

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number _____ Page _____

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 99000344

Date Listed: 3/18/99

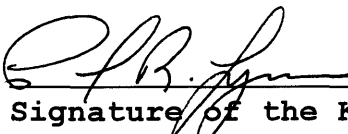
Hutchins Bridge
Property Name

Madison
County

MT
State

N/A
Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.


Signature of the Keeper

3/18/99
Date of Action

=====
Amended Items in Nomination:

Classification:

The Ownership of the Property is: *Public-Local (County)*.

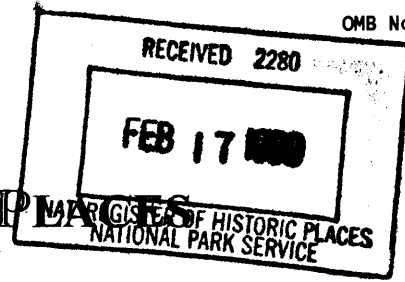
The Category of Property is: *Structure*.

This information was confirmed with Lon Johnson of the MT SHPO.

DISTRIBUTION:

- National Register property file
- Nominating Authority (without nomination attachment)

United States Department of the Interior
National Park Service



NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

1. Name of Property

historic name: Hutchins Bridge

other name/site number:

2. Location

street & number: Across the Madison River

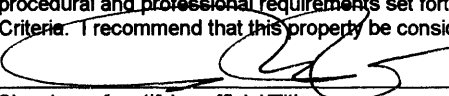
not for publication: na
vicinity: X

city/town: Cameron

state: Montana code: MT county: Madison code: 057 zip code: 59720

3. 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. I recommend that this property be considered significant nationally statewide locally.

 _____ Date 2-4-99

Signature of certifying official/Title _____
Montana State Historic Preservation Office
State or Federal agency or bureau _____ (See continuation sheet for additional comments.)

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

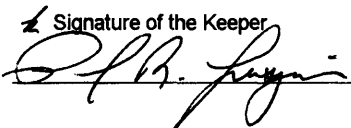
Signature of commenting or other official _____ Date _____

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): _____

 _____ Date of Action 3/12/99

5. Classification

Ownership of Property:	Number of Resources within Property	
	Contributing	Noncontributing
Category of Property:	___	___ building(s)
Number of contributing resources previously listed in the National Register: na	___	___ sites
	<u>1</u>	___ structures
	___	___ objects
Name of related multiple property listing: na	<u>1</u>	___ TOTAL

6. Function or Use

Historic Functions:

TRANSPORTATION/road-related/bridge

Current Functions:

TRANSPORTATION/road-related/bridge

7. Description

Architectural Classification:

OTHER: Pratt Through Truss

Materials:

foundation: concrete
walls: steel
roof: steel
other:

Narrative Description

The Hutchins Bridge spans the Madison River near the mouth of the West Fork of the Madison River. It provides access from U.S. Highway 287 to the West Fork (of the Madison River) Road. The bridge is about nine miles west of Quake Lake and 23 miles south of Cameron.

The Madison County Commissioners awarded the construction contract for the Hutchins Bridge to John W. Towle in 1902. Towle used three, pin-connected Pratt through trusses to span the river. The trusses are identical in design; each truss is 100 feet in length and has a 16-foot wide roadway. Two channel sections riveted together with a continuous plate on the top flange and lacing bars on the bottom flanges make up the upper chords. The lower chords are rectangular eye bars. The verticals are composed of two channel sections with lacing except at the hip where the verticals are a pair of square eye rods. The counters are square eye bars, some with turnbuckles. Paired angles make up the portal and sway bracing. The steel I-beams are connected to the superstructure with large "U bolts" and have round rod lateral bracing. The beams support timber stringers which run longitudinally. The stringers are covered with decking and have driving planks. The trusses have moveable plates and are supported by steel caissons filled with concrete. The center caissons are joined with large metal plates. At the abutments, the caissons are joined at the top with a steel I-beam and round eye bars; they have plank backwalls. Wood 4x4 posts remain from the original guardrails, but the 2x4 rails are gone. A chainlink fence now protects pedestrians.

