United States Department of the Interior

National Park Service

National Register of Historic Places Registration Form



1. Name	of	Pro	perty
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Historic	Name:	Bedstead	Truss	Bridge
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Other name/site number: Mulberry Creek Bridge (listed as such in 1975); West Navidad River Bridge

Name of related multiple property listing	g: Historic Bridges o	f Texas, 1866-1945
2. Location		
Street & number: In Wolters Park, 0.1 n City or town: Schulenburg Not for publication: □	nile northwest of Hill State: Texas Vicinity: □	lje/Kallus Street intersection County: Fayette
3. State/Federal Agency Certifica	ation	
☑ nomination ☐ request for determination Register of Historic Places and meets the p property ☑ meets ☐ does not meet the Na	of eligibility meets the rocedural and profess tional Register criteria	
l recommend that this property be considered a national ☑ statewide ☐ local	ed significant at the fol	llowing levels of significance:
Applicable National Register Criteria:] D
Signature of certifying official / Jitle Texas Historical Commission State or Federal agency / bureau or Triba		Preservation Officer 9/17/13 Date
In my opinion, the property □ meets □ do	es not meet the Nation	nal Register criteria.
Signature of commenting or other official	I	Date
State or Federal agency / bureau or Triba	al Government	
4. National Park Service Certifica	tion	
entered in the National Register determined eligible for the National Register determined not eligible for the National removed from the National Register other, explain: Signature of the Keeper		11/29/2013 Date of Action

5. Classification

Ownership of Property

	Private
Χ	Public - Local
	Public - State
	Public - Federal

Category of Property

	building(s)
	district
	site
Х	structure
	object

Number of Resources within Property

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

Number of contributing resources previously listed in the National Register: 0

Name of Related Multiple Property Listing: Historic Bridges of Texas, 1866-1945

6. Function or Use

Historic Functions: Transportation/road-related

Current Functions: Transportation/pedestrian-related

7. Description

Architectural Classification: Other: Pratt bedstead truss

Principal Exterior Materials: METAL/wrought iron

Narrative Description: (see continuation sheets 6 through 8)

8. Statement of Significance

Applicable National Register Criteria

	Α	Property is associated with events that have made a significant contribution to the broad patterns of our history.
	В	Property is associated with the lives of persons significant in our past.
X	С	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: B – Moved from its original location

Areas of Significance: Engineering

Period of Significance: 1888

Significant Dates: 1888

Significant Person (only if criterion b is marked): N/A

Cultural Affiliation (only if criterion d is marked): N/A

Architect/Builder: A.J. Tullock/Missouri Valley Bridge Company

Narrative Statement of Significance (see continuation sheets 9 through 16)

9. Major Bibliographic References

Bibliography (see continuation sheets 17 through 18)

Previous documentation on file (NPS):

- _ preliminary determination of individual listing (36 CFR 67) has been requested.
- x 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 (*Texas Historical Commission*, Austin)
- Other state agency
- **x** Federal agency (*National Register of Historic Places*, Washington D.C.)
- Local government
- _ University
- _ Other -- Specify Repository:

Historic Resources Survey Number (if assigned): NA

10. Geographical Data

Acreage of Property: Less than one acre

Coordinates (either UTM system or latitude/longitude coordinates)

Latitude/Longitude Coordinates

Datum if other than WGS84: NA

1. Latitude: 29.674049° Longitude: -96.910829°

Verbal Boundary Description: The nominated property is the footprint of the bridge located in Wolters Park, Schulenburg, Texas. The boundary encompasses the entire structure.

Boundary Justification: Nomination includes all property associated with the structure in its current location.

11. Form Prepared By (with assistance from Gregory Smith, National Register Coordinator)

Name/title: Megan Venno, Historic Preservation Specialist & Richard E. Mitchell, Manager, Historic Preservation

Organization: Mead & Hunt

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City or Town: Austin State: Texas Zip Code: 78757

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Additional Documentation

Maps (see continuation sheet Maps-19 through Maps-21)

Additional Items (see continuation sheet Figure-22)

Photographs (see continuation sheet 5)

Photographs

Bedstead Truss Bridge Schulenburg, Fayette County, Texas Photographed April 2013 by Mead & Hunt

Photo 1

Northwest oblique

Camera facing southeast.

Photo 2

Builder's date plaque on southeast endpost

Camera facing west

Photo 3

Typical interior panel on south truss

Camera facing northwest.

Photo 4

Detail of top chord/northeast endpost connection

Camera facing north.

Photo 5

Detail of southeast endpost base

Camera facing south

Photo 6

Pin connection and replacement diagonal eyebar on south truss

Camera facing northwest

Photo 7

North panel from creekbed

Camera facing south

Narrative Description

The 1888 Bedstead Truss Bridge in Schulenburg, Fayette County, Texas, is a wrought iron, single-span Pratt bedstead pony truss bridge. It is located in Wolters Park and spans Schulenburg Creek, a small intermittent stream, in an east-west orientation. The bridge is 60 feet in length and is divided into four panels of equal size, each 15 feet in length. As a Pratt bedstead truss, the bridge is defined by its vertical endposts. The bridge was originally located on the Schulenburg-Flatonia Road over the West Navidad River, before being moved in the early 1920s to County Road 291 (Hermis Road) at Mulberry Creek in rural Fayette County. The bridge was moved to its current location and rehabilitated in 2001. It now serves pedestrian traffic within the park and is blocked from vehicular traffic with concrete filled steel bollards at each approach.

