ACEC Indiana 50 YEARS OF EXCELLENCE
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ACEC Indiana Short List

A publication of the American Council of Engineering Companies of Indiana

May 2009 | Volume 5, Issue 5

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Mechanistic-Empirical Pavement Design Guide in Indiana

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The Mechanistic-Empirical Pavement Design Guide (MEPDG) is a recently developed methodology to design pavements using more project-specific variables such as traffic data, climate data for a specific region, and materials data for estimating damage over a specified pavement service life. The mechanistic-empirical method is more accurate than the empirical method, because the empirical method only relies on the field performance, while the mechanistic-empirical method combines both the field performance and theoretical prediction models. The MEPDG software may be utilized for design of new pavement, pavement rehabilitation, or pavement preservation. To date, it has been our experience that the MEPDG software provides an opportunity for technical-based decision-making when selecting an economical and constructible pavement section.

As of Jan. 1, the Indiana Department of Transportation (INDOT) has implemented this methodology for design of all state highways and interstates. Furthermore, as of April 1, INDOT has mandated that roadways administered by a local public agency (LPA) and funded by federal sources also use MEPDG for design of pavements constructed beyond FY 2010. This includes redesign of pavements that have been previously designed but have not yet gone to letting. For those pavements that have been designed and bid, it is suggested that the LPA's check the design using MEPDG. If a significant savings can be realized, the LPA may approach the contractor to work out a mutually agreeable contract change.

The MEPDG software developed by a National Cooperative Highway Research Program project will be utilized until DARWIN ME is completed and distributed by the American Association of State Highway and Transportation Officials (AASHTO). All states that implement the MEPDG are required to locally calibrate the models within the software. The INDOT Office of Research and Development has gone to great lengths in developing these calibrations and has coordinated efforts with the INDOT Office of Pavement Engineering to include this information in a revised Chapter 52 of the Indiana Design Manual. The revised chapter is available online.

Due to the complexity and level of detail of this software as compared to other design methodologies in the past, a two-day workshop, sponsored by the Indiana Chapter of the American Concrete Pavement Association (ACPA) and ACEC Indiana with instruction by representatives of INDOT, was offered in March. Binders from this workshop and copies of the software are available from ACPA for a nominal charge. INDOT staff will be available for support through the initial implementation process. Additional MEPDG implementation details may be found at the following location http://www.in.gov/dot/div/contracts/standards/memos/2009/0906-pc.pdf.

What has ACEC Indiana done for you?

> Attended the ACEC Annual Convention and Consulting Congress Days in Washington, D.C. Met with members of Congress and their staff to discuss key issues facing the engineering industry.

> Hosted Unions Seminar to address the potential pitfalls an organized union can present and to prepare companies with effective solutions.

> Held the final 08-09 ACEC Indiana Leadership session. This educational experience prepares rising stars for firm partnerships, management and potential succession ownership opportunities. For more information about the Leadership Program, contact Beth Bauer at bbauer@acecindiana.org.

ACEC Indiana Scholarship Golf Outing

Wednesday June 17
Maple Creek Golf Club, Indianapolis

Don't be left in the rough, sign up for a foursome or individual play at this year's golf outing and support ACEC Indiana's scholarship program!

Individual Player $125
Golf Foursome $500

ACEC Indiana offers several sponsorship opportunities on par with your company. Visit www.acecindiana.org or e-mail staff@acecindiana.org for more information.