

## **Appendix C: Individual Section 4(f) and Programmatic Agreement**



FINAL  
Individual Section 4(f) Evaluation

Ozark National Scenic Riverways  
Echo Bluff State Park  
Sinking Creek Bridge (H0079)  
Three Bridges Historic District

Shannon County  
Route 19  
MoDOT Job No. J9P0438

Prepared in Compliance with  
49 U. S. C. § 303

August 2016

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Date of Approval

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For FHWA

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## Introduction and Project Description

### Introduction

The Missouri Department of Transportation (MoDOT) proposes to use federal funding from the Federal Highway Administration (FHWA) to rehabilitate or replace the Route 19 Bridge over Sinking Creek in Shannon County, Missouri (Figure 1). An Environmental Assessment (EA) is being prepared under the National Environmental Policy Act of 1969 (NEPA), which details the alternates being considered and the socioeconomic, natural and cultural resources impacts the project would have.

This Final Individual Section 4(f) Evaluation has been prepared in compliance with Section 4(f) of the U. S. Department of Transportation Act of 1966, codified at 49 USC 303, with implementing regulations at 23 CFR 774 and with FHWA policies and guidelines.

The intent of Section 4(f) is to establish as policy that “special effort should be made to preserve the natural beauty of the countryside and Public Park and recreation lands, wildlife and waterfowl refuges, and historic sites.”<sup>1</sup> To meet this intent, a U. S. Department of Transportation agency cannot approve the use of a Section 4(f) property unless a determination is made that:

- (a)(1) There is no prudent and feasible avoidance alternative to the use of land from the property; and
- (2) The action includes all possible planning to minimize harm to the property resulting from such use; or
- (b) The use, including any measures to minimize harm (such as any avoidance, minimization, mitigation or enhancement measures) will have a *de minimis* impact on the property.<sup>2</sup>

A “use” of a Section 4(f) property occurs:

- When land is permanently incorporated into a transportation facility;
- There is a temporary occupancy of land that is adverse in terms of the Section 4(f) statute preservation purposes; or
- When there is a constructive use.<sup>3</sup>

A constructive use occurs when a project does not incorporate land from a Section 4(f) property, but the project’s proximity impacts are so severe that the protected features or attributes that the qualify the property for protection are substantially impaired.<sup>4</sup>

A *de minimis* use is a use that would not adversely affect the features, attributes or qualities that qualify a property for protection under Section 4(f).<sup>5</sup>

It is possible for a project to benefit a Section 4(f) property. A “net benefit” is achieved when the transportation use, the measures to minimize harm and mitigation measures result in an overall

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<sup>1</sup> 49 USC 303(a).

<sup>2</sup> 23 CFR 744.3.

<sup>3</sup> 23 CFR 774.17.

<sup>4</sup> 23 CFR 774.15.

<sup>5</sup> 23 CFR 774.17 Definition of *De minimis* impact (2).

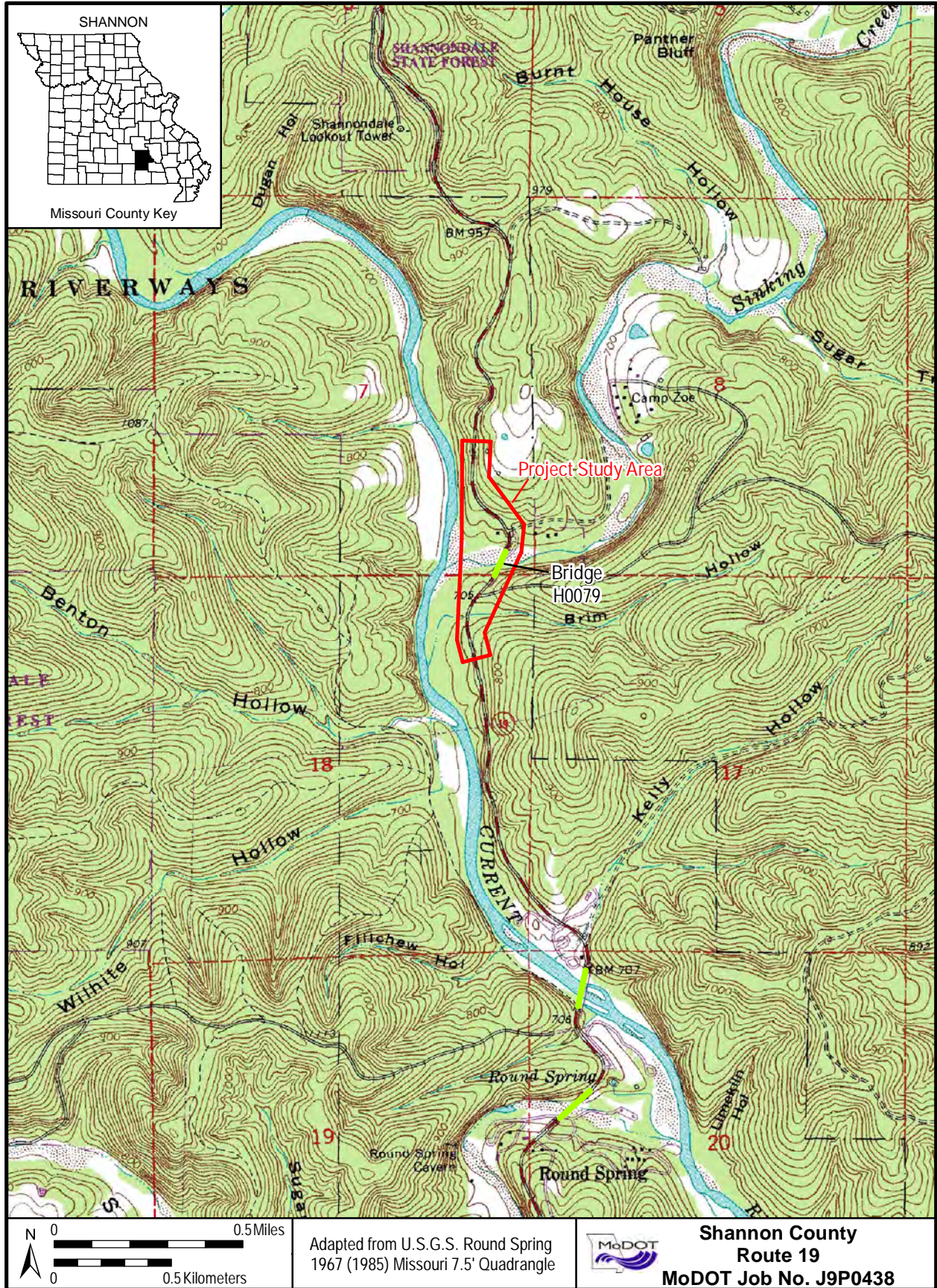


Figure 1: Project location



enhancement of the Section 4(f) property when compared to both the do nothing and avoidance alternates and considering the present condition of the property.<sup>6</sup>

The concurrence of the officials with jurisdiction over the Section 4(f) property is required at many points in the Section 4(f) process. For historic properties the official with jurisdiction is the State Historic Preservation Office (SHPO). For parks, recreation areas, and wildlife and waterfowl refuges the official(s) with jurisdiction are the agency or agencies that own or administer the property in question and who are empowered to represent the agency on matters related to the property.<sup>7</sup>

A feasible and prudent avoidance alternative avoids using any Section 4(f) property and does not cause other severe problems of a magnitude that outweigh the importance of protecting the Section 4(f) property.<sup>8</sup> An alternative is not feasible if it cannot be built as a matter of sound engineering judgment.<sup>9</sup> An alternative is not prudent if:

- It compromises the project so that it no longer meets the purpose and need;
- It results in unacceptable safety or operational problems;
- After reasonable mitigation it still causes:
  - Severe social, economic or environmental impacts;
  - Severe disruption to established communities;
  - Severe disproportionate impacts to minority or low income communities;
  - Severe impacts to environmental resources protected under other federal laws;
- It results in additional construction, maintenance or operational costs of an extraordinary magnitude;
- It causes other unique problems or unusual factors; or
- It involves multiple factors above, that while individually minor, cumulatively cause unique problems of extraordinary magnitude.<sup>10</sup>

### ***Description of the Proposed Action***

MoDOT Job Number J9P0438 will provide a reliable, safe and cost efficient Route 19 crossing over Sinking Creek in Shannon County.

Route 19 is the primary north/south access through Shannon County, providing access to surrounding counties for commerce and industry and for emergency responders. Local industry includes logging and forestry products, and recreational activities including access to the Ozark National Scenic Riverways (ONSR) and the Current and Jacks Fork Rivers.

Route 19 crosses Sinking Creek, a tributary of the Current River, approximately 14.2 miles north of Eminence, the seat of Shannon County. The existing Sinking Creek Bridge (H0079) was constructed in 1926 and has primarily undergone only routine maintenance to date. In March 2015, MoDOT discovered the bridge had structural issues that necessitated making it a one-lane structure with a 20 ton load restriction. MoDOT temporarily realigned Route 19 in the area and

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<sup>6</sup> Net Benefit Programmatic Section 4(f), 70 *Federal Register* 75 (20 April 2005), p. 20628.

<sup>7</sup> 23 CFR 774.17 Definition of Official(s) with jurisdiction.

<sup>8</sup> 23 CFR 774.17 Definition of feasible and prudent avoidance alternative (1).

<sup>9</sup> *Ibid* (2).

<sup>10</sup> *Ibid* (3).

constructed a temporary bridge (H0079T) in May of 2015 and the existing Sinking Creek Bridge was closed. The temporary structure was necessary because heavy trucks were taking substantial detours in order to access Route 19 on either side of Sinking Creek. However, this is a temporary measure until a permanent solution is implemented that will provide a safe and reliable Route 19 crossing over Sinking Creek.

### **Purpose & Need**

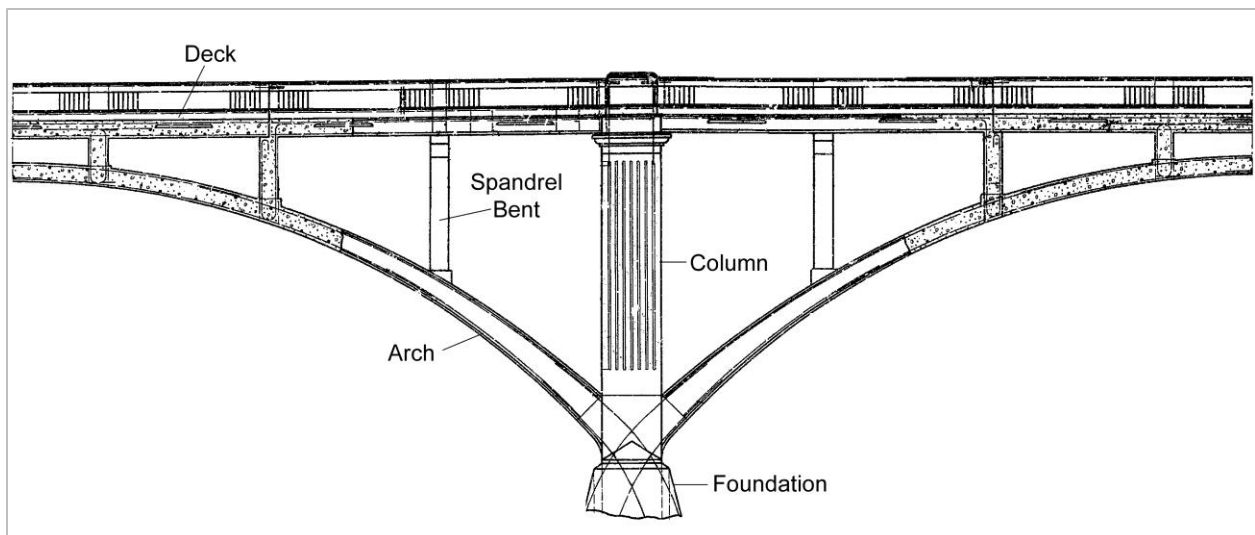
The primary purpose of the project is to provide a reliable, safe and cost efficient Route 19 crossing over Sinking Creek in Shannon County.

### **Project Needs**

- The Sinking Creek Bridge (H0079) is 90 years old and structurally deficient. Its age and condition require regular maintenance resulting in periodic closures that create an inconvenience to the traveling public and substantial expense to taxpayers. The bridge was closed in May 2015 after a temporary bridge was constructed.
- The bridge's design is functionally obsolete. It does not meet MoDOT's standards for lane width, shoulders or vertical clearance.
- The Route 19 temporary bridge over Sinking Creek does not provide a long-term solution.

MoDOT conducts routine bridge inspections biennially. Following the inspection, the substructure (foundation and columns), superstructure (spandrel arches and bents) and deck (riding surface) are each assigned a numerical rating following each inspection (Figure 2 identifies these parts). These ratings range from zero, a failed condition that cannot be corrected and which typically requires closing a bridge, to nine, excellent condition.

A routine inspection of the Sinking Creek Bridge was conducted in February 2015. The Sinking Creek Bridge substructure is currently rated a five (fair), the deck is rated a three (serious) and the superstructure is rated a four (poor). Because of the inspection, the decision was made to reduce the load carrying capacity of the bridge to 20-tons and reduce it to a one-lane bridge.



**Figure 2: Schematic of Arch identifying parts**

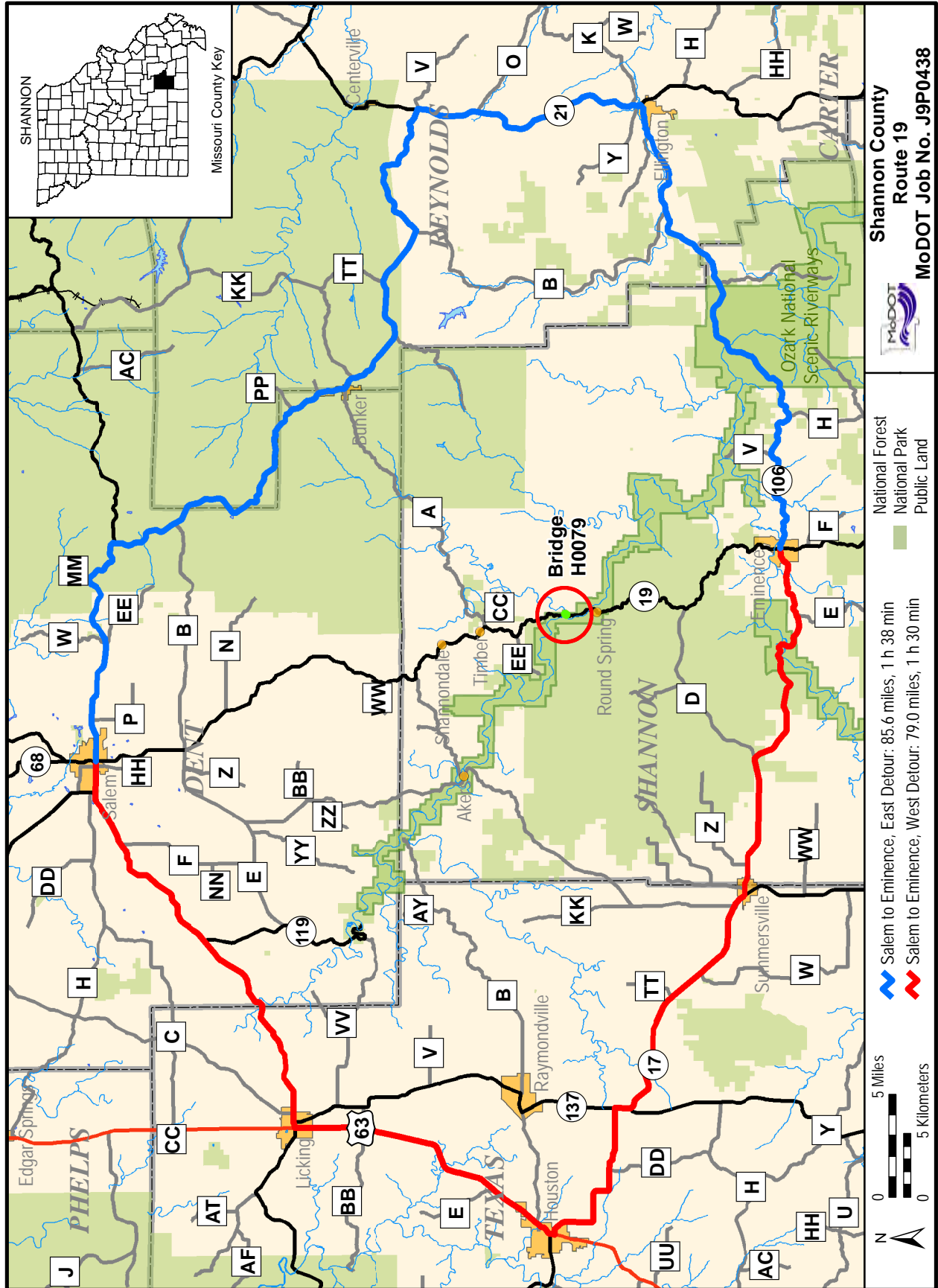


Figure 3: East and West Detour Routes

Among the inspection findings of the 2015 inspection were signs of significant deterioration including concrete spalling and rusting steel rebar, especially in the northernmost span. The southern span had shifted approximately three inches to the south since the previous inspection in 2013. If the shifting continues it could fall off its supports. These findings necessitated the load restrictions.

The weight restrictions caused heavy vehicles to use alternate routes, resulting in significantly longer travel times and reduced efficiency. The detours for these heavy vehicles are substantial; 85.5 miles for through traffic using the east detour and 79 miles for through traffic using the west detour (Figure 3). The bridge carries approximately 610 vehicles per day and is expected to increase to 750 vehicles per day by 2037. Commercial trucks average about 8% of the traffic, or about 50 vehicles per day. Local residents were concerned when meeting large trucks, construction equipment or farm equipment at the bridge, and frequently yielded to oncoming heavy equipment, effectively creating a one-lane bridge. Similar conditions exist at the Current River Bridge 2 miles south of the Sinking Creek Bridge. At the request of Shannon County, the Current River Bridge has been signed as a one-lane bridge.

The existing bridge is 18 feet wide and provided for two 9-foot lanes prior to the reductions. Current standards require 12 foot lanes and 2 foot shoulders on roadways like Route 19. One-lane bridges and narrow lane widths can affect the efficient flow of traffic and contribute to head-on, sideswipe and rear-end collisions. Such collisions could cause injury or death to the people involved and could also damage the structure.

The temporary bridge (H0079T), opened in May 2015, and is not intended to be a permanent crossing for Sinking Creek. It was constructed about seven (7) feet lower than the existing high water requirements and is susceptible to flooding. It has already been closed due to flooding (Figure 4). One set of columns is located in the middle of the channel causing concerns about scour at the base of the column and presenting an obstruction in the channel that will snag debris. Typically this type of a temporary structure is only in service for a year, keeping it open longer will require additional maintenance.



**Figure 4: Temporary Bridge closed due to flooding**

The temporary bridge currently has a posted 30 mile-per-hour speed, due to the vertical alignment of the temporary roadway. In addition, the grated deck causes a rough ride and is very noisy.

Additional information on the purpose and need for the project can be found in the EA.

## **Description of Section 4(f) Properties**

### ***Parks, Recreation Areas, Wildlife & Waterfowl Refuges***

#### Ozark National Scenic Riverways

Route 19 runs through the Ozark National Scenic Riverways (ONSR), a unit of the National Park Service. The ONSR contains approximately 80,785 acres in Shannon, Carter, Dent and Texas Counties encompassing the Current and Jacks Fork Rivers (Figure 5). The land includes 51,654 acres of federal land and 29,131 acres of nonfederal lands with easements for ONSR.

ONSR exists to preserve and protect the unique scenic and natural values, process and settings derived from the free-flowing Current and Jacks Fork Rivers, and the springs, caves and their karst regions. In addition they:

- Provide and promote opportunities for scientific and public understanding of natural and cultural resources;
- Provide for the use and enjoyment of Ozark Highland landscape; and
- Provide for uses and enjoyment of outdoor recreational opportunities consistent with the parks resources.

The ONSR includes recreational opportunities on the Current and Jacks Fork Rivers including boating, canoeing, tubing, swimming, and fishing. The ONSR also provides areas for hiking, backpacking, hunting and horseback riding.

The ONSR *General Management Plan* allows land based recreation in the study area, including camping and seasonal mixed-use of the Current River. Seasonal mixed use of the river, in the area, is defined as 25 horse power motor during the off-peak season, no motors between April 1 (or the end of trapping season) through September 14 (or the first day of gigging season, as defined by the Missouri Department of Conservation). The natural area would predominate, but the social setting would vary seasonally with the types of allowable activities and the levels of use. During peak season the ONSR has a standard of up to 40 watercraft per mile on the Current River near the project area.

Land based recreation in the study area includes the Sinking Creek Backcountry Campground. Many regular campgrounds include electrical and water hookups and observe quiet hours. Most campgrounds designate family sites. The ONSR defines their backcountry campgrounds as less developed with more basic amenities than their regular campgrounds. Backcountry campgrounds are more developed than primitive campgrounds which have no amenities. Camping is also allowed on gravel bars that are accessed by water, are one-half mile away from designated campgrounds, and are more than fifty feet away from a designated river access.

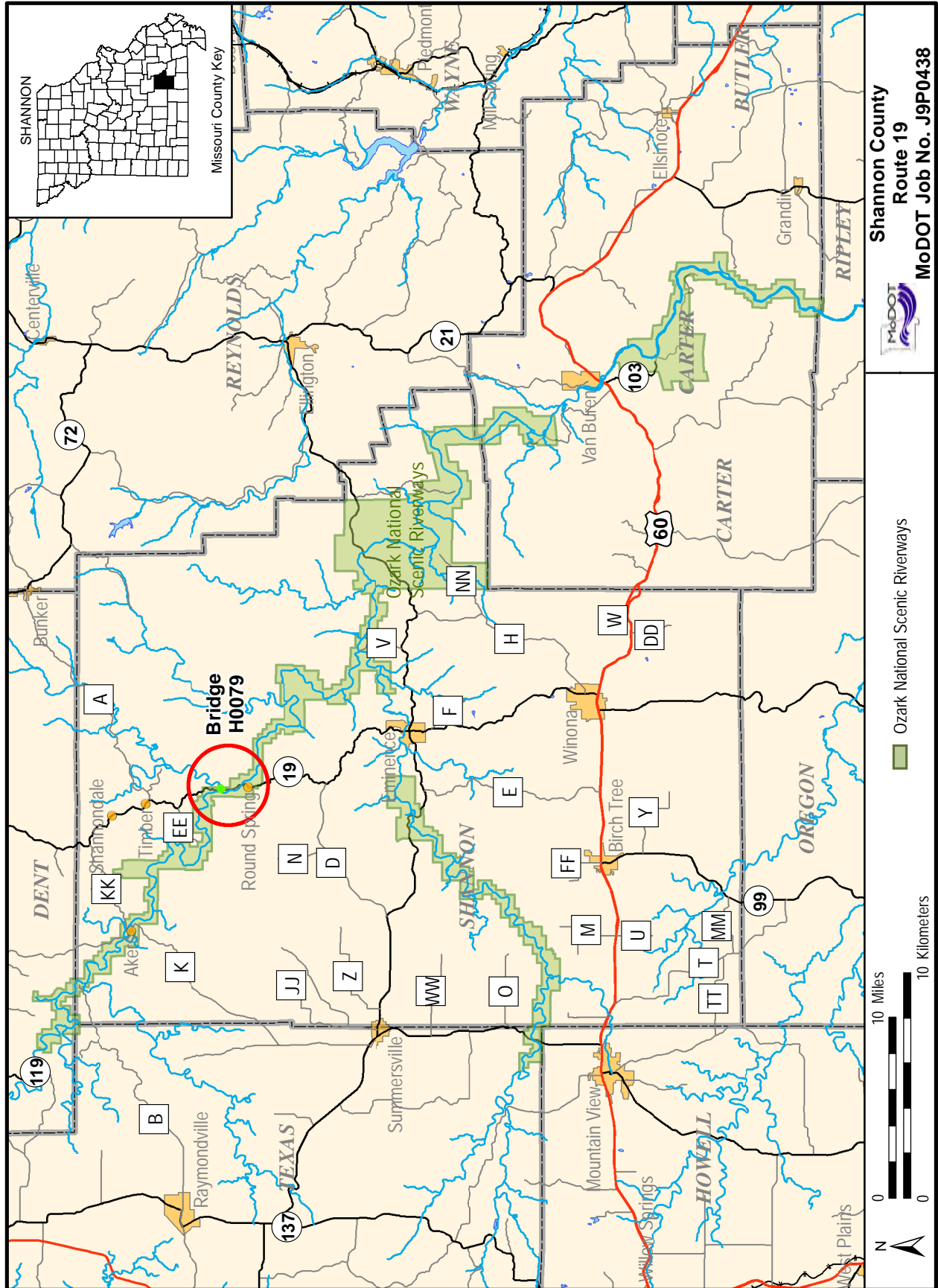


Figure 5: Ozark National Scenic Riverways



Figure 6: Sinking Creek Backcountry Campground

### *Sinking Creek Backcountry Campground*

The Sinking Creek Backcountry Campground (Campground) is near the Current River with access off Route 19 (Figure 6). It contains restrooms, a message board and eight (8) campsites. Each campsite contains a table, grill and lantern post. Campsite occupancy is limited to six people and two vehicles, and to fourteen (14) days duration. The ONSR does not keep statistics on the use of this facility, but describe it as having a very high day use since it provides a river access point.

The ONSR has three tiers of camping facilities available. Developed campgrounds are described as front-country campgrounds. They provide a mix of electric and non-electric sites. Amenities include restrooms, tables, grills, lantern posts, and may include showers, RV dump stations, electrical hook ups, reservation systems and campground hosts. Cluster sites are also available. Costs for a campsite at a developed campground are \$16.00 for a non-electric site, \$19.00 for an electric site and \$35.00 for cluster sites.

Backcountry campgrounds have some basic amenities including restrooms, fire grills, tables and lantern posts. Sites cost \$5.00 a night, except at Powder Mill Campground, which are \$12.00 a night.

Primitive campsites have few or no amenities and are free of charge.

See Figures 7 and 8 for photographs of the Campground.



**Figure 7: Camp Sites, Sinking Creek Backcountry Campground, ONSR**





**Figure 8: Camp Sites, Sinking Creek Backcountry Campground, ONSR**

#### Echo Bluff State Park

To the northeast of the study area, Missouri State Parks developed a new state park, Echo Bluff State Park, which opened July 30, 2016. Echo Bluff State Park contains 410 acres along Sinking Creek (Figure 9). The park features a lodge, cabins, camp sites, a bluff-top shelter, and an amphitheater with tiered seating and a dramatic natural backdrop.

The main entrance to the Park is located approximately 1 mile north of the project off Route 19. Additional access to the southern end of the park is provided at County Road 19-250. The State Park abuts Highway 19. During construction of the project the main entrance will remain open and unobstructed by the project. The south access at County Road 19-250 will have to be closed for a maximum of two weeks during construction with Alternates 2, 3 and 4 to tie the roadway into the existing road.

Although Echo Bluff State Park is in the Project Study Area, none of the alternates require new right of way or temporary or permanent easements from the Park. Since people will still have access to the Park during construction, and the park has an internal circulation system, including a crossing of Sinking Creek, temporarily closing the south access during construction would not adversely affect the resource and therefore would not be a Section 4(f) use.

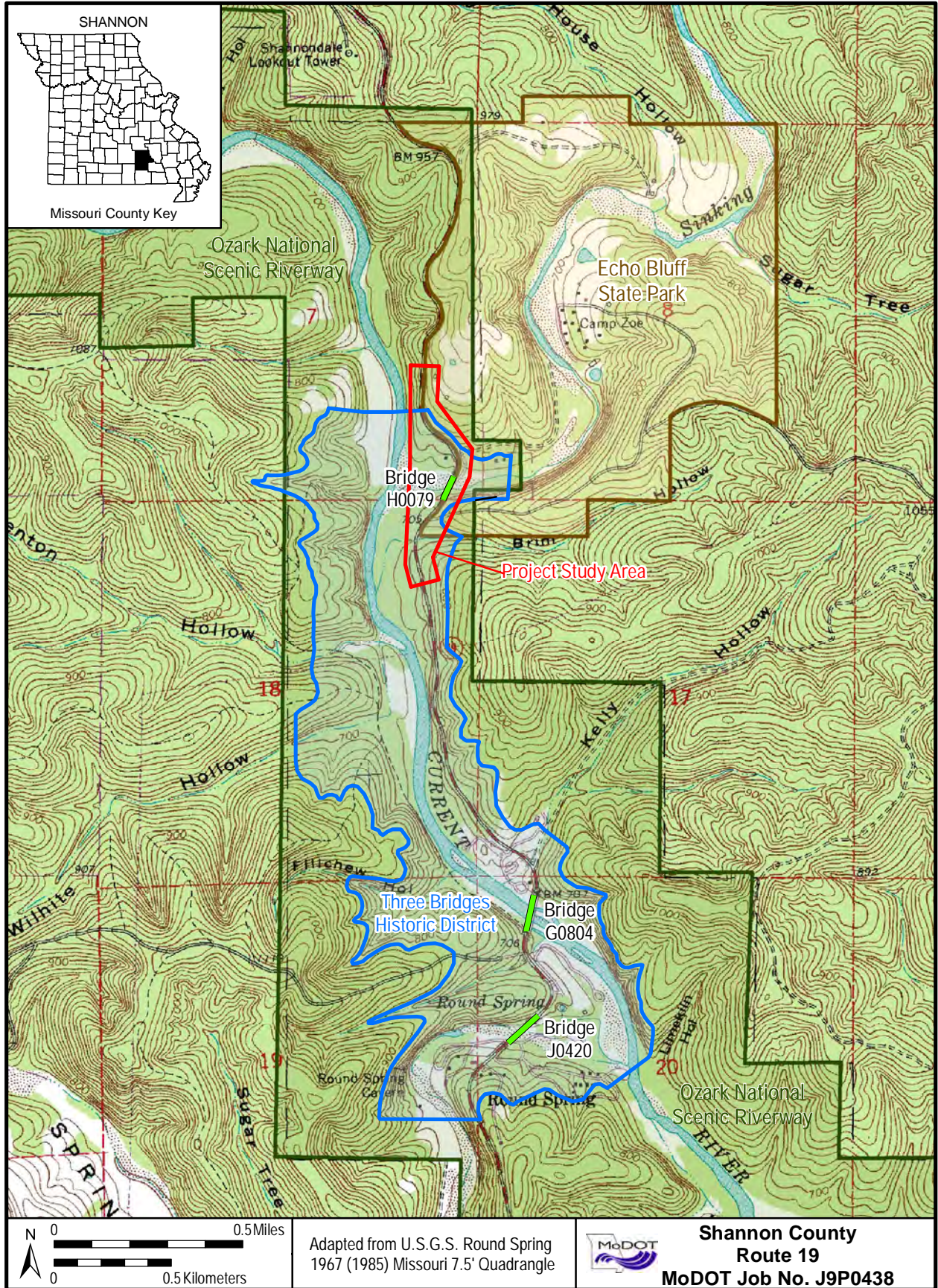
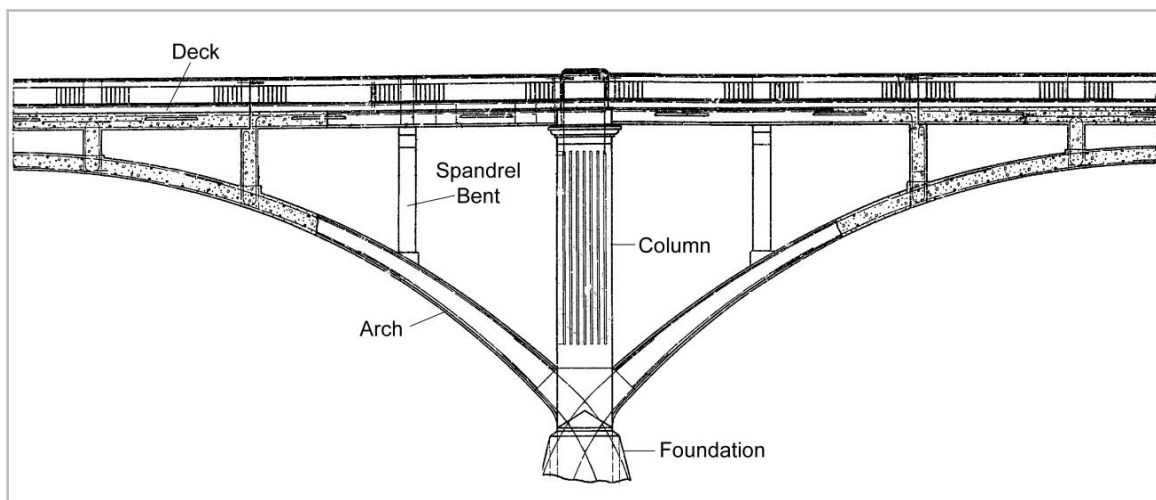


Figure 9: Echo Bluff State Park and Three Bridges Historic District

## *Historic Sites*

### Sinking Creek Bridge (H0079)

The Sinking Creek Bridge (H0079) is a 1926, open-spandrel concrete arch bridge with three 80 foot arch spans and two 40 foot concrete deck girder approach spans (see Figure 1 for location). The bridge has concrete abutments and wing walls. The bridge has a total length of 338 feet. The bridge columns are fluted. Each arch has two ribs with six spandrel bents; the arches are tied together with two arch struts. The bridge has a cast in place concrete deck with an asphalt wearing surface (see Figure 10 for diagram of arch bridge terminology, and Figures 11 and 12 for photographs of the Bridge). The bridge deck is 18 feet wide, curb-to-curb with a concrete balustrade railing with posts at the columns.



**Figure 10: Arch Schematic**



**Figure 11: Sinking Creek Bridge, facing southeast**

Bids for the Sinking Creek Bridge were received on June 26, 1925. The Public Works Construction Company of St. Louis, Missouri was the low bidder for the project and was awarded the contract on July 8, 1925 for a price of \$36,828.00. The bridge was completed on November 15, 1926.

The *Missouri Historic Bridge Inventory* notes that the State Highway Department typically utilized open spandrel designs for concrete arch bridges greater than 80 feet long and filled spandrels were used for shorter bridges. A number of open spandrel concrete arch bridges were constructed in the 1920s and 1930s by the State Highway Department; eleven are extant on state highways. The Sinking Creek Bridge is the oldest of the surviving bridges. The Sinking Creek Bridge is an excellent example of the open spandrel arch construction, with good overall historical integrity. It is eligible for listing on the National Register of Historic Places (NRHP) under criterion C for local significance in engineering. The boundary of the Sinking Creek Bridge is the footprint of the bridge and its abutments and wingwalls.



**Figure 12: Sinking Creek Bridge, facing east, Column detail**

### Three Bridges Historic District

The Three Bridges Historic District (Historic District) is a rural historic landscape adjacent to Route 19 and the Current River in northern Shannon County. The landscape includes three individually eligible concrete arch bridges, the roadway connecting the bridges and the views from the roadway. Route 19 in northern Shannon County was constructed in the mid-1920s. The roadway followed the terrain of the Ozarks, twisting and winding, rising and falling. There are areas where the roadway is cut into the hillsides, exposing native rock formations with drops to the Current River on the other side (see Figures 13 and 14).

Route 19 was designed and constructed shortly after one of Missouri's first State Parks, Round Spring State Park, was created. One of the reasons for the construction of the highway was to provide access to the park as well as to serve local and through traffic. Because of the scenic nature of the area, special care was taken to design a highway and bridges that would blend with the Ozarks native beauty.

The Historic District is eligible for the NRHP under Criteria A and C for local significance in transportation, recreation and engineering, with a period of significance of 1925 to 1964. Character defining features of the district include the roadway and its right-of-way, the Sinking Creek Bridge (H0079), the Current River Bridge (G0804), the Spring Valley Bridge (J0420), the views from the roadway and the views from the Current River.



**Figure 13: Three Bridges Historic District Landscape, near Sinking Creek Bridge**

The boundaries of the Historic District are depicted on Figure 8. The boundary begins approximately 0.25 miles north of the Sinking Creek Bridge and extend to the south approximately two miles to a point approximately 0.25 miles south of the Spring Valley Bridge.

The Historic District encompasses the views from Route 19 on both sides following contour lines of the surrounding bluffs (for a full description of the district, history, significance and boundary description, as well as additional photos of the district, please see *Three Bridges Historic District* in Appendix A).

Character defining features of Route 19, particularly a vista around the curve toward the Sinking Creek Bridge just to the north of the bridge, are within the area of potential effects for this project (Figure 15).

The Historic District could also contain small scale elements associated with recreation and tourism that date from the period of significance, but these have not yet been surveyed and identified. None of these small scale elements exist within the area of potential effects for the Sinking Creek Bridge replacement project.



**Figure 14: Three Bridges Historic District**





Figure 15: Three Bridges Historic District, view leading into Sinking Creek Bridge

Alternate Analysis

Table 1: Section 4(f) Alternates Summary

	Preliminary Analysis	Detailed Analysis	Least Overall Harm Analysis	Reason for Dismissal and/or Least Overall Harm Analysis
<b>Total Avoidance Alternates</b>				
No Build	➔			Dismissed—did not meet the project needs (not prudent)
East Detour Route	➔			Dismissed—did not meet the project needs (not prudent)
West Detour Route	➔			Dismissed—did not meet the project needs (not prudent)
<b>Other Alternates</b>				
Alternate 1	➔	➔	➔	
Alternate 1a (Rehabilitation)	➔	➔		Dismissed—did not meet the project needs (not prudent)
Alternate 2	➔	➔	➔	
Alternate 3	➔	➔	➔	

	Preliminary Analysis	Detailed Analysis	Least Overall Harm Analysis	Reason for Dismissal and/or Least Overall Harm Analysis
Alternate 4				Dismissed during screening due to unacceptable environmental impacts
Alternate 5				Dismissed during screening due to unacceptable environmental impacts

***Alternates Considered***

Total Avoidance

The initial range of alternates considered in the EA includes the No-Build Alternate, rehabilitation of the existing bridge, and five build alternates. The five build alternates and the rehabilitation alternate are shown in Figure 16. Any of the proposed build alternates would satisfy the project purpose and needs and would eliminate the ongoing maintenance needs, expense, and inconvenience to motorists arising from the age and condition of the existing bridge. Each new bridge alternate would meet current MoDOT standards and AASHTO national standards for lane width and vehicular load. Consideration will be given for the inclusion of bicycle/pedestrian facilities within this project.

Two alternates which avoid all Section 4(f) resources are considered only in this Section 4(f) evaluation, the East and West Detour Alternates.

No-Build Alternate

The No-Build alternate would make no improvements to the existing Sinking Creek Bridge. Even if the bridge were reopened as a one lane, load restricted bridge, normal maintenance including pothole patching, pavement replacement, striping, and overlays would only delay the permanent closing of the bridge due to structural deterioration. The No-Build would not correct the concrete spalling or rusting rebar. It would also not correct the shifting occurring in the southern span.

This alternate would leave traffic on the temporary bridge and no construction would be performed on the existing bridge. The temporary bridge is not intended to be a permanent solution for a crossing at Sinking Creek. It was constructed about seven (7) feet lower than the existing bridge, which may make it unreliable during flood events. Because the temporary bridge has columns in the middle of the Sinking Creek channel, scour at the base of the columns is a concern. The columns also present an obstruction that snag debris during flood events.

The temporary bridge requires monitoring following larger rain events and has an increased possibility of being structurally compromised by flooding, requiring closure of Route 19 and a substantial detour for traffic.



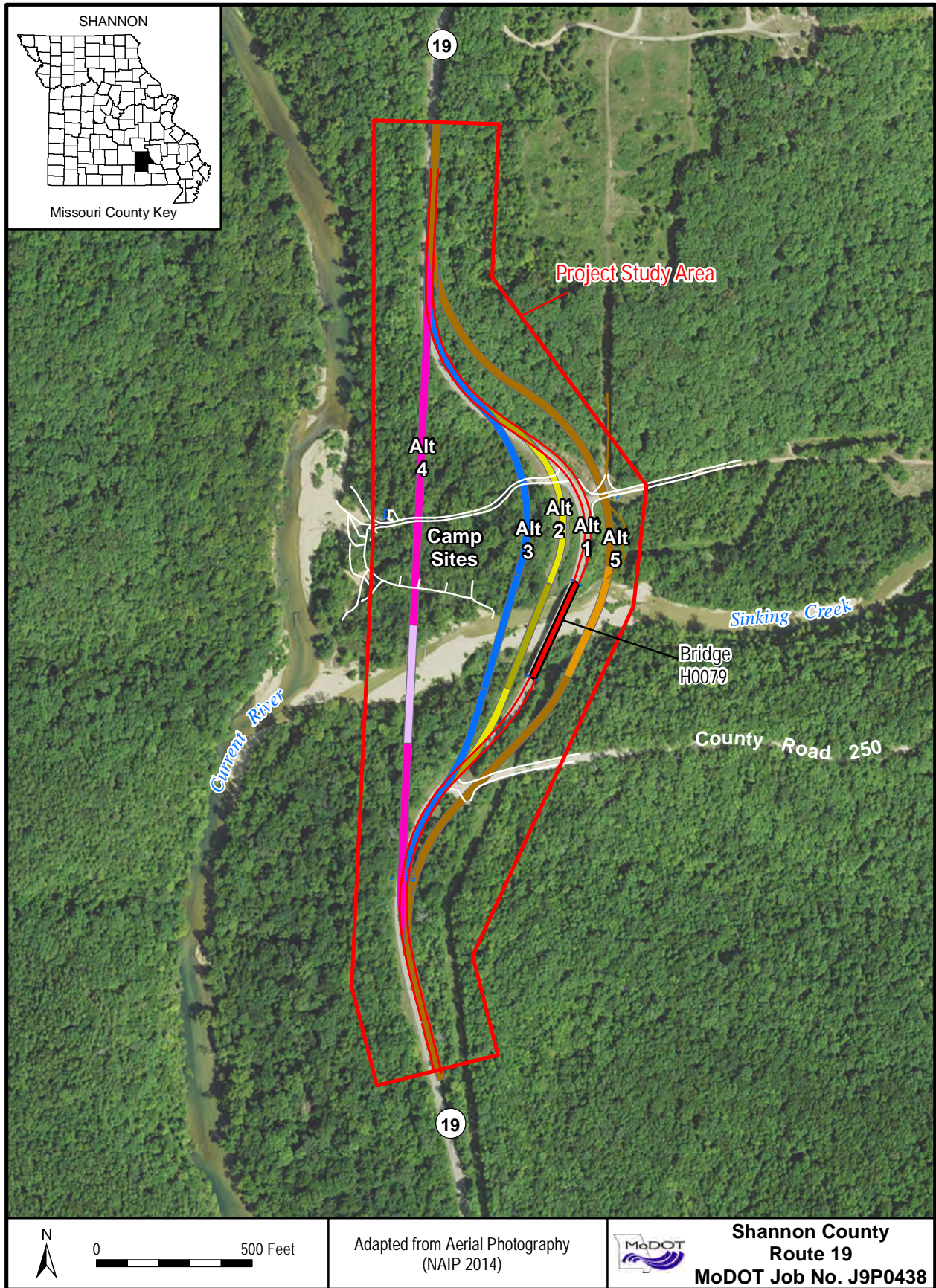


Figure 16: Alternates

For these reasons, the No-Build alternate fails to meet the project purpose of providing a reliable Route 19 crossing over Sinking Creek. It is being retained in the EA as a baseline for comparison with the other alternates evaluated.

#### East Detour Route

The East Detour Route, as shown in Figure 3, would route through traffic on state highways to the east. From Eminence through traffic would detour from Route 19 by taking State Highway 106 east to Ellington, go north on State Highway 21 to U. S. Highway 72 where the detour would turn west. The detour would reconnect at 19 in Salem. This route is 86 miles.

Utilizing the East Detour Route if a person at the north side of the Sinking Creek Bridge wanted to get to the south side of the bridge it would require a drive of 91 miles lasting nearly 2 hours.

The East Detour Route does not provide an efficient crossing of Sinking Creek and does not meet the purpose and need for the project.

#### West Detour Route

The West Detour Route, as shown in Figure 3, would route through traffic on state highways to the west. From Eminence through traffic would detour from Route 19 west on State Highway 106 to Houston, north on U. S. Highway 63 to Licking, east on U. S. Highway 72 to Salem, where the detour would reconnect with Route 19. This detour route is 79 miles.

Utilizing the West Detour Route if a person at the north side of Sinking Creek Bridge wanted to get to the south side of the bridge it would require a drive of 84 miles, lasting nearly 2 hours.

The West Detour Route does not provide an efficient crossing of Sinking Creek and does not meet the purpose and need for the project.

#### Other Alternates

##### Alternate 1

This alternate requires the existing Sinking Creek Bridge to be replaced in its current location with a new two-lane bridge. It would construct approximately 400 feet of new roadway north and south of the new bridge to tie in each bridge end to the existing roadway and allows the temporary bridge to be used to carry traffic while construction is being performed.

This alternate has the least amount of impacts to the surrounding natural resources of any of the build alternates. It also allows for the old roadway and bridge to be used as a contractor staging area since traffic would continue to use the temporary bridge during construction.

For this alternate, a *de minimis* determination has been made for the impacts to the Campground. No new right of way will be required. Most of the construction can be completed with no impacts to the Campground. There would be very minimal disruption, consisting of closing the road into the Campground for a maximum of two weeks, while the new bridge and roadway are tied together. Of the four potential alternates this alternate will have the least amount of impacts to the Campground and ONSR properties.

This alternate would require the removal of the Sinking Creek Bridge and would have an adverse effect on the historic bridge under Section 106 of the National Historic Preservation Act, causing a use of the bridge.

The removal of the historic bridge, a contributing element of the landscape would also be an adverse effect on the historic landscape. In addition, since the roadway on a new bridge would need to be about two feet higher on a new bridge, the approach roads would need to be raised to meet the raised profile of the bridge causing slight alterations to the landscape, these alterations to the roadway engineering would be minor. This alternate would have an adverse effect on the Three Bridges Historic District under Section 106 of the National Historic Preservation Act, causing a use of the district.

#### Alternate 1a (Rehabilitation)

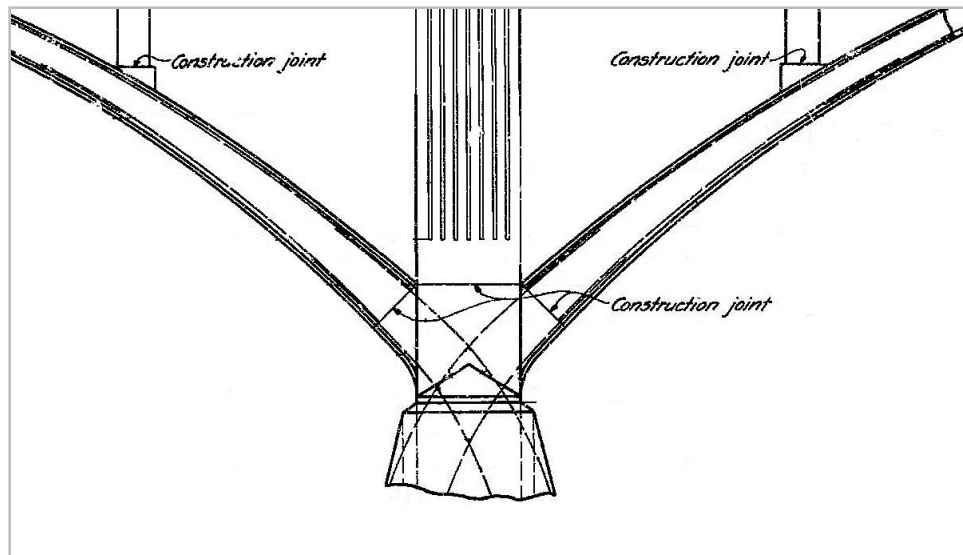
This alternate would rehabilitate and widen the existing bridge by removing all the floor system, spandrel bents and columns. A new deck, pre-stressed concrete girders and column bents would be installed. The girder bridge would have a 40' wide deck, curb-to-curb, with two 20' traffic lanes. The existing spandrel arch ribs and column footings would remain in place. With this proposed alternate, the spandrel arch ribs would no longer contribute to the structural capacity of the bridge. Traffic would remain on the temporary bridge during construction.

This alternate has constructability and structural concerns. In order to widen the existing bridge and correct its structural deficiencies the column and spandrel bents must be replaced with stronger columns and girders added to span between the new columns. The new columns and girders would carry the traffic loads and would remove these loads from the arches. The existing footings, underneath the columns, and arches would remain. The arches would maintain the historical appearance of the bridge.

There are serious concerns of being able to replace the columns without damaging the arches, since the arches tie into the columns. Also, when the loads are removed from the arches, freeze/thaw cycles will most likely cause the arches to deteriorate at a quicker rate because they were designed to stay under a loaded condition. There are also concerns about the ability of the footings to carry the load of the girder spans. Excessive loads would shorten the life span of the 1926 footings. Since the arches are tied into the footings as well, they would be difficult to replace without damaging the arches. Figure 17 shows the location of the construction joints between the spandrel bents and arches that would have to be cut, as well as the arches and columns and arches and footings.

Concrete testing was completed on the Sinking Creek Bridge in 2002. Chloride content in the spandrel arches was determined to be more than twice the threshold for corrosion which will continue to accelerate the deterioration of the historic bridge's architectural significant design.

Because of these constructability and structural concerns, the bridge rehabilitation proposed with Alternate 1a will not meet the project's purpose and need of providing a safe, reliable long-term crossing. With an extensive rehabilitation the structural deficiencies of the bridge would be removed.



**Figure 17: Construction joints at arches, columns, footings and spandrel bents**

As with Alternate 1, a *de minimis* determination is anticipated to be made for Alternate 1a for the impacts to the Campground. No new rights of way will be required and this alternate would cause only a very minimal disruption to accessing the campground while the new bridge and roadway are tied together. Out of the four potential alternates, this alternate, along with Alternate 1, will have the fewest impacts to the campground and ONSR properties.

The rehabilitation would have an adverse effect on the bridge since it would cause the removal of the superstructure and columns of the historic bridge replacing it with concrete girders with the existing concrete arches left in place in non-structural capacity for aesthetic purposes. It has not been determined if the arches would be stable when not carrying load. The loss of historic material and workmanship by the removal of the superstructure and columns would have an adverse effect on the integrity of the bridge because of the changes to the engineering characteristics of the bridge. This alternate would have an adverse effect on the Sinking Creek Bridge under Section 106 of the National Historic Preservation Act, causing a use of the bridge.

The rehabilitation alternate would have no adverse effect on the historic landscape since the views from the roadway and bridge would remain largely unchanged, and the view from the stream would remain unchanged. The characteristic views of the bridge, the three arch spans, would remain largely unchanged visually. The surrounding landscape would also remain unchanged by the rehabilitation alternate. This alternate would have no adverse effect on the Three Bridges Historic District under Section 106 of the National Historic Preservation Act.

#### *Rehabilitation for Non-motorized Purposes*

Giving the bridge to another party for preservation and non-motorized use has also been studied. To determine if there were parties who would be willing to take over ownership and maintenance of the Sinking Creek Bridge the availability of the bridge was marketed, following the guidance of MoDOT's *Historic Bridge Marketing Plan*. The bridge was made available for ninety (90) days. Press releases about the availability of the bridge were prepared by the MoDOT Southeast District and were carried by local, regional and national news outlets.

The bridge was direct marketed to local governments, agencies and historical societies. The bridge was marketed to all the adjacent property owners, who are consulting parties in the Section 106 process. All the Section 106 consulting parties received copies of the direct market campaign including the ONSR, Missouri State Parks, the LAD Foundation/Pioneer Forest, the Friends of the Current River, Shannon County, Shannon County Historical Society, Missouri Preservation, the Corps of Engineers, Historic Bridge Foundation, and Nathan Holth the webmaster for [Historicbridges.org](http://Historicbridges.org).

A flyer was posted to the Missouri Preservation list serve. The bridge was marked as “available for reuse” on [Bridgehunter.com](http://Bridgehunter.com). The bridge was posted to MoDOT’s *Free Bridges* webpage.

In addition to general marketing efforts, conversations were held with the Shannon County Commission, Missouri State Parks and ONSR about taking over the bridge, if it were rehabilitated to pedestrian standards first. The Commissioners expressed great interest in developing an ATV trail that could use the bridge, but decided not to pursue the project and told MoDOT they would not take over the bridge.

There was considerable interest generated by the campaign, with numerous inquiries received about how the bridge could be reused. Despite the interest no proposals for reuse were received. MoDOT continued to work with the ONSR and Missouri State Parks, but both have indicated that they do not wish to add the bridge to their inventories. The trail system Missouri State Parks is developing within Echo Bluff State Park will utilize a bridge within the park, which has been constructed as part of the development of Echo Bluff State Park and which will be owned and managed by Shannon County for five years. ONSR has stated they do not wish to add maintaining the bridge to their obligations.

MoDOT has no desire to maintain an abandoned bridge. The bridge would not connect to an existing trail system or parts of a community. The location of the bridge near a recreational facility makes leaving this bridge in place without a new use a particular concern. To keep the bridge in place would require placing barriers on the sides of the bridge to keep people from jumping or falling off or throwing items off the bridge. The usage of Sinking Creek would not require the bridge to have a fully enclosed cage barrier, but curved barriers similar to those on the Eminence Bridge (Figures 18 and 19).

In addition, fencing would have to be placed to limit access for people to climb on the arches, potentially falling or jumping from them.

Barriers would have to be placed at both ends of the bridge to discourage people from trying to park on the bridge. The approach roadway leading to the bridge would have to be removed to prevent this. Since there is a Current River access in the Campground, MoDOT would not want to create a location for day users of the River to think they could park their vehicles and boat trailers creating hazards near the highway.

Since no provision for parking can be allowed on east side of Route 19, those wishing to be on the bridge would have to utilize the parking at the Campground. Leaving the bridge in place would encourage people to cross the highway. People would walk across Route 19, which has a

55 mile-per-hour speed limit in an area with poor visibility. This is not a safe condition for drivers or pedestrians.



**Figure 18: Eminence Bridge, deck view**



**Figure 19: Eminence Bridge, side view**

If the bridge were to remain in place, MoDOT would have to enter into an agreement with the neighboring ONSR and/or Missouri State Parks for policing activities on the bridge otherwise a situation could be created in which only the Missouri Highway Patrol and Shannon County Sherriff Department would have authority to act on the Bridge.

Since no proposal for the reuse of the bridge has been received, and MoDOT does not wish to abandon the bridge for safety reasons, preserving it for non-motorized use is not feasible and prudent. Therefore, retention of the historic bridge is not considered as part of the Alternates discussed below.

### Alternate 2

This alternate constructs approximately 1,400 feet of new roadway and requires constructing a new bridge that would replace the existing Temporary Sinking Creek Bridge in the same alignment. It would raise the vertical alignment of the new Bridge higher than the temporary one and traffic would be temporarily rerouted. Potential traffic detour options exist. One is an approximate 90-mile long detour along state highways. The western detour would be along Route 60 to Route 17 in Mountain View to Route 32 in Licking to Route 19 in Salem. The eastern detour would be Route 60 to Route 21 near Van Buren to Route 72 near Centerville to Route 19 in Salem. The other is reopening the existing, weight-limited Sinking Creek Bridge to non-truck traffic and rerouting truck traffic on a nearby paved County Road that goes through the new Echo Bluff State Park located just east of the proposed bridge site. Shannon County has expressed approval for this detour route, if necessary. Use of the County Road would be about a 2 mile detour. Neither detour option is ideal. The 90-mile long detours would be a financial hardship to the many commercial and tourism industries that depend on Route 19, would be a potential two hour inconvenience to local travel, delay school bus travel, and would hinder response time for emergency vehicles. The other detour routes large trucks through the state park which would disrupt campers and other recreational activities as well as deteriorate the county road through the park.

*A de minimis* determination has been made for Alternate 2 for the impacts to the Campground and ONSR property. This alternate would require the purchase of 2.1 acres of new right of way from ONSR in order to construct the bridge on the new alignment. This alternate would be the second least impactful to ONSR properties and would have the same impact to the campground as the other alternates.

Although the Sinking Creek Bridge could remain with this Alternate, since no viable proposal for reuse has been received the bridge would not be retained. Since the historic bridge would be removed this alternate would have an adverse effect on the historic bridge under Section 106 of the National Historic Preservation Act, causing a use of the bridge.

The alternate would have an adverse effect on the Historic District since it would change the alignment of the roadway, removing historic materials of the bridge and roadway and changing the engineering of the roadway. It would also introduce non-historic elements into the landscape through the new roadway and bridge and alter the views from the roadway, pulling the roadway away from the rock cuts on the south end of the bridge which would harm the overall integrity of

the landscape. This alternate would have an adverse effect on the Three Bridges Historic District under Section 106 of the National Historic Preservation Act, causing a use of the district.

### Alternate 3

This alternate constructs approximately 2,400 feet of new roadway and requires the existing Sinking Creek Bridge to be replaced just to the west of Alternate 2. The temporary bridge would be used to carry traffic while construction is being performed.

The elevation of Route 19 as it crosses the side road that serves as access to Current River and camping area is 20 feet to 25 feet higher than the existing access road. This will result in a new access road connection that will be much steeper than existing and impact a wide area of forested land. The steeper roadway would be much more difficult to negotiate than the existing.

A *de minimis* determination has been made for Alternate 3 for the impacts to the Campground and ONSR property. This alternate would require the purchase of 3.93 acres of new right of way from ONSR in order to construct the bridge on the new alignment. This alternate would have the most impact to ONSR properties and would place the new structure closest to the existing campsites.

Although the Sinking Creek Bridge could remain with this Alternate, since no viable proposal for reuse has been received, the bridge would not be retained. This alternate would have an adverse effect on the historic bridge under Section 106 of the National Historic Preservation Act, causing a use of the bridge.

The alternate would have an adverse effect on the historic landscape since it would change the alignment of the roadway, significantly reducing the curve to the north of Sinking Creek, changing the engineering of the roadway and removing historic material. It would also change the views from the roadway since the view of Sinking Creek and the bridge would be altered, as would the view of the rock cuts to the south of Sinking Creek. It would introduce non-historic elements into the landscape through the introduction of a non-historic bridge and would remove historic landscape features including trees and the rock cut. This alternate would have an adverse effect on the Three Bridges Historic District under Section 106 of the National Historic Preservation Act, causing a use of the district.

### Alternate 4

Alternate 4 would construct a new structure to replace the Sinking Creek Bridge to the west of the other alternates. Alternate 4 is the furthest alternate from the existing location and the closest in proximity to the Current River. Alternate 4 is the straightest of the proposed alignments and would require approximately 2,600 feet of new roadway to be constructed to connect to existing Route 19. Traffic, truck and non-truck, would still be able to use the temporary bridge during construction of this alternate.

This alternate has severe environmental impacts on the ONSR including the backcountry campground. Route 19 would be 25 to 30 feet higher than the existing access road to the Campground creating a substantially steeper access and would necessitate the construction of a new access road. At least two campsites would be eliminated with this alternate and the restroom



building would likely need to be relocated. The forested area surrounding the realigned Route 19 would be substantially impacted by tree clearing.

The hydrology of Sinking Creek and the Current River would be affected by this alternate. Because of the proximity of the confluence of Sinking Creek and the Current River, the roadway fill would have the potential of creating excess backwater, flooding properties upstream of the Current River. The alternative would require a longer bridge structure, since the Sinking Creek valley expands as it approaches the confluence with the Current River. Building a structure in the location could alter the natural deposition of materials and sediment into the Current River.

This alternate has adverse effects on the Three Bridges Historic District including changes to the engineering, altering character defining views from the roadway and the removal of the historic bridge.

Due to the severity of the environmental impacts, it is not being carried forward for further study.

#### *Alternate 5*

Alternate 5 would build a new structure to the east from the existing Sinking Creek Bridge. To construct at this location would require that 3,100 feet of new roadway to be built to connect back with the existing road and utility relocations. Traffic would still be able to use the temporary bridge during the construction of this alternate.

This alternate has severe environmental impacts on the environment and would have safety concerns. The alternate would include excavation north and south of the Sinking Creek crossing approximately 35 to 40 feet deep as measured from ditch bottom. Tree clearing would be swaths up to 250' wide, although with the use of retaining walls, this could be reduced to 100 to 150 feet with additional costs and visual impacts. The alternate would require the relocation of a recently installed 3-phase overhead/underground power line. The existing county road, 19-250, just south of Sinking Creek currently has a steep grade and has just been surfaced with a full depth pavement to serve as the southern entrance for Echo Bluff State Park. This alternate would require the reconfiguration of a portion of the county road, resulting in closure for a period of time and a steeper grade. The grade could present safety concerns, especially during snow and ice events.

This alternate has an adverse effect on the Three Bridges Historic District including the affecting the engineering of the roadway and bridge, landscape associated with rock cuts, and views from the roadway.

Due to the severity of the environmental impacts, it is not being carried forward for further study.

#### ***Alternate Summary***

The total avoidance alternates, the No-Build and the detour alternates, do not meet the purpose and need for the project and are not being carried forward for additional analysis. There are no feasible and prudent total avoidance alternates.

Alternate 1a, the rehabilitation alternate, is not prudent from an engineering perspective, and is not being carried forward for additional study. Rehabilitating the bridge for non-motorized use is

not feasible since no new owner has been identified to take over the bridge, and leaving it in place creates a safety hazard as discussed previously. Two build alternates, 4 and 5, are being dismissed due to the severity of impacts on the environment.

Alternates 1, 2 and 3 would have *de minimis* impacts on the ONSR and the Campground. The ONSR has been consulted about this finding and concurred with the recommendation on April 25, 2016. Copies of correspondence regarding this finding can be found in Appendix B.

Three build Alternates 1, 2 and 3 are being carried forward for further study. A summary of the use of each of these alternates is shown in Table 2.

**Table 2: Impact Summary for Reasonable Alternates**

	<b>Alternate 1</b>	<b>Alternate 2</b>	<b>Alternate 3</b>
<b>Right of Way (from ONSR) (new acres)</b>	0	2.10	3.93
<b>Section 4(f) use of ONSR</b>	<i>de minimis</i>	<i>de minimis</i>	<i>de minimis</i>
<b>Section 4(f) use of Sinking Creek Backcountry Campground</b>	<i>de minimis</i>	<i>de minimis</i>	<i>de minimis</i>
<b>Effect on Sinking Creek Bridge (H0079)</b>	Adverse/ use	Adverse/ use	Adverse/ use
<b>Effect on Three Bridges Historic District</b>	Adverse/ use	Adverse/ use	Adverse/ use

### **Least Overall Harm Analysis**

An assessment of the least overall harm of alternatives is required when complete avoidance of all Section 4(f) properties is not feasible and prudent and all remaining alternates involve some use of Section 4(f) properties. The purpose of the analysis is to identify the alternate that causes the least overall harm in light of the preservation purposes of the Section 4(f) statute.

Three build alternates are being carried forward for further analysis to determine least overall harm, Alternates 1, 2 and 3.

### ***Factors for Determining Least Overall Harm***

There are seven factors to consider when determining least overall harm. Each is discussed below for each alternate and how it applies to the Section 4(f) properties.

#### **1. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)**

Alternative 1 would have minimal impacts on the ONSR. It would not require tree removal and would not move the highway closer to existing recreational facilities. Visual impacts from the construction of the new bridge could be mitigated through design considerations and materials treatments to lessen visual impacts on the ONSR.

Alternate 2 would convert the existing temporary easement into a permanent easement, incorporating 2.10 acres of the ONSR into the transportation system. Minimal new tree removal might be required, which would be mitigated by planting new trees. The roadway and bridge would be higher than the temporary roadway and bridge, which would bring fill closer to the campground, but none of the camp sites would be directly impacted. The raised highway and bridge would have visual impacts on the campground and Sinking Creek; these could be

mitigated through design considerations and treatments to lessen the visual impacts on the ONSR.

