

LEGEND

	EXISTING 40" RETICULATION PIPELINE
	EXISTING 22" GRP RISING MAIN
	PROPOSED 200mm Ø BULK PIPELINE
	PROPOSED 150mm Ø 40% CLASS 16 RETICULATION PIPELINE
	PROPOSED 75mm Ø 40% CLASS 12 RETICULATION PIPELINE
	PROPOSED FIRE HYDRANTS
	PROPOSED VALVES
	PROPOSED BULK METER
	PROJECT SECTION BOUNDARY

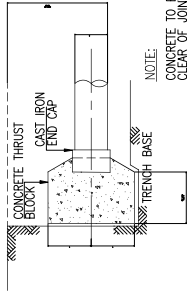
NOTES

- NOTES**
1. RETICULATION PIPELINE POSITIONS TO BE POSITIONED AT 1m OFFSET FROM CADASTRAL BOUNDARY
 2. FINAL POSITIONS OF WATER CONNECTIONS TO BE DETERMINED ON SITE.
 3. RETICULATION PIPE SIZES ARE 100mm Ø AND LOWER.
 4. PIPELINES TO BE LOCATED IN ROAD SURF VERTUDE & 1m FROM EXISTING MANS.
 5. EXISTING PIPELINES TO BE LOCATED FIRST BEFORE EXCAVATIONS CAN PROCEED TO PREVENT DAMAGES.
 6. ALL PIPES TO BE CLASS 12 UNLESS OTHERWISE SPECIFIED.
 7. PIPE SIZES 500mm Ø AND LOWER SHALL BE HDPE.

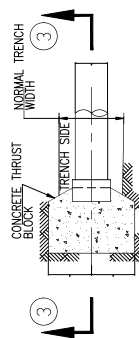


ORIGINAL DRAWING

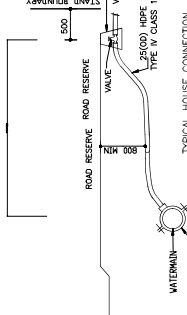
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NOTE:
CONCRETE TO BE KEPT
CLEAR OF JOINTS



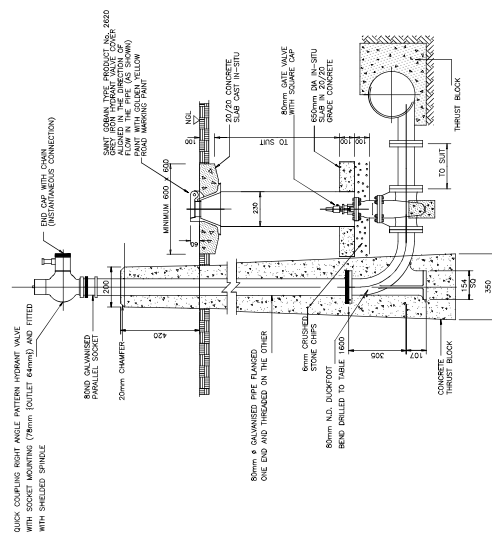
NOTE:
CONCRETE TO BE KEPT
CLEAR OF JOINTS



NOTE:
CONCRETE TO BE KEPT
CLEAR OF JOINTS

PLAN OF END CAP

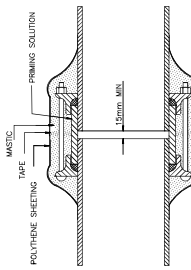
SECTION 3-3



- NOTES:
- HYDRANTS TO BE PAINTED GOLDEN YELLOW ABOVE GROUND AND BLACK BELOW GROUND.
 - WITH 3 COATS OF PAINT COLOR AS PRESCRIBED BY MANUFACTURER'S INSTRUCTIONS.
 - ALL BOLTED CONNECTIONS TO BE WRAPPED WITH "GENCO" WRAP OR SIMILAR APPROVED AFTER CONSULTATION WITH "GENCO-PASTE" OR SIMILAR APPROVED.
 - FLANGES TO BE DRILLED ACCORDING TO SABS 1123.
 - VALVE TO BE SUPPLIED WITH REMOVABLE HYDRANT KEY.

STANDARD 80mm DIA HYDRANT

N.T.S.

