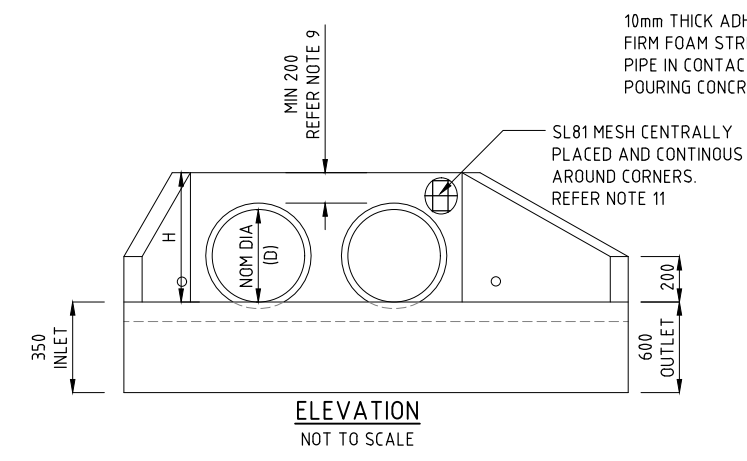
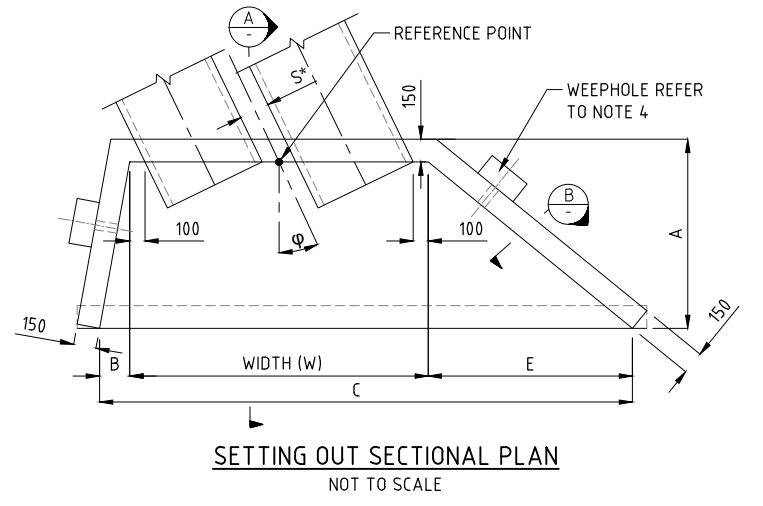
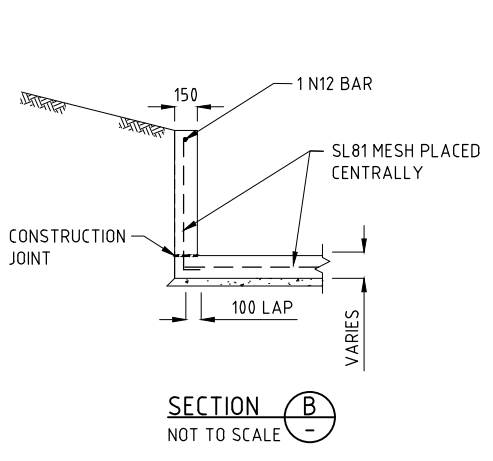
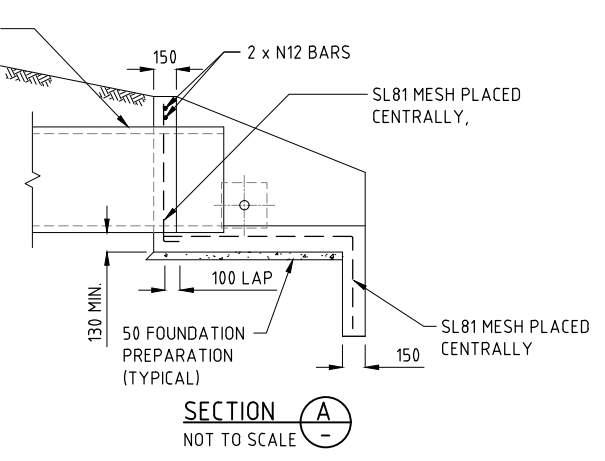


SETTING OUT OF PIPES
NOT TO SCALE

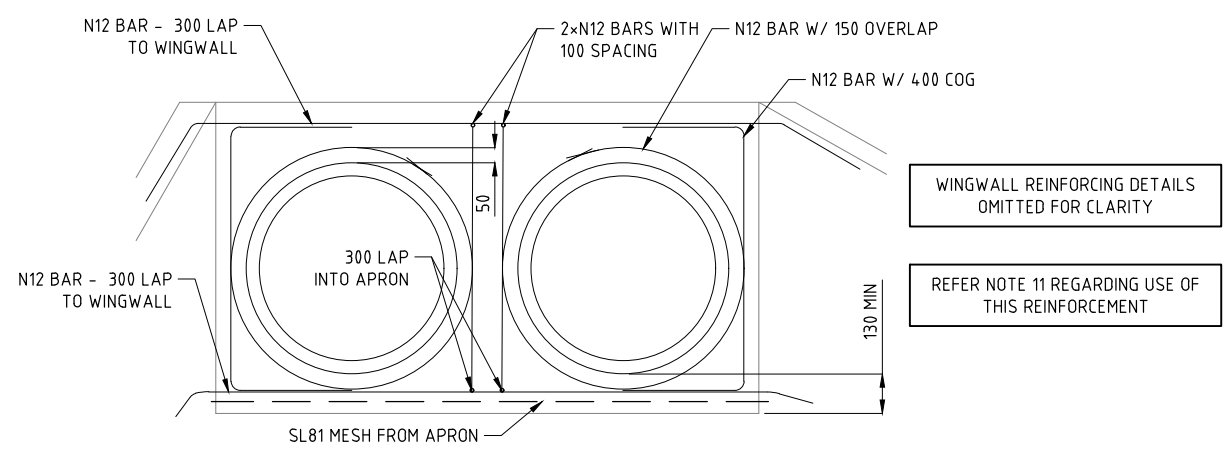


10mm THICK ADHESIVE BACKED POLYETHYLENE FIRM FOAM STRIP BONDED AROUND TOP HALF OF PIPE IN CONTACT WITH HEADWALL BEFORE POURING CONCRETE

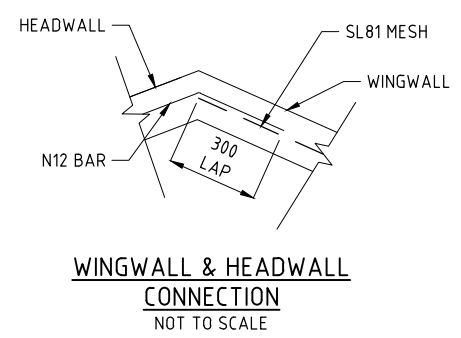


NOTES:

1. DESIGN LOADS ARE IN ACCORDANCE WITH AUSTRALIAN BRIDGE DESIGN CODE AS5100.
2. HEADWALLS ARE NOT DESIGNED FOR GUARDRAIL IMPACT FORCES.
3. THE SETTING OUT DIMENSIONS IN THIS DRAWINGS ARE BASED ON A SET ROAD BATTER AND CULVERT BATTER SLOPES BEHIND THE WINGWALLS. THE MAXIMUM SLOPE SHALL BE 1V:2H.
4. STANDARD DRAWING REFERENCES:
 - 4.1. CS3100 - NOTE 1 FOR THE RECOMMENDED REINFORCEMENT COVER THICKNESS AND CONCRETE STRENGTH UNDER DIFFERENT EXPOSURE CLASS.
 - 4.2. CS3100 - NOTE 31 AND 32 FOR WEEPHOLES AND APRON DETAILS.
 - 4.3. CS3101 - TABLE 1 FOR SPACING BETWEEN PIPES, S*.
 - 4.4. CS3127 & CS3128 - WINGWALL SETOUT DIMENSIONS & QUANTITIES [A], [B], [C], [E], [H]
5. REINFORCING BAR SHALL BE D500N AND MESH SHALL BE D500L IN ACCORDANCE WITH AS/NZS 4671.
6. MINIMUM LAP SHALL BE 300mm FOR REINFORCING BARS AND 100mm FOR MESH.
7. ALL EXPOSED EDGES TO BE PROVIDED WITH 20mm CHAMFERS.
8. LAY 50mm COMPACTED SAND AS FOUNDATION PREPARATION.
9. DEPTH OF HEADWALL MAY VARY, DEPENDING ON THE BATTER SLOPE. LOCALLY INCREASE HEADWALL HEIGHT TO MEET FLUSH WITH BATTER HINGE.
10. ADOPT 150mm FOR HEADWALLS/WINGWALLS THICKNESS (T). ANY PROJECT SPECIFIC THICKNESS SHALL DESIGN TO OBTAIN AN ADEQUATE CONCRETE COVER AS PER STANDARD DRAWING CS3100 NOTE 1.
11. ALTERNATIVE HEADWALL REINFORCEMENT USING REINFORCING BARS MAY BE ADOPTED INSTEAD OF SL81 MESH, REFER TO PROVIDED DETAIL FOR REINFORCEMENT LAYOUT.
12. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.



ALTERNATIVE HEADWALL REINFORCING DETAILS - WITH REINFORCING BARS
NOT TO SCALE



THIS DRAWING IS DERIVED FROM TRANSPORT SOUTH AUSTRALIA STANDARD DRAWING S-4002, SHEET 23 AND ADOPTED FOR NT CONDITIONS.

No.	DESCRIPTION	DATE	NAME	DEPT/COMPANY
2	MINOR CHANGES	JAN 2024	D.LLANO	DIPL
1	DESIGN DETAILS AMENDED	APR 2023	J.COOK	TCS / DIPL
0	ISSUED AS A STANDARD DRAWING	SEPT 2017	J.LEESON	EES/DIPL
AMENDMENTS				

WARNING
BEWARE OF UNDERGROUND SERVICES. THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

DRAWN J.LEESON	CHECKED S.HATZI
DATE SEPT 2017	DATE SEPT 2017
DESIGNED S.A.	CHECKED S.A.
DATE	DATE
DESIGN LEADER S.HATZI	DESIGN DIRECTOR S.JACKSON
DATE 1/09/2017	DATE 1/09/2017



STANDARD DRAWINGS DRAINAGE				
RCP 375mm DIA. TO 900mm DIA. HEADWALL & WINGWALL DETAIL 21° TO 45° SKEW ANGLE				
FILE No.	ASSET No.	SHEET No.	DRAWING No.	AMEND.
-	-	3 OF 5	CS3104	2
				SHEET SIZE A1