

## **A Study on the Response of Vacuum Consolidation on Soft Clay in Combination with Prefabricated Vertical Drain (PVD), Embankment and Surcharge Preloading**

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**Abstract :** The application of vacuum pressure to accelerate ground consolidation has been growing significantly in recent years. This ground improvement technique has its advantages, especially in areas where suitable fill is scarce, as it minimizes the surcharge fill height required for the preloading. A study was carried out to examine the response of soft subsoil subjected to vacuum consolidation in combination with embankment loading, surcharge preloading and PVD with two-way drainage. This paper shall describe a procedure to determine the optimum surcharge height and penetration depth of prefabricated vertical drains (PVD) where vacuum consolidation is combined with the use of PVD in soft clay deposits with two-way drainage.

**Keywords :** prefabricated vertical drain, soft soil, surcharge preload, vacuum consolidation

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