

DRAWING INDEX

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LEGEND, SYMBOLS AND ABBREVIATIONS

WATER DISTRIBUTION SYSTEM

	CWL	COLD WATER LINE
	CWR	COLD WATER RISER
	CWDF	COLD WATER DOWNFEED
	HWL	HOT WATER LINE
	HWR	HOT WATER RISER
	HWDF	HOT WATER DOWNFEED
	HB	HOSE BIBB
	GV	GATE VALVE
	WM	WATER METER
	CV	CHECK VALVE
	PRV	PRESSURE REDUCING VALVE
	QC	QUICK COUPLER

WASTE, SEWER & VENT SYSTEM

	SP	SOIL PIPE
	WP / KWP	WASTE PIPE / KITCHEN WASTE PIPE
	VAC	VENT AT CEILING
	FCO	FLOOR CLEANOUT
	CCO	CEILING CLEANOUT
	VS/WS/SS	VENT / WASTE / SOIL STACK
	FD	FLOOR DRAIN
	VSTR	VENT STACK THRU ROOF
	VSTD	VENT STACK THRU DECK

STORM DRAINAGE SYSTEM

	DP	DRAIN PIPE
	ACDP	AIRCON DRAIN PIPE
	INS.	INSULATION
	FCUD/ACUD	FAN COIL UNIT DRAIN / AIRCON UNIT DRAIN
	DS / PDS / PLDS	DOWNSPOUT / PARKING DRAIN STACK / PLASTER DRAIN STACK
	ACDS	AIRCON DRAIN STACK
	DD / LD	DECK DRAIN / LEDGE DRAIN
	AD / CB	AREA DRAIN/CATCH BASIN
	FDF	FLOOR DRAIN W/ FUNNEL
	T&G	TRENCH & GRATING
	TD	TRENCH DRAIN
	PD	PARKING DRAIN

PLUMBING FIXTURES

	WC	WATER CLOSET
	URI	URINAL
	LAV	LAVATORY
	KS / PS	KITCHEN SINK / PANTRY SINK
	GT	GREASE TRAP

OTHERS

	S	SLOPE
	STP	SEWAGE TREATMENT PLANT
	WWTP	WASTE WATER TREATMENT PLANT
		PUMPS

MATERIAL SPECIFICATIONS

COLD WATER LINES

FROM TAPPING POINT TO WATER METER TO DISTRIBUTION TO RISERS AND DOWNFEEDS SHALL BE POLYPROPYLENE PIPE AND FITTINGS, PN-20 MINIMUM RATING. JOINTING SHALL BE SOCKET FUSION. "WAVEN", "ECOTECH", "UNITEC" BRAND OR APPROVED EQUAL.

FOR PUMP PIPING SHALL BE GALVANIZED IRON (G.I.) PIPES, SCHEDULE 40, CONFORMING TO ASTM A-120-80, ASTM A53. FITTINGS SHALL BE CLASS 300. JOINTING SHALL BE FLANGE CONNECTION. "SUPERIOR", "SUPREME" OR APPROVED EQUAL.

FOR ROUGHING-IN OF TOILETS SHALL BE POLYPROPYLENE PIPE AND FITTINGS, PN-20 MINIMUM RATING JOINTING SHALL BE BY SOCKET FUSION. "WAVEN", "ECOTECH", "UNITEC" BRAND OR APPROVED EQUAL.

SCHEDULE OF G.I. PIPE DIAMETER EQUIVALENT TO PPRC / HDPE

DESIGNED PIPE SIZE NOMINAL DIAMETER - G.I. PIPE, SCH. 40 INSIDE DIMENSION (MM)	PIPE DIAMETER EQUIVALENT TO PPRC/HDPE PIPE(PN-20)		PIPE DIAMETER EQUIVALENT TO PPRC/HDPE PIPE(PN-16)	
	OUTSIDE DIMENSION (MM)	THICKNESS (MM)	OUTSIDE DIMENSION (MM)	THICKNESS (MM)
20	32	5.4	25	3.5
25	40	6.7	32	4.4
32	50	8.3	40	6.9
40	63	10.5	63	8.6
50	75	12.5	75	10.3
65	90	15	90	12.3
75	110	18.3	110	15.1
100	140	23.3	140	23.3
150	—	—	—	—
200	—	—	—	—

SEWER/WASTE LINES

FOR LATERAL PIPE, SHALL BE POLYVINYL CHLORIDE (uPVC) PIPES AND FITTINGS, SERIES 1000, PIPE SHALL BE MADE AND MANUFACTURED FROM VIRGIN RIGID PVC (POLYVINYL CHLORIDE VINYL COMPOUNDS WITH A CELL CLASSIFICATION OF 12454 IN CONFORMANCE WITH ASTM D1784. JOINTING SHALL BE SOCKET TYPE WITH SOLVENT CEMENT IN CONFORMANCE TO ASTM D2564. "EMERALD", "ATLANTA", "CROWN PIPES", "MOLDEX" OR APPROVED EQUAL.

VENT LINES / STACKS

SHALL BE POLYVINYL CHLORIDE (uPVC) PIPES AND FITTINGS, SERIES 1000, PIPE SHALL BE MADE AND MANUFACTURED FROM VIRGIN RIGID PVC (POLYVINYL CHLORIDE) VINYL COMPOUNDS WITH A CELL CLASSIFICATION OF 12454 IN CONFORMANCE WITH ASTM D1784. JOINTING SHALL BE SOCKET TYPE WITH SLIP TIGHT RUBBER RING IN CONFORMANCE TO PNS 1008/ISO4633 "EMERALD", "ATLAN", "CROWN PIPES", "MOLDEX" OR APPROVED EQUAL.

DOWNSPOUTS

SHALL BE POLYVINYL CHLORIDE (PVC) PIPES CONFORMING TO ASTM D2729, SERIES 1000 WITH IZOD IMPACT TEST OF 80 JOULES (MINIMUM) AND TENSILE STRENGTH OF 48MPa (MINIMUM). PIPES SHALL BE MADE OF VIRGIN PVC RESIN AND COMPOUND WITH CELL #12454D. FITTINGS SHALL CONFORM TO ASTM 3311. PIPE AND FITTINGS SHALL BE LEAD FREE. JOINTING SHALL BE BY SOLVENT CEMENT. "CROWN PIPES", "EMERALD ULTIMA" OR APPROVED EQUAL.

STORM DRAINAGE COLLECTOR

SHALL BE POLYVINYL CHLORIDE (PVC) PIPES AND FITTINGS, SERIES 1000 II, HIGH IMPACT, "EMERALD", "MOLDEX", "ATLANTA" BRAND OR APPROVED EQUAL. JOINTING SHALL BE BY SOLVENT CEMENT JOINTING CONFORMING TO ASTM D2564. FOR OUTSIDE BUILDING SHALL BE CONCRETE DRAIN PIPE (RCP), TONGUE AND GROOVE, MORTAR JOINTS. REINFORCED FOR 300 MM,ø AND LARGER, UNLESS OTHERWISE SPECIFIED ON PLANS.

PERFORATED PIPES

SHALL BE POLYVINYL CHLORIDE (PVC) PIPES AND FITTINGS, SERIES 1000 II, "EMERALD", "MOLDEX", "CROWN PIPES" BRAND OR APPROVED EQUAL. JOINTING SHALL BE BY SOLVENT CEMENT JOINTING CONFORMING TO ASTM D2564.

FCU/AHU/REFRIGERANT DRAIN LINES

SHALL BE POLYVINYL CHLORIDE (PVC) PIPES AND FITTINGS, SERIES 1000 II, "EMERALD", "MOLDEX", "CROWN PIPES" BRAND OR APPROVED EQUAL. JOINTING SHALL BE BY SOLVENT CEMENT JOINTING CONFORMING TO ASTM D2564. FOR 40ø AND BELOW SHALL BE PVC BLUE, "MOLDEX", "EMERALD", "CROWN PIPES" BRAND OR APPROVED EQUAL. JOINTING SHALL BE BY SOLVENT CEMENT JOINTING CONFORMING TO ASTM D564. PROVIDE INSULATION, 20 MM THICK, PRE-MOLDED ELASTOMERIC CLOSED CELL RUBBER INSULATION, WRAPPED WITH POLYETHYLENE TAPE AND CLAD WITH GA-26 ALUMINUM SHEETS.

"ARAD", "AMICO", SYNERGY OR MWSI APPROVED.

"FYRELYN", "BERMAD", "TOZEN", OR APPROVED EQUAL.

"JAMAN BY EUROBRASS", "JPI, FLAMINGO OR APPROVED EQUAL.

"HILTI" OR APPROVED EQUAL.

WATER METER

VALVES




















































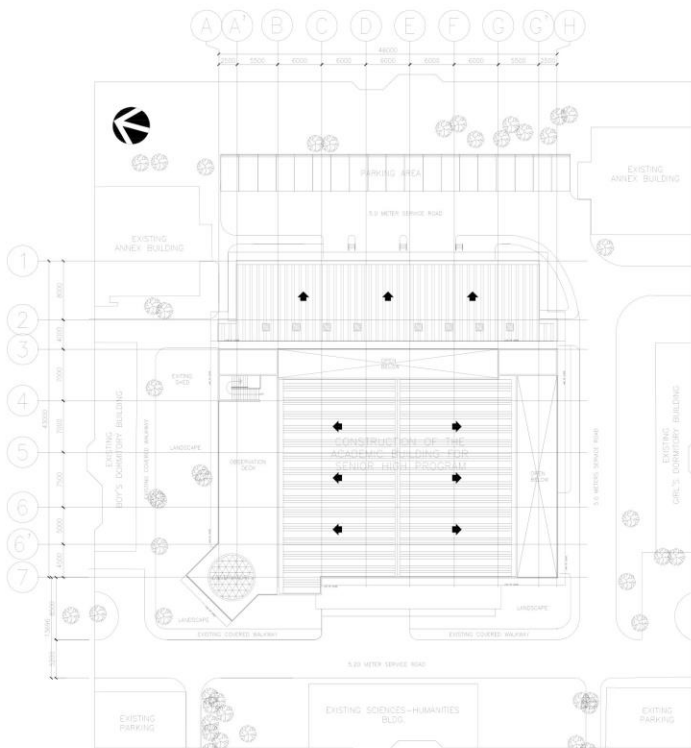
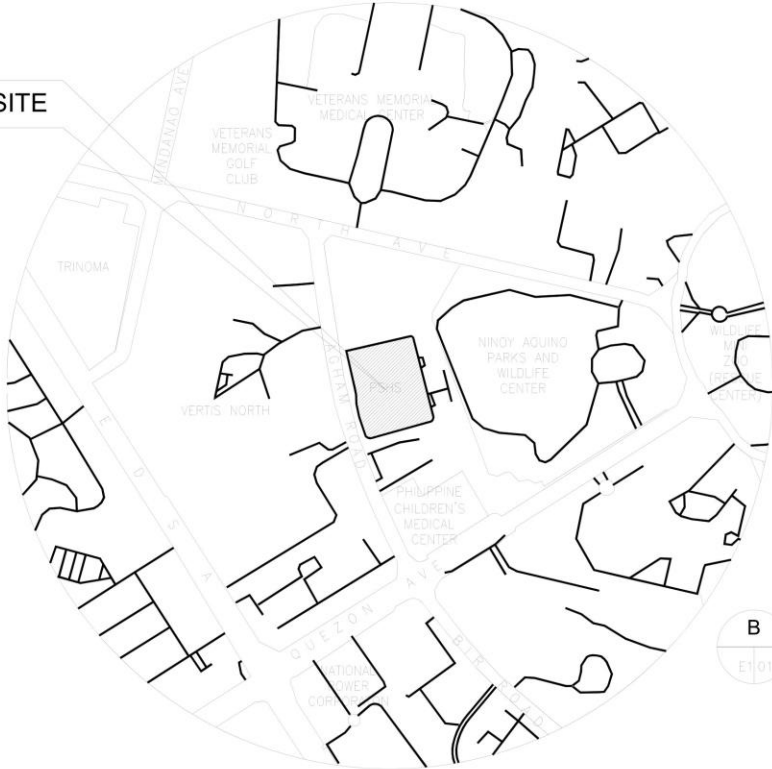


DRAINS

FIRE STOPPING SYSTEM

CONSULTANT:	PRINCIPAL ARCHITECT:	DESIGN ARCHITECT:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
 <b>ARCE•BAILON•ARCE</b> ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE.: 3552323 FAX NO.: 3551080 www.arcebailonarce.com	MARIANO S. ARCE, JR., fuap	NOEL G. YUMOL	CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM	 PHILIPPINE SCIENCE HIGH SCHOOL MAIN CAMPUS	LAWRENCE V. MADRIAGA SGO DIRECTOR III	GENERAL NOTES, LEGENDS, SYMBOLS, MATERIAL SPECIFICATIONS		17-06	P1-0
REG. NO. 6844	PTR NO. -	REG. NO. 1895	PTR NO. -	LOCATION: Agham Road, Diliman, Quezon City			DESIGNED BY: CAD:	CHECKED BY:	DATE:
TIN -	DATE: -	TIN -	DATE: -						



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GENERAL NOTES		LEGENDS & SYMBOLS		LEGENDS & SYMBOLS						
<div>1. ALL ELECTRICAL WORKS HEREIN SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE ORDINANCES OF THE LOCAL CODE ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE LOCAL POWER SERVICE PROVIDER.</div> <div>2. SYSTEM VOLTAGE SHALL BE THREE PHASE, 400/230 VOLTS, 4-WIRE, 60 HERTZ SYSTEM.</div> <div>3. WIRING METHOD SHALL BE DONE IN ELECTRICAL METALLIC TUBING (EMT) FOR EXPOSED WIRING AND UNPLASTICIZED POLYVINYL-CHLORIDE (uPVC) CONDUIT FOR EMBEDDED WIRING.</div> <div>4. SMALLEST BRANCH CIRCUIT WIRE SHALL BE 3.5mm<sup>2</sup> THHN FOR POWER AND LIGHTING SYSTEM IN RACEWAY 15mmø TRADE SIZE CONDUIT. WIRE SHALL BE INSULATED FOR 600 VOLTS.</div> <div>5. ALL BRANCH CIRCUIT HOMERUNS SHALL BE INSTALLED AS INDICATED IN THE PLAN. EXPOSED CONDUIT RUN SHALL BE INSTALLED PARALLEL TO OR PERPENDICULAR WITH THE BUILDING LINE AND SUPPORTED BY CONDUIT CLAMPS EVERY 1.50 M. DIAGONAL CONDUIT RUN SHALL NOT BE ACCEPTED.</div> <div>6. WHENEVER NECESSARY, PULLBOX OF PROPER SIZE AND DIMENSION SHALL BE PROVIDED ALTHOUGH NOT INDICATED IN THE PLAN. ALL JUNCTION BOXES SHALL BE PROVIDED WITH COVERS.</div> <div>7. ALL LIGHT CONTROLLED SWITCHES SHALL BE RATED 15 AMPS, 250VAC ONLY. SWITCHES SHALL BE INSTALLED FOR OPERATION WITH VERTICAL MOTION.</div> <div>8. ALL BRANCH CIRCUIT HOMERUNS FOR POWER AND LIGHTING SHALL NOT BE ENCASED IN A DEDICATED RACEWAY.</div> <div>9. FOR EACH SPARE CIRCUIT IN PANELBOARD PROVIDE 15mmøC RACEWAY TERMINATING IN A 100mm DEEP TYPE SQUARE BOX WITH COVER AT CEILING SLAB.</div> <div>10. ALL MATERIALS TO BE USED SHALL BE NEW AND INSTALLED IN APPLICATION FOR WHICH THESE ARE INTENDED FOR.</div> <div>11. ALL METALLIC CONDUITS AND BOXES SHALL BE PROPERLY GROUNDED AND BONDED.</div> <div>12. LIGHTING BRANCH CIRCUITS WITHOUT DESIGNATION SHALL BE 2-WIRE AND 1-GROUND WIRE IN 15mmø IMC CONDUIT UNLESS OTHERWISE NOTED.</div> <div>13. CONVENIENCE OUTLETS CIRCUITS IN GENERAL SHALL BE 2-WIRE AND 1-GROUND WIRE IN 15mmø IMC CONDUIT UNLESS OTHERWISE NOTED.</div> <div>14. ALL BOXES SHALL BE MADE OF COLD GAUGE STEEL WITH ZINC CHROMATE PROTECTION.</div> <div>15. MOUNTING HEIGHTS FOR SWITCHES AND CONVENIENCE OUTLETS SHALL BE 1.40m AND 0.30m RESPECTIVELY, UNLESS OTHERWISE SPECIFIED.</div> <div>16. ALL RECEPTACLES OUTLETS SHALL BE PROPERLY GROUNDED TO THE BOX BY MEANS OF UL-LISTED GROUNDING LUGS AND SS METAL FASTENERS.</div> <div>17. FOR SWITCH BOXES WITH MORE THAN FOUR WIRES ENTERING, USE SQUARE BOX WITH ONE ADAPTER RING.</div> <div>18. ALL WIRES AND CABLES SHALL BE COLOR CODED. COLOR SHALL BE GREEN FOR GROUNDING CONDUCTORS. THE COLOR OF THE UNDERGROUNDED CONDUCTORS IN DIFFERENT VOLTAGE SYSTEM SHALL BE AS FOLLOWS: PHASE A ----- RED      NEUTRAL ----- WHITE PHASE B ----- YELLOW      GROUND ----- GREEN PHASE C ----- BLUE</div> <div>19. THE CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE WORK AND SHALL FURNISH THE OWNER THROUGH THE ENGINEERS FINAL CERTIFICATES OF ELECTRICAL INSPECTION AND APPROVAL FROM PROPER GOVERNMENT AUTHORITIES FOR COMPLETE WORK.</div> <div>20. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR THE EXACT LOCATION OF MOTORS, MOTOR CONTROLS, AND EQUIPMENT OVERCURRENT PROTECTION.</div> <div>21. THE ELECTRICAL CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WIRING DEVICES, AND LIGHTING FIXTURES.</div> <div>22. ALL ELECTRICAL WORKS HEREIN SHALL BE UNDER THE DIRECT AND IMMEDIATE SUPERVISION OF A DULY LICENSED ELECTRICAL ENGINEER OR MASTER ELECTRICIAN AUTHORIZED AS PER R.A. 7920.</div>	<div> POWER INCOMING</div> <div> LIGHTING PANELBOARD</div> <div> POWER PANELBOARD</div> <div> ENCL. CIRCUIT BREAKER (REFER TO LOAD SCHEDULE FOR EXACT RATING)</div> <div> IL-1, TROFFER LIGHTING 1, 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 603MM X 1213MM X 67MM HEIGHT.</div> <div> IL-2, TROFFER LIGHTING 2, 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 302MM X 1216MM X 75MM HEIGHT.</div> <div> IL-3, TROFFER LIGHTING 3, 1 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 177MM X 1218MM X 75MM HEIGHT.</div> <div> IL-4, TROFFER LIGHTING 4, 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 250MM X 1226MM X 62MM HEIGHT.</div> <div> IL-5, TROFFER LIGHTING 5, 2 X 18 WATTS, COOL WHITE OR DAY LIGHT, T8 LED TUBE WITH 304MM X 1222MM X 100MM HEIGHT.</div> <div> IL-6, OPEN TYPE T8 LED, 1 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 53MM X 1220MM X 40MM HEIGHT.</div> <div> IL-7, CENTER LIGHT, 1-24 WATTS LED, SURFACE MOUNTED WITH WHITE POWDER-COATED HOUSING WITH COVER</div> <div> IL-8, DOWNLIGHT 1 ROUND, 20 X 0.5 WATTS LED, COOL WHITE IN 130MM DIAMETERS CUT OUT, 140MM X 140MM X 80MM HEIGHT</div> <div> IL-9, DOWNLIGHT 2 ROUND, 1 X 12.5 WATTS COOL DAYLIGHT, LED BULB, IN 180MM DIAMETERS X 220MM HEIGHT</div> <div> IL-10, DOWNLIGHT 3 ROUND, 1 X 12.5 WATTS COOL DAYLIGHT, LED BULB, IN 167MM DIAMETER X 194MM HEIGHT.</div> <div> IL-11, DOWNLIGHT 4 ROUND, 19 WATTS LED, WARM WHITE IN 111MM DIAMETERS X 160MM SURFACE MOUNTED.</div> <div> IL-12, DOWNLIGHT 5, 10 WATTS LED WITH BEAM ANGLE 90°, WITH COLOR TEMP. OF 3000K , IN 108MM DIAMETERS X 108MM HEIGHT.</div> <div> IL-13, DOWNLIGHT 6, 25 WATTS LED 90° 3000K WARM WHITE 2500 LUMENS, 211MM X 211MM X 97MM HEIGHT</div> <div> IL-14, DOWNLIGHT 7, 37 WATTS LED 45° 3000K WARM WHITE 3000 LUMENS, IN 187MM DIAMETERS CUT OUT 219MM X 219MM X 112MM HT.</div> <div> IL-15, DOWNLIGHT 8, 54 WATTS LED 45° 3000K WARM WHITE 4500 LUMENS, IN 187MM DIAMETERS CUT OUT 219MM X 219MM X 156MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT</div> <div> IL-16, SUSPENDED TRACK LIGHT, 40 WATTS LED 38° 3000K WARM WHITE 4280 LUMENS, IN SUSPENDED TRACKS</div> <div> IL-17, SMART BLUETOOTH ADJUSTABLE RECESSED SPOTLIGHTS, 47(60) WATTS LED 10-30° 3000K WARM WHITE 2720-3080 LUMENS.</div> <div> IL-18, STAGE LIGHT, 110 WATTS LED LIGHTS, WITH BEAM ANGLE OF 35° OR 60° IN PROJECTION ANGLE.</div> <div> IL-19, LED STRIPS, 9.6 WATTS/METERS, WARM WHITE LED STRIPS LIGHT, WITH BEAM ANGLE OF 110° AND 941/M LUMENS, IN 12MM X 5.5MM HEIGHT.</div> <div> IL-20, EMERGENCY LIGHT, 3 WATTS LED 44 X 0.7WATTS (22 LEDS/LAMP HEAD).</div> <div> IL-21, EXIT LIGHT, 2 WATTS, DOUBLE-SIDED, CEILING-MOUNTED LED LAMPS</div> <div> IL-22, WALL MOUNTED LAMP, 20 WATTS, LED-PAR 30 WARM WHITE.</div> <div> IL-23, HIGH BAY LIGHTS, 40/50 WATTS COOL WHITE, LED LIGHTS</div> <div> IL-24, HIGH BAY LIGHTS (FOR COVE LIGHTING @ ANTE ROOM), 10 WATTS BLUE AND WARM WHITE LED STRIP LIGHTS WITH 18 TO 20 LM, IN 10MM, 15.6MM X 7MM CROSS SECTION, ONE ROLL = 100M, 60 LIGHTS PER 1 METER.</div> <div> IL-25, CIRCULAR WALL LAMP (FOR OBSERVATORY ROOM), 8 WATTS, RED COOL WHITE LED BLUE IN 300MM DIAMETERS</div> <div> IL-26, DOWNLIGHT 9 ROUND, 28 WATTS LED, WARM WHITE IN 111MM DIAMETERS X 160MM SURFACE MOUNTED.</div> <div> TWO-GANG SWITCH</div> <div> THREE-GANG SWITCH</div> <div> THREE-WAY SWITCH</div> <div> SWITCHBANK</div> <div> DUPLEX CONV. OUTLET, 16A, 230V, 2P+E, WALL MOUNTED</div> <div> DUPLEX CONV. OUTLET, 16A, 230V, 2P+E, FLOOR MOUNTED</div> <div> DUPLEX CONV. OUTLET, 16A, 230V, 2P+E, CEILING MOUNTED</div> <div> SPECIAL PURPOSE OUTLET, 16A, 230V, 2P+E, WALL MOUNTED</div> <div> TOILET EXHAUST FAN</div> <div> CIRCUIT HOMERUN</div>	<div> AA - DENOTES PANEL DESIGNATION</div> <div> 00 - DENOTES CIRCUIT NUMBER</div> <div> RISER UP/DOWN</div> <div> RISER UP</div> <div> RISER DOWN</div> <div> JUNCTION BOX</div> <div> MOTOR SWITCH / CONTROLLER (REFER TO LOAD SCHEDULE)</div> <div> HAND DRYER</div> <div> HOOD</div> <div> WITH WEATHERPROOF ENCLOSURE</div> <div> GROUND FAULT CIRCUIT INTERRUPTER</div>	<div><b>DRAWING LIST</b></div> <div><b>GENERAL</b></div> <div>E1-01 GENERAL NOTES, LEGENDS, SYMBOLS, DRAWING LIST, VICINITY MAP AND SITE DEVELOPMENT PLAN</div> <div><b>SCHEMATIC DIAGRAM AND COMPUTATION</b></div> <div>E2-01 POWER SINGLE LINE DIAGRAM</div> <div>E2-02a LOAD SCHEDULE - 1</div> <div>E2-02b LOAD SCHEDULE - 2</div> <div>E2-02c LOAD SCHEDULE - 3</div> <div>E2-02d LOAD SCHEDULE - 4</div> <div><b>FLOOR PLANS / LAYOUTS</b></div> <div>E3-01a GROUND FLOOR LIGHTING SYSTEM</div> <div>E3-01b SECOND FLOOR LIGHTING SYSTEM</div> <div>E3-01c THIRD FLOOR LIGHTING SYSTEM</div> <div>E3-01d FOURTH FLOOR LIGHTING SYSTEM</div> <div>E3-01e FIFTH FLOOR LIGHTING SYSTEM</div> <div>E3-01f SIXTH FLOOR LIGHTING SYSTEM</div> <div>E3-02a GROUND FLOOR POWER SYSTEM</div> <div>E3-02b SECOND FLOOR POWER SYSTEM</div> <div>E3-02c THIRO FLOOR POWER SYSTEM</div> <div>E3-02d FOURTH FLOOR POWER SYSTEM</div> <div>E3-02e FIFTH FLOOR POWER SYSTEM</div> <div>E3-02f SIXTH FLOOR POWER SYSTEM</div> <div>E3-03a GROUND FLOOR HVAC POWER SYSTEM</div> <div>E3-03b SECOND FLOOR HVAC POWER SYSTEM</div> <div>E3-03c THIRD FLOOR HVAC POWER SYSTEM</div> <div>E3-03d FOURTH FLOOR HVAC POWER SYSTEM</div> <div>E3-03e FIFTH FLOOR HVAC POWER SYSTEM</div> <div>E3-03f SIXTH FLOOR HVAC POWER SYSTEM</div> <div><b>MISCELLANEOUS DETAILS</b></div> <div>E4-01 MISCELLANEOUS DETAILS</div>	<div><div><b>A SITE DEVELOPMENT PLAN</b> E1-01 SCALE 1:500M</div></div>	<div><div><b>B VICINITY MAP</b> E1-01 SCALE N T S</div></div>					
	CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. ELECTRICAL ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
	<div><div><b>ARCE•BAILON•ARCE</b> ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE: 3552323 FAX NO.: 3551080 www.arcebailonarce.com</div></div>	<div>MARIANO S. ARCE, JR., fuap</div> <div>REG. NO. 6844 PTR NO. -</div> <div>TIN - DATE:</div>	<div>ALEJANDRO S. LICERIO</div> <div>ACR-ATEC-ASEAN ENGINEER</div> <div>REG. NO. 3190 PTR NO. -</div> <div>TIN - DATE:</div>	<div>CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM</div> <div>LOCATION: Agham Road, Diliman, Quezon City</div>	<div><div><b>PHILIPPINE SCIENCE HIGH SCHOOL</b> MAIN CAMPUS</div></div>	<div>LAWRENCE V. MADRIAGA</div> <div>SGD DIRECTOR III</div>	<div>GENERAL NOTES, LEGENDS, SYMBOLS, DRAWING LIST, VICINITY MAP AND SITE DEVELOPMENT PLAN</div>	<div>REV-1 VOLTAGE SYSTEM 230V (JAN2018) REV-2 PANELBOARD LOCATION (NOV2018) REV-3 LIGHTING FIXTURE IL-26 (FEB2022)</div>	<div>17-06</div>	<div>E1-01</div>
								DESIGNED BY: CAD:	CHECKED BY: RLH	DATE:



CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. ELECTRICAL ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
<b>ARCE•BAILON•ARCE</b> ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE : 3552323 FAX NO. : 3551080 www.arcebailonarce.com	MARIANO S. ARCE, JR., fuap	ALEJANDRO S. LICERIO ACREATEC-ASEAN ENGINEER	CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM	PHILIPPINE SCIENCE HIGH SCHOOL MAIN CAMPUS	LAWRENCE V. MADRIAGA SGD DIRECTOR III	POWER SINGLE LINE DIAGRAM	REV-1 VOLTAGE SYSTEM 230V (JAN2018) REV-2 LIGHTING FIXTURE IL-26 (FEB2022)	17-06	E2-01
REG. NO. 6844 PTR NO. -	REG. NO. 3190 PTR NO. -	LOCATION: Agham Road, Diliman, Quezon City					DESIGNED BY: CAD: -	CHECKED BY: RLH	DATE: -
TIN -	DATE: -	TIN -	DATE: -						



FOR BIDDING

Panelboard: <b>MDP</b>		Location: <b>GF EE Room</b>		Mounting: <b>SURFACE</b>									
Voltage System: <b>230V, 3-PHASE, 3-WIRE + G, 60Hz</b>		Enclosure: <b>NEMA 1</b>											
PNL No.	PANELBOARD DESIGNATION	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. OF WIRE & SIZE		CONDUIT
				ØAB	ØCA	ØBC	ØABC	AT	AF	P	CONDUCTOR (mm <sup>2</sup> )		
1	DP-1	198678	230	119.45	119.98	125.15	288.24	600	600	3	3 x (3- 80mm <sup>2</sup> THHN + 1- 14mm <sup>2</sup> THHN G)		3 x 65
2	DP-2	192955	230	175.64	163.56	171.82	187.83	600	600	3	3 x (3- 80mm <sup>2</sup> THHN + 1- 14mm <sup>2</sup> THHN G)		3 x 65
3	DP-3	160400	230	117.17	117.97	123.88	195.36	500	600	3	2x (3- 125mm <sup>2</sup> THHN + 1- 22mm <sup>2</sup> THHN G)		2 x 80
4	DP-4	179023	230	152.40	145.04	136.20	195.36	600	600	3	3 x (3- 80mm <sup>2</sup> THHN + 1- 14mm <sup>2</sup> THHN G)		3 x 65
5	DP-5	65311	230	70.69	72.55	62.68	45.06	250	250	3	3- 125mm <sup>2</sup> THHN + 1- 22mm <sup>2</sup> THHN G		80
6	DP-6	208016	230	40.02	44.09	46.24	446.92	700	800	3	2 x (3- 200mm <sup>2</sup> THHN + 1- 22mm <sup>2</sup> THHN G)		2 x 80
7	Elevator 1	12375	230				31.06	100	100	3	3- 14mm2 THHN + 1- 5.5mm2 THHN G		32
8	Elevator 2	12375	230				31.06	100	100	3	3- 14mm2 THHN + 1- 5.5mm2 THHN G		32
9	Water Pump, 3x 10HP	33462	230				84.00	125	250	3	3- 30mm2 THHN + 1- 8.0mm2 THHN G		40
10	DP-FP (Fire Pump)	73413	230				184.29	1200	1200	3	3- 125mm <sup>2</sup> THHN + 1- 22mm <sup>2</sup> THHN G		80
11	SPARE							100	100	3			
FEEDER/ MAIN OCP		1136008	230	675.37	663.19	665.97	1689.20	2000	2000	3	6 x (3- 200mm2 THHN & 22mm2 THHN G)		6 x 80
I(total)wire = (1689.20A-184.29A) x 0.70 DF + 0.25 x 97.68A + 1.732 x 675.37A x 0.70 D.F.=				1896.68 A									
I(total)ocp = (1,689.20A-184.29A) x 0.70 DF + 0.75 x 97.68A + 1.732 x 656.57A x 0.70 DF=				1945.52 A									
KVA(total) = 1.732x 2000Ax 230V/1000 =				755.56 kVA									
USE: Standby AC Generator, 900KVA, 3-Phase, 3-Wire, 230Vac, 60 Hz													

Panelboard: DP-FP				Location: Verify on site				Mounting: SURFACE								
Voltage System: 230V, 3-PHASE, 3-WIRE + G, 60Hz				Enclosure: NEMA 1												
PNL No.	PANELBOARD DESIGNATION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLTS-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. OF WIRE & SIZE		CONDUIT (mmø)
							ØAN	ØBN	ØCN	ØABC	AT	AF	P	CONDUCTOR (mm²)		
1	FP-1			1	68750	230				172.58	1000	1000	3	3- 100mm² + 14mm² THHN G		65
2	JP-1			1	4663	230				11.70	30	100	3	3- 3.5mm² THHN + 3.5mm² THHN G		15
3	SPACE															
FEEDER/ MAIN OCP		0	0	2	73413	230	0.00	0.00	0.00	184.29	1200	1200	3	3- 125mm² THHN + 1- 22mm² THHN G		80
(total)wire = 1.25 x 184.29A =						230.36 A										
(total)ocp = 6 x 172.58A + 11.70A =						1047.20 A										

Panelboard: <b>DP-1</b>				Location: <b>GF EE Room</b>		Mounting: <b>SURFACE</b>										
Voltage System: <b>230V, 3-PHASE, 3-WIRE + G, 60Hz</b>				Enclosure: <b>NEMA 1</b>												
PNL No.	PANELBOARD DESIGNATION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. OF WIRE & SIZE		CONDUIT
							ØAN	ØBN	ØCN	ØABC	AT	AF	P	CONDUCTOR (mm <sup>2</sup> )		(mmø)
1	LP-1	0	256	36	13087	230	17.32	23.21	17.24	0.00	100	100	3	3- 30mm <sup>2</sup> THHN + 1- 8.0mm <sup>2</sup> THHN G		40
2	PP-1	85	0	0	82540	230	65.04	59.39	60.52	100.41	250	250	3	3- 125mm <sup>2</sup> THHN + 1- 22mm <sup>2</sup> THHN G		80
3	PPM-1	0	0	21	76725	230	2.17	3.04	3.04	187.83	300	400	3	3- 125mm <sup>2</sup> THHN + 1- 22mm <sup>2</sup> THHN G		80
4	PP-K1	30	0	1	8709	230	11.64	11.45	14.78	0.00	40	100	3	3- 8.0mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G		25
5	PP-K2	30	0	1	8709	230	11.64	11.45	14.78	0.00	40	100	3	3- 8.0mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G		25
6	PP-K3	30	0	1	8709	230	11.64	11.45	14.78	0.00	40	100	3	3- 8.0mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G		25
<b>FEEDER/ MAIN OCP</b>		<b>115</b>	<b>256</b>	<b>60</b>	<b>198678</b>	<b>230</b>	<b>119.45</b>	<b>119.98</b>	<b>125.15</b>	<b>288.24</b>	<b>600</b>	<b>600</b>	<b>3</b>	<b>3 x (3- 80mm<sup>2</sup> THHN + 1- 14mm<sup>2</sup> THHN G)</b>		<b>3 x 65</b>
I(total)wire = 288.24A + 0.25 x 93.92A + 1.732 x (125.15A + 0.25 x 17.24A) =					<b>535.95 A</b>											
I(total)ocp = 288.24A + 0.75 x 93.92A + 1.732 x (101.42A + 0.25 x 25.47A) =					<b>582.90 A</b>											

Panelboard: LP-1			Location: GF EE Room			Mounting: SURFACE										
Voltage System: 230V, 3-PHASE, 3-WIRE + G, 60Hz			Enclosure: NEMA 1													
CKT. No.	LOAD DESCRIPTION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. Of WIRE & SIZE		CONDUIT (mmø)
							ØAB	ØCA	ØBC	ØABC	AT	AF	P	CONDUCTOR (mm <sup>2</sup> )		
1	L.O.	7	0	174	230	0.76				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15		
2	L.O.	11	4	995	230	4.33				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15		
3	L.O.	20	2	935	230		4.07			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15		
4	L.O.	15	7	1550	230		6.74			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15		
5	L.O.	10	1	546	230			2.37		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15		
6	L.O.	4	0	92	230			0.40		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15		
7	L.O.	4	0	69	230	0.30				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15		
8	L.O.	11	0	398	230	1.73				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15		
9	L.O.	18	0	810	230		3.52			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15		
10	L.O.	12	0	540	230		2.35			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15		
11	L.O.	25	0	1135	230			4.93		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15		
12	SPARE				230			0.02		20	100	2				
13	LP-1A	119	22	6044	230	10.21	6.54	9.53	0.00	40	100	3	3- 8.0mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G	25		
14	SPACE				230											
FEEDER/ MAIN OCP		0	256	36	13287	230	17.32	23.21	17.24	0.00	100	100	3	3- 30mm <sup>2</sup> THHN + 1- 8.0mm <sup>2</sup> THHN G	40	
I(total) = 0.00A + 1.25 x 1.732 x 23.39A = 50.25 A																
Load Computation:																
General Lighting: 1426 sq.m x 24 VA/ sq.m = 34,224 VA																
I(total) = 34.224 VA/ (1.732 x 230 Vac) = 85.91 A																

Panelboard: <b>LP-1A</b>			Location: <b>GF EE Room</b>				Mounting: <b>SURFACE</b>											
Voltage System: <b>230V, 3-PHASE, 3-WIRE + G, 60Hz</b>							Enclosure: <b>NEMA 1</b>											
CKT. No.	LOAD DESCRIPTION	Qty. of C.O.	Qty. of L.O.	Qty. (Other loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. OF WIRE & SIZE		CONDUIT (mmø)		
							ØAB	ØCA	ØBC	ØABC	AT	AF	P	CONDUCTOR (mm²)				
1	L.O.		4	0	69	230	0.30				20	100	2	2- 3.5mm² THHN + 1- 3.5mm² THHN G		15		
2	O.F. - 7 units		0	7	875	230	3.80				20	100	2	2- 3.5mm² THHN + 1- 3.5mm² THHN G		15		
3	L.O.		15	0	675	230		2.93			20	100	2	2- 3.5mm² THHN + 1- 3.5mm² THHN G		15		
4	L.O.		13	0	203	230		0.88			20	100	2	2- 3.5mm² THHN + 1- 3.5mm² THHN G		15		
5	O.F. - 8 units		0	8	1000	230			4.35		20	100	2	2- 3.5mm² THHN + 1- 3.5mm² THHN G		15		
6	L.O.		9	0	317	230			1.38		20	100	2	2- 3.5mm² THHN + 1- 3.5mm² THHN G		15		
7	L.O.		41	0	594	230	2.58				20	100	2	2- 3.5mm² THHN + 1- 3.5mm² THHN G		15		
8	L.O.		18	0	810	230	3.52				20	100	2	2- 3.5mm² THHN + 1- 3.5mm² THHN G		15		
9	L.O.		9	0	376	230		1.63			20	100	2	2- 3.5mm² THHN + 1- 3.5mm² THHN G		15		
10	L.O.		10	0	250	230		1.09			20	100	2	2- 3.5mm² THHN + 1- 3.5mm² THHN G		15		
11	O.F. - 5 units		0	5	625	230			2.72		20	100	2	2- 3.5mm² THHN + 1- 3.5mm² THHN G		15		
12	O.F. - 2 units		0	2	250	230			1.09		20	100	2	2- 3.5mm² THHN + 1- 3.5mm² THHN G		15		
13	SPARE					230			0.00		20	100	2					
14	SPARE					230			0.00		2							
FEEDER/ MAIN OCP			0	119	22	604A	230	10.21	6.54	9.53	0.00	40	100	3	3- 8.0mm² THHN + 1- 5.5mm² THHN G		25	
(total) = 0.00A + 1.25 x 1.732 x 10.10A															= 22.10 A			



## FOR BIDDING

PANEL : PP-2 SYSTEM : 230V, 3-PHASE, 3-WIRE + G, 60Hz				Location: 2F EE Room		Mounting: SURFACE Enclosure: NEMA 1									
O.KT. No.	LOAD DESCRIPTION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. OF WIRE & SIZE CONDUCTOR (mm <sup>2</sup> )	CONDUIT (mm)
							ØAB	ØCA	ØBC	ØABC	AT	AF	P		
1	C.O. (Room 201)	9			1620	230	7.04				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
2	C.O. (Room 202)	9			1620	230	7.04				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
3	C.O. (Room 203)	9			1620	230			7.04		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
4	C.O. (Room 203)	9			1620	230			7.04		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
5	C.O. (Room 204)	11			1980	230			8.61		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
6	C.O. (Room 204)	11			1980	230			8.61		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
7	C.O. (Room 202)	9			1620	230			7.04		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
8	C.O. (Room 201)	9			1620	230			7.04		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
9	C.O. (M Lounge, Receiving Counter)	9			1620	230			7.04		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
10	C.O. (T Lounge, Receiving Counter)	9			1620	230			7.04		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
11	C.O. (Hallway, Pantry 1, Room 205)	9			1620	230			7.04		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
12	C.O.-Pantry	3			3000	230			13.04		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
13	C.O. (Hand dryer MCT 2d)	1			1800	230	7.83				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
14	C.O. (Hand dryer FCT 2e)	1			1800	230	7.83				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
15	C.O. (Room 205, Pantry)	9			1620	230			7.04		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
16	C.O. (Pantry 2)	3			4500	230			19.57		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
17	C.O. (Hallway)	8			1440	230			6.26		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
18	C.O. (Hallway)	9			1620	230			7.04		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
19	PP-2A	64			23180	230	39.04	28.70	33.04	0.00	100	100	3	4- 30mm <sup>2</sup> THHN + 1- 8.0mm <sup>2</sup> THHN G	40
20	SPACE					230					100	3			
FEEDER/ MAIN OCP		201	0	0	57500	400	82.87	83.48	83.65	0.00	200	250	3	3-100mm <sup>2</sup> THHN + 1- 14mm <sup>2</sup> THHN G	65
I(total) = 0.00A + 1.25 x 1.732 x 83.65A = 181.11 A															

PANEL : PP-2A SYSTEM : 230V, 3-PHASE, 3-WIRE + G, 60Hz				Location: 2F EE Room		Mounting: SURFACE Enclosure: NEMA 1									
O.KT. No.	LOAD DESCRIPTION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT			CIRCUIT BREAKER			No. Of WIRE & SIZE CONDUCTOR (mm <sup>2</sup> )	CONDUIT (mm)	
							ØAB	ØCA	ØBC	ØABC	AT	AF			P
1	C.O. (Library)	12			2160	230	9.39			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
2	C.O. (Lobby, consultation)	8			1440	230	6.26			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
3	C.O. (Pantry-Library)	2			3000	230		13.04		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
4	C.O. (EE/ELV)	2			1000	230		4.35		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
5	C.O. (Hand dryer MT2b)	1			1800	230			7.83	20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
6	C.O. (Hand dryer FT 2a)	1			1800	230			7.83	20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
7	C.O. (Pantry)	1			1500	230	6.52			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
8	C.O. (Hand dryer PWD2)	1			1800	230	7.83			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
9	C.O. (Workshop, Technician)	8			1600	230		6.96		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
10	C.O. (Reproduction)	1			1000	230		4.35		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
11	C.O. (CS Faculty Room)	10			2000	230		8.70		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
12	C.O. (CS Faculty Room)	10			2000	230		8.70		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
13	C.O. (Reproduction)	1			1000	230	4.35			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
14	C.O. (Archives)	6			1080	230	4.70			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
15	SPARE					230		0.00		20	100	2			
16	SPARE					230		0.00		20	100	2			
17	SPARE					230		0.00		20	100	2			
18	SPARE					230		0.00		20	100	2			
FEEDER/ MAIN OCP		64	0	0	23180	230	39.04	28.70	33.04	0.00	100	100	3	4- 30mm <sup>2</sup> THHN + 1- 8.0mm <sup>2</sup> THHN G	40
I(total) = 0.00A + 1.25 x 1.732 x 39.04A 84.53 A															

PANEL : PPM-2 SYSTEM : 230V, 3-PHASE, 3-WIRE + G, 60Hz				Location: 2F EE Room				Mounting: SURFACE Enclosure: NEMA 1											
O.KT. No.	LOAD DESCRIPTION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. OF WIRE & SIZE CONDUCTOR (mm <sup>2</sup> )	CONDUIT (mm)				
							ØAB	ØCA	ØBC	ØABC	AT	AF	P						
1	ACCU-20TR	1			37413	230				93.92	175	250	3	3- 50mm <sup>2</sup> THHN + 1- 14mm <sup>2</sup> THHN G	50				
2	ACCU-20TR	1			37413	230				93.92	175	250	3	3- 50mm <sup>2</sup> THHN + 1- 14mm <sup>2</sup> THHN G	50				
3	FCU-1.5- 2 units, FCU-1TR- 1unit	3			225	230			0.98		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	20				
4	FCU-3.0TR- 2 units, FCU-1.5TR- 1unit, FCU-1.5TR- 4units	4			350	230			1.52		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	20				
5	FCU-1TR- 4units	4			300	230			1.30		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	20				
6	FCU-3TR- 4units	4			400	230			1.74		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	20				
7	FCU-3TR- 2units	2			200	230			0.87		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	20				
8	FCU-3TR- 2units, FCU-1TR- 1unit	3			225	230			0.98		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	20				
9	FCU-1.5- 1unit, FCU-1TR- 1unit (GF)	2			150	230			0.65		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	20				
10	SPARE	1				230			0.00		20	100	2						
11	SPARE	1				230			0.00		20	100	2						
12	SPARE	1				230			0.00		20	100	2						
13	SPARE					230			0.00		20	100	2						
14	SPARE					230					20	100	2						
15	SPARE					230					20	100	2						
16	SPARE					230					20	100	2						
FEEDER/ MAIN OCP		0	0	27	76675	230	3.15	3.04	1.85	187.83	300	400	3	3- 125mm <sup>2</sup> THHN + 1- 22mm <sup>2</sup> THHN G	80				
I(total)wire = 187.83A + 0.25 x 93.92A + 1.732 x 3.15A =						216.77 A													
I(total)ocp = 187.83A + 0.75 x 93.92A x 1.732 x 3.15A =						263.73 A													

PANEL : PPCS-1, PPCS-2 SYSTEM : 230V, 3-PHASE, 3-WIRE + G, 60Hz					Location: CS Lab		Mounting: SURFACE NEMA 1								
O.KT. No.	LOAD DESCRIPTION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. Of WIRE & SIZE CONDUCTOR (mm <sup>2</sup> )	CONDUIT (mm)
							ØAB	ØCA	ØBC	ØABC	AT	AF	P		
1	C.O.	8			2400	230				10.43	20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
2	C.O.	8			2400	230				10.43	20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
3	C.O.	8			2400	230				10.43	20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
4	C.O.- Overhead projector	1			300	230			2.17		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
5	C.O.	6			1080	230			4.70		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
6	C.O.	8			2400	230			10.43		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
7	SPARE					230			0.00		20	100	2		
8	SPARE					230			0.00		20	100	2		
FEEDER/ MAIN OCP		39	0	0	11180	230	20.87	12.61	15.13	0.00	50	100	3	3- 8.0mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	25
I(total) = 1.25 x 1.732 x 20.87A = 45.18 A															



FOR BIDDING

PANEL : PPBCL		Location: Biochem Lab						Mounting: SURFACE										
SYSTEM :		230V, 3-PHASE, 3-WIRE + G, 60Hz						Enclosure: NEMA 1										
O.K.T. No.	LOAD DESCRIPTION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. OF WIRE & SIZE	CONDUIT (mm)			
							ØAB	ØCA	ØBC	ØABC	AT	AF	P					
1	C.O.- Lab bench	8			1600	230	6.96				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
2	C.O.- Refrigerator	1			800	230	3.48				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
3	C.O.- Lab bench	8			1600	230		6.96			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
4	C.O.- Countertop	4			800	230		3.48			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
5	C.O.- Lab bench	8			1600	230			6.96		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
6	C.O.- Drying Oven	1			1200	230			5.22		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
7	SPARE	1				230	0.00				20	100	2					
8	SPARE	2				230	0.00				20	100	2					
FEEDER/ MAIN OCP					33	0	0	7600	230	10.43	10.43	12.17	0.00	30	100	3	3- 5.5mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G	20
I(total) = 1.25 x 1.732 x 12.17A					26.36 A													

PANEL : PPBL		Location: Biology Lab						Mounting: SURFACE								
SYSTEM :		230V, 3-PHASE, 3-WIRE + G, 60Hz						Enclosure: NEMA 1								
O.K.T. No.	LOAD DESCRIPTION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. OF WIRE & SIZE		CONDUIT (mm)
							ØAB	ØCA	ØBC	ØABC	AT	AF	P			
1	C.O.- Lab table	2			400	230	1.74				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
2	C.O.- Lab table	2			400	230	1.74				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
3	C.O.- Lab table	2			400	230		1.74			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
4	C.O.- Countertop	4			800	230		3.48			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
5	C.O. (Equipment Room)	3			540	230			2.35		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
6	C.O.- Autoclave	1			4500	230			19.57		30	100	2	2- 5.5mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G	20	
7	C.O.- Incubator	1			500	230	2.17				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
8	C.O.- Countertop	3			600	230	2.61				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
9	C.O.- Refrigerator 2 units	2			1000	230		4.35			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
10	C.O.- Lab table	2			400	230		1.74			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
11	C.O.- Lab table	2			400	230			1.74		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
12	C.O.- Lab table	2			400	230			1.74		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
13	C.O.	4			800	230	3.48				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15	
14	SPARE	1				230	0.00				20	100	2			
15	SPARE	1				230		0.00			20	100	2			
16	SPARE	8				230		0.00			20	100	2			
FEEDER/ MAIN OCP		40	0	0	11140	230	11.74	11.30	25.39	0.00	60	100	3	3- 14mm2 THHN + 1- 5.5mm2 THHN G	32	
I(total) = 1.25 x 1.732 x 25.39A		54.97 A														

PANEL : PPAL		Location: Agri/Aqua Lab					Mounting: SURFACE								
SYSTEM :		230V, 3-PHASE, 3-WIRE + G, 60Hz					Enclosure: NEMA 1								
O.K.T. No.	LOAD DESCRIPTION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. OF WIRE & SIZE	CONDUIT (mm)
							ØAB	ØCA	ØBC	ØABC	AT	AF	P		
1	C.O.- Lab table	2			400	230	1.74				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
2	C.O.- Lab table	2			400	230	1.74				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
3	C.O.- Lab table	2			400	230		1.74			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
4	C.O.- Countertop	4			800	230		3.48			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
5	SPARE	3				230			0.00		20	100	2		
6	SPARE	1				230			0.00		20	100	2		
FEEDER/ MAIN OCP		14	0	0	2000	230	3.48	5.22	0.00	0.00	30	100	3	3- 5.5mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G	20
I(total) = 1.25 x 1.732 x 5.22A		11.30 A													

PANEL : PPM-3		Location: 3F EE Room					Mounting: SURFACE											
SYSTEM :		230V, 3-PHASE, 3-WIRE + G, 60Hz					Enclosure: NEMA 1											
O.K.T. No.	LOAD DESCRIPTION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. OF WIRE & SIZE	CONDUIT (mm)			
							ØAB	ØCA	ØBC	ØABC	AT	AF	P					
1	ACCU-30TR	1			38913	230				97.68	175	250	3	3- 50mm <sup>2</sup> THHN + 1- 14mm <sup>2</sup> THHN G	50			
2	ACCU-30TR	1			38913	230				97.68	175	250	3	3- 50mm <sup>2</sup> THHN + 1- 14mm <sup>2</sup> THHN G	50			
3	FCU-1.5- 4 units	4			300	230	1.30				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
4	FCU-2.5TR- 2 units, FCU-1.0TR- 1 unit	3			225	230	0.98				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
5	FCU-2TR- 2 units, FCU-1.5TR- 2 units	4			300	230		1.30			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
6	FCU-2.0TR- 2 units, FCU-1.5TR- 2 units	4			300	230			1.30		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
7	FCU-1TR- 4 units	4			300	230				1.30	20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
8	FCU-2TR- 3 units, FCU-1TR- 1 unit	4			300	230				1.30	20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
9	TEF-1	1			250	230	1.09				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
10	EXH-1	1			250	230	1.09				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
11	EXH-1	1			250	230		1.09			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
12	EXH-1	1			250	230			1.09		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15			
13	SPARE					230				0.00	20	100	2					
14	SPARE					230					20	100	2					
15	SPARE					230					20	100	2					
16	SPARE					230					20	100	2					
FEEDER/ MAIN OCP					0	0	29	80550	230	4.46	4.78	2.61	195.36	300	400	3	3- 125mm <sup>2</sup> THHN + 1- 22mm <sup>2</sup> THHN G	80
I(total)wire = 195.36A + 0.25 x 97.68A + 1.732 x 4.78A =					228.07 A													
I(total)ocp = 195.36A + 0.75 x 97.68A + 1.732 x 4.78A =					276.91 A													

Panelboard: DP-4			Location: 4F EE Room				Mounting: SURFACE								
Voltage System: 230V, 3-PHASE, 3-WIRE + G, 60Hz							Enclosure: NEMA 1								
P.NL No.	PANELBOARD DESIGNATION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER		No. Of WIRE & SIZE	CONDUIT (mm)	
							ØAB	ØCA	ØBC	ØABC	AT	AF			P
1	LP-4	0	257	22	12168	230	16.60	18.46	17.85	0.00	100	100	3	3- 30mm <sup>2</sup> THHN + 1- 8.0mm <sup>2</sup> THHN G	40
2	PP-4	103	0	0	38860	230	58.22	55.78	52.96	0.00	125	250	3	3- 38mm <sup>2</sup> THHN + 1- 14mm <sup>2</sup> THHN G	50
3	PPPL	90	0	0	17840	230	27.83	27.83	21.91	0.00	60	100	3	3- 14mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G	32
4	PPRL	37	0	0	15970	230	24.17	22.43	22.83	0.00	60	100	3	3- 14mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G	32
5	PPPNL	50	0	0	11760	230	19.39	13.91	13.48	0.00	50	100	3	4- 8.0mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G	25
6	PPM-4	0	0	33	82425	230	6.20	6.63	7.17	195.36	300	400	3	3- 125mm <sup>2</sup> THHN + 1- 22mm <sup>2</sup> THHN G	80
FEEDER/ MAIN COP		280	257	55	179023	230	152.40	145.04	136.20	195.36	600	600	3	3- (8.0mm <sup>2</sup> THHN + 1- 14mm <sup>2</sup> THHN G)	3 x 65
							490.93 A								
If total wire = 195.36A + 0.5x 179,68A + 1.73x (152.40A + 0.25 x 16.60A)							539.77 A								
If total loop = 195.36A + 0.75x 179,68A + 1.73x (152.40A + 0.25 x 16.60A)															



## FOR BIDDING

Panelboard: DP-5					Location: 5F Hallway		Mounting: SURFACE													
Voltage System: 230V, 3-PHASE, 3-WIRE + G, 60Hz					Enclosure: NEMA 1															
PNL No.	PANELBOARD DESIGNATION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT			CIRCUIT BREAKER	No. OF WIRE & SIZE	CONDUIT								
							ØAB	ØCA	ØBC	ØABC	AT	AF	P	CONDUCTOR (mm <sup>2</sup> )	(mm)					
1	LP-5	0	172	19	7646	230	9.73	11.05	12.46	0.00	100	100	3	3- 30mm <sup>2</sup> THHN + 1- 8.0mm <sup>2</sup> THHN G	40					
2	PP-5	74	0	0	39040	230	59.65	60.52	49.57	0.00	150	250	3	3- 60mm <sup>2</sup> THHN + 1- 14mm <sup>2</sup> THHN G	50					
3	PPM-5	0	0	11	18625	230	1.30	0.98	0.65	45.06	100	100	3	3- 14mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G	32					
4	SPACE					230					250	3								
FEEDER/ MAIN OCP					74	172	30	65311			230	70.69	72.55	62.68	45.06	250	250	3	3- 125mm <sup>2</sup> THHN + 1- 22mm <sup>2</sup> THHN G	80
I(total)wire = 1.25 x 45.06A + 1.732 x (72.55A + 0.25 x 11.05A) = 186.76 A																				
I(total)ocp = 1.75 x 45.06A + 1.732 x (72.55A + 0.25 x 11.05A) = 209.29 A																				

