Department : **Civil**

Year : **2013-2014**

Group No: **8**

Guided By

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Project Title

"IMPROVEMENT OF ENGINEERING PROPERTIES OF SWELLING SOIL (BLACK COTTON SOIL) BY ADDING FLY ASH"

Abstract:

Urbanization and Transportation growth in the economy of India have led to the steep increase in the construction activities and has necessitated the implementation of infrastructure projects such as highways, railways, air strips, water tanks, reclamation etc. These projects invariably require quality earth in massive quantity. In urban areas, borrow earth is not easily available which has to be hauled from a long distance. Quite often, large areas are covered with highly plastic and expansive soil like black cotton soil, which is not suitable for such purpose. Black cotton soil has the tendency to swell when their moisture content is increased and shrink when their moisture content is decreased. The moisture may come from rain flooding, leaking water or sewer lines or from reduction in surface evapotranspiration when an area is covered by a building or pavement. To achieve the economy and for proper performance of structures it is necessary to improve the engineering properties of black cotton soil. Various stabilizers' are used such as lime, cement and calcium chloride. In the present scenario fly ash has emerged as a one of the potential admixture to stabilize the soil. In the present work an attempt is made to understand the effect of fly ash on various properties of expansive soil. Fly ash is mixed in various proportions in a parent soil. For these various proportions of fly ash different properties of soil are determined in laboratory and compared with the parent expansive soil properties. The study is carried out on various properties i.e. compaction properties, Atterberg's limit C.B.R.

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