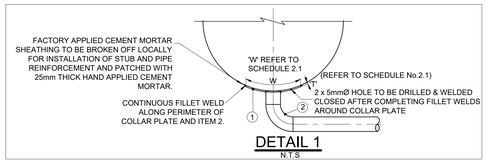
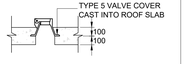
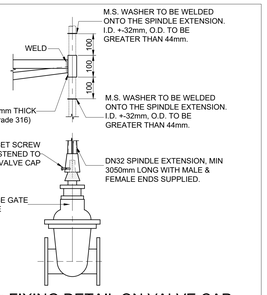
NOTE:
ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF WORKS.
REFER ANY DISCREPANCIES TO THE ENGINEER.



DETAIL 1
N.T.S



DETAIL 2: VALVE COVER
SCALE 1 : 25



DETAIL 3: FIXING DETAIL ON VALVE CAP
SCALE 1:10

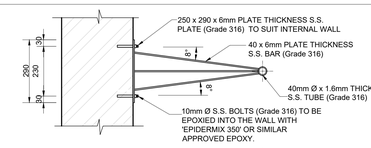
NOTE:
1. VALVE CHAMBER ACCESS : OPERATIONS PERSONNEL SHALL ACCESS THE VALVE CHAMBER VIA THE ACCESS MANHOLE CAST IN THE ROOF SLAB.
2. VENTILATION : OPERATIONS PERSONNEL SHALL PROVIDE AND OPERATE A FORCED VENTILATION SYSTEM IN THE VALVE CHAMBER PRIOR TO AND DURING THE TIME THAT PERSONNEL ARE CARRYING OUT WORK IN THE CHAMBER. THE VENTILATION SYSTEM SHALL BE EFFECTIVE AT THE LEVEL AT WHICH WORK IS BEING CARRIED OUT.

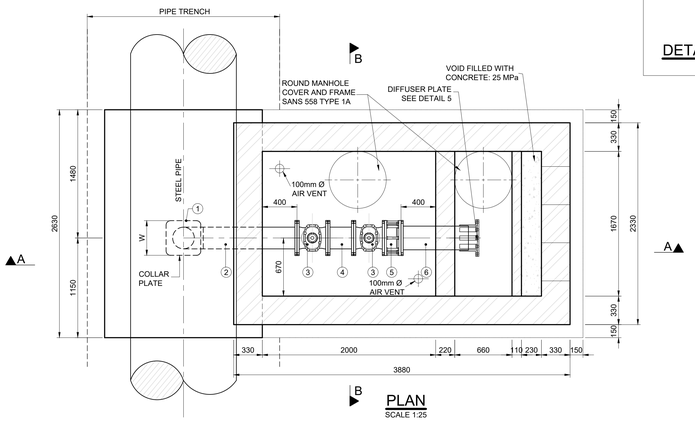
NOTE:

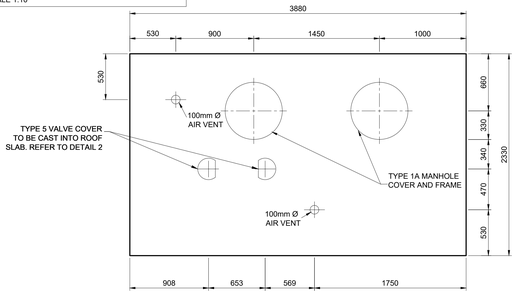
THIS DRAWING INDICATES THE IDEAL POSITION AND MEASUREMENT FOR THE SCOUR VALVE INSTALLATIONS. SHOULD ANY ADJUSTMENTS BE REQUIRED, IT SHOULD BE APPROVED BY THE ENGINEER ON SITE.

