State Level Historic Documentation Report

State Project # S307-11-6.88
Federal Project # STBG-0011(195)D

SAWMILL RIBBED ARCH BRIDGE
Calhoun County

Prepared by:

Tracy D. Bakic, Structural Historian

WV Department of Transportation
Division of Highways
Engineering Division
Environmental Section

June 15, 2026

STATE LEVEL HISTORIC DOCUMENTATION
SAWMILL RIBBED ARCH BRIDGE

Location:	County Route 11 over Left Fork of West Fork Little Kanawha River Calhoun County West Virginia USGS Chloe Quadrangle
Date of Construction:	1926
Builder:	Luten Bridge Company of York, Pennsylvania
Present Owner:	West Virginia Department of Transportation Division of Highways 1900 Kanawha Boulevard, East Charleston, WV 25305
Present Use:	Vehicular Bridge
Significance:	Sawmill Ribbed Arch Bridge is historically significant for as a representation of a spandrel-braced (ribbed) concrete arch bridge, an uncommon bridge type in West Virginia, and as an example of the work of the Luten Bridge Company of York, Pennsylvania, a nationally recognized former bridge builder. Examples of both the bridge type and builder are increasingly diminishing resources in West Virginia.
Project Information:	The project has been undertaken due to the deteriorating condition of the bridge and the necessity for a structure that can accommodate a wider roadway/traffic width. Any future deterioration of the bridge will result in its closure. Therefore, this bridge warrants replacement. This documentation was undertaken in June 2026 in accordance with a Memorandum of Agreement among the West Virginia Department of Transportation and West Virginia State Historic Preservation Office. These measures are required due to the replacement of this National Register eligible structure.

Tracy D. Bakic, Structural Historian
West Virginia Division of Highways
Charleston, WV 25305
June 15, 2026

Sawmill Ribbed Arch Bridge spans the Left Fork of the West Fork Little Kanawha River and is located in the unincorporated Euclid-Nicut area of southeastern Calhoun County, West Virginia (WV) on County Route 11 (CR 11), approximately 0.39 miles southeast of CO 11/5. Little Kanawha River is a tributary of the Ohio River. The 2022 average daily traffic rate over the bridge is 150 vehicles per day.

The existing Sawmill Ribbed Arch Bridge is a single-span reinforced concrete spandrel-braced deck arch bridge that was built by Luten Bridge Company of York, PA in 1926. The structure consists of two spandrel walls (ribs) that support a concrete deck above. The substructure consists of a 12-inch-thick concrete curtain wall abutment and concrete footer(s) at each end of the span. The bridge's existing overall measurements are 58 feet, 1 inch long (end-to-end of parapet walls) by 17 feet, 6 inches wide (out-to-out of deck). The roadway width is 15 feet, 6 inches (between curbs).

The bridge's two closed spandrel walls are 12 inches thick, and each has a central elliptical arch. Elliptical arches are based on ellipse/ovular forms rather than round/circular. The arched opening at each spandrel wall measures 39 feet, 11 inches (springline-to-springline) and 8 feet, 9 inches high (top of footer to arch rib midpoint). The edges of the arched openings (arch ribs) are chamfered. The term "closed" identifies that the area between the arch rib of each spandrel wall and the deck above is solid/closed (as opposed to open/pierced). The term "ribbed" is often used to describe a spandrel-braced arch bridge, identifying it has two or more rows of spandrels – creating "ribs" – working as the main support for the deck; there is open space between each spandrel/rib (as opposed to another version of closed spandrel arch bridge the includes an arch ring and earthen-filled deck).

The bridge deck is 9-inch-thick reinforced concrete. The deck overhangs each spandrel wall by roughly two (2) feet. There are solid reinforced concrete railings along the stream sides of the deck; they are 8-inch-thick by 3-foot-tall and include incised rectangular motif decoration on both sides. The bottom of each railing includes slight curb elements at both the interior- and exterior-facing sides. The deck surface (between curbs) has been paved over with an asphalt

wearing surface. The bridge does not include sidewalks. Typical modern flexbeam approach guardrail is installed off each corner of the structure (at the railings).

A bronze bridge plaque at the north end of the west/downstream railing reads “J.A. MOREFORD, PRES., D.O. CHENOWETH, R.A. BOARD, COUNTY COURT, B.B. FERREL, PROS. ATTY., R.C. HARDMAN, CLERK.”

A bronze bridge builder’s plaque at the south end of the east/upstream railing reads “1926 / LUTEN BRIDGE CO. / YORK PA.”

Sawmill Ribbed Arch Bridge is considered in poor condition and includes the following serious deficiencies: at the upstream (north) rib/spandrel wall are two longitudinal cracks in the bottom of the arch rib apex – on 1/16” and the other 1/8”, along with some flexural cracks and a few small spalls in the rib(s); both ribs/spandrel wall and the curtain wall abutments include cracks; the east abutment (Abut 2) exhibits minor shoulder loss at its downstream (south) side; the underside of the deck/slab exhibits spalls with visible rebar, concrete scales, and efflorescence; and the curbs and parapet walls (railings) exhibit random spalls and scrapes.

Washington District & Euclid-Nicut Area

The villages of Euclid and Nicut are within Washington District, Calhoun County. The district is mainly mountainous and hilly and is named to honor George Washington, first President of the US. An early settler was Peter McCune who, with his family, made a home in the West Fork valley in the lower part of the district in 1815. Soon after other families settled along the West Fork, including those by the name of Parsons, Cook, Conley, Cottrell, Truman, and Brannan. The first grist mill was erected around 1828 by Job Truman, and the first sawmill was erected in 1845 by Thomas Jarvis. The first school in the district was started in 1835, being taught by D. George Conley. A Methodist Episcopal congregation was organized in 1836 at the home of Thomas Jarvis. By ca. 1880s there were eight church groups organized within the district, including Methodist and Baptist groups (WVGenWeb).

From a review of the website HurHerald.com, the Nicut-Euclid area appears to have been an agricultural area through its history. Within the county, nearly every small community included a grist mill, many associated with a country store while others operated from family barns and sheds (HurHerald.com).

- At Nicut there was a grist mill related to the David Oscar Chenowith home, a store and a PO located at the confluence of the Left Fork and Nicut Run (HurHerald.com). The

Nicut PO was established in 1902 and Francis M. King was its first postmaster. The Nicut PO operated until 1919 (*Calhoun Chronicle* 8/1902; PostalHistory.com; US 1903:403).

- Heading north from Nicut on CO 11, one passes over the Sawmill Ribbed Arch Bridge and then to the next village of Frozen, located at the confluence of Left Fork and Frozen Run. There was also a grist mill at Frozen, which was operated by John Cottrell (HurHerald.com). Frozen's PO was established in 1909 and Cottrell was its first postmaster. The PO operated until 1950 (PostalHistory.com; US 1909:524).

- Euclid is the next community north on CO 11. This village was named when its post office was established in 1901 by Ira Reip whose young son was named Dalton Euclid Reip (born 1889), the first and middle names purportedly selected by Ira when viewing those names in a Chamber's Encyclopedia. Ira entered his son's middle name to the US postal service when establishing the PO. The Euclid PO operated until 1955 (*Calhoun Chronicle* 1901, 1/1902; HurHerald.com; Kenny 1945:233; PostalHistory.com).

There were local schoolhouses, including at Nicut/Nicut Run, Upper Big Run (just north of the Sawmill Ribbed Arch Bridge), Frozen Run, and Lower Nicut Run (WVSRC 1933, 1937).

Calhoun County Route 11 & Sawmill Ribbed Arch Bridge

CO 11 is not known to be part of a historic turnpike/toll road. This road is presently also identified on signs/maps as Nicut Road and Euclid-Nicut Road. Locally the road has been called "Left Hand Road" or "Left Hand Fork Road" as it is along the Left (or Left Hand) Fork of the West Fork Little Kanawha River. A best early depiction of the general alignment of today's CO 11 is on 1906 USGS topographic mapping (USGS 1906). This road from Orma and through Gomez, Euclid, Nicut to the Braxton County line has been identified as Calhoun County Rt 11 since at least the early 1930s (WVSRC 1933).