Alternate 3 would incorporate 3.93 acres of ONSR into the transportation system. Extensive tree removal would be required for construction of the roadway and to connect the road into the Campground to Route 19. New trees could be planted to compensate for the removal of existing trees. While none of the camp sites would be directly impacted by the construction, the new roadway would be within 15' of the nearest camp site, affecting the desirability of the site for use. To mitigate for this, the Campground would need to be reconfigured, which is not desired by ONSR or by MoDOT since it would have additional environmental impacts.

For both Alternates 2 and 3 the existing Route 19 alignment could be given to ONSR as partial mitigation for the right of way taking. If the roadway was removed and landscaping introduced into the area, it would alter the historic landscape and views, having an adverse effect on the historic district under Section 106.

Alternate 3 has the greatest impact on two NRHP potentially eligible archaeological sites which would be eligible for the NRHP under criteria D, for their potential to yield information, SHPO concurred with the eligibility of these sites on June 20, 2016. Alternate 1 would have no adverse effect on these sites, Alternates 2 and 3 would have an adverse effect on the sites. These impacts would have to be mitigated.

Each of the alternates would use the historic bridge and the Three Bridges Historic District. These effects could be mitigated through measures developed through the Section 106 consultation process. The consultation process is ongoing, and a Programmatic Agreement (PA) has been developed which contains mitigation measures for adverse effects on the Three Bridges Historic District and for the Sinking Creek Bridge. The consultation process is summarized in the Information to Accompany the PA (the PA is located in Appendix C).

2. What is the relative severity of the harm to the protected activities, attributes, or features that qualify each Section 4(f) property for protection?

All three alternates would require the removal of the Sinking Creek Bridge, having an adverse effect on the historic property.

Alternate 1 would have an adverse effect on the Three Bridges Historic District because of the removal of a contributing resource of the district and impacting a significant view from Route 19 to the historic bridge. Because the alternate keeps the alignment of the highway the impact is not as severe as that of Alternates 2 and 3.

Alternates 2 and 3 would have an adverse effect on the Three Bridges Historic District because of the removal of the contributing historic bridge, the change in the engineering of the roadway and the changes in views from the roadway. The changes caused by Alternate 3 would be more severe than those caused by Alternate 2 because of the greater change in the engineering of the roadway and the views from the roadway. In addition, the relationship of the roadway to historic landscape features such as the rock cuts would be altered with both Alternates 2 and 3.

While all three alternates have *de minimis* use of the ONSR and the Campground, Alternate 1 is the least impact since it does not require new right of way from ONSR, tree removal or impact the camp sites. Alternate 2 would require the existing temporary easement to be converted to a permanent easement or into right of way, it would include tree removal due to the need to raise the temporary road and the roadway and bridge would be closer to the campground than with alternate 1, but not closer than with the existing temporary bridge. Alternate 3 requires the most right of way from ONSR and moves the road alignment to within 15 feet of the camp site closest to the road. Alternate 3 would require tree removal for the construction of the roadway and for the connection of the Campground road to Route 19.

All three alternates would have a visual impact on the ONSR through the change in the views to the bridge from Sinking Creek and the Current River. This change is greatest with Alternate 3, which places the new element closest to the Campground and closest to the Current River.

3. What is the relative significance of each Section 4(f) property?

The ONSR is a unit of the National Park Service, serving residents of the State of Missouri and the Ozarks region. Efforts to turn the Current, Jack’s Fork and Eleven Point Rivers into a national recreation area started in the 1950s, following threats to dam the free-flowing Current River in the 1930s and 40s. The rivers and springs had popular public and private recreation destinations since the 1920s. Missouri had several State Parks in the area, including Big Spring, Alley Spring and Round Spring. Several private resorts, health spas and camps were also in the area, including Camp Zoe, a girls’ camp which is the location of the new Echo Bluff State Park. In 1964 the ONSR was established as the first federally protected national rivers. The designation provided the impetus for the enactment of the National Wild and Scenic Rivers Act of 1968. It remains a major tourist attraction for the region. The ONSR draws visitors nationally and is of national significance.

**Table 3: Relative Significance of Resources**

<b>Resource</b>	<b>Significance</b>
ONSR	National
Three Bridges Historic District	Regional
Sinking Creek Bridge	Local
Sinking Creek Backcountry Campground	Local

The Three Bridges Historic District is eligible for listing on the NRHP for local significance in transportation, engineering and recreation. The events that influenced the construction of the highway and bridges were driven by statewide forces and the district represents these forces and how they were applied on a regional scale. The bridge is one contributing resource in the district with views from the highway also being a contributing element. The removal of the bridge will have an adverse effect; however the district will still remain eligible for the remaining characteristics that qualify it for inclusion in the NRHP. The district containing multiple concrete arch bridges and the connecting roadway is more significant than the individual bridge that is part of the district, since it conveys a larger part of the transportation and engineering heritage of the state.

The Sinking Creek Bridge (H0079) is individually eligible for listing on the NRHP for local significance in engineering. The bridge is the oldest surviving open spandrel concrete arch bridge on the state highway system.

The Sinking Creek Backcountry Campground is a small facility within the ONSR that has evolved as the creek and the Current River have shifted. It is a popular day use area.

4. What is the view of the officials with jurisdiction over each Section 4(f) property?

The ONSR has consistently stated a preference for Alternate 1 since it would minimize impacts on the natural and cultural resources of the ONSR. This opinion was expressed in an October 16, 2015 letter to MoDOT providing comments on the Purpose and Need of the EA. During the March 28, 2016 Section 106 consultation meeting, Superintendent Lawrence Johnson expressed preference for Alternate 1 stating that it would have the least impact on the resources that ONSR is directed to protect. He also stated that the ONSR would convert the existing temporary easement being utilized for Alternate 2 into a permanent easement, but would not grant a new permanent easement.

The State Historic Preservation Office (SHPO) has also expressed preference for Alternate 1 since it would have the least overall harm on the Three Bridges Historic District.

5. What is the degree to which each alternative meets the purpose & need for the project?

Each of the alternates meets the purpose and need of the project to a similar degree in providing a safe, efficient crossing of Sinking Creek on Route 19.

6. What is the magnitude of any adverse impacts to the resources not protected by Section 4(f)?

As discussed in the EA, each of the alternates has similar, and relatively equal, impacts on the environment. Other than the resources protected by Section 4(f), there are no substantial adverse impacts on natural resources.

7. What are the differences in costs among the alternatives?

Alternate 1 is the least expensive option to construct, since it uses existing right of way and requires less new roadway construction. Alternates 2 and 3 are higher in cost due to higher right of way and roadway costs. These costs are summarized in Table 5.

**Table 4: Cost Summary for Alignment Alternates**

<b>Costs</b>	<b>Alternate 1</b>	<b>Alternate 2</b>	<b>Alternate 3</b>
Construction	\$2,800,000	\$3,000,000	\$3,300,000
Right of Way	0	\$17,000	\$31,000
Total	\$2,800,000	\$3,017,000	\$3,331,000
Right of Way (New) Acres	0	2.10	3.93

\*Figures based on a haunched plate girder span

Replacing the bridge with a standard pre-stressed I-girder with a 28 foot roadway would cost approximately \$1,398,220.

A haunched plate girder span could be constructed of weathering steel and the girder spans would have a slight curve to them (see Figure 20 for an example constructed over the Jacks Fork River on Texas 17 in the ONSR).



**Figure 20: Example of a Haunched Plate Girder: Buck Hollow Bridge, Texas County**

The haunched girder with a 28 foot roadway would cost approximately \$1,934,870 including a railing similar to the example above.

Constructing a new open spandrel concrete arch was also considered. An open spandrel concrete arch would be similar in appearance to the historic bridge, but would have a 28 foot roadway. It would cost approximately \$2,954,505.

Table 3 summarizes the construction costs of the three bridge design alternates.

**Table 5: Summary of Bridge Design Option Costs**

	<b>Remove Existing</b>	<b>New Bridge*</b>	<b>Approach Slab</b>	<b>Total</b>
<b>Pre-Stressed I-Girder</b>	\$142,800	\$1,234,295	\$21,125	\$1,398,220
<b>Haunched Plate Girder</b>	\$142,800	\$1,770,945	\$21,125	\$1,934,870
<b>Open Spandrel Concrete Arch</b>	\$142,800	\$2,790,580	\$21,125	\$2,954,505

\*Based on 28 foot Roadway and 350 foot Bridge Structure

Although construction of a new concrete arch bridge was studied, the bridge cost more than twice as much as a standard prestressed I-girder span and \$1 million more than the haunched plate girder span. This difference in cost would pay for a small bridge replacement in many places in Missouri, which could eliminate another critical condition bridge on the state highway system. There are currently over 640 critical condition bridges on the state highway system. MoDOT considers spending the money for a concrete bridge to be excessive at this time, given the number of critical condition bridges. In an effort to balance cost and aesthetics at this location, a haunched plate girder span has been discussed, with the consulting parties and the public, as a good balance.

In addition to cost issues, a new concrete arch bridge would take twice as long to construct given the specialty of the bridge type. MoDOT would have to contract out the design, which would increase the design time for a new bridge, and the construction would take longer. Since the temporary bridge has already been in place for a year, delaying construction of a permanent replacement increases the maintenance costs on the temporary bridge and increases the likelihood of the temporary bridge being closed due to flooding or structural issues.

Of the three bridges in the Three Bridges Historic District, the Sinking Creek Bridge is the most isolated. The Current River Bridge and the Spring Valley Bridge are more visible in the ONSR and in closer proximity to one another. The Current River Bridge serves as a landmark for many users of the River and has a pedestrian bridge just downstream that serves as an ideal place for viewing that bridge. Roadways at Round Spring lead under the Spring Valley Bridge, also providing prime views of the bridge. Because these bridges are more visible, MoDOT is willing to conduct feasibility studies on the rehabilitation and preservation of these two bridges as part of the mitigation for this project. If they cannot be rehabilitated, MoDOT is willing to commit to considering additional aesthetic mitigation measures if they are to be replaced.

***Summary of Least Overall Harm***

Alternate 1 has the least overall harm on Section 4(f) properties. It requires no right of way from ONSR, has the least impact on the Three Bridges Historic District, is the least expensive of the options being studied, and is preferred by the Officials with Jurisdiction over the Section 4(f) properties.

Alternate 2 would have greater impacts on the ONSR and on the Three Bridges Historic District than Alternate 1 and is slightly more expensive to construct.

Alternate 3 would have the greatest impact on the ONSR; it also comes close to the Sinking Creek Backcountry Campground and has the most effect on the Three Bridges Historic District. It is the most expensive of the alternates being studied, requiring the construction of the most new roadway.

The Least Overall Harm factors are summarized in Table 6.

**Table 6: Least Overall Harm Summary**

<b>Factors for Determining Least Overall Harm</b>	<b>Alternate 1</b>	<b>Alternate 2</b>	<b>Alternate 3</b>
<b>1. Ability to Mitigate Adverse Impacts</b>	<ul style="list-style-type: none"> <li>• Aesthetic bridge treatments</li> </ul>	<ul style="list-style-type: none"> <li>• New trees</li> <li>• Aesthetic bridge treatments</li> <li>• Possible donation of MoDOT right of way</li> </ul>	<ul style="list-style-type: none"> <li>• New trees</li> <li>• Aesthetic bridge treatments</li> <li>• Possible donation of MoDOT right of way</li> </ul>
	Historic properties can be mitigated through Section 106	Historic properties can be mitigated through Section 106	Historic properties can be mitigated through Section 106

<b>Factors for Determining Least Overall Harm</b>	<b>Alternate 1</b>	<b>Alternate 2</b>	<b>Alternate 3</b>
<b>2. Relative Severity to Each Section 4(f) property</b>	<ul style="list-style-type: none"> <li>• 0 acres new right of way from ONSR</li> <li>• Maximum two week closure of Sinking Creek Campground to tie-in road connections</li> </ul>	<ul style="list-style-type: none"> <li>• 2.10 acres new right of way from ONSR</li> <li>• Maximum two week closure of Sinking Creek Campground to tie-in road connections</li> </ul>	<ul style="list-style-type: none"> <li>• 3.93 acres new right of way from ONSR, mostly forested</li> <li>• Steeper access road to Sinking Creek Campground</li> <li>• w/in 15' of closest camp site</li> <li>• Approximately two week closure of Sinking Creek Campground to tie-in road connections</li> </ul>
	Least adverse effect to Historic District	Greater adverse effect to Historic District than Alt. 1	Greatest adverse effect to Historic District
<b>3. Relative Significance of each Section 4(f) property</b>	Least impact to most significant resources	Moderate impact to most significant resources	Greatest impact to most significant resources
<b>4. Views of Officials with Jurisdiction</b>	ONSR prefers SHPO prefers		
<b>5. Degree to which meets Purpose &amp; Need</b>	Meets Purpose & Need	Meets Purpose & Need	Meets Purpose & Need
	All alternates are substantially equal in meeting the Purpose & Need for the project.		
<b>6. Magnitude of other impacts</b>	No significant impacts to non-4(f) resources	No significant impacts to non-4(f) resources	No significant impacts to non-4(f) resources
	All alternates are substantially equal in impacts to non-Section 4(f) resources		
<b>7. Differences in Cost*</b>	\$2,800,000	\$3,017,000	\$3,331,000

\*Figures are based on a haunched plate girder span

### **Coordination with Officials with Jurisdiction**

In addition to the coordination described below, the U. S. Department of the Interior, the ONSR, and the Missouri SHPO were provided the opportunity to review and comment on the Draft Section 4(f) Evaluation, as provided for in 23 CFR 774.5.

The Department of the Interior (DOI) provided several comments on the Draft Section 4(f) Evaluation (see Appendix D). The comments indicated that ONSR had not concurred with the de minimis recommendation for impacts to the ONSR—the ONSR correspondence in Appendix B shows that ONSR concurred with the recommendation on April 25, 2016.



The DOI commented on the two archaeological sites mentioned as possibly being affected by Alternate 3. The eligibility of these sites was evaluated in consultation with the SHPO and the sites were determined potentially to be eligible under Criterion D for information potential only and do not have value for preservation in place and would be further tested if affected by the preferred alternative, and are therefore not subject to Section 4(f) protection.

The DOI would not comment that all measures to minimize harm to historic properties had been considered until the PA was executed. A Draft Programmatic Agreement circulated with the Draft Section 4(f). The PA was not substantively altered between the draft and the executed versions, and the mitigation measures were not altered, other than changing the stipulations into active voice. The DOI has been provided a copy of the executed PA for consideration.

The Fish and Wildlife Service, in the DOI response, commented on the presence of forested habitat and federally listed endangered bat species within the project area. Fish and Wildlife Service requested that during the development of the EA, that FHWA/MoDOT consider the possibility of bats roosting on the underside of the Sinking Creek Bridge.

A copy of the Draft Section 4(f) Evaluation was provided to the ONSR, who did not provide comments on the document.

The Missouri SHPO indicated during conversation with MoDOT that they would not be commenting on the Draft Section 4(f) Evaluation since they had been participating in the Section 106 consultation process.

### ***Section 106 Consultation Process***

The Section 106 consultation process was initiated in May 2015 when FHWA and MoDOT approached the Missouri State Historic Preservation Office (SHPO) about the development of a Programmatic Agreement (PA) for the Three Bridges Historic District, the Sinking Creek Bridge and the development of procedures for future projects for the Current River and Spring Valley Bridges. In June 2015 the Advisory Council on Historic Preservation (Council) and other consulting parties were invited to participate in consultation about the project and the development of the PA. Tribes with an interest in the area were invited to participate in consultation about the Sinking Creek project.

A consultation meeting to discuss the Purpose & Need and introduce the Section 106 process and the alternates being studied was held on September 9, 2015. A site visit to the project area was conducted on January 14, 2016. A consultation meeting on alternates and beginning to develop mitigation measures was held on March 28, 2016. The consultation process has resulted in the development of a PA for the bridges in the Three Bridges Historic District. Consultation will continue throughout project development to minimize impacts on the Three Bridges Historic District and provide the consulting parties with input into the bridge design. The consultation process is discussed in the Information to Accompany the PA located in Appendix C. The PA which was executed on August 9, 2016, was not substantively altered from the version which was circulated with the Draft Section 4(f) Evaluation for agency comment.

### ***Coordination with the National Park Service***

The ONSR is a Cooperating Agency under the NEPA and is participating in the development and review of the EA for the project. The ONSR participated in the Agency Scoping Meeting on July 13, 2015 and voiced concerns about the cumulative impacts of bridge replacements on highway 19. After a review of the anticipated Section 106 procedures for the project the ONSR said that their concerns would be addressed through that process. The ONSR also participated in the public meeting on October 5, 2015.

ONSR is a consulting party in the Section 106 process and has participated in consultation meetings and review of information for that process.

### **Conclusion**

Based on the facts presented, a total avoidance of Section 4(f) properties is not feasible and prudent.

Alternate 1, which has been identified as the preferred alternate, has the least overall harm on Section 4(f) properties in light of the statute's preservation purpose, and it incorporates mitigation measures to minimize harm to Section 4(f) properties according to the definition of "all possible planning".<sup>11</sup> Alternate 1 is preferred by the officials with jurisdiction: the ONSR and by the SHPO.

FHWA and MoDOT are working with the ONSR and SHPO on the design of a replacement bridge that will minimize visual impacts on the ONSR and the Three Bridges Historic District. Efforts will be made to minimize impacts to the Sinking Creek Backcountry Campground, and MoDOT will work with ONSR to minimize disruption during construction and when the access roadway needs to be closed to tie into Route 19.

Alternate 1 has the least use of the ONSR and the Sinking Creek Backcountry Campground since it will have a *de minimis* use of these resources requiring no right of way from the Park and only temporary impacts to the Campground when the roadway is being tied into the existing roadway.

Utilizing the existing roadway alignment has the least overall effect on the Three Bridges Historic District since it does not change the historic alignment of the highway or the right of way of the highway. Although the views from the highway will be altered somewhat by the replacement of the bridge these effects can be mitigated through measures developed through the Section 106 consultation process.

The FHWA and MoDOT have worked with the SHPO and other consulting parties to minimize the effects of the project on historic sites through the Section 106 consultation process, which is captured in the Programmatic Agreement, developed for the Three Bridges Historic District. MoDOT will work with the SHPO and ONSR to implement mitigation measures for the bridge and historic district that are suitable and publically accessible as specified in the agreement.

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<sup>11</sup> 23 CFR 774.17, all possible planning definition.

FHWA and MoDOT have incorporated all possible planning into the project to minimize impacts to Section 4(f) resources. Coordination between FHWA/MoDOT and the ONSR and the SHPO, the Officials with Jurisdiction over the Section 4(f) resources, will continue through the design and construction of the new bridge.

**Appendix A:  
Three Bridges Historic District**

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# Three Bridges Historic District

## Shannon County, Missouri

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Karen L. Daniels, Senior Historic Preservation Specialist  
Missouri Department of Transportation  
March 2016

### Description

The Three Bridges Historic District consists of an Ozark rolling hills landscape adjacent to the Current River and its tributaries in northern Shannon County, Missouri. Running through this landscape is Missouri Highway 19 (Route 19), an asphalt surface highway built into the hillside, which winds through the landscape. Route 19 crosses three concrete arch bridges in the district at Sinking Creek, the Current River and at Spring Valley.

Route 19 runs approximately two miles through the district. It has two ten-foot traffic lanes with two-foot earth shoulders. The highway winds and twists through the district following the topography of the Ozarks (views of the roadway and associated landscape are located in Appendix A). The roadway has a rock base and asphalt surface. The roadway is posted at 55 miles-per-hour, but first-time visitors find the speed limit hard to achieve. Chevrons mark the curves, signs mark each of the bridges, and various directional signs are located within the district. The highway was constructed in section between 1925 and 1927, originally as a gravel road, and improved with an asphaltic surface in 1941, 1968, 1974 and 1992 (MoDOT 2015).

The Sinking Creek Bridge (H0079) is a 1925, open-spandrel concrete arch bridge with three 80' arch spans and two 40' concrete deck girder approach spans (see Figure 1). The bridge has concrete abutments and wing walls. The bridge has a total length of 338'. The bridge columns between the arches have incised ribs. Each arch has two ribs with six spandrel bents; the arches are tied together with two arch struts. The bridge has a cast in place concrete deck with an asphalt wearing surface. The bridge is 18' wide, curb-to-curb with a concrete balustrade railing with posts at the columns. (Photos of the bridges are located in Appendix B).



**Figure 1: Sinking Creek Bridge (2015)**

In 2015 a temporary bridge was constructed just to the west of the Sinking Creek Bridge (H0079T) (Figure 2). The bridge consists of nine 40' steel girder spans and has an overall length of 360' 11". The bridge has steel pile bents and piers with steel cap, struts and cross bracing. The bridge has a mesh deck and a width of 23' 11" curb-to-curb. A three beam guardrail serves as railing.



**Figure 2: Temporary Bridge at Sinking Creek (2015)**

The Current River Bridge (G0804) is a 1924, closed spandrel concrete arch bridge with three 130' main spans, two 60' approach spans and a U-type abutment (Figure 3). The bridge has a total length of 601'. The columns between the arches project slightly beyond the surface of the closed spandrel. The bridge is 18' wide, curb-to-curb, with a concrete balustrade railing over the arch spans and a solid concrete railing over the abutments, with posts at the columns.



**Figure 3: Current River Bridge (2015)**

The Spring Valley (or Round Spring) Bridge (J0420) is a 1930, open-spandrel concrete arch with a 151' main span and three concrete deck girder approach spans on the north end and four concrete deck girder approach spans on the south end, and a total length of 522' (Figure 4). The

bridge has concrete abutments and wing walls. The bridge has a 45 degree skew. The main span is a 151' two rib arch with twelve spandrel bents and six arch struts. The approach spans are concrete girder spans with concrete pile bents with concrete caps and struts. The approach spans are 54'-52'-51' on the north side and 51'-52'-52'-54' on the south side. The bridge has a cast in place concrete deck with a bituminous surface. The bridge is 20' wide, curb-to-curb with a concrete balustrade railing, with posts at the bents.



**Figure 4: Spring Valley Bridge (2015)**

Also within the right-of-way are rock cuts which were necessary for the construction of Route 19 (Figure 5). These rock cuts expose the thin layer of top soil and thick layers of stone. Natural weathering has occurred on the exposed stone since the 1920s, leaving gaps, jagged edges and smoothed surfaces.



**Figure 5: Representative example of rock cuts along Route 19 near Sinking Creek (2015)**



A variety of native trees are planted close to the right-of-way. Trees include deciduous trees that allow views during the winter but enclose the highway when the trees are leafed out, pines that provide a sense of enclosure year round, and flowering trees. Much of the area had been logged and replanted in the late nineteenth and early twentieth centuries, so the trees are mature and dense.

Views from the highway constitute an important part of the landscape in the Three Bridges Historic District and are a contributing feature of the district (Figure 6). Views tend to be constricted on one side of the highway since the highway was built into the hillside. Views to the hillside tend to be tree covered hillside or rock cuts, except where the highway crosses streams or hollows, where the view expands.



**Figure 6: Views from Route 19 (2015)**

Contributing elements of the historic district include the Route 19 alignment including the roadway and right-of-way, the Sinking Creek Bridge (H0079), the Current River Bridge (G0804), and the Spring Valley Bridge (J0402) as well as the views from Route 19. Views from the Current River are also contributing resources. There may be additional contributing resources within the district, including buildings related to early recreation or tourism resources.

The temporary bridge at Sinking Creek (H0079T) is non-contributing. There may be additional non-contributing resources.

A comprehensive survey of all the resources within the district has not been conducted.

### **History & Significance**

The Three Bridges Historic District lies in northern Shannon County and encompasses the roadway, viewshed from the roadway and bridges (Sinking Creek, Current River and Round

Spring/Spring Valley) from just north of the Sinking Creek Bridge to just south of the Round Spring Bridge (see boundary map in Appendix C). The Three Bridges Historic District is eligible for listing on the National Register of Historic Places (NRHP) under criteria A and C for local significance in transportation, recreation and engineering, with a period of significance of 1925-1964. In addition, each of the three bridges individually eligible for listing on the NRHP for engineering significance, with a period of significance of its date of construction.

Shannon County lies in the heart of the Missouri Ozark Mountains. Route 19 winds through the county providing scenic vistas and the rivers in the area have provided recreational opportunities for more than a century. The tourism industry centers on the Current River. In 1964 over 134 miles of the upper Current River was incorporated into the Ozark National Scenic Riverways (ONSR), the first unit of the National Park Service to protect a river (ONSR nd: 4). The Sinking Creek Bridge is located within the ONSR.

Route 19 through Shannon County north of Eminence was constructed in the mid-1920s to improve access to the region, and to provide access to Round Spring State Park (MSHC 1926, MSHC1928a, MSHC 1928b, MSHC 1931, MSHD 1924, MSHD 1925a, MSHD 1930). Tourism was a booming industry in the Missouri and in the Ozarks, with tourist spending growing from \$61 million in 1926 to \$98 million by 1928 (MSHC 1928b: 378). Route 19 was a gravel road with an 18 foot roadway (MoDOT 2015). Because Route 19 connected to the Round Spring State Park just south of the Current River, the designers noted the need to consider the aesthetics of the highway approaching the park, especially from the north. The road was designed to fit into the terrain, as was typical of roadways of the era, but aesthetic considerations also influenced the curvature of the highway to provide vistas of the bridges and the Current River and notes to the Bridge Division were made to ensure that the bridges were aesthetically pleasing (MSHD 1925b; MSHD 1927).

Route 19 has a twenty foot roadway with earth shoulders that follows the topography of the mountains and curves around natural features. Between the Dent County line and Eminence, grading and excavation was done between 1925 and 1928 and it has given an aggregate surface in 1941. Although it was under construction prior to the passage of Proposition 3, Route 19 was a priority after its passage (MSHC 1926, MSHC 1928, MoDOT 2015).

In October 1923 Commissioners from Dent, Shannon and Oregon Counties appeared before the State Highway Commission asking that the road be started as soon as possible. Commissioner D. L. Bales of Shannon County stated, “the construction of this road would open up virgin territory and would mean much to that part of the state” (MSHC 1923: 2). In addition, he particularly urged the construction of a bridge over the Current River as quickly as possible. The Chief Engineer of the State Highway Department said that work was progressing on plans for the highway, and that funds had been allocated for the bridge. The Department was looking at suspension bridge designs, or possibly acquiring girders from a railroad to use for the bridge (MSHC 1923: 2-3).

Advertising for Proposition 3, sponsored by the Missouri Good Roads Committee, identified “five cardinal features” of the bond program:

- Finishing the 7640 mile State Highway System 4 to 6 years earlier than would be possible without the bonds;
- Building a network of Farm-to-Market roads in every County;
- Relieving traffic congestion around large cities;
- Refunding Counties and Civil Subdivisions for roads they constructed for the State Highway System; and
- Building new mileage for the state system, including making interstate and Park connections (MGRC 1926).

A map showing the progress of the State Highway System as part of the advertisement shows that none of Route 19 had been started in Shannon County (MGRC 1926).

Scenic views along Route 19 in Shannon County were frequently shown in the *Biennial Reports* of the Missouri State Highway Commission (Daniels 2015). The Fifth and Sixth *Biennial Reports* identify ten projects between the Dent County line and Eminence (including clearing done by State Maintenance forces), including three bridges (the Current River Bridge, the Sinking Creek Bridge, and the Bridge at Eminence) (MSHC 1926, MSHC 1928b, MoDOT 2015). The Seventh Biennial Report describes the Spring Valley Bridge, the only one of the three bridges to be described in the Bridge Bureau Report (MSHC 1930a).

Table 1 below shows the projects identified on Route 19 in the Fifth and Sixth *Biennial Reports*, listed in order from north to south, from the Dent County line to Eminence. The Spring Valley (Round Spring) Bridge is not included in the list, as is a section of highway that would be constructed during the next biennial period (1929-1930) (MSHC 1926: 217; MSHC 1928b: 277).

**Table 1: Route 19 Projects from Fifth and Sixth Biennial Reports**

<b>Project Number</b>	<b>Type</b>	<b>Length</b>	<b>Contractor</b>	<b>Date of Completion</b>	<b>Cost*</b>
19-28	30' Excavation	4.515 miles	Naney Bros. & Co.	1 September 1927	\$27,356.36
19-29	30' Excavation	4.394 miles	Naney Bros. & Co.	1 September 1927	\$24,910.13
19-33	20' Excavation	2.244 miles	A. A. Davis Construction Co.	12 March 1926	\$146,459.34
19-32	Bridge [Sinking Creek]		Public Works Construction Co.	15 November 1926	\$40,334.54
19-34	Bridge [Current River]		M. E. Gilloiz	29 July 1925	\$73,005.04
19-37	30' Excavation	3.788 miles	Carte-Harlin Construction Co.	30 August 1927	\$5,738.45
19-38	30' Excavation	3.419 miles	Carte-Harlin Construction Co.	30 August 1927	\$17,891.57
19-38	Bridge [Eminence]		Thomas & Sampson	9 June 1926	\$5,947.66**
19-40	20' Excavation	2.383	A. A. Davis Construction	7 March 1928	\$88,671.45

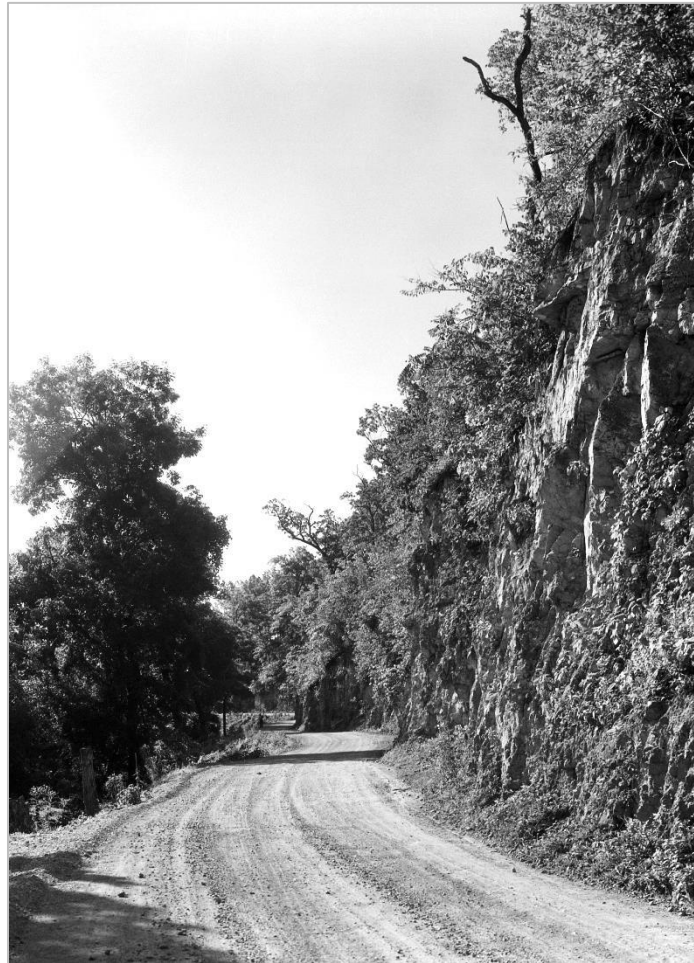
Project Number	Type	Length	Contractor	Date of Completion	Cost*
		miles	Co.		
	Clearing, Leveling & Grading		State Maintenance Forces	31 December 1927	\$35,671.45

\*Cost through December 31, 1928

\*\*Bridge not complete

Because the highway was connecting to a state park and tourism being a major industry, the vistas provided by the roadway were a concern during the design. The first roadside park created in the state highway system is located on Route 19 south of Eminence (outside this project area). Views of the Current River and its tributaries and of the concrete arch bridges are provided as the road curves through the mountains (Daniels 2015).

Figures 7 and 8 are State Highway Department photographs showing the roadway shortly after construction. Although the photographs were not necessarily taken within the project area, the scenes are representative of Route 19 through Shannon and Oregon Counties where the highway was built into the hillside.



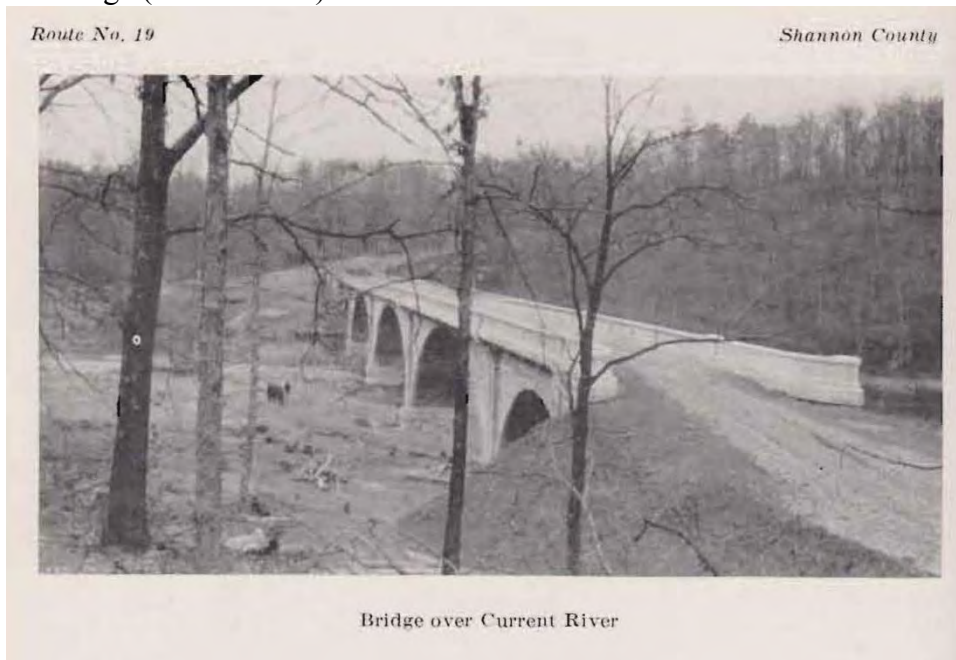
**Figure 7: Route 19 in the late 1920s**



**Figure 8: Route 19 in the late 1920s**

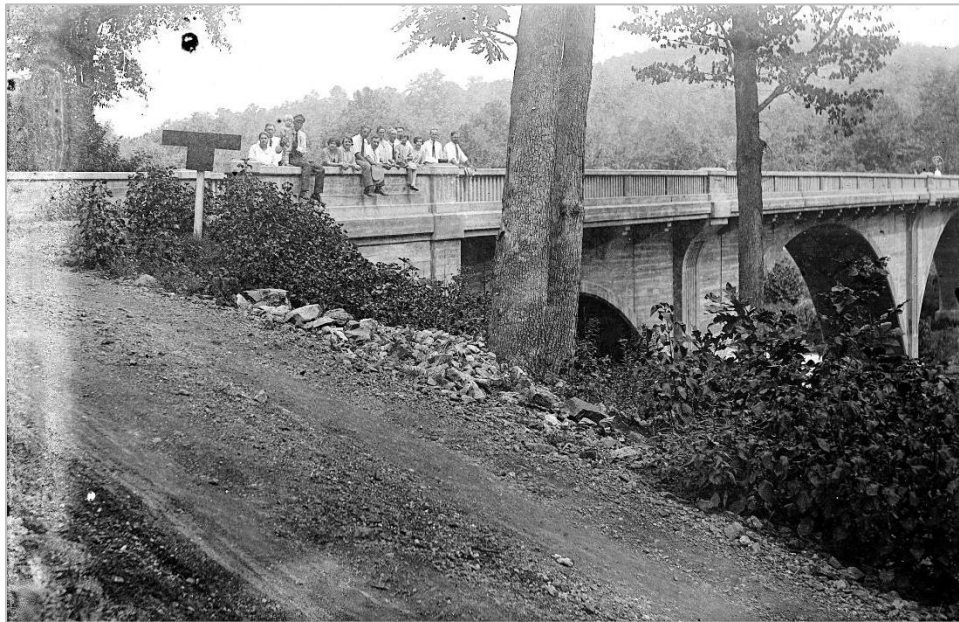
In 1930, as the highway was being constructed, the major landowner in Township 30 North, Range 4 West, was the Current River Lumber Company, which owned half of the land. Three other timber companies owned substantial acreage within the Township as well, the Missouri Lumber and Manufacturing Company, the Bunker Culler Lumber Company and the Smalley Tie and Timber Company (Hixson 1930).

Figure 9 below is from the *Fifth Biennial Report* and shows the highway as it approaches the Current River Bridge (MSHC 1926).



**Figure 9: Current River Bridge, ca. 1925**

Construction of Route 19 encouraged tourist development. In 1929 Camp Zoe, a youth camp, was developed off Route 19 along Sinking Creek (Camp Zoe 2015). A photograph taken in the late 1920s shows a group of revelers on the Current River Bridge (Figure 10) (Gill nd).



**Figure 10: Group on Bridge over Current River near Round Spring**

In 1930 the Commission described its roadside beautification program in the Seventh Biennial Report. Attractive highways are desired by users of the road and the adjoining property owners. Replacing trees removed when highways are constructed is a duty of the department. Improved roadways are “a magnet in drawing tourists by the thousands to Missouri. The tourist traffic will bring new money to the communities along the roadsides, and will stimulate their development” (MSHC 1930a: 427). Since Missouri is unsurpassed in scenic beauty, it is proper to enhance the drawing power of that beauty by appropriate roadside landscaping and respect for native growth along the highway. Scenic vistas are revealed to road users by careful trimming and cutting of trees (MSHC 1930a: 427-9).

In 1932, with the state highway system nearing completion, the Commission reported on tourist traffic for the first time. During the summer of 1931 a traffic census and survey had been completed revealing that tourism had resulted in \$21 million in money coming into Missouri during the season. The average tourist spent just over \$50 per vehicle during their stay in Missouri, which averaged just over seven days (MSHC 1932: 438-9).

The Works Progress Administration (WPA) *Guide to the “Show-Me” State*, described Route 19 as penetrating “a rugged, half-wild area divided into almost equal parts by the Current River. There is a rough, strong beauty in the mountains and cliffs and narrow valleys. There is much color, too, in the folk life of the section. Along the byways of the route, protected by the rocky hills, are folkways that elsewhere have passed from the American scene” (WPA 1998: 545). The 1940 Shannon County Highway Map (Figure 11) illustrates the winding nature of the highway (MSHD 1940).

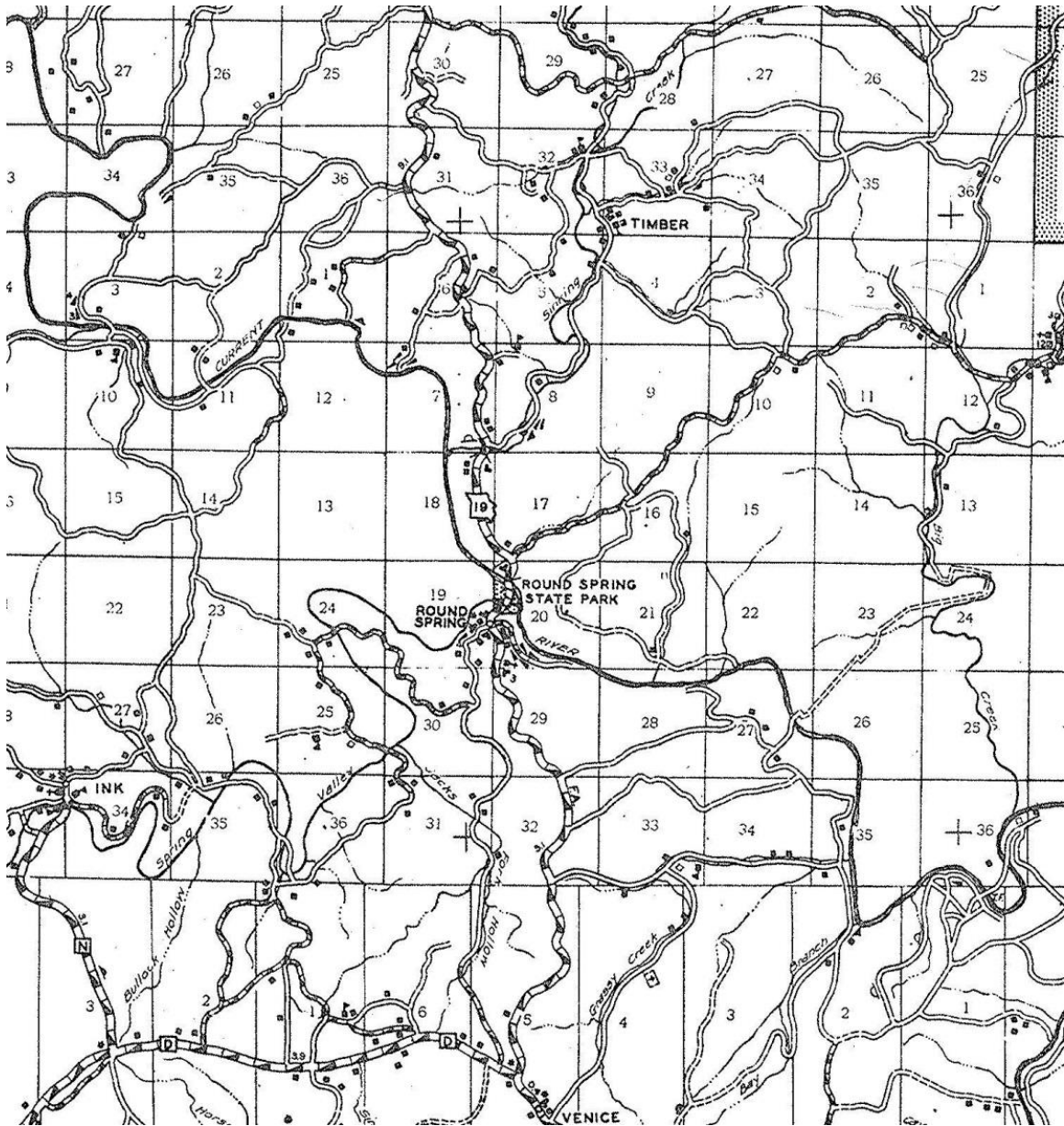


Figure 11: Shannon County Highway Map Detail (1940)

The *Guide* describes the Current River as one of the scenic fishing steams of the state, winding a turbulent path through “the most rugged sections of the Ozarks” (WPA 1998: 549). The *Guide* continues, “Scenic beauty, and good fishing for black bass, salmon, and goggle-eye have made the river a popular float stream, and outfitting and conducting floats are local means of livelihood. A float trip is made under the supervision of guides in one or more boats, depending on the number of persons in the party. The trips usually begin at Round Spring and last two to six days. The time is spent drifting leisurely with the current and fishing in well-known holes. At night, camps are made on the sand bars which inevitably lie opposite the bluffs that mark sharp bends in the river” (WPA 1998: 549).

Round Spring, a State Park at the time of the *Guide*, is described as a small recreational center built about Round Spring, a spring rising from a basin about 80 feet in diameter. The spring

waters were described as having a soft, bluish color and a surface so still that it was necessary to look at a gauge to determine that the water was actually flowing (WPA 1998: 549).

The 1945 U. S. Geological Survey Round Spring Quadrangle shows several tourist related developments along the Current River and its tributaries including Camp Zoe on Sinking Creek, Camp Alton and the Round Spring State Park on the Current River and the Round Spring Caverns (USGS 1945). Round Spring Caverns was a tourist cave with a 14-foot waterfall which formed a stream through the cave. The cave was a well-developed tourist cave with paths and bridges (WPA 1998: 549-550). The Caverns was open to the public in 1932 as a show cave and was incorporated into the ONSR in 1972 (Showcaves.com 2015). The Alton Club was developed between 1937 and 1945 as a summer retreat for employees and customers of the Alton Box Board Company, and reflects rustic architecture popularized by the National Park Service. More than 1,000 acres contain sports and recreation venues, club house, lodge, dormitories and service buildings (Love 2004).

In the 1930s the U. S. Army Corps of Engineers had been given authority to dam the Current River; however, opposition from conservation groups and local citizens, and World War II delayed the plan. Governor Forest Smith added his support to the opposition in 1949, voicing support for keeping the Current River in a free-flowing, natural condition. The proposal to dam the river was withdrawn the following year (ONSR nd: 7).

In 1956 state and federal agencies called for the creation of a national recreation area for the Current, Jacks Fork and Eleven Points Rivers. The study was conducted in 1960. A series of bills to preserve the Ozark Rivers were introduced in Congress between 1960 and 1963, but differing opinions about appropriate management of the rivers doomed them to failure. In 1964 the Missouri delegation united behind a proposal for the Current and Jacks Fork rivers and legislation creating the Ozark National Scenic Riverways was passed and signed by Lyndon Johnson (ONSR nd: 7-8).

#### *Sinking Creek Bridge (H0079)*

Bids for the Sinking Creek Bridge were received on June 26, 1925. The Public Works Construction Company of St. Louis, Missouri was the low bidder for the project and was awarded the contract on July 8, 1925 for a price of \$36,828.00 (MSHC 1925). The bridge was completed on November 15, 1926 (MSHC 1926).

The concrete abutment and wing walls can be seen in a photograph taken during the construction of the bridge (Figure 12) (Gill 1926).





Figure 12: Sinking Creek Bridge during construction, (Gill 1926)

#### *Current River Bridge (G0804)*

In 1923 representatives from Dent, Shannon and Oregon County appeared before the Missouri State Highway Commission asking that construction of Route 19 through the counties be expedited, particularly a bridge across the Current River. The representatives were told that plans for Route 19 were proceeding and construction would occur when funding was available (MSHC 1923). Bids for the Current River Bridge were received on January 29, 1924. M. E. Gillioz was the low bidder for the project which included a 600' bridge. The project was awarded on February 13 for \$69,260.14 (MSHC 1924). The project was completed on July 29, 1925 for a cost of \$73,005.04 (MSHC 1926).

#### *Spring Valley/Round Spring Bridge (J0420)*

Planning for the Spring Valley Bridge began in 1929 when a field check of the site was made by the Bureau of Bridges (MSHD 1929). The preliminary layout in 1930 indicated that the location of the structure in Round Spring State Park was “aesthetically suited for an arch and due regard was given to the appearance of the structure from this point of view” (MSHD 1930a). The original design was changed to provide lesser slopes at the north and south ends of the bridge. The designers noted that the route required “extreme grades and curvatures” (MSHD 1930a).

Bids for the project were received on April 29, 1930. C. F. Johnson & Sons of Buffalo, Missouri was the low bidder for the project and was awarded the contract on May 13, 1930 for a bid of \$145,623.58 (MSHC 1930b).

The Missouri Historic Bridge Inventory notes that the State Highway Department typically utilized open spandrel designs for concrete arch bridges greater than 80 feet long and filled spandrels were used for shorter bridges. A number of open spandrel concrete arch bridges were constructed in the 1920s and 1930s by the department. The Sinking Creek Bridge was identified as a well-preserved, representative example of the open spandrel arch construction and

recommended as potentially eligible (Fraser SHAN02). The Spring Valley Bridge is identified as a superlative example of the type with strong integrity of design and setting, and with the second longest span length in the state (Fraser SHAN 03). The Current River Bridge is an unusual example of a multi-span closed-spandrel arch bridge, and the 130' main spans are the longest filled spandrel arches on the state system. It was described as a technologically significant representative of concrete design of the 1920s (Fraser SHAN 01).

The Three Bridges Historic District encompasses three significant concrete arch bridges in a short distance on a roadway filled with extreme grades and curvatures and with exceptional views of the Current River and its tributaries. When completed, Route 19 provided exceptional opportunities for scenic driving as well as improving access to state parks and private clubs.

### **Recommended Boundary**

The recommended boundary of the Three Bridges Historic District recognizes the significant transportation corridor and the scenic driving experience associated with Route 19 and the view from the roadway and the Current River. The views from the roadway and river change with the seasons, but the view in the winter, when there is maximum visibility, was considered.

The northern boundary is approximately 0.25 miles north of the north end of the Sinking Creek Bridge, where Route 19 intersects with one of the parcels owned by the Ozark National Scenic Riverways (ONSR). This is at the apex of the curve preceding the curve onto the Sinking Creek Bridge, just before the bridge becomes visible from the roadway. The view to the west from this point extends across the Current River to the far bank, and on the east side hugs the 800' elevation line of the Mountain into which the roadway was built.

The eastern boundary continues along the elevation line above Route 19, extending at Sinking Creek to where the bluff on the northeast side turns to the north again, crosses Sinking Creek and follows the 800' contour line on along the east side to Kelly Hollow. At Kelly Hollow the boundary follows the bluff line east to an arbitrary point 250' along the bluff, turns south to cross the bluff and follows the 800' contour line to the projection of the bluff just north of Limekiln Hollow, where the boundary turns southwest to form the southern boundary.

The western boundary follows the 820' contour line above the western bank of the Current River from the northern boundary to a point where it intersects with the southern boundary just south of Round Spring.

The Southern Boundary is approximately 0.25 miles south of the south end of the Round Spring Bridge, at a point on the Route 19 tangent before the bridge is visible heading north on the roadway. The southern boundary extends west to connect to the western boundary in a fairly straight line since there is a sharp grade change between the roadway and the valley floor. It extends to the east along the contour lines until it intersects with the eastern boundary at the Current River near Limekiln Hollow.

The boundary is illustrated on the map in Appendix C.

The boundary includes the significant bridges, the roadway connecting them, the views from the roadway and the Current River and extends north of the Sinking Creek Bridge far enough north to include the first vista that includes the Sinking Creek Bridge and extends far enough south to include the first vista that includes the Spring Valley Bridge. The boundary is compact in including three historically significant bridges that are closely related by geography and construction time period, other nearby areas of Route 19, while sharing similar roadway geometry do not share the characteristic bridges.

It is possible that the boundary could extend along Route 19 further north and south, outside the area of potential effects for this project and that additional survey along Route 19 might identify additional area(s) that could be included within the boundaries.

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- 1925 “Minutes of a Special Called Meeting of the State Highway Commission Held at the Jefferson Hotel, St. Louis, Missouri, on Wednesday, July 8, 1925,” 8 July 1925, as held by the Secretary to the Commission, Missouri State Highway Commission, Jefferson City, Missouri.
- 1926 *Fifth Biennial Report of the State Highway Commission of Missouri for the Period Ending December First 1926*, Jefferson City, Mo: Hugh Stephens Press.
- 1928a “Plan and Profile of Proposed State Road,” Shannon County, Route 19, Section 19-33, Design Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1928b *Sixth Biennial Report of the State Highway Commission of Missouri for the Period Ending December First 1928*, Jefferson City, Mo: Hugh Stephens Press.
- 1930a *Seventh Biennial Report of the State Highway Commission of Missouri for the Period Ending December First 1930*, Jefferson City, Mo: Botz Printing and Stationery Co.
- 1930b “Minutes of the Meeting of the State Highway Commission, held in Jefferson City, Missouri, May 13, 1930,” 13 May 1930, as held by the Secretary to the Commission, Missouri Highway and Transportation Commission, Jefferson City, Missouri.
- 1931 “Plan and Profile of Proposed State Road,” Shannon County, Route 19, Section 19-35, Design Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1932 *Eighth Biennial Report of the State Highway Commission of Missouri for the Period Ending December First 1932*, Jefferson City, Mo: Botz Printing and Stationery Co.

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- 1925b Project file, Project 19-33, Design Division, Missouri Department of Transportation, Jefferson City, Missouri.

- 1926 Official State Highway Map, Jefferson City, MO.
- 1927 Project file, Project 19-37, Design Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1929 “Field Check Memo” Bridge J0420, Bridge Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1930a “Preliminary Inspection Report,” J0420, Bridge Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1930b “Bridge over Spring Valley,” J-420, Bridge Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1940 “County Highway Map, Shannon County.” Jefferson City, MO: MSHD.

#### Ozark National Scenic Riverways

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- 2015 Round Spring Cavern, ([www.showcaves.com/english/usa/index.html](http://www.showcaves.com/english/usa/index.html): accessed 3 December 2015).

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- 1998 *The WPA Guide to the “Show Me” State*, Missouri State Highway Department, 1941, Reprint 1998 by the Missouri Historical Society Press, St. Louis, Missouri.

**Appendix A**  
**Landscape Photos**

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Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438





Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438





Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438





Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



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**Appendix B**  
**Bridge Photos**

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Sinking Creek Bridge (H0079), facing southeast



Sinking Creek Bridge (H0079), facing southwest

Shannon County  
Route 19  
Job No. J9P0438



Sinking Creek Bridge (H0079), facing south

Sinking Creek Bridge (H0079), facing north



Shannon County  
Route 19  
MoDOT Job No. J9P0438



Sinking Creek Temporary Bridge (H0079T), facing north



Sinking Creek Temporary Bridge (H0079T), facing north

Shannon County  
Route 19  
Job No. J9P0438



Current River Bridge (G0804), facing southwest



Current River Bridge (G0804), facing south

Shannon County  
Route 19  
Job No. J9P0438



Current River Bridge (G0804), facing east



Current River Bridge (G0804), facing northwest

Shannon County  
Route 19  
Job No. J9P0438





Spring Valley (Round Spring) Bridge (J0420), facing northeast



Spring Valley (Round Spring) Bridge (J0420), facing northwest

Shannon County  
Route 19  
Job No. J9P0438



Spring Valley (Round Spring) Bridge (J0420),  
facing north

Spring Valley (Round Spring) Bridge (J0420),  
facing northeast

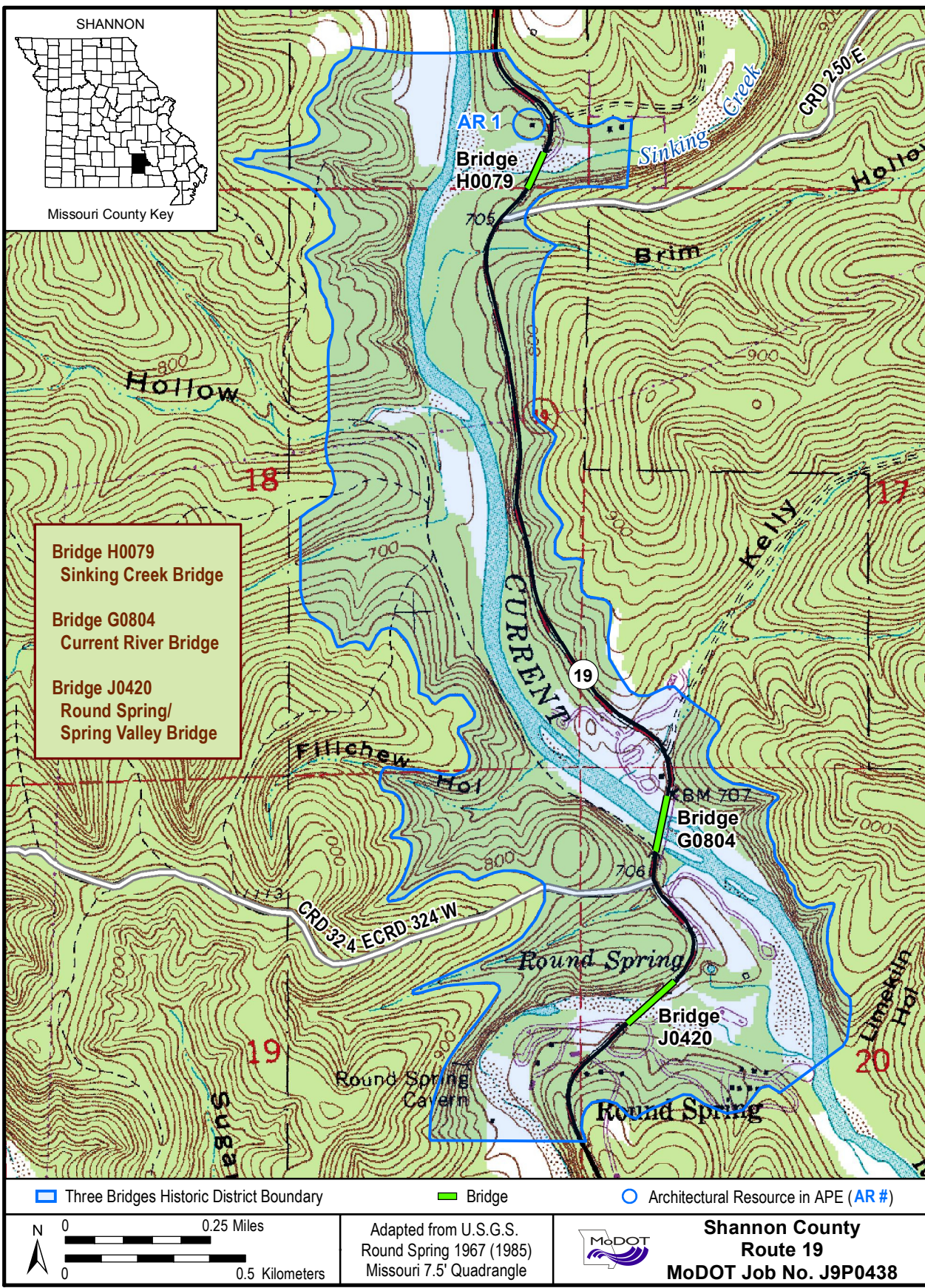


Shannon County  
Route 19  
MoDOT Job No. J9P0438

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**Appendix C**  
**Boundary Map showing Bridge Locations**

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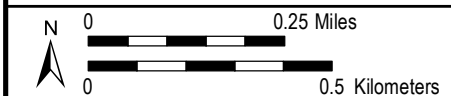


- Bridge H0079  
Sinking Creek Bridge
- Bridge G0804  
Current River Bridge
- Bridge J0420  
Round Spring/  
Spring Valley Bridge

AR 1  
Bridge  
H0079

BM 707  
Bridge  
G0804

Bridge  
J0420



Adapted from U.S.G.S.  
Round Spring 1967 (1985)  
Missouri 7.5' Quadrangle



**Shannon County  
Route 19**  
MoDOT Job No. J9P0438

**Appendix B:**  
**Ozark National Scenic Riverways *De minimis***

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105 West Capitol Avenue  
P.O. Box 270  
Jefferson City, Missouri 65102

**Missouri Department of Transportation**  
*Patrick K. McKenna, Director*

573.751.2551  
Fax: 573.751.6555  
1.888.ASK.MODOT (275.6636)

April 13, 2016

Lawrence E. Johnson, Superintendent  
Ozark National Scenic Riverways  
404 Watercress Drive, P. O. Box 490  
Van Buren, MO 63965

RE: MoDOT Job Numbers J9P0438  
Route 19, Shannon County  
Bridge Improvements over Sinking Creek  
Request for Concurrence on De Minimis Impact to Section 4(f) Protected Resource

Dear Mr. Johnson:

The J9P0438 project will construct a new bridge or rehabilitate the existing bridge over Sinking Creek. Alternates range from rehabilitation or new construction on existing alignment or options for new construction downstream of the existing bridge. This letter regards the potential impacts to the use by the public of the Sinking Creek Backcountry Campground located in Shannon County, Missouri, just downstream of the existing Route 19 Sinking Creek Bridge as a result of the Route 19 bridge improvement project over Sinking Creek. Below is a description of the proposed alternates and the Section 4(f) determination made by the Missouri Department of Transportation (MoDOT).

This project is subject to the National Environmental Policy Act (NEPA). At this time in the NEPA process, MoDOT is preparing an environmental assessment (EA) that considers the following four alternatives:

Alternate 1 requires the existing Sinking Creek Bridge to be replaced in its current location with a new two-lane bridge. This alternate would construct approximately 400 feet of new roadway north and south of the new bridge to tie in each bridge end to the existing roadway and allows the temporary bridge to be used to carry traffic while construction is being performed. This alternate has the least amount of impacts to the surrounding natural resources of any of the build alternates. It also allows for the old roadway and bridge to be used as a contractor staging area since traffic would continue to use the temporary bridge during construction.

For this alternate, a *de minimis* determination has been made for the impacts to the Sinking Creek Backcountry Campground. No new right of way will be required and this alternate would cause only a very minimal disruption to accessing the campground while the new bridge and roadway are tied together. Of the four potential alternatives this alternate will have the least amount of impacts to the campground and Ozark National Scenic Riverways (ONSR) properties.

Alternate 1a would rehabilitate and widen the existing bridge by removing the floor system, spandrel bents and columns. A new deck, pre-stressed concrete girders and column bents, would be installed. The existing spandrel arch ribs and column footings would remain in place. With this proposed alternate, the spandrel arch ribs would no longer contribute to the structural capacity of the bridge. Traffic would remain on the temporary bridge during construction.

Although this alternate will be carried forward for consideration, this alternate has constructability and structural concerns. To widen the existing bridge and correct its structural deficiencies the column and spandrels must be replaced with stronger columns and girders will be added to span between the new columns. The new columns and girders would carry the traffic loads and would remove these loads from the arches. The existing footings, underneath the columns, and arches would remain in place to maintain the historical appearance of the bridge. There are serious concerns with the ability to replace the columns without damaging the existing arches. Also, when the loads are removed from the arches, freeze/thaw cycles will most likely cause the arches to deteriorate at a quicker rate because they were designed to stay under a loaded condition.

As with alternate 1, a *de minimis* determination has been made for Alternate 1a for the impacts to the Sinking Creek Backcountry Campground. No new rights of way will be required and this alternate would cause only a very minimal disruption to accessing the campground while the new bridge and roadway are tied together. Out of the four potential alternates, this alternate, along with Alternate 1, will have the fewest impacts to the campground and Ozark National Scenic Riverways (ONSR) properties.

Alternate 2 constructs approximately 1,400 feet of new roadway and requires constructing a new bridge that would replace the existing temporary Sinking Creek Bridge on the same alignment. It would raise the vertical alignment of the new bridge higher than the temporary bridge and traffic would need to be temporarily rerouted. Several potential traffic detour options exist. One is an approximate 90-mile long detour along state highways. The western detour would occur along Route 60 to Route 17 in Mountain View to Route 32 in Licking to Route 19 in Salem. The eastern detour would be Route 60 to Route 21 near Van Buren to Route 72 near Centerville to Route 19 in Salem. A second detour would place non-truck traffic on the existing Sinking Creek Bridge and reroute truck traffic on a nearby paved county road that goes through the new Echo Bluff State Park located just east of the proposed bridge site. This would be about a 2 mile detour for truck traffic. Neither detour option is ideal. The 90-mile long detours would be a financial hardship to the many commercial and tourism industries that depend on Route 19, would be a potential two hour inconvenience to local travel, delay school bus travel, and would hinder response time for emergency vehicles. There is another option to detour large trucks through the state park. Although this is a viable option, this would disrupt campers and other recreational activities as well as contribute to the deterioration of the county road through the park.

A *de minimis* determination has been made for Alternate 2 for the impacts to the Sinking Creek Backcountry Campground and ONSR property. This alternate would require the purchase of 2.1 acres of new right of way from ONSR in order to construct the bridge on the new alignment. This alternate would be the second least impactful to ONSR properties and would have the same impact to the campground as the other alternatives.

Alternate 3 constructs approximately 2,400 feet of new roadway and constructs a new bridge just downstream of Alternate 2. The temporary bridge would be used to carry traffic while construction is being performed. The elevation of Route 19 as it crosses the side road that serves as access to Current River and camping area is 20' to 25' higher than the existing access road. This will result in a new access road connection that will be much steeper than existing and impact a wide area of forested land. The steeper roadway would be much more difficult to negotiate than the existing.

A *de minimis* determination has been made for Alternate 3 for the impacts to the Sinking Creek Backcountry Campground and ONSR property. This alternate would require the purchase of 3.93 acres of new right of way from ONSR in order to construct the bridge on the new alignment. This alternative would have the most impact to ONSR properties and would place the new structure closest to the existing campsites.

A review of the project impacts and proposed construction show that the net impact to the use of the Sinking Creek Backcountry Campground will not be adverse and all measures to minimize harm have been considered. Based on this assessment, the determination of impacts to the property would be classified as *de minimis*.

Under Section 4(f) of the U.S. Department of Transportation Act of 1966, the Sinking Creek Backcountry Campground property is considered a Section 4(f) resource. Section 4(f) is a portion within the U.S. Department of Transportation Act of 1966 that establishes the requirement for consideration of park and recreational lands during project development. Work associated with the new bridge construction will occur on Sinking Creek Backcountry Campground/ONSR property for Alternates 2 and 3. All alternates will require the temporary closure of entrance to the campground adversely affecting the use of the facility.

