GENERAL NOTES AND SPECIFICATIONS:

1. ALL WORK HEREIN SHALL BE DONE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
2. ELECTRICAL WORKS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, MUNICIPAL/CITY LAWS AND ORDINANCES AND THE REGULATIONS FO THE LOCAL POWER AND TELEPHONE COMPANY.
3. THE JOB SHALL BE EXECUTED IN THE MOST THOROUGH PROMPT AND WORKMANLIKE MANNER EMPLOYING STANDARD TOOLS, EQUIPMENT, METHODS AND GOOD ENGINEERING PRACTICE. THE JOB SHALL BE DONE IN ALL ASPECTS AS REQUIRED PER PLANS AND SPECIFICATIONS AND READY FOR OPERATION.
4. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PERSENT A GENERAL LAYOUT AND BROAD OUTLINE/DESCRIPTION OF THE PROJECT, BUT DO NOT NECESSARILY INDICATE OR DESCRIBE ACTUAL LOCATIONS, LEVELS AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENTS AT THE JOBSITE THAT ARE GOVERNED BY ACTUAL FIELD CONDITION.
5. SERVICE VOLTAGE TO THE BUILDING FROM THE POWER SOURCE SHALL BE 230V.
6. SERVICE ENTRANCE WIRING SHALL BE RIGID STEEL CONDUIT (RSC).
7. FEEDER WIRING SHALL BE ELECTRICAL METALLIC TUBING (EMT).
8. BRANCH CIRCUIT WIRING ELECTRICAL METALLIC TUBING (EMT).
9. BRANCH CIRCUIT WIRING EMBEDDED IN CONCRETE SHALL BE IN PVC PIPE WITH ADEQUATE GROUND WIRE FOR EQUIPMENT GROUNDING.
10. LIGHT SWITCHES SHALL BE 15A, 230VAC.
11. ALL MATERIALS SHALL BE BRAND NEW AND OF APPROVED TYPE FOR LOCATION AND PURPOSE INTENDED.
12. DEVICES, FIXTURES LOCATED OUTDOOR SHALL BE WEATHERPROOF TYPE.
13. MOUNTING HEIGHTS ARE:

A.	LIGHT SWITCHES	1.40M ABOVE FLOOR FINISH
B.	CONVENIENCE OUTLETS	0.30M ABOVE FLOOR FINISH
C.	COUNTER TOP C.O,	0.40M TO .50M ABOVE THE COUNTER
D.	TELEPHONE OUTLETS	0.30M ABOVE FLOOR FINISH
E.	PANEL BOARD	1.50M ABOVE FLOOR FINISH
F.	EMERGENCY LIGHT	0.30M BELOW CEILING LINE

14. ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION OR DECISION.
15. THE ENTIRE WORK SHALL BE DONE UNDER THE DIRECT SUPERVISION OF DULY REGISTERED ELECTRICAL ENGINEER.
16. REFER TO SHEET E-2 FOR EXACT NUMBER AND LOCATION OF DEVICES/EQUIPMENT FOR ELECTRICAL SYSTEM. ANY CONFLICT ON QUANTITY AND/OR LAYOUT MUST BE VERIFIED AND CONFIRMED TO DESIGNER/CONSULTANT.
17. REFER TO LOAD SCHEDULE FOR THE RATING OF INDIVIDUAL ENCL, ACB'S IN NEMA-3R.
18. ALL ELECTRICAL CONDUITS AND TELEPHONE SERVICE ENTRANCE THAT INSTALLED BELOW THE GROUND SHALL BE IN CONCRETE ENCASEMENT.
19. ANY DEVICES OR EQUIPMENT NOT REFLECTED OR SHOWN ON PLANS BUT REQUIRED TO COMPLETE THE SYSTEM MUST BE INCLUDED ON SCOPE OF WORK.
20. REQUEST FOR TEMPORARY POWER INTERRUPTION SHOULD BE COORDINATED TO OWNER'S REPRESENTATIVE OR DESIGNER.
21. THE SIZE OF GENERATOR IS 40% OF THE TOTAL VA LOAD. THIS IS INTENDED TO SUPPLY ELECTRIC POWER FOR LIGHTINGS AND OTHER IMPORTANT APPLIANCES DURING THE POWER INTERRUPTION OF MAIN POWER SOURCE.

LEGEND AND SYMBOLS :

○	LED DOWNLIGHT, VERTICAL RECESSED, ROUND 12W w/ 6" CASING FIXTURE		CIRCUIT BREAKER WITH NEMA 3R METAL ENCLOSURE
▭	1-9W LED TUBE LIGHT WITH DIFFUSER, 2 FT. LENGTH (FL)	18 AC CONDENSER	ACU CONDENSER OUT DOOR UNIT WITH NEMA 3R CIRCUIT BREAKER
▭	2-9W LED TUBE LIGHT WITH DIFFUSER, 2 FT. LENGTH (FL)	18	ACU WALL/FLOOR MOUNTED, SPLIT TYPE, INDOOR UNIT
▭	1-18W LED TUBE LIGHT WITH DIFFUSER, 4 FT. LENGTH (FL)		ELECTRICAL LINE
▭	2-18W LED TUBE LIGHT WITH DIFFUSER, 4 FT. LENGTH (FL)		LIGHTING SWITCH
EL	EMERGENCY LIGHT (EL)		CIRCUIT HOMERUN
S_1, S_A	ONE GANG SWITCH	1LPP1	CIRCUIT NUMBER
S_2, S_{AB}	TWO GANG SWITCH		PANEL BOARD
S_3	THREE GANG SWITCH		SERVICE ENTRANCE
S_{3W}, S_{a3W}	THREE WAY SWITCH	M	KILOWATT HOUR METER
	TWO GANG CONVENIENCE OUTLET	CP. 1	CONSTRUCTION POINTS
$_{WP}$	WEATHER-PROOF TWO GANG CONVENIENCE OUTLET		SECONDARY STEEL POLE
	TWO GANG CONVENIENCE OUTLET (FLOOR MOUNTED)		SECONDARY CONCRETE POLE
$_{SPO}$, $_{SPO}$	TWO GANG SPECIAL POWER OUTLET / TWO GANG SPECIAL POWER OUTLET (FLOOR MOUNTED)	●	PRIMARY CONCRETE POLE
	THREE PIN ACU OUTLET	■	SERVICE ENTRANCE CONCRETE PEDESTAL
AC	ACU WINDOW TYPE		TRUSS/DOWN GUY SUPPORT