The earliest roadwork found in WV State Road Commission (WVSRC) annual reports that appears related to CO 11 (Left Hand Fork) was in 1926-27 when two miles of the route was graded (WVSRC 1927:52). Quick review of available WVSRC annual reports indicates further grading and stone-surfacing of the route by the 1940s. The bituminous paving of CO 11 progressed over time, the earliest section from Orma to Frozen Run being done by ca. 1950 and the rest of the route to the Braxton County line by the 1960s (WVSRC *Annual Reports* 1940-1961*; WVSRC Hwy Maps 1954-68, on file WVDOH).

* https://catalog.hathitrust.org/Record/010306046 (viewed June 2026)

Sawmill Ribbed Arch Bridge. Per the bridge's extant builder's and county plaques, Sawmill Ribbed Arch Bridge was a project of the Calhoun County Court and was built in 1926 by the Luten Bridge Company of York, PA. Research for this report has not found any other construction history or original plans related to this span. It appears that the nearby Nicut Run Ribbed Arch (WVSHPO Site CH-0015) was built in the same year and by the same bridge company. It could be possible that the bridges were part of the same contract with the Calhoun County court.

Reinforced Concrete Spandrel-Braced Deck Arch Bridge Context

The earliest known existing reinforced concrete arch bridge in the US was designed by Ernest L. Ransome and built in 1889 in Golden Gate Park, San Francisco. Other early names associated with reinforced concrete arch bridge design were Joseph Melan, Fritz von Emperger and Edwin Thacher. However, it was Daniel B. Luten who, within the first three decades of the 20th century, was the dominant designer, builder and promoter of reinforced concrete arch spans in the US (Parsons Brinkerhoff et al. 2005: 53). There were many other companies, though, that incorporated concrete arch bridge design and building as part of their repertoire. In West Virginia, concrete arch deck bridges were built steadily through the 1930s and were very popular in the 1910s and 1920s (KCI et al. 2015: 88).

Reinforced concrete deck arch bridges include filled-spandrel and spandrel-braced types, each spanning between concrete abutments. The arch proper is formed by an arch ring or arch ribs and the spandrel is the area/space between the ring/ribs and the deck above. Solid spandrel walls built to each side of an arch ring will form the closed/filled spandrel type; with this design the spandrel area between the walls was earth-filled (ie, rubble, stone, dry soil) which facilitated distribution of traffic loads over the span. A spandrel-braced arch has a pair (or more) of parallel reinforced spandrel walls that act together as "ribs" to support (or brace) the deck above; the area between the ribs is typically open and the walls/ribs can be solid or pierced. The subject bridge is a spandrel-braced arch bridge with solid spandrel ribs [Carver 2008: 241; KCI et al. 2015: 321; P.A.C. Spero & Co. 1995:152]).

Daniel B. Luten & Luten Bridge Company. Daniel B. Luten is nationally recognized as an important figure in bridge building and the design of reinforced concrete arch bridges. Luten patented his designs, and they were used throughout the US (KCI et al. 2015). The central idea of Luten's practice was to "produce a more efficient structure" by reducing the material needed to build for a given strength. His innovative approaches to reinforcing concrete arches with longitudinal tension rods resulted in efficient bridge designs (Mead & Hunt 2007:88).

In 1902 Luten's design firm - National Bridge Company of Indianapolis, Indiana - was incorporated (Cooper 1997:52; *Railroad Gazette* 1902). "Luten designs were utilized throughout the United States. By 1915 Daniel B. Luten held 39 patents on concrete bridge plans and had designed about 6,000 bridges in the United States, Mexico, and Canada. In 1925 Luten had over 50 patents and over 1,400 bridges were attributed to his designs" (KCI et al. 2015). D. B. Luten reportedly closed his design office in 1932 (Cooper 1997:182).

"Luten often provided agents and builders with drawings and a license to construct bridges based on his plans for a set price. One such agent was Alex B. Whittaker. In 1909 [PA 1911:110]. Whittaker incorporated his own company, the Luten Bridge Company of York, Pennsylvania, and was joined by his brother John Whittaker, Lucius G. Brown, and G. W. Drury. The Luten Bridge Company established a number of branch offices and obtained bridge construction contracts throughout the eastern and southern United States, including Clarksburg, West Virginia; Atlanta, Georgia; Syracuse, New York; Concord, New Hampshire; Palatka, Florida; Pennsylvania, Maryland, Tennessee, and Arkansas. The Luten Bridge Company is believed to have sold Daniel Luten designs as well as other similar concrete arch bridge designs" (KCI et al. 2015).

Despite his patents, D. B. Luten's virtual control of the concrete arch bridge industry was challenged and broken in January 1918 when a Federal judge in Iowa ruled that the Luten patents covered in the case "Luten v. Marsh" represented common engineering knowledge and were "invalid." With a legal precedent set and minus the burdens of royalty costs for patent use, the ruling freed up the field for competitors to design and build concrete arch bridges and the vehicular bridge type greatly expanded across the country (Carver 2008:240; Herbst & Rottman 1986:10; Jochims 1985; McDonald 1918).

"Daniel Luten-designed concrete arch bridges were often known for achieving a notably flat arch, which provided a long arch span with less need for bridge height. Use of this design feature resulted in aesthetically pleasing bridges that were also economical in their use of materials. Some Luten designs utilized more rounded, less elliptical arches to respond to particular site conditions and shorter crossings (KCI et al. 2015). His most efficient designs were developed in the 1920s using spandrel-braced arch (VTRC 2000:46, 48).

Eligibility

Sawmill Ribbed Arch Bridge has been determined eligible for listing in the National Register of Historic Places for its engineering significance as a representation of a spandrel-braced (ribbed) concrete arch bridge, an uncommon bridge type in West Virginia, and as an example of the work of the Luten Bridge Company of York, Pennsylvania, a nationally recognized former bridge builder. Examples of both the bridge type and builder are increasingly diminishing resources in West Virginia.

Sawmill Ribbed Arch Bridge will eventually be removed as a result of the planned construction of a new bridge at the existing bridge location.

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STATE LEVEL HISTORIC DOCUMENTATION
INDEX TO PHOTOGRAPHS

Sawmill Ribbed Arch Bridge
County Route 11 over Left Fork of West Fork Little Kanawha River
Webster County, West Virginia

Photographer(s): Tracy D. Bakic Photography Date: April 17, 2025

SAWMILL RIBBED ARCH – 1	East/Upstream Elevation. View Southwest.
SAWMILL RIBBED ARCH – 2	East/Upstream Elevation. View Southeast.
SAWMILL RIBBED ARCH – 3	East/Upstream Elevation. View West/Northwest.
SAWMILL RIBBED ARCH – 4	West/Downstream Elevation. View Northeast.
SAWMILL RIBBED ARCH – 5	West/Downstream Elevation. View Southeast.
SAWMILL RIBBED ARCH – 6	Spandrel Walls/Ribs, North Abutment, and Underside of Deck. View Northwest.
SAWMILL RIBBED ARCH – 7	West Spandrel Wall/Rib & North Abutment. View Northwest.
SAWMILL RIBBED ARCH – 8	North Approach. View Southeast.
SAWMILL RIBBED ARCH – 9	South Approach. View Northwest.
SAWMILL RIBBED ARCH – 10	Plaque on East/Upstream Railing, South End. Reads: “1926 / LUTEN BRIDGE CO. / STATE BRIDGE / YORK, PA.”. View East/Northeast.
SAWMILL RIBBED ARCH – 11	County Commissioners Plaque on West/Downstream Railing, North End. View Southwest.

No original bridge plans exist for this bridge.

