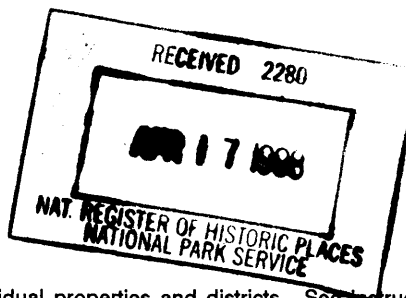


United States Department of the Interior  
National Park Service

National Register of Historic Places  
Registration Form



519

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 an 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 Tremaine Bridge

other names/site number \_\_\_\_\_

2. Location

street & number 280th Street over Boone River  not for publication

city or town 5.6 miles south of Webster City  vicinity

state Iowa code IA county Hamilton code 079 zip code 50595

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, 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. (  See continuation sheet for additional comments.)

Patricia Chenkins DSHP 4-7-98  
Signature of certifying official/Title Date

**STATE HISTORICAL SOCIETY OF IOWA**

\_\_\_\_\_  
State or Federal agency and bureau

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

\_\_\_\_\_  
Signature of certifying official/Title Date

\_\_\_\_\_  
State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the 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 A. Beall 5.15.98

**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**

(Do not include previously listed resources in the count)

Contributing	Noncontributing	
0	0	buildings
0	0	sites
1	0	structures
0	0	objects
1	0	Total

**Name of related multiple property listing**

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

Highway Bridges of Iowa

**Number of contributing resources previously listed in the National Register**

0

**6. Function or Use**

**Historic Functions**

(Enter categories from instructions)

TRANSPORTATION/road-related

**Current Functions**

(Enter categories from instructions)

TRANSPORTATION/road-related

**7. Description**

**Architectural Classification**

(Enter categories from instructions)

other: Camelback through truss

**Materials**

(Enter categories from instructions)

foundation concrete

walls \_\_\_\_\_

roof \_\_\_\_\_

other steel

**Narrative Description**

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

Located 5.6 miles south of Webster City, the Tremaine Bridge spans Boone River in a rural Hamilton County setting that has changed little since the structure's period of significance. A description of the structure follows:

span number: 1	construction date: 1902
span length: 160.0'	construction cost: \$3600.00
total length: 186.0'	current condition: good
roadway wdt.: 14.4'	alterations: approach added, 1940

superstructure: steel, 8-panel, pin-connected Camelback through truss, with steel stringer approach spans

substructure: concrete / timber pile bent abutments with concrete-filled steel cylinder piers

floor/decking: timber decking (on end) over steel stringers

other features: upper chord/inclined endpost: 2 channels with cover plate and lacing; lower chord: 2 punched rectangular eyebars; vertical: 2 channels with lacing, 2 angles with lacing (at hip); diagonal: 2 punched rectangular eyebars; counter: round eyerod with turnbuckle; lateral bracing: round rod with threaded ends; strut: 4 angles with lacing and knee braces; floor beam: I-beam, field bolted to vertical; guardrail: 2 angles

Other than maintenance-related repairs and alterations noted above, the bridge remains essentially unaltered as it continues to carry vehicular traffic. The Tremaine Bridge today retains a high degree of integrity of location, design, setting, materials, workmanship, feeling and association.

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)

Property is:

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

Narrative Statement of Significance

(Explain the significance of the property on continuation sheets.)

Areas of Significance

(Enter categories from instructions)

Engineering

Period of Significance

1902

(The period of significance is derived from the original construction date.)

Significant Dates

1902 (construction date)

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

designer:

N.M. Stark and Company, Des Moines IA

fabricator:

Carnegie Steel Company, Pittsburgh PA

builder:

N.M. Stark and Company, Des Moines IA

9. Major Bibliographical References

Bibliography

(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
other State agency
Federal agency
Local government
University
other
name of repository:

**10. Geographical Data**Acreage of Property less than one acre**UTM References**

(Place additional UTM references on a continuation sheet)

1 15 433440 4692810  
zone easting northing2 \_\_\_\_\_  
zone easting northing**Verbal Boundary Description**

(Describe the boundaries of the property)

The nominated property is a rectangular-shaped parcel measuring feet by feet, which is centered on the UTM point(s) listed above. Included within this rectangular parcel are the bridge's superstructure, substructure, approach spans and floor system.

**Boundary Justification**

(Explain why the boundaries were selected)

The nominated structure includes the bridge's superstructure, substructure, floor system, any approach spans and the property on which they rest. These boundaries encompass, but do not exceed, all of the property that has been historically associated with the bridge.

**11. Form Prepared By**

name/title Clayton B. Fraser  
 organization Fraserdesign date 31 August 1994  
 street & number 1269 Cleveland Avenue telephone 303-669-7969  
 city or town Loveland state Colorado zip code 80537

**Additional Documentation**

Submit the following items with the completed form:

**Continuation Sheets****Maps**A **USGS map** (7½ or 15 minute series) indicating the property's locationA **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 SHPO or FPO)

name/title Hamilton County  
 street & number 2300 Superior Street telephone 515-832-9520  
 city or town Webster City state Iowa zip code 50595

**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 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 Projects (1024-0018), Washington, DC 20503.

**United States Department of the Interior  
National Park Service**

**National Register of Historic Places  
Continuation Sheet**

Section Number 8 Page 1 Tremaine Bridge Hamilton County; Iowa

---

The Tremaine Bridge spans the Boone River in Independence Township, south of Webster City. Carrying an unpaved county road, the structure consists of a single pin-connected Camelback through truss, supported by steel cylinder piers. The bridge's construction dates from 1902. In April of that year the Hamilton County Board of Supervisors contracted with Des Moines bridge contractor N.M. Stark to supply and build this 160-foot truss. The proposed new structure, which cost \$3600.00, would replace an existing bridge over the Boone River at this point, built next to Bone's Mill. Using steel rolled in Pittsburgh by Carnegie, Stark erected the truss on timber falseworks near the Tremaine Post Office, completing the bridge later in 1902. The Tremaine Bridge has carried traffic since, with only maintenance-related alterations to its superstructure.

Straight-chorded Pratt through trusses were used extensively throughout Iowa for medium-span crossings in the late 19th and early 20th centuries. For longer crossings after the turn of the century, however, bridge companies could develop greater efficiency with polygonal-chorded Pratt variants - primarily Parker, Pennsylvania and Camelback trusses. With its distinctive five-faceted upper chords, the Camelback configuration was disdained by some engineers (including the redoubtable J.A.L. Waddell, who called it "uncompromisingly ugly") for its tendency under certain conditions to reverse compressive and tensile forces acting on their individual members. As a result, Camelback trusses never received widespread acceptance. Relatively few were ever built on Iowa's roads, and only a handful have been identified as extant by the bridge inventory. The Tremaine Bridge is thus technologically significant as a well-preserved example of this uncommon structural type.

**United States Department of the Interior  
National Park Service**

**National Register of Historic Places  
Continuation Sheet**

Section Number   9   Page   2   Tremaine Bridge Hamilton County; Iowa

---

Iowa Department of Transportation, Structure Inventory and Appraisal: Structure No. 171920.

Hamilton County Supervisors' Minute Book 4, 22 April 1902, 24 February 1903, located at the Hamilton County Courthouse, Webster City IA.

Two reports on file at the Hamilton County Courthouse on earlier Bone's Mill bridges, dated 1 September 1868 and 4 September 1868.

Field inspection by Clayton Fraser, 23 July 1988.