

Twenty Mile Road Bridge
Spanning St. Joseph River
Tekonsha Vicinity
Calhoun County
Michigan

HAER No. MI-106

HAER
MICH
13-TEKOV
1-

PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Great Lakes Systems Office
1709 Jackson Street
Omaha, Nebraska 68102-2571

HISTORIC AMERICAN ENGINEERING RECORD

20 MILE ROAD BRIDGE

HAER No. MI-106

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Location: Spanning St. Joseph River, Tekonsha vicinity, Calhoun County, Michigan.

UTM: 16.673170.4665840
Quad: South Lyon, Michigan

Date of Construction: 1906

Present Owner: Calhoun County Road Commission
13300 Fifteen Mile Road
Marshall, MI 49068

Present Use: The bridge is closed to all traffic.

Significance: The 20 Mile Road Bridge is a large and early example of a riveted pony truss structure with no pinned connections. It is all the more unusual for its Pratt rather than Warren truss design because Pratt truss designs are typically pin-connected. It has been considered eligible for the National Register of Historic Places since 1992.

Project Information: HAER documentation was undertaken in November of 1995 in accordance with the Memorandum of Agreement agreed to by the Calhoun County Road Commission and the Michigan State Historic Preservation Office. The Memorandum of Agreement is a mitigative measure used to maintain the bridge in a different location through a sale or a transfer to an interested party, if there is one, who would use and preserve the structure. This action was successful. The bridge will remain in the hands of Calhoun County and be relocated to Riverside Park along the Kalamazoo River in Section 15 of Emmett Township, Calhoun County, Michigan. The county plans to place other historic trusses in the park along with the 20 Mile Road truss.

Author: Robert H. Scott, President
Scott Civil Engineering Company
1601 McKay Tower
146 Monroe Center NW
Grand Rapids, Michigan 49503

Summary Description of Bridge and Setting

The 20 Mile Road Bridge over the St. Joseph River is located in Sections 16 and 17 of Clarendon Township, Calhoun County, Michigan. Twenty Mile Road is a north-south road situated on a 20.12 meter (66 feet) right-of-way. The roadway surface in the vicinity of the bridge is gravel, averaging 5.5 meters (18 feet) in width. M-60, a heavily traveled state highway, intersects 20 Mile Road 260 meters (0.16 miles) north of the bridge. Twenty Mile Road ends at R Drive 850 meters (0.53 miles) south of the bridge. The 20 Mile Road Bridge provided access to railroad tracks situated 670 meters (0.42 miles) south of the bridge, access to school and church for area residents, and access to markets and fields by farmers on both sides of the river. It is typical of the many "farm to market" bridges constructed in the late 1800's and early 1900's in the rural areas of Michigan.

The original plans for the 20 Mile Road Bridge cannot be located. The bridge has no nameplate. A review of road commission files has uncovered no record of construction or photographs. An extensive search of local, township, county and state newspapers, historical narratives, public documents, personal written recollections, engineering records, and meeting minutes has been made. No plans or records of the 20 Mile Road Bridge were found.

