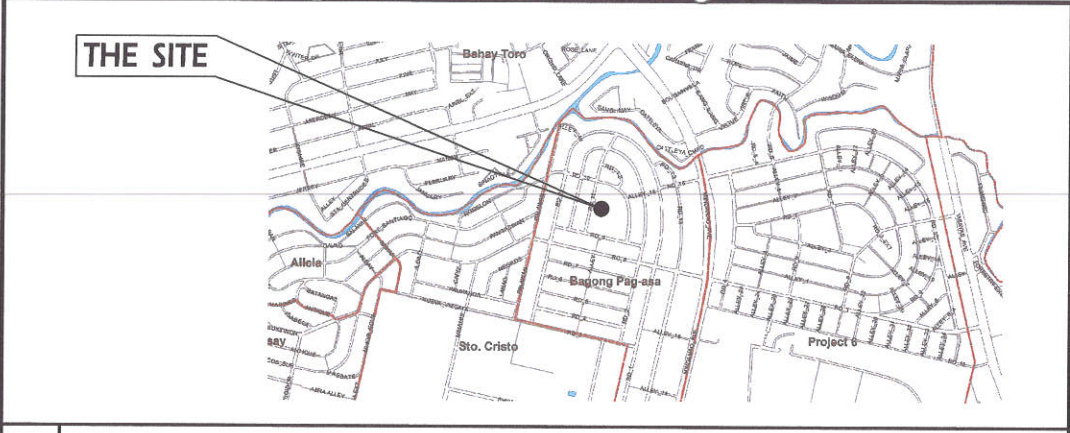
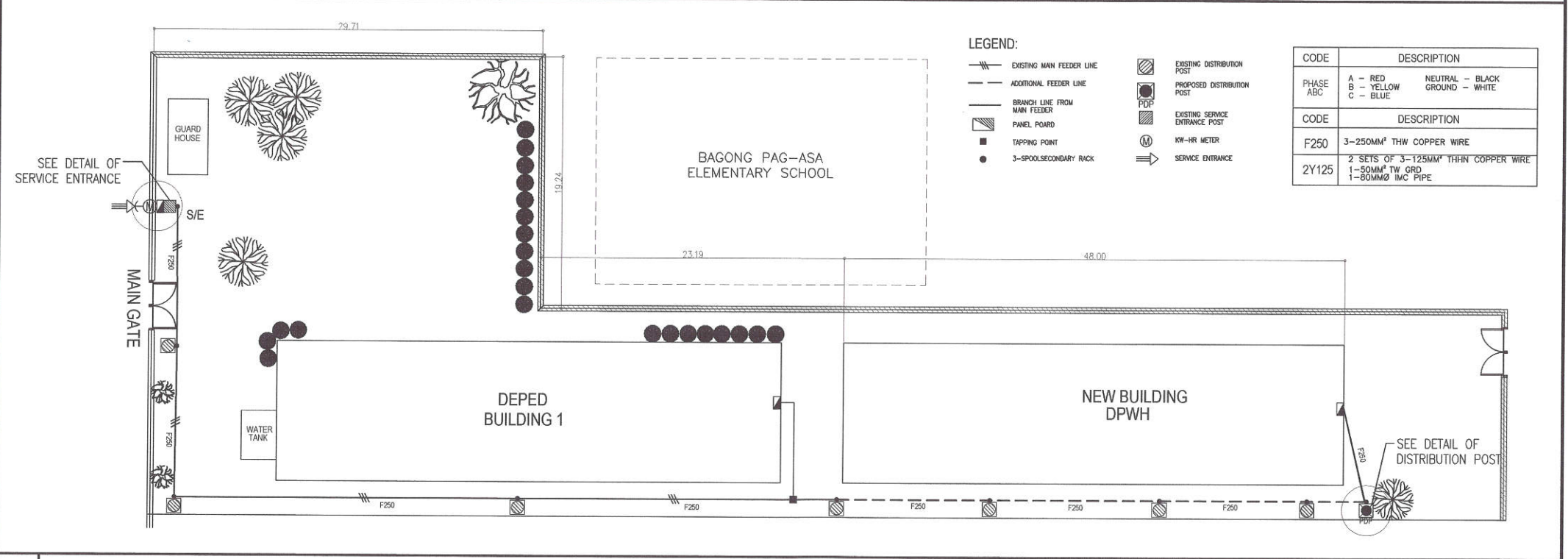




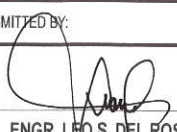
1 VICINITY MAP

2 LOCATION MAP



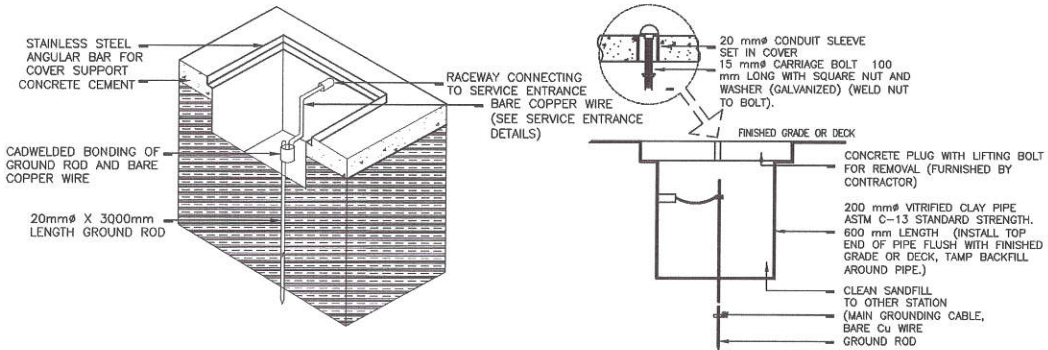
3 SITE DEVELOPMENT PLAN AND FEEDER LAYOUT

