





OL1F - PS1 TO SPECON PIPELINE

OLIFANTSPORT WATER TREATMENT WORKS

CLIENT:



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PROFESSIONAL ENGINEER:  
R. OSTROWSKI  
PROF. Reg.No:  
930381  
DATE:  
2022-08-22  
SIGNATURE: 

DESIGN BY:  
B. COETZEE  
DRAWN BY:  
E. COETZEE  
CHECKED BY:  
B. COETZEE  
APPROVED BY:  
R. OSTROWSKI

REVISIONS			
REV	DATE	DESCRIPTION	BY
a	2022-08-22	ISSUED FOR TENDER	R.O

PROJECT NAME  
**UPGRADE OF OLIFANTSPORT AND EBENEZER WATER SUPPLY SCHEME**

TITLE  
**LOCALITY PLAN FOR REFURBISHMENT OF EXISTING OLIFANTSPORT WATER TREATMENT WORKS**

PROJECT STATUS: **TENDER**

DATE	SCALE	SHEET	REV	A1
2022-08-22	N.T.S	1 OF 1	a	

DWG NO  
**P1001-OL1C-CIV-0100**



EXISTING SAND FILTER: 250mm HIGH x 250mm WIDE WALLS TO BE BUILT ON EXISTING FILTER OVERFLOWS (12m LONG) SEE DETAIL ON DWG: P1001-OL1C-CIV-0401

EXISTING SAND FILTER: 250mm HIGH X 250mm WIDE WALLS TO BE BUILT ON EXISTING FILTER OVERFLOWS (12m LONG) SEE DETAIL ON DWG: P1001-OL1C-CIV-0401

LAST 5 FLOCCULATION CHANNELS: RAISE WALL LEVELS BY 200mm (SEE DETAIL ON DWG: P1001-OL1C-CIV-0401)

FIRST 5 FLOCCULATION CHANNELS RAISE WALL LEVELS BY 100mm (SEE DETAIL ON DWG: P1001-OL1C-CIV-0401)

HYDRAULIC JUMP RAPID MIXER RAISE WALL LEVELS BY 200mm (SEE DETAIL ON DWG: P1001-OL1C-CIV-0401)

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PROFESSIONAL ENGINEER:  
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APPROVED BY:  
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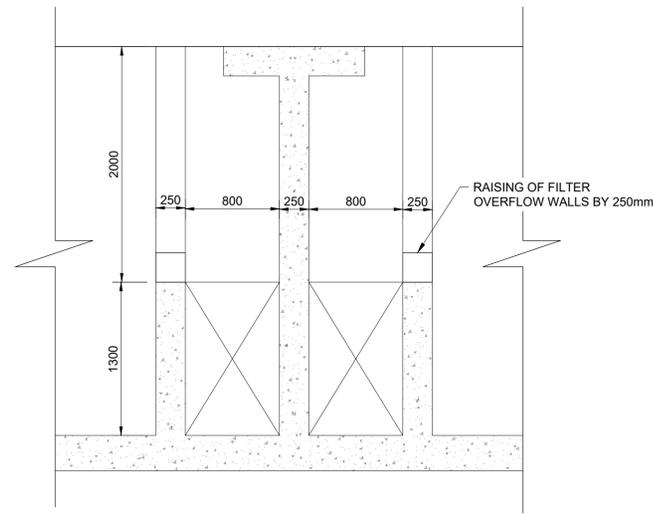
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REV	DATE	DESCRIPTION	BY
a	2022-11-03	ISSUED FOR TENDER	R.O

PROJECT NAME  
**UPGRADE OF OLIFANTSPOORT AND EBENEZER WATER SUPPLY SCHEME**

TITLE  
**LAYOUT OF THE OLIFANTSPOORT WATER TREATMENT WORKS**

PROJECT STATUS: **TENDER**

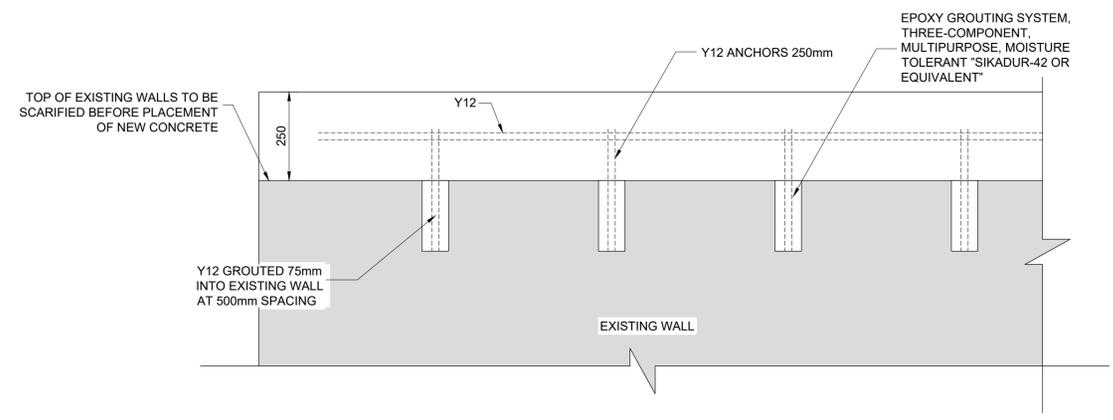
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2022-11-03	1:500	1 OF 1	a	A1
DWG NO <b>P1001-OL1C-CIV-0101</b>				



