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Abstract Details

Title: Study on Strengthening and Rehabilitation of Flexible Pavement with Overlay using Fwd Test vs. Reconstruction

Authors: Manish Tanwar and Jaswant Singh

Abstract: Existing Pavement after course of time and due to movement of traffic over it, the life of pavement cease and required reconstruction of road completely and new layers are to be provided. Reconstruction works is costly and time consuming. Traffic plying on existing road is to be diverted or numbers of diversion road is to be constructed during reconstruction activity. To avoid this situation, overlay is best solution which will increase life of pavement, cost and time saving. Requirement of Overlay thickness is essentially depends upon characteristic of existing pavement layers. Index used to ascertain characteristics of existing pavement layers is deflection under defined loading (through wheel load) and rebound in original position after release of loads which is terms as characteristic deflection. In India, Benkelman Beam Deflection test has been used as per IRC 81 – 1997 and overlay used to design based on BBD Survey. Due to limitation of Benkelman beam survey, Indian Road Congress has introduced new code IRC: 115 -2014 "Guidelines For Structural Evaluation and Strengthening of Flexible Road Pavements using Falling Weight Reflectometer and Strengthening of Flexible Road Pavements using Falling Weight Deflectometer (FWD) Technique". Overlay design is therefore an important role to provide safe, durable in lower cost. More importantly, overlay reduces requirement of new material which will saves therefore environment. The satisfactory performance of the pavement will result in higher savings in terms of vehicle operating costs and travel time, which has a bearing on the overall economic feasibility of the project. This paper discusses about the design methods adopted in Overlay Design and its cost saving between reconstructions of project road.

Keywords: Flexible Pavement, Fwd Test, Reconstruction.