

United States Department of the Interior
National Park Service

National Register of Historic Places
Registration Form

1. Name of Property

historic name South Branch Bridge

other names/site number Capon Lake Whipple Truss Bridge (preferred)

2. Location

street & number WV Route 259 n. of intersection with CR 16 ☐ not for publication

city or town Capon Lake ☐ vicinity

state West Virginia code WV county Hampshire code 027 zip code 26865

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ☒ nomination ☐
request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic
Places and meets the procedural and professional requirements set for in 36 CFR Part 60. In my opinion, the property ☒ meets ☐
does not meet the National Register criteria. I recommend that this property be considered significant
☐ nationally ☒ statewide ☐ locally. (See continuation sheet for additional comments.)

Signature of certifying official/Title

Date

West Virginia State Historic Preservation Office

State or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. (☐ See Continuation sheet for additional
comments.)

Signature of certifying official/Title

Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

- ☐ entered in the National Register.
☐ See continuation sheet

- ☐ determined eligible for the
National Register.
☐ See continuation sheet

- ☐ determined not eligible for the
National Register.

- ☐ removed from the National
Register.

- ☐ other, (explain:) _____

Signature of the Keeper

Date of Action

Capon Lake Whipple Truss Bridge

Name of Property

Hampshire County, West Virginia

County and State

5. Classification

Ownership of Property

- ☐ private
☐ public-local
☒ public-State
☐ public-Federal

Category of Property

- ☐ building(s)
☐ district
☐ site
☒ structure
☐ object

Number of Resources within Property

Contributing

Noncontributing

buildings

sites

structures

objects

Total

1

1

Name of related multiple property listing

n/a

Number of Contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions

TRANSPORTATION/road-related (vehicular)

Current Functions

TRANSPORTATION/ pedestrian-related

7. Description

Architectural Classification

Other: Whipple Truss

Materials

foundation CONCRETE

walls

roof

other METAL: iron

Narrative Description

See Continuation Sheets

8. Statement of Significance

Applicable National Register Criteria

- ☐ **A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- ☐ **B** Property is associated with the lives of persons significant in our past.
- ☒ **C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- ☐ **D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

Property is:

- ☐ **A** owned by a religious institution or used for religious purposes.
- ☒ **B.** removed from its original location.
- ☐ **C.** birthplace or grave of a historical figure of outstanding importance.
- ☐ **D** a cemetery.
- ☐ **E** a reconstructed building, object, or structure.
- ☐ **F** a commemorative property
- ☐ **G** less than 50 years of age or achieved significance within the past 50 years.

Narrative Statement of Significance:

See Continuation sheets

Levels of Significance (local, state, national)

State

Areas of Significance

ENGINEERING

Period of Significance

1874

Significant Dates

1874

Significant Person

N/A

Cultural Affiliation

N/A

Architect/Builder

White and Sons of New Brighton, PA

9. Major Bibliographical References

Bibliography

Previous documentation on file (NPS):

- ☐ preliminary determination of individual listing (36 CFR 67) has been requested
- ☐ previously listed in the National Register
- ☐ Previously determined eligible by the National Register
- ☐ designated a National Historic Landmark
- ☐ recorded by Historic American Buildings Survey # _____
- ☐ recorded by Historic American Engineering _____

Primary location of additional data:

- ☐ State Historic Preservation Office
- ☒ Other State Agency
- ☐ Federal Agency
- ☐ Local Government
- ☐ University
- ☐ Other

Name of repository:

WV Division of Highways

Record # _____

Capon Lake Whipple Truss Bridge
Name of Property

Hampshire County, West Virginia
County and State

10. Geographical Data

Acreage of Property <1 acre

UTM References

1 17 713003 4337255
Zone Easting Northing
2

3
Zone Easting Northing
4

☐ See continuation sheet

Verbal Boundary Description

See Continuation Sheets

Boundary Justification

See Continuation Sheets

11. Form Prepared By

name/title Courtney Fint, Architectural Historian
organization West Virginia Division of Highways date August 3, 2011
street & number Bldg 5, Room 450; 1900 Kanawha Blvd. E. telephone 304-558-2885
city or town Charleston state WV zip code 25305

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

- A **USGS map** (7.5 or 15 minute series) indicating the property's location
- A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

- Representative **black and white photographs** of the property.
- CD with electronic images if digital photographs.

Floorplans for individual listings

Additional items

(Check with the SHPO or FPO for any additional items.)

