Numerical analysis of foundation on slope

Rinda Karlinasari, author

Abstrak

The bearing capacity of footings on level ground can be predicted by different calculation methods, using the results of laboratory or in situ tests. In the other side the effects of proximity to a slope are poorly understood.

This study was performed as a research on the bearing capacity of foundation on slope, in particular the influence of the internal angle of. friction (Φ), the cohesion (c) of the soil and the eccentricity of the load applied have been analyzed.

The study was conducted using a numerical method that is based on the Finite Difference Method. Building the problem in this numerical method was studied first, then the validation of the code was obtained by comparison to experimental results available. Further the influence of the particular parameters was then studied and analyzed.

The model used is the Mohr-Coulomb model as an approach to the behavior of soil with parameters very easy to define from laboratory tests.

The analysis of the result was performed with making a comparison to the theory or the experimental results available.