

# US 34 Missouri River Connector

Iowa/Nebraska border

## HISTORY

The Missouri River is the longest river in North America and a major source of transportation and commerce in the central United States. Beginning in the Rocky Mountains, the Missouri River runs over 2,300 miles before spilling into the Mississippi River.

Just south of Omaha, Nebraska (pop. 420,000), the Platte River flows into the Missouri, creating a state border with Iowa to the east. Along nearly 30 miles of the border, there is just one bridge spanning the river, the Plattsmouth Bridge, built in 1929 as a toll bridge to carry U.S. Highway 34 west out of Iowa into Nebraska. Highway 34 wanders into the town of Plattsmouth before connecting with U.S. Highway 75, a route leading north into Omaha.

The Greater Omaha-Council Bluffs metro area sits in one of the busiest freight corridors in the United States, at the crossing of two major interstates (I-29 and I-80) and a pair of major railroads.

The original connection was two narrow, two-lane bridges. Over time, the route saw a steady increase in travel time for commercial and personal vehicles and an uptick of accidents. Meanwhile the regional economy, which includes nearby Offutt Air Force Base (the top employer in the Omaha-Council Bluffs metro region), became stifled.

The project was pitched as a jobs creation engine that can “unlock a vast potential for economic development and job growth.”

According to a study by the Iowa Department of Transportation, the creation of a new US 34 Missouri River Connector could provide more than \$550 million in benefits to the two states



over a span of 25 years. The study also showed that nearly 40,000 jobs could be created between 2010 and 2038.

## PROBLEM

The first of three phases in a new connector project called for a new bridge 10 miles north that would cross the Missouri River above its congregation with the Platte River.

The new span would include two pier foundations in the riverbed where unfavorable soil conditions existed.

Two flood cycles on the Missouri and the presence of an endangered fish (pallid sturgeon) limited the timeline for construction. Driving of steel could not occur between

February and June, due to the mating patterns of the fish.

## SOLUTION

Nucor Skyline’s spiralweld pipe pile was an ideal choice for the load-bearing construction in unfavorable soil conditions: It can be produced in a variety of sizes, grades and lengths. Testing has shown the high quality spiralweld pipe to be as strong as API pipe, and has numerous commercial advantages, including price and availability.

Steel pipe pile was chosen because of its geotechnical and structural capacity advantage over H-pile, and also for its constructability advantage over concrete drilled shafts for soil conditions on this specific site. The design