

## SUMMARY

**Mayangsari**, *Department of Civil Engineering, Faculty of Engineering, University of Brawijaya, August 2018, Analytical Comparison of Driven Foundation and Bore Pile Foundation in Dental and Oral Hospital of Brawijaya University Construction Project. Academic supervisor: As'ad Munawir and Yulvi Zaika.*

*Dental and Oral Hospital of Brawijaya University (RSGM UB) is one of the infrastructure supporting educational buildings located in Brawijaya University, Malang city. Construction of RSGM UB is planned use, bore pile foundation. In this study, the re-planning of the foundation uses driven pile foundation. The planning of this foundation aims to determine the planning of the driven pile, comparing the amount of cost needed in the work of the driven pile and bore pile foundation. So, of the two types of foundations, which types of foundations are more efficient and economical, and which foundation is the faster process of completion.*

*Planning of driven pile foundation using the calculation of end point bearing capacity Mayerhof, Vesic, and Coyle and Castello methods. While, in calculating the frictional skin resistance capacity using the  $\alpha$ ,  $\lambda$ , and  $\beta$  methods obtained from laboratory tests. The soil parameters used are:  $\phi$ ,  $c$ , and  $\gamma$  under undrained conditions. Where the bearing ultimate capacity is obtained at 742.28 kN. Based on the results of the investigation of soil is known that the type of soil is dominated by sand soil. Thus, to estimate the bearing capacity of the driven pile obtained from field testing data, such as SPT testing. Bearing ultimate capacity of permits from the results of field data was 609.816 kN.*

*The results of the planning of the number of driven piles were 330 poles with an estimated cost of Rp. 4.750.140.000 and for the drill pole was 157 with an estimated cost of Rp. 6.350.000.000. So, from the results of the comparison of the two foundations based on cost efficiency, the driven pile foundation is more efficient and economical than the drill pile foundation. However, if we look at the implementation aspects of the bored pile foundation, the completion is faster than the drivem pile foundation, where the work process can only be at night.*

*Keywords: driven pile foundation, bearing capacity, construction cost*

*“Halaman ini sengaja dikosongkan”*