

HR-311 Comparison of Creep and Resilient Modulus Laboratory Results With Field Cores

Key Words: Hot mixed asphalt, Resilient modulus, Asphalt concrete, Rutting, Creep testing

ABSTRACT

This is Part 3 of a study of creep and resilient modulus testing of hot mix asphalt concrete. The creep and resilient modulus testing in Part I showed the improved load carrying characteristics of crushed particles. Cores from pavements drilled in Part 2 exhibited a poor correlation with rutting and creep/resilient modulus on pavement with a range of rut depths.

The objective of Part 3 was to determine the relationship of creep and resilient modulus for 1) Marshall specimens from laboratory mixing for mix design; 2) Marshall specimens from construction plant mixing; and 3) cores drilled from the hot mixed asphalt pavement. The creep and resilient modulus data from these three sources exhibited substantial variations. No meaningful correlations of the results from these three sources were obtained.