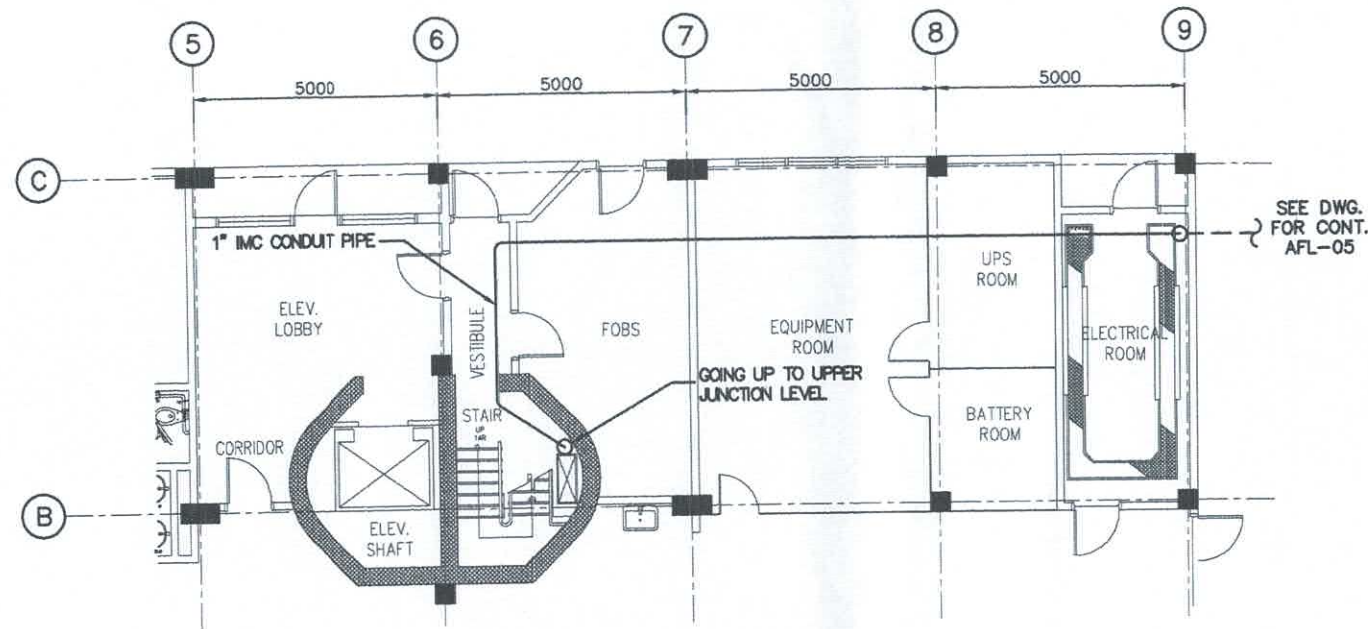
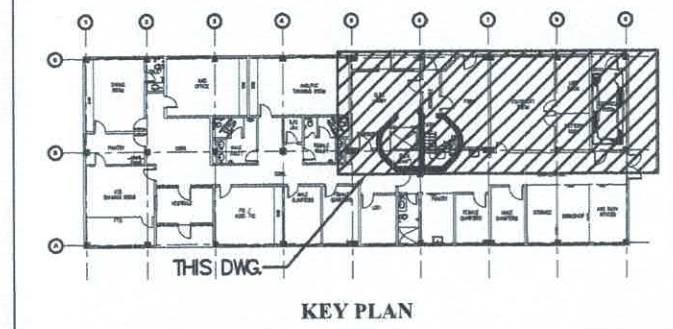


