphragms & bolts

(W27x94) 2 x (40'+40') x 94# = 15,040#  
 (W36x150) 2 x 60' x 150# = 18,000#  
 (C15x33.9) 6 x 4 x 5' x 33.9# = 4,100#  
 6 x 2 x 85' x 33.9# = 3,500#  
 Misc. Allow = 2,000#

9,600#

Total = 42,640# x \$3.00/# = \$129,000  
use 43,000#

for unit price, include fabricated steel, welded stud shear connectors, primed and fully painted. Includes bearings + anchor bolts, and erection } use \$3.00/lb.

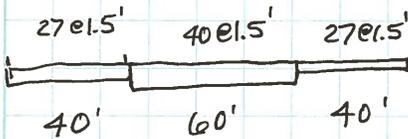
→ Reinforced concrete deck, 8-inches thick, with epoxy coated rebars:

$$\frac{145' \times 42' \times 0.667'}{27} = 150.4 \text{ CY}$$

round to 155 CY x \$1,200 = \$186,000  
to include fillets above beams

Use \$1,200/CY, to include formwork and epoxy coated rebars; also includes expansion joints

→ Stud shear connectors add to existing 6 lines of steel I-beams, welded, 3 per row



$$6 \times (27 + 40 + 27) \times 3 = 1,692 \text{ ea. @ } \$3.50 = \$8,500$$

(at the site) → +1.50  
\$5.00 ea.

→ Clean and paint existing steel beams and bearings (near white finish); includes containment + environmental protection

1 LS = \$250,000

→ New OK Std. TR4-2 Railing:

$$145' \times 2 = 290 \text{ LF @ } \$125 / \text{LF} = \$36,200$$

→ Modify bearing seats on piers and abutments for new lines of beams.

1 LS = \$10,000

→ Patch spalled concrete on abutments, and seal cracks w/epoxy injection:

1 LS = \$25,000

→ Dredge creek channel, esp. under west span:

1 LS = \$15,000

→ Add stone riprap north of ea. abutment

$$2 \times 50 \text{ CY} = 100 \text{ CY} \times \$50 / \text{CY} = \$5,000$$

→ Pavement marking (striping): Updated DJB

4 inch epoxy double yellow centerline, white edge lines:

$$4 \times (200' + 145' + 200') = 2,180 \text{ LF} \times \$1.00/\text{LF} = \$2,180$$

## Alternative 3 - Option A (new bridge on northerly alignment)

- ROW Acquisition costs:

2010 Report had \$977,200 → use \$1,000,000

- Utility Relocation Costs:

2010 Report had \$298,700 → use \$300,000

- Earthwork for New Road:

2010 Report had \$306,880 → use \$350,000

- 2-Lane Roadway w/ Shoulders:

2010 Report had \$270,000 → use ~~\$285,000~~ use \$500,000, updated to match Behan 8/2016 estimate data

- Guardrail at approaches to existing bridge:

$$150' \times 4 \text{ quads.} = 600 \text{ LF} \times \$25.00 = \$15,000$$

- Demolition: railings, sidewalks, decks, 21 mes of beams,

plus 2 wingwalls → use \$80,000  
(#5,000 more than Alt. 2)

- New structural steel (see Alt. 2):  $43,000 \times 3.00/\# = \$129,000$

- Stud shear connectors welded to existing beams (see Alt. 2):  $1,692 \text{ ea.} \times \$5 = \$8,460$

- Clean & paint existing steel (see Alt. 2) → \$250,000

- Cast-in-place reinforced concrete deck:

$$\frac{145' \times 38' \times 0.667'}{27} = 136.1 \text{ CY, round to } 140 \text{ CY} \times \$1,200 = \$168,000$$

- New OK Std. TR4-2 Rail (see Alt. 2)  $290 \text{ LF} \times \$125 = \$36,250$
- Modify bearing seats on piers & abutments for new lines of beams (see Alt. 2) Allow LS = \$10,000
- Patch spalled concrete on abutments, and seal cracks w/ epoxy injection (see Alt. 2) Allow LS = \$25,000
- Construct concrete closure walls at each abutment between new & existing bridge:  $2 \text{ Ea.} @ \$10,000 = \$20,000$
- Dredge Channel (see Alt. 2) Allow LS = \$15,000
- Pavement marking (see Alt. 2)  $2,180 \text{ LF} \times \$1.00/\text{LF} = 2,180$
- New bridge:  $10,332 \text{ SF} \times \$115/\text{SF} = \$1,188,180$  (see Sheet 1 of 5)

## Alternative 3 - Option B-1 - Monument

→ Items same as Alt. 3 - Option A, except as follows:

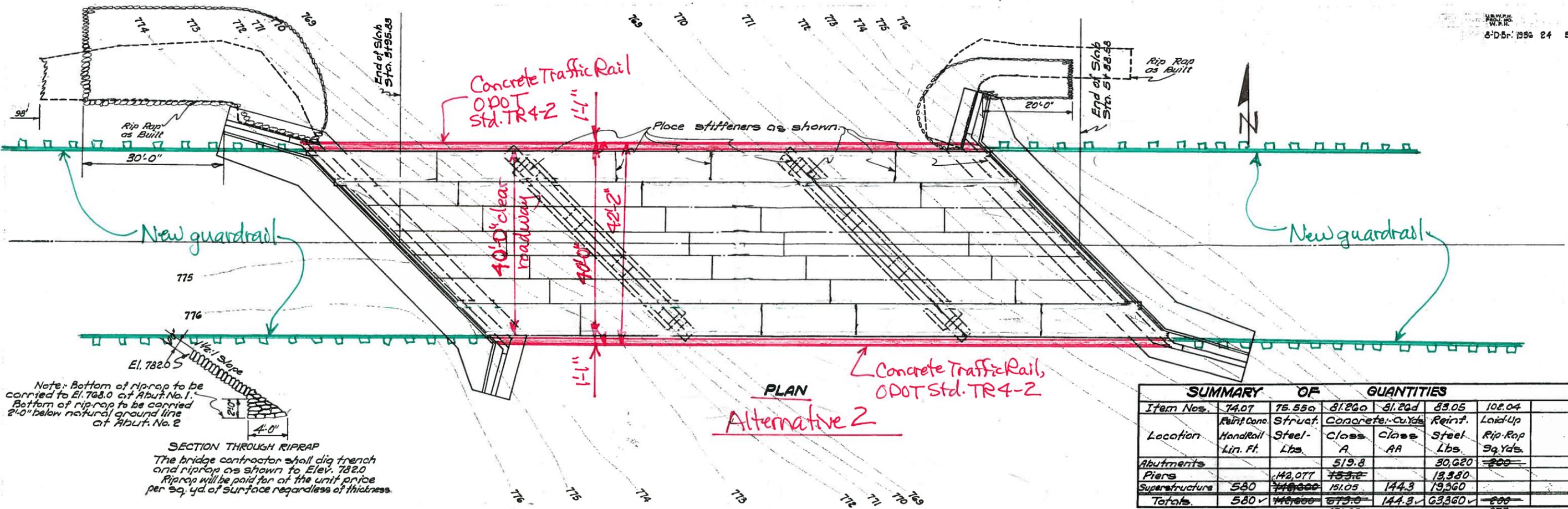
- Obliterate old road pavement ea. end of bridge: Allow LS = \$30,000
- Construct permanent barricades at ends:  $2 \text{ Ea.} \times \$2,500 = \$5,000$
- Remove north wingwalls @ ea. abutment: Allow LS = \$15,000
- Reseal (not replace) joints in deck:  $40' \times 4 = 160 \text{ LF} \times \$10 = \$1,600$

## Alternative 3 - Option B-2 - Ped/Bike Bridge

→ Items same as Alt. 3 - Option A, except as follows:

- Patch spalled concrete in bridge deck:  $40\% \times (140' \times 24') = 1,344 \text{ SF} \times \$20 = \$26,880$
- Construct 2-Inch Concrete Overlay:  $3,360 \text{ SF} \times \$20 = \$67,200$
- Construct new deck expansion joints:  $4 \text{ Ea.} \times \$10,000 = \$40,000$
- Remove and replace steel diaphragms:  $9,600 \text{ lb} \times \$3.00 = \$28,800$  (see Alt. 2)
- Construct concrete filled bollards at each end of bridge:  $2 \times 6 = 12 \text{ Ea.} \times \$300 = \$3,600$

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Note: Bottom of riprap to be carried to El. 763.0 at Abut. No. 1.  
Bottom of riprap to be carried 2'-0" below natural ground line at Abut. No. 2

**SECTION THROUGH RIPRAP**  
The bridge contractor shall dig trench and riprap as shown to Elev. 782.0. Riprap will be paid for at the unit price per sq. yd. of surface regardless of thickness.

SUMMARY OF QUANTITIES						
Item Nos.	74.07	75.55a	81.86a	81.86d	83.05	102.04
Location	Reinf. Conc. HandRail Lin. Ft.	Struct. Steel Lbs.	Concrete Class A	Cure Class AA	Reinf. Steel Lbs.	Load-Up Rip-Rap Sq. Yds.
Abutments			519.8		30,620	200
Piers		142,077	753.2		13,380	
Superstructure	580	<del>142,077</del>	151.05	144.3	19,360	
Totals	580	142,077	670.85	144.3	63,360	200

All exposed concrete surfaces are to have a carborundum finish. This work shall be constructed according to Okla. Std. Spec. of 1932. 60' I-beams shall be rolled with 1/4" camber. 40' I-beams shall be rolled with 3/4" camber.

For details of Superstructure see Std. I.B.-G, Sht. No. 28 & Sht. No. 27.  
Abutments see Sht. No. 25.  
Piers see Sht. No. 26.

Measurement of fine and coarse aggregate shall be by weight in accordance with the second & third paragraphs of Section No. 81.07. Concrete mixer shall comply with the requirements of Sec. No. 81.08. Concrete materials shall be handled as specified in Sec. No. 62.20.

D.A. 17 Sq. Mi.  
C=0.8  
Reqd. Area. 850<sup>sq</sup>

**REVISED AS BUILT**  
**HORSE CREEK**  
**GENERAL ELEVATION AND PLAN**  
**SUMMARY OF QUANTITIES**  
60' AND 2-40' I.B.M. SPANS WITH 2-5'-0" SIDEWALKS  
24'-0" ROADWAY 45' SKEW RT. FWD.  
± STA. 4 + 67.21  
U.S.W.P.H. PROJ. NO. W.P.H. 8 SEC. "D-BR."

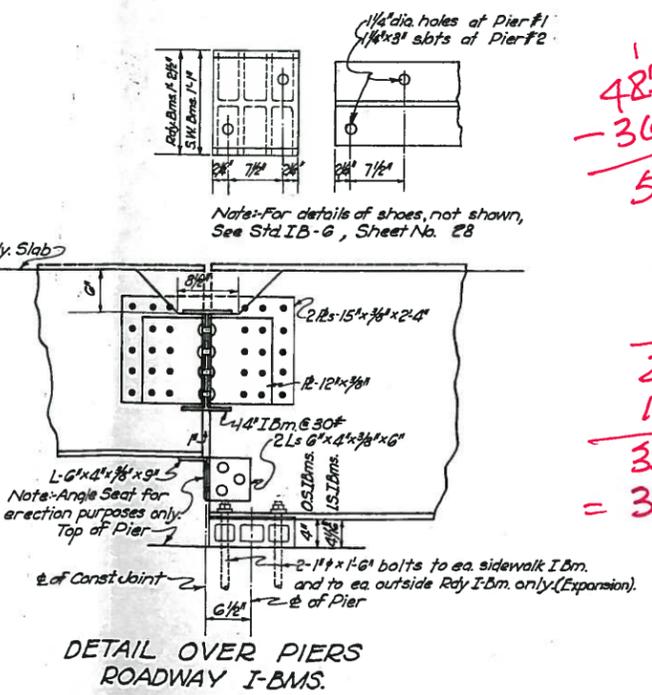
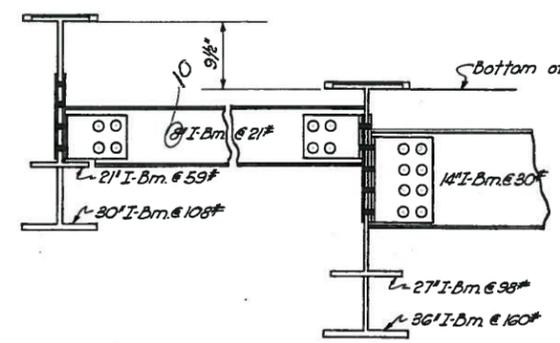
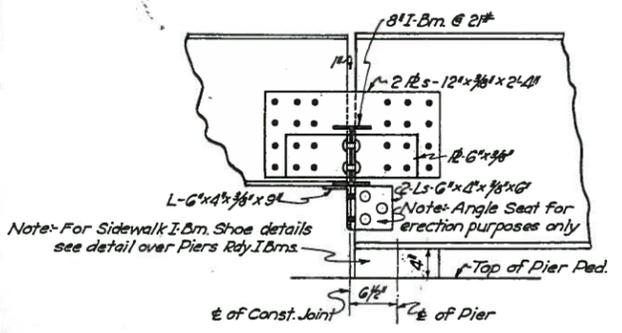
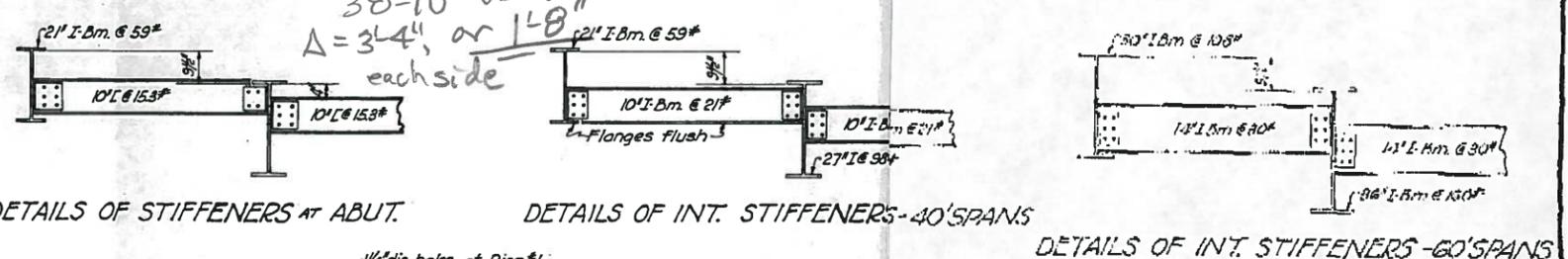
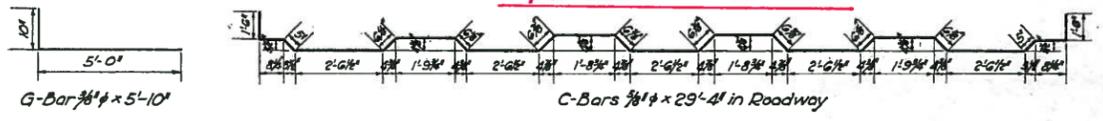
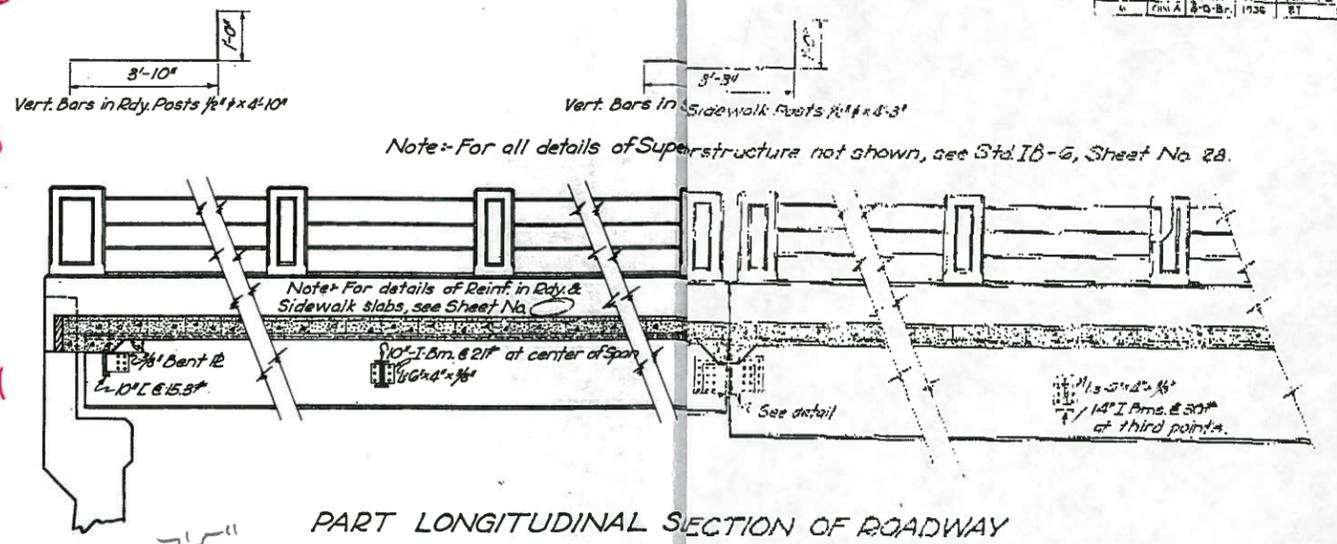
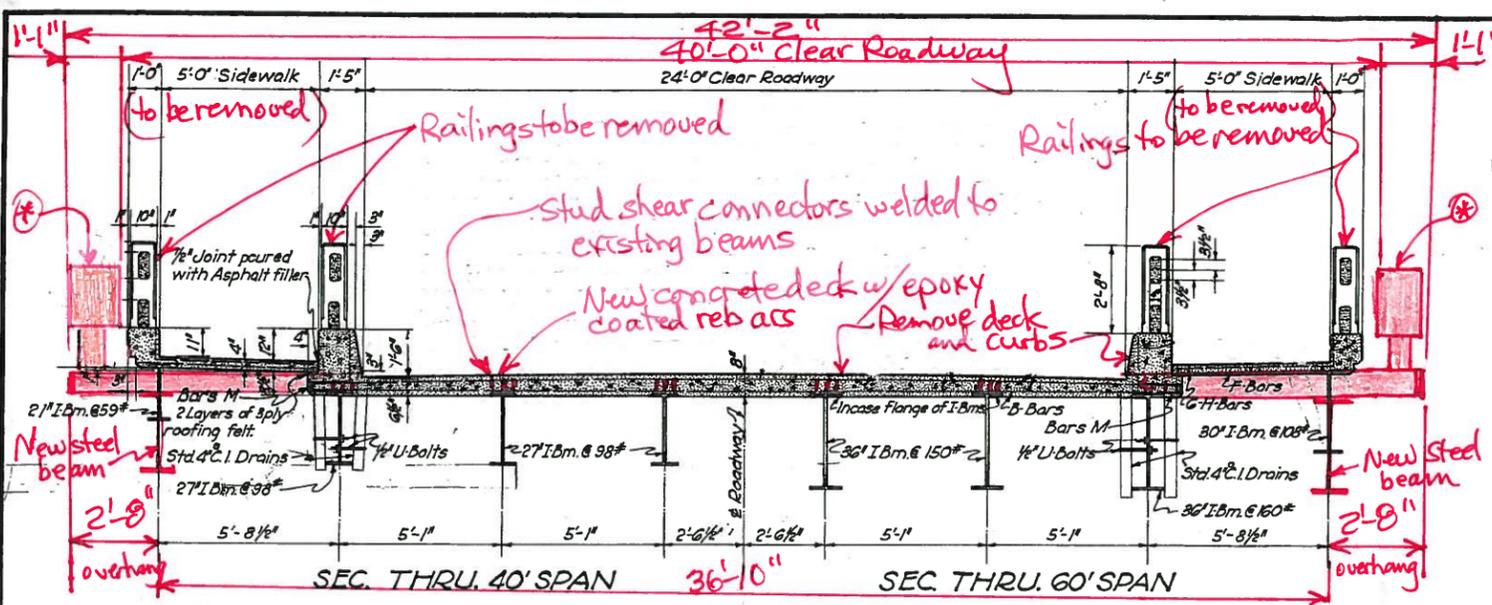
✓ DJB  
5/6/16

