

State Level Historic Documentation Report

State Project No. S317-20-30.57
Federal Project No. ACST-0020(317)D

Dola Bridge Harrison County



Prepared by:

Randy Epperly, Historian

Department of Transportation
Division of Highways
Engineering Division
Environmental Section

October 20, 2016

STATE LEVEL HISTORIC DOCUMENTATION
DOLA BRIDGE

Location: West Virginia Route 20, spanning Little Tenmile Creek
Harrison County
West Virginia

USGS Wolf Summit Quadrangle

Date of Construction: 1925

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 Dola Bridge is eligible for the National Register of Historic Places under Criterion A for its visible reuse of another bridge during World War II.

Project Information: The project has been undertaken due to the poor condition of the structure, its narrow width, and low weight limits. The project will allow traffic, including school buses and commercial traffic, a safer structure to cross Little Tenmile Creek. The existing bridge warrants replacement. The documentation was undertaken in August 2016 in accordance with a Memorandum of Agreement among the Federal Highway Administration, West Virginia Department of Transportation, and West Virginia State Historic Preservation Office.

No original plans are available.

Randy Epperly, Historian
West Virginia Division of Highways
Charleston, WV 25305
October 20, 2016

The Dola Bridge carries West Virginia Route 20 over the Little Tenmile Creek in Harrison County. It was built in 1925 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 an example of an uncommon type, unusual design element, or variation of features particular to this bridge type. It is also associated with a nationally distinguished bridge builder, Daniel Luten.

The Dola Bridge is a 90 foot long concrete arch with a deck width of 20.4 feet. The 2014 Average Daily Traffic is 2,369 Vehicles Per Day. The bridge features no parapets but guardrail is located on each side of the bridge. The bridge features two closed spandrel elliptical arch ribs. It is in a state of disrepair as the arch is in poor condition with widespread cracking. Abutment 1 contains a large crack on its downstream wingwall and a large crack and deterioration along the abutment. The bridge is posted for weight limits.

Concrete deck arch bridges were typically constructed in West Virginia between 1900 and 1951. The arch is elliptical with the bottom of the arch receiving most of the load. Concrete arches are located throughout West Virginia and were very popular between 1910 and the 1930s. They are similar to masonry arches but were cheaper to build. These bridges “act in compression and require steel reinforcement. The arch rib and spandrel columns are reinforced with longitudinal steel held by lateral ties” (KCI, 2015).

Luten Bridge Company was located in York, Pennsylvania and is known for their concrete arch bridge design, which they often sold. National Bridge Company was founded in 1902 by Daniel Luten, who received multiple patents for his concrete arches. Sometime around 1920 the company was renamed Luten Bridge Company (Ficker, 2003).

BIBLIOGRAPHY

Ficker, Maryellen. Bridge Builders. WVDOH. January 2003.

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

West Virginia Division of Highways, Bridge Files, Maintenance Division, Building 5, Capitol
Complex, Charleston, WV 25305. 2015.

STATE LEVEL HISTORIC DOCUMENTATION
INDEX TO PHOTOGRAPHS

Dola Bridge
WV Route 20
Little Tenmile Creek
Harrison County, West Virginia

Photographer: Randy Epperly

February 2016

DOLA BRIDGE-1	View of Dola Bridge looking east along WV Route 20.
DOLA BRIDGE-2	View of Dola Bridge arch from downstream side.
DOLA BRIDGE-3	View of Dola Bridge looking west along WV Route 20.
DOLA BRIDGE-4	View of downstream side of Dola Bridge.
DOLA BRIDGE-5	View of Dola Bridge looking upstream.
DOLA BRIDGE-6	View of gabion basket and cracked downstream wingwall of abutment 1.
DOLA BRIDGE-7	View of deterioration and cracking of abutment 1 where Dola Bridge meets the CSX Railroad Bridge.



