NPS Form 10-900
(Oct. 1990)

OMB No. 10024-0018

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NAT. REGISTER OF HISTORIC PLACES
NATIONAL PARK SERVICE

929

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street & number WV Route 259 n. of intersection with CR 16 ☐ not for publication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

Susan Pierce, DSHPO 10/25/11

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:) _____

for Edson H. Beall

Signature of the Keeper Date of Action

12.15.11

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
1		structures
		objects
1		Total

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

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 1

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.

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.

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

Narrative Statement of Significance:
See Continuation sheets

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 # _____

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 2

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

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

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

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

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 9 Page 6

BIBLIOGRAPHY

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Kemp, Emory. *American Bridge Patents: The First Century*. Morgantown: West Virginia University Press, 2005.

Kitzmiller, Brenda. "The History of the Bridges Across the South Branch of the Potomac River on the Northwestern Turnpike (U.S. Route 50) Hampshire County, WestVirginia." Manuscript on file, West Virginia Division of Highways District 5 Headquarters, Burlington, 1991.

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

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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.

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Skelly and Loy, Inc. "Bradford County's Truss Bridges." http://www.skellyloy.com/bctb/index.htm (accessed July 25 2011).

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"South Branch Railroad." *South Branch Intelligencer*, May 22, 1874.

"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.

"We regret to learn...." *South Branch Intelligencer*, July 24, 1874.

West Virginia House of Delegates. House Concurrent Resolution No. 26. March 12, 2011. http://www.legis.state.wv.us/Bill_Status/resolution.cfm?billdoc=hcr26 sub.htm&yr=2011&sesstype=rs&i=26 (accessed July 25, 2011).

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

	Zone	Easting	Northing		Zone	Easting	Northing
1	17	713003	4337255	3			
2				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 Reductions Projects (1024-0018), Washington, DC 20303.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 10 Page 8

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.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number **Photos** Page **9**

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 take 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.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number **Photos** Page **10**

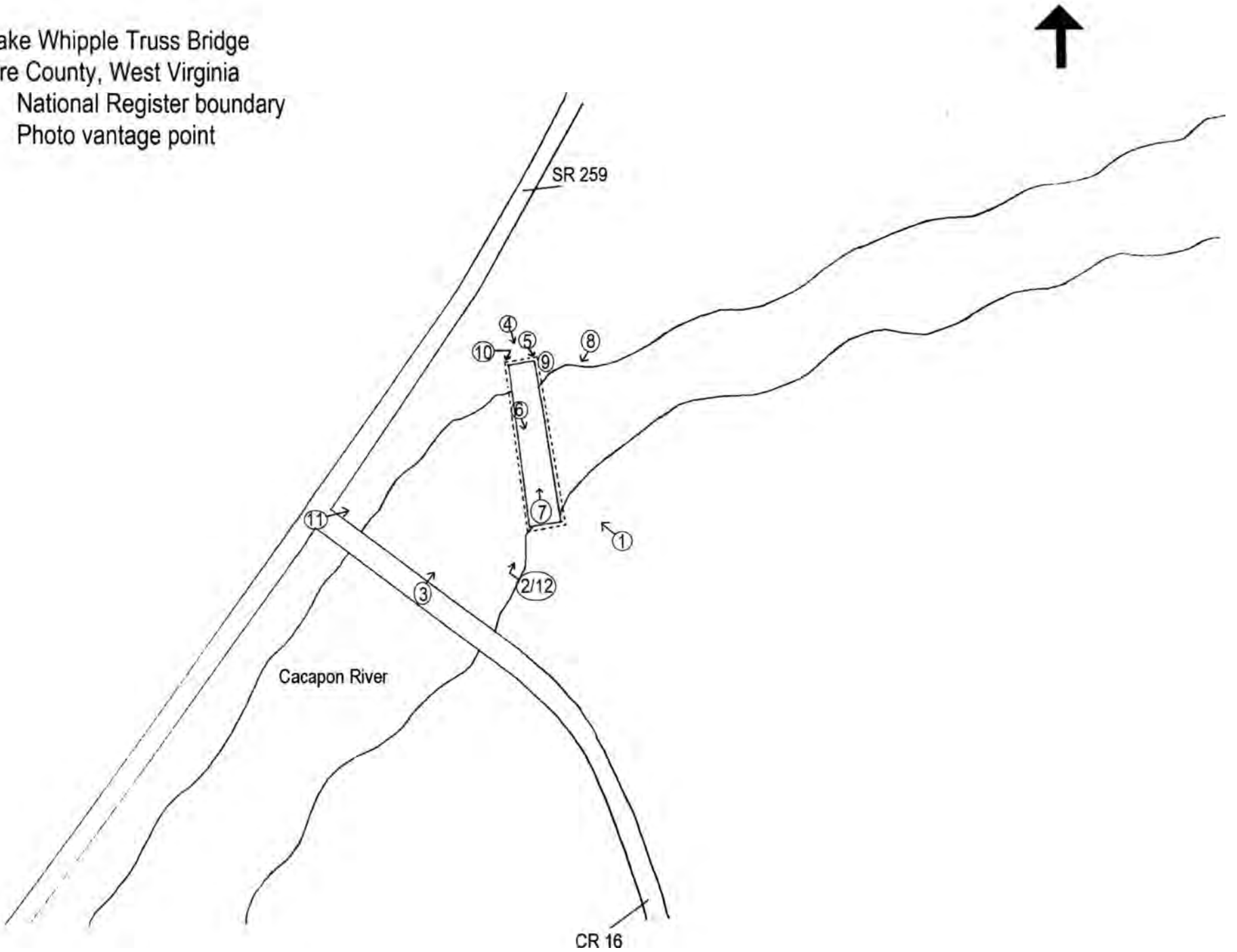
Photo 9 of 12
WV_HampshireCounty_CaponLakeWhippleTruss_0009
General view of the bridge floor system

