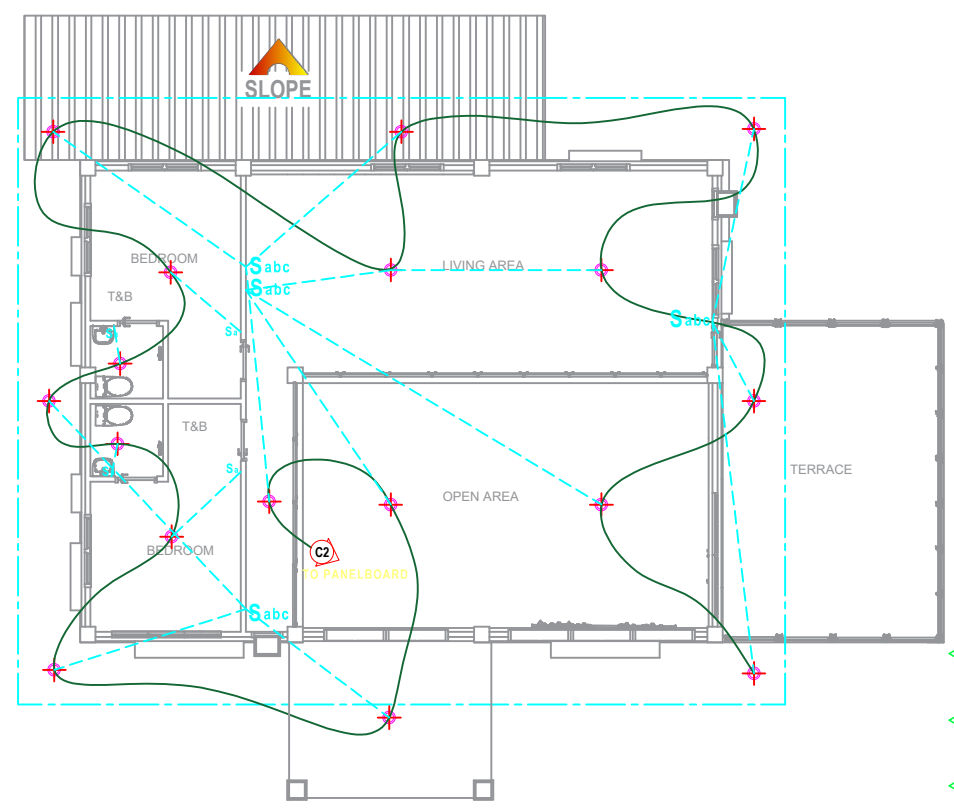


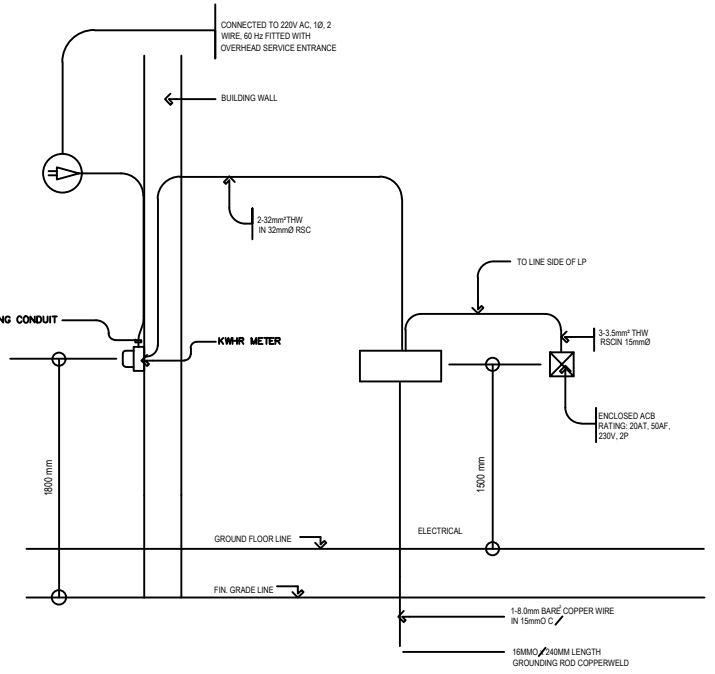
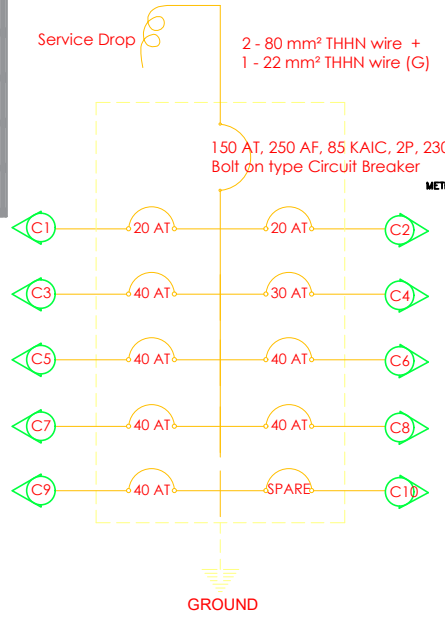
25 LIGHTNING LAYOUT PLAN 1
E 1 Scale 1:100



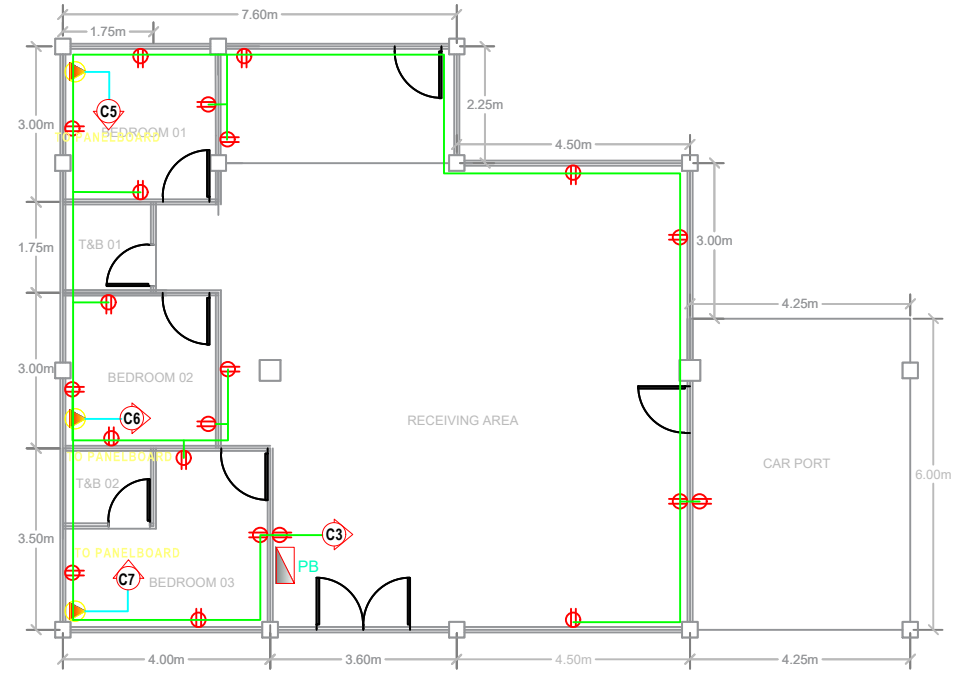
26 LIGHTNING LAYOUT PLAN 2
E 1 Scale 1:100

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	15W LED pinlight		1 gang switch
	2 gang convenience outlet with ground		2 gang switch
	Exhaust Fan Ceiling type		3 gang switch
	Weatherproof 1 gang convenience outlet with ground - above counter		Panelboard
	Aircon outlet		Circuit run

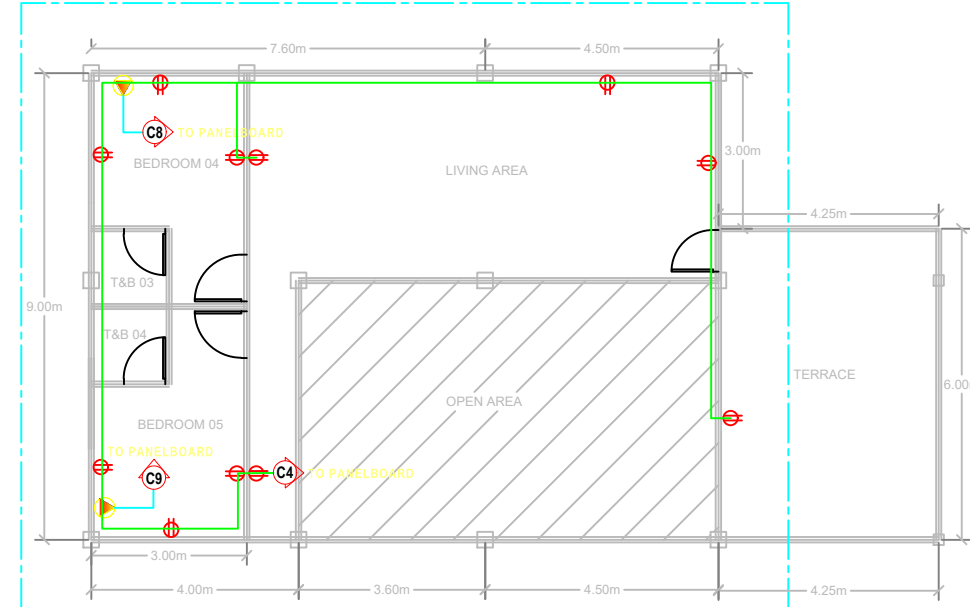
SINGLE LINE DIAGRAM



29 RISER DIAGRAM
E 1 Scale nts



27 POWER LAYOUT PLAN 1
E 1 Scale 1:100



28 POWER LAYOUT PLAN 2
E 1 Scale 1:100

PANELBOARD

CIRCUIT NUMBER	LOAD DESCRIPTION	QUANTITY	VOLT-AMPERE (VA)	VOLTAGE	AMPERES	CIRCUIT RUN WIRE SIZE	CONDUIT SIZE	CIRCUIT BREAKER			
								AT	AF	KAIC	φ - VOLTAGE
1	LIGHTING LOADS	12 - (100W) LED PINLIGHT @ 0.9 PF	1200	230	5.22	2 - 3.5 sq. mm THHN wire 1 - 2.0 sq. mm THHN wire (G)	20 mm Ø PVC	20 AT	100 AF	10 KAIC	2P, 230v
2	LIGHTING LOADS	17 - (100W) LED PINLIGHT @ 0.9 PF	1700	230	7.39	2 - 3.5 sq. mm THHN wire 1 - 2.0 sq. mm THHN wire (G)	20 mm Ø PVC	30 AT	100 AF	10 KAIC	2P, 230v
3	CONVENIENCE OUTLET	21 - 2 GANG CONVENIENCE OUTLET WITH GROUND	7560	230	32.87	2 - 3.5 sq. mm THHN wire 1 - 2.0 sq. mm THHN wire (G)	20 mm Ø PVC	40 AT	100 AF	10 KAIC	2P, 230v
4	CONVENIENCE OUTLET	11 - 2 GANG CONVENIENCE OUTLET WITH GROUND	3960	230	17.22	2 - 3.5 sq. mm THHN wire 1 - 2.0 sq. mm THHN wire (G)	20 mm Ø PVC	30 AT	100 AF	10 KAIC	2P, 230v
5	AIRCON OUTLET	1 - AIRCON, 1 HP	1840	230	8.0	2 - 8.0 sq. mm THHN wire 1 - 3.5 sq. mm THHN wire (G)	20 mm Ø PVC	40 AT	100 AF	10 KAIC	2P, 230v
6	AIRCON OUTLET	1 - AIRCON, 1 HP	1840	230	8.0	2 - 8.0 sq. mm THHN wire 1 - 3.5 sq. mm THHN wire (G)	20 mm Ø PVC	40 AT	100 AF	10 KAIC	2P, 230v
7	AIRCON OUTLET	1 - AIRCON, 1 HP	1840	230	8.0	2 - 8.0 sq. mm THHN wire 1 - 3.5 sq. mm THHN wire (G)	20 mm Ø PVC	40 AT	100 AF	10 KAIC	2P, 230v
8	AIRCON OUTLET	1 - AIRCON, 1 HP	1840	230	8.0	2 - 8.0 sq. mm THHN wire 1 - 3.5 sq. mm THHN wire (G)	20 mm Ø PVC	40 AT	100 AF	10 KAIC	2P, 230v
9	AIRCON OUTLET	1 - AIRCON, 1 HP	1840	230	8.0	2 - 8.0 sq. mm THHN wire 1 - 3.5 sq. mm THHN wire (G)	20 mm Ø PVC	40 AT	100 AF	10 KAIC	2P, 230v
10	SPARE										
			23620		102.7						

DESIGN COMPUTATION AND ANALYSIS

APPLICATION OF DEMAND FACTOR:
 $[(23620 \text{ VA} - 9200 \text{ VA}) \times (80\% \text{ DF})] + [(9200 \text{ VA}) \times (100\% \text{ DF})] = 20736 \text{ VA}$

MAIN FEEDER CONDUCTOR:

TOTAL LOAD CURRENT:
 $[20736 \text{ VA} + 25\% (3780 \text{ VA})] / (230\text{V}) = 92.74 \text{ AMPS}$

CONDUCTOR SIZE:
 $(125\%) \times (92.74 \text{ AMPS}) = 115.92 \text{ AMPS}$

USE: 2 - 80 mm² THHN CONDUCTOR +
 1 - 22 mm² THHN CONDUCTOR (ground) in 50 mm Ø RMC

MAIN OVER-CURRENT PROTECTION DEVICE:

$[(20736 \text{ VA} - 2624.4 \text{ VA}) + (250\%) (2624.4 \text{ VA})] / (230\text{V}) = 107.27 \text{ AMPS}$

USE: 40 AT, 250 AF, 85 KAIC, 60 HZ, 230V, 2P, BOLT-ON TYPE CIRCUIT BREAKER

ENGINEER: _____

PRC Reg. No: _____

TIN. No: _____

PTR. No: _____

PLACE: _____

DATE: _____

Project Title: **Construction of Two Storey Residential Building**

Location: _____

OWNER'S APPROVAL

Owner's Name & Signature