The bridge builder's plaque, mounted on the south east hip reads: 1902/Built By/ John W. Towle/Civil Engineer/Omaha, Nebr.

Ruins of the original Hutchins Bridge's stone piers are visible in the river.

8. Statement of Significance

Applicable National Register Criteria: A and C

Areas of Significance: TRANSPORTATION;
ENGINEERING

Criteria Considerations (Exceptions): n/a

Period(s) of Significance: 1902-1922

Significant Person(s): n/a

Significant Dates: 1902

Cultural Affiliation: n/a

Architect/Builder: John W. Towle

Narrative Statement of Significance

The Hutchins Bridge is eligible for listing in the National Register of Historic Places under Criterion A for its association with efforts to develop transportation routes into Yellowstone National Park. The Madison River provided one of the first two routes into the Park. Early travelers forded the river at the location of the future Hutchins Bridge. Gilman Sawtell, a major promoter of Yellowstone, constructed a bridge at the ford in the early 1870s. From 1885 until 1901, a multi-span wood toll bridge served travelers to the Park. Finally, in 1901, the Madison County Commissioners purchased the old bridge and the next year, constructed the existing three-span Pratt through truss. The bridge served early motorists using the Grand Canyon to Banff and the Vigilante Trail highways. The bridge was bypassed in 1922 when the road into Yellowstone National Park was rerouted. The Hutchins Bridge is also eligible under Criterion C as a representative example of a Pratt through truss bridge. This was the most popular steel bridge type built in Montana up until about 1920.

History of the Madison River Road

The Madison County Commissioners first investigated the feasibility of a road up the Madison River in 1869. The Commissioners were hoping to find a shorter route to connect Virginia City with the Salt Lake City Road (more commonly known today as the Corrine Road). The road "viewers" accompanied by the county surveyor returned a favorable report finding it would cut almost 100 miles from the existing road, had easier grades, and would be free of tolls. They estimated construction costs from Virginia City to the Idaho line at \$5,000 with an additional \$3,000 required for construction costs in Idaho. Upon receipt of the report, the Madison County Commissioners ordered construction of the surveyed road. The appropriated funds, however, were only one-half of what the road viewers estimated for construction costs in Madison County, and made no provisions for the costs in Idaho. Payment was contingent on a road ready for "loaded teams" by December 1.¹ Apparently no one accepted the Commissioners offer for two years later, a traveler up the Madison River found a "good bridge" crossing the river at or near the future site of the Hutchins Bridge and stated "I believe no wagon but his has ever passed over this part of the country." The traveler was referring to Gilman Sawtell who lived at Henry's Lake. He went on to say, however, that Sawtell had made improvements to the road and that there was no place between Virginia City and Henry's Lake "that a loaded wagon could not pass over with apprent ease."²

Madison County soon had another reason for building a road up the Madison River. At the time the U.S. Congress designated Yellowstone a National Park in 1872, the park was virtually inaccessible. Travelers to the Park took stages to either Bozeman or Virginia City, and then transferred to horses making the trip from Bozeman through Yankee Jim Canyon to Mammoth Hot Springs or from Virginia City by way of the Madison Canyon to the Upper Geyser Basin.³

As noted, Gilman Sawtell completed some work on the road up the Madison River in the early 70s. In 1873, he finally convinced the businessmen of Virginia City that it was in their economic interest to construct a good wagon road into Yellowstone Park. Two thousand

¹ *Helena Weekly Herald*, September 9, 1869.

² *The New North-West* (Deer Lodge), September 30, 1871. This is one in a series of articles that ran for several weeks. Written by C.C. Clawson and entitled "Notes on the Way to Wonderland or A Ride to the Infernal Regions," it provides an excellent description of the Madison River route to Yellowstone.