One of the criteria for a *de minimis* determination under Section 4(f) is to consider measures to minimize harm. Through the NEPA and Section 106 consultation process, MoDOT has considered multiple alternates. The descriptions of these alternates are described above as well as the type of use that they will have on the Section 4(f) protected property. Maps included in the attachments show the location of each of the alternates still being considered as well as alternates that were dismissed early in the NEPA process.

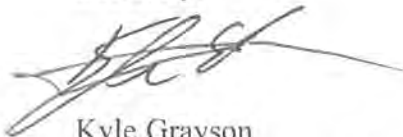
Another component in determining whether a project is *de minimis* is the opportunity for the public to review the impact. On October 5, 2015, a public informational meeting was held at the Shannon County Courthouse, as well as an option to participate via an online version of the meeting, to provide the public the opportunity to comment on the proposed project. Of the fifteen comments that were received, eight commenters preferred Alternate 1 for reasons ranging from least amount of cost to least amount of harm the surrounding landscape, two commenters preferred leaving the historic bridge for pedestrian use and building a new bridge upstream, one preferred Alternate 4 (dismissed for the large amount of impacts to ONSR and hydraulic issues), one comment preferred rehabilitation of the existing bridge (Alternate 1a), along with other various comments. All comments received at the public and online meetings are included in the attachments.

Along with the comments from the public, MoDOT also received letters from the US Army Corps of Engineers and the ONSR expressing their preference for Alternate 1 due to it being the least impactful to the park property and jurisdictional waters of the US. These letters are included in the attachments.

To make the Section 4(f) *de minimis* finding, your written concurrence is necessary. To acknowledge that you have been notified of the intent to apply the Section 4(f) *de minimis* finding, and your agreement that the net impact to the use of Sinking Creek Backcountry Campground and ONSR property will not be adverse and all measures to minimize harm have been considered for each of the alternates, please sign below and return the signed copy to Missouri Department of Transportation at the address above, and retain a copy for your records.

If you have any questions, please contact me at 573/526-5648, or by email at [kyle.grayson@modot.mo.gov](mailto:kyle.grayson@modot.mo.gov).

Sincerely,



Kyle Grayson  
Senior Environmental Specialist  
Missouri Department of Transportation

Attachments

---

As the official with jurisdiction over the Sinking Creek Backcountry Campground and the surrounding ONSR property, I hereby concur with the recommendation that the project alternates meet the criteria for a *de minimis* use in that the use and impacts associated with this project along with the identified avoidance, minimization, and mitigation measures, will not adversely affect the activities, features, and attributes that qualify the property for protection under section 4(f).

*Lawrence E. Johnson*

Lawrence Johnson, Superintendent  
Ozark National Scenic Riverways

*4/25/16*

Date

Copies: Raegan Ball - FHWA  
Pete Berry-SE/de

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SINKING CREEK

APPROX. ONSR BOUNDARY

APPROX. ONSR BOUNDARY

ENTRANCE TO NEW STATE PARK

ENTRANCE TO NEW STATE PARK

Co Rd 19-250

ALT 1

ROUTE 19

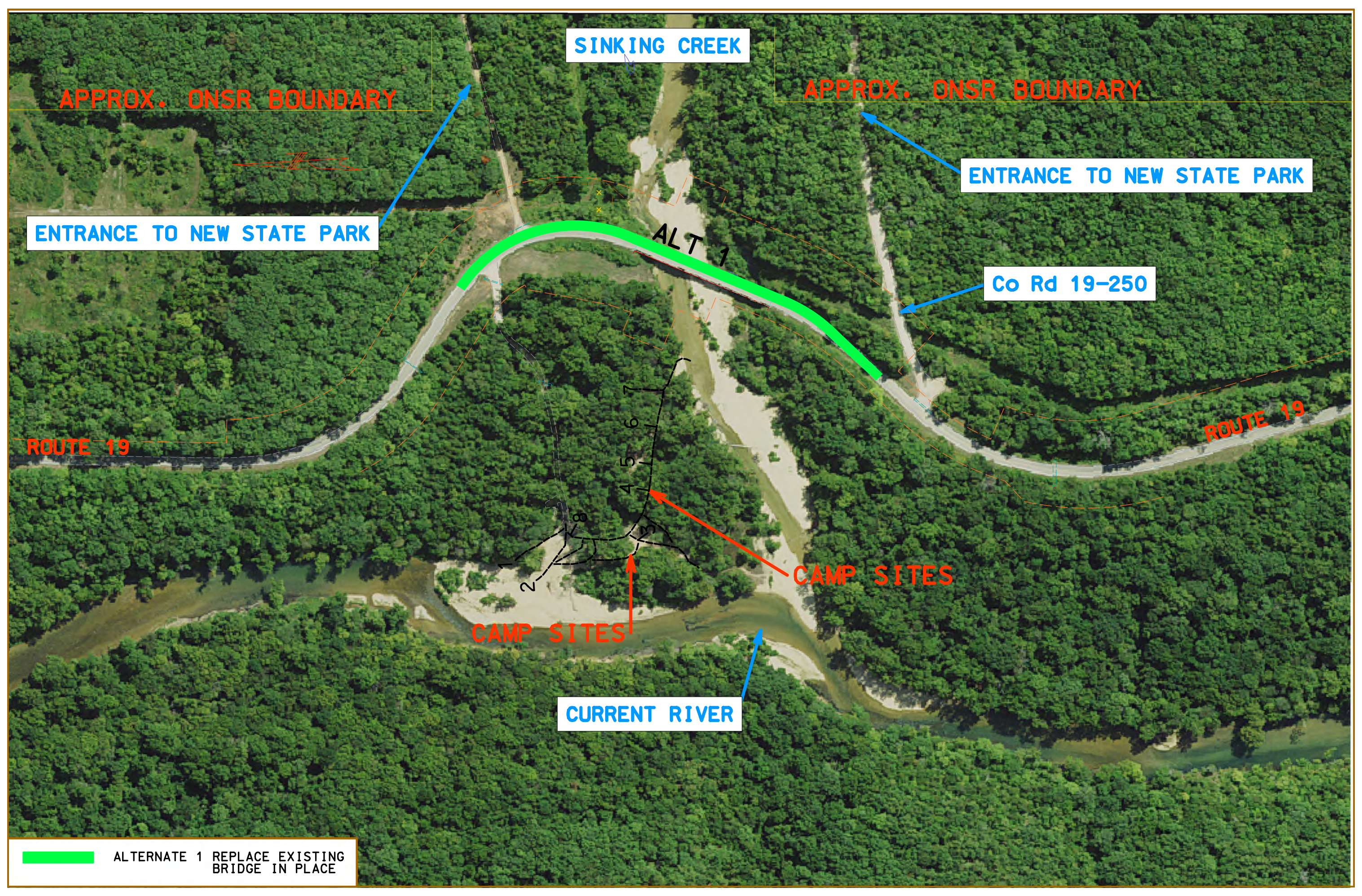
ROUTE 19

CAMP SITES

CAMP SITES

CURRENT RIVER

ALTERNATE 1 REPLACE EXISTING BRIDGE IN PLACE



SINKING CREEK

APPROX. ONSR BOUNDARY

APPROX. ONSR BOUNDARY

ENTRANCE TO NEW STATE PARK

ENTRANCE TO NEW STATE PARK

Co Rd 19-250

ALT 1A

ROUTE 19

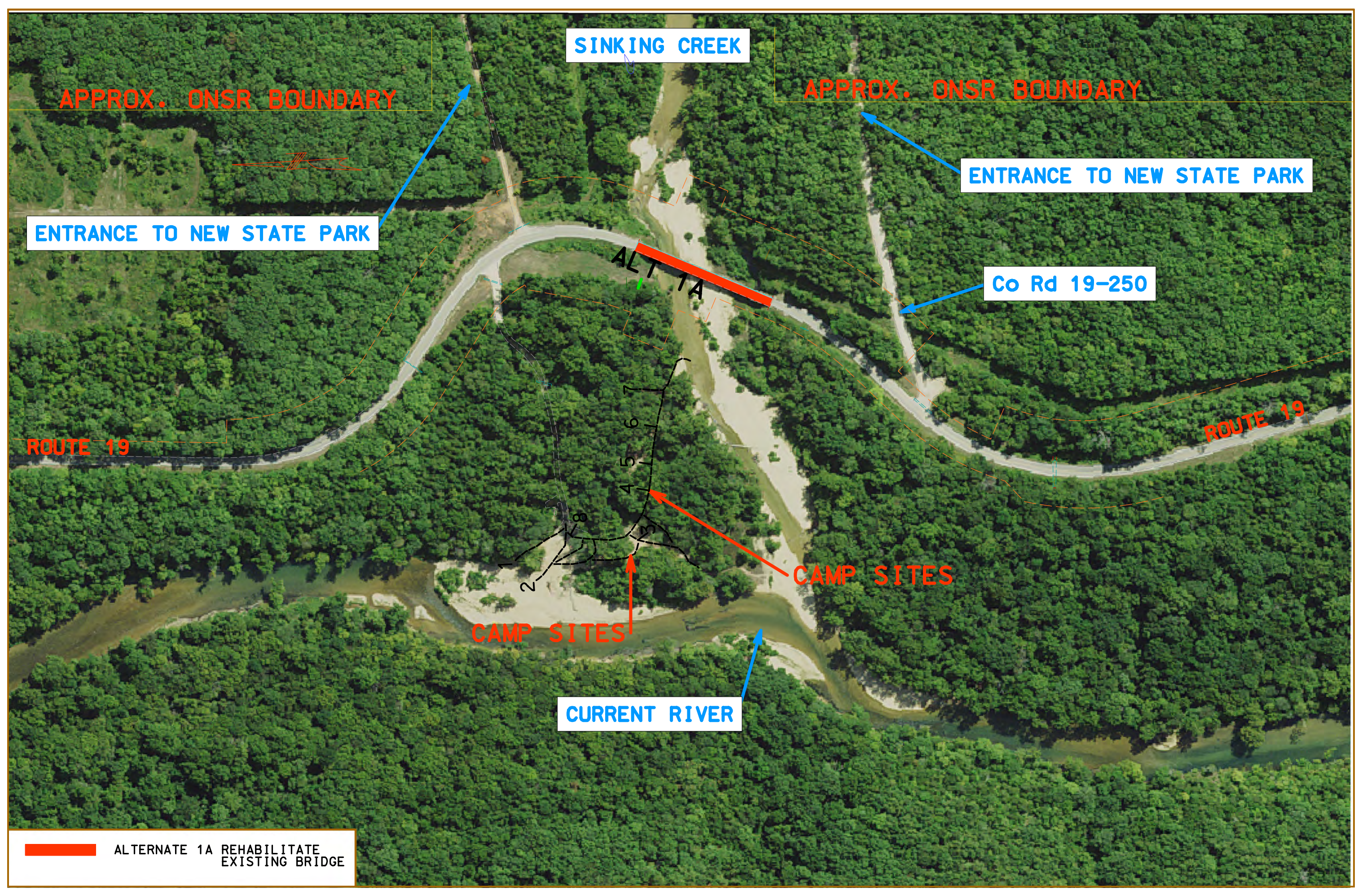
ROUTE 19

CAMP SITES

CAMP SITES

CURRENT RIVER

ALTERNATE 1A REHABILITATE EXISTING BRIDGE





SINKING CREEK

APPROX. ONSR BOUNDARY

APPROX. ONSR BOUNDARY

ENTRANCE TO NEW STATE PARK

ENTRANCE TO NEW STATE PARK

Co Rd 19-250

ROUTE 19

ROUTE 19

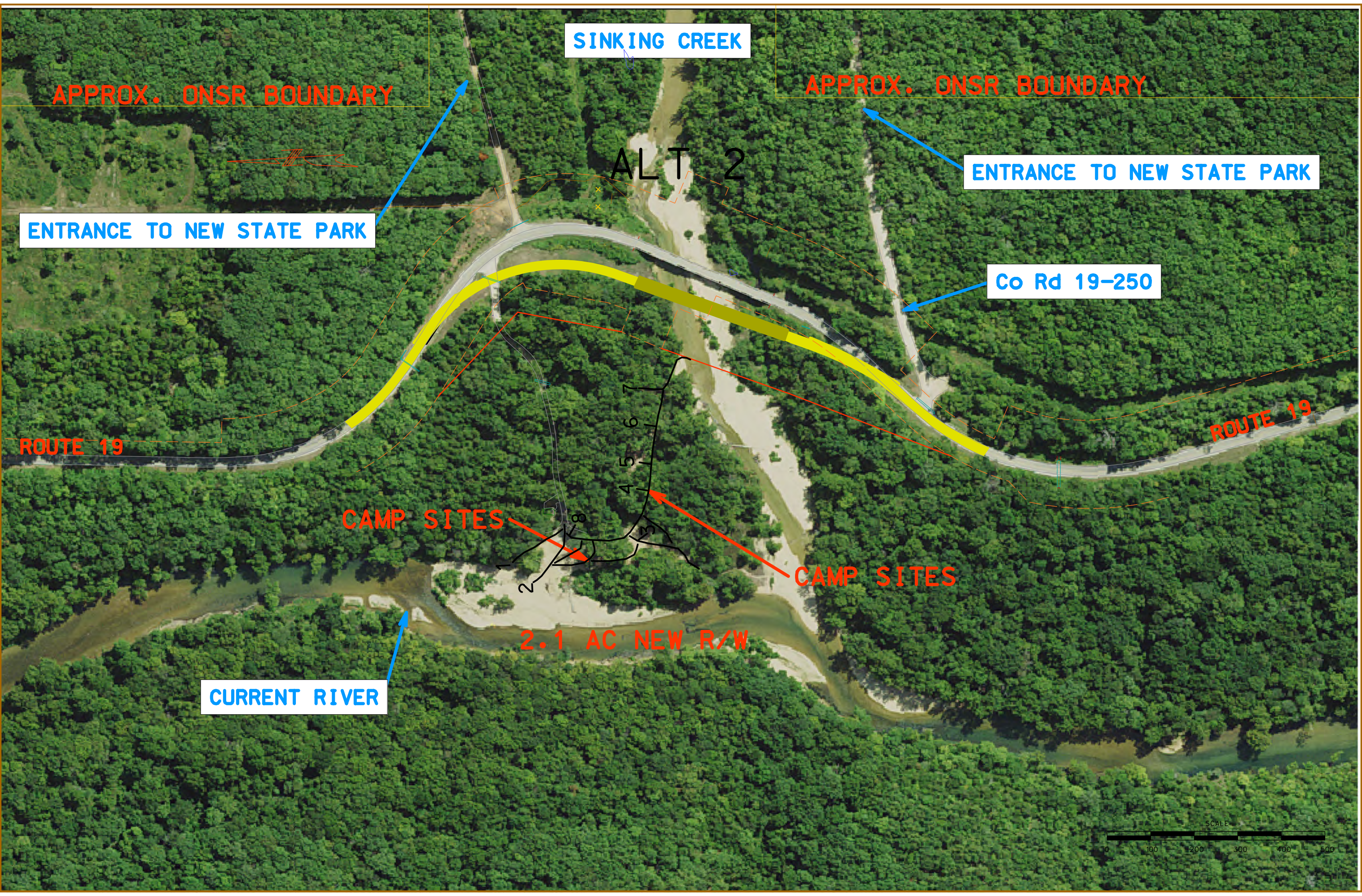
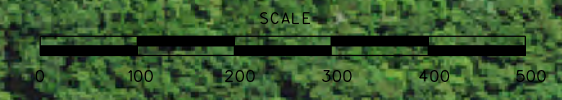
ALT 2

CAMP SITES

CAMP SITES

2.1 AC NEW R/W

CURRENT RIVER



SINKING CREEK

APPROX. ONSR BOUNDARY

APPROX. ONSR BOUNDARY

ENTRANCE TO NEW STATE PARK

ENTRANCE TO NEW STATE PARK

ALT 3

Co Rd 19-250

ROUTE 19

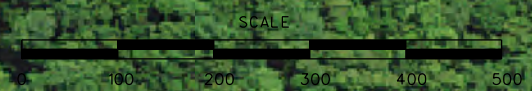
ROUTE 19

CAMP SITES

CAMP SITES

CURRENT RIVER

3.93 ACRES NEW R/W



IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

SINKING CREEK

APPROX. ONSR BOUNDARY

APPROX. ONSR BOUNDARY

ENTRANCE TO NEW STATE PARK

ENTRANCE TO NEW STATE PARK

Co Rd 19-250

ROUTE 19

ALT 4

ROUTE 19

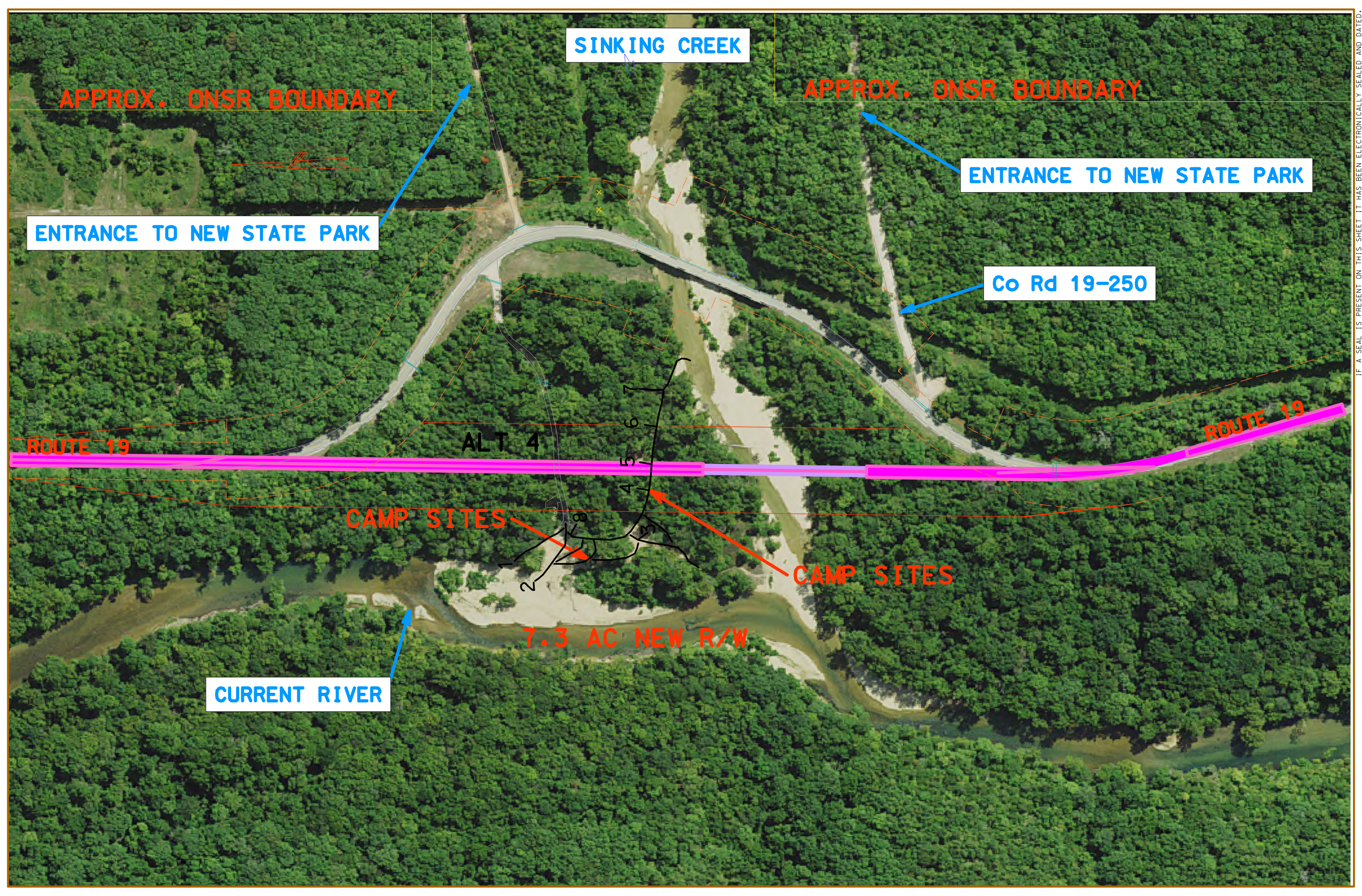
CAMP SITES

CAMP SITES

7.3 AC NEW R/W

CURRENT RIVER

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



SINKING CREEK

APPROX. ONSR BOUNDARY

APPROX. ONSR BOUNDARY

ENTRANCE TO NEW STATE PARK

ENTRANCE TO NEW STATE PARK

ALT 5

Co Rd 19-250

ROUTE 19

ROUTE 19

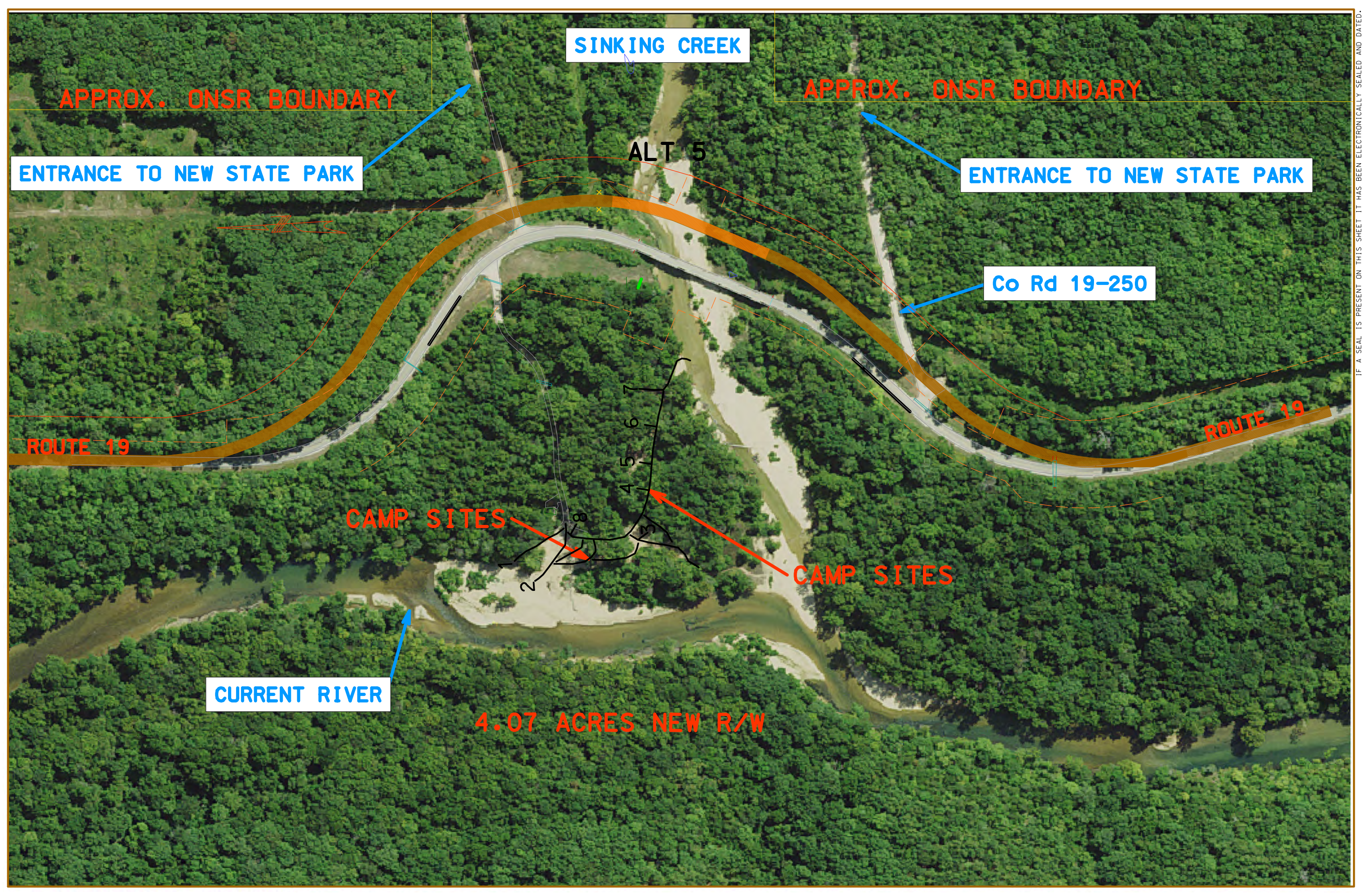
CAMP SITES

CAMP SITES

CURRENT RIVER

4.07 ACRES NEW R/W

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.





# SIGN-IN SHEET

Route 19 Sinking Creek Bridge  
Shannon County  
October 5, 2015

Southeast District  
2675 North Main Street  
P.O. Box 160  
Sikeston, MO 63801  
(573) 472-5333  
Fax (573) 472-5342  
Toll free 1-888 ASK MoDOT  
www.modot.org

PLEASE PRINT

Name	Address	Email	Phone Number
1 DAVID STOKELY		David_Stokely@mcclintock.com	314-222-0136
2 DEMETRI GARD	1819 SAN LUIS DR. ST. LOUIS MO 63148	demetri.gard@gmail.com	314-222-0136
3 BOB FOSSEN	HC 62 BOX 495 SALEM MO	BURBAS.PENCE@gmail.com	573-558-3343
4 JIM NEWBERRY	HC 62 BOX 386 SALEM MO	jim.newberry@dnr.mo.gov	573-858-3045
5 ALLE RANNEY	EMINENCE MO PO BOX 124 65507		573 226 5547
6 DENNIS TUBCEL	400 N. MAIN, SALEM	dpuce11@centurylink.net	
7 DARRELL SKILES	400 N. MAIN SALEM MO	darrallskiles@hotmail.com	573 8729-3044
8 CARLOS SUAREZ	702 SWEETEE ST SALEM, MO	carlos.suarez@grc.com	573-247-4543
9 JAMIE HOMER	702 N WALKER SALEM MO	JAMIE@VIPSALEMMO.COM	573 247-8477
10 MIKE HOMER	''	awhuber@mindspring.com	573 729 8200
11 JEFF FOGUE		jeff.fogue143@yahoo.com	573-247-7127
12 NICHOLE SHADD	Rt. 1 Box 1510 Winning, MO 65588	msadd@centurytel.net	573-226-5483



# We want to know.

Please share your comments regarding plans to improve the Route 19 bridge over Sinking Creek in Shannon County. Please submit your comments by October 19. Thank you for your input.

Name: Darrell Skiles Phone: 573-308-5415

Address: 1541 Co. Rd. 2540 Salem, Mo. 65560

Email Address: darrellskiles@hotmail.com

How did you hear about the meeting? newspaper \_\_\_\_\_ radio X

website/e-mail \_\_\_\_\_ facebook/twitter \_\_\_\_\_ message board \_\_\_\_\_

other (please specify) \_\_\_\_\_

Were your questions answered by the MoDOT project team? yes. Excellent

Do you understand the project after attending this meeting? yes

Comments may also be submitted online at: [www.modot.org/southeast/news\\_and\\_information/public\\_meetings/](http://www.modot.org/southeast/news_and_information/public_meetings/)

Comments: Replace existing bridge with a new structure in its place with little or no change in alignment. Alternate 1. This will easily be the most cost effective, least environmentally problematic, and cause the least disruption of traffic as long as the current temporary bridge is left in place until the new bridge is opened to the public. Thank you.

Darrell Skiles

(additional space on reverse side)



# We want to know.

Please share your comments regarding plans to improve the Route 19 bridge over Sinking Creek in Shannon County. Please submit your comments by October 19. Thank you for your input.

Name: CARLOS Lopez Phone: 573-247-4543

Address: 702 S. Water St., Salem, MO, 65560

Email Address: clopez@gpacecommunitysalem.org

How did you hear about the meeting? newspaper  radio

website/e-mail  facebook/twitter  message board

other (please specify) Father-in-law

Were your questions answered by the MoDOT project team? yes

Do you understand the project after attending this meeting? yes

Comments may also be submitted online at: [www.modot.org/southeast/news\\_and\\_information/public\\_meetings/](http://www.modot.org/southeast/news_and_information/public_meetings/)

## Comments:

It seems to me that it would make more sense to replace the ~~the~~ old bridge. It would more than likely cut cost + wouldn't step on any toes as FAR AS property lines go. Aside from the historic space, everyone wins. I would also suggest to build it where it could withstand more weight.

(additional space on reverse side)







# We want to know.

Please share your comments regarding plans to improve the Route 19 bridge over Sinking Creek in Shannon County. Please submit your comments by October 19. Thank you for your input.

Name: Dennis DuCell Phone: 573-247-1043

Address: 400 N. Main, Salem, MO. 65560

Email Address: dpuccell@CenturyLink.net

How did you hear about the meeting? newspaper \_\_\_\_\_ radio \_\_\_\_\_

website/e-mail \_\_\_\_\_ facebook/twitter \_\_\_\_\_ message board \_\_\_\_\_

other (please specify) daily Paper (your world Today)

Were your questions answered by the MoDOT project team? yes

Do you understand the project after attending this meeting? yes

Comments may also be submitted online at: [www.modot.org/southeast/news\\_and\\_information/public\\_meetings/](http://www.modot.org/southeast/news_and_information/public_meetings/)

Comments: ~~XXXXXXXXXX~~ Alternative 1 seems  
To be the best and least expensive  
For a Replacement Bridge. Alternate 1  
is the least intrusive and disturbs  
The Country side less than the other  
~~NO~~ options.

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(additional space on reverse side)





**From:** [Marissa V. Robey](mailto:Marissa.V.Robey)  
**To:** [Pete Berry](mailto:Pete.Berry)  
**Subject:** Comment Form--Route 19 Sinking Creek  
**Date:** Friday, October 09, 2015 9:40:27 PM

---

MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: no-reply@modot.mo.gov [<mailto:no-reply@modot.mo.gov>]  
Sent: Friday, October 09, 2015 2:03 PM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Dean Fry

Address1: 10727 Saint Matthew Lane

Address2: \* no value given \*

City: Saint Ann

State: MO

Zip: 63074

Phone Number: 314-428-3312

Fax Number: \* no value given \*

Email: [ddfryccc@gmail.com](mailto:ddfryccc@gmail.com)

Comments: Route 19, Sinking Creek.

I have driven this route a few times and have felt these bridges fit the surroundings well. Since there is a temporary bridge in place, I think that Alternative 1 makes the best sense. Depending on how the new park is developed and how much traffic is generated as a result, a three lane bridge, or a bridge expandable to three lanes, should be considered. Also to be considered is the potential of a pedestrian overlook on the bridge, maybe each side, and connections to any trail systems that may be developed. Both of which are very good reasons to work closely with MoDNR on this project. Finally, I would like to see the design of the new bridge not stray too far from the open spandrel arch style of the current bridge, especially if it can be built with patterned forms.

**From:** [Marissa V. Robey](#)  
**To:** [Pete Berry](#)  
**Subject:** Comment--Route 19 Shannon County Sinking Creek  
**Date:** Friday, October 02, 2015 10:19:48 PM

---

Thanks,

MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
www.modot.org

-----Original Message-----

From: no-reply@modot.mo.gov [<mailto:no-reply@modot.mo.gov>]  
Sent: Friday, October 02, 2015 6:42 PM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Michael Sutton

Address1: 5544 CR204

Address2: \* no value given \*

City: Annapolis

State: MO

Zip: 63620

Phone Number: 573-546-2864

Fax Number: \* no value given \*

Email: [haganandsutton@gmail.com](mailto:haganandsutton@gmail.com)

Comments: Re: Route 19 Sinking Creek Bridge.

As you know, the Sinking Creek bridge is within the authorized boundaries of Ozark National Scenic Riverways, and construction of the new bridge, should be sensitive to the nature of a National Park - i.e it should be as unobtrusive as possible with the least impact on the surrounding environment. Therefore, I strongly advocate either alternatives 1 or 1A - building in the same location as the old bridge without altering the approaches. The only rationale for the other alternatives would be to straighten the road, allowing for faster travel, but I would reiterate that this is a road in a National Park, where high speed travel is not appropriate. You should also be aware that a significant ONSR cave - Ditch Cave - stands to be seriously affected or destroyed by rerouting, especially if alternative 5 is implemented. The cave entrance is literally in the highway ditch a short way north of Sinking Creek, and any road widening here would almost certainly destroy the entrance. Several of the

rerouting alternatives would pass directly over the cave, threatening its ecosystem with road run-off pollutants and putting it at risk from spills. The cave is home to several species of state concern - the grotto salamander and at least two species of bat, and its biology is still the subject of an active investigation by the Cave Research Foundation.

Thank you for your consideration of these comments.

**From:** [Marissa V. Robey](#)  
**To:** [Pete Berry](#)  
**Subject:** Comment--Route 19 Sinking Creek  
**Date:** Friday, October 16, 2015 8:02:00 AM

---

MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: no-reply@modot.mo.gov [<mailto:no-reply@modot.mo.gov>]  
Sent: Thursday, October 15, 2015 8:20 PM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Charles Stewart

Address1: HC 1 Box 156B

Address2: \* no value given \*

City: Eminence

State: MO

Zip: 65466

Phone Number: 573-226-5695

Fax Number: \* no value given \*

Email: [jastewie@gmail.com](mailto:jastewie@gmail.com)

Comments: In viewing the alternates, and being a lifelong resident of the Round Spring area, I highly recommend the option #4. I feel this would be the safest and most direct route eliminating the curves, hills, blind areas greatly reducing the chance of accidents especially with the expected increase in traffic in this area. Feel free to contact me with any questions or to discuss further.

**From:** [Marissa V. Robey](#)  
**To:** [Pete Berry](#); [Chris Rutledge](#)  
**Subject:** Facebook Comment--Route 19 Shannon County  
**Date:** Wednesday, September 30, 2015 11:23:01 AM

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Please see the comment below from Ms. Akers. I don't think we need to respond. I just wanted to share this prior to Monday's meeting. Thanks!

**[Margaret Akers](#)**

To plan an expensive NEW park when they knew the roads weren't adequate was putting the cart before the horse!! Let the new park build the NEW Highway 19 Bridge. It's my understanding that the park plans a bridge over Sinking Creek INSIDE that park .... guess we'll just have go into the park & use that bridge. No sense using State Money TWICE to build TWO bridges. If they are begging for money again then they'd ALL better start using the money MORE WISELY! Go revisit the plans!! All of the traffic can stay north of there as far as I'm concerned ... Shannon County wouldn't benefit enough in 5 generations from the new park or anything else that happens up there.. So let the road stop at the north of side Sinking Creek ... The people who want to visit the park can stay in Salem ... The ones from St Louis would have a better trip driving to Poplar Bluff to Winona then to Eminence if the are looking to visit Jacks Fork. OR go to Rolla, Houston to Summersville to Eminence!!

[Like](#) · [Reply](#) · [1](#) · [17 hrs](#) · [Edited](#)

**MARISSA VAN ROBNEY-ROBERTSON**

*Senior Communications Specialist*

**Missouri Department of Transportation**

Southeast District - Communications

PO Box 160, Sikeston, MO 63801

573.472.5311

[www.modot.org](http://www.modot.org)



**From:** [Marissa V. Robey](#)  
**To:** [Pete Berry](#); [Chris Rutledge](#)  
**Subject:** Facebook Comments--Route 19 Shannon  
**Date:** Monday, October 05, 2015 9:30:44 AM

---

Good morning,

Here are a few more comments from Facebook.

-

[Jim Anderson](#) MoDOT found federal funding for a new bridge. Highway 19 is the only North/South freight corridor through Shannon County, and tourism is a secondary benefit. The old bridge failed, so here's a positive development without footing the entire bill. If you feel differently about it, then come to the meeting and voice your opinion. That's what these meetings are all about.

[Margaret Akers](#) 100% federal funding? If not is the balance being paid for by the new Million dollar park? The state can't even keep the lights on at the intersections on at the Hwy 19 & Hwy 60 in Winona ... plus they haven't painted lines to help keep it safer! WE didn't ask them for a 4 lane highway with 2 unsafe crossing AND NO NIGHT TIME LIGHTING! It's gonna be mighty scary when they can't keep the traffic lights & lighting at the intersections in Mtn View because of the cost of the bridge! Which cost came first????

[Like](#) · [Reply](#) · [October 3 at 10:51pm](#) · [Edited](#)

[Margaret Akers](#) Attending the meeting to be heard will be useless as always.

**MARISSA VAN ROBEY-ROBERTSON**

*Senior Communications Specialist*

**Missouri Department of Transportation**

Southeast District - Communications

PO Box 160, Sikeston, MO 63801

573.472.5311

[www.modot.org](http://www.modot.org)

**From:** [Marissa V. Robey](mailto:Marissa.V.Robey)  
**To:** [Pete Berry](mailto:Pete.Berry)  
**Subject:** FW: District 10 Contact Us Form--Route 19 Shannon  
**Date:** Monday, October 05, 2015 10:18:00 AM

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MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: no-reply@modot.mo.gov [<mailto:no-reply@modot.mo.gov>]  
Sent: Saturday, October 03, 2015 10:08 AM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: George Bilbrey

Address1: 3020 HiGHWAY DD

Address2: \* no value given \*

City: Salem

State: MO

Zip: 65560

Phone Number: 573 729-6835

Fax Number: N/A

Email: [gbrb@embarqmail.com](mailto:gbrb@embarqmail.com)

Comments: I'd like to add my comments on the Shannon County Route 19 Sinking Creek Bridge reconstruction, to those of Dr Michael Sutton which you recently received via this website. Dr Sutton has a PHD in biology, specializing in cave biology. He is recognized both in the United States and some foreign countries, having discovered and reported on several previously unknown species of cave life.

I completely agree with his comments. Most especially about the necessity to protect the entrance and underground features of Ditch Cave. I helped survey part of Ditch Cave several years ago. I am a Fellow with Cave Research Foundation, having been a member since 1960.

In my opinion it would be a travesty to alter the features of Ditch Cave. I support the recommendation to use either alternative 1 or 1A. Thank you for your consideration

George Bilbrey

**From:** [Marissa V. Robey](mailto:Marissa.V.Robey)  
**To:** [Pete Berry](mailto:Pete.Berry)  
**Subject:** FW: District 10 Contact Us Form--Sinking Creek Project Comment  
**Date:** Saturday, September 19, 2015 10:25:52 PM

---

MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
www.modot.org

-----Original Message-----

From: no-reply@modot.mo.gov [<mailto:no-reply@modot.mo.gov>]  
Sent: Saturday, September 19, 2015 3:25 PM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Geoffrey Gilbert Havens

Address1: 2131 S. Todd

Address2: \* no value given \*

City: Springfield

State: MO

Zip: 65807

Phone Number: 4173505525

Fax Number: \* no value given \*

Email: [geoffrey.havens@umontana.edu](mailto:geoffrey.havens@umontana.edu)

Comments: I'd like to express a few short opinions on the Sinking Creek Bridge Project. I urge MODOT to avoid selecting the far downstream alternate, as that would directly impact the NPS Sinking Creek Campground, a place that both many locals and visitors view as a special spot with many memories. I would further encourage MODOT to consider the options that repair and improve the current bridge structure, or move the new traffic bridge slightly upstream of the existing structure. The old bridge is a wonderful historic structure and could remain useful as a hiker/biker structure.

**From:** [Marissa V. Robey](#)  
**To:** [Pete Berry](#)  
**Subject:** FW: MoDOT--Shannon County Route 19  
**Date:** Friday, October 02, 2015 9:46:55 AM

---

Good morning,

Please see my response to Mr. Skwiot below. Here is the comment I received this morning:

Name: paul skwiot

Address1: 7027 Dale Ave #1

Address2: \* no value given \*

City: Saint Louis

State: MO

Zip: 63117

Phone Number: \* no value given \*

Fax Number: \* no value given \*

Email: [soundslikequiet@gmail.com](mailto:soundslikequiet@gmail.com)

Comments: I saw an article regarding the Rt 19 bring online with a map of proposed changes. Please repost article on your website as the map isn't visible, or are you hiding it?

One way to improve quality: bring in KC or Western Region engineers and architects. Their work is much superior to the work St Louis region engineer and architects do.

**MARISSA VAN ROBNEY-ROBERTSON**

*Senior Communications Specialist*

**Missouri Department of Transportation**

Southeast District - Communications

PO Box 160, Sikeston, MO 63801

573.472.5311

[www.modot.org](http://www.modot.org)

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**From:** Marissa V. Robey  
**Sent:** Friday, October 02, 2015 9:38 AM  
**To:** 'soundslikequiet@gmail.com'  
**Subject:** MoDOT--Shannon County Route 19

Good morning,

Thank you for contacting us regarding the Route 19 bridge over Sinking Creek in Shannon County. We certainly want you to have all of the information regarding the alternates.

The map you are referencing is included on the second page of the link below.

[http://www.modot.org/southeast/news\\_and\\_information/public\\_meetings/documents/Handout\\_ShannonCounty\\_Route19\\_SinkingCreek\\_October2015.pdf](http://www.modot.org/southeast/news_and_information/public_meetings/documents/Handout_ShannonCounty_Route19_SinkingCreek_October2015.pdf)

In addition, these are links to the historical and environmental information that will also be shared during the meeting.

[http://www.modot.org/southeast/news\\_and\\_information/public\\_meetings/documents/historical.pdf](http://www.modot.org/southeast/news_and_information/public_meetings/documents/historical.pdf)

[http://www.modot.org/southeast/news\\_and\\_information/public\\_meetings/documents/Environmental\\_Tri-fold.pdf](http://www.modot.org/southeast/news_and_information/public_meetings/documents/Environmental_Tri-fold.pdf)

If you have issues viewing the links to the documents included above or if you have any questions pertaining to this information, please let me know. I will be happy to provide the map in a different format or get you in contact with our project manager to discuss your concerns.

Thank you,

**MARISSA VAN ROBNEY-ROBERTSON**

*Senior Communications Specialist*

**Missouri Department of Transportation**

Southeast District - Communications

PO Box 160, Sikeston, MO 63801

573.472.5311



**From:** [Marissa V. Robey](#)  
**To:** [Pete Berry](#)  
**Subject:** Project Comment--Shannon County Route 19  
**Date:** Monday, September 21, 2015 8:56:43 AM

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MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: no-reply@modot.mo.gov [<mailto:no-reply@modot.mo.gov>]  
Sent: Monday, September 21, 2015 8:53 AM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Kathryn Love

Address1: 1623 Univesity Ave

Address2: \* no value given \*

City: columbia

State: MO

Zip: 65201

Phone Number: 573-875-7918

Fax Number: \* no value given \*

Email: [lovekat68@gmail.com](mailto:lovekat68@gmail.com)

Comments: I favor rehabilitating the existing bridge to preserve its beautiful and historic architecture. This is an exceptional and fragile setting, of possible archeological significance. The best solution will disturb the land, creek and river the least, while preserving the aesthetic features of the existing bridge.

# We want to know.

Please share your comments regarding plans to improve the Route 19 bridge over Sinking Creek in Shannon County. Please submit your comments by October 19. Thank you for your input.

Name: Dent County Commission Phone: 573-729-3044

Address: 400 N. Main Salem, Mo. 65560

Email Address: \_\_\_\_\_

How did you hear about the meeting? newspaper  radio

website/e-mail \_\_\_\_\_ facebook/twitter \_\_\_\_\_ message board \_\_\_\_\_

other (please specify) \_\_\_\_\_

Were your questions answered by the MoDOT project team? yes

Do you understand the project after attending this meeting? yes

Comments may also be submitted online at: [www.modot.org/southeast/news\\_and\\_information/public\\_meetings/](http://www.modot.org/southeast/news_and_information/public_meetings/)

Comments: The Dent County Commission strongly supports Alternate 1. The Commission would also like to encourage MoDOT to consider adding a center turn lane to Hwy. 19 on both sides of the bridge at this time if at all possible.

Danell Skiles

Tommy Farrell

Andy Garrison

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(additional space on reverse side)



# We want to know.

Please share your comments regarding plans to improve the Route 19 bridge over Sinking Creek in Shannon County. Please submit your comments by October 19. Thank you for your input.

Name: Joe DeVALL Phone: 573-729-7373

Address: 52 Hwy. WW SALEM MO

Email Address: \_\_\_\_\_

How did you hear about the meeting? newspaper  radio \_\_\_\_\_

website/e-mail \_\_\_\_\_ facebook/twitter \_\_\_\_\_ message board \_\_\_\_\_

other (please specify) \_\_\_\_\_

Were your questions answered by the MoDOT project team? Yes

Do you understand the project after attending this meeting? Yes

Comments may also be submitted online at: [www.modot.org/southeast/news\\_and\\_information/public\\_meetings/](http://www.modot.org/southeast/news_and_information/public_meetings/)

## Comments:

I THINK OPTION # 1-1A IS THE  
BEST SOLUTION FOR THE NEW  
SINKING CREEK BRIDGE. I WOULD  
LIKE, A TURNING LANE BE ADDED  
TOO

(additional space on reverse side)





# We want to know.

Please share your comments regarding plans to improve the Route 19 bridge over Sinking Creek in Shannon County. Please submit your comments by October 19. Thank you for your input.

Name: Bob Fossey Phone: 573-858-3343

Address: HC 62 Bx 495 Salem Mo 65560

Email Address: bubbaspence@gmail.com

How did you hear about the meeting? newspaper  radio

website/e-mail  facebook/twitter  message board

other (please specify) \_\_\_\_\_

Were your questions answered by the MoDOT project team? No

Do you understand the project after attending this meeting? SOMEWHAT

Comments may also be submitted online at: [www.modot.org/southeast/news\\_and\\_information/public\\_meetings/](http://www.modot.org/southeast/news_and_information/public_meetings/)

Comments: PRESERVING THE ORIGINAL BRIDGE AND  
MAKING IT ONE LANE SEEMS THE MOST COST  
EFFECTIVE PLAN, SINCE THE NEXT BRIDGE SOUTH  
N 19 IS ONE LANE. THIS ALLOWS THE HISTORIC  
STRUCTURE TO CONTINUE TO CONTRIBUTE TO  
UNIQUE HERITAGE THAT ~~EXISTS~~ EXISTS  
THIS AREA. THE MONEY SAVED USING THIS  
PLAN COULD THEN BE USED TO REHABILITATE  
OTHER TWO BRIDGES IN THIS STRING (ROUND  
1. CURRENT RIVER). MoDOT NEEDS TO  
DO WHATEVER IT CAN

(additional space on reverse side)



**From:** [Brian Rasche](#)  
**To:** [Pete Berry](#)  
**Subject:** Re: Sinking Creek Bridge and Road Alignment  
**Date:** Wednesday, October 28, 2015 6:53:21 PM

---

Hi Pete,

I tried to submit a comment through the web interface but after a long delay it responded with a server error message.

Here's my thoughts on the project and alignments:

With the new park, maybe the camp grounds below the bridge are not that important. I know I would not like to camp near a noisy roadway.

Please do not interpret that meaning I prefer the straight alignment.

I think it is important to preserve the scenic and rural character of the bridge and roadway and therefore prefer an alignment that includes a curve.

I also like seeing the river below when I drive over the bridge. The old bridge made that possible. Modern bridges often include high Jersey barriers and wide shoulder lanes making the creek below impossible to see.

Landscape is what makes the Ozark National Scenic Riverways beautiful. Not just the rivers, but the entire region, including the roads leading to the area.

It's been my observation that often modern roadway construction and maintenance seems to be intent on destroying scenic beauty. Road widening, broad shoulders, trees and outcroppings bulldozed into sloping aprons. It's my fear that the new bridge construction will be combined with "roadway improvements" and scenic destruction.

Please, try to preserve the character of the existing roadway: where the asphalt ends at the white line, where there are occasional rock outcroppings in the right-of-way, and where trees overhang and shade the roadway. This is the scenic character of the Ozarks and a large part of the attraction to tourists. Destroying this character will hurt tourism and the local economies.

Sincerely,

Brian Rasche  
Orlando, FL

On Wed, Oct 28, 2015 at 3:29 PM, Pete Berry <[Pete.Berry@modot.mo.gov](mailto:Pete.Berry@modot.mo.gov)> wrote:

Brian,

Thanks for your inquiry. Please see the following link for more information. Please give me a call if you have any questions. We have not selected a preferred alternate yet but are still in the process of going through the study.

Thanks!

[http://www.modot.org/southeast/news\\_and\\_information/public\\_meetings./Route19\\_SinkingCreek\\_Shannon\\_Oct2015.htm](http://www.modot.org/southeast/news_and_information/public_meetings./Route19_SinkingCreek_Shannon_Oct2015.htm)

**Pete Berry, P.E.**

Transportation Project Manager | MoDOT • Southeast District | [417-469-6242](tel:417-469-6242) |

**From:** Brian Rasche [mailto:[brasche@gmail.com](mailto:brasche@gmail.com)]  
**Sent:** Tuesday, October 27, 2015 2:21 PM  
**To:** Pete Berry  
**Subject:** Sinking Creek Bridge and Road Alignment

Hi Pete,

We own property in the area but live in Florida and are unable to attend the meetings. If available, will you please send us information on the proposed alignments.

Thanks,

Brian Rasche

Orlando, FL

BTW, a quick comment on recent road right-of-way tree trimming. It is a disaster for the scenic beauty of the region. Specifically, the stretch of Hwy. 160 from Eminence to H. It was once a delightful canopied and shaded drive with light flickering through the leaves. Today it is a barren alleyway and will take decades re-grow. 8-(

**From:** [Marissa V. Robey](mailto:Marissa.V.Robey)  
**To:** [Pete Berry](mailto:Pete.Berry)  
**Subject:** Route 19 Shannon Comment  
**Date:** Tuesday, September 29, 2015 10:58:44 AM

---

MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: no-reply@modot.mo.gov [<mailto:no-reply@modot.mo.gov>]  
Sent: Tuesday, September 29, 2015 10:55 AM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Scott House

Address1: 1606 Luce

Address2: \* no value given \*

City: Cape Girardeau

State: MO

Zip: 63701

Phone Number: 573-651-3794

Fax Number: \* no value given \*

Email: [scott\\_house@hotmail.com](mailto:scott_house@hotmail.com)

Comments: Alternative 1 or 1a (if feasible) are the only alternatives that do not involve major destruction in the form of roadway creation. Otherwise, enlarged or new roadways will impact species of conservation concern residing in Ditch Cave, plus have impacts on the visual integrity of the Ozark National Scenic Riverways.

**From:** [Marissa V. Robey](mailto:Marissa.V.Robey)  
**To:** [Pete Berry](mailto:Pete.Berry)  
**Subject:** Route 19 Shannon County  
**Date:** Tuesday, September 29, 2015 10:53:48 AM

---

MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: no-reply@modot.mo.gov [<mailto:no-reply@modot.mo.gov>]  
Sent: Tuesday, September 29, 2015 10:46 AM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Daniel Lamping

Address1: 4946 Seibert Avenue

Address2: \* no value given \*

City: St. Louis

State: MO

Zip: 63123

Phone Number: 314-775-8584

Fax Number: \* no value given \*

Email: [daniellamping@att.net](mailto:daniellamping@att.net)

Comments: The present footprint for Hwy 19 should be utilized and no new path should be created. A temporary bridge is currently constructed which would allow for the construction of a new bridge at the site of the old one. There are significant caves nearby, one of which, Ditch Cave, is biologically significant. One of the proposed routes, the Brown, ALT 5 would go over this significant cave and would likely have adverse effects. Any of the other proposed routes, aside from ALT 1, which uses the current route would contribute to erosion and necessitate the clearing of forest in addition to greater costs associated with changing the landscape. I urge you to follow the current footprint for the Highway 19 bridge over Sinking Creek. It is the only responsible course, both fiscally and environmentally.

**From:** [Marissa V. Robey](mailto:Marissa.V.Robey)  
**To:** [Pete Berry](mailto:Pete.Berry)  
**Subject:** Route 19 Sinking Creek Shannon County Comment  
**Date:** Friday, October 02, 2015 12:04:36 AM

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MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: no-reply@modot.mo.gov [<mailto:no-reply@modot.mo.gov>]  
Sent: Thursday, October 01, 2015 5:45 PM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Esther D Stroh

Address1: 807 LEAWOOD TER

Address2: \* no value given \*

City: COLUMBIA

State: MO

Zip: 65203

Phone Number: 5753032130

Fax Number: \* no value given \*

Email: [edstroh@gmail.com](mailto:edstroh@gmail.com)

Comments: I prefer alternative 2, the nearest downstream site, and keeping the historic bridge for pedestrians. Fixing the historic bridge for pedestrians and bicycles only will not require as much work as restoring it for heavy vehicles. The historic bridge should NOT be removed or replaced. This is a beautiful and historic bridge. The upstream sites will be more environmentally harmful, as they require more tree removal, etc. Also, closer proximity to the new park will negatively affect park experience as more noise from bridge traffic will be audible from the upstream sites. Thank you for the opportunity to comment.



REPLY TO  
ATTENTION OF:

**DEPARTMENT OF THE ARMY**  
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS  
Walnut Ridge Regulatory Field Office - P.O. BOX 865  
WALNUT RIDGE, ARKANSAS 72476-0865  
[www.swl.usace.army.mil/](http://www.swl.usace.army.mil/)

October 2, 2015

Regulatory Division

Ms. Gayle Unruh  
Environmental and Historic Preservation Manager  
Missouri Department of Transportation  
PO Box 270  
Jefferson City, Missouri 65102

Dear Ms. Unruh:

This is to acknowledge receipt of your request dated September 22, 2015, to provide comments, as a cooperating agency, on your draft purpose and need review and initial range of alternatives. These are in reference to the Route 19 crossing of Sinking Creek. The crossing is located in Sinking Creek, in the SE ¼ of the SE ¼ of section 7, T. 30 N., R. 4 W., north of Eminence, Shannon County, Missouri. You are hereby advised that no work should be initiated without prior Department of the Army permit authorization from this office.

The purpose and need of the project lays out the problem and the public's concern/need to have this addressed. The photos showing the 'bandaid' in the form of a small metal bracket displays the severity of the condition of the existing bridge. Although the temporary structure has improved on the ability of traffic to pass on the bridge; it is a temporary bridge and was not designed as a replacement bridge.

The alternatives presently appear to cover all the possible alignments for Route 19 to cross Sinking Creek at this location. Alternative #2 would use the present temporary crossing alignment. This replacement bridge would have an elevation at least 7 feet higher and likely higher than that, since the locals had indicated that at least on one occasion the water in Sinking Creek had reached the height of the decking material of the old bridge that is closed. However, alternative #2 would require the traffic to again use the closed bridge structure during construction of a new larger bridge along the temporary crossing alignment. Not only would this require a single lane of traffic, but those greater loads would again need to be re-routed since there would still be a load restriction on this structurally deficient and functionally obsolete bridge. Alternative #1A would rehabilitate the old bridge. It might be possible to address the structural aspects, but you can't address the functional obsolescence of the bridge. A big problem was the lane width, especially when two large trucks met each other. The current lane width standard is 12 feet and the old bridge has two lanes that are 9 feet in width. It is also hard to see how a retrofitted bridge can be as strong and provide the same longevity as a new structure would provide. Alternative #4 will impact existing infrastructure at the public camp site west of Route 19 and north of Sinking Creek. Although Camp Zoe is being developed by State Parks, the current public camp sites would provide

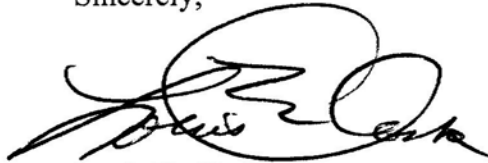
overflow accommodations and alternative camping experiences. Alternative #4 is physically close to the Current River; there is a notch on the east side of the Current River upstream of the public camp area that might be working downstream; if so it will take out the western portion of the public camp area and place the Current River closer to Route 19. Both alternatives #3 and #4 cross lower terrain with a soil type that does have a hydric soil inclusion. There is a greater potential of wetland impacts along alternatives #3 and #4. Only the accomplishment of wetland delineations along the proposed alignments can determine the location and amounts of potential wetland impacts. Also, placing Route 19 through the lower terrain, will likely result in a greater potential of flooding Route 19. Alternatives #3, #4, and #5 will remove habitat for the endangered and threatened bat species. Finally, Alternative #1 which removes and replaces the old bridge in the present Route 19 alignment, would result in less additional impacts to the environment and the general aesthetics of the area. Totally replacing the bridge addresses the functional obsolescence of the structure and provides appropriate passing clearance for large heavy vehicles.

Thank you for this opportunity to provide comments. I hope these help. Your request has been assigned No. **SWL-2015-00124-1**. Please reference this number when you write or call us concerning your project. Should you have any questions, please contact me at the address or phone number listed below.

Louis Clarke  
USACE - Little Rock District  
1100 West Main Street  
Walnut Ridge, Arkansas 72476

Telephone No. (870) 886-3610

Sincerely,

A handwritten signature in black ink, appearing to read 'Louis Clarke', with a large, stylized flourish at the end.

Louis E. Clarke  
Project Manager



**OFFICIAL ELECTRONIC MAIL: NO HARD COPY TO FOLLOW**

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National Park Service  
Ozark National Scenic Riverways  
404 Watercress Drive  
P.O. Box 490  
Van Buren, Missouri 63965  
(573) 323-4270

1.A.1 (OZAR L76)

October 16, 2015

Gayle Unruh  
Environmental and Historic Preservation Manager  
Missouri Department of Transportation  
105 West Capitol Avenue  
P.O. Box 270  
Jefferson City, Missouri 65102

Gayle Unruh <Gayle.Unruh@modot.mo.gov>

Dear Ms. Unruh:

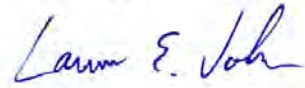
Thank you for the opportunity to review and comment on the draft Purpose and Need and the Initial Range of Alternatives for the Proposed Project to provide a safe and reliable crossing over Sinking Creek on Route 19 in Shannon County, Missouri. As you know, this bridge lies in the heart of the Ozark National Scenic Riverways. We are interested in the planning and decision making process as the permanent solution will help us preserve the scenic value, cultural and natural resources, and free-flowing nature of the Ozark National Scenic Riverways.

We offer the following comments as shown by section:

- Chapter 1: Purpose and Need. Why is this Environmental Assessment being prepared?  
Please add a sentence toward the end of the paragraph that states "This undertaking is also subject to review as an undertaking under Section 106 of the National Historic Preservation Act. Assessing potential impacts to cultural resources will as part of the decision making process will improve project planning."
- Chapter 1: Existing Bridge and Roadway.  
Please add a sentence about how the bridge is one of three in the surrounding area that could potentially make up a National Register Historic Transportation District.
- Map Showing Alternates.  
At this point, we support Initial Alternate 1; Replace the Existing Bridge in Place as it will minimize the impacts on the natural and cultural resources of Ozark National Scenic Riverways.

If you have any questions, please do not hesitate to call Chief of Resource Management Eric Daniels at 573-323-4868.

Sincerely,

A handwritten signature in blue ink that reads "Lawrence E. Johnson". The signature is written in a cursive style with a large initial "L" and "J".

Lawrence E. Johnson  
Superintendent

**Appendix C:**  
**Section 106 Programmatic Agreement**

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**PROGRAMMATIC AGREEMENT  
AMONG  
FEDERAL HIGHWAY ADMINISTRATION  
MISSOURI STATE HISTORIC PRESERVATION OFFICE  
AND THE  
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
FOR THE MITIGATION OF ADVERSE EFFECTS  
TO THE THREE BRIDGES HISTORIC DISTRICT,  
THE SINKING CREEK BRIDGE (H0079),  
THE CURRENT RIVER BRIDGE (G0804) AND THE  
ROUND SPRING/SPRING VALLEY BRIDGE (J0420)  
ROUTE 19, SHANNON COUNTY, MISSOURI**

**Whereas**, the Federal Highway Administration (FHWA) administers that Federal Aid Highway Program (FAHP) in Missouri authorized by 23 U.S.C. 101, et. seq., through the Missouri Highways and Transportation Commission (MHTC); and

**Whereas**, the MHTC acts through the Missouri Department of Transportation (MoDOT) to ensure compliance with federal environmental and historic preservation laws; and

**Whereas**, the Missouri Division of the FHWA and MoDOT propose to replace the Sinking Creek Bridge (H0079) on Route 19 in Shannon County, Missouri, with MoDOT Job Number J9P0438 (see Figure 1 of the attached Information to Accompany), and are preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA); and

**Whereas**, replacing the Sinking Creek Bridge would constitute an undertaking under Section 106 of the National Historic Preservation Act (36 CFR 800.3(a)); and

**Whereas**, the area of potential effects (APE) established for the EA encompassed the alternates under consideration and extended 200 feet beyond the outermost alternates for the consideration of direct effects and extended an additional 100 feet for the consideration of indirect effects as shown on Figure 2 in the attached Information to Accompany; and

**Whereas**, the APE for the survey of the cultural landscape extended along Route 19 from approximately 0.5 miles north of the Sinking Creek Bridge to approximately 0.5 miles south of the Round Spring/Spring Valley Bridge and extended 200 feet on either side of Route 19, as shown on Figure 3 of the attached Information to Accompany; and

**Whereas**, archaeological surveys have been conducted within the APE for the Sinking Creek Bridge and two potentially National Register of Historic Places (NRHP) eligible sites were identified within the APE, 23SH97 and 23SH1566, and may require Phase II testing after an alternative is selected. The Missouri State Historic Preservation Office (SHPO) has concurred with this finding; and

**Whereas**, the Three Bridges Historic District, has been identified as an NRHP eligible historic landscape, containing the Sinking Creek Bridge (H0079), the Current River Bridge (G0804) and

Three Bridges Historic District Programmatic Agreement  
Route 19, Shannon County, Missouri

at Round Spring/Spring Valley Bridge (J0420), Route 19 and the surrounding viewshed as contributing elements; and

**Whereas**, the Sinking Creek Bridge (H0079) the Current River Bridge (G0804) and the Round Spring/Spring Valley Bridge (J0420) are each individually eligible for listing on the NRHP; and

**Whereas**, the effects of these FAHP projects on the historic bridges and on the Three Bridges Historic District, are likely to be similar in nature and have the potential to be adverse; and

**Whereas**, the regulations implementing Section 106 of the National Historic Preservation Act allow for the development of Programmatic Agreements when project effects on historic properties are similar and repetitive in nature (36 CFR 800.14(b)(1)(i)); and

**Whereas**, the Advisory Council on Historic Preservation (Council) was notified of the potential adverse effect on the Three Bridges Historic District and the Sinking Creek Bridge (H0079) on June 29, 2015 and was invited to participate in consultation for the development of this Programmatic Agreement (PA) and declined to participate in consultation on July 31, 2015; and

**Whereas**, the Missouri SHPO has participated in consultation regarding the eligibility of the bridges and historic landscape and has consulted in the development of appropriate mitigation measures for project effects on them, and in the development of this PA; and

**Whereas**, the MoDOT has participated in consultation and has been invited to be a signatory to this PA; and

**Whereas**, the Absentee Shawnee Tribe of Indians of Oklahoma, the Cherokee Nation, the Delaware Nation, the Delaware Tribe of Indians of Oklahoma, the Eastern Shawnee Tribe of Oklahoma, the Osage Nation, the Quapaw Tribe of Oklahoma, the Shawnee Tribe and the United Keetoowah Band of Cherokee have been invited to participate in consultation for the Sinking Creek Bridge replacement, and will be invited to participate in the bridge specific projects in the future; and

**Whereas**, the Delaware Tribe of Indians of Oklahoma, the Osage Nation and the United Keetoowah Band of Cherokee have all responded indicating they have no objection to the Sinking Creek Bridge replacement. The Delaware Tribe of Indians of Oklahoma and the United Keetoowah Band of Cherokee asked to be contacted if human remains are encountered. The Delaware Tribe of Indians of Oklahoma and the Osage Nation requested to review the archaeological report; and

**Whereas**, the National Park Service Ozark National Scenic Riverways (ONSR), U. S. Army Corps of Engineers Little Rock Division (USACE), Missouri State Parks, Shannon County Commission, the Shannon County Historical Society, the Friends of the Current River, the LAD Foundation/Pioneer Forest, the Historic Bridge Foundation, and Nathan Holth have been invited to participate in consultation about the Sinking Creek Bridge replacement and the Three Bridges Historic District; and

Three Bridges Historic District Programmatic Agreement  
Route 19, Shannon County, Missouri

**Whereas**, the Ozark National Scenic Riverways, Missouri State Parks, Shannon County, Historic Bridge Foundation, LAD Foundation/Pioneer Forest, and Nathan Holth accepted consulting party status and have actively participated in consultation; and

**Whereas**, the consulting parties were asked if they wished to concur in the PA; and

**Whereas**, none of the consulting parties chose to concur in the PA; and

**Whereas**, the consulting parties provided substantial input into the evaluation of the Three Bridges Historic District, including identifying the boundaries of the historic property as well as identifying and developing appropriate mitigation measures for the District and the bridges; and

**Whereas**, MoDOT shall follow the guidance on public involvement contained in Category 129: Public Involvement of the MoDOT Engineering Policy Guide;

**Now therefore**, the FHWA, MHTC and the SHPO agree that the following stipulations will be implemented for FHWA undertakings involving the Sinking Creek Bridge (H0079), the Current River Bridge (G0804), the Round Spring/Spring Valley Bridge (J0420) and the Three Bridges Historic District in Shannon County, Missouri:

### STIPULATIONS

The FHWA shall ensure that the following measures are carried out:

- I. The MHTC, acting by and through MoDOT, shall ensure that the following measures are carried out for each individual project occurring to one of the individually eligible bridges:
  - A. For any project affecting one of the individually eligible bridges, FHWA and MoDOT shall initiate consultation with the consulting parties. Consulting parties shall be offered the opportunity to consult about the project purpose and need, range of alternatives and project effects.
  - B. For any project adversely affecting an individually eligible bridge, the MoDOT shall:
    1. Prepare historical documentation to Level II standards of the *Levels of Bridge Documentation (State Level) For Section 106 Mitigation of Adverse Effect*.
    2. Prior to project letting, take archival photographs of the bridge.
      - a. Take archival photographs, consistent with the NRHP and SHPO standards, with sufficient coverage to provide overall views of the bridge and significant details of the bridge.
      - b. Consult with the SHPO regarding the adequacy of coverage for the bridge and the selection of images prior to the project letting.
      - c. Print and label the photographs consistent with NRHP standards.
      - d. Provide original photographs and digital images on archival discs to the SHPO; MoDOT will maintain original prints and digital images.
    3. Original construction plans shall be included in the historical documentation in paper and digital (.pdf) format.

