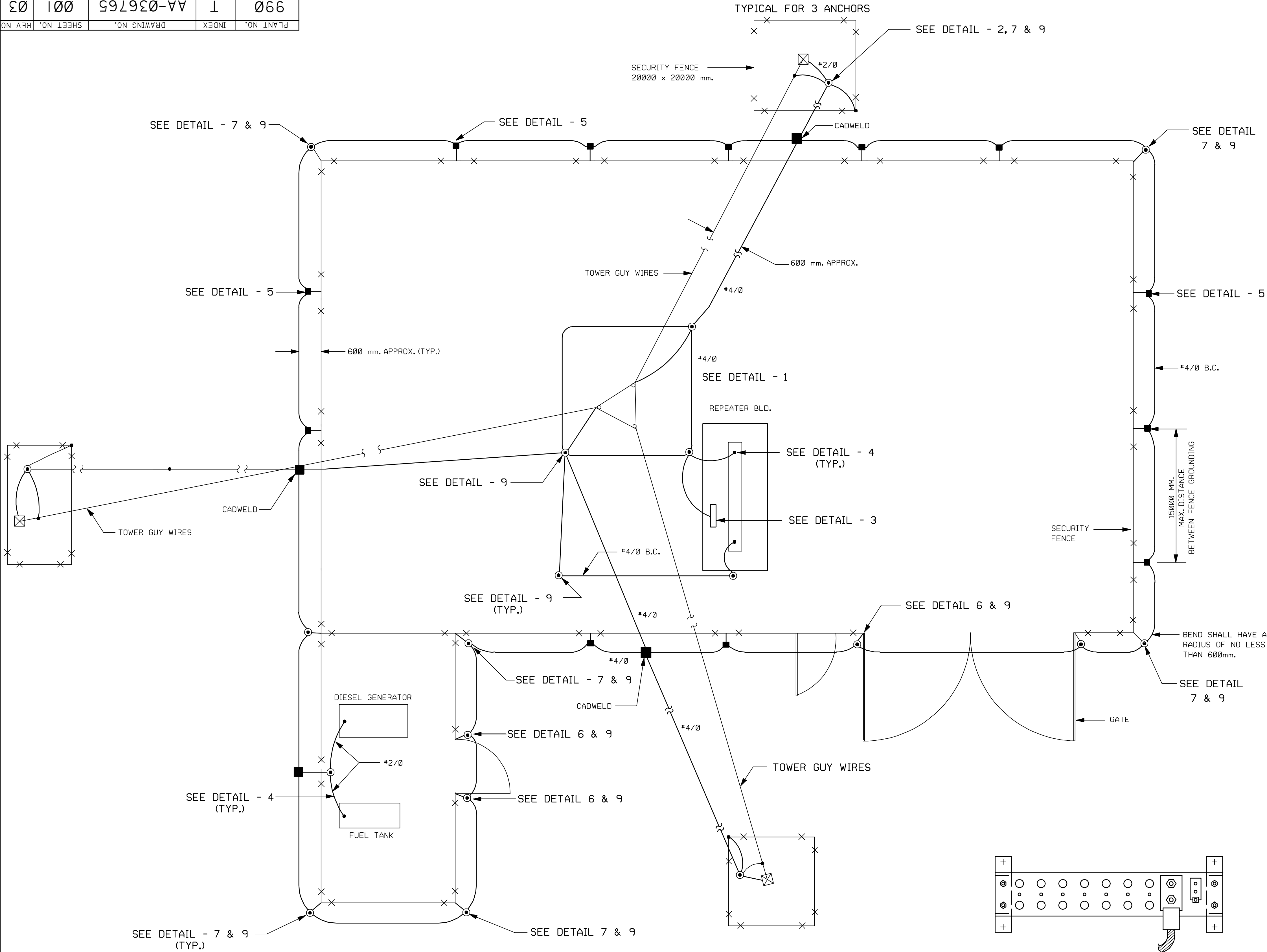
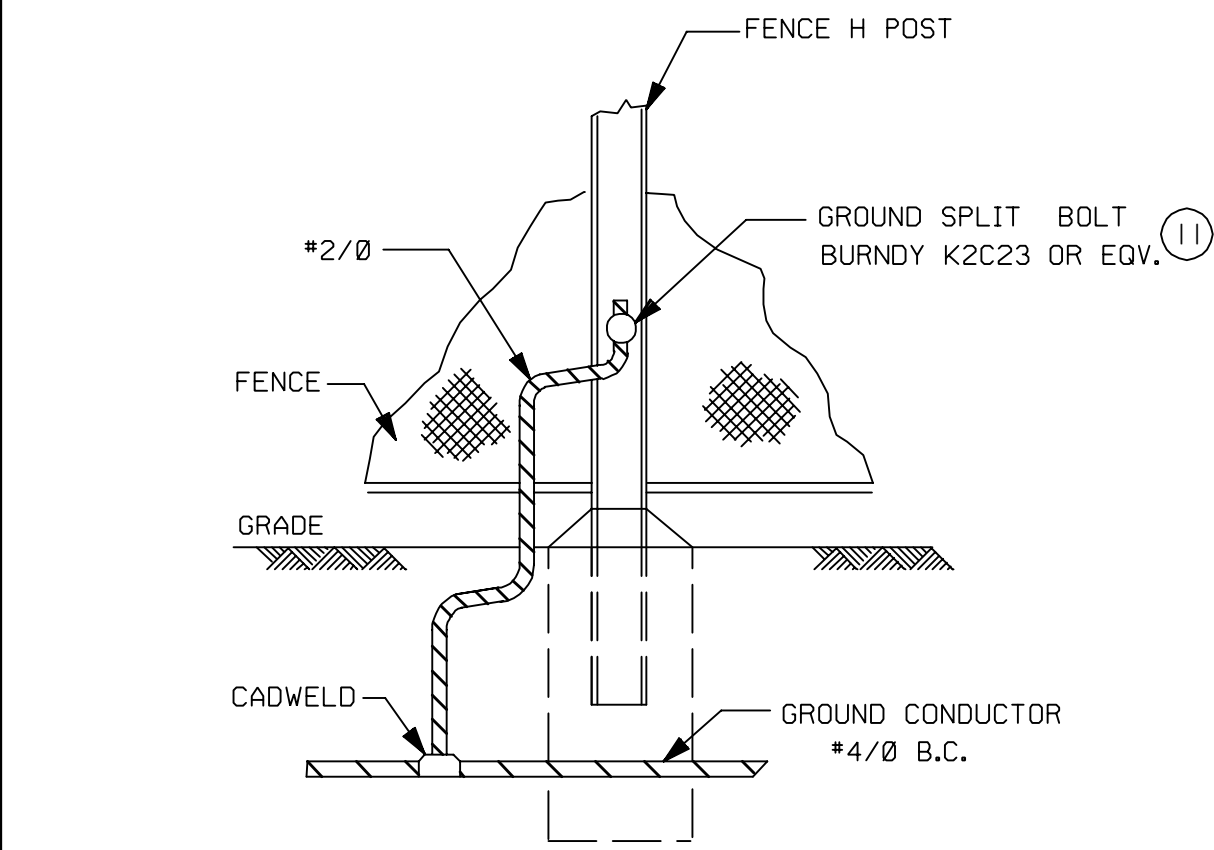