³ U.S. Department of the Interior, National Park Service, *The History of the Construction of the Road System in Yellowstone National Park, 1872-1966*, by Mary Shivers Culpin. Selections from the Division of Cultural Resources, Rocky Mountain Region, No. 5, 1994.

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dollars were raised through private subscriptions to complete what one newspaper dubbed the "geyser wagon road."⁴ Officially known as the "Virginia City and National Park Free Wagon Road" (to differentiate it from the Bozeman toll road), the newspaper reported:

The Construction Committee . . . on Tuesday sent provisions, tools and a force of laborers to commence work, under charge of Gilman Sawtelle (sic), and will send out another force on Monday. They assure us they will put 200 men on the work if found necessary, and they will visit the Upper Geyser Basin in a carriage before the first day of December.⁵

The road, after leaving Virginia City, struck the Madison River near Wigwam Creek (just south of present day Ennis). Here it crossed the river and turned south. It followed the east bank of the river to a point "just above the crossing of Lawrence Creek" where it crossed to the west bank of the river. At the "Big Bend," the road left the river, crossed into Idaho, skirted Henry's Lake, and then entered the Park at Firehole Canyon.⁶ A visitor using this road in 1877 described how his party had to cut their way through a mile of downed timber once they reached the Park.⁷

Construction of the First Hutchins Bridge

In 1880, George W. Marshall and John B. Goff built the Marshall Hotel on the Firehole River in Yellowstone National Park. The same year, they carried the first tourists by "commercial conveyance" from Virginia City to their hotel. Expanded tourism in the park required the construction of a new, larger hotel in 1884.⁸ The road system within the Park received considerable attention during this period.⁹

Outside the Park, entrepreneurs also took advantage of the Park's increased tourism. Early on, private parties graded portions of the road from Bozeman to the Park's north entrance and began charging tolls. On May 15, 1885, the *Madisonian* reported "the Upper Madison river is being bridged, and the geyser travel can now avoid a dangerous ford." Mathew Dunham as a toll bridge was constructing the bridge. The Madison River at this point is almost 300 feet wide, and the bridge was an expensive undertaking, costing \$1,261. Dunham hired a chief carpenter to oversee a crew of ten men. They cut timber up river, constructed eight piers on the river bank, and then floated them downstream to the bridge site. There, the piers were up righted and filled with stones. Log kingpost through trusses spanned between the piers. The trusses were braced with log outriggers and a log swing brace. An iron rod suspended from the middle of each truss provided tensile strength to the floor beams. A split log deck was installed over the floor beams.¹⁰

⁴ *Bozeman Avant Courier*, October 3, 1873,

⁵ *Ibid.*

⁶ Harry J. Norton, *Wonder-Land Illustrated; or, Horseback Rides through the Yellowstone National Park* (Virginia City: Harry J. Norton, 1873); James Spray, "Early Days in the Madison Valley," typescript c. 1935. In collection of Montana Historical Society.

⁷ U.S. Department of the Interior, National Park Service, *Road System*, p. 363.

⁸ Lee H. Whittlesey, "Marshall's Hotel in the National Park," *Montana: The Magazine of Western History* 30 (October 1980).

⁹ U.S. Department of the Interior, National Park Service, *Road System*, p.

¹⁰ James Spray, "Early Days in the Madison Valley," 168-9. Typescript (ca. 1935) located at Montana Historical Society Library, Helena. A photograph of the bridge is located in Madison County History Association, comp., *Pioneer Trails and Trials* (Great Falls: Blue Print & Letter Company, 1976), 87.

