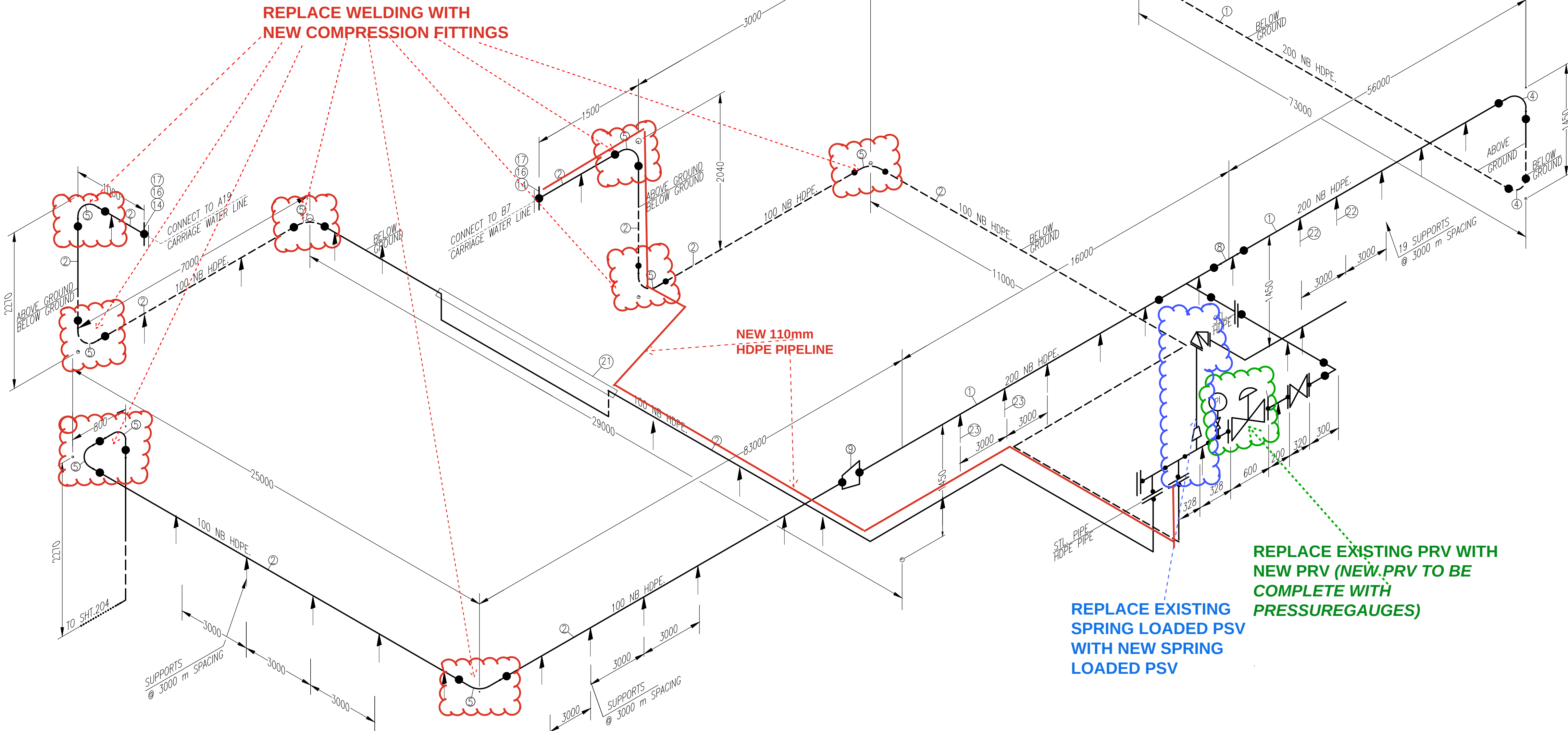


MECHANICAL-CARRIAGE WATER MATERIAL				
No.	Size	Quantity	Description	
1	200 NB	320 M	HDPE PIPE SPEC PE 100 PN 16 RATED	
2	100 NB	235 M	HDPE PIPE PE 100 PN 16 RATED PIPE	
3	200 NB	1	ELL 90DEG LR SCH40 STL A234 WPB	
4	200 NB	5	ELBOW 90 DEGREES HDPE PE100 PN 16 RATED	
5	100 NB	11	ELL 90 DEGREES COMPRESSED HDPE PN 16 RATED	
6	200 NB	2	ELBOW 45 DEGREES HDPE PE100 PN 16 RATED	
7	200x100	1	REDUCING TEE STD WT STL A234 WPB	
8	200 x 110	2	REDUCING TEE HDPE PE100 PN 16 RATED	
9	200 NB x 100 NB	1	CONCETRIC REDUCER HDPE PE100 PN 16 RATED	
10	100 NB	2	COMPRESSED COUPLING HDPE PN 16 RATED	
11	200 NB	1	FLANGE SLIP ON CL PN 16 RAISED FACE BORE A105	
12	100 NB	1	FLANGE SLIP ON CL PN 16 RAISED FACE BORE A105	
13	200 NB	1	FLANGE HDPE PE 100 TO CONNECT TO STEEL FLANGE PN 16 RATED	
14	100 NB	4	FLANGE HDPE PE 100 TO CONNECT TO STEEL FLANGE PN 16 RATED	
15	200 NB	1	GASKET PN16 CM GRAF 3 MM THK	
16	100 NB	3	GASKET PN16 CM GRAF 3 MM THK	
17		32	M16 x 100 MM STUD BOLT A193 B7 W/A194 GR 2H NUTS	
18		12	M20 x 110 MM STUD BOLT A193 B7 W/A194 GR 2H NUTS	
19	100 NB	1	AIR VALVE CARBON STEEL	
20	250 NB	18 M	PVC PIPE SLEEVE FOR ROAD CROSSING	
