DED2020_0034

20-00129

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE LAWS AND ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER AND TELEPHONE UTILITY COMPANY.
2. LOCATION OF CONDUITS SHOWN ON THE DRAWING/PLAN ARE DIAGRAMMATIC, ALL CONDUITS SHALL BE INSTALLED IN A MANNER HEREINAFTER SPECIFIED AND SHALL WHEN NECESSARY BE BUILT-IN DURING CONSTRUCTION.
3. ALL MATERIALS TO BE USED SHALL BE NEW AND INSTALLED IN APPLICATION FOR WHICH THEY ARE INTENDED.
4. ALL ITEMS NOT SPECIFICALLY SHOWN ON THE PLAN BUT OBVIOUSLY REQUIRED IN CONSTRUCTION TO OBTAIN A WORKABLE INSTALLATION SHALL BE INCLUDED.
5. ALL CONDUIT PIPES SHALL BE POLYVINYL CHLORIDE CONDUIT (PVC) EXCEPT AS NOTED ON THE PLANS AND SPECIFICATIONS. REFER TO SPECIFICATION FOR INSTALLATION REQUIREMENT.
6. MINIMUM SIZE OF CONDUIT SHALL BE 20 MM DIAMETER.
7. ALL CONDUIT SHALL BE CONCEALED UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. EXPOSED CONDUIT RUNS SHALL BE INSTALLED PARALLEL TO OR PERPENDICULAR WITH THE BUILDING LINE AND SUPPORTED BY CONDUIT CLAMPS EVERY 1.50 METERS.
8. PROVIDE GALVANIZED PULLING WIRE G.A. 18 OR ALL EMPTY CONDUITS.
9. PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS.
10. FOR BOXES WITH MORE THAN FOUR WIRES ENTERING, USE 0.10 M X 0.10 M SQUARE BOX WITH ONE ADAPTER RING. (TYPICAL FOR RECEPTACLE BOXES)
11. ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 3 WIRE 3.5 SQ. MM THHN UNLESS OTHERWISE NOTED. MINIMUM SIZE OF WIRE SHALL BE 3.5 SQ. MM THW.
12. ALL DUPLEX RECETACLE OUTLETS SHALL BE GROUNDING TYPE WITH PARALLEL SLOTS FOR 220 V.
13. PROVIDE GROUND FAULT CURRENT INTERRUPTER CIRCUIT BREAKER FOR LOADS MARKED "GFCI" ON THE PLAN.
14. ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED.
15. UNLESS OTHERWISE NOTED, MOUNTING HEIGHT FOR WALL MOUNTED DEVICES SHALL BE AS FOLLOWS:
    - RECEPTACLE OUTLET - 300 MM AFF
    - TELEPHONE OUTLET - 300 MM AFF
    - CATV OUTLET - 300 MM AFF
    - LIGHTING SWITCH - 1370 MM AFF
16. LOCATION OF ELECTRICAL FIXTURES ARE APPROXIMATE ONLY FINAL LOCATIONS OF FIXTURES SHALL BE DETERMINED ON SITE TO AVOID INTERFERENCE WITH OTHER SYSTEMS AND/OR EQUIPMENT.
17. REFER TO MECHANICAL, PLUMBING ANF FIRE PROTECTION DRAWINGS FOR RATINGS AND LOCATIONS OF EQUIPMENT AS WELL AS THEIR CONTROL SEQUENCES AS SPECIFIED AND OR SHOWN UNDER THEIR RESPECTIVE SECTIONS.
18. ALL CIRCUIT BREAKERS UNAVAILABLE TO MARKET SHALL REFER TO NEXT HIGHER RATING, PROVIDED THAT THE AMAPCITY OF ITS FEEDER IS ALLOWABLE. THIS SHALL BE IN ACCORDANCE TO THE LATEST VERSION OF PHILIPPINE ELECTRICAL CODE.