**GENERAL ELEVATION**  
Scale 1" = 10'-0"

Drawn by G.M. J.L.F.  
Checked by Soundings by Hedrick

4-15  
Blanketed  
Lynch Carbone

95



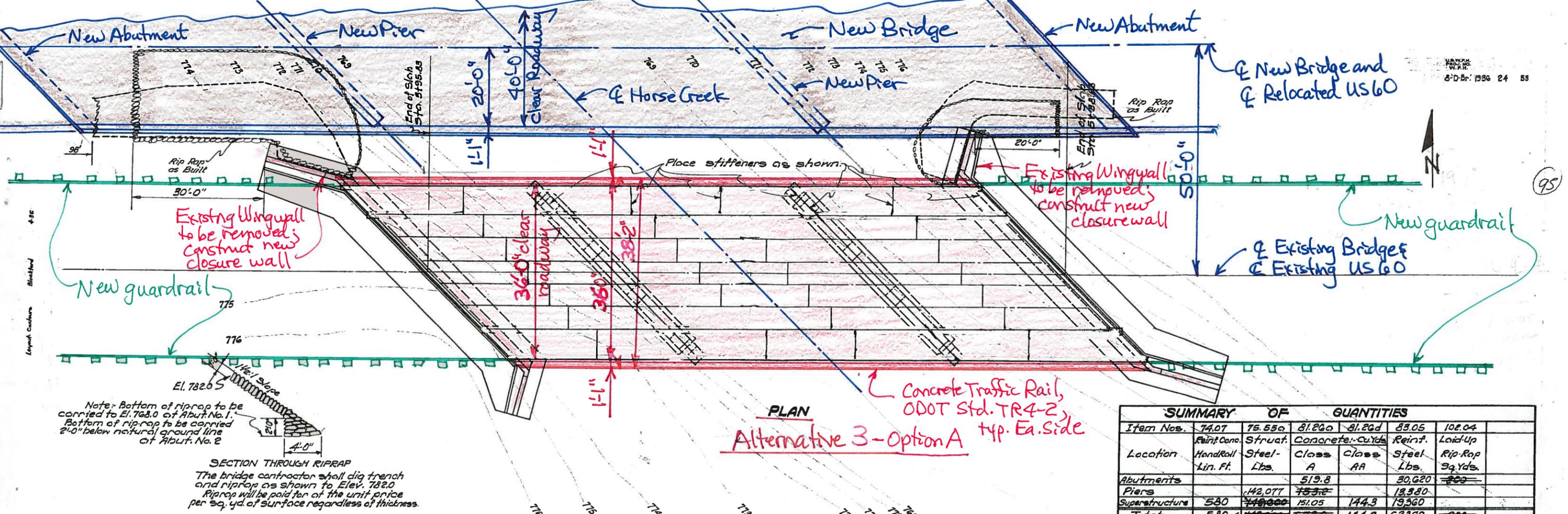
$$\begin{aligned}
 & 48'-2" \\
 & - 36'-10" \\
 & \hline
 & 5'-4" \div 2 = 2'-8" \text{ overhang} \\
 \\
 & 5'-1" \times 5 = 25'-5" \\
 & 10'-17" = 2 \times 5'-8\frac{1}{2} \\
 & \hline
 & 35'-22" \\
 & = 36'-10"
 \end{aligned}$$

58 06-0256-1

**HORSE CREEK**  
**DETAILS OF SUPERSTRUCTURE**  
 1-60' & 2-40' I-BM. SPANS  
 24'-0" ROADWAY & 2-5'-0" SIDEWALKS  
 SKEWED 45° RIGHT FWD.  
 STA. = 4+67.21  
 U.S.W.P.H. PROJ. NO. W.P.H. 8-SEC'D-BR."

Detailed & Traced by Marsh J.L.F.  
 Checked by J.L.F.  
 May 1985

DJB  
5/6/16



Note: Bottom of riprap to be carried to El. 782.0 at Abut. No. 1.  
Bottom of riprap to be carried 2'-0" below natural ground line at Abut. No. 2

**SECTION THROUGH RIPRAP**  
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Superstructure	580	748,000	151.05	144.3	13,360	
Totals	580	1,420,077	670.85	144.3	63,360	200

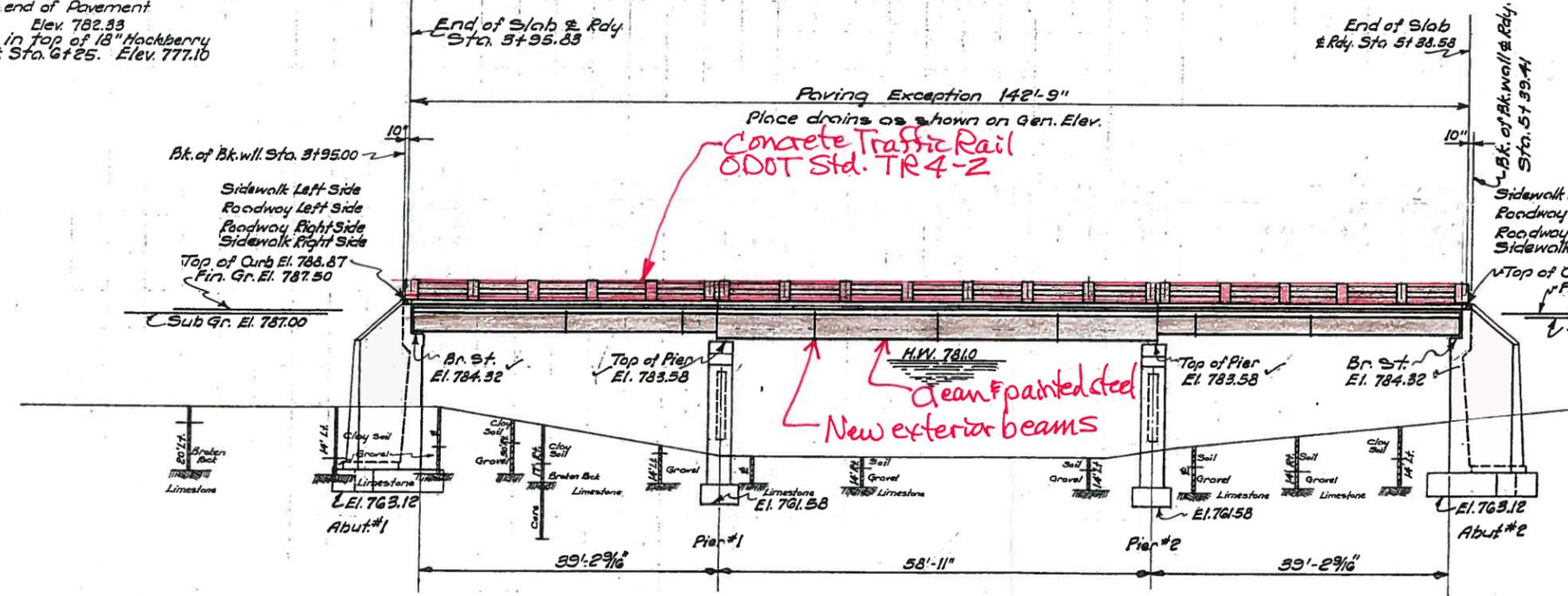
All exposed concrete surfaces are to have a carborundum finish.  
This work shall be constructed according to Okla. Std. Spec. of 1932.  
60' I-beams shall be rolled with 1 1/4" camber.  
40' I-beams shall be rolled with 3/4" camber.

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Abutments see Sht. No. 25.  
Piers see Sht. No. 26.

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Concrete mixer shall comply with the requirements of Sec. No. 81.08  
Concrete materials shall be handled as specified in Sec. No. 62.20

D.A. 17 Sq. Mi.  
C=0.8  
Reqd. Area 850'

B.M. Center of end of Pavement Sta. 0+00 Elev. 782.33  
B.M. 2 spikes in top of 18" Hackberry stump '65' Rt. Sta. 6+25. Elev. 777.10



