

United States Department of the Interior National Park Service

NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

1. Name of Property

historic name: Duck Run Cable Suspension Bridge

other name/site number: Trubada Swinging Bridge; WVDOH No. 11-30-6.29

2. Location

street & number: Near intersection of WV Route 5 & 30

not for publication: N/A

city/town: Trubada

vicinity:

state: WV county: Gilmer

code: 021

zip code: 26351

3. Classification

Ownership of Property: Public-Local

Category of Property: Structure

Number of Resources within Property:

Contributing	Noncontributing	
<u> </u>	<u> </u>	buildings
<u> </u>	<u> </u>	sites
<u> 1 </u>	<u> </u>	structures
<u> </u>	<u> </u>	objects
<u> 1 </u>	<u> 0 </u>	Total

Number of contributing resources previously listed in the National Register: 0

Name of related property listing: N/A

=====
4. State/Federal Agency Certification
=====

As the designated authority under the National Historic Preservation Act of 1986, 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 forth in 36 CFR Part 60. In my opinion, the property

meets

does not meet

the National Register Criteria. See continuation sheet.

William C. Langer
Signature of Certifying Official

6/4/97
Date

State or Federal agency and bureau

In my opinion, the property

meets

does not meet

the National Register criteria. See continuation sheet.

Signature of commenting or other official

Date

State or Federal agency and bureau

Date

=====
5. National Park Service Certification
=====

I, hereby certify that this 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 Keeper

Date of Action

=====
6. Function or Use
=====

Historic: Transportation Sub: Road related

Current : Work in progress Sub: Pedestrian related

=====
7. Description
=====

Architectural Classification:
No style

Other Description: _____

Materials: foundation Reinforced roof _____
concrete towers other Wire rope cable and
and anchorages timber deck
walls _____

Describe present and historic physical appearance. ___ See continuation sheet.

=====
8. Statement of Significance
=====

Certifying official has considered the significance of this property in relation to other properties: State/Local.

Applicable National Register Criteria: C

Criteria Considerations (Exceptions) : N/A

Areas of Significance: Engineering

Period(s) of Significance: 1922 _____

Significant Dates : 1922 _____

Significant Person(s): N/A

Cultural Affiliation: N/A

Architect/Builder: Moss, William M. & Lewis, Fred
Gilmer County Engineers
Summers, M.B. & Keith, J.W.,
local citizens

State significance of property, and justify criteria, considerations, and areas and periods of significance noted above.
___ See continuation sheet.

9. Major Bibliographical References

See continuation sheet.

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 Record #

Primary Location of Additional Data:

- State historic preservation office
- Other state agency
- Federal agency
[X] Local government
- University
[X] Other -- Specify Repository: Gilmer County Historic Landmark Commission & Dr. E.L. Kemp Collection

10. Geographical Data

Acreage of Property: Less than one acre

UTM References: Zone Easting Northing Zone Easting Northing
A 17 518100 4308500 B
C D

Verbal Boundary Description: X See continuation sheet.

Boundary Justification: X See continuation sheet.

11. Form Prepared By

Name/Title: Dr. Emory L. Kemp, Director; Institute for the
Organization: History of Tech & Industrial Archaeology Date: 26 Nov 96
Street & Number: 1535 Mileground Telephone: (304) 293-7169
City or Town: Morgantown State: WV ZIP: 26505

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Duck Run Cable Suspension Bridge, Gilmer Co., WV

Section number 7 Page 2

The Duck Run Cable Suspension Bridge is located in a rural area known as Trubada, approximately three miles east of Glenville, West Virginia. The bridge spans the Little Kanawha River between West Virginia Routes 30 and 5. Although overgrown with brush, the site retains much of its historic appearance. A concrete bridge completed in 1992 is located some 500 feet upstream from the suspension bridge. With the opening of the new bridge, the suspension bridge was taken out of service and is now undergoing rehabilitation as a historic and recreational site.

The Duck Run Cable Suspension Bridge consists of a main span of 209 feet 9 inches and two half spans of 76 feet 6 inches and 65 feet 4 inches, respectively. The overall length of the bridge is 351 feet 7 inches. The two wire rope cables are supported by four reinforced concrete towers, two on each bank of the river and are anchored in four concrete anchorages. The concrete towers taper to the top with a flat coping. Although the bridge can be considered an example of the vernacular construction, the wire rope and all of the fittings were manufactured at that time by leading companies such as Roebling and Bethlehem Steel Corporation and were readily available from wire rope dealers. Wire rope was developed for a wide variety of industrial uses as a replacement for traditional organic hemp rope.

The timber bridge deck consists of 4 inch by 8 inch wooden planks laid flat and supported by pairs of 3 inch by 12 inch wood floor beams, 14 feet 1 inch long. These pairs of beams are in turn supported by vertical wire rope suspenders. The curb width is 10 feet by 9 inches while the overall deck width is 11 feet 6 inches. West Virginia Division of Highways records reveal the deck was replaced in 1958. Originally the bridge had no railings but a simple wooden 2-rail system was added overtime.

