

ELECTRICAL INSTALLATIONS

TOTAL CARRIED FORWARD TO SUMMARY	
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[illegible]

ITEM	DESCRIPTION	UNIT	QTY	LABOUR RATE	MATERIAL RATE	TOTAL RATE
BROUGHT FORWARD						
2.16	c) 6mm² x 2C	No	6			
2.16	Allow for payment to NORED for connection fee	Sum	1			
2.17	Supply and insall siren in metal cage	No	1			
	Supply and installation of surface weatherproof lockable Meterboard including wiring and termination					
2.18	a) Enclosure with 50% spare space	No	1			
2.19	b) 60A/TP/CB	No	1			
2.20	b) 40A/DP/CB	No	1			
2.21	c) 25A/SP/CB	No	6			
2.22	d) 20A/SP/CB	No	1			
	CLASSROOM BLOCKS (BRICK & ZINC)					
	Supply and installation of surface distribution boards complete with switchgear, doors, cables, locks.					
2.23	a) Enclosure with 20% spare space	No	8			
2.24	b) 40A DP CB	No	2			
2.25	c) 60A DP EL-Isolator, 6kA	No	8			
2.26	d) 5A to 40A SP CB 6kA sockets	No	32			
2.27	e) 10A SP MCB - 6kA - lights	No	16			
2.28	f) 16A Isolator, by-pass	No	2			
2.29	g) 20A TP Contactor	No	8			
	16 Amp surface wall mounted galvanised socket outlets including 4mm² wiring, steel conduits, saddles, bends, couplers, chasing etc.					
2.30	a) 16A SSO	No	17			
	Supply, delivery and installation of the following light fittings and bulbs:-					
TOTAL CARRIED FORWARD						

ITEM	DESCRIPTION	UNIT	QTY	LABOUR RATE	MATERIAL RATE	TOTAL RATE
BROUGHT FORWARD						
2.31	a) Type A	No	40			
2.32	b) Type B	No	20			
2.33	c) Type E	No	22			
2.34	Supply and installation of light points complete with 2,5mm² wiring, steel conduits etc.	No	82			
2.35	Supply and installation of earth rods plus connection to roof steel as per detail.	No	10			
2.36	Supply and installation of earth conductor connections as required to distribution board and bonding as required. Supply and installation of height switches:-	No	10			
2.37	a) one way	No	16			
2.38	b) daylight switch in bulkhead fitting	No	2			
	TOILET BLOCK					
	Supply and installation of surface distribution boards complete with switchgear, doors, cables, locks.					
2.39	a) Enclosure weatherproof with 20% spare space	No	1			
2.40	b) 30A DP-Isolator, 6kA	No	1			
2.41	c) 16A SP MCB - 6kA	No	1			
2.42	d) 16A SP Isolator, by-pass	No	1			
2.43	e) 20A TP Contactor	No	1			
	Supply, delivery and installation of the following light fittings:-					
2.44	a) E	No	7			
2.45	Supply and installation of light points complete with 2,5mm² wiring, steel conduits etc.	No	7			
2.46	Supply and installation of earth rods plus connection to roof steel as per detail.	No	2			
2.47	Supply and installation of earth conductor connections as required to distribution board and bonding as required.	Sum	1			
TOTAL CARRIED FORWARD						

ITEM	DESCRIPTION	UNIT	QTY	LABOUR RATE	MATERIAL RATE	TOTAL RATE
BROUGHT FORWARD						
	Supply and installation of light switches:-					
2.48	a) one way surface weatherproof	No	1			
2.49	b) daylight switch in bulkhead fitting	No	1			
CHURCH						
2.50	Supply and installation of readyboard with baseplate, complete	No	1			
2.51	Supply and installation of prepaid meter with baseplate, complete	No	1			
	16 Amp surface wall mounted galvanised socket outlets including 4mm² wiring, steel conduits, saddles, bends, couplers, chasing etc.					
2.52	a) 16A SSO Supply, delivery and installation of the following light fittings:-	No	1			
2.53	a) Type A	No	2			
2.54	b) Type E	No	1			
2.55	Supply and installation of light points complete with 2,5mm² wiring, steel conduits etc.	No	3			
2.56	Supply and installation of earth rods plus connection to roof steel as per detail.	No	2			
2.57	Supply and installation of earth conductor connections as required to distribution board and bonding as required	Sum	1			
	Supply and installation of light switches:-					
2.58	a) one way	No	1			
CLINIC						
2.59	Supply and installation of readyboard with baseplate, complete	No	1			
2.60	Supply and installation of prepaid meter with baseplate, complete	No	1			
TOTAL CARRIED FORWARD						

ITEM	DESCRIPTION	UNIT	QTY	LABOUR RATE	MATERIAL RATE	TOTAL RATE
BROUGHT FORWARD						
	16 Amp surface wall mounted galvanised socket outlets including 4mm² wiring, steel conduits, saddles, bends, couplers, chasing etc.					
2.61	a) 16A SSO	No	1			
	Supply, delivery and installation of the following light fittings:-					
2.62	a) Type A	No	2			
2.63	b) Type E	No	1			
2.64	Supply and installation of light points complete with 2,5mm² wiring, steel conduits etc.	No	3			
2.65	Supply and installation of earth rods plus connection to roof steel as per detail.	No	2			
2.66	Supply and installation of earth conductor connections as required to distribution board and bonding as required	Sum	1			
	Supply and installation of light switches:-					
2.67	a) one way	No	1			
TOTAL CARRIED FORWARD TO SUMMARY						

ITEM	DESCRIPTION	UNIT	QTY	LABOUR RATE	MATERIAL RATE	TOTAL RATE
3	ONALUTHIPA PRIMARY SCHOOL					
	CIVIL WORK					
3.1	Trench in pickable material for 600/1000V LT underground cables, complete with warning tape, backfill and compaction.	m	630			
3.2	50mm diameter PVC sleeves for cable entry installed complete including draw-wires.	m	10			
3.3	50mm diameter PVC long radius bends for cable entry to DB's. Supply and installation of channel	No	1			
3.4	- P2000	m	10			
3.5	- P9000	m	1			
3.6	Allow for making good to damaged floors and walls 1000V CABLE RETICULATION Supply and delivery and installation of 1000V PVC SWA PVC cables (copper).	Sum	1			
3.7	a) 16mm ² x 4C (to School MeterBoard)	m	100			
3.8	b) 10mm x 2C (Brick Classroom, Clinic, Church)	m	480			
3.9	c) 6mm ² x 2C (Ablution + Zinc Classroom) Supply and delivery and installation of bare copper earth wire.	m	50			
3.10	a) 10mm ²	m	100			
3.11	a) 6mm ²	m	480			
3.12	a) 4mm ² Supply and delivery and installation of termination units including mechanical clamps, lugs, corrotion, proof bolts, nuts washers etc. to terminate the following cables:-	m	50			
3.13	a) 16mm ² x 4C	No	2			
3.14	b) 10mm x 2C	No	20			
TOTAL CARRIED FORWARD						

ITEM	DESCRIPTION	UNIT	QTY	LABOUR RATE	MATERIAL RATE	TOTAL RATE
BROUGHT FORWARD						
3.15	c) 6mm² x 2C	No	4			
3.16	Allow for payment to NORED for connection fee	Sum	1			
3.17	Supply and insall siren in metal cage	No	1			
	Supply and installation of surface weatherproof lockable Meterboard including wiring and termination					
3.18	a) Enclosure with 50% spare space	No	1			
3.19	b) 60A/TP/CB	No	1			
3.20	b) 40A/DP/CB	No	1			
3.21	c) 25A/SP/CB	No	6			
3.22	d) 20A/SP/CB	No	1			
	CLASSROOM BLOCKS (BRICK & ZINC)					
	Supply and installation of surface distribution boards complete with switchgear, doors, cables, locks.					
3.23	a) Enclosure with 20% spare space	No	9			
3.24	b) 40A DP CB	No	3			
3.25	c) 60A DP EL-Isolator, 6kA	No	9			
3.26	d) 5A to 40A SP CB 6kA sockets	No	36			
3.27	e) 10A SP MCB - 6kA - lights	No	18			
3.28	f) 16A Isolator, by-pass	No	3			
3.29	g) 20A TP Contactor	No	9			
	16 Amp surface wall mounted galvanised socket outlets including 4mm² wiring, steel conduits, saddles, bends, couplers, chasing etc.					
3.30	a) 16A SSO	No	13			
	Supply, delivery and installation of the following light fittings:-					
TOTAL CARRIED FORWARD						

ITEM	DESCRIPTION	UNIT	QTY	LABOUR RATE	MATERIAL RATE	TOTAL RATE
BROUGHT FORWARD						
3.31	a) Type A	No	36			
3.32	b) Type B	No	16			
3.33	c) Type E	No	20			
3.34	Supply and installation of light points complete with 2,5mm² wiring, steel conduits etc.	No	72			
3.35	Supply and installation of earth rods plus connection to roof steel as per detail.	No	10			
3.36	Supply and installation of earth conductor connections as required to distribution board and bonding as required. Supply and installation of height switches:-	No	10			
3.37	a) one way	No	11			
3.38	b) daylight switch in bulkhead fitting	No	3			
TOILET BLOCK						
	Supply and installation of surface distribution boards complete with switchgear, doors, cables, locks.					
3.39	a) Enclosure weatherproof with 20% spare space	No	1			
3.40	b) 30A DP-Isolator, 6kA	No	1			
3.41	c) 16A SP MCB - 6kA	No	2			
3.42	d) 16A SP Isolator, by-pass	No	1			
3.43	e) 20A TP Contactor	No	1			
	Supply, delivery and installation of the following light fittings:-					
3.44	a) E	No	7			
3.45	Supply and installation of light points complete with 2,5mm² wiring, steel conduits etc.	No	7			
3.46	Supply and installation of earth rods plus connection to roof steel as per detail.	No	1			
3.47	Supply and installation of earth conductor connections as required to distribution board and bonding as required.	Sum	1			
TOTAL CARRIED FORWARD						

ITEM	DESCRIPTION	UNIT	QTY	LABOUR RATE	MATERIAL RATE	TOTAL RATE
BROUGHT FORWARD						
	Supply and installation of light switches:-					
3.48	a) one way surface weatherproof	No	1			
3.49	b) daylight switch in bulkhead fitting	No	1			
CHURCH						
3.50	Supply and installation of readyboard with baseplate, complete	No	1			
3.51	Supply and installation of prepaid meter with baseplate, complete	No	1			
	16 Amp surface wall mounted galvanised socket outlets including 4mm ² wiring, steel conduits, saddles, bends, couplers, chasing etc.					
3.52	a) 16A SSO Supply, delivery and installation of the following light fittings:-	No	1			
3.53	a) Type A	No	2			
3.54	b) Type E	No	1			
3.55	Supply and installation of light points complete with 2,5mm ² wiring, steel conduits etc.	No	3			
3.56	Supply and installation of earth rods plus connection to roof steel as per detail.	No	2			
3.57	Supply and installation of earth conductor connections as required to distribution board and bonding as required	Sum	1			
	Supply and installation of light switches:-					
3.58	a) one way	No	1			
CLINIC						
3.59	Supply and installation of readyboard with baseplate, complete	No	1			
3.60	Supply and installation of prepaid meter with baseplate, complete	No	1			
TOTAL CARRIED FORWARD						