Photo #1



Photo #2

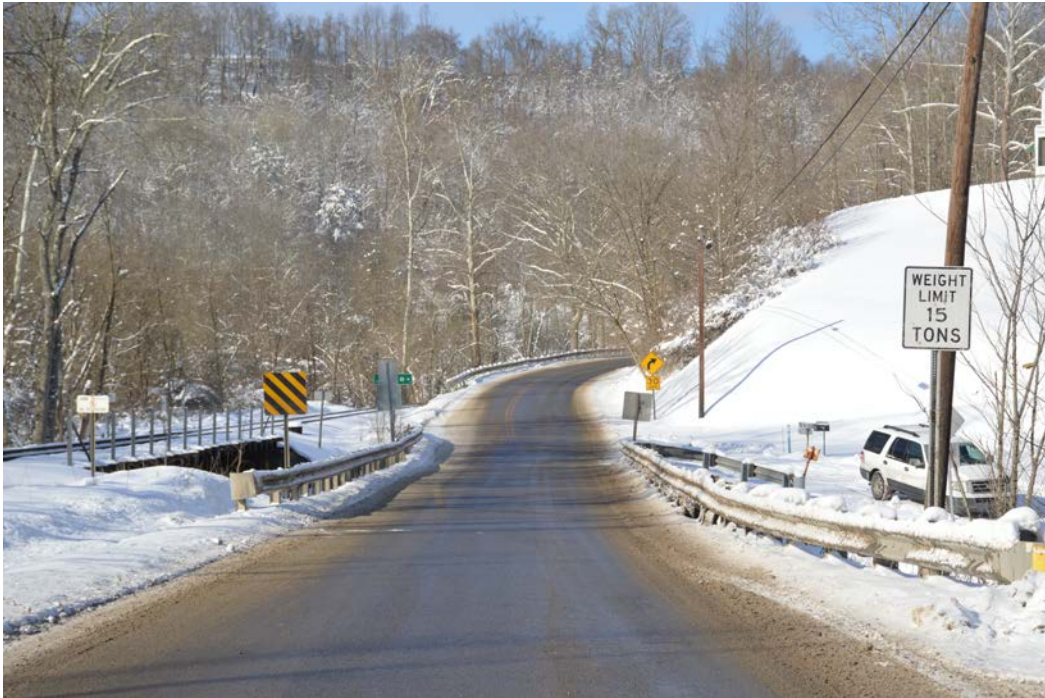


Photo #3



Photo #4



Photo #5



Photo #6



Photo #7

**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 DOLA BRIDGE
REPLACEMENT PROJECT
S317-20-30.57
ACST-0020(317)D
HARRISON COUNTY, WEST VIRGINIA
MAY 2016**

WHEREAS, the Federal Highway Administration (FHWA), in cooperation with the West Virginia Division of Highways (WVDOH), proposes to replace the Dola Bridge, which spans Little Tenmile Creek in Harrison 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 Dola 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 contacted the Harrison County Historic Society and the Preservation Alliance of West Virginia regarding the Project. The Harrison County Historic Society responded by phone in support of the project.

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:

Dola Bridge

- I. The Dola 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 and the Luton Bridge Company 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 the Lowe Public Library in Shinnston a copy of the Dola Bridge State Level Historic Documentation for references and educational purposes.
- IV. 50 color brochures of the Dola Bridge will be developed by the WVDOH and distributed to the Lowe Public Library in Shinnston. 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 Dola Bridge will be documented on a website currently being developed 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 X below. FHWA shall notify the signatories as to the course of action it will pursue.