Construction of the bridge was completed in 1888. The bridge is a wrought-iron, single-span, Pratt bedstead pony truss. It is 60 feet in length between the centerlines of its endposts, with an overall length of 61 feet, 8 inches, inclusive of the endposts. The bridge is divided into four panels of equal size, each 15 feet in length. The bridge has an overall width of 12 feet, 9 inches, with 12 feet clear width between the flanges of the corner endposts. The trusses have a depth of 8 feet between the centerlines of the top and bottom chords. The bridge's joints are pin-connected, while remaining connections are riveted. Rivets are button-headed with diameters of approximately 5/8-inch. A325 high-strength bolts have replaced several rivets at each endpost/top chord connection. These bolts were added in 2001 to accommodate lifting and relocation of the bridge to its current site.

The bridge is located in Wolters Park, which is located in the southwest part of the city, bounded by Black Street to the north, Hillje Avenue to the east, Kallus Street to the south, and James Avenue to the east. The bridge is located about 400 feet northeast of the intersection of Kallus Street and Hillje Avenue.

As a Pratt bedstead truss, the bridge is defined by its vertical endposts, which act in compression. Each endpost is made up of two wrought iron channels connected by v-lacing riveted to the channels. The top chords, also acting in compression, are composed of two channels also joined by riveted v-lacing bars. An iron I-beam member is in tension and serves as bottom chord on each end of the panels. Bottom chords on the central panels are made up of two 2.1–inch-wide flat eyebars that extend between panel joints. Interior vertical members are single I-beams acting in compression. Diagonal members are paired eyebars in each panel. Round iron rods, 3/4-inch in diameter, act as diagonal counters in the center panels, with a turnbuckle present on each counter. The outside diagonal eyebar in the south truss's west panel was replaced in kind as part of the 2001 rehabilitation. A weld mark is present above the eye loop, joining the loop to the main bar. External sway bracing at the midspan of the bridge provides added stability to the truss and extends from the top chord outward to an extension of the center floor beam.

The bridge's floor system consists of six rolled I-beam stringers that rest on transverse floor beams. The stringers may be original to the bridge or may have been added in the early-twentieth-century when the bridge was relocated to Mulberry Creek. Each floor beam is a built-up member, with four angles riveted to a central plate. The floor beams are connected to the bottom of the verticals by U-bolt hangers on the center spans and bolts at the end posts. Lateral cross bracing is provided under each panel by two 1/2-inch-diameter round bars. Treated 3-inch by 8-inch timber boards rest transversely over the stringers to form the bridge deck. The current deck was installed in 2001. Small metal spacers are situated periodically between deck boards, presumably to allow for proper spacing and drainage. Two concrete bollards installed at each portal prevent vehicular traffic from entering the bridge.

The bridge retains its historic railing, with two angles as longitudinal rails and diagonal lacing strips approximately 1.25 inches in width. The railings are 1 foot, 6.5 inches deep, with the top railing about 3 feet, 9.5 inches above the deck boards. They are connected to the endposts with small bolted and riveted iron plates, and to the intermediate

verticals with riveted angles. Builder plaques, inscribed "BUILT BY AJ TULLOCK & CO LEAVENWORTH KAN 1888," are at the top of each endpost.

Steelmaker marks are found on some truss members. The mark "CARNEGIE" is found on at least one bottom chord and multiple verticals, indicating fabrication by Carnegie Brother or Carnegie Phipps and Company. In contract, some of the bridge's stringers have marks of "C.R.M. Co" and "M." The presence of marks on the stringers that differ from those on the main members may indicate that the stringers were installed after the bridge's original construction.

At the bridge's former location at Mulberry Creek, each endpost extended directly into concrete abutments. In the 2001 relocation, the endposts were cut at the abutment cap to allow for removal of the bridge. The endposts now extend about 4 inches below the bottom of the floor beams. Each endpost is welded to a steel bearing plate supported on a neoprene bearing pad. The bearing plates are then bolted into concrete abutments constructed at the new site in 2001. The abutments have 45-degree flared wingwalls.

The bridge spans over Schulenburg Creek, a small intermittent stream that feeds into the West Navidad River. At the bridge's location, the channel is approximately 12 feet wide with a maximum depth of about 7 feet, 8 inches. The channel banks are gently sloped and vegetated with grasses. The park area surrounding the bridge is grassy with scattered pecan, oak, and other hardwood trees. Wolters Park is a center of community recreation, with a city pool, playgrounds, exercise courts, picnic/barbeque pavilions, and rodeo arena. The park also is home to the 1835 Wolters Log Cabin (moved from Austin County in 1941) and the 1886 Turnverein/Turner Hall (moved from downtown Schulenburg and remodeled in 1937). The bridge, located in the southeast portion of the park, serves as a pedestrian connection between the rodeo arena and other park facilities. A c.1960 gable roof storage shed/garage is located about 75 feet northwest of the bridge.

Bridge Integrity

The historic integrity of the bridge was assessed applying the National Register's seven aspects as follows. Overall, this bridge retains its historic integrity since the bridge is recognizable as a Pratt bedstead truss.

Location – The 1888 bridge was moved from its original location at the West Navidad River west of Schulenburg in the 1920s or 1930s. It was relocated to Hermis Road southwest of Schulenburg, where it remained until 2001. At that time, the bridge was again relocated to its current site in Schulenburg's Wolters Park. While these locations are within a few miles of one another in southern Fayette County, the Bedstead Truss Bridge no longer retains its integrity of location.

Design – The bridge retains integrity of design. Alterations to the truss itself are limited to: removal of the bottom portions of endposts during the bridge's relocations, possible in-kind replacement of stringers during the historic period, in-kind replacement of a diagonal eyebar in 2001, and replacement of a small number of rivets with bolts to facilitate lifting the bridge in 2001. In addition, as originally constructed in 1888, the truss was flanked by wooden trestle approaches over the West Navidad River, but the truss span was sufficient to cross the channel at its Mulberry Creek and Schulenburg Creek relocation sites. The lack of approach spans does not impact the design of the truss unit itself.

Even with these minor alterations, the bridge continues to function in its original intent as a Pratt bedstead truss, with vertical and top chords in compression, bottom chord in tension, and diagonals serving a role in both compression and tension. The bridge retains its basic design, with pin connections and endposts still visually recognizable and serving as primary load-carrying members.

Setting – The bridge no longer retains integrity of setting. It was originally built with wooden approaches in a rural location as a roadway bridge over the West Navidad River. The truss span was moved in the 1920s or 1930s to a similar rural location over Mulberry Creek. It is now located in Wolters Park in Schulenburg, over a shallow channel with a paved park access road and several buildings and structures located within a few hundred feet of the bridge. Although the bridge has a paved pathway extending from either end of the structure and serves pedestrian traffic, it no longer functions in its original setting as a component of a linear road corridor.

Materials – The bridge retains its integrity of materials. The non-original diagonal eyebar and possible non-original stringers in the bridge's floor system are in-kind replacements. These changes are unnoticeable without detailed examination and research. The number of non-original bolts added in the 2001 relocation is small compared to the overall number of rivets used on the structure. The historic materials are otherwise intact and in good condition, with deterioration limited to minor cracking in some members, peeling paint, and loose lateral sway bracing.

Workmanship – The bridge also retains integrity of workmanship, as expressed in the overall design and construction of its original wrought iron truss members, pin connections, and railing.

Feeling – The placement of the bridge in a city park, while less jarring than a fully urban setting, detracts from the bridge's historic character as a truss bridge in rural surroundings. However, the bridge itself, with its intact truss configuration and nearly unaltered wrought iron members, strongly conveys a sense of the historic character of a latenineteenth century Pratt bedstead truss. Therefore, the bridge retains integrity of feeling relating to its primary character-defining features, which are tied to its design and engineering significance.

Association – The bridge no longer retains its integrity of association, with its relocation to Mulberry Creek in the early twentieth century and its recent move to Wolters Park.

The Bedstead Truss Bridge is eligible for inclusion on the National Register of Historic Places under Criterion C for its engineering significance. While it no longer possesses integrity of location, setting, and association, truss bridges were designed to be moved, so lack of these associations does not substantially affect its eligibility. Under Criterion C, it is important that the structure retains integrity of design, materials, and workmanship, which the bridge does. The bridge also retains integrity of feeling, and continues in use as a functioning bridge over a watercourse.

Statement of Significance

The 1888 Bedstead Truss Bridge in Schulenburg, Fayette County, Texas, is one of five extant Pratt bedstead trusses in Texas, and the oldest known bridge of its type in the state. The bridge is an important early example of work by A.J. Tullock, bridge designer and owner of the Missouri Valley Bridge Company/Missouri Valley Bridge and Iron Works, and stands as one of a decreasing number of extant roadway bridges attributed to Tullock during his association with the company. The bridge originally spanned the West Navidad River, and was moved (probably in the in the 1920s) to span Mulberry Creek. It was originally listed in the National Register in 1975 as the *Mulberry Creek Bridge*, moved to its current location in 2001, and delisted in 2013. Although moved, the bridge retains its original character defining features, including vertical end posts that extend beneath the bottom chord, Pratt truss configuration, and pinned connections. The bridge therefore retains integrity of design, materials, and workmanship, which are the aspects most relevant to convey the bridge's engineering significance. To some extent, the bridge retains integrity of feeling, particularly as it related to its physical characteristics. The bridge is nominated under National Register Criterion C in the area of Engineering at the state level of significance, and meets Criteria Consideration B as a moved property because the current setting is comparable to the originally setting. The period of significance for the bridge is 1888, the date of the bridge's construction.

Permanent European settlement of the area began in the 1820s and early 1830s, as Anglo farmers settled grants along the Colorado and Navidad Rivers, as part of Austin's Colony. Even at this state of settlement, early roads and trails passed in the vicinity of present-day Schulenburg. An east-west road, roughly following today's U.S. Highway (US) 90, connected San Antonio and Gonzales with Columbus and San Felipe while a north-south route near present-day US 77 connected La Grange with the coastal port of Texana. Early Anglo settlers established the Lyons community, at the intersection of those roads about two miles south of present-day Schulenburg. German immigrants began to arrive in southern Fayette County in the late 1840s, joined by a concentration of Bohemian Czech settlers in the mid-to-late 1850s. High Hill, which developed in the late 1840s as a rural community along the Columbus–San Antonio Road, was the center of the area's German settlement. High Hill was located about two miles northwest of Schulenburg. Early Czech settlements in the region were centered around parish churches in Moravan (later renamed Hostyn) and Praha. By 1860 Fayette County was intensively farmed, with cotton and corn being the county's primary agricultural products. The county's farms were characterized by a mix of Anglo, Czech, and German owners, with African-American slaves as farm laborers on the larger Anglo-owned farms.

Fayette County received its first rail line in late 1873, when the Galveston, Harrisburg, and San Antonio (GH&SA) Railroad built westward from its previous terminus in Columbus. New townsites were platted along the east-west route, which roughly followed the old Columbus-Gonzales Road. One new town was Schulenburg in December 1873. Most residents and business owners from nearby Lyons and High Hill gradually moved to the new townsite, and by 1874 Schulenburg had 700 residents. Other towns, such as Flatonia in southwestern Fayette County and Weimar in neighboring Colorado County, were established along the line with similar growth patterns. The GH&SA became

¹ Jane Knapik, Schulenburg: 100 Years on the Road 1873-1973 (Wichita Falls, Texas: Nortex Offset Publication, 1973), 3.

² Handbook of Texas Online, s.v., "Lyons, Texas," http://www.tshaonline.org/handbook/online/articles/hll76 (accessed 17 July 2009); Knapik, 3.

³ Handbook of Texas Online, s.v., "Fayette County," http://www.tshaonline.org/handbook/online/articles/hcf03 (accessed 19 June 2009).

⁴ Knapik, 6.

