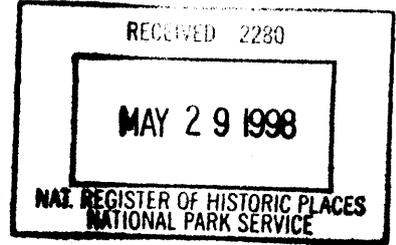


United States Department of the Interior
National Park Service

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NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions 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 any 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 Bridge No. 5388
other names/site number N/A

2. Location

street & number Mn. Hwy. 24 over North Fork Crow River
not for publication N/A
city or town Forest City Twp. Kingston vicinity X
state Minnesota code MN county Meeker code 093
zip code 55326

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 ✓ 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.)

Ian R. Stewart Signature of certifying official Date 5/12/98
Ian R. Stewart, Deputy State Historic Preservation Officer
State or Federal agency and bureau Minnesota Historical Society

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

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

removed from the National Register

other (explain): _____

Edson H. Ball 6/20/98

ball

Signature of Keeper Date
of Action

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

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

Number of contributing resources previously listed in the National Register N/A

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

Historic Iron and Steel Bridges in Minnesota

6. Function or Use

Historic Functions (Enter categories from instructions)

Cat: TRANSPORTATION Sub: road-related (vehicular)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Current Functions (Enter categories from instructions)

Cat: TRANSPORTATION Sub: road-related (vehicular)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

7. Description

Architectural Classification (Enter categories from instructions)

OTHER: Warren polygonal pony truss with
verticals

Materials (Enter categories from instructions)

foundation (Substructure) CONCRETE

roof _____

walls _____

other (Superstructure) METAL: Steel

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

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.)

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

Areas of Significance (Enter categories from instructions)

ENGINEERING

Period of Significance 1935

Significant Dates 1935

Significant Person (Complete if Criterion B is marked above)

Cultural Affiliation _____

Architect/Builder Contractor/Builder: Teberg and Berg
Designer: Minnesota Highway Department

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

9. Major Bibliographical References

(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 # _____

Primary Location of Additional Data

___ State Historic Preservation Office

X Other State agency

___ Federal agency

___ Local government

___ University

___ Other

Name of repository: Minnesota Department of Transportation

10. Geographical Data

Acreage of Property less than one acre

UTM References (Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing	Zone	Easting	Northing
1	<u>15</u>	<u>390990</u>	<u>5006290</u>	3	___	___
2	___	___	___	4	___	___

___ See continuation sheet.

Forest City, Minn., 1982

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 Jeffrey A. Hess, Historian
organization Hess, Roise and Company
street & number The Foster House, 100 North First Street
city or town Minneapolis state MN zip code 55401
telephone (612) 338-1987
date September 1997

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 the SHPO or FPO.)

name _____
street & number _____
telephone _____
city or town _____ state ____ zip code ____

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.). Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

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**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section 7 Page 1 Bridge No. 5388
name of property
Meeker County, Minnesota
county and state

Description

Located about three miles west of Kingston in section 13 of Forest City Township in rural northeast Meeker County, Bridge No. 5388 carries Minnesota Trunk Highway 24 across the North Fork of the Crow River. Aligned on an east-west axis, the 100-foot span is a steel, five-panel, rigid-connected, Warren pony truss with verticals and polygonal top chords. The superstructure rests on concrete abutments with rocker-type expansion bearings on the west side. The two truss webs are identically detailed. Two channel sections with X-lacing form the top chord, while four angle sections with battens comprise the bottom chord. The diagonal members consist of four angle sections with either V-lacing or battens. The primary vertical members are four angle sections with V-lacing, and the secondary vertical members are two angle sections with battens. The primary verticals are sway braced by paired angle sections in an outrigger configuration. Bottom lateral bracing consists of crossed angle sections. The flooring system supports a concrete deck on 13 I-beam stringers riveted to the webs of I-beam floor beams. The roadway is 26 feet in width. Bridge No. 5388 has experienced no major alterations to the truss webs. The structure has excellent historical integrity.

