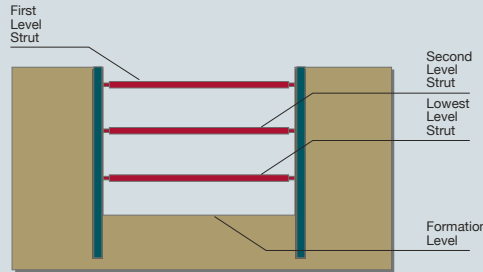
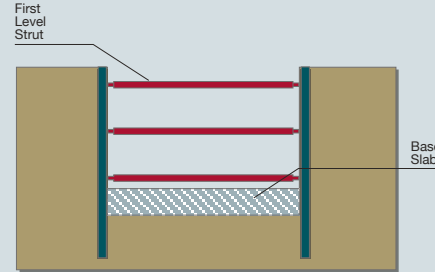


03. Excavation & Installation of Steel Strut



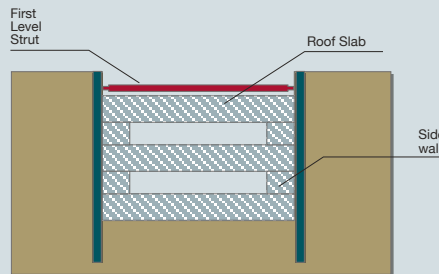
The soil is excavated to the next strut level and the second level strut is installed. It continues till the excavation reaches the final depth or formation level. The number of strut levels depends on the excavation depth.

04. Construction of Underground Structure



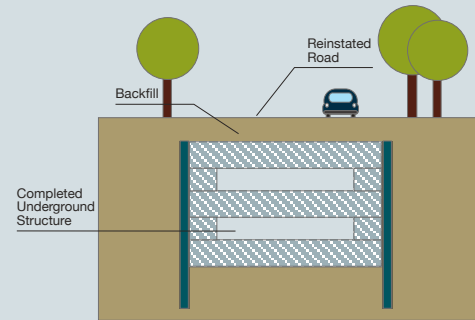
At formation level, the reinforced concrete slab or base slab is constructed, followed by the removal of the lowest level strut and the side walls are constructed.

05. Construction of Underground Structure



The next level of slab is constructed, followed by the removal of the strut near to that slab level. This process progresses upwards till the roof slab is constructed.

06. Backfilling & Reinstatement



After the roof slab is completed, the soil is backfilled to the first strut level before the first level strut is removed. This is followed by completely backfilling the top of the underground structure. If the retaining wall is a diaphragm wall or a bored pile wall, the top 2 metres of the wall will be removed. If it is a sheet pile wall, the sheet piles will be extracted.

While noise, dust and other inconveniences are inevitable during construction, LTA will work closely with the contractor to keep them to a minimum.



CONSTRUCTION OF DIAPHRAGM WALL



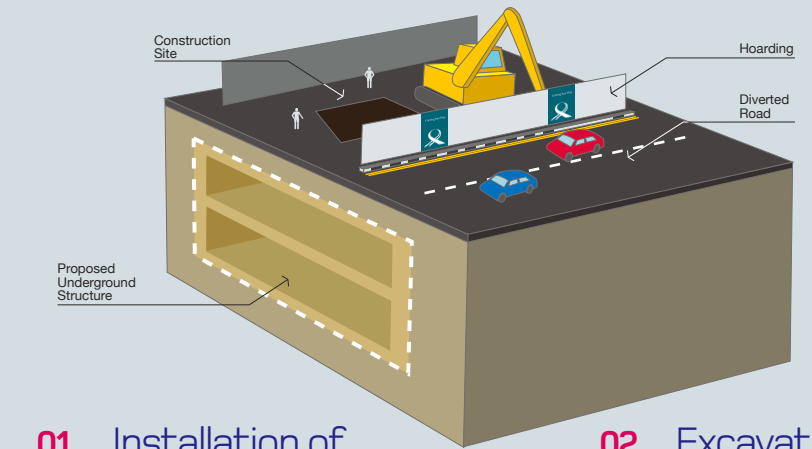
If you have any suggestions or feedback, please call our Customer Service Line: 1800 - CALL LTA 1800 - 2255 582

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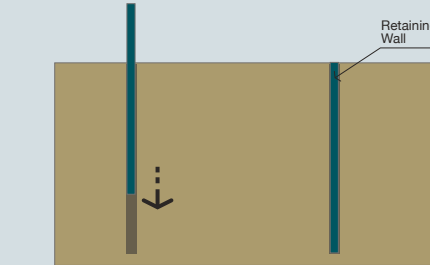


The underground Rapid Transit System (RTS) stations and cut-and-cover tunnels are typically constructed by the “open-cut and bottom-up” method. In this method, the earth is excavated to the required depth with retaining walls and struts supporting the soil at the sides. Upon the completion of excavation to the required depth, the base slab of the underground structure is cast at the bottom-most level, followed by the side walls. Casting of concrete progresses upwards, level by level till the roof of the structure is completed. Ground is then backfilled and reinstated.

OPEN-CUT & BOTTOM-UP CONSTRUCTION METHOD

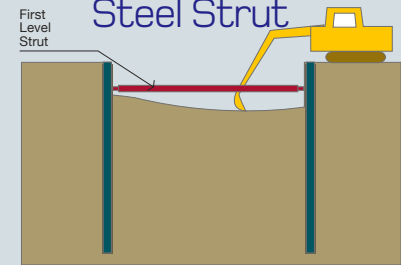


01. Installation of Retaining Wall



The underground retaining wall is installed before excavation commences. The retaining wall can be a concrete diaphragm wall, a concrete bored pile wall or a steel sheet pile wall; depending on the site condition, soil type and the excavation depth.

02. Excavation & Installation of Steel Strut



The soil is excavated to the first strut level. The first level strut is installed before the excavation proceeds further.