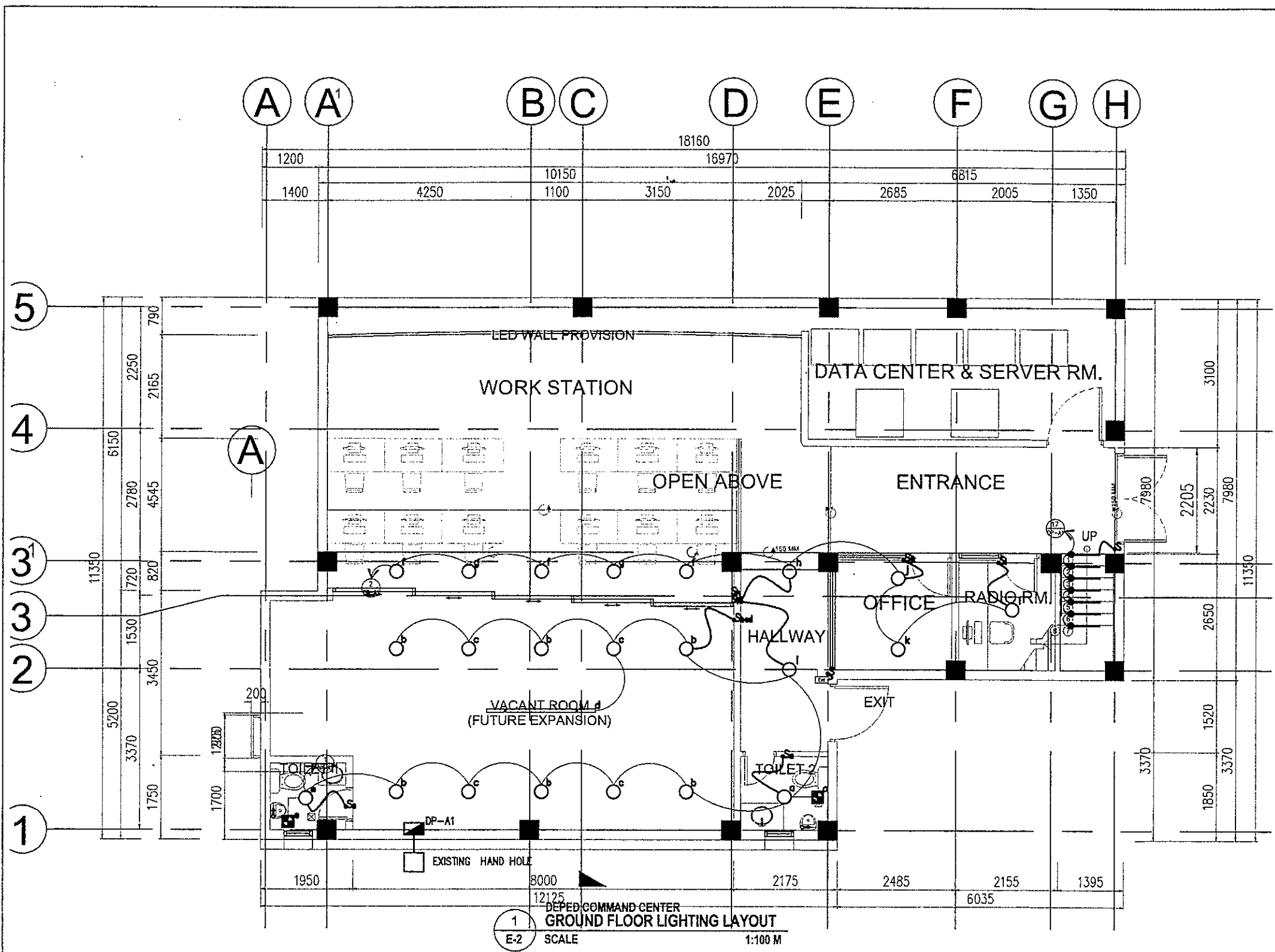


1  
E-1 SCALE NTS

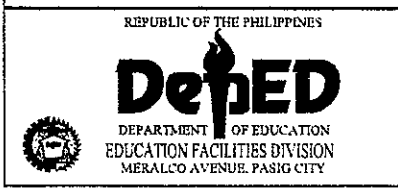
DEPED COMMAND CENTER  
PROPOSED DISTRIBUTION LINE (UNDERGROUND)

REPUBLIC OF THE PHILIPPINES <b>DepED</b> DEPARTMENT OF EDUCATION EDUCATION FACILITIES DIVISION MERALCO AVENUE, PASIG CITY	PREPARED BY :  <b>JOHN PAUL S. LICARDO</b> ELECTRICAL ENGINEER ETD-DepEd	CHECKED BY :  <b>SIGMUND SANCHEZ</b> PROFESSIONAL ELECTRICAL ENGINEER ETD-DepEd	RECOMMENDING APPROVAL :  <b>ANABELLE R. PANGAN</b> CHIEF, ETD DepED	RECOMMENDING APPROVAL :  <b>ROBERT M. AGUSTIN</b> DIRECTOR IV ADMINISTRATIVE SERVICE	APPROVED BY :  <b>NOLASCO A. MELFIN</b> UNDERSECRETARY OF ADMINISTRATION	PROJECT TITLE : <b>Extension of an Existing Building at the DepEd Central Office for the CO Matatag Center</b> LOCATION : MERALCO AVENUE, PASIG CITY	PROJECT CODE:  OWNER : <b>DEPARTMENT OF EDUCATION DepED</b>	SHEET NO: <b>E-1</b> <b>7</b>
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SHEET CONTENTS :  
GROUND FLOOR AND MEZZANINE