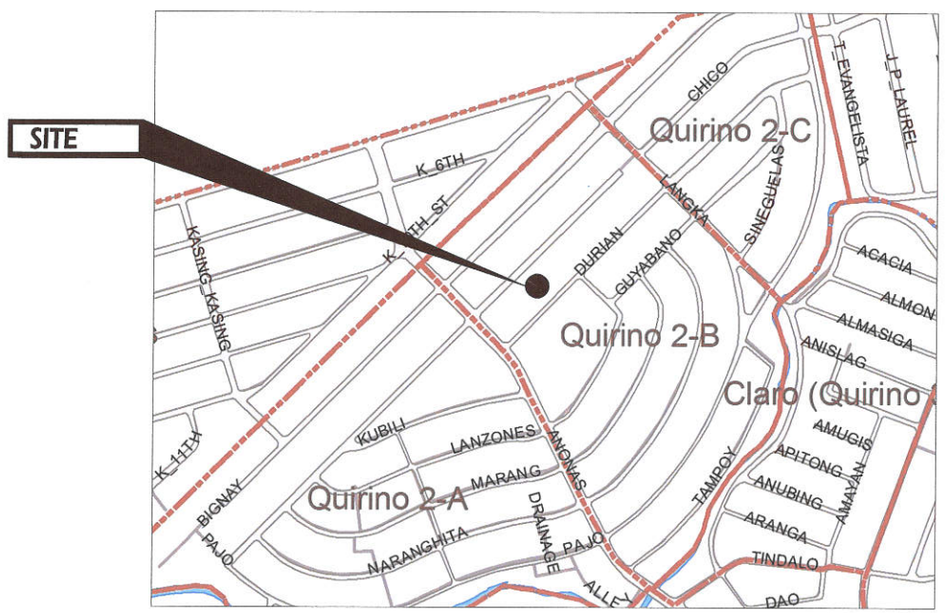
1 GENERAL NOTES AND SEPCIFICATIONS

SCALE: NTS

- TWO WIRE FEEDER LINE
- BRANCH LINE FROM BUILDING–MDP
- PANEL POARD
- TAPPING POINT
- GW/GR ⊙ GROUND WELL/GROUND ROD PIT
- GR • GROUND ROD
- PROPOSED DISTRIBUTION POST
- EXISTING DISTRIBUTION POST
- 2–SPOOL SECONDARY RACK (HEAVY DUTY)
- PROPOSED SERVICE ENTRANCE POST
- (M) KILOWATT–HOUR METER
- SERVICE ENTRANCE

