

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determination for individual properties and districts. See instruction in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Boulder Creek Bridge

other names/site number CDOT No. D-15-AK; 5BL7902

2. Location

street & number Colorado Highway 119 at milepost 39.13 [N/A] not for publication

city or town Boulder [X] vicinity

state Colorado code CO county Boulder code 013 zip code _____

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this [X] 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 [X] meets [] does not meet the National Register criteria. I recommend that this property be considered significant [] nationally [] statewide [X] locally. ([] See continuation sheet for additional comments.)

Georganna Cougle
Signature of certifying official/Title

State Historic Preservation Officer January 20, 2003
Date

State Historic Preservation Office, Colorado Historical Society
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
[] See continuation sheet.

Edson W. Ball
Signature of the Keeper

Date of Action
3-11-03

Boulder Creek Bridge
Name of Property

Boulder County, Colorado
County/State

5. Classification

Ownership of Property
(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property
(Check only one box)

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

Number of Resources within Property
(Do not count previously listed resources.)

Contributing	Noncontributing	
0	0	buildings
0	0	sites
1	0	structures
0	0	objects
1	0	Total

Name of related multiple property listing.
(Enter "N/A" if property is not part of a multiple property listing.)

Highway Bridges in Colorado

Number of contributing resources previously listed in the National Register.

0

6. Function or Use

Historic Function

(Enter categories from instructions)

Road-related

Current Functions

(Enter categories from instructions)

Road-related

7. Description

Architectural Classification

(Enter categories from instructions)

Other: Concrete slab and girder

Materials

(Enter categories from instructions)

foundation _____
walls _____
roof _____
other Concrete _____
Asphalt _____
Steel _____

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

Boulder Creek Bridge
Name of Property

Boulder County, Colorado
County/State

8. Statement of Significance

Applicable National Register Criteria

(Mark "X" in one or more boxes for the criteria qualifying the property for National Register listing.)

- 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

(Mark "X" in all the boxes that apply.)

Property is:

- A** owned by a religious institution or used for religious purposes.
- B** removed from its original location.
- C** a birthplace or grave.
- 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

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles and other sources used in preparing this form on one or more continuation sheets.)

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

Areas of Significance

(Enter categories from instructions)

Transportation

Engineering

Periods of Significance

1953

Significant Dates

N/A

Significant Person(s)

(Complete if Criterion B is marked above).

N/A

Cultural Affiliation

N/A

Architect/Builder

U.S. Bureau of Public Roads

Primary location of additional data:

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

Name of repository:

Colorado Historical Society

Colorado Dept. of Transportation

Boulder Creek Bridge
Name of Property

Boulder County, Colorado
County/State

10. Geographical Data

Acreage of Property less than one

UTM References

(Place additional UTM references on a continuation sheet.)

1. 13 472680 4429205
Zone Easting Northing

2. _____
Zone Easting Northing

3. _____
Zone Easting Northing

4. _____
Zone Easting Northing

[] See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Office of Archaeology and Historic Preservation and Clay Fraser, principal

organization Colorado Historical Society and Fraser Design date May 21, 2002

street & number 1300 Broadway telephone 303-866-4681

city or town Denver state CO zip code 80203

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.

Additional Items

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

Property Owner

(Complete this item at the request of SHPO or FPO.)

name Colorado Department of Transportation

street & number 4201 E. Arkansas Avenue telephone _____

city or town Denver state CO zip code 80222

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 listings. 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.*)

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Boulder Creek Bridge
Boulder County, Colorado
Highway Bridges in Colorado, MPS

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DESCRIPTION

Location: Colorado Highway 119 at milepost 39.13, 13.7 miles east of junction with State Highway 72.

Setting: Over Boulder Creek in a rugged mountainous setting.

Structure length: 100 feet

Structure width: 39 feet

Roadway width: 34 feet

Main span number: 3

Main span length: 48 feet

Superstructure: Concrete arched deck girder, continuous

Substructure: Concrete abutments, wingwalls and spill through piers

Floor/decking: Concrete deck with asphalt overlay

Other features: Steel baluster guardrails

Erected: 1953

Designer: Bureau of Public Roads

Alterations: Steel flex beams at approaches

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Boulder Creek Bridge
Boulder County, Colorado
Highway Bridges in Colorado, MPS

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SIGNIFICANCE

The 1953 Boulder Creek Bridge on Colorado Highway 119, 13.7 miles east of the junction with Colorado Highway 72, meets the registration requirements under Criteria A and C as set forth in the *Highway Bridges in Colorado*, Multiple Property Documentation Form. The bridge is eligible in the area of transportation for its association with the development and operation of roads providing access to national forest lands. The Boulder Creek Bridge is also eligible in the area of engineering. The design used by the U.S. Bureau of Public Roads reflects mid-20th century innovations in the construction of concrete slab and girder bridges.

During 1915-1916, the Highway Commission established State Primary Road No. 54 in Boulder and Gilpin counties. Beginning at the intersection with the Great North-South Road near Lafayette, the road extended straight west to Boulder and then followed a winding route up through Boulder Canyon toward Gilpin County. The Highway Commission and Boulder County worked to improve the road as it snaked through the canyon. According to the Commission, "In Boulder County work has continued on the Boulder-Nederland Road, and good progress has been made, considering the heavy work."

In 1922, the U.S. Bureau of Public Roads approved Colorado's first federal aid highway system. Of the 48,000 miles of roads in the state, some 3,360 were declared as state highways. Under the new system, State Primary Road No. 54 was redesignated as State Highway 119. Although the state highway system was under the aegis of the Colorado Highway Department (CHD), the Bureau of Public Roads took an active role in road construction and maintenance in some specific instances. The most common of these were on federal lands, typically national parks and national forests. The Forest Highway Act of 1921 required the forests to establish a comprehensive forest road system, including roads within the forests themselves and routes that would provide access to the forests. Under the act millions of dollars were appropriated for road construction, improvement and maintenance.