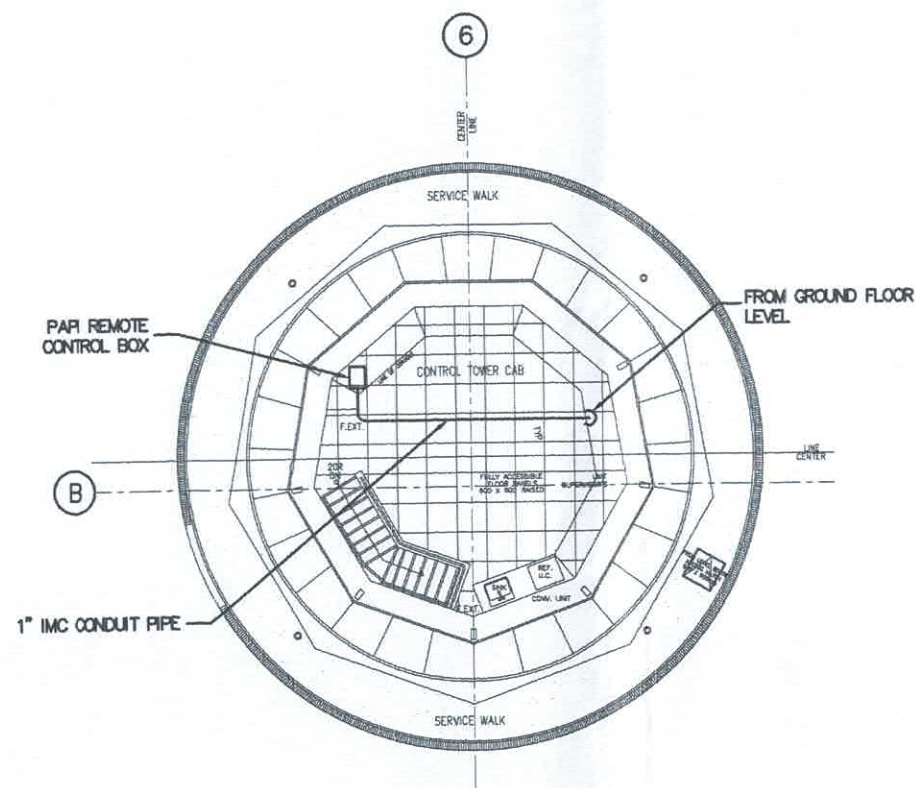


**CONTROL TOWER
GROUND FLOOR CONDUIT LAYOUT**
SCALE 1:150



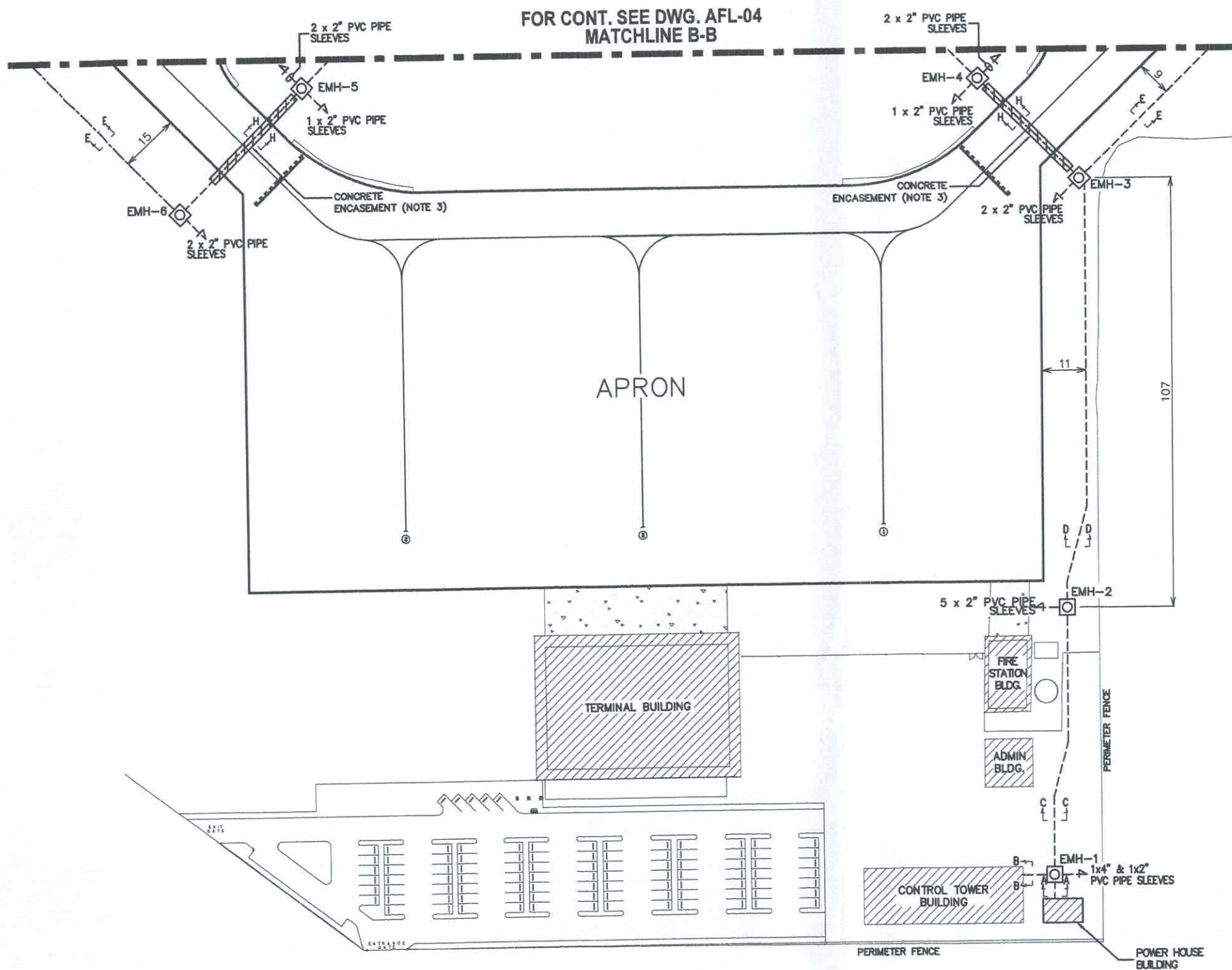
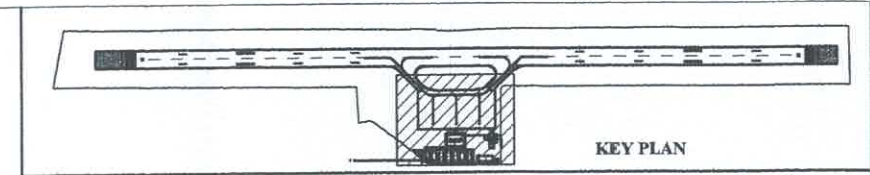
LEGEND:

- PVC CONDUIT PIPES
DIRECT BURIED
- ⬆ - CONDUIT PIPE GOING UP
- ⬇ - CONDUIT PIPE GOING DOWN



**CONTROL TOWER
CAB ROOM CONDUIT LAYOUT**
SCALE 1:150

CIVIL AVIATION AUTHORITY OF THE PHILIPPINES	TITLE :	DESIGNED BY :	CHECKED BY :	REVIEWED BY :	SUBMITTED BY :	RECOMMENDING APPROVAL :	APPROVED BY :	SHEET NO. :	
 AIR NAVIGATION SERVICE	PURCHASE/INSTALLATION OF PAPI SYSTEMS AT SAN VICENTE AIRPORT PROJ. CODE: 10604010 2512	 <u>WILMAR D. LABITAN</u> ANFE I, ANPPDD	 <u>RAPHAEL RUSSEL II L. FERNANDO</u> CNSSO II, ANPPDD	 <u>ROBERICK D. VEGA</u> Division Chief III, ANPPDD	 <u>JOSUE R. SUGUI</u> Acting Department Manager, ANQMD	 <u>LEANDRO R. VARQUEZ</u> Department Manager, ANPPDD	 <u>GARY M. JADIE</u> Acting Chief, Air Navigation Service	 <u>CAPT. MANUEL ANTONIO L. TAMAYO</u> Director General, CAAP	AFL-03 / 12
		DATE:							
		02 AUG 2024							



LEGEND:

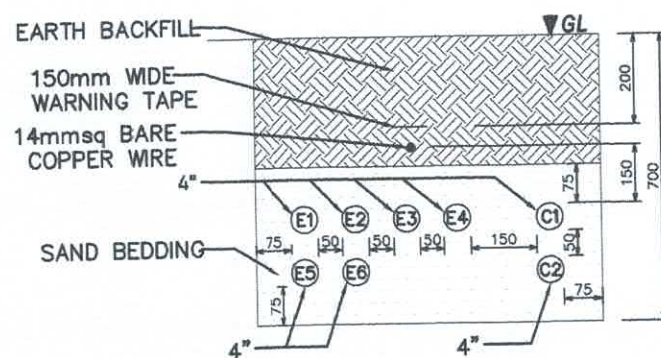
- - MAINTENANCE HOLE (EMH)
- - HANDHOLE (EHH)
- - - PVC CONDUIT PIPES DIRECT BURIED
- □ □ □ - PRECISION APPROACH PATH INDICATOR

NOTES:

1. FOR SECTION DETAILS SEE DRAWING NUMBER AFL-06.
2. ALL PVC CONDUIT SLEEVES INSIDE MANHOLE SHALL HAVE DUCT SEALS.
3. CONCRETE ENCASEMENT SHALL BE PERPENDICULAR TO THE TAXIWAY PAVEMENT AND SHALL EXTEND 2 METERS BEYOND THE EDGE OF THE TAXIWAY PAVEMENT.

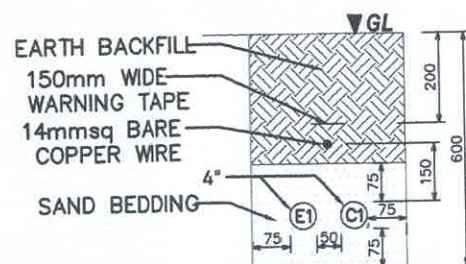
UNDERGROUND CABLE DUCTING LAYOUT
SCALE 1:1200

CIVIL AVIATION AUTHORITY OF THE PHILIPPINES	TITLE :	DESIGNED BY :	CHECKED BY :	REVIEWED BY :	SUBMITTED BY :	RECOMMENDING APPROVAL :	APPROVED BY :	SHEET NO. :
	PURCHASE/INSTALLATION OF PAPI SYSTEMS AT SAN VICENTE AIRPORT	WILMAR D. LABITAN ANPE I, ANPPDD	RAPHAEL RUSSEL III, PERNANDO CNSSO II, ANPPDD	RODERICK D. VEGA Division Chief III, ANPPDD	JOSUE R. SUGUI Acting Department Manager, ANQMD	LEANDRO R. VARQUEZ Department Manager III, ANPPDD	GARY M. JADIE Acting Chief, Air Navigation Service	AFL-05 / 12
AIR NAVIGATION SERVICE	PROJ. CODE: 10604010 2512						CAPT. MANUEL ANTONIO L. TAMAYO Director General, CAAP	DATE: 02 AUG 2024



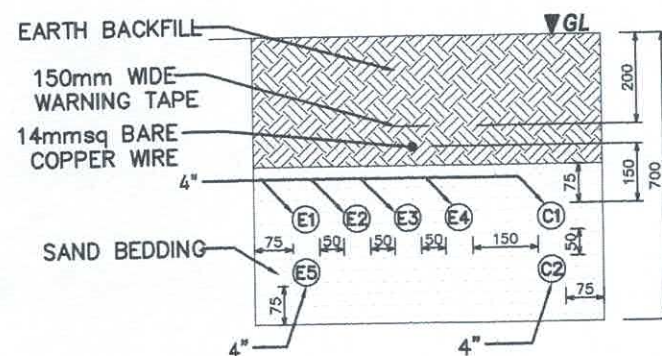
SECTION A-A
SCALE NTS

PVC	DESCRIPTION	TYPE OF CABLE
E1	APRON FLOODLIGHT 1	FUTURE
E2	APRON FLOODLIGHT 2	FUTURE
E3	AFL GENERATOR	FUTURE
E4	SPARE	
E5	REDL CKT1	FUTURE
E6	REDL CKT2	FUTURE
	TEDL	FUTURE
E6	PAPI 04 & 22	4-1C x 8mmsq 5kV + 2 x 14mmsq
C1	PAPI REMOTE CONTROL BOX	1-8C x 1.25mmsq
C2	MET 04 & 22	FUTURE