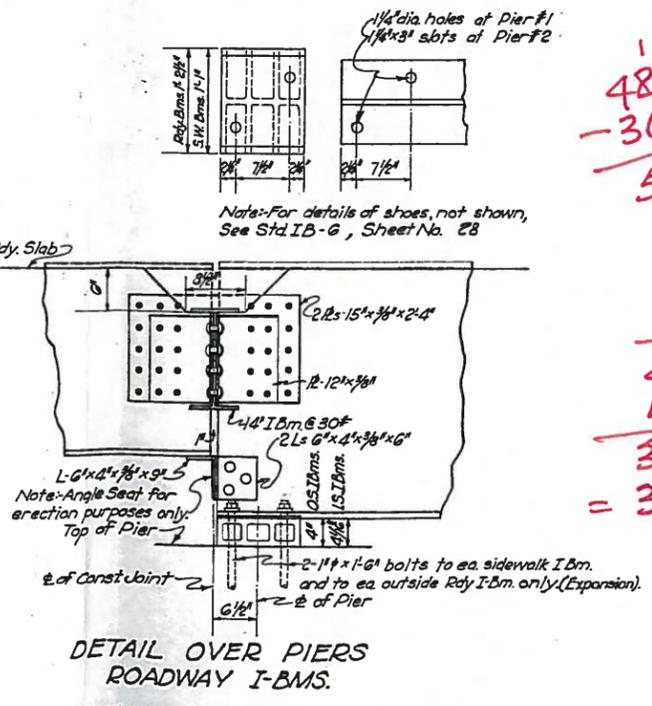
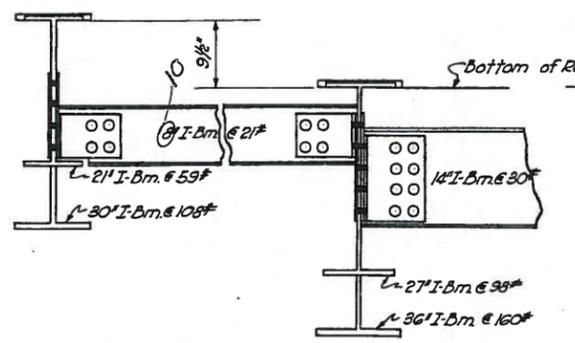
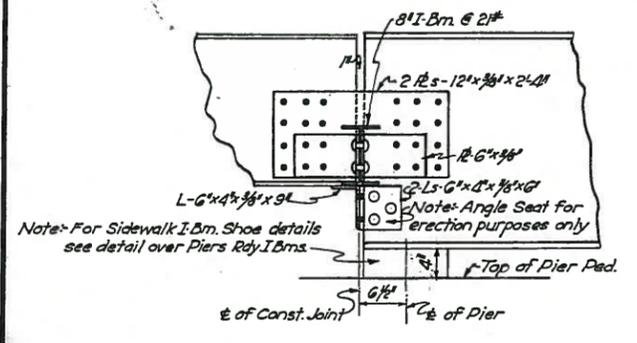
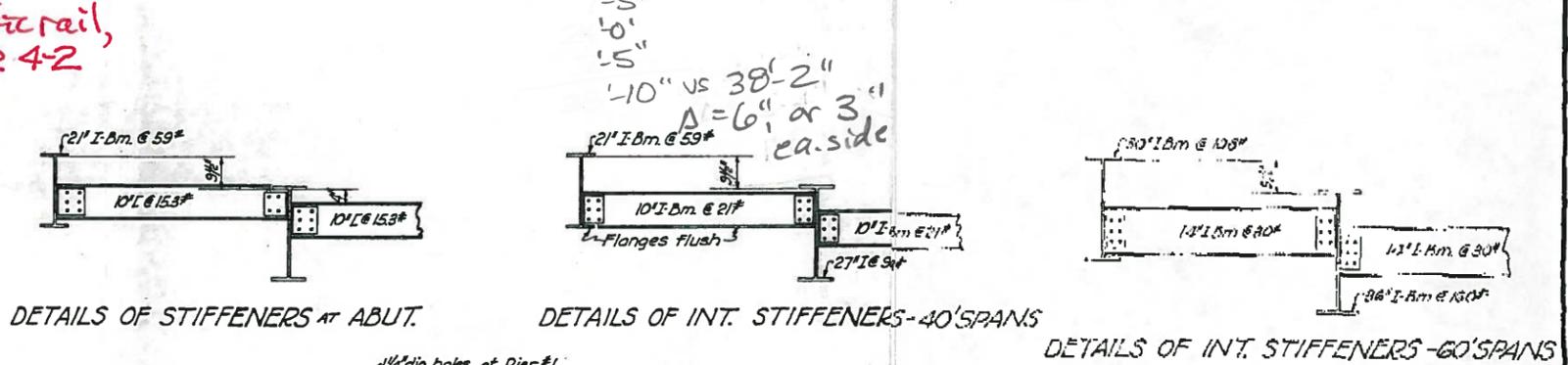
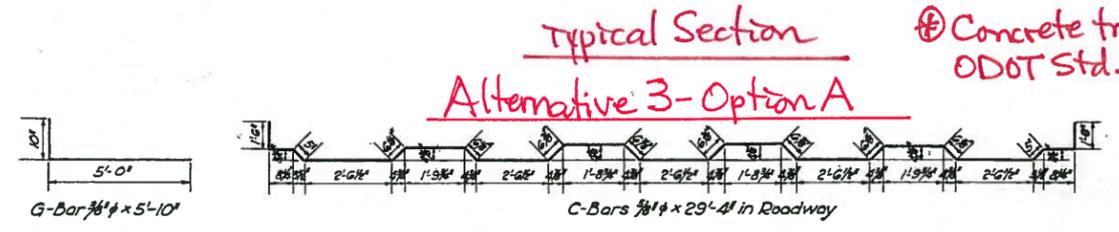
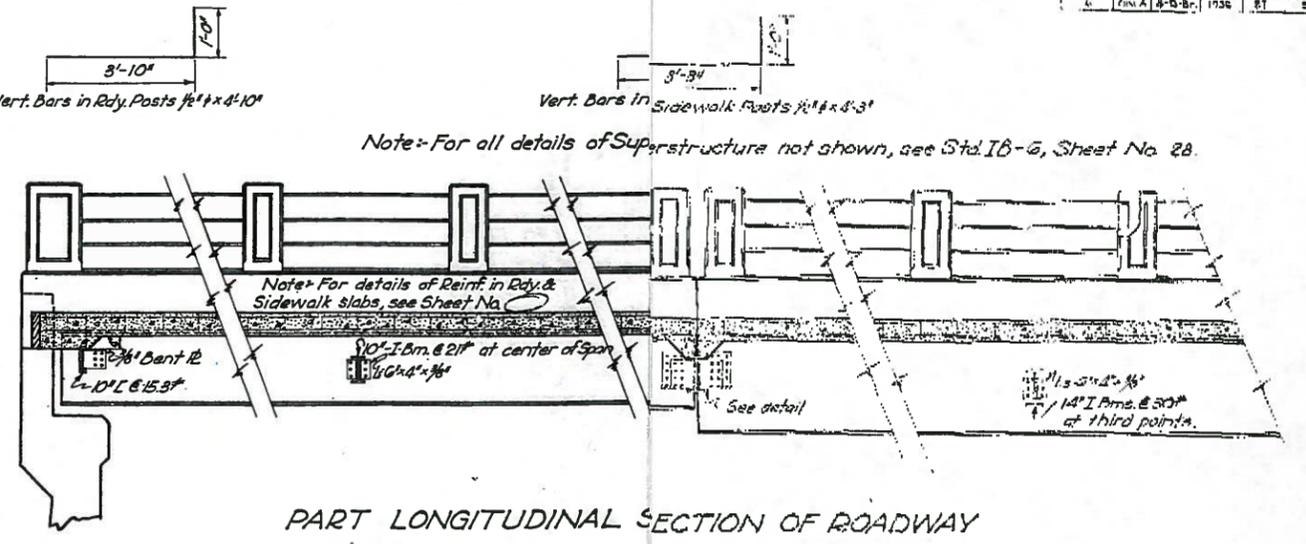
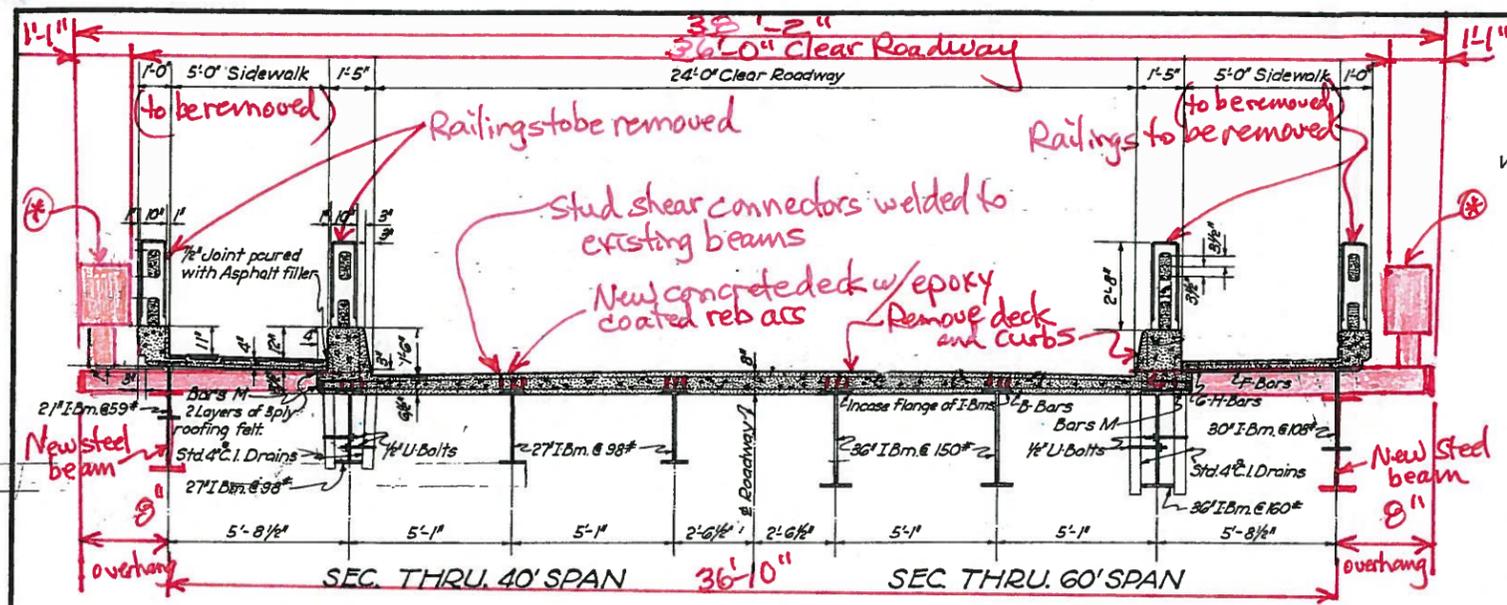
**GENERAL ELEVATION**  
Scale 1" = 10'-0"

**REVISED AS BUILT**  
**HORSE CREEK**  
**GENERAL ELEVATION AND PLAN**  
**SUMMARY OF QUANTITIES**  
60' AND 2-40' I.B.M. SPANS WITH 2'-5'-0" SIDEWALKS  
24'-0" ROADWAY 45° SKEW RT. FWD.  
± STA. 4 + 67.21  
U.S.W.P.H. PROJ. NO. W.P.H. 8 SEC. "D-BR."

DJB  
5/6/16

5-1995  
G.M.  
J.L.F.  
Checked by  
SOUNDINGS by Hestrick

DESIGNER	CHECKED	DATE	SCALE	SHEET NO.	TOTAL SHEETS
J.L.F.	J.L.F.	5/1/85	AS SHOWN	1736	1736



$$\begin{array}{r} 14 \\ 48'-2" \\ - 36'-10" \\ \hline 5'-4" \div 2 = 2'-8" \\ \text{overhang} \end{array}$$

$$\begin{array}{r} 5'-1" \\ \times 5 \\ \hline 25'-5" \\ 10'-17" = 2 \times 5'-8 1/2" \\ \hline 35'-22" \\ = 36'-10" \end{array}$$

58 06-02.56-X

**HORSE CREEK**  
**DETAILS OF SUPERSTRUCTURE**  
**1-60' & 2-40' I-BM SPANS**  
**24'-0" ROADWAY & 2-5'-0" SIDEWALKS**  
**SKEWED 45° RIGHT FWD.**  
CL STA. = 4+67.21  
**U.S.W.P.H. PROJ. NO. W.P.H. 8-SEC'D-BR."**

Detailed & Traced by Marsh J.L.F. May 1985 Checked

LDJB  
5/6/16

## Works Cited

Federal Highway Administration and Oklahoma Department of Transportation. "Design Support for Section 4(f) Analysis for Historic Bridges." 25 March 2013 (updated). Available at <http://www.environment.fhwa.dot.gov/4f/4fpolicy.pdf>.

Federal Highway Administration, Office of Planning, Environment, and Realty, Project Development and Environmental Review. "Section 4(f) Policy Paper." 20 July 2012. Available at <http://www.environment.fhwa.dot.gov/4f/4fpolicy.pdf>.

Federal Highway Administration. *Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges*, Report No. FHWA-PD-96-001. December 1995.

National Register of Historic Places, Horse Creek Bridge, Afton, Ottawa County, Oklahoma. National Register #95000040.



# Oklahoma Historical Society

Founded May 27, 1893

## State Historic Preservation Office

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)

June 20, 2016

Mr. Scott Sundermeyer, Director  
ODOT Cultural Resources Program  
111 East Chesapeake, Rm. 102, OU  
Norman, OK 73019

RE: File #1662-16; Horse Creek Bridge Replacement Project on US-60, #JP-24273(04),  
Ottawa County

Dear Mr. Sundermeyer:

We have received your request for review of the referenced project. We concur that the property to be impacted is listed on the National Register of Historic Places as the Horse Creek Bridge (NRIS #95000040); it was listed February 23, 1995.

We also concur that Buildings #1, #2, #3, #4, #5A, #5B, & Remnants of Bridge in NE/NW Sec.33 T26N R22E, Afton Vicinity, are not eligible for listing in the National Register of Historic Places.

Once the Section 4(f) analysis is complete, please submit a detailed description of the proposed project. (Please refer to the *Review and Compliance Manual*, Pages 37-38, or our website at [www.okhistory.org/shpo/section106.htm](http://www.okhistory.org/shpo/section106.htm)). We will then complete the review and comment on your opinion of effect.

If you have any questions, please contact Catharine M. Wood, Historical Archaeologist, at 405/521-6381.

Should further correspondence pertaining to this project be necessary, please reference the above underlined file number. Thank you.

Sincerely,

Melvena Heisch  
Deputy State Historic  
Preservation Officer

MH:pm



# Oklahoma Archeological Survey

THE UNIVERSITY OF OKLAHOMA

July 29, 2016

Scott Sundermeyer  
Director, ODOT Cultural Resources Program  
111 E. Chesapeake, Room 102  
University of Oklahoma  
Norman, OK 73019-5111

Re: JP 24273(04): Proposed replacement of the US-60 bridge over Horse Creek located east of Afton, Oklahoma  
Ottawa County  
Legal Location: Section 33, T26N, R22E

Dear Mr. Sundermeyer,

Thank you for responding to my earlier request (June 23, 2016) for additional documentation in relation to the archaeological survey conducted in support of the above-listed proposed undertaking. From the original survey report and the additional information provided, I understand that ODOT staff surveyed the 8.39-acre project area on April 22, 2016. No archaeological sites were documented, though several historic architectural resources were recorded. **I concur with the findings presented in the collective documentation submitted regarding the archaeological investigation of the project area; as indicated in my earlier letter, I defer opinion on the potential eligibility of the above-ground historic resources to 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.

If you have any questions or wish to discuss this further, please let me know.

Sincerely,

Kary L. Stackelbeck, Ph.D.  
State Archaeologist

cc: SHPO





**OKLAHOMA DEPARTMENT OF TRANSPORTATION  
CULTURAL RESOURCES PROGRAM**

111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

---

July 11, 2016

Dr. Kary L. Stackelbeck  
State Archaeologist  
Oklahoma Archeological Survey  
111 East Chesapeake Drive  
Norman, Oklahoma 73019-5111

Dear Dr. Stackelbeck:

Re: Ottawa County JP 24273(04): Proposed replacement of the US-60 bridge over Horse Creek.

Thank you for your comments regarding the proposed bridge replacement on US-60 over Horse Creek (letter dated June 23, 2016). Your comments included a request for additional documentation regarding the potential for more deeply-buried archaeological resources in the project study area.

As described in the cultural resources report, the study area investigated for the project is mapped in Keokuk and Reeds Spring Formation and St. Joe Group, which are geological formations dating to the Paleozoic Era, and soils mapped in the study area formed prior to or during the Pleistocene Epoch. Therefore, cultural materials would be found in surface or near-surface contexts; this is consistent with archaeological materials associated with previously-recorded sites in the general area (34DL98, 34DL320, 34CG15, 34CG28, 34CG29, 34CG36, 34CG68, 34CG85). Shovel testing conducted as part of this investigation revealed soils in the study area to be shallow, consisting of dark brown silty loam (approximately 0-20 centimeters below the surface [cmbs]), which overlay gray-brown silty clay loam with deteriorating bedrock (20-45 cmbs), which in turn overlay dark gray clay.

As noted in the cultural resource report, the study area has been considerably disturbed by excavation and ground-disturbing activities associated with residential and commercial development, construction of the existing roadway and the former 1926 alignment of Route 66, which is immediately north of the existing bridge, and historic and modern plowing south of the existing roadway and northeast of the existing bridge. These activities have disturbed the soil horizons in the project study area which might otherwise have potential to contain archaeological deposits. In conclusion, more deeply-buried archaeological materials would not be present because of the shallow soils and ancient underlying geologic formations in the study area.

If you have any questions regarding this project, please contact me at 325-7201.

Sincerely,

Scott Sundermeyer  
Director, ODOT Cultural Resources Program

*"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 Archeological Survey

THE UNIVERSITY OF OKLAHOMA

June 23, 2016

Scott Sundermeyer  
Director, ODOT Cultural Resources Program  
111 E. Chesapeake, Room 102  
University of Oklahoma  
Norman, OK 73019-5111

Re: JP 24273(04): Proposed replacement of the US-60 bridge over Horse Creek located east of Afton, Oklahoma  
Ottawa County  
Legal Location: Section 33, T26N, R22E

Dear Mr. Sundermeyer,

This agency received the above-referenced cultural resources survey report of investigations for review and comment. From the information provided, I understand that ODOT staff surveyed the 8.39-acre project area on April 22, 2016. No archaeological sites were documented, though several historic architectural resources were recorded. I understand that you are only seeking comment regarding the eligibility of the properties documented in the Area of Potential Effect (APE). **I defer opinion on the potential eligibility of the above-ground historic resources to the State Historic Preservation Office.** However, I would like to request additional documentation on efforts to identify archaeological resources that may be more deeply-buried than could be detected by the efforts discussed in the submitted survey report. Acknowledging that portions of the project area have been heavily disturbed by some previous activities (construction, development, utilities, etc.), the extent to which "historic agricultural and pastoral activity" or other conditions would negate the potential for intact, deeply-buried cultural deposits that could "address important questions of prehistory or history" is unclear. Please provide additional documentation to support this assessment.

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.

If you have any questions or wish to discuss this further, please let me know.

Sincerely,

Kary L. Stackelbeck, Ph.D.  
State Archaeologist

cc: SHPO





**OKLAHOMA DEPARTMENT OF TRANSPORTATION  
CULTURAL RESOURCES PROGRAM**

111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

---

May 25, 2016

Ms. Melvena Heisch  
Deputy State Historic Preservation Officer  
Oklahoma History Center  
800 Nazih Zuhdi Drive  
Oklahoma City, Oklahoma 73105

Dear Ms. Heisch:

Re: Ottawa County 24273(04): Proposed replacement of the US-60 bridge over Horse Creek located east of Afton, Oklahoma, approximately 2.6 north of the Delaware County line

Attached is a cultural resources report for the above-referenced project completed by ODOT's Cultural Resources Program. During the investigations, four buildings and one building complex were recorded on HPRI forms for submittal. The remains of one bridge (Structure and NBI # Unknown), which carried a former 1929 alignment of Route 66, was also recorded on an Oklahoma Bridge Survey and Inventory Form.

The Horse Creek Bridge was listed on the National Register of Historic Places (NRHP) on December 19, 1994 (NR ID 95000040). The subject bridge is listed on the NRHP under criterion A for its association with Route 66. It should be noted that the structure was also constructed under a New Deal Works Program Project W.P.H. (Works Progress Highway) 8-SEC."D-BR". Because of the historic significance of the bridge, ODOT is inviting the Oklahoma Historic Bridge and Highway Group, Preservation Oklahoma, Oklahoma Route 66 Association, and the National Park Service Route 66 Corridor Preservation Program, and the City of Afton. We also plan to conduct an aggressive public involvement campaign consisting of a Drop-in Center in the Town of Afton.

Pursuant to 36 CFR 60.4, it is our opinion that the four buildings, one building complex, and one bridge remnant representing the 1929 bridge do not retain sufficient historic integrity to warrant consideration for the NRHP.

ODOT has tasked the Section 4(f) analysis of the historic bridge to Mead & Hunt, however that analysis has not yet been completed. ODOT is presented with some unique challenges with this structure, which must be addressed for the project, regardless of the alternative. The current roadway is 24-foot-wide, which does not meet the current standards of 32-foot-wide for a roadway carrying roughly 6500 vehicles per day. In addition, a character-defining feature of the bridge is its unique double railing, which was built on the bridge in advance of proposed sidewalks to the east of Afton that were never constructed. Any alternative reviewed under 4(f) will need to address these functional issues.

