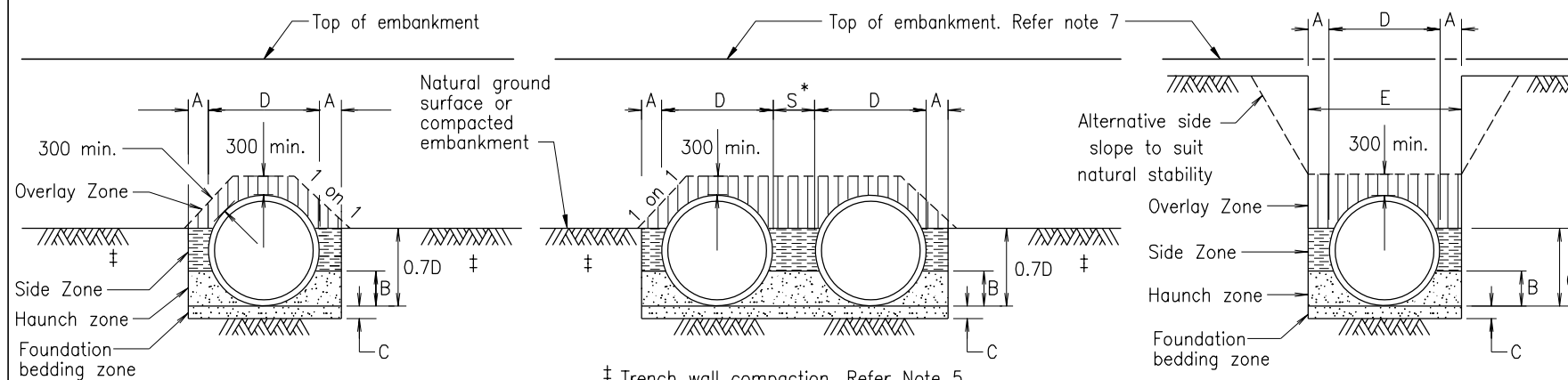
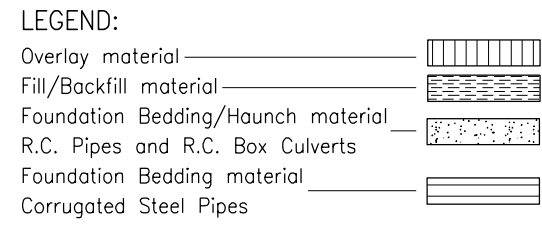
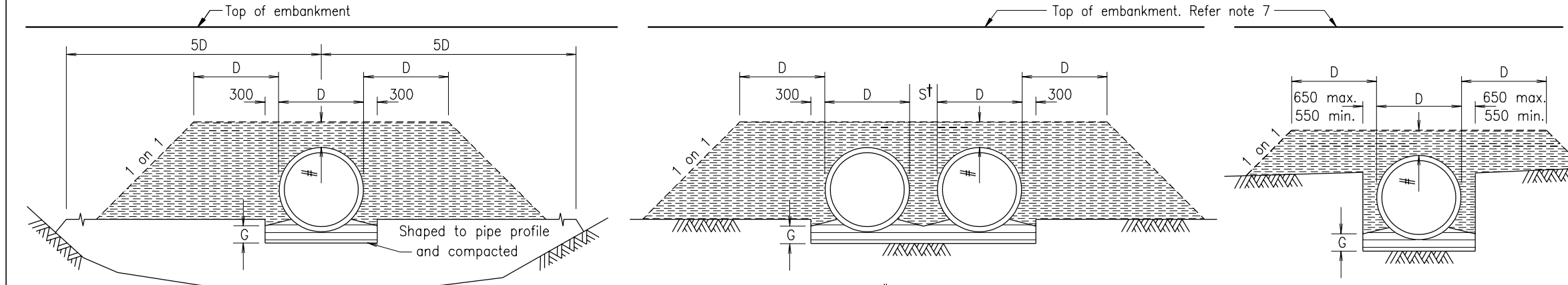


NOMINAL INTERNAL DIAMETER, ID(mm)	MINIMUM WIDTH, A (mm)	HAUNCH DEPTH, B (0.3 x D mm)	MAXIMUM ALLOWABLE WIDTH, E(m) TRENCH INSTALLATION
300	300	110	1.1
375	300	135	1.2
450	300	160	1.3
525	300	180	1.5
600	300	205	1.6
750	450	255	1.8
900	450	310	1.9
1050	450	360	2.1
1200	450	405	2.2
1350	450	450	2.4
1500	500	505	2.7
1650	500	550	2.9
1800	500	600	3.1
1950	500	665	3.3
2100	500	715	3.5
2400	600	810	4.2
2700	600	910	4.6
3000	700	1005	5.0

- NOTES :**
- "D" denotes external diameter of culvert.
 - FOUNDATION BEDDING**
 - C R.C. Pipes
 - 100 if ID < 1350
 - 150 if ID ≥ 1350
 - G Corrugated Steel Culverts
 - 100 in firm material other than rock
 - $\frac{D}{4}$ or 250 whichever ever the lesser in rock
 - H Precast Box Culverts
 - 75 min. in firm material other than rock
 - 150 min. in rock
 - SPACING BETWEEN MULTIPLE CULVERTS**
 - S[†] R.C. Pipes
 - 300 when nominal ID ≤ 600
 - 600 when nominal ID > 600 and ≤ 1800
 - 900 when nominal ID > 1800
 - S^{††} Corrugated Steel Culverts
 - Nestable Culverts :
 - $\frac{Dia}{2}$ or 300 min.
 - Helical Lock-seam Culvert :
 - 300 (when nominal ID ≤ 600)
 - $\frac{Dia}{2}$ (when nominal ID > 600 and ≤ 1800)
 - 1200 (when nominal ID > 1800)
 - Plate Culverts :
 - $\frac{Dia \text{ (or span)}}{2}$ or 1200 max.



‡ Trench wall compaction. Refer Note 5



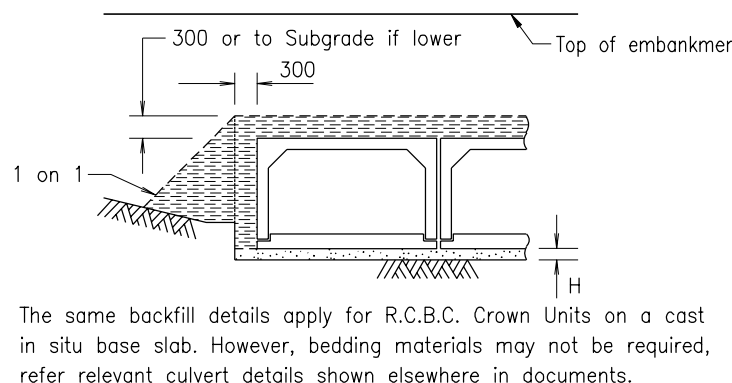
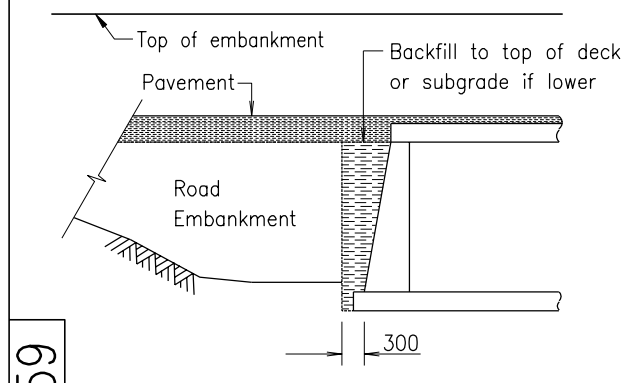
- WINGWALLS fill/backfill material shall be placed 300mm thick behind wingwalls for the length and height of the wings.
- TRENCH WALL COMPACTION** of natural ground or embankment Minimum 90% Standard RDD for minimum 2.5D each side of trench wall and to a minimum depth of 0.7D.
- DETAILS TO BE SHOWN ELSEWHERE IN THE DOCUMENTS** concrete pipe support type.
- WORKING LOADS** are those due to fill material and standard highway vehicles as per AS 3725. Allowance for construction loads shall comply with standard specification MRS11.03.
- MINIMUM DEPTH OF OVERLAY ZONE** above pipes/culverts as shown may include pavement. Pavement within this area to be compacted by hand or alternatively a lean mix concrete pavement layer may be used.

9. HELICAL LOCK-SEAM CORRUGATED PIPE CULVERTS MINIMUM COVER:

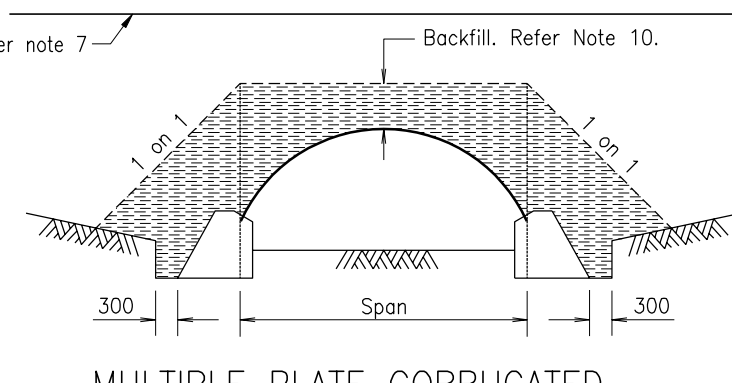
Diameter	Minimum Cover
≤1200mm	600mm
>1200mm	$\frac{Diameter}{2}$

10. NESTABLE AND MULTIPLE PLATE CORRUGATED STEEL CULVERTS: Minimum cover shall be 600mm or Diameter or Span whichever is the greater.

11. DIMENSIONS are in millimetres unless shown otherwise.
 ASSOCIATED DOCUMENTS :
 Department of Main Roads Manual of Standard Drawings Roads
 Department of Main Roads Manual of Standard Specifications Roads
 REFERENCED DOCUMENTS :
 Australian Standards :
 AS 3725 Loads on Buried Concrete Pipes
 Standard Specifications :
 MRS11.03 Drainage, Retaining Structures and Protective Treatments
 MRS11.04 General Earthworks



The same backfill details apply for R.C.B.C. Crown Units on a cast in situ base slab. However, bedding materials may not be required, refer relevant culvert details shown elsewhere in documents.



1359

R.C. SLAB DECK CULVERT

PRECAST R.C. BOX CULVERT

MULTIPLE PLATE CORRUGATED STEEL ARCH CULVERT

CULVERTS			
INSTALLATION, BEDDING AND FILLING/BACKFILLING AGAINST/OVER CULVERTS		Size A3	Drawing No
		Scales	1359
		as shown	Date 10/03
			A B C D E