Property Owner

name West Virginia Division of Highways District 5 (attn: Gary Klavuhn)
street & number PO Box 99 telephone 304-289-3521
city or town Burlington state WV zip code 26710

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listing. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 *et seq.*)

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P. O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reduction Projects (1024-0018), Washington, DC 20303.

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LOCATION and SETTING

Capon Lake Whipple Truss Bridge is located along WV Route 259 in Hampshire County, immediately north of the intersection with Hampshire County Route 16. It crosses the Cacapon River and is just downstream of the Capon Lake Bridge, a steel stringer structure built in 1991 to replace the Whipple Truss for vehicular traffic. The surrounding landscape is rural and forested. Capon Springs, an historic spring and resort first discovered in the late 1700s and still in operation as a retreat, is about 3.5 miles east of Capon Lake on County Route 16.

DESCRIPTION

The structure is a Whipple/Murphy Truss bridge, approximately 20' wide and 176' long, built atop a reinforced concrete abutment and pier. The bridge has a full-length pedestrian walkway, with an observation platform and seating near midspan. The truss consists of 14 bays, each approximately 11' wide and 23' tall. The truss has a double-intersection configuration, meaning that the diagonals extend across two bays. The bridge is constructed of wrought iron and is pin-connected.

The Capon Lake Whipple Truss Bridge was constructed in 1874 near Romney as part of a larger two-span Whipple Truss bridge. The current bridge span was moved to its current location in 1938 and connected to a Pratt truss. The Pratt truss was removed in 1991. At this time, the decking was removed from the Whipple truss and a pedestrian walkway and viewing platform was constructed.

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STATEMENT of SIGNIFICANCE

Capon Lake Whipple Truss is eligible on a state level under Criterion C for its engineering significance as an excellent example of a Whipple/Murphy Truss bridge and under Criterion Consideration B: Moved Properties. Its period of significance is its date of construction, 1874. Due to its uncommon innovative design and age, Capon Lake Whipple Truss is one of West Virginia's most significant bridges and it is maintained as a historical site for pedestrians by West Virginia Division of Highways District 5. This is an early example of the use of metal truss bridge technology, which characterized highway bridge design well into the twentieth century. Trusses such as this could be ordered from catalogs by county courts and other entities and could be built faster and more economically than stone bridges, and could span longer distances with more durability than wooden bridges. Capon Lake Whipple Truss is the state's oldest example of a bridge technology that revolutionized road transportation throughout the state.

The bridge was originally built near Romney, West Virginia in 1874 on US Route 50, which follows the route of the Northwestern Turnpike. The bridge exhibits the characteristic innovations developed by prominent bridge designers Squire Whipple and J.W. Murphy, including double-intersection diagonals and counter-diagonals, and pin connections. Metal truss bridges were marketed as moveable structures that could be dismantled and re-erected elsewhere if necessary; this bridge was moved from its original location to the Cacapon River in 1938 and was closed to vehicular traffic in 1991.

HISTORY

The Capon Lake Whipple Truss Bridge was constructed over the South Branch of the Potomac River one mile west of Romney, West Virginia in 1874. It replaced an 1838 covered bridge that was chartered by the Virginia General Assembly for the Northwestern Turnpike and was burned by Confederate forces during the Civil War. The town of Romney is famous for having reportedly changed hands 56 times during the Civil War; whatever the true number, Romney, especially the crossing at the South Branch of the Potomac, was certainly a strategic point due to its location on the Northwestern Turnpike, a major east-west route. After the end of the war, local citizens and the newspaper advocated for the quick replacement of the bridge, citing "continual risk, danger and inconveniences arising from want of the South Branch Bridge at Col. Gibson's (destroyed during the war)..." The County issued bonds for a new bridge in 1868, and by 1874 the bridge was under construction.

The *South Branch Intelligencer* provided frequent updates on the progress of the bridge, noting that the bridge was on track for completion by July 1875, Mr. John Ridenour lost a finger while working on the bridge but was healing well, and finally, that the bridge was completed early in October 1874. An article in the October 2, 1874 edition of the *Intelligencer* described the new bridge as a "complete, handsome and durable structure," and continued, "The contractors, Messrs. White & Sons, New Brighton, Pennsylvania 'Penn Bridge & Machine Works,' have given us, in general opinion, a first rate, durable work, and deserve

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our best commendations... We are confident that ours will realize a very handsome income and fully vindicate the wisdom of the County Court in voting its construction.”