NOT TO SCALE

 Republika ng Pilipinas Lungsod ng Quezon CITY ENGINEERING DEPARTMENT	PROJECT TITLE :	DRAWN BY: 	SUBMITTED BY: 	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.	
	PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT CARLOS P. ROMULO SENIOR HIGH SCHOOL	DATE:		ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. JERAGANI R. VERZOSA, JR. CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	VICINITY MAP LOCATION MAP SITE DEVELOPMENT PLAN AND FEEDER LINE LAYOUT	EL 01
	PROJECT LOCATION :	CHECKED BY: 	REVISION NO.:					
	BARANGAY BAGONG PAG-ASA, DISTRICT 1 QUEZON CITY							

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. ALL EMBEDDED BRANCH CIRCUITS SHALL BE PVC CONDUITS AND FOR EXPOSED INSTALLATION SHALL BE IMC SUPPORTED BY CONDUIT CLAMPS EVERY 700 MILLIMETERS
3. PULL BOXES SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER NECESSARY TO FACILITATE WIRE PULLING EVEN IF THESE ARE NOT INDICATED ON THE PLANS. SIZING OF ALL PULLBOXES SHALL BE COMPUTED BASED ON THE CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. LOCATION OF PULLBOXES SHALL BE APPROVED BY THE ARCHITECT/ENGINEER AND MUST BE REFLECTED ON THE "AS-BUILT" PLAN.
4. ALL METALLIC CONDUITS, CABINETS AND EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED.
5. ALL MATERIALS TO BE USED SHALL BE OF THE BEST QUALITY, BRAND NEW AS SPECIFIED.
6. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT GENERAL LAYOUT AND BROAD OUTLINE/DESCRIPTION OF THE PROJECT BUT DO NOT NECESSARILY INDICATE/DESCRIBED ACTUAL LOCATIONS, LEVEL AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENT AT THE JOBSITE AS LOCATION, DISTANCES AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS.
7. ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION DECISION.
8. ALL LIGHTING AND CONVENIENCE OUTLET CIRCUITS SHALL BE 3.5 SQ. MM. THWN-2 COPPER WIRE UNLESS OTHERWISE NOTED. MINIMUM SIZE OF WIRE SHALL BE 3.5 SQ. MM. COPPER WIRE. ALL WIRES AND CABLES SHALL BE COLOR CODED AS FOLLOWS:
- PHASE A - RED
PHASE B - YELLOW
PHASE C - BLUE
GROUND - WHITE
9. BOXES, WIRE, GUTTERS, ENCLOSURE SHALL BE FABRICATED FROM STEEL WITH THICKNESS AS FOLLOWS:
- | MAXIMUM WIDTH OF THE WIDEST SURFACE STEEL | GA |
|---|---|
| UP TO INCLUDING 152.40 MM | GA 16 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT |
| OVER 152.40 MM BUT NOT OVER 457.30 | GA 14 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT |
| OVER 457.30 MM BUT NOT OVER 762 MM | GA 12 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT |
| OVER 762 MM | GA 10 PAINTED WITH METAL PRIMER EPOXY AND TOPCOAT |
10. ALL ELECTRICAL WORKS HEREIN SHALL BE EXECUTED BY EXPERIENCED ELECTRICIAN UNDER THE DIRECT SUPERVISION OF A REGISTERED ELECTRICAL PRACTITIONER. WORKS SHALL BE NEATLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
11. TYPE OF SERVICE ENTRANCE SHALL BE THREE-PHASE, THREE-WIRE PLUS GROUND, 60 HERTZ, 230V AC NOMINAL.
12. CONDUITS IN NO CASE SHALL THERE BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS IN ANY ONE RUN. ALL CONDUIT BENDS SHALL BE FIELD MADE BY USING HYDRAULIC BENDERS. MINIMUM BENDING RADIUS MUST BE IN ACCORDANCE TO THE CODE REQUIREMENTS.
13. UPON COMPLETION OF ELECTRICAL CONSTRUCTION WORK, INSULATION RESISTANCE TEST AND FUNCTIONALITY TEST SHALL BE PERFORMED BY THE CONTRACTOR INCLUSIVE OF THE INSTALLATION TO BE REPORTED IN DETAILS ON FORMS APPROVED BY THE QUEZON CITY ENGINEERING DEPARTMENT REPRESENTATIVE. THE GROUND RESISTANCE FOR ELECTRICAL SYSTEMS SHALL NOT BE MORE THAN 5 OHMS. COMMUNICATION GROUNDING RESISTANCE SHALL NOT EXCEED 2 OHMS.

