

State Level Historic Documentation Report

State Project No. S344-13-7.42
Federal Project No. ACST-0013(062)D

Poca Truss Bridge Roane County



Prepared by:

Randy Epperly, Historian

Department of Transportation
Division of Highways
Engineering Division
Environmental Section

June 1, 2016

STATE LEVEL HISTORIC DOCUMENTATION
POCA TRUSS BRIDGE

Location: County Route 13, spanning Pocatalico River
Roane County
West Virginia

USGS Walton Quadrangle

Date of Construction: 1909

Builder: Canton 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 Poca Truss Bridge is eligible for the National Register of Historic Places under Criterion C for its engineering significance and association with a nationally recognized bridge builder.

Project Information: The project has been undertaken due to the poor condition of the structure and its narrow width. The project will allow traffic, including school buses, a safer structure to cross Pocatalico River. The existing bridge warrants replacement. The documentation was undertaken in April 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
June 1, 2016

The Poca Truss Bridge carries County Route 13 over the Pocatalico River in Roane County. It was built in 1914, by Canton Bridge Company of Canton, Ohio. No original plans were found for the bridge. The bridge is eligible under Criterion C of the National Register of Historic Places for its engineering significance and association with a nationally recognized bridge builder. The bridge is listed on the 1990 Final List of Historic Bridges.

The Poca Truss Bridge is a simple span pin connected steel Pratt through truss. The abutments are cut stone, but abutment two has a concrete cap. The bridge is 14' x 156' and is a single lane. The deck consists of 2" x 4" laminated timber fastened to the floorsystem with nailing clips. The railing consists of 2 1/2" x 2 x 3/16" angles and 1" x 13/16" lacing. Vertical clearance for the bridge is 14'9" A bridge plate is located on both ends of the bridge above the portals. There are posted weight limits on the bridge. Average Daily Traffic (ADT) for 2013 is 50 Vehicles Per Day (VPD) with a projected 2033 ADT of 65 VPD. Main members were replaced in 1996 and portions of the deck were replaced in 2004, 2005, and 2006. The structure is in poor condition and the concrete and truss members show heavy deterioration (Bridge Inspection Report, 2014).

Metal truss bridges expanded on the technology used in wooden truss bridges. Metal became popular to support the weight of heavier trains. Metal truss bridges were first built using wrought iron and later using steel. Early designs used pin connections but were later replaced for sturdier rivet connections. On a through truss design the truss rests on the bottom chords and there is lateral bracing between the top chords. The Pratt Truss bridge design was common in West Virginia and was patented in 1844 by Thomas and Caleb Pratt. The design placed verticals in compression and diagonals in tension. This design spurred metal bridges to overtake timber bridges (KCI, 2015).

The Canton Bridge Company, a nationally recognized builder, was formed in 1891 by W.E. Sherlock and operated independently until 1925 when Massion Steel Joist Company purchased it. In 1927 they merged into the Macomber Steel Company and the Canton Bridge Company name was dropped. The company would later be consolidated into the American 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. 2014.