Three Bridges Historic District Programmatic Agreement  
Route 19, Shannon County, Missouri

4. Copies of the documentation shall be put into report format and provided to the SHPO and to a local repository (library and/or historical society) in paper and digital (.pdf) formats. Copies will be made available on MoDOT's web-site.
- II. Laser Imaging Detection and Ranging (LiDAR) Documentation
    - A. The Sinking Creek Bridge (H0079) will be documented using LiDAR scanning. MoDOT will work with the consulting parties to find ways to use the LiDAR scans to interpret the Sinking Creek Bridge.
    - B. MoDOT will determine the feasibility of using LiDAR scanning to document the Current River Bridge (G0804) and the Spring Valley Bridge (J0420) if projects are developed for the rehabilitation or replacement of the bridge.
  - III. Three Bridges Historic District
    - A. MoDOT will conduct a feasibility study on the rehabilitation of the Current River Bridge (G0804) and the Round Spring/Spring Valley Bridge (J0420).
    - B. MoDOT will prepare a historic context of the development of Route 19 through the Three Bridges Historic District.
    - C. MoDOT will work with the ONSR to identify locations within the ONSR for placement of interpretive panels, which will focus on the history and significance of the Three Bridges Historic District and the individually eligible bridges.
    - D. MoDOT will work with ONSR to develop a workbook on the history and significance of the Three Bridges Historic District, which will focus on the bridge types, the decision making process for bridge projects, the history of the area and landscape characteristics of the Three Bridges Historic District. The workbook shall be available for distribution through the ONSR.
    - E. MoDOT will work with the consulting parties to determine the feasibility and practicality of implementing additional mitigation measures developed through the consultation process.
  - IV. Architectural Surveys for specific projects
    - A. During the environmental study for each project, when the range of alternates is being considered, an architectural survey will be conducted in accordance with MoDOT's *Built Environment Resource Methods*.
    - B. The SHPO and other consulting parties shall be consulted about the development of the APE (direct and indirect effects) for the project, the eligibility of resources within the APE, project effects on historic properties and appropriate mitigation measures, following the regulations implementing Section 106 of the National Historic Preservation Act, 36 CFR 800.
  - V. Archaeological Surveys for specific projects
    - A. If, during the preliminary design phase of an individual project, it is determined that new right of way or easements are necessary, archaeological investigation will be conducted to identify and evaluate archaeological sites, assess the effects of the proposed undertaking on National Register eligible archaeological sites, and mitigate the adverse effects of the project on NRHP eligible archaeological sites that cannot be avoided.



Three Bridges Historic District Programmatic Agreement  
Route 19, Shannon County, Missouri

1. The MHTC, acting by and through MoDOT shall apply the National Register Criteria (36 CFR part 63), in consultation with the SHPO, appropriate Indian Tribes, and other interested parties, and guided by the Secretary's Standards and Guidelines for Evaluation, to evaluate the NRHP eligibility of identified archaeological sites;
  2. FHWA shall consult with MHTC (acting by and through MoDOT), the SHPO, and appropriate Indian Tribes, and other interested parties, regarding evaluation of adverse effects on archaeological resources identified as eligible for the NRHP, and to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate project adverse effects on archaeological sites eligible for the NRHP.
  3. If project activities are found to have adverse effects on archaeological sites eligible for the NRHP, the FHWA shall consult with MHTC (acting by and through MoDOT), the SHPO, and appropriate Indian Tribes and other interested parties to resolve the adverse effects, consistent with guidance provided in 36 CFR § 800.6, through the implementation of an Archaeological Data Recovery Plan(s) developed in accordance with the Council's "Recommended Approach for Consultation on the Recovery of Significant Information from Archaeological Sites" (64 FR 27085-87 published in the Federal Register on May 18, 1999), the Council's Handbook on Treatment of Archaeological Properties, and the Secretary of the Interior's Standards for Archaeological Documentation.
  4. The signatories recognizes that any human remains (other than from a crime scene or from a documented cemetery, burial plot or grave) which may be discovered or excavated during data recovery operations are located on state land, and are subject to the immediate control, possession, custody, and jurisdiction of the SHPO, pursuant to the Missouri Unmarked Human Burial Sites Act, §§ 194.400 – 194.410, RSMo. The FHWA shall monitor MoDOT's excavation and handling of any such human remains and associated or unassociated funerary objects, sacred objects or objects of cultural patrimony, to assure itself that these are handled, excavated or processed in accordance with the SHPO's instructions, and that the SHPO has actual physical as well as legal custody, possession and jurisdiction of those remains and other objects, after MoDOT or any other persons or entities complete any analysis of the remains and objects authorized by the SHPO, and within twelve (12) months of their excavation, pursuant to §§ 194.400-194.410, RSMo, and pursuant to any provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) applicable to such remains and artifacts found on non-federal lands
  5. The signatories recognize that Native American skeletal remains, associated or unassociated funerary objects, sacred objects, and objects of cultural patrimony that may be discovered during the archaeological survey, testing, or data recovery excavations on federal land are subject to NAGPRA. The land managing federal agency, the Corps, shall, with assistance from FHWA and MoDOT, assume responsibility for compliance with NAGPRA related to this undertaking.
- B. If appropriate and suitable for public education, methods to make this information available to the public will be explored by the signatories and any other interested consulting parties.

Three Bridges Historic District Programmatic Agreement  
Route 19, Shannon County, Missouri

- VI. Reporting
  - A. MoDOT shall report annually at the end of the state fiscal year (on or about June 30), to the SHPO and consulting parties, about the status of the bridge projects and the mitigation efforts.
  
- VII. Duration
  - A. This PA shall be in effect for twenty (20) years from the date of execution. Prior to the expiration of this PA, the FHWA, SHPO and MoDOT may consult with the other consulting parties to reconsider the terms of the PA and amend it in accordance with Stipulation IV below or extend it for a five (5) year period.
  
- VIII. Amendments
  - A. This PA may be amended when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date the amendment is filed and signed by the Council.
  
- IX. Termination
  - A. If any signatory to this PA 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 VIII 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 PA upon written notification to the other signatories.

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


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Three Bridges Historic District Programmatic Agreement  
Route 19, Shannon County, Missouri

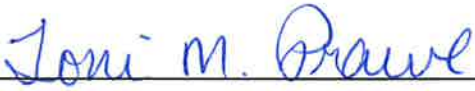
Execution of this PA by the FHWA, the Missouri SHPO and MHTC and implementation of its terms evidence that FHWA has taken into account the effects of undertakings on the Three Bridges Historic District, the Sinking Creek Bridge (H0079), the Current River Bridge (G0804), and the Round Spring/Spring Valley Bridge (J0420) in Shannon County, Missouri, and have afforded the Council an opportunity to comment.

**Signed:**

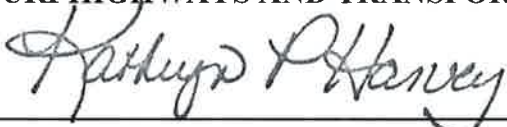
**FEDERAL HIGHWAY ADMINISTRATION:**

By:  Date: 8/9/16  
Title: Program Development Team Leader

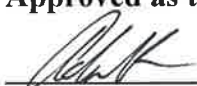
**THE MISSOURI STATE HISTORIC PRESERVATION OFFICE:**

By:  Date: 08/03/16  
Title: Deputy SHPO

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION:**

By:  Date: 7-29-16  
Title: Assistant Chief Engineer

Attest:   
Commission Secretary

Approved as to form:   
Commission Counsel

# Information to Accompany

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The Federal Highway Administration (FHWA) and the Missouri Department of Transportation (MoDOT) are developing a Programmatic Agreement as provided for under 36 CFR 800.14(b), specifically when effects on historic properties are similar and repetitive in nature as provided for in subsection (1)(i). The Missouri State Historic Preservation Office (SHPO) has been consulted and concurs that the development of a Programmatic Agreement is appropriate for the project (see Appendix A for Correspondence).

## *Federal Agency Contacts:*

Raegan Ball  
Program Development Team Leader  
FHWA—Missouri Division  
3200 W. Edgewood, Suite H  
Jefferson City, MO 65109  
[raegan.ball@dot.gov](mailto:raegan.ball@dot.gov)  
573-638-2620

Roopa Banerjee  
Environmental Specialist  
FHWA—Missouri Division  
3200 W. Edgewood, Suite H  
Jefferson City, MO 65109  
[roopa.banerjee@dot.gov](mailto:roopa.banerjee@dot.gov)  
573-638-2615

## **Project Description**

The FHWA and MoDOT are undertaking an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to study options for a permanent replacement bridge on Route 19 in Shannon County at Sinking Creek (Bridge H0079) (see Figure 1 for a location map), this project will be constructed by MoDOT Job Number J9P0438.

Route 19 has two 10-foot travel lanes with a 2-foot earth shoulder and a 55 mile per hour (mph) speed limit as it approaches the Sinking Creek Bridge. The bridge is 18 feet wide with three 80 foot open-spandrel arch spans and two 40 foot deck girder spans. The bridge has a total length of 339 feet carrying two 9 foot traffic lanes and no shoulders. Following a February 2015 inspection the substructure was given a condition rating of 5 (fair), the deck a rating of three (serious) and the superstructure a rating of four (poor). It was discovered that the deck girders in the northernmost span had significant deterioration including spalling concrete and rusting steel rebar. It was also discovered that the southernmost span had shifted approximately three inches to the south. If the shifting continues the span could fall off its supports. Following the inspection the decision was made to make the bridge a one-lane bridge and to restrict the bridge to 20 tons or less.

The roadway is heavily used by logging trucks and other commercial vehicles and provides the main access to the Ozark National Scenic Riverways (ONSR) and the Current River, a major tourist destination. In addition, Missouri State Parks, a division of the Missouri Department of Natural Resources, is constructing Echo Bluff State Park adjacent to Sinking Creek. In spring 2015, a temporary bridge was constructed immediately to the west of the Sinking Creek Bridge to meet traffic demands, and the Sinking Creek Bridge (H0079) was closed, but a permanent solution is needed.

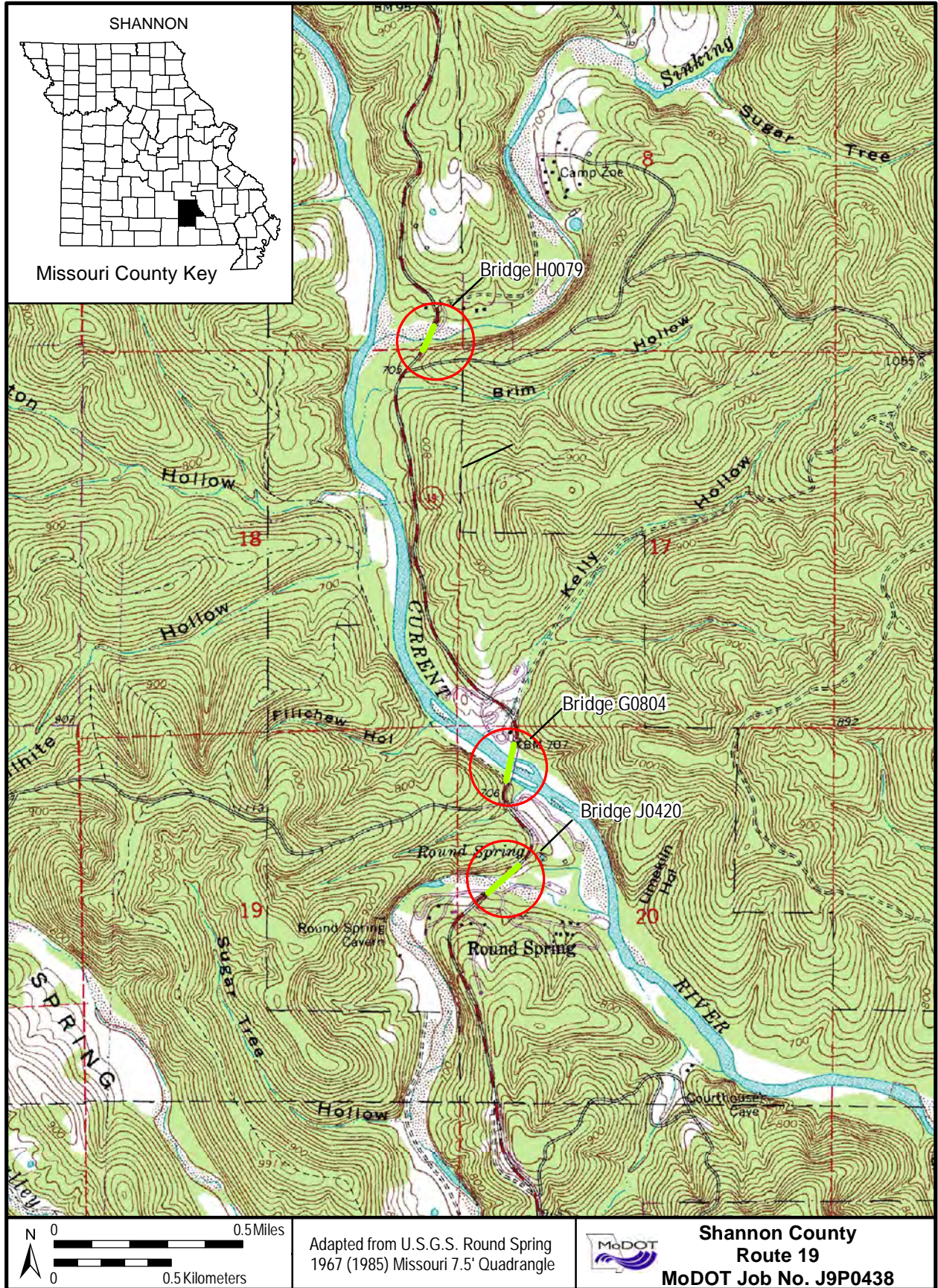


Figure 1. Location Map

Three Bridges Historic District Programmatic Agreement  
Route 19, Shannon County, Missouri

The Purpose and Need of the project, as identified in the EA, is to provide a reliable, safe and cost efficient Route 19 crossing over Sinking Creek. The project needs are identified as:

- The Sinking Creek Bridge (H0079) is 89 years old and structurally deficient. Its age and condition require regular maintenance resulting in periodic closures that create an inconvenience to the traveling public and substantial expense to taxpayers.
- The bridge's design is functionally obsolete. It does not meet MoDOT's standards for lane width, shoulders or vertical clearance.
- The temporary Route 19 roadway does not meet a 55 mph design speed posted for the Route 19 corridor.
- The temporary bridge may be unreliable during flood events and unstable for an indefinite time period.

The FHWA is the lead federal agency for the project, since funding for the project will come through the Department of Transportation. The ONSR, a unit of the National Park Service, is participating in the EA and the development of this Programmatic Agreement since they own land adjacent to Route 19 throughout the area of potential effects (APE) for the project and the Three Bridges Historic District. If new right of way adjacent to the existing corridor is required, it will likely be an ONSR easement. Permits may be required from the U. S. Army Corps of Engineers.

### **Alternatives Considered**

The alternatives considered for the permanent solution for a crossing at Sinking Creek are shown on Figure 2. These alternates include the No-Build Alternate and six build alternates. One of the build alternatives consists of rehabilitation of the existing bridge.

#### *No-Build Alternate*

The No-Build alternate would make no improvements to the existing Sinking Creek Bridge. Even if the bridge were reopened as a one lane, load restricted bridge, normal maintenance including pothole patching, pavement replacement, striping, and overlays would only delay the permanent closing of the bridge due to structural deterioration. This alternate would leave traffic on the temporary bridge and no construction would be performed on the existing bridge. The temporary bridge may be unreliable during flood events, because it is not intended to handle the hydraulic forces a permanent bridge is designed for. The temporary bridge requires monitoring for larger rain events and has an increased possibility of being structurally compromised by flooding versus a permanent bridge. For these reasons, the No-Build alternate fails to meet the project purpose of providing a reliable Route 19 crossing over Sinking Creek, but it will be retained in this EA as a baseline for comparison with the other alternates evaluated.

#### *Alternate 1*

This alternate requires the existing Sinking Creek Bridge to be replaced in its current location with a new two-lane bridge. It would construct approximately 400 feet of new roadway north and south of the new bridge to tie in each bridge end to the existing roadway and allows the temporary bridge to be used to carry traffic while construction is being performed.

This alternate has the least amount of impacts to the surrounding natural resources of any of the build alternates. It also allows for the old roadway and bridge to be used as a contractor staging area since traffic would continue to use the temporary bridge during construction.

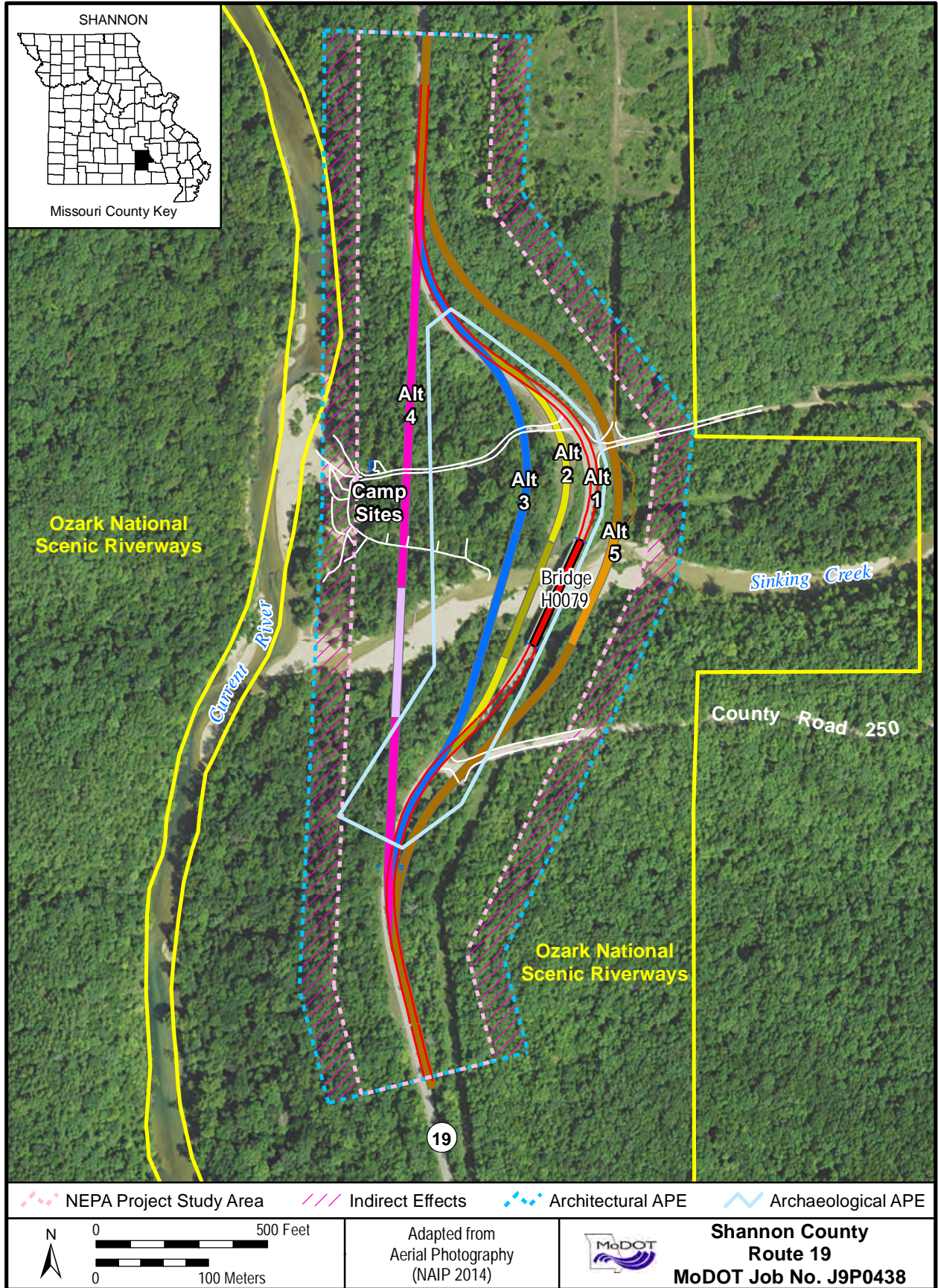


Figure 2. Sinking Creek Alternates and APE

Three Bridges Historic District Programmatic Agreement  
Route 19, Shannon County, Missouri

*Alternate 1a (Rehabilitation)*

This alternate would rehabilitate and widen the existing bridge by removing all the floor system, spandrel bents and columns. A new deck, pre-stressed concrete girders and column bents would be installed. The existing spandrel arch ribs and column footings would remain in place. With this proposed alternate, the spandrel arch ribs would no longer contribute to the structural capacity of the bridge. Traffic would remain on the temporary bridge during construction.

This alternate has constructability and structural concerns. In order to widen the existing bridge and correct its structural deficiencies the column and spandrels must be replaced with stronger columns and girders added to span between the new columns. The new columns and girders would carry the traffic loads and would remove these loads from the arches. The existing footings, underneath the columns, and arches would remain in place to maintain the historical appearance of the bridge. There are serious concerns of being able to replace the columns without damaging the existing arches. Also, when the loads are removed from the arches, freeze/thaw cycles will most likely cause the arches to deteriorate at a quicker rate because they were designed to stay under a loaded condition. It would be impractical to use the footings that were constructed in 1926 due to their lack of longevity. Concrete testing was completed on the Sinking Creek Bridge in 2002. Chloride content in the spandrel arches was determined to be more than twice the threshold for corrosion which will continue to accelerate the deterioration of the historic bridge's architecturally significant design.

Because of these constructability and structural concerns, the bridge rehabilitation proposed with Alternate 1a will not meet the project's purpose and need of providing a safe, reliable long-term crossing. The existing bridge would still be functionally obsolete and structurally deficient.

*Alternate 2*

This alternate constructs approximately 1400 feet of new roadway and requires constructing a new bridge that would replace the existing Temporary Sinking Creek Bridge in the same alignment. It would raise the vertical alignment of the new Bridge higher than the temporary one and traffic would be temporarily rerouted. A couple potential traffic detour options exist. One is an approximate 90-mile long detour along state highways. The western detour would be along Route 60 to Route 17 in Mountain View to Route 32 in Licking to Route 19 in Salem. The eastern detour would be Route 60 to Route 21 near Van Buren to Route 72 near Centerville to Route 19 in Salem. The other is placing non-truck traffic on the existing Sinking Creek Bridge and rerouting truck traffic on a nearby paved County Road that goes through the new Echo Bluff State Park located just east of the proposed bridge site. This would be about a 2 mile detour for truck traffic. Neither detour option is ideal. The 90-mile long detour would be a financial hardship to the many commercial and tourism industries that depend on Route 19, would be a potential two hour inconvenience to local travel, delay school bus travel, and would hinder response time for emergency vehicles. The other detour routes large trucks through the state park which would disrupt campers and other recreational activities as well as deteriorate the county road through the park.



Three Bridges Historic District Programmatic Agreement  
Route 19, Shannon County, Missouri

*Alternate 3*

This alternate constructs approximately 2400 feet of new roadway and requires the existing Sinking Creek Bridge to be replaced just downstream of Alternate 2. The temporary bridge would be used to carry traffic while construction is being performed.

The elevation of Route 19 as it crosses the side road that serves as access to the Current River and camping area is 20' to 25' higher than the existing access road. This will result in a new access road connection that will be much steeper than existing and impact a wide area of forested land. The steeper roadway would be much more difficult to negotiate than the existing.

*Alternate 4*

Alternate 4 would construct a new structure to replace the Sinking Creek Bridge downstream of the other alternates. Alternate 4 is the furthest alternative from the existing location and the closest in proximity to the Current River. Alternate 4 is the straightest of the proposed alignments and would require approximately 2,600 feet of new roadway to be constructed to connect to existing Route 19. Traffic, truck and non-truck, would still be able to use the temporary bridge during construction of this alternate.

This alternate has significant environmental impacts on the ONSR including the backcountry campground. The hydrology of Sinking Creek and the Current River would be affected. This alternate has significant effects on the Three Bridges Historic District. Due to the significant environmental impacts, it is not being carried forward for further study.

*Alternate 5*

Alternative 5 would build a new structure upstream from the existing Sinking Creek Bridge. To construct at this location would require 3,100 feet of new roadway to be built to connect back with the existing road. Traffic would still be able to use the temporary bridge during the construction of this upstream alternative.

This alternate has significant environmental impacts on the ONSR. A cave located within MoDOT right of way would be affected. This alternate has significant effects on the Three Bridges Historic District. Due to the significant environmental impacts, it is not being carried forward for further study.

**Area of Potential Effects**

The area of potential effects (APE) for the Sinking Creek Bridge (H0079) project (shown on Figure 2) includes a corridor 200' from the anticipated centerline of the outermost alternates under consideration for direct effects, with a buffer of 100 feet for the consideration of indirect effects. This APE considers the direct and indirect effects of all of the alternates on archaeological sites, the historic bridge, cultural landscapes, buildings, and other historic properties that might exist within it. The archaeological APE was further refined as alternates were eliminated from the study. The archaeological APE used for fieldwork is identified on Figure 2.

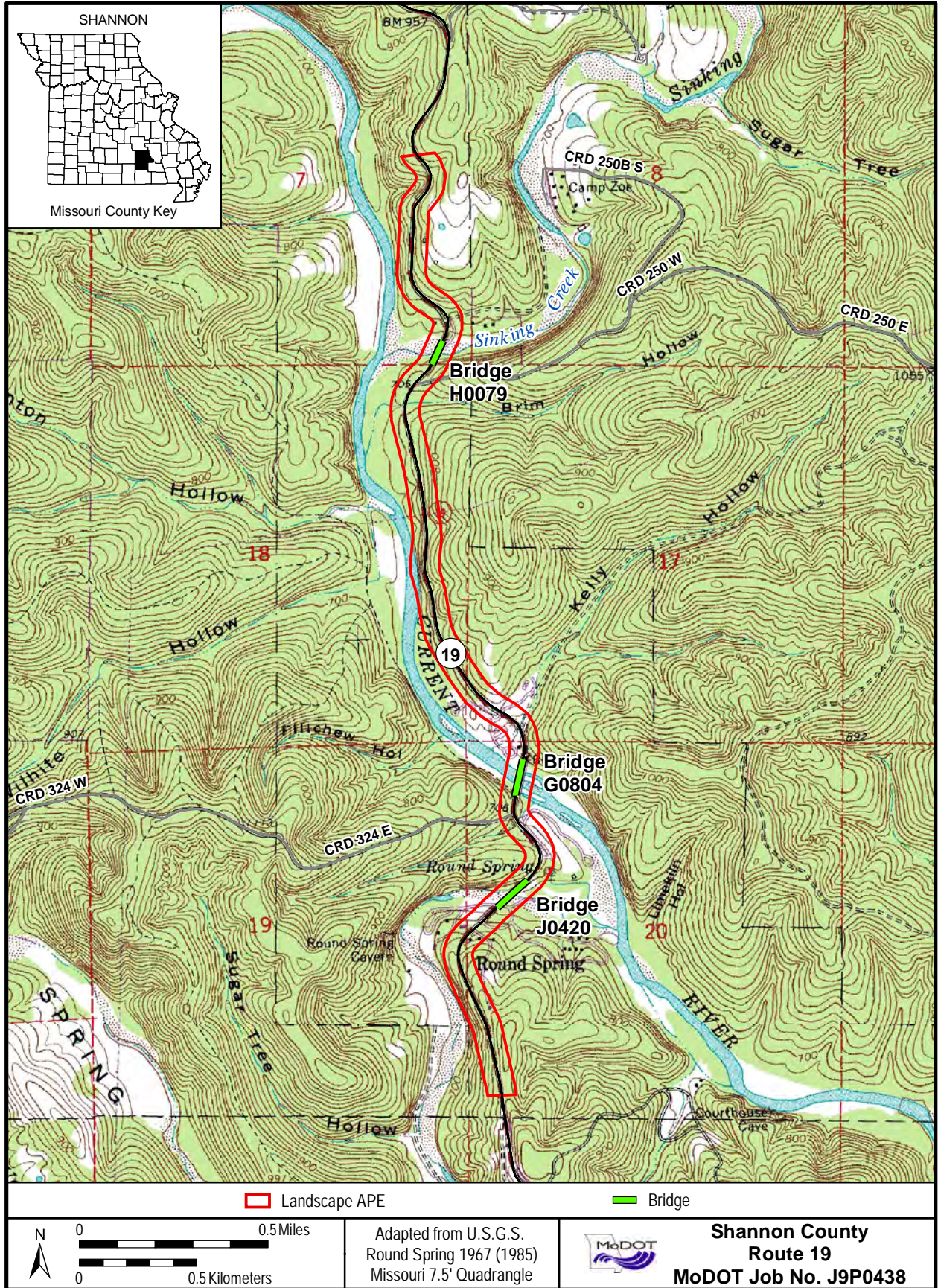


Figure 3. Landscape APE

## Three Bridges Historic District Programmatic Agreement Route 19, Shannon County, Missouri

An additional APE was developed to study the landscape corridor, this APE extended from approximately 0.5 miles north of the Sinking Creek Bridge, along Route 19 to approximately 0.5 miles south of the Round Spring Bridge and included the viewshed from Route 19—approximately 200 feet from centerline of Route 19 on each side, this APE is shown on Figure 3, this APE allows for the consideration of the cumulative effects of each bridge project on the Three Bridges Historic District.

In addition, it is anticipated that within the next twenty years the bridges at the Current River (G0804) and Round Spring (J0420) just south of Sinking Creek may also need to be replaced (these bridges are identified on Figure 1 and 3 and photos are provided). These bridges are similar to the Sinking Creek Bridge. Each is individually eligible for the NRHP and is a contributing element of the Three Bridges Historic District; therefore the overall cultural resource concerns will be similar. The FHWA and MoDOT developed this Programmatic Agreement to develop a process for consultation for projects affecting these bridges and develop a mitigation plan that addresses the resources appropriately and comprehensively. A project specific APE for each of those bridges will be developed based on the alternatives considered for each bridge.

### **Steps Taken to Identify Historic Properties**

#### *Archaeological Sites*

A survey of the archaeological APE (see Figure 2) was conducted under an Archaeological Resources Protection Act (ARPA) permit issued to MoDOT by the National Park Service (NPS). The survey included examination of portions of two archaeological sites using systematic screened shovel testing. Survey methodology and results are detailed in MoDOT's report: A Phase I Cultural Resources Survey of Proposed Alternates for Replacement of the Sinking Creek Bridge (Bridge H0079), State Route 19, Shannon County, Missouri (Weismann, et. al., 2016).

#### *Sinking Creek Bridge*

The Sinking Creek Bridge (H0079) was identified by the *Missouri Historic Bridge Inventory* (Fraser 1996) as “possibly eligible” for listing on the National Register of Historic Places (NRHP) with a significance rating of 50. It is a 1925, three span, open spandrel concrete arch bridge (see attached photographs). Three additional concrete arch bridges in Shannon County were also recommended as potentially eligible: at Eminence (K0209), at Round Spring (J0420) and the Current River Bridge (G0804).

#### *Three Bridges Historic District*

In 1999, in response to a Draft Environmental Impact Statement for improvements to Routes 17 and 19 in Texas and Shannon Counties, the State Historic Preservation Office (SHPO) identified a historic district consisting of three of these concrete bridges: Sinking Creek (H0079), the Current River (G0804) and Round Spring (J0420) and the roadway connecting them. They also identified the cultural landscape within the viewshed of Route 19 as historically significant.

In 2015 for the construction of the temporary bridge MoDOT concurred with the existence of a historic cultural landscape within the viewshed of Route 19 in Shannon County with undefined northern and southern borders and containing the three bridges and associated roadway (Daniels 2015).

## **Description of the Historic Property**

### *Three Bridges Historic District & Bridges*

Below is a summary of the Three Bridges Historic District history and significance, additional information can be found in Appendix B. Shannon County lies in the heart of the Missouri Ozark Mountains. Route 19 winds through the county providing scenic vistas and the rivers in the area have provided recreational opportunities for more than a century. The tourism industry centers on the Current River. In 1964 over 134 miles of the upper Current River was incorporated into the Ozark National Scenic Riverways (ONSR), the first unit of the National Park Service to protect a river, the Sinking Creek Bridge is located within the ONSR.

Route 19 through Shannon County north of Eminence was constructed in the mid-1920s to improve access to the region, and to provide access to Round Spring State. Tourism was a booming industry in Missouri and in the Ozarks, with tourist spending growing from \$61 million in 1926 to \$98 million by 1928. By 1945 Camp Zoe had been developed just up Sinking Creek, Camp Alton was just up the Current River, the Round Spring State Park was just down the road and the Round Spring Caverns had been developed.

Route 19 has a twenty foot roadway with earth shoulders that follows the topography of the mountains and curves around natural features. Grading and excavation was done in 1926 and 1928 and it was given an aggregate surface in 1941. Route 19 was a priority after the passage of Amendment 3 in 1926 since the roadway would serve Round Spring State Park, and providing good roadways to state parks was one of the goals of the amendment. Scenic views along Route 19 in Shannon County were frequently shown in the *Biennial Reports* of the Missouri State Highway Commission (Daniels 2015).

Because the highway was connecting to a state park and tourism being a major industry, the vistas provided by the roadway were a concern during the design. The first roadside park created in the state highway system is located on Route 19 south of Eminence (outside this project area). Views of the Current River and its tributaries and of the concrete arch bridges are provided as the road curves through the mountains.

The cultural landscape of Route 19, including the viewshed and the three bridges have been identified as a historic district eligible for listing on the NRHP under criterion A for significance in tourism and recreation and criterion C for local significance in engineering for the roadway and bridges. The period of significance is 1925-1964. The boundary was determined during consultation among MoDOT, FHWA, SHPO, Missouri State Parks and NPS. The recommended boundary is shown on Figure 4 and described below.

The eastern boundary follows the 800' elevation line above Route 19, extending to the east at Sinking Creek to a point where the bluff on the northeast side turns to the north, then, crosses Sinking Creek and follows the 800' contour line on along the east side to Kelly Hollow. At Kelly Hollow the boundary follows the bluff line east to an arbitrary point 250' along the bluff, turns south to cross the bluff and follows the 800' contour line to the projection of the bluff just north of Limekiln Hollow, where the boundary turns southwest to form the southern boundary.

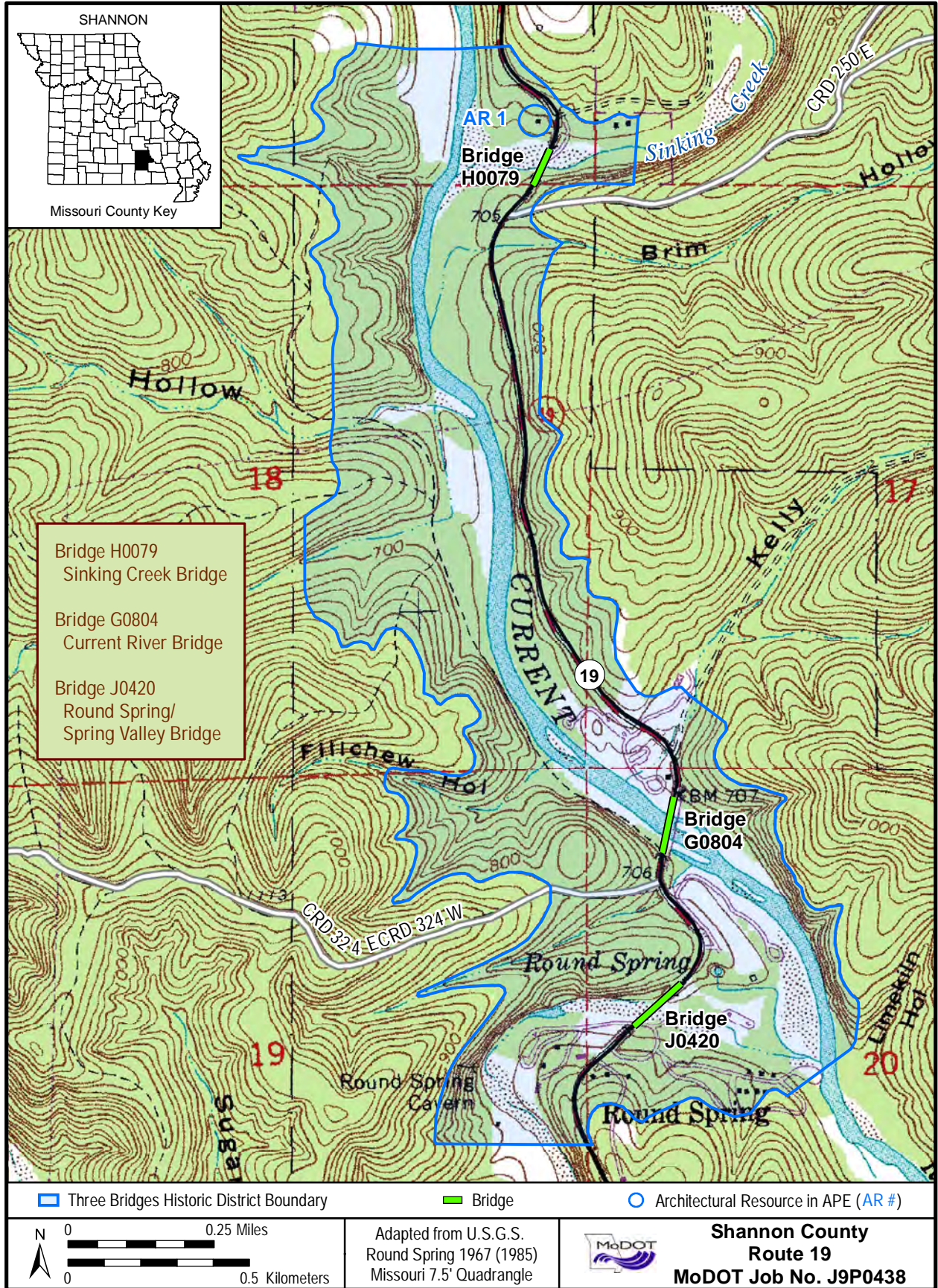


Figure 4. Three Bridges Historic District

Three Bridges Historic District Programmatic Agreement  
Route 19, Shannon County, Missouri

The western boundary follows the 820' contour line above the western bank of the Current River from the northern boundary to a point where it intersects with the southern boundary just south of Round Spring.

The northern boundary is at the apex of the curve preceding the curve into the Sinking Creek Bridge. The southern boundary is south of the curve preceding the Round Spring Bridge and is the intersection of a section line with Route 19. Both are at points where Route 19 intersects with parcel boundaries of parcels that make up the ONSR.

The Sinking Creek Bridge (H0079) (Figure 5) is a 1925 three span open-spandrel concrete arch bridge with two concrete tee beam approach spans. It is 338' long with an 18' wide deck, curb-to-curb. The bridge is currently closed to traffic, with a temporary bridge carrying all traffic. The open spandrel concrete arch bridge was a perfect selection for the location because the spans provided ample space for crossing the Sinking Creek channel and flood channel did not impede the views from the roadway and are attractive when viewed from the Creek.



**Figure 5: Sinking Creek Bridge (H0079)**

The Current River Bridge (G0804) (Figure 6) is a 1924 five span closed-spandrel concrete arch bridge. It is 601' long with an 18' wide deck, curb-to-curb. At the request of Shannon County, this bridge is currently signed for one-way traffic.

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**Figure 6: Current River Bridge (G0804)**

The Round Spring Bridge (J0402) (Figure 7) is a 1930 bridge with one open-spandrel concrete arch span and seven concrete deck girder approach spans. The bridge is 522' long with a 20' wide deck, curb-to-curb.



**Figure 7: Round Spring Bridge (J0402)**

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Each of the three bridges is also individually eligible for the NRHP under criterion C for engineering significance.

The archeological survey identified and investigated archaeological sites 23SH97 (Late Paleo-Indian, Late Archaic, Early Woodland, Mississippian and 20th Century historic components) and 23SH1566 (Late Archaic, Early/Middle Woodland and 20th Century historic components). Both sites may be eligible for listing on the NRHP under criterion D, based on their potential to include significant archaeological data and may require Phase II testing once an alternative is selected. There is currently no evidence that either site includes burials or human remains, funerary objects, sacred objects, or objects of cultural patrimony and therefore, neither site appears to have value for preservation-in-place. The report, *A Phase I Cultural Resources Survey of Proposed Alternates for Replacement of the Sinking Creek Bridge (Bridge H0079), State Route 19, Shannon County, Missouri*, was submitted in June 2016 to the State Historic Preservation Office, the National Park Service's Ozark National Scenic Riverways, the Delaware Tribe of Indians, and the Osage Nation for review.

### **Description of the Effects of the Project on the Historic Property**

Replacing the Sinking Creek Bridge on the existing alignment, causing the removal of the historic bridge, would have an adverse effect on the historic bridge. Depending on the design of the replacement bridge, it could also have an adverse effect on the cultural landscape by altering the viewshed. Replacing the bridge on another alignment would have an adverse effect on the historic landscape by altering the engineering of the roadway and the views from the road. Similar issues will be encountered during discussions about replacing the Current River and Round Springs Bridges.

A preferred alternative has not been selected. The consulting parties in the section 106 process will participate in the alternative analysis and selection in the NEPA process. Mitigation measures are being developed, for inclusion in the PA, for the individual bridges and for the historic district which will be implemented if any project has an adverse effect on these historic properties.

Any project that has an adverse effect on an individually eligible bridge or on the historic district will need mitigation under the provisions of the Programmatic Agreement. That project will also need to be evaluated under Section 4(f) of the U. S. Department of Transportation Act (23 USC 774) as it applies to the use of historic properties.

### **Consultation and Public Involvement**

The Agency Scoping Meeting for the Sinking Creek Bridge project was held on July 13, 2015 at the Havener Center in Rolla, Missouri. Representatives of FHWA, MoDOT, the SHPO, the Missouri Department of Conservation, ONSR, and the Environmental Protection Agency attended the meeting. Participants were given an overview of the project, the ten year history of previous studies, and the alternates that had been previously developed. The Section 106 process, including the planned consultation process and the development of the Programmatic Agreement were also discussed. Prior to the discussion of the Section 106 process the ONSR raised concerns



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about cumulative impacts on the ONSR, but during the discussion of the consultation and public involvement process their concerns were addressed.

*Public Involvement*

The FHWA and MoDOT will use the NEPA public involvement process to reach the general public about the project. The SHPO agrees that the FHWA/MoDOT NEPA public involvement process is sufficient to reach the general public. The Agency and Public Involvement Plan is located in Appendix C. The Public Involvement Plan provides for public meetings at key points during the Environmental Assessment:

- During the identification of preliminary alternatives, during which the public will have the opportunity to identify alternatives on a map.
- When the Environmental Assessment becomes available for the public for review.

MoDOT Historic Preservation Staff are present at these public meetings with display boards explaining the Section 106 process, the resources in the project area, and seeking input from the public. Copies of the displays are located in Appendix D.

The first public meeting was held at the Shannon County Courthouse in Eminence on October 5, 2015, and was available [on-line](#). MoDOT Historic Preservation staff had a display explaining the Section 106 process as well as the consultation process for the Route 19 bridges programmatic agreement. Participants were asked to identify resources they considered historically significant on topographic maps, and if they felt the historic landscape was significant, they were asked about the boundaries of the landscape and asked to mark those on the map as well. Information on the National Register of Historic Places, the bridges and landscape, how to participate in consultation and how to provide comments to MoDOT were included in a handout.

Numerous comments were received from the public meeting. Several commenters want the historic bridge preserved—either rehabilitated for one-lane road traffic or for bicycle/pedestrian use. Other comments reminded MoDOT to consider the visual impacts a new bridge would have on the landscape and on the ONSR. One comment addressed archaeological potential in the area and another requested MoDOT consider a concrete arch replacement bridge. In a follow up to the public meeting one participant (not the same person who made the comment at the public meeting) called the MoDOT Historic Preservation Section to discuss archaeological concerns. An e-mail sent to the Historic Preservation Section addressed the tree canopy as part of the landscape and asked MoDOT to respect the existing canopy during construction and maintenance of Route 19.

Of those expressing support for alternates, 1 and 1a received the most support.

*Consultation--Tribal*

Tribal consultation will be done on a project-by-project basis with tribes that have historical ties or interest in Shannon County, when the maximum area of potential effect for the specific project can be determined.

To identify tribes to consult with about specific projects, FHWA/MoDOT consulted with the SHPO and the ONSR about the tribes they identified for projects in Shannon County. If a tribe

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appeared on a list used by any of the agencies, they were invited to participate in consultation for the Sinking Creek project and will be invited to participate in future projects in the area. Table 1 below identifies the tribes and their responses to the Sinking Creek project.

**Table 1: Tribal Consultation and Responses**

Tribe	Response
Absentee Shawnee Tribe of Indians of Oklahoma	
Cherokee Nation	
Delaware Nation	
Delaware Tribe of Indians of Oklahoma	Look forward to reviewing the final report, have no objection to the proposed project based on their review of records. If any human remains are encountered, stop work immediately and contact them.
Eastern Shawnee Tribe of Oklahoma	
Osage Nation	Look forward to reviewing the final report
Quapaw Tribe of Oklahoma	
Shawnee Tribe	
United Keetoowah Band of Cherokee	No comments or objections to project; if human remains are encountered, stop work immediately and contact them.

For the Sinking Creek Bridge project the FHWA initiated consultation with Tribes with historical ties or an expressed interest to Shannon County on June 12, 2015. (Copies of all correspondence are located in Appendix A).

To date, three tribes have responded. The Osage Nation responded that it was looking forward to reviewing the archaeological report. The Delaware Tribe of Indians responded that they are looking forward to reviewing the archaeological report, but they are not aware of any religious or culturally significant sites in the project area; however, if human remains are encountered during construction, they request that construction be stopped immediately and they be contacted. The United Keetoowah Band of Cherokee responded that they have no objection to the project; however, should human remains be discovered during construction, they request that construction be stopped immediately and they be contacted.

A copy of the Phase I report for the Sinking Creek project has been submitted to the SHPO for comment and has been circulated to the Delaware Tribe of Indians and the Osage Nation for review.

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*Consultation—Non-Tribal*

The SHPO and the NPS were consulted about other parties to invite to participate in consultation—those with an interest in historic bridges, the Current River, or cultural resources generally. Table 2 identifies the parties invited to participate in consultation and if they have chosen to participate in consultation.

**Table 2: Parties Invited to Participate in Consultation**

<b>Party</b>	<b>Interest</b>	<b>Chose to Participate?</b>
Friends of the Current River	Ozark National Scenic Riverways	
National Park Service-ONSR	Ozark National Scenic Riverways	Yes
Shannon County	Local Government	Yes
Shannon County Historical Society	Local history	
Historic Bridge Foundation	Historic Bridges	Yes
Nathan Holth— HistoricBridges.org	Historic Bridges	Yes
Missouri State Parks	Echo Bluff State Park under development	Yes
Missouri Preservation Corps of Engineers, Little Rock District	Statewide Historic Preservation Permit may be needed	
LAD Foundation/Pioneer Forest	Adjacent private landowner, environmental interest	Yes

Any additional interested parties identified as consultation and public involvement move forward will be invited to join the consultation process.

On June 29, 2015 the Advisory Council on Historic Preservation (Council) was invited to participate in consultation for the development of this Programmatic Agreement, since it is assumed that there will be adverse effects to at least one historic property by the project and the development of a Programmatic Agreement will be used to mitigate adverse effects and establish procedures for projects affecting the historic district and the remaining bridges in the future. On July 31, 2015 the Council declined to participate in consultation.

On September 9, 2015 the first consultation meeting was held in Jefferson City and by teleconference. An agenda and materials for the meeting were distributed by e-mail on August 31, 2015, so the parties would have time to review the information prior to the meeting. The meeting discussed the purpose and need for the project, the alternates under consideration, the section 106 process, including the area of potential effects and the expected level of effort to identify historic properties and the goals of the programmatic agreement to be developed. Minutes of the meeting and supporting materials are located in Appendix E.

In January 2016 a field visit was conducted with MoDOT, FHWA, SHPO, NPS, State Parks and Shannon County to discuss the boundaries of the Three Bridges Historic District. Prior to the meeting a draft boundary map and narrative boundary description was sent to the consulting

Three Bridges Historic District Programmatic Agreement  
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parties for review, along with photo plates of the landscape. During the field visit the corridor was driven several times and views from the roadway examined. Participants stopped at the Sinking Creek Bridge and the Current River Bridge to examine site lines and vistas. Based on the feedback received during the field visit, the boundaries were revised to those shown in Figure 4.

On March 3, 2016, FHWA, MoDOT and the NPS held a conference call to discuss the project. NPS participants included ONSR and the Midwest Regional Office and the Midwest Archaeological Center. This meeting served to familiarize those in FHWA and NPS who would be reviewing NEPA and Section 4(f) Documentation with the project and the ongoing Section 106 consultation process. An overview of the project timeline was presented—from the initial Environmental Impact Statement prepared in the late 1990s to the timeline for the current Sinking Creek project. Also discussed was the evaluation of the Three Bridges Historic District and the status of the archaeological investigations. An e-mail which had been circulated to the consulting parties about potential designs for the replacement bridge was also discussed, as was the reuse of the existing bridge for pedestrian purposes. As a result of the meeting the NPS Midwest Regional Office and the Midwest Archaeological Center were added to the Section 106 consulting party e-mail group.

On March 28, 2016 a consultation meeting was held with all the consulting parties. This meeting focused on the eligibility assessment of the Three Bridges Historic District, which had been distributed prior to the meeting, the reuse of the Sinking Creek Bridge, the alignment alternatives for the Sinking Creek Bridge project and the design alternatives for the Sinking Creek project. In addition, a brainstorming session was conducted to develop mitigation measures for individually eligible bridges that might be adversely affected by a MoDOT project and the Three Bridges Historic District. The list would be developed and circulated to the consulting parties for additional ideas and prioritization. The ideas developed out of the brainstorming session and subsequent ranking by the consulting parties were incorporated into the PA.

A draft of the Programmatic Agreement has been circulated for comments among the consulting parties, with only the SHPO providing minor comments to clarify the mitigation documentation. The consulting parties were asked if they would like to concur in the PA when it was sent for the initial review.

The consultation process continues with discussion of bridge aesthetics for the Sinking Creek Bridge.

## References

Daniels, Karen L.

2015 “Shannon 19, MoDOT Job No. J9P3101, Temporary Bridge at Sinking Creek,” Section 106 Memo, Historic Preservation Section, Missouri Department of Transportation, Jefferson City, Mo.

Fraser, Clayton

1996 *Missouri Historic Bridge Inventory* (draft), Loveland, CO: Fraserdesign.

Three Bridges Historic District Programmatic Agreement  
Route 19, Shannon County, Missouri

Weisman, Russell, Karen Daniels and Dan Felty

2016 *A Phase I Cultural Resources Survey of Proposed Alternates for Replacement of the Sinking Creek Bridge (Bridge H0079), State Route 19, Shannon County, Missouri.*  
Historic Preservation Section, Missouri Department of Transportation, Jefferson City, Mo.

**Appendices:**

**Appendix A: Correspondence**

**Appendix B: Three Bridges Historic District Narrative**

**Appendix C: Public Involvement Plan**

**Appendix D: Public Meeting Displays and Handouts**

**Appendix E: Consultation Meeting Minutes and Materials**

## **Appendix A: Correspondence**

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**Missouri Department of Transportation**  
*David B. Nichols, Director*

573.751.2551  
Fax: 573.751.6555  
1.888.ASK MODOT (275.6636)

May 29, 2015

Dr. Toni Prawl, Director SHPO  
MDNR/DSP  
P. O. Box 176  
Jefferson City, MO 65102

Dear Dr. Prawl:

Subject: Design  
Shannon County, Route 19  
Job No. J9P0438  
Bridge H0079 at Sinking Creek  
Initiating Consultation for Programmatic Agreement

The Missouri Department of Transportation (MoDOT) is initiating the process to prepare an Environmental Assessment for the construction of a new crossing at Sinking Creek in Shannon County. Through our recent consultation for the construction of a temporary bridge at that location (010-SH-15) we have concurrence that the Sinking Creek Bridge (H0079) is individually eligible for the National Register of Historic Places (NRHP) and is a contributing element of a larger cultural landscape centered around Route 19.

We have had prior consultation about Route 19 bridges (October 18, 1999) which indicate the presence of a historic district consisting of three concrete arch bridges which are in proximity (H0079, the Sinking Creek Bridge, G0804 the Current River Bridge and J0420, the Round Spring Bridge) and the roadway which connects these bridges. Attached is a topographic map which identifies these three bridges. It is possible that there may be studies within the next few years for new crossings at the other two locations.

It will be impossible to construct a new bridge at Sinking Creek without having an adverse effect on at least one resource. Replacing the bridge on the existing alignment will affect the historic bridge, and possibly the cultural landscape. Constructing a bridge on a new alignment will have an adverse effect on the landscape, and if it causes the removal of the historic bridge, the road corridor and bridge. Similar impacts would occur if the other two bridges were replaced.

MoDOT would like to begin the consultation process to develop a Programmatic Agreement (PA) to establish a process for Section 106 review of these bridges, determine appropriate mitigation measures for the cultural landscape and bridges, and identify potential consulting parties. We request the SHPO concur with our recommendation that the project will have an adverse effect on one of these resources (the bridge, the road corridor or the landscape), that these adverse effects would be to the same types of resources for each bridge and that handling consultation and development of mitigation measures programmatically is appropriate for these resources.



Should you or any of your staff have any questions, please contact Karen Daniels, MoDOT Senior Historic Preservation Specialist, at [Karen.Daniels@modot.mo.gov](mailto:Karen.Daniels@modot.mo.gov) or (573) 526-7346.

Sincerely,



Michael C. Meinkoth  
Historic Preservation Manager

Attachments

Copies:        Ms. Sara Parker Pauley – MDNR  
                    Mr. Mark Shelton – SE-ao  
                    Ms. Jerica Holtsclaw – CO-de  
                    Ms. Raegan Ball – FHWA



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

## DEPARTMENT OF NATURAL RESOURCES

[www.dnr.mo.gov](http://www.dnr.mo.gov)

June 8, 2015

Michael Meinkoth  
Historic Preservation Manager  
Missouri Department of Transportation  
P.O. Box 270  
Jefferson City, Missouri 65102

Re: Route 19, Job No. J9P0438 (FHWA) Shannon County, Missouri

Dear Mr. Meinkoth:

Thank you for submitting information on the above referenced project for our review pursuant to Section 106 of the National Historic Preservation Act (P.L. 89-665, as amended) and the Advisory Council on Historic Preservation's regulation 36 CFR Part 800, which requires identification and evaluation of cultural resources.

We have reviewed the information provided concerning the anticipated construction of a permanent new bridge at Sinking Creek and the eventual consideration of new crossings at the Current River and Round Spring. We concur the Bridge Nos. H0079 (Sinking Creek); G0804 (Current River); and J0420 (Round Spring) are eligible for inclusion in the National Register of Historic Places as concrete arch bridges, and as contributing the Route 10 historic transportation route and cultural landscape.

We also concur that either replacement of the eligible bridges, or construction of new bridges, would have an adverse effect on the cultural landscape, and that a Programmatic Agreement (PA) to establish a process for Section 106 review of these historic properties should be undertaken. We look forward to the opportunity to consult as this process moves forward.

If you have any questions, please write the State Historic Preservation Office, P.O. Box 176, Jefferson City, Missouri 65102 attention Review and Compliance, or call Judith Deel at 573/751-7862. Please be sure to include the SHPO Log Number (010-SH-15) on all future correspondence or inquiries relating to this project.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE

A handwritten signature in cursive script that reads "Toni M. Prawl".

Toni M. Prawl, Ph.D.  
Director and Deputy State  
Historic Preservation Officer

TMP:jd

c Raegan Ball, FHWA  
Roopa Banerjee, FHWA

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Organization	Interest	Contact	Title	Address 1	Address 2	City/State/Zip	Phone	E-mail	Response
Shannon 19 Consulting Parties									
Friends of the Current River	ONSR	Allison Young	Park Archaeologist	404 Watercress Dr.	P. O. Box 490	Van Buren, MO 63965	573.323.4236	<a href="mailto:CurrentRiverFriends@yahoo.com">CurrentRiverFriends@yahoo.com</a>	yes
National Park Service	ONSR	Russ Runge						<a href="mailto:Russell_Runge@nps.gov">Russell_Runge@nps.gov</a>	yes
National Park Service	ONSR	Rusty Rawson	Presiding Commissioner	106 Main St.	P. O. Box 187	Eminence, MO 65466	417.247.1234	<a href="mailto:Rusty_Rawson@nps.gov">Rusty_Rawson@nps.gov</a>	yes
Shannon County	local govt	Jeff Cowen						<a href="mailto:jeffcowen@yahoo.com">jeffcowen@yahoo.com</a> ; <a href="mailto:shannon@sos.mo.gov">shannon@sos.mo.gov</a>	yes
Shannon County Historical Society	local history	Kitty Hendeson	Executive Director	106 N. Ash St.	Winona, MO 65588		573.325.4728	<a href="mailto:kitty@historicbridgerefoundation.com">kitty@historicbridgerefoundation.com</a>	Yes--electronic only, please
Historic Bridge Foundation	historic bridge			P. O. Box 66245	Austin, TX 78766				
Historicbridges.org	historic bridge	Nathan Holth	web-master	2767 Eastway Dr.	Okemos, MI 48864			<a href="mailto:nathan@historicbridges.org">nathan@historicbridges.org</a>	Yes--electronic only, please
Missouri State Parks	Echo Bluff State Park	Brent Bayer	Director of Administration & Planning	1659 E. Elm Street, P. O. Box 176	Jefferson city, MO 65101		573.751.2123	<a href="mailto:brent.bayer@dnr.mo.gov">brent.bayer@dnr.mo.gov</a>	yes
Missouri State Parks	Echo Bluff State Park	Laura Hendrickson	Ozark District Supervisor, Ozark District	P. O. Box 951	Lebanon, MO 65536		417.532.7161	<a href="mailto:laura.hendrickson@dnr.mo.gov">laura.hendrickson@dnr.mo.gov</a>	yes
Missouri State Parks	Echo Bluff State Park	Bill Bryan	Director	P. O. Box 176	Jefferson City, MO 65102		573.751.8258	<a href="mailto:Bill.Bryan@dnr.mo.gov">Bill.Bryan@dnr.mo.gov</a>	yes
Missouri Preservation Corps of Engineers, Little Rock District	historic preservation	Bill Hart	Executive Director Environmental Branch	320 First Street P. O. Box 867	Boonville, MO 65233 Little Rock, AR 72203-0867			<a href="mailto:preservm01@yahoo.com">preservm01@yahoo.com</a> <a href="mailto:dana.o.coburn@usace.army.mil">dana.o.coburn@usace.army.mil</a>	
LAD Foundation/Pioneer Forest	adjacent landowner	Dana O. Coburn	Chief Planning and Environmental Division						
		Greg Iffrig		319 N. 4th St, Suite 805	St Louis, MO 63102		314.621.0230	<a href="mailto:greg.iffrig@ladfoundation.org">greg.iffrig@ladfoundation.org</a>	yes
<b>Tribe</b>									
Absentee Shawnee Tribe of Indians of Oklahoma		Mr. Joseph Blanchard	Tribal Historic Preservation Officer	2025 South Gordon Cooper Drive	Shawnee, OK 74801		405-275-4030	<a href="mailto:Joseph.Blanchard@astribe.com">Joseph.Blanchard@astribe.com</a>	
Cherokee Nation	*	Dr. Richard Allen		P.O. Box 948	Tahlequah, OK 74465		918/456-0671 ext. 5466		
Delaware Nation		Mr. Jason Ross	Section 106 Manager	P.O. Box 825	Anadarko, OK 73005		405-247-8903	<a href="mailto:jross@delawarenation.com">jross@delawarenation.com</a>	
Delaware Tribe of Indians of Oklahoma	*	Dr. Bruce Obermeyer		170 NE Barbara	Bartlesville, OK 74006		918-335-7026	<a href="mailto:bobermeyer@delawaretribe.org">bobermeyer@delawaretribe.org</a>	
Eastern Shawnee Tribe of Oklahoma		Ms. Robin Dushane	Cultural Preservation Director	127 West Oneida	Seneca, MO 64865		918-666-2435 ext. 247	<a href="mailto:radushane@gmail.com">radushane@gmail.com</a>	
Osage Nation		Dr. Andrea Hunter	Director Historic Preservation Office	P.O. Box 1449	Pawhuska, OK 74056			<a href="mailto:ahunter@osagetribe.org">ahunter@osagetribe.org</a>	Review Final report
Quapaw Tribe of Oklahoma		Mr. Everett Brady	Tribal Historic Preservation Officer	P.O. Box 765	Quapaw, Oklahoma 74363-0765		888-641-4724	<a href="mailto:ebandy@quapawtribe.com">ebandy@quapawtribe.com</a>	
Shawnee Tribe	*	Ms. Jodi Hayes		P.O. Box 74355	Miami, OK 74355		918-542-2441		
United Keetoowah Band of Cherokee	*	Ms. Lisa Larue-Baker	Tribal Historic Preservation Officer	P.O. Box 746	Tahlequah, OK 74465		918-822-1952		

\* I couldn't locate these contacts online and had to use the list SHPO has, which is not always up-to-date



U.S. Department  
of Transportation

**Federal Highway  
Administration**

**Missouri Division**

6/12/2015

3220 W. Edgewood, Suite H  
Jefferson City, Missouri 65109  
(573) 636-7104  
Fax (573) 636-9283  
Missouri.FHWA@fhwa.dot.gov

In Reply Refer To:  
HDA-MO

Delaware Tribe of Indians of Oklahoma  
Dr. Brice Obermeyer  
170 NE Barbara  
Bartlesville, OK 74006

Dear Dr. Obermeyer:

Subject: Design  
Shannon County, Route 19  
Job No. J9P0438  
Bridge H0079 at Sinking Creek  
Initiating Section 106

The Federal Highway Administration, in cooperation with the Missouri Department of Transportation (MoDOT) is initiating the process to prepare a National Environmental Policy Act Environmental Assessment for a proposed project on Route 19 at Sinking Creek in Shannon County. The primary purpose of the project is to provide a reliable, safe, and cost-efficient Route 19 crossing over Sinking Creek.

