Kajian Pengunaan Tiang Pancang Panjang dan Pendek pada Dinding Penahan Tanah Tanggul Kali Jompo Jember

Givari Rheviyanda Toha, Arief Alihudien, Pujo Priyono

Abstract

Retaining walls are an important structural component of the building for roads and other environmental buildings that are connected to contoured land or land of different elevations. In short, a retaining wall is a wall that is built to hold the mass of land on top of the structure or building being made. The retaining wall is a man-made structure to withstand the lateral ground thrust that occurs due to differences in ground level elevation as well as external loads. Analysis of the stability of the retaining wall of the soil is carried out to determine the dimensions of the walls that can withstand the pressure forces of the soil vertically or horizontally. The use of pile foundations with Ø80 cm on the retaining wall of the jember river embankment, where the Qkel in the vertical direction has a value of 260.49 tonnes greater than P1-21 which is only 163.96 tonnes, Ø65 cm is closer to the value of P1-21 in Qkel of 225.5 Tons. piles with a length of 10m Ø80cm are converted into piles with 26m Ø65 in holding the Maximum Moment of the pile (My) with a value of 35.64 Ton / m compared to a pile of Ø80cm which has a value of 66.45 Ton / m, where the H_{ijin} is 39.3 Ton / m and if divided by the safety factor Ø65 cm My is 11.8 Ton / m ≤ H_{ijin} 13.09 Ton (safe) in the pile collapse factor.

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