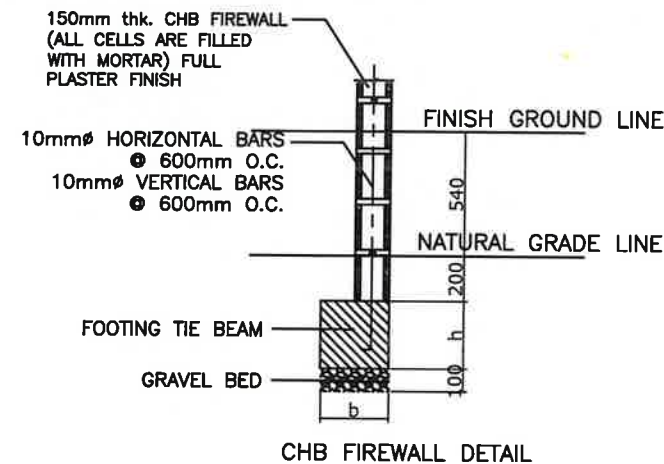
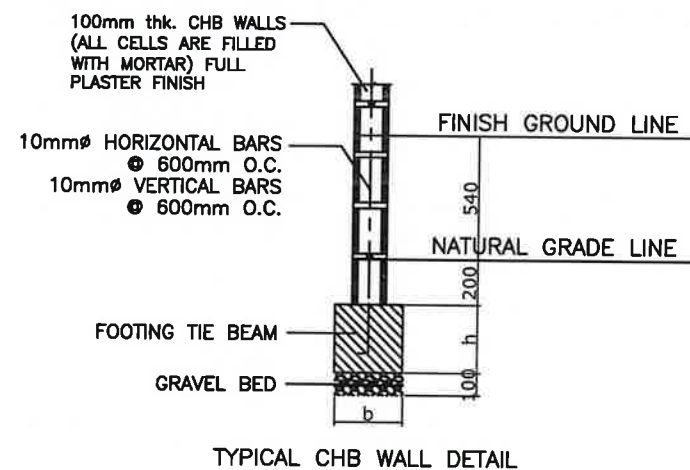
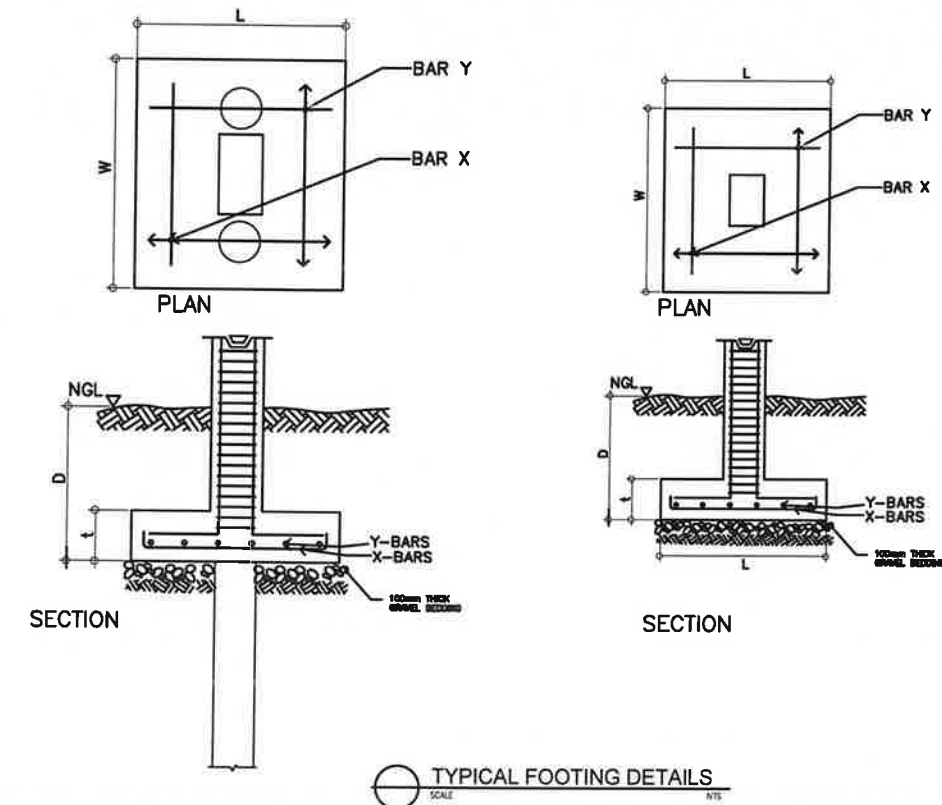
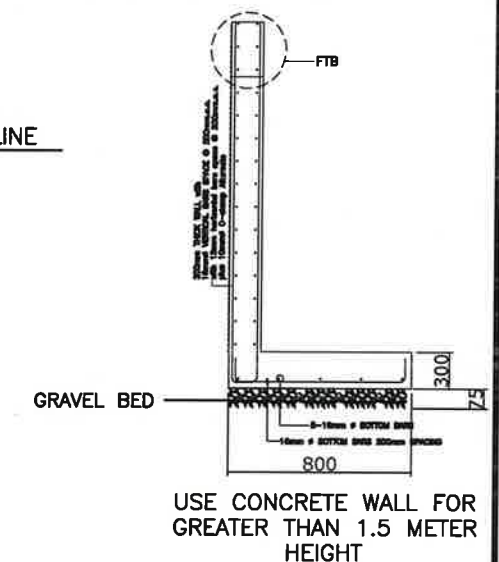
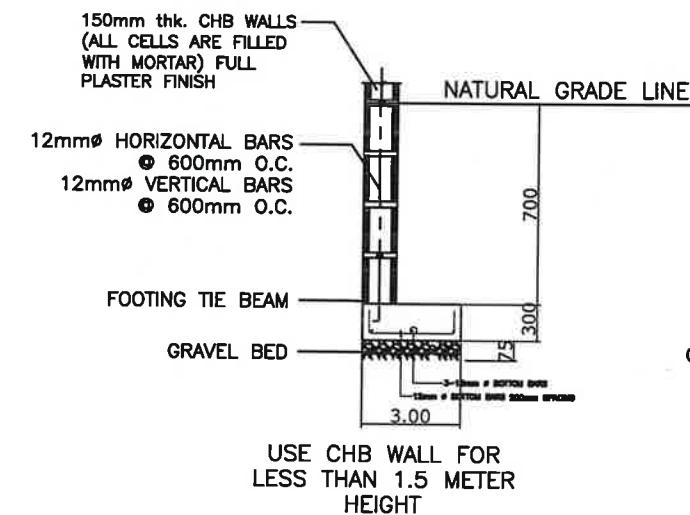


FOOTING MARK	FOOTING DIMENSIONS (mm)							REINFORCEMENT				REMARKS	
	LENGTH (m)	WIDTH (m)	X (m)	Y (m)	Z (m)	Thickness (m)	DEPTH (m)	BAR X		BAR Y			
								TOP	BOTTOM	TOP	BOTTOM		
F-1	3.20	1.80	-	-	-	1.00	1.50	20mm# 180 mm Spacing O.C.	28mm# 180 mm Spacing O.C.	20mm# 180 mm Spacing O.C.	28mm# 180 mm Spacing O.C.	PILE CAP /ISOLATED	
F-2	2.50	2.50	-	-	-	0.55	1.50	-	25mm# 180 mm Spacing O.C.	-	25mm# 180 mm Spacing O.C.		ISOLATED
F-3	1.90	1.80	-	-	-	0.50	1.50	-	25mm# 180 mm Spacing O.C.	-	25mm# 180 mm Spacing O.C.		ISOLATED

SCALE NTS
SCHEDULE OF FOOTING



SCALE NTS
TYPICAL CHB WALL DETAILS



SCALE NTS
TYPICAL RETAINING WALL DETAILS



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BATAAN FIRST
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PROJECT NAME AND LOCATION :
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SUPPORT SOCIAL SERVICE - CONSTRUCTION
OF MULTI-PURPOSE BUILDING (GYMNASIUM),
SAMAL, BATAAN

SHEET CONTENT :
AS SHOWN

DRAFTED BY:
REYNALDO B. ANTONIO
DRAFTSMAN II
PREPARED BY:
ROLANDO P. SOLIMAN
ARCHITECT II

REVIEWED BY:
CHRIS P. RAMIREZ
ENGINEER II
DATE:

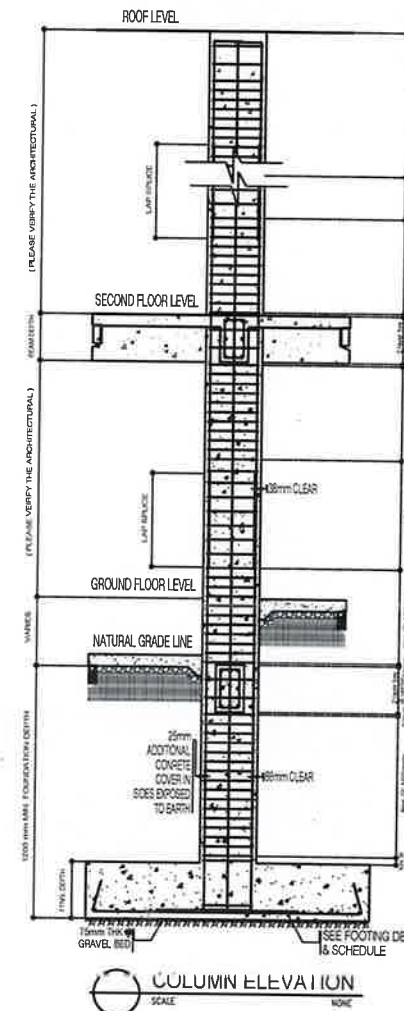
SUBMITTED BY :
CELIA M. RAMOS
CHIEF, PLANNING AND DESIGN SECTION
DATE:

RECOMMENDED :
REGINA H. AGUSTIN
ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED :
JOHN PAOLO S. TAN
OIC-DISTRICT ENGINEER
DATE:

SET NO. SHT. NO.
S-9 15
65

ROOF LEVEL TO SECOND FLOOR			
VERTICAL BARS	18 - 25 mmØ VERTICAL BARS	8 - 25 mmØ VERTICAL BARS	8 - 20 mmØ VERTICAL BARS
LATERAL TIES	WITH 16mmØ LATERAL TIES 2 @ 50mm o.c., 10 @ 100mm o.c., REST @ 200mm o.c. (5 ties per set)	WITH 12mmØ LATERAL TIES 2 @ 50mm o.c., 10 @ 100mm o.c., REST @ 200mm o.c. (3 ties per set)	WITH 12mmØ LATERAL TIES 2 @ 50mm o.c., 10 @ 100mm o.c., REST @ 200mm o.c. (3 ties per set)
SECOND FLOOR TO GROUND FLOOR			
VERTICAL BARS	18 - 25 mmØ VERTICAL BARS	12 - 25 mmØ VERTICAL BARS	8 - 20 mmØ VERTICAL BARS
LATERAL TIES	WITH 16mmØ LATERAL TIES 2 @ 50mm o.c., 10 @ 100mm o.c., REST @ 200mm o.c. (5 ties per set)	WITH 12mmØ LATERAL TIES 2 @ 50mm o.c., 10 @ 100mm o.c., REST @ 200mm o.c. (3 ties per set)	WITH 12mmØ LATERAL TIES 2 @ 50mm o.c., 10 @ 100mm o.c., REST @ 200mm o.c. (3 ties per set)
GROUND FLOOR TO FOOTING			
VERTICAL BARS	18 - 25 mmØ VERTICAL BARS	12 - 25 mmØ VERTICAL BARS	8 - 20 mmØ VERTICAL BARS
LATERAL TIES	WITH 16mmØ LATERAL TIES 2 @ 50mm o.c., 10 @ 100mm o.c., REST @ 200mm o.c. (5 ties per set)	WITH 12mmØ LATERAL TIES 2 @ 50mm o.c., 10 @ 100mm o.c., REST @ 200mm o.c. (3 ties per set)	WITH 12mmØ LATERAL TIES 2 @ 50mm o.c., 10 @ 100mm o.c., REST @ 200mm o.c. (3 ties per set)
COLUMN MARKED	C1	C2	C3