Panelboard: LP-5				Location: SF Hallway				Mounting: SURFACE								
Voltage System: 230V, 3-PHASE, 3-WIRE + G, 60Hz				Enclosure: NEMA 1												
OKT. No.	LOAD DESCRIPTION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. OF WIRE & SIZE		CONDUIT (mm)
							ØAB	ØCA	ØBC	ØABC	AT	AF	P	CONDUCTOR (mm <sup>2</sup> )		
1	L.O.-	7	17	5	944	230					20	63	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G		15
2	L.O.-	7	0	7	325	230	1.41				20	63	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G		15
3	L.O.-	28	0	0	440	230		1.91			20	63	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G		15
4	L.O.-	30	0	0	512	230		2.23			20	63	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G		15
5	L.O.-	9	0	9	141	230			0.61		20	63	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G		15
6	L.O.-	57	14	14	2726	230			11.85		20	63	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G		15
7	L.O.-	8	0	0	360	230	1.57				20	63	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G		15
8	L.O.-	15	0	0	609	230	2.65				20	63	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G		15
9	L.O.-	1	0	0	1589	230		6.91			20	63	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G		15
10	SPARE		0	0	0	230		0.00			20	63	2			
11	SPARE		0	0	0	230			0.00		20	63	2			
12	SPARE		0	0	0	230			0.00		20	63	2			
FEEDER/ MAIN OCP		0	172	19	7646	230	9.73	11.05	12.46	0.00	100	100	3	3- 30mm <sup>2</sup> THHN + 1- 8.0mm <sup>2</sup> THHN G		40
I(total) = 0.00A + 1.25 x 1.732 x 12.46A = 26.99 A																
Load Computation:																
General Lighting: 1426 sq.m x 24 VA/ sq.m = 34,224 VA																
I(total) = 34,224 VA / (1.732 x 230 Vac) = 85.91 A																

PANEL : PP-5		Location: 5F Hallway				Mounting: SURFACE									
SYSTEM : 230V, 3-PHASE, 3-WIRE + G, 60Hz		Enclosure: NEMA 1													
OKT. No.	LOAD DESCRIPTION	Qty. of C.O.	Qty. of L.O.	Qty. (Other loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. OF WIRE & SIZE	CONDUIT
							ØAB	ØCA	ØBC	ØABC	AT	AF	P	CONDUCTOR (mm <sup>2</sup> )	(mm)
1	C.O.- Hand dryer (MT 5b)	1			1800	230	7.83				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
2	C.O.- Hand dryer (PWD 5b)	1			1800	230	7.83				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
3	C.O.- Hand dryer (FT 5c)	1			1800	230		7.83			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
4	C.O. (Hallway)	6			1080	230			4.70		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
5	C.O. (Lobby)	8			1440	230			6.26		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
6	C.O. (Lobby)	7			1260	230			5.48		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
7	C.O. (Secretariat Rm.)	9			1620	230	7.04				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
8	C.O. (Hallway, Jan. Rm.)	5			900	230	3.91				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
9	C.O.- Hand dryer (FT 5a)	1			1800	230		7.83			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
10	C.O.- Hand dryer (PWD 5a)	1			1800	230		7.83			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
11	C.O.- Hand dryer (MT 5a)	1			1800	230			7.83		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
12	C.O. (Auditorium front)	5			900	230			3.91		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
13	C.O. (Auditorium stage)	3			600	230	2.61				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
14	C.O. (Auditorium stage)	5			1000	230	4.35				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
15	C.O. (Backstage)	4			720	230		3.13			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
16	C.O. (Backstage)	4			720	230		3.13			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
17	C.O. (Dressing Rm.1)	2			3000	230			13.04		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
18	C.O. (Dressing Rm.1)	2			3000	230			13.04		20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
19	C.O. (Dressing Rm.2)	2			3000	230	13.04				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
20	C.O. (Dressing Rm.2)	2			3000	230	13.04				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
21	C.O. (Dressing Rm.3)	2			3000	230		13.04			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
22	C.O. (Dressing Rm.3)	2			3000	230		13.04			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G	15
FEEDER/ MAIN OCP		74	0	0	39040	230	59.65	60.52	49.57	0.00	150	250	3	3- 60mm <sup>2</sup> THHN + 1- 14mm <sup>2</sup> THHN G	50
I(total) = 1.25 x 1.732 x 60.52A =							131.03 A								

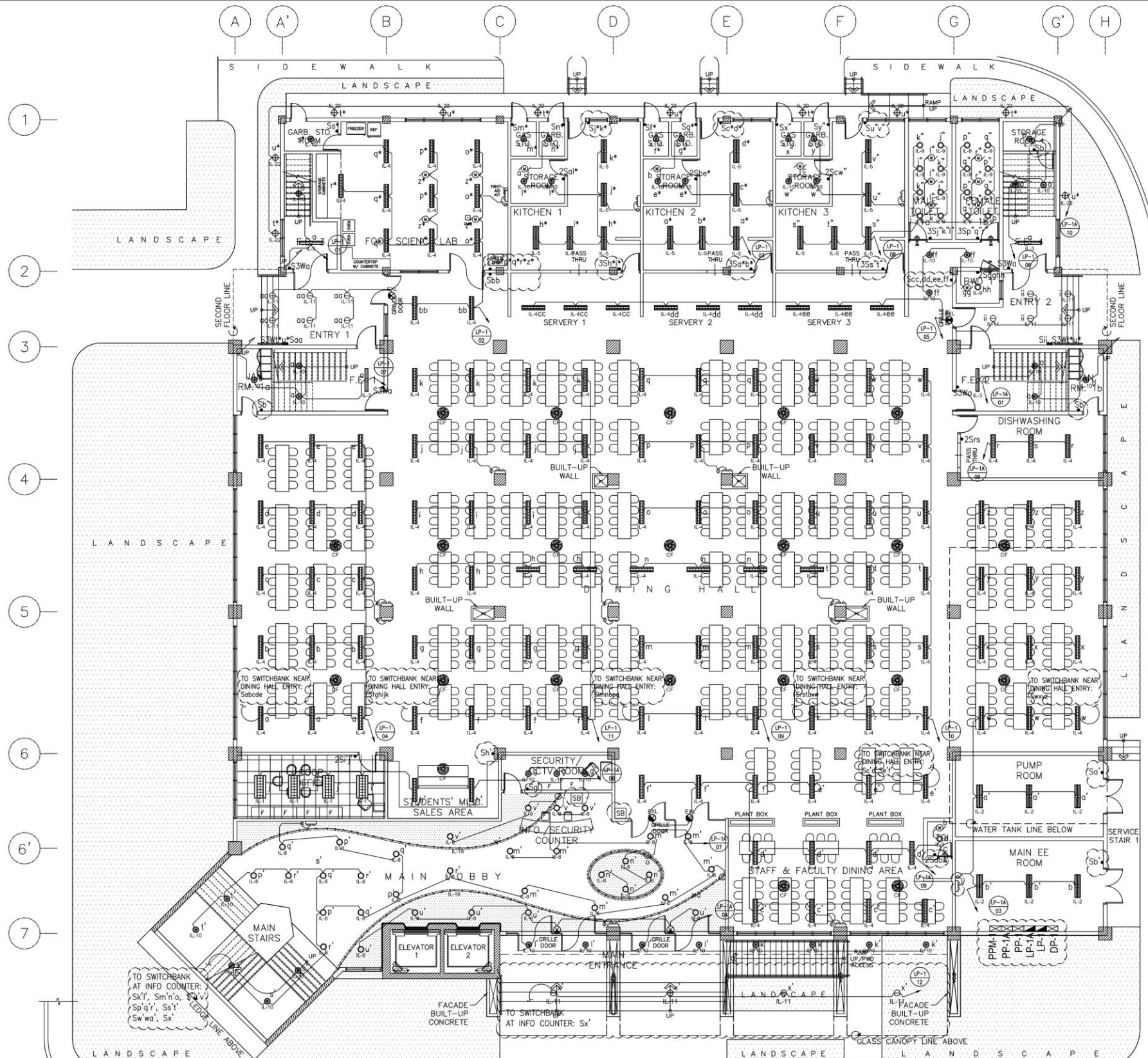
PANEL : PPM-5				Location: 5F Hallway				Mounting: SURFACE								
SYSTEM : 230V, 3-PHASE, 3-WIRE + G, 60Hz				Enclosure: NEMA 1												
OKT. No.	LOAD DESCRIPTION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER			No. OF WIRE & SIZE		CONDUIT
							ØAB	ØCA	ØBC	ØABC	AT	AF	P	CONDUCTOR (mm <sup>2</sup> )		
1	ACCU-15TR				17950	230				45.06	80	100	3	3- 14mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G		32
2	SPACE					230				0.00						
3	FCU-1.5-4 units	4	300		230	1.30					20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G		15
4	SPARE				230	0.00				0.00	20	100	2			
5	FCU-2.0-3 units	3	225		230		0.98				20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G		15
6	SPARE	1			230		0.00				20	100	2			
7	FCU-1.5-2 units	2	150		230			0.65			20	100	2	2- 3.5mm <sup>2</sup> THHN + 1- 3.5mm <sup>2</sup> THHN G		15
8	SPARE				230			0.00			20	100	2			
FEEDER/ MAIN OCP			11	18625	230	1.30	0.98	0.65	45.06		100	100	3	3- 14mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G		32
I(total)wire = 1.25 x 45.06A + 1.732 x 1.30A =						58.58 A										
I(total)ocp = 1.75 x 45.06A + 1.732 x 1.30A =						81.11 A										

Panelboard: DP-6						Location: 6F Hallway		Mounting: SURFACE										
Voltage System: 230V, 3-PHASE, 3-WIRE + G, 60Hz						Enclosure: NEMA 1												
PNL No.	PANELBOARD DESIGNATION	Qty. of C.O.	Qty. of L.O.	Qty. (Other Loads)	VOLT-AMPS	VOLTS	PHASE / LINE CURRENT				CIRCUIT BREAKER	No. of WIRE & SIZE		CONDUIT				
							ØAB	ØCA	ØBC	ØABC	AT	AF	P	CONDUCTOR (mm <sup>2</sup> )	(mm)			
1	LP-6	0	69	6	4363	230	6.29	5.54	7.14	0.00	100	100	3	3- 30mm <sup>2</sup> THHN + 1- 8.0mm <sup>2</sup> THHN G	40			
2	LP-D	0	104	0	5729	230	8.03	7.77	9.10	0.00	30	100	3	3- 3.5mm <sup>2</sup> THHN + 1- 5.5mm <sup>2</sup> THHN G	20			
3	PP-6	27	0	0	19740	230	25.04	30.78	30.00	0.00	70	100	3	3- 22mm <sup>2</sup> THHN + 1- 8.0mm <sup>2</sup> THHN G	32			
4	PPM-6	0	0	8	178185	230	0.65	0.00	0.00	446.92	600	600	3	2 x (3- 125mm <sup>2</sup> THHN + 1- 22mm <sup>2</sup> THHN G)	2 x 80			
5	SPACE										600	3						
FEEDER/ MAIN OCP					27	173	14	208016	230	40.02	44.09	46.24	446.92	700	800	3	2 x (3- 200mm <sup>2</sup> THHN + 1- 22mm <sup>2</sup> THHN G)	2 x 80
								575.00 A										
I(total)wire = 446.92A + 1.732 x 46.24A + 0.25 x (175.72A + 16.24A) =																		
I(total)ocbp= 446.92A + 1.732 x 46.24A + 0.75 x 175.72A + 1.25 x 16.24A =					662.86 A													





# FOR BIDDING

**NOTE:**  
ELECTRICAL  
WORK SCOPE  
INCLUDES  
PANEL BOARD  
INSTALLATION,  
CABLING AND  
LIGHTING  
FIXTURES  
INSTALLATION  
FROM THE  
GROUND  
FLOOR UP TO  
THE FOURTH  
FLOOR ONLY.  
SAME SCOPE  
FOR TRANSIENT  
AREA ALREADY  
ACCOMPLISHED  
FOR PHASE 2



LEGENDS	DESCRIPTION
LIGHTING FIXTURES	
IL-1	IL-1 TROFFER LIGHTING 1 SHALL BE 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 603MM X 1213MM X 67MM HEIGHT, MIRRORIZED ALUMINUM REFLECTOR AND MULTI-LINED SATIN FINISH ALUMINUM LOUVERS IN POWDER-COATED PAINT FINISH, ZINC-PHOSPHATE STEEL SHEET HOUSING, RECESSED MOUNTED.
IL-2	IL-2 TROFFER LIGHTING 2 SHALL BE 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 302MM X 1218MM X 75MM HEIGHT, MIRRORIZED ALUMINUM REFLECTOR AND MULTI-LINED SATIN FINISH ALUMINUM LOUVERS IN POWDER-COATED PAINT FINISH, ZINC-PHOSPHATE STEEL SHEET HOUSING, SURFACE MOUNTED.
IL-3	IL-3 TROFFER LIGHTING 3 SHALL BE 1 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 177MM X 1218MM X 75MM HEIGHT, MIRRORIZED ALUMINUM REFLECTOR AND MULTI-LINED SATIN FINISH ALUMINUM LOUVERS IN POWDER-COATED PAINT FINISH, ZINC-PHOSPHATE STEEL SHEET HOUSING, SURFACE MOUNTED.
IL-4	IL-4 TROFFER LIGHTING 4 SHALL BE 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 250MM X 1226MM X 62MM HEIGHT, MIRROR FINISH ANODIZED ALUMINUM REFLECTOR, ZINC PHOSPHATE STEEL SHEET HOUSING HOUSING, SUSPENDED MOUNTED LOUVER LUMINAIRE WITH BEVELED PROFILE.
IL-5	IL-5 TROFFER LIGHTING 5 SHALL BE 2 X 18 WATTS, COOL WHITE OR DAY LIGHT, T8 LED TUBE WITH 304MM X 1222MM X 100MM HEIGHT, MADE FROM ZINC PHOSPHATE STEEL SHEET HOUSING IN POWDER COATED PAINT FINISH WITH PRISMATIC DIFFUSER AND GASKET FOR CLEANROOM APPLICATION, SURFACE MOUNTED.
IL-6	IL-6 OPEN TYPE T8 LED SHALL BE 1 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 53MM X 1220MM X 40MM HEIGHT, ZINC-PHOSPHATE STEEL SHEET HOUSING IN POWDER COATED PAINT FINISH, SURFACE MOUNTED.
IL-7	IL-7 CENTER LIGHT SHALL BE 1-24 WATTS LED, SURFACE MOUNTED WITH WHITE POWDER-COATED HOUSING WITH COVER
IL-8	IL-8 DOWNLIGHT 1 ROUND SHALL BE 20 X 0.5 WATTS LED, COOL WHITE IN 130MM DIAMETERS CUT OUT, 140MM X 140MM X 80MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT (WITH COVER) MADE FROM ALUMINUM AND SYNTHETIC MATERIAL IN FLAT RING WHITE COLOR FINISH.
IL-9	IL-9 DOWNLIGHT 2 ROUND SHALL BE 1 X 12.5 WATTS COOL DAYLIGHT, LED BULB, IN 180MM DIAMETERS X 220MM HEIGHT, RECESSED MOUNTED DOWNLIGHT (WITHOUT GLASS COVER) WITH DIAMOND DESIGN REFLECTOR AND WHITE CEILING RIM WITH SOCKET.
IL-10	IL-10 DOWNLIGHT 3 ROUND SHALL BE 1 X 12.5 WATTS COOL DAYLIGHT, LED BULB, IN 167MM DIAMETER X 194MM HEIGHT, SURFACE MOUNTED DOWNLIGHT (WITHOUT GLASS COVER) WITH DOTTED REFLECTOR AND WHITE CASING WITH E27 SOCKET.
IL-11	IL-11 DOWNLIGHT 4 ROUND SHALL BE 19 WATTS LED, WARM WHITE IN 111MM DIAMETERS X 160MM SURFACE MOUNTED, MADE FROM DIE CAST ALUMINUM WITH CENTRAL HOUSING MADE FROM EXTRUDED ALUMINUM COMPLETE WITH SAFETY GLASS, SILICON GASKET WITH EXTERNAL SCREWS MADE OF STAINLESS STEEL
IL-12	IL-12 DOWNLIGHT 5 SHALL BE 10 WATTS LED WITH BEAM ANGLE 90°, WITH COLOR TEMP OF 3000K, IN 108MM DIAMETERS X 108MM HEIGHT, RECESSED MOUNTED
IL-13	IL-13 DOWNLIGHT 6 SHALL BE 25 WATTS LED 90° 3000K WARM WHITE 2500 LUMENS, 211MM X 211MM X 97MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT WITH DIFFUSER
IL-14	IL-14 DOWNLIGHT 7 SHALL BE 37 WATTS LED 45° 3000K WARM WHITE 3000 LUMENS, IN 187MM DIAMETERS CUT OUT 219MM X 219MM X 112MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT
IL-15	IL-15 DOWNLIGHT 8 SHALL BE 54 WATTS LED 45° 3000K WARM WHITE 4500 LUMENS, IN 187MM DIAMETERS CUT OUT 219MM X 219MM X 156MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT
IL-16	IL-16 SUSPENDED TRACK LIGHT SHALL BE 40 WATTS LED 38° 3000K WARM WHITE 4280 LUMENS, IN SUSPENDED TRACKS
IL-17	IL-17 SMART BLUETOOTH ADJUSTABLE RECESSED SPOTLIGHTS SHALL BE 47(60) WATTS LED 10-30° 3000K WARM WHITE 2720-3080 LUMENS, ADJUSTABLE BEAM ANGLES
IL-18	IL-18 STAGE LIGHT SHALL BE 110 WATTS LED LIGHTS, WITH BEAM ANGLE OF 35° OR 60° IN PROJECTION ANGLE, RECESSED MOUNTED MADE FROM DIE CAST ALUMINUM IN CHROME OR BLACK FINISH.
IL-19	IL-19 LED STRIPS SHALL BE 9.6 WATTS/METERS, WARM WHITE LED STRIPS LIGHT, WITH BEAM ANGLE OF 110° AND 941LM LUMENS, IN 12MM X 5.5MM HEIGHT, SURFACE MOUNTED FOR COVED LIGHTING. PROVIDE 6MM THICK ACRYLIC COVER IN WHITE OPAQUE FINISH FOR COVE LIGHTING.
EML	IL-20 EMERGENCY LIGHT SHALL BE 3 WATTS LED 44 X 0.7WATTS (22 LEDS/LAMP HEAD), WALL MOUNTED EMERGENCY LIGHT MADE FROM ABS PLASTICS WITH 5 HOURS OPERATING TIME AND 48 HOURS CHARGING TIME.
EXL	IL-21 EXIT LIGHT SHALL BE 2 WATTS, DOUBLE-SIDED, CEILING-MOUNTED LED LAMPS IN ELECTRO GALVANIZED STEEL WITH EPOXY POWDER-COATED FITTING CONSTRUCTION AND FIRE-RETARDANT MOULDED ACRYLIC DIFFUSER.
IL-22	IL-22 WALL MOUNTED LAMP SHALL BE 20 WATTS, LED-PAR 30 WARM WHITE, WALL MOUNTED LUMINAIRE MADE FROM DIE-CAST ALUMINUM BODY IN POWDER-COATED FINISH WITH CLEAR TOUGHENED GLASS CONTROL GEAR AND REMOTE TRANSFORMER GASKET SILICON RUBBER MOUNTING SURFACE.
IL-23	IL-23 HIGH BAY LIGHTS SHALL BE 40/50 WATTS COOL WHITE, LED LIGHTS BY "SAMSUNG" OR APPROVED EQUAL, IN 405MM DIAMETER X 400MM HEIGHT, HIGH BAY LUMINAIRES IN ALUMINUM REFLECTOR AND HOUSING.
IL-24	IL-24 HIGH BAY LIGHTS (FOR COVE LIGHTING ANTE ROOM) SHALL BE 10 WATTS BLUE AND WARM WHITE LED STRIP LIGHTS WITH 18 TO 20 LM, IN 10MM; 15.8MM X 7MM CROSS SECTION, ONE ROLL = 100M, 60 LIGHTS PER 1 METER, COMPLETE WITH ACCESSORIES, SURFACE MOUNTED FOR COVED LIGHTING.
IL-25	IL-25 CIRCULAR WALL LAMP (FOR OBSERVATORY ROOM) SHALL BE 8 WATTS, RED COLOR, LED BULB IN 300MM DIAMETERS WALL MOUNTED CIRCULAR LAMP MADE OF POLYCARBONATE BASE, RING AND DIFFUSER WITH HIGH SILICONE SEAL FOR IP 65.
IL-26	IL-26 DOWNLIGHT 9 ROUND SHALL BE 28 WATTS LED, WARM WHITE IN 111MM DIAMETERS X 160MM SURFACE MOUNTED, MADE FROM DIE CAST ALUMINUM WITH CENTRAL HOUSING MADE FROM EXTRUDED ALUMINUM COMPLETE WITH SAFETY GLASS, SILICON GASKET WITH EXTERNAL SCREWS MADE OF STAINLESS STEEL.
2Sg	ONE-GANG SWITCH
2Ssb	TWO-GANG SWITCH
3Sabc	THREE-GANG SWITCH
3S3wo	THREE-WAY SWITCH
SB	SWITCHBANK
	LIGHTING PANEL
	POWER PANEL
	CIRCUIT HOMERUN
AA	AA - DENOTES PANEL DESIGNATION
00	00 - DENOTES CIRCUIT NUMBER
UP	RISER UP
UP/DN	RISER UP/DN
DN	RISER DN
TE	TOILET EXHAUST FAN
J	JUNCTION BOX

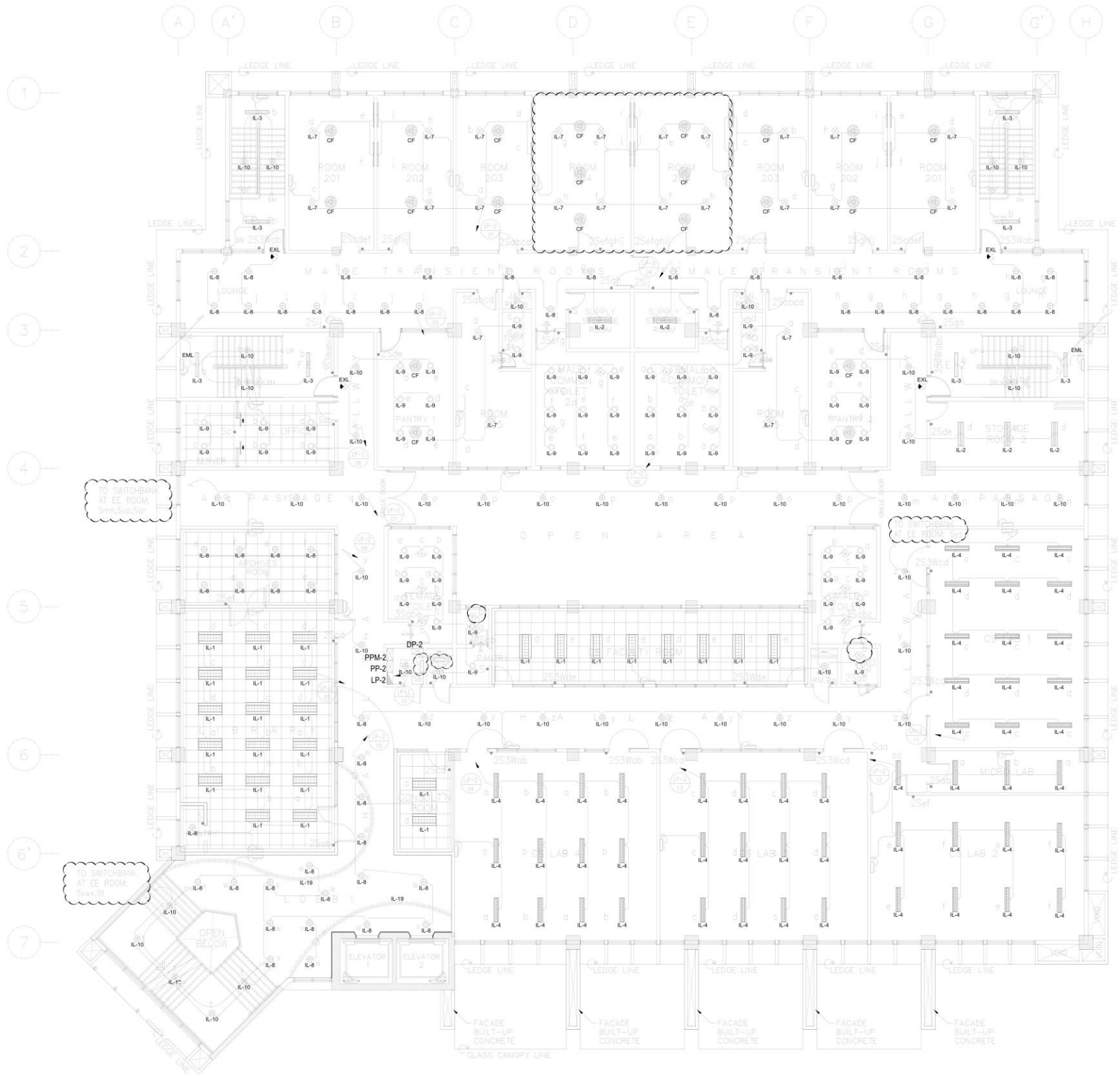
**A** GROUND FLOOR LIGHTING SYSTEM LAYOUT  
SCALE 1 : 125M

CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. ELECTRICAL ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
 <b>ARCE•BAILON•ARCE</b> ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE: 3552323 FAX NO.: 3551080 www.arcebailonarce.com	MARIANO S. ARCE, JR., fuap	ALEJANDRO S. LICERIO ACREATEC ASEAN ENGINEER	CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM	 <b>PHILIPPINE SCIENCE HIGH SCHOOL</b> MAIN CAMPUS	LAWRENCE V. MADRIAGA SGD DIRECTOR III	GROUND FLOOR LIGHTING SYSTEM LAYOUT	REV-2 PANELBOARD LOCATION (NOV2018) REV-3 LIGHTING FIXTURES & 3A (FEB2022) REV-3 LOCATION OF SWITCH (FEB2022) REV-4 ADDTL. 8" EE RM (JAN2023)	17-06	E3-01a
REG. NO. 6844 PTR NO. - TIN -	DATE: -	REG. NO. 3190 PTR NO. - TIN -	DATE: -	LOCATION: Agham Road, Diliman, Quezon City			DESIGNED BY: CAD: CHECKED BY: DATE:	RLH	



FOR BIDDING

**NOTE:**  
ELECTRICAL  
WORK SCOPE  
INCLUDES  
PANEL BOARD  
INSTALLATION,  
CABLING AND  
LIGHTING  
FIXTURES  
INSTALLATION  
FROM THE  
GROUND  
FLOOR UP TO  
THE FOURTH  
FLOOR ONLY.  
SAME SCOPE  
FOR TRANSIENT  
AREA ALREADY  
ACCOMPLISHED  
FOR PHASE 2



