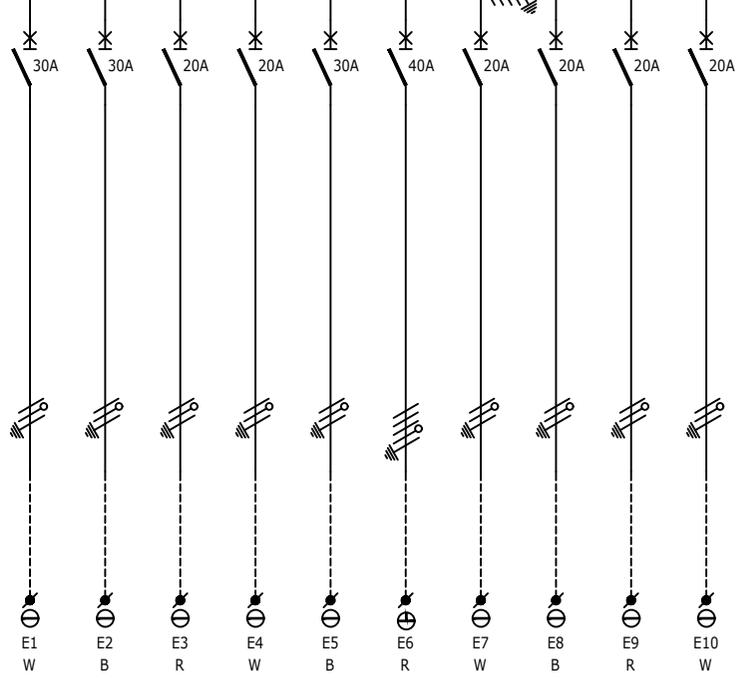


FROM SHEET 1 60A BUSBAR, 5kA FAULT LEVEL

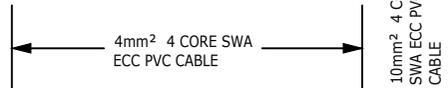


FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

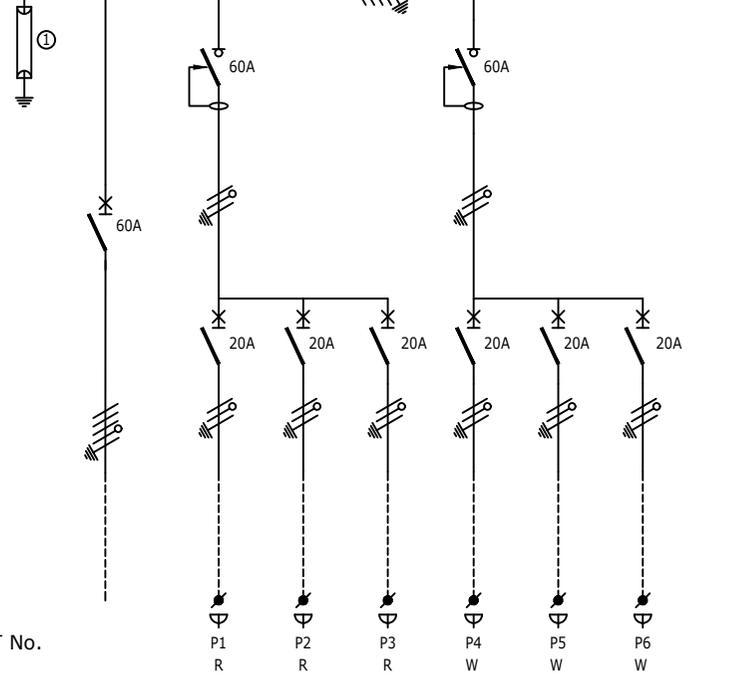
EQUIPMENT EQUIPMENT EQUIPMENT EQUIPMENT EQUIPMENT EQUIPMENT SPARE SPARE SPARE SPARE

WIRING



LOAD (AMPS)  
No. OF POINTS  
CABLE No.

60A BUSBAR, 5kA FAULT LEVEL TO SHEET 3



FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

FROM MAIN LV ESSENTIAL PANEL  
SOCKET OUTLETS SOCKET OUTLETS SOCKET OUTLETS SOCKET OUTLETS SOCKET OUTLETS SOCKET OUTLETS

WIRING



LOAD (AMPS)  
No. OF POINTS  
CABLE No. P015

MECHANICAL BARRIER

NOT WITHSTANDING ANYTHING TO THE CONTRARY, ALL RIGHTS RESERVED. NO PART OF THIS DRAWING MAY BE REPRODUCED IN ANY MATERIAL FORM (INCLUDING PHOTOCOPYING OR STORING IN ANY MEDIUM OR BY ELECTRONIC MEANS WHETHER OR NOT TRANSIENTLY OR INCIDENTALLY TO SOME OTHER USE OF THIS DRAWING) AND ALSO, THIS DRAWING MAY NOT BE USED FOR ANY PURPOSE OR REASON OTHER THAN FOR WHICH IT WAS ORIGINALLY ISSUED, WITHOUT THE WRITTEN PERMISSION OF IBUYA CONSULTING ENGINEERS.

ENGINEER	DRAWN	DATE	SCALE	CHKD.
S.Nzama	C.G	Sep 23	n.t.s	
DRAWING No.			SHEET:	REV.
23023 - 405			2 of 4	0
REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	13/09/23	SN
Ibuya Drawing No. : 21010_405_0 Lyr:0:1:A3				

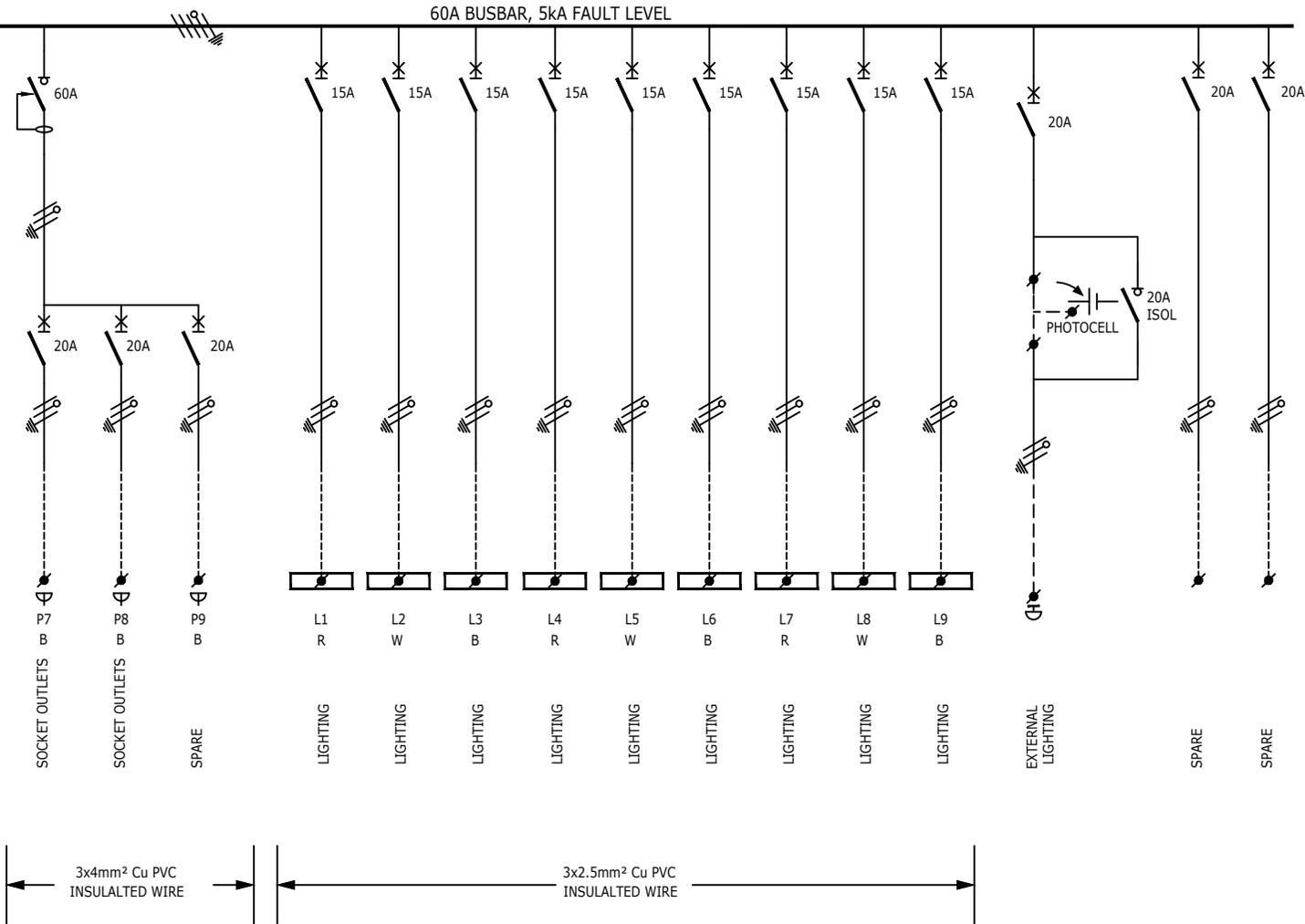
TITLE	NEWTON CONVERSION TO LARGE CLINIC
DRAWING TITLE:	DB-F1/DB-F1-E/DB-F1-UPS
	Single Line Diagram

FIRST FLOOR  
BAKER TILLY HOUSE  
18 WESTVILLE ROAD  
WESTVILLE, 3629  
PO BOX 1469  
WESTVILLE, 3630

TEL: +27 (031) 2667332  
E-mail: ibuya@ibuya.co.za

FROM SHEET 2

60A BUSBAR, 5KA FAULT LEVEL

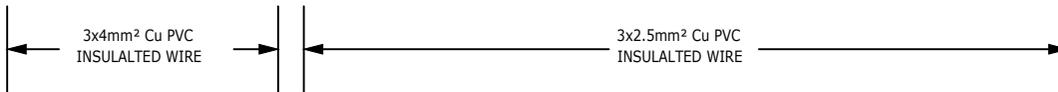


FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

WIRING

LOAD (AMPS)  
No. OF POINTS  
CABLE No.



MECHANICAL BARRIER

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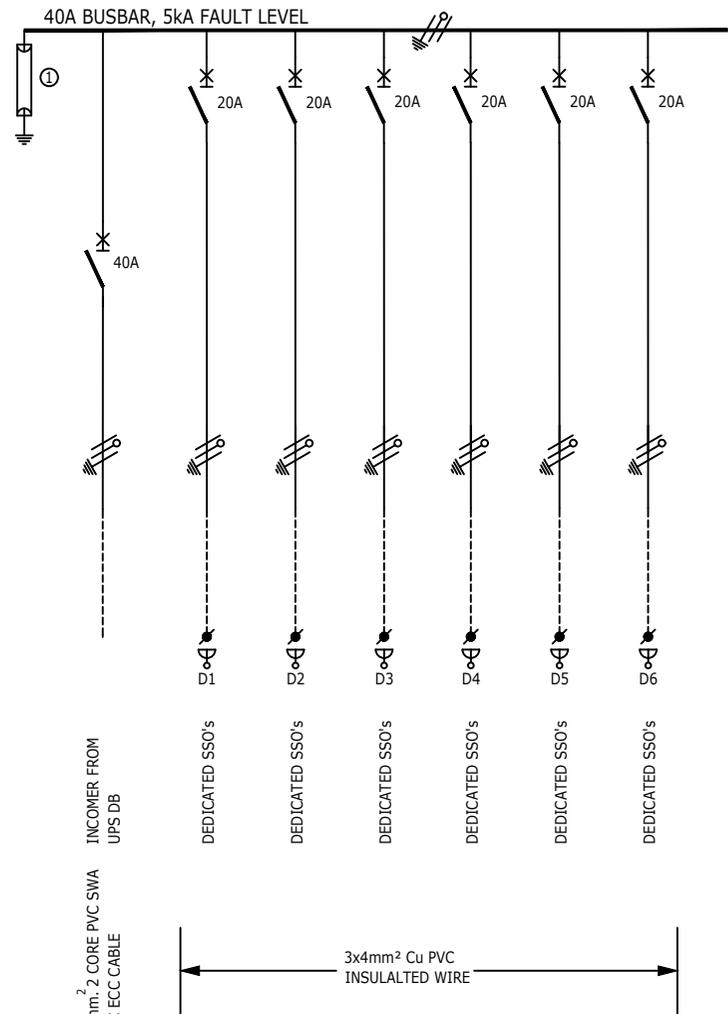
ENGINEER	DRAWN	DATE:	SCALE:	CHKD.
S.Nzama	C.G	Sep 23	n.t.s	
DRAWING No.			SHEET:	REV.
23023 - 405			3 of 4	0
REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	13/09/23	SN
Ibuya Drawing No. : 21010_405_0 Lyr:0:1:A3				

TITLE	NEWTON CONVERSION TO LARGE CLINIC
DRAWING TITLE:	DB-F1/DB-F1-E/DB-F1-UPS
	Single Line Diagram



FIRST FLOOR  
BAKER TILLY HOUSE  
18 WESTVILLE ROAD  
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WESTVILLE, 3630

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FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

WIRING

LOAD (AMPS)  
No. OF POINTS  
CABLE No.

INCOMER FROM  
UPS DB  
  
1.0mm<sup>2</sup> 2 CORE PVC SWA  
PVC ECC CABLE  
  
P026

DEDICATED SSO's  
DEDICATED SSO's  
DEDICATED SSO's  
DEDICATED SSO's  
DEDICATED SSO's  
DEDICATED SSO's  
  
3x4mm<sup>2</sup> Cu PVC  
INSULATED WIRE

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ENGINEER	DRAWN	DATE	SCALE:	CHKD.
S.Nzama	C.G	Sep 23	n.t.s	
DRAWING No.			SHEET:	REV.
23023 - 405			4 of 4	0
REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	13/09/23	SN
Ibuya Drawing No. : 21010_405_0		Lyr:0:1:A3		

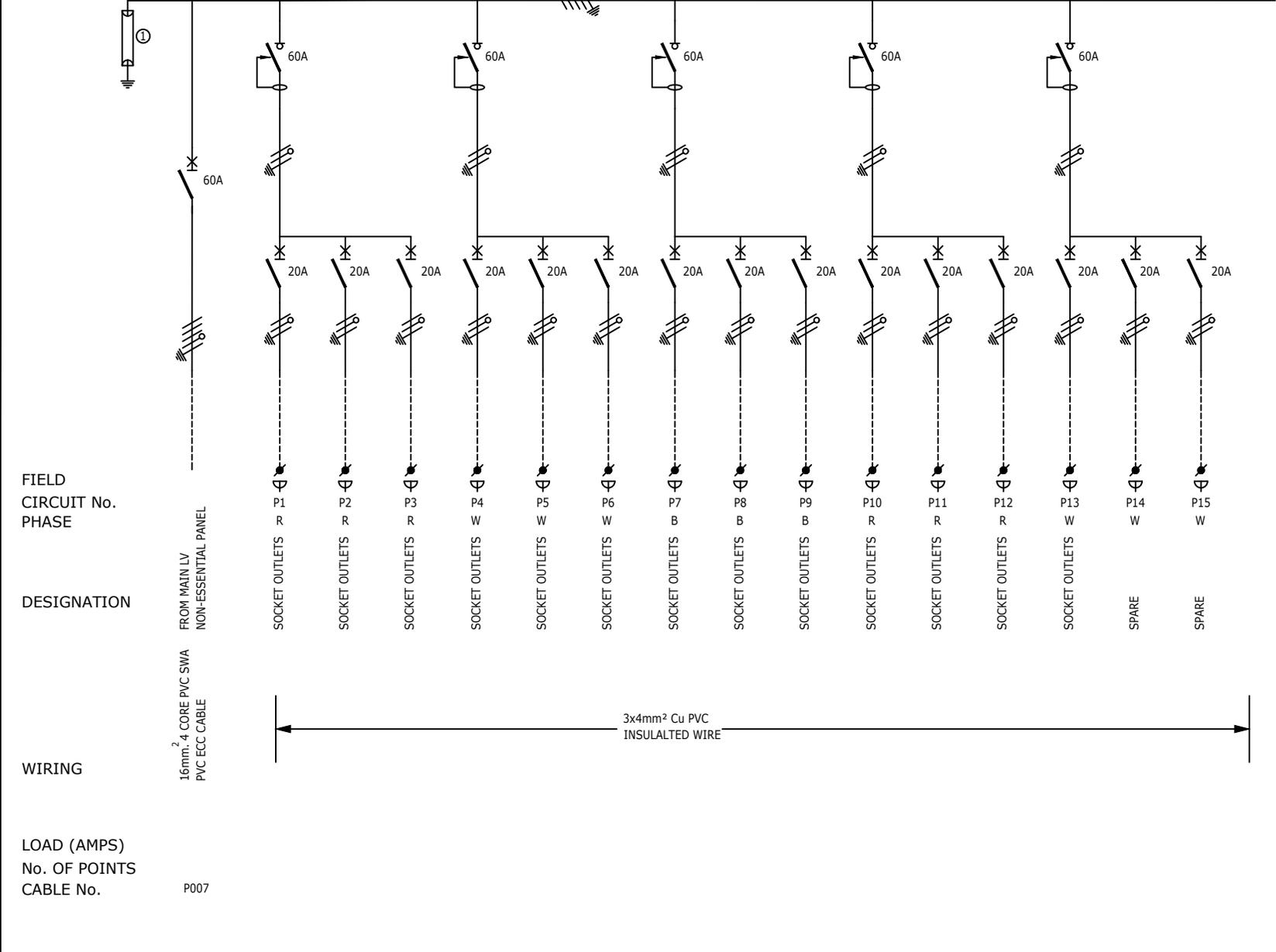
TITLE	Newtown Conversion to Large Clinic
DRAWING TITLE:	DB-F1/DB-F1-E/DB-F1-UPS Single Line Diagram



FIRST FLOOR  
BAKER TILLY HOUSE  
18 WESTVILLE ROAD  
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WESTVILLE, 3630  
  
TEL: +27 (031) 2667332  
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60A BUSBAR, 5kA FAULT LEVEL

TO SHEET 2



FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

WIRING

LOAD (AMPS)  
No. OF POINTS  
CABLE No.

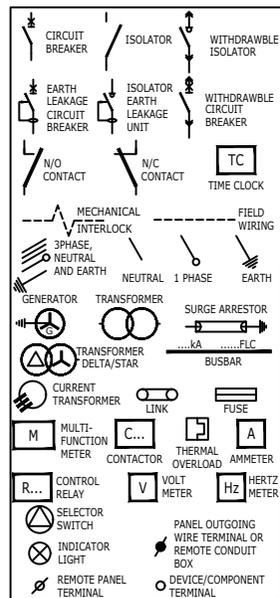
FROM MAIN LV  
NON-ESSENTIAL PANEL

16mm<sup>2</sup>, 4 CORE PVC SWA  
PVC ECC CABLE

P007

- NOTES**
- 1) DROPPERS/TAILS TO BE RATED FOR FULL PL LET THROUGH.
  - 2) HARNESSSED WIRING TO BE DERATED.
  - 3) TUFFENOL BRACES ARE NOT TO BE USED ABOVE 10kA.
  - 4) COPPER BUSBARS TO BE CONTINUOUS RATED.
  - 5) SUFFICIENT SPACE REQUIRED FOR SAFE ACCESS FOR REWIRING.
  - 6) EARTH AND NEUTRAL BARS TO BE EASILY ACCESSIBLE.
  - 7) ALL CIRCUIT BREAKERS TO BE FITTED WITH TERMINAL SHIELD ON LIVE AND LOAD SIDES.
  - 8) ENCLOSURE TO BE IP54
  - 9) PHASING RWB, TOP TO BOTTOM, LEFT TO RIGHT, BACK TO FRONT.
  - 10) INTERNAL TEMP TO BE LIMITED TO 5° ABOVE AMBIANT, MAX 40°C.
  - 11) ALL CIRCUITS TO BE LABELED.
  - 12) 25% SPARE SPACE. SPARE SPACES ARE TO BE FITTED WITH COPPER BUSBAR TAILS CONNECTED TO DROPPER BUSBARS TO ALLOW INSTALLATION OF CIRCUIT BREAKERS WITH A MINIMAL SHUTDOWN PERIOD.
  - 13) DB TO BE FITTED WITH A4 LEGEND CARD HOLDER WITH STANDARD IBUYA A4 LEGEND CARD.
  - 14) EACH CIRCUIT TO BE LABELED WITH DETAILED DESCRIPTION OF CONNECTED DEVICE.
  - 15) EXTERNAL EARTH STUD MOUNTED ADJACENT CABLE ENTRY.

- INCOMING CABLE COLOUR
- TOP/BOTTOM
  - NORMAL - WHITE
  - ESSENTIAL - RED
  - UPS-BLUE
- ACCESS
- SURFACE
  - FRONT
- PROTECTIVE DEVICES
- SCHNEIDER
  - ACB'S (1250A-4000A) -MASTERPACT NW
  - MCCB'S(800A - 1000A) -COMPACT NS
  - MCCB'S(60A-630A) -EASYPACT CSV
  - MCB'S -MULTI 9, TYPE 2
- CONTACTORS
- AC3 HEAVY DUTY
- METERS
- SCHNEIDER
- 1) CLASS 2 SURGE ARRESTOR



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ENGINEER	DRAWN	DATE	SCALE:	CHKD.	TITLE
S.Nzama	C.G	Sep 23	n.t.s PAPER SIZE: A3		Newtown Conversion to Large Clinic
DRAWING No.	SHEET:	REV.			DRAWING TITLE:
23023 - 406	1 of 4	0			DB-F2/DB-F2-E/DB-F2-UPS
REV	DESCRIPTION	BY	DATE	CHKD.	Ibuya Drawing No. : 21010_406_0
0	Original Issue	CG	13/09/23	SM	Lyr: 0:1:A3

DRAWING TITLE: DB-F2/DB-F2-E/DB-F2-UPS

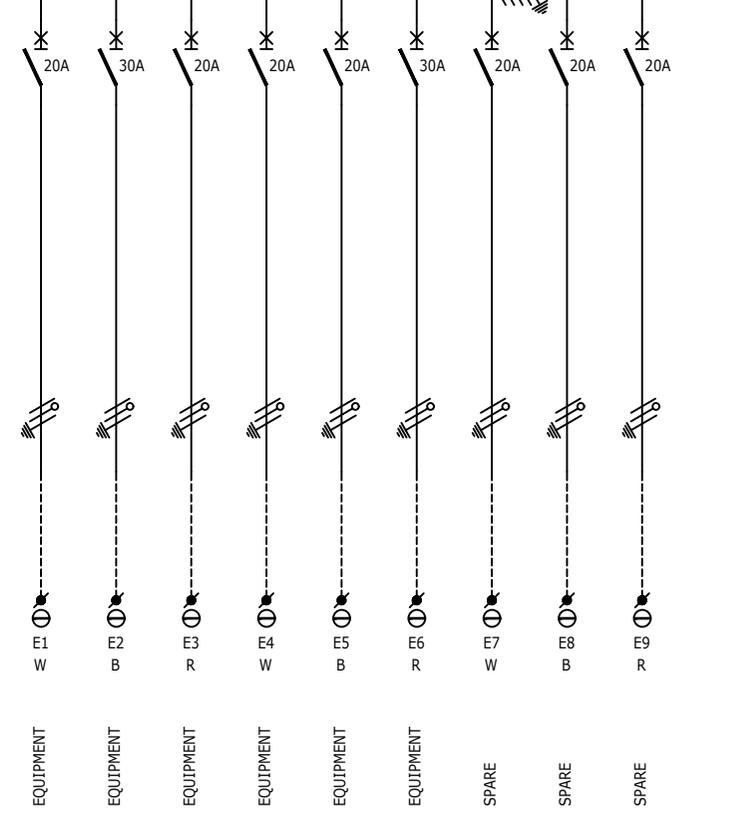
Single Line Diagram

**IBUYA** Consulting Engineers  
"POWERING DEVELOPMENT"

FIRST FLOOR  
BAKER TILLY HOUSE  
18 WESTVILLE ROAD  
WESTVILLE, 3629  
PO BOX 1469  
WESTVILLE, 3630

TEL: +27 (031) 2667332  
E-mail: ibuya@ibuya.co.za

FROM SHEET 1 60A BUSBAR, 5KA FAULT LEVEL



FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

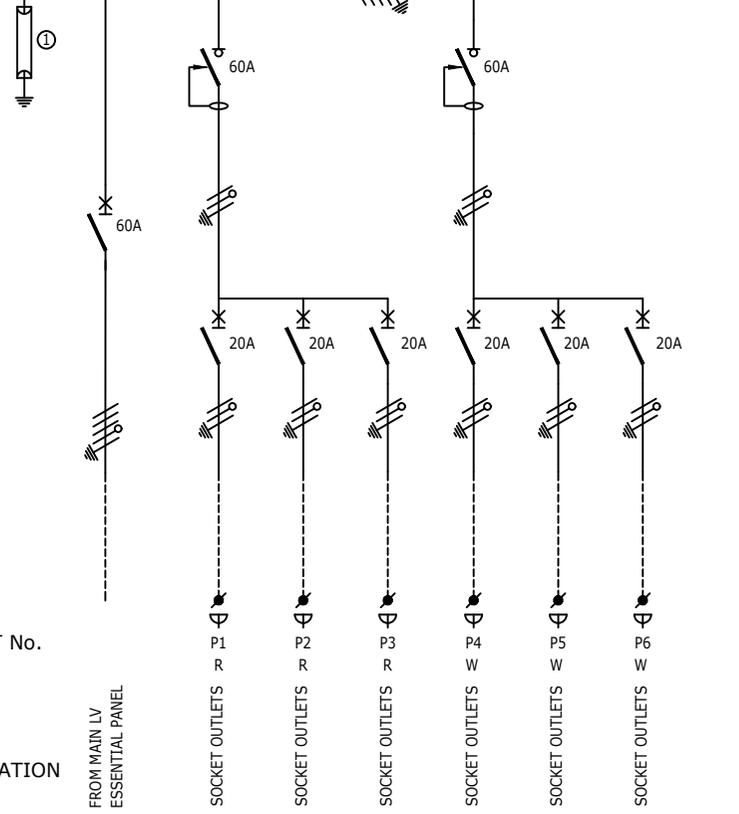
WIRING

LOAD (AMPS)  
No. OF POINTS  
CABLE No.

4mm<sup>2</sup> 4 CORE SWA  
ECC PVC CABLE

MECHANICAL BARRIER

60A BUSBAR, 5KA FAULT LEVEL TO SHEET 3



FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

WIRING

LOAD (AMPS)  
No. OF POINTS  
CABLE No.

3x4mm<sup>2</sup> Cu PVC  
INSULATED WIRE

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ENGINEER	DRAWN	DATE	SCALE:	CHKD.
S.Nzama	C.G	Sep 23	n.t.s	
DRAWING No.			SHEET:	REV.
23023 - 406			2 of 4	0
REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	13/09/23	SN
Ibuya Drawing No. : 21010_406_0 Lyr:0:1:A3				

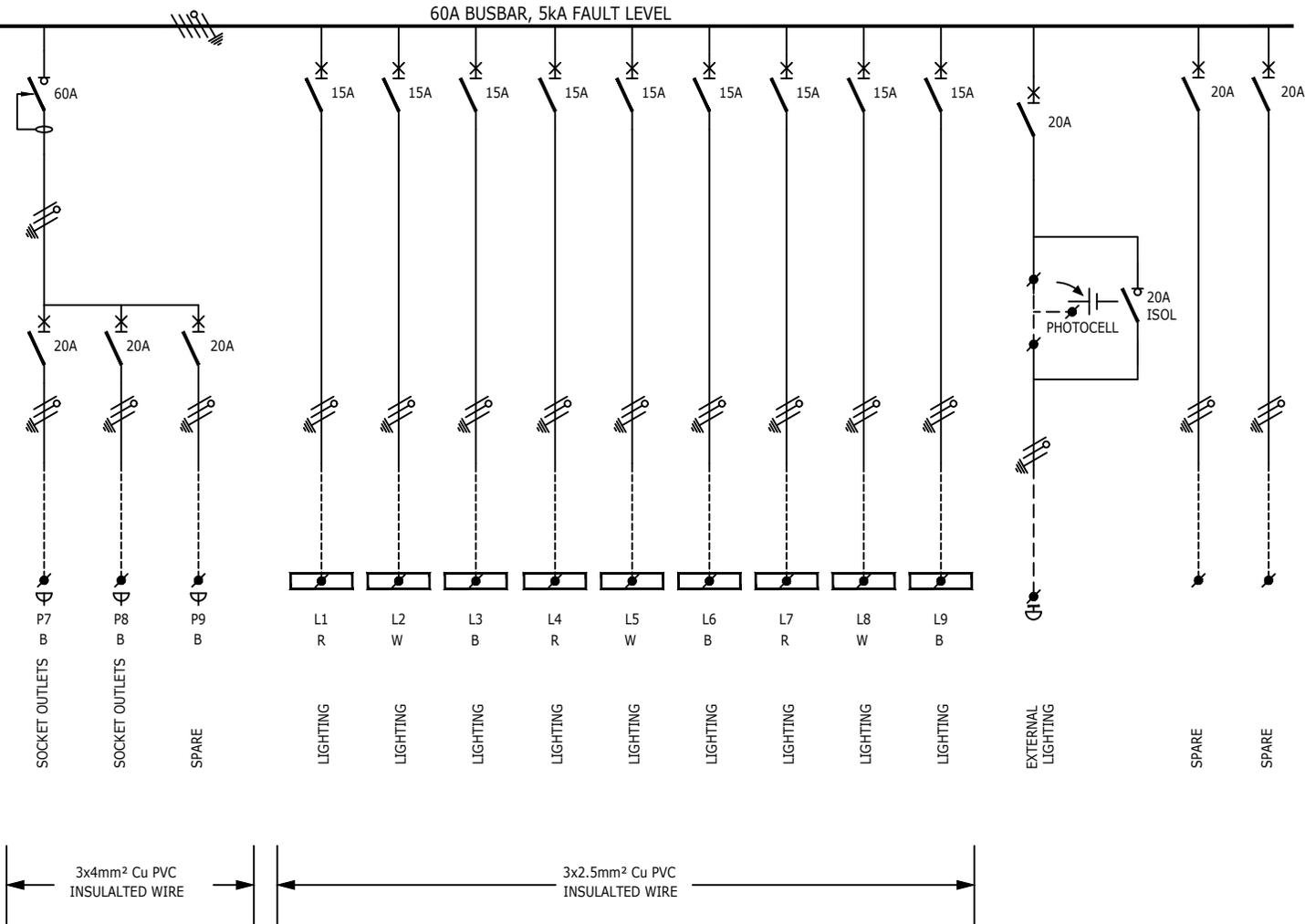
TITLE	NEWTON CONVERSION TO LARGE CLINIC
DRAWING TITLE:	DB-F2/DB-F2-E/DB-F2-UPS
	Single Line Diagram

FIRST FLOOR  
BAKER TILLY HOUSE  
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PO BOX 1469  
WESTVILLE, 3630

TEL: +27 (031) 2667332  
E-mail: ibuya@ibuya.co.za

FROM SHEET 2

60A BUSBAR, 5KA FAULT LEVEL



FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

WIRING

3x4mm<sup>2</sup> Cu PVC  
INSULATED WIRE

3x2.5mm<sup>2</sup> Cu PVC  
INSULATED WIRE

LOAD (AMPS)  
No. OF POINTS  
CABLE No.

MECHANICAL BARRIER

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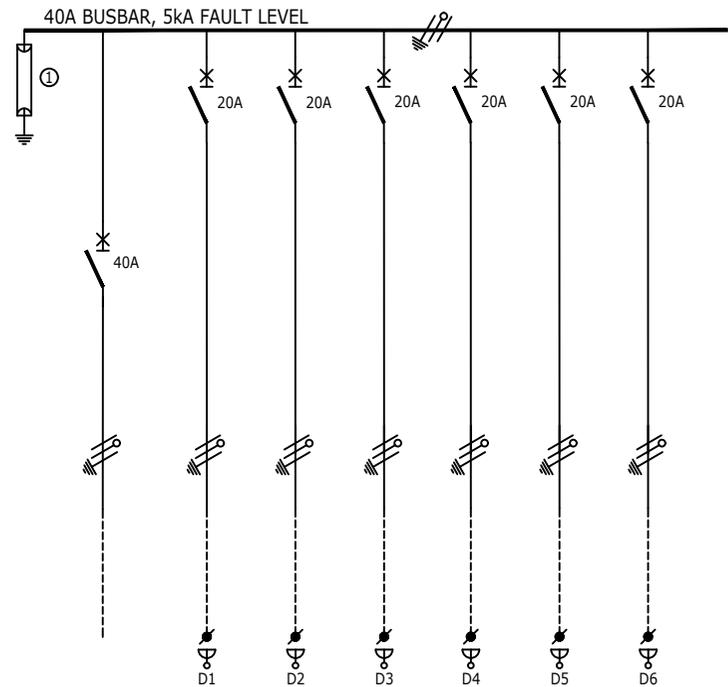
ENGINEER	DRAWN	DATE:	SCALE:	CHKD.
S.Nzama	C.G	Sep 23	n.t.s	
DRAWING No.			SHEET:	REV.
23023 - 406			3 of 4	0
REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	13/09/23	SN
Ibuya Drawing No. : 21010_406_0 Lyr:0:1:A3				

TITLE	NEWTON CONVERSION TO LARGE CLINIC
DRAWING TITLE:	DB-F2/DB-F2-E/DB-F2-UPS
	Single Line Diagram



FIRST FLOOR  
BAKER TILLY HOUSE  
18 WESTVILLE ROAD  
WESTVILLE, 3629  
PO BOX 1469  
WESTVILLE, 3630

TEL: +27 (031) 2667332  
E-mail: ibuya@ibuya.co.za



FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

WIRING

LOAD (AMPS)  
No. OF POINTS  
CABLE No.

