

THE USE OF LIME STONE (DOMATO) AS EXPANSIVEMATERIAL FOR SOIL IMPROVEMENT(CASE STUDY: ROAD TOMATA - BETELEME)

Ruslan¹, Syamsul Arifin² & Sukiman Nurdin³

¹ Research Scholar, Department of Civil Engineering, Tadulako University, Palu, Indonesia
² Associate Professor, Department of Civil Engineering, Tadulako University, Palu, Indonesia
³Lecturer, Department of Civil Engineering, Tadulako University, Palu, Indonesia

ABSTRACT

The phenomenon of expansive soil is a serious problem in geotechnical engineering that must be addressed immediately. The losses that must be borne by the community are in the form of material and non-material losses. Expansive land in the Tomata - Beteleme location often experiences shrinkage, which can cause minor damage to buildings and pavement. This study aims to determine the effect of lime stone on the bearing capacity of expansive subgrade through testing the physical and mechanical properties of the soil. The method used was to mix lime stone with variations of 3 %, 6 %, 9 %, 12 % and 15 %. Free compressive strength test and triaxial test were reviewed at curing time of 1, 7, 4, and 28 days. The results of the physical properties test showed that the clay soil of Taliwan Village, Tomata Subdistrict, North Morowali Regency in the USCS classification system was classified as CL soil type with a plasticity index value of 14.82 %. The highest free compressive strength test was variation lime stone 15 % with 28 days of ripening.

KEYWORDS: Expansive Soil, Lime Stone, Free Compressive Strength, Triaxial

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