LEGENDS	DESCRIPTION
LIGHTING FIXTURES	
	IL-1 TROFFER LIGHTING 1 SHALL BE 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 603MM X 1213MM X 67MM HEIGHT, MIRRORIZED ALUMINUM REFLECTOR AND MULTI-LINED SATIN FINISH ALUMINUM LOUVERS IN POWDER-COATED PAINT FINISH, ZINC-PHOSPHATE STEEL SHEET HOUSING, RECESSED MOUNTED.
	IL-2 TROFFER LIGHTING 2 SHALL BE 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 102MM X 1216MM X 75MM HEIGHT, MIRRORIZED ALUMINUM REFLECTOR AND MULTI-LINED SATIN FINISH ALUMINUM LOUVERS IN POWDER-COATED PAINT FINISH, ZINC-PHOSPHATE STEEL SHEET HOUSING, SURFACE MOUNTED.
	IL-3 TROFFER LIGHTING 3 SHALL BE 1 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 177MM X 1218MM X 75MM HEIGHT, MIRRORIZED ALUMINUM REFLECTOR AND MULTI-LINED SATIN FINISH ALUMINUM LOUVERS IN POWDER-COATED PAINT FINISH, ZINC-PHOSPHATE STEEL SHEET HOUSING, SURFACE MOUNTED.
	IL-4 TROFFER LIGHTING 4 SHALL BE 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 250MM X 1226MM X 62MM HEIGHT, MIRROR FINISH ANODIZED ALUMINUM REFLECTOR, ZINC PHOSPHATE STEEL SHEET HOUSING HOUSING, SUSPENDED MOUNTED LOUVER LUMINAIRE WITH BEVELED PROFILE.
	IL-5 TROFFER LIGHTING 5 SHALL BE 2 X 18 WATTS COOL WHITE OR DAY LIGHT, T8 LED TUBE WITH 304MM X 1222MM X 100MM HEIGHT, MADE FROM ZINC PHOSPHATE STEEL SHEET HOUSING IN POWDER COATED PAINT FINISH WITH PRISMATIC DIFFUSER AND GASKET FOR CLEANROOM APPLICATION, SURFACE MOUNTED.
	IL-6 OPEN TYPE T8 LED SHALL BE 1 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 53MM X 1220MM X 40MM HEIGHT, ZINC-PHOSPHATE STEEL SHEET HOUSING IN POWDER COATED PAINT FINISH, SURFACE MOUNTED.
	IL-7 CENTER LIGHT SHALL BE 1-24 WATTS LED, SURFACE MOUNTED WITH WHITE POWDER-COATED HOUSING WITH COVER
	IL-8 DOWNLIGHT 1 ROUND SHALL BE 20 X 0.5 WATTS LED, COOL WHITE IN 130MM DIAMETERS CUT OUT, 140MM X 140MM X 80MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT (WITH COVER) MADE FROM ALUMINUM AND SYNTHETIC MATERIAL IN FLAT RING WHITE COLOR FINISH.
	IL-9 DOWNLIGHT 2 ROUND SHALL BE 1 X 18.5 WATTS COOL DAYLIGHT, LED BULB, IN 180MM DIAMETERS X 220MM HEIGHT, RECESSED MOUNTED DOWNLIGHT (WITHOUT GLASS COVER) WITH DIAMOND DESIGN REFLECTOR AND WHITE CEILING RIM WITH SOCKET.
	IL-10 DOWNLIGHT 3 ROUND SHALL BE 1 X 12.5 WATTS COOL DAYLIGHT, LED BULB, IN 167MM DIAMETER X 194MM HEIGHT, SURFACE MOUNTED DOWNLIGHT (WITHOUT GLASS COVER) WITH DOTTED REFLECTOR AND WHITE CASING WITH E27 SOCKET.
	IL-11 DOWNLIGHT 4 ROUND SHALL BE 19 WATTS LED, WARM WHITE IN 111MM DIAMETERS X 160MM SURFACE MOUNTED, MADE FROM DIE-CAST ALUMINUM WITH CENTRAL HOUSING MADE FROM EXTRUDED ALUMINUM COMPLETE WITH SAFETY GLASS, SILICON GASKET WITH EXTERNAL SCREWS MADE OF STAINLESS STEEL.
	IL-12 DOWNLIGHT 5 SHALL BE 10 WATTS LED WITH BEAM ANGLE 90°, WITH COLOR TEMP OF 3000K, IN 108MM DIAMETERS X 108MM HEIGHT, RECESSED MOUNTED
	IL-13 DOWNLIGHT 6 SHALL BE 25 WATTS LED 80° 3000K WARM WHITE 2500 LUMENS, 211MM X 211MM X 97MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT WITH DIFFUSER
	IL-14 DOWNLIGHT 7 SHALL BE 37 WATTS LED 45° 3000K WARM WHITE 3000 LUMENS, IN 187MM DIAMETERS CUT OUT 219MM X 219MM X 112MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT
	IL-15 DOWNLIGHT 8 SHALL BE 34 WATTS LED 45° 3000K WARM WHITE 4500 LUMENS, IN 187MM DIAMETERS CUT OUT 219MM X 219MM X 156MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT
	IL-16 SUSPENDED TRACK LIGHT SHALL BE 40 WATTS LED 38° 3000K WARM WHITE 4280 LUMENS, IN SUSPENDED TRACKS
	IL-17 SMART BLUETOOTH ADJUSTABLE RECESSED SPOTLIGHTS SHALL BE 47(60) WATTS LED 10-30° 3000K WARM WHITE 2720-3080 LUMENS, ADJUSTABLE BEAM ANGLES
	IL-18 STAGE LIGHT SHALL BE 110 WATTS LED LIGHTS, WITH BEAM ANGLE OF 35° OR 60° IN PROJECTION ANGLE, RECESSED MOUNTED MADE FROM DIE CAST ALUMINUM IN CHROME OR BLACK FINISH.
	IL-19 LED STRIPS SHALL BE 9.6 WATTS/MEETERS, WARM WHITE LED STRIPS LIGHT, WITH BEAM ANGLE OF 110° AND 94 LM LUMENS, IN 12MM X 6.5MM HEIGHT, SURFACE MOUNTED FOR COVE LIGHTING, PROVIDE 6MM THICK ACRYLIC COVER IN WHITE OPAQUE FINISH FOR COVE LIGHTING.
	IL-20 EMERGENCY LIGHT SHALL BE 3 WATTS LED 44 X 0.7WATTS (22 LEDS/LAMP HEAD), WALL MOUNTED EMERGENCY LIGHT MADE FROM ABS PLASTICS WITH 5 HOURS OPERATING TIME AND 48 HOURS CHARGING TIME.
	IL-21 EXIT LIGHT SHALL BE 2 WATTS, DOUBLE-SIDED, CEILING-MOUNTED LED LAMPS IN ELECTRO GALVANIZED STEEL WITH EPOXY POWDER-COATED FITTING CONSTRUCTION AND FIRE-RETARDANT MOULDED ACRYLIC DIFFUSER.
	IL-22 WALL MOUNTED LAMP SHALL BE 20 WATTS LED-PAR 30 WARM WHITE, WALL MOUNTED LUMINAIRE MADE FROM DIE-CAST ALUMINUM BODY IN POWDER-COATED FINISH WITH CLEAR TOUGHENED GLASS CONTROL GEAR AND REMOTE TRANSFORMER GASKET SILICON RUBBER MOUNTING SURFACE.
	IL-23 HIGH BAY LIGHTS SHALL BE 40/50 WATTS COOL WHITE, LED LIGHTS BY "SAMSUNG" OR APPROVED EQUAL, IN 400MM DIAMETER X 400MM HEIGHT, HIGH BAY LUMINAIRES IN ALUMINUM REFLECTOR AND HOUSING.
	IL-24 HIGH BAY LIGHTS (FOR COVE LIGHTING @ ANTE ROOM) SHALL BE 10 WATTS BLUE AND WARM WHITE LED STRIP LIGHTS WITH 16 TO 20 LM, IN 10MM 15.8MM X 7MM CROSS SECTION, ONE ROLL = 100M, 60 LIGHTS PER 1 METER, COMPLETE WITH ACCESSORIES, SURFACE MOUNTED FOR COVE LIGHTING
	IL-25 CIRCULAR WALL LAMP (FOR OBSERVATORY ROOM) SHALL BE 8 WATTS, RED COLOR, LED BULB IN 300MM DIAMETERS WALL MOUNTED CIRCULAR LAMP
	IL-26 DOWNLIGHT 9 ROUND SHALL BE 29 WATTS LED, WARM WHITE IN 111MM DIAMETERS X 160MM SURFACE MOUNTED, MADE FROM DIE-CAST ALUMINUM WITH CENTRAL HOUSING MADE FROM EXTRUDED ALUMINUM COMPLETE WITH SAFETY GLASS, SILICON GASKET WITH EXTERNAL SCREWS MADE OF STAINLESS STEEL
	2Sdb TWO-GANG SWITCH
	3Sdb THREE-GANG SWITCH
	3Way THREE-WAY SWITCH
	SB SWITCHBANK
	LP LIGHTING PANEL
	PP POWER PANEL
	CIR CIRCUIT HOMERUN
	AA - DENOTES PANEL DESIGNATION
	OB - DENOTES CIRCUIT NUMBER
	R RISER UP
	R/O RISER UP/DN
	R/D RISER DN
	T TOILET EXHAUST FAN
	JB JUNCTION BOX

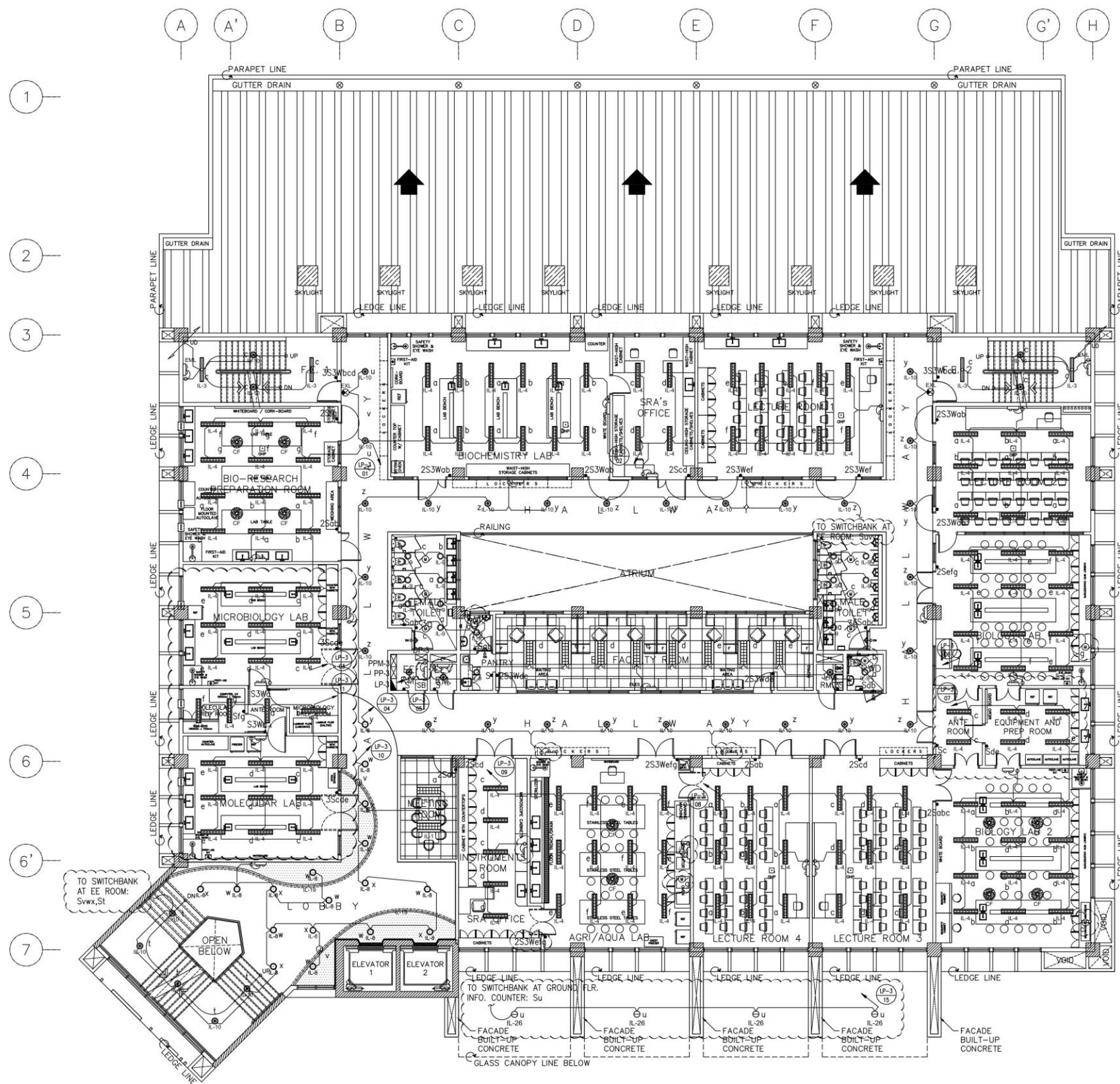
A SECOND FLOOR LIGHTING SYSTEM LAYOUT

E3-01b SCALE 1 : 125M

CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. ELECTRICAL ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
 ARCE•BAILON•ARCE ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE: 3552323 FAX NO.: 3551080 www.arcebailonarce.com	MARIANO S. ARCE, JR., fuap	ALEJANDRO S. LICERIO ACREATEC ASEAN ENGINEER	CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM	 PHILIPPINE SCIENCE HIGH SCHOOL MAIN CAMPUS	LAWRENCE V. MADRIAGA SGD DIRECTOR III	SECOND FLOOR LIGHTING SYSTEM LAYOUT	REV.3 LOCATION OF SWITCH (PER2022) REV.4 ADD'L. EL @ EE & ELV RM (JAN2023) REV.5 CHANGES AT ROOM 204 FURNITURE LAYOUT (JAN2023) E	17-06	E3-01b
REG. NO. 6844 PTR NO. -	REG. NO. 3190 PTR NO. -	LOCATION: Agham Road, Diliman, Quezon City					DESIGNED BY: CAD:	CHECKED BY: RLH	DATE:
TIN -	DATE: -	TIN -	DATE: -				-		





**NOTE:**  
ELECTRICAL  
WORK SCOPE  
INCLUDES  
PANEL BOARD  
INSTALLATION,  
CABLING AND  
LIGHTING  
FIXTURES  
INSTALLATION  
FROM THE  
GROUND  
FLOOR UP TO  
THE FOURTH  
FLOOR ONLY.  
SAME SCOPE  
FOR TRANSIENT  
AREA ALREADY  
ACCOMPLISHED  
FOR PHASE 2



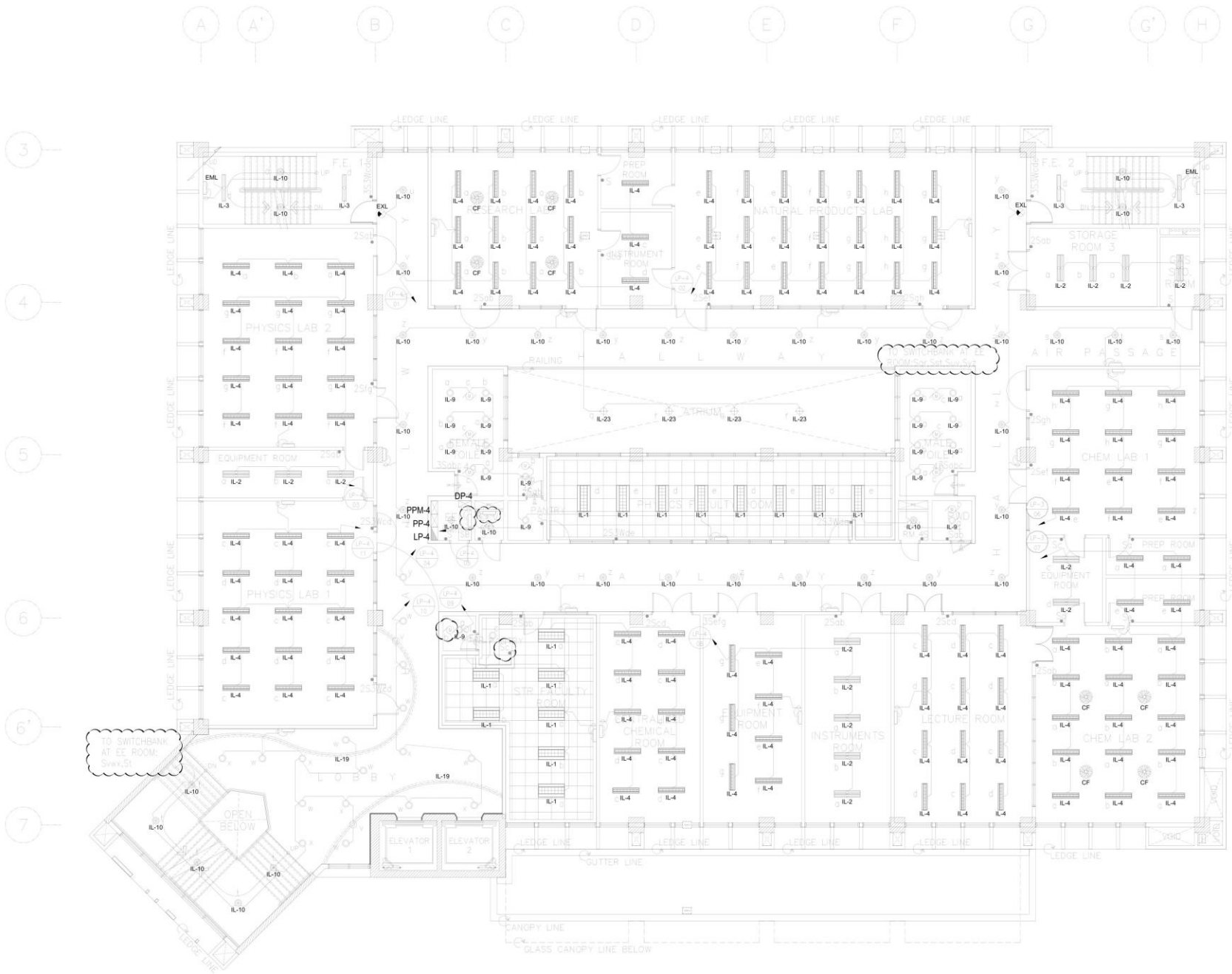
LEGENDS	DESCRIPTION
LIGHTING FIXTURES	
IL-1	IL-1 TROFFER LIGHTING 1 SHALL BE 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 603MM X 1213MM X 67MM HEIGHT, MIRRORIZED ALUMINUM REFLECTOR AND MULTI-LINED SATIN FINISH ALUMINUM LOUVERS IN POWDER-COATED PAINT FINISH, ZINC-PHOSPHATE STEEL SHEET HOUSING, RECESSED MOUNTED.
IL-2	IL-2 TROFFER LIGHTING 2 SHALL BE 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 302MM X 1218MM X 75MM HEIGHT, MIRRORIZED ALUMINUM REFLECTOR AND MULTI-LINED SATIN FINISH ALUMINUM LOUVERS IN POWDER-COATED PAINT FINISH, ZINC-PHOSPHATE STEEL SHEET HOUSING, SURFACE MOUNTED.
IL-3	IL-3 TROFFER LIGHTING 3 SHALL BE 1 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 177MM X 1218MM X 75MM HEIGHT, MIRRORIZED ALUMINUM REFLECTOR AND MULTI-LINED SATIN FINISH ALUMINUM LOUVERS IN POWDER-COATED PAINT FINISH, ZINC-PHOSPHATE STEEL SHEET HOUSING, SURFACE MOUNTED.
IL-4	IL-4 TROFFER LIGHTING 4 SHALL BE 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 250MM X 1226MM X 62MM HEIGHT, MIRROR FINISH ANODIZED ALUMINUM REFLECTOR, ZINC PHOSPHATE STEEL SHEET HOUSING HOUSING, SUSPENDED MOUNTED LOUVER LUMINAIRE WITH BEVELED PROFILE.
IL-5	IL-5 TROFFER LIGHTING 5 SHALL BE 2 X 18 WATTS, COOL WHITE OR DAY LIGHT, T8 LED TUBE WITH 304MM X 1222MM X 100MM HEIGHT, MADE FROM ZINC PHOSPHATE STEEL SHEET HOUSING IN POWDER COATED PAINT FINISH WITH PRISMATIC DIFFUSER AND GASKET FOR CLEANROOM APPLICATION, SURFACE MOUNTED.
IL-6	IL-6 OPEN TYPE T8 LED SHALL BE 1 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 53MM X 1220MM X 40MM HEIGHT, ZINC-PHOSPHATE STEEL SHEET HOUSING IN POWDER COATED PAINT FINISH, SURFACE MOUNTED.
IL-7	IL-7 CENTER LIGHT SHALL BE 1-24 WATTS LED, SURFACE MOUNTED WITH WHITE POWDER-COATED HOUSING WITH COVER
IL-8	IL-8 DOWNLIGHT 1 ROUND SHALL BE 20 X 0.5 WATTS LED, COOL WHITE IN 130MM DIAMETERS CUT OUT, 140MM X 140MM X 80MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT (WITH COVER) MADE FROM ALUMINUM AND SYNTHETIC MATERIAL IN FLAT RING WHITE COLOR FINISH.
IL-9	IL-9 DOWNLIGHT 2 ROUND SHALL BE 1 X 12.5 WATTS COOL DAYLIGHT, LED BULB, IN 180MM DIAMETERS X 220MM HEIGHT, RECESSED MOUNTED DOWNLIGHT (WITHOUT GLASS COVER) WITH DIAMOND DESIGN REFLECTOR AND WHITE CEILING RIM WITH SOCKET.
IL-10	IL-10 DOWNLIGHT 3 ROUND SHALL BE 1 X 12.5 WATTS COOL DAYLIGHT, LED BULB, IN 167MM DIAMETER X 194MM HEIGHT, SURFACE MOUNTED DOWNLIGHT (WITHOUT GLASS COVER) WITH DOTTED REFLECTOR AND WHITE CASING WITH E27 SOCKET.
IL-11	IL-11 DOWNLIGHT 4 ROUND SHALL BE 19 WATTS LED, WARM WHITE IN 111MM DIAMETERS X 160MM SURFACE MOUNTED, MADE FROM DIE CAST ALUMINUM WITH CENTRAL HOUSING MADE FROM EXTRUDED ALUMINUM COMPLETE WITH SAFETY GLASS, SILICON GASKET WITH EXTERNAL SCREWS MADE OF STAINLESS STEEL
IL-12	IL-12 DOWNLIGHT 5 SHALL BE 10 WATTS LED WITH BEAM ANGLE 90°, WITH COLOR TEMP OF 3000K , IN 108MM DIAMETERS X 108MM HEIGHT, RECESSED MOUNTED
IL-13	IL-13 DOWNLIGHT 6 SHALL BE 25 WATTS LED 90° 3000K WARM WHITE 2500 LUMENS, 211MM X 211MM X 97MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT WITH DIFFUSER
IL-14	IL-14 DOWNLIGHT 7 SHALL BE 37 WATTS LED 45° 3000K WARM WHITE 3000 LUMENS, IN 187MM DIAMETERS CUT OUT 219MM X 219MM X 112MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT
IL-15	IL-15 DOWNLIGHT 8 SHALL BE 54 WATTS LED 45° 3000K WARM WHITE 4500 LUMENS, IN 187MM DIAMETERS CUT OUT 219MM X 219MM X 156MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT
IL-16	IL-16 SUSPENDED TRACK LIGHT SHALL BE 40 WATTS LED 38° 3000K WARM WHITE 4280 LUMENS, IN SUSPENDED TRACKS
IL-17	IL-17 SMART BLUETOOTH ADJUSTABLE RECESSED SPOTLIGHTS SHALL BE 47(60) WATTS LED 10-30° 3000K WARM WHITE 2720-3080 LUMENS, ADJUSTABLE BEAM ANGLES
IL-18	IL-18 STAGE LIGHT SHALL BE 110 WATTS LED LIGHTS, WITH BEAM ANGLE OF 35° OR 60° IN PROJECTION ANGLE, RECESSED MOUNTED MADE FROM DIE CAST ALUMINUM IN CHROME OR BLACK FINISH.
IL-19	IL-19 LED STRIPS SHALL BE 9.6 WATTS/METERS, WARM WHITE LED STRIPS LIGHT, WITH BEAM ANGLE OF 110° AND 941LM LUMENS, IN 12MM X 5.5MM HEIGHT, SURFACE MOUNTED FOR COVED LIGHTING. PROVIDE 6MM THICK ACRYLIC COVER IN WHITE OPAQUE FINISH FOR COVE LIGHTING.
EML	IL-20 EMERGENCY LIGHT SHALL BE 3 WATTS LED 44 X 0.7WATTS (22 LEDS/LAMP HEAD), WALL MOUNTED EMERGENCY LIGHT MADE FROM ABS PLASTICS WITH 5 HOURS OPERATING TIME AND 48 HOURS CHARGING TIME.
EXL	IL-21 EXIT LIGHT SHALL BE 2 WATTS, DOUBLE-SIDED, CEILING-MOUNTED LED LAMPS IN ELECTRO GALVANIZED STEEL WITH EPOXY POWDER-COATED FITTING CONSTRUCTION AND FIRE-RETARDANT MOULDED ACRYLIC DIFFUSER.
IL-22	IL-22 WALL MOUNTED LAMP SHALL BE 20 WATTS, LED-PAR 30 WARM WHITE, WALL MOUNTED LUMINAIRE MADE FROM DIE-CAST ALUMINUM BODY IN POWDER-COATED FINISH WITH CLEAR TOUGHENED GLASS CONTROL GEAR AND REMOTE TRANSFORMER GASKET SILICON RUBBER MOUNTING SURFACE.
IL-23	IL-23 HIGH BAY LIGHTS SHALL BE 40/50 WATTS COOL WHITE, LED LIGHTS BY "SAMSUNG" OR APPROVED EQUAL, IN 405MM DIAMETER X 400MM HEIGHT, HIGH BAY LUMINAIRES IN ALUMINUM REFLECTOR AND HOUSING.
IL-24	IL-24 HIGH BAY LIGHTS (FOR COVE LIGHTING @ ANTE ROOM) SHALL BE 10 WATTS BLUE AND WARM WHITE LED STRIP LIGHTS WITH 18 TO 20 LM, IN 10MM; 15.8MM X 7MM GROSS SECTION, ONE ROLL = 100M, 60 LIGHTS PER 1 METER, COMPLETE WITH ACCESSORIES, SURFACE MOUNTED FOR COVED LIGHTING
IL-25	IL-25 CIRCULAR WALL LAMP (FOR OBSERVATORY ROOM) SHALL BE 8 WATTS, RED COLOR, LED BULB IN 300MM DIAMETERS WALL MOUNTED CIRCULAR LAMP MADE OF POLYCARBONATE BASE, RING AND DIFFUSER WITH HIGH SILICONE SEAL FOR IP 65
IL-26	IL-26 DOWNLIGHT 9 ROUND SHALL BE 28 WATTS LED, WARM WHITE IN 111MM DIAMETERS X 160MM SURFACE MOUNTED, MADE FROM DIE CAST ALUMINUM WITH CENTRAL HOUSING MADE FROM EXTRUDED ALUMINUM COMPLETE WITH SAFETY GLASS, SILICON GASKET WITH EXTERNAL SCREWS MADE OF STAINLESS STEEL
2Sg	ONE-GANG SWITCH
2Sabc	TWO-GANG SWITCH
3Sabc	THREE-GANG SWITCH
3SWo	THREE-WAY SWITCH
SB	SWITCHBANK
	LIGHTING PANEL
	POWER PANEL
	CIRCUIT HOMERUN
AA	AA - DENOTES PANEL DESIGNATION
00	00 - DENOTES CIRCUIT NUMBER
UP	RISER UP
UP/DN	RISER UP/DN
DN	RISER DN
UE	TOILET EXHAUST FAN
JB	JUNCTION BOX