1. East/Upstream Elevation. View Southwest.

2. East/Upstream Elevation. View Southeast.

3. East/Upstream Elevation. View West/Northwest.

4. West/Downstream Elevation. View Northeast

5. West/Downstream Elevation. View Southeast.

6. Spandrel Walls/Ribs & North Abutment. View Northwest.

7. West Spandrel Wall/Rib & North Abutment. View Northwest.

8. North Approach. View Southeast.

9. South Approach. View Northwest.

10. Bridge Builder's Plaque on Upstream/East Railing. View Northeast.

11. County Plaque on Downstream/West Railing. View SW

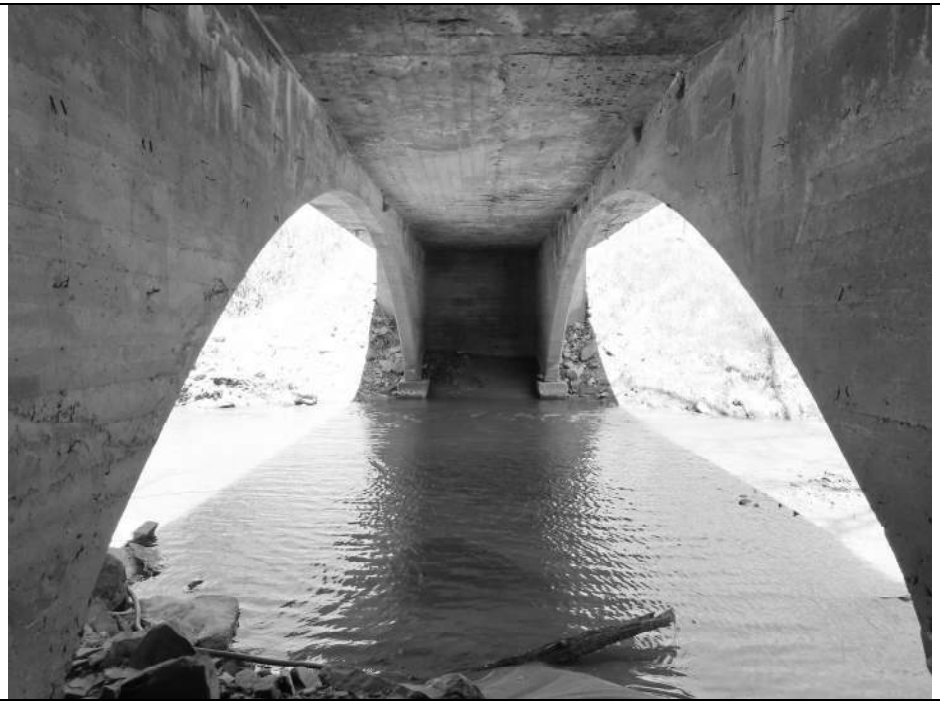
1. East/Upstream Elevation. View Southwest.

