



MAQUASSI HILLS LOCAL MUNICIPALITY

INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY

TENDER DRAWINGS VOLUME 2

CONTRACT NUMBER: MHLM/WSIG/06/2023/24.

19 JUNE 2024



VERSION	DRAWING NUMBER	DRAWING DESCRIPTION
1.0	2023-06/G/A/001	PROJECT DRAWING INDEX
1.0	2023-06/G/D/001	PROJECT NAME BOARD
1.0	2023-06/W/A/001	TYPICAL DETAILS
1.0	2023-06/W/D/001	WATER METER INSTALLATION LAYOUT & DETAILS FOR 50ND & 80ND WATER METER INSTALLATION ON 75mmØ & 110mmØ WATER MAIN
1.0	2023-06/W/D/002	WATER METER INSTALLATION LAYOUT & DETAILS FOR 100ND & 150ND WATER METER INSTALLATION ON 160mmØ & 200mmØ WATER MAIN
1.0	2023-06/W/D/003	WATER METER INSTALLATION LAYOUT & DETAILS FOR 200ND & 250ND WATER METER INSTALLATION ON 250mmØ TO 350mmØ WATER MAIN
1.0	2023-06/W/L/001	WATER METER INSTALLATIONS LOCALITY MAP
1.0	2023-06/W/P/001	WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT
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1.0	2023-06/W/P/001A-1	WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 1 WATER METER POSITIONS
1.0	2023-06/W/P/001B	WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 2 & 3
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1.0	2023-06/W/P/002A	WATER METER INSTALLATIONS MAKWASSIE LAYOUT ZONE 7
1.0	2023-06/W/P/002A-1	WATER METER INSTALLATIONS MAKWASSIE LAYOUT ZONE 7 WATER METER POSITIONS
1.0	2023-06/W/P/002B	WATER METER INSTALLATIONS MAKWASSIE LAYOUT ZONE 8, 9 & 10
1.0	2023-06/W/P/002B-1	WATER METER INSTALLATIONS MAKWASSIE LAYOUT ZONE 8, 9 & 10 WATER METER POSITIONS
1.0	2023-06/W/P/003	WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT
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1.0	2023-06/W/P/003A-1	WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT ZONE 11 & 12 WATER METER POSITIONS
1.0	2023-06/W/P/003B	WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT ZONE 13 & 14
1.0	2023-06/W/P/003B-1	WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT ZONE 13 & 14 WATER METER POSITIONS
1.0	2023-06/W/P/004	WATER METER INSTALLATIONS WITPOORT LAYOUT
1.0	2023-06/W/P/004A	WATER METER INSTALLATIONS WITPOORT LAYOUT ZONE 15, 16 & 17
1.0	2023-06/W/P/004A-1	WATER METER INSTALLATIONS WITPOORT LAYOUT ZONE 15, 16 WATER METER POSITIONS

REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____
 CLIENT: _____ DATE: _____

PRINT ISSUED ON



Mobile: + 27 (0)83 265 1524
 329 Stateway Chambers, Stateway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: .


DRAWING TITLE **PROJECT DRAWING INDEX**

DESIGN	DATE	DRAWN	DATE
.	AUG 2023	.	AUG 2023
SURVEYED	DATE	CHECKED	DATE
.	.	J BATEMAN	AUG 2023

SCALE **NTS**

DRAWING No. **2023-06/G/A/001**


REVISION No.							
1.0							

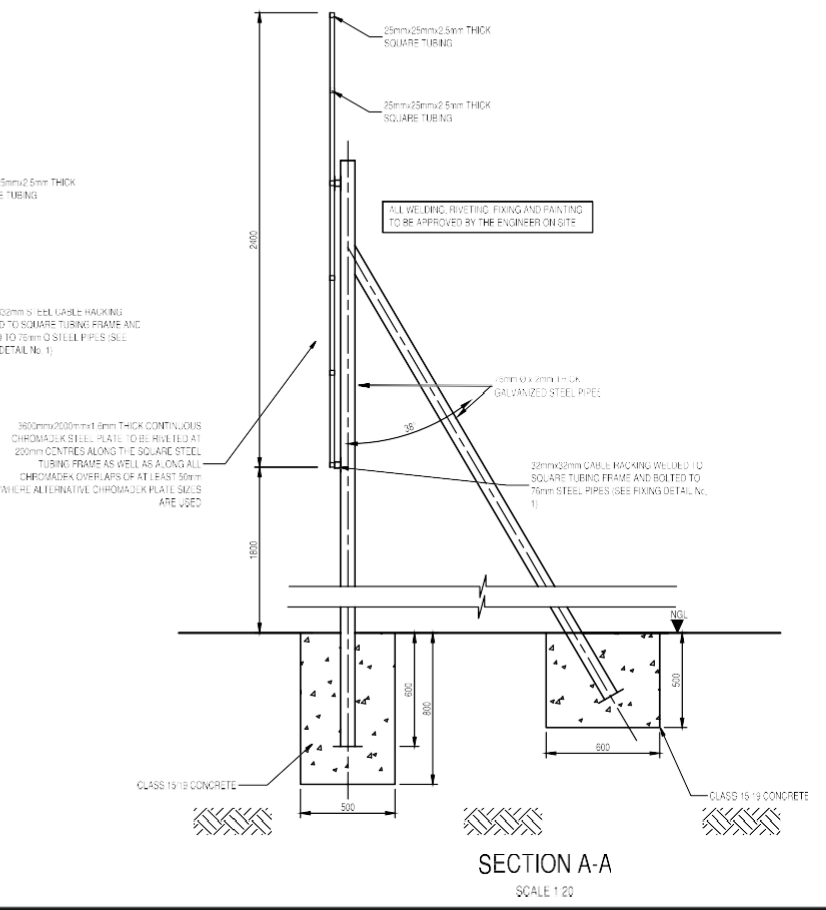
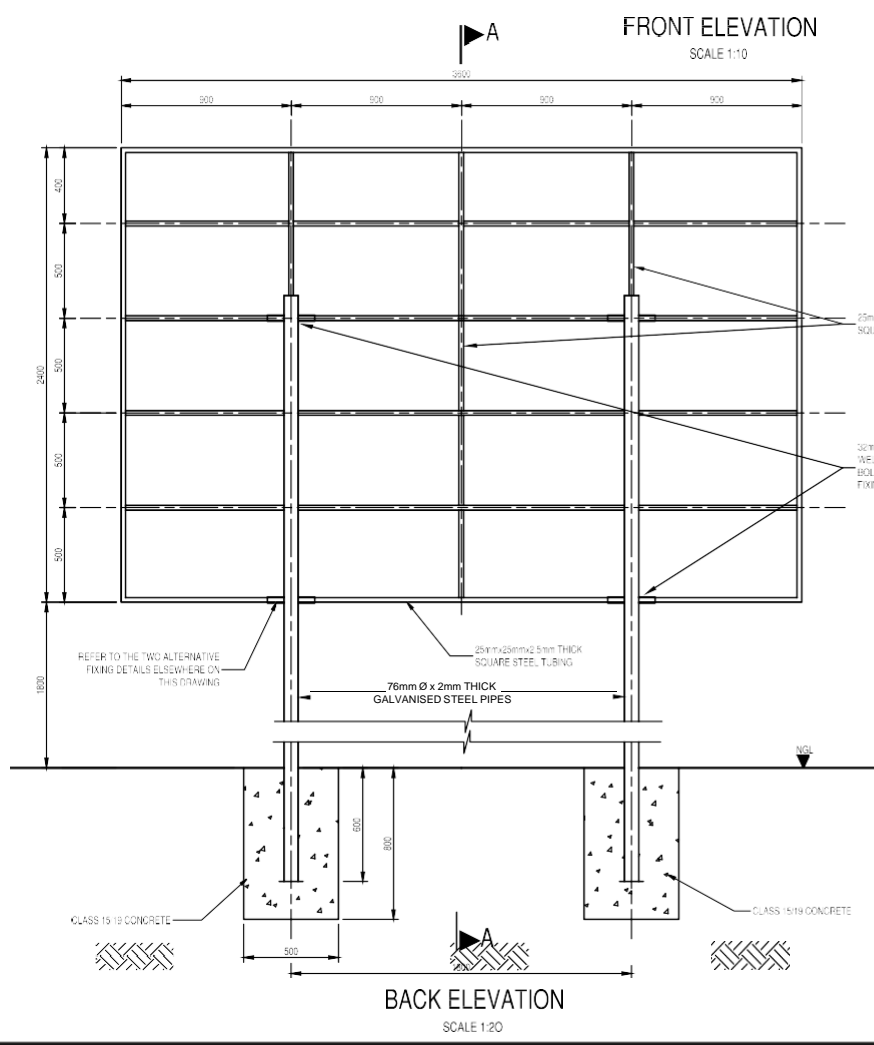
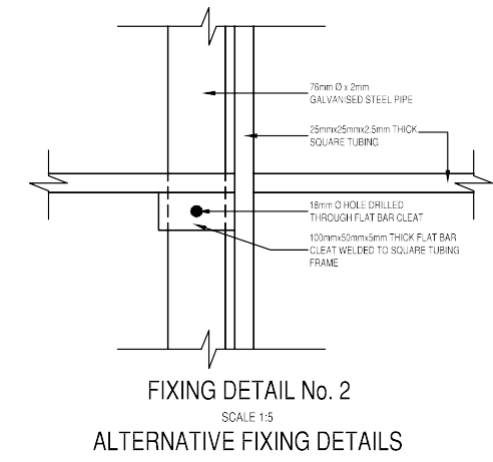
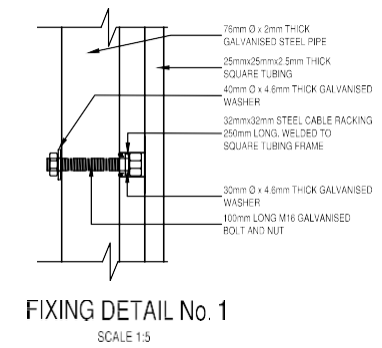


MAQUASSI HILLS LOCAL MUNICIPALITY

PROJECT NAME:
**INSTALLATION OF BULK AND ZONAL WATER METERS IN THE
 MAQUASSI HILLS LOCAL MUNICIPALITY**

CONTRACT NUMBER: MHLM/WSIG/06/2023/24 **PROJECT AMOUNT:** -

	FUNDING AGENT
	XXXXXXXXXXXXXXXXXXXX
	CONSULTING ENGINEERS
	TSELA TSWEU CONSULTING ENGINEERS
CONTRACTOR (LOGO)	CONTRACTOR
	CONTRACTOR NAME



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- Description in italics must be adjusted to suit project details.
 - Type face to be used shall be Helvetica Medium Colour of lettering AS INDICATED.
 - LETTERS TO BE CAPITALISED.
 - Background of board to be WHITE. ALL borders & lines to be MIDDLE BLUE. Colour for logos to be AS PER RESPECTIVE.
 - All paint used should match Ref. 290 Acrylic Road Sign Paint.
 - All lettering to be painted on. Stick-on labels will NOT be permitted.

REFERENCE DRAWINGS	
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Mobile: +27 (0)83 265 1524
 329 Staveley Chambers, Staveley, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT
INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY

FUNDING AGENT: _____

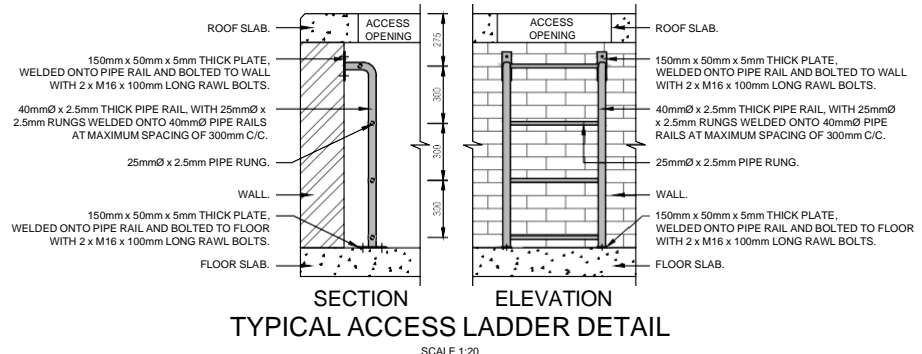
DRAWING TITLE
PROJECT NAME BOARD

DESIGN	DATE AUG 2023	DRAWN	DATE AUG 2023
SURVEYED	DATE	CHECKED J BATEMAN	DATE AUG 2023

SCALE: as shown

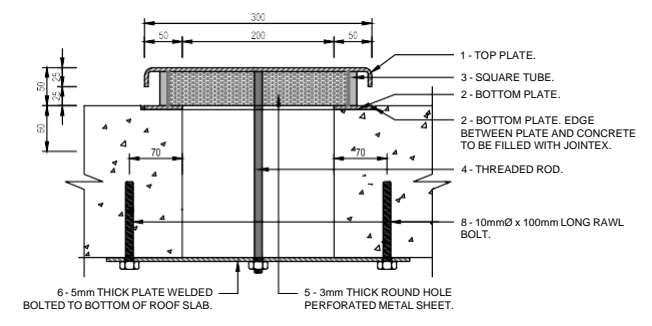
DRAWING No. **2023-06/G/D/001**

REVISION No.	1.0						
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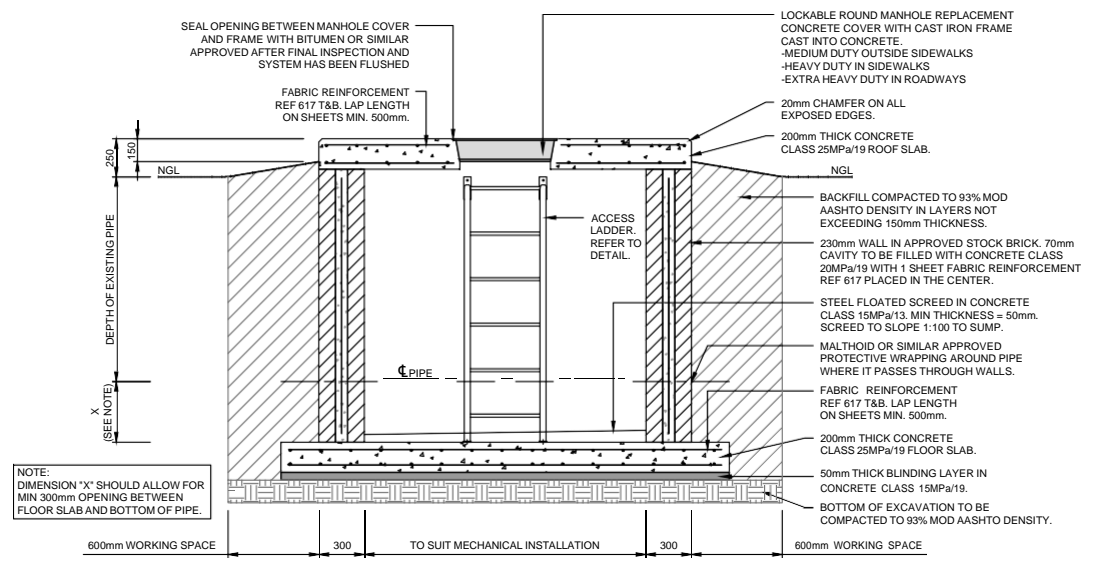


TYPICAL ACCESS LADDER DETAIL
SCALE 1:20

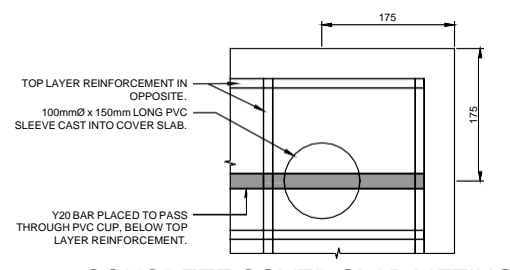
- TOP UNIT COMPONENTS:**
- TOP PLATE - 300mm x 300mm x 5mm THICK WITH EDGES BENT 90° DOWNWARD FOR 25mm.
 - BOTTOM PLATE - 300mm x 300mm x 3mm THICK WITH 200mm x 200mm OPENING CUT OUT IN THE MIDDLE.
 - SQUARE TUBING - 8 x 20mm x 20mm x 3mm x 45mm LONG. SQUARE TUBES PLACED 25mm FROM CORNER ON EACH CORNER AND ONE IN THE CENTER OF EACH EDGE OF TOP AND BOTTOM PLATES. WELDED ONTO TOP PLATE AND BOTTOM PLATE.
 - THREADED ROD - 1 x 300mm LONG x 10mm Ø. WELDED AT THE CENTER ONTO BOTTOM OF TOP PLATE.
 - 3mm THICK ROUND HOLE PERFORATED METAL SHEET, FIXED TO INSIDE OF SQUARE TUBES.
- FIXING BRACKET COMPONENTS:**
- 50mm WIDE x 5mm THICK x 400mm LONG PLATE, BOLTED TO BOTTOM OF ROOF SLAB WITH 10mm Ø x 100mm LONG RAWL BOLTS. ONE EACH SIDE PLATE TO HAVE 12mm Ø HOLE IN THE CENTER TO ACCOMMODATE FIXING OF TOP UNIT WITH 10mm Ø THREADED ROD.
- GENERAL:**
- A. ALL STEELWORK TO BE HOT DIP GALVANIZED.
 - B. PERFORATED PLATE TO BE ALUMINIUM.



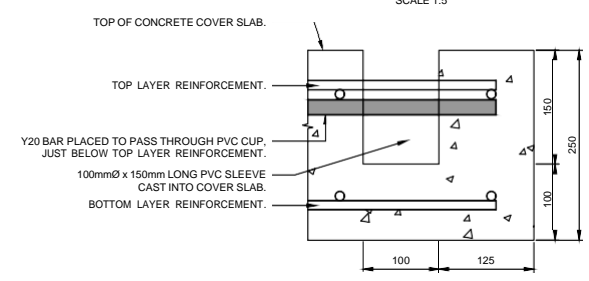
AIR BREATHER DETAIL - SECTION
SCALE 1:5



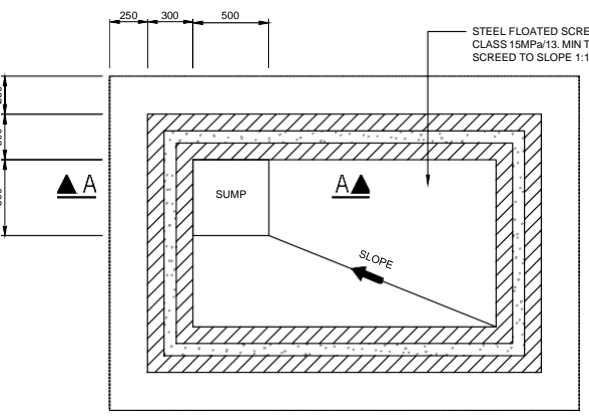
TYPICAL SECTION
SCALE 1:25



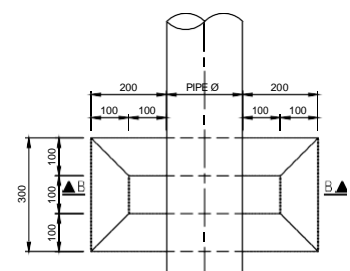
CONCRETE COVER SLAB LIFTING HOOK PLAN VIEW
SCALE 1:5



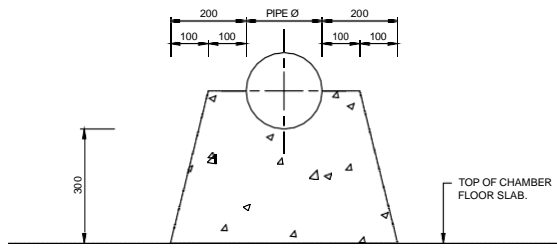
SECTION
SCALE 1:5



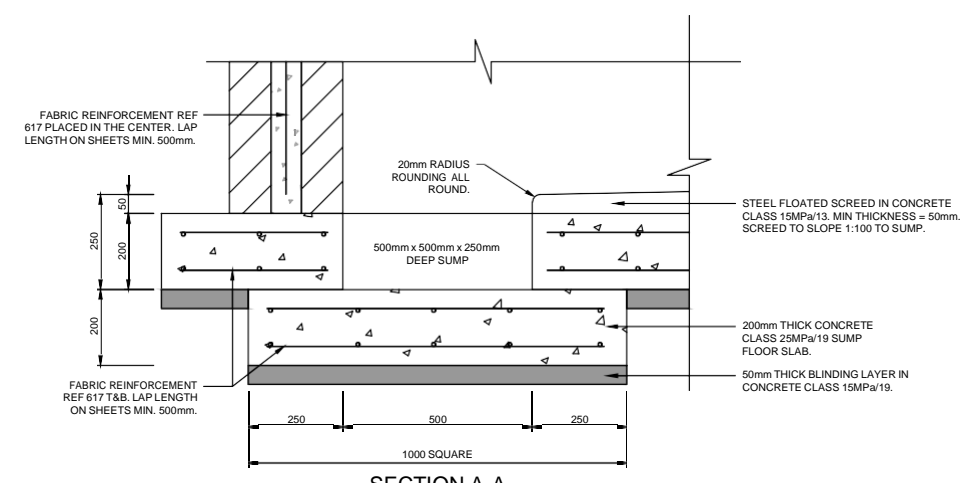
TYPICAL FLOOR PLAN
SCALE 1:25



PIPE PEDESTAL PLAN
SCALE 1:10



SECTION B-B PIPE PEDESTAL
SCALE 1:10



SECTION A-A SUMP DETAIL
SCALE 1:10

REVISIONS				
No.	DATE	BY	DESCRIPTION	

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 APPROVED: _____ DATE: _____
 CLIENT: _____
 PRINT ISSUED ON _____

Tsela Tsweu CONSULTING ENGINEERS

Mobile: +27 (0)83 265 1524
 329 Stately Chambers, Statelyway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

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PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

DRAWING TITLE: **TYPICAL DETAILS**

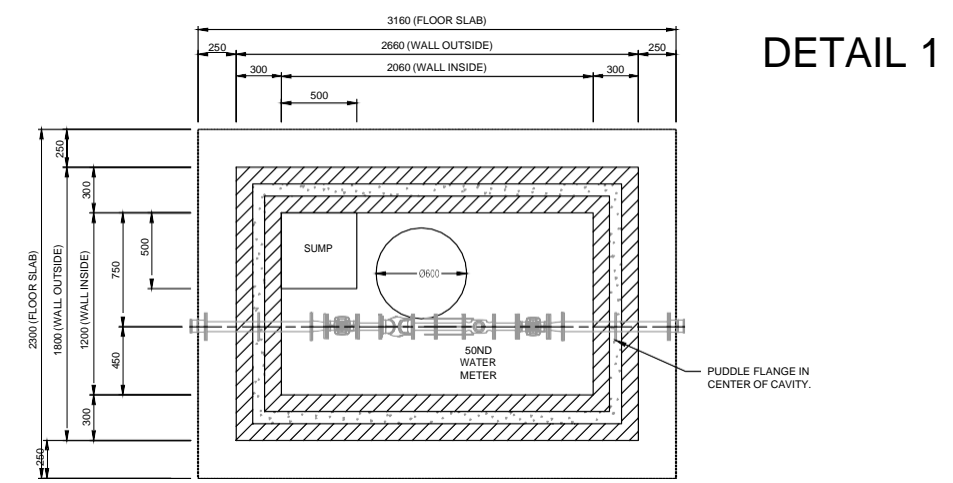
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	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: AS SHOWN

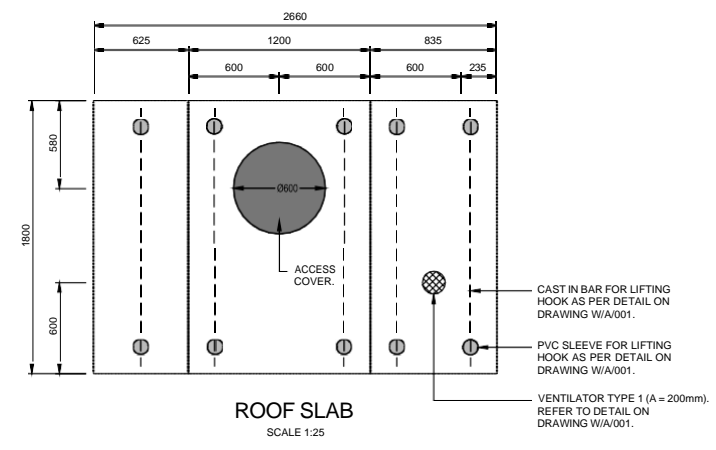
DRAWING No. **2023-06/W/A/001**

REVISION No.				
1.0				

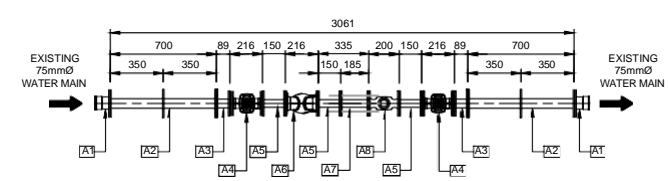
NOTE:
1. FOR TYPICAL DETAILS REFER TO DRAWING 2023-06/W/A/001.



50ND WATER METER INSTALLATION LAYOUT
SCALE 1:25

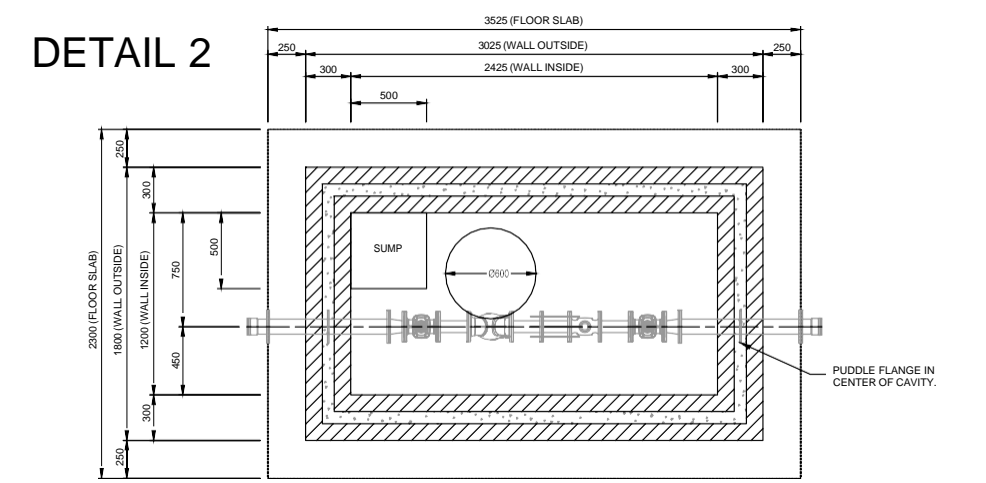


ROOF SLAB
SCALE 1:25

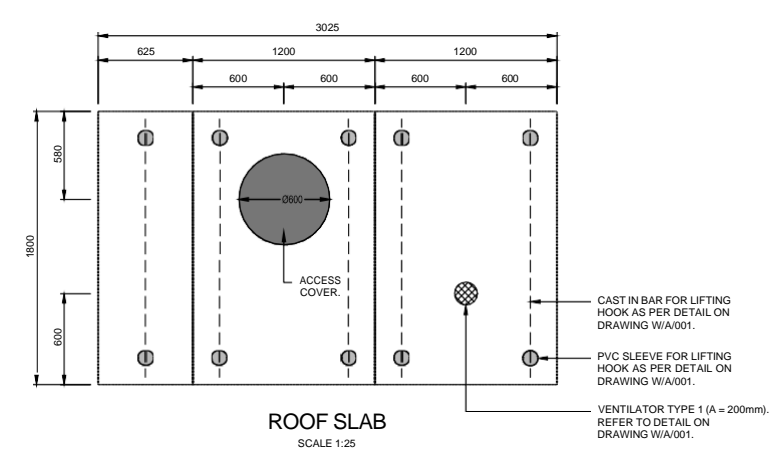


50ND WATER METER INSTALLATION PIPES & FITTINGS LAYOUT
SCALE 1:25

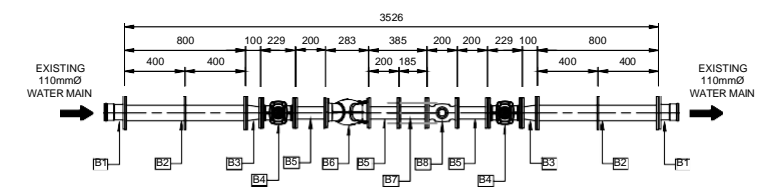
50ND BULK WATER METER INSTALLATION PIPE FITTING LIST			
PIPE NUMBER	DESCRIPTION	MATERIAL	QUANTITY
A1	COUPLING TO SUIT CONNECTION ONTO EXISTING 75mm DIAMETER WATER MAIN AND 65mm DIAMETER STEEL PIPE.	STANDARD	2
A2	65mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 62	2
A3	65mm - 50mm FLANGED ECCENTRIC REDUCER.	SCHEDULE 40	2
A4	50ND PN16 RESILIENT SEATED GATE VALVE TO SANS 664.	DUCTILE IRON - EPOXY PAINTED	2
A5	50mm DIAMETER FLANGED STRAIGHT PIPE.	SANS 62	3
A6	50ND PN16 Y-PATTERN STRAINER.	DUCTILE IRON - EPOXY PAINTED	1
A7	50ND PN16 DISMANTLING JOINT.	STANDARD	1
A8	50ND PN16 WATER METER.	CAST IRON - EPOXY PAINTED	1



80ND WATER METER INSTALLATION LAYOUT
SCALE 1:25



ROOF SLAB
SCALE 1:25



80ND WATER METER INSTALLATION PIPES & FITTINGS LAYOUT
SCALE 1:25

80ND BULK WATER METER INSTALLATION PIPE FITTING LIST			
PIPE NUMBER	DESCRIPTION	MATERIAL	QUANTITY
B1	COUPLING TO SUIT CONNECTION ONTO EXISTING 110mm DIAMETER WATER MAIN AND 100mm DIAMETER STEEL PIPE.	STANDARD	2
B2	100mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 62	2
B3	100mm - 80mm FLANGED ECCENTRIC REDUCER.	SCHEDULE 40	2
B4	80ND PN16 RESILIENT SEATED GATE VALVE TO SANS 664.	DUCTILE IRON - EPOXY PAINTED	2
B7	80mm DIAMETER FLANGED STRAIGHT PIPE.	SANS 62	3
B6	80ND PN16 Y-PATTERN STRAINER.	DUCTILE IRON - EPOXY PAINTED	1
B7	80ND PN16 DISMANTLING JOINT.	STANDARD	1
B8	80ND PN16 WATER METER.	CAST IRON - EPOXY PAINTED	1

REVISIONS			
No.	DATE	BY	DESCRIPTION

- MECHANICAL NOTES:**
- ALL FLANGES TO BE DRILLED SABS 1123-1977 (1600/3)
 - ALL VALVES, STRAINERS AND WATER METERS TO BE APPROVED BY ENGINEER IN WRITING.
 - THE LENGTH OF PIPES AND FITTINGS ARE APPROXIMATE ONLY - ACTUAL LENGTH TO BE DETERMINED BY CONTRACTOR ONLY AFTER APPROVAL OF VALVES BY ENGINEER.
 - NO ALLOWANCE HAS BEEN MADE IN PIPE AND FITTING DIMENSIONS FOR PACKINGS, GASKETS AND GAPS BETWEEN PIPEWORK - PROVISION FOR THESE TO BE MADE BY SUPPLIERS.
 - FLANGE HOLES TO BE DRILLED TO ALLOW EXACT ALIGNMENT HORIZONTALLY AND VERTICALLY, AS DETAILED ON THE DRAWINGS, OF ALL PIPEWORK AND EQUIPMENT.
 - ALL WELDING TO BE FULL STRENGTH, FULL PENETRATION.
 - ALL PIPES, ELBOWS, TEE PIECES AND REDUCERS TO BE HOT-DIPPED GALVANISED.
 - ALL PIPEWORK PASSING THROUGH BRICKWORK TO BE MALTHOID WRAPPED (4 LAYERS MIN.) AND SEALED AROUND PIPE WITH POLYSULPHIDE SEALANT ON BOTH FACES OF BRICKWORK.
 - ALL BOLTS, NUTS AND GASKETS NECESSARY FOR THE PROPER INSTALLATION OF THE EQUIPMENT, TO BE SUPPLIED AS PART OF THE MECHANICAL EQUIPMENT.
 - A PEDESTAL IN CONCRETE CLASS 25MPa/19 TO BE CAST EITHER SIDE OF THE WATER. REFER TO PEDESTAL DETAIL ON DRAWING W/A/001.