**A** THIRD FLOOR LIGHTING SYSTEM LAYOUT  
E3 01c SCALE 1 : 125M

CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. ELECTRICAL ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
 <b>ARCE•BAILON•ARCE</b> ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE: 3552323 FAX NO.: 3551080 www.arcebailonarce.com	MARIANO S. ARCE, JR., fuap	ALEJANDRO S. LICERIO ACRETEC ASEAN ENGINEER	CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM	 PHILIPPINE SCIENCE HIGH SCHOOL MAIN CAMPUS	LAWRENCE V. MADRIAGA SGD DIRECTOR III	THIRD FLOOR LIGHTING SYSTEM LAYOUT	REV 3 LIGHTING FIXTURE IL-26 (PER0202) REV 3 LOCATION OF SWITCH (PER0302) REV 4 ADJUSTED EL LOCATION (JAN2023) REV 4 ADOTL EL @ EE & ELV RM (JAN2023)	17-06	E3-01c
REG. NO. 6844 PTR NO. - TIN -	DATE: -	REG. NO. 3190 PTR NO. - TIN -	DATE: -	LOCATION: Agham Road, Diliman, Quezon City			DESIGNED BY: - CAD: -	CHECKED BY: RLH	DATE: -



**NOTE:**  
ELECTRICAL  
WORK SCOPE  
INCLUDES  
PANEL BOARD  
INSTALLATION,  
CABLING AND  
LIGHTING  
FIXTURES  
INSTALLATION  
FROM THE  
GROUND  
FLOOR UP TO  
THE FOURTH  
FLOOR ONLY.  
SAME SCOPE  
FOR TRANSIENT  
AREA ALREADY  
ACCOMPLISHED  
FOR PHASE 2



A FOURTH FLOOR LIGHTING SYSTEM LAYOUT  
E3-01d SCALE 1" = 125'

LEGENDS	DESCRIPTION
LIGHTING FIXTURES	
	IL-1 TROFFER LIGHTING 1 SHALL BE 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 603MM X 1213MM X 67MM HEIGHT, MIRRORIZED ALUMINUM REFLECTOR AND MULTI-LINED SATIN FINISH ALUMINUM LOUVERS IN POWDER-COATED PAINT FINISH, ZINC-PHOSPHATE STEEL SHEET HOUSING, RECESSED MOUNTED.
	IL-2 TROFFER LIGHTING 2 SHALL BE 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 1026MM X 1216MM X 75MM HEIGHT, MIRRORIZED ALUMINUM REFLECTOR AND MULTI-LINED SATIN FINISH ALUMINUM LOUVERS IN POWDER-COATED PAINT FINISH, ZINC-PHOSPHATE STEEL SHEET HOUSING, SURFACE MOUNTED.
	IL-3 TROFFER LIGHTING 3 SHALL BE 1 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 1773MM X 1218MM X 75MM HEIGHT, MIRRORIZED ALUMINUM REFLECTOR AND MULTI-LINED SATIN FINISH ALUMINUM LOUVERS IN POWDER-COATED PAINT FINISH, ZINC-PHOSPHATE STEEL SHEET HOUSING, SURFACE MOUNTED.
	IL-4 TROFFER LIGHTING 4 SHALL BE 2 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 2550MM X 1226MM X 62MM HEIGHT, MIRROR FINISH ANODIZED ALUMINUM REFLECTOR, ZINC PHOSPHATE STEEL SHEET HOUSING, SUSPENDED MOUNTED LOUVER LUMINAIRE WITH BEVELED PROFILE.
	IL-5 TROFFER LIGHTING 5 SHALL BE 1 X 18 WATTS COOL WHITE OR DAY LIGHT, T8 LED TUBE WITH 304MM X 1222MM X 100MM HEIGHT, MADE FROM ZINC PHOSPHATE STEEL SHEET HOUSING IN POWDER COATED PAINT FINISH WITH PRISMATIC DIFFUSER AND GASKET FOR CLEANROOM APPLICATION, SURFACE MOUNTED.
	IL-6 OPEN TYPE T8 LED SHALL BE 1 X 18 WATTS T-8 COOL WHITE LED TUBE, WITH 53MM X 1222MM X 40MM HEIGHT, ZINC-PHOSPHATE STEEL SHEET HOUSING IN POWDER COATED PAINT FINISH, SURFACE MOUNTED.
	IL-7 CENTER LIGHT SHALL BE 1-24 WATTS LED, SURFACE MOUNTED WITH WHITE POWDER-COATED HOUSING WITH COVER
	IL-8 DOWNLIGHT 1 ROUND SHALL BE 20 X 0.5 WATTS LED, COOL WHITE IN 130MM DIAMETERS CUT-OUT, 140MM X 140MM X 80MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT (WITH COVER) MADE FROM ALUMINUM AND SYNTHETIC MATERIAL IN FLAT RING WHITE COLOR FINISH.
	IL-9 DOWNLIGHT 2 ROUND SHALL BE 1 X 12.5 WATTS COOL DAYLIGHT, LED BULB, IN 180MM DIAMETERS X 220MM HEIGHT, RECESSED MOUNTED DOWNLIGHT (WITHOUT GLASS COVER) WITH DIAMOND DESIGN REFLECTOR AND WHITE CEILING RIM WITH SOCKET.
	IL-10 DOWNLIGHT 3 ROUND SHALL BE 1 X 12.5 WATTS COOL DAYLIGHT, LED BULB, IN 167MM DIAMETER X 194MM HEIGHT, SURFACE MOUNTED DOWNLIGHT (WITHOUT GLASS COVER) WITH DOTTED REFLECTOR AND WHITE CASING WITH E27 SOCKET.
	IL-11 DOWNLIGHT 4 ROUND SHALL BE 19 WATTS LED, WARM WHITE IN 111MM DIAMETERS X 160MM SURFACE MOUNTED, MADE FROM DIE CAST ALUMINUM WITH CENTRAL HOUSING MADE FROM EXTRUDED ALUMINUM COMPLETE WITH SAFETY GLASS, SILICON GASKET WITH EXTERNAL SCREWS MADE OF STAINLESS STEEL.
	IL-12 DOWNLIGHT 5 SHALL BE 10 WATTS LED WITH BEAM ANGLE 90°, WITH COLOR TEMP OF 3000K, IN 108MM DIAMETERS X 108MM HEIGHT, RECESSED MOUNTED
	IL-13 DOWNLIGHT 6 SHALL BE 25 WATTS LED 80° 3000K WARM WHITE 2500 LUMENS, 211MM X 211MM X 97MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT WITH DIFFUSER
	IL-14 DOWNLIGHT 7 SHALL BE 37 WATTS LED 45° 3000K WARM WHITE 3000 LUMENS, IN 187MM DIAMETERS CUT-OUT 219MM X 219MM X 112MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT
	IL-15 DOWNLIGHT 8 SHALL BE 34 WATTS LED 45° 3000K WARM WHITE 4500 LUMENS, IN 187MM DIAMETERS CUT-OUT 219MM X 219MM X 156MM HEIGHT RECESSED MOUNTED LED DOWNLIGHT
	IL-16 SUSPENDED TRACK LIGHT SHALL BE 40 WATTS LED 38° 3000K WARM WHITE 4280 LUMENS, IN SUSPENDED TRACKS
	IL-17 SMART BLUETOOTH ADJUSTABLE RECESSED SPOTLIGHTS SHALL BE 47(50) WATTS LED 10-30° 3000K WARM WHITE 2720-3080 LUMENS, ADJUSTABLE BEAM ANGLES
	IL-18 STAGE LIGHT SHALL BE 110 WATTS LED LIGHTS, WITH BEAM ANGLE OF 35° OR 60° IN PROJECTION ANGLE, RECESSED MOUNTED MADE FROM DIE CAST ALUMINUM IN CHROME OR BLACK FINISH.
	IL-19 LED STRIPS SHALL BE 9.6 WATTS/MEETERS, WARM WHITE LED STRIPS LIGHT, WITH BEAM ANGLE OF 110° AND 947MM LUMENS IN 12MM X 6.5MM HEIGHT, SURFACE MOUNTED FOR COVE LIGHTING, PROVIDE 6MM THICK ACRYLIC COVER IN WHITE OPAQUE FINISH FOR COVE LIGHTING.
	IL-20 EMERGENCY LIGHT SHALL BE 3 WATTS LED 44 X 0.7WATTS (22 LEDS/LAMP HEAD), WALL MOUNTED EMERGENCY LIGHT MADE FROM ABS PLASTICS WITH 5 HOURS OPERATING TIME AND 48 HOURS CHARGING TIME.
	IL-21 EXT LIGHT SHALL BE 2 WATTS, DOUBLE-SIDED, CEILING-MOUNTED LED LAMPS IN ELECTRO GALVANIZED STEEL WITH EPOXY POWDER-COATED FITTING CONSTRUCTION AND FIRE-RETARDANT MOULDED ACRYLIC DIFFUSER.
	IL-22 WALL MOUNTED LAMP SHALL BE 20 WATTS LED-PAR 30 WARM WHITE, WALL MOUNTED LUMINAIRE MADE FROM DIE-CAST ALUMINUM BODY IN POWDER-COATED FINISH WITH CLEAR TOUGHENED GLASS CONTROL GEAR AND REMOTE TRANSFORMER GASKET SILICON RUBBER MOUNTING SURFACE.
	IL-23 HIGH BAY LIGHTS SHALL BE 40/50 WATTS COOL WHITE, LED LIGHTS BY "SAMSUNG" OR APPROVED EQUAL, IN 400MM DIAMETER X 400MM HEIGHT, HIGH BAY LUMINAIRES IN ALUMINUM REFLECTOR AND HOUSING.
	IL-24 HIGH BAY LIGHTS (FOR COVE LIGHTING @ ANTE ROOM) SHALL BE 10 WATTS BLUE AND WARM WHITE LED STRIP LIGHTS WITH 16 TO 20 LM, IN 10MM/15.8MM X 7MM CROSS SECTION, ONE ROLL = 100M, 60 LIGHTS PER 1 METER, COMPLETE WITH ACCESSORIES, SURFACE MOUNTED FOR COVE LIGHTING
	IL-25 CIRCULAR WALL LAMP (FOR OBSERVATORY ROOM) SHALL BE 8 WATTS, RED COLOR, LED BULB IN 300MM DIAMETERS WALL MOUNTED CIRCULAR LAMP
	IL-26 DOWNLIGHT 9 ROUND SHALL BE 29 WATTS LED, WARM WHITE IN 111MM DIAMETERS X 160MM SURFACE MOUNTED, MADE FROM DIE CAST ALUMINUM WITH CENTRAL HOUSING MADE FROM EXTRUDED ALUMINUM COMPLETE WITH SAFETY GLASS, SILICON GASKET WITH EXTERNAL SCREWS MADE OF STAINLESS STEEL
	2500b TWO-GANG SWITCH
	3500c THREE-GANG SWITCH
	3300a THREE-WAY SWITCH
	SB SWITCHBANK
	LIGHTING PANEL
	POWER PANEL
	CIRCUIT NUMBER
	AA - DENOTES PANEL DESIGNATION
	08 - DENOTES CIRCUIT NUMBER
	RISE UP
	RISE UP/ON
	RISE ON
	TOILET EXHAUST FAN
	JUNCTION BOX



**ARCE•BAILON•ARCE**  
ARCHITECTS•ENGINEERS•CONSULTANTS  
14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY.  
TRUNKLINE: 3552323 FAX NO.: 3551080  
www.arcebailonarce.com

MARIANO S. ARCE, JR., fuap  
REG. NO. 6844 PTR NO. -  
TIN - DATE:

ALEJANDRO S. LICERIO  
ACREATEC-ASEAN ENGINEER  
REG. NO. 3190 PTR NO. -  
TIN - DATE:

CONSTRUCTION OF THE  
ACADEMIC BUILDING  
FOR SENIOR HIGH PROGRAM

LOCATION: Agham Road, Diliman, Quezon City



**PHILIPPINE SCIENCE HIGH SCHOOL**  
MAIN CAMPUS

LAWRENCE V. MADRIAGA  
SGD  
DIRECTOR III

SHEET CONTENTS:

FOURTH FLOOR  
LIGHTING SYSTEM LAYOUT

REVISION:

REV 3 LIGHTING FIXTURE IL-26 (PER0202)  
REV 3 LOCATION OF SWITCH (PER0202)  
REV 4 ADJUSTED EL LOCATION (JAN2023)  
REV 4 ADJUSTED EL & EE & ELV RM (JAN2023)

PROJECT NO.:

17-06

SHEET NO.:

E3-01d

DESIGNED BY:

-

CAD:

-

CHECKED BY:

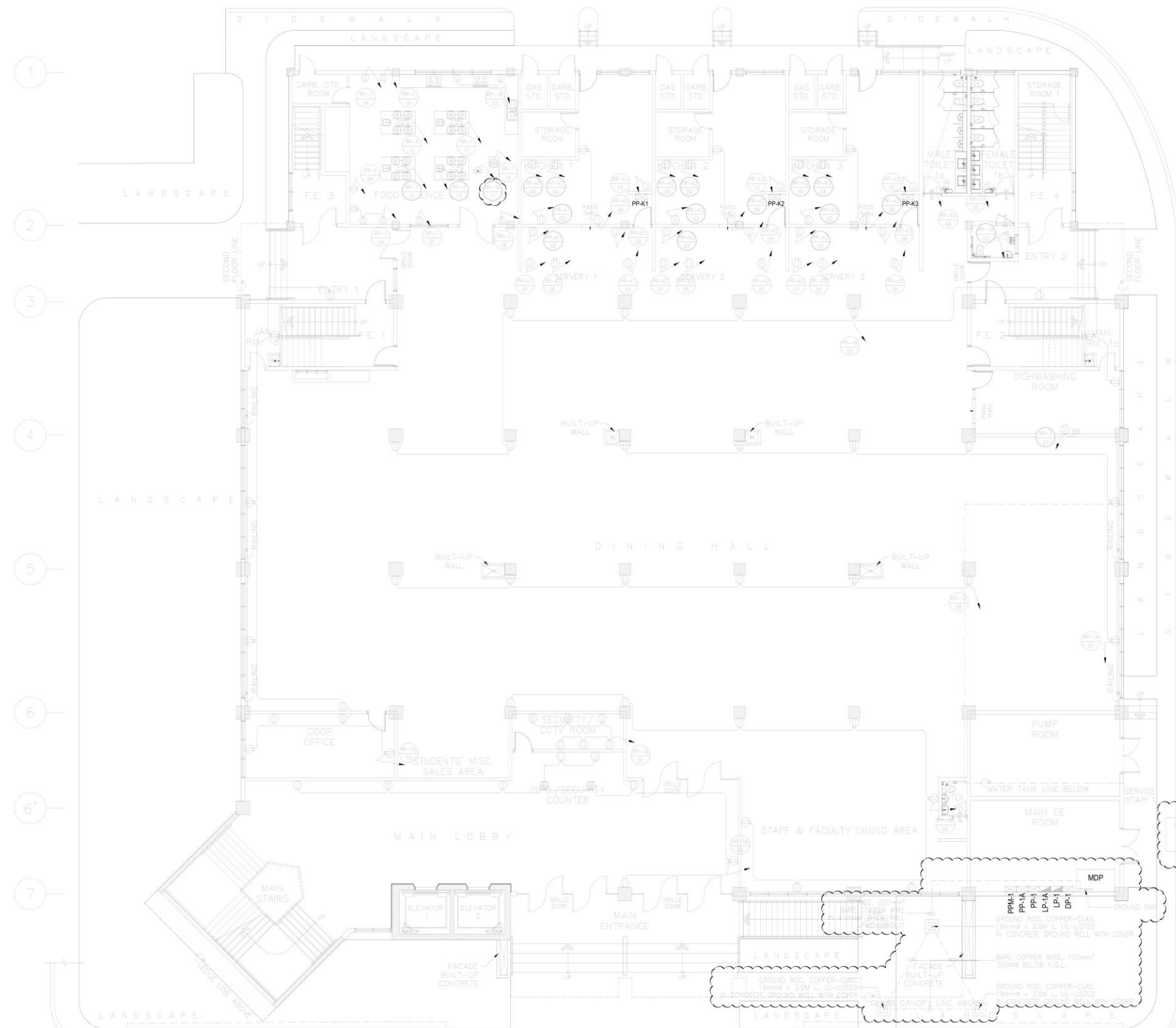
RLH

DATE:

-





**NOTE:**  
ELECTRICAL  
WORK SCOPE  
INCLUDES  
PANEL BOARD  
INSTALLATION,  
CABLING AND  
LIGHTING  
FIXTURES  
INSTALLATION  
FROM THE  
GROUND  
FLOOR UP TO  
THE FOURTH  
FLOOR ONLY.  
SAME SCOPE  
FOR TRANSIENT  
AREA ALREADY  
ACCOMPLISHED  
FOR PHASE 2

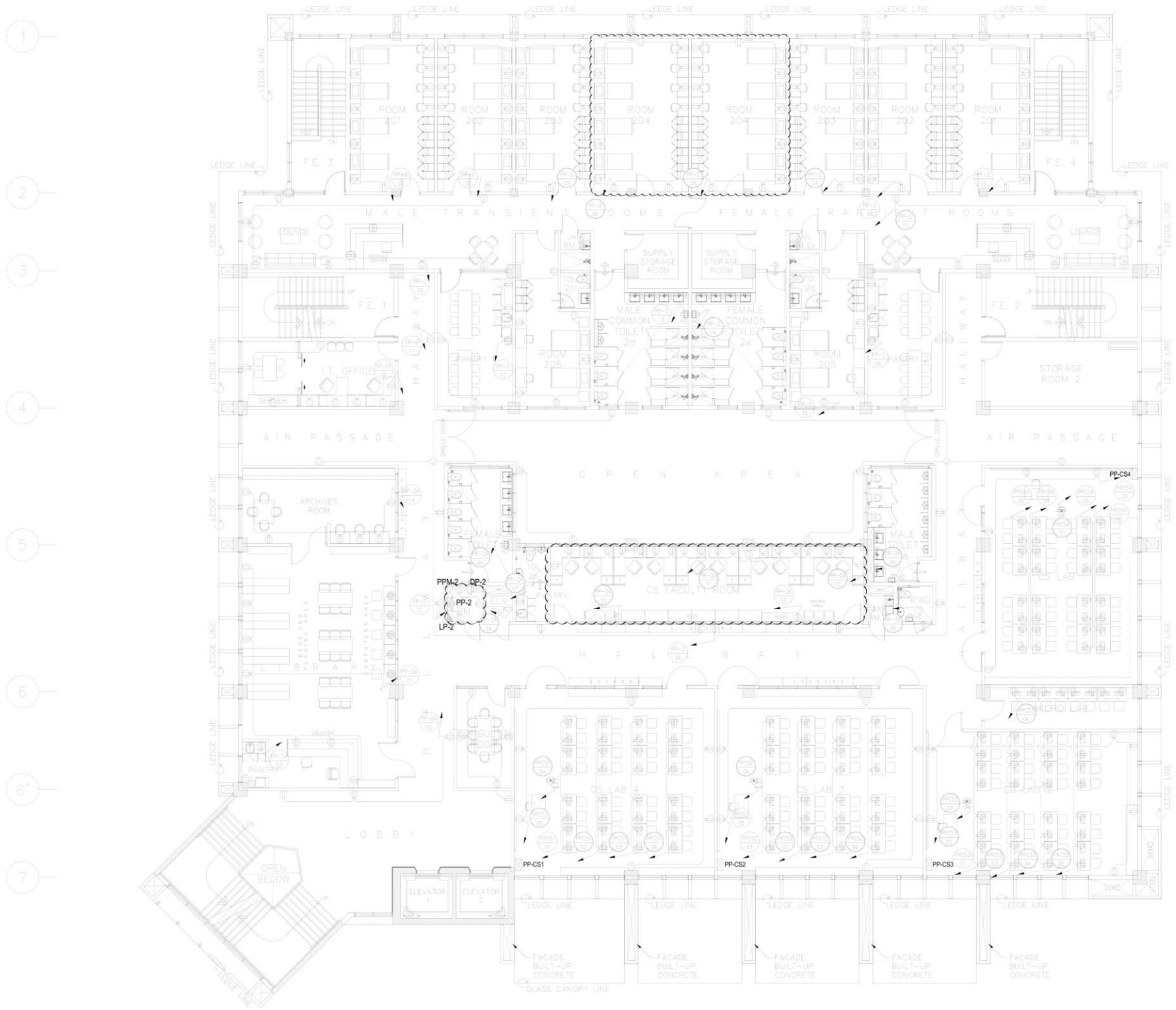


LEGENDS	DESCRIPTION
	DUPLEX CONN. OUTLET, 16A, 230V, 2P+E WALL MOUNTED
	DUPLEX CONN. OUTLET, 16A, 230V, 2P+E FLOOR MOUNTED
	SPECIAL PURPOSE OUTLET, 16A, 230V, 2P+E WALL MOUNTED
	ENCLOSED CIRCUIT BREAKER (REFER TO LOAD SCHEDULE FOR EXACT RATING)
	LIGHTING PANEL
	POWER PANEL
	CIRCUIT HOWERUN
	AA - DENOTES PANEL DESIGNATION
	00 - DENOTES CIRCUIT NUMBER
	HD - HAND DRYER

**A** GROUND FLOOR POWER SYSTEM LAYOUT  
E3-02a SCALE 1 : 125M

CONSULTANT:		PRINCIPAL ARCHITECT:		PROF. ELECTRICAL ENGINEER:		PROJECT TITLE:		OWNER:		APPROVED BY:		SHEET CONTENTS:		REVISION:		PROJECT NO.:		SHEET NO.:	
<div></div> <div>ARCE•BAILON•ARCE ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY, TRUNKLINE: 3552323 FAX NO.: 3551080 www.arcebailonarce.com</div>		MARIANO S. ARCE, JR., fuap		ALEJANDRO S. LICERIO ACREATE/ASEAN ENGINEER		CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM		<div></div> <div>PHILIPPINE SCIENCE HIGH SCHOOL MAIN CAMPUS</div>		LAWRENCE V. MADRIAGA SGD DIRECTOR III		GROUND FLOOR		R1-GROUNDING SYSTEM (2018)		17-06		E3-02a	
												POWER SYSTEM LAYOUT							
REG. NO. 6844 PTR NO. -		REG. NO. 3190 PTR NO. -		LOCATION: Agham Road, Diliman, Quezon City						DESIGNED BY:		CAD:		CHECKED BY:		DATE:			
TIN -		DATE: -								-		RLH							

**NOTE:**  
ELECTRICAL  
WORK SCOPE  
INCLUDES  
PANEL BOARD  
INSTALLATION,  
CABLING AND  
LIGHTING  
FIXTURES  
INSTALLATION  
FROM THE  
GROUND  
FLOOR UP TO  
THE FOURTH  
FLOOR ONLY.  
SAME SCOPE  
FOR TRANSIENT  
AREA ALREADY  
ACCOMPLISHED  
FOR PHASE 2



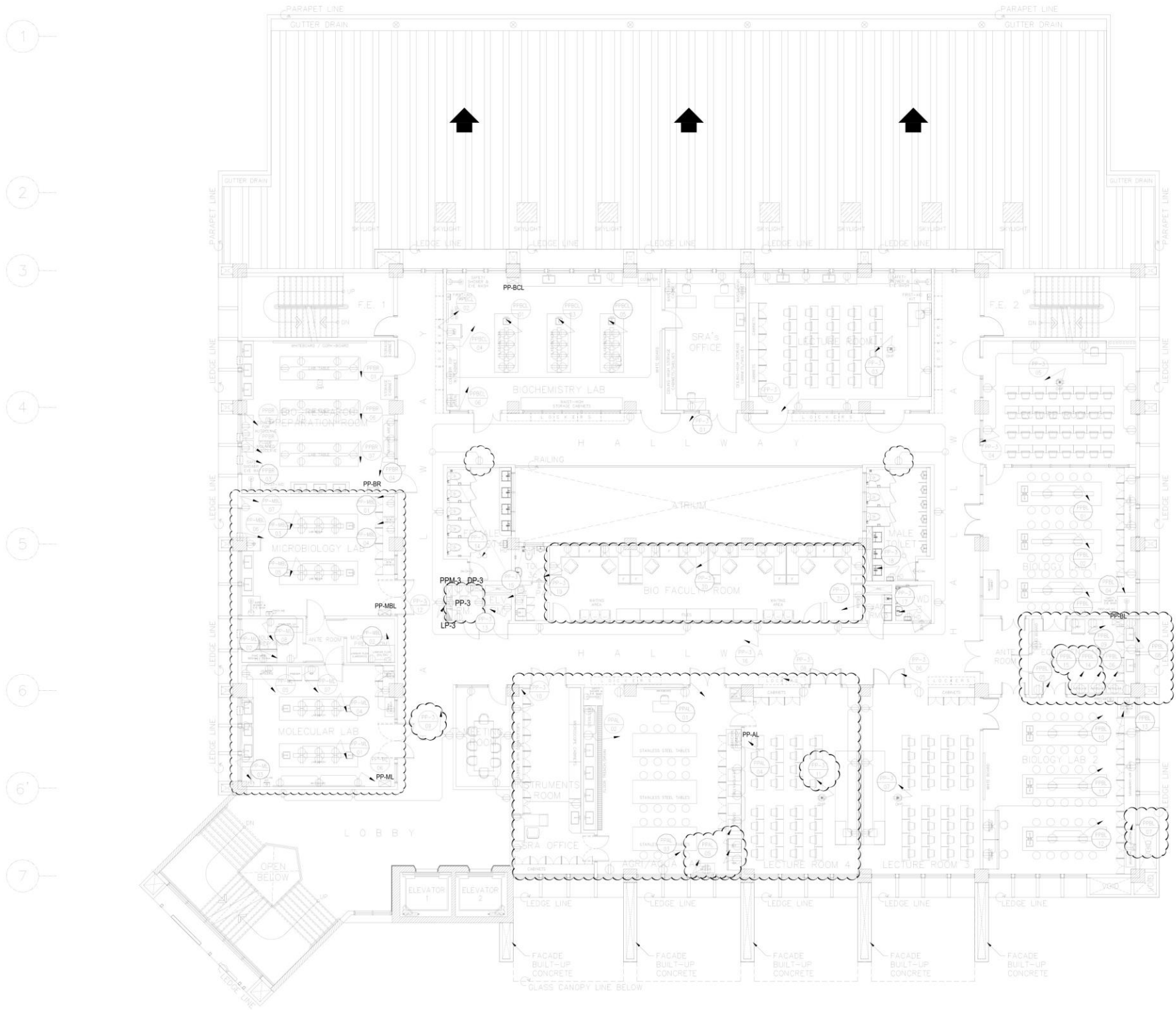
LEGENDS	DESCRIPTION
	DUPLEX CONV. OUTLET, 16A, 230V, 3P+E, WALL MOUNTED
	DUPLEX CONV. OUTLET, 16A, 230V, 3P+E, FLOOR MOUNTED
	DUPLEX CONV. OUTLET, 16A, 230V, 3P+E, CEILING MOUNTED
	LIGHTING PANEL
	POWER PANEL
	CIRCUIT HOMERUN
	AA — DENOTES PANEL DESIGNATION
	00 — DENOTES CIRCUIT NUMBER
	HD — HAND DRYER

A SECOND FLOOR POWER SYSTEM LAYOUT  
SCALE 1 : 125M

CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. ELECTRICAL ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
 ARCE•BAILON•ARCE ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE.: 3552323 FAX NO.: 3551080 www.arcebailonarce.com	MARIANO S. ARCE, JR., fuap	ALEJANDRO S. LICERIO ACREATEC-ASEAN ENGINEER	CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM	 PHILIPPINE SCIENCE HIGH SCHOOL MAIN CAMPUS	LAWRENCE V. MADRIAGA SGD DIRECTOR III	SECOND FLOOR POWER SYSTEM LAYOUT	REV. 1 CS FACULTY ROOM POWER LAYOUT ADJUSTMENT (NOV 2023) REV. 2 MALE & FEMALE ROOM 204 POWER LAYOUT ADJUSTMENT (JAN 2023) REV. 3 REMOVAL OF VENT LOUVERS AT OPEN AREA (JAN 2023) REV. 4 ADJUST. OUTLETS @ ELV ROOM (JAN 2023)	17-06	E3-02b
REG. NO. 6844 PTR NO. -	REG. NO. 3190 PTR NO. -	LOCATION: Agham Road, Diliman, Quezon City					DESIGNED BY: CAD: CHECKED BY: DATE:		
TIN -	DATE: -	TIN -					RLH		



