

Spring 2009
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MRB
CONNECTING MISSOURI & ILLINOIS

THE ROAD TO THE BRIDGE

MRB TEAM DISCUSS PROJECT, BID DATES WITH BUSINESSES

The Mississippi River Bridge team held an orientation meeting for business owners from Illinois and Missouri, Feb. 18 at the Engineer's Club in St. Louis.

The intent of the meeting was to give business owners interested in working on the bridge information on how the project was developing, as well as when Missouri and Illinois were planning to take bids on the various projects for the bridge.

"This was a good opportunity for interested parties to learn what the process will be to work on the different bridge projects," said Greg Horn, P.E., MRB project director. "It also gave the team a good opportunity to answer some of the questions from business owners in both states."

One of the biggest concerns addressed during the orientation was about Disadvantaged Business Enterprise certification. Companies who are approved contractors and certified DBEs in either state can work on the cable-stayed bridge, the Missouri approach or the Illinois approach, Horn clarified during the meeting. Otherwise,



More than 120 business owners attended a meeting to discuss the bidding process and available resources.

the company needs to be approved and certified in the state where they are doing the work.

About 120 people attended the meeting – many said the time was well-spent.

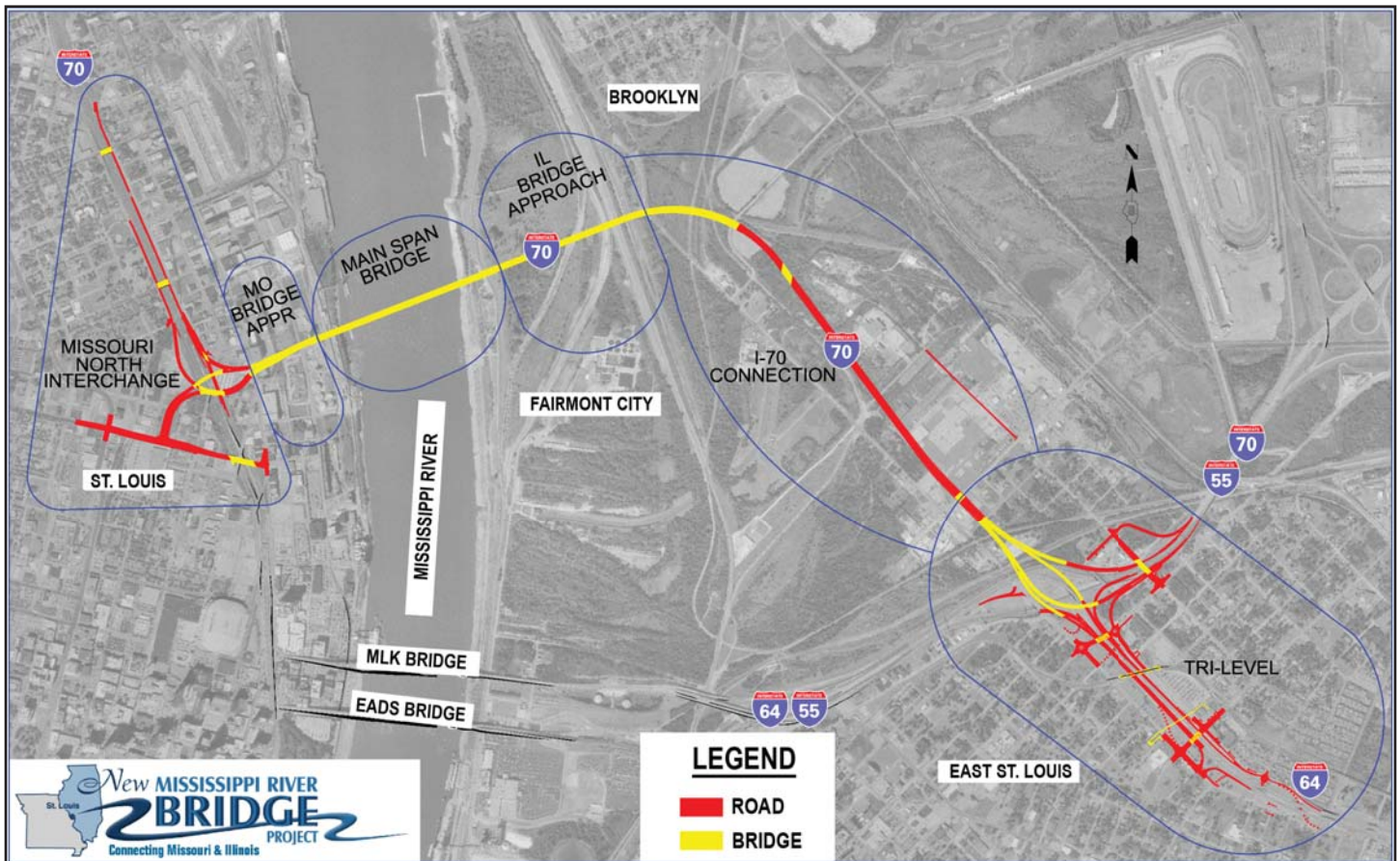
"I found the networking most useful," said Lawrence Nwachukwu, president, Basilico Engineering Inc. "This meeting showed us where there might be some opportunities for our company. Since our company worked on the I-64 project, we have some insight on the concerns of contractors working on that project."

