

ABSTRACT

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(XIX + 107 + Attachment)

The soil retaining wall used in diaphragm-type planning aims to prevent material from landslides on the road. Based on the results of soil stratification that has been made from three test points, it is known that the type of soil conditions in the field is dominated by silt and silt clay. The initial planning step analyzes field test data and site laboratory tests to obtain preliminary data. The next stage is to calculate the design of the diaphragm wall starting from slope stability analysis, Rankine method lateral soil pressure calculation, stability against rolling, excavation stability, hydrodynamic depth, heaving hazard control and deformation analysis using the Plaxis application. The planned diaphragm wall has a panel width of 10 m, a height of 22 m with a thickness of 1 m. The reinforcement used to withstand the bending moment is D22-365 and to resist shear is D13-160. The location of the development planning project is in the Tangerang City area, so the list of wage unit prices and workers uses a reference based on prices for the Tangerang City area. As a result of the calculation of the budget plan for the planning of the diaphragm wall, the total cost is IDR 93.274.505.805,469 including VAT of 11%. Unit price analysis is carried out by calculating the unit price of work referring to the Annex to the Regulation of the Minister of Public Works and Public Housing Number 1 of 2022.

Keywords: ground retaining wall, diaphragm wall, plaxis

Bibliography, 16 (1985-2022)