PIPEWORK AND FITTINGS SCHEDULE 1.1 (TYPE 1 - PER INSTALLATION)

ITEM NO.	DESCRIPTION	WALL THICKNESS	NO. OFF	LINING	COATING	GRADE OF STEEL
1	COLLAR PLATE AS PER SCHEDULE No. 2.1 AND DETAIL '1'	-	1	-	-	SEE SCHEDULE 2.1
2	SPECIAL: DN250 x 90° LRB (ANSI B16.9), FOE, FLANGE SUPPLIED WITH ITEM 3, AS DETAILED BELOW. (FINAL LENGTH TO BE DETERMINED ON SITE) REFER TO GENERAL NOTES - VALVES & FITTINGS.	6mm	1	CML	CMS	X42 / GRADE C
3	DN250 WEDGE GATE VALVE, WITH VALVE CAP, PN10 OR PN16 COMPLETE WITH MATCHING FLANGES, NUTS, BOLTS, WASHERS & GASKETS. REFER TO SCHEDULE 2.1 & GENERAL NOTES - VALVES & FITTINGS	-	2	-	-	-
4	DN250 x 300mm LONG SPOOL PIECE, BEF, FLANGES SUPPLIED WITH ITEM 3, REFER TO GENERAL NOTES - VALVES & FITTINGS.	6mm	1	CML	CMS	X42 / GRADE C
5	DN250 RESTRAINED DISMANTLING JOINT. PN10 OR PN16 COMPLETE WITH NUTS, BOLTS, WASHERS & GASKETS. REFER TO SCHEDULE 2.1 FOR PRESSURE RATING	-	1	-	-	-
6	SPECIAL: DN250 x 770mm LONG SPOOL PIECE WITH DIFFUSER PLATE AS PER DETAIL 5, FOE, FLANGES SUPPLIED WITH ITEM 3, REFER TO GENERAL NOTES - VALVES & FITTINGS.	6mm	1	CML	CMS	X42 / GRADE C

