B. The Contractor shall select between using inter-locked sheet pile cofferdam or reinforced concrete caisson as the most appropriate for the site conditions and for the soil profile.

C. All the joints between caisson rings shall be sealed with joint sealant and the caisson grouted from outside in order to make it watertight.

D. Interlocked steel sheet piles shall be braced by suitable steel framing welded to the sheet piles. No struts shall be used for bracing. The first set of bracing shall be 0.5m from the ground surface.

E. The pit bottom shall be sealed with a concrete plug, which shall be placed underwater and designed to resist water uplift as well as forces from the jacking equipment to be installed in the pit.

F. A reinforced concrete wall shall be provided in the thrust pit to resist the jacking force. A properly braced concrete wall shall be provided in the thrust and reception pits in order to install the exit and entry rings.

G. If a portion of the pit is to be constructed in rock, then this portion may be unsupported provided the rock layer is strong enough to safely resist all the expected forces and stresses. Contractor shall prove this by testing and calculation. Special precautions shall be taken to seal the interface between the caisson or sheet piles and the rock so that it is water and soil tight. Rock faces should also be treated if necessary to make them watertight.

H. The pits/shafts shall be maintained dry prior to commencing and throughout tunneling works. Dealing with groundwater were required shall be carried out carefully and slowly. The Contractor shall provide standby facilities.

I. Thrust wall shall be:

1. Perpendicular to the proposed line of thrust.
2. Sufficient to accept repeatedly the maximum permitted thrust force without undue movement and without thrusting directly off any part of the permanent works comprising any shaft, chamber or pumping station unless this is specifically designed to withstand the thrust reaction.
3. Not joined to the jacking rig base.
4. Any void between the soil face used to provide a reaction to the thrust force and the thrust wall filled completely with grout or concrete.

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