

LOAD TRANSFER OF RETICULATED AND NON-RETICULATED MICROPILES FROM LARGE-SCALE TESTS

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ABSTRACT

Using micropiles for slope stabilization is a proven technique but there are many uncertainties with how load is transferred from the soil to the structural elements. A large-scale model was constructed to test model slopes while measuring slope movement, pore pressures and strains in the reinforcing members. Three groups of tests were performed with different reinforcement geometries for each group with two non-reticulated and none reticulated. Pile spacing was changed within each group. Micropiles were installed in a model slope and the testing device tilting until a slope failure occurred. Using soil-structure interaction techniques, modeling parameters for p - y and t - z analyses were back-calculated and compared to literature. Measured moments and axial loads were reduced and compared. Better estimates of soil modeling parameters from this work will help in estimating these modeling parameters and increasing the reliability of micropile design.