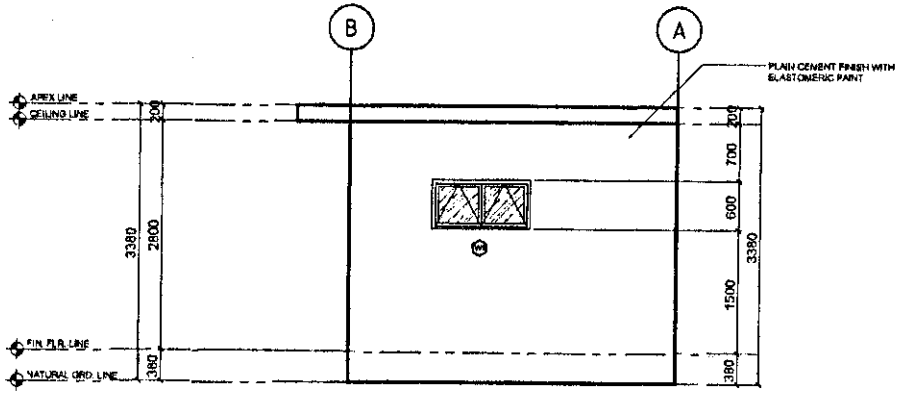
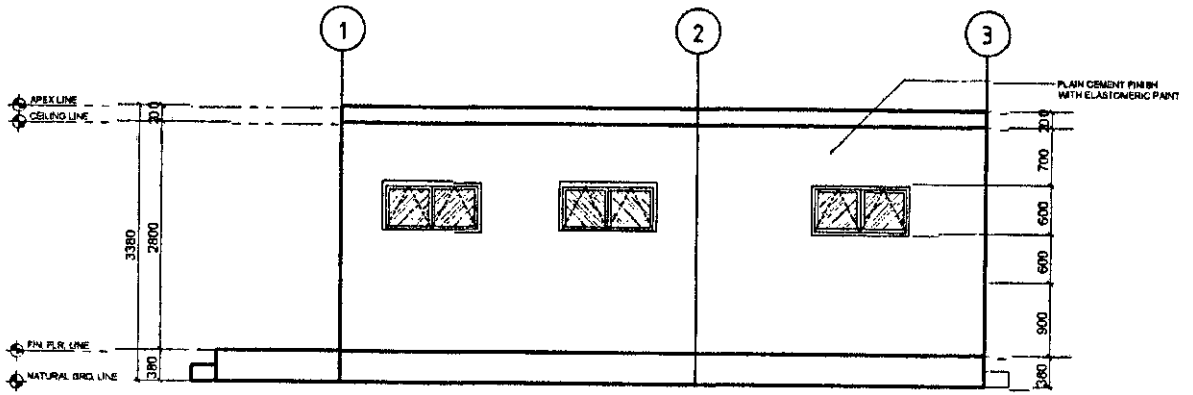
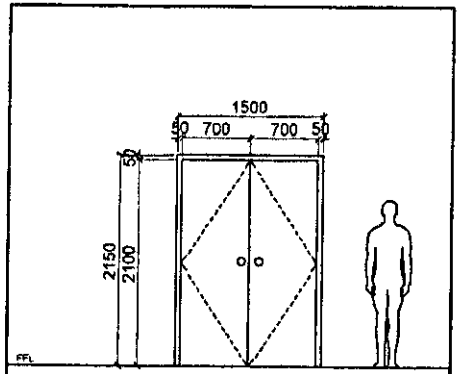


1 PH-3 **REAR ELEVATION**
SCALE 1:50

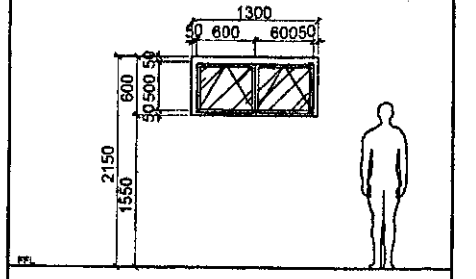


2 PH-3 **LEFT SIDE ELEVATION**
SCALE 1:50



TYPE:	MARINE PLYWOOD FINISH DOUBLE LEAF FLUSH DOOR
LOCATION:	PUMP HOUSE MAIN ENTRANCE
SET:	TWO (02)

D1



TYPE	AWNING TYPE WINDOW IN STEEL CASEMENT 25MM THK. AND 6.35mm THK CLEAR GLASS
LOCATION	PUMP HOUSE
SET:	FIVE (05)

W1

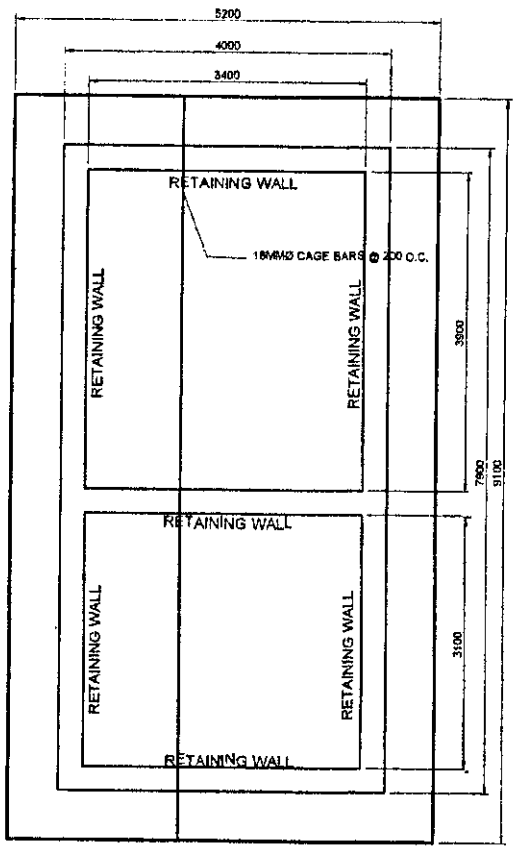
3 PH-3 **SCHEDULE OF DOORS & WINDOWS**
SCALE 1:50

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

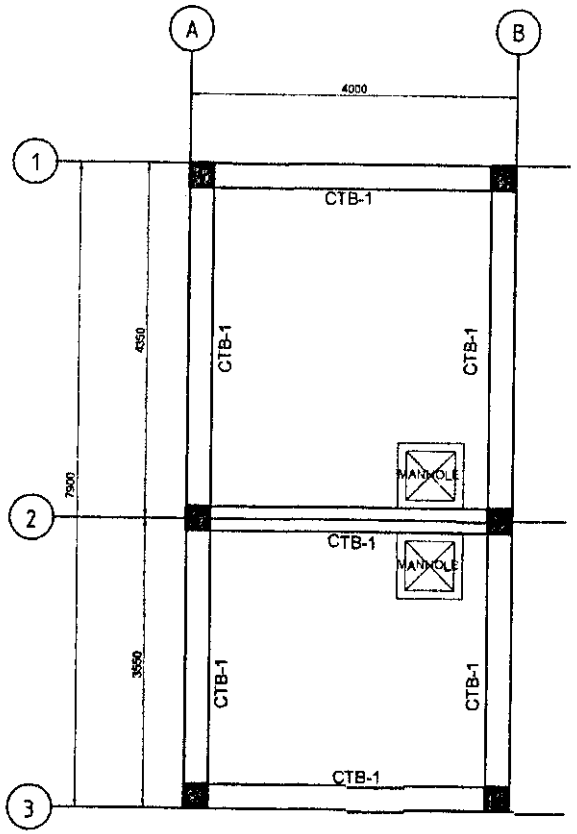
PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALDO MATIBAG	MARGARITO P. DIPALIG	JON GABRIELL M. MANANGALA	REYNARD C. PARAFINA	JAMES J. GANALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

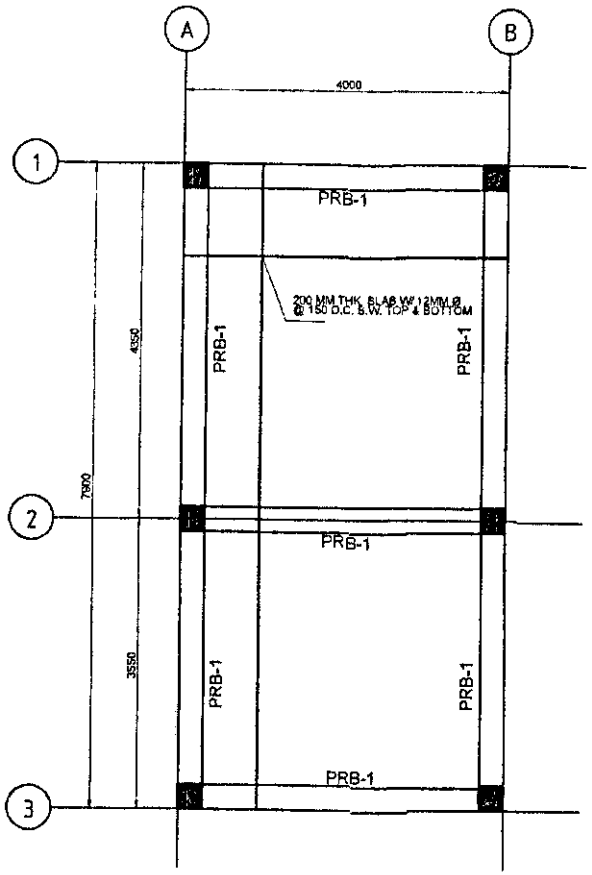
SHEET CONTENTS:	SCALE:
AS SHOWN	AS SHOWN
	SHEET NO. PH-3 of 12
	DATE : 25 NOV 2024



1 PH-4 FOUNDATION PLAN (PUMP HOUSE)
SCALE 1:50

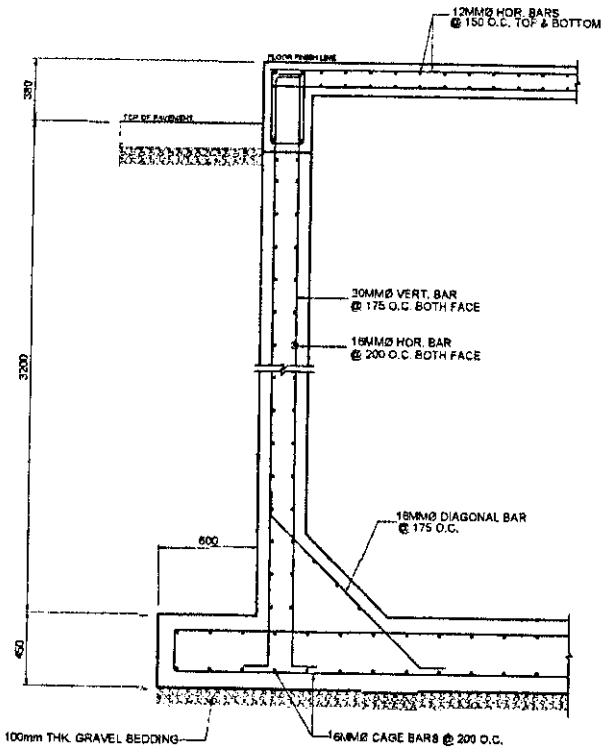


2 PH-4 GROUND FLOOR FRAMING PLAN (PUMP HOUSE)
SCALE 1:50

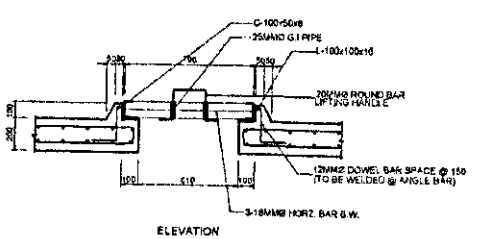


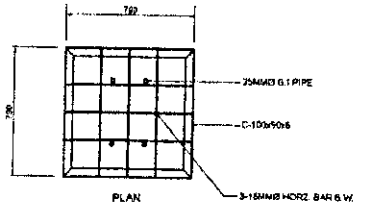
3 PH-4 ROOF FRAMING PLAN (PUMP HOUSE)
SCALE 1:50

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: RONALD O. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO P. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JOSH GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNAND S. PARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. CONTALAO, Assistant General Manager for Engineering	AS SHOWN / SHEET NO. PH-4 of 12 / DATE: 25 NOV 2024



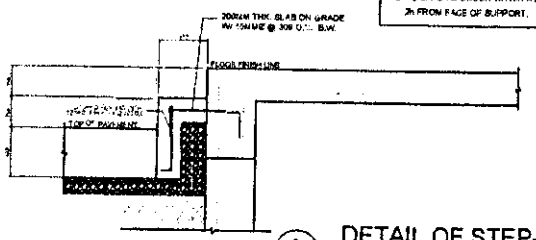
1 PH-5 **RETAINING WALL DETAIL**
SCALE 1:30



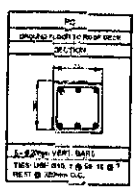


2 PH-5 **DETAIL OF MANHOLE COVER**
SCALE 1:30

NOTE :
1. SPLICING OF REINFORCEMENT SHALL BE LIMITED TO 1/2 THE TOTAL AMOUNT OF REINFORCEMENT AT THE SECTION.
2. NO LAPS TO OCCUR WITHIN A DISTANCE OF 2h FROM FACE OF SUPPORT.

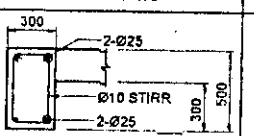
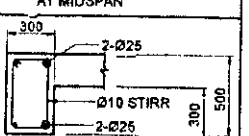
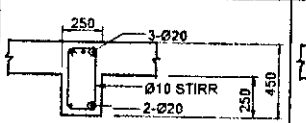
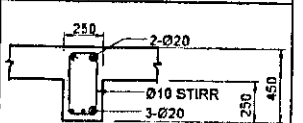


3 PH-5 **DETAIL OF STEP-UP**
SCALE 1:30



4 PH-5 **COLUMN SCHEDULE**
SCALE 1:30

PUMP HOUSE BEAM SCHEDULE

BEAM ID	SECTION	
	AT SUPPORTS	AT MIDSPAN
CTB-1		
	STIRRUPS: USE Ø10, 200mm O.C.	
PRB-1		
	STIRRUPS: USE Ø10, 1 @ 50, 10 @ 100 REST @150mm O.C.	

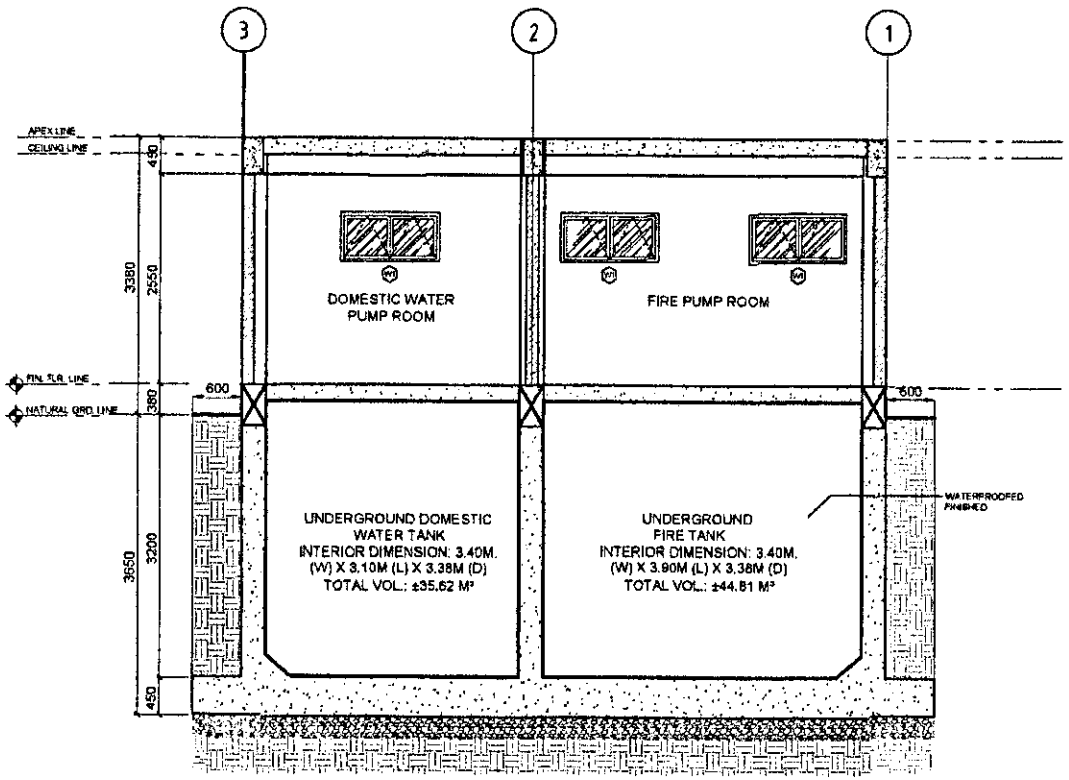
5 PH-5 **BEAM SCHEDULE**
SCALE 1:30

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JOHN GABRIELL M. MANANSALA	REYNANDO C. PARAFINA	JAMES J. SANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

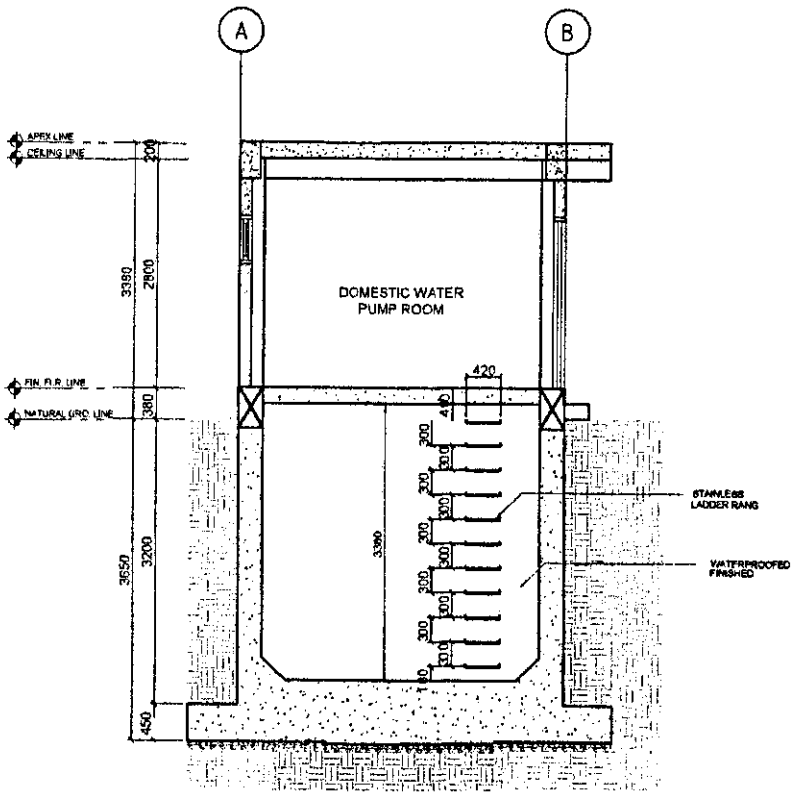
SHEET CONTENTS:	SCALE:
AS SHOWN	AS SHOWN
	SHEET NO. PH-5 of 12
	DATE : 25 NOV 2024



1 PH-6 SECTION THRU Y-Y'

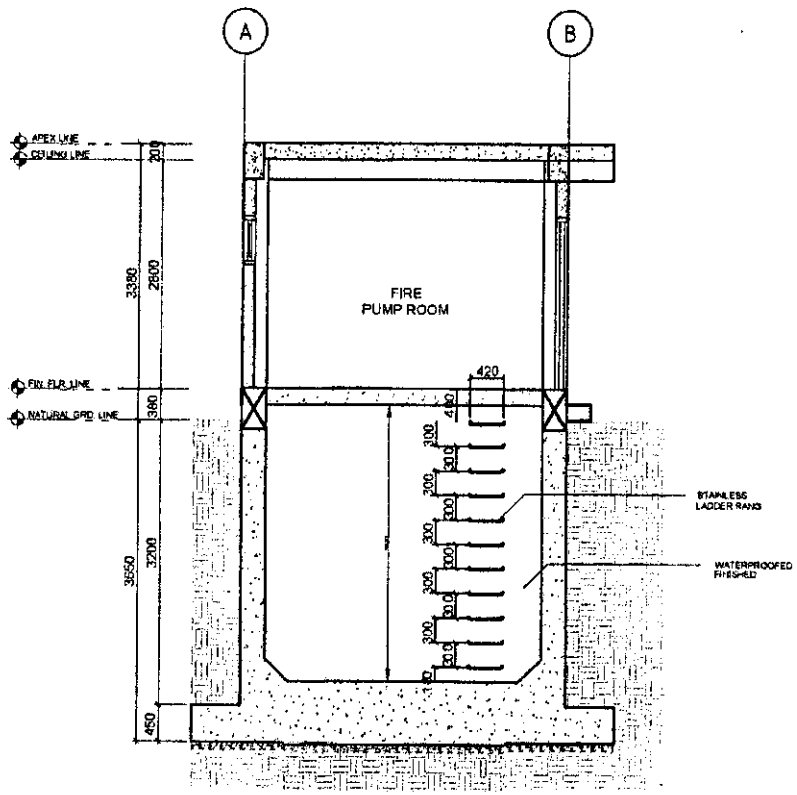
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PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTE ROXAS PORT OF ROXAS, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: RONALD O. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO P. DIMALIG, Division Manager A, ESD	SUBMITTED BY: JON GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNANDO C. RAFAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. SANTALAO, Assistant General Manager for Engineering	AS SHOWN	SHEET NO. PH-6 of 12
							DATE : 25 NOV 2024



1 PH-7 SECTION THRU X-X'

SCALE 1:50



2 PH-7 SECTION THRU Z-Z'

SCALE 1:50

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

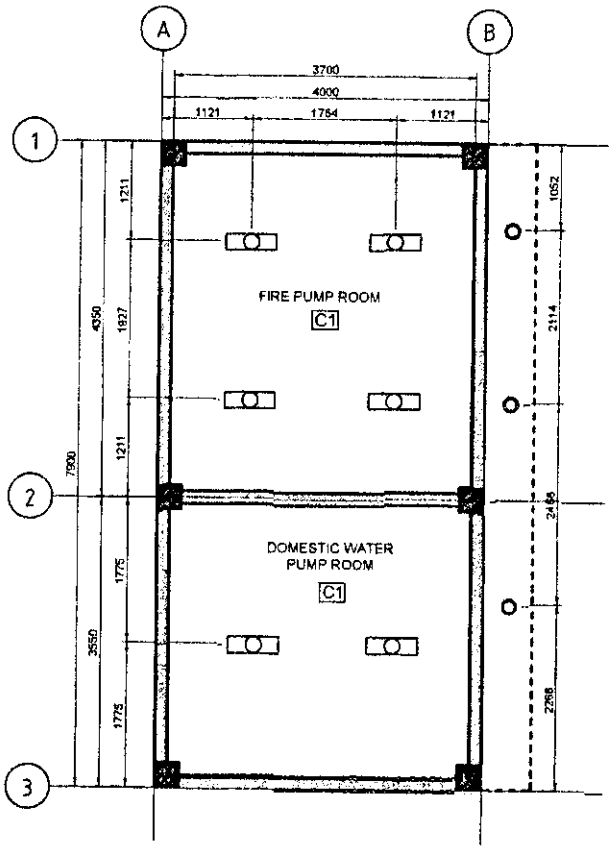
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RONALD O. MATIBAG	MARGARITO P. DIMALIG	JON GABRIELL M. MANANSALA	REYNANO C. MARAFINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

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SCALE: AS SHOWN

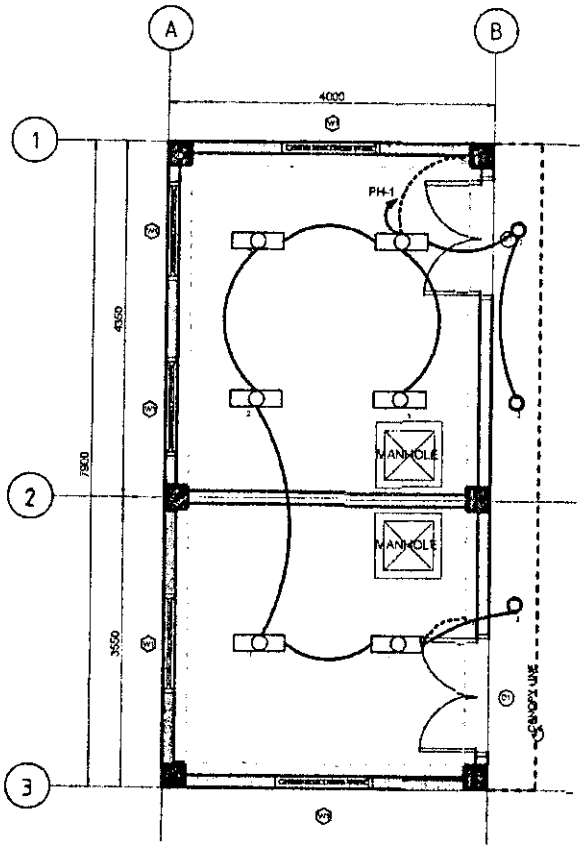
SHEET NO. PH-7 of 12

DATE : 25 NOV 2024



1 PH-5 REFLECTED CEILING PLAN

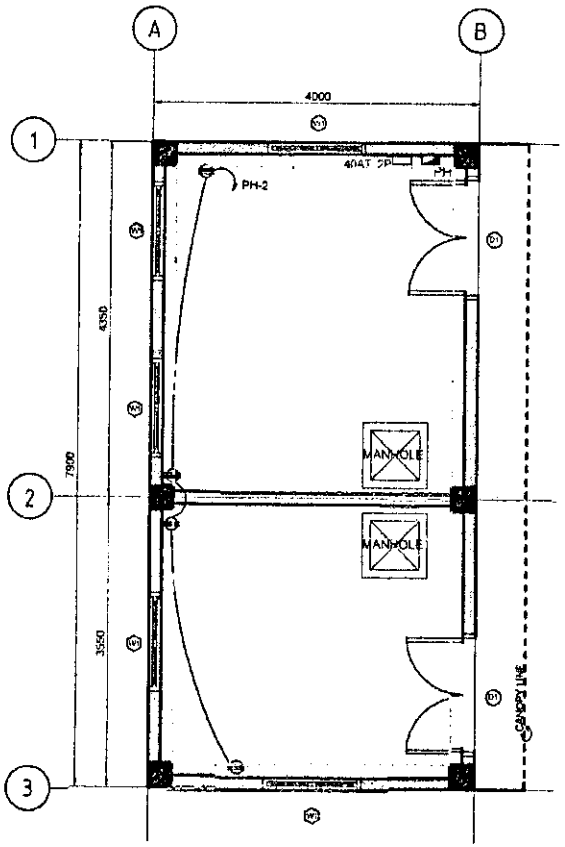
SCALE 1:80



2 PH-6 LIGHTING LAYOUT PLAN

SCALE 1:80

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: RONALD O. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO P. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JON GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNALDO C. PARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. GAMTALAO, Assistant General Manager for Engineering	AS SHOWN	SHEET NO. PH-8 of 12
						DATE: 25 NOV 2024



1 PH-9 LIGHTING LAYOUT PLAN

SCALE 1:50

LP/PP
SCHEDULE OF LOAD

LP/PP CKT. NO.	LT	CO	LOAD DESCRIPTION	VOLT	CURRENT	AMPERES AB	AMPERES BC	AMPERES CA	AMPERES 3Ø	WIRE (mm^2) (THHN / THWN-2)	CONDUIT mm (PVC)	CKT. BKR PROTECTION
1	9		LIGTHING	220	2.04					2-3.5	20 (1/2") O.D.	20AT-2P
2		4	DUPLEX CONVENIENCE OUTLET	220	3.27					2-3.5 +1-2.0	20 (1/2") O.D.	20AT-2P
3			SPARE	220								20AT-2P
TOTAL CONNECTED LOAD				220	5.31					2-5.5 + 1-3.5	25mm(3/4")	40AT-2P

LEGEND:

- 1-40 WATT , INDUSTRIAL TYPE FLUORESCENT LAMP W/ DIFFUSER
- DUPLEX CONVENIENCE OUTLET W/ GROUNDING
- LP/PP MAIN DISCONNECT PANEL
- SURFACED MOUNTED DOWNLIGHT 5" DIA. 11 WATT, E27, LED BULB

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
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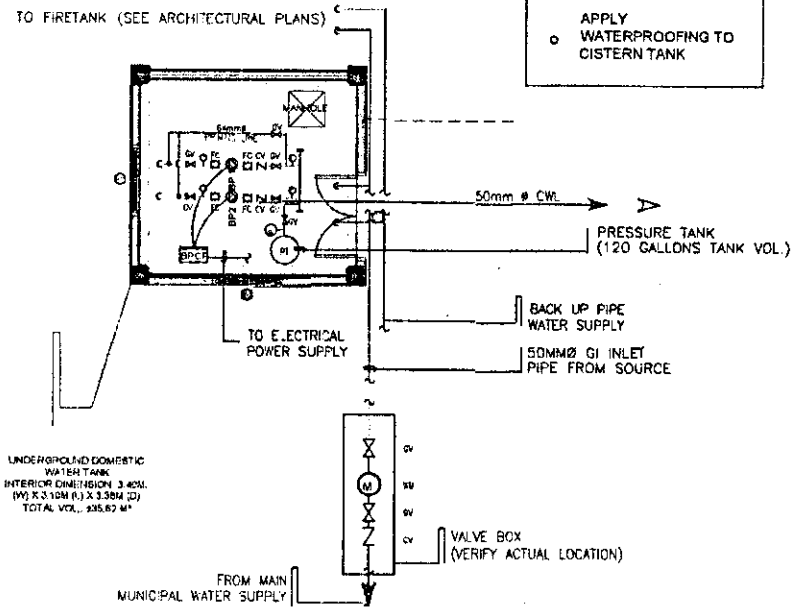
PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL	APPROVED BY:
RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JON GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. CANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

SHEET CONTENTS:	SCALE:
AS SHOWN	AS SHOWN
	SHEET NO. PH-9 of 12
	DATE : 25 NOV 2024

NOTE:

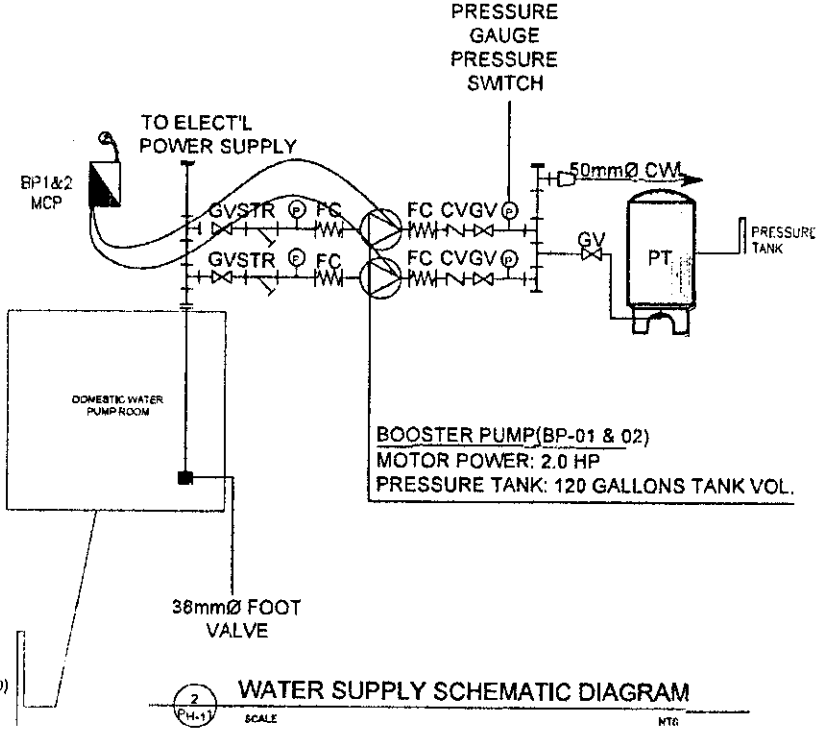
- ALL FITTINGS SHALL BE PROVIDED IN ACCORDANCE WITH THE TYPE/ SIZE OF PIPE TO BE USED
- ALL SIZES OF PIPES INDICATED ARE IN NOMINAL SIZE.
- USE ALTERNATING RELAY FOR BOOSTER PUMP
- APPLY WATERPROOFING TO CISTERN TANK

EQUIPMENT DESCRIPTION	CONSTANT PRESSURE BOOSTER PUMP	PRESSURE TANK 120 GALS
LOCATION	GROUND FLOOR (PUMP ROOM)	GROUND FLOOR (PUMP ROOM)
QUANTITY	2	1
POWER RATING	2.0 HP	
TYPE	DUPLEX-TYPE CONSTANT PRESSURE SYSTEM	
FUNCTION	BOOSTER PUMP	PRESSURE TANK
REMARKS	UNIT SIMILAR TO PACO, WILO,GRUNDFOS 1 UNIT DUTY & 1 UNIT STANDBY AND CAPABLE TO OPERATE IN PARALLEL & CYLIC MODE.	



