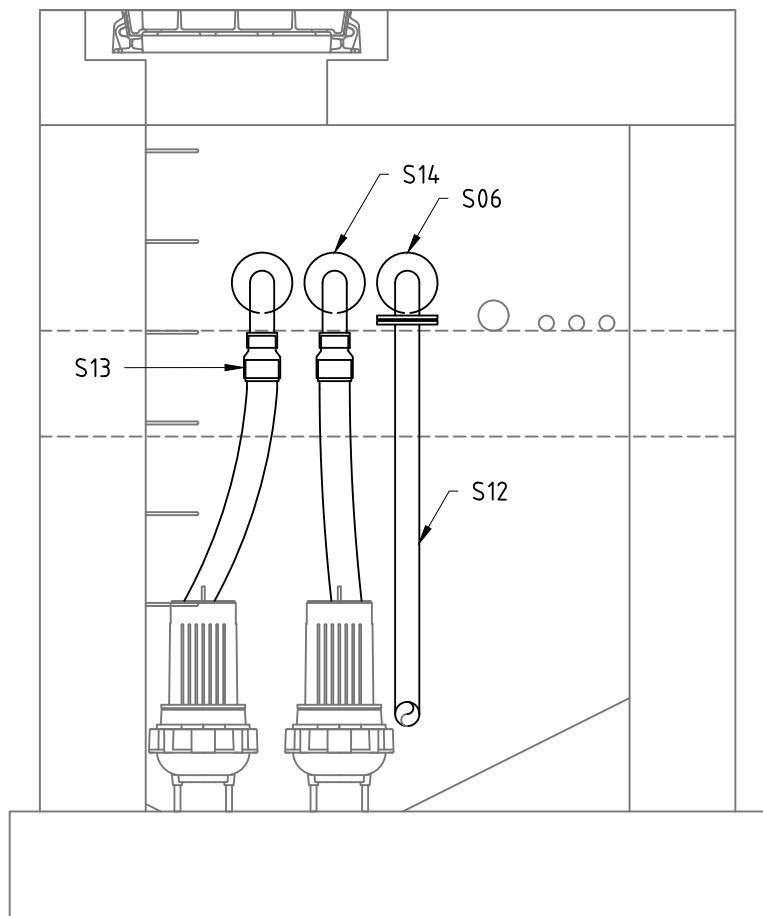
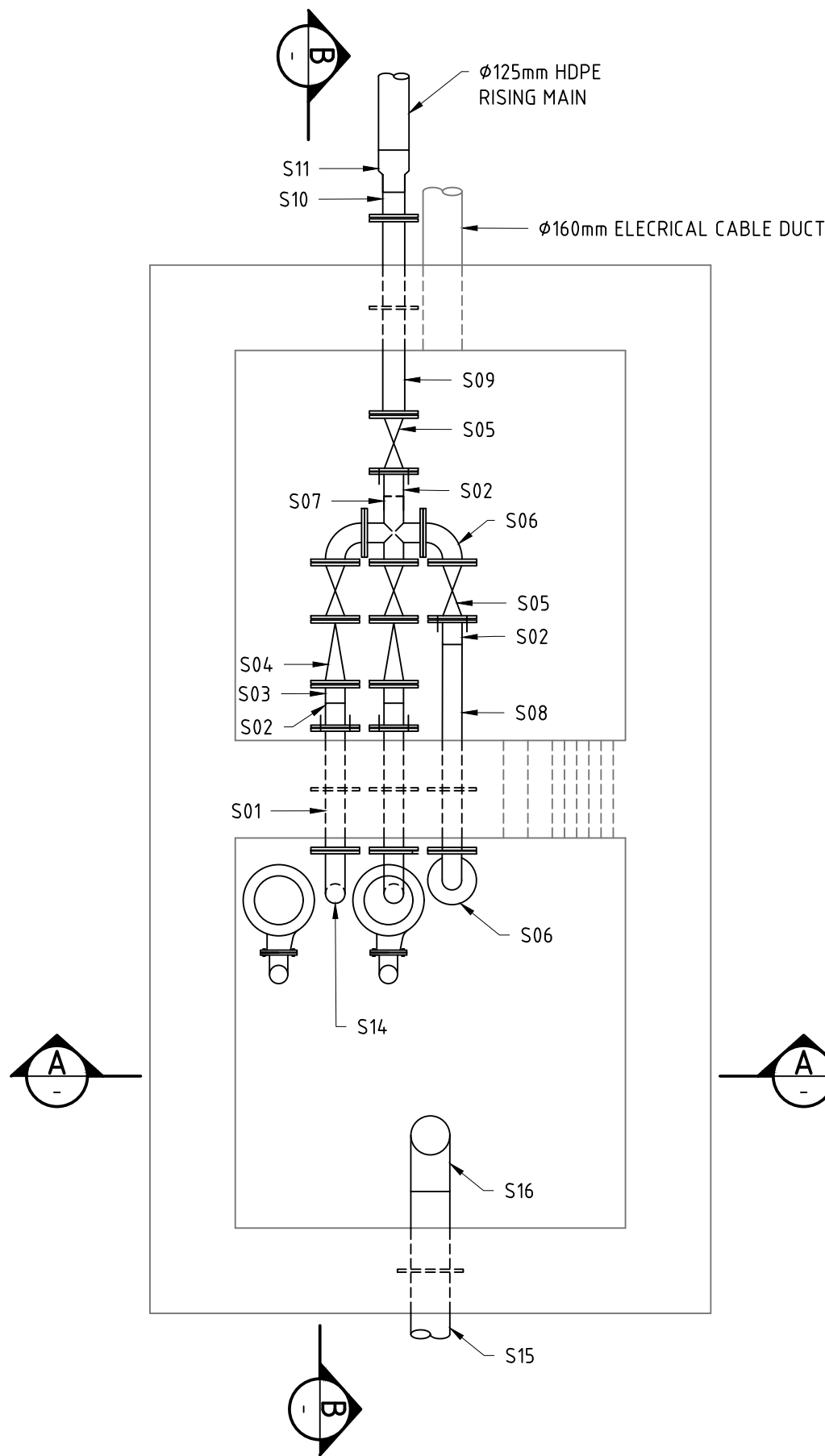


