

State Level Historic Documentation Report

State Project No. S229-50-10.65
Federal Project No. STP-0050(420)D

New Creek Bridge Mineral County



Prepared by:

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Department of Transportation
Division of Highways
Engineering Division
Environmental Section

April 2023

STATE LEVEL HISTORIC DOCUMENTATION NEW CREEK BRIDGE

Location: US Route 50, spanning New Creek
Mineral County
West Virginia

USGS Antioch Quadrangle

Date of Construction: 1931

Builder: Harmon Brothers Construction 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: New Creek Bridge is eligible for the National Register of Historic Places under Criterion C for its innovative design or construction technique that represents a variation in bridge construction. The bridge was built by Harmon Brothers Construction Company, considered a known regional or West Virginia based builder whose work is distinguishable within the state.

Project Information: The project has been undertaken due to its poor condition and deficiencies of the structure. The project will provide a new bridge crossing New Creek. The existing bridge is structurally deficient and posted for weight limits. The existing bridge warrants replacement.

The documentation was undertaken in April 2023 in accordance with a Memorandum of Agreement among the Federal Highway Administration, West Virginia Department of Transportation, West Virginia State Historic Preservation Office. The bridge is scheduled to be replaced in 2026.

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Charleston, WV 25305
April 2023

New Creek Bridge is located in Mineral County, just south of Keyser, and carries US Route 50 over New Creek. It was constructed in 1931 by Harmon Brothers Construction Company. The structure consists of three simple reinforced concrete T-beam spans supported by full height concrete abutments and two concrete piers. The structure is highly skewed. The concrete deck contains an asphalt wearing surface. The overall length of the bridge is 133 feet and the width is 33 feet. There are no sidewalks on the bridge. Flexbeam is located at each end of the bridge and overlaps the end parapet posts.

New Creek Bridge is eligible for the National Register of Historic Places under Criterion C for its innovative design or construction technique that represents a variation in bridge construction. The bridge was built by Harmon Brothers Construction Company, considered a known regional or West Virginia based builder whose work is distinguishable within the state (KCI, 2015). No further information has been found regarding the company.

The existing bridge is structurally deficient. The superstructure, deck, and substructure are rated as poor. The show cracking, heavy concrete deterioration, and spalling (WVDOH, 2023).

The WV Historic Bridge Survey noted the New Creek Bridge was designed by a known regional or West Virginia based engineer or firm whose work is distinguishable in the state. The bridge also conveys an innovative design due to being highly skewed. Further information on Harmon Brothers Construction Company has not been found (KCI, 2015).

Concrete T-beam bridges were typically cast in place concrete bridges constructed in the 1930s and 1940s and as late as the 1960s. The T-beam was reinforced with T-shaped stems the length of the superstructure allowing for span length increases. T-beams were reinforced primarily by stirrups placed within the stem at intervals. Secondary reinforcement is at the sides of the beams. T-beams were often less than 50 feet in length, although some were over 200 feet. Although similar to concrete slab bridges they required piers, making them more expensive to construct. (KCI, p. 89-90). New Creek Bridge is significant due to its length, curvature, and early construction in the concrete T-beam period.

Mineral County was created in 1866 and Keyser is the county seat. Before being renamed for William Keyser, an official of the Baltimore & Ohio Railway, New Creek was one of the names for the current town of Keyser. Now New Creek refers to the unincorporated area just south of Keyser. During the Civil War small conflicts were fought in Mineral County and union soldiers had a training camp in the New Creek area. US Route 50 roughly follows the old Northwestern Turnpike and WV 972 in the project area roughly follows the old New Creek and Hardy Turnpike. The project location was an important intersection between the two turnpikes. It was particularly strategic for movement of troops and supplies for both the Union and Confederacy during the Civil War (Mineral County, 2021).

BIBLIOGRAPHY

KCI Technologies and Mead & Hunt Inc. West Virginia Statewide Historic Bridge Survey: Final Survey Report. April 2015.

Mineral County, WV. www.mineralwv.org/history 2021. Retrieved 19 May 2022.

West Virginia Division of Highways. New Creek Bridge Design Study. 22 February 2023.

