

Bridge of Pines (Rumbly Bridge)
Spanning a ravine in Irvine Park,
on Ermatinger Drive
Chippewa Falls
Chippewa County
Wisconsin

HAER No. WI-36

HAER
WIS,
9-CHIFA,
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

HISTORIC AMERICAN ENGINEERING RECORD

HAER
WIS,
9-CHIF,
1-

Bridge of Pines
(Rumbly Bridge)

HAER No. WI-36

Location: Spanning a ravine in Irvine Park, on Ermatinger Drive.
(Center span originally crossed Duncan Creek near the south entrance to the park.)
Chippewa Falls, Chippewa County, Wisconsin

UTM: 15.625935.4979680
Quad: Chippewa Falls

Date of Construction: 1907 (center span); 1913 (end spans)

Manufacturer: Wisconsin Bridge & Iron Company (1907)
Worden-Allen Company (1913)

Present Owner: Chippewa Falls

Present Use: Pedestrian traffic

Significance: In 1906, the city of Chippewa Falls established Irvine Park. The Bridge of Pines represents two phases of the park's development. In 1907, the Wisconsin Bridge and Iron Company erected a one-span arched Warren truss across Duncan Creek near the park's main entrance. In 1913, the Worden-Allen Company incorporated this bridge into a three-span structure crossing a ravine in a north addition. Both companies were prominent bridge-building firms that continued into the 1970s-1980s. The 146-foot structure incorporates the continuous top chord, a design apparently unique to these two companies. The Bridge of Pines is possibly the only remaining metal truss in Wisconsin specifically designed as an ornamental park bridge.

Historian: Diane Kromm
Wisconsin Historic Bridge Recording Project
Summer 1987

Chippewa Falls is located 12 miles north of Eau Claire along the Chippewa River. By 1910, the population had increased to 9,000. In 1906, the Chippewa Lumber & Boom Company, under the direction of manager William Irvine, offered to donate 85 acres of land to the city of Chippewa Falls to establish a public park. The Common Council unanimously accepted the gift. Later that year, the company, along with William Irvine and L. C. Stanley, contributed additional property, making the entire donation 163-1/2 acres. The long strip of land was located in the northwest part of the city, parallel to Duncan Creek, a stream extending into the city and emptying into the Chippewa River. Plans to improve the park began almost immediately. The Chippewa Falls Common Council established a city park association to administer the necessary changes. The proposed road system required that several bridges span the creek.¹

In February 1907, the A. Y. Bayne & Company of Minneapolis, Minnesota, submitted plans, specifications and prices for two park bridges. The park association considered the offer and placed it on file. At a regular meeting late in March, the board again addressed the issue of constructing park bridges. James MacDonald, contracting engineer for the Wisconsin Bridge & Iron Company, attended the meeting and participated in the discussion. The A. Y. Bayne & Company presented two more plans for the bridges. In addition, the association invited stone masons to act as consultants regarding the use of stone piers for the substructures. The association members concluded that steel, concrete, and pile piers would be safer and no more expensive than stone.²

The following morning, the participants assembled to continue discussing the matter of letting the bridge contract. McDonald offered to erect the two bridges for \$1,690. Specifications included one bridge 60 feet in length and the other 32 feet, both with 14-foot roadways and 12-foot by 30-inch steel and cement piers. The A. Y. Bayne & Company submitted a bid on these bridges for \$2,095. The association members considered the offers, but were unable to make a decision without first visiting the proposed bridge sites. In the afternoon, the members, along with McDonald and the city engineer, David Kirk, convened in the park. The participants decided to increase the length of the upper bridge from 32 feet to 50 feet, to allow for a sufficient waterway. McDonald revised his price and offered to build the two bridges for \$1,870. This latest offer was still considerably lower than the A. Y. Bayne & Company's initial proposal. The park association agreed to enter into a contract with the Wisconsin Bridge & Iron Company to erect two single span bridges within two months.³