2. East/Upstream Elevation. View Southeast.

3. East/Upstream Elevation. View West/Northwest.

4. West/Downstream Elevation. View Northeast

5. West/Downstream Elevation. View Southeast.

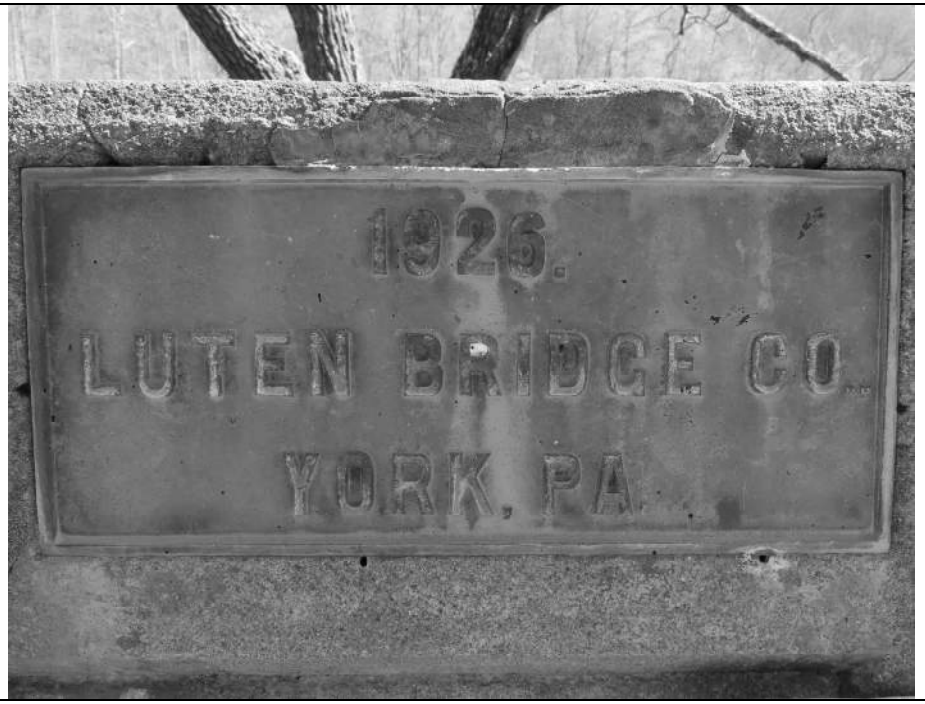


6. Spandrel Walls/Ribs & North Abutment. View Northwest.

7. West Spandrel Wall/Rib & North Abutment. View Northwest.

8. North Approach. View Southeast.

9. South Approach. View Northwest.



10. Bridge Builder's Plaque on Upstream/East Railing. View Northeast.

11. County Plaque on Downstream/West Railing. View SW

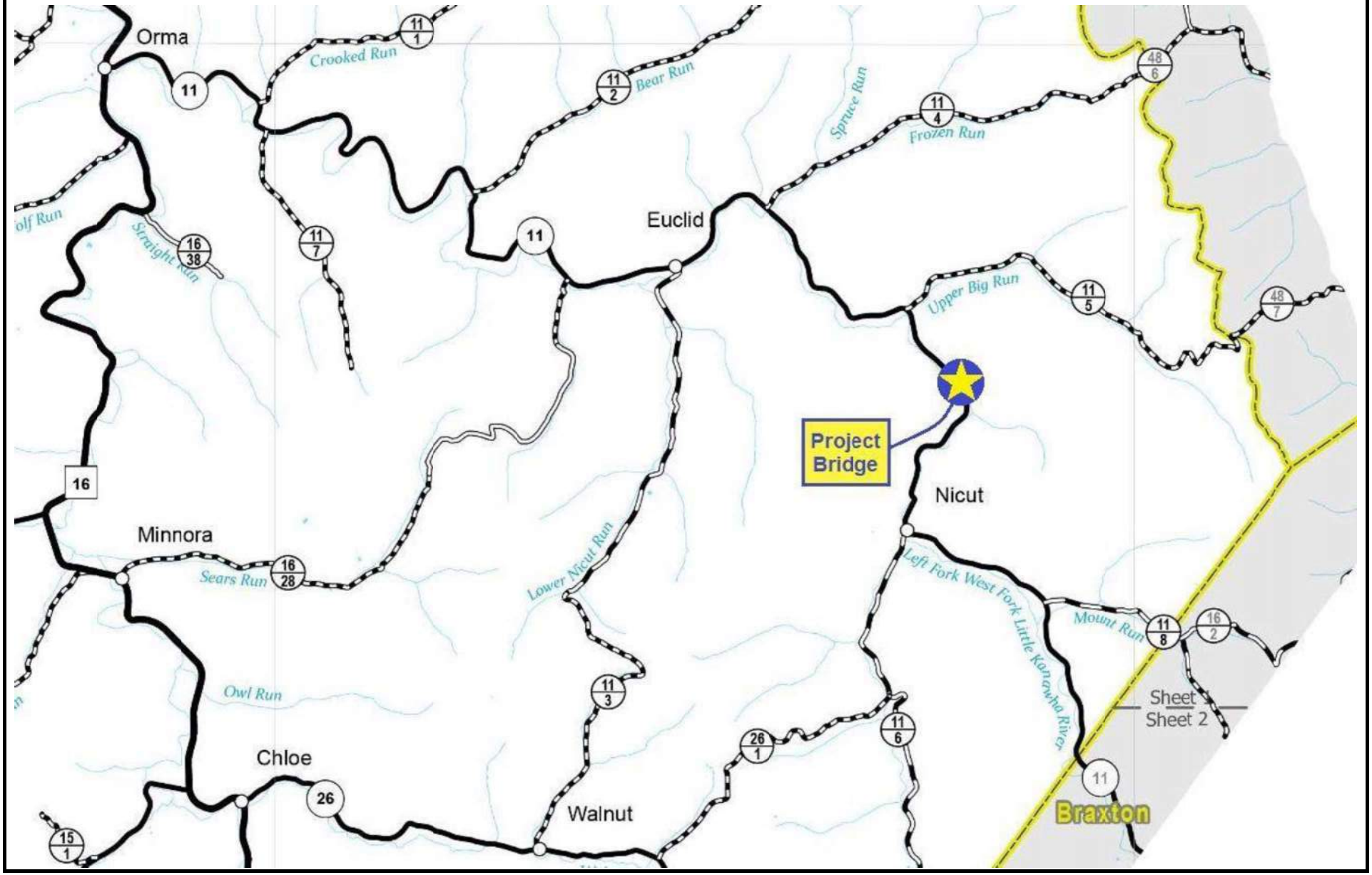
PROJECT AREA

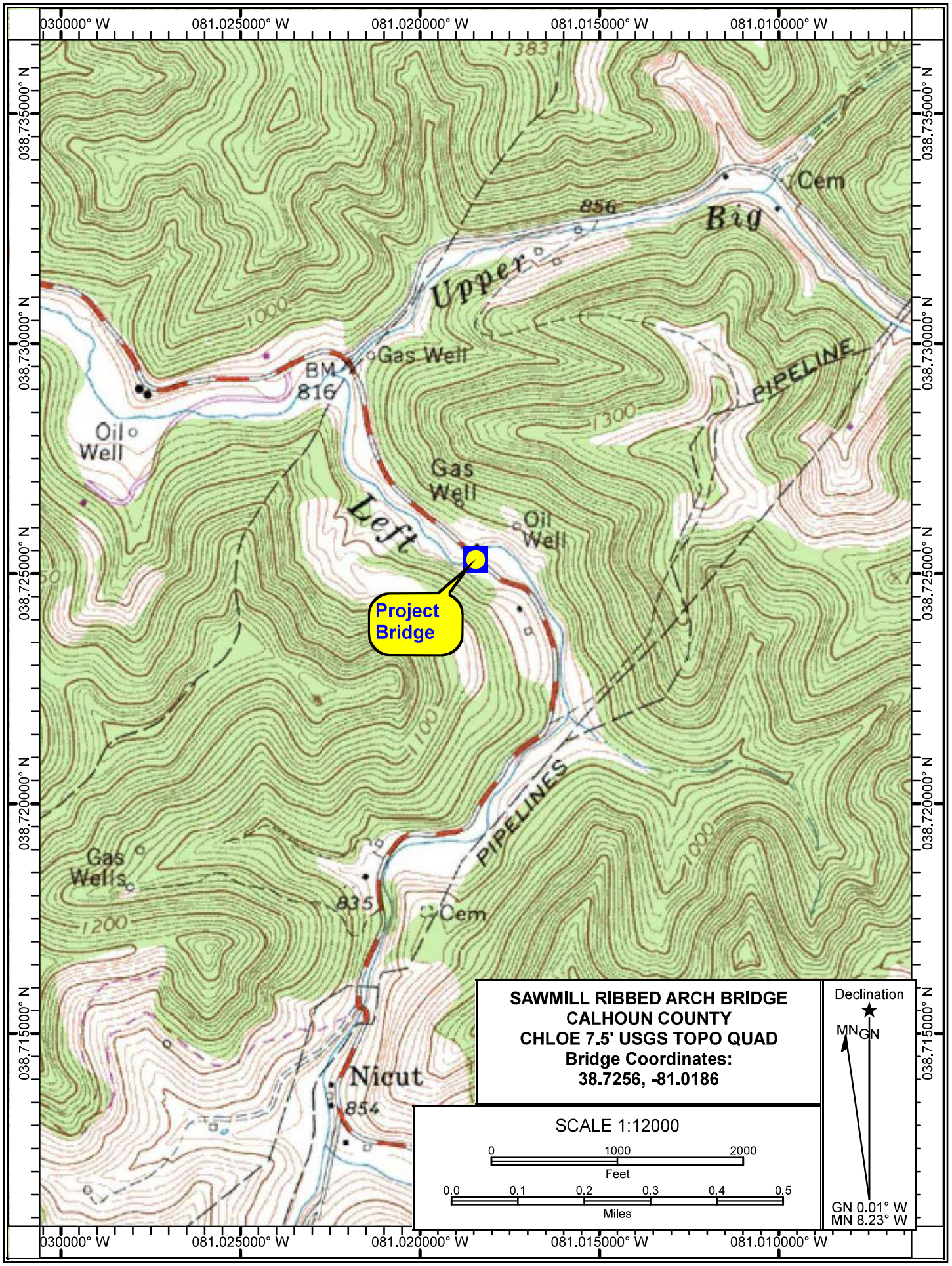
SAWMILL RIBBED ARCH BRIDGE REPLACEMENT PROJECT

State Project S307-11-6.88

County Route 11 (Euclid-Nicut Road) over Left Fork of West Fork Little Kanawha River

Calhoun County

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SAWMILL RIBBED ARCH BRIDGE
CALHOUN COUNTY
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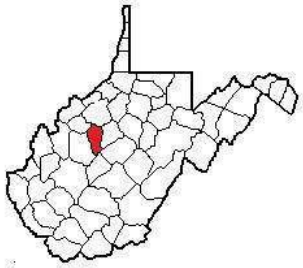
PROJECT AREA

SAWMILL RIBBED ARCH BRIDGE REPLACEMENT PROJECT

State Project S307-11-6.88

County Route 11 (Euclid-Nicut Road) over Left Fork of West Fork Little Kanawha River

Calhoun County

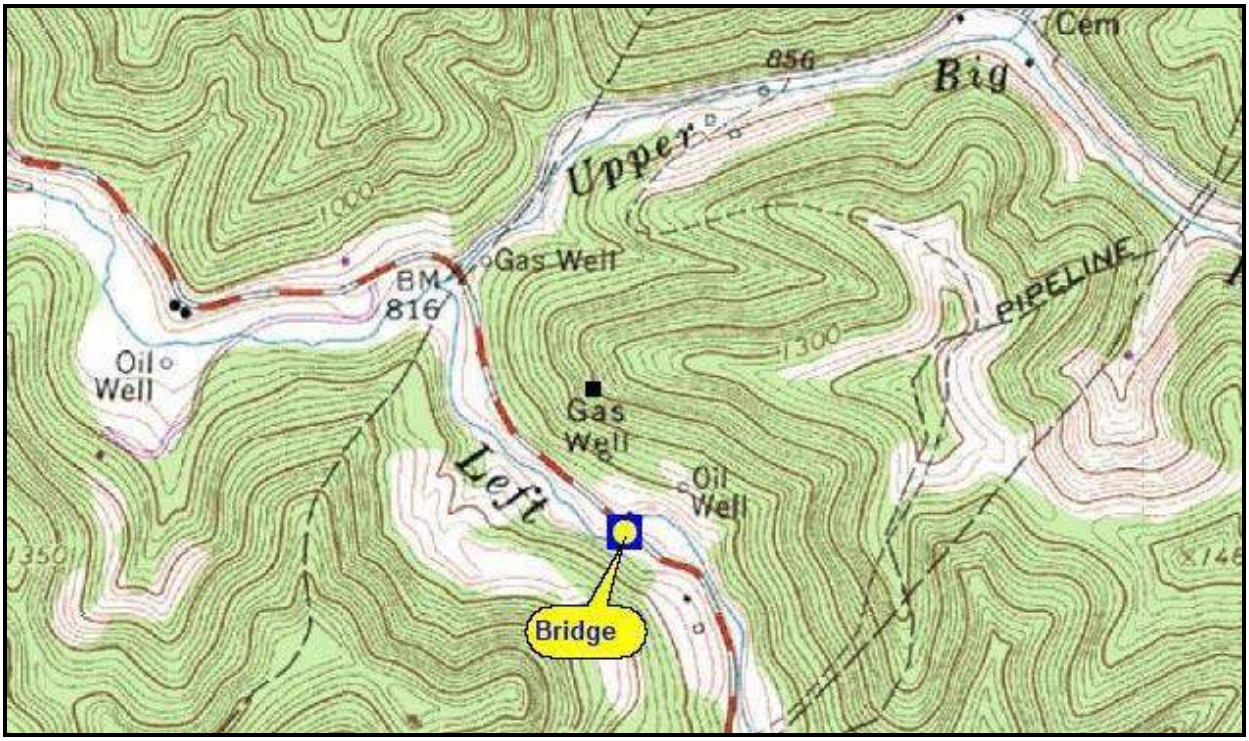


Internal Rating: CE

6 May 2026

WEST VIRGINIA HISTORIC PROPERTY INVENTORY FORM

Street Address County Rt 11 over Left Fork of West Fork of Little Kanawha River	**Common/Historic Name/Both** ☒ ☐ ☐ Sawmill Ribbed Arch Bridge	**Field Survey #** APE 1	**Site # *(SHPO Only)*** CH-0014_Rev01
Town or Community Nicut vicinity	**County** Calhoun	**Negative No.**	**NR Listed Date**
Architect/Builder Luten Bridge Co. of York, PA	**Date of Construction** 1926	**Style** Rein. Concrete Spandrel-Braced Arch Bridge	
Exterior Siding/Materials Rein. Concrete	**Roofing Material** Rein. Concrete Deck	**Foundation** Rein. Concrete	
Property Use or Function **Residence** ☐ **Commercial** ☐ **Other** ☒ Transporation; Bridge	**UTM#** Zone 17N NAD 1983 498394E, 4286324N		
Survey Organization & Date WVDOH April 23, 2025	**Quadrangle Name** Chloe **Part of What Survey/FR#** Sawmill Ribbed Arch Bridge Replacement S307-11-6.88		



CH-0014_Rev01

Site No.

