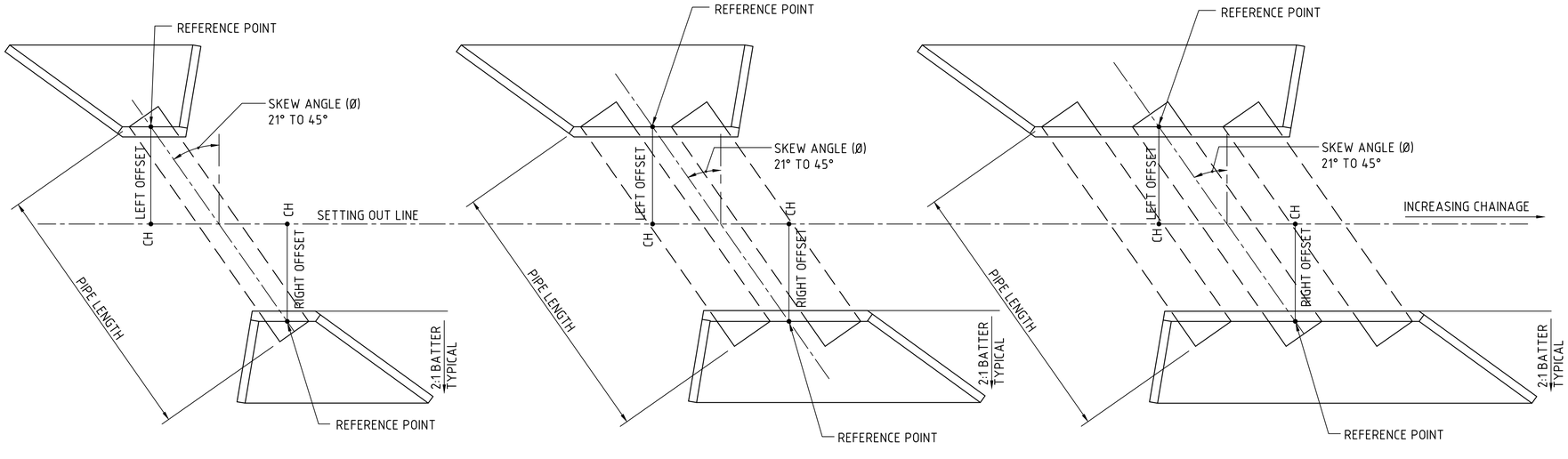
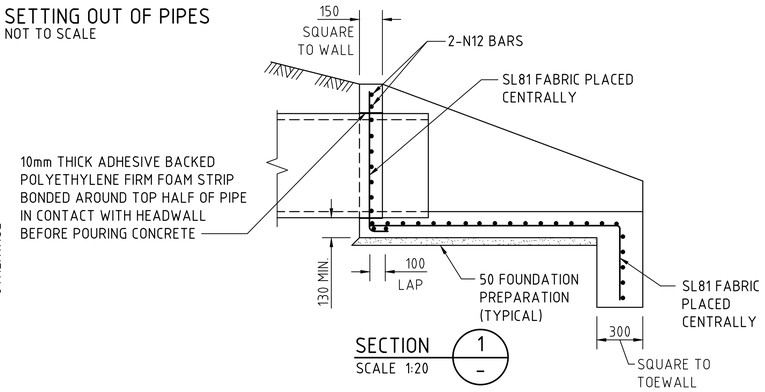