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
ENGINEER: _____
APPROVED: _____ DATE: _____
CLIENT: _____

PRINT ISSUED ON

Mobile: +27 (0)83 265 1524
329 Stately Chambers, Statelyway, Welkom,
PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

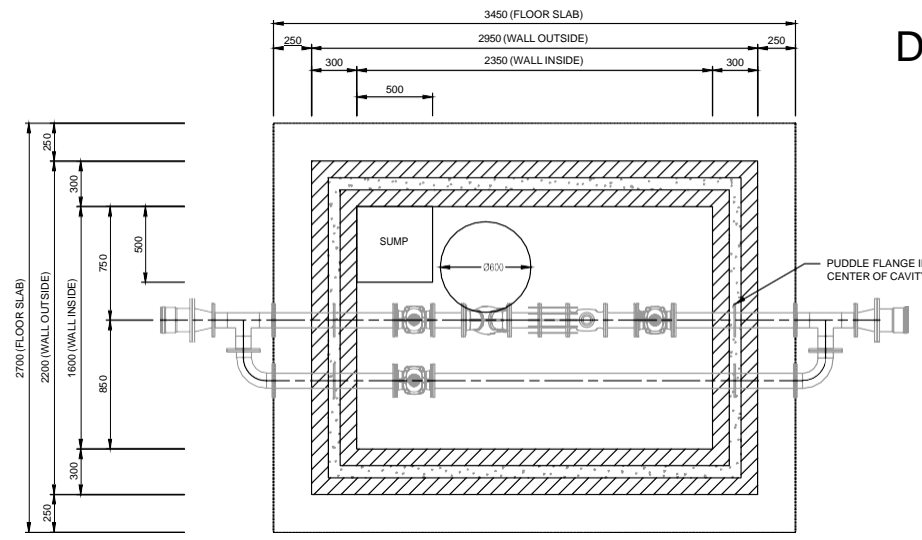
FUNDING AGENT: _____

DRAWING TITLE: **WATER METER INSTALLATION LAYOUT & DETAILS FOR 50ND & 80ND WATER METER INSTALLATION ON 75mmØ & 110mmØ WATER MAIN**

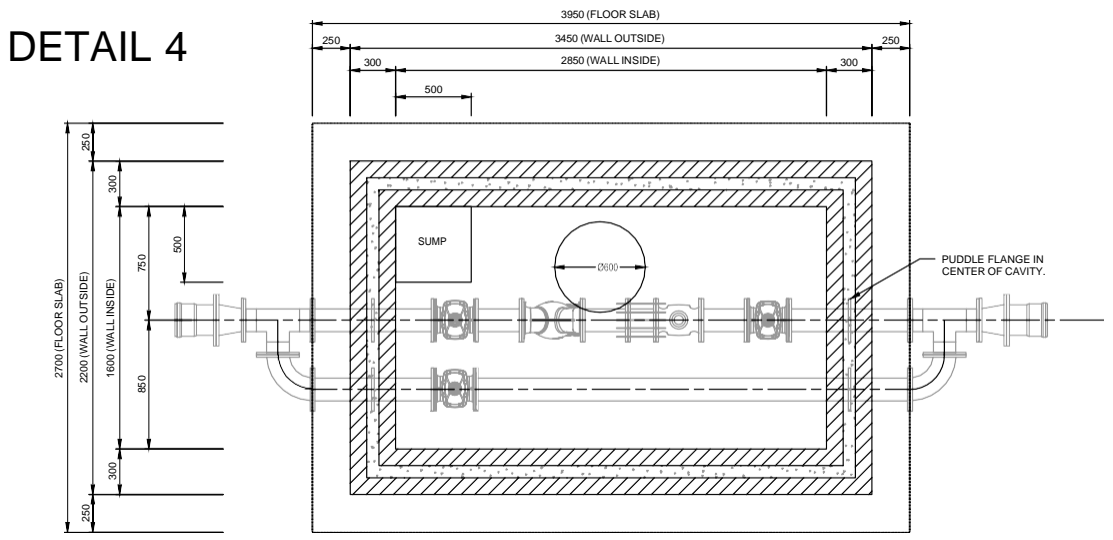
DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:25
DRAWING No. **2023-06/W/D/001**
REVISION No. _____

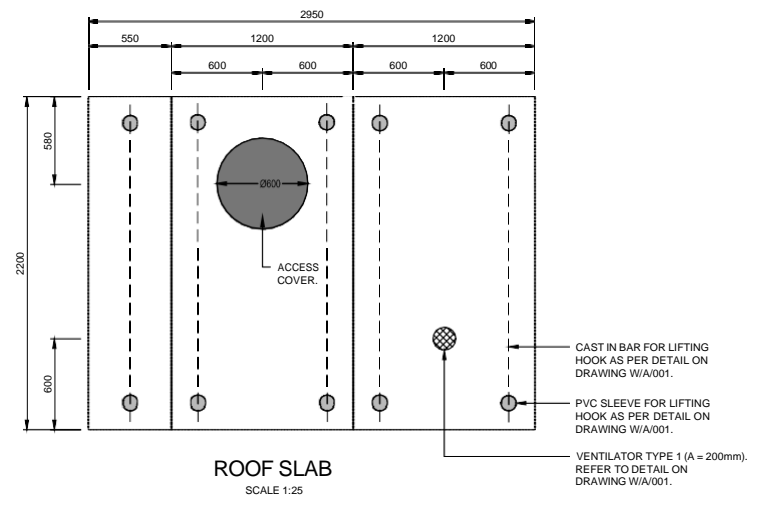
NOTE:
1. FOR TYPICAL DETAILS REFER TO DRAWING 2023-06/W/A/001.



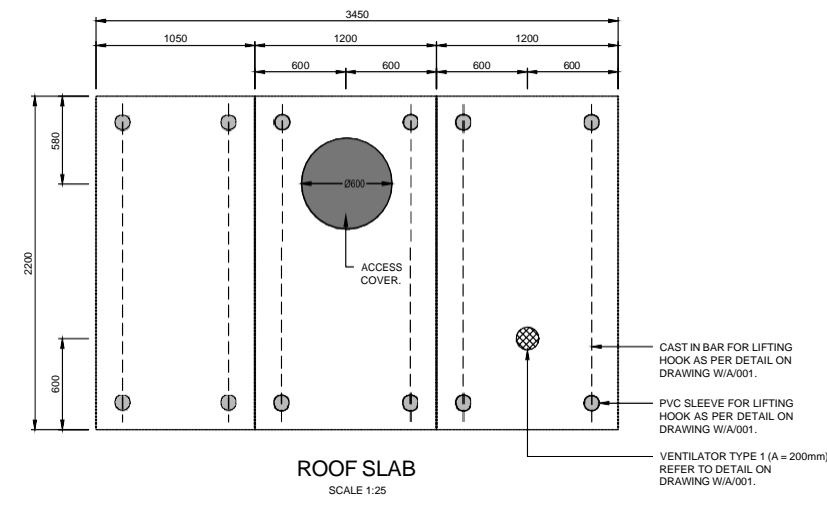
100ND WATER METER INSTALLATION LAYOUT
SCALE 1:25



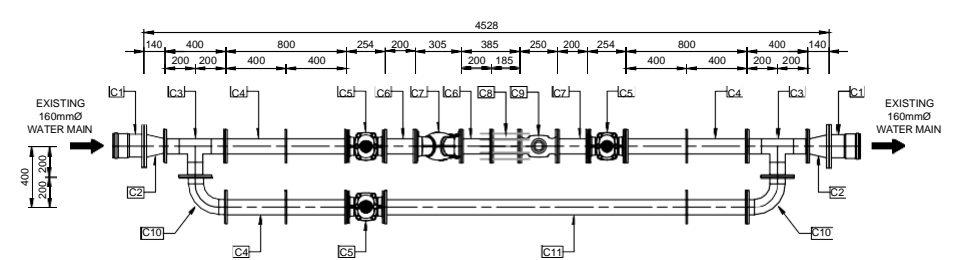
150ND WATER METER INSTALLATION LAYOUT
SCALE 1:25



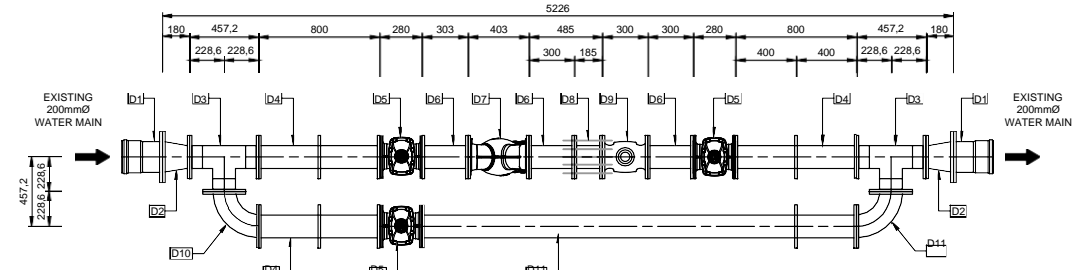
ROOF SLAB
SCALE 1:25



ROOF SLAB
SCALE 1:25



100ND WATER METER INSTALLATION
PIPES & FITTINGS LAYOUT
SCALE 1:25



150ND WATER METER INSTALLATION
PIPES & FITTINGS LAYOUT
SCALE 1:25

100ND BULK WATER METER INSTALLATION			
PIPE FITTING LIST			
PIPE NUMBER	DESCRIPTION	MATERIAL	QUANTITY
C1	COUPLING TO SUIT CONNECTION ONTO EXISTING 160mm DIAMETER WATER MAIN AND 150mm DIAMETER STEEL PIPE.	STANDARD	2
C2	150mm - 100mm FLANGED ECCENTRIC REDUCER.	SCHEDULE 40	2
C3	100mm DIAMETER TEE PIECE.	SCHEDULE 40	2
C4	100mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 62	3
C5	100ND PN16 RESILIENT SEATED GATE VALVE TO SANS 664.	DUCTILE IRON - EPOXY PAINTED	3
C6	100mm DIAMETER FLANGED STRAIGHT PIPE.	SANS 62	3
C7	100ND PN16 Y-PATTERN STRAINER.	DUCTILE IRON - EPOXY PAINTED	1
C8	100ND PN16 DISMANTLING JOINT.	STANDARD	1
C9	100ND PN16 WATER METER.	CAST IRON - EPOXY PAINTED	1
C10	100mm DIAMETER FLANGED 90 DEGREE ELBOW.	SCHEDULE 40	2
C11	100mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 62	1

150ND BULK WATER METER INSTALLATION			
PIPE FITTING LIST			
PIPE NUMBER	DESCRIPTION	MATERIAL	QUANTITY
D1	COUPLING TO SUIT CONNECTION ONTO EXISTING 200mm DIAMETER WATER MAIN AND 200mm DIAMETER STEEL PIPE.	STANDARD	2
D2	200mm - 150mm FLANGED ECCENTRIC REDUCER.	SANS 719	2
D3	150mm DIAMETER TEE PIECE.	SCHEDULE 40	2
D4	150mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 62	3
D5	150ND PN16 RESILIENT SEATED GATE VALVE TO SANS 664.	DUCTILE IRON - EPOXY PAINTED	3
D6	150mm DIAMETER FLANGED STRAIGHT PIPE.	SANS 62	3
D7	150ND PN16 Y-PATTERN STRAINER.	DUCTILE IRON - EPOXY PAINTED	1
D8	150ND PN16 DISMANTLING JOINT.	STANDARD	1
D9	150ND PN16 WATER METER.	CAST IRON - EPOXY PAINTED	1
D10	150mm DIAMETER FLANGED 90 DEGREE ELBOW.	SCHEDULE 40	2
D11	150mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 62	1

REVISIONS				
No.	DATE	BY	DESCRIPTION	

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 - ALL WELDING TO BE FULL STRENGTH, FULL PENETRATION.
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 - A PEDESTAL IN CONCRETE CLASS 25MPa/19 TO BE CAST EITHER SIDE OF THE WATER. REFER TO PEDESTAL DETAIL ON DRAWING W/A/001.

REFERENCE DRAWINGS	
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APPROVED: _____ DATE: _____
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Tsela Tsweu
CONSULTING ENGINEERS

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329 Stately Chambers, Stately, Welkom,
PO Box 2600, Welkom, 9460, South Africa

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PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT:

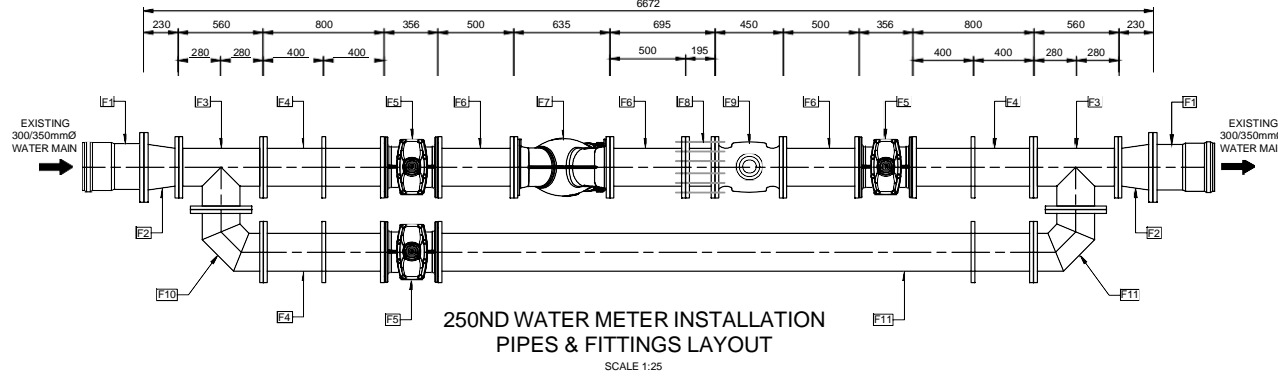
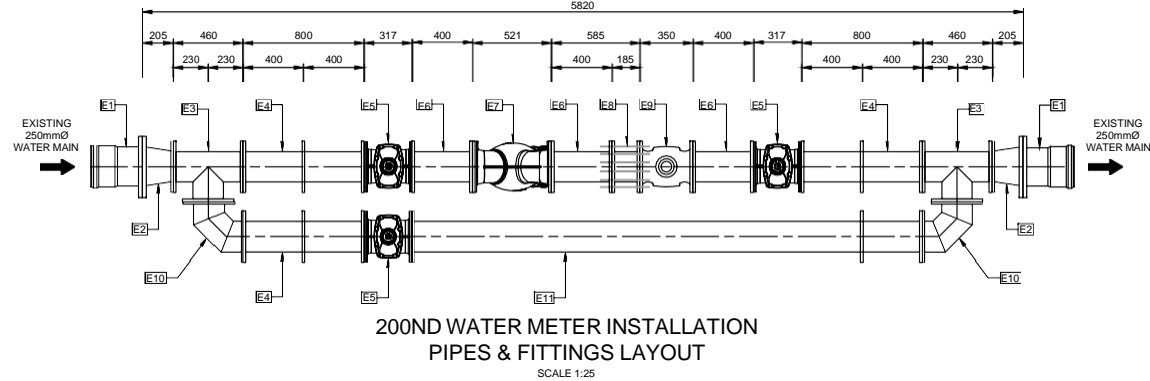
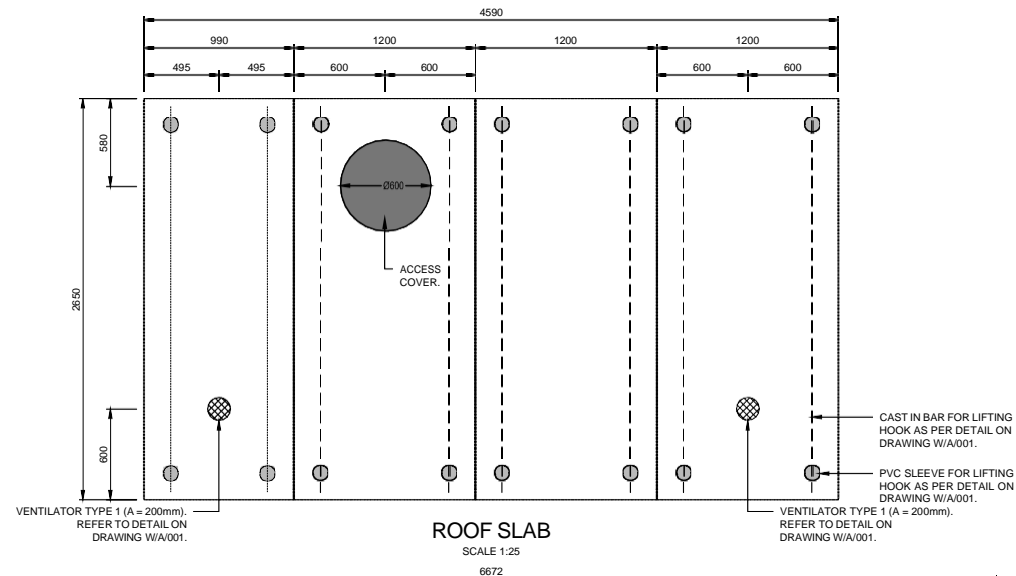
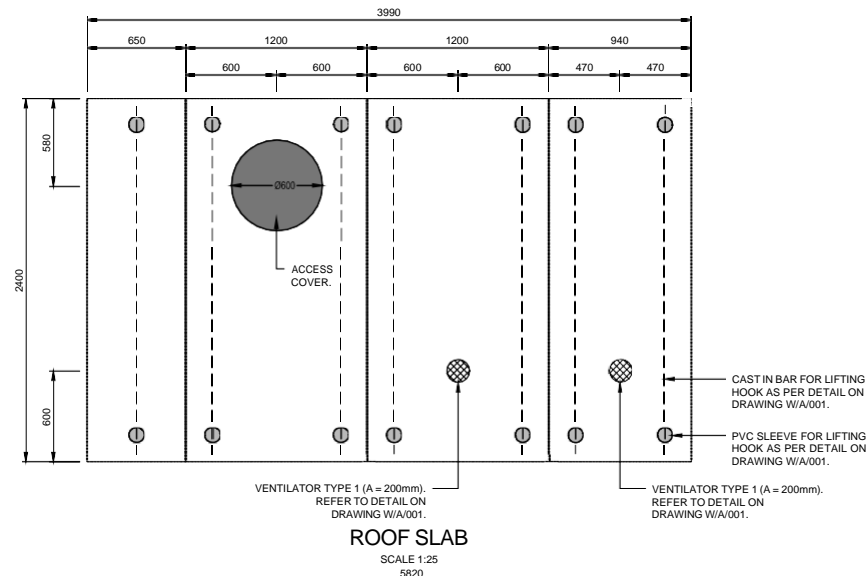
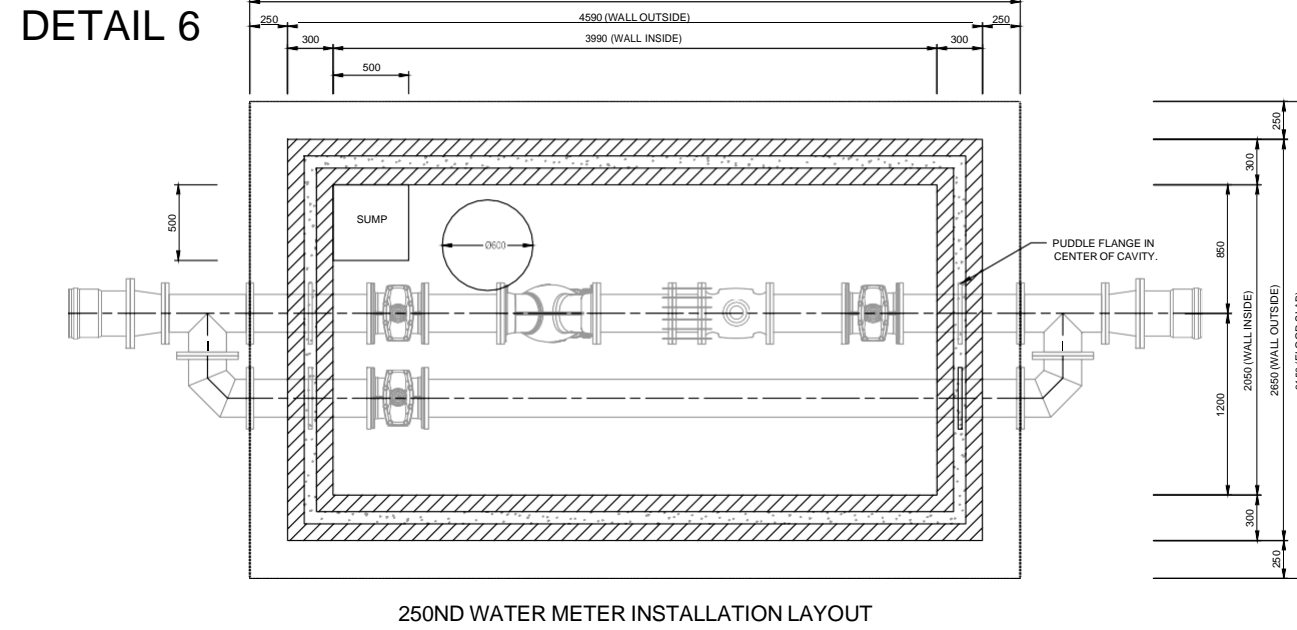
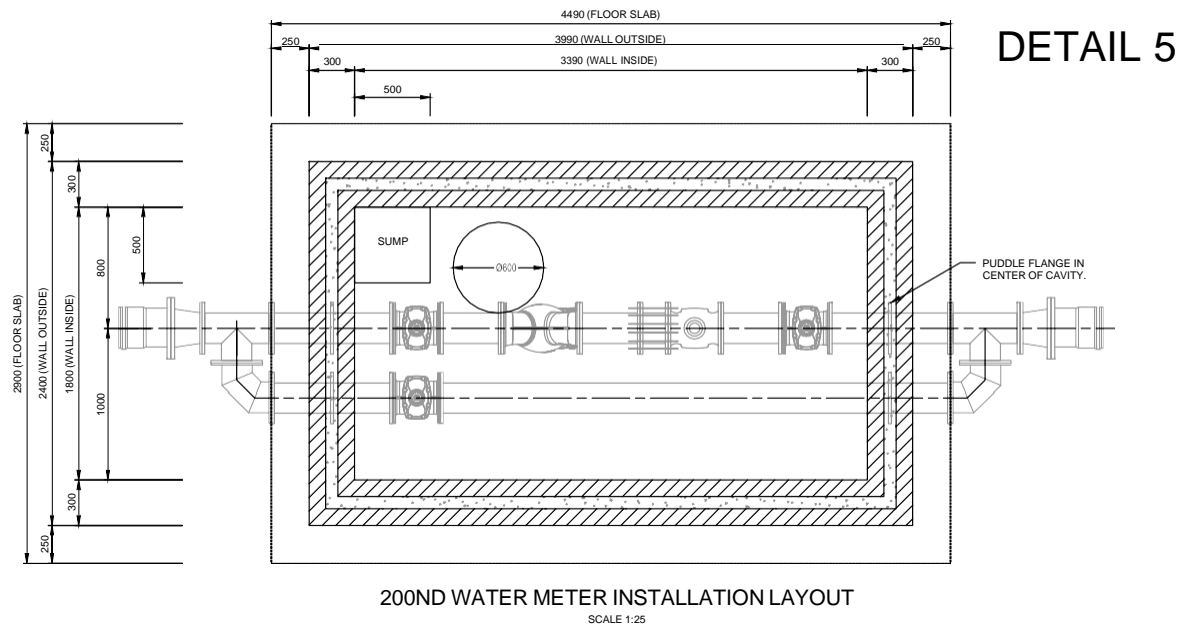
DRAWING TITLE: **WATER METER INSTALLATION LAYOUT & DETAILS FOR 100ND & 150ND WATER METER INSTALLATION ON 160mmØ & 200mmØ WATER MAIN**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:25

DRAWING No. **2023-06/W/D/002**

REVISION No.				
1.0				



200ND BULK WATER METER INSTALLATION			
PIPE FITTING LIST			
PIPE NUMBER	DESCRIPTION	MATERIAL	QUANTITY
E1	COUPLING TO SUIT CONNECTION ONTO EXISTING 250mm DIAMETER WATER MAIN AND 250mm DIAMETER STEEL PIPE.	STANDARD	2
E2	250mm - 200mm FLANGED ECCENTRIC REDUCER.	SANS 719	2
E3	200mm DIAMETER TEE PIECE.	SANS 719	2
E4	200mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 719	3
E5	200ND PN16 RESILIENT SEATED GATE VALVE TO SANS 664.	DUCTILE IRON - EPOXY PAINTED	3
E6	200mm DIAMETER FLANGED STRAIGHT PIPE.	SANS 719	3
E7	200ND PN16 Y-PATTERN STRAINER.	DUCTILE IRON - EPOXY PAINTED	1
E8	200ND PN16 DISMANTLING JOINT.	STANDARD	1
E9	200ND PN16 WATER METER.	CAST IRON - EPOXY PAINTED	1
E10	200mm DIAMETER FLANGED 90 DEGREE ELBOW.	SANS 719	2
E11	200mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 719	1

250ND BULK WATER METER INSTALLATION ON 300mm DIAMETER WATER MAIN			
PIPE FITTING LIST			
PIPE NUMBER	DESCRIPTION	MATERIAL	QUANTITY
F1	COUPLING TO SUIT CONNECTION ONTO EXISTING 300mm DIAMETER WATER MAIN AND 300mm DIAMETER STEEL PIPE.	STANDARD	2
F1	COUPLING TO SUIT CONNECTION ONTO EXISTING 350mm DIAMETER WATER MAIN AND 350mm DIAMETER STEEL PIPE.	STANDARD	2
F2	300mm - 250mm FLANGED ECCENTRIC REDUCER.	SANS 719	2
F2	350mm - 250mm FLANGED ECCENTRIC REDUCER.	SANS 719	2
F3	250mm DIAMETER TEE PIECE.	SANS 719	2
F4	250mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 719	3
F6	250ND PN16 RESILIENT SEATED GATE VALVE TO SANS 664.	DUCTILE IRON - EPOXY PAINTED	3
F6	250mm DIAMETER FLANGED STRAIGHT PIPE.	SANS 719	3
F7	250ND PN16 Y-PATTERN STRAINER.	DUCTILE IRON - EPOXY PAINTED	1
F8	250ND PN16 DISMANTLING JOINT.	STANDARD	1
F9	250ND PN16 WATER METER.	CAST IRON - EPOXY PAINTED	1
F10	250mm DIAMETER FLANGED 90 DEGREE ELBOW.	SANS 719	2
F11	250mm DIAMETER FLANGED STRAIGHT PIPE WITH PUDDLE FLANGE.	SANS 719	1

ALTERNATIVE FITTING F1 FOR CONNECTION ONTO EXISTING 350mm WATER MAIN.

ALTERNATIVE FITTING F2 FOR CONNECTION ONTO EXISTING 300mm WATER MAIN.

NOTE:
1. FOR TYPICAL DETAILS REFER TO DRAWING 2023-06/W/A/001.

REVISIONS

No.	DATE	BY	DESCRIPTION

MECHANICAL NOTES:

- ALL FLANGES TO BE DRILLED SABS 1123-1977 (1600/3)
- ALL VALVES, STRAINERS AND WATER METERS TO BE APPROVED BY ENGINEER IN WRITING.
- THE LENGTH OF PIPES AND FITTINGS ARE APPROXIMATE ONLY - ACTUAL LENGTH TO BE DETERMINED BY CONTRACTOR ONLY AFTER APPROVAL OF VALVES BY ENGINEER.
- NO ALLOWANCE HAS BEEN MADE IN PIPE AND FITTING DIMENSIONS FOR PACKINGS, GASKETS AND GAPS BETWEEN PIPEWORK - PROVISION FOR THESE TO BE MADE BY SUPPLIERS.
- FLANGE HOLES TO BE DRILLED TO ALLOW EXACT ALIGNMENT HORIZONTALLY AND VERTICALLY, AS DETAILED ON THE DRAWINGS, OF ALL PIPEWORK AND EQUIPMENT.
- ALL WELDING TO BE FULL STRENGTH, FULL PENETRATION.
- ALL PIPES, ELBOWS, TEE PIECES AND REDUCERS TO BE HOT-DIPPED GALVANISED.
- ALL PIPEWORK PASSING THROUGH BRICKWORK TO BE MALTHOID WRAPPED (4 LAYERS MIN.) AND SEALED AROUND PIPE WITH POLYSULPHIDE SEALANT ON BOTH FACES OF BRICKWORK.
- ALL BOLTS, NUTS AND GASKETS NECESSARY FOR THE PROPER INSTALLATION OF THE EQUIPMENT, TO BE SUPPLIED AS PART OF THE MECHANICAL EQUIPMENT.
- A PEDESTAL IN CONCRETE CLASS 25MPa/19 TO BE CAST EITHER SIDE OF THE WATER. REFER TO PEDESTAL DETAIL ON DRAWING W/A/001.

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: ENGINEER: _____ DATE: _____
 APPROVED: CLIENT: _____ DATE: _____
 PRINT ISSUED ON

Tsela Tsweu
CONSULTING ENGINEERS

Mobile: +27 (0)83 265 1524
 329 Stately Chambers, Statelyway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT:

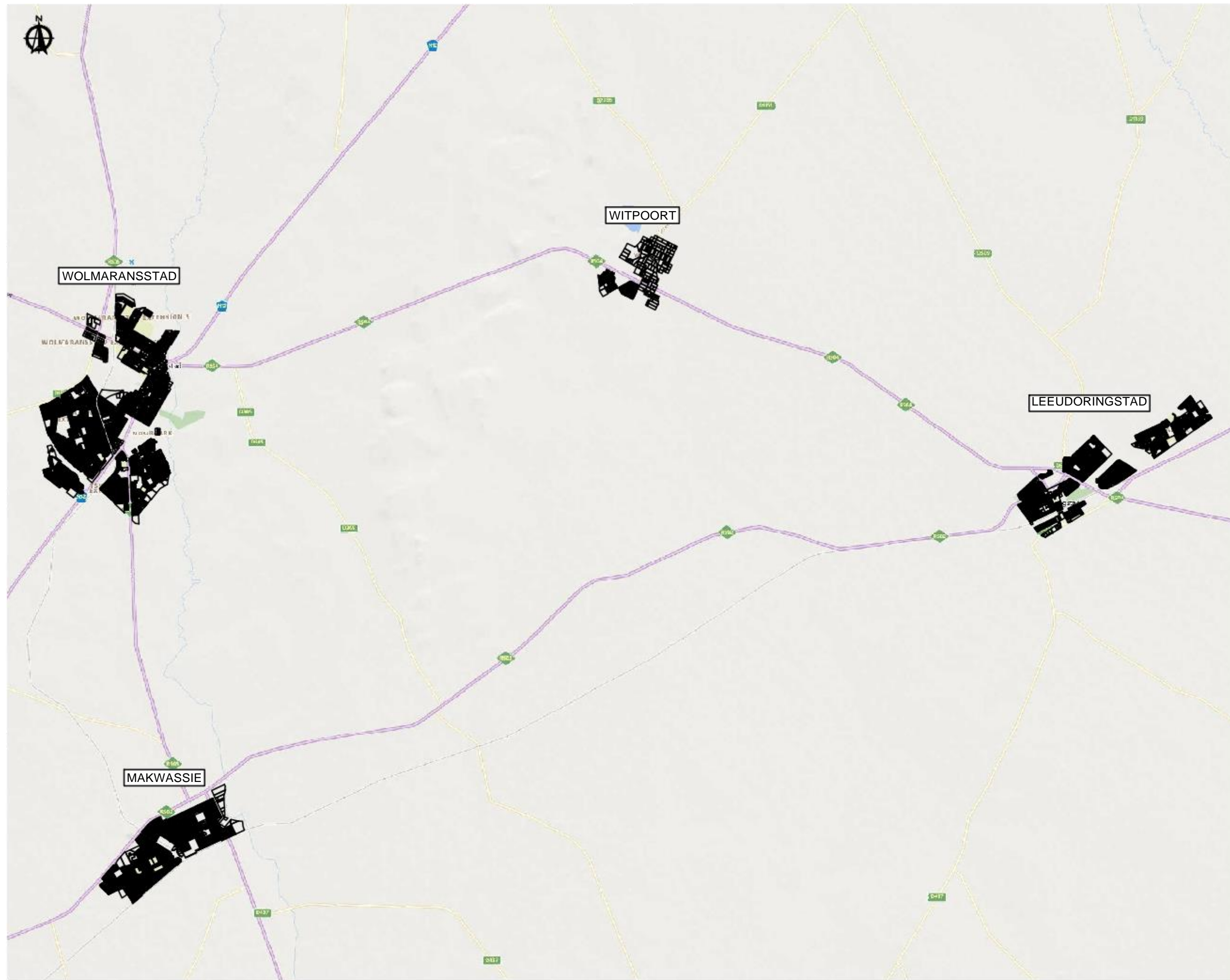
DRAWING TITLE: **WATER METER INSTALLATION LAYOUT & DETAILS FOR 200ND & 250ND WATER METER INSTALLATION ON 250mmØ TO 350mmØ WATER MAIN**

DESIGN	DATE	DRAWN	DATE
-	AUG 2023	-	AUG 2023
SURVEYED	DATE	CHECKED	DATE
-	-	J BATEMAN	AUG 2023

SCALE: 1:25

DRAWING No. **2023-06/W/D/003**

REVISION No.				
1.0				



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- EXISTING RETICULATION
 - EXISTING PUMP MAIN
 - EXISTING SEDBING WATER MAIN
 - EXISTING RESERVOIR
 - WATER METER

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____ DATE: _____
 APPROVED: _____ DATE: _____
 CLIENT: _____ DATE: _____

PRINT ISSUED ON _____



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 329 Stately Chambers, Statelyway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

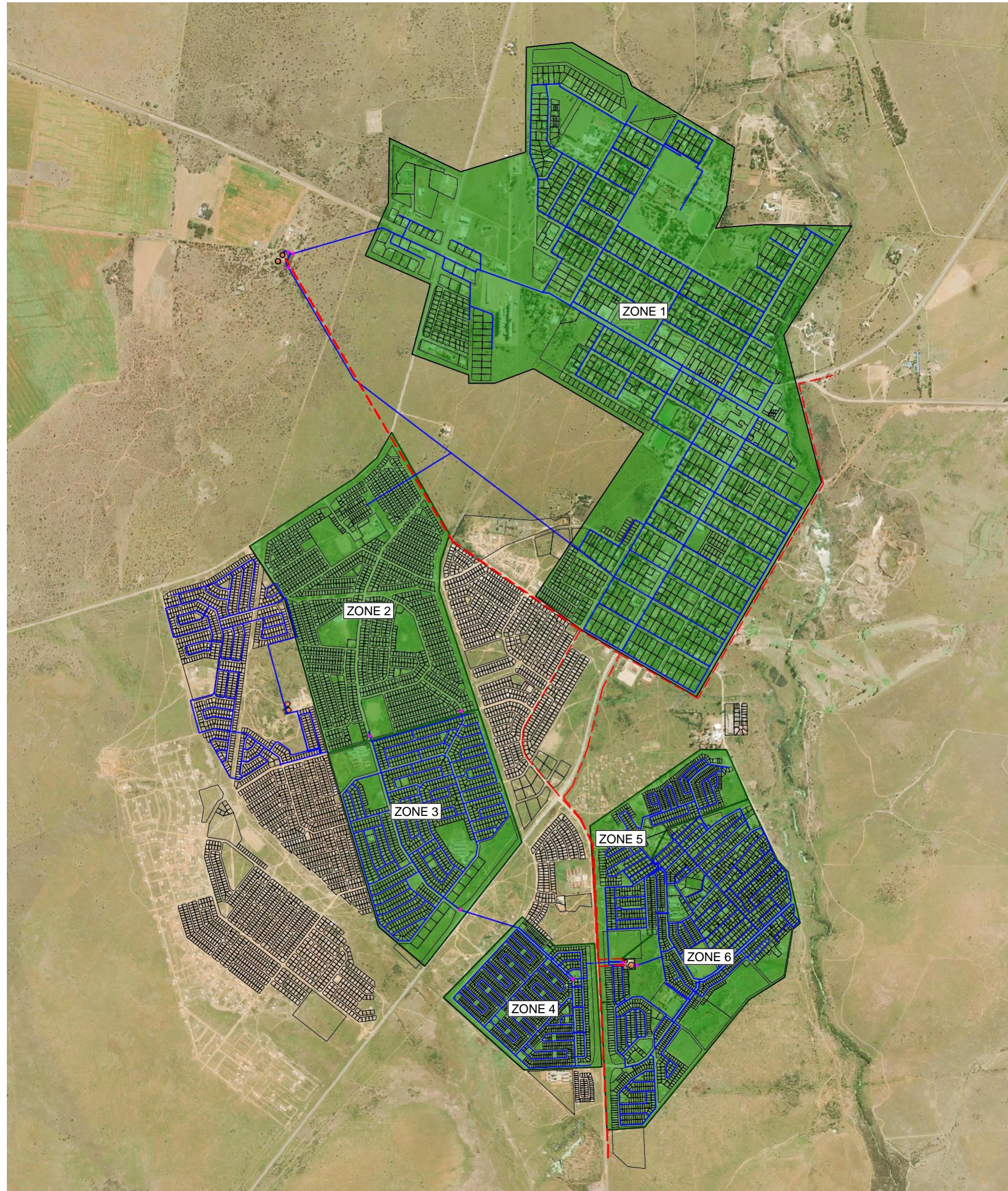
DRAWING TITLE: **WATER METER INSTALLATIONS LOCALITY MAP**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:50 000