2 LEGENDS AND SYMBOLS

SCALE: NTS



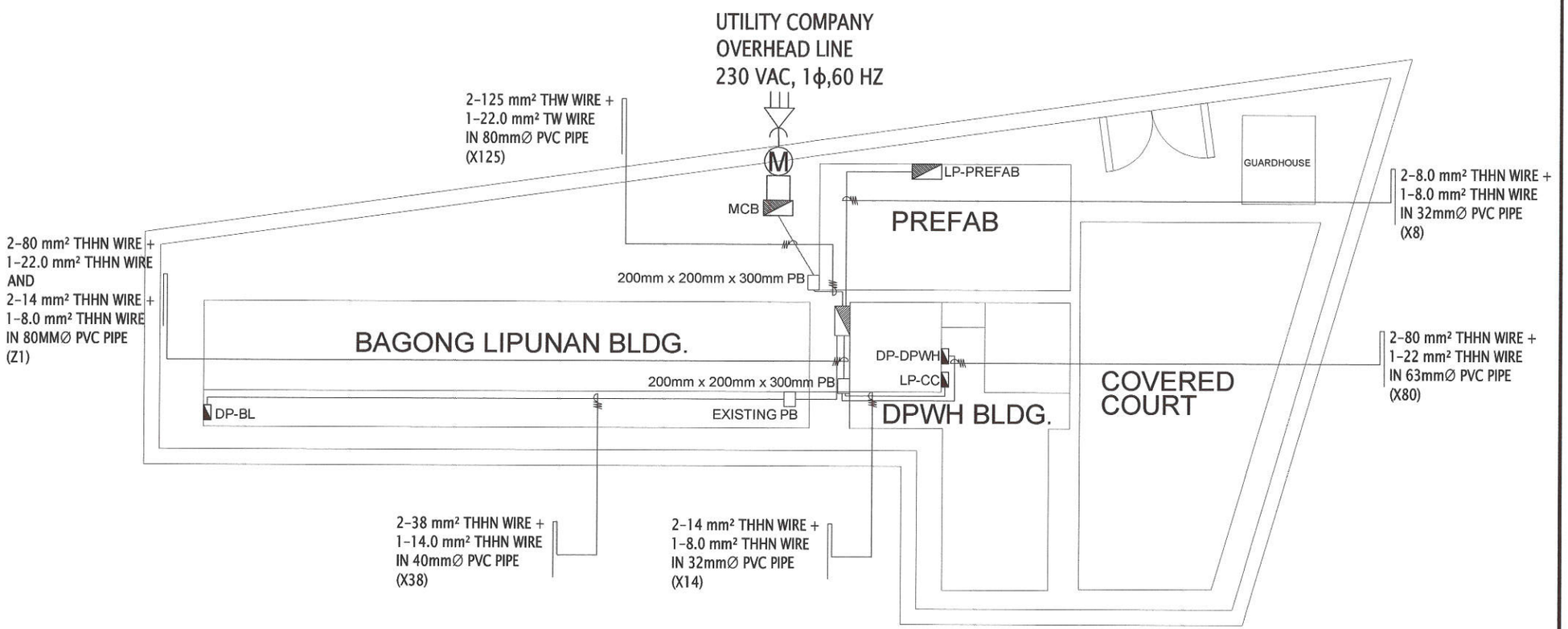
3 VICINITY MAP

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED UPGRADING OF SERVICE ENTRANCE OF DON QUINTIN PAREDES HIGH SCHOOL LOCATION: BARANGAY QUIRINO 2-B, DISTRICT 3, QUEZON CITY	DRAWN BY: KMD DATE: NOVEMBER 07, 2020 CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA, JR., OIC, CITY ENGINEERING DEPARTMENT
APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR, QUEZON CITY	SHEET CONTENTS: GENERAL NOTES AND SPECIFICATIONS LEGENDS AND SYMBOLS VICINITY MAP	SHEET NO. EL-01	