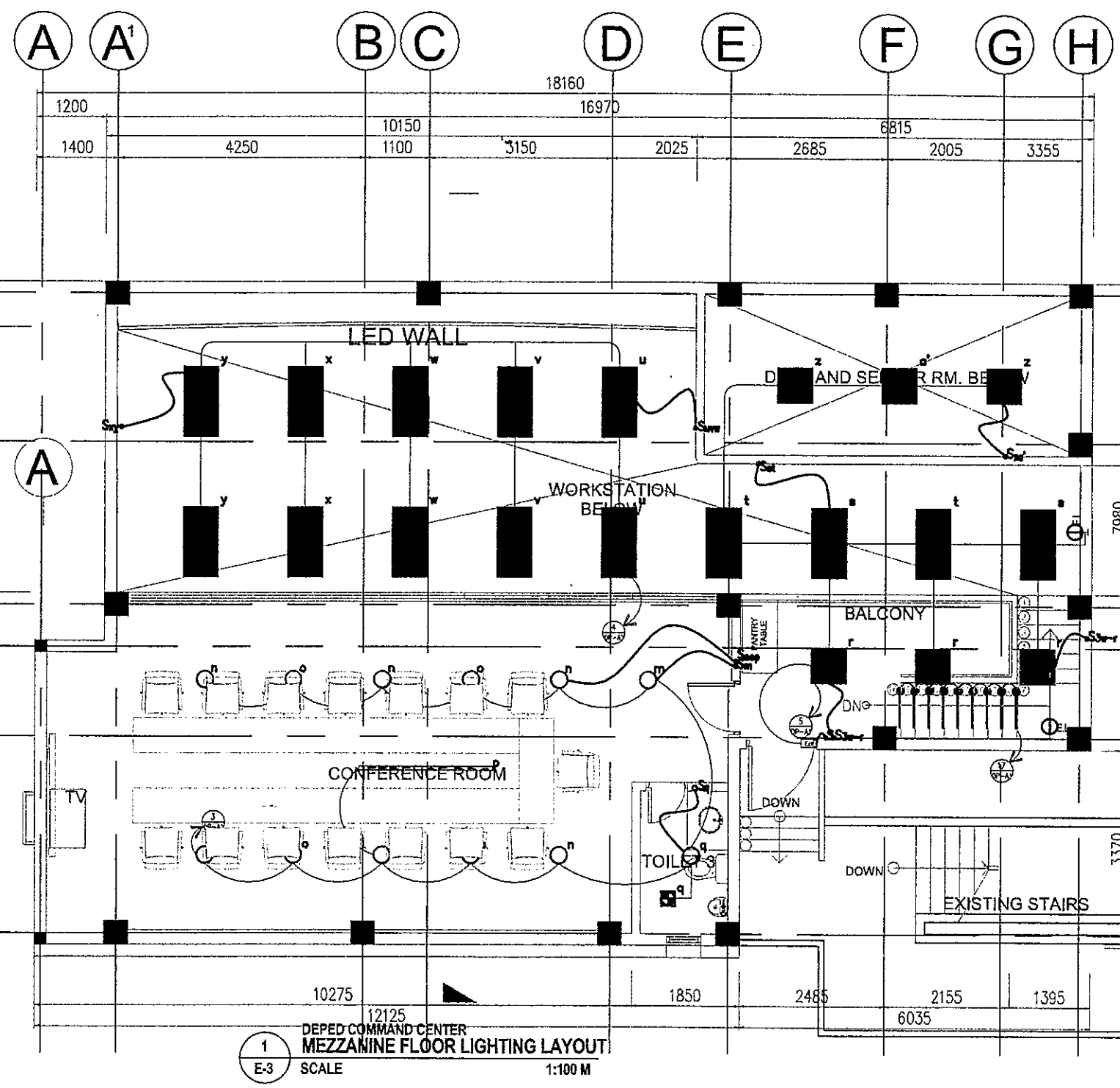


LIGHTINGS SPECIFICATION :	
	-LED (1200x600 Diffuser type),IP40, DAY LIGHT,RECESSED MOUNT,AC 85-265V 50/60Hz
	-LED (600x600 Diffuser type),IP40, DAY LIGHT,RECESSED MOUNT,AC 85-265V 50/60Hz
	-24W LED DOWNLIGHT,IP40, DAY LIGHT,RECESSED MOUNT,AC 85-265V 50/60Hz
	-3W LED WALL LIGHT FOR FOOTLIGHT,IP65, WARM LIGHT,EMBEDDED IN STAIR,RECTANGULAR, AC 85-265V 50/60Hz



