

*PROPOSED 4 UNITS OF 2
BEDROOM BLOCK OF
FLATS.*

*ELECTRICAL SERVICES
DRAWINGS*

LIGHTING

SYMBOL	DESCRIPTION
	12W WARM WHITE LED CYLINDRICAL DIE-CAST SURFACE MOUNTED DOWNLIGHT (IP65).
	17W RECESSED CIRCULAR WARM WHITE LED LIGHT WITH WHITE TRIM
	7W RECESSED CIRCULAR WARM WHITE LED LIGHT WITH WHITE TRIM
	25W LED WARM WHITE DECORATIVE DINING PENDANT LIGHT FITTING.
	18W LED 1200MM WHITE SURFACE MOUNTED LINEAR NON-CORROSIVE LUMINAIRE
	WARM WHITE LED STRIP LIGHT FOR COVE LIGHTING.
	15W WARM WHITE LED CEILING MOUNTED BULHEAD.
	EXTRACTOR FAN
	21W WARM WHITE LED DECORATIVE UP & DOWN WALL MOUNTED LIGHTFITTING.
	24W WARM WHITE LED DECORATIVE SURFACE MOUNTED LIGHT FITTING
	2X7W RECESSED RECTANGULAR WARM WHITE LED LIGHT .
	50W WARM WHITE LED DECORATIVE LIVING ROOM PENDANT LIGHT FITTING.
	120W WARM WHITE LED LAMP FLOOD LIGHT WITH DIE - CAST HOUSING. IP65
	21W WARM WHITE LED AQUA SUBMERSIBLE ADJUSTABLE SPOT LIGHT FITTING. IP68
	10A PIR MOTION SENSOR
	30W WARM WHITE E27 LAMP UP & DOWN GRAPHITE GREY FENCE MOUNTED IP65 LIGHT FITTING WITH DIE CAST HOUSING.
	8W WARM WHITE LED MIRROR LIGHT
	3W WARM WHITE RECESSED LIGHT FITTING 3000K FOR STAIRHALL
	10A N-GANG 1-WAY SWITCH
	10A N-GANG 2-WAY SWITCH
	10A INTERMEDIATE SWITCH
	10W WARM WHITE LED WALL MOUNTED UP AND DOWN LIGHTER
	3 X 9W WARM WHITE LED DECORATIVE KITCHEN CLUSTER PENDANT LIGHT
	13W WARM WHITE LED DIE CAST IP65 RATED DECORATIVE BOLLARD

POWER

SYMBOL	DESCRIPTION
	13A RAW POWER SINGLE SWITCHED SOCKET OUTLET
	13A RAW POWER TWIN SWITCHED SOCKET OUTLET
	13A RAW POWER TWIN SWITCHED SOCKET OUTLET(WEATHERROOF)
	32A DOUBLE POLE AC SWITCH + INDICATOR LIGHT
	20A DOUBLE POLE AC SWITCH + INDICATOR LIGHT
	15A SINGLE SWITCHED SOCKET OUTLET
	COOKER CONTROL UNIT
	20A DOUBLE POLE WATER HEATER SWITCH
	DISTRIBUTION BOARD
	WATER HEATER OUTLET

FIRE ALARM

SYMBOL	DESCRIPTION
	SMOKE DETECTOR
	HEAT DETECTOR
	BREAK GLASS(MANUAL CALL POINT)
	ALARM BELL
	BATTERY OPERATED SMOKE DETECTOR
	BATTERY OPERATED HEAT DETECTOR
	FIRE ALARM PANEL
	SIREN FLASHER

SIGNAL

SYMBOL	DESCRIPTION
	TELEVISION OUTLET
	SINGLE RJ45 TELEPHONE OUTLET
	DUAL RJ45 VOICE & DATA OUTLET
	SINGLE RJ45 DATA OUTLET
	PRIVATE AUTOMATED BOX EXCHANGE
	MAIN DISTRIBUTION FRAME
	INTERMEDIATE DISTRIBUTION FRAME
	CEILING MOUNTED WIRELESS ACCESS POINT

CCTV SYSTEM

SYMBOL	DESCRIPTION
	BULLET CAMERA
	NETWORK VIDEO RECORDER
	MONITOR
	DOME CAMERA

AUDIO SYSTEM

SYMBOL	DESCRIPTION
	CEILING RECESSED SPEAKER
	MUSIC WALL MOUNTED KEYPAD
	MULTI-ZONE MUSIC POWER AMPLIFIER
	WALL/FLOOR OUTDOOR SPEAKER

GENERAL NOTES

1 -THE DESIGN OF THE FIRE ALARM AND EXTINGUISHING SYSTEM IS IN ACCORDANCE WITH NFPA 72 AND BS-5839.

2-ALL CONDUITS ARE CONFORMING WITH EMT CONDUIT

3-FIRE ALARM CABLES ARE THERMOPLASTIC COVERED STRANDED WIRE 1.5 SQ.MM - FIRE ALARM DETECTORS, MANUAL STATIONS, PRESSURE SWITCH

4-ALL ELECTRIC MANUAL RELEASE STATIONS WERE MOUNTED NOT LESS THAN 1.10 METERS AND NOT MORE THAN 1.40 METERS ABOVE THE FINISH FLOOR LEVEL WITH REFERENCE TO THE BOTTOM OF THE EQUIPMENT.

5-EXTINGUISHING CONTROL PANEL IS MOUNTED NOT LESS THAN 1.40 METERS ABOVE THE FINISH FLOOR LEVEL WITH REFERENCE TO THE BOTTOM OF THE EQUIPMENT.

6-LOCATION OF DETECTORS AND OTHER FIRE ALARM DEVICES ARE AS PER SITE CONDITIONS IN REFERENCE TO THE DESIGN SCHEMATICS.

7-CONTACT THE OFFICE FOR CLARIFICATIONS ON ANY DETAILS NOT WELL DEFINED ON DRAWINGS.

SEAL

PROJECT TITLE

4 UNIT OF 2 BEDROOM BLOCK OF FLAT

CLIENT

ALHAJI ABUBAKAR

LOCATION

DRAWN BY

ABDULLAHI SHEHU

DESIGNED BY

IWEIBO S.E

CHECKED BY

APPROVED BY

DATE

2002.

DRAWING TITLE:

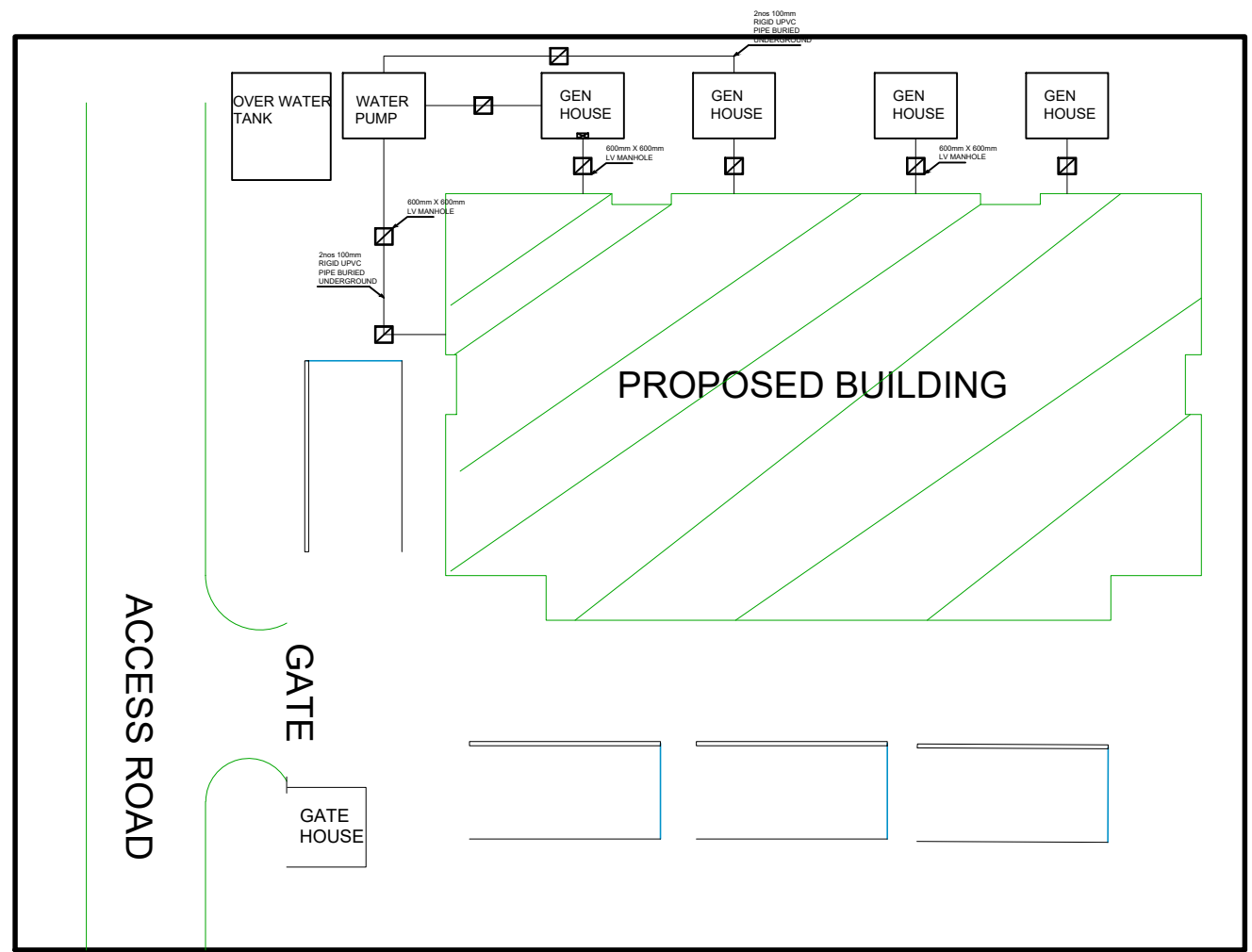
LEGENDS

DRAWING SCALE:

N.T.S.