WHAT'S NEW ON THE WEB

- A list of potential Disadvantaged Business Enterprise involvement with various contracts on the bridge
 - Preliminary plans for the bridge
- See more at www.newriverbridge.org

INSIDE

Project update	2
First steps	3
Concrete meets bedrock	4
Engineer honored for bridge work	5
Contractor profile	6



PROJECT UPDATES

MISSOURI NORTH INTERCHANGE

Engineers have finished plans for the St. Louis and Madison Avenue bridge work. These bridges will be rebuilt, starting later this year. The St. Louis Avenue bridge over I-70 will be reconstructed first, with traffic detouring over Madison Avenue during reconstruction. After St. Louis Avenue is complete, the Madison Avenue bridge will be demolished and replaced. MoDOT is currently accepting bids for this contract

Progress continues on the design of the interchange. Engineers are coordinating with St. Louis City on the Cass Avenue connection.

BRIDGE, MISSOURI AND ILLINOIS APPROACHES

The MRB team continues to talk to property owners impacted by the bridge and approaches. The team has also completed most of the preliminary work to get permits approved.

Currently, engineers are taking a close look at the

data obtained from the seismic studies to make sure the bridge foundations exceed the required standards. The seismic information was determined based on rock and soil samples gathered during last September's river drilling, as well as drilling along the banks of the Mississippi.

Engineers are completing constructability checks on the bridge and the approaches. These checks ensure that the designs can be built.

I-70 CONNECTION AND TRI-LEVEL INTERCHANGE

The MRB team performed value engineering (VE) studies for three different contract packages. The VE studies recommend cost saving alternatives for the MRB team to consider. The team plans additional VE studies later this year.

The MRB team continues to coordinate with the various local agencies, railroad and utility companies affected by the project.

Property acquisition has begun and will continue for the next one to two years.

CONSTRUCTION TAKES FIRST STEPS

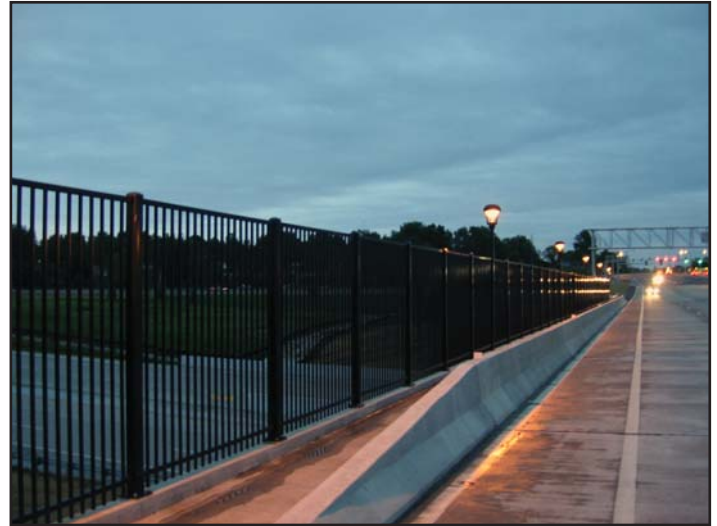
Although work on the cable-stayed bridge portion of the Mississippi River Bridge won't start for more than nine months, construction crews will start work on a number of preliminary projects. Many of these projects will be "let," which means the applicable department of transportation will start accepting bids, within the next three months.

Currently, Missouri is accepting bids on one of these projects. This project will be to demolish the St. Louis Avenue, Madison Street and Cass Avenue bridges over Interstate 70 and rebuild the St. Louis Avenue and Madison Street bridges. The Missouri Department of Transportation is accepting bids for this project until late May for the MRB team. Work on this project will not start until later in 2009 when I-64 reopens between Kingshighway and I-170.

BRIDGE REPLACEMENT

The MRB team held a public meeting in April to discuss plans for replacing the St. Louis and Madison Avenue bridges over I-70.

This project will start after I-64 reopens between Kingshighway and I-170. Initially, crews will have to close I-70 for a weekend to remove the St. Louis. During the I-70 closure, drivers will have to detour down Memorial Drive; I-70 will reopen after the debris from the bridge has been cleared. St. Louis Avenue will remain closed until the bridge is completed with traffic detouring over the Madison Street bridge.