PREPARED BY :  <b>JOHN PAUL B. LICARDO</b> ELECTRICAL ENGINEER EFD-DepEd	CHECKED BY :  <b>SIGMUND SANCHEZ</b> PROFESSIONAL ELECTRICAL ENGINEER EFD-DepEd	RECOMMENDING APPROVAL :  <b>ANNABELLE R. PANGAN</b> CHIEF, EFD DepEd	RECOMMENDING APPROVAL :  <b>ROBERT M. AGUSTIN</b> DIRECTOR IV ADMINISTRATIVE SERVICE	APPROVED BY :  <b>NOLASCO A. MEMPIN</b> UNDERSECRETARY OF ADMINISTRATION
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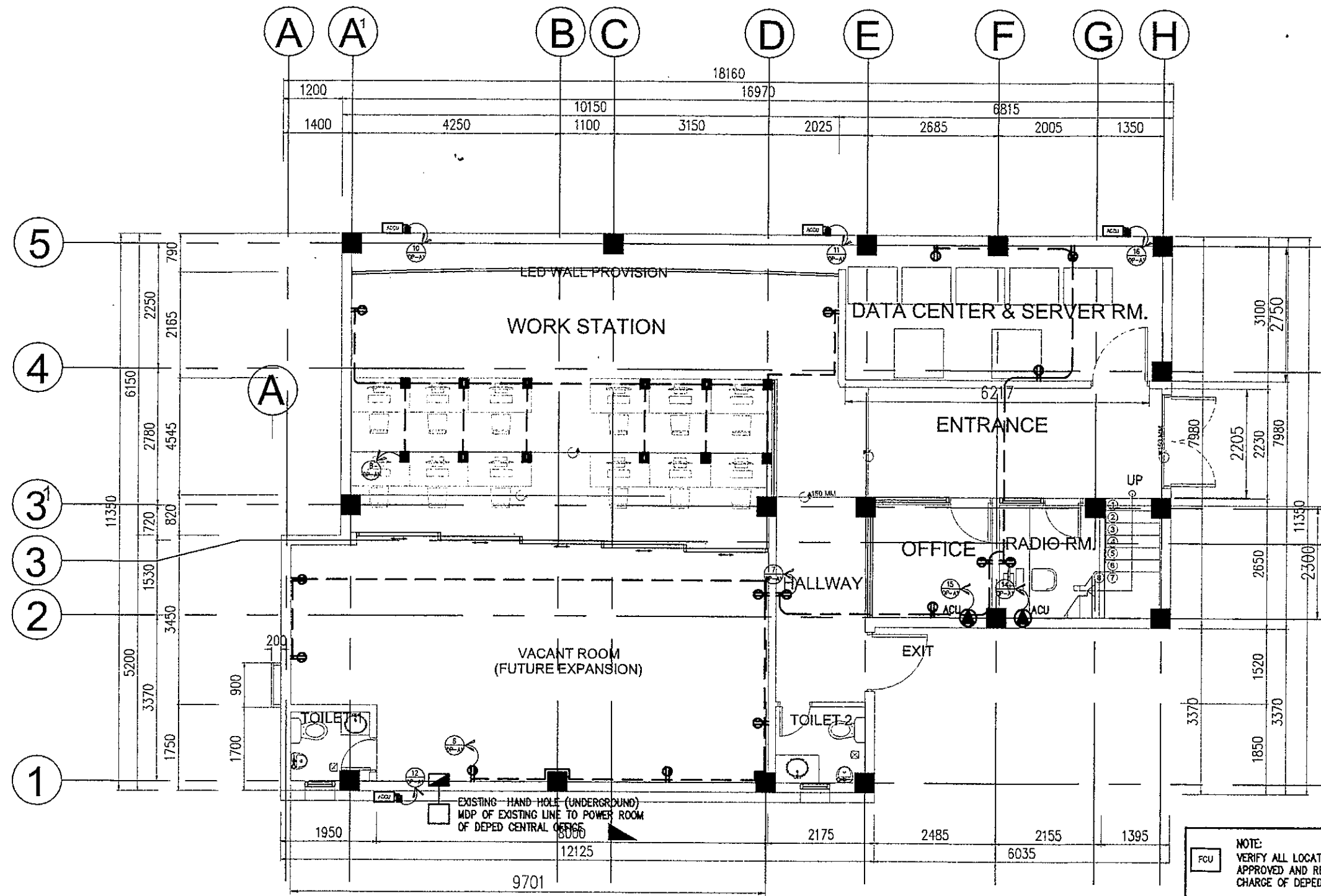
PROJECT TITLE : <b>Extension of an Existing Building at the DepEd Central Office for the CO Matatag Center</b>	PROJECT CODE :	OWNER : <b>DEPARTMENT OF EDUCATION DepEd</b>	SHEET NO. : <b>E-2</b>
LOCATION : <b>MERALCO AVENUE, PASIG CITY</b>	SHEET CONTENTS : <b>GROUND FLOOR AND MEZZANINE</b>		<b>7</b>



LIGHTINGS SPECIFICATION :	
	-LED (1200x600 Diffuser type),IP40, DAY LIGHT,RECESSED MOUNT,AC 85-265V 50/60Hz
	-LED (600x600 Diffuser type),IP40, DAY LIGHT,RECESSED MOUNT,AC 85-265V 50/60Hz
	-24W LED DOWNLIGHT,IP40, DAY LIGHT,RECESSED MOUNT,AC 85-265V 50/60Hz
	-3W LED WALL LIGHT FOR FOOTLIGHT,IP65, WARM LIGHT,EMBEDDED IN STAIR,RECTANGULAR, AC 85-265V 50/60Hz

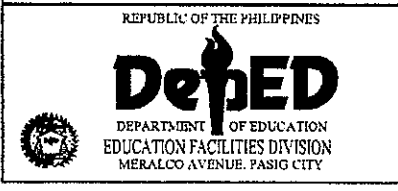
1  
E-3  
DEPED COMMAND CENTER  
MEZZANINE FLOOR LIGHTING LAYOUT  
SCALE 1:100 M

<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF EDUCATION EDUCATION FACILITIES DIVISION MERALCO AVENUE, PASIG CITY</p>	PREPARED BY :  <b>JOHN PAUL B. LICARDO</b> ELECTRICAL ENGINEER EFD-DepEd	CHECKED BY :  <b>SIEGMUND SANCHEZ</b> PROFESSIONAL ELECTRICAL ENGINEER EFD-DepEd	RECOMMENDING APPROVAL :  <b>ANNABELLE R. PAGAN</b> CHIEF, EFD DepEd	RECOMMENDING APPROVAL :  <b>ROBERT M. AGUSTIN</b> DIRECTOR IV ADMINISTRATIVE SERVICE	APPROVED BY :  <b>NOLASCO A. MEMPIN</b> UNDERSECRETARY OF ADMINISTRATION	PROJECT TITLE : <b>Extension of an Existing Building at the DepEd Central Office for the CO Matatag Center</b>	PROJECT CODE :	OWNER : <b>DEPARTMENT OF EDUCATION DepEd</b>	SHEET NO. : <b>E-3 7</b>
	LOCATION : MERALCO AVENUE, PASIG CITY						SHEET CONTENTS : GROUND FLOOR AND MEZZANINE		

