

# **State Level Historic Documentation Report**

State Project No. S333-1-5.65  
Federal Project No. ACBR-0001(244)D

## **Sleepy Creek Arch Bridge Morgan County**



**Prepared by:**

**Randy Epperly III, Historian**

Department of Transportation  
Division of Highways  
Engineering Division  
Environmental Section

**December 22, 2014**

# STATE LEVEL HISTORIC DOCUMENTATION

## SLEEPY CREEK ARCH BRIDGE

Location: County Route 1, spanning Sleepy Creek  
Morgan County  
West Virginia

USGS Cherry Run Quadrangle

Date of Construction: 1923

Builder: Luten Bridge Company

Present Owner: West Virginia Department of Transportation  
Division of Highways  
1900 Kanawha Boulevard, Building 5, Room A-110  
Charleston, WV 25305

Present Use: Vehicular Bridge

Significance: The Sleepy Creek Arch Bridge is eligible under Criterion C of the National Register of Historic Places for its significance as a significant example of a 2 span concrete arch, continuous span design, and the work of a master builder, Luten Bridge Company.

Project Information: The project has been undertaken due to the poor condition of the superstructure and its narrow width. The project will allow trucks to better negotiate the approaches by straightening the curves on each end of the bridge. The existing bridge warrants replacement. The documentation was undertaken in December 2014 in accordance with a Memorandum of Agreement among the Federal Highway Administration, West Virginia Department of Transportation, and West Virginia State Historic Preservation Office. These measures are required prior to replacement of this National Register eligible structure.

No original plans are available.

Randy Epperly III, Historian  
West Virginia Division of Highways  
Charleston, WV 25305  
December 22, 2014

The Sleepy Creek Arch Bridge carries County Route 1 over Sleepy Creek in Morgan County near the town of Sleepy Creek. It was built in 1923, by the Luten Bridge Company. No original plans were found for the bridge. The bridge is eligible under Criterion C of the National Register of Historic Places as a significant example of a 2 span concrete arch, continuous span design, and its association with Luten Bridge Company, a master builder.

Sleepy Creek Arch Bridge consists of 2 simple reinforced concrete deck arches supported by a concrete pier and 2 concrete footings. The railings, a feature of Luten bridges, are solid concrete parapets. The overall length of the bridge is 103 feet 5 inches and the overall width is 15 feet 6 inches. The 2008 Average Daily Traffic is 670 vehicles per day and it is used as a one-lane structure. Bridge plates are located on the bridge showing the builder's name and date and the county court. The bridge is in poor condition. The wingwalls have been stabilized and the spans and arch are deteriorating. Rebar is visible on the pier. The wingwalls and spandrel walls are fractured and the parapet walls have been damaged by vehicles (WVDOH Bridge Files).

Concrete deck arch bridges were primarily built between 1900 and 1951. They were built as a cheaper alternative to a masonry bridge. Closed spandrel arches are used for shorter bridge spans as compared to open spandrel arches. In a closed spandrel the fill material within the spandrel is what takes the traffic loads. The arch ring and spandrel walls are the significant elements of a closed spandrel bridge (KCI, 2014).

The Luten Bridge Company of York, Pennsylvania was founded in 1902 by Daniel Luten. The company was known during the early 20<sup>th</sup> century for their concrete arch bridge designs. The company was known as the National Bridge Company until 1920 when the name was changed to Luten. The company was a prolific builder in West Virginia during the early 1920s.

## BIBLIOGRAPHY

Ficker, Maryellen. Bridge Builders. January 2003. West Virginia Division of Highways.

KCI Technologies, Inc., and Mead & Hunt, Inc. West Virginia Statewide Historic Bridge Survey:  
Final Survey Report. May 2014.

West Virginia Division of Highways, Bridge Files, Maintenance Division, Building 5, Capitol  
Complex, Charleston, WV 25305. 2010.



STATE LEVEL HISTORIC DOCUMENTATION  
INDEX TO PHOTOGRAPHS

Sleepy Creek Arch Bridge  
County Route 1  
Sleepy Creek  
Morgan County, West Virginia

Photographer: Randy Epperly

APRIL 2012

SLEEPY CREEK ARCH BRIDGE-1	View of Sleepy Creek Arch Bridge looking northwest.
SLEEPY CREEK ARCH BRIDGE-2	View of downstream side of Sleepy Creek Arch Bridge.
SLEEPY CREEK ARCH BRIDGE-3	View of bridge builders' plaque.
SLEEPY CREEK ARCH BRIDGE-4	View of County Court bridge plaque.
SLEEPY CREEK ARCH BRIDGE-5	View of upstream side of Sleepy Creek Arch Bridge.
SLEEPY CREEK ARCH BRIDGE-6	View of Sleepy Creek Arch Bridge looking southeast.

