LEGEND

EXISTING:
- SEWERS CL AND M.H'S
- STORMWATER CL DRAIN
- WATER MAINS CL AND VALVES
- ELECTRICITY CL(OH) -Z- -Z-
- TELECOMMS. CL (OH)
- FIBRE OPTIC CL
- ROAD CENTERLINES
- ROAD EDGE
- ROAD RESERVE
- FENCE/BOUNDARY AND GATE

PROPOSED:
- UPGRADE ROAD EDGE
- TRANSMISSION PIPE CL
- AIR VALVE
- SCOUR VALVE
- ISOLATING VALVE
- METER (M)

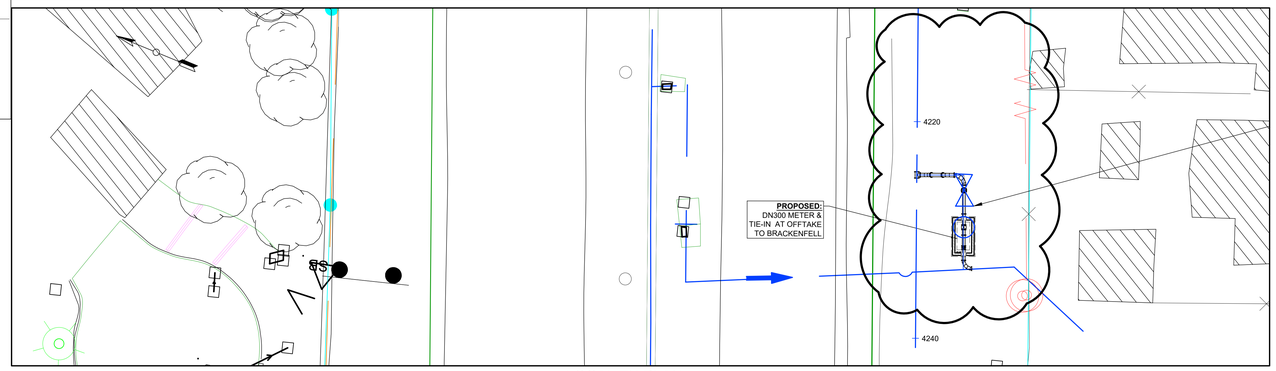
NOTE:
1. ALL SERVICES DEPICTED ON THE PLAN & LONG SECTION ARE APPROXIMATE POSITIONS OF EXPECTED SERVICES OBTAINED FROM SERVICE PROVIDERS RECORDS THAT MAY BE ENCOUNTERED BY THE CONTRACTOR ALONG THE ROUTE. ALL SERVICES ARE TO BE TRACED AND PROVED IN CONJUNCTION WITH EACH SERVICE PROVIDER AND NOT LESS THAN 14 WORKING DAYS PRIOR TO EXCAVATION TO AVOID CAUSING DAMAGE TO "EXISTING SERVICES".
2. ALL SERVICES SHOWN ON PLAN AND LONG SECTION AND ALL ADDITIONAL SERVICES PROVIDED BY THE SERVICE PROVIDER(S) SHALL BE DEFINED AS "KNOWN SERVICES". NO COMPENSATION WILL BE PAID FOR DAMAGE CAUSED TO "KNOWN SERVICES".

SETTING OUT CONTROL

NAME	Y	X	Z	DESCRIPTION
NRB 85-21	26453.78	3746563.85	96.451	
NRB 84-21	26677.62	3746746.37	96.676	
NRB 83-21	26915.48	3746932.16	96.751	

NOTE:
1. SURVEY BASED ON LO 19, SOUTH AFRICAN SURVEY GRID, WGS84 DATUM: 18 TO 20d E
2. THE ABOVE DATA IS UNIQUE TO THIS PROJECT ONLY. THE CONTRACTOR IS PROHIBITED FROM USING FOREIGN CONTROL BEACONS.