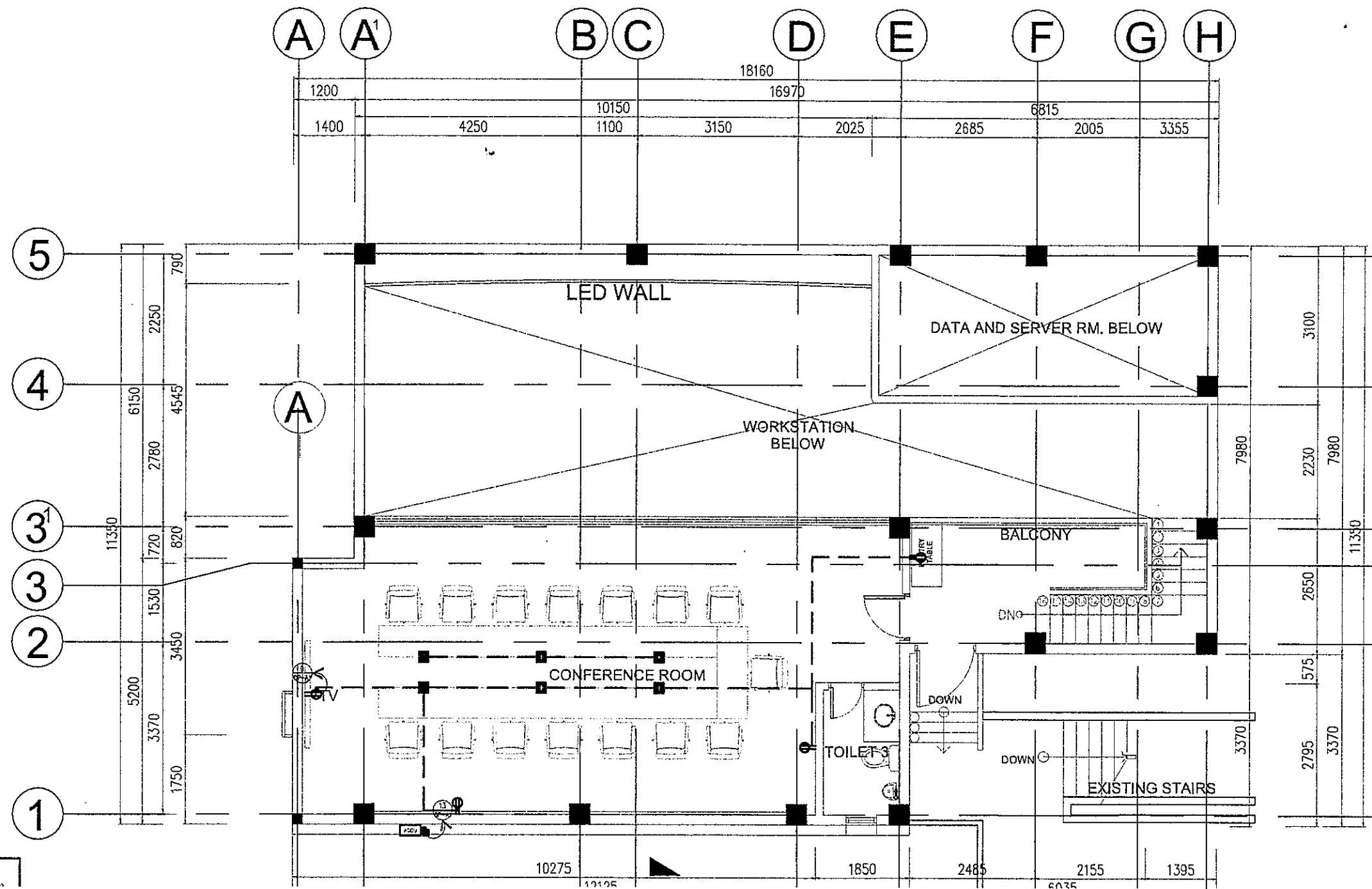


1  
E-4  
DEPED COMMAND CENTER  
GROUND FLOOR POWER LAYOUT  
SCALE 1:100 M

NOTE:  
VERIFY ALL LOCATION OF FCU (FLOOR MOUNTED ACU)  
APPROVED AND RECOMMENDED BY PROJECT IN  
CHARGE OF DEPED CENTRAL OFFICE

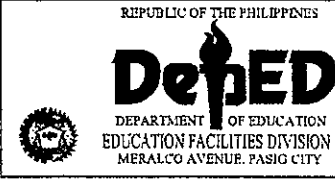


REPUBLIC OF THE PHILIPPINES	PREPARED BY :	CHECKED BY :	RECOMMENDING APPROVAL :	RECOMMENDING APPROVAL :	APPROVED BY :	PROJECT TITLE :	PROJECT CODE :	OWNER :	SHEET NO. :
	JOHN PAUL B. LICARDO ELECTRICAL ENGINEER EFD-DepEd	SIEGMUND SANCHEZ PROFESSIONAL ELECTRICAL ENGINEER EFD-DepEd	ANNABELLE R. PANGAN CHIEF, EFD DepEd	ROBERT M. AGUSTIN DIRECTOR IV ADMINISTRATIVE SERVICE	NOLASCO A. MEMPIN UNDERSECRETARY OF ADMINISTRATION	Extension of an Existing Building at the DepEd Central Office for the CO Matatag Center LOCATION : MERALCO AVENUE, PASIG CITY		DEPARTMENT OF EDUCATION DepED	E-4 7
							SHEET CONTENTS :	GROUND FLOOR AND MEZZANINE	