**MEMORANDUM OF AGREEMENT  
BY AND AMONG  
THE FEDERAL HIGHWAY ADMINISTRATION  
THE WEST VIRGINIA STATE HISTORIC PRESERVATION OFFICE  
AND THE WEST VIRGINIA DIVISION OF HIGHWAYS  
REGARDING IMPLEMENTATION OF THE SLEEPY CREEK ARCH BRIDGE  
REPLACEMENT PROJECT  
S333-1-5.65  
ACBR-0001(244)D  
MORGAN COUNTY, WEST VIRGINIA  
SEPTEMBER 2014**

**WHEREAS**, the Federal Highway Administration (FHWA), in cooperation with the West Virginia Division of Highways (WVDOH), proposes to replace the Sleepy Creek Arch Bridge, which spans Sleepy Creek in Morgan County, hereinafter referred to as the Project. The improvements involve the construction of a new bridge and the removal of the existing bridge; and

**WHEREAS**, the FHWA has determined that the Project will have an adverse effect upon the Sleepy Creek Arch Bridge, a property eligible for the National Register of Historic Places (NRHP); and

**WHEREAS**, the FHWA has consulted with the West Virginia State Historic Preservation Officer (WVSHPO) pursuant to 36 CFR Part 800 Implementing Section 106 of the National Historic Preservation Act; (16 U.S.C., 470f); and

**WHEREAS**, the FHWA has determined that the Project will not effect archaeological properties; and

**WHEREAS**, the WVDOH contacted the Morgan County Historic and Genealogical Society regarding the Project. The Morgan County Historic and Genealogical Society chose not to respond. The project was also placed on the WVDOH's website for public comment. Two comments were received but did not address cultural resources.

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

**NOW, THEREFORE**, the FHWA, the WVSHPO, and the WVDOH, agree that the undertaking will be implemented in accordance with the following stipulations in order to take into account the effects of the undertaking on historic properties.

## STIPULATIONS

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

### **Sleepy Creek Bridge**

- I. The Sleepy Creek Arch Bridge will be documented in its present historic setting. The documentation package will include 5"x7" black and white digital prints in accordance with the National Register of Historic Places and National Historic Landmarks Survey Photo Policy Expansion of January 2009.
- II. A brief history of the structure will be included along with fully completed West Virginia Historic Property Inventory forms and copies of any available plan sheets and drawings of the bridge from WVDOH bridge files
- III. West Virginia Division of Highways staff will provide Morgan County Public Library a copy of the Sleepy Creek Arch Bridge State Level Historic Documentation for references and educational purposes.
- IV. 100 color brochures of the Sleepy Creek Arch Bridge will be developed by the WVDOH and distributed to the Morgan County Public Library. The WVSHPO will be given the opportunity to review all educational materials developed for this stipulation. A CD containing the brochure will also be given to the library to print brochures when the original total has been exhausted.
- V. The Sleepy Creek Arch Bridge will be documented on a future website listing historic bridges.

### **VI. Duration**

This MOA will expire if its stipulations are not carried out within five (5) years from the date of its execution. At such time, and prior to work continuing on the undertaking, the FHWA shall either (a) execute an MOA pursuant to 36 CFR 800.6, or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR 800.7. Prior to such time, FHWA may consult with other signatories to reconsider the terms of the MOA and amend it in accordance with Stipulation XI below. FHWA shall notify the signatories as to the course of action it will pursue.

### **VIII. Post-Review Discoveries**

If any unanticipated discoveries of historic properties or archaeological sites, including human burial sites and/or skeletal remains, are encountered during the implementation of this undertaking, work shall be suspended in the area of the discovery until the

WVDOH has developed and implemented an appropriate treatment plan in consultation with the WVSHPO pursuant to 800.13 (b).

#### **IX. Monitoring and Reporting**

Each year following the execution of this MOA until it expires or is terminated, FHWA shall provide all parties to this MOA a summary report detailing work carried out pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in FHWA's efforts to carry out the terms of this MOA.