STATE LEVEL HISTORIC DOCUMENTATION
INDEX TO PHOTOGRAPHS

New Creek Bridge
US Route 50
New Creek
Mineral County, West Virginia

Photographer: Randy Epperly

April 2022

NEW CREEK BRIDGE-1	Looking west at New Creek Bridge
NEW CREEK BRIDGE-2	Looking east at New Creek Bridge
NEW CREEK BRIDGE-3	Looking east at upstream parapet
NEW CREEK BRIDGE-4	Looking east at New Creek Bridge
NEW CREEK BRIDGE-5	Looking at downstream parapet
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NEW CREEK BRIDGE-9	Looking at bridge plaque on south side of abutment 2
NEW CREEK BRIDGE-10	Looking at pierced parapet detail



Photo #1



Photo #2



Photo #3



Photo #4



Photo #5:



Photo #6:



Photo #7:



Photo #8:



04/28/2022

Photo #9



04/28/2022

Photo #10



Photo #1
New Creek Bridge
Mineral County
US Route 50, spanning New Creek
Looking west at New Creek Bridge



Photo #2
New Creek Bridge
Mineral County
US Route 50, spanning New Creek
Looking east at New Creek Bridge



Photo #3
New Creek Bridge
Mineral County
US Route 50, spanning New Creek
Looking east at upstream parapet



Photo #4
New Creek Bridge
Mineral County
US Route 50, spanning New Creek
Looking east at New Creek Bridge



Photo #5
New Creek Bridge
Mineral County
US Route 50, spanning New Creek
Looking at downstream parapet



Photo #6
New Creek Bridge
Mineral County
US Route 50, spanning New Creek
Looking west at New Creek Bridge



Photo #7
New Creek Bridge
Mineral County
US Route 50, spanning New Creek
Looking west at upstream parapet



Photo #8
New Creek Bridge
Mineral County
US Route 50, spanning New Creek
Looking east at downstream parapet



Photo #9
New Creek Bridge
Mineral County
US Route 50, spanning New Creek
Looking at bridge plaque on south side of abutment 2



Photo #10
New Creek Bridge
Mineral County
US Route 50, spanning New Creek
Looking at pierced parapet detail

