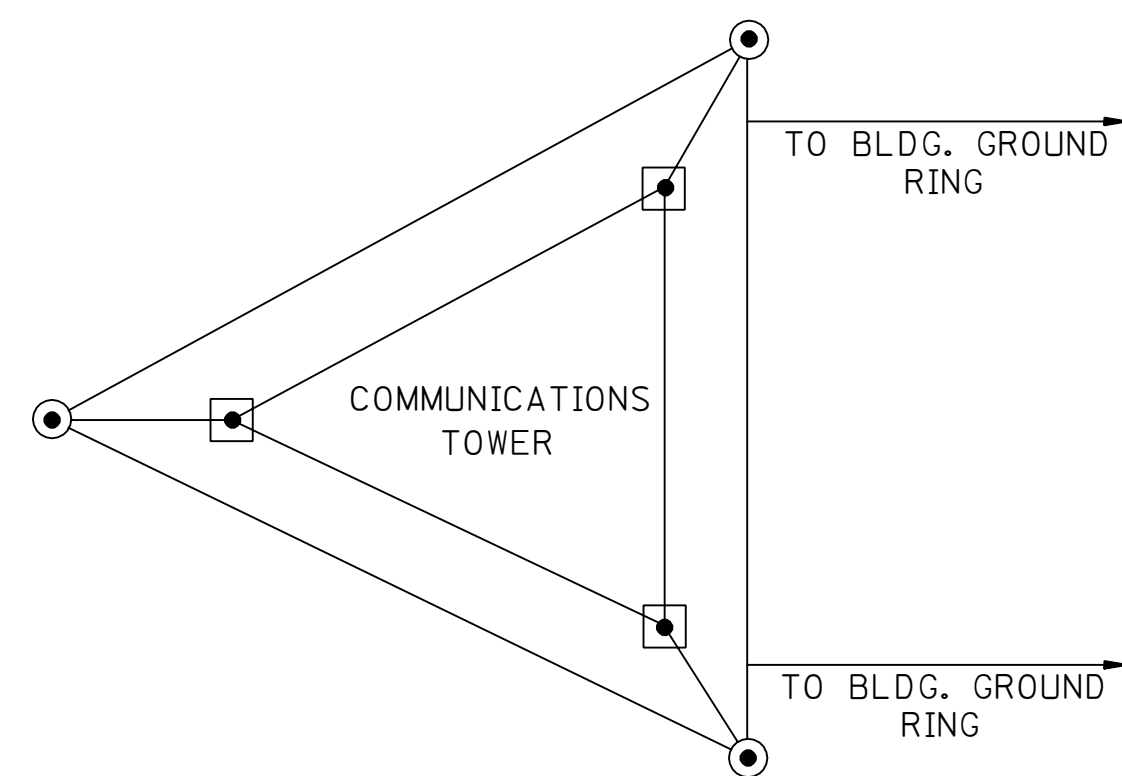
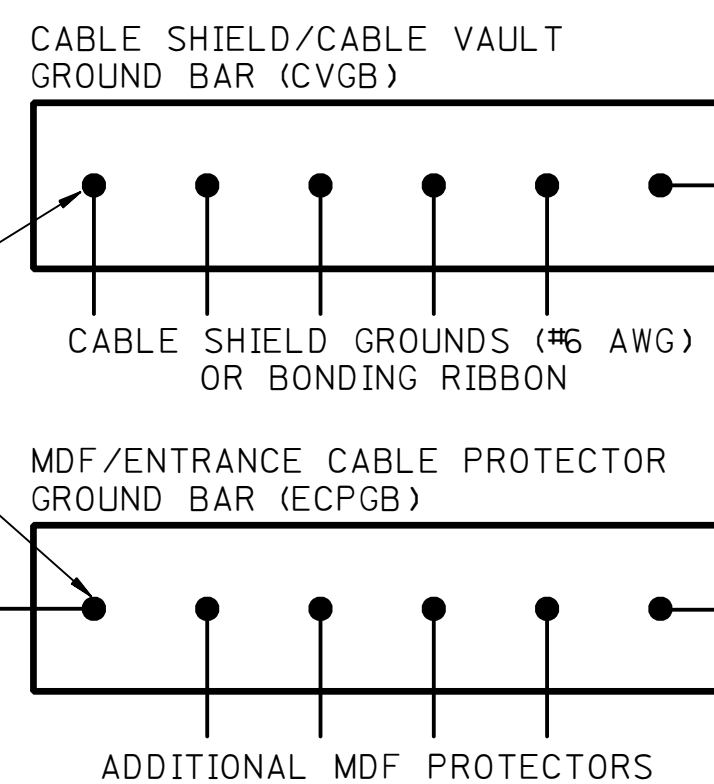
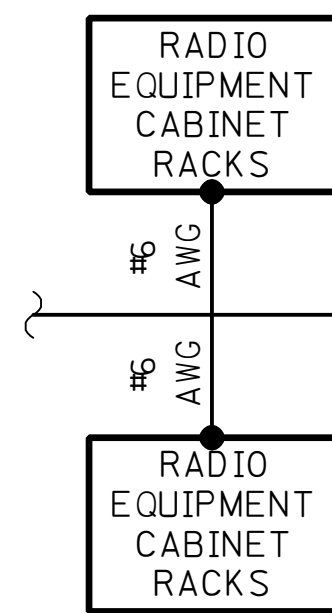