VICINITY MAP

PREPARED BY:	END USER:	REVIEWED BY:		ENDORSED BY:	REC. APPROVAL:		APPROVED BY:	PROJECT TITLE/ LOCATION:	IMPLEMENTING AGENCY:	SHT NO:
R. J. R. SANCHEZ PDU OVPPD	J. L. REYES CAMPUS ADMINISTRATOR CvSU SILANG	R. P. PEÑA PROF. ELEC. ENGINEER	S. B. BAYOT JR. HEAD PDU	O. B. DELOS REYES DIRECTOR PLANNING AND DEVT. OFFICE	M. J. D. TEPORA VPPD CVSU	J. X. B. NEPOMUCENO VPASS CVSU	H. D. ROBLES PRES CVSU	IMPROVEMENT OF ELECTRICAL POWER SYSTEM OF CvSU SILANG CAMPUS CAVITE STATE UNIVERSITY SILANG CAMPUS	CAVITE STATE UNIVERSITY	E - 1

CONSTRUCTION POINTS

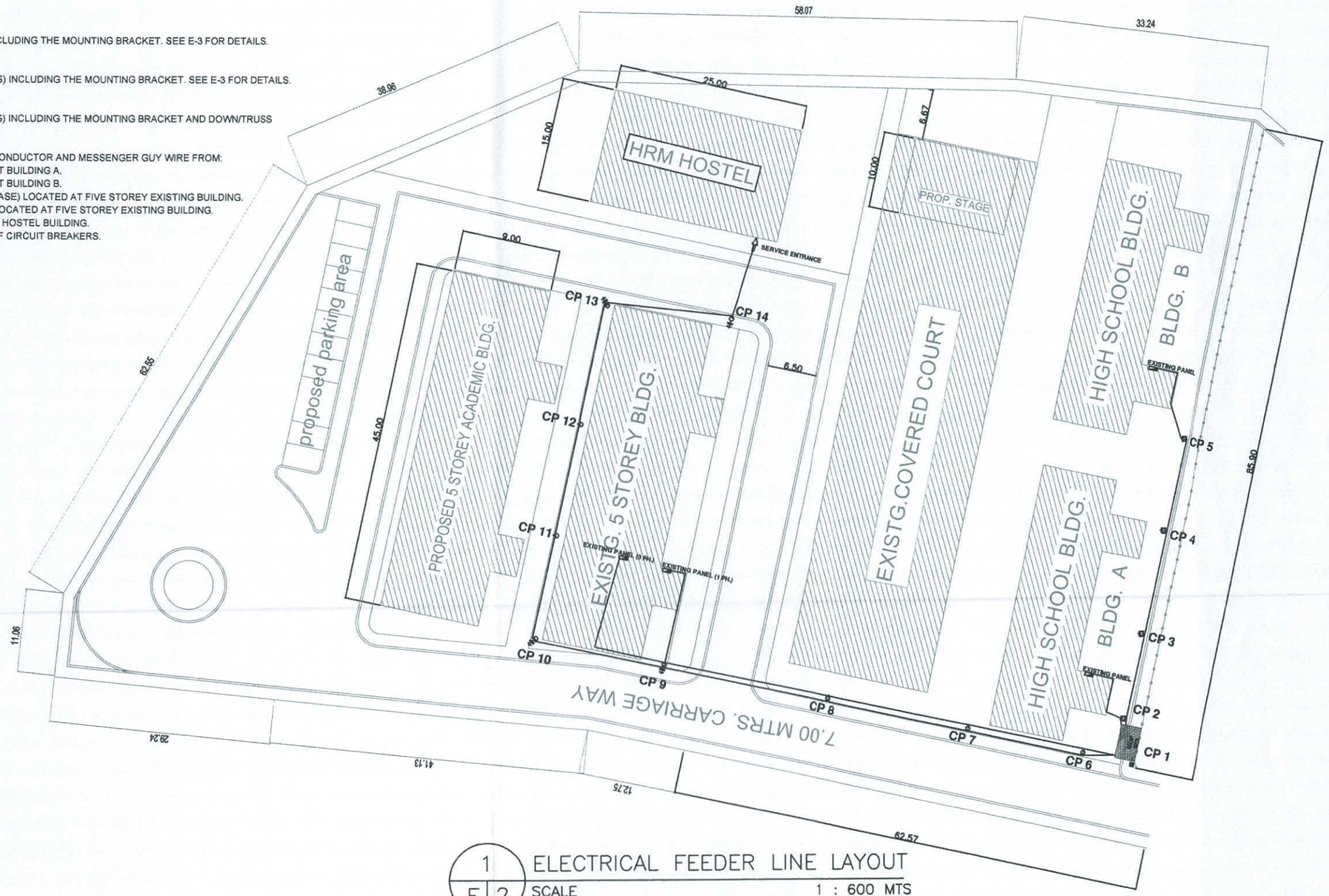
CP1
-CONSTRUCTION OF ELECTRICAL HOUSE IN ACCORDANCE WITH THE PLAN (A-1 & S-1).
-SUPPLY AND INSTALLATION OF PANEL BOARDS, BUSBAR GUTTER AND CIRCUIT BREAKERS FOR MAIN DISTRIBUTION PANEL MDP (SEE SCHEDULE OF LOAD FOR SPECIFICATIONS).
-INSTALLATION OF CONDUCTOR WIRES, CONDUIT PIPES AND SUPPORT BRACKETS.
-INSTALLATION OF SERVICE ENTRANCE CONCRETE PEDESTAL WITH CONDUIT PIPES, THHN/THWN COPPER CONDUCTOR WIRES, SUPPORT BRACKETS AND ACCESSORIES. SEE E-3 FOR DETAILS.
-INCLUDE TAPPING/TERMINATION OF WIRES TO SOURCE.