INCOMER FROM  
UPS DB  
  
1.0mm<sup>2</sup> 2 CORE PVC SWA  
PVC ECC CABLE

3x4mm<sup>2</sup> Cu PVC  
INSULATED WIRE

P027

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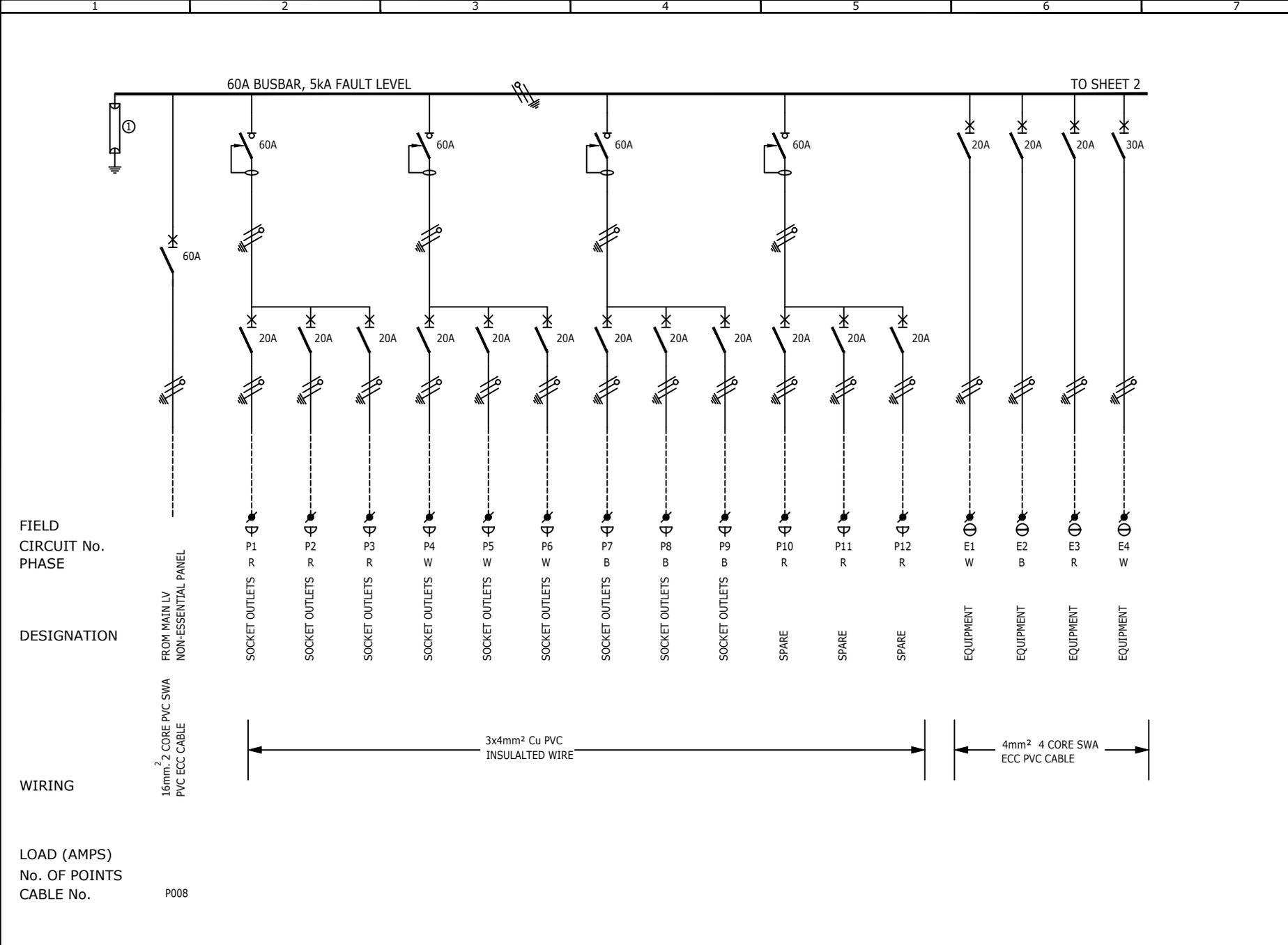
ENGINEER	DRAWN	DATE	SCALE:	CHKD.
S.Nzama	C.G	Sep 23	n.t.s	
DRAWING No.			SHEET:	REV.
23023 - 406			4 of 4	0
BY	DATE	CHKD.	Ibuya Drawing No. : 21010_406_0	
CG	13/09/23	SN	Lyr:0:1:A3	

TITLE	Newtown Conversion to Large Clinic
DRAWING TITLE:	DB-F2/DB-F2-E/DB-F2-UPS
	Single Line Diagram



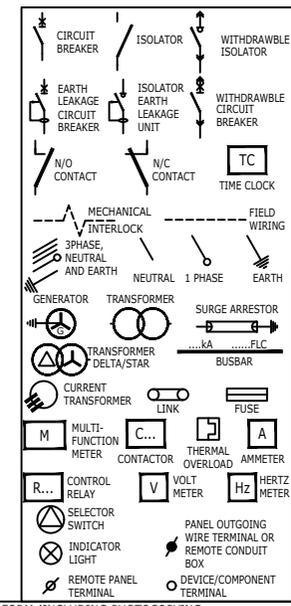
FIRST FLOOR  
BAKER TILLY HOUSE  
18 WESTVILLE ROAD  
WESTVILLE, 3629  
PO BOX 1469  
WESTVILLE, 3630

TEL: +27 (031) 2667332  
E-mail: ibuya@ibuya.co.za



- NOTES**
- 1) DROPPERS/TAILS TO BE RATED FOR FULL FLT LET THROUGH.
  - 2) HARNESSSED WIRING TO BE DERATED.
  - 3) TUFFENOL BRACES ARE NOT TO BE USED ABOVE 10kA.
  - 4) COPPER BUSBARS TO BE CONTINUOUS RATED.
  - 5) SUFFICIENT SPACE REQUIRED FOR SAFE ACCESS FOR REWIRING.
  - 6) EARTH AND NEUTRAL BARS TO BE EASILY ACCESSIBLE.
  - 7) ALL CIRCUIT BREAKERS TO BE FITTED WITH TERMINAL SHIELD ON LIVE AND LOAD SIDES.
  - 8) ENCLOSURE TO BE IP54
  - 9) PHASING RWB, TOP TO BOTTOM, LEFT TO RIGHT, BACK TO FRONT.
  - 10) INTERNAL TEMP TO BE LIMITED TO 5° ABOVE AMBIANT, MAX 40°C.
  - 11) ALL CIRCUITS TO BE LABELED.
  - 12) 25% SPARE SPACE. SPARE SPACES ARE TO BE FITTED WITH COPPER BUSBAR TAILS CONNECTED TO DROPPER BUSBARS TO ALLOW INSTALLATION OF CIRCUIT BREAKERS WITH A MINIMAL SHUTDOWN PERIOD.
  - 13) DB TO BE FITTED WITH A4 LEGEND CARD HOLDER WITH STANDARD IBUYA A4 LEGEND CARD.
  - 14) EACH CIRCUIT TO BE LABELED WITH DETAILED DESCRIPTION OF CONNECTED DEVICE.
  - 15) EXTERNAL EARTH STUD MOUNTED ADJACENT CABLE ENTRY.

- INCOMING CABLE**
- OUTGOING CIRCUITS**
- COLOUR**
- MOUNTING ACCESS**
- PROTECTIVE DEVICES**
- CONTACTORS**
- METERS**
- BOTTOM
  - TOP/BOTTOM
  - NORMAL - WHITE
  - ESSENTIAL - RED
  - UPS - BLUE
  - SURFACE
  - FRONT
  - SCHNEIDER
  - ACB's (1250A-4000A) -MASTERPACT NW
  - MCCB'S(800A - 1000A) -COMPACT NS
  - MCCB'S(60A-630A) -EASYPACT CSV
  - MCB's -MULTI 9, TYPE 2
  - CONTACTORS -AC3 HEAVY DUTY
  - SCHNEIDER
- 1) CLASS 2 SURGE ARRESTOR



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ENGINEER	DRAWN	DATE	SCALE:	CHKD.	TITLE
S.Nzama	C.G	Sep 23	n.t.s PAPER SIZE: A3		Newtown Conversion to Large Clinic
DRAWING No.	SHEET:	REV.	DRAWING TITLE:		
23023 - 407	1 of 3	0	DB-F3/DB-F3-E/DB-F3-UPS		
REV	DESCRIPTION	BY	DATE	CHKD.	Ibuya Drawing No. : 21010_407_0
0	Original Issue	CG	13/09/23	SM	Lyr: 0:1:A3

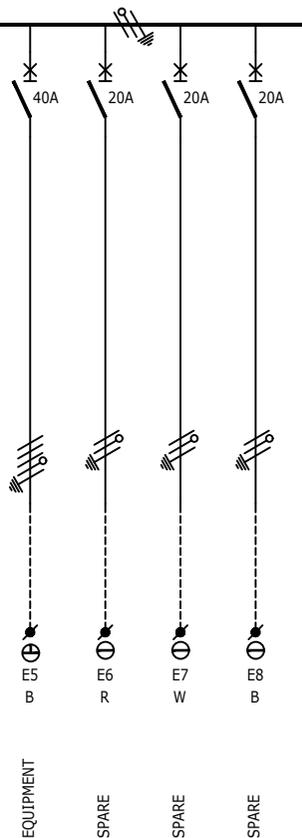
**Single Line Diagram**

**IBUYA** Consulting Engineers  
"POWERING DEVELOPMENT"

FIRST FLOOR  
BAKER TILLY HOUSE  
18 WESTVILLE ROAD  
WESTVILLE, 3629  
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WESTVILLE, 3630

TEL: +27 (031) 2667332  
E-mail: ibuya@ibuya.co.za

FROM SHEET 1



FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

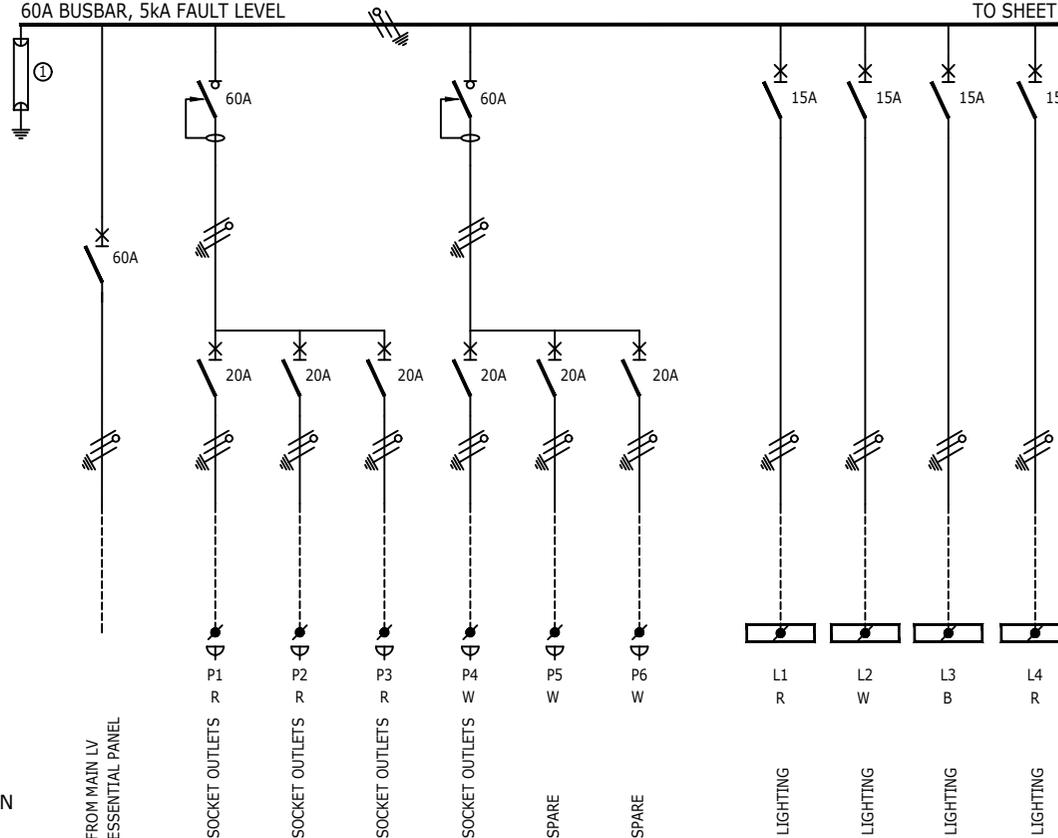
WIRING

LOAD (AMPS)  
No. OF POINTS  
CABLE No.

10mm<sup>2</sup> 4 CORE  
SWA ECC PVC  
CABLE

60A BUSBAR, 5ka FAULT LEVEL

TO SHEET 3



FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

WIRING

LOAD (AMPS)  
No. OF POINTS  
CABLE No.

16mm<sup>2</sup> 4 CORE PVC SWA  
PVC ECC CABLE

P017

3x4mm<sup>2</sup> Cu PVC  
INSULATED WIRE

3x2.5mm<sup>2</sup> Cu PVC  
INSULATED WIRE

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ENGINEER	DRAWN	DATE:	SCALE:	CHKD.
S.Nzama	C.G	Sep 23	n.t.s PAPER SIZE: A3	
DRAWING No.	SHEET:	REV.		
23023 - 407	2 of 3	0		
IBUYA Drawing No. : 21010_407_0	Lyr:0:1:A3			

TITLE	NEWTOWN CONVERSION TO LARGE CLINIC
DRAWING TITLE:	DB-F3/DB-F3-E/DB-F3-UPS Single Line Diagram

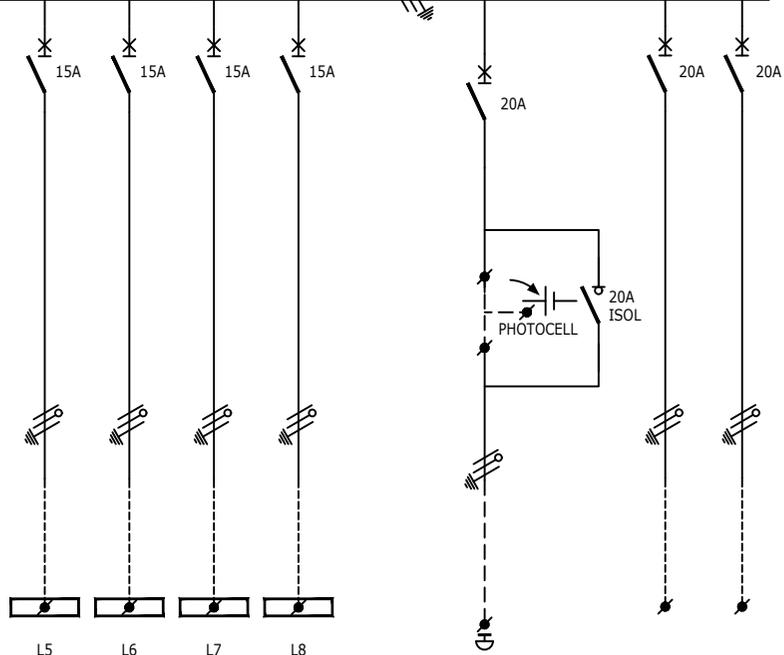


FIRST FLOOR  
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TEL: +27 (031) 2667332  
E-mail: ibuya@ibuya.co.za

REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	13/09/23	SN

FROM SHEET 2 60A BUSBAR, 5kA FAULT LEVEL



FIELD  
CIRCUIT No.  
PHASE

L5	L6	L7	L8	CH		
W	B	R	W			

DESIGNATION

LIGHTING	LIGHTING	LIGHTING	LIGHTING	EXTERNAL LIGHTING	SPARE	SPARE
----------	----------	----------	----------	-------------------	-------	-------

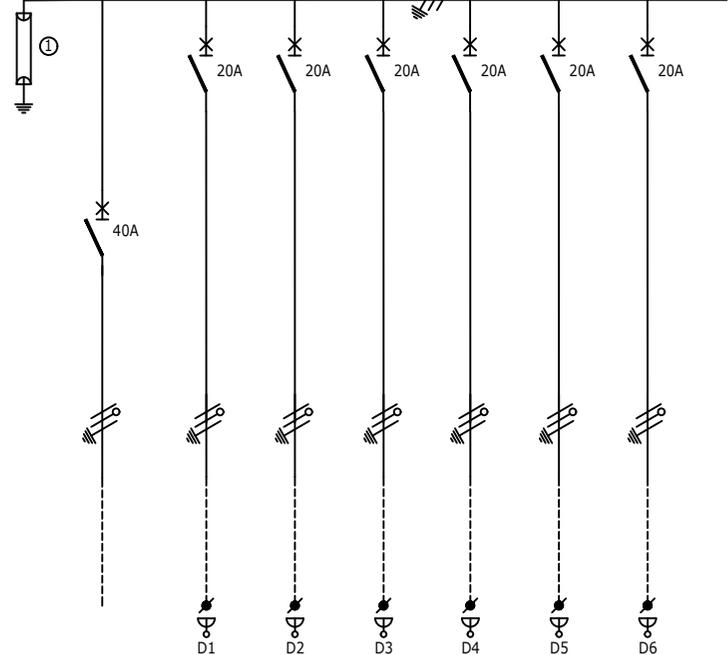
WIRING

← 3x2.5mm<sup>2</sup> Cu PVC INSULATED WIRE →

LOAD (AMPS)  
No. OF POINTS  
CABLE No.

MECHANICAL BARRIER

40A BUSBAR, 5kA FAULT LEVEL



FIELD  
CIRCUIT No.  
PHASE

	D1	D2	D3	D4	D5	D6
--	----	----	----	----	----	----

DESIGNATION

INCOMER FROM UPS DB	DEDICATED SSO's					
---------------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------

WIRING

← 3x4mm<sup>2</sup> Cu PVC INSULATED WIRE →

1.0mm<sup>2</sup> 2 CORE PVC SWA PVC ECC CABLE

LOAD (AMPS)  
No. OF POINTS  
CABLE No.

P028

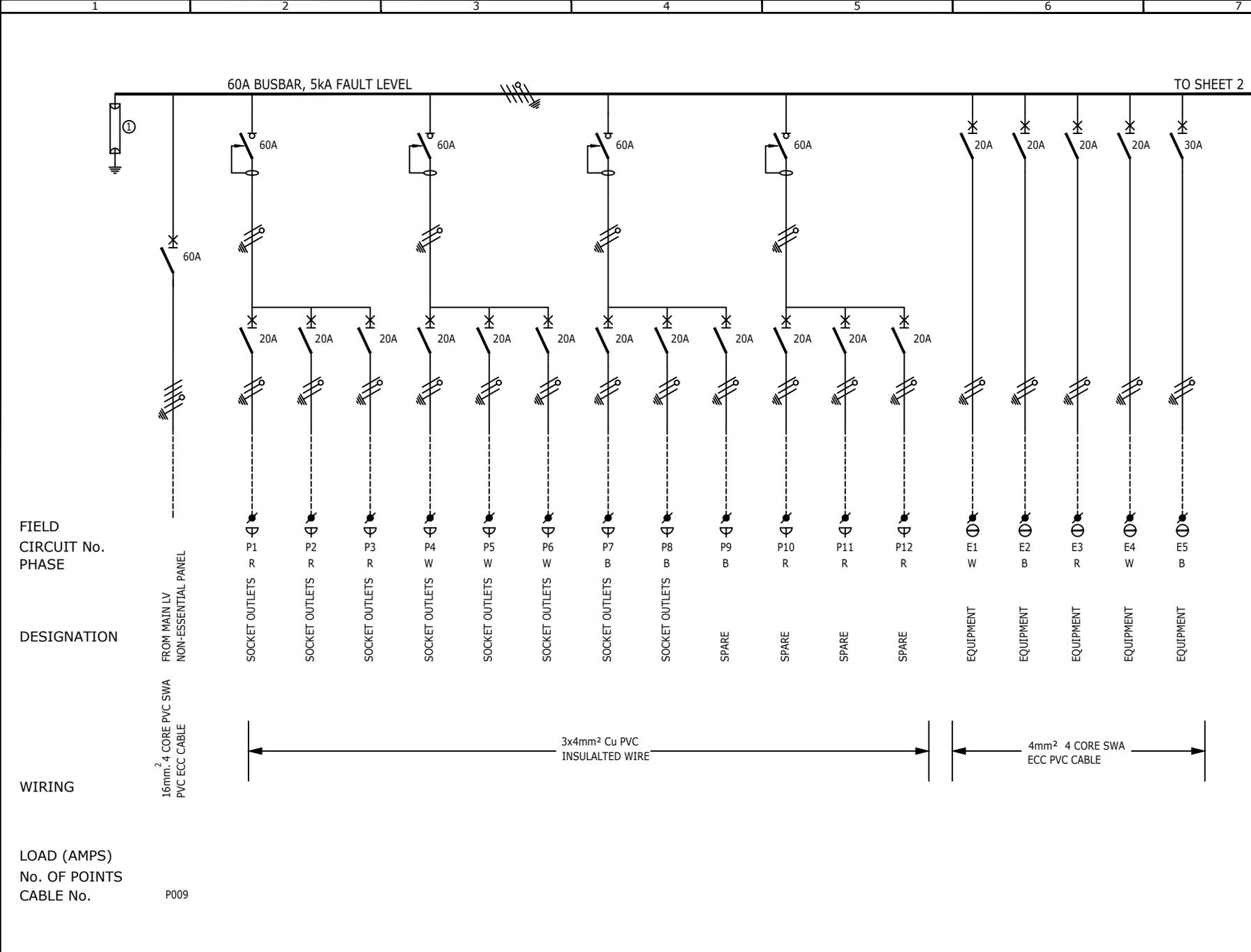
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ENGINEER	DRAWN	DATE:	SCALE:	CHKD.
S.Nzama	C.G	Sep 23	n.t.s	
DRAWING No.	SHEET:	REV.		
23023 - 407	3 of 3	0		
REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	13/09/23	SN
Ibuya Drawing No. : 21010_407_0 Lyr:0:1:A3				

TITLE	NEWTON CONVERSION TO LARGE CLINIC
DRAWING TITLE:	DB-F3/DB-F3-E/DB-F3-UPS
	Single Line Diagram

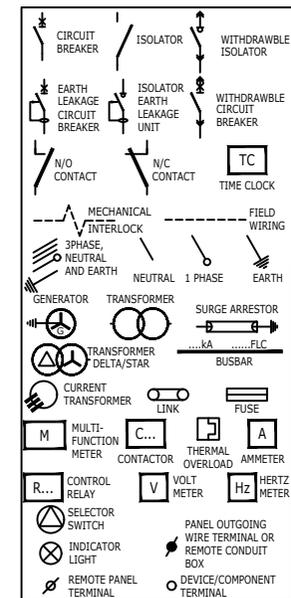
FIRST FLOOR  
BAKER TILLY HOUSE  
18 WESTVILLE ROAD  
WESTVILLE, 3629  
PO BOX 1469  
WESTVILLE, 3630

TEL: +27 (031) 2667332  
E-mail: ibuya@ibuya.co.za



- NOTES**
- 1) DROPPERS/TAILS TO BE RATED FOR FULL FLT LET THROUGH.
  - 2) HARNESSSED WIRING TO BE DERATED.
  - 3) TUFFNOL BRACES ARE NOT TO BE USED ABOVE 10kA.
  - 4) COPPER BUSBARS TO BE CONTINUOUS RATED.
  - 5) SUFFICIENT SPACE REQUIRED FOR SAFE ACCESS FOR REWIRING.
  - 6) EARTH AND NEUTRAL BARS TO BE EASILY ACCESSIBLE.
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  - 8) PHASING RWB, TOP TO BOTTOM, LEFT TO RIGHT, BACK TO FRONT.
  - 9) INTERNAL TEMP TO BE LIMITED TO 5° ABOVE AMBIANT, MAX 40°C.
  - 10) ALL CIRCUITS TO BE LABELED.
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  - 13) EACH CIRCUIT TO BE LABELED WITH DETAILED DESCRIPTION OF CONNECTED DEVICE.
  - 14) EXTERNAL EARTH STUD MOUNTED ADJACENT CABLE ENTRY.

- INCOMING CABLE**
- OUTGOING CIRCUITS**
- COLOUR**
- MOUNTING ACCESS**
- PROTECTIVE DEVICES**
- CONTACTORS**
- METERS**
- 1) CLASS 2 SURGE ARRESTOR**
- BOTTOM
  - TOP/BOTTOM
  - NORMAL - WHITE
  - ESSENTIAL-RED
  - UPS-BLUE
  - SURFACE
  - FRONT
  - SCHNEIDER
  - ACB's (1250A-4000A) -MASTERPACT NW
  - MCCB'S(800A - 1000A) -COMPACT NS
  - MCCB'S(60A-630A) -EASYPACT CSV
  - MCB's -MULTI 9, TYPE 2
  - AC3 HEAVY DUTY
  - SCHNEIDER



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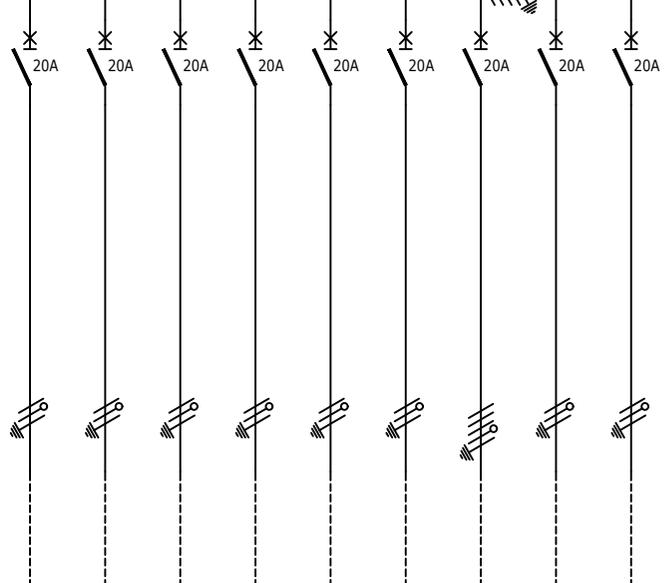
ENGINEER	DRAWN	DATE	SCALE:	CHKD.	TITLE
S.Nzama	C.G	Sep 23	n.t.s PAPER SIZE: A3		Newtown Conversion to Large Clinic
DRAWING No.	SHEET:	REV.	DRAWING TITLE:		
23023 - 408	1 of 4	0	DB-F4/DB-F4-E/DB-F4-UPS		
0	Original Issue	CG	13/09/23	SM	Single Line Diagram
REV	DESCRIPTION	BY	DATE	CHKD.	Ibuya Drawing No. : 21010_408_0
					Lyr: 0:1:A3

**IBUYA** Consulting Engineers  
"POWERING DEVELOPMENT"

FIRST FLOOR  
BAKER TILLY HOUSE  
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WESTVILLE, 3629  
PO BOX 1469  
WESTVILLE, 3630

TEL: +27 (031) 2667332  
E-mail: ibuya@ibuya.co.za

FROM SHEET 1 60A BUSBAR, 5kA FAULT LEVEL



FIELD  
CIRCUIT No.  
PHASE

E6 W  
E7 B  
E8 R  
E9 W  
E10 B  
E11 R  
E12 W  
E13 B  
E R

DESIGNATION

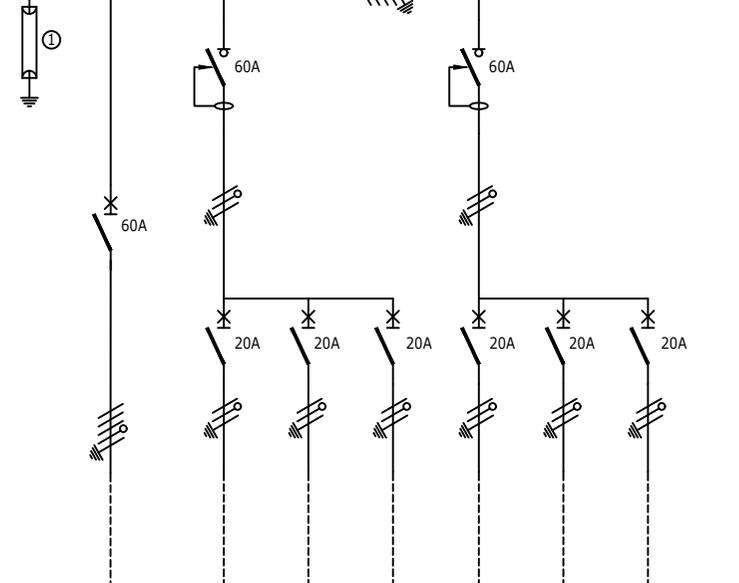
EQUIPMENT  
EQUIPMENT  
EQUIPMENT  
EQUIPMENT  
EQUIPMENT  
EQUIPMENT  
EQUIPMENT  
SPARE  
SPARE

WIRING



LOAD (AMPS)  
No. OF POINTS  
CABLE No.

60A BUSBAR, 5kA FAULT LEVEL TO SHEET 3



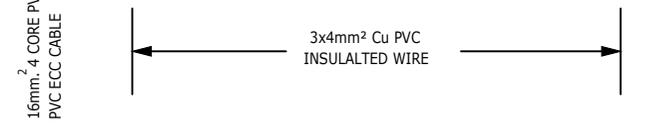
FIELD  
CIRCUIT No.  
PHASE

P1 R  
P2 R  
P3 R  
P4 W  
P5 W  
P6 W

DESIGNATION

FROM MAIN LV ESSENTIAL PANEL  
SOCKET OUTLETS  
SOCKET OUTLETS  
SOCKET OUTLETS  
SOCKET OUTLETS  
SOCKET OUTLETS  
SOCKET OUTLETS

WIRING



LOAD (AMPS)  
No. OF POINTS  
CABLE No.

P020

MECHANICAL BARRIER

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ENGINEER	DRAWN	DATE	SCALE:	CHKD.
S.Nzama	C.G	Sep 23	n.t.s	
DRAWING No.			SHEET:	REV.
23023 - 408			2 of 4	0
REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	13/09/23	SN
Ibuya Drawing No. : 21010_408_0		Lyr:0:1:A3		

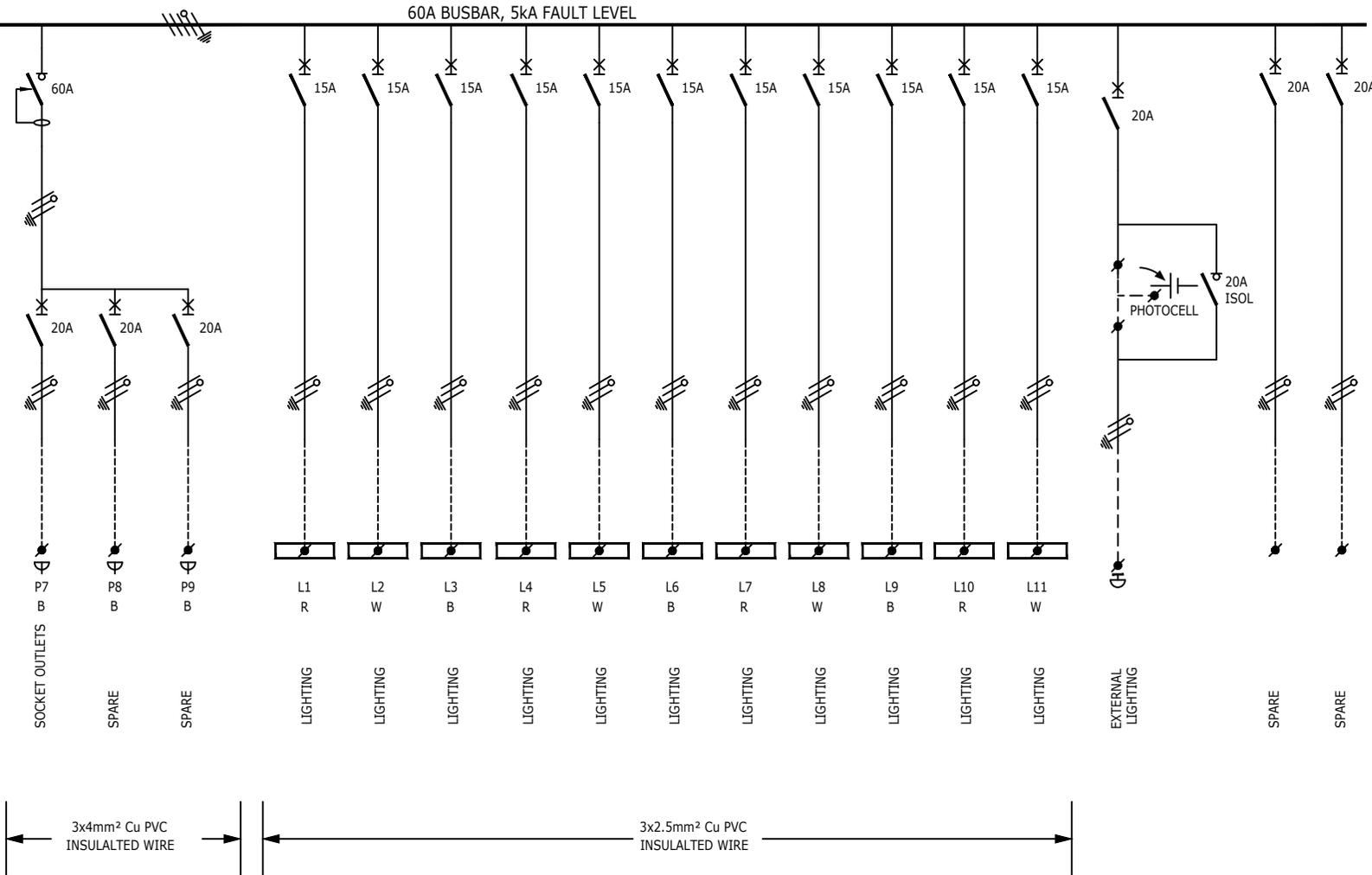
TITLE	NEWTON CONVERSION TO LARGE CLINIC
DRAWING TITLE:	DB-F4/DB-F4-E/DB-F4-UPS
	Single Line Diagram

FIRST FLOOR  
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WESTVILLE, 3630

TEL: +27 (0)31 2667332  
E-mail: ibuya@ibuya.co.za

FROM SHEET 2

60A BUSBAR, 5ka FAULT LEVEL



MECHANICAL BARRIER

MECHANICAL BARRIER

FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

WIRING

LOAD (AMPS)  
No. OF POINTS  
CABLE No.