20-00129



1 ELECTRICAL DISTRIBUTION FEEDER LAYOUT

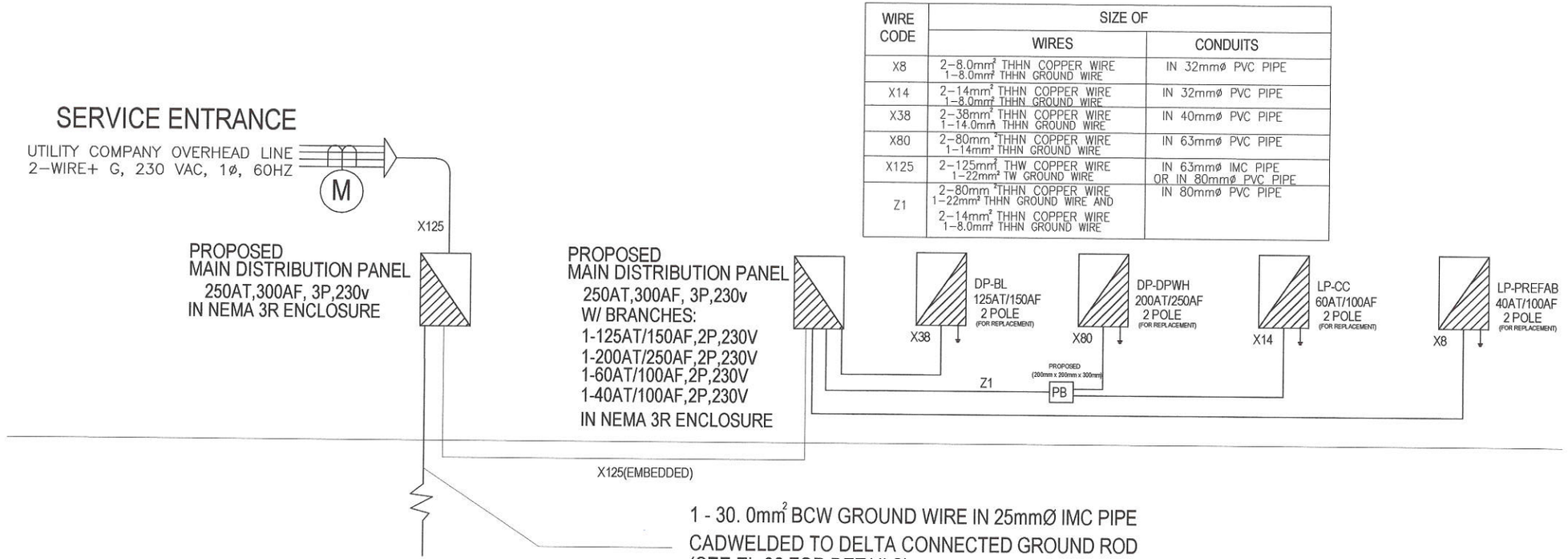
SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED UPGRADING OF SERVICE ENTRANCE OF DON QUINTIN PAREDES HIGH SCHOOL LOCATION: BARANGAY QUIRINO 2-B, DISTRICT 3, QUEZON CITY	DRAWN BY: KMD DATE: NOVEMBER 02, 2020 CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA, JR., OIC, CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR, QUEZON CITY	SHEET CONTENTS: ELECTRICAL DISTRIBUTION FEEDER LAYOUT	SHEET NO. EL-02