SECTION OF FILTER WALLS  
SCALE 1:30

TABLE A:	
HEIGHT OF WALL RAISE	APPLICABLE AREA AT WTW
100mm	FIRST 5 FLOCCULATION CHANNEL WALLS
200mm	LAST 5 FLOCCULATION CHANNEL WALLS
200mm	HYDRAULIC JUMP RAPID MIXER WALLS
250mm	SAND FILTERS WALLS

**NOTE:**  
FINAL WALL DIMENSION TO BE CONFIRMED AFTER SURVEY COMPLETED ONCE SITE HAS STARTED.



TYPICAL RAISING OF WALLS  
SCALE 1:10

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2022-11-03  
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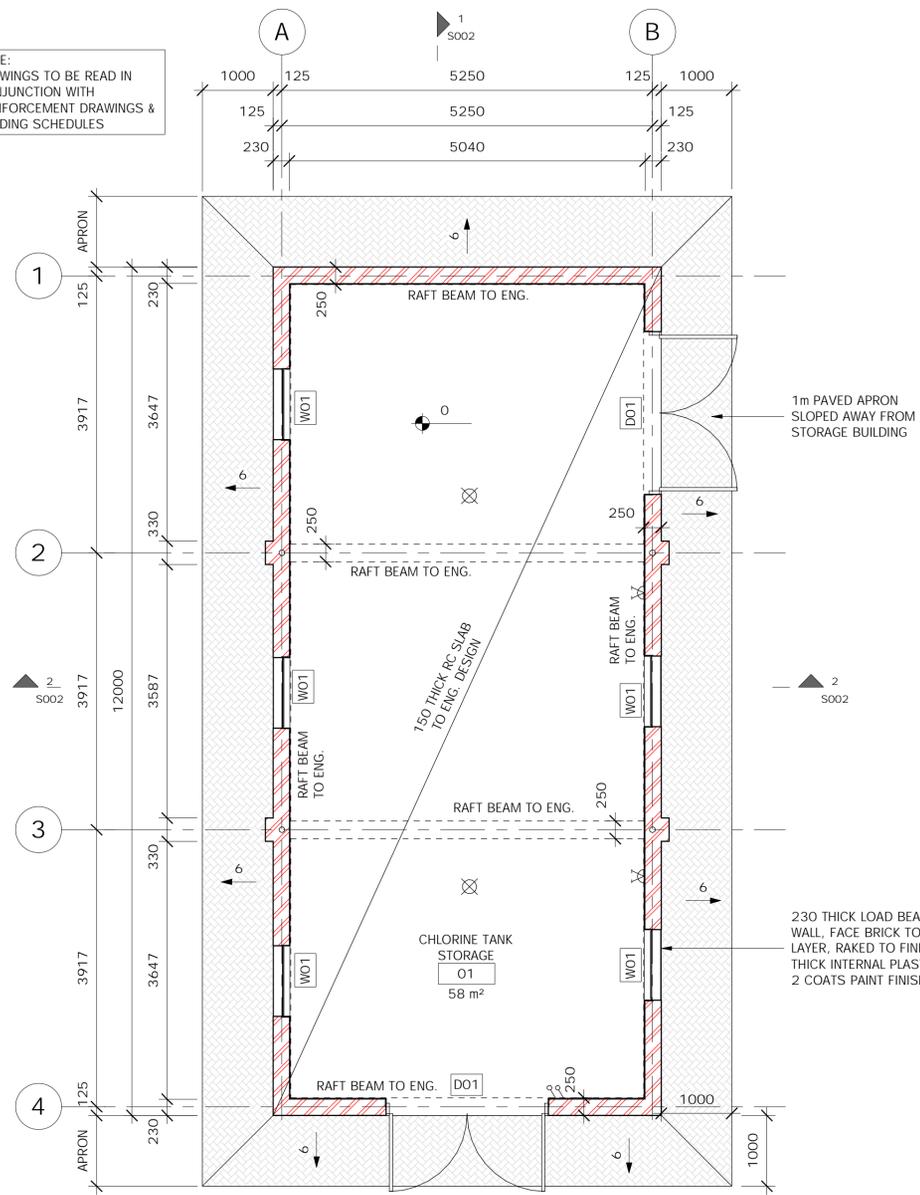
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a	2022-11-03	ISSUED FOR TENDER	R.O

PROJECT NAME  
**UPGRADE OF OLIFANTSPOORT AND EBENEZER WATER SUPPLY SCHEME**  
TITLE  
**DETAILS FOR RAISING OF WALLS FOR OLIFANTSPOORT WATER TREATMENT WORKS**

PROJECT STATUS: **TENDER**  
DATE: 2022-11-03  
SCALE: AS SHOWN  
SHEET: 1 OF 1  
REV: a  
BY: A1  
DWG NO: P1001-OL1C-CIV-0401

