

The Manchester Street Bridge  
Intersection of Manchester and Mill Race Streets  
(Manchester Street across Baraboo River)  
Baraboo  
Sauk County  
Wisconsin

HAER NO. WI-14

HAER  
WIS,  
56-BARAB,  
3-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record  
National Park Service  
Rocky Mountain Regional Office  
Department of the Interior  
P.O. Box 25287  
Denver, Colorado 80225

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HISTORIC AMERICAN ENGINEERING RECORD  
THE MANCHESTER STREET BRIDGE

Location: Intersection of Manchester and Mill Race Streets  
(Manchester St. across Baraboo River), Baraboo,  
Sauk County, Wisconsin.

USGS Baraboo Quadrangle, Universal Transverse  
Mercator Coordinates:  
Zone 16 Easting 279160 Northing 4815305

Present Owner: City of Baraboo

Present Use: Vehicular

Significance: The Manchester Street Bridge is a Camelback  
(Pratt) through truss. It was erected in 1884  
by the Milwaukee Bridge and Iron Works, a very  
prolific late nineteenth century firm that built  
bridges throughout the midwest. This bridge has  
been cited by Cultural Resource Management in  
Wisconsin, the state's manual for historic  
properties, as one of only two Camelback truss  
bridges remaining in Wisconsin. Of the two it is  
the only pre-1900 structure. It is significant,  
therefore, as the state's only wrought iron, pin  
connected example of this unique Pratt truss.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: 1884. This date is clearly  
established by the bridge plate, as well as articles  
in the local newspaper that discuss the course of  
its construction.
2. Architect: Unknown.
3. Original and subsequent ownership: Public ownership.
4. Builders, suppliers:
  - A. Builders: Milwaukee Bridge and Iron Works.
  - B. Suppliers: Milwaukee Bridge and Iron Works.
5. Original plans and construction: The original plans  
for this bridge have not been found. Predicated on  
the number of bridges the Milwaukee Bridge and Iron

Works built, however, it is thought that this may have been one of several standard types the firm produced.

6. Alterations and additions: The stringers and deck, both of wood, have been periodically replaced. In addition, the westernmost floor beam was replaced in the early 1970s, as were the hip verticals attached thereto.

B. Historical Context:

The area around the Manchester Street Bridge was originally known as the Baraboo River's Lower Ox-bow. Eben Peck claimed the first land at that location in 1839, predating, in fact, interest in the site that later became Baraboo's downtown. Another claim for the same land was filed shortly thereafter by James Van Slyke. As Van Slyke began to make river improvements, Peck filed suit, hoping to drive the intruder out. Van Slyke left the valley in 1840, the same year that Peck moved there permanently, only to return in 1846. With the financial help of a Mr. Maxwell, he filed a new claim and again began working on river improvements. Van Slyke completed a dam and race in 1848, and immediately began work on a sawmill. Constructed on the west side of the river, a gristmill, sawmill, and a carding and cloth-dressing establishment were in place by 1856 (History, pp. 503, 508-509).

Admiring the industrial growth on the west side of the Lower Ox-bow, Walter P. Flanders, one of the subsequent owners of the Van Slyke gristmill, decided to try and develop the east bank. He retained Peter Folsom to survey the Village of Manchester in 1850, and locate it directly across from the west side industrial complex. Written in 1880, The History of Sauk County, Wisconsin, prophesied that "... as a village it will probably never prove a success" (History, pp. 509, 554).

With a thriving industrial complex on the west, and a newly platted village on the east, a bridge spanning the river at the Lower Ox-bow might have seemed appropriate by the mid 1850s. Those circumstances notwithstanding, a bridge was not indicated on a map thought to date to the mid 1860s (Canfield, n.d.), nor is one reflected on an 1877 county map (Sauk County Map). The absence of a bridge may well have contributed to the failure of the Village of Manchester.

Despite failure on the east bank, business continued on

the west. The sawmill burned down in 1857, only to be immediately rebuilt. The Manchester Roller Mills and Manchester Knitting Mills were still operating in the 1880s, a time when there were even plans to build a new paper factory at the Lower Ox-bow.