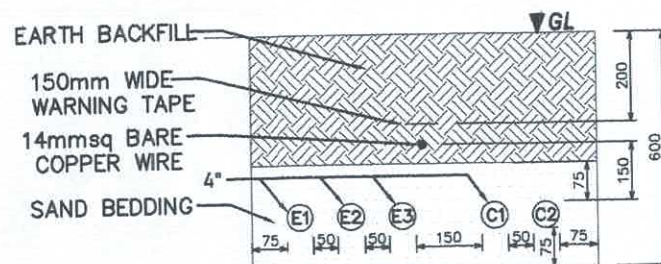
SECTION B-B
SCALE NTS

PVC	DESCRIPTION	TYPE OF CABLE
E1	SPARE	
C1	PAPI REMOTE CONTROL BOX	1-8C x 1.25mmsq



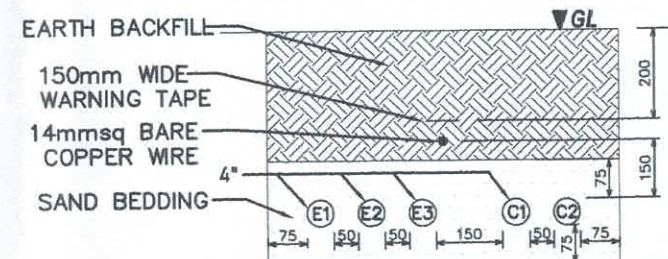
SECTION C-C
SCALE NTS

PVC	DESCRIPTION	TYPE OF CABLE
E1	APRON FLOODLIGHT 1	FUTURE
E2	APRON FLOODLIGHT 2	FUTURE
E3	REDL CKT1	FUTURE
E4	REDL CKT2	FUTURE
E5	TEDL	FUTURE
E6	PAPI 04 & 22	4-1C x 8mmsq 5kV + 2 x 14mmsq
E5	SPARE	
C1	PAPI REMOTE CONTROL BOX	1-8C x 1.25mmsq
C2	MET 04 & 22	FUTURE



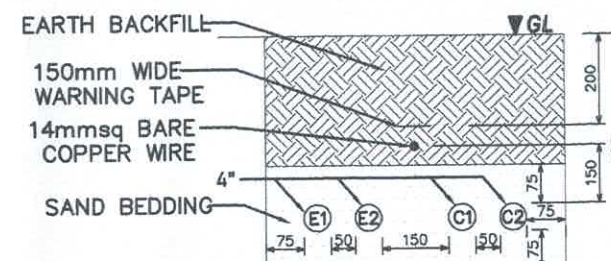
SECTION D-D
SCALE NTS

PVC	DESCRIPTION	TYPE OF CABLE
E1	REDL CKT1	FUTURE
E1	REDL CKT2	FUTURE
	TEDL	FUTURE
E2	PAPI 04 & 22	4-1C x 8mmsq 5kV + 2 x 14mmsq
E3	SPARE	
C1	MET 04 & 22	FUTURE
C2	SPARE	



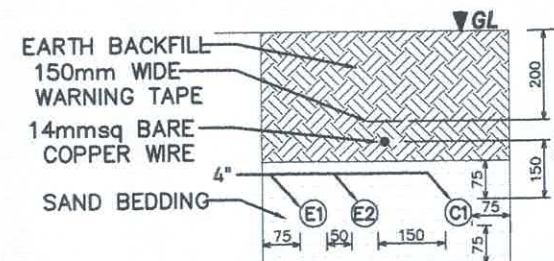
SECTION E-E
SCALE NTS

PVC	DESCRIPTION	TYPE OF CABLE
E1	REDL CKT1	FUTURE
E1	REDL CKT2	FUTURE
	TEDL	FUTURE
E2	PAPI 04 OR 22	2-1C x 8mmsq 5kV + 1 x 14mmsq
E3	SPARE	
C1	MET 04 OR 22	FUTURE
C2	SPARE	



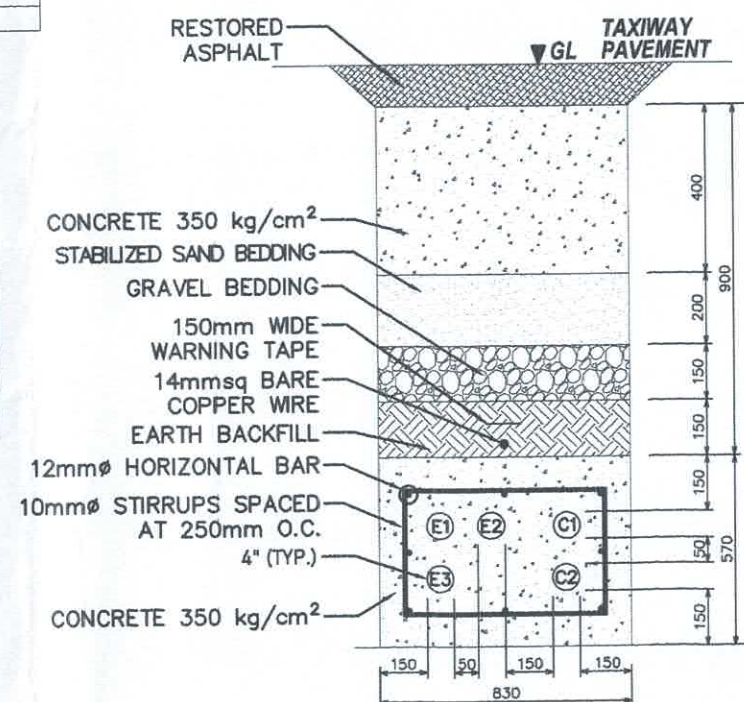
SECTION F-F
SCALE NTS

PVC	DESCRIPTION	TYPE OF CABLE
E1	PAPI 04 OR 22	2-1C x 8mmsq 5kV + 1 x 14mmsq
E2	SPARE	
C1	MET 04 OR 22	FUTURE
C2	SPARE	



SECTION G-G
SCALE NTS

PVC	DESCRIPTION	TYPE OF CABLE
E1	PAPI 04 OR 22	2-1C x 8mmsq 5kV + 1 x 14mmsq
E2	SPARE	
C1	SPARE	



SECTION H-H (NOTE 4)
SCALE NTS

PVC	DESCRIPTION	TYPE OF CABLE
E1	REDL CKT1	FUTURE
E1	REDL CKT2	FUTURE
	TEDL	FUTURE
E2	PAPI 04	2-1C x 8mmsq 5kV + 1 x 14mmsq
E3	SPARE	
C1	MET 04	FUTURE
C2	SPARE	

NOTES:

1. ALL UNDERGROUND PVC CONDUITS SHALL BE SCHEDULE 40.
2. ALL PVC CONDUITS SHALL BE INSTALLED WITH A MINIMUM BENDS AND OFFSETS.
3. THE USE OF PVC CONDUIT SPACERS IS REQUIRED.
4. CONCRETE ENCASUREMENT SHALL EXTEND 2 METERS BEYOND THE EDGE OF THE TAXIWAY PAVEMENT.

