

Missouri Department of Transportation 2012 IBC Featured Agency

Amelia Earhart Bridge (Winthrop, Mo./Atchison, Kan.)

As funds for transportation projects become scarcer, the ability for agencies to work together and pool limited resources is an effective way to provide transportation solutions. The Amelia Earhart Bridge is a prime example. This \$59.4 million project is being cost shared with the Kansas Department of Transportation to replace the major river bridge on Route 59, connecting Winthrop, Missouri and Atchison, Kansas.

Hurricane Deck Bridge (Lake Ozark)

Built in 1934, this bridge provides a critical link through one of Missouri's largest tourist destinations. Today, the 77-year-old bridge's superstructure is in poor condition and in need of replacement, but its piers are still in good condition. The current design approach is to build a new superstructure on temporary piers and slide it into place. The contracting process allows for contractors to propose "Alternate Technical Concepts." Traffic will remain on the existing bridge until the new superstructure is complete. Then, a two to five day closure will be necessary to slide the new superstructure onto the old bridge's piers. This innovative approach will extend the bridge's service life another 75 years and save \$3 million.



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Innovation and efficiency are key in building and maintaining bridges in Missouri, which are a substantial part of the nation's 7th largest state highway system.



Missouri Department of Transportation's large bridge inventory of 10,405 span type bridges and culverts includes 53 major river bridges, more than any other state. Another 13,844 bridges span rivers and streams on city and county roadways.

Missouri is known for its innovative bridge design and construction practices. Through a unique method known as practical design, engineers are using non-traditional project design methods to develop efficient solutions for today's project needs.

Christopher S. Bond Missouri River Bridge (Kansas City)

This new landmark, cable-stay bridge has transformed the Kansas City skyline. The project included the single widest



bridge deck pour in Missouri state history at 134 feet in width. Using the design-build delivery method, the project was designed and constructed on a fixed budget and all major construction was completed six months ahead of schedule.

Mississippi River Bridge (St. Louis)

The new Mississippi River Bridge – carrying Interstate 70 – is the first bridge built connecting downtown St. Louis and southwestern Illinois in more than 40 years. With a main span of 1,500 feet, this bridge will be the third longest cable-



stayed bridge in the U.S. The cable-stayed portion of the bridge will require 8 million pounds of reinforcing steel and 14.8 million pounds of steel girders.

Safe & Sound Bridge Improvement Program (Statewide)

Through Safe & Sound, 802 of Missouri's lowest-rated bridges are being fixed or replaced in a five-year span. Of those bridges, 248 will be rehabilitated while another 554 bridges



will be replaced through a single design-build contract. Most bridges are being closed to speed construction and lower costs. On average, the typical closure has been 40 days, or half the time it normally takes to replace a bridge.

Diverging Diamond Interchanges (Springfield, St. Louis)

America's first diverging diamond interchange opened in June 2009 in Springfield, Mo. The unique design of a DDI helps increase capacity, improve traffic flow, decrease congestion and minimize the cost of new infrastructure. The DDI

also increases safety by allowing free left turns for motorists, meaning vehicles don't cross opposing traffic. Today, there is a second diverging diamond interchange in Springfield and another one in St. Louis. Others are planned in Kansas City and Columbia, Mo.

Rural Missouri River Bridges (Glasgow, Miami)

An innovative design enabled these two aging structures to be replaced at a savings of \$25 million while extending their service lives by 50 years. MoDOT engineers determined the substructures of the old bridges could be reused, enabling the bridges to be replaced without expensive right of way, and new roadway connections or lengthy environmental studies. MoDOT replaced the superstructures with only a 12-month closure for each structure, widening the roadway of each bridge 6 feet to a width of 26 feet. During construction of the Glasgow bridge, MoDOT provided a ferry service to maintain connectivity for local residents, farmers and commuters.

Pedestrian Addition to Missouri River Bridge (Jefferson City)

In April 2011, a pedestrian/bicycle attachment on the U.S. 54/U.S. 63 Missouri River Bridge was completed. The new \$6.7 million bridge attachment is 8-feet wide and includes two lookout points with a view of the Missouri State Capitol. A ramp structure on the north side of the river allows access to the Katy Trail, America's longest "rails to trails" project.