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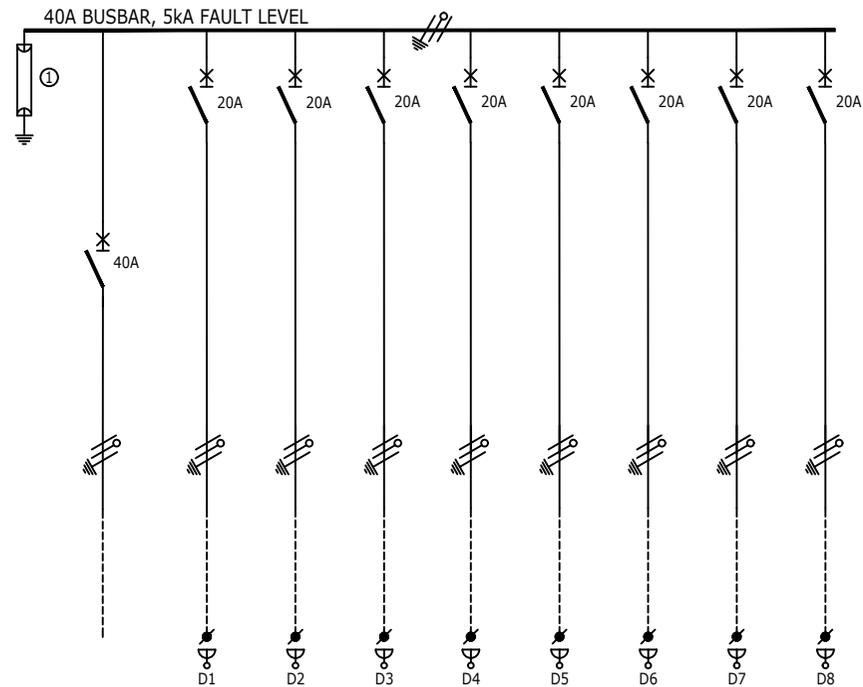
ENGINEER	DRAWN	DATE	SCALE	CHKD.
S.Nzama	C.G	Sep 23	n.t.s	
DRAWING No.			SHEET	REV.
23023 - 408			3 of 4	0
REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	13/09/23	SN
Ibuya Drawing No. : 21010_408_0		Lyr: 0:1:A3		

TITLE	NEWTON CONVERSION TO LARGE CLINIC
DRAWING TITLE:	DB-F4/DB-F4-E/DB-F4-UPS
	Single Line Diagram



FIRST FLOOR  
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E-mail: ibuya@ibuya.co.za



FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

WIRING

LOAD (AMPS)  
No. OF POINTS  
CABLE No.

INCOMER FROM  
UPS DB  
  
1.0mm<sup>2</sup> 2 CORE PVC SWA  
PVC ECC CABLE

3x4mm<sup>2</sup> Cu PVC  
INSULATED WIRE

P029

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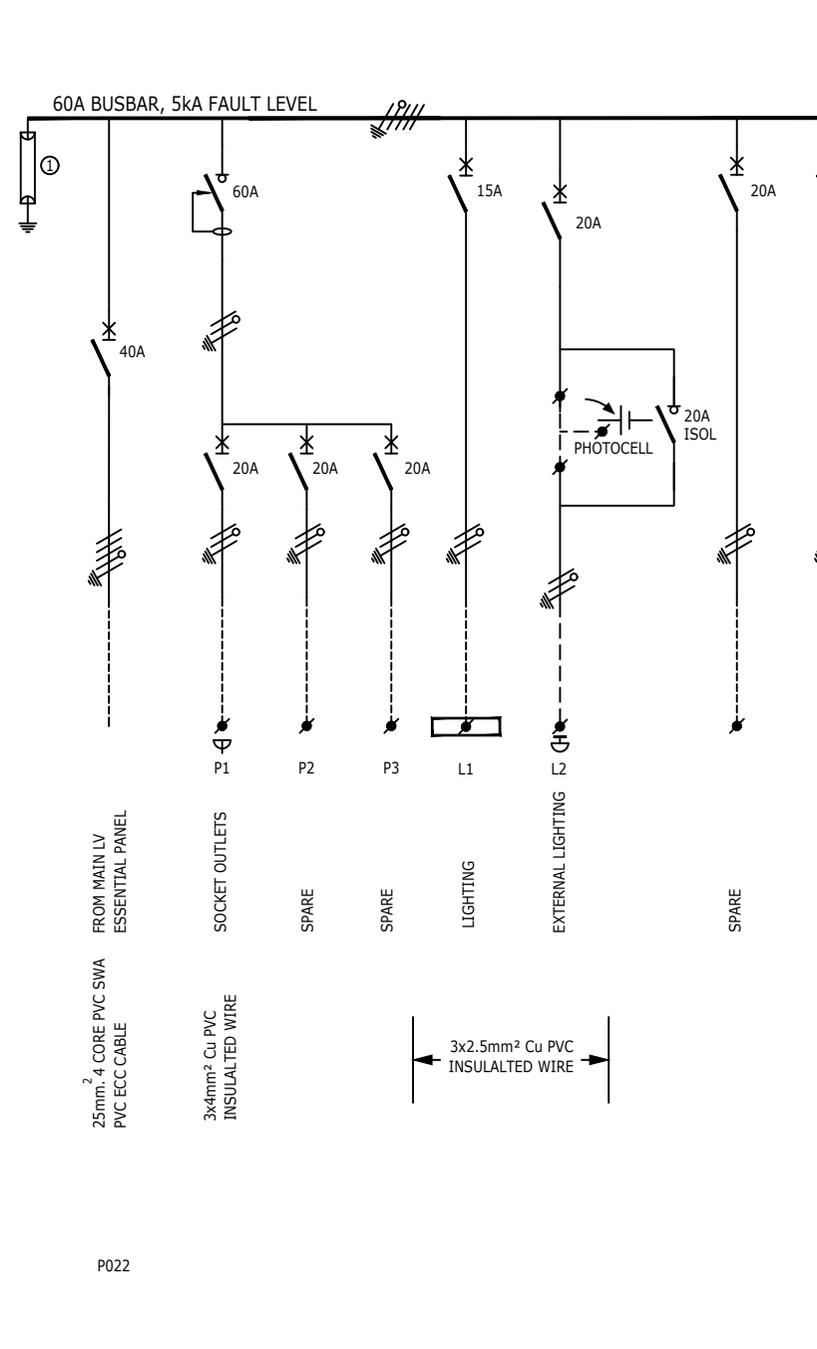
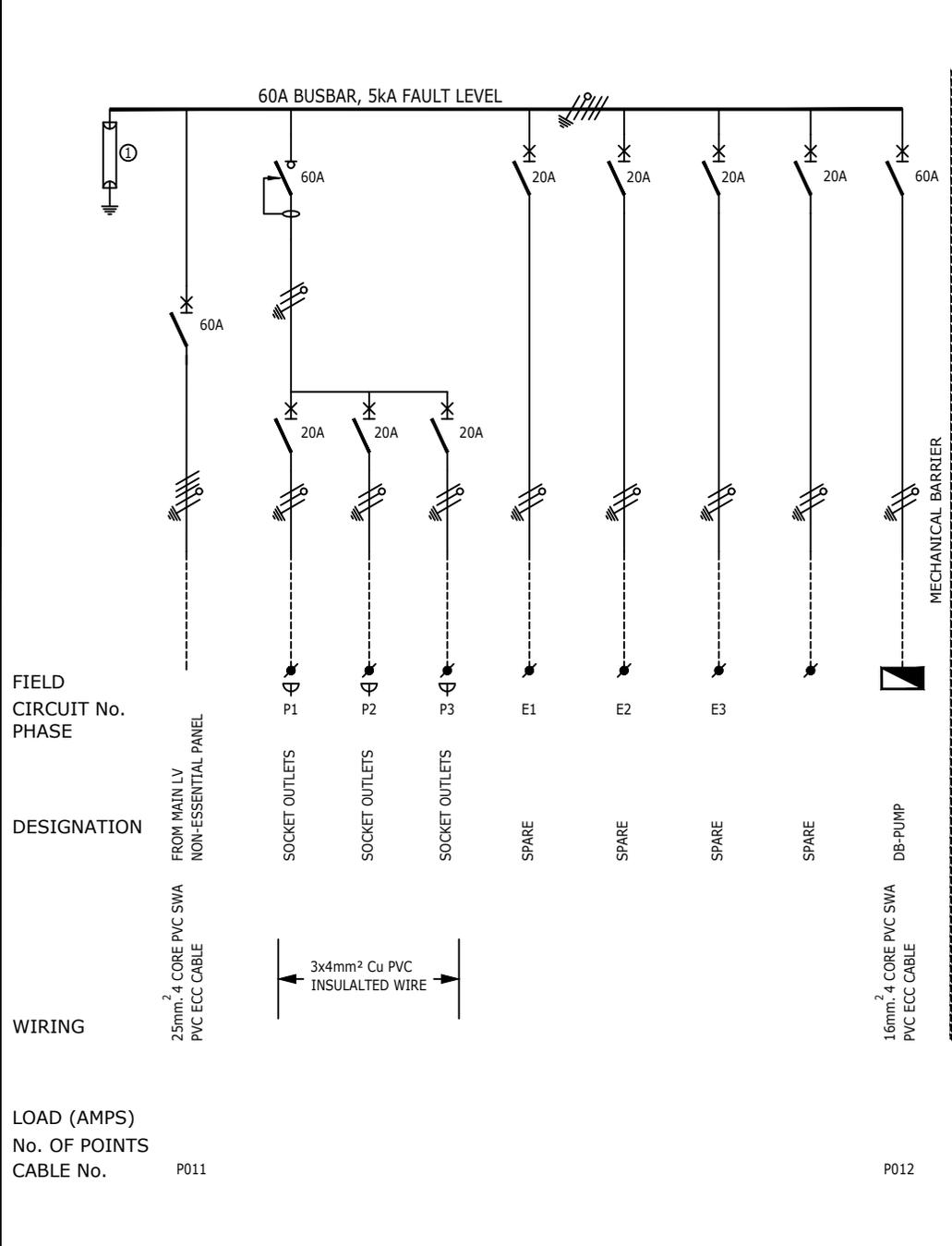
ENGINEER	DRAWN	DATE	SCALE:	CHKD.	TITLE
S.Nzama	C.G	Sep 23	n.t.s		Newtown Conversion to Large Clinic
DRAWING No.	SHEET:	REV.	PAPER SIZE:		DRAWING TITLE:
23023 - 408	4 of 4	0	A3		DB-F4/DB-F4-E/DB-F4-UPS
IBUYA Drawing No. : 21010_408_0	Lyr:0:1:A3				Single Line Diagram

REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	13/09/23	SN

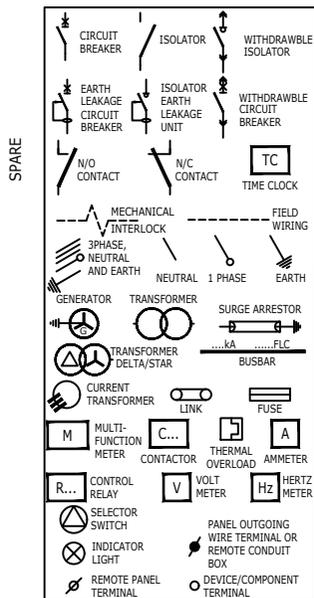


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- COMING CABLE**  
OUTGOING CIRCUITS COLOUR
- BOTTOM
  - TOP/BOTTOM
  - NORMAL - WHITE
  - ESSENTIAL-RED
- MOUNTING ACCESS**  
-FRONT
- PROTECTIVE DEVICES**
- SCHNEIDER
  - ACB's (1250A-4000A) -MASTERPACT NW
  - MCCB'S(800A - 1000A) -COMPACT NS
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  - MCB'S -MULTI 9, TYPE 2
  - CONTACTORS -AC3 HEAVY DUTY
  - SCHNEIDER
- CONTACTORS**
- METERS**
- 1) CLASS 2 SURGE ARRESTOR



ENGINEER	DRAWN	DATE	SCALE:	CHKD.
S.Nzama	C.G	Sep 23	n.t.s PAPER SIZE: A3	
DRAWING No.	SHEET:	REV.		
23023 - 409	1 of 1	0		
0	Original Issue	CG	4/9/23	
REV	DESCRIPTION	BY	DATE	CHKD.
	Ibuya Drawing No. :			Lyr: 0:1:A3

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**TITLE**  
Newtown Conversion to Large Clinic

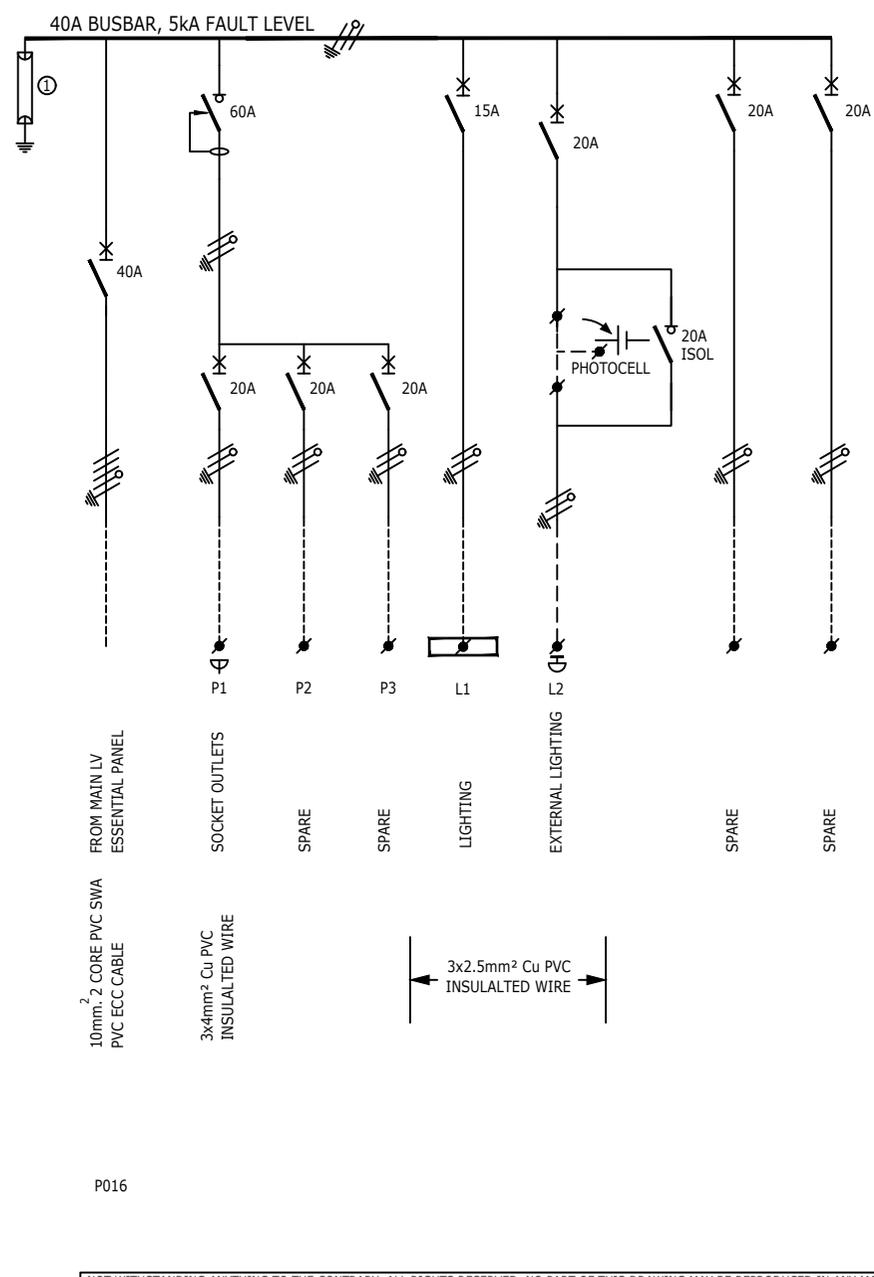
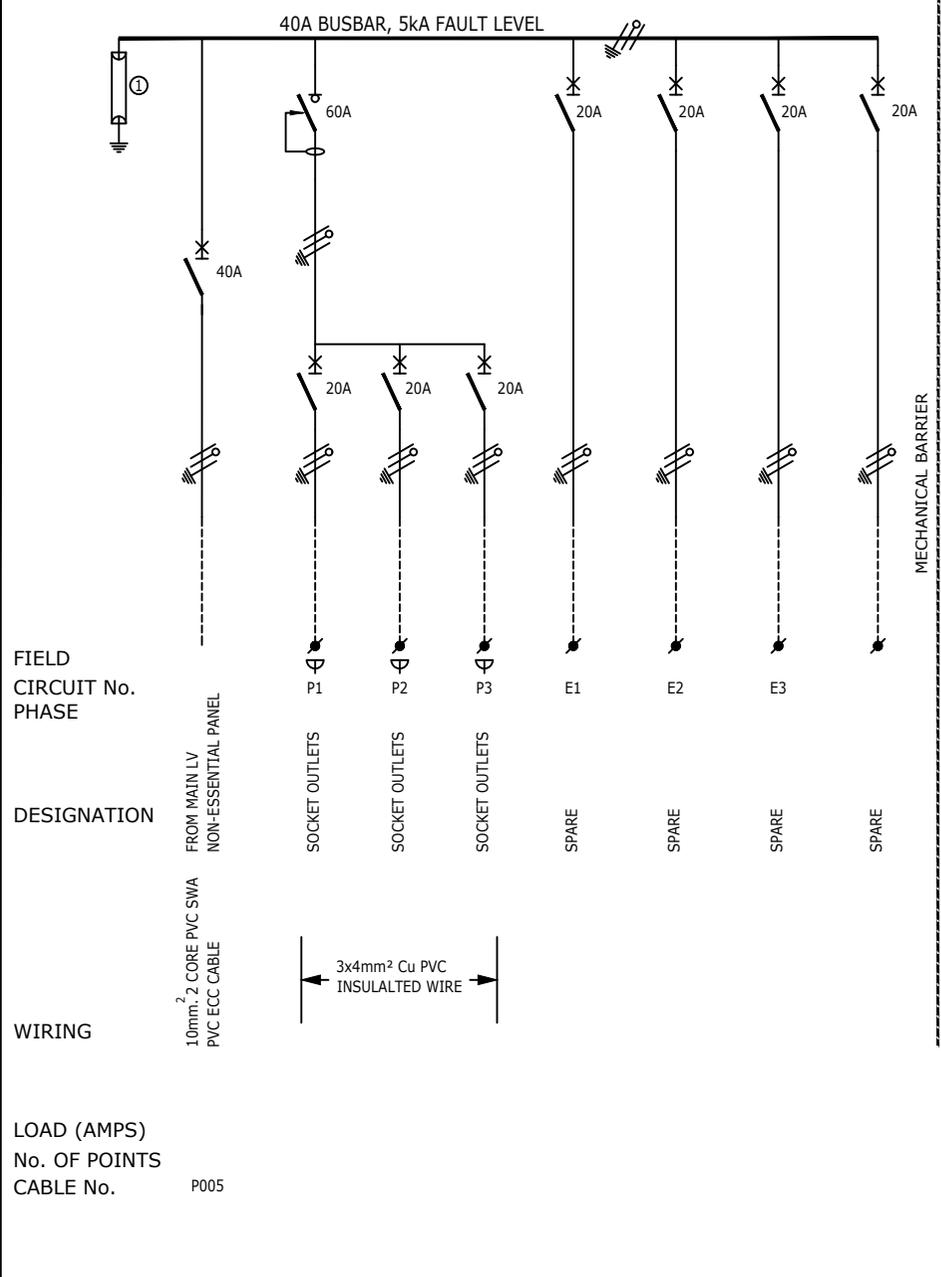
**DRAWING TITLE:**  
DB-S/DB-S-E

**Single Line Diagram**

**IBUYA Consulting Engineers**  
"POWERING DEVELOPMENT"

FIRST FLOOR  
BAKER TILLY HOUSE  
18 WESTVILLE ROAD  
WESTVILLE, 3629  
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- INCOMING CABLE** - BOTTOM  
**OUTGOING CIRCUITS** - TOP/BOTTOM  
**COLOUR** - NORMAL - WHITE  
 ESSENTIAL-RED
- MOUNTING ACCESS** - FRONT  
**PROTECTIVE DEVICES** - SCHNEIDER  
 ACB'S (1250A-4000A) - MASTERPACT NW  
 MCCB'S(800A - 1000A) - COMPACT NS  
 MCCB'S(60A-630A) - EASYPACT CSV  
 MCB'S - MULTI 9, TYPE 2  
**CONTACTORS** - AC3 HEAVY DUTY  
**METERS** - SCHNEIDER
- 1) CLASS 2 SURGE ARRESTOR

**FIELD**  
**CIRCUIT No.**  
**PHASE**

**DESIGNATION**

**WIRING**

**LOAD (AMPS)**  
**No. OF POINTS**  
**CABLE No.**

FROM MAIN LV NON-ESSENTIAL PANEL  
 FROM MAIN LV ESSENTIAL PANEL

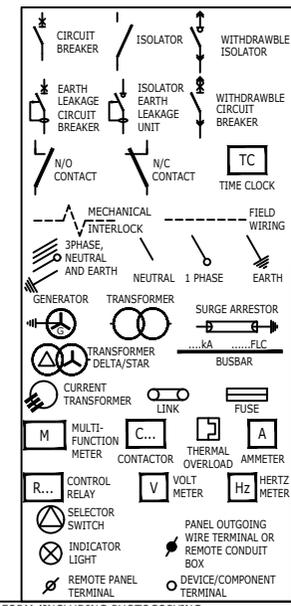
SOCKET OUTLETS  
 SOCKET OUTLETS  
 SOCKET OUTLETS  
 SPARE  
 SPARE  
 SPARE  
 SPARE

SOCKET OUTLETS  
 SPARE  
 SPARE  
 LIGHTING  
 EXTERNAL LIGHTING  
 SPARE  
 SPARE

10mm<sup>2</sup> 2 CORE PVC SWA PVC ECC CABLE  
 3x4mm<sup>2</sup> Cu PVC INSULATED WIRE

10mm<sup>2</sup> 2 CORE PVC SWA PVC ECC CABLE  
 3x4mm<sup>2</sup> Cu PVC INSULATED WIRE

P005  
 P016



ENGINEER	DRAWN	DATE	SCALE:	CHKD.
S.Nzama	C.G	Sep 23	n.t.s PAPER SIZE: A3	
DRAWING No.	SHEET:	REV.		
23023 - 410	1 of 1	0		
REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	13/09/23	SN
Ibuya Drawing No. : Lyr: 0:1:A3				

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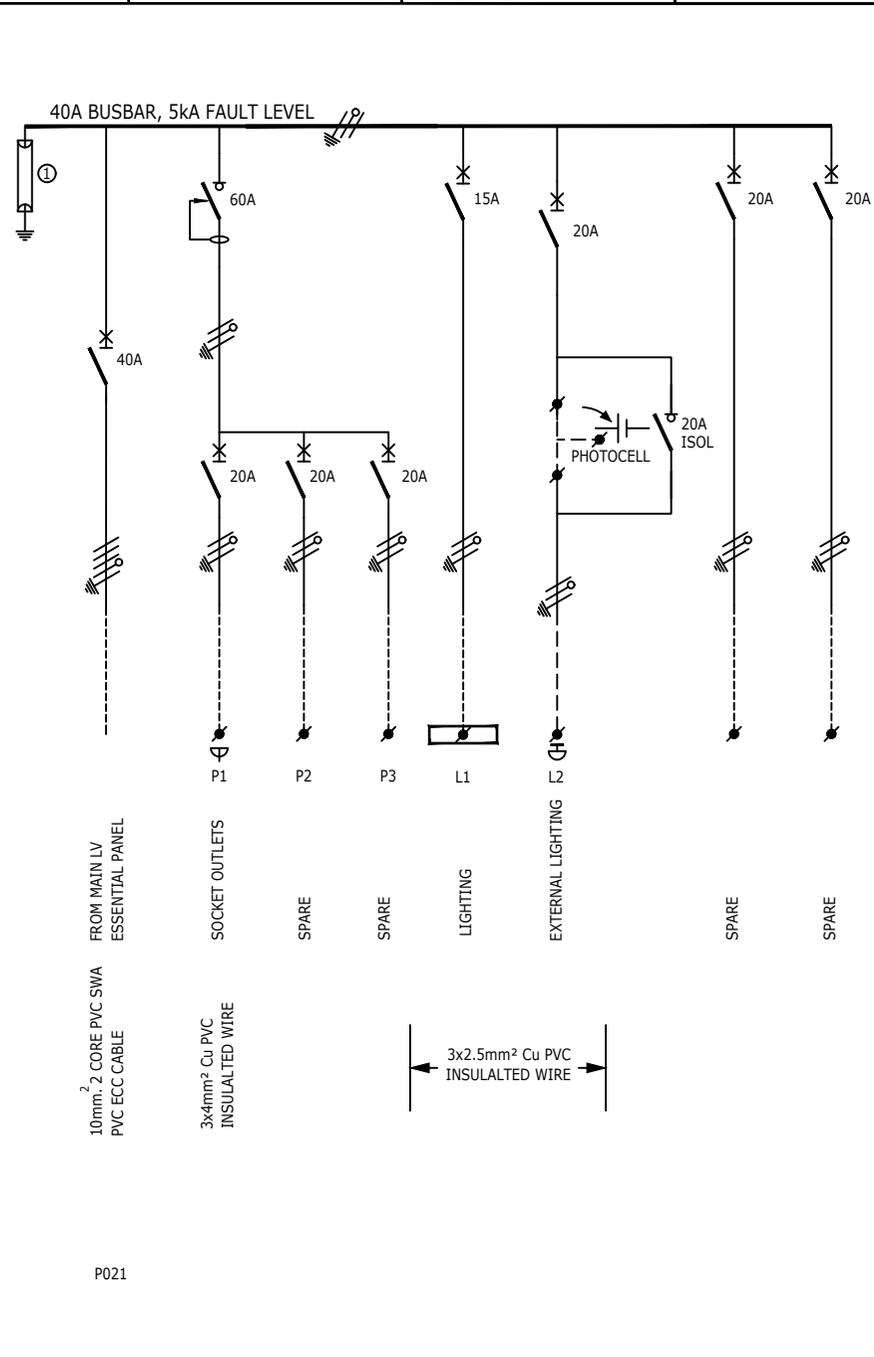
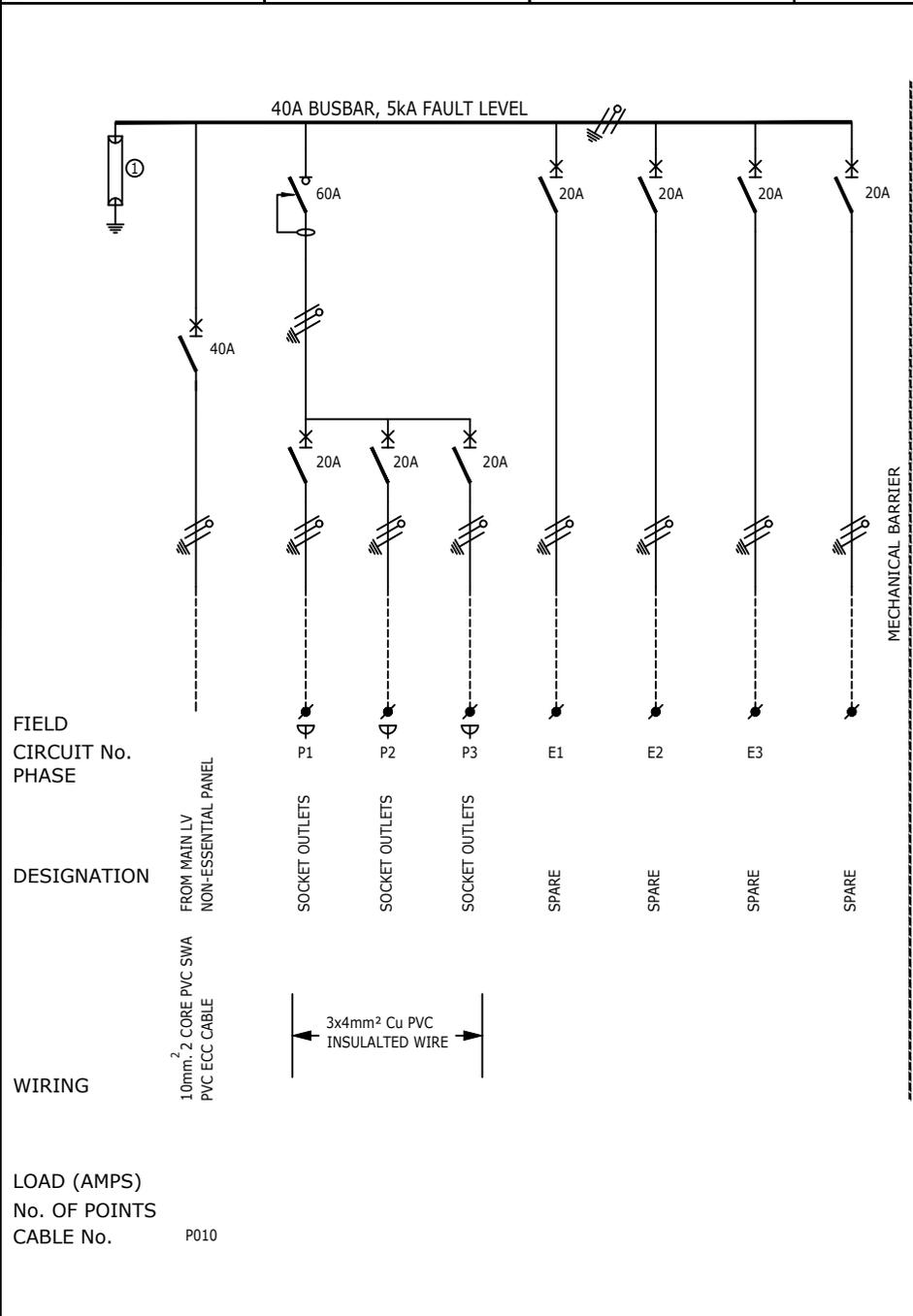
**NEWTON CONVERSION TO LARGE CLINIC**

**DB-GH1/DB-GH1-E**  
**Single Line Diagram**

**IBUYA** Consulting Engineers  
 "POWERING DEVELOPMENT"

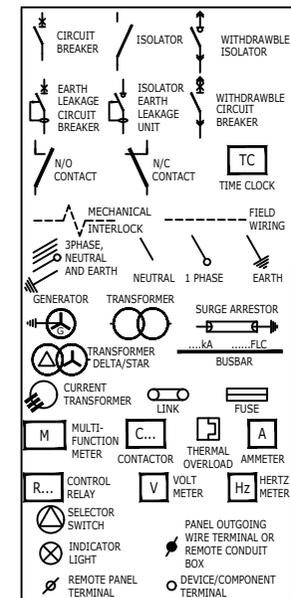
FIRST FLOOR  
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- INCOMING CABLE** - BOTTOM  
**OUTGOING CIRCUITS** - TOP/BOTTOM  
**COLOUR** - NORMAL - WHITE  
 ESSENTIAL-RED
- MOUNTING ACCESS** - FRONT  
**PROTECTIVE DEVICES** - SCHNEIDER  
 ACB'S (1250A-4000A) - MASTERPACT NW  
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 MCB'S - MULTI 9, TYPE 2  
**CONTACTORS** - AC3 HEAVY DUTY  
**METERS** - SCHNEIDER
- 1) CLASS 2 SURGE ARRESTOR



ENGINEER	DRAWN	DATE	SCALE:	CHKD.
S.Nzama	C.G	Sep 23	n.t.s PAPER SIZE: A3	
DRAWING No.	SHEET:	REV.		
23023 - 411	1 of 1	0		
0	Original Issue	CG	13/09/23	SN
REV	DESCRIPTION	BY	DATE	CHKD.
	Ibuya Drawing No. :			Lyr: 0:1:A3

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**ENGINEER** S.Nzama  
**DRAWN** C.G  
**DATE** Sep 23  
**SCALE:** n.t.s  
**PAPER SIZE:** A3  
**CHKD.**

**TITLE** Newtown Conversion to Large Clinic

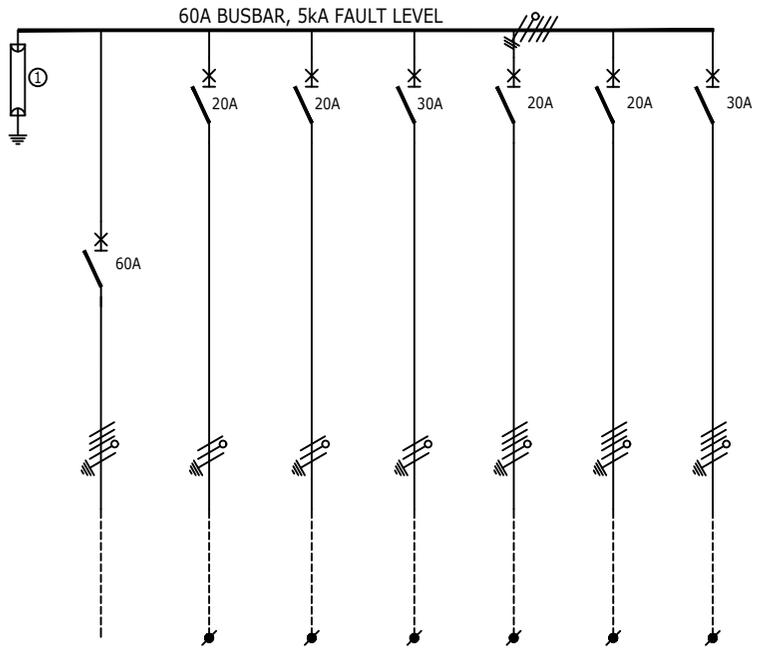
**DRAWING TITLE:** DB-GH2/DB-GH2-E Single Line Diagram

**IBUYA** Consulting Engineers  
 "POWERING DEVELOPMENT"

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 18 WESTVILLE ROAD  
 WESTVILLE, 3629  
 PO BOX 1469  
 WESTVILLE, 3630

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 E-mail: ibuya@ibuya.co.za

60A BUSBAR, 5kA FAULT LEVEL



FIELD  
CIRCUIT No.  
PHASE

DESIGNATION

WIRING

LOAD (AMPS)  
No. OF POINTS  
CABLE No.

