

United States Department of the Interior National Park Service

RECEIVED MAY 22 1990

National Register of Historic Places Registration Form

NATIONAL REGISTER

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in Guidelines for Completing National Register Forms (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name Bridge No. L4013 other names/site number Black Hammer Township Stone-Arch Bridge

2. Location

street & number Twp. Rd. 126 over Riceford Creek city, town Black Hammer Township state Minnesota code MN county Houston code 055 zip code 55921

3. Classification

Ownership of Property: private, public-local (checked), public-State, public-Federal. Category of Property: building(s), district, site, structure (checked), object. Number of Resources within Property: Contributing (1), Noncontributing (0), Total (1).

Name of related multiple property listing: Minnesota Masonry-Arch Highway Bridges. Number of contributing resources previously listed in the National Register: 0.

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, 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. Ian R. Stewart, Deputy State Historic Preservation Officer, Minnesota Historical Society, Date 5/14/90.

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. (checked) 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:)

Beth Boland

7/5/90

Signature of the Keeper Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)

Current Functions (enter categories from instructions)

Transportation, road-related (vehicular)

Transportation, road-related (vehicular)

7. Description

Architectural Classification
(enter categories from instructions)

Materials (enter categories from instructions)

Other: Stone-arch bridge

foundation Stone, limestone

walls

roof

other Stone, limestone

Describe present and historic physical appearance.

Located in a wooded rural area of Houston County about 8 miles west of the City of Caledonia, the structure is a single-span, stone-arch bridge that carries an unpaved east-west road over a branch of Riceford Creek.

Built of coursed-ashlar, buff-colored limestone, the bridge displays a semicircular arch with a 12-foot, 6-inch span. The limestone matches farmstead foundations in the general vicinity, strongly suggesting a local origin. The quarry, however, has not been identified. The voussoirs are well blocked and uniform, measuring 8 inches in width and 12 inches in height. Joints are about 1-inch thick. Except for a few crude patches of repointing, the mortar has almost completely disintegrated from the intrados joints. The arch, however, retains its shape without any signs of settling. The arch springs about 4 feet above grade from sharply defined impost ledges that extend outward from the intrados about 6 inches. Constructed on a slight skew, the bridge has an overall width of approximately 18 feet. Spandrel walls are continuous with slightly flared wing walls.

To protect the foundations from the scour, the streambed under the bridge has been paved in concrete. Photographs from the 1950s and 1960s show stone parapet walls with pipe-metal railings on both sides of the roadway. These features have been removed, leaving a ragged masonry line flush with the roadway. None of the alterations affects the bridge's most significant elements, which are the design of the impost ledges and the configuration of the arch itself.

8. Statement of Significance

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

nationally statewide locally

Applicable National Register Criteria A B C D

Criteria Considerations (Exceptions) A B C D E F G

Areas of Significance (enter categories from instructions)

Engineering

Period of Significance

1915

Significant Dates

1915

Cultural Affiliation

N/A

Significant Person

N/A

Architect/Builder

Rasmussen, Alfred J., engineer

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

Bridge No. L4013 embodies engineering significance in the context of Minnesota masonry-arch highway bridges of the period 1870 to 1945. Constructed in 1915, the structure is important as the only surviving, authenticated example of an early twentieth-century, state-designed, stone-arch bridge. Since its design is replicated in other counties, the bridge provides strong evidence that the Minnesota State Highway Commission (MHC) attempted to standardize stone-arch bridge construction in much the same way that it sought to create uniformity in the design of steel and concrete bridges.

As the historical context points out (see Section E, pp. 6-7), the MHC was officially organized in 1905 to improve the quality of roads and bridges in the state. To fulfill its responsibilities, the MHC assigned field engineers to assist county governments with highway projects, and prepared a series of standard bridge plans, including "plans for beam spans, plate girders, low trusses and high trusses, reinforced concrete slab and girder bridges." Although MHC reports do not mention a stone-arch plan, the commission's field engineers apparently had at their disposal a standard short-span design appropriate for the limestone region of southeastern Minnesota. In January 1915, for example, Houston County requested Alfred J. Rasmussen, the MHC engineer for that county, "to make a survey and draw plans" for a bridge in Section 20 (southwest quarter of northwest quarter) of Black Hammer Township. The county approved the plans a month later, and, although county records provide no further information on the project, the bridge presumably was built by the end of the summer.

See continuation sheet

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Bridge No. L4013, Houston County, MN

Section number 8 Page 1

In its basic design, Bridge No. L4013 is a 12-foot-span, semicircular stone arch with distinctive, 6-inch-wide impost ledges, which probably served as supports for the arch centering. Although it is perhaps not surprising that a nearby bridge in Black Hammer Township (Bridge No. L4009) incorporates the same kind of construction, it is remarkable that the design repeats itself on early twentieth-century, rural bridges in Fillmore County (L4770) and Wabasha County (Bridge Nos. L1122, 93741). The construction history of these bridges is unknown, but it is unlikely that Rasmussen was their designer. MHC records indicate that he was assigned only to Fillmore County, which hired him away from the state to fill the newly created position of county engineer in the summer of 1915, reappointing him the next year. By 1920, Rasmussen had relocated to Lacrosse, Wisconsin where he established a private business as "engineer and contractor."⁵ Instead of a single designer, the geographic range of the "impost-ledge type" of stone-arch bridge suggests the existence of a state-sponsored standard plan, which would have been in keeping with the MHC's general policy toward bridge design.

Notes

1. Minnesota State Highway Commission, Report of the State Highway Commission of Minnesota for 1914 (n. pub., 1915), p. 222.
2. Proceedings of the Houston County Board of Commissioners, January 6, February 13, 1915. Houston County Courthouse.
3. Proceedings, June 22, 1915, March 29, 1916; "Roster of Membership," The Bulletin of the Affiliated Engineering Societies of Minnesota, 5 (August 1920), 23.

9. Major Bibliographical References

Minnesota State Highway Commission. Report of the State Highway Commission of Minnesota for 1914. N. pub., 1915.

Proceedings of the Houston County Board of Commissioners, January 6, February 13, June 22, 1915; March 29, 1916. Houston County Courthouse.

"Roster of Membership." The Bulletin of the Affiliated Engineering Societies of Minnesota, 5 (August 1920), 18-24.

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

Acreeage of property Less than one acre.

UTM References

A

1	1	5
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6	0	4	4	3	0
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4	8	3	0	5	1	0
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Zone Easting Northing

C

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B

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Zone Easting Northing

D

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See continuation sheet

Verbal Boundary Description

The nominated property is defined by a rectangle measuring 15 feet east-west by 20 feet north-south, whose vertices coincide with the outside corners of the bridge's wing walls.

See continuation sheet

Boundary Justification

Based on field measurements, as well as measurements provided by the Minnesota Department of Transportation, the boundaries enclose the bridge's superstructure and substructure, including wing walls.

See continuation sheet

11. Form Prepared By

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organization N/A date August 1988

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