DO NOT SCALE - IF IN DOUBT, ASK



SECTION A  
1:25



PLAN: PUMP STATION TYPE 1 PIPEWORK DETAILS  
1:25

NOTES

1. PIPEWORK

1.1. HDPE PIPES

- 1.1.1.  $\phi 125\text{mm}$  HDPE PIPES ARE TO BE PE 100 CLASS 10 WITH A STANDARD DIAMETER RATIO OF 11 IN ACCORDANCE WITH ISO 4427.  
1.1.2.  $\phi 125\text{mm}$  HDPE PIPES ARE TO BE JOINED TOGETHER BY ELECTRO FUSION COUPLING IN ACCORDANCE WITH SANS 10286 PART 2.  
1.1.3. ALL COUPLINGS **MAY NOT** HAVE A PRESSURE RATING LOWER THAN THAT OF THE PIPES BEING JOINED TOGETHER.

1.2. CAST IRON PIPES

- 1.2.1. ALL CAST IRON PIPE WORK SHALL COMPLY WITH SANS1835.

3. VALVES

- 3.1. GATE VALVES SHALL BE CAST IRON FLANGED RESILIENT SEAL TYPE, COMPLYING TO SABS 664 CLASS 10.  
3.2. GATE VALVES SHALL BE CLOCKWISE CLOSING AND SHALL HAVE RISING SPINDLES.  
3.3. NON-RETURN VALVES SHALL BE OF THE SWING DOOR CHECK TYPE.  
3.4. NON-RETURN VALVES SHALL BE FLANGED BOTH ENDS.  
3.5. THE HINGE PIN OF THE NON-RETURN VALVES SHALL BE EXTENDED AND FITTED WITH AN EXTERNAL LEVER ARM AND COUNTERWEIGHT.

