

Research Notes

Program Steering Committee (PSC): Pavement

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Title: Updated Standard Materials Library

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Product Category: Processed data/database

Task Manager:

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TITLE:

Updated Standard Materials Library

Adding the mechanistic properties of a number of commonly used materials to a standard materials library

WHAT IS THE NEED?

University of California Pavement Research Center (UCPRC) has added the mechanistic properties of a number of commonly used materials to a standard materials library. These properties include subgrade stiffnesses, granular layer stiffnesses including various recycled materials, stabilized base stiffnesses including various recycled materials, Hot Mix Asphalt (HMA) stiffness, fatigue and rutting properties, and concrete coefficient of thermal expansion. The library needs to be more comprehensive, particularly to reflect different materials available in different regions in California, in order to support the Mechanistic-Empirical (ME) design process adequately.

WHAT ARE WE DOING?

We identify materials that need to be included in the materials library by working with Mechanistic-Empirical (ME) Task Group, District Materials Engineers, and industry. We measure the relevant properties in the laboratory and/or field and add the information to the library.

WHAT IS OUR GOAL?

We developed the CalME software for the Mechanistic-Empirical (ME) design of flexible pavements. Our goal is to update the CalME materials library with additional materials.

WHAT IS THE BENEFIT?

We will have a comprehensive CalME materials library to reflect different materials available in different regions in California. As a result, we will be able to support the Mechanistic-Empirical (ME) design process adequately.

WHAT IS THE PROGRESS TO DATE?

A number of Hot Mix Asphalt (HMA) mixes have been prepared and tested. All CalME parameters have been developed for all these mixes. Final report is underway.