Present Owners	**Owners Mailing Address**
WVDOH	
Phone #	

Describe Setting ___ **Acres**

This structure spans County Route 11 (CR 11; Euclid-Nicut Road) over the Left Fork of the West Fork Little Kanawha River in the unincorporated Euclid-Nicut area, southeastern Calhoun County. Little Kanawha River is a tributary of Ohio River. The bridge is 0.39 miles southeast of CR 11/5 (Upper Big Run Rd). The general area forested, hilly/mountainous terrain with dispersed residential development focused along the river and its tributaries.

☐ **Archaeological Artifacts Present**

Description of Building or Site (Original and Present) __ **Stories** __**Front Bays**

The existing Sawmill Ribbed Arch Bridge is a single-span reinforced concrete spandrel-braced deck arch bridge that was built by Luten Bridge Company of York, PA in 1926. The structure consists of two spandrel walls (ribs) that support a concrete deck above. The substructure consists of a 12-inch-thick concrete curtain wall abutment and concrete footer(s) at each end of the span. The bridge's existing overall measurements are 58 feet, 1 inch long (end-to-end of parapet walls) by 17 feet, 6 inches wide (out-to-out of deck). The roadway width is 15 feet, 6 inches (between curbs).

The bridge's two closed spandrel walls are 12 inches thick, and each has a central elliptical arch. Elliptical arches are based on ellipse/ovular forms rather than round/circular. The arched opening at each spandrel wall measures 39 feet, 11 inches (springline-to-springline) and 8 feet, 9 inches high (top of footer to arch rib midpoint). The edges of the arched openings (arch ribs) are chamfered. The term "closed" identifies that the area between the arch rib of each spandrel wall and the deck above is solid/closed (as opposed to open/pierced). The term "ribbed" is often used to describe a spandrel-braced arch bridge, identifying it has two or more rows of spandrels – creating "ribs" – working as the main support for the deck; there is open space between each spandrel/rib (as opposed to another version of closed spandrel arch bridge the includes an arch ring and earthen-filled deck).

The bridge deck is 9-inch-thick reinforced concrete. The deck overhangs each spandrel wall by roughly two (2) feet. There are solid reinforced concrete railings along the stream sides of the deck; they are 8-inch-thick by 3-foot-tall and include incised rectangular motif decoration on both sides. The bottom of each railing includes slight curb elements at both the interior- and exterior-facing sides. The deck surface (between curbs) has been paved over with an asphalt wearing surface. The bridge does not include sidewalks. Typical modern flexbeam approach guardrail is installed off each corner of the structure (at the railings).

A bronze bridge plaque at the north end of the west/downstream railing reads "J.A. MOREFORD, PRES., D.O. CHENOWETH, R.A. BOARD, COUNTY COURT, B.B. FERREL, PROS. ATTY., R.C. HARDMAN, CLERK."

A bronze bridge builder's plaque at the south end of the east/upstream railing reads "1926 / LUTEN BRIDGE CO. / YORK PA."

Alterations ☑ **Yes** ☐ **No** **If yes, describe**: Addition of flexbeam guardrails by the early 1990s.

Additions ☐ **Yes** ☑ **No** **If yes, describe:**

Describe All Outbuildings

N/A

Statement of Significance

(See Continuation Sheets)

Bibliographical References

(See Continuation Sheets)

Form Prepared By: Tracy D. Bakic **Date:** April 23, 2025

Name/Organization: West Virginia Division of Highways

Address: Capitol Complex
Building 5, Rm 820
Charleston, WV 25305

Phone #: 304-414-6407

Statement of Significance:

This resource is located in southeastern Calhoun County, between unincorporated locales of Euclid and Nicut. The county was established in 1856, formed from the western portion of Gilmer County (VA 1856:90). The County was named for John Caldwell Calhoun (1782-1850), a well-known South Caroliina Statesman who eventually served as US Vice President under to US Presidents – 1825-29 under John Quincy Adams and 1829-32 under Andrew Jackson; he was also a staunch supporter of the Southern cause and states' rights during the Antebellum era (Bonar 2024; Senate.gov). The location for the Calhoun County seat was much disputed for the county's first 13 years, with court meetings often being held in Arnoldsburg. However, Grantsville – in the northeastern portion of the county - formally became the seat in 1869 (Lewis 1998:216; WVCulture.org).

Calhoun County was within Virginia but also close to Northern State borders. During the Civil War, residents of the county were divided in their allegiances to Southern Confederate or Northern Union causes (Bonar 2024). The Moccasin Rangers were a Confederate guerrilla outfit operating near the headwaters of the Kanawha River during the war had a membership largely from Calhoun County (Bailey 2024). When the State of WV was created and admitted to the Union in 1863, Calhoun County was subdivided into five townships – Sheridan, Center, Sherman, Lee and Washington. In 1872 the townships were reestablished as magisterial districts, keeping the same names as before (Rand McNally 1924; US Census 1870,1880; White 1873; WV Dept of Ed 1872:98). The subject bridge has always been in Washington District.

The post-Civil War years were marked by slow but steady growth. "Timbering became an important economic activity as numerous rafts of logs were floated down the Little Kanawha to Parkersburg. Beginning in the late 1800s, Calhoun County became a major oil and gas producer, with a resulting increase in employment and population. . . In the absence of railroads and all-weather roads, the river was used to ship merchandise and supplies in and out of the county. At the turn of the century, an important development in river transportation was made by a Calhoun resident, Capt. Norman Williams. His narrow, shallow-draft, gasoline-powered sternwheelers made navigation possible on the upper reaches of the Little Kanawha and its tributaries. Everything from people to mail to oil field equipment traveled on these boats and their barges" (Bonar 2024).

"Calhoun County's recovery from the Great Depression was slow, and the county suffered from the same out-migration that affected most of the state after World War II. The number of Calhoun Countians peaked at 12,455 in 1940 and declined thereafter, with a population of 6,229 in 2020. The county's economy in the late 20th century was based on livestock grazing, light manufacturing, and the oil and gas and pipeline construction industries. In 2023, Calhoun County's largest employers were the Minnie Hamilton Health Care Center, county school system, Momentum Pipeline, Lost Time Control West, and Houchin Construction. Reforestation has led to a resurgence of timbering and has made the county ideal for hunting and fishing" (Bonar 2024)

Washington District & Euclid-Nicut Area

The villages of Euclid and Nicut are within Washington District. The district was named to honor George Washington, first President of the US. The district is mainly mountainous and hilly. An early settler was Peter McCune who, with his family, made a home in the West Fork valley in the lower part of the district in 1815. Soon after other families settled along the West Fork, including those by the name of Parsons, Cook, Conley, Cottrell, Truman, and Brannan. The first grist mill was erected around 1828 by Job Truman, and the first sawmill was erected in 1845 by Thomas Jarvis. The first school in the district was started in 1835, being taught by D. George Conley. A Methodist Episcopal congregation was organized in 1836 at the home of Thomas Jarvis. By ca. 1880s there were 8 church groups organized within the district, including Methodist and Baptist groups (WVGenWeb).

From a review of the website HurHerald.com, the Nicut-Euclid area appears to have been an agricultural area through its history. Within the county, nearly every small community included a grist mill, many associated with a country store while others operated from family barns and sheds (HurHerald.com).