Through past consultation with the State Historic Preservation Office on the Sinking Creek Bridge (H0079) it has been determined that it is individually eligible for the National Register of Historic Places and is a contributing element of a larger cultural landscape centered on Route 19. In addition, a previously recorded archaeological site, 23SH97, is located northeast of the bridge in the Ozark National Scenic Riverways' Sinking Creek campground.

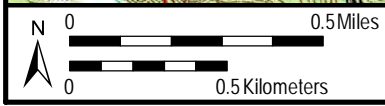
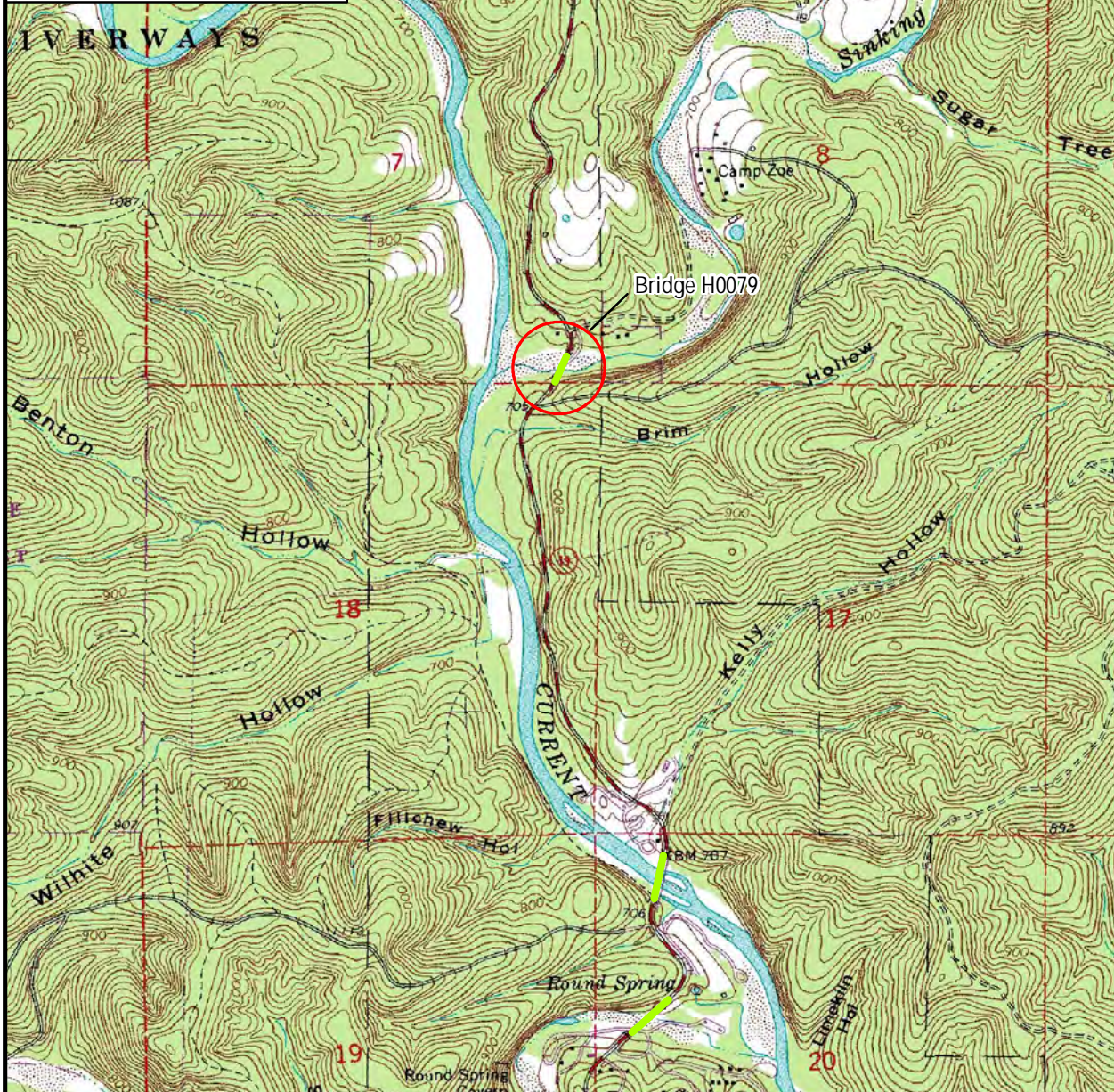
Attached are maps showing the location of the proposed roadway improvements to Route 19 in Shannon County and the proposed study limits (i.e., area of potential effects). If your Tribe is interested in participating in the Section 106 process, or have any questions regarding this proposed project please contact me at: raegan.ball@dot.gov, or phone: (573) 638-2620, or contact Mike Meinkoth, the MoDOT Historic Preservation Manager, at: michael.meinkoth@modot.mo.gov, (573) 526-3593.

Sincerely,

Raegan Ball  
Program Development Team Leader

Attachments

Copies: Dr. Toni Prawl – MDNR  
Mr. Michael Meinkoth – MoDOT



Adapted from U.S.G.S. Round Spring  
1967 (1985) Missouri 7.5' Quadrangle



**Shannon County**  
**Route 19**  
**MoDOT Job No. J9P0438**



APE

CURRENT RIVER

SINKING CREEK

ENTRANCE TO NEW STATE PARK

ENTRANCE TO NEW STATE PARK

Co Rd 19-250

19

19

100'

200'

200'

100'

100'

200'

100'

700'

100'

200'

100'

100'

200'

200'

100'

100'

200'

200'

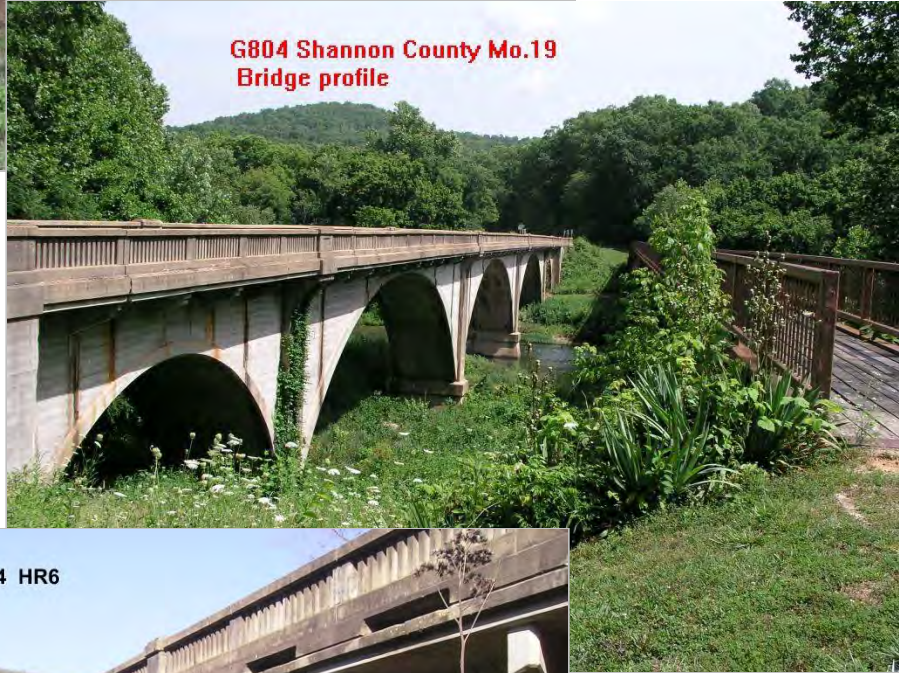
100'

SHANNON COUNTY  
JOB NO. J9P0438  
SINKING CREEK  
AREA OF POTENTIAL EFFECTS



Sinking Creek Bridge, H0079

Current River Bridge, G0804



**G804 Shannon County Mo.19  
Bridge profile**



J0420 4-14-04 HR6  
W SIDE

Round Spring Bridge, J0420

Shannon County  
Route 19  
MoDOT Job No. J9P0438





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

**Missouri Division**

6/12/2015

3220 W. Edgewood, Suite H  
Jefferson City, Missouri 65109  
(573) 636-7104  
Fax (573) 636-9283  
Missouri.FHWA@fhwa.dot.gov

In Reply Refer To:  
HDA-MO

Missouri State Parks  
Bill Bryan, Deputy Director  
Camp Zoe  
P.O. Box 176  
Jefferson City, MO 65102

Dear Mr. Bryan:

Subject: Design  
Shannon County, Route 19  
Job No. J9P0438  
Bridge H0079 at Sinking Creek  
Initiating Section 106 Consultation

The Federal Highway Administration, in cooperation with the Missouri Department of Transportation (MoDOT) is initiating the process to prepare a National Environmental Policy Act Environmental Assessment for a proposed project on Route 19 over Sinking Creek in Shannon County. The primary purpose of the project is to provide a reliable, safe, and cost-efficient Route 19 crossing over Sinking Creek. Through our recent consultation with the State Historic Preservation Office (SHPO) for the construction of a temporary bridge at that location we have concurrence that the Sinking Creek Bridge (H0079) is individually eligible for the National Register of Historic Places and is a contributing element of a larger cultural landscape centered on Route 19.

We have had prior consultation with the SHPO about Route 19 bridges (October 18, 1999) that indicates the presence of a historic district consisting of three concrete arch bridges (H0079, the Sinking Creek Bridge; G0804, the Current River Bridge; and J0420, the Round Spring Bridge) and the roadway which connects these bridges. Attached is a topographic map which identifies these three bridges and photographs of the three bridges. It is possible that there may be studies within the next few years for new crossings at the other two bridge locations.

I am inviting your organization to participate in consultation for the development of a Programmatic Agreement (PA) under Section 106 of the National Historic Preservation Act. A PA will assist us as we evaluate these resources and the effects of projects on them and as we develop mitigation measures to compensate for adverse effects from MoDOT projects. Your assistance in identifying what is significant to the communities and interest groups you represent will greatly aid in the evaluation of the resources. Our mitigation efforts are greatly benefited when measures that users of the resources identify as appropriate and relevant to them are developed.

Information on the Section 106 process and the role of consulting parties is available on the MoDOT website at <http://www.modot.mo.gov/ehp/HistoricPreservation.htm> and in the Advisory Council on Historic Preservation Publication, *Protecting Historic Properties: A Citizen's Guide to Section 106*, which is also available at MoDOT's website.

MoDOT would like to know if your organization is interested in participating in the Section 106 process for this project by July 10, 2015. Please contact Karen Daniels, MoDOT Senior Historic Preservation Specialist, at [Karen.Daniels@modot.mo.gov](mailto:Karen.Daniels@modot.mo.gov) or (573) 526-7346. In addition, should you or any of your staff have any questions, please contact Ms. Daniels.

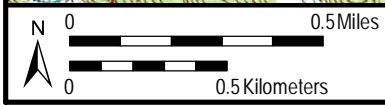
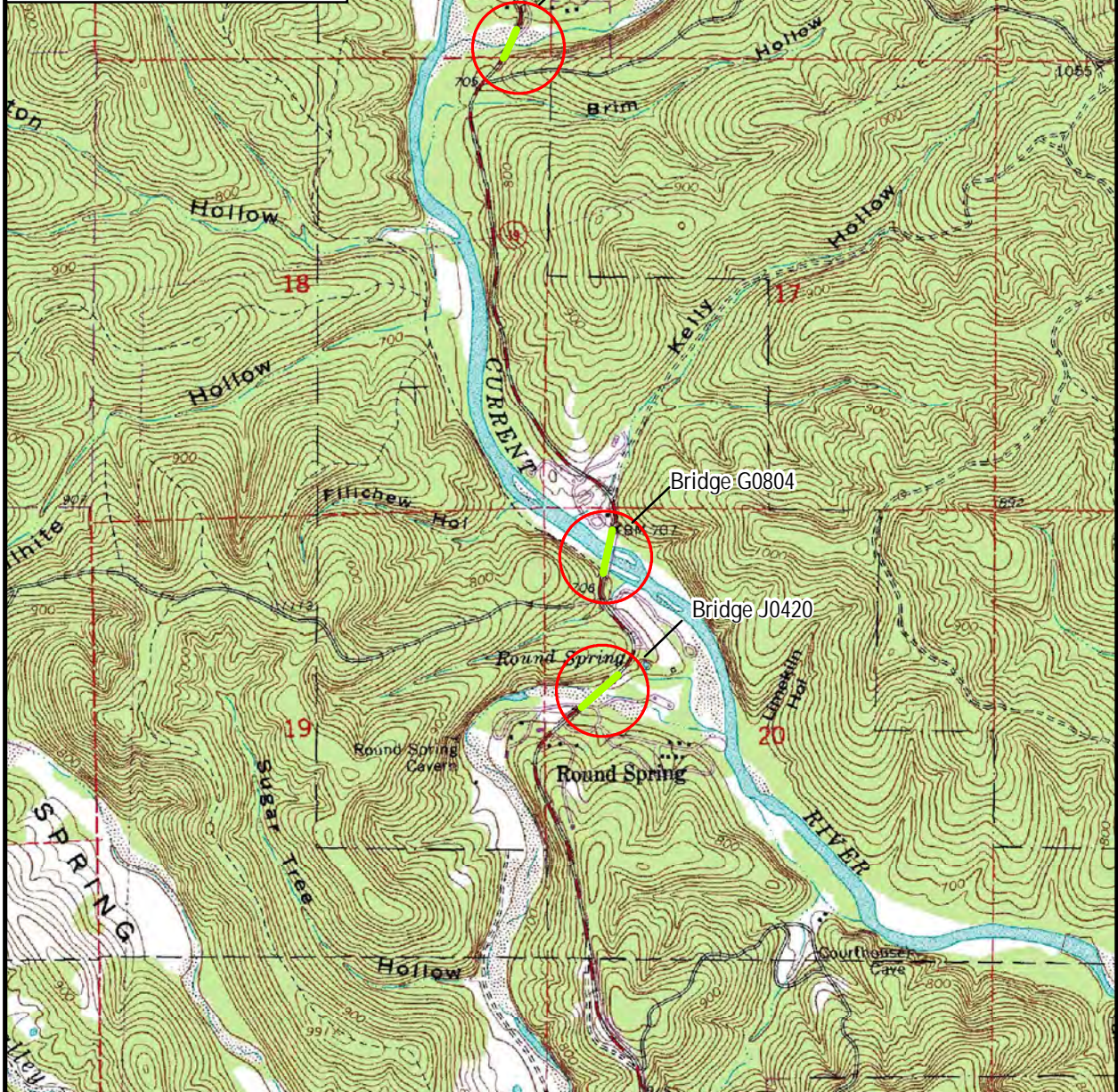
Sincerely,



Raegan Ball  
Program Development Team Leader

**Attachments**

Copies:      Dr. Toni Prawl – MDNR  
                 Mr. Michael Meinkoth – MoDOT



Adapted from U.S.G.S. Round Spring  
1967 (1985) Missouri 7.5' Quadrangle

**Shannon County**  
**Route 19**  
**MoDOT Job No. J9P0438**



APE

CURRENT RIVER

SINKING CREEK

ENTRANCE TO NEW STATE PARK

ENTRANCE TO NEW STATE PARK

Co Rd 19-250

19

19

100'

200'

200'

100'

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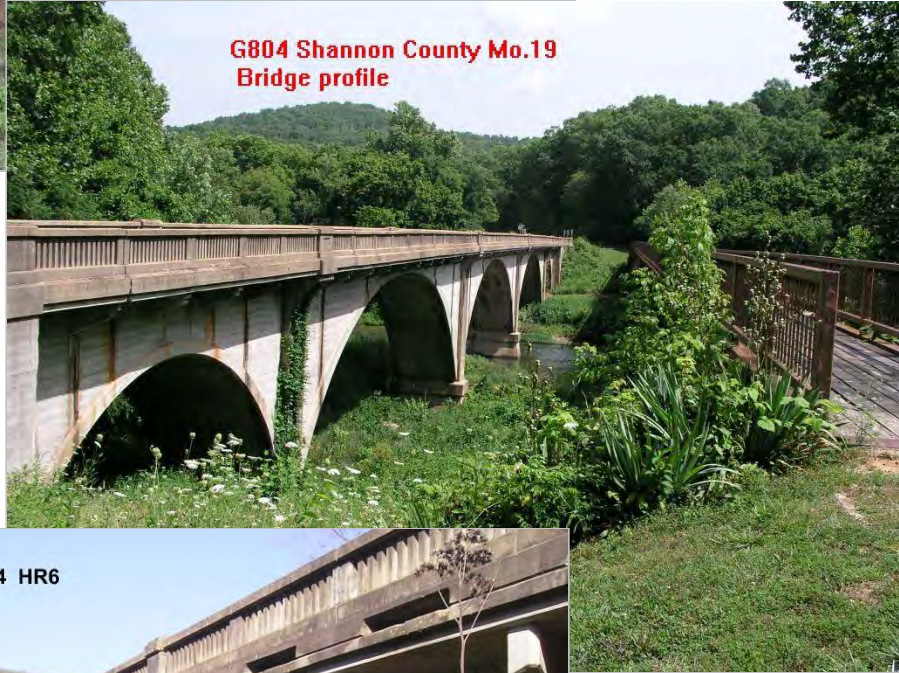
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SHANNON COUNTY  
JOB NO. J9P0438  
SINKING CREEK  
AREA OF POTENTIAL EFFECTS



Sinking Creek Bridge, H0079

Current River Bridge, G0804



**G804 Shannon County Mo.19  
Bridge profile**



J0420 4-14-04 HR6  
W SIDE

Round Spring Bridge, J0420

Shannon County  
Route 19  
MoDOT Job No. J9P0438

JUN 29 2015



**Delaware Tribe Historic Preservation Office**

1 Kellogg Circle  
Roosevelt Hall, RM 212  
Emporia State University  
Emporia, KS 66801  
(620) 341-6699

[bobermeyer@delawaretribe.org](mailto:bobermeyer@delawaretribe.org)

June 23, 2015

U.S. Department of Transportation  
Federal Highway Administration  
Attn: Raegan Ball  
3220 W. Edgewood, Suite H  
Jefferson City, MO 65109

Re: Shannon County, Route 19  
Job # J9P0438; Bridge H0079 at Sinking Creek

Dear Raegan Ball,

Thank you for providing the report documenting the location of the archaeological site during the planning for the above referenced project. We agree that the site should either be avoided or further investigated if it will be impacted by the construction project and we look forward to reviewing the results of any archaeological survey that is potentially performed. However, our review does indicate that there are no religious or culturally significant sites in the proposed project area and we have no objection to the proposed project.

We do ask that if any human remains are accidentally unearthed during the course of the project that you cease development immediately and inform the Delaware Tribe of Indians of the inadvertent discovery.

If you have any questions, feel free to contact this office by phone at (620) 340-0111 or by e-mail at [bobermeyer@delawaretribe.org](mailto:bobermeyer@delawaretribe.org).

Sincerely,

A handwritten signature in cursive script that reads "Brice Obermeyer".

Brice Obermeyer  
Delaware Tribe Historic Preservation Office  
1 Kellogg Drive  
Roosevelt Hall, Rm 212  
Emporia State University  
Emporia, KS 66801



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

**Missouri Division**

6/29/2015

3220 W. Edgewood, Suite H  
Jefferson City, Missouri 65109  
(573) 636-7104  
Fax (573) 636-9283  
Missouri.FHWA@fhwa.dot.gov

In Reply Refer To:  
HDA-MO

Advisory Council on Historic Preservation  
401 F Street NW, Suite 308  
Washington, DC 20001-2637

RE: Invitation to Participate in the Development of a Programmatic Agreement, Shannon 19,  
MoDOT Job No. J9P0438

Dear Mr. Wilson:

The Federal Highway Administration (FHWA) and the Missouri Department of Transportation (MoDOT) are initiating the process to prepare an Environmental Assessment for the construction of a new crossing at Sinking Creek in Shannon County. Through our recent consultation with the Missouri State Historic Preservation Office (SHPO) for the construction of a temporary bridge at that location we have concurrence that the Sinking Creek Bridge (H0079) is individually eligible for the National Register of Historic Places (NRHP) and is a contributing element of a larger cultural landscape centered on Route 19.

We have had prior consultation with the SHPO about Route 19 bridges that indicate the presence of a historic district consisting of three concrete arch bridges which are in proximity (H0079, the Sinking Creek Bridge, G0804, the Current River Bridge and J0420, the Round Spring Bridge) and the roadway that connects these bridges. It is possible that there may be studies within the next few years for new crossings at the other two locations.

It will be impossible to construct a new bridge at Sinking Creek without having an adverse effect on at least one historic property. Replacing the bridge on the existing alignment will affect the historic bridge, and possibly the cultural landscape. Constructing a bridge on a new alignment will have an adverse effect on the landscape, and if it causes the removal of the historic bridge, the road corridor and bridge. Similar impacts would occur if the other two bridges were replaced.

The FHWA and MoDOT would like to begin the consultation process to develop a Programmatic Agreement (PA) to establish a process for Section 106 review of these bridges and determine appropriate mitigation measures for the cultural landscape and bridges. The SHPO concurs that this is an appropriate approach for these resources. We are inviting the Council to participate in this Consultation. Attached is information that will assist in your decision making.

Should you or any of your staff have any questions, please contact me at 573-638-2620 or [raegan.ball@dot.gov](mailto:raegan.ball@dot.gov); or Mike Meinkoth, MoDOT Historic Preservation Manager at 573-526-3593, [Michael.Meinkoth@modot.mo.gov](mailto:Michael.Meinkoth@modot.mo.gov).

Sincerely,



Raegan Ball  
Program Development Team Leader

Enclosures

Cc: Judith Deel, MoSHPO  
Mike Meinkoth, MoDOT



**Agency:** FHWA  
**State:** Missouri  
**Project:** Shannon County, Route 19, Job No. J9P0438, Environmental Assessment for a Permanent Replacement Bridge over Sinking Creek to replace Bridge H0079

The Federal Highway Administration (FHWA) and the Missouri Department of Transportation (MoDOT) are proposing to develop a Programmatic Agreement as provided for under 36 CFR 800.14(b), specifically when effects on historic properties are similar and repetitive in nature as provided for in subsection (1)(i). The Missouri State Historic Preservation Office (SHPO) has been consulted and concurs that the development of a Programmatic Agreement is appropriate for the project (see attached correspondence).

### **Project Description**

The FHWA and MoDOT are undertaking an Environmental Assessment under the National Environmental Policy Act (NEPA) to study options for a permanent replacement bridge on Route 19 in Shannon County at Sinking Creek (see attached location map). Early in 2015 the Sinking Creek Bridge (H0079) was posted with a 10 ton weight limit. The roadway is heavily used by logging trucks and provides the main access to the Ozark National Scenic Riverways and the Current River, a major tourist destination. In addition, the Missouri Department of Natural Resources is constructing a new state park adjacent to Sinking Creek. A temporary bridge was constructed to meet traffic demands, but a permanent solution is needed.

In addition, it is anticipated that within the next five to ten years the bridges at the Current River (G0804) and Round Spring (J0420) just south of Sinking Creek may also need to be replaced (these bridges are identified on the attached location map and photos are provided). These bridges are similar to the Sinking Creek Bridge and the cultural resource concerns will be similar. The FHWA and MoDOT would like to develop a Programmatic Agreement to develop a process for consultation for projects affecting these bridges and develop a mitigation plan that addresses the resources appropriately and comprehensively.

### **Steps Taken to Identify Historic Properties**

The Sinking Creek Bridge (H0079) was identified by the *Missouri Historic Bridge Inventory* (Fraser 1996) as “possibly eligible” for listing on the National Register of Historic Places (NRHP) with a significance rating of 50. It is a 1925, three span, open spandrel concrete arch bridge (see attached photographs). Three additional concrete arch bridges in Shannon County were also recommended as potentially eligible: at Eminence (K0209), at Round Spring (J0420) and the Current River Bridge (G0804).

In 1999, in response to a Draft Environmental Impact Statement for improvements to Routes 17 and 19 in Texas and Shannon Counties, the State Historic Preservation Office (SHPO) identified a historic district consisting of three of these concrete bridges: Sinking Creek, the Current River and Round Spring and the roadway connecting them. They also identified the cultural landscape within the viewshed of Route 19 as historically significant.

In 2015 for the construction of the temporary bridge the MoDOT concurred with the existence of a historic cultural landscape within the viewshed of Route 19 in Shannon County with undefined northern and southern borders and containing the three bridges and associated roadway (Daniels 2015).

### **Description of the Historic Property**

Shannon County lies in the heart of the Missouri Ozark Mountains. Route 19 winds through the county providing scenic vistas and the rivers in the area have provided recreational opportunities for more than a century. The tourism industry centers on the Current River. In 1964 over 134 miles of the upper Current River was incorporated into the Ozark National Scenic Riverways (ONSR), the first unit of the National Park Service to protect a river, the Sinking Creek Bridge is located within the ONSR.

Route 19 through Shannon County north of Eminence was constructed in the mid-1920s to improve access to the region, and to provide access to Round Spring State. Tourism was a booming industry in the Missouri and in the Ozarks, with tourist spending growing from \$61 million in 1926 to \$98 million by 1928. By 1945 Camp Zoe had been developed just up Sinking Creek, Camp Alton was just up the Current River, the Round Spring State Park was just down the road and the Round Spring Caverns had been developed.

The Sinking Creek Bridge (H0079) is a 1925 three span open-spandrel concrete arch bridge with two concrete tee beam approach spans. It is 338' long with an 18' wide deck, curb-to-curb. The bridge is currently closed to traffic, with a temporary bridge carrying all traffic. The open spandrel concrete arch bridge was a perfect selection for the location because the spans provided ample space for crossing the Sinking Creek channel and flood channel did not impede the views from the roadway and are attractive when viewed from the Creek.

The Current River Bridge (G0804) is a 1924 five span closed-spandrel concrete arch bridge. It is 601' long with an 18' wide deck, curb-to-curb. At the request of Shannon County, this bridge is currently signed for one-way traffic.

The Round Spring Bridge (J0402) is a 1930 bridge with one open-spandrel concrete arch span and seven concrete deck girder approach spans. The bridge is 522' long with a 20' wide deck, curb-to-curb.

Route 19 is a twenty foot roadway with soft shoulders that follows the topography of the mountains and curves around natural features. Grading and excavation was done in 1926 and 1928 and it has given an aggregate surface in 1941. Route 19 was a priority after the passage of Amendment 3 in 1926 since the roadway would serve Round Spring State Park, and providing good roadways to state parks was one of the goals of the amendment. Scenic views along Route 19 in Shannon County were frequently shown in the *Biennial Reports* of the Missouri State Highway Commission.

Because the highway was connecting to a state park and tourism being a major industry, the vistas provided by the roadway were a concern during the design. The first roadside park created in the state highway system is located on Route 19 (outside this project area). Views of the

Current River and its tributaries and of the concrete arch bridges are provided as the road curves through the mountains.

The cultural landscape of Route 19, including the viewshed and the three bridges have been identified as a historic district eligible for listing on the NRHP under criterion A for significance in tourism.

Each of the bridges is individually eligible for the NRHP under criterion C for engineering significance.

**Description of the Effects of the Project on the Historic Property**

Replacing the Sinking Creek Bridge on the existing alignment, causing the removal of the historic bridge, would have an adverse effect on the historic bridge. Replacing the bridge on another alignment would have an adverse effect on the cultural landscape by altering the roadway and the viewshed. Similar issues will be encountered during discussions about replacing the Current River and Round Springs Bridges.

A preferred alternative has not been selected. The consulting parties in the section 106 process will participate in the alternative analysis and selection in the NEPA process.

**Consultation and Public Involvement**

The FHWA and MoDOT will use the NEPA public involvement process to reach the general public about the project. The SHPO agrees that the FHWA/MoDOT NEPA public involvement process is sufficient to reach the general public.

The FHWA is initiating consultation with Tribes with historical ties or an expressed interest to Shannon County. These tribes are the: Absentee Shawnee Tribe of Indians of Oklahoma, the Cherokee Nation, the Delaware Nation, the Delaware Tribe of Indians of Oklahoma, the Eastern Shawnee Tribe of Oklahoma, the Osage Nation, the Quapaw Tribe of Oklahoma, the Shawnee Tribe and the United Keetoowah Band of Cherokee.

The SHPO and the NPS were consulted about other parties to invite to participate in consultation—those with an interest in historic bridges, the Current River, or cultural resources generally. Based on these discussions, the following are being invited, by FHWA, to participate in consultation:

<b>Party</b>	<b>Interest</b>
Friends of the Current River	Ozark National Scenic Riverways
National Park Service-ONSR	Ozark National Scenic Riverways
Shannon County	Local Government
Shannon County Historical Society	Local history
Historic Bridge Foundation	Historic Bridges
Nathan Holth—HistoricBridges.org	Historic Bridges
Missouri State Parks	Camp Zoe, nearby State Park being developed
Missouri Preservation	Statewide Historic Preservation
Corps of Engineers, Little Rock District	Permit will be needed
Pioneer Ford	Adjacent private landowner, environmental interest

Any additional interested parties identified as consultation and public involvement move forward will be invited to join the consultation process.

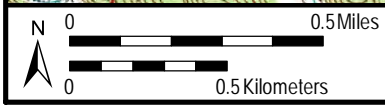
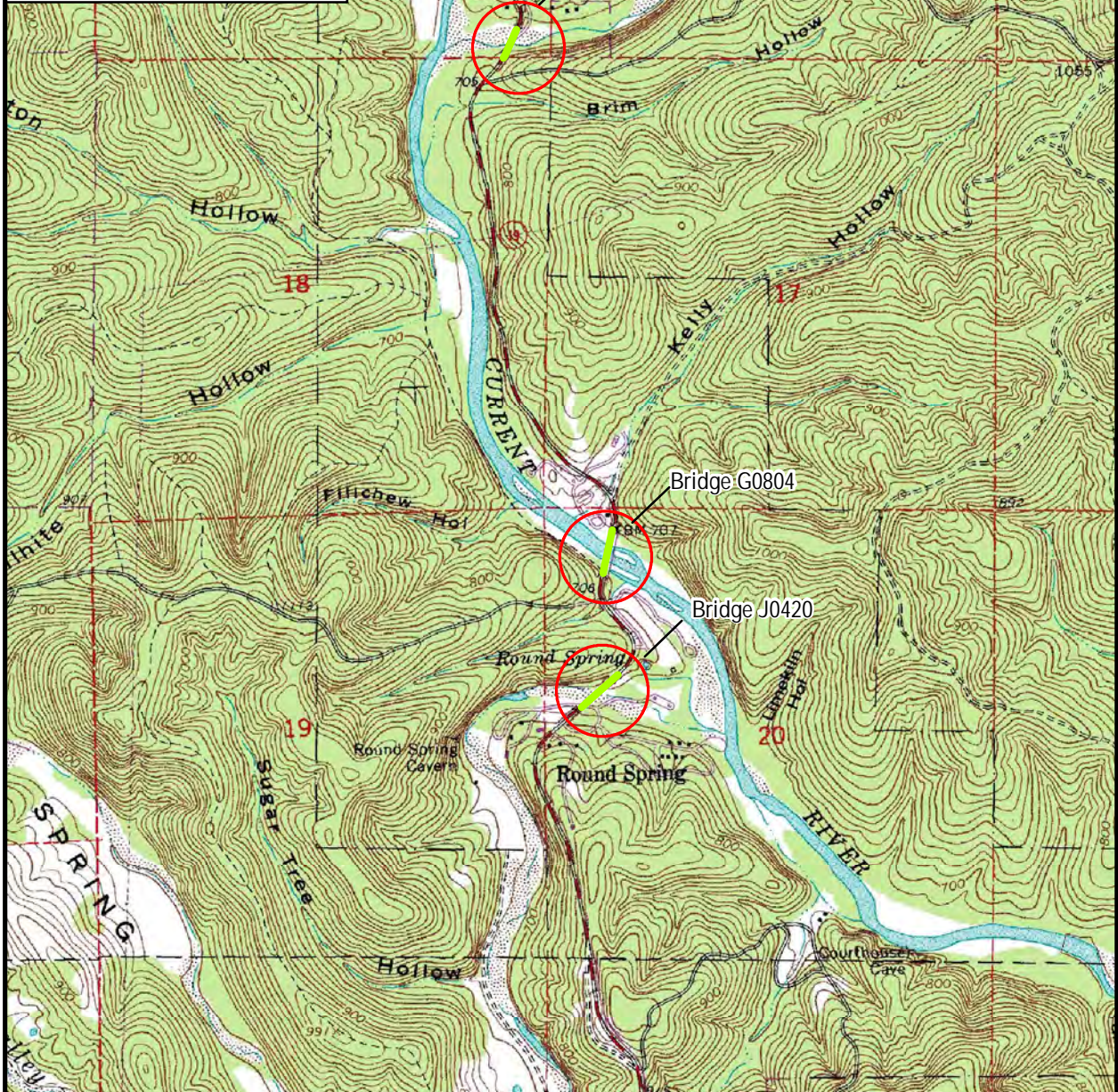
The Advisory Council on Historic Preservation (Council) is also being invited to participate in consultation for the development of this Programmatic Agreement.

**Attachments:**

Location Map

Photographs

Correspondence between MoDOT, SHPO and consulting parties



Adapted from U.S.G.S. Round Spring  
1967 (1985) Missouri 7.5' Quadrangle

**Shannon County**  
**Route 19**  
**MoDOT Job No. J9P0438**



Sinking Creek Bridge, H0079

Current River Bridge, G0804



**G804 Shannon County Mo.19  
Bridge profile**



J0420 4-14-04 HR6  
W SIDE

Round Spring Bridge, J0420

Shannon County  
Route 19  
MoDOT Job No. J9P0438

**Missouri Department of Transportation**  
*David B. Nichols, Director*

573.751.2551  
Fax: 573.751.6555  
1.888.ASK MODOT (275.6636)

May 29, 2015

Dr. Toni Prawl, Director SHPO  
MDNR/DSP  
P. O. Box 176  
Jefferson City, MO 65102

Dear Dr. Prawl:

Subject: Design  
Shannon County, Route 19  
Job No. J9P0438  
Bridge H0079 at Sinking Creek  
Initiating Consultation for Programmatic Agreement

The Missouri Department of Transportation (MoDOT) is initiating the process to prepare an Environmental Assessment for the construction of a new crossing at Sinking Creek in Shannon County. Through our recent consultation for the construction of a temporary bridge at that location (010-SH-15) we have concurrence that the Sinking Creek Bridge (H0079) is individually eligible for the National Register of Historic Places (NRHP) and is a contributing element of a larger cultural landscape centered around Route 19.

We have had prior consultation about Route 19 bridges (October 18, 1999) which indicate the presence of a historic district consisting of three concrete arch bridges which are in proximity (H0079, the Sinking Creek Bridge, G0804 the Current River Bridge and J0420, the Round Spring Bridge) and the roadway which connects these bridges. Attached is a topographic map which identifies these three bridges. It is possible that there may be studies within the next few years for new crossings at the other two locations.

It will be impossible to construct a new bridge at Sinking Creek without having an adverse effect on at least one resource. Replacing the bridge on the existing alignment will affect the historic bridge, and possibly the cultural landscape. Constructing a bridge on a new alignment will have an adverse effect on the landscape, and if it causes the removal of the historic bridge, the road corridor and bridge. Similar impacts would occur if the other two bridges were replaced.

MoDOT would like to begin the consultation process to develop a Programmatic Agreement (PA) to establish a process for Section 106 review of these bridges, determine appropriate mitigation measures for the cultural landscape and bridges, and identify potential consulting parties. We request the SHPO concur with our recommendation that the project will have an adverse effect on one of these resources (the bridge, the road corridor or the landscape), that these adverse effects would be to the same types of resources for each bridge and that handling consultation and development of mitigation measures programmatically is appropriate for these resources.

Should you or any of your staff have any questions, please contact Karen Daniels, MoDOT Senior Historic Preservation Specialist, at [Karen.Daniels@modot.mo.gov](mailto:Karen.Daniels@modot.mo.gov) or (573) 526-7346.

Sincerely,




Michael C. Meinkoth  
Historic Preservation Manager

Attachments

Copies:        Ms. Sara Parker Pauley – MDNR  
                    Mr. Mark Shelton – SE-ao  
                    Ms. Jerica Holtsclaw – CO-de  
                    Ms. Raegan Ball – FHWA





STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES

Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

[www.dnr.mo.gov](http://www.dnr.mo.gov)

June 8, 2015

Michael Meinkoth  
Historic Preservation Manager  
Missouri Department of Transportation  
P.O. Box 270  
Jefferson City, Missouri 65102

Re: Route 19, Job No. J9P0438 (FHWA) Shannon County, Missouri

Dear Mr. Meinkoth:

Thank you for submitting information on the above referenced project for our review pursuant to Section 106 of the National Historic Preservation Act (P.L. 89-665, as amended) and the Advisory Council on Historic Preservation's regulation 36 CFR Part 800, which requires identification and evaluation of cultural resources.

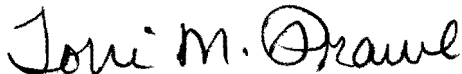
We have reviewed the information provided concerning the anticipated construction of a permanent new bridge at Sinking Creek and the eventual consideration of new crossings at the Current River and Round Spring. We concur the Bridge Nos. H0079 (Sinking Creek); G0804 (Current River); and J0420 (Round Spring) are eligible for inclusion in the National Register of Historic Places as concrete arch bridges, and as contributing the Route 10 historic transportation route and cultural landscape.

We also concur that either replacement of the eligible bridges, or construction of new bridges, would have an adverse effect on the cultural landscape, and that a Programmatic Agreement (PA) to establish a process for Section 106 review of these historic properties should be undertaken. We look forward to the opportunity to consult as this process moves forward.

If you have any questions, please write the State Historic Preservation Office, P.O. Box 176, Jefferson City, Missouri 65102 attention Review and Compliance, or call Judith Deel at 573/751-7862. Please be sure to include the SHPO Log Number (010-SH-15) on all future correspondence or inquiries relating to this project.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE



Toni M. Prawl, Ph.D.  
Director and Deputy State  
Historic Preservation Officer

TMP:jd

c Raegan Ball, FHWA  
Roopa Banerjee, FHWA

*Promoting, Protecting and Enjoying our Natural Resources. Learn more at [dnr.mo.gov](http://dnr.mo.gov)*



## Karen Daniels

---

**From:** raegan.ball.dot.gov  
**Sent:** Wednesday, August 19, 2015 9:09 AM  
**To:** Karen Daniels  
**Subject:** FW: Route 19, SInking Creek in Shannon County, MO

Raegan Ball  
Program Development Team Leader  
FHWA, Missouri Division  
573-638-2620

-----Original Message-----  
From: Ball, Raegan (FHWA)  
Sent: Monday, July 06, 2015 8:21 AM  
To: [Michael.Meinkoth@modot.mo.gov](mailto:Michael.Meinkoth@modot.mo.gov)  
Cc: Banerjee, Roopa (FHWA)  
Subject: FW: Route 19, SInking Creek in Shannon County, MO

fyi

Raegan Ball  
Program Development Team Leader  
FHWA, Missouri Division  
573-638-2620

-----Original Message-----  
From: Lisa LaRue-Baker - UKB THPO [<mailto:ukbthpo-larue@yahoo.com>]  
Sent: Wednesday, July 01, 2015 12:14 PM  
To: Ball, Raegan (FHWA)  
Cc: [ebird@unitedkeetoowahband.org](mailto:ebird@unitedkeetoowahband.org)  
Subject: Route 19, Sinking Creek in Shannon County, MO

The United Keetoowah Band of Cherokee Indians in Oklahoma has reviewed your project under Section 106 of the NHPA, and at this time, have no comments or objections. However, should any human remains be inadvertently discovered, please cease all work and contact us immediately. In addition, the UKB reserves the right to re-enter consultation at any time on this project.

Thank you,

Lisa C. Baker  
Acting THPO  
United Keetoowah Band of Cherokee Indians in Oklahoma PO Box 746 Tahlequah, OK 74465

c 918.822.1952

[ukbthpo-larue@yahoo.com](mailto:ukbthpo-larue@yahoo.com)

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JUL 20 2015

**TRIBAL HISTORIC PRESERVATION OFFICE**

**Date: July 16, 2015**

**File: 1415-1776MO-6**

**RE: MODOT Route 19 Bridge H0079 at Sinking Creek Job No. J9P0438 in Shannon Co, MO**


Missouri Department of Transportation  
Raegan Ball  
3220 W Edgewood, Suite H  
Jefferson City, MO 65109

Dear Ms. Ball,

The Osage Nation Historic Preservation Office has received notification and accompanying information for the proposed project listed as MODOT Route 19 Bridge H0079 at Sinking Creek Job No. J9P0438 in Shannon County, MO. 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



Preserving America's Heritage

July 31, 2015

Ms. Raegan Ball  
Program Development Team Leader  
Federal Highway Administration  
Missouri Division  
3220 W. Edgewood, Suite H  
Jefferson City, MO 65109

Ref: *Proposed Replacement of Bridge H0079 on Route 19 over Sinking Creek  
Shannon County, Missouri  
Job No. J9P0438*

Dear Ms. Ball:

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 you 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, affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and you determine 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 Programmatic Agreement (PA), developed in consultation with the Missouri State Historic Preservation Office's (SHPO's) and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the PA 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 your notification of adverse effect. If you have any questions or require further assistance, please contact Christopher Wilson at 202 517-0229 or via e-mail at [cwilson@achp.gov](mailto:cwilson@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)

June 8, 2016

Dr. Toni Prawl, Director SHPO  
MDNR/DSP  
P. O. Box 176  
Jefferson City, MO 65102

Dear Dr. Prawl:

Subject: Design  
Shannon County, Route 19  
Job No. J9P0438  
Bridge H0079 at Sinking Creek  
Section 106 Compliance Submittal

Please find attached a Section 106 Survey Report (one paper copy and one .PDF file) detailing the results of a cultural resources investigations conducted in conjunction with a National Environmental Policy Act Environmental Assessment to select an appropriate alignment for the above referenced project.

It is the Missouri Department of Transportation's (MoDOT) opinion that Bridge H0079 is individual eligible for listing on the National Register of Historic Places (NRHP) under Criterion C for its local significance in engineering and is also a contributing element to the "Three Bridges Historic District," which is eligible for listing on the NRHP under Criteria A and C, with local significance in the areas of transportation, recreation and engineering. Archaeological sites 23SH97 (Late Paleoindian, Late Archaic, Early Woodland, Mississippian and 20<sup>th</sup> Century historic components) and 23SH1566 (Late Archaic, Early/Middle Woodland and 20<sup>th</sup> Century historic components) may be eligible for listing on the NRHP and may require Phase II testing once an alternative is selected. We request the concurrence of the State Historic Preservation Office (SHPO) with this finding.

Should you or any of your staff have any questions, please contact Mike Meinkoth, MoDOT Historic Preservation Manager, at [michael.meinkoth@modot.mo.gov](mailto:michael.meinkoth@modot.mo.gov) or (573) 526-3593

Sincerely,



Michael C. Meinkoth  
Historic Preservation Manager

Attachments

Copies: Ms. Sara Parker Pauley – MDNR  
Mr. Mark Shelton – SE-ao

Ms. Jerica Holtsclaw – CO-de  
Ms. Raegan Ball – FHWA



## **Appendix B: Three Bridges Historic District Narrative**

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# Three Bridges Historic District

## Shannon County, Missouri

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Karen L. Daniels, Senior Historic Preservation Specialist  
Missouri Department of Transportation  
March 2016

### Description

The Three Bridges Historic District consists of an Ozark rolling hills landscape adjacent to the Current River and its tributaries in northern Shannon County, Missouri. Running through this landscape is Missouri Highway 19 (Route 19), an asphalt surface highway built into the hillside, which winds through the landscape. Route 19 crosses three concrete arch bridges in the district at Sinking Creek, the Current River and at Spring Valley.

Route 19 runs approximately two miles through the district. It has two ten-foot traffic lanes with two-foot earth shoulders. The highway winds and twists through the district following the topography of the Ozarks (views of the roadway and associated landscape are located in Appendix A). The roadway has a rock base and asphalt surface. The roadway is posted at 55 miles-per-hour, but first-time visitors find the speed limit hard to achieve. Chevrons mark the curves, signs mark each of the bridges, and various directional signs are located within the district. The highway was constructed in section between 1925 and 1927, originally as a gravel road, and improved with an asphaltic surface in 1941, 1968, 1974 and 1992 (MoDOT 2015).

The Sinking Creek Bridge (H0079) is a 1925, open-spandrel concrete arch bridge with three 80' arch spans and two 40' concrete deck girder approach spans (see Figure 1). The bridge has concrete abutments and wing walls. The bridge has a total length of 338'. The bridge columns between the arches have incised ribs. Each arch has two ribs with six spandrel bents; the arches are tied together with two arch struts. The bridge has a cast in place concrete deck with an asphalt wearing surface. The bridge is 18' wide, curb-to-curb with a concrete balustrade railing with posts at the columns. (Photos of the bridges are located in Appendix B).



**Figure 1: Sinking Creek Bridge (2015)**

In 2015 a temporary bridge was constructed just to the west of the Sinking Creek Bridge (H0079T) (Figure 2). The bridge consists of nine 40' steel girder spans and has an overall length of 360' 11". The bridge has steel pile bents and piers with steel cap, struts and cross bracing. The bridge has a mesh deck and a width of 23' 11" curb-to-curb. A three beam guardrail serves as railing.



**Figure 2: Temporary Bridge at Sinking Creek (2015)**

The Current River Bridge (G0804) is a 1924, closed spandrel concrete arch bridge with three 130' main spans, two 60' approach spans and a U-type abutment (Figure 3). The bridge has a total length of 601'. The columns between the arches project slightly beyond the surface of the closed spandrel. The bridge is 18' wide, curb-to-curb, with a concrete balustrade railing over the arch spans and a solid concrete railing over the abutments, with posts at the columns.



**Figure 3: Current River Bridge (2015)**

The Spring Valley (or Round Spring) Bridge (J0420) is a 1930, open-spandrel concrete arch with a 151' main span and three concrete deck girder approach spans on the north end and four concrete deck girder approach spans on the south end, and a total length of 522' (Figure 4). The

bridge has concrete abutments and wing walls. The bridge has a 45 degree skew. The main span is a 151' two rib arch with twelve spandrel bents and six arch struts. The approach spans are concrete girder spans with concrete pile bents with concrete caps and struts. The approach spans are 54'-52'-51' on the north side and 51'-52'-52'-54' on the south side. The bridge has a cast in place concrete deck with a bituminous surface. The bridge is 20' wide, curb-to-curb with a concrete balustrade railing, with posts at the bents.



**Figure 4: Spring Valley Bridge (2015)**

Also within the right-of-way are rock cuts which were necessary for the construction of Route 19 (Figure 5). These rock cuts expose the thin layer of top soil and thick layers of stone. Natural weathering has occurred on the exposed stone since the 1920s, leaving gaps, jagged edges and smoothed surfaces.



**Figure 5: Representative example of rock cuts along Route 19 near Sinking Creek (2015)**

A variety of native trees are planted close to the right-of-way. Trees include deciduous trees that allow views during the winter but enclose the highway when the trees are leafed out, pines that provide a sense of enclosure year round, and flowering trees. Much of the area had been logged and replanted in the late nineteenth and early twentieth centuries, so the trees are mature and dense.

Views from the highway constitute an important part of the landscape in the Three Bridges Historic District and are a contributing feature of the district (Figure 6). Views tend to be constricted on one side of the highway since the highway was built into the hillside. Views to the hillside tend to be tree covered hillside or rock cuts, except where the highway crosses streams or hollows, where the view expands.



**Figure 6: Views from Route 19 (2015)**

Contributing elements of the historic district include the Route 19 alignment including the roadway and right-of-way, the Sinking Creek Bridge (H0079), the Current River Bridge (G0804), and the Spring Valley Bridge (J0402) as well as the views from Route 19. Views from the Current River are also contributing resources. There may be additional contributing resources within the district, including buildings related to early recreation or tourism resources.

The temporary bridge at Sinking Creek (H0079T) is non-contributing. There may be additional non-contributing resources.

A comprehensive survey of all the resources within the district has not been conducted.

### **History & Significance**

The Three Bridges Historic District lies in northern Shannon County and encompasses the roadway, viewshed from the roadway and bridges (Sinking Creek, Current River and Round

Spring/Spring Valley) from just north of the Sinking Creek Bridge to just south of the Round Spring Bridge (see boundary map in Appendix C). The Three Bridges Historic District is eligible for listing on the National Register of Historic Places (NRHP) under criteria A and C for local significance in transportation, recreation and engineering, with a period of significance of 1925-1964. In addition, each of the three bridges individually eligible for listing on the NRHP for engineering significance, with a period of significance of its date of construction.

Shannon County lies in the heart of the Missouri Ozark Mountains. Route 19 winds through the county providing scenic vistas and the rivers in the area have provided recreational opportunities for more than a century. The tourism industry centers on the Current River. In 1964 over 134 miles of the upper Current River was incorporated into the Ozark National Scenic Riverways (ONSR), the first unit of the National Park Service to protect a river (ONSR nd: 4). The Sinking Creek Bridge is located within the ONSR.

Route 19 through Shannon County north of Eminence was constructed in the mid-1920s to improve access to the region, and to provide access to Round Spring State Park (MSHC 1926, MSHC1928a, MSHC 1928b, MSHC 1931, MSHD 1924, MSHD 1925a, MSHD 1930). Tourism was a booming industry in the Missouri and in the Ozarks, with tourist spending growing from \$61 million in 1926 to \$98 million by 1928 (MSHC 1928b: 378). Route 19 was a gravel road with an 18 foot roadway (MoDOT 2015). Because Route 19 connected to the Round Spring State Park just south of the Current River, the designers noted the need to consider the aesthetics of the highway approaching the park, especially from the north. The road was designed to fit into the terrain, as was typical of roadways of the era, but aesthetic considerations also influenced the curvature of the highway to provide vistas of the bridges and the Current River and notes to the Bridge Division were made to ensure that the bridges were aesthetically pleasing (MSHD 1925b; MSHD 1927).

Route 19 has a twenty foot roadway with earth shoulders that follows the topography of the mountains and curves around natural features. Between the Dent County line and Eminence, grading and excavation was done between 1925 and 1928 and it has given an aggregate surface in 1941. Although it was under construction prior to the passage of Proposition 3, Route 19 was a priority after its passage (MSHC 1926, MSHC 1928, MoDOT 2015).

In October 1923 Commissioners from Dent, Shannon and Oregon Counties appeared before the State Highway Commission asking that the road be started as soon as possible. Commissioner D. L. Bales of Shannon County stated, “the construction of this road would open up virgin territory and would mean much to that part of the state” (MSHC 1923: 2). In addition, he particularly urged the construction of a bridge over the Current River as quickly as possible. The Chief Engineer of the State Highway Department said that work was progressing on plans for the highway, and that funds had been allocated for the bridge. The Department was looking at suspension bridge designs, or possibly acquiring girders from a railroad to use for the bridge (MSHC 1923: 2-3).

Advertising for Proposition 3, sponsored by the Missouri Good Roads Committee, identified “five cardinal features” of the bond program:

- Finishing the 7640 mile State Highway System 4 to 6 years earlier than would be possible without the bonds;
- Building a network of Farm-to-Market roads in every County;
- Relieving traffic congestion around large cities;
- Refunding Counties and Civil Subdivisions for roads they constructed for the State Highway System; and
- Building new mileage for the state system, including making interstate and Park connections (MGRC 1926).

A map showing the progress of the State Highway System as part of the advertisement shows that none of Route 19 had been started in Shannon County (MGRC 1926).

Scenic views along Route 19 in Shannon County were frequently shown in the *Biennial Reports* of the Missouri State Highway Commission (Daniels 2015). The Fifth and Sixth *Biennial Reports* identify ten projects between the Dent County line and Eminence (including clearing done by State Maintenance forces), including three bridges (the Current River Bridge, the Sinking Creek Bridge, and the Bridge at Eminence) (MSHC 1926, MSHC 1928b, MoDOT 2015). The Seventh Biennial Report describes the Spring Valley Bridge, the only one of the three bridges to be described in the Bridge Bureau Report (MSHC 1930a).

Table 1 below shows the projects identified on Route 19 in the Fifth and Sixth *Biennial Reports*, listed in order from north to south, from the Dent County line to Eminence. The Spring Valley (Round Spring) Bridge is not included in the list, as is a section of highway that would be constructed during the next biennial period (1929-1930) (MSHC 1926: 217; MSHC 1928b: 277).

**Table 1: Route 19 Projects from Fifth and Sixth Biennial Reports**

<b>Project Number</b>	<b>Type</b>	<b>Length</b>	<b>Contractor</b>	<b>Date of Completion</b>	<b>Cost*</b>
19-28	30' Excavation	4.515 miles	Naney Bros. & Co.	1 September 1927	\$27,356.36
19-29	30' Excavation	4.394 miles	Naney Bros. & Co.	1 September 1927	\$24,910.13
19-33	20' Excavation	2.244 miles	A. A. Davis Construction Co.	12 March 1926	\$146,459.34
19-32	Bridge [Sinking Creek]		Public Works Construction Co.	15 November 1926	\$40,334.54
19-34	Bridge [Current River]		M. E. Gilloiz	29 July 1925	\$73,005.04
19-37	30' Excavation	3.788 miles	Carte-Harlin Construction Co.	30 August 1927	\$5,738.45
19-38	30' Excavation	3.419 miles	Carte-Harlin Construction Co.	30 August 1927	\$17,891.57
19-38	Bridge [Eminence]		Thomas & Sampson	9 June 1926	\$5,947.66**
19-40	20' Excavation	2.383	A. A. Davis Construction	7 March 1928	\$88,671.45

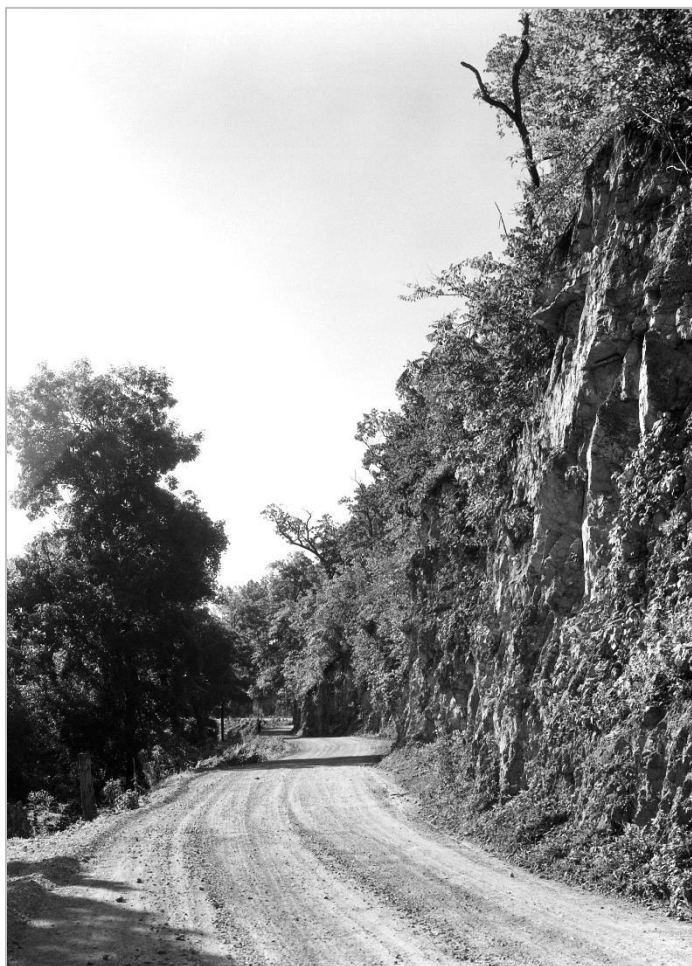
Project Number	Type	Length	Contractor	Date of Completion	Cost*
		miles	Co.		
	Clearing, Leveling & Grading		State Maintenance Forces	31 December 1927	\$35,671.45

\*Cost through December 31, 1928

\*\*Bridge not complete

Because the highway was connecting to a state park and tourism being a major industry, the vistas provided by the roadway were a concern during the design. The first roadside park created in the state highway system is located on Route 19 south of Eminence (outside this project area). Views of the Current River and its tributaries and of the concrete arch bridges are provided as the road curves through the mountains (Daniels 2015).

Figures 7 and 8 are State Highway Department photographs showing the roadway shortly after construction. Although the photographs were not necessarily taken within the project area, the scenes are representative of Route 19 through Shannon and Oregon Counties where the highway was built into the hillside.



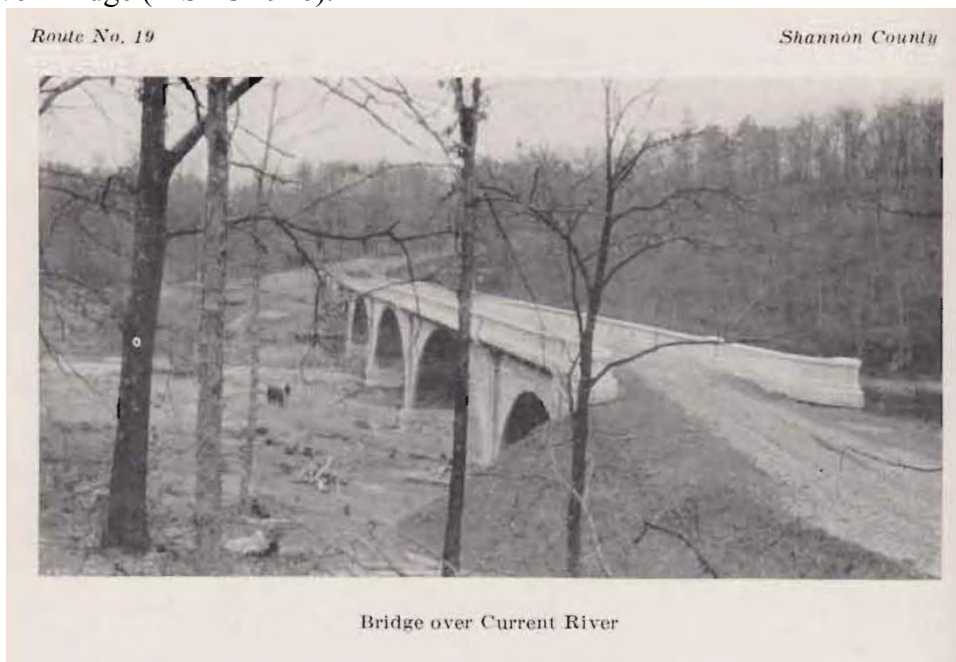
**Figure 7: Route 19 in the late 1920s**



**Figure 8: Route 19 in the late 1920s**

In 1930, as the highway was being constructed, the major landowner in Township 30 North, Range 4 West, was the Current River Lumber Company, which owned half of the land. Three other timber companies owned substantial acreage within the Township as well, the Missouri Lumber and Manufacturing Company, the Bunker Culler Lumber Company and the Smalley Tie and Timber Company (Hixson 1930).

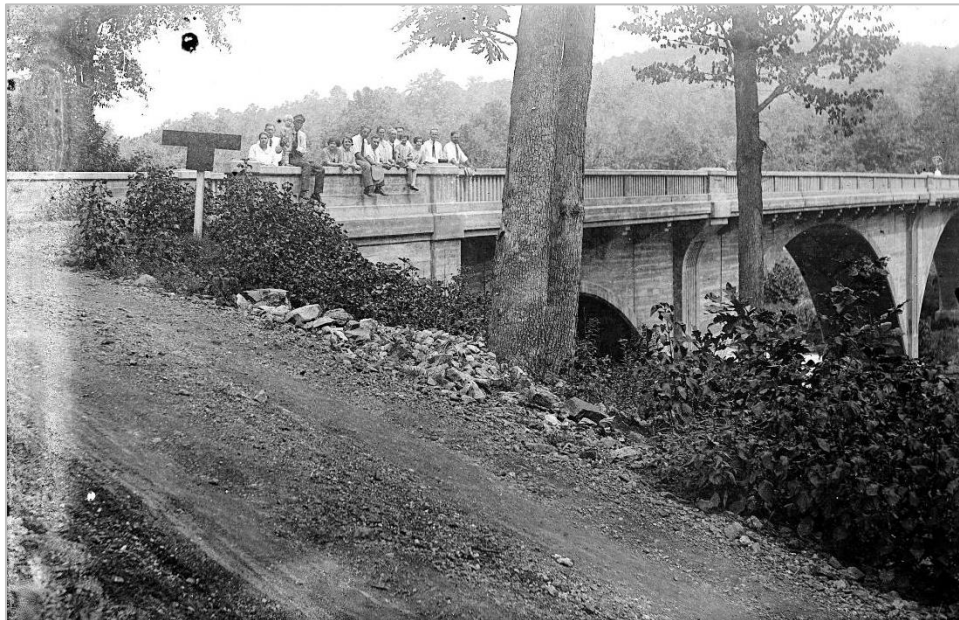
Figure 9 below is from the *Fifth Biennial Report* and shows the highway as it approaches the Current River Bridge (MSHC 1926).



**Figure 9: Current River Bridge, ca. 1925**



Construction of Route 19 encouraged tourist development. In 1929 Camp Zoe, a youth camp, was developed off Route 19 along Sinking Creek (Camp Zoe 2015). A photograph taken in the late 1920s shows a group of revelers on the Current River Bridge (Figure 10) (Gill nd).



**Figure 10: Group on Bridge over Current River near Round Spring**

In 1930 the Commission described its roadside beautification program in the Seventh Biennial Report. Attractive highways are desired by users of the road and the adjoining property owners. Replacing trees removed when highways are constructed is a duty of the department. Improved roadways are “a magnet in drawing tourists by the thousands to Missouri. The tourist traffic will bring new money to the communities along the roadsides, and will stimulate their development” (MSHC 1930a: 427). Since Missouri is unsurpassed in scenic beauty, it is proper to enhance the drawing power of that beauty by appropriate roadside landscaping and respect for native growth along the highway. Scenic vistas are revealed to road users by careful trimming and cutting of trees (MSHC 1930a: 427-9).

In 1932, with the state highway system nearing completion, the Commission reported on tourist traffic for the first time. During the summer of 1931 a traffic census and survey had been completed revealing that tourism had resulted in \$21 million in money coming into Missouri during the season. The average tourist spent just over \$50 per vehicle during their stay in Missouri, which averaged just over seven days (MSHC 1932: 438-9).

The Works Progress Administration (WPA) *Guide to the “Show-Me” State*, described Route 19 as penetrating “a rugged, half-wild area divided into almost equal parts by the Current River. There is a rough, strong beauty in the mountains and cliffs and narrow valleys. There is much color, too, in the folk life of the section. Along the byways of the route, protected by the rocky hills, are folkways that elsewhere have passed from the American scene” (WPA 1998: 545). The 1940 Shannon County Highway Map (Figure 11) illustrates the winding nature of the highway (MSHD 1940).