1 GENERAL NOTES

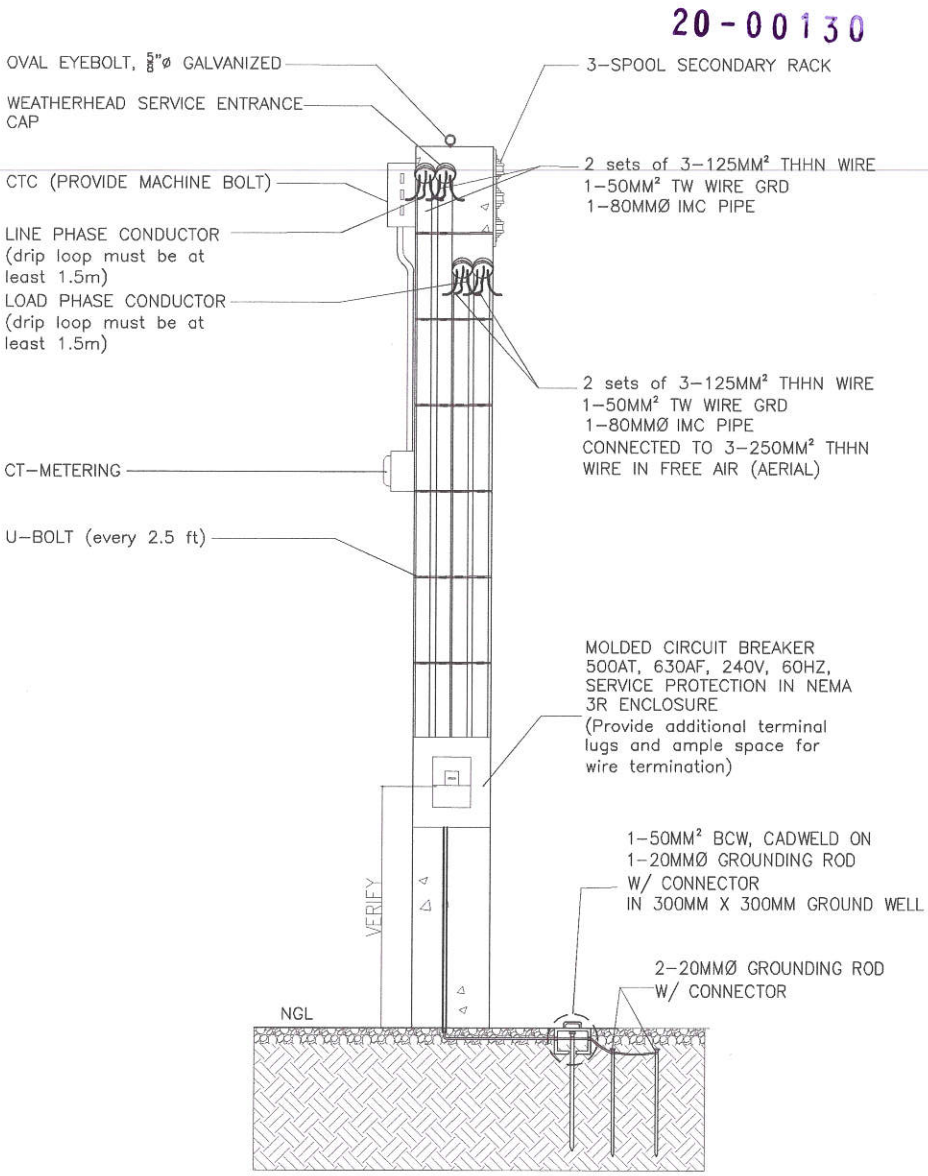


2 GROUND ROD TEST STATION DETAIL

NOT TO SCALE

3 SERVICE ENTRANCE POST DETAILS

NOT TO SCALE

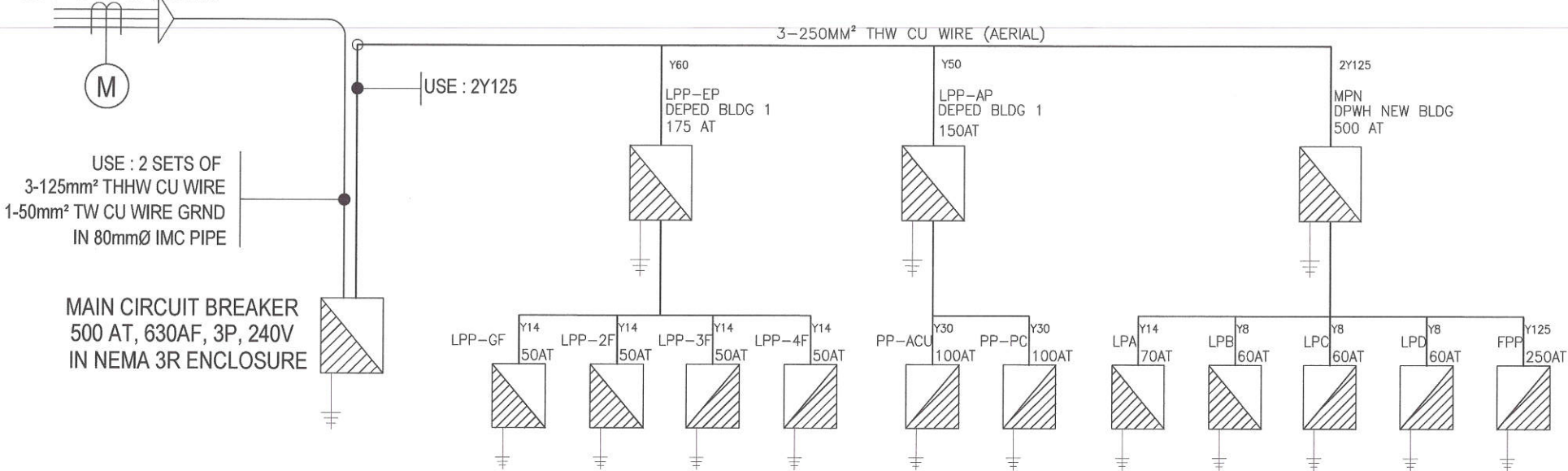


Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :	DRAWN BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	SHEET CONTENT	SHEET NO.
PROPOSED UPGRADING OF ELECTRICAL SYSTEM AT CARLOS P. ROMULO SENIOR HIGH SCHOOL	DATE:	ENGR. LEO S. DEL ROSARIO HEAD, PLANNING & PROGRAMMING DIVISION	ENGR. SABANI R. VERZOSA, JR. CIC, CITY ENGINEERING DEPARTMENT	HON. MA. JOSEFINA G. BELMONTE CITY MAYOR, QUEZON CITY	GENERAL NOTES GROUND ROD TEST STATION DETAIL SERVICE ENTRANCE POST DETAILS	EL 02
PROJECT LOCATION : BARANGAY BAGONG PAG-ASA, DISTRICT 1 QUEZON CITY	CHECKED BY:	REVISION NO.:				

