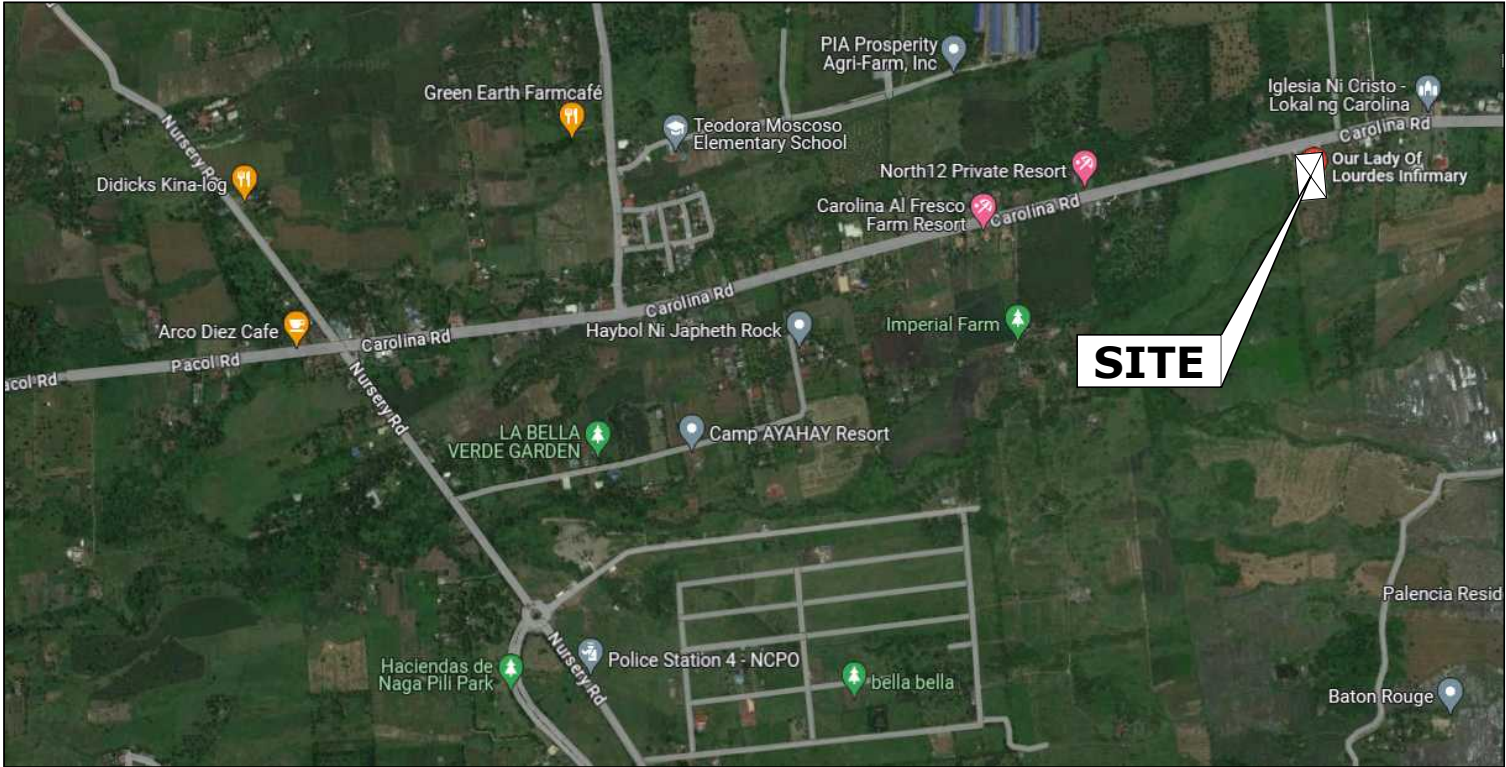


PROJECT ID. NO. : 008968-2023-04

PROPOSED UPGRADING OF POWER SUPPLY

LOCATION: OUR LADY OF LOURDES INFIRMARY, BRGY. CAROLINA, NAGA CITY



VICINITY MAP

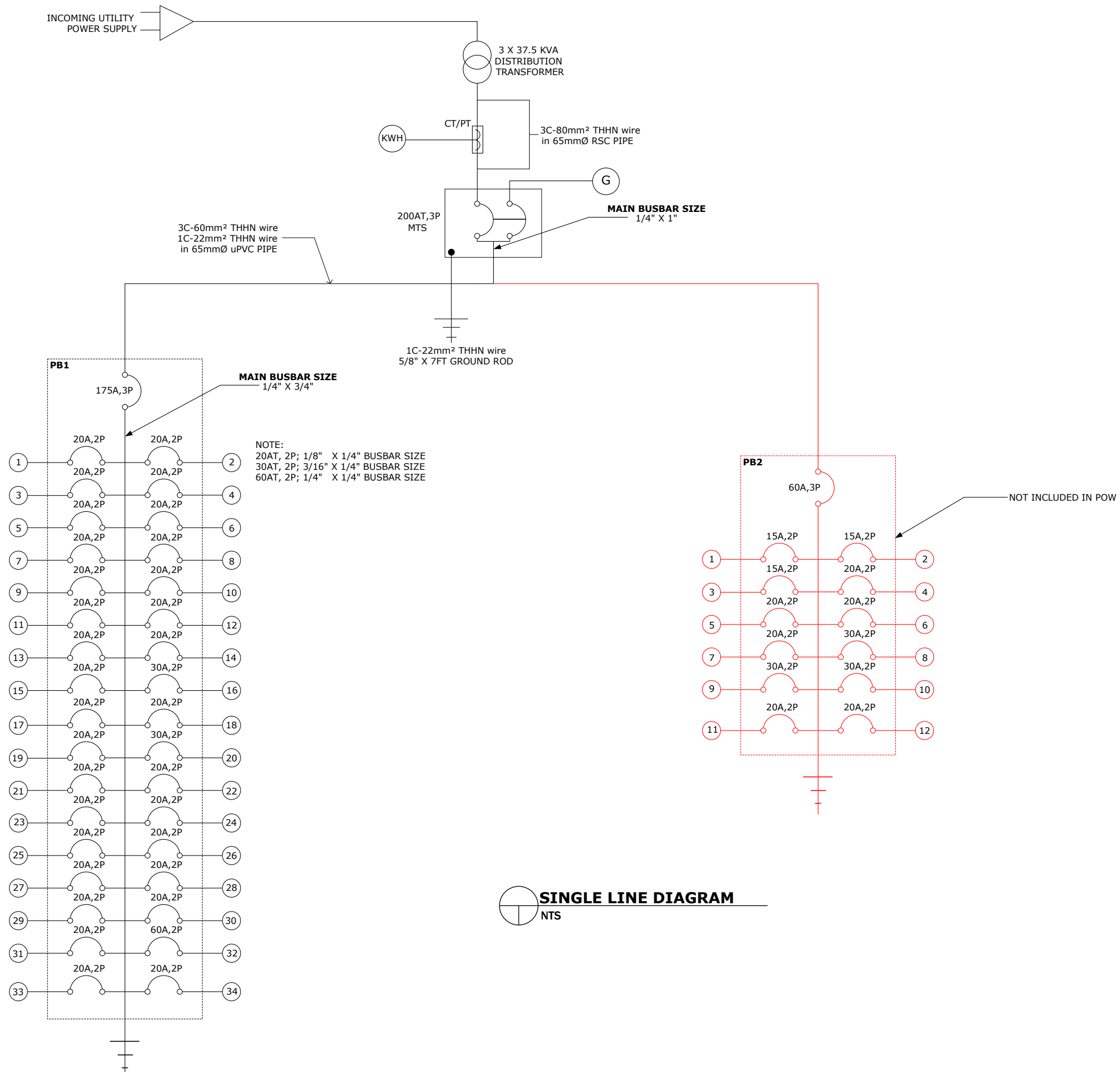
NTS



SITE DEVELOPMENT PLAN

NTS

REPUBLIC OF THE PHILIPPINES  OFFICE OF THE CITY ENGINEER CITY OF NAGA	PROJECT TITLE:	PREPARED BY:	RECOMMENDED BY:	CONCURED BY:	A P P R O V E D B Y:		SHEET NO.
	PROPOSED UPGRADING OF POWER SUPPLY	JUDE P. GOROM	EMMEL M. ADAQUE	DR. RONALDO T. AMORANTO	ALEXANDER N. CANING	NELSON S. LEGACION	
	LOCATION: OUR LADY OF LOURDES INFIRMARY, BRGY. CAROLINA, NAGA CITY	ENGINEER	ENGINEER III	CGDH-I, CITY HEALTH OFFICER II	ACTING CITY ENGINEER	CITY MAYOR	



SINGLE LINE DIAGRAM
NTS

REPUBLIC OF THE PHILLIPINES OFFICE OF THE CITY ENGINEER CITY OF NAGA	PROJECT TITLE: PROPOSED UPGRADING OF POWER SUPPLY	PREPARED BY: JUDE P. GOROM ENGINEER	RECOMMENDED BY: EMMEL M. ADAQUE ENGINEER III	CONCURED BY: DR. RONALDO T. AMORANTO CGDH-I, CITY HEALTH OFFICER II	A P P R O V E D B Y: ALEXANDER N. CANING ACTING CITY ENGINEER	NELSON S. LEGACION CITY MAYOR	SHEET NO.
	LOCATION: OUR LADY OF LOURDES INFIRMARY, BRGY. CAROLINA, NAGA CITY						

	-	PIN LIGHT	S1 •	-	1-GANG SWITCH		-	KILOWATT HOUR METER		-	L.O. CIRCUIT LINE
	-	POWER OUTLET	S2 •	-	2-GANG SWITCH		-	DISTRIBUTION TRANSFORMER		-	SWITCH LEG
	-	AIRCON OUTLET	S3 •	-	3-GANG SWITCH		-	MAIN DISTRIBUTION PANEL BOARD		-	C.O. CIRCUIT LINE