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Two years after the bridge's completion, Dunham sold the bridge to Israel Ammon Hutchins. Hutchins developed a ranch at one end of the bridge and continued to collect tolls. The Hutchins Bridge became the center of activity for the upper Madison Valley. The Lyon post office was moved to the Hutchins Ranch with Hutchins as postmaster. He also constructed a 'stopping place' which catered to local ranchers and tourists alike.¹¹

Construction of the Hutchins Bridge

By 1900, the Hutchins Bridge had served the upper Madison Valley for 15 years. The wood truss bridge was showing signs of deterioration and structural inadequacy. One span of the bridge "broke down" during the winter of 1900-01 and the Madison County Commissioners ordered Hutchins to fix it. The repaired bridge was reported to be "in fair condition."¹² Hutchins soon approached the County Commissioners with an offer to sell the bridge. Title to the bridge and the road right-of-way through Hutchins' ranch was transferred to Madison County for \$300 in June.¹³ The Lyon correspondent to *The Madisonian* reported the next week that since sale of the bridge to the county, "the gate has been left open and several parties who have gone by have urged their teams and kept their eye on the house watching for someone to come out to stop them, but as no one comes, they seem to think that they were unseen and got across without paying."¹⁴ Portions of the bridge again collapsed that fall when a herd of cattle were being driven across it.¹⁵ The bridge apparently remained unrepaired since future references refer to the Hutchins Bridge "site."

Reacting to "the several petitions and remonstrance[s]," in March 1902, the Madison County Commissioners advertised for a new bridge at the Hutchins Bridge site. Montana counties during this time usually specified only the location and length for new bridges, leaving it up to the bidders to provide them with alternative plans. For the new Hutchins Bridge, however, the County Commissioners provided clear specifications for a three-span Pratt truss bridge. The bid advertisement stated the size of the piers, reinforcing bars, and steel and even the species of the timbers--Oregon fir for the beams and Montana red fir for the decking.¹⁶ Whether the County Commissioners were acting on the advice of an engineer or using standardized specifications from a bridge company is unknown.

Many leading Midwest bridge building companies submitted bids for the new Hutchins Bridge. These included N.M. Stark of Des Moines, Iowa; M.A. Adams of Minneapolis; the Missouri Valley Bridge and Iron Works, and the Midland Bridge Company of Kansas City. O.E. Peppard, Montana's primary bridge builder also submitted a bid. The County Commissioners awarded the contract to John W. Towle of Omaha, Nebraska, who had the lowest bid at \$5,999. The County Commissioners specified a January 1, 1903 completion date.¹⁷

John W. Towle, a native of Nebraska, received his education in civil engineering at Cornell University. He returned to Nebraska in the 1890s as general western agent for the Canton Bridge Company of Canton, Ohio. Incorporated in 1891, the Canton Bridge Company

¹¹ Madison County History Association, comp., *Pioneer Trails and Trials* (Great Falls: Blue Print & Letter Company, 1976), 86-7.

¹² *The Madisonian*, January 17, 1901.

¹³ *The Madisonian*, June 8, 1901.

¹⁴ *The Madisonian*, June 15, 1901.

¹⁵ *Alder Gulch Times* (Virginia City), April 26, 1902.

¹⁶ Madison County, Montana, *Commissioners' Journal*, March 6, 1902.

¹⁷ Madison County, Montana, *Commissioners' Journal*, June 6, 1902.

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constructed bridges throughout the trans-Mississippi west. Agents based in Omaha, including Towle, conducted the company's bidding and construction in states such as South Dakota. The Canton Bridge Company continued in business at least into the 1910s. It is unclear exactly when Towle severed his association with the Canton Bridge Company. By 1907, he owned the Western Bridge and Construction Company. Towle also had interests in several related companies, including the Nebraska Bridge Supply and Lumber Company, Concrete Engineering Company, Omaha Structural Steel Works, and Allied contractors, Inc.¹⁸

The Hutchins Bridge and the Montana State Highway System

Soon after the appearance of the automobile, Montana communities began to recognize the economic benefits of improving roads and linking their communities to others. After creation of the Yellowstone Trail which linked St. Paul with Yellowstone National Park, the idea quickly caught on in Montana. Dozens of trail associations were founded with the purpose of raising money to improve roads and advertising the road to the traveling public. Montana's two national parks received much attention from these associations as local communities tried to entice visitors to the roads entering the parks that passed through their communities. By 1917, the Hutchins Bridge was located on the Banff to Grand Canyon Road, also known as the Red and White Trail because of the colors of its signs. Within Montana, the road began at West Yellowstone, following the Madison River Road across the Hutchins Bridge and into Virginia City. From there it continued through Butte, Helena, Great Falls, East Glacier, and then to the Canadian border north of Babb. The portion of the road from West Yellowstone to Butte was also designated as the Vigilante Trail, a title meant to appeal to Montanans.