**NOTE:**  
ELECTRICAL  
WORK SCOPE  
INCLUDES  
PANEL BOARD  
INSTALLATION,  
CABLING AND  
LIGHTING  
FIXTURES  
INSTALLATION  
FROM THE  
GROUND  
FLOOR UP TO  
THE FOURTH  
FLOOR ONLY.  
SAME SCOPE  
FOR TRANSIENT  
AREA ALREADY  
ACCOMPLISHED  
FOR PHASE 2



LEGENDS	DESCRIPTION
	DUPLEX CONV. OUTLET, 16A, 230V, 3P+E WALL MOUNTED
	DUPLEX CONV. OUTLET, 16A, 230V, 3P+E FLOOR MOUNTED
	DUPLEX CONV. OUTLET, 16A, 230V, 3P+E CEILING MOUNTED
	ENCLOSED CIRCUIT BREAKER (REFER TO LOAD SCHEDULE FOR EXACT RATING)
	LIGHTING PANEL
	POWER PANEL
	CIRCUIT HOMERUN
	AA - DENOTES PANEL DESIGNATION
	00 - DENOTES CIRCUIT NUMBER
	HD - HAND DRYER
	H - HOOD


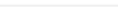
A THIRD FLOOR POWER SYSTEM LAYOUT  
SCALE 1 : 125M

CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. ELECTRICAL ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
ARCE•BAILON•ARCE ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE: 3552323 FAX NO.: 3551080 www.arcebailonarce.com	MARIANO S. ARCE, JR., fuap	ALEJANDRO S. LICERIO ACRE/ATEC/ASEAN ENGINEER	CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM	PHILIPPINE SCIENCE HIGH SCHOOL MAIN CAMPUS	LAWRENCE V. MADRIAGA SGD DIRECTOR III	THIRD FLOOR POWER SYSTEM LAYOUT	REV. 1 MICROBIOLOGY LAB & MOLECULAR LAB ROOM DRAP & POWER LAYOUT DRAP (FEB 2022) REV. 1 EQUIPMENT ROOM W/ ANTE ROOM POWER LAYOUT ADJUSTMENT (FEB 2022) REV. 1 HALLWAY POWER LAYOUT ADJUSTMENT & CORRECTED CIRCUIT NO. (FEB 2022) REV. 2 BIO FACILITY ROOM POWER LAYOUT ADJUSTMENT (NOV 2022) REV. 3 AGRICULTURE LAB, LECTURE ROOM 1 & 4, BIOLOGY LAB 2, EQUIPMENT & PREP ROOM POWER LAYOUT ADJUSTMENT (JAN 2023) REV. 4 ADD'L CABLES & SVL ROOM (JAN2023)	17-06	E3-02c
REG. NO. 6844 PTR NO. - REG. NO. 3190 PTR NO. -	TIN - DATE: - TIN - DATE: -	LOCATION: Agham Road, Diliman, Quezon City					DESIGNED BY: CAD: CHECKED BY: DATE:	RLH	

## FOR BIDDING

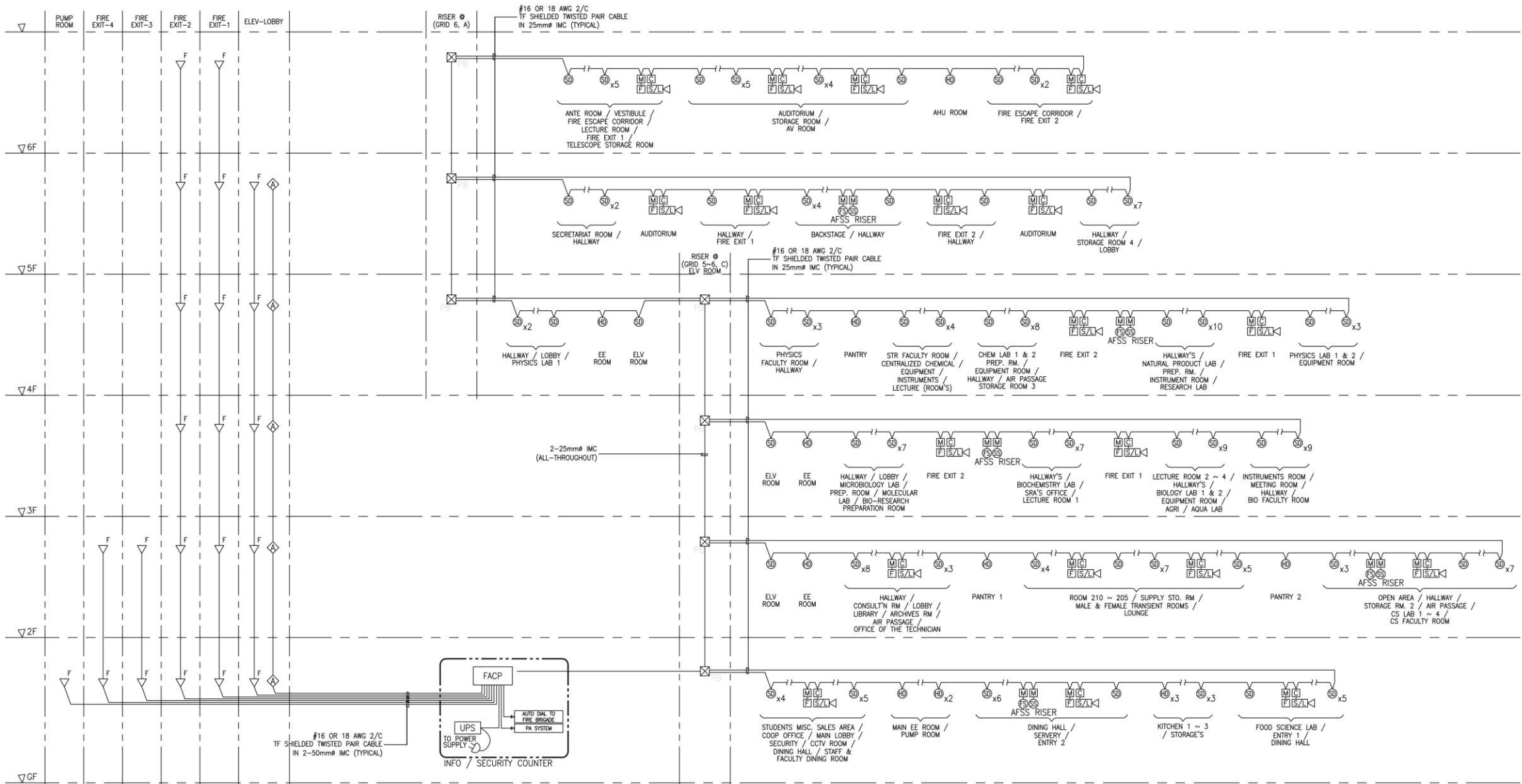
**NOTE:**  
ELECTRICAL  
WORK SCOPE  
INCLUDES  
PANEL BOARD  
INSTALLATION,  
CABLING AND  
LIGHTING  
FIXTURES  
INSTALLATION  
FROM THE  
GROUND  
FLOOR UP TO  
THE FOURTH  
FLOOR ONLY.  
SAME SCOPE  
FOR TRANSIENT  
AREA ALREADY  
ACCOMPLISHED  
FOR PHASE 2

**A FOURTH FLOOR POWER SYSTEM LAYOUT**

CONSULTANT:		PRINCIPAL ARCHITECT:		PROF. ELECTRICAL ENGINEER:		PROJECT TITLE:		OWNER:		APPROVED BY:		SHEET CONTENTS:		REVISION:		PROJECT NO.:		SHEET NO.:	
<div><div>ARCE•BAILON•ARCE ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY, TRUNKLINE: 3552323 FAX NO.: 3551080 www.arcebailonarce.com</div></div>		MARIANO S. ARCE, JR., fuap		ALEJANDRO S. LICERIO <small>ARCE/ARCE-ASIAN ENGINEER</small>		CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM		<div><div>PHILIPPINE SCIENCE HIGH SCHOOL MAIN CAMPUS</div></div>		LAWRENCE V. MADRIAGA <small>SGD DIRECTOR III</small>		FOURTH FLOOR POWER SYSTEM LAYOUT		REV-1 HAND DRIVER @ F TOILET 40 (PER 2022) REV-1 CORRECTED CIRCUIT NO. (PER 2022) REV-2 REV-2 PHYSICS FACULTY ROOM POWER LAYOUT ADJUSTMENT (PER 2022) REV-4 ADDT. OUTLETS @ ELV ROOM (JAN2022)		17-06		E3-02d	
REG. NO. 6844 PTR NO. - REG. NO. 3190 PTR NO. - TIN - DATE: - TIN - DATE: -		LOCATION: Agham Road, Diliman, Quezon City										DESIGNED BY: CAD: CHECKED BY: DATE: - RLH							

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A FIRE DETECTION & ALARM SYSTEM SCHEMATIC DIAGRAM  
EC2 01 SCALE N T S

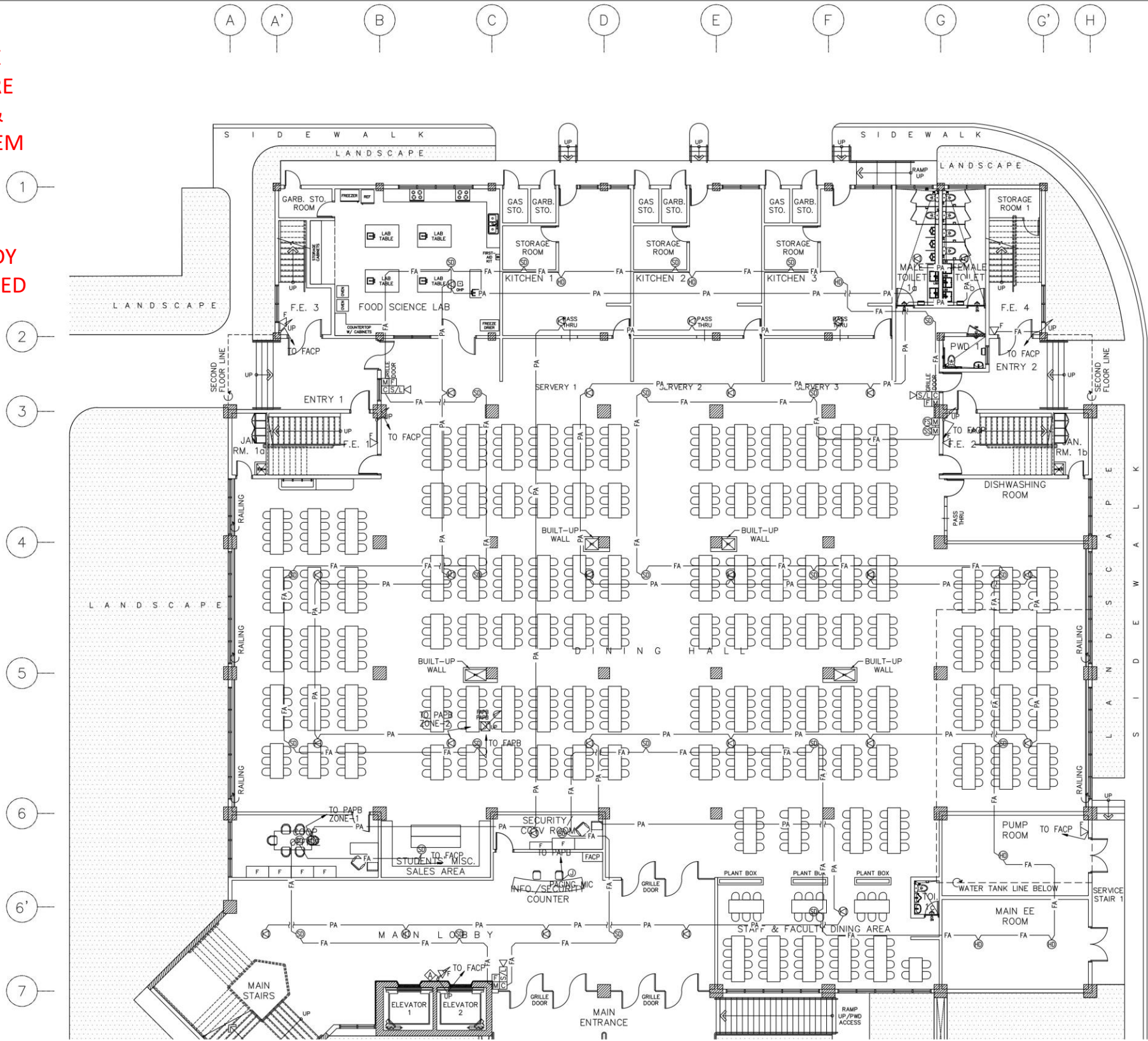
LEGENDS	DESCRIPTION
FACP	FIRE ALARM CONTROL PANEL
UPS	230V, 1Ø, UPS, 15MIN BACK-UP (RATING AS INDICATED)
SD	SMOKE DETECTOR
HD	HEAT DETECTOR
FS	FLOW SWITCH
SS	SUPERVISORY SWITCH
F	MANUAL PULL STATION
CM	CONTROL MODULE
M	MONITOR MODULE
S/L	FIRE ALARM SOUNDER WITH STROBE LIGHT
GA	GRAPHICAL ANNUNCIATOR
VF	FIREMAN'S TELEPHONE JACK
PB	PULLBOX (250x250x150)MM

ABBREVIATIONS	CAT	CATEGORY
IMC	INTERMEDIATE METALLIC CONDUIT	
PVC	POLYVINYL-CHLORIDE CONDUIT	
AWG	AMERICAN WIRE GAUGE	
TF	THERMOPLASTIC COVERED FIXTURE WIRE	
UPS	UNINTERRUPTIBLE POWER SUPPLY	

- NOTES FOR FIRE DETECTION AND ALARM SYSTEM :
1. THE PURPOSE OF THIS SCHEMATIC IS TO PROVIDE A GENERAL CONCEPT AND PRINCIPLE OF THE PROPOSED FIRE DETECTION AND ALARM SYSTEM.
  2. EQUIPMENT AND DEVICES REFLECTED ON THE PLANS ARE INDICATIVE ONLY. CONTRACTOR TO FURNISH AND INSTALL THE COMPLETE SYSTEM TO AND SOFTWARE PROGRAMMING AS MAY BE DEEMED NECESSARY FOR THE SUCCESSFUL OPERATION OF THE SYSTEM.
  3. QUANTITY OF FACP SHALL BE AS PER MANUFACTURER CAPACITY.
  4. REFER TO FLOOR PLAN LAYOUT FOR THE LOCATION OF ANNUNCIATOR.
  5. THE CAPACITY OF THE FACP SHALL BE AS PER MANUFACTURER AND HAVE AT LEAST 1 SPARE SIGNALING LINE CIRCUIT (SLC) LOOP.
  6. ALL FLOW SWITCHES AND SUPERVISORY SHALL BE CONNECTED TO THE FIRE DETECTION AND ALARM SYSTEM.
  7. PROVIDE REPEATERS IF NECESSARY.



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REG. NO. 6844 PTR NO. -	REG. NO. 0072 PTR NO. -	LOCATION: Agham Road, Diliman, Quezon City				DESIGNED BY: RCMCC	CAD:	CHECKED BY:	DATE:

**NOTE:**  
WORK SCOPE  
INCLUDES FIRE  
DETECTION &  
ALARM SYSTEM  
ONLY. SAME  
SCOPE FOR  
TRANSIENT  
AREA ALREADY  
ACCOMPLISHED  
FOR PHASE 2



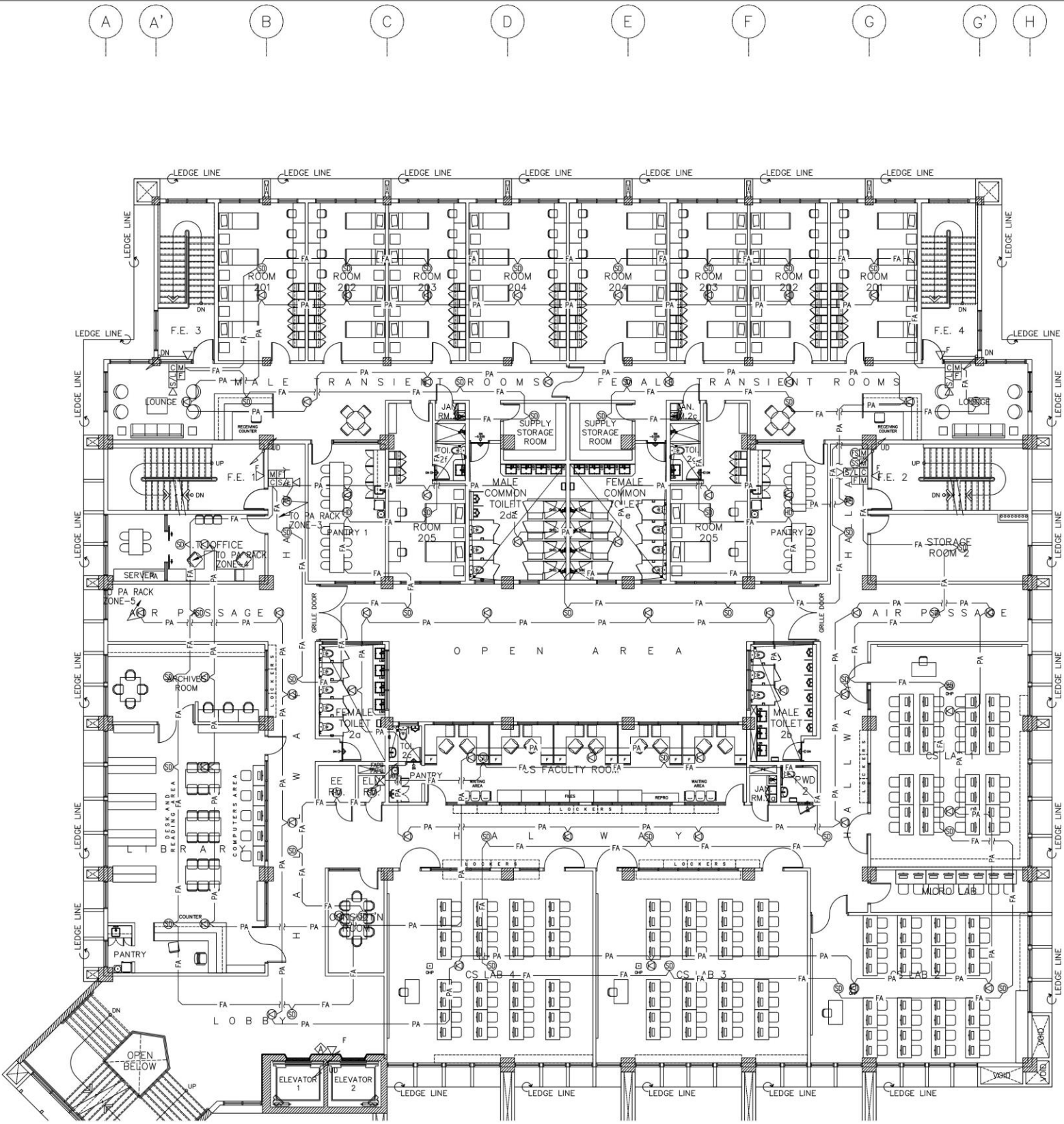
**GROUND FLOOR FIRE DETECTION & ALARM SYSTEM  
AND PUBLIC ADDRESS SYSTEM LAYOUT**  
SCALE 1 : 125M

LEGENDS	DESCRIPTION
FACP	FIRE ALARM CONTROL PANEL
SD	SMOKE DETECTOR
HD	HEAT DETECTOR
FS	FLOW SWITCH
SS	SUPERVISORY SWITCH
MP	MANUAL PULL STATION
CM	CONTROL MODULE
MM	MONITOR MODULE
SLS	FIRE ALARM SOUNDER WITH STROBE LIGHT
GA	GRAPHICAL ANNUNCIATOR
FJT	FIREMAN'S TELEPHONE JACK
CMS	CEILING MOUNTED SPEAKER, 6W
PB	PULLBOX
RU	RISER UP
FA	FIRE ALARM SYSTEM LAYOUT (25mm IMC)
PA	PUBLIC ADDRESS SYSTEM LAYOUT (25mm IMC)
JB	JUNCTION BOX

CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. ELECTRONICS ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
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REG. NO. 6844 PTR NO. - TIN -	DATE: -	REG. NO. 0072 PTR NO. - TIN -	DATE: -	LOCATION: Agham Road, Diliman, Quezon City		DESIGNED BY: CAD: RCMCC	CHECKED BY: DATE:		



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LEGENDS	DESCRIPTION
	SMOKE DETECTOR
	HEAT DETECTOR
	FLOW SWITCH
	SUPERVISORY SWITCH
	MANUAL PULL STATION
	CONTROL MODULE
	MONITOR MODULE
	FIRE ALARM SOUNDER WITH STROBE LIGHT
	GRAPHICAL ANNUNCIATOR
	FIREMAN'S TELEPHONE JACK
	PUBLIC ADDRESS EQUIPMENT RACK
	CEILING MOUNTED SPEAKER, 6W
	PULLBOX
	RISER UP/DOWN
	RISER UP
	RISER DOWN
	FIRE ALARM SYSTEM LAYOUT (25mm IMC)
	PUBLIC ADDRESS SYSTEM LAYOUT (25mm IMC)

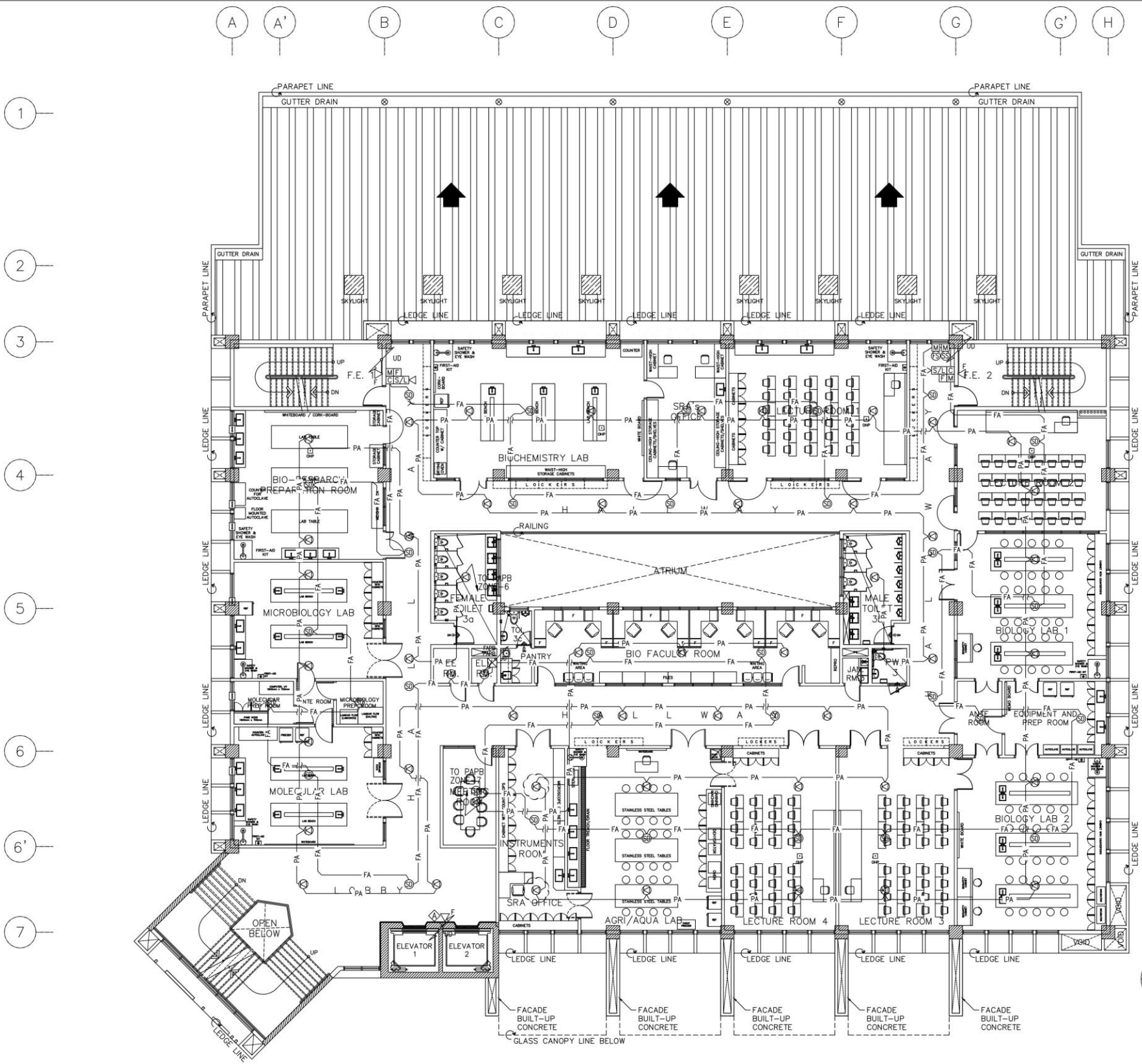
SECOND FLOOR FIRE DETECTION & ALARM SYSTEM  
AND PUBLIC ADDRESS SYSTEM LAYOUT

SCALE 1 : 125M

CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. ELECTRONICS ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
	MARIANO S. ARCE, JR., fuap	RAYMOND C. MEDINA	CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM		LAWRENCE V. MADRIAGA	SECOND FLOOR FIRE DETECTION & ALARM SYSTEM AND PUBLIC ADDRESS SYSTEM LAYOUT		17-06	EC3-01b
REG. NO. 6844 PTR NO. -	REG. NO. 0072 PTR NO. -	LOCATION: Agham Road, Diliman, Quezon City				DESIGNED BY: RCMCC	CAD:	CHECKED BY:	DATE:



**NOTE:**  
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LEGENDS	DESCRIPTION
	SMOKE DETECTOR
	HEAT DETECTOR
	FLOW SWITCH
	SUPERVISORY SWITCH
	MANUAL PULL STATION
	CONTROL MODULE
	MONITOR MODULE
	FIRE ALARM SOUNDER WITH STROBE LIGHT
	GRAPHICAL ANNUNCIATOR
	FIREMAN'S TELEPHONE JACK
	CEILING MOUNTED SPEAKER, 6W
	PULLBOX
	RISER UP/DOWN
	RISER UP
	RISER DOWN
	FIRE ALARM SYSTEM LAYOUT (25mm# IMC)
	PUBLIC ADDRESS SYSTEM LAYOUT (25mm# IMC)