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ITEM	DESCRIPTION	UNIT	QTY	LABOUR RATE	MATERIAL RATE	TOTAL RATE
BROUGHT FORWARD						
4.15	c) 6mm² x 2C	No	6			
4.16	Allow for payment to NORED for connection fee	Sum	1			
4.17	Supply and insall siren in metal cage	No	1			
	Supply and installation of surface weatherproof lockable Meterboard including wiring and termination					
4.18	a) Enclosure with 50% spare space	No	1			
4.19	b) 60A/TP/CB	No	1			
4.20	b) 40A/DP/CB	No	1			
4.21	c) 25A/SP/CB	No	2			
4.22	d) 20A/SP/CB	No	1			
	CLASSROOM BLOCKS (BRICK & ZINC)					
	Supply and installation of surface distribution boards complete with switchgear, doors, cables, locks.					
4.23	a) Enclosure with 20% spare space	No	1			
4.24	b) 40A DP CB	No	1			
4.25	c) 60A DP EL-Isolator, 6kA	No	1			
4.26	d) 5A to 40A SP CB 6kA sockets	No	4			
4.27	e) 10A SP MCB - 6kA - lights	No	2			
4.28	f) 16A Isolator, by-pass	No	2			
4.29	g) 20A TP Contactor	No	2			
	16 Amp surface wall mounted galvanised socket outlets including 4mm² wiring, steel conduits, saddles, bends, couplers, chasing etc.					
4.30	a) 16A SSO	No	2			
	Supply, delivery and installation of the following light fittings:-					
TOTAL CARRIED FORWARD						

ITEM	DESCRIPTION	UNIT	QTY	LABOUR RATE	MATERIAL RATE	TOTAL RATE
BROUGHT FORWARD						
4.31	a) Type A	No	1			
4.32	c) Type E	No	8			
4.33	Supply and installation of light points complete with 2,5mm ² wiring, steel conduits etc.	No	9			
4.34	Supply and installation of earth rods plus connection to roof steel as per detail.	No	2			
4.35	Supply and installation of earth conductor connections as required to distribution board and bonding as required. Supply and installation of height switches:-	No	2			
4.36	a) one way	No	1			
4.37	b) daylight switch in bulkhead fitting	No	1			
TOILET BLOCK						
	Supply and installation of surface distribution boards complete with switchgear, doors, cables, locks.					
4.38	a) Enclosure weatherproof with 20% spare space	No	1			
4.39	b) 30A DP-Isolator, 6kA	No	1			
4.40	c) 16A SP MCB - 6kA	No	2			
4.41	d) 16A SP Isolator, by-pass	No	1			
4.42	e) 20A TP Contactor	No	1			
	Supply, delivery and installation of the following light fittings:-					
4.43	a) E	No	1			
4.44	Supply and installation of light points complete with 2,5mm ² wiring, steel conduits etc.	No	1			
4.45	Supply and installation of earth rods plus connection to roof steel as per detail.	No	1			
4.46	Supply and installation of earth conductor connections as required to distribution board and bonding as required.	Sum	1			
TOTAL CARRIED FORWARD						

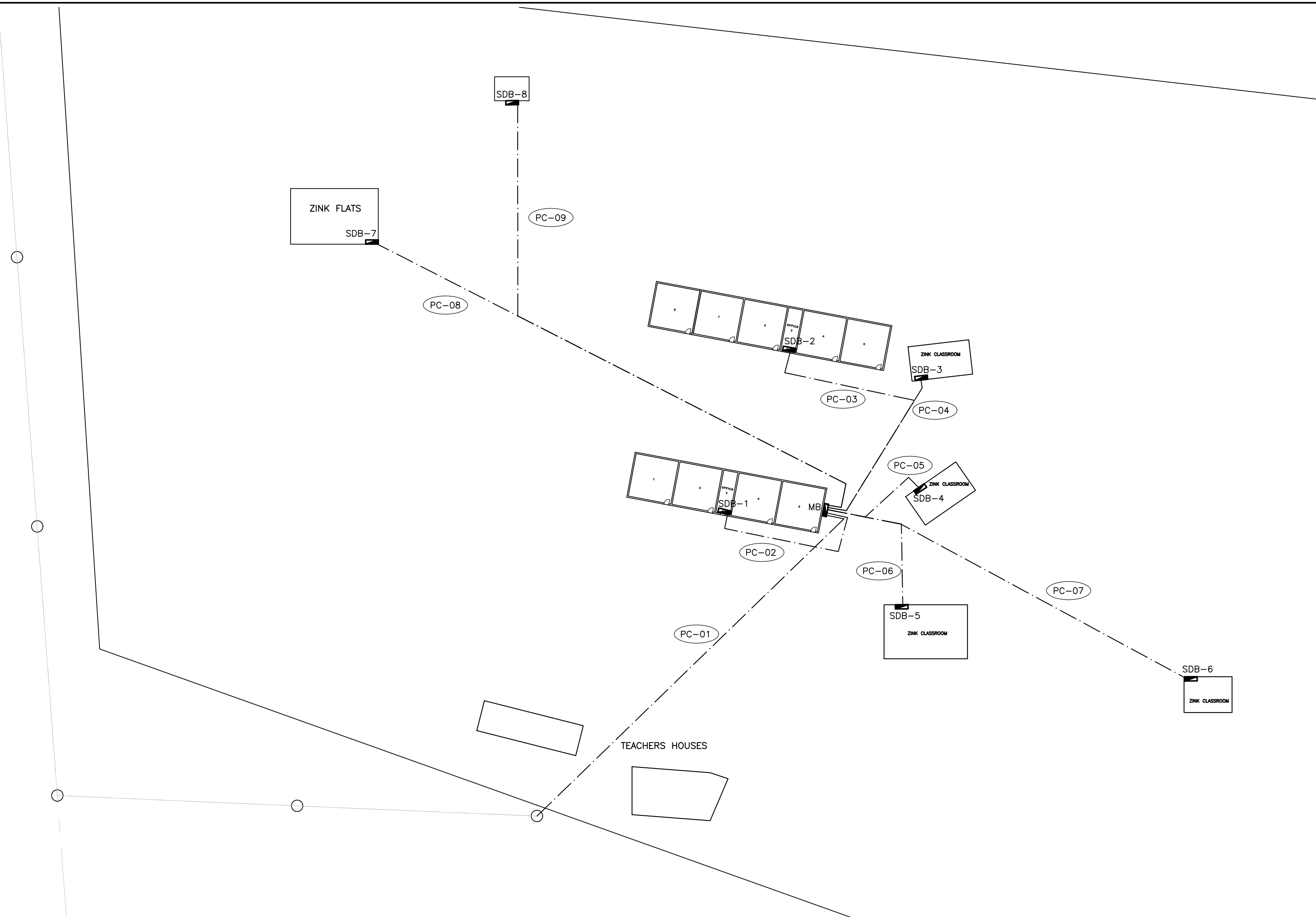
ITEM	DESCRIPTION	UNIT	QTY	LABOUR RATE	MATERIAL RATE	TOTAL RATE
BROUGHT FORWARD						
	Supply and installation of light switches:-					
4.47	a) one way surface weatherproof	No	1			
4.48	b) daylight switch in bulkhead fitting	No	1			
CHURCH						
4.49	Supply and installation of readyboard with baseplate, complete	No	1			
4.50	Supply and installation of prepaid meter with baseplate, complete	No	1			
	16 Amp surface wall mounted galvanised socket outlets including 4mm ² wiring, steel conduits, saddles, bends, couplers, chasing etc.					
4.51	a) 16A SSO Supply, delivery and installation of the following light fittings:-	No	1			
4.52	a) Type A	No	2			
4.53	b) Type E	No	1			
4.54	Supply and installation of light points complete with 2,5mm ² wiring, steel conduits etc.	No	3			
4.55	Supply and installation of earth rods plus connection to roof steel as per detail.	No	2			
4.56	Supply and installation of earth conductor connections as required to distribution board and bonding as required	Sum	1			
	Supply and installation of light switches:-					
4.57	a) one way	No	1			
CLINIC						
4.58	Supply and installation of readyboard with baseplate, complete	No	1			
4.59	Supply and installation of prepaid meter with baseplate, complete	No	1			
TOTAL CARRIED FORWARD						