CP2, CP3, CP4 AND CP5
-SUPPLY AND INSTALLATION OF SECONDARY STEEL POLES (4 SETS) INCLUDING THE MOUNTING BRACKET. SEE E-3 FOR DETAILS.

CP6, CP7, CP8, CP11, AND CP12
-SUPPLY AND INSTALLATION OF SECONDARY CONCRETE POLES (5 SETS) INCLUDING THE MOUNTING BRACKET. SEE E-3 FOR DETAILS.

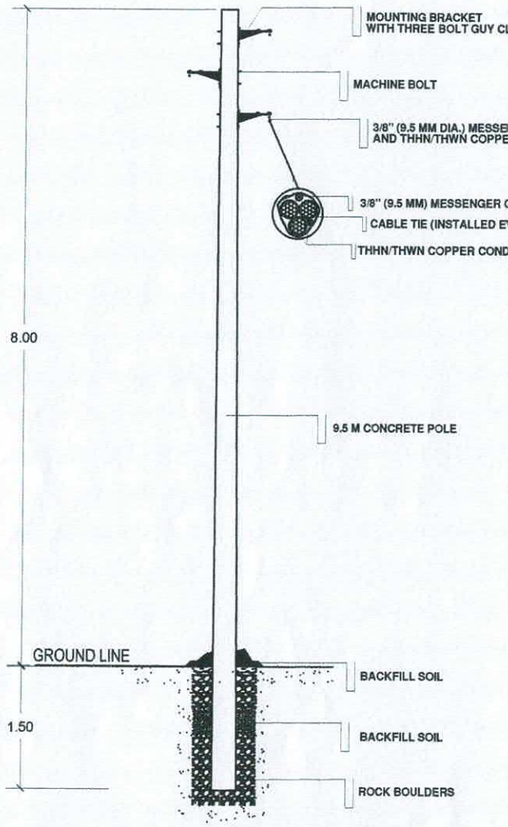
CP9, CP10, CP13 AND CP14
-SUPPLY AND INSTALLATION OF SECONDARY CONCRETE POLES (4 SETS) INCLUDING THE MOUNTING BRACKET AND DOWN/TRUSS GUY. SEE E-3 FOR DETAILS.

SUPPLY AND INSTALLATION, CABLE PULLING OF THHN/THWN COPPER CONDUCTOR AND MESSENGER GUY WIRE FROM:
-MDP LOCATED AT ELECTRICAL HOUSE TO EXISTING PANEL LOCATED AT BUILDING A.
-MDP LOCATED AT ELECTRICAL HOUSE TO EXISTING PANEL LOCATED AT BUILDING B.
-MDP LOCATED AT ELECTRICAL HOUSE TO EXISTING PANEL (SINGLE PHASE) LOCATED AT FIVE STOREY EXISTING BUILDING.
-MDP LOCATED AT ELECTRICAL HOUSE TO EXISTING PANEL (3 PHASE) LOCATED AT FIVE STOREY EXISTING BUILDING.
-MDP LOCATED AT ELECTRICAL HOUSE TO SERVICE ENTRANCE OF HRM HOSTEL BUILDING.
NOTE: INCLUDE TAPPING TO THE PANEL BOARDS AND ENERGIZATION OF CIRCUIT BREAKERS.



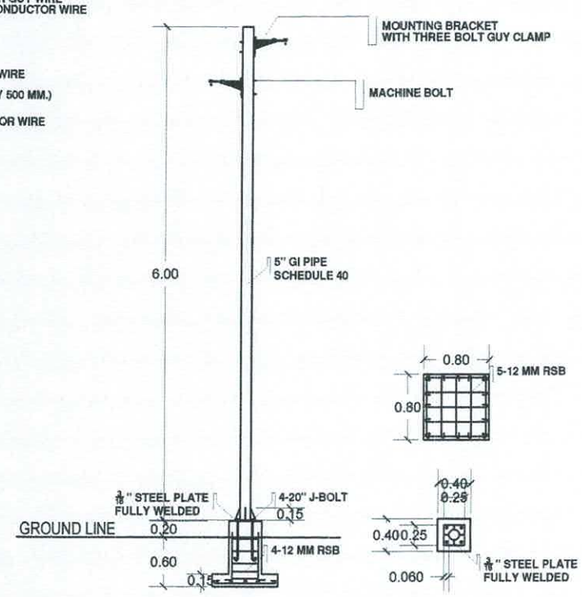
1 / E 2 ELECTRICAL FEEDER LINE LAYOUT
SCALE 1 : 600 MTS

PREPARED BY:	END USER:	REVIEWED BY:		ENDORSED BY:	REC. APPROVAL:		APPROVED BY:	PROJECT TITLE/ LOCATION:	IMPLEMENTING AGENCY:	SHT NO:
R. J. R. SANCHEZ PDU OVPPD	J. L. REYES CAMPUS ADMINISTRATOR CvSU SILANG	R. P. PEÑA PROF. ELEC. ENGINEER	S. B. BAYOT JR. HEAD PDU	O. B. DELOS REYES DIRECTOR PLANNING AND DEVT. OFFICE	M. J. D. TEPORA VPPD CVSU	J. X. B. NEPOMUCENO VPASS CVSU	H. D. ROBLES PRES CVSU	IMPROVEMENT OF ELECTRICAL POWER SYSTEM OF CvSU SILANG CAMPUS CAVITE STATE UNIVERSITY SILANG CAMPUS	CAVITE STATE UNIVERSITY	E - 2



1 / E 3 SECONDARY CONCRETE POLE DETAILS

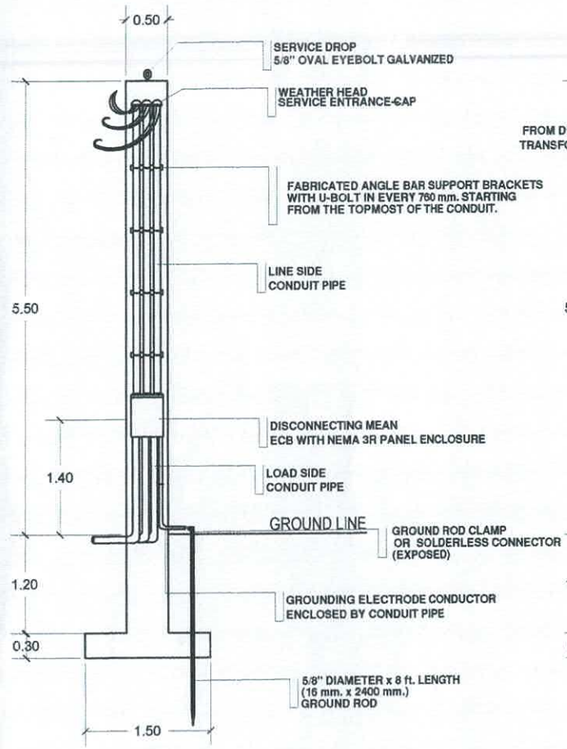
SCALE 1:75



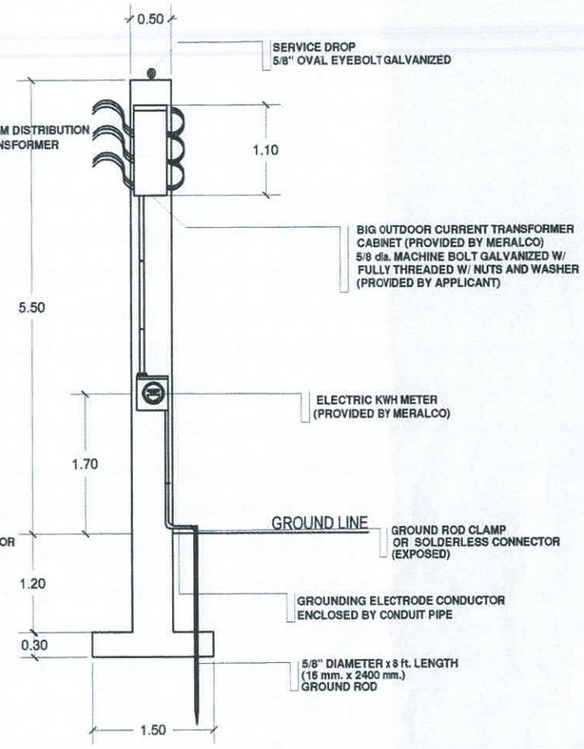
2 / E 3 SECONDARY STEEL POLE WITH PEDESTAL DETAILS

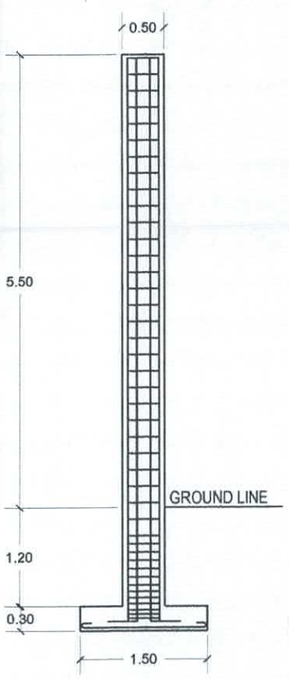
SCALE 1:75

FRONT VIEW



REAR VIEW



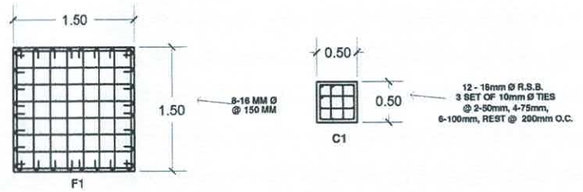


SCHEDULE OF FOOTINGS

NAME	TYPE	THICKNESS	SIZE (LxW)	DEPTH	REINFORCEMENT	
					BOTTOM	
					ALONG L	ALONG W
F1	ISOLATED	300 MM	1500 x 1500 MM	1500 MM	8-16 MM Ø @ 150 MM	8-16 MM Ø @ 150 MM

COLUMN	DIMENSION	REINFORCEMENT	NO. OF TIES & SPACING
C1	500 MM X 500 MM	12 - 16mm Ø R.S.B.	3 SET OF 10mm Ø TIES @ 2-50mm, 4-75mm, 6-100mm, REST @ 200mm O.C.