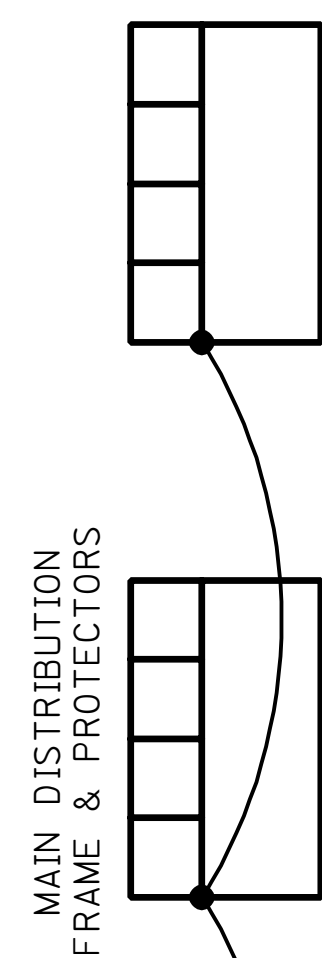
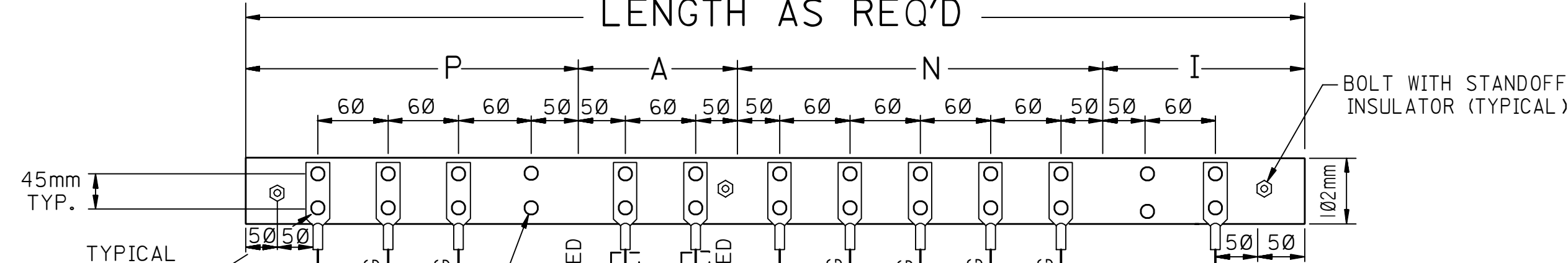


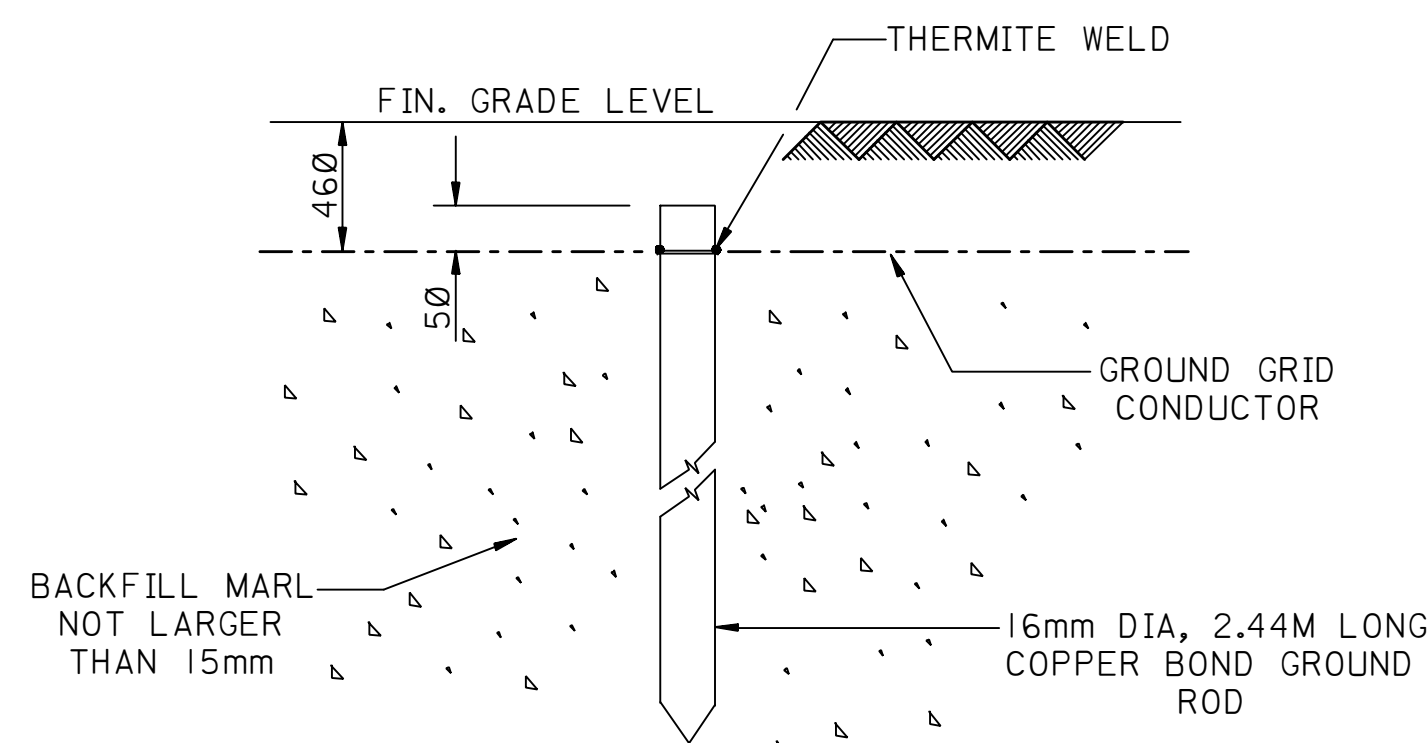
MASTER GROUND BAR (MGB) NOTE 12

LENGTH AS REQ'D