⁵ Handbook of Texas Online, s.v., "Praha, Texas," http://www.tshaonline.org/handbook/online/articles/hnp51 (accessed 17 July 2009). Knapik,

⁶ Handbook of Texas Online, s.v., "Fayette County."

⁷ Handbook of Texas Online, s.v., "Galveston, Texas," http://www.tshaonline.org/handbook/online/articles/hdg01 (accessed 17 July 2009).

⁸ Knapik, 19.

⁹ Handbook of Texas Online, s.v., "Schulenburg, Texas," http://www.tshaonline.org/handbook/online/articles/hjs11 (accessed 29 June 2009).
¹⁰ Knapik. 22.

South Texas' primary rail line, linking Galveston and Houston with San Antonio and El Paso. By 1883 the GH&SA connected with Southern Pacific system lines in west Texas, forming the United States' southern transcontinental railroad route.

The railroad's arrival allowed area farmers better access to agricultural markets and processing facilities. It also brought a new wave of immigrants, mostly German, Czech, and Wends, to Fayette County. The county's population rose from 16,863 in 1870 to 31,481 in 1890 and peaked at 36,542 in 1900. With the increased population came increased agricultural production, particularly as larger plantations were divided into smaller parcels. During the 1880s the county's cotton production rose 52 percent and corn production rose 31 percent, with smaller amount of various vegetables also grown. The city of Schulenburg developed into a center of agricultural trade and processing during the period, with a large cottonseed oil mill, cotton gin, and lumberyard and planning mill in operation by the early 1880s. The community was home to numerous stores, schools, and churches, with 1,000 residents by 1884. The city prospered through the late 1800s and by 1902, a Fayette County publication boasted that "Schulenburg, in the center of the richest agricultural section of the county, is a great trading point. Perhaps its merchants do more business than those of any other town of the county." Rural communities, usually centered on ethnic German or Czech churches, also sprouted up to serve the growing farm population. One example is St. John, about four miles southwest of Schulenburg on the Fayette-Lavaca County line. A church and school were erected in the 1880s, and a small community formed around the church. The church was formally dedicated in 1894.

Early Road & Bridge Construction in Fayette County

With growing population and a greater need for farmers to have reliable access to market and shipment points, Fayette County made improvements to its road and bridge system in the 1880s. Prior to that time, the county had limited involvement in bridge upkeep. Fayette County received its first bridge, funded through public donations, in the 1850s. The first county-funded bridges were constructed in 1860. A larger, privately owned toll bridge over the Colorado River was built at La Grange in 1883, replacing an earlier ferry crossing.

With plentiful funding from dedicated tax monies and bonds, Fayette County authorized construction of bridges on major creek crossings throughout the country. Two bridges were constructed in 1884, including the county's first iron truss. These initial projects led to demand from residents for more bridges elsewhere in the county. Two more bridges were built by the county in 1885, with another in 1886 and in 1887. In 1888 the commissioners funded construction of six truss bridges on creeks around the county. The King Iron Bridge Company built a bridge in 1889 over Mulberry Creek. On the country of th

A previous National Register nomination for the bridge was prepared in 1975. Research conducted for that nomination indicated that the bedstead truss currently in Wolters Park was the 1889 Mulberry Creek Bridge built by A.J. Tullock and Company, possibly under subcontract to the King Iron Bridge Company.²¹ However, subsequent analysis shows that the 1975 National Register nomination information is incorrect. The first discrepancies in the research findings

¹¹ Handbook of Texas Online, s.v., "Flatonia, Texas," http://www.tshaonline.org/handbook/online/articles/hjf04 (accessed 17 July 2009).

¹² Texas Almanac, 170.

¹³ Handbook of Texas Online, s.v., "Fayette County."

¹⁴ Handbook of Texas Online, s.v., "Schulenburg, Texas"; Knapik, 23.

¹⁵ Frank Lotto, Fayette County, Her History, and Her People (Schulenburg, Texas: Sticker Steam Press, 1902), 368.

¹⁶ Lotto, 107.

¹⁷ Lotto, 154.

¹⁸Lotto, 163; Fayette County Commissioners' Courte Minutes, Volume 3, Page 157 (12 September 1887).

¹⁹ Lotto, 163; Fayette County Commissioners' Courte Minutes, Volume 3, Pages 333-334 (13 May 1889).

²⁰ Fayette County Commissioners' Courte Minutes, Volume 3, Pages 333-334 (13 May 1889).

²¹ William C. Griggs, Mulberry Creek Bridge, National Register of Historic Places nomination form, 1975.

arose with the bridge's location. According to Fayette County Commissioners' Court records, the bridge constructed by King over Mulberry Creek in 1889 was on the Flatonia-Praha Road.²² This road's location does not correspond to the bridge's location at the time of the 1975 nomination, several miles southeast of both Flatonia and Praha. In addition, the nomination states that Fayette County awarded the contract for Mulberry Creek Bridge to King in May 1889 while the builder plaques on the bridge state it was built by Tullock in 1888. The 1975 nomination hypothesized that Tullock could have furnished the bridge to King on a subcontract basis, but left substantial questions regarding the relationship between King and Tullock, as well as the discrepancy regarding the bridge's construction date.

Construction of the Bedstead Truss Bridge

Subsequent research for this project then focused on identifying the correct builder and construction date for the Bedstead Truss Bridge, using Fayette County Commissioners' Court minutes as the primary research source. In February 1888 the commissioners voted to accept recommendations to construct bridges over six streams in various locations around the county.²³ On March 19, 1888, commissioners opened the bids submitted from five companies on each of the six bridges. The following companies submitted bids: Pennsylvania Bridge Company; Kansas City Bridge Company; King Iron Bridge Company; Smith Bridge Company; and the Missouri Valley Bridge Company. ²⁴ The following day, the Fayette County Commissioners' Court awarded the contracts for four of the six bridges to the Missouri Valley Bridge Company and the remaining two contracts to King Iron Bridge.²⁵ The bids from the various companies for a given crossing were remarkably similar in specifications of the bridge to be constructed, with relatively minor differences in price as well. Such vaguely collusionary practices, known as "pooling," were common when bidding on county road bridges of the period.²⁶

Of the six bridges awarded for contract in 1888, specifications for one match the type and dimensions of the bridge now located in Wolters Park. The Schulenburg-Flatonia Road at the West Navidad River crossing was recommended by the county to be a "low truss, 60' span, height of pillars 22'."²⁷ The Commissioners' Court awarded the contract for the Bedstead Truss Bridge to the Missouri Valley Bridge and Iron Company. Missouri Valley had provided two bids for this bridge, one with "cylinder piers" and one with "channel piers." The county accepted their bid for a 60-foot-span low truss with channel piers and approaches, at a cost of \$1,850. The minutes state that the Missouri Valleyconstructed bridges were to be "low square truss Iron Bridges, with channel iron piers or abutment posts and approaches."²⁹ Presumably, the reference to "square truss" equates to the use of bedstead trusses at these locations. The contract between Missouri Valley and Fayette County further quantifies the bridge's dimensions: "The said company shall agree to furnish all material and to build and construct...one channel iron pier low truss bridge 60' x 12' span as per plans, specification, and details adopted for West Navidad River."³⁰ Contact cards for Missouri Valley list the dimensions of the four bridges, including one 60-foot by 12-foot structure, but do not provide specific locations. The contract is shown to have been executed on April 6, 1888, with an overall value of \$6,782.³¹

The bridge was apparently nearing completion by November 1888, when the Commissioners' Court contracted with William Cornelson of Schulenburg "for construction and completion of additional approaches to be made out of trestle

²² Fayette County Commissioners' Court Minutes, Volume 3, Pages 333-334 (13 May 1889).

²³ Fayette County Commissioners' Court Minutes, Volume 3, Pages 188 (15 February 1888).

²⁴ Fayette County Commissioners' Court Minutes, Volume 3, Pages 199-200 (19 March 1888).

²⁵ Fayette County Commissioners' Court Minutes, Volume 3, Pages 200-201 (20 March 1888).

²⁶ Stocklin, E-21.

²⁷ Fayette County Commissioners' Court Minutes, Volume 3, Pages 188 (15 February 1888).

²⁸ Fayette County Commissioners' Court Minutes, Volume 3, Pages 199-200 (19 March 1888).

²⁹ Fayette County Commissioners' Court Minutes, Volume 3, Pages 200-201 (20 March 1888). ³⁰ Fayette County Commissioners' Court Minutes, Volume 3, Pages 202 (20 March 1888).

³¹ Missouri Valley Bridge and Iron Company, Contract Cards, Photocopy available at Texas Department of Transportation Environmental Affairs Division, Austin, Texas; originals held by Kansas State Historical Society, Topeka, Kansas.

and earthwork for the West Navidad Iron bridge, 1.5 miles west of Schulenburg, recently erected by the Mo. [sic] Valley Bridge Company...to put the said bridge and its approaches in good traveling condition...," undertaken at a cost of \$425.³²

Tullock, named on the builder's plaque of the bridge now in Wolters Park, was not associated with the King Iron Bridge Company as theorized in the 1975 National Register nomination. Instead, he was the owner of Missouri Valley Bridge and Iron Works of Leavenworth, Kansas. Tullock, originally from Rockford, Illinois, and a trained engineer educated at the University of Michigan, began work at the Missouri Valley Bridge Company around 1878 as its engineer and manager.³³ The company was initially founded in 1874 by the Edwin Farnsworth and D.W. Eaves partnership, but was taken over by the Insley and Shire Bank of Leavenworth in 1878 due to financial problems.³⁴ Tullock bought an increasing interest in the company beginning in 1880 and became its sole owner in 1888. The company's name was changed to Missouri Valley Bridge and Iron Works at that time.³⁵ The company's name was sometimes followed by "A.J. Tullock and Company Proprietors." With the changes in ownership and company nomenclature, it is possible that Tullock chose to simply use his name on the 1888 builder's plaque used on the Bedstead Truss Bridge. Tullock continued as owner of Missouri Valley Bridge and Iron Works until his death in 1904. The company was most known as a prolific builder of railroad bridges in the central and western United States, but also constructed many roadway bridges in the same regions, as well as bridges for the Mexican Central Railway. Their bridges were typically longer than 300 feet, a departure from the Bedstead Truss Bridge.³⁷ Tullock was also associated with the construction of the pre-1900 harbor in Galveston and the wharf in Tampico, Mexico.³⁸ Missouri Valley Bridge and Iron Company contract cards list well over 300 roadway bridges constructed for counties and cities in Texas between the 1880s and the 1930s, as well as at least 20 railroad bridges.³⁹

Based on the research gathered for this project, it is very likely that the bridge erected in 1888 on the Schulenburg-Flatonia Road at the West Navidad River is the bridge now located in Wolters Park. The construction date and builder shown on the bridge plaque match with the Bedstead Truss Bridge, and the bridge's dimensions match the basic specifications listed in the Commissioner's Court minutes for the Bedstead Truss Bridge.

Mulberry Creek Relocation

It is not clear exactly when the bridge was moved to Fayette County Road 291 at Mulberry Creek, where it stood until 2001. The 1975 National Register nomination assumed that the bridge was always located on County Road 291 (also known as Hermis Road or Old Praha Road). Fayette County Commissioners' Court minutes do not provide information on the relocation of the bridge from the West Navidad River; however, a review of historical maps and local newspaper articles gives an idea of possible relocation dates. A 1919 U.S. Army Corps of Engineers map shows the Schulenburg-Flatonia Road leading westward from Schulenburg on the north side of the GH&SA railroad tracks. The map notes a bridge crossing the West Navidad River on the road. The 1919 map also shows that Hermis Road was not yet constructed on its current east-west alignment over Mulberry Creek. Approaching Mulberry Creek from the

³² Fayette County Commissioners' Court Minutes, Volume 3, Page 271 (15 November 1888).

³³ William E. Connelley, A Standard History of Kansas and Kansans (Chicago: Lewis Publishing Company, 1918), 2305; Larry Jochims, Metal Truss Bridges in Kansas 1861-1939, Multiple Property Submission, National Register of Historic Places, 1989, E-3.

³⁴ Nineteenth Street over South Platte River, Historic American Engineering Record No. CO-59, 1990, 5.

³⁵ Connelley, 2305; Jochims, E-3.

³⁶ Nineteenth Street over South Platte River, 5.

³⁷ Nineteenth Street over South Platte River, 5; Jochims, E-3.

³⁸ Connelley, 2305.

³⁹ Bridge Manufacturers File for Missouri Valley Bridge and Iron Company, available at Texas Department of Transportation Environmental Affairs Division, Austin, Texas.

west, the road veered northeast and crossed the creek about one-half-mile north of the current alignment. 40 Therefore, the bridge had not been moved to the Hermis Road location by 1919.

Articles in the local Schulenburg newspaper recount that the new "highway west of town" with concrete surfacing was set to open for traffic in February 1923. This referred to State Highway (SH) 3, later redesignated as US 90. The 1940 Texas Highway Department county highway map shows that SH 3/US 90 generally followed the old Schulenburg-Flatonia Road, on the north side of the railroad tracks, between the two cities. 42 It is very likely that the 1888 truss bridge was removed when the new highway was constructed in the early 1920s. A photograph in the 1922 Texas Highway Bulletin shows the bridge with the exact appearance of the current Bedstead Truss Bridge with new highway bridge construction adjacent. This photo appears to conform to placement of bridge and channel at US 90/West Navidad River (see Photo 1 on page 25). The 1940 map shows present-day Hermis Road in its current alignment, with a bridge crossing Mulberry Creek. It is likely that the bridge was relocated from the Schulenburg-Flatonia Road to Hermis Road between 1919 and 1940, probably sometime around the construction of SH 3 between Schulenburg and Flatonia in the early 1920s.

Fayette County Commissioner's minutes and local newspaper articles give a detailed account of removal of a similar bridge on the East Navidad River, dismantled as SH 3 was constructed east of Schulenburg. That bridge, a 60-footlong "square truss" built by Missouri Valley Bridge and Iron in 1904, was removed from the old Schulenburg-Weimar Road in 1923 and then reassembled on the Schulenburg-St. John Road (now Hermis Road) in 1924. 43 Based on available evidence, it is presumed that the Bedstead Truss Bridge was moved to Mulberry Creek in early 1920s; however, there is some uncertainty regarding these records. Some records indicate that the East Navidad River Bridge was removed to Mulberry Creek, while other evidence points to the Bedstead Truss Bridge being the one removed to Mulberry Creek. It can be surmised that a late change in relocation plans that was not captured in County Commissioners' Court minutes. A sketch map (see Map 3 on page 24) included in the County Commissioners' Court records indicates that the St. John Road was relocated at some point with a new crossing over Mulberry Creek. The 1920s-era alignment of Schulenburg-St. John Road corresponds to today's Hermis Rd.

Both the 1888 and 1904 Missouri Valley bedstead bridges were relocated to county roads between Schulenburg and the St. John community, located on the Fayette-Lavaca County line. With federal and state funding used to improve primary trunk routes beginning in the late 1910s, the county was likely looking to relocate existing truss bridges from those routes and reuse them to improve the local farm-to-market road system. During the early twentieth century, Fayette County's agricultural production rose, with cotton taking an even more important role in the local economy. Corn production and cattle raising were also important through the period.⁴⁴ The St. John's community had a cotton gin in operation. 45 Schulenburg continued as a local agricultural trade and processing center for southern Fayette County, with some industry also present. By 1920 the population had grown to 1,246 and slowly rose to 1,640 in 1930. 46 With the increased agricultural production and trade, it is likely that the county desired to better its roads, and the relocation of truss bridges to smaller crossings would have helped to satisfy this need.

United States Army Corps of Engineers, Schulenburg Quadrangle Map (1912).
 Schulenburg Sticker (January 5, 1923; February 9, 1923), Issues available at Fayette County Archives and Museum, La Grange, Texas.

⁴² Texas State Highway Department. General Highway Map, Fayette County, Texas, 1940, accessed from Texas State Library and Archives website, http://www.tsl.state.tx.us/arc/maps/map4858.jpg.

⁴³ Fayette County Commissioners' Court Minutes, Volume 8, Page 239 (1 January 1923); Volume 8, Page 241 (10 January 1923); Volume 8, Page 437 (1 April 1924).

⁴⁴ Handbook of Texas Online, s.v., "Fayette County."

⁴⁵ Handbook of Texas Online, s.v., "St. John, Texas."

⁴⁶ Handbook of Texas Online, s.v., "Schulenburg, Texas."

Farm-to-Market Road (FM) 957 was constructed in the late 1950s on the alignment of the old Schulenburg-St. John Road, but Hermis Road remained a gravel surfaced county route proceeding east from FM 957 towards Praha. The area gained more agricultural diversity after the Great Depression and World War II. Cattle raising became the dominant agricultural activity, with hay, corn, and sorghum production also present. Very little other information is available for the bridge or its surrounding until its relocation to Wolters Park in 2000-2001.