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**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section 8 Page 1 Bridge No. 5388
name of property
Meeker County, Minnesota
county and state

Summary of Significance

In its biennial report for 1935-1936, the Minnesota Highway Department noted that most of its bridge work during the previous two years had focussed on building new highway/railroad grade separations or on making "emergency replacements" of substandard structures on state trunk highway routes that had been added to the state system by the Minnesota legislature in 1933. Yet the department also found time and funding for a few other projects, such as the improvement of Trunk Highway (TH) 24 in Meeker County. Established in 1921 as part of the state's original trunk highway system, TH 24 connected the city of Litchfield on the south to the city of St. Cloud on the northwest, a distance of about 40 miles. When the state legislature expanded the trunk highway system in the 1930s, the state highway department reorganized the numbering system and retained the TH 24 designation for only the south half of the original route, stretching from Litchfield to Kimball. This portion received approximately \$100,000 worth of improvements in 1935-1936, mostly in the form of grading and graveling. However, about one-quarter of the amount went to the construction of a new highway crossing, to be designated as Bridge No. 5388, over the North Fork of the Crow River, about eight miles northwest of Litchfield. The state highway department completed plans for Bridge No. 5388 in November 1934, and a month later awarded a low-bid construction contract for the project, in the amount of \$22,240, to Teberg and Berg of St. Paul. The contractor completed the bridge without incident in 1935.

Bridge No. 5388 marks the final stage in the state highway department's work with the Warren pony-truss form. When the agency issued its first bridge specifications in 1912, it stipulated the use of the rigid-connected, Warren-truss configuration for future pony-truss construction, and it set the maximum span length for the type at 80 feet. These provisions were reiterated when the agency re-issued its specifications in 1918, 1921, and 1925. In 1930, the state highway department

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CONTINUATION SHEET**

Section 8 Page 2 Bridge No. 5388
name of property
Meeker County, Minnesota
county and state

announced that "our bridges are now being designed in substantial accordance with the approved specifications of the American Association of State Highway Officials [ASSHO] which safely provides for the legal loadings specified in our own state laws." AASHO's specifications, as codified in 1928, set the maximum span length for low riveted trusses at 100 feet. To use the rigid-connected Warren pony truss in the 80- to 100-foot range, the Minnesota Highway Department revised its standard plan for the type by replacing the conventional, horizontal top chord of the truss web with a polygonal top chord. The "curved top chord," as it was sometimes called, was more economical for longer spans because it varied the depth of the web to suit the stresses produced by the load, thereby reducing the amount of steel necessary for construction. During the 1930s, the highway department designed several of the new Warren pony trusses, but only Bridge No. 5388 achieved the outer span limit of 100 feet. The crossing was the longest pony-truss span ever built under the state's supervision. When the highway department issued revised plans and specifications in the mid-1940s, it dropped the Warren pony truss as an "obsolete" type, which could be economically replaced by long-span, deep-section, I-beam bridges.

Bridge No. 5388 is eligible for the National Register for its design in the area of engineering under Criterion C, within the historic context of "Historic Iron and Steel Bridges in Minnesota, 1873-1945." The Multiple Property Documentation Form associated with this context states that properties may be eligible under Criterion C if "they embody distinctive characteristics of bridge engineering and construction or significant phases in the evolution of bridge engineering and construction." Representing the final evolution of the Minnesota Highway Department's standard plan for the Warren pony-truss type, Bridge No. 5388 satisfies this criterion.

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CONTINUATION SHEET**

Section 9 Page 1 Bridge No. 5388
name of property
 Meeker County, Minnesota
county and state

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Published Sources

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Improvement Bulletin 79 (21 December 1934): 20.

Miller, E.J. "Standard Bridge and Culvert Plans." *Better Roads* (June 1947): 24.

Minnesota Highway Commission. *Standard Specifications for Steel and Concrete Highway Bridges, 1912*. Minneapolis: The Thos. A. Clark Company, 1912.

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Section 9 Page 2 Bridge No. 5388
name of property
 Meeker County, Minnesota
county and state

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Quivik, Fredric L. "Iron and Steel Bridges in Minnesota,"
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Archival Sources

Bridge Database. Minnesota Department of Transportation, St.
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Bridge No. 5388 File (construction plans, contract). Minnesota
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**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section 10 Page 1 Bridge No. 5388
name of property
Mo-Meeker County, Minnesota
county and state

Verbal Boundary Description

The general area of the nominated property is a rectangle 27.8 feet wide and 100 feet long, whose long center axis parallels the centerline of the bridge.

Boundary Justification

Based on measurements provided by the Minnesota Department of Transportation, the boundaries enclose the entire historic resource.