COLUMN DETAILS



3 / E 3 SERVICE ENTRANCE CONCRETE PEDESTAL DETAILS

SCALE 1:75

PREPARED BY:	END USER:	REVIEWED BY:		ENDORSED BY:	REC. APPROVAL:		APPROVED BY:	PROJECT TITLE/ LOCATION:	IMPLEMENTING AGENCY:	SHT NO:
R. J. R. SANCHEZ PDU OVPPD	J. L. REYES CAMPUS ADMINISTRATOR CvSU SILANG	R. P. PEÑA PROF. ELEC. ENGINEER	S. B. BAYOT JR. HEAD PDU	O. B. DELOS REYES DIRECTOR PLANNING AND DEVT. OFFICE	M. J. D. TEPORA VPPD CVSU	J. X. B. NEPOMUCENO VPASS CVSU	H. D. ROBLES PRES CVSU	IMPROVEMENT OF ELECTRICAL POWER SYSTEM OF CvSU SILANG CAMPUS CAVITE STATE UNIVERSITY SILANG CAMPUS	CAVITE STATE UNIVERSITY	E - 3

SCHEDULE OF LOADS AND COMPUTATIONS:

PANEL : MDP (MAIN DISTRIBUTION PANEL) **CABLE:** 3 - 3 - 250.0 SQMM THHN+ 3 - 50.0 SQMM THW **MAIN:** 1200 AT, 1300 AF, 3P, 230V,MCCB
CONDUIT: RSC/IMC, 3 - 90 MM DIA. **ENCLOSURE:** NEMA 1
PHASE: 3 **MOUNTING:** SURFACE
VOLTS: 230 **LOCATION:** ELECTRICAL HOUSE

CKT NO.	CIRCUIT DESCRIPTION	PANEL	LOAD IN RATING						CIRCUIT PROTECTION	Size and type of Conductor THHN/THWN COPPER CONDUCTOR			Size Of Conduit In MM ø	Color Code
			Volt- Amp	VOLT	AMPERES									
					3 ø	AB	CA	BC	CIRCUIT BREAKER RATING	SQ. MM THHN		SQ. MM THW(G)		
1	SINGLE PHASE DISTRIBUTION PANEL 1	SDP1	36800	230	0	160			200AT, 3P, 230V, MCCB	2 - 100.0	+	G 30.0	RSC/IMC, 50	1R,1B, G
2	SINGLE PHASE DISTRIBUTION PANEL 2	SDP2	36800	230	0		160		200AT, 3P, 230V, MCCB	2 - 100.0	+	G 30.0	RSC/IMC, 50	1B,1Y, G
3	SINGLE PHASE DISTRIBUTION PANEL 3	SDP3	36800	230	0			160	200AT, 3P, 230V, MCCB	2 - 100.0	+	G 30.0	RSC/IMC, 50	1Y,1R, G
4	THREE PHASE DISTRIBUTION PANEL 1	TDP1	60000	230	0	150	150	150	250AT, 3P, 230V, MCCB	3 - 125.0	+	G 30.0	RSC/IMC, 65	1R,1B,1Y, G
5	THREE PHASE DISTRIBUTION PANEL 2	TDP2	60000	230	0	150	150	150	250AT, 3P, 230V, MCCB	3 - 125.0	+	G 30.0	RSC/IMC, 65	1R,1B,1Y, G
6	THREE PHASE DISTRIBUTION PANEL 3	TDP3	100000	230	0	250	250	250	400AT, 3P, 230V, MCCB	3 - 200.0	+	G 50.0	RSC/IMC, 80	1R,1B,1Y, G
7	LIGHTING POWER PANEL	LPP	300	230	0	1			15AT, 2P, 230V, MCCB	2 - 2.0			PVC, 20	1R,1B
	TOTAL		330700	230	0	711	710	710	1200 AT, 3P, 230V, MCCB	3 - 3 - 250.0	+	G 3 - 50.0	RSC/IMC, 3 - 90	1R,1B,1Y, G