This decision was one of the first steps the park commission made for permanent park improvements. The bridge to be erected in the lower part of the park (the center span of the Bridge of Pines) would replace footbridge built the previous summer. The other bridge would be constructed further up the creek near the stone quarry. Eight bridges already spanned Duncan Creek in Chippewa Falls. A newspaper columnist claimed that the new "bridges are not like the others that span the creek in the city; they are the regular park bridge,

substantial and ornamental in design."⁴ This individual considered the bridges decorative. Yet, according to an invoice, the Wisconsin Bridge and Iron Company described the structures as a typical "riveted highway span." The slight arch in the span and lattice railing, however, was probably added for decorative effect. For unexplained reasons, the steel for the bridges did not arrive until the beginning of July. On the same day it arrived, ironically, high water carried away the footbridge it was replacing. The use of steel bridges was intended to prevent similar washouts from occurring again. The Wisconsin Bridge and Iron Company provided a superintendent to direct the bridge construction.⁵

The bridges served the park for the next five years, until heavy use required new or additional structures. On April 5, 1913, the park commissioners held a special meeting to consider erecting an additional bridge across Duncan Creek near the south entrance to the park, to accommodate growing numbers of pedestrians. The Minneapolis Bridge Company submitted a bid for the project, but the commission members rejected the offer because it was too high. James McDonald, now representing the Worden-Allen Company of Milwaukee, submitted a successful offer. The park commission entered into a contract with the Milwaukee firm for a 125-foot long bridge, 16 feet wide, and capable of carrying 100 pounds per square foot. The entire structure would cost \$2,000, with half the amount paid when the materials arrived and the balance paid when the bridge was completed. By the end of the month, however, the park commissioners considered cancelling the contract. The additional footbridge, they concluded, would not relieve congestion at the lower bridge. At a special meeting on April 29, 1913, the commissioners asked Worden-Allen to cancel the first contract and submit a bid to replace the lower bridge with a larger structure. This new bridge was to be 28 feet wide, 60 feet long, with a 6-foot walk on the north side. The commissioners wanted the company to reuse the four piers in the new substructure and remove the old bridge. McDonald offered to furnish the bridge for \$2,187.00, provided that the company secured the contract for moving the old old bridge (center span in Bridge of Pines) to the north ravine and erecting a new bridge. Otherwise, the price increased \$100. The park commissioners agreed to the company's terms. The reference to a new bridge across a ravine was a new development in the park's improvement.⁶

In 1912, William Irvine, the original benefactor of the park, had offered to make a significant park improvement. He would contribute the funds to create a scenic road through the north end of the property, including a bridge to carry the road across a deep ravine. In the past, the ravine had created an obstacle to constructing a road through the area. On May 10, 1913, as promised, the park commissioners entered into a contract with the Worden-Allen Company to erect the bridge across the north end ravine. For \$2,500, the company agreed to erect the 144-foot-long bridge with a 14-foot-wide roadway. The bridge had three spans. The former lower bridge at the park entrance served as the center span. The company erected two 42-foot spans at each end, along with concrete approaches. The following year, the park commissioners officially designated the new structure as the "Bridge O' Pines," an official

name describing its scenic surroundings. Residents were proud of the new 100 acre addition to the park, particularly the new bridge. A local newspaper columnist claimed the "bridge across the ravine will be the greatest undertaking and will give the wildest bit of scenery of any park we have ever seen in Wisconsin."⁷ Despite the possible exaggeration, the bridge was a uniquely engineered design.

DESCRIPTION

The double-intersection Warren truss center span, originally built in 1907, consists almost entirely of angle irons and riveted connections. Two back-to-back angles form the top chord. The entire length of the upper chord is divided into three sections, splice plates securing the enlarged mid-section. In a design characteristic of the Wisconsin Bridge and Iron Company, the inclined endposts extend into the top chord without a hip joint, forming a continuous upper chord. Gussset plates secure the diagonal posts and vertical supports. Sway bracing provides lateral support. A lattice railing runs the length of the span. Perhaps unique to a park design, the span is arched. The two end spans duplicate the design of the center span almost identically. The only apparent difference is that they follow a straight line instead of an arch. The entire structure appears to balance precariously on four lattice-webbed steel extensions embedded in concrete piers.