20-00129

WIRE CODE	SIZE OF	
	WIRES	CONDUITS
X8	2–8.0mm² THHN COPPER WIRE 1–8.0mm² THHN GROUND WIRE	IN 32mmø PVC PIPE
X14	2–14mm² THHN COPPER WIRE 1–8.0mm² THHN GROUND WIRE	IN 32mmø PVC PIPE
X38	2–38mm² THHN COPPER WIRE 1–14.0mm² THHN GROUND WIRE	IN 40mmø PVC PIPE
X80	2–80mm ²THHN COPPER WIRE 1–14mm² THHN GROUND WIRE	IN 63mmø PVC PIPE
X125	2–125mm² THW COPPER WIRE 1–22mm² TW GROUND WIRE	IN 63mmø IMC PIPE OR IN 80mmø PVC PIPE
Z1	2–80mm ²THHN COPPER WIRE 1–22mm² THHN GROUND WIRE AND 2–14mm² THHN COPPER WIRE 1–8.0mm² THHN GROUND WIRE	IN 80mmø PVC PIPE



1 **SINGLE LINE DIAGRAM**

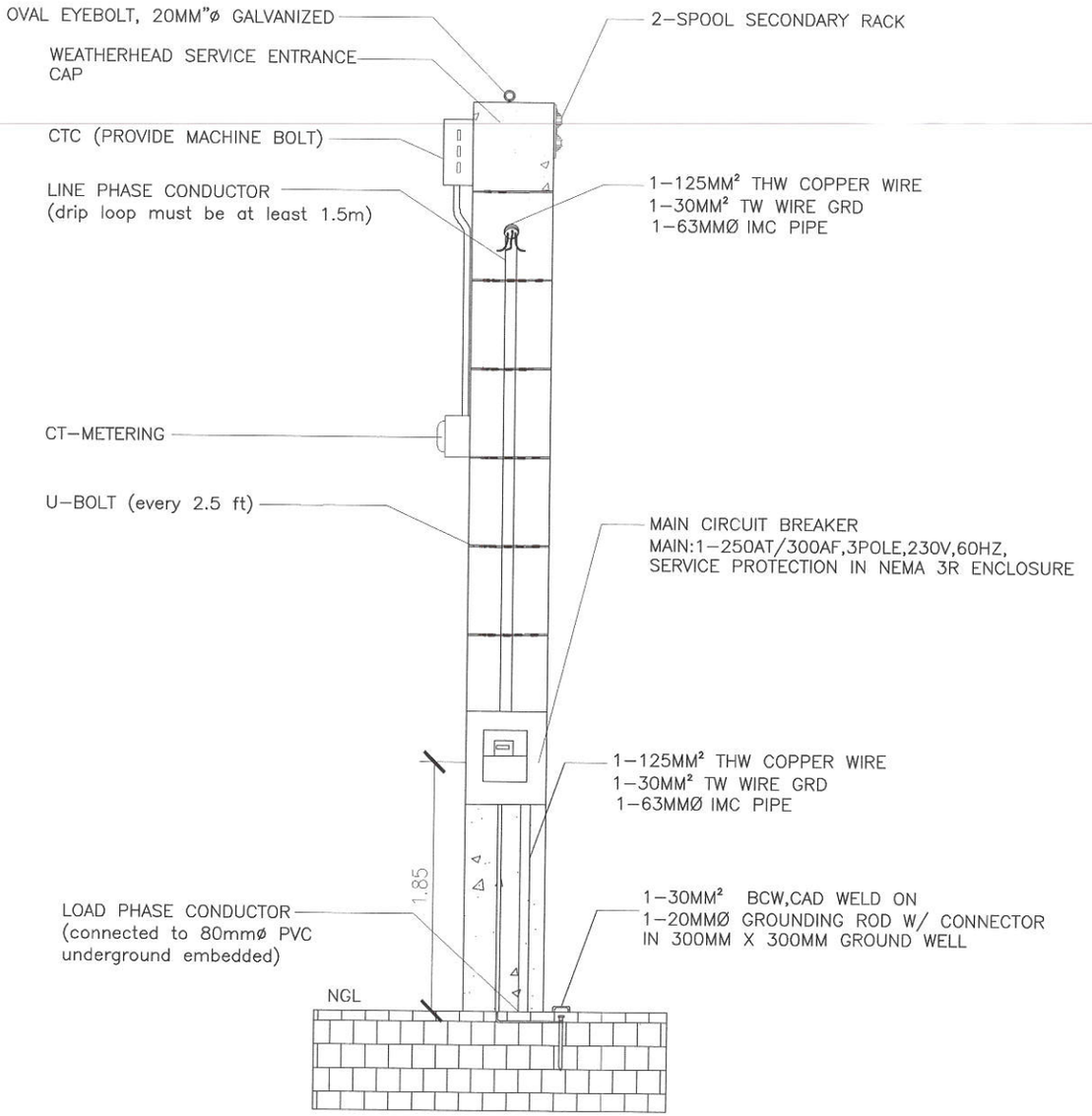
SCALE: NTS

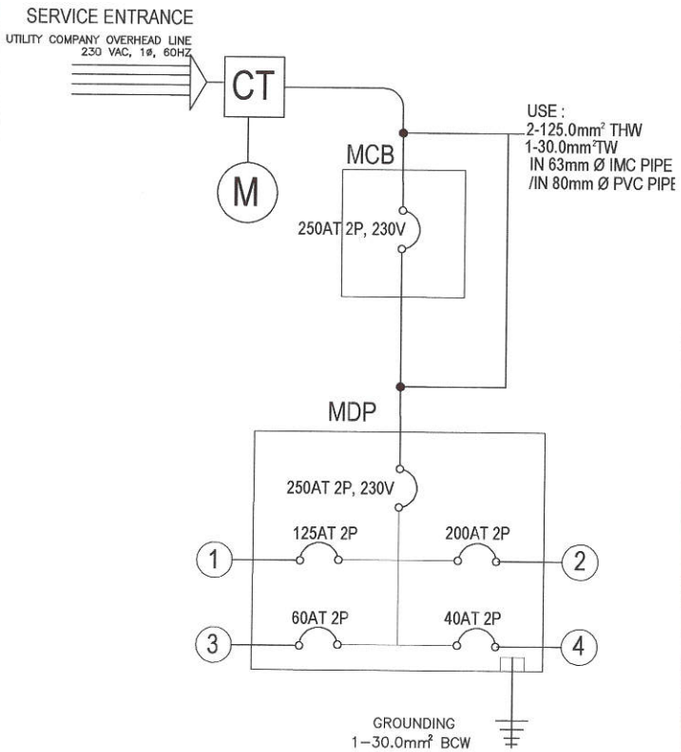
Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED UPGRADING OF SERVICE ENTRANCE OF DON QUINTIN PAREDES HIGH SCHOOL LOCATION: BARANGAY QUIRINO 2-B, DISTRICT 3, QUEZON CITY	DRAWN BY: KMO DATE: NOVEMBER 07, 2020 CHECKED BY: REVISION NO.:	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO HEAD , PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA , JR. OIC-CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE CITY MAYOR , QUEZON CITY	SINGLE LINE DIAGRAM	EL-03