NOTES ON RC COLUMN

- UNLESS OTHERWISE INDICATED EMBEDDED IN THE GROUND SHALL BE 50mm LARGER THAN THE COLUMN AS PER PLAN AT THE GROUND FLOOR LEVEL;
- CONSTRUCTION JOINTS IN COLUMNS SHALL BE LOCATED AT THE TOP OF THE PEDESTAL (ground floor line) OR AT LEAST A DISTANCE ABOVE THE FLOOR EQUAL TO THE MAXIMUM DIMENSION OF THE COLUMN OR 1/6 STOREY FLOOR TO FLOOR HEIGHT;
- ALL TIES SHALL BE FASTENED TO COLUMN VERTICAL REBARS BY MEANS OF WIRES AT ALL INTERSECTION POINT OF TIES AND COLUMN REBARS;
- NOT MORE THAN ONE HALF OF THE TOTAL NUMBER OF REBARS SHALL BE SPLICED AT THE SAME LEVEL. THE LAP SPICE BE 130d AS THE DEVELOPMENT LENGTH AS PER STAGGERED A DISTANCE AT LEAST 40 BAR DIAMETER;
- COLUMN BAR SPICE LENGTH SHALL FOLLOW THOSE TABULATED FOR REINFORCEMENT DEVELOPMENT LENGTHS AS PER TABLE;
- CONFINEMENT TIES SHALL BE PROVIDED ON ALL AT BEAM-COLUMN INTERSECTIONS AS SHOWN INT THE COLUMN ELEVATION;

NOTES ON LATERAL TIES

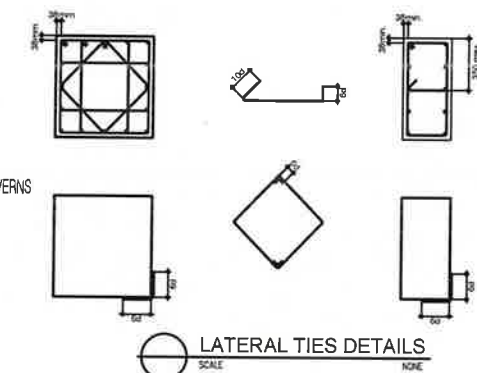
A. HOOKS

- 6d = 60 (10mmØ)
- 6d = 75 (12mmØ)
- 10d = 100 (16mmØ)
- 10d = 120 (12mmØ)

B. VERTICAL SPACING

WHICHEVER IS GREATER GOVERNS

- 16 x vertical bar diameter
- 48 x tie diameter
- least dimension of the column



		SLAB SECTION SPAN	

SCHEDULE OF REINFORCED CONCRETE SLAB



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AS SHOWN

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DRAFTERMAN II
PREPARED BY:
ROLANDO P. SOLIMAN
ARCHITECT II

REVIEWED BY:
CHRIS P. RAMIREZ
ENGINEER II
DATE:

SUBMITTED BY :
CELIA M. RAMOS
CHIEF, PLANNING AND DESIGN SECTION
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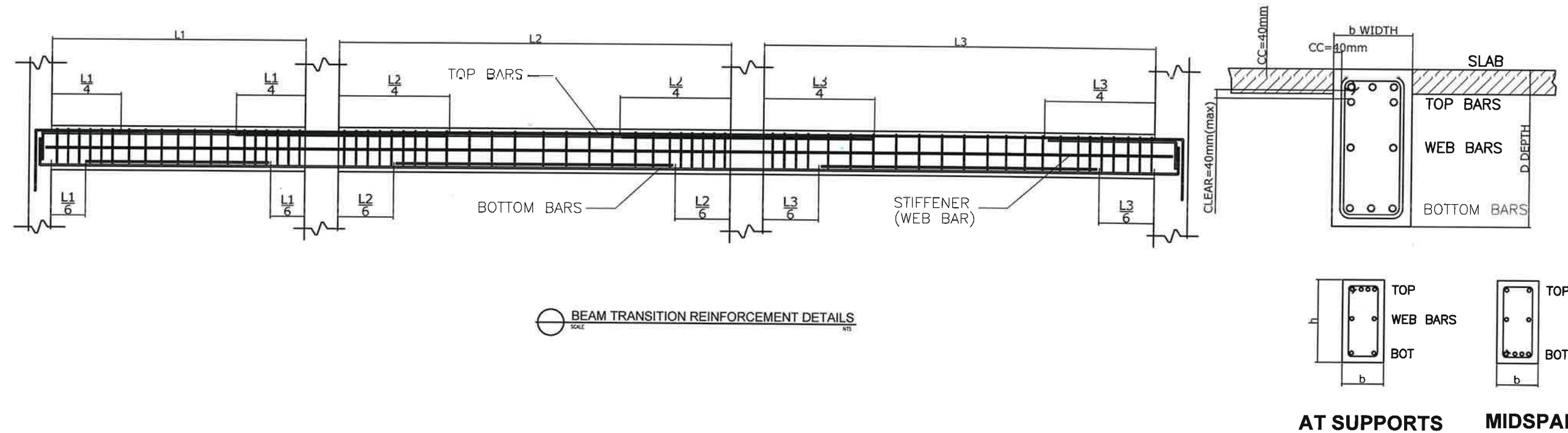
RECOMMENDED :
REGINA H. AGUSTIN
ASSISTANT DISTRICT ENGINEER
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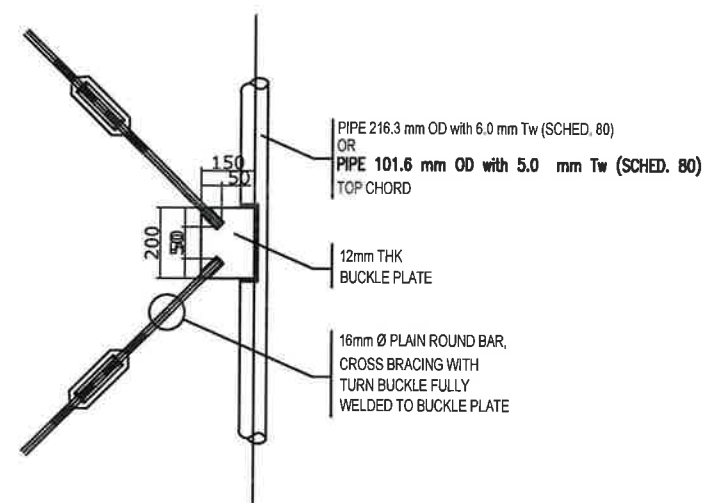
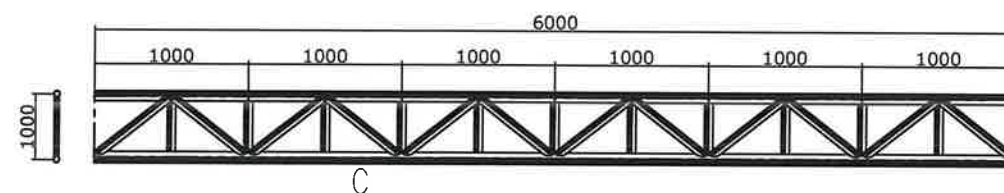
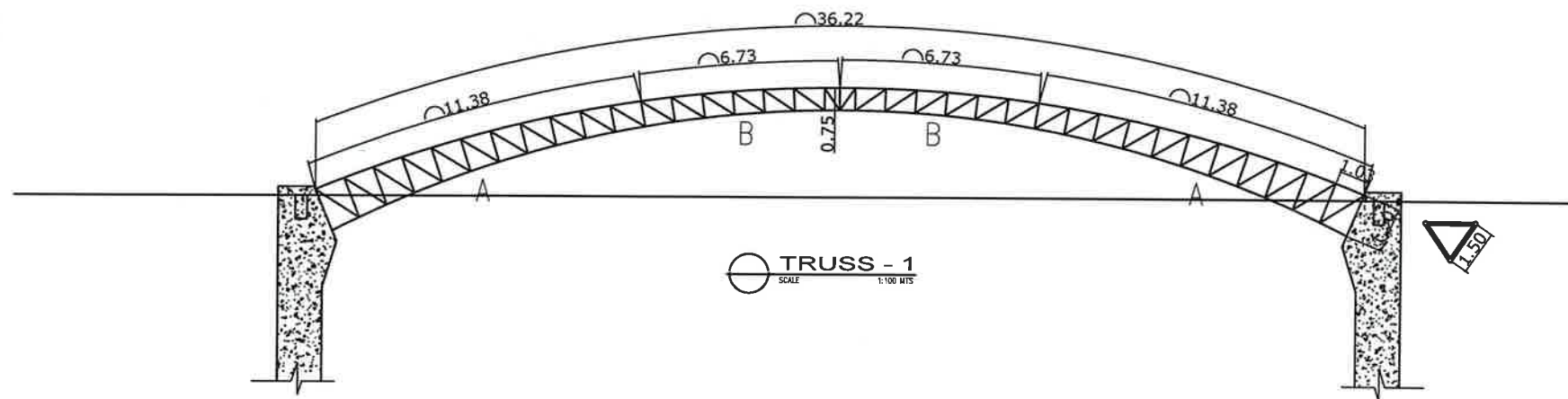
SET NO. SHT. NO.
S-10 16
65

SCHEDULE OF FOOTING TIE BEAMS FRAMING											
MARK	SIZE		BAR DIA.	MAIN REINFORCEMENT				STIRRUPS			STIFFENERS
	b (mm)	h (mm)		AT SUPPORT		AT MIDSPAN		NO./SET	DIA.	S P A C I N G	WEB BARS
				TOP BAR	BOT. BAR	TOP BAR	BOT. BAR				
TB1	300	400	25mm ϕ	3	3	3	3	1	12mm ϕ	3@50,8@75,10@100,REST@150 TO CENTER	1 – 16mm ϕ
TB2	300	400	25mm ϕ	3	3	3	3	1	12mm ϕ	3@50,8@75,10@100,REST@150 TO CENTER	1 – 16mm ϕ

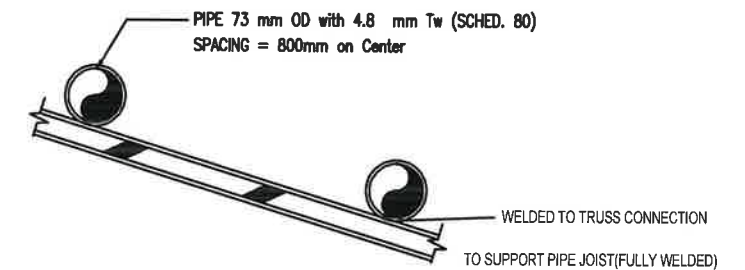
SCHEDULE OF MEZZANINE & LOWER ROOF BEAMS FRAMING											
MARK	SIZE		BAR DIA.	MAIN REINFORCEMENT				STIRRUPS			STIFFENERS
	b (mm)	h (mm)		AT SUPPORT		AT MIDSPAN		NO./SET	DIA.	S P A C I N G	WEB BARS
				TOP BAR	BOT. BAR	TOP BAR	BOT. BAR				
2G1	350	700	25mmØ	6	4	4	6	1	12mmØ	3Ø50,8Ø75,10Ø100,RESTØ150 TO CENTER	2 – 16mmØ
2G2	350	700	25mmØ	6	3	3	6	1	12mmØ	3Ø50,8Ø75,10Ø100,RESTØ150 TO CENTER	2 – 16mmØ
2G3	300	600	25mmØ	5	3	3	5	1	12mmØ	3Ø50,8Ø75,10Ø100,RESTØ150 TO CENTER	2 – 16mmØ
2G4	300	600	25mmØ	5	3	3	5	1	12mmØ	3Ø50,8Ø75,10Ø100,RESTØ150 TO CENTER	2 – 16mmØ
2G5	300	600	20mmØ	6	3	3	5	1	12mmØ	3Ø50,8Ø75,10Ø100,RESTØ150 TO CENTER	2 – 16mmØ
2G6	300	600	20mmØ	5	3	3	5	1	12mmØ	3Ø50,8Ø75,10Ø100,RESTØ150 TO CENTER	2 – 16mmØ
2G7	200	400	20mmØ	3	2	2	3	1	12mmØ	3Ø50,8Ø75,10Ø100,RESTØ150 TO CENTER	2 – 16mmØ
2CG1	300	600	20mmØ	6	3	6	3	1	12mmØ	3Ø50,8Ø75,10Ø100,RESTØ150 TO CENTER	2 – 16mmØ
2CG2	200	400	20mmØ	5	3	5	3	1	12mmØ	3Ø50,8Ø75,10Ø100,RESTØ150 TO CENTER	2 – 16mmØ
RB	400	800	28mmØ	6	4	4	6	1	12mmØ	3Ø50,8Ø75,10Ø100,RESTØ150 TO CENTER	4 – 20mmØ
WG1	250	500	16mmØ	3	3	3	3	1	10mmØ	3Ø50,8Ø75,10Ø100,RESTØ150 TO CENTER	2 – 12mmØ
WG2	250	500	16mmØ	3	3	3	3	1	10mmØ	3Ø50,8Ø75,10Ø100,RESTØ150 TO CENTER	2 – 12mmØ



DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BATAAN FIRST DISTRICT ENGINEERING OFFICE REGIONAL OFFICE III ROMAN EXPRESSWAY MULAWIN, ORANI, BATAAN	PROJECT NAME AND LOCATION :	SHEET CONTENT :	DRAFTED BY :	REVIEWED BY :	SUBMITTED BY :	RECOMMENDED :	APPROVED :	SET NO.	SHT. NO.
	BASIC INFRASTRUCTURE PROGRAM - MULTI - PURPOSE BUILDINGS/FACILITIES TO SUPPORT SOCIAL SERVICE - CONSTRUCTION OF MULTI-PURPOSE BUILDING (GYMNASIUM), SAMAL, BATAAN	AS SHOWN	DRAFTSMAN II REYNALDO B. ANTONIO PREPARED BY: ROLANDO P. SOLIMAN ARCHITECT II	ENGINEER II CHRIS P. RAMIREZ DATE:	CHIEF, PLANNING AND DESIGN SECTION CELIA M. RAMOS DATE:	ASSISTANT DISTRICT ENGINEER REGINA H. AGUSTIN DATE:	OIC-DISTRICT ENGINEER JOHN PAOLO S. TAN DATE:	S-11 17 65	



CONNECTION DETAIL OF CROSS BRACING



PURLINS CONNECTION DETAILS

SCHEDULE OF TRUSS MEMBER			
TRUSS FRAME	MEMBER MARK	MATERIALS	
	A	TOP & BOTTOM MEMBERS	PIPE 165.2 mm OD with 6.0 mm Tw (SCHED. 80)
		WEB MEMBERS	PIPE 101.6 mm OD with 5.0 mm Tw (SCHED. 80)
	B	TOP & BOTTOM MEMBERS	PIPE 101.6 mm OD with 5.0 mm Tw (SCHED. 80)
		WEB MEMBERS	PIPE 73.0 mm OD with 5.0 mm Tw (SCHED. 40)
	C	TOP & BOTTOM MEMBERS	PIPE 73.0 mm OD with 5.0 mm Tw (SCHED. 40)
		WEB MEMBERS	PIPE 60.5 mm OD with 5.0 mm Tw (SCHED. 40)
CONNECTIONS: FULLY WELDED WITH D = larger THICKNESS OF THE PLATES			

MATERIALS	
BUCKLE PLATE	12 mm THK MS PLATE
SAGROD	36 Ø mm PLAIN ROUND BAR
CROSS BRACING	36 Ø mm PLAIN ROUND BAR WITH TURNBUCKLE
ROOF JOIST	PIPE 65 mm OD with 4.8 mm Tw (SCHED. 80) SPACING = 800mm on Center

NOTES:

1. PIPES TO BE USED SHOULD BE OF STANDARD SIZE AND WEIGHT.
2. CONNECTIONS SHOULD BE FULL-WELD AND WELDED BY COMPETENT WELDER.
3. WELDING RODS TO BE USED SHOULD BE OF HIGH QUALITY.
4. MEASUREMENTS INDICATED HERE MAY VARY IN ACTUAL CONSTRUCTION.



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DRAFTSMAN II
PREPARED BY:
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ARCHITECT II

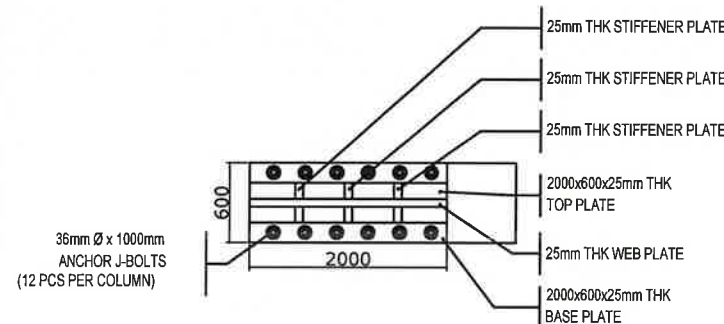
REVIEWED BY:
CHRIS P. RAMIREZ
ENGINEER II
DATE:

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CHIEF, PLANNING AND DESIGN SECTION
DATE:

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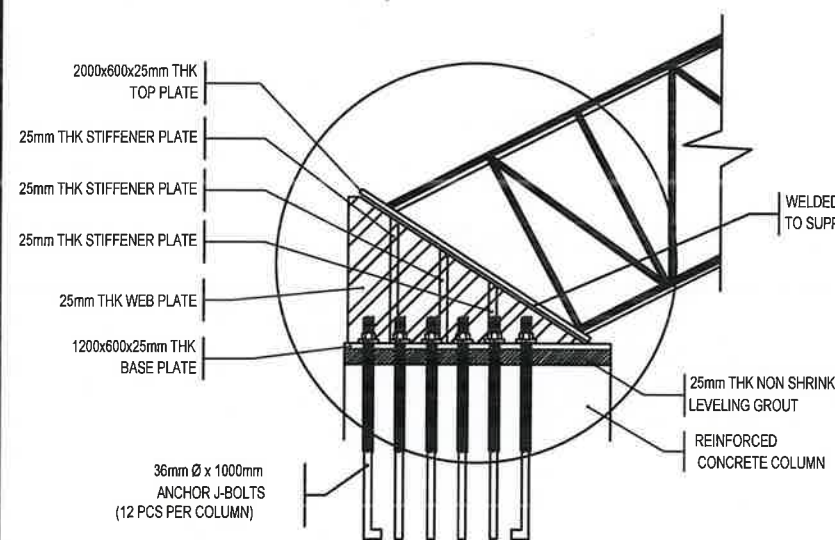
APPROVED :
JOHN PAOLO S. TAN
OIC-DISTRICT ENGINEER
DATE:

SET NO. SHT. NO.
S-12 18
65

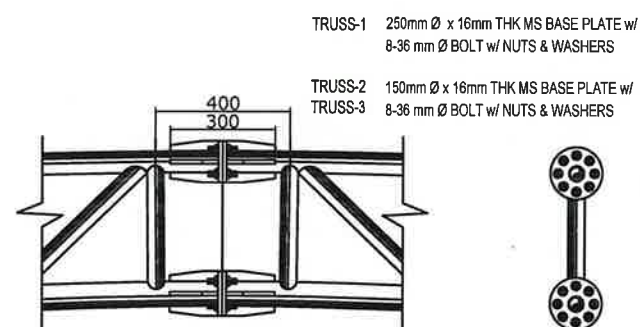


BASE PLATE (TOP) DETAIL

SCALE: NTS

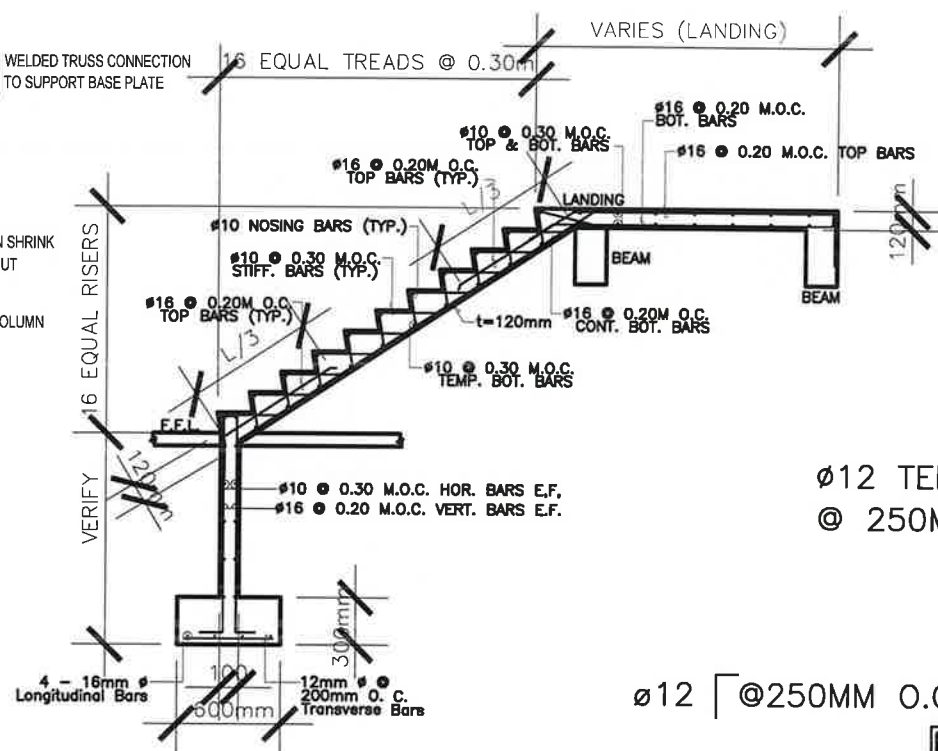
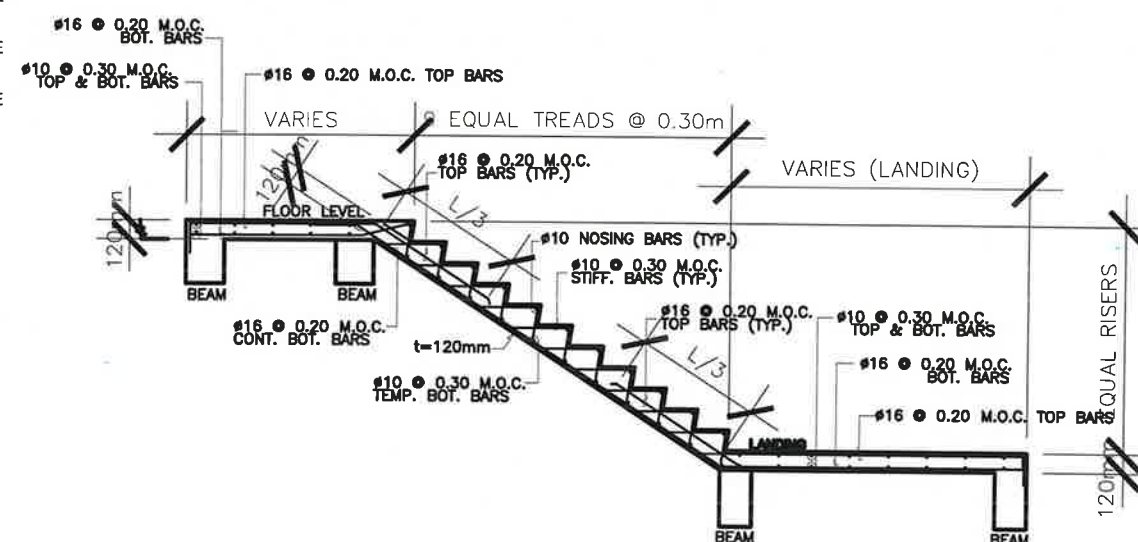


BASE PLATE (SIDE) DETAIL



TRUSS SPOT DETAIL - 1

SECTION



TYPICAL STAIR DETAILS

SCALE: NTS

Ø12 TEMP. BARS @ 250MM

Ø12 @ 250MM O.C.