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.

Capon Lake Whipple Truss Bridge
Hampshire County, West Virginia
------ National Register boundary
(1)→ Photo vantage point



UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Capon Lake Whipple Truss Bridge, formerly South Branch Bridge

MULTIPLE NAME:

STATE & COUNTY: WEST VIRGINIA, Hampshire

DATE RECEIVED: 11/04/11 DATE OF PENDING LIST: 11/29/11
DATE OF 16TH DAY: 12/14/11 DATE OF 45TH DAY: 12/20/11
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 11000929

REASONS FOR REVIEW:

APPEAL:	N	DATA PROBLEM:	N	LANDSCAPE:	N	LESS THAN 50 YEARS:	N
OTHER:	N	PDIL:	N	PERIOD:	N	PROGRAM UNAPPROVED:	N
REQUEST:	Y	SAMPLE:	N	SLR DRAFT:	N	NATIONAL:	N

COMMENT PERIOD WAIVED: N REDUCED: N

V ACCEPT ___RETURN ___REJECT 12·15·11 DATE

ABSTRACT/SUMMARY COMMENTS:

Entered in
The National Register
of
Historic Places

RECOM./CRITERIA_____

REVIEWER_____DISCIPLINE_____

Phone_____Date_____

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the National Park Service.

CAPON LAKE WHIPPLE TRUSS

HAMPSHIRE CO., WV

PHOTO 1 OF 12

CAPON LAKE WHIPPLE TRUSS

HAMPSHIRE CO., WV

PHOTO 2 OF 12

CAPON LAKE WHIPPLE TRUSS

HAMPSHIRE CO., WV

PHOTO 3 OF 12

CAPON LAKE WHIPPLE TRUSS

HAMPSHIRE CO., WV

PHOTO 4 OF 12


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 LAKE WHIPPLE TRUSS
HAMPSHIRE CO WV

PHOTO 5 OF 12

CADON LAKE WHIPPLE TRUSS
HAMPSHIRE CO, WV
PHOTO 6 OF 12

CAPON LAKE WHIPPLE TRUSS

HAMPSHIRE CO WV

PHOTO 7 OF 12

CAPON LAKE WHIPPLE TRUSS

HAMPSHIRE CO., WV

PHOTO 8 OF 12

CAPON LAKE WHIPPLE TRUSS
HAMPSHIRE CO., WV

PHOTO 9 OF 12


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.

CAPON LAKE WHIPPLE TRUSS

HAMPSHIRE CO, WV

PHOTO 10 OF 12


STOP

CAPON LAKE WHIPPLE TRUSS

HAMPSHIRE CO., WV

PHOTO 11 OF 12

CAPON LAKE WHIPPLE TRUSS

HAMPSHIRE CO. WV

PHOTO 12 OF 12

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF WEST VIRGINIA
REPRESENTED BY THE
STATE OF WEST VIRGINIA GEOLOGICAL SURVEY
AND OTHER STATE AGENCIES

YELLOW SPRING QUADRANGLE
WEST VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
NE/4 WARDENSVILLE 15' QUADRANGLE

5262 I SW (AUGUSTA)
5262 I SE (HANGING ROCK)
5262 IV SW (CAPON BRIDGE)
5262 II NW (RIO)
5262 II SE (WARDENSVILLE)
5362 III NW (CAPON SPRINGS)
(BAKER) 5262 II SW
(MOUNTAIN FALLS) 5362 III SW

78°37'30" 39°15' 706000m.E. 707 708 35' 709 712 32'30" 713 714 2 280 000 FEET 715 78°30' 39°15'
4346000m.N. 4347 4346 270 000 FEET 4345 4344 4343 12'30" 4342 4341 4340 4339 4338 10' 4337 4336 4335 230 000 FEET 4334000m.N.
2 250 000 FEET 78°37'30" 39°07'30"