1 PH-10 DOMESTIC WATER PUMP HOUSE PIPE PLAN

SCALE NTS



2 PH-11 WATER SUPPLY SCHEMATIC DIAGRAM

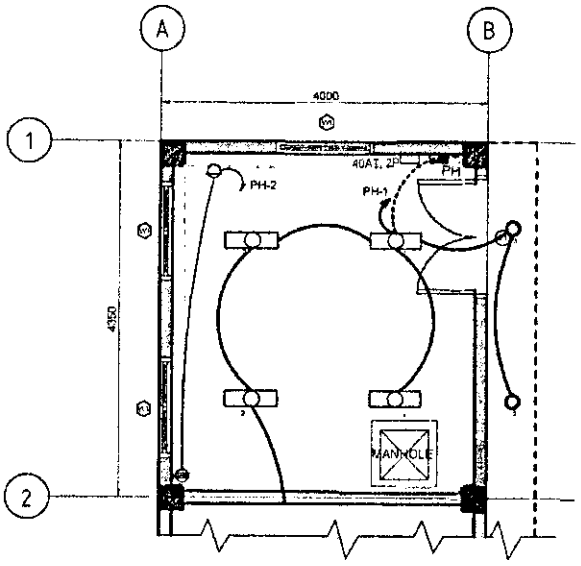
SCALE NTS

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
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RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JOSE GABRIELL M. MANANSALA	REYNANDO C. PAPAFINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

SHEET CONTENTS:	SCALE: AS SHOWN
AS SHOWN	SHEET NO. PH-10 of 12
	DATE : 25 NOV 2024



FIRE PUMP HOUSE ELECTRICAL LAYOUT

SCALE 1:75 M

FIRE PUMP ROOM
SCHEDULE OF LOAD

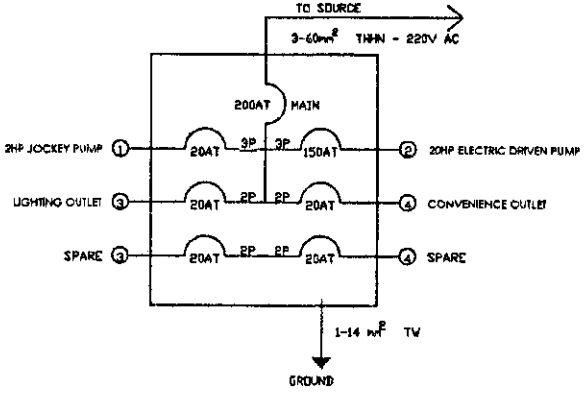
PH CKT. NO.	LT	CO	LOAD DESCRIPTION	VOLT	AMPERES				WIRE (mm²) (THHN / THWN-2)	GROUND WIRE	CONDUIT mm (RMC) O.D	CKT. BKR PROTECTION
					AB	BC	CA	SG				
1			2HP JOCKEY PUMP	230				6.8	3 - 5.5	3.5	20	20AT - 3P
2			20HP ELECTRIC DRIVEN PUMP	230				54	3 - 14	5.5	25	150AT - 3P
3	6		LIGHTING OUTLET	230	2.04				3.5	3.5	20	20AT - 2P
4		4	CONVENIENCE OUTLET	230		3.27			3.5	3.5	20	20AT - 2P
5			SPARE	230			2.73		3.5	3.5	20	20AT - 2P
6			SPARE	230			2.73		3.5	3.5	20	20AT - 2P
			TOTAL CONNECTED LOAD	220	2.04	3.27	5.46	60.8	3-60mm²	14mm²	50mm	200AT - 3P

LOAD SCHEDULE

SCALE NTS.

LEGEND:

- 1-40 WATT, INDUSTRIAL TYPE FLUORESENT LAMP w/ DIFFUSER
- DUPLEX CONVENIENCE OUTLET w/ GROUNDING
- PANEL BOARD
- SURFACED MOUNTED DOWNLIGHT 5" DIA. 11 WATT, EE7, LED BULB

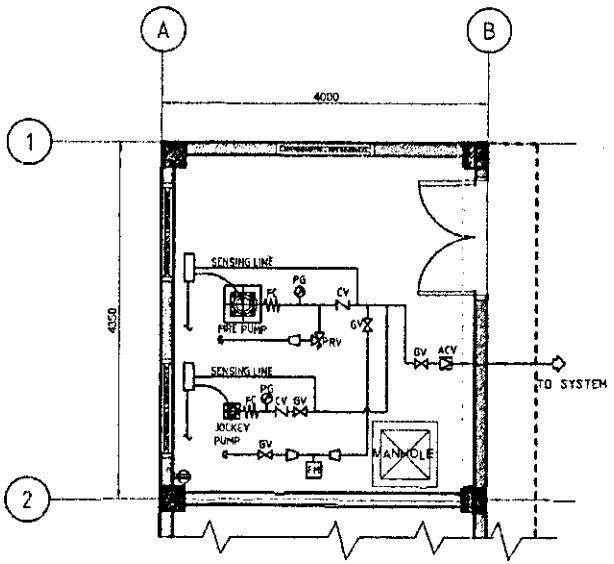


RISER DIAGRAM / PANEL BOARD

ELECTRICAL NOTES:

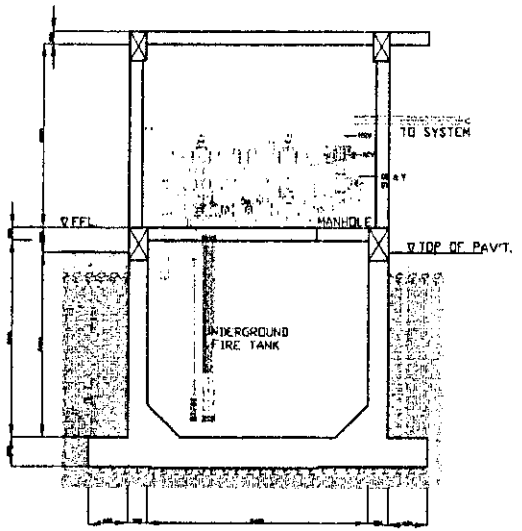
1. ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PHILIPPINE ELECTRICAL CODE AND THE RULES AND REGULATIONS OF THE LOCAL POWER UTILITY COMPANY.
2. ALL ELECTRICAL SWITCHES AND OUTLETS SHALL BE INSTALLED AT 1.20 M. ABOVE FINISH FLOOR UNLESS OTHERWISE NOTED.
3. ALL WIRING SHALL BE CONCEALED IN CONDUITS FROM OUTLET TO OUTLET AND FROM OUTLET TO PANEL BOARD.
4. ALL CONDUITS SHALL BE GALVANIZED RIGID STEEL CONDUIT (GRSC) OF PROPER SIZE AS INDICATED ON THE PLANS.
5. MINIMUM BRANCH CIRCUIT CONDUCTOR SHALL BE 2.0 mm² THHN OR EQUIVALENT.
6. ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE ELECTRICAL SPECIFICATION.

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO			SHEET CONTENTS:	SCALE AS SHOWN
	PREPARED BY: RONALD O. PARIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO F. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JOY GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNAND S. PARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. GANTALAO, Assistant General Manager for Engineering	AS SHOWN	SHEET NO. PH - 11 of 12
							25 NOV 2024



FIRE PUMP BLOW-UP PLAN

SCALE 1:75 M



FIRE PUMP ROOM LONGITUDINAL SECTION

SCALE 1:75 M

FIRE PROTECTION EQUIPMENT SCHEDULE

EQUIP. NO	EQUIPMENT NAME	SPECIFICATION SUMMARY	QTY.	ELECTRICAL			
				Ph	V	Hz	Kw
FP-1	FIRE PUMP	Type : Horizontal Pump Capacity : 380 GPM Head : 91ft. THD Electric Driven Complete w/ Controller & Accessories BHP : 20hp	1	3	220	60	
JP-1	JOCKEY PUMP	Type : Vertical In-line Turbine Capacity : 38 GPM Head : 102ft. THD Electric Driven Complete w/ Controller & Accessories BHP : 2hp	1	3	220	60	

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

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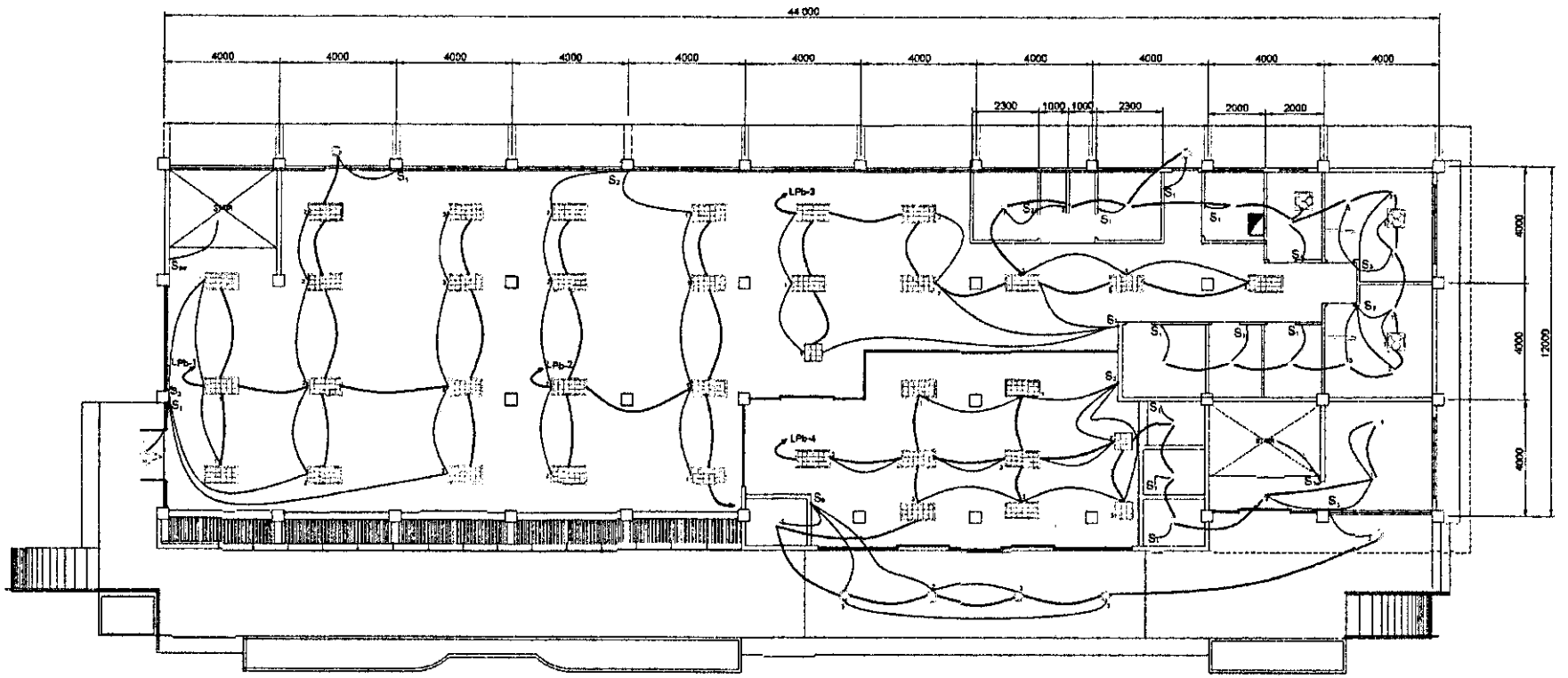
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SCALE: AS SHOWN

SHEET NO. PH - 12 of 12

DATE: 25 NOV 2024

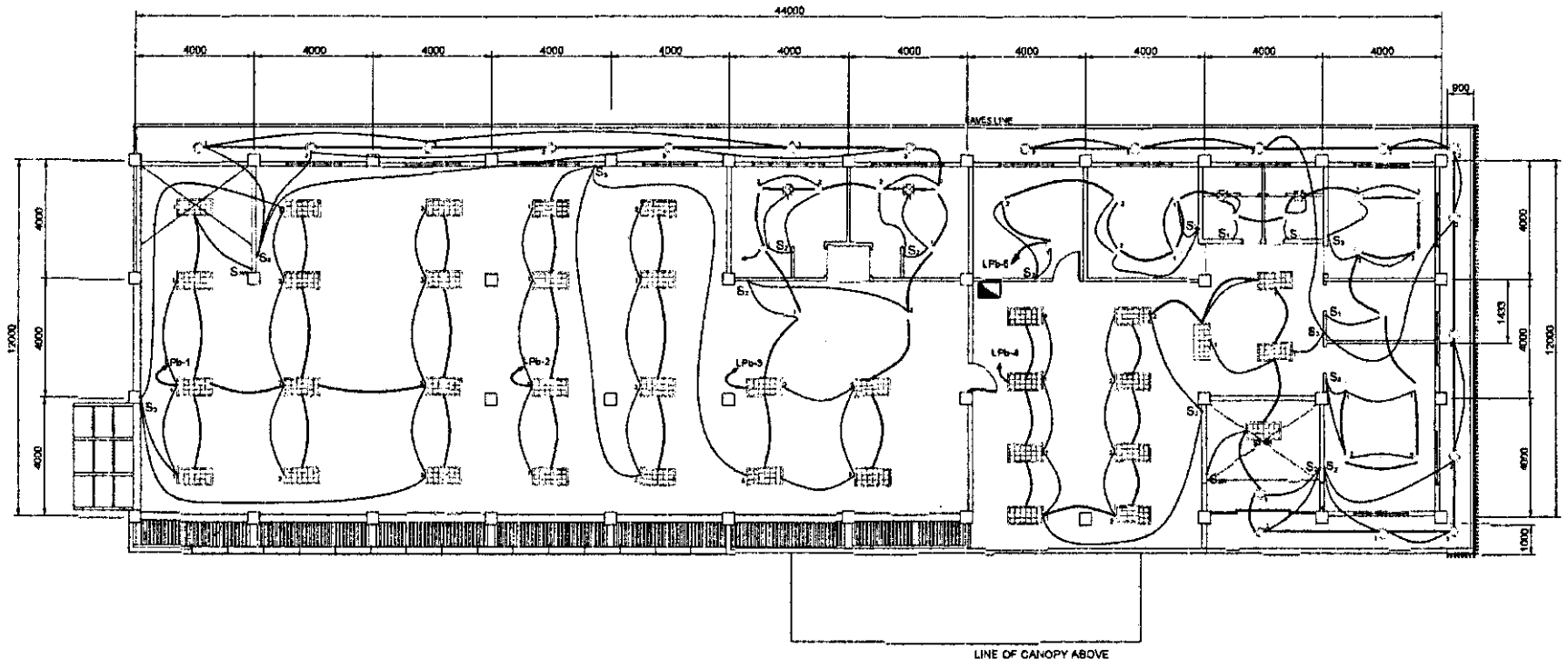
PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO P. LIMAILIG	JON GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering



E-1 GROUND FLOOR LIGHTING LAYOUT

SCALE 1:150

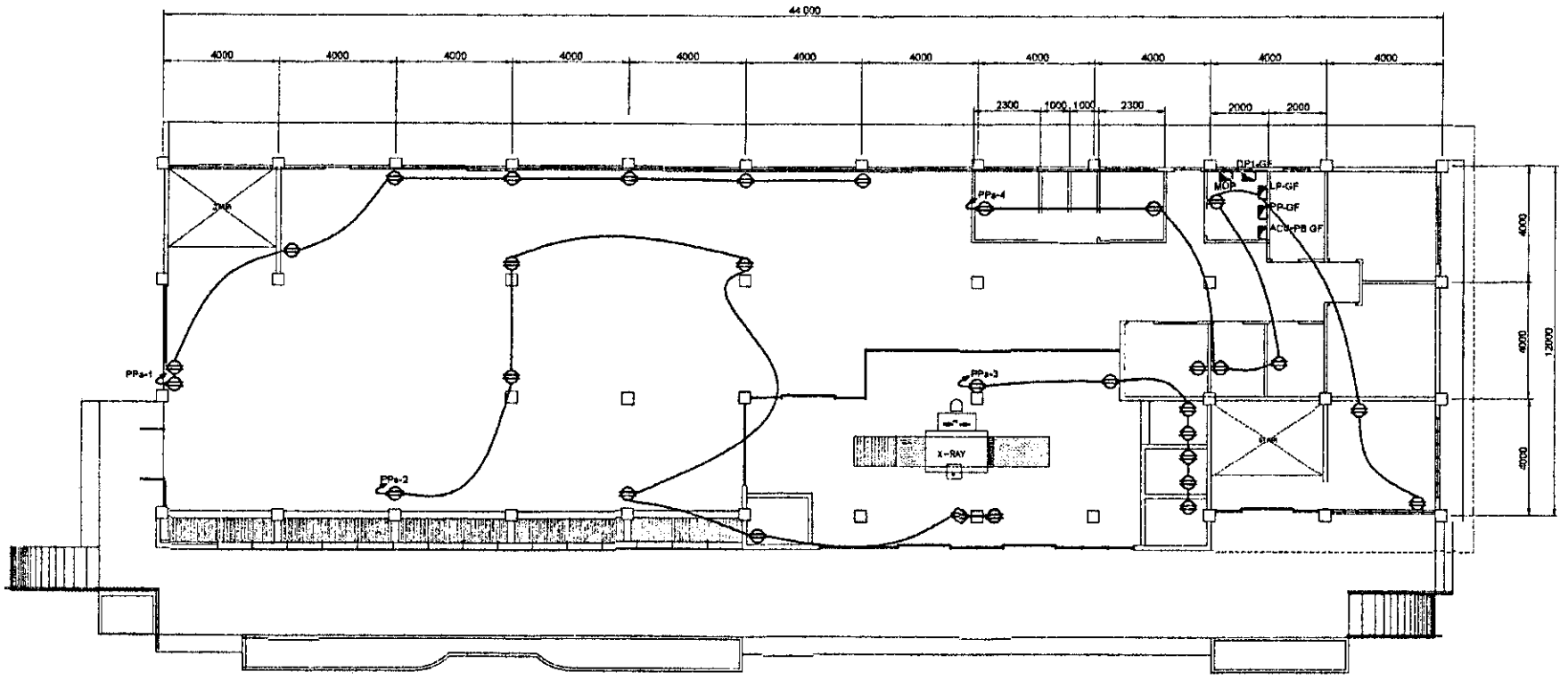
PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO					AS SHOWN
	PREPARED BY: RONALD O. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO P. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JOVI GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNAND C. PARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. GANTALAO, Assistant General Manager for Engineering	AS SHOWN	SHEET NO. E-1 of 12 DATE : 25 NOV 2024



SECOND FLOOR LIGHTING LAYOUT

E-2 SCALE 1:150

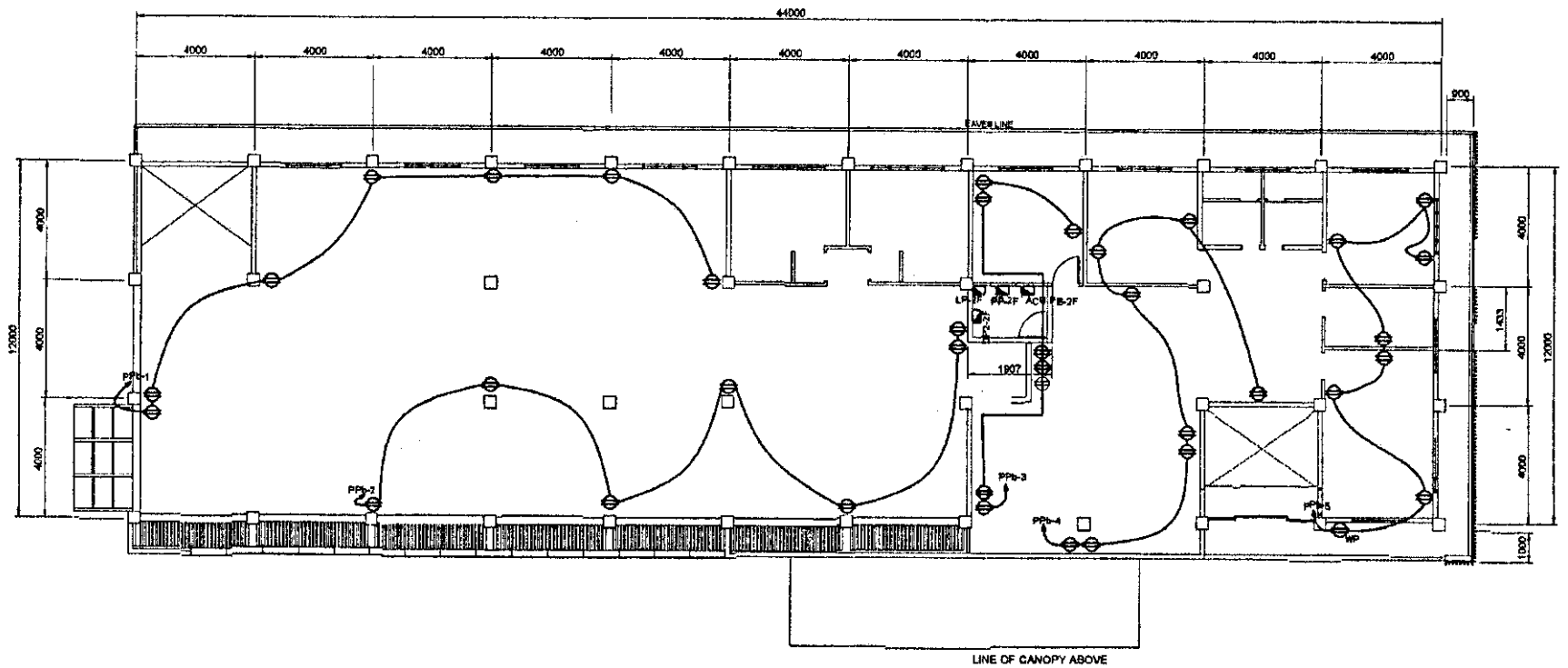
PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO					AS SHOWN
	PREPARED BY: RONALD O. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO P. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JOHN GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNAND C. PARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. GANDALAO, Assistant General Manager for Engineering	AS SHOWN	SHEET NO. E-2 of 12 DATE : 25 NOV 2024



GROUND FLOOR POWER LAYOUT

E-3 SCALE 1:150

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO				AS SHOWN
PREPARED BY: RONALD O. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGERITO P. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JON GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNAND C. PARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. CANTALAO, Assistant General Manager for Engineering	AS SHOWN / SHEET NO. E-3 of 12 / DATE : 25 NOV 2024



SECOND FLOOR POWER LAYOUT

E-4

SCALE 1:150

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO					AS SHOWN
	PREPARED BY: RONALDO O. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO P. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JOSE GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNAND C. PARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. GANDALAO, Assistant General Manager for Engineering	AS SHOWN / SHEET NO. E-4 of 12 / DATE: 25 NOV 2024

LP-GF

SCHEDULE OF LOAD (GROUND FLOOR)

CKT. NO.	LOAD DESCRIPTION	VOLT	AMPERES				WIRE (mm^2) THHN/THWN	GROUND WIRE	CONDUIT (mm dia. PVC)	OCPD
			AB	BC	CA	3PH				
1	LIGHTING OUTLET	230	5.48				3.5	3.5	15	20
2	LIGHTING OUTLET	230		6.96			3.5	3.5	15	20
3	LIGHTING OUTLET	230			5.44		3.5	3.5	15	20
4	LIGHTING OUTLET	230	6.53				3.5	3.5	15	20
5	LIGHTING OUTLET	230		5.22			3.5	3.5	15	20
6	LIGHTING OUTLET	230			7.27		3.5	3.5	15	20
7	SPARE	230	5.22							20
8	SPARE	230		5.22						20
9	SPARE	230			5.22					20
	TOTAL		17.23	17.40	17.93		3-8	5.5	20	40

LP-2F

SCHEDULE OF LOAD (SECOND FLOOR)

CKT. NO.	LOAD DESCRIPTION	VOLT	AMPERES				WIRE (mm^2) THHN/THWN	GROUND WIRE	CONDUIT (mm dia. PVC)	OCPD
			AB	BC	CA	3PH				
1	LIGHTING OUTLET	230	6.96				3.5	3.5	15	20
2	LIGHTING OUTLET	230		6.96			3.5	3.5	15	20
3	LIGHTING OUTLET	230			6.96		3.5	3.5	15	20
4	LIGHTING OUTLET	230	6.96				3.5	3.5	15	20
5	LIGHTING OUTLET	230		6.53			3.5	3.5	15	20
6	LIGHTING OUTLET	230			6.53		3.5	3.5	15	20
7	SPARE	230	5.22							20
8	SPARE	230		5.22						20
9	SPARE	230			5.22					20
	TOTAL		19.14	18.73	18.71		3-8	5.5	20	40

ACU PB- GF

SCHEDULE OF LOAD (GROUND FLOOR)

CKT. NO.	LOAD DESCRIPTION	VOLT	AMPERES				WIRE (mm^2) THHN/THWN	GROUND WIRE	CONDUIT (mm dia. PVC)	OCPD
			AB	BC	CA	3PH				
1	CEILING CASSETTE TYPE ACU, 3TR	230	21.80				14.0	5.5	25	50
2	CEILING CASSETTE TYPE ACU, 3TR	230	21.80				14.0	5.5	25	50
3	CEILING CASSETTE TYPE ACU, 3TR	230		21.80			14.0	5.5	25	50
4	CEILING CASSETTE TYPE ACU, 3TR	230		21.80			14.0	5.5	25	50
5	CEILING CASSETTE TYPE ACU, 3TR	230			21.80		14.0	5.5	25	50
6	CEILING CASSETTE TYPE ACU, 3TR	230			21.80		14.0	5.5	25	50
7	CEILING CASSETTE TYPE ACU, 3TR	230	21.80				14.0	5.5	25	50
8	CEILING CASSETTE TYPE ACU, 3TR	230	21.80				14.0	5.5	25	50
9	CEILING CASSETTE TYPE ACU, 3TR	230		21.80			14.0	5.5	25	50
10	CEILING CASSETTE TYPE ACU, 3TR	230		21.80			14.0	5.5	25	50
11	CEILING CASSETTE TYPE ACU, 3TR	230			21.80		14.0	5.5	25	50
12	CEILING CASSETTE TYPE ACU, 3TR	230			21.80		14.0	5.5	25	50
13	CEILING CASSETTE TYPE ACU, 3TR	230	21.80				14.0	5.5	25	50
14	1.5 HP SPLIT TYPE ACU	230	10.00				5.5	3.5	20	30
15	1.5 HP SPLIT TYPE ACU	230		10.00			5.5	3.5	20	30
16	1.5 HP SPLIT TYPE ACU	230		10.00			5.5	3.5	20	30
17	1.5 HP SPLIT TYPE ACU	230			10.00		5.5	3.5	20	30
18	1.5 HP SPLIT TYPE ACU	230			10.00		5.5	3.5	20	30
19	1.0 HP SPLIT TYPE ACU	230	8.00				5.5	3.5	20	20
20	1.0 HP SPLIT TYPE ACU	230	8.00				5.5	3.5	20	20
21	1.5 HP SPLIT TYPE ACU	230		10.00			5.5	3.5	20	30
22	SPARE	230		12.00						30
23	SPARE	230			12.00					30
24	SPARE	230			12.00					30
	TOTAL		135.00	129.20	131.20		3-100	22	85	225

PP-GF

SCHEDULE OF LOAD (GROUND FLOOR)

CKT. NO.	LOAD DESCRIPTION	VOLT	AMPERES				WIRE (mm^2) THHN/THWN	GROUND WIRE	CONDUIT (mm dia. PVC)	OCPD
			AB	BC	CA	3PH				
1	CONVENIENCE OUTLET	230	6.27				3.5	3.5	15	20
2	CONVENIENCE OUTLET	230		6.27			3.5	3.5	15	20
3	CONVENIENCE OUTLET	230			6.27		3.5	3.5	15	20
4	CONVENIENCE OUTLET	230	6.27				3.5	3.5	15	20
5	SPARE	230		6.27						20
6	SPARE	230			6.27					20
7	SPARE	230	5.22							20
8	SPARE	230		5.22						20
9	SPARE	230			5.22					20
	TOTAL		17.76	17.76	17.76		3-8	3.5	20	40

PP-2F

SCHEDULE OF LOAD (SECOND FLOOR)

CKT. NO.	LOAD DESCRIPTION	VOLT	AMPERES				WIRE (mm^2) THHN/THWN	GROUND WIRE	CONDUIT (mm dia. PVC)	OCPD
			AB	BC	CA	3PH				
1	CONVENIENCE OUTLET	230	5.48				3.5	3.5	15	20
2	CONVENIENCE OUTLET	230		5.48			3.5	3.5	15	20
3	CONVENIENCE OUTLET	230			6.27		3.5	3.5	15	20
4	CONVENIENCE OUTLET	230	6.27				3.5	3.5	15	20
5	SPARE	230		6.27						20
6	SPARE	230			6.27					20
7	SPARE	230	5.22							20
8	SPARE	230		5.22						20
9	SPARE	230			4.35					20
	TOTAL		16.97	16.97	16.89		3-8	3.5	20	40

ACU PB- 2F

SCHEDULE OF LOAD (SECOND FLOOR)

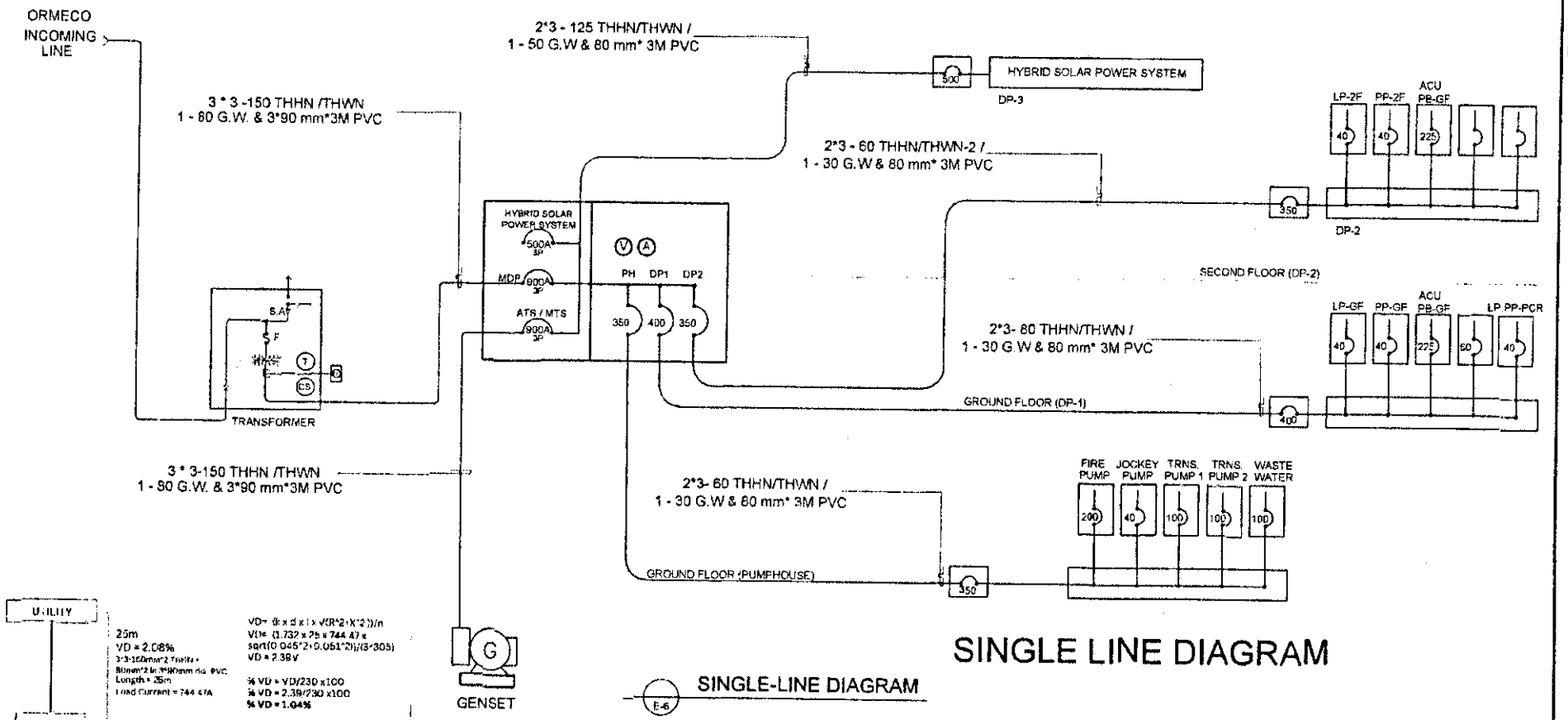
CKT. NO.	LOAD DESCRIPTION	VOLT	AMPERES				WIRE (mm^2) THHN/THWN	GROUND WIRE	CONDUIT (mm dia. PVC)	OCPD
			AB	BC	CA	3PH				
1	CEILING CASSETTE TYPE ACU, 3TR	230	21.80				14.0	3.5	15	50
2	CEILING CASSETTE TYPE ACU, 3TR	230	21.80				14.0	3.5	15	50
3	CEILING CASSETTE TYPE ACU, 3TR	230		21.80			14.0	3.5	15	50
4	CEILING CASSETTE TYPE ACU, 3TR	230		21.80			14.0	3.5	15	50
5	CEILING CASSETTE TYPE ACU, 3TR	230			21.80		14.0	3.5	15	50
6	CEILING CASSETTE TYPE ACU, 3TR	230			21.80		14.0	3.5	15	50
7	CEILING CASSETTE TYPE ACU, 3TR	230	21.80				14.0	3.5	15	50
8	CEILING CASSETTE TYPE ACU, 3TR	230	21.80				14.0	3.5	15	50
9	CEILING CASSETTE TYPE ACU, 3TR	230		21.80			14.0	3.5	15	50
10	CEILING CASSETTE TYPE ACU, 3TR	230		21.80			14.0	3.5	15	50
11	CEILING CASSETTE TYPE ACU, 3TR	230			21.80		14.0	3.5	15	50
12	CEILING CASSETTE TYPE ACU, 3TR	230			21.80		14.0	3.5	15	50
13	1.5 HP SPLIT-TYPE ACU	230	10.00				5.5	3.5	15	30
14	1.5 HP SPLIT-TYPE ACU	230	10.00				5.5	3.5	15	30
15	CEILING CASSETTE TYPE ACU, 3TR	230		21.80			14.0	3.5	15	50
16	1.5 HP SPLIT-TYPE ACU	230		10.00			5.5	3.5	15	30
17	CEILING CASSETTE TYPE ACU, 3TR	230			21.80		14.0	3.5	15	50
18	1.5 HP SPLIT-TYPE ACU	230			10.00		5.5	3.5	15	30
19	1.5 HP SPLIT-TYPE ACU	230	10.00				5.5	3.5	15	30
20	SPARE	230	12.00							
21	SPARE	230		8.00						
22	SPARE	230		8.00						
23	SPARE	230			8.00					
24	SPARE	230			8.00					
	TOTAL		129.20	135.00	135.00		3-100	22	85	225