DRAWING No. **2023-06/W/L/001**

REVISION No.					
1.0					



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- EXISTING RETICULATION
 - EXISTING PUMP MAIN
 - EXISTING SEWERING WATER MAIN
 - EXISTING RESERVOIR
 - WATER METER

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____ DATE: _____
 CLIENT: _____

PRINT ISSUED ON _____

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 329 Stateway Chambers, Stateway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

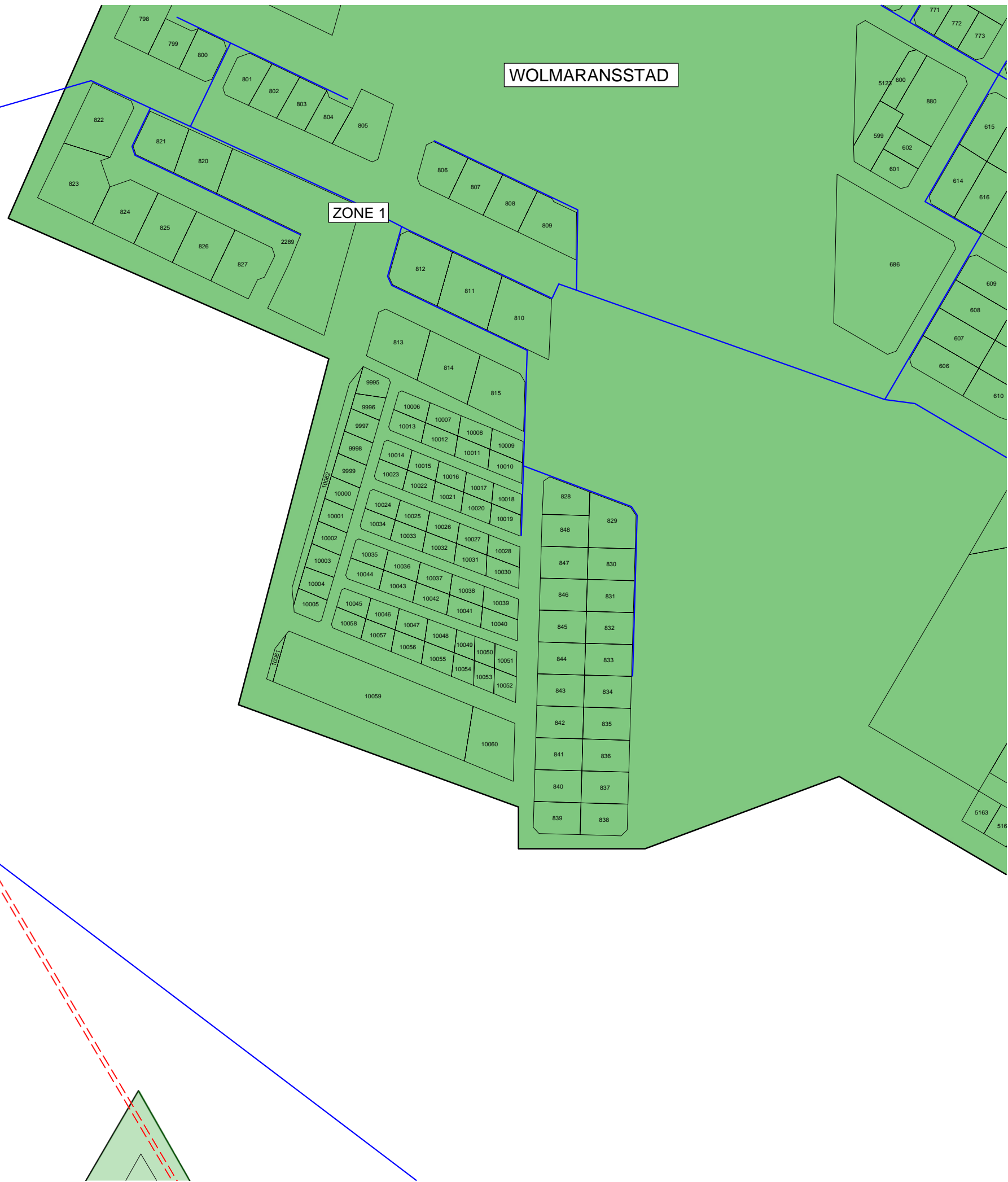
DRAWING TITLE: **WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT**

DESIGN	DATE	DRAWN	DATE
+	AUG 2023	-	AUG 2023
SURVEYED	DATE	CHECKED	DATE
-	-	J BATEMAN	AUG 2023

SCALE: 1:12 500

DRAWING No. **2023-06/W/P/001**

REVISION No.	DATE	DESCRIPTION
1.0		



REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

- EXISTING RETICULATION
- - - EXISTING PUMP MAIN
- - - EXISTING SEDIMENT WATER MAIN
- EXISTING RESERVOIR
- NEW WATER METER
- EXISTING WATER METER
- EXISTING BOREHOLE

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____
 CLIENT: _____ DATE: _____

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 329 Stateway Chambers, Stateway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

DRAWING TITLE: **WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 1**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:2500

DRAWING No. **2023-06/W/P/001A**

REVISION No.					
1.0					



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- EXISTING RETICULATION
 - EXISTING PUMP MAIN
 - EXISTING SEWERING WATER MAIN
 - EXISTING RESERVOIR
 - NEW WATER METER
 - EXISTING WATER METER

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____ DATE: _____
 APPROVED: _____ DATE: _____
 CLIENT: _____ DATE: _____

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 329 Stately Chambers, Stately, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

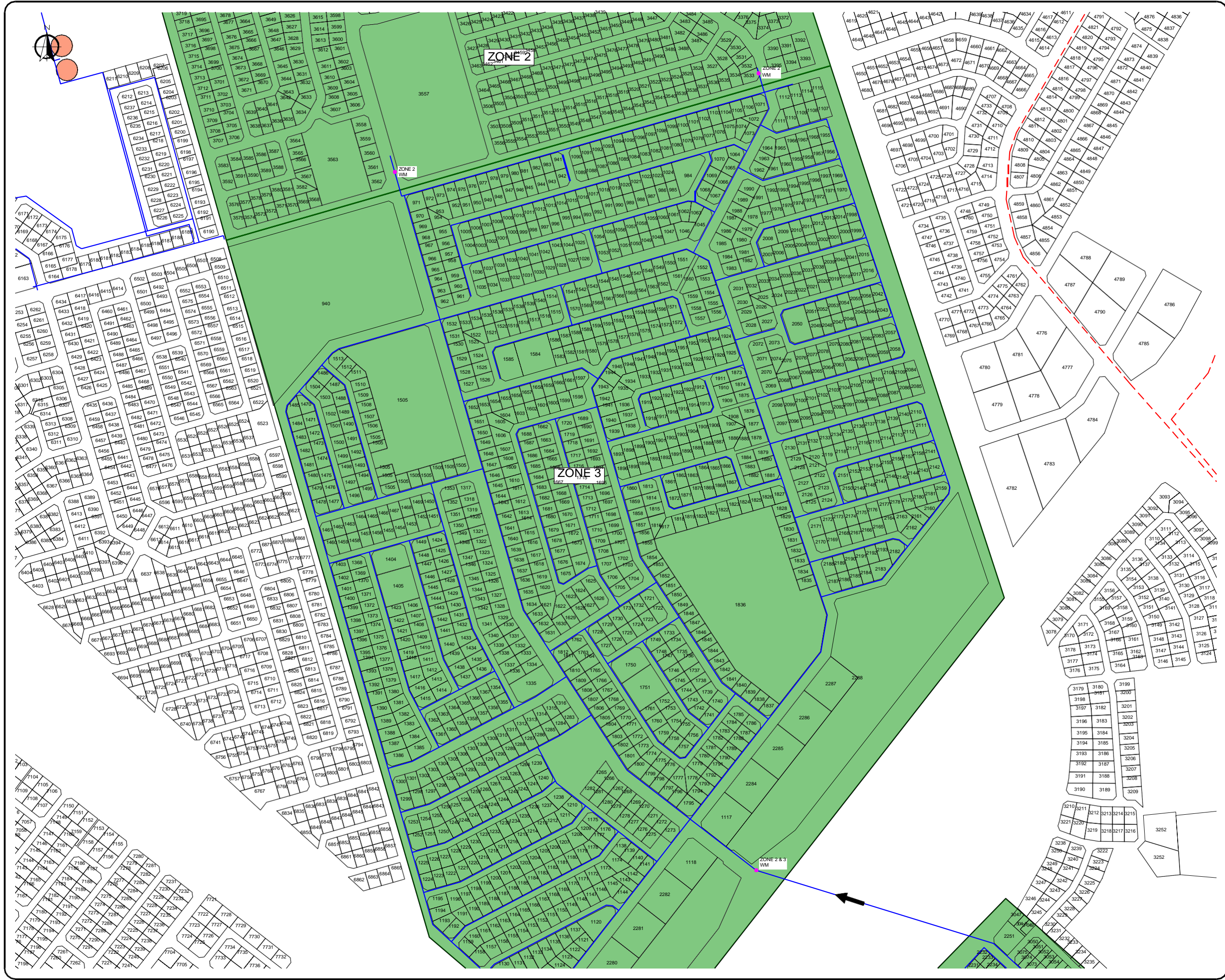
DRAWING TITLE: **WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 1 WATER METER POSITIONS**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE 1:250

DRAWING No. **2023-06/W/P/001A-1**

REVISION No.							
1.0							



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- EXISTING RETICULATION
 - EXISTING PUMP MAIN
 - - - EXISTING SEDIMENT WATER MAIN
 - EXISTING RESERVOIR
 - NEW WATER METER
 - EXISTING WATER METER
 - EXISTING BOREHOLE

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____
 CLIENT: _____ DATE: _____

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 CONSULTING ENGINEERS

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 329 Staveley Chambers, Staveley, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT
INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY

FUNDING AGENT: _____

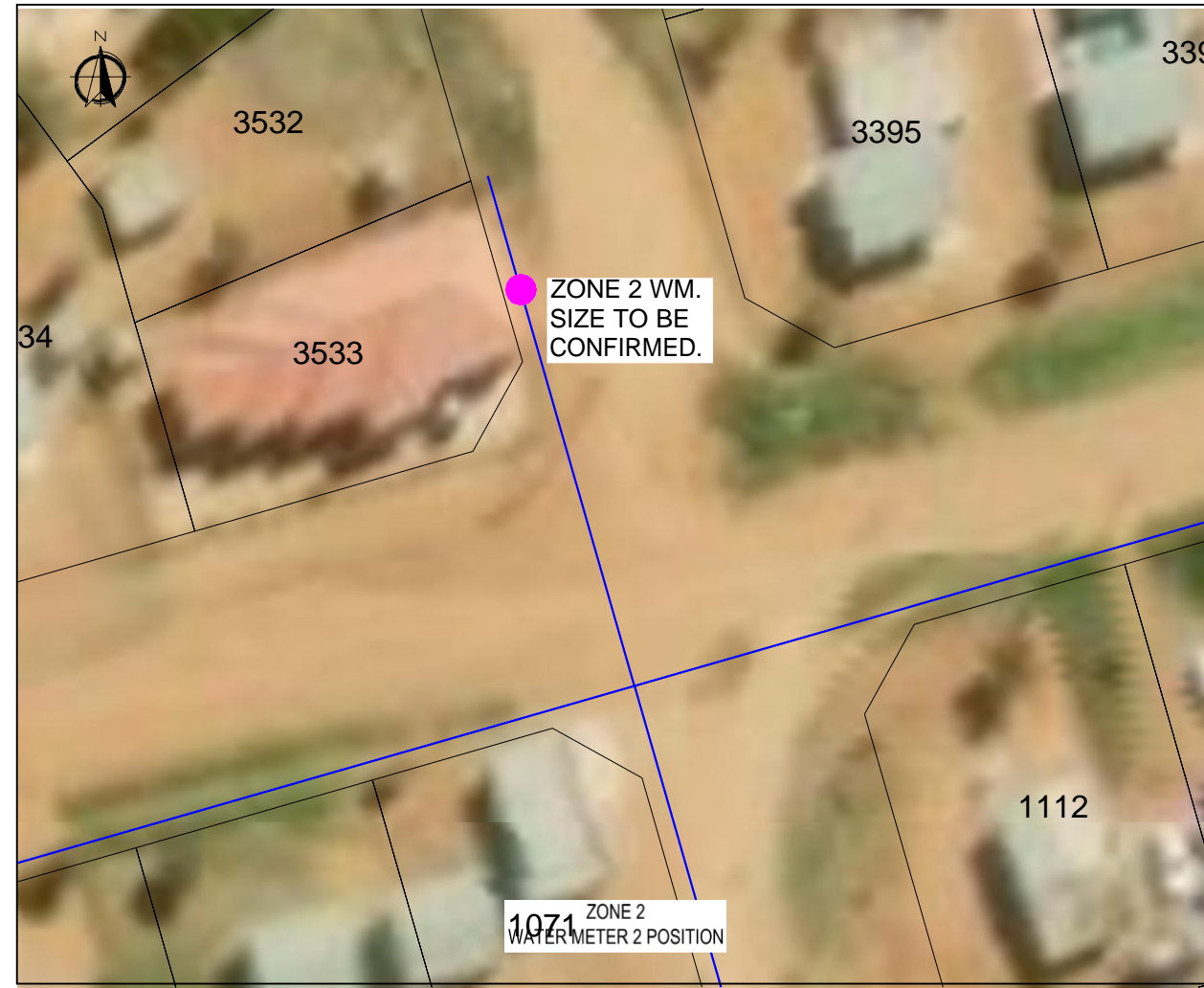
DRAWING TITLE
WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 2 & 3

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE 1:2500

DRAWING No. **2023-06/W/P/001B**

REVISION No.	
1.0	



REVISIONS			
No.	DATE	BY	DESCRIPTION

NOTES

- EXISTING RETICULATION
- EXISTING PUMP MAIN
- EXISTING SLEEPING WATER MAIN
- EXISTING RESERVOIR
- NEW WATER METER
- EXISTING WATER METER

EXACT POSITION OF NEW WATER METER CHAMBERS TO BE DETERMINED BY THE ENGINEER ON SITE.

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____
 CLIENT: _____ DATE: _____

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CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

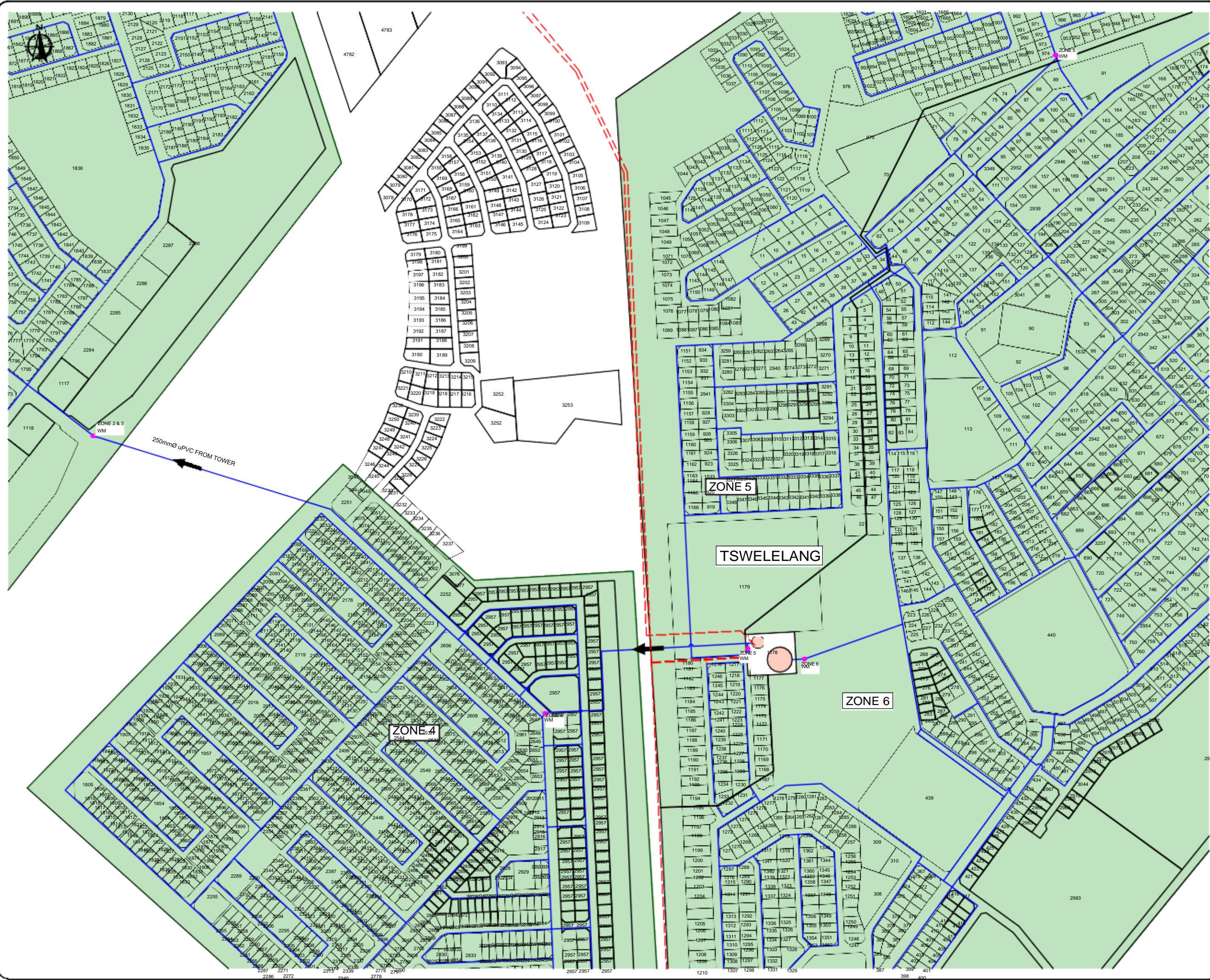
DRAWING TITLE: **WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 2 & 3 WATER METER POSITIONS**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:250