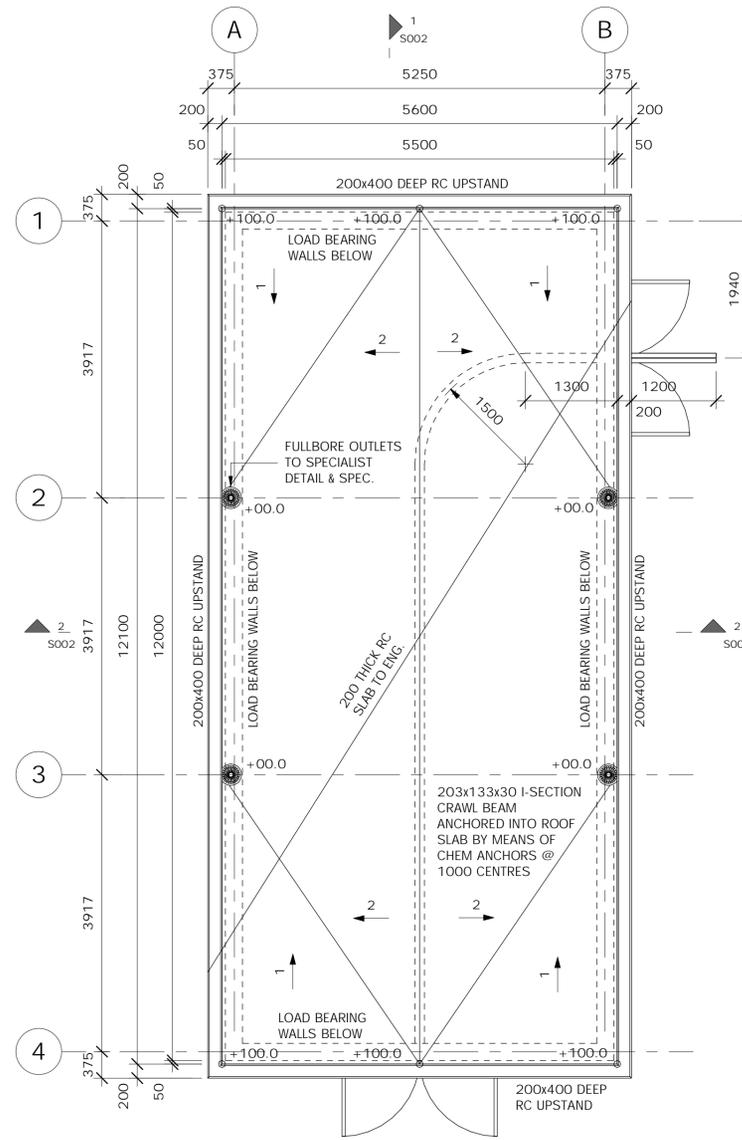
NOTE: DRAWINGS TO BE READ IN CONJUNCTION WITH REINFORCEMENT DRAWINGS & BENDING SCHEDULES



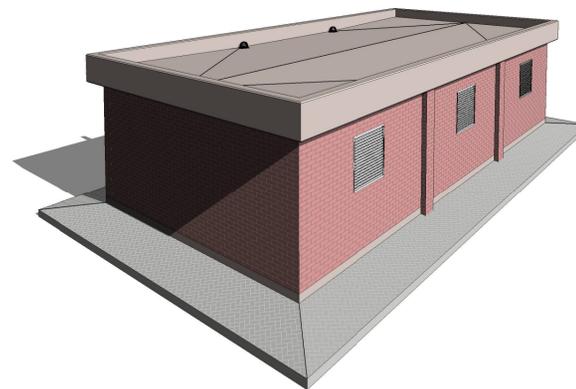
GROUND FLOOR PLAN  
SCALE 1:50



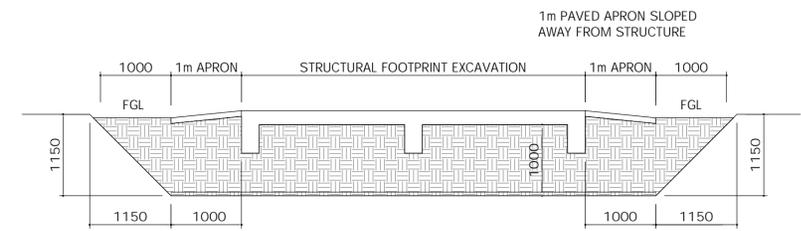
SOUTH EAST PERSPECTIVE (LEVEL 0)  
NOT TO SCALE



ROOF PLAN  
SCALE 1:50



NORTH WEST PERSPECTIVE (LEVEL 1)  
NOT TO SCALE



STRUCTURAL FOUNDATION EXCAVATION TYPICAL DETAIL

EARTH MATTRESS CONSTRUCTION ( STRUCTURES)  
SCALE 1: 50

- (S1) EXCAVATE 1m BEYOND ENTIRE FOUNDATION FOOTPRINT USING 1:1 (V:H) SIDE SLOPES.
- (S2) RIP AND RE-COMPACT BOTTOM IN SITU LAYER WHEN ESTABLISHED AT 1m BELOW RAFT SLAB.
- (S3) CONSTRUCT EARTH MATTRESS IN 150mm LAYERS TO BE COMPACTED AND TESTED AT EACH LAYER USING G6 MATERIAL. COMPACTION TO BE ACHIEVED AT 95% MOD AASHTO AT OMC. LAYERS SHALL BE CONSTRUCTED TO BENEATH FOUNDATIONS AND AROUND FOOTPRINT TO FGL.
- (S4) AN APPROPRIATE WATER MANAGEMENT SYSTEM SHALL BE EMPLOYED WHILE EXCAVATIONS ARE EXPOSED
- (S5) ENSURE ALL REQUIRED STEPS DESCRIBED ARE APPROVED BY ENGINEER AT NECESSARY INTERVALS

SPECIFICATIONS - REINFORCED CONCRETE

- REINFORCED CONCRETE
- 1 VIBRATED CONCRETE 30 MPA.
  - 2 PROVIDE MIX DESIGN.
  - 3 MAKE 6 TEST CUBES FOR SLAB & 6 CUBES FOR UPSTAND BEAMS. 3 CUBES EACH FOR 7 & 28 DAY TEST RESULTS RESPECTIVELY.
  - 4 TOP SLAB FINISH TO BE WOODFLOATED. FORMWORK VERTICAL
- 1 ALL FORMS TO BE NORMAL STEEL SHUTTERS WITH TOP SIDE WAY SUPPORT. UPSTAND BEAMS SHOULD ALSO BE POKER VIBRATED.
  - 2 SIDE FORMS TO BE TREATED WITH FORM RELEASE OIL FOR QUALITY STRIPPING.
- REINFORCING
- 1 COVER TO LINKS IN BEAMS AND SLABS = 40mm.
  - 2
  - 3
- REFER TO BENDING SCHEDULES FOR RAFT SLAB DOWN STAND/EDGE BEAMS AND UPSTAND BEAMS TOLERANCES
- 1 RAFT SLAB:  
Horizontal sides and corner to corner across +- 20mm  
Vertical +50 -5  
Surface +20 -5
  - 2 UPSTAND BUND WALL BEAMS:  
Horizontal +10  
Vertical +-10
- PROGRAM
- 1 UPSTAND BEAMS MAY BE STRIPPED AFTER 3 DAYS.
  - 2 STRUCTURAL STEEL TANK CONSTRUCTION MAY COMMENCE 14 DAYS AFTER LAST CAST AFTER PROVIDING CUBE TEST RESULTS
- 1 TANK ERECTED TO +-5MM TOLERANCES.
  - 2 USE 120 x 120 x 1,2...10mm HOT DIPPED GALVANISED SHIMS TO LEVEL TANK FLOOR BELOW AND ON TOP OF 150x5 CONTINUOUS STEEL BEARING PLATE WITH SHIMS AT EACH TANK FLOOR NODE 1222# C/C BOTH WAYS.
- PROVIDE 250mm MICRON DPM UNDERNEATH ENTIRE STRUCTURAL FOOTPRINT

CONCRETE NOTES:

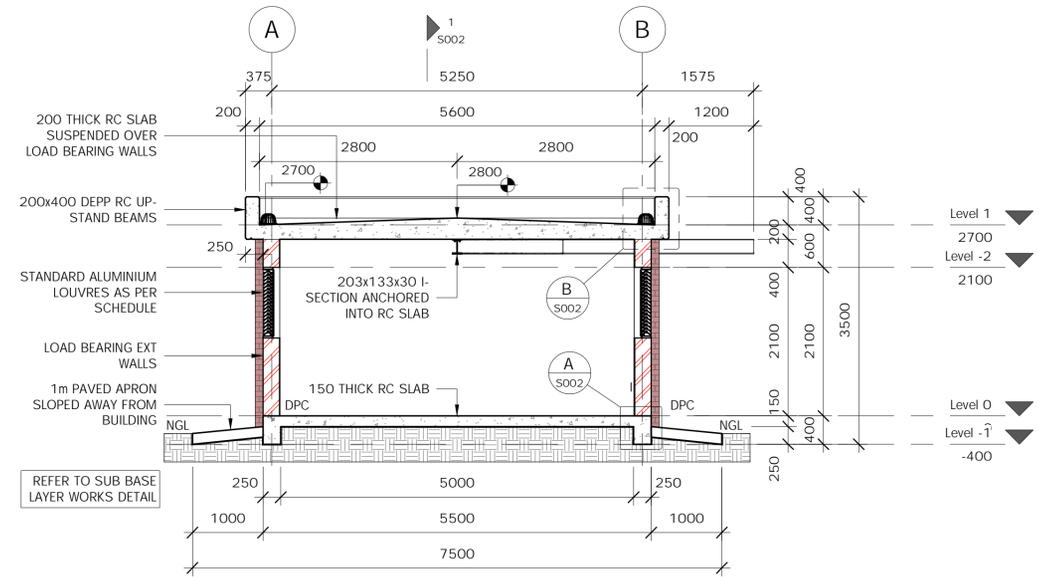
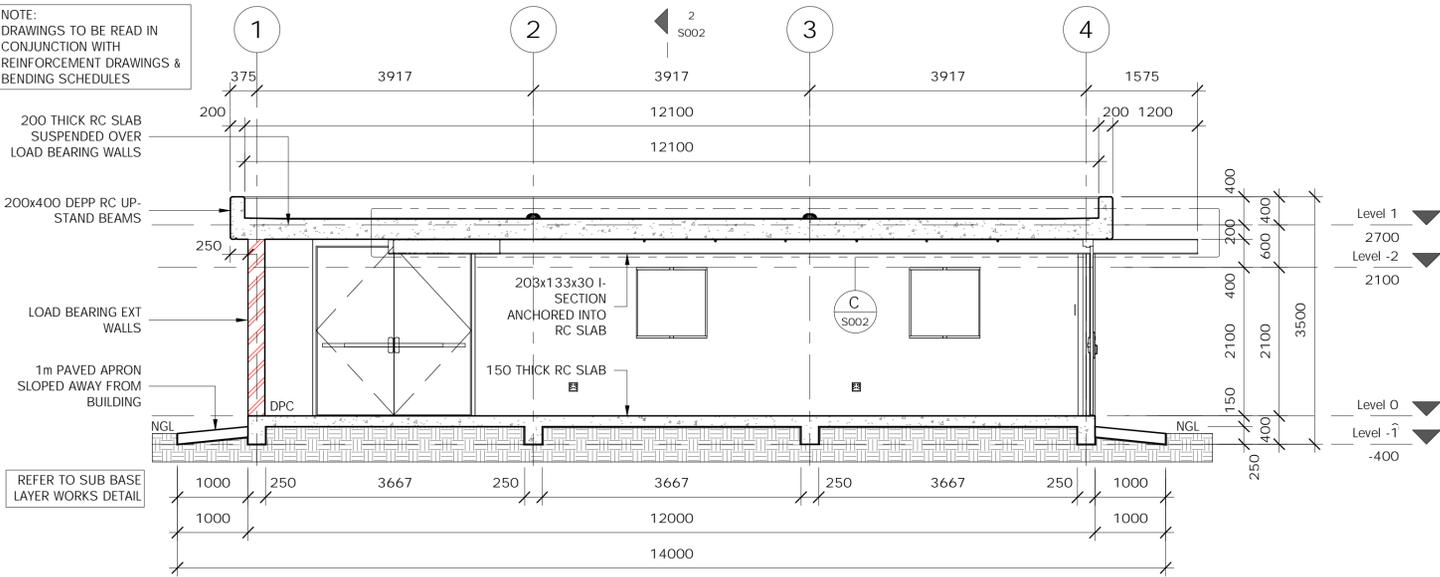
- 1) REQUEST THE READY MIX PLANT WHEN CASTING THE RAFT BEAMS AND SLAB TO SAMPLE AS FOLLOWS:
  - 3 CUBE MOULDS FOR 7 DAYS CRUSHING
  - 3 CUBE MOULDS FOR 14 DAYS CRUSHING
  - 3 CUBE MOULDS FOR 28 DAYS CRUSHING
- 2) APPLY CHRYSOCURE WB CURING COMPOUND TO TOP OF SURFACES AS SOON AS CONCRETE IS STURDY ENOUGH TO WALK ON. OBTAIN THE MANUFACTURERS DATA SHEETS TO ACHIEVE THE RECOMMENDED APPLICATION CONDITIONS.