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



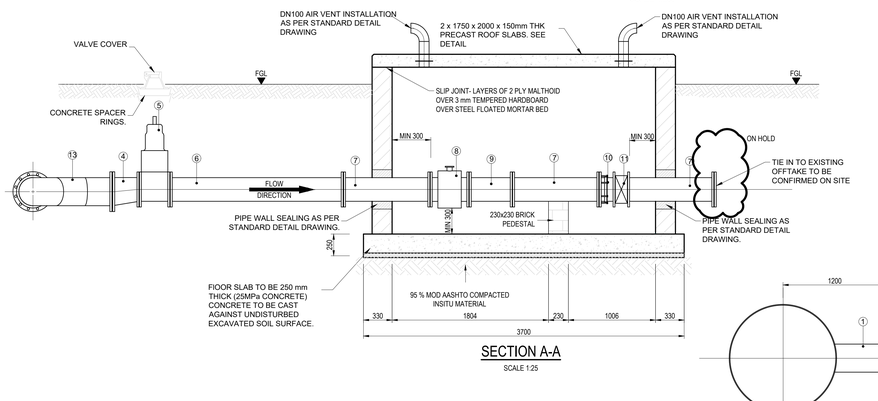
LOCALITY PLAN
SCALE 1:200

SCHEDULE 1.1 - PIPE WORK AND FITTINGS - PN16

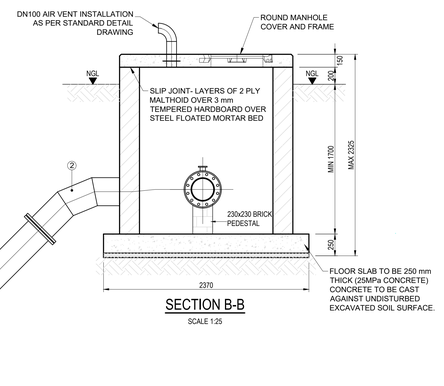
ITEM NO.	DESCRIPTION	WALL THICKNESS	NO. OFF	LINING	COATING	GRADE OF STEEL
1	DN300 FLANGED STUB AND 600 x 600 x 4.5mm THICK COLLAR PLATE.	4.5mm	1	CML	CMS	X42 / GRADE C
2	DN300 x 45°LONG RADIUS BEND (SANS 719), BEF.	4.5mm	2	CML	CMS	X42 / GRADE C
3	DN300 x MIN 500mm LONG F/F STRAIGHT PIPE, BEF. FINAL LENGTH TO BE DETERMINED ON SITE.	4.5mm	1	CML	CMS	X42 / GRADE C
4	DN300 x DN250 x 310mm F/F ECCENTRIC REDUCER, BEF.	4.5mm	1	CML	CMS	X42 / GRADE C
5	DN250 WEDGE GATE VALVE, NON-RISING, WITH EXTENSION SPINDLE AND CAP TOP, COMPLETE WITH MATCHING FLANGES.	-	1	-	-	-
6	DN250 x 2000mm LONG F/F STRAIGHT PIPE, BEF.	4.5mm	1	CML	CMS	X42 / GRADE C
7	DN250 x 1000mm LONG F/F STRAIGHT PIPE, BEF.	4.5mm	3	CML	CMS	X42 / GRADE C
8	DN250 MAG FLOW METER.	-	1	-	-	-
9	DN250 x 500mm LONG F/F STRAIGHT PIPE, BEF.	4.5mm	1	CML	CMS	X42 / GRADE C
10	DN250 RESTRAINED DISMANTLING JOINT.	-	1	-	-	-
11	DN250 WAFER CHECK VALVE.	-	1	-	-	-
12	DN300 x 90°LONG RADIUS BEND (SANS 719), BEF.	4.5mm	1	CML	CMS	X42 / GRADE C
13	DN400 x DN300 ECCENTRIC REDUCER, BEF AND DN400 LOOSE FLANGE	4.5mm	1	CML	CMS	X42 / GRADE C