Engineering

Providing access from Boulder to the Roosevelt National Forest, State Highway 119 fell under the purview of the Bureau of Public Roads as a forest access highway. In the early 1950s the agency undertook a major reconstruction of the road that involved construction of several bridges in Boulder Canyon. One of these structures crossed Boulder Creek about three miles west of Boulder. For the Boulder Creek Bridge, Bureau engineers delineated this three span, reinforced concrete structure. It had a 48 foot main span, flanked on each side by a shorter approach span. Both main and approach spans featured parabolically arched concrete deck girders, carried continuously over concrete spill through piers. The 34 foot wide concrete deck was bounded on both sides by steel baluster guardrails. Completed in 1953, the Boulder

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Boulder Creek Bridge
Boulder County, Colorado
Highway Bridges in Colorado, MPS

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Creek Bridge has since functioned in place, with the installation of steel flex beams at the approaches as the only alteration of note.

The first reinforced concrete girder bridge was built in France in 1893. Spans of up to 85 feet appeared by 1904 in Europe, the leader in this design, and in America concrete girders began to receive acceptance for highway use between 1900 and 1910. A few concrete slab or girder bridges were built in Colorado by the counties, the railroads and the larger cities after the turn of the century.

Between 1905 and 1911 the State Engineer's Office erected several concrete girder structures, two of which, the Brown's Canon Bridge (5CF1058) in Chaffee County and the Capulin Bridge (5CN906) in Conejos County are still in place as the oldest intact examples of their type in the state. Their use was relatively limited, however, until the Colorado Highway Commission began designing bridges in 1910. Most of the Commission's first bridges that year were concrete slab or girder structures. In addition to 20 foot span slabs in Arapahoe and Douglas counties and a 30 foot girder in Montezuma County, the agency designed and built multiple span structures over Kiowa and Box Elder creeks in Adams County and Bijou Creek in Morgan County.

With a few exceptions, the counties were slow in accepting concrete construction, however, this began to change gradually around 1917 when the Commission issued its first standard plans for reinforced concrete slab and girder bridges. Widely distributed among the counties, these designs featured haunches that were angled or arched to decrease the effective span length by cantilevering, and their roadways were bounded on both sides by solid concrete parapets or concrete post-and-beam guardrails.

Concrete slab and deck girder bridges received more widespread use in the 1920s and 1930s, as CHD assumed more responsibility for bridge construction in the state. The main advantages of concrete slabs and girders were structural rigidity under load and the capability for subsequent widening by adding onto one or both sides of the roadway. Despite these advantages, slabs or girders were never built in abundance in Colorado, because CHD preferred steel stringer construction to concrete girders.

There were no noteworthy technological advancements made on these structural types during the 1940s. In the 1950s, the concrete deck girder experienced a notable resurgence in popularity, as CHD built scores of flat beamed girders at crossings throughout the state. Additionally, at this time both the CHD and the Bureau of Public Roads introduced a new type of long span concrete girder design, with the beams arched parabolically over their span and supported by concrete spill through piers. First used at a few isolated locations around the state, these became the standard design for highway over and underpasses when Colorado built its interstate highway system in the late 1950s, 1960s, and 1970s. This bridge and a

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Boulder Creek Bridge
Boulder County, Colorado
Highway Bridges in Colorado, MPS

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similar now altered structure (5BL7909) over Boulder Creek were identified as the earliest examples of this structural type. As such the Boulder Creek Bridge is technologically significant as a harbinger of present-day bridge construction.

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Brownlee, James L. "Forest Highway Program." *Colorado Highways* 8:1, January 1929.

Brownlee, James L. "Forest Roads." University of Colorado Highway Conference. May 1929.

Colorado Department of Transportation, Structure Inventory and Appraisal: Structure No. D-15-AK. Located at CDOT, Denver, CO.

Colorado Highway Department. Bridge Kardex File. Located at CDOT Bridge Division, Denver, CO.

Colorado State Highway Commission. *First Biennial Report 1910-1911* (Denver: Smith-Brooks Printing Company, 1911).

Colorado State Highway Commission. *Third Biennial Report 1913-1914* (Denver: Smith-Brooks Printing Company, 1915).

Fraser, Clayton B. "Boulder Creek Bridge, 5BL7902," Historic Bridge Inventory, 31 March 2000.

Fraser, Clayton B. Field inspection, February 2000.

Maloney, J. E. "Standard Bridge Plans," *Colorado Highways Bulletin* 2:11, November 1919.

State Highway Commission. *Second Biennial Report 1911-1912*. (Denver: Smith-Brooks Printing Company, 1912).

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Boulder Creek Bridge
Larimer County, Colorado
Highway Bridges in Colorado, MPS

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GEOGRAPHICAL DATA

VERBAL BOUNDARY DESCRIPTION

The bridge is located on Colorado Highway 119, at milepost 39.13. The boundaries of this nomination consist of a rectangle of land 10 feet out in each direction from the footprint of the bridge.

BOUNDARY JUSTIFICATION

The nomination includes all the land directly and historically associated with the bridge.

PHOTOGRAPH LOG

The following information pertains to photograph numbers 1-2:

Name of Property: Boulder Creek Bridge
Location: Boulder County, Colorado
Photographer: Clayton Fraser
Date of Photographs: February 2000
Negatives: Colorado Department of Transportation

Photo No. Photographic Information

- 1 View to north of bridge roadway
- 2 View to north through bridge

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Boulder County, Colorado
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USGS TOPOGRAPHIC MAP
Boulder Quadrangle, Colorado
7.5 Minute Series

