

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number 3 Page 1

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: see below Date Listed: 12/09/93

Property Name: see below

County: see below State: South Dakota

Historic Bridges in South Dakota MPS
Multiple Name

The following properties are 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

December 9, 1993
Date of Action

Amended Items in Nomination:

Section 3/8. State Certification/Statement of Significance. Certifying official has considered the significance of the following properties to be of state significance.

Reference No.	Property	County
93001295	Capa Bridge	Jones County
93001287	Chilson Bridge	Fall River County
93001308	Eighth Street Bridge	Minnehaha County
93001298	Esmond Bridge	Kingsbury County
93001317	Hall Bridge	Spink County
93001274	Hay Creek Bridge	Butte County
93001264	Kemp Avenue Bridge	Codington County
93001266	Larson Bridge	Codington County
93001277	Minnesela Bridge	Butte County
93001268	Old Cochrane Bridge	Deuel County
93001281	Red Shirt Bridge	Custer County
93001300	Redwater Bridge, Old	Lawrence County

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93001269	South Dakota Dept. of Transportation Bridge No. 03-338-100	Beadle County
93001260	South Dakota Dept. of Transportation Bridge No. 03-020-008	Beadle County
93001261	South Dakota Dept. of Transportation Bridge No. 03-327-230	Beadle County
93001270	South Dakota Dept. of Transportation Bridge No. 05-028-200	Bon Homme county
93001271	South Dakota Dept. of Transportation Bridge No. 05-032-170	Bon Homme County
93001272	South Dakota Dept. of Transportation Bridge No. 05-138-080	Bon Homme County
93001273	South Dakota Dept. of Transportation Bridge No. 05-255-130	Bon Homme County
93001276	South Dakota Dept. of Transportation Bridge No. 10-112-355	Butte County
93001275	South Dakota Dept. of Transportation Bridge No. 10-109-360	Butte County
93001278	South Dakota Dept. of Transportation Bridge No. 12-503-230	Charles Mix County
93001265	South Dakota Dept. of Transportation Bridge No. 15-210-136	Codington County
93001279	South Dakota Dept. of Transportation Bridge No. 16-570-054	Carson County
93001280	South Dakota Dept. of Transportation Bridge No. 17-289-107	Custer County
93001282	South Dakota Dept. of Transportation Bridge No. 18-040-137	Davison County
93001283	South Dakota Dept. of Transportation Bridge No. 18-060-202	Davison County
93001284	South Dakota Dept. of Transportation Bridge No. 18-100-052	Davison County
93001285	South Dakota Dept. of Transportation Bridge No. 18-142-150	Davison County
93001286	South Dakota Dept. of Transportation Bridge No. 20-153-210	Deuel County
93001288	South Dakota Dept. of Transportation Bridge No. 25-218-141	Faulk County
93001262	South Dakota Dept. of Transportation Bridge No. 25-380-142	Faulk County
93001289	South Dakota Dept. of Transportation Bridge No. 27-000-201	Gregory County
93001290	South Dakota Dept. of Transportation Bridge No. 27-060-298	Gregory County

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93001291	South Dakota Dept. of Transportation Bridge No. 29-221-060	Hamlin County
93001292	South Dakota Dept. of Transportation Bridge No. 29-279-010	Hamlin County
93001293	South Dakota Dept. of Transportation Bridge No. 30-257-400	Hand County
93001294	South Dakota Dept. of Transportation Bridge No. 31-115-110	Hanson County
93001297	South Dakota Dept. of Transportation Bridge No. 39-006-070	Kingsbury County
93001299	South Dakota Dept. of Transportation Bridge No. 39-176-100	Kingsbury County
93001301	South Dakota Dept. of Transportation Bridge No. 44-028-220	McCook County
93001302	South Dakota Dept. of Transportation Bridge No. 44-212-090	McCook County
93001303	South Dakota Dept. of Transportation Bridge No. 47-215-363	Meade County
93001263	South Dakota Dept. of Transportation Bridge No. 47-151-389	Meade County
93001305	South Dakota Dept. of Transportation Bridge No. 48-244-204	Melette County
93001306	South Dakota Dept. of Transportation Bridge No. 49-095-190	Miner County
93001267	South Dakota Dept. of Transportation Bridge No. 50-200-035	Minnehaha County
93001310	South Dakota Dept. of Transportation Bridge No. 56-090-096	Sanborn County
93001312	South Dakota Dept. of Transportation Bridge No. 56-174-090	Sanborn County
93001311	South Dakota Dept. of Transportation Bridge No. 56-117-123	Sanborn County
93001313	South Dakota Dept. of Transportation Bridge No. 58-010-376	Spink County
93001314	South Dakota Dept. of Transportation Bridge No. 58-021-400	Spink County
93001315	South Dakota Dept. of Transportation Bridge No. 58-025-370	Spink County
93001316	South Dakota Dept. of Transportation Bridge No. 58-062-270	Spink County
93001318	South Dakota Dept. of Transportation Bridge No. 58-120-231	Spink County
63001319	South Dakota Dept. of Transportation Bridge No. 58-140-224	Spink County

