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United States Department of the Interior
National Park Service

DEC 1 1993

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

1. Name of Property

historic name: Fromberg Concrete Arch Bridge

other name/site number:

2. Location

street & number: River Street over the Clarks Fork of the Yellowstone River

not for publication: n/a

vicinity: n/a

city/town: Fromberg

state: Montana

code: MT

county: Carbon

code: 009

zip code: 59029

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, 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.)

Manell Shufy SHPO 12-11-93
Signature of certifying official/Title Date

Montana State Historic Preservation Office
State or Federal agency or bureau

In my opinion, the property meets does not meet the National Register criteria.

Signature of commenting or other official Date

State or Federal agency and bureau

4. 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

 see continuation sheet
 removed from the National Register
 see continuation sheet

 other (explain): _____

Signature of the Keeper

Patrick Andrews

Date of Action

1/28/93

5. Classification

Ownership of Property: Public - local	Number of Resources within Property	
	Contributing	Noncontributing
Category of Property: Structure		
Number of contributing resources previously listed in the National Register: 0	___	___ building(s)
	___	___ sites
	<u>1</u>	___ structures
	___	___ objects
Name of related multiple property listing: Historic and Architectural Properties in Fromberg	<u>1</u>	<u>0</u> Total

6. Function or Use

Historic Functions:	Current Functions:
Transportation: road-related (vehicular)	Transportation: road-related (vehicular)

7. Description

Architectural Classification:	Materials:
Other: concrete arch bridge	foundation: concrete
	walls: n/a
	roof: n/a

Narrative Description

The Fromberg Bridge is a three-span, filled spandrel, barrel-type, concrete deck arch bridge. It crosses the Clarks Fork of the Yellowstone River at the eastern corporate limits of Fromberg, and links the town with agricultural areas to the east. It crosses the line between sections 16 and 20, R23E T5S. The bridge extends to an overall length of 219-feet and is 18 feet wide with a 15-foot, 4-inch driving lane. Each of the three 56-foot parabolic arches is eight feet from the spring line to the top of the arch. The arches are supported on concrete abutments and piers resting on wood piles. Concrete cutwaters protect the upstream side of each pier. The spandrel walls rise three feet above the roadway and are ornamented with indented panels.

The bridge has experienced some concrete spalling at the railings and major scouring of the cutwaters, but otherwise remains as constructed. It retains integrity of design, workmanship, materials, location, feeling, and association.

8. Statement of Significance

Applicable National Register Criteria: C

Areas of Significance: Engineering

Criteria Considerations (Exceptions): n/a

Period(s) of Significance: 1914

Significant Person(s): n/a

Significant Dates: 1914

Cultural Affiliation: n/a

Architect/Builder: Gibson, C. A. (designer)
Beley Construction Company (builder)

Narrative Statement of Significance

The Fromberg Concrete Arch Bridge is being nominated to the National Register of Historic Places under the "Historic and Architectural Resources of Fromberg" multiple property listing. The significance of the bridge is established under the historic context of "Transportation and Commerce in Fromberg, 1899-1936." The listing does not provide registration requirements for an associated property type because the concrete arch bridge is the only resource of its type in Fromberg. The bridge is eligible for listing in the National Register under Criterion C as the oldest multi-arch concrete bridge in Montana. The bridge is also significant under Criterion C for its engineering design. The rise to span ratio of 1 to 7 (8-foot rise to 56-foot span) was relatively advanced for the time of its construction.

Residents of the Clarks Fork Valley first petitioned the County Commissioners for a bridge to span the Clarks Fork of the Yellowstone at Fromberg in 1899. The petition included a promise by area ranchers to donate the labor for moving the bridge near Gebo, about a mile downstream, to the new site.¹ The Commissioners granted the petition, and the bridge was completed in 1900.² A wooden Howe truss replaced the earlier bridge in 1909.