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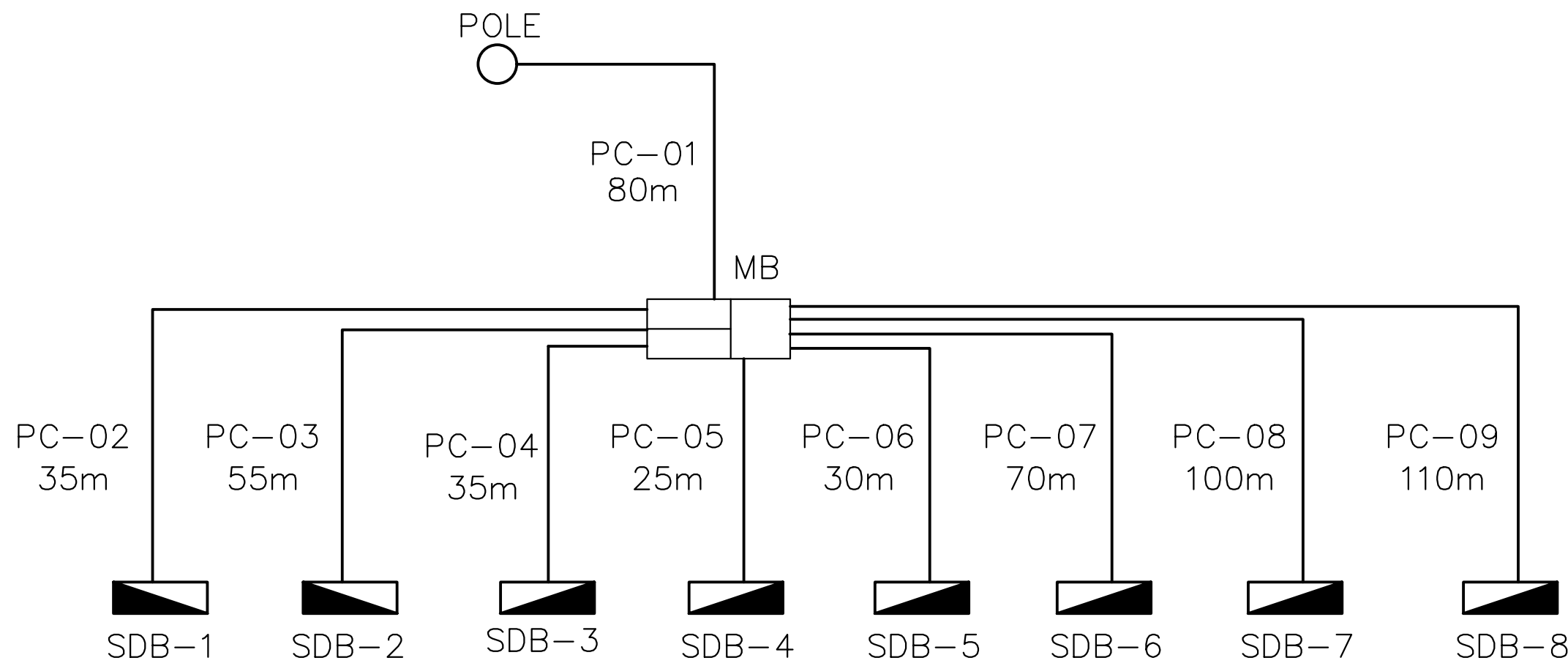
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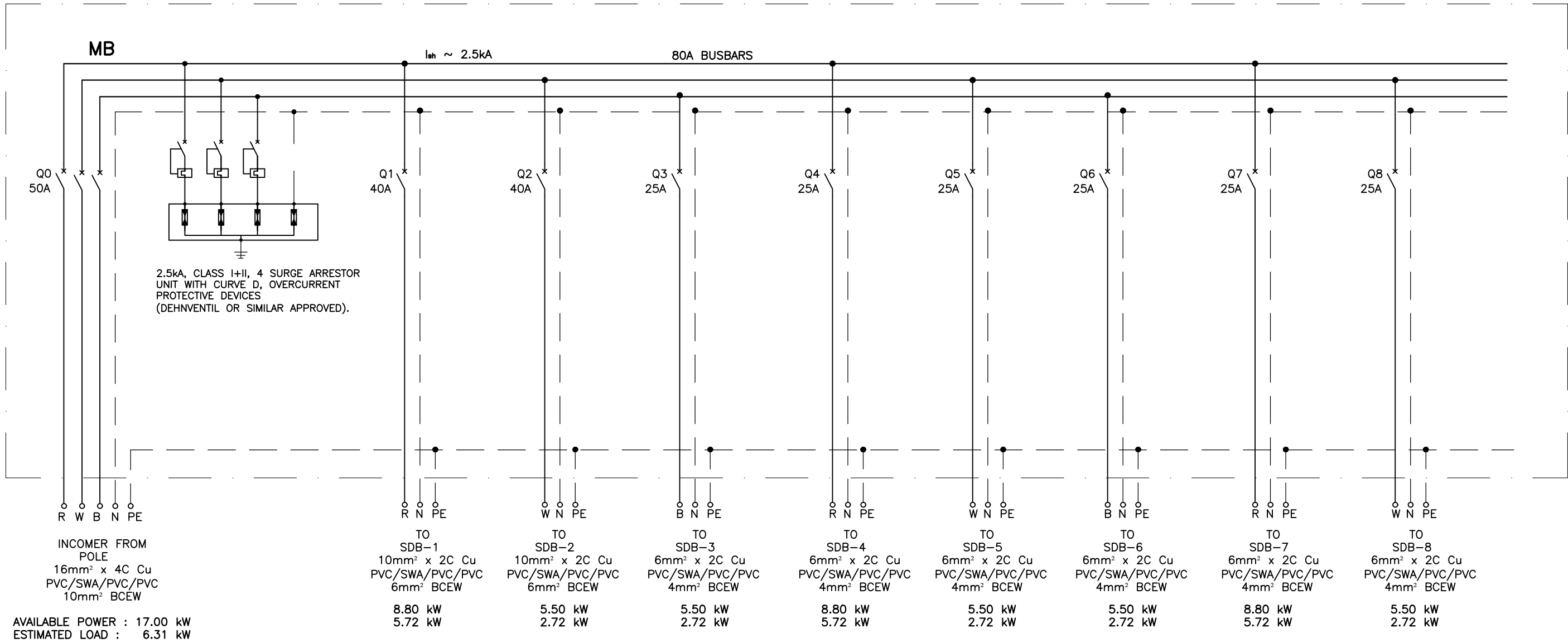
CABLE, EARTH & SLEEVE-PIPE SCHEDULE								
REF.	ROUTE		AMOUNT OF CORES	CABLE/SLEEVE		RATED ISOLATED VOLTAGE	ESTIMATED LENGTH (m)	SYSTEM VOLTAGE
	FROM	TO		SIZE (mm²)	TYPE			
PC-01	POLE	MB	4	16	PVC/SWA/PVC	1000 V	80	380/220V
E/W				10	BCEW			
PC-02	MB	SDB-1	2	10	PVC/SWA/PVC	1000 V	35	380/220V
E/W				6	BCEW			
PC-03	MB	SDB-2	2	10	PVC/SWA/PVC	1000 V	55	380/220V
E/W				6	BCEW			
PC-04	MB	SDB-3	2	6	PVC/SWA/PVC	1000 V	35	380/220V
E/W				4	BCEW			
PC-05	MB	SDB-4	2	6	PVC/SWA/PVC	1000 V	25	380/220V
E/W				4	BCEW			
PC-06	MB	SDB-5	2	6	PVC/SWA/PVC	1000 V	30	380/220V
E/W				4	BCEW			
PC-07	MB	SDB-6	2	10	PVC/SWA/PVC	1000 V	70	380/220V
E/W				6	BCEW			
PC-08	MB	SDB-7	2	10	PVC/SWA/PVC	1000 V	100	380/220V
E/W				6	BCEW			
PC-09	MB	SDB-8	2	10	PVC/SWA/PVC	1000 V	110	380/220V
E/W				6	BCEW			



ELECTRICAL LAYOUT
SCALE 1:500



SCHEMATIC SCHEDULE



METERBOARD : LINE DIAGRAM

NOTES

1. LENGTH OF CONDUCTOR DOES NOT INCLUDE LENGTH MEASURED WHEN CONDUCTOR IS SAGGED
2. RULING SPANS LV LINE IS 45m UNLESS OTHERWISE SPECIFIED

FOR BIDDING
PURPOSES ONLY

No.	REVISIONS	ENG.	DATE

CONSULTANT:



DEKA
CONSULTING ENGINEERS

P.O. Box 21744
Tel: 061 220 959
Fax: 061 220 992
E-mail: info@dekaconsult.com
WINDHOEK

DESIGN					
DESIGNED	AKM	03/23	DRAWN	HFM	03/23
PROFESSIONAL ENGINEER		AKM			

CLIENT:



REPUBLIC OF NAMIBIA

MINISTRY OF MINES AND ENERGY

PRIVATE BAG 13297
WINDHOEK
NAMIBIA
TEL: (061) 284 8111
FAX: (061) 238 643

USER CLIENT:



NORED
Electricity For Development

P. O. BOX 639
ONDANGWA
NAMIBIA
TEL: (065) 282 2175
FAX: (065) 297 3827

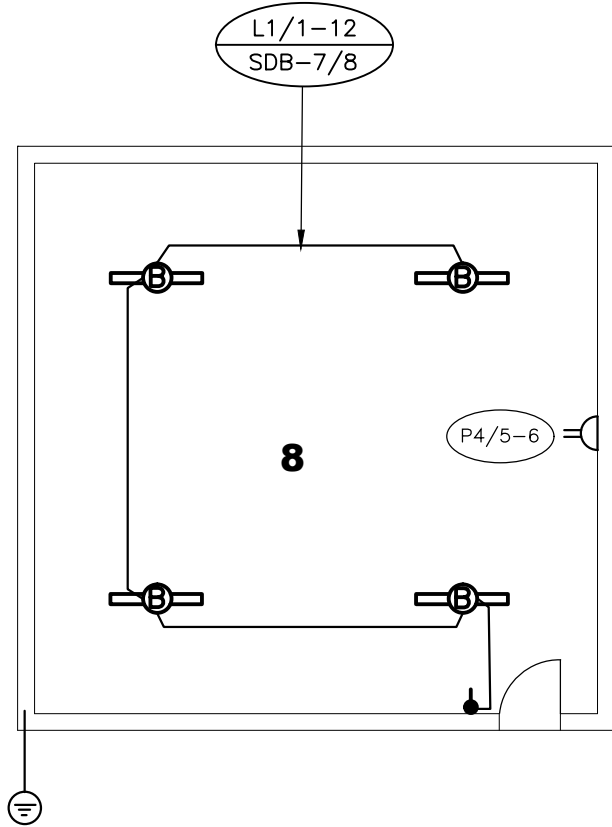
DISCIPLINE: ELECTRICAL

PROJECT TITLE: **RURAL ELECTRIFICATION OSHIKOTO REGION 2023/2024**

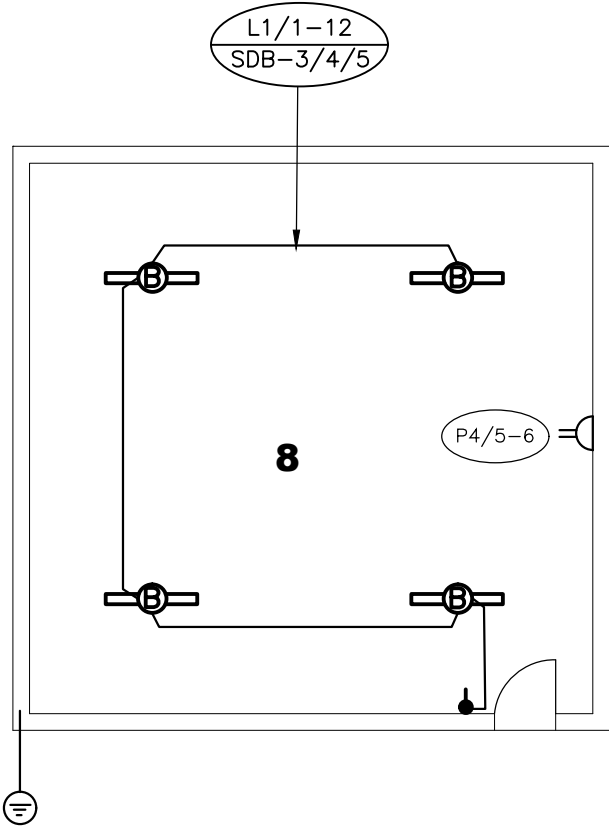
DRAWING TITLE: **OKANKOLO CONSTITUENCY: ONJAMBAYONGHALU SCHOOL BUILDINGS ELECTRICAL LAYOUT**

SCALE: AS SHOWN	A1
CONSULTANT DRAWING NO.: D0096/PH3/E1-20	REV. 
CLIENT DRAWING NO.:	REV. 

