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United States Department of the Interior
National Park Service

JAN 23 1990

National Register of Historic Places
Registration Form

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 Chicken Creek Bridge
other names/site number Same

2. Location

street & number SE 1/4, SE 1/4, NW 1/4, NE 1/4, S7, T14S, R19E not for publication
city, town Lone Star vicinity
state Kansas code KS county Douglas code 045 zip code 66006

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
<input type="checkbox"/> private	<input type="checkbox"/> building(s)	Contributing	Noncontributing
<input checked="" type="checkbox"/> public-local	<input type="checkbox"/> district	_____	_____ buildings
<input type="checkbox"/> public-State	<input type="checkbox"/> site	_____	_____ sites
<input type="checkbox"/> public-Federal	<input checked="" type="checkbox"/> structure	<u>1</u>	_____ structures
	<input type="checkbox"/> object	_____	_____ objects
		<u>1</u>	_____ Total

Name of related multiple property listing:
Masonry Arch Bridges of Kansas

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.

Ramon Power State Historic Preservation Officer January 8, 1990
Signature of certifying official Date
Kansas State Historical Society
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:)

Beth Boland 3/5/90

Signature of the Keeper

Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)

Transportation: Road related
(Vehicular): Bridge

Current Functions (enter categories from instructions)

Transportation: Road related
(Vehicular): Bridge

7. Description

Architectural Classification
(enter categories from instructions)Other: Masonry Arch

Materials (enter categories from instructions)

foundation _____

walls _____

roof _____

other Stone: limestone, concrete

Describe present and historic physical appearance.

The Chicken Creek Bridge (c. 1913) spans the Chicken Creek and is located in Willow Springs Township in southwestern Douglas County (pop. 74,839) Kansas. The bridge is a filled spandrel, limestone veneer, single arch structure. The bridge stands in a rural location with a north to south orientation. Both the north and south gravel approaches curve gently, following the historic roadway pattern and also allowing a right angle approach to the waterway.

The bridge measures forty-two feet from out to out and fifteen feet, four inches from curb to curb. The semi-circular arch spans fourteen and a half feet at its widest point and measures eleven feet from its summit to the water, its barrel measures eighteen feet, four inches. The impost walls which support the arch measure three feet, three inches from the water and project two and a half inches into the arch on each side. The parapets are centered over the arch and measure nineteen feet long, three feet nine inches high and one foot, six inches wide. The parapets bow out approximately one foot from an overall base measurement of eighteen feet, four inches to an overall summit measurement of nineteen feet, four inches. The roadway drop-off is eleven feet at the north end of the bridge and seventeen feet at the south end of the bridge.

The spandrel walls are composed primarily of coursed ashlar limestone blocks with some semi-coursed limestone rubble along the southeastern spandrel and are held together with mortar. The spandrel walls flair away from the arches, creating a surface that is intentionally concave. The parapet is a continuation of the spandrel walls and is built upon the outermost edge of the roadway. The Chicken Creek Bridge gains its strength from the arch, relying on compression to keep the stones in place. The earth loading allows for the even distribution of live loads and helps to strengthen the arch.

The bridge retains a high degree of architectural integrity although it does require some maintenance. A deep crack that runs from behind the keystone of the western arch to behind the third voussoir on the southern side of the arch is a structural problem that needs to be addressed. The face of the stone below the third voussoir has been sheared from the pressure of the shifting arch. If this structural problem is not addressed the arch will eventually collapse. Fixing this problem will entail building a wooden frame support inside the arch, running tie rods through the affected voussoirs, replacing the damaged stones, and repointing the necessary areas. Regrading of the roadbed to allow for proper drainage, reshoring of the abutments, reconstruction of the southern spandrel walls, and the general repointing will all facilitate the preservation of the Chicken Creek Bridge.

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

Transportation

Period of Significance

c. 1913

c. 1913

Significant Dates

c. 1913

c. 1913

Cultural Affiliation

N/A

Significant Person

N/A

Architect/Builder

Metsker, Benjamin Franklin

Babb, Ike

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

The Chicken Creek Bridge (c. 1913) is being nominated to the National Register under criterion C for its architectural significance as a limestone, single arch bridge and is to be included in the "Masonry Arch Bridges of Kansas" thematic resources nomination. The bridge's native limestone veneer, earth loaded construction, and arched form is typical of masonry arch bridge construction in Kansas.

The Chicken Creek Bridge is one of two masonry arch bridges of its size that remain in Douglas County, several more small stone bridges also remain extant. Until steel trusses were introduced in rural Douglas County during the early 20th century tributaries were bridged either in wood or stone. Most of the masonry arch and steel truss bridges were destroyed in the 1970s during an aggressive replacement campaign on the part of the county.

When the stone arch at Chicken Creek was constructed in 1913 it was considered a bridge. Today its fourteen foot, five inch span classifies it as a culvert. Under current Kansas law bridges are defined as structures having a clear span of more than twenty feet and culverts are defined as any structure spanning less than twenty feet. For purposes of inclusion in the "Masonry Arch Bridges of Kansas" thematic resources nomination the Chicken Creek Bridge shall be considered a bridge.

Chicken Creek Bridge spans the Chicken Creek in Willow Springs Township in southwestern Douglas County. The Chicken Creek Bridge has been part of the Willow Springs cultural landscape for three generations. The north and south gravel approaches to the bridge curve gently, following the historic roadway pattern that existed before the stone arch at Chicken Creek was built. It marks the way along a road that has changed slowly over time and is by its very nature important to preserve.