	-	X-RAY MACHINE	S3W •	-	3-WAY SWITCH		-	SERVICE ENTRANCE		-	MANUAL TRANSFER SWITCH BREAKER
	-	FLOURECENT LAMP		-	CURRENT & POTENTIAL TRANSFORMER		-	CIRCUIT HOMERUN			
	-	CEILING FAN		-	CIRCUIT BREAKER		-	GENERATOR			

 LEGEND
NTS

1. ALL ELECTRICAL WORKS SHALL COMPLY WITH THESE PLANS AND SPECIFICATIONS. THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE CODE (PEC), THE RULES AND REGULATIONS OF THE LOCAL ENFORCING AUTHORITY AND THE REQUIREMENTS OF THE LOCAL POWER COMPANY.
2. THE ELECTRICAL SERVICE POWER SHALL BE 1-PHASE, 3-WIRE, 230V AC, 60Hz.
3. WIRING METHOD SHALL BE AS FOLLOWS:
*RIGID STEEL CONDUIT OR POLYVINYL CHLORIDE CONDUIT SCHEDULE 40 SHALL BE USED AS SPECIFIED IN THE PLAN.
4. ALL WIRES SHALL BE COPPER AND THERMOPLASTIC INSULATED TYPE "THHN" UNLESS OTHERWISE INDICATED IN THE PLAN. THE MINIMUM SIZE WIRE FOR POWER AND LIGHTING CIRCUIT HOMERUNS SHALL BE 3.5mm² AND INSULATED FOR 600VOLTS. LIKewise, ALL CONDUCTORS SHALL BE COLOR-CODED.
SMALLEST RACEWAY SHALL BE 15mmØ. (NOMINAL)
5. ALL OUTLET BOXES SHALL BE GALVANIZED GAGE NO. 16 DEEP TYPE.
6. ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND APPROVED FOR THE PARTICULAR LOCATION AND USAGE.
7. EQUIPMENT GROUNDING SYSTEM SHALL BE PROVIDED TO THE ELECTRICAL SYSTEM AS PER PHILIPPINE ELECTRICAL CODE REQUIREMENT.
8. MOUNTING HEIGHT OF THE WIRING DEVICES SHALL BE AS FOLLOWS:

A.LIGHTING SWITCH

- 1.20M ABOVE FINISH FLOOR

B. CONVENIENCE OUTLET

- 0.30M ABOVE FINISH FLOOR

C. PANEL BOARD

- 1.50M ABOVE FINISH FLOOR

D. FIRE ALARM STATION OUTLET

- 1.50M ABOVE FINISH FLOOR

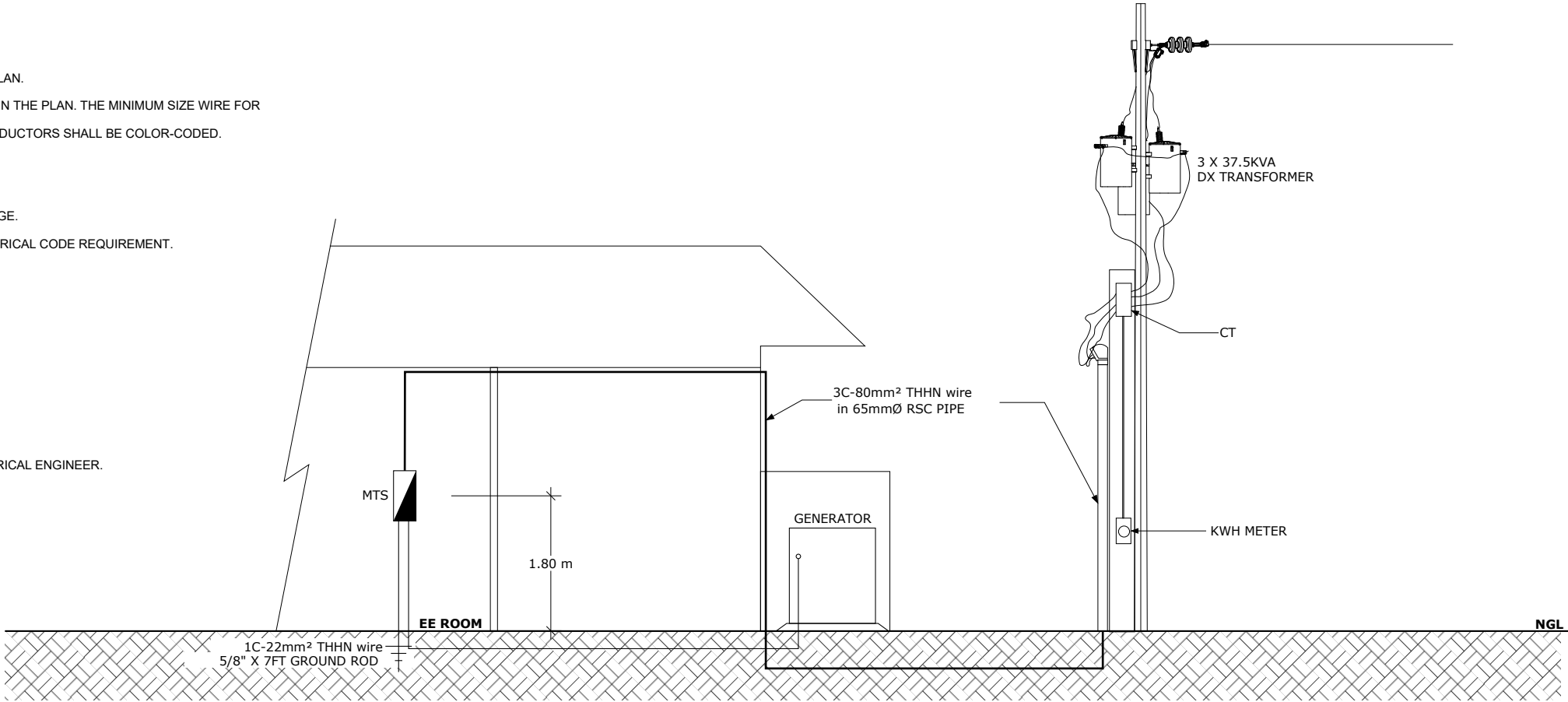
E. PUSH BUTTON OUTLET

- 1.50M ABOVE FINISH FLOOR

F. FIRE ALARM AND VIBRATING

- 0.30M ABOVE FINISH FLOOR
9. ALL ELECTRICAL WORKS SHALL BE DONE UNDER THE DIRECT AND IMMEDIATE SUPERVISION OF A DULY ELECTRICAL ENGINEER.