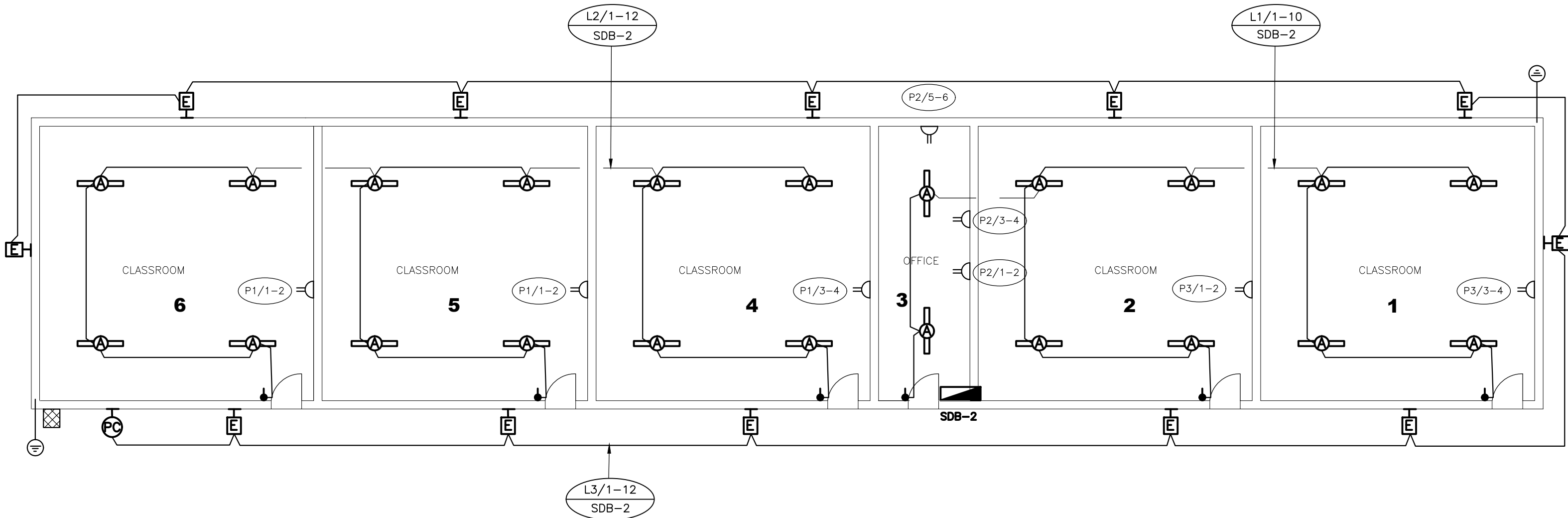
SYMBOL LIST				
No	SYMBOL	DESCRIPTION	TYPE	QTY
1		REGENT LIGHTING 5FT LED OPEN CHANNEL DOUBLE – BR FTL006 + 2x 20W LED TUBE, FROSTED 840 WITH 4000K.	BR FTL-006 2x 20W LED TUBE	40
2		RADIANT LIGHTING 5FT DOUBLE VAPOUR PROOF T8 LED WITH 2x 24W LAMP, IP65 OR SIMILAR APPROVED	RADIANT 2x 24W OR SIMILAR APPROVED	20
3		WALL / CEILING MOUNTED LASCON B-10 LED, WHITE, IP65, ROUND POLYCARBONATE BULKHEAD, APPLICABLE IN ABLUTION BLOCK / EXTERNAL WALL WITH INGRESS PROTECTION 65 RATING	LASCON B-10 LED 2x 9W	22
4		220V, 16A ONE LEVER ONE WAY LIGHT SWITCH IN 100x50x50mm FLUSH STEEL DRAWBOX, COLOR : WHITE, COMPLETE WITH ALL ACCESSORIES. MOUNTED @1200mm AFFL.	CLIPSAL LX RANGE OR SIMILAR APPROVED	16
5		16A DOUBLE SWITCH SOCKET-OUTLET ON 100x100x50mm DRAWBOX WITH SAFETY SHUTTERS 250V, 2P+EARTH WITH SIDE CONTACTS. FLUSH/SURFACE MOUNTED @300mm AFFL.	CLIPSAL LX RANGE OR SIMILAR APPROVED	17
6		EPOXY COATED, PVC POWER DISTRIBUTION ENCLOSURE. FLUSH MOUNTED @1400mm AFFL.	GEM OR SIMILAR APPROVED	8
7		PHOTO-CELL MOUNTED @2400m AFFL.	CLIPSAL OR SIMILAR APPROVED	2
8		COPPER EARTH ELECTRODE DRIVEN TO A DEPTH PREDETERMINED BY SOIL RESISTIVITY SURVEY. RESISTANCE NOT TO EXCEED 200 ohms AT ANY SINGLE POINT & 50 ohms OVERALL.		9
9		TEST POINT 300mm ABOVE FINISH FLOOR LEVEL		2



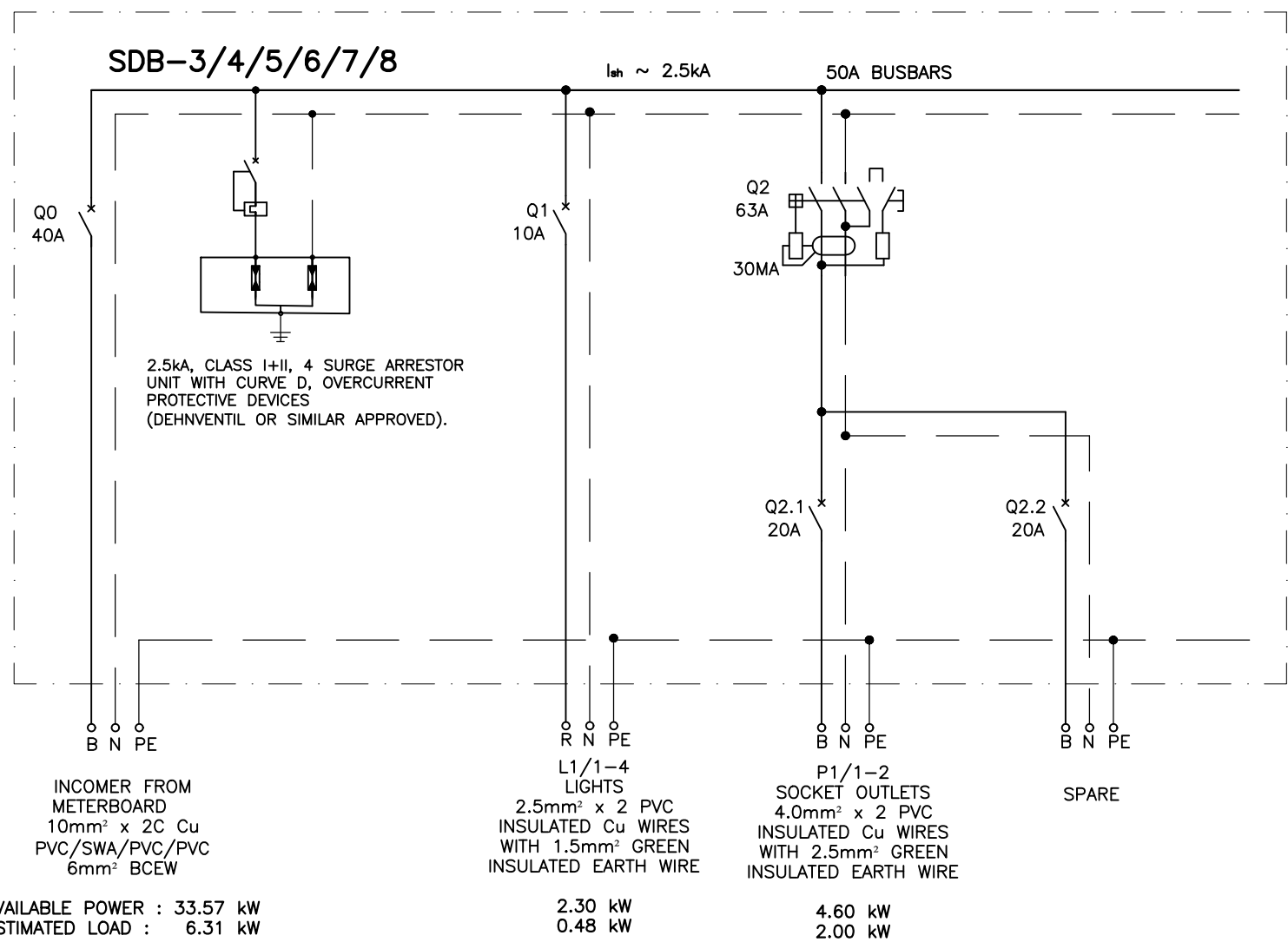
4 - KITCHEN & STORE
ZINC STRUCTURE
(2 OFF)



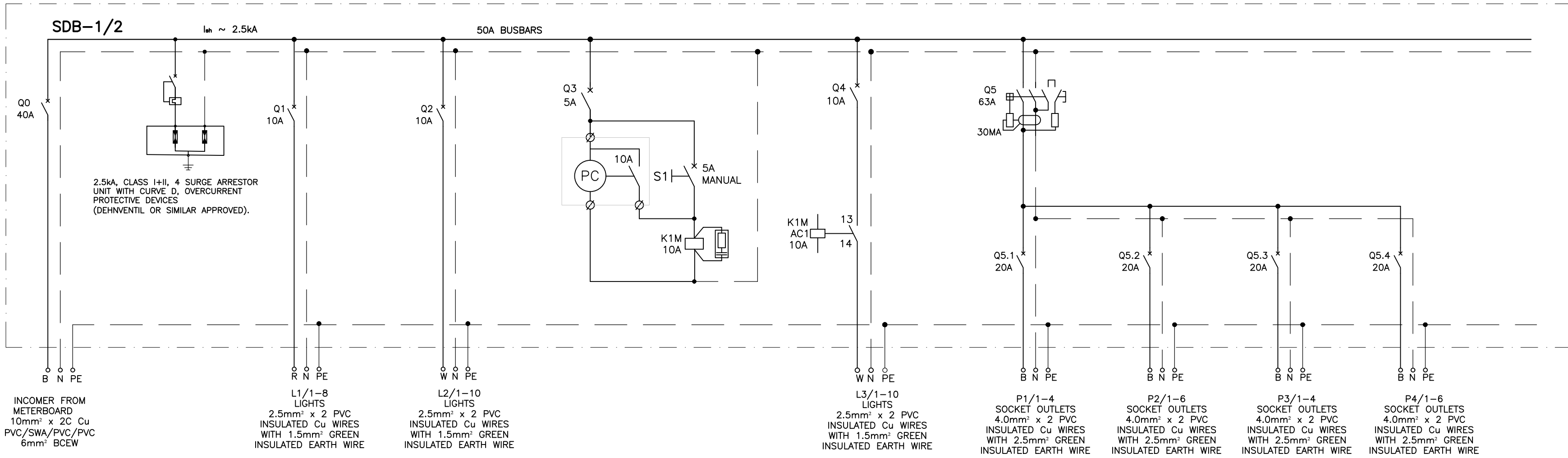
3 - CLASSROOM BLOCK
ZINC STRUCTURE
(3 OFF)



2 - CLASSROOM BLOCK
BRICK STRUCTURE



SDB-3 TO 8 : LINE DIAGRAM
SINK STRUCTURES
NTS



SDB-1 & 2 : LINE DIAGRAM
CLASSROOM BLOCK
NTS

NOTES

- ANY DISCREPANCIES ON THIS DRAWING TO BE DISCUSSED WITH THE ENGINEER BEFORE ANY WORK COMMENCES
- THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS.
- INSTALLATION SHALL BE ACCORDING WITH RELEVANT SABS SPECIFICATIONS AND IN PARTICULAR SANS 10142-1, THE WIRING OF PREMISES & IEC 1507: LOW VOLTAGE PVC POWER CABLES.
- SYMBOLS ON THIS DRAWING IS NOT A TRUE REFLECTION OF SIZE OF ITEM/EQUIPMENT INTENDED, BUT MERELY A GRAPHICAL REPRESENTATION.

FOR BIDDING
PURPOSES ONLY

No.	REVISIONS	ENG.	DATE

CONSULTANT:	
	P.O. Box 21744 Tel: 061 220 959 Fax: 061 220 992 E-mail: info@dekaconsult.com WINDHOEK

DESIGN			
DESIGNED	AKM	03/23	DRAWN HFM 03/23

PROFESSIONAL ENGINEER	AKM
-----------------------	-----

CLIENT:
REPUBLIC OF NAMIBIA
MINISTRY OF MINES AND ENERGY
PRIVATE BAG 13297 WINDHOEK NAMIBIA
TEL: (061) 284 8111 FAX: (061) 238 643

USER CLIENT:
P. O. BOX 639 ONDANGWA NAMIBIA
TEL: (065) 282 2175 FAX: (065) 297 3827

DISCIPLINE:	ELECTRICAL
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PROJECT TITLE:
RURAL ELECTRIFICATION OSHIKOTO REGION 2023/2024

