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PROJECT REPORT ON

"STRENGTHENING OF PAVEMENT USING GEOTEXTILES"

Submitted by

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In partial fulfillment of the requirements for the degree of

BACHELOR OF ENGINEERING

In

CIVIL ENGINEERING

Under the Guidance of

Mr. Sandeepkumar D S

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CERTIFICATE

Certified that the project work entitled "**STRENGTHENING OF PAVEMENT USING GEOTEXTILES**" has been successfully completed by

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The bonafide students of Department of Civil Engineering ,Alva's Institute of Engineering and Technology in partial fulfillment for the award of BACHELOR OF ENGINEERING in **CIVIL ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI** during the year 2021.It is certifiedthat all corrections/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 requirements in respect of seminar work prescribed for the Bachelor of Engineering Degree.

Sandeepkumar D S 09/08/21

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ABSTRACT

Geotextiles are generally used for straining and separation in road constructions, to prevent relocation and intermingling of materials, thus allowing free movement of water. Geotextiles act as a soupy mass between the two consecutive layers of soil. The geotextiles network should be enough stable such that no difficulty would arise during carrying, installation, and repair work in future. It is commonly divided into two categories: Woven and Nonwoven geotextiles. The functions performed by geotextiles are: drainage, sealing, filtration, separation, and reinforcement. The properties of geotextiles like elongation, tensile strength, diffusive permeability, flexibility etc. are predominantly affected by its molecular weight. Polyamide, Polypropylene, Polyester, Polyethylene are the four main raw used in the fabrication of geotextiles. The economic development of a country is closely related to its road transport infrastructure facilities available. The periodic maintenance of the road is limited due to cost consideration which will disrupt the service and affect the function of the road. To overcome these constraints, Geotextiles shall be used in pavements to extend the service life of the pavement which requires less repair and maintenance and also reduces the total thickness of the pavement system. In this study, an attempt is made to enhance the performance of the flexible pavement using woven geotextiles and non-woven geotextiles between the layers of soft subgrade and base course and also effective utilization of fly ash in subgrade for stabilization.