FROM MAIN LV  
NON-ESSENTIAL PANEL

16mm<sup>2</sup> 4 CORE PVC SWA  
PVC ECC CABLE

P012

E1  
SPARE

E2  
SPARE

E3  
SPARE

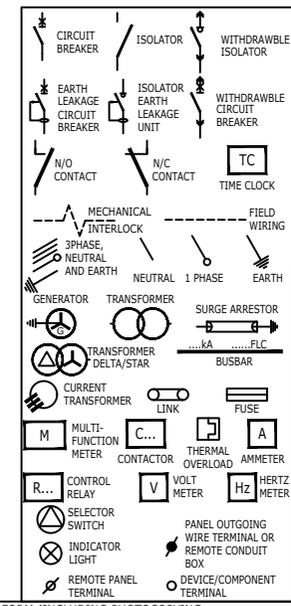
E4  
SPARE

E5  
SPARE

E6  
SPARE

- NOTES**
- 1) DROPPERS/TAILS TO BE RATED FOR FULL Pt LET THROUGH.
  - 2) HARNESSSED WIRING TO BE DERATED.
  - 3) TUFFENOL BRACES ARE NOT TO BE USED ABOVE 10kA.
  - 4) COPPER BUSBARS TO BE CONTINUOUS RATED.
  - 5) SUFFICIENT SPACE REQUIRED FOR SAFE ACCESS FOR REWIRING.
  - 6) EARTH AND NEUTRAL BARS TO BE EASILY ACCESSIBLE.
  - 7) ALL CIRCUIT BREAKERS TO BE FITTED WITH TERMINAL SHIELD ON LIVE AND LOAD SIDES.
  - 8) ENCLOSURE TO BE IP54
  - 9) PHASING RWB, TOP TO BOTTOM, LEFT TO RIGHT, BACK TO FRONT.
  - 10) INTERNAL TEMP TO BE LIMITED TO 5° ABOVE AMBIANT, MAX 40°C.
  - 11) ALL CIRCUITS TO BE LABELED.
  - 12) 25% SPARE SPACE. SPARE SPACES ARE TO BE FITTED WITH COPPER BUSBAR TAILS CONNECTED TO DROPPER BUSBARS TO ALLOW INSTALLATION OF CIRCUIT BREAKERS WITH A MINIMAL SHUTDOWN PERIOD.
  - 13) DB TO BE FITTED WITH A4 LEGEND CARD HOLDER WITH STANDARD IBUYA A4 LEGEND CARD.
  - 14) EACH CIRCUIT TO BE LABELED WITH DETAILED DESCRIPTION OF CONNECTED DEVICE.
  - 15) EXTERNAL EARTH STUD MOUNTED ADJACENT CABLE ENTRY.

- INCOMING CABLE -BOTTOM  
OUTGOING CIRCUITS -TOP/BOTTOM  
COLOUR -NORMAL - WHITE
- MOUNTING -SURFACE  
ACCESS -FRONT
- PROTECTIVE DEVICES -SCHNEIDER  
ACB's (1250A-4000A) -MASTERPACT NW  
MCCB'S(800A - 1000A) -COMPACT NS  
MCCB'S(60A-630A) -EASYPACT CSV  
MCB's -MULTI 9, TYPE 2
- CONTACTORS -AC3 HEAVY DUTY  
METERS -SCHNEIDER
- 1) CLASS 2 SURGE ARRESTOR



ENGINEER	DRAWN	DATE	SCALE:	CHKD.
S.Nzama	C.G	Sep 23	n.t.s PAPER SIZE: A3	
DRAWING No.	SHEET:	REV.		
23023 - 412	1 of 1	0		
REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	4/9/23	
Ibuya Drawing No. : Lyr: 0:1:A3				

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TITLE  
**Newtown Conversion to Large Clinic**

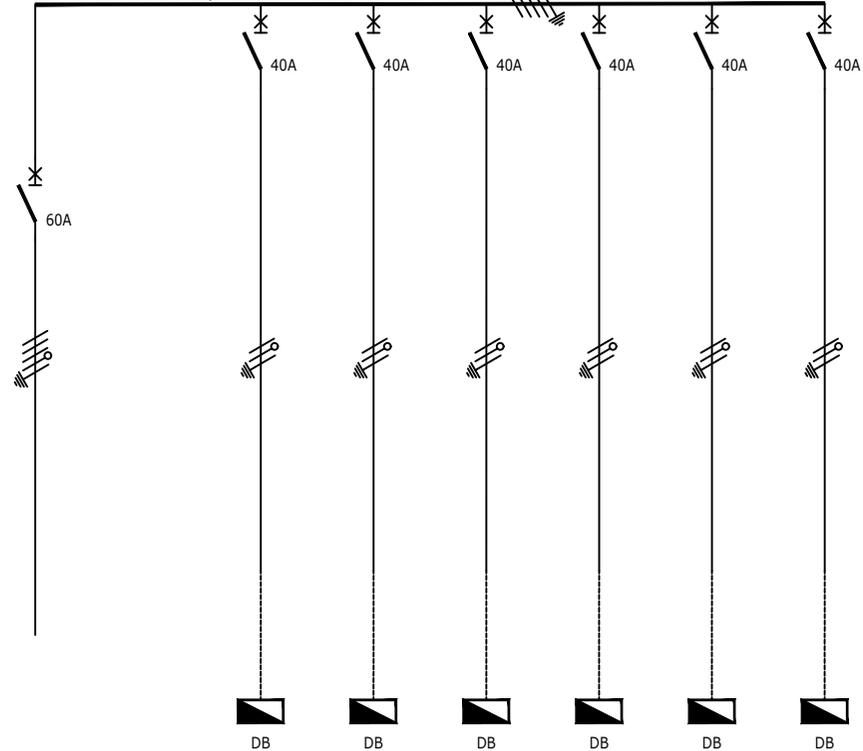
DRAWING TITLE:  
**DB-Pump**

Single Line Diagram

FIRST FLOOR  
BAKER TILLY HOUSE  
18 WESTVILLE ROAD  
WESTVILLE, 3629  
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WESTVILLE, 3630

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E-mail: ibuya@ibuya.co.za

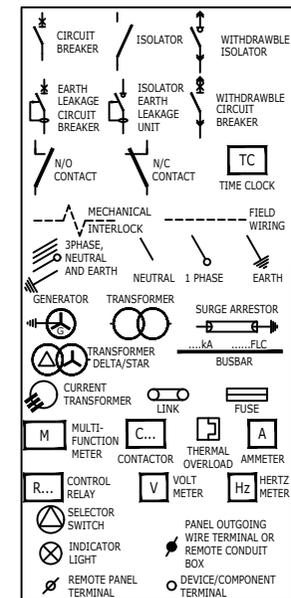
60 AMP BUSBAR, 5ka FAULT LEVEL



FIELD CIRCUIT No. PHASE	DESIGNATION	WIRING	LOAD (AMPS)	No. OF POINTS	CABLE No.
	INCOMER (FROM UPS1)	16mm <sup>2</sup> 4 CORE Cu PVC SWA PVC ECC CABLE			P023
	DB-G2-UPS	10mm <sup>2</sup> 2 CORE Cu PVC SWA PVC ECC CABLE	XX	X	P024
	DB-G3-UPS		XX	X	P025
	DB-F1-UPS		XX	X	P026
	DB-F2-UPS		XX	X	P027
	DB-F3-UPS		XX	X	P028
	DB-F4-UPS		XX	X	P029

- NOTES**
- 1) DROPPERS/TAILS TO BE RATED FOR FULL P1 LET THROUGH.
  - 2) HARNESSED WIRING TO BE DERATED.
  - 3) TUFFNOL BRACES ARE NOT TO BE USED ABOVE 10kA.
  - 4) COPPER BUSBARS TO BE CONTINUOUS RATED.
  - 5) SUFFICIENT SPACE REQUIRED FOR SAFE ACCESS FOR REWIRING.
  - 6) EARTH AND NEUTRAL BARS TO BE EASILY ACCESSIBLE.
  - 7) ALL CIRCUIT BREAKERS TO BE FITTED WITH TERMINAL SHIELD ON LIVE AND LOAD SIDES.
  - 8) ENCLOSURE TO BE IP54.
  - 9) PHASING RWB, TOP TO BOTTOM, LEFT TO RIGHT, BACK TO FRONT.
  - 10) INTERNAL TEMP TO BE LIMITED TO 5° ABOVE AMBIANT, MAX 40°C.
  - 11) ALL CIRCUITS TO BE LABELED.
  - 12) 25% SPARE SPACE. SPARE SPACES ARE TO BE FITTED WITH COPPER BUSBAR TAILS CONNECTED TO DROPPER BUSBARS TO ALLOW INSTALLATION OF CIRCUIT BREAKERS WITH A MINIMAL SHUTDOWN PERIOD.
  - 13) DB TO BE FITTED WITH A4 LEGEND CARD HOLDER WITH STANDARD IBUYA A4 LEGEND CARD.
  - 14) EACH CIRCUIT TO BE LABELED WITH DETAILED DESCRIPTION OF CONNECTED DEVICE.
  - 15) EXTERNAL EARTH STUD MOUNTED ADJACENT CABLE ENTRY.

- INCOMING CABLE -BOTTOM  
OUTGOING CIRCUITS -TOP/BOTTOM  
COLOUR -NORMAL - WHITE
- MOUNTING -SURFACE  
ACCESS -FRONT
- PROTECTIVE DEVICES -SCHNEIDER  
ACB's (1250A-4000A) -MASTERPACT NW  
MCCB'S(800A - 1000A) -COMPACT NS  
MCCB'S(60A-630A) -EASYPACT CSV  
MCB's -MULTI 9, TYPE 2  
CONTACTORS -AC3 HEAVY DUTY  
METERS -SCHNEIDER
- 1) CLASS 2 SURGE ARRESTOR



ENGINEER	DRAWN	DATE	SCALE	CHKD.
S.Nzama	C.G	Sep 23	n.t.s PAPER SIZE: A3	
DRAWING No.			SHEET	REV.
23023 - 413			1 of 1	0
0	Original Issue	CG	4/9/23	
REV	DESCRIPTION	BY	DATE	CHKD.
	Ibuya Drawing No. :			Lyr: 0:1:A3

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**NEWTON CONVERSION TO LARGE CLINIC**

**DB-UPS**

**Single Line Diagram**

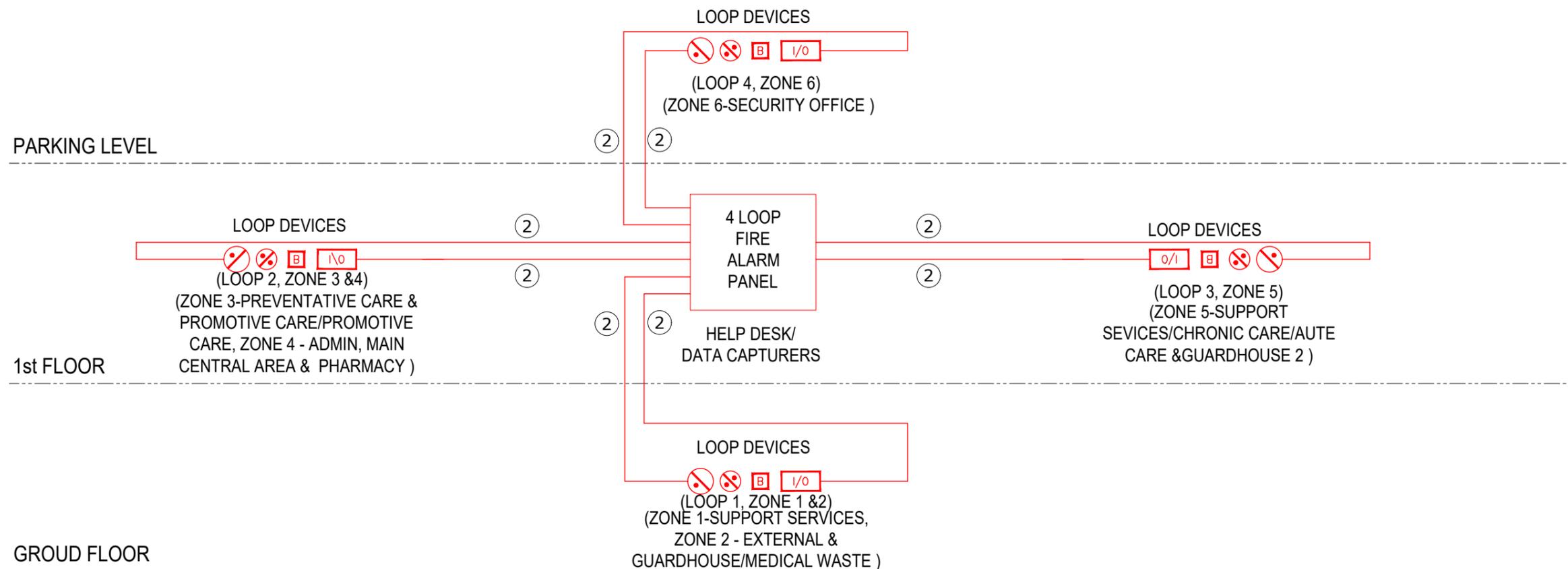
**IBUYA** Consulting Engineers  
"POWERING DEVELOPMENT"

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E-mail: ibuya@ibuya.co.za

NOTES:

- ① I/O FOR HVAC PLANT INTERFACE
- ② PH120 CABLE



REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	4/9/23	

ENGINEER	DRAWN	DATE:	SCALE:	CHKD.
M.Kambaran	C.G	Sep 23	n.t.s	
DRAWING No.		SHEET:	REV.	
23023 - 500		1 of 1	0	
Ibuya Drawing No. : 21010_404_0 Lyr: 0:1:A3				

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PROJECT:	Newtown Conversion to Large Clinic
DRAWING TITLE:	Smoke Detection Schematic Single Line Diagram

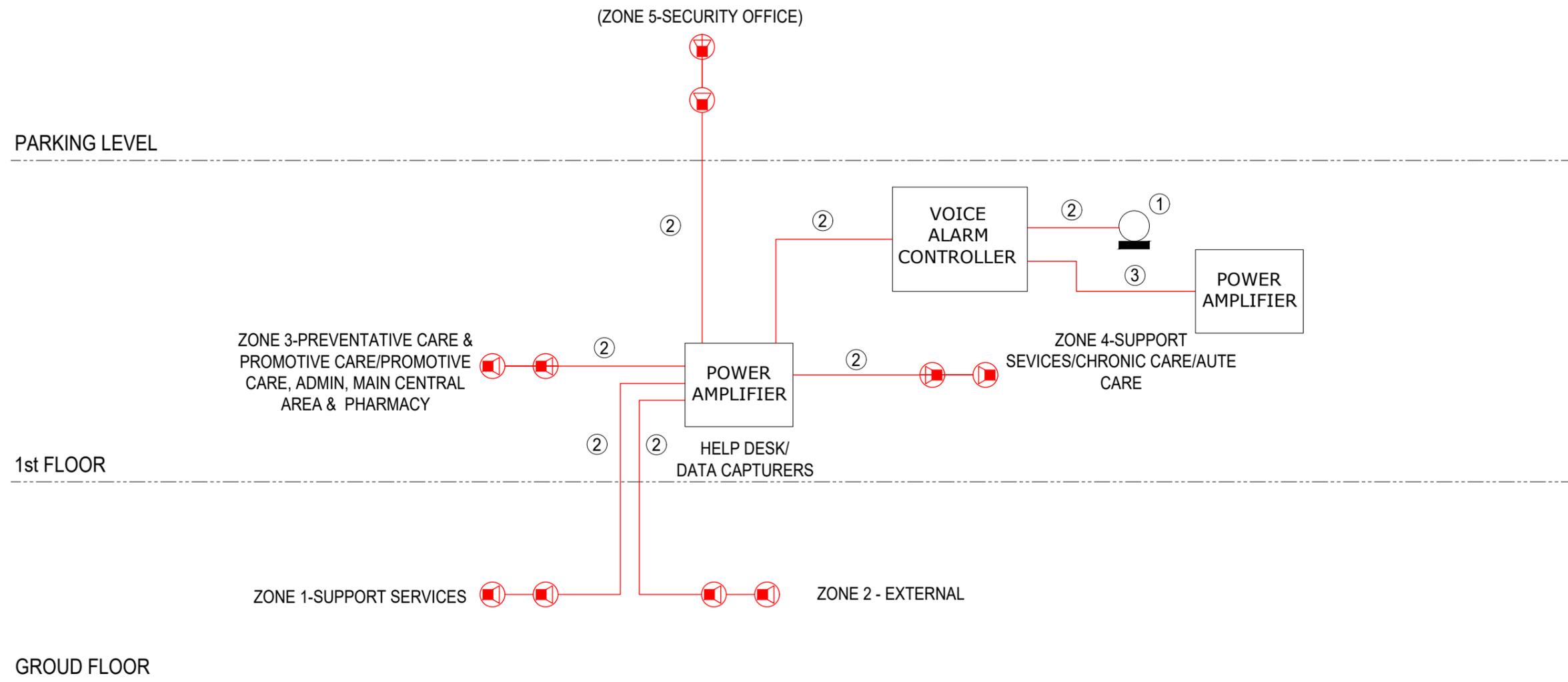


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E-mail: ibuya@ibuya.co.za

NOTES:

- ① Desk mounted microphone
- ② PH120 cable
- ③ Link to fire panel



REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	4/9/23	

ENGINEER	DRAWN	DATE:	SCALE:	CHKD.
M.Kambaran	C.G	Sep 23	n.t.s	
DRAWING No.		SHEET:		REV.
23023 - 501		1 of 1		0
Ibuya Drawing No. : 21010_404_0 Lyr: 0:1:A3				

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PROJECT:	Newtown Conversion to Large Clinic
DRAWING TITLE:	Public Address Schematic Single Line Diagram

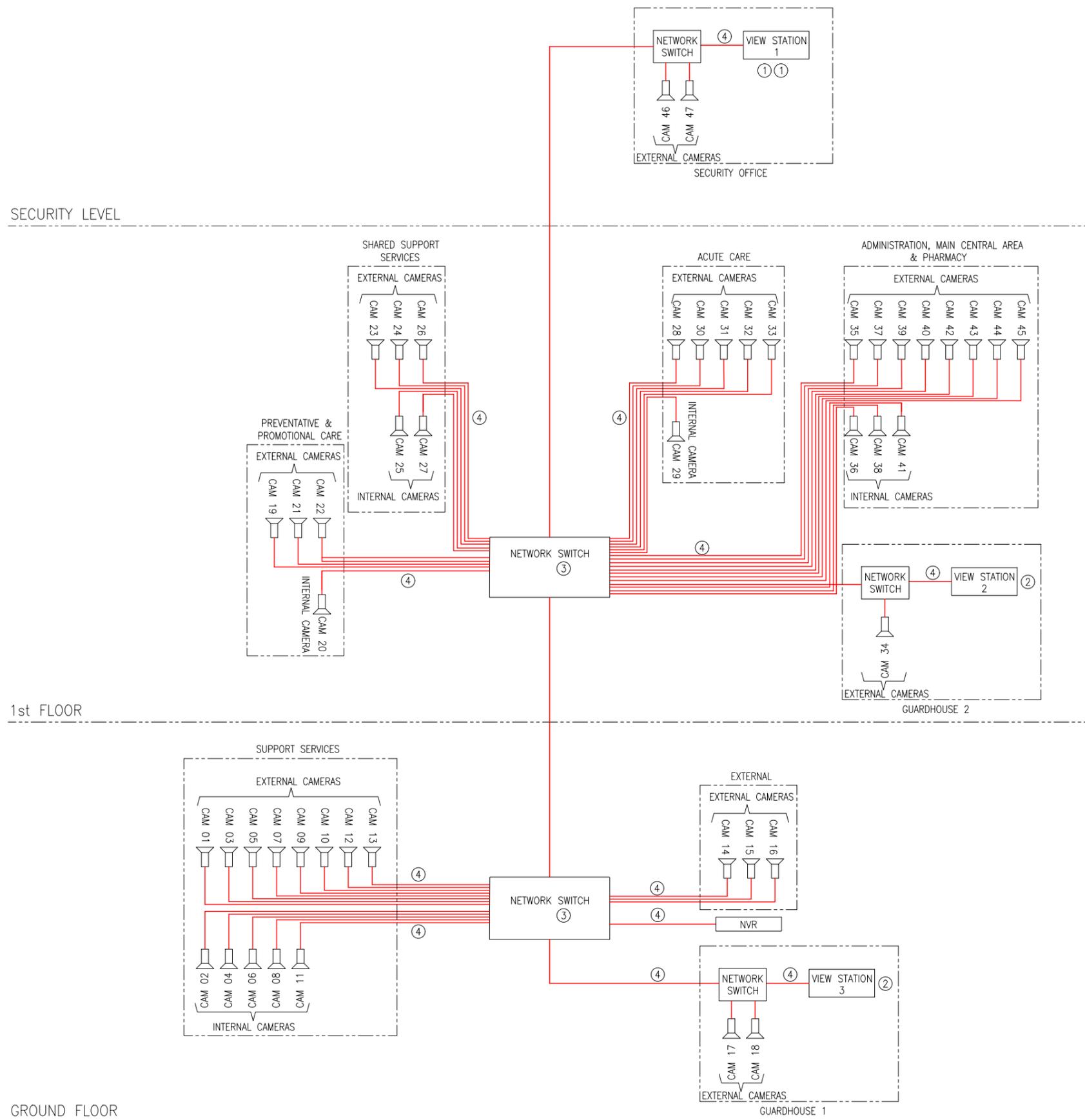


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 WESTVILLE, 3630

TEL: +27 (031) 2667332  
 E-mail: ibuya@ibuya.co.za

NOTES:

- ① 32" View Station
- ② 19" View Station
- ③ Single Mode Fibre Optic Cable (1Gig)
- ④ CAT 6A UTP Cable (1Gig Line)



REV	DESCRIPTION	BY	DATE	CHKD.
0	Original Issue	CG	4/9/23	

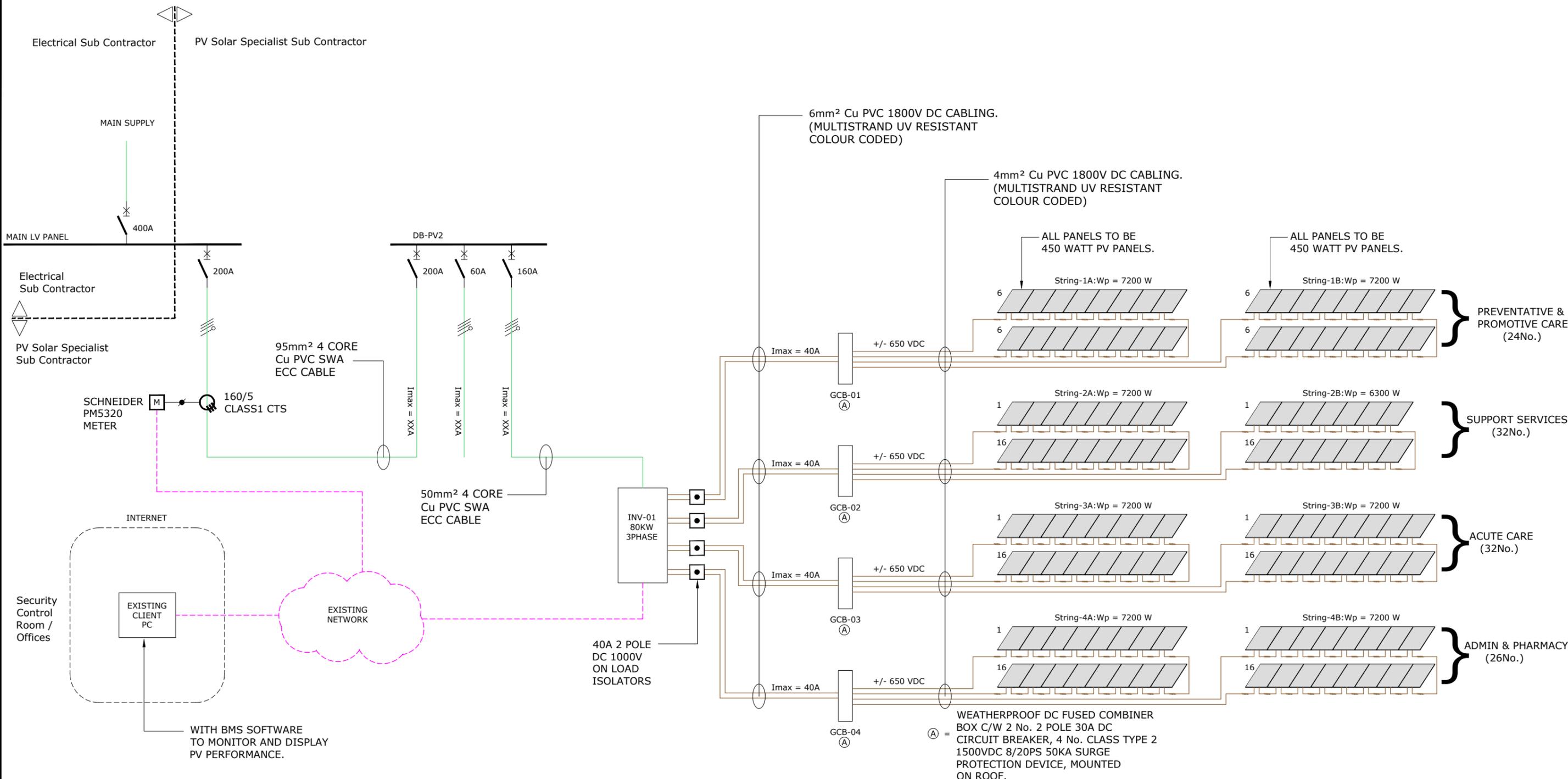
ENGINEER	DRAWN	DATE:	SCALE:	CHKD.	PROJECT:
M.Kambaran	C.G	Sep 23	n.t.s A3		Newtown Conversion to Large Clinic
DRAWING No.	SHEET:	REV.	DRAWING TITLE:		
23023 - 502	1 of 1	0	CCTV Schematic Single Line Diagram		
Ibuya Drawing No. : 21010_404_0			Lyr: 0:1:A3		



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- AC Cables
- DC Cables
- - - Ethernet Cable



REV	DESCRIPTION	BY	DATE	CHKD.	Ibuya Drawing No. : 21010_404_0	Lyr: 0:1:A3
0	Original Issue	CG	4/9/23			

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PROJECT: **Newtown Conversion to Large Clinic**

DRAWING TITLE: **Grid Tied Photovoltaic System-System Schematic**

ENGINEER: M.Kambaran  
 DRAWN: C.G  
 DATE: Sep 23  
 SCALE: n.t.s  
 PAPER SIZE: A3

DRAWING No. 23023 - 503  
 SHEET: 1 of 1  
 REV. 0

IBUYA Consulting Engineers  
 "POWERING DEVELOPMENT"

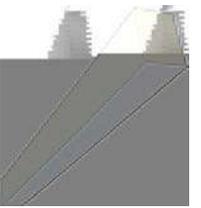
FIRST FLOOR  
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 E-mail: ibuya@ibuya.co.za

Cable No.	FROM	TO	Load Amps	N° of Cores	Size mm <sup>2</sup>	N° of Cables	Cable Type	Earth Cond. Type	Earth Cond. Size	Route Length M	Cond of Use	Defined Use	Upstream protective device rating	REMARKS
P001	Existing Kiosk (from Supply Authority)	DB-MLV		4	95	2	3	2E		30	D		400	
P002	DB-MLV	DB-G1 (Ground Floor)		2	16	1	3	2E		13	D		60	
P003	DB-MLV	DB-G2 (Ground Floor)		4	16	1	3	2E		25	D		60	
P004	DB-MLV	DB-G3 (Ground Floor)		2	16	1	3	2E		63	D		60	
P005	DB-MLV	DB-GH1 (Ground Floor)		2	16	1	3	2E		48	D		60	
P006	DB-MLV	DB-F1 (First Floor)		4	16	1	3	2E		17	D		60	
P007	DB-MLV	DB-F2 (First Floor)		4	16	1	3	2E		42	D		60	
P008	DB-MLV	DB-F3 (First Floor)		2	16	1	3	2E		54	D		60	
P009	DB-MLV	DB-F4 (First Floor)		4	16	1	3	2E		74	D		60	
P010	DB-MLV	DB-GH2 (First Floor)		2	16	1	3	2E		38	D		60	
P011	DB-MLV	DB-S (Security Floor)		4	25	1	3	2E		124	D		60	
P012	DB-S (Security Room)	DB-Pump		4	16	1	3	2E		12	D		60	
P013	DB-MLV-E	DB-G1E (Ground Floor)		2	16	1	3	2E		13	D		60	
P014	DB-MLV-E	DB-G2E (Ground Floor)		4	16	1	3	2E		25	D		60	
P015	DB-MLV-E	DB-G3E (Ground Floor)		2	16	1	3	2E		63	D		60	
P016	DB-MLV-E	DB-GH1E		2	16	1	3	2E		48	D		60	
P017	DB-MLV-E	DB-F1E (First Floor)		4	16	1	3	2E		17	D		60	
P018	DB-MLV-E	DB-F2E (First Floor)		4	16	1	3	2E		42	D		60	
P019	DB-MLV-E	DB-F3E (First Floor)		2	16	1	3	2E		54	D		60	
P020	DB-MLV-E	DB-F4E (First Floor)		4	16	1	3	2E		74	D		60	
P021	DB-MLV-E	DB-GH2E		2	16	1	3	2E		38	D		60	
P022	DB-MLV-E	DB-SE (Security Room)		4	25	1	3	2E		124	D		60	
P023	UPS1	DB-UPS		4	16	1	3	2E		55	D		60	
P024	DB-UPS	DB-G2U (Ground Floor)		2	10	1	3	2E		45	D		40	
P025	DB-UPS	DB-G3U (Ground Floor)		2	10	1	3	2E		18	D		40	
P026	DB-UPS	DB-F1U (First Floor)		2	10	1	3	2E		48	D		40	
P027	DB-UPS	DB-F2U (First Floor)		2	10	1	3	2E		26	D		40	
P028	DB-UPS	DB-F3U (First Floor)		2	10	1	3	2E		10	D		40	
P029	DB-UPS	DB-F4U (First Floor)		2	10	1	3	2E		18	D		40	
P030	Generator	DB-MLVE		4	50	1	3	2E		15	D		160	

<b>Cable Type:</b>				<b>Earth Conductor type</b>				<b>Cond. of Use</b>				<b>Defined Use</b>							
<b>600/ 1000V rating</b> 1= Cu. Pvc in conduit 2=Cu. Pvc, Pvc 3= Cu, Pvc, Swa, ECC, PVC 4= Cu. Pvc, Swa plain, PVC 5=Resin encapsulated Cu busbar 6= 7=				<b>6.35/ 11kV rating</b> 8=AL,ABC XLPE aerial self supporting 9=AL PILC armored PVC 10=Cu XLPE SWA PVC copper tape 11= Cu, PILC armored PVC 12= 13= 14=				1E= Cu PVC 2E= SWA/ECC 3E= Cu bar 4E= Bare Cu 5E = CuPVC + SWA				A=Aerial C=Conduit D=Duct G=Direct in ground K=Direct Sun T=Tray/ ladder				T1=Trefoil-RWB grouping T2=Trefoil grouping per phase S=Spaced <0.5 diameter between cables/ walls S1=Spaced ≥0.5 diameter to adjacent cable/ walls.			
0	Original Issue	MH	24/04/20	ENGINEER:	DRAWN:	DATE:	CHKD	P SIZE	TITLE:										
				SN	MH	APR 2020		A4	NEWTOWN CONVERSION TO LARGE CLINIC										
				PROJ No.:	DWG No		REV	SCALE	Cable Schedule										
				17016	602		B	nts											
REV	DESCRIPTION	BY	DATE	CHKD	FILE NAME:	SHEET:	1 of 1												



Type	Description	Installation	Lamps		Qty	Location	Comments
			Type	Colour			
A / Ae	 600x600 LED panel, aluminium trim. Back lit with a 4mm frosted diffuser and PMMA light guide CRI 80+, UGR =19,100-120 lumens per watt complete with 6amp plug top and 3m cordset. 1 hr battery back up where indicated with 'e'. Complete with 5 year warranty	Recessed Mounted	40W LED	4000K	as indicated on drawings	Offices, Wards, Passages etc.	Supplied by Rubicon Lighting / ETAP / Performace Lighting / Lighting Innovations / Beka / Regent
B / Be	 Die-cast aluminium LED downlighter with 120-140 lumens per watt (CRI 80+), complete with 3m cordset and 6amp plug top. 1 hour emergency battery back up where indicated with "e". Complete with 5 year warranty	Recessed Mounted	20-25W LED	4000K	as indicated on drawings	Patient Wards	Supplied by Rubicon Lighting / ETAP / Performace Lighting / Lighting Innovations / Beka / Regent
C / Ce	 Die-cast aluminium LED dimmable downlighter with 120-140 lumens per watt (CRI 80+), complete with 3m cordset and 6amp plug top. 1 hour emergency battery back up where indicated with "e". Complete with 5 year warranty	Recessed Mounted	10-12W LED	4000K	as indicated on drawings	Ablutions	Supplied by Rubicon Lighting / ETAP / Performace Lighting / Lighting Innovations / Regent
D	 3000mm aluminium linear suspended profile, matt silver with frosted diffuser, complete with 3m cordset and 6A plugtop. (110 - 130 lumens per watt) (CRI 80+). Complete with 5 year warranty	Suspended	36 W/m LED	4000K	as indicated on drawings	Boardrooms	Supplied by Rubicon Lighting / ETAP / Performace Lighting / Lighting Innovations / Regent
E / Ee	 LED Linear vapour proof fitting (IP65), with poly carbonate UV protected diffuser and stainless clips. (160 - 180 lumens per watt and CRI 80+). 1 hour emergency battery back up where indicated with "e". Complete with 5 year warranty	Surface Mounted	35-40W LED	4000K	as indicated on drawings	Medical Waste Rooms / Gas Storage	Supplied by Rubicon Lighting / ETAP / Performace Lighting / Lighting Innovations / Regent

**Notes**

Samples of all luminaires are to be presented for approval before orders are placed.  
Quantities are to be confirmed by contractor. All luminaires to have LM79, LM80 & TM21 test reports and IES files and carry a 5 year warantee.  
Lamps to be Osram ,Phillips or equal and approved. Control gear to be Osram, Phillips, Tridonic, V&S or equal and approved . Full details to be submitted with sample.