DRAWING No. **2023-06/W/P/001B-1**

REVISION No.					
1.0					



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- EXISTING RETICULATION
 - EXISTING PUMP MAIN
 - EXISTING SEWERING WATER MAIN
 - EXISTING RESERVOIR
 - NEW WATER METER
 - EXISTING WATER METER
 - EXISTING BOREHOLE

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____ DATE: _____
 APPROVED: _____ DATE: _____
 CLIENT: _____ DATE: _____

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CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

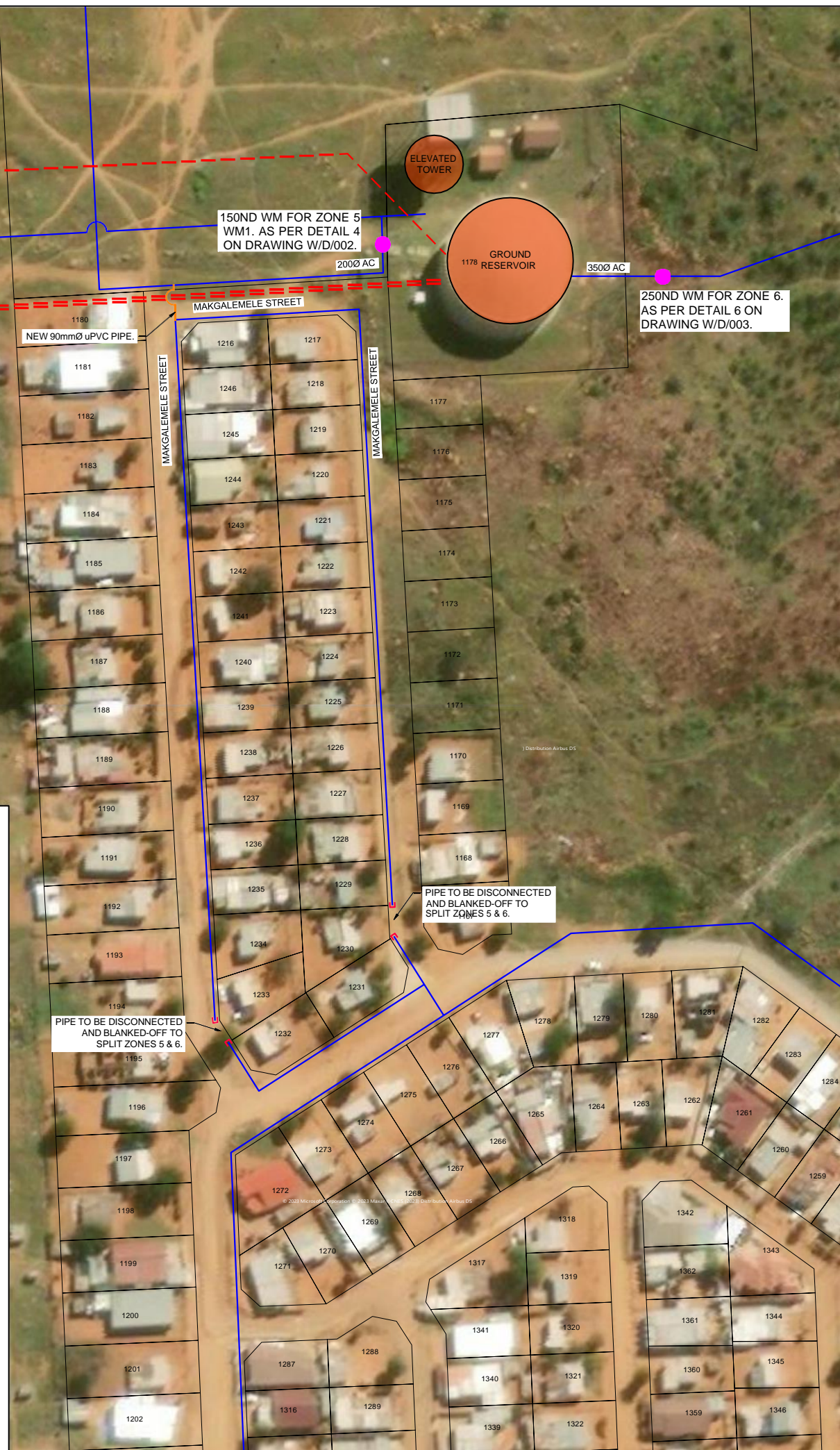
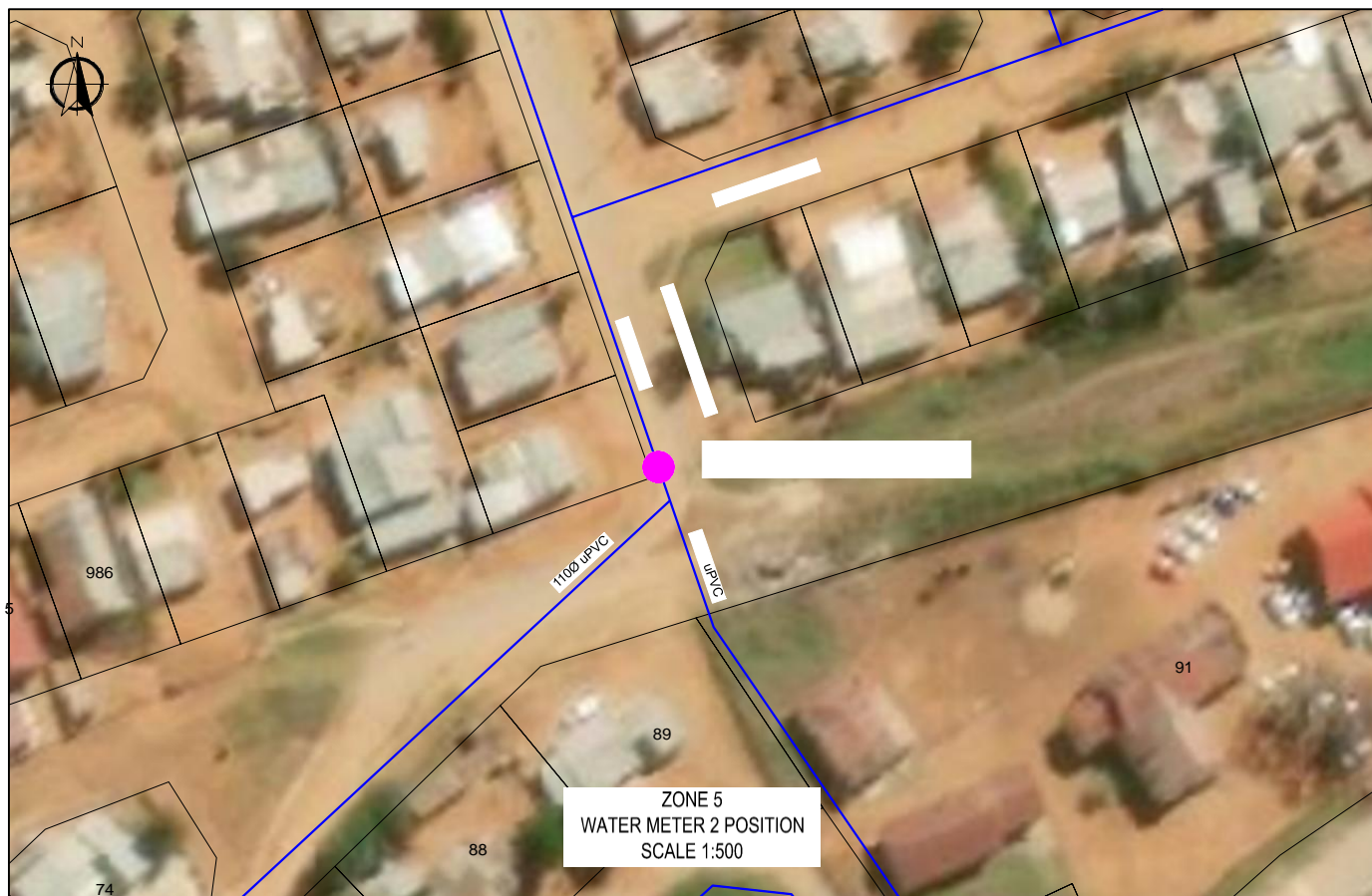
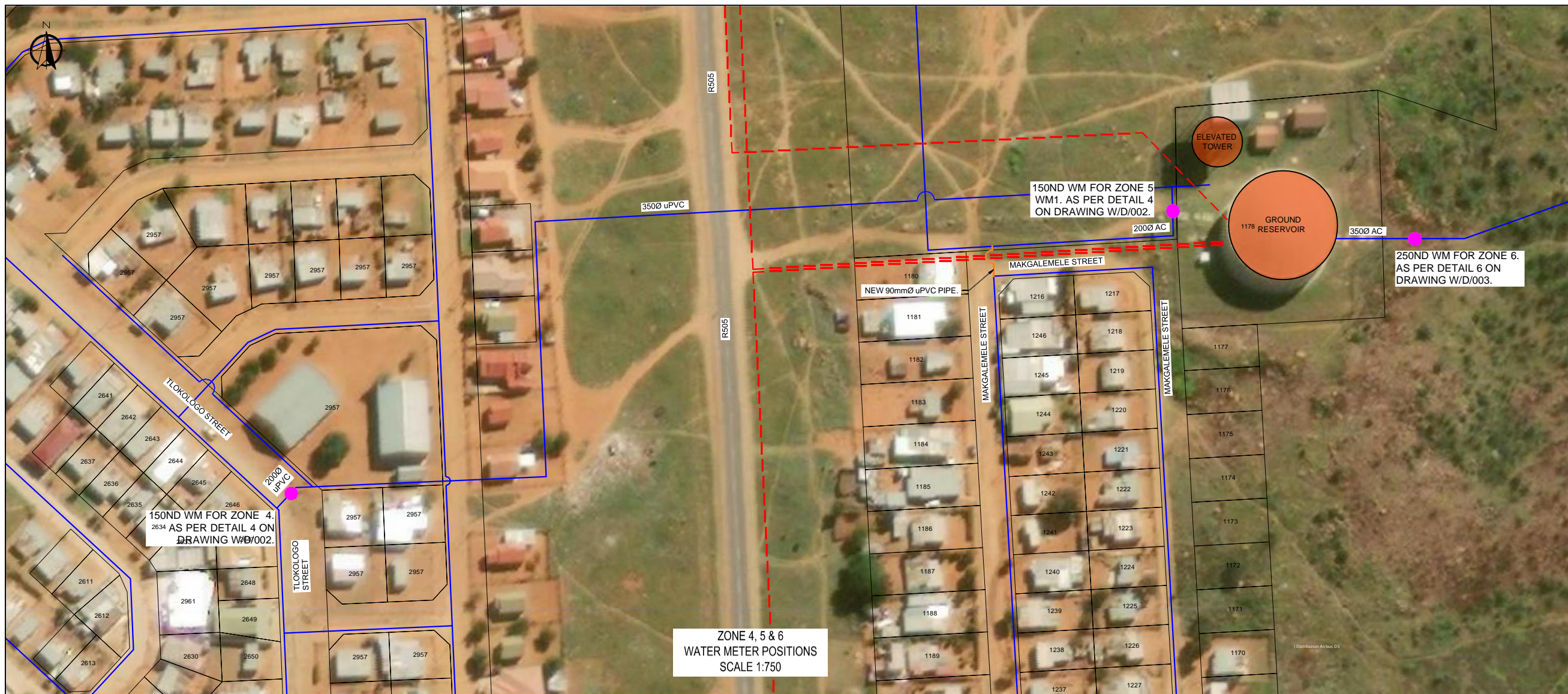
PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

DRAWING TITLE: **WATER METER INSTALLATIONS WOLMARANSSTAD LAYOUT ZONE 4, 5 & 6**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:2000
 DRAWING No. **2023-06/W/P/001C**
W/P/001C
 REVISION No. _____



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- EXISTING RETICULATION
 - EXISTING PUMP MAIN
 - EXISTING SEDIMENT WATER MAIN
 - NEW PIPE CONNECTION
 - EXISTING RESERVOIR
 - NEW WATER METER
 - EXISTING WATER METER
- EXACT POSITION OF NEW WATER METER CHAMBERS TO BE DETERMINED BY THE ENGINEER ON SITE.

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____
 CLIENT: _____ DATE: _____

Tsela Tsweu
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 329 Stately Chambers, Stately, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT
INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY

FUNDING AGENT: _____

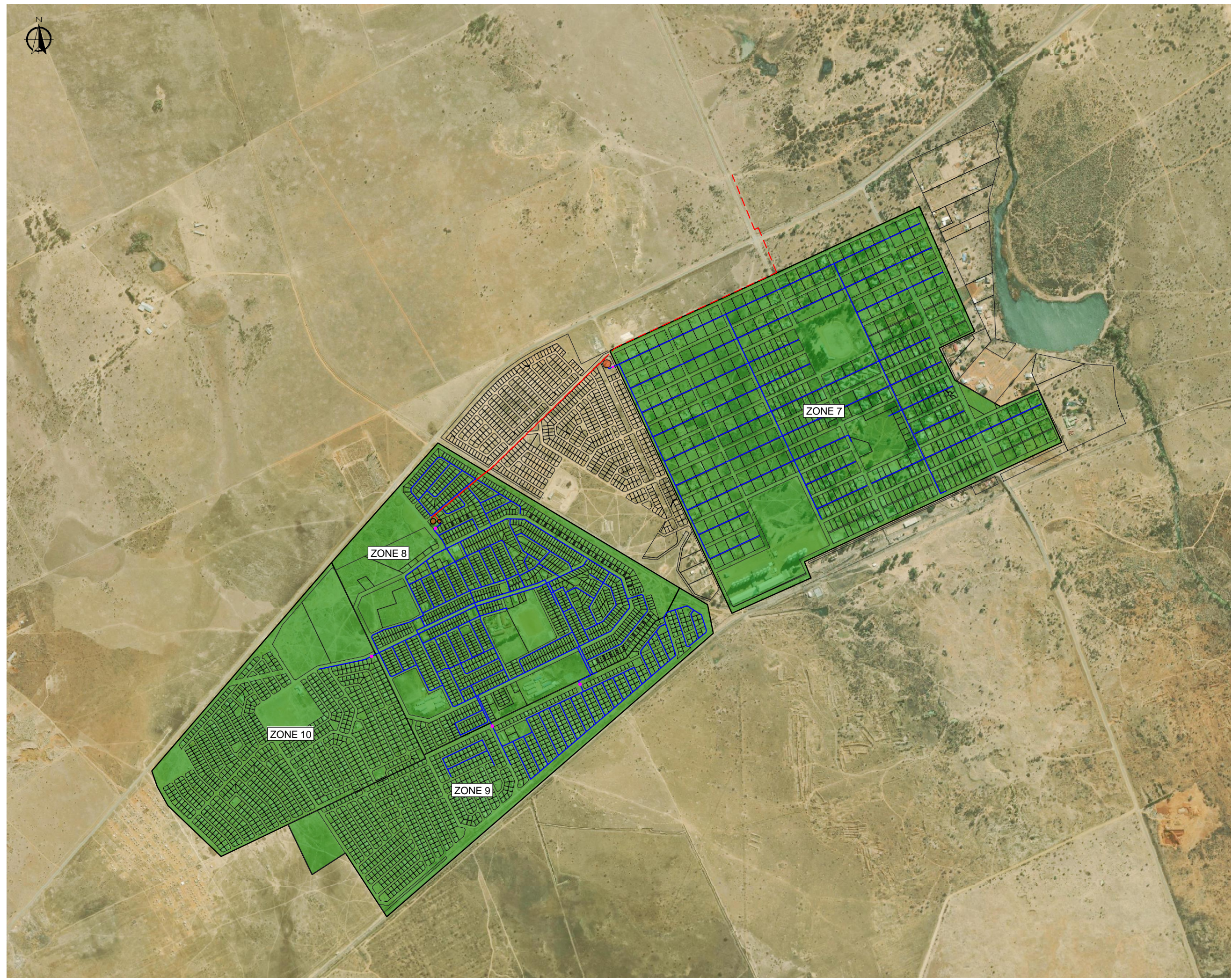
DRAWING TITLE
**WATER METER INSTALLATIONS
 WOLMARANSSTAD LAYOUT
 ZONE 4, 5 & 6 WATER METER POSITIONS**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE AS SHOWN

DRAWING No. **2023-06/W/P/001C-1**

REVISION No.					
1.0					



REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

- EXISTING RETICULATION
- EXISTING PUMP MAIN
- EXISTING SUBDIVISION WATER MAIN
- EXISTING RESERVOIR
- WATER METER

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____

ENGINEER: _____ DATE: _____

APPROVED: _____ DATE: _____

CLIENT: _____ DATE: _____

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 329 Stateway Chambers, Stateway, Welkom,
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CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT:

