

(5) TRENCH BUILDING MACHINE TBM (2007) – Sending and Receiving Rooms

The construction of main sewage at 9.00 m depth below ground level to serve Alexandria East Treatment Plant passes beneath Alexandria – Matrouh railways necessitated the design of two structure reinforced concrete rooms of 8.0 m length square shape to accommodate the machine functions at the sewage line's beginning and ending points. The construction of 9.00 m deep square room required a temporary supporting system to facilitate excavation from ground level to foundation level in very soft clay geological profile. Secant pile wall of 600 mm diameter RC piles intersecting with bentonite piles of same diameter over 150 mm distance served to support the soil excavation height and a difference of ground water table inside and outside the wall of 6.00 m. The wall at beginning points had the capacity to support additional forces due to the machine thrust in the pushing mode.

