

## ABSTRACT

*White Hotel Sedan is built between residents' houses, so the use of foundation pole drill is more efficient and does not cause vibration and sound effects that can be harmful to the surrounding buildings. The bored pile foundation is planned with 3 (three) alternatives, 60cm, 70cm and 80cm diameter. The purpose of this research is to discover the comparison of the bearing capacity foundation with three methods, diameter and number of pole with 3 (three) safety factor. The design of bored pile foundation on White Hotel Sedan construction using static method based on sondir test result. The result of bearing capacity analysis of Meyerhoff method diameter 60 cm, 70 cm, and 80 cm, obtained respectively 4947,828 kN, 3244,138 kN, and 4098,118 kN bigger than value  $P = 2879,682$  kN, Schmertmann and Nottingham method of diameter 60 cm, 70 cm, and 80 cm, obtained results 3748,937 kN, 4799,52 kN, and 2879,682 kN bigger than value  $P = 2879,682$  kN, and method of Reese & Wright diameter 60 cm, 70 cm, and 80 cm, obtained respectively of 3248.399 kN, 3922,888 kN, and 4635,403 kN greater than the value of  $P = 2879,682$  kN, so the bored pile foundation with a diameter of 60 cm, 70 cm, and 80 cm is safely used in the construction of the White Hotel Sedan. With various alternatives, which are 60 cm, 70 cm, and 80 cm in diameter, the 3rd alternative diameter of 80 cm Meyerhoff method is used with 1 pole in one pole group. This is based on the number of poles that are used less, so it can save the work time and construction costs incurred. In addition, the results of bearing capacity of pile group ( $Q_g$ ) is greater than the axial load ( $P$ ) and the total axial load ( $P_t$ ) received, ie  $4098,118$  kN >  $2879,682$  kN and  $4098,118$  kN >  $3071,143$  kN, so that the load of the building structure on the foundation can be retained by the foundation pile group.*

*Keywords: Metode, bearing capacity, diameter*