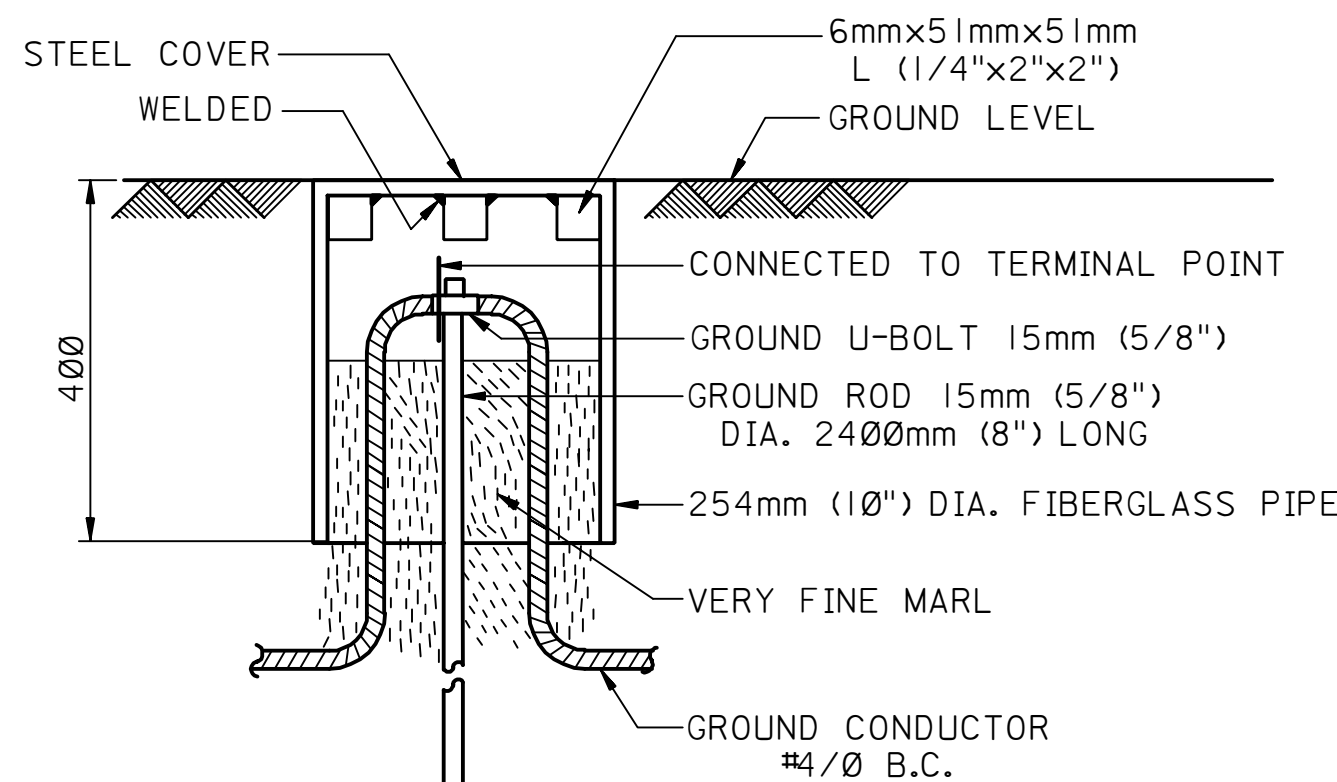
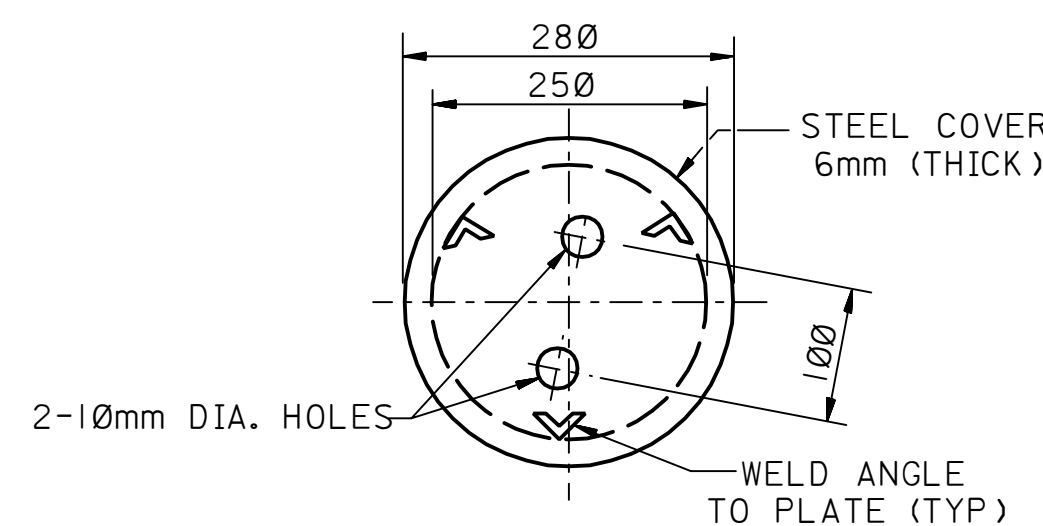
DETAIL-1