Soon after establishment of the State Highway Department in 1912, the State designated the Madison River Road as part of the state highway system. Changes in the route into Yellowstone National Park about 1922 resulted in the Hutchins Bridge being removed from the state highway system. Instead of crossing the Madison River at the bridge, the highway was rerouted along the north bank of the Madison River, thus creating a more direct route to Yellowstone National Park. At a point about five miles southeast of the Hutchins Bridge, the old road into Idaho and Henry's Lake was connected to the new road. From that time on, the Hutchins Bridge has served local traffic.

Engineering Significance

The Hutchins Bridge is significant as a representative example of a pin-connected Pratt through trusses. Thomas and Caleb Pratt patented the Pratt design in 1844. The design featured short vertical members acting in compression and longer diagonal members acting in tension. By the late nineteenth century, the Pratt design was by far the most common form for metal truss bridges. The ability to ship the premanufactured components by railroad, and then to build the bridges on-site using pins to connect the components, resulted in their widespread acceptance by bridge engineers. Pratt trusses far outnumbered any other type of steel bridge in Montana until about 1920.¹⁹ The construction of a steel bridge was an expensive undertaking for most Montana counties. Steel bridges were often the second largest outlays of public funds, preceded only by the construction of a courthouse. Commissioners constructed large steel bridges for two reasons, either to join disconnected parts of a county separated by rivers or, as with the Hutchins Bridge, to open new markets.

Montana's historic bridges are fast disappearing from the landscape and few have been nominated to the National Register of Historic Places. Of the hundreds of Pratt through-trusses erected, only the Joliet and the Fort Benton bridges (the latter is comprised of other types of spans, too) are listed. The recently listed Kearny Rapids Bridge has already been demolished.

¹⁸ Frederic L. Quivik and Lon Johnson, "Historic Bridges in South Dakota," September 1990.

¹⁹ Jon Axline, Voges Bridge, Historic American Engineering Record No. MT-103; Frederic L. Quivik and Lon Johnson, "Historic Bridges in South Dakota."

Hutchins Bridge
Name of Property

Madison County, Montana
County and State

9. Major Bibliographic 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
 Local government
 University
 Other -- Specify Repository:

10. Geographical Data

Acreage of Property: Less than one

UTM References:	Zone	Easting	Northing
	12	454220	4970550

Legal Location (Township, Range & Section(s)): Section 3, Township 11 South, Range 1 East, M.P.M.

Verbal Boundary Description

The boundary for the Hutchins Bridge is a rectangle, 300 feet by 25 feet. The rectangle encompasses the bridge from beginning of the northeast span to termination of the southwest span and is centered on the bridge.

Boundary Justification

Boundaries for the Hutchins Bridge are drawn to encompass the three spans of the bridge and that portion of the Madison River spanned by the bridge. The width is increased beyond the out-to-out measurements of the bridge to include the piers.

11. Form Prepared By

name/title: Lon Johnson

organization: State Historic Preservation Office

street & number: 1410 Eighth Avenue

city or town: Helena

state: MT

date: December 1998

telephone: 406-444-7742

zip code: 59620

Property Owner

name/title: Madison County Commissioners

street & number: Madison County Courthouse

city or town: Virginia City

state: MT

telephone:

zip code: 59755

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Quivik, Frederic L. and Lon Johnson. "Historic Bridges of South Dakota," September 1990.

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Whittlesey, Lee H. "Marshall's Hotel in the National Park." *Montana: The Magazine of Western History* 30 (October 1980).