

**State of Wisconsin/Department of Transportation**  
 RESEARCH PROGRESS REPORT FOR THE QUARTER ENDING: June 30, 2008

<b>Program: SPR-0010(36) FFY99</b>		<b>Part: II Research and Development</b>	
<b>Project Title:</b> Implementation of Equivalency of Alternative Working Platforms and Their Pavement Design Strength Contribution		<b>Project ID:</b> 0092-06-08	
<b>Administrative Contact:</b> Nikki Hatch		<b>Sponsor:</b> WHRP	
<b>WisDOT Technical Contact:</b> Bob Arndorfer		<b>Approved Starting Date:</b> 8/11/2006	
<b>Approved by COR/Steering Committee:</b> \$15,000		<b>Approved Ending Date:</b> 8/10/2007	
<b>Project Investigator (agency &amp; contact):</b> Tuncer B. Edil, Geo Engineering Consulting, LLC		<b>Current Ending Date:</b> 9/30/2008	
		<b>Number of Extensions:</b> 1	

**Percent Complete:** 80%

**Request a No Cost Time Extension (Please Select One):**  YES  NO

**Reason for No Cost Time Extension:** N/A

**Project Description:**

Implementation of research results is an emphasis area of the Wisconsin Highway Research Program (WHRP) Steering Committee. The WHRP Geotechnical Technical Oversight Committee decided in their November 15, 2005 meeting to complete implementation work on two items. These are: (1) Determining the equivalent thicknesses of the eight select material alternatives and (2) Determining the pavement design strength contribution of these same eight select material alternatives. This will pull information from four, separate, completed projects. For the objective of establishing equivalency as a working platform, the California Bearing Ratio (CBR) test will be used as the basis of comparison and for structural contribution, the resilient modulus test/value will be used to compare the materials. Materials that were not specifically used in the research projects will be evaluated on the basis of their CBR and modulus relative to the materials used in the projects. These properties will be specified based on direct test data, but the test results will be moderated based on experience and published references for these materials. The alternative select material thicknesses recommended for inclusion in the FDM will be based on either a specified minimum material property or as a function of the specific CBR/modulus. The intent is to have 'standardized' material values so that site-specific material testing will not be required on projects. Appropriate procedures for including the strength contribution of these materials into the pavement design process will also be provided.

**Progress This Quarter:**

(Includes project committee mtgs, work plan status, contract status, significant progress, etc.)  
 Materials that contain coarse grains can not be tested as a specimen for their modulus. A new technique involving MEMS has been developed and validated past quarter. After determination of a strain-based relation between seismic modulus and resilient modulus, a simple test was also devised that could be performed in the field or laboratory on a smaller scale. Tests have been completed on all granular materials with satisfactory correlation. A meeting was held with Bob Arndorfer and Jeff Horsefall of WisDOT and the work to date was presented.

**Work Next Quarter:**

The testing program has been completed. Writing of the procedures will be completed for inclusion in FDM.

**Circumstances Affecting Progress/Budget:**

None

**Gantt Chart:**  
80% progress