

ABSTRACT

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Re-planning of Cantilever Type Retaining Walls in the Construction of the Cinere – Jagorawi Toll Road Section 3 at STA 0+875 to STA 0+950

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(xvii + 77 + Attachment)*

The re-planning of the retaining wall in the construction of the cinere – jagarawi toll road using the cantilever type aims to determine whether the cantilever type retaining wall is able to withstand the load on it and to determine the bearing stability and dimensions of the retaining wall that are suitable for that location. Calculations are done manually with the help of Software Autocad and Ms. Excel. Calculations are made based on SNI 8460:2017 concerning Requirements for Geotechnical Design, SNI 2847:2013 concerning Requirements for Structural Concrete for Buildings, and for the calculation of the budget plan (RAB) based on the regulation of the minister of public works and public housing of the Republic of Indonesia number 1 of 2022 concerning guidelines for the preparation estimates of costs and construction work in the field of public works and public housing. The cantilever type retaining wall is planned to have a height of 7 meters. Stability analysis is carried out to obtain the value of the calculation of stability against sliding of 1.75; stability against overturning of 2.96; and stability against collapse of soil bearing capacity of 4.26. Reinforcement calculations obtained reinforcement for the vertical section of retaining wall pieces I - I produced D20-350, pieces II - II produced D20-350, pieces III - III produced D20-250. Reinforcement for retaining wall foot plates IV – IV pieces produced D20-250, and V – V pieces produced D20-250. Calculation of the budget plan obtained the total cost required is Rp. 10.992.552.028 which has been added with PPN of 11%.

Keywords: Retaining Wall, Silt Clay Soil, Cantilever Type, Stability Analysis of Retaining Wall, Cost Budget Plan.