0	ORIGINAL ISSUE	KS	08/09/23	MK	ENGINEER: MK	DRAWN: KS	DATE: 10/07/23	CHKD: MK	P SIZE: A4	TITLE: Newtown Conversion to Large Clinic	 <p>FIRST FLOOR BAKER TILLY HOUSE 18 WESTVILLE ROAD WESTVILLE, 3629 PO BOX 1468 WESTVILLE, 3630</p> <p>TEL: +27 (0)31 2867332 E-mail: ibuya@ibuya.co.za</p>
0	DESCRIPTION	BY	DATE	CHKD	PROJ No.: 23023	DWG No: 601	REV: 0	SCALE: nts	TITLE: Luminaire Schedule		
					FILE NAME:		SHEET: 1 of 2				

Type	Description	Installation	Lamps		Qty	Location	Comments
			Type	Colour			
F	 Surface mounted bulkhead fitting, high-pressure die cast marine grade aluminium, IP65 complete with 3m cordset and 5A plugtop. 127 lumens per watt and CRI 80+. Complete with 5 year warranty	Surface Mounted	17W LED	4000K	as indicated on drawings	Staircases and External Areas	Supplied by Rubicon Lighting / ETAP / Performace Lighting / Lighting Innovations / Beka / Regent
G	 Ceiling mounted emergency exit signage. Complete with 2 hour self contained, maintained emergency with separate red/green indicator lights and test button. Complete with 5 year warranty	Surface Mounted	5W LED	4000K	as indicated on drawings	Emergency Escape	Supplied by Rubicon Lighting / ETAP / Performace Lighting / Lighting Innovations / Beka / Regent
H	 Post top light fitting, marine grade high-pressure die-cast aluminium, high-impact acrylic polycarbonate, IP66, 125 lumens per watt and CRI 70+, complete with 3,5m fibre glass pole with access hatch. Complete with 5 year warranty	Post Top Mounted	55W LED	4000K	as indicated on drawings	External Areas	Supplied by Rubicon Lighting / ETAP / Performace Lighting / Lighting Innovations / Beka / Regent

**Notes**

Samples of all luminaires are to be presented for approval before orders are placed.  
Quantities are to be confirmed by contractor. All luminaires to have LM79, LM80 & TM21 test reports and IES files and carry a 5 year warantee.  
Lamps to be Osram ,Phillips or equal and approved. Control gear to be Osram, Phillips, Tridonic, V&S or equal and approved . Full details to be submitted with sample.

0	ORIGINAL ISSUE	KS	08/09/23	MK	ENGINEER: MK	DRAWN: KS	DATE: 10/07/23	CHKD: MK	P SIZE: A4	TITLE: Newtown Conversion to Large Clinic	 <p>FIRST FLOOR  BAKER TILLY HOUSE  18 WESTVILLE ROAD  WESTVILLE, 3629  PO BOX 1489  WESTVILLE, 3630</p> <p>TEL: +27 (0)31 2867332  E: mail: ibuya@ibuya.co.za</p>
					PROJ No.: 23023	DWG No: 601	REV: 0	SCALE: nts	Luminaire Schedule		
REV	DESCRIPTION	BY	DATE	CHKD	FILE NAME:	SHEET: 2 of 2					



**KWAZULU-NATAL PROVINCE**  
HEALTH  
REPUBLIC OF SOUTH AFRICA

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**Newtown A CHC: Conversion of Newtown CHC from a CHC to Large Clinic**

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## **ANNEXURE 23**

### **Mechanical Engineer Drawings**



- DESIGN NOTES**
- DO NOT SCALE FROM THIS DRAWING.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER LAYOUTS, SPECIFICATIONS AND SCHEDULES. THIS INCLUDES OTHER CONSULTANTS INFORMATION.
  - THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND LEVELS ON THE SITE AND NOTIFY THE NEC SUPERVISOR OF ANY VARIATIONS BEFORE CONSTRUCTION.
  - GIBB SHALL NOT BE LIABLE FOR THE CONSEQUENCES OF USING THIS DOCUMENT OTHER THAN FOR THE PURPOSE FOR WHICH IT WAS COMMISSIONED. ANY USER AND ANY OTHER PERSON USING OR RELYING ON THE DOCUMENT FOR SUCH OTHER PURPOSE, WILL BE SOULIABLE OR RELIANCE BE TAKEN TO CONFIRM HIS AGREEMENT TO THE TERMS OF GIBB FOR ALL LOSS OR DAMAGE RESULTING THERE FROM.
  - UNLESS OTHERWISE STATED:
    - ALL DUCTWORK WILL BE GALVANIZED STEEL.
    - ALL MITRED BENDS WILL HAVE TURNING VANES.
  - ALL BRANCHES WHERE INDICATED WILL HAVE VOLUME CONTROL DAMPERS. ALL MAIN BRANCHES TO EQUIPMENT WILL HAVE A VOLUME CONTROL DAMPER. ALL VCCDS WILL BE OPPOSED BLADE TYPE. ALL DAMPERS WILL BE MARKED TO INDICATE THE COMMISSIONED STATE.
  - FOR ALL CONDENSATE CONNECTIONS SEE THE PLUMBING LAYOUTS. ALL CONDENSATE PIPE TO RUN AT 1200 TO 1400 FALL. CONDENSATE PIPEWORK FROM AN AC UNIT WILL HAVE A TRAP BEFORE ENTERING THE MAIN RUN.
  - ALL AC UNITS TO HAVE TRAPPED DRAINAGE.
  - ALL MEETING ROOMS AND BOARD ROOMS TO BE SEPARATED USING CROSS TALK ATTENUATORS IN THE DUCTWORK BETWEEN ROOMS.
  - ALL REFRIGERANT PIPEWORK TO BE INSULATED - FROM THE ROOM UNIT TO THE OUTDOOR UNIT. ALL INSULATION RUNNING EXTERNALLY TO BE PROTECTED USING GALVANIZED CLADDING.
  - ALL REFRIGERANT PIPEWORK TO RUN ON CABLE BASKET.
  - ALL AC UNITS WILL HAVE AN ELECTRICAL ISOLATOR ATTACHED TO THE CABLE BASKET OF THE PIPEWORK FOR FINAL CONNECTION. THIS WILL BE BY THE ELECTRICAL INSTALLER.
  - DUCT SIZES ARE SHOWN AS SHEET METAL DUCT SIZES.
  - ALL DUCTING TO BE MANUFACTURED IN ACCORDANCE WITH SANS STANDARDS.
  - ALL DUCTING & PIPE WORK IS TO BE SUPPORTED ON OR FROM STRUCTURE.
  - DUCT JOINTS TO BE PROPERLY SEALED.
  - AIR CONDITIONING UNITS & FANS TO BE FITTED WITH ANTI-VIBRATION MOUNTINGS & FLEXIBLE CONNECTIONS AND ARE TO BE SUPPORTED FROM THE ROOF STRUCTURE.
  - COORDINATE PIPE ROUTES, DUCT ROUTES & EQUIPMENT POSITIONS WITH OTHER SERVICES (WATER, DRAINAGE, ELECTRICAL, ETC.) ON SITE.
  - ALL WALL MOUNTED AIR CONDITIONING CONTROLLERS AND SENSORS TO BE CONSIDERED ON SITE AND TO BE PREFERABLY SITUATED WHERE SHOWN AT THE SAME HEIGHT AS LIGHT SWITCHES.
  - ALL CONDENSATE DRAINS WILL BE TRAPPED AND WILL RUN TO THE NEAREST ALLOCATED DRAINAGE SYSTEM CONNECTION POINT.
  - ALL EXPOSED VENTILATION RELATED ELECTRICAL CONDUIT / CABLE TRAY / TRUNKING SHALL BE GALVANIZED, ORANGE POWDER COATED, INCLUDING RELEVANT BUSHES, LOCKRINGS, COUPLINGS, GALVANIZED SADDLES, ETC.
  - ALL EXPOSED SMOKE VENTILATION RELATED ELECTRICAL CONDUIT / CABLE TRAY / TRUNKING SHALL BE GALVANIZED, YELLOW POWDER COATED, INCLUDING RELEVANT BUSHES, LOCKRINGS, COUPLINGS, GALVANIZED SADDLES, ETC.
  - FIRE PROTECTION
    - ALL DUCTS PASSING THROUGH FIRE WALLS WILL HAVE A FIRE DAMPER SEE FIRE LAYOUTS FOR FIRE RATED WALLS.
    - ALL FANS AND AC UNITS WILL BE CONNECTED TO THE FIRE ALARM SYSTEM AND WILL SHUT DOWN IN THE EVENT OF A FIRE.
  - ABBREVIATIONS
    - HL - HIGH LEVEL
    - LL - LOW LEVEL
    - TA - TO ABOVE
    - TB - TO BELOW
    - TA - FROM ABOVE
    - TB - FROM BELOW
    - CD - CONDENSATE DRAIN

**GENERAL NOTES**

**KEY:**

- 200 HIGH LEVEL DRAINAGE PIPEWORK - GENERALLY INSTALLED FROM THE SOFFIT
- 150 and 200 REFRIGERANT PIPEWORK FROM CONTROL BOX TO UNIT - INSTALLED ON BASKET - SINGLE LINE INDICATIVE ACTUAL NUMBER OF PIPES AS REQUIRED
- DOOR GRILLE - SIZE AS STATED
- DOOR UNDERCUT - 40mm
- OPPOSED BLADE VOLUME CONTROL DAMPER - VCD - TO BE DUCT SIZE
- FIRE DAMPER - TO BE DUCT SIZE
- STANDARD SUPPLY OR EXHAUST WEATHER LOUVER
- ATTENUATOR
- EXTRACT AIR VALVE - ED / XX
- SUPPLY DIFFUSER - SD / XX - 600x600 GRID CEILING MOUNTED
- LINEAR BAR INTAKE GRILLES FOR AC UNITS 300 x 600
- SPLIT CASSETTE UNITS
- WALL MOUNTED VRF UNIT
- KITCHEN EXTRACT FAN
- PASSIVE INFRA RED MOTION SENSOR
- WALL MOUNTED REMOTE HARD WIRED TEMPERATURE AND CO2 SENSOR
- AC UNIT CONTROL POINT - HARD WIRED - CASSETTES
- SIMPLE CONTROLLER FOR VRF SYSTEMS
- CENTRAL AC UNIT CONTROL POINT - HARD WIRED
- OUTDOOR AIR CONDITIONING UNIT
- NORMAL DUCTWORK
- FIRE RATED DUCTWORK

Client number: 00000 page type: AD

DEPARTMENT SIGNATURES

FACILITY: NEWTOWN A CHC: CONVERSION TO A LARGE CLINIC

FACILITY CEO: \_\_\_\_\_

FACILITY MANAGER: \_\_\_\_\_

DISTRICT MANAGER: \_\_\_\_\_

PROJECT LEADER: \_\_\_\_\_

Checked by (Professional Consultant): \_\_\_\_\_

Name: \_\_\_\_\_ Date: 2023/08/31 16:58:31

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Client:

Consultant:

Consultant:

Project: NEWTOWN A CHC: CONVERSION TO A LARGE CLINIC

Drawing title: GROUND FLOOR HVAC LAYOUT

Project Stage: STAGE 5: DETAILED DESIGN

Drawn: \_\_\_\_\_ Date: 2023/10/09

Scale: 1:75

Sheet number: UJ-1100

Drawing Number ID: 00000 = Client No, UKU = Department, A = Consultant Discipline, 0000 = Drawing No, 0 = Revision No

**AC INDOOR EQUIPMENT SCHEDULE**

ID	DESCRIPTION	CAPACITY	POWER REQUIREMENT	CONTROLS
AC01	AWAY CASSETTE SPLIT UNIT	2.2kW TC, 1.5kW TH	1 PHASE 220-240V/50Hz/1 0.25kW	Unit will be controlled by using the hard wired wall mounted controller. Unit sensor will be used to automatically maintain the temperature of the room.
AC02	AWAY CASSETTE SPLIT UNIT	3.6 kW TC, 4.0kW TH	1 PHASE 220-240V/50Hz/1 1.2kW	Unit will be controlled by using the hard wired wall mounted controller. Unit sensor will be used to automatically maintain the temperature of the room.
AC03	AWAY CASSETTE SPLIT UNIT	4.8 kW TC, 4.0kW TH	1 PHASE 220-240V/50Hz/1 1.0kW	Unit will be controlled by using the hard wired wall mounted controller. Unit sensor will be used to automatically maintain the temperature of the room.
AC04	WALL MOUNT SPLIT UNIT	5.0kW TC, 6.0kW TH	1 PHASE 220-240V/50Hz/1 1.0kW	Unit will be controlled by using the hard wired wall mounted controller. Unit sensor will be used to automatically maintain the temperature of the room.
AC05	AWAY CASSETTE SPLIT UNIT	5.0kW TC, 6.0kW TH	1 PHASE 220-240V/50Hz/1 1.0kW	Unit will be controlled by using the hard wired wall mounted controller. Unit sensor will be used to automatically maintain the temperature of the room.
AC06	AWAY CASSETTE SPLIT UNIT	6.3kW TC, 6.0kW TH	1 PHASE 220-240V/50Hz/1 2.2kW	Unit will be controlled by using the hard wired wall mounted controller. Unit sensor will be used to automatically maintain the temperature of the room.
AC07	WALL UNIT SPLIT UNIT	2.2 kW TC, 2.2kW TH	1 PHASE 220-240V/50Hz/1 0.25kW	Unit will be controlled by using the hard wired wall mounted controller. Unit sensor will be used to automatically maintain the temperature of the room.
AC07	UNDER CEILING UNIT SPLIT UNIT	2.2 kW TC, 6.0kW TH	1 PHASE 220-240V/50Hz/1 2.25kW	Unit will be controlled by using the hard wired wall mounted controller. Unit sensor will be used to automatically maintain the temperature of the room.

**AC OUTDOOR EQUIPMENT SCHEDULE**

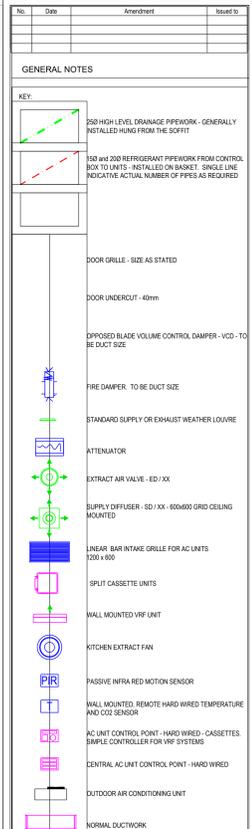
ID	DESCRIPTION	CAPACITY	POWER REQUIREMENT	CONTROLS
AC10	CONDENSER MULTI-SPLIT UNIT	11.2 kW TC, 12 kW TH	1 PHASE 220-240V/50Hz/3 3.5kW	Unit will work in conjunction with the indoor Unit. Sensor will be used to automatically maintain the temperature of the room.
AC09	CONDENSER MULTI-SPLIT UNIT	20.8kW TC, 20.0kW TH	1 PHASE 220-240V/50Hz/5 5.2kW	Unit will work in conjunction with the indoor Unit. Sensor will be used to automatically maintain the temperature of the room.
PUR01	PACKAGE UNIT	22.4 kW TC, 24 kW TH	1 PHASE 380-415V/50Hz/1 12.0kW	Unit will use indoor room sensors to automatically maintain the temperature of the room.
PUR02	PACKAGE UNIT	33.6 kW TC, 28 kW TH	1 PHASE 380-415V/50Hz/1 12.0kW	Unit will use indoor room sensors to automatically maintain the temperature of the room.
PUR03	PACKAGE UNIT	58.4 kW TC, 57.0kW TH	3 PHASE 380-415V/50Hz/1 16.1kW	Unit will use indoor room sensors to automatically maintain the temperature of the room.

**VENTILATION EQUIPMENT SCHEDULE**

ID	DESCRIPTION	SIZE	CAPACITY	POWER REQUIREMENT
VF01	IN LINE MIXED FLOW SUPPLY AIR FAN	Ø150mm	90 l/s @ 100 Pa	0.15kW, 1 PHASE
VF02	IN LINE MIXED FLOW SUPPLY AIR FAN	Ø200mm	180 l/s @ 150 Pa	0.30kW, 1 PHASE
VF03	IN LINE MIXED FLOW EXTRACT FAN	Ø300mm	360 l/s @ 250 Pa	0.55kW, 1 PHASE
VF04	IN LINE MIXED FLOW EXTRACT FAN	Ø1200mm	1200 l/s @ 300 Pa	1.05kW, 1 PHASE
VF05	IN LINE MIXED FLOW EXTRACT FAN	Ø1500mm	47 l/s @ 100 Pa	0.15kW, 1 PHASE
VF06	IN LINE MIXED FLOW EXTRACT FAN	Ø250mm	120 l/s @ 150 Pa	0.43kW, 1 PHASE
VF07	IN LINE SHORT CASE AXIAL FAN	Ø200mm	280 l/s @ 150 Pa	0.48kW, 1 PHASE
VF08	IN LINE SHORT CASE AXIAL FAN	Ø400mm	1100 l/s @ 200 Pa	0.98kW, 1 PHASE
VF09	IN LINE SHORT CASE AXIAL FAN	Ø500mm	1400 l/s @ 300 Pa	1.38kW, 1 PHASE
VF010	WALL EXTRACT FAN	Ø150mm	47 l/s @ 50 Pa	0.03kW, 1 PHASE
VD01	VOLUME DAMPER	Ø150mm		
VD02	VOLUME DAMPER	Ø200mm		
VD03	VOLUME DAMPER	Ø250mm		
VD04	VOLUME DAMPER	Ø300mm		
VD05	VOLUME DAMPER	Ø350mm		
VD06	VOLUME DAMPER	Ø400mm		
ATT01	SOUND ATTENUATOR	700mm x 200mm		
WL01	WEATHER LOUVER	250mm x 250mm		
WL02	WEATHER LOUVER	300mm x 350mm		
WL03	WEATHER LOUVER	400mm x 400mm		
WL04	WEATHER LOUVER	700mm x 600mm		
AF01	SECONDARY AIR FILTER, PLEATED PANEL - E8079			
AF02	SECONDARY AIR FILTER, PLEATED PANEL BAG - WITH CLASSIFICATION F5			
AF03	SECONDARY AIR FILTER, HIGH CAPACITY RIGID IMPELLAT - G879 CLASSIFICATION F5			
SD01	DOOR GRILLE	550mm x 200mm		
ED01	EXTRACT VALVE	Ø50mm		
ED02	EXTRACT VALVE	200x200mm		
SD01	SUPPLY AIR DIFFUSER	Ø250mm		
ED01	EGG CRATE GRILLE	600x600mm		



- GENERAL NOTES
- DO NOT SCALE FROM THIS DRAWING.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER LAYOUTS, SPECIFICATIONS AND SCHEDULES. THIS INCLUDES OTHER CONSULTANT INFORMATION.
  - THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND LEVELS ON THE SITE AND NOTIFY THE NEAREST SUPERVISOR OF ANY VARIATIONS BEFORE CONSTRUCTION.
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  - UNLESS OTHERWISE STATED:
    - ALL DUCTWORK WILL BE GALVANIZED STEEL.
    - ALL MITRED BENDS WILL HAVE TURNING VANES.
  - ALL BRANCHES WHERE INDICATED WILL HAVE VOLUME CONTROL DAMPERS. ALL FINAL BRANCHES TO EQUIPMENT WILL HAVE VOLUME CONTROL DAMPERS. ALL VCDs WILL BE OPPOSED BLADE TYPE. ALL DAMPERS WILL BE MARKED TO MATCH THE COMMISSIONING DATA.
  - FOR ALL CONDENSATE CONNECTIONS SEE THE PLUMBERS LAYOUTS. ALL CONDENSATE PIPES TO RUN AT 1:200 TO 1:400 FALL. CONDENSATE PIPES FROM ALL AC UNITS WILL HAVE A TRAP BEFORE ENTERING THE MAIN RUN.
  - ALL MEETING ROOMS AND BOARD ROOMS TO BE SEPARATED USING CROSS TALK ATTENUATORS IN THE DUCTWORK BETWEEN ROOMS.
  - ALL AC UNITS TO HAVE IMPROVED DRAINAGE.
  - ALL REFRIGERANT PIPING TO BE INSULATED - FROM THE INDOOR UNIT TO THE OUTDOOR UNIT. ALL INSULATION RUNNING EXTERNALLY TO BE PROTECTED USING GALVANIZED CLADDING.
  - ALL REFRIGERANT PIPING TO RUN ON CABLE BASKET.
  - ALL AC UNITS WILL HAVE AN ELECTRICAL ISOLATOR ATTACHED TO THE CABLE BASKET OF THE PIPING FOR FINAL CONNECTION. THIS WILL BE BY THE ELECTRICAL INSTALLER.
  - DUCT SIZES ARE SHOWN AS SHEET METAL DUCT SIZES.
  - ALL DUCTING TO BE MANUFACTURED IN ACCORDANCE WITH SANS STANDARDS.
  - ALL DUCTING & PIPE WORK IS TO BE SUPPORTED ON OR FROM STRUCTURE.
  - DUCT JOINTS TO BE PROPERLY SEALED.
  - AIR CONDITIONING UNITS & FANS TO BE FITTED WITH ANTI-VIBRATION MOUNTINGS & FLEXIBLE CONNECTIONS AND ARE TO BE SUPPORTED FROM THE ROOF STRUCTURE.
  - COORDINATE PIPE ROUTES, DUCT ROUTES & EQUIPMENT POSITIONS WITH OTHER SERVICES (WATER, DRAINAGE, ELECTRICAL, ETC.) ON SITE.
  - ALL WALL MOUNTED AIR CONDITIONING CONTROLS AND SENSORS TO BE COORDINATED ON SITE AND TO BE PRESENTABLY SITUATED WHERE SHOWN AT THE SAME HEIGHT AS LIGHT SWITCHES.
  - ALL CONDENSATE DRAINS WILL BE TRAPPED AND RUN TO THE NEAREST ALLOCATED DRAINAGE SYSTEM CONNECTION POINT.
  - ALL EXPOSED VENTILATION ISOLATED ELECTRICAL CONDUIT / CABLE TRAY / TRUNKING SHALL BE GALVANIZED, ORANGE POWDER-COATED, INCLUDING RELEVANT BUSHES, LOCKOUTS, COUPLINGS, GALVANIZED SADDLES, ETC.
  - ALL EXPOSED SHOCK VENTILATION ISOLATED ELECTRICAL CONDUIT / CABLE TRAY / TRUNKING SHALL BE GALVANIZED, YELLOW POWDER-COATED, INCLUDING RELEVANT BUSHES, LOCKOUTS, COUPLINGS, GALVANIZED SADDLES, ETC.
  - FIRE PROTECTION
  - ALL DUCTS PASSING THROUGH FIRE WALLS WILL HAVE A FIRE DAMPER SEE FIRE LAYOUTS FOR FIRE RATED WALLS.
  - ALL FANS AND AC UNITS WILL BE CONNECTED TO THE FIRE ALARM SYSTEM AND WILL SHUT DOWN IN THE EVENT OF A FIRE.
- ABBREVIATIONS
- HL - HIGH LEVEL
  - LL - LOW LEVEL
  - TA - TO ABOVE
  - TB - TO BELOW
  - FA - FROM ABOVE
  - FB - FROM BELOW
  - CD - CONDENSATE DRAIN



Client number: \_\_\_\_\_ page type: AO

DEPARTMENT SIGNATURES

FACILITY: \_\_\_\_\_

FACILITY CEO: \_\_\_\_\_

FACILITY MANAGER: \_\_\_\_\_

DISTRICT MANAGER: \_\_\_\_\_

PROJECT LEADER: \_\_\_\_\_

Checked by (Professional Consultant): \_\_\_\_\_

Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Client:

Consultant:

10 The Boulevard, Wetmore Office Park, Wetmore, Durban, 3003. Tel: 031 265 5441, email: gibbon@ukuzulu.co.za

UKUZA CONSULTING PTW

Discipline: MECHANICAL

Project: **NEWTOWN A CHC: CONVERSION TO A LARGE CLINIC**

Drawing title: **FIRST FLOOR HVAC LAYOUT**

Project Stage: **STAGE 3: DETAILED DESIGN**

Drawn: **G MAWLELA** Date: \_\_\_\_\_

Scale: **1:75** 2023/10/09

Drawing number: **UF-1101**

Drawing Number ID: **00000** = Client No

**UKU** = Department

**A** = Consultant Discipline

**0000** = Drawing No

**1** = Revision No

ID	DESCRIPTION	SIZE	CAPACITY	POWER REQUIREMENT
SP401	PLINE MIXED FLOW SUPPLY AIR FAN	Ø150mm	50 l/s @ 100 Pa	0.36kW, 1 PHASE
SP402	PLINE MIXED FLOW SUPPLY AIR FAN	Ø200mm	140 l/s @ 100 Pa	0.36kW, 1 PHASE
SP403	PLINE MIXED FLOW EXTRACT FAN	Ø200mm	360 l/s @ 200 Pa	0.56kW, 1 PHASE
SP404	PLINE MIXED FLOW EXTRACT FAN	Ø1200mm	1200 l/s @ 200 Pa	1.08kW, 1 PHASE
EP401	PLINE MIXED FLOW EXTRACT FAN	Ø150mm	87 l/s @ 100 Pa	0.18kW, 1 PHASE
EP402	PLINE MIXED FLOW EXTRACT FAN	Ø250mm	125 l/s @ 150 Pa	0.43kW, 1 PHASE
EP403	PLINE LONG CASE SOUL FAN	Ø250mm	202 l/s @ 150 Pa	0.48kW, 1 PHASE
EP404	PLINE SHORT CASE SOUL FAN	Ø255mm	1105 l/s @ 200 Pa	0.94kW, 1 PHASE
EP405	PLINE SHORT CASE SOUL FAN	Ø255mm	1400 l/s @ 200 Pa	1.38kW, 1 PHASE
WEF01	WALL EXTRACT FAN	Ø150mm	67 l/s @ 0 Pa	0.035kW, 1 PHASE
VD001	VOLUME DAMPER	Ø160mm		
VD002	VOLUME DAMPER	Ø200mm		
VD003	VOLUME DAMPER	Ø250mm		
VD004	VOLUME DAMPER	Ø300mm		
VD005	VOLUME DAMPER	Ø350mm		
VD006	VOLUME DAMPER	Ø400mm		
ATT-01	SCAND ATTENUATOR	700x500mm		
WL01	WEATHER LOUVER	250mm x 250mm		
WL02	WEATHER LOUVER	300mm x 300mm		
WL03	WEATHER LOUVER	400mm x 400mm		
WL04	WEATHER LOUVER	700mm x 600mm		
AF01	PRIMARY AIR FILTER, PLEATED PANEL BAG, MESH CLASSIFICATION			
AF02	SECONDARY AIR FILTER, PLEATED PANEL BAG, MESH CLASSIFICATION			
AF03	SECONDARY AIR FILTER, HIGH CAPACITY RIGID PANEL BAG, MESH CLASSIFICATION			
DO01	DOOR GRILLE	300mm x 300mm		
ED001	EXTRACT VALVE	Ø200mm	55 l/s	
ED002	EXTRACT VALVE	Ø200mm	90 l/s	
SD01	SUPPLY AIR DIFFUSER	Ø200mm	100 l/s	
ED01	EGG CRATE GRILLE	600x600mm		

ID	DESCRIPTION	CAPACITY	POWER REQUIREMENT	CONTROLS
AC001	ARRAY CASSETTE SPLIT UNIT	2.2kW TC, 1.9kW TH	1 PHASE 220-240V/50Hz 0.56kW	Unit will be controlled by using the heat sensor wall mounted controller. LHM sensor will be used to automatically maintain the temperature of the room.
AC002	ARRAY CASSETTE SPLIT UNIT	3.6kW TC, 4.9kW TH	1 PHASE 220-240V/50Hz 1.2kW	Unit will be controlled by using the heat sensor wall mounted controller. LHM sensor will be used to automatically maintain the temperature of the room.
AC003	ARRAY CASSETTE SPLIT UNIT	4.4kW TC, 6.2kW TH	1 PHASE 220-240V/50Hz 1.6kW	Unit will be controlled by using the heat sensor wall mounted controller. LHM sensor will be used to automatically maintain the temperature of the room.
AC004	WALL MOUNT SPLIT UNIT	5.9kW TC, 6.9kW TH	1 PHASE 220-240V/50Hz 1.8kW	Unit will be controlled by using the heat sensor wall mounted controller. LHM sensor will be used to automatically maintain the temperature of the room.
AC005	ARRAY CASSETTE SPLIT UNIT	5.6kW TC, 6.9kW TH	1 PHASE 220-240V/50Hz 2.1kW	Unit will be controlled by using the heat sensor wall mounted controller. LHM sensor will be used to automatically maintain the temperature of the room.
AC006	ARRAY CASSETTE SPLIT UNIT	6.3kW TC, 6.8kW TH	1 PHASE 220-240V/50Hz 2.2kW	Unit will be controlled by using the heat sensor wall mounted controller. LHM sensor will be used to automatically maintain the temperature of the room.
AC007	WALL MOUNT SPLIT UNIT	2.2kW TC, 3.5kW TH	1 PHASE 220-240V/50Hz 0.86kW	Unit will be controlled by using the heat sensor wall mounted controller. LHM sensor will be used to automatically maintain the temperature of the room.
AC008	UNDER CEILING SPLIT UNIT	7.2kW TC, 8.5kW TH	1 PHASE 220-240V/50Hz 2.6kW	Unit will be controlled by using the heat sensor wall mounted controller. LHM sensor will be used to automatically maintain the temperature of the room.

