

DRAWING LIST				
DRAWING NUMBER	DRAWING DESCRIPTION	REVISION	STATUS	DATE LAST PUBLISHED
COM17/2023-00-00	DRAWING INDEX	-		2023/02/08
COM17/2023-01-01	MUTSULU: BULK WATER LINE & RETICULATION LAYOUT	-		2023/02/08
COM17/2023-01-02	2ML RESERVOIR PLAN AND SECTION DETAILS	-		2023/02/08
COM17/2023-02-01	WATER DETAILS: THRUST BLOCKS	-		2023/02/08
COM17/2023-02-02	WATER DETAILS: PIPELINE MARKER	-		2023/02/08
COM17/2023-02-03	WATER DETAILS: BULK METER MANHOLE COVER	-		2023/02/08
COM17/2023-02-04	WATER DETAILS: AIR VALVE CHAMBER	-		2023/02/08
COM17/2023-02-05	WATER DETAILS: SCOUR VALVE AND ISOLATION VALVE	-		2023/02/08
COM1/2023-02-06	WATER DETAILS: HOUSE CONNECTION DETAILS	-		2023/02/08
COM1/2023-02-07	WATER DETAILS: BULK INLET CHAMBER DETAILS	-		2023/02/08
COM17/2023-02-08	WATER DETAILS: BREAK PRESSURE TANK DETAILS	-		2023/02/08
COM17/2023-02-09	WATER DETAILS: PIPE SUPPORT DETAIL 01	-		2023/02/08
COM17/2023-02-10	WATER DETAILS: PIPE SUPPORT DETAIL 02	-		2023/02/08
COM17/2023-02-11	ABOVE GROUND CUSTOMER WATER METER INSTALLATION	-		2023/02/08
COM17/2023-02-12	DOMESTIC WATER & ELECTRICAL METER INSTALLATION	-		2023/02/08
COM17/2023-02-13	DOMESTIC ABOVE GROUND WATER METER DETAIL	-		2023/02/08
COM17/2023-02-14	PIPE TRENCH AND HYDRANT DETAILS	-		2023/02/08

[illegible]

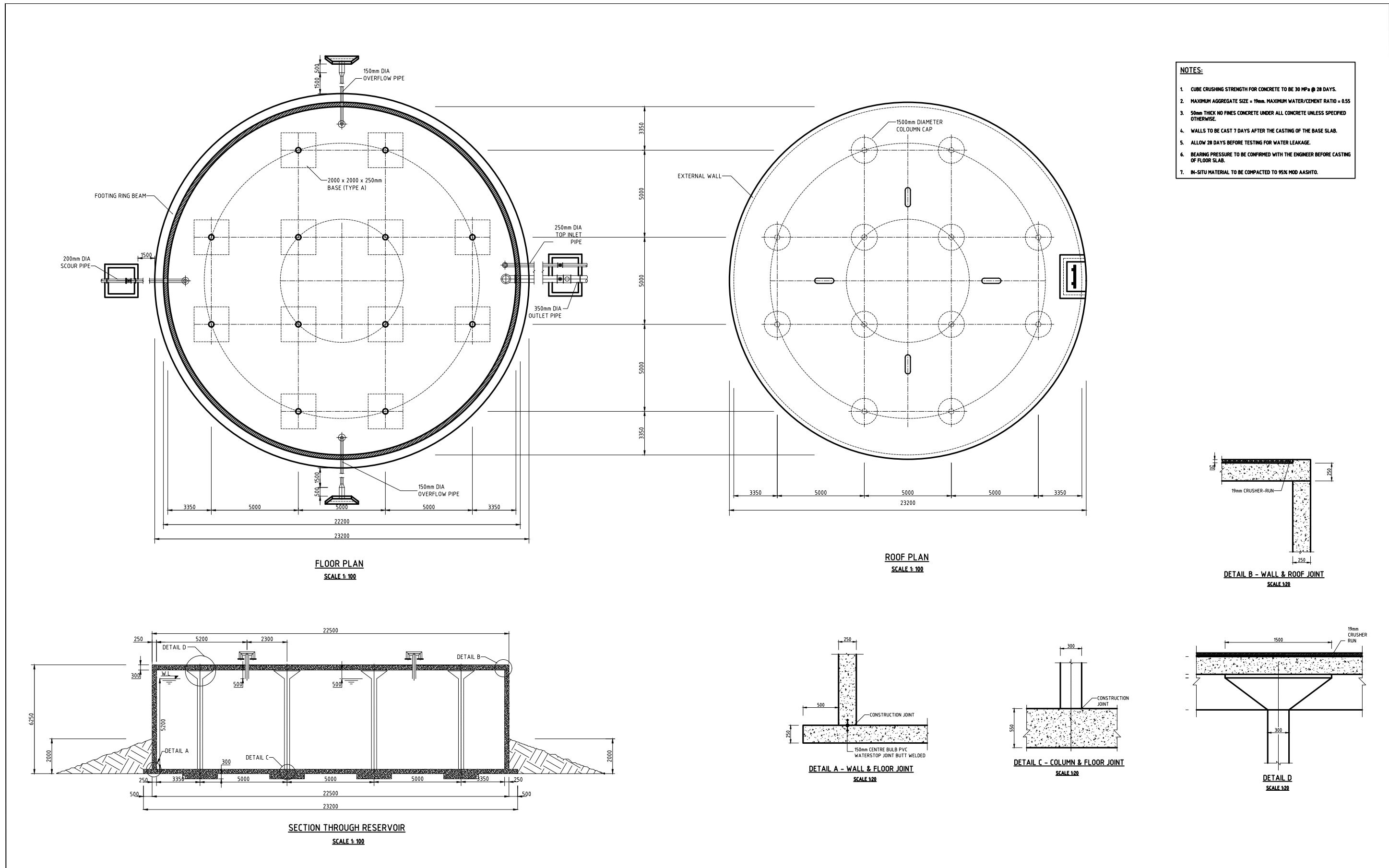
LEGEND

- New 75mm Dia Pipe/Class 12
- New 110mm Dia Pipe/Class 12
- New 200mm Dia Pipe/Class 16
- New 250mm Dia Pipe/Class 16
- New 315mm Dia Pipe/Class 16
- Existing 75mm Dia Pipe/Class 12
- Existing 160mm Dia Pipe/Class 12
- Existing 200mm Dia Pipe/Class 16
- Existing water valve
- New PRV
- New FCV

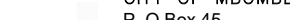


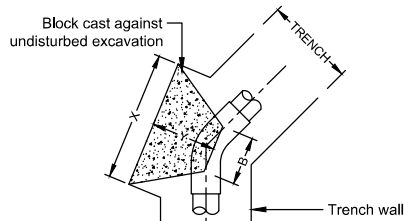
**EXISTING PACKAGE PLANT AND
PUMP STATION TO BE UPGRADED**

DESIGNED BY:	M.M.S	INFORMATION Full Signatures For Client For Consulting Engineer Consultant's Drawing No.:	APPROVED For Client For Consulting Engineer	NO.	REVISION DETAILS	REV NO.	DATE	REVISED BY	APPRVD BY	 CITY OF MBOMBELA P. O Box 45 Mbombela 1200 Tel: +27 (0) 13 759 2041 Fax: +27 (0) 13 759 2274 CONSULTING ENGINEERS Jamela Consulting Engineering and Project Management 1999/015744/23 15A Allie van Bergen Street P.O. Box 419 WHITE RIVER, 1240 Tel: (013) 750 0100 Fax: (013) 751 1980 Email: mack@jamela.co.za	BID NUMBER: COM17/2023	SHEET 1 OF 1
DRAWN BY:	TM			0	ISSUED FOR TENDER	0	FEB 2023					SCALE: AS SHOWN
CHECKED BY:	M.M.S											DRAWING NO:
ISSUED BY:	M.M.S											COM17/2023-01-01
WATER RETICULATION LAYOUT												



- NOTES:**
1. CUBE CRUSHING STRENGTH FOR CONCRETE TO BE 30 MPa @ 28 DAYS.
 2. MAXIMUM AGGREGATE SIZE = 19mm. MAXIMUM WATER/CEMENT RATIO = 0.55
 3. 50mm THICK NO FINES CONCRETE UNDER ALL CONCRETE UNLESS SPECIFIED OTHERWISE.
 4. WALLS TO BE CAST 7 DAYS AFTER THE CASTING OF THE BASE SLAB.
 5. ALLOW 28 DAYS BEFORE TESTING FOR WATER LEAKAGE.
 6. BEARING PRESSURE TO BE CONFIRMED WITH THE ENGINEER BEFORE CASTING OF FLOOR SLAB.
 7. IN-SITU MATERIAL TO BE COMPACTED TO 95% MOD AASHTO.

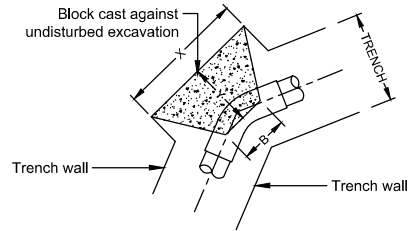
DESIGNED BY:	M.M.S	INFORMATION Full Signatures For Client For Consulting Engineer Consultant's Drawing No.:	APPROVED For Client For Consulting Engineer	NO.	REVISION DETAILS	REV NO.	DATE	REVISED BY	APPRVD BY	 CITY OF MBOMBELA THE ULTIMATE DESTINATION CITY OF MBOMBELA P. O Box 45 Mbombela 1200 Tel: +27 (0) 13 759 2041 Fax: +27 (0) 13 759 2274	CONSULTING ENGINEERS Jamela Consulting Engineering and Project Management 1999/015744/23 16A Allie van Bergen Street P.O. Box 419 WHITE RIVER, 1240 Tel: (013) 750 0160 Fax: (013) 751 1980 Email: jamela@jamela.co.za	BID NUMBER: COM17/2023	SHEET 1 OF 1
DRAWN BY:	TM				0	ISSUED FOR TENDER	0	FEB 2023				SCALE: AS SHOWN	
CHECKED BY:	M.M.S											DRAWING NO: COM17/2023-01-02	
ISSUED BY:	M.M.S												
2ML RESERVOIR PLAN AND SECTION DETAILS													



THRUST BLOCK FOR 45° BEND

SCALE 1:30

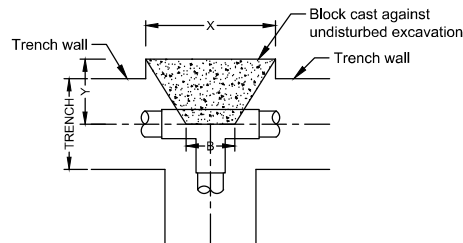
NOMINAL PIPE DIAMETER Ø (mm)	AREA REQUIRE D m²	DIMENSIONS (mm)					AREA PROVIDE D M²	VOL (m³)
		B	Z	X	Y			
75	0,061	0,300	0,400	0,400	0,350	0,160	0,049	
110	0,109	0,300	0,500	0,500	0,375	0,250	0,075	
160	0,245	0,300	0,500	0,500	0,400	0,250	0,080	
200	0,435	0,300	0,600	0,800	0,400	0,480	0,132	
250	0,680	0,350	0,650	1,100	0,450	0,715	0,212	
300	0,979	0,400	0,700	1,400	0,500	0,980	0,315	
300+								SEE NOTE 5



THRUST BLOCK FOR 22.5° BEND

SCALE 1:30

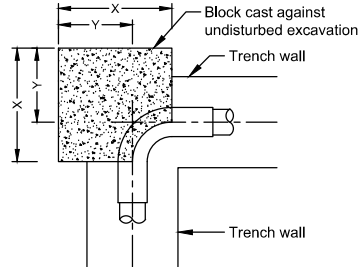
NOMINAL PIPE DIAMETER Ø (mm)	AREA REQUIRE D m²	DIMENSIONS (mm)					AREA PROVIDE D M²	VOL (m³)
		B	Z	X	Y			
75	0,031	0,300	0,400	0,400	0,350	0,160	0,049	
110	0,055	0,300	0,500	0,500	0,375	0,250	0,075	
160	0,124	0,300	0,500	0,500	0,400	0,250	0,080	
200	0,220	0,300	0,600	0,600	0,400	0,360	0,108	
250	0,344	0,350	0,650	0,650	0,450	0,423	0,146	
300	0,496	0,400	0,700	0,800	0,500	0,560	0,210	
300+								SEE NOTE 5



THRUST BLOCK FOR TEE-PIECE

SCALE 1:30

NOMINAL PIPE DIAMETER Ø (mm)	AREA REQUIRE D m²	DIMENSIONS (mm)					AREA PROVIDE D M²	VOL (m³)
		B	Z	X	Y			
75	0,079	0,150	0,400	0,400	0,350	0,160	0,039	
110	0,141	0,200	0,500	0,500	0,375	0,250	0,066	
160	0,318	0,300	0,500	0,700	0,400	0,350	0,100	
200	0,565	0,300	0,600	1,000	0,400	0,600	0,156	
250	0,883	0,350	0,650	1,400	0,450	0,910	0,256	
300	1,272	0,400	0,700	1,900	0,500	1,330	0,403	
300+								SEE NOTE 5



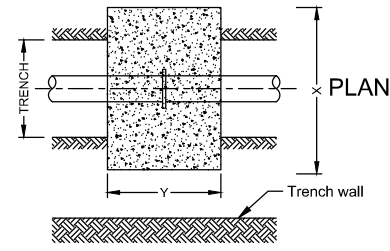
THRUST BLOCK FOR 90° BEND

SCALE 1:30

NOMINAL PIPE DIAMETER Ø (mm)	AREA REQUIRE D m²	DIMENSIONS (mm)					AREA PROVIDE D M²	VOL (m³)
		Z	X	Y				
75	0,078	0,400	0,350	0,350	0,140	0,049		
110	0,139	0,500	0,380	0,375	0,190	0,075		
160	0,314	0,500	0,350	0,400	0,330	0,211		
200	0,576	0,600	1,000	0,400	0,600	0,600		
250	0,871	0,650	1,400	0,450	0,910	1,274		
300	1,225	0,700	1,800	0,500	1,260	1,268		
300+								SEE NOTE 5

NOMINAL PIPE DIAMETER Ø (mm)	AREA REQUIRE D m²	DIMENSIONS (mm)					AREA PROVIDE D M²	VOL (m³)
		B	Z	X	Y			
75	0,078	75	300	475*	200	0,140	0,017	
110	0,139	100	300	500*	200	0,150	0,018	
160	0,312	150	600	550*	200	0,330	0,063	
200	0,555	200	950	600*	200	0,570	0,076	
250	0,867	250	700	1250	500	0,880	0,263	
300	1,248	300	750	1700	700	1,280	0,525	
300+								SEE NOTE 5

*=TRENCH WIDTH

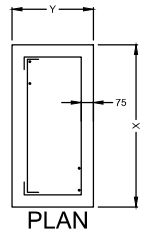


THRUST BLOCK FOR PUDDLE FLANGE

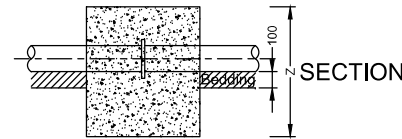
SCALE 1:30

NOMINAL PIPE DIAMETER Ø (mm)	AREA REQUIRE D m²	TRENCH WIDTH mm	DIMENSIONS (mm)			AREA PROVIDE D M²	VOL (m³)
			X	Y	Z		
75	0,078	475	875	500	575	0,410	0,25
110	0,139	500	900	500	600	0,420	0,27
160	0,312	550	950	700	650	0,450	0,42
200	0,555	600	1000	700	900	0,740	0,61
250	0,867	650	1250	1000	950	0,950	1,14
300	1,250	700	1500	1000	1000	1,250	1,43
300+							SEE NOTE 5

THRUST BLOCK THICKNESS = 500mm
CONCRETE 25MPa
HORIZONTAL STEEL: Y10 @ 200
VERTICAL STEEL: 2 LAYERS Y10 @ 200

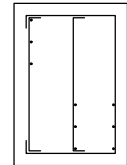


PLAN

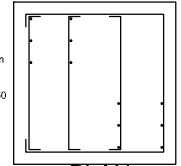


SECTION

THRUST BLOCK THICKNESS = 700mm
CONCRETE 25MPa
HORIZONTAL STEEL: Y12 @ 200
VERTICAL STEEL: 3 LAYERS Y12 @ 200

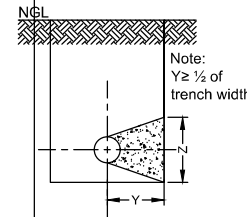


PLAN



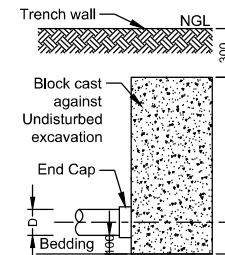
PLAN

THRUST BLOCK THICKNESS = 1000mm
CONCRETE 25MPa
HORIZONTAL STEEL: Y12 @ 150
VERTICAL STEEL: 3 LAYERS Y12 @ 150

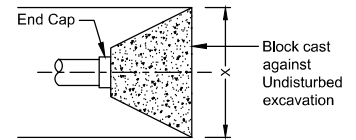


TYPICAL SECTION FOR
11,5°; 22,5° AND 45° BEND

SCALE 1:30



SECTION



THRUST BLOCK DEAD END

SCALE 1:30

DESIGNED BY:	M.A.S.	INFORMATION Full Signature	APPROVED	N.O.	REVISION DETAILS	REV. NO.	DATE	REVISED BY	APPROV BY
DRAWN BY:	TM	For Client	For Client	0	ISSUED FOR TENDER	0	FEB 2023		
CHECKED BY:	M.A.S.	For Consulting Engineer	For Consulting Engineer						
ISSUED BY:	M.A.S.	Consultant's Drawing No.:	For Consulting Engineer						



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BID NUMBER: COM17/2023

PROVISION OF RETICULATION NETWORK AND RESERVOIR AT
MATSULU ENTRANCE AND YOUTH CENTRE SECTION

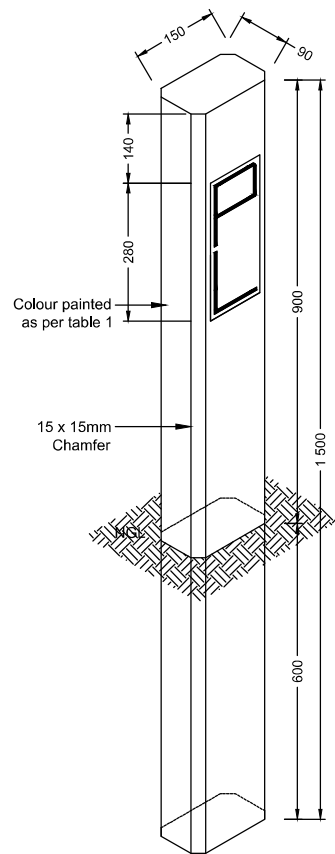
WATER DETAILS: THRUST BLOCK

SHEET 1 OF 1

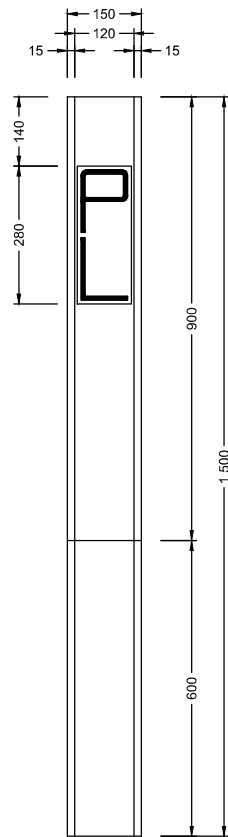
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DRAWING NO:

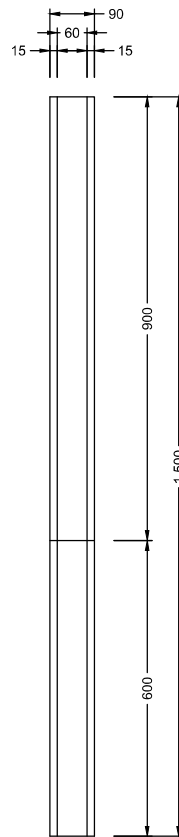
COM17/2023-02-01



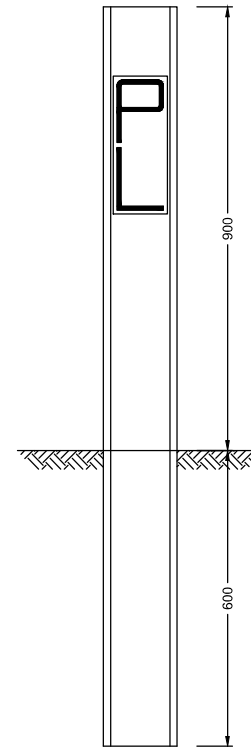
PIPELINE MARKER
SCALE 1:10



FRONT VIEW:
PIPELINE MARKER
SCALE 1:10



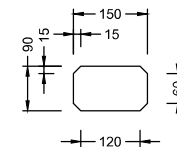
SIDE VIEW:
PIPELINE MARKER
SCALE 1:10



INSTALLATION DETAIL
SCALE 1:10

TABLE 01

TYPE OF PIPELINE	COLOUR CODE TO SABS 1091
WATER GRAVITY SUPPLY	ARTIC BLUE F2B
WATER PUMP LINE	SIGNAL RED A11
GRAVITY SEWER	DARK BROWN B03
SEWERAGE PUMP LINE	BLACK

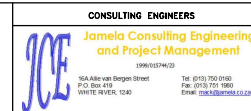


TOP VIEW:
PIPELINE MARKER
SCALE 1:10

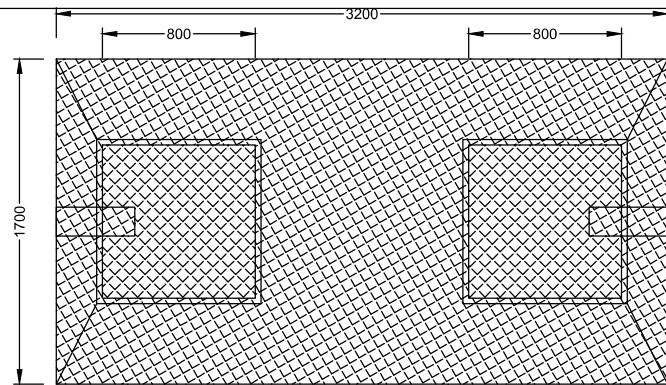
DESIGNED BY:	M.M.S.	INFORMATION FOR SIGNATURES	APPROVED	NO.	REVISION DETAILS	REV NO.	DATE	REVISED BY	APPROVED BY
DRAWN BY:	TM	For Client	For Client	0	ISSUED FOR TENDER	0	FEB 2023		
CHECKED BY:	M.M.S.	For Consulting Engineer	For Consulting Engineer						
ISSUED BY:	M.M.S.	Consultant's Drawing No.:	20 / /						



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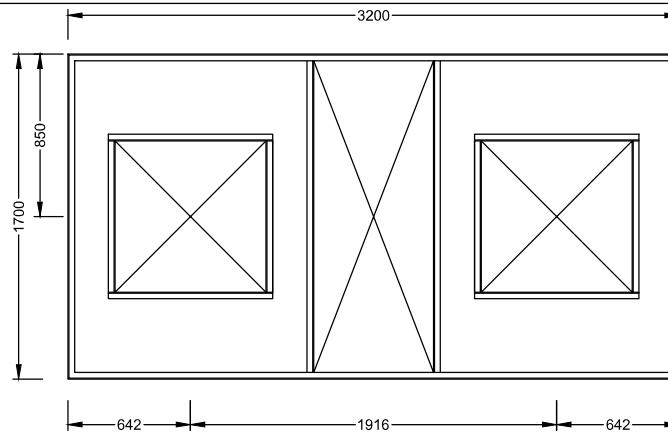


BID NUMBER: COM17/2023	SHEET 1 OF 1
PROVISION OF RETICULATION NETWORK AND RESERVOIR AT MATSULU ENTRANCE AND YOUTH CENTRE SECTION	SCALE: AS SHOWN
WATER DETAILS: PIPELINE MARKER	DRAWING NO. COM17/2023-02-02



LAYOUT PLAN OF MANHOLE COVER

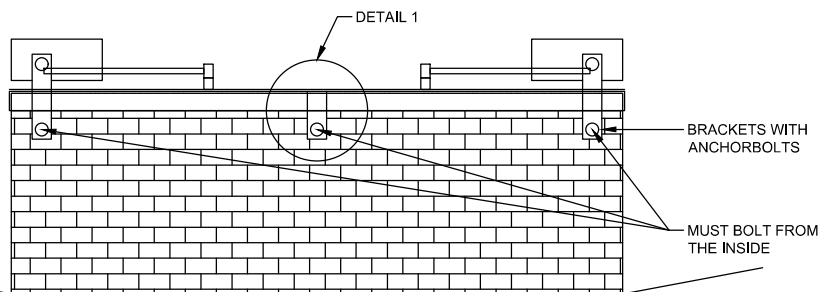
SCALE 1:25



LAYOUT PLAN OF MANHOLE FRAME

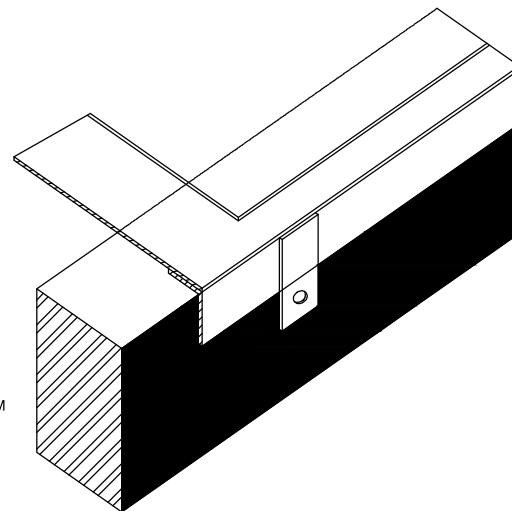
SCALE 1:25

ANGLE IRON
SUPPORT FRAME



ELEVATION OF MANHOLE COVER

SCALE 1:25

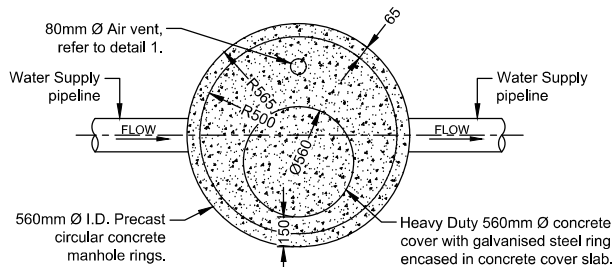


DETAIL 01

NTS

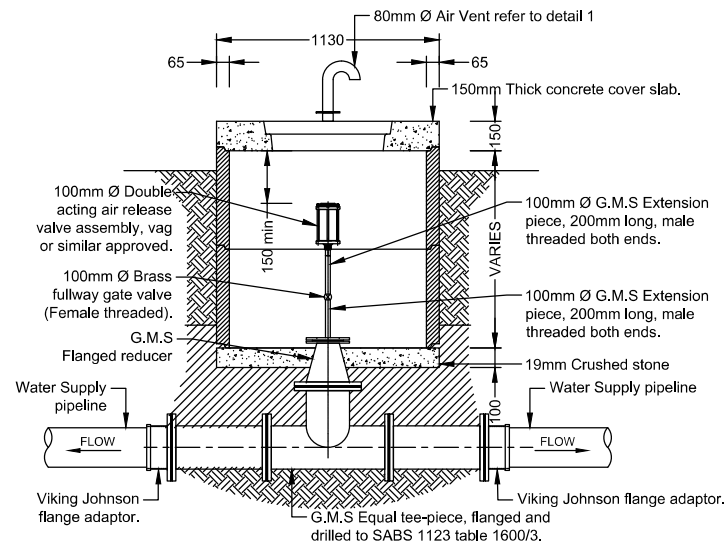
DESIGNED BY:	M.A.S.	INFORMATION	Full Signature	APPROVED	NO.	REVISION DETAILS	REV. NO.	DATE	REVISED BY	APPROVED BY	CITY OF MBOMBELA	CONSULTING ENGINEERS	BID NUMBER: COM17/2023	SHEET 1 OF 1
DRAWN BY:	TM	For Client		For Client	0	ISSUED FOR TENDER	0	FEB 2023			P.O. Box 45	Jamela Consulting Engineering and Project Management	PROVISION OF RETICULATION NETWORK AND RESERVOIR AT MATSULU ENTRANCE AND YOUTH CENTRE SECTION	SCALE: AS SHOWN
CHECKED BY:	M.A.S.	For Consulting Engineer		For Consulting Engineer							1200	088010274622	DRAWING NO:	COM17/2023-02-03
ISSUED BY:	M.A.S.	Consultant's Drawing No.:		For Consulting Engineer	20						156 Nkomo Street, Grahamstown	156 Nkomo Street, Grahamstown	WATER DETAILS: TYPICAL BULK METER MANHOLE COVER	
											P.O. Box 4753	156 Nkomo Street, Grahamstown		
											1200	156 Nkomo Street, Grahamstown		

Item No.	No Off.	Dia(mm) ND	Description	Drawing
01	02	200Ø	200Ø Viking Johnson flange adapter T16 flanged.	
02	02	200Ø	200Ø Straight pipe, T16 flanged.	
03	01	200Ø	200Ø G.M.S Equal tee-piece, T16 flanged.	
04	01	200 Ø - 100 Ø	200Ø - 100Ø G.M.S reducer T16 Flanged.	
05	01	100Ø	100mm Ø G.M.S Extension piece, 200mm long, male threaded both ends. 100mm Ø Brass fullway gate valve (Female threaded). 100mm Ø Double acting air release valve. T16 Flanged.	
06	01	80Ø	80mm Ø Air Vent with puddle flange	



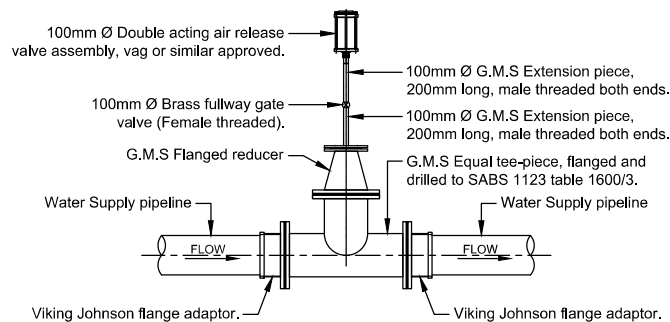
AIR VALVE CHAMBER: PLAN VIEW

SCALE 1:25



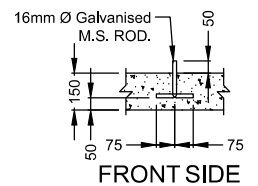
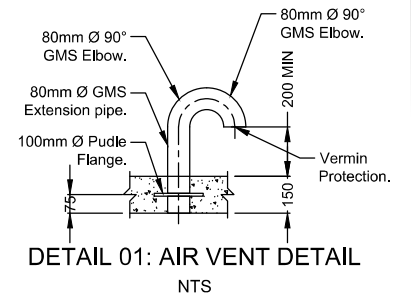
AIR VALVE CHAMBER: SECTION A - A

SCALE 1:25



TYPICAL 100mm Ø AIR VALVE INSTALLATION ONTO ABOVE GROUND PIPELINE

SCALE 1:25



DETAIL 02: LIFTING HOOK

NTS

DESIGNED BY:	M.M.S	INFORMATION FOR SIGNATURE	APPROVED	NO.	REVISION DETAILS	REV NO.	DATE	REVISED BY	APPROVED BY
DRAWN BY:	TM	For Client	For Client	0	ISSUED FOR TENDER	0	FEB 2023		
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ISSUED BY:	M.M.S	Consultant's Drawing No.:	For Consulting Engineer	20					



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BID NUMBER: COM17/2023

PROVISION OF RETICULATION NETWORK AND RESERVOIR AT MATSULU ENTRANCE AND YOUTH CENTRE SECTION

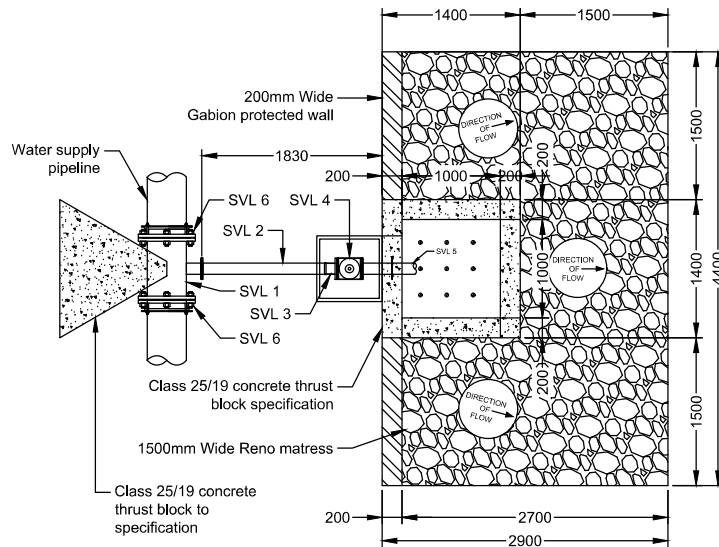
WATER DETAILS: VALVE CHAMBER

SHEET 1 OF 1

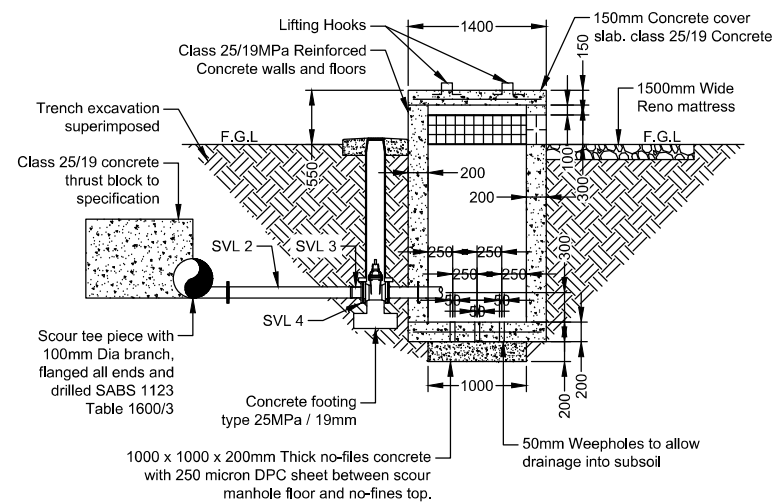
SCALE: AS SHOWN

DRAWING NO.

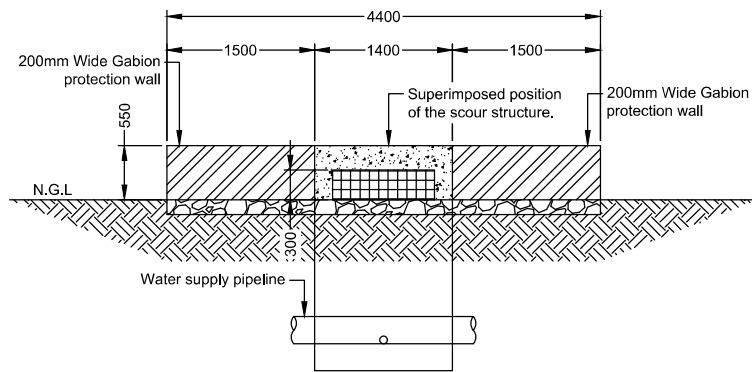
COM17/2023-02-04



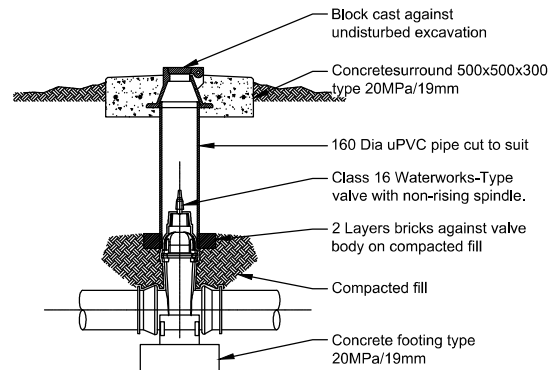
LAYOUT: SCOUR VALVE ASSEMBLY
SCALE 1:50



SECTION A - A: SCOUR VALVE ASSEMBLY
SCALE 1:50



SECTION C - C
SCALE 1:50



ISOLATION VALVE
NTS

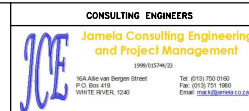
PIPE FITTING SCHEDULE: BULK WATER PUMP MAIN		
CODE	DESCRIPTION	QUANTITY
SVL 1	G.M.S SCOUR TEE PIECE WITH 100mm DIA. BRANCH FLANGED ALL 3 ENDS AND DRILLED SABS 1123, TABLE 1600/3	1
SVL 2	1400mm LONG G.M.S PIPE PIECE, FLANGED ONE END ONLY, OTHER END FLANG, FLANGE DRILLED SABS 1123, TABLE 1600/3	1
SVL 3	FLANGED ADAPTOR, DRILLED SABS 1123, TABLE 1600/3	1
SVL 4	CLASS 16 WATERWORKS-TYPE VALVE WITH NON-RISING SPINDLE, WITH DIRECTION INDICATED ON THE BODY, DRILLED BS 4504 PN 16 (16BAR RATING)	1
SVL 5	1300mm LONG G.M.S PUDDLE PIPE PIECE, FLANGED ON ONE END ONLY, PUDDLE FLANGE - 200mm FROM FLANGE FACE, FLANGE DRILLED SABS 1123, TABLE 1600/3	1
SVL 6	G.M.S SCOUR TEE PIECE WITH 100mm DIA. BRANCH FLANGED ALL 3 ENDS AND DRILLED SABS 1123, TABLE 1600/3	1

NOTE
ALL BOLTS, NUTS, WASHERS AND GASKETS TO BE SUPPLIED WITH THE ABOVE FITTINGS. BOLTS MUST BE LONG ENOUGH SO THAT A MINIMUM OF THREE THREADS PROTRUDE BEYOND THE NUTS. ALL BOLTS AT CONNECTION MUST BE INSTALLED IN THE SAME DIRECTION. ALL BOLTS, NUTS AND WASHERS EXPOSED TO SUBSOIL CONDITIONS SHALL BE DENSELY WRAPPED OR PROTECTED AGAINST CORROSION IN AN APPROVED MANNER (SEE DWAF SPECIFICATION DWS-1130, DWS-131)

DESIGNED BY:	M.M.S	INFORMATION FOR SIGNATURES	APPROVED	NO.	REVISION DETAILS	REV NO.	DATE	REVISED BY	APPROVED BY
DRAWN BY:	TM	For Client	For Client	0	ISSUED FOR TENDER	0	FEB 2023		
CHECKED BY:	M.M.S	For Consulting Engineer	For Consulting Engineer						
ISSUED BY:	M.M.S	Consultant's Drawing No.:	For Consulting Engineer	20					



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BID NUMBER: COM17/2023

PROVISION OF RETICULATION NETWORK AND RESERVOIR AT MATSULU ENTRANCE AND YOUTH CENTRE SECTION

WATER DETAILS: SCOUR VALVE AND ISOLATION VALVE

SHEET 1 OF 1

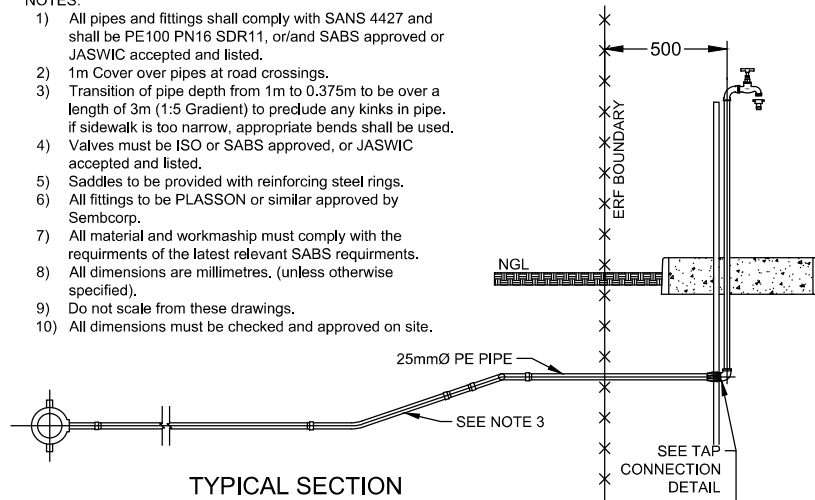
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DRAWING NO.

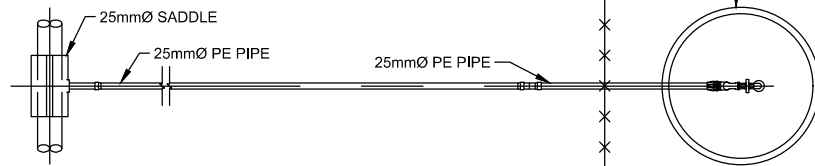
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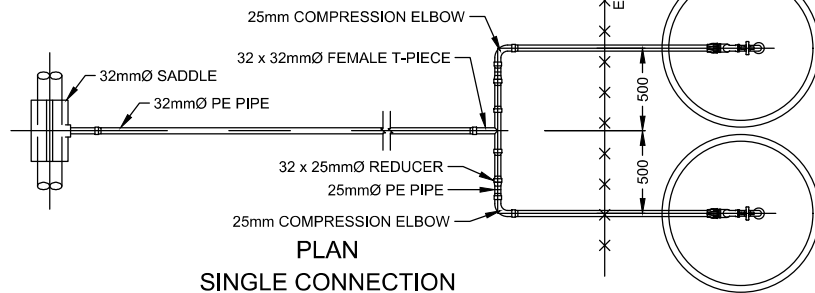
- 1) All pipes and fittings shall comply with SANS 4427 and shall be PE100 PN16 SDR11, or/and SABS approved or JASWIC accepted and listed.
- 2) 1m Cover over pipes at road crossings.
- 3) Transition of pipe depth from 1m to 0.375m to be over a length of 3m (1:5 Gradient) to preclude any kinks in pipe. if sidewalk is too narrow, appropriate bends shall be used.
- 4) Valves must be ISO or SABS approved, or JASWIC accepted and listed.
- 5) Saddles to be provided with reinforcing steel rings.
- 6) All fittings to be PLASSON or similar approved by Sembcorp.
- 7) All material and workmanship must comply with the requirements of the latest relevant SABS requirements.
- 8) All dimensions are millimetres, (unless otherwise specified).
- 9) Do not scale from these drawings.
- 10) All dimensions must be checked and approved on site.



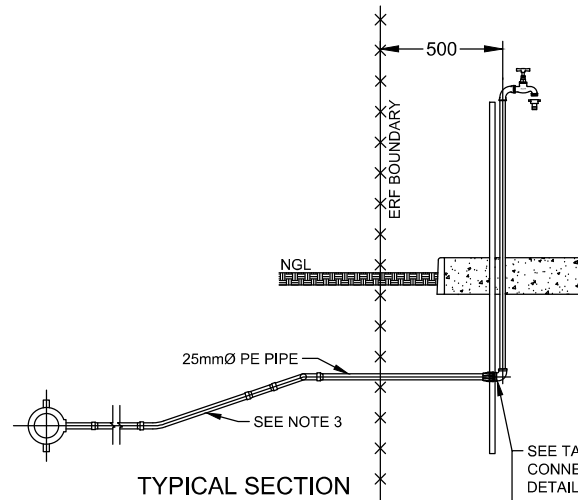
TYPICAL SECTION



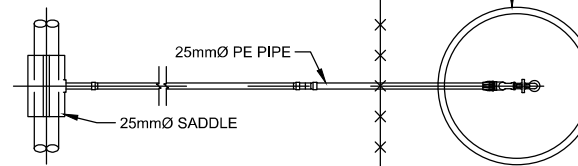
LONGEST ERF CONNECTIONS
NTS



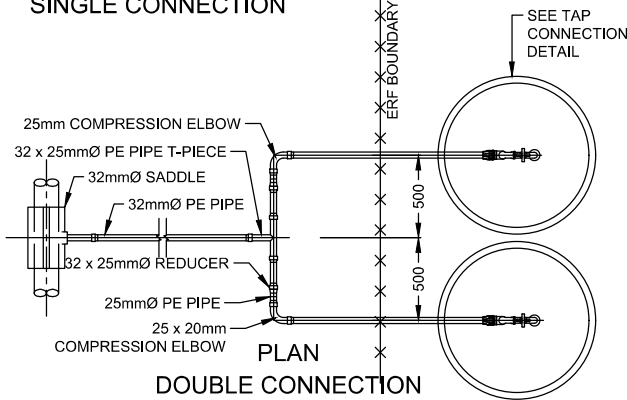
PLAN
SINGLE CONNECTION



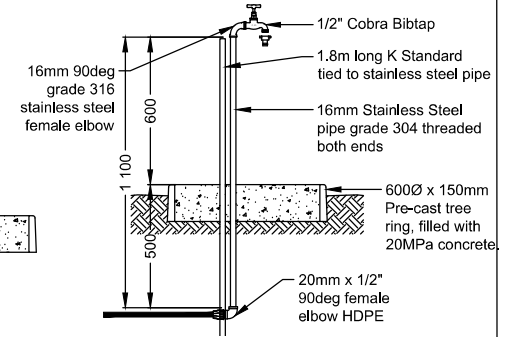
TYPICAL SECTION



PLAN
SINGLE CONNECTION



PLAN
DOUBLE CONNECTION

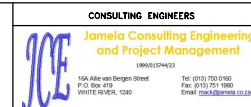


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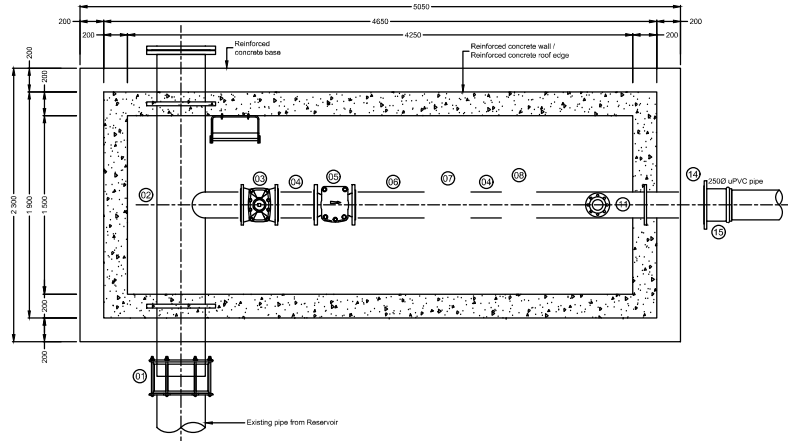
DESIGNED BY:	M.A.S.	INFORMATION Full Signature For Client For Consulting Engineer Consultant's Drawing No.:	APPROVED For Client 20 / / For Consulting Engineer 20 / /	NO. 0	REVISION DETAILS ISSUED FOR TENDER	REV NO. 0	DATE 0 FEB 2023	REVISED BY 	APPROVED BY
DRAWN BY:	TM								
CHECKED BY:	M.A.S.								
ISSUED BY:	M.A.S.								



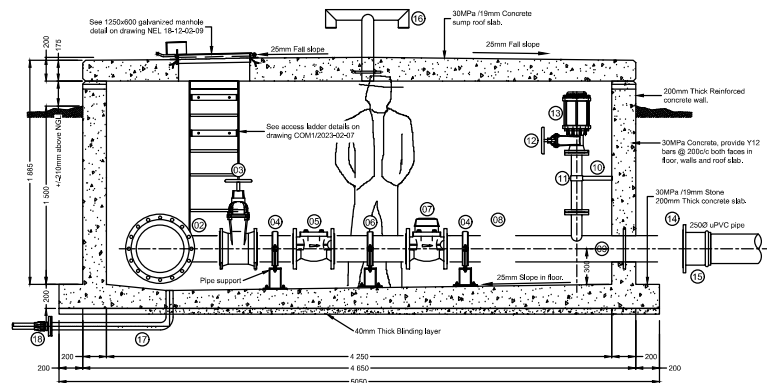
CITY OF MBOMBELA
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BID NUMBER: COM17/2023	SHEET 1 OF 1
PROVISION OF RETICULATION NETWORK AND RESERVOIR AT MATSULU ENTRANCE AND YOUTH CENTRE SECTION	SCALE: AS SHOWN
DRAWING NO. COM17/2023-02-06	
WATER DETAILS: HOUSE CONNECTION DETAILS	



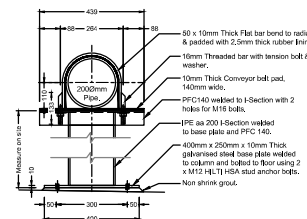
**BULK INLET CHAMBER TO
250mm PIPE LAYOUT**
Scale 1:20



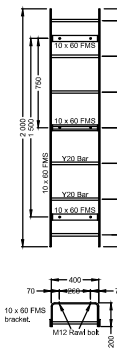
**BULK INLET CHAMBER TO
250mm PIPE SECTION**
Scale 1:20

DETAIL No.:	SCALE:	DRAWING DESCRIPTION:	SEE DRAWING No.:
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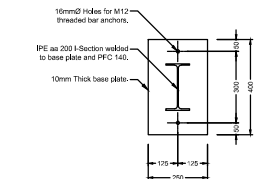
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100	01	ISSUED FOR TENDER	



**2000 PIPE FLOOR MOUNTED(x2)
PIPE BRACKET DETAIL**



**FLOOR MOUNTED PIPE
BRACKET BASE PLATE DETAIL**



**FLOOR MOUNTED PIPE
BRACKET SIDE ELEVATION**

- * ALL STEEL FITTINGS AND METAL WORK MUST BE CLEANED, USING A MECHANICAL DRIVEN WIRE BRUSH AND BONDED EPOXY COATED TO DFT 300 MICRONS THICK.
- * ALL FLANGES TO BE TABLE 12.
- * ALL BOLTS TO BE GALVANISED BOLTS.

DESIGNED BY:	M.M.S	INFORMATION FOR SIGNATURE	APPROVED	NO.	REVISION DETAILS	REV NO.	DATE	REVISED BY	APPROVED BY
DRAWN BY:	TM		For Client	0	ISSUED FOR TENDER	0	FEB 2023		
CHECKED BY:	M.M.S		For Consulting Engineer						
ISSUED BY:	M.M.S	Consultant's Drawing No.:	For Consulting Engineer						

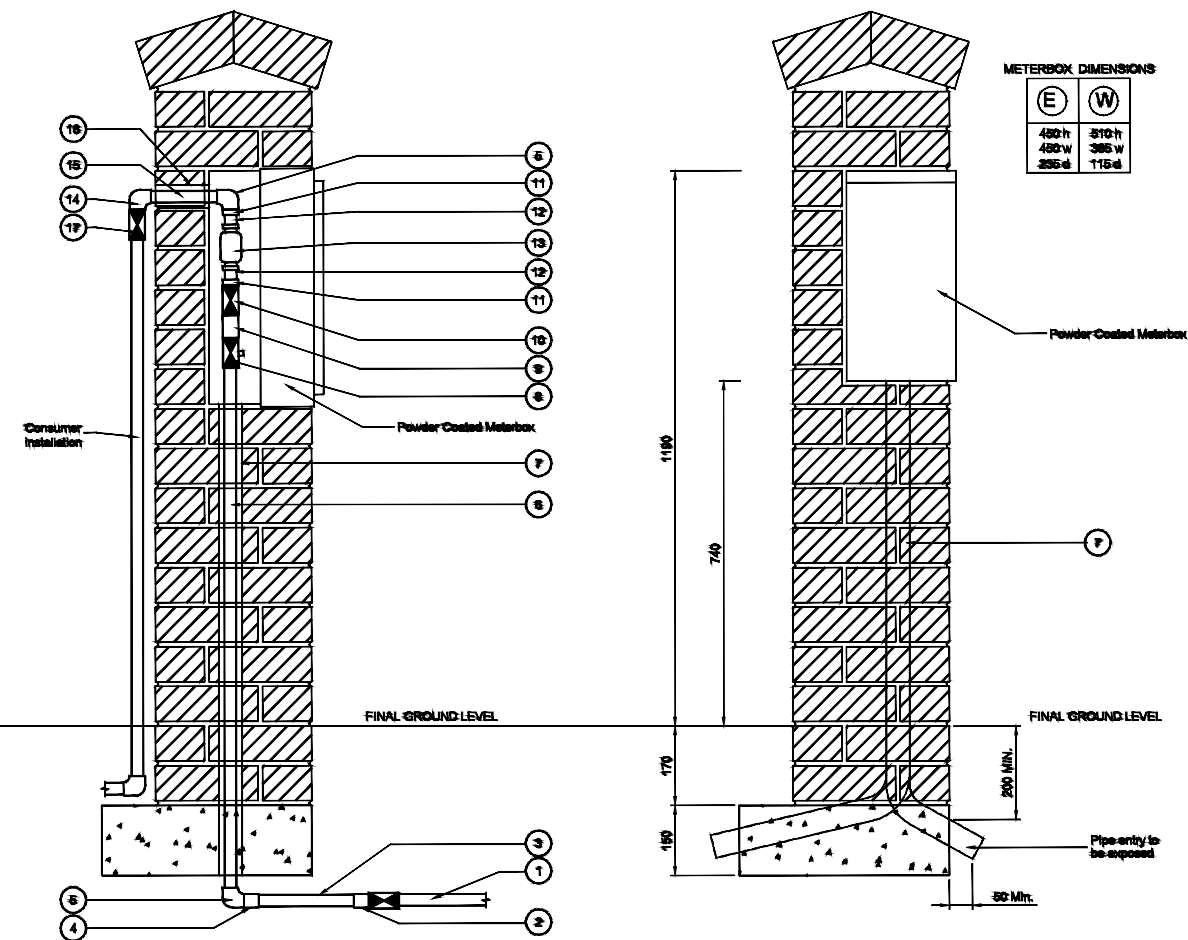


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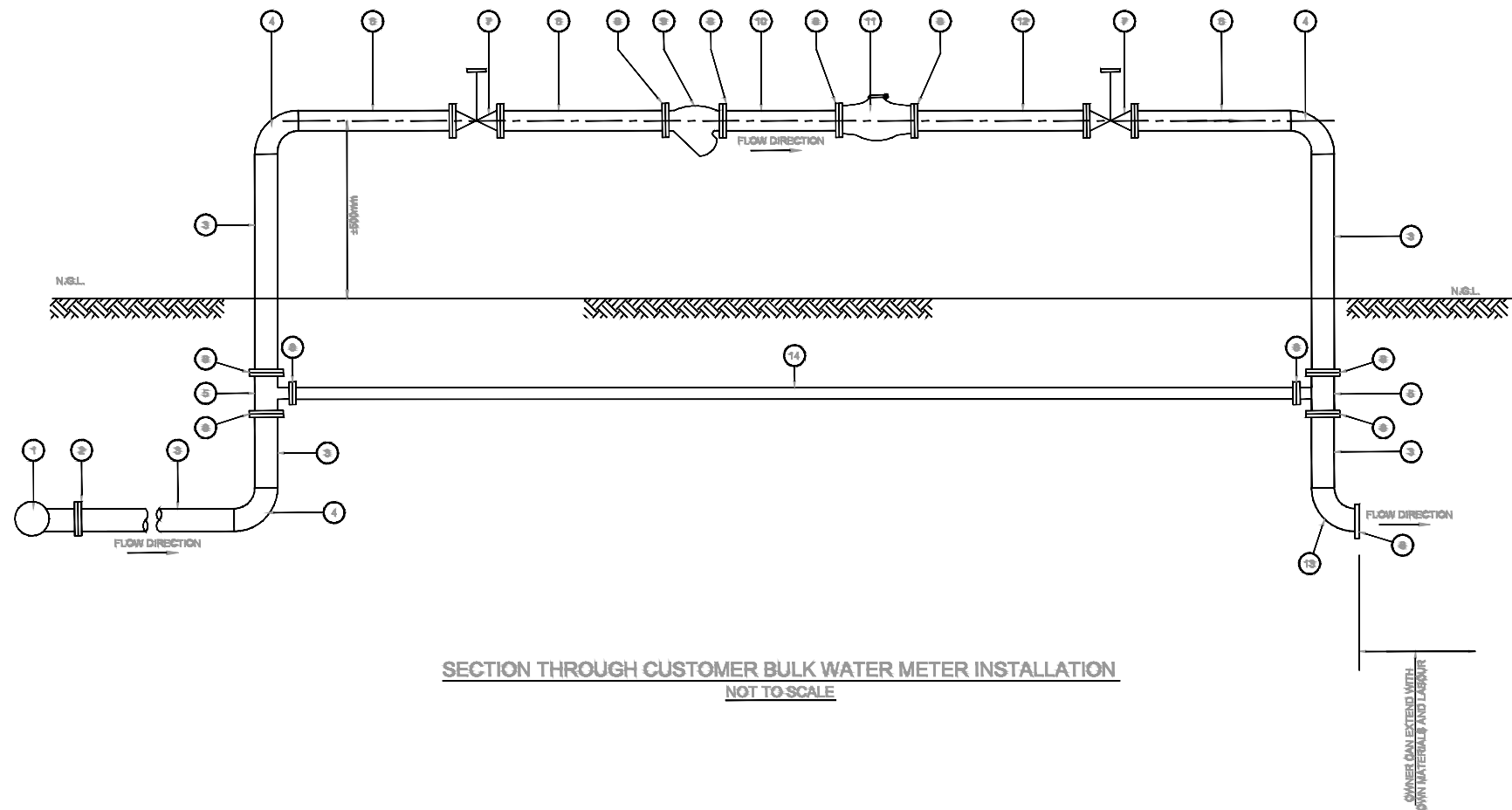
BID NUMBER: COM17/2023
PROVISION OF RETICULATION NETWORK AND RESERVOIR AT MATSULU ENTRANCE AND YOUTH CENTRE SECTION
BULK INLET AND CHAMBER DETAILS

SHEET 1 OF 1
SCALE: AS SHOWN
DRAWING NO.: COM17/2023-02-07



1. 25mm HDPE supply pipe with Stopvalve (F/F)
2. 25mm Plasson Adaptor
3. 25mm HDPE Pipe class 12
4. 25x20mm Plasson Adaptor (male)
5. 20mm Galvanised Elbow (F/F)
6. 20mm Galv. pipe 1100mm long
7. 50mm PVC pipe as sleeve in brickwork
8. 20mm Ball Valve (Stop valve) (F/F)
9. 20mm Nipple
10. 20mm Trickle Valve
11. 15x20mm Galv. Reducing bush
12. 15mm Tailpiece
13. 15mm KSM/PSM Water Meter (Elster Kent)
(type & size to be specified by Sembcorp Silulumanzi)
14. 20mm Galvanised Elbow (M/F)
15. 20mm Galvanised pipe 200mm long
16. 50mm PVC Vent pipe as sleeve in brickwork
17. 20mm Consumer Ball Valve (Stop valve) (F/F) / stopcock

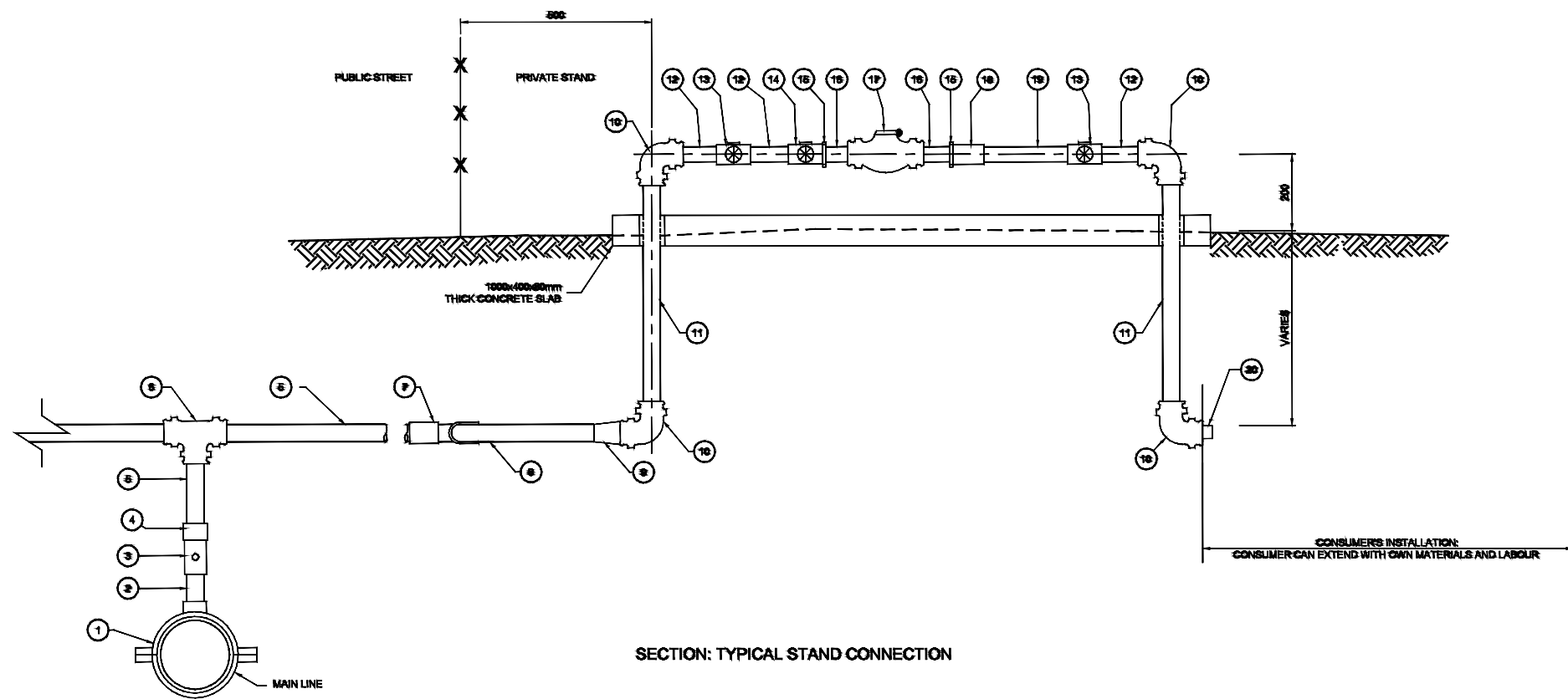
DESIGNED BY:	M.M.S	INFORMATION Full Signatures For Client For Consulting Engineer Consultant's Drawing No.:	APPROVED	NO.	REVISION DETAILS	REV NO.	DATE	REVISED BY	APPRVD BY	 CITY OF MBOMBELA P. O Box 45 Mbombela 1200 Tel: +27 (0) 13 759 2041 Fax: +27 (0) 13 759 2274	 CONSULTING ENGINEERS Jamela Consulting Engineering and Project Management 1999/015744/23 16A, Jille van Bargen Street P.O. Box 419 WHITE RIVER, 1240 Tel: (013) 750 0 100 Fax: (013) 751 1880 Email: mack@jamela.co.za	BID NUMBER: COM17/2023	SHEET 1 OF 1
DRAWN BY:	TM		For Client	0	ISSUED FOR TENDER	0	FEB 2023						SCALE: AS SHOWN
CHECKED BY:	M.M.S		For Consulting Engineer										DRAWING NO:
ISSUED BY:	M.M.S		For Consulting Engineer										COM17/2023-02-12
											WATER DETAILS: DOMESTIC WATER & ELECTRICAL METER INSTALLATION		



LEGEND:

1. Hydrant T / Flanged Reducing T (To suit application)
2. 50/80/100 Threaded flange Table 16 (with reducing bush if required)
3. 50/80/100 Galvanised pipe (cut and dice) (cut length to suit)
4. 50/80/100 Galvanised elbow (F/F)
5. 50/80/100 Galvanised equal T-Piece
6. 50/80/100 Galvanised pipe (cut and dice) min 100mm
7. 50/80/100 Brass gate valve
8. 50/80/100 Threaded flange Table 16
9. 50/80/100 Y Type Strainer (Epoxy Coated)
10. 50/80/100 Galvanised pipe (cut and dice)
50mm: min length = 250mm
80mm: min length = 400mm
100mm: min length = 500mm
11. 50/80/100 Water meter (Elster Kent Helix H4000 or Elster Kent combination meter)
12. 50/80/100 Galvanised pipe (cut and dice)
50mm: min length = 150mm
80mm: min length = 240mm
100mm: min length = 300mm
13. 50/80/100 Galvanised elbow (M/F)
14. 50/80/100 Galvanised pipe (Cut length to suit)

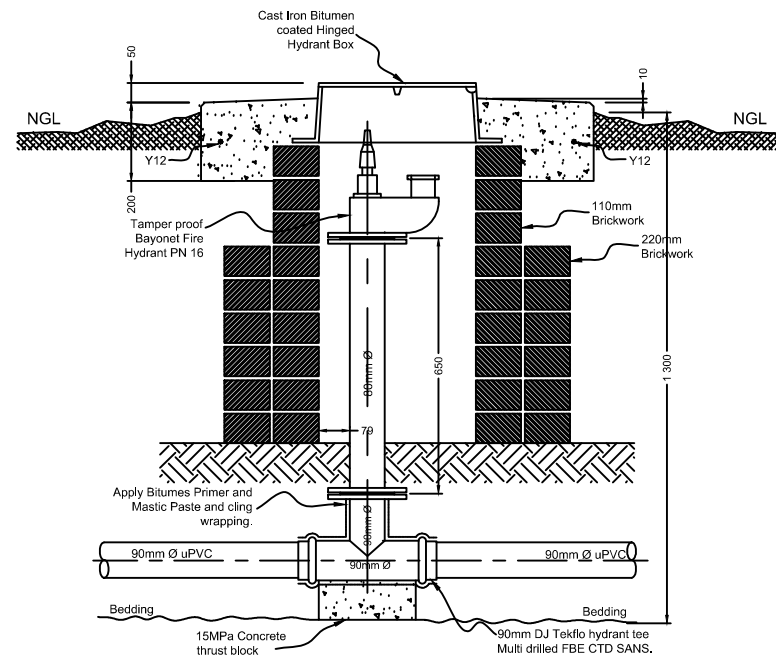
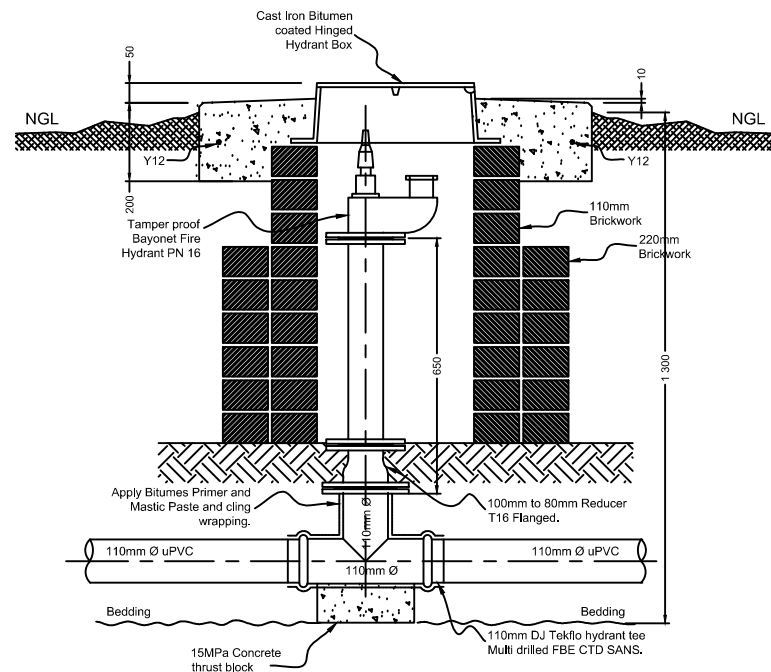
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DRAWN BY:	TM			0	ISSUED FOR TENDER	0	FEB 2023					PROVISION OF RETICULATION NETWORK AND RESERVOIR AT MATSULU ENTRANCE AND YOUTH CENTRE SECTION	SCALE: AS SHOWN
CHECKED BY:	M.M.S											WATER DETAILS: ABOVE GROUND CUSTOMER WATER METER INSTALLATION	DRAWING NO: COM17/2023-02-11
ISSUED BY:	M.M.S												



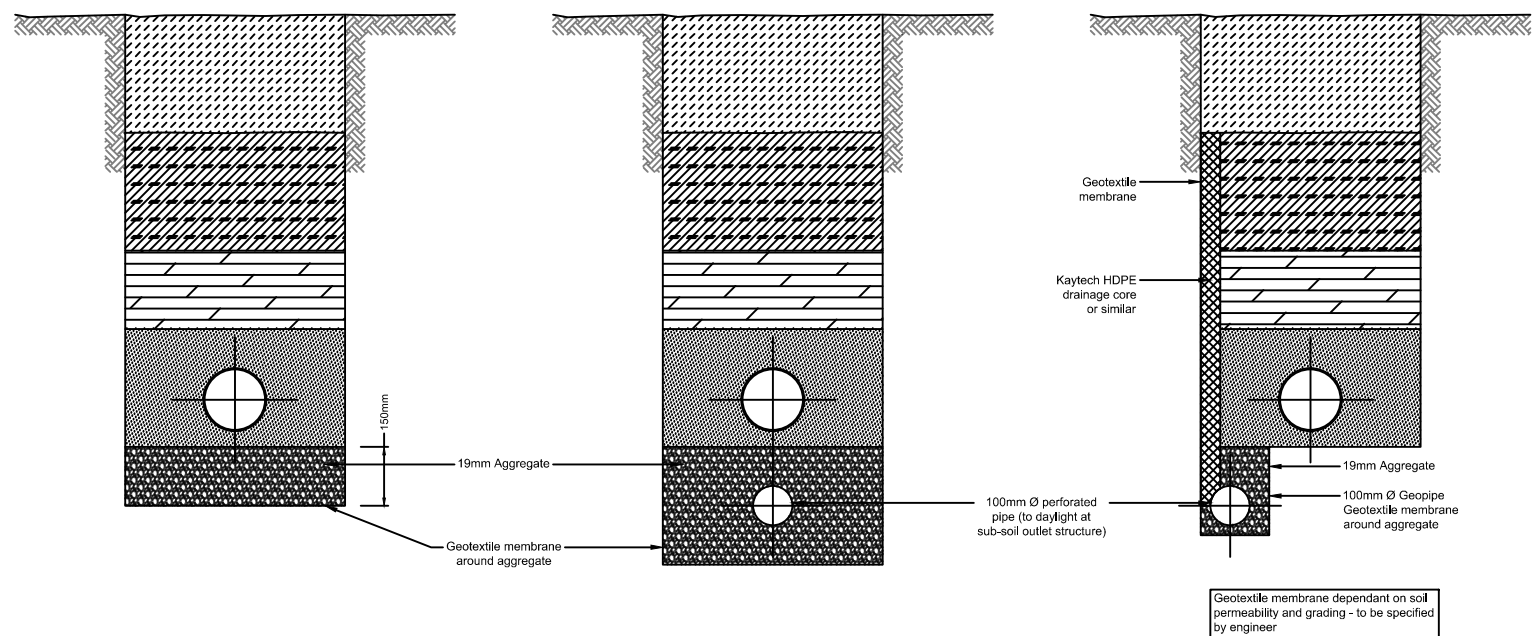
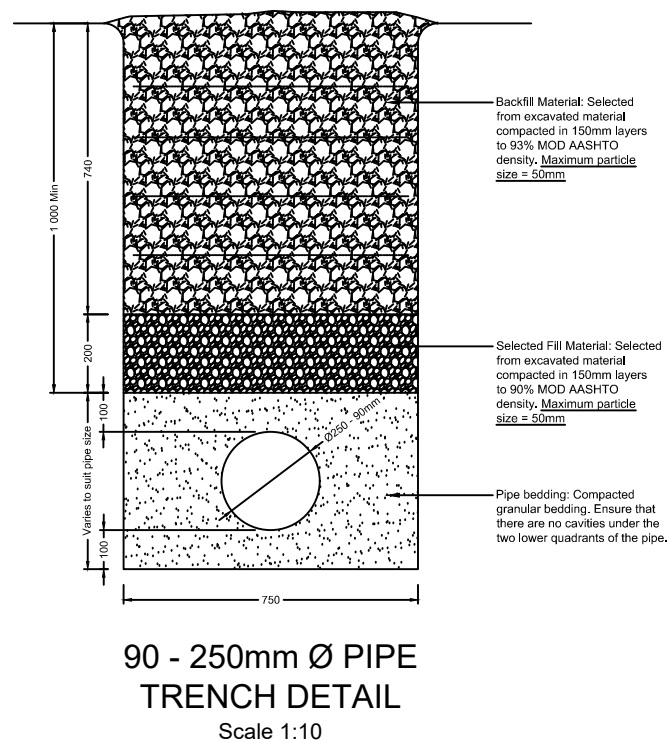
LEGEND:

1. Saddle on PVC mains (32mm take off) (Reinforcement of saddle with metal ring according to SANS)
2. 32mm galvanised nipple.
3. 32mm ball valve.
4. 32mm Plasson adaptor (male)
5. 32mm HDPE pipe Class 12
6. 32mm equal Tee (Plasson)
7. 32 x 25mm Tee (Plasson)
8. 25mm HDPE pipe Class 12
9. 20 x 25mm Plasson adaptor (male)
10. 20mm galvanised elbow F/F
11. 20mm threaded galvanised pipe (min. 500mm long)
12. 20mm nipple
13. 20mm stopcock
14. Trickle flow valve
15. 20x15mm reducing bush
16. 15mm brass meter nipple
17. 15mm KSM/PSM water meter (type & size to be specified by Sembcorp Silulumanzi)
18. 20mm galvanised socket
19. 20mm galvanised pipe (200mm long)
20. 20mm end stop

DESIGNED BY:	M.M.S	INFORMATION Full Signatures For Client For Consulting Engineer Consultant's Drawing No.:	APPROVED For Client For Consulting Engineer	NO. ISSUED FOR TENDER	REV NO. 0	DATE FEB 2023	REVISED BY	APPRVD BY	 CITY OF MBOMBELA P. O Box 45 Mbombela 1200 Tel: +27 (0) 13 759 2041 Fax: +27 (0) 13 759 2274	CONSULTING ENGINEERS Jamela Consulting Engineering and Project Management 1999/015744/23 16A Allie van Bergen Street P.O. Box 419 WHITE RIVER, 1240 Tel: (013) 750 0160 Fax: (013) 751 1980 Email: mack@jamela.co.za	BID NUMBER: COM17/2023	SHEET 1 OF 1	
DRAWN BY:	TM											PROVISION OF RETICULATION NETWORK AND RESERVOIR AT MATSULU ENTRANCE AND YOUTH CENTRE SECTION	SCALE: AS SHOWN
CHECKED BY:	M.M.S											WATER DETAILS: DOMESTIC ABOVE GROUND WATER METER DETAIL	DRAWING NO:
ISSUED BY:	M.M.S												COM17/2023-02-13

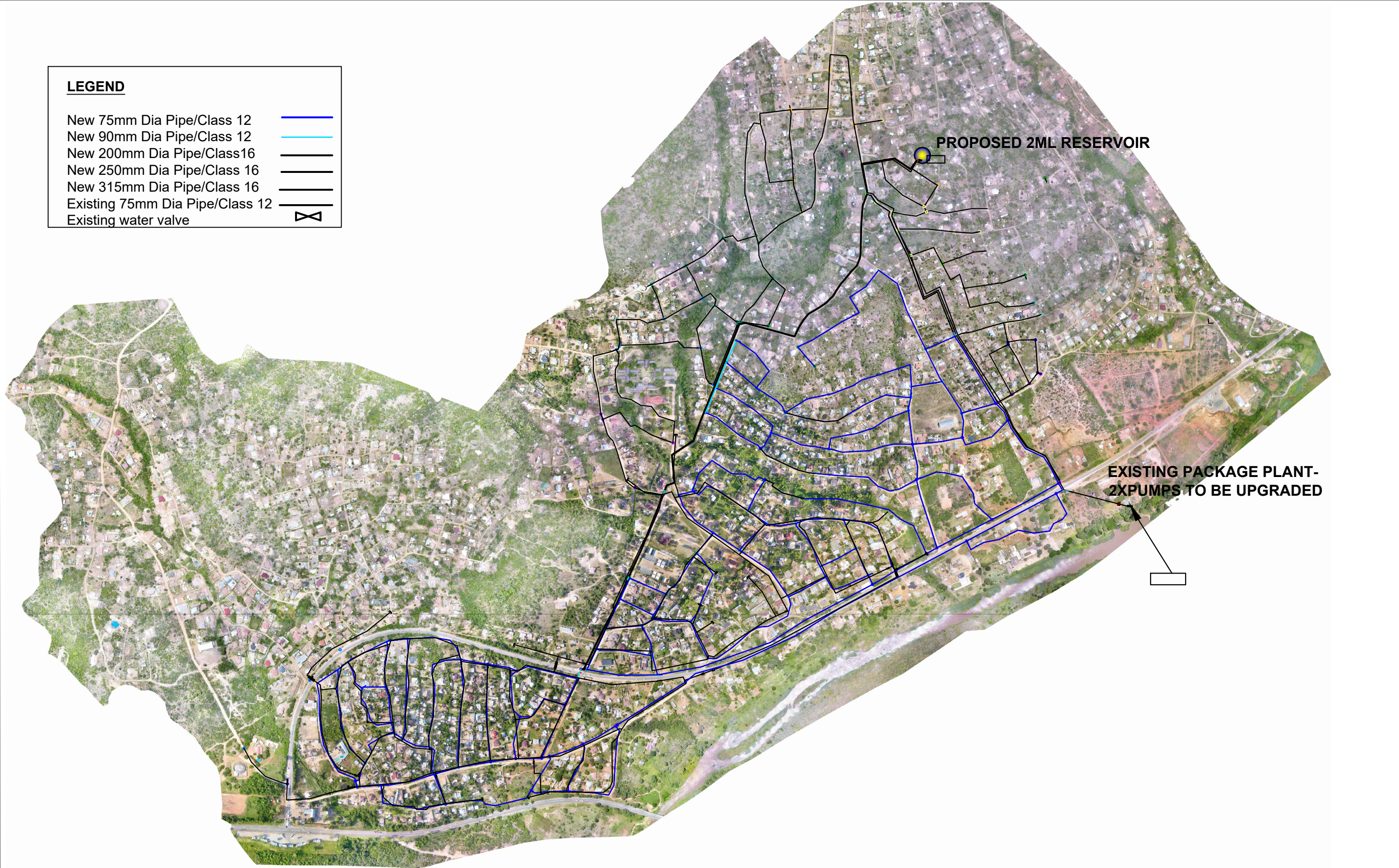


DETAIL No.:	SCALE:	DRAWING DESCRIPTION:	SEE DRAWING No.:
-	1 : 10	TYPICAL GATE VALVE DETAILS	-



DETAIL No.:	SCALE:	DRAWING DESCRIPTION:	SEE DRAWING No.:	DETAIL No.:	SCALE:	DRAWING DESCRIPTION:	SEE DRAWING No.:
-	1 : 10	PIPE TRENCH DETAILS	-	-	1 : 10	TYPICAL SUB-SOIL DRAIN DETAILS	-

[illegible]



DESIGNED BY:	M.M.S	INFORMATION Full Signatures For Client For Consulting Engineer Consultant's Drawing No.:	APPROVED	NO. 0 ISSUED FOR TENDER	REV NO.	0	DATE	FEB 2024	REVISED BY		APPRVD BY		CITY OF MBOMBELA P. O Box 45 Mbombela 1200 Tel: +27 (0) 13 759 2041 Fax: +27 (0) 13 759 2274 CITY OF MBOMBELA THE ULTIMATE DESTINATION	CONSULTING ENGINEERS JCE Jamela Consulting Engineering and Project Management 1999/015744/23 16A Allie van Bergen Street P.O. Box 419 WHITE RIVER, 1240 Tel: (013) 750 0160 Fax: (013) 751 1980 Email: mk@jamela.co.za	BID NUMBER: COM17/2023	SHEET 1 OF 1
DRAWN BY:	TM		For Client												SCALE: AS SHOWN	
CHECKED BY:	M.M.S		For Consulting Engineer												DRAWING NO:	
ISSUED BY:	M.M.S		For Consulting Engineer												COM17/2023-01-01	
PROVISION OF RETICULATION NETWORK AND RESERVOIR AT MATSULU ENTRANCE AND YOUTH CENTRE SECTION															WATER RETICULATION LAYOUT	