The revamped St. Louis and Madison Ave. bridges over I-70 will look similar to this bridge in downtown St. Louis.

Once the St. Louis Avenue bridge has been completed, crews will once again close I-70 for two weekend to remove the Madison Street and Cass Avenue bridges. Drivers will have to use Memorial Drive and Broadway to detour around the closure until the debris has been cleared from I-70. Madison Street will remain closed until the bridge is complete with traffic detouring over the new St. Louis Avenue bridge.

Dates for the work have not yet been set, and won't be finalized until later this year.

WORD ON THE STREET - WHAT OTHERS ARE SAYING ABOUT THE MRB



"The Mississippi River Bridge will have a great impact for our community here in East Saint Louis, IL. With the new interchanges that are associated with this bridge project, we will have the potential to attract much needed business and commerce. Also, this will allow the traffic to flow unimpeded and create a functional 'twin-city' effect like other major cities throughout the United States. Thank you IDOT, MODOT and everyone who was instrumental in making this happen."

**Elder Keith Mosby, Senior
Gethsemane Church of the Living God**

WHERE CONCRETE MEETS BEDROCK

CONTRACTORS HAVE OPTION ON PIERS FOR RIVER BRIDGE

Engineers have completed about 75 percent of the design on the new Mississippi River Bridge, and have started finalizing design of the foundations for the bridge's piers (the portion of the bridge that will be in the Mississippi River.)

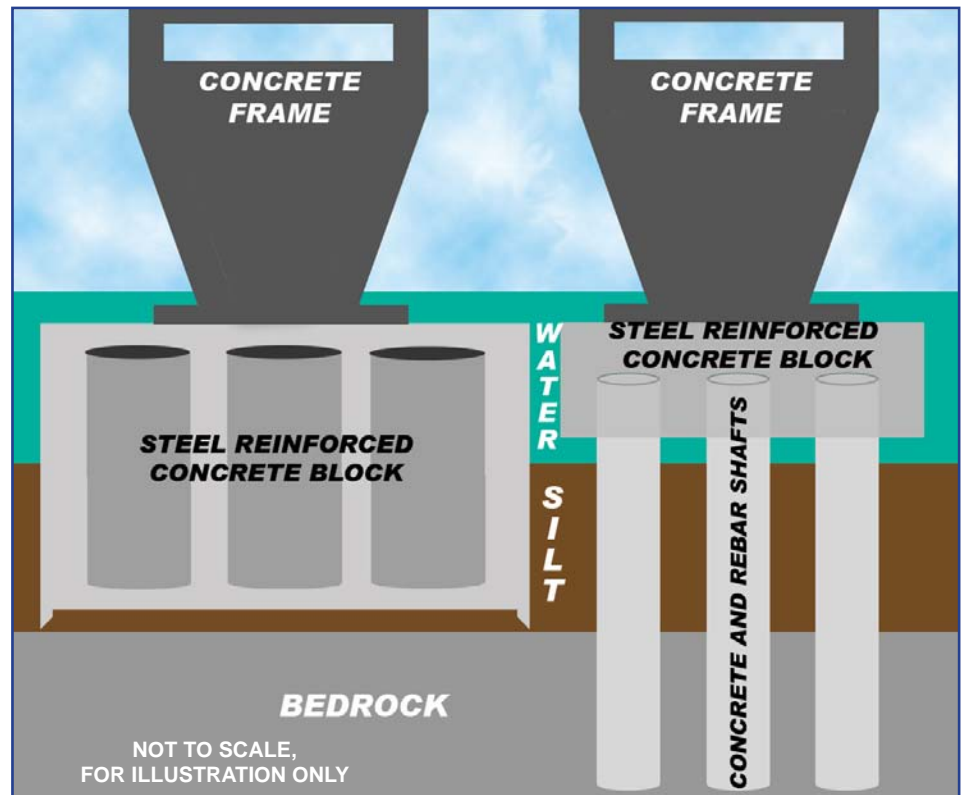
However, they are allowing the winning contractor to determine how to construct those foundations. Engineers are designing two different types of foundations; the winning contractor will indicate their choice as part of their bid.

“The costs of both a dredged caisson and a drilled shaft foundation are very close on the Mississippi River Bridge,” said Randy Hitt, P.E., Missouri Department of Transportation MRB deputy project director. “We believe we can get more competition and a better price if we allow the contractor to pick from two foundations – both of which are effective.”

The two foundations look very different; the process to construct the two are slightly different, as well.

With the dredged caisson, crews will construct a special type of dam – called a cofferdam – in the river. They will then construct a caisson – a huge metal rectangle divided into smaller square sections – in the cofferdam.