SERVICE ENTRANCE

UTILITY COMPANY
OVERHEAD LINE
230 VAC, 3 ϕ , 60HZ



CODE	DESCRIPTION	CODE	DESCRIPTION
F250	3-250MM ² THW COPPER WIRE	Y30	2-30MM ² THHN COPPER WIRE 1-8.0MM ² TW WIRE GRD 1-40MM ϕ PVC PIPE
2Y125	2 SETS OF 3-125MM ² THHN COPPER WIRE 1-50MM ² TW WIRE GRD 1-80MM ϕ IMC PIPE	Y14	2-14MM ² THHN COPPER WIRE 1-8.0MM ² TW WIRE GRD 1-32MM ϕ PVC PIPE
Y125	3-125MM ² THHN COPPER WIRE 1-30MM ² TW WIRE GRD 1-80MM ϕ RSC PIPE	Y8	2-8.0MM ² THHN COPPER WIRE 1-5.5MM ² TW WIRE GRD 1-32MM ϕ PVC PIPE
Y60	2-60MM ² THHN COPPER WIRE 1-14MM ² TW WIRE GRD 1-63MM ϕ PVC PIPE	PHASE	A - RED NEUTRAL - BLACK B - YELLOW GROUND - WHITE C - BLUE
Y50	2-50MM ² THHN COPPER WIRE 1-14MM ² TW WIRE GRD 1-50MM ϕ PVC PIPE		

1 SINGLE LINE DIAGRAM

NOT TO SCALE



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :

PROPOSED UPGRADING OF ELECTRICAL
SYSTEM AT CARLOS P. ROMULO SENIOR HIGH
SCHOOL

PROJECT LOCATION :

BARANGAY BAGONG PAG-ASA, DISTRICT 1 QUEZON CITY

DRAWN BY :

DATE :

CHECKED BY :

REVISION NO. :

SUBMITTED BY :

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

RECOMMENDING APPROVAL :

ENGR. ISAGANI R. VERZOSA, JR.
CIC, CITY ENGINEERING DEPARTMENT

APPROVED BY :

HON. MA. JOSEFINA G. BELMONTE
CITY MAYOR, QUEZON CITY

SHEET CONTENT

SINGLE LINE DIAGRAM

SHEET NO.

EL
03

20-00130

DEPED BUILDING 1

LPP-GF (PANEL- GROUND FLOOR)									
CKT. NO.	LOAD DESCRIPTION			VOLTS	VA	AMP.	AT	SIZE OF	
	L.O	C.O	OTHERS					WIRES	CONDUITS
1	6	2	2-FANS	230	1260	5.47	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
2	6	2	2-FANS	230	1260	5.47	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
3	6	2	2-FANS	230	1260	5.47	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
4	11	1	1-BELL	230	1280	5.56	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
5			1 HP PUMP	230	1870	8.0	20	2-5.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 25mm ^ø PVC PIPE
6			SPARE	-	-	-	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
7			SPARE	-	-	-	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
8			SPARE	-	-	-	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
9			SPARE	-	-	-	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
TOTAL					6930				
COMPUTATION :									
IT = $\frac{6,930 \text{ VA} + (0.25 \times 1870 \text{ VA})}{230 \text{ V}}$					OVER CURRENT PROTECTION USE : 50AT, 2P, 230V CIRCUIT BREAKER				
= 32.16 AMP.					MAIN FEEDER : USE : 2 - 14mm ² THHN & 1- 8.0mm ² TW GROUND WIRE IN 32mm ^ø PVC PIPE/ Y14				

LPP-UF (PANEL TYPICAL TO SECOND-FOURTH FLOOR)									
CKT. NO.	LOAD DESCRIPTION			VOLTS	VA	AMP.	AT	SIZE OF	
	L.O	C.O	OTHERS					WIRES	CONDUITS
1	6	2	2-FANS	230	1260	5.47	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
2	6	2	2-FANS	230	1260	5.47	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
3	6	2	2-FANS	230	1260	5.47	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
4	11	1		230	1180	5.13	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
5			SPARE	-	-	-	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 25mm ^ø PVC PIPE
6			SPARE	-	-	-	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
7			SPARE	-	-	-	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
8			SPARE	-	-	-	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
9			SPARE	-	-	-	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
TOTAL					4960				
COMPUTATION :									
IT = $\frac{4,960 \text{ VA}}{230 \text{ V}}$					OVER CURRENT PROTECTION USE : 50AT, 2P, 230V CIRCUIT BREAKER				
= 21.57 AMP.					MAIN FEEDER : USE : 2 - 14 mm ² THHN & 1-8.0mm ² TW GROUND WIRE IN 32mm ^ø PVC PIPE/ Y14				