BRIDGE REPLACEMENT STUDY

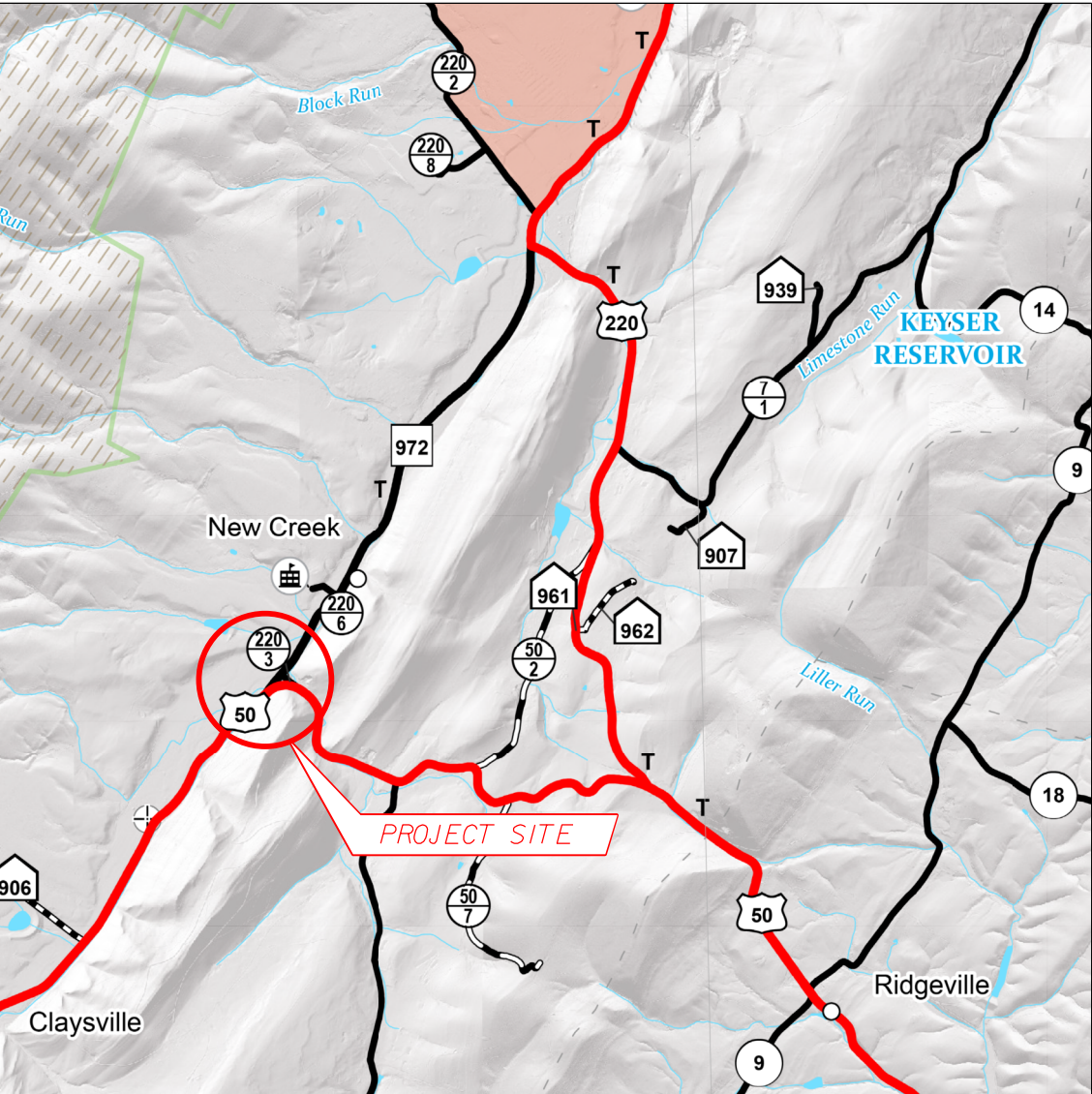
NEW CREEK BRIDGE

STATE PROJECT NO. S229-50-10.65

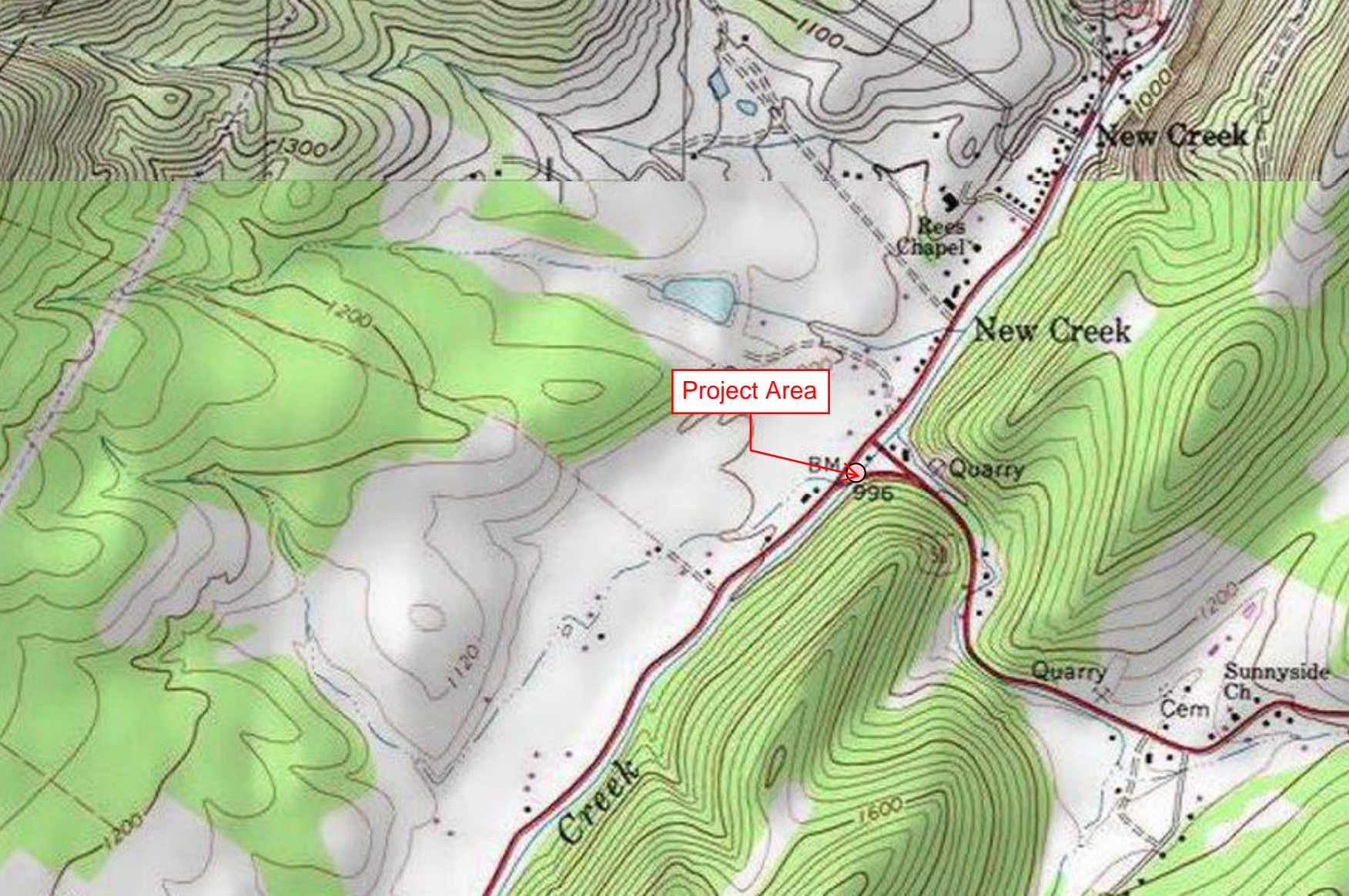
FEDERAL PROJECT NO. STP-0050(420)D

MINERAL COUNTY

APRIL 2022



WEST VIRGINIA DIVISION OF HIGHWAYS
INITIAL DESIGN SECTION



Project Area

New Creek

Rees Chapel

New Creek

BM 996

Quarry

Quarry

Sunnyside Ch.
Cem

Creek

1600

1200

1200

1300

1100

1000

1200

1120



New Creek

West Virginia Historic Bridge Inventory Form

Bridge No. 29-050/00-010.65 BARS No. 29A047 Federal Bridge No. 00000000029A047 Bridge Design No. 1232.0

IDENTIFICATION INFORMATION

SHPO Survey No. MI-0172 Owner State Highway Agency
Local Name NEW CREEK BRIDGE Status Extant - in service
Other Local Name

LOCATIONAL AND SETTING INFORMATION

District 05 County Mineral Latitude 39220600 Longitude 079015400
Location 0.01 MI E OF WV 972 F UTM-Northing
Facility Carried By Structure US 50 T UTM-Easting
UTM Zone
Features Intersected NEW CREEK Surrounding Land Use Residential
Type of Development Rural - (undeveloped area outside communities)

STRUCTURAL INFORMATION

Main Span Type Concrete Stringer/Multi-beam or Girder Structure Length (ft) 133
Main Span Type Code 102 Length of Maximum Span (ft) 40
Number of Spans in Main Unit 003 Average Daily Traffic 003000 Year 2002
Number of Approach Spans 0000 Sufficiency Rating 0472 Skew 60
(Note: Data current as of April 2006 database)

BRIDGE DESCRIPTIVE INFORMATION

Year Built 1931 Arrangement
Year Reconstructed Connection Type
Truss Bridge Type Truss Details
Alteration(s) Date of Alterations (Year)

Architectural Treatment(s) Bridge Plate Text
N/A

BRIDGE HISTORY

Engineer or Designer Builder or Fabricator Harmon Brothers Construction Company
Bridge Plan Location As built plans in the District.
Additional Details: Common pierced rail. Cast-in-place concrete superstructure. Exposed rebar on east parapet. Highly skewed structure represents an innovation in design or construction technique. Cracks on southeast wingwall and curtain wall.

NATIONAL REGISTER EVALUATION INFORMATION

National Register Determination Eligible Reason Not Evaluated

National Register Determination Date 2013

This bridge is not eligible for the National Register under Criterion A as it does not have a significant association with an important historic transportation system, program, event, trend, or policy identified through contextual research and survey activities.

This bridge displays an important design innovation or construction technique that represents a variation, evolution, or transition in bridge construction. This bridge was designed or constructed by a known regional or West Virginia-based engineer, architect, or firm whose work is recognized as distinguishable within the state of West Virginia.

This bridge retains the historic integrity necessary to convey its engineering significance and, therefore, is eligible for the National Register under Criterion C.