The Chicken Creek Bridge was constructed by Benjamin Franklin Metsker (1856-1935) and Ike Babb (-1913). Metsker and Babb were paid \$113.25 and \$57.00 respectively for their work, as indicated in a July 28, 1913 entry in the Willow Springs Township, Douglas County, Kansas "Treasurer's Record Book." The stone for the bridge was quarried and gathered locally.

See continuation sheet

9. Major Bibliographical References

Daron, Gulah and Garman. Metsker: Cousins by the Dozens - Descendants of three Metsker Brothers, Pioneer Residents of Douglas County, Kansas. (Oklahoma City, OK: 1973).

Domer, Dennis. "Chicken Creek Bridge." (National Register Nomination, 1989).

Domer, Dennis. Personal interview with Betty Lou Metsker, July, 1989.

Domer, Dennis. Personal interview with Victor Solberg, July, 1989.

Domer, Dennis. Personal interview with Pearl Stobener, July, 1989.

Douglas County, Kansas Atlas; 1873, 1887, 1902, 1921.

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:

Kansas State Historical Society

10. Geographical Data

Acreeage of property Less than 1 acre

UTM References

A

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2	9	6	6	6	5
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4	3	0	2	8	6	0
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Zone Easting Northing

B

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Zone Easting Northing

C

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See continuation sheet

Verbal Boundary Description The nominated property is located on the SE $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$, S7, T14S, R19E, Willow Springs Township, Douglas County, Kansas on a tract measuring 42' x 18'4" whose northeast corner is represented by the northeast corner of the bridge. Beginning at the northeast corner, the boundary proceeds 42' south, 18'4" west, 42' north, and 18'4" east to the point of beginning.

See continuation sheet

Boundary Justification

The boundary includes only that area that is historically associated with the nominated property.

See continuation sheet

11. Form Prepared By

name/title Martha Hagedorn-Krass, Architectural Historian

organization Kansas State Historical Society date January 2, 1990

street & number 120 W. 10th telephone 913-296-5264

city or town Topeka state Kansas zip code 66612

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Metsker was a local stone mason who owned a farm about a mile south of the bridge. He was responsible for a number of bridges and houses in Willow Springs and Marion Townships although few remain extant, his own house and the Chicken Creek Bridge being exceptions. Babb was a laborer who was killed on a bridge project just north of Chicken Creek not long after he finished work on the Chicken Creek Bridge.

Generally speaking, stone bridges were more expensive to construct than metal bridges. Walter Sharp, a major stone arch contractor active in Kansas in the early twentieth century, estimated the cost differential at ten percent in 1904, although this too was somewhat misleading. Those contractors proposing steel bridges would often lower their bids one hundred to five hundred dollars when they found themselves as competitors to stone contractors. An additional selling point for stone bridges was their strength. There was ample evidence that stone bridges were far better able to withstand periodic floods than were their metal counterparts.

Sharp wrote in 1906 that "the rubble stone bridge looks solid, substantial and rustic; more like the handiwork of nature than of man. A rubble stone bridge can be built at a cost of a good steel bridge and it will stand the ravages of time without expense of repairing....The item of repairing and renewing floors of steel and wooden bridges is constantly increasing with each succeeding year, a fruitful source of annoyance and expense to the people. The money thus expended amounts in many instances to enough to build several good arch bridges in each county each season....Moreover, they are built by local labor out of native material, which is no small item to the taxpayer who foots the bills."

In Spring, 1989 Douglas County initiated plans to demolish the bridge, however the public outcry and National Register nomination that resulted from this news may have stayed these plans. The the Douglas County Public Works Department and the Douglas County Commission are reviewing a variety of alternatives, including the bridge's preservation and continued service. The bridge retains a high degree of architectural integrity although it does require some maintenance. Regrading of the roadbed to allow for proper drainage, reshoring of the abutments, reconstruction of the southern spandrel walls, repair of the structural crack in the western arch, and general repointing will all facilitate the preservation of the Chicken Creek Bridge.

In Kansas culverts that span off-system county roads do not need to meet the American Association of State and Highway Transportation Officials Standards (AASHTO) and they are not inventoried by the Kansas Department of Transportation for load bearing capacity. However, AASHTO standards are used for the construction of new culverts and these standards are often used as a way to measure the structural and functional capacity of older culverts. In the case of the Chicken Creek Bridge, its reclassification from a bridge to a culvert has resulted in neglected maintenance on it and an assumption that it would be replaced. Regular inspection and continued maintenance on these off-system structures would address the liability concerns that some county engineers harbour about continued use of older bridges and culverts.

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Douglas County, Kansas. Willow Springs Township. Statistical Rolls,
1926-1935.

Douglas County, Kansas. Willow Springs Township. Treasurer's Record Book.
28 July 1913.

Jochims, Larry. "Masonry Arch Bridges of Kansas." (Thematic resources
nomination). Kansas State Historical Society. April, 1985.

Kansas City Star, 25 March 1906.

Middlemas, Keith. Letter to Martha Hagedorn-Krass, 24 July 1989.

U.S. Census. Kansas. Douglas County. Willow Springs Township. 1875, 1900,
1905, 1910, 1915, 1925.

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SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 90000298

Date Listed: 3/5/90

Chicken Creek Bridge
Property Name

Douglas
County

KS
State

Multiple Name _____

This property is 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.

Beth Boland
Signature of the Keeper

3/5/90
Date of Action

=====
Amended Items in Nomination:

Item #2: Location: The correct locational description is SW 1/4, SW 1/4, NW 1/4, NE 1/4, S7, T14S, R19E.

Item #8: Significance:

Chicken Creek Bridge is significant under criterion C only, in the area of architecture. Transportation is not an applicable area of significance.

Item #10: Verbal Boundary Description:

The first two Section references are SW 1/4, SW 1/4 (see locational information, above).

DISTRIBUTION:

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