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

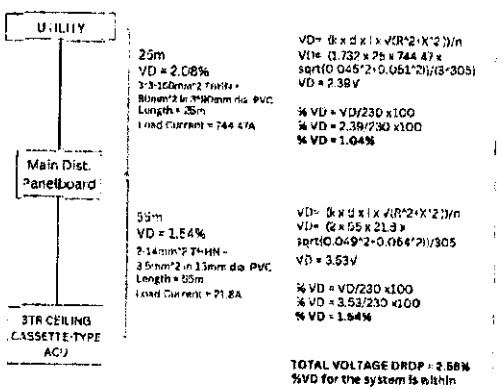
PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD D. MATIBAG	MARGARITO P. DIMALIG	JONN GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

SHEET CONTENTS:	SCALE:
AS SHOWN	AS SHOWN
	SHEET NO. E-5 of 12
	DATE : 25 NOV 2024



SINGLE LINE DIAGRAM



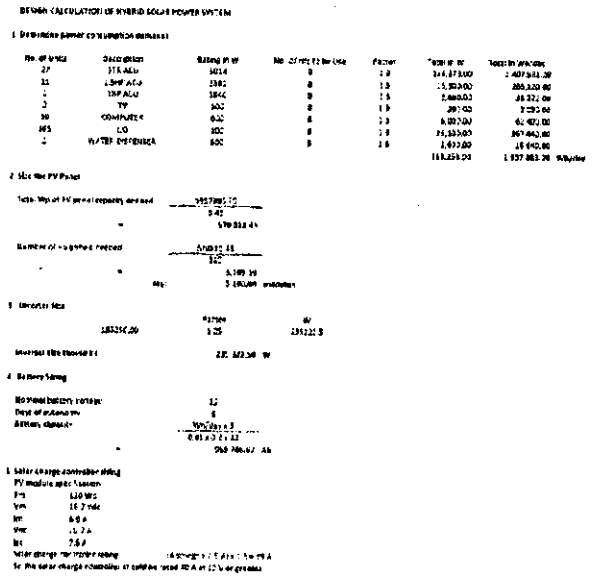
SINGLE-LINE DIAGRAM
E-6

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: RONALD C. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO P. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JOHN GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNANO C. PARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. GANTALAO, Assistant General Manager for Engineering	AS SHOWN / SHEET NO. E-6 of 12 / DATE: 25 NOV 2024

DESIGN CALCULATION OF HYBRID SOLAR

LEGEND:

- 60 x 120 LED Panel Light
- 60 x 60 LED Panel Light
- VERTICAL DOWNLIGHT RECESSED MOUNTED TYPE WITHOUT GLASS COVER LAMP HOLDER, 220V, E27, 8-11 WATT LED BULB , DAYLIGHT
- VERTICAL DOWNLIGHT SURFACE MOUNTED TYPE WITHOUT GLASS COVER LAMP HOLDER, 220V, E27, 8-11 WATT, LED BULB, DAYLIGHT
- BATHROOM RECESSED CEILING EXHAUST FAN 38 WATT , 220 VOLT, 60 HZ
- E_{EL} EMERGENCY EXIT LIGHT
- S_1 ONE GANG SWITCH, 10A
- S_{1w} TWO GANG SWITCH, 10A, SUBSCRIPT DENOTES LIGHT CONTROL
- S_3 THREE GANG SWITCH
- S_{3w} THREE WAY SWITCH
- 3-PRONG DUPLEX CONVENIENCE OUTLET WITH GROUNDING
- WEATHERPROOF CONVENIENCE OUTLET
- CIRCUIT HOMERUN, GROUND FLOOR PLAN
- POWER ,PANEL BOARD


DESIGN CALCULATION OF HYBRID SOLAR POWER SYSTEM

1. Determine power consumption demand

No. of Units	Description	Rating in W	No. of Hrs. to be Use	Factor	Total in W	Total in Amperes
27	3TR AC's	3014	8	1.0	244,873.00	1,407,943.20
11	1.5HP AC's	1566	8	1.5	15,303.00	268,320.60
1	1HP AC's	1044	8	1.5	2,466.00	28,321.08
3	TV	300	8	1.0	2,700.00	7,290.00
30	COMPUTER	600	8	1.0	6,000.00	43,200.00
365	LIG	100	8	1.0	24,333.00	267,663.00
1	WATER DISPENSER	500	8	1.0	1,833.00	10,540.00
					110,259.00	1,937,883.28 Watts/day

2. Size the PV Panel

Total Wh of PV panel capacity demand: 1937883.28 / 3.45 = 570,332.41

Number of Amorphous needed: Answer: 15 / 120 = 5.249 39 say: 5 180,000 watts/day

3. Inverter Size

185356.00	3.25	57032.9

Inverter size should be 57, 032.308 W

4. Battery Sizing

Nominal battery voltage	12
Days of autonomy	6
Battery capacity	Wh/day x 3 / 0.85 x 0.6 x 12 = 968 706.67 Ah

5. Solar charge controller sizing

PV module specification

Pm	620 Wp
Vm	36.7 Vdc
Im	8.8 A
Voc	43.2 A
Isc	7.8 A

Solar charge controller current rating: 1.4 (amps) x 1.5 A x 1 = 16.75 A

for the solar charge controller, it can be used 80 A at 12 V or greater

GENERAL NOTES AND SPECIFICATIONS

1. THE ELECTRICAL INSTALLATION HEREIN SHALL BE DONE IN ACCORDANCE WITH THE PROVISION OF THE LATEST EDITION OF PHILIPPINE ELECTRICAL CODE. THE REQUIREMENTS OF THE BUILDING CODE OF THE EXISTING LOCAL ORDINANCES, RULES AND REGULATIONS OF THE CITY OF CALAPAN, AND THE REQUIREMENTS OF THE LOCAL POWER COMPANIES.

2. THE TYPE OF POWER SERVICE TO BE SUPPLIED SHALL BE 1-Ø, 230V, 2-WIRE, 60Hz A.C.

3. THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF SERVICE FOR PROPER CONNECTION OF THE SERVICE DROP.

4. ALL WIRING SHALL BE INSTALLED IN STANDARD PVC CONDUIT, RUN EMBEDDED INSIDE THE CONCRETE AND HOLLOW BLOCK STRUCTURES, SLABS, COLUMNS, WALLS AND PARTITIONS AND INSIDE CEILING SPACES.

5. ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR LOCATION AND PURPOSE.

6. STANDARD TYPE OF ACCESSORIES, SPLICING DEVICES, TERMINATIONS, AND OTHER APPURTENANCES FOR THE ENTIRE ELECTRICAL INSTALLATIONS SHALL BE USED.

7. UNLESS OTHERWISE SPECIFIED, THE MINIMUM SIZE OF WIRE AND CONDUIT SHALL BE 3.5mm² THW AND 15mm DIAMETER RESPECTIVELY.

8. ALL LIGHTING CIRCUITS HOMERUNS AND CONVENIENCE OUTLETS SHALL BE WIRED WITH NOT LESS THAN 3.5mm² THW IN SIZE. ALL 15 AMPS AND 20 AMPS CIRCUIT HOMERUNS TO PANEL BOARD MORE THAN 30m IN LENGTH SHALL BE WIRED NOT LESS THAN 5.5mm² THW UNLESS OTHERWISE INDICATED ON THE PLANS.

9. THE ELECTRICAL WORKS SHALL HEREIN BE DONE UNDER THE DIRECT AND IMMEDIATE SUPERVISION OF LICENSED ELECTRICAL ENGINEER.

DP 1 (GF)

SCHEDULE OF LOAD (GROUND FLOOR)

CKT. NO.	LOAD DESCRIPTION	VOLT	AMPERES AB	AMPERES BC	AMPERES CA	AMPERES 3PH	WIRE (mm^2) THHN/THWN	GROUND WIRE	CONDUIT (mm dia. PVC)	OCPD
1	LP - GF	230	17.23	17.40	17.93		8.0	5.5	20	40
2	PP - GF	230	17.76	17.76	17.76		8.0	5.5	20	40
3	ACU PB - GF	230	135.00	129.20	131.20		100	22	65	225
4	SPARE	230	25.00	25.00	23.00					60
	TOTAL		194.99	189.36	189.89		2 SETS OF 3-60	30	80	600

DP 2 (2F)

SCHEDULE OF LOAD (SECOND FLOOR)

CKT. NO.	LOAD DESCRIPTION	VOLT	AMPERES AB	AMPERES BC	AMPERES CA	AMPERES 3PH	WIRE (mm^2) THHN/THWN	GROUND WIRE	CONDUIT (mm dia. PVC)	OCPD
1	LP - 2F	230	19.14	18.73	18.71		8.0	5.5	20	40
2	PP - 2F	230	16.97	16.97	16.89		8.0	5.5	20	40
3	ACU PB - 2F	230	129.20	135.00	135.00		100	22	65	225
	TOTAL		165.31	170.68	170.60		2 SETS OF 3-60	30	80	350

PUMPHOUSE

SCHEDULE OF LOAD (GROUND FLOOR)

CKT. NO.	LOAD DESCRIPTION	VOLT	AMPERES AB	AMPERES BC	AMPERES CA	AMPERES 3PH	WIRE (mm^2) THHN/THWN	GROUND WIRE	CONDUIT (mm dia. PVC)	OCPD
1	FIREPUMP 50HP	230				130	80.0	14	65	200
2	JOCKEY PUMP 3HP	230				9.6	8.0	3.5	25	40
3	TRANSFER PUMP 1	230				42	22	8.0	40	100
4	TRANSFER PUMP 2	230				42	22	8.0	40	100
5	WASTEWATER	230				42	22	8.0	40	100
	TOTAL					265.6	2 SETS OF 3-60	80	80	350

MDP

SCHEDULE OF LOAD (SECOND FLOOR)

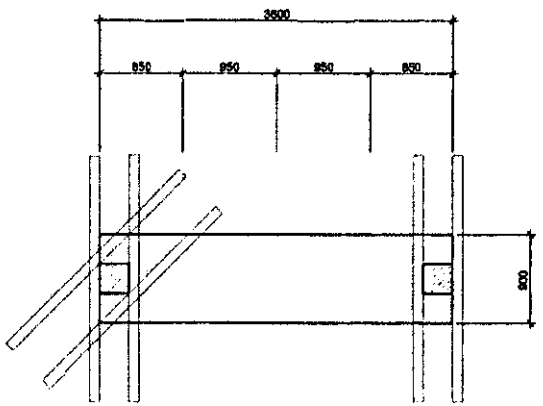
CKT. NO.	LOAD DESCRIPTION	VOLT	AMPERES AB	AMPERES BC	AMPERES CA	AMPERES 3PH	WIRE (mm^2) THHN/THWN	GROUND WIRE	CONDUIT (mm dia. PVC)	OCPD
1	DP 1 (GF)	230	194.99	189.36	189.89		2 SETS OF 3-60	30	80	400
2	DP 2 (2F)	230	165.31	170.68	170.60		2 SETS OF 3-60	30	80	350
3	PUMPHOUSE	230				265.6	2 SETS OF 3-60	30	80	350
	TOTAL		360.30	360.04	360.49	265.6	3 SETS OF 3-150	80	90*3	800

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

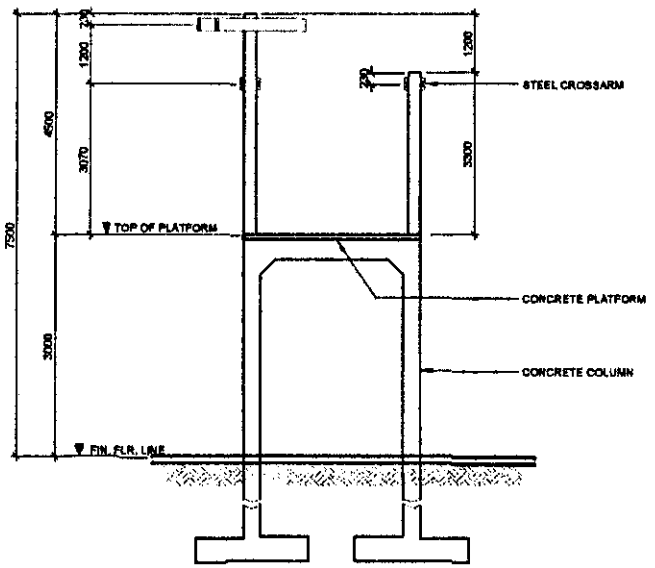
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PORT OF ROXAS, ORIENTAL MINDORO

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL	APPROVED BY:
RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JON GABRIELL M. MANANSALA	REYNAND C. PARAGINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

SHEET CONTENTS:	SCALE:
AS SHOWN	AS SHOWN
	SHEET NO. E-7 of 12
	DATE : 25 NOV 2024



PLAN
SCALE 1:100 M



ELEVATION
SCALE 1:100 M

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

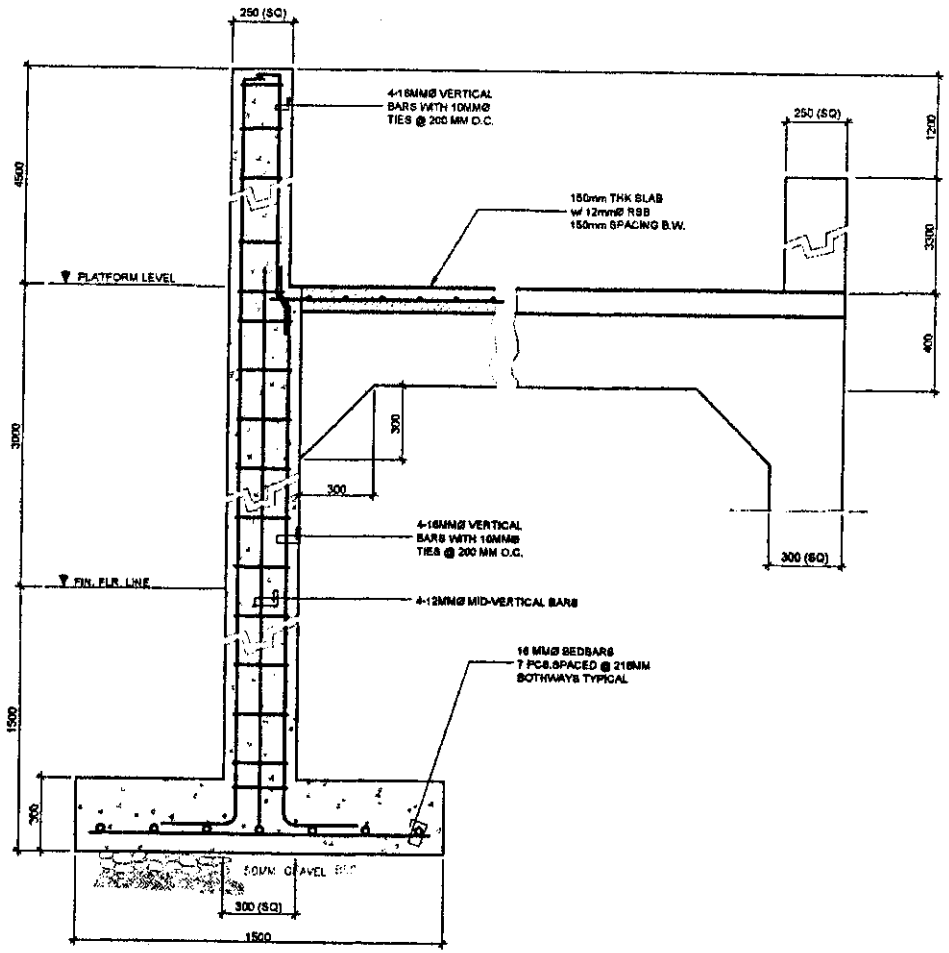
PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO C. DIMAILIG	JON GABRIELL M. MANANSALA	REYNANO C. PARAFINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

SHEET CONTENTS: AS SHOWN

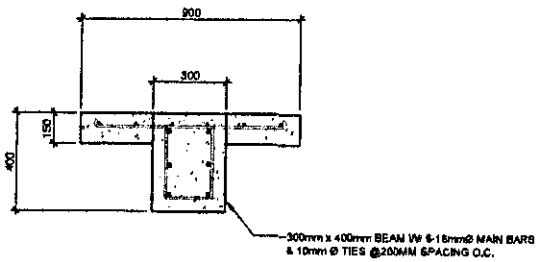
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SHEET NO. E-8 of 12

DATE : 25 NOV 2024



C1-F1 DETAIL
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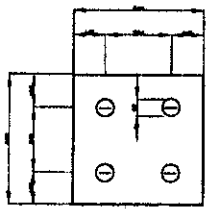
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PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

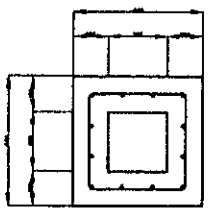
PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JOVI GABRIELL M. MANANSALA	REYNANO C. PARAFINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

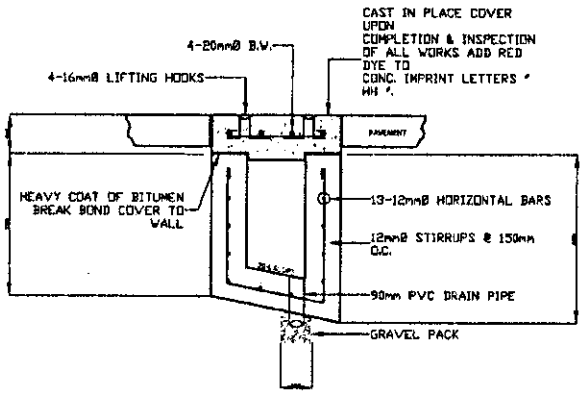
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	DATE : 25 NOV 2024



COVER



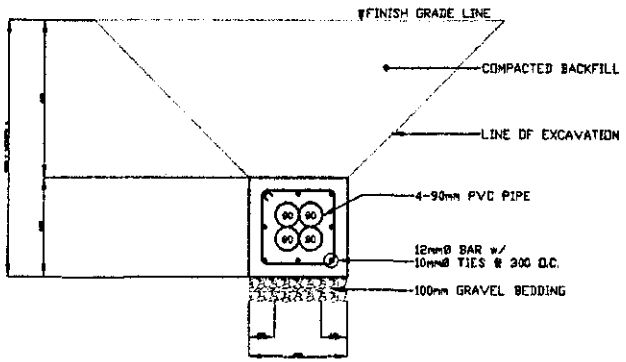
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SECTION

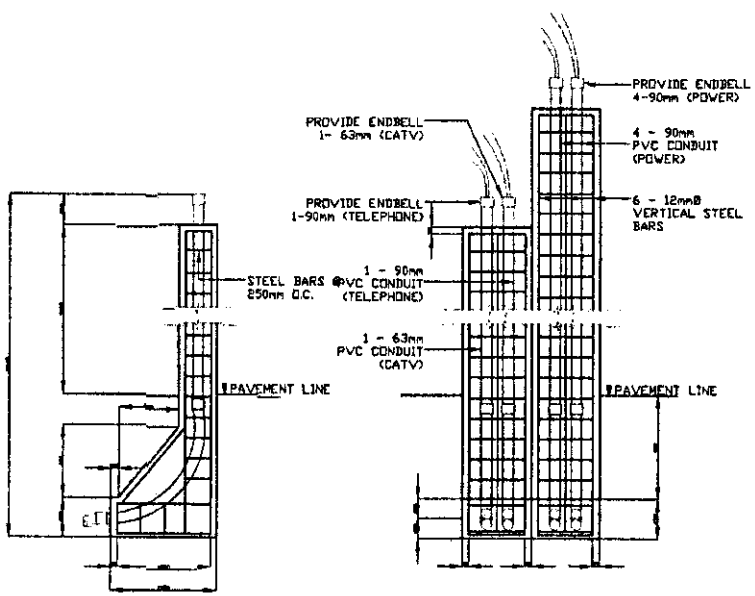
DETAIL OF HAND HOLE

SCALE NTS.



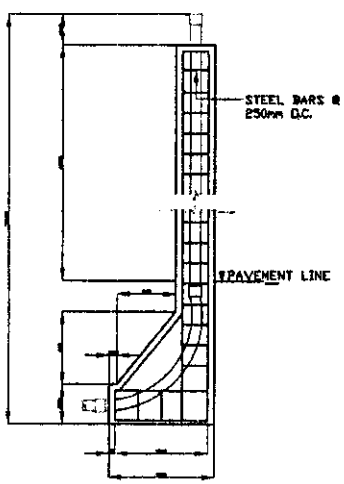
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DETAIL OF DUCTBANK (CONCRETE PEDESTAL POST)

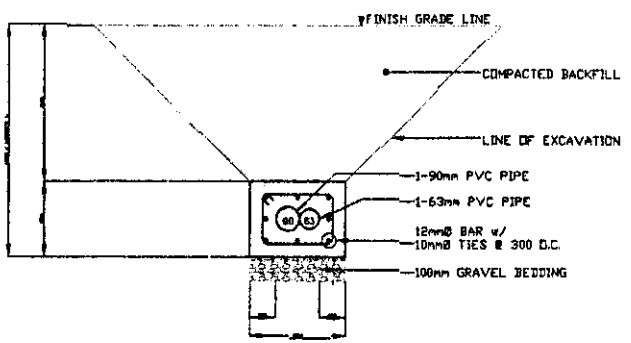


CATV & TELEPHONE

CONCRETE PEDESTAL POST



POWER



SECTION

DETAIL OF DUCTBANK (CATV / TELEPHONE)

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

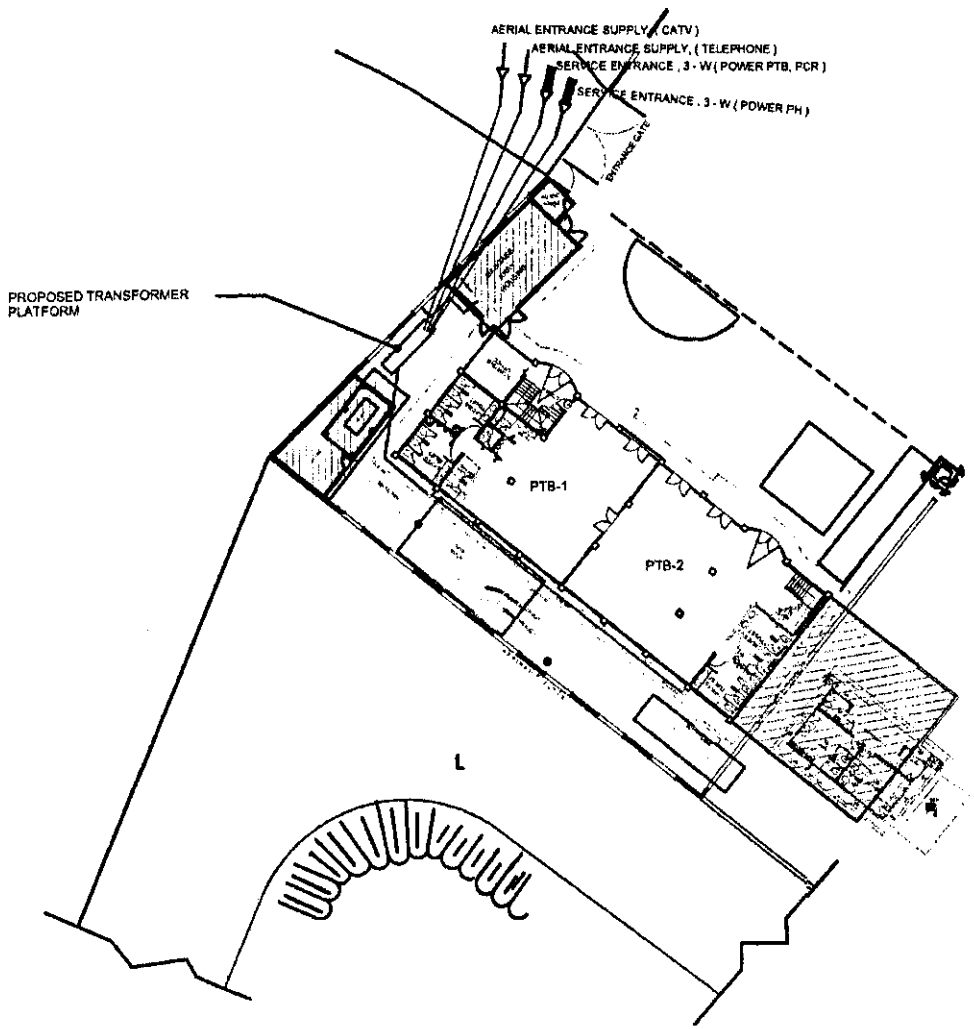
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RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JOHN GABRIELL M. MANANBALA	REYNAND C. RAFINA	JAMES L. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

SHEET CONTENTS: AS SHOWN

SCALE: AS SHOWN

SHEET NO. E-10 of 12

DATE : 25 NOV 2024



LEGEND:

- UNDERGROUND CONCRETE DUCTBANK
- SERVICE ENTRANCE , 3 - W (POWER PTB)
- SERVICE ENTRANCE , 3 - W (POWER PH)
- AERIAL ENTRANCE SUPPLY, (TELEPHONE)
- AERIAL ENTRANCE SUPPLY, (CATV)

P-1 SERVICE ENTRANCE LAYOUT PLAN

SCALE NTS

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

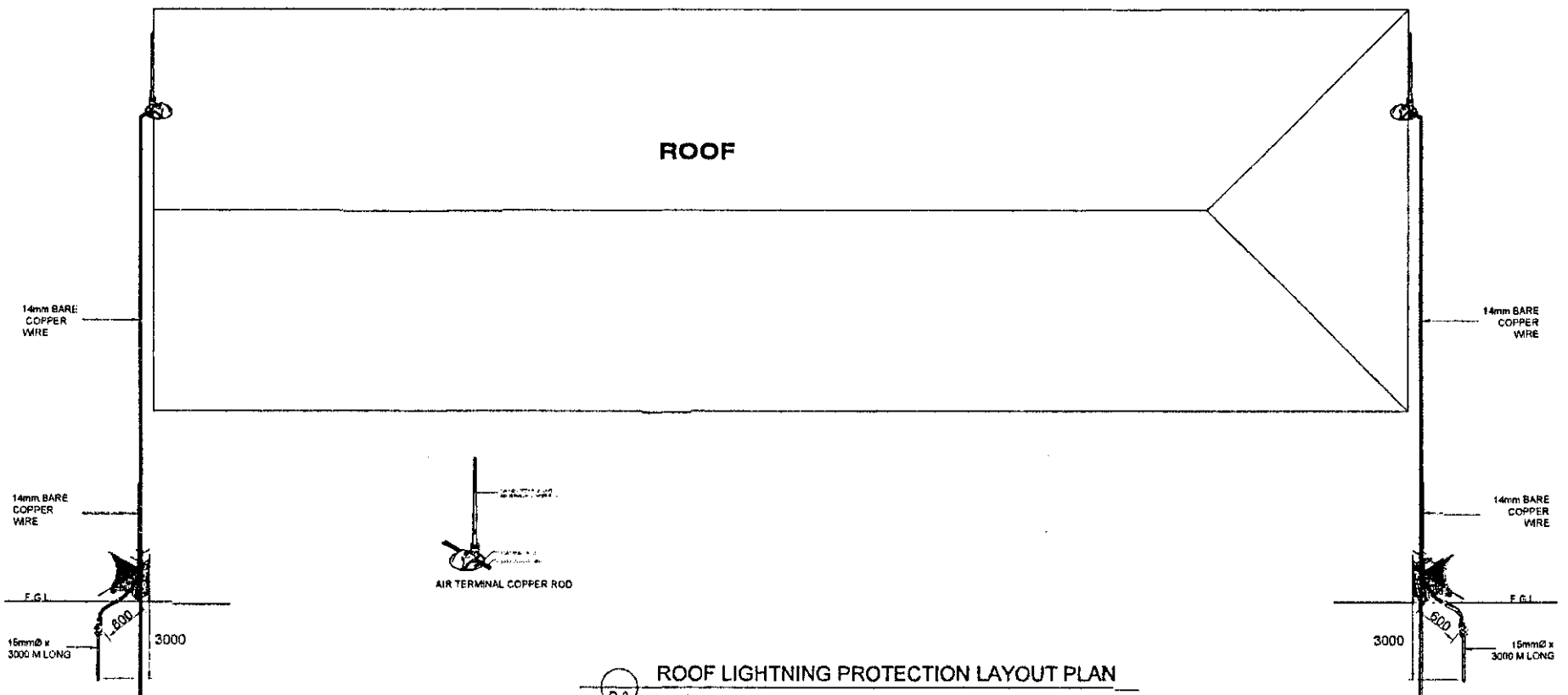
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SHEET NO. E-11 of 12

DATE : 25 NOV 2024

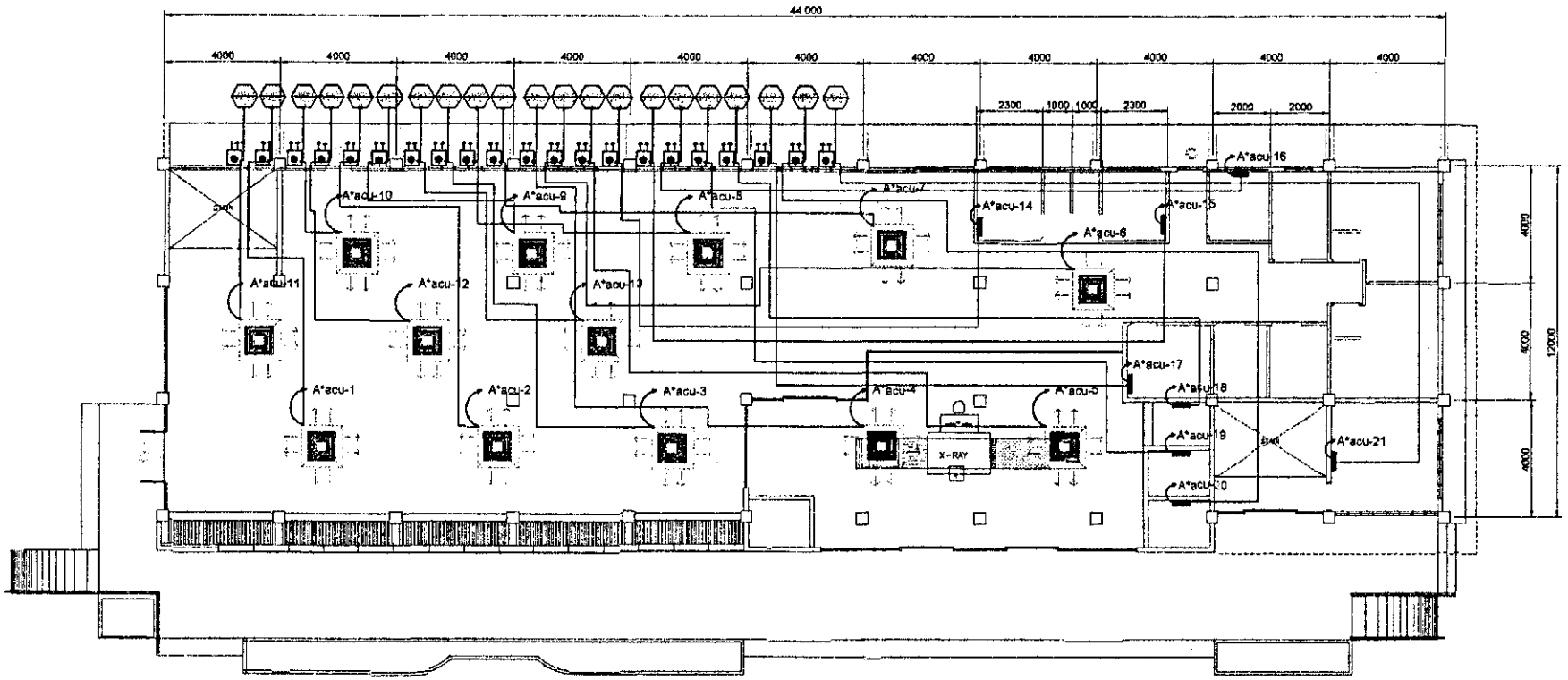
PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD D. MATIBAG	MARGARITO F. DIPAILIG	JON GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering



P-3 ROOF LIGHTNING PROTECTION LAYOUT PLAN

SCALE 1:150

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: RONALDO L. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO P. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JONISABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNANDO C. PATAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. GANALAO, Assistant General Manager for Engineering	AS SHOWN	SHEET NO. 1-12 of 12
						DATE : 25 NOV 2024



GROUND FLOOR AIR CONDITION UNIT LAY-OUT PLAN & OUTDOOR AIR COOLED CONDENSING UNIT (ACCU)

SCALE 1:150

LEGEND: HVAC SYMBOLS

CEILING CASSETTE AIR CONDITION
2 TR 1-PHASE, 220V, 60Hz

CEILING / WALL MOUNTED (SPLIT TYPE AIR CONDITION)
N-DOOR FAN COIL UNIT (FCU)
N-EQUIPMENT (HP) NUMBER

OUTDOOR ACCU-AIR COOLED CONDENSING UNIT
N- HORSEPOWER/HP/TONNAGE (TR)
LOCATION/ACU-NUMBER

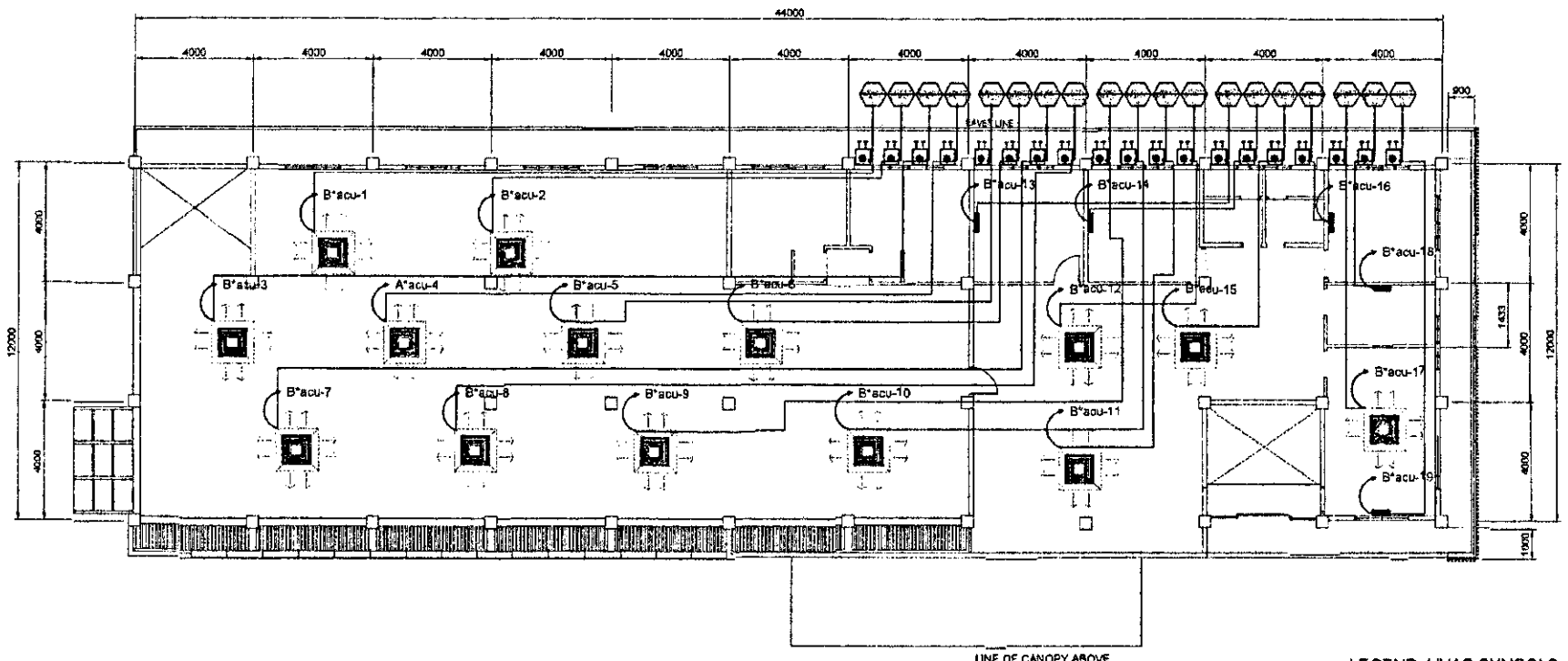
A*acu-N GROUND FLOOR ACU-(N) NUMBER
B*acu-N SECOND FLOOR ACU-(N) NUMBER

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

AS SHOWN

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:	AS SHOWN	SHEET NO. ACU-1 of 3
RONALD O. MATIBAG Acting Principal Engineer A	MARGARITO P. DUMALUG Division Manager A, ESD	JON GABRIELL M. MANANSALA Port Manager A	REYNANDO C. PARAFINA Manager, Port Planning and Design Department	JAMES J. GANTALAO Assistant General Manager for Engineering		DATE : 25 NOV 2024



SECOND FLOOR AIR CONDITION UNIT LAY-OUT PLAN & OUTDOOR AIR COOLED CONDENSING UNIT (ACCU)

SCALE 1:150

LEGEND: HVAC SYMBOLS

CEILING CASSETTE AIR CONDITION
2 TR 1-PHASE 220V, 60HZ

CEILING / WALL MOUNTED (SPLIT TYPE AIR CONDITION)
INDOOR FAN COIL UNIT (FCU)
IN-EQUIPMENT (HP) NUMBER

OUTDOOR ACCU-AIR COOLED CONDENSING UNIT
& HORSEPOWER/HP)/TONNER (TR)
LOCATION/ACU-NUMBER

A*acu-N GROUND FLOOR ACU-(N) NUMBER

B*acu-N SECOND FLOOR ACU-(N) NUMBER

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO O. DIMAILIG	JOY GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

AS SHOWN

AS SHOWN

SHEET NO. ACU-2 of 3

DATE : 25 NOV 2024

SPECIFICATIONS:

MECHANICAL EQUIPMENT SCHEDULE (CEILING MOUNTED CASSETTE TYPE INVERTER AIR CONDITION)

NOMINAL RATING (TR) (CEILING CASSETTE)	COOLING CAPACITY RANGE (KJ/HR)	POWER SUPPLY (V/PH/HZ)	INDOOR UNIT									OUTDOOR UNIT								
			UNIT DIMENSIONS (WxDxH) (mm)			SYSTEM POWER INPUT RANGE (W)	RATED CURRENT (AMPS)	EER RANGE (KJ/W - HR)	WEIGHT (kg)	AIR FLOW (m/hr)	SOUND LEVEL db(A)	UNIT DIMENSIONS (WxDxH) (mm)				PIPE CONNECTION				
			WIDTH (mm)	DEPTH (mm)	HEIGHT (mm)							WIDTH (mm)	DEPTH (mm)	HEIGHT (mm)	WEIGHT (kg)	LIQUID (mmØ)	GAS (mmØ)	REFRIGERANT	MAXIMUM LENGTH (m)	MAXIMUM VERTICAL SEPARATION (m)
3.0	40,090	230/1/60	840	840	245	3100/ 4300	17.06 16.00	12.30	25/30	2.100	43	990	354	956	71 / 83.5	9.5 (3/8")	15.90 (5/8")	R410A	30	

MECHANICAL EQUIPMENT SCHEDULE (SPLIT- TYPE WALL MOUNTED INVERTER AIR CONDITION)

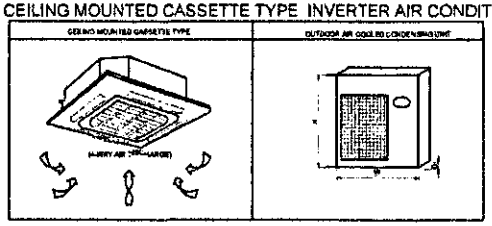
NOMINAL RATING (HP)	LEVEL	QTY	COOLING CAPACITY (KJ/HR)	SYSTEM POWER INPUT (WATTS)	SYSTEM CURRENT (A)	ENERGY EFFICIENT RATIO (EER) (KJ/W-HR)	POWER SUPPLY (V/PH/HZ)	INDOOR UNIT						OUTDOOR UNIT								
								UNIT DIMENSIONS (HxWxD) (mm)			UNIT WEIGHT (KG)	AIR VOLUME (m³/hr) (H/M/L/Lo)	SOUND LEVEL (dBA)	UNIT DIMENSIONS (HxWxD) (mm)			UNIT WEIGHT (KG)	SOUND PRESSURE LEVEL (dBA)	DATA PIPING				
								HEIGHT (mm)	WIDTH (mm)	DEPTH (mm)				HEIGHT (mm)	WIDTH (mm)	DEPTH (mm)			LIQUID (mm/inch)	GAS (mm/inch)	CONNECTION TYPE	MAX. PIPE LENGTH (m)	MAX. VERTICAL DIFFERENCE (m)
1.0	GROUND FLOOR	2.0 UNITS	10,440	770	3.53	15.20	220-230/1/60	740	195	250	8	522	39/36/32/ 34/30	600	240	530	26	61	6.35(1/4)	9.52(3/8)	FLARE	10	8
1.5	GROUND AND SECOND FLOOR	11.0 UNITS	13,665	910	4.55 4.60	15.20	220-230/1/60															

NOTES: PERFORMANCE RATING AND SPECIFICATION OF AIR CONDITION ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE DUE TO CONTINUOUS PRODUCT IMPROVEMENT.

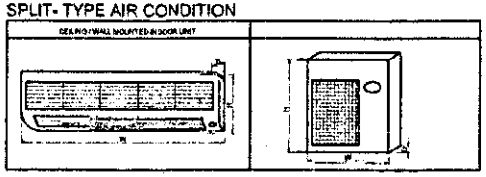
GENERAL NOTES
MECHANICAL (AC VENTILATION SYSTEM)

1. ALL MECHANICAL WORKS SHALL BE DONE IN ACCORDANCE WITH LATEST REQUIREMENTS OF THE PHILIPPINE NATIONAL BUILDING CODE AND REGULATION OF THE LOCAL MUNICIPALITY.
2. THE TOTAL SCOPE OF WORK SHALL INCLUDE ALL WORKS DESCRIBED IN PLANS AND LISTED IN THE TECHNICAL SPECIFICATIONS FOR MECHANICAL WORKS.
3. THE WORKS SHALL BE EXECUTED IN CLOSE COORDINATION WITH ALL TRADES.
4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, MANUFACTURER'S EQUIPMENT SPECIFICATIONS & MATERIAL SAMPLES TO INCLUDE VIBRATION ISOLATORS, INSULATIONS, DAMPERS. ETC. BEFORE EXECUTION OF WORK.
5. CONTRACTOR/SUPPLIER SHALL INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
6. PROVIDE SEISMIC RESTRAINTS FOR ALL RIGIDLY AND RESILENTLY SUPPORTED EQUIPMENT PER APPLICABLE CODE AND AS SPECIFIED.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL THE BALANCING, TESTING AND COMMISSIONING OF THE WHOLE VENTILATION AND AIR CONDITIONING SYSTEM AND INSTALLATION.
8. ALL POWER WIRINGS UP TO SPLICE BOX SHALL BE BY ELECTRICAL CONTRACTOR AND FROM SPLICE BOX TO EQUIPMENT BY MECHANICAL CONTRACTOR.
9. PROVIDE PIPE SLEEVES FOR ALL PIPING PASSING THROUGH BUILDING STRUCTURE.
10. PIPE ALL EQUIPMENT CONDENSATE DRAIN LINE TO THE NEAREST DRAIN.
11. PROVIDE GUIDE, HANGERS AND SUPPLEMENTAL BUPPORT STEEL FOR ALL PIPING.
12. ALL PIPING TO EQUIPMENT SHALL BE ARRANGED TO ALLOW EASY ACCESS FOR REMOVING AND CLEANING WITHOUT DISMANTLING PIPING.
13. ALL DUCT AND PIPE DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE NOTED.
14. THE MECHANICAL EQUIPMENT SCHEDULE INDICATED IN THE PLANS HAS CORRESPONDING MOTOR AND/OR ELECTRICAL DESIGN LOAD/S WHICH IS THE BASIS IN SIZING THE ELECTRICAL POWER SYSTEM. ANY PROPOSED CHANGES, ALTERATIONS, DEVIATIONS, OR OUTDOOR UNIT

CEILING MOUNTED CASSETTE TYPE INVERTER AIR CONDITION



SPLIT- TYPE AIR CONDITION



PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
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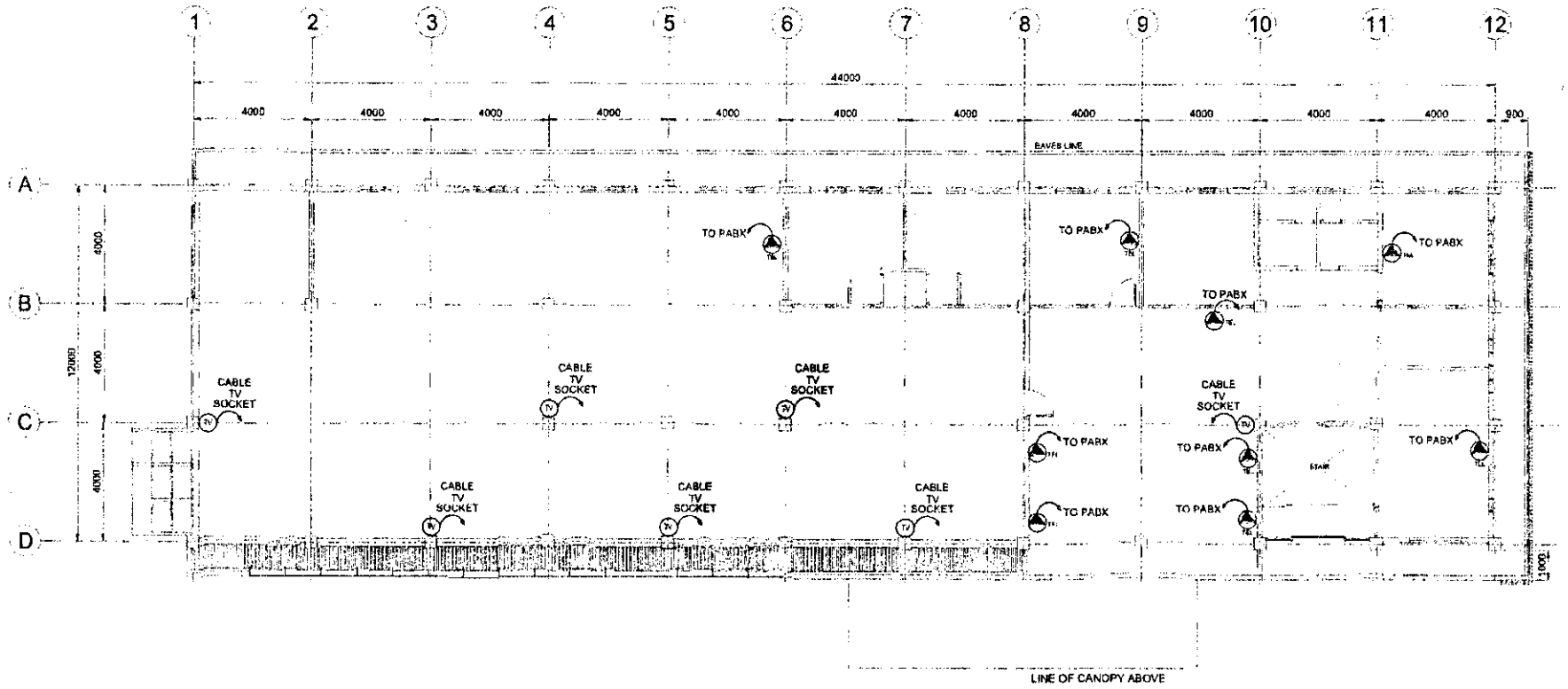
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SCALE: AS SHOWN

SHEET NO. ACU-3 of 3

DATE : 25 NOV 2024

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JON GABRIELL M. MANANSALA	REYNANO C. PARAFINA	JAMES U. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering



1 SECOND FLOOR CATV AND TELEPHONE LAYOUT PLAN

SCALE 1:150 M

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JON GABRIELL M. MANANSALA	REYNAND C. PORAFINA	JAMES J. CANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

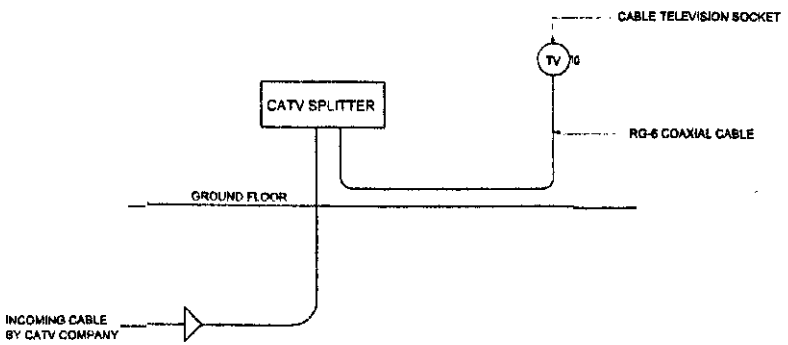
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AS SHOWN	SHEET NO. CATV/TEL - 01 of 03
	DATE : 25 NOV 2024

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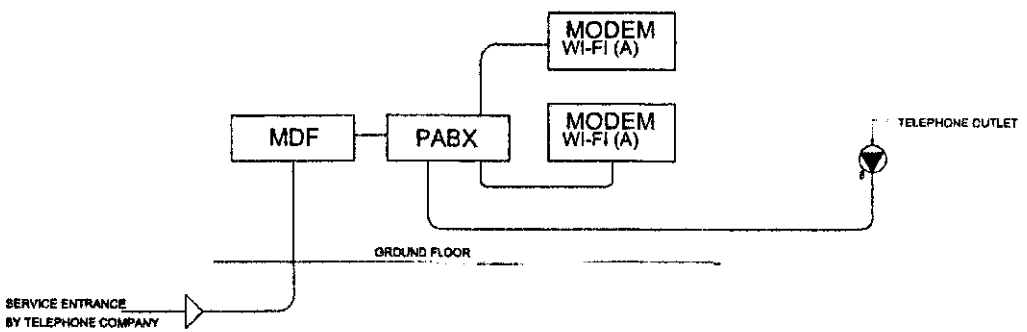
- TV - CABLE TV SOCKET
- CATV - COMMUNITY ANTENNA TELEVISION (CATV)
- INTERNET - LOCAL TELEPHONE COMPANY
- PABX - PRIVATE AUTOMATIC BRANCH EXCHANGE (PABX)
- TEL - TELEPHONE OUTLET
- MDF - MAIN DISTRIBUTION FRAME

NOTES CATV SYSTEM

1. MINIMUM SIZE OF WIRE AND CONDUIT SHALL BE RG-6 COAXIAL CABLE 75 OHMS IMPEDANCE IN 20mm Ø PVC ($\frac{3}{4}$Ø O.D.)
2. SERVICE PROVIDER OF CATV SYSTEM SHALL BE RESPONSIBLE TO BRING IN ENTRANCE CABLE FROM CATV SERVICE ENTRANCE. CONTRACTOR TO PROVIDE TAP CONDUIT WITH PULLWIRES ONLY
3. TOP OFF SHALL BE FLUSH MOUNTED WITH BACK MATCH OUTLET PLATES. IT SHALL BE PROVIDED WITH BUSHING AND CABLE CONNECTOR TO ACCEPT RG-6 COAXIAL CABLES.
4. MOUNTING HEIGHTS OF CATV OUTLET SHALLS BE CONFIRMED ON SITE AS PER INTSRUCTION OF THE ENGINEER.
5. FINAL LOCATION OF CATV OUTLETS SHALL BE AS PER ACTUAL CONDITIONS AT SITE.
6. THE CATV DISTRIBUTION AMPLIFIER SHALL ACCOMMODATE ALL INCOMING CATV COAXIAL CABLE REQUIREMENTS, REQUIRED FOR.



1 COMMUNICATION ANTENNA TELEVISION (CATV) SINGLE LINE DIAGRAM



2 TELEPHONE SINGLE LINE DIAGRAM

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
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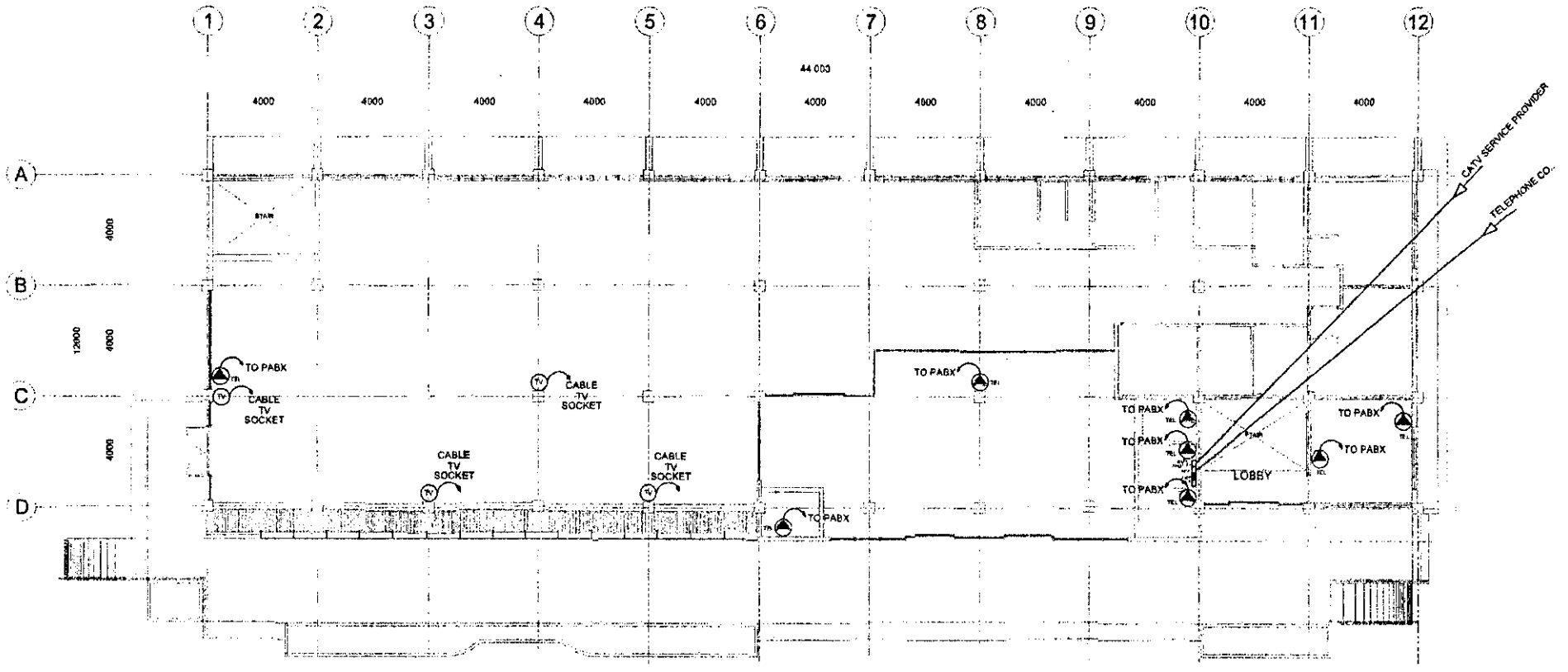
PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO P. PIMENTEL	JON GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

SHEET CONTENTS: AS SHOWN

SCALE: AS SHOWN

SHEET NO. CATV/TEL - 01 of 03

DATE : 25 NOV 2024



GROUND FLOOR CATV AND TELEPHONE LAYOUT PLAN

SCALE 1:150 M

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: RONALD O. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO P. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JON GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNANDO C. PARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. GANTALAO, Assistant General Manager for Engineering	AS SHOWN	SHEET NO. CATV/TEL - 01 of 03
						DATE : 25 NOV 2024

GENERAL NOTES

1. MOTORS, GENERATORS AND OTHER ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH NON-COMBUSTIBLE SPLASH PROOF SHIELDS OR HOODS.
2. SPRINKLER HEADS SPACED LESS THAN 1.40 M. (6 FT.) SHALL BE PROVIDED WITH BAFFLES OR DEFLECTORS.
3. FLOOR DRAINS FOR OIL SPILLS SHALL BE PROVIDED IN FLOOR SLAB FOR TRANSFORMER VAULT (BY PLUMBING CONTRACTOR).
4. ALL PORTABLE FIRE EXTINGUISHER (FXE) SHALL BE "ABC" TYPE DRY CHEMICAL UNLESS OTHERWISE SPECIFIED (INSIDE FIRE HOSE CABINETS A COMMON AREAS.)
5. ALL ELECTRICAL, MECHANICAL, AHU ROOMS TO BE PROVIDED WITH 10 LBS HALOTRON TYPE PORTABLE FIRE EXTINGUISHER
6. TRANSFORMER VAULT SHALL BE PROVIDED WITH 1-45 LBS. WHEELED TYPE HALOTRON PORTABLE FIRE EXTINGUISHER
7. ALL INSTALLATION SHALL FOLLOW THE PERTINENT NFPA-13 STANDARDS
8. FOR AREAS WITH AN EXISTING FIRE PROTECTION SYSTEM LAYOUT, DESIGN MODIFICATIONS SHALL BE SUBJECT TO ADMIN. APPROVAL
9. IN AREAS WHERE NON-COMBUSTIBLE (ACOUSTIC TYPE OR THE LIKE) DROP CEILING INSTALLED, INSTALL PENDENT TYPE HEADS WILL BE SAME TYPE OR BRAND AS WHAT HAVE BEEN
10. IN AREAS WHERE NON-COMBUSTIBLE (ACOUSTIC TYPE OR THE LIKE) DROP CEILING INSTALLED, INSTALL PENDENT TYPE HEADS WILL BE SAME TYPE OR BRAND AS WHAT HAVE BEEN
11. IN AREAS WHERE NON-COMBUSTIBLE (PLYWOOD) DROP CEILING AN UPRIGHT TYPE SPRINKLER HEAD SHALL BE INSTALL ON CEILING VOID.
12. ALL AREAS ROOM SPACE, PENDENT TYPE SPRINKLER HEADS SHALL BE USED WITH ESCUTCHEON PLATES
13. DISTANCE OF SPRINKLER HEAD (PENDENT OR UPRIGHT) TO A WALL OR HIGH PARTITION MUST NOT EXCEED 2.25M
14. MAXIMUM DISTANCE OF A SPRINKLER UNIT FROM THE SLAB SHALL BE 300M.
15. MAXIMUM COVERAGE OF ONE SPRINKLER HEAD (PENDENT OR UPRIGHT TYPE) IS EQUIVALENT TO A ROOM DIMENSION OF 4.6 X 4.6M (AREA). IRREGULAR CEILING OR CEILING WITH OBSTRUCTION (NOT FLAT) SHALL BE SUBJECT TO THE FIRE PROTECTION CONSULTANT APPROVAL.
16. PIPES SHALL BE BLACK IRON (B.I.) PIPES, SCHEDULE 40 WITH FIRST AND FINAL COATING OF SAFETY RED PAINT. FITTINGS SHALL CONFORM WITH ASTM A 53A153
17. ALL PIPE LINE SHALL BE B.I. PIPE SCHEDULE 40 AND TO BE SUBJECTED TO HYDROSTATIC TEST OF NOT LESS THAN 200 PSI FOR TWO HOURS. NO VISIBLE LEAKAGE FOR INSIDE SPRINKLER PIPING SHALL BE ALLOWED.
18. PIPES SLEEVE SHALL BE PROVIDED ON EVERY PIPES PASS THROUGH WALLS AND BEAM, AND FIRE SEALANT SHALL BE RHE SAME FIRE RATING OF WALLS PARTITION.
19. CONTRACTOR SHALL PROVIDE 2 COATING ANTI RUST PAINT & 2 COATING OF FINAL PAINT FOR ALL PIPING CONNECTION
20. CONTRACTOR HAS HAVE OPTION TO PROPOSE ALTERNATIVE & APPROVED PIPE MATERIAL SUITABLE FOR SUCH APPLICATION.
21. OUTSIDE UNDERGROUND PIPE, USE G.I PIPE SCH 40, APPLY 3 COATS OF COAL TAR PAINT & WRAPPED AROUND WITH GEOTEXTILE TO TRUE PRIOR TO EMBED THE GROUND.