At this time ODOT is neither able to issue an opinion nor are we requesting comment as to the effect of the undertaking on the historic Horse Creek Bridge. Pursuant to 36 CFR 800.4(c), we are seeking comment regarding the eligibility of the properties documented in the APE, so that we can incorporate those findings into the 4(f) document. It is also our desire to incorporate your comments, those of the parties listed above, and comments collected from public involvement into the decision of the project in order to avoid or minimize effects and. If you have any questions regarding this project, please contact me at 325-7201.

If you have any questions regarding this project, please contact me at [ssundermeyer@ou.edu](mailto:ssundermeyer@ou.edu) or 325-7201.

Sincerely,



Scott Sundermeyer  
ODOT Cultural Resources Program Director

cc: State Archeologist

*"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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**OKLAHOMA DEPARTMENT OF TRANSPORTATION  
CULTURAL RESOURCES PROGRAM**

111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

May 31, 2016

Oklahoma Historic Bridge and Highway Group  
Mr. Weslee Kinsler, Administrator  
P.O. Box 252  
Morrison, Oklahoma 73061-0252

Dear Mr. Kinsler:

Re: Ottawa County 24273(04): Proposed replacement of the US-60 bridge over Horse Creek located east of Afton, Oklahoma, approximately 2.6 north of the Delaware County line

Attached is a cultural resources report for the above-referenced project completed by ODOT's Cultural Resources Program. During the investigations, four buildings and one building complex were recorded on HPRI forms for submittal. The remains of one bridge (Structure and NBI # Unknown), which carried a former 1929 alignment of Route 66, was also recorded on an Oklahoma Bridge Survey and Inventory Form.

The Horse Creek Bridge was listed on the National Register of Historic Places (NRHP) on December 19, 1994 (NR ID 95000040). The subject bridge is listed on the NRHP under criterion A for its association with Route 66. It should be noted that the structure was also constructed under a New Deal Works Program Project W.P.H. (Works Progress Highway) 8-SEC."D-BR". Because of the historic significance of the bridge, ODOT is inviting the Oklahoma Historic Bridge and Highway Group, Preservation Oklahoma, Oklahoma Route 66 Association, and the National Park Service Route 66 Corridor Preservation Program, and the City of Afton. We also plan to conduct an aggressive public involvement campaign consisting of a Drop-in Center in the Town of Afton.

ODOT has tasked the Section 4(f) analysis of the historic bridge to Mead & Hunt, however that analysis has not yet been completed. ODOT is presented with some unique challenges with this structure, which must be addressed for the project, regardless of the alternative. The current roadway is 24-feet-wide, which does not meet the current standards of 32-feet-wide for a roadway carrying roughly 6500 vehicles per day. In addition, a character-defining feature of the bridge is its unique double railing, which was built on the bridge in advance of proposed sidewalks to the east of Afton that were never constructed. Any alternative reviewed under 4(f) will need to address these functional issues.

At this time ODOT is neither able to issue an opinion nor are we requesting comment as to the effect of the undertaking on the historic Horse Creek Bridge. Pursuant to 36 CFR 800.4(c), we are seeking comment regarding the eligibility of the properties documented in the APE, so that we can incorporate those findings into the 4(f) document. It is also our desire to incorporate your comments and comments collected from public involvement into the decision of the project in order to avoid or minimize effects and. If you have any questions regarding this project, please contact me at 325-7201.

If you have any questions regarding this project, please contact Scott Sundermeyer at [ssundermeyer@ou.edu](mailto:ssundermeyer@ou.edu) or 325-7201.

Sincerely,

Jen Jones  
ODOT Cultural Resources Architectural Historian

*"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  
CULTURAL RESOURCES PROGRAM**

111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

May 31, 2016

Route 66 Corridor Preservation Program  
Kaisa Barthuli, Program Manager  
National Trails Intermountain Region  
National Park Service  
P.O. Box 728  
Santa Fe, New Mexico 87504-0728

Dear Ms. Barthuli:

Re: Ottawa County 24273(04): Proposed replacement of the US-60 bridge over Horse Creek located east of Afton, Oklahoma, approximately 2.6 north of the Delaware County line

Attached is a cultural resources report for the above-referenced project completed by ODOT's Cultural Resources Program. During the investigations, four buildings and one building complex were recorded on HPRI forms for submittal. The remains of one bridge (Structure and NBI # Unknown), which carried a former 1929 alignment of Route 66, was also recorded on an Oklahoma Bridge Survey and Inventory Form.

The Horse Creek Bridge was listed on the National Register of Historic Places (NRHP) on December 19, 1994 (NR ID 95000040). The subject bridge is listed on the NRHP under criterion A for its association with Route 66. It should be noted that the structure was also constructed under a New Deal Works Program Project W.P.H. (Works Progress Highway) 8-SEC."D-BR". Because of the historic significance of the bridge, ODOT is inviting the Oklahoma Historic Bridge and Highway Group, Preservation Oklahoma, Oklahoma Route 66 Association, and the National Park Service Route 66 Corridor Preservation Program, and the City of Afton. We also plan to conduct an aggressive public involvement campaign consisting of a Drop-in Center in the Town of Afton.

ODOT has tasked the Section 4(f) analysis of the historic bridge to Mead & Hunt, however that analysis has not yet been completed. ODOT is presented with some unique challenges with this structure, which must be addressed for the project, regardless of the alternative. The current roadway is 24-foot-wide, which does not meet the current standards of 32-foot-wide for a roadway carrying roughly 6500 vehicles per day. In addition, a character-defining feature of the bridge is its unique double railing, which was built on the bridge in advance of proposed sidewalks to the east of Afton that were never constructed. Any alternative reviewed under 4(f) will need to address these functional issues.

At this time ODOT is neither able to issue an opinion nor are we requesting comment as to the effect of the undertaking on the historic Horse Creek Bridge. Pursuant to 36 CFR 800.4(c), we are seeking comment regarding the eligibility of the properties documented in the APE, so that we can incorporate those findings into the 4(f) document. It is also our desire to incorporate your comments and comments collected from public involvement into the decision of the project in order to avoid or minimize effects and. If you have any questions regarding this project, please contact me at 325-7201.

If you have any questions regarding this project, please contact Scott Sundermeyer at [ssundermeyer@ou.edu](mailto:ssundermeyer@ou.edu) or 325-7201.

Sincerely,



Jen Jones  
ODOT Cultural Resources Architectural Historian

**From:** [brad.nickson@gmail.com](mailto:brad.nickson@gmail.com) on behalf of [Brad Nickson](#)  
**To:** [Scott Sundermeyer](#)  
**Cc:** [Oklahoma Route 66 Association](#)  
**Subject:** Re: Fw: ODOT Ottawa County US-60 Horse Creek project JP 24273(04)  
**Date:** Monday, June 20, 2016 9:58:40 AM

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Scott,

I apologize for my tardiness in this response, but I do feel the need to make a brief comment regarding this project. And I do understand that this project is still under some analysis.

I believe that the 1936 Horse Creek Bridge in Afton, OK should, if possible, be preserved and that options be considered to ensure its presence on historic Route 66. It is an authentic representative of road/bridge construction from an earlier time of Route 66. The fact that it is also a Works Project Highway effort is further historic reason to preserve this bridge. Add to these two reasons, the fact that it had pedestrian sidewalks on both sides in anticipation of Afton's eastward growth, it is representative of a hopeful not-bypassed-by-Interstate future for a Route 66 community. It's representative, by its authenticity, of what Route 66 travelers are interested in seeing.

The Oklahoma Route 66 Association is generally supportive of ODOT projects for making safer and standards compliant roads (El Reno and near Depew). When a project comes along that very directly affects an authentic and/or historic portion of the Route, we do need to express our concerns.

Brad



Brad Nickson  
President  
Oklahoma Route 66 Association  
[www.oklahomaroute66.com](http://www.oklahomaroute66.com)

On Wed, May 25, 2016 at 4:42 PM, Oklahoma Route 66 Association  
<[okrt66association@sbcglobal.net](mailto:okrt66association@sbcglobal.net)> wrote:

----- Forwarded Message -----

**From:** Scott Sundermeyer <[SSundermeyer@odot.org](mailto:SSundermeyer@odot.org)>  
**To:** "[pathfinder66@earthlink.net](mailto:pathfinder66@earthlink.net)" <[pathfinder66@earthlink.net](mailto:pathfinder66@earthlink.net)>; Oklahoma Route 66 Association <[okrt66association@sbcglobal.net](mailto:okrt66association@sbcglobal.net)>; "[wkinsler@wkinsler.com](mailto:wkinsler@wkinsler.com)" <[wkinsler@wkinsler.com](mailto:wkinsler@wkinsler.com)>; "Barthuli, Kaisa" <[kaisa\\_barthuli@nps.gov](mailto:kaisa_barthuli@nps.gov)>; "[jill\\_jensen@nps.gov](mailto:jill_jensen@nps.gov)" <[jill\\_jensen@nps.gov](mailto:jill_jensen@nps.gov)>; Kitty Henderson <[kitty@historicbridgefoundation.com](mailto:kitty@historicbridgefoundation.com)>

From: [Kitty Henderson](#)  
To: [Scott Sundermeyer](#)  
Cc: [Melvena Heisch](#)  
Subject: Re: ODOT Ottawa County US-60 Horse Creek project JP 24273(04)  
Date: Wednesday, May 25, 2016 5:45:33 PM

---

Hi Scott

Thank you for including me on the information about the Horse Creek Bridge. Am I to assume that Section 106 will occur and that in informing me of the project you are asking me to be a consulting party?

Kitty

Kitty Henderson  
Executive Director  
Historic Bridge Foundation  
PO Box 66245  
Austin, Texas 78766  
512 407 8898

On May 25, 2016, at 4:18 PM, Scott Sundermeyer <[SSundermeyer@odot.org](mailto:SSundermeyer@odot.org)> wrote:

Good afternoon all –

ODOT is considering improvements to the crossing of US-60 over Horse Creek in Afton, Oklahoma. The subject bridge is listed on the National Register of Historic places and was constructed in 1936 as a New Deal Work Relief project. Project information is available at the following website: <http://www.odotculturalresources.info/horse-creek-bridge.html>

We have just completed the cultural resource survey report for the project. We documented several buildings and the remnants of the 1929 bridge which originally carried Route 66 over Horse Creek. I have also attached the form documenting that structure.

Please also see the attached letter we submitted to SHPO regarding effects to the project. At this time we have not completed the analysis of the bridge, as a candidate for rehabilitation, nor have we determined the effects to the bridge. We are challenged by several limitations that should be addressed. Namely:

High traffic counts at roughly 6500 vehicles per day  
Narrow bridge, at 24 feet in width with no shoulders  
Railings that have not been crash-tested – note that the rails are a character-defining feature of the bridge.

Please review the attached materials, and the materials on the website. The website has a web-based comment form. Please share this information with others who may be interested.

Best-  
Scott

**From:** Scott Sundermeyer  
**To:** "pathfinder66@earthlink.net"; "Oklahoma Route 66 Association"; "wkinsler@wkinsler.com"; "Barthuli, Kaisa"; "jill\_jensen@nps.gov"; "Kitty Henderson"; "David Pettyjohn"  
**Subject:** RE: ODOT Ottawa County US-60 Horse Creek project JP 24273(04)  
**Date:** Wednesday, May 25, 2016 6:00:00 PM

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Good evening all –

In my desire to get this out to you today, I failed to explain the reason I am reaching out to you.

Under Section 106 of the National Historic Preservation Act, federal agencies seek comments from consulting parties who have a demonstrated interest in their projects when they have the potential to affect historic properties. The referenced project will be funded by the Federal Highway Administration (FHWA). ODOT is authorized by FHWA-Oklahoma Division to initiate and carry out Section 106 consultation with the State Historic Preservation Officer and consulting parties.

By this transmittal, I am inviting your participation in this project as a consulting party. Most of you have participated in consultation for other ODOT projects, including Route 66 projects and those involving historic bridges. I look forward to your participation in this project as well. Please let me know if you wish to be involved as a consulting party for this project.

I will continue to update the website listed below with additional information as it becomes available, and will email you when I update it. Please let me know if there is additional information you would like to receive.

Best-  
Scott

Scott A. Sundermeyer, RPA  
Director - ODOT Cultural Resources Program  
405.325.7201

---

**From:** Scott Sundermeyer  
**Sent:** Wednesday, May 25, 2016 4:19 PM  
**To:** 'pathfinder66@earthlink.net' <pathfinder66@earthlink.net>; 'Oklahoma Route 66 Association' <okrt66association@sbcglobal.net>; 'wkinsler@wkinsler.com' <wkinsler@wkinsler.com>; 'Barthuli, Kaisa' <kaisa\_barthuli@nps.gov>; 'jill\_jensen@nps.gov' <jill\_jensen@nps.gov>; Kitty Henderson <kitty@historicbridgefoundation.com>  
**Subject:** ODOT Ottawa County US-60 Horse Creek project JP 24273(04)

Good afternoon all –

ODOT is considering improvements to the crossing of US-60 over Horse Creek in Afton, Oklahoma. The subject bridge is listed on the National Register of Historic places and was constructed in 1936 as a New Deal Work Relief project. Project information is available at the following website:  
<http://www.odotculturalresources.info/horse-creek-bridge.html>

We have just completed the cultural resource survey report for the project. We documented several buildings and the remnants of the 1929 bridge which originally carried Route 66 over Horse Creek. I have also attached the form documenting that structure.

Please also see the attached letter we submitted to SHPO regarding effects to the project. At this time

we have not completed the analysis of the bridge, as a candidate for rehabilitation, nor have we determined the effects to the bridge. We are challenged by several limitations that should be addressed. Namely:

High traffic counts at roughly 6500 vehicles per day  
Narrow bridge, at 24 feet in width with no shoulders  
Railings that have not been crash-tested – note that the rails are a character-defining feature of the bridge.

Please review the attached materials, and the materials on the website. The website has a web-based comment form. Please share this information with others who may be interested.

Best-  
Scott

Scott A. Sundermeyer, RPA  
Cultural Resources Program Director  
Oklahoma Department of Transportation

Oklahoma Archeological Survey  
111 E. Chesapeake Avenue, Rm. 102  
Norman, OK 73019  
405.325.7201  
[ssundermeyer@ou.edu](mailto:ssundermeyer@ou.edu)  
[ssundermeyer@odot.org](mailto:ssundermeyer@odot.org)  
<http://www.odotculturalresources.info/>

March 1, 2016

Caddo Nation  
 Attn: Chairman Tamara Francis-Fourkiller  
 Post Office Box 487  
 Binger, OK 73009

Dear Chairman Francis-Fourkiller:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(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>	Ottawa	<b>Job Piece #</b>	24273(04)	<b>Anticipated Let Date</b>	2018
<b>Project description</b>	Bridge replacement on U.S. 60 over Horse Creek, 2.6 miles north of the Delaware County line, in Afton				
<b>Location</b>	Sec 33, T26N R22E. 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 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: Tribal Historic Preservation Office



## Caddo Nation of Oklahoma

P.O. Box 487 Binger, OK 73009-0487  
Phone: (405) 656-2344 ~ FAX (405) 656-2892

---

<b>Date:</b>	<u>March 3, 2016</u>	<b>Check #</b>	<u>NA</u>
<b>Company:</b>	<u>ODOT</u>		
<b>TCNS #:</b>	<u>JP# 24273(04)</u>		
<b>County/State:</b>	<u>Ottawa County, OK</u>		
<b>Description:</b>	<u>Proposed bridge replacement on US 60 over Horse Creek in Afton</u>		

To Whom It May Concern:

The Caddo Nation received correspondence regarding the above referenced project. Our office is committed to protecting sites important to tribal heritage, culture and religion. Furthermore, the tribe is particularly concerned with archaeological sites that may contain human burial remains, and associated funerary objects.

As described in your correspondence and upon research of our database(s) and files, we find that this project is in the Caddo Nation area of interest. However, it does not impact sights fo interest to the Caddo Nation. Please proceed with the project as planned keeping the Caddo Nation informed of any changes or discoveries.

Please note the Caddo Nation of Oklahoma is the only Federally Recognized Caddo entity in the United States and consultation must be made only with designated staff of this tribe. We appreciate your cooperation in contacting the Caddo Nation to conduct proper Section 106 consultation. Should you have any questions, feel free to contact myself by phone at the Caddo Nation Headquarters at 405-656-2344.