STATE LEVEL HISTORIC DOCUMENTATION
INDEX TO PHOTOGRAPHS

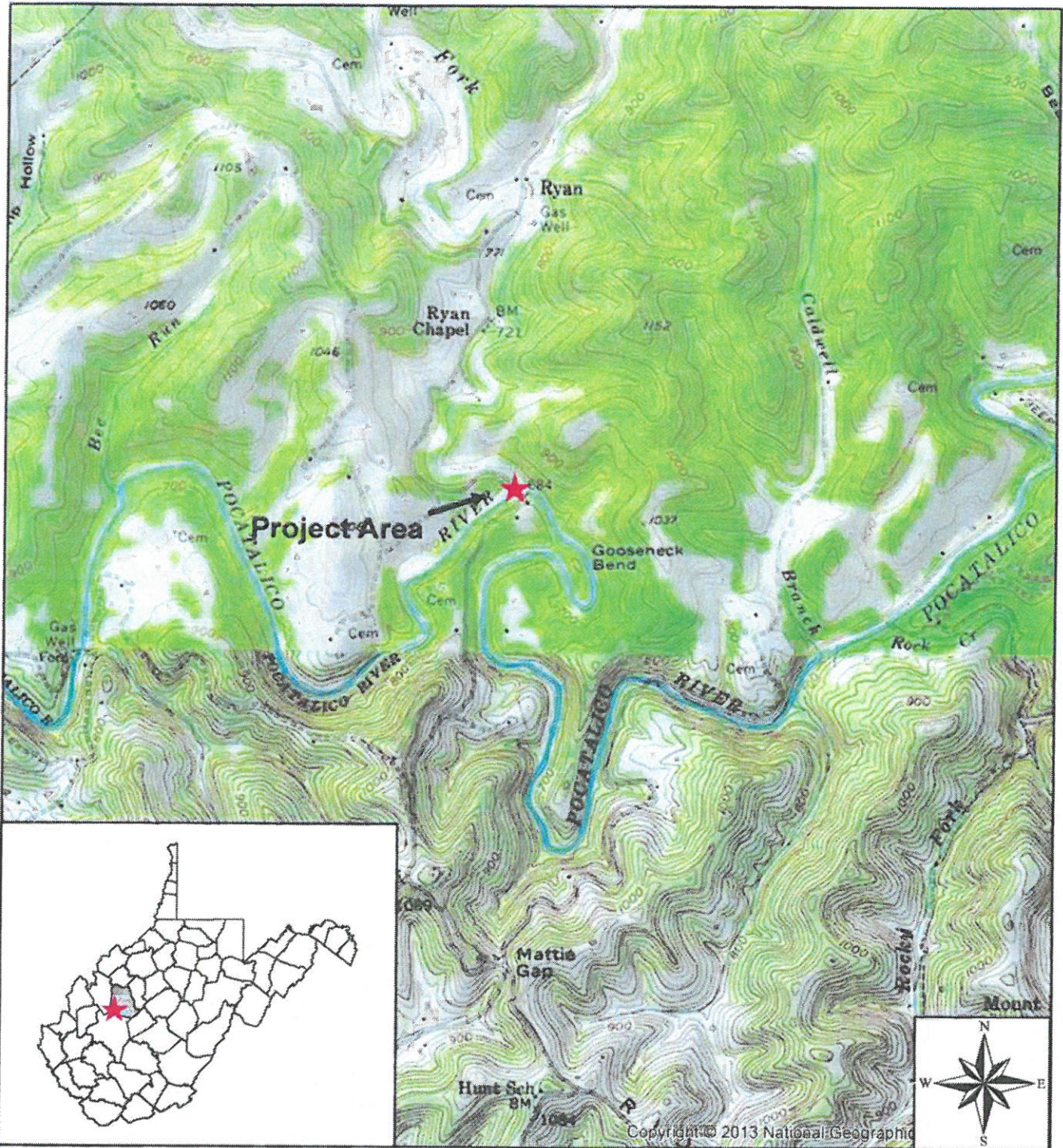
Poca Truss Bridge
County Route 13
Pocatalico River
Roane County, West Virginia

Photographer: Randy Epperly & Rodney DeMott

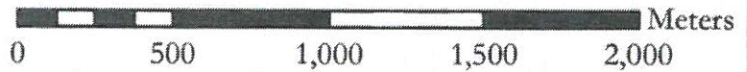
December 2015

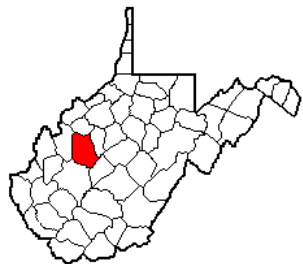
POCA TRUSS BRIDGE-1	View of Poca Truss Bridge southern approach looking north.
POCA TRUSS BRIDGE-2	View of Poca Truss Bridge northern approach looking south.
POCA TRUSS BRIDGE-3	View of Poca Truss Bridge looking downstream.
POCA TRUSS BRIDGE-4	View of cut stone abutment 1.
POCA TRUSS BRIDGE-5	View of abutment 2 showing cut stone and concrete cap.
POCA TRUSS BRIDGE-6	View of bridge plate on southern end of bridge.
POCA TRUSS BRIDGE-7	View of bridge plate on northern end of bridge.
POCA TRUSS BRIDGE-8	View of pin connection.
POCA TRUSS BRIDGE-9	View of railing and decorative end piece.
POCA TRUSS BRIDGE-10	View of inside of the truss looking north.
POCA TRUSS BRIDGE-11	View of railing connection.
POCA TRUSS BRIDGE-12	View of lower chord connection.

