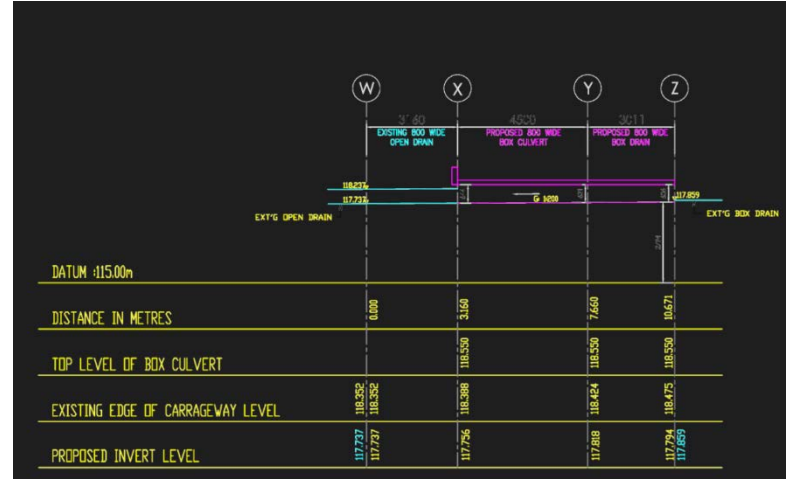
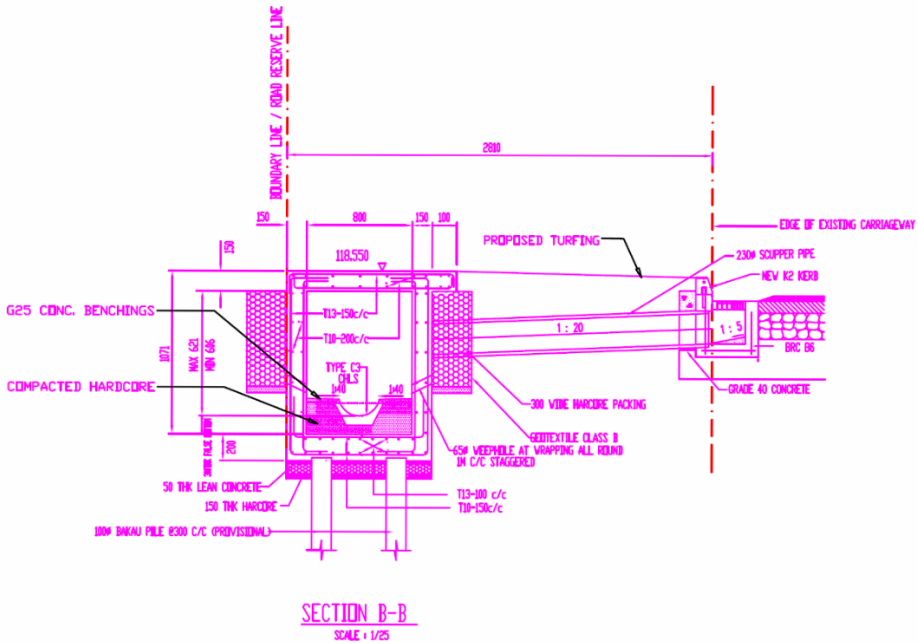
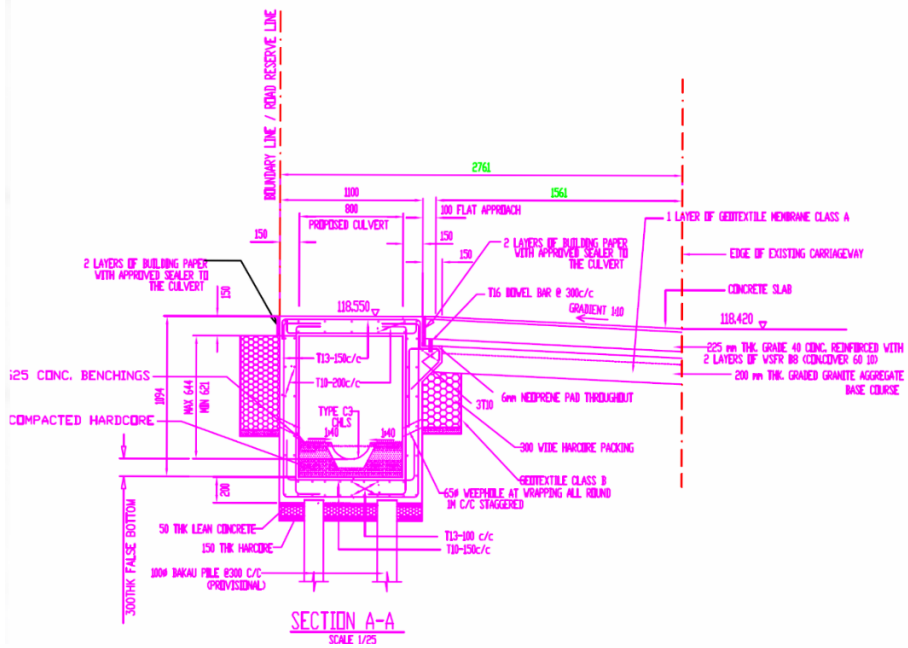