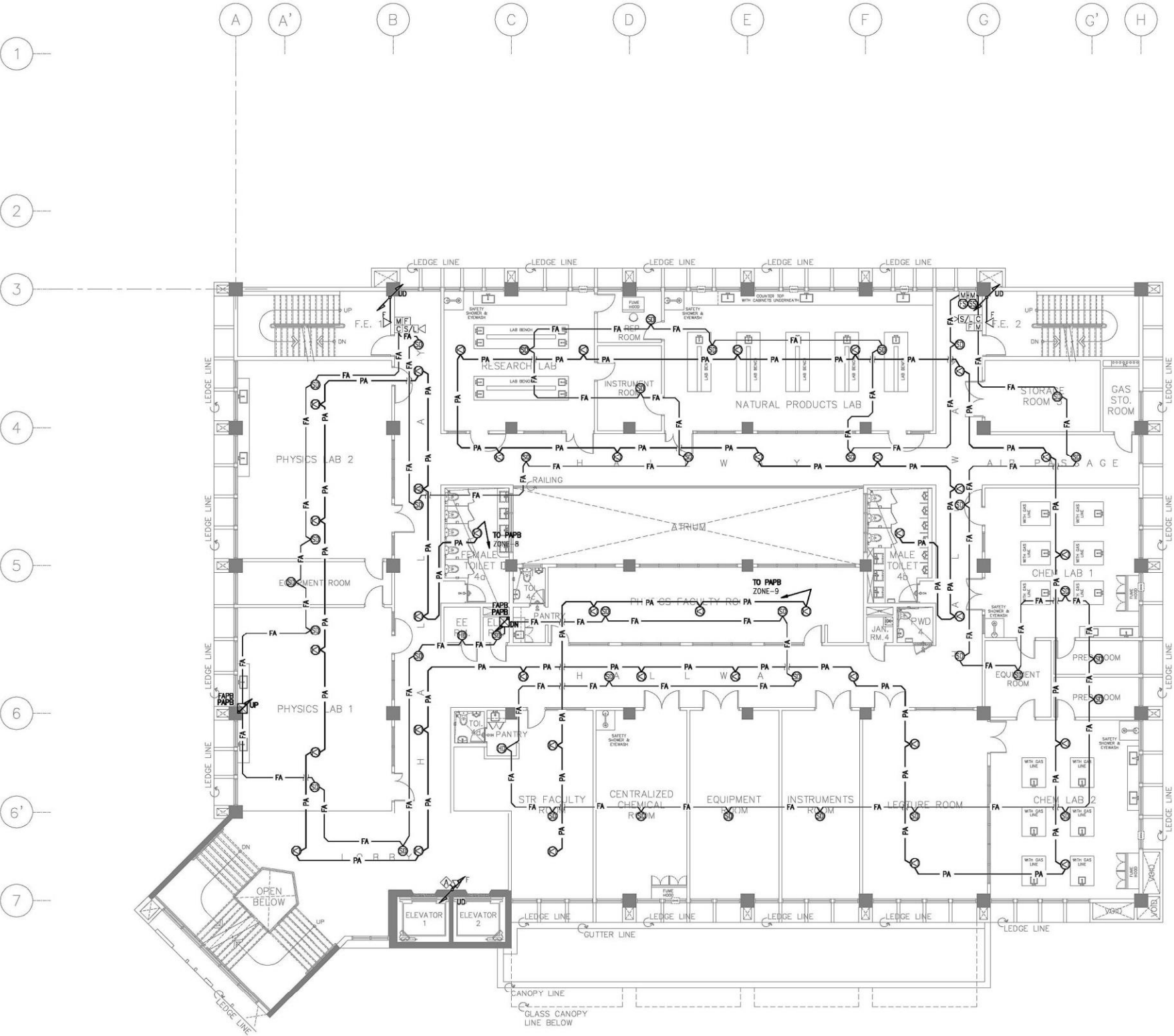
THIRD FLOOR FIRE DETECTION & ALARM SYSTEM  
AND PUBLIC ADDRESS SYSTEM LAYOUT

SCALE 1 : 125M

CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. ELECTRONICS ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
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REG. NO. 6844 PTR. NO. 0072	REG. NO. 0072 PTR. NO. 0072	LOCATION: Agham Road, Diliman, Quezon City				DESIGNED BY: RCMCC	CAD:	CHECKED BY:	DATE:



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LEGENDS	DESCRIPTION
	SMOKE DETECTOR
	HEAT DETECTOR
	FLOW SWITCH
	SUPERVISORY SWITCH
	MANUAL PULL STATION
	CONTROL MODULE
	MONITOR MODULE
	FIRE ALARM SOUNDER WITH STROBE LIGHT
	GRAPHICAL ANNUNCIATOR
	FIREMAN'S TELEPHONE JACK
	CEILING MOUNTED SPEAKER, 6W
	PULLBOX
	RISER UP/DOWN
	RISER UP
	RISER DOWN
	FA — FIRE ALARM SYSTEM LAYOUT (25mm IMC)
	PA — PUBLIC ADDRESS SYSTEM LAYOUT (25mm IMC)

FOURTH FLOOR FIRE DETECTION & ALARM SYSTEM  
AND PUBLIC ADDRESS SYSTEM LAYOUT

SCALE

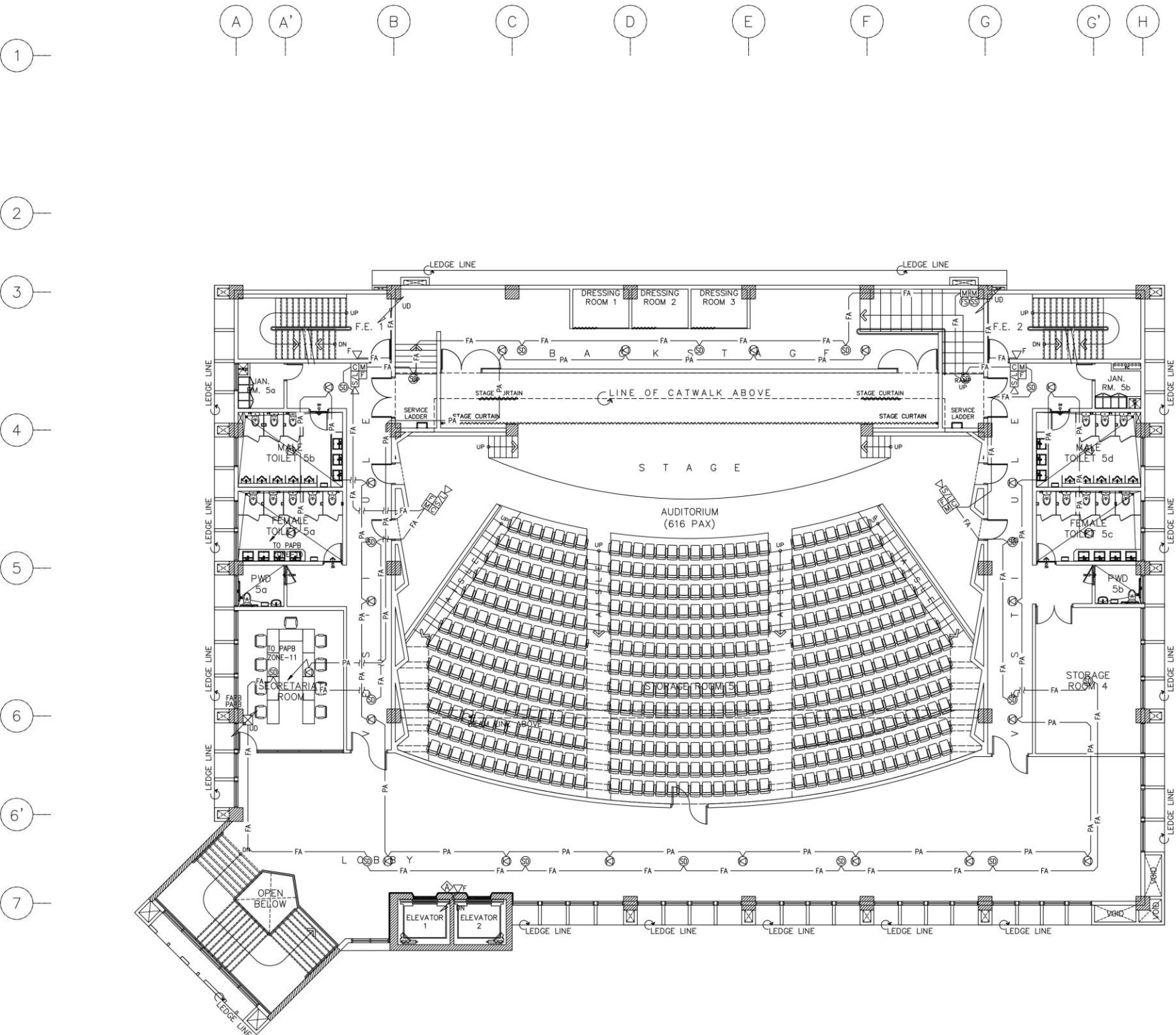
1 : 125M

CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. ELECTRONICS ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
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REG. NO. 6844 PTR NO. - TIN -	DATE: -	REG. NO. 0072 PTR NO. - TIN -	DATE: -	LOCATION: Agham Road, Diliman, Quezon City		DESIGNED BY: RCMCC	CAD: -	CHECKED BY: -	DATE: -



## FOR BIDDING

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DETECTION &  
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AREA ALREADY  
ACCOMPLISHED  
FOR PHASE 2



LEGENDS	DESCRIPTION
	SMOKE DETECTOR
	HEAT DETECTOR
	FLOW SWITCH
	SUPERVISORY SWITCH
	MANUAL PULL STATION
	CONTROL MODULE
	MONITOR MODULE
	FIRE ALARM SOUNDER WITH STROBE LIGHT
	GRAPHICAL ANNUNCIATOR
	FIREMAN'S TELEPHONE JACK
	CEILING MOUNTED SPEAKER, 6W
	PULLBOX
	RISER UP/DOWN
	RISER UP
	RISER DOWN
— FA —	FIRE ALARM SYSTEM LAYOUT (25mm $\phi$ IMC)
— PA —	PUBLIC ADDRESS SYSTEM LAYOUT (25mm $\phi$ IMC)



**FIFTH FLOOR FIRE DETECTION & ALARM SYSTEM  
AND PUBLIC ADDRESS SYSTEM LAYOUT**

**A**

EC3 01e

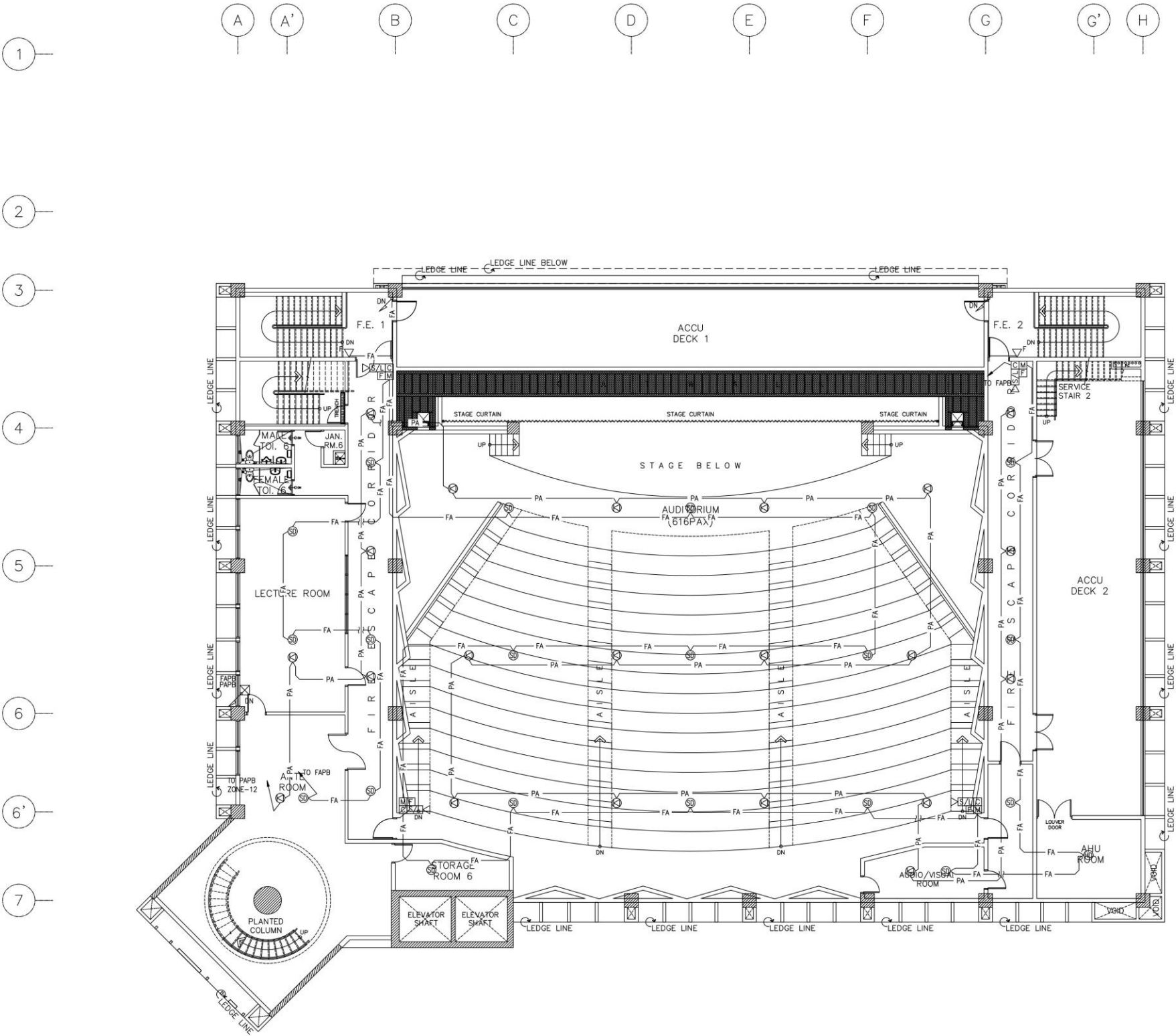
SCALE

1 : 125M

CONSULTANT:		PRINCIPAL ARCHITECT:		PROF. ELECTRONICS ENGINEER:		PROJECT TITLE:		OWNER:		APPROVED BY:		SHEET CONTENTS:		REVISION:		PROJECT NO.:		SHEET NO.:	
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												FIRE DETECTION & ALARM SYSTEM							
												AND PUBLIC ADDRESS SYSTEM LAYOUT							
REG. NO. 6844 PTR NO. -		REG. NO. 0072 PTR NO. -		LOCATION:						DESIGNED BY: - CAD: -		CHECKED BY: - DATE: -							
TIN. - DATE: -		TIN. - DATE: -								RCMCC									



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LEGENDS	DESCRIPTION
	SMOKE DETECTOR
	HEAT DETECTOR
	FLOW SWITCH
	SUPERVISORY SWITCH
	MANUAL PULL STATION
	CONTROL MODULE
	MONITOR MODULE
	FIRE ALARM SOUNDER WITH STROBE LIGHT
	CEILING MOUNTED SPEAKER, 6W
	PULLBOX
	RISER DOWN
	— FA — FIRE ALARM SYSTEM LAYOUT (25mm $\phi$ IMC)
	— PA — PUBLIC ADDRESS SYSTEM LAYOUT (25mm $\phi$ IMC)

SIXTH FLOOR FIRE DETECTION & ALARM SYSTEM  
AND PUBLIC ADDRESS SYSTEM LAYOUT

SCALE

1 : 125M

CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. ELECTRONICS ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
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REG. NO. 6844 PTR NO. -	REG. NO. 0072 PTR NO. -	LOCATION: Agham Road, Diliman, Quezon City				DESIGNED BY: RCMCC	CAD:	CHECKED BY:	DATE:

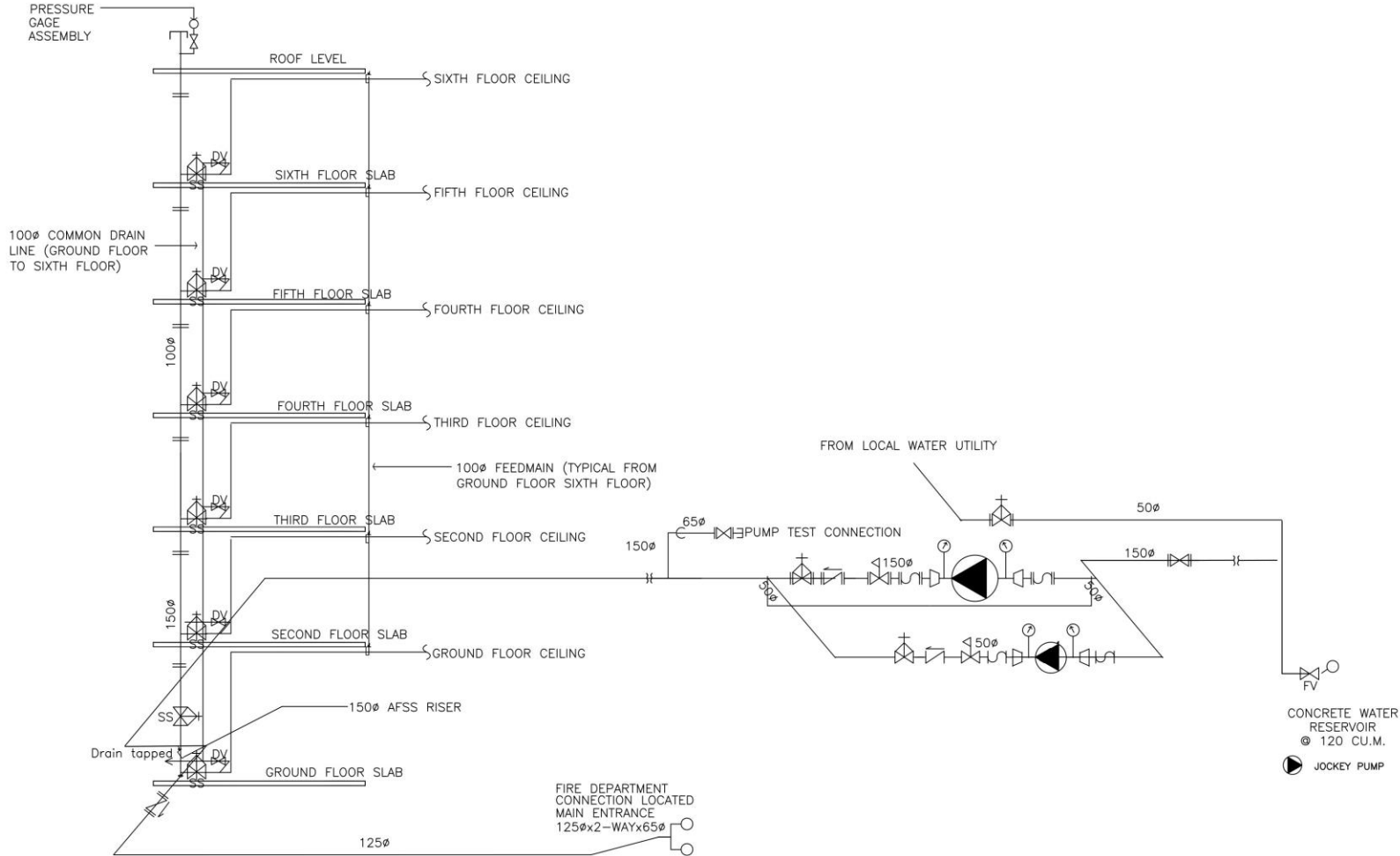


GENERAL NOTES:

- ALL WORKS SHALL BE EXECUTED IN ACCORDANCE TO THE PROVISIONS OF THE FIRE CODE OF THE PHILIPPINES AND THE NATIONAL FIRE CODE BY NFPA.
- THE WORK SHALL BE EXECUTED IN CLOSED COORDINATION WITH OTHER TRADES SO AS TO INSURE THE PROPER IMPLEMENTATION OF THIS PROJECT.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE EXACT LOCATION AND DIMENSIONS OF ALL REQUIRED WALL AND FLOOR OPENINGS.
- THE EXACT LOCATION OF ALL SPRINKLER HEADS SHALL BE COORDINATED WITH THE CONSTRUCTION MANAGER REPRESENTATIVE AND SHALL BE SUBJECTED TO BOTH THE ARCHITECTS AND THE FIRE PROTECTION DESIGN ENGINEERS APPROVAL.
- LOCATION OF DRAIN PIPES AND OF THE BACK-UP SUPPLY LINES SHALL BE COORDINATED BY PLUMBING CONTRACTOR.
- LOCATION AND MOUNTING OF FIRE HOSE CABINETS SHALL BE COORDINATED WITH THE ARCHITECTURAL FINISHES AND SHALL BE SUBJECTED TO BOTH THE ARCHITECTS AND FIRE PROTECTION DESIGN ENGINEERS APPROVAL.
- SIZE OF THE RISER NIPPLES SHALL CONFORM TO PIPE SCHEDULES AS DELINEATED IN NFPA 13.
- PIPE SUPPORT, HANGERS AND BRACING SHALL BE OF APPROVED TYPE AND SHALL BE INDEPENDENT FORM CEILINGS AND DUCT SUPPORT.
- FP-1 AND JP-1 CIRCUIT BREAKER AND STARTERS INCLUDING THE POWER WIRING AND CONDUITING TAPPING FROM MAIN CIRCUIT BREAKER AT FIRE PUMP ROOM SHALL BE SUPPLIED AND INSTALLED BY FIRE PROTECTION CONTRACTOR.
- ALL WIRINGS TO MONITOR FLOW SWITCH IN THE FIRE ALARM PANEL SHALL BE SUPPLIED AND INSTALL BY FIRE PROTECTION CONTRACTOR. ROUGHING-IN SHALL BE BY ELECTRICAL CONTRACTOR. WIRING SHALL BE TERMINATED TO THE DESIGNATED TERMINAL BLOCK IN THE ALARM PANEL.
- SHOP DRAWING SHALL BE PREPARED FOR THE FIRE PUMP LAYOUT, PIPE HANGER AND OTHER INSTALLATION AS INDICATED IN THE SPECIFICATION.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL 10 LBS. PORTABLE FIRE EXTINGUISHER IN FIRE HOSE CABINET. ALL PORTABLE FIRE EXTINGUISHERS SHALL BE LOCATED SO THAT ALL FIRE FIRE AT ANY POINT IN THE BUILDING CAN BE REACHED FROM ONE(1) EXTINGUISHER WITH A TRAVEL DISTANCE OF NOT MORE THAN 75 FT.
- PROVIDE SECTIONALIZING AND FLOW SWITCHES FOR ALL ZONE CONNECTION TO RISER
- PIPE SHALL BE OF SCHEDULE 40 & SHALL CONFORM TO ASTM OR ANSI/ASTM A-120 OR API-5L. FOR PIPE SIZES LARGER THAN 50mm, THE FITTING SHALL ANSI B16-9 FOR FLANGED BECK BUTT WELDED TYPE, FITTING SIZE 50mm & SMALLER SHALL BE TREATED MALEABLE IRON FITTINGS SHALL CONFORM TO ANSI B-16-3, CLASS 150.
- PROVIDE UNION @ EACH THREADED OR WELDED CONNECTION TO EQUIPMENT & VALVES UP TO 50mm.
- VALVES RATING SHALL MEET OR EXCEED THEIR RESPECTIVE SYSTEM OPERATING PRESSURE AND TEMPERATURE. ALL VALVE SHALL BE LINE SIZE UNLESS OTHERWISE SPECIFIED.
- PIPE SHALL BE PAINTED W/ ONE(1) COAT PRIME & TWO(2) COATS FINAL.
- SPACING OF SPRINKLER & BRANCH LINE SHALL CONFORM TO THE DRAWINGS.
- A MINIMUM OF 50mm CLEARANCE SHALL BE PROVIDED AROUND PIPING EXTENDED THROUGH WALL, FLOORS, PLATFORMS & FOUNDATION, INCLUDING DRAINS & OTHER AUXILIARY PIPING.
- JOINT COMPOUND OR TAPE SHALL BE APPLIED TO THE THREADS OF THE PIPE & NOT IN FITTING.
- PIPE HANGER SHALL BE IN SUCH THAT COULD SUPPORT FIVE TIMES THE WEIGHT OF THE WATER FILLED PIPE PLUS 114KG @ EACH POINT OF PIPING SUPPORT.
- MAXIMUM DISTANCE BETWEEN HANGERS SHALL NOT EXCEED 3.66M (12FT.) FOR 25mmø & 32mm OR 4.57(15FT.) FOR 38mmø & LARGER DIAMETER.
- FIRE PROTECTION CONTRACTOR SHALL INDICATE LOCATION OF EXISTING DRY STANDPIPE, INCLUDING FIRE DEPARTMENT CONNECTION ON AS-BUILT PLANS.