2G6

2G6

SEE THE BEAM DETAILS

BLEACHERS DETAILS

SCALE: 1:25mts



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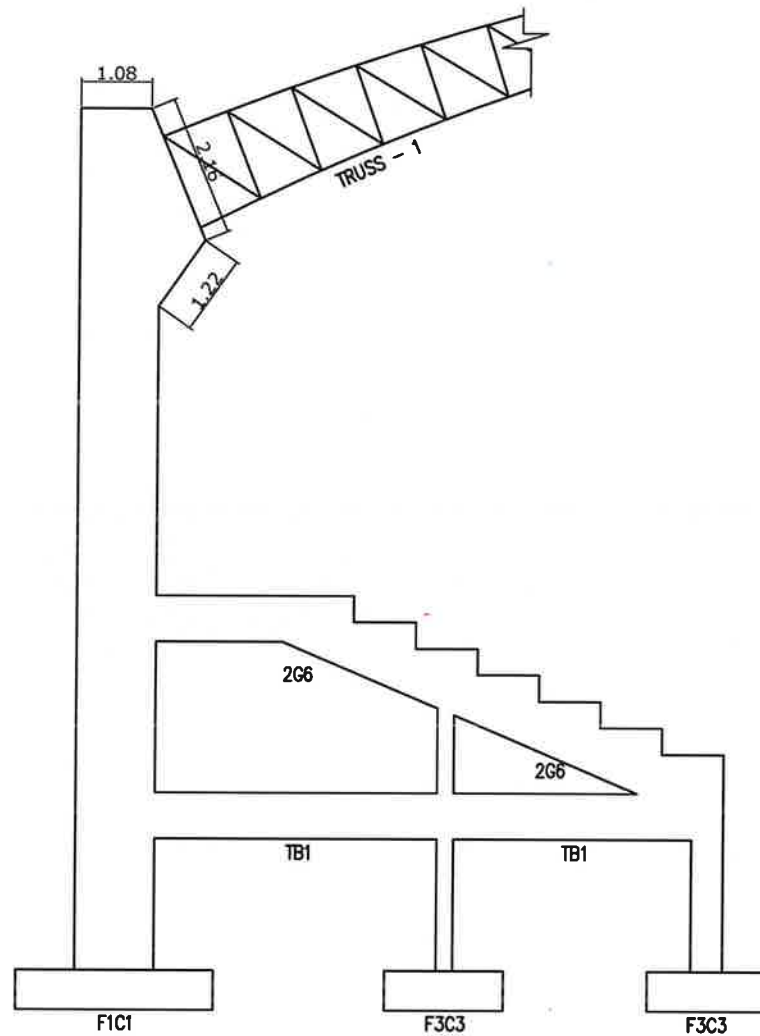
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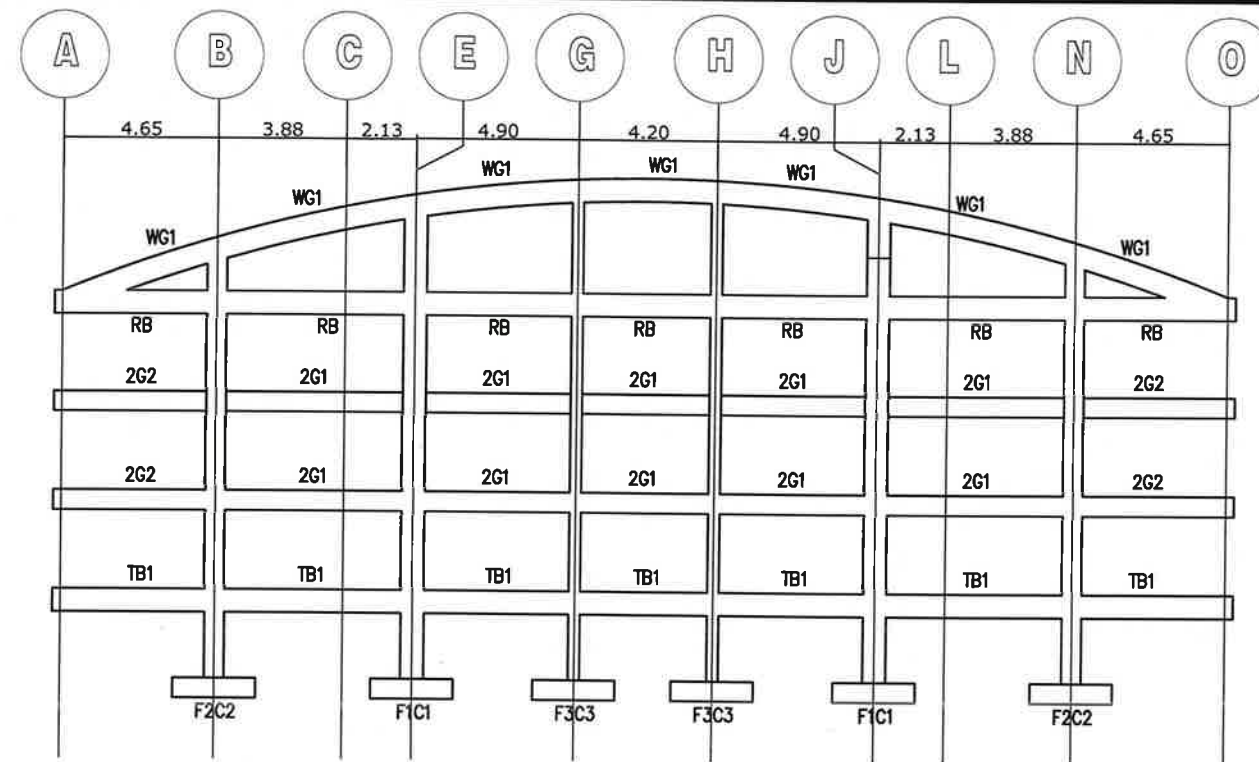
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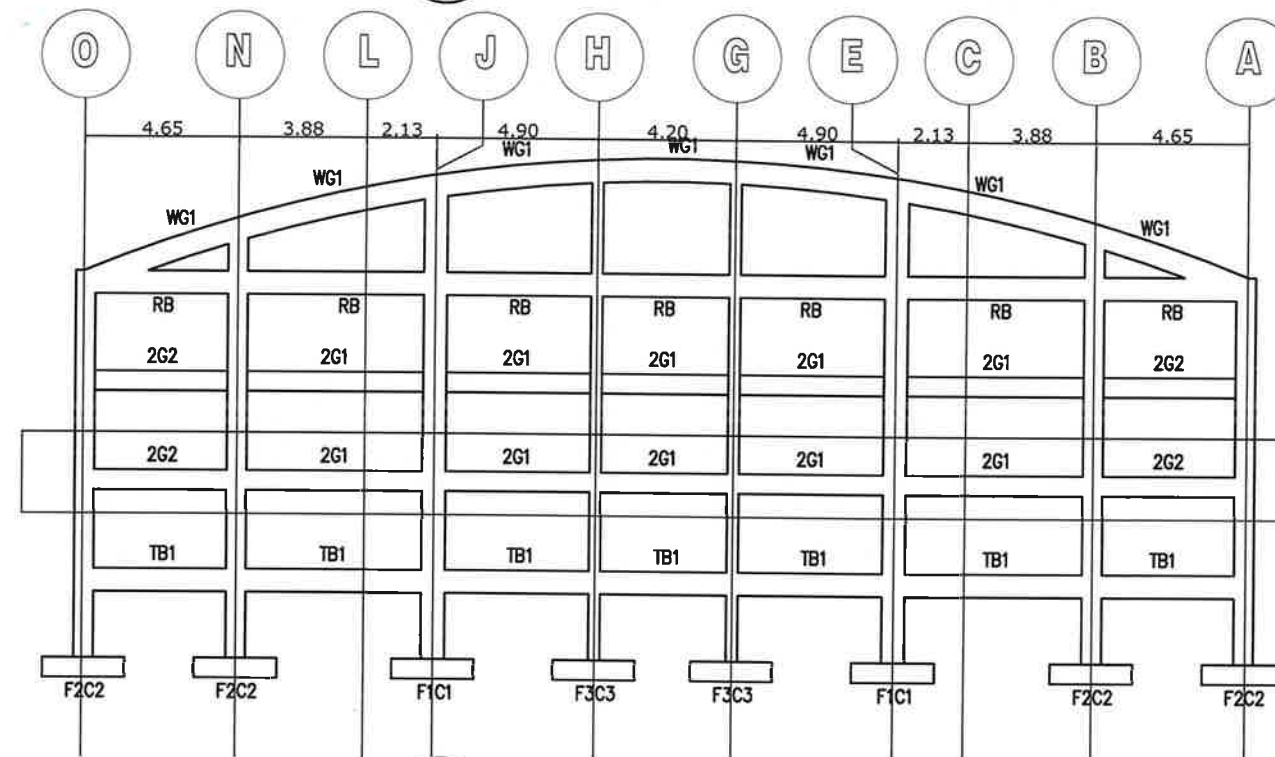
SET NO. SHT. NO.
S-13 19
65



SECTION
SCALE: 1:50mts



FRONT FRAMING ELEVATION
SCALE: 1:100mts



REAR FRAMING ELEVATION
SCALE: 1:100mts



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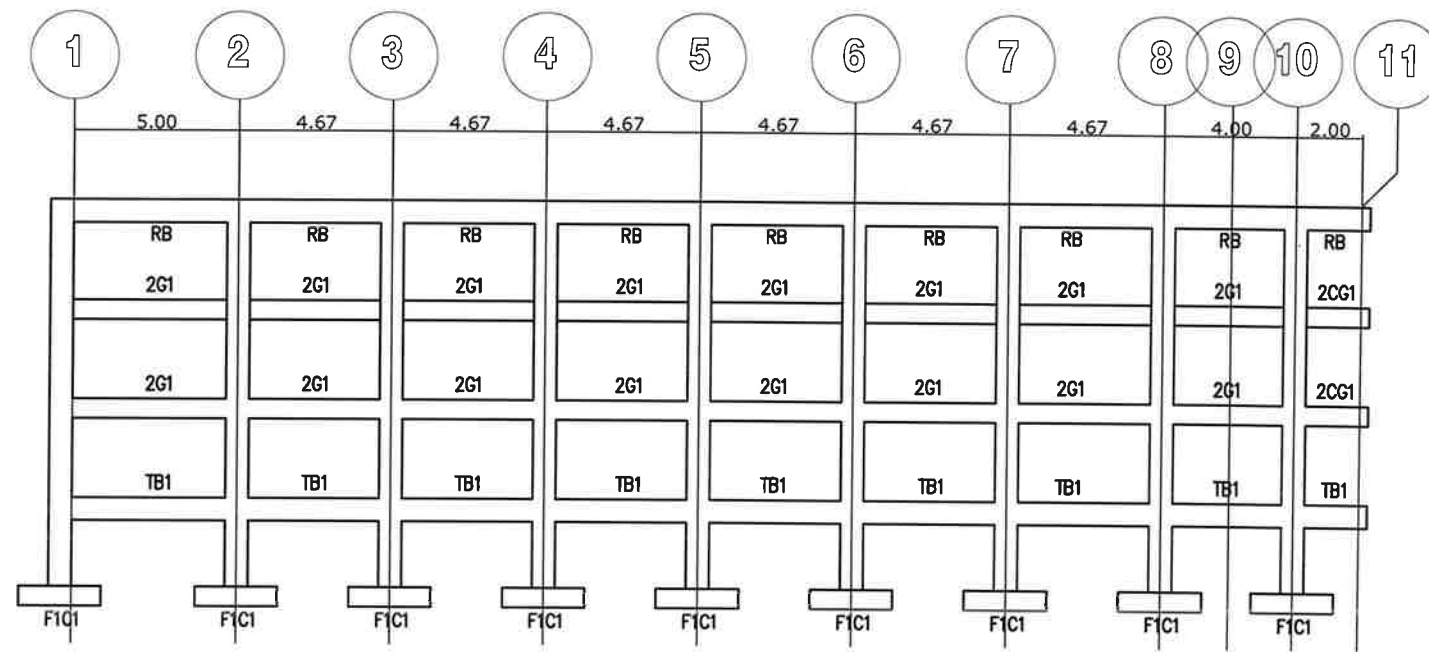
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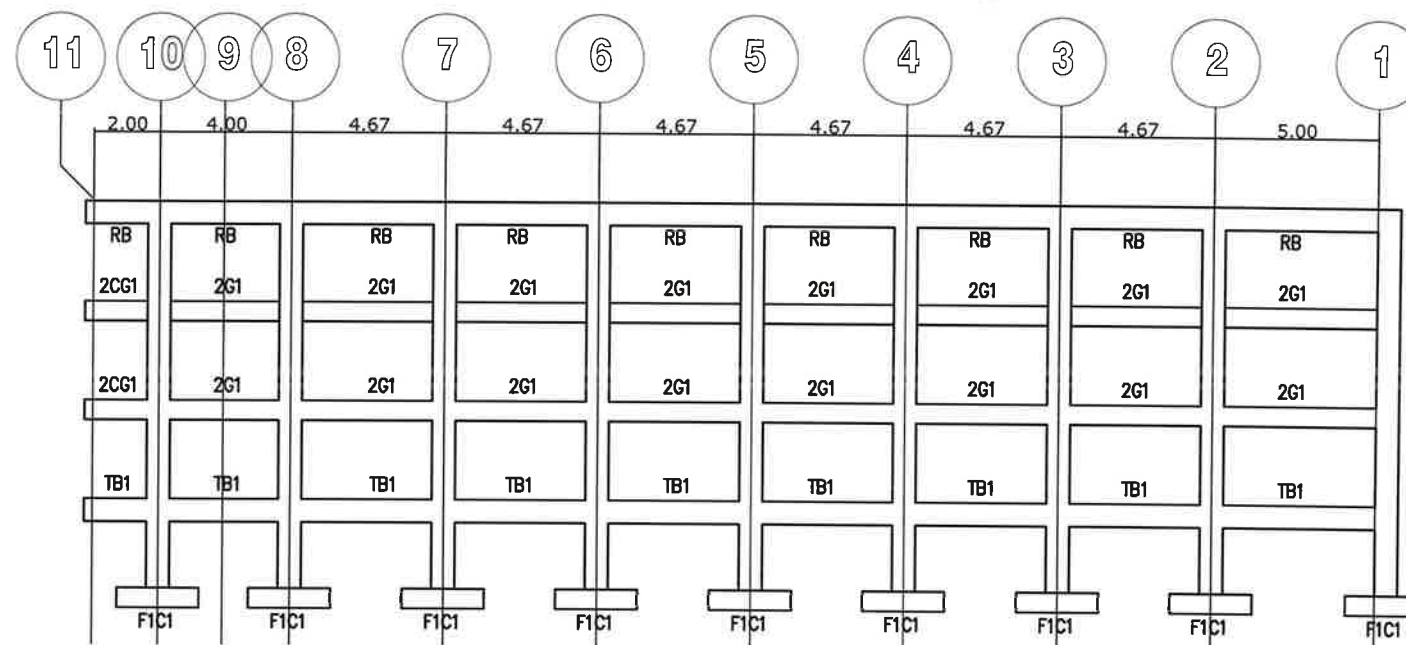
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OIC-DISTRICT ENGINEER
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S-14 20
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LEFT SIDE FRAMING ELEVATION
SCALE: 1:100mts