TOWER GROUNDING LAYOUT



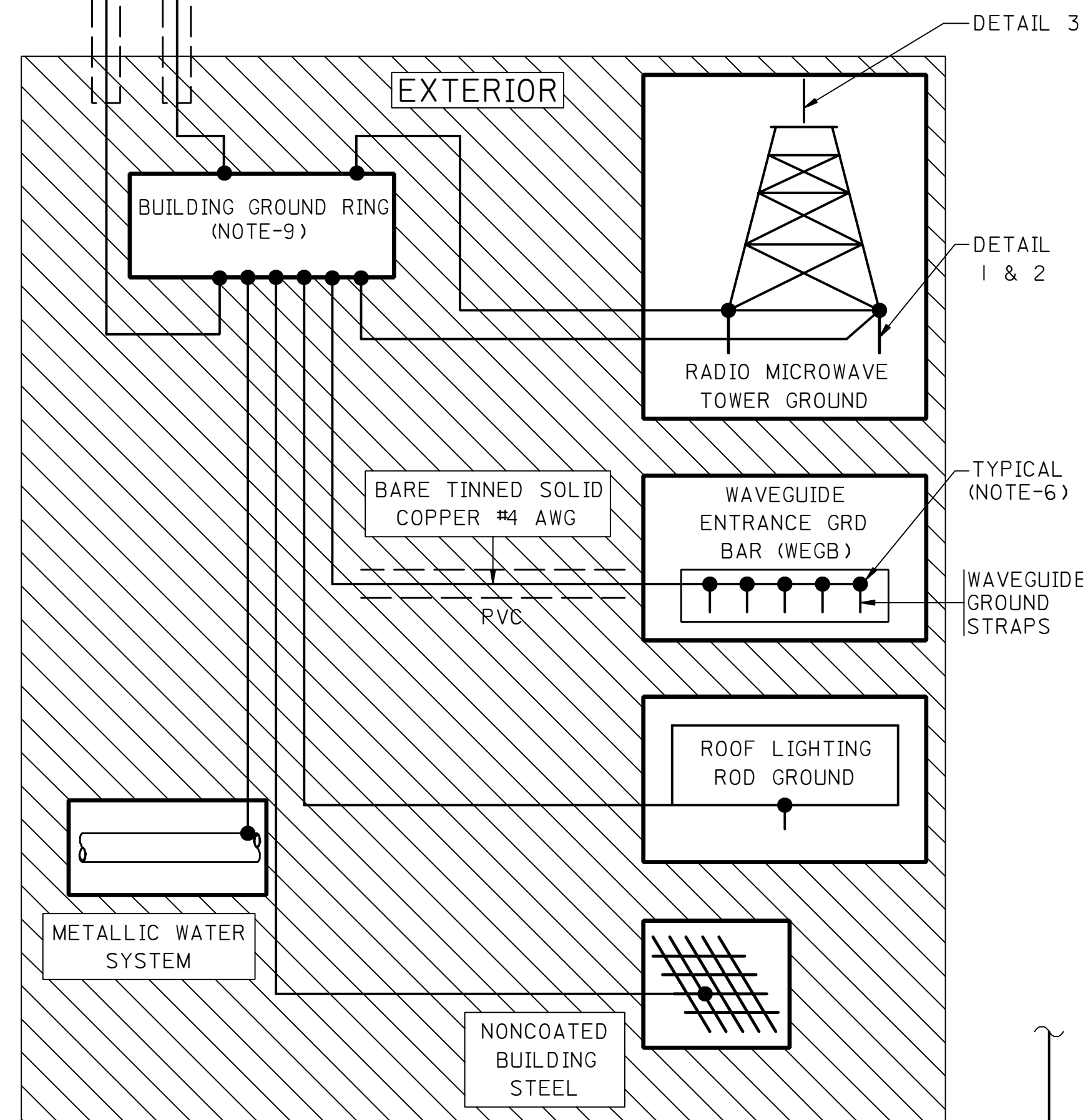
DETAIL-2

GROUND ROD CONNECTION
TO GROUND CONDUCTOR (BELOW GROUND)

