Abstract

Commonly, foundation has its role as the most bottom building supporting structural component and the last element which continue load deep in to the ground. In the design of the foundation for a large building on a deposit of clay, it may found that raft foundations have an acceptable factor of safety again ultimate bearing capacity failure, but that the settlement would be excessive.

Designing a Pile – Raft System proposed by Poulos and Davis (1980), the number of piles required to reduce settlement without using a complicated analysis.

In the final project instead of looking at complicated graphic and equation, solving by using excel worksheet had been done for practical purpose.

In the conclusion, the additional of friction pile in Raft Foundation becomes Pile Raft System was able to reduce the
settlement to 90%. While in Pile Raft System itself, the pile length is more influential compare to the number of pile. The calculation in this project was limited no more than 25 piles.

Keywords: Pile-Raft System, Friction Pile, Settlement.