ABSTRACT

Foundation is part of structure which directly in contact with soil, in such a way that soil condition and soil type directly affects the determination of soil bearing capacity and the foundation construction method. Foundation design process includes calculating size and depth of foundation. These variables are calculated from data given by soil investigation tests. But these data has its limit due to the irregularity of soil layers and its heterogeneous nature. This limitation gives a certain degree of uncertainty in every soil investigation results, which correlates to the amount of risk each design must have.

The data for this thesis is taken from Project "Interchange of Penjaringan" at Sedyatmo Toll Road ,year 2011-2012, which connectsPantai Indah Kapuk area in the north part to PuriKembangan area through JalanTol JORR W and data from housing area at Pantai Indah Kapuk. Interchange of Penjaringan is located on swampy area.Next step is to process the descriptive statistic's numbers for analyze the whether correlation exist between variable range of area, number of soil investigation and soil capacity.

The analysis resulted in a correlation between range of area and number of soil investigation needed to be conducted, while the number of soil investigation correlates with the design length of foundation pile to be implemented at project.

Keywords: swamp, foundation pile