HANGING ROCK 1.3 MI.
RIO 3.7 MI.
WARDENSVILLE 3.5 MI.
11 MI. TO U.S. 50

BM 1474 · BM 1398 · BM 1123 · BM 938 · BM 1055 · BM 945 · BM 982 · BM 992 · BM 936 · BM 902 · BM 862 · Davis Ford

Brushy Ridge · Rath Run · Elkhorn · Short Mountain Public Hunting Area · Sedan · Ford · Green Lane Cem · Cem · Union Ch · Delray · North River · Lick Run · Ford · Short Mountain Public Hunting Area · Jeep Trail · Trail · Road

Cooper Mountain · Millbrook · St James Cem · Dillons Run · Gunbarrel Hollow · Kale Hollow · Mountain · White · Green Mount Cem · Ford · Parks Hollow · Dillons Cacapon Mountain · Cacapon Jeep Trail · Yellow Spring Gap · Spring · Mc Kees Rocks · Yellow Spring · Falling Run · Capon Lake · Capon Springs · Old Railroad Grade · Dry Run · Middle Ridge · Hebron Ch · Cem · Intermont · Cacapon Mountain · Baker · Flat Ridge · Hollow · Dutch Ridge · Big Ridge · Warden Lake · Warden Lake Public Fishing Area · Picnic Area · Moores Run · Hampshire Co · Hardy Co · George Washington National Forest · Hawk Run · Harness Run · Simmons

1507 · 1310 · 1214 · 1808 · 1849 · 1905 · 1076 · 1080 · 1703 · 1295 · 1140 · 1072 · 1653 · 1271 · 1302 · 1285 · 1201 · 1185 · 1545 · 1399 · 1474 · 1787 · 1998 · 1921 · 1913 · 1672 · 1785 · 1679 · 1480 · 1383 · 1058 · 1836 · 1696 · 1142 · 1207 · 1622 · 1386 · 1417 · 1330 · 1983 · 1905 · 1855 · 1955 · 1549 · 1514 · 1674 · 1285 · 1375 · 1244 · 2019 · 2056 · 2175 · 1876 · 1926 · 1497

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1966. Field checked 1970

Projection and 10,000-foot grid ticks: West Virginia coordinate system, north zone (Lambert conformal ctnic)
1000-meter Universal Transverse Mercator grid ticks, zone 17, shown in blue. 1927 North American datum

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

MN 6½° 116 MILS · GN 1°32' 27 MILS
UTM GRID AND 1970 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000
1 MILE · 7000 FEET · 1 KILOMETER
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

W. VA.
QUADRANGLE LOCATION

ROAD CLASSIFICATION
Primary highway, hard surface
Secondary highway, hard surface
Light-duty road, hard or improved surface
Unimproved road
Interstate Route · U. S. Route · State Route

YELLOW SPRING, W. VA.
NE/4 WARDENSVILLE 15' QUADRANGLE
N3907.5—W7830/7.5
1970

AMS 5262 II NE—SERIES V854

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1974

CAPON LAKE
WHIPPLE TRUSS
HAMPSHIRE CO,
WEST VIRGINIA
E: 713003
N: 4337255
ZONE 17

WEST VIRGINIA
Division of Culture and History

The Culture Center
1900 Kanawha Blvd., E.
Charleston, WV 25305-0300
Randall Reid-Smith, Commissioner
Phone 304.558.0220 • www.wvculture.org
Fax 304.558.2779 • TDD 304.558.3562
EEO/AA Employer

October 24, 2011

Ms. Carol Shull
Interim Keeper, National Register of Historic Places
National Park Service 2280
National Register of Historic Places
1201 "I" (eye) Street, NW
Washington D.C. 20005

Dear Ms. Shull:

For your review, we are submitting the following National Register of Historic Places registration forms:

Capon Lake Whipple Truss Bridge, Hampshire County
Winfield Toll Bridge, Putnam County

The enclosed nominations have been approved by the West Virginia Archives and History Commission in accordance with 36 CFR, Part 60. Should you have any questions please contact National Register Coordinator, Erin Riebe, at 304.558.0240.

Sincerely,

Susan M. Pierce
Deputy State Historic Preservation Officer

enclosures

Nathan Holth
5371 Walker Road
North Street, MI 48049

269-290-2593
nathan@historicbridges.org

December 1, 2011

Paul Loether
National Register Chief
National Register of Historic Places,
National Park Service,
1849 C St. NW., MS 2280, Washington, DC 20240

Subject: Winfield Toll Bridge (11000931) and South Branch Bridge (11000929) National Register Nominations

Dear Mr. Loether:

My intent is for this letter to be submitted as my comments regarding the proposed listing of the following two bridges in West Virginia:

1. Winfield Toll Bridge, WV 34 mi. 21.34, Winfield, 11000931. Located in Putnam County.
2. South Branch Bridge, WV 259 N. of jct. Cty. Rd. 16, Capon Lake, 11000929. Located in Hampshire County.

