

# effect of sand on Chabahar-Zahedan railway route and Ways to improve it

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**Abstract:** Since Iran is a developing country, the expansion of communication routes across the country is essential. Due to the fact that in some areas proper materials for roads substructure does not exist, the cost of transportation and high-quality materials from other areas require multiple investments. Improvement of loose substrates of the road superstructure and so-called problematic soils and materials of the subbase and base courses by adding upgrading materials is one of the successful techniques in road construction. By using conventional improvement materials such as lime, cement, fly ash, pozzolan and ..., are recommended for improving the substrate, base, and subbase. Therefore, it is necessary to test and evaluate the amount of effectiveness and the way of application of this type of materials. In this paper, we seek to provide an appropriate solution to solve this problem. Here we study the improvement of railway substructure layers and study the geotechnical characteristics of this type of soil for mixing with dune sand to improve its bearing capacity.

Keywords: Dune Sand, Railways, Road Improvement, Engineering Geology.

## 1. Introduction

Nowadays, the importance of railways, highways and freeways for the development of human societies is not overlooked. The amount of roads available in each country is one of the