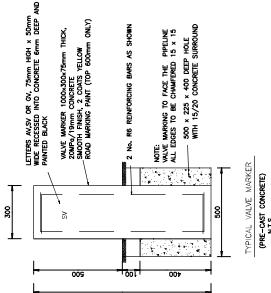


TYPICAL SECTION THROUGH COUPLING

- MASTIC PROTECTION TO FLANGED JOINTS, FLEXIBLE COUPLINGS AND FLANGE ADAPTORS NOTE: AS SUPPLIED BY JEND PRODUCTS OR SIMILAR APPROVED.
- APPLICATION TO BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - JOINT/COUPLING ENSURING ALL AIR IS EXPELLED.
 - JOINT/COUPLING TO BE WRAPPED WITH "GENCO" WRAP OR SIMILAR APPROVED.
 - POLYURETHANE SHEETING TO OVERLAP BURIED WRAPPING ON PIPES EITHER SIDE OF JOINT BY 100mm AND SECURED USING DUCT TAPE.

DETAILS OF MASTIC PROTECTION TO FLANGED JOINTS AND FLEXIBLE COUPLINGS

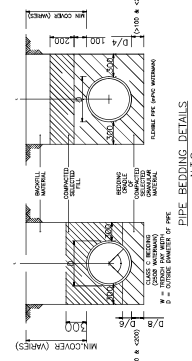
(TO BE READ IN CONJUNCTION WITH PROJECT SPECIFICATION)



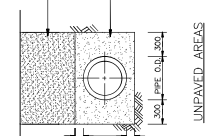
TYPICAL VALVE MARKER
(PRE-CAST CONCRETE)
N.T.S.

PLAN OF T-JUNCTION

NOTE:
CONCRETE TO BE KEPT
CLEAR OF JOINTS



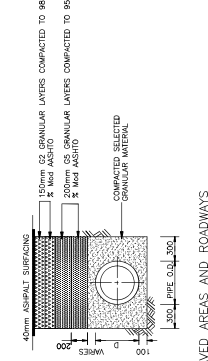
N.T.S.



N.T.S.

TYPICAL TRENCH SECTION

N.T.S.



PAVED AREAS AND ROADWAYS



PROJECT/DRAWING TITLE		RUSTENBURG LOCAL MUNICIPALITY		CONTRACT No.	
REPLACEMENT OF AG BULK AND RETICULATION IN PHATSIMA		RUSTENBURG LOCAL MUNICIPALITY		RUM/COMM014/2024/25	
PHYSICAL ADDRESS		CORNER BEYERS VALDE & NELSON		SHEET	OF
RUSTENBURG		RUSTENBURG		1	2
CLIENT REP		RUSTENBURG		DRAWING No.	K056-1-WIT-101
SIGNATURE		H. FUYANA		REVISION	T
DESIGNED		K. MUCHAMAMETH		DATE	20/06/2024
CHECKED		H. FUYANA		APPROVED	H. FUYANA
DRAWN		N. MACHE		DESCRIPTION OF REVISION(S)	
PROJECT ENGINEER		H. FUYANA			
REGISTRATION NO.		201670323			



LEGEND

EXISTING 250MM GRP GRAVITY MAINS

NEW RAW WATER MAIN

NEW BRICKS

PUMPSTATION

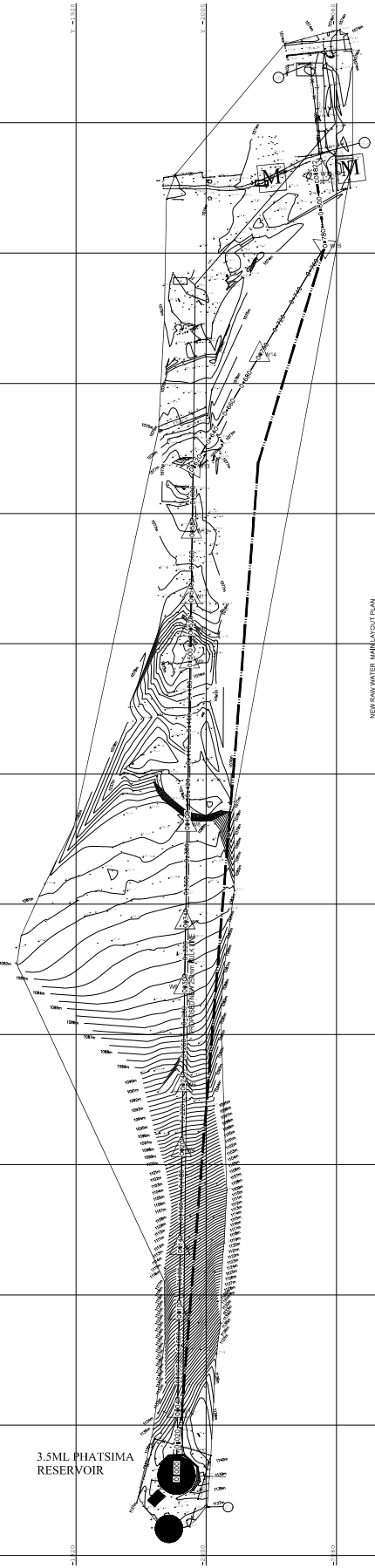
FENCE

AIR VALVES

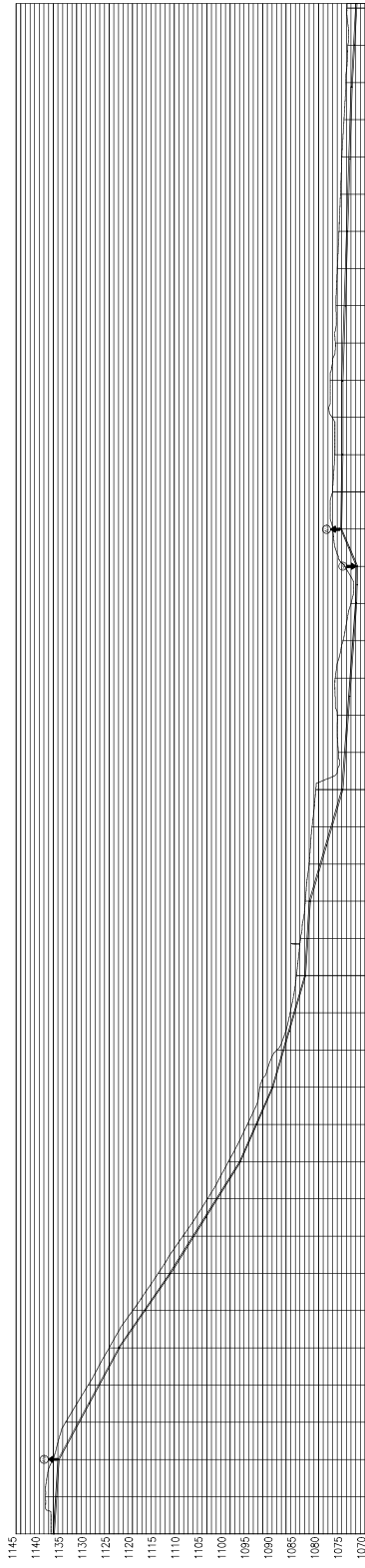
SCOUR VALVES

NOTE

ALL DIMENSIONS SHOWN IN APPROXIMATE SIZES ONLY. CONTRACTOR TO PROVIDE DIMENSIONS BY CAREFUL EXPOSING DURING CONSTRUCTION ACTIVITIES.



NEW RAW WATER MAIN LAYOUT PLAN
SCALE: 1:1000



Reference	Y	Per. depth (m)	Depth
AB	-180.120	20.115	1.200
AC	-180.140	20.115	1.200
AD	-180.160	20.115	1.200
AE	-180.180	20.115	1.200
AF	-180.200	20.115	1.200
AG	-180.220	20.115	1.200
AH	-180.240	20.115	1.200
AI	-180.260	20.115	1.200
AJ	-180.280	20.115	1.200
AK	-180.300	20.115	1.200
AL	-180.320	20.115	1.200
AM	-180.340	20.115	1.200
AN	-180.360	20.115	1.200
AO	-180.380	20.115	1.200
AP	-180.400	20.115	1.200
AQ	-180.420	20.115	1.200
AR	-180.440	20.115	1.200
AS	-180.460	20.115	1.200
AT	-180.480	20.115	1.200
AV	-180.500	20.115	1.200
AW	-180.520	20.115	1.200
AX	-180.540	20.115	1.200
AY	-180.560	20.115	1.200
AZ	-180.580	20.115	1.200
BA	-180.600	20.115	1.200
BB	-180.620	20.115	1.200
BC	-180.640	20.115	1.200
BD	-180.660	20.115	1.200
BE	-180.680	20.115	1.200
BF	-180.700	20.115	1.200
BG	-180.720	20.115	1.200
BH	-180.740	20.115	1.200
BI	-180.760	20.115	1.200
BJ	-180.780	20.115	1.200
BK	-180.800	20.115	1.200
BL	-180.820	20.115	1.200
BM	-180.840	20.115	1.200
BN	-180.860	20.115	1.200
BO	-180.880	20.115	1.200
BP	-180.900	20.115	1.200
BQ	-180.920	20.115	1.200
BR	-180.940	20.115	1.200
BS	-180.960	20.115	1.200
BT	-180.980	20.115	1.200
BU	-181.000	20.115	1.200
BV	-181.020	20.115	1.200
BW	-181.040	20.115	1.200
BX	-181.060	20.115	1.200
BY	-181.080	20.115	1.200
BZ	-181.100	20.115	1.200
CA	-181.120	20.115	1.200
CB	-181.140	20.115	1.200
CC	-181.160	20.115	1.200
CD	-181.180	20.115	1.200
CE	-181.200	20.115	1.200
CF	-181.220	20.115	1.200
CG	-181.240	20.115	1.200
CH	-181.260	20.115	1.200
CI	-181.280	20.115	1.200
CJ	-181.300	20.115	1.200
CK	-181.320	20.115	1.200
CL	-181.340	20.115	1.200
CM	-181.360	20.115	1.200
CN	-181.380	20.115	1.200
CO	-181.400	20.115	1.200
CP	-181.420	20.115	1.200
CQ	-181.440	20.115	1.200
CR	-181.460	20.115	1.200
CS	-181.480	20.115	1.200
CT	-181.500	20.115	1.200
CU	-181.520	20.115	1.200
CV	-181.540	20.115	1.200
CW	-181.560	20.115	1.200
CX	-181.580	20.115	1.200
CY	-181.600	20.115	1.200
CZ	-181.620	20.115	1.200
DA	-181.640	20.115	1.200
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DE	-181.720	20.115	1.200
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DG	-181.760	20.115	1.200
DH	-181.780	20.115	1.200
DI	-181.800	20.115	1.200
DJ	-181.820	20.115	1.200
DK	-181.840	20.115	1.200
DL	-181.860	20.115	1.200
DM	-181.880	20.115	1.200
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DO	-181.920	20.115	1.200
DP	-181.940	20.115	1.200
DQ	-181.960	20.115	1.200
DR	-181.980	20.115	1.200
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DU	-182.040	20.115	1.200
DV	-182.060	20.115	1.200
DW	-182.080	20.115	1.200
DX	-182.100	20.115	1.200
DY	-182.120	20.115	1.200
DZ	-182.140	20.115	1.200
EA	-182.160	20.115	1.200
EB	-182.180	20.115	1.200
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EE	-182.240	20.115	1.200
EF	-182.260	20.115	1.200
EG	-182.280	20.115	1.200
EH	-182.300	20.115	1.200
EI	-182.320	20.115	1.200
EJ	-182.340	20.115	1.200
EK	-182.360	20.115	1.200
EL	-182.380	20.115	1.200
EM	-182.400	20.115	1.200
EN	-182.420	20.115	1.200
EO	-182.440	20.115	1.200
EP	-182.460	20.115	1.200
EQ	-182.480	20.115	1.200
ER	-182.500	20.115	1.200
ES	-182.520	20.115	1.200
ET	-182.540	20.115	1.200
EU	-182.560	20.115	1.200
EV	-182.580	20.115	1.200
EW	-182.600	20.115	1.200
EX	-182.620	20.115	1.200
EY	-182.640	20.115	1.200
EZ	-182.660	20.115	1.200
FA	-182.680	20.115	1.200
FB	-182.700	20.115	1.200
FC	-182.720	20.115	1.200
FD	-182.740	20.115	1.200
FE	-182.760	20.115	1.200
FF	-182.780	20.115	1.200
FG	-182.800	20.115	1.200
FH	-182.820	20.115	1.200
FI	-182.840	20.115	1.200
FJ	-182.860	20.115	1.200
FK	-182.880	20.115	1.200
FL	-182.900	20.115	1.200
FM	-182.920	20.115	1.200
FN	-182.940	20.115	1.200
FO	-182.960	20.115	1.200
FP	-182.980	20.115	1.200
FQ	-183.000	20.115	1.200
FR	-183.020	20.115	1.200
FS	-183.040	20.115	1.200
FT	-183.060	20.115	1.200
FU	-183.080	20.115	1.200
FV	-183.100	20.115	1.200
FW	-183.120	20.115	1.200
FX	-183.140	20.115	1.200
FY	-183.160	20.115	1.200
FZ	-183.180	20.115	1.200
GA	-183.200	20.115	1.200
GB	-183.220	20.115	1.200
GC	-183.240	20.115	1.200
GD	-183.260	20.115	1.200
GE	-183.280	20.115	1.200
GF	-183.300	20.115	1.200
GG	-183.320	20.115	1.200
GH	-183.340	20.115	1.200
GI	-183.360	20.115	1.200
GJ	-183.380	20.115	1.200
GK	-183.400	20.115	1.200
GL	-183.420	20.115	1.200
GM	-183.440	20.115	1.200
GN	-183.460	20.115	1.200
GO	-183.480	20.115	1.200
GP	-183.500	20.115	1.200
GQ	-183.520	20.115	1.200
GR	-183.540	20.115	1.200
GS	-183.560	20.115	1.200
GT	-183.580	20.115	1.200
GU	-183.600	20.115	1.200
GV	-183.620	20.115	1.200
GW	-183.640	20.115	1.200
GX	-183.660	20.115	1.200
GY	-183.680	20.115	1.200
GZ	-183.700	20.115	1.200
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HB	-183.740	20.115	1.200
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HE	-183.800	20.115	1.200
HF	-183.820	20.115	1.200
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HV	-184.140	20.115	1.200
HW	-184.160	20.115	1.200
HX	-184.180	20.115	1.200
HY	-184.200	20.115	1.200
HZ	-184.220	20.115	1.200
IA	-184.240	20.115	1.200
IB	-184.260	20.115	1.200
IC	-184.280	20.115	1.200
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IH	-184.380	20.115	1.200
II	-184.400	20.115	1.200
IJ	-184.420	20.115	1.200
IK	-184.440	20.115	1.200
IL	-184.460	20.115	1.200
IM	-184.480	20.115	1.200
IN	-184.500	20.115	1.200
IO	-184.520	20.115	1.200
IP	-184.540	20.115	1.200
IQ	-184.560	20.115	1.200
IR	-184.580	20.115	1.200
IS	-184.600	20.115	1.200
IT	-184.620	20.115	1.200
IU	-184.640	20.115	1.200
IV	-184.660	20.115	1.200
IV	-184.680	20.115	1.200
IV	-184.700	20.115	1.200
IV	-184.720	20.115	1.200
IV	-184.740	20.115	1.200
IV	-184.760	20.115	1.200
IV	-184.780	20.115	1.200
IV	-184.800	20.115	1.200
IV	-184.820	20.115	1.200
IV	-184.840	20.115	1.200
IV	-184.860	20.115	1.200
IV	-184.880	20.115	1.200
IV	-184.900	20.115	1.200
IV	-184.920	20.115	1.200
IV	-184.940	20.115	1.200
IV	-184.960	20.115	1.200
IV	-184.980	20.115	1.200
IV	-185.000	20.115	1.200

Pipe Dia.	200mm	250mm	300mm	350mm	400mm	450mm	500mm	550mm	600mm	650mm	700mm	750mm	800mm	850mm	900mm	950mm	1000mm	1050mm	1100mm	1150mm	1200mm	1250mm	1300mm	1350mm	1400mm	1450mm	1500mm	1550mm	1600mm	1650mm	1700mm	1750mm	1800mm	1850mm	1900mm	1950mm	2000mm	2050mm	2100mm	2150mm	2200mm	2250mm	2300mm	2350mm	2400mm	2450mm	2500mm	2550mm	2600mm	2650mm	2700mm	2750mm	2800mm	2850mm	2900mm	2950mm	3000mm	3050mm	3100mm	3150mm	3200mm	3250mm	3300mm	3350mm	3400mm	3450mm	3500mm	3550mm	3600mm	3650mm	3700mm	3750mm	3800mm	3850mm	3900mm	3950mm	4000mm	4050mm	4100mm	4150mm	4200mm	4250mm	4300mm	4350mm	4400mm	4450mm	4500mm	4550mm	4600mm	4650mm	4700mm	4750mm	4800mm	4850mm	4900mm	4950mm	5000mm	5050mm	5100mm	5150mm	5200mm	5250mm	5300mm	5350mm	5400mm	5450mm	5500mm	5550mm	5600mm	5650mm	5700mm	5750mm	5800mm	5850mm	5900mm	5950mm	6000mm	6050mm	6100mm	6150mm	6200mm	6250mm	6300mm	6350mm	6400mm	6450mm	6500mm	6550mm	6600mm	6650mm	6700mm	6750mm	6800mm	6850mm	6900mm	6950mm	7000mm	7050mm	7100mm	7150mm	7200mm	7250mm
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1. STANDPIPE POSITION TO BE JOINTLY DETERMINED BY PROPERTY OWNER, SOCIAL CONSULTANT AND ENGINEER ON SITE.

