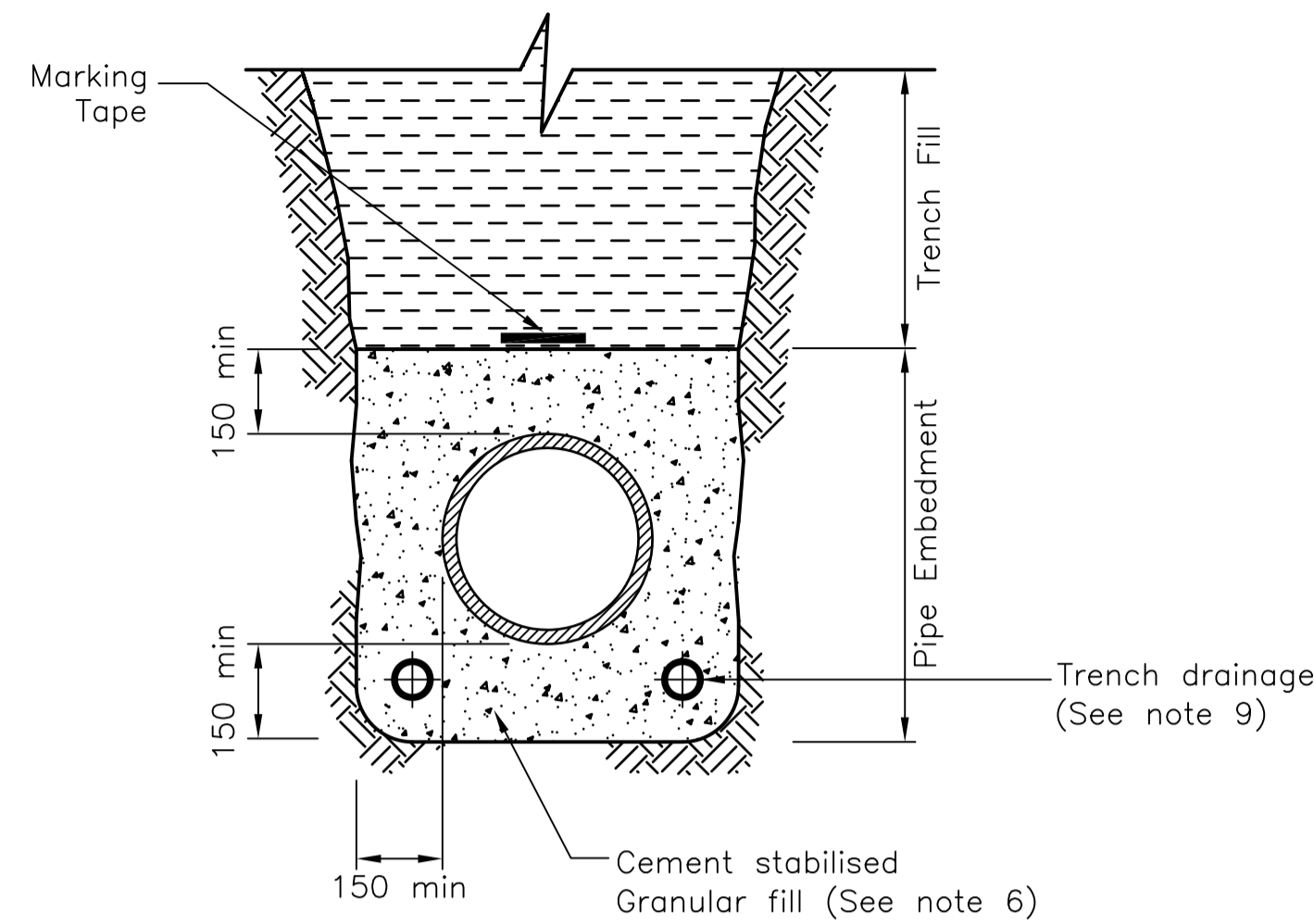
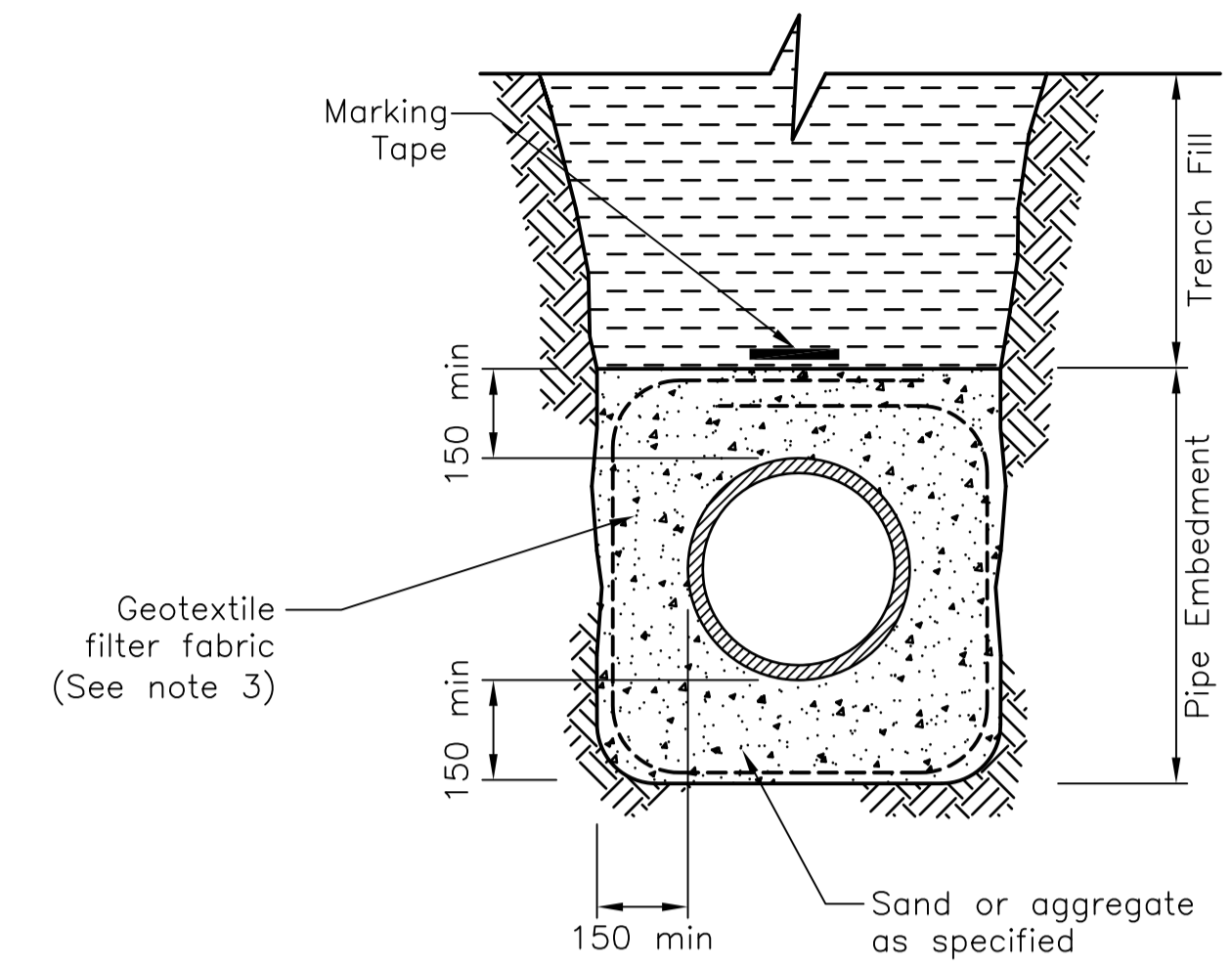