 GENERAL NOTES
NTS



 SERVICE ENTRANCE DETAIL
NTS

REPUBLIC OF THE PHILLIPINES OFFICE OF THE CITY ENGINEER CITY OF NAGA		PROJECT TITLE:	PREPARED BY:	RECOMMENDED BY:	CONCURED BY:	A P P R O V E D B Y:		SHEET NO.
	PROPOSED UPGRADING OF POWER SUPPLY	JUDE P. GOROM ENGINEER	EMMEL M. ADAQUE ENGINEER III	DR. RONALDO T. AMORANTO CGDH-I, CITY HEALTH OFFICER II	ALEXANDER N. CANING ACTING CITY ENGINEER	NELSON S. LEGACION CITY MAYOR		
	LOCATION: OUR LADY OF LOURDES INFIRMARY, BRGY. CAROLINA, NAGA CITY							

LOAD SCHEDULE : PB1																
CKT. NO.	LOAD DESCRIPTION	NO. OF			SWITCHES			VOLT	VA	AMP				CB	SIZE OF WIRE	CONDUIT
		L.O.	CO.	OTHERS	S1	S2	S3			AB	BC	CA	3Ø			
1	7pcs-40watts FLOURESCENT LAMP 15pcs-20watts PIN LIGHT	22			3	2	2	230	580	2.52			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
2	12pcs-40watts FLOURESCENT LAMP 6pcs-20watts PIN LIGHT	18			2		3	230	600	2.60			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
3	12pcs-40watts FLOURESCENT LAMP 3pcs-20watts PIN LIGHT	15			2		3	230	540		2.34		20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
4	14pcs-20watts PIN LIGHT	14				2	1	230	280		1.21		20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
5	7pcs-40watts FLOURESCENT LAMP 13pcs-20watts PIN LIGHT	20			2	1	1	230	540			2.34	20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
6	5pcs-40watts FLOURESCENT LAMP 11pcs-20watts PIN LIGHT	16			2	2	1	230	420			1.82	20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
7	POWER OUTLET		8					230	1440	6.26			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
8	POWER OUTLET		5					230	900	3.91			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
9	POWER OUTLET		7					230	1260		5.47		20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
10	POWER OUTLET		8					230	1440		6.26		20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
11	POWER OUTLET		6					230	1080			4.69	20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
12	POWER OUTLET		8					230	1440			6.26	20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
13	POWER OUTLET		6					230	1080	4.69			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
14	CEILING FAN			10				230	500	2.17			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
15	CEILING FAN			8				230	400		1.73		20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
16	AUTOCLAVE UNIT			1				230	2000		8.69		30AT, 2P	2C-5.5mm ² THHN wire 1C-5.5mm ² THHN wire	20 MM Ø uPVC PIPE	
17	1.5HP ACU WINDOW TYPE			1				230	2300			10.00	20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
18	1.0HP ACU WINDOW TYPE			1				230	1840			8.00	20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
19	1.0HP ACU WINDOW TYPE			1				230	1840	8.00			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
20	2.0HP ACU WINDOW TYPE			1				230	3680	16.00			30AT, 2P	2C-5.5mm ² THHN wire 1C-5.5mm ² THHN wire	20 MM Ø uPVC PIPE	
21	1.0HP ACU WINDOW TYPE			1				230	1840		8.00		20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
22	0.5HP ACU WINDOW TYPE			1				230	1127		4.90		20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
23	0.75HP ACU WINDOW TYPE			1				230	1587			6.90	20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
24	0.75HP ACU WINDOW TYPE			1				230	1587			6.90	20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
25	3pcs-40watts FLOURESCENT LAMP 4pcs-20watts PIN LIGHT	7				1	1	230	200	0.86			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
26	3pcs-40watts FLOURESCENT LAMP 6pcs-20watts PIN LIGHT	9			1	1	1	230	240	1.04			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
27	POWER OUTLET		5					230	900			3.91	20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
28	CEILING FAN			3				230	150			0.65	20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
29	2.0HP ACU WINDOW TYPE			1				230	3680	16.00			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
30	2.0HP ACU WINDOW TYPE			1				230	3680	16.00			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
31	2.0HP ACU WINDOW TYPE			1				230	3680			16.00	20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE	
32	XRAY MACHINE			1				230	9500		41.30		60AT, 2P	2C-14mm ² THHN wire 1C-8.0mm ² THHN wire	20 MM Ø uPVC PIPE	
33	SPARE							230	1500			6.52	20AT, 2P			
34	SPARE							230	1500				20AT, 2P			
TOTAL		121	53	34	12	9	13	230	55,331.00	80.08	79.94	80.53	-	-	-	

LOAD SCHEDULE: PB2																
CKT. NO.	LOAD DESCRIPTION	NO. OF			SWITCHES			VOLT	VA	AMP				CB	SIZE OF WIRE	CONDUIT
		L.O.	CO.	OTHERS	S1	S2	S3			AB	BC	CA	3Ø			
1	CIRCULAR DOWNLIGHT 15W	11			3	2	2	230	165		0.71			15AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE
2	CIRCULAR DOWNLIGHT 15W	9			3	2	2	230	135		0.58			15AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE
3	CIRCULAR DOWNLIGHT 15W	8			3	2	2	230	120		0.52			15AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE
4	POWER OUTLET		6					230	1080		4.69			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE
5	POWER OUTLET		5					230	900		3.91			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE
6	POWER OUTLET		6					230	1080		4.69			20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE
7	POWER OUTLET		7					230	1260			5.47		20AT, 2P	2C-3.5mm ² THHN wire 1C-3.5mm ² THHN wire	20 MM Ø uPVC PIPE
8	SPLIT TYPE ACU 1HP			1				230	1840	8.00				30AT, 2P	2C-5.5mm ² THHN wire 1C-5.5mm ² THHN wire	20 MM Ø uPVC PIPE
9	SPLIT TYPE ACU 1HP			1				230	1840	8.00				30AT, 2P	2C-5.5mm ² THHN wire 1C-5.5mm ² THHN wire	21 MM Ø uPVC PIPE
10	SPLIT TYPE ACU 2HP			1				230	3680			16.00		30AT, 2P	2C-5.5mm ² THHN wire 1C-5.5mm ² THHN wire	22 MM Ø uPVC PIPE
11	SPARE							230	1500		6.52			20AT, 2P		
12	SPARE							230	1500	6.52				20AT, 2P		
TOTAL		28	24	3	9	6	6	230	12,100.00	22.52	21.65	21.47	-	-	-	-

