

ANALYSIS OF PLANTS ON SOFT SOIL IN THE DEVELOPMENT OF DEPOK TOLL ROAD - ANTASARI PHASE II RULE BRIGIF - SAWANGAN

(Case Study :STA : 8+500 – 8+750)

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ABSTRACT

Depok City is a city in West Java Province, Indonesia. As the Infrastructure Development in Depok City is rapidly increasing, so the Depok-Antasari toll road construction is built on soft clay soil layers, so that the subgrade has a low carrying capacity that can result in the planning of the embankment having a large compression carried out by research PT Girder Indonesia's laboratory. Therefore it is necessary to plan a pile of basic soil improvement to increase the carrying capacity of the subgrade and accelerate the process of soil compression.

So that a preloading method is needed to improve the characteristics of soft soils. For planning the pile on soft soil using manual method and with the help of geostudio / slope w from the calculation analysis that has been done, it is obtained the height of the pile plan (HR) as a load of 9 m with 30 days time. For a long period of decline in original soil without PVD (prefabricated vertical drain) is 300 years, for a time of decline in original soil using PVD 48 weeks or 1 year. On the results of the pile safety factor after PVD is 1,800 with a length of 18m, while for the pile safety factor before PVD is 1,100.

Keywords: Soft clay soil, settlement, embankment, preloading method, prefabricated vertical drain (PVD), safety factor, geoslope/w.