CIVIL AVIATION AUTHORITY
OF THE PHILIPPINES



AIR NAVIGATION SERVICE

TITLE :

PURCHASE/INSTALLATION
OF PAPI SYSTEMS AT
SAN VICENTE AIRPORT

PROJ. CODE: 10604010 2512

DESIGNED BY :

WILMAR D. LABITAN
ANPE I, ANPPDD

CHECKED BY :

RAFAEL RUSSEL L. FERNANDO
CNSSO II, ANPPDD

REVIEWED BY :

RODERICK D. VEGA
Division Chief III, ANPPDD

SUBMITTED BY :

LEANDRO R. VARQUEZ
Department Manager III, ANPPDD

RECOMMENDING APPROVAL :

GARY M. JADIE
Acting Chief, Air Navigation Service

APPROVED BY :

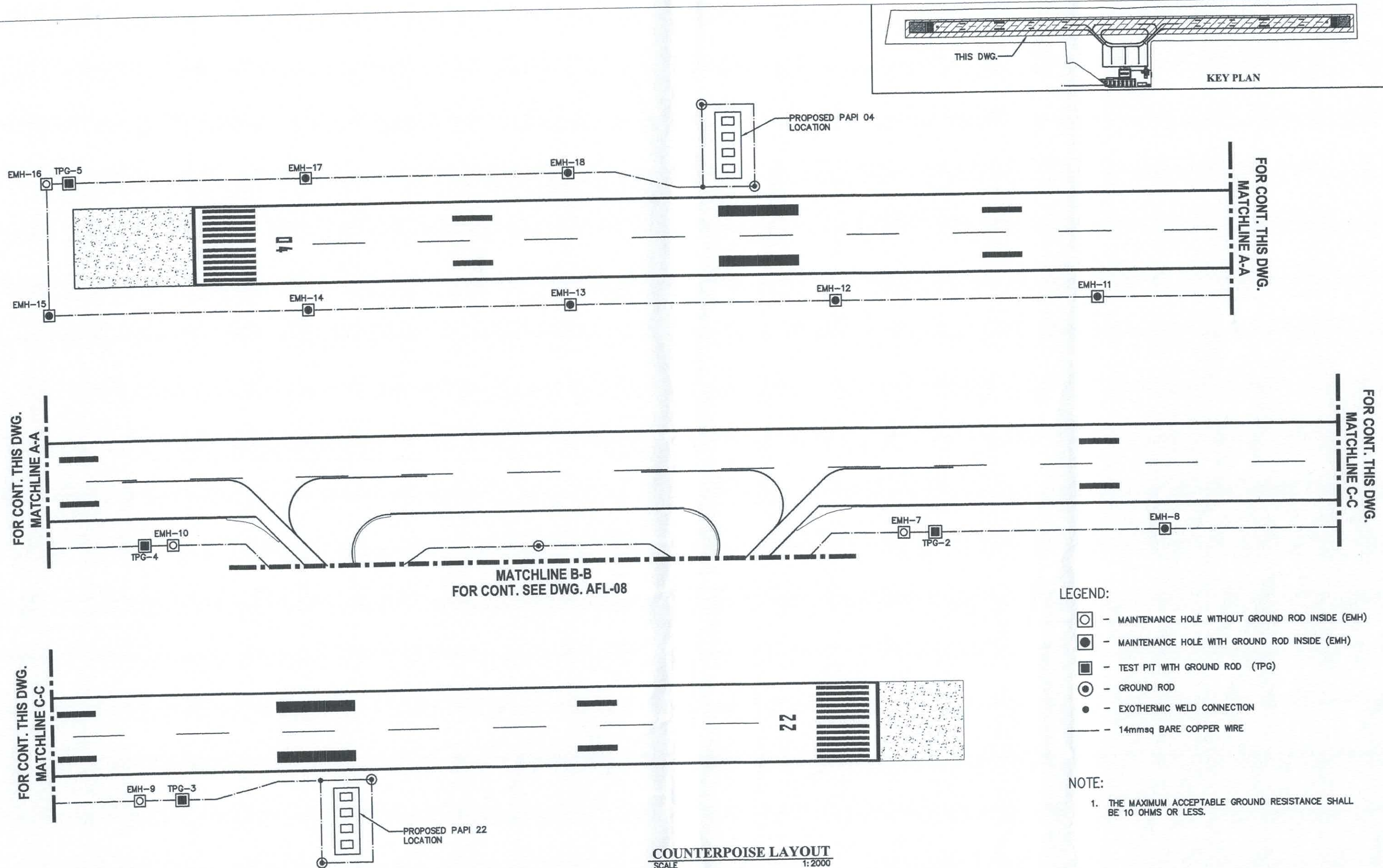
CAPT. MANUEL ANTONIO L. TAMAYO
Director General, CAAP

SHEET NO. :

AFL-06 / 12

DATE:

02 AUG 2024

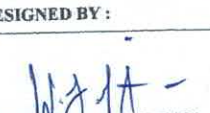
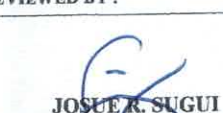


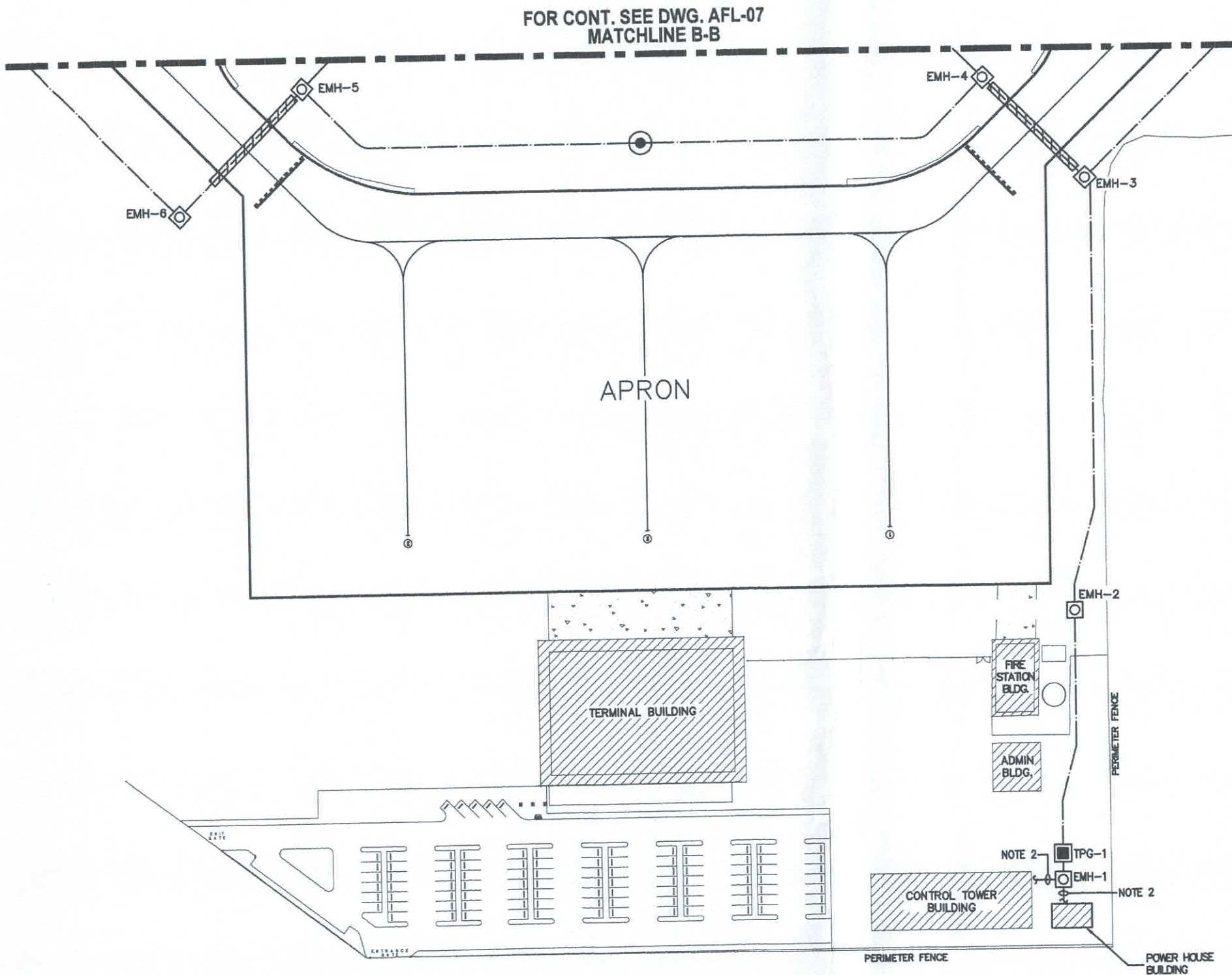
LEGEND:

- - MAINTENANCE HOLE WITHOUT GROUND ROD INSIDE (EMH)
- - MAINTENANCE HOLE WITH GROUND ROD INSIDE (EMH)
- - TEST PIT WITH GROUND ROD (TPG)
- ⊙ - GROUND ROD
- - EXOTHERMIC WELD CONNECTION
- - 14mmsq BARE COPPER WIRE

NOTE:

1. THE MAXIMUM ACCEPTABLE GROUND RESISTANCE SHALL BE 10 OHMS OR LESS.

CIVIL AVIATION AUTHORITY OF THE PHILIPPINES  AIR NAVIGATION SERVICE	TITLE : PURCHASE/INSTALLATION OF PAPI SYSTEMS AT SAN VICENTE AIRPORT PROJ. CODE: 10604010 2512	DESIGNED BY :  WILMAR D. LABITAN ANPPDD	CHECKED BY :  RAFAEL RUSSEL H. L. FERNANDO CNSSO, ANPPDD	REVIEWED BY :  RODERICK D. VEGA Division Chief III, ANPPDD	SUBMITTED BY :  JOSE R. SUGUI Acting Department Manager, ANQMD	RECOMMENDING APPROVAL :  LEANDRO E. VARQUEZ Department Manager III, ANPPDD	APPROVED BY :  GARY M. JADIE Acting Chief, Air Navigation Service	APPROVED BY :  CAPT. MANUEL ANTONIO L. TAMAYO Director General, CAAP	SHEET NO. : AFL-07 / 12 DATE: 02 AUG 2024
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FOR CONT. SEE DWG. AFL-07
MATCHLINE B-B

APRON

TERMINAL BUILDING

FIRE
STATION
BLDG.

ADMIN
BLDG.

CONTROL TOWER
BUILDING

POWER HOUSE
BUILDING

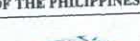
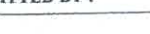
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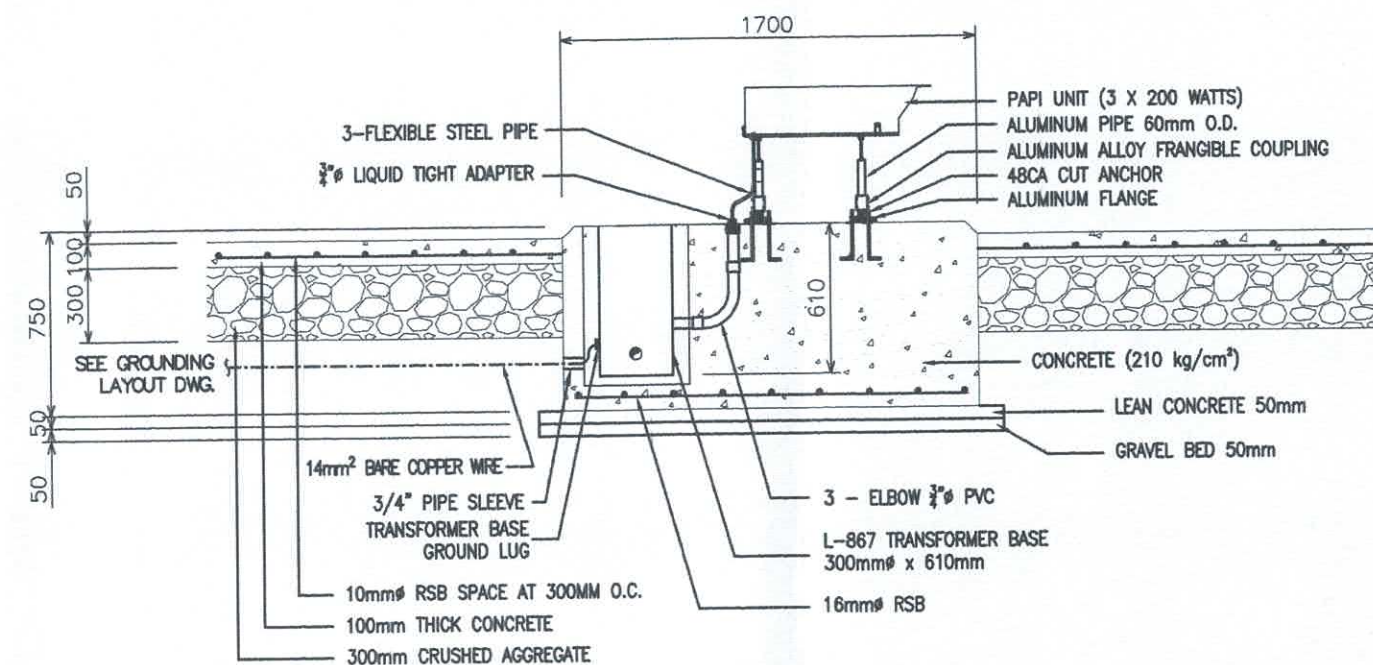
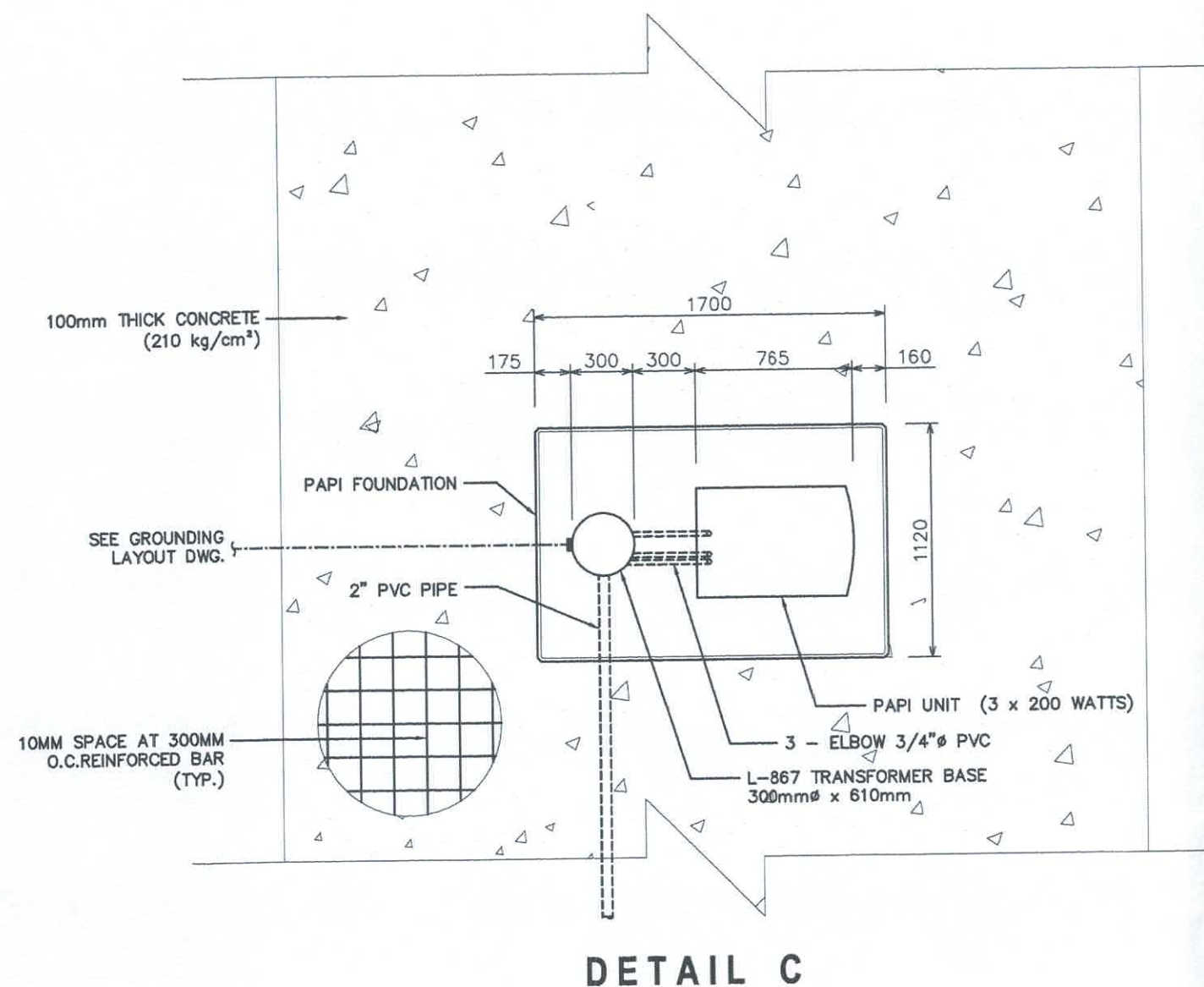
-  - MAINTENANCE HOLE WITHOUT GROUND ROD INSIDE (EMH)
-  - MAINTENANCE HOLE WITH GROUND ROD INSIDE (EMH)
-  - TEST PIT WITH GROUND ROD (TPG)
-  - GROUND ROD
-  - EXOTHERMIC WELD CONNECTION
-  - 14mmsq BARE COPPER WIRE