#### **X. Dispute Resolution**

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

- A. Forward all documentation relevant to the dispute, including the FHWA's proposed resolution, to the ACHP. The ACHP shall provide FHWA with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FHWA shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. FHWA will then proceed according to its final decision.
- B. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, FHWA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, FHWA shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the MOA, and provide them and the ACHP with a copy of such written response.
- C. FHWA's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

#### **XI. Amendments**

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

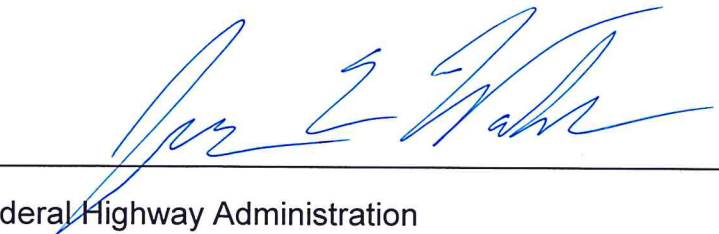
## **XII. Termination**

If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per Stipulation 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 MOA upon written notification to the other signatories.

Once the MOA is terminated, and prior to work continuing on the undertaking, FHWA must either (a) execute a MOA pursuant to 36 CFR 800.6, or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR 800.7. FHWA shall notify the signatories as to the course of action it will pursue.

**EXECUTION** of the Memorandum of Agreement by the FHWA, WWSHPO, the WVDOT and the Council, and implementation of its terms evidence that the FHWA has afforded the Council an opportunity to comment on the Sleepy Creek Arch Bridge Replacement project and its effects on historic properties, and that the FHWA has taken into account the effects of the undertaking on the historic property.