- At Nicut there was a grist mill related to the David Oscar Chenowith's home, store and the PO, located at the confluence of the Left Fork and Nicut Run (HurHerald.com). The Nicut PO was established in 1902 and Francis M. King was its first postmaster. The Nicut PO operated until 1919 (*Calhoun Chronicle* 8/1902; PostalHistory.com; US 1903:403).

Statement of Significance (*cont'*d):

- Heading north from Nicut on CO 11, one passes over the Sawmill Ribbed Arch Bridge and then the next village of Frozen, located at the confluence of Left Fork and Frozen Run. There was also a grist mill at Frozen, which was operated by John Cottrell (HurHerald.com). Frozen's PO was established in 1909 and Cottrell was its first postmaster. The PO operated until 1950 (PostalHistory.com; US 1909:524).
- Euclid is the next community north on CO 11. This village was named when its post office was established in 1901 by Ira Reip whose young son was named Dalton Euclid Reip (born 1889), the first and middle names purportedly selected by Ira when viewing those names in a Chamber's Encyclopedia. Ira entered his son's middle name to the US postal service when establishing the PO. The Euclid PO operated until 1955 (*Calhoun Chronicle* 1901, 1/1902; HurHerald.com; Kenny 1945:233; PostalHistory.com).

There were local schoolhouses, including at Nicut/Nicut Run, Upper Big Run (just north of the project bridge), Frozen Run, and Lower Nicut Run (WVSRC 1933, 1937).

Calhoun County Route 11 & Sawmill Ribbed Arch Bridge

CO 11 is not known to be part of a historic turnpike/toll road. This road is presently also identified on signs/maps as Nicut Road and Euclid-Nicut Road. Locally the road has been called "Left Hand Road" or "Left Hand Fork Road" as it is along the Left (or Left Hand) Fork of the West Fork Little Kanawha River. A best early depiction of the general alignment of today's CO 11 is on 1906 USGS topographic mapping (USGS 1906). This road from Orma and through Gomez, Euclid, Nicut to the Braxton County line has been identified as Calhoun County Rt 11 since at least the early 1930s (WVSRC 1933).

The earliest roadwork found in WV State Road Commission (WVSRC) annual reports that appears related to CO 11 (Left Hand Fork) was in 1926-27 when two miles of the route was graded (WVSRC 1927:52). Quick review of available WVSRC annual reports indicates the route was being graded and stone-surfaced by the 1940s. The bituminous paving of CO 11 progressed over time, the earliest section from Orma to Frozen Run being done by ca. 1950 and the rest of the route to the Braxton County line by the 1960s (WVSRC *Annual Reports* 1940-1961*; WVSRC Hwy Maps 1954-68, on file WVDOH).

Sawmill Ribbed Arch Bridge. Per the extant builder's plaque on the east/upstream railing, this concrete arch bridge was built in 1926 by the Luten Bridge Company of York, PA. Research for this form has not found any other construction history or original plans related to this span. It appears that the nearby Nicut Run Ribbed Arch (CH-0015) was built in the same year and by the same bridge company. It could be possible that the bridges were part of the same contract with the Calhoun County court.

* https://catalog.hathitrust.org/Record/010306046 (viewed April 2025)

Reinforced Concrete Spandrel-Braced Deck Arch Bridge Context

The earliest known existing reinforced concrete arch bridge in the US was designed by Ernest L. Ransome and built in 1889 in Golden Gate Park, San Francisco. Other early names associated with reinforced concrete arch bridge design were Joseph Melan, Fritz von Emperger and Edwin Thacher. However, it was Daniel B. Luten who, within the first three decades of the 20th century, was the dominant designer, builder and promoter of reinforced concrete arch spans in the US (Parsons Brinkerhoff et al. 2005: 53). There were many other companies, though, that incorporated concrete arch bridge design and building as part of their repertoire. In West Virginia, concrete arch deck bridges were built steadily through the 1930s and were very popular in the 1910s and 1920s (KCI et al. 2015: 88).

Reinforced concrete deck arch bridges include filled-spandrel and spandrel-braced types, each spanning between concrete abutments. The arch proper is called the arch rib or arch ring and the spandrel is the area/space between the ring and the deck. Solid spandrel walls built to each side of an arch ring will form the closed/filled spandrel type; with this design the spandrel area between the walls was earth-filled (ie, rubble, stone, dry soil) which facilitated distribution of traffic loads over the span. A spandrel-braced arch has a pair of reinforced spandrel walls that act together as "ribs" to support (or brace) the deck above; the area between the ribs is typically open and the walls/ribs can be solid or pierced. The subject bridge is a spandrel-braced arch bridge with solid spandrel ribs [Carver 2008: 241; KCI et al. 2015: 321; P.A.C. Spero & Co. 1995:152]).

Statement of Significance (*cont'*d):

Daniel B. Luten & Luten Bridge Company. Daniel B. Luten is nationally recognized as an important figure in bridge building and the design of reinforced concrete arch bridges. Luten patented his designs, and they were used throughout the US (KCI et al. 2015). The central idea of Luten's practice was to "produce a more efficient structure" by reducing the material needed to build for a given strength. His innovative approaches to reinforcing concrete arches with longitudinal tension rods resulted in efficient bridge designs (Mead & Hunt 2007:88).

In 1902 Luten's design firm - National Bridge Company of Indianapolis, Indiana - was incorporated (Cooper 1997:52; *Railroad Gazette* 1902). "Luten designs were utilized throughout the United States. By 1915 Daniel B. Luten held 39 patents on concrete bridge plans and had designed about 6,000 bridges in the United States, Mexico, and Canada. In 1925 Luten had over 50 patents and over 1,400 bridges were attributed to his designs" (KCI et al. 2015). D. B. Luten reportedly closed his design office in 1932 (Cooper 1997:182).

"Luten often provided agents and builders with drawings and a license to construct bridges based on his plans for a set price. One such agent was Alex B. Whittaker. In 1909 [PA 1911:110] Whittaker incorporated his own company, the Luten Bridge Company of York, Pennsylvania, and was joined by his brother John Whittaker, Lucius G. Brown, and G. W. Drury. The Luten Bridge Company established a number of branch offices and obtained bridge construction contracts throughout the eastern and southern United States, including Clarksburg, West Virginia; Atlanta, Georgia; Syracuse, New York; Concord, New Hampshire; Palatka, Florida; Pennsylvania, Maryland, Tennessee, and Arkansas. The Luten Bridge Company is believed to have sold Daniel Luten designs as well as other similar concrete arch bridge designs" (KCI et al. 2015).

Despite his patents, D. B. Luten's virtual control of the concrete arch bridge industry was challenged and broken in January 1918 when a Federal judge in Iowa ruled that the Luten patents covered in the case "Luten v. Marsh" represented common engineering knowledge and were "invalid." With a legal precedent set and minus the burdens of royalty costs for patent use, the ruling freed up the field for competitors to design and build concrete arch bridges and the vehicular bridge type greatly expanded across the country (Carver 2008:240; Herbst & Rottman 1986:10; Jochims 1985; McDonald 1918).

"Daniel Luten-designed concrete arch bridges were often known for achieving a notably flat arch, which provided a long arch span with less need for bridge height. Use of this design feature resulted in aesthetically pleasing bridges that were also economical in their use of materials. Some Luten designs utilized more rounded, less elliptical arches to respond to particular site conditions and shorter crossings (KCI et al. 2015). His most efficient designs were developed in the 1920s using spandrel-braced arch (VTRC 2000:46, 48).

Evaluation

Criterion A. Existing CO 11, including Sawmill Ribbed Arch Bridge, represents local road development and improvements common throughout the state in the early 20th century. The portion of CO 11 that the bridge is on is not part of a known turnpike route. Other than general association with the history of the area, there is no reason to believe that Sawmill Ribbed Arch Bridge has an important link with events or trends, transportation- or industry-related or other, that have made a significant contribution to the broad patterns of history. Due to the above, Sawmill Ribbed Arch Bridge does *not* meet NRHP Criterion A for association with events at a national, regional or local level.

Criterion B. Per research and public involvement to this point*, this span is not known to have been associated with the significant productive period of some notable person's life, nor to have been associated for any length of time with such a person, nor to be the best representation of such a person's historic contribution. Therefore, this span does not meet NRHP Criterion B.