NOTE:

1. THE MAXIMUM ACCEPTABLE GROUND RESISTANCE SHALL BE 10 OHMS OR LESS.
2. TO BE CONNECTED TO EXISTING GROUNDING GRID.

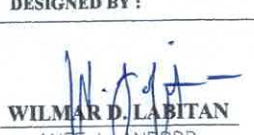
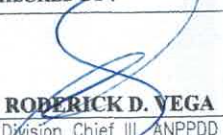
GROUNDING LAYOUT
SCALE 1:1200

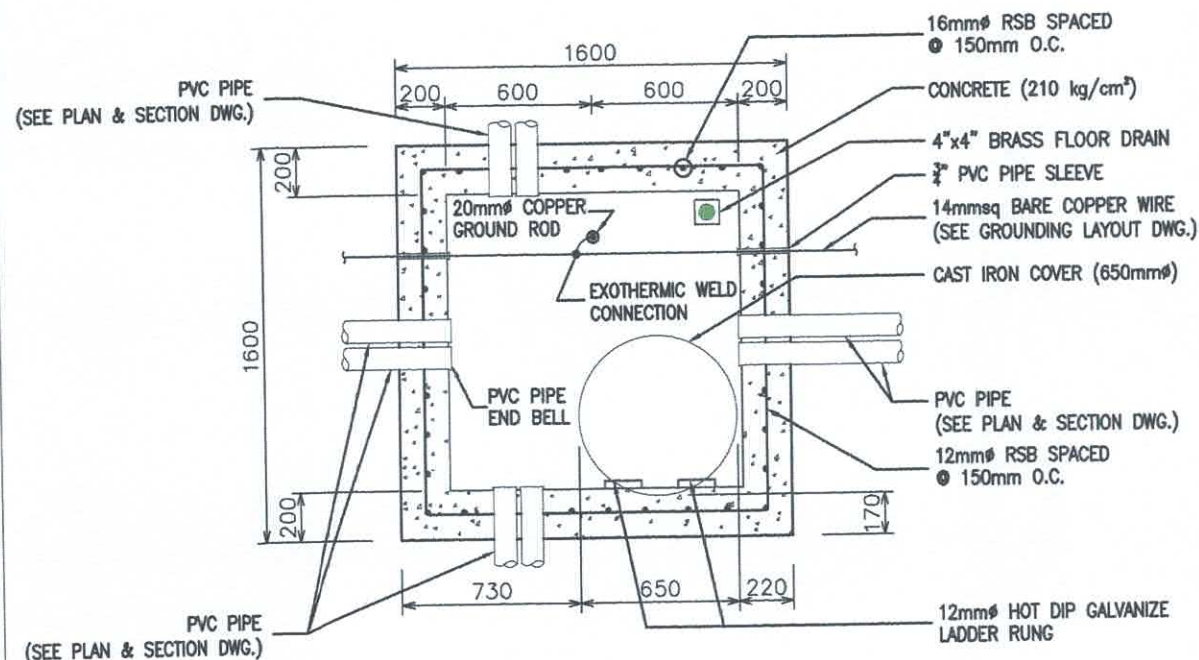
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES	TITLE :	DESIGNED BY :	CHECKED BY :	REVIEWED BY :	SUBMITTED BY :	RECOMMENDING APPROVAL :	APPROVED BY :	SHEET NO. :		
 AIR NAVIGATION SERVICE	PURCHASE/INSTALLATION OF PAPI SYSTEMS AT SAN VICENTE AIRPORT PROJ. CODE: 10604010 2512	 <u>WILMAR D. LABITAN</u> ANPE I, ANPPDD	 <u>RAFAEL RUSSEL H. FERNANDO</u> CNSSG II, ANPPDD	 <u>RODERICK D. VEGA</u> Division Chief III, ANPPDD	 <u>JOSUE R. SUGUI</u> Acting Department Manager, ANQMD	 <u>LEANDRO R. VARQUEZ</u> Department Manager III, ANPPDD	 <u>GARY M. JARIE</u> Acting Chief, Air Navigation Service	 <u>CAPT. MANUEL ANTONIO L. TAMAYO</u> Director General, CAAP	AFL-08 / 12	
										DATE:
										02 AUG 2024



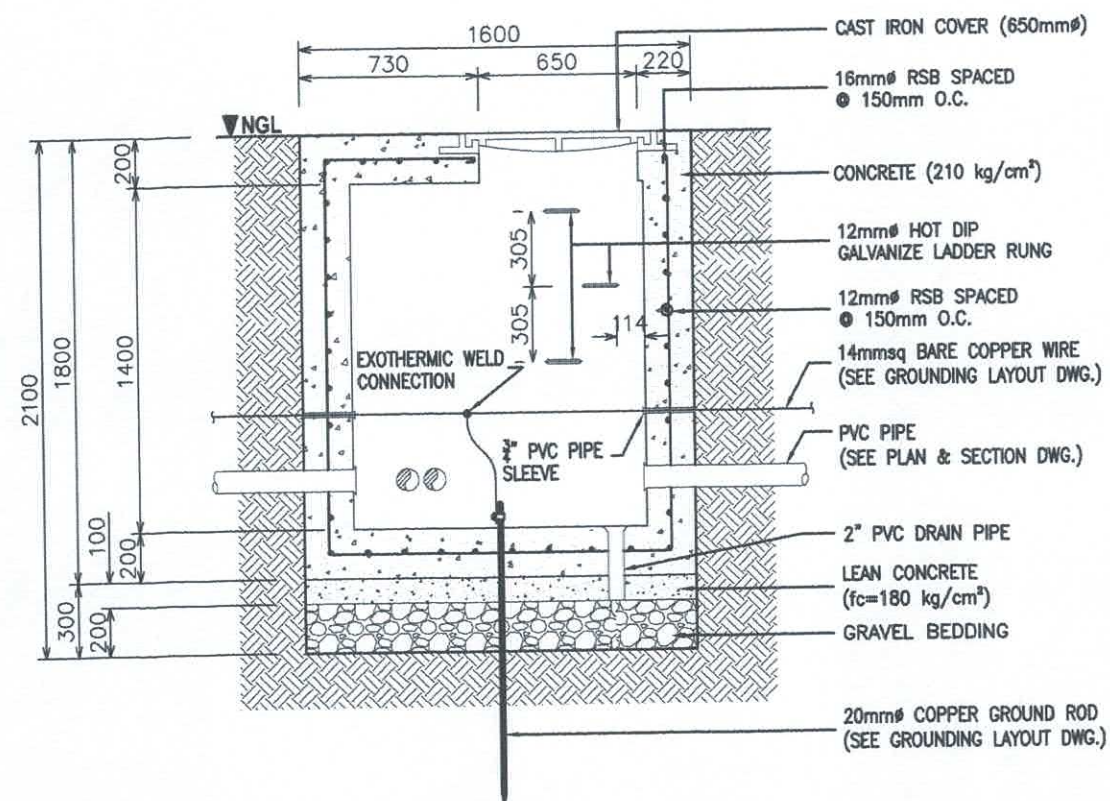
NOTE:
1. ALL PVC CONDUIT SLEEVES SHALL HAVE DUCT SEALS.