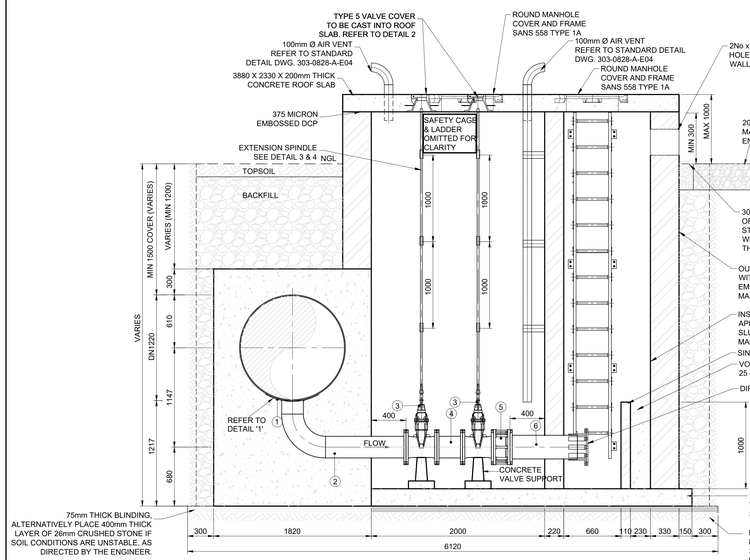




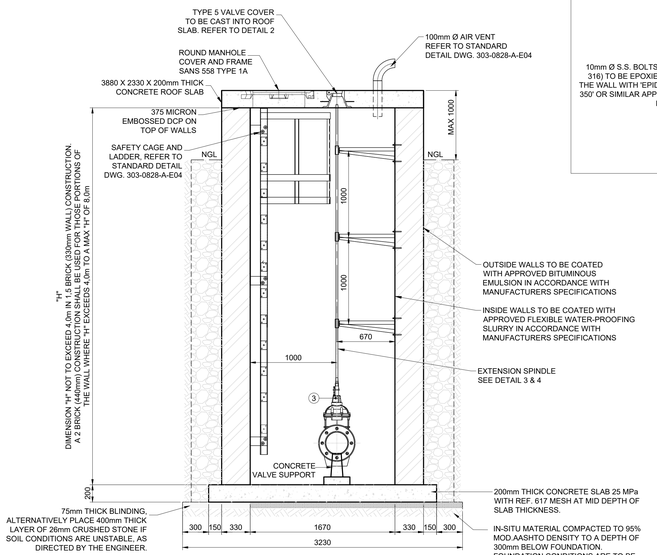


ROOF SLAB DETAIL
SCALE 1:25

DETAIL 4: SPINDLE BRACKET DETAIL

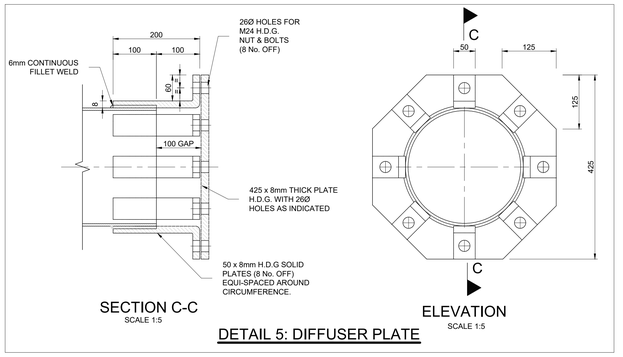


SECTION A - A
SCALE 1:25



SECTION B - B
SCALE 1 : 25

SCOUR VALVE ASSEMBLY - TYPE 1
(WATER DISCHARGES ONTO NATURAL GROUND SURFACE)



DETAIL 5: DIFFUSER PLATE

GENERAL NOTES

PIPEWORK

1. ALL PIPEWORK TO BE MILD STEEL IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS UNLESS OTHERWISE STATED.
2. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS OF ALL PIPEWORK AND ADVISE THE ENGINEER OF ANY DISCREPANCIES PRIOR TO FABRICATION.
3. ALL PIPES GREATER THAN AND INCLUDING DN100, FITTED TO EQUIPMENT OR FITTINGS, OR WHERE SPECIFICALLY INDICATED SHALL BE FLANGED TO SANS 1123 (TABLE 3) OR BS EN 1092 : 1 WHERE SANS 1123 (TABLE 3) DOES NOT APPLY OR AS SPECIFIED ON THE DRAWINGS. SHOULD THE RESPECTIVE FLANGE DRILLING NOT BE COVERED IN THE ABOVE SPECIFICATIONS THE RESIDENT ENGINEER SHALL BE CONSULTED FOR THE APPROPRIATE SPECIFICATION, BEFORE PROCURING ANY VALVES OR FLANGES.
4. SURFACE PREPARATION FOR APPLICATION OF CORROSION PROTECTION MATERIALS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
5. DAMAGED COATINGS AND LININGS SHALL BE REPAIRED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
6. ALL PIPEWORK AND SPECIALS TO BE COATED AND LINED AS PER THE PROJECT SPECIFICATIONS.
7. ALL JOINTS SHALL BE COATED, PROTECTED AND WRAPPED AS PER THE PROJECT SPECIFICATIONS.
8. THE PRESSURE RATINGS OF ALL PIPEWORK, FLANGES AND VALVES, SHALL BE AS INDICATED IN THE SCHEDULES OF FITTINGS.
9. ALL MILD STEEL PIPEWORK, COLLARS, WRAPPERS AND CROTCH PLATES TO BE MANUFACTURED FROM STEEL PIPE OF THE SAME GRADE AS THE MAIN PIPE.
10. ALL BENDS TO BE FABRICATED AND DIMENSIONED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
11. FOR COLLAR PLATES, PRE-DRILL 2 x 5mmØ HOLE. UPON COMPLETION OF FILLET WELDING WELD HOLES CLOSED.

VALVES AND FITTINGS

12. AIR VALVES.
 12.1. DN25 TO DN50 TO BE SCREW TYPE.
 12.2. DN80 TO DN200 TO BE FLANGED TYPE.
13. BUTTERFLY VALVES.
 13.1. FLANGED U-SECTION TYPE - SIZES UP TO DN1200, HAND WHEEL OPERATED, CLOCKWISE CLOSING (SUPPLIED WITH MATCHING FLANGES, NUTS, BOLTS, WASHERS AND GASKETS). UNLESS OTHERWISE SPECIFIED.
14. RSV & WEDGE GATE VALVES:
 14.1. DN100 TO DN300, HAND WHEEL OPERATED, CLOCKWISE CLOSING (SUPPLIED WITH MATCHING FLANGES, NUTS, BOLTS, WASHERS AND GASKETS). UNLESS OTHERWISE SPECIFIED.

