

Turtleville Iron Bridge
Beloit Vicinity
Rock County
Wisconsin

HAER No. WI-4

HAER
WIS,
53-BELOIT,
1-

PHOTOGRAPHS

HISTORICAL AND DESCRIPTIVE DATA

ADDENDUM
FOLLOWS

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

HISTORIC AMERICAN ENGINEERING RECORD

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TURTLEVILLE IRON BRIDGE

HAER No. WI-4

Location: Lathers Road at Turtle Creek
Beloit Vicinity, Rock County, Wisconsin

UTM: 16.3387504714240
Quad: Shopiere, Wisconsin

Date of Construction: 1887

Builder/Designer: Wisconsin Bridge and Iron Company

Present Owner: Town of Turtle, Wisconsin

Present Use: Highway Bridge

Significance: The Turtleville Iron Bridge carries Lather Road 140 feet, from abutment face to abutment face, across Turtle Creek. It was built in 1887 by the Wisconsin Bridge and Iron Company, and is a Pratt through-truss with pin connections and bottom chord eye-bars. The wooden flooring, covered with an asphalt road bed, is supported by riveted stringers and floor beams. Triangular nameplates are affixed atop each portal. Metallographic examination of three specimens from a post, a counter rod, and a hip vertical, conducted by the Beloit Foundry Company, revealed a typical microstructure of true wrought iron and iron silicate slag. In 1981 the bridge was in fair condition, covered with a layer of oxidation. It has since been scheduled for demolition. The Wisconsin Bridge and Iron Company was founded in 1870 under the name "Weinhagen Brothers, Engineers." Its name was changed in 1880.

Prepared for transmittal by: Jean P. Yearby, 1984, from research undertaken
by George Danko, 1977

ADDENDUM TO:

Turtleville Iron Bridge
(Lathers Road Bridge)
Spanning Turtle Creek, on Lathers Road
Beloit vicinity
Rock County
Wisconsin

HAER No. WI-4

HAER
WIS.
53-BELO.V,
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
U. S. Department of the Interior
P.O. Box 37127
Washington, D. C. 20013-7127

HISTORY

On June 21, 1887, at the office of Charles Weirick, Town Clerk of Shopiere, the Town Board of Turtle received proposals for three iron bridges over Turtle Creek, at Shopiere and at Turtleville. Contracts for the three bridges were awarded to the Wisconsin Bridge and Iron Company for \$5,875.¹ The Turtleville Iron Bridge is the only one of three bridges still remaining.

The Turtleville bridge spans Turtle Creek at Lathers Road, a crossing between farmland and the village center. First settled in 1838, Turtleville at its height (c. 1848-1875) was a small milling settlement which had a dam, mill, distillery, store, blacksmith shop, school, church, and cemetery. Although the stores and one or two older houses remain, the cemetery and bridge are the only unaltered remains of the early community.²

The bridge, which was built for horse-and-carriage traffic, needed rather extensive repairs by the 1970s. After inspecting the iron bridge, one highway commissioner stated, "If a truck hit one of the members of that bridge, it would go down like a sack of potatoes."³ Soon afterward, the town stabilized the bridge and replaced the stringers and deck.

DESCRIPTION

The Turtleville Iron Bridge is a wrought iron, single span, Full-Slope Pratt through truss. Its overall length is 147 feet, 4 inches, with a span length of 141 feet, 4 inches; its overall width is 16 feet, 2 inches. The bridge has built-up members, looped eyebars with pinned connections (lower chord eyebars are punched), roller-needle bearings, and stone abutments. The beams are rolled-section, and the stringers rest directly on a concrete seat. A "Bridge Inventory report" indicates that the stringers are replacements, possibly from another structure, and that the lower-chord eyebars are out of position on the pins, suggesting that there have been rather extensive floor-system repairs.⁴ The wood-plank deck, a subject of concern to the town in the 1970s, has been replaced with the present metal grid sometime since 1973. Inclined endposts and upper chords are double upright channels with a cover plate. The lower chords and diagonals are double rectangular punched eyebars; verticals are double square eyebars tied with v-lacing front and back. The floor system has double threaded U-bolt floor-beam hangers, extended through floor-beam flanges. Top and bottom lateral bracing consists of threaded rods. The lateral struts are double back-to-back angles with V-lacing. The portals are double back-to-back angles with X-lacing, which is extended above the portal strut to form decorative cresting. Triangular bridge plates are attached over each portal.

WISCONSIN BRIDGE AND IRON COMPANY

In 1880, Frederick Weinhausen, a Milwaukee bridge builder and contractor, and Berthold Weinhausen, a civil engineer, formed a joint proprietorship known as the Wisconsin Bridge and Iron Company. Prior to the formation of the company, the brothers had founded a small engineering shop, Weinhausen Brothers, Engineers, in Wauwatosa. Wisconsin Bridge and Iron Company was incorporated in January 1891. In 1893, the company moved its operations to a new plant in Milwaukee. The company gradually grew to become one of the major bridge building firms in the north central section of the country. (For more information on the Wisconsin Bridge and Iron Company, see HAER No. WI-17.)

SIGNIFICANCE

The Turtleville Iron Bridge is significant as a very early, representative Pratt Full-Slope overhead metal highway truss bridge. It is also one of the oldest of the remaining overhead truss bridges in the State of Wisconsin. The bridge has aesthetic interest with its decorative portals and unusual triangular builder's plates.

The builder, Wisconsin Bridge and Iron Works, was a significant bridge building firm within the State.

In 1977, the Turtleville Iron Bridge was added to the National Register of Historic Places.

FOOTNOTES

- 1 Annie S. McLenegan, Centennial History of the Town of Turtle (Beloit, Wisconsin, 1936), pp. 53-54.
- 2 National Register of Historic Places Nomination Form: Turtleville Iron Bridge (State Historical Society of Wisconsin, 1977.).
- 3 Scott, Angus, "Bridge Problem Not Too Serious," Janesville Gazette, March 13, 1973.
- 4 "Bridge P-53-162," Wisconsin Department of Transportation File.

BIBLIOGRAPHY

Angus, Scott. "Bridge Problem Not Too Serious," Janesville Gazette, March 13, 1973.

"Bridge P-53-162," Wisconsin Department of Transportation File. Madison, Wisconsin.

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McLenegan, Annie S. Centennial History of the Town of Turtle. Beloit, Wisconsin, 1936.

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Madison, Wisconsin: State Historical Society, 1977.

Wyatt, Barbara, ed. "Iron and Steel Truss Highway Bridges," in Cultural Resource Management in Wisconsin. Vol. 2. Madison, Wisconsin: State Historical Society, 1986.