When constructed outside of Romney, the original bridge was two spans, both Whipple trusses. Squire Whipple invented the Whipple truss in 1847 and was one of the first designers to use scientific analysis for structural design. His book, *A Work on Bridge Building*, had a vast impact on bridge engineering. Whipple’s design incorporated double-intersection diagonals into the standard Pratt truss, meaning that the diagonals extend across two truss bays. He received a patent for this design in 1847. J.W. Murphy modified the Whipple design in 1863 by adding double-intersection counter-diagonals, which allowed even longer spans. Murphy was also the first to use pinned eye-bar connections in a Whipple truss in 1859, which eliminated the need for riveted connections and allowed easier and more widespread construction. These technological advances, as well as advances in steel and iron fabrication, made wrought iron trusses a major industry in the United States. Trusses for almost any span length or site could be ordered from a company’s catalog, and shipped to the construction site. The Capon Lake Truss exhibits the later modifications of Murphy and thus is considered a Whipple/Murphy Truss.

The structure was constructed by T.B. White and Sons of New Brighton, Pennsylvania. Timothy White began working as a carpenter beginning in the 1840s and established his iron bridge construction company in 1868, which was known as both “T.B. White and Sons” and “Penn Bridge and Machine Works.” The company’s original factory burned in 1878 and the company was moved across the Beaver River to Beaver Falls and reorganized as the Penn Bridge Company. In addition to iron bridges, the company produced a variety of structural and architectural products. It continued to grow and expand into the 20th century, and employed over 500 workers in 1908. Unlike a great number of small 19th-century bridge companies, Penn Bridge Company was not purchased by the conglomerate American Bridge Company of U.S. Steel and continued to operate independently. Penn Bridge Company was most active in the Pittsburgh area, but built structures in almost all 50 states.

The Whipple Truss Bridge served Romney for almost 65 years. In 1935, the West Virginia State Road Commission began a project to replace the Whipple truss over the South Branch of the Potomac River. The construction was underway in 1936 when on November 18, a car hit the south side of the eastern end of the old truss span and knocked it completely off the abutment. The car fell into the riverbed below and the truss collapsed on top of it. A car coming from the west did not realize the span had fallen and then drove off the end of the west span at the pier onto the collapsed span. Miraculously, no one was seriously injured. The *Hampshire Review* noted that the only injury was a broken leg and that it was a wooden broken leg. A temporary wooden span was constructed in place of the collapsed span to carry traffic until the replacement bridge was opened on June 21, 1937.

The remaining western span of the old Whipple truss bridge was still considered useable and was moved to Capon Lake in eastern Hampshire County to provide access across the Cacapon River to Capon Springs. A

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new pier and abutments were constructed to carry the Whipple truss and a Pratt truss also salvaged from another unknown bridge. The new bridge was dedicated on August 20, 1938 with a celebration including food and music from the Romney High School Band and Capon Springs Band. The ceremony was attended by several state officials, including former Governor H. G. Kump and Cy Hammill, Secretary of the State Road Commission. In a 1991 interview conducted with Branson Himelwright, a local of Capon Springs who worked on the re-erection of the Whipple truss, Mr. Himelwright stated that prior to the bridge, the two ways to cross the river to reach Capon Springs included a swinging footbridge and a ford. Mr. Himelwright and Jacob "Moss" Rudolph recalled in interviews that the excavation and concrete work for the Capon Lake truss was done by hand.

The recycled trusses served Capon Lake until 1991, when they were replaced with a new structure just upstream of the Whipple truss. The Pratt span was removed due to significant deterioration, but the Whipple truss was preserved in place due to its rarity, age and engineering significance. The decking was removed and a pedestrian walkway and viewing platform was constructed.

Integrity and Criterion Consideration B: Moved Properties

Although the bridge has been moved and altered, it retains its essential characteristics. The design, materials and workmanship of the original structure remain intact. The double-intersection diagonal members, connections and truss members are original materials and were reassembled at the relocation site as per the original truss design. Wrought iron and steel bridges were marketed as moveable structures, so the bridge's relocation to another site does not diminish its integrity. The bridge has been at its current location since 1938, a period of 73 years. It is located over a river in a rural area, as it was in its original location, maintaining the association with its original purpose or carrying travelers over a waterway. Its design significance is not specifically related to its location, but rather to the configuration and materials of the truss. The removal of the second span, a deteriorated Pratt truss from a different unknown location, does not affect the existing span's design or significance. Although this Whipple span was originally part of a two-span bridge, the second span was destroyed in an accident in 1938, making it impossible for the entire structure to be relocated. Finally, wooden decking on truss bridges was historically frequently replaced. The removal of the decking and construction of the pedestrian walkway are reversible alterations that are low-scale and distinguishable from the historic materials. These alterations do not detract from the Whipple truss configuration.

