

NOTES

DESIGN LOADS

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

SETTING OUT

- THE SETTING OUT DIMENSIONS ARE BASED ON INCREASING THE BATTER LOCALLY TO 2:1 BEYOND THE HEADWALLS, EXCEPT AS INDICATED FOR SINGLE PIPES.

CONCRETE

- GRADE S40

COVER

- MINIMUM CLEAR COVER TO BE 50mm.

CONCRETE EXPOSURE CLASSIFICATION

- 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 AGGRESSIVE SOILS - SULPHATE IONS - pH = 4.0)	-	70

REINFORCEMENT

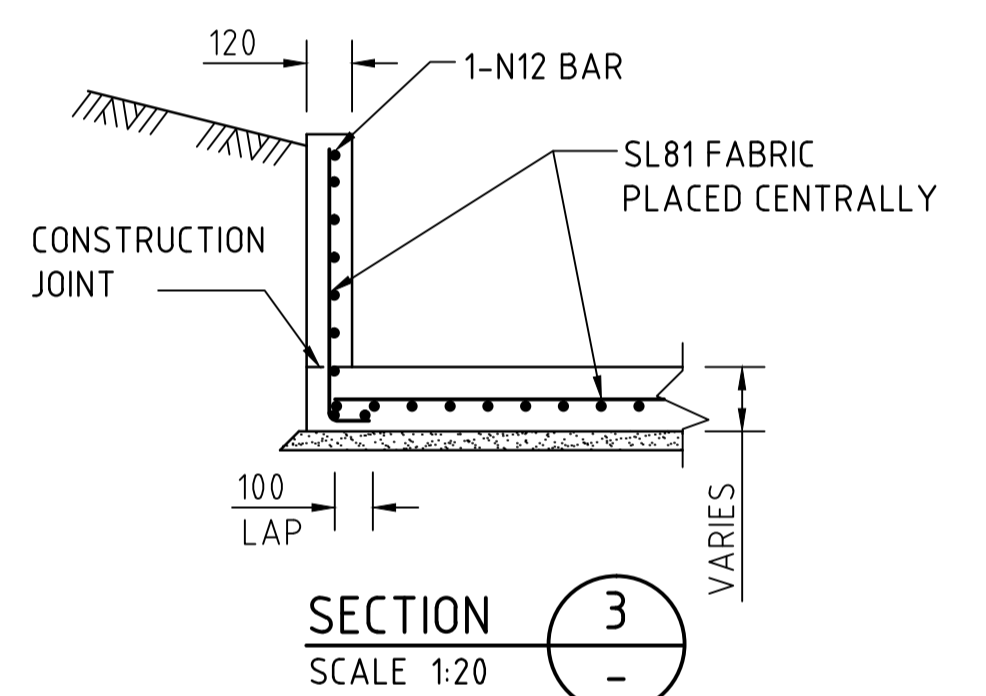
- REINFORCING BAR SHALL BE D500N AND MESH SHALL BE D500L IN ACCORDANCE WITH AS/NZS4671.
- MINIMUM LAPS, UNLESS SHOWN OTHERWISE: BARS 300mm, FABRIC 100mm.

