

## **BEHAVIOR OF GEOGRID REINFORCED SAND UNDER VERTICAL LOAD**

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**ABSTRACT:** In previous works several experimental investigations aimed at establishing the behavior of granular soils reinforced with geosynthetics have been conducted. It has been found that the capacity of the soil improves due to a tensile force given by the geosynthetic that thus provides a soil reinforcement function and therefore allows a better distribution of pressure in the soil. Many of these studies report the use of CBR tests to characterize the behavior of reinforced soil. The CBR test measures the vertical deformation with application of vertical loads, by which it is possible to characterize the stress-strain behavior of the material. In this paper, modified CBR tests are performed on samples of granular soils reinforced with geogrids in order to establish the behavior of reinforced soil at the load application surface from foundations; in this case the displacements are restricted in the cylinder edges of CBR test. The results are compared with those obtained by CBR testing performed without restricting displacements at the edges and without including any type of reinforcement, which were documented in previous work of the authors.

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