VII. 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).

VIII. 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.

IX. 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.

X. 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.

XI. 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 X, 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 Council, and implementation of its terms evidence that the FHWA has afforded the Council an opportunity to comment on the Dola 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

8/16/16
Date



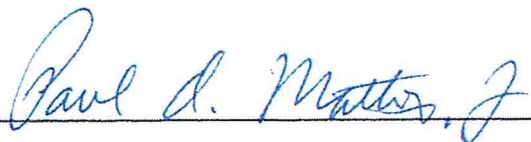
West Virginia Deputy State Historic Preservation Officer

6/24/16
Date

Advisory Council on Historic Preservation

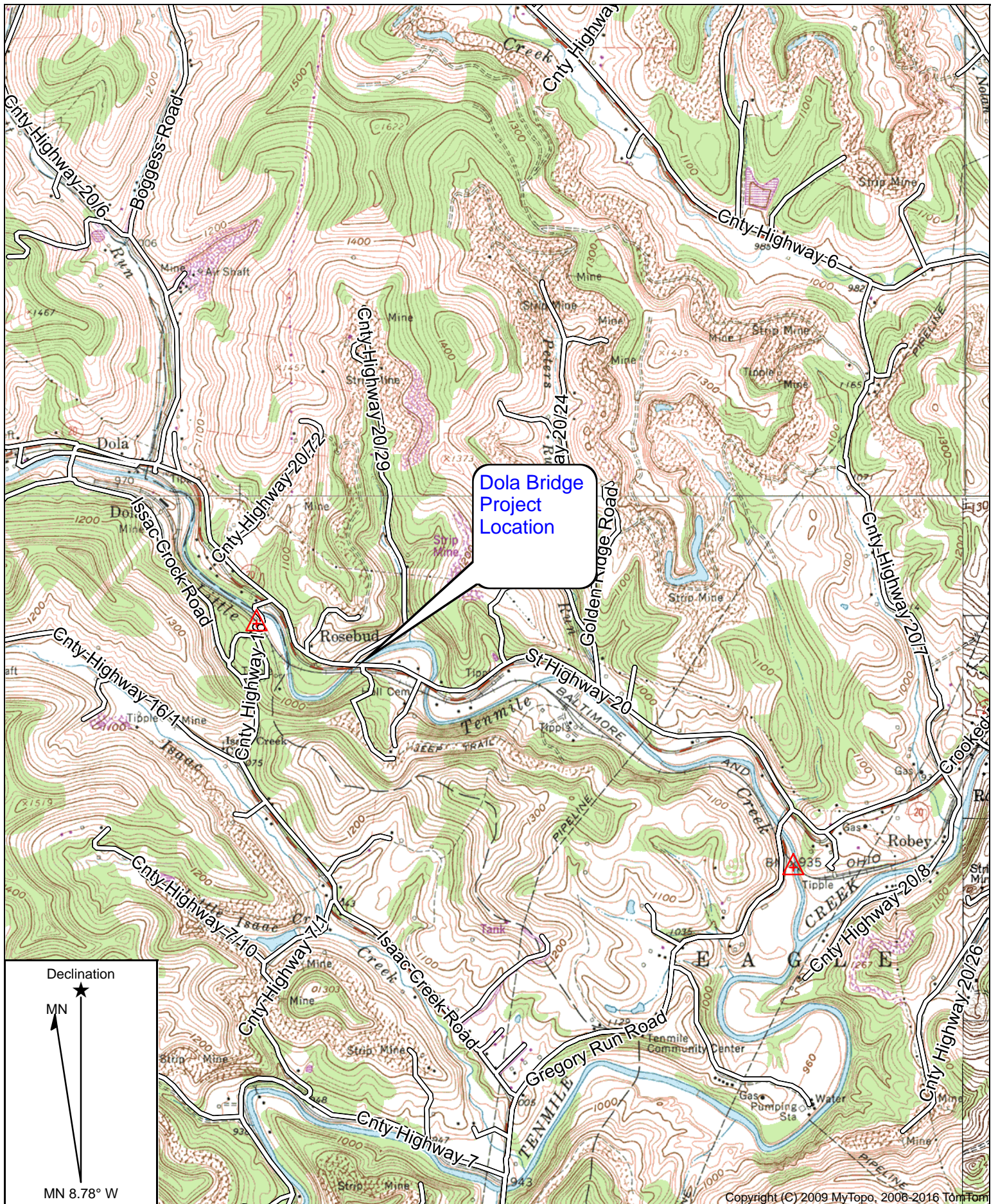
Date

CONCUR:



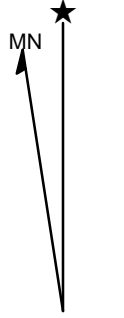
West Virginia Division of Highways

6/28/16
Date



Dola Bridge
Project
Location

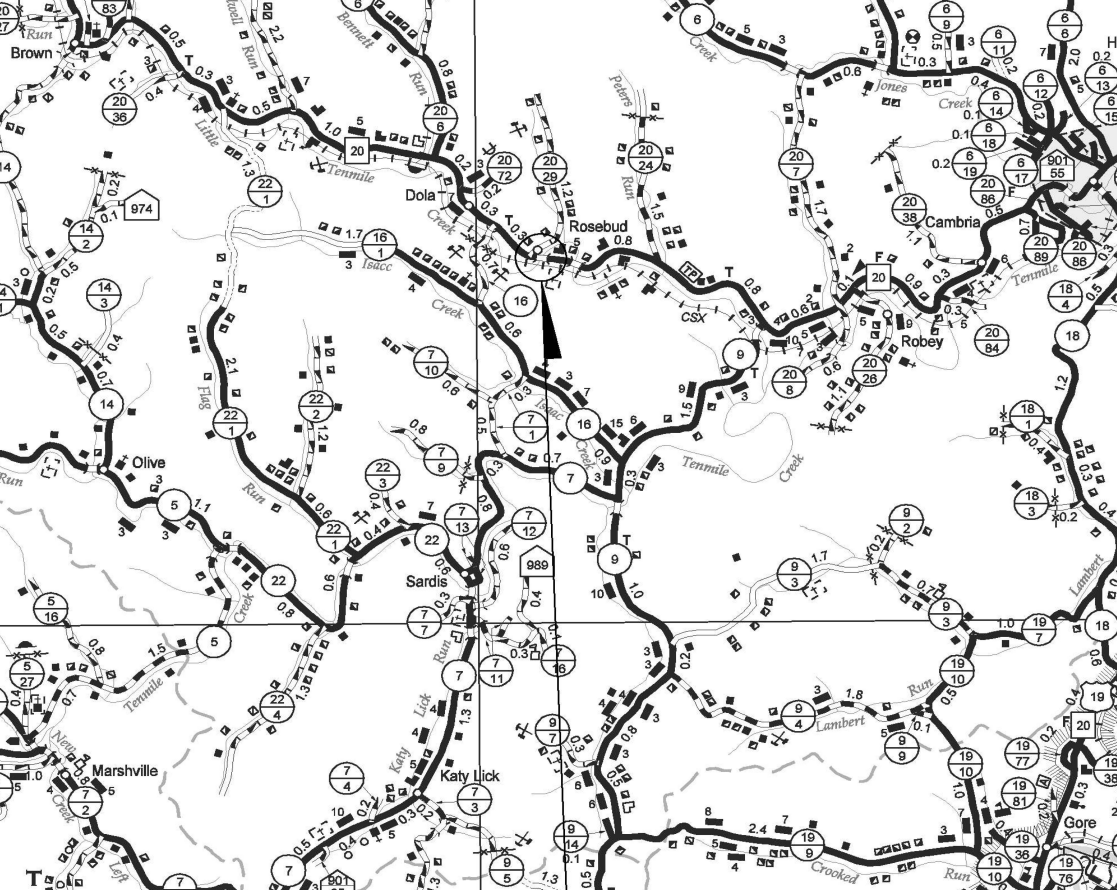
Declination



MN 8.78° W

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Dola Bridge
Harrison County



NATIONAL REGISTER EVALUATION INFORMATION

National Register Determination

Reason Not Evaluated

National Register Determination Date

This bridge is an example of an uncommon type or displays an unusual design element that represents the individuality or variation of features particular to this bridge type.

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

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