MINNESOTA HISTORIC PROPERTY RECORD

PART I. PROPERTY IDENTIFICATION AND GENERAL INFORMATION

Common Name: Holmes Street Bridge

Bridge Number: 4175

Identification Number: SC-SPC-068

Location:

Feature Carried:	Pedestrian Trail
Feature Crossed:	CR 101 & Minnesota River
Descriptive Location:	0.1 Miles North of Jct. County 101
Town, Range, Section:	115N-23W-1
Town or City:	Shakopee
County:	Scott

UTM:

Zone:	15
Easting:	458215
Northing:	4960869

Quad:

Shakopee
7.5 Minute Series
1927

Present Owner:

State

Present Use:

Mainline

Significance Statement:

Bridge No. 4175 is eligible for listing on the National Register of Historic Places under Criterion C: Engineering, as a rare example of a deck truss bridge in Minnesota. The four main spans are designed in a Warren truss configuration with verticals. The period of significance for Bridge No. 4175 is its 1927 date of construction. The bridge was built by the Minnesota Department of Highways (MDH) to carry T.H. 5 over the Minnesota River and into Shakopee in Scott County. The property meets the eligibility requirements established in Frederic Quivik and Dale Martin, "Iron and Steel Bridges in Minnesota," (July 1988), in Jeffrey Hess, Final Report of the Minnesota Historic Bridge Survey: Part 2 (August 1988). Bridge No. 4175 is a rare example of a deck truss bridge and was built by an important bridge fabricator, the Minneapolis Steel and Machinery Company.

Historic Context

Urban growth in Minnesota began in the 1840s with the establishment of settlements along the

Mississippi and lower St. Croix Rivers. Until the extensive building of railroads in the late 1860s, settlement followed rivers—the Mississippi, Minnesota, and St. Croix—and the shore of Lake Superior. Even after construction of the railways enabled large numbers of settlers to create inland communities, this early pattern persisted. Of the ten largest cities in Minnesota at the turn of the century, six were located along the Mississippi, and one each on the Minnesota River, the St. Croix, and Lake Superior.

Most bridges in cities and towns crossed natural barriers, primarily watercourses and ravines. Few, except in the Twin Cities, crossed man-made features, such as railroad tracks. Most communities along rivers were situated on only one shore. In these cases, bridges served to link them to the rural districts and smaller settlements on the other side. This removed natural obstacles for the rural residents and increased the area over which the merchants and bankers in the larger towns could extend their business.

The City of Shakopee

Shakopee is located on the site of a Dakota village and was settled by traders and missionaries as early as 1844. Towns began to develop in the Minnesota River Valley following the 1851 Treaty of Mendota, which opened up the area for Euro-American settlement. Early settlers hailed primarily from New England and the mid-Atlantic States, but the later influx of German, Irish, Bohemian, and Scandinavian immigrants was critical to the settlement of the county.

In 1854 the town of Shakopee was platted and named as the seat of Scott County, and on May 23, 1857, it was incorporated as a city. The original plat was aligned with the Minnesota River, so lots in the earliest part of town have a northwest-southeast orientation. Later additions were aligned on a north-south orientation.

Within the next 20 years, Shakopee grew, as evidenced by the increasing number and diversity of types of buildings. The first public school and post office were constructed in 1854; the first railroad shops of the Minnesota Valley Company in 1867; and, in 1874, the Occidental Hotel was opened for business. By 1900 the population of Scott County had reached 15,000.

The Holmes Street Bridge: Bridge No. 4175

Bridge No. 4175 replaced an 1880 bridge nearby. The 1880 Lewis Street Bridge was a 409-foot-long metal, swing-span bridge, which allowed for Minnesota River navigation. According to Julius Coller, the community's proposal to build a bridge arose from desires to increase the Shakopee trading area. Faced with competition for the county seat from the village of Jordan, Shakopee established a Board of Trade in 1878. The board revived an 1876 proposal to build a bridge across the Minnesota River. The Lewis Street Bridge first opened in 1880.