Tamara Francis-Fourkiller  
Caddo Nation Chairman/THPO

*Chairman Francis- Fourkiller has been temporarily assigned the duties of THPO by Tribal Resolution on March 5, 2015 and will retain those duties until otherwise re-assigned. Please address all correspondence and Administrative fees to the Caddo Nation.*

August 1, 2016

Caddo Nation  
Attn: Chairman Tamara Francis-Fourkiller  
Post Office Box 487  
Binger, OK 73009

Dear Chairman Francis-Fourkiller:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(04)

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

County	Ottawa	Job Piece #	24273(04)	Anticipated Let Date	2018
Description	Bridge replacement on U.S. 60 over Horse Creek, 2.6 miles north of the Delaware County line				

In accordance with 36 CFR Part 800.4, the proposed project area 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.

During the investigations, four buildings, one building complex, and the remains of one bridge were recorded. Pursuant to 36 CFR 60.4, our opinion is that the four buildings, one building complex, and one bridge remnant do not retain sufficient historic integrity to warrant consideration for the National Register of Historic Places. The Horse Creek Bridge was listed on the NRHP under criterion A for its association with Route 66. Section 4(f) analysis for the Horse Creek bridge will be prepared, and we are continuing consultation with the Oklahoma State Historic Preservation Office regarding this property.

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 405.521.3632 or by email at rfair@odot.org.

Sincerely,



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

cc: Tribal Historic Preservation Office



## Caddo Nation of Oklahoma

P.O. Box 487

Binger, OK 73009-0487

Phone: (405) 656-2344 ~ FAX (405) 656-2892

---

<b>Date:</b>	<u>August 30, 2016</u>	<b>Check #</b>	<u>NA</u>
<b>Company:</b>	<u>ODOT</u>		
<b>TCNS #:</b>	<u>JP# 24273(04)</u>		
<b>County/State:</b>	<u>Ottawa County, Oklahoma</u>		
<b>Description:</b>	<u>Proposed bridge replacement on US 60 over Horse Creek</u>		

### To Whom It May Concern:

The Caddo Nation received correspondence regarding the above referenced project. Our office is committed to protecting sites important to tribal heritage, culture and religion. Furthermore, the tribe is particularly concerned with archaeological sites that may contain human burial remains, and associated funerary objects.

As described in your correspondence and upon research of our database(s) and files, we find that the Caddo people did occupy this area historically or prehistorically. However, the described project will have no impact on sites of interest to the Caddo Nation. Please proceed with the project as planned keeping the Caddo Nation informed of any changes or discoveries.

Please note the Caddo Nation of Oklahoma is the only Federally Recognized Caddo entity in the United States and consultation must be made only with designated staff of this tribe. We appreciate your cooperation in contacting the Caddo Nation to conduct proper Section 106 consultation. Should you have any questions, feel free to contact myself by phone at the Caddo Nation Headquarters at 405-656-2344.

Tamara Francis-Fourkiller  
Caddo Nation Chairman/THPO

*Chairman Francis- Fourkiller has been temporarily assigned the duties of THPO by Tribal Resolution on March 5, 2015 and will retain those duties until otherwise re-assigned. Please address all correspondence and Administrative fees to the Caddo Nation.*

March 1, 2016

Cherokee Nation  
 Attn: Principal Chief Bill John Baker  
 Post Office Box 948  
 Tahlequah, OK 74465

Dear Principal Chief Baker:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(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>	Ottawa	<b>Job Piece #</b>	24273(04)	<b>Anticipated Let Date</b>	2018
<b>Project description</b>	Bridge replacement on U.S. 60 over Horse Creek, 2.6 miles north of the Delaware County line, in Afton				
<b>Location</b>	Sec 33, T26N R22E. 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 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: Sheila Bird, THPO



August 1, 2016

Cherokee Nation
Attn: Principal Chief Bill John Baker
Post Office Box 948
Tahlequah, OK 74465

Dear Principal Chief Baker:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(04)

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During the investigations, four buildings, one building complex, and the remains of one bridge were recorded. Pursuant to 36 CFR 60.4, our opinion is that the four buildings, one building complex, and one bridge remnant do not retain sufficient historic integrity to warrant consideration for the National Register of Historic Places.

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.

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

Sincerely,

[Handwritten signature]

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

cc: Sheila Bird, THPO

March 1, 2016

Eastern Shawnee Tribe  
 Attn: Chief Glenna Wallace  
 Post Office Box 350  
 Seneca, MO 64865

Dear Chief Wallace:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(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>	Ottawa	<b>Job Piece #</b>	24273(04)	<b>Anticipated Let Date</b>	2018
<b>Project description</b>	Bridge replacement on U.S. 60 over Horse Creek, 2.6 miles north of the Delaware County line, in Afton				
<b>Location</b>	Sec 33, T26N R22E. See enclosed map.				
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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: Robin Dushane, THPO

August 1, 2016

Eastern Shawnee Tribe  
Attn: Chief Glenna Wallace  
Post Office Box 350  
Seneca, MO 64865

Dear Chief Wallace:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(04)

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

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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 405.521.3632 or by email at rfair@odot.org.

Sincerely,



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

cc: Robin Dushane, THPO

## Rhonda Fair

---

**From:** Robin Dushane <RDushane@estoo.net>  
**Sent:** Wednesday, August 17, 2016 8:44 AM  
**To:** Rhonda Fair  
**Subject:** JP# 24273(04)

Dear Dr. Fair,

In accordance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470f), and implementing regulation, 36 CFR 800, "Protection of Historic Properties" the Eastern Shawnee Tribal Historic Preservation Office is responding to your request for identifying properties of significance to our Tribe at US 60 over Horse Creek.

Currently this office is unaware of properties of significance to inform you of that would be involved in the proposed construction at the location referenced above.

There remains the possibility that unrecorded cultural resources, including archaeological artifacts or human remains, may be encountered during construction, demolition or earthmoving activities of this project. Should this occur, we require you contact this office in order that we may offer appropriate comments under 36 CFR 800.13.

Best regards,

*Robin Dushane*

Tribal Historic Preservation Officer

Eastern Shawnee Tribe

70500 E 128 Rd.

Wyandotte, OK 74370

918 533 4104-cell

[rdushane@estoo.net](mailto:rdushane@estoo.net)

**IMPORTANT NOTICE:** This e-mail message is intended to be received only by persons entitled to receive the confidential information it may contain. E-mail messages from ESTOO.net may contain information that is confidential and legally privileged. Please do not read, copy, forward, or store this message unless you are an intended recipient of it. If you have received this message in error, please forward it to the sender and delete it completely from your computer system.



March 1, 2016

Miami Nation
Attn: Chief Douglas Lankford
Post Office Box 1326
Miami, OK 74355

Dear Chief Lankford:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(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.

Table with 4 columns: County, Job Piece #, Anticipated Let Date, and Project description. It details a bridge replacement project in Ottawa County, Oklahoma, with a completion date of 2018.

If this undertaking may affect 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.

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.

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,

[Handwritten signature of Rhonda S. Fair]

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

cc: Diane Hunter, Acting THPO

## Rhonda Fair

---

**From:** Diane Hunter <dhunter@miamination.com>  
**Sent:** Tuesday, March 15, 2016 9:52 AM  
**To:** Rhonda Fair  
**Subject:** JP# 24273(04) Bridge replacement on U.S. 60 over Horse Creek in Afton

Dear Dr. Fair:

Aya, kikwehsitoole. My name is Diane Hunter, and I am the Acting Tribal Historic Preservation Officer for the Federally Recognized Miami Tribe of Oklahoma. In this capacity, I am the Miami Tribe's point of contact for all Section 106 issues.

The Miami Tribe offers no objection to the proposed project at this time, as we are not currently aware of existing documentation directly linking a specific Miami cultural or historic site to the project site. However, as this site is within the contemporary homelands of the Miami Tribe, if any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of this project, the Miami Tribe requests immediate consultation with the entity of jurisdiction for the location of discovery. In such a case, please contact me at 918-541-8966, by email at [dhunter@miamination.com](mailto:dhunter@miamination.com), or by mail at the address listed below to initiate consultation.

Sincerely,

Diane Hunter  
Acting Tribal Historic Preservation Officer  
Miami Tribe of Oklahoma  
P.O. Box 1326  
Miami, OK 74355

August 1, 2016

Miami Nation  
Attn: Chief Douglas Lankford  
Post Office Box 1326  
Miami, OK 74355

Dear Chief Lankford:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(04)

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

County	Ottawa	Job Piece #	24273(04)	Anticipated Let Date	2018
Description	Bridge replacement on U.S. 60 over Horse Creek, 2.6 miles north of the Delaware County line				

In accordance with 36 CFR Part 800.4, the proposed project area 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.

During the investigations, four buildings, one building complex, and the remains of one bridge were recorded. Pursuant to 36 CFR 60.4, our opinion is that the four buildings, one building complex, and one bridge remnant do not retain sufficient historic integrity to warrant consideration for the National Register of Historic Places. The Horse Creek Bridge was listed on the NRHP under criterion A for its association with Route 66. Section 4(f) analysis for the Horse Creek bridge will be prepared, and we are continuing consultation with the Oklahoma State Historic Preservation Office regarding this property.

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 405.521.3632 or by email at rfair@odot.org.

Sincerely,



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

cc: Diane Hunter, THPO



March 1, 2016

Modoc Tribe
Attn: Chief Bill Follis
418 G Street SE
Miami, OK 74354

Dear Chief Follis:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(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.

Table with 4 columns: County, Job Piece #, Anticipated Let Date, and Project description. Rows include location (Sec 33, T26N R22E) and additional information regarding project alignment, right of way, and ground disturbance.

If this undertaking may affect 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.

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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,

[Handwritten signature of Rhonda S. Fair]

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

cc: Historic Preservation Office



August 1, 2016

Modoc Tribe
Attn: Chief Bill Follis
418 G Street SE
Miami, OK 74354

Dear Chief Follis:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(04)

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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 by email at rfair@odot.org.

Sincerely,

[Handwritten signature]

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

cc: Historic Preservation Office

March 1, 2016

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 Ottawa County, Oklahoma; JP# 24273(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>	Ottawa	<b>Job Piece #</b>	24273(04)	<b>Anticipated Let Date</b>	2018
<b>Project description</b>	Bridge replacement on U.S. 60 over Horse Creek, 2.6 miles north of the Delaware County line, in Afton				
<b>Location</b>	Sec 33, T26N R22E. 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				

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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



## TRIBAL HISTORIC PRESERVATION OFFICE

**Date:** April 15, 2016

**File:** 1516-1717OK-3

**RE:** ODOT JP# 24273(04) Bridge replacement on US 60 over Horse Creek in Ottawa County, OK

ODOT  
Rhonda Fair  
200 NE 21<sup>st</sup> St Room 1-C1a  
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 JP# 24273(04) Bridge replacement on US 60 over Horse Creek in Ottawa County, OK. 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,

  
\_\_\_\_\_  
Jackie Rodgers  
Archaeologist



August 1, 2016

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 Ottawa County, Oklahoma; JP# 24273(04)

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

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Sincerely,

[Handwritten signature]

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

cc: Tribal Historic Preservation Office



March 1, 2016

Ottawa Tribe
Attn: Chief Ethel Cook
Post Office Box 110
Miami, OK 74355

Dear Chief Cook:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(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,

[Handwritten signature of Rhonda S. Fair]

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

cc: Rhonda Hayworth, THPO

August 1, 2016

Ottawa Tribe  
Attn: Chief Ethel Cook  
Post Office Box 110  
Miami, OK 74355

Dear Chief Cook:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(04)

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

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Sincerely,



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

cc: Rhonda Hayworth, THPO

March 1, 2016

Peoria Tribe of Indians  
 Attn: Chief John Froman  
 Post Office Box 1527  
 Miami, OK 74355

Dear Chief Froman:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(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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Sincerely,



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



August 1, 2016

Peoria Tribe of Indians
Attn: Chief John Froman
Post Office Box 1527
Miami, OK 74355

Dear Chief Froman:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(04)

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Sincerely,

[Handwritten signature]

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

March 1, 2016

Quapaw Tribe  
 Attn: Chairman John Berrey  
 Post Office Box 765  
 Quapaw, OK 74363

Dear Chairman Berrey:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(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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<b>Location</b>	Sec 33, T26N R22E. 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 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: Everett Bandy, 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."*

# QUAPAW TRIBE OF OKLAHOMA

P.O. Box 765  
Quapaw, OK 74363-0765

(918) 542-1853  
FAX (918) 542-4694

April 5, 2016

Rhonda S. Fair, Ph. D.  
Director  
ODOT Tribal Coordination  
200 N.E. 21<sup>st</sup> Street, Room 3A8  
Oklahoma City, OK 73105-3204

RE: Ottawa County, job piece# 24273(04), bridge replacement on U.S. 60 over Horse Creek

Dear Ms. Fair

The Quapaw Tribal Historic Preservation Office has received the documentation concerning the referenced project in Ottawa County, Oklahoma and concurs with your agency recommendations that a cultural resources survey should be completed for the proposed project area.

In accordance with the National Historic Preservation Act, (NHPA) [16 U.S.C. 470 §§ 470-470w-6] 1966, undertakings subject to the review process are referred to in S101 (d) (6) (A), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800).

The Quapaw Tribe has a vital interest in protecting its historic and ancestral cultural resources and therefore, looks forward to reviewing the cultural resource survey.

Should you have any questions or need additional information, please contact me at the number listed below. Thank you for consulting with the Quapaw Tribe on this matter.

Sincerely,



Everett Bandy  
Tribal Historic Preservation Officer  
P.O. Box 765  
Quapaw, OK 74363  
(w) 918-238-3100  
[ebandy@quapawtribe.com](mailto:ebandy@quapawtribe.com)

August 1, 2016

Quapaw Tribe  
Attn: Chairman John Berrey  
Post Office Box 765  
Quapaw, OK 74363

Dear Chairman Berrey:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(04)

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

County	Ottawa	Job Piece #	24273(04)	Anticipated Let Date	2018
Description	Bridge replacement on U.S. 60 over Horse Creek, 2.6 miles north of the Delaware County line				

In accordance with 36 CFR Part 800.4, the proposed project area 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.

During the investigations, four buildings, one building complex, and the remains of one bridge were recorded. Pursuant to 36 CFR 60.4, our opinion is that the four buildings, one building complex, and one bridge remnant do not retain sufficient historic integrity to warrant consideration for the National Register of Historic Places. The Horse Creek Bridge was listed on the NRHP under criterion A for its association with Route 66. Section 4(f) analysis for the Horse Creek bridge will be prepared, and we are continuing consultation with the Oklahoma State Historic Preservation Office regarding this property.

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 405.521.3632 or by email at rfair@odot.org.

Sincerely,



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

cc: Everett Bandy, THPO

# QUAPAW TRIBE OF OKLAHOMA

P.O. Box 765  
Quapaw, OK 74363-0765

(918) 542-1853  
FAX (918) 542-4694

August 4, 2016

Rhonda S. Fair, Ph.D.  
Director  
ODOT Tribal Coordination  
200 N.E. 21<sup>st</sup> Street, Room 3A8  
Oklahoma City, OK 73105-3204

Re: Ottawa County, JP# 24273(04); US-60 Bridge Replacement over Horse Creek

Dear Rhonda,

The Quapaw Tribe Historic Preservation Office has received and reviewed the information provided for the project referenced as Ottawa County, JP# 24273(04), US-60 bridge replacement over Horse Creek and has determined that this project is not likely to adversely effect properties of cultural or sacred significance to the Quapaw Tribe.

In accordance with the National Historic Preservation Act, (NHPA) [16 U.S.C. 470 §§ 470-470w-6] 1966, undertakings subject to the review process are referred to in S101 (d) (6) (A), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969).

The Quapaw Tribe has vital interests in protecting its historic and ancestral cultural resources. We do not anticipate that this project will adversely impact any cultural resources or human remains protected under the NHPA, NEPA, or the Native American Graves Protection and Repatriation Act. If, however, artifacts or human remains are discovered during project-related activities, we ask that activities cease immediately and the Quapaw Tribal Historic Preservation Office be contacted.

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 Quapaw Tribe on this matter.

Sincerely,



Everett Bandy  
Tribal Historic Preservation Officer  
Quapaw Tribe of Oklahoma  
P.O. Box 765  
Quapaw, OK 74363  
(w) 918-238-3100  
[ebandy@quapawtribe.com](mailto:ebandy@quapawtribe.com)

March 1, 2016

Seneca-Cayuga Tribe  
 Attn: Chief William Fisher  
 23701 South 655 Road  
 Grove, OK 74344

Dear Chief Fisher:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(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>	Ottawa	<b>Job Piece #</b>	24273(04)	<b>Anticipated Let Date</b>	2018
<b>Project description</b>	Bridge replacement on U.S. 60 over Horse Creek, 2.6 miles north of the Delaware County line, in Afton				
<b>Location</b>	Sec 33, T26N R22E. 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 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: Paul Barton, THPO

August 1, 2016

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23701 South 655 Road  
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During the investigations, four buildings, one building complex, and the remains of one bridge were recorded. Pursuant to 36 CFR 60.4, our opinion is that the four buildings, one building complex, and one bridge remnant do not retain sufficient historic integrity to warrant consideration for the National Register of Historic Places. The Horse Creek Bridge was listed on the NRHP under criterion A for its association with Route 66. Section 4(f) analysis for the Horse Creek bridge will be prepared, and we are continuing consultation with the Oklahoma State Historic Preservation Office regarding this property.