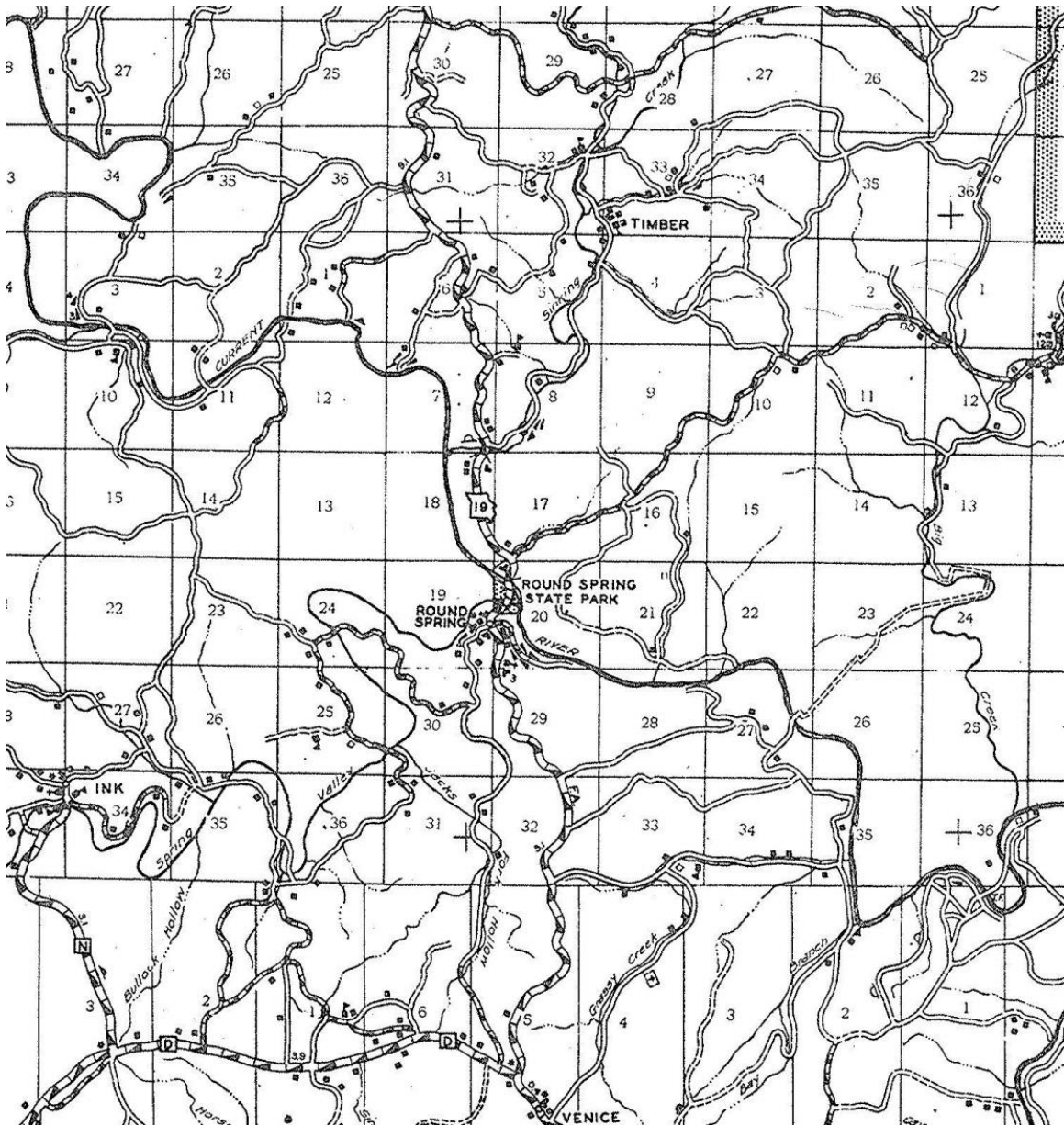


Figure 11: Shannon County Highway Map Detail (1940)

The *Guide* describes the Current River as one of the scenic fishing steams of the state, winding a turbulent path through “the most rugged sections of the Ozarks” (WPA 1998: 549). The *Guide* continues, “Scenic beauty, and good fishing for black bass, salmon, and goggle-eye have made the river a popular float stream, and outfitting and conducting floats are local means of livelihood. A float trip is made under the supervision of guides in one or more boats, depending on the number of persons in the party. The trips usually begin at Round Spring and last two to six days. The time is spent drifting leisurely with the current and fishing in well-known holes. At night, camps are made on the sand bars which inevitably lie opposite the bluffs that mark sharp bends in the river” (WPA 1998: 549).

Round Spring, a State Park at the time of the *Guide*, is described as a small recreational center built about Round Spring, a spring rising from a basin about 80 feet in diameter. The spring

waters were described as having a soft, bluish color and a surface so still that it was necessary to look at a gauge to determine that the water was actually flowing (WPA 1998: 549).

The 1945 U. S. Geological Survey Round Spring Quadrangle shows several tourist related developments along the Current River and its tributaries including Camp Zoe on Sinking Creek, Camp Alton and the Round Spring State Park on the Current River and the Round Spring Caverns (USGS 1945). Round Spring Caverns was a tourist cave with a 14-foot waterfall which formed a stream through the cave. The cave was a well-developed tourist cave with paths and bridges (WPA 1998: 549-550). The Caverns was open to the public in 1932 as a show cave and was incorporated into the ONSR in 1972 (Showcaves.com 2015). The Alton Club was developed between 1937 and 1945 as a summer retreat for employees and customers of the Alton Box Board Company, and reflects rustic architecture popularized by the National Park Service. More than 1,000 acres contain sports and recreation venues, club house, lodge, dormitories and service buildings (Love 2004).

In the 1930s the U. S. Army Corps of Engineers had been given authority to dam the Current River; however, opposition from conservation groups and local citizens, and World War II delayed the plan. Governor Forest Smith added his support to the opposition in 1949, voicing support for keeping the Current River in a free-flowing, natural condition. The proposal to dam the river was withdrawn the following year (ONSR nd: 7).

In 1956 state and federal agencies called for the creation of a national recreation area for the Current, Jacks Fork and Eleven Points Rivers. The study was conducted in 1960. A series of bills to preserve the Ozark Rivers were introduced in Congress between 1960 and 1963, but differing opinions about appropriate management of the rivers doomed them to failure. In 1964 the Missouri delegation united behind a proposal for the Current and Jacks Fork rivers and legislation creating the Ozark National Scenic Riverways was passed and signed by Lyndon Johnson (ONSR nd: 7-8).

#### *Sinking Creek Bridge (H0079)*

Bids for the Sinking Creek Bridge were received on June 26, 1925. The Public Works Construction Company of St. Louis, Missouri was the low bidder for the project and was awarded the contract on July 8, 1925 for a price of \$36,828.00 (MSHC 1925). The bridge was completed on November 15, 1926 (MSHC 1926).

The concrete abutment and wing walls can be seen in a photograph taken during the construction of the bridge (Figure 12) (Gill 1926).



**Figure 12: Sinking Creek Bridge during construction, (Gill 1926)**

#### *Current River Bridge (G0804)*

In 1923 representatives from Dent, Shannon and Oregon County appeared before the Missouri State Highway Commission asking that construction of Route 19 through the counties be expedited, particularly a bridge across the Current River. The representatives were told that plans for Route 19 were proceeding and construction would occur when funding was available (MSHC 1923). Bids for the Current River Bridge were received on January 29, 1924. M. E. Gillioz was the low bidder for the project which included a 600' bridge. The project was awarded on February 13 for \$69,260.14 (MSHC 1924). The project was completed on July 29, 1925 for a cost of \$73,005.04 (MSHC 1926).

#### *Spring Valley/Round Spring Bridge (J0420)*

Planning for the Spring Valley Bridge began in 1929 when a field check of the site was made by the Bureau of Bridges (MSHD 1929). The preliminary layout in 1930 indicated that the location of the structure in Round Spring State Park was “aesthetically suited for an arch and due regard was given to the appearance of the structure from this point of view” (MSHD 1930a). The original design was changed to provide lesser slopes at the north and south ends of the bridge. The designers noted that the route required “extreme grades and curvatures” (MSHD 1930a).

Bids for the project were received on April 29, 1930. C. F. Johnson & Sons of Buffalo, Missouri was the low bidder for the project and was awarded the contract on May 13, 1930 for a bid of \$145,623.58 (MSHC 1930b).

The Missouri Historic Bridge Inventory notes that the State Highway Department typically utilized open spandrel designs for concrete arch bridges greater than 80 feet long and filled spandrels were used for shorter bridges. A number of open spandrel concrete arch bridges were constructed in the 1920s and 1930s by the department. The Sinking Creek Bridge was identified as a well-preserved, representative example of the open spandrel arch construction and

recommended as potentially eligible (Fraser SHAN02). The Spring Valley Bridge is identified as a superlative example of the type with strong integrity of design and setting, and with the second longest span length in the state (Fraser SHAN 03). The Current River Bridge is an unusual example of a multi-span closed-spandrel arch bridge, and the 130' main spans are the longest filled spandrel arches on the state system. It was described as a technologically significant representative of concrete design of the 1920s (Fraser SHAN 01).

The Three Bridges Historic District encompasses three significant concrete arch bridges in a short distance on a roadway filled with extreme grades and curvatures and with exceptional views of the Current River and its tributaries. When completed, Route 19 provided exceptional opportunities for scenic driving as well as improving access to state parks and private clubs.

### **Recommended Boundary**

The recommended boundary of the Three Bridges Historic District recognizes the significant transportation corridor and the scenic driving experience associated with Route 19 and the view from the roadway and the Current River. The views from the roadway and river change with the seasons, but the view in the winter, when there is maximum visibility, was considered.

The northern boundary is approximately 0.25 miles north of the north end of the Sinking Creek Bridge, where Route 19 intersects with one of the parcels owned by the Ozark National Scenic Riverways (ONSR). This is at the apex of the curve preceding the curve onto the Sinking Creek Bridge, just before the bridge becomes visible from the roadway. The view to the west from this point extends across the Current River to the far bank, and on the east side hugs the 800' elevation line of the Mountain into which the roadway was built.

The eastern boundary continues along the elevation line above Route 19, extending at Sinking Creek to where the bluff on the northeast side turns to the north again, crosses Sinking Creek and follows the 800' contour line on along the east side to Kelly Hollow. At Kelly Hollow the boundary follows the bluff line east to an arbitrary point 250' along the bluff, turns south to cross the bluff and follows the 800' contour line to the projection of the bluff just north of Limekiln Hollow, where the boundary turns southwest to form the southern boundary.

The western boundary follows the 820' contour line above the western bank of the Current River from the northern boundary to a point where it intersects with the southern boundary just south of Round Spring.

The Southern Boundary is approximately 0.25 miles south of the south end of the Round Spring Bridge, at a point on the Route 19 tangent before the bridge is visible heading north on the roadway. The southern boundary extends west to connect to the western boundary in a fairly straight line since there is a sharp grade change between the roadway and the valley floor. It extends to the east along the contour lines until it intersects with the eastern boundary at the Current River near Limekiln Hollow.

The boundary is illustrated on the map in Appendix C.

The boundary includes the significant bridges, the roadway connecting them, the views from the roadway and the Current River and extends north of the Sinking Creek Bridge far enough north to include the first vista that includes the Sinking Creek Bridge and extends far enough south to include the first vista that includes the Spring Valley Bridge. The boundary is compact in including three historically significant bridges that are closely related by geography and construction time period, other nearby areas of Route 19, while sharing similar roadway geometry do not share the characteristic bridges.

It is possible that the boundary could extend along Route 19 further north and south, outside the area of potential effects for this project and that additional survey along Route 19 might identify additional area(s) that could be included within the boundaries.

## References

Camp Zoe

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2015 “Shannon 19, MoDOT Job No. J9P3101, Temporary Bridge at Sinking Creek,” Section 106 Memo, Historic Preservation Section, Missouri Department of Transportation, Jefferson City, Mo.

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Gill, Charles Elliot

1926 Sinking Creek Bridge under construction, Photograph, Charles Elliott Gill Collection, Missouri State Archives, Jefferson City, Missouri.

nd Group on Bridge over Current River near Round Spring, Photograph, Charles Elliott Gill Collection, Missouri State Archives, Jefferson City, Missouri.

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Missouri Department of Transportation (MoDOT)

2015 Project History Map, Shannon County, Transportation Planning, Jefferson City, Missouri.

Missouri Good Roads Committee (MGRC)

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Missouri State Highway Commission (MSHC)

- 1923 “Minutes of the State Highway Commission Meeting,” 9 October 1923, as held by the Secretary to the Commission, Missouri Highway and Transportation Commission, Jefferson City, Missouri.
- 1924 “Minutes of the State Highway Commission Meeting,” 13 February, 1924, as held by the Secretary to the Commission, Missouri Highway and Transportation Commission, Jefferson City, Missouri.
- 1925 “Minutes of a Special Called Meeting of the State Highway Commission Held at the Jefferson Hotel, St. Louis, Missouri, on Wednesday, July 8, 1925,” 8 July 1925, as held by the Secretary to the Commission, Missouri State Highway Commission, Jefferson City, Missouri.
- 1926 *Fifth Biennial Report of the State Highway Commission of Missouri for the Period Ending December First 1926*, Jefferson City, Mo: Hugh Stephens Press.
- 1928a “Plan and Profile of Proposed State Road,” Shannon County, Route 19, Section 19-33, Design Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1928b *Sixth Biennial Report of the State Highway Commission of Missouri for the Period Ending December First 1928*, Jefferson City, Mo: Hugh Stephens Press.
- 1930a *Seventh Biennial Report of the State Highway Commission of Missouri for the Period Ending December First 1930*, Jefferson City, Mo: Botz Printing and Stationery Co.
- 1930b “Minutes of the Meeting of the State Highway Commission, held in Jefferson City, Missouri, May 13, 1930,” 13 May 1930, as held by the Secretary to the Commission, Missouri Highway and Transportation Commission, Jefferson City, Missouri.
- 1931 “Plan and Profile of Proposed State Road,” Shannon County, Route 19, Section 19-35, Design Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1932 *Eighth Biennial Report of the State Highway Commission of Missouri for the Period Ending December First 1932*, Jefferson City, Mo: Botz Printing and Stationery Co.

Missouri State Highway Department (MSHD)

- 1924 “Bridge over Current River,” G-804, Bridge Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1925a “Bridge over Sinking Creek,” H-79, Bridge Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1925b Project file, Project 19-33, Design Division, Missouri Department of Transportation, Jefferson City, Missouri.

- 1926 Official State Highway Map, Jefferson City, MO.
- 1927 Project file, Project 19-37, Design Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1929 “Field Check Memo” Bridge J0420, Bridge Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1930a “Preliminary Inspection Report,” J0420, Bridge Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1930b “Bridge over Spring Valley,” J-420, Bridge Division, Missouri Department of Transportation, Jefferson City, Missouri.
- 1940 “County Highway Map, Shannon County.” Jefferson City, MO: MSHD.

#### Ozark National Scenic Riverways

- nd *Final General Management Plan/Environmental Impact Statement*, National Park Service, (<http://parkplanning.nps.gov/documentsList.cfm?projectID=15793>: accessed 3 December 2015).

#### Showcaves.com

- 2015 Round Spring Cavern, ([www.showcaves.com/english/usa/index.html](http://www.showcaves.com/english/usa/index.html): accessed 3 December 2015).

#### United States Geological Survey (USGS)

- 1945 Round Spring Quadrangle, 15-Minute Series Topographic Map, Denver, CO: USGS.

#### Works Progress Administration (WPA)

- 1998 *The WPA Guide to the “Show Me” State*, Missouri State Highway Department, 1941, Reprint 1998 by the Missouri Historical Society Press, St. Louis, Missouri.



**Appendix A**  
**Landscape Photos**

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Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

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Shannon County  
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Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
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Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving south

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving south



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438





Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



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Job No. J9P0438



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Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438





Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438



Route 19, driving north



Route 19, driving north

Shannon County  
Route 19  
Job No. J9P0438

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**Appendix B**  
**Bridge Photos**

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Sinking Creek Bridge (H0079), facing southeast



Sinking Creek Bridge (H0079), facing southwest

Shannon County  
Route 19  
Job No. J9P0438



Sinking Creek Bridge (H0079), facing south

Sinking Creek Bridge (H0079), facing north



Shannon County  
Route 19  
MoDOT Job No. J9P0438





Sinking Creek Temporary Bridge (H0079T), facing north



Sinking Creek Temporary Bridge (H0079T), facing north

Shannon County  
Route 19  
Job No. J9P0438



Current River Bridge (G0804), facing southwest



Current River Bridge (G0804), facing south

Shannon County  
Route 19  
Job No. J9P0438



Current River Bridge (G0804), facing east



Current River Bridge (G0804), facing northwest

Shannon County  
Route 19  
Job No. J9P0438



Spring Valley (Round Spring) Bridge (J0420), facing northeast



Spring Valley (Round Spring) Bridge (J0420), facing northwest

Shannon County  
Route 19  
Job No. J9P0438



Spring Valley (Round Spring) Bridge (J0420),  
facing north

Spring Valley (Round Spring) Bridge (J0420),  
facing northeast



Shannon County  
Route 19  
MoDOT Job No. J9P0438

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**Appendix C**  
**Boundary Map showing Bridge Locations**

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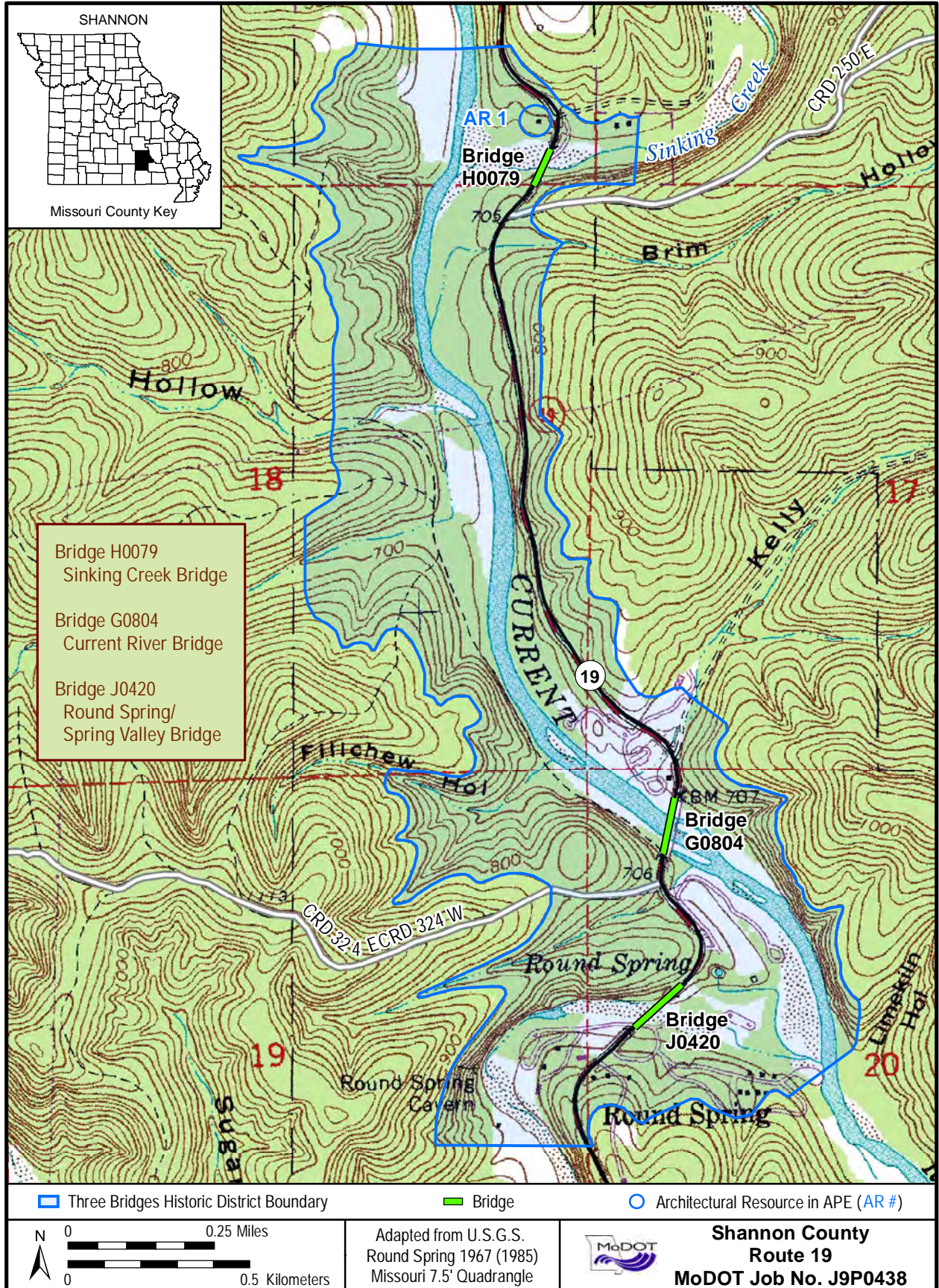


Figure 4. Three Bridges Historic District

## **Appendix C: Public Involvement Plan**

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**AGENCY AND PUBLIC INVOLVEMENT PLAN FOR  
MO ROUTE 19 SINKING CREEK BRIDGE  
ENVIRONMENTAL ASSESSMENT  
FINAL**



**MO ROUTE 19 SINKING CREEK BRIDGE**

**MoDOT Job No. J9P0438  
MO Route 19, North of Eminence,  
Shannon County, Missouri**

**Missouri  
Department of Transportation**



**JUNE 2015**

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## **1.0 PURPOSE OF AGENCY AND PUBLIC INVOLVEMENT PLAN**

MO Route 19 crosses Sinking Creek in Shannon County, Missouri via a historic open-spandrel arch bridge. Since the Federal Highway Administration (FHWA) is expected to provide funding for this proposed bridge replacement project, FHWA is the lead federal agency. As a direct recipient of federal funds for the project, the Missouri Department of Transportation (MoDOT) is a lead agency. MoDOT and FHWA are advancing this project through an Environmental Assessment (EA).

Recognizing the need for early, frequent, and open communication with the public and federal, state, and local agencies, MoDOT has developed this agency and public involvement plan. It defines how MoDOT will communicate information about the MO Route 19 Sinking Creek Bridge EA to other agencies and to the public. It also identifies how comments and information from agencies and the public will be solicited and considered.

The MO Route 19 Sinking Creek Bridge Agency and Public Involvement Plan (hereinafter called the Plan) identify specific opportunities for public and agency involvement tied to key project milestones (purpose and need, alternatives screening/environmental impact methodology, and preferred alternative selection). In addition to defined Agency Process Points, ongoing coordination with agencies will occur throughout project development to facilitate compliance with state and federal regulations, including the National Environmental Policy Act and Section 106 of the National Historic Preservation Act. Ongoing public involvement activities throughout the development of the EA will keep the public informed of project status and provide opportunity for comment.

The Plan will:

- Identify early coordination activities
- Identify cooperating and other regulatory agencies to be involved in agency coordination
- Establish the timing and form for agency review and comment on the project's purpose and need and study area, the range of alternatives to be investigated and impact methodologies, and the preferred alternative
- Establish the timing and form for public opportunities to be involved in defining the project's purpose and need, study area, and the range of alternatives to be investigated; providing input on environmental features and issues of concern; and commenting on the findings presented in the EA
- Describe the communication methods that will be used to inform the surrounding area's population about the project

The Plan will be revised periodically to reflect changes to the project schedule and other items that typically require updating over the course of a project.



---

## **2.0 PROPOSED PROJECT**

The project extends approximately 0.146 miles north and 0.111 miles south of Sinking Creek approximately 14.2 miles north of Eminence on MO Route 19 in Shannon County, Missouri, also is approximately 29.2 miles south of Salem on MO Route 19 Dent and Shannon County, Missouri, and approximately 1.8 miles from Round Springs, Missouri (see Figure 1).

### **2.1 Purpose and Need**

As part of this study, a purpose and need statement is being developed and will be refined based on input obtained from agencies and the public during early project coordination and scoping. The primary purpose of the project is to replace the existing bridge over Sinking Creek.

The needs for the proposed MO Route 19 Sinking Creek bridge project are:

- 1) The Sinking Creek Bridge (H0079) is 89 years old and structurally deficient. Its age and condition require regular maintenance resulting in periodic closures that create an inconvenience to the traveling public and substantial expense to taxpayers.
- 2) The bridge's design is functionally obsolete. It does not meet MoDOT's standards for lane width, shoulders, or vertical clearance.
- 3) The current Route 19 temporary bridge over Sinking Creek does not provide a long-term solution.

### **2.2 Potential Alternatives**

Alternatives to be evaluated are expected to include:

- No-build/rehabilitation
- New bridge in existing location with improvements
- New bridge on new alignment

The alternatives to be considered in the EA will be developed and refined based on input obtained from agencies and the public during early coordination/scoping and subsequent agency and public involvement opportunities.

Proposed alternatives will take into account the needs of neighboring communities and residents, as well as considering the social, environmental, economic, and cultural resource impacts associated with these proposals.

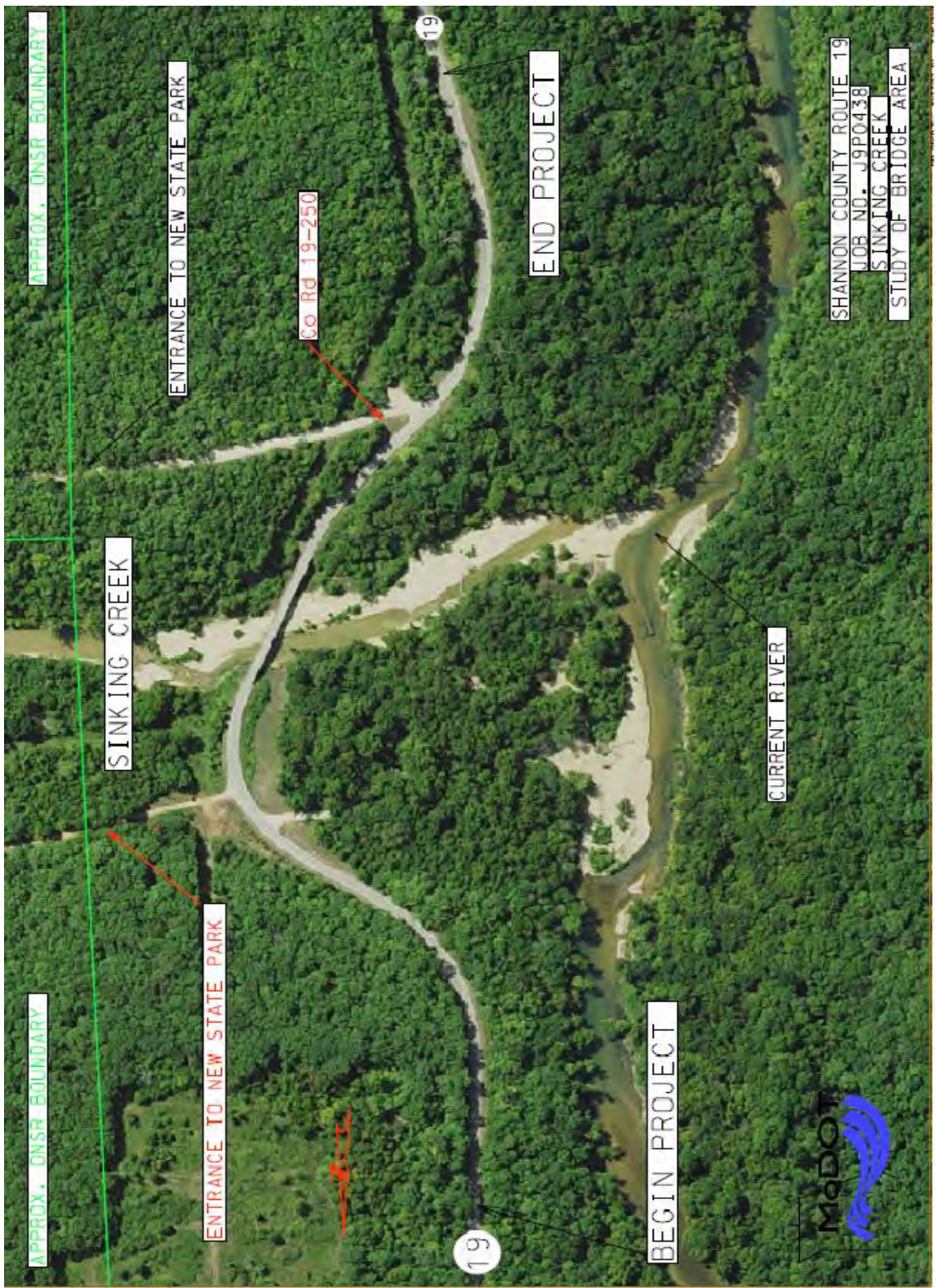


Figure 1 MO Route 19 Sinking Creek Bridge Study Area

**MO ROUTE 19 AGENCY AND PUBLIC INVOLVEMENT PLAN**

### 3.0 PROJECT COORDINATION

This section outlines and defines the agencies' opportunities and responsibilities for involvement in the project's development, other organizations' involvement, and early Section 106 coordination. Table 1 tracks project coordination activities.

Table 1: Project Coordination Activities

Activity	Agency(ies) Responsible	Completion Date
Hold meeting with NPS--FHWA	MoDOT/FHWA/NPS	June 2015
Invitation to agencies and tribe-- Write and FHWA send to agencies-- include the scoping packages	MoDOT/ FHWA	June 2015
Notify SHPO of adverse effect to the historic Sinking Creek Bridge and historic landscape--Section 106 Submittal	FHWA/MoDOT	June 2015
Scoping meeting—meet with agencies and FHWA	MoDOT/FHWA/Agencies	July 2015
Initiate Section 106 Consultation--Notify NPS, the advisory council, and potential consulting parties about the undertaking—(need a letter from SHPO)	FHWA/MoDOT	July 2015
Draft Section 106 Programmatic Agreement—Begin consultation on PA	MoDOT/FHWA	September-October 2015
Preliminary EA—Review and comment—4 weeks	FHWA	June 2016
Cooperating Agency Review—Review and Comment—4 weeks (may overlap with FHWA)	NPS	June 2016
EA approval and signatures—Sign EA—(Design phase has to be in the STIP)	MoDOT/FHWA	August 2016
Notice of Availability—NOA to agencies and hold/advertise hearing	FHWA	August-September 2016
Final Section 106 PA—PA signed by consulting parties	MoDOT/FHWA	October 2016
Review FONSI and other documentation—review and comment	FHWA	November 2016
FONSI approval—Sign FONSI	FHWA	January 2017
Notice of availability to agencies	FHWA	January 2017

### 3.1 Project Scoping

Early coordination/scoping will be conducted to obtain comments and input from agencies and the public to help determine the purpose and need for the project, alternatives to be evaluated, and the issues that will be examined in the EA.

---

## **3.2 Cooperating and Other Regulatory Agencies, Section 106 Consultation, and Non-Governmental Organizations**

### **3.2.1 Cooperating Agencies**

Cooperating agencies are those federal agencies that the lead agency specifically requests to participate in the environmental evaluation process for the project. FHWA's NEPA regulations (23 CFR 771.111(d)) require that federal agencies with jurisdiction by law (such as permitting or land transfer authority) be invited to be cooperating agencies for an EA. Letters of invitation were sent to the US Army Corps of Engineers (Little Rock District and the National Park Service).

### **3.2.2 Other Regulatory Agencies**

These are federal and non-federal governmental agencies that may have an interest in the project because of their jurisdictional authority, special expertise, and/or statewide interest. A total of 9 federal and state agencies were invited by letter (June 25, 2015) to attend the agency scoping meeting and offer comments on this project. Table 2 lists the agencies with potential regulatory involvement in the project, and those that were the invited to the meeting.

### **3.2.3 Section 106 Consultation**

The agency official (FHWA) or its designees—MODOT —may use its NEPA public involvement procedures to also satisfy the National Historic Preservation Act (NHPA) Section 106 requirements for public involvement by providing adequate opportunities for public involvement through public meetings and hearings, and supplying information on the Section 106 process and historic properties at these meetings.

The NHPA requires the federal agency or its designee to seek the participation and consider the opinions of interested parties throughout the Section 106 process including the identification and evaluation of cultural resources potentially affected by the project, the evaluation of project effects to historic resources, and the development of appropriate mitigation plans as needed. This participation is referred to as “consultation.” Consulting parties include the State Historic Preservation Office (SHPO), American Indian tribes with historical ties or interests in the area, representatives of the local government, and individuals or organizations with a demonstrated interest in the project.

The FHWA, MoDOT, and SHPO consulted to consider the nature of the project and the kinds of historic resources potentially affected to identify the appropriate individuals, organizations, and entities with whom to consult. In addition, the National Park Service was consulted about the appropriate consulting parties. Nine American Indian tribes were invited by letter June 12, 2015 to consult on this project under Section 106. Ten non-tribal consulting parties including the local government, historic preservation and historic bridge enthusiasts, Missouri State Parks, and environmental organizations with an interest in the Current River were invited to participate. Because MoDOT considers Section 106 requirements early in the NEPA process, compliance with both statutes is coordinated throughout the project.

### 3.2.4 Non-Governmental Organizations

These are private groups with a special interest in the project. MODOT may interact with and solicit comment from such groups during the development of the EA. These entities are also listed in Table 2.

Table 2: Lead, Cooperating, and Other Regulatory Agencies; Section 106 Consulting Parties; and Non-Governmental Organizations

Agency	Agency Role	Contact Person/ Title	Phone	E-mail / Address
Federal Highway Administration	Lead	Ms. Reagan Ball, Program Development Team Leader <b>MO</b>	573-638-2620	<a href="mailto:Regan.Ball@dot.gov">Regan.Ball@dot.gov</a>
Missouri Department of Transportation	Co-Lead	Mr. Pete Berry, Project Manger	417-469-6242	<a href="mailto:Pete.Berry@modot.mo.gov">Pete.Berry@modot.mo.gov</a>
		Ms. Gayle Unruh, Environmental Contact	573-526-6679	<a href="mailto:Gayle.Unruh@modot.mo.gov">Gayle.Unruh@modot.mo.gov</a>
US Army Corps of Engineers <b>Little Rock District</b>	Cooperating	Dana O. Coburn, Environmental Division		<a href="mailto:Dana.o.coborn@usace.army.mil">Dana.o.coborn@usace.army.mil</a>  Little Rock, AR 72203-0867
US Environmental Protection Agency, Region 7 <b>MO</b>	Federal Regulatory	Mr. Ron Hammerschmidt, Director		901 N. 5 <sup>th</sup> Street Kansas City, KS 66101
Federal Emergency Management Agency (USDHS)	Federal Regulatory	Mr. Ken Sessa		9221 Ward Parkway, Suite 300 Kansas City, MO. 64114-3372
National Park Service	Cooperating	Allison Young, Park Archaeologist	573-323-4236	P.O. Box 490 Van Buren, Mo 65466
US Fish and Wildlife Service	Federal Regulatory	Ms. Amy Salveter, Field Supervisor	573-234-2132	101 Park DeVillie Drive, Suite A Columbia, MO 65203-0057
Missouri Department of Conservation	State Regulatory	Mr. Alan Leary, Policy Coordinator	573-522-4115 ext. 3346	<a href="mailto:Alan.Leary@mdc.mo.gov">Alan.Leary@mdc.mo.gov</a>
Missouri Department of Natural Resources	State Regulatory	Ms. Lorisa Smith	573-522-2401	<a href="mailto:Lorisa.smith@dnr.mo.gov">Lorisa.smith@dnr.mo.gov</a> PO Box 176 Jefferson City, MO 65102
Missouri Department of Tourism	State Regulatory	Dan Lennon, Director	573-751-3051	<a href="mailto:DirectorMoTourism@ded.mo.gov">DirectorMoTourism@ded.mo.gov</a> P.O. Box 1055 Jefferson City, Mo 65102
Missouri State Parks	State Regulatory	Bill Bryan, Deputy Director	573-751-8258	Bill.Bryan@dnr.mo.gov P.O. Box 176

### MO ROUTE 19 AGENCY AND PUBLIC INVOLVEMENT PLAN

Agency	Agency Role	Contact Person/ Title	Phone	E-mail / Address
				Jefferson City, Mo 65102
Missouri State Historic Preservation Office	State Regulatory	Dr.Toni Prawl, Director		<i>PO Box 180 Jefferson City, MO 651012</i>
State of Missouri Emergency Management Agency	State Regulatory	Ms. Kim Stuefer, Public Assistance Coordinator		<i>2302 Militia Drive P.O. Box 116 Jefferson City, MO 65102</i>
Shannon County Commissioner (MO)	Local Government	<i>Jeff Cowen, Presiding Commissioner</i>	573-226-3414	<a href="mailto:Shannon@sos.mo.gov">Shannon@sos.mo.gov</a> P.O. Box 187 Eminence, Mo 65466
Dent County Commissioner (MO)	Local Government	<i>Darrell Skiles, Presiding Commissioner</i>	573-729-3044	400 N. Main St. Salem, MO 65560
Friends of the Current River	ONSR			<a href="mailto:CurrentRiverFriends@yahoo.com">CurrentRiverFriends@yahoo.com</a>
Shannon County Historical Society	Local History		573-325-4728	106 N. Ash St. Winona, Mo 65588
Historic Bridge Foundation	Historic Bridge	<i>Kitty Hendeson, Executive Director</i>		<a href="mailto:Kitty@historicbridgefoundation.com">Kitty@historicbridgefoundation.com</a> P.O. Box 66245 Austin, TX 78766
Historicbridges.org	Historic Bridge	<i>Nathan Holth, Web-Master</i>		<a href="mailto:Nathan@historicbridge.com">Nathan@historicbridge.com</a> 12534 Houghton Dr. Dewitt, MI 48820
Absentee Shawnee Tribe of Indians of Oklahoma	Tribe	<i>Mr. Joesph Blanchard, Tribal Historic Preservation</i>	405-275-4030	<a href="mailto:Joesph.Blanchard@astribe.com">Joesph.Blanchard@astribe.com</a> 2025 South Gordon Cooper Dr. Shawnee, OK 74801
Cherokee Nation	Tribe	<i>Dr. Richard Allen, Officer</i>	918-456-0671	P.O. Box 948 Tahlequah, OK 74465
Delaware Nation	Tribe	<i>Mr. Jason Ross, Section 106 Manager</i>	405-247-8903	<a href="mailto:jross@delawarenation.com">jross@delawarenation.com</a> P.O. Box Anadarko, OK 73005
Delaware Tribe of Indians of Oklahoma	Tribe	<i>Dr. Brice Obermeyer</i>	918-335-7026	<a href="mailto:bobermeyer@delawaretribe.org">bobermeyer@delawaretribe.org</a> 170 NE Barbara Bartlesville, OK 74006
Eastern Shawnee Tribe of Oklahoma	Tribe	<i>Ms. Robin Dushane, Cultural Preservation Director</i>	918-666-2435	<a href="mailto:radushane@gmail.com">radushane@gmail.com</a> 127 West Oneida P.O. Box 350 Seneca, MO 64865

**MO ROUTE 19 AGENCY AND PUBLIC INVOLVEMENT PLAN**

Agency	Agency Role	Contact Person/ Title	Phone	E-mail / Address
Osage Nation	Tribe	<i>Dr. Andra Hunter, Director Historic Preservation Office</i>		<a href="mailto:ahunter@osagetribe.org">ahunter@osagetribe.org</a> P.O. Box 1449 Pawhuska, OK 74056
Quapaw Tribe of Oklahoma	Tribe	<i>Mr. Everett Bandy, Tribal Historic Preservation Officer</i>	888-641-4724	<a href="mailto:ebandy@quapawtribe.com">ebandy@quapawtribe.com</a> P.O. Box 765 Quapaw, OK 74363-0765
Shawnee Tribe	Tribe	<i>Ms. Jodi Hayes,</i>	918-542-2441	P.O. Box 74355 Miami, OK 74355
United Keetoowah Band of Cherokee	Tribe	<i>Ms. Lisa Larue-Baker, Tribal Historic Preservation Officer</i>	918-822-1952	P.O. Box 746 Tahlequah 74465
LAD Foundation		<i>Greg Iffrig,</i>	(314)-621-0230 (P) (314)-241-4706	319 North 4 <sup>th</sup> Street Suite 805 St. Louis, Missouri 63102 <a href="mailto:greg.iffrig@ladfoundation.org">greg.iffrig@ladfoundation.org</a>

#### 4.0 AGENCY COORDINATION

The cooperating agencies' roles and responsibilities for this project include but are not limited to:

- Communicating the agency's views on subjects within its jurisdiction or expertise;
- Participating in the NEPA process as early as practicable, including commenting on purpose and need and range of alternatives;
- Identifying at the earliest possible time any issues regarding the project's potential environmental, historic preservation, or socioeconomic impacts that could substantially delay or prevent the granting of a permit or other approval;
- Reviewing and commenting on preliminary versions of the EA; and
- Informing FHWA and/or MoDOT if at any point in the process the agency's needs are not being met. MoDOT expects that the EA will satisfy the agency's NEPA requirements (including those related to project alternatives, environmental consequences, and mitigation) and intends to use the EA and any subsequent decision-making document as the basis for any permit applications at the end of the process.

Other regulatory agencies' roles and responsibilities for this project include:

- Providing meaningful and early input in the NEPA process, especially on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail for the alternatives analysis;

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#### MO ROUTE 19 AGENCY AND PUBLIC INVOLVEMENT PLAN

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- 
- Participating in coordination meetings and joint field reviews as appropriate; and
  - Identifying, as early as practicable, any issues of concern regarding the project's potential environmental, historic preservation, or socioeconomic impacts and offering meaningful and timely input on unresolved issues.

Other regulatory agencies will have defined opportunities for meaningful participation in the decision-making process for the project. Specific opportunities are provided via the agency process points that have been defined for this project.

#### **4.1 Agency Process Points**

The agency process points defined herein are intended to obtain agency input within a defined time period so the project study can move forward. They are not meant to be points where there is total agreement. At the end of any specified agency process point, the lead agencies will make a decision about the changes or revisions that are needed based on agency and public input.

Agency process point contacts with the agencies listed previously in Table 2 will occur at the following three major milestones in the development of the MO Route 19 Sinking Creek Bridge EA:

- 1) Purpose and Need/Initial Range of Alternatives/Methodologies for Evaluating Impacts
- 2) Alternatives to be Evaluated in the EA
- 3) Preferred Alternative

The information to be provided and expectations at each of the agency process points for this project are discussed next.

##### **4.1.1 Process Point 1—Purpose and Need/Initial Range of Alternatives**

MoDOT will prepare and forward the draft purpose and need statement to the agencies for review, along with maps displaying the initial range of alternatives and the revised Plan.

Agencies will have 30 days to review the information provided and submit written comments on the purpose and need statement. MoDOT will consider agency comments at the end of this period. Process Point 1 should result in comments from the agencies on:

- The purpose and need statement and the project study area,
- Initial range of alternatives to be considered,
- Appropriate methodologies to be used for evaluating impacts and level of detail for analysis of alternatives, and
- The Plan.



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Additionally, the agencies should provide comments on environmental features, resources, and issues of concern.

Following the conclusion of Process Point 1, the joint leads will use agency comments and the public meeting on purpose and need to revise the purpose and need statement and the Plan as appropriate and to screen the initial range of alternatives. The joint leads will coordinate with regulatory agencies on impact evaluation methodologies.

#### **4.1.2 Process Point 2—Alternatives Retained for Detailed Analysis**

Based on Process Point 1 decisions and analysis of the initial range of alternatives conducted during the project development process, MoDOT will prepare an information packet on the alternatives retained for detailed analysis.

Agencies will be given 30 days to review the information and provide written comments. MoDOT will consider agency comments at the end of this period. Process Point 2 should result in comments from the agencies on:

- The alternatives to be carried forward in the EA,
- Any revisions to the purpose and need statement, and
- Any revisions to the Plan.

At the conclusion of Process Point 2, the MoDOT will consider input from the agencies and the public meeting on alternatives in deciding on the alternatives to carry forward.

#### **4.1.3 Process Point 3—Preferred Alternative**

Based on Process Point 2 decisions, agency and public comments, and the subsequent detailed investigation of alternatives and analysis of impacts, MoDOT will designate a preferred alternative for the project. MoDOT will prepare an information packet on the preferred alternative. Cooperating agencies and other regulatory agencies will be given 30 days to review the information and provide comments. MoDOT will consider agency comments at the end of this period.

Process Point 3 should result in comments from the agencies on the preferred alternative. Agencies will be expected to specify whether additional information is needed to fulfill other applicable environmental reviews or consultation requirements. In addition, the cooperating agencies should specify any additional information needed to comment adequately on the EA analysis of site-specific effects associated with the granting or approving by the agency of necessary permits, licenses, or entitlements.

#### **4.1.4 EA**

At the conclusion of the third agency process point, MoDOT will prepare a preliminary EA (pEA) for submittal to FHWA. The EA will determine whether or not an EIS is needed to address significant impacts or controversy. Upon FHWA's approval of the EA for circulation, one or more public hearings will be conducted in accordance with NEPA requirements and the project's Agency and Public Involvement Plan (contained herein as Section 6.0).

Following FHWA's approval of the EA, the document will be made available for public and agency review for a minimum of 30 days. This is the final opportunity for the public and agencies to comment on the environmental evaluation process. MoDOT and FHWA will address the substantive comments received during the EA comment period and prepare a FONSI addressing substantive comments and indicating the Selected Alternative. FHWA's approval of the FONSI completes the NEPA process for the project. Notices of availability of both the EA and FONSI will be sent to agencies.

## 5.0 SCHEDULE

The anticipated schedule for the EA completion and issuance of a FONSI is shown below. This schedule will be revised/ updated as needed to reflect schedule adjustments.

### Missouri Route 19 Sinking Creek Bridge EA Schedule

Milestone/Action	Date
Invitation to agencies and tribes	June 2015
Access to private land	June 2015
Agency and Public Involvement Plan	June 2015
Field work	June - August 2015
Section 106 Initial Submittal	June 2015
Scoping meeting	July 2015
Purpose and Need	July 2015
Initiate Section 106 Consultation	July 2015
Preliminary alternatives	August 2015
Draft Section 106 Programmatic Agreement	September- October 2015
Public meeting	October 2015
Status meeting	November 2015
Purpose and need and Reasonable Alternatives	December 2015
Screen alternatives to preferred	January 2016
Preliminary EA	February-April 2016
Internal QA /QC and revisions	May 2016

### MO ROUTE 19 AGENCY AND PUBLIC INVOLVEMENT PLAN

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<b>Milestone/Action</b>	<b>Date</b>
Management briefing	May 2016
Revise Preliminary EA	June 2016
Cooperating Agency Review	June 2016
EA reviews	July 2016
EA approval and signatures	August 2016
Notice of Availability	August 2016
Public location hearing for EA and Section 106	September 2016
Prepare draft FONSI while waiting on comments	September 2016
Final Section 106 PA	October 2016
FONSI, Final 4(f) evaluation	October-November 2016
Management briefing	November 2016
Review FONSI and other documentation	November 2016
FONSI revisions	December 2016
FONSI approval	January 2017
Notice of availability to agencies	January 2017

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## **6.0 OPPORTUNITIES FOR PUBLIC INPUT**

This section contains the Public Involvement Plan (PIP) outlining the approach the project team will use to identify and engage the communities, officials, local citizens, and other potentially affected interests. The PIP provides a clear description of how the project team will solicit input, develop two-way communication with the public, and document public opinions regarding improvements within the study area.

FHWA recognizes the importance of building support among the public who are stakeholders in transportation investments that impact their communities. FHWA's regulations for implementing NEPA require that the public be given early and continuing opportunities during project development to be involved in identifying social, economic, and environmental impacts, as well as impacts associated with relocating individuals, groups, or institutions. MoDOT and FHWA encourage the public to voice their opinions about the problems and solutions identified during development of the project's purpose and need statement and identification of the range of alternatives to be considered. MoDOT's public involvement process relies on the use of a project-specific PIP to promote the open exchange of information and ideas between the public and transportation decision-makers.

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### **MO ROUTE 19 AGENCY AND PUBLIC INVOLVEMENT PLAN**

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The PIP contained herein for the development of the MO Route 19 Sinking Creek Bridge Environmental Assessment (EA) describes strategies for obtaining public input and outlines the opportunities to be provided to the public to offer specific input on the project's purpose and need and the range of alternatives. The project team, made up of the lead agencies' key staff members involved in the project, will accept comments throughout the development of the EA as well as in conjunction with public meetings. Once FHWA approves the EA and it is made available for public and agency review, there is a specific, designated 30-day period during which comments on that document are accepted.

## **6.1 Affected Interests and Key Messages**

### **6.1.1 Potentially Affected Interests**

The stakeholders in the MO Route 19 Sinking Creek Bridge EA include but are not limited to:

- South Central Ozark Council of Governments (Regional Planning Commission)
- The communities of Salem, Eminence, and Winona, Missouri
- Meramec Regional Planning Commission, Salem, MO
- Dent County, Mo Commissions
- Shannon County, MO Commissions
- Business interests such as Timber Charcoal: Salem, MO, Brewer's Ice Co: Eminence, MO, U.S. Foods: Salem, MO, and other small business
- State Representative: Jeffery Pogue
- State Senator: Doug Libla
- Area emergency response—Shannon County, Dent County, MO fire, police, sheriff and local volunteer fire departments; Missouri Department of Conservation, National Park Service, Missouri State Highway Patrol Troop G; Salem Memorial District Hospital, Salem Memorial Distract Hospital Ambulance Distract, Air Evac, etc.
- Pioneer Forest L.L.C.
- Area residents and civic organizations

### **6.1.2 Key Messages**

Key messages will be emphasized and communicated to the public throughout the development of the EA. These messages, intended to support the goals of the PIP, are:

- MoDOT encourages the public's participation and will actively seek out and engage all who may be affected.

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## **MO ROUTE 19 AGENCY AND PUBLIC INVOLVEMENT PLAN**

- 
- MoDOT will be transparent in this process.
  - The purpose of the EA is to examine reasonable alternatives and select an alternative to address the project needs to be ready to construct the selected alternative when funding becomes available.
  - The existing bridge is structurally deficient and functionally obsolete. It is 89 years old and was not designed for today's vehicles.
  - The public has a voice in the decision-making process and MoDOT will listen to and consider all input.

## **6.2 Public Outreach Activities**

### **6.2.1 Public Meetings and Public Hearing**

At least one public meeting and one public location and design hearing will be held to communicate project objectives with the public as well as gather comments and recommendations about the project, possible impacts, and potential solutions.

The public meetings will be held within the study area. The meetings will be held in an open-house format with a specific time designated for a presentation. Members of the project team will be present to speak one-on-one with meeting attendees. The public hearing will include an opportunity for members of the public to voice their comments in a setting where all attendees may listen.

A meeting summary will be prepared following each public meeting. These summaries will be posted on the MoDOT Web site at [www.modot.org/southeast](http://www.modot.org/southeast) and included in the EA.

To satisfy NEPA and fulfill MoDOT's requirements, a public hearing will be held in conjunction with the publication of the EA. The team will prepare an official transcript of the public hearing.

The project team will use an interactive website, emails, mailings, media, and/or other materials to appropriate audiences for notification of the public meetings and the hearing.

Comment forms will be available at each public meeting and at the public hearing to gather written feedback from meeting/hearing attendees. A tape recorder will also be available at the hearing to record any oral comments from attendees.

An online meeting may be held in conjunction with the public meeting.

### **6.2.2 Project Information on MoDOT's Website**

Information about the project will be posted on MoDOT's SE District web site at [www.modot.org/southeast](http://www.modot.org/southeast).

Using information supplied by the project team, web site postings will be available to both the public within the study area and those outside the study area who use the

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bridge. The purpose of the web site postings is to share information about the status of the project, encourage online community involvement, encourage bridge user involvement, and create project transparency. It will be promoted at public meetings and will be user-friendly to engage the public throughout area communities.

### **6.2.3 The Media**

News releases will be distributed to local newspapers, radio stations serving the study area prior to each public meeting and the public hearing.

The media list includes but is not limited to the following media: The Shannon County Current Wave, The Salem News, KSMO Radio (1340AM), and the Ozark Area Network that includes multiple locations radio stations.

Advertisements will be developed and published in select newspapers prior to each public meeting and the public hearing. Flyers may also be distributed in the study area.

### **6.2.4 Contact Information**

MoDOT's toll-free phone number, 1-888-ASK-MoDOT (275-6636), will allow the public to contact members of the MoDOT project team. The phone number will be included as part of public meeting/hearing handout information, as well as on newsletters and information sent to news media. The MoDOT Southeast District mailing address (3956 East Main Street, Willow Springs, Missouri 65793) will be used for mailing correspondence.

### **6.2.5 Public Involvement Activities**

Public involvement activities, including, but not limited to:

Purpose and Need statement

Range of Alternatives

Preferred Alternative

Agency and Public Involvement Plan

Correspondence

Public comments

Website comments

Summaries of public meetings

Transcript of public hearing

Public meeting/hearing handout materials

Media contacts

Social media updates

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## 7.0 REVISION HISTORY

Table 3 identifies changes to the Plan.

Table 3: Plan Revisions

Version	Revision Description and Reason Needed

## **Appendix D: Public Meeting Displays and Handouts**



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## SHANNON COUNTY

### Project Description

This project will include finding a permanent solution to provide a safe and reliable Route 19 crossing over Sinking Creek in Shannon County.

A temporary bridge was put into place in May 2015 after a weight restriction and lane reduction were necessary on the existing structure. The temporary bridge allows heavy truck traffic to avoid lengthy detours. The Missouri Department of Transportation is currently looking for a more permanent solution.

### Timeline

Construction is anticipated in spring 2017.

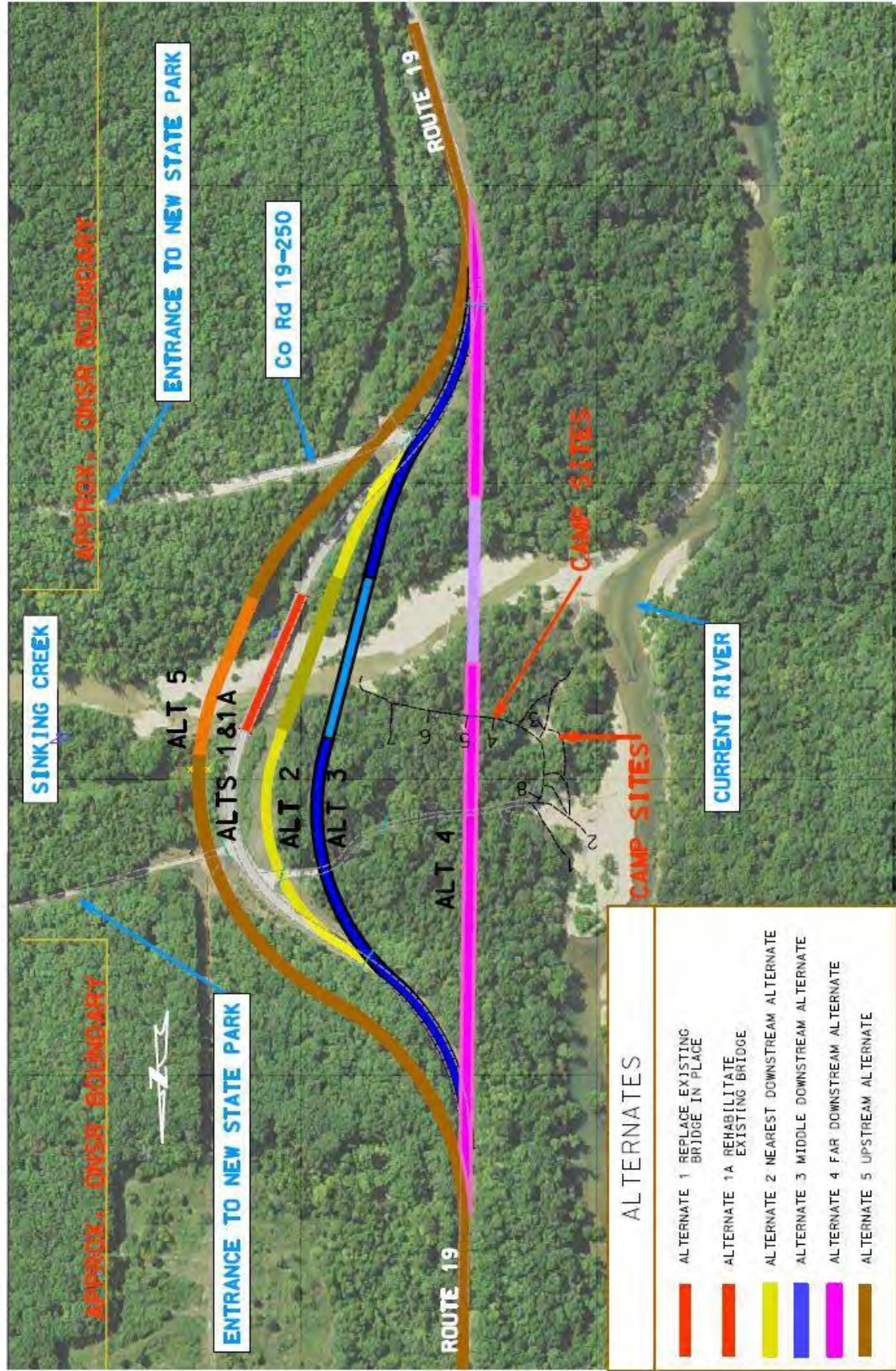
### Traffic Impacts

MoDOT is currently examining six options for providing a crossing over Sinking Creek. Four of the alternates include building the structure on a new alignment, with two proposed alternates designed on the existing alignment.

### Contact Information

For more information, please contact Project Manager Pete Berry at (417) 469-6242 or Assistant District Engineer Chris Rutledge at (417) 469-6239.





SINKING CREEK

ENTRANCE TO NEW STATE PARK

Co Rd 19-250

ROUTE 19

CURRENT RIVER

ALT 5

ALTS 1&1A

ALT 2

ALT 3

ALT 4

CAMP SITES

CAMP SITES

APPROX. OH58 BOUNDARY

ENTRANCE TO NEW STATE PARK

ROUTE 19

ALTERNATES	
	ALTERNATE 1 REPLACE EXISTING BRIDGE IN PLACE
	ALTERNATE 1A REHABILITATE EXISTING BRIDGE
	ALTERNATE 2 NEAREST DOWNSTREAM ALTERNATE
	ALTERNATE 3 MIDDLE DOWNSTREAM ALTERNATE
	ALTERNATE 4 FAR DOWNSTREAM ALTERNATE
	ALTERNATE 5 UPSTREAM ALTERNATE



# SIGN-IN SHEET

Route 19 Sinking Creek Bridge  
Shannon County  
October 5, 2015

Southeast District  
2675 North Main Street  
P.O. Box 160  
Sikeston, MO 63801  
(573) 472-5333  
Fax (573) 472-5342  
Toll free 1-888 ASK MoDOT  
www.modot.org

PLEASE PRINT

Name	Address	Email	Phone Number
1 DAVID STOKELY		David_Stokely@mcclintockkill.senate.gov	
2 DEMETRI GRAD	1819 SAN LUIS DR. ST. LOUIS MO 63148	demetri.grad@gmail.com	314-222-0136
3 BOB FOSSEN	HC 62 BOX 495 SALEM	BURBAS.PENCE@gmail.com	573-558-3343
4 JIM NEWBERRY	HC 62 BOX 386 SALEM	jim.newberry@dnr.mo.gov	573-858-3045
5 ALLE RANNEY	EMINENCE MO PO BOX 124 65507		573 226 5547
6 DENNIS TUBCEL	400 N. MAIN, SALEM	dpuce11@centurylink.net	
7 DARRELL SKILES	400 N. MAIN SALEM MO	darrallskiles@hotmail.com	573 8729-3044
8 CARLOS SUAREZ	702 SWARTZ ST SALEM, MO	carlos.suarez@gracelakecommunitysystem.org	573-247-4543
9 JAMIE HOMER	702 N WALTER SALEM	JAMIE@VIPSALEMMO.COM	573 247-8477
10 MIKE HOMER	''	awhuber@mindspring.com	573 729 8200
11 JEFF POGUE		jeff.pogue143@yahoo.com	
12 NICHOLE SHADD	Rt. 1 Box 1510 Winning, MO 65588	jkpogue@yahoo.com	573-247-7127
		mshadd@centurytel.net	573-226-5483



# We want to know.

Please share your comments regarding plans to improve the Route 19 bridge over Sinking Creek in Shannon County. Please submit your comments by October 19. Thank you for your input.

Name: Darrell Skiles Phone: 573-308-5415

Address: 1541 Co. Rd. 2540 Salem, Mo. 65560

Email Address: darrellskiles@hotmail.com

How did you hear about the meeting? newspaper  radio

website/e-mail  facebook/twitter  message board

other (please specify) \_\_\_\_\_

Were your questions answered by the MoDOT project team? yes. Excellent

Do you understand the project after attending this meeting? yes

Comments may also be submitted online at: [www.modot.org/southeast/news\\_and\\_information/public\\_meetings/](http://www.modot.org/southeast/news_and_information/public_meetings/)

Comments: Replace existing bridge with a new structure in its place with little or no change in alignment. Alternate 1. This will easily be the most cost effective, least environmentally problematic, and cause the least disruption of traffic as long as the current temporary bridge is left in place until the new bridge is opened to the public. Thank you.

Darrell Skiles

(additional space on reverse side)



# We want to know.

Please share your comments regarding plans to improve the Route 19 bridge over Sinking Creek in Shannon County. Please submit your comments by October 19. Thank you for your input.

Name: CARLOS Lopez Phone: 573-247-4543

Address: 702 S. Water St., Salem, MO, 65560

Email Address: clopez@gpacecommunitysalem.org

How did you hear about the meeting? newspaper \_\_\_\_\_ radio \_\_\_\_\_

website/e-mail \_\_\_\_\_ facebook/twitter \_\_\_\_\_ message board \_\_\_\_\_

other (please specify) Father-in-law

Were your questions answered by the MoDOT project team? yes

Do you understand the project after attending this meeting? yes

Comments may also be submitted online at: [www.modot.org/southeast/news\\_and\\_information/public\\_meetings/](http://www.modot.org/southeast/news_and_information/public_meetings/)

## Comments:

It seems to me that it would make more sense to replace the ~~the~~ old bridge. It would more than likely cut cost + wouldn't step on any toes as far as property lines go. Aside from the historic space, everyone wins. I would also suggest to build it where it could withstand more weight.

(additional space on reverse side)









70

# We want to know.

Please share your comments regarding plans to improve the Route 19 bridge over Sinking Creek in Shannon County. Please submit your comments by October 19. Thank you for your input.

Name: JAMIE HOMEYER Phone: 573 247 8427

Address: 702 N WARFEL, SALEM

Email Address: JAMIE@VIPSALEMNO.COM

How did you hear about the meeting? newspaper \_\_\_\_\_ radio \_\_\_\_\_  
website/e-mail \_\_\_\_\_ facebook/twitter \_\_\_\_\_ message board \_\_\_\_\_  
other *(please specify)* \_\_\_\_\_

Were your questions answered by the MoDOT project team? yes

Do you understand the project after attending this meeting? yes

Comments may also be submitted online at: [www.modot.org/southeast/news\\_and\\_information/public\\_meetings/](http://www.modot.org/southeast/news_and_information/public_meetings/)

Comments: DO NOT LIKE THE PINK OPTION!  
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(additional space on reverse side)



## Karen Daniels

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**From:** Marissa V. Robey  
**Sent:** Friday, October 09, 2015 9:40 PM  
**To:** Pete Berry  
**Subject:** Comment Form--Route 19 Sinking Creek

MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: [no-reply@modot.mo.gov](mailto:no-reply@modot.mo.gov) [<mailto:no-reply@modot.mo.gov>]  
Sent: Friday, October 09, 2015 2:03 PM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Dean Fry

Address1: 10727 Saint Matthew Lane

Address2: \* no value given \*

City: Saint Ann

State: MO

Zip: 63074

Phone Number: 314-428-3312

Fax Number: \* no value given \*

Email: [ddfryccc@gmail.com](mailto:ddfryccc@gmail.com)

Comments: Route 19, Sinking Creek.