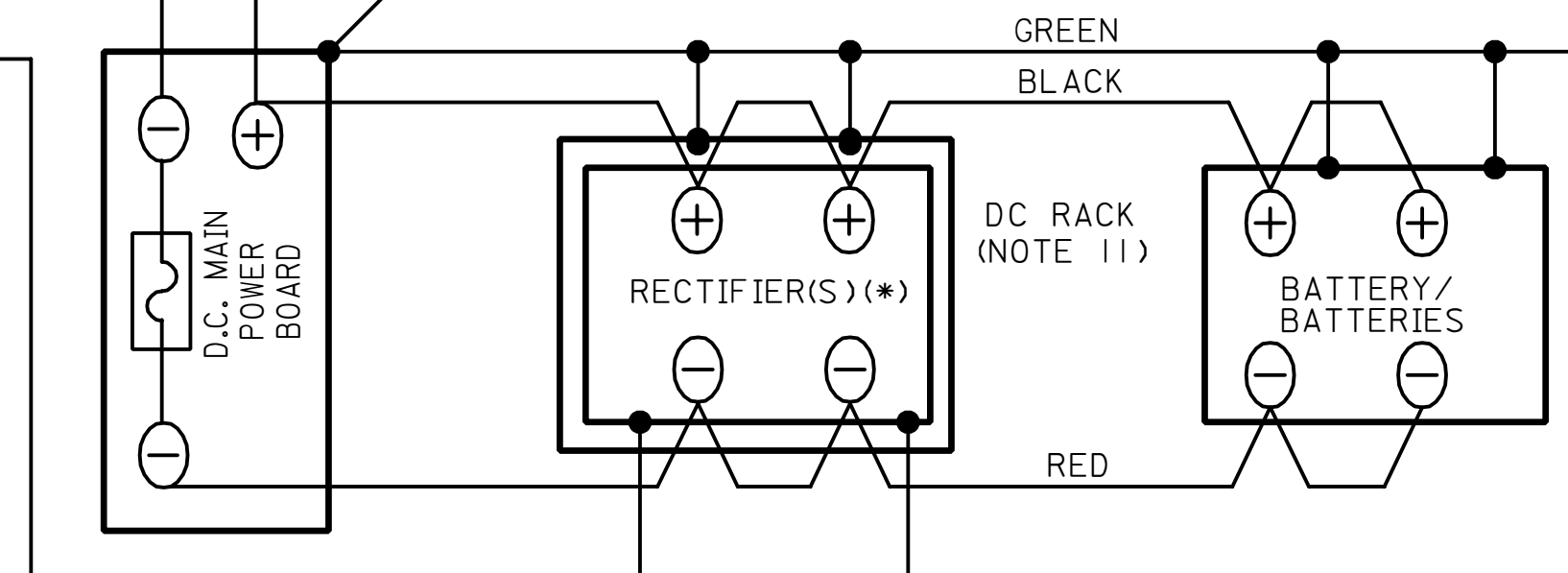
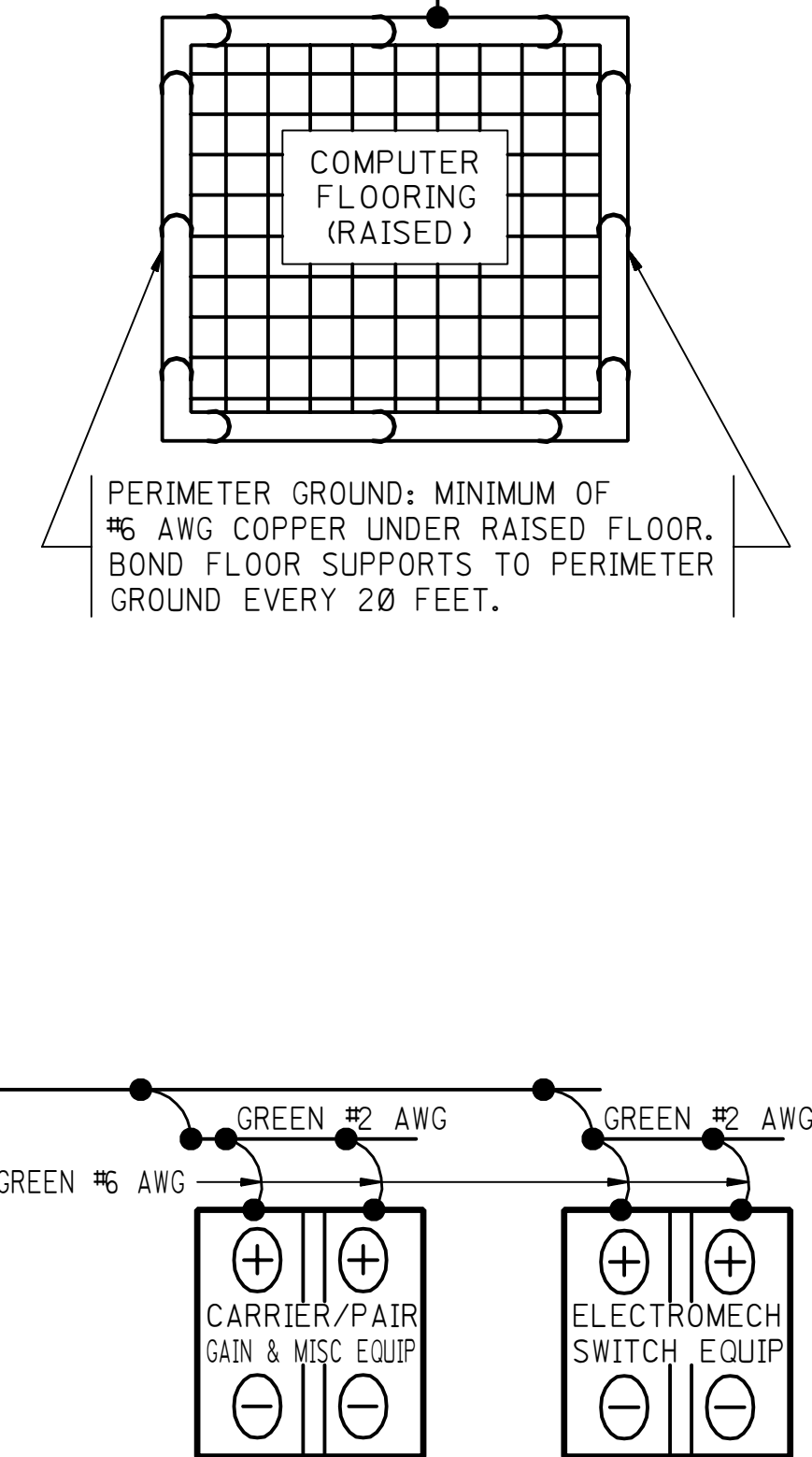
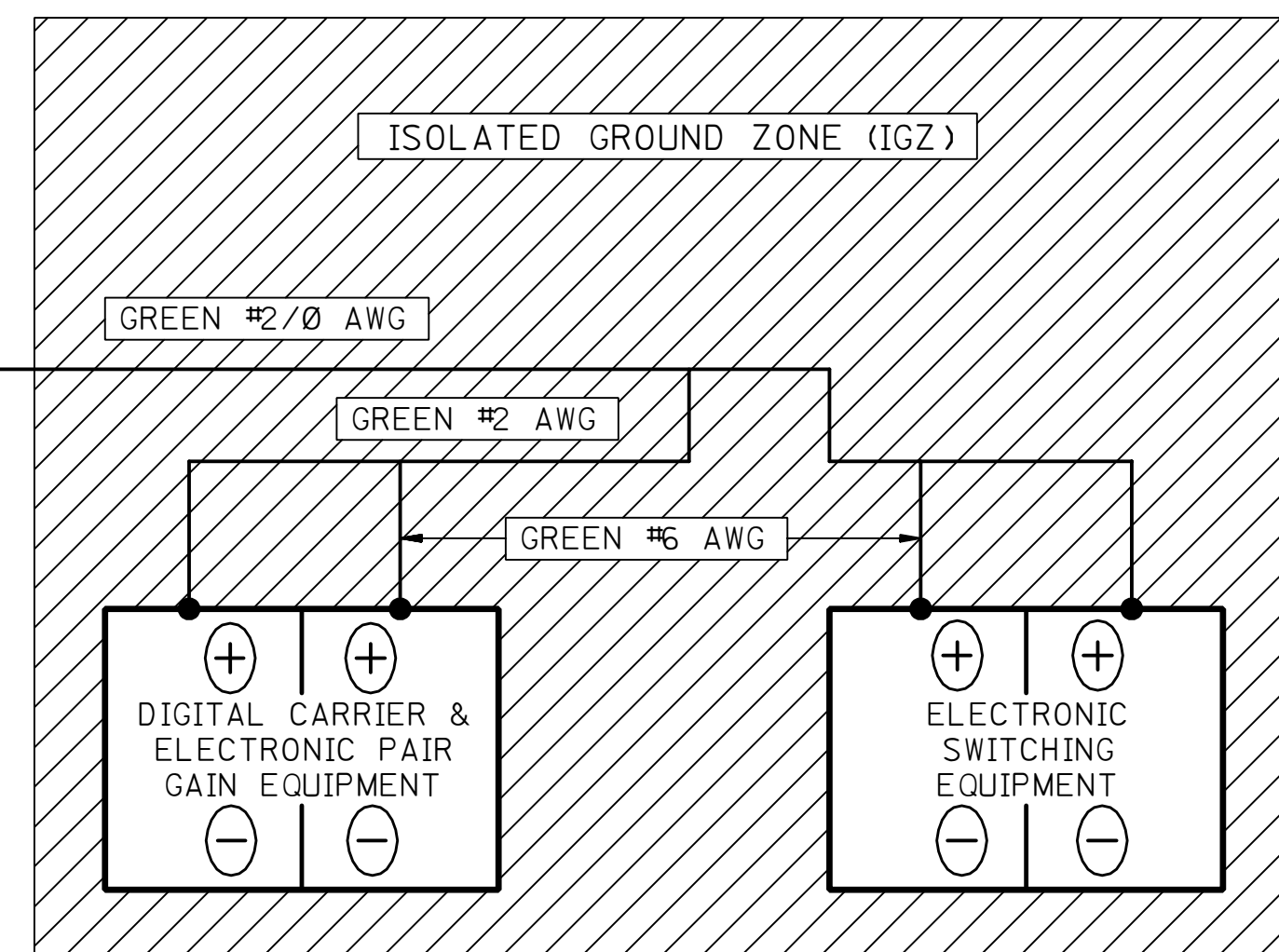