DRAWINNG NO:

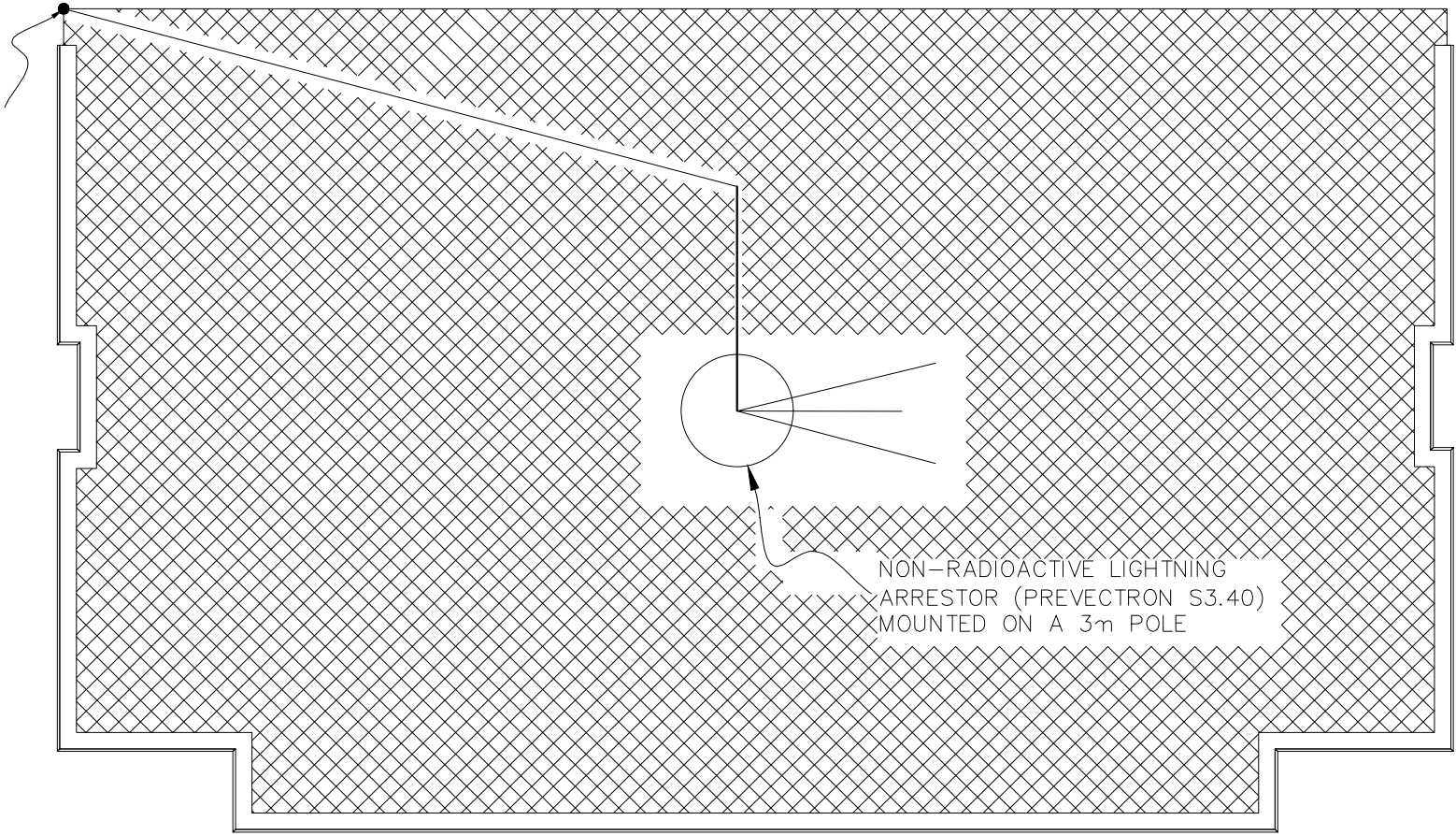
E01



SEAL

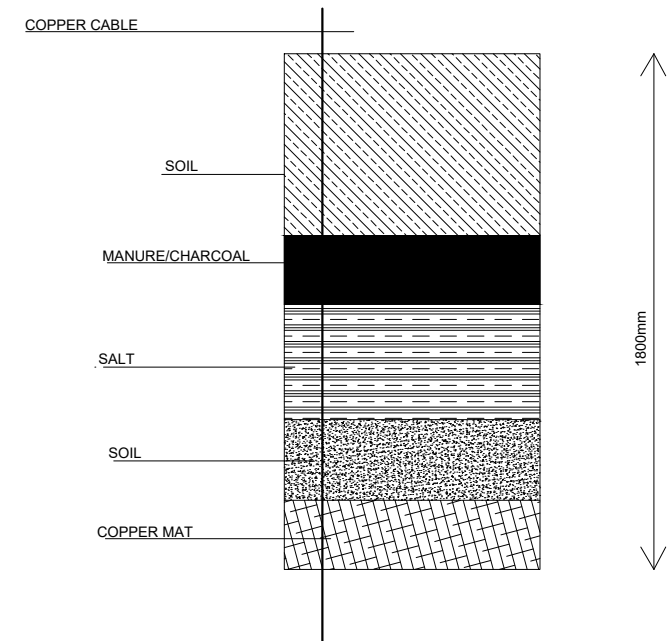
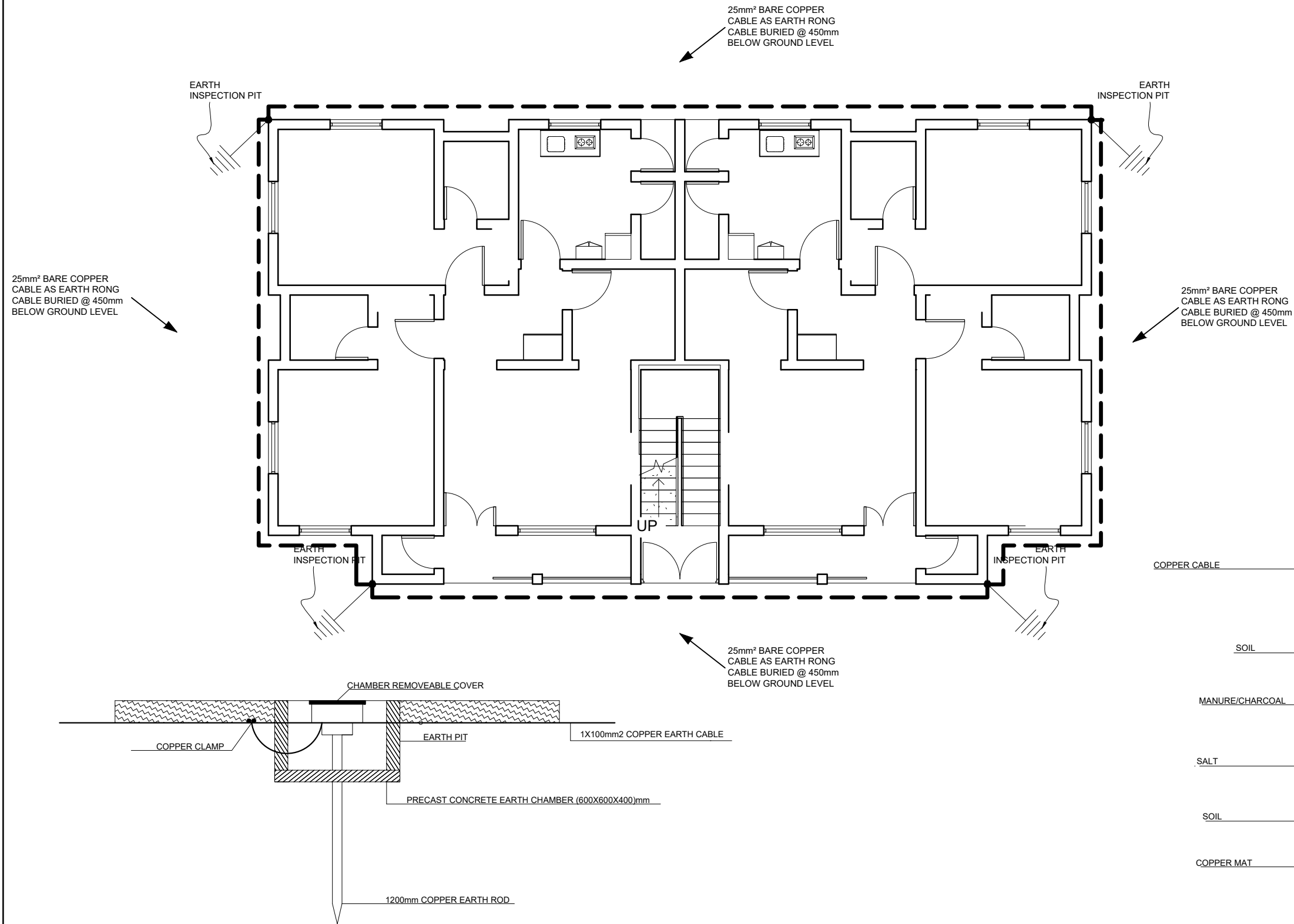
PROJECT TITLE 4 UNIT OF 2 BEDROOM BLOCK OF FLAT		DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: LV CABLE ROUTE SITE LAYOUT	
		DESIGNED BY	IWEIBO S.E		
CLIENT	ALHAJI ABUBAKAR	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINNG NO: E02
LOCATION		APPROVED BY			
		DATE	2002.		

25mmX3mm BARE COPPER
TAPE AS DOWN CONDUCTOR
LINKING THE GROUND
EARTHING NETWORK.



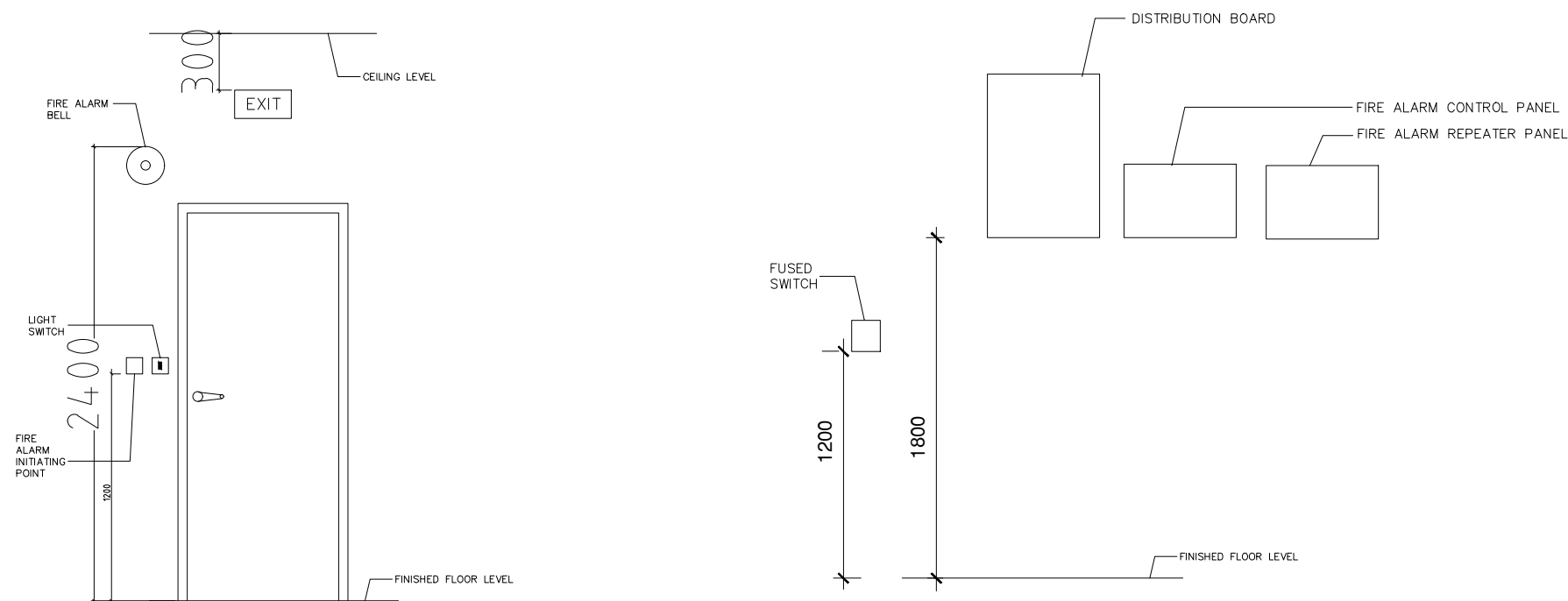
SEAL

PROJECT TITLE 4 UNIT OF 2 BEDROOM BLOCK OF FLAT		DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: LIGHTNING PROTECTION LAYOUT	
		DESIGNED BY	IWEIBO S.E		
CLIENT	ALHAJI ABUBAKAR	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINNG NO: E03
LOCATION		APPROVED BY			
		DATE	2002.		



