

I-74 Mississippi River Bridge



Location:	Quad Cities region, Iowa and Illinois, United States
Crosses:	Mississippi River
Opened in:	2021
Materials:	concrete, carbon steel and stainless steel
Stainless steel products:	2507 super duplex anchor bolts, stainless steel reinforcing bar in the deck and barriers
Photographs and text:	Used with permission ©Iowa Department of Transportation
More information:	i74riverbridge.com

History

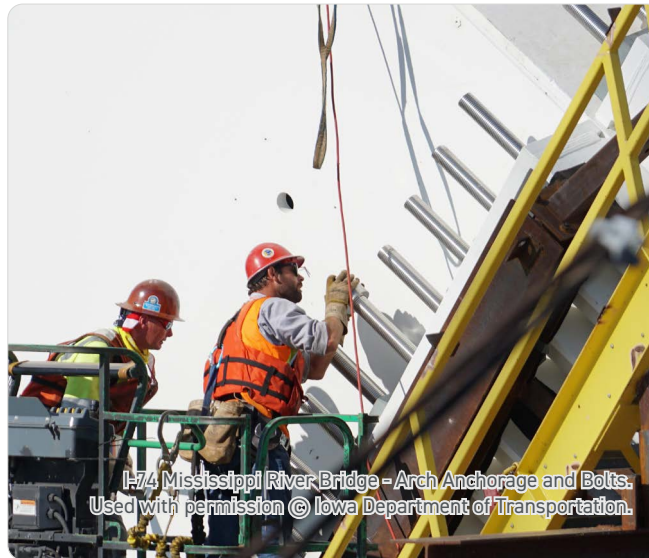
The I-74 Mississippi River Bridge historically has provided an important east-west link in the nation's transportation network. The I-74 bridge crosses the Mississippi River on two separate structures. The westbound bridge, Illinois to Iowa, was completed and opened in 1935. The eastbound bridge, Iowa to Illinois, was completed in 1959 and opened in 1960.

Planning a bridge for the future

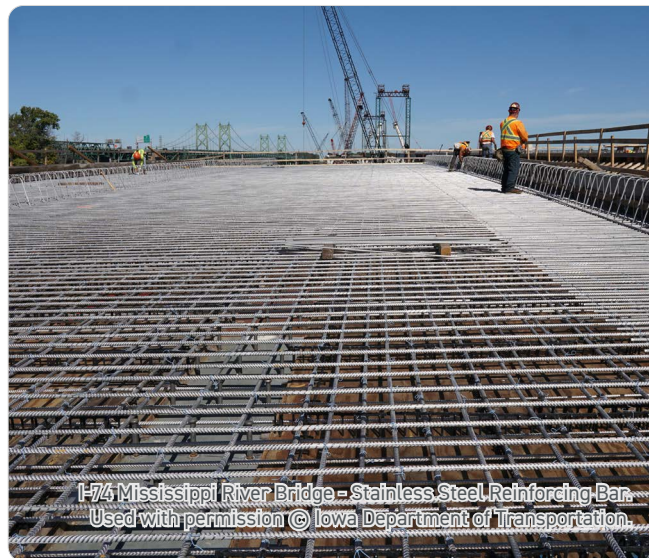
In 2016, the Iowa and Illinois departments of transportation joined forces with other agencies and local officials to conduct the I-74 Iowa-Illinois Corridor Study. This study evaluated transportation issues and recommended solutions to improve traffic flow and complement community goals and plans, with respect to the environment. A solution for the I-74 corridor was achieved by working collectively and communicating with concerned parties.

Building a bridge for the future

The I-74 Mississippi River Bridge project is part of a regional strategy for improving access across the Mississippi River in the Quad Cities. It includes the replacement of the I-74 twin bridges over the Mississippi River, interchange ramp reconfigurations, and interstate and local roadway improvements. Construction began in July 2017 and the new bridge fully opened to traffic in December 2021. The new bridge provides four lanes in each direction and



I-74 Mississippi River Bridge - Arch Anchorage and Bolts.
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I-74 Mississippi River Bridge - Stainless Steel Reinforcing Bar.
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Why stainless steel?

The concrete deck employs stainless steel exclusively, including in the barriers, to provide a long service life and minimize the need for extensive maintenance and disruptive deck replacement.

The arch segments are anchored to the foundations using specialized, high-strength stainless steel prestressed anchor rods developed as part of a research project to identify a corrosion-resistant material for this type of application, and the design team chose a duplex stainless steel (grade 2507) with a minimum tensile strength of 116 ksi. The bridges have a total of 384 anchor bolts. After installation, the bars are grouted in their ducts to provide an additional corrosion barrier and bond them to the surrounding concrete.

two full size shoulders on the Iowa-bound bridge and Illinois-bound bridge. A multi-use path on the bridge connects to paths in Bettendorf and Moline. Between Middle Road in Bettendorf and Avenue of the Cities in Moline, I-74 has been expanded to three lanes in each direction with additional lanes at select locations.

Text courtesy of i74riverbridge.com