DED2020_0034

20-00129





1 **SERVICE ENTRANCE DETAILS**

2 **PANELBOARD DETAILS**

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:
PROPOSED UPGRADING OF SERVICE ENTRANCE OF DON QUINTIN PAREDES HIGH SCHOOL

LOCATION: BARANGAY QUIRINO 2-B, DISTRICT 3, QUEZON CITY

DRAWN BY: KMD
DATE: NOVEMBER 9, 2020
CHECKED BY:
REVISION NO.

SUBMITTED BY:
ENGR. LEO S. DEL ROSARIO
HEAD, PLANNING & PROGRAMMING DIVISION

RECOMMENDING APPROVAL:
ENGR. ISAGANI R. VERZOSA, JR.
OIC-CITY ENGINEERING DEPARTMENT

APPROVED BY:
HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SERVICE ENTRANCE DETAILS
PANELBOARD DETAILS

EL-04

20-00129

DP-DPWH

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	LP-DEPED GF	230	8000	34.78	60	2-14mm² THHN COPPER WIRE 1-8.0mm² THHN GROUND WIRE	IN 32mmØ PVC PIPE
2	LP-DEPED 2F	230	8000	34.78	60	2-14mm² THHN COPPER WIRE 1-8.0mm² THHN GROUND WIRE	IN 32mmØ PVC PIPE
3	LP-DEPED 3F	230	8000	34.78	60	2-14mm² THHN COPPER WIRE 1-8.0mm² THHN GROUND WIRE	IN 32mmØ PVC PIPE
			24,000	104.34			

COMPUTATION :

$$IT = \frac{24{,}000\ VA + (25\% \times 1840\ VA)}{230\ V}$$

IT = 106.84 AMPERES

OVER CURRENT PROTECTION

USE : 200AT/250AF, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER :

USE : 2 - 80.0mm² THHN & 1-14.0mm² THHN GROUND WIRE IN 63mmØ PVC PIPE

DP-BL (BAGONF LIPUNAN BLDG.)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	12 – LIGHTING OUTLETS	230	1200	5.22	15	3-3.5mm² THWN COPPER WIRE	IN 20mmØ PVC PIPE
2	12 – LIGHTING OUTLETS	230	1200	5.22	15	3-3.5mm² THWN COPPER WIRE	IN 20mmØ PVC PIPE
3	6 – LIGHTING OUTLETS	230	600	2.61	15	3-3.5mm² THWN COPPER WIRE	IN 20mmØ PVC PIPE
4	9 – LIGHTING OUTLETS	230	900	3.91	15	3-3.5mm THWN COPPER WIRE	IN 20mmØ PVC PIPE
5	12 – LIGHTING OUTLETS	230	1200	5.22	15	3-3.5mm THWN COPPER WIRE	IN 20mmØ PVC PIPE
6	12 – LIGHTING OUTLETS	230	1200	5.22	15	3-3.5mm THWN COPPER WIRE	IN 20mmØ PVC PIPE
7	6 – LIGHTING OUTLETS	230	600	2.61	15	3-3.5mm² THWN COPPER WIRE	IN 20mmØ PVC PIPE
8	9 – LIGHTING OUTLETS	230	900	3.91	15	3-3.5mm² THWN COPPER WIRE	IN 20mmØ PVC PIPE
9	6-DUPLEX CONVENIENCE OUTLETS	230	1080	4.70	30	3-3.5mm² THWN COPPER WIRE	IN 20mmØ PVC PIPE
10	8-DUPLEX CONVENIENCE OUTLETS	230	1440	6.26	30	2-3.5mm² THWN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
11	6-DUPLEX CONVENIENCE OUTLETS	230	1080	4.70	30	2-3.5mm² THWN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
12	6-DUPLEX CONVENIENCE OUTLETS	230	1080	4.70	30	2-3.5mm² THWN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
13	8-DUPLEX CONVENIENCE OUTLETS	230	1440	6.26	30	2-3.5mm² THWN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
14	6-DUPLEX CONVENIENCE OUTLETS	230	1080	4.70	30	2-3.5mm² THWN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
15	6-110W CEILING FAN	230	660	2.87	30	2-3.5mm² THWN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
16	4-110W CEILING FAN	230	440	1.91	30	2-3.5mm² THWN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
17	6-110W CEILING FAN	230	660	2.87	30	2-3.5mm² THWN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
18	4-110W CEILING FAN	230	440	1.91	30	2-3.5mm² THWN COPPER WIRE 1-3.5mm² TW GROUND WIRE	IN 20mmØ PVC PIPE
			25300	110			