PRECISION APPROACH PATH INDICATOR DETAIL SCALE NTS

CIVIL AVIATION AUTHORITY OF THE PHILIPPINES	TITLE :	DESIGNED BY :	CHECKED BY :	REVIEWED BY :	SUBMITTED BY :	RECOMMENDING APPROVAL :	APPROVED BY :	SHEET NO. :
	PURCHASE/INSTALLATION OF PAPI SYSTEMS AT SAN VICENTE AIRPORT	 WILMAR D. LABITAN ANPE I, ANPPDD	 RAPHAEL RUSSEL B. L. FERNANDO CNSSO II, ANPPDD	 ROBERICK D. VEGA Division Chief III, ANPPDD	 JOSUE R. SUGUI Acting Department Manager, ANQMD	 LEANDRO R. VARQUEZ Department Manager III, ANPPDD	 GARY M. JADIE Acting Chief, Air Navigation Service	 CAPT. MANUEL ANTONIO L. TAMAYO Director General, CAAP
AIR NAVIGATION SERVICE	PROJ. CODE: 10604010 2512							AFL-10 / 12
								DATE: 02 AUG 2024



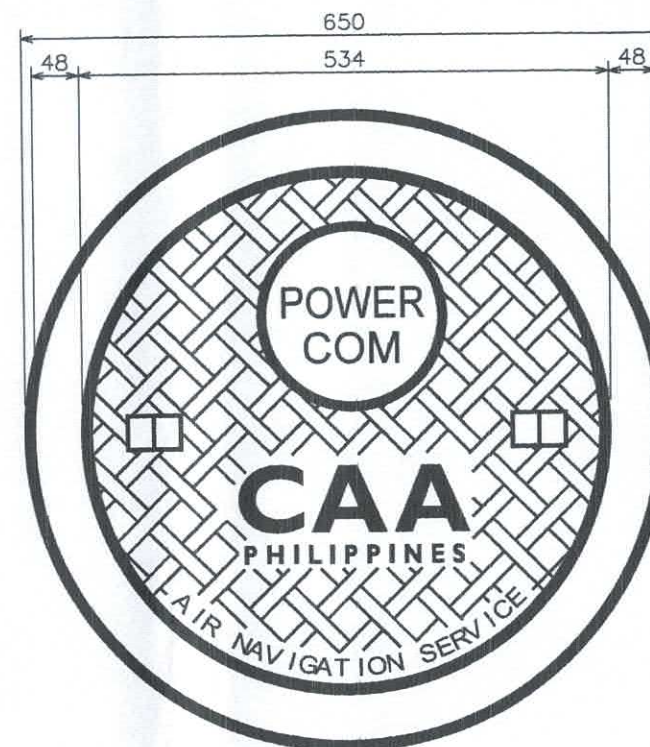
PLAN



SECTION

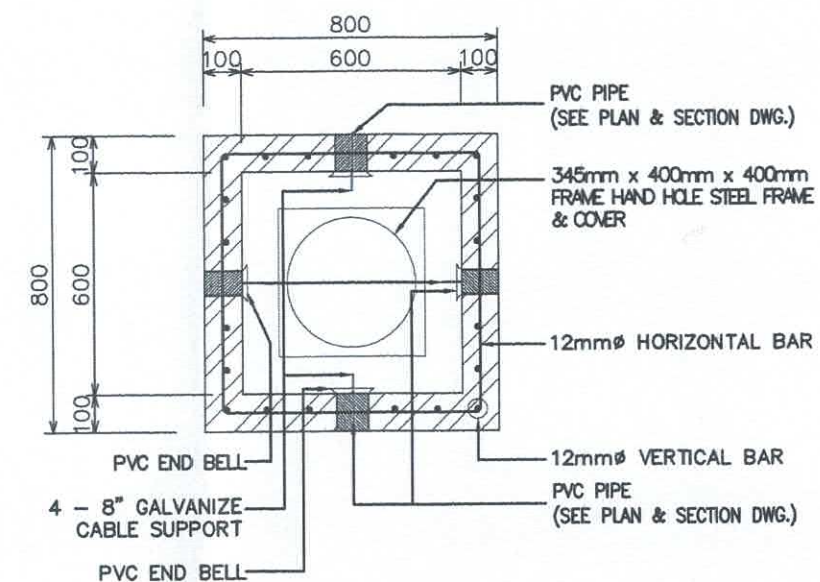
DETAIL OF MAINTENANCE HOLE

SCALE 1:30

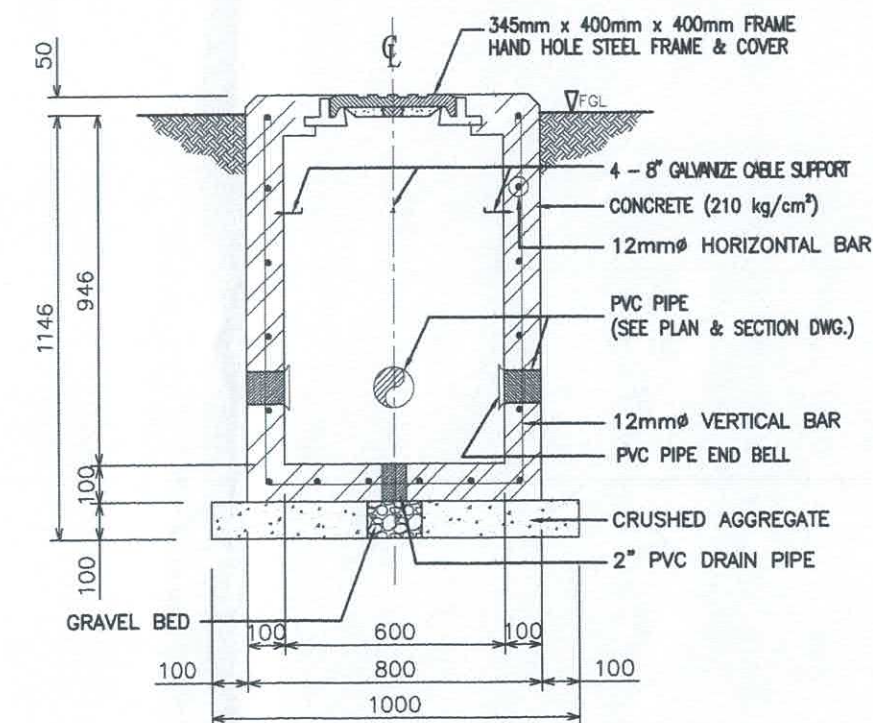


MAINTENANCE HOLE COVER LAYOUT

SCALE 1:7.5



PLAN



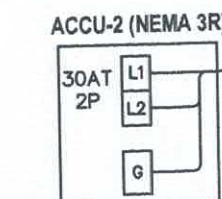
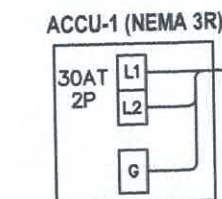
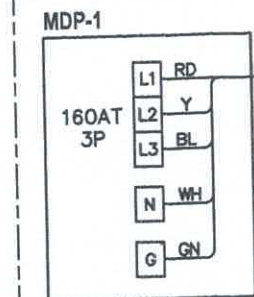
SECTION