**Signatories Page**

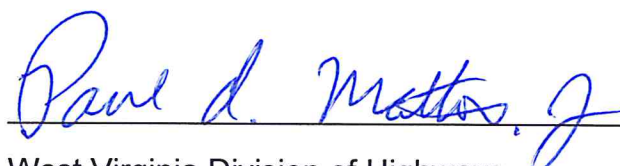
  
\_\_\_\_\_  
Federal Highway Administration

10/21/14  
Date

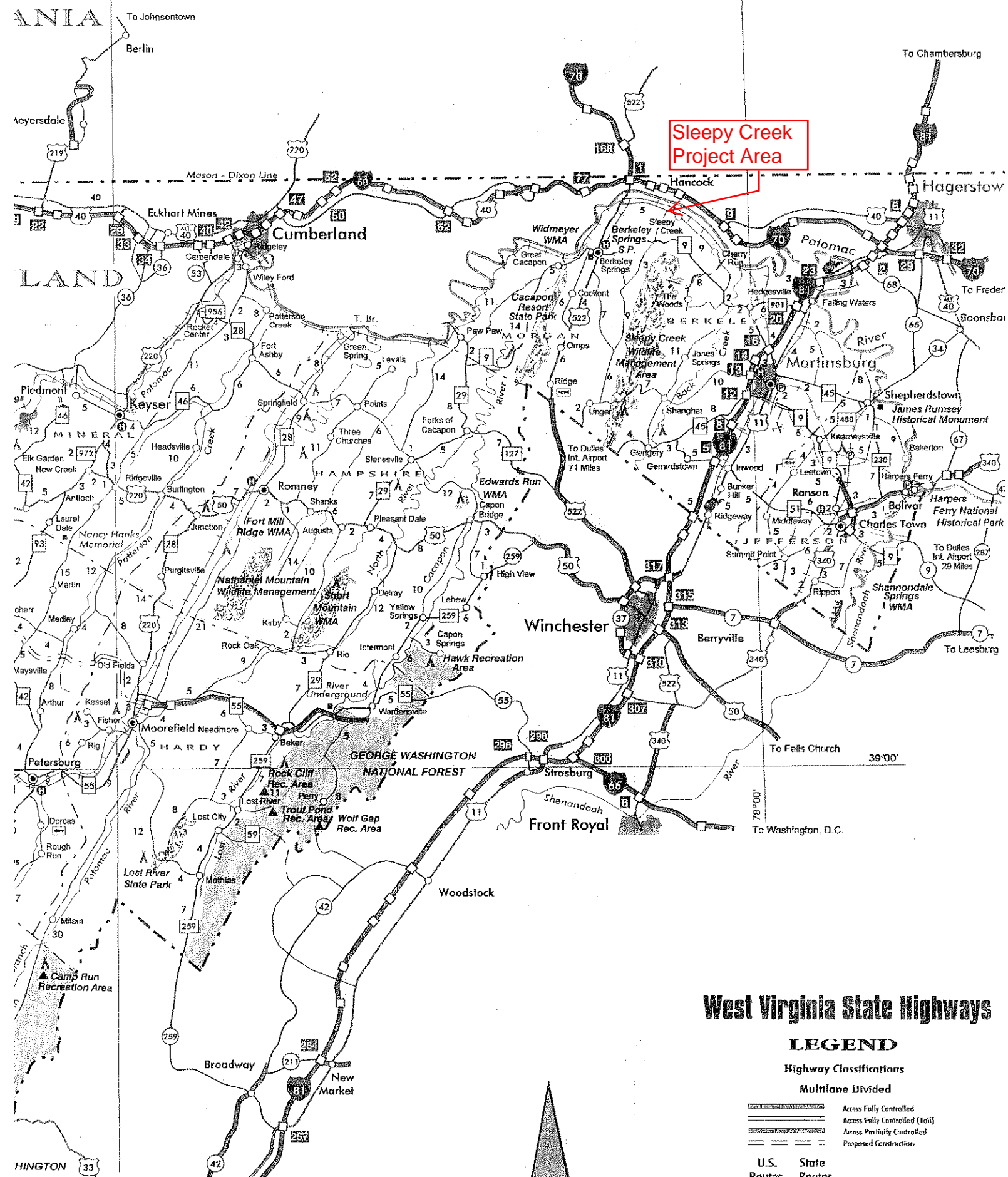
  
\_\_\_\_\_  
West Virginia Deputy State Historic Preservation Officer

9/16/14  
Date

CONCUR:

  
\_\_\_\_\_  
West Virginia Division of Highways

9/18/14  
Date









# Sleepy Creek Arch Bridge


## Morgan County

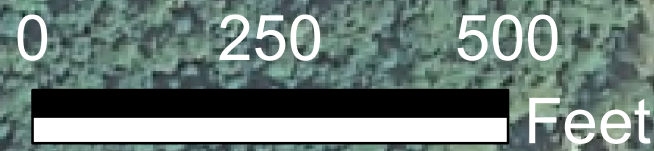
### S333-1-5.65

West Virginia Division of Highways  
Engineering Division  
Environmental Section  
Randy Epperly  
September 29, 2011



**Legend**

 Sleepy Creek Arch Bridge





# West Virginia Historic Bridge Inventory Form

Bridge No. 33-001/00-005.69 BARS No. 33A002 Federal Bridge No. 00000000033A002 Bridge Design No. 7421.0

## IDENTIFICATION INFORMATION

SHPO Survey No. MN-0227 Owner State Highway Agency  
Local Name SLEEPY CREEK ARCH Status Extant - in service  
Other Local Name

## LOCATIONAL AND SETTING INFORMATION

District 05 County Morgan Latitude 39400000 Longitude 078052400  
Location 0.18 MI E OF CR 1/7 SLS UTM-Northing  
Facility Carried By Structure CR 01 SLS UTM-Easting  
UTM Zone  
Features Intersected SLEEPY CREEK Surrounding Land Use Forested  
Type of Development Rural - (undeveloped area outside communities)

## STRUCTURAL INFORMATION

Main Span Type Concrete Arch - Deck (continuous) Structure Length (ft) 103  
Main Span Type Code 211 Length of Maximum Span (ft) 50  
Number of Spans in Main Unit 001 Average Daily Traffic 001100 Year 2002  
Number of Approach Spans 0001 Sufficiency Rating 0322 Skew 00  
*(Note: Data current as of April 2006 database)*

## BRIDGE DESCRIPTIVE INFORMATION

Year Built 1923 Arrangement  
Year Reconstructed Connection Type  
Truss Bridge Type Truss Details  
Alteration(s) Date of Alterations (Year)  
Change in railing/parapet Unknown  
Altered substructure Unknown

Architectural Treatment(s) Bridge Plate Text  
Decorative pier nose  
(2) plaques. "1923, LUTEN BRIDGE CO., YORK, PA" and "1922, F.E. RICE, PRES., P.C. YOST, M.A. VANORSDALE, H.W. BAYER, ENG., 1923, P.C. YOST, PRES., M.A. VANORSDALE, J.W. UNCER, M.S. HARMISON, CLERK, H.D. ALLEN, PROS. ATTY., L.M. YOST, ENG"