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 405.521.3632 or by email at rfair@odot.org.

Sincerely,



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

cc: Paul Barton, THPO

March 1, 2016

Shawnee Tribe  
 Attn: Chairman Ron Sparkman  
 Post Office Box 189  
 Miami, OK 74355

Dear Chairman Sparkman:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(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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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

August 1, 2016

Shawnee Tribe  
Attn: Chairman Ron Sparkman  
Post Office Box 189  
Miami, OK 74355

Dear Chairman Sparkman:

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Sincerely,



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

cc: Historic Preservation Office

March 1, 2016

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 Ottawa County, Oklahoma; JP# 24273(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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Sincerely,



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

cc: Historic Preservation Office

August 1, 2016

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

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Sincerely,



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

cc: Historic Preservation Office

March 1, 2016

Wyandotte Nation  
Attn: Chief Billy Friend  
64700 E Highway 60  
Wyandotte, OK 74370

Dear Chief Friend:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(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>	Ottawa	<b>Job Piece #</b>	24273(04)	<b>Anticipated Let Date</b>	2018
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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: Sherri Clemons, THPO

August 1, 2016

Wyandotte Nation  
Attn: Chief Billy Friend  
64700 E Highway 60  
Wyandotte, OK 74370

Dear Chief Friend:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Ottawa County, Oklahoma; JP# 24273(04)

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

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During the investigations, four buildings, one building complex, and the remains of one bridge were recorded. Pursuant to 36 CFR 60.4, our opinion is that the four buildings, one building complex, and one bridge remnant do not retain sufficient historic integrity to warrant consideration for the National Register of Historic Places. The Horse Creek Bridge was listed on the NRHP under criterion A for its association with Route 66. Section 4(f) analysis for the Horse Creek bridge will be prepared, and we are continuing consultation with the Oklahoma State Historic Preservation Office regarding this property.

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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 by email at rfair@odot.org.

Sincerely,



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

cc: Sherri Clemons, THPO

# OKLAHOMA DEPARTMENT OF TRANSPORTATION CULTURAL RESOURCES SURVEY REPORT

## Prepared by: ODOT Cultural Resources Program

**County:** Ottawa  
**J/P Number:** 24273(04)  
**Surveyed By:** Kristina Wyckoff and Jen Jones  
**Survey Date:** April 22, 2016  
**Prepared By:** Kristina Wyckoff and Jen Jones  
**Report Date:** May 12, 2016

---

### 1. PROJECT DESCRIPTION:

This report documents a cultural resources survey for the proposed project to correct deficiencies in the US-60 bridge over Horse Creek, located east of Afton, Oklahoma, and approximately 2.6 miles north of the Delaware County Line. The existing bridge accommodates two 12-foot driving lanes with four-foot outside shoulders and the proposed bridge would be widened to accommodate two 12-foot driving lanes with eight-foot outside shoulders.

The project study area, as defined, consists of an 1,153-foot corridor of US-60 centered over the existing bridge over Horse Creek; the study area extends 200 feet southeast and 120 feet northeast from the existing US-60 centerline. In total the project study area encompasses approximately 8.39 acres.

The existing bridge over Horse Creek (Structure 5806 0256 X; NBI 05017) is a steel/stringer girder constructed in 1936. This bridge was listed on the National Register of Historic Places (NRHP) on December 19, 1994 (NR ID No. 95000040), and is identified in the Oklahoma Depression-era Bridges and Road-related Resources, 1933-1945, study (Mead & Hunt 2015).

**Legal Location:** T26N R22E Section 33  
**U.S.G.S. Quadrangle:** Afton (1971)

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### 2. TOPOGRAPHY AND VEGETATION:

The study area, as mapped, is located in the Boston Mountains geomorphic province, where the deeply-dissected plateau is capped by gently-dipping Pennsylvanian sandstones. The study area is mapped within Keokuk and Reeds Spring formations and St. Joe Group chert, limestone, and shale. The vegetation of the study area, as mapped, is post oak-blackjack forest, commonly referred to as the Cross Timbers. The Cross Timbers is marked by dense forest, woodland, and grassland vegetation which exists as part of the transition between the Southeastern deciduous forest and the grassy Southern Plains. Post oak and blackjack oak are the most important trees, and blakhaw, black oak, black hickory, buckbrush, gum bumelia, Mexican plum, redbud, roughleaf dogwood, and smooth and winged sumac are common woody plants.

At the time of survey the study area was comprised of residential and commercial development, pasture, and woods.

**Vegetation Coverage:**  
XXX 0-25%  
\_\_\_\_\_ 25-50%  
\_\_\_\_\_ 50-75%  
\_\_\_\_\_ 75-100%

**General Soils Observations:**

Soils were dark brown silty loam (approximately 0-20 centimeters below the surface [cmbs]) overlaying a gray-brown silty clay loam with deteriorating bedrock (20-45 cmbs), which in turn overlay dark gray clay (50+ cmbs). Soils along the north side of the road were considerably disturbed, in the west by commercial and residential development, northwest of the existing bridge by the previous US-66 alignment, in the northeastern and southwestern portions of the study

area by historic farming activities, southeast of the existing bridge by bioturbation, and immediately northeast of the bridge by recent mechanical ground disturbance. Northeast of Horse Creek soils were marshy and inundated at the time of survey.

---

### 3. PROJECT METHODOLOGY:

#### A. Background Research:

XXX State Site Files at Oklahoma Archeological Survey

XXX SHPO NRHP and DOE Files

XXX Native American Tribes and Nations Consulted by Procedures Established with FHWA and ODOT: Caddo Nation, Cherokee Nation, Delaware Tribe of Indians, Osage Nation, United Keetoowah Band of Cherokee, Wichita and Affiliated Tribes.

XXX Other sources: General Land Office (GLO) Original Survey Map (1898)  
USGS Wyandotte 30' Quadrangle (1907, 1909)  
USGS Afton 7.5' Quadrangle (1971)  
USGS Vinita NE 7.5' Quadrangle (1971)  
Ottawa County General Highway and Transportation Maps (GHM) (1936, 1950, 1963, 1968, 1976)  
Ottawa County aerial imagery (1939, 1964, 1972)

Brooks, Robert L.

2005 Oklahoma Atlas of Archaeological Sites and Management Activities. <http://www.ou.edu/cas/archsur/Atlas/atlas.htm> accessed online January 6, 2016.

1985 Resource Protection Planning Process Management Region 3. Report submitted to the State Historic Preservation Office Oklahoma Historical Society. Unpublished manuscript on file at the Oklahoma Archeological Survey, Norman.

Mead & Hunt

2015 *Oklahoma Depression-era Bridges and Road-related Resources, 1933-1945*. Report prepared for the Oklahoma Department of Transportation.

The Oklahoma Route 66 Association (2001-2002)

2002 *Oklahoma Route 66 Roadbed Documentation Project (1926-1970) A Survey of Roadbed and Integral Structures*. Report prepared for the Oklahoma State Historic Preservation Office.

1960 *Soil Survey Ottawa County, Oklahoma*. United States Department of Agriculture, Soil Conservation Service, and Oklahoma Experiment Station. U.S. Government Printing Office, Washington, D.C.

## **RESULTS OF BACKGROUND RESEARCH:**

A review of the Oklahoma Archeological Survey (OAS) maps indicates no previously-recorded archaeological sites are mapped in the project study area or one-mile vicinity.

Prehistoric archaeological sites in the general region of the project, specifically those recorded on the Afton and Vinita NE quadrangles, are generally mapped on terraces and rises overlooking major drainages, specifically Fly Creek, Little Horse Creek, Horse Creek, Little Cabin Creek, and Shawnee Creek. Robert Brooks included Ottawa County in Region 3 of his Resource Protection, Planning, Process Management manuscript (Brooks 1985). Region 3 consists of the Ozark Plateau and Cherokee Prairie and is made up of the 11 northeastern-most counties in Oklahoma (Brooks 1985:1). In 1985, the majority of the more than 1,500 sites which had been recorded in Region 3 were located in river valleys with a significantly smaller number of sites recorded in the Cherokee Prairie and upland Ozark Plateau (Brooks 1985:9; Wyckoff and Brooks 1983:50). Region 3 includes sites from Paleoindian, Archaic, Woodland, Village Farming, and 19<sup>th</sup> and 20<sup>th</sup> century periods. According to Brooks, Archaic sites in Region 3 are most heavily concentrated in Cherokee County, and Middle Archaic base camps generally occur along major streams (Brooks 1985:25). In contrast, Woodland sites recorded in Region 3 tend to be located in upland and alluvial valley topography and include base camps, temporary camps, burned rock mounds, and rock shelters (Brooks 1985:64). Village Farming sites are generally located on terraces overlooking major drainages (Brooks 1985:66). Because approximately 7% (as of 1985) of the sites in Region 3 had been tested or excavated, we have more substantial data on cultural sequences, assemblage variation, etc. for this region than for any other region in Oklahoma (Brooks 1985:9). However, because research has focused on large sites and reservoir projects, data for Region 3 is largely limited to village sites and findings along major streams and rivers, more ancient sites (e.g. Paleoindian) and the prehistoric occupation of uplands and the use of upland resources in this region are still poorly understood (Brooks 1985:9).

Nineteenth and 20<sup>th</sup> century archaeological sites are generally recorded where occupations are indicated on historic maps or aerial photographs. The town of Afton is indicated immediately west of the project study area on the 1898 General Land Office (GLO) Original Survey Map, but no buildings are indicated in the study area on this resource. One building mapped on the 1907 and 1909 Wyandotte quadrangle is indicated within the southwestern portion of the study area, and a 20<sup>th</sup> century house building is currently standing at this approximate location. The next available map resources for the study area are the 1936-1976 General Highway and Transportation Maps (GHM); however, these resources do not indicate buildings in the town of Afton. Aerial images from 1939, 1964, and 1972, indicate three buildings or complexes, which comprise the northeastern edge of the town of Afton and are within or overlapping the project study area at its western end.

The project area includes part of the 1937 alignment of Route 66. Route 66, arguably one of America's most famous highways, was first borne out of the development of a numbering system for a system of federal highways proposed by the American Association of State Highway Officials (AASHO) in 1926. One of those highways was to run from Chicago to Los Angeles, and through the efforts of Cyrus S. Avery, was to cross Oklahoma from end to end. Avery, who served as Oklahoma State Highway Commissioner from 1923-1926, was a major figure in the Good Roads Movement having first been associated with the Ozark Trails Association and later with the National Route 66 Association. Avery had been chosen in 1924 by the Secretary of Agriculture Howard Gore to join a joint board with other state highway officials to develop a system of interstate roads that were consistently numbered from state to state. Avery ensured while serving on this board that the Chicago to Los Angeles route would cross through Oklahoma as much as possible ensuring the state would profit from the attendant business and tourism the road would bring. The route chosen for the Oklahoma portion of the new highway followed Oklahoma State Highways 39, 7, and 3, part of which had previously been a section of the Ozark Trails auto system. The highway was originally designated US-60 but after much controversy was named US-66. A complete paving of US-66 through Oklahoma became one of the primary goals of early highway construction taking 11 years to finish as it was done in pieces as funds became available. Traffic on the road grew through the 1930s as automobiles became more common. It also served, more tragically, as the route for the outmigration brought on by the Dust Bowl. The first guidebook *A Guide Book to Highway 66* by Jack Rittenhouse appeared in 1946 starting a tourism industry in earnest that reached its

peak in the 1950s encouraged greatly by the efforts of Jack Cutberth of Clinton who served as the National Executive of the Route 66 Association. The growth of the interstate system in the 1960s, however, brought on the slow decline of Route 66 as a major thoroughfare. Many sections were disassembled, reconfigured, became access roads to interstates, or were given to local jurisdiction. In 1985, US-66 was officially decertified as a US highway leading to a further decline in the small towns and Main Streets it had once fed. However, due to the efforts of preservation groups and history buffs, it has experienced a revitalization in past years as it has been dubbed "The Mother Road" and become the center of a whole new tourism industry.

In 2002, the Oklahoma Route 66 Association completed a survey of the Route 66 roadbed and integral roadway structures, such as bridges, culverts, viaducts, drains, and highway markers. The project was intended to document these features and provide National Register of Historic Places recommendations for properties along the various alignments of Route 66 to assist planners and preservationists in projects involving historic alignments of Route 66. Each roadbed property that was documented in the study received a numeric designation.

The bridge and project area being studied as part of the current undertaking are on an alignment of Route 66. The construction of this road corrected a curve in 1926 alignment. The current bridge is an I-beam structure built in 1936 by Pharoah & Company [sic] as part of WPH 8-D. It has pedestrian walkways on each side of the bridge, and is the only remaining bridge of its type along Route 66 in Oklahoma. The bridge was listed on the NRHP in 1995 under Criterion A for its association with Route 66's contributions to the history of travel in both Oklahoma and the nation. This bridge replaced an earlier 1929 bridge on the 1926 alignment. The 1936 bridge is Property #8 in the 2002 "Oklahoma Route 66 Roadbed Documentation Project (1926-1970): A Survey of Roadbed and Integral Structures" where it was misidentified as the 1929 bridge. The section of roadbed in the project area was not given a property number and is not considered historic.

**B. Field Investigation Methodology:**

- \_\_\_\_\_ 100% Windshield Survey
- \_\_\_\_\_ Windshield survey with sample pedestrian survey
- XXX 100% pedestrian survey
- XXX Subsurface Testing. Describe methodology of testing under comments, below:

***FIELD INVESTIGATION METHODOLOGY COMMENTS:***

The entire project study area was subjected to pedestrian archaeological survey; shovel tests were placed at regular intervals throughout and excavated dirt was screened through ¼ inch mesh. Based on the background research, prehistoric archaeological sites in the general area tend to occur on terraces and rises overlooking major drainages, including Horse Creek. Because of the increased likelihood for prehistoric archaeological sites to occur in these areas, all terraces in the project study area were thoroughly examined and shovel tested for evidence of archaeological material. Additionally, all creek banks, eroded areas, and road cuts in the project study area were examined for evidence of archaeological materials.

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**4. 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.
- \_\_\_\_\_ Oklahoma Archeological Site Survey Form(s) for State Archeologist files.
- XXX Historic Preservation Resource Identification Form(s) for SHPO files.

XXX 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:***

No archaeological sites were observed or recorded in the project study area. Four buildings (Bldg 1-4) and one building complex (Bldgs 5A-5D) were documented on Historic Preservation Resource Information (HPRI) forms, and a bridge abutment from a previous alignment of US-66 (Structure 1) was documented on an Oklahoma Bridge Survey Information (OBSI) form.

Soils in the study area consisted of dark brown silty loam (approximately 0-20 cmbs) overlaying a gray-brown silty clay loam with deteriorating bedrock (approximately 20-45 cmbs), which in turn overlay dark gray clay (50+ cmbs). Soils along the north side of the road were considerably disturbed, in the west by commercial and residential development, as evidenced by mixed and mottled soils with fragments of non-local gravel and small chunks of concrete; northwest of the existing bridge by a previous roadway alignment, evidenced by mixed soils, non-local gravel, a remnant abutment, and asphalt; immediately northeast of the bridge by recent mechanical ground disturbance; and in the northeastern and southwestern portions of the study area by historic farming; and southeast of the existing bridge by bioturbation from historic and modern pastoral activities. Northeast of Horse Creek soils were marshy and inundated at the time of survey.

The study area is an unfavorable setting for the presence and preservation of intact, buried archaeological deposits, and has been extensively disturbed by residential and commercial development, movement of the creek, two road and bridge alignments, utility emplacements, and historic agricultural and pastoral activity, precluding the potential for it to contain any intact archaeological deposits. Any archaeological sites that would be present within the study area would lack sufficient integrity of location and association to be able to address important questions of prehistory or history (36 CFR 60.4).

Building 1, is a quonset hut built in 1970; Building 2 is a pre-fabricated metal building built in 1970; Building 3 is a National Folk with Queen Anne touches single family home built ca. 1921; and Building 4 is a concrete block commercial building of no style built in 1921. It is our opinion that Buildings 1-4 lack historic integrity and/or distinction of design and are therefore not eligible for listing on the NRHP.