MATERIAL SPECIFICATIONS

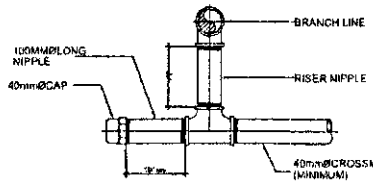
FIRE LINES	FIRE LINES SHALL BE BLACK IRON (B.I.) PIPES SCHEDULE 40 "STANDARD" CONFORMING TO ASTM A-120-1986 "SUPREME", "APCO" BRAND OR APPROVED EQUIVALENT.
GATE VALVES	GATE VALVES SHALL BE OUTSIDE SCREW AND YOKE (OS & Y) TO ASTM B-62 CHECK AND GLOBE VALVES TO ASTM B-62.
SPRINKLER HEADS	ALL SPRINKLER HEADS, PENDENT (CONCEALED UPRIGHT & SIDEWALL) SHALL BE RATED 57 C (135°F) TO 74 C (165°F) EXCEPT ON PUMP & MECHANICAL ROOM SHALL BE 79°C 175°F) TO 100°C (212°F)

ABBREVIATION:

AV	ANGLE VALVE	ACV	ALARM CHECK VALVE
APSS	AUTOMATIC FIRE SPRINKLER SYSTEM	PRV	PRESSURE RELIEF VALVE
(OS&Y) GV	(OUTSIDE & YOKE) GATE VALVE	ITC	INSPECTOR TEST CONNECTION
GV	GATE VALVE	DL	DRAIN LINE
CV	CHECK VALVE	FV	FLOATER VALVE
FCV	FLOOR CONTROL VALVE	EP	JOCKEY PUMP
DV	DRAIN VALVE	FH	ELECTRIC PUMP
WFB	WATER FLOW SWITCH	WSP	FIRE HOSE
FHV	FIRE HOSE VALVE	FDC	WET STAND PIPE
FHC	FIRE HOSE CABINET	FD/DT	FIRE DEPARTMENT INLET
FD/FC	FLEXIBLE CONNECTION/ADJUC COUPLING		CONNECTION ROOF MANIFOLD OUTLET (SIAMESE TWIN)

LEGEND

RECESSED PENDENT TYPE SPRINKLER HEAD (CHROMED FINISHED WITH ESCUTCHEON PLATE)
CHECK VALVE
GATE VALVE(OS&Y)
DRAIN VALVE
SPRINKLER RISER
FOVHTC DL STACK RISER
FLUSHING CONNECTION
FIRE HOSE VALVE
FIRE HOSE CABINET
ALARM CHECK VALVE ASSEMBLY
AUTOMATIC AIR VENT
AFFS COMBINATION PIPE LINE
DRAIN LINE
INSPECTOR TEST CONNECTION
PRESSURE RELIEF VALVE
SIGHT GLASS
FLOW SWITCH
ROOF MANIFOLD OUTLET (SIAMESE TWIN)
FIRE DEPARTMENT INLET CONNECTION
MECHANICAL FLOAT VALVE



1 FP-01 DETAIL OF FLUSHING CONNECTION
NOT TO SCALE

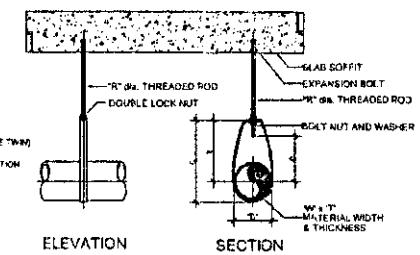


TABLE OF DIMENSIONS IN MM

PIPE SIZE "D" (MM)	ROD DIA "R" (MM)	A	B	C	W (WIDTH)	L THK(s)	W x T
25	10	38	55	76	22	1.8	25 x 3
32	10	46	65	87	22	1.8	25 x 3
40	10	49	57	98	22	1.8	25 x 3
50	10	58	76	106	22	1.8	25 x 3
65	15	76	98	125	38	2.5	25 x 3
75	15	84	108	152	38	2.5	40 x 6
100	15	90	124	161	52	2.5	40 x 6
150	20	132	152	246	68	4.5	40 x 6

2 FP-01 DETAIL OF PIPE HANGER
NOT TO SCALE

SCHEDULE OF EQUIPMENT

SCHEDULE OF EQUIPMENT: FIRE AND JOCKEY PUMP SPECIFICATIONS

EQUIPMENT	SPECIFICATION	NUMBER OF UNITS	LOCATIONS	REMARKS
FIRE PUMP UL LISTED/FM APPROVED (ELECTRIC DRIVEN)	THE FIRE PUMP SHALL BE ELECTRIC DRIVEN VERTICAL TURBINE TYPE. THE DRIVE SHALL BE DIRECT CONNECTED TO THE PUMP SHAFT AND TO BE EQUIPPED WITH A NON REVERSE RATCHET AND CONNECTED DIRECTLY TO THE ENGINE BY AN APPROVED FLEX SHAFT PROVIDED WITH ENCLOSING GUARD AS RECOMMENDED IN NFPA-20 PAMPHLET. THE PUMP SHALL BE SUPPLIED WITH ALL ACCESSORIES TO INCLUDE CONTROLLERS, CIRCUIT BREAKERS, STARTERS, CONTACTORS, TRIMS AND ITS ACCESSORIES TO COMPLETE THE WORKS. THE FIRE PUMP VOLUMETRIC CAPACITY SHALL BE 380 GPM VS. 76 FT. TDH APPROX. 20 HP, 380V/3Ø/60HZ CUT IN 121 PSIG CUT OFF: MANUAL	1-SET COMPLETE WITH ACCESSORIES	PUMP ROOM @ BASEMENT LEVEL	UNIT SHALL BE FIREHANKS MORSE, ITT AC-PUMP, FLOWAY PUMP Co., PEERLESS PUMP Co.
JOCKEY PUMP	JOCKEY PUMP SHALL BE ELECTRIC MOTOR DRIVE AND VERTICAL TURBINE TYPE TO BE SUPPLIED WITH ACCESSORIES TO INCLUDE CONTROLLER, CIRCUIT BREAKERS, STARTER, CONTACTORS, CONTROLS, TRIMS AND ITS ACCESSORIES. JOCKEY PUMP VOLUMETRIC CAPACITY IS 38 GPM VS. 87 FT. TDH, 2 HP, 220V/3Ø/60HZ CUT IN 131 PSIG CUT OFF: 141 PSIG	1-SET COMPLETE WITH ACCESSORIES	PUMP ROOM @ BASEMENT LEVEL	UNIT SHALL BE GRUNDFOS, MTH HAMMER
CONTROLLER UL LISTED/FM APPROVED	FIRE PUMP CONTROLLER SHALL BE A FACTORY ASSEMBLED AND WIRED WITH A POWER TRANSFER SWITCH WIRED AND TESTED AND SHALL CONFORM TO ALL THE REQUIREMENTS TO THE LATEST EDITION OF NFPA 70, STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR THE FIRE PROTECTION AND NFPA 70, NATIONAL ELECTRICAL CODE. THE CONTROLLER SHALL BE LISTED BY UNDERWRITERS LABORATORIES, INC. IN ACCORDANCE WITH UL218 JOCKEY PUMP CONTROL PANELS, FURNISH READY FOR WIRING JOCKEY PUMP, GENERAL ELECTRIC 35 TYPE "E" WITH H-O AUTOMATIC SWITCH AND TIMER RUN RELAYS, WITH THREE OVERLOAD RELAYS ON NEMA 2 ENCLOSURE, SIMILAR TO CLARK CONTROLLER INC. "CUTLER HAMMER", "PIRETROL" BRAND OR APPROVED EQUAL.	1-SET COMPLETE WITH ACCESSORIES	PUMP ROOM @ BASEMENT LEVEL	UNIT SHALL BE: PIRETROL, CUTLER HAMMER, METHON
SYSTEM REQUIREMENTS	380 GPM VS. 34 PSIG (76 FT. TDH)			

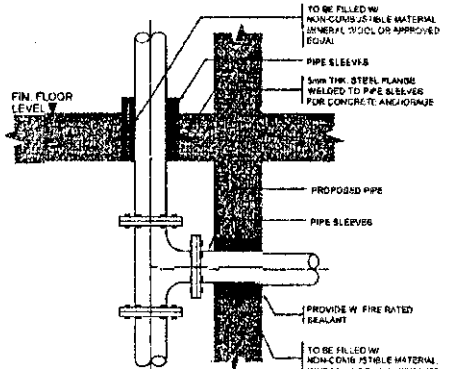
SCHEDULE OF PIPE SLEEVES

SIZE OF BRANCH PIPE	SIZE OF PIPE SLEEVES
25MM⌀	50MM⌀
32MM⌀	65MM⌀
40MM⌀	65MM⌀
50MM⌀	75MM⌀
65MM⌀	100MM⌀
75MM⌀	100MM⌀
100MM⌀	150MM⌀
150MM⌀	225MM⌀
200MM⌀	300MM⌀

NOTES

SLEEVES SHALL BE PROVIDED AROUND ALL PIPING EXTENDING THROUGH WALLS, FLOORS, PLATFORMS AND FOUNDATIONS

1. THE CLEARANCE BETWEEN THE PIPE SLEEVES SHALL BE FILLED W/NON-COMBUSTIBLE FLEXIBLE MATERIAL SUCH AS MINERAL WOOL, FIBERGLASS OR EQUIVALENT.
2. MINIMUM CLEARANCE BETWEEN PIPE AND SLEEVES SHALL NOT BE LESS THAN 25MM FOR PIPE 25MM THROUGH 75MM & 40MM FOR PIPE SIZE 100MM AND LARGER FLOOR SLEEVES SHALL BE EXTENDED AT LEAST 15MM ABOVE THE TOP OF THE WEARING SURFACE



3 FP-01 DETAIL OF PIPE SLEEVE
NOT TO SCALE

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

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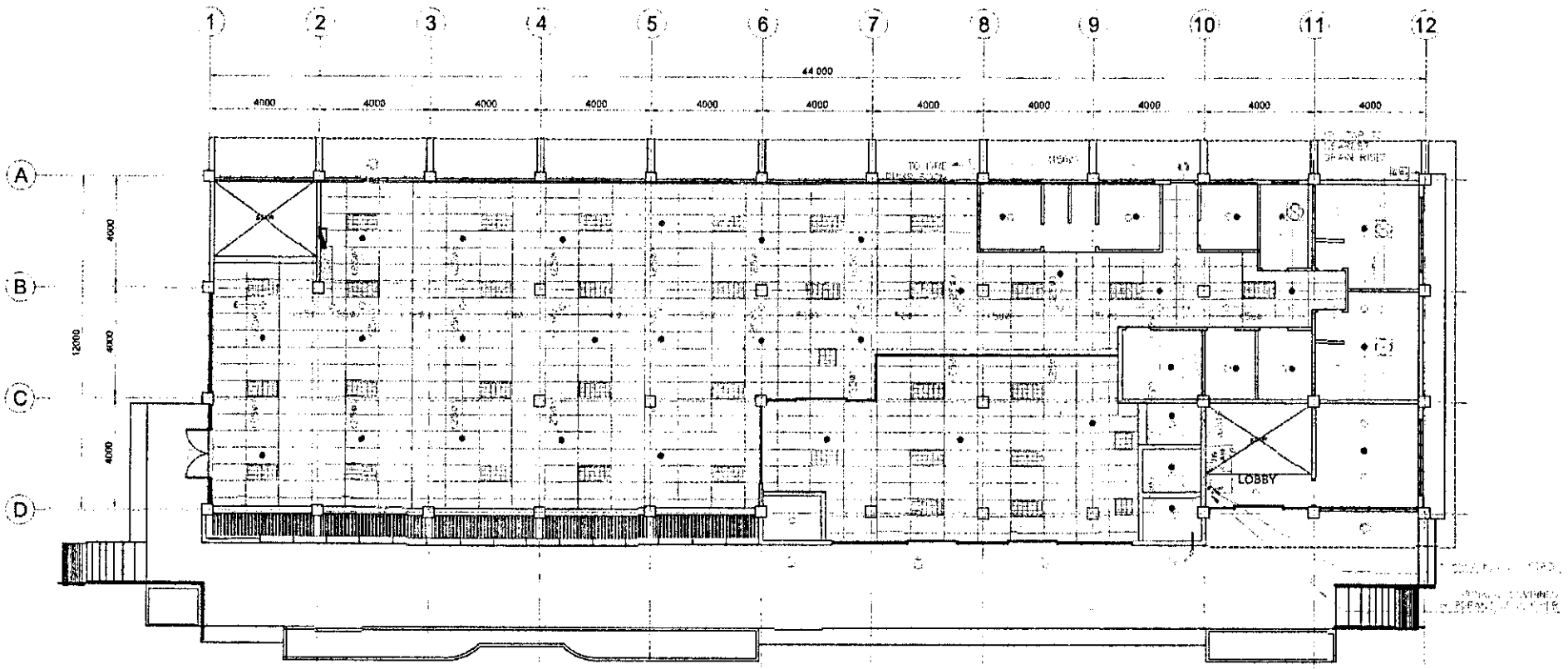
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PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG Acting Principal Engineer A	MARGARITO P. BAMALIG Division Manager A, ESD	JONG GABRIELL M. MANANSALA Port Manager A	REYNAND C. ARAFINA Manager Port Planning and Design Department	JAMES J. GANTALAO Assistant General Manager for Engineering

AS SHOWN

SHEET NO. FP - 01 of 09

DATE : 25 NOV 2024



1 FP-02 **GROUND FLOOR SPRINKLER LAYOUT**

SCALE 1:150 M

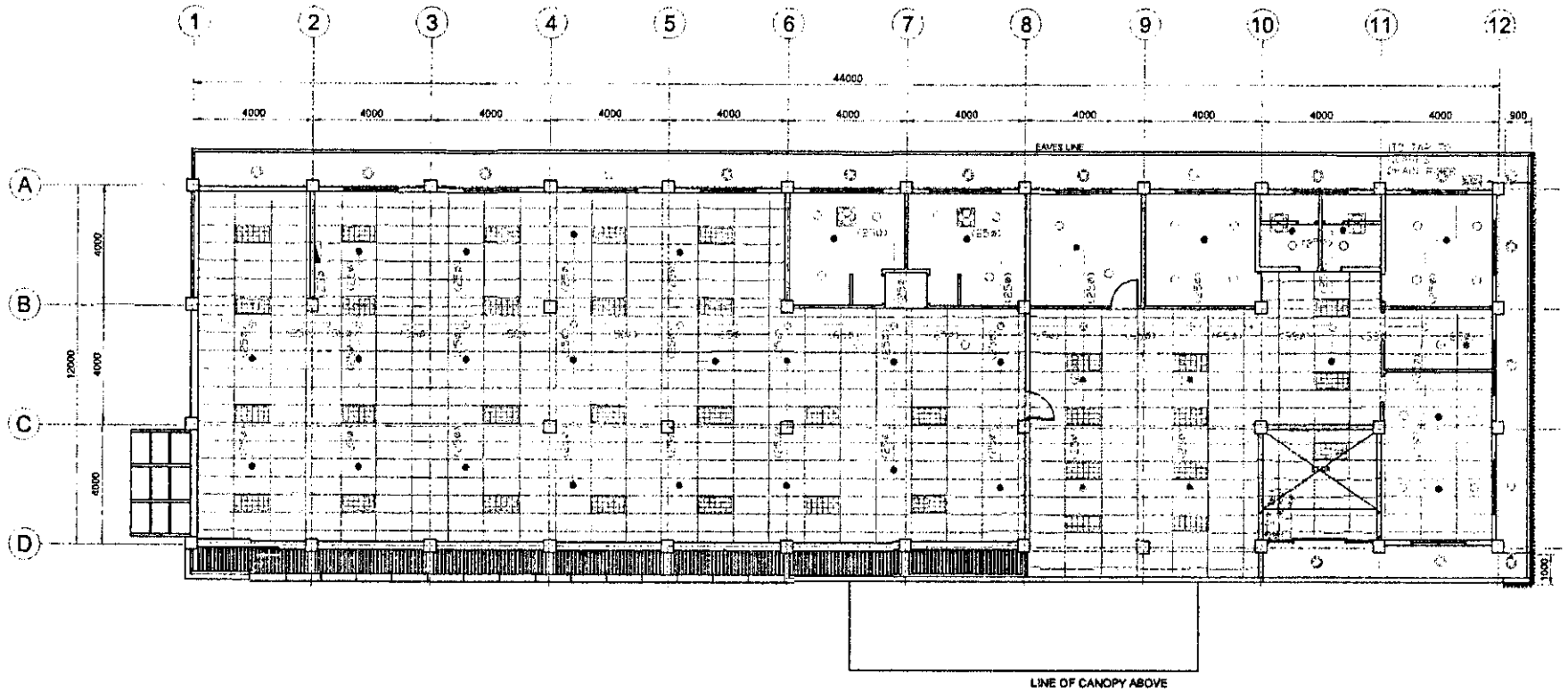
LEGEND:	
	LIGHTING FIXTURES
	EXHAUST FAN
	PENDANT SPRINKLER HEADS
	FIRE HOSE CABINET (FHC)
	SPRINKLER SYSTEM LINE

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
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Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager,Port Planning and Design Department	Assistant General Manager for Engineering

SHEET CONTENTS:	SCALE: AS SHOWN
AS SHOWN	SHEET NO. FP - 02 of 09
	DATE : 25 NOV 2024



1 FP-03 SECOND FLOOR SPRINKLER LAYOUT

SCALE 1:150 M

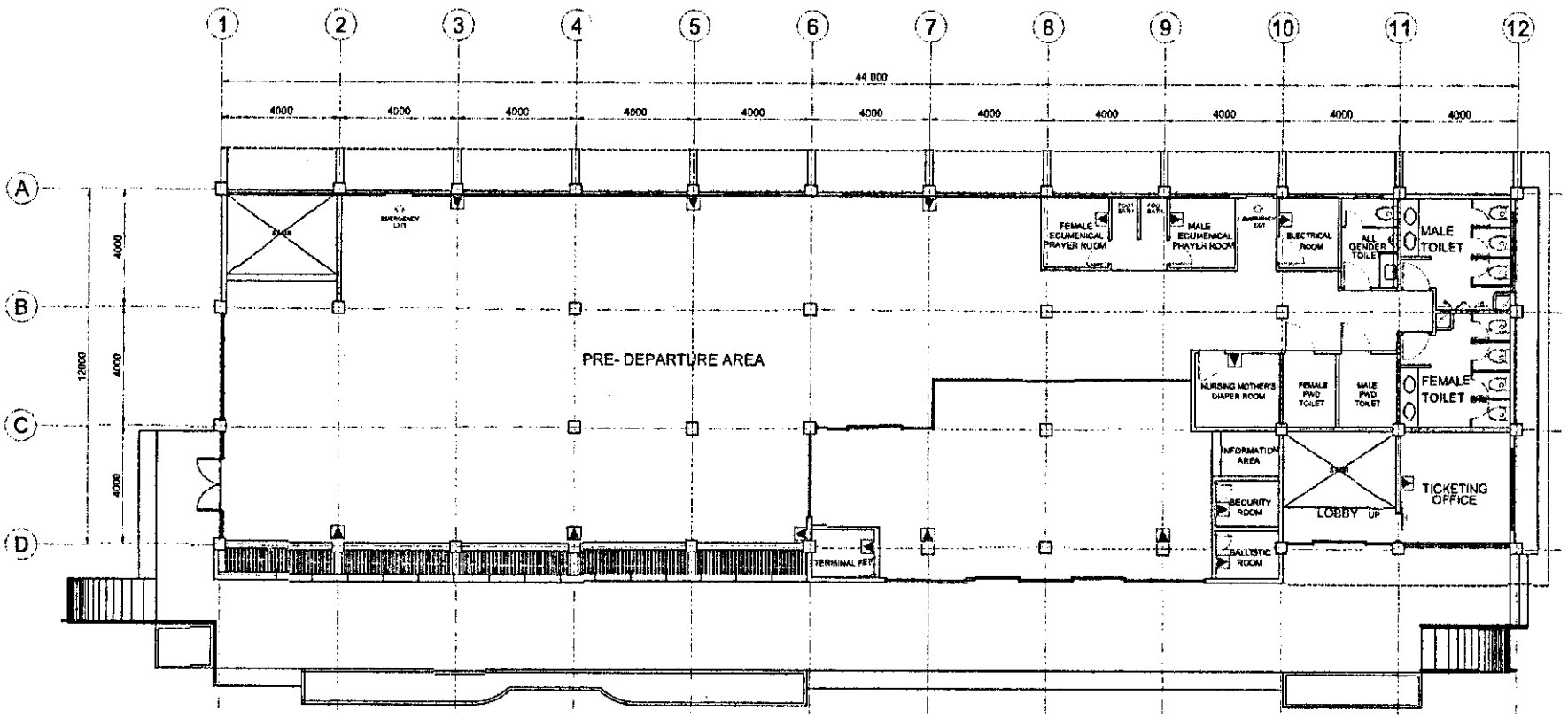
LEGEND:	
	LIGHTING FIXTURES
	EXHAUST FAN
	PENDANT SPRINKLER HEADS
	FIRE HOSE CABINET (FHC)
	SPRINKLER SYSTEM LINE

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO P. D'MALIG	JONA GABRIELL M. MANANSALA	REYNANO C. PARAFINA	JAMES J. QUINTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager,Port Planning and Design Department	Assistant General Manager for Engineering

SHEET CONTENTS:	SCALE: AS SHOWN
AS SHOWN	SHEET NO. FP - 03 of 09
	DATE : 25 NOV 2024



1 FP-04 **GROUND FLOOR FIRE EXTINGUISHER LAYOUT**

SCALE 1:150 M

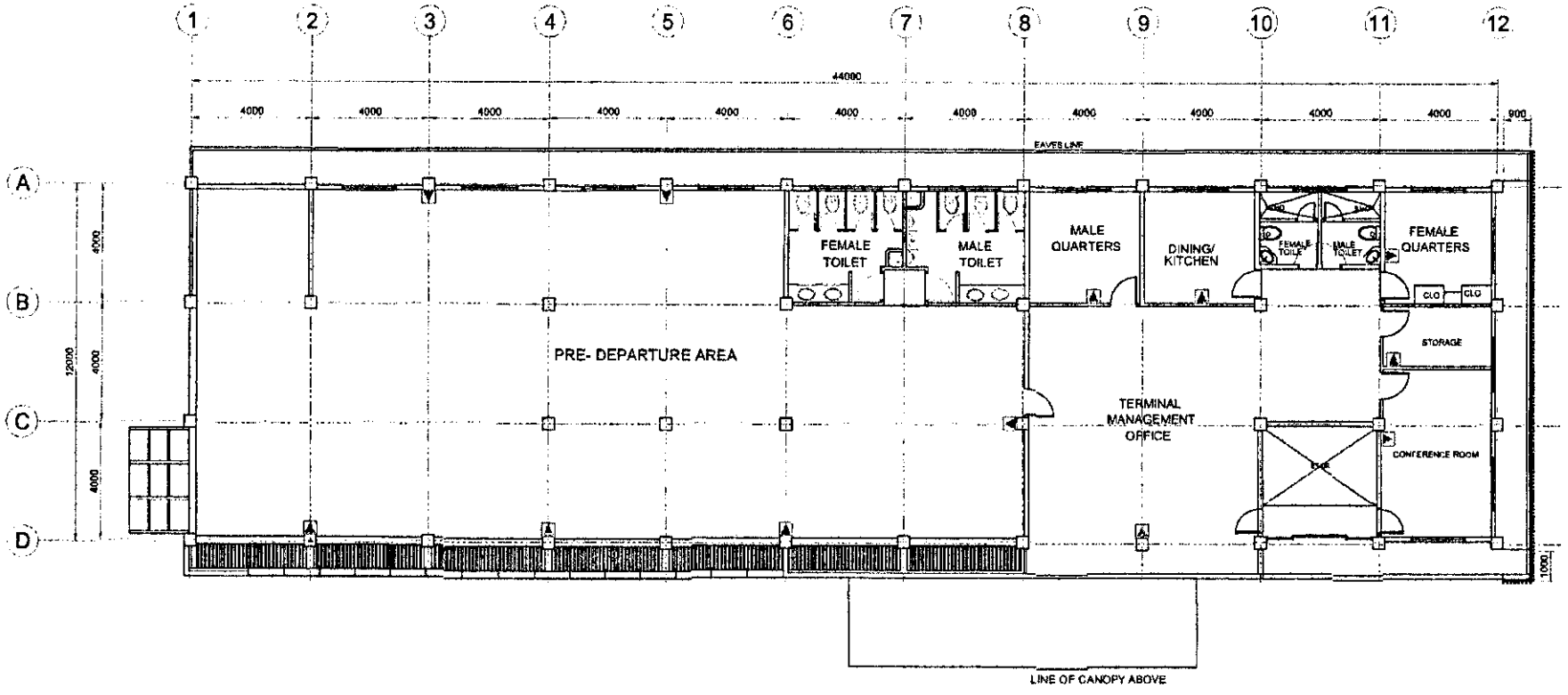
LEGEND:	
	FIRE EXTINGUISHER TOTAL = 17 FIRE EXTINGUISHER

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
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SHEET CONTENTS:	SCALE: AS SHOWN
AS SHOWN	SHEET NO. FP - 04 of 09
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1 FP-05 SECOND FLOOR FIRE EXTINGUISHER LAYOUT

SCALE 1:150 M

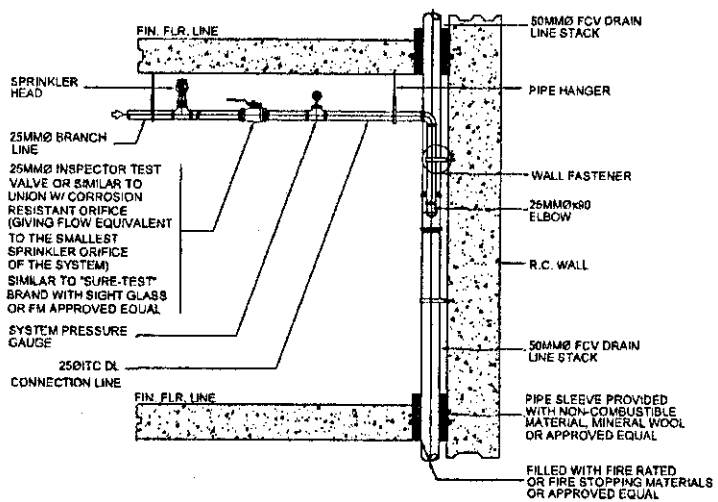
LEGEND:	
	FIRE EXTINGUISHER TOTAL = 12 FIRE EXTINGUISHER

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

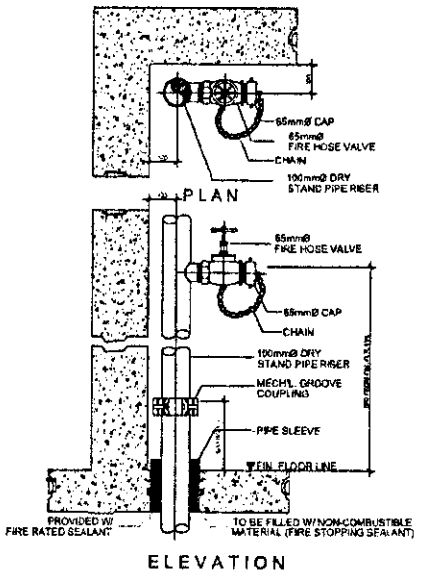
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RONALD O. MATIBAG Acting Principal Engineer A	MARGARITO P. DUMALIG Division Manager A, ESD	JONG BRIELL M. MANANSALA Port Manager A	REYNAND C. ARAFINA Manager, Port Planning and Design Department	JAMES J. GANTALAO Assistant General Manager for Engineering

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	DATE : 25 NOV 2024



1 FP-06 DETAIL OF INSPECTOR TEST CONNECTION

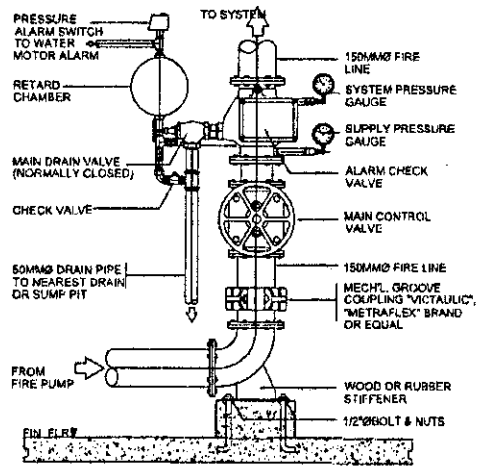
NOT TO SCALE



ELEVATION

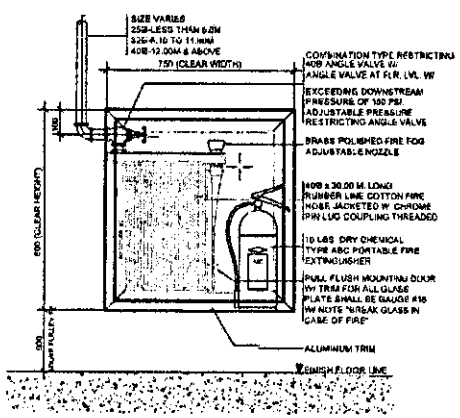
2 FP-06 DETAIL OF FIRE HOSE VALVE

NOT TO SCALE

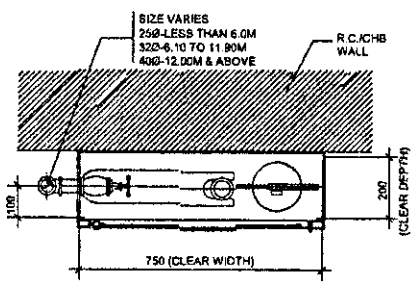


3 FP-06 DETAIL OF ALARM CHECK VALVE ASSEMBLY (WET TYPE)

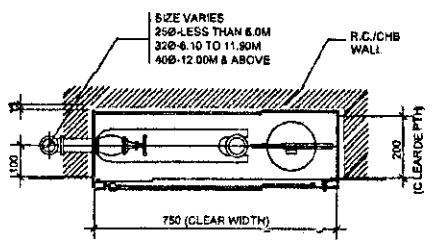
NOT TO SCALE



ELEVATION



PLAN
(SURFACE MOUNTED)



PLAN
(RECESSED TYPE)

4 FP-06 DETAIL OF FIRE HOSE CABINET

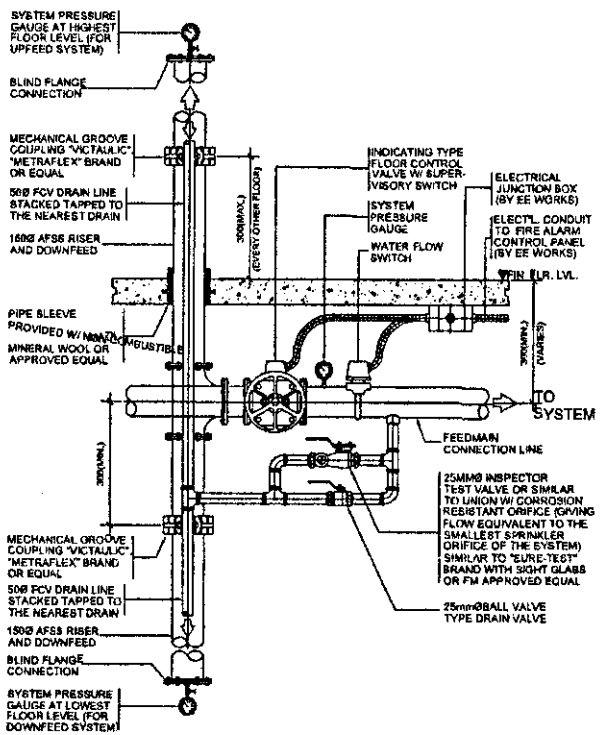
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PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

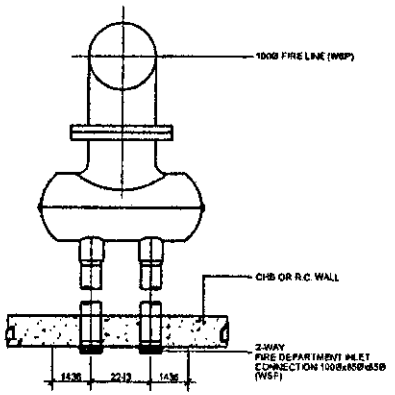
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RONALD O. MATIBAG	MARGARITO A. DIMAILIG	JON GABRIELL M. MANANSALA	REYNAND C. PERAFINA	JAMES S. GANTALAO
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	DATE : 25 NOV 2024

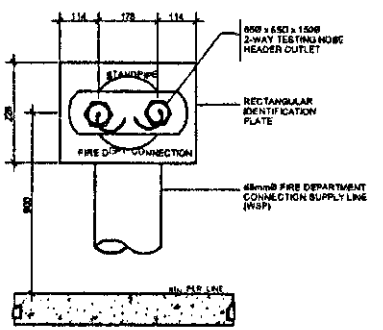


DETAIL OF SUPERVISORY FLOOR CONTROL VALVE ASSEMBLY

1 / FP-07 NOT TO SCALE



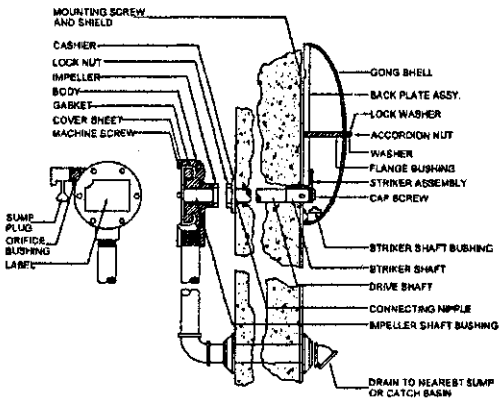
SECTION



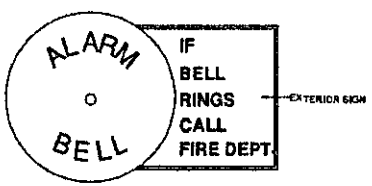
ELEVATION

DETAIL OF FIRE DEPARTMENT INLET CONNECTION

2 / FP-07 NOT TO SCALE



SECTION



ELEVATION

DETAIL OF ALARM MOTOR GONG

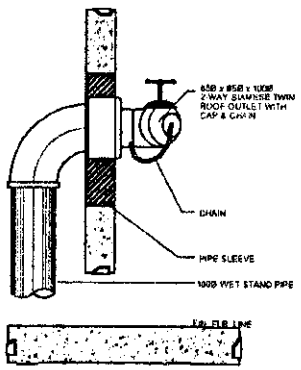
3 / FP-07 NOT TO SCALE

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

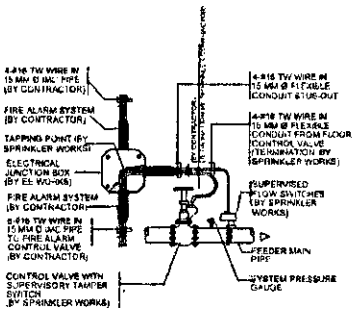
PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

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RONALD O. MATIBAG	MARGARITO P. DURALIG	JONA GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. SANTALAO
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	SHEET NO. FP - 07 of 09
	DATE : 25 NOV 2024