METHODOLOGY

- 1) S1
- 2) S2
- 3) OBTAIN MODS FROM THE LABORATORY OF THE IN-SITU MATERIAL IN ORDER TO BE ABLE TO CONDUCT NUCLEAR DENSITY TESTING.
- 4) WHERE THERE IS GLARING EVIDENCE OF UNSATISFACTORY MATERIAL FOR FOUNDING, IMPORT G5 MATERIAL AT 200 LAYERS FROM AN APPROVED COMMERCIAL QUARRY. WHERE THERE IS UNCERTAINTY, OBTAIN THE ADVICE OF THE ENGINEER BY FURNISHING PICTORIAL ILLUSTRATIONS OF THE SITE CONDITIONS.
- 5) LAYER TESTING SHOULD BE DONE EVERY 2ND LAYER WHETHER IN-SITU OR IMPORTED MATERIAL ARE BEING USED.
- 6) REINFORCEMENT & SHUTTERING CAN COMMENCE ONCE MATERIAL COMPACTION TESTS ARE PROVEN TO BE IN ORDER.

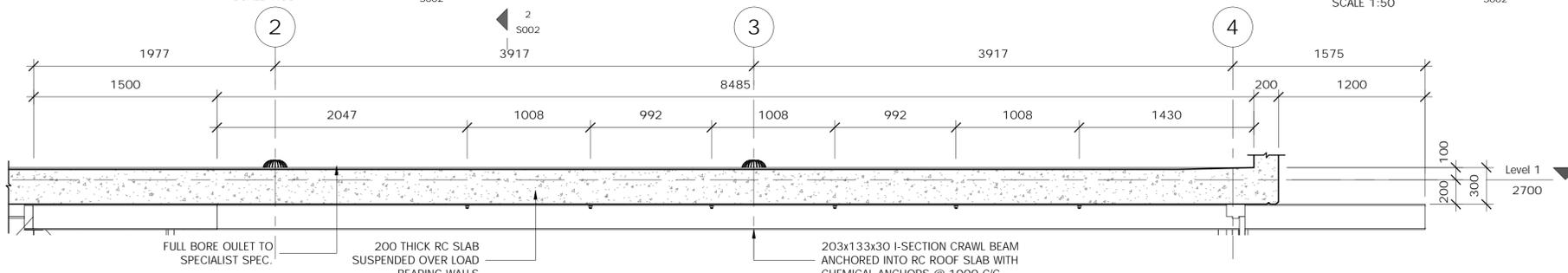
CLIENT: 1 Landros Mare Street Polokwane Central Tel: (015) 295 1800 Email: info@lepelie.co.za Website: www.lepeliewater.com	CONSULTANT: 16 Blue Jay Rooihuiskraal Centurion, 0157 P.O Box 31523 Braamfontein, 2017 Johannesburg Tel: (012) 661 0283 Fax: (035) 789 0222 Email: lansanam@sigodimarah.co.za Website: www.sigodimarah.com	PROFESSIONAL ENGINEER: R. OSTROWSKI PROF. Reg.No: 930381 DATE:  SIGNATURE:	DESIGN BY: B. MBOYANA DRAWN BY: G. MAREDI CHECKED BY: B. MBOYANA APPROVED BY: R. OSTROWSKI	REVISIONS <table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>07-2022</td> <td>ISSUED FOR TENDER</td> <td></td> </tr> </tbody> </table>	REV	DATE	DESCRIPTION	BY	a	07-2022	ISSUED FOR TENDER		PROJECT NAME <b>UPGRADE OF OLIFANTSPOORT AND EBENEZER WATER SUPPLY SCHEME</b>  TITLE <b>OLIFANTSPOORT CHLORINE TANK STORAGE BUILDING</b>	PROJECT STATUS: <b>DETAIL DESIGN</b> <table border="1"> <thead> <tr> <th>DATE</th> <th>SCALE</th> <th>SHEET</th> <th>REV</th> <th>A1</th> </tr> </thead> <tbody> <tr> <td>07-2022</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> DWG NO <b>P1001-OL1C-CIV-1301</b>	DATE	SCALE	SHEET	REV	A1	07-2022				
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NOTE: DRAWINGS TO BE READ IN CONJUNCTION WITH REINFORCEMENT DRAWINGS & BENDING SCHEDULES