Although not researched for this form, there could be potential that any of the Calhoun County officials listed on the plaque on the west/downstream railing of the bridge may have lived in/near the surrounding area at the time of this bridge's construction. Regardless, county officials would have been included on any plaque-worthy bridge built during their respective terms. The possibility of a term official having a more personal association with a new bridge location can be seen as happenstance and not typically of notable significance.

* Correspondence was conducted with Preservation Alliance of West Virginia, Calhoun County Historical & Genealogical Society, and Calhoun County Commission.

Statement of Significance (*cont'*d):

Criterion C. The extant Sawmill Ribbed Arch Bridge is a single-span reinforced concrete spandrel-braced (ribbed) arch bridge that was built in 1926 by the Luten Bridge Company of York, PA. It was previously determined NRHP-eligible under Criterion C in 2013 when it was evaluated for the WV Statewide Historic Bridge Survey as an uncommon bridge type in WV and for its association with designer Daniel B. Luten and the Luten Bridge Company (KCI et al 2013, 2015).

In the 2015 WV bridge survey there were about 209 Luten Bridge Company concrete arch bridges extant in WV. By 2020, this number was reduced to about 164 and is likely further reduced by 2024-25. Of the Luten Bridge Co. concrete arch bridges remaining in 2020, only about 21 were of the Spandrel-Braced (Ribbed) type. As of 2025, at least five of these spandrel-braced bridges are now gone – Dola Bridge (HS-0804), Haymond Hwy Arch (HS-0838), Blue Creek Twin Arch Bridge (Kanawha Co), Garrison Bridge (WZ-0061), and Jobes Bridge (WZ-0060). The following 16 spans are Luten Bridge Co-built Spandrel-Braced Arch Bridges known to currently still exist in WV:

Known Existing Spandrel-Braced (Ribbed) Concrete Arch Bridges Built by Luten Bridge Company (York, PA) per the 2015 WV Historic Bridge Survey with updated WVDOH info to April 2025.						
County	**Name/Location**	**Year Built**	**Spans**	**WVDOH BARS #**	**WVSHPO Site #**	**NRHP Eligibility**
Calhoun	Sawmill Ribbed Arch CO 11 over L Fk West Fk L Kanawha Riv	1926	1	07A029	CH-0014	Eligible
Calhoun	Nicut Run Ribbed Arch CO 11 over Nicut Run	1926	1	07A030	CH-0015	Eligible
Doddridge	N Central Station Arch CO 11 over Arnold Creek	1926	1	09A013	DO-0109	Eligible
Doddridge	Avon Arch CO 58 over Meathouse Fork	1926	1	09A091	DO-0121	Eligible
Harrison	Coon Hunters Arch CO 5/7 over Tenmile Creek	1924	1	17A025	HS-0789	Eligible
Harrison	Laura Lee Arch CO 20/84 over Tenmile Creek	1925	1	17A178	HS-0821	Eligible
Harrison	Hope Street Bridge Hope St over Jones Run; Lumberport	1925	1	17A915	HS-0839	Eligible
Kanawha	Loudon Heights Bridge Louden Hts Rd over Fk Porters Hollow	1924	1	20A909	KA-5542	Eligible
Lewis	Kincheloe Creek Ribar CO 1 over Kincheloe Ck	1924	1	21A005	LE-0044	Eligible
Lewis	Sand Fork Arch CO 2 over Kincheloe Ck	1923	1	21A009	LE-0046	Eligible
Lewis	Limestone Run Arch CO 22 over Limestone Run	1923	1	21A070	LE-0063	Eligible
Marion	Morris Siding Arch CO 17 over Paw Paw Ck	1925	1	25A035	MA-3832	Eligible
Marion	Chesapeake Arch CO 250/31 over Buffalo Ck	1924	1	25A182	MA-3854	Eligible
Monroe	Wolf Creek Bridge CO 10 over Wolf Ck	1929	1	32A018	ME-0304	Eligible
Putnam	Trace Fork Bridge CO 37 over Trace Fk Mud Riv	1927	1	40A043	PU-0057	Eligible
Webster	Hacker Valley Rib Arch CO 3 over L Fk Holly River	1928	1	51A001	WB-0097	Eligible

Statement of Significance (*cont'*d):

Per the above, Sawmill Ribbed Arch Bridge is one of only about 16 total Luten Bridge Company-built Spandrel-Braced (Ribbed) Arch bridges remaining in WV. WVDOH continues to agree with the 2015 WV Statewide Historic Bridge Survey that this bridge is noteworthy as a representation of an uncommon bridge type in WV, and as an example of the work of the Luten Bridge Company of York, PA, a nationally recognized bridge builder that had strong associations with the designs Daniel B. Luten, a nationally recognized bridge designer. This bridge retains a good level of integrity, particularly in the aspects of design, materials and workmanship. Therefore, Sawmill Ribbed Arch Bridge continues to meet NRHP Criterion C.

Criterion D. This span is not likely to have important information that will contribute to our understanding of human history or prehistory. Construction appears to have utilized commonly known techniques, tools and materials. The potential for information is minimal and, therefore, this span does not meet NRHP Criterion D.

Summary: The Sawmill Ribbed Arch Bridge is NRHP-eligible under Criterion C as a notable example of a reinforced concrete spandrel-braced (ribbed) arch bridge, an uncommon and diminishing bridge type represented in WV landscape, and as an example of the work of the Luten Bridge Company of York, PA, a nationally recognized bridge builder that had strong associations with the designs Daniel B. Luten, a nationally recognized bridge designer.

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East/Upstream Elevation. View SW (WVDOH 4/17/2025)

East/Upstream Elevation. View SE (WVDOH 4/17/2025)

East/Upstream Elevation. View WNW (WVDOH 4/17/2025)

West/Downstream Elevation. View NE (WVDOH 4/17/2025)

West/Downstream Elevation. View SE (WVDOH 4/17/2025)

Spandrel Walls, North Abutment, and Underside of Deck.
View NW, taken from South Abutment (WVDOH 4/17/2025)

South Abutment Backwall. View SE (WVDOH 4/17/2025)

South Abutment, Downstream/West Side. View E (WVDOH 4/17/2025).

South Abutment, Upstream/East Side. View SSE (WVDOH 4/17/2025).

North Abutment, Upstream/East Side. View NW (WVDOH 4/17/2025)

North Abutment, Downstream/West Side. View SW (WVDOH 4/17/2025)

View Highlighting Beveled/Chamfered Edges at Spandrel Arches. View West/Up (WVDOH 4/17/2025)

North Approach. View SE (WVDOH 4/17/2025). North End of Downstream/West Railing has County Plaque.

South Approach. View NW (WVDOH 4/17/2025). South End of Upstream/East Railing has Builder's Plaque.

Bridge Builder's Plaque at South End of Upstream/East Railing. View NE (WVDOH 4/17/2025)

County Commissioner's Plaque at North End of Downstream/West Railing. View SW (WVDOH 4/17/2025)

West Virginia
Historic Bridge Inventory Form

Bridge No. 07-011/00-006.90 **BARS No.** 07A029 **Federal Bridge No.** 00000000007A029 **Bridge Design No.** 6099.0

IDENTIFICATION INFORMATION

SHPO Survey No. CH-0014
Local Name SAWMILL RIBBED ARCH
Other Local Name
Owner State Highway Agency
Status Extant - in service

LOCATIONAL AND SETTING INFORMATION

District 03 **County** Calhoun **Latitude** 38433000 **Longitude** 081010600
Location 0.39 MI E CR 11/5
Facility Carried By Structur CR 11
UTM-Northing
UTM-Easting
UTM Zone
Features Intersected L FK WEST FK L KANAWHA R
Surrounding Land Use Residential
Type of Development Rural - (undeveloped area outside communities)

STRUCTURAL INFORMATION

Main Span Type Concrete Arch - Deck
Main Span Type Code 111
Number of Spans in Main Unit 001
Number of Approach Spans 0000
Structure Length (ft) 58
Length of Maximum Span (ft) 39
Average Daily Traffic 000200 **Year** 2004
Sufficiency Rating 0685 **Skew** 00
(Note: Data current as of April 2006 database)

BRIDGE DESCRIPTIVE INFORMATION

Year Built 1926
Year Reconstructed
Truss Bridge Type
Alteration(s)
Arrangement
Connection Type
Truss Details
Date of Alterations (Year)

Architectural Treatment(s)

Bridge Plate Text
(2) plaques. "J.A. MOREFORD, PRES., D.O. CHENOWETH, R.A. BOARD, COUNTY COURT, B.B. FERREL, PROS. ATTY., R.C. HARDMAN, CLERK" and "1926 LUTEN BRIDGE CO., YORK PA."