DRAWING TITLE:
OKANKOLO CONSTITUENCY: ONDJAMBAYONGHALU SCHOOL BUILDINGS ELECTRICAL LAYOUT

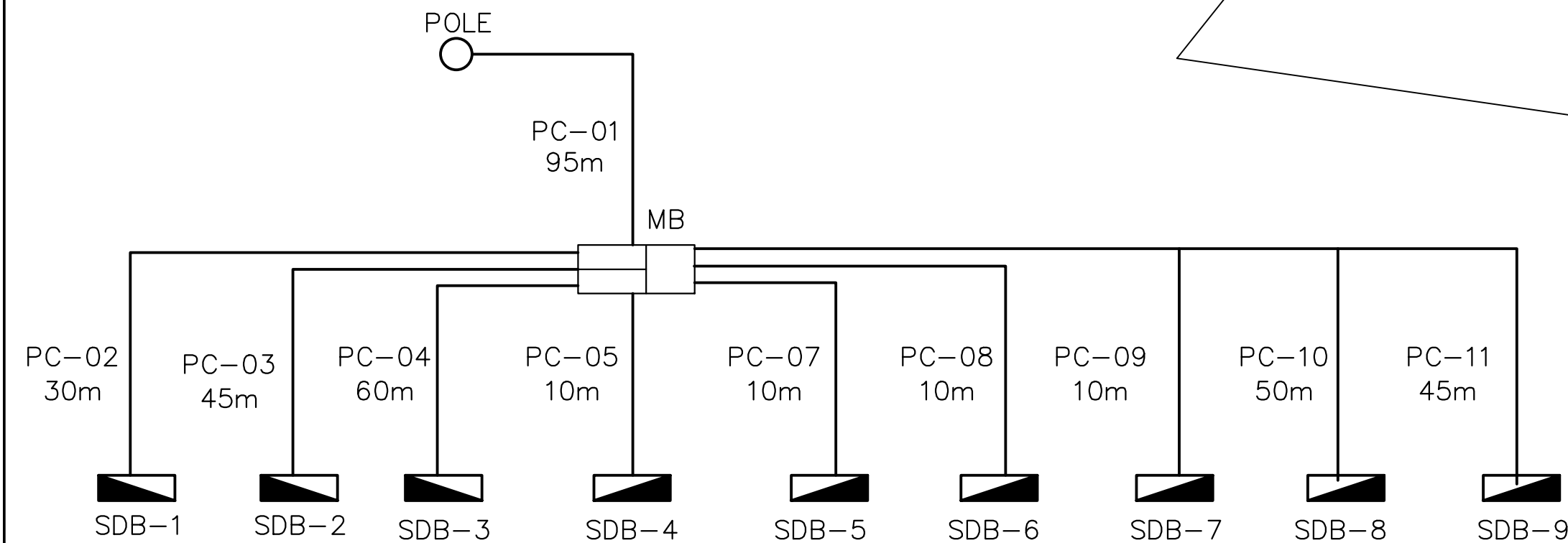
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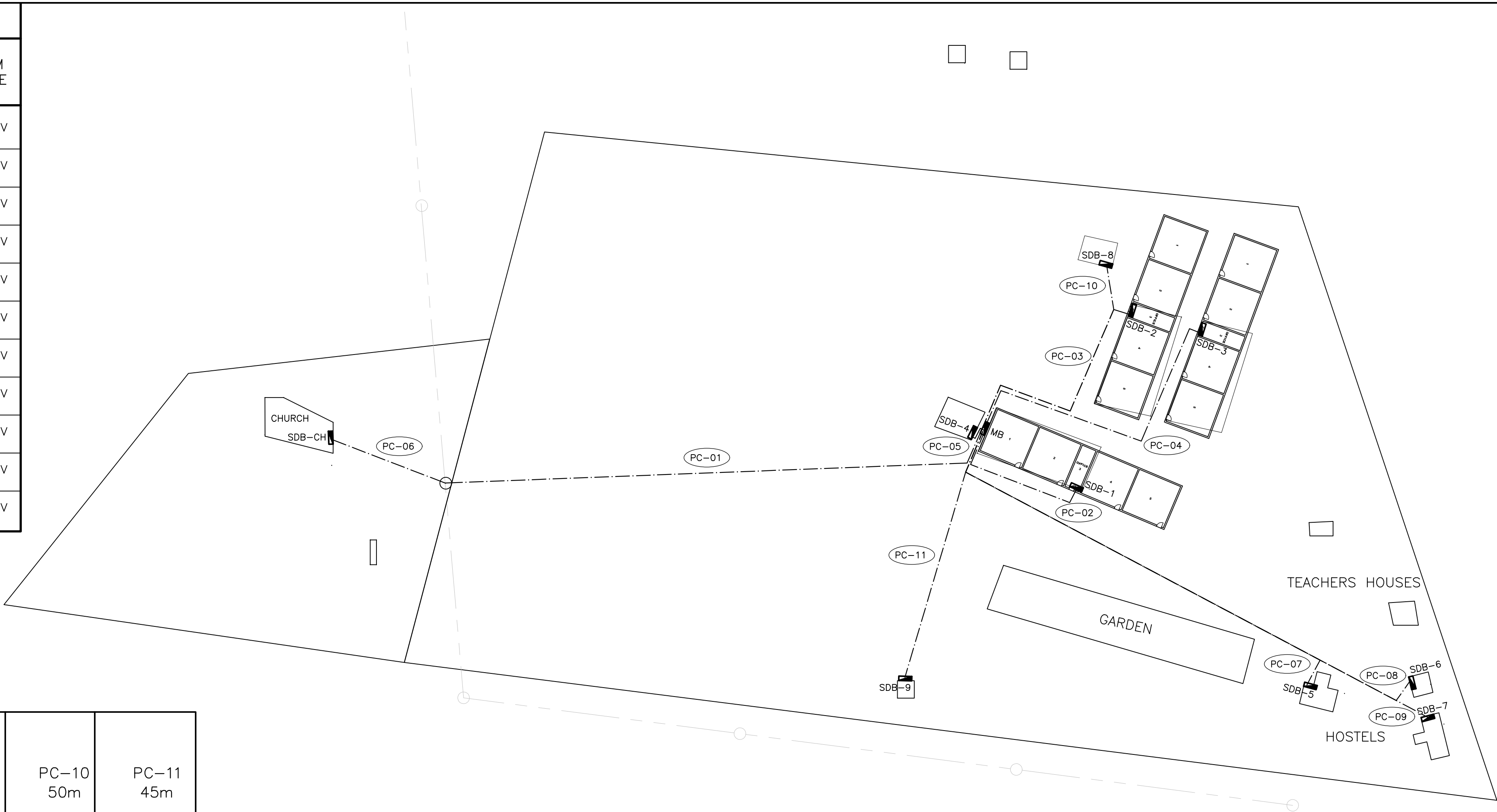
CLIENT DRAWING NO:	
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REV.
REV.

CABLE, EARTH & SLEEVE—PIPE SCHEDULE								
REF.	ROUTE		AMOUNT OF CORES	CABLE/SLEEVE		RATED ISOLATED VOLTAGE	ESTIMATED LENGTH (m)	SYSTEM VOLTAGE
	FROM	TO		SIZE (mm²)	TYPE			
PC-01	POLE	MB	4	16	PVC/SWA/PVC	1000 V	100	380/220V
E/W				10	BCEW			
PC-02	MB	SDB-1	2	10	PVC/SWA/PVC	1000 V	30	380/220V
E/W				6	BCEW			
PC-03	MB	SDB-2	2	10	PVC/SWA/PVC	1000 V	45	380/220V
E/W				6	BCEW			
PC-04	MB	SDB-3	2	10	PVC/SWA/PVC	1000 V	60	380/220V
E/W				6	BCEW			
PC-05	MB	SDB-4	2	6	PVC/SWA/PVC	1000 V	5	380/220V
E/W				4	BCEW			
PC-06	POLE	SDB-CH	2	10	PVC/SWA/PVC	1000 V	35	380/220V
E/W				6	BCEW			
PC-07	MB	SDB-5	2	10	PVC/SWA/PVC	1000 V	80	380/220V
E/W				6	BCEW			
PC-08	MB	SDB-6	2	10	PVC/SWA/PVC	1000 V	95	380/220V
E/W				6	BCEW			
PC-09	MB	SDB-7	2	10	PVC/SWA/PVC	1000 V	95	380/220V
E/W				6	BCEW			
PC-10	MB	SDB-8	2	10	PVC/SWA/PVC	1000 V	50	380/220V
E/W				6	BCEW			
PC-11	MB	SDB-9	2	6	PVC/SWA/PVC	1000 V	45	380/220V
E/W				4	BCEW			

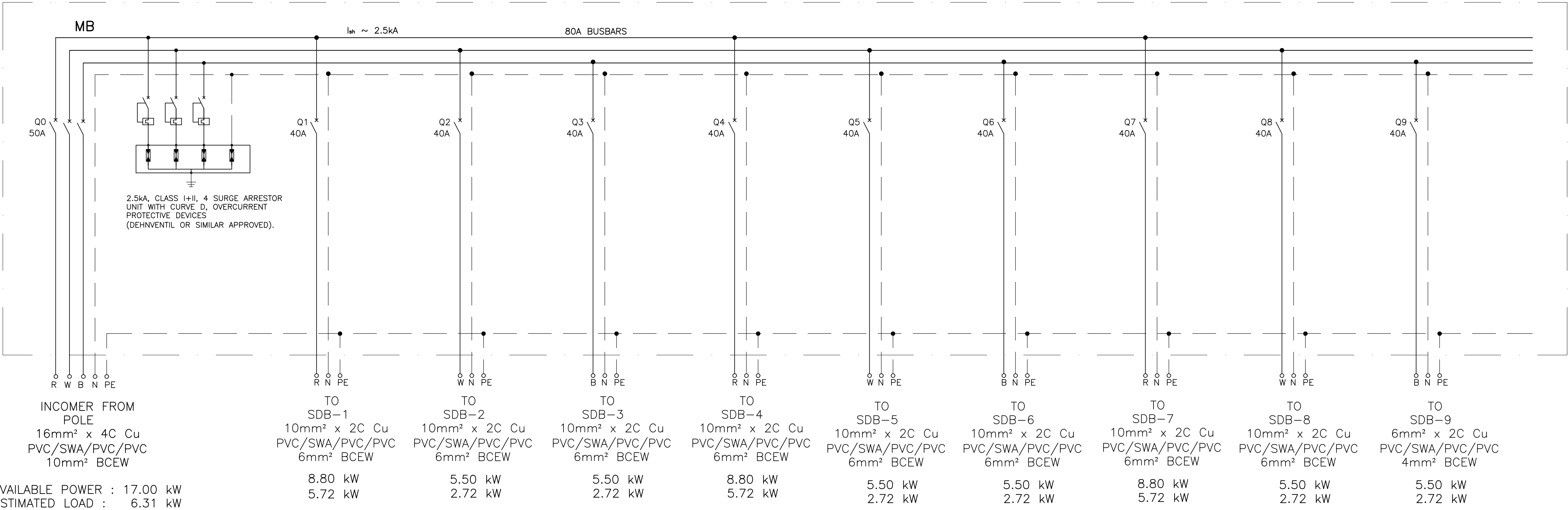


SCHEMATIC SCHEDULE



ELECTRICAL LAYOUT

SCALE 1:500



METERBOARD : LINE DIAGRAM

NOTES

1. LENGTH OF CONDUCTOR DOES NOT INCLUDE LENGTH MEASURED WHEN CONDUCTOR IS SAGGED

2. RULING SPANS LV LINE IS 45m UNLESS OTHERWISE SPECIFIED

FOR BIDDING PURPOSES ONLY

No.	REVISIONS	ENG.	DATE
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CONSULTANT:

P.O. Box 21744
Tel: 061 220 959
Fax: 061 220 992
E-mail: info@dekaconsult.com
WINDHOEK

DESIGN

DESIGNED	AKM	03/23	DRAWN	HFM	03/23
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PROFESSIONAL ENGINEER

AKM

CLIENT:

REPUBLIC OF NAMIBIA

MINISTRY OF MINES AND ENERGY

PRIVATE BAG 13297
WINDHOEK
NAMIBIA
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USER CLIENT:

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ONDANGWA
NAMIBIA
TEL: (065) 282 2175
FAX: (065) 297 3827

DISCIPLINE:

ELECTRICAL

PROJECT TITLE:

RURAL ELECTRIFICATION
OSHIKOTO REGION
2023/2024

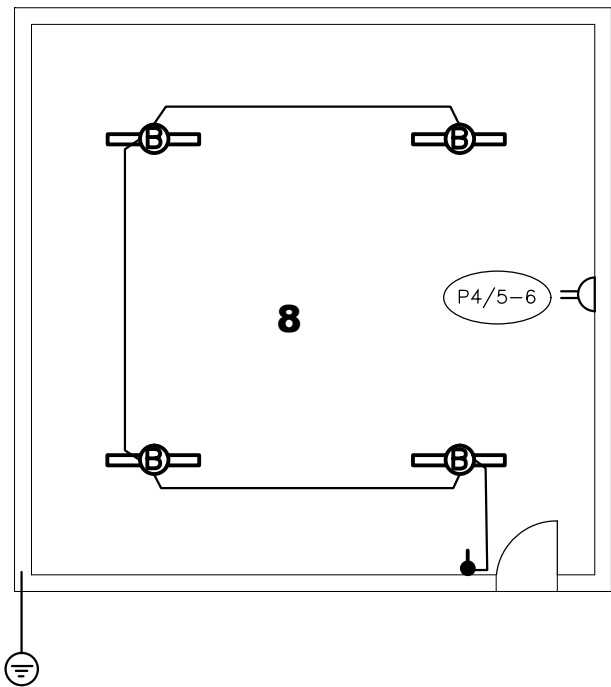
DRAWING TITLE:

EENGODI CONSTITUENCY:
ONALUTHIPA SCHOOL BUILDINGS
ELECTRICAL LAYOUT

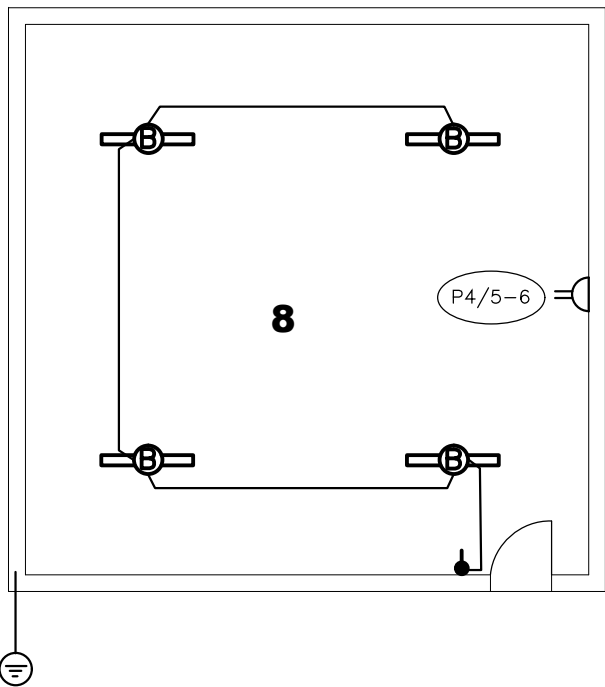
SCALE:	AS SHOWN	A1
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CONSULTANT DRAWING NO.:	D0096/PH3/E1-22	REV.
CLIENT DRAWING NO.:		REV.

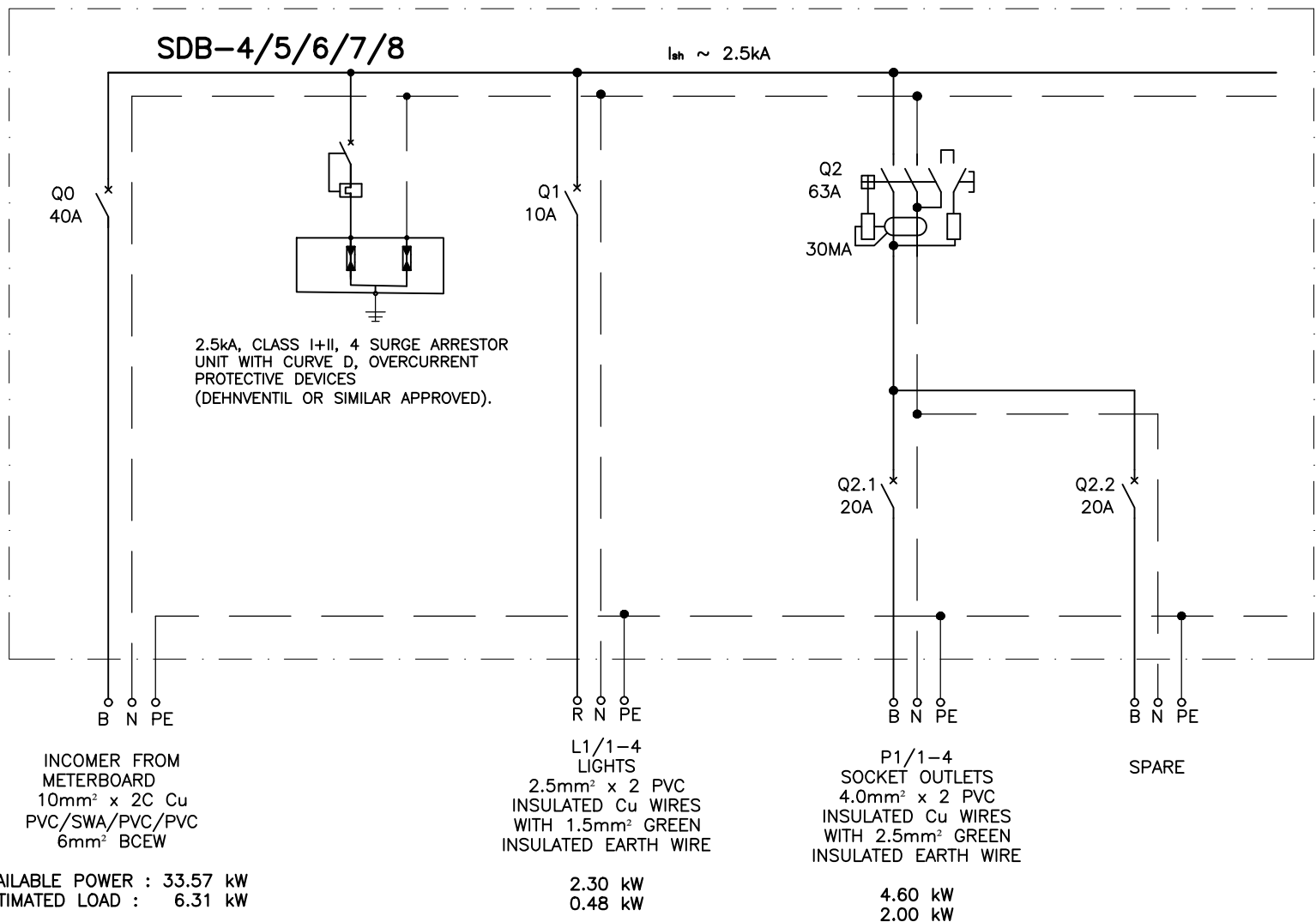
SYMBOL LIST				
No	SYMBOL	DESCRIPTION	TYPE	QTY
1		REGENT LIGHTING 5FT LED OPEN CHANNEL DOUBLE – BR FTL006 + 2x 20W LED TUBE, FROSTED 840 WITH 4000K.	BR FTL–006 2x 20W LED TUBE	36
2		RADIANT LIGHTING 5FT DOUBLE VAPOUR PROOF T8 LED WITH 2x 24W LAMP, IP65 OR SIMILAR APPROVED	RADIANT 2x 24W OR SIMILAR APPROVED	16
3		WALL / CEILING MOUNTED LASCON B–10 LED, WHITE, IP65, ROUND POLYCARBONATE BULKHEAD, APPLICABLE IN ABLUTION BLOCK / EXTERNAL WALL WITH INGRESS PROTECTION 65 RATING	LASCON B–10 LED 2x 9W	20
4		220V, 16A ONE LEVER ONE WAY LIGHT SWITCH IN 100x50x50mm FLUSH STEEL DRAWBOX, COLOR : WHITE, COMPLETE WITH ALL ACCESSORIES. MOUNTED @1200mm AFFL.	CLIPSAL LX RANGE OR SIMILAR APPROVED	11
5		16A DOUBLE SWITCH SOCKET–OUTLET ON 100x100x50mm DRAWBOX WITH SAFETY SHUTTERS 250V, 2P+EARTH WITH SIDE CONTACTS. FLUSH/SURFACE MOUNTED @300mm AFFL.	CLIPSAL LX RANGE OR SIMILAR APPROVED	13
6		EPOXY COATED, PVC POWER DISTRIBUTION ENCLOSURE. FLUSH MOUNTED @1400mm AFFL.	GEM OR SIMILAR APPROVED	9
7		PHOTO–CELL MOUNTED @2400m AFFL.	CLIPSAL OR SIMILAR APPROVED	3
8		COPPER EARTH ELECTRODE DRIVEN TO A DEPTH PREDETERMINED BY SOIL RESISTIVITY SURVEY. RESISTANCE NOT TO EXCEED 200 ohms AT ANY SINGLE POINT & 50 ohms OVERALL.		6
9		TEST POINT 300mm ABOVE FINISH FLOOR LEVEL		3



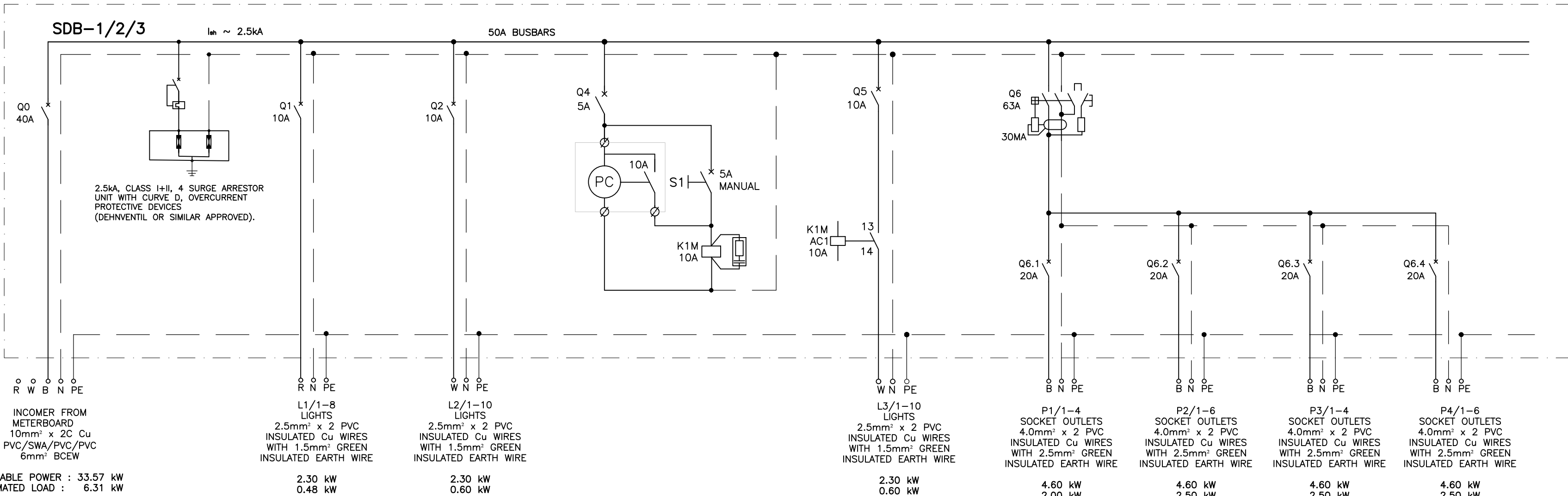
3 - HOSTEL BLOCK
ZINC STRUCTURE
(3 OFF)



2 - CLASSROOM BLOCK
ZINC STRUCTURE
(1 OFF)



SDB–4/5/6/7/8 : LINE DIAGRAM
SINK CLASSROOM & HOSTEL BLOCKS
NTS
(5 OFF)



SDB–1/2/3 : LINE DIAGRAM
CLASSROOM BLOCK
NTS
(3 OFF)

NOTES

- ANY DISCREPANCIES ON THIS DRAWING TO BE DISCUSSED WITH THE ENGINEER BEFORE ANY WORK COMMENCES
- THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS.
- INSTALLATION SHALL BE ACCORDING WITH RELEVANT SABS SPECIFICATIONS AND IN PARTICULAR SANS 10142–1, THE WIRING OF PREMISES & IEC 1507: LOW VOLTAGE PVC POWER CABLES.
- SYMBOLS ON THIS DRAWING IS NOT A TRUE REFLECTION OF SIZE OF ITEM/EQUIPMENT INTENDED, BUT MERELY A GRAPHICAL REPRESENTATION.

FOR BIDDING
PURPOSES ONLY

No.	REVISIONS	ENG.	DATE

CONSULTANT:	
	P.O. Box 21744 Tel: 061 220 959 Fax: 061 220 992 E-mail: info@dekaconsult.com WINDHOEK

DESIGN			
DESIGNED	AKM	03/23	DRAWN
			HFM
			03/23
PROFESSIONAL ENGINEER		AKM	

CLIENT:	
	REPUBLIC OF NAMIBIA
MINISTRY OF MINES AND ENERGY	
PRIVATE BAG 13297 WINDHOEK NAMIBIA	
TEL: (061) 284 8111 FAX: (061) 238 643	

USER CLIENT:	
P. O. BOX 639 ONDANGWA NAMIBIA	
TEL: (065) 282 2175 FAX: (065) 297 3827	

DISCIPLINE:	ELECTRICAL
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PROJECT TITLE:	RURAL ELECTRIFICATION OSHIKOTO REGION 2023/2024
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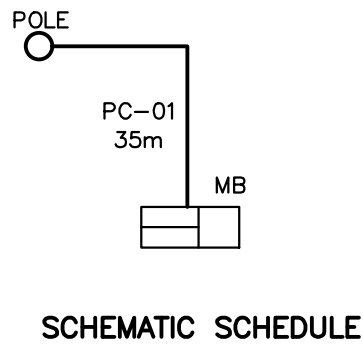
DRAWING TITLE:	EENGODI CONSTITUENCY: ONALUTHIPA SCHOOL BUILDINGS ELECTRICAL LAYOUT
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SCALE:	1 : 100
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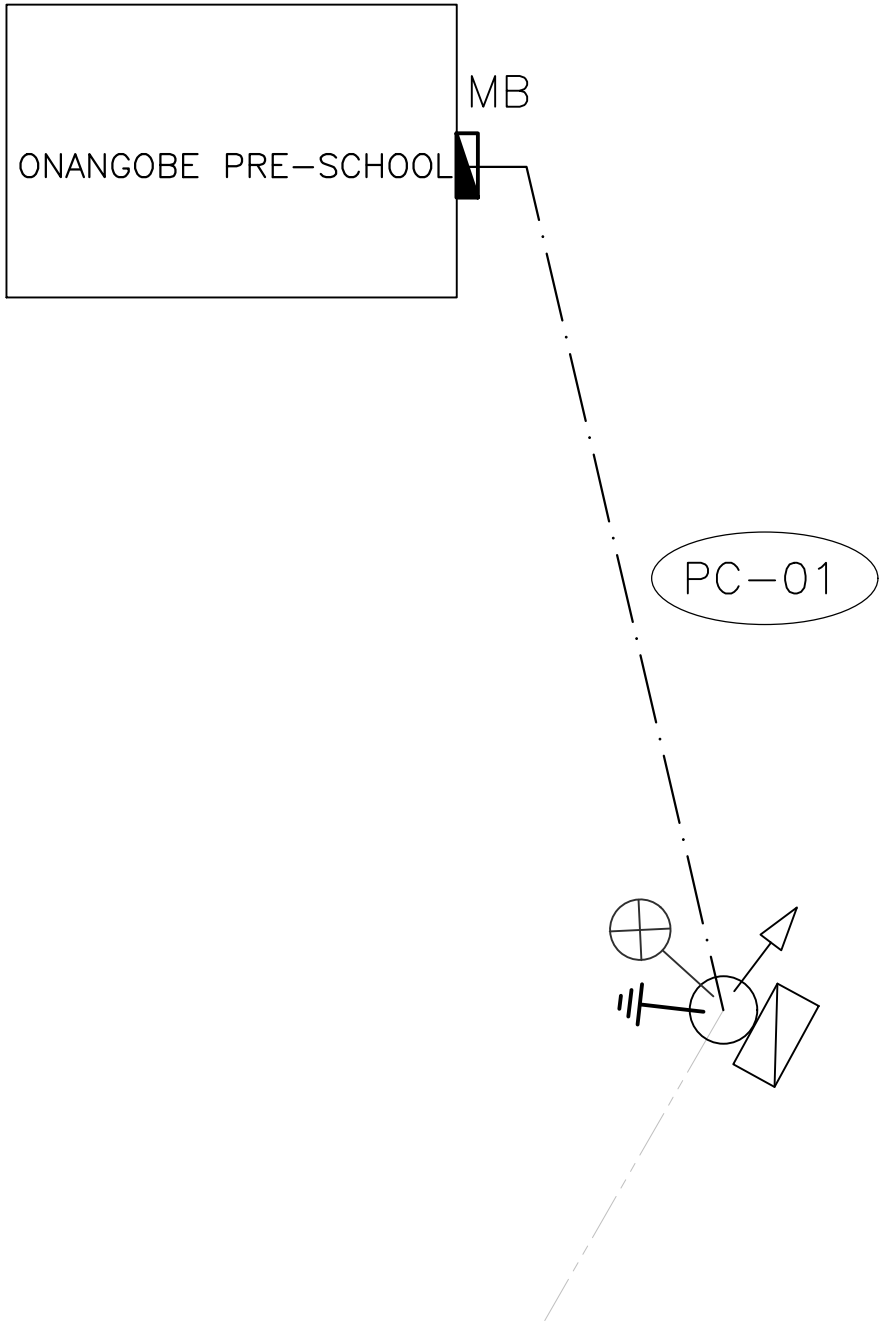
CONSULTANT DRAWING NO:	D0096/PH3/E1–23
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CLIENT DRAWING NO:	
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CABLE, EARTH & SLEEVE-PIPE SCHEDULE								
REF.	ROUTE		AMOUNT OF CORES	CABLE/SLEEVE		RATED ISOLATED VOLTAGE	ESTIMATED LENGTH (m)	SYSTEM VOLTAGE
	FROM	TO		SIZE (mm²)	TYPE			
PC-01	POLE	MB	4	16	PVC/SWA/PVC	1000 V	35	380/220V
E/W				10	BCEW			

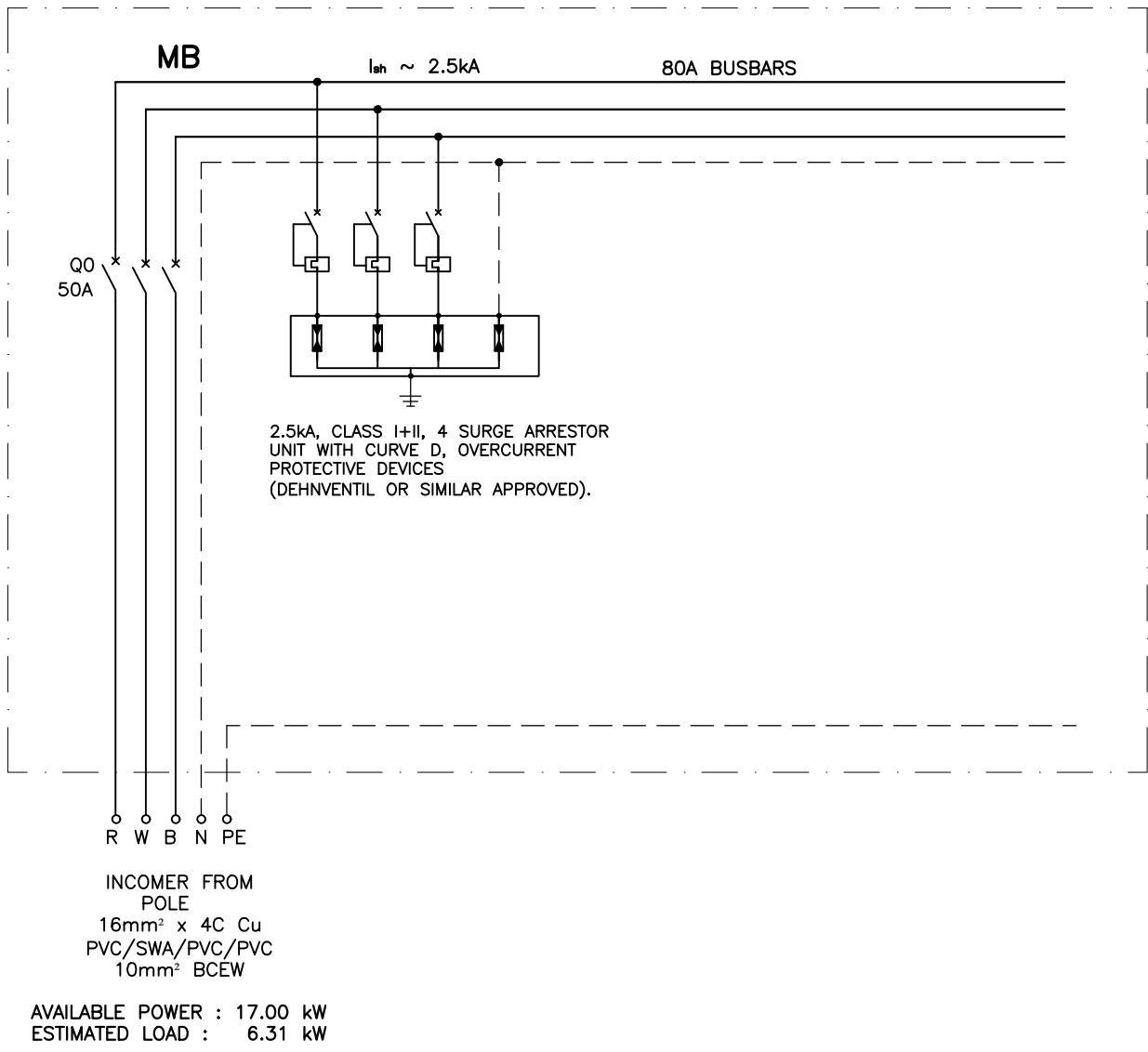


SCHEMATIC SCHEDULE



ELECTRICAL LAYOUT

SCALE 1:250



METERBOARD : LINE DIAGRAM

NOTES

1. LENGTH OF CONDUCTOR DOES NOT INCLUDE LENGTH MEASURED WHEN CONDUCTOR IS SAGGED
2. RULING SPANS LV LINE IS 45m UNLESS OTHERWISE SPECIFIED

FOR BIDDING
PURPOSES ONLY

No.	REVISIONS	ENG.	DATE

CONSULTANT:



DEKA
CONSULTING ENGINEERS

P.O. Box 21744
Tel: 061 220 959
Fax: 061 220 992
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WINDHOEK

DESIGN					
DESIGNED	AKM	03/23	DRAWN	HFM	03/23
PROFESSIONAL ENGINEER		AKM			

CLIENT:



REPUBLIC OF NAMIBIA

MINISTRY OF MINES AND ENERGY

PRIVATE BAG 13297
WINDHOEK
NAMIBIA
TEL: (061) 284 8111
FAX: (061) 238 643

USER CLIENT:

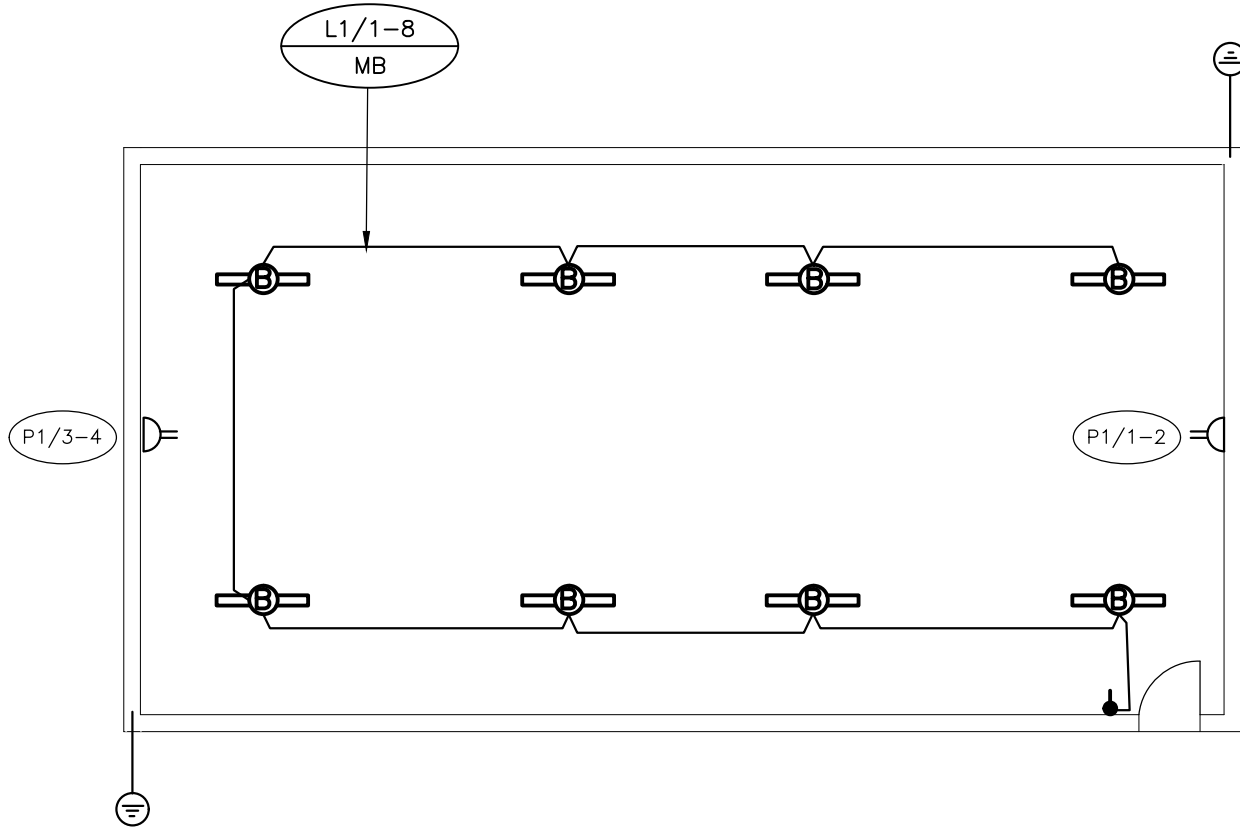


NORED
Electricity For Development

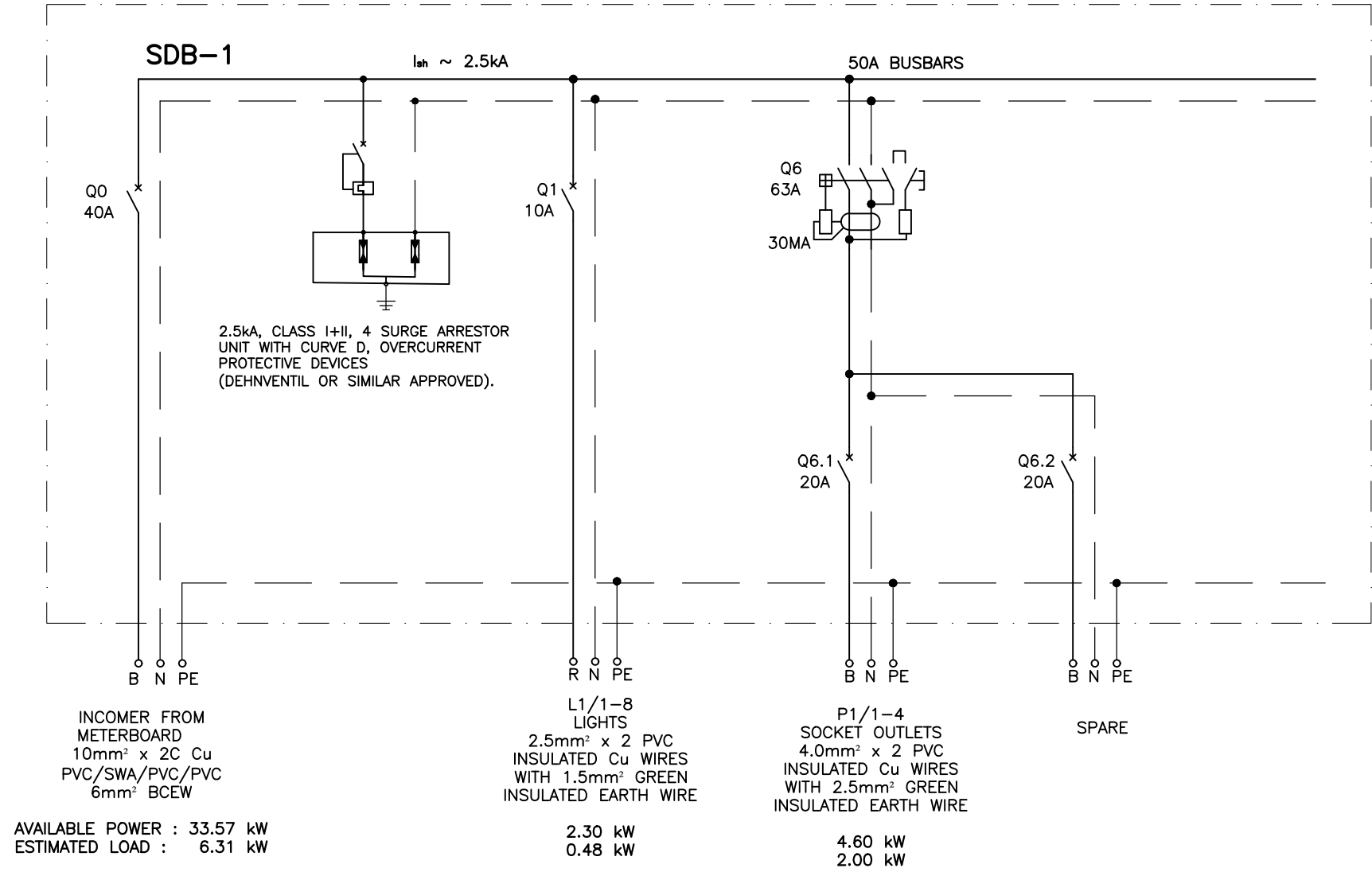
P. O. BOX 639
ONDANGWA
NAMIBIA
TEL: (065) 282 2175
FAX: (065) 297 3827

DISCIPLINE:	ELECTRICAL	
PROJECT TITLE:	RURAL ELECTRIFICATION OSHIKOTO REGION 2023/2024	
DRAWING TITLE:	ONAYENA CONSTITUENCY: ONANGOBE PRE-SCHOOL ELECTRICAL LAYOUT	
SCALE:	AS SHOWN	A1
CONSULTANT DRAWING NO.:	D0096/PH3/E1-24	REV. △
CLIENT DRAWING NO.:		REV. △

SYMBOL LIST				
No	SYMBOL	DESCRIPTION	TYPE	QTY
1		REGENT LIGHTING 5FT LED OPEN CHANNEL DOUBLE – BR FTL006 + 2x 20W LED TUBE, FROSTED 840 WITH 4000K.	BR FTL–006 2x 20W LED TUBE	0
2		RADIANT LIGHTING 5FT DOUBLE VAPOUR PROOF T8 LED WITH 2x 24W LAMP, IP65 OR SIMILAR APPROVED	RADIANT 2x 24W OR SIMILAR APPROVED	8
3		WALL / CEILING MOUNTED LASCON B–10 LED, WHITE, IP65, ROUND POLYCARBONATE BULKHEAD, APPLICABLE IN ABLUTION BLOCK / EXTERNAL WALL WITH INGRESS PROTECTION 65 RATING	LASCON B–10 LED 2x 9W	0
4		220V, 16A ONE LEVER ONE WAY LIGHT SWITCH IN 100x50x50mm FLUSH STEEL DRAWBOX, COLOR : WHITE, COMPLETE WITH ALL ACCESSORIES. MOUNTED @1200mm AFFL.	CLIPSAL LX RANGE OR SIMILAR APPROVED	1
5		16A DOUBLE SWITCH SOCKET–OUTLET ON 100x100x50mm DRAWBOX WITH SAFETY SHUTTERS 250V, 2P+EARTH WITH SIDE CONTACTS. FLUSH/SURFACE MOUNTED @300mm AFFL.	CLIPSAL LX RANGE SIMILAR APPROVED	2
6		EPOXY COATED, PVC POWER DISTRIBUTION ENCLOSURE. FLUSH MOUNTED @1400mm AFFL.	GEM OR SIMILAR APPROVED	1
7		PHOTO–CELL MOUNTED @2400m AFFL.	CLIPSAL OR SIMILAR APPROVED	0
8		COPPER EARTH ELECTRODE DRIVEN TO A DEPTH PREDETERMINED BY SOIL RESISTIVITY SURVEY. RESISTANCE NOT TO EXCEED 200 ohms AT ANY SINGLE POINT & 50 ohms OVERALL.		2
9		TEST POINT 300mm ABOVE FINISH FLOOR LEVEL		1



1 - CLASSROOM BLOCK
ZINC STRUCTURE



SDB–1 : LINE DIAGRAM
CLASSROOM BLOCK
NTS

NOTES

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FOR BIDDING
PURPOSES ONLY

No.	REVISIONS	ENG.	DATE

CONSULTANT:

DEKA
CONSULTING ENGINEERS

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Fax: 061 220 992
E-mail: info@dekaconsult.com
WINDHOEK

DESIGN					
DESIGNED	AKM	03/23	DRAWN	HFM	03/23
PROFESSIONAL ENGINEER		AKM			

CLIENT:

REPUBLIC OF NAMIBIA

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FAX: (065) 297 3827

DISCIPLINE:	ELECTRICAL	
PROJECT TITLE:	RURAL ELECTRIFICATION OSHIKOTO REGION 2023/2024	
DRAWING TITLE:	ONAYENA CONSTITUENCY: ONANGOBE PRE–SCHOOL BUILDINGS ELECTRICAL LAYOUT	
SCALE:	1 : 100	A1
CONSULTANT DRAWING NO:	D0096/PH3/E1–25	REV.
CLIENT DRAWING NO:		REV.