NPS Form 10-900
(Rev. 8-86)

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

029-0000-0024

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 Pott's Ford Bridge
other names/site number

2. Location

1 mile west and 1 mile north of the intersection of F.A.S. 135 and 1043.
street & number on unmarked county road ☐ not for publication
city, town Glasco ☒ vicinity
state Kansas code KS county Cloud code zip code 67445

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
		Contributing	Noncontributing
☐ private	☐ building(s)		buildings
☒ public-local	☐ district		sites
☐ public-State	☐ site	1	structures
☐ public-Federal	☒ structure		objects
	☐ object	1	Total

Name of related multiple property listing:
Metal Truss Bridges in 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.

Signature of certifying official — Date: Nov. 16, 1989

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:) _____

Signature of the Keeper — Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)

Transportation: Road Related (Vhicular): Bridge

Current Functions (enter categories from instructions)

Transportation: Road Related (Vehicular): Bridge

7. Description

Architectural Classification (enter categories from instructions)

Other: Pratt Through Truss

Materials (enter categories from instructions)

foundation

walls

roof

other Metal: Wrought Iron

Describe present and historic physical appearance.

The Pott's Ford bridge, erected in 1884, is a pin connected Pratt through truss. The bridgeconsists of three Pratt pony trusses and one Pratt through truss. The truss lengths are 48 foot, 46 foot, 149 foot and 72 foot respectively. It is located on a light duty road southwest of Glasco. The bridge is located on a slight bend of the road and sits on a slight northeast-southwest alignment. This is often true with early bridges as thie misalignment allowed a right angle approach to the river and a saving of money in both bridge lenth and amount of fill required.

The members of a truss bridge are designated either as chord members or web members. Chord members are those mainly defining the outlines of the structure and they are termed lower or upper chord members depending on whether they are found at the bottom or the top of the structure. Members between the chords are web members. They are called posts or ties if they sustain compression or tension respectively. In the instance of the Pott's Ford bridge, as with all Pratt trusses, the web members are alternately vertical and inclined. The inclined members are in tension and the verticals in compression.

The inclined end posts and top chord of the Pott's Ford bridge are fabricated from sections of channel iron, tied together by single bar lacing. The girders thus formed are topped with an iron cover plate. Hip verticals consist of a wrought iron round rod with an eye loop at the end which enables its connection with the panel pin. The compression posts on the through truss are made up of flat lattice (non intersecting) and channel pieces those ofthe pony trusses feature single bar lacing. The portal bracing is fabricated from angle stock and forms an interlocking triangle design. Individual components are fabricated of stock angles and straps by being rivited together. The main members of the bridge, however, are connected at panel points by the use of a pin.

The bridge retains a high degree of structural integrity.

☐ See continuation sheet

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)	Period of Significance	Significant Dates
Engineering	1884	1884
Transportation	1884	1884

Cultural Affiliation: n/a

Significant Person: n/a

Architect/Builder: Wrought Iron Bridge Builders

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

The great evolution of truss bridge construction began in the United States soon after the publication of Squire Whipple's historic work on stresses in 1840. Prior to this the design work was essentially that of trial and error, experience and judgement. The Warren and Pratt trusses were rational designs and lent themselves readily to the system of analyses postulated by Whipple. They were, therefore, readily and rapidly accepted and formed the foundation for a greater part of American truss design.

The basic Pratt truss was patented in 1844 by Thomas and Caleb Pratt and the Warren, a design patented by two British engineers in 1848, demonstrated their versatility, durability, and most important for the west, cost effectiveness.

In the Pratt design the diagonals were placed in tension and vertical members in compression, with the exception of the hip verticals. Generally, until the 20th century, all panel point connections were made with the use of a pin. This becamse such a widespread practice that it became one of the distinctive features of United States bridge construction. The pin was selected for several reasons. It was simple in design and it was much easier for period engineers to calculate stress at the panel points and throughout the structure than if the members were connected by the use of rivets. Although the riveted structure was much more rigid, the inability to insure that the individual rivets had not been damaged during insertion made early failure an unknown quantity. It was extremely difficult to calculate the stress throughout the joint. The pin could be considered basically as a single rivet.

Time was always a consideration in American construction. Logically labor costs would be less if the bridge went in quickly but also the falsework in the river would not have to be in place long. Flash floods were the bane of any bridge contractor. The pin connected bridge could be

☐ See continuation sheet

put up more quickly and with the use of less skilled employees. The portable pneumatic riveter was also in its infancy in the 1890s and without it, erection of totally riveted bridges was almost impossible. It was much easier to have the bridge members fabricated and riveted in a shop setting and pin them together on the job site.

The use of wrought iron in bridge construction was popular in 1883. It would not totally be replaced by steel until 1910.

The Pott's Ford bridge is significant because it is a good example of the Pratt truss design of the late 19th century and as the work of one of the major out-of-state bridge fabrication companies, namely the Wrought Iron Bridge Company of Canton, Ohio. Out of the approximately 262 Pratt through trusses in Kansas only nine have presently been identified as having been built by Wrought Iron Bridge. These are spread throughout the state in Anderson, Bourbon, Cloud, Miami, Republic, Smith and Wilson counties. All are presently in use on the county highway systems.