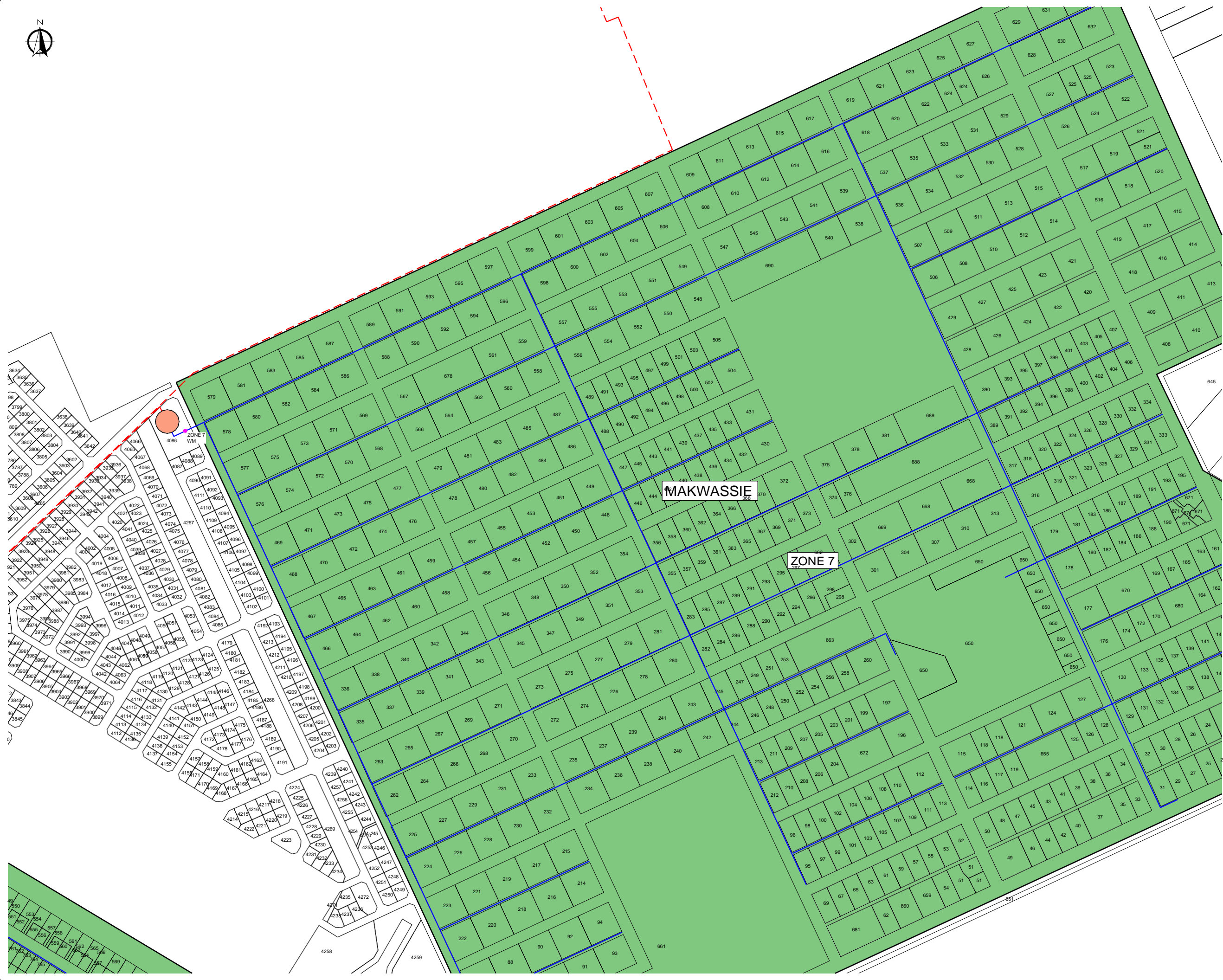
DRAWING TITLE: **WATER METER INSTALLATIONS MAKWASSIE LAYOUT**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE 1:7500

DRAWING No. **2023-06/W/P/002**

REVISION No.							
1.0							



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- EXISTING RETICULATION
 - EXISTING PUMP MAIN
 - - - EXISTING SEDIMENT WATER MAIN
 - EXISTING RESERVOIR
 - NEW WATER METER
 - EXISTING WATER METER
 - EXISTING BOREHOLE

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____
 CLIENT: _____ DATE: _____

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 329 Stately Chambers, Statelyway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT
INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY

FUNDING AGENT: _____

DRAWING TITLE
**WATER METER INSTALLATIONS
 MAKWASSIE LAYOUT
 ZONE 7**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE 1:2500

DRAWING No.
2023-06/W/P/002A

REVISION No.				
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REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- EXISTING RETICULATION
 - EXISTING PUMP MAIN
 - - - EXISTING SEWERING WATER MAIN
 - EXISTING RESERVOIR
 - NEW WATER METER
 - EXISTING WATER METER
- EXACT POSITION OF NEW WATER METER CHAMBERS TO BE DETERMINED BY THE ENGINEER ON SITE.

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____
 CLIENT: _____ DATE: _____

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 329 Stateway Chambers, Stateway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

DRAWING TITLE: **WATER METER INSTALLATIONS MAKWASSIE LAYOUT ZONE 7 WATER METER POSITIONS**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:250

DRAWING No. **2023-06/W/P/002A-1**

REVISION No.					
1.0					



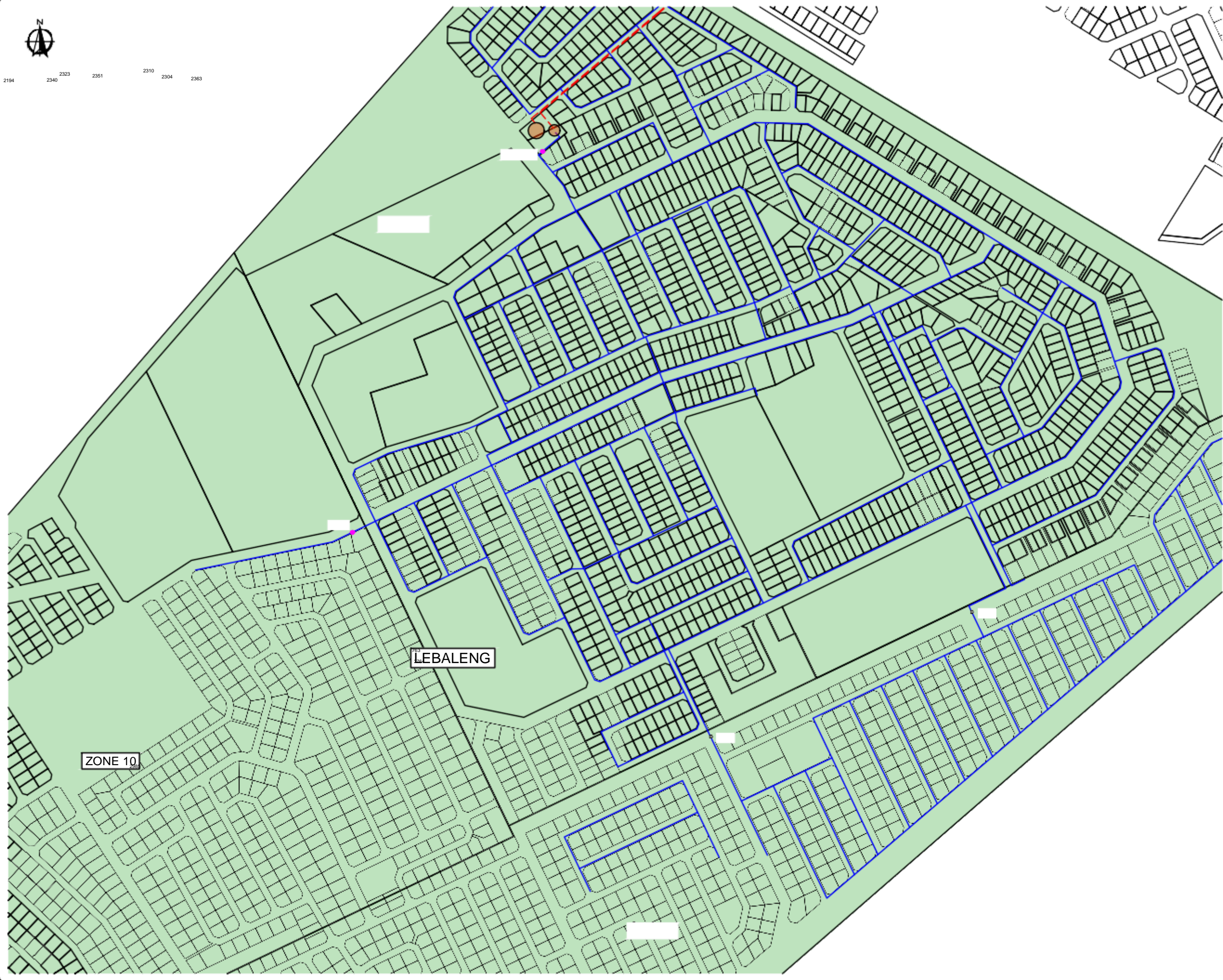
ZONE 8

ZONE 9

- EXISTING RETICULATION
- - - EXISTING PUMP MAN
- - - EXISTING RESERVOIR WATER MAN
- EXISTING RESERVOIR
- NEW WATER RESERVOIR
- EXISTING WATER METER
- EXISTING BORE HOLE



2194 2340 2323 2351 2310 2304 2363



1:0

REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

- EXISTING RETICULATION
- EXISTING PUMP MAIN
- - - EXISTING SEWER WATER MAIN
- EXISTING RESERVOIR
- NEW WATER METER
- EXISTING WATER METER
- EXISTING BOREHOLE

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____ DATE: _____
 APPROVED: _____ DATE: _____
 CLIENT: _____ DATE: _____
 PRINT ISSUED ON _____

Tsela Tsweu
CONSULTING ENGINEERS

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 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

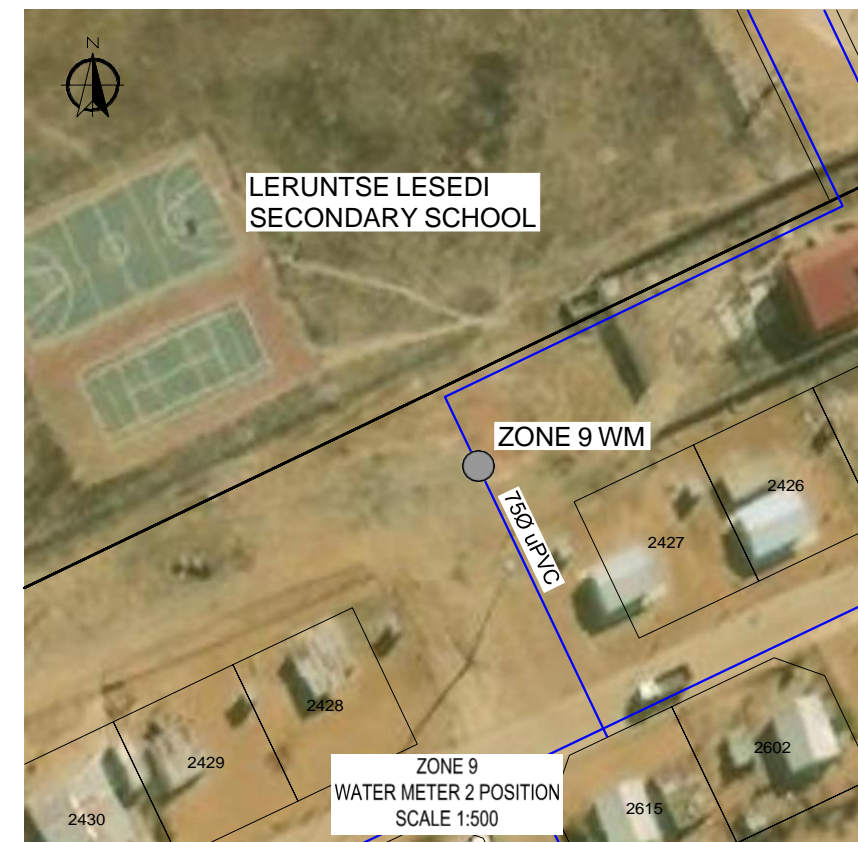
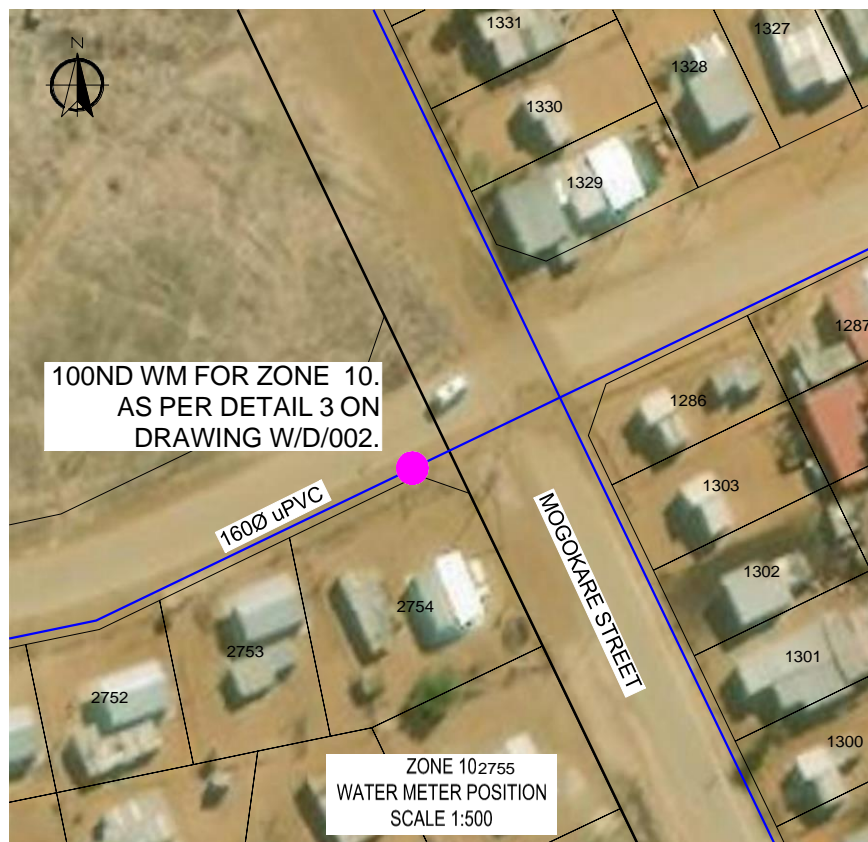
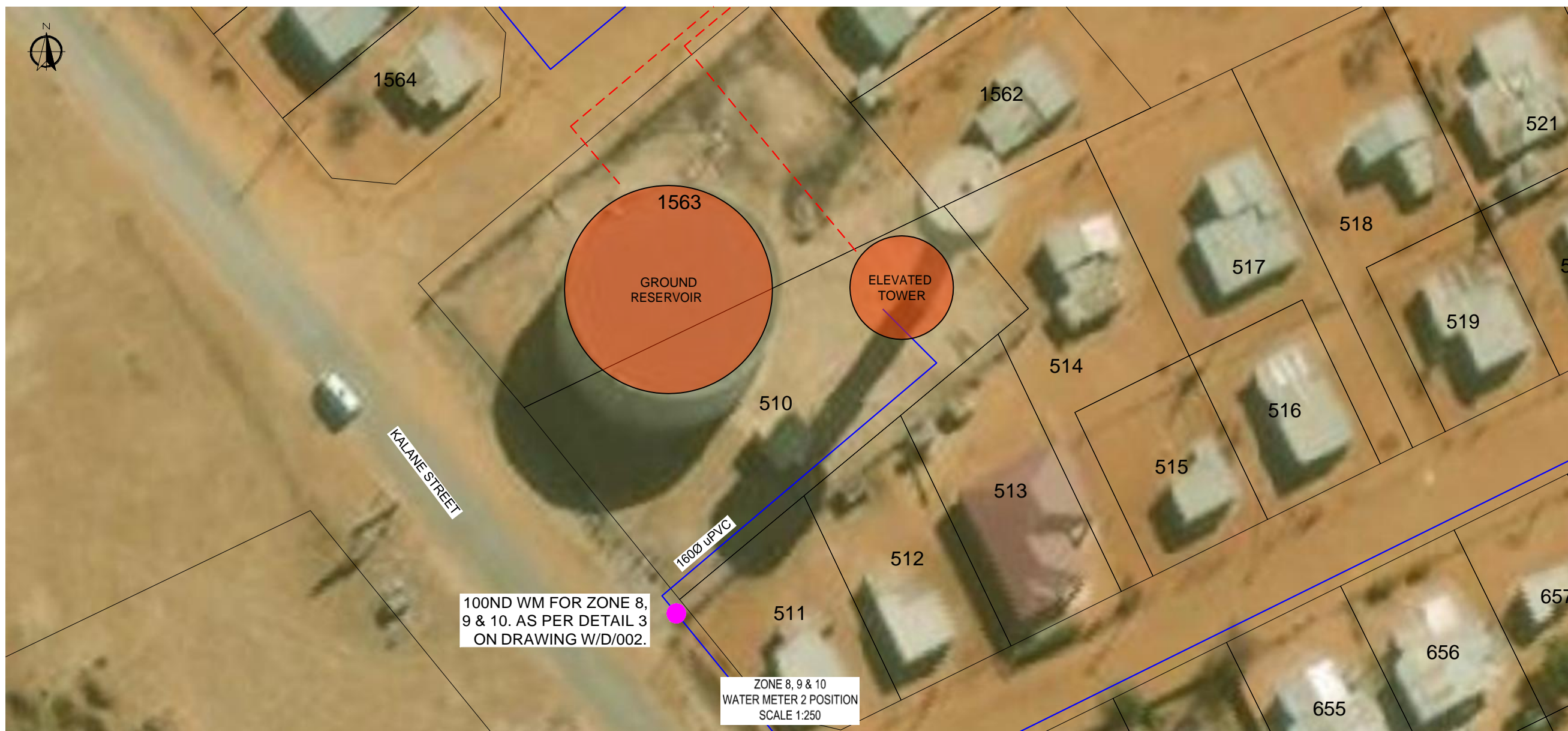
PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

DRAWING TITLE: **WATER METER INSTALLATIONS MAKWASSIE LAYOUT ZONE 8, 9 & 10**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: _____
 DRAWING No. **2023-06/W/P/002B**
 REVISION No. _____



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- EXISTING RETICULATION
 - EXISTING PUMP MAIN
 - EXISTING SIDLING WATER MAIN
 - EXISTING RESERVOIR
 - NEW WATER METER
 - EXISTING WATER METER
- EXACT POSITION OF NEW WATER METER CHAMBERS TO BE DETERMINED BY THE ENGINEER ON SITE.

