SLOPE STABILITY

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ABSTRACT

I've chosen the title of Slope Stability for my final project. In order for me t complete this project, I have to obtain the knowledge of EGC 263, soil mechanics. In this project, there are calculation works and also literature review.

Geotechnical engineers have developed methods of evaluating the potential for failure, and can express it as factor of safety. These methods have proven to be reliable, and are used routinely in geotechnical engineering practice. The main objective of this project is to simplify safety factor calculation of the slope. Tables are formed by verifying the soil properties, such as degree Θ, height h, unit weight of the soil γ, friction angle $\acute{\emptyset}$ and cohesion $\acute{c}$. this table will be constructed using ordinary slice method. I will also demonstrate how this method will actually aid the calculation of the slope safety factor. In case the engineers encounter the similar soil properties as specified in the table, they can work out the safety factor hastily by referring to this table.

For the literature part, I will discuss on terminology, causes of slope failure which include natural and human-induced condition, different modes of slope failure which are slope failure and base failure, procedure of stability analysis that are mass procedure and method f slices as well as the significant of factor of safety for design and a case study about the landslide.

Since the calculation of the slope safety factor is so important, I expect this design table will be used by engineers to ease the hassle of safety factor calculation of the slopes.

DIPLOMA IN CIVIL ENGINEERING