4. FLANGES

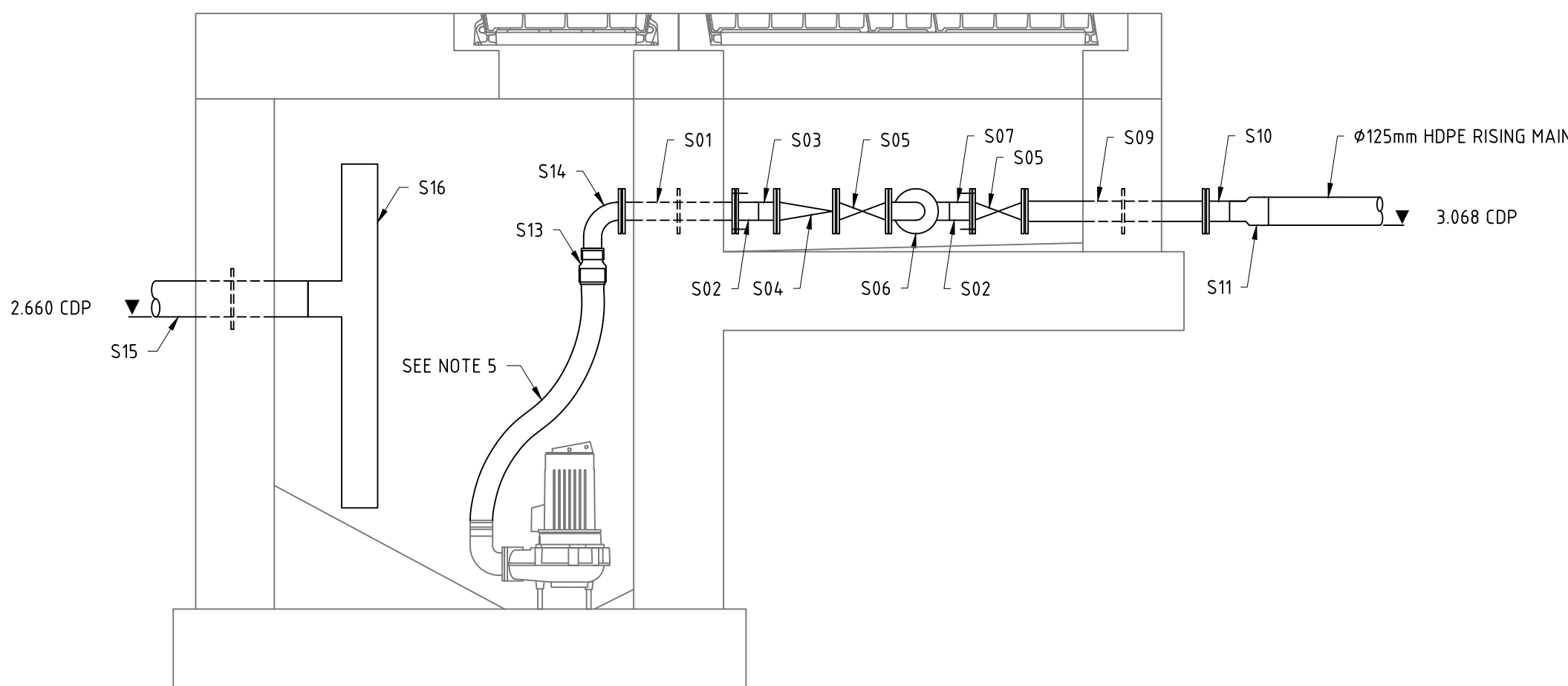
- 4.1. ALL FLANGES SHALL COMPLY WITH SABS 1123 TABLE 15.  
4.2. THE JOINTING MATERIAL USED ON FLANGE JOINTS SHALL BE A 3mm NEOPRENE RUBBER INSERTION.  
4.3. FULL FACE GASKETS SHALL BE USED ON ALL JOINTS.  
5.4. ANY FASTENERS USED ON FLANGES ARE TO BE STAINLESS STEEL GRADE 316 STAINLESS STEEL TO ASTM 240

6. CORROSION PROTECTION FOR PIPEWORK

- 6.1.1. ALL EXTERNAL AND INTERNAL SURFACES OF ALL CAST FITTINGS SHALL BE PROTECTED WITH A WATER RESISTANT, NON-TOXIC AND NON-TAINTING, FUSION BONDED EPOXY PIPE COATING TO A MINIMUM THICKNESS OF 300 MICRONS IN ACCORDANCE WITH SANS 1217.  
6.1.2. THE CONTRACTOR SHALL SUBMIT A METHOD STATEMENT FOR APPROVAL PRIOR TO APPLYING PROTECTION SYSTEM.

5. FLEXIBLE HOSE

- 5.1. THE FLEXIBLE HOSES (2 No) SHALL BE  $\phi 100\text{mm}$  WIRE EMBEDDED RUBBER PULP AND SLURRY PIPES, EACH 15m LONG.  
5.2. ONE END SHALL BE FITTED WITH A MALE QUICK RELEASE COUPLING. THE OTHER END SHALL BE FITTED WITH AN APPROPRIATE ADAPTOR FOR THE PUMP OUTLET CONNECTION.