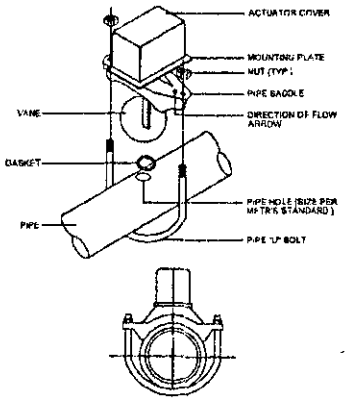


SECTIONAL ELEVATION



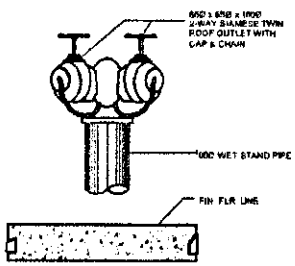
2 FP-08 SPOT DETAIL

NOT TO SCALE



3 FP-08 WATERFLOW SWITCH DETAIL

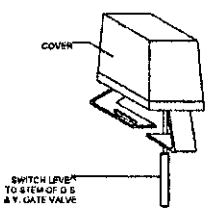
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SECTION

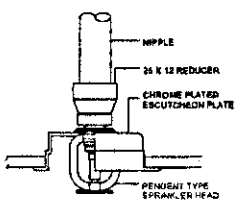
1 FP-08 DETAIL OF ROOF MANIFOLD OUTLET (SIAMESE TWIN)

NOT TO SCALE



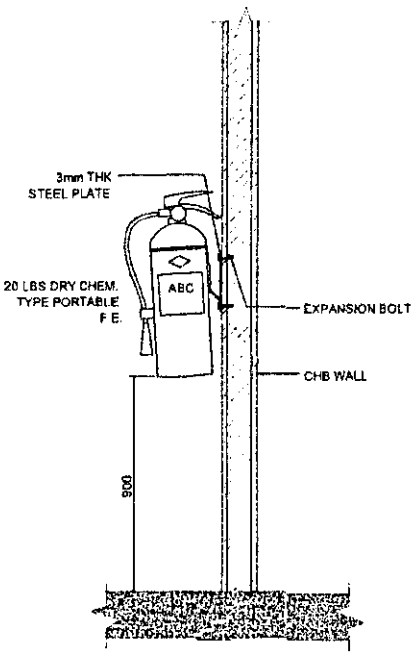
4 FP-08 MOTOR SWITCH DETAIL

NOT TO SCALE



5 FP-08 PENDANT TYPE SPRINKLER HEAD DETAIL

NOT TO SCALE



6 FP-08 PORTABLE FIRE EXTINGUISHER MOUNTING DETAIL

NOT TO SCALE

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JON GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

SHEET CONTENTS:	SCALE:
AS SHOWN	AS SHOWN
	SHEET NO. FP - 08 of 09
	DATE : 25 NOV 2024

PUMP CAPACITY COMPUTATION

NUMBER OF ACTIVE SPRINKLERS MAX. = $\frac{\text{FIRE PROTECTION AREA}}{\text{AREA OPERATION OF SPRINKLER}}$

LIGHT HAZARD = 0.1 $\frac{\text{GPM}}{\text{SQ. FT.}}$

AREA OF OPERATION = 200 SQ. FT

VOLUME FLOW = 0.1 $\frac{\text{GPM}}{\text{SQ. FT.}}$ x 200 SQ. FT x 14 sprinkler

VOLUME FLOW = 280 GPM

HOSE STREAM ALLOWANCE = 100 GPM (NFPA 13)

TOTAL VOLUME FLOW = 380 GPM

WHERE:

P = PRESSURE HEAD, FT
Z = ELEVATION, FT
V = VELOCITY HEAD, FT
HEAD LOSS, FT

ΔP = 15 psi > RESIDUAL PRESSURE FOR SPRINKLERS

= 15 psi x $\frac{2.31 \text{ FT.}}{1 \text{ psi}}$

ΔP = 34.65 ft

ΔV = 0 ft * closed system

ΔZ = $(z_2 - z_1)$

= 7.2m - -0.6m

ΔZ = 7.8 m x $\frac{3.28 \text{ ft.}}{1 \text{ m}}$

ΔZ = 25.58 ft

Hf = $\frac{(4 \text{ to } 10 \text{ ft}) \times TL \times 1.5}{100 \text{ ft}}$

WHERE:

TL = PIPE TOTAL LENGTH, FT

Hf = 56.9 M x $\frac{3.28 \text{ FT}}{1\text{M}}$ = 193.24 FT

Hf = $\frac{6 \text{ FT}}{100\text{FT}}$ x 193.24 x 1.5

Hf = 17.39 ft

TDH = 34.65 FT + 0 FT + 25.58 FT + 17.39 FT

TDH = 77.62 FT

WHERE:

BHP = $\frac{\text{FLOW (GPM)} \times \text{TDH (FT)} \times \text{S.G}}{3960 \times \text{Eff.}}$

= $\frac{380 \text{ GPM} \times 77.62 \text{ FT.} \times 1}{3960 \times 0.6}$

= 12.41 Hp

BHP = 20Hp > COMMERCIAL SIZE AVAILABLE

1 FP-09 PUMP CAPACITY COMPUTATION

FOR JOCKEY PUMP

FLOW = 10% OF FIRE PUMP CAPACITY

= 10% x 350 GPM

FLOW = 38 GPM

TDH = 112% OF FIRE PUMP

= 112% x 77.62 FT

= 86.93 FT

BHP = $\frac{\text{FLOW (GPM)} \times \text{TDH (FT)}}{3960 \times \text{Eff.}}$

= $\frac{38 \text{ GPM} \times 86.93 \text{ FT}}{3960 \times 0.6}$

BHP = 2.0HP > COMMERCIAL SIZE AVAILABLE

2 FP-09 JOCKEY PUMP COMPUTATION

TANK VOLUME

ASSUMING 30 MINS. OPERATION

V = $\frac{380 \text{ GAL}}{\text{MIN}} \times 30 \text{ MINS} = 11400 \text{ GAL} \times \frac{3.785 \text{ LI}}{1 \text{ GAL}} \times \frac{1 \text{ M}^3}{1000 \text{ LI}}$

V = 43.15 M^3

SAY

L = 3.9M
W = 3.4M

43.15M^3 = 3.9M x 3.4M x H

H = 3.25 + (0.13M AIRSPACE)
H = 3.38 M

TANK INTERIOR DIMENSION: 3.9M(L) x 3.4M(W) x 3.38 M(H)

2 FP-09 TANK VOLUME COMPUTATION

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
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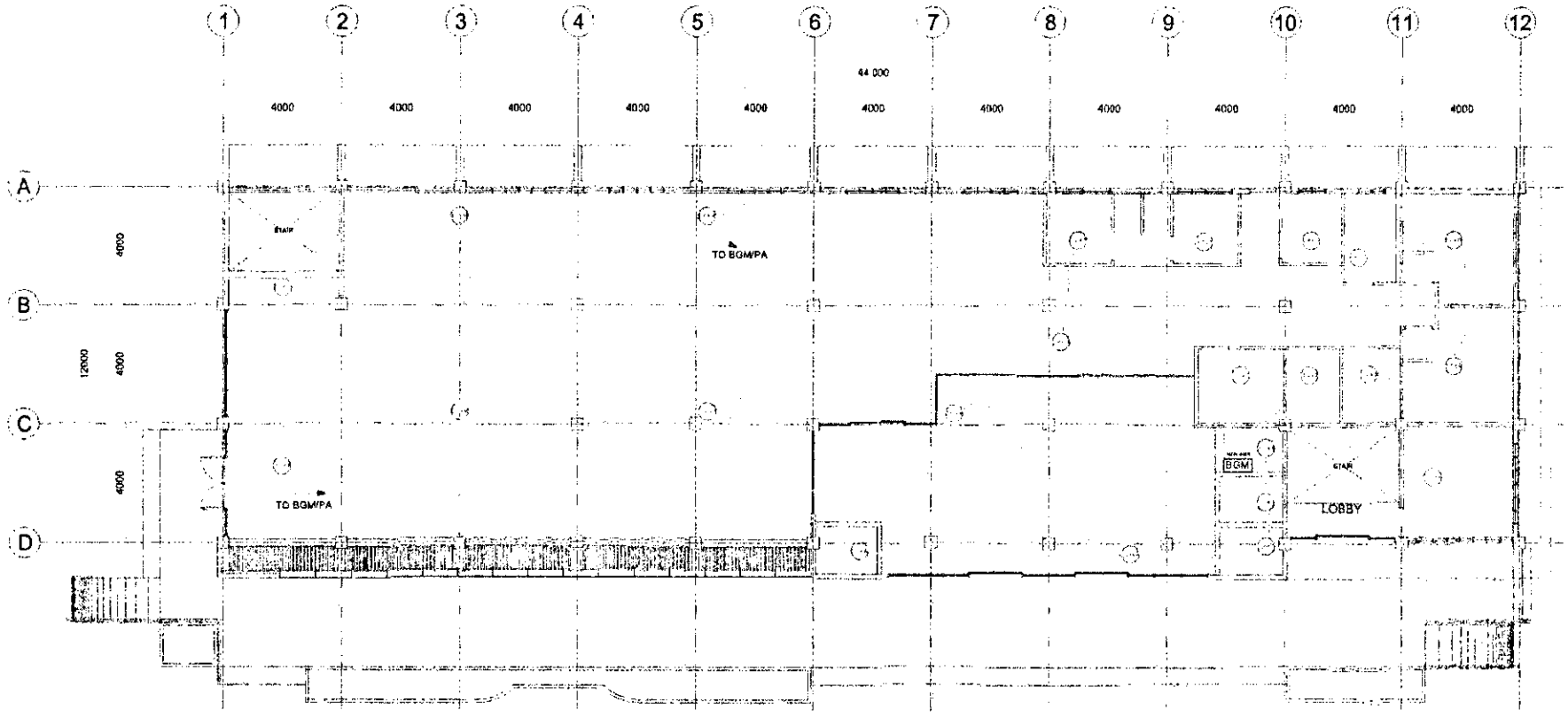
PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG Acting Principal Engineer A	MARGARITO P. DIMAILIG Division Manager A, ESD	JON GABRIELL M. MANANSALA Port Manager A	REYNAND C. TARAFINA Manager, Port Planning and Design Department	JAMES S. GANTALAO Assistant General Manager for Engineering

SHEET CONTENTS: AS SHOWN

SCALE: AS SHOWN

SHEET NO. FP - 09 of 09

DATE : 25 NOV 2024



1 EGM-01 GROUND FLOOR BACKGROUND MUSIC / PAGING ALARM LAYOUT PLAN

SCALE 1:150 M

LEGEND:

- CEILING MOUNTED SPEAKER
- BGM — BACKGROUND MUSIC /PUBLIC ADDRESS SYSTEM

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

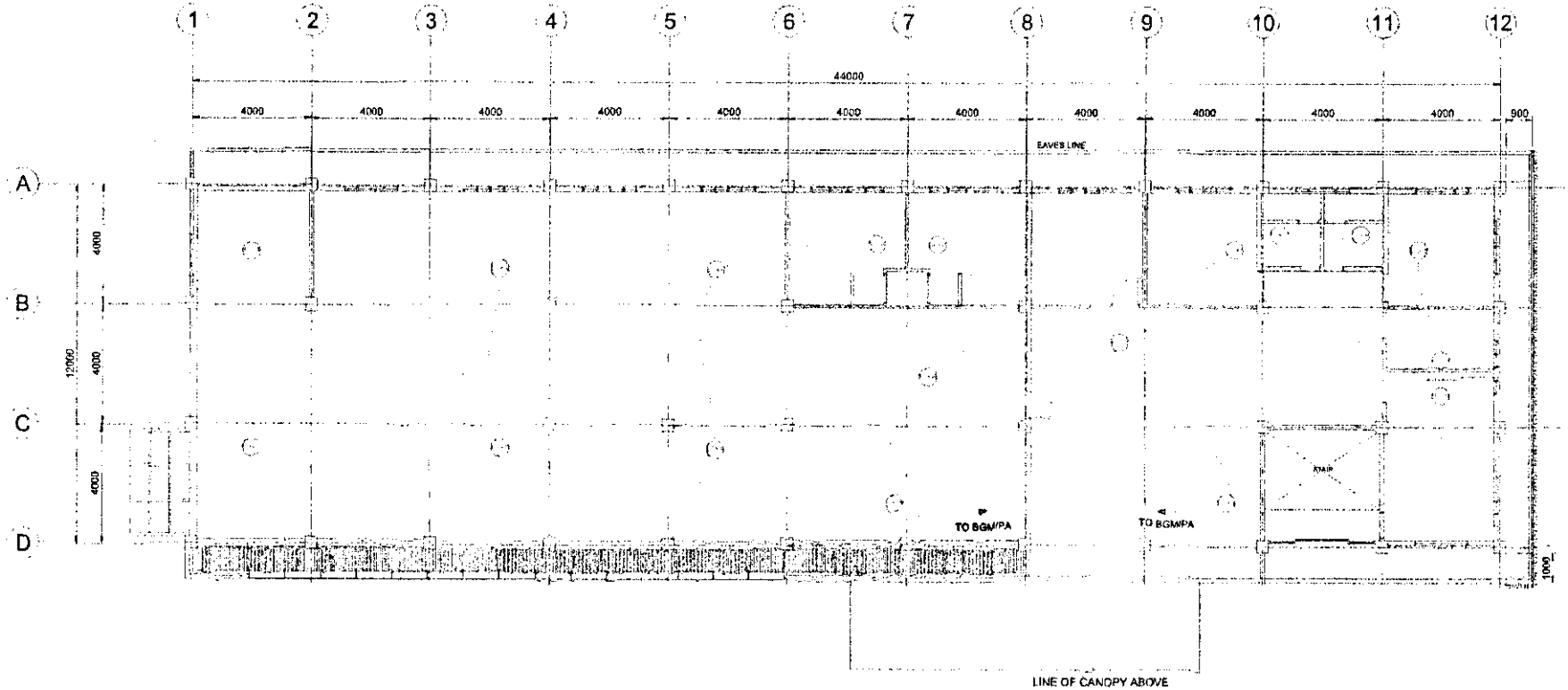
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SCALE: AS SHOWN

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SHEET NO. BGM - 01 of 03

DATE : 25 NOV 2024



1 BGM-02 SECOND FLOOR BACKGROUND MUSIC / PAGING ALARM LAYOUT PLAN

SCALE 1:150 M

LEGEND:

- CEILING MOUNTED SPEAKER
- BGM — BACKGROUND MUSIC /PUBLIC ADDRESS SYSTEM

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

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RONALD O. [illegible] IBAG	MARGARITO P. DIMAILIG	JON GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. GANTALAO
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SHEET CONTENTS: AS SHOWN

SCALE: AS SHOWN

SHEET NO. BGM - 02 of 03

DATE : 25 NOV 2024

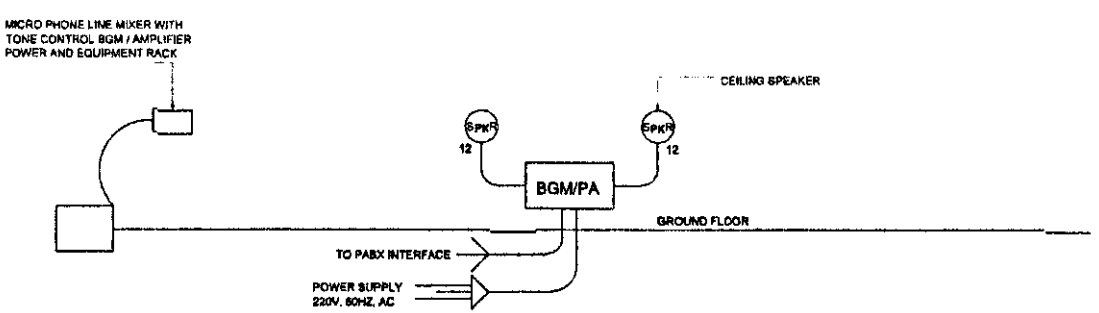
LEGEND:

SPKR — CEILING MOUNTED SPEAKER

BGM — BACKGROUND MUSIC /PUBLIC ADDRESS SYSTEM

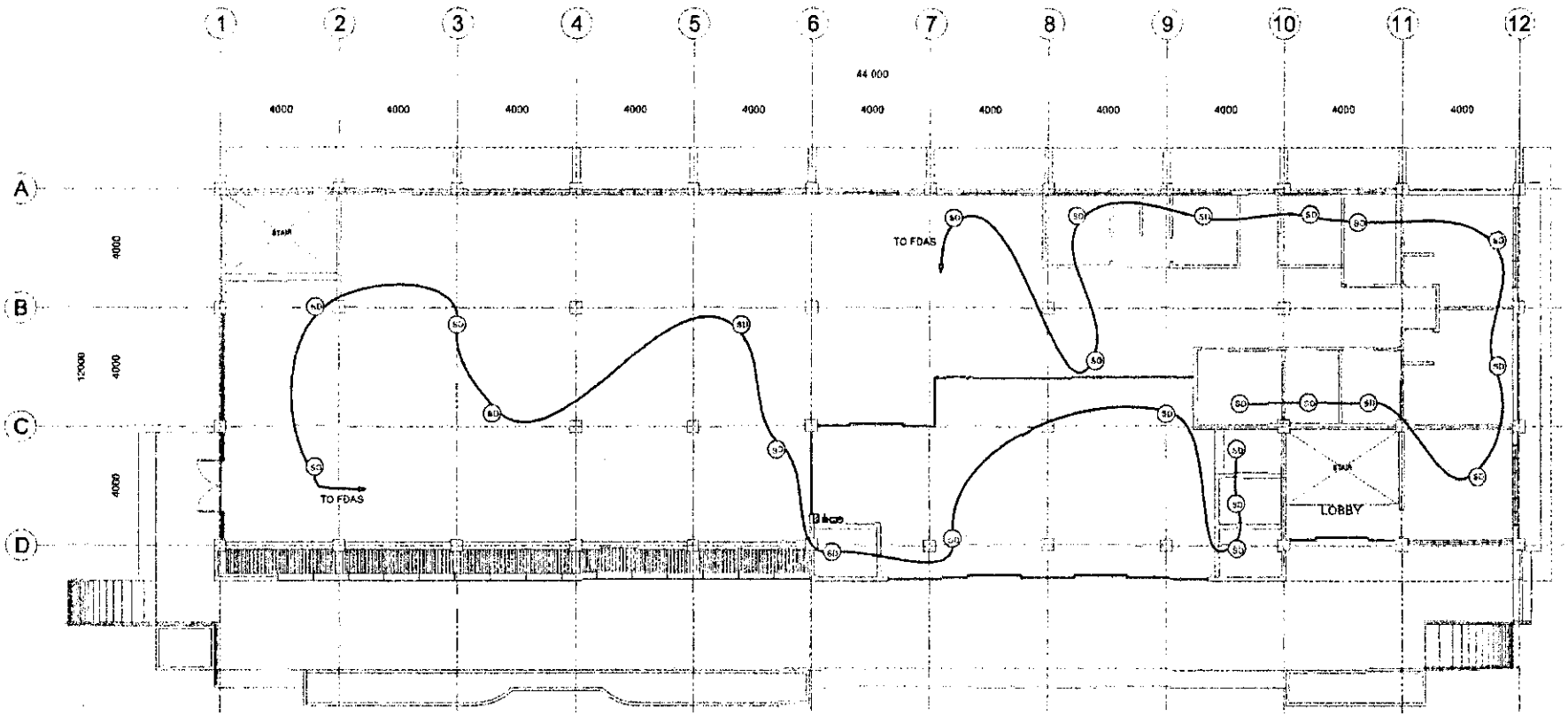
NOTES ON BGM/PA SYSTEM:

1. MINIMUM SIZE OF WIRE AND CONDUIT TO BE USED SHALL BE 2.0mm THHN /THWN IN 20mmØ C (1/2") PVC.
2. THE PUBLIC ADDRESS SYSTEM SHALL ALLOW INTERFACE WITH THE PBAX SYSTEM.
3. THE BACK GROUND MUSIC SHALL BE ABLE TO BE LINKED TO ANY EXTERNAL MUSIC SOURCE SUCH AS FM RADIO , DVD / CD PLAYER AND CASSETTE DECK.
4. THE CONTRACTOR SHALL PROVIDE NECESSARY PENDANTS (OPTIONAL) FOR HORN SPEAKERS INCLUSIVE OF MOUNTING SUPPORTS BRACKETS ETC.
5. THE CONTRACTOR CAN MODIFY THE RISER DIAGRAM IN ACCORDANCE WITH THE MANUFACTURER'S RECOMENDATION TO SUIT THE SUPPLIED EQUIPMENTS.
6. THE BGM / PA AMPLIFIER / EQUIPMENTS SHALL BE LOCATED AT THE DESIGNATED ROOM.
7. FINAL LOCATION OF BGM / PA SPEAKERS SHALL BE AS PER ACTUAL CONDITIONS AT SITE.



1 BGM-03 BACKGROUND MUSIC / PAGING ALARM (BGM/PA) SINGLE LINE DIAGRAM

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: RONALDO O. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO P. DIMALIG, Division Manager A, ESD	SUBMITTED BY: JON GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNAND C. PARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. CANTALAO, Assistant General Manager for Engineering	AS SHOWN	SHEET NO. BGM - 03 of 03
						DATE : 25 NOV 2024



1 GROUND FLOOR FIRE DETECTION ALARM SYSTEM LAYOUT PLAN

FDAS-01

SCALE 1:150 M

LEGEND:

- SD — SMOKE DETECTOR w/ COMMON DETECTOR BASE
- 6" Red Gong B — ALARM BELL
- FA — CONVENTIONAL MANUAL CALL POINT
- M
- FACP — CONVENTIONAL FIRE ALARM CONTROL PANEL

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

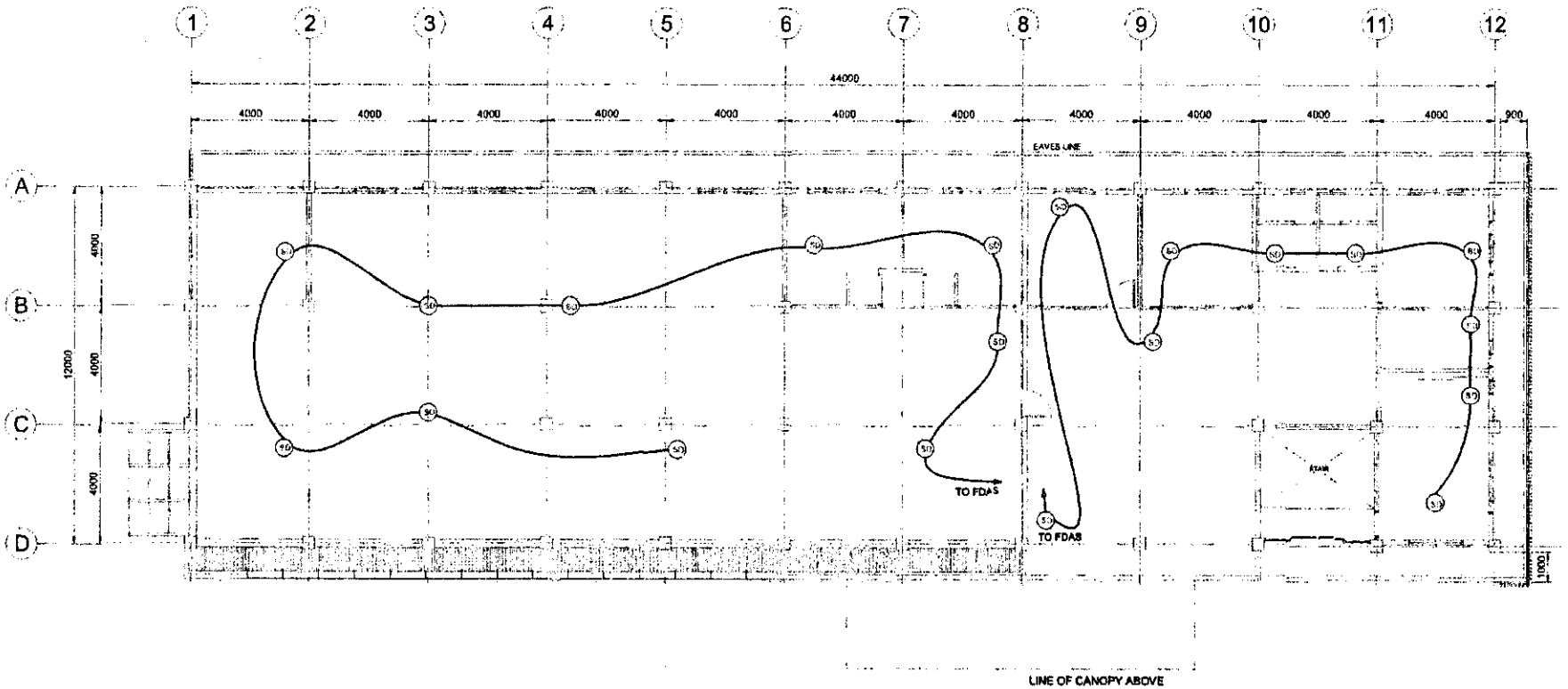
PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALDO MATIBAG	MARGARITO P. DIMAILIG	JON GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. GANTALAO
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SHEET CONTENTS: AS SHOWN

SCALE: AS SHOWN

SHEET NO. FDAS - 01 of 03

DATE : 25 NOV 2024



1 FDAS-02 SECOND FLOOR FIRE DETECTION ALARM SYSTEM LAYOUT PLAN

SCALE 1:150 M

LEGEND:

SD	SMOKE DETECTOR w/ COMMON DETECTOR BASE
6" Red Gong B	ALARM BELL
FA	CONVENTIONAL MANUAL CALL POINT
M	
FACP	CONVENTIONAL FIRE ALARM CONTROL PANEL

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

SHEET CONTENTS: AS SHOWN

SCALE: AS SHOWN

SHEET NO. FDAS - 02 of 03

DATE : 25 NOV 2024

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RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JOHN GABRIELL M. MANANSALA	REYNANDO C. PARAFINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

LEGEND:

SD — SMOKE DETECTOR w/ COMMON DETECTOR BASE

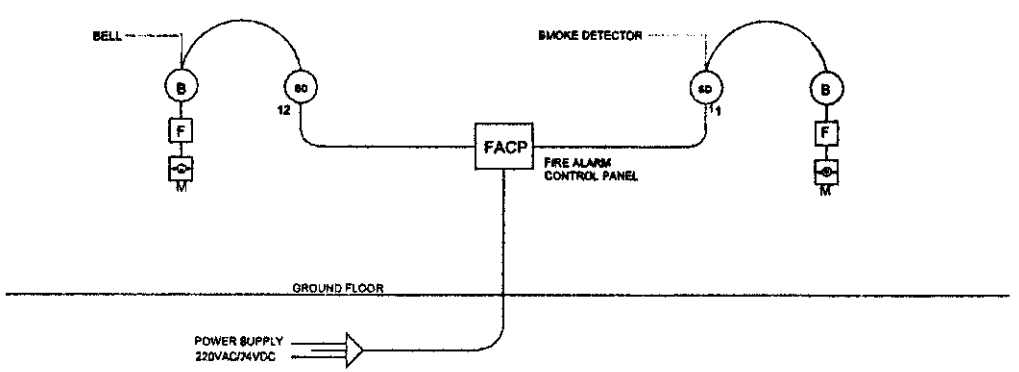
B — 6" Red Gong ALARM BELL

FA / M — CONVENTIONAL MANUAL CALL POINT

FACP — CONVENTIONAL FIRE ALARM CONTROL PANEL

NOTES ON FDAS:

1. THE FIRE ALARM SYSTEM SHALL BE ADDRESSABLE / MANUAL TYPE WITH CLASS "A" WIRING MICROPROCESSOR BASED.
2. THE COMPLETE FIRE ALARM SYSTEM SHALL BE FURNISHED/ INSTALLED BY ACCREDITED AND APPROVED SUPPLIER INCLUSSIVE OF WIRING/EQUIPMENT.
3. MINIMUM SIZE OF CONDUIT TO BE USED SHALL BE 20mmØ AND THE MINIMUM SIZE OF WIRE TO BE USED SHALL BE 1.25mm TWISTED SHIELDED PAIR.
4. FIRE ALARM CONTROL PANEL SHALL BE AS MANUFACTURED BY "SIMPLEX" MODEL TRUE ALARM.
5. SMOKE DETECTOR SHALL BE PHOTOELECTRIC TYPE.



1 — FIRE DETECTION ALARM SYSTEM (FDAS) SINGLE LINE DIAGRAM

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
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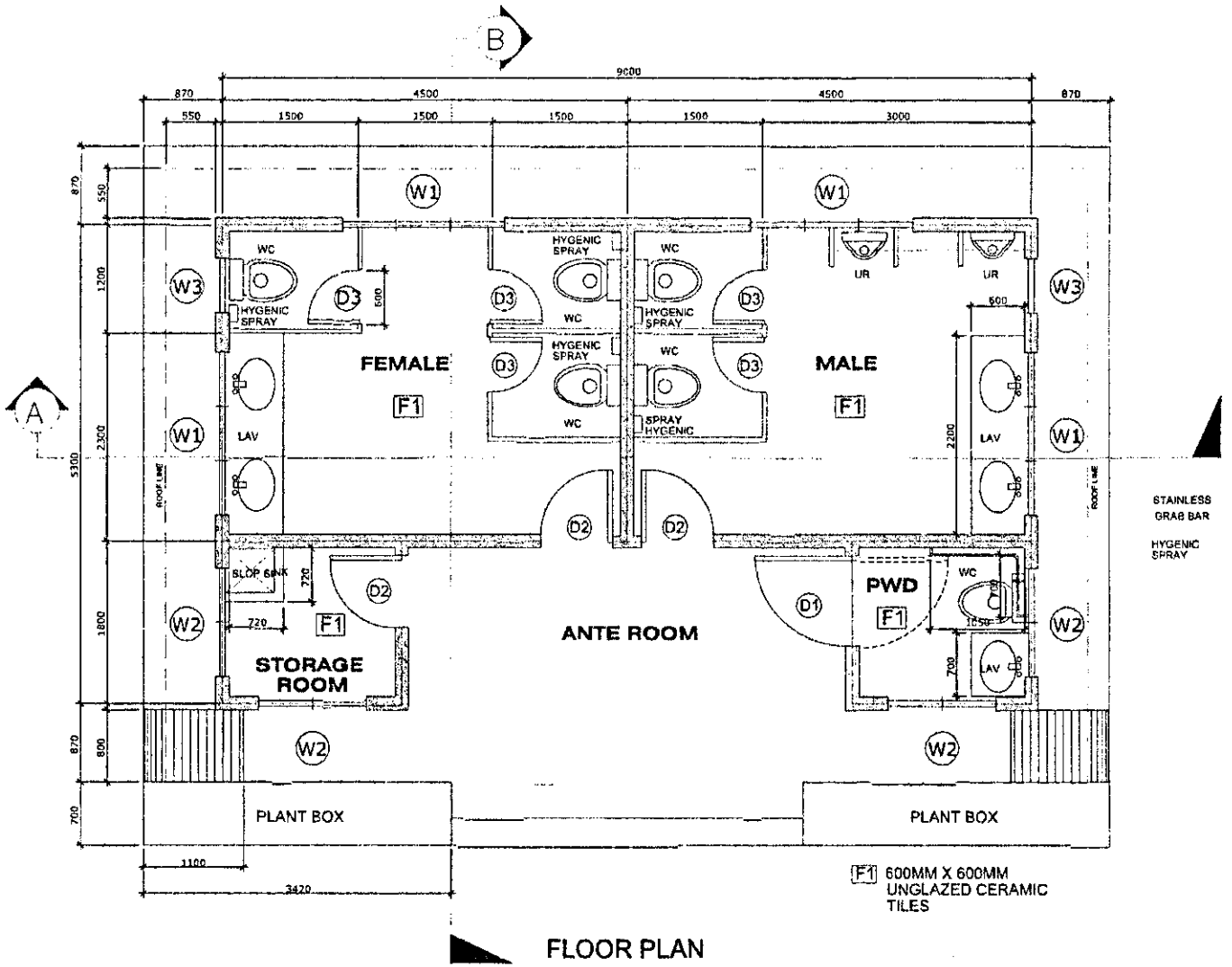
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SHEET CONTENTS: AS SHOWN