In 1926 a new highway bridge was authorized at Shakopee, to be located at the foot of Holmes Street, 300 feet west of Lewis Street. A petition letter dated April 12, 1926, indicates that local manufacturing companies did not consider a moveable bridge, like that at Lewis Street, to be necessary for the Shakopee channel of the Minnesota River. Citing ample railroad service, improved trunk highways, and the poor quality of the river for navigation and freight transport, the manufacturers petitioned for a fixed-span bridge to be built as part of a transportation link between southwestern Minnesota and the Twin Cities.

Bridge No. 4175 was built in 1927 by the Minnesota Highway Department (MHD) as a fixed span. Its elevation on the upper river bluff allowed for a deck-truss configuration instead of a through-truss or moveable span. The use of shallow concrete girders in the shorter approach spans provided additional vertical clearance for the railroad line passing underneath, thus creating a

grade separation. The bridge connected with Holmes Street on the south. The bridge was designed by MHD Bridge Engineer M.J. Hoffmann and built by the Widell Company of Mankato at a cost of approximately $146,000. The steel work was fabricated by the Minneapolis Steel and Machinery Company.

Bridge No. 4175 continued to carry T.H. 169/101 (former T.H. 5) into Shakopee until 1990 when a new four-lane bridge was constructed at the foot of Lewis Street to carry T.H. 169/101 over the Minnesota River. According to the Susan Granger and Scott Kelly's Report on Bridge 4175, Bridge No. 4175 is to be rehabilitated for use as a pedestrian and bicycle trail bridge. The new bridge was built without pedestrian sidewalks or bike paths.

For extensive background information on the general design, engineering, and construction of metal trusses in Minnesota, see Frederic Quivik and Dale Martin, "Iron and Steel Bridges in Minnesota," (July 1988), which is included in Jeffrey Hess, Final Report of the Minnesota Historic Bridge Survey: Part 2 (August 1988). This report also includes the following note on the Minneapolis Steel and Machinery Company:

"The Minneapolis Steel and Machinery Company was founded in Minneapolis in 1902 by J.L. Record and Otis Briggs. By 1903, the company had a plant along Hiawatha Avenue between East 28th and Lake Streets, which covered about two and one-half blocks. A 1908 source states the company had 1,200 employees. Among the products it advertised in 1909 were steel structural buildings, storefronts, stairs, water tanks and towers, bridges, and steel grain elevators. The Minneapolis Steel and Machinery served a large regional market, preparing steel for bridges ranging in size from a 63-foot, riveted Warren pony truss to a 622-foot steel deck arch. The Minneapolis Steel and Machinery Company apparently also played an important role in establishing high standards for steel bridges built in Minnesota just prior to the establishment of the Minnesota State Highway Commission, which created its own standards. "

Conclusion

Bridge No. 4175, which features four main spans of riveted steel deck truss construction in a Warren configuration with verticals, is eligible under Criterion C: Engineering. The structure retains a high degree of integrity of location, design, setting, and material. Bridge No. 4175 meets Registration Requirement 9 established in Quivik and Martin, "Iron and Steel Bridges in Minnesota." Registration Requirement 9 states, "A Deck Truss Bridge. Such bridges are very rare and represent a design solution to an unusual site condition." Bridge No. 4175 also meets Registration Requirement 4 which states, "Built by an Important Bridge Fabricator," and identifies the Minneapolis Steel and Machinery Company as one of "three Minnesota firms [that] achieved statewide importance."

PART II. HISTORICAL INFORMATION

Date of Construction:

1927

Contractor and/or Designer (if known):

Contractor: Minneapolis Steel and Machinery Company, fabricator
Widell Company, Mankato, builder

Designer: M. J. Hoffmann

Historic Context:

Iron and Steel Bridges in Minnesota

National Register Criterion:

C

PART III. DESCRIPTIVE INFORMATION

Descriptive Information:

Property and Setting

Bridge No. 4175 is located at the foot of Holmes Street, on the northern edge of the city of Shakopee, Minnesota. It originally carried Trunk Highway (T.H.) 5 (now T.H. 169/101) into Shakopee and was locally known as the "Holmes Street Bridge." Minnesota Department of Transportation (Mn/DOT) documents list Bridge No. 4175 as officially closed to vehicular traffic as of 2005.