SUMMARY

The Capon Lake Whipple Truss is West Virginia's oldest existing metal truss and one of the few Whipple Trusses remaining in the state. Squire Whipple, who patented this truss design in 1847, and J.W. Murphy, who designed innovative modifications seen in the Capon Lake Truss, were prolific structural engineers who contributed to the widespread use of metal trusses in the United States. As an early wrought iron example of

Capon Lake Whipple Truss Bridge

Name of Property

Hampshire County, West Virginia

County and State

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the work of these men, Capon Lake Whipple Truss qualifies for the National Register of Historic Places under Criterion C.

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BIBLIOGRAPHY

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Annual Report of the State Road Commission of West Virginia, 1937-38. Charleston, WV: State Road Commission, 1938.

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"Lost River and Romney Turnpike." *South Branch Intelligencer*, April 24, 1874.

"New Bridge at Capon Dedicated August 20." *Hampshire Review*, August 17, 1938.

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-- "Capon Lake Bridge Interview with Jacob 'Moss' Rudolph." Capon Springs, WV: 1991. Manuscript on file, West Virginia Division of Highways District 5 Headquarters, Burlington.

"One Little Automobile Knocked Down This Big Bridge." *Hampshire Review*, December 2, 1936.

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"The South Branch Bridge." *South Branch Intelligencer*, October 12, 1874.

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"Span of Old River Bridge Goes Down." *Hampshire Review*, November 18, 1936.

"Special Meeting of Board of Supervisors of Hampshire Co." *South Branch Intelligencer*, May 1, 1868.

"The wire cable..." *South Branch Intelligencer*, May 12, 1871.

"State Begins Work on Bridge Over Capon." *Hampshire Review*, October 13, 1937.

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Capon Lake Whipple Truss Bridge
Name of Property

Hamsphire County, West Virginia
County and State

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VERBAL BOUNDARY DESCRIPTION

The boundaries of the Capon Lake Whipple Truss include the bridge structure, which is approximately 176' long and 20' wide.

BOUNDARY JUSTIFICATION

The boundary was selected to include the structure and its abutment and pier.

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Photographer: Greg Michael
Date: August 2011

Photo 1 of 12

WV_HampshireCounty_CaponLakeWhippleTruss_0001

Oblique view showing south end and downstream side of bridge. Photo taken from sportsman's access on south embankment

Photo 2 of 12

WV_HampshireCounty_CaponLakeWhippleTruss_0002

Oblique view showing south end and upstream side of bridge. Photo taken from replacement bridge (built in 1991) on upstream side of the old truss

Photo 3 of 12

WV_HampshireCounty_CaponLakeWhippleTruss_0003

Elevation view showing upstream side of bridge. Photo taken from replacement bridge on upstream side.

Photo 4 of 12

WV_HampshireCounty_CaponLakeWhippleTruss_0004

End view looking south. Photo taken along shoulder of WV Route 259.

Photo 5 of 12

WV_HampshireCounty_CaponLakeWhippleTruss_0005

Sign near north downstream corner of bridge, briefly describing history of the structure.

Photo 6 of 12

WV_HampshireCounty_CaponLakeWhippleTruss_0006

General view of the pedestrian walkway and observation deck looking south.

Photo 7 of 12

WV_HampshireCounty_CaponLakeWhippleTruss_0007

General view of the pedestrian walkway looking north.

Photo 8 of 12

WV_HampshireCounty_CaponLakeWhippleTruss_0008

Elevation view showing the downstream side of the truss, as well as upstream replacement structure built in 1991.

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WV_HampshireCounty_CaponLakeWhippleTruss_0009

General view of the bridge floor system

Photo 10 of 12

WV_HampshireCounty_CaponLakeWhippleTruss_00010

Sign near north upstream corner of bridge describing history of Capon Springs.