SCALE: AS SHOWN

SHEET NO. FDAS - 03 of 03

DATE : 25 NOV 2024



FLOOR PLAN

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

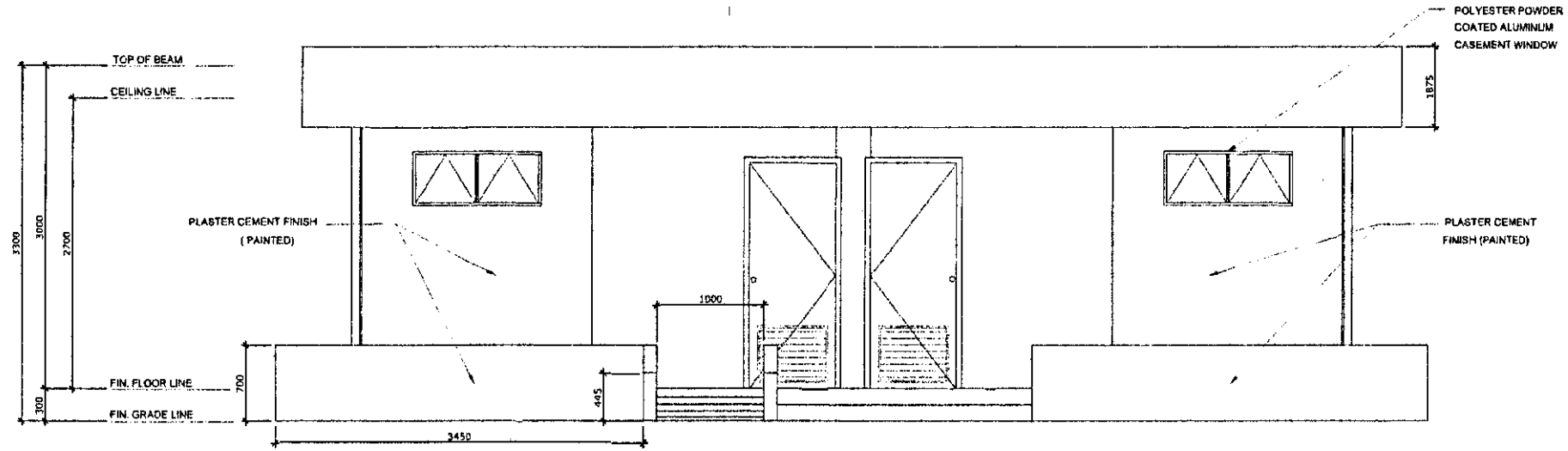
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SHEET NO. PCR - 01 of 12

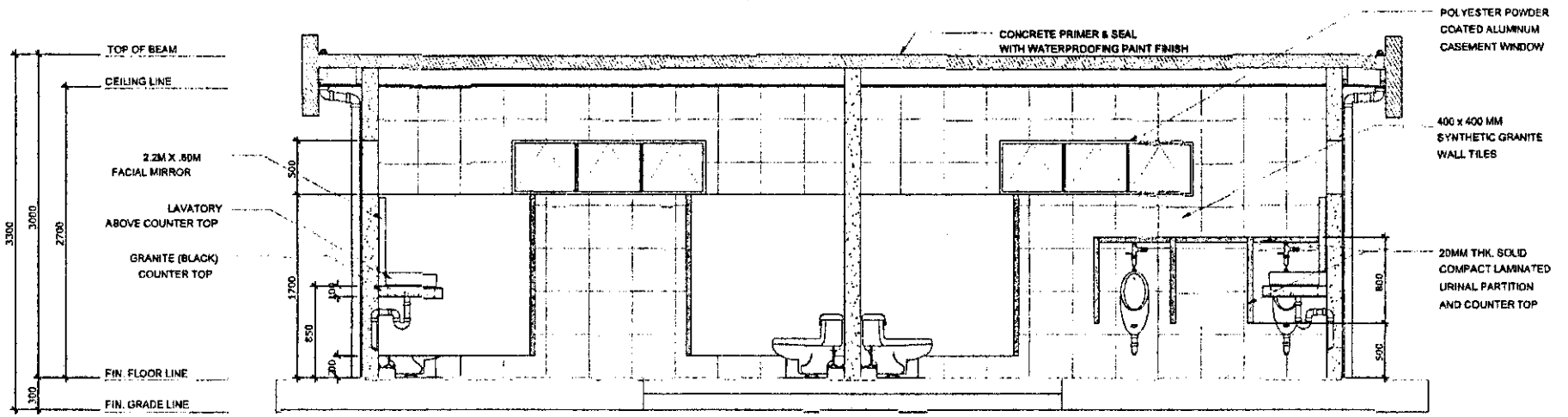
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PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JON GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. GANTALAO
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FRONT ELEVATION

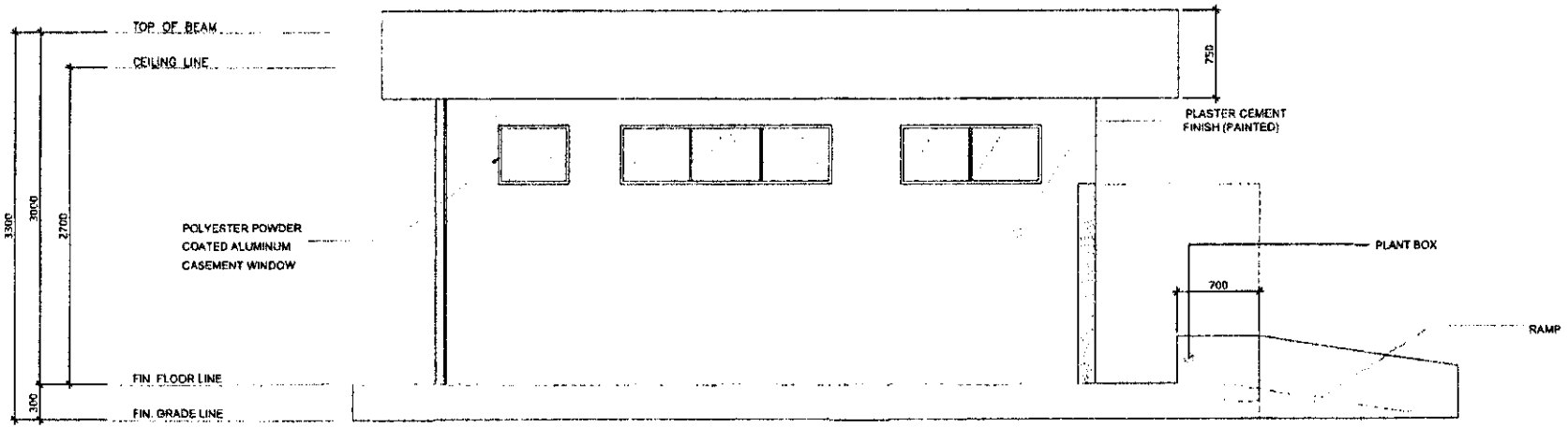
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SECTION "A"

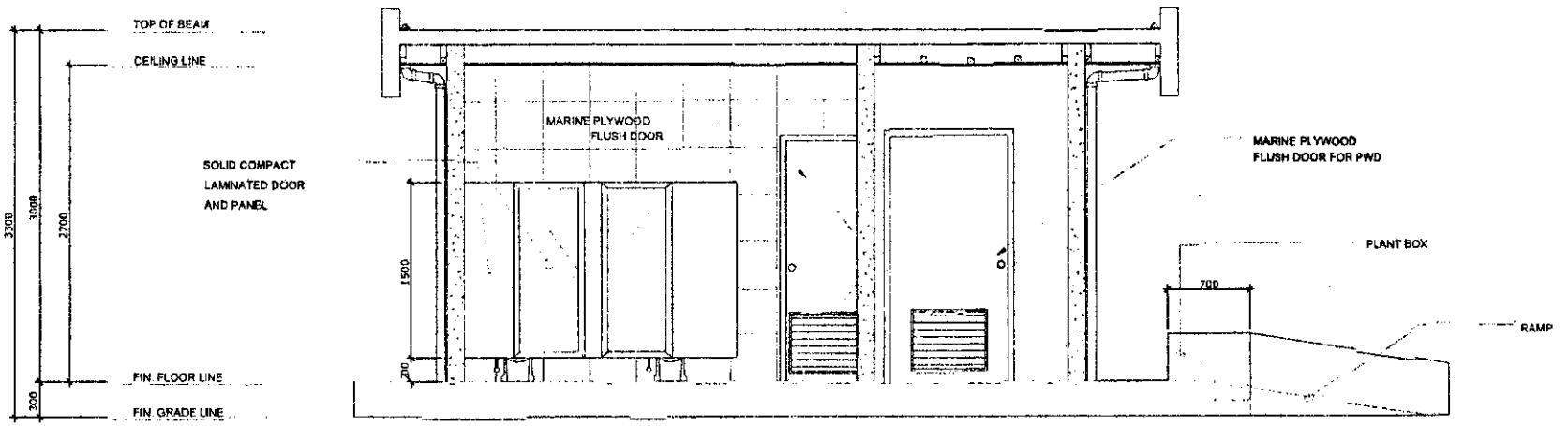
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PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: RONALD O. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO P. DIMARLIG, Division Manager A, ESD	SUBMITTED BY: JOHN GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNAND C. PARATINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. CANTALAO, Assistant General Manager for Engineering	AS SHOWN	SHEET NO. PCR - 02 of 12
						DATE : 25 NOV 2024



SIDE ELEVATION

SCALE 1 : 40 MTS.



SECTION " B"

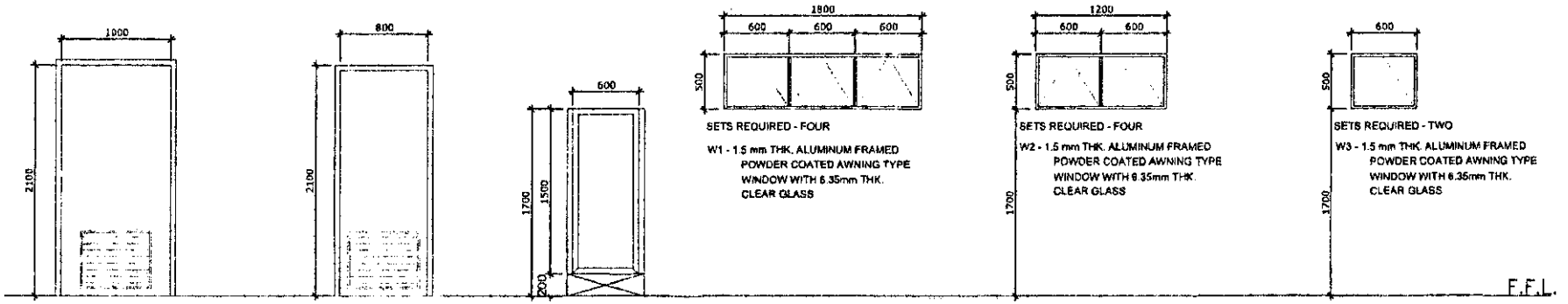
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PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
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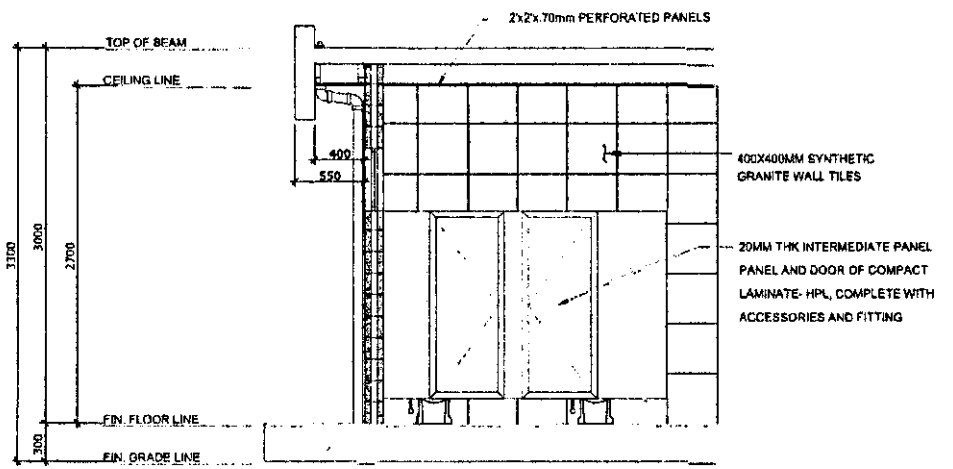
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SHEET CONTENTS:	SCALE: AS SHOWN
AS SHOWN	SHEET NO. PCR - 03 of 12
	DATE : 25 NOV 2024



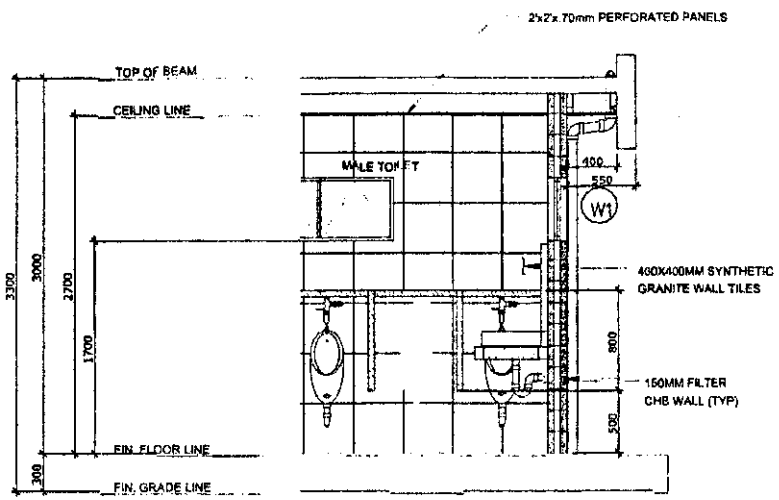
schedule of doors & windows

SCALE 1 : 40 MTS.



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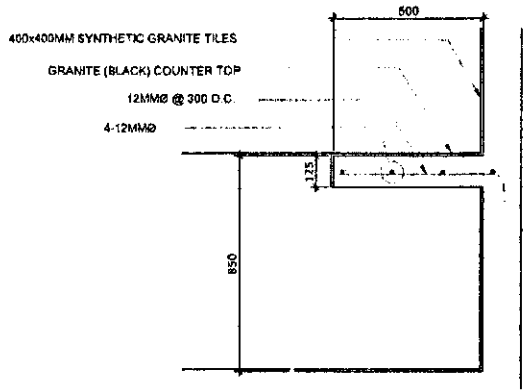
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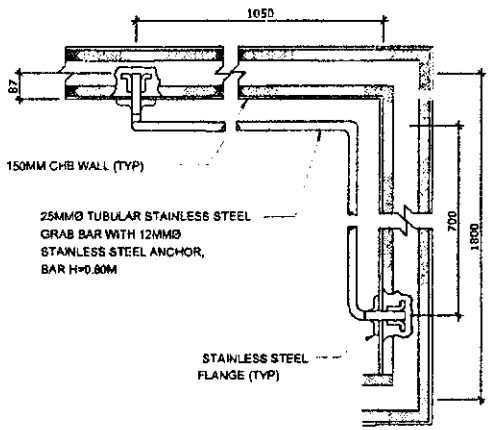
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PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: RONALD D. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO P. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JON GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNAND C. BARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. GANZALAO, Assistant General Manager for Engineering	AS SHOWN	SHEET NO. PCR - 04 of 12
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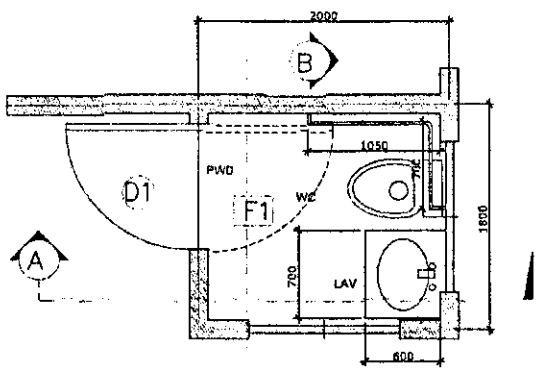
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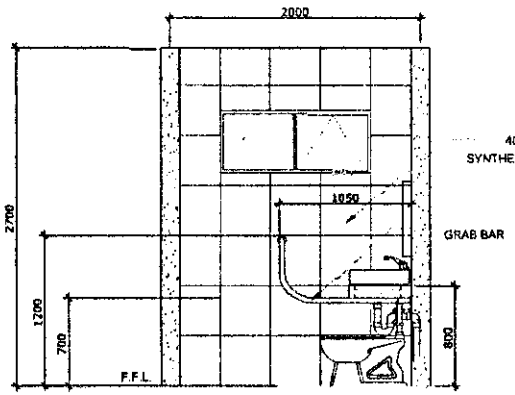


grab bar detail

SCALE nts

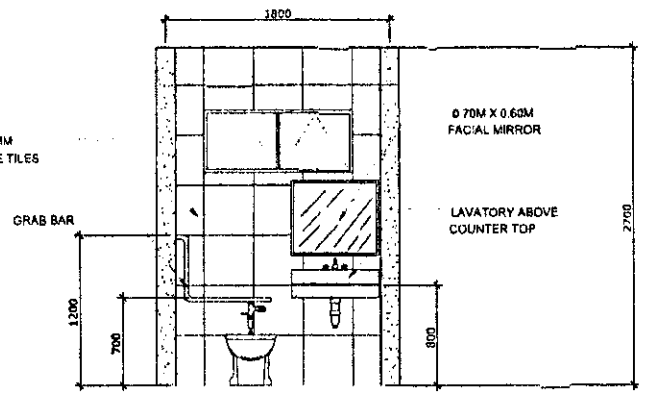


PLAN



400MM X 400MM
SYNTHETIC GRANITE TILES

SECTION "A"



SECTION "B"

DETAIL OF PWD

SCALE 1 : 40 MTS.

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

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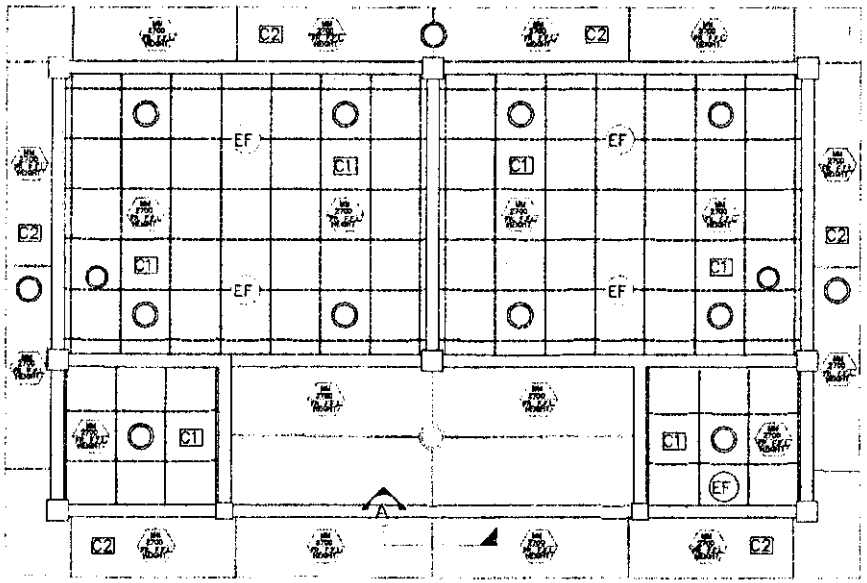
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RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JONGABRIELL M. MANANSALA	REYNAND C. MARRERA	JAMES J. GANTALAO
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SHEET CONTENTS: AS SHOWN

SCALE: AS SHOWN

SHEET NO. PCR - 05 of 12

DATE : 25 NOV 2024

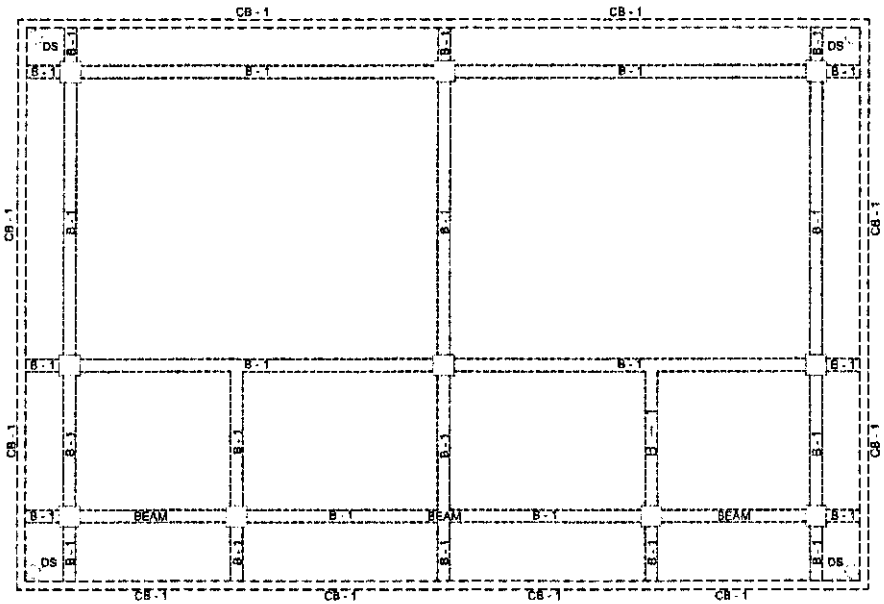


C1 PERFORATED PANELS, 2' x 2' x 0.70 mm., BONE WHITE, OR EQUIVALENT (INTERIOR CEILING)

C2 12 MM THICK FIBER CEMENT BOARD PAINT FINISH (EXTERIOR CEILING)

REFLECTED CEILING PLAN

SCALE 1 : 50 MTS.



ROOF FRAMING PLAN

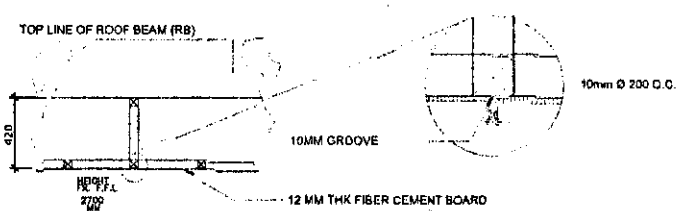
SCALE 1 : 50 MTS.

SCHEDULE OF BEAM

MARK	SIZE	REINFORCEMENT @ SUPPORT TOP	@ SUPPORT BOT.	@ MID SPAN TOP	@ MID SPAN BOT.	BARS	STIRRUPS
B-1	150 x 250	3	3	3	3	16mmØ	10MMØ STIRRUPS @200MM O.C.
CB-1	100 x 750	2	2	2	2	16mmØ	- DO -

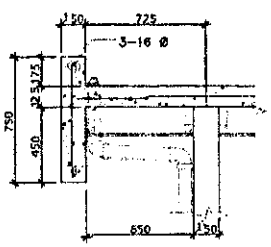
SCHEDULE OF SLAB

MARK	THICKNESS	REINFORCEMENT BARØ	SHORT SPAN SPACING	LONG SPAN SPACING	REMARKS
SLAB ON GRADE	100mm + FINISH	10mmØ	400mm O.C.	400mm O.C.	BENT UP 2 OUT 3 @ L/4 TO L/4 OF CONT. EDGE & BENT BACK L/4 FOR DISCONT. EDGE
DECK SLAB	100mm + FINISH	10mmØ	100mm O.C.	100mm O.C.	BENT UP 2 OUT 3 @ L/4 TO L/4 OF CONT. EDGE & BENT BACK L/4 FOR DISCONT. EDGE



SECTION "A"

SCALE 1:30 M



DETAIL OF PARAPET

SCALE 1:30 M

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

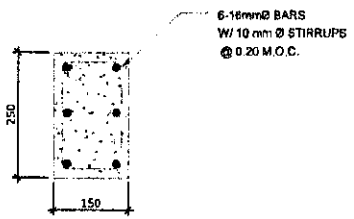
SHEET CONTENTS: AS SHOWN

SCALE: AS SHOWN

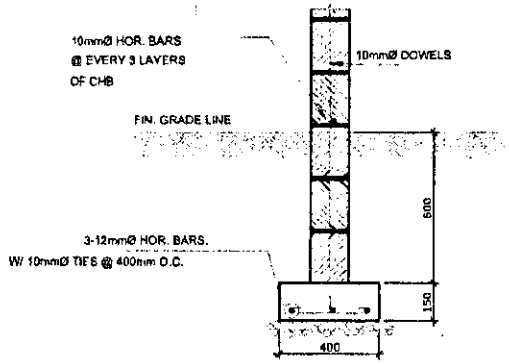
SHEET NO. PCR - 06 of 12

DATE : 25 NOV 2024

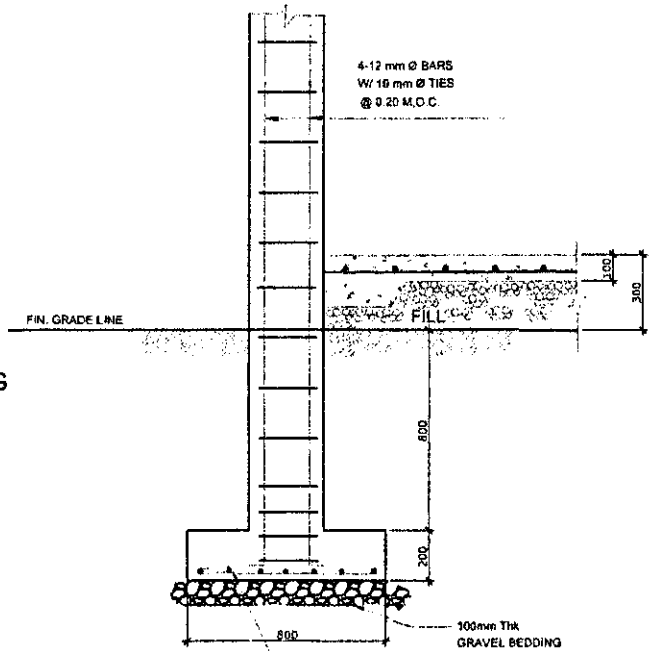
PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JON GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

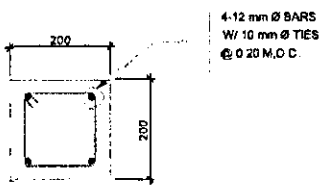


TYPICAL DETAIL OF BEAM
SCALE 1:10 M

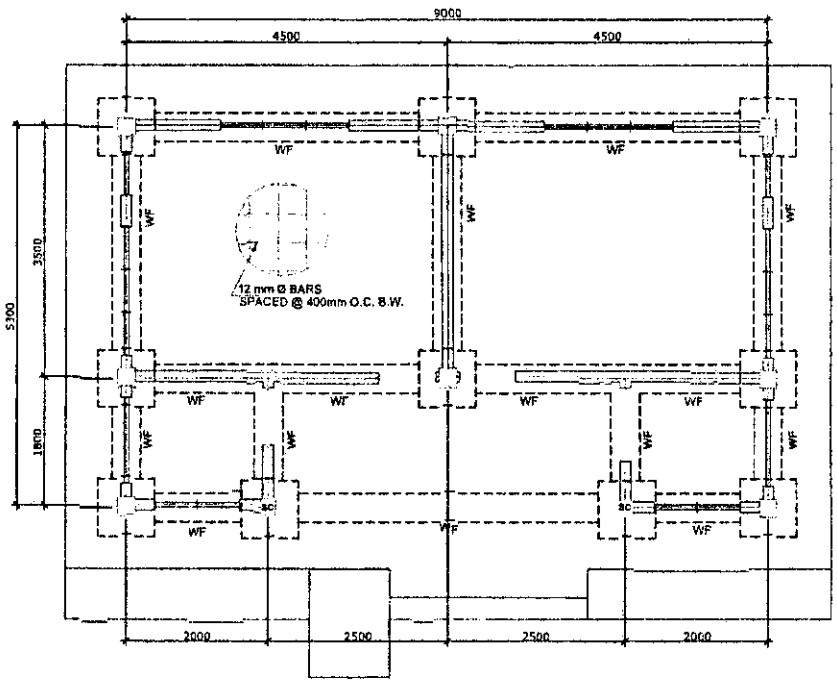


DETAIL OF WALL FOOTING
SCALE 1:20 M

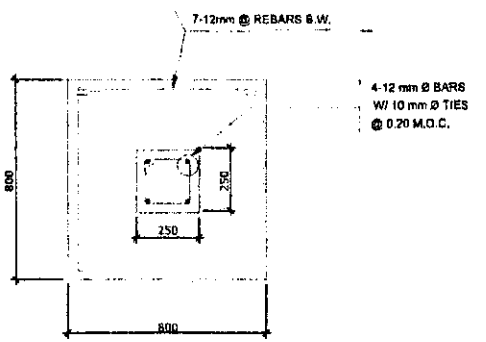




DETAIL OF STIFFENER COL
SCALE 1:10 M



FOUNDATION PLAN
SCALE 1 : 70 MTS.



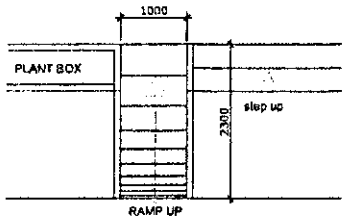
DETAIL OF COLUMN & FOOTING
SCALE 1 : 20 MTS.