SINGLE PIPE

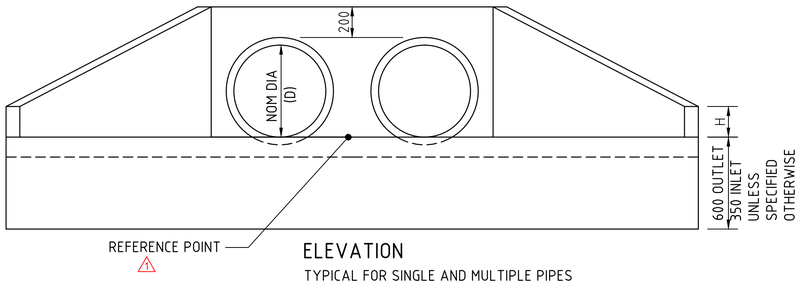
MULTIPLE PIPES - EVEN NUMBER

MULTIPLE PIPES - ODD NUMBER

SETTING OUT OF PIPES
NOT TO SCALE



SECTION 1
SCALE 1:20



ELEVATION
TYPICAL FOR SINGLE AND MULTIPLE PIPES
SCALE 1:20

NOTES

DESIGN LOADS
1. IN ACCORDANCE WITH AUSTRALIAN BRIDGE DESIGN CODE 1996.
2. HEADWALLS ARE NOT DESIGNED FOR GUARDRAIL IMPACT FORCES.

SETTING OUT
1. THE SETTING OUT DIMENSIONS ARE BASED ON INCREASING THE BATTER LOCALLY TO 2:1 BEYOND THE HEADWALLS.

CONCRETE
1. GRADE S40

COVER
1. MINIMUM CLEAR COVER TO BE 50mm.

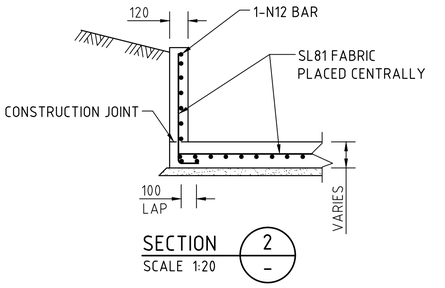
CONCRETE EXPOSURE CLASSIFICATION
1. IN ACCORDANCE WITH REQUIREMENTS IN AUSTRALIAN BRIDGE DESIGN CODE 1996 FOR CONCRETE EXPOSURE CLASSIFICATION.
   1.1 COVER AND CONCRETE STRENGTH SHOWN ON DRAWINGS SATISFY REQUIREMENTS FOR EXPOSURE CLASSIFICATIONS B1 AND B2.
   1.2 FOR EXPOSURE CLASSIFICATIONS C AND U, THE FOLLOWING SHALL APPLY.

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

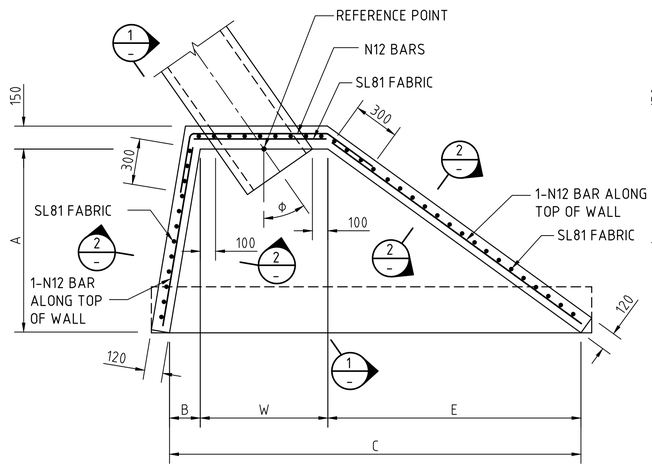
REINFORCEMENT
1. REINFORCING BAR SHALL BE D500N AND MESH SHALL BE D500L IN ACCORDANCE WITH AS/NZS4671.
2. MINIMUM LAPS, UNLESS SHOWN OTHERWISE: BARS 300mm, FABRIC 100mm.

