

Cut Slope Stability Analysis and Mitigation of Northern Palawan National Road.

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ABSTRACT

This study used a physical experiment to clarify the mechanisms by which these factors contribute to the occurrence of Rockslide/landslides. Slope stability analysis made using finite analysis method, wedge failure, circular failure; Stability Analysis with seepage force considering all parameters indicated the cut slope is susceptible. Factor of safety or stability factors were analyzed as unstable or susceptible against sliding, overturning and bearing capacity. The slope is steep to very steep composed of silt, siltstone, sandstone and sandy gravel soil which predominantly low plastic behavior, potential swell, intermediately expansive and absorbed water, low strength, low resistance, low deformation and rupture, and its capacity to change shape without altering its volume is relatively low, low conductivity. It has a possibility of rotational slides when saturation effects occurred at different predicted failure plane. Water infiltrates the pores between infilling materials and sandstone cracks, prone to slide when high water pore pressure occurs.

Key words: Slope Stability, Road cut slope, Slope Mitigations, Seepage force, Rockslides.