

RP 289 – Local Calibration of “C-Values” for Common Idaho Soil Types for Use in Mechanistic-Empirical Pavement Design

- Project Description:

This project will collect C-Value data from ITD projects over time. The C-Value is a ratio utilized by AASHTOware software to correlate laboratory-established resilient moduli with moduli back-calculated from field tests. There are three hierarchical levels of data accuracy for pavement mechanistic-empirical (ME) roadway design methodology, which is currently used by ITD. Level 1 is site or project-specific. Level 2 is based on local data. Currently, ITD uses Level 3 C-Values, which are a best estimate for a global default value. Developing a database of C-values within a dedicated stand-alone project would be cost prohibitive due to the costs of labor, traffic control, drilling, testing, and data processing involved. However, if C-values are leveraged from projects that are already planned or in process over the course of three years, a reliable database of C-Values can be created and maintained in a more cost-effective manner. Establishing this database of accurate C-values will allow for more specific and reliable data available to project designers.
- Project Objective:

The objectives of this project include:

 - Collect C-Value data from ITD projects over a three-year period, and incorporate those values into a database for use by ITD, LHTAC, local highway districts, and Idaho municipalities.
- Estimated Completion Date: April 30, 2022
- Budget: \$36,000 (total ITD share)

Project Manager: Tyler Coy, (208) 332-7193, tyler.coy@itd.idaho.gov
- Principal Investigator:

Stan Crawford, American Geotechnics, (208) 658-8700, s_crawford@americangeotechnics.com
- Co-Investigator:

Dr. Emad Kassem, University of Idaho, (208) 885-1025, ekassem@uidaho.edu
- TAC Members:

Dave Richards, (208) 334-8448, dave.richards@itd.idaho.gov
John Arambarri, (208) 332-7161, john.arambarri@itd.idaho.gov
Ken Hahn, (208) 745-5640, ken.hahn@itd.idaho.gov
Lynn White, (208) 886-7834, lynn.white@itd.idaho.gov
Greydon Wright, (208) 234-3611, greydon.wright@itd.idaho.gov
Chad Clawson, (208) 334-8453, chad.clawson@itd.idaho.gov
- FHWA Advisor: Kyle Holman, (208) 334-9180 kyle.holman@dot.gov