TYPE 'J' & 'K' SUPPORT
 (TOWNSVILLE WATER APPROVAL REQUIRED)
 NON-REINFORCED (TYPE J)
 REINFORCED (TYPE K)
 ALL PIPE TYPES

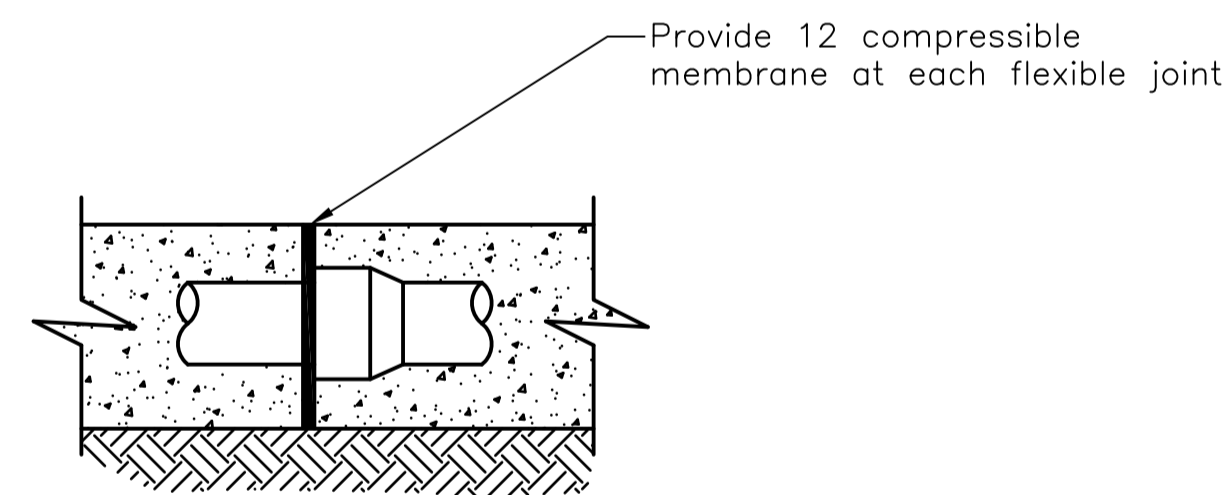


TYPE 'L' SUPPORT
 ALL PIPE TYPES



TYPE 'M' SUPPORT
 ALL PIPE TYPES
GEOTEXTILE SURROUND SYSTEM
GROUNDWATER SEEPAGE CONDITIONS
 (TYPE M)

CEMENT STABILISED FILL SYSTEM
INADEQUATE TRENCH WALL STIFFNESS
 (TYPES J, K, & L)



JOINT DETAIL FOR CONCRETE ENCASEMENT

CONCRETE ENCASEMENT SYSTEM
 (TOWNSVILLE WATER APPROVAL REQUIRED)

NOTES

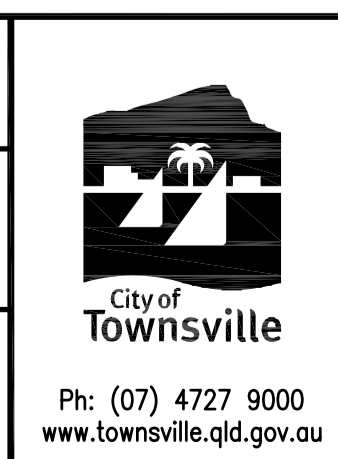
1. All dimensions are in millimetres unless noted otherwise.
2. Use these support types only where specified on the design drawings or in the job specification.
3. Lay geotextile filter fabric against the trench floor and wall such that it fully encases over excavation. Provide min of 250 lap at all filter fabric joints.
4. Unreinforced concrete to be class N20, and reinforced concrete N25 For aggressive conditions use special grades of concrete.
5. Minimum steel reinforcement of 0.4% of concrete cross section placed centrally and with minimum cover of 65 to external face. Specify reinforcement for the applicable loading in design drawings.
6. Cement stabilised granular fill to have 6% minimum cement (by volume), place dry.
7. Pipes will require a restraint system to prevent movement and/or flotation during encasing process.
8. Provide dowel pins as designed on the design drawings at each encasing joint to prevent the pipe shearing at the joint.
9. See SD-375 if continuous trench drainage is required.
10. Embedment material to be in accordance with design drawings, job specification and AS2566.2, Tables G1, G2 and G3.
11. Townsville water written approval required for concrete encasement of pipes.

No.	DATE	DESCRIPTION	AP'D
B		REFERENCES AMENDED	
A		ORIGINAL ISSUE	
REVISIONS			

NOTES : BASED ON FORMER WSAА DRAWING WAT-1204

Full Size A1
 Not to Scale

DRAWN: DESIGN OFFICE
 CHECKED: D Moseley
 Design Engineer Approved: P Turl
 Date: 24-07-2012
 Manager Approved: M Harvey
 Date: 24-07-2012



SPECIAL EMBEDMENTS
CONCRETE, GEOTEXTILE
AND CEMENT STABILISED SYSTEMS

STANDARD DRAWING
 WATER
 SD-340 B