Building Complex 5 consists of Building 5A, a National Folk with Queen Anne touches single family home built in 1921; Building 5B, a detached garage; Building 5C, a detached carport; and Building 5D, a small storage shed. It is our opinion that all of the buildings of this complex lack historic integrity and/or distinction of design and are therefore not eligible for listing on the NRHP.

The southwestern, poured-concrete abutment of a previous US-66 I-beam span bridge over Horse Creek (Structure 1), which was replaced by the existing 1936 bridge, is present in the project study area and was recorded on an Oklahoma Bridge and Survey Inventory Form. This bridge was constructed in 1929 by E.S. Alderman as part of State Aid Project (SAP) 628. The As-Built plans for the existing 1936 bridge state the 1929 bridge was to be left in place, but the 1939 aerial indicates this bridge was no longer present. The northern, abandoned alignment and this remnant abutment are visible in the 1939 aerial, traces of the old

alignment can be seen in the 1964 aerial, and the raised berm along which the old alignment was situated is indicated on the 1971 Afton quadrangle. This remnant bridge abutment lacks historic architectural integrity and/or design distinction and is considered to be not eligible for inclusion in the NRHP.

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## 5. RECOMMENDATIONS:

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

\_\_\_\_\_ **Approval to proceed** 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 Archeologist in accordance with Section 202.04, Standard Specifications for Highway Construction.

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

XXX **Additional consultation with SHPO** regarding NRHP-eligible Properties

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

\_\_\_\_\_ **NRHP Eligibility Archeological Test Excavations**

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

### ***COMMENTS REGARDING RECOMMENDATIONS:***

The existing bridge over Horse Creek is a steel girder bridge constructed in 1936 as part of Route 66 (Structure 5806 0256 X; NBI 05017). This bridge was listed on the NHRP in 1994 under criterion A for association with transportation (1936-1944). The bridge was also found to have an association with a Federal-aid New Deal program as part of the Oklahoma Depression-era Bridges and Road-related Resources study (Mead & Hunt 2015). Additional consultation will be necessary to avoid, minimize, or mitigate effects to this property.

Pursuant to 36 CFR 60.4, all eight of the buildings recorded lack sufficient historic integrity and/or design distinction and are therefore considered to be not eligible for inclusion in the NRHP.

Pursuant to 36 CFR 60.4, the remaining concrete abutment from a previous roadway alignment crossing Horse Creek (Structure 1) lacks sufficient historic integrity and/or design distinction and is therefore considered to be not eligible for inclusion in the NRHP.

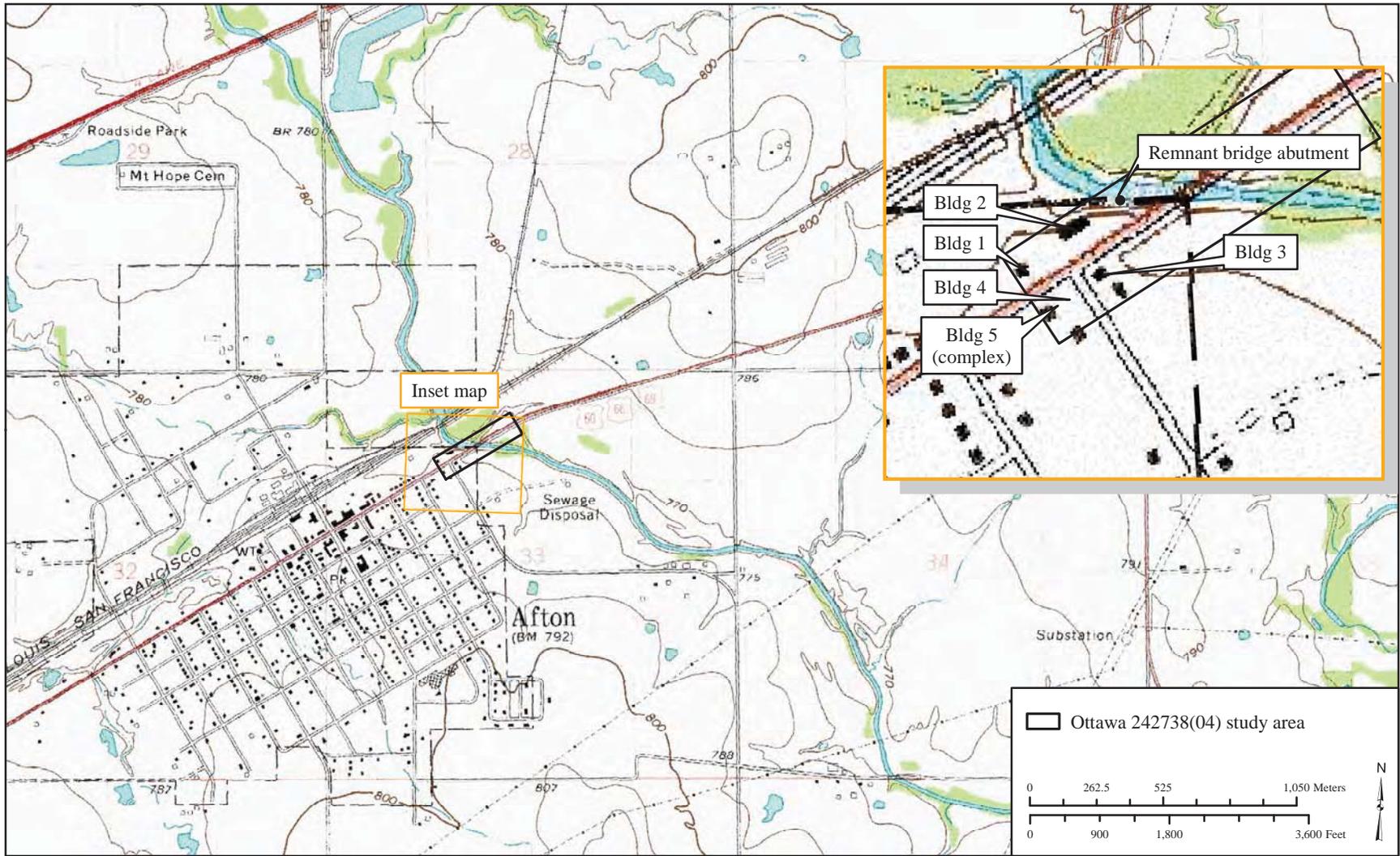


Figure 1. Ottawa County JP 24273(04): US-60 over Horse Creek.

Basemap: Afton (1971) 7.5' USGS Quadrangle; Legal: T26N R22E Section 33.



## Section 106 Public Involvement

**From:** [Joe Meeks](#)  
**To:** [Scott Sundermeyer](#)  
**Subject:** Horse Creek bridge  
**Date:** Sunday, September 03, 2017 9:32:57 AM

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Mr. Sundermeyer,

It is my understanding that ODOT has decided to destroy the Horse Creek Bridge in Afton, Ok. Why? That is a piece of the history of Route 66. It is the only double pedestrian bridge on the entire route of 66, is my understanding. Route 66 has become a major tourist attraction in Oklahoma and yet the state and local governments do little to protect the very things that tourists from all over the world come to see. The Horse Creek bridge is one of them.

In the short run it may be cheaper to replace it with a new bridge but in the long run it will be missed by many visitors. I assure you that in 100 years no one will be interested in seeing the new bridge but would still be coming to Oklahoma to see the old one.

Regarding bridges in Oklahoma in general, ODOT should find a way that drivers on new bridges in Oklahoma can see the rivers they cross. The current design prevents there being any view. This is not true in many others states. Why in Oklahoma?

I hope ODOT will reconsider its decision about Horse Creek. We need to protect what few tourist attractions we have. Not destroy them.

Joe Meeks  
Tulsa, OK.

**From:** [Swa Frantzen](#)  
**To:** [Scott Sundermeyer](#); [Melvena Heisch](#)  
**Subject:** Horse Creek Bridge in Afton, OK  
**Date:** Friday, September 01, 2017 7:47:16 PM

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Scott, Melvena,

It has come to my attention that ODOT is planning on demolishing a quite unique bridge on historic Route 66 over the Horse Creek in Afton, OK. This despite it being listed on the National Register.

Obviously, being from Belgium the details of the procedure are beyond my understanding, so I won't elaborate on that part too much.

I do want to point out one big part nonetheless: As a European, I know quite well the appeal Route 66 has back home. Part of that appeal sends thousands of tourists every year over to your state (and the 7 others on Route 66 just as well). These are people who have discovered that "yes one can still drive Route 66", and they are seeking to find the legendary, iconic road they learned about in movies, tv shows and music alike. Do know that there's no way those people will understand how anything on a national list of historic places/landmarks can be destroyed willingly by any part of any government.

To those of us who know the program the NPS runs to protect such things as this bridge, it makes even less sense.

Please reconsider.

For the Historic Route 66 Association of Belgium,

Swa

--

Swa Frantzen  
<http://www.rt66.be/>

**From:** [ACIENT1@aol.com](mailto:ACIENT1@aol.com)  
**To:** [Scott Sundermeyer](#); [Melvena Heisch](#)  
**Subject:** Save that Bridge!  
**Date:** Wednesday, August 30, 2017 2:26:02 PM

---

Dear Scott Sundermeyer and Melvena Heisch,

It has come to my attention that the town of Afton wants to demolish a Route 66 Landmark, The Horse Creek Bridge in Afton, Oklahoma.

Preserving our Historical landmarks diminish our national heritage.

My company, Vincent Video, is at the verge of releasing a 27 episode documentary about Route 66, and Afton is part of the show. It would be a sad commentary for the State of Oklahoma if landmarks featured on the show become permanently deleted. Wouldn't you agree that It would suggest shortsightedness of Oklahoma leadership?

Once it is gone, it is gone forever.

Once this show is aired, an increase of tourism will result, and with it revenue, except for the towns with few or no remaining historical attractions.

I strongly advise the preservation of this landmark for future generations and build your new bridge next to this one. Demolition costs money, leaving it be is free.

Sincerely,

Vincent Cricchio  
President of Vincent Video Productions

<https://www.facebook.com/vincentvideoAT66/>

**From:** [Jerry McClanahan](#)  
**To:** [Scott Sundermeyer](#)  
**Subject:** Horse creek Bridge, Afton  
**Date:** Tuesday, August 29, 2017 2:44:46 PM

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Hello Mr Sundermeyer,

As the author of the best selling guide to Route 66, I frequently talk to tourists from the world over about their expectations and enjoyment of the Mother Road. One of the road's favorite, and most endangered features is its historic bridges.

This unique example across Horse Creek in Afton is one of those things that make Route 66 special and memorable to these travelers. Its loss would be one less feature for them to appreciate.

I would urge, if possible, that plans be changed to provide for retaining this historic, National Register listed structure in place, even if that requires that new approaches be built.

Also, using the existing approaches would seem to require a lengthy closing of Historic 66 in this area and an inconvenient detour for those touring Route 66.

Oklahoma has one of the longest and best sections of Route 66. We need to retain all the historic content possible to encourage tourists to linger longer. It'd be a shame to lose any more valuable history than necessary.

Thank you for your consideration,

Jerry McClanahan

Lincoln County Rep, Oklahoma Route 66 Association

EZ 66 Guide for Travelers

Here It Is Map Series

Route 66 Sightings

McJerry's Route 66 Gallery

405 240 7659

**From:** [Dean Kennedy](#)  
**To:** [Scott Sundermeyer](#)  
**Subject:** Historic Horse Creek Bridge  
**Date:** Tuesday, August 29, 2017 6:07:16 PM

---

Sir;

It has come to my attention that the Historic Horse Creek Bridge in Afton, Oklahoma, is in danger of being demolished instead of preserved, to make way for a new bridge. I also understand that, previously, the new bridge was to be built next to the existing bridge, thereby preserving the existing bridge for pedestrian use, which seems the more logical solution, considering the historic significance of this bridge.

It is my understanding that this is the only bridge remaining on Route 66 that is of this type of construction, with dual pedestrian walkways running parallel on both sides of the bridge.

Inasmuch as this bridge has made significant contribution to the broad patterns of our history, has met the documentation, procedural and professional criteria to be placed on the National Register of Historic Places, and is the last of it's kind on Route 66 in Oklahoma, I respectfully ask that the Oklahoma Department of Transportation reconsider their decision and preserve this bridge for the future enjoyment of the citizens of Oklahoma and all who travel Route 66.

Sincerely,

Dean Kennedy  
Member-  
Route 66 Association of Illinois  
Route 66 Association of Missouri  
Route 66 Association of Kansas  
Route 66 Association of Oklahoma  
Route 66 Association of Texas  
Route 66 Association of New Mexico  
Route 66 Association of Arizona  
Route 66 Association of California  
National Route 66 Association

Sent from [Outlook](#)

**From:** Scott Sundermeyer  
**To:** "[pathfinder66@earthlink.net](mailto:pathfinder66@earthlink.net)"; "[Oklahoma Route 66 Association](#)"; "[wkinsler@wkinsler.com](mailto:wkinsler@wkinsler.com)"; "[Barthuli, Kaisa](#)"; "[jill\\_jensen@nps.gov](mailto:jill_jensen@nps.gov)"; "[Kitty Henderson](#)"; "[David Pettyjohn](#)"  
**Subject:** RE: ODOT Ottawa County US-60 Horse Creek project JP 24273(04)  
**Date:** Monday, September 19, 2016 8:07:00 AM  
**Attachments:** [Ottawa 24273\(04\) Public Involvement Handout Aug 2016.pdf](#)

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Good morning –

Just wanted to let you know of our Drop-in Center, which we will be doing as a public involvement effort this week in Afton, Oklahoma. The information can be found on our web page, below, but I have attached the handout. <http://www.odotculturalresources.info/horse-creek-bridge.html>.

In addition, ODOT's consultant has completed the 4(f) alternatives analysis (analysis of alternatives that leave the bridge in place). That document is also on the web page. Please share this information with anyone who might be interested. Please note that there is a section at the bottom of the web page to submit comments to the project.

Best-  
Scott

Scott A. Sundermeyer, RPA  
Director - ODOT Cultural Resources Program  
405.325.7201

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**OKLAHOMA DEPARTMENT OF TRANSPORTATION  
CULTURAL RESOURCES PROGRAM**

111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

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

RE: File 1662-16; Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear Ms. Heisch:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA) is proposing to correct the existing bridge over Horse Creek on US-60 (formerly Route 66) within the Town of Afton in Ottawa County. The purpose of the project is to provide a structurally sound bridge over Horse Creek. The existing bridge is listed on the National Register of Historic Places (NRHP) due to its association with Route 66 and unique double railed sidewalk.

The existing NRHP Bridge has a narrow clear roadway width of 24 feet and an approach roadway of 24 feet with no paved shoulders. The bridge is considered structurally deficient, functionally obsolete and is of substandard width. The current traffic is 7,000 vehicles per day (vpd) with 20 year projected traffic of 11,200 vpd. As part of the Section 106 process, public involvement using drop in centers are planned. ODOT has tasked a Consultant to develop alternatives for improving the bridge including the no build, build on new location (one-way pair or leave as monument), rehabilitation of the existing bridge while maintaining the historic integrity or replacement.

The drop in centers will be available on September 21, 2016 from 10:00 am until 2:00 p.m. days at the following locations in Afton.

- Nowhere Restaurant 300 SE 1<sup>st</sup> Street
- Afton Station 12 SE 1<sup>st</sup> Street
- City Hall 201 SW 1<sup>st</sup> Street

The public is encouraged to stop by these drop in centers and provide input/comments on the alternatives considered, the expected impacts for the Horse Creek bridge improvements and obtain public input to aid ODOT in moving forward with the completion of the Section 106 process, environmental studies, design, and subsequent construction. Please feel free to provide the attached information to those who may be interested.

Should you have any questions regarding the project, please contact Scott Sundermeyer, Director ODOT Cultural Resources Program at (405) 325-7201 or [SSundermeyer@odot.org](mailto:SSundermeyer@odot.org).

Sincerely,

Scott A. Sundermeyer  
Cultural Resources Program Director

Enclosures: Location Map

*"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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CULTURAL RESOURCES PROGRAM**

111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

Historic Bridge Foundation  
Kitty Henderson  
P.O. Box 66245  
Austin, TX 78766

RE: Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear Kitty:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA) is proposing to correct the existing bridge over Horse Creek on US-60 (formerly Route 66) within the Town of Afton in Ottawa County. The purpose of the project is to provide a structurally sound bridge over Horse Creek. The existing bridge is listed on the National Register of Historic Places (NRHP) due to its association with Route 66 and unique double railed sidewalk.