DETAIL-4

GROUND INSPECTION STATION
WITH GROUND GRID



AWG	AREA SQ. MM	AMP	AWG	AREA SQ. MM	AMP
6	16	65	1/0	50	150
4	25	85	2/0	70	175
2	35	115	4/0	120	230



NOTES:

1. CONDUCTOR SIZE SHALL BE BASED ON OFFICE DRAIN (AMPERES).
2. GROUNDING CONDUCTOR MUST BE RUN IN NON-METALLIC OR NO CONDUIT. NON METALLIC CONDUIT SHALL BE SUITABLE FOR ABOVEGROUND USE (NEC ARTICLE 347).
3. UNAVOIDABLE BENDS SHALL HAVE A LARGE RADIUS THE MINIMUM ACCEPTABLE BENDING RADIUS SHALL BE:
 - 150mm (6 in.) FOR SIZES UP TO NO. 6 AWG (16 sq. mm)
 - 160mm (12 in.) FOR SIZES MORE THAN NO. 6 AWG (16 sq. mm) AND UP TO NO. 4/0 AWG (120 sq. mm)
 - 600mm (24 in.) FOR SIZES MORE THAN NO. 4/0 AWG (120 sq. mm) AND UP TO NO. 500 MCM (250 sq. mm)
 - 900mm (36 in.) FOR SIZES GREATER THAN NO. 500 MCM (THOUSAND CIRCULAR MILS) (250 sq. mm)
4. LABEL GROUND BARS, "P-A-N-Z" ZONES, AND GROUND CONDUCTORS AT EQUIP. BARS.
5. RADIO AND M/W EQUIP. RACKS MUST BE ELECTRICALLY INSULATED FROM OTHER COMMS. EQUIPMENT RACKS.
6. ALL TERMINAL CONNECTORS AT ALL GROUND BARS SHALL BE 2-HOLE "CRIMP" TYPE.
7. ALL CONDUCTOR SIZES TO EQUAL OR EXCEED THE INDICATED.
8. EXPOSED GROUNDING CONDUCTORS SHALL BE GREEN PVC (SAES-P-III) COATED.
9. CONDUCTOR SIZING ACCORDING TO SAES-P-III.
10. AT SITES WITH NO FLOOR GROUND BAR (FGB) ELECTRONIC SWITCHING EQUIPMENT SHALL BE CONNECTED DIRECTLY TO MGB.
11. AC POWERED EQUIPMENT AND THEIR RACKS MUST BE ISOLATED FROM OTHER DC EQUIPMENT RACKS AND CABLE TRAYS.
12. ONLY DC & COMMUNICATIONS EQUIPMENT WITHIN COMMUNICATIONS BUILDING / ROOM SHALL BE GROUNDED TO MGB.

LEGEND:

P - PRODUCER OF SURGE CURRENT
A - ABSORBER OF SURGE CURRENT
N - NON-PRODUCER OF SURGE CURRENT
I - ISOLATED GROUND ZONE

COMMENTS:

(*) THE RECTIFIER/CHARGER(S) MUST BE ELECTRICALLY ISOLATED FROM OTHER COMMUNICATIONS EQUIPMENT RACKS AND OVERHEAD CABLE TRAYS TO AVOID GROUND LOOPS. AT SITES, WHERE IT IS DIFFICULT TO ISOLATE THE RECTIFIERS FROM THE REST OF THE RACK, IT IS BETTER TO ISOLATE BOTH THE RECTIFIERS AND THE RACK FROM THE DC BOARD AND CABLE TRAYS(S) AND GROUND DIRECTLY TO THE AC GROUNDING SYSTEM.

MANDATORY DRAWING

REV. NO.	DATE	BY	JO/EWO	DESCRIPTION	CHKD.	CERT.	APPD.
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SAUDI ARABIAN OIL COMPANY

DRAWN BY ESSD/CAB CHECKED BY _____ SCALE: NONE

DATE STARTED 07-27-94 DATE COMPLETED 09-24-95

OPR'G. DEPT. _____ ENG. DEPT. _____

APP'D. FOR CONST. _____	
THIS DRAWING IS NOT TO BE USED FOR _____	CERTIFIED _____

CONSTRUCTION OR FOR ORDERING
MATERIAL UNTIL CERTIFIED AND DATED

COMM. EQUIPMENT GROUNDING SYSTEM

FOR TELECOMMUNICATIONS
EQUIPMENT

FACILITIES	
STD	DWC

PLANT NO.	INDEX	DRAWING NUMBER	SHT. NO.	REV. NO.
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