SECTION B  
1:25

NOTE:  
SHOULD SPECIALS OF DIFFERENT DIMENSIONS BE USED, THE RELEVANT LENGTHS OF ITEMS S01 AND S08 SHOULD BE ADJUSTED.

S01		2	$\phi 80\text{mm}$ PUDDLE PIPE 500mm LONG. BOTH ENDS FLANGED.
S02		4	$\phi 80\text{mm}$ FLANGE ADAPTOR.
S03		2	$\phi 80\text{mm}$ SPOOL PIECE 150mm LONG. ONE END FLANGED. ONE END PLAIN.
S04		2	$\phi 80\text{mm}$ NON-RETURN VALVE WITH LEVER ARM AND COUNTERWEIGHT. BOTH ENDS FLANGED. (SEE NOTE No2)
S05		4	$\phi 80\text{mm}$ RESILIENT SEAL GATE VALVE. (SEE NOTE No2)
S06		3	$\phi 80\text{mm}$ 90° ELBOW. BOTH ENDS FLANGED.
S07		1	$\phi 80\text{mm}$ CROSS. THREE BRANCHES 120mm LONG AND FLANGED. ONE BRANCH 230mm LONG AND PLAIN ENDED.
S08		1	$\phi 80\text{mm}$ PUDDLE PIPE 1060mm LONG. ONE END FLANGED. ONE END PLAIN. PUDDLE FLANGE 250mm FROM ONE END.
S09		1	$\phi 80\text{mm}$ PUDDLE PIPE 1060mm LONG. BOTH ENDS FLANGED.
S10		1	$\phi 90\text{mm}$ HDPE SPOOL PIECE 175mm LONG. ONE END FLANGED. ONE END PLAIN.
S11		1	90mm TO 125mm HDPE ELECTROFUSION REDUCING COUPLING
S12		1	$\phi 80\text{mm}$ PIPE $\pm 1300\text{mm}$ LONG. ONE END FLANGED. ONE END STANDARD 90° PLAIN ENDED ELBOW.
S13		1	4" TO 3" STAINLESS STEEL FEMALE TO MALE QUICK RELEASE REDUCING COUPLING
S14		1	$\phi 80\text{mm}$ STANDARD 90° PLAIN ENDED ELBOW ONE END FLANGED. 3" FEMALE QUICK RELEASE COUPLING OTHER END.
S15		1	$\phi 160\text{mm}$ HDPE PUDDLE PIPE. BOTH ENDS PLAIN.
S16		1	$\phi 160\text{mm}$ HDPE BACKDROP PIPE $\pm 1530\text{mm}$ LONG. ALL ENDS PLAIN.

		Engineers								EPCM CONSULTANT: <b>TNPA</b>		ORIGINATOR: <b>ZAA</b>		Transnet National Ports Authority																	
										TITLE		NAME		SIGNATURE		DATE		237 MAHATMA GANDHI ROAD DURBAN P.O. BOX 31683, DURBAN TEL: 031 361 8852													
										LEAD DES. ENG.		NAME		SIGNATURE		DATE		<b>PORT OF DURBAN</b>													
										ENG. COORD.		NAME		SIGNATURE		DATE		DCT BERTHS 203 to 205 RECONSTRUCTION DEEPENING AND LENGTHENING													
										ENG. MANAGER		NAME		SIGNATURE		DATE		SEWER													
										AREA MANAGER		NAME		SIGNATURE		DATE		PUMP STATION TYPE 1 DETAILS													
										PROJECT MGR.		NAME		SIGNATURE		DATE		SHEET 2 OF 2													
										DIVISION		NAME		SIGNATURE		DATE															
										NO.		DESCRIPTION		BY		CHK'D		APP'D		DATE											
										REVISIONS / ISSUE AUTHORIZATION		PR.ENG. / PR.TECH.		NAME		SIGNATURE		DATE													
										1785-CO-130-C-DWG-0003		SEWER TYPICAL DETAILS		PROJECT NUMBER		DV		FBS		DIS		TYPE		DRG NO.		SHT.		REV.		ID	
										1785-CO-130-C-DWG-0002		SEWER GENERAL ARRANGEMENT PHASES 2 & 3		21228301		1301		C		GA		1003		02		0A		DC			
										DRAWING NO.		REFERENCE		SCALE : 1:25		OR AS NOTED		A1													