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____
 CLIENT: _____ DATE: _____

Tsela Tsweu
 CONSULTING ENGINEERS

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 329 Stately Chambers, Statelyway, Welkom,
 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

DRAWING TITLE: **WATER METER INSTALLATIONS MAKWASSIE LAYOUT ZONE 8, 9 & 10 WATER METER POSITIONS**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:AS SHOWN

DRAWING No. **2023-06/W/P/002B-1**

REVISION No.					
1.0					



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- EXISTING RETICULATION
 - EXISTING PUMP MAIN
 - EXISTING SEWER/WATER MAIN
 - EXISTING RESERVOIR
 - WATER METER

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____ DATE: _____
 CLIENT: _____

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 PO Box 2600, Welkom, 9460, South Africa

CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

DRAWING TITLE: **WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:10 000

DRAWING No. **2023-06/W/P/003**

REVISION No.					
1.0					



LEEUDORINGSTAD

ZONE 12

ZONE 11

ZONE 12 WM

ZONE 11 WM

REVISIONS				
No.	DATE	BY	DESCRIPTION	

NOTES	
	EXISTING RETICULATION
	EXISTING PUMP MAIN
	EXISTING SEDIMENT WATER MAIN
	EXISTING RESERVOIR
	NEW WATER METER
	EXISTING WATER METER
	EXISTING BOREHOLE

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED:	DATE:
ENGINEER:	DATE:
APPROVED:	DATE:
CLIENT:	DATE:

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CLIENT:
MAQUASSI HILLS LOCAL MUNICIPALITY

PROJECT
INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY

FUNDING AGENT:

DRAWING TITLE
WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT ZONE 11 & 12

DESIGN	DATE	DRAWN	DATE
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE 1:2500

DRAWING No. **2023-06/W/P/003A**

REVISION No.			



REVISIONS			
No.	DATE	BY	DESCRIPTION

NOTES

- EXISTING RETICULATION
- EXISTING PUMP MAIN
- EXISTING SEDIMENT WATER MAIN
- EXISTING RESERVOIR
- NEW WATER METER
- EXISTING WATER METER

EXACT POSITION OF NEW WATER METER CHAMBERS TO BE DETERMINED BY THE ENGINEER ON SITE.

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
 APPROVED: _____
 CLIENT: _____ DATE: _____

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PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

DRAWING TITLE: **WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT ZONE 11 & 12 WATER METER POSITIONS**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:250

DRAWING No. **2023-06/W/P/003A-1**

REVISION No.					
1.0					



REVISIONS				
No.	DATE	BY	DESCRIPTION	

NOTES	
	EXISTING RETICULATION
	EXISTING PUMP MAIN
	EXISTING SEDIMENT WATER MAIN
	EXISTING RESERVOIR
	NEW WATER METER
	EXISTING WATER METER
	EXISTING BOREHOLE

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED:	DATE:
ENGINEER:	
APPROVED:	
CLIENT:	DATE:

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PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT:

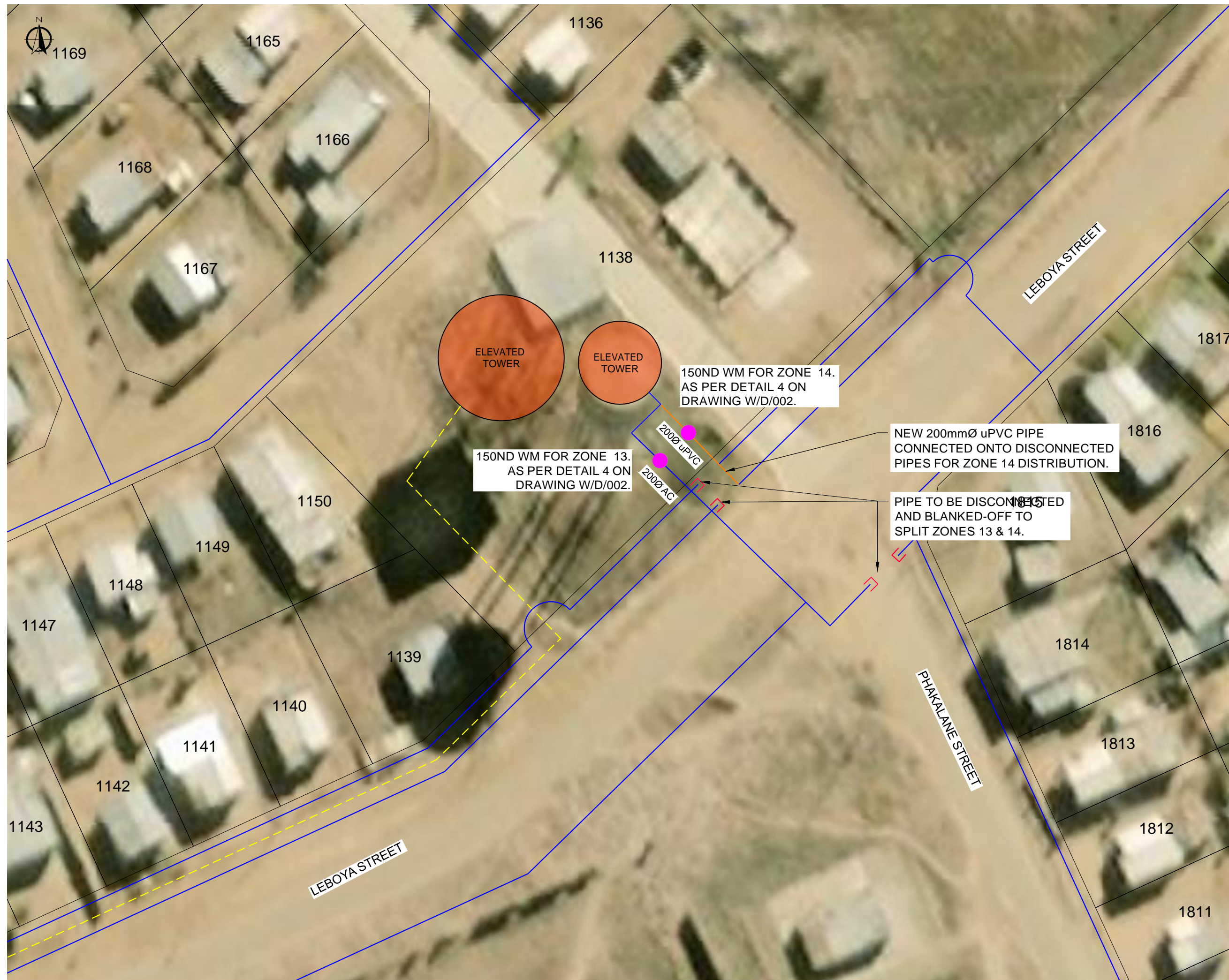
DRAWING TITLE: **WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT ZONE 13 & 14**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:2500

DRAWING No. **2023-06/W/P/003B**
W/P/003B

REVISION No.



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- EXISTING RETICULATION
 - EXISTING PUMP MAIN
 - EXISTING SEWERING WATER MAIN
 - NEW PIPE CONNECTION
 - EXISTING RESERVOIR
 - NEW WATER METER
 - EXISTING WATER METER
- EXACT POSITION OF NEW WATER METER CHAMBERS TO BE DETERMINED BY THE ENGINEER ON SITE.

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____
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 CLIENT: _____ DATE: _____

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CLIENT: **MAQUASSI HILLS LOCAL MUNICIPALITY**

PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

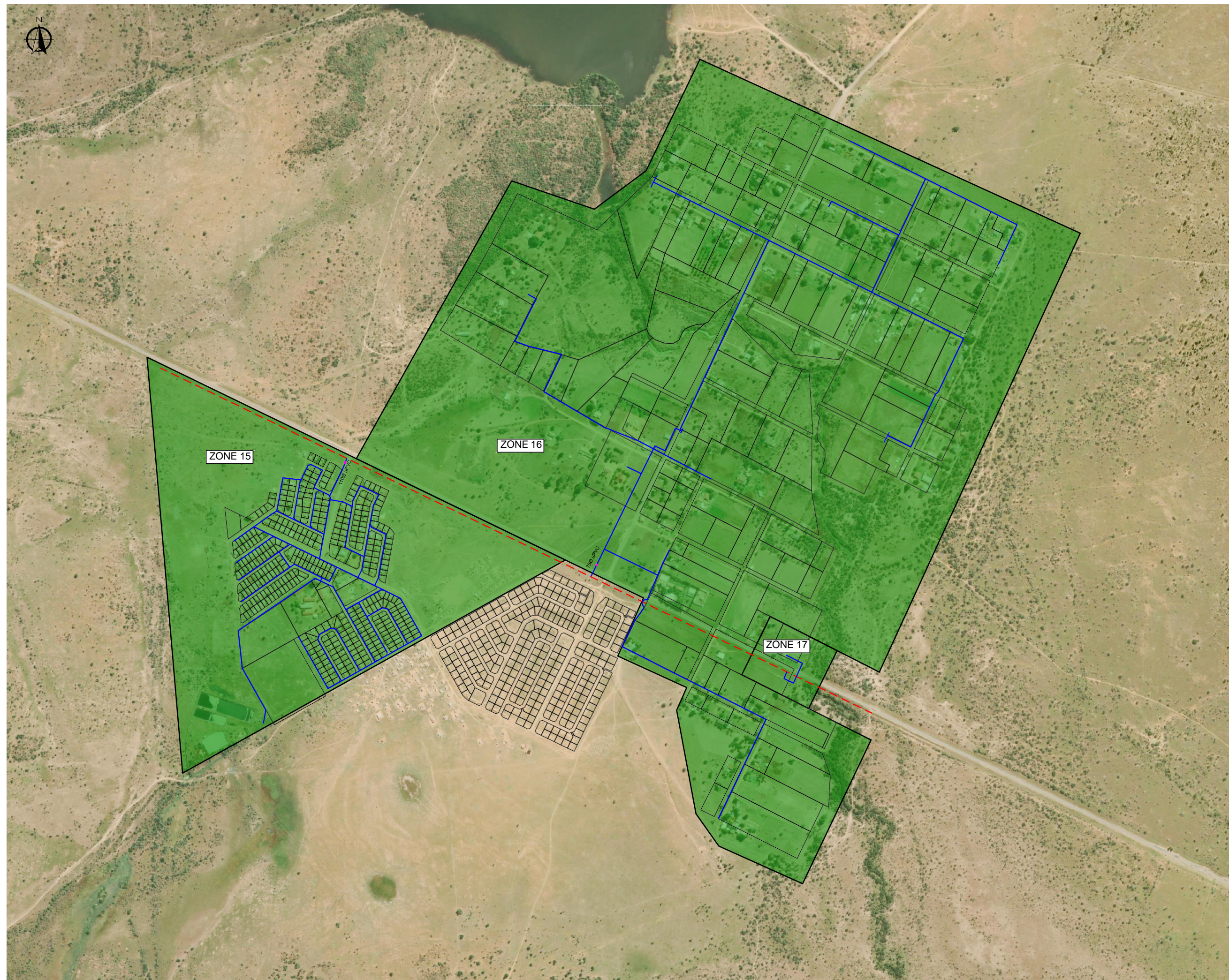
DRAWING TITLE: **WATER METER INSTALLATIONS LEEUDORINGSTAD LAYOUT ZONE 13 & 14 WATER METER POSITIONS**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:250

DRAWING No. **2023-06/W/P/003B-1**

REVISION No.			
No.	DATE	BY	DESCRIPTION
1.0			



REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

- EXISTING RETICULATION
- EXISTING PUMP MAIN
- - - EXISTING SLEEPING WATER MAIN
- EXISTING RESERVOIR
- WATER METER

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
 ENGINEER: _____ DATE: _____
 APPROVED: _____ DATE: _____
 CLIENT: _____ DATE: _____

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PROJECT **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT:

DRAWING TITLE
WATER METER INSTALLATIONS WITPOORT LAYOUT

DESIGN	DATE	DRAWN	DATE
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE 1:5000

DRAWING No.
2023-06/W/P/004

REVISION No.	1.0						
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REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

- EXISTING RETICULATION
- EXISTING PUMP MAIN
- - - EXISTING SEDIMENT WATER MAIN
- EXISTING RESERVOIR
- NEW WATER METER
- EXISTING WATER METER
- EXISTING BOREHOLE

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____

ENGINEER: _____ DATE: _____

APPROVED: _____ DATE: _____

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PROJECT
INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY

FUNDING AGENT: _____

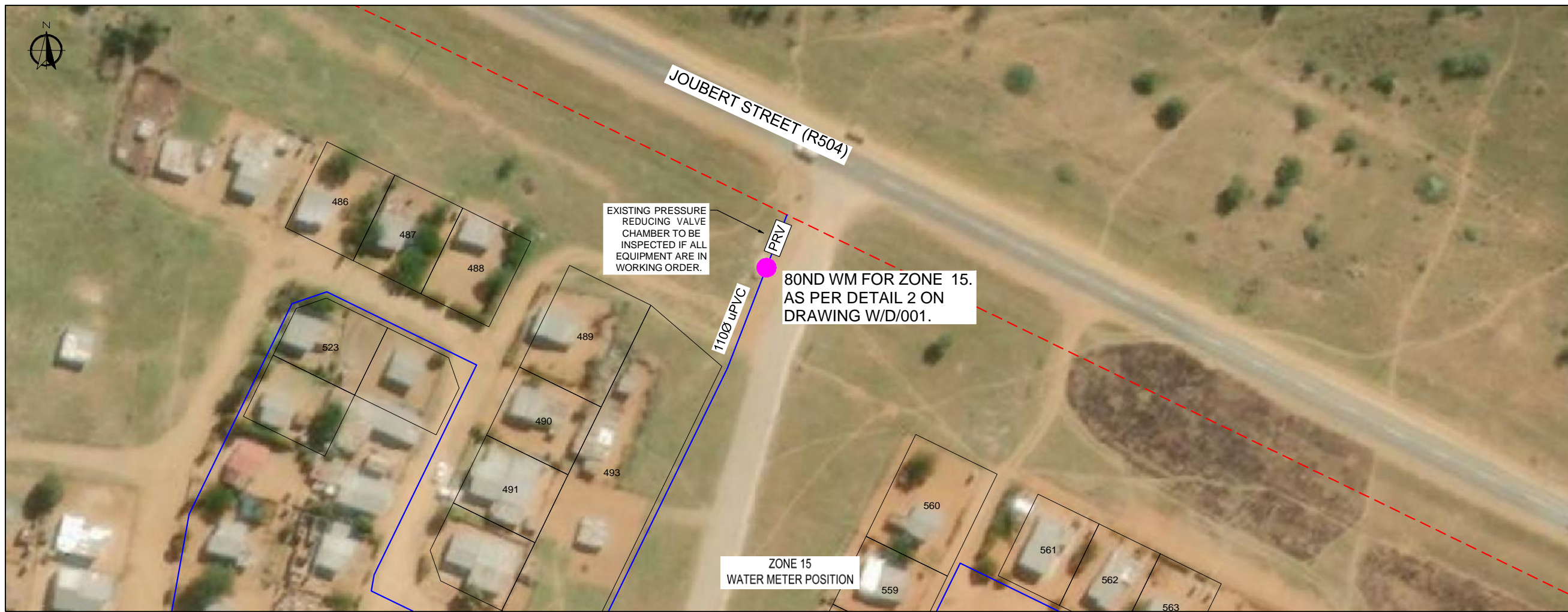
DRAWING TITLE
WATER METER INSTALLATIONS WITPOORT LAYOUT ZONE 15, 16 & 17

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:2500

DRAWING No. **2023-06/W/P/004A**

REVISION No. _____



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- EXISTING RETICULATION
 - EXISTING PUMP MAIN
 - EXISTING SEWERING WATER MAIN
 - EXISTING RESERVOIR
 - NEW WATER METER
 - EXISTING WATER METER
- EXACT POSITION OF NEW WATER METER CHAMBERS TO BE DETERMINED BY THE ENGINEER ON SITE.

REFERENCE DRAWINGS	
PLAN No.	DESCRIPTION

APPROVED: _____ DATE: _____
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PROJECT: **INSTALLATION OF BULK AND ZONAL WATER METERS IN THE MAQUASSI HILLS LOCAL MUNICIPALITY**

FUNDING AGENT: _____

DRAWING TITLE: **WATER METER INSTALLATIONS WITPOORT LAYOUT ZONE 15 & 16 WATER METER POSITIONS**

DESIGN	DATE	DRAWN	DATE
	AUG 2023		AUG 2023
SURVEYED	DATE	CHECKED	DATE
		J BATEMAN	AUG 2023

SCALE: 1:500

DRAWING No. **2023-06/W/P/004A-1**

REVISION No.					
1.0					