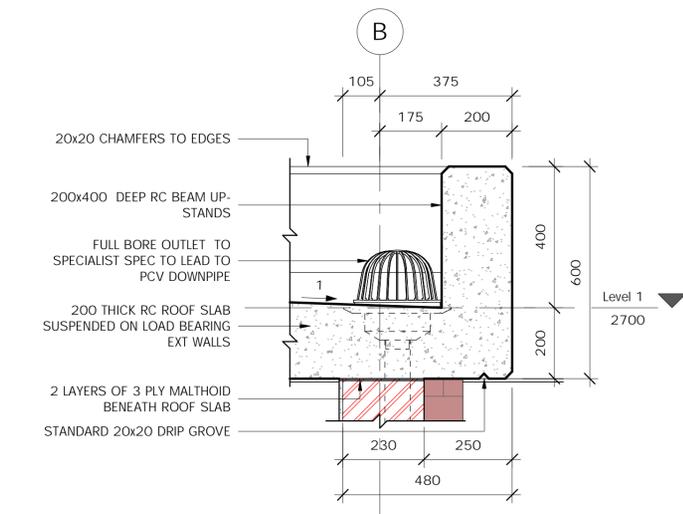


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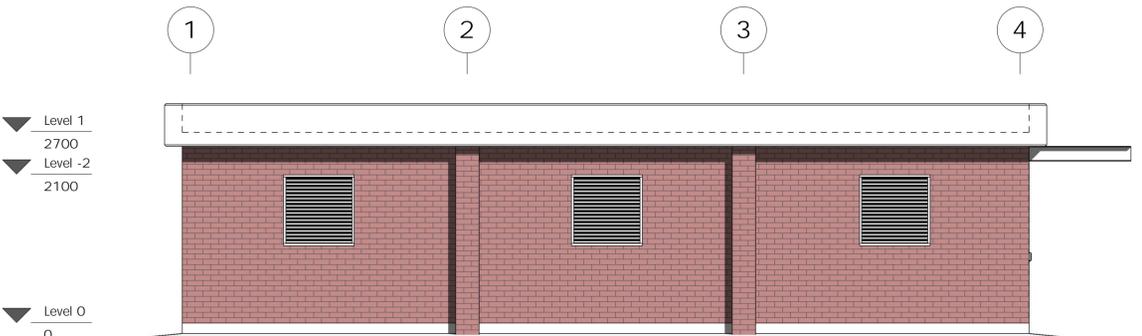
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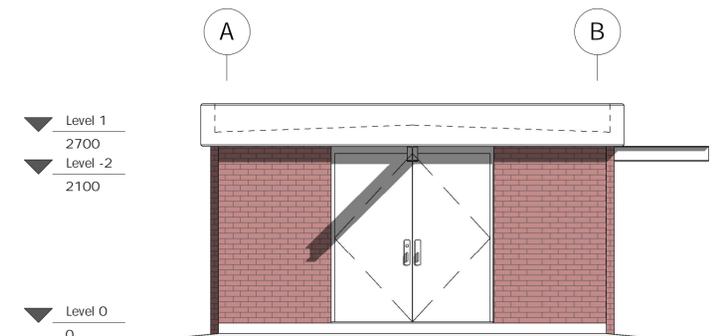
CRAWL BEAM ELEVATION DETAIL C  
SCALE 1:25