On March 9, 1914, C.A. Gibson, the Carbon County surveyor reported to the County Commissioners that the wooden truss needed to be replaced. The Commissioners directed Gibson to prepare plans for a concrete bridge.³ Gibson's design for the bridge was quite advanced for the time--flattened parabolic arches with a rise to span ratio of 1 to 7. The first decade of the 1900s had seen major experimentation in methods of reinforcing concrete bridges, and it was not until about 1910 that designers of concrete bridges began to move away from traditional arches to flattened parabolic arches.

Little information has been located on C.A. Gibson. However, it is known that he worked for the Chicago, Burlington & Quincy Railroad for three years prior to being elected county surveyor in 1910. The Burlington had been one of the earliest users of reinforcing bars placed in a two-way grid for concrete bridges, as opposed to the more common use of steel I-beams at the time.⁴ It seems fairly certain that Gibson's knowledge of concrete bridge design was derived from his work with the railway.

The County Commissioners awarded the contract for construction of the bridge to the Livingston-based Beley Construction Company for \$9,731.50.⁵ The Gibson Concrete Works of Fromberg supplied the concrete. [It is unknown whether C.A. Gibson was somehow related to John Gibson, owner of the concrete works.] Extra claims added an additional \$6,080.57 to the final cost of the bridge,⁶ but may have partially been due to floodwaters which destroyed a coffer dam during construction.⁷

Upon completion of the bridge in December 1914, it was the largest concrete bridge in Montana. The Fromberg Herald, claimed it to be "the second largest rainbow arch bridge in the United States . . ."⁸ It is unclear exactly what the newspaper was referring to since the term "rainbow arch" does not fit the current definition of the Fromberg Bridge type. It survives today as the oldest multi-arch concrete bridge in the state.

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NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section number 8

Fromberg Concrete Arch Bridge

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NOTES

1. Carbon County Sentinel, 14 July 1899.
2. Carbon County Sentinel, 13 April 1900.
3. Carbon County, Commissioners Minutes, 9 March 1914.
4. Carl W. Condit, American Building, (Chicago and London: The University of Chicago Press, 1968), 252.
5. Carbon County, Commissioners Minutes, 8 May 1914.
6. Carbon County, Bridge Record, Bridge #74.
7. Fromberg Service Club, Fromberg: The Fruit Basket of Carbon County (Billings: Empire Printing, 1976): pg. 8.
8. Fromberg Herald, 16 December 1915.

9. Major Bibliographic References

Condit, Carl W. American Building. Chicago and London: The University of Chicago Press, 1968.
Carbon County. Bridge Record. Bridge # 74.
Carbon County. Commissioners Minutes. 9 March 1914, and 8 May 1914.
Carbon County Sentinel, 14 July 1899, and 13 April 1900.
Fromberg Herald. 16 December 1915.
Fromberg Service Club. Fromberg: The Fruit Basket of Carbon County. Billings: Empire Press, 1985.

Previous documentation on file (NPS):

Primary Location of Additional Data:

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 # _____

State Historic Preservation Office
 Other State agency
 Federal agency
 Local government
 University
 Other -- Specify Repository:

10. Geographical Data

Acreage of Property: less than one acre

UTM References:

	Zone	Easting	Northing
A	12	664840	5028430

Verbal Boundary Description

The nominated property consists of a rectangle, 219 feet long by 18 feet wide, whose vertices coincide with the outside corners of the bridge abutments at each end of the bridge, and includes only the bridge superstructure and substructure. It is located on the line between Sections 16 and 21, T5S R23E.

Boundary Justification

Because the bridge is located on a public road, there are no legal boundary lines for the ends of the bridge. Therefore, these boundaries are drawn to encompass only the superstructure and substructure of the bridge itself.

11. Form Prepared By

name/title: Lon Johnson, Historical Architect
organization: Renewable Technologies, Inc. **date:** August 1992
street & number: 511 Metals Bank Building **telephone:** 406/782-0494
city or town: Butte **state:** MT **zip code:** 59701

Property Owner

name/title: Carbon County
street & number: Carbon County Courthouse
city or town: Fromberg **state:** MT **zip code:** 59029