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- 63001320 South Dakota Dept. of Transportation Bridge No. 58-218-
360 Spink County
 - 63001321 South Dakota Dept. of Transportation Bridge No. 62-220-
512 Tripp County
 - 63001322 South Dakota Dept. of Transportation Bridge No. 64-061-
199 Union County
 - 93001309 Split Rock Park Bridge Minnehaha County
 - 93001304 Stamford Bridge Miner County
 - 93001307 Summit Avenue Viaduct Minnehaha County
 - 93001296 Van Metre Bridge Jones County
-

Section 8: Applicable Criteria

93001266 Larson Bridge Codington County

Criterion C should be checked and not A to be consistent with bridge's significance in engineering for its method of construction.

Section 8: Period of Significance

93001266 Larson Bridge Codington County

Period of significance is amended to read "1917" to indicate date of construction and to be consistent with significance in engineering.

93001281 Red Shirt Bridge Custer County

Period of significance is amended to read "1943-1944" to cover the period of construction.

93001278 South Dakota Dept. of Transportation Bridge No. 12-503-
230 Faulk County

Due to typographical error, period of significance is corrected to read " 1920-1943."

93001265 South Dakota Dept. of Transportation Bridge No. 15-210-
136 Codington County

Period of significance is amended to read "1917" since significance is under criterion C in engineering and the date of construction should be entered.

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93001262 South Dakota Dept. of Transportation Bridge No. 25-380-
142 Faulk County

Period of significance is amended to read "1902" because the area of significance is engineering and the period of significance should be based on the date of construction. The bridge was moved from its original site in 1955.

Section 8: Date of Significance

93001308 Eighth Street Bridge Minnehaha County

"1977" is deleted because the date lies outside the period of significance.

93001317 Hall Bridge Spink County

"1904" is deleted because bridge is significant under criterion C for engineering and the move in 1904 falls outside the period of significance which is based on the date of construction and does not appear to have particular importance.

93001286 South Dakota Dept. of Transportation Bridge No. 20-153-
210 Deuel County

"1960" is deleted because the date lies outside the period of significance.

93001262 South Dakota Dept. of Transportation Bridge No. 25-380-
142 Faulk County

"1955" is deleted because the date lies outside the period of significance.

93001302 South Dakota Dept. of Transportation Bridge No. 44-212-
090 McCook County

"1960" is deleted because the date lies outside the period of significance.

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93001267 South Dakota Dept. of Transportation Bridge No. 50-200-
035 Minnehaha County

"1935" is deleted because the date lies outside the period of significance which is based on the date of construction.

93001311 South Dakota Dept. of Transportation Bridge No. 56-117-
123 Sanborn County

"1905" is deleted because the date lies outside the period of significance and does not appear to have particular importance.

Melissa Dirr, architectural historian, of the South Dakota State Historic Preservation Office was notified of the above-mentioned amendments by telephone on December 09, 1993.

DISTRIBUTION:

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

NPS Form 10-900
(Rev. 8-86)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

RECEIVED

OCT 25 1993

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

NATIONAL
REGISTER

1. Name of Property

historic name: N/A

other name/site number: South Dakota Dept. of Trans. Br. No. 58-021-400

2. Location

street & number: Local road over Turtle Creek

not for publication:

city/town: Tulare

vicinity: X

state: SD county: Spink

code: 115

zip code: 57476

3. Classification

Ownership of Property: public-local

Category of Property: structure

Number of Resources within Property:

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

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

Name of related multiple property listing: Historic Bridges in South Dakota

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.

Signature of certifying official

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

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): _____

SM Clelland 12/9/93

Signature of Keeper

Date of Action

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

Historic: Transportation Sub: road-related (vehicular)

Current : Transportation Sub: road-related (vehicular)

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

Architectural Classification:

Other

Other Description: Bedstead pony truss

Materials: foundation concrete roof _____
walls _____ other metal: steel

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

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

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

Applicable National Register Criteria: A & C

Criteria Considerations (Exceptions) : _____

Areas of Significance: Politics/Government
Engineering

Period(s) of Significance: 1921 - 1943

Significant Dates : 1921 _____

Significant Person(s): N/A

Cultural Affiliation: N/A

Architect/Builder: Designer: State Highway Commission
Builder: Iowa Bridge Company

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

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9. Major Bibliographical References
=====

X 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: South Dakota Department of Transportation

=====
 10. Geographical Data
 =====

Acreage of Property: less than 1 acre

UTM References: Zone Easting Northing Zone Easting Northing

A	<u>14</u>	<u>526630</u>	<u>4945330</u>	B	___	_____	_____
C	___	_____	_____	D	___	_____	_____

___ See continuation sheet.

Verbal Boundary Description: ___ See continuation sheet.