A. LOAD COMPUTATION		B. MAIN SERVICE CONDUCTOR	C. MAIN CIRCUIT PROTECTION
I _T	= $\frac{12,100VA + (3,680 \times 25\%)VA}{230V \times 1.732}$	USE: 3C-14mm ² THHN wire 1C-8.0mm ² THHN wire in 32mmØ uPVC PIPE	USE: 60AT, 3P, 230V MCCB
	= 32.68 AMP		

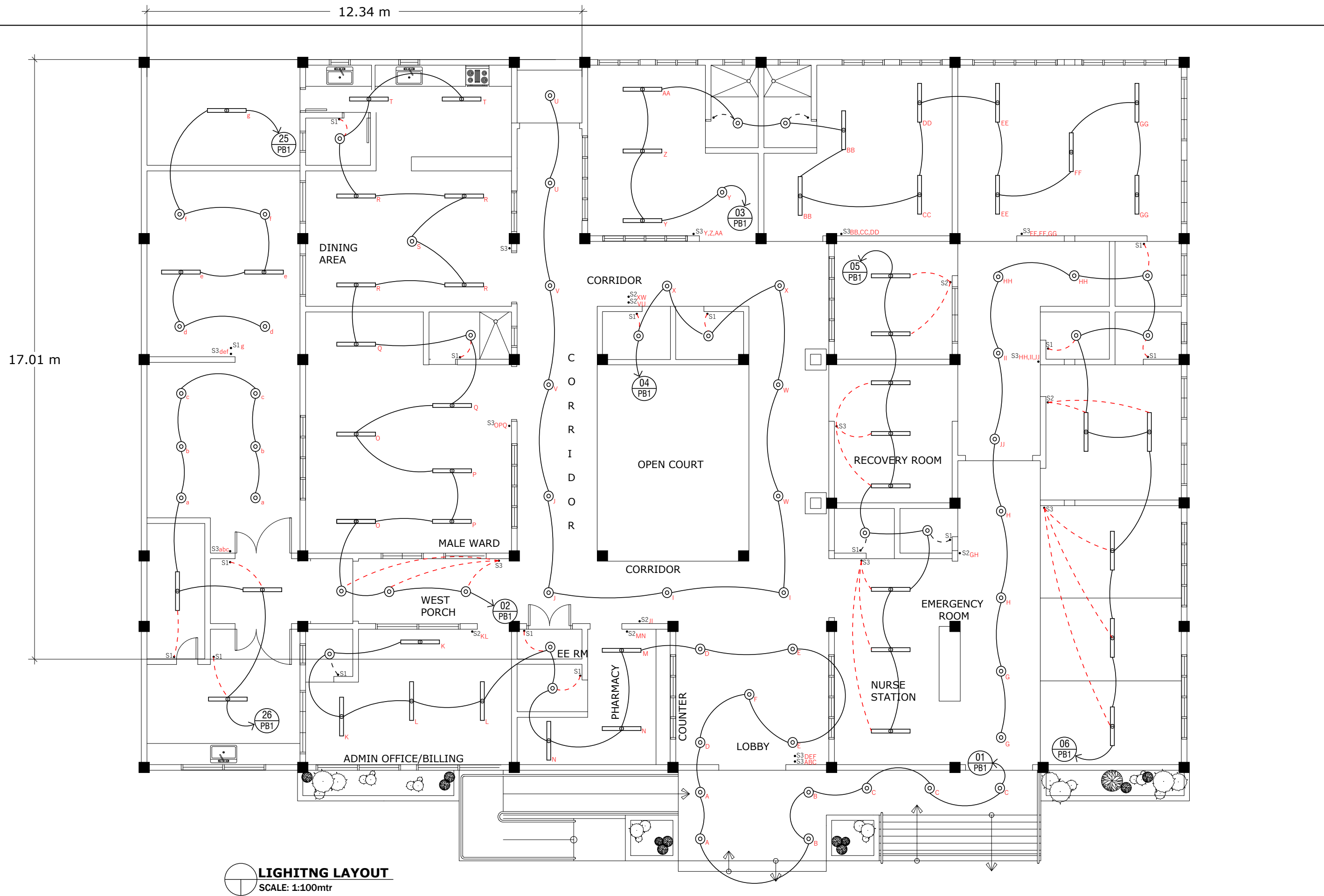
S U M M A R Y										
CKT. NO.	LOAD DESCRIPTION	VOLT	VA	AMP				CB	SIZE OF WIRE	CONDUIT
				AB	BC	CA	3Ø			
1	PB1	230	55,331.00	80.08	79.94	80.53		175AT, 3P	2C-60mm² THHN/THWN-2 wire 1C-22mm² THHN/THWN-2 wire	50 MM Ø uPVC PIPE
2	PB2	230	12,100.00	22.52	21.65	21.47		60AT, 3P	2C-14mm² THHN/THWN-2 wire 1C-8.0mm² THHN/THWN-2 wire	32 MM Ø uPVC PIPE
TOTAL		230	67,431.00	102.60	101.59	102.01		-	-	-

A. LOAD COMPUTATION	B. MAIN SERVICE CONDUCTOR	C. MAIN CIRCUIT PROTECTION
$I_T = \frac{67,431VA + (3,680 \times 25\%)VA}{230V \times 1.732}$ $= 171.58 \text{ AMP}$	USE: 3C-80mm ² THHN wire 1C-22mm ² THHN wire in 65mmØ RSC PIPE	USE: 200AT, 3P, 230V MCCB

A. LOAD COMPUTATION	B. MAIN SERVICE CONDUCTOR	C. MAIN CIRCUIT PROTECTION
$I_T = \frac{55,331VA + (3,680 \times 25\%)VA}{230V \times 1.732}$ $= 141.21 \text{ AMP}$	USE: 3C-60mm ² THHN wire 1C-22mm ² THHN wire in 65mmØ uPVC PIPE	USE: 175AT, 3P, 230V MCCB

