

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

Program: SPR-0010(36) FFY99		Part: II Research and Development	
Project Title: Determination of Resilient Modulus Value Typical Plastic Soils in Wisconsin		Project ID: 0092-08-12	
Administrative Contact: Nikki Hatch		Sponsor: Wisconsin Department of Transportation	
WisDOT Technical Contact: Bob Arndorfer		Approved Starting Date: October 23, 2007	
Approved by COR/Steering Committee:		Original End Date: April 23, 2009	
Project Investigator (agency & contact): Hani Titi (hanititi@uwm.edu) (414) 229-6893		Current End Date: April 23, 2009	
		Number of Extensions: 0	

Percent Complete: 15%

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

Reason for No Cost Time Extension:

Project Description:

The primary objective of this research project is to develop (and/or expand, improve) and validate a methodology for estimating the resilient modulus of various Wisconsin subgrade soils from basic soil properties (Level 2 input parameters in the mechanistic-empirical pavement design). The following specific objectives are identified for successful accomplishment of this research:

1. Conduct repeated load triaxial tests to determine the resilient modulus of Wisconsin soils selected by WisDOT engineers. These soils will also be subjected to different laboratory tests to obtain their physical and compaction properties. The obtained test results will augment and expand the test data conducted during Phase I of the resilient modulus research.
2. Develop/expand/modify resilient modulus correlations (models) that were proposed in Phase I between the resilient modulus constitutive model parameters (k_1 , k_2 , & k_3) and basic soil properties. The new correlations will be validated for wide range of Wisconsin soils and conditions.

Progress This Quarter:

(Includes project committee mtgs, work plan status, contract status, significant progress, etc.)

- WisDOT Geotechnical Engineers identified and collected two fine-grained soils.
- Started comprehensive laboratory testing program on these two soils to obtain physical, mechanical, and compaction properties.

Work Next Quarter:

- Obtain more soil samples that are identified and collected by WisDOT Geotechnical Engineers.
- Calibrate the dynamic materials testing system and develop testing software
- Conduct repeated load triaxial test on the available soils under variety of moisture contents and unit weight
- Analyze the test results and consult/meet with the POC to obtain directions

Circumstances Affecting Progress/Budget:

Gantt Chart: