

ABSTRACT

Dowel bar are provided in expansion joint of concrete pavement. The existing models of dowel bar analysis idealize concrete as a set of springs, and allows full slippage between the dowel bar and concrete. In this study it is proposed to include shear strength of concrete as well as bond between the dowel bar and concrete in the analysis model. Dowel bar has been analyzed as semi-infinite and finite member. The proposed approach has been compared with the existing approaches through numerical analysis. It is observed that the effects of shear of concrete and bond interface between the dowel bar and concrete on deflection and bending moment are negligible.