Due its proximity to the west end of the Manchester St. Bridge, there is a special interest in the Manchester Roller Mills. Little is known of this operation. There is no evidence to suggest that the Manchester Roller Mills were the successor operation to the 1849 gristmill built by Van Slyke. It was noted in 1880, however, that the sawmill rebuilt in 1857 had been, since 1874, "run as a grist-mill [sic], having been fitted up for that purpose by Spencer Brothers." It was further noted that the mill contained two runs of stone and had a forty barrel per day capacity (History, p. 509). In 1885 the Manchester Roller Mills were specifically identified as having two runs of stone and a fifty barrel per day capacity (Sanborn, 1885). Notwithstanding the ten barrel discrepancy, it is possible that the Manchester Roller Mills were established in 1874 and housed in the 1857 sawmill building. The mill's proprietors included Christian and Enos Johnson, who operated it between at least 1890 and 1895, and Edward P. Pooch and James H. Hull, who acquired the property sometime after 1895 and before 1903, and operated it for a time thereafter (Sauk County, p. 62; Baraboo, Wisconsin, p. 123; Baraboo City, 1903, p. 135). The mill is not reflected on either 1913 or 1917 fire insurance maps (Sanborn). By 1915, Ed Pooch, one of the mill's two last known operators, was the engineer in charge of the city pump station, located adjacent to the mill site (Baraboo City, 1915, p. 80). Predicated on the mill's absence from the fire insurance maps, and Pooch's change in jobs, it is possible to conclude that operations ceased between 1905 and 1915.

Whereas a thriving industrial complex was operating on the west bank of the Lower Ox-bow long before a bridge was constructed, as well as the fact that the Manchester Roller Mills were thought to be operating at least three years before a bridge was built, and that there is no evidence that the mill's output grew after the bridge's construction (a fact that could have suggested an influx of wheat from farmers on the east side of the river), it must be concluded that there was not a unique historical relationship between the bridge and the mill.

Because no bridge was indicated on the 1877 county map, and the current bridge was built to replace one lost in an 1884 flood, it is probable that the first Manchester

Street bridge was erected between those two years. That bridge, however, was lost in the Spring floods, on 25 March 1884 (Baraboo Republic, 26 March 1884). Suggesting that the bridge had become a river crossing of some importance, the city planned immediately to replace it. A \$2,000 bid from Keyser and Ridell, Milwaukee, was accepted by the city on 17 May 1884 (Baraboo Republic, 21 May 1884). Including \$650 for abutment construction, the Baraboo Republic declared that the \$3,000 bridge will be "an excellent improvement and will in the end prove the most economical bridge that has ever been built in Baraboo" (25 June 1884). The bridge was ready for service by September, 1884 (Baraboo Republic, 3 September 1884).

The bid for the bridge was likely submitted by Keepers and Ridell, not Keyser and Ridell. In 1884 Keepers and Ridell were the proprietors of the Milwaukee Bridge and Iron Works, the firm whose name is on the bridge plate. Entering business in 1875, the Milwaukee Bridge and Iron Works was established by Leon Soulerin and Garath James (Thickens, p. 316). The firm underwent a rapid change of owners until 1882, when it was acquired by William H. Keepers and Augustus T. Ridell (Milwaukee Directory 1882, p. 414). They controlled the company until 1892, when Julius G. Wagner bought it. Ridell and another associate, E. Morris, then began the Milwaukee Variety Iron Works, bridge builders. City directories indicated that both bridge building concerns operated at the same address. The Milwaukee Variety Iron Works had ceased operations by 1895 (Milwaukee Directory 1892, p. 638; Milwaukee Directory 1895, p. 694). Wagner's control over the Milwaukee Bridge and Iron Works continued to 1901, when he sold it to the American Bridge and Iron Company. It was operated as a separate entity by American Bridge until 1906, at which time it was integrated into their operation as a branch (Milwaukee Directory 1901, p. 713; Milwaukee Directory 1907, p. 112).

The Milwaukee Bridge and Iron Works was a prolific bridge builder around Wisconsin and the Midwest. A 3 December 1877 article in the Milwaukee Sentinel stated that they were building bridges in Racine, Darlington and Theresa, Wisconsin, Mississippi and Iowa. They had also finished building six iron bridges that exceeded 500 feet for the City of Stevens Point. A 9 November 1877 advertisement in the Sentinel identified the company as making "wrought iron railway and highway bridges." They also built many bridges in Milwaukee, one of which, according to a 15 January 1890 article in

the Sentinel, crossed the Menomonee River Valley and was 2,085 feet long and cost \$75,000.