1 DEPED COMMAND CENTER  
MEZZANINE FLOOR POWER LAYOUT  
E-5 SCALE 1:100 M

NOTE:  
VERIFY ALL LOCATION OF FCU(FLOOR MOUNTED ACU)  
APPROVED AND RECOMMENDED BY PROJECT IN  
CHARGE OF DEPED CENTRAL OFFICE

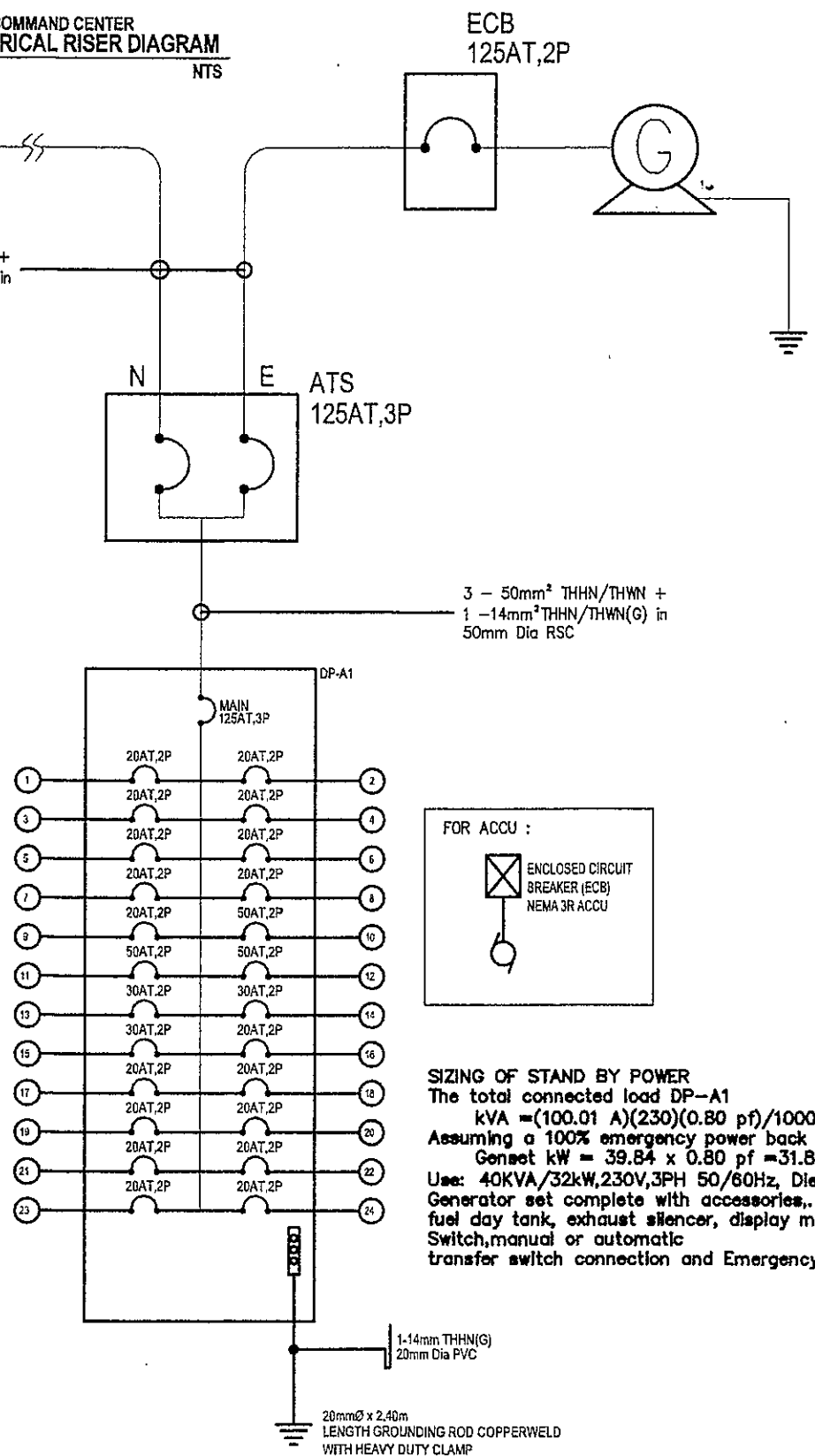


REPUBLIC OF THE PHILIPPINES	PREPARED BY :	CHECKED BY :	RECOMMENDING APPROVAL :	RECOMMENDING APPROVAL :	APPROVED BY :	PROJECT TITLE :	PROJECT CODE :	OWNER :	SHEET NO. :
<b>DepED</b> DEPARTMENT OF EDUCATION EDUCATION FACILITIES DIVISION MERALCO AVENUE, PASIG CITY	JOHN PAUL B. LICARDO ELECTRICAL ENGINEER EFD-DepEd	SIEGMUND SANCHEZ PROFESSIONAL ELECTRICAL ENGINEER EFD-DepEd	ANNABELLE R. PANGAN CHIEF, EFD DepED	ROBERT M. AGUSTIN DIRECTOR IV ADMINISTRATIVE SERVICE	NOLASCO A. MEMPIN UNDERSECRETARY OF ADMINISTRATION	Extension of an Existing Building at the DepEd Central Office for the CO Matatag Center LOCATION : MERALCO AVENUE, PASIG CITY		DEPARTMENT OF EDUCATION DepED	E-5 7
								SHEET CONTENTS :	
								GROUND FLOOR AND MEZZANINE	