CONCRETE

15. ALL DIMENSIONS IN MILLIMETERS UNLESS STATED OTHERWISE.
16. ALL EXPOSED EDGES TO BE CHAMFERED 25x25.
17. MINIMUM COVER TO ALL REINFORCING SHALL BE 50mm.
18. CONSTRUCTION JOINTS TO BE WELL CLEANED & SCABBLED TO EXPOSE FRESH AGGREGATE AND THOROUGHLY WETTED BEFORE THE NEXT LIFT IS POURED.
19. FLOOR SCREED LAID TO FALL WITH THICKNESS VARYING FROM 100 TO 50mm.
20. CONCRETE GRADE
 20.1. BLINDING : C12/15-20 UNLESS OTHERWISE STATED
 20.2. CONCRETE : C25/20-20 UNLESS OTHERWISE STATED
 20.3. SCREED : 1:3 (CEMENT/SAND)
21. FINISHES
 21.1. EXTERNAL WALLS UNEXPOSED : F1 FINISH
 21.2. EXTERNAL WALLS EXPOSED : F1 FINISH
 21.3. INTERNAL WALLS : F2 FINISH
 21.4. FLOOR : U4 FINISH
22. WHERE APPLICABLE, AIR VENTS, LIFTING HOLES, LIFTING HOOKS, STEP IRONS AND MANHOLE COVER & FRAME ARE TO BE CAST IN CONCRETE.
23. BOTTOM OF AIR INLET TO BE MINIMUM OF 200mm ABOVE NGL.
24. ACCESS LADDERS TO HAVE CAGE FROM 2.3m ABOVE CHAMBER FLOOR.
25. PRESSURE RATING IN ACCORDANCE TO SCHEDULES

ABBREVIATIONS :

ID	-	INSIDE DIAMETER	DI	-	DUCTILE IRON
CI	-	CAST IRON	F/F	-	FACE TO FACE DIMENSION
DN	-	DIAMETER NOMINAL	C/F	-	CENTER TO FACE DIMENSION
OD	-	OUTSIDE DIAMETER	FOE	-	FLANGED ONE END
MS	-	MILD STEEL	BEF	-	BOTH ENDS FLANGED
SS	-	STAINLESS STEEL	FAR	-	FLANGED ALL ROUND
FRL	-	FINAL ROAD LEVEL	LRB	-	LONG RADIUS BEND
SFE	-	SOLVENT FREE EPOXY	SRB	-	SHORT RADIUS BEND
CML	-	CEMENT MORTAR LINED	NGL	-	NATURAL GROUND LEVEL
FBE	-	FUSION BONDED EPOXY	HDGMS	-	HOT DIPPED GALVANIZED MILD STEEL
CMS	-	CEMENT MORTAR SHEATHING			