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

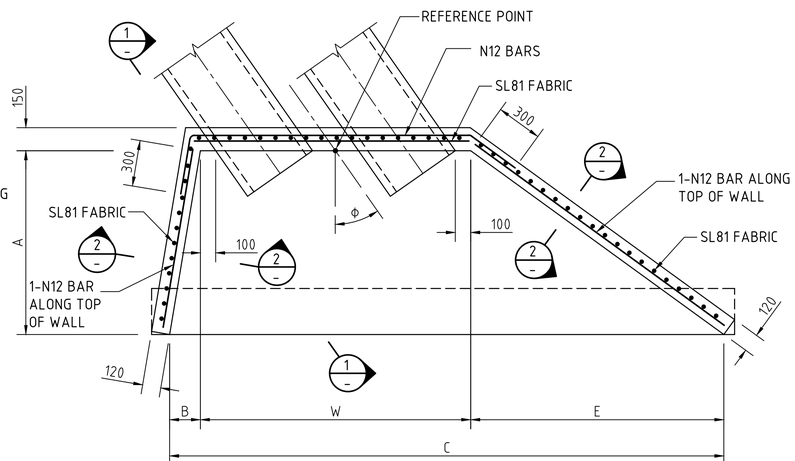
FOUNDATION PREPARATION
1. 50mm GRADE 10 CONCRETE OR 50mm COMPACTED SAND.



SECTION 2
SCALE 1:20



SECTIONAL PLAN
REINFORCEMENT FOR SINGLE PIPE
SCALE 1:20



SECTIONAL PLAN
REINFORCEMENT FOR MULTIPLE PIPES
SCALE 1:20

SETTING OUT DIMENSIONS

D	A	H	SKEW ANGLE Ø 21° TO 30° B	E	C	31° TO 35° B	E	C
450	900	250	150	1100	W+1250	150	1250	W+1400
525	1000	275	175	1225	W+1400	175	1375	W+1550
600	1100	300	200	1350	W+1550	175	1525	W+1700
675	1200	325	225	1475	W+1700	200	1650	W+1850
750	1300	350	225	1600	W+1825	225	1800	W+2025
825	1400	375	250	1700	W+1950	225	1925	W+2150
900	1500	400	275	1875	W+2150	250	2075	W+2325

D	A	H	SKEW ANGLE Ø 36° TO 40° B	E	C	41° TO 45° B	E	C
450	900	250	150	1400	W+1550	0	1600	W+1600
525	1000	275	150	1575	W+1725	0	1800	W+1800
600	1100	300	175	1725	W+1900	0	1975	W+1975
675	1200	325	175	1875	W+2050	0	2150	W+2150
750	1300	350	200	2025	W+2225	0	2325	W+2325
825	1400	375	200	2200	W+2400	0	2500	W+2500
900	1500	400	225	2350	W+2575	0	2675	W+2675

* BEYOND 45° REQUIRES SPECIAL DESIGN

THIS SHEET SUPERSEDES DRG S-4002, SHEET 13

No.	AMENDMENT DESCRIPTION	BY	CHECK	ACCEPTANCE	DATE
1	REFERENCE POINT SHOWN IN ELEVATION, TITLE BLOCK UPDATED	ANC	PM	STEPHEN PASCALE	03.08.15

100 MILLIMETRES ON ORIGINAL DRAWING

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE

Government of South Australia

Department of Planning, Transport and Infrastructure

STANDARD DRAWING

HEADWALL, WINGWALL AND APRON DETAILS

RC PIPES 450 TO 900 DIA., SKEW ANGLE 21° TO 45°

DESIGNED:	DRAFTED:	ACCEPTED FOR USE:	ACCEPTANCE FORM KNET No.:	DRAWING No.:	SHEET No.:	AMEND No.:
DU	DU	STEPHEN PASCALE	9722937	4002	23	1
CHECKED: TN/GN	REVIEWED: GWC	MGR. TECHNICAL SERVICES DATE: 03/08/2015				

UNCONTROLLED COPY WHEN PRINTED

FILE: \\ORION\common\structural\01 - DRAWINGS IN PROGRESS\ANC (Various Jobs)\Standard Drawings\Stormwater\Drawings for Amendment\4002_Sheet_0023.dwg

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