- | ITEM No. | DESCRIPTION | No. OFF |
|----------|--|---------|
| 1 | 25mm MALE / FEMALE BALLSTOP VALVE 1200kpa | 1 |
| 2 | 15mm MALE IRON / FEMALE COPPER COUPLING | 2 |
| 3 | 15mm FEMALE / FEMALE BALLSTOP VALVE 1200kpa | 1 |
| 4 | 15mm THREADED FEMALE STRAINER | 1 |
| 5 | 15mm GALV. IRON MALE NIPPLE | 2 |
| 6 | 15mm THREADED PRESSURE RELIEFING VALVE WITH ADJUSTABLE DOWNSTREAM PRESSURE SETTING 400 - 1200kpa | 1 |
| 7 | 15mm x 1/2" COPPER TO FEMALE IRON COUPLER | 1 |
| 8 | 15mm BRASS MALE BIP COCK CODE 121 - COBRA TYPE | 1 |
| 9 | 15mm MALE KENT FLOW METER | 1 |

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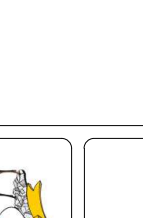
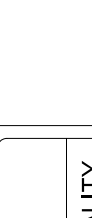
	MUNICIPAL INFRASTRUCTURE GRANT NORTH WEST PROVINCE APPOINTMENT OF A CONTRACTOR FOR THE REPLACEMENT OF PHATSIMA AC BULK & RETICULATION WATER PIPELINES IN PHATSIMA CONTRACT NUMBER: RLM/OMM/01/24/2024/25	
ENQUIRIES PROJECT MANAGEMENT UNIT MANAGER TEL: 014 590 3535		
	IMPLEMENTING AGENT RUSTENBURG LOCAL MUNICIPALITY Tel: (014) 590 3535 Fax: (014) 590 3879	CONSULTANTS FMA ENGINEERS (PTY) LTD Tel: (031) 764 2763 Fax: 086 542 4084
		CONTRACTOR
    EXPANDED PUBLIC WORKS PROGRAMME		
Creating opportunities towards human fulfilment		

Figure 1 shows a number line with tick marks at 32, 926, 527, and 1283. The line is divided into segments by these points. The segments are labeled with their lengths: 32 (from 0 to 32), 926 (from 32 to 926), 527 (from 926 to 1283), and 32 (from 1283 to 1315).

SCALE	TYPES OF PLANNING	STATUS
NTS	PLANNING CONSTRUCTION AS-BUILT	PLANNING 
REVISION	PLAN No.	
T	K056.1-WIT-105	

CLIENT	RUSTENBURG LOCAL MUNICIPALITY	CONTRACT NO.	PLUMWAT/24/2020/026	PW/NO.	SHEET
PROJECT TITLE					
APPOINTMENT OF A CONTRACTOR FOR THE REPLACEMENT OF PHATSIMA AC BULK & RETICULATION WATER PIPELINE IN PHATSIMA					
DRAWING TITLE					
CONTRACT NAME BOARD - PHATSIMA AC BULK					

CLIENT ADDRESS


Rustenburg
Local Municipality

P O BOX 16
RUSTENBURG
0300

Tel: (014) 560 3535
Fax: (014) 560 3008

RAILMAN CONSULTING	ISSUED BY:	DEPARTMENT OF ROADS AND STORMWATER
DATE:	RECEIVED BY:	DATE:

H. Fuyana-Pr Tech Eng	DESIGNED	H. Fuyana-Pr Tech Eng	CHECKED
	B. DUMINI		
	DRAWN		

DESIGNED BY: FMA ENGINEERS (PTY) LTD

FMA
ENGINEERS

10 YORK ROAD
ROBERTSON PARK
GILITTS

Tel: (012) 753 0744
Fax: (012) 753 0745
Email: admin@fmaengineers.co.za 3510

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