The bridge has deteriorated over the years, particularly since its abandonment in 1992. Nevertheless, deterioration has caused no significant change to the bridge's historic integrity. Work is now underway to restore the bridge to its original condition for interpretation as an historic site. It will be used as a pedestrian bridge in a planned recreation area.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Duck Run Cable Suspension Bridge, Gilmer Co., WV

Section number 8 Page 2

The Duck Run Cable Suspension Bridge is significant under Criteria C for Engineering. The bridge was completed in 1922 and served the local community until 1992, when it was taken out of service following the completion of a new bridge across the Little Kanawha River in the nearby vicinity. The construction of the suspension bridge coincides with the National Good Roads Movement which attempted to improve the quality of America's roads following the First World War. This was the first nation-wide attempt in America to provide paved all weather roads in rural areas. The resulting network of roads also involved the construction of bridges. In the case of this bridge, it was to eliminate the river ford crossing for motor cars. Its construction made a significant contribution to the road network in Gilmer County.

There are a number of historic bridges crossing the Little Kanawha River on its course to the Ohio River at Parkersburg, but no other suspension bridges appeared in the area. This is not to be taken as case of uniqueness, but to recognize the bridge as a second generation of such structures spanned by the Wheeling Suspension Bridge built in 1849.

About 1918, James W. Keith who lived on Duck Run Road, purchased a motor car. He was not happy with the ford over the Little Kanawha River and began soliciting the county for a bridge to be built.

At that time, counties were responsible for their roads and Gilmer County did not have the money for such an undertaking. So, Keith drew support from M.B. Summers and other neighbors in the area. They began raising money through yard sales, cake walks, raffles, etc. A deed dated February 4, 1921, gives permission from the landowner, E.W. Floyd and family, for a right-of-way to build the "Summers Suspension Bridge." M.B. Summers and James W. Keith served as parties of the second part.

Local boys joined Fred Lewis, County Road Engineer, as volunteer workers in the actual construction. Money raised in Duck Run and Bear Run communities helped to pay for the materials. The bridge was completed in 1922.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Duck Run Cable Suspension Bridge, Gilmer Co., WV

Section number 8 Page 3

Even though the construction employed volunteer labor, this was not a typical Appalachian swinging bridge built without benefit of engineering design, but rather relied on the work of William M. Moss and Fred Lewis, Gilmer County engineers. The suspension bridge type offered the cheapest possible bridge to carry cars and provide a clear span of more than 200 feet over the river. By using readily available wire rope and associated fittings, a bridge with high quality components for the main structural elements could provide a safe and yet very economical structure. While the main cables, suspenders and associated clamps and other fittings were produced by leading steel companies, notably the Roebling Company and the Bethlehem Steel Company; the wood for the deck was obtained locally, while the concrete, according to local informants, was made on site using Little Kanawha sand and gravel to produce the concrete. Little else is recorded on the actual construction. The resulting concrete lacked the quality control needed for long term durability. In order to insure the capacity of the towers to support the cables, the corners of each of the towers were later reinforced with external steel angles and horizontal binders. They remain as a prominent feature of the bridge. In contrast, the anchorages appear to be in much better condition.

The first series of suspension bridges were inspired by the Wheeling Suspension Bridge. Expertise and all of the wire required for the cables and suspenders, as well as cast iron fittings for the saddles and anchorages, were supplied from Wheeling to build a series of bridges in Morgantown, Fairmont, Sutton, Charleston, and over the Guyandotte River near Huntington. These early bridges of the 1850s and later closely followed the parallel wire cables used in the Wheeling Suspension Bridge. With the widespread application of wire rope (as opposed to custom made parallel wire cables) for mining, construction equipment, and in industry, it was a logical step to apply this new technology to short and medium span bridges. Wire rope technology was the vehicle for the second wave of suspension bridge building beginning at the turn of the century. Thus, the Duck Run Bridge is a visible reminder of the transfer of technology in several waves in the Mountain State.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Duck Run Cable Suspension Bridge, Gilmer Co., WV

Section number 9 Page 1

Bibliography

Gilmer County Order Book 18, Page 200.

Gilmer County Order Book 19, Pages 7, 24, 130.

Gilmer County Deed Book, Gilmer County Courthouse,
Glennville, WV.

Mountain Views, July, 1992.

The Glennville Democrat, August 6, 1992.

The Glennville Democrat, September 10, 1992.

WV Department of Highways Inspection Report dated, May 9, 1979,
Bridge No. 11-30-6.29.

Kemp, Dr. Emory L., West Virginia's Historic Bridges. Report
for the WV Department of Highways, the WV State Historic
Preservation Office, and the Federal Highway Administration,
Morgantown, WV, 1983.

Kemp, Dr. Emory L., "Ellet's Contribution to the Development
of Suspension Bridges," Engineering Issues, American
Society of Civil Engineers, 1973, Pages 331-351.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Duck Run Cable Suspension Bridge, Gilmer Co., WV

Section number 10 Page 1

Verbal Boundary Description

The boundary of the Duck Run Cable Suspension Bridge follows the 40 foot wide right-of-way for the original road. This right-of-way extends from the WV Route 30 to WV Route 5, in a south to north direction, a distance of approximately 0.2 miles.

Boundary Justification

By defining the boundary in terms of the old road alignment, all of the elements associated with the suspension bridge are included.



8-0



4311
 4310
 (GILMER) 4861 1 NW
 4309
 4308
 55'
 4306
 GILMER 4.5 MI.
 NAPIER (U.S. 19) 18 MI.

Duck Run Cable
 Suspension Bridge
 Intersection of
 WV Rte. 5 and 30,
 Gilmer Co. WV
 UTM 17/518100/43085

**GLENVILLE
 QUAD**