While it bears acknowledgement that I am a private citizen not affiliated with any organization or agency, and neither an engineer or certified bridge inspector, I do want to comment that I have visited and closely looked at over 2100 old and historic bridges in North America, and I have worked with, watched, and learned from many professionals in the historic bridge world including engineers, craftsmen/fabricators, and historians. I have become familiar with a rather wide variety of aspects of historic bridges and their preservation as I have worked to develop one of the largest historic bridge websites on the internet, www.historicbridges.org.

I strongly support the proposal to list both of the above listed bridges in the National Register of Historic Places.

The Winfield Toll Bridge appears to be an example of a significant and increasingly rare bridge type. Generally reserved for long-span river crossings, riveted cantilever truss bridges like the Winfield Toll Bridge are among the largest and most iconic of bridges in the United States. Due to construction costs, the number of bridges that cross a large river is generally smaller than the number of bridges that cross small rivers. Since cantilever bridges are typically crossings for large rivers, the total number of existing cantilever truss bridges is relatively small. To make matters worse, Riveted cantilever truss bridges have in recent years faced an alarming rate of demolition. Constructed in 1955, the Winfield Toll Bridge is a later example of a riveted cantilever truss bridge. Bridges of this type were first built in the late 19th Century and became increasingly popular in the first few decades of the 20th Century. Nearly all of the 19th Century examples were replaced years ago, and today it is the bridges from the 1920s through the 1940s that are being replaced at a rapid rate today nationwide.

Earlier significant riveted cantilever truss bridges in and along West Virginia's borders have been or are to be replaced in the immediate future. These include:

- Kanawha River on Center Street in St. Albans, Built 1934, Demolition/Replacement Planned
- Pomeroy-Mason Bridge, Ohio River, Built 1928, Demolished/Replaced 2007
- Bellaire Bridge, Benwood, WV, Built 1926, Demolition/Replacement Planned

The loss of these bridges leaves the Winfield Toll Bridge as one of the oldest of the very small number of surviving highway cantilever truss bridges in West Virginia. Because of the loss of the aforementioned earlier examples, the 1955 Winfield Toll Bridge has, in my opinion, gained historic and technological significance as a representative example of a complex and noteworthy bridge type. Like most cantilever truss bridges, the Winfield Toll Bridge's size and complex truss configuration make the bridge an example of a significant engineering achievement. It also makes use of historical construction and fabrication techniques, particularly the use of rivets to compose built-up beams. The bridge appears to retain good historic integrity with no major alterations apparent. It is my opinion that this bridge should be listed in the National Register of Historic Places.

The South Branch Bridge is an extremely old and rare example of a pin-connected Whipple (Double-Intersection Pratt) through truss that also has several unusual and distinctive construction details. The bridge's trusses are listed as being originally built in 1874, and I found a source that suggested the bridge may have been moved to its current location in 1938. The potential relocation of this bridge, particularly so many decades ago, in my opinion does not disqualify the bridge for listing in the National Register of Historic Places. Pin-connected truss bridges were noted for the ease in which they could be disassembled and relocated, a unique trait not shared by most other bridge types. It was common many decades ago, when they became insufficient for their original location, to relocate and reuse pin-connected truss bridges at other locations where the bridge could still be useful. This is part of their history.

Nationwide, only a very small number of metal truss bridges date to before 1880. The South Branch Bridge's 1874 construction date thus places it among the oldest surviving metal truss bridges in the county. In addition, bridges built before 1880 were built in a period of experimentation and development of the metal truss bridge in the United States that tapered off by the early 1880s as builders gravitated toward more reliable standardized designs. During this period of experimentation, different builders experimented with a variety of creative and unusual designs, form the overall truss design down to specific construction details. The South Branch Bridge displays some of these unusual construction details. The composition of the built-up top chord and end post follows an unusual design. The use of "threaded rod with nut" connections on the top chord are also non-standard truss details. At the same time, the bridge displays some of the details that would continue to be seen in the more standardized trusses of the 1880s. These details include the use of traditional pin connections on the bottom chord, as well as the overall Whipple truss configuration.

As a result, the South Branch Bridge is historically and technologically significant because it documents the period of transition from experimentation to standardization of metal truss bridge construction in the United States. In addition, the bridge's Whipple truss configuration, generally reserved for spans in excess of 140 feet, (the Single Intersection Pratt truss was usually used for shorter spans) is today a rare truss configuration both nationwide and in West Virginia.

I would be happy to discuss my comments further if there are any questions or concerns.

Sincerely,

Nathan Holth

Nathan Holth

Author/Webmaster, HistoricBridges.org