FIELD PERFORMANCE OF HOT APPLIED MODIFIED BINDER CHIP SEAL IN CALIFORNIA

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ABSTRACT

Caltrans has used Modified Binder (MB) chip seal containing either polymers or Crumb Rubber Modifier (CRM) since 2008 and has constructed a number of projects in several districts. In 2015, the conditions and performance of 14 Caltrans MB seal coat projects were assessed. These 14 projects were located in 18 different locations in five Caltrans districts. Of the 18 locations reviewed, most projects were rated either good or fair, but some projects were rated poor. In order to find out the plausible causes for the distresses, the chip seals were grouped into different district locations, climate regions, and traffic levels. In addition, the pavement ages, materials specifications, geometry, cost, and pre-existing pavement structure information were collected. Based on the study, transverse cracking and bleeding were the dominant distresses in high-mountain and high desert regions. High traffic volume, especially heavy trucks, could have contributed to the wearing of the chip seal coats.