Precisely why the city and Milwaukee Bridge and Iron elected to construct a Camelback truss here is unknown. It must be noted, however, that this type of design was able to carry a longer span than a simple Pratt truss (Comp, n.p.). Perhaps that was a factor for this 128' structure. Based on the number of Camelback bridges that remain in Wisconsin, it is thought not to have been a widely used style. The Manchester Street Bridge was identified by Cultural Resource Management in Wisconsin as one of only two Camelbacks left (Wyatt, vol.2, p. 12-16). Of the two, it is the only pre-1900 structure. It is significant, therefore, as the Wisconsin's only wrought iron, pin connected version of this unique Pratt truss. The bridge continues to carry traffic today. It is shortly to be moved to a park in Baraboo, where it will continue to span the Baraboo River and be used as a foot bridge.

## PART II. ARCHITECTURAL INFORMATION

### A. General Statement:

1. Architectural Character: The Manchester Street Bridge was built in 1884. It is a single span, Camelback through truss.
2. Condition of fabric: The bridge has been in service since its construction. The periodic replacement of the traffic deck, as well as replacing the west end hip verticals and floor beam, suggest the bridge is in good condition. Those items notwithstanding, a three ton limit was placed on the bridge as the integrity of its individual structural members became questionable.

### B. Description:

The bridge's overall length is 128', width is 14' 2", and it carries one lane of traffic. Resting on stone abutments, the traffic deck is carried by six floor beams. Five of them are built up "I" beams that taper slightly at each end. The sixth, located at the bridge's west end, is a 13" by 5" "I" beam that has been placed in the last ten years. Perpendicular to the floor beams and extending from beam to beam are, and it varies span to span, from ten to thirteen 11.25" by 2.5" deck stringers. The bottom lateral bracing is comprised of

lipset, cylindrical rods. The traffic deck itself is of wooden planks.

Rising from the two floor beams nearest the abutments are cylindrical hip verticals. The four intermediate posts are two channels connected with lacing and stay plates, each measuring 9" by 4". The inclined end posts, as well as the top chords, are 12.25" by 8.25". Each is two channels, connected with lacing, stay plates and cover plates. Top lateral bracing is comprised of lipset, cylindrical rods. The counters are cylindrical eye bars, loop welded, with lipset ends for turnbuckles. Top lateral struts, fabricated from angles connected with lacing, resemble "I" beams. Portal struts are made of the same pieces as the top lateral struts, except that additional flat iron creates a latticework affect instead of simple lacing. Portal bracing is made of angles shaped to form 90 degree arcs. Sway bracing consists of cylindrical tubing and rods placed 14' 3" above the traffic deck on the four intermediate posts.

The diagonals are cylindrical rods with a diameter of either 7/8" or 5/8". Bottom chords are 2.5" by .75", forged double rectilinear eye bars.

All connections are pinned.

The Manchester Street Bridge is a functional structure. In keeping with the original rural setting, and the contemporary semi-rural setting, it has no decorative features.

### PART III. SOURCES OF INFORMATION

- A. Original architectural drawings: None
- B. Early views: The circa 1900 photograph of the city pumping station and the Manchester Roller Mills, came from the Sauk County Historical Society, 531 4th Ave., Baraboo, Wisconsin.

#### C. Bibliography:

- 1. Primary and unpublished sources: None
- 2. Secondary and published sources:

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D. Likely Sources Not Yet Investigated: None

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Milwaukee, Wisconsin  
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PART IV. PROJECT INFORMATION

This project has been sponsored by the City of Baraboo and the State of Wisconsin, Department of Transportation. Mid State Associates, Baraboo, Wisconsin, formally acted as the contracting agency. The project was undertaken by John N. Vogel, a consulting historian, who provided the photographic work, the historical data as well as the architectural (technical) data. Mr. Vogel was assisted by David Keene, an archaeological consultant at Loyola University of Chicago, who conducted archaeological investigations at the site of the former Manchester Roller Mills.