VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi- 590018

PROJECT REPORT ON

"ANALYSIS AND DESIGN OF RC DECK SLAB BRIDGE"

Submitted in partial fulfilment of requirements for the award of degree

BACHELOR OF ENGINEERING

IN

CIVIL ENGINEERING

Submitted by

G MOHAMMED SHAHEER	4AL18CV014
MOHAMMED IRSHAD	4AL18CV020
NAMITH	4AL18CV023
MUHAMMAD SAFWAN	4AL19CV022

Under the Guidance of

Mr. Surendra. P
Assistant Professor
DEPARTMENT OF CIVIL ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY
MIJAR, D.K- 574225
KARNATAKA

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ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

(A Unit of Alva's Education Foundation®, Moodbidri)

"Shobhavana", Mijar, Moodbidri – 574 225, D.K.

DEPARTMENT OF CIVIL ENGINEERING

Certificate

Certified that the project work entitled "**ANALYSIS AND DESIGN OF RC DECK SLAB BRIDGE**" is the bonafide work carried out by

G MOHAMMED SHAHEER	**4AL18CV014**
MOHAMMED IRSHAD	**4AL18CV020**
NAMITH	**4AL18CV023**
MUHAMMAD SAFWAN	**4AL19CV022**

in partial fulfilment for the award of Bachelor of engineering in civil engineering of **Visvesvaraya Technological University, Belagavi** during the academic year 2022-2023, it is certified that all corrections and suggestions indicated for internal assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirement in respect of project work prescribed for the said degree.

24/05/23

Mr. Surendra. P
Project Guide

Dr. H Ajith Hebbar
Head of the Department

H.O.D.
Dept. of Civil Engineering
Alva's Institute of Engg. & Technology
Mijar, Moodbidri - 574 225

Dr. Peter Fernandes
Principal

PRINCIPAL
Alva's Institute of Engg. & Technology,
Mijar, MOODBIDRI - 574 225, D.K.

External Examiners

Signature with Date

1) Surendra. P

24/05/23

2) Swapna. S A

23/5/23

ABSTRACT

Bridge is structure which carries a road or railway across a natural or artificial obstacle such as a river, a canal or another railway or road. Designs of bridges vary depending on the function of the bridge, the nature of the terrain where the bridge is constructed and anchored, the material used to make it, and the funds available to build it.

The bridge at Kuloor (12.938828 N, 74.931107'E) is the only direct route connecting Mangalore and Bajpe. The river Phalguni serenely flows below it. Currently, the bridge is in a bad state. In brief, the bridge needs repair and maintenance even as the traffic just flows over it. The road is too narrow to allow the vehicles in both the directions. The local people have been clamoring for a new bridge from the past several years, but nobody is bothering to take the respective measures. They are also terrified that it may fail to serve the needful purpose.

The main objective of this project is to solve the problems faced by the people at kuloor. The present span and width of the bridge is 187m and 4.5m respectively. The methodology involved is to analyze and design the new RC Deck slab bridge for the span of 180m and width of 16m (4 lane) with IRC 70R+A loading using the STAAD.Pro software.

The analysis and design of RC Deck Slab Bridge has been carried out through the STAAD Pro software as per the IRC guidelines and the following results have been noted. The maximum deflection due to loads on bridge is 77.63mm and also the total quantity of concrete and steel required is 8827.63m^3 and 699968 kg respectively.