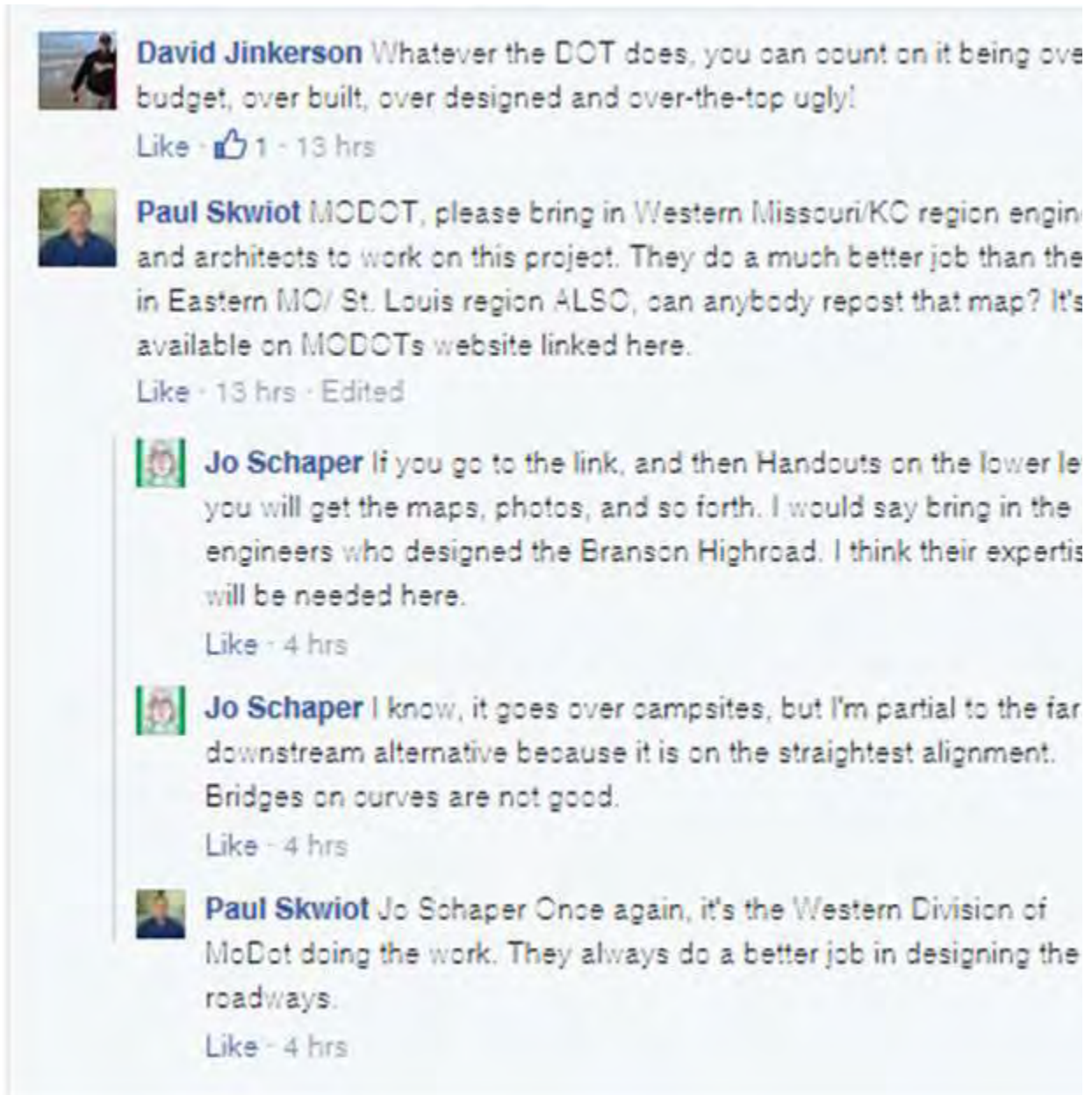
I have driven this route a few times and have felt these bridges fit the surroundings well. Since there is a temporary bridge in place, I think that Alternative 1 makes the best sense. Depending on how the new park is developed and how much traffic is generated as a result, a three lane bridge, or a bridge expandable to three lanes, should be considered. Also to be considered is the potential of a pedestrian overlook on the bridge, maybe each side, and connections to any trail systems that may be developed. Both of which are very good reasons to work closely with MoDNR on this project. Finally, I would like to see the design of the new bridge not stray too far from the open spandrel arch style of the current bridge, especially if it can be built with patterned forms.


## Karen Daniels

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**From:** Marissa V. Robey  
**Sent:** Friday, October 02, 2015 10:33 PM  
**To:** Pete Berry  
**Subject:** Route 19 Facebook Comments

Mr. Skwiot also commented on one of the “shares” from our Facebook page. It is very similar to his comment that we received. Thankfully, Ms. Schaper provided the info he needed about the map as well. Ms. Schaper’s comment about the alternates are also below.



**David Jinkerson** Whatever the DOT does, you can count on it being over budget, over built, over designed and over-the-top ugly!  
Like ·  1 · 13 hrs

**Paul Skwiot** MODOT, please bring in Western Missouri/KC region engineers and architects to work on this project. They do a much better job than the in Eastern MO/ St. Louis region ALSO, can anybody repost that map? It's available on MODOT's website linked here.  
Like · 13 hrs · Edited

**Jo Schaper** If you go to the link, and then Handouts on the lower left you will get the maps, photos, and so forth. I would say bring in the engineers who designed the Branson Highroad. I think their expertise will be needed here.  
Like · 4 hrs

**Jo Schaper** I know, it goes over campsites, but I'm partial to the far downstream alternative because it is on the straightest alignment. Bridges on curves are not good.  
Like · 4 hrs

**Paul Skwiot** Jo Schaper Once again, it's the Western Division of MoDot doing the work. They always do a better job in designing the roadways.  
Like · 4 hrs

**MARISSA VAN ROBEY-ROBERTSON**

*Senior Communications Specialist*

**Missouri Department of Transportation**

## Karen Daniels

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**From:** Marissa V. Robey  
**Sent:** Tuesday, September 29, 2015 10:59 AM  
**To:** Pete Berry  
**Subject:** Route 19 Shannon Comment

MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: [no-reply@modot.mo.gov](mailto:no-reply@modot.mo.gov) [<mailto:no-reply@modot.mo.gov>]  
Sent: Tuesday, September 29, 2015 10:55 AM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Scott House

Address1: 1606 Luce

Address2: \* no value given \*

City: Cape Girardeau

State: MO

Zip: 63701

Phone Number: 573-651-3794

Fax Number: \* no value given \*

Email: [scott\\_house@hotmail.com](mailto:scott_house@hotmail.com)

Comments: Alternative 1 or 1a (if feasible) are the only alternatives that do not involve major destruction in the form of roadway creation. Otherwise, enlarged or new roadways will impact species of conservation concern residing in Ditch Cave, plus have impacts on the visual integrity of the Ozark National Scenic Riverways.

## Karen Daniels

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**From:** Marissa V. Robey  
**Sent:** Tuesday, September 29, 2015 10:54 AM  
**To:** Pete Berry  
**Subject:** Route 19 Shannon County

MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: [no-reply@modot.mo.gov](mailto:no-reply@modot.mo.gov) [<mailto:no-reply@modot.mo.gov>]  
Sent: Tuesday, September 29, 2015 10:46 AM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Daniel Lamping

Address1: 4946 Seibert Avenue

Address2: \* no value given \*

City: St. Louis

State: MO

Zip: 63123

Phone Number: 314-775-8584

Fax Number: \* no value given \*

Email: [daniellamping@att.net](mailto:daniellamping@att.net)

Comments: The present footprint for Hwy 19 should be utilized and no new path should be created. A temporary bridge is currently constructed which would allow for the construction of a new bridge at the site of the old one. There are significant caves nearby, one of which, Ditch Cave, is biologically significant. One of the proposed routes, the Brown, ALT 5 would go over this significant cave and would likely have adverse effects. Any of the other proposed routes, aside from ALT 1, which uses the current route would contribute to erosion and necessitate the clearing of forest in addition to greater costs associated with changing the landscape. I urge you to follow the current footprint for the Highway 19 bridge over Sinking Creek. It is the only responsible course, both fiscally and environmentally.

## Karen Daniels

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**From:** Marissa V. Robey  
**Sent:** Friday, October 02, 2015 12:05 AM  
**To:** Pete Berry  
**Subject:** Route 19 Sinking Creek Shannon County Comment

MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: [no-reply@modot.mo.gov](mailto:no-reply@modot.mo.gov) [<mailto:no-reply@modot.mo.gov>]  
Sent: Thursday, October 01, 2015 5:45 PM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Esther D Stroh

Address1: 807 LEAWOOD TER

Address2: \* no value given \*

City: COLUMBIA

State: MO

Zip: 65203

Phone Number: 5753032130

Fax Number: \* no value given \*

Email: [edstroh@gmail.com](mailto:edstroh@gmail.com)

Comments: I prefer alternative 2, the nearest downstream site, and keeping the historic bridge for pedestrians. Fixing the historic bridge for pedestrians and bicycles only will not require as much work as restoring it for heavy vehicles. The historic bridge should NOT be removed or replaced. This is a beautiful and historic bridge. The upstream sites will be more environmentally harmful, as they require more tree removal, etc. Also, closer proximity to the new park will negatively affect park experience as more noise from bridge traffic will be audible from the upstream sites. Thank you for the opportunity to comment.

## Karen Daniels

---

**From:** Marissa V. Robey  
**Sent:** Friday, October 02, 2015 10:20 PM  
**To:** Pete Berry  
**Subject:** Comment--Route 19 Shannon County Sinking Creek

I will respond to Mr. Sutton regarding receipt of his comment, but if you would like to provide further information regarding his comments, please let me know. He seems to have really analyzed the alternates and has written a very thorough synopsis of his thoughts.

Thanks,

MARISSA VAN ROBNEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: [no-reply@modot.mo.gov](mailto:no-reply@modot.mo.gov) [<mailto:no-reply@modot.mo.gov>]  
Sent: Friday, October 02, 2015 6:42 PM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Michael Sutton

Address1: 5544 CR204

Address2: \* no value given \*

City: Annapolis

State: MO

Zip: 63620

Phone Number: 573-546-2864

Fax Number: \* no value given \*

Email: [haganandsutton@gmail.com](mailto:haganandsutton@gmail.com)

Comments: Re: Route 19 Sinking Creek Bridge.

As you know, the Sinking Creek bridge is within the authorized boundaries of Ozark National Scenic Riverways, and construction of the new bridge, should be sensitive to the nature of a National Park - i.e



it should be as unobtrusive as possible with the least impact on the surrounding environment. Therefore, I strongly advocate either alternatives 1 or 1A - building in the same location as the old bridge without altering the approaches. The only rationale for the other alternatives would be to straighten the road, allowing for faster travel, but I would reiterate that this is a road in a National Park, where high speed travel is not appropriate.

You should also be aware that a significant ONSR cave - Ditch Cave - stands to be seriously affected or destroyed by rerouting, especially if alternative 5 is implemented. The cave entrance is literally in the highway ditch a short way north of Sinking Creek, and any road widening here would almost certainly destroy the entrance. Several of the rerouting alternatives would pass directly over the cave, threatening its ecosystem with road run-off pollutants and putting it at risk from spills. The cave is home to several species of state concern - the grotto salamander and at least two species of bat, and its biology is still the subject of an active investigation by the Cave Research Foundation.

Thank you for your consideration of these comments.

## Karen Daniels

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**From:** Marissa V. Robey  
**Sent:** Wednesday, September 30, 2015 11:23 AM  
**To:** Pete Berry; Chris Rutledge  
**Subject:** Facebook Comment--Route 19 Shannon County

Please see the comment below from Ms. Akers. I don't think we need to respond. I just wanted to share this prior to Monday's meeting. Thanks!

- **Margaret Akers**

To plan an expensive NEW park when they knew the roads weren't adequate was putting the cart before the horse!! Let the new park build the NEW Highway 19 Bridge. It's my understanding that the park plans a bridge over Sinking Creek INSIDE that park .... guess we'll just have go into the park & use that bridge. No sense using State Money TWICE to build TWO bridges. If they are begging for money again then they'd ALL better start using the money MORE WISELY! Go revisit the plans!! All of the traffic can stay north of there as far as I'm concerned ... Shannon County wouldn't benefit enough in 5 generations from the new park or anything else that happens up there.. So let the road stop at the north of side Sinking Creek ... The people who want to visit the park can stay in Salem ... The ones from St Louis would have a better trip driving to Poplar Bluff to Winona then to Eminence if the are looking to visit Jacks Fork. OR go to Rolla, Houston to Summersville to Eminence!!

Like · Reply · 1 · 17 hrs · Edited

**MARISSA VAN ROBESY-ROBERTSON**

*Senior Communications Specialist*

**Missouri Department of Transportation**

Southeast District - Communications

PO Box 160, Sikeston, MO 63801

573.472.5311

[www.modot.org](http://www.modot.org)

## Karen Daniels

---

**From:** Marissa V. Robey  
**Sent:** Friday, October 02, 2015 10:41 PM  
**To:** Pete Berry  
**Subject:** Facebook Comments2--Shannon County Route 19

**Ozark National Scenic Riverways** Like Page  
September 30 at 10:05pm · 🌐

Of interest to anyone concerned about the Round Spring / Sinking Creek area. Public meeting October 5 at the Shannon County Courthouse.  
[Show Attachment](#)

16 Likes · 2 Comments · 2 Shares

[Like](#) [Comment](#) [Share](#)

Shawn Cordry, Bill Brake, Bill Bradford and 13 others like this. Top Comments ▾

2 shares



**Sherry Richardson** Why can't you just put a new bridge right next to the old one? That road has enough curves in it now, and you won't destroy anymore of the beauty out there.  
Like · Reply · Yesterday at 6:34am · Edited

**Ozark National Scenic Riverways** You need to express your thoughts to MODOT. We're just the messenger in this case.  
Like · Reply · 👍 1 · Yesterday at 8:20am

**Dan Lamping** Please advocate for Alternate 1 as  
Like · Reply · 👍 1 · Yesterday at 4:11am

**Jim Anderson** MoDOT found federal funding for a new bridge. Highway 18 the only North/South freight corridor through Shannon County, and tourism a secondary benefit. The old bridge failed, so here's a positive development without footing the entire bill. If you feel differently about it, then come to the meeting and voice your opinion. That's what these meetings are all about.  
Like · Reply · 👍 1 · 7 hrs

**MARISSA VAN ROBEY-ROBERTSON**

*Senior Communications Specialist*

**Missouri Department of Transportation**

Southeast District - Communications

PO Box 160, Sikeston, MO 63801

## Karen Daniels

---

**From:** Marissa V. Robey  
**Sent:** Monday, October 05, 2015 9:31 AM  
**To:** Pete Berry; Chris Rutledge  
**Subject:** Facebook Comments--Route 19 Shannon

Good morning,

Here are a few more comments from Facebook.

[Jim Anderson](#) MoDOT found federal funding for a new bridge. Highway 19 is the only North/South freight corridor through Shannon County, and tourism is a secondary benefit. The old bridge failed, so here's a positive development without footing the entire bill. If you feel differently about it, then come to the meeting and voice your opinion. That's what these meetings are all about.

- [Margaret Akers](#) 100% federal funding? If not is the balance being paid for by the new Million dollar park? The state can't even keep the lights on at the intersections on at the Hwy 19 & Hwy 60 in Winona ... plus they haven't painted lines to help keep it safer! WE didn't ask them for a 4 lane highway with 2 unsafe crossing AND NO NIGHT TIME LIGHTING! It's gonna be mighty scary when they can't keep the traffic lights & lighting at the intersections in Mtn View because of the cost of the bridge! Which cost came first????

Like · Reply · October 3 at 10:51pm · Edited

[Margaret Akers](#) Attending the meeting to be heard will be useless as always.

### MARISSA VAN ROBEY-ROBERTSON

*Senior Communications Specialist*

### Missouri Department of Transportation

Southeast District - Communications

PO Box 160, Sikeston, MO 63801

573.472.5311

[www.modot.org](http://www.modot.org)

## Karen Daniels

---

**From:** Marissa V. Robey  
**Sent:** Monday, October 05, 2015 10:18 AM  
**To:** Pete Berry  
**Subject:** FW: District 10 Contact Us Form--Route 19 Shannon

MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: [no-reply@modot.mo.gov](mailto:no-reply@modot.mo.gov) [<mailto:no-reply@modot.mo.gov>]  
Sent: Saturday, October 03, 2015 10:08 AM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: George Bilbrey

Address1: 3020 HiGHWAY DD

Address2: \* no value given \*

City: Salem

State: MO

Zip: 65560

Phone Number: 573 729-6835

Fax Number: N/A

Email: [gbrb@embarqmail.com](mailto:gbrb@embarqmail.com)

Comments: I'd like to add my comments on the Shannon County Route 19 Sinking Creek Bridge reconstruction, to those of Dr Michael Sutton which you recently received via this website. Dr Sutton has a PHD in biology, specializing in cave biology. He is recognized both in the United States and some foreign countries, having discovered and reported on several previously unknown species of cave life.

I completely agree with his comments. Most especially about the necessity to protect the entrance and underground features of Ditch Cave. I helped survey part of Ditch Cave several years ago. I am a Fellow with Cave Research Foundation, having been a member since 1960.

In my opinion it would be a travesty to alter the features of Ditch Cave. I support the recommendation to use either alternative 1 or 1A. Thank you for your consideration

George Bilbrey

## Karen Daniels

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**From:** Marissa V. Robey  
**Sent:** Saturday, September 19, 2015 10:26 PM  
**To:** Pete Berry  
**Subject:** FW: District 10 Contact Us Form--Sinking Creek Project Comment

Please see the comment below from Mr. Havens regarding the Sinking Creek project. I will forward these along as I receive them. Would you like to respond to thank Mr. Havens for his comments or would you like to respond to him?

Thanks,

MARISSA VAN ROBNEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: [no-reply@modot.mo.gov](mailto:no-reply@modot.mo.gov) [<mailto:no-reply@modot.mo.gov>]  
Sent: Saturday, September 19, 2015 3:25 PM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Geoffrey Gilbert Havens

Address1: 2131 S. Todd

Address2: \* no value given \*

City: Springfield

State: MO

Zip: 65807

Phone Number: 4173505525

Fax Number: \* no value given \*

Email: [geoffrey.havens@umontana.edu](mailto:geoffrey.havens@umontana.edu)

Comments: I'd like to express a few short opinions on the Sinking Creek Bridge Project. I urge MODOT to avoid selecting the far downstream alternate, as that would directly impact the NPS Sinking Creek Campground, a place that both many locals and visitors view as a special spot with many memories. I would further encourage MODOT to consider the options that repair and improve the

current bridge structure, or move the new traffic bridge slightly upstream of the existing structure. The old bridge is a wonderful historic structure and could remain useful as a hiker/biker structure.



## Karen Daniels

---

**From:** Marissa V. Robey  
**Sent:** Friday, October 02, 2015 9:47 AM  
**To:** Pete Berry  
**Subject:** FW: MoDOT--Shannon County Route 19

Good morning,

Please see my response to Mr. Skwiot below. Here is the comment I received this morning:

Name: paul skwiot

Address1: 7027 Dale Ave #1

Address2: \* no value given \*

City: Saint Louis

State: MO

Zip: 63117

Phone Number: \* no value given \*

Fax Number: \* no value given \*

Email: [soundslikequiet@gmail.com](mailto:soundslikequiet@gmail.com)

Comments: I saw an article regarding the Rt 19 bring online with a map of proposed changes. Please repost article on your website as the map isn't visible, or are you hiding it? One way to improve quality: bring in KC or Western Region engineers and architects. Their work is much superior to the work St Louis region engineer and architects do.

### MARISSA VAN ROBESY-ROBERTSON

*Senior Communications Specialist*

#### Missouri Department of Transportation

Southeast District - Communications

PO Box 160, Sikeston, MO 63801

573.472.5311

[www.modot.org](http://www.modot.org)

---

**From:** Marissa V. Robey  
**Sent:** Friday, October 02, 2015 9:38 AM  
**To:** 'soundslikequiet@gmail.com'  
**Subject:** MoDOT--Shannon County Route 19

Good morning,

Thank you for contacting us regarding the Route 19 bridge over Sinking Creek in Shannon County. We certainly want you to have all of the information regarding the alternates.

The map you are referencing is included on the second page of the link below.

[http://www.modot.org/southeast/news\\_and\\_information/public\\_meetings/documents/Handout\\_ShannonCounty\\_Route19\\_SinkingCreek\\_October2015.pdf](http://www.modot.org/southeast/news_and_information/public_meetings/documents/Handout_ShannonCounty_Route19_SinkingCreek_October2015.pdf)

In addition, these are links to the historical and environmental information that will also be shared during the meeting.

[http://www.modot.org/southeast/news\\_and\\_information/public\\_meetings/documents/historical.pdf](http://www.modot.org/southeast/news_and_information/public_meetings/documents/historical.pdf)

[http://www.modot.org/southeast/news\\_and\\_information/public\\_meetings/documents/Environmental\\_Tri-fold.pdf](http://www.modot.org/southeast/news_and_information/public_meetings/documents/Environmental_Tri-fold.pdf)

If you have issues viewing the links to the documents included above or if you have any questions pertaining to this information, please let me know. I will be happy to provide the map in a different format or get you in contact with our project manager to discuss your concerns.

Thank you,

**MARISSA VAN ROBEY-ROBERTSON**

*Senior Communications Specialist*

**Missouri Department of Transportation**

Southeast District - Communications

PO Box 160, Sikeston, MO 63801

573.472.5311

[www.modot.org](http://www.modot.org)

## Karen Daniels

---

**From:** Marissa V. Robey  
**Sent:** Monday, September 21, 2015 8:57 AM  
**To:** Pete Berry  
**Subject:** Project Comment--Shannon County Route 19

MARISSA VAN ROBEY-ROBERTSON  
Senior Communications Specialist  
Missouri Department of Transportation  
Southeast District - Communications  
PO Box 160, Sikeston, MO 63801  
573.472.5311  
[www.modot.org](http://www.modot.org)

-----Original Message-----

From: [no-reply@modot.mo.gov](mailto:no-reply@modot.mo.gov) [<mailto:no-reply@modot.mo.gov>]  
Sent: Monday, September 21, 2015 8:53 AM  
To: SECRRep; SECR  
Subject: District 10 Contact Us Form

Name: Kathryn Love

Address1: 1623 Univesity Ave

Address2: \* no value given \*

City: columbia

State: MO

Zip: 65201

Phone Number: 573-875-7918

Fax Number: \* no value given \*

Email: [lovekat68@gmail.com](mailto:lovekat68@gmail.com)

Comments: I favor rehabilitating the existing bridge to preserve its beautiful and historic architecture. This is an exceptional and fragile setting, of possible archeological significance. The best solution will disturb the land, creek and river the least, while preserving the aesthetic features of the existing bridge.

# We want to know.

Please share your comments regarding plans to improve the Route 19 bridge over Sinking Creek in Shannon County. Please submit your comments by October 19. Thank you for your input.

Name: Dent County Commission Phone: 573-729-3044

Address: 400 N. Main Salem, Mo. 65560

Email Address: \_\_\_\_\_

How did you hear about the meeting? newspaper  radio

website/e-mail \_\_\_\_\_ facebook/twitter \_\_\_\_\_ message board \_\_\_\_\_

other (please specify) \_\_\_\_\_

Were your questions answered by the MoDOT project team? yes

Do you understand the project after attending this meeting? yes

Comments may also be submitted online at: [www.modot.org/southeast/news\\_and\\_information/public\\_meetings/](http://www.modot.org/southeast/news_and_information/public_meetings/)

Comments: The Dent County Commission strongly supports Alternate 1. The Commission would also like to encourage MoDOT to consider adding a center turn lane to Hwy. 19 on both sides of the bridge at this time if at all possible.

Danell Skiles

Debra Farrell

Andy Garrison

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(additional space on reverse side)



# We want to know.

Please share your comments regarding plans to improve the Route 19 bridge over Sinking Creek in Shannon County. Please submit your comments by October 19. Thank you for your input.

Name: Joe DeVALL Phone: 573-729-7373

Address: 52 Hwy. WW SALEM MO

Email Address: \_\_\_\_\_

How did you hear about the meeting? newspaper  radio \_\_\_\_\_

website/e-mail \_\_\_\_\_ facebook/twitter \_\_\_\_\_ message board \_\_\_\_\_

other (please specify) \_\_\_\_\_

Were your questions answered by the MoDOT project team? Yes

Do you understand the project after attending this meeting? Yes

Comments may also be submitted online at: [www.modot.org/southeast/news\\_and\\_information/public\\_meetings/](http://www.modot.org/southeast/news_and_information/public_meetings/)

## Comments:

I THINK OPTION # 1-1A IS THE  
BEST SOLUTION FOR THE NEW  
SINKING CREEK BRIDGE. I WOULD  
LIKE, A TURNING LANE BE ADDED  
TOO

(additional space on reverse side)



# We want to know.

Please share your comments regarding plans to improve the Route 19 bridge over Sinking Creek in Shannon County. Please submit your comments by October 19. Thank you for your input.

Name: Bob Fossey Phone: 573-858-3343

Address: HC 62 Bx 495 Salem Mo 65560

Email Address: bubbaspence@gmail.com

How did you hear about the meeting? newspaper  radio

website/e-mail  facebook/twitter  message board

other (please specify) \_\_\_\_\_

Were your questions answered by the MoDOT project team? No

Do you understand the project after attending this meeting? SOMEWHAT

Comments may also be submitted online at: [www.modot.org/southeast/news\\_and\\_information/public\\_meetings/](http://www.modot.org/southeast/news_and_information/public_meetings/)

Comments: PRESERVING THE ORIGINAL BRIDGE AND  
MAKING IT ONE LANE SEEMS THE MOST COST  
EFFECTIVE PLAN, SINCE THE NEXT BRIDGE SOUTH  
N 19 IS ONE LANE. THIS ALLOWS THE HISTORIC  
STRUCTURE TO CONTINUE TO CONTRIBUTE TO  
UNIQUE HERITAGE THAT EXISTS EXISTS  
THIS AREA. THE MONEY SAVED USING THIS  
PLAN COULD THEN BE USED TO REHABILITATE  
OTHER TWO BRIDGES IN THIS STRING (ROUND  
1. CURRENT RIVER). MoDOT NEEDS TO  
DO WHATEVER IT CAN

(additional space on reverse side)



## Karen Daniels

---

**From:** Brian Rasche <brasche@gmail.com>  
**Sent:** Wednesday, October 28, 2015 6:32 PM  
**To:** Karen Daniels  
**Subject:** Sinking Creek Bridge

Hi Karen,

We own property in the area but live in Florida so I really can't contribute anything historical. However I would like to comment on the landscape.

Landscape is what makes the Ozark National Scenic Riverways beautiful. Not just the river, but the entire region, including the roads leading to the area.

It's been my observation that often modern roadway construction and maintenance seems to be intent on destroying the that scenic beauty.

Road widening, broad shoulders, trees and outcroppings bulldozed into sloping aprons. It's my fear that the new bridge construction will be combined with "roadway improvements" and scenic destruction.

Please, try to preserve the character of the existing roadway: where the asphalt ends at the white line, where there are occasional rock outcroppings in the right-of-way, and where trees overhang and shade the roadway. This is the scenic character of the Ozarks and a large part of the attraction to tourists. Destroying this character will hurt tourism and the local economies.

For example, during our recent visit this fall we were heartbroken to see the ugliness inflicted by the recent road right-of-way tree trimming along the stretch of Hwy. 106 from Eminence to H. It was once a delightful canopied and shaded drive with light flickering through the leaves. Today it is a barren alleyway and will take decades re-grow. The "trimming" is a disaster for the scenic beauty of the region. Further, the trees were "trimmed" in such a brutal way that many of them will likely die from the assault. Increasing the incidence of downed trees during storms. 8-(

Sincerely,

Brian Rasche  
Orlando, FL

# Route 19 Bridges Consultation

## Agencies parties participating in consultation are:

Federal Highway Administration  
Missouri State Historic Preservation Office  
Missouri Department of Transportation  
Shannon County Commission  
Ozark National Scenic Riverways  
Missouri State Parks  
Historic Bridge Foundation  
Historicbridges.org  
Pioneer Forest

If you would like to participate in the consultation process, send a letter explaining your interest in the cultural resources in the project area to:

Raegan Ball  
Program Development Team Leader  
FHWA—Missouri Division  
3200 W. Edgewood, Suite H  
Jefferson City, MO 65109  
[Raegan.Ball@dot.gov](mailto:Raegan.Ball@dot.gov)

Please copy the State Historic Preservation Office and MoDOT on the request:

Judith Deel	Mike Meinkoth
Missouri SHPO	MoDOT
P. O. Box 176	P. O. Box 270
Jefferson City, MO 65101	Jefferson City, MO 65102
<a href="mailto:Judith.Deel@dnr.mo.gov">Judith.Deel@dnr.mo.gov</a>	<a href="mailto:Michael.Meinkoth@modot.mo.gov">Michael.Meinkoth@modot.mo.gov</a>

Additional information on the Section 106 review process and the role of consulting parties and the public can be found on MoDOT's web site: <http://www.modot.org/ehp/HistoricPreservation.htm>.

Buildings, structures (such as bridges), sites (such as archaeological sites and landscapes), objects (such as monuments) and historic districts (which can be comprised of any or all of the proceeding), can be eligible for listing on the National Register of Historic Places if:

- A. They are associated with events significant in history,
- B. They are associated with people significant in history,
- C. They have architectural or engineering significance, are the work of a master, or comprise a district of resources that as a whole possess significance, or
- D. Have the ability to answer important questions about American history or prehistory.

The Missouri Department of Transportation (MoDOT) will be conducting surveys and evaluating resources associated with the Sinking Creek Bridge project and the Route 19 corridor to determine if there are resources that are eligible for listing on the National Register. The evaluation will be done through a consultation process with several consulting parties and through public involvement. We want to know what you consider historically important in the area.



**1. Sinking Creek Bridge**



The bridges at Sinking Creek, the Current River, and Round Spring were recommended as eligible for listing on the National Register during the *Missouri Historic Bridge Inventory*.



**2. Current River Bridge**



**3. Round Spring Bridge over Spring Valley Creek**

MoDOT will also be evaluating Route 19 between the bridges and the landscape around the bridges to determine if the scenic qualities of the landscape are eligible for the National Register.



**4. Typical landscape along Route 19 near Sinking Creek**

You can comment on concerns about Cultural Resources through the comment card available at the public meeting, or directly to the Historic Preservation Section at 573-526-7346 or by e-mail to: [Karen.Daniels@modot.mo.gov](mailto:Karen.Daniels@modot.mo.gov). We would love to hear about what you consider historically significant in the area. We would also like to see photographs you have of the bridges and the associated landscape that you think are significant. You can send digital photographs or scan older photographs and e-mail them to the address above.

If there is a historic district that includes the natural landscape, what do you think the boundaries should be? We would love to hear your ideas, please either mark up a map and give it to us or describe it to us.

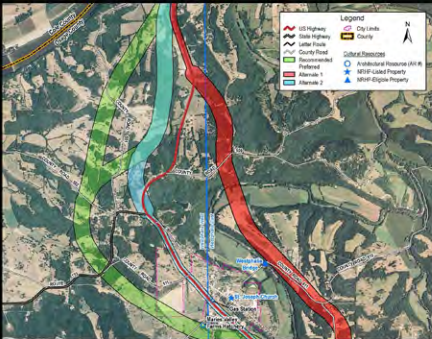
# Section 106 Process

Section 106 of the National Historic Preservation Act requires federal agencies, and the recipients of federal dollars, to consider the effects of their projects on “historic properties”. Historic properties are defined as:

***Any historic or prehistoric site, district, building, structure or object included on, or eligible for inclusion on the National Register.***

Some examples include nationally significant resources, such as the Eads Bridge in St. Louis, resources of statewide significance, such as the University of Missouri campus in Columbia, and of local significance, such as the Louisiana Public Library.

A systematic process is undertaken to identify historic properties, analyze potential effects on them, and determine what action will need to be taken to eliminate or mitigate those effects. This is commonly referred to as the “Section 106 Process”. The process is outlined below.



## 1 Establish Area of Potential Effects (APE)

The area of potential effects (APE) is the area or areas where a project might have effects on historic properties. Each alternative considered for a project will have an APE.



## 2 Identify Resources and their Significance

Archival research and field surveys are conducted to identify historic properties within the APE. The significance and integrity of the properties are documented. The State Historic Preservation Officer (SHPO) is consulted about the findings.



## 3 Determination of Project Effects

The study team determines how the project might affect historic properties within the APE, considering direct and indirect effects. If a resource is adversely affected, options for eliminating or mitigating those effects are considered. This could include changing the location of the improvements or making adjustments in the design to lessen the effects.

## 4 Resolve Adverse Effects

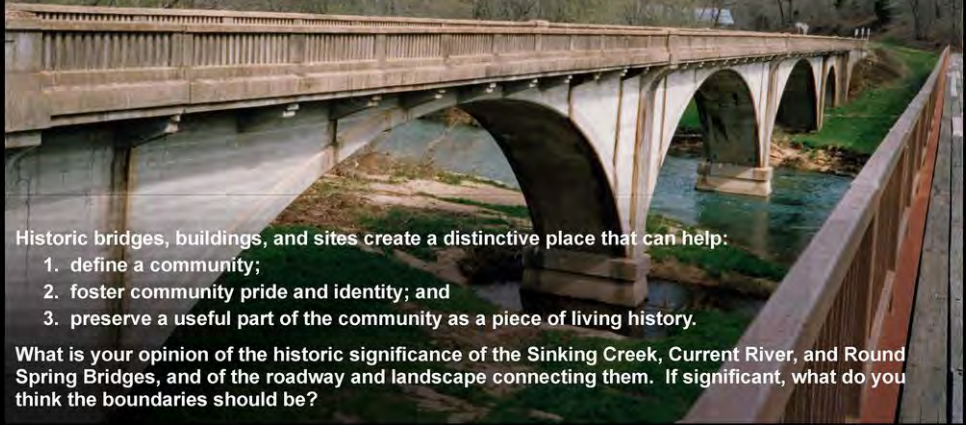
Decisions regarding adverse effects on historic properties are formalized in a legally binding Memorandum of Agreement that becomes part of the study's official documentation. It spells out what measures will be taken to mitigate the project effects on historic properties.



MoDOT hopes you, the public, will inform us of any properties you consider important. You can do this by leaving a comment on the public meeting response form or speaking with the representative of the Historic Preservation Section at the meeting.



# Route 19 Bridges Programmatic Agreement



Historic bridges, buildings, and sites create a distinctive place that can help:

1. define a community;
2. foster community pride and identity; and
3. preserve a useful part of the community as a piece of living history.

What is your opinion of the historic significance of the Sinking Creek, Current River, and Round Spring Bridges, and of the roadway and landscape connecting them. If significant, what do you think the boundaries should be?



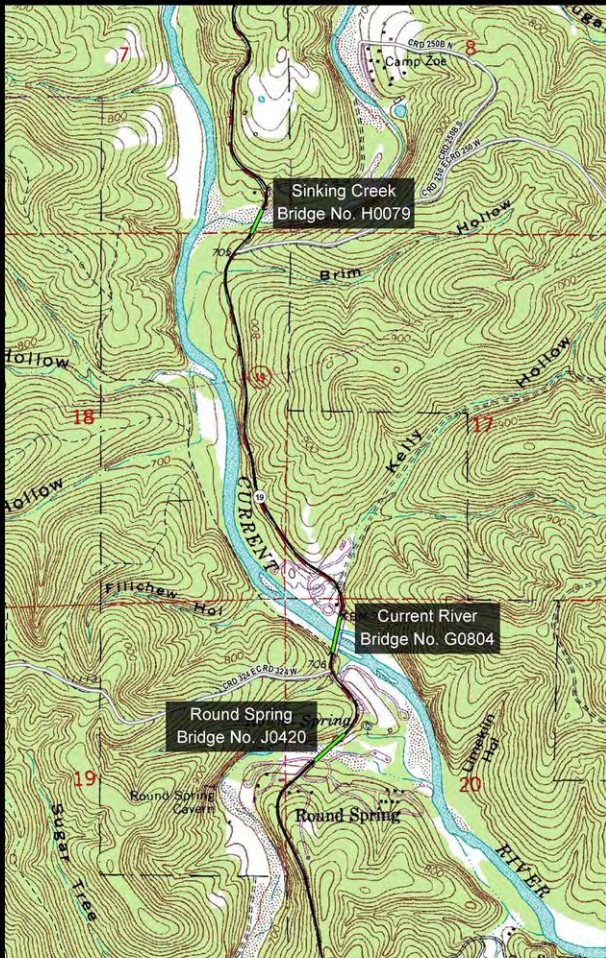
Sinking Creek Bridge No. H0079



Sinking Creek Bridge No. H0079



Sinking Creek Bridge No. H0079



Current River Bridge No. G0804



Current River Bridge No. G0804



Current River Bridge No. G0804



Round Spring Bridge No. J0420



Round Spring Bridge No. J0420



Round Spring Bridge No. J0420

# Route 19 Bridges Programmatic Agreement



Buildings, structures (such as bridges), sites (such as archaeological sites and landscapes), objects (such as monuments) and historic districts (which can be comprised of any or all of the proceeding), can be eligible for listing on the National Register of Historic Places if:

- A. They are associated with events significant in history,
- B. They are associated with people significant in history,
- C. They have architectural or engineering significance, are the work of a master, or comprise a district of resources that as a whole possess significance, or
- D. Have the ability to answer important questions about American history or prehistory.

The Missouri Department of Transportation (MoDOT) will be evaluating resources associated with the Sinking Creek Bridge project and the Route 19 corridor to determine if there are resources that are eligible for listing on the National Register. The evaluation will be done through a consultation process with several consulting parties and through public involvement. We want to know what you consider historically important in the area.



You can comment on concerns about Cultural Resources through the comment card available at the public meeting, or directly to the Historic Preservation Section at 573-526-7346 or by e-mail to: [Karen.Daniels@modot.mo.gov](mailto:Karen.Daniels@modot.mo.gov). We would love to hear about what you consider historically significant in the area. We would also like to see photographs you have of the bridges and the associated landscape that you think are significant. You can send digital photographs or scan older photographs and e-mail them to the address above.

If there is a historic district that includes the natural landscape, what do you think the boundaries should be? We would love to hear your ideas, please either mark up a map and give it to us or describe it to us.

## **Appendix E: Consultation Meeting Minutes and Materials**

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**Agenda**  
**Consultation Meeting**  
**Sinking Creek Programmatic Agreement**  
**September 9, 2015**  
**1:00-3:00 p.m. Central**

Location:

601 W. Main Street, Jefferson City, Missouri, Conference Room ISD-1

Or

Teleconference # 573.526.3993

Conference ID: 67346#

Welcome

Introductions

Purpose & Need for the Sinking Creek Bridge Project

Alternates under consideration

Section 106 Process

Area of Potential Effects

Identification of Historic Properties

Goals of the Programmatic Agreement to be developed

Next Steps

**Route 19 Bridges Programmatic Agreement  
Consultation Meeting  
September 9, 2015**

**Sign-in Sheet**

Name	Organization	Address	Phone	E-mail
Dale Counts	Shannon Co Comm City of Eminence	Eminence MO P.O. Box 187		
Jim Anderson	Eminece	Eminece mo	573- 226-3717	
Gayle Unruh	MoDOT		573 526-6676	gayle.unruh@ modot.mo.gov
Kyle Grayson	MoDOT		573-526-5648	Kyle.Grayson@modot. mo.gov
Pete Berry	MoDOT		417-469-6242	pete.berry@modot. mo.gov
Amanda Burke	SHPO		573-522-4641	amanda.Burke@ DNR-MO.GOV
Judith Deel	SHPO		573-751-7862	Judith.deel @dnr-mo.gov
Mike Meinke	MoDOT			
Rusty Weisman	MoDOT		573 526-3590	Russell.Weisman@ MODOT.MO.GOV



**Route 19 Bridges Programmatic Agreement  
 Consultation Meeting  
 September 9, 2015**

**Sign-in Sheet**

Name	Organization	Address	Phone	E-mail
Jeff Cowen	Presiding Commissioner Shannon		417 297 1234	Jeff.Cowen@yahoo.com
Karen Daniels	MODOT		573.526.7346	karen.daniels@ modot.mo.gov
Raegan Ball	FHWA		573-638-2620	raegan.ball@dot.gov
Kitty Henderson	via teleconf.			
Nathan Holth	via teleconf.			
Brent Saer	via teleconf.			
Kevin Adkins	via teleconf.			
Trisha Miller	via teleconf.			
Toni Prawl	SHPO		573.751.7857	toni.prawl@dnr. mo.gov

**Route 19 Bridges Consultation Meeting  
September 9, 2015  
Minutes**

Attendees:

Dale Counts, Shannon County Commission  
Jeff Cowan, Shannon County Commission  
Jim Anderson, City of Eminence  
Kitty Henderson, Historic Bridge Foundation (via teleconference)  
Nathan Holth, Historicbridges.org (via teleconference)  
Kevin Adkins, National Park Service (via teleconference)  
Trisha Miller, National Park Service (via teleconference)  
Brent Bayer, Missouri State Parks (via teleconference)  
Toni Prawl, Missouri State Historic Preservation Office (SHPO)  
Judith Deel, SHPO  
Amanda Burke, SHPO  
Raegan Ball, Federal Highway Administration (FHWA)  
Pete Berry, MoDOT Southeast District  
Gayle Unruh, MoDOT Environmental & Historic Preservation  
Kyle Grayson, MoDOT Environmental  
Mike Meinkoth, MoDOT Historic Preservation  
Rusty Weismann, MoDOT Historic Preservation  
Karen Daniels, MoDOT Historic Preservation

Raegan Ball, FHWA, welcomed everyone to the meeting, and thanked them for attending. This is going to be the first of several meetings in the development of a Programmatic Agreement (PA) under Section 106 of the National Historic Preservation Act which will cover the project at Sinking Creek, but will also consider the larger cultural resource concerns including the bridges at the Current River and Round Spring, the roadway and the associated landscape. It will provide a framework for review for future projects involving those bridges.

Introductions were made around the room and those participating via teleconference.

Mike Meinkoth, MoDOT Historic Preservation Manager, also welcomed everyone. He said that there is a known historic property in the project area—the Sinking Creek Bridge. There is also a nebulous historic property that MoDOT needs to get a better understanding of the significance and boundaries of—a potential historic district that includes the bridges at Sinking Creek, the Current River and Round Spring as well as the roadway that connects them. The consultation and public involvement processes will help us define the historic properties and determine ways to avoid having an effect on them and mitigate unavoidable adverse effects.

Kyle Grayson explained that an Environmental Assessment (EA) is being prepared for the Sinking Creek project under the National Environmental Policy Act. FHWA and MoDOT are currently finalizing the draft Purpose and Need which will be sent to the Cooperating Agencies for review. A Public Meeting will be held in Shannon County on October 5 to get community

input on the project, and the public meeting will also include a virtual meeting component. MoDOT is currently developing the initial range of alternatives.

Karen Daniels explained that the work done for the Section 106 process under the National Historic Preservation Act and the Section 4(f) Evaluation under the Department of Transportation Act would be the same for the EA as it would be for an Environmental Impact Statement (EIS) or a Categorical Exclusion (CE).

Pete Berry explained the Purpose & Need for the project [the draft Purpose & Need was distributed prior to the meeting for review]. The existing Sinking Creek Bridge was closed because of deficiencies—it is posted at 10 tons and is deficient in width. The bridge is also functionally obsolete—the lane width and shoulders of the bridge make it in effect a one-way bridge. A temporary bridge was constructed to carry traffic, but it is not a long-term solution, it's just enough to get us through the study process. The need for the project is to provide a structurally sound and functionally safe bridge.

Pete Berry also explained the alternates currently being looked at include 5 build alternates and the rehabilitation alternate. As shown on the map distributed prior to the meeting they are:

- Alternate 1—replacing the bridge on the existing alignment, shown in red
- Alternate 2—using the temporary bridge alignment, but raising the bridge height, shown in yellow
- Alternate 3—just downstream of the temporary bridge, it would have smoother horizontal curves and the bridge would be higher than the existing bridge, shown in blue
- Alternate 4—the straight option, shown in pink
- Alternate 5—upstream of the existing bridge, would have more curves and a longer bridge, shown in orange
- Rehabilitation alternate would rehab the existing 1926 bridge, which currently has an 18 foot deck, by replacing the existing columns, leaving the arches in place for aesthetics, but spanning them with new girders; it would reuse the existing footing; there are concerns about the arches—they are meant to be in compression, if the weight is taken off them they could crumble

Rusty Weismann questioned the distance between alternates 3 and 4. Pete said they were trying to miss as many of the camp sites (shown in white on the aerial) as possible.

Rusty asked what future speed limits would be on the bridge. Pete said that the existing roadway is chevroned at 30 miles per hour because of the curves, so there is no advantage to raising the speed limit. Commissioner Counts said raising the speed limit would not be ideal because the Current River was signed as one-lane by County request.

Rusty asked about reopening the old bridge if alternate 2 is selected. Pete said the old bridge would be load posted, so the heavy trucks that use the route would not be able to use the bridge. Commissioner Counts said that the state park bridge would be open and it will be a County bridge for five years. Pete said that it would be possible to use the County road as a detour for trucks and cars could use the old bridge.

Karen Daniels explained where MoDOT is in the Section 106 process. Referring to the Section 106 flowchart that had been distributed prior to the meeting, step 1, initiation of the project had been completed. An undertaking had been established because the permanent solution at Sinking Creek is an undertaking. The SHPO had been notified. Tribes with an interest in the area had been notified and invited to participate in consultation, the responses received thus far had been they look forward to receiving the final report. Consulting parties had been invited to participate, and most are involved in this meeting. Public involvement will be through the public involvement for the NEPA process, we will be at the meeting on October 5 with information on Cultural Resources and asking people for their input on what is significant.

We are currently in step 2, the identification of historic resources. The area of potential effects (APE) for the Sinking Creek Bridge project is identified on the aerial with the alternates.

Rusty Weismann explained that process that would be used for the archaeological survey. Rusty said that MoDOT had applied for and received an Archaeological Resources Protection Act (ARPA) Permit from the National Park Service to do our archaeological survey. MoDOT will be required to do shovel testing at a closer interval than normal, 10 meters rather than our standard 30 meters, for the 42 acres in the archaeological APE. If any of the alternates drop out of consideration early, such as alternate 4, they won't be surveyed. Fieldwork is scheduled for the last week of October and will continue until it is done. There have been finds recorded in the area in the past; a sawmill was recorded near the campground. There are some habitation sites in the area as well. It is not anticipated that any sites eligible for the National Register of Historic Places will be encountered.

Karen explained that the architectural survey would be conducted within the APE including a 100 foot buffer to consider indirect effects. In 1999, in response to the EIS for Routes 17 and 19, the Department of Natural Resources had indicated the presence of a historic district composed of the bridges at Sinking Creek, the Current River and Round Spring and the roadway connecting them. The way the description in the letter was phrased, it is clear that there were concerns about a cultural landscape in the project area. As part of this project, MoDOT will be working with the SHPO and the consulting parties to identify and define and evaluate the larger historic property, this cultural landscape, and determine its eligibility for the National Register, areas of significance, and boundaries. Judith Deel indicated that at the time they were concerned about the scenic characteristics and qualities of the roadway, but the letter had not used the words "cultural landscape."

Karen Daniels said that the Programmatic Agreement that MoDOT wants to develop will create procedures for the Section 106 process for projects involving the Current River and Round Springs Bridges as well as serve as the agreement document for the Sinking Creek project. It will allow for the consideration of the historic property as a whole, rather than in pieces. It will also allow us to develop mitigation measures that will be holistic in consideration of the larger historic property and that will be beneficial to the community—something that will be useable by the National Park Service and Shannon County in their efforts to promote and interpret the area.

When the Alternatives have been developed they will be distributed for review, and when FHWA and MoDOT are getting ready to screen to a preferred, there will be another consultation

meeting, so the group will have input into the selection. The cultural resources work should have progressed by that point so that more definitive evaluations of resources will have been made and can be presented to the group.

Kitty Henderson asked why an EA was being prepared rather than a CE. Raegan Ball responded that it is because of the environmentally sensitive resources in the project area.

Kitty asked if this might be a case where context sensitive solutions might be considered. Pete Berry said that it is. Other projects involving Ozark National Scenic Riverways had attempted to soften the impact of new bridge designs, and such features would be considered at Sinking Creek.

Commissioner Counts, Commissioner Cowan and Mayor Anderson all expressed that they would like to see a new bridge constructed in a timely manner since Route 19 is the north-south route through the county and it carries truck traffic from the logging trucks. Tourism is also a major industry in the County. They would like to see a new bridge that is similar in design to the existing Sinking Creek Bridge.

Raegan Ball reminded Karen that the APE identified in the Programmatic Agreement needed to include all three bridges so it was clear that the PA covered all three.

Mike Meinkoth said that when Route 19 was constructed, it was in part to provide connections to Alley Spring and Round Springs, which were state parks.

Commissioner Counts said that Route 19 was designated a scenic byway, Senator Staples had it designated. There was discussion of whether the designation restricted being able to relocate the roadway.

There were no further questions or discussion. Karen Daniels thanked everyone for attending and said meeting minutes would be forthcoming.

# **Chapter 1: Purpose and Need**

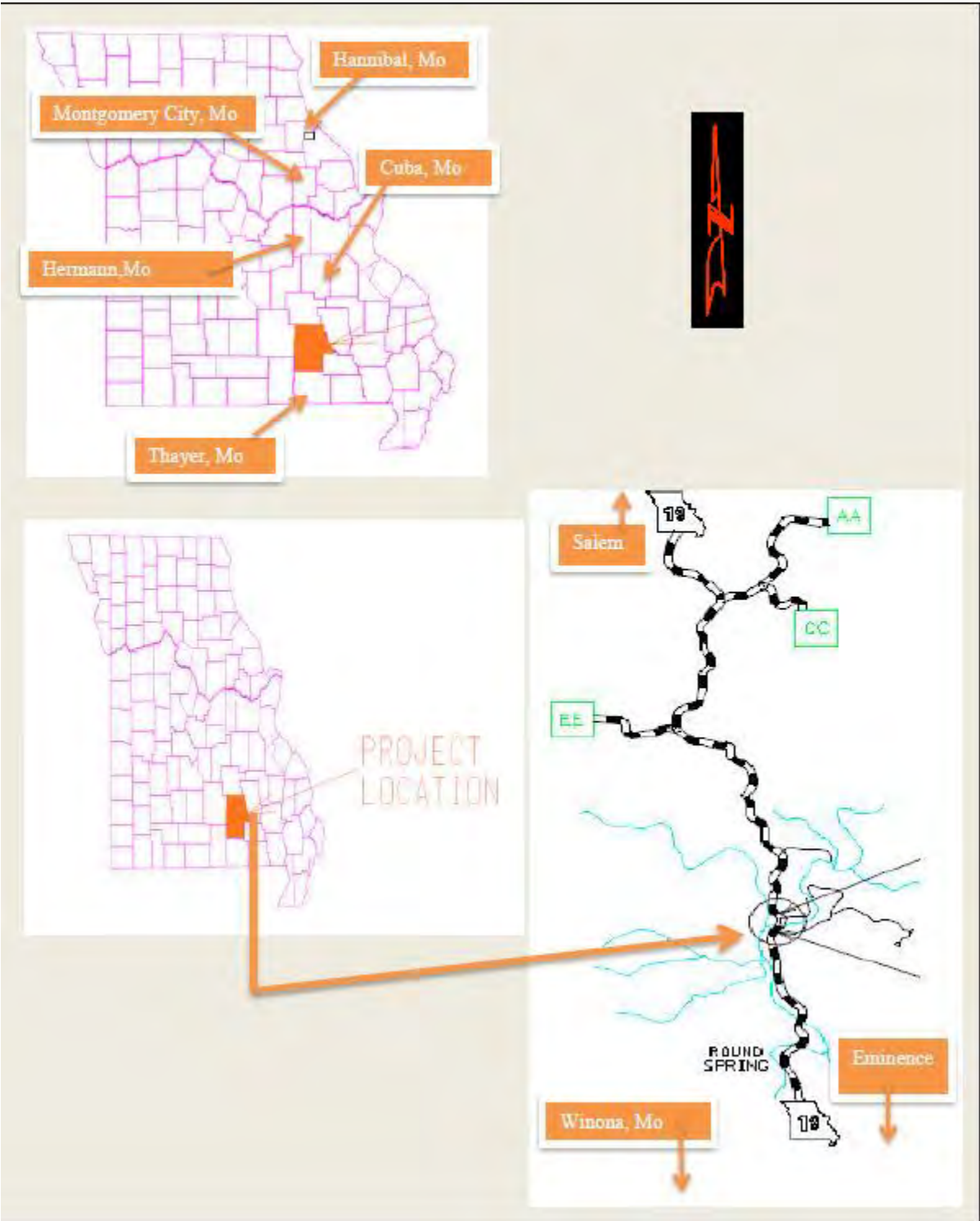
## **Introduction**

Missouri Route 19 (Route 19) begins at U.S. Route 61 south of Hannibal in northeastern Missouri. From there, Route 19 then travels south through Montgomery City, Hermann, Cuba, Salem, Winona, and Thayer Missouri where it intersects with U.S. Route 63 coming to an end near the Arkansas state line (Figure 1-1). Route 19 through these locations is an important part of Missouri's primary road system which is vital to the movement of traffic that promotes industry. Route 19 serves communities, the logging industry, and various other commercial activities in transporting their goods and services to the north and south throughout the region. This artery serves as the main/only north-south access for emergency response, access to public lands, and delivery of goods and services for southeastern Missouri. The existing Sinking Creek bridge (Bridge #H0079) is a historic open spandrel arch bridge with architectural detail fitting in well with the rural forested landscape. The historic bridge was constructed in 1926 and has primarily undergone only routine maintenance to date. In March of 2015, MoDOT discovered the bridge had structural issues that necessitated making it a one-lane structure with a load restriction of 20 tons. MoDOT temporarily realigned Route 19 in the area and constructed a temporary bridge in May of 2015 and the existing Sinking Creek Bridge was closed. The construction of the temporary structure was a necessary venture after load posting of the existing bridge as heavy trucks were taking substantial detours in order to access Route 19 on either side of Sinking Creek. However, this is a temporary measure until a permanent solution is implemented that will provide a safe and reliable Route 19 crossing over Sinking Creek.

## **Why is this Environmental Assessment being prepared?**

The Missouri Department of Transportation (MoDOT) anticipates receiving federal funds from the Federal Highway Administration (FHWA) for permanent solution to provide a safe and reliable crossing over Sinking Creek on Route 19. As the lead federal agency, the FHWA is responsible for ensuring that all highway improvement projects using federal money comply with the National Environmental Policy Act (NEPA). This Environmental Assessment (EA) was developed in accordance with 23 CFR 771 to document and inform interested parties about the decision making process for the proposed project.

Figure 1-1: Missouri Route 19



## **Location of the Study Area**

The study area of this EA extends approximately 0.15 mile north and 0.11 mile south of Sinking Creek and is approximately 14.2 miles north of Eminence on Route 19 in Shannon County, Missouri (Figure 1-2). Three side roads intersect Route 19 within the study area; County Road 19-250 southeast of Sinking Creek accesses Pioneer Forest property and Missouri State Park property, an unnamed road north of Sinking Creek heading east accessing Missouri State Park property, and an unnamed road north of Sinking Creek headed west that serves as public access to a public campground, Sinking Creek, and the Current River.

## **The Existing Bridge and Roadway**

Classified as a minor route across Missouri, Route 19 has two 10-foot lanes with a 2-foot earth shoulders and 55 miles per hour (mph) speed limit as it approaches the Sinking Creek Bridge from both the north and south. Several curves approaching the bridge are posted with speed reduction plaques and chevrons similar to the entire Route 19 corridor in the region. The temporary alignment (Figure 1-6) and bridge is posted at 30 mph due to the roadway geometry and the steel grate type deck on the temporary structure.

The existing Sinking Creek Bridge opened to traffic in 1926 and is eligible for listing on the National Register of Historic Places (NHRP). The Sinking Creek Bridge is an open-spandrel arch bridge that is 18 feet wide with three 80 foot open-spandrel arch spans and two 40 foot deck girder spans (Figure 1-3). MoDOT Bridge Transportation Management System (TMS) data lists the structure as 339 feet long with an 18 foot wide deck that carries two 9 foot lanes with no shoulders. The bridge was closed in May of 2015 due to structural issues that could not be repaired.

In 2015, the Annual Average Daily Traffic (AADT) on the bridge was approximately 700 vehicles per day (vpd). This volume is expected to increase to 850 vpd by 2025. Commercial trucks average almost 7% of the total traffic on the bridge or 50 vpd. The narrow bridge width had been a concern for local residents that meet large trucks, farm equipment, and construction equipment that often use the bridge. The two-lane temporary bridge is 24 feet wide providing more width for vehicles to meet and pass.



Figure 1-2: Study Limits for Route 19 Sinking Creek EA

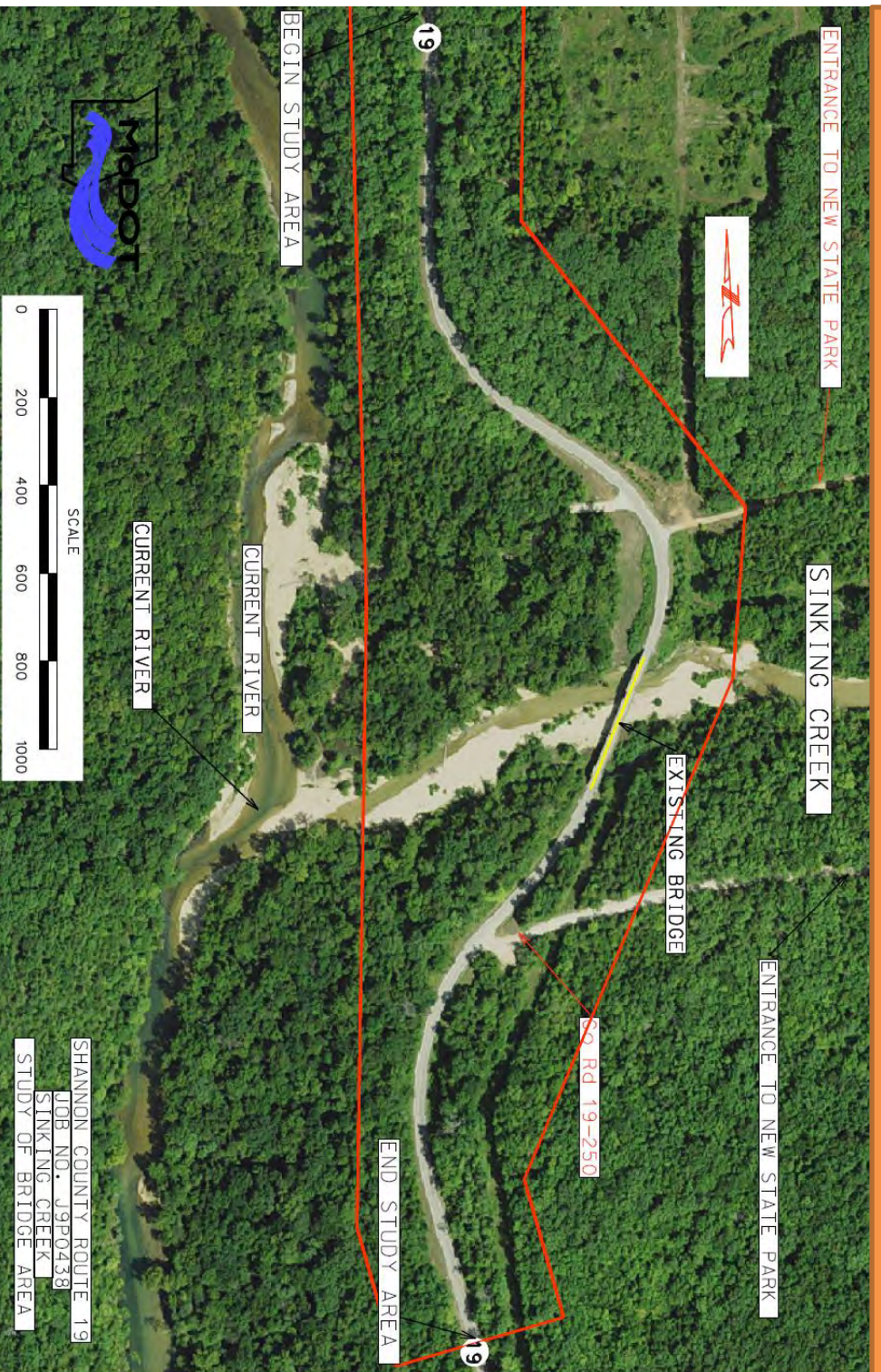


Figure 1-3: The Historic Missouri Route 19 Sinking Creek Bridge



MO Route 19 Sinking Creek Bridge,  
Looking southeast



On the bridge, looking north



East side of bridge, South approach



South bound on MO 19, looking at  
west side of bridge

### Project Purpose

The primary purpose of the project is to provide a reliable, safe, and cost efficient Route 19 crossing over Sinking Creek in Shannon County.

## Project Needs

- The Sinking Creek Bridge (H0079) is 89 years old and structurally deficient. Its age and condition require regular maintenance resulting in periodic closures that create an inconvenience to the traveling public and substantial expense to taxpayers.
- The bridge's design is functionally obsolete. It does not meet MoDOT's standards for lane width, shoulders, or vertical clearance.
- The current Route 19 temporary bridge over Sinking Creek does not provide a long-term solution.

The remainder of this chapter discusses the project needs in more detail.

## The Bridge's Structurally Deficient Condition

MoDOT conducted a routine inspection on the existing Sinking Creek Bridge on Route 19 in Shannon County in February 2015. The bridge is inspected every other year and the substructure (foundation and supporting piers), superstructure (spandrel arches and risers), and deck (riding surface) are each assigned numerical condition ratings. These ratings range from zero, a failed condition that cannot be corrected and typically requires closing the bridge, to nine, excellent condition. Currently, the substructure condition is rated a five (fair), the deck is rated a three (serious), and superstructure is rated a four (poor). Because of this inspection, it was determined to reduce the load carrying capacity to a gross weight of 20 tons and reduce it to a one-lane bridge.

### *What is a "structurally deficient" bridge?*

A bridge is considered structurally deficient when the deck, superstructure, or substructure condition is rated as 4 or lower. This designation does not mean the bridge is unsafe or likely to collapse; however, it must be monitored, inspected, repaired, or replaced as appropriate to retain structural integrity. In some cases, the gross vehicular weight allowed on the bridge may be reduced to keep it safely open to traffic. If a physical inspection identifies unsafe conditions, the bridge must be closed.

As stated before, the existing Sinking Creek Bridge was closed in May 2015 following an inspection. During the inspection it was discovered the deck girders at the northernmost span have significant deterioration including concrete spalls and rusting steel rebar. It was also discovered the southernmost span has shifted approximately three inches to the south. If the shifting continues the span could fall off of its supports (see Figure 1-4 showing bridge deterioration). Due to these findings, the bridge was converted into a single lane bridge and load posted at 20 tons.

Due to the hardship this placed on the traveling public, a temporary bridge just downstream of the existing structure was constructed and opened near the end of May 2015. This bridge is only intended to be temporary until a permanent solution is determined.



Bridge repairs have been completed over a period of time from 2002 to 2015. The superstructure repairs to the girder ends were completed in 2002, bridge deck repair and concrete work was completed in 2004, and the east side of the handrail center post was repaired in 2013. A bolted bracket was placed along the deck to secure the top side of the wall at Bent Number 2 that had shifted in spring 2013. The repairs have been stopped because there is currently a temporary bridge along the west side of the current alignment and the existing bridge is closed (see Figure 1-5).