PP-ACU (PANEL- ACU AT GROUND FLOOR)									
CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF			
						WIRES	CONDUITS		
1	1HP ACU	230	1870	8.13	20	2-5.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE		
2	1HP ACU	230	1870	8.13	20	2-5.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE		
3	1HP ACU	230	1870	8.13	20	2-5.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE		
4	1HP ACU	230	1870	8.13	20	2-5.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE		
5	1HP ACU	230	1870	8.13	20	2-5.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE		
6	1HP ACU	230	1870	8.13	20	2-5.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE		
TOTAL			11220						
COMPUTATION :									
IT = $\frac{11,220 \text{ VA} + (0.25 \times 1870 \text{ VA})}{230 \text{ V}}$					OVER CURRENT PROTECTION USE : 100AT, 2P, 230V CIRCUIT BREAKER				
= 50.82 AMP.					MAIN FEEDER : USE : 2 - 30 mm ² THHN & 1-8.0mm ² TW GROUND WIRE IN 40mm ^ø PVC PIPE /Y30				

PP-PC (PANEL FOR COMPUTER ROOM AT FOURTH FLOOR)									
CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF			
						WIRES	CONDUITS		
1	10 PERSONAL COMPUTER	230	1800	7.83	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE		
2	10 PERSONAL COMPUTER	230	1800	7.83	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE		
3	10 PERSONAL COMPUTER	230	1800	7.83	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE		
4	10 PERSONAL COMPUTER	230	1800	7.83	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE		
5	10 PERSONAL COMPUTER	230	1800	7.83	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE		
6	1HP ACU	230	1870	8.13	30	2-5.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 25mm ^ø PVC PIPE		
7	1HP ACU	230	1870	8.13	30	2-5.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 25mm ^ø PVC PIPE		
8									
9									
TOTAL			12740						
COMPUTATION :									
IT = $\frac{12,740 \text{ VA} + (0.25 \times 1870 \text{ VA})}{230 \text{ V}}$					OVER CURRENT PROTECTION USE : 100AT, 2P, 230V CIRCUIT BREAKER				
= 57.42 AMP.					MAIN FEEDER : USE : 2 - 30 mm ² THHN & 1-8.0mm ² TW GROUND WIRE IN 40mm ^ø PVC PIPE / Y30				

SCHEDULE OF LOADS

NOT TO SCALE



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :
**PROPOSED UPGRADING OF ELECTRICAL
SYSTEM AT CARLOS P. ROMULO SENIOR HIGH
SCHOOL**
PROJECT LOCATION :
BARANGAY BAGONG PAG-ASA, DISTRICT 1 QUEZON CITY

DRAWN BY: **ED**
DATE:
CHECKED BY: **SD**
REVISION NO.:

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

RECOMMENDING APPROVAL:
ENGR. SAGANI R. VERZOSA, JR.
CIC, CITY ENGINEERING DEPARTMENT

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

SHEET CONTENT
SCHEDULE OF LOADS

SHEET NO.

**EL
04**

20-00130

DEPED BUILDING 1

LPP-EP (MAIN EXISTING PANEL)							
CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	LPP-GF	230	6930	30.13	50	2-14mm ² THHN COPPER WIRE 1-8mm ² TW GROUND WIRE	IN 32mm ^ø PVC PIPE
2	LPP-UF(SECOND FLOOR)	230	4960	21.57	50	2-14mm ² THHN COPPER WIRE 1-8mm ² TW GROUND WIRE	IN 32mm ^ø PVC PIPE
3	LPP-UF(THIRD FLOOR)	230	4960	21.57	50	2-14mm ² THHN COPPER WIRE 1-8mm ² TW GROUND WIRE	IN 32mm ^ø PVC PIPE
4	LPP-UF(FOURTH FLOOR)	230	4960	21.57	50	2-14mm ² THHN COPPER WIRE 1-8mm ² TW GROUND WIRE	IN 32mm ^ø PVC PIPE
TOTAL			21810				
COMPUTATION :							
IT = $\frac{21,810 \text{ VA} + (0.25 \times 1870 \text{ VA})}{230 \text{ V}}$			OVER CURRENT PROTECTION USE : 175AT, 2P, 230V CIRCUIT BREAKER				
= 96.86 AMP.			MAIN FEEDER : USE : 2 - 60 mm ² THHN & 1-14.0mm ² TW GROUND WIRE IN 63mm ^ø PVC PIPE / Y60				

LPP-AP (MAIN ACU & PC PANEL)							
CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	PP-ACU	230	11220	48.78	100	2-30mm ² THHN COPPER WIRE 1-14mm ² TW GROUND WIRE	IN 40mm ^ø PVC PIPE
2	PP-PC	230	12740	55.39	100	2-30mm ² THHN COPPER WIRE 1-14mm ² TW GROUND WIRE	IN 40mm ^ø PVC PIPE
TOTAL			23690				
COMPUTATION :							
IT = $\frac{23,690 \text{ VA} + (0.25 \times 1870 \text{ VA})}{230 \text{ V}}$			OVER CURRENT PROTECTION USE : 150AT, 2P, 230V CIRCUIT BREAKER				
= 105.03 AMP.			MAIN FEEDER : USE : 2 - 50 mm ² THHN & 1-14.0mm ² TW GROUND WIRE IN 50mm ^ø PVC PIPE / Y50				

DPWH NEW BUILDING

LPA (LIGHTING & POWER PANEL)							
CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	16-LIGHTING OUTLETS	230	1440	6.26	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
2	14-LIGHTING OUTLETS	230	1260	5.48	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
3	18-LIGHTING OUTLET	230	1620	7.0	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
4	6-WALL FAN	230	840	3.65	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
5	4-WALL FAN	230	560	2.43	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
6	7-CONVENIENCE OUTLET	230	1260	5.48	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
7	6-CONVENIENCE OUTLET	230	1080	4.7	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
8	FACP	230	500	2.17	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
9	2HP-AIR CONDITIONING UNIT	230	2760	12	30	2-5.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 25mm ^ø PVC PIPE
10	2HP-AIR CONDITIONING UNIT	230	2760	12	30	2-5.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 25mm ^ø PVC PIPE
11	S P A R E	230	-	-	20	EMPTY	EMPTY
12	S P A R E	230	-	-	20	EMPTY	EMPTY
TOTAL			14080	61.17			
COMPUTATION :							
IT = $\frac{14,080 \text{ VA} + (0.25 \times 2760 \text{ VA})}{230 \text{ V}}$			OVER CURRENT PROTECTION USE : 70AT, 100AF, 2P, 230V, MCCB IN NEMA 1				
IT = 64.22 AMP.			MAIN FEEDER : USE : 2 - 14mm ² THHN & 1-8.0mm ² TW GROUND WIRE IN 32mm ^ø (1"Ø) PVC PIPE / Y14				

LPB, LPC, & LPD (TYPICAL)							
CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMP.	AT	SIZE OF	
						WIRES	CONDUITS
1	16-LIGHTING OUTLETS	230	1440	6.26	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
2	14-LIGHTING OUTLETS	230	1260	5.48	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
3	18-LIGHTING OUTLET	230	1620	7.0	15	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
4	6-WALL FAN	230	840	3.65	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
5	4-WALL FAN	230	560	2.43	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
6	7-CONVENIENCE OUTLET	230	1260	5.48	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
7	6-CONVENIENCE OUTLET	230	1080	4.7	20	2-3.5mm ² THHN COPPER WIRE 1-3.5mm ² TW GROUND WIRE	IN 20mm ^ø PVC PIPE
8	S P A R E	230	-	-	20	EMPTY	EMPTY
9	S P A R E	230	-	-	20	EMPTY	EMPTY
10	S P A R E	230	-	-	20	EMPTY	EMPTY
TOTAL			8060	35			
COMPUTATION :							
IT = $\frac{8,060 \text{ VA}}{230 \text{ V}}$			OVER CURRENT PROTECTION USE : 60AT, 100AF, 2P, 230V, MCCB IN NEMA 1				
IT = 35 AMP.			MAIN FEEDER : USE : 2 - 8.0mm ² THHN & 1-5.5mm ² TW GROUND WIRE IN 32mm ^ø (1"Ø) PVC PIPE / Y8				

1 SCHEDULE OF LOADS

NOT TO SCALE



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :
**PROPOSED UPGRADING OF ELECTRICAL
SYSTEM AT CARLOS P. ROMULO SENIOR HIGH
SCHOOL**

PROJECT LOCATION :
BARANGAY BAGONG PAG-ASA, DISTRICT 1 QUEZON CITY

DRAWN BY: EQN
DATE:
CHECKED BY: SDO
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 CONTENT
SCHEDULE OF LOADS

SHEET NO.

**EL
05**

20-00130

DPWH NEW BUILDING

FPP (FIRE PROTECTION PANEL)										
CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AB	CA	BC	3Ø		WIRES	CONDUITS
1	FIRE PUMP, 40HP 3ø	230	23920				104	250	3-125mm ² THHN COPPER WIRE 1-22mm ² TW GROUND WIRE	IN 80mmø PVC PIPE
2	JOCKEY PUMP, 5HP 3ø	230	3496				15.2	40	3-5.5mm ² THHN COPPER WIRE 1-5.5mm ² TW GROUND WIRE	IN 25mmø PVC PIPE
3	WATER PUMP 1, 3HP 1ø	230	2208			9.6		40	3-5.5mm ² THHN COPPER WIRE 1-5.5mm ² TW GROUND WIRE	IN 25mmø PVC PIPE
4	WATER PUMP 1, 3HP 1ø	230	2208			9.6		40	3-5.5mm ² THHN COPPER WIRE 1-5.5mm ² TW GROUND WIRE	IN 25mmø PVC PIPE
5	S P A R E	230	-					40	E M P T Y	E M P T Y
6	S P A C E	230	-	-	-	-	-	-	E M P T Y	E M P T Y
TOTAL			34040			19.2	119.2			
COMPUTATION : IT = 9.6 * 1.732 + 119.2 + (0.25*104) IT = 178.46 OVER CURRENT PROTECTION USE : 250AT, 250AF, 3P, 230V, MCCB IN NEMA 1 MAIN FEEDER : USE : 3 - 125mm² THHN & 1-30.0mm² TW GROUND WIRE IN 80mmø (3") RSC PIPE / Y125										

