

DYNAMIC REPLACEMENT



GFWA

SUSTAINABLE TECHNOLOGY

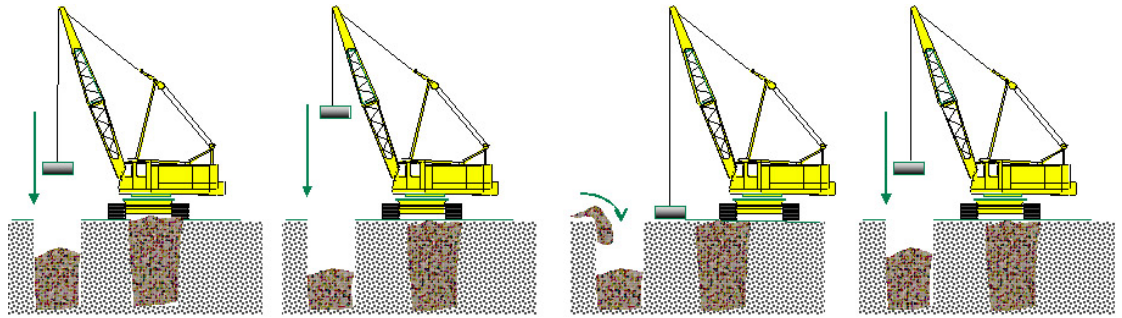


Dynamic Replacement is one of the techniques invented by Louis Menard for improving the strength of saturated soft cohesive or organic soils. This technique is applicable to all clean granular soils, and to dry, partially saturated and saturated soils with substantial amounts of fines.

In this method granular material is pushed into the soft soil using a pounder weighing 5 to 30 tons is dropped 5 to 30 meters. The pounder weight, drop height, arrangement of the impact points, number of phases, number of blows per phase and rest periods depend on the soil characteristics, design criteria, load intensity and load layout.

This ground treatment technique is applicable to the foundations of commercial, residential and industrial buildings, tanks, roads, platforms, reclaimed areas and large embankments.

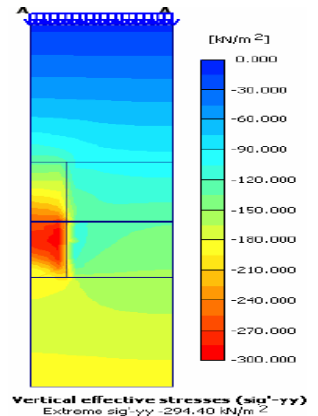
Work procedure for Dynamic Replacement



Cliff Road Overpass

This project was the construction of 4 to 8m high embankments at the site for the Cliff Street Overpass in Portland, Victoria.

The soil investigation revealed that the upper 4 m of soil was soft and compressible fine soils. Dynamic Replacement was chosen as the optimum solution for reducing the long term settlements to the project specifications.



Recent References

- Al Sowa Island Development (UAE)** - Mubadala - 600,000 m²
- Alexandria City Center (Egypt)** - Majid Al Futtaim Misr - *Commercial buildings* - 220,000 m²
- Beirut Container Terminal No. 15 (Lebanon)** - Government of Lebanon- *Container terminal* - 160,000 m²
- Shuaiba Desalination Plant (Saudi Arabia)** - Shuaiba IWPP- *Industrial structures* - 150,000 m²
- Cliff Street Overpass (VIC, Australia)** - Victoria Roads, *Road and embankment*
- Townsville Sugar Terminal (QLD, Australia)** - Queensland Sugar - *Storage*
- Westlink M7 Wallgrove Road Interchange (NSW, Australia)** - RTA – *Road & embankment*

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