RIGHT SIDE FRAMING ELEVATION
SCALE: 1:100mts



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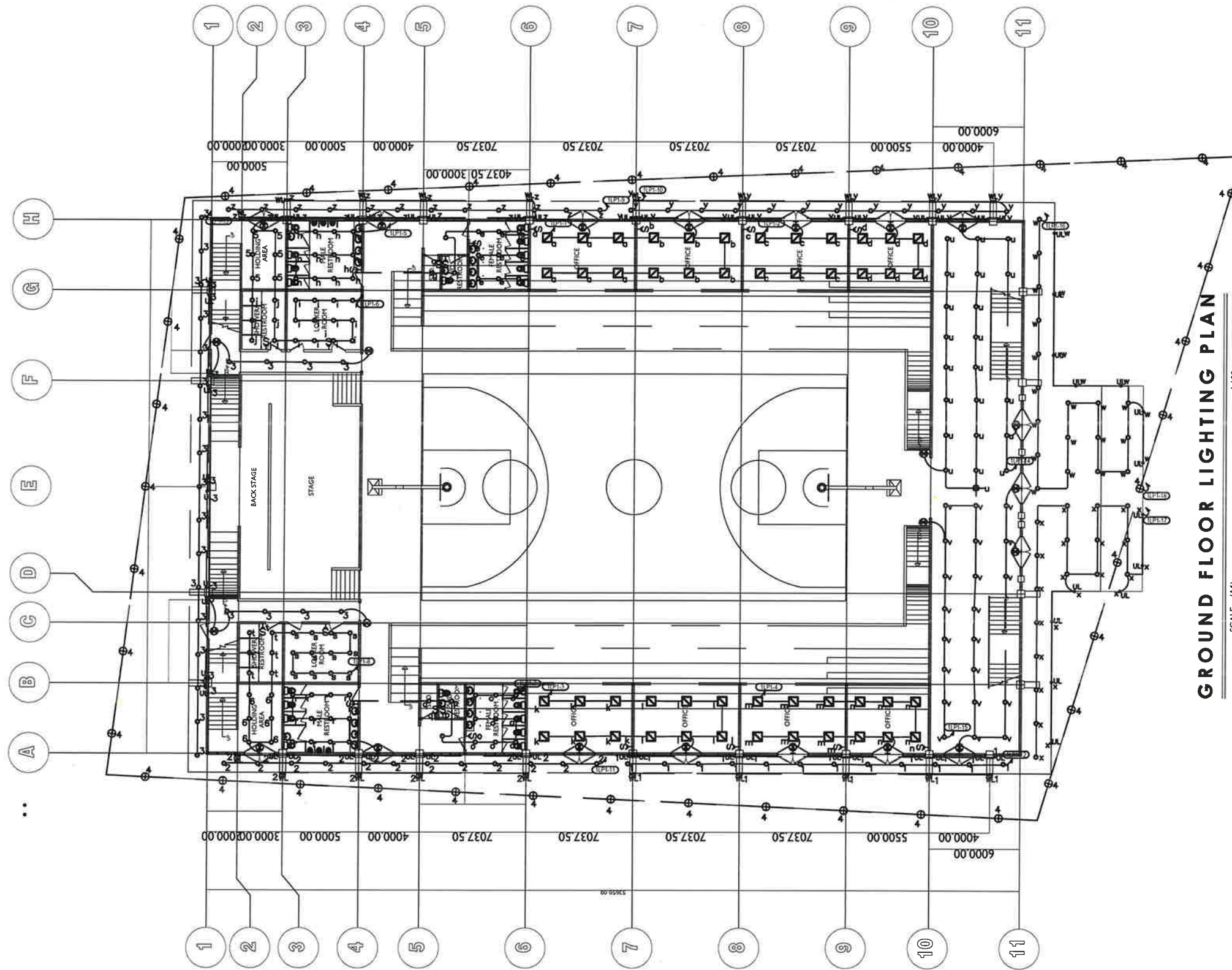
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SCALE (A1)
1:100ms



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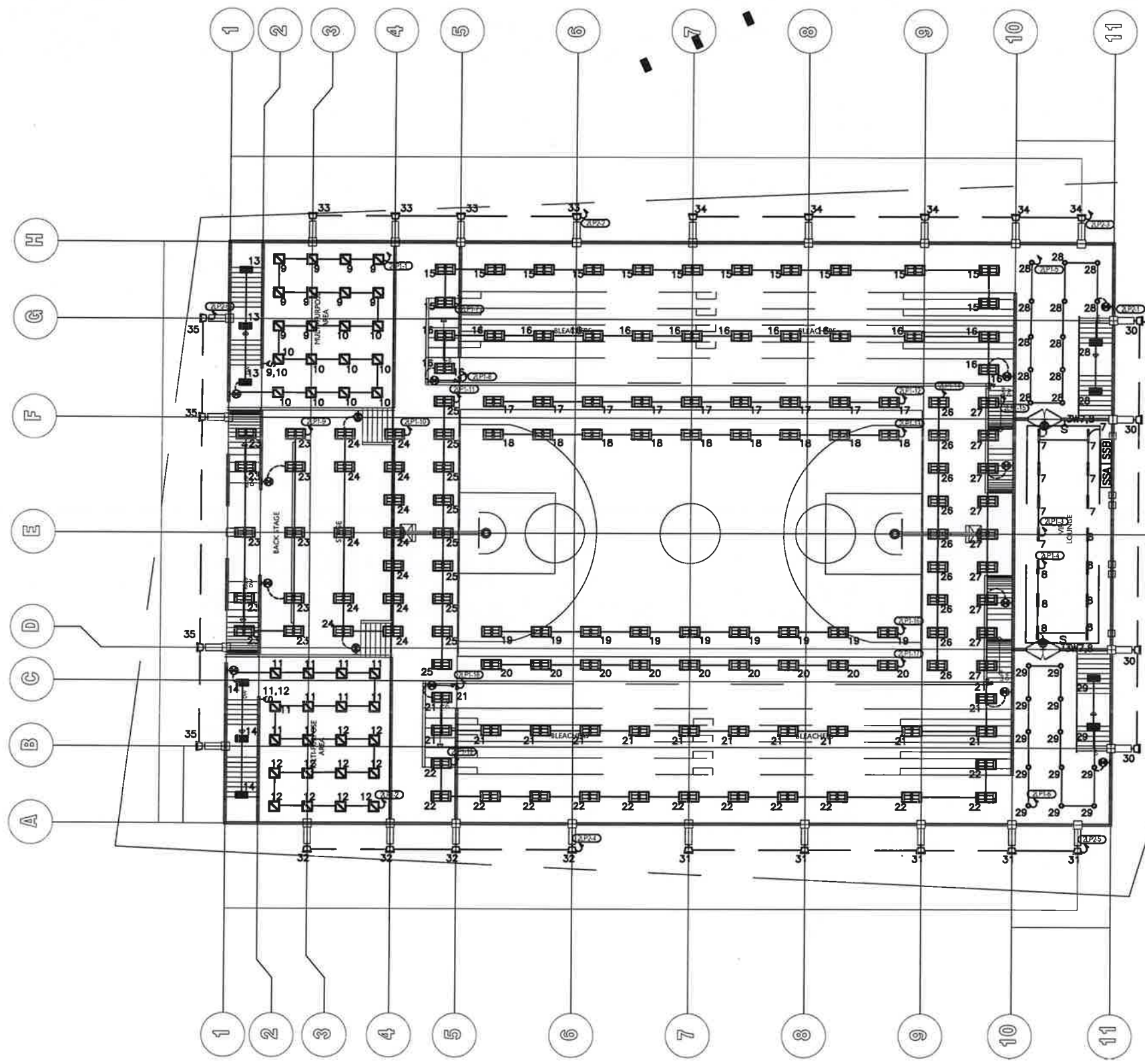
REVIEWED BY:
ROSETTE A. COLENTAVA
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OIC-DISTRICT ENGINEER
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E-1 22
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SWITCH STATION A (SSA)		
S _{4,5,6}	S _{7,8,9}	S _{10,11,12}
S _{13,14,15}	S _{16,17,18}	S _{19,20,21}
S _{22,23,24}	S _{25,26,27}	S _{28,29,30}
S _{31,32,33}	S _{34,35}	

SECOND FLOOR LIGHTING PLAN

SCALE (A1) 1:100ms



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ARCHITECT II

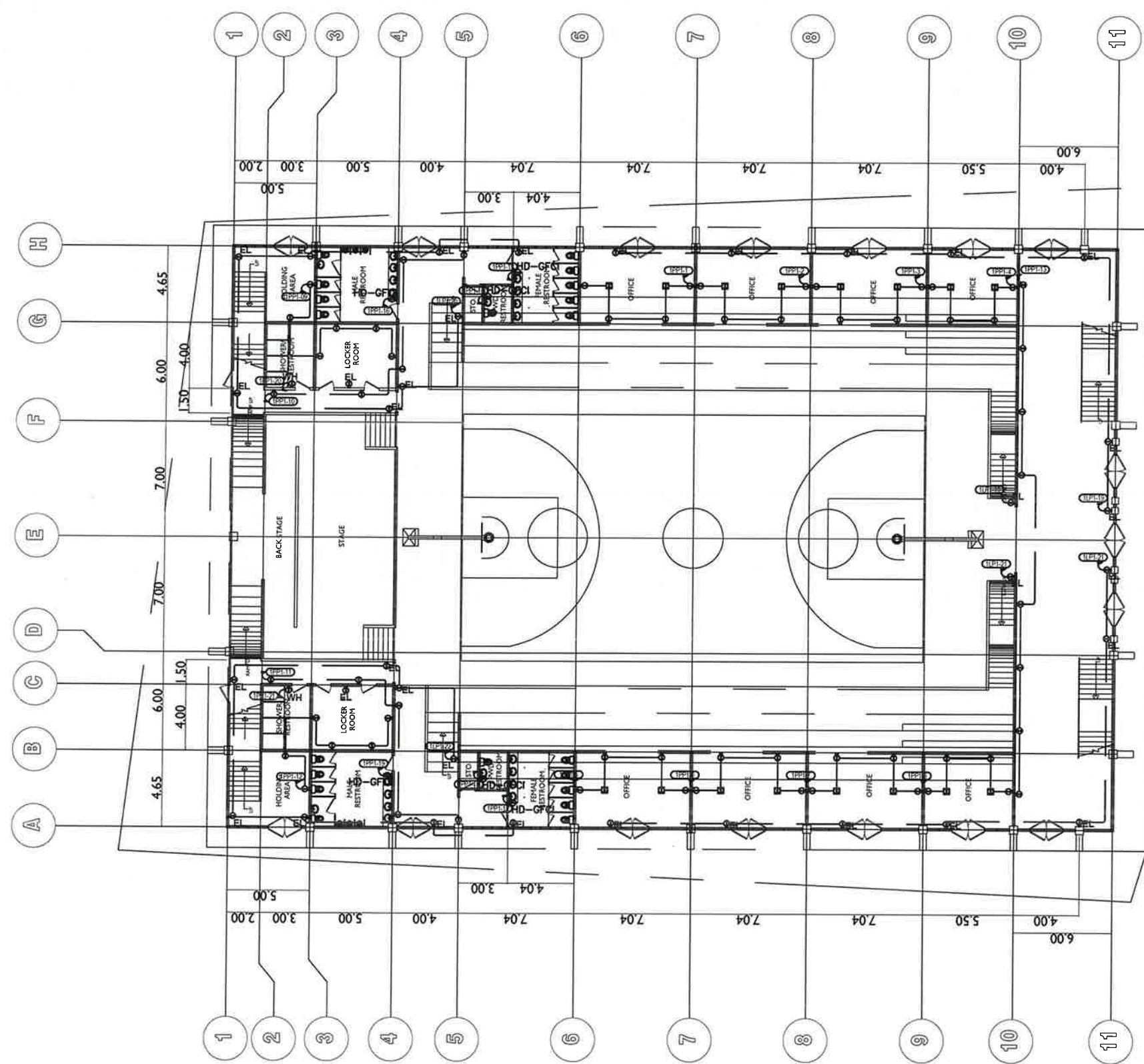
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RECOMMENDED :
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DATE:

APPROVED :
JOHN PAOLO S. TAN
OIC-DISTRICT ENGINEER
DATE:

SET NO.	SHT. NO.
E-2	23
	65



GROUND FLOOR POWER PLAN

SCALE (A1) 1:100mts



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DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BATAAN FIRST
DISTRICT ENGINEERING OFFICE
REGIONAL OFFICE III
ROMAN EXPRESSWAY MALLAWIN, ORAY, BATAAN

PROJECT NAME AND LOCATION :
**BASIC INFRASTRUCTURE PROGRAM -
MULTI - PURPOSE BUILDINGS/FACILITIES TO
SUPPORT SOCIAL SERVICE - CONSTRUCTION
OF MULTI-PURPOSE BUILDING (GYMNASIUM),
SAMAL, BATAAN**

SHEET CONTENT :
AS SHOWN

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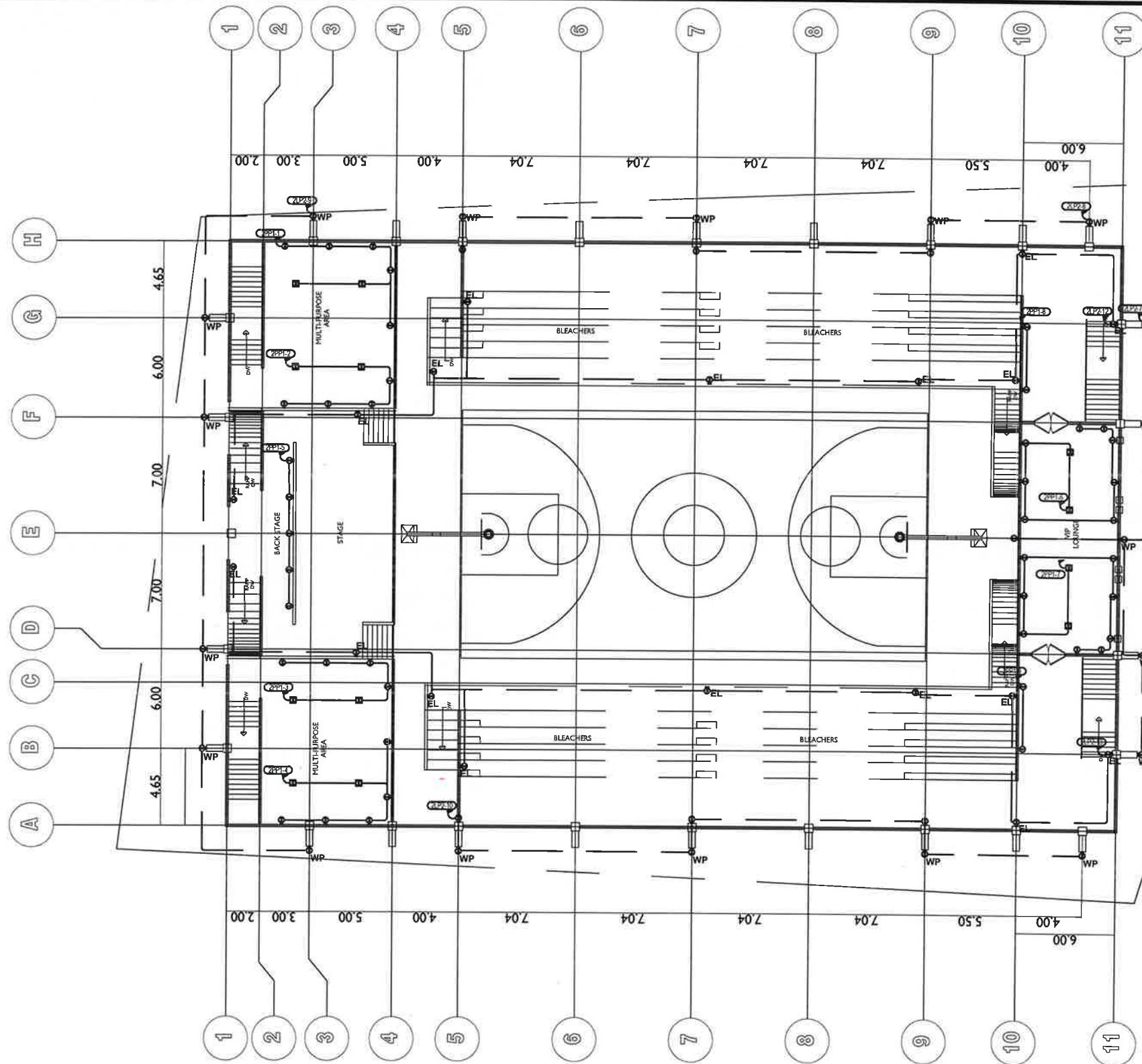
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SET NO.	SHT. NO.
E-3	24
	65



SECOND FLOOR POWER PLAN

SCALE (A1)

1:100mts



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DISTRICT ENGINEERING OFFICE
REGIONAL OFFICE III
ROMAN EXPRESSWAY MULAWIN, ORANI, BATAAN

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OF MULTI-PURPOSE BUILDING (GYMNASIUM),
SAMAL, BATAAN

SHEET CONTENT :

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SET NO.	SHT. NO.
E-4	25
	65

1 Load Schedule E-14 SCALE NTS

2 Design Analysis E-14 SCALE NTS

LOAD SCHEDULE AND COMPUTATION														
Panel Board Name:				MDP1		Source: MMCA								
Supply Voltage:				400 V Line to Line, Three Phase, Four Wire System		Mounting Type: Wall Mounted								
Number of Circuit				Provide 19 Circuits & 1 Spare		Enclosure: NEMA Class 1								
Circuit Number	Item			Circuit Description	Power, Volt-Ampere	Demand			Three Phase	CB Rating			Home Run Description	
	CO	LO	Location			Single Phase Load Current, Ampere				AT	AF	P	Conductor Size and Type	Conduit Size
						Phase A - N	Phase B - N	Phase C - N						
1			EE Rm.	1LP1	20,399	29	30,404	28,996		50	200	3	4 - 8.0 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ IMC
2			EE Rm.	2LP1	25,284	35	38,261	36,765		50	200	3	4 - 8.0 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ IMC
3			EE Rm.	2LP2	22,660	0	25,284,000	0.000		50	200	3	4 - 8.0 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ IMC
4			EE Rm.	1PP1	41,800	61,739	59,48	60,522		125	200	3	4 - 38.0 mm2 THHN + 1 - 14.0 mm2 THHN	41 mmφ IMC
5			EE Rm.	2PP1	15,660	21,130	22,696	24,26		50	200	3	4 - 8.0 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ IMC
6			EE Rm.	PACU	20,930	44,900	34,000	17,000		50	200	3	4 - 8.0 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ IMC
7			EE Rm.	1PF1	206,954	305,500	257,600	336,70		450	500	3	4 - 325.0 mm2 THHN + 1 - 38.0 mm2 THHN	103 mmφ IMC
8			EE Rm.	2PF1	38,985	58,800	46,900	63,800		80	200	3	4 - 22.0 mm2 THHN + 1 - 8.0 mm2 THHN	35 mmφ IMC
9			EE Rm.	PPAU	45,425	83.70	56,900	56,900		100	200	3	4 - 30.0 mm2 THHN + 1 - 8.0 mm2 THHN	35 mmφ IMC
10			EE Rm.	PAH1	1,065,665				1,538.20	2000	3000	3	4X(4 - 400.0 mm2 THHN + 1 - 30.0 mm2 THHN)	4X(129 mmφ IMC)
11			EE Rm.	PAH2	1,065,665				1,538.20	2000	3000	3	4X(4 - 400.0 mm2 THHN + 1 - 30.0 mm2 THHN)	4X(129 mmφ IMC)
12			EE Rm.	PFAN	240,769	9,391	10,739	9,783	337.60	500	700	3	4 - 400.0 mm2 THHN + 1 - 38.0 mm2 THHN	129 mmφ IMC
13			EE Rm.	PPBP	22,862				33.00	50	200	3	4 - 8.0 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ IMC
14			EE Rm.	PPFP	23,971				34.60	80	200	3	4 - 22.0 mm2 FR + 1 - 8.0 mm2 FR	35mmφ IMC
15			EE Rm.	PAUX	37,200	55,2173913	52,174	52,174		100	200	3	4 - 22.0 mm2 THHN + 1 - 8.0 mm2 THHN	35mmφ IMC
16			EE Rm.	Spare						100	200	3		
Total	0				2,894,229	704.57	25893.15	686.90	3481.60					
Total Maximum Non Coincident Demand, Volt Ampere							2,894,229							
Total Maximum Non Coincident Demand, Ampere							19,233.92							
Total Line Current with the application of Demand Factor, Ampere							4193.71							
Size and type of Feeder Conductor							10K(4 - 400.0 mm2 THHN + 1 - 30.0 mm2 THHN grounding in 129 mmφ IMC)							
Size and Rating of Protective Device							5000 Ampere, 6000 AF, 400 V, 3 pole, CB							

Design Analysis for MDP					
Item	Load Circuit Description	Non-Coincident Load, Watts	Coincident Load, Watts	Demand Factor	Reference Article in PEC 2017
1	Load	2,894,229	2,894,229	100.00	Section 2.20.3.3
Sub Total		2,894,229	2,894,229		
Total		2,894,229.48	2,894,229.48		

Total Load of MDP	Non-Coincident Load, Volt-Ampere	Coincident Load, Volt-Ampere
	2,894,229.48	2,894,229.48
Total Load of MDP	Non-Coincident Load, Ampere	Coincident Load, Ampere
	4,177.58	4,193.71

LOAD SCHEDULE AND COMPUTATION														
Panel Board Name:		1LP1 (Ground Floor)				Source: MDP								
Supply Voltage:		400 V Line to Line, Three Phase, Four Wire System				Mounting Type: Wall Mounted								
Number of Circuit		Provide 24 Circuits & 2 Spares				Enclosure: NEMA Class 1								
Circuit Number	Item			Circuit Description	Power, Volt-Ampere	Demand			Three Phase	CB Rating			Home Run Description	
	CO	LO	Location			Single Phase Load Current, Ampere				AT	AF	P	Conductor Size and Type	Conduit Size
						Phase A - N	Phase B - N	Phase C - N						
1		14	Office	Lighting Circuit 1	680	2.96				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
2		14	Office	Lighting Circuit 2	680	2.96				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
3		14	Office	Lighting Circuit 3	680		2.96			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
4		14	Office	Lighting Circuit 4	680		2.96			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
5		25	CR	Lighting Circuit 5	610			2.65		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
6		25	Locker	Lighting Circuit 6	610			2.65		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
7		25	CR	Lighting Circuit 7	610	2.65				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
8		25	Locker	Lighting Circuit 8	610		2.65			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
9		25	Exterior Side	Lighting Circuit 9	497		2.16			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
10		27	Exterior Side	Lighting Circuit 10	529		2.30			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
11		25	Exterior Side	Lighting Circuit 11	497			2.16		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
12		27	Exterior Side	Lighting Circuit 12	529			2.30		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
13		39	Back Extellor	Lighting Circuit 13	1,217	5.29				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
14		25	lobby	Lighting Circuit 14	670	2.91				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
15		24	lobby	Lighting Circuit 15	555		2.41			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
16		25	Front	Lighting Circuit 16	562		2.44			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
17		25	Front	Lighting Circuit 17	562			2.44		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
18		41	Exterior	Perimeter Lights (Bollard)	851			3.74		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
19	8		Ground Floor	Emergency Lights 1	1,440	6.26				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
20	8		Ground Floor	Emergency Lights 2	1,440	6.26				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
21	8		Ground Floor	Emergency Lights 3	1,440		6.26			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
22	8		Ground Floor	Emergency Lights 4	1,440		6.26			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
23		1	Ground Floor	Provision for Spotlight	1,000			4.35		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
24		4	Ground Floor	Provision for Signage	2,000			8.70		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
25				Spare						20	50	1		
26				Spare						20	50	1		
Total	32	444			20,399	29	30	29						
Total Maximum Non Coincident Demand, Volt Ampere						20,399								
Total Maximum Non Coincident Demand, Ampere						151.20								
Total Line Current with the application of Demand Factor, Ampere						29.44								
Size and type of Feeder Conductor						4 - 8.0 mm2 THHN + 1 - 5.5 mm2 THHN grounding in 21 mmφ IMC								
Size and Rating of Protective Device						50 Ampere, 70 AF, 400 V, 3 pole, CB								

Design Analysis for 1LP1					
Item	Load Circuit Description	Non-Coincident Load, Watts	Coincident Load, Watts	Demand Factor	Reference Article in PEC 2017
1	General Lighting and Convenience Receptacle Load	20,399	20,399	100.00	Section 2.20.3.3
Sub Total		20,399.00	20,399.00		
Total		20,399.00	20,399.00		

Total Load of MDP	Non-Coincident Load, Volt-Ampere	Coincident Load, Volt-Ampere
	20,399.00	20,399.00
Total Load of MDP	Non-Coincident Load, Ampere	Coincident Load, Ampere
	29.44	29.44