In 1916, the bridge underwent minor repairs and apparently was painted. In April 1972, park personnel replaced the deck on the bridge (cost: \$2,950 for materials; \$1,000 for labor). Possibly following the previous floor pattern, they ran the boards (3x12 inches) diagonally along the roadway, securing the alternating ends of every other board. When a vehicle traveled across the deck, the loose ends created noise, hence the name "Rumbly Bridge." It is unclear whether this was the original intention of the 1913 bridge builders. Local residents, however, claim that "Rumbly Bridge" has been its traditional name since it was built. In 1981, the park commission closed the bridge to vehicles, instead rerouting the road around the bridge.⁸

FOOTNOTES

- 1 "Irvine Park: One Man's Legacy to the City He Loved," Chippewa Herald-Telegram, November 22, 1980, sec. B. pp. 6-7; Chippewa Falls, Park Association, Minutes, 1906; "Appropriation for Irvine Park," Daily Independence (Chippewa Telegram), March 20, 1907, p. 3, col. 1.
- 2 Park Association, Minutes, February 6, 1907, p. 15; Ibid., March 20, 1907, p. 17.
- 3 Ibid., March 21, 1907, p. 17; Ibid., May 21, 1907; "Contract For Park Bridges," Daily Independent, March 22, 1907, p. 3, col. 1; Contract between Wisconsin Bridge and Iron Company and Chippewa Falls Park Association, July 3, 1907 (Park and Recreation Department, Chippewa Falls).
- 4 Daily Independent, March 22, 1907, p. 3, col. 1.
- 5 "Greater Chippewa," Daily Independent, March 31, 1907; Wisconsin Bridge and Iron Company Invoice, July 3, 1907 (Parks and Recreation Department, Chippewa Falls); "Park Bridges Arrive," Daily Independent, July 9, 1907, p. 3, col. 1; "New Bridges," Daily Independent, July 10, 1907, p. 3, col. 3.
- 6 Park Association, Minutes, April 5, 1913, p. 144; Ibid., April 29, 1913, p. 145; The Worden-Allen Company incorporated on December 13, 1902, and formally dissolved on December 30, 1977 (Articles of Incorporation and Dissolution Papers, Corporation Division, Secretary of State, Madison, Wisconsin).
- 7 "New Bridge For Park," Sunday Independent (Chippewa Times), May 11, 1913, p. 3, col. 1; Park Association, Minutes, February 4, 1914, p. 154; "Irvine Park Addition," Sunday Independent, June 1, 1913, p. 7(3), col. 4.
- 8 Roger Meier, Park Superintendent, interview with author, Chippewa Falls, Wisconsin, July 7, 1987.

BIBLIOGRAPHY

Chippewa Falls. Park Association. Minutes. 1906-1923.

Chippewa Falls Park Board. Irvine Park Master Plan. c. 1982.

Chippewa Telegraph (Daily Independent). 1907(March-August),
1913(April-August).

Chippewa Times. 1907(July).

Contract between Wisconsin Bridge and Iron Company and Chippewa Falls Park Association, March 21, 1907. Including invoice (July 3, 1907) and letter asking for payment (August 9, 1907). (Parks and Recreation Department, Chippewa Falls, Wisconsin.)

Intensive Survey Form for Bridge of Pines (P-9-718). November 1986.
(Wisconsin Department of Transportation, Madison, Wisconsin).

"Irvine Park: One Man's Legacy to the City He Loved." Chippewa Herald-Telegram, sec. B, pp. 5-7.

Meier, Roger, park superintendent. Interview with author, Chippewa Falls, Wisconsin, July 7, 1987.

Past and Present of Chippewa County, Wisconsin.