Organized in 1864 by David Hammond, Wrought Iron Bridge Company was incorporated in 1871. Its major offices were located at Canton, New York City, Chicago and Kansas City, Missouri. From 1880-1900 the company was one of the major suppliers of metal truss bridges. In 1900 the company was absorbed by J. P. Morgan's American Bridge Company. Current information suggests that the company only sold Pratt truss structures in Kansas.

The Pott's Ford bridge was born out of controversy, necessity and competition. In the spring of 1883 the Kansas State Legislature voted to allow Solomon township to vote bonds to erect a bridge across the Solomon River. Petitions were soon being passed throughout the township to try and pursuade trustees to locate the bridge in various parts of the township. It did not take the bridge companies long to hear about the potential sale for by April 14, 1883 two representatives had left plans for viewing at H.H. Spaulding's store in Glasco. Romeiser's Crossing was selected as the site and an election was held June 5, 1883 at Glasco. The Glasco Sun lobbied hard for the bridge with the argument that it would shorten the farm to market trips of the farmers, give a boost to the Glasco economy, keep the local monies out of Mitchell county, keep local farmers from effectively being disenfranchised at time of election if the river is high or from their mail, mill, church, and medical service in case of emergency.

The bonds were voted by a majority of twenty-eight but the township official in charge refused to issue them. The Sun characterized the opposition, used money, whiskey and beer as well as other dishonorable means to defeat the "long-felt want." The proponents sued but lost their case.

A new election was called for June 28, 1884, and the battle was again enjoined. The chief anti-bridge lobby was the Mitchell county town of Simpson who had the most to lose if a bridge was built near Glasco. It would steal their trade. The new election was in favor of locating the bridge at Pott's Ford between sections 14 and 15. A second proposition surfaced to vote down the Pott's Ford side in favor of the old Romeiser location.

The Pott's Ford site was selected by a 3/5th majority but it appears Simpson hired a lawyer to fight the bond issue on the charge of fraud hoping to delay the construction until after the harvest season. Undaunted the township called for bids to be opened August 9th. It appears that by the end of August the case was settled and the pro bridge forces had won. Wrought Iron Bridge was given 100 days to complete the bridge on August 28, 1884.

The Kansas Department of Transportation (KDOT) carried out a statewide inventory of historic bridges between 1980 and 1983. The bridges to be included were identified through computer printouts developed by KDOT, from information supplied by the counties (since almost all of the historic bridges were located on secondary rather than the primary road system), and by direct observation by field personnel. All bridges were inspected by KDOT personnel to verify the date on file. That information was jointly evaluated by representatives of KDOT, Kansas State Historical Society, and the State Preservation Officer.

Each structure was evaluated using a points rating system adapted from the points evaluation rating developed by the Ohio Department of Transportation and Ohio Historic Preservation Office. Consideration was given to areas such as age, builder, number of spans, length, special features, history, integrity, surviving numbers, and preservation potential.

In many instances there is little information about individual structures. Often bridge plaques which may have contained information have been removed, or the county's records are not complete or have been destroyed. Due to the large numbers of similar structures there is often little to choose from in differentiating among individual bridges other than condition and the likelihood of preservation.

The purpose of the KDOT study and subsequent evaluation was to identify a representative selection of bridges of each class. Through this approach KDOT and KSHS hope to preserve for posterity some examples of each type.

The Pott's Ford bridge was rated quite high in significance because of its age, one of the oldest Pratt's in the state, because it was the work of a known prolific out-of-state builder, retained a good degree of its integrity and possesses a fair bypass potential.

It is also a symbol of the struggle between early Kansas communities and the struggles they were willing to undertake to promote their security and safety.

9. Major Bibliographical References

Glasco Sun "The Bridge Question," February 10, 1883, p.1.
"Local Items," February 10, 1883, p. 4.
"Communication," March 31, 1883, p. 1.
"Local," April 7, 1883, p. 6.
"Second Week," April 14, 1883, p. 4.
"Election Notice," May 26, p. 4.
"Last Call," June 2, 1883, p. 1.
"Last Call," June 30, 1883, p. 1.
"Indignant Voters," August 18, 1883, p. 1.

[X] 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:
- [x] State historic preservation office
- [ ] Other State agency
- [ ] Federal agency
- [ ] Local government
- [ ] University
- [ ] Other

Specify repository: Kansas State Historical Society

10. Geographical Data

Acreage of property less than one acre

UTM References

	Zone	Easting	Northing
A	14	598740	4356060
B			
C			
D			

[ ] See continuation sheet

Verbal Boundary Description

The nominated property is located on the NW 1/4, NW 1/4, NW 1/4, NW 1/4, section 23, township 8 south, range 5 west, on a tract measuring 315' x 16' whose northeast corner is represented by the northeast corner of the bridge. Beginning at the northeast corner the boundary proceeds 315' southwest, 16' northwest, 315' northeast, and 16' southeast 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