ID	DESCRIPTION	CAPACITY	POWER REQUIREMENT	CONTROLS
AC10	CONDENSER MULTI-SPLIT UNIT DOUBLE FAN	11.2kW TC, 12.4kW TH	1 PHASE 220-240V/50Hz 4.5kW	Unit will work in conjunction with the indoor unit. Sensor will be used to automatically maintain the temperature of the room.
AC06	CONDENSER MULTI-SPLIT UNIT DOUBLE FAN	26.6kW TC, 28.5kW TH	3 PHASE 220-240V/50Hz 5.3kW	Unit will work in conjunction with the indoor unit. Sensor will be used to automatically maintain the temperature of the room.
P001	PACKAGE UNIT	22.4kW TC, 24.4kW TH	3 PHASE 380-415V/50Hz 9.1kW	Unit will use indoor room sensors to automatically maintain the temperature of the room.
P002	PACKAGE UNIT	33.5kW TC, 25.4kW TH	3 PHASE 380-415V/50Hz 9.1kW	Unit will use indoor room sensors to automatically maintain the temperature of the room.
P003	PACKAGE UNIT	56.6kW TC, 57.8kW TH	3 PHASE 380-415V/50Hz 15.9kW	Unit will use indoor room sensors to automatically maintain the temperature of the room.

No.	Date	Amendment	Issued To
1	2023/08	Revised to Latest Arch Layout	

GENERAL NOTES

Client number: 00000 page type: A1

DEPARTMENT SIGNATURES

FACILITY: \_\_\_\_\_  
 FACILITY CEO: \_\_\_\_\_  
 FACILITY MANAGER: \_\_\_\_\_  
 DISTRICT MANAGER: \_\_\_\_\_  
 PROJECT LEADER: \_\_\_\_\_  
 (Checked by Professional Consultant)

Name: \_\_\_\_\_ Date: 2023/08/31 16:58:31  
 Signature: \_\_\_\_\_

Client:  health  
 Department: Health  
 PROVINCE OF KWAZULU-NATAL

Consultant:  GIBB  
 ENGINEERS & ARCHITECTS

Consultant:  UKUZA CONSULTING  
 15 The Boulevard  
 Westway Office Park,  
 Republic  
 Durban, 3600  
 Tel: 031 265 0444  
 Email: gorp@ukuza.co.za

Discipline: MECHANICAL

Project: NEWTOWN A CHC: CONVERSION TO A LARGE CLINIC

Drawing title: GROUND FLOOR LEVEL MEDICAL GAS SUPPLY LAYOUT

Project Stage: STAGE 4: TENDER

Drawn: A STULUMANI Date: \_\_\_\_\_  
 scale: 1:50 Date: 2023/10/09  
 drawing number: ZI-1101

Drawing Number ID:  
 00000 = Client No  
 UKUJ = Department  
 A = Consultant Discipline  
 0000 = Drawing No  
 1 = Revision No

MEDICAL GAS LEGEND	
	MEDICAL OXYGEN
	MEDICAL AIR LOW PRESSURE
	VACUUM
	OXYGEN TERMINAL POINT
	VACUUM TERMINAL POINT
	LP AIR TERMINAL POINT
	ISOLATION BALL VALVE
	ISOLATION VALVE NORMALLY OPEN
	ISOLATION VALVE NORMALLY CLOSED
	NON RETURN VALVE (FLOW IN THE DIRECTION OF THE ARROW)
	PRESSURE REGULATOR
	MOTORIZED 2 WAY VALVE
	3-WAY VALVE
	SHUTTLE VALVE
	TERMINAL UNIT
	LOCKABLE ISOLATION VALVE
	PRESSURE SAFETY VALVE
	PRESSURE RELIEF VALVE
	LIQUID LEVEL SWITCH
	DRAIN CONNECTION
	BACTERIA FILTER
	SEPARATOR
	OIL FILTER
	WATER SEPARATOR
	SUBMICRON FILTER
	PRE FILTER
	ACTIVATED CARBON FILTER
	RECEIVER
	GAS CYLINDER
	DRAIN FLASK
	COMPRESSOR
	SUCTION PUMP
	AFTERCOOLER
	AUTOMATIC DRAIN
	FUSIBLE PLUG
	FLOW RESTRICTOR
	SILENCER
	DRYER COLUMN
	PRESSURE GAUGE
	PRESSURE SWITCH
	SWITCH
	THERMOMETER
	TEMPERATURE SENSOR / TRANSDUCER
	TEMPERATURE SWITCH
	DEW POINT TRANSDUCER
	TAIL PIPE / FLEXIBLE CONNECTION

- A COMPRESSOR SIZED FOR 240 LITRES/MINUTE
- B AIR RECEIVER SIZED FOR 240 LITRES
- C DESICCANT DRIER WITH BUILT IN AFTERCOOLERS SIZED FOR 240 LITRES/MINUTE
- D VACUUM PUMP SIZED FOR 130 LITRES/MINUTE
- E AIR RECEIVER SIZED FOR 130 LITRES
- F DENTAL CHAIR PUMP

TRUNKING FOR MEDICAL GAS PIPEWORK FROM PLANT AREA TO THE BUILDING

MEDICAL GAS PIPING TO FIRST FLOOR

5500  
Turning  
circle



NTC-A-3000-0



MEDICAL GAS LEGEND:	
	MEDICAL OXYGEN
	MEDICAL AIR LOW PRESSURE
	VACUUM
	OXYGEN TERMINAL POINT
	VACUUM TERMINAL POINT
	LP AIR TERMINAL POINT
	ISOLATION BALL VALVE
	ISOLATION VALVE NORMALLY OPEN
	ISOLATION VALVE NORMALLY CLOSED
	NON RETURN VALVE (FLOW IN THE DIRECTION OF THE ARROW)
	PRESSURE REGULATOR
	MOTORIZED 2 WAY VALVE
	3-WAY VALVE
	SHUTTLE VALVE
	TERMINAL UNIT
	LOCKABLE ISOLATION VALVE
	PRESSURE SAFETY VALVE
	PRESSURE RELIEF VALVE
	LIQUID LEVEL SWITCH
	DRAIN CONNECTION
	BACTERIA FILTER
	SEPARATOR
	OIL FILTER
	WATER SEPARATOR
	SUBMICRON FILTER
	PRE FILTER
	ACTIVATED CARBON FILTER
	RECEIVER
	GAS CYLINDER
	DRAIN FLASK
	COMPRESSOR
	SUCTION PUMP
	AFTERCoolER
	AUTOMATIC DRAIN
	FUSIBLE PLUG
	FLOW RESTRICTOR
	SILENCER
	DRYER COLUMN
	PRESSURE GAUGE
	PRESSURE SWITCH
	SWITCH
	THERMOMETER
	TEMPERATURE SENSOR / TRANSDUCER
	TEMPERATURE SWITCH
	DEW POINT TRANSDUCER
	TAIL PIPE / FLEXIBLE CONNECTION

MEDICAL GAS SERVICES ABBREVIATIONS:	
O2	- OXYGEN
VAC	- VACUUM
LP	- LOW PRESSURE AIR (400kPa)

No.	Date	Revised to	Revised by
1	2023/10/09	Revised to Layout Arch Layout	

GENERAL NOTES

Client number: \_\_\_\_\_ Paper Size: A1

DEPARTMENT SIGNATURES

FACILITY: \_\_\_\_\_

FACILITY CEO: \_\_\_\_\_

FACILITY MANAGER: \_\_\_\_\_

DISTRICT MANAGER: \_\_\_\_\_

PROJECT LEADER: \_\_\_\_\_

(Checked by Professional Consultant)

Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Client

health  
Department: Health  
PROVINCE OF KWAZULU-NATAL

Consultant

GIBB  
Engineering & Construction

Consultant

15 The Boulevard  
Wesley Office Park,  
Midrand,  
Durban, 2009  
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Email: gorp@gibb.co.za

UKUZA CONSULTING  
Pty Ltd

Discipline: MECHANICAL

Project: NEWTOWN A CHC: CONVERSION TO A LARGE CLINIC

Drawing title: FIRST FLOOR LEVEL MEDICAL GAS SUPPLY LAYOUT

Project Stage: STAGE 3: DETAIL DESIGN

Drawn: A STULUMANI Date: \_\_\_\_\_

Scale: 1:50 2023/10/09

Drawing number: ZI-1102

Drawing Number ID

00000 = Client No

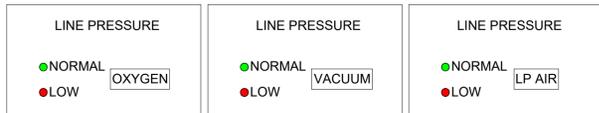
UKU = Department

A = Consultant Discipline

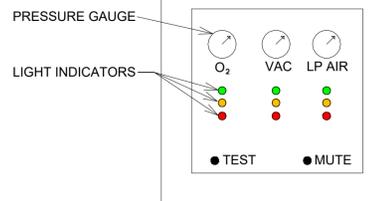
0000 = Drawing No

1 = Revision No

# MEDICAL GAS AND VACUUM ALARMSYSTEM



PLANT MIMIC ALARM PANEL DETAIL  
SCALE: N.T.S

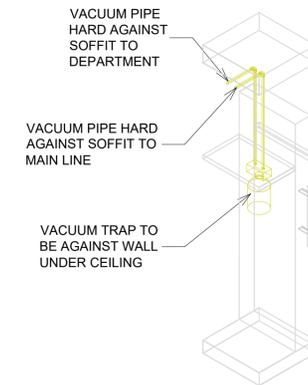


NOTE:  
GREEN LIGHT - SYSTEM GOOD  
ORANGE LIGHT - HIGH PRESSURE IN SYSTEM  
RED LIGHT - SYSTEM AT LOW PRESSURE

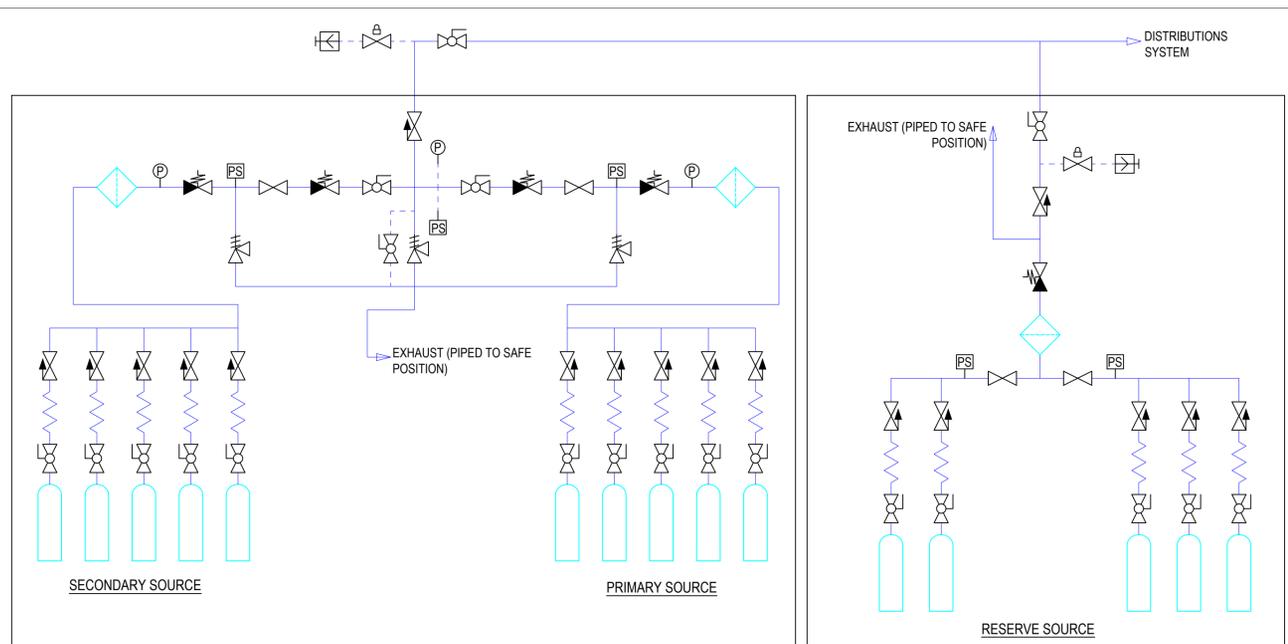
LOCAL ALARM PANEL DETAIL  
SCALE: N.T.S



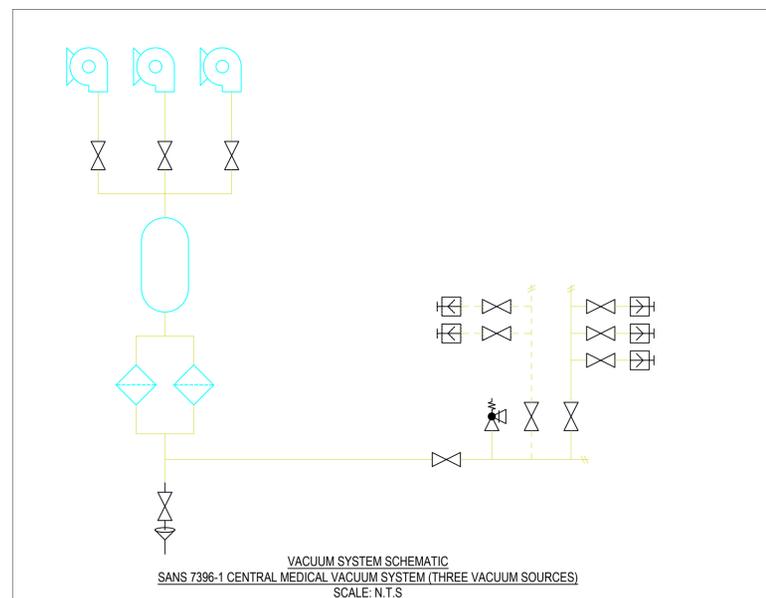
TERMINALS MOUNTING ORDER DETAIL  
SCALE: N.T.S



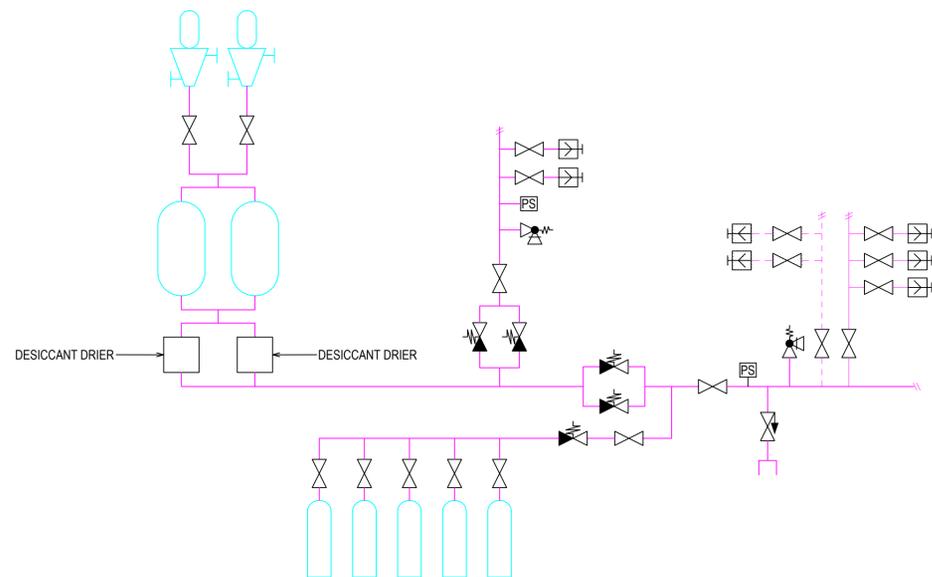
TYPICAL VACUUM BOTTLE TRAP 3D DETAIL  
SCALE: N.T.S



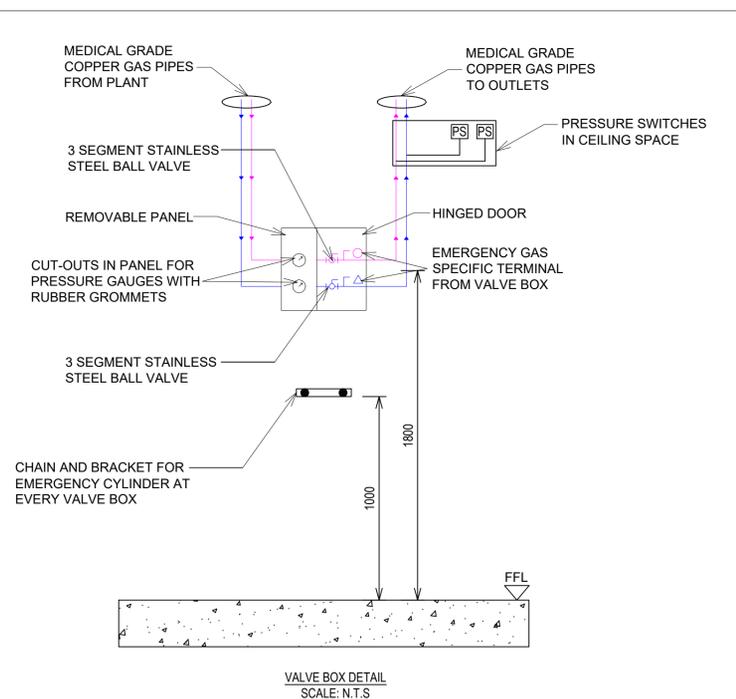
OXYGEN SYSTEM SCHEMATIC  
HTM 02-01 TYPICAL AUTOMATIC MANIFOLD CONTROL SYSTEM AND EMERGENCY RESERVE MANIFOLD  
SCALE: N.T.S



VACUUM SYSTEM SCHEMATIC  
SANS 7396-1 CENTRAL MEDICAL VACUUM SYSTEM (THREE VACUUM SOURCES)  
SCALE: N.T.S



LOW PRESSURE AIR (400kPa) SYSTEM SCHEMATIC  
SANS 7396-1 SINGLE STAGE PIPELINE SYSTEM (TWO COMPRESSORS & ONE CYLINDER SOURCE ALTERNATIVE RESERVE SUPPLY ARRANGEMENT)  
SCALE: N.T.S



VALVE BOX DETAIL  
SCALE: N.T.S

## MEDICAL GAS LEGEND:

	MEDICAL OXYGEN
	MEDICAL AIR LOW PRESSURE
	VACUUM
	OXYGEN TERMINAL POINT
	VACUUM TERMINAL POINT
	LP AIR TERMINAL POINT
	ISOLATION BALL VALVE
	ISOLATION VALVE NORMALLY OPEN
	ISOLATION VALVE NORMALLY CLOSED
	NON RETURN VALVE (FLOW IN THE DIRECTION OF THE ARROW)
	PRESSURE REGULATOR
	MOTORIZED 2 WAY VALVE
	3-WAY VALVE
	SHUTTLE VALVE
	TERMINAL UNIT
	LOCKABLE ISOLATION VALVE
	PRESSURE SAFETY VALVE
	PRESSURE RELIEF VALVE
	LIQUID LEVEL SWITCH
	DRAIN CONNECTION
	BACTERIA FILTER
	SEPARATOR
	OIL FILTER
	WATER SEPARATOR
	SUBMICRON FILTER
	PRE FILTER
	ACTIVATED CARBON FILTER
	RECEIVER
	GAS CYLINDER
	DRAIN FLASK
	COMPRESSOR
	SUCTION PUMP
	AFTERCOOLER
	AUTOMATIC DRAIN
	FUSIBLE PLUG
	FLOW RESTRICTOR
	SILENCER
	DRYER COLUMN
	PRESSURE GAUGE
	PRESSURE SWITCH
	SWITCH
	THERMOMETER
	TEMPERATURE SENSOR / TRANSDUCER
	TEMPERATURE SWITCH
	DEW POINT TRANSDUCER
	TAIL PIPE / FLEXIBLE CONNECTION

## MEDICAL GAS SERVICES ABBREVIATIONS:

O2	- OXYGEN
VAC	- VACUUM
LP	- LOW PRESSURE AIR (400kPa)

No.	1	Date	2023/09/15	Amendment	Revised to Latest Arch Layout	Issued To	
GENERAL NOTES							
Client number							
Paper Size							
A1							
DEPARTMENT SIGNATURES							
FACILITY							
FACILITY CEO							
FACILITY MANAGER							
DISTRICT MANAGER							
PROJECT LEADER							
Checked by (Professional Consultant)							
Name							
Signature							
Date							
Client							
Consultant							
Consultant							
Discipline							
MECHANICAL							
Project							
NEWTOWN A CHC: CONVERSION TO A LARGE CLINIC							
Drawing title							
MEDICAL GAS SUPPLY DETAILS							
Project Stage							
STAGE 3: DETAIL DESIGN							
Drawn							
A STULUMANI							
Date							
2023/09/15							
Scale							
N.T.S							
Drawing number							
ZL-1120							
Drawing Number ID							
00000 = Client No							
UKU = Department							
A = Consultant Discipline							
0000 = Drawing No							
0 = Revision No							



**KWAZULU-NATAL PROVINCE**  
HEALTH  
REPUBLIC OF SOUTH AFRICA

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**Newtown A CHC: Conversion of Newtown CHC from a CHC to Large Clinic**

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## **ANNEXURE 24**

### **Fire Engineer Drawings**

No.	Date	Amendment	Issued to
1	2023/10/09	Revised to Latest Arch Layout	

- ### GENERAL NOTES
- DO NOT SCALE DRAWING - ONLY DIMENSIONS SHOWN TO BE USED
  - THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND LEVELS ON THE SITE AND NOTIFY THE NEC SUPERVISOR OF ANY VARIATIONS BEFORE CONSTRUCTION
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER LAYOUTS, SPECIFICATIONS AND SCHEDULES. THIS INCLUDES OTHER CONSULTANTS INFORMATION
  - NO FIREWORKS TO BE EMBEDDED IN THE SCREEN OR CONCRETE FLOORS ALL FIREWORKS SHALL CONFORM TO SANS 610 (STEEL MEDIUM)
  - THE DISTANCE BETWEEN PIPE SUPPORT BRACKETS FOR THE HORIZONTAL AND VERTICAL PORTION SHALL NOT EXCEED THE FOLLOWING:  
HORIZONTAL: MAXIMUM SPACING 3000mm  
VERTICAL: MAXIMUM SPACING 2000mm
  - PIPING SHALL BE PROPERLY CLEANED OFF SITE, FROM ROOT AND LODGE WALL SCALE WITH A HARD WIRE BRUSH AND DEGREASED PRIOR TO APPLICATION OF A RED OXIDE PRIMER
  - ALL ABOVE GROUND FIRE PIPE TO BE PAINTED: FINISH COATS OF PAINT TO BE TWO OF SIGNAL RED, HIGH GLOSS ENAMEL TO SABS 833
  - ALL BRACKETS, SUPPORTS AND FITTINGS ABOVE GROUND TO BE GALVANISED. ALL SCREWED JOINTS TO COMPLY WITH S11 OR EQUAL. SEALING OF JOINTS WILL BE WITH HEMP, STAGS OR PIPE TAPE
  - HYDRAULIC PRESSURE TESTING SHALL BE DONE TO 15 BAR FOR A PERIOD OF 24 HOURS
  - PORTABLE FIRE EXTINGUISHERS UNLESS OTHERWISE STATED FIRE EXTINGUISHERS SHALL BE 4.5kg AND IN S11 CHEMICAL POWDER TYPE
  - ALL FIRE EXTINGUISHERS SHALL BE MOUNTED ON (BEAD) CHANGED FOR EXTINGUISHER BRACKETS MOUNTED WITH MOUNTING PORTABLE FIRE EXTINGUISHER
  - PORTABLE FIRE EXTINGUISHERS SHALL COMPLY WITH THE REQUIREMENTS IN SANS 10101 AND SANS 10102. SHALL BE MAINTAINED AND SERVICED BY COMPETENT PERSONS IN ACCORDANCE WITH SANS 10101 AND SANS 10102.1
  - FIRE HOSE REELS  
11.1. FIRE HOSE REELS SHALL COMPLY WITH THE REQUIREMENTS IN SANS 543, SHALL BE INSTALLED IN ACCORDANCE WITH SANS 10101 AND SANS 10102 AND SHALL BE MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS IN SANS 10101  
11.2. ALL FIRE HOSE REELS SHALL BE COMPLETE WITH 30 METRES OF HOSE  
11.3. ALL FIRE HOSE REELS WITH PRESSURE GAUGE INSTALLED IN BRACKETS TO THE HOSE REEL BEFORE THE ISOLATION VALVE  
11.4. HOSE REELS WILL DELIVER 300mm AT 3 BAR. ALL WILL BE TESTED AND RESULTS NOTED
  - FIRE HYDRANTS  
12.1. FIRE HYDRANTS SHALL COMPLY WITH SANS 10301  
12.2. EXTERNAL HYDRANTS SHALL BE STAMPEDED AND ENCASED IN CONCRETE "THIMBLE"  
12.3. HYDRANTS SHALL DELIVER 1000mm AT 3 BAR. ALL WILL BE TESTED AND RESULTS NOTED
  - SERVICE SHAFTS  
13.1. SERVICE SHAFTS NOT CONTAINING COMBUSTIBLE MATERIAL SHALL BE STAMPEDED  
13.2. SERVICE SHAFTS CONTAINING COMBUSTIBLE MATERIAL SHALL BE STAMPEDED AT TOP STAIR  
13.3. WHERE SERVICES PENETRATE A SEPARATING ELEMENT, SUCH A SEPARATING ELEMENT SHALL BE COMPLETELY SEALED AROUND SUCH SERVICE
  - ESCAPE DOORS  
14.1. ALL ESCAPE DOORS SHALL BE COMPLETE WITH FIRE ESCAPE ROMANSHERRY
  - FIRE ESCAPE ROUTES  
15.1. ALL FIRE ESCAPE ROUTES, INCLUDING CORRIDORS AND STAIRWAYS SHALL HAVE MINIMUM WIDTH OF 1000MM UNLESS SHOWN OTHERWISE  
15.2. ALL ESCAPE ROUTES SHALL HAVE A FIRE RESISTANCE AS INDICATED ON THE DRAWINGS  
15.3. ALL EMERGENCY ROUTES SHALL HAVE A FIRE RESISTANCE AS INDICATED ON THE DRAWINGS
  - PIPERWORK HEIGHTS TO BE AGREED ON SITE TO LIMIT THE USE OF BENDS, DROPS AND RISERS. THIS WILL GENERALLY FALL WITHIN THE ZONES REQUIRED BY THE ARCHITECT
  - ALL 90° AND 45° BENDS IN THE GROUND WILL HAVE A THIRTEEN BLOCK SUPPORTING THE CORNER TO ENSURE MOVEMENT IS LIMITED
  - ABBREVIATIONS:  
• FE - FIRE EXTINGUISHER  
• FH - FIRE HYDRANT  
• FHR - FIRE HOSE REEL

### KEY

- FIRE MAIN AT HIGH LEVEL - GS
- FIRE MAIN BELOW GROUND - HDPE OR uPVC PRESSURE PIPE
- 30m HOSE REEL - 250 CONNECTION WITH ISOLATION VALVE
- PIPE RISER/DROPPER
- 4.5kg FIRE EXTINGUISHER
- 9kg FIRE EXTINGUISHER
- FIRE EXTINGUISHER - SEE LAYOUT
- WALL / COLUMN MOUNTED FIRE HYDRANT
- TWIN BOOSTER CONNECTION WITH PRESSURE GAUGE
- EXTERNAL STANDING FIRE HYDRANT

### KEY

- DIVISION WALL FIRE RESISTANCE OF NOT LESS THAN 60min
- DIVISION WALL FIRE RESISTANCE OF NOT LESS THAN 120min
- TENACITY DIVISION WALL FIRE RESISTANCE OF NOT LESS THAN 30min
- OCCUPATION TYPE DIVISION LINES
- ARROWS INDICATE GENERAL DIRECTION OF ESCAPE
- EMERGENCY ESCAPE DOOR - THESE DOORS / BARRIERS WILL BE REQUIRED TO INTERFACE WITH THE ALARM SYSTEM AND FAIL OPEN / BECOME MANUALLY OPERABLE ON ALARM
- AREA IN FRONT OF FIRE FIGHTING EQUIPMENT WILL BE PAINTED WITH A YELLOW CHEVRON INDICATING AREA TO BE KEPT CLEAR

### ASSEMBLY AREA

STANDALONE SIGN FOR ASSEMBLY AREA DESIGNATION

ASSEMBLY AREA

### ESCAPE ROUTE SIGNAGE

ALL SIGNS WHITE ON GREEN BACKGROUND OR GREEN ON WHITE BACKGROUND.

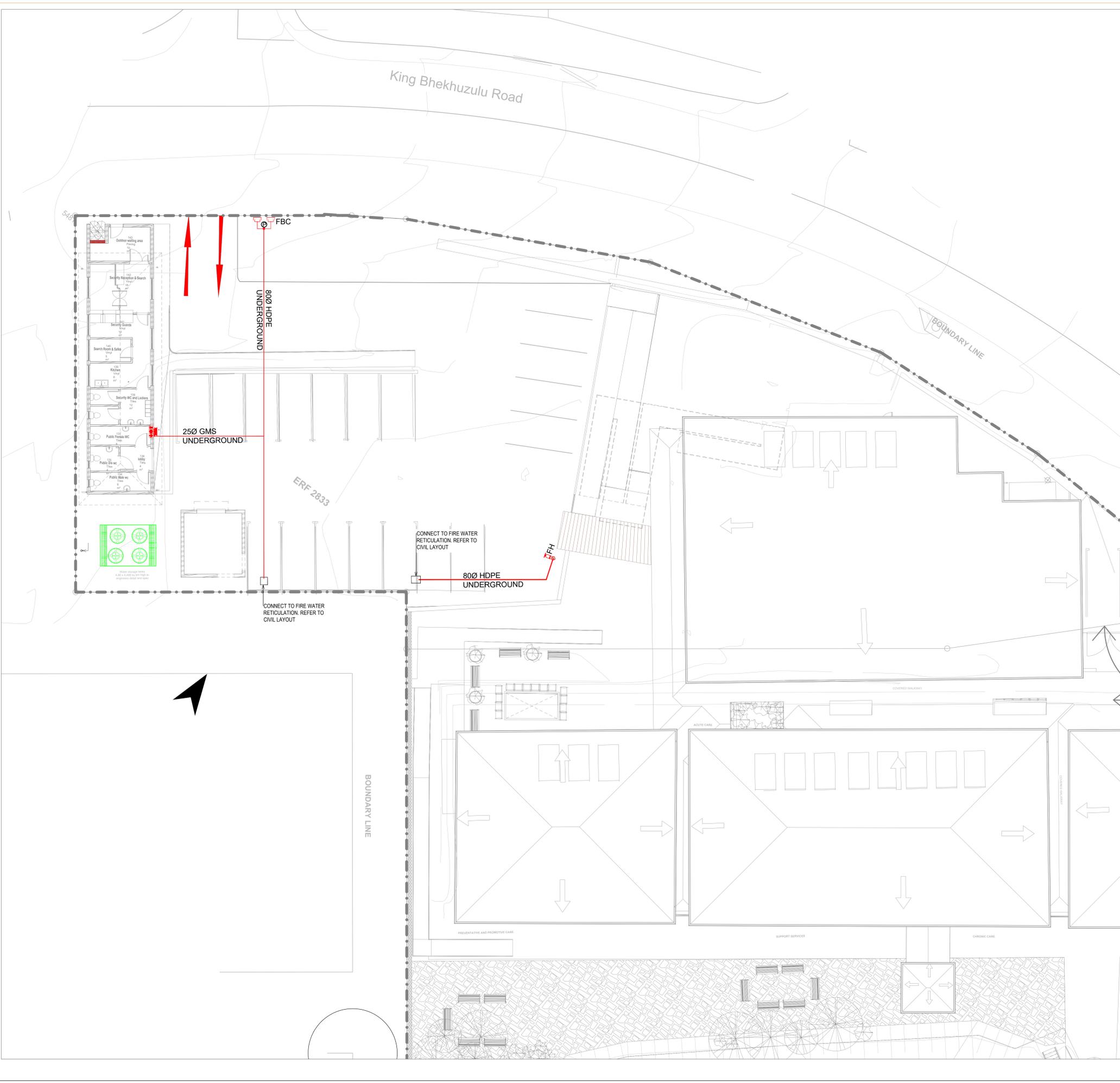
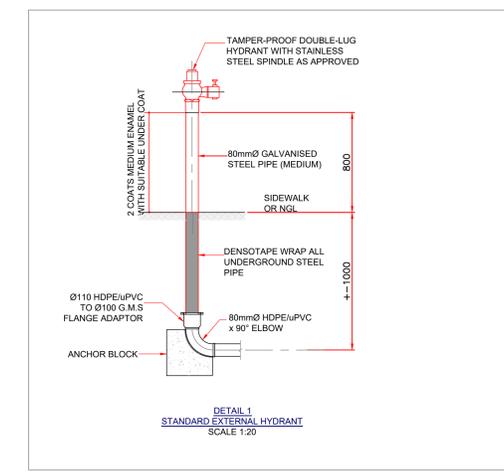
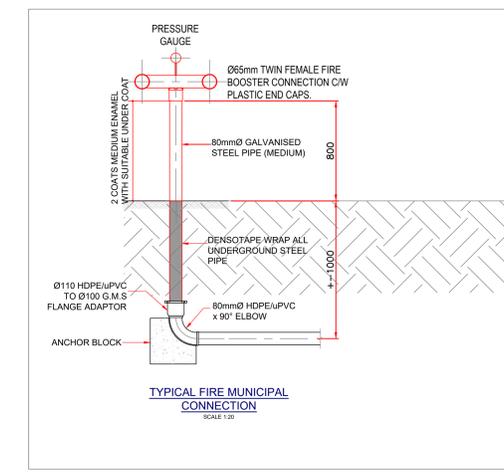
E1	E8	E16	E26
E2	E9	E17	E27
E3	E10	E18	E28
EXIT	E11	E19	E29
EXIT	E12	E20	E30
EXIT	E13	E21	E31
E7	E14	E22	E32
E7A	E15		

### FIRE EQUIPMENT SIGNAGE

ALL SIGNS WHITE ON RED BACKGROUND OR RED ON WHITE BACKGROUND.