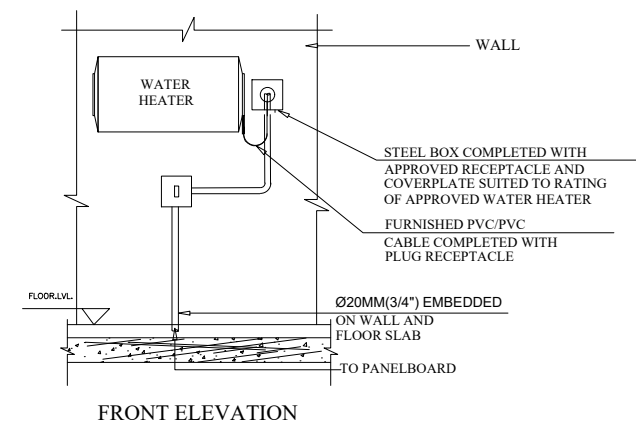
SEAL

PROJECT TITLE 4 UNIT OF 2 BEDROOM BLOCK OF FLAT	DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: EARTHING AND BONDING PROTECTION LAYOUT	
	DESIGNED BY	IWEIBO S.E		
CLIENT ALHAJI ABUBAKAR	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWING NO: E04
LOCATION	APPROVED BY			
	DATE	2002.		

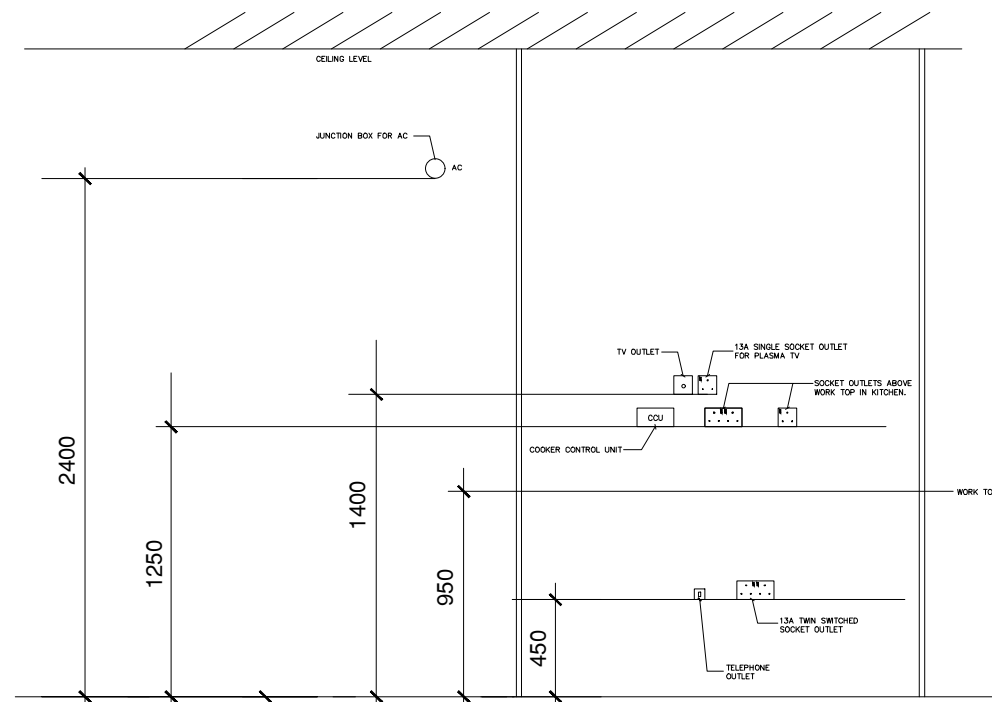


DOOR MOUNTING HEIGHT DETAILS

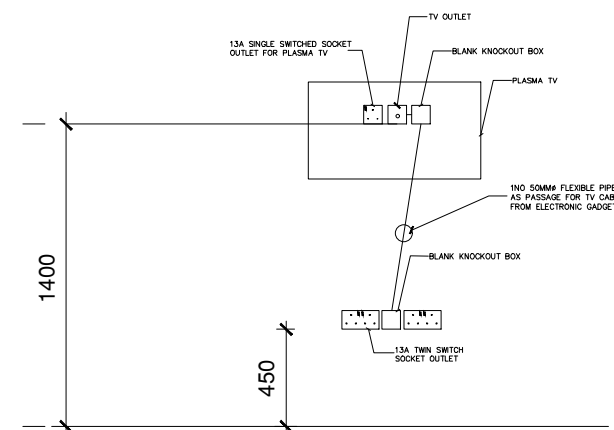
MOUNTING HEIGHT DETAILS FOR PANELS, DISTRIBUTION BOARDS AND FUSED SWITCHES



ELECTRIC WATER HEATER, POWER INSTALLATION DETAILS



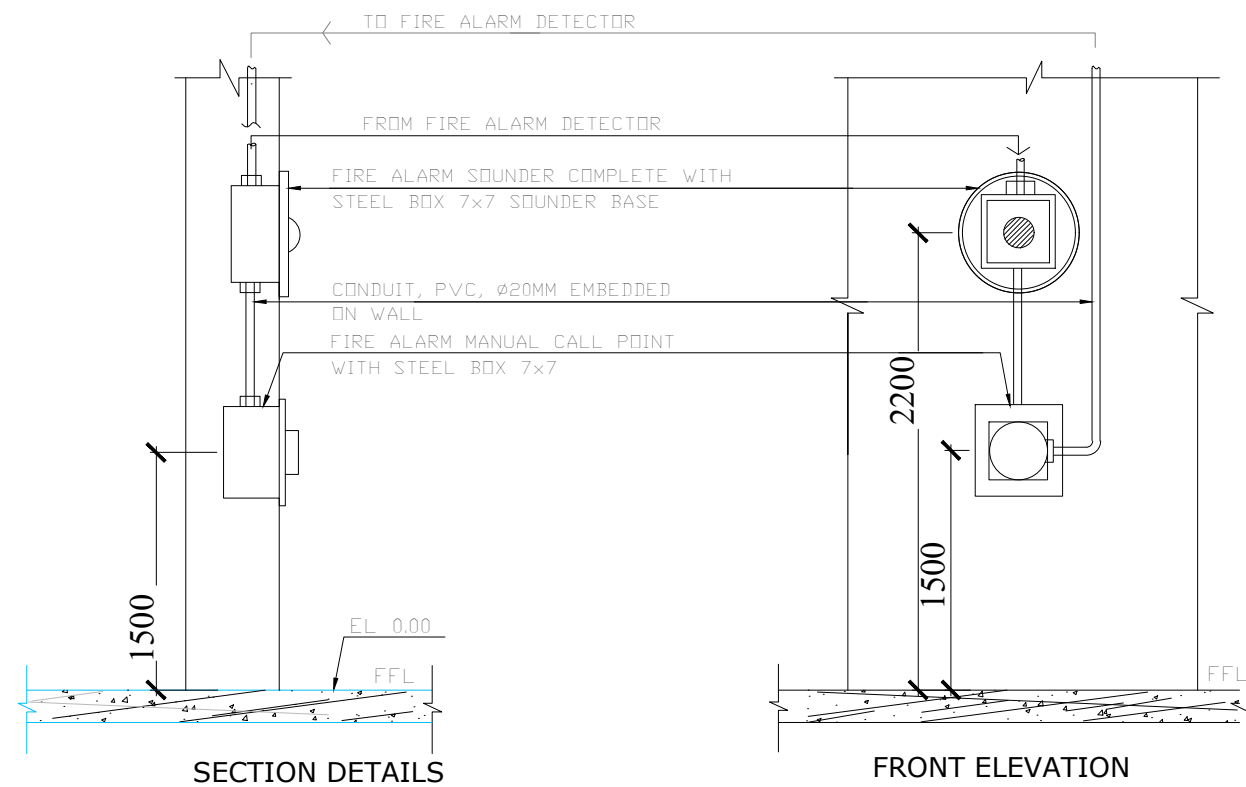
IN KITCHEN AREA



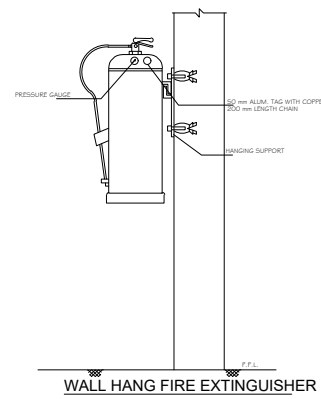
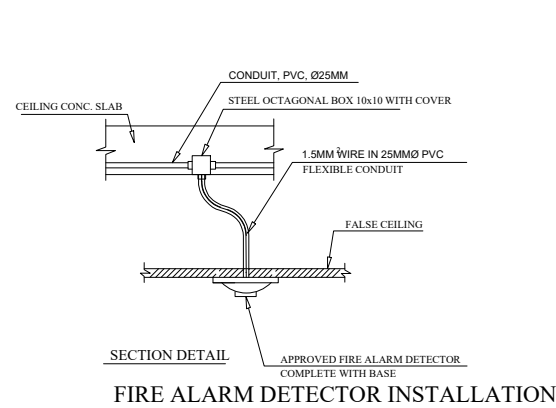
TV MOUNTING HEIGHT DETAILS (WITH DECODER)

SEAL

PROJECT TITLE 4 UNIT OF 2 BEDROOM BLOCK OF FLAT		DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: ELECTRICAL FITTINGS & FIXTURES MOUNTING HEIGHT DETAILS	
		DESIGNED BY	IWEIBO S.E		
CLIENT	ALHAJI ABUBAKAR	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWING NO: E05
LOCATION		APPROVED BY			
		DATE	2002.		