COMPUTATION :

$$IT = \frac{25300VA}{230\ V}$$

IT = 110 AMPERES AT 90% D.F.

= 99 AMPERES

OVER CURRENT PROTECTION

USE : 125AT/150AF, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER :

USE : 2 - 38.mm² THHN & 1-14.0mm² THHN GROUND WIRE IN 40mmØ PVC PIPE

1 **SCHEDULE OF LOADS**

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE:	DRAWN BY: KMD	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:		
PROPOSED UPGRADING OF SERVICE ENTRANCE OF DON QUINTIN PAREDES HIGH SCHOOL	DATE: NOVEMBER 07, 2020	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. ISAGANI R. VERZOSA, JR. OIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	SCHEDULE OF LOADS	EL-05
LOCATION: BARANGAY QUIRINO 2-B, DISTRICT 3, QUEZON CITY	CHECKED BY: GMO					
	REVISION NO.:					

MDP-MAIN DISTRIBUTION PANEL

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	DP-BL	230	25300	110	125	2-38mm² THHN COPPER WIRE 1-14mm² THHN GROUND WIRE	IN 40mmø PVC PIPE
2	DP-DPWH	230	24000	104.34	200	2-80mm² THHN COPPER WIRE 1-14mm² THHN GROUND WIRE	IN 63mmø PVC PIPE
3	LP-CC	230	3540	15.47	60	2-14mm² THHN COPPER WIRE 1-8.0mm² THHN GROUND WIRE	IN 32mmø PVC PIPE
4	LP-PREFAB	230	2210	9.61	40	2-8.0mm² THHN COPPER WIRE 1-8.0mm² THHN GROUND WIRE	IN 32mmø PVC PIPE
			55050	239.42			

COMPUTATION :

$$IT = \frac{55050\ VA + (25\% \times 1840\ VA)}{230\ V}$$

IT = 241.92 AMPERES

OVER CURRENT PROTECTION
USE : 250AT/300AF, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 3R

MAIN FEEDER :
USE : 2 - 125.mm² THW & 1-22.0mm² TW GROUND WIRE IN 63mmØ IMC PIPE/ 80mmØ PVC PIPE

LP-CC (COVERED COURT)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	4- 200W LIGHTING OUTLETS	230	800	3.48	20	3-3.5mm² THHN COPPER WIRE	IN 20mmø PVC PIPE
2	4- 200W LIGHTING OUTLETS	230	800	3.48	20	3-3.5mm² THHN COPPER WIRE	IN 20mmø PVC PIPE
3	3- 400W LIGHTING OUTLETS	230	1200	5.21	20	3-3.5mm² THHN COPPER WIRE	IN 20mmø PVC PIPE
4	4-LIGHTING OUTLETS	230	400	1.74	20	3-3.5mm² THHN COPPER WIRE	IN 20mmø PVC PIPE
5	2-CONVENIENCE OUTLETS	230	360	1.20	20	2-3.5mm² THHN COPPER WIRE 1-3.5mm² THHN GROUND WIRE	IN 20mmø PVC PIPE
			3560	15.47			