F1	F13	F24	F25
F2	F14	F26	F27
F3	F15	F28	F29
F4	F16	F30	F31
F5	F17	F32	F33
F6	F18	F34	F35
F7	F19	F36	F37
F8	F20	F38	
F9	F21		
F10	F22		
F11	F23		
F12			

F39	F45	FLOOR NUMBERS FOR STAIRWELLS
F40	F46	1 9
F41	F47	G B
F42	F48	UG LB
F43	F49	
F44	F50	
	F51	
	F52	



Client number: \_\_\_\_\_ Paper Size: A0

DEPARTMENT SIGNATURES

FACILITY: \_\_\_\_\_

FACILITY CEO: \_\_\_\_\_

FACILITY MANAGER: \_\_\_\_\_

DISTRICT MANAGER: \_\_\_\_\_

PROJECT LEADER: \_\_\_\_\_

Checked by (Professional Consultant): \_\_\_\_\_

Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Client:

Consultant:

Consultant:

Discipline: MECHANICAL

Project: **NEWTOWN A CHC: CONVERSION TO A LARGE CLINIC**

Drawing title: **LOWER GROUND FLOOR FIRE PROTECTION LAYOUT**

Project Stage: STAGE 3: DETAIL DESIGN

Drawn: A SULLIMANI Date: \_\_\_\_\_

Scale: 1:100 2023/10/09

Drawing number: **S[60]100**

Drawing Number ID: 00000 = Client No  
UKU = Department  
A = Consultant Discipline  
0000 = Drawing No  
1 = Revision No



**SIGNAGE**

- ALL INTERNAL SIGNS WILL CARRY THE SANS 1186-6 MARK
- ALL EXTERNAL SIGNS WILL CARRY THE 1186-6 MARK
- ONLY STANDARD SIZES TO BE USED 150mm, 190mm, 250mm or 400mm
- SIGNAGE SHALL BE INSTALLED SUCH AS TO CLEARLY INDICATE THE POSITIONS OF ALL FIRE EQUIPMENT
- SIGNAGE INDICATING ALL ESCAPE ROUTES AND DOORS SHALL BE INSTALLED
- EACH FLOOR LEVEL SHALL BE NUMBERED IN THE ESCAPE STAIRS
- SIGNAGE ON DRAWING IS AN INDICATION OF SIGNAGE REQUIRED. FINAL SIGNAGE TO BE DETERMINED ON SITE. ADDITIONAL SIGNAGE TO BE ADDED SHOULD IT BE REQUESTED BY THE LOCAL AUTHORITIES
- FINAL FIRE SIGNAGE IS TO BE DETERMINED ON SITE WITH THE LOCAL AUTHORITY OFFICER

**ESCAPE ROUTE SIGNAGE**

ALL SIGNS WHITE ON GREEN BACKGROUND OR GREEN ON WHITE BACKGROUND.

E1	E8	E16	E26
E2	E9	E17	E27
E3	E10	E18	E28
E4	E11	E19	E29
EXIT	E12	E20	E30
EXIT	E13	E21	E31
E7	E14	E22	E32
E7A	E15		

**FIRE EQUIPMENT SIGNAGE**

ALL SIGNS WHITE ON RED BACKGROUND OR RED ON WHITE BACKGROUND.

F1	F13	F24	F25
F2	F14	F26	F27
F3	F15	F28	F29
F4	F16	F30	F31
F5	F17	F32	F33
F6	F18	F34	F35
F7	F19	F36	F37
F8	F20	F37	F38
F9	F21		
F10	F22		
F11	F23		

**KEY:**

- FIRE MAIN AT HIGH LEVEL - GS
- FIRE MAIN BELOW GROUND - HDPE OR uPVC PRESSURE PIPE
- 30m HOSE REEL - 250 CONNECTION WITH ISOLATION VALVE
- PIPE RISER/DROPPER
- 4.5kg FIRE EXTINGUISHER
- 9kg FIRE EXTINGUISHER
- FIRE EXTINGUISHER - SEE LAYOUT
- WALL / COLUMN MOUNTED FIRE HYDRANT
- TWIN BOOSTER CONNECTION WITH PRESSURE GAUGE
- EXTERNAL STANDING FIRE HYDRANT

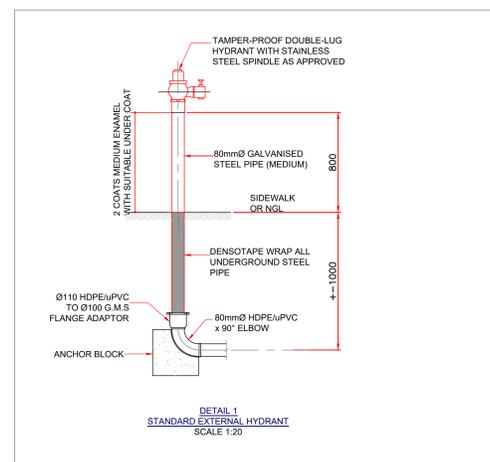
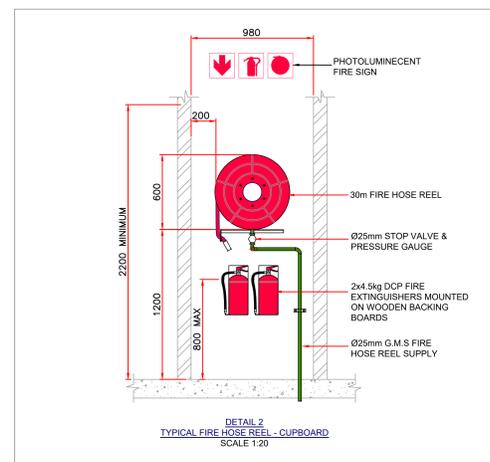
**KEY:**

- DIVISION WALL FIRE RESISTANCE OF NOT LESS THAN 60min
- DIVISION WALL FIRE RESISTANCE OF NOT LESS THAN 120min
- TENACITY DIVISION WALL FIRE RESISTANCE OF NOT LESS THAN 30min
- OCCUPATION TYPE DIVISION LINES
- ARROWS INDICATE GENERAL DIRECTION OF ESCAPE
- EMERGENCY ESCAPE DOOR - THESE DOORS / BARRIERS WILL BE REQUIRED TO INTERFACE WITH THE ALARM SYSTEM AND FALL OPEN / BECOME MANUALLY OPERABLE ON ALARM
- AREA IN FRONT OF FIRE FIGHTING EQUIPMENT WILL BE PAINTED WITH A YELLOW CHEVRON INDICATING AREA TO BE KEPT CLEAR

**ASSEMBLY AREA**

STANDALONE SIGN FOR ASSEMBLY AREA DESIGNATION

**ASSEMBLY AREA**



No.	Date	Amendment	Issued to
1	2023/10/09	Revised to Latest Arch Layout	

**GENERAL NOTES**

**NOTES**

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- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND LEVELS ON THE SITE AND NOTIFY THE NEC SUPERVISOR OF ANY VARIATIONS BEFORE CONSTRUCTION
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH OTHER LAYOUTS, SPECIFICATIONS AND SCHEDULES. THIS INCLUDES OTHER CONSULTANTS INFORMATION
- NO FIREWORKS TO BE EMBEDDED IN THE SCREEN OR CONCRETE FLOORS ALL FIREWORKS SHALL CONFORM TO SANS 62 (STEEL MEDIUM)
- THE DISTANCE BETWEEN PIPE SUPPORT BRACKETS FOR THE HORIZONTAL AND VERTICAL PRESSURE PIPE SHALL NOT EXCEED THE FOLLOWING:
 

30mm	MAXIMUM SPACING
200mm	MAXIMUM SPACING
250mm	MAXIMUM SPACING
- PIPING SHALL BE PROPERLY CLEANED OFF SITE, FROM RUST AND LOOSE WALL SCALE WITH A HARD WIRE BRUSH AND DEGREASED PRIOR TO APPLICATION OF A RED OCEAN PRIMER
- ALL ABOVE GROUND FIRE PIPE TO BE PAINTED: FINISH COATS OF PAINT TO BE TWO OF SIGNAL RED, HIGH GLOSS ENAMEL TO SABS 833
- ALL BRACKETS, SUPPORTS AND FITTINGS ABOVE GROUND TO BE GALVANISED. ALL SCREENED JOINTS TO COMPLY WITH SANS 10100. GALVANISING OF JOINTS WILL BE WITH HEMP, STAGS OR PIPE TAPE
- HYDRAULIC PRESSURE TESTING SHALL BE DONE TO 15 BAR FOR A PERIOD OF 24 HOURS
- PORTABLE FIRE EXTINGUISHERS UNLESS OTHERWISE STATED FIRE EXTINGUISHERS SHALL BE 4.5kg AND 9kg PORTABLE FIRE EXTINGUISHERS SHALL BE MOUNTED ON (BEAD) CHANGING UNLESS HOSE BACKING BOARDS WITH MOUNTING
- PORTABLE FIRE EXTINGUISHERS SHALL COMPLY WITH THE REQUIREMENTS IN SANS 1186-6 AND SHALL BE TESTED AND MAINTAINED AND SERVICED BY COMPETENT PERSONS IN ACCORDANCE WITH SANS 10100.1 AND SANS 10100.2
- HOSE REELS SHALL COMPLY WITH THE REQUIREMENTS IN SANS 543, SHALL BE INSTALLED IN ACCORDANCE WITH SANS 10100.1 AND SANS 10100.2 AND SHALL BE MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS IN SANS 10100.2
- ALL FIRE HOSE REELS SHALL BE COMPLETE WITH 30 METRES OF HOSE
- ALL FIRE HOSE REELS WITH PRESSURE GAUGE INSTALLED IN BRANCHES TO THE HOSE REEL BEFORE THE ISOLATION VALVE. HOSE REELS WILL DELIVER 300mm AT 3 BAR. ALL WILL BE TESTED AND RESULTS NOTED
- FIRE HYDRANTS
  - FIRE HYDRANTS SHALL COMPLY WITH SANS 1038-1
  - EXTERNAL HYDRANTS SHALL BE STANDALONE AND ENCASED IN CONCRETE "FRAMED"
  - HYDRANTS WILL DELIVER 1000mm AT 3 BAR. ALL WILL BE TESTED AND RESULTS NOTED
- SERVICE SHAFTS
  - SERVICE SHAFTS NOT CONTAINING COMBUSTIBLE MATERIAL SHALL BE PROTECTED BY 150mm CONCRETE
  - SERVICE SHAFTS CONTAINING COMBUSTIBLE MATERIAL SHALL BE PROTECTED BY 150mm CONCRETE
  - WHERE SERVICES PENETRATE A SEPARATING ELEMENT, SUCH A SEPARATING ELEMENT SHALL BE COMPLETELY SEALED AROUND SUCH SERVICE
- ESCAPE DOORS
  - ALL ESCAPE DOORS SHALL BE COMPLETE WITH FIRE ESCAPE ROMANSEAL
- FIRE ESCAPE ROUTES
  - ALL ESCAPE ROUTES, INCLUDING CORRIDORS AND STAIRWAYS SHALL HAVE MINIMUM WIDTH OF 1000MM UNLESS SHOWN OTHERWISE
  - ALL ESCAPE ROUTES SHALL HAVE A FIRE RESISTANCE AS INDICATED ON THE DRAWINGS
  - ALL ESCAPE ROUTES SHALL HAVE A FIRE RESISTANCE AS INDICATED ON THE DRAWINGS
- PIPERWORK HEIGHTS TO BE AGREED ON SITE TO LIMIT THE USE OF BENDS, JOINTS AND REDUCERS. THIS WILL GENERALLY FALL WITHIN THE ZONES REQUIRED BY THE ARCHITECT
- ALL 90° AND 45° BENDS IN THE GROUND WILL HAVE A THRETELL BLOCK SUPPORTING THE CORNER TO ENSURE MOVEMENT IS LIMITED
- |   |   |
|---|---|
| 1 | 9 |
| G | B |
| U | G |
| L | B |

  - FE - FIRE EXTINGUISHER
  - FH - FIRE HYDRANT
  - FHR - FIRE HOSE REEL

**Client number:** \_\_\_\_\_ **Page Size:** A0

**DEPARTMENT SIGNATURES**

**FACILITY:** \_\_\_\_\_

**FACILITY CEO:** \_\_\_\_\_

**FACILITY MANAGER:** \_\_\_\_\_

**DISTRICT MANAGER:** \_\_\_\_\_

**PROJECT LEADER:** \_\_\_\_\_

Checked by (Professional Consultant): \_\_\_\_\_

Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Client:** Department: Health PROVINCE OF KWAZULU-NATAL

**Consultant:** GIBB ENGINEERING & ARCHITECTURE

**Consultant:** UKUZA CONSULTING PTY LTD

15 The Boulevard  
Wesway Office Park,  
Wesway,  
Durban, 3635  
Tel: 031 205 5444  
email: george@ukuza.co.za

**Discipline:** MECHANICAL

**Project:** NEWTOWN A CHC: CONVERSION TO A LARGE CLINIC

**Drawing title:** GROUND FLOOR FIRE PROTECTION LAYOUT

**Project Stage:** STAGE 3: DETAIL DESIGN

**Drawn:** A STULMANN **Date:** \_\_\_\_\_

**Scale:** 1:100 **2023/10/09**

**Drawing number:** S[60]101

**Drawing Number ID:** 00000 = Client No  
UKU = Department  
A = Consultant Discipline  
0000 = Drawing No  
1 = Revision No





**KWAZULU-NATAL PROVINCE**

HEALTH  
REPUBLIC OF SOUTH AFRICA

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**Newtown A CHC: Conversion of Newtown CHC from a CHC to Large Clinic**

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## **ANNEXURE 25**

**Wet Service Engineer Drawings**

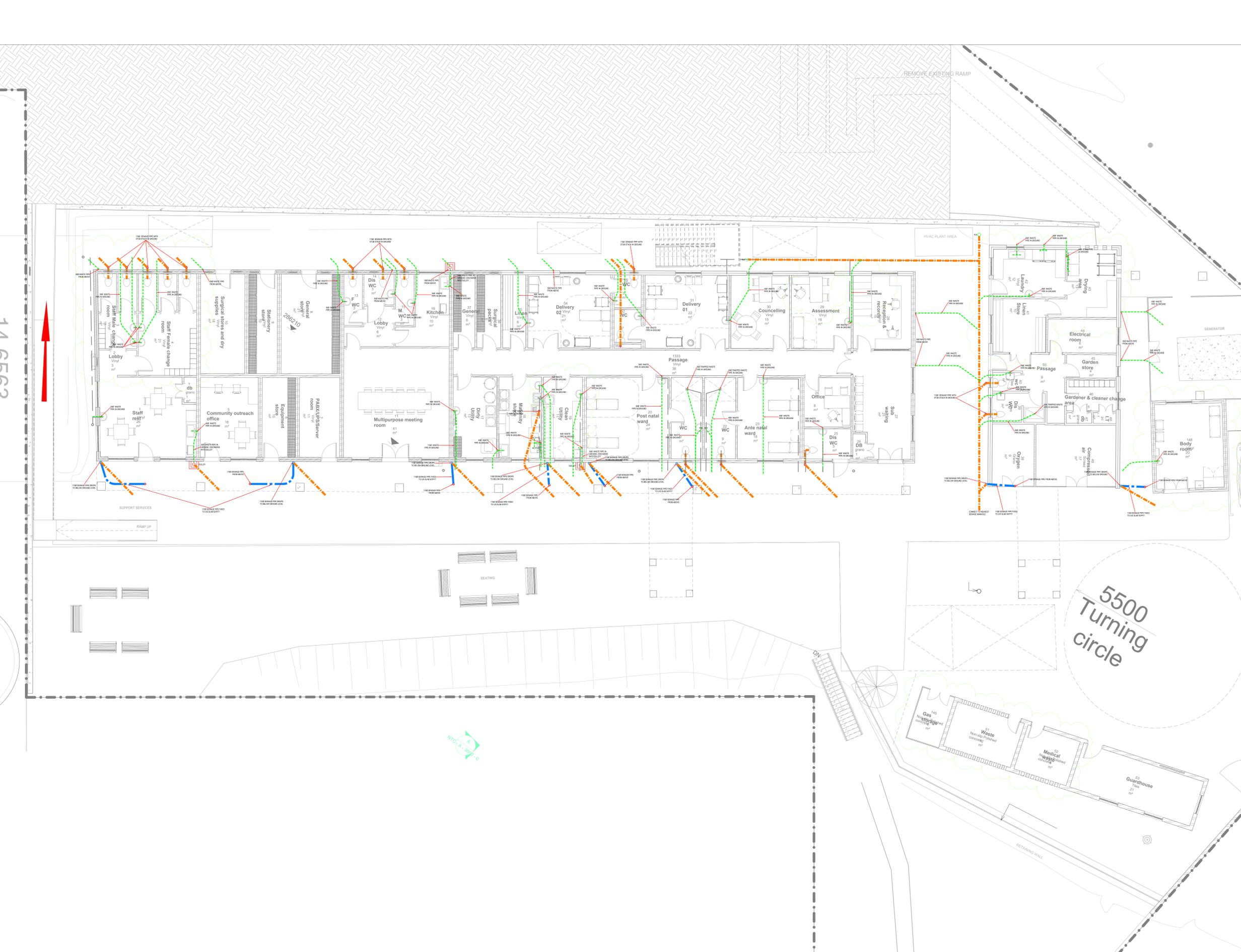


**KEY**

- High level drainage pipework - generally installed hand from the soffit
- High level dedicated vent pipework - generally installed hand from the soffit
- Mid level pipework - installed at mid to low level within the service voids, risers and access corridors
- Drain running below floor or floor - installed to be received in level or within a below ground service trench
- Overhead running below ground
- Subsidence drain connection with bottle trap - trap and crossed pipework into wall or duct to be chrome plated
- 100mm connection - all WCs to have integral trap
- 100mm trap connection - trap and crossed pipework into wall or duct to be chrome plated
- Subsidence connection with bottle trap - trap and crossed pipework into wall or duct to be chrome plated
- Vertical soil stack - unless otherwise stated these are all 100mm and run from above to below
- Rooftop eye
- Roof eye
- F001 - Duty toilet area floor drain
- F002 - Medium duty kitchen floor drain
- G01 - Standard concrete gully for external purposes - to have trapped connection

PIPEWORK SIZING CONVERSION (OD)		
SIZE ON DRAWING	UPVC	HDPE
32	32	32
40	40	40
50	50	63
75	75	75
90	90	90
110	110	110

- GENERAL NOTES**
- DESIGN NOTES**
- DO NOT SCALE FROM THIS DRAWING.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER LAYOUTS, SPECIFICATIONS AND SCHEDULES. THIS INCLUDES OTHER CONSULTANTS INFORMATION.
  - ALL PIPES BELOW GROUND TO BE 1100
  - UNLESS OTHERWISE STATED:
    - ALL BELOW GROUND DRAINAGE PIPEWORK WILL BE UPVC
    - ALL DRAINAGE CONNECTING TO FIXTURES AND TO BELOW WILL BE UPVC
    - ALL PIPEWORK ON THE SOFFIT COLLECTING DRAINS FROM ABOVE WILL BE UPVC
  - ECCENTRIC REDUCER TO BE INSTALLED IN THE VERTICAL JUST BELOW FFL
  - DRAIN TRAP THAT REQUIRE SLEEVES
    - 1000 DRAIN - 2000 SLEEVE
    - 750 TO 1000 DRAIN - 1000 SLEEVE
    - 500 DRAIN AND SMALLER - 1000 SLEEVE
  - ALL FLOOR GULLIES TO BE CAST INTO THE SLAB OR SCORED. ALL FLOOR DRAINS AND GULLIES TO BE FLOOR WITH THE FLOOR FINISH. WATERPROOFING LAPPED INTO THE GULLY
  - FOR ALL CONDENSATE POINTS SEE THE MECHANICAL ENGINEERS DRAWINGS FOR DETAILS AND DEFINED LOCATIONS. ALL CONDENSATE DRAIN LINES WILL BE TRAPPED. ALL CONDENSATE DRAIN POINTS WILL BE SEALED WITH A RUBBER STOPPER OR MASTIC TYPE SEALANT
  - UNLESS OTHERWISE STATED ALL FALLS WILL BE AT A MINIMUM FALL OF 1:60
  - REFER TO SANS 1000 WHERE GENERAL DETAILS ARE LACKING INFORMATION
  - FOR DETAILS SPECIFICATION REFER TO CITY STANDARD REQUIREMENTS
  - ALL DRAIN PIPES THAT PASS THROUGH A FIRE WALL WILL HAVE A FIRE COLLAR
  - ALL EXPOSED AND VISIBLE PIPEWORK IN FRONT FF FLOOR AREAS WILL BE CHROME PLATED
- ROOFING ACCESS AND REQUIREMENTS:**
- ALL RUN ENDS WILL HAVE ROOFING ACCESS
  - ALL BENDS WILL HAVE ACCESS EYES
  - ALL CHANGES OF DIRECTION WILL HAVE ROOFING ACCESS EITHER IN THE BENDS OR BEFORE AND AFTER THE BEND
  - ALL PIPES MUST BE ROOFABLE FROM AT LEAST ONE DIRECTION FOR THE ENTIRE LENGTH OF THE RUN
- ABBREVIATIONS**
- HL - HIGH LEVEL
  - LL - LOW LEVEL
  - TA - TO ABOVE
  - FB - FROM ABOVE
  - FL - FROM BELOW
  - BIS - BELOW GROUND
  - IL - INVERT LEVEL
  - FD - FLOOR DRAIN



Client number: \_\_\_\_\_ Page Size: A0

**DEPARTMENT SIGNATURES**

FACILITY GEO: \_\_\_\_\_

FACILITY MANAGER: \_\_\_\_\_

DISTRICT MANAGER: \_\_\_\_\_

PROJECT LEADER: \_\_\_\_\_

Checked by (Professional Consultant): \_\_\_\_\_

Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



Discipline: MECHANICAL

Project: NEWTOWN A CHC: CONVERSION TO A LARGE CLINIC

Drawing title: GROUND FLOOR LEVEL INTERNAL DRAINAGE LAYOUT

Project Stage: STAGE 3: DETAILED DESIGN

Drawn: T.J.P. Date: 2023/09/15

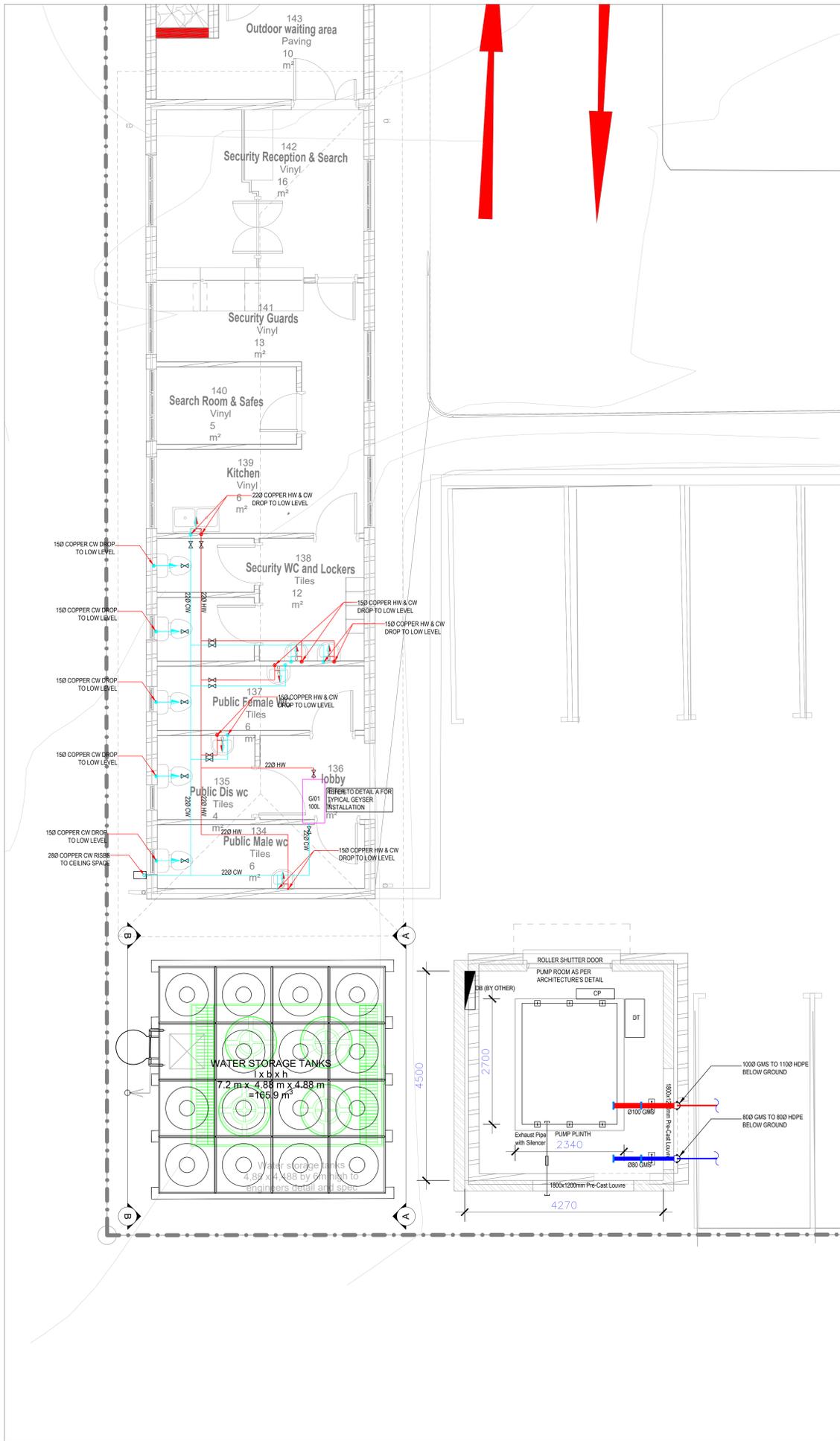
Scale: 1:75

Drawing number: R[-]101

Drawing Number ID

- 00000 = Client No
- UKU = Department
- A = Consultant Discipline
- 0000 = Drawing No
- 1 = Revision No





EQUIPMENT SCHEDULE					
ID	DESCRIPTION	CAPACITY	POWER REQUIREMENT	CONTROLS	NOTES
WS01	SECTIONAL STEEL COLD WATER & FIRE WATER STORAGE TANK	165.9 m <sup>3</sup>			540 COPPER HW at high level 1000 GMS Overflow at high level 1000 GMS Scour Outlet bottom of tank Access Hatch and Cat ladder 760 COPPER Suction line to Booster Pump 1000 GMS Fire Outlet bottom of tank
BP01	COLD WATER TWIN BOOSTER PUMP SET	2.5 l/s @ 3.0 bar Minimum	3 PHASE 300V/415/50Hz 5.5kW	TWIN BOOSTER PUMP SET WITH 1 DUTY AND 1 STANDBY PUMP. PUMPS WILL HAVE FULL INVERTER CONTROL TO PROVIDE CONTINUOUS VARIABLE SPEED PUMPING.	LIQUID TEMPERATURE 0 °C TO 40 °C HEAT PRESSURE NOT EXCEED 16 BAR MOTOR PROTECTION AGAINST OVERLOAD AND LOW LEVEL PROTECTION
BP02	DIESEL ELECTRICAL/ JOCKEY FIRE BOOSTER	1200 l/min @ 4.0 bar	3 PHASE 300V/415/50Hz 15kW @ 5.5kW JOCKEY	MAIN ELECTRIC WITH DIESEL BACK-UP AND JOCKEY PUMP TO KEEP THE SYSTEM PRESSURISED.	
G01	100L GEYSER	2 KW ELEMENT 100L STORAGE	1 PHASE 220-240V/50Hz 2KW	FALL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 70 °C TO BE INSTALLED HORIZONTALLY IN CEILING SPACE	950mm x 540mm DIAMETER The geyser will be installed in compliance with SANS 10254 Electric Hot Water Storage Heaters c/w Temperature & Pressure Valve (Safety Valve), Drain Cock, Pressure Control Valve, Dip Trap, Vacuum Breaker
G02	150L GEYSER	2 KW ELEMENT 150L STORAGE	1 PHASE 220-240V/50Hz 2KW, 8.7Amp	FALL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 70 °C TO BE INSTALLED HORIZONTALLY IN CEILING SPACE	1331mm x 596mm DIAMETER The geyser will be installed in compliance with SANS 10254 Electric Hot Water Storage Heaters c/w Temperature & Pressure Valve (Safety Valve), Drain Cock, Pressure Control Valve, Dip Trap, Vacuum Breaker
G03	200L GEYSER	4 KW ELEMENT 200L STORAGE	1 PHASE 220-240V/50Hz 4KW	FALL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 70 °C TO BE INSTALLED HORIZONTALLY IN CEILING SPACE	1635mm x 596mm DIAMETER The geyser will be installed in compliance with SANS 10254 Electric Hot Water Storage Heaters c/w Temperature & Pressure Valve (Safety Valve), Drain Cock, Pressure Control Valve, Dip Trap, Vacuum Breaker
G04	250L GEYSER	4 KW ELEMENT 250L STORAGE	1 PHASE 220-240V/50Hz 4KW	FALL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 70 °C TO BE INSTALLED HORIZONTALLY IN CEILING SPACE	1635mm x 596mm DIAMETER The geyser will be installed in compliance with SANS 10254 Electric Hot Water Storage Heaters c/w Temperature & Pressure Valve (Safety Valve), Drain Cock, Pressure Control Valve, Dip Trap, Vacuum Breaker
HB01	STAFF LOUNGE HYDROBOL	7.5L HYDRO BOLL	1 PHASE 220-240V/50Hz 1.5kW	FALL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 70 °C TO BE INSTALLED HORIZONTALLY	Hydro-Boil 7.5 litre instant boiling water unit with White Epoxy Powder Coated outer case and two-way tap, complete with anti-chamber technology. Unit to be installed in accordance with manufacturers instructions, connected to 15mm cold water supply and 220 volt 15 amp electrical power supply.