The city of Shakopee is located on the south side of the Minnesota River. The south approaches to Bridge No. 4175 were originally built across a Chicago, Milwaukee and St. Paul Railway spur track, now the location of Levee Drive. Adjacent to Levee Drive is a bituminous bicycle and pedestrian trail that passes beneath the south approach. The Minnesota Department of Natural Resources (Mn/DNR) has an easement with the city on portions of this trail and also owns and maintains Riverside Park, which is located immediately west of the north end of the bridge. On the north, the bridge connects with a pedestrian/bicycle trail. The north approach originally spanned Indian Road, an unpaved roadway that has been abandoned.

Description

Bridge No. 4175 was completed in 1927 and is aligned on a north-south axis. It has an overall length of 645 feet and an out-to-out width of 42.4 feet. The superstructure consists of four main river spans and four approach spans, two on the north and two on the south. The main spans provide 22 feet of vertical clearance at high water. Each main span is comprised of three riveted, steel deck Warren trusses, with a 125-foot clear span, pier to pier. As originally built, the main spans accommodated a 28-foot roadway and two 5-foot sidewalks cantilevered on brackets from the outside trusses. The approach spans are 30-foot-long, cast-in-place, reinforced-concrete, deck girder spans.

The substructure is comprised of reinforced-concrete piers and abutments that display Classical Revival architectural elements. The river piers are solid with a pair of arched recesses on either side, suggesting a column supporting each of the three trusses. The approach piers have four arched openings with a column supporting each girder. The U-shaped abutments have pilasters with recessed panels.

Atop the abutments are poured concrete parapet-railings with Classical Revival recessed panels. The railings on the main and approach spans consist of panels of curved and open-lattice metalwork with square metal posts in a Classical Revival design. The railings are 2 feet, 8 inches high.

Poured concrete Jersey barriers were installed in 1972 between the pedestrian sidewalks and the roadway. Seven fluted cast-iron light standards with elongated glass lamps and finials were originally mounted along each railing. These were removed in 1969.

A concrete pedestrian stairway with metal pipe railing is located on each side of the north abutment, leading down to the former Indian Road. The Classical Revival detailing of the underside of the abutment suggests the attention given to the pedestrian access to Riverside Park at the northwest end of the bridge.

Integrity

Bridge No. 4175 retains integrity of design, location, setting, and materials. The Warren deck trusses retain full integrity of design and materials. Alterations in 1969 and 1972 included removal of light standards; replacement of curbing, sidewalk, and deck; cleaning and repainting of metal railings; installation of new floor beams and stringers; and installation of new expansion joints and jersey barriers. Some original floor beams and stringers remain. The 1969 and 1972 alterations did not compromise the historical integrity of the superstructure and substructure.

PART IV. SOURCES OF INFORMATION

References:

"Report on Bridge 4175, Shakopee, Minnesota S.P. 7009-52 (T.H. 169), prepared for Minnesota Department of Transportation by Gemini Research (Susan Granger and Scott Kelly), 1994; "Bridge No. 4175: Summary of Inspection and Recommendations for Reuse as a Pedestrian Bridge," prepared for Minnesota Department of Transportation by Parsons, Brinckerhoff, Quade and Douglas, Inc., 1997; Frederic Quivik and Dale Martin, “Iron and Steel Bridges in Minnesota,” (July 1988), in Jeffrey Hess, "Final Report of the Minnesota Historic Bridge Survey: Part 2" (August 1988); National Register of Historic Places Registration Form (draft), "Holmes Street Bridge, Bridge 4175," prepared for Minnesota Department of Transportation by Mead and Hunt, 2005. Detailed lists of sources are included in the above documents.

PART V. PROJECT INFORMATION

Historians:

Susan Granger
Scott Kelly
Christine Gesick

Form Preparer:

Mead & Hunt, 2006

MHPR NO. SC-SPC-068