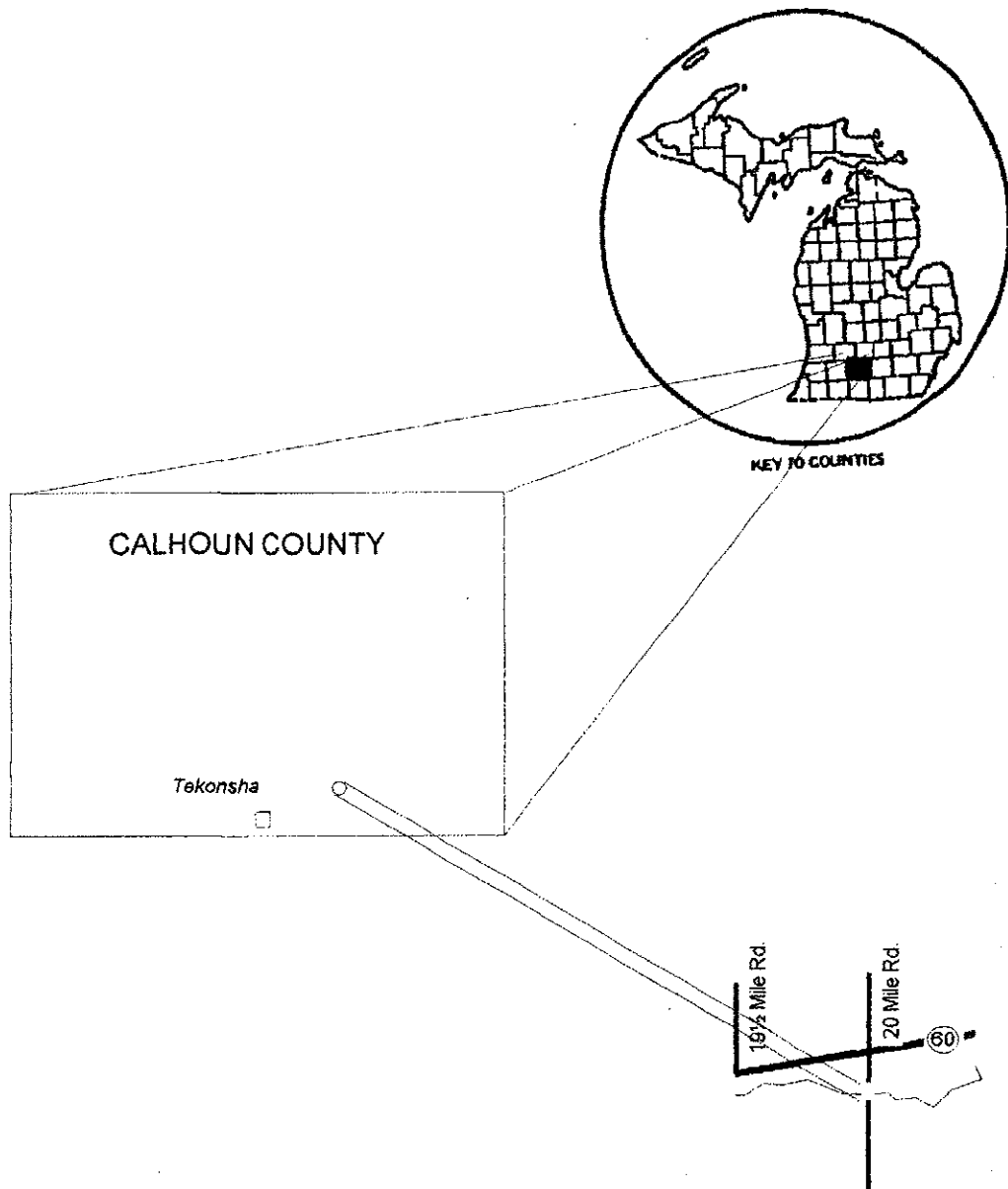
The bridge is a single span steel pony truss with riveted connections. Each truss has five panels that are 3.90 meters (12.8 feet) long creating a span of 19.51 meters (64 feet). The clear distance between trusses is 4.69 meters (15.4 feet). The top and inclined members (compression members) of the truss consist of two channels with a top plate riveted to the top flange of the channels. The vertical members consist of four angles connected by lattice work. Flat steel bars are welded to the four angles to create a lattice pattern. The diagonals consist of two angles connected with lattice work. The bottom chords (tension members) consist of two angles welded together. The deck is a concrete jack-arch supported by six 178-mm (7-inch) steel stringers and two 178-mm (7-inch) fascia channels. These members are supported by 457-mm (18-inch) I-type floor beams at each truss panel point.

The trusses are supported by concrete abutments supplemented by concrete wingwalls in each quadrant. The wingwalls retain the road fill and the original slopes. Steel bars and guardrails serve as the bridge railings along each side of the bridge.

The 20 Mile Road Bridge is typical of most bridges built in southern Michigan around the late 19th century and early 20th century. Because of the relatively lightweight truss superstructure, the bridge was fabricated at a steel fabrication plant and shipped by rail to the job site. The contractor constructed the substructure units, then assembled and erected the steel truss on-site.

BIBLIOGRAPHY

Ford Demeter, Nancy, Taylor, Kent C., Marzonie, Christopher J., HISTORIC EVALUATION AND NATIONAL REGISTER OF HISTORIC PLACES ASSESSMENT FOR THE 20 MILE ROAD BRIDGE OVER THE ST. JOSEPH RIVER, CALHOUN COUNTY, MICHIGAN, Jackson, Michigan, Commonwealth Cultural Resources Group Inc., 1994.



**SITE
LOCATION MAP**