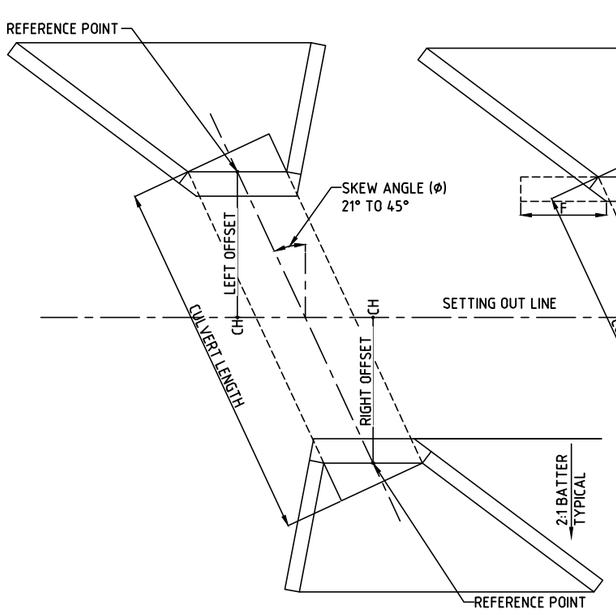
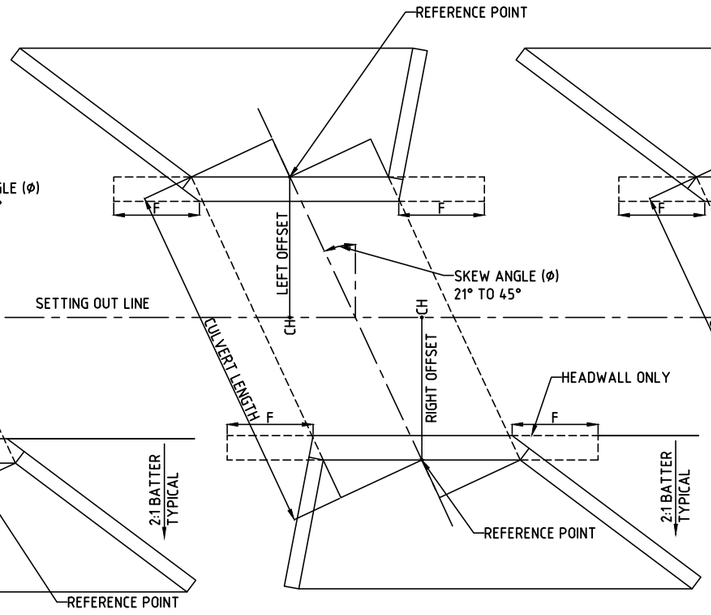
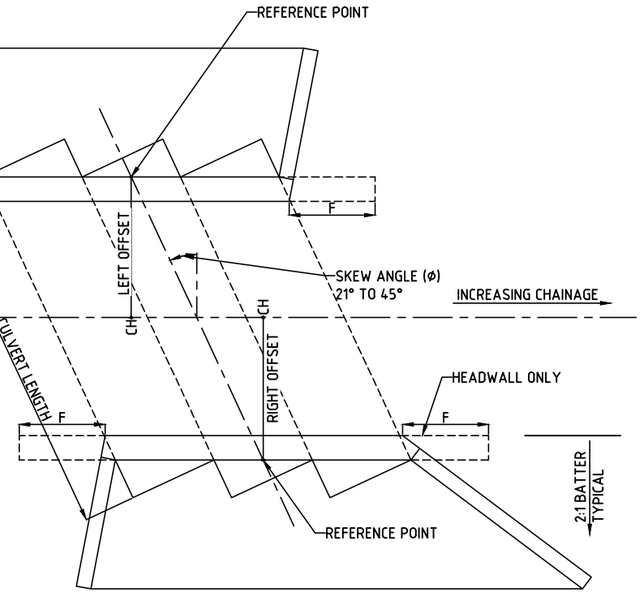


SINGLE CULVERT



MULTIPLE CULVERT - EVEN NUMBERS



MULTIPLE CULVERT - ODD NUMBERS

SETTING OUT OF BOX CULVERTS

NOT TO SCALE

NOTE:

DESIGN LOADS:
1. IN ACCORDANCE WITH AUSTRALIAN BRIDGE DESIGN CODE AS 5100-2017.
2. HEADWALLS ARE NOT DESIGNED FOR GUARDRAIL IMPACT FORCES.

