



MetroLink Construction Phase – Tunnel Lining Supports

Tunnel Supports

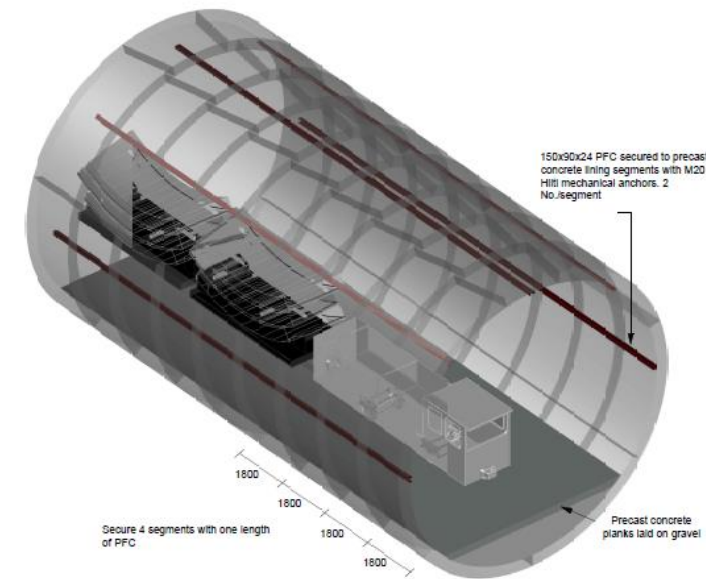


Preparation work within tunnel

The preparation for the excavation around the tunnel rings will require the following works to be undertaken from within the tunnel:

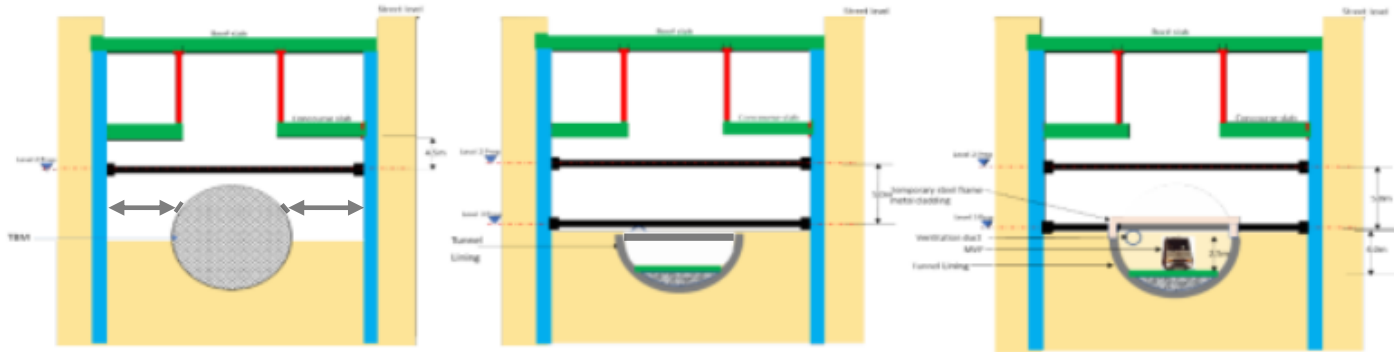
- Protection will be placed around the 11kV cables supplying the TBM and conveyor booster stations, to protect these against any flying debris from blasting.
- Removal and protection of necessary tunnel services
- The tunnel will be fitted with controlled stop points on either side of the station so that access through the tunnel is suspended during blasting or ring removal operations.
- Steel channel sections will be bolted to the inside of the tunnel lining rings longitudinally to keep the rings held together when exposed.

Station Excavation: Temporary restraint to tunnel lining



Isometric View of
Transverse Section

Tunnel Supports



Prior to TBM stoppage:

- Excavate down below level two prop and expose the crown of the tunnel.
- Continue excavation down to axis of the tunnel evenly on both sides in approx. 10m long sections providing temporary struts as required

The following works are to take place during a stoppage to the TBM (e.g. for cutterhead maintenance), with all traffic within the tunnel prohibited:

- Carefully remove the top half of the tunnel lining. Hang the TBM ventilation duct from the level 2 props or concourse slab
- Install the level 3 props
- Install a 'top hat' steel support structure over the half-tunnel
- The tunnel and station works will therefore both before and after be segregated by physical barriers