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BATAAN FIRST
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REGIONAL OFFICE III
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PROJECT NAME AND LOCATION :
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MULTI - PURPOSE BUILDINGS/FACILITIES TO
SUPPORT SOCIAL SERVICE - CONSTRUCTION
OF MULTI-PURPOSE BUILDING (GYMNASIUM),
SAMAL, BATAAN

SHEET CONTENT :
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DATE:

SET NO. SHT. NO.
E-5 26
65

1 Load Schedule

E-15 SCALE NTS

LOAD SCHEDULE AND COMPUTATION														
Panel Board Name:		2LP1				Source: MDP								
Supply Voltage:		400V Line to Line, Three Phase, Four Wire System				Mounting Type: Wall Mounted								
Number of Circuit		Provide 21 Circuits & 3 Spares				Enclosure: NEMA Class 1								
Circuit Number	Item			Circuit Description	Power, Volt-Ampere	Demand			Three Phase	CB Rating			Home Run Description	
	CO	LO	Location			Phase A - N	Phase B - N	Phase C - N		AT	AF	P	Conductor Size and Type	Conduit Size
1		24	Multri Purpose Area 1	Lighting Circuit 1	650	2.83				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
2		24	Multri Purpose Area 2	Lighting Graiit 2	650			2.83		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
3		9	VIP Lounge	Lighting Circuit 3	1,250		5.43			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
4		8	VIP Lounge	Lighting Circuit 4	710		3.09			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
5		15	2F Entrance	Lighting Circuit 5	370			1.61		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
6		15	2F Entrance	Lighting Circuit 6	370			1.61		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
7		13	Highbay at Basketball Court	Lighting Circuit 7	1,716	7.46				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
8		17	Highbay at Basketball Court	Lighting Circuit 8	1,786	7.77				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
9		12	Highbay at Basketball Court	Lighting Circuit 9	1,340		5.83			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
10		14	Highbay at Basketball Court	Lighting Circuit 10	1,604		6.97			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
11		9	Highbay at Basketball Court	Lighting Circuit 11	1,188			5.17		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
12		9	Highbay at Basketball Court	Lighting Circuit 12	1,188			5.17		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
13		9	Highbay at Basketball Court	Lighting Circuit 13	1,188	5.17				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
14		9	Highbay at Basketball Court	Lighting Circuit 14	1,188	5.17				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
15		11	Highbay at Basketball Court	Lighting Circuit 15	1,208		5.25			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
16		9	Highbay at Basketball Court	Lighting Circuit 16	1,188		5.17			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
17		9	Highbay at Basketball Court	Lighting Circuit 17	1,188			5.17		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
18		17	Highbay at Basketball Court	Lighting Circuit 18	1,786			7.77		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
19		13	Highbay at Basketball Court	Lighting Circuit 19	1,716			7.46		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
20			Stage	Provision for Stage Lights 1	1,500	6.52				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
21			Stage	Provision for Stage Lights 2	1,500		6.52			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
22				Spare						20	50	1		
23				Spare						20	50	1		
24				Spare						20	50	1		
Total	0	246			25,284	35	38	37						
Total Maximum Non Coincident Demand, Volt Ampere						25,284								
Total Maximum Non Coincident Demand, Ampere						63.47								
Total Line Current with the application of Demand Factor, Ampere						36.49								
Size and type of Feeder Conductor						4 - 8.0mm2 THHN + 1 - 5.5 mm2 THHN grounding in 21 mmø IMC								
Size and Rating of Protective Device						50 Ampere, 70 AF, 400 V, 3 pole, CB								

2 Design Analysis

E-15 SCALE NTS

Design Analysis for 2LP1					
Item	Load Circuit Description	Non-Coincident Load, Watts	Coincident Load, Watts	Demand Factor	Reference Article in PEC 2017
1	General Lighting and Convenience Receptacle Load	25,284	25,284	100.00	Section 2.20.3.3
Sub Total		25,284.00	25,284.00		
Total		25,284.00	25,284.00		

Total Load of MDP	Non-Coincident Load, Volt-Ampere	Coincident Load, Volt-Ampere
	25,284.00	25,284.00
Total Load of MDP	Non-Coincident Load, Ampere	Coincident Load, Ampere
	36.50	36.49

LOAD SCHEDULE AND COMPUTATION														
Panel Board Name:		2LP2				Source: MDP								
Supply Voltage:		400 V Line to Line, Three Phase, Four Wire System				Mounting type: Wall Mounted								
Number of Circuit		Provide 13 Circuits & 3 Spares				Enclosure: NEMA Class 1								
Circuit Number	Item			Circuit Description	Power, Volt-Ampere	Demand			Three Phase	CB Rating			Home Run Description	
	CO	LO	Location			Single Phase Load Current, Ampere				AT	AF	P	Conductor Size and Type	Conduit Size
						Phase A - N	Phase B - N	Phase C - N						
1		4	Perimeter Floodlight	Lighting Circuit 1	680			2.96		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
2		4	Perimeter Floodlight	Lighting Circuit 2	680			2.96		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
3		5	Perimeter Floodlight	Lighting Circuit 3	850		3.70			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
4		4	Perimeter Floodlight	Lighting Circuit 4	680		2.96			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
5		5	Perimeter Floodlight	Lighting Circuit 5	850		3.70			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
6		4	Perimeter Floodlight	Lighting Circuit 6	680		2.96			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
7	6		Second Floor	Christmas Lights Outlet 1	3,000	13.04				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
8	7		Second Floor	Christmas Lights Outlet 2	3,000	13.04				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
9	6		Second Floor	Christmas Lights Outlet 3	3,000		13.04			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
10	7		Second Floor	Christmas Lights Outlet 4	3,000		13.04			20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
11			Second Floor	Provision for Christmas Lights	3,000			13.04		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
12	9		Second Floor	Emergency Lights 1	1,620			7.04		20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
13	9		Second Floor	Emergency Lights 2	1,620	7.04				20	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmø PVC
14				Spare						20	50	1		
15				Spare						20	50	1		
16				Spare						20	50	1		
Total	0	26			22,660	33	33	33						
Total Maximum Non Coincident Demand, Volt Ampere						22,660								
Total Maximum Non Coincident Demand, Ampere						56.88								
Total Line Current with the application of Demand Factor, Ampere						32.71								
Size and type of Feeder Conductor						4 - 8.0 mm2 THHN + 1 - 5.5 mm2 THHN grounding in 21 mmø IMC								
Size and Rating of Protective Device						50 Ampere, 70 AF, 400 V, 3 pole, CB								

Design Analysis for 2LP2					
Item	Load Circuit Description	Non-Coincident Load, Watts	Coincident Load, Watts	Demand Factor	Reference Article in PEC 2017
1	General Lighting and Convenience Receptacle Load	22,660	22,660	100.00	Section 2.20.3.3
Sub Total		22,660.00	22,660.00		
Total		22,660.00	22,660.00		

Total Load of MDP	Non-Coincident Load, Volt-Ampere	Coincident Load, Volt-Ampere
	22,660.00	22,660.00
Total Load of MDP	Non-Coincident Load, Ampere	Coincident Load, Ampere
	32.71	32.71



REPUBLIC OF THE PHILIPPINES
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ROMAN EXPRESSWAY MALABON, GRAMP, BATAAN

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SAMAL, BATAAN

SHEET CONTENT :
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CHIEF, PLANNING AND DESIGN SECTION
DATE:

RECOMMENDED :
REGINA H. AGUSTIN
ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED :
JOHN PAOLO S. TAN
OIC-DISTRICT ENGINEER
DATE:

SET NO. SHT. NO.
E-6 27
65

1 Load Schedule

E-16 SCALE NTS

					LOAD SCHEDULE AND COMPUTATION									
Panel Board Name:			IPP1		Source: MDP									
Supply Voltage:			400V Line to Line, Three Phase, Four Wire System		Mounting Type: Wall Mounted									
Number of Circuit			Provide 25 Circuits & 3 Spares		Enclosure: NEMA Class 1									
Circuit Number	Item			Circuit Description	Power, Volt-Ampere	Demand			Three Phase	CB Rating			Home Run Description	
	CO	LO	Location			Single Phase Load Current, Ampere				AT	AF	P	Conductor Size and Type	Conduit Size
						Phase A - N	Phase B - N	Phase C - N						
1	6		Office	Convenience Outlet 1	1,080	4.70				30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
2	6		Office	Convenience Outlet 2	1,080	4.70				30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
3	6		Office	Convenience Outlet 3	1,080		4.70			30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
4	6		Office	Convenience Outlet 4	1,080		4.70			30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
5	6		Office	Convenience Outlet 5	1,080			4.70		30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
6	6		Office	Convenience Outlet 6	1,080			4.70		30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
7	6		Office	Convenience Outlet 7	1,080	4.70				30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
8	6		Office	Convenience Outlet 8	1,080	4.70				30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
9	6		Locker Rm.	Convenience Outlet 9	1,080		4.70			30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
10	5		Ground Floor	Convenience Outlet 10	900			3.91		30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
11	6		Locker Rm.	Convenience Outlet 11	1,080			4.70		30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
12	5		Ground Floor	Convenience Outlet 12	900			3.91		30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
13	8		Lobby	Convenience Outlet 13	1,440	6.26				30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
14	1		Female Restroom	Hand Dryer 1	2,000	8.70				30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
15	1		PWD Restroom	Hand Dryer 2	2,000		8.70			30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
16	1		Male Restroom	Hand Dryer 3	2,000		8.70			30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
17	1		Female Restroom	Hand Dryer 4	2,000			8.70		30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
18	1		PWD Restroom	Hand Dryer 5	2,000			8.70		30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
19	1		Male Restroom	Hand Dryer 6	2,000			8.70		30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
20	1		Shower	Centralized Water Heater 1	5,000	21.74				30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
21	1		Shower	Centralized Water Heater 2	5,000		21.74			30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
22	8		Ground Floor	Provision for Convenience Outlet 1	1,440		6.26			30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
23	8		Ground Floor	Provision for Convenience Outlet 2	1,440			6.26		30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
24	8		Ground Floor	Provision for Convenience Outlet 3	1,440			6.26		30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
25	8		Ground Floor	Provision for Convenience Outlet 4	1,440	6.26				30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC
26				Spare						30	50	1		
27				Spare						30	50	1		
28				Spare						30	50	1		
Total	118				41,800	61.74	59.48	60.52						
Total Maximum Non Coincident Demand, Volt Ampere						41,800								
Total Maximum Non Coincident Demand, Ampere						104.92								
Total Line Current with the application of Demand Factor, Ampere						92.09								
Size and type of Feeder Conductor						4 - 38.0 mm2 THHN + 1 - 14.0 mm2 THHN grounding in 41 mmφ IMC								
Size and Rating of Protective Device						125 Ampere, 150 AF, 400 V, 3 pole, CB								

2 Design Analysis

E-16 SCALE NTS

Design Analysis for 1PP1				
Item	Load Circuit Description	Non-Coincident Load, Watts	Coincident Load, Watts	Demand Factor Applied, %
1	Small Appliances Load	41,800.00	41,800.00	100.00
Sub Total		41,800.00	41,800.00	
2	Hand Dryers	12,000.00	12,000.00	100.00
3	Centralized Water Heaters	10,000.00	10,000.00	100.00
Sub Total		22,000.00	22,000.00	
Total		63,800.00	63,800.00	

Total Load of MDP	Non-Coincident Load, Volt-Ampere	Coincident Load, Volt-Ampere
	63,800.00	63,800.00
Total Load of MDP	Non-Coincident Load, Ampere	Coincident Load, Ampere
	92.09	92.09

Panel Board Name:														ZPP1				Source: MDP			
Supply Voltage:														400 V Line to Line, Three Phase, Four Wire System				Mounting Type : Wall Mounted			
Number of Circuit														Provide 12 Circuits & 2 Spares				Enclosure: NEMA Class 1			
Circuit Number	Item			Circuit Description	Power, Volt-Ampere	Demand			Three Phase	CB Rating			Home Run Description								
	CO	LO	Location			Single Phase Load Current, Ampere				AT	AF	P	Conductor Size and Type	Conduit Size							
						Phase A - N	Phase B - N	Phase C - N													
1	7		Multi-Purpose Rm.	Convenience Outlet 1	1,260	5.48				30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC							
2	6		Multi-Purpose Rm.	Convenience Outlet 2	1,080	4.70				30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC							
3	7		Multi-Purpose Rm.	Convenience Outlet 3	1,260		5.48			30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC							
4	6		Multi-Purpose Rm.	Convenience Outlet 4	1,080		4.70			30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC							
5	5		Stage	Convenience Outlet 5	900			3.91		30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC							
6	10		VIP Lounge	Convenience Outlet 6	1,800			7.83		30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC							
7	10		VIP Lounge	Convenience Outlet 7	1,800	7.83				30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC							
8	4		VIP Entrance	Convenience Outlet 8	720	3.13				30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC							
9	8		Second Floor	Provision for Convenience Outlet 1	1,440		6.26			30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC							
10	8		Second Floor	Provision for Convenience Outlet 2	1,440		6.26			30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC							
11	8		Second Floor	Provision for Convenience Outlet 3	1,440		6.26			30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC							
12	8		Second Floor	Provision for Convenience Outlet 4	1,440		6.26			30	50	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	21 mmφ PVC							
13				Spare						30	50	1									
14				Spare						30	50	1									
Total	87				15,660	21.13	22.70	24.26													
Total Maximum Non Coincident Demand, Volt Ampere							15,660														
Total Maximum Non Coincident Demand, Ampere							39.31														
Total Line Current with the application of Demand Factor, Ampere							22.60														
Size and type of Feeder Conductor							4 - 8.0 mm2 THHN + 1 - 5.5 mm2 THHN grounding in 21 mmφ IMC														
Size and Rating of Protective Device							50 Ampere, 70 AF, 400 V, 3 pole, CB														