BRIDGE HISTORY

Engineer or Designer
Builder or Fabricator Luten Bridge Company
Bridge Plan Location Unknown
Additional Details: Closed parapet rail with incised panels. Two closed spandrel elliptical arch ribs support the deck slab. This bridge is an example of a spandrel-braced arch, an uncommon bridge type. The type is closely associated with the work of Daniel B. Luten, a nationally recognized bridge designer.

Bridge No.	07-011/00-006.90	BARS No.	07A029	Federal Bridge No.	00000000007A029	Bridge Design No.	6099.0

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 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.
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 Bridge Inventory Form
Form Prepared By Mead & Hunt and KCI
Form Preparation Date 2013

Sawmill Ribbed Arch bridge

Calhoun County

Sawmill Ribbed Arch Bridge spans County Route 11 over the Left Fork of the West Fork Little Kanawha River in the Euclid-Nicut area of Washington District, southeastern Calhoun County. This historically agricultural area experienced pioneer settlement in the early half of the 19th century. Nearly every small community had a grist mill, including Nicut to the south and Frozen to the north of the bridge. Euclid, Frozen, and Nicut had post offices established in the first decade of the 20th century, and there were several area schoolhouses.

This bridge – built in 1926 by Luten Bridge Company of York, PA – is a 58'-1" long by 17'-6" wide reinforced concrete span. It is a single-span, spandrel-braced elliptical arch bridge, composed of a pair of concrete spandrel walls (or "ribs") that support the concrete deck above. Beneath the deck, the area between the ribs is completely open.

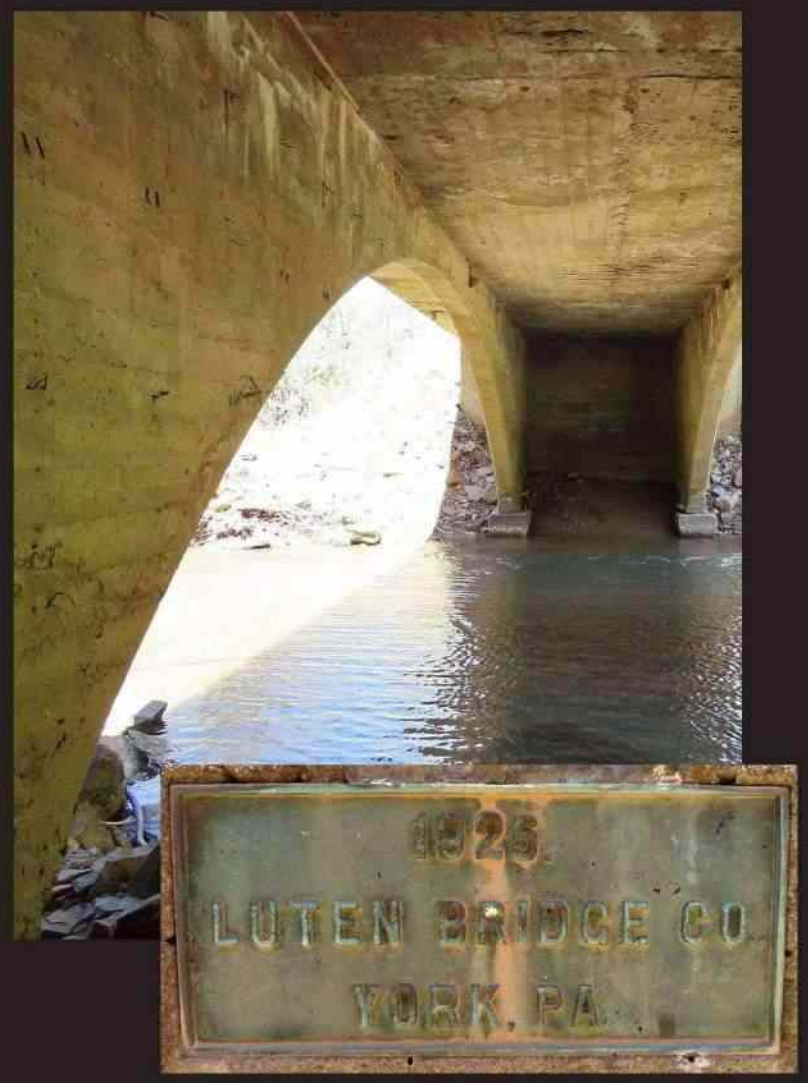
Daniel B. Luten is a nationally important figure in bridge building and the design of reinforced concrete bridges. He patented his designs, and they were utilized throughout the US, most popularly from 1900 to 1930. He often provided agents & builders with a license to use his plans. One such agent was Luten Bridge Co., which was incorporated in 1909 and became a prolific bridge builder in the eastern and southern US.

Sawmill Ribbed Arch Bridge has been determined eligible for listing in the National Register of Historic Places for its engineering significance as a representation of a braced-spandrel concrete arch bridge, an uncommon bridge type in WV, and as an example of the work of Luten Bridge Co., a nationally recognized former bridge builder. Examples of both the bridge type and builder are increasingly diminishing resources in WV.

Sawmill Ribbed Arch bridge

This bridge is documented on WVDOH's historic bridge website,

www.highwaysthroughhistory.com



Contact Us

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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
SAWMILL RIBBED ARCH BRIDGE REPLACEMENT PROJECT
STATE PROJECT # S307-11-6.88
FEDERAL PROJECT # STBG-0011(195)D
CALHOUN COUNTY, WEST VIRGINIA
AUGUST 2025

WHEREAS, the Federal Highway Administration (FHWA), in cooperation with the West Virginia Division of Highways (WVDOH), proposes to replace the Sawmill Ribbed Arch Bridge which spans over the Left Fork of the West Fork Little Kanawha River on County Route 11 in Calhoun County, hereinafter referred to as the Project. The Project will involve the demolition of the existing bridge; and

WHEREAS, the FHWA has determined that the Project will have an adverse effect upon the Sawmill Ribbed 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 affect archaeological properties; and

WHEREAS, the WVDOH has contacted the Preservation Alliance of West Virginia, Calhoun County Commission, and the Calhoun County Historical & Genealogical Society regarding the Project. None of these groups chose to respond and/or establish ability in relation to reuse of the existing Sawmill Ribbed Arch 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. Sawmill Ribbed Arch Bridge

a. Sawmill Ribbed Arch Bridge will be documented in its present historic setting. The State Level Historic Documentation package will include: a brief history of the structure, along with fully completed West Virginia Historic Property Inventory forms and copies of any available plans sheets and drawings of the structure from WVDOH bridge files or other repositories; and 5"x7" black and white digital prints in accordance with the NRHP and National Historic Landmarks Program Consolidated and Updated Photograph Policy of 2024. The documentation package will include hard copies of the information outlined in this stipulation as well as digital copies in the form of PDFs for reports and documents, and TIFF files for photographs. The WVSHPO will be given the opportunity to review and comment on the documentation before submission of final versions.

b. WVDOH staff will provide Calhoun County Historical & Genealogical Society and Calhoun County Public Library with a copy of the Sawmill Ribbed Arch Bridge State Level Historic Documentation for reference and educational purposes.

c. Color brochures about Sawmill Ribbed Arch Bridge will be developed by WVDOH and distributed to Calhoun County Historical & Genealogical Society and Calhoun County Public Library. The brochure will also be provided via an electronic data storage device for the above organizations to print brochures when the original total provided has been exhausted. The WVSHPO will be given the opportunity to review and comment on the content on the brochure before it is finalized for distribution to the above organizations

d. Sawmill Ribbed Arch Bridge will be documented on the West Virginia historic bridge website.

e. Sawmill Ribbed Arch Bridge's existing two informational plaques (builder's plaque & county plaque) will be given to the Calhoun County Historical & Genealogical Society.

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 Sawmill Ribbed 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

JASON WORKMAN

Digitally signed by JASON WORKMAN
Date: 2025.11.13 13:01:14 -05'00'

Federal Highway Administration — Date

West Virginia Deputy State Historic Preservation Officer — 9/29/2025 — Date

INVITED SIGNATORY:

West Virginia Division of Highways — 10/1/2025 — Date