MPN (MAIN PANEL - DPWH NEW BUILDING)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AB	CA	BC	3Ø		WIRES	CONDUITS
1	PANEL LPA	230	14080	64.22				70	2-30mm² THHN COPPER WIRE 1-8.0mm² TW GROUND WIRE	IN 32mmø PVC PIPE
2	SPARE	230	-	-				60		
2	PANEL LPB	230	8060		35			60	2-14mm² THHN COPPER WIRE 1-8.0mm² TW GROUND WIRE	IN 25mmø PVC PIPE
3	PANEL LPC	230	8060		35			60	2-14mm² THHN COPPER WIRE 1-8.0mm² TW GROUND WIRE	IN 25mmø PVC PIPE
4	PANEL LPD	230	8060			35		60	2-30mm² THHN COPPER WIRE 1-8.0mm² TW GROUND WIRE	IN 32mmø PVC PIPE
7	PANEL FPP	230	34040			19.2	119.2	250	3-125mm² THHN COPPER WIRE 1-8.0mm² TW GROUND WIRE	IN 80mmø PVC PIPE
8	S P A R E	230	-	-	-	-	-	-	E M P T Y	E M P T Y
TOTAL			72300	64.22	70	54.2	119.2			
COMPUTATION :				OVER CURRENT PROTECTION USE : 500AT, 500AF, 3P, 230V, MCCB IN NEMA 1						
IT = 70 * 1.732 + 119.2 + (0.25*104)				MAIN FEEDER : USE : 2 - SETS 3 - 125mm² THHN & 1-50mm² TW GROUND WIRE IN 80mmØ (4") IMC PIPE / 2Y125						
IT = 266.44 AMP.										

MDP (MAIN DISTRIBUTION PANEL)

CKT. NO.	LOAD DESCRIPTION	VOLTS	VA	AMPERE LOAD				AT	SIZE OF	
				AB	CA	BC	3Ø		WIRES	CONDUITS
1	MPN (NEW BLDG.)	230	72300	64.22	70	44.6	119.2	500	2SETS 3-125mm² THHN COPPER WIRE 1-50mm² TW GROUND WIRE	IN 80mmØ IMC PIPE
2	LPP-EP (BLDG. 1)	230	21810		96.86			175	2-60mm² THHN COPPER WIRE 1-14mm² TW GROUND WIRE	IN 63mmØ PVC PIPE
3	LPP-AP (BLDG. 1)	230	23690			105.03		150	2-50mm² THHN COPPER WIRE 1-14mm² TW GROUND WIRE	IN 50mmØ PVC PIPE
TOTAL			117800	64.22	66.86	147.6	119.2			
COMPUTATION :				OVER CURRENT PROTECTION USE : 500AT, 630AF, 3P, 230V, MCCB IN NEMA 3R						
IT = 166.86 * 1.732 + 119.2 + (0.25*104)										
IT = 434.20AMP.				MAIN FEEDER : USE : 2 SETS OF 3 - 125mm² THHN & 1-50mm² TW GROUND WIRE IN 80mmØ IMC PIPE / 2Y125						

1 SCHEDULE OF LOADS

NOT TO SCALE



Republika ng Pilipinas
Lungsod ng Quezon
CITY ENGINEERING DEPARTMENT

PROJECT TITLE :
**PROPOSED UPGRADING OF ELECTRICAL
SYSTEM AT CARLOS P. ROMULO SENIOR HIGH
SCHOOL**

PROJECT LOCATION :
BARANGAY BAGONG PAG-ASA, DISTRICT 1 QUEZON CITY

DRAWN BY: 
DATE:
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 CONTENT
SCHEDULE OF LOADS

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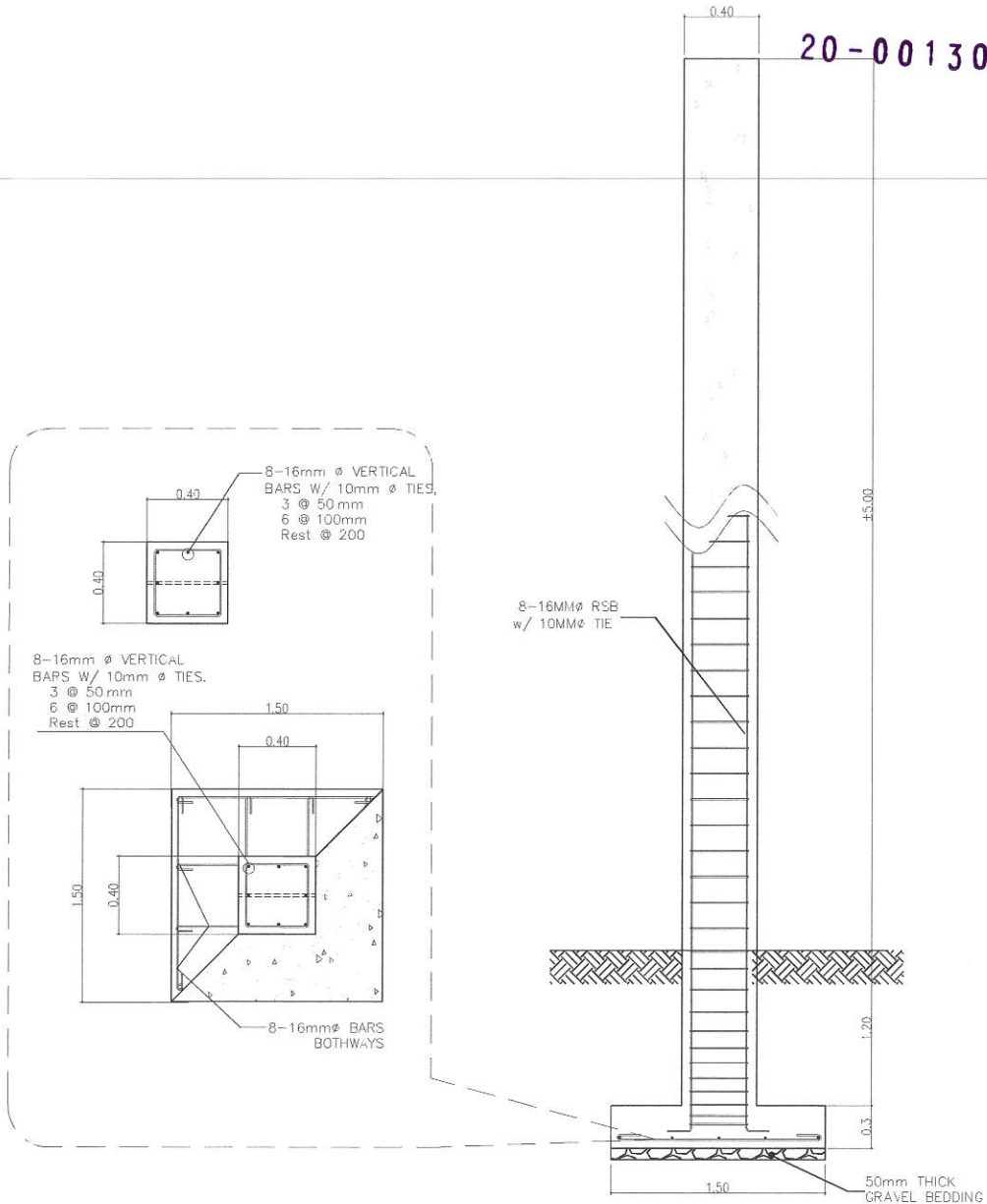
**EL
06**

- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE LATEST BUILDING CODE OF AMERICAN CONCRETE INSTITUTE (ACI-318)
- ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS WITH CORRESPONDING MAXIMUM SIZE AGGREGATE AND SLUMPS AS FOLLOWS

LOCATION	STRENGTH	MAX SIZE OF AGGREGATES	MAX SLUMP
a. SLAB ON GRADE, CURBS, PAVEMENTS, WALL FOOTING	3000 Psi (20.685 MPa)	1 in (25 mm)	4 in (100mm)
b. BEAMS, COLUMNS, FOOTINGS, SUSPENDED SLAB	3000 Psi (20.685 MPa)	3/4 in (19mm)	4 in (100mm)
- ALL REINFORCING BARS SHALL CONFORM TO PNS49 GRADE 275 FOR 12MM AND SMALLER BARS AND GRADE 415 FOR 16mm AND LARGER BARS.
- IN GENERAL THE LATEST EDITION OF ACI 315, MANUAL OF STANDARD PRACTICE DETAILING REINFORCED CONCRETE STRUCTURES SHALL BE ADHERED TO UNLESS OTHERWISE SHOWN OR NOTED.
- MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS:

CONCRETE DEPOSITED DIRECTLY AGAINST GROUND	75mm
SUSPENDED SLABS	20mm
SLAB ON GRADE	40 mm
WALLS ABOVE GRADE	25 mm
BEAMS & COLUMNS	40mm
- SPLICES SHALL BE SECURELY WIRED TOGETHER AND SHALL LAP OR EXTEND IN ACCORDANCE WITH TABLE 1 (TABLE OF LAP SPLICE AND ANCHORAGE LENGTH UNLESS OTHERWISE SHOWN ON DRAWINGS SPLICES SHALL BE STAGGERED WHENEVER POSSIBLE.)
- ALL ANCHOR BOLTS, DOWELS AND OTHER INSERTS SHALL BE PROPERLY POSITIONED AND SECURED IN PLACE PRIOR PLACING OF CONCRETE
- CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEOUS CURBS, SILLS, STOOLS, EQUIPMENTS & MECHANICAL BASES THAT ARE REQUIRED BY THE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS.
- ALL CONCRETE SHALL BE KEPT MOIST FOR A MINIMUM OF SEVEN (7) CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE OF WET BURLAP, FOG SPRAYING, CURING COMPOUNDS OR OTHER APPROVED METHODS.
- STRIPPING OF FORMS AND SHORES:

FOUNDATION	24 HRS.
SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED	8 DAYS
WALL	21 DAYS
BEAMS	14 DAYS
COLUMNS	21 DAYS
- DEVELOPMENT LENGTH FOR ALL BARS SHALL BE A MINIMUM OF 50 BAR DIAMETER UNLESS OTHERWISE NOTED STRUCTURAL STEEL AND PLATES.
- ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM (A-36) SPECIFICATIONS WITH MINIMUM YIELD STRENGTH, $f_y = 250 \text{ MPa}$
- ANCHOR & FASTENER BOLTS. ALL BOLTS SHALL CONFORM TO ASTM (A-307) SPECIFICATIONS
- WELDING RODS. ALL WELDING RODS SHALL BE MILD STEEL ELECTRODE. LOW HYDROGEN E7018 WITH MINIMUM YIELD STRENGTH = 420 MPa
- FOUNDATION IS DESIGNED BASED ON NATIONAL BUILDING CODE OF THE PHILIPPINES FOR AN ALLOWABLE SOIL BEARING CAPACITY OF 240KPa
- FOUNDATION SHALL REST ON NATURAL SOIL. UNLESS OTHERWISE NOTED BY THE ENGINEER. NO PART OF THE FOUNDATION SHALL REST ON FILL
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER UPON COMPLETION OF FOUNDATION EXCAVATION FOR ACTUAL SOIL CONDITIONS WHICH DO NOT CONFORM TO THE SOIL BEARING CAPACITY FOR PROPER REVISION.



1 GENERAL NOTES ON REINFORCEMENT

2 CONCRETE DISTRIBUTION POST DETAILS

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GENERAL NOTES ON
REINFORCEMENT
CONCRETE DISTRIBUTION
POST DETAILS

SHEET NO.

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01**