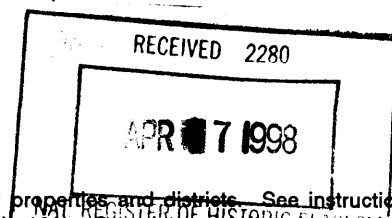


United States Department of the Interior
National Park Service

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 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 Herrold Bridge

other names/site number _____

2. Location

street & number Northwest 88th Avenue over Beaver Creek not for publication

city or town 0.6 mile north of Herrold vicinity

state Iowa code IA county Polk code 153 zip code 50131

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 Ontenking DSHPO 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 H. 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: concrete deck girder

Materials

(Enter categories from instructions)

foundation Concrete

walls

roof

other Concrete

Narrative Description

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

Located 0.6 mile north of Herrold, the Herrold Bridge spans Beaver Creek in a rural Polk County setting that has changed little since the structure's period of significance. A description of the structure follows:

span number: 3 construction date: 1921
 span length: 68.0' construction cost: \$24,283.36 (contract amount)
 total length: 156.0' current condition: good
 roadway wdt.: 18.2' alterations: none

superstructure: concrete cantilevered deck girder
 substructure: concrete abutments, wingwalls and pier
 floor/decking: concrete deck
 other features: concrete guardrails with square balusters

Other than maintenance-related repairs, the bridge remains essentially unaltered as it continues to carry vehicular traffic. The Herrold 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

1921

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

Significant Dates

1921 (construction date)

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Bulider

designer:

Iowa State Highway Commission

fabricator:

none

builder:

Ben Cole, Ames 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 DataAcreage of Property less than one acre**UTM References**

(Place additional UTM references on a continuation sheet)

1 15 437640 4618970 2 _____
zone easting northing zone easting northing**Verbal Boundary Description**

(Describe the boundaries of the property)

The nominated property is a rectangular-shaped parcel measuring 20 feet by 156 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 Byname/title Michelle Crow-Dolby
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 Polk County
street & number 5885 Northeast Fourteenth Street telephone 515-286-3705
city or town Des Moines state Iowa zip code 50313

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 Herrold Bridge Polk County; Iowa

Built in 1921, the Herrold Bridge spans Beaver Creek near Herrold Station in west-central Polk County. This outstanding early structure is comprised of three arched concrete deck girder spans, cantilevered from concrete abutments and piers. County engineer M.D. Blue surveyed the site late in 1920 for a new bridge that would replace an earlier timber pile structure here. That year engineers for the Iowa State Highway Commission's Bridge Department designed the new concrete structure, as well as a 150-foot steel through truss - the two configurations to be bid as alternates. As delineated by ISHC, the deck girder alternate was comprised of a 64-foot central span, flanked on both sides by 42-foot girders; the bridge would consume some 607 cubic yards of concrete and 52,000 pounds of reinforcing steel. Polk County solicited competitive bids for the two bridges early the following year, using ISHC's designs and specifications. On March 29, 1921, the county awarded a contract to Ben Cole of Ames, Iowa, to build the concrete girder bridge for \$24,550.00. Cole began work on the substructural excavation soon thereafter, completing the new Herrold Bridge later that year. It has functioned in place since, in essentially unaltered condition.

The choice to use a rather esoteric structural type at this crossing was for the Highway Commission a logical extension of its design policies. ISHC had first developed the design for simply supported concrete girder bridges - designated Standard Series H - among its first standardized bridge plans in 1914. Three years later the Highway Commission designed its first cantilevered deck girder for a three-span structure over the Boyer River at Woodbine. A description of the Woodbine Bridge in the Iowa State Highway Commission Service Bulletin indicates that the cantilevered design was chosen not only for its utility but for its aesthetics as well. The Woodbine Bridge was followed by a handful of other cantilevered girders in the 1910s and 1920s, including spans at Correctionville in Woodbury County, at Goldfield in Wright County, at Nevada in Story County and at Herrold in Polk County.

In its 1917 annual report, ISHC deemed the cantilevered deck girder design "particularly well adapted for use on deep drainage ditches and streams subject to widening." A cantilevered span could carry more weight than a simply supported girder of the same length. Alternately, a cantilevered girder could span a greater distance, while carrying the same weight as a shorter, simply-supported girder. Moreover, the arched profile of ISHC's cantilevered girders was considered more architecturally accomplished than the straight spandrel of simply supported girders. Finally, although ISHC engineers espoused the advantages of standardized construction, they apparently could not resist the opportunity to experiment occasionally. The Beaver Creek structure allowed the ISHC the opportunity to demonstrate the superiority and flexibility of concrete for bridge construction. With a 68-foot center span and a total length of 156 feet, the Herrold Bridge is an excellent example of this type of construction. It is one of the most technologically significant of the state's numerous concrete girder bridges.

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

**National Register of Historic Places
Continuation Sheet**

Section Number 9 Page 2 Herrold Bridge Polk County; Iowa

Iowa Department of Transportation, Structure Inventory and Appraisal: Structure No. 282190.

Johnson Brigham, **History of Des Moines and Polk County, Iowa** (Chicago: S.J. Clarke Publishing Company, 1911).

Report of the State Highway Commission, 1921, pages 23, 282-83.

Survey Drawing by M.D. Blue, city engineer, 17 November 1920, Polk County Engineer Bridge Drawing, Bridge Number 449, located at the Polk County Engineer's Office, Des Moines IA.

Field inspection by Clayton Fraser, 14 July 1992.