Photo 11 of 12

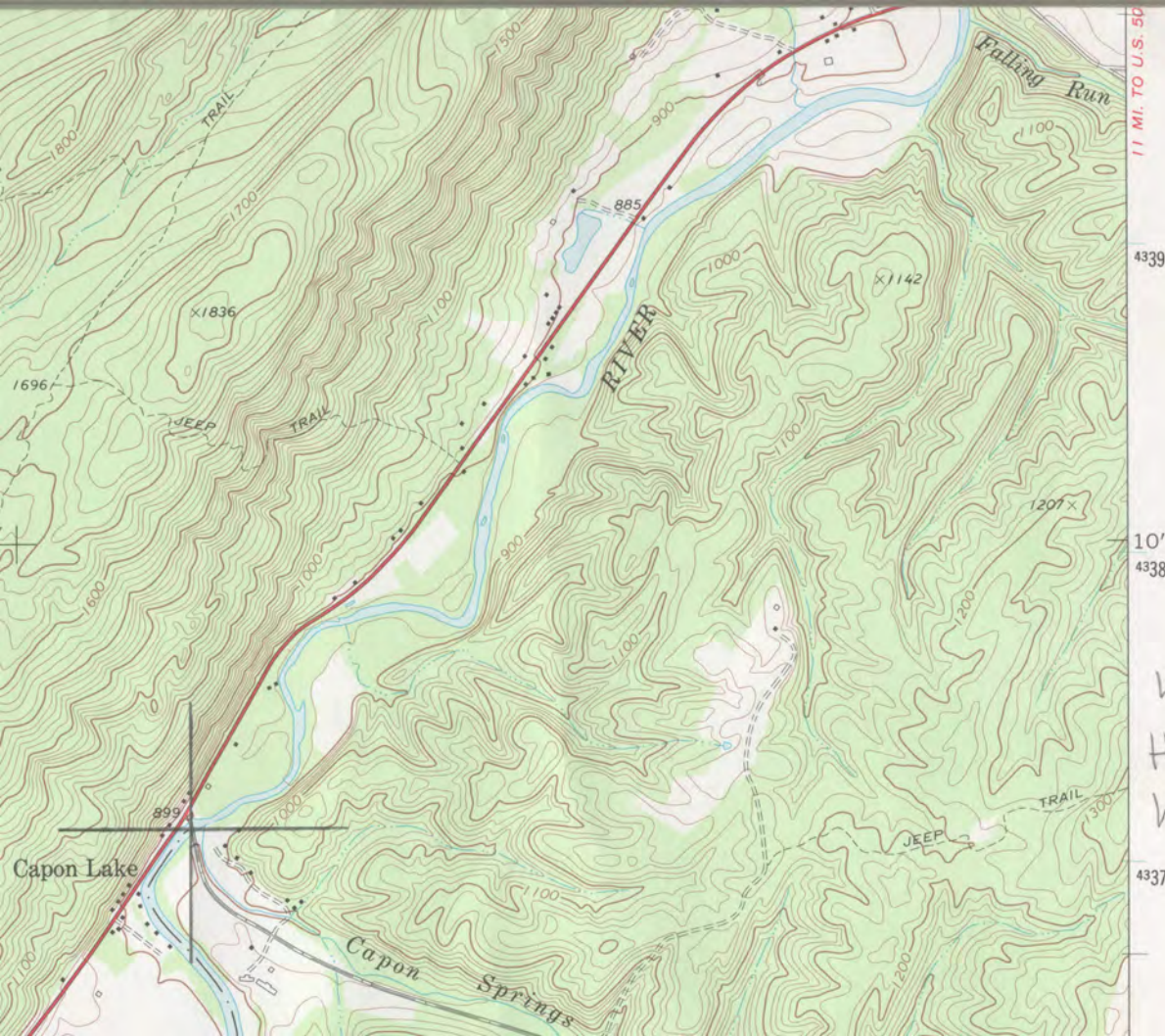
WV_HampshireCounty_CaponLakeWhippleTruss_00011

General view of upstream side of structure in relation to the 1991 replacement bridge and intersection of WV 259 and County Route 16.

Photo 12 of 12

WV_HampshireCounty_CaponLakeWhippleTruss_00012

Oblique view showing south end and upstream side of bridge. Photo taken from sportsman's access on south embankment of Cacapon River.