The existing NRHP Bridge has a narrow clear roadway width of 24 feet and an approach roadway of 24 feet with no paved shoulders. The bridge is considered structurally deficient, functionally obsolete and is of substandard width. The current traffic is 7,000 vehicles per day (vpd) with 20 year projected traffic of 11,200 vpd. As part of the Section 106 process, public involvement using drop in centers are planned. ODOT has tasked a Consultant to develop alternatives for improving the bridge including the no build, build on new location (one-way pair or leave as monument), rehabilitation of the existing bridge while maintaining the historic integrity or replacement.

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Should you have any questions regarding the project, please contact Scott Sundermeyer, Director ODOT Cultural Resources Program at (405) 325-7201 or [SSundermeyer@odot.org](mailto:SSundermeyer@odot.org).

Sincerely,

Scott A. Sundermeyer  
Cultural Resources Program Director  
Enclosures: Location Map

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**AN EQUAL OPPORTUNITY EMPLOYER**



**OKLAHOMA DEPARTMENT OF TRANSPORTATION  
CULTURAL RESOURCES PROGRAM**

111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

Afton City Hall  
Phyllis Logan  
201 SW 1st Street  
Afton, Oklahoma 74331

RE: Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear Phyllis:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA) is proposing to correct the existing bridge over Horse Creek on US-60 (formerly Route 66) within the Town of Afton in Ottawa County. The purpose of the project is to provide a structurally sound bridge over Horse Creek. The existing bridge is listed on the National Register of Historic Places (NRHP) due to its association with Route 66 and unique double railed sidewalk.

The existing NRHP Bridge has a narrow clear roadway width of 24 feet and an approach roadway of 24 feet with no paved shoulders. The bridge is considered structurally deficient, functionally obsolete and is of substandard width. The current traffic is 7,000 vehicles per day (vpd) with 20 year projected traffic of 11,200 vpd. As part of the Section 106 process, public involvement using drop in centers are planned. ODOT has tasked a Consultant to develop alternatives for improving the bridge including the no build, build on new location (one-way pair or leave as monument), rehabilitation of the existing bridge while maintaining the historic integrity or replacement.

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Should you have any questions regarding the project, please contact Scott Sundermeyer, Director ODOT Cultural Resources Program at (405) 325-7201 or [SSundermeyer@odot.org](mailto:SSundermeyer@odot.org).

Sincerely,

Scott A. Sundermeyer  
Cultural Resources Program Director  
Enclosures: Location Map

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AN EQUAL OPPORTUNITY EMPLOYER



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CULTURAL RESOURCES PROGRAM**

111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

Afton Station Packard Museum  
Marlin Carpenter  
12 SE 1<sup>st</sup> Street  
Afton, Oklahoma 74331

RE: Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear Marlin:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA) is proposing to correct the existing bridge over Horse Creek on US-60 (formerly Route 66) within the Town of Afton in Ottawa County. The purpose of the project is to provide a structurally sound bridge over Horse Creek. The existing bridge is listed on the National Register of Historic Places (NRHP) due to its association with Route 66 and unique double railed sidewalk.

The existing NRHP Bridge has a narrow clear roadway width of 24 feet and an approach roadway of 24 feet with no paved shoulders. The bridge is considered structurally deficient, functionally obsolete and is of substandard width. The current traffic is 7,000 vehicles per day (vpd) with 20 year projected traffic of 11,200 vpd. As part of the Section 106 process, public involvement using drop in centers are planned. ODOT has tasked a Consultant to develop alternatives for improving the bridge including the no build, build on new location (one-way pair or leave as monument), rehabilitation of the existing bridge while maintaining the historic integrity or replacement.

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The public is encouraged to stop by these drop in centers and provide input/comments on the alternatives considered, the expected impacts for the Horse Creek bridge improvements and obtain public input to aid ODOT in moving forward with the completion of the Section 106 process, environmental studies, design, and subsequent construction. Please feel free to provide the attached information to those who may be interested.

Should you have any questions regarding the project, please contact Scott Sundermeyer, Director ODOT Cultural Resources Program at (405) 325-7201 or [SSundermeyer@odot.org](mailto:SSundermeyer@odot.org).

Sincerely,

Scott A. Sundermeyer  
Cultural Resources Program Director  
Enclosures: Location Map

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**OKLAHOMA DEPARTMENT OF TRANSPORTATION  
CULTURAL RESOURCES PROGRAM**

111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

Nowhere on Route 66  
Sandra Reynolds  
300 SE 1<sup>st</sup> Street  
Afton, Oklahoma 74331

RE: Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear Sandra:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA) is proposing to correct the existing bridge over Horse Creek on US-60 (formerly Route 66) within the Town of Afton in Ottawa County. The purpose of the project is to provide a structurally sound bridge over Horse Creek. The existing bridge is listed on the National Register of Historic Places (NRHP) due to its association with Route 66 and unique double railed sidewalk.

The existing NRHP Bridge has a narrow clear roadway width of 24 feet and an approach roadway of 24 feet with no paved shoulders. The bridge is considered structurally deficient, functionally obsolete and is of substandard width. The current traffic is 7,000 vehicles per day (vpd) with 20 year projected traffic of 11,200 vpd. As part of the Section 106 process, public involvement using drop in centers are planned. ODOT has tasked a Consultant to develop alternatives for improving the bridge including the no build, build on new location (one-way pair or leave as monument), rehabilitation of the existing bridge while maintaining the historic integrity or replacement.

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- Afton Station 12 SE 1<sup>st</sup> Street
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111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

Afton Station and Route 66 Packards  
David Kane  
12 SE 1<sup>st</sup> Street  
Afton, Oklahoma 74331

RE: Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear Mr. Kane:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA) is proposing to correct the existing bridge over Horse Creek on US-60 (formerly Route 66) within the Town of Afton in Ottawa County. The purpose of the project is to provide a structurally sound bridge over Horse Creek. The existing bridge is listed on the National Register of Historic Places (NRHP) due to its association with Route 66 and unique double railed sidewalk.

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111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

Jim Ross  
13100 E. Old Highway 66  
Arcadia, Oklahoma 73007

RE: Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear Brad:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA) is proposing to correct the existing bridge over Horse Creek on US-60 (formerly Route 66) within the Town of Afton in Ottawa County. The purpose of the project is to provide a structurally sound bridge over Horse Creek. The existing bridge is listed on the National Register of Historic Places (NRHP) due to its association with Route 66 and unique double railed sidewalk.

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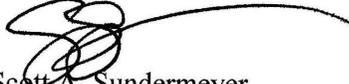
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Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

Grand County Lakeside RV Park  
Kathi Sikorski  
55015 E. 270 Road  
Afton, Oklahoma 74331

RE: Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear Ms. Sikorski:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA) is proposing to correct the existing bridge over Horse Creek on US-60 (formerly Route 66) within the Town of Afton in Ottawa County. The purpose of the project is to provide a structurally sound bridge over Horse Creek. The existing bridge is listed on the National Register of Historic Places (NRHP) due to its association with Route 66 and unique double railed sidewalk.

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Scott A. Sundermeyer  
Cultural Resources Program Director  
Enclosures: Location Map

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111 E. Chesapeake, Room 102, University of Oklahoma  
Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

Billy M. Harrison  
201 SW 1<sup>st</sup> Street  
P.O. Box 250  
Afton, Oklahoma 74331

RE: Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear Mr. Harrison:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA) is proposing to correct the existing bridge over Horse Creek on US-60 (formerly Route 66) within the Town of Afton in Ottawa County. The purpose of the project is to provide a structurally sound bridge over Horse Creek. The existing bridge is listed on the National Register of Historic Places (NRHP) due to its association with Route 66 and unique double railed sidewalk.

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Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

Oklahoma Route 66 Association, Inc.  
Brad Nickson, President  
P.O. Box 446  
Chandler, OK 74834

RE: Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear Brad:

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Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

Route 66 Corridor Preservation Program  
Kaisa Barthuli, Program Manager  
National Trails Intermountain Region  
National Park Service  
P.O. Box 728  
Santa Fe, New Mexico 87504-0728

RE: Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear Kaisa:

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Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

Oklahoma Historic Bridge and Highway Group  
Mr. Weslee Kinsler, Administrator  
P.O. Box 252  
Morrison, Oklahoma 73061-0252

RE: Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear Weslee:

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Cultural Resources Program Director  
Enclosures: Location Map

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Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

Preservation Oklahoma, Inc.  
Mr. David Pettyjohn, Executive Director  
405 NW 15<sup>th</sup> Street  
Oklahoma City, Oklahoma 73103

RE: Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear David:

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Norman, OK 73019-5111  
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

August 31, 2016

Route 66 Alliance  
Ken Busby, Executive Director and CEO  
1500 Frisco #3D  
Tulsa, Oklahoma 74119

RE: Section 106 public involvement and drop in center for bridge improvements on US-60 over Horse Creek, located 2.6 miles north of the Delaware County line, Ottawa County, Oklahoma; State Job Piece Number 24273(04), Project Number J2-4273(004).

Dear Phyllis:

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## **Horse Creek Project Public comment summary**

### **Drop-in centers**

Drop-in centers were held on September 21, 2016 in Afton, Oklahoma to solicit public input on the Horse Creek Bridge project. In total there were six project attendees manning three drop-in centers within the community. Public input was gathered at the following venues in Afton.

- Afton City Hall
- The Nowhere Restaurant
- The Afton Station (a Route 66 Museum)

The project representatives included:

- 4 ODOT staff –
  - Scott Sundermeyer (ODOT, Cultural Resources Program Director)
  - Jennifer Jones (ODOT, Project Architectural Historian)
  - Kristina Wyckoff (ODOT, Project Archaeologist)
  - David Saulsberry (ODOT, Environmental Programs Field Division 8)
- 2 consultants - Rick Mitchell and Liz Boyer (Mead & Hunt, Inc.)

Boards and handouts requesting comment on the proposed project were available for the public at each of the drop-in center venues. The public was encouraged to either fill in the comment cards on-site or to mail them to ODOT. Public comments were also gathered via the ODOT website from September 21, 2016, through October 5, 2016.

In total, 19 comment cards were returned (comprised of 14 comment cards, 2 written statements relating to the bridge project recorded on a sign-in sheet at the Afton Station, and 3 emails).<sup>1</sup> Below is a summary of the comments received relating to the bridge; in addition the comments are transcribed into Table 1.

No verbal comments were collected at the drop-in centers.

- Removal and replacement of the bridge (4 respondents)
- Preservation and rehabilitation of the bridge for continued vehicular use (13 respondents)
- Construction of a new adjacent bridge with rehabilitation of the existing bridge for continued use as a vehicular bridge (paired one-way) (2 respondents)
- Construction of a new adjacent bridge with rehabilitation of the existing bridge as a pedestrian/bicycle bridge (1 respondent)
- Construction of a new adjacent bridge, no comment on retention or rehabilitation of the existing bridge (1 respondent)
- Widen the existing bridge to four lanes (1 respondent)
- Further study into the bridge's safety with replacement or rehabilitation based on the ability to make it structurally safe (2 respondents)

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<sup>1</sup> Note that three of the comment cards were signed by multiple individuals. Each person who signed the comment card were counted individually, for a total of 24 respondents.

In addition, a total of six individuals, from the United States, Europe, and Australia, left comments regarding enjoyment of their travels along Route 66. An additional five visitors signed-in at the Afton Station drop-in center but left no comments. Two individuals commented on the museum collection rather than the proposed project and their responses were not included within the tally of public comment.

**ODOT outreach to interested parties**

ODOT corresponded directly with organizations and potentially interested parties with a known potential interest in historic bridges, Route 66 or Afton, Oklahoma including National Park Service's Route 66 Preservation Program, the Historic Bridge Foundation, Oklahoma Route 66 Association. The Historic Bridge Foundation communicated via email to ODOT that they were unable to attend the Afton drop-in centers meeting but wished to continue participation in the process as a stakeholder. The Oklahoma Route 66 Association also responded to ODOT's solicitation and noted their preference to see the bridge be preserved and rehabilitated; the organization did not directly note if they preferred to remain as a stakeholder in the process. No correspondence was received from the other organizations.

**Table 1. Compilation of Public Comments Received September 28 – October 5, 2016**  
**U.S. Highway 60 Bridge over Horse Creek**

Comment	Commenter	Response via	Notes
In favor of bridge rehabilitation			
Save the Bridge	REDACTE	Drop-in center	Area resident
Save the Bridge	REDAC	Drop-in center	Area resident
Rehabilitate for continued two-way use. If left as it is it will continue to deteriorate and eventually be lost. It is important to maintain this structure as a historic landmark. And also important to the town that has been part of this historic roadway for so many years.	REDACTE D	Mail	Route 66 enthusiast
As a Route 66 enthusiast I would like for the bridge to be restored. It is an early part of the Mother Road and needs to remain as a vital part.	REDACTE	Mail	Route 66 enthusiast
Please keep bridge up! It is history and a Route 66 landmark. I would hate to drive through next time and it be left to ruin. Please keep it up!	REDACTE	Mail	Route 66 enthusiast
Please go around the bridge over Horse Creek it is the last bridge in O.K. that has a sidewalk on both sides. Plus children fish off of the bridge. And I do believe the people of Afton built the bridge.	REDACTE	Drop-in center	Area resident
I think it is good for the kids in town.	REDACTED	Drop-in center	Area resident
We want to save & keep our bridge.	REDACTED	Mail	Area resident
I think this bridge on RT 66 east of Afton, OK should be left. It was built @ 1930. The tourist love to see & take pictures. The young kids like to fish off it. Some of the elderly. It is a great part of history. <u>Please leave it.</u>	REDACTED	Mail	Area resident
We need to save the Horse Creek bridge...!! It has been a part of our county for so long it has become a "heritage" site. I and many others crossed that bridge while growing up and remember it fondly!	REDACTE	Email	Area resident
Against bridge rehabilitation			
This bridge is old and unsafe. It needs to be removed and replaced. It is an eyesore and is too narrow for today's traffic and large trucks. I strongly feel this bridge needs to be torn down and replaced with a new modern one in the same location. I am a property owner near this bridge and have observed how unsafe it is.	REDACTE	Email	Area resident

Comment	Commenter	Response via	Notes
This bridge needs to be torn down & scrapped, it has been a piece of junk for many years. On the new bridge leave the walkways off and use that space to widen both lanes. This bridge has always been too narrow for truck traffic. The shoulders on the road are too narrow & not made for walking. I have observed this bridge most of my life 79 years & it sets on a part of my property next to the bridge. We do not need another eyesore setting around this town.	REDACTED	Mail	Area resident
The bridge is patched upon patch on the deck and underneath. The deck and all the structure are both in serious decay. The sidewalks on both sides are unusual because there is no sidewalk leading to or away from. It will be nothing but an eyesore if it is left and an unnecessary expense to maintain.	REDACTED	Drop-in center	Area resident
This bridge is not part of the original Rt. 66. In my opinion it should be replaced.	REDACTE	Drop-in center	Area resident
Support alternative solutions			
Build a new bridge to the North of the existing bridge! We need a wider bridge.	REDACTED	Email contact form	Area resident
Re-habilitate the old bridge & use it for one way traffic / build a parallel bridge next to it. That would be the most productive use of the bridge, while maintaining the historic structure. This would also prevent the highway from being shut down during construction. Worse case scenario there would be one of the two bridges open at all time during construction, until the project is completed. A detour clear to Bernice would be outrageous for semi truck traffic. I don't see any other detour options currently.	REDACTED	Mail	Area resident
This bridge built in 1936 is the only historical site in Afton that hasn't been torn down!!! Please help us to KEEP RETAIN OUR HISTORIC BRIDGE FOR PEDESTRIAN / TRAIL USE!!! We have many 66 tourists stop & take pictures on this Great Little Bridge	REDACTE	Mail	Area resident
4 lanes + wider	REDA	Drop-in center	Area resident
Needs additional information			
We think safety should be first and foremost in the issue of the bridge at Horse Creek. It is good that the bridge is on the national register of historical places, but if it is not a strong structure, and collapse of the bridge would cause harm to just one person, it is not worth injury or loss of life.	REDACTED P	Mail	Area resident
Route 66 comments			
Great drive – Lots of Fun!	REDACTE	Drop-in center	Route 66 enthusiast
Great Route 66 – Fantastic	REDA	Drop-in center	Route 66 enthusiast

Comment	Commenter	Response via	Notes
Love Rt 66	REDACTED	Drop-in center	Route 66 enthusiast
Awesome!!!	REDACTED	Drop-in center	Route 66 enthusiast
Love it!!!!	REDACTED	Drop-in center	Route 66 enthusiast
Fantastic	REDACTED CTED	Drop-in center	Route 66 enthusiast
Stakeholder comment			
[See attached document]	REDACTED	Email	Oklahoma Route 66 Association

INDIVIDUAL COMMENT FORMS REDACTED