

Moisture Variations in Unbound Layers in an Instrumented Pavement Section

Authors : R. Islam, Rafiqul A. Tarefder

Abstract : This study presents the moisture variations of unbound layers from April 2012 to January 2014 in the Interstate 40 (I-40) pavement section in New Mexico. Three moisture probes were installed at different layers inside the pavement which measure the continuous moisture variations of the pavement. Data show that the moisture contents of unbound layers are typically constant throughout the day and month unless there is rainfall. Moisture contents of all unbound layers change with rainfall. Change in ground water table may affect the moisture content of unbound layers which has not investigated in this study. In addition, the Level 3 predictions of moisture contents using the Pavement Mechanistic-Empirical (ME) Design software are compared and found quite reasonable. However, results presented in the current study may not be applicable for pavement in other regions.

Keywords : asphalt pavement, moisture probes, resilient modulus, climate model

Conference Title : ICCGE 2015 : International Conference on Civil and Geological Engineering

Conference Location : Los Angeles, United States

Conference Dates : April 03-04, 2015