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

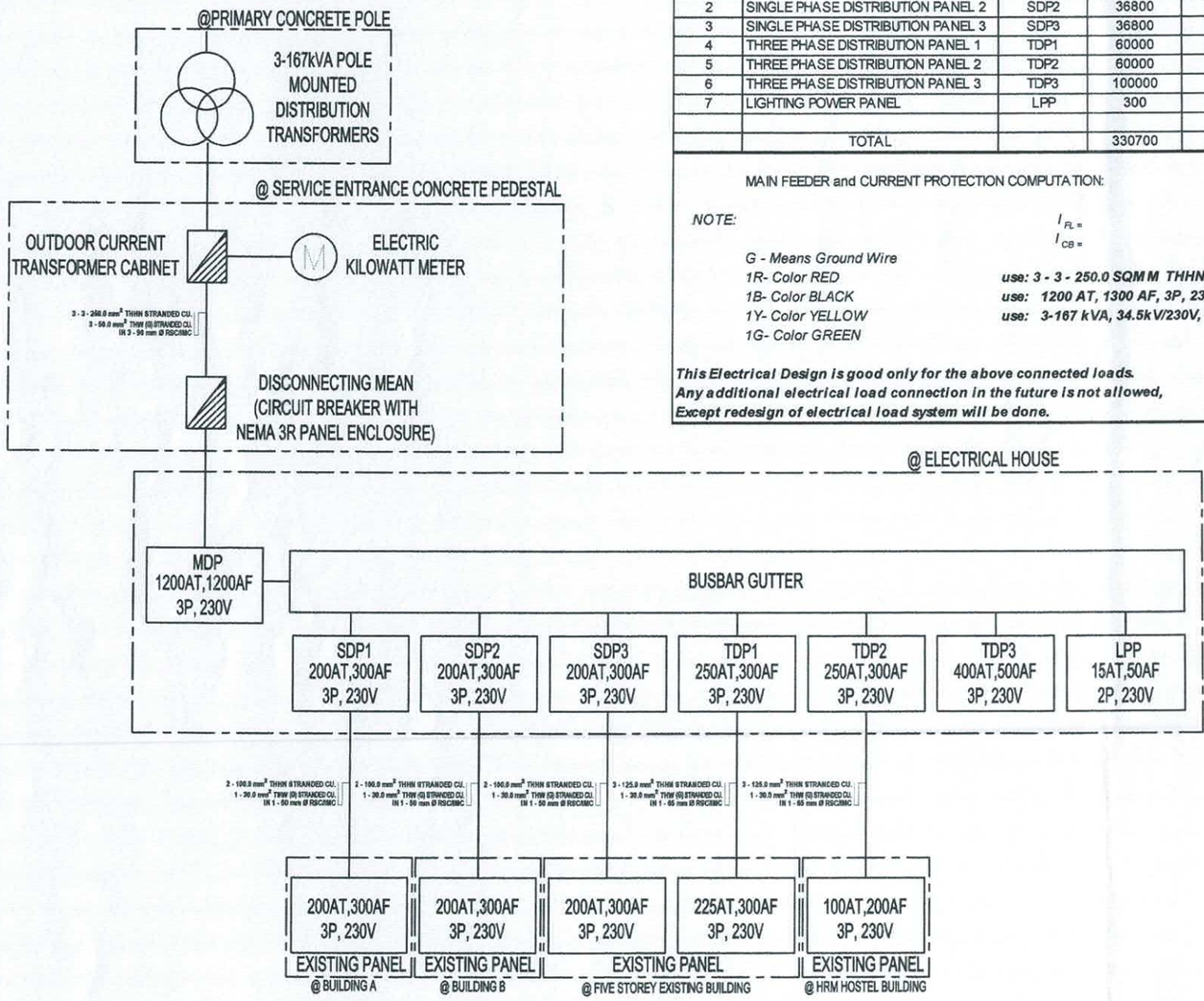
NOTE:

I_{FL} = (711 x 1.732)) x DF = 985.16 *Amperes*
I_{CB} = (711 x 1.732)) x DF = 985.16 *Amperes*

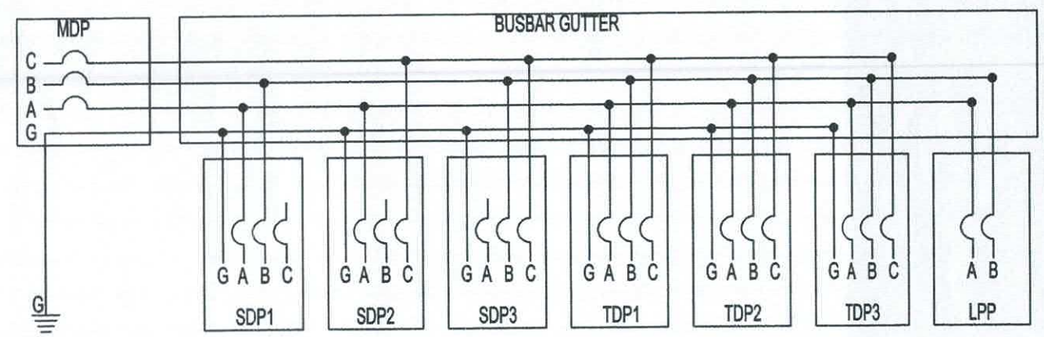
G - Means Ground Wire
1R- Color RED
1B- Color BLACK
1Y- Color YELLOW
1G- Color GREEN

use: 3 - 3 - 250.0 SQMM THHN+ 3 - 50.0 SQMM THW IN 3 - 90 MM DIA. RSC/IMC
use: 1200 AT, 1300 AF, 3P, 230V,MCCB
use: 3-167 kVA, 34.5kV/230V, POLE MOUNTED, DISTRIBUTION TRANSFORMER

This Electrical Design is good only for the above connected loads.
Any additional electrical load connection in the future is not allowed,
Except redesign of electrical load system will be done.

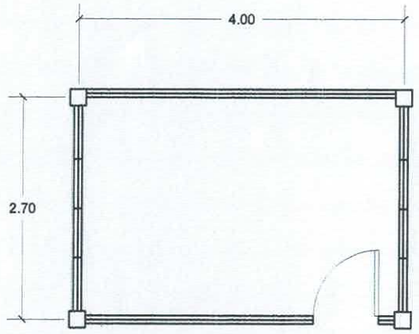


1 / E 4 SINGLE LINE DIAGRAM
SCALE N T S



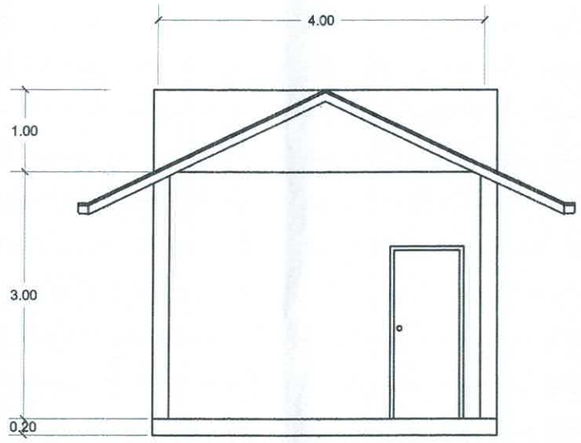
2 / E 4 PANEL BOARD AND BUSBAR GUTTER DETAILS
SCALE N T S