Design Analysis for 2PP1				
Item	Load Circuit Description	Non-Coincident Load, Watts	Coincident Load, Watts	Demand Factor Applied, %
1	Small Appliances Load	15,660.00	15,660.00	First 10,000 at 100% DF, Remainder over 10,000 at 50% DF
Sub Total		15,660.00	15,660.00	
Total		15,660.00	15,660.00	

Total Load of MDP	Non-Coincident Load, Volt-Ampere	Coincident Load, Volt-Ampere
	15,660.00	15,660.00
Total Load of MDP	Non-Coincident Load, Ampere	Coincident Load, Ampere
	22.60	22.60



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
BATAAN FIRST DISTRICT ENGINEERING OFFICE
REGIONAL OFFICE III
ROMAN EXPRESSWAY MULAWIN, ORANI, BATAAN

PROJECT NAME AND LOCATION :
BASIC INFRASTRUCTURE PROGRAM - MULTI - PURPOSE BUILDINGS/FACILITIES TO SUPPORT SOCIAL SERVICE - CONSTRUCTION OF MULTI-PURPOSE BUILDING (GYMNASIUM), SAMAL, BATAAN

SHEET CONTENT :
AS SHOWN

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DRAFTSMAN II
PREPARED BY:
ROLANDO P. SOLIMAN
ARCHITECT II

REVIEWED BY:
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DATE:

APPROVED BY:
JOHN PAOLO S. TAN
OIC-DISTRICT ENGINEER
DATE:

SET NO. SHT. NO.
E-7 28
65

LOAD SCHEDULE AND COMPUTATION														
Panel Board Name:		1PF1 (Ground Floor)				Source: MDP								
Supply Voltage:		400 V line to line, Three Phase, Four Wire System				Mounting Type: Wall Mounted								
Number of Circuit		Provide 23 Circuits & 3 Spare				Enclosure: NEMA Class 1								
Circuit Number	Item			Circuit Description	Power, Volt-Ampere	Demand			Three Phase	CB Rating			Home Run Description	
	CO	LO	Location			Single Phase Load Current, Ampere				AT	AF	P	Conductor Size and Type	Conduit Size
						Phase A - N	Phase B - N	Phase C - N						
1	1		Player's Lounge 1	FCU-1C 1TR (1.5HP)	2,300			10.00		30	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
2	1		Player's Lounge 2	FCU-1C 1TR (1.5HP)	2,300			10.00		30	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
3	1		Warm up 1	FCU-1C 1TR (1.5HP)	2,300		10.00			30	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
4	1		Warm up 2	FCU-1C 1TR (1.5HP)	2,300		10.00			30	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
5	1		Accounting	FCU-2C 1.5TR (2.5HP)	3,887			16.90		30	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
6	1		Administration Office	FCU-2C 1.5TR (2.5HP)	3,887			16.90		30	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
7	1		Administration Rm.	FCU-3C 3TR (5HP)	6,440			28.00		40	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
8	1		Administration Rm.	FCU-3C 3TR (5HP)	6,440			28.00		40	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
9	1		Vip Lounge/Waiting	FCU-3C 3TR (5HP)	6,440	28.00				40	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
10	1		Vip Lounge/Waiting	FCU-3C 3TR (5HP)	6,440	28.00				40	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
11	1		Conference	FCU-5C 3TR (4HP)	5,750	25.00				40	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
12	1		MPA: Player's 1	FCU-6C 4TR (8HP)	10,327		44.90			60	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
13	1		MPA: Player's 2	FCU-6C 4TR (8HP)	10,327		44.90			60	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
14	1		MPA: Player's 3	FCU-6C 4TR (8HP)	10,327	44.90				60	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
15	1		MPA: Player's 4	FCU-6C 4TR (8HP)	10,327	44.90				60	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
16	1		MPA: Player's 5	FCU-6C 4TR (8HP)	10,327		44.90			60	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
17	1		MPA: Player's 6	FCU-6C 4TR (8HP)	10,327		44.90			60	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
18	1		MBC: Player's 1	FCU-6C 4TR (8HP)	10,327			44.90		60	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
19	1		MBC: Player's 2	FCU-6C 4TR (8HP)	10,327	44.90				60	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
20	1		MBC: Player's 3	FCU-6C 4TR (8HP)	10,327	44.90				60	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
21	1		MBC: Player's 4	FCU-6C 4TR (8HP)	10,327		44.90			60	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
22	1		Ping Pong Court	FCU-6C 4TR (8HP)	10,327		44.90			60	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
23	1		Ping Pong Court	FCU-6C 4TR (8HP)	10,327	44.90				60	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
24	1		Ping Pong Court	FCU-6C 4TR (8HP)	10,327	44.90				60	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
25	1		Lobby/Hallway	FCU-7C 6.67TR (11HP)	13,340			58.00		70	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
26	1		Lobby/Hallway	FCU-7C 6.67TR (11HP)	13,340		58.00			70	100	1	2 - 14.0 mm2 THHN + 1 - 8.0 mm2 THHN	21 mmφ PVC
27	1		Lobby/Reception	FCU-8C 8.33TR (12HP)	14,260			62.00		80	100	1	2 - 22.0 mm2 THHN + 1 - 8.0 mm2 THHN	27 mmφ PVC
28	1		Lobby/Reception	FCU-8C 8.33TR (12HP)	14,260			62.00		80	100	1	2 - 22.0 mm2 THHN + 1 - 8.0 mm2 THHN	27 mmφ PVC
29	1		Ground Floor	Spare						30	100	1		
30			Ground Floor	Spare						30	100	1		
Total	29				237,935	350.40	347.40	336.70						
Total Maximum Non Coincident Demand, Volt Ampere							237,935							
Total Maximum Non Coincident Demand, Ampere							597.25							
Total Line Current with the application of Demand Factor, Ampere							348.24							
Size and type of Feeder Conductor							4 - 325.0 mm2 THHN + 1 - 38.0 mm2 THHN grounding in 103 mmφ IMC							
Size and Rating of Protective Device							450 Ampere, 400 AF, 400 V, 3 pole, CB							

Design Analysis for 1PF1					
Item	Load Circuit Description	Non-Coincident Load, Watts	Coincident Load, Watts	Demand Factor	Reference Article in PEC 2017
1	FCU-1C 1TR (1.5HP)	2300	2300	100.00	
2	FCU-1C 1TR (1.5HP)	2300	2300	100.00	
3	FCU-1C 1TR (1.5HP)	2300	2300	100.00	
4	FCU-1C 1TR (1.5HP)	2300	2300	100.00	
5	FCU-2C 1.5TR (2.5HP)	3887	3887	100.00	
6	FCU-2C 1.5TR (2.5HP)	3887	3887	100.00	
7	FCU-3C 3TR (5HP)	6440	6440	100.00	
8	FCU-3C 3TR (5HP)	6440	6440	100.00	
9	FCU-3C 3TR (5HP)	6440	6440	100.00	
10	FCU-3C 3TR (5HP)	6440	6440	100.00	
11	FCU-5C 3TR (4HP)	5750	5750	100.00	
12	FCU-6C 4TR (8HP)	10327	10327	100.00	
13	FCU-6C 4TR (8HP)	10327	10327	100.00	
14	FCU-6C 4TR (8HP)	10327	10327	100.00	
15	FCU-6C 4TR (8HP)	10327	10327	100.00	
16	FCU-6C 4TR (8HP)	10327	10327	100.00	
17	FCU-6C 4TR (8HP)	10327	10327	100.00	
18	FCU-6C 4TR (8HP)	10327	10327	100.00	
19	FCU-6C 4TR (8HP)	10327	10327	100.00	
20	FCU-6C 4TR (8HP)	10327	10327	100.00	
21	FCU-6C 4TR (8HP)	10327	10327	100.00	
22	FCU-6C 4TR (8HP)	10327	10327	100.00	
23	FCU-6C 4TR (8HP)	10327	10327	100.00	
24	FCU-6C 4TR (8HP)	10327	10327	100.00	
25	FCU-7C 6.67TR (11HP)	13340	13340	100.00	
26	FCU-7C 6.67TR (11HP)	13340	13340	100.00	
27	FCU-8C 8.33TR (12HP)	14260	14260	100.00	
28	FCU-8C 8.33TR (12HP)	14260	14260	100.00	
Sub Total		237,935	237,935		
Total		237,935.00	237,935.00		

Total Load of MDP		
Non-Coincident Load, Volt-Ampere	Coincident Load, Volt-Ampere	
237,935.00	237,935.00	
Total Load of MDP		
Non-Coincident Load, Ampere	Coincident Load, Ampere	
348.24	348.24	

LOAD SCHEDULE AND COMPUTATION														
Panel Board Name:		2PF1 (Mezzanine)					Source: MDP							
Supply Voltage:		400 V Line to Line, Three Phase, Four Wire System					Mounting Type: Wall Mounted							
Number of Circuit		Provide 8 Circuits & 2 Spare					Enclosure: NEMA Class 1							
Circuit Number	Item			Circuit Description	Power, Volt-Ampere	Demand			Three Phase	CB Rating			Home Run Description	
	CO	LO	Location			Single Phase Load Current, Ampere				AT	AF	P	Conductor Size and Type	Conduit Size
						Phase A - N	Phase B - N	Phase C - N						
1	1		Office	FCU-2C 1.5TR (2.5HP)	3,887	16.90				30	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
2	1		Control (Lights & Sound)	FCU-2C 1.5TR (2.5HP)	3,887	16.90				30	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
3	1		Control (Lights & Sound)	FCU-2C 1.5TR (2.5HP)	3,887			16.90		30	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
4	1		Vip Lounge/Mezzanine	FCU-3C 3TR (5HP)	6,440		28.00			40	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
5	1		Vip Lounge/Mezzanine	FCU-3C 3TR (5HP)	6,440			28.00		40	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
6	1		Vip Viewing Area	FCU-4C 2TR (2.75HP)	4,347			18.90		30	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
7	1		Vip Viewing Area	FCU-4C 2TR (2.75HP)	4,347		18.90			30	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
8	1		Control (CCTV)	FCU-5C 3TR (4HP)	5,750	25.00				40	100	1	2 - 5.5 mm2 THHN + 1 - 5.5 mm2 THHN	16 mmφ PVC
9			Ground Floor	Spare						30	100	1		
10			Ground Floor	Spare						30	100	1		
Total	8				38,985	58.80	46.90	63.80						
Total Maximum Non Coincident Demand, Volt Ampere							38,985							
Total Maximum Non Coincident Demand, Ampere							97.86							
Total Line Current with the application of Demand Factor, Ampere							58.59							
Size and type of Feeder Conductor							4 - 22.0 mm2 THHN + 1 - 8.0 mm2 THHN grounding in 53 mmφ IMC							
Size and Rating of Protective Device							80 Ampere, 90 AF, 400 V, 3 pole, CB							

Design Analysis for 2PF1				Demand Factor	Reference Article in PEC 2017
Item	Load Circuit Description	Non-Coincident Load, Watts	Coincident Load, Watts		
1	FCU-2C 1.5TR (2HP)	3,887	3,887	100.00	
2	FCU-2C 1.5TR (2HP)	3,887	3,887	100.00	
3	FCU-2C 1.5TR (2HP)	3,887	3,887	100.00	
4	FCU-3C 3TR (5HP)	6,440	6,440	100.00	
5	FCU-3C 3TR (5HP)	6,440	6,440	100.00	
6	FCU-4C 2TR (2.75HP)	4,347	4,347	100.00	
7	FCU-4C 2TR (2.75HP)	4,347	4,347	100.00	
8	FCU-5C 3TR (4HP)	5,750	5,750	100.00	
Sub Total		38,985.00	38,985.00		
Total		38,985.00	38,985.00		