11 MI. TO U.S. 50

4339

10'
4338

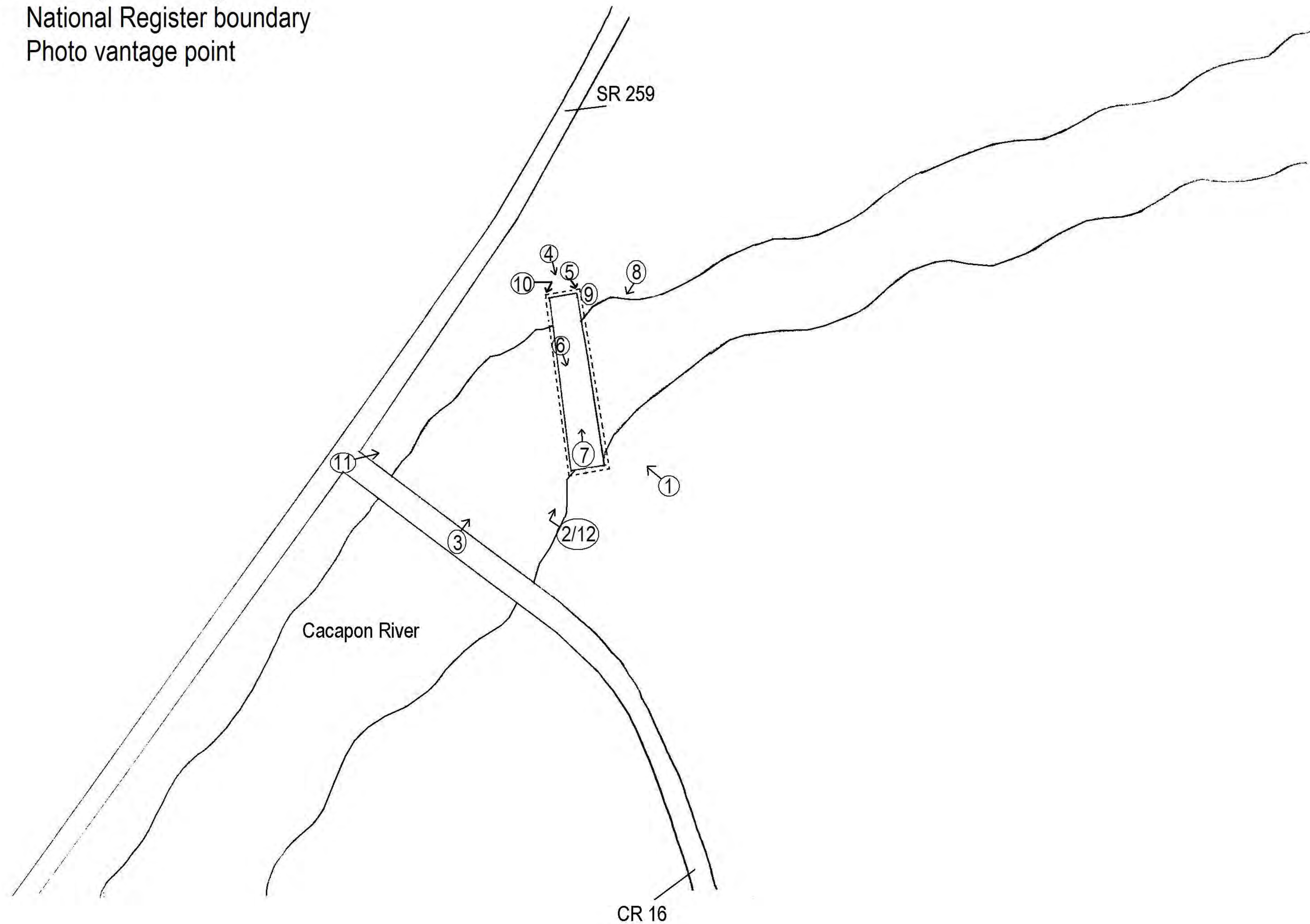
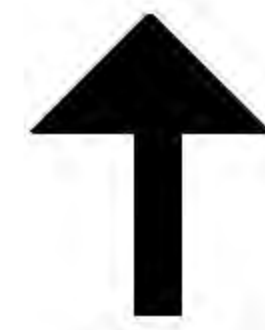
CAPON LAKE
WHIPPLE TRUSS
HAMPSHIRE CO,
WEST VIRGINIA

4337

E: 713003
N: 4337255
ZONE 17

Capon Lake Whipple Truss Bridge
Hampshire County, West Virginia

- National Register boundary
①→ Photo vantage point











HISTORIC WHIPPLE TRUSS

BUILT IN 1874 ON U.S. RT. 50
NEAR ROMNEY AND RE-ERECTED
AT THE PRESENT SITE IN 1938.

IN USE UNTIL 1991, AND MADE

AN HISTORIC SITE BY THE

WVDOT IN 1992. IT IS THE

OLDEST OF THE FEW WHIPPLE
TRUSSES LEFT IN WV.











CAPON SPRINGS
Capon Springs bears Indian name meaning the "Medicine Waters." Discovered in 1765. Famous resort of early days. President Franklin Pierce, Daniel Webster, and his guest, Sir Henry Bulwer, the British Minister, were among guests.



