

UTC Project Information	
Project Title	Determination of Creep Compliance and Indirect Tensile Strength for Mechanistic-Empirical Pavement Design Guide
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Funding Source(s) and Amounts Provided (by each agency or organization)	
Total Project Cost	\$60000.00
Agency ID or Contract Number	
Start and End Dates	Start: 01/15/2015 End: 06/15/2016
Brief Description of Research Project	<p>Pavement condition greatly affects the safety of driver. For instance, the rutting in wheelpath creates hydroplaning which can lead to loss of control of vehicles. The roughness, e.g. potholes, can pose safety hazards to the driver. Therefore, improving the pavement condition by designing cost-effective long-lasting pavement is of paramount importance. The adoptions of Mechanistic-Empirical Pavement Design Guide (MEPDG) align well with this goal, when compared to traditional empirical pavement design.</p> <p>Dynamic modulus, indirect tensile (IDT) creep compliance and strength are the three primary mechanistic properties of asphalt mix for the asphalt pavement in the MEPDG. Thermal cracking is one of dominant distresses in Northern States in the U.S. Based on the NCHRP 01-40, the thermal cracking prediction by the Pavement ME is very sensitive (highest category) to the IDT creep compliance and IDT strength. The MEPDG is a significant improvement over empirical design method and the models in MEPDG were developed based on national database of material properties and are not applicable to local materials. Therefore, there needs a local calibration of models and establishment of catalog of typical material properties, including IDT creep compliance and strength at low temperature, for local material. Without catalog of material properties in a state, the calibration of models would not be valid. The objective of this proposed research is to develop catalogs of IDT creep compliance and IDT strength for thermal cracking for materials in Idaho.</p>

<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	
<p>Web Links</p> <ul style="list-style-type: none">• Reports• Project Website	
<p>Project Type (basic, applied, advanced, etc)</p>	<p>Applied</p>