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

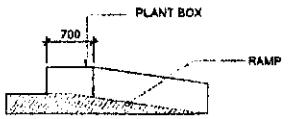
PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO P. DIMAILIG	JON GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. GANTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

SHEET CONTENTS:	SCALE: AS SHOWN
AS SHOWN	SHEET NO. PCR - 07 of 12
	DATE : 25 NOV 2024



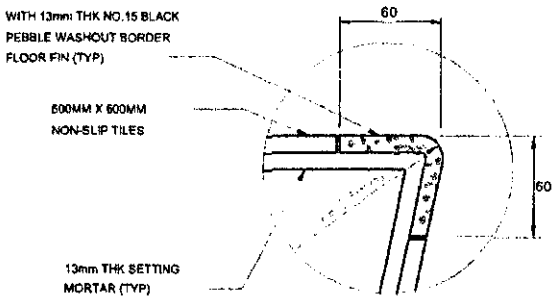
RAMP PLAN



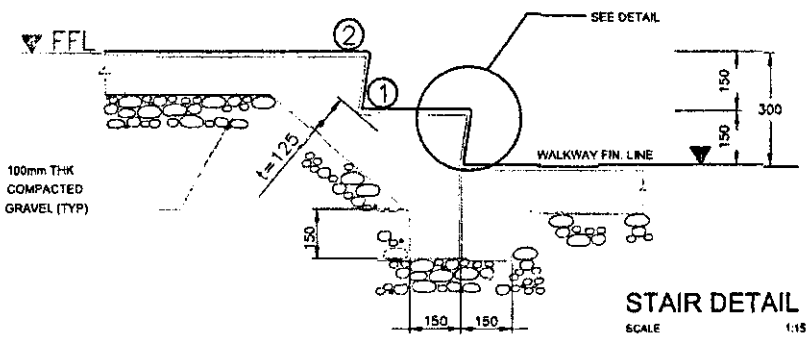
RAMP SECTION

RAMP DETAILS

SCALE 1:40MTS

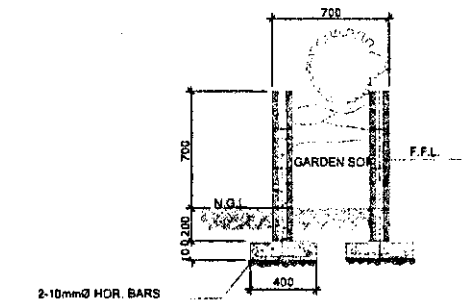


SPOT DETAIL



STAIR DETAIL

SCALE 1:15



SECTION

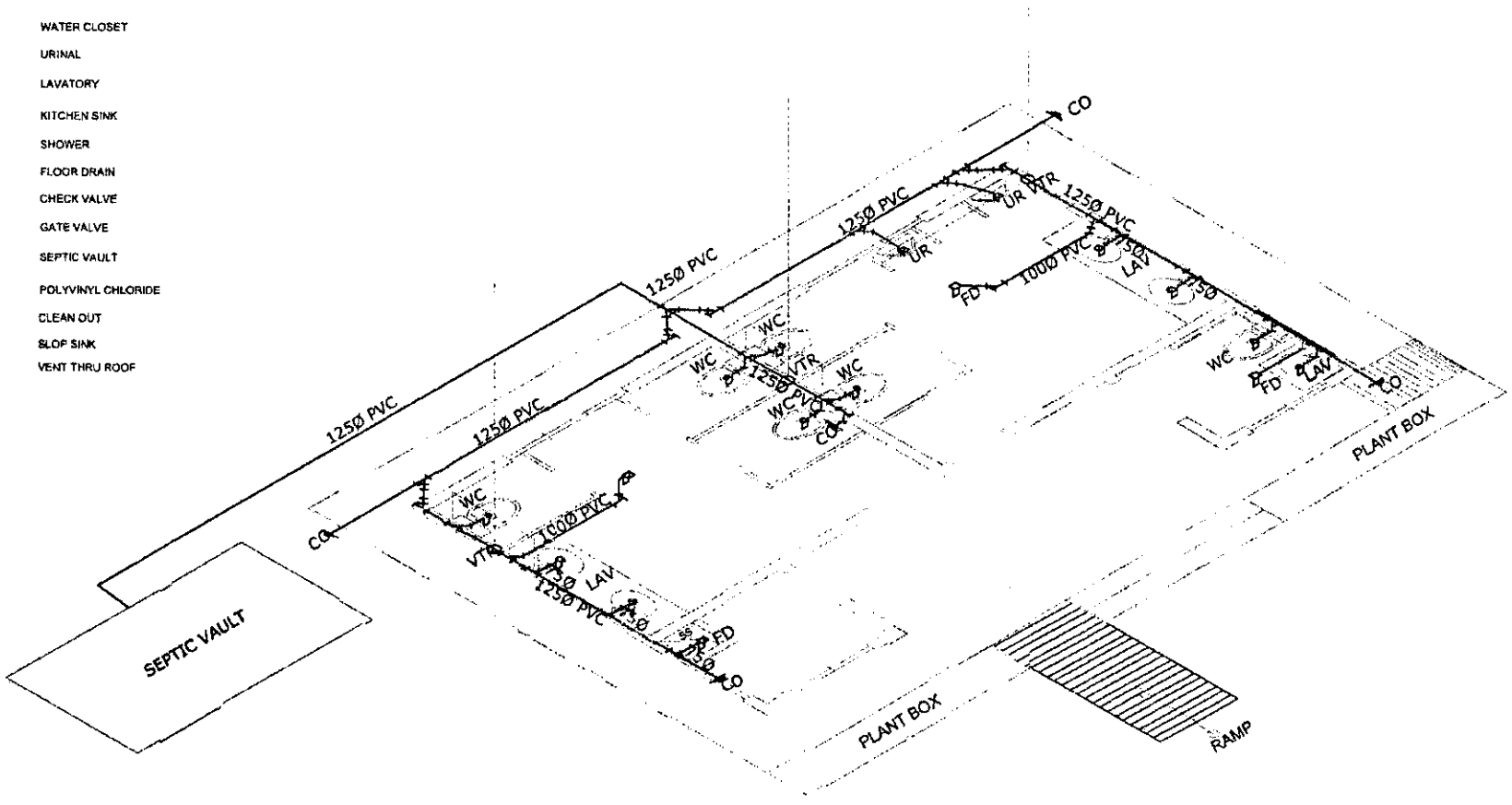
DETAIL OF PLANT BOX

SCALE 1:30 M

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: RONALD O. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO F. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JON GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNAND C. PARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. GARTALAO, Assistant General Manager for Engineering	AS SHOWN	SHEET NO. PCR - 08 of 12
						DATE : 25 NOV 2024

ABBREVIATIONS

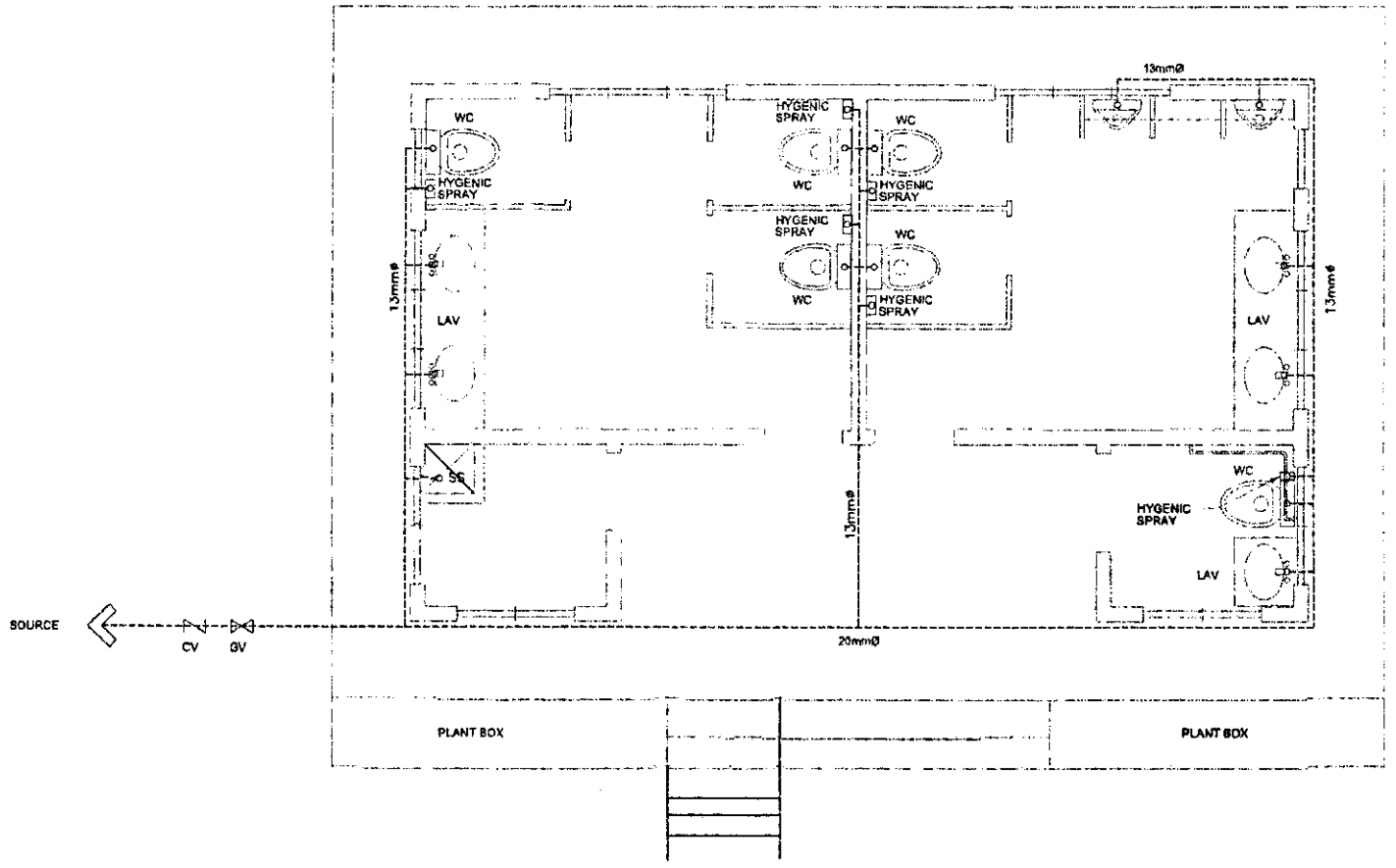
WC	WATER CLOSET
UR	URINAL
LAV	LAVATORY
KS	KITCHEN SINK
SHO	SHOWER
FD	FLOOR DRAIN
CV	CHECK VALVE
GV	GATE VALVE
SV	SEPTIC VAULT
PVC	POLYVINYL CHLORIDE
CO	CLEAN OUT
SS	SLOP SINK
VTR	VENT THRU ROOF



PLUMBING LAYOUT PLAN

SCALE 1: 50 MTS.

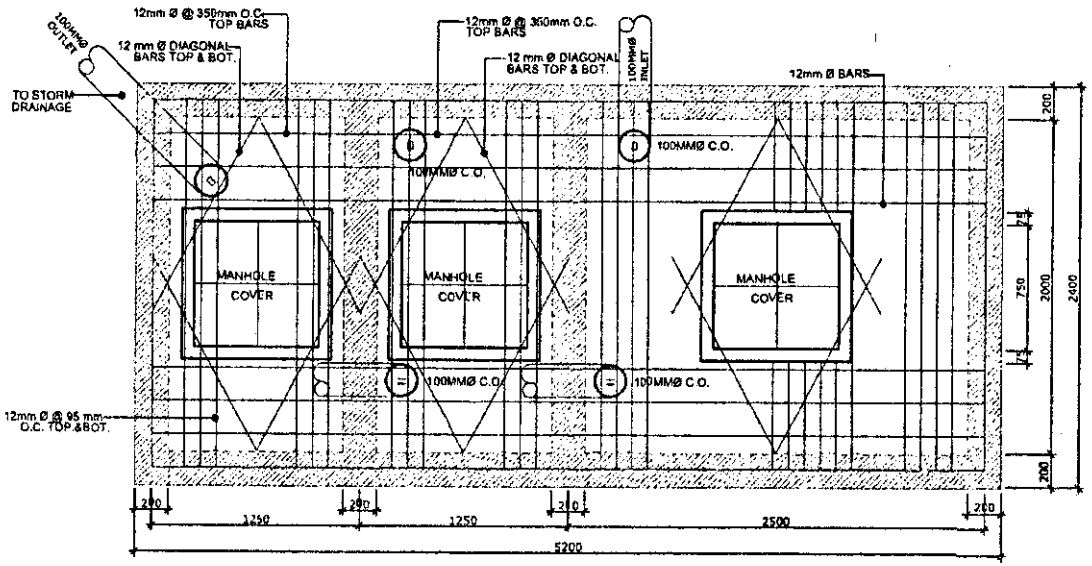
PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: RONALD O. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO R. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JOHN GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNAND C. PARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. SANVALAO, Assistant General Manager for Engineering	AS SHOWN	SHEET NO. PCR - 09 of 12
							DATE : 25 NOV 2024



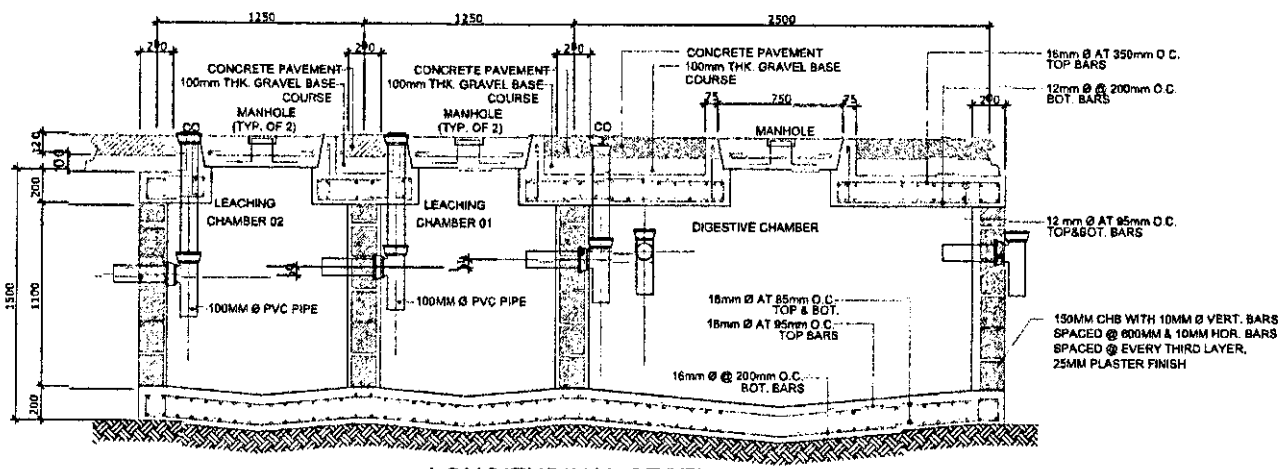
WATER LAYOUT PLAN

SCALE 1:50 MTS.

PHILIPPINE PORTS AUTHORITY PMO- MINDORO	PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS PORT OF ROXAS, ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED BY: RONALD O. MATIBAG, Acting Principal Engineer A	CHECKED / REVIEWED BY: MARGARITO T. DIMAILIG, Division Manager A, ESD	SUBMITTED BY: JON GABRIELL M. MANANSALA, Port Manager A	RECOMMENDING APPROVAL: REYNAND C. PARAFINA, Manager, Port Planning and Design Department	APPROVED BY: JAMES J. GANTALAO, Assistant General Manager for Engineering	AS SHOWN	SHEET NO. PCR - 10 of 12
							DATE : 25 NOV 2024

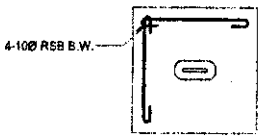


PLAN OF SEPTIC TANK

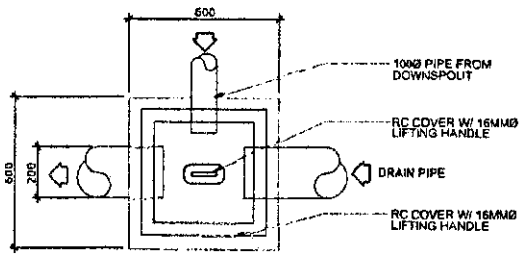


LONGITUDINAL SECTION
SEPTIC VAULT DETAIL

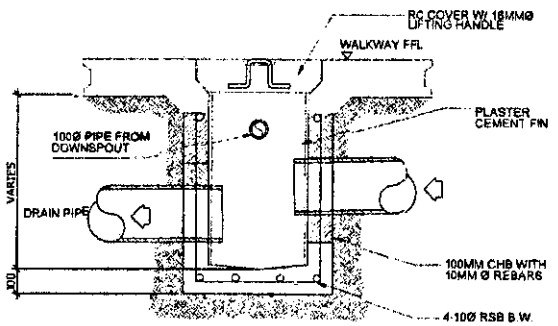
SCALE 1 : 30 MTS.



DETAIL OF R.C. COVER



PLAN



SECTION

DETAIL OF CATCH BASIN / AREA DRAIN CATCH BASIN

SCALE 1 : 20 MTS.

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

SHEET CONTENTS: AS SHOWN

SCALE: AS SHOWN

SHEET NO. PCR - 11 of 12

DATE : 25 NOV 2024

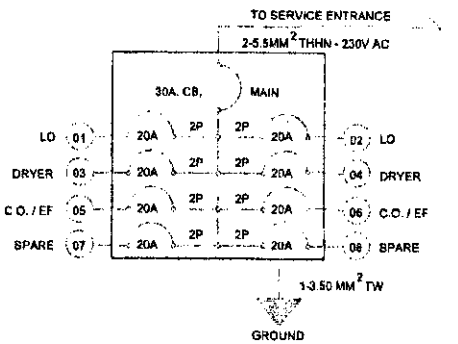
PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MATIBAG	MARGARITO T. DMAILIG	JON GABRIELL M. MANANSALA	REYNAND C. FARAFINA	JAMES J. GARTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

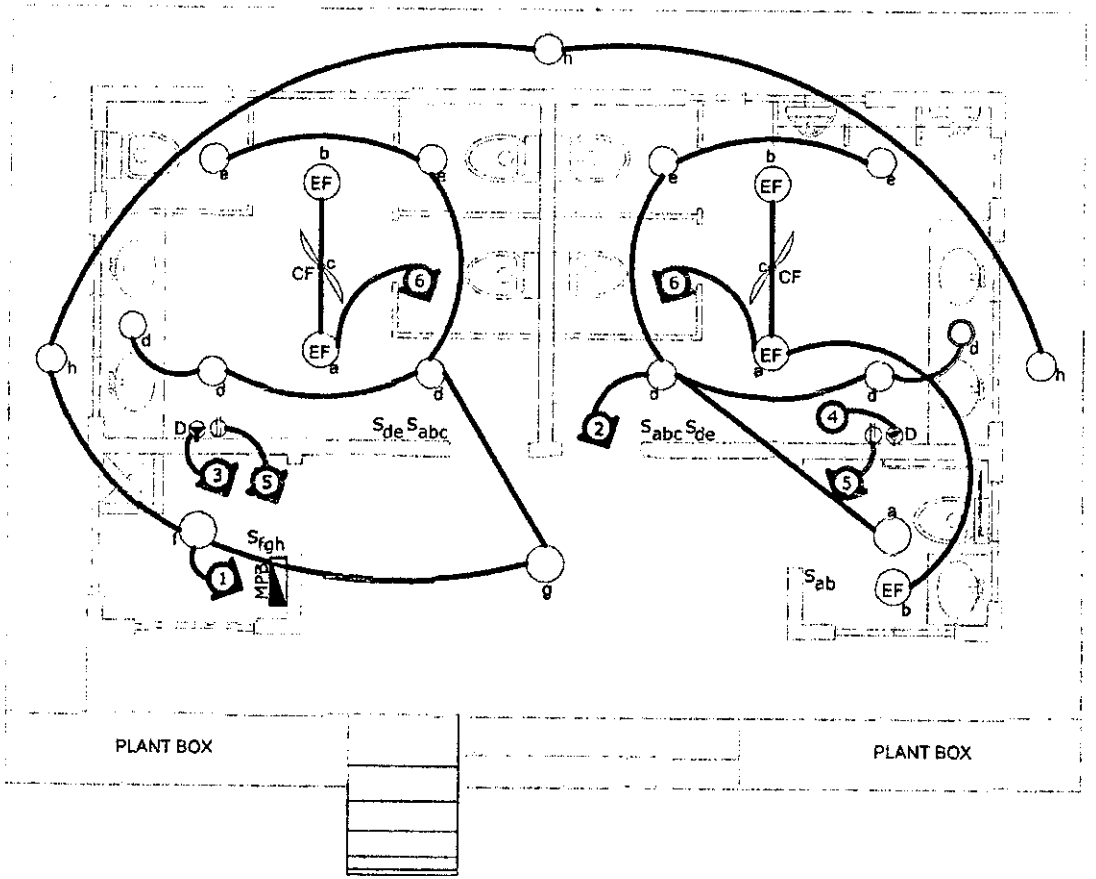
LOAD SCHEDULE

CKT. NO.	NUMBER OF OUTLETS			RATING VOLTS	RATING WATTS	POLE	WIRE SIZE MM^2 (THHN)	CONDUIT SIZE MM^2	PROTECTION	AMPERES
	LO	CO	DRYER							
01	10			230	1000	2	3.5	20	20A	4.35
02	6			230	600	2	3.5	20	20A	2.61
03			1	230	500	2	3.5	20	20A	2.17
04			1	230	500	2	3.5	20	20A	2.17
05		2		230	400	2	3.5	20	20A	1.73
06		7		230	1400	2	3.5	20	20A	6.08
07			SPARE	230	500	2	3.5	20	20A	2.17
08			SPARE	230	500	2	3.5	20	20A	2.17
TOTAL	16	9	2		5,400					23.48 A

PROTECTION : 30A - CB, 2P, 60HTZ,230V; SINGLE PHASE
USE : 2-5.5MM ^{2} THHN; 1-3.50MM ^{2} TW, GROUND, Ø 25MM RSC

MAIN PANEL BOARD DIAGRAM (MPB)





ELECTRICAL LAYOUT PLAN

SCALE 1 : 50 MTS.

LEGEND:

- 4-INCH DIAMETER PIN LIGHT STAINLESS STEEL CASEMENT 20W LED LIGHT, 300 lux
- 4-INCH DIAMETER DOWN LIGHT STAINLESS STEEL CASEMENT 20W LED LIGHT, 300 lux
- MPB — MAIN PANEL BOARD (MPB)
- SPECIAL OUTLET FOR DRYER
- S_a — ONE GANG SWITCH
- S_{ab} — TWO GANG SWITCH
- CONVENIENT OUTLET
- S_{abc} — THREE GANG SWITCH
- EF — CEILING EXHAUST FAN
- CEILING FAN

PHILIPPINE PORTS AUTHORITY
PMO- MINDORO

PROJECT TITLE: REHABILITATION AND EXPANSION OF PTB ROXAS
PORT OF ROXAS, ORIENTAL MINDORO

SHEET CONTENTS: AS SHOWN

SCALE: AS SHOWN

SHEET NO. PCR - 12 of 12

DATE : 25 NOV 2024

PREPARED BY:	CHECKED / REVIEWED BY:	SUBMITTED BY:	RECOMMENDING APPROVAL:	APPROVED BY:
RONALD O. MAYBAG	MARGARITO P. DIMAILIG	JON GABRIELL M. MANANSALA	REYNAND C. PARAFINA	JAMES J. GONTALAO
Acting Principal Engineer A	Division Manager A, ESD	Port Manager A	Manager, Port Planning and Design Department	Assistant General Manager for Engineering

SECTION VIII

BILL OF QUANTITIES and ATTACHMENTS

BID SUMMARY

REHABILITATION AND EXPANSION OF PTB ROXAS
Port of Roxas, Oriental Mindoro

NO. (1)	DESCRIPTION OF WORK (2)	AMOUNT (Pesos) (3)
BILL NO. 1	GENERAL EXPENSES	
BILL NO. 2	DEMOLITION, REMOVAL AND RESTORATION WORKS	
BILL NO. 3	REHABILITATION AND EXPANSION OF PTB	
BILL NO. 4	PUBLIC COMFORT ROOM	
BILL NO. 5	TEMPORARY PASSENGER TERMINAL	
BILL NO. 6	TEMPORARY PORT OPERATIONAL BUILDING	
BILL NO. 7	REIMBURSABLE ITEMS	
BILL NO. 8	CONSTRUCTION OF PUMPHOUSE	
BID SUMMARY		

Name of Firm

Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

Date

BILL OF QUANTITIES

REHABILITATION AND EXPANSION OF PTB ROXAS
Port of Roxas, Oriental Mindoro

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QUANTITY (4)	UNIT PRICE (Pesos)(5)	AMOUNT (Pesos)(4x5)
BILL NO. 1	**GENERAL EXPENSES**				
Bill No. 1.01	Mobilization, Demobilization and Cleaning, Permits and Clearances	lot	1		P
Bill No. 1.02	Rental of temporary site office and residence for the Engineer and staff	mo	12		
Bill No. 1.03	Maintain temporary site office and residence for the Engineer and staff	mo	12		
Bill No. 1.04	Provide Construction Safety and Health Program	mo	12		
	TOTAL AMOUNT FOR BILL NO. 1				

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES

REHABILITATION AND EXPANSION OF PTB ROXAS
Port of Roxas, Oriental Mindoro

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QUANTITY (4)	UNIT PRICE (Pesos)(5)	AMOUNT (Pesos)(4x5)
BILL NO. 2	**DEMOLITION, REMOVAL AND RESTORATION WORKS**				
Bill No. 2.01	Demolish and Dispose Portion of Existing PTB-1 and PTB-2 and Turning Over of Recovered Materials with Value to PPA Authority	cu.m	119.60		P
Bill No. 2.02	Demolish and Dispose Portion of Baggage Xray Housing, Covered Walk and Guard House	lot	1.00		
Bill No. 2.03	Remove Existing Doors and Windows	set	99.00		
Bill No. 2.04	Remove existing Gang Chairs and Accessories	set	300.00		
Bill No. 2.05	Remove existing X-ray Machine and accessories	set	1.00		
Bill No. 2.06	Remove, Chip Off and Dispose Existing Floor Tiles	sq.m	783.40		
Bill No. 2.07	Remove Existing Ceilings and Accessories	sq.m	1,025.70		

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES

REHABILITATION AND EXPANSION OF PTB ROXAS
Port of Roxas, Oriental Mindoro

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QUANTITY (4)	UNIT PRICE (Pesos)(5)	AMOUNT (Pesos)(4x5)
Bill No. 2.08	Remove/Dismantle Existing Plumbing Fixtures and Accessories	set	105.00		P
Bill No. 2.09	Remove and Dispose Existing Concrete Pavement	cu.m	95.12		
Bill No. 2.10	Scraping of Existing Gravel Materials	cu.m	95.12		
Bill No. 2.11	Restoration of Newly Demolished Concrete Pavement	cu.m	21.21		
Bill No. 2.12	Remove Existing Electrical Materials and Accessories	lot	1.00		
Bill No. 2.13	Remove/Dismantle of existing Roof	sq.m	638.38		
Bill No. 2.14	Construct Temporary X-ray Storage	lot	1.00		
Bill No. 2.15	Remove Existing Stair Handrails and Grab Rails	lot	1.00		
	TOTAL AMOUNT FOR BILL NO. 2				

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES

REHABILITATION AND EXPANSION OF PTB ROXAS

Port of Roxas, Oriental Mindoro

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QUANTITY (4)	UNIT PRICE (Pesos)(5)	AMOUNT (Pesos)(4x5)
Bill No. 3.01	Excavation and Backfilling Works including Disposal of Unsuitable Items	cu.m	260.41		P
Bill No. 3.02	Subgrade Preparation	cu.m	392.10		
Bill No. 3.03	Deliver to Site PSC Piles	l.m	99.00		
Bill No. 3.04	Handle, Pitch and Drive PSC Piles	l.m	99.00		
Bill No. 3.05	Cut/Chip and Dispose Newly Driven PSC piles up to Required Elevation	pc	9.00		
Bill No. 3.06	Supply and Apply Soil Treatment	sq.m	392.10		
Bill No. 3.07	Supply, Place and Compact Gravel Bedding for Building Foundation and Pile Cap	cu.m	45.75		
Bill No. 3.08	Supply, Place and Compact Selected Fill for Laying of Slab on Grade	cu.m	91.49		

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES

REHABILITATION AND EXPANSION OF PTB ROXAS
Port of Roxas, Oriental Mindoro

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QUANTITY (4)	UNIT PRICE (Pesos)(5)	AMOUNT (Pesos)(4x5)
Bill No. 3.09	Supply and Place Lean Concrete for Pile Caps	cu.m	1.30		P
Bill No. 3.10	Supply and Place Reinforcing Steel Bars for Concreting Works	kg	24,466.00		
Bill No. 3.11	Supply and Place 3,500 psi Concrete for the Building Structure (Footing, Columns, Beams, Slabs, Stairs, Wall Footing)	cu.m	200.75		
Bill No. 3.12	Supply and Place CHB Wall including Reinforcement and Cement Plaster Finish	sq.m	444.83		
Bill No. 3.13	Supply, Fabricate and Install Structural Steel Materials including Truss Accessories	lot	1.00		
Bill No. 3.14	Supply and Apply Anti-rust Paint for Metal Structures	sq.m	403.75		
Bill No. 3.15	Construct Reinforced Concrete Septic Tank	cu.m	19.10		
Bill No. 3.16	Construct Reinforced Concrete Catch Basin	cu.m	136.75		

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES

REHABILITATION AND EXPANSION OF PTB ROXAS
Port of Roxas, Oriental Mindoro

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QUANTITY (4)	UNIT PRICE (Pesos)(5)	AMOUNT (Pesos)(4x5)
Bill No. 3.17	Supply, Deliver and Install Roof including Double Sided Insulation Foam with Wire Mesh and Accessories	sq.m	616.50		P
Bill No. 3.18	Supply, Fabricate and Install Polycarbonate Solid Sheet Including Accessories	lot	1.00		
Bill No. 3.19	Supply, Fabricate and Install 12mm thk. Phenolic Toilet Partition and Frosted Glasss Shower Partition including Accessories	lot	1.00		
Bill No. 3.20	Supply and Install Toilet Fixtures and Accessories	lot	1.00		
Bill No. 3.21	Supply and Install Water Line Pipes and Fittings including Accessories	lot	1.00		
Bill No. 3.22	Supply and Install Sewerage Pipes and Fittings including Accessories	lot	1.00		
Bill No. 3.23	Supply and Install Drainage Pipes and Fittings including Accessories	lot	1.00		

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES

REHABILITATION AND EXPANSION OF PTB ROXAS
Port of Roxas, Oriental Mindoro

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QUANTITY (4)	UNIT PRICE (Pesos)(5)	AMOUNT (Pesos)(4x5)
Bill No. 3.24	Supply, Deliver, and Install Conduit Pipe, including Fittings of Various Sizes	lot	1.00		P
Bill No. 3.25	Supply, Deliver, and Install Electrical Wirings and Devices	lot	1.00		
Bill No. 3.26	Supply, Deliver, and Install Protective Devices	lot	1.00		
Bill No. 3.27	Supply, Deliver, and Install Lighting Fixtures	lot	1.00		
Bill No. 3.28	Supply, Deliver, and Install Lightning Protection and Accessories	lot	1.00		
Bill No. 3.29	Supply, Deliver, and Install Auxiliary System	lot	1.00		
Bill No. 3.30	Supply, Deliver, and Install Air Conditioning unit	lot	1.00		
Bill No. 3.31	Supply and Install Fire Protection System including Testing, Commisioning, Fire Extinguishers, Water Sprinklers and other Accessories	lot	1.00		

Name of Bidder/ Authorized Representative
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BILL OF QUANTITIES

REHABILITATION AND EXPANSION OF PTB ROXAS
Port of Roxas, Oriental Mindoro

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QUANTITY (4)	UNIT PRICE (Pesos)(5)	AMOUNT (Pesos)(4x5)
Bill No. 3.32	Supply and Apply Waterproofing Coating	sq.m	276.22		P
Bill No. 3.33	Supply and Install Floor, Wall, and Stair Tiles in Various Sizes	sq.m	1,749.43		
Bill No. 3.34	Supply and Install Ceiling Suspension System including Furring, Carrying Channel, Suspension Rod and other Accessories	sq.m	1,219.00		
Bill No. 3.35	Supply and Install Aluminum Clip-in Perforated Panel including Accessories	sq.m	962.40		
Bill No. 3.36	Supply and Install 12 mm thk Moisture Resistant Gypsum Board Painted on Galvanized Steel Suspension	sq.m	88.10		
Bill No. 3.37	Supply and Install 50mmx100mmx5.80m Lineweight Timber Look uPVC extruded material baffle ceiling suspended on metal track	sq.m	27.30		
Bill No. 3.38	Supply and Install 0.40 mm thk. Preformed/Pre-Painted Ribbed Type Spandrel Ceiling	sq.m	141.20		

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BILL OF QUANTITIES

REHABILITATION AND EXPANSION OF PTB ROXAS
Port of Roxas, Oriental Mindoro

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QUANTITY (4)	UNIT PRICE (Pesos)(5)	AMOUNT (Pesos)(4x5)
Bill No. 3.39	Supply, fabricate and install aluminum and stainless steel materials for ladder, glass railings including tempered glass, ramp handrails, grab rails and other accessories	lot	1.00		P
Bill No. 3.40	Supply and Install Fabricated Aluminum Framed and Frameless Glass Doors and Windows, Glass Curtain Wall and Glass Partitions including Accessories	lot	1.00		
Bill No. 3.41	Supply and Install Fabricated 50mmx50mm Aluminum Trellis including Accessories	lot	1.00		
Bill No. 3.42	Supply and Install Fabricated Doors	sq.m	39.00		
Bill No. 3.43	Supply and Install Fabricated Emergency Exit Door with Panic Bar Lock including Jambs and Accessories	lot	1.00		
Bill No. 3.44	Supply and Apply Paint for Masonry and Dry Wall Surfaces including Surface Preparation	sq.m	4,373.11		
Bill No. 3.45	Supply and Install Aluminum Composite Panel and Accessories	sq.m	178.32		

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REHABILITATION AND EXPANSION OF PTB ROXAS
Port of Roxas, Oriental Mindoro

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QUANTITY (4)	UNIT PRICE (Pesos)(5)	AMOUNT (Pesos)(4x5)
Bill No. 3.46	Supply and Install Perforated Aluminum Composite Panel as Wind Shutter with Mangyan Logo	sq.m	146.40		P
Bill No. 3.47	Supply and Place 100mm CHB and Concrete Pouring for Kitchen Countertop including Reinforcement	cu.m	2.55		
Bill No. 3.48	Supply and Install Kitchen Sink and Overhang Cabinets	sq.m	9.34		
Bill No. 3.49	Supply and Place Quartz Stone including Splash Board for Kitchen Countertop	sq.m	7.25		
Bill No. 3.50	Supply and Install Photoluminescent Signs and Path Markings for Emergency Route including its Accessories	lot	1.00		
Bill No. 3.51	Supply and Deliver Gang Chairs	lot	1.00		
Bill No. 3.52	Supply and Deliver Office Furnitures	lot	1.00		
Bill No. 3.53	Reinstallation of Removed X-ray Machine	lot	1.00		

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BILL OF QUANTITIES

REHABILITATION AND EXPANSION OF PTB ROXAS
Port of Roxas, Oriental Mindoro

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QUANTITY (4)	UNIT PRICE (Pesos)(5)	AMOUNT (Pesos)(4x5)
Bill No. 3.54	Supply and Install PPA Logo including Accessories	lot	1.00		P
Bill No. 3.55	Supply and Install Indoor Plants for Landscape and Plantbox	lot	1.00		
Bill No. 3.56	Supply, Deliver & Installation of Distribution Transformer including Accessories and Other Incidental Expenses, RC Platform, Ductbank, Pedestal Post	lot	1.00		
Bill No. 3.57	Supply and Install Hybrid Solar Power System	lot	1.00		
	TOTAL AMOUNT FOR BILL NO. 3				

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BILL OF QUANTITIES

REHABILITATION AND EXPANSION OF PTB ROXAS
Port of Roxas, Oriental Mindoro

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QUANTITY (4)	UNIT PRICE (Pesos)(5)	AMOUNT (Pesos)(4x5)
BILL NO. 4	**PUBLIC COMFORT ROOM**				
Bill No. 4.01	Demolition and Disposal of Portion of Existing Pavement	sq.m	75.61		P
Bill No. 4.02	Excavation, Backfilling and Compaction	cu.m	30.12		
Bill No. 4.03	Supply and Place Gravel Bedding	cu.m	7.56		
Bill No. 4.04	Supply and Place 3500 psi Concrete for Superstructure	cu.m	27.37		
Bill No. 4.05	Supply and Place CHB including Reinforcement and Plastering	sq.m	103.48		
Bill No. 4.06	Supply and Place Reinforcing Steel Bars for Concreting Works	kg	3,379.31		
Bill No. 4.07	Interior Ceiling : Supply & Install 2" x 2" x 0.70mm thk. Perforated Aluminum-Clip-In Panel, Bone White Ceiling Board	sq.m	38.70		
Bill No. 4.08	Exterior Ceiling : Supply & Install Ficem 12mm Exterior Ceiling Board & Framing	sq.m	31.01		

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