Poca Truss S344-13-7.42



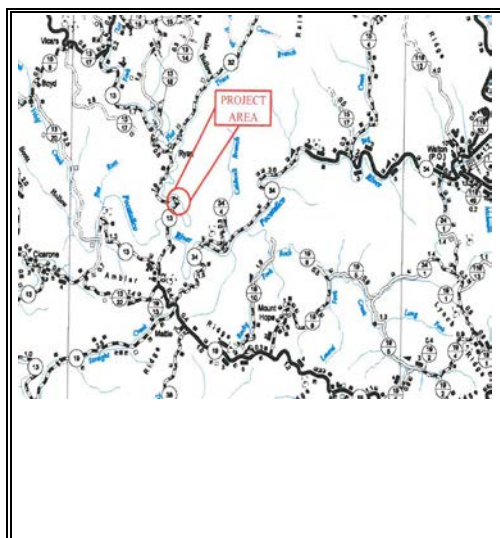
Roane County
Walton 7.5' Topographic
Quadrangle





**WEST VIRGINIA HISTORIC PROPERTY
INVENTORY FORM**

Street Address Located on County Route 13 spanning Pocatalico River.	Common/Historic Name/Both <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Poca Truss Bridge	Field Survey # HPI #1	Site # (SHPO Only)
Town or Community Between Ryan and Mattie	County Roane	Negative No.	NR Listed Date
Architect/Builder The Canton Bridge Company	Date of Construction 1909	Style (SHPO Only)	
Exterior Siding / Materials Simple Span Pin Connected Steel Through Truss.	Roofing Material Deck Material: Timber	Foundation Abutments: Cut stone. Abutment two has concrete cap.	
Property Use or Function Transportation	UTM Zone18 NAD 1983 Easting 0458814E Northing 4275714N		
Survey Organization & Date WVDOH December 10, 2015	Quadrangle Name Walton		
	Part of What Survey / FR# State County Route S344-13-7.42 Federal Route ACST-0013(067)D		



Name: Poca Truss Bridge
Survey #: HPI #1
Survey / FR#: S344-13-7.42

Present Owners WVDOH	Owners Mailing Address Building 5, Capitol Complex Charleston, WV 25305	
Describe Setting The structure is located in a rural area spanning the Pocatalico River along County Route 13 in Roane County. Trace Fork flows into the Pocatalico River 150 feet upstream.		Unknown--<1 Acres <input type="checkbox"/> Archaeological Artifacts Present
Description of Buildings or Site (Original and Present)		
The structure is a 14' x 156' single lane bridge built in 1909 by The Canton Bridge Company. It consists of a simple span pin connected steel through truss supported by cut stone abutments. The deck consists of 2" x 4" laminated timber fastened to the floorsystem with nailing clips. The railing consists of 2 1/2" x 2 x 3/16" angles and 1" x 13/16" lacing. Roadway clearance on the bridge is 13'8" and the vertical clearance is 14'9". A bridge plate is located on both sides of the bridge. The average daily traffic (ADT) for 2013 is 50 vehicles per day (VPD) and the projected ADT for 2033 is 65 VPD.	Stories	Front Bays
Alterations <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe Main members were replaced in 1996. Portions of the deck were replaced in 2004, 2005, and 2006. Abutment #2 was encased in concrete in 2006.		
Additions <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe		
Describe All Outbuildings N/A		
Statement of Significance: See Continuation Sheet		
Bibliographical References Ficker, Maryellen. WVDOH. January 2003. KCI Technologies, Inc. and Mead & Hunt, Inc. <u>West Virginia Statewide Historic Bridge Survey: Final Survey Report.</u> April 2015. WVDOH Maintenance Division. WV Bridge Inspection Data. 2014. Charleston, WV. 1990 Final List of Historic Bridges. WVDOH. 2-21-90.		
Form Prepared By: Name/Organization: Randy Epperly Address: WV Division of Highways Capitol Complex Building 5, Rm. 463 Charleston, WV 25305 Phone #: 304-558-9385		Date: December 10, 2015

WEST VIRGINIA HISTORIC PROPERTY FORM

CONTINUATION SHEET

Name: Poca Truss Bridge
Survey Number: HPI #1
Project / FR#: State County Route: S344-13-7.42

Other than a general association with transportation in the area, there is no reason to believe this structure is an important link to events or trends that have made a significant contribution to the broad patterns of our history. There is no evidence of this bridge as a significant transportation linkage. This bridge is not eligible under Criterion A of the National Register of Historic Places.

The Poca Truss Bridge is not associated with the significance of an individual or an individual's historic contribution. The bridge is not eligible under Criterion B.

The Poca Truss Bridge was listed on the 1990 Final List of Historic Bridges in WV. It is a 14' x 156' single lane bridge built in 1909 by The Canton Bridge Company. It consists of a simple span pin connected steel through truss supported by cut stone abutments. Although the bridge has had members replaced and shows signs of vehicular damage and deterioration, it retains its overall historic integrity. The bridge contains decorative railing consisting of 2 1/2" x 2 x 3/16" angles and 1" x 13/16" lacing. Bridge plates are located on both portals of the bridge with distinctive architectural components on each side of them. The Pratt Truss bridge design was patented in 1844 by Thomas and Caleb Pratt. The design placed verticals in compression and diagonals in tension. This design spurred the metal bridges to overtake timber bridges (KCI, 2015).

Canton Bridge Company was a prolific builder in the early 1900s. It was formed by W.E. Sherlock in 1891 and operated independently until 1925 when Massilon Steel Joist Company purchased it. In 1927 they merged into the Macomber Steel Company and the name Canton Bridge Company was dropped. The company would later be consolidated into the American Bridge Company (Ficker, 2003). Poca Truss Bridge is eligible for the National Register of Historic Places under Criterion C as a significant example of a Pratt Thru Truss Bridge and its association with Canton Bridge Company, a nationally recognized builder.

The bridge is not likely to possess any important information that will contribute to our understanding of early human history or prehistory. The potential for information is minimal. The Poca Truss Bridge is not eligible for the National Register of Historic Places under Criterion D.

**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 **POCA TRUSS BRIDGE**
REPLACEMENT PROJECT
S344-13-7.42
ACST-0013(067)D
ROANE COUNTY, WEST VIRGINIA
FEBRUARY 2016**

WHEREAS, the Federal Highway Administration (FHWA), in cooperation with the West Virginia Division of Highways (WVDOH), proposes to replace the Poca Truss Bridge, which spans the Pocatalico River in Roane County, hereinafter referred to as the Project. The improvements involve the construction of a new bridge 40 feet downstream and the removal of the existing bridge; and

WHEREAS, the FHWA has determined that the Project will have an adverse effect upon the Poca Truss 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 Roane County Historic Society and the Preservation Alliance of West Virginia regarding the Project. Neither group chose to respond.

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:

Poca Truss Bridge

- I. The Poca Truss 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 Canton 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 Roane County Public Library a copy of the Poca Truss Bridge State Level Historic Documentation for references and educational purposes.
- IV. 50 color brochures of the Poca Truss Bridge will be developed by the WVDOH and distributed to the Roane 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 Poca Truss Bridge will be documented on the West Virginia historic bridge website.

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, WWSHPO, the WVDOH and the Council, and implementation of its terms evidence that the FHWA has afforded the Council an opportunity to comment on the Poca Truss 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



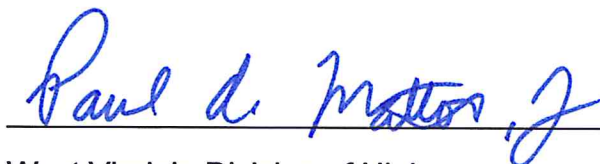
Federal Highway Administration
Date 3/31/16



West Virginia Deputy State Historic Preservation Officer
Date 3/22/16

Advisory Council on Historic Preservation
Date _____

CONCUR:



West Virginia Division of Highways
Date 3/28/16



Photo #1



Photo #2



Photo #3



Photo #4



Photo #5



Photo #6



Photo #7



Photo #8



Photo #9



Photo #10



Photo #11



Photo #12