SCHEDULE 1.2 - ANCILLARIES

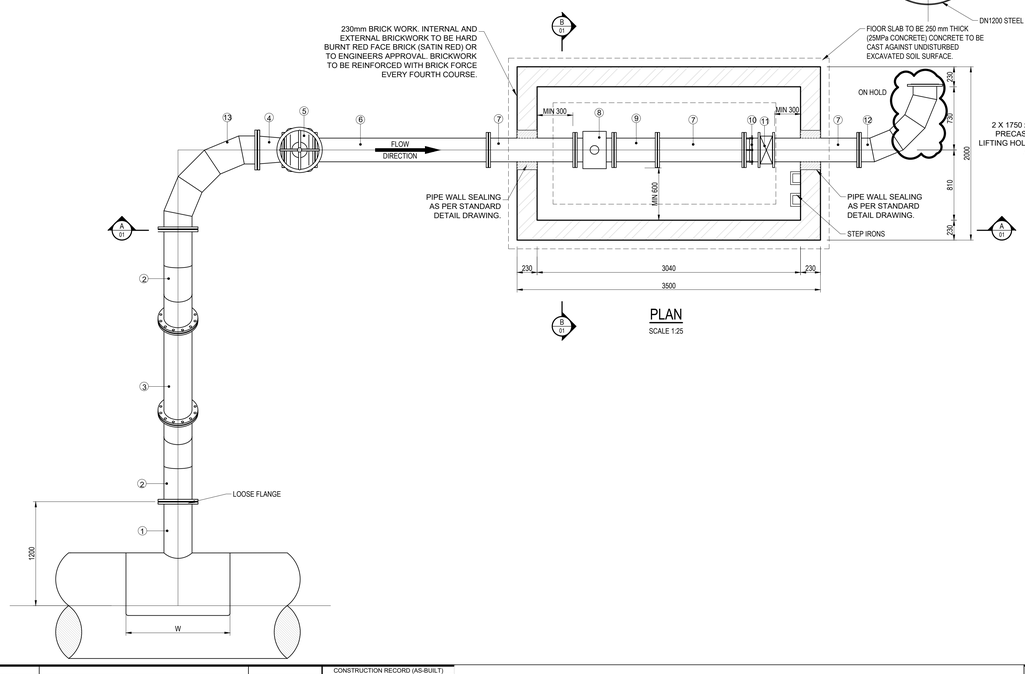
ITEM NO.	DESCRIPTION	NO. OFF
A	STEP IRONS. (MIN. 10 OFF) REFER TO STANDARD DETAILS DRG.303-00828-A-E04	10
B	TYPE 5 VALVE COVER.	2
C	100mm AIR VENT INSTALLATION AS PER STANDARD DETAIL DRAWING. (ITEM 1 - 4) REFER TO STANDARD DETAILS DRG.303-00828-A-E04	2
D	ROUND MANHOLE COVER AND FRAME (SANS 558 - TYPE 1A).	1
E	PRECAST CONCRETE VALVE SPACER RINGS. (MIN. 12 OFF)	8



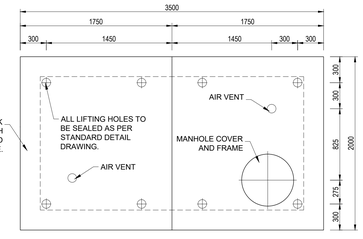
SECTION A-A
SCALE 1:25



SECTION B-B
SCALE 1:25



PLAN
SCALE 1:25



ROOF PLAN
SCALE 1:25

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.

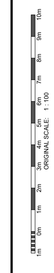
CONCRETE

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			





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 :

CONSULTANT APPROVAL
Name :
Prof. Reg. No. :
Date :
THE ABOVE SIGNATORY CERTIFIES THAT THE DESIGNER AND CHECKER HAVE CONSENTED TO THEIR NAMES BEING INSERTED ON THIS DRAWING AND THAT THEY HAVE SEEN AND APPROVED THE DRAWING.

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48 Tambotie Avenue
Val de Grace
Pretoria
0184

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SANRAL
SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LTD
Reg No.: 1998/ 009584/ 06
BUILDING SOUTH AFRICA THROUGH BETTER ROADS

WESTERN REGION
1 Havenga Street
Oakdale
Bellville
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Private Bag X19
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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 B - KRAAIFONTEIN TO BRACKENFELL
DN250 METER & TIE-IN DETAILS AT OFFTAKE TO BRACKENFELL

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.	312-0827-B-B05	VER V1
SANRAL DOCUMENT #	-	