Rev. Date Amendment Issued to

1	2023/10/09	Revised to Latest Arch Layout	Issued to
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**GENERAL NOTES**

**DESIGN NOTES**

- DO NOT SCALE FROM THIS DRAWING.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER LAYOUTS, SPECIFICATION AND SCHEDULES. THIS INCLUDES OTHER CONSULTANTS' INFORMATION.
- FOR PIPE SIZING NOT SHOWN ON THE LAYOUTS SEE SCHEMATIC DETAILS AND GENERAL BUILDING SCHEMATIC.
- ALL FINAL CONNECTIONS TO FIXTURES TO BE AS FOLLOWS:
  - BASINS: 150D
  - SINKS: 200D
  - WCS: 150D
  - URINALS: 150D
  - SHOWERS: 150D
- ALL BRANCHES TO HAVE ISOLATION VALVES INSTALLED JUST AFTER THE CONNECTION.
- ALL PRIMARY EQUIPMENT CONNECTIONS WILL HAVE AN ISOLATION VALVE.
- ALL SANITARY CONNECTIONS WILL BE BY MEANS OF FLEXIBLE PIPE FROM THE VALVE TO THE FIXTURE.
- SITE WATER METER SUPPLIED BY EITHER THE DEVELOPER OR BY CONTRACTOR TO COMPLY REQUIREMENTS.
- ALL HOT AND COLD WATER PIPESWORK NOT CHASED INTO A WALL MUST BE INSULATED BEFORE BEING COVERED AND PLASTERED.
- ALL VALVES TO HAVE MINIMUM PRESSURE RATING OF PN10. THIS WOULD BE PREFERABLE.
- ALL VALVES INSTALLED MUST BE VALVES OF THE SAME TYPE AS THE PIPE BEING INSTALLED.
- EVERY SET OF BRANCH PIPESWORK IS TO HAVE AN ISOLATION VALVE TO ENSURE THAT THE BRANCH CAN BE ISOLATED FROM THE REST OF THE SYSTEM.
- PIPESWORK HEIGHTS TO BE AGREED ON SITE TO LIMIT THE USE OF BENDS, CROSSINGS AND RISERS. THIS WILL GENERALLY FALL WITHIN THE ZONES REQUIRED BY THE ARCHITECT.
- ALL LOW POINTS IN THE SYSTEM TO HAVE DIRT POCKETS AND DRAIN VALVES.
- ALL HIGH POINTS TO HAVE AIR POCKETS AND AIR RELEASE VALVES. ALL HIGH POINTS TO HAVE VACUUM BREAKERS.
- PIPESWORK TO BE RUN ON BRACKETS BOLTED TO THE WALL. PARAPET WHERE NOT POSSIBLE PIPESWORK TO BE RUN ON TRAY BASKET ATTACHED TO 3000x300 CONCRETE FAYERS ON TOP OF THE WATER PROOFING.
- HOT WATER TAP IS ALWAYS ON THE RIGHT.
- COLD WATER TAP IS ALWAYS ON THE LEFT.
- ALL PIPESWORK ON ROOF EXPOSED TO ACCESSIBLE AREAS OR WEATHER IS TO BE INSULATED AND IS TO HAVE GALVANISED CLADDING.
- ALL EXPOSED PIPESWORK AT HIGH LEVEL TO BE PAINTED RAL 9010 GR AS PER TENDR SPEC AND TO BE CLEARLY LABELED AND MARKED AS PER THE WATER SERVICES SPECIFICATION.
- ABBREVIATIONS
  - HL - HIGH LEVEL
  - LL - LOW LEVEL
  - TA - TO ABOVE
  - TB - TO BELOW
  - FA - FROM ABOVE
  - FB - FROM BELOW
  - CWS - COLD WATER SERVICE
  - HWS - HOT WATER SERVICE
  - HWFS - HOT WATER SERVICES FLOW
  - HWBR - HOT WATER SERVICE RETURN

**PIPEWORK SIZING CONVERSION**

SIZE ON DRAWING	MEPA	COOPER
15	15	15
20	20	22
25	25	28
32	32	35
40	40	42
50	50	54
65	65	67

Client number: \_\_\_\_\_ Floor Size: \_\_\_\_\_  
 Name: \_\_\_\_\_ AD

DEPARTMENT SIGNATURES

FACILITY CEO: \_\_\_\_\_  
 FACILITY MANAGER: \_\_\_\_\_  
 DISTRICT MANAGER: \_\_\_\_\_  
 PROJECT LEADER: \_\_\_\_\_

Checked by (Professional Consultant): \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Client: health  
 Department: Health  
 PROVINCE OF KWAZULU-NATAL

Consultant: GIBB  
 ENGINEERING & ARCHITECTURE

Consultant: UKUZA CONSULTING  
 15 The Boulevard  
 Westway Office Park,  
 Westville,  
 Durban, 3615  
 Tel: 031 285 4444  
 email: gip@gibb.co.za

Discipline: MECHANICAL

Project: **NEWTOWN A CHC: CONVERSION TO A LARGE CLINIC**

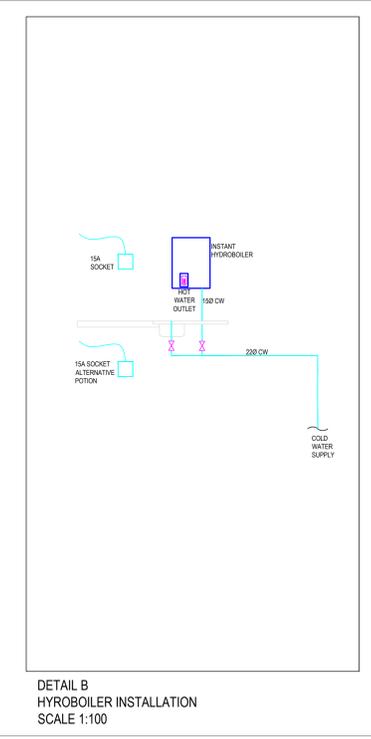
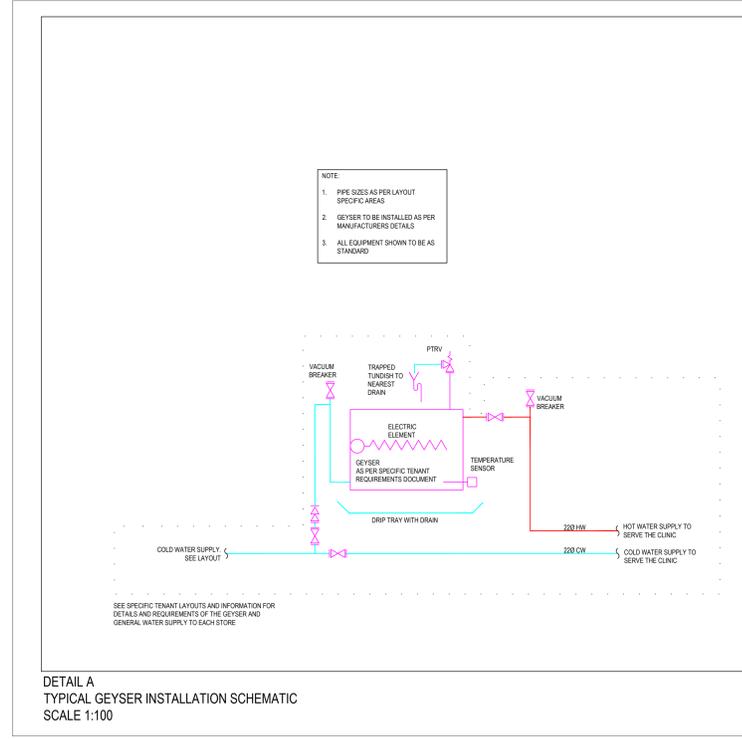
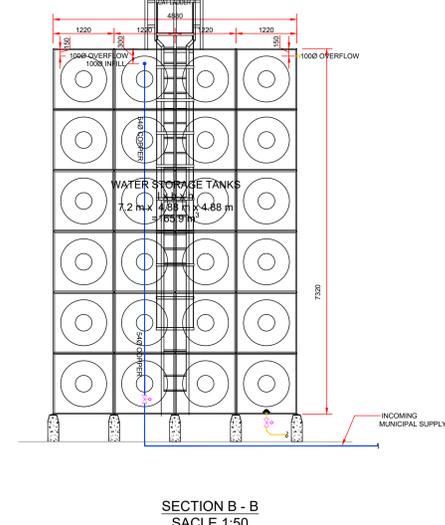
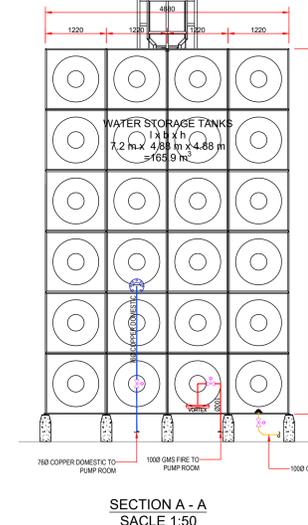
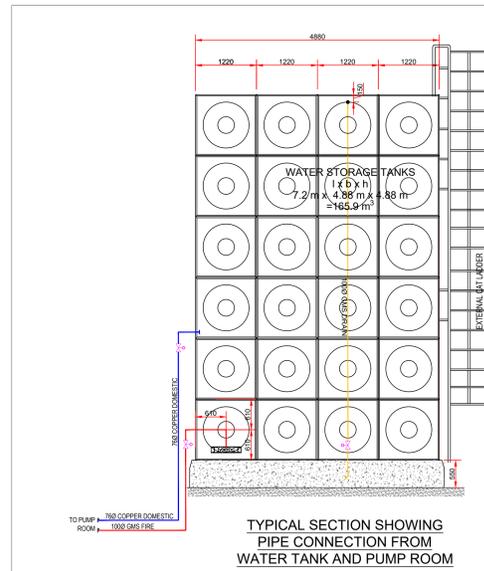
Drawing title: **LOWER GROUND LEVEL DOMESTIC WATER & WATER STORAGE LAYOUT**

Project Stage: STAGE 3: DETAILED DESIGN

Drawn: A STJLUMANI Date: \_\_\_\_\_  
 Scale: 1:75 2023/10/09

Drawing number: **SF-1100**

Drawing Number ID: \_\_\_\_\_  
 00000 = Client No  
 UKU = Department  
 A = Consultant Discipline  
 0000 = Drawing No  
 1 = Revision No



No.	Date	Amendment	Issued to
1	2023/10/09	Revised to Latest Arch Layout	

**GENERAL NOTES**

- DESIGN NOTES**
- DO NOT SCALE FROM THIS DRAWING.
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  - FOR PIPE SIZING NOT SHOWN ON THE LAYOUTS SEE SCHEMATIC DETAILS AND GENERAL BUILDING SCHEMATIC.
  - ALL FINAL CONNECTIONS TO FIXTURES TO BE AS FOLLOWS:
    - BASINS: 150
    - SINKS: 220
    - WCs: 150
    - URINALS: 150
    - SHOWERS: 150
  - ALL BRANCHES TO HAVE ISOLATION VALVES INSTALLED JUST AFTER THE JUNCTION.
  - ALL SANITARY EQUIPMENT CONNECTIONS WILL HAVE AN ISOLATION VALVE.
  - ALL SANITARY CONNECTIONS WILL BE BY MEANS OF FLEXIBLE PIPE FROM THE VALVE TO THE FIXTURE.
  - SITE WATER METER SUPPLIED BY EITHER THE DEVELOPER OR BY CONTRACTOR TO COMPLY REQUIREMENTS.
  - ALL HOT AND COLD WATER PIPESWORK WHERE NOT CHASED INTO A WALL MUST BE INSULATED.
  - ALL PIPESWORK CHASED INTO A WALL MUST BE PAPER WRAPPED AND INSULATED BEFORE BEING COVERED AND PLASTERED.
  - ALL VALVES TO HAVE MINIMUM PRESSURE RATING OF PN10. PN15 WOULD BE PREFERABLE.
  - ALL VALVES INSTALLED MUST BE VALVES OF THE SAME TYPE AS THE PIPE BEING INSTALLED.
  - EVERY SET OF BRANCH PIPESWORK IS TO HAVE AN ISOLATION VALVE TO ENSURE THAT THE BRANCH CAN BE ISOLATED FROM THE REST OF THE SYSTEM.
  - PIPESWORK HEIGHTS TO BE AGREED ON SITE TO LIMIT THE USE OF BENDS, GROUPS AND RISERS. THIS WILL GENERALLY FALL WITHIN THE ZONES REQUIRED BY THE ARCHITECT.
  - ALL LOW POINTS IN THE SYSTEM TO HAVE DIRT POCKETS AND DRAIN VALVES.
  - ALL HIGH POINTS TO HAVE AIR POCKETS AND AIR RELEASE VALVES. ALL HIGH POINTS TO HAVE VACUUM BREAKERS.
  - PIPESWORK TO BE RUN ON BRACKETS BOLTED TO THE WALL. PARAPET WHERE NOT POSSIBLE PIPESWORK TO BE RUN ON TRAY BASKET ATTACHED TO 3000KCC CONCRETE FAYERS ON TOP OF THE WATER PROOFING.
  - HOT WATER TAP IS ALWAYS ON THE RIGHT.
  - COLD WATER TAP IS ALWAYS ON THE LEFT.
  - ALL PIPESWORK ON ROOF EXPOSED TO ACCESSIBLE AREAS OR WEATHER IS TO BE INSULATED AND IS TO HAVE GALVANISED CLADDING.
  - ALL EXPOSED PIPESWORK AT HIGH LEVEL TO BE PAINTED RAL 9010 GR AS PER DRAWING SPEC AND TO BE CLEARLY LABELED AND MARKED AS PER THE WATER SERVICES SPECIFICATION.
- ABBREVIATIONS**
- HL - HIGH LEVEL
  - LL - LOW LEVEL
  - TA - TO ABOVE
  - TB - TO BELOW
  - FA - FROM ABOVE
  - FB - FROM BELOW
  - CWS - COLD WATER SERVICE
  - HWS - HOT WATER SERVICE
  - HWSP - HOT WATER SERVICES FLOW
  - HWSR - HOT WATER SERVICES RETURN

SIZE ON DRAWING	MEPA	COOPER
15	15	15
20	20	22
25	25	28
32	32	35
40	40	42
50	50	54
65	65	67

Client number: \_\_\_\_\_ Floor Size: 40

**DEPARTMENT SIGNATURES**

FACILITY: \_\_\_\_\_  
 FACILITY CEO: \_\_\_\_\_  
 FACILITY MANAGER: \_\_\_\_\_  
 DISTRICT MANAGER: \_\_\_\_\_  
 PROJECT LEADER: \_\_\_\_\_  
 Checked by (Professional Consultant): \_\_\_\_\_  
 Name: \_\_\_\_\_ Date: 2023/08/31 16:58:31  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_



Consultant:  
 15 The Boulevard  
 Westway Office Park,  
 Durban, 3635  
 Tel: 031 285 5444  
 email: george@ukzn.co.za

Discipline: MECHANICAL

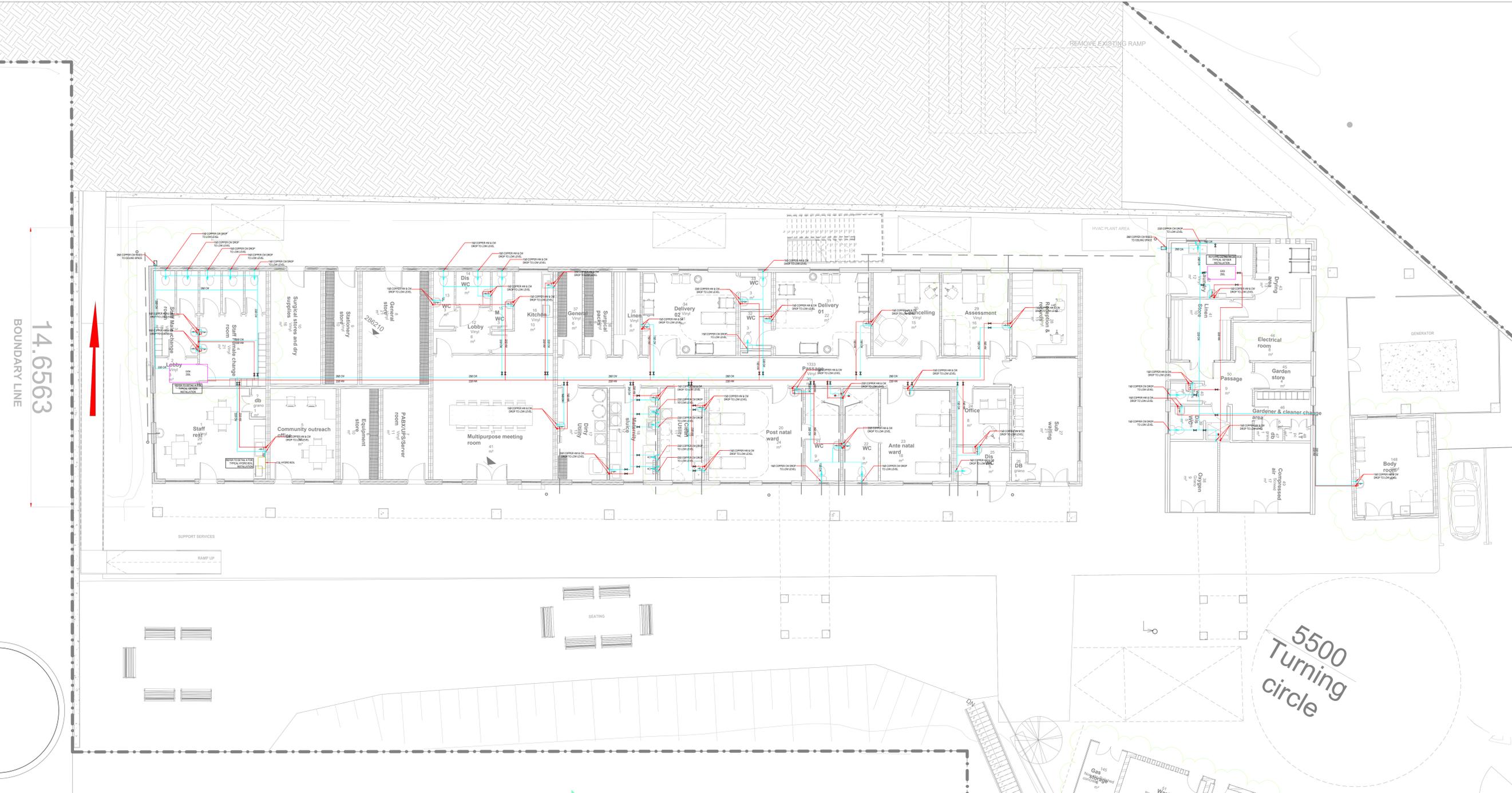
Project: NEWTOWN A CHC: CONVERSION TO A LARGE CLINIC

Drawing title: GROUND FLOOR LEVEL DOMESTIC WATER LAYOUT

Project Stage: STAGE 3: DETAILED DESIGN

Drawn: A STJLUMANI Date: \_\_\_\_\_  
 Scale: 1:75 2023/10/09

Drawing number: S-[101  
 Drawing Number ID: 00000 = Client No  
 UKU = Department  
 A = Consultant Discipline  
 0000 = Drawing No  
 1 = Revision No



ID	DESCRIPTION	CAPACITY	POWER REQUIREMENT	CONTROLS	NOTES
WS01	SECTIONAL STEEL COLD WATER & FIRE WATER STORAGE TANK	165.9 m³			1000 COPPER units at high level 1000 GWS Overflow at high level 1000 Scoor Outlet bottom of tank Access Hatch and Cat ladder 100 COPPER Suction line to Booster Pump 1000 GWS Fire Outlet bottom of tank
BP01	COLD WATER TWIN BOOSTER PUMP SET	2.5 l/s @ 3.0 bar Minimum	3 PHASE 380V-415V/50Hz 5.5kW	TWIN BOOSTER PUMP SET WITH 1 DUTY AND 1 STANDBY PUMP. PUMPS WILL HAVE FULL INVERTER CONTROL TO PROVIDE CONTINUOUSLY VARIABLE SPEED PUMPING.	Liquid Temperature 0 °C to +40 °C MAXIMUM PRESSURE NOT EXCEED 15 BAR MOTOR PROTECTION AGAINST OVERLOAD AND LOW LEVEL PROTECTION
BP02	DIESEL ELECTRICAL JOCKEY FIRE BOOSTER	1260 l/min @ 4.0 bar	3 PHASE 380V-415V/50Hz 15kW & 5kW JOCKEY	MAIN ELECTRIC WITH DIESEL BACK-UP AND JOCKEY PUMP TO KEEP THE SYSTEM PRESSURISED.	
G01	100L GEYSER	2 kW ELEMENT 100L STORAGE	1 PHASE 220-240V/50Hz 2kW	FAIL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 70 °C TO BE INSTALLED HORIZONTALLY IN CEILING SPACE 20W ELEMENT	90mm x 543mm DIAMETER The geyser will be installed in compliance with SANS 10254 Electric Hot Water Storage Heaters C/w Temperature & Pressure Valve (Safety Valve), Drain Cock, Pressure Control Valve, Drip Tray, Vacuum Breakers
G02	150L GEYSER	2 kW ELEMENT 150L STORAGE	1 PHASE 220-240V/50Hz 2kW, 8.7amp	FAIL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 70 °C TO BE INSTALLED HORIZONTALLY IN CEILING SPACE 20W ELEMENT	133mm x 596mm DIAMETER The geyser will be installed in compliance with SANS 10254 Electric Hot Water Storage Heaters C/w Temperature & Pressure Valve (Safety Valve), Drain Cock, Pressure Control Valve, Drip Tray, Vacuum Breakers
G03	200L GEYSER	4 kW ELEMENT 200L STORAGE	1 PHASE 220-240V/50Hz 4kW	FAIL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 70 °C TO BE INSTALLED HORIZONTALLY IN CEILING SPACE 40W ELEMENT	163mm x 596mm DIAMETER The geyser will be installed in compliance with SANS 10254 Electric Hot Water Storage Heaters C/w Temperature & Pressure Valve (Safety Valve), Drain Cock, Pressure Control Valve, Drip Tray, Vacuum Breakers
G04	250L GEYSER	4 kW ELEMENT 250L STORAGE	1 PHASE 220-240V/50Hz 4kW	FAIL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 70 °C TO BE INSTALLED HORIZONTALLY IN CEILING SPACE 40W ELEMENT	163mm x 596mm DIAMETER The geyser will be installed in compliance with SANS 10254 Electric Hot Water Storage Heaters C/w Temperature & Pressure Valve (Safety Valve), Drain Cock, Pressure Control Valve, Drip Tray, Vacuum Breakers
HB01	STAFF LOUNGE HYDROBOL	7.5L HYDRO BOL	1 PHASE 220-240V/50Hz 1.5kW	FAIL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 70 °C TO BE INSTALLED HORIZONTALLY 2.4kW ELEMENT	Hydro Bol 7.5 litre instant boiling water unit with White Epoxy Powder Coated outer case and heavy duty, compliant with Nano-chamber technology. Unit to be installed in accordance with manufacturers instructions, connected to 15mm cold water supply and 220 volt 15 amp electrical power supply.

**DESIGN NOTES**

- DO NOT SCALE FROM THIS DRAWING.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER LAYOUTS, SPECIFICATION AND SCHEDULES. THIS INCLUDES OTHER CONSULTANTS INFORMATION.
- SEE CIVIL ENGINEERS LAYOUTS FOR INCOMING WATER SUPPLY
- FOR PIPE SIZING NOT SHOWN ON THE LAYOUTS SEE SCHEMATIC DETAILS AND GENERAL BUILDING SCHEMATIC
- ALL FINAL CONNECTIONS TO BE AS FOLLOWS:
  - BASINS: 150
  - SINKS: 220
  - WCs: 150
  - URINALS: 150
- ALL BRANCHES TO HAVE ISOLATION VALVES INSTALLED JUST AFTER THE JUNCTION.
- ALL PRE PAID WATER METERS ARE SUPPLIED BY THE FACILITIES MANAGERS
- ALL SANITARY EQUIPMENT CONNECTIONS WILL HAVE AN ISOLATION VALVE
- ALL SANITARY CONNECTIONS WILL BE BY MEANS OF FLEXIBLE PIPE FROM THE VALVE (B) TO THE FIXTURE.
- CWS = COLD WATER SERVICE.  
HWS = HOT WATER SERVICE

SIZE ON DRAWING	MEPA	COOPER	GALVANIZED
15	15	15	15
20	20	22	20
25	25	28	25
32	32	35	32
40	40	42	40
50	50	54	50
65	65	67	65

ID	DESCRIPTION	CAPACITY	POWER REQUIREMENT	CONTROLS	NOTES
WS01	SECTIONAL STEEL COLD WATER & FIRE WATER STORAGE TANK	165.9 m³			548 COPPER inlet at high level 1000 GMS Overflow at high level 1000 GMS Outlet bottom of tank Access Hatch and Cat ladder 750 COPPER Function line to Booster Pump 1000 GMS Fire Outlet bottom of tank
BP01	COLD WATER TWIN BOOSTER PUMP SET	2.51 @ 3.0 bar Minimum	3 PHASE 380V/415/50/Hz 5.5kW	TWIN BOOSTER PUMP SET WITH 1 DUTY AND 1 STANDBY PUMP PUMPS WILL HAVE FULL INVERTER CONTROL TO PROVIDE CONTINUOUSLY VARIABLE SPEED PUMPING	LIQUID TEMPERATURE 0 °C TO +40 °C INLET PRESSURE NOT EXCEED 6.5 BAR MOTOR PROTECTION AGAINST OVERLOAD AND LOW VOLTAGE PROTECTION
BP02	DIESEL ELECTRICAL/ JOCKEY FIRE BOOSTER	1200 ltrm @ 4.0 bar	3 PHASE 380V/415/50/Hz 15kW & 15kW JOCKEY	MAIN ELECTRIC WITH DIESEL BACK-UP AND JOCKEY PUMP TO KEEP THE SYSTEM PRESSURISED.	
G01	100L GEYSER	2 KW ELEMENT 100L STORAGE	1 PHASE 220-240V/50/Hz 5kW	FALL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 20 °C TO BE INSTALLED HORIZONTALLY IN CEILING SPACE 2XW ELEMENT	602mm x 543mm DIAMETER The geyser will be installed in compliance with SANS 10234 Electric Hot Water Storage Heaters Clear Temperature & Pressure Valve (Safety Valve), Drain Cock, Pressure Control Valve, Drip Tray, Vacuum Breakers
G02	150L GEYSER	2 KW ELEMENT 150L STORAGE	1 PHASE 220-240V/50/Hz 5kW & 7kW	FALL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 20 °C TO BE INSTALLED HORIZONTALLY IN CEILING SPACE 2XW ELEMENT	1333mm x 506mm DIAMETER The geyser will be installed in compliance with SANS 10234 Electric Hot Water Storage Heaters Clear Temperature & Pressure Valve (Safety Valve), Drain Cock, Pressure Control Valve, Drip Tray, Vacuum Breakers
G03	200L GEYSER	4 KW ELEMENT 200L STORAGE	1 PHASE 220-240V/50/Hz 4kW	FALL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 20 °C TO BE INSTALLED HORIZONTALLY IN CEILING SPACE 4XW ELEMENT	1635mm x 506mm DIAMETER The geyser will be installed in compliance with SANS 10234 Electric Hot Water Storage Heaters Clear Temperature & Pressure Valve (Safety Valve), Drain Cock, Pressure Control Valve, Drip Tray, Vacuum Breakers
G04	250L GEYSER	4 KW ELEMENT 250L STORAGE	1 PHASE 220-240V/50/Hz 4kW	FALL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 20 °C TO BE INSTALLED HORIZONTALLY IN CEILING SPACE 4XW ELEMENT	1635mm x 506mm DIAMETER The geyser will be installed in compliance with SANS 10234 Electric Hot Water Storage Heaters Clear Temperature & Pressure Valve (Safety Valve), Drain Cock, Pressure Control Valve, Drip Tray, Vacuum Breakers
HB01	STAFF LOUNGE HYDROROL	7.5L HYDROROL	1 PHASE 220-240V/50/Hz 1.5kW	FALL SAFE THERMOSTAT GRADUATED BETWEEN 30 °C AND 20 °C TO BE INSTALLED HORIZONTALLY 2XW ELEMENT	Hydro Boil 7.5 litre instant boiling water unit with White Epoxy Powder Coated outer case and honey bee, complete with built-in chamber technology. Unit to be installed in accordance with manufacturers instructions, connected to 15mm cold water supply and 220 volt 15 amp electrical power supply.

- GENERAL NOTES**
- DESIGN NOTES**
- DO NOT SCALE FROM THIS DRAWING.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER LAYOUTS, SPECIFICATION AND SCHEDULES. THIS INCLUDES OTHER CONSULTANT'S INFORMATION.
  - FOR PIPE SIZING NOT SHOWN ON THE LAYOUTS SEE SCHEMATIC DETAILS AND GENERAL BUILDING SCHEMATIC.
  - ALL FINAL CONNECTIONS TO FIXTURES TO BE AS FOLLOWS:
    - BASINS: 150D
    - SINKS: 200D
    - URINALS: 150D
    - SHOWERS: 150D
  - ALL BRANCHES TO HAVE ISOLATION VALVES INSTALLED JUST AFTER THE JUNCTION.
  - ALL SANITARY EQUIPMENT CONNECTIONS WILL HAVE AN ISOLATION VALVE FROM THE VALVE TO THE FIXTURE.
  - ALL SANITARY CONNECTIONS WILL BE BY MEANS OF FLEXIBLE PIPE FROM THE VALVE TO THE FIXTURE.
  - SITE WATER METER SUPPLIED BY EITHER THE DEVELOPER OR BY CONTRACTOR TO COMPLY REQUIREMENTS.
  - ALL HOT AND COLD WATER PIPEWORK WHERE NOT CHASED INTO A WALL MUST BE INSULATED.
  - ALL PIPEWORK CHASED INTO A WALL MUST BE PROPERLY WRAPPED AND INSULATED BEFORE BEING COVERED AND PLASTERED.
  - ALL VALVES TO HAVE MINIMUM PRESSURE RATING OF PN10. PN15 WOULD BE PREFERABLE.
  - ALL VALVES INSTALLED MUST BE VALVES OF THE SAME TYPE AS THE PIPE.
  - EVERY SET OF BRANCH PIPEWORK IS TO HAVE AN ISOLATION VALVE TO ENSURE THAT THE BRANCH CAN BE ISOLATED FROM THE REST OF THE SYSTEM.
  - PIPEWORK HEIGHTS TO BE AGREED ON SITE TO LIMIT THE USE OF BENDS, GROUPS AND RISERS. THIS WILL GENERALLY FALL WITHIN THE ZONES REQUIRED BY THE ARCHITECT.
  - ALL LOW POINTS IN THE SYSTEM TO HAVE DIRT POCKETS AND DRAIN VALVES.
  - ALL HIGH POINTS TO HAVE AIR POCKETS AND AIR RELEASE VALVES. ALL HIGH POINTS TO HAVE VACUUM BREAKERS.
  - PIPEWORK TO BE RUN ON BRACKETS BOLTED TO THE WALL. PARAPET WHERE NOT POSSIBLE PIPEWORK TO BE RUN ON TRAY BASKET ATTACHED TO 300x300 CONCRETE PAVERS ON TOP OF THE WATER PROOFING.
  - HOT WATER TAP IS ALWAYS ON THE RIGHT.
  - COLD WATER TAP IS ALWAYS ON THE LEFT.
  - ALL PIPEWORK ON ROOF EXPOSED TO ACCESSIBLE AREAS OR WEATHER IS TO BE INSULATED AND IS TO HAVE GALVANISED CLADDING.
  - ALL EXPOSED PIPEWORK AT HIGH LEVEL TO BE PAINTED RAL 9010 GR AS PER DRAWING SPEC AND TO BE CLEARLY LABELED AND MARKED AS PER THE WATER SERVICES SPECIFICATION.
  - ABBREVIATIONS
    - HL - HIGH LEVEL
    - LN - LOW LEVEL
    - TA - TO ABOVE
    - TB - TO BELOW
    - FA - FROM ABOVE
    - FB - FROM BELOW
    - CWS - COLD WATER SERVICE
    - HWS - HOT WATER SERVICE
    - HWWS - HOT WATER SERVICES FLOW
    - HWRS - HOT WATER SERVICE RETURN

PIPEWORK SIZING CONVERSION		
SIZE ON DRAWING	MEPA	COOPER
15	15	15
20	20	22
25	25	28
32	32	35
40	40	42
50	50	54
65	65	67

Client number: \_\_\_\_\_ Floor Size: 60

DEPARTMENT SIGNATURES

FACILITY: \_\_\_\_\_

FACILITY CEO: \_\_\_\_\_

FACILITY MANAGER: \_\_\_\_\_

DISTRICT MANAGER: \_\_\_\_\_

PROJECT LEADER: \_\_\_\_\_

Checked by (Professional Consultant): \_\_\_\_\_

Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Client: health Department: Health PROVINCE OF KWAZULU-NATAL

Consultant: GIBB ENGINEERING & ARCHITECTURE

Consultant: UKUZA CONSULTING

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Discipline: MECHANICAL

Project: **NETTOWN A CHC: CONVERSION TO A LARGE CLINIC**

Drawing title: **FIRST FLOOR LEVEL DOMESTIC WATER LAYOUT**

Project Stage: STAGE 3: DETAILED DESIGN

Drawn: A STULUMANI Date: 2023/10/09

Scale: 1:75

Drawing number: SF-1102

Drawing Number ID: 00000 = Client No  
UKU = Department  
A = Consultant Discipline  
0000 = Drawing No  
1 = Revision No