Wolters Park Relocation

In 2000, with the proposed replacement of the 1888 bridge on Fayette County Road 291 (now the official designation for Hermis Road) at Mulberry Creek, plans were made to relocate the bedstead truss. In August 2000 the mayor of Schulenburg transmitted a letter to the Texas Department of Transportation formally requesting the relocation of the bridge to Wolters Park. The letter included a map from a 1998 Wolters Park upgrade plan, which already listed the bridge relocation as an improvement item, indicating discussions for the bridge's move had been underway for at least two years. 48

On September 25, 2000, the Fayette County Commissioners Court approved agreements that allowed the bridge to be transferred to the City of Schulenberg's responsibility for use in Wolters Park. Work began on the overall bridge replacement project on March 5, 2001, and was completed in mid-July. The work included preparation of the bridge for relocation, through placement of lifting brackets bolted to each corner of the bridge. The bridge was moved to its new location in one piece with the old timber deck removed. Once at the park, the bridge was repaired through straightening bent member and replacing broken or missing members. It was placed on new concrete abutments, with a paved walk leading to both ends of the structure. The bridge now serves as a crossing over Schulenburg Creek, between the main portion of the park and a rodeo arena.

Bedstead Truss Bridges

Reputedly, the railroads developed the bedstead truss in the 1880s for use in the Midwest where there was little rock available for masonry abutments.⁵¹ Two variations of bedstead truss bridges were constructed in the US: Pratt bedsteads and Warren bedsteads. Pratt bedstead trusses are most common with the Warren variations being much rarer. Based on the Warren bedstead examples in Indiana and Oklahoma, they appear to be constructed later than the Pratt bedsteads.⁵² All the extant bedstead trusses in Texas are built in a Pratt configuration and the following discussion focuses on Pratt bedstead design.

Understanding the construction of bedstead trusses reveals how they are different from other truss bridges, and bedstead trusses function in the same basic ways. In Pratt bedstead truss bridges the vertical endposts extend below the bottom chord and into the ground where they are supported by concrete footings.⁵³ The endposts are vertical, not inclined, and resemble the head of a bed, hence their name. As with all truss bridges, however, the endposts of the bedstead truss carry the thrust of the filled earth behind the abutment as well as the live and dead load of one-half of the

⁴⁷ Handbook of Texas Online, s.v., "Fayette County."

⁴⁸ Included as attachment in Fayette County Commissioners' Court Minutes, Volume 53, Pages 445-449 (25 September 2000).

⁴⁹ Fayette County Commissioners' Court Minutes, Volume 53, Pages 380-381 (25 September 2000).

Texas Department of Transportation, Plans of Proposed State Highway Improvement, Fayette County on CR 291 (Hermis Road) at Mulberry Creek, available at Texas Department of Transportation Yoakum District Office, 2000.

⁵¹ Cooper, 80

 ⁵² Cooper, 111-199; Joseph King, Spans of Time: Historic Bridges in Oklahoma, prepared for the Oklahoma Department of Transportation, 1993.
 In Indiana, Cooper found no Pratt trusses after 1910, but some Warren truss Bedsteads built after 1910, up through the 1920s. In Oklahoma, although Pratt bedstead trusses were first built in 1901, the Warren bedstead trusses were built between 1910 and 1915.
 53 Cooper, 111-199.

span. For this reason the truss needs to have stiff bottom chords that can resist this thrust.⁵⁴ The truss web, which consists of the verticals and diagonals as well as diagonal counter rods in nineteenth-century trusses, distinguishes the bedstead trusses as Pratt trusses.

Structural connections evolved on bedstead trusses, much as they did in other truss designs. Pinned structural connections dominated nineteenth century bridge design and around the turn of the twentieth century, pinned, riveted, and bolted gusset plate connections became more prominent. In Texas, the three remaining pre-1900 Pratt bedstead bridges (located in Ellis, Fayette, and Milam County) exhibit pin connections. Around 1900, designers moved away from a hinged system that depended solely on the pins to framing members with a gusset plate connection. The diagonals were connected to the plate by pins, the bottom chord connected by bolts, and the verticals connected by rivets. Using a gusset plate made the bridges easier to construct in the field and provided extra stiffness at the joints. The gusset plate essentially became the main structural connection point because it transferred the load between the members.

Because it did not require expensive stone or concrete abutments, the bedstead represents a design where short spans could be built cheaply in part by incorporating the substructure directly into the metal fabricator's equation.⁵⁵ As such, they were an inexpensive alternative to other pony truss types.⁵⁶ Although the elimination of substantial abutments made the bridge appear inexpensive, the trusses contained several inherent design problems that contributed to a short life and early replacement.⁵⁷ The exposed steel endposts were subject to rust, which led to substantial section loss in the members. In spite of the fact that the Wrought Iron Bridge Company catalogue advertised designs as "much cheaper and about as durable as masonry," bedstead structures quickly weakened, making them prone to buckle under pressure of earth fill.⁵⁸

Despite its structural drawbacks, Pratt bedstead truss bridge designs are found in Texas and throughout the U.S. Examples of bedstead truss bridges have been identified in bridge surveys and multiple property submissions for Tennessee (13), Nebraska (12), and Indiana (45). Individual bedstead truss bridges have been documented for the Historic American Engineering Record (HAER) in South Dakota, Minnesota, Oklahoma, Illinois, Kansas, Missouri, Wisconsin, Ohio, and Arkansas.

Since the Texas bedstead trusses pre-date the creation of the Texas Highway Department in 1919, the construction of these bridges were undertaken at the local level. These trusses were inexpensive and simplicity of assembly may have been appealing to local governments constrained for funds or without experienced bridge builders or engineers. As in other parts of the U.S., the bedstead truss bridge in Texas was used only for short spans in the later nineteenth and early twentieth centuries. There are currently five known extant bedstead truss bridges in Texas, built between 1888 and 1908, and their main span lengths vary from 30 feet to 80 feet, with panel lengths measuring 12.3 to 20 feet.