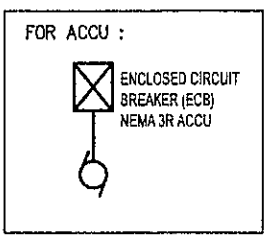
1  
E-6  
DEPED COMMAND CENTER  
ELECTRICAL RISER DIAGRAM  
SCALE NTS

CONNECT TO SPARE FEEDER LOCATED ELECTRICAL ROOM UNDER THE SUPERVISION OF GENERAL SERVICE DIVISION (GSD)

3 - 50mm<sup>2</sup> THHN/THWN + 1 - 14mm<sup>2</sup> THHN/THWN(G) in 50mm Dia RSC



3 - 50mm<sup>2</sup> THHN/THWN + 1 - 14mm<sup>2</sup> THHN/THWN(G) in 50mm Dia RSC



**SIZING OF STAND BY POWER**  
The total connected load DP-A1  
kVA = (100.01 A)(230)(0.80 pf)/1000 = 39.84 kVA  
Assuming a 100% emergency power back up  
Genset kW = 39.84 x 0.80 pf = 31.87 kW  
Use: 40KVA/32kW, 230V, 3PH 50/60Hz, Diesel Engine Generator set complete with accessories, starting battery, fuel day tank, exhaust silencer, display metering, AC Switch, manual or automatic transfer switch connection and Emergency Stop.

2  
E-6  
DEPED COMMAND CENTER  
SCHEDULE OF LOADS  
SCALE NTS

PANEL BOARD TYPE	PANEL LOCATION	ENCLOSURE TYPE	VOLTAGE SYSTEM	PHASE SYSTEM	SCHEDULE OF LOADS				MAIN FEEDER SIZE			MAIN BREAKER SIZE					
					DP-A1				X	50.0 mm'	R,Y,BK	AT	125	A			
	VACANT RM	NEMA 1	230	3PH, 60HZ					G	14 mm'	GREEN	AF	250	A			
									SETS	1	PC	P	3	P			
									TYPE	THHN/THWN		KAIC	35	P			
CKT. NO	DESCRIPTION	V	VA	AMPERES			CIRCUIT BREAKER			WIRE SIZE		CONDUIT SIZE (mmφ)					
				AB	BC	CD	3φ	AT	AF	P	X		G				
1	LIGHTING OUTLET	230	1210	5.26				20	50	2	2-	3.5mm'	1-	3.5mm'	20	PVC	
2	LIGHTING OUTLET	230	810	3.52				20	50	2	2-	3.5mm'	1-	3.5mm'	20	PVC	
3	LIGHTING OUTLET	230	1160		5.04			20	50	2	2-	3.5mm'	1-	3.5mm'	20	PVC	
4	LIGHTING OUTLET	230	900		3.91			20	50	2	2-	3.5mm'	1-	3.5mm'	20	PVC	
5	LIGHTING OUTLET EMERGENCY OUTLET	230	1260			5.48		20	50	2	2-	3.5mm'	1-	3.5mm'	20	PVC	
6	CONVENIENCE OUTLET	230	1080			4.70		20	50	2	2-	3.5mm'	1-	3.5mm'	20	PVC	
7	CONVENIENCE OUTLET	230	1260	5.48				20	50	2	2-	3.5mm'	1-	3.5mm'	20	PVC	
8	CONVENIENCE OUTLET	230	2880	12.52				20	50	2	2-	3.5mm'	1-	3.5mm'	20	PVC	
9	CONVENIENCE OUTLET	230	1980		8.61			20	50	2	2-	3.5mm'	1-	3.5mm'	20	PVC	
10	ACCU 3TR (WORKSTATION)	230	3910		17.00			50	50	2	2-	8.0mm'	1-	5.5mm'	25	PVC	
11	ACCU 3TR (VACANT RM)	230	3910			17.00		50	50	2	2-	8.0mm'	1-	5.5mm'	25	PVC	
12	ACCU 3TR (VACANT RM)	230	3910			17.00		50	50	2	2-	8.0mm'	1-	5.5mm'	25	PVC	
13	ACCU 3TR (CONFERENCE RM)	230	3910	17.00				50	50	2	2-	8.0mm'	1-	5.5mm'	25	PVC	
14	ACU .75HP (RADIO RM)	230	1587	6.90				30	50	2	2-	5.5mm'	1-	3.5mm'	25	PVC	
15	ACU .75HP (OFFICE RM)	230	1587		6.90			30	50	2	2-	5.5mm'	1-	3.5mm'	25	PVC	
16	ACCU 2.5HP (SERVER RM)	230	2760		12.00			30	50	2	2-	5.5mm'	1-	3.5mm'	25	PVC	
17	FACP	230	600			2.09		20	50	2	2-	3.5mm'	1-	3.5mm'	20	PVC	
18	CCTV	230	900			3.13		20	50	2	2-	3.5mm'	1-	3.5mm'	20	PVC	
19	SPARE	230	1500	5.22				20	50	2							
20	SPARE	230	1500	5.22				20	50	2							
21	SPARE	230	1000		3.48			20	50	2							
22	SPARE	230	1000		3.48			20	50	2							
23	SPARE	230	1000			3.48		20	50	2							
24	SPARE	230	1000			3.48		20	50	2							
TOTAL CONNECTED LOAD					61.12	60.42	56.35										
FOR FEEDER CURRENT				SIZE FOR MAIN FEEDER				FOR MAIN BREAKER SIZE									
3PH + 1PH LOAD = 105.86 A				X				G									
25% OF HIGHEST CONTINUOUS LOAD = 4.25 A				3-		50.0 mm'		1-		14 mm'		125		AT			
HIGHEST CURRENT LOAD = 17.00 A				NO. OF SET				1				3				P	
DEMAND FACTOR = 85%				SIZE OF CONDUIT				35				KAIC					
PH FEEDER = 93.59 A				50				RSC				MCCB, BOLT-ON					
1.73 MAIN PROTECTION = 115.27 A																	