## BRIDGE HISTORY

Engineer or Designer Unknown Builder or Fabricator Luten Bridge Company

Bridge Plan Location Unknown

Additional Details: Concrete barrel has exposed rebar on south side. Southeast wingwall has been repaired with 3 vertical angles. Concrete parapet with incised rectangular panels. Repairs to end of parapet. Decorative pier nose. Multi-span closed spandrel elliptical arch. WVDOH bridge database records indicate the bridge was constructed by the Luten Bridge Company. Bridge possesses distinctive nonsymmetrical design that was a patented feature of Daniel B. Luten and this feature indicates that the bridge incorporates engineering design related directly to the work of Daniel B. Luten, a nationally recognized bridge designer.

<b>Bridge No.</b> 33-001/00-005.69	<b>BARS No.</b> 33A002	<b>Federal Bridge No.</b> 00000000033A002	<b>Bridge Design No.</b> 7421.0
<b>NATIONAL REGISTER EVALUATION INFORMATION</b>			

**National Register Determination**

**Reason Not Evaluated**

**National Register Determination Date**

This bridge exhibits continuous span design, demonstrating important engineering design or technology as a variation within its class.

This bridge was designed or constructed by an engineer or firm whose work is distinguishable on the national level.

This bridge displays one or more architectural treatments.

Although this bridge has undergone alterations, it still retains the historic integrity necessary to convey its engineering significance and, therefore, is eligible for the National Register under Criterion C.



West Virginia Historic Bridge Inventory Form  
Form Prepared By Mead & Hunt and KCI  
Form Preparation Date 2011

GENERAL BRIDGE INFORMATION

BARS Number: 33A002

District: 05

County/Rt/Milepost: 33-001/00-005.69

County: Morgan

CRITERION A

Criterion A:

(If there is no Criterion A significance, both points fields must be 0 and do not continue to integrity)

Criterion A Integrity: (Complete both reason and point allocation, even if 0)

Design, Materials, Workmanship:

Major Alterations:

Minor Alterations:

Location:

Setting, Association, Feeling:

Major Alterations:

Minor Alterations:

Criterion A Significance Points:

Criterion A Integrity Points:

Criterion A Total Points:

Save Record

CRITERION C

Criterion C: (Highlight Choices in Boxes Below)

Distinctive Characteristics:

0

Early period of use (2)

0

Above average main span length (2)

1

Continuous design (1)

0

Uncommon type, fabrication or design features (4)

Significant fabrication or design features (2)

0

Sig. innovation in design or construction technique (4)

Innovation in design or construction technique (2)

0

Significant technological advancement in materials (4)

Technological advancement in materials (2)

Represents work of a master:

4

Nationally recognized engineer, architect or firm (4)

Known regional or West Virginia-based engineer or firm (2)

DOH engineer with recognition (2)

High artistic value:

2

Displays at least one architectural treatment (2)

High artistic value in overall form and materials (4)

Criterion C Points - Must be 4 or greater to continue to integrity:

Criterion C Significance Codes (correspond to choices above) - Complete only if points are 4 or greater than 4 (Otherwise choose "NCS" in box 1) and click the "Save Record" button below:

1: C3

2: C7A

3: C8A

4:

5:

Criterion C Integrity: (Complete both reason and point allocation, even if 0)

Design, Materials, Workmanship:

Minor Alterations

-2

Major Alterations:

Minor Alterations:

Alterations to parapet/railing

Location:

Original location

0

Description of Alterations:

Setting, Association, Feeling:

Retains integrity of setting/feeling/association

0

Description of Alterations:

Criterion C Points - Must be 4 or greater than 4 to continue to integrity:

Criterion C Integrity Points:

Criterion C Total Points:

7

-2

5





Photo #1: Looking northwest at Sleepy Creek Arch Bridge.



Photo #2: Looking at downstream side of Sleepy Creek Arch Bridge.





Photo #3: Bridge builders plate.



Photo #4: County Court plate.





Photo #5: Looking at upstream side of Sleepy Creek Arch Bridge.



Photo #6: Looking southeast at Sleepy Creek Arch Bridge.





Photo #7: Looking west at County Route 1 from the bridge.



Photo #8: Looking downstream from bridge toward new alignment.