PREPARED BY:	END USER:	REVIEWED BY:		ENDORSED BY:	REC. APPROVAL:		APPROVED BY:	PROJECT TITLE/ LOCATION:	IMPLEMENTING AGENCY:	SHT NO:
R. J. R. SANCHEZ PDU OVPPD	J. L. REYES CAMPUS ADMINISTRATOR CvSU SILANG	R. P. PEÑA PROF. ELEC. ENGINEER	S. B. BAYOT JR. HEAD PDU	O. B. DELOS REYES DIRECTOR PLANNING AND DEVT. OFFICE	M. J. D. TEPORA VPPD CVSU	J. X. B. NEPOMUCENO VPASS CVSU	H. D. ROBLES PRES CVSU	IMPROVEMENT OF ELECTRICAL POWER SYSTEM OF CvSU SILANG CAMPUS CAVITE STATE UNIVERSITY SILANG CAMPUS	CAVITE STATE UNIVERSITY	E - 4



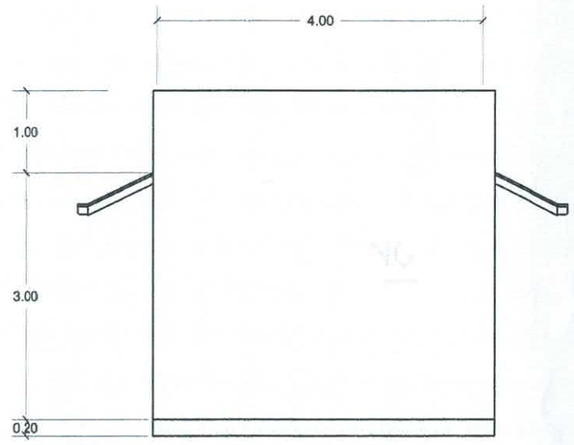
FLOOR PLAN

SCALE 1 :75 MTS



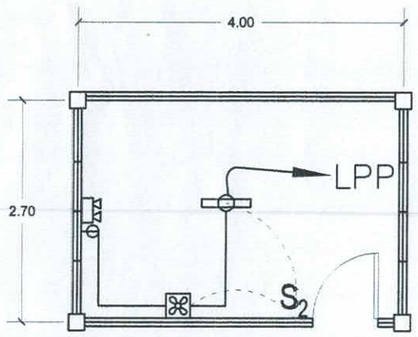
FRONT ELEVATION

SCALE 1 :75 MTS



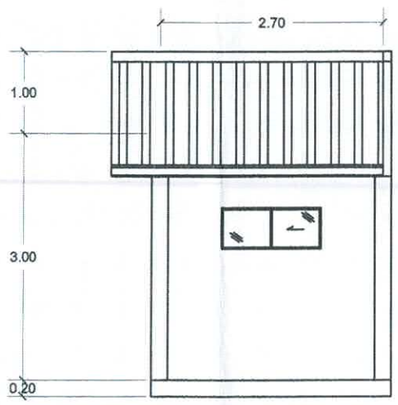
REAR ELEVATION

SCALE 1 :75 MTS



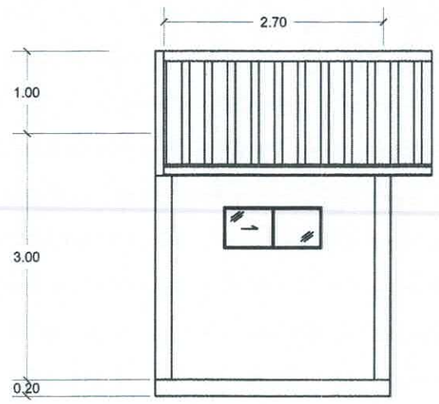
LIGHTING AND EXHAUST FAN LAYOUT

SCALE 1 :75 MTS



RIGHT SIDE ELEVATION

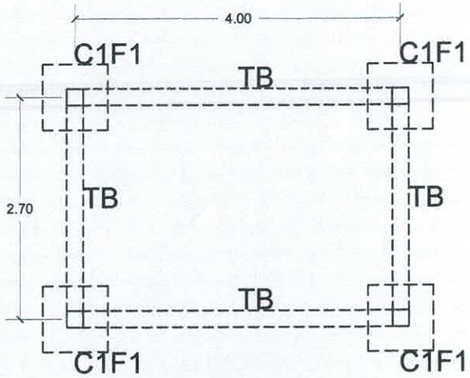
SCALE 1 :75 MTS



LEFT SIDE ELEVATION

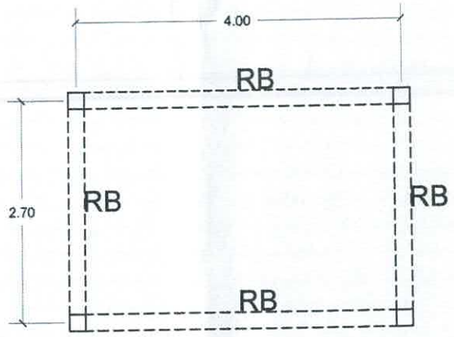
SCALE 1 :75 MTS

PREPARED BY:	END USER:	REVIEWED BY:		ENDORSED BY:	REC. APPROVAL:		APPROVED BY:	PROJECT TITLE/ LOCATION:	IMPLEMENTING AGENCY:	SHT NO:
R. J. M. PASCUAL PDU OVPPD	J. L. REYES CAMPUS ADMINISTRATOR CvSU SILANG	E. N. RODEROS JR. ARCHITECT	S. B. BAYOT JR. HEAD PDU	O. B. DELOS REYES DIRECTOR PLANNING AND DEVT. OFFICE	M. J. D. TEPORA VPPD CVSU	J. X. B. NEPOMUCENO VPASS CVSU	H. D. ROBLES PRES CVSU	IMPROVEMENT OF ELECTRICAL POWER SYSTEM OF CvSU SILANG CAMPUS CAVITE STATE UNIVERSITY SILANG CAMPUS	CAVITE STATE UNIVERSITY	A - 1



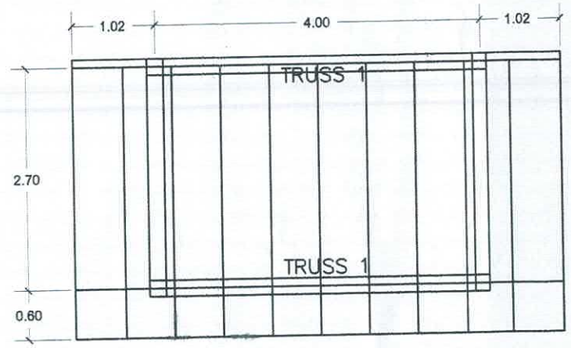
FOUNDATION PLAN

SCALE 1 :75 MTS



ROOF BEAM PLAN

SCALE 1 :75 MTS



ROOF FRAMING PLAN

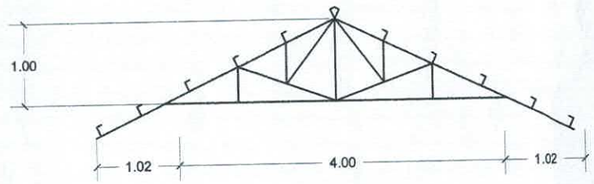
