

MINNESOTA HISTORIC BRIDGE INVENTORY

Bridge No : 002628

County Name : Jackson

City/Township : Alba Township

Township : 103 Range : 38W Section : 22

UTM Coordinates : 15:306908:4842270

307020 4842020

USGS Quadrangle : Brewster

SW - NW - SW

Inventory Number : JK-ABA-001

National Register Eligible : Yes

Criteria : C

Context : Reinforced-Concrete Highway Bridges in Minnesota

Period of Significance : 1917-1947

Retains Integrity : Yes

Structural Data

Main Span Type : 105

number main spans : 01

number appr spans :

structure length : 64.00

deck width : 23.00

Superstructure : single-span concrete through girder

Substructure : concrete abutments with flared wingwalls

Floor/Decking : concrete deck carried by 2 concrete through girders with transverse floor beams

Other Features : railings: load-bearing girders rise above roadway to form solid-parapet concrete railings

Historical Data

Year built : 1917

Contractor/Builder :

Designer : Minnesota Highway Department

Statement of significance :

Spanning Okabena Creek in rural Alba Township, Bridge No. 2628 stands on an unpaved township-owned road about four miles west and two miles south of Okabena in west-central Jackson County. The crossing is a 60-foot, poured-in-place, concrete, through-girder structure with transverse floor beams. The gravel-covered concrete deck has an 18-foot roadway between solid-parapet concrete railings, which are the above-road extension of the load-bearing girders. The bridge has experienced no major alterations and retains its historical integrity.

According to a hand-written bridge log compiled by the Minnesota Department of Transportation, Bridge No. 2628 was originally designed as a 60-foot pony truss in 1917. The Jackson County Highway Department has on file a plan for the crossing prepared by the Minnesota Highway Department and dated 26 June 1917. It shows a steel, four-panel, rigid-connected, Warren pony truss with reinforced-concrete abutments, a 60-foot span, a concrete deck, and an 18-foot roadway. Steel, however, was expensive and in short supply during World War I. As the state highway department noted in its biennial report for 1915-1916: "On account of the increase in the price of steel, the I-beam span bridge with a concrete floor has advanced considerably in cost, and where we have furnished plans for this type and also for the flat slab reinforced concrete bridge, to be bid on at the same time, we found that in most cases the bids on the concrete were nearly as low or lower than on the steel type." The state agency responded to this situation by substituting the concrete-slab for the steel-stringer design. As the final design of Bridge No. 2628 indicates, it also substituted concrete girders for steel pony trusses.

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The state highway department prepared a standard plan for concrete through-girder bridges at least as early as 1912. With minor modifications, this design remained in use until about 1922, at which time it was abandoned because concrete through-girder bridges could not readily be widened. The state's specifications for concrete-girder highway crossings set the maximum span length at 60 feet, and several through girders were built at the outer limit. Of these, Bridge No. 2628 is the only surviving example. According to the National Register Multiple Property Documentation form for historic Minnesota concrete bridges, a concrete-girder span may be eligible for the National Register under Criterion C if it was "designed at the outer recommended limits for its span type." With its 60-foot span, Bridge No. 2628 meets this guideline, and it is therefore eligible under Criterion C, within the context of "Reinforced-Concrete Highway Bridges in Minnesota." Research has not established grounds for the bridge's significance under Criteria A and B.

References :

Bridge No. 2628 File, in Minnesota Department of Transportation, Waters Edge Building, Roseville, Minnesota; Bridge No. 2628 File, in Jackson County Highway Department, Jackson, Minnesota; Jackson County Board of Commissioners, Proceedings, 1916-1918, in Jackson County Courthouse, Jackson; Minnesota Department of Transportation, Bridge Log, entry for Bridge No. 2628, in Bridge Division, Minnesota Department of Transportation, St. Paul; *Standard Specifications for Steel and Concrete Highway Bridges, 1912*, sec. 19; Minnesota Highway Department, *General Provisions and Bridge and Culvert Specifications, 1918*, sec. 118; Minnesota Highway Department, *Trunk Highway Specifications, 1921*, sec. S11-1; Minnesota Highway Department, *Biennial Report, 1915-1916*, 19; Robert M. Frame, "Reinforced-Concrete Highway Bridges in Minnesota," National Register of Historic Places Multiple Property Documentation Form, 1988, Sec. F, 8, in State Historic Preservation Office, Minnesota Historical Society, St. Paul; field inspection by Jeffrey A. Hess, 30 July 1996.

Form Prepared By : Jeffrey A. Hess