WEST VIRGINIA HISTORIC PROPERTY FORM CONTINUATION SHEET

Name: New Creek Bridge Survey Number: MI-0172 Updated 5/18/22
Project / FR#: State County Route: S229-50-10.65

2022 Update: New Creek Bridge (MI-0172) was surveyed in 2013 by Mead & Hunt and KCI as part of the WV Historic Bridge Survey. The bridge was determined to be eligible for the National Register under Criterion C. The bridge was designed by a known regional or West Virginia based engineer or firm whose work is distinguishable in the state. The bridge also conveys an innovative designed due to being highly skewed.

The property was surveyed again on April 28, 2022. No alterations to the bridge were observed since the 2013 inventory. No new historical information has been found.

The New Creek Bridge remains eligible for the National Register under Criterion C due to its innovative design and association with a know regional or West Virginia based engineer or firm. The bridge is not eligible under Criteria A, B, or D.



**MEMORANDUM OF AGREEMENT
BY AND AMONG
THE FEDERAL HIGHWAY ADMINISTRATION,
THE WEST VIRGINIA STATE HISTORIC PRESERVATION OFFICER
AND THE WEST VIRGINIA DIVISION OF HIGHWAYS
REGARDING IMPLEMENTATION OF THE
NEW CREEK BRIDGE REPLACEMENT PROJECT
STATE PROJECT # S229-50-10.65
FEDERAL PROJECT # STP-0050(420)D
MINERAL COUNTY, WEST VIRGINIA
OCTOBER 2022**

WHEREAS, the Federal Highway Administration (FHWA), in cooperation with the West Virginia Division of Highways (WVDOH), proposes to replace the New Creek Bridge which spans over New Creek on US Route 50 in Mineral County, hereinafter referred to as the Project. The Project will 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 New Creek 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 affect archaeological properties; and

WHEREAS, the WVDOH has contacted the Preservation Alliance of West Virginia and Mineral County Historical Society regarding the Project. None of these groups chose to respond and/or establish ability in relation to reuse of the existing New Creek Bridge; and

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); and

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:

I. New Creek Bridge

- a. New Creek 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 NRHP and National Historic Landmarks Survey Photo Policy of May 2013. The documentation package will include hard copies in the form of PDFs for reports and documents, and TIFF files for photographs. The WVSHPO will be given the opportunity to review the documents before submission of final versions.
- b. 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.
- c. WVDOH staff will provide Keyser-Mineral County Public Library a copy of the New Creek Bridge State Level Historic Documentation for reference and educational purposes.
- d. Color brochures about New Creek Bridge will be developed by the WVDOH and distributed to Keyser-Mineral County Public Library. The WVSHPO will be given the opportunity to review all educational materials developed for this stipulation. A USB flash drive containing the brochure will also be provided to print brochures when the original total has been exhausted.
- e. New Creek Bridge will be documented on the West Virginia historic bridge website.

II. Duration

This Memorandum of Agreement (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 VI below. FHWA shall notify the signatories as to the course of action it will pursue.

III. Post-Review Discoveries

If any unanticipated effects to or 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 36 CFR 800.13 (b).

IV. 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.

V. 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.

VI. 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.

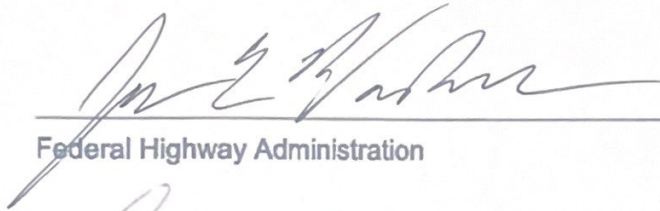
VII. Termination

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 VI, 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.

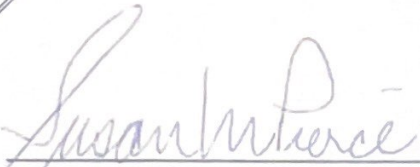
EXECUTION of the Memorandum of Agreement by the FHWA, WVSHPO, the WVDOH and the ACHP, and implementation of its terms evidence that the FHWA has afforded the ACHP an opportunity to comment on the New Creek Bridge Replacement project and its effects on historic properties, and that the FHWA has taken into account the effects of the undertaking on the historic property.

Signatories Page



Federal Highway Administration

4/13/2023
Date



West Virginia Deputy State Historic Preservation Officer

11/2/2022
Date

INVITED SIGNATORY:



West Virginia Division of Highways

11/10/22
Date