LEGENDS & SYMBOLS

SYMBOLS	DESCRIPTION
	END CAP
	PENDENT TYPE SPRINKLER HEADS (CHROME FINISHED W/ ESCUTCHEON PLATE)
	CHECK VALVE, FLANGED
	OS & Y GATE VALVE, FLANGED
	OS & Y GATE VALVE, WITH SUPERVISORY SWITCH
	RELIEF VALVE, FLANGED
	FLOAT VALVE
	DRAIN VALVE
	FIRE DEPARTMENT CONNECTION 150øx2-WAYx65ø
	HANGER/SUPPORT
	LATERAL SWAY BRACE
	LONGITUDINAL SWAY BRACE
	RISER NIPPLE
	FLEXIBLE CONNECTOR
	REDUCER (ECCENTRIC)
	REDUCER (CONCENTRIC)
	PORTABLE FIRE EXTINGUISHER - ABC TYPE
	AUTOMATIC FIRE SPRINKLER SYSTEM
	FLOOR CONTROL VALVE
	FIRE HOSE CABINET
	FIRE PUMP



PUMP SCHEDULE

ITEM	QTY	LOCATION	DESCRIPTION	CAPACITY (GPM)	TOTAL DYNAMIC HEAD (M-H2O)	RPM	APPROX. MOTOR INPUT (KW)	RATING	REMARKS
FP-1	1	NEARBY	HORIZONTAL SPLIT CASE FIRE PUMP W/ CONTROLLER	500	133	3500	55.00	220V\1HP\60HZ	FIRE PUMP-CUT IN 60 PSI, CUT-OUT MANUAL
JP-1	1	WATER SOURCE	HORIZONTAL SPLIT CASE JOCKEY PUMP W/ CONTROLLER	20	105	3500	3.73	220V\1HP\60HZ	JOCKEY PUMP SHALL BE SET TO CUT-IN AT 80 PSI AND TO CUT-OFF AT 150 PSI

TABULATED COMPONENTS OF AFSS SYSTEM

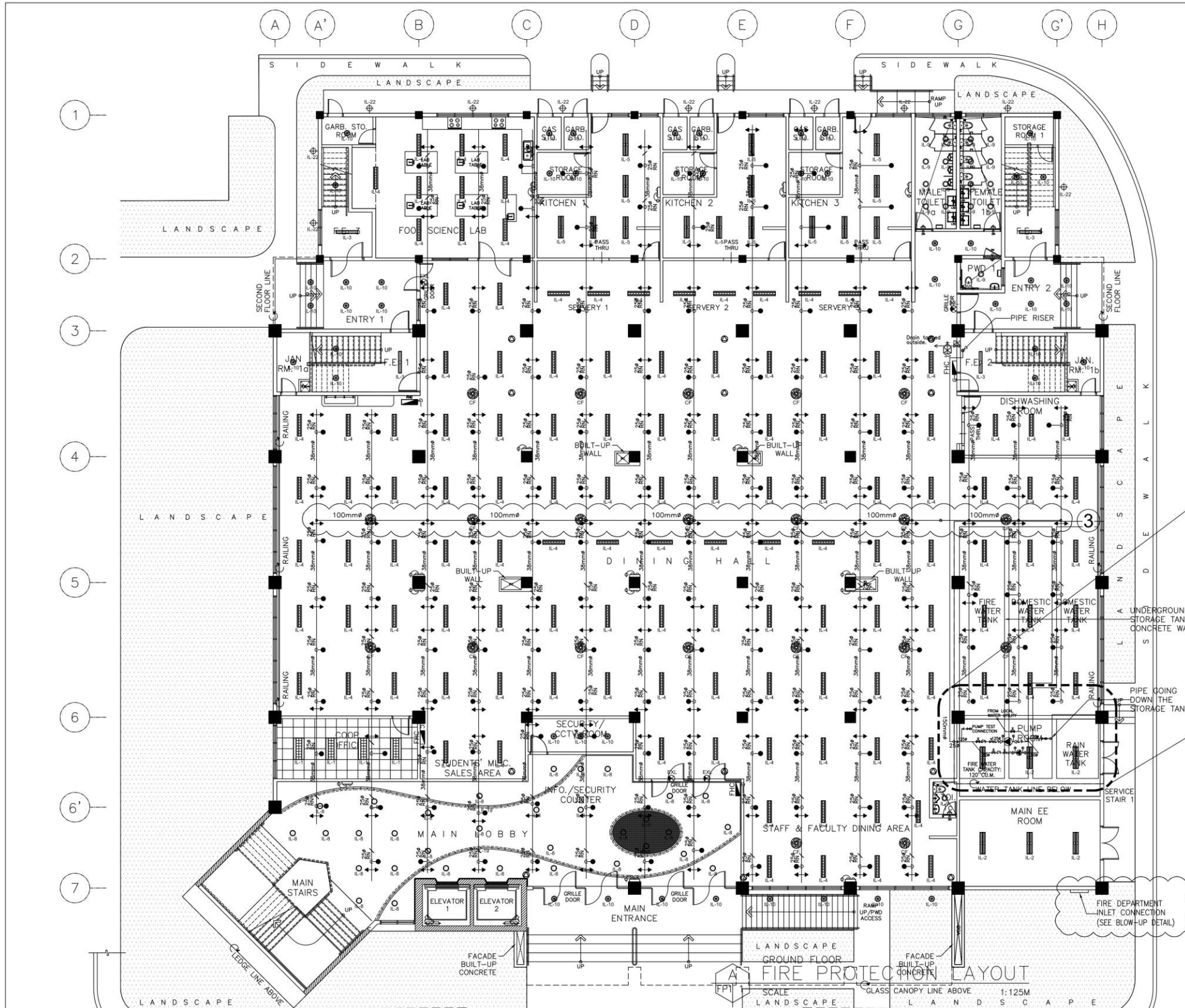
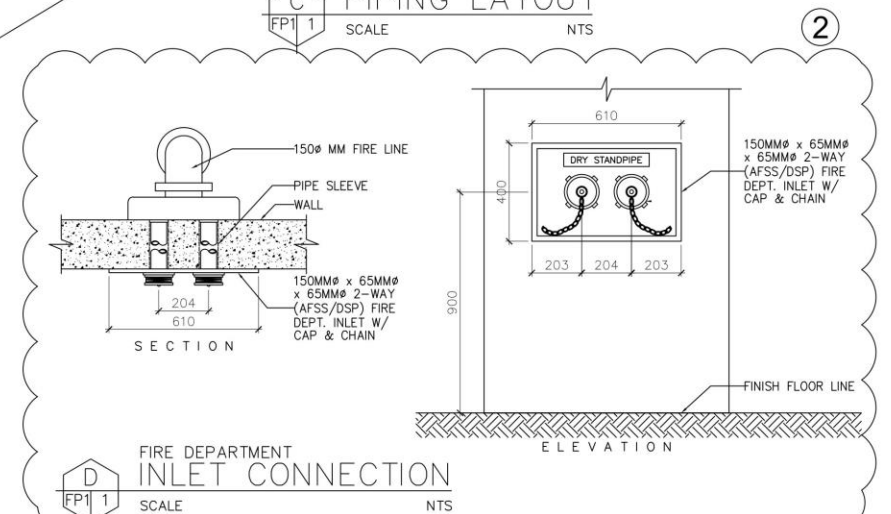
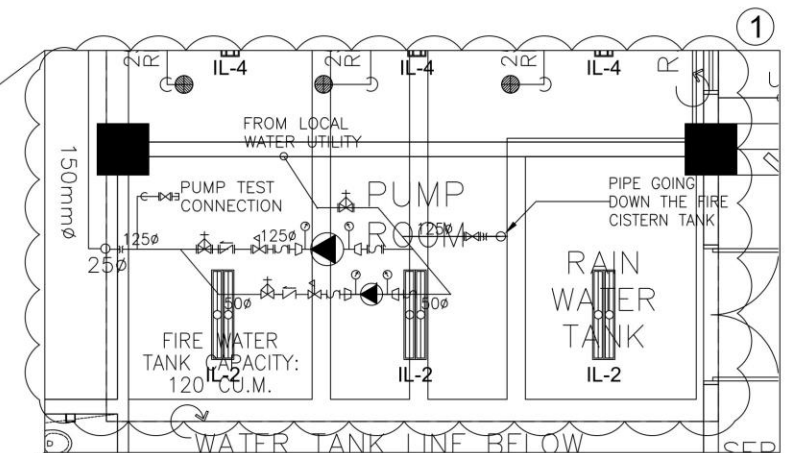
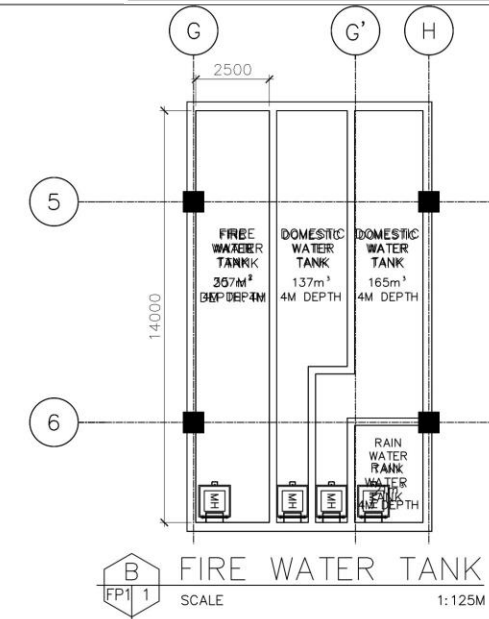
FLOOR	QUANTITY OF PENDANT SPRINKLER HEADS	PORTABLE FIRE EXTINGUISHER (ABC TYPE, 4.5kg)	FIRE HOSE CABINET W/ PFE ABC, 4.5kg	SCHEDULE OF PIPE SIZES (LIGHT HAZARD OCCUPANCY)
GROUND FLOOR	163	12	4	2 S. HEADS - 25mm 3 S. HEADS - 30mm 5 S. HEADS - 38mm 10 S. HEADS - 50mm 275 S. HEADS & ABOVE - 150mm 30 S. HEADS - 65MM 60 S. HEADS - 75MM 100 S. HEADS - 100MM 165 S. HEADS - 125MM
SECOND FLOOR	164	12	4	
THIRD FLOOR	126	12	4	
FOURTH FLOOR	118	12	4	
FIFTH FLOOR	45	12	4	
SIXTH FLOOR	119	12	4	
	735			

CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. MECHANICAL ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
 ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE.: 3552323 FAX NO.: 3551080 www.arcebailonarce.com	MARIANO S. ARCE, JR., fuap	ERIC M. PANZO	CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM	 PHILIPPINE SCIENCE HIGH SCHOOL MAIN CAMPUS	LAWRENCE V. MADRIAGA SGO DIRECTOR III	GENERAL NOTES	-	17-06	FP0-1
REG. NO. 6844 PTR NO. -	REG. NO. 2891 PTR NO. -	LOCATION:	Agham Road, Diliman, Quezon City			DESIGNED BY:	CAD:	CHECKED BY:	DATE:
TIN -	TIN -								



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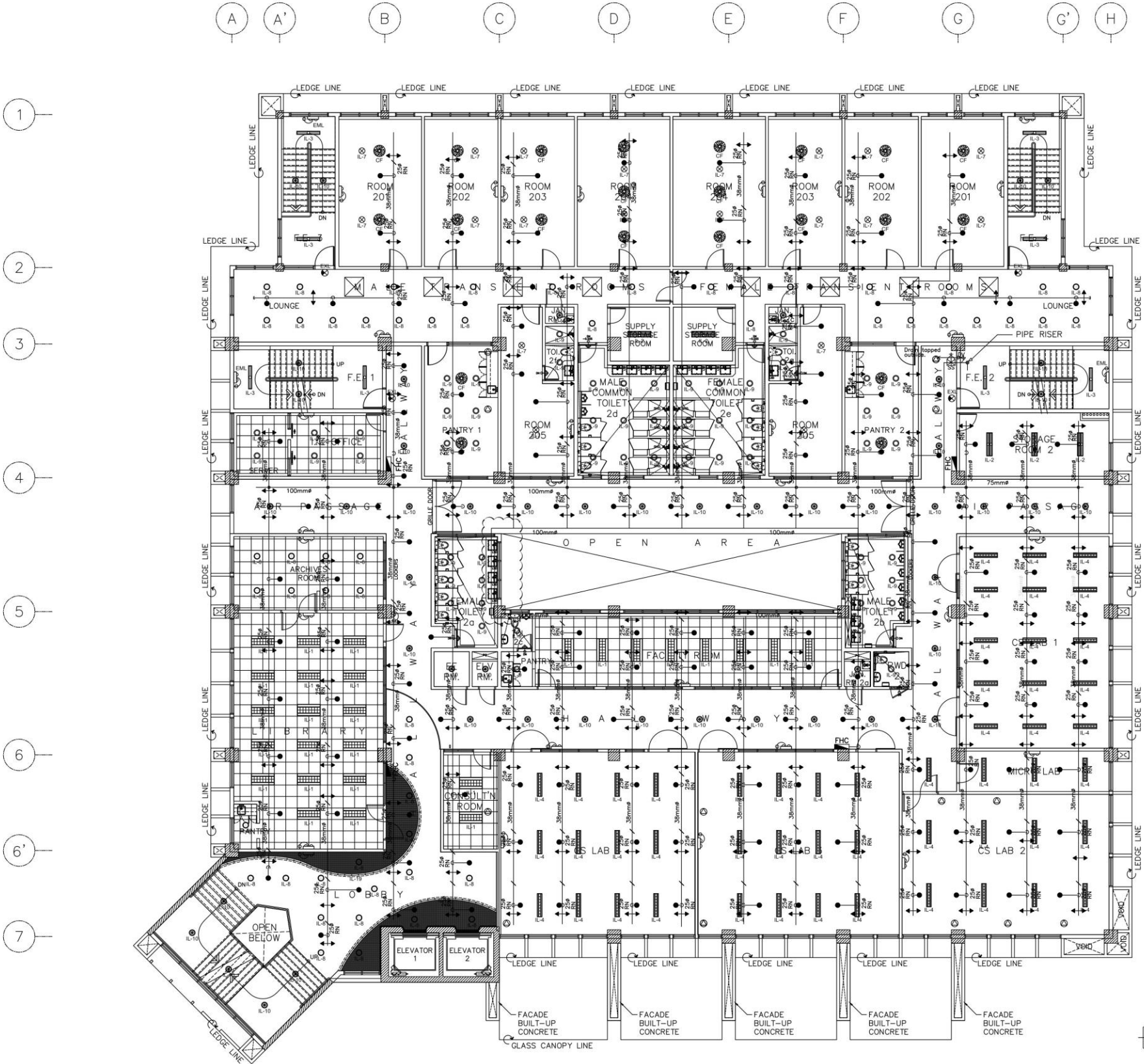
**NOTE:**  
FOR FIRE  
PROTECTION  
SYSTEM WORK  
SCOPE, EXCLUDE  
TRANSIENT AREA  
WHICH WAS  
ACCOMPLISHED  
FOR PHASE 2





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ARCE•BAILON•ARCE ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE : 3522323 FAX NO.: 3551080 www.arcebailonarce.com	MARIANO S. ARCE, JR., fuap	ERIC M. PANZO	CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM	PHILIPPINE SCIENCE HIGH SCHOOL MAIN CAMPUS	LAWRENCE V. MADRIAGA SGD DIRECTOR III	FIRE PROTECTION LAYOUT - GROUND FLOOR	R1 - CROSS MAIN, PIPING LAYOUT	17-06	FP1-1
REG. NO. 6844 PTR NO. - TIN - DATE:	REG. NO. 2891 PTR NO. - TIN - DATE:	LOCATION: Agham Road, Diliman, Quezon City					DESIGNED BY: CAD: CHECKED BY: DATE:		



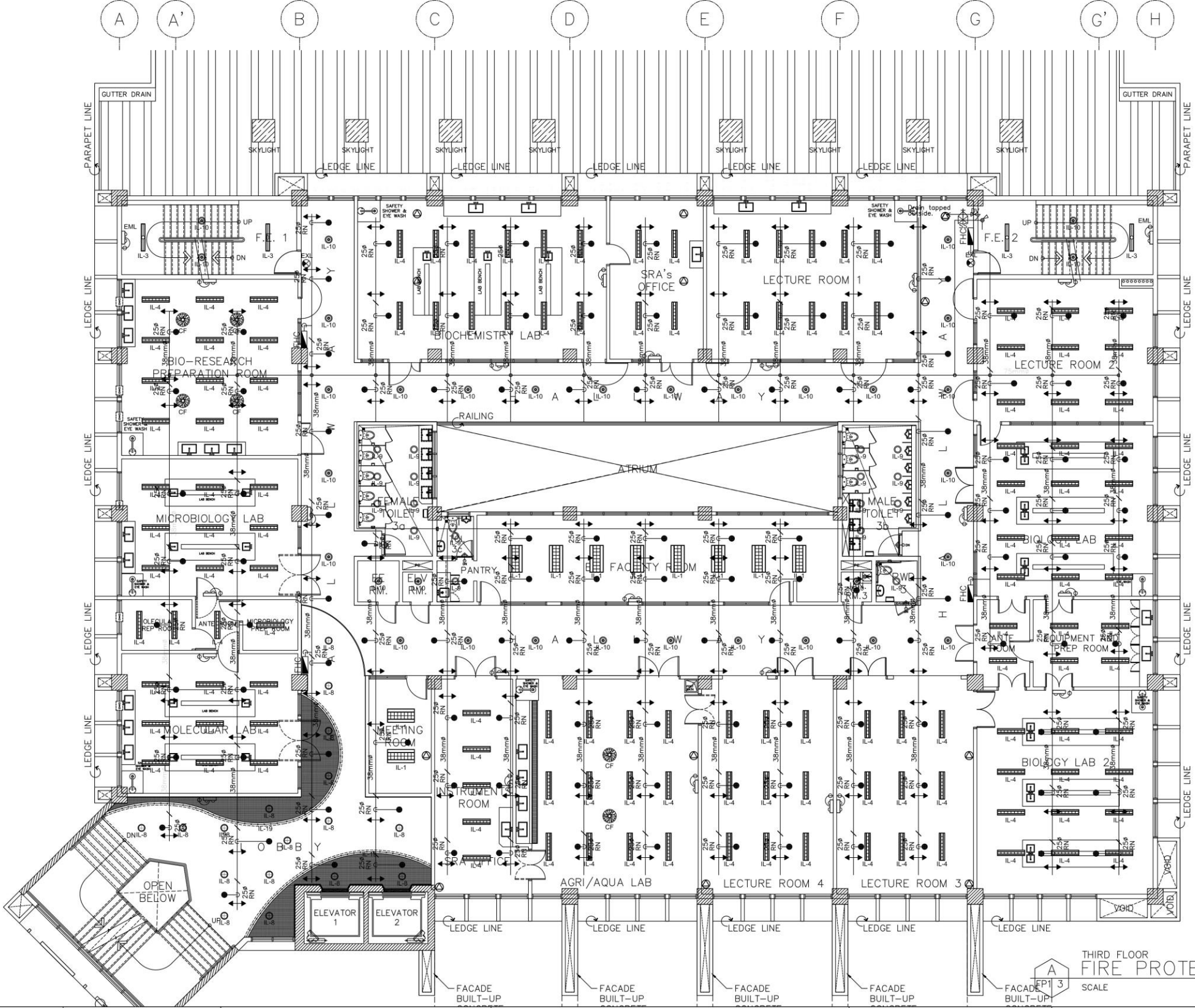
**NOTE:**  
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CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. MECHANICAL ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
 <b>ARCE•BAILON•ARCE</b> ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE : 3552323 FAX NO. : 3551080 www.arcebailonarce.com	MARIANO S. ARCE, JR., fuap	ERIC M. PANZO	CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM	 <b>PHILIPPINE SCIENCE HIGH SCHOOL</b> MAIN CAMPUS	LAWRENCE V. MADRIAGA SGO DIRECTOR III	FIRE PROTECTION LAYOUT - SECOND FLOOR		17-06	FP1-2
REG. NO. 6844 PTR NO. -	REG. NO. 2891 PTR NO. -	LOCATION: Agham Road, Diliman, Quezon City				DESIGNED BY: CAD:	CHECKED BY: DATE:		
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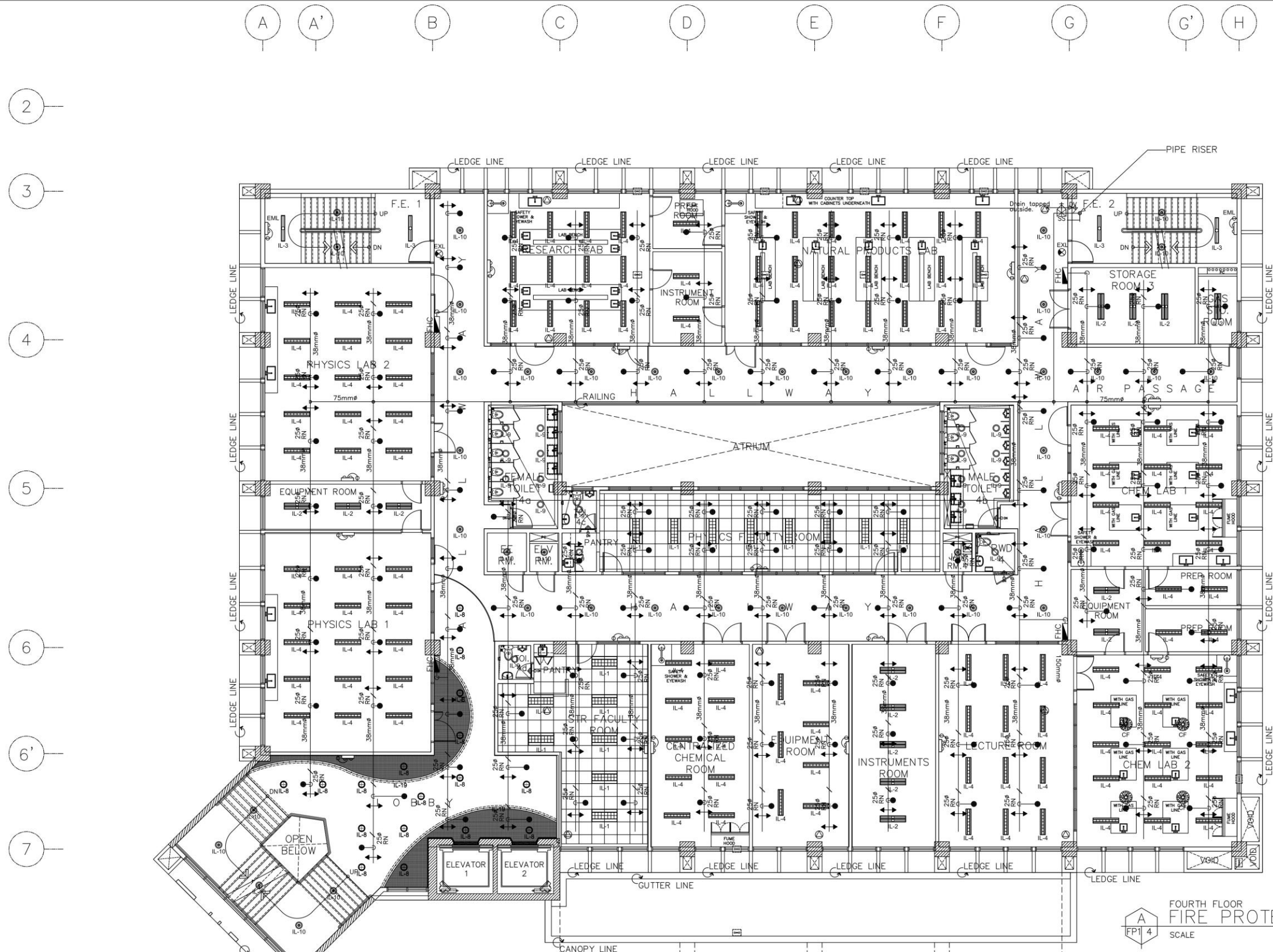


CONSULTANT:	PRINCIPAL ARCHITECT:	PROF. MECHANICAL ENGINEER:	PROJECT TITLE:	OWNER:	APPROVED BY:	SHEET CONTENTS:	REVISION:	PROJECT NO.:	SHEET NO.:
 <b>ARCE•BAILON•ARCE</b> ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE: 3552323 FAX NO.: 3551080 www.arcebailonarce.com	MARIANO S. ARCE, JR., fuap	ERIC M. PANZO	CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM	 PHILIPPINE SCIENCE HIGH SCHOOL MAIN CAMPUS	LAWRENCE V. MADRIAGA SGO DIRECTOR III	FIRE PROTECTION LAYOUT - THIRD FLOOR		17-06	FP1-3
REG. NO. 6844 PTR NO. -	REG. NO. 2891 PTR NO. -	LOCATION: Agham Road, Diliman, Quezon City				DESIGNED BY:	CAD:	CHECKED BY:	DATE:
TIN -	DATE:	TIN -	DATE:						





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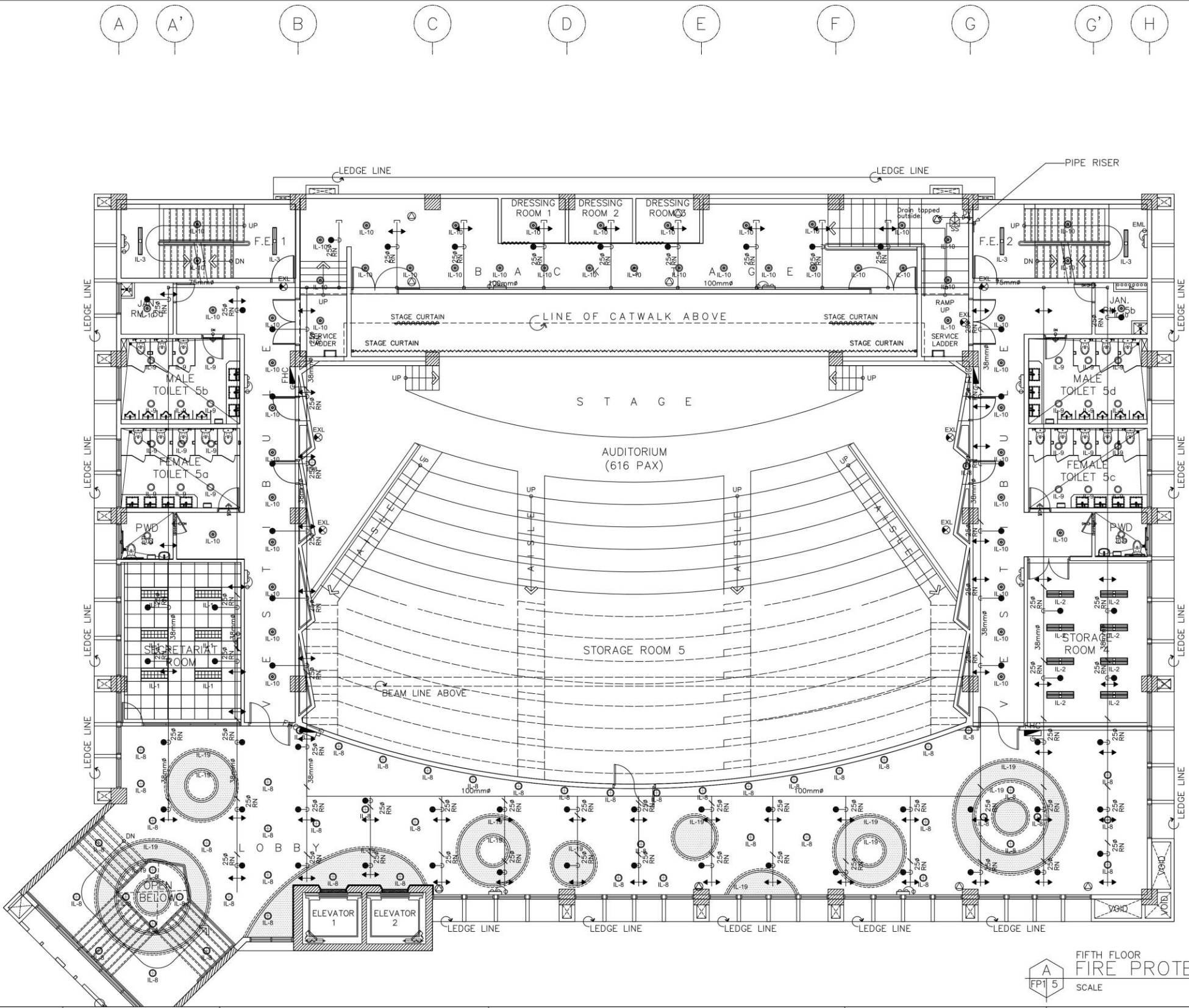
FOURTH FLOOR  
FIRE PROTECTION LAYOUT

SCALE 1:100M



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<div></div> <div>ARCE•BAILON•ARCE</div> <div>ARCHITECTS•ENGINEERS•CONSULTANTS</div> <div>14 SCOUT BOWENBO STREET, SOUTH TRIANGLE, QUEZON CITY.</div> <div>TRUNKLINE #: 3552323 FAX NO.: 3551080</div> <div>www.arcebailonarce.com</div>		MARIANO S. ARCE, JR., fuap		ERIC M. PANZO		CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM		<div></div> <div>PHILIPPINE SCIENCE HIGH SCHOOL</div> <div>MAIN CAMPUS</div>		LAWRENCE V. MADRIAGA CDO DIRECTOR III		FIRE PROTECTION LAYOUT - FOURTH FLOOR		17-06		FP1-4			
		REG. NO. 6844 PTR NO.		- REG. NO. 2891 PTR NO.		LOCATION: Agham Road, Diliman, Quezon City						DESIGNED BY:		CAD:		CHECKED BY:		DATE:	
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FIFTH FLOOR  
FIRE PROTECTION LAYOUT  
SCALE 1:100M

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 <b>ARCE•BAILON•ARCE</b> ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE: 3552323 FAX NO.: 3551080 www.arcebailonarce.com	MARIANO S. ARCE, JR., fuap	ERIC M. PANZO	CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM	 <b>PHILIPPINE SCIENCE HIGH SCHOOL</b> MAIN CAMPUS	LAWRENCE V. MADRIAGA SGO DIRECTOR III	FIRE PROTECTION LAYOUT - FIFTH FLOOR		17-06	FP1-5
REG. NO. 6844 PTR NO. -	REG. NO. 2891 PTR NO. -	LOCATION: Agham Road, Diliman, Quezon City				DESIGNED BY: CAD: CHECKED BY: DATE:			



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CONSULTANT:		PRINCIPAL ARCHITECT:		PROF. MECHANICAL ENGINEER:		PROJECT TITLE:		OWNER:		APPROVED BY:		SHEET CONTENTS:		REVISION:		PROJECT NO.:		SHEET NO.:	
<div></div> <div>ARCE•BAILON•ARCE ARCHITECTS•ENGINEERS•CONSULTANTS 14 SCOUT BORROMEO STREET, SOUTH TRIANGLE, QUEZON CITY. TRUNKLINE: 3552253 FAX NO.: 3551080 www.arcebailonarce.com</div>		MARIANO S. ARCE, JR., fuap		ERIC M. PANZO		CONSTRUCTION OF THE ACADEMIC BUILDING FOR SENIOR HIGH PROGRAM		<div></div> <div>PHILIPPINE SCIENCE HIGH SCHOOL MAIN CAMPUS</div>		LAWRENCE V. MADRIAGA SCD DIRECTOR III		FIRE PROTECTION LAYOUT - SIXTH FLOOR				17-06		FP1-6	
REG. NO. 6844 PTR NO. -		REG. NO. 2891 PTR NO. -		LOCATION: Agham Road, Diliman, Quezon City						DESIGNED BY: CAD:		CHECKED BY: DATE:							
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