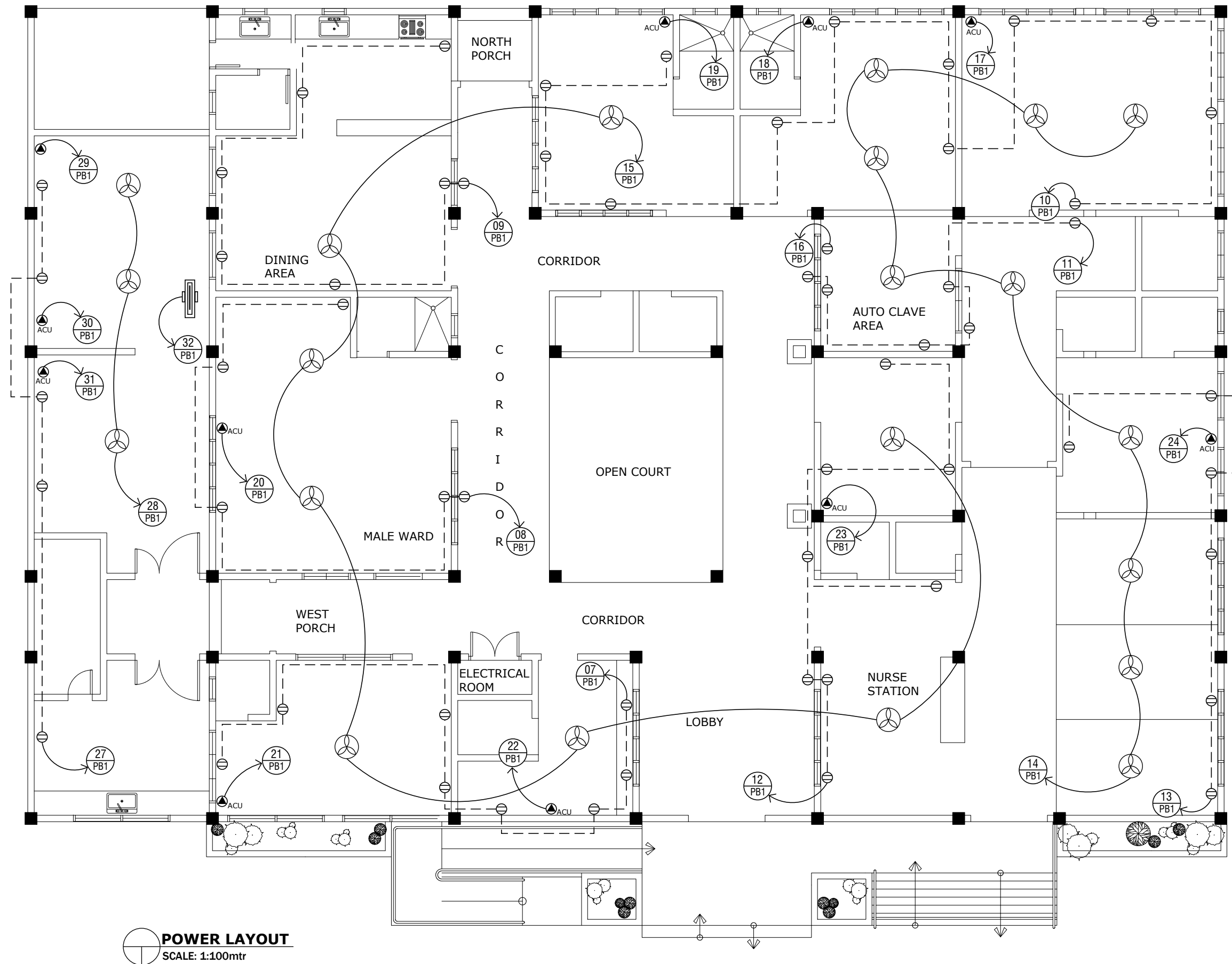


SCHEDULE OF LOAD

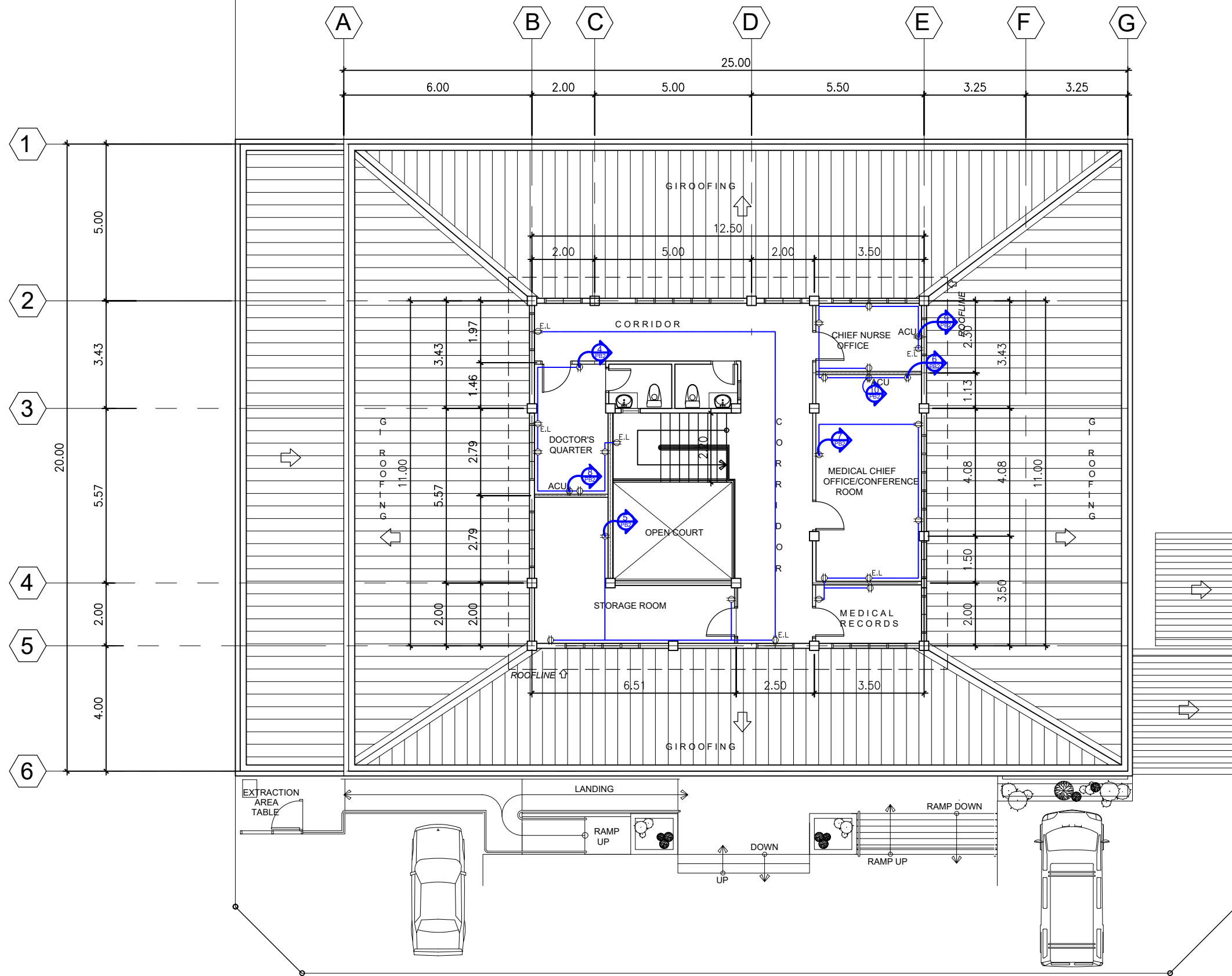


LIGHTING LAYOUT
SCALE: 1:100mtr

REPUBLIC OF THE PHILLIPINES OFFICE OF THE CITY ENGINEER CITY OF NAGA	PROJECT TITLE: PROPOSED UPGRADING OF POWER SUPPLY	PREPARED BY: JUDE P. GOROM ENGINEER	RECOMMENDED BY: EMMEL M. ADAQUE ENGINEER III	CONCURED BY: DR. RONALDO T. AMORANTO CGDH-I, CITY HEALTH OFFICER II	A P P R O V E D B Y: ALEXANDER N. CANING ACTING CITY ENGINEER	SHEET NO.
	LOCATION: OUR LADY OF LOURDES INFIRMARY, BRGY. CAROLINA, NAGA CITY				NELSON S. LEGACION CITY MAYOR	



REPUBLIC OF THE PHILIPPINES OFFICE OF THE CITY ENGINEER CITY OF NAGA	PROJECT TITLE: PROPOSED UPGRADING OF POWER SUPPLY LOCATION: OUR LADY OF LOURDES INFIRMARY, BRGY. CAROLINA, NAGA CITY	PREPARED BY: JUDE P. GOROM ENGINEER	RECOMMENDED BY: EMMEL M. ADAQUE ENGINEER III	CONCURED BY: DR. RONALDO T. AMORANTO CGDH-I, CITY HEALTH OFFICER II	A P P R O V E D B Y: ALEXANDER N. CANING ACTING CITY ENGINEER	NELSON S. LEGACION CITY MAYOR	SHEET NO.
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SECOND FLOOR
POWER LAYOUT PLAN

SCALE 1:100m



REPUBLIC OF THE PHILIPPINES
OFFICE OF THE CITY ENGINEER
CITY OF NAGA



PROJECT TITLE :

PROPOSED UPGRADING OF POWER SUPPLY

LOCATION: NAGA CITY INFIRMARY, CAROLINA NAGA CITY

PREPARED BY:

JUDE P. GOROM
ENGINEER

RECOMMENDED BY:

EMMEL M. ADAQUE
ENGINEER III

CONCURED BY:

DR. RONALDO T. AMORANTO
CGDH-I, CITY HEALTH OFFICER II

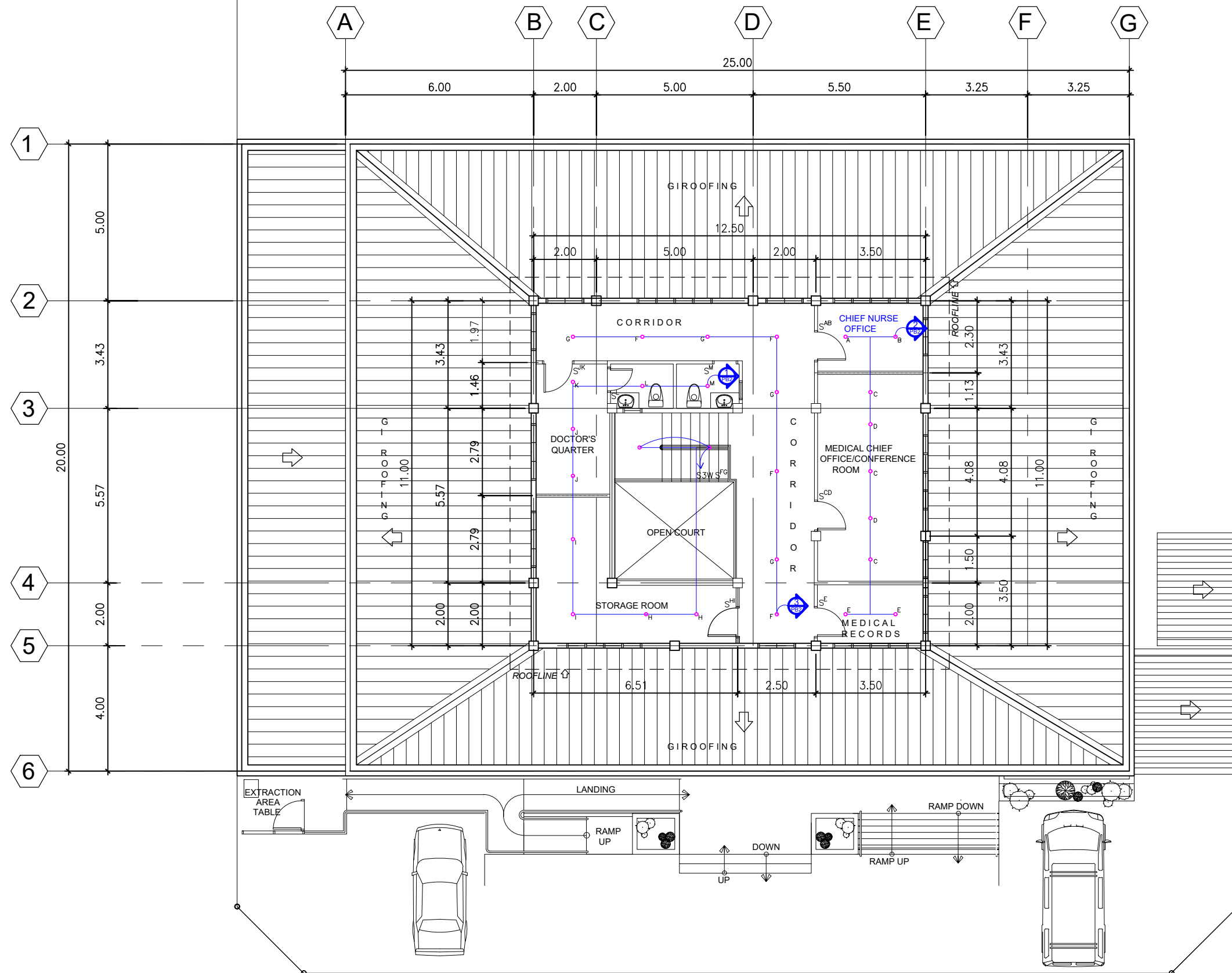
APPROVED BY:

ALEXANDER N. CANING
ACTING CITY ENGINEER

NELSON S. LEGACION
CITY MAYOR

PLANNING & DESIGN /
SPECIAL PROJECT TEAM :

SHEET
NO.

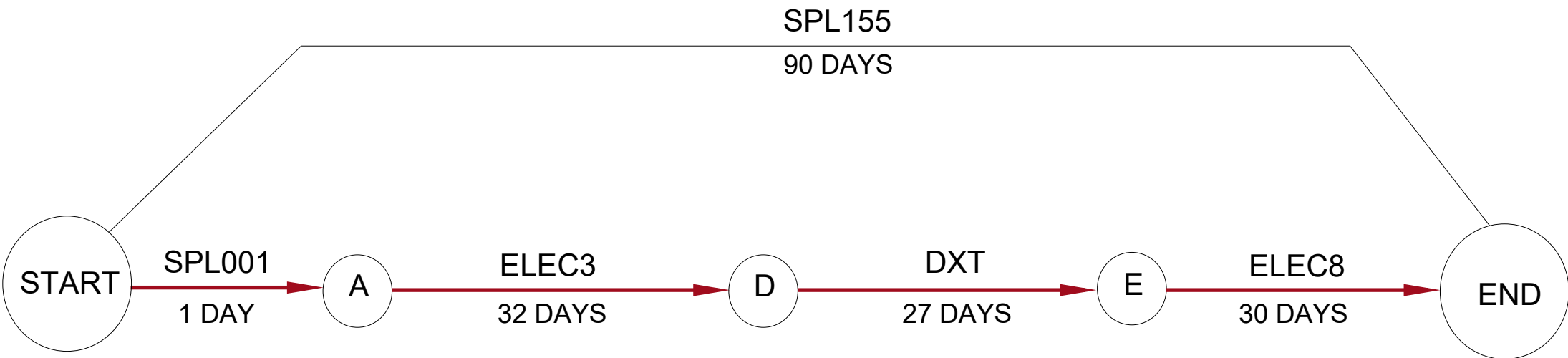


SECOND FLOOR
LIGHTING LAYOUT PLAN

SCALE 1:100m

 OFFICE OF THE CITY ENGINEER CITY OF NAGA	 PROPOSED UPGRADING OF POWER SUPPLY LOCATION: NAGA CITY INFIRMARY, CAROLINA NAGA CITY	PROJECT TITLE :	PREPARED BY:	RECOMMENDED BY:	CONCURED BY:	APPROVED BY:		PLANNING & DESIGN / SPECIAL PROJECT TEAM :	SHEET NO.	
		JUDE P. GOROM ENGINEER	EMMEL M. ADAQUE ENGINEER III	DR. RONALDO T. AMORANTO CGDH-I, CITY HEALTH OFFICER II	ALEXANDER N. CANING ACTING CITY ENGINEER	NELSON S. LEGACION CITY MAYOR				

PROJECT EVALUATION REVIEW TECHNIQUE- CRITICAL PATH METHOD



ITEM NO.	ITEM DESCRIPTION
ELEC3	Service Entrance/ Panel Board
DXT	DX Transformer
ELEC8	Utility Connection (CASURECO II)
SPL155	Construction Safety and Health
SPL001	Sign Board

LEGEND:

ITEM OF WORK

DURATION

CRITICAL PATH

ITEM OF WORK

DURATION

REGULAR SCHEDULE