COMPUTATION :

$$IT = \frac{3560\ VA}{230\ V}$$

IT = 15.47 AMPERES

OVER CURRENT PROTECTION
USE : 60AT/100AF, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

MAIN FEEDER :
USE : 2 - 14.0mm² THHN & 1-8.0mm² THHN GROUND WIRE IN 32mmØ PVC PIPE

LP-PREFAB

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	8-LIGHTING OUTLETS	230	800	3.48	20	3-3.5mm² THHN COPPER WIRE	IN 20mmø PVC PIPE
2	6-CONVENIENCE OUTLETS	230	1080	4.69	20	3-3.5mm² THHN COPPER WIRE	IN 20mmø PVC PIPE
3	3-110W CEILING FAN	230	330	1.43	20	3-3.5mm² THHN COPPER WIRE	IN 20mmø PVC PIPE
			2210	9.61			

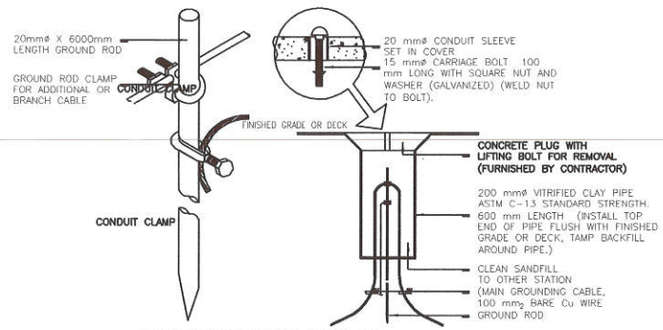
COMPUTATION :

$$IT = \frac{2210\ VA}{230\ V}$$

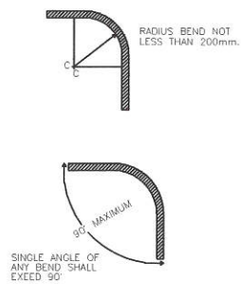
IT = 9.61 AMPERES

OVER CURRENT PROTECTION
USE : 40AT/100AF, 2P, 230V MOLDED CASE CIRCUIT BREAKER IN NEMA 1

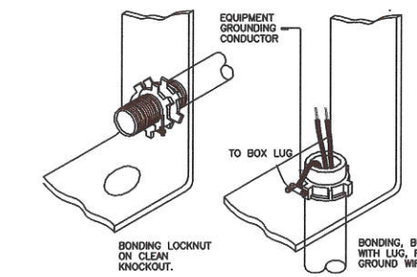
MAIN FEEDER :
USE : 2 - 8.0mm² THHN & 1-8.0mm² THHN GROUND WIRE IN 32mmØ PVC PIPE



GROUND ROD TEST STATION DETAIL



DETAIL OF BENDING RADIUS



NOTE:

CONNECTION OF THREADED RIGID METAL CONDUIT OR INTERMEDIATE METALLIC CONDUIT TO A THREADED BOSS OR HUB IS CONSIDERED TO BE A BONDED CONDUIT TERMINATION.

BONDED RACEWAY TERMINATION FOR SHEET METAL KNOCKOUTS

1 **SCHEDULE OF LOADS (CONT.)**

2 **PANELBOARD DETAILS**

SCALE: NTS

Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE: PROPOSED UPGRADING OF SERVICE ENTRANCE OF DON QUINTIN PAREDES HIGH SCHOOL	DRAWN BY: KMD	SUBMITTED BY: ENGR. LEO S. DEL ROSARIO, HEAD, PLANNING & PROGRAMMING DIVISION	RECOMMENDING APPROVAL: ENGR. ISAGANI R. VERZOSA, JR., OIC - CITY ENGINEERING DEPARTMENT	APPROVED BY: HON. MA. JOSEFINA G. BELMONTE, CITY MAYOR, QUEZON CITY	SCHEDULE OF LOADS MISCELLANEOUS DETAILS	EL-06
LOCATION: BARANGAY QUIRINO 2-B, DISTRICT 3, QUEZON CITY	DATE: NOVEMBER 27, 2020					
	CHECKED BY:					
	REVISION NO.:					