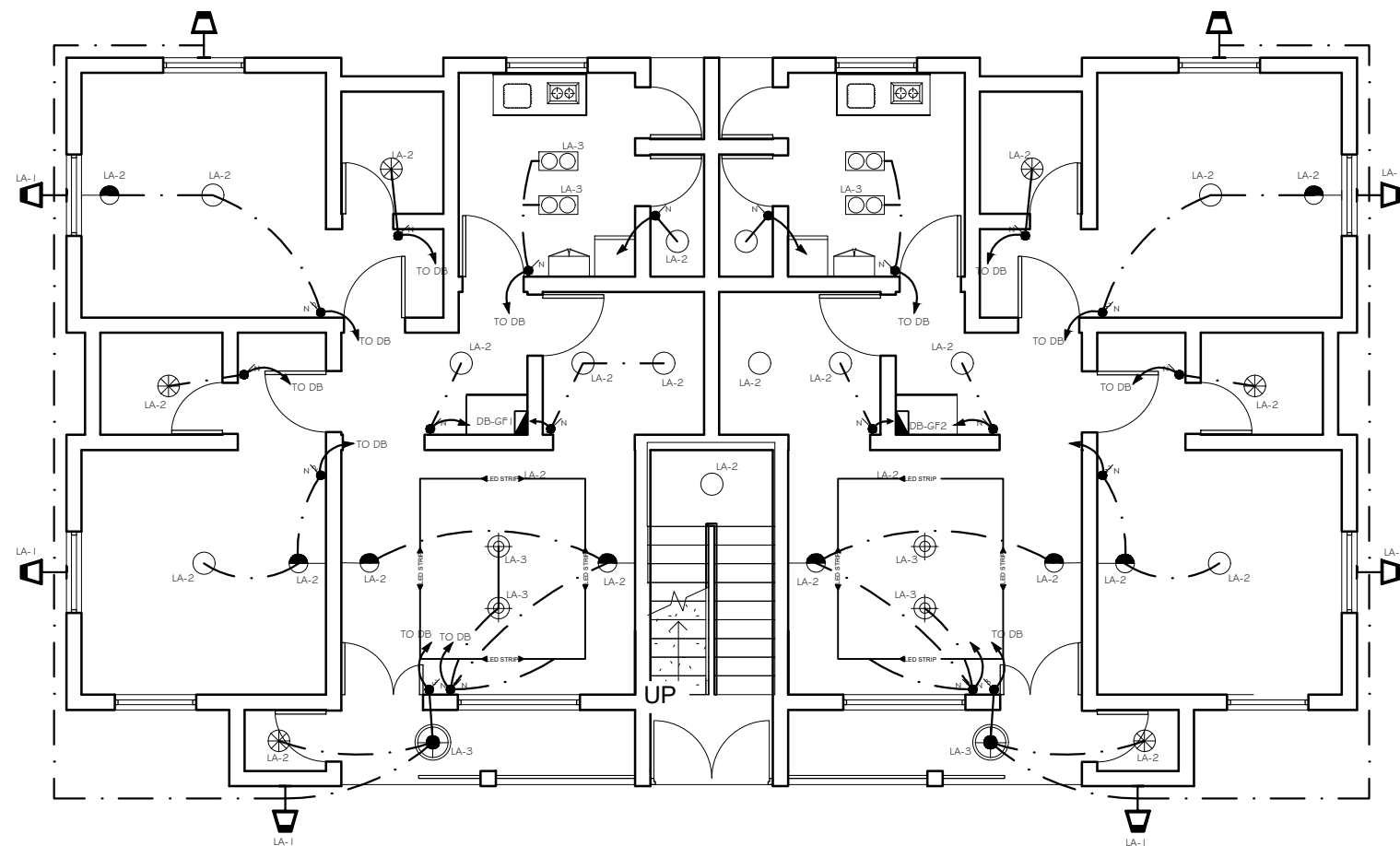


FIRE ALARM SOUNDER AND MANUAL CALL POINT
INSTALLATION DETAILS



SEAL

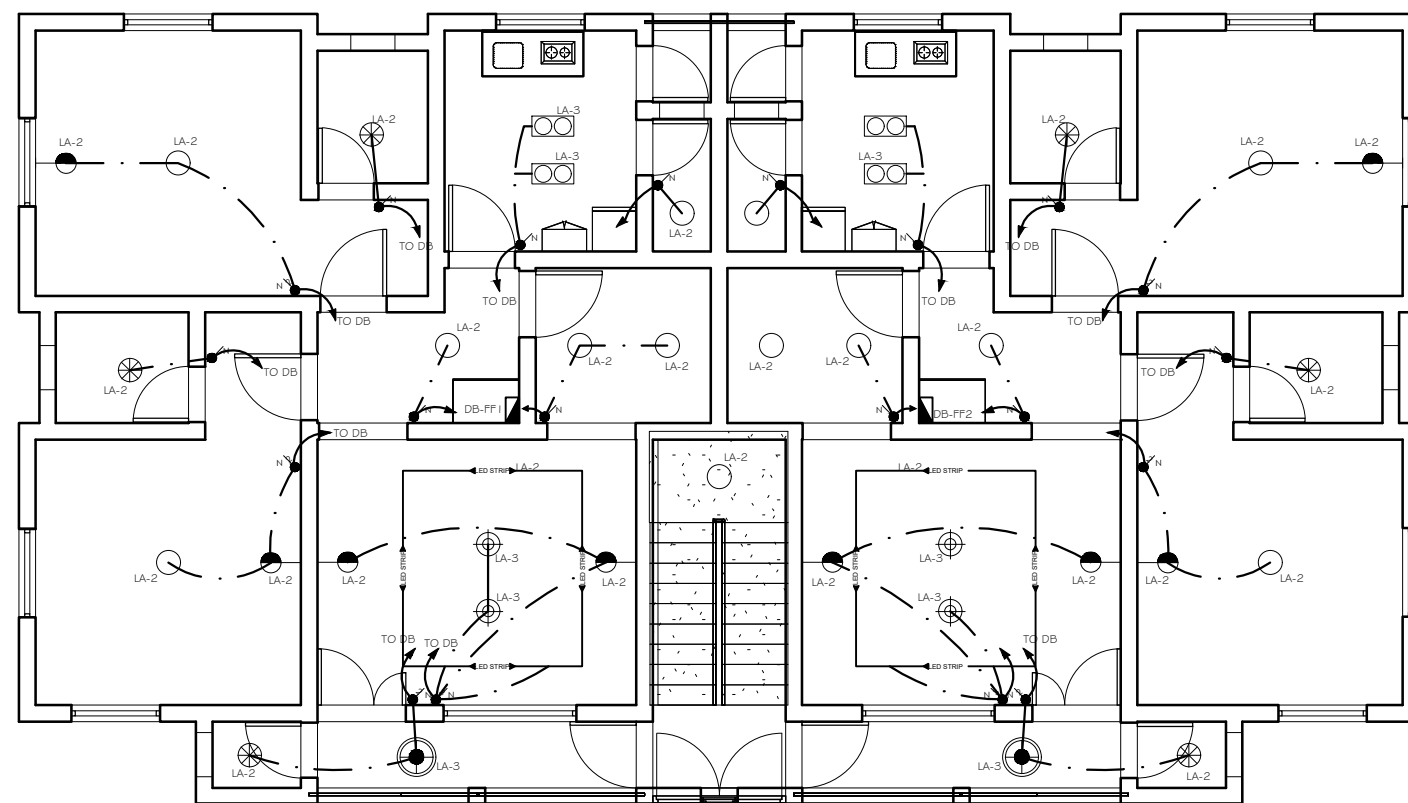
PROJECT TITLE 4 UNIT OF 2 BEDROOM BLOCK OF FLAT		DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: FIRE SERVICE FITTINGS & FIXTURES MOUNTING HEIGHT DETAILS	
		DESIGNED BY	IWEIBO S.E		
CLIENT	ALHAJI ABUBAKAR	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWING NO: E06
LOCATION		APPROVED BY			
		DATE	2002.		



GROUND FLOOR

SEAL

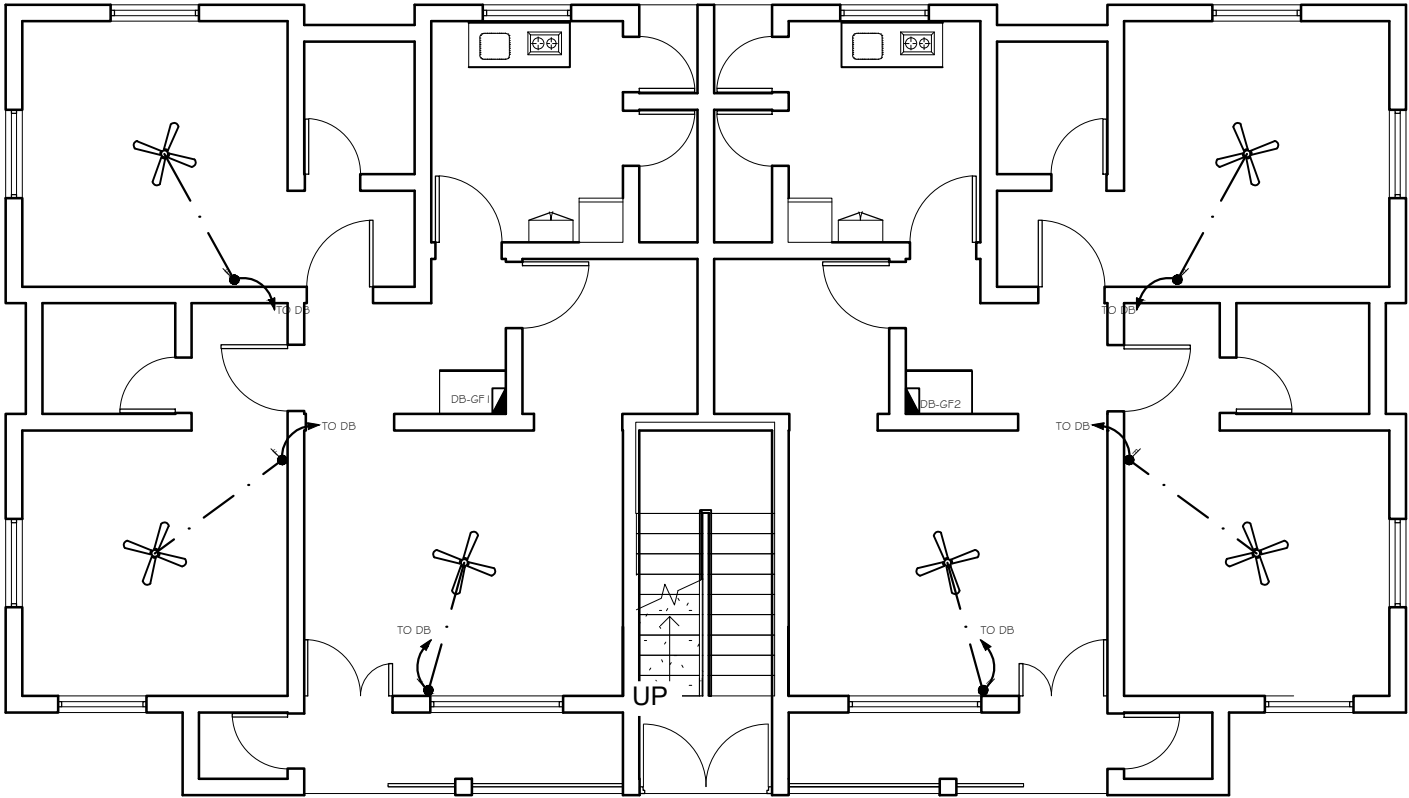
PROJECT TITLE 4 UNIT OF 2 BEDROOM BLOCK OF FLAT		DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: LIGHTING PLAN	
		DESIGNED BY	IWEIBO S.E		
CLIENT ALHAJI ABUBAKAR	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWING NO: E07	
LOCATION	APPROVED BY				
	DATE	2002.			



FIRST FLOOR

SEAL

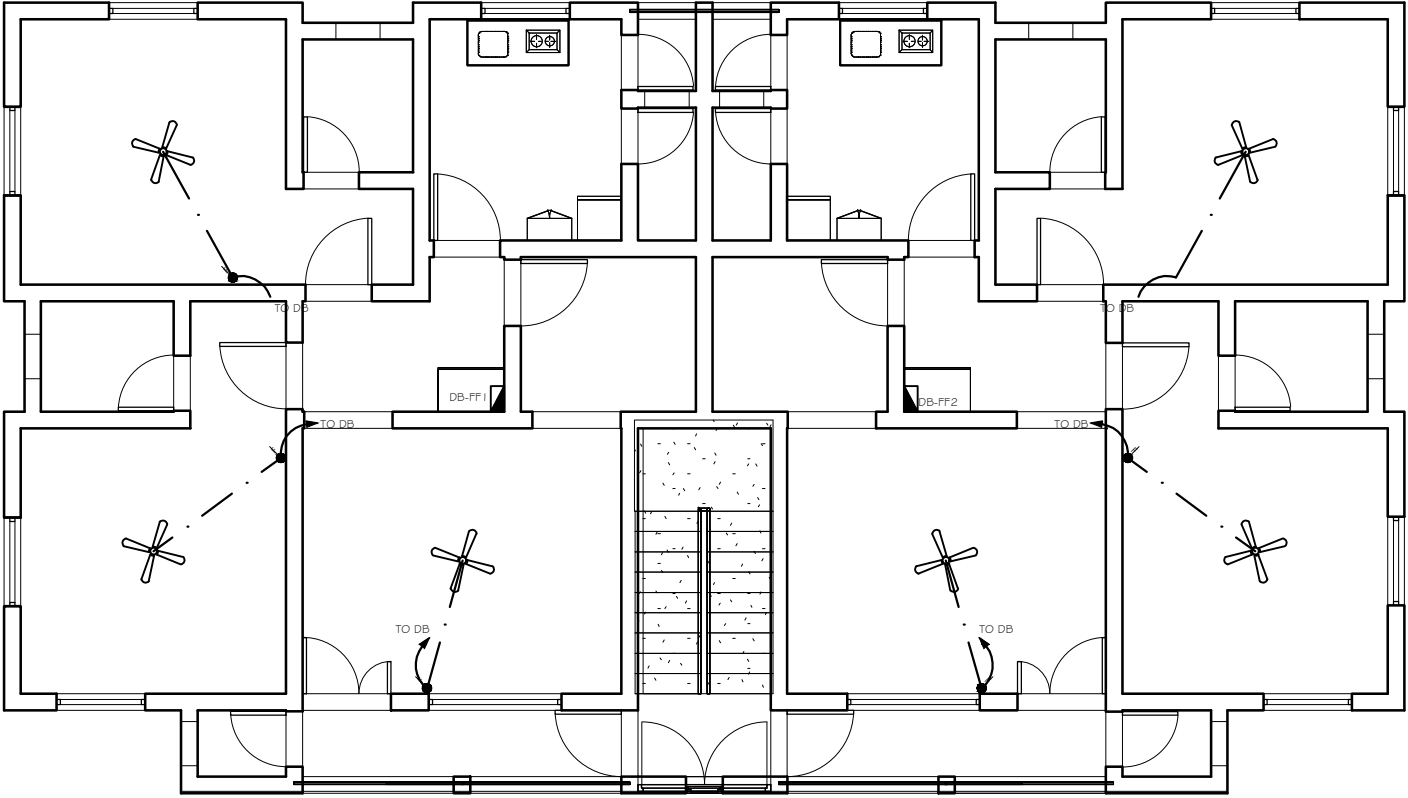
PROJECT TITLE	4 UNIT OF 2 BEDROOM BLOCK OF FLAT	DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: LIGHTING PLAN	
		DESIGNED BY	IWEIBO S.E		
CLIENT	ALHAJI ABUBAKAR	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINNG NO: E08
LOCATION		APPROVED BY			
		DATE	2002.		



GROUND FLOOR

SEAL

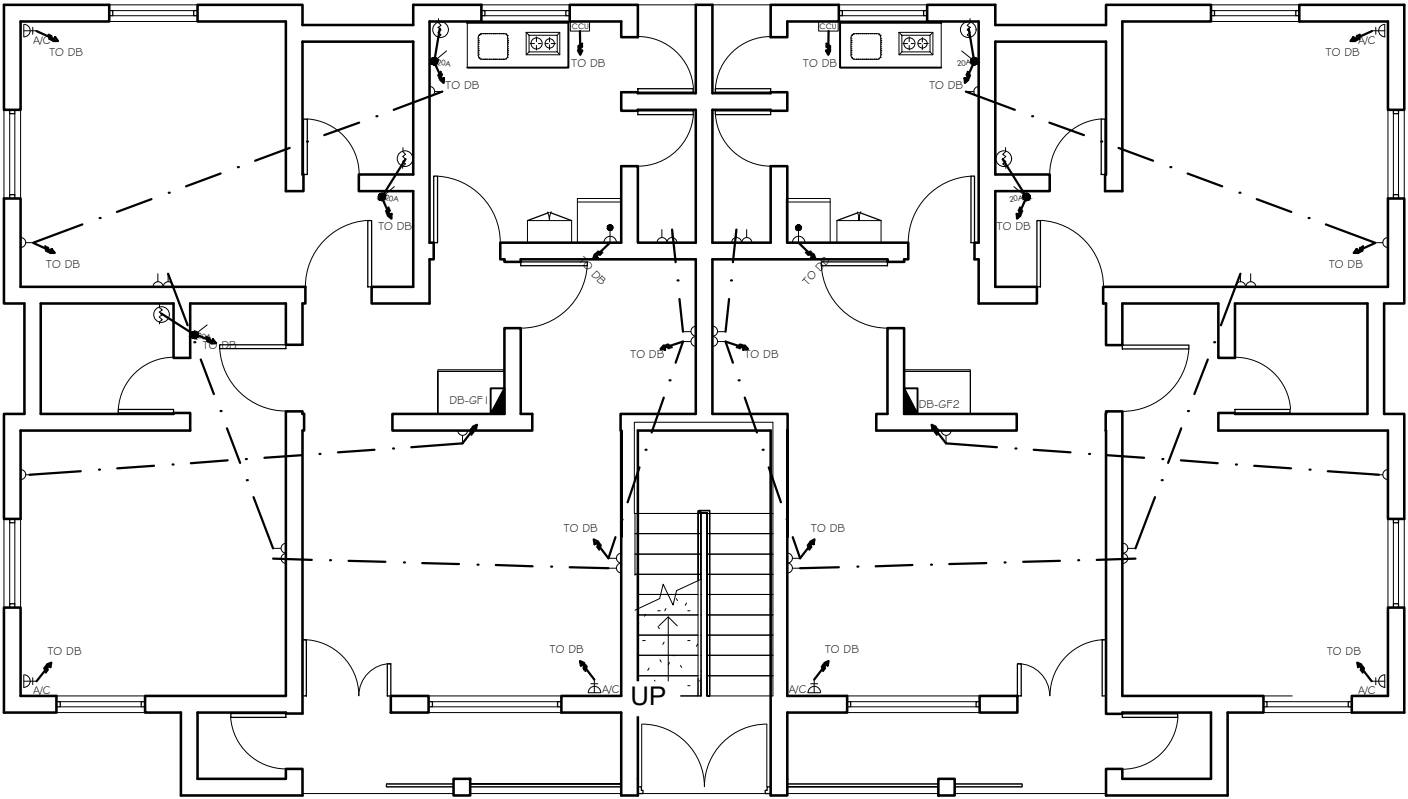
PROJECT TITLE 4 UNIT OF 2 BEDROOM BLOCK OF FLAT		DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: LIGHTING PLAN (FAN LAYOUT)	
		DESIGNED BY	IWEIBO S.E		
CLIENT	ALHAJI ABUBAKAR	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWING NO: E09
LOCATION		APPROVED BY			
		DATE	2002.		



FIRST FLOOR

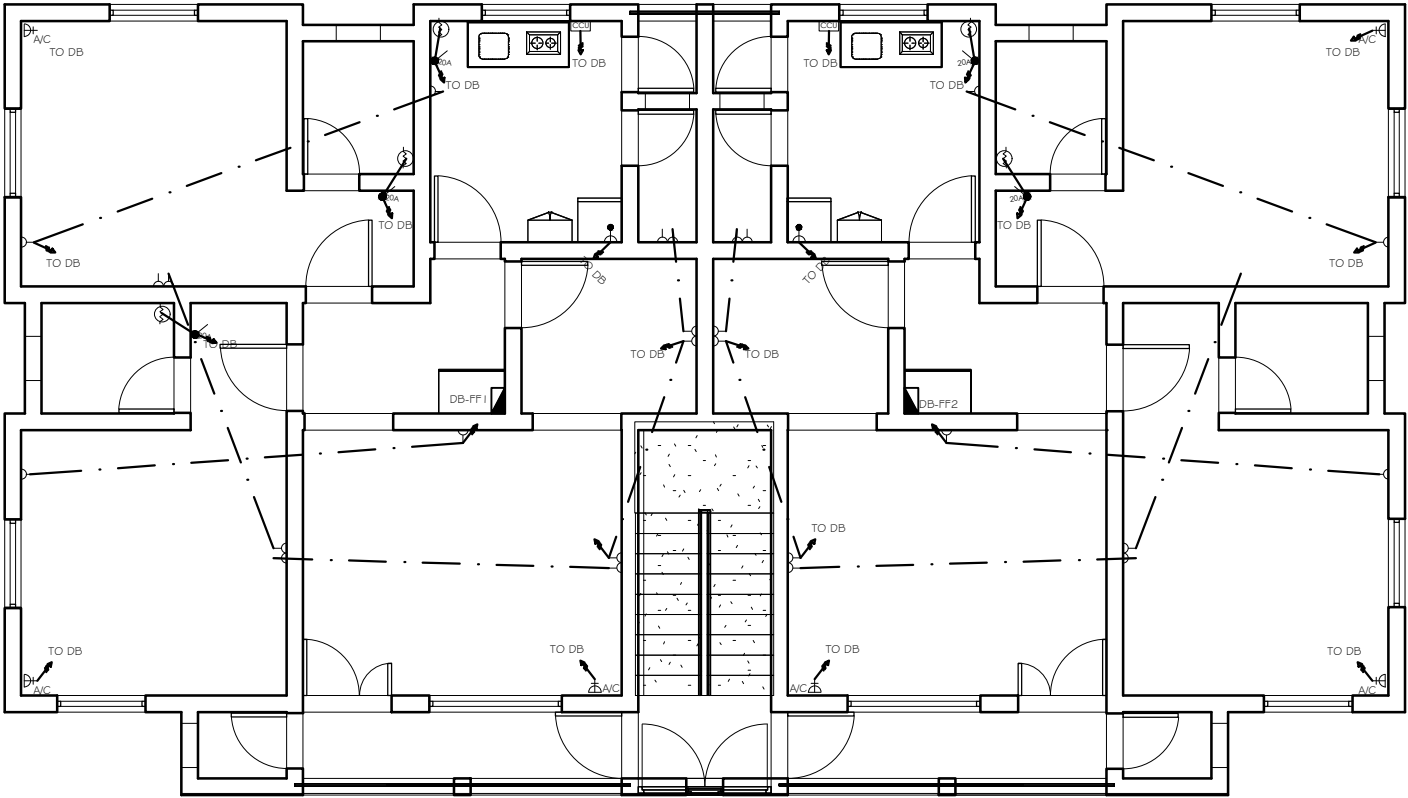
SEAL

PROJECT TITLE 4 UNIT OF 2 BEDROOM BLOCK OF FLAT		DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: LIGHTING PLAN (FAN LAYOUT)	
		DESIGNED BY	IWEIBO S.E		
CLIENT	ALHAJI ABUBAKAR	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINNG NO: E10
LOCATION		APPROVED BY			
		DATE	2002.		



GROUND FLOOR

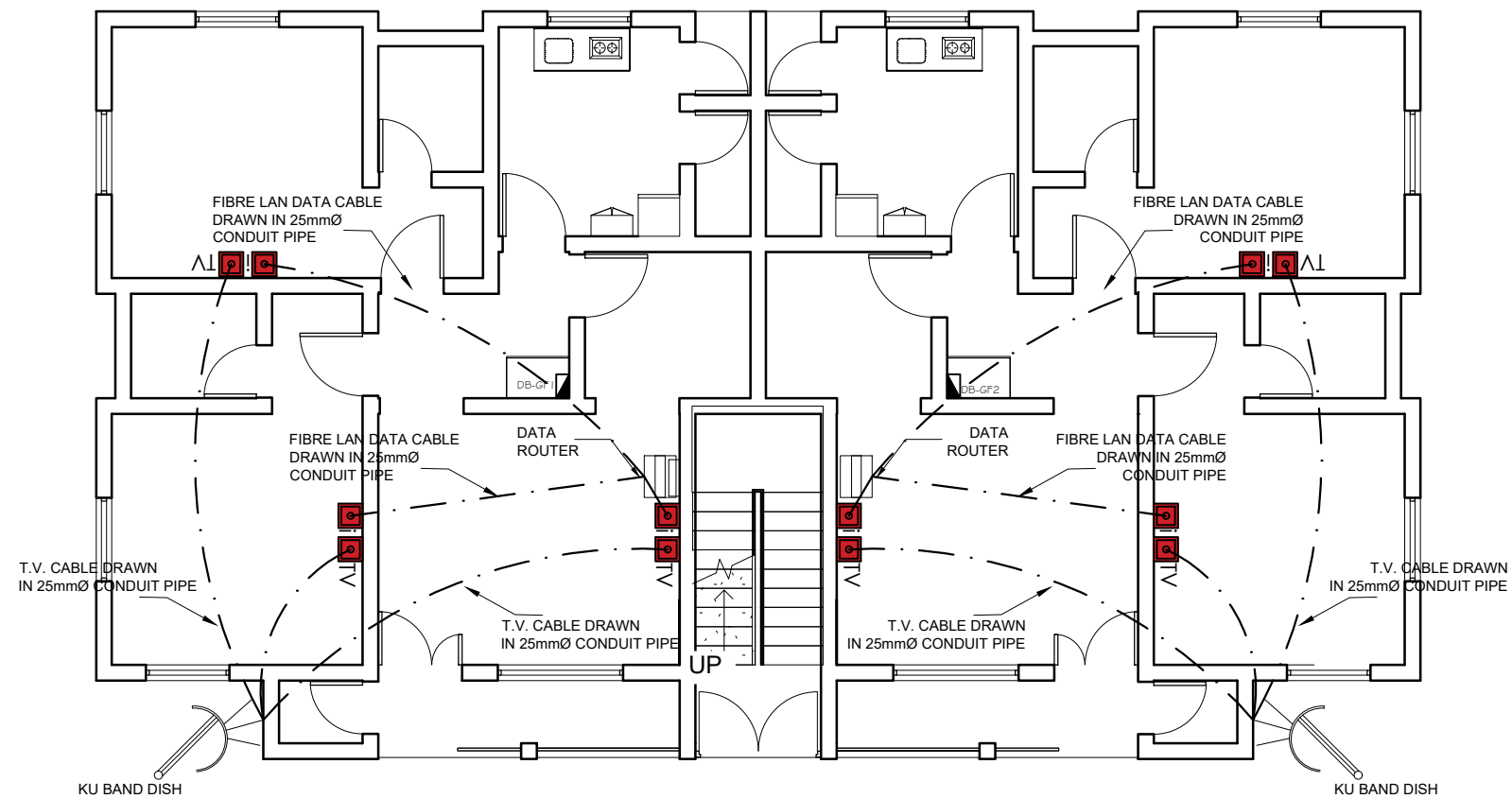
SEAL	PROJECT TITLE	DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: POWER PLAN	
	4 UNIT OF 2 BEDROOM BLOCK OF FLAT				
	CLIENT	DESIGNED BY	IWEIBO S.E	DRAWING SCALE: N.T.S.	DRAWING NO: E11
	ALHAJI ABUBAKAR	CHECKED BY			
	LOCATION	APPROVED BY			
		DATE	2002.		



FIRST FLOOR

SEAL

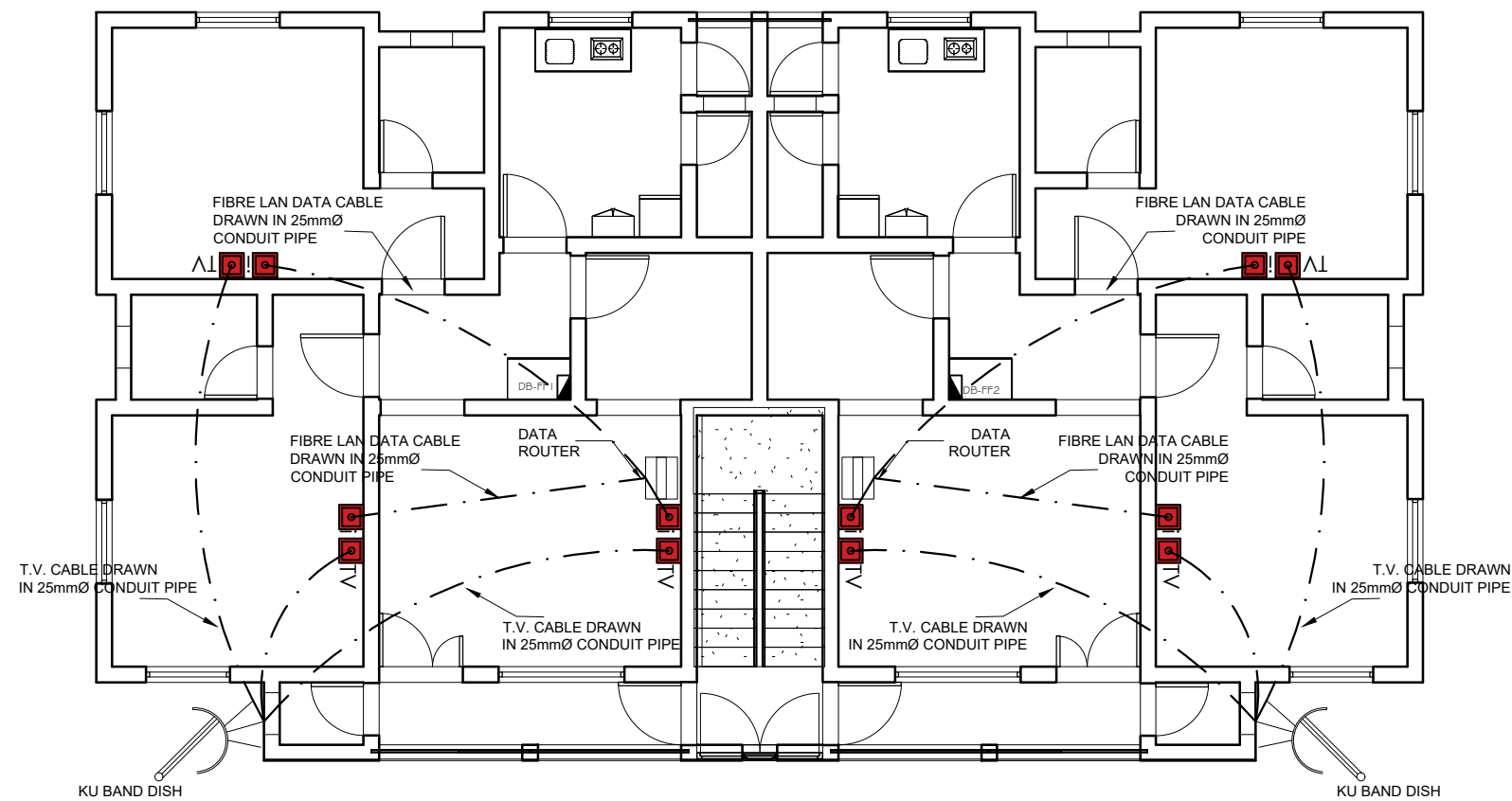
PROJECT TITLE 4 UNIT OF 2 BEDROOM BLOCK OF FLAT		DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: POWER PLAN	
		DESIGNED BY	IWEIBO S.E		
CLIENT	ALHAJI ABUBAKAR	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINNG NO: E12
LOCATION		APPROVED BY			
		DATE	2002.		



GROUND FLOOR

SEAL

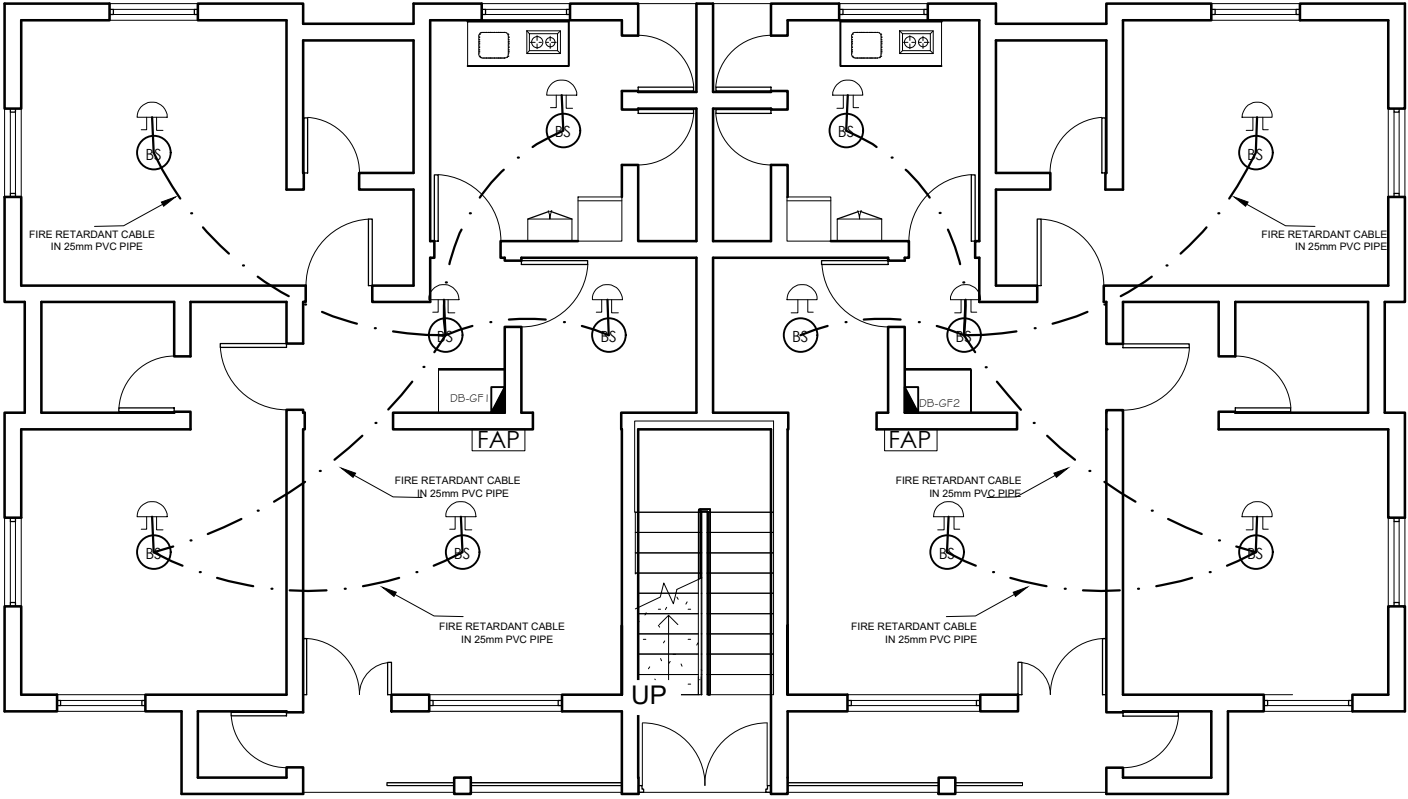
PROJECT TITLE	4 UNIT OF 2 BEDROOM BLOCK OF FLAT	DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: SIGNAL LAYOUT	
		DESIGNED BY	IWEIBO S.E		
CLIENT	ALHAJI ABUBAKAR	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINNG NO: E13
APPROVED BY					
LOCATION		DATE	2002.		



FIRST FLOOR

SEAL

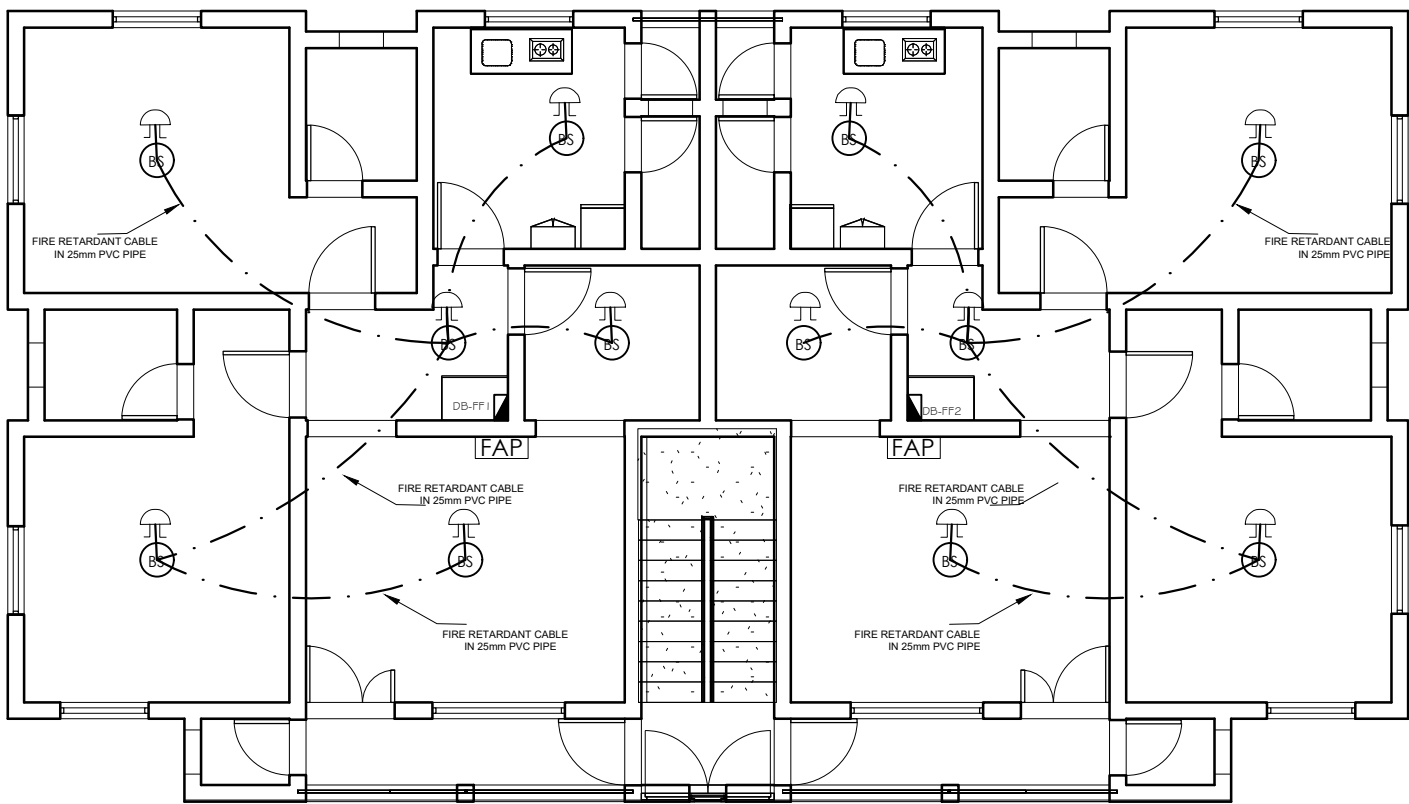
PROJECT TITLE 4 UNIT OF 2 BEDROOM BLOCK OF FLAT		DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: SIGNAL LAYOUT	
		DESIGNED BY	IWEIBO S.E		
CLIENT	ALHAJI ABUBAKAR	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINNG NO: E14
LOCATION		APPROVED BY			
		DATE	2002.		



GROUND FLOOR

SEAL

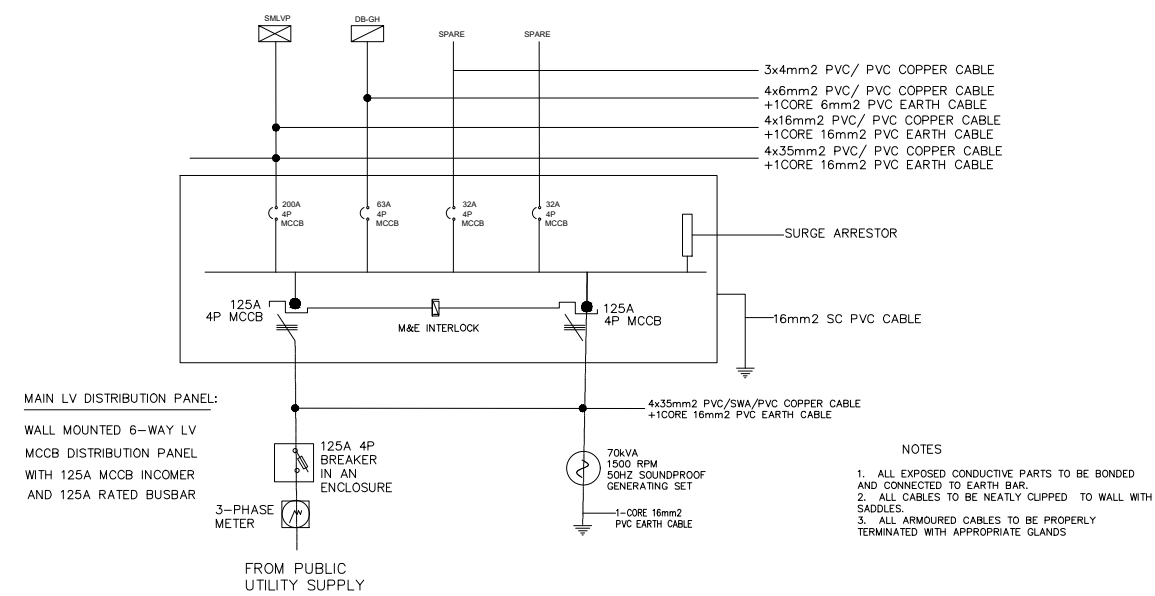
PROJECT TITLE	4 UNIT OF 2 BEDROOM BLOCK OF FLAT		DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: FIRE DETECTION LAYOUT	
			DESIGNED BY	IWEIBO S.E		
CLIENT	ALHAJI ABUBAKAR		CHECKED BY		DRAWING SCALE:	DRAWINGG NO:
LOCATION			APPROVED BY		N.T.S.	E15
			DATE	2002.		



FIRST FLOOR

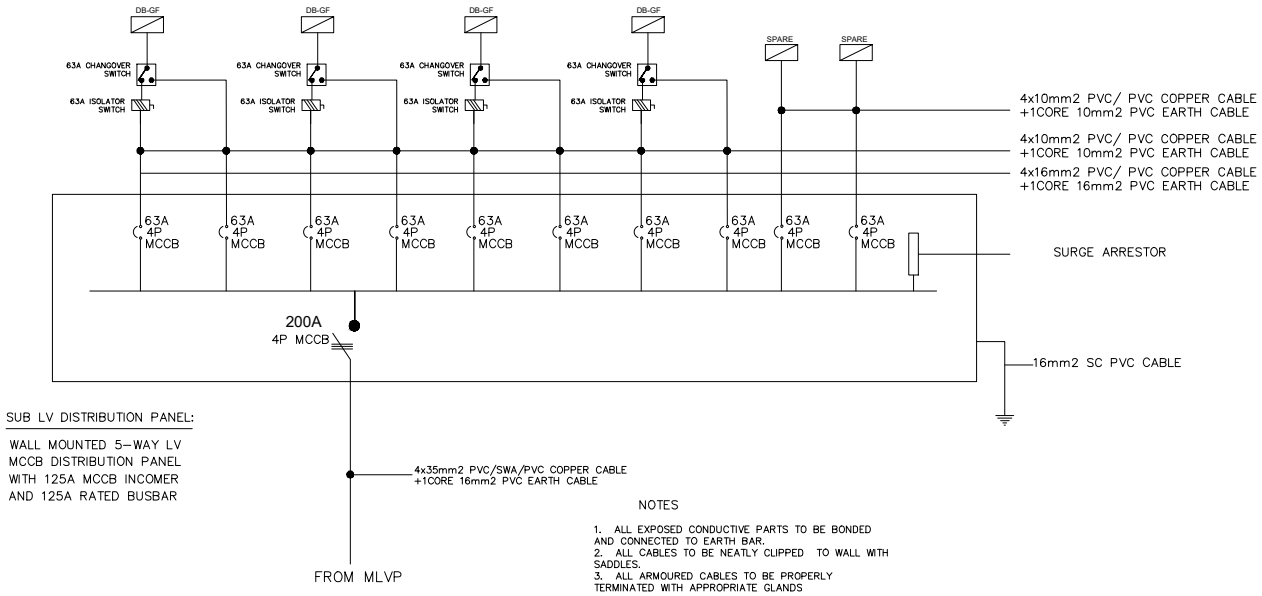
SEAL

PROJECT TITLE 4 UNIT OF 2 BEDROOM BLOCK OF FLAT		DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: FIRE DETECTION LAYOUT	
		DESIGNED BY	IWEIBO S.E		
CLIENT	ALHAJI ABUBAKAR	CHECKED BY		DRAWING SCALE: N.T.S.	DRAWINNG NO: E16
		APPROVED BY			
LOCATION		DATE	2002.		



MAIN PANEL (MLVP) ELECTRICAL POWER SCHEMATIC

MAIN LOW VOLTAGE PANEL (MLVP)							
SERVICES	LOCATION	BREAKER	RATING	RED(VA)	YELLOW(VA)	BLUE(VA)	TOTAL LAOD(VA)
SMLVP	MAIN BUILDING	MCCB		25600	25400	24600	75600
DB-GH	GEN HOUSE	MCB		922	822	270	2014
TOTAL CONNECTED LOAD				26522	26222	24870	77614
MAXIMUM DEMAND LOAD (VA @0.8)				21218	20978	19896	62091
MAXIMUM DEMAND CURRENT IN AMPERE							108.00
TOTAL MAXIMUM DEMAND LOAD KVA @ A DIVERSITY FACTOR OF 0.8(80%) = 62.091							
CURRENT RATING = 225A (THREE PHASE) MCCB							
CABLE SIZE:							



SUB-MAIN LOW VOLTAGE PANEL (SMLVP) ELECTRICAL POWER SCHEMATIC

SUB-MAIN LOW VOLTAGE PANEL (SMLVP)							
SERVICES	LOCATION	BREAKER	RATING	RED(VA)	YELLOW(VA)	BLUE(VA)	TOTAL LAOD(VA)
DB-GF1	GROUND FLOOR	MCCB		7000	6850	6150	20000
DB-GF2	GROUND FLOOR	MCCB		7000	6850	6150	20000
DB-FF1	FIRST FLOOR	MCCB		5800	5850	6150	17800
DB-FF2	FIRST FLOOR	MCCB		5800	5850	6150	17800
SPARE		MCCB					
SPARE							
TOTAL CONNECTED LOAD				25600	25400	24600	75600
MAXIMUM DEMAND LOAD (VA @0.8)				20480	20320	19680	60480
MAXIMUM DEMAND CURRENT IN AMPERE							105.18
TOTAL MAXIMUM DEMAND LOAD KVA @ A DIVERSITY FACTOR OF 0.8(80%) = 60.48							
CURRENT RATING = 200A (THREE PHASE) MCCB							
CABLE SIZE:							

SEAL

PROJECT TITLE	4 UNIT OF 2 BEDROOM BLOCK OF FLAT		DRAWN BY	ABDULLAHI SHEHU	DRAWING TITLE: SCHEDULE AND SCHEMATICS MAIN LOW VOLTAGE PANEL	
			DESIGNED BY	IWEIBO S.E		
	CLIENT		CHECKED BY		DRAWING SCALE:	DRAWINGNG NO:
		ALHAJI ABUBAKAR	APPROVED BY			
LOCATION			DATE	2002.	N.T.S.	E17

DB NAME: DB-GF1

LOCATION: GROUND FLOOR

CCT CODE	MCB RATING (A)	CABLE SIZE (mm2)	LOAD PER POINT (W)	DIVERSITY FACTOR	LOAD PER PHASE			DESCRIPTION	LOAD PER PHASE			DIVERSITY FACTOR	LOAD PER POINT (W)	CABLE SIZE (mm2)	MCB RATING (A)	CCT CODE
					RED	YELLOW	BLUE		RED	YELLOW	BLUE					
A-1	10	1.5	400	1.0	400			LIGHTING POINT	400			1.0	400	1.5	10	B-1
A-2	10	1.5	1500	1.0		1500		LIGHTING POINT		1500		1.0	1500	1.5	10	B-2
A-3	10	1.5	500	1.0			500	LIGHTING POINT			500	1.0	500	1.5	10	B-3
A-4	10	1.5	300	1.0			300	LIGHTING POINT			300	1.0	300	1.5	10	B-4
A-5	10	2.5	600	1.0	600			SMOKE DETECTOR	600			1.0	600	2.5	10	B-5
A-6	30	2.5	1500	0.9		1350		13A/15A FLOOR SOCKET		1350		0.9	1500	2.5	30	B-6
A-7	30	2.5	1500	0.9			1350	13A/15A FLOOR SOCKET			1350	0.9	1500	2.5	30	B-7
A-8	20	4.0	2000	1.0	2000			COOKER UNIT	2000			1.0	2000	4.0	20	B-8
A-9	20	4.0	2000	1.0	2000			A/C SOCKET	2000			1.0	2000	4.0	20	B-9
A-10	20	4.0	2000	1.0		2000		A/C SOCKET		2000		1.0	2000	4.0	20	B-10
A-11	20	4.0	2000	1.0			2000	A/C SOCKET			2000	1.0	2000	4.0	20	B-11
A-12	20	4.0	2000	1.0	2000			WATER HEATER	2000			1.0	2000	4.0	20	B-12
A-13	20	4.0	2000	1.0		2000		WATER HEATER		2000		1.0	2000	4.0	20	B-13
A-14	20	4.0	2000	1.0			2000	WATER HEATER			2000	1.0	2000	4.0	20	B-14
A-15	30	2.5	1500	0.9	1350			SPARE	1350			0.9	1500	2.5	30	B-15
A-16	30	2.5	1500	0.9		1350		SPARE		1350		0.9	1500	2.5	30	B-16
A-17	30	2.5	1500	0.9			1350	SPARE			1350	0.9	1500	2.5	30	B-17

TOTAL LOAD (W)	7000	6850	6150
TOTAL CONNECTED LOAD (KW)	20.00		
TOTAL CURRENT DRAWN (AMPS)	34.80		

7000	6850	6150	TOTAL LOAD (W)
20.00	TOTAL CONNECTED LOAD (KW)		
34.80	TOTAL CURRENT (AMPS)		

DB NAME: DB-GF2

LOCATION: GROUND FLOOR

DB NAME: DB-FF1

LOCATION: FIRST FLOOR

CCT CODE	MCB RATING (A)	CABLE SIZE (mm2)	LOAD PER POINT (W)	DIVERSITY FACTOR	LOAD PER PHASE			DESCRIPTION	LOAD PER PHASE			DIVERSITY FACTOR	LOAD PER POINT (W)	CABLE SIZE (mm2)	MCB RATING (A)	CCT CODE
					RED	YELLOW	BLUE		RED	YELLOW	BLUE					
A-1	10	1.5	1500	1.0	1500			LIGHTING POINT	1500			1.0	1500	1.5	10	B-1
A-2	10	1.5	500	1.0		500		LIGHTING POINT		500		1.0	500	1.5	10	B-2
A-3	10	1.5	300	1.0	300			LIGHTING POINT	300			1.0	300	1.5	10	B-3
A-4	10	1.5	600	1.0			600	SMOKE DETECTOR			600	1.0	600	1.5	10	B-4
A-5	10	2.5	1500	1.0		1350		13A/15A FLOOR SOCKET	1350			1.0	1500	2.5	10	B-5
A-6	30	2.5	1500	0.9			1350	13A/15A FLOOR SOCKET			1350	0.9	1500	2.5	30	B-6
A-7	30	2.5	2000	0.9			2000	COOKER UNIT			2000	0.9	2000	2.5	30	B-7
A-8	20	4.0	2000	1.0	2000			A/C SOCKET	2000			1.0	2000	4.0	20	B-8
A-9	20	4.0	2000	1.0		2000		A/C SOCKET		2000		1.0	2000	4.0	20	B-9
A-10	20	4.0	2000	1.0			2000	A/C SOCKET			2000	1.0	2000	4.0	20	B-10
A-11	20	4.0	2000	1.0	2000			WATER HEATER	2000			1.0	2000	4.0	20	B-11
A-12	20	4.0	2000	1.0		2000		WATER HEATER		2000		1.0	2000	4.0	20	B-12
A-13	20	4.0	2000	1.0			2000	WATER HEATER			2000	1.0	2000	4.0	20	B-13
A-14	30	2.5	1500	0.9	1350			SPARE	1350			0.9	1500	2.5	30	B-14
A-15	30	2.5	1500	0.9		1350		SPARE		1350		0.9	1500	2.5	30	B-15
A-16	30	2.5	1500	0.9			1350	SPARE			1350	0.9	1500	2.5	30	B-16
A-17																B-17

TOTAL LOAD (W)	5800	5850	6150
TOTAL CONNECTED LOAD (KW)	17.80		
TOTAL CURRENT DRAWN (AMPS)	31.00		

5800	5850	6150	TOTAL LOAD (W)
17.80	TOTAL CONNECTED LOAD (KW)		
31.00	TOTAL CURRENT (AMPS)		

DB NAME: DB-FF2

LOCATION: FIRST FLOOR

DB NAME: DB-GH

LOCATION: GEN HOUSE

CCT CODE	MCB RATING (A)	CABLE SIZE (mm2)	LOAD PER POINT (W)	DIVERSITY FACTOR	LOAD PER PHASE			DESCRIPTION
					RED	YELLOW	BLUE	
D-1	10	1.5	100	1.0	400			LIGHTING POINT
D-2	10	1.5	100	1.0		300		LIGHTING POINT
D-3	30	2.5	300	0.9			270	13A/15A FLOOR SOCKET
D-4	30	2.5	522	1.0	522			WATER PUMP
D-5	30	2.5	522	1.0		522		SPARE
D-6								SPARE

TOTAL LOAD (W)	922	822	270
TOTAL CONNECTED LOAD (KW)	2.02		
TOTAL CURRENT (AMPS)	3.50		

SEAL

PROJECT TITLE

4 UNIT OF 2 BEDROOM BLOCK OF FLAT

CLIENT

ALHAJI ABUBAKAR

LOCATION

DRAWN BY

ABDULLAHI SHEHU

DESIGNED BY

IWEIBO S.E

CHECKED BY

APPROVED BY

DATE

2002.

DRAWING TITLE:

SCHEDULE AND SCHEMATICS
SUB-MAIN LOW VOLTAGE PANEL

DRAWING SCALE:

N.T.S.

DRAWINNG NO:

E18