Summary of Integrity and Significance

While this bedstead truss is now situated in Schulenburg's Wolters Park, it was likely originally located over the West Navidad River west of Schulenburg, and moved in the early 1920s to present-day Fayette County Road 291 over Mulberry Creek southwest of Schulenburg. The bridge was relocated to its current site in 2001. Although the bridge

⁵⁴ Cooper, 80.

⁵⁵ Cooper, 80.

⁵⁶ Roberts, Section F, 40.

⁵⁷ Carver, 299.

⁵⁸ Carver, 273.

⁵⁹ Stocklin, Section E, 12.

United States Department of the Interior
National Park Service / National Register of Historic Places REGISTRATION FORM
NPS Form 10-900
OMB No. 1024-0018

Bedstead Truss Bridge, Schulenburg, Fayette County, Texas

has been twice moved, its three locations share similar contexts in terms of the overall agricultural, commercial, and transportation development of the Schulenburg area and southern Fayette County.

While the bridge is significant for its links to Fayette County's aggressive bridge-building and transportation improvement campaigns of the 1880s, it no longer retains sufficient integrity to convey those associations. In particular, the bridge does not retain integrity of location, setting, and association, and its integrity of feeling regarding association with transportation development is diminished due to its multiple locations. The bridge would not be eligible under Criterion A in the area of Transportation, nor would it be eligible in the areas of Industry or Commerce as listed in 1975. Overall, this bridge retains its historic integrity since the bridge is recognizable as a Pratt bedstead truss.

The Bedstead Truss Bridge is nominated to the National Register under Criterion C for its engineering significance. While it no longer possesses integrity of location, setting, and association, truss bridges were designed to be moved, so lack of these associations does not substantially affect its eligibility. Under Criterion C, it is important that the structure retains integrity of design, materials, and workmanship. The bridge also retains integrity of feeling, and continues in use as a functioning bridge over a watercourse.

While moved properties are generally not considered eligible for inclusion in the National Register, Criteria Consideration B allows inclusion for moved properties under specific circumstances. As stated in the National Register Bulletin *How to Complete the National Register Registration Form*, "A property removed from its original or historically significant location can be eligible if it is significant primarily for architectural value or it is the surviving property most importantly associated with a historic person or event." Examples of properties that can be moved and still be considered eligible include a ship docked in a harbor, a locomotive on tracks or in a rail yard, and a bridge relocated from one body of water to another. The Bedstead Truss Bridge is eligible under Criteria Consideration B as a bridge that has been relocated from one body of water to another, as it still serves its original purpose.

⁶⁰ National Park Service, How to Complete the National Register Registration Form, prepared for the U.S. Department of the Interior, 1977, page 37.

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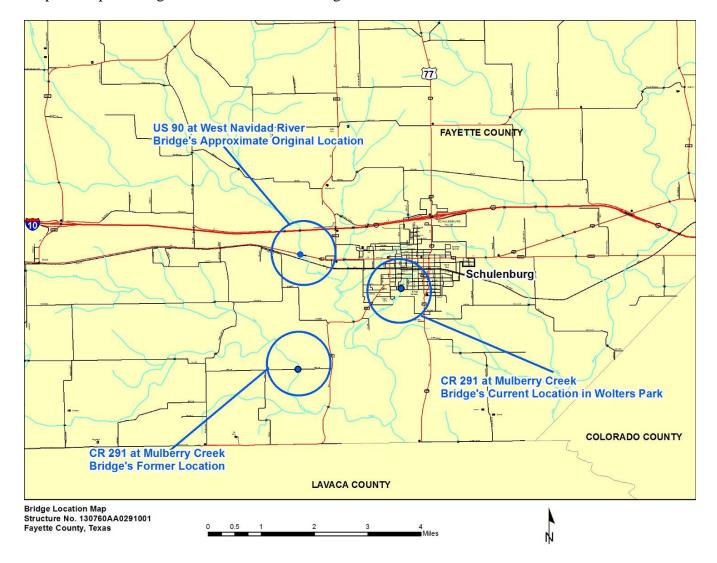
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Map 1. The nominated property is located in Schulenburg, Texas, 0.1 mile northwest of Hillje Avenue/Kallus Street intersection, crossing Schulenburg Creek.

(Google Earth Maps, accessed 5 April 2013.)



Map 2. Map showing three locations of the bridge.



Map 3. Sketch map from County Commissioners' Court minutes showing new proposed road and bridge location over Mulberry Creek.

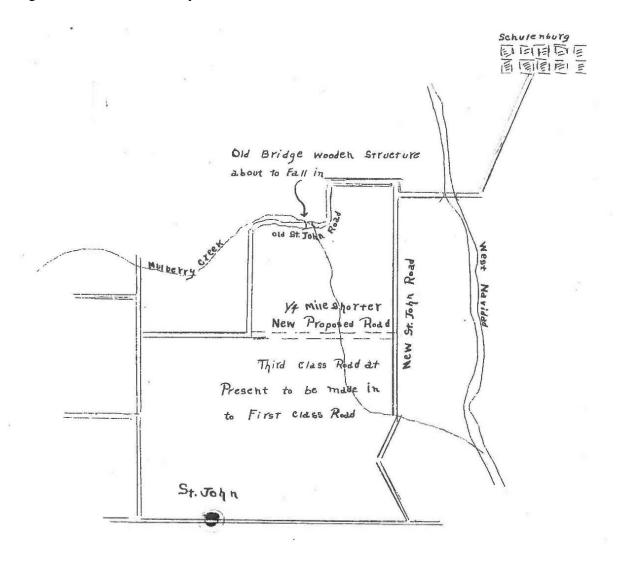


Figure 1. Bedstead Truss Bridge in Fayette County, Fayette County, Texas. (Source: *Texas Highway Bulletin*, December 1922).