**Figure 1-5: Temporary Bridge Photo**



### **The Bridge's Functionally Obsolete Design**

Missouri's current standards for new bridges on this type of roadway require 12 foot lanes and 2 foot shoulders. The existing bridge is only 18 feet wide providing two 9 foot lanes, and was currently restriped to a one-lane bridge in in May of 2015. These dimensions result in the bridge being functionally obsolete by current roadway standards. In late May of 2015 the bridge was closed and the temporary bridge opened for all traffic which is 24 feet wide and is not weight restricted.

### *What makes a bridge “functionally obsolete”?*

A functionally obsolete bridge lacks adequate lane widths, shoulder widths, or vertical clearances to serve current traffic demand or to meet today’s geometric standards. Although functionally obsolete bridges were built to standards that are no longer used, they are not necessarily unsafe.

Design deficiencies such as one-lane bridges and narrow lane widths can affect the efficient flow of traffic and contribute to head-on, sideswipe, and rear-end accidents. Such effects could cost lives and possible structure loss. The weight restriction applied to the bridge affects traffic in the area as many of the vehicles utilizing the bridge are heavy trucks. This weight reduction causes heavy vehicles to use alternate routes resulting in longer travel times and reduced efficiency.

The historic bridge’s narrow lane width and lack of shoulders discourage pedestrians and bicyclists from utilizing the bridge. Any new bridge alternative would consider providing shoulders wide enough that bicyclists and pedestrians could use to access destinations on both sides of Sinking Creek.

A full in depth hydraulic analysis has not been performed yet, however, discussions with local officials indicate flood waters have reached as high as the bridge deck for the historic bridge on one occasion.

### **The Temporary Bridge is not a long-term solution**

The Temporary Bridge (Figure 1-6) was constructed approximately 7 (seven) feet lower than the historic bridge not meeting design high water requirements and is susceptible to being over topped by flood waters and potentially washed away. One set of columns are located in the middle of the channel causing concern for erosion at the base of the columns and an obstruction that could catch drift/debris. A temporary structure of this type is typically only in use for a year. Keeping it open longer than this translates into more maintenance in terms of tightening bolts and checking welds. The grate type deck is rough riding and very noisy as well.

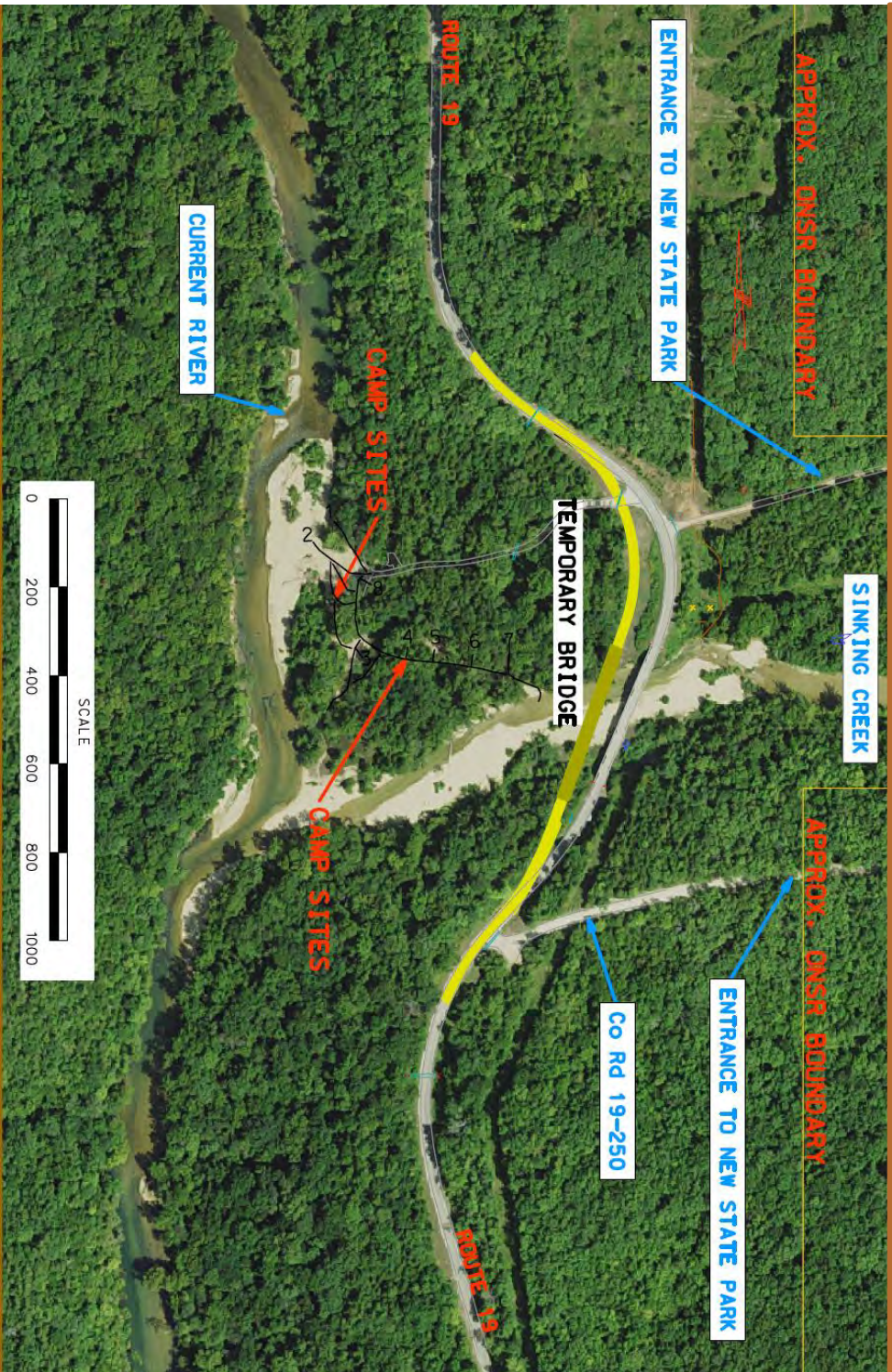


Figure 1-6: Temporary Bridge Aerial

## **Conclusion**

The bridge over Sinking Creek provides an important north/south connection of Route 19 in southern Missouri. The 89 year old bridge is currently closed because it is structurally deficient and is functionally obsolete with substandard lane width and shoulders. The existing bridge has deteriorated beyond repair and was closed because it is not a desirable crossing in its current single lane, load posted condition. The temporary bridge is not intended to be a permanent solution and requires much more maintenance than a new permanent structure. There is also concern about the reliability of the structure during a flood event as it is not designed to withstand a major flood.



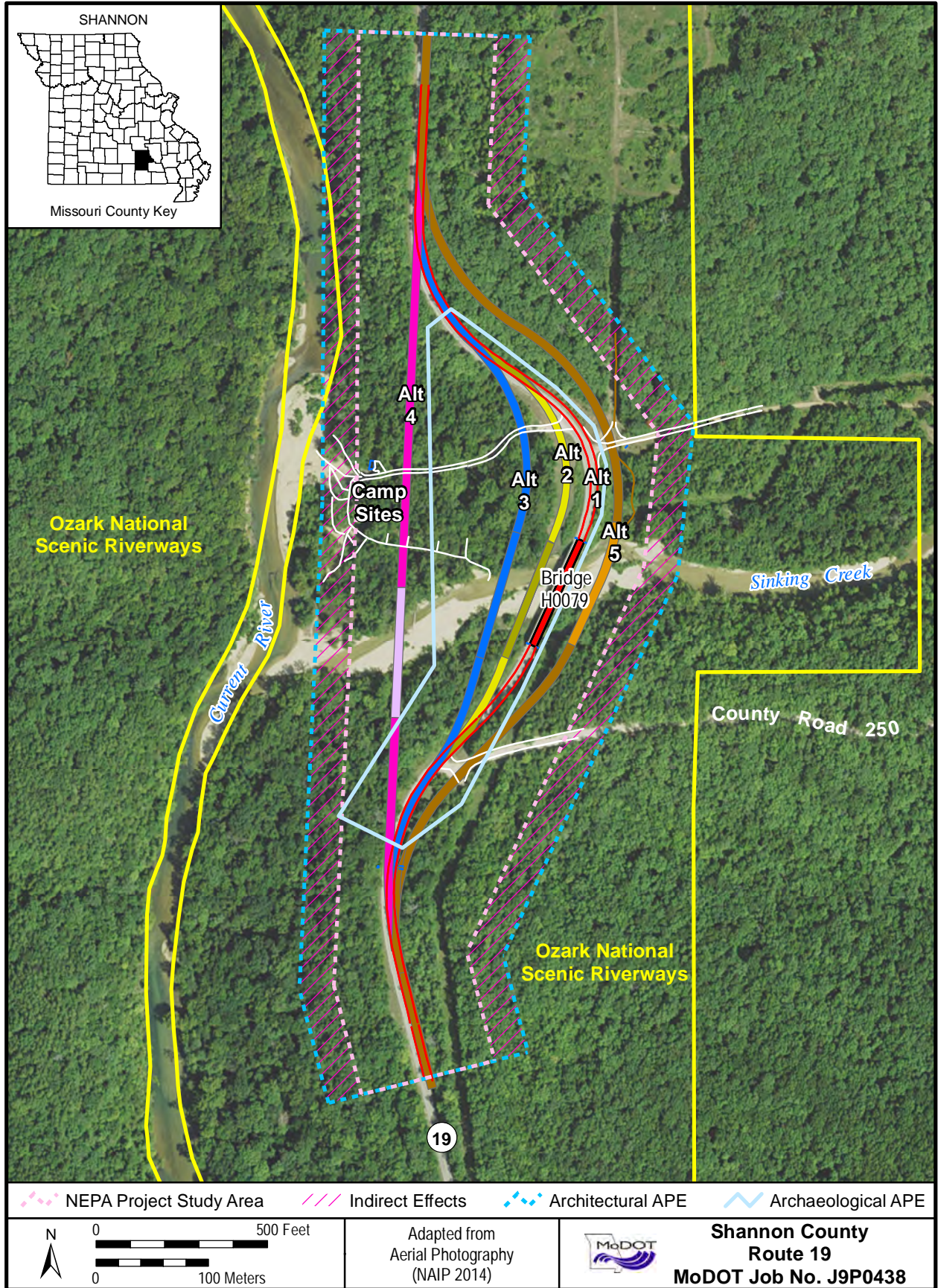
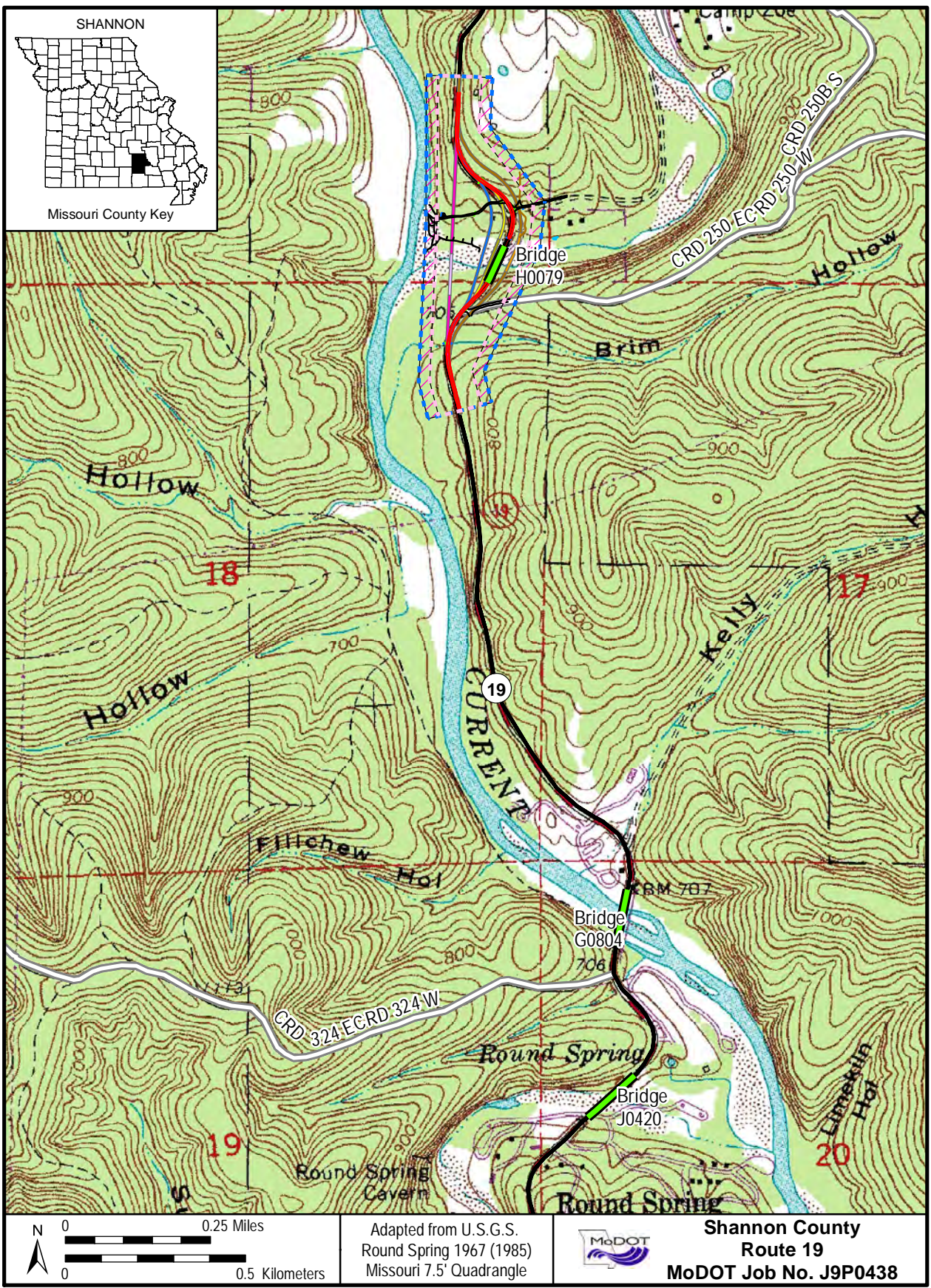


Figure 2. Sinking Creek Alternates and APE



# The Section 106 Process

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## 1. INITIATE the process

- Determine undertaking
- Notify SHPO/THPO
- Identify Tribes and Other Consulting Parties
- Plan to involve the public

*No undertaking/  
potential to cause  
effects?*

## 2. IDENTIFY historic properties

- Determine APE
- Identify historic properties
- Consult with SHPO/THPO, Tribes, and Other Consulting Parties
- Involve the public

*No historic properties  
present/affected?*

## 3. ASSESS adverse effects

- Apply criteria of adverse effect
- Consult with SHPO/THPO, Tribes, and Other Consulting Parties
- Involve the public

*No historic properties  
adversely affected?*

## 4. RESOLVE adverse effects

- Avoid, minimize, or mitigate adverse effects
- Notify ACHP
- Consult with SHPO/THPO, Tribes, and Other Consulting Parties
- Involve the public

*Agreement  
(MOA/PA)  
or  
Council Comment*

**Three Bridges Historic District  
Field Review  
January 14, 2016**

**Agenda**

- 10:30 Meet at National Park Service Office at Round Spring
- 10:45 Drive Three Bridges Historic District Corridor to determine appropriate boundary  
(will likely entail repeated trips driving north and south)
- 12:15 Return to Round Spring Office
- 12:30 Conclude

**Three Bridges Historic District  
Field Visit  
January 14, 2016**

**Sign-in Sheet**

Name	Organization	Address	Phone	E-mail
Jeff Cowen	Shannon Co. Commission		417 247 1234	Jeff.cowen@yahoo.com
Pooja Banerjee	IHLWA		513-638-2615	roopa.banerjee@dot.gov
Judith Deel	MO SHPO		573-751-7862	Judith.deel@dnr.mo.gov
Mike Mentz	MoDOT		573-526 3553	Michael.mcintosh@ modot.mo.gov
Toni Prawl	MO SHPO		573.751.7857	toni.prawl@ dnr.mo.gov
Kyle Grayson	MODOT/EMV		573-526-5648	Kyle.Grayson@ modot.mo.gov
Richard Moore	MoDOT		573-526-2909	richard.moore@ modot.mo.gov
Julia Larson	Mo DOT			julia.larson@ modot.mo.gov
Amanda Burke	SHPO		573-5224641	amanda.burke@ dnr.mo.gov

**Three Bridges Historic District  
Field Visit  
January 14, 2016**

**Sign-in Sheet**

Name	Organization	Address	Phone	E-mail
Allison Young	NPS OZAR		573-323-8042	allison-young@nps.gov
Karen Daniels	MoDOT	P.O. Box 270 JC MO 65102	573-526-7346	karen.daniels@modot.mo.gov
Pete Berry	MoDOT		417-969-6242	pete.berry@modot.mo.gov
Curt Woolsey	MoDOT	3956 East Main St Willow Springs MO 65793	417-469-6232	curt.woolsey@modot.mo.gov

**Consultation Meeting/Three Bridges Historic District Field Visit**  
**Shannon 19, J9P0438**  
**January 14, 2016**

Attendees:

Jeff Cowen, Shannon County Commission  
Roopa Banerjee, FHWA  
Mike Meinkoth, MoDOT  
Toni Prawl, MoSHPO  
Kyle Grayson, MoDOT  
Richard Moore, MoDOT  
Julia Larson, MoDOT  
Amanda Burke, MoSHPO  
Allison Young, NPS-ONSR  
Karen Daniels, MoDOT  
Pete Berry, MoDOT  
Curt Woolsey, MoDOT

The attendees gathered at the Maintenance Office at the Ozark National Scenic Riverways (ONSR) in Shannon County, Missouri. Introductions were made among the group to familiarize everyone with the participants and the role they are playing in the project.

Karen Daniels passed out maps with the draft boundaries of the Three Bridges Historic District depicted and discussed her research on the district and proposed areas of significance, period of significance and the boundaries. The period of significance identified for the district is 1925 to 1964, which coincides with the construction of Highway 19 through the area to the designation of the ONSR, which significantly changed land use in the area. The construction of Route 19 provided easy access to the Round Spring State Park, promoting tourism in the area. The scenic nature of the area was considered when the highway was constructed and views of the highway were frequently used in promotional materials prepared by the State Highway Department. The bridges on the highway in Shannon County, concrete arch bridges, reflect the scenic nature of the highway, since these bridges tended to be constructed in scenic areas. In addition to tourism, the timber industry was a major landowner in the area, with timber companies owning more than half the land in the township.

Areas of significance identified for the district include transportation and recreation (specifically recreational driving) and engineering. The boundaries of the district encompass the three bridges, the roadway connecting them and the views from the roadway. The northern boundary starts at the curve approaching the Sinking Creek Bridge, just before the bridge becomes visible; the southern boundary is at a similar point for the Round Spring Bridge.

## Karen Daniels

---

**From:** Karen Daniels  
**Sent:** Monday, January 25, 2016 3:54 PM  
**To:** Allison Young; Amanda Burke - SHPO (amanda.burke@dnr.mo.gov); Brent Bayer; Bryan, Bill; Greg Iffrig; Jeff Cowen (jeffcowen@yahoo.com); Jeff Cowen (shannon@sos.mo.gov); Judith Deel - SHPO (judith.deel@dnr.mo.gov); Julia L. Larson; Kitty Henderson - Historic Bridge Foundation (kitty@historicbridgefoundation.com); Kyle E. Grayson; Laura Hendrickson; Michael Meinkoth; Nathan Holth - HistoricBridges.org (nathan@historicbridges.org); Pete Berry; Raegan Ball - FHWA (Raegan.Ball@dot.gov); Roopa Banerjee (roopa.banerjee@dot.gov); Russell M. Weisman; Russell Runge; Rusty Rawson; Toni Prawl (toni.prawl@dnr.mo.gov)  
**Subject:** Sinking Creek Bridge, Shannon 19--Soliciting early opinions about bridge design options  
**Attachments:** 2016\_02\_04\_bridge\_type\_examples.pdf

All,

MoDOT is preparing for an internal meeting on the Sinking Creek project on February 4<sup>th</sup>, and we would like your input on some design options for a new bridge we are considering prior to that meeting. These design options will be fully discussed at a Section 106 consultation meeting that I'm planning on scheduling later in February, but we would like some input now to aid in our planning efforts.

There are three options under consideration:

- A Prestressed I-Girder Span, similar to what is shown in A4566 on the attached PDF. This example is further up Sinking Creek. It is the design preferred by MoDOT designers.
- A Haunched Plate Girder, shown at the bottom of the attached PDF (the example is over the Jack's Fork at Buck's Hollow in the Ozark National Scenic Riverways, built about 10 years ago). The Haunched Girder would cost about 35% more to build than the I-Girder bridge.
- The third option would be a new Open Spandrel Arch. While MoDOT hasn't constructed any new open spandrel arch bridges (and so I don't have photos of any on Missouri Highways), they have been constructed in other states. Based on those projects, we estimate they would cost twice as much as the I-Girder to build.

Please let me know what your thoughts on these options are by February 3<sup>rd</sup>, so I can share it with our internal team. Again, we will discuss them in more depth at an upcoming Section 106 consultation meeting later in February. If you have any questions, please feel free to contact me. Thank you in advance for sharing your views.

Karen

Karen L. Daniels  
Senior Historic Preservation Specialist  
Design/Historic Preservation  
Missouri Department of Transportation



601 W. Main St., P. O. Box 270

Jefferson City, MO 65102

[Karen.Daniels@modot.mo.gov](mailto:Karen.Daniels@modot.mo.gov)

573.526.7346

<http://www.modot.mo.gov/ehp/HistoricPreservation.htm>

<http://www.modot.org/freebridges/>

**A4566 1-7-08**  
**Profile**



**P/S I Girder Bridge Example**



**Haunched Plate Girder Bridge Example**

**A4566 1-7-08**  
**Profile**



**P/S I Girder Bridge Example**



**Haunched Plate Girder Bridge Example**

## Sinking Creek Bridge Replacement Conference Call

### Invited Attendees:

Allison Young: Park Archeologist and Section 106 Coordinator at Ozark National Scenic Riverways

Tricia Miller: Museum Technician at Ozark National Scenic Riverways

Roberta Young: Landscape Architect at NPS Midwest Regional Office

Dan Jackson: Cultural Resource Program Manager at NPS

Mark Chavez: Historical Architect at NPS Midwest Regional Office

Don Stephens: Historian at NPS Midwest Regional Office

Erin Dempsey: Archeologist at Midwest Archeological Center

Stephen Rogers: Sectional 106 Coordinator at NPS Midwest Regional Office

Mike Meinkoth: Historic Preservation Manager at MODOT

Karen Daniels: Senior Historic Preservation Specialist at MODOT

Rusty Weisman: Archeologist at MODOT

### Discussion Points:

1. Project Overview and Project Timeline
2. National Register Nomination Update
3. Archeology Update
4. Bridge Placement Alternatives
5. Bridge Design Input

There are three options under consideration:

- A Prestressed I-Girder Span, similar to what is shown in A4566 on the attached PDF. This example is further up Sinking Creek. It is the design preferred by MoDOT designers.
- A Haunched Plate Girder, shown at the bottom of the attached PDF (the example is over the Jack's Fork at Buck's Hollow in the Ozark National Scenic Riverways, built about 10 years ago). The Haunched Girder would cost about 35% more to build than the I-Girder bridge.
- The third option would be a new Open Spandrel Arch. While MoDOT hasn't constructed any new open spandrel arch bridges (and so I don't have photos of any on Missouri Highways), they have been constructed in other states. Based on those projects, we estimate they would cost twice as much as the I-Girder to build.

Sinking Creek Bridge Replacement  
Shannon 19, J9P0438  
Conference Call  
March 1, 2016

**Attendees:**

National Park Service:

Roberta Young, Landscape Architect at NPS Midwest Regional Office  
Dan Jackson, Cultural Resource Program Manager at NPS  
Mark Chavez, Historical Architect at NPS Midwest Regional Office  
Don Stephens, Historian at NPS Midwest Regional Office  
Erin Dempsey, Archeologist at Midwest Archeological Center

NPS-Ozark National Scenic Riverways:

Allison Young, Park Archeologist and Section 106 Coordinator  
Tricia Miller, Museum Technician

FHWA:

Raegan Ball, Program Development Team Leader, Missouri Division  
Roopa Banerjee, Environmental Specialist, Missouri Division  
Lisa Landers, Environmental Specialist, Eastern Federal Lands Division

MoDOT:

Mike Meinkoth, Historic Preservation Manager  
Karen Daniels, Senior Historic Preservation Specialist (Architectural Historian)  
Rusty Weisman, Senior Historic Preservation Specialist (Archeologist)  
Dan Felty, Historic Preservation Specialist  
Pete Berry, Project Manager

**Discussion Points:**

*Project Overview and Project Timeline*

Mike Meinkoth explained the project history and timeline. In the late 1990s FHWA and MoDOT started to prepare an EIS in the ONSR for Route 19 in Shannon County including the bridges at Sinking Creek, the Current River and Spring Valley and in Texas County on Route 17 at Buck Hollow. The project was too complex and the Route 17 portion was split off, and eventually built. There was no movement on the Route 19 bridges until recently. The State recently purchased Camp Zoe across from campgrounds near Sinking Creek, for development as a new state park. The bridges on Route 19 were inspected, and the bridge at Route 19 was restricted for weight limit, and the bridge at the Current River was made a one-lane bridge. A temporary bridge was constructed at Sinking Creek to allow for construction vehicles and the logging trucks to continue using Route 19; following that construction, the NEPA process for a permanent solution was begun.

In the 1990s, as part of the EIS, the SHPO identified a historic district consisting of the Sinking Creek, Current River and Spring Valley bridges and Route 19 connecting them. The letter also indicated that the landscape adjoining Route 19 was significant.

MoDOT is currently working on an Environmental Assessment for a Sinking Creek Bridge. Specialists are turning in drafts of their write-ups for the document. Our Section 106 process is also on-going. We decided to do a Programmatic Agreement that would address cumulative impacts on the historic district and set procedures for a process for the other bridges. We have had two consultation meetings, including one on-site visit. Another consultation meeting will be held soon to discuss the screening preferences as a preferred alternative is identified through the NEPA process.

#### *National Register Evaluation Update*

Karen Daniels explained the status of the evaluation process for the landscape. Working from the 1999 determination from the SHPO, MoDOT knew that SHPO considered the three bridges, the roadway and the surrounding landscape a cultural landscape. In November fieldwork was conducted to determine a boundary for this landscape within the landscape APE for the project.

Historical research in the project area indicates that when the roadway and bridges were designed, the State Highway Department took care to consider the aesthetics of the roadway and the views, and the Spring Valley Bridge took special consideration of the State Park for aesthetics.

A consultation meeting was held in Shannon County in January 2016 and the boundaries of the landscape were discussed. As a result of the meeting, the boundaries were expanded to include more the landscape adjacent to the Current River, to include views from the River, and further up the slopes adjacent to Route 19. The ONSR, SHPO and Shannon County participated in the meeting.

Roberta Young asked if the area was designated a scenic byway. Karen Daniels explained that Route 19 is not designated under the federal or Missouri state scenic byway program; however, in 1989 it was designated a “Scenic and rustic” highway and the State Highway Department was ordered to mark the highway appropriately. The State Senator for the area was instrumental in getting this passed, but it has no protection associated with it, and no termini for the scenic and rustic portions of Route 19 are indicated.

Karen Daniels indicated that the evaluation is not completed yet, but should be within the month. It will be discussed at the next consultation meeting, to take place in March to discuss alternative selection.

It was suggested [unclear who] that information on the historic scenic considerations of the highway be included in the purpose and need to help justify aesthetic considerations as screening to a preferred moves forward.

### *Archeology Update*

Rusty Weisman gave an update on the status of archaeological investigations. Two sites are located within the Sinking Creek project APE. Site 23SH97 on the north side of Sinking Creek was recorded in the 1950s and 60s. It was damaged when the road was constructed, but to the west of the bridge there could be intact areas that could be eligible. A newly discovered site, 23SH1566, identified during survey for the project, is located on the south side of the Sinking Creek. It contains historic and prehistoric materials. The historic is non-contributing. The historic is archaic. The highway bisects the site, to the east of the highway there is no integrity, to the west there were some effects when the temporary bridge was built.

### *Bridge Placement Alternatives*

The graphic showing the alignment alternatives had not been distributed prior to the meeting. Karen Daniels said she would send it following the meeting.

### *Bridge Design Input*

Pete Berry discussed the alternatives that are being considered for the new bridge design. There are three options under consideration:

- A Prestressed I-Girder Span, a typical MoDOT bridge. There is an example further up Sinking Creek. It would cost about \$1.4 million.
- A Haunched Plate Girder, similar to what was done at Buck's Hollow on the Jack's Fork. The concrete on the columns would have a decorative treatment, the plate girder would have a haunched flange, and the railing would not be the standard concrete railing, but would have a metal tube railing which would allow visibility through the bridge. This would cost about \$2 million.
- An Open Spandrel Concrete Arch, similar to what is already there, would cost about \$3 million. MoDOT hasn't built any of these recently, but they have been constructed in other states.

Karen Daniels reported that these options, including photographs of the first two, had been distributed to the consulting parties for their input. The SHPO had indicated a preference for the Open Spandrel Arch. One other consulting party had also responded, supporting the SHPO preference for the concrete arch.

Mike Meinkoth explained that the existing bridge could be reused for pedestrian purposes, and that the demolition costs could be made available to another party. MoDOT had provided estimated costs for demolition and the pedestrian rehabilitation, and it could be done within the demolition costs. He said that there had been discussion within MoDOT of doing the rehabilitation as part of our project, if the ONSR or State Parks want to take over the bridge, since funds often go into general funds rather than to specific projects. MoDOT's engineers had estimated that the rehab would make the bridge good for 20 years.

Allison Young asked for a copy of the e-mail providing the demolition costs and life time. Mike promised to provide it. Allison said that she would talk with the park superintendent about it. Mike did indicate that the window for being able to reuse the bridge is closing.

Of the alternates being considered, only building on the existing alignment would not require new right-of-way from the ONSR.

*Follow-up items:*

- ✓ Add NPS Midwest Regional Office staff to Sinking Creek PA consulting party group
- ✓ Send e-mail with bridge and alignment alternatives to group
- ✓ Send Allison information on demolition/rehabilitation costs



**Consultation Meeting  
Shannon 19 Programmatic Agreement  
March 28, 2016  
1:00 p.m.-3:00 p.m.**

**Agenda**

601 W. Main Street, Conference Room ISD-1

Teleconference # 573-526-3993, ID 67346#

Introductions

Discussion of Three Bridges Historic District Eligibility Assessment

Reuse of the Sinking Creek Bridge

Alignment Alternatives for Sinking Creek Project

Design Alternatives for Sinking Creek Project

Discussion of ideas for mitigation measures—project specific and corridor wide

Prioritization of mitigation ideas

Schedule

Adjourn

Route 19 Bridges Programmatic Agreement  
Consultation Meeting  
March 28, 2016

Sign-in Sheet

Name	Organization	Address	Phone	E-mail
Karen Daniels	MoDOT			
Gayle Unruh	MoDOT			
Col Dent	MoDOT			
Rusty Weisman	MoDOT			
Juan Zedl	SUPD			
Buck Brooks	MoDOT			
Mike Menkath	MoDOT			
Raegan Ball	FHWA			
Julia Larson	MoDOT			

Route 19 Bridges Programmatic Agreement  
Consultation Meeting  
March 28, 2016

Sign-in Sheet

Name	Organization	Address	Phone	E-mail
Pete Berry	MDOT			
Curt Woolsey	MDOT			
Kyle Grayson	MDOT			
Laura Hendrickson	SP			
Eric Daniels	ONSR			
Larry Johnson	ONSR			
Russel Rung	ONSR			
Rich Hebert	ONSR			
Allison Young	ONSR			



**Consultation Meeting  
Shannon 19, J9P0438  
March 28, 2016 1-3 p.m.**

**Attendees:**

Raegan Ball, FHWA  
Judith Deel, SHPO  
Laura Hendrickson, Mo State Parks  
Kitty Henderson, Historic Bridge Foundation  
Eric Daniels, ONSR  
Rich Halbert, ONSR  
Larry Johnson, ONSR  
Russell Runge, ONSR  
Allison Young, ONSR  
Mark Chavez, NPS  
Roberta Young, NPS  
Pete Berry, MoDOT Southeast District  
Curt Woolsey, MoDOT Southeast District  
Buck Brooks, MoDOT Environmental  
Jo Dent, MoDOT Environmental  
Kyle Grayson, MoDOT Environmental  
Gayle Unruh, MoDOT Environmental  
Karen Daniels, MoDOT Historic Preservation  
Julia Larson, MoDOT Historic Preservation  
Mike Meinkoth, MoDOT Historic Preservation  
Rusty Weisman, MoDOT Historic Preservation

Raegan Ball welcomed everyone and thanked them for participating in the meeting. Introductions were made of those participating via teleconference and in Jefferson City.

Karen Daniels asked for feedback on the National Register eligibility assessment for the Three Bridges Historic District which had been sent out on March 21, 2016 with the meeting notice and agenda for the meeting. Karen said she would send it again following the meeting for those who had not found time to review it. She asked for comments within thirty (30) days.

Laura Henderickson said that some of the special use areas in Echo Bluff State Park will fall within the boundaries of the historic district.

Roberta Young said that she thinks it wonderful that MoDOT/FHWA is incorporating viewshed analysis in the project.

Karen Daniels reported that the Sinking Creek Bridge had been advertised as available for reuse in place. The advertisement had received a considerable amount of attention, with the wire services picking up the story and newspapers on both coasts carrying it. Despite the attention, no proposals for reuse had been received. MoDOT had additional conversations with Missouri State

Parks and with Ozark National Scenic Riverways, and had been told informally that neither organization had interest in taking over the bridge.

Allison Young said that at this time ONSR does not wish to take over the bridge.

Mike Meinkoth said that while the option for reuse is not completely closed at this point, MoDOT and FHWA do need to move forward with consideration of alternatives. The farther we get in that process, the harder it will be to incorporate preservation of the bridge.

Karen Daniels asked that before the alternatives are explained next, everyone remember that the preferred alternative would be selected based on the Section 4(f) process and the least harm analysis that is part of the process. The consulting parties would be asked for their thoughts about the alternatives, and could express their preferences, but the 4(f) would decide.

She further explained that the alternatives had been sent to the consulting parties that morning. Comments would be accepted for thirty (30) days. Kyle Grayson reminded everyone that the alternatives are still in a draft stage of the NEPA process.

Pete Berry explained the alternatives being studied in the Environmental Assessment (EA). There are six alternatives being considered.

- Alt. 1A is the rehab. It was studied many years ago. It consists of taking the deck and columns off the bridge, building new columns and building girders to carry the load. The arches would be left in place but would not be in compression. Problems with this option include trying to build the columns while the bridge load is carried, the condition of the existing footings, and concerns that the arches would rapidly deteriorate when they are not in compression.
- Alt. 1 is the existing alignment, but would be 2' higher, requiring a slight increase in the rise of the highway.
- Alt. 2 is on top of the temporary bridge alignment, there would be a vertical change of 8'; it would require conversion of the existing temporary easement from ONSR to right-of-way and would require traffic to detour during construction.
- Alt. 3 is a shift downstream from the temporary bridge, it has a slightly flatter curve; would require more right-of-way from ONSR than Alt. 2; it comes closest to the closer to the campsites, but does not actually take any.
- Alternates 4 and 5 are not being carried through the EA because of their environmental impacts.

Karen Daniels mentioned a memo found in files relooking at the rehab study following the rehabilitation of the Branson Bridge and using the lessons learned from the Branson Bridge recommended that because of the complexities of trying to remove the deck and columns without damaging the arches and construct new footings with the arches tied into the existing footings, as well as the belief that the bridge could not be widened to 22', they did not recommend using the girder method of rehabilitation.

Larry Johnson, Superintendent of ONSR said that that they prefer Alternate 1 since it would have the least impact on the resources that they are charged with protecting and since the temporary bridge could remain open during construction.

Kyle Grayson (Gayle Unruh?) remarked that the Corps of Engineers has told us they also prefer Alternate 1.

Kitty Henderson asked what effect the removal of the Sinking Creek Bridge would have on the Historic District and the condition of the other bridges.

Pete Berry explained that the Current River Bridge is in good shape. It is narrower than the Spring Valley Bridge, and the County Commission asked MoDOT to make it a one-lane bridge, which we did. It was not a condition issue, but a width issue (18'), and the fact that the traveling public was already treating it like a one-way bridge.

The Spring Valley Bridge is in a little worse shape, but is not on the radar for work in the next 5-10 years. They try to keep the deck sealed to keep water and salt infiltration to a minimum.

Karen Daniels explained that removing the Sinking Creek Bridge would be considered an adverse effect on the historic district. Kitty Henderson asked if we were replacing a bridge, why are even considering the landscape. Karen Daniels explained that the historic district had been identified in 1999. MoDOT wanted to be sure to consider the effects of the project on it, as well as be sure that our cumulative effects were considered from the start.

Judith Deel said that SHPO concurs that the Three Bridges Historic District is eligible and that all the alternates would have an adverse effect. We are looking for alternates that would lessen the adverse effect—particularly on the landscape.

Pete Berry discussed design alternates for the replacement bridge. MoDOT was looking at:

- Standard girder bridge—least expensive alternate
- Haunched girder bridge similar to what we constructed at Buck Hollow on Route 17, which has a short concrete railing with a tubular metal railing and used form liner for piers so they have a textured look and weathering steel for the girder so it blends into the landscape nicely; costs about 35% more than the standard girder
- Concrete arch—will cost more than twice as much as the standard girder

Allison Young said that ONSR would like to see a concrete arch to help maintain the character of the historic district. Roberta Young concurred and said that the experience consideration should be similar with a new bridge.

Kitty Henderson said she also concurred that a concrete arch should be preferred.

Mark Chavez asked if it would be possible to see examples of the various designs being considered.

Mike Meinkoth asked what kind of effect assessment FHWA/MoDOT could get on the historic landscape if we put in a concrete arch.

Judith Deel said it would still involve removing a historic element.

Roberta Young said that MoDOT should keep the general character of the landscape for floaters and drivers.

Mark Chavez said that if the existing bridge is a character defining feature, the Secretary of the Interior's Standards say the impact should minimize the impact on the historic bridge but not mimic the historic bridge. We do not want to recreate or confuse the past.

Pete Berry said that he had forwarded a photograph of the Buck Hollow Bridge. The railing on a new bridge using a similar design would have to be different because that railing is no longer considered standard. Standard rail height is 32". We could use a combination of concrete and steel.

Allison Young observed that there are always people around the bridge.

Judith Deel said that foreseeable cumulative effects need to be considered. In the future the other two bridges will come up for replacement, whatever is done at this location will become the standard for those two locations.

Karen Daniels reported that she had taken archival photographs of the bridge and the nearby landscape prior to the construction of the temporary bridge last May. She and Judith had conferred, and believe those photographs to be adequate photographic documentation of the bridge. A brainstorming session of possible mitigation ideas for the bridge and the landscape as a whole was held.

Kitty Henderson asked about the possibility of rehabilitating the Current River Bridge, including widening the deck, if necessary.

Mike Meinkoth expanded the idea to developing a feasibility study and rehabilitation plan for the Current River and Valley Springs Bridges including potential measures to extend their service life.

Raegan Ball said adding an interpretive kiosk at the campground to interpret the bridge is the ONSR would agree. Kitty Henderson said she always likes to see interpretation as part of the mitigation.

Allison Young said that a historical workbook, similar to the Junior Ranger, on bridges—types, decision making process for bridge projects, significance of the area would be nice

Mike Meinkoth mentioned a recent mitigation project where we worked with the Corps of Engineers on an interpretive project that had been on their wish list for years, but they never had



funding for, and asked if ONSR or MSP had any such wish lists for the area that MoDOT might be able to help with

Mike also said that MoDOT has been experimenting with a LIDAR scanner at the bridge, the scans have been done and that various products could be produced based on desire and availability of funds.

Mike mentioned hosting an oral history day to gather thoughts from people who have been using the bridge

There was discussion if such a project could be done through the ONSR or through MSP. Laura Hendrickson said that they have already done a lot of oral history from the Camp Zoe era and have a lot of information from alumni. They didn't collect much information specifically on the bridge.

Karen Daniels said she would send out a list of the mitigation ideas developed, and ask each agency to prioritize their preferences. These will be used to determine the measures that are pursued. The more money that goes into enhancement of the bridge to reduce the overall impacts on the landscape, the less other compensatory mitigation will be done.

Judith Deel asked if there is archaeology in the project area. Rusty Weisman said that there are sites at both ends of the bridge options. They are NRHP eligible for data they can yield, so they will be able to be mitigated if affected. Testing will be needed once a preferred alternative is identified.

Karen Daniels discussed the schedule for the project. We anticipate having a draft Programmatic Agreement for everyone to review in June. The preliminary EA will be available for review by the NPS and FHWA in June/July, and a Draft Section 4(f) Evaluation should be at the Department of Interior for review in August.

The meeting adjourned.

## **Alternates Considered**

The initial range of alternates considered includes the No-Build Alternate, rehabilitation of the existing bridge, and five build alternates. The five build alternates and the rehabilitation alternate are shown below in Figure 1. Any of the proposed build alternates would satisfy the project purpose and needs and would eliminate the ongoing maintenance needs, expense, and inconvenience to motorists arising from the age and condition of the existing bridge. Each new bridge alternate would meet current MoDOT standards and AASHTO national standards for lane width and vehicular load. Consideration will be given for the inclusion of bicycle/pedestrian facilities within this project.

### **No-Build Alternate**

The No-Build alternate would make no improvements to the existing Sinking Creek Bridge. Even if the bridge were reopened as a one lane, load restricted bridge, normal maintenance including pothole patching, pavement replacement, striping, and overlays would only delay the permanent closing of the bridge due to structural deterioration. This alternate would leave traffic on the temporary bridge and no construction would be performed on the existing bridge. The temporary bridge may be unreliable during flood events, because it is not intended to handle the hydraulic forces a permanent bridge is designed for. The temporary bridge requires monitoring for larger rain events and has an increased possibility of being structurally compromised by flooding versus a permanent bridge. For these reasons, the No-Build alternate fails to meet the project purpose of providing a reliable Route 19 crossing over Sinking Creek, but it will be retained in this EA as a baseline for comparison with the other alternates evaluated.

### **Alternate 1**

This alternate requires the existing Sinking Creek Bridge to be replaced in its current location with a new two-lane bridge. It would construct approximately 400 feet of new roadway north and south of the new bridge to tie in each bridge end to the existing roadway and allows the temporary bridge to be used to carry traffic while construction is being performed.

This alternate has the least amount of impacts to the surrounding natural resources of any of the build alternates. It also allows for the old roadway and bridge to be used as a contractor staging area since traffic would continue to use the temporary bridge during construction.

### **Alternate 1a (Rehabilitation)**

This alternate would rehabilitate and widen the existing bridge by removing all the floor system, spandrel bents and columns. A new deck, pre-stressed concrete girders and column bents would be installed. The existing spandrel arch ribs and column footings would remain in place. With this proposed alternate, the spandrel arch ribs would no longer contribute to the structural capacity of the bridge (See Figure 2). Traffic would remain on the temporary bridge during construction.

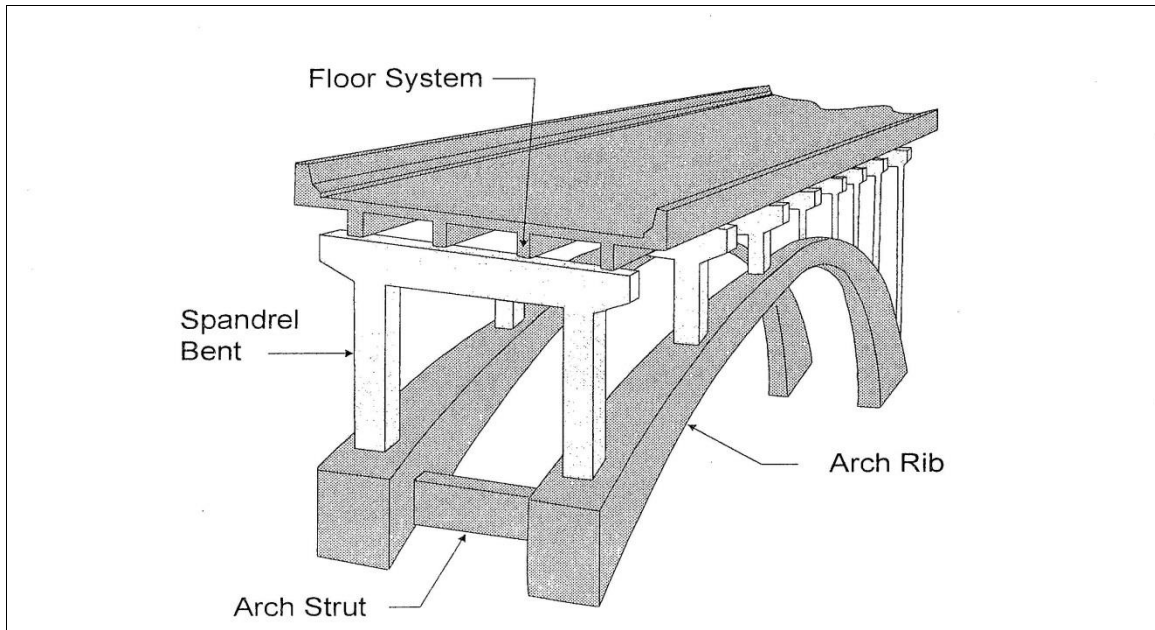


Figure 1 – Open Spandrel Arch Schematic

This alternate has constructability and structural concerns. In order to widen the existing bridge and correct its structural deficiencies the column and spandrels must be replaced with stronger columns and girders added to span between the new columns. The new columns and girders would carry the traffic loads and would remove these loads from the arches. The existing footings, underneath the columns, and arches would remain in place to maintain the historical appearance of the bridge. There are serious concerns of being able to replace the columns and not damaging the existing arches. Also, when the loads are removed from the arches, freeze/thaw cycles will most likely cause the arches to deteriorate at a quicker rate because they were designed to stay under a loaded condition. It would be impractical to use the footings that were constructed in 1926 due to their lack of longevity (see engineering study – Bridge Rehabilitation or Reconstruction Alternatives for Environmental Impact Study by Harrington & Cortelyou, Inc. in appendix). Concrete testing was completed on the Sinking Creek Bridge in 2002. Chloride content in the spandrel arches was determined to be more than twice the threshold for corrosion which will continue to accelerate the deterioration of the historic bridge's architectural significant design.

Because of these constructability and structural concerns, the bridge rehabilitation proposed with Alternate 1a will not meet the project's purpose and need of providing a safe, reliable long-term crossing. The existing bridge would still be functionally obsolete and structurally deficient. The Rehabilitation Alternate will be retained for further study similar to the No-Build Alternate as a base line for comparison with the other alternates evaluated. This will be important information for the consulting parties and the 4(f) evaluation.

## Alternate 2

This alternate constructs approximately 1400 feet of new roadway and requires constructing a new bridge that would replace the existing Temporary Sinking Creek Bridge in the same alignment. It would raise the vertical alignment of the new Bridge higher than the temporary one and traffic would be temporarily rerouted. A couple potential traffic detour options exist. One is an approximate 90-mile long detour along state highways. The western detour would be along Route 60 to Route 17 in Mountain View to Route 32 in Licking to Route 19 in Salem. The

eastern detour would be Route 60 to Route 21 near Van Buren to Route 72 near Centerville to Route 19 in Salem. The other is placing non-truck traffic on the existing Sinking Creek Bridge and rerouting truck traffic on a nearby paved County Road that goes through the new Echo Bluff State Park located just east of the proposed bridge site. This would be about a 2 mile detour for truck traffic. Neither detour option is ideal. The 90-mile long detours would be a financial hardship to the many commercial and tourism industries that depend on Route 19, would be a potential two hour inconvenience to local travel, delay school bus travel, and would hinder response time for emergency vehicles. The other detour routes large trucks through the state park which would disrupt campers and other recreational activities as well as deteriorate the county road through the park.

### **Alternate 3**

This alternate constructs approximately 2400 feet of new roadway and requires the existing Sinking Creek Bridge to be replaced just downstream of Alternate 2. The temporary bridge would be used to carry traffic while construction is being performed.

The elevation of Route 19 as it crosses the side road that serves as access to Current River and camping area is 20' to 25' higher than the existing access road. This will result in a new access road connection that will be much steeper than existing and impact a wide area of forested land. The steeper roadway would be much more difficult to negotiate than the existing.

### **Alternate 4**

Alternate 4 would construct a new structure to replace the Sinking Creek Bridge downstream of the other alternates. Alternate 4 is the furthest alternative from the existing location and the closest in proximity to the Current River. Alternate 4 is the straightest of the proposed alignments and would require approximately 2,600 feet of new roadway to be constructed to connect to existing Route 19. Traffic, truck and non-truck, would still be able to use the temporary bridge during construction of this alternate.

### **Alternate 5**

Alternative 5 would build a new structure upstream from the existing Sinking Creek Bridge. To construct at this location would require that 3,100 feet of new roadway to be built to connect back with the existing road. Traffic would still be able to use the temporary bridge during the construction of this upstream alternative.

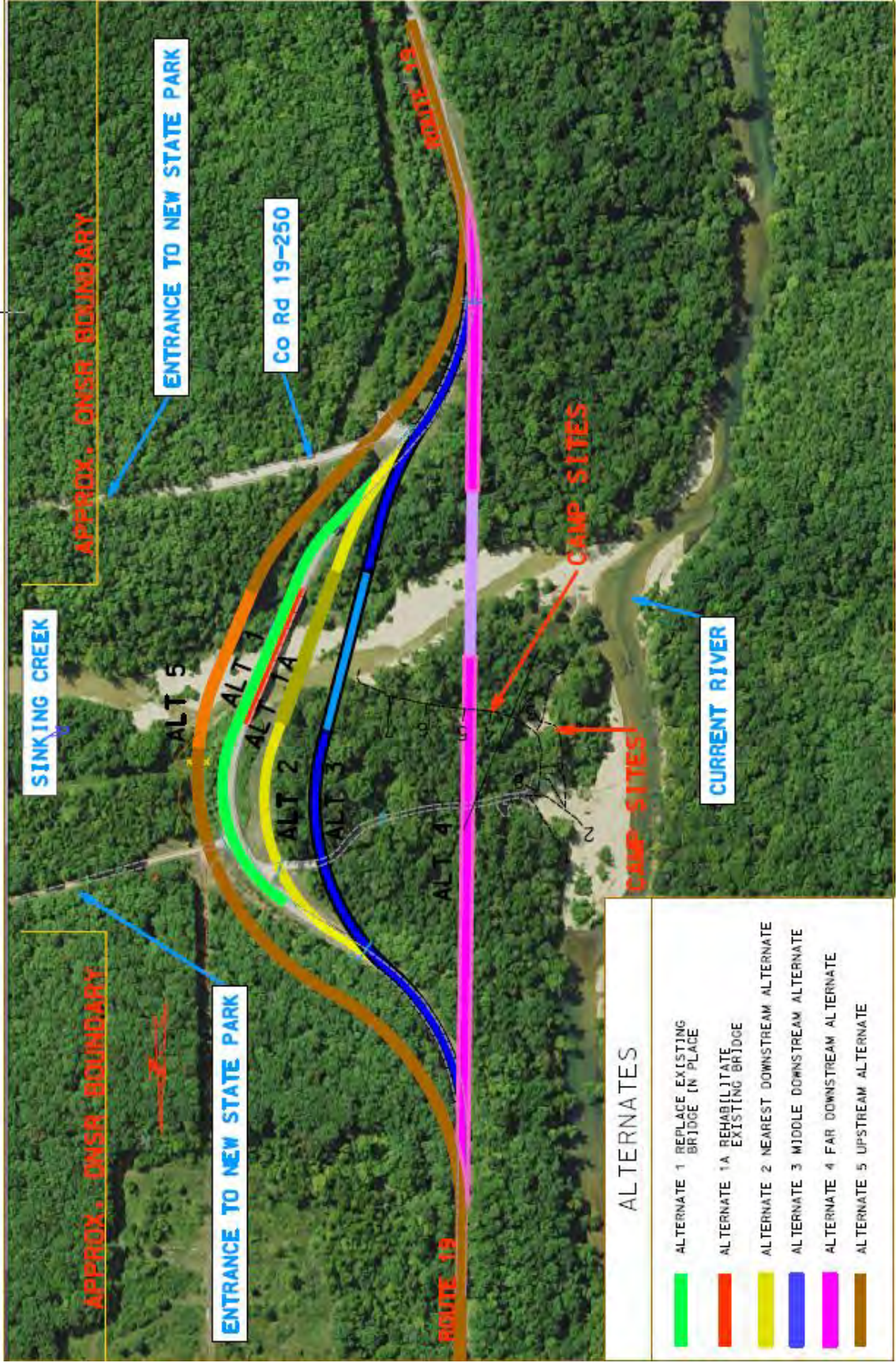


Figure 2- Alternates Display

## **Alternates Dismissed from Further Evaluation**

### *Alternate 4 Dismissal*

Alternate 4 has been dismissed from further evaluation due to constructability issues and impacts to the surrounding landscape. The elevation of Route 19 as it crosses the side road that serves as access to Current River and camping area is 25' to 30' higher than the existing access road. This will result in a new access road connection that will be much steeper than existing and impact a wide area of forested land and potentially the campground restrooms. Several of the existing campsites would be eliminated with this alignment.

Due to the Alternate's close proximity to the confluence of Sinking Creek and Current River, the roadway fill has the potential of creating excess backwater flooding properties upstream of the Current River. Building a structure in Alternative 4's proposed location would impact hydraulics and potentially deposit sediment into the Current River. This alternative would require a longer structure as the Sinking Creek valley is widening at the confluence of the Current River. Sinking Creek, which is on a steeper stream gradient, is depositing its sediment load in this area as it merges with the shallower gradient, slower flowing Current River. Constructing a bridge in such a dynamic location may alter the natural deposition of materials and sediment into the Current River.

Though the roadway and bridge relocation proposed with Alternate 4 does meet the project's purpose and need of having a crossing that is functionally and structurally sufficient and provides a long-term crossing it greatly impacts the surrounding landscape and has constructability issues associated with the close proximity to the confluence of Sinking Creek and Current River.

### *Alternate 5 Dismissal*

Alternate 5 has been dismissed from further evaluation due to safety issues and impacts to the surrounding landscape. This alternate includes significant excavation south and north of the Sinking Creek crossing. These two cut sections would be approximately 35' to 40' in depth as measured from the ditch bottom, and the combined backslope and roadway widths would impact a 200' to 250' wide area of forested land. With the use of retaining walls, this width might be reduced to 100' to 150' with added associated costs. This alternate would also require the relocation of a recently installed 3-phase overhead/underground power line. Existing County Road 19-250 just south of Sinking Creek is currently a steep upgrade road. This road has recently been surfaced with full depth concrete pavement to serve as the main south entrance into the new Echo Bluff State Park. The new roadway elevation for Route 19 would set much lower than the County Road resulting in the need for complete reconstruction of a portion of CR 19-250. The connection work would be lengthy and consist of excavation that would impact yet another large, wide area of forested land. Also, the final grade of CR 19-250 would be much steeper than the existing and could present safety concerns especially during snow/ice conditions.

Though the roadway and bridge relocation proposed with Alternate 5 does meet the project's purpose and need of having a crossing that is functionally and structurally sufficient and provides a long-term crossing it greatly impacts the surrounding landscape and compromises safety at CR 19-250.

## **Alternates Retained in this EA**

Alternates 1, 2, and 3, will be retained and evaluated in detail for this EA along with the No-Build Alternate and the Rehabilitation (1a) Alternate, which serve as baselines for evaluating the proposed build alternates. The three build alternates are being retained because they best meet the purpose and need established earlier of having a crossing that is not functionally obsolete or structurally deficient and provides a safe, reliable long-term crossing.

**Preferred Alternate**

XXXX

<b>Summary of Potential Impacts For Reasonable Alternates</b>					
	<b>No-Build Alternate</b>	<b>Alternate 1</b>	<b>Alternate 1a</b>	<b>Alternate 2</b>	<b>Alternate 3</b>
<b>Costs (Millions)</b>					
Construction	0	2.8	2.9	3.0	3.3
Right of Way	0	0	0	0.017	0.031
Total	0	\$2.800	\$2.900	\$3.017	\$3.331
Right of Way Impacts					
Residential Relocations	0	0	0	0	0
Commercial Relocations	0	0	0	0	0
Right of Way (New) Acres	0	0	0	2.10	3.93
Environmental Impacts					
Potential Section 4 (f) Properties (Parklands)	0	0	0		
Wetlands	0				
Creek/Stream/River Crossings	0				
Farmland (acres)	0				
Floodplain (acres)	0				
Threatened and Endangered Species	0				
Hazardous Waste	0				
Cultural Resources Impacts					
Cemeteries	0				
Previously Recorded Archaeological Sites	0				
Potential Historic/4 (f) Properties	0				

## Karen Daniels

---

**From:** Hendrickson, Laura <laura.hendrickson@dnr.mo.gov>  
**Sent:** Monday, March 28, 2016 3:38 PM  
**To:** Karen Daniels  
**Cc:** Bayer, Brent  
**Subject:** Sinking Creek bridge conference call

Karen,

I confirmed the following with our Director Bill Bryan:

1. Missouri State Parks (MSP) is not interested in taking over the care and maintenance of the Sinking Creek bridge.
2. We agree that the best proposed location for the replacement bridge over Sinking Creek is back in its original location or Alternate 1.
3. Our preferred bridge design would be the same arch style architecture as exists with the other two bridges over the Current River and Spring Valley.

Laura Hendrickson  
District Supervisor, Ozarks District Office  
Post Office Box 951  
Lebanon MO 65536  
Phone 417.532.7161 or 417.718.1558  
E-mail: [laura.hendrickson@dnr.mo.gov](mailto:laura.hendrickson@dnr.mo.gov)

<image002.jpg>

You are always welcome in [Missouri state parks!](#)



**Appendix D:  
Agency Comments on Draft Section 4(f) Evaluation**

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# United States Department of the Interior

OFFICE OF THE SECRETARY  
Office of Environmental Policy and Compliance  
Denver Federal Center, Building 67, Room 118  
Post Office Box 25007 (D-108)  
Denver, Colorado 80225-0007

August 4, 2016

9043.1  
ER-16/0353

Mr. Kevin Ward  
Division Administrator  
Federal Highway Administration  
Missouri Division  
3220 W. Edgewood, Suite H  
Jefferson City, Missouri 65109

Dear Mr. Ward:

The Department of the Interior (Department) has reviewed the Draft Section 4(f) Evaluation for Route 19 Bridge over Sinking Creek in Shannon County, Missouri, and offers the following comments and recommendations for your consideration:

## **Section 4(f) Comments**

This document considers effects to properties identified in the project study area as eligible to be considered under Section 4(f) of the Department of Transportation Act of 1966 (codified at 49 U.S.C. 303§ 771.135) associated with the Sinking Creek bridge project. Missouri Route 19 crosses Sinking Creek just west of the Current River in Shannon County. The Sinking Creek Bridge is 90 years old; a routine inspection of the bridge was conducted in February 2015 and was found structurally deficient. The bridge's design is functionally obsolete and does not meet the Missouri Department of Transportation's (MoDOT) standards for lane width, shoulders or vertical clearance. The bridge was closed in May 2015 after a temporary bridge was constructed. Not intended to be a permanent crossing for Sinking Creek, the temporary bridge was constructed about seven feet lower than the existing high water requirements and is susceptible to flooding.

The draft Section 4(f) evaluation, prepared by the Federal Highway Administration (FHWA) and the MoDOT, considered the impacts to the Ozark National Scenic Riverways (Riverways) and specifically the Sinking Creek backcountry campground, the Sinking Creek Bridge (historic property), and the Three Bridges Historic District. FHWA and MoDOT explored several avoidance alternatives, including a no build alternative. Two detour routes, putting Route 19 traffic on other state and federal routes, would result in excessively long delays getting around the bridge, and deemed not prudent. A rehabilitation alternative, an attempt to extend the useful life of the existing bridge, was dismissed as not prudent because of cost and engineering

concerns. Five alternative routes, from replacing the existing bridge in its current alignment to several alternate alignments, were ultimately considered. Two of these were dismissed as having unacceptable environmental impacts, and three were carried through the full analysis.

The FHWA and MoDOT determined that, of the three alternatives carried through the analysis, the project would have a *de minimis* impact on the Riverways and the backcountry campground. The largest use of land would be 3.93 acres of land under Alternative 3 for additional right-of-way. The Department has no say in these *de minimis* determinations other than to note that the documentation provides evidence that the Riverways has been informed of the determination and has been asked to concur. The evaluation does not indicate that they have responded.

The project would have an adverse effect under Section 106 of the National Historic Preservation Act, as amended, to the historic bridge and to the Three Bridges Historic District. A reference in the evaluation mentions the potential for impacts to two eligible archeological sites that would require mitigation; the evaluation does not mention whether these sites are significant for the information they contain, or whether they have value if preserved in place. A determination of an adverse effect under Section 106 constitutes a use under Section 4(f); for archeological sites, Section 4(f) applies only if the historic values of the resource can be preserved through mitigation.

The Department would concur with the FHWA and the MoDOT on a determination of no feasible or prudent alternative to the preferred alternative, if built as proposed, which would result in impacts to eligible properties. However, the FHWA and MoDOT have not selected a preferred alternative; both the management at the Riverways and the State Historic Preservation Officer have indicated the replacement of the bridge on the existing alignment is preferable to the other two build alternatives. The Department cannot concur that all measures to minimize harm to the historic properties have been included. A programmatic agreement (PA) providing mitigation necessary for this property has been drafted and is under negotiation. The Department will withhold our concurrence on the measures to minimize harm until an agreement is reached and the PA signed. We would be willing to reconsider this position upon receipt of the signed PA.

### **Fish and Wildlife Comments**

Of the alternatives considered in the evaluation, The U.S. Fish and Wildlife Service (FWS) supports Alternative 1, which involves replacement of the Sinking Creek Bridge in its current location. This alternative would require no new construction of right-of-way (ROW), whereas Alternatives 2 and 3 would require 2.3 acres and 3.93 acres of new ROW, respectively. Removal of forested habitat as part of ROW construction could affect the following federally listed bat species known to occur within the project area: the gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), and northern long-eared bat (*Myotis septentrionalis*). Removal of trees within the riparian corridor as part of Alternatives 2 and 3 also may increase erosion of the Sinking Creek stream banks, resulting in sediment release into the Current River. The federally endangered Ozark Hellbender (*Cryptobranchus alleganiensis bishopi*) occurs in the Current River, and sedimentation is considered one of the primary threats to species because sediment can smother adult and larval habitat.

The evaluation states that MoDOT and FHWA are currently preparing an Environmental Assessment (EA). When developing the EA, and for consultation under section 7(a)(2) of the Endangered Species Act, FWS recommends that MoDOT and FHWA consider the possibility of gray bats roosting on the underside of the Sinking Creek bridge. Gray bats are known to occur within the project area and have been documented at other locations roosting under bridges, both during the day and at night. For this reason, surveys should be conducted to evaluate potential effects to the species.

The Department has a continuing interest in working with the FHWA and the MoDOT to ensure impacts to resources of concern to the Department are adequately addressed. For issues concerning Section 4(f) resources, please contact Regional Environmental Coordinator Nick Chevance, Midwest Regional Office, National Park Service, 601 Riverfront Drive, Omaha, Nebraska 68102, telephone (402) 661-1844. For issues concerning the FWS comments, please contact Trisha Crabill, U.S. Fish and Wildlife Service, Missouri Ecological Services Field Office, 101 Park DeVill Drive, Suite A, Columbia, Missouri 65203, telephone (573) 234-2132, extension 121.

Sincerely,

A handwritten signature in black ink that reads "Robert F. Stewart". The signature is written in a cursive style with a long horizontal line extending from the end of the name.

Robert F. Stewart  
Regional Environmental Officer

cc: Raegan Ball