REPUBLIC OF THE PHILIPPINES	PREPARED BY : <i>John Paul B. Licardo</i> JOHN PAUL B. LICARDO ELECTRICAL ENGINEER EFD-DepEd	CHECKED BY : <i>Sigmund Sanchez</i> SIGMUND SANCHEZ PROFESSIONAL ELECTRICAL ENGINEER EFD-DepEd	RECOMMENDING APPROVAL : <i>Amabelle R. Pangan</i> AMABELLE R. PANGAN CHIEF, ETD DepEd	RECOMMENDING APPROVAL : <i>Robert M. Agustin</i> ROBERT M. AGUSTIN DIRECTOR IV ADMINISTRATIVE SERVICE	APPROVED BY : <i>Nolasco A. Mempin</i> NOLASCO A. MEMPIN UNDERSECRETARY OF ADMINISTRATION	PROJECT TITLE : Extension of an Existing Building at the DepEd Central Office for the CO Matatag Center	PROJECT CODE :	OWNER : DEPARTMENT OF EDUCATION DepEd	SHEET NO. : E-6 7
DEPED DEPARTMENT OF EDUCATION EDUCATION FACILITIES DIVISION MERALCO AVENUE, PASIG CITY	LOCATION : MERALCO AVENUE, PASIG CITY				SHEET CONTENTS : GROUND FLOOR AND MEZZANINE				

**GENERAL NOTES**

ALL ELECTRICAL WORKS HEREIN SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE (PEC), EXISTING LOCAL ORDINANCES, RULES, AND REGULATIONS OF THE UTILITY COMPANY. THE SUPPLY VOLTAGE POWER IS 3PHASE, 3-WIRE + GROUND 230VAC, 60HZ.

INSTALLATION SHALL BE AS FOLLOWS:

WIRING AND TRAYS - IMC/RSC

RECEPTACLE - PVC SCHEDULE 40 BRANCH CKT. & RECEPTACLE

ALL MATERIALS (EQUIPMENT AND DEVICES) TO BE INSTALLED BY THE CONTRACTOR SHALL BE NEW AND SHALL BEAR THE CERTIFICATION MARK OR IMPORT COMMODITY QUALITY MARK OR IMPORT COMMODITY QUALITY MARK BY THE DEPARTMENT OF TRADE AND INDUSTRIAL DEVELOPMENT OF PRODUCT STANDARDS (DTI-BPS) FOR SPECIFIC PRODUCTS.

CONDUIT AND ALL ACCESSORIES, SPlicing DEVICES, TERMINATION, AND OTHER COMPONENTS FOR THE ENTIRE ELECTRICAL INSTALLATION SHALL BE NEW.

CONDUIT SHALL BE AS NEEDED TO FACILITATE INSERTION AND REMOVAL OF WIRE WITHOUT ABRASION, CONDUIT BENDS SHALL BE MADE IN SUCH A MANNER THAT THE INTERNAL DIAMETER IS NOT REDUCED.

LOCATION, VOLTAGE, LOCATION AND RATING OF EQUIPMENT AND MATERIALS SHALL BE VERIFIED WITH THE ENGINEER/OWNER OR ANY OF HIS AUTHORIZED REPRESENTATIVES AND CHANGES SHALL BE MADE ACCORDINGLY.

ALL ELECTRICAL WORK SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A LICENSED ELECTRICAL ENGINEER.

ALL ELECTRICAL PANELS, AND SWITCHES MUST BE APPROPRIATELY SUPPLIED WITH PANELS/BREAKERS SUPPLYING THEM.

WELDING OF ELECTRICAL CONNECTIONS SHOULD BE DONE BY EXOTHERMIC WELDING OR WELDING BY OTHER APPROVED SIMILAR PROCESS, MINIMUM GROUND RESISTANCE SHALL BE 5 OHMS.

ALL ELECTRICAL CONNECTIONS SHALL BE LABELED AT THE ORIGINATING PANEL BOARD AND THE PANEL BOARD LEGEND. THEY SHALL BE ALSO LABELED AT THE LOCATION OF THE RECEPTACLE, LIGHT SWITCH, OR THE PIECE OF EQUIPMENT (E.G. MOTOR STARTER, SAFETY SWITCH).