**Quick Guide to Application of  
Clearance Certificate for Detailed  
Plan (DP) Drainage Works (Internal)  
- Minor Project**

# WHAT DO YOU NEED TO SUBMIT?

- Your submission should show clearly the following
  - Cross-sectional of the drain
  - Longitudinal section of the drain and to indicate drain gradient, invert and cope level (including existing drain connection)
- For a development or structure constructed within less than 300mm from a Drainage Reserve and drain, the survey plan shall include a site plan and cross-sections showing the development or structure and lot boundary in relation to the Drainage Reserve.





Sample – Longitudinal section of the drain

Sample - Cross-sectional of the drain

# **FOR DEVELOPMENT WITH NEW BOX CULVERT OR EXTENSION OF EXISTING BOX CULVERT**

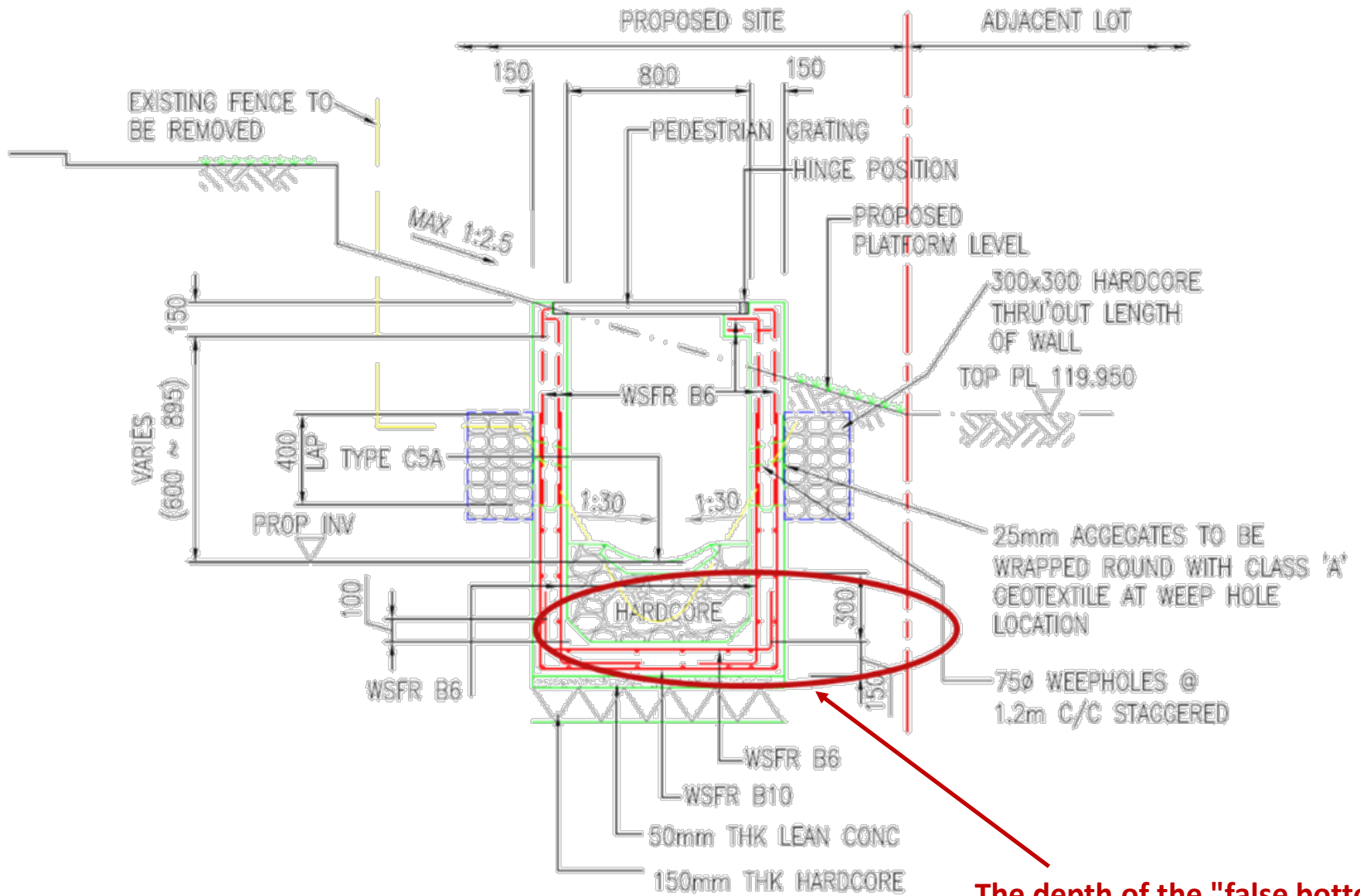
- The submission should include the Professional Engineer (PE)'s endorsement
- For vehicle crossing - Please indicate that the culvert is designed to withstand vehicular loading of  $20 \text{ kN/m}^2$
- For pedestrian crossing - Please indicate that the covered drain / culvert is designed to withstand nominal loading of  $10 \text{ kN/m}^2$



# THINGS TO NOTE

- Where an entrance culvert/crossing is proposed at a stretch of closed drain, gratings/openings shall be provided at the closed drain sections immediately upstream and downstream of the proposed entrance culvert/crossing.
- The internal width and clear depth of a roadside drain/culvert (including entrance culvert) shall be at least 600mm or align to the size of the existing drain size (whichever is wider).