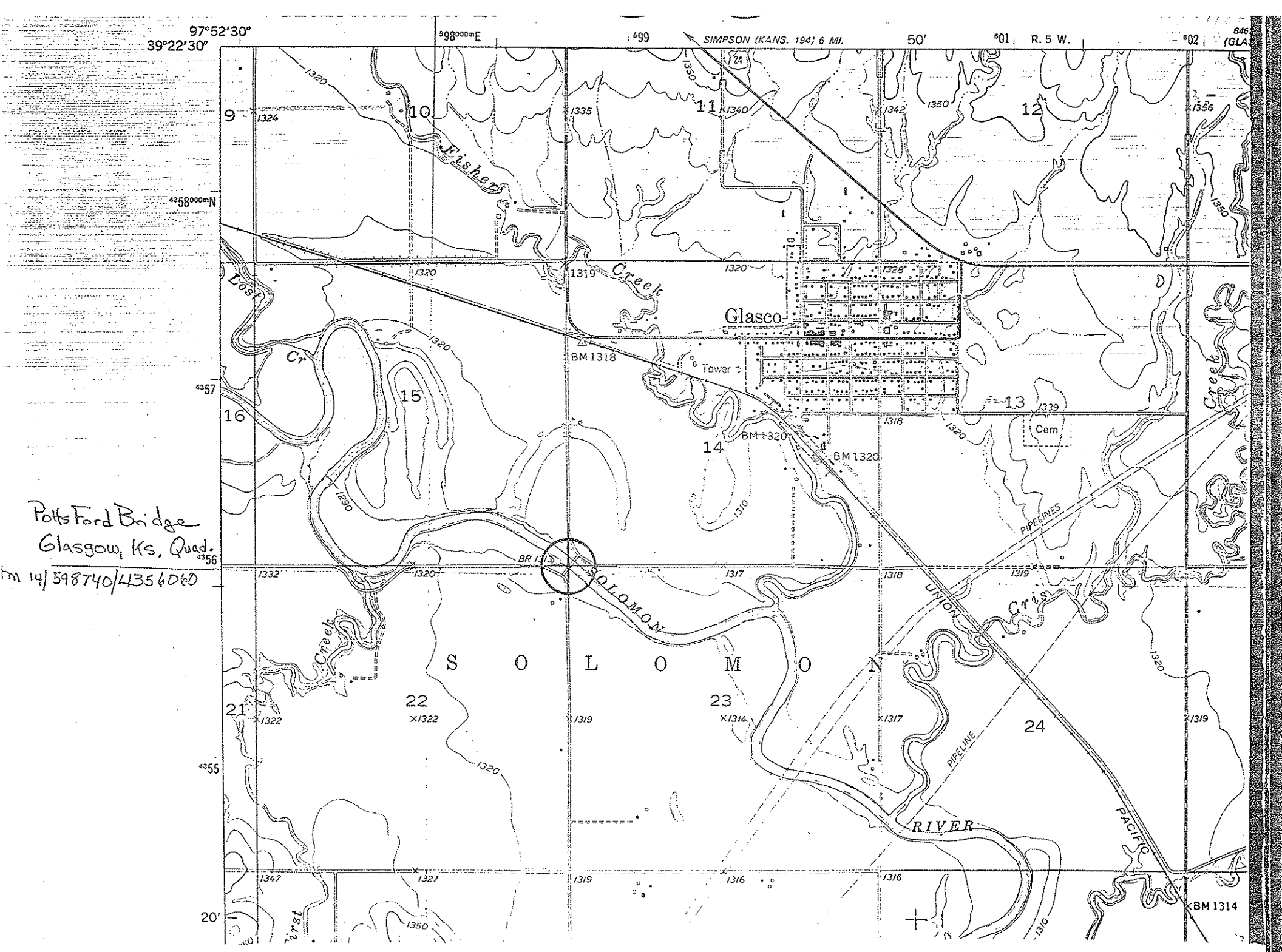
name/title Larry Jochims
organization Kansas State Historical Society date September 20, 1989
street & number 120 W. 10th telephone (913) 296-3251
city or town Topeka state KS zip code 66612

"Bridge Bonds," August 11, 1883, p. 1.
"Local," January 12, 1884, p. 1.
"The Bridge Proposition," June 7, 1884, p. 4.
"Local," June 21, 1884, p. 1.
"Another Bridge Proposition," June 21, 1886, p. .4
"Local," June 28, 1884, p. 3.
"Local," July 5, 1884, p. 1.
"Local," July 12, 1884, p. 1.
"Notice to Contractors," July 19, 1884, p. 4.
"Local," August 16, 1884, p. 1.
"Local," August 23, 1884, p. 1.
"Local," August 23, 1884, p. 4.
"Local," August 30, 1884, p. 1.

Victor C. Darnell, American Bridge Building Companies, Washington, DC: Society for Industrial Archeology Occasional Publication 4, 1984.

"Eight New Bridges," Belleville Freeman, May 4, 1899, p. 4. c. 3.

David Weitzman, Traces of the Past: A Field Guide to Industrial Archeology, New York: Charles Saibner's Sons, 1980.



Potts Ford Bridge
Glasgow, Ks. Quad.

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