The nominated property consists of a rectangle, 24 feet wide by 73 feet long, 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.

Boundary Justification: ___ See continuation sheet.

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: Jennifer Traeger/Historian and Fred Quivik/ Architectural Historian

Organization: Renewable Technologies, Inc.

Date: August 1990/9-93

Street & Number: 510 Metals Bank Bldg.

Telephone: (406)782-0494

City or Town: Butte

State: MT ZIP: 59701

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Section number 7 Bridge No. 58-021-400 Page 6
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Bridge no. 58-021-400 is located 5 miles south and 7.9 miles west of Tulare and carries a local road across Turtle Creek. The 65-foot, steel, riveted, Bedstead pony truss span rests on concrete abutments. The wing walls rise to form L-shaped approach guards and also have recessed panels. The superstructure is comprised as follows: the end posts are H-sections built up of a steel plate web and pairs of angle sections with an additional steel plate on the outer flanges; the upper chords are paired angle sections with a riveted continuous channel section cover plate; the lower chords are paired angle sections with battens; vertical and diagonal members are paired angle sections. The concrete slab deck rests on the steel I-beam floor beams which are riveted to the vertical members. Side stiffening brackets are angle sections riveted to the center vertical members above the lower chords. Bottom lateral bracing consists of angle section cross-braces spanning two panels. The railings are one channel section.

Although the approach guards are deteriorating, the bridge retains good integrity.

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Section number 8

Bridge No. 58-021-400

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Bridge no. 58-021-400 is being nominated to the National Register of Historic Places as part of the "Historic Bridges in South Dakota" Multiple Property Nomination. It is related to the historic context of "Historic Bridges in South Dakota, 1893-1942" and is classified with the associated property type for iron and steel frame bridges. This bridge is individually eligible for the National Register under Criterion A for its association with the early designs of the South Dakota State Highway Commission (SHC). Bridges designed by the SHC, such as this one, represent the efforts of state government to improve the quality of bridge construction in South Dakota and break the hold the bridge building companies had on local governments. The bridge is also eligible under Criterion C as a representative example of standardized truss design developed by SCH. Riveted bedsteads, such as this bridge, were the only pony trusses built in South Dakota after 1919 until about 1930. Bridges of this truss type have added significance because they represent the development of a standardized design unique to South Dakota. This bridge retains good integrity.

Prior to about 1920, South Dakota lacked a coordinated statewide system to control the quality and costs of bridge work in the state. Most of its counties and townships independently carried out their bridge building projects, with little coordination except for sharing costs for an occasional county-line road or bridge. Within each county, the commissioners determined the location, need, and plans and specifications for new bridges with little, or as in most cases, no technical expertise themselves or outside technical assistance. Each county seemed to be dominated by a bridge company different from neighboring counties, with the same company receiving bridge contracts in the same county year after year. This was mostly likely due to illegal "pooling" arrangements under which various bridge-building firms agreed to divide states among themselves, assigning particular counties to specific firms.

In 1919, however, the state government actively intervened to improve the quality of bridge construction in South Dakota. At this time, the South Dakota State Highway Commission (SHC) established a bridge department, hired a bridge engineer, and gave him responsibility for designing all state and county bridges and supervising the bidding process for bridge construction contracts. The first bridge engineer for the State of South Dakota was John E. Kirkham, a professor of engineering at Iowa State at Ames and consulting engineer to the Iowa State Highway Commission, among the most innovative state highway departments in the
(continued)

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NATIONAL REGISTER OF HISTORIC PLACES
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Section number 8 & 9

Bridge No. 58-021-400

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8. Significance (continued)

country at the time. In South Dakota, Kirkham sought to reduce the cost of bridge construction and maintenance. He accomplished this in part by developing a series of standardized bridge plans which were especially suited to South Dakota's conditions of climate, terrain, and rural traffic needs.

One bridge plan devised by Kirkham for the South Dakota SHC was for a bedstead-type pony truss. Unique to Kirkham's design was its single-web upper chord in place of the conventional boxed upper chord. To critics, Kirkham argued that his design resulted in cost reductions because it required less materials to fabricate both the bridge superstructure and deck. Kirkham's pony truss design also called for concrete abutments with concrete approach guards to protect the ends of the truss. Kirkham believed that vertical end-posts, distinctive of the bedstead truss, with concrete approach guards provided a superior aesthetic design in comparison with other pony truss types. Although SHC pony trusses of Kirkham's design replaced construction of riveted Pratt and Warren pony truss in South Dakota, it was not adopted by other states.

Although several of these standardized SHC pony trusses with vertical end posts and concrete approaches survive on the South Dakota landscape, Bridge no. 58-021-400 has added significance because it is one of the oldest surviving in the state. It was constructed by the Iowa Bridge Company in 1921.

9. Bibliography

Spink County "Commissioners Record," Book G, p. 317, Auditor's Office, Spink County Courthouse, Redfield.