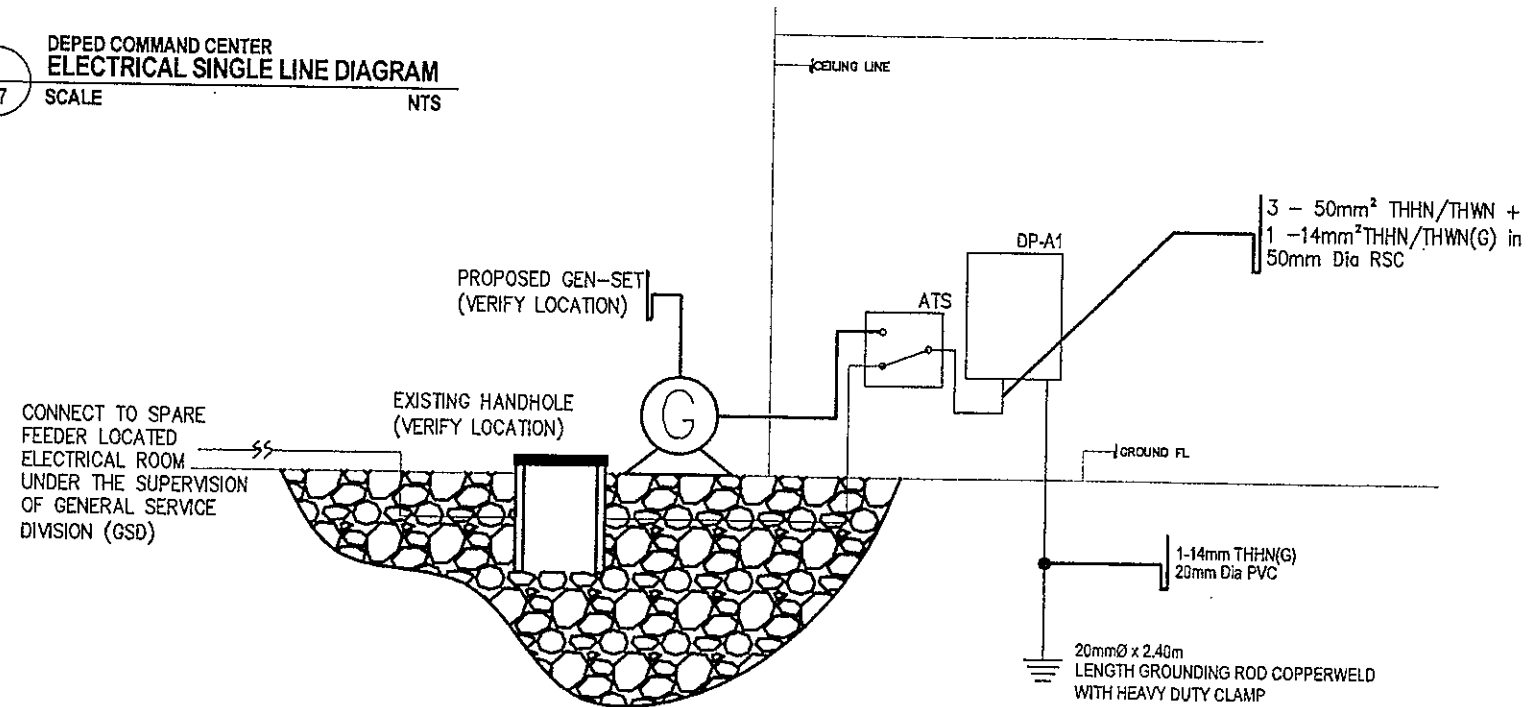
CONDUIT HANGING HEIGHTS OF WIRING DEVICES SHALL BE AS FOLLOWS:

- LIGHT SWITCH - 1.20 M ABOVE FINISH FLOOR
- RECEPTACLE - 0.30 M ABOVE FINISH FLOOR
- PANELBOARD - 1.80 M ABOVE FINISH FLOOR
- DUPLEX CONVENIENCE OUTLET - 1.50 M. ABOVE FINISH FLOOR
- PUSH BUTTON OUTLET - 1.20 M ABOVE FINISH FLOOR
- EXHAUST FAN & VIBRATING BELL - 0.30 M BELOW CEILING LINE

**1**  
E-7 SCALE NTS  
**DEPED COMMAND CENTER  
ELECTRICAL GENERAL NOTES AND LEGENDS**

LEGEND	
SYMBOL	DESCRIPTION
3WSx	THREE WAY ONE GANG DEVICE SWITCH
Sw	ONE GANG DEVICE SWITCH
Swb	TWO GANG DEVICE SWITCH
Swc	THREE GANG DEVICE SWITCH
	FAN COIL UNIT - FLOOR MOUNTED TYPE
	AIR-COOLED CONDENSING UNIT
	ENCLOSED CIRCUIT BREAKER, NEMA 3R RATING AS INDICATED
	RACEWAY CONDUIT CONCEALED IN CEILING
	RACEWAY CONDUIT CONCEALED UNDER FLOOR/GROUND
	PANELBOARD, MARKED AS "MDP/DPA/DPB"
	CKT. BREAKER, RATING AS INDICATED
	DUPLEX CONVENIENCE OUTLET, UNIVERSAL SLOTS, GROUNDING TYPE, 16 AMPS, 250 VOLT
	CIRCUIT HOMERUN
	SERVICE METER
	SERVICE ENTRANCE
	JUNCTION BOX
	MOTOR, INDICATED AS FUNCTION AND RATING
	EXIT LIGHT, RATING AS INDICATED
	SINGLE CONVENIENCE OUTLET FOR EMERGENCY LIGHT
	JUNCTION BOX
	EXHAUST FAN
	FLOOR MOUNTED, DUPLEX CONVENIENCE OUTLET
	AIR CONDITIONING UNIT, INDICATED RATING

**2**  
E-7 SCALE NTS  
**DEPED COMMAND CENTER  
ELECTRICAL SINGLE LINE DIAGRAM**



	 <b>PAUL A. LICARDO</b> ELECTRICAL ENGINEER EFD-DepEd	 <b>SIEGMUND SANCHEZ</b> PROFESSIONAL ELECTRICAL ENGINEER EFD-DepEd	 <b>ANNABELLE F. PAGAN</b> CHIEF, EFD DepEd	 <b>ROBERT M. AGUSTIN</b> DIRECTOR IV ADMINISTRATIVE SERVICE	 <b>NOLASCO A. MEMPIN</b> UNDERSECRETARY OF ADMINISTRATION	PROJECT TITLE : <b>Extension of an Existing Building at the DepEd Central Office for the CO Matatag Center</b>	PROJECT CODE :	OWNER : <b>DEPARTMENT OF EDUCATION DepEd</b>	SHEET NO. : <b>E-7</b> <b>7</b>
	LOCATION : <b>MERALCO AVENUE, PASIG CITY</b>						SHEET CONTENTS : <b>GROUND FLOOR AND MEZZANINE</b>		