SCHEDULE 2.1

SCOUR VALVE ASSEMBLY DETAILS

DESCRIPTION				PRESSURE	MAIN PIPE DETAILS			BRANCH PIPE DETAILS			VALVE DETAILS		FLANGE RATING & DRILLING TABLES		INSTALLATION	PIPE REINFORCING DETAILS - COLLAR PLATE DETAILS		
PI	CHAINAGE (m)	IL (mas)	DEPTH TO IL (m)	PRESSURE CLASS	MAIN PIPE DIAMETER DN (mm)	MAIN PIPE PLATE THICKNESS (mm)	MAIN PIPE GRADE	SCOUR BRANCH PIPE DIAMETER (mm)	SCOUR BRANCH PIPE PLATE THICKNESS (mm)	SCOUR BRANCH CLASS	ISOLATING VALVE SIZE	ISOLATING VALVE TYPE	ISOLATING VALVE	PIPE FLANGES	TYPE	PLATE REINF. GRADE	THICKNESS OF REINF.	OVERALL REINF. WIDTH
																	(T + mm)	(W + mm)
PI-A8	199.926	125.182	2.932	PN10	1220	10.0	X42	250	6.0	X42	250	WEDGE GATE	PN10	PN10	1	X42	6.0	500.0
PI-A18	770.336	139.307	2.457	PN10	1220	10.0	X42	250	6.0	X42	250	WEDGE GATE	PN10	PN10	1	X42	6.0	500.0
PI-A23	1077.164	130.348	2.569	PN10	1220	10.0	X42	250	6.0	X42	250	WEDGE GATE	PN10	PN10	1	X42	6.0	500.0
PI-A30	1892.723	140.986	2.533	PN10	1220	10.0	X42	250	6.0	X42	250	WEDGE GATE	PN10	PN10	1	X42	6.0	500.0
PI-A36	2628.976	133.524	2.575	PN10	1220	10.0	X42	250	6.0	X42	250	WEDGE GATE	PN10	PN10	1	X42	6.0	500.0
PI-A39	2787.906	133.855	2.471	PN10	1220	10.0	X42	250	6.0	X42	250	WEDGE GATE	PN10	PN10	1	X42	6.0	500.0
PI-A46	3439.574	129.186	2.561	PN10	1220	10.0	X42	250	6.0	X42	250	WEDGE GATE	PN10	PN10	1	X42	6.0	500.0
PI-A49	3697.536	123.307	3.451	PN10	1220	10.0	X42	250	6.0	X42	250	WEDGE GATE	PN10	PN10	1	X42	6.0	500.0
PI-A62	5505.405	105.909	2.48	PN10	1220	10.0	X42	250	6.0	X42	250	WEDGE GATE	PN10	PN10	1	X42	6.0	500.0
PI-A68	5903.181	102.7	2.651	PN10	1220	10.0	X42	250	6.0	X42	250	WEDGE GATE	PN10	PN10	1	X42	6.0	500.0
PI-A74	6073.467	101.004	2.409	PN16	1220	10.0	X42	250	6.0	X42	250	WEDGE GATE	PN16	PN16	1	X42	6.0	500.0
PI-A76	6162.472	99.949	2.819	PN16	1220	10.0	X42	250	6.0	X42	250	WEDGE GATE	PN16	PN16	1	X42	6.0	500.0
PI-A79	6303.62	99.757	2.656	PN16	1220	10.0	X42	250	6.0	X42	250	WEDGE GATE	PN16	PN16	1	X42	6.0	500.0

No.	DATE	REVISION	CONSULT. ENG.
V1	23/11/2023	ORIGINAL VERSION	

CONSTRUCTION RECORD (AS-BUILT)
WORKS CONTRACT ENGINEER
Name :
Prof. Reg. No. :
Date :
SANRAL PROJECT MANAGER
Name :
Date :

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ACCEPTANCE

THIS ACCEPTANCE IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OR LIABILITY OF ANY KIND FROM WHATSOEVER CAUSE OR HOWEVER ARISING

for the SA NATIONAL ROADS AGENCY SOC LTD.
Date:

PROJECT DESCRIPTION
THE CAPACITY IMPROVEMENT OF THE NATIONAL ROUTE 1 SECTION 1 FROM OLD OAK INTERCHANGE (KM 18.90) TO KOELENOFF INTERCHANGE (KM 33.00)

DRAWING DESCRIPTION
N1 - WEMMERSHOEK PIPELINE RELOCATION
SECTION A - KOELENHOF TO KRAAIFONTEIN
TYPICAL SCOUR VALVE DETAILS - DN1200 MAINLINE

SCALE : AS SHOWN | SHEET 1 OF 1

PROJECT NUMBER	N.001-010-2021/1	
DRAWING LOCATION DATA	START	END
ROUTE	N01	N01
SECTION	01	01
DRAWING km DISTANCE	18.90	33.00
DRAWING TYPE	ROADS-UTILITIES	
BRIDGE/STRUCTURE No.		
CONSULTANT DRAWING No.	312-0828-A-E03	VER
SANRAL DOCUMENT #	-	V1