DETAIL OF HANDHOLE

SCALE 1:20

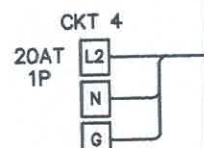
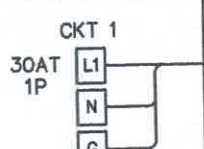
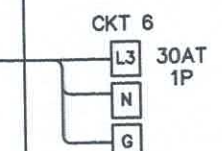
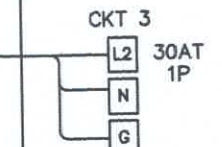
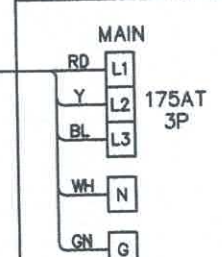
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES	TITLE :	DESIGNED BY :	CHECKED BY :	REVIEWED BY :	SUBMITTED BY :	RECOMMENDING APPROVAL :	APPROVED BY :	SHEET NO. :
	PURCHASE/INSTALLATION OF PAPI SYSTEMS AT SAN VICENTE AIRPORT	WILMAR D. LABITAN ANFE I, ANPPDD	RODERICK D. VEGA Division Chief III, ANPPDD	JOSIE R. SUGUI Acting Department Manager, ANQMD	LEANDRO R. VARQUEZ Department Manager III, ANPPDD	GARY M. JADIE Acting Chief, Air Navigation Service	CAPT. MANUEL ANTONIO L. TAMAYO Director General, CAAP	AFL-11 / 12
AIR NAVIGATION SERVICE	PROJ. CODE: 10604010 2512	RAPHAEL RUSSEL II L. FERNANDO CNSSO II, ANPPDD						DATE: 02 AUG 2024

POWER HOUSE EQUIPMENT ROOM



PC-MDP1-PPAFLS-L1
PC-MDP1-PPAFLS-L2
PC-MDP1-PPAFLS-L3
PC-MDP1-PPAFLS-N
PC-MDP1-PPAFLS-G

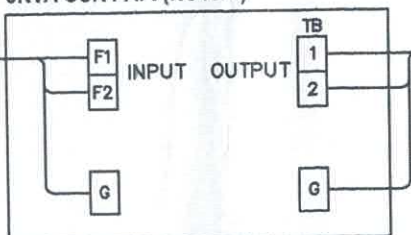
PP-AFLS



PC-PPAFLS-5KVACORPAPI

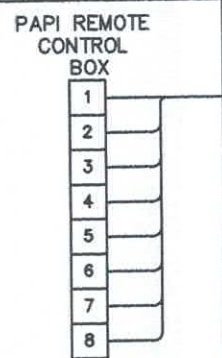
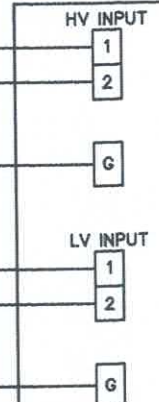
PC-PPAFLS-CSSPAPI

5KVA CCR PAPI (NOTE 1)



PC-5KVACORPAPI-CSSPAPI-1
PC-5KVACORPAPI-CSSPAPI-2
PC-5KVACORPAPI-CSSPAPI-G

CSS-PAPI CIRCUIT SELECTOR SWITCH (NOTE 1)



OUTPUT PAPI 04

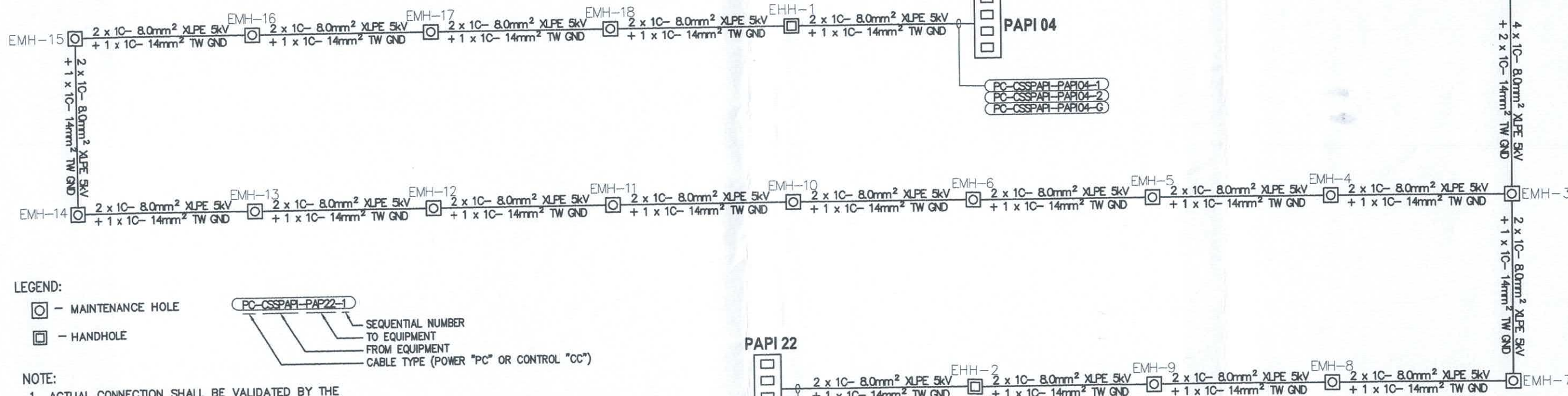
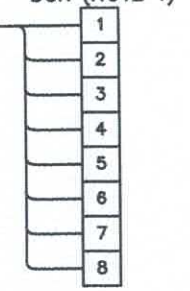


PAPI 22



CONTROL TOWER BUILDING CAB ROOM

PAPI REMOTE CONTROL BOX (NOTE 1)



LEGEND:

- - MAINTENANCE HOLE
- - HANDHOLE

PC-CSSPAPI-PAP22-1

SEQUENTIAL NUMBER TO EQUIPMENT FROM EQUIPMENT
CABLE TYPE (POWER "PC" OR CONTROL "CC")

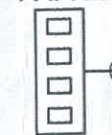
NOTE:

- ACTUAL CONNECTION SHALL BE VALIDATED BY THE CONTRACTOR AS PER EQUIPMENT SCHEMATIC DIAGRAM.
- ALL WIRES & CABLE SHALL HAVE MARKERS ATTACHED ON BOTH SIDES OF EACH CONNECTOR AND AT ACCESS POINTS ENTERING OR LEAVING SUCH AS MANHOLES, HANDHOLES, ETC. AS PER ICAO DOC 9157 PART 5.

WIRING DIAGRAM

SCALE NTS

PAPI 22



PC-CSSPAPI-PAP22-1
PC-CSSPAPI-PAP22-2
PC-CSSPAPI-PAP22-G

CIVIL AVIATION AUTHORITY OF THE PHILIPPINES



AIR NAVIGATION SERVICE

TITLE:

PURCHASE/INSTALLATION OF PAPI SYSTEMS AT SAN VICENTE AIRPORT

PROJ. CODE: 10604010 2512

DESIGNED BY:

WILMAR D. LABITAN
ANPE I, ANPPDD

RAPHAEL RUSSEL B. L. FERNANDO
CNSSO III, ANPPDD

CHECKED BY:

RODERICK D. VEGA
Division Chief III, ANPPDD

REVIEWED BY:

JOSUE R. SUGUI
Acting Department Manager, ANQMD

SUBMITTED BY:

LEANDRO R. VARQUEZ
Department Manager III, ANPPDD

RECOMMENDING APPROVAL:

GARY M. JADIE
Acting Chief, Air Navigation Service

APPROVED BY:

CAPT. MANUEL ANTONIO L. TAMAYO
Director General, CAAP

SHEET NO.:

AFL-12 / 12

DATE:

02 AUG 2024

SCHEDULE OF ACTIVITIES FOR THE PROJECT "PURCHASE/INSTALLATION OF PAPI SYSTEM for SAN VICENTE AIRPORT (COB MYP 2024-25)

ACTIVITIES	CD	CY2024												CY2025											
		1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
I. DED STAGE	210																								
I.1 Detailed Engineering Design (Survey, Market Research, Cost Estimates, POW, etc.)																									
I.2 Bid Document Preparation/Submission																									
II. PROCUREMENT STAGE	90																								
II.1 Bidding Process/Contract/NTP																									
III. IMPLEMENTATION STAGE	120																								
III.1 General Requirements/Mobilization																									
III.2 Site Works/Delivery																									
III.3 Excavation Works																									
III.4 Backfilling Works																									
III.5 Underground Cable Ducts, Manholes, Handholes, Groundings																									
III.6 Power, Control, and Monitoring System																									
III.7 Precision Approach Path Indicator System																									
III.8 Miscellaneous (levelling /Test/Commissioning/Flight Check Inspection																									

PREPARED BY:

ANPPDD / ELECTRO-MECH DIVISION