SCALE 1 :75 MTS

SCHEDULE OF COLUMNS

COLUMN	DIMENSION	REINFORCEMENT	NO. OF TIES & SPACING
C1	200 MM X 200 MM	4 - 16mm Ø R.S.B.	2 SETS OF 10mm Ø TIES @ 2-50mm, 4-75mm, 6-100mm, REST @ 200mm O.C.

SCHEDULE OF FOOTINGS

NAME	TYPE	THICKNESS	SIZE (LxW)	DEPTH	REINFORCEMENT			
					TOP		BOTTOM	
					ALONG L	ALONG W	ALONG L	ALONG W
F1	ISOLATED	200 MM	800 x 800 MM	1000 MM	----	----	4-16 MM Ø @ 150 MM	4 -16 MM Ø @ 150 MM



TRUSS 1

NOTE:

USE THE FOLLOWING:

- 2 - 1.5" X 1.5" X ⅛" THK. ANGULAR BAR FOR TOP CHORDS, BOTTOM CHORDS, & KING POSTS ON TRUSS 1 & LT1
- 2 - 1.5" x 1.5"X ⅛" THK. ANGULAR BAR FOR WEB MEMBERS ON TRUSS 1 & LT1
- 6mm THICK GUSSET PLATES ON ALL JOINTS
- 50mm x 150mm x 1.5mm CEE PURLINS SPACED @ 0.60m O.C.
- 12mm THICK BASE PLATES

TRUSS DETAILS

SCALE 1 :75 MTS

SCHEDULE OF BEAMS

BEAM	DIMENSION	SUPPORT		MID-SPAN		BAR ARRANGEMENT		STIRRUPS REMARKS	ADDT. REMARKS
		TOP	BOTTOM	TOP	BOTTOM	SUPPORT	MID-SPAN		
TB	200mm X 300mm	2-16 MM Ø	2-16 MM Ø	2-16 MM Ø	2-16 MM Ø			10mm Ø STIRRUPS 4 - 50mm, 6 - 75mm, 6 -100mm REST @ 200mm O.C.	USE 2 - 12mm Ø STIFFENER BARS
RB	200mm X 300mm	2-16 MM Ø	2-16 MM Ø	2-16 MM Ø	2-16 MM Ø			- DO -	- DO -

PREPARED BY:	END USER:	REVIEWED BY:		ENDORSED BY:	REC. APPROVAL:		APPROVED BY:	PROJECT TITLE/ LOCATION:	IMPLEMENTING AGENCY:	SHT NO:
R. J. M. PASCUAL PDU OVPPD	J. L. REYES CAMPUS ADMINISTRATOR CvSU SILANG	L. E. ROCELA CIVIL ENGINEER	S. B. BAYOT JR. HEAD PDU	O. B. DELOS REYES DIRECTOR PLANNING AND DEVT. OFFICE	M. J. D. TEHORA VPPD CVSU	J. X. E. NEPOMUCENO VPASS CVSU	H. D. ROBLES PRES CVSU	IMPROVEMENT OF ELECTRICAL POWER SYSTEM OF CvSU SILANG CAMPUS CAVITE STATE UNIVERSITY SILANG CAMPUS	CAVITE STATE UNIVERSITY	S - 1