- If the depth of the roadside drain is less than 600mm, a "false bottom" shall be provided. The depth of the "false bottom" shall be at least 300mm. The depth of the drain together with the "false bottom" shall be at least 600mm.





## **SECTION D-D**

(SCALE 1:30)

**The depth of the "false bottom" shall be at least 300mm**

# REMINDER

- Removal of service structure within the new culvert / boxed drain
  - a) As specified in clause 5.5.2 of Code of Practice on Surface Water Drainage, where services are approved to be laid within a drain or Drainage Reserve, the services shall be laid to undercross the drain throughout the full width of the drain with a 1.0 m minimum clearance below the invert of the existing or proposed lined drain
  - b) As specified in clause 5.5.4 of Code of Practice on Surface Water Drainage, where new drains are to be constructed or existing drains are to be reconstructed, all existing services within or across the drains shall be re-laid at the cost of the developer / owner to undercross the new or reconstructed drains



Remember to enclose a cover letter and endorse the following on your drawings

- a) The planning, design, construction activities and procedures for plan submission shall comply fully with the requirements as stipulated in the latest edition of the Code of Practice on Surface Water Drainage and the Sewerage and Drainage (Surface Water Drainage) Regulations 2007.
- b) The capacity of internal drains shall be sufficient to intercept and discharge all runoff from the development site.
- c) The runoff within, upstream of and adjacent to the development lot can be effectively drained away without causing flooding within the lot or in areas outside the lot.







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