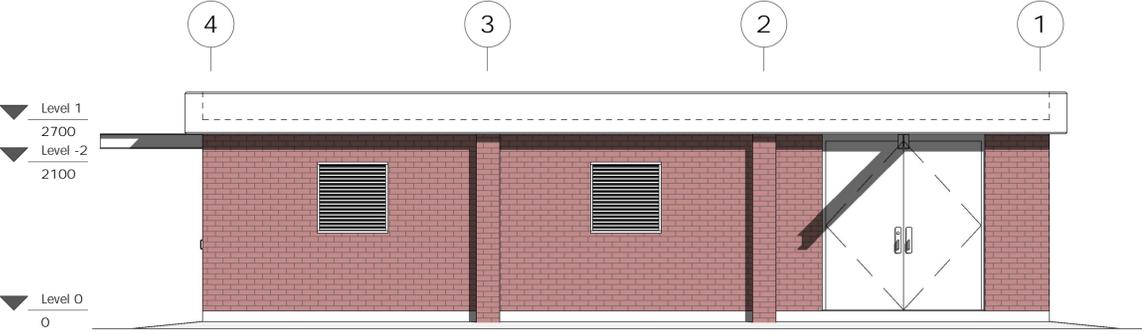
ROOF DETAIL B  
SCALE 1:10



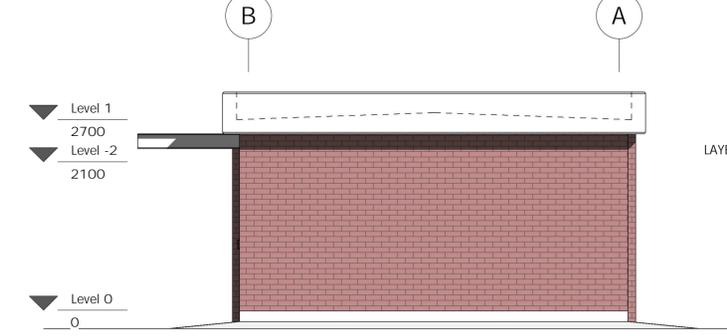
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SCALE 1:50



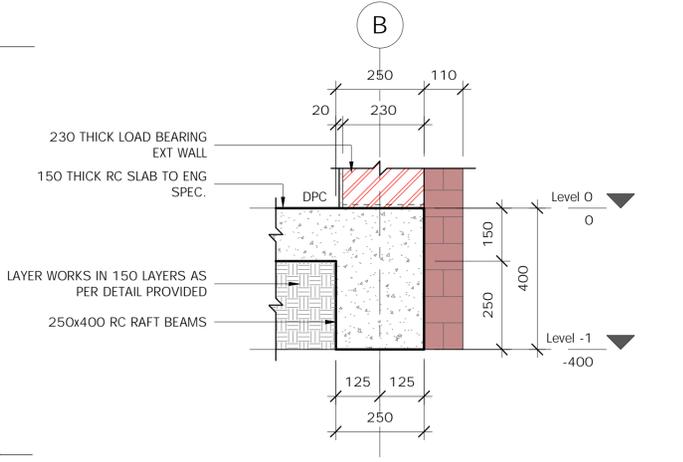
SOUTH ELEVATION  
SCALE 1:50



EAST ELEVATION  
SCALE 1:50



NORTH ELEVATION  
SCALE 1:50



RAFT BEAM DETAIL A  
SCALE 1:10

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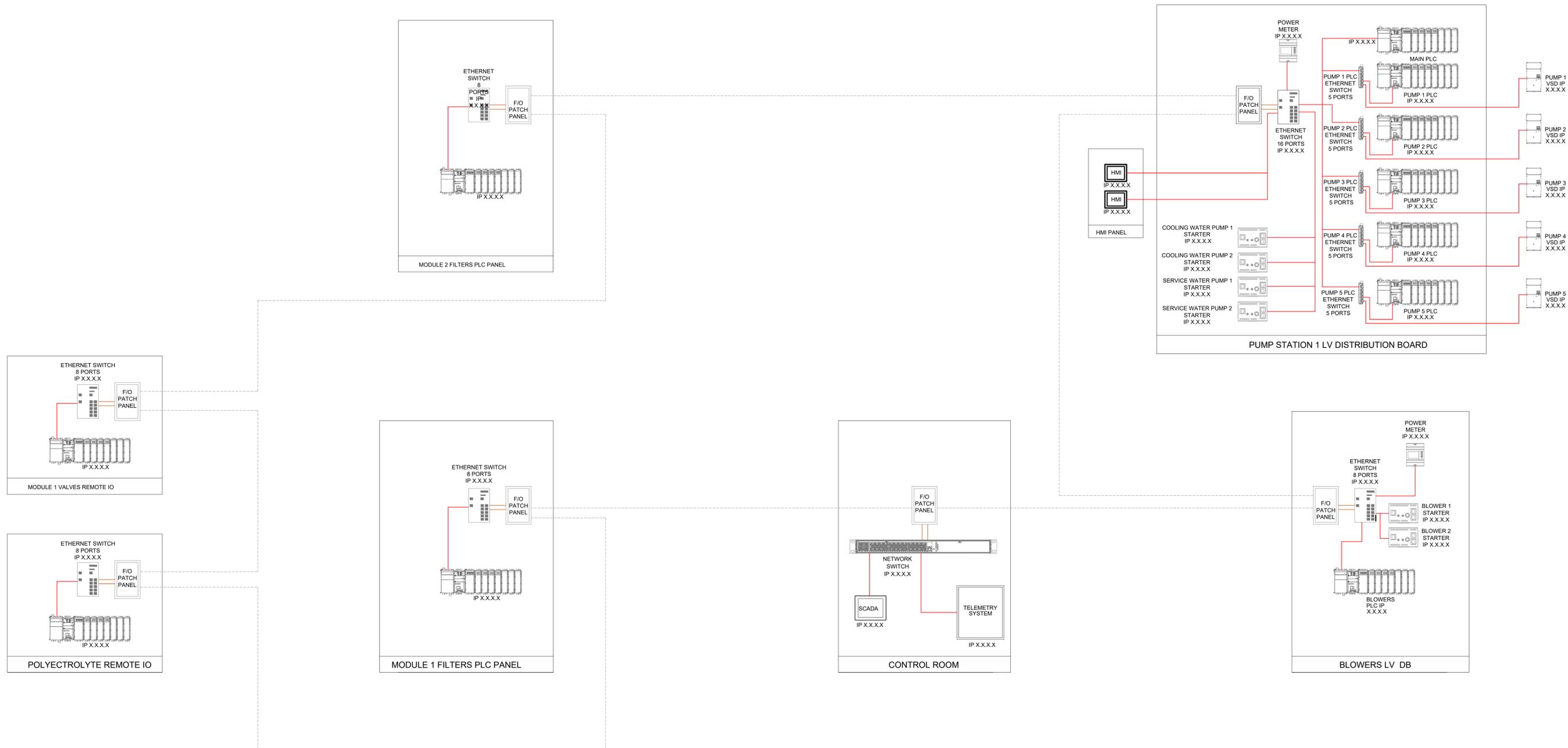
PROJECT NAME  
**UPGRADE OF OLIFANTSPOORT AND EBENEZER WATER SUPPLY SCHEME**

TITLE  
**SECTIONS, ELEVATIONS & DETAILS**

PROJECT STATUS:  
**DETAIL DESIGN**

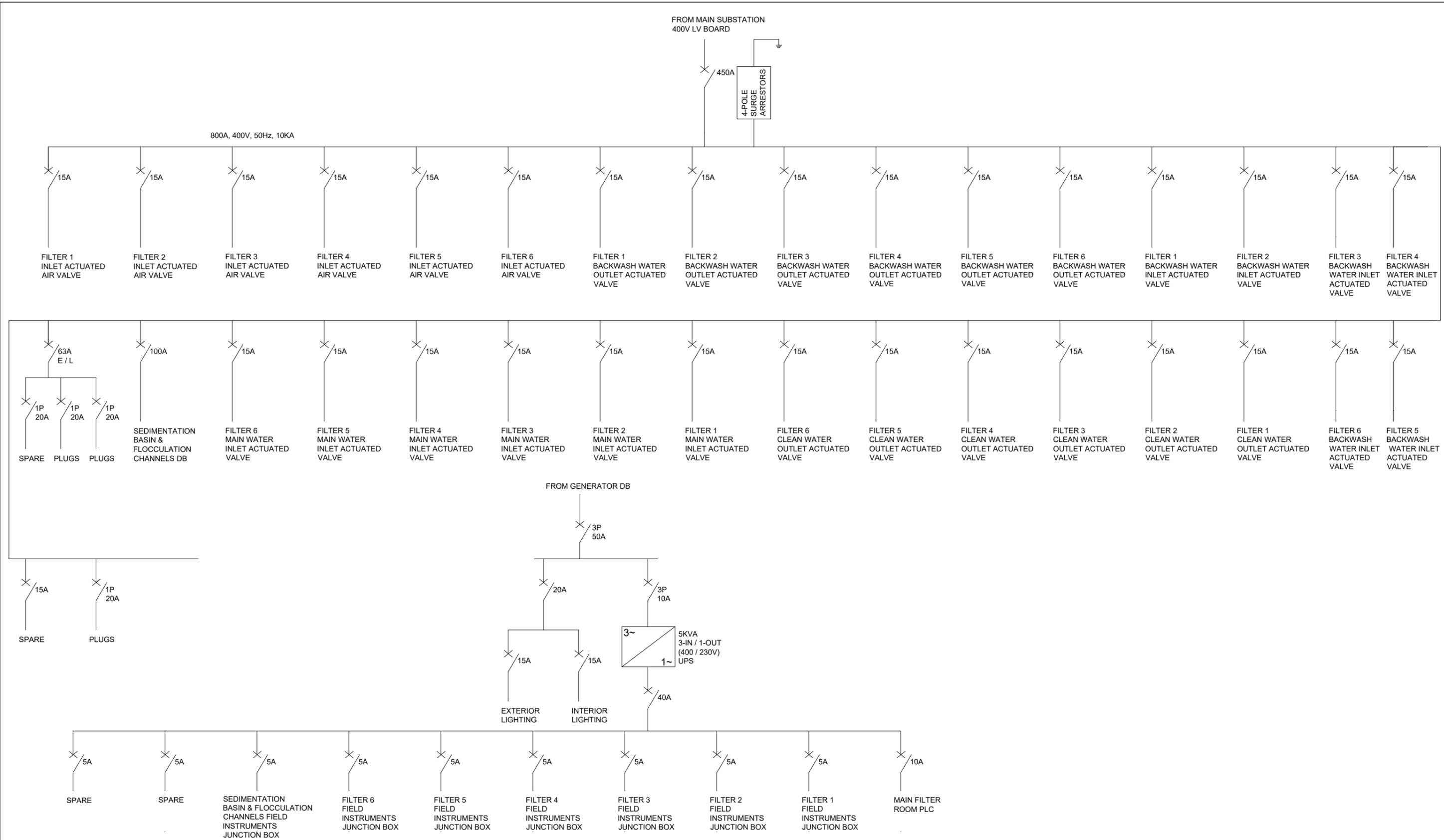
DATE 07-2022	SCALE	SHEET	REV A1
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DWG NO  
**P1001-OL1C-CIV-1302**



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REV	DATE	DESCRIPTION		
a	2022-09-23	ISSUED FOR TENDER		LM





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PROJECT NAME

**UPGRADE OF OLIFANTSPOORT AND EBENEZER WATER SUPPLY SCHEME**

TITLE

**OLIFANTSPOORT WATER SCHEME - WTW  
MODULE 2 ELECTRICAL SINGLE LINE DIAGRAM**

PROJECT STATUS:

**TENDER DRAWING**

DATE	SCALE	SHEET	REV	A3
2022-09-23	AS SHOWN	1 of 1	0	

DWG NO

**P1001-OL1C-ELE-7202**