ABSTRACT

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Bored pile foundation is a type of deep foundation that is usually used for soft soil. Bored pile foundations have the advantage of high soil carrying capacity and do not require a large amount of land. The purpose of this final project is to plan and design the bored pile foundation in the office building to be built. Based on the results of the soil investigation, the characteristics of the dominant soil type were silt silt soil with a hard soil depth at a depth of 14 m. The methods used in planning are Mayerhoff's Method for calculating pole power, Vesic's Method for calculating drop and Broms Method for calculating lateral bearing capacity and column deflection. The calculation of foundation and pile cap repetition refers to SNI 2847:2019. The planned foundation is 14 m long with a diameter of 0.6 m. Building data structure planning using etabs software. Based on the results of the calculation of the carrying capacity of permits for single poles of 282,140 tons on BH-1 and 258,861 tons on BH-2 with a total of 49 poles. The decrease in the foundation of a single pile was 4,594 cm and for the pile group was 9,187 cm. The lateral bearing capacity of a single pile bored pile foundation is 23,333 tons. The reinforcement used in the bored pile foundation is 25D16 for longitudinal reinforcement, and D16-92 for sliding reinforcement. The dimensions of the pile cap used after trial and error are 3 pieces, namely 2400 mm x 900 mm for a 2-pole configuration and 2400 mm x 2200 mm for a 3-pole pile cap reinforcement configuration and 2400 mm x 2400 mm for a 4-pole configuration. Cost Budget Plan (RAB) for bored pile and pile cap foundations for the construction of office buildings in Central Jakarta amounting to Rp. 2.556.515.500,00,-

Keywords : Foundation, Bearing Capacity, Mayerhoff, Silt Land, Drill Pole