Crews will remove the sand and silt under the caisson, which gradually lowers to the top of the bedrock. As the material is removed,



Contractors may construct either a dredged caisson (left) or a drilled shaft foundation for the new Mississippi River Bridge.

water flows in to replace it. Once all the material is removed, crews will use a special process to pour the concrete, while removing the excess water. This process continues until the caisson is completely full of concrete.

When constructing a drilled shaft, crews drill into the bedrock and will use steel to form a casing to keep additional soil and debris out of the shaft. After the crews have finished drilling, they lower a mesh of rebar into the casing.

Crews will then pour a concrete mix around the rebar. In the current design for the river bridge, engineers have planned for 14 ten-foot diameter drilled shafts for the river pier foundations.

DID YOU KNOW?

- Although concrete and cement are normally used interchangeably, cement is an ingredient of concrete.
- Concrete does not dry -- it cures. Curing is the hardening process that occurs because of the chemical reaction between cement and water. Concrete needs to be kept moist during curing.
- Although concrete cures under water, flowing water can cause problems during the curing process.

BUYING PROPERTY, PROPERLY

Federal and state laws require state departments of transportation to pay fair market value to property owners for any property required for highway projects. The process to purchase property normally starts after engineers determine the project's "footprint"—how the bridges, ramps and other needed roadways fit into the existing roadway.

Missouri and Illinois have different laws in respect to purchasing property.

Appraisal – After engineers determine exactly what land is needed for the project, appraisers take a look at each affected property. They produce two appraisals – one as the property currently exists, and one with the required land removed. The appraiser also has to determine if acquiring the property for the roadway project will "damage" the property. An example of "damage" might be taking a significant amount

HOW ARE THE STATES DIFFERENT?

Missouri process to purchase right of way is a little different from the process in Illinois, as described below"

Mediation – If the property owner doesn't agree with the initial offer, the two parties come together with a mediator.

Commissioners – During the early part of the condemnation process, a judge appoints three landowners as commissioners. They determine the amount awarded to the property owner. Either party can file exceptions to the commissioner's award, which then goes to a jury trial.

of parking for a business.

Making an offer – After the land is appraised, the DOT makes a fair and valid offer for the property to the property owner. The property owner gets a copy of the appraisal and then negotiates with the DOT. If these negotiations are successful and the offer is accepted, the process is complete.

Condemnation—If the DOT and the property owner cannot come

to a negotiated settlement, the last resort is condemnation (invoking eminent domain). The DOT and the property owner meet in court. A trial is held with both sides arguing the merits of their value and a judge or jury (property owners' choice) decides what value is appropriate. The judge then orders the DOT to pay the property owner (if the court determines that the property is required for the roadway project) and gives the DOT title to the property.



Brooks Brestal

BRESTAL HONORED FOR BRIDGE WORK

Brooks Brestal, P.E., from the District 8 Bureau of Program Development, was named as the IDOT 2008 Statewide Engineer of the Year.

Brestal is deputy project director for the New Mississippi River Bridge project and is also the project manager for the Illinois projects associated with the bridge.

Brestal is one of the engineers responsible for planning and encouraging cooperation between two states – resulting in the agreement to build the New Mississippi River Bridge.

IDOT selected Brestal from the top engineers across the state. Each of IDOT's nine districts nominated an individual.

"Brooks' constant commitment to quality and desire to succeed has a motivating effect on the entire Mississippi River Bridge team," said Mary Lamie, P.E., IDOT Region Five district engineer. "His influence impacts every aspect of the project and has ensured the department's ability to deliver the regionally significant Mississippi River Bridge. We're very proud of Brooks and his many accomplishments."

CONTRACTOR FOCUS: KASKASKIA ENGINEERING GROUP, LLC

Location: Belleville, Illinois

Mission: The group provides engineering services to the private and public sector.

Number of employees: 30, includes 17 engineers - nine are registered professional engineers, one is a licensed structural engineer.

Number of employees on the MRB project: 11

About working on the bridge: “Working on the New Mississippi River Bridge project has been an incredible experience for our team. The whole purpose of the DBE program is to provide firms such as ours great opportunities and the rest is up to us. We have seized this opportunity with gratitude and understand this experience will help us progress and continue our core value of striving for our ultimate potential. MoDOT and HNTB has



Warren Clemons, left, and Joe Hamilton, of Kaskaskia Engineering Group LLC, discuss the locations of bridge piers to determine which utilities need to be relocated.

fostered an atmosphere of partnership and trust and we look forward to future opportunities with this talented group.” – Marsia Geldert-Murphey, managing partner.

FIND MORE INFORMATION ON THE BRIDGE AT WWW.NEWRIVERBRIDGE.ORG



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