21	150 NB	6 M	PVC PIPE SLEEVE FOR ROAD CROSSING	
22		35	CIVIL SUPPOTS WITH U-BOLTS TO SUPPORTS 200 OD HDPE PIPE(Detail to come from Civils)	
23		46	CIVIL SUPPOTS WITH U-BOLTS TO SUPPORTS 100 OD HDPE PIPE (Details to come from Civils)	
24	200 NB	2.3 M	PIPE SMLESS SCH40 A106 GRB (FREE ISSUED TO THE CONTRACTOR)	
25	100 NB x 80 NB	1	CONCETRIC REDUCER STD WT STL A234 WPB	
26	200 NB	6	FLANGE SLIP ON CL PN 16 RAISED FACE BORE A105	
27	100 NB	3	FLANGE SLIP ON CL PN 16 RAISED FACE BORE A105	
28	80 NB	1	FLANGE SLIP ON CL PN 16 RAISED FACE BORE A105	
29	100 NB	1	GASKET PN16 CM GRAF 3 MM THK	
30	80 NB	1	GASKET PN16 CM GRAF 3 MM THK	
31	M16	16	M16 x 100 MM STUD BOLT A193 B7 W/A194 GR 2H NUTS	
32	M20	40	M20 x 110 MM STUD BOLT A193 B7 W/A194 GR 2H NUTS	
33	20 NB	1	PRESSURE GAUGE ISOLATION VALVE	
34	200 NB	1	PRESSURE REDUCING VALVE PN 25 FLANGED (FREE ISSUED TO THE CONTRACTOR)	
35	100 NB x 80 NB	1	PRESSURE RELIEF VALVE SPRING LOADED TYPE. PRESSURE RATED 40 BAR, PN 16 CONNECTING FLANGES. BODY CARBON STEEL SA 216 WCB DIN EN-1092-1	
36	100 NB	2 M	PIPE SMLESS SCH 40 A106 GR.B	
37	200 NB	1	ELL 90DEG LR SCH40 STL A234 WPB	
38	100 NB	1	ELL 90DEG LR SCH40 STL A234 WPB	
39	200x100	2	REDUCING TEE STD WT STL A234 WPB	