CHAMFERS

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

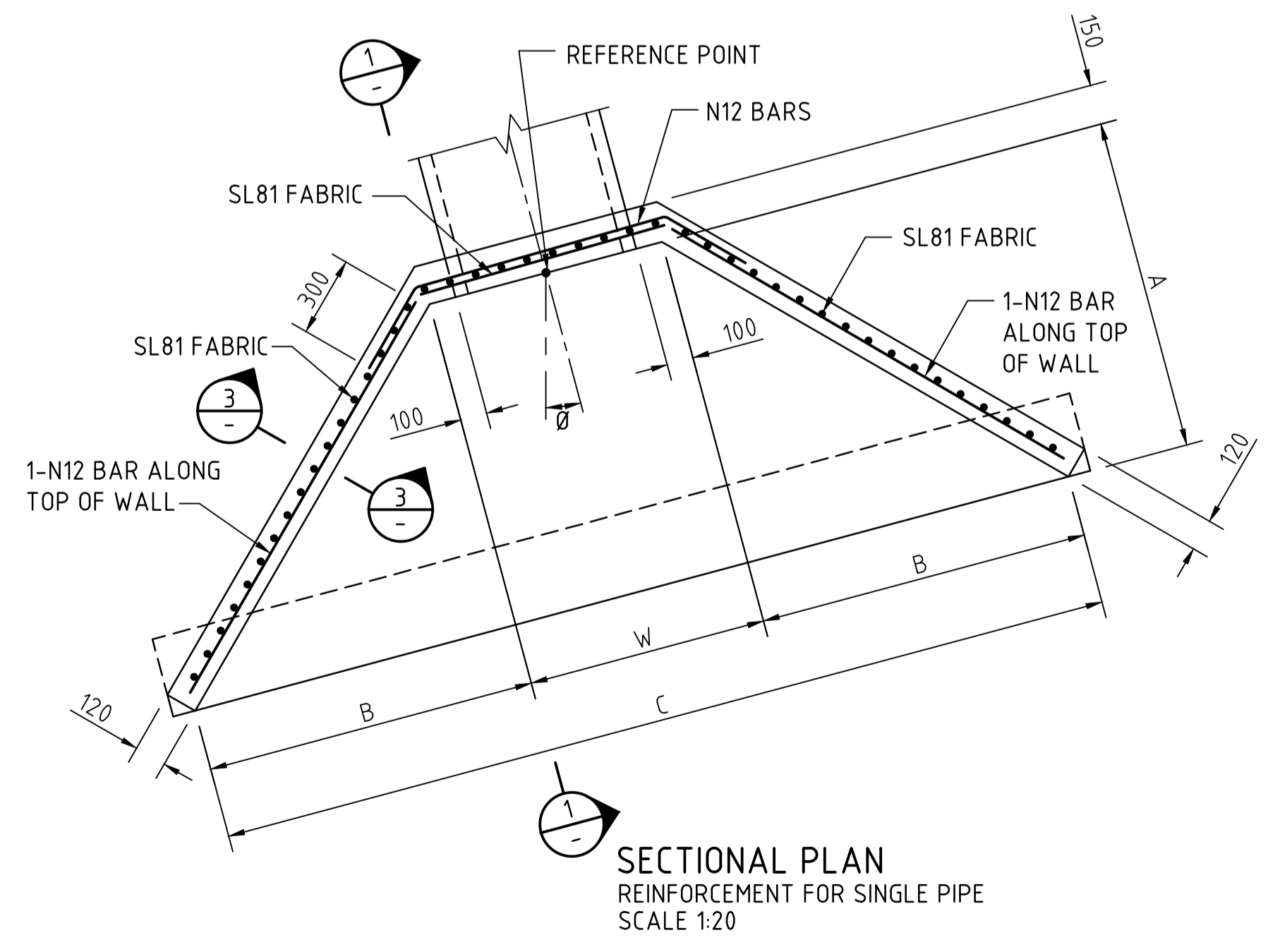
FOUNDATION PREPARATION

- 50mm GRADE 10 CONCRETE OR 50mm COMPACTED SAND.

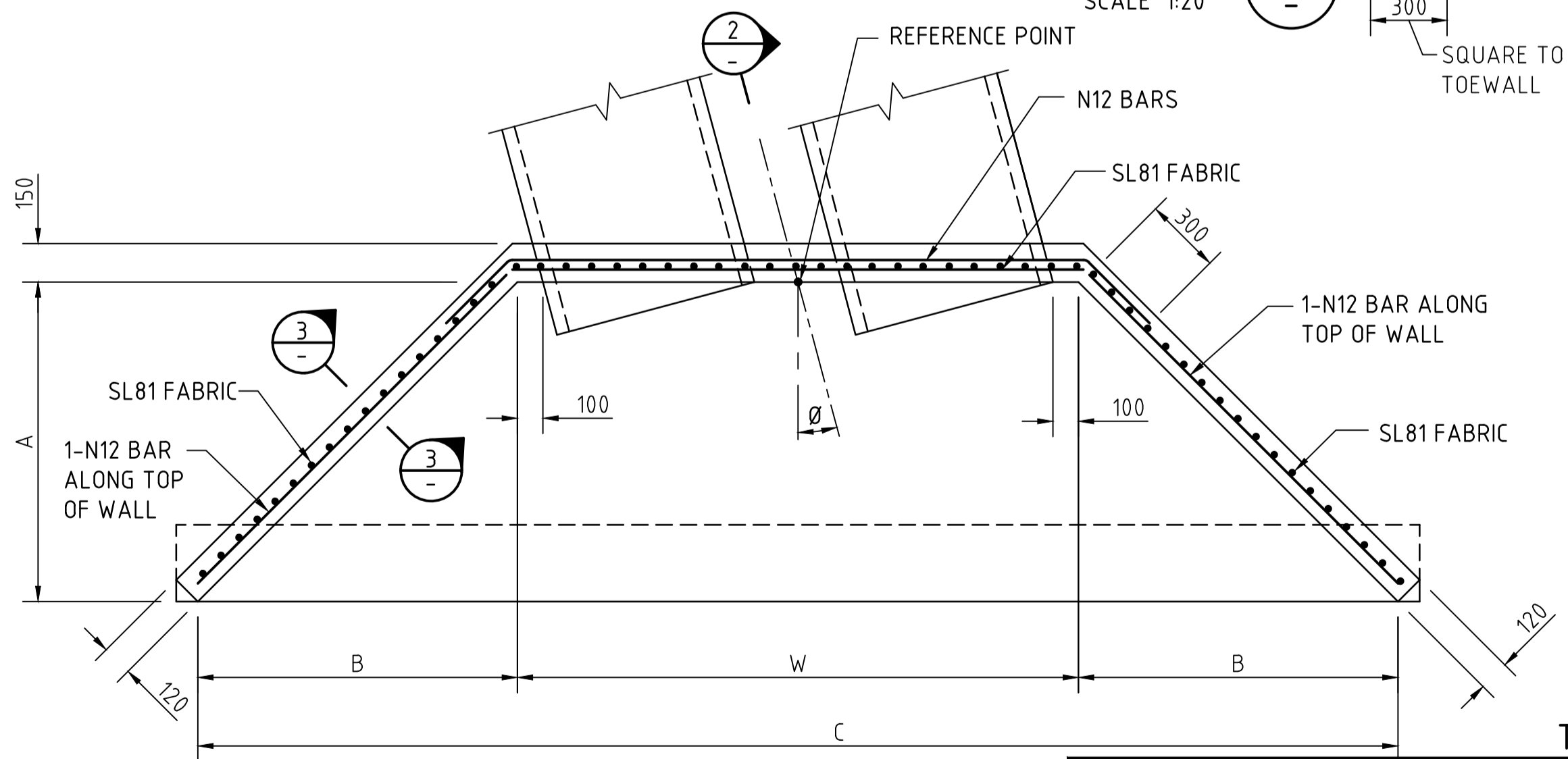


SETTING OUT DIMENSIONS FOR SINGLE PIPES				
D	A	H	SKEW ANGLE Ø LESS THAN 20°	
			B	C
450	900	250	900	W+1800
525	1050	275	1050	W+2100
600	1200	300	1200	W+2400
675	1350	325	1350	W+2700
750	1500	350	1500	W+3000
825	1650	375	1650	W+3300
900	1800	400	1800	W+3600

SETTING OUT DIMENSIONS FOR MULTIPLE PIPES				
D	A	H	SKEW ANGLE Ø LESS THAN 20°	
			B	C
450	900	250	900	W+1800
525	1000	275	1000	W+2000
600	1100	300	1100	W+2200
675	1200	325	1200	W+2400
750	1300	350	1300	W+2600
825	1400	375	1400	W+2800
900	1500	400	1500	W+3000



SECTIONAL PLAN
REINFORCEMENT FOR SINGLE PIPE
SCALE 1:20



SECTIONAL PLAN
REINFORCEMENT FOR MULTIPLE PIPES
SCALE 1:20

THIS SHEET SUPERSEDES DRG S-4002, SHEET 12



STANDARD DRAWING

HEADWALL, WINGWALL AND APRON DETAILS

RC PIPES 450 TO 900 DIA., SKEW ANGLE 0° TO 20°

DESIGNED: DU	DRAFTED: DU	ACCEPTED FOR USE: STEPHEN PASCALE	ACCEPTANCE FORM KNET No.:	DRAWING No.:	SHEET No.:	AMEND No.:
CHECKED: TN/GN	REVIEWED: GWC	MGR. TECHNICAL SERVICES DATE: 03/08/2015	9722937	4002	21	1

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FILE: \\ORION\COMMON\STRUCTURAL\01 - DRAWINGS IN PROGRESS\ANC (Various Jobs)\Standard Drawings\Drawings for Amendment\4002 - Sheet_0021.dwg

1	REFERENCE POINT SHOWN IN ELEVATION & SECTION 2, TITLE BLOCK UPDATED	ANC	PM	STEPHEN PASCALE	03.08.15
No.	AMENDMENT DESCRIPTION	BY	CHECK	ACCEPTANCE	DATE

100 MILLIMETRES ON ORIGINAL DRAWING

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE