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A NEWSLETTER FROM HENEGHAN & ASSOCIATES, P.C.

Celebrating Our 23rd Year in Business

October 2009

Structural Engineering—Bridges in the U.S.

By Cheryl A. Moody



Lake Pontchartrain Causeway Bridge

On a recent trip to Biloxi, Mississippi, I traveled over the longest bridge I have ever been on. Going from Biloxi, Mississippi to Louisiana, I estimated the bridge to be at least 5 miles long. Clocking the length of the bridge on the way back to Biloxi showed it was

almost exactly 5 miles. This bridge is the Twin Span Bridge across Lake Pontchartrain on I-10.

Researching for information on the Twin Span Bridge revealed of the world's top 10 longest bridges, 3 are located in Louisiana and six are located in the People's Republic of China. The second longest bridge in the world is the Lake Pontchartrain Causeway which crosses from Metairie, Louisiana (a suburb of New Orleans) at the southern terminus of the causeway to Mandeville, Louisiana which is the northern terminus of the causeway. This bridge consists of two parallel bridges, with the longer of the two bridges being 23.8 miles long. The bridges which are supported by more than 9,500 concrete pilings, were completed in one year.

There are six bridges in Louisiana with a total length of five miles or more. Louisiana is also home to one of the longest railroad bridges in the U.S., known as the Norfolk Southern Lake Pontchartrain Bridge, which is 5.8 miles long.

The longest bridge in the world is the Bang Na Expressway (officially Burapha Withi Expressway) in Bangkok, Thailand, which was completed at during the millennium year 2000, measuring 33.5 miles. Some debate its recognition as the longest bridge in the world, since it does not cross a body of water for most of its length, although it does cross a river and narrow canals. The Bang Na Expressway runs above National Highway 34 (Bang Na-Bang Pakong Road). The Bang Na Expressway was constructed to satisfy several different reasons, with one of those reasons to help alleviate traffic congestion in and around Bangkok.



The longest bridge in the world: Bang Na Expressway in Bangkok, Thailand.

About 2,350,000 cubic yards of concrete and 3 1/2 years after construction started, the Bang Na Expressway was completed.

Although not nearly as long as the longest bridge in the world or U.S., the longest

bridge in the State of Illinois, which is 1,728 feet long, is the Great River Road or Highway 100 where it crosses the Illinois River at Hardin to connect Calhoun and Greene Counties. What makes this bridge unique is its vertical lift span of 308 feet, 9 inches in length, making it the largest span of this type in the world. A section of this bridge remains horizontal as it is raised upward to allow river traffic to pass underneath. About 5 million pounds of steel and concrete were used in the bridge's construction.

The name of this bridge is the Joe Page Bridge. It was named after Joseph Page (1845-1938), who served in the Civil War and later settled in Jerseyville. Page served as Jerseyville's mayor five different times.

And the shortest bridge in the world? While some would reply with "the bridge of your nose," the shortest bridge in the world is reportedly a 30 foot bridge that connects a Canadian island with a U.S. island (right).

Recently, Heneghan and Associates added a structural engineering department to the services we provide. If you have bridge issues or other structural engineering concerns, contact Larry Thompson at the Jerseyville office.



CLIENT SPOTLIGHT

Madison County - Bender Road

Heneghan and Associates recently completed a fast track transportation project for the Madison County Highway Department. The project was the reconstruction of Bender Road from Highway 143 to Old Alton Edwardsville Road and consisted of design for 1100 LF of 24' wide Portland Cement Concrete (PCC) pavement, 8' wide PCC shoulders, storm sewer, and curb and gutter. The project also required modifications to a neighboring bike trail. Bender Road is a haul route for large trucks traveling to the landfill located at the south end of the road. The project was awarded to Baxmeyer Construction on September 16, 2009 at a cost of \$546,532. The estimated completion date is December 18, 2009.

"We make a living by what we get, but we make a life by what we give." Winston Churchill

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Questions or comments?

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MEET & GREET

Douglas L. Kinzinger, P.E., P.L.S.



This month's "Meet & Greet" employee is Mr. Douglas Kinzinger. Doug was hired in 2004 to grow and manage the Columbia office. Doug has 27 years of experience as a licensed engineer and professional surveyor. Doug is originally from New Athens where he and his family reside. He graduated from the University of Missouri at Rolla in 1981 where he received a bachelor of science degree in civil engineering. While Doug is adept with all phases of engineering, his specialty is transportation. Doug has a thorough knowledge of the different kinds of funding mechanisms available to help with the completion of highway and road projects as well as the procedures and policies of working with the Illinois Department of Transportation. Some of Doug's current projects include assisting Concordia Water Coop in extending water lines along areas of Stookey and Millstadt Townships, rehabilitation of the sanitary sewage treatment plant for the Village of Maeystown, expanding recreational facilities for the Village of Lenzburg, and roadway projects in Jerseyville, Staunton and Mt. Vernon.

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