Influence of AASHO Road Test Local Factors On Present Serviceability Index for Flexible Pavement Systems

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ABRIDGMENT

•USING DATA from approximately 134 flexible pavement sections of the AASHO Road Test, a correlation is developed between flexible pavement performance and local factors considered, such as pavement structural composition, applied load, and number of load applications. Pavement performance is represented by a present serviceability index which has been correlated with a panel serviceability rating. The general expression used to describe the present serviceability index as a function of the number of load applications for given conditions of applied axle load and pavement structure assumes a constant rate of pavement deterioration during the majority of the year and a very rapid deterioration associated with spring thaw periods. The coefficients included in each of the above expressions are then determined as functions of applied axle load and a pavement thickness index. Specific values for all coefficients are presented for the environmental conditions of the AASHO Road Test, and illustrative examples are given to indicate the usefulness of this concept in the rational design of flexible pavement systems. Quantitative values for these coefficients for other localities, other material properties, and other environmental conditions may be obtained through a comprehensive satellite test program.

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