ISOMETRIC VIEW

REFERENCE DRAWINGS		INSULATION			CONDITION									
MATERIAL SPECIFICATION		TYPE NO.	TYP	THK	OPERATING		DESIGN				TEST		PWHT	
FABRICATION SPECIFICATION	None				TEMP °C	PRESS kPa(g)	TEMP °C (MIN)	TEMP °C (MAX)	PRESS kPa(g)	PRESS kPa(g)	PRESS kPa(g)	MEDIUM	REQ'D YES/NO	
STRESS CALCULATION	VISUAL	1	None	None	22	800	10	35	3000	2500	4500	WATER	NO	
CODE OF CONSTRUCTION	ASME B31.3	2												
PIPING GA	None	3												
SANS 347 CATEGORY	SEP	4												
FLUID GROUP	GROUP II	5												
PIPING SUPPORT STANDARD	None	6												
P&ID	DRG No. RA 39728	7												

DRG No. RA-39728/203

- NOTES
- 1.) THE CONTRACTOR SHALL ALLOW FOR DIAMOND TIPPED CORE DRILLING IN THE STEEL REINFORCED CONCRETE STRUCTURES FOR THE HOLDING DOWN "RAWLBOLT" HOLES.
 - 2.) DIMENSIONS ARE SHOWN FOR TENDER PURPOSES. THE CONTRACTOR IS RESPONSIBLE FOR MEASURING UP ON SITE PRIOR TO MANUFACTURE.
 - 3.) THE PIPING CONTRACTOR SHALL BE RESPONSIBLE FOR THE CUTTING ALLOWANCE, ALLOCATION AND LOCATION OF FIELD FIT WELDS ON ALL PIPING SYSTEMS.
 - 4.) THE PIPING CONTRACTOR SHALL CONFIRM ALL DIMENSIONS ON SITE PRIOR TO THE COMMENCEMENT OF FABRICATION.
 - 5.) ALL FLANGE BOLT TO STRADDLE PIPE CENTRE LINE.
 - 6.) THE PIPING ERECTOR SHALL VERIFY INSTALLED STRUCTURAL/MECHANICAL OR CIVIL WORKS ELEVATIONS AND CO-ORDINATES & ELECTRICAL RACEWAYS ROUTES PRIOR TO INITIATING RELATED WORKS AND REPORT POTENTIAL CLASHES TO THE REPNISABLE SITE REPRESENTATIVE.
 - 7.) ALL HDPE PIPE 150NB AND SMALLER SHALL BE CONNECTED USING COMPRESSION FITTINGS.
 - 8.) ALL HDP PIPE 150NB AND BIGGER SHALL BE CONNECTED BY BUT-FUSSION, STUBS AND BACKING RINGS.
 - 9.) THE BURRIED PIPES DEPTH SHOULD NOT BE MORE THAT 500MM.
 - 10.) THE METAL PIPE SHOULD BE WELDED ACCORDING TO API 1104.

FOR TENDER PURPOSE ONLY

REVISIONS				
No	DATE	CHECKED	APPROVED	DESCRIPTION

REFERENCE DRAWINGS	
NUMBER	TITLE



BOX 1127

JOHANNESBURG

2000

TEL: 011-682-0911

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SAP No.	P.03797	CHECKED BY	
CONTRACT No.	RW00000/19	D.O.M.	C. TUMBARE
DESIGNED BY	R.MSWELI	APPROVED	 Pr Eng
DRAWN BY	M.MTOTOBA	REG. No.	
DATE	2020/02/20	DATE	

EIKENHOF PUMPING STATION			
CARRIAGE WATER PIPE			
STATION	WKS	DOC. TYPE	S
E I K	U G	D C G	A
SCALE : AS SHOWN			REVISION
DRG No. RA-39728/203			1