

GURU GHASIDAS VISHWAVIDYALYA

A Central University, Bilaspur (C.G)



INTERNSHIP REPORT

on

“CONSTRUCTION OF CEMENT CONCRETE PAVEMENT”

B.TECH

in

CIVIL ENGINEERING

Submitted By:

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ROLL: 21024123

ENROLL: GGV/21/01023

Internship carried out at:

ROAD CONSTRUCTION DEPARTMENT PATNA

GOVERNMENT OF BIHAR

UNDER THE GUIDANCE OF

Mrs. Manisha Kumari

Assistant Engineer

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DEPARTMENT OF CIVIL

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BILASPUR, (C.G)– 495009

2024-2025



Government of Bihar

OFFICE OF THE EXECUTIVE ENGINEER
NEW CAPITAL ROAD DIVISION, PATNA,
ROAD CONSTRUCTION DEPARTMENT, PATNA, BIHAR.

Letter No.: - 2002

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This is to certify that

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We wish him every success in life.


Executive Engineer,

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Patna, Bihar.

ABSTRACT

A rigid pavement is a structure consisting of superimposed layers of processed materials above the natural soil-subgrade, whose primary function is to distribute the applied vehicle load to the subgrade. The pavement structure should be able to provide a surface of acceptable riding quality, adequate skid resistance, favourable light reflecting characteristics and low noise pollution. The ultimate aim is to ensure that the transmitted stresses due to wheel load and temperature variation must be sufficiently reduced, so that they will not exceed the bearing capacity of the sub-grade.

An ambitious road construction plan is underway in India, which primarily involves bituminous pavements. At the present time, Ministry of Road Transport & Highways (MORTH) Specification for Road and Bridge Works, 2001 Edition is used for construction of all roads including national highways.

Computation of stresses in concrete pavement under complex loading conditions involving application of wheel loads when the slabs are curled due to temperature variation and moisture gradient in slab is of prime importance. These stresses observed in rigid pavement must be critically assessed as they have significant effect on various design parameters. The design of concrete pavement is progressively becoming more scientific because of research on analysis and performance carried out in different parts of the world.

Most recent rigid pavement design guides are based on Empirical-Mechanistic approaches. Available literature specified that field data obtained from AASHTO have been widely used in empirical part of design procedures.

While mechanistic part of design guides provides required information on calculation of the critical stresses and deflection in pavements, which consist of designing a rigid pavement using scientifically evaluated parameters without using any empirical equations. Hence, this paper presents a review on effect of critical stresses in rigid pavement and its effect on various pavement design parameters.