CONCRETE:
1. GRADES S40

COVER:
1. MINIMUM CLEAR COVER TO BE 50mm.

CONCRETE EXPOSURE CLASSIFICATION:
1. IN ACCORDANCE WITH REQUIREMENTS IN AUSTRALIAN BRIDE DESIGN CODE AS 5100-2017 FOR CONCRETE EXPOSURE CLASSIFICATION.
   - 1.1. COVER AND CONCRETE STRENGTH SHOWN ON DRAWINGS SATISFY REQUIREMENTS FOR EXPOSURE CLASSIFICATION B1 AND B2.
   - 1.2. FOR EXPOSURE CLASSIFICATIONS C AND U, THE FOLLOWING SHALL APPLY.

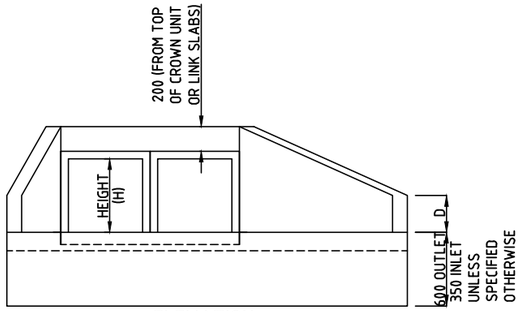
EXPOSURE CLASSIFICATION	MINIMUM CLEAR COVER (mm)	
	40 MPa CONCRETE	50 MPa CONCRETE
C (SALT-RICH ARID AREAS OR IN SEA WATER)	60	50
U (IN SOFT OR RUNNING WATER OR AGGRESSIVE SOILS - SULPHATE IONS - pH<4.0)	-	70

REINFORCEMENT:
1. REINFORCING BAR SHALL BE D500N AND MESH SHALL BE D500L IN ACCORDANCE WITH AS/NZS 4671-2001.
2. MINIMUM LAPS, UNLESS SHOWN OTHERWISE: BARS 300mm, FABRIC 100mm.

CHAMFERS:
1. ALL EXPOSED EDGES TO BE PROVIDED WITH 20mm CHAMFERS.

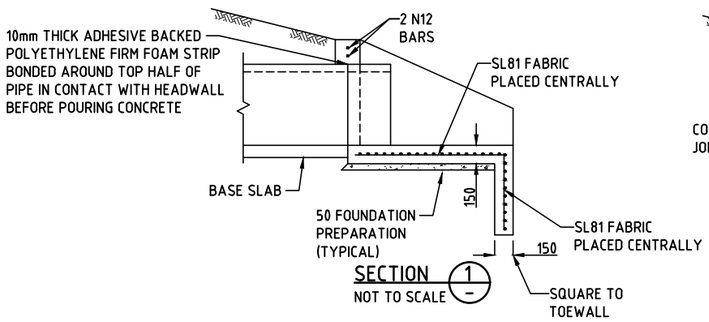
FOUNDATION PREPARATION:
1. 50mm COMPACTED SAND.

REFERENCE DRAWINGS:
1. FOR CULVERT BASE DETAILS, REFER TO CS3111 AND CS3112.
2. FOR RCBC AND LINK SLAB DETAILS REFER TO CS3109 AND CS3110.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

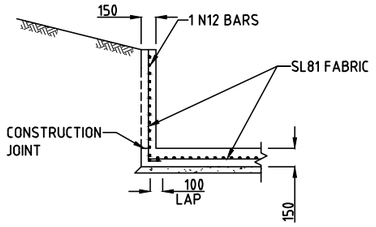


ELEVATION

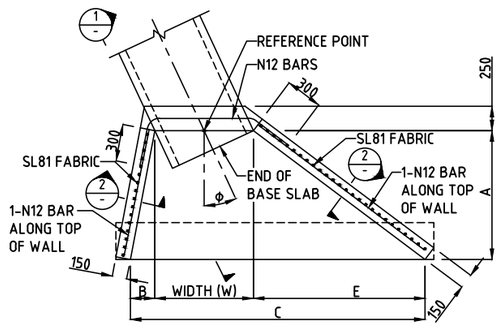
TYPICAL FOR SINGLE AND MULTIPLE PIPES
NOT TO SCALE



SECTION 1
NOT TO SCALE

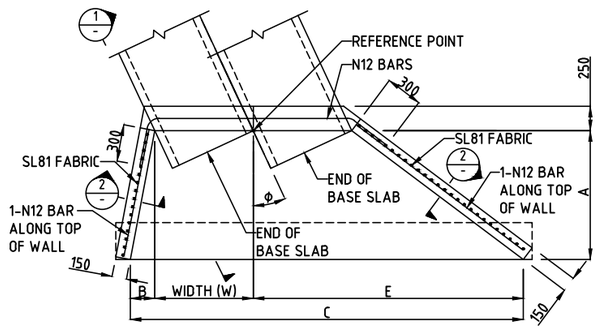


SECTION 2
NOT TO SCALE



SECTIONAL PLAN

REINFORCEMENT FOR SINGLE CULVERT
NOT TO SCALE



SECTIONAL PLAN

REINFORCEMENT FOR MULTIPLE CULVERT
NOT TO SCALE

SETTING OUT DIMENSIONS

			SKEW ANGLE ø						
			21° TO 30°			31° TO 35°			ALL
H	A	D	B	E	C	B	E	C	F
450	1000	250	175	1150	W+1325	150	1300	W+1450	700
600	1200	300	200	1400	W+1600	200	1575	W+1775	950
750	1400	350	250	1625	W+1875	225	1850	W+2075	N/A
900	1600	400	275	1850	W+2125	250	2100	W+2350	N/A
1050	1800	450	300	2075	W+2375	275	2350	W+2625	N/A
1200	2000	500	350	2300	W+2650	300	2625	W+2925	N/A
			SKEW ANGLE ø						
			36° TO 40°			41° TO 45°			ALL
H	A	D	B	E	C	B	E	C	F
450	1000	250	150	1500	W+1650	0	1700	W+1700	700
600	1200	300	175	1800	W+1975	0	2050	W+2050	950
750	1400	350	200	2100	W+2300	0	2400	W+2400	N/A
900	1600	400	225	2400	W+2625	0	2725	W+2725	N/A
1050	1800	450	250	2675	W+2925	0	3075	W+3075	N/A
1200	2000	500	275	2975	W+3250	0	3425	W+3425	N/A

*BEYOND 45° REQUIRES SPECIAL DESIGN

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

No.	DESCRIPTION	DATE	NAME	DEPT/COMPANY
1	HEADWALL DETAILS ADDED	DEC 2017	J.S	EES/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 DATE	CHECKED S.HATZI DATE
DESIGNED S.A. DATE	CHECKED S.A. DATE
DESIGN LEADER S.HATZI DATE 1/09/2017	DESIGN DIRECTOR S.JACKSON DATE 1/09/2017

Northern Territory Government

STANDARD DRAWINGS
DRAINAGE

RCBC 450mm HIGH TO 1200mm HIGH HEADWALL & WINGWALL DETAIL 21°TO 45°SKEW ANGLE

FILE No.	ASSET No.	SHEET No.	DRAWING No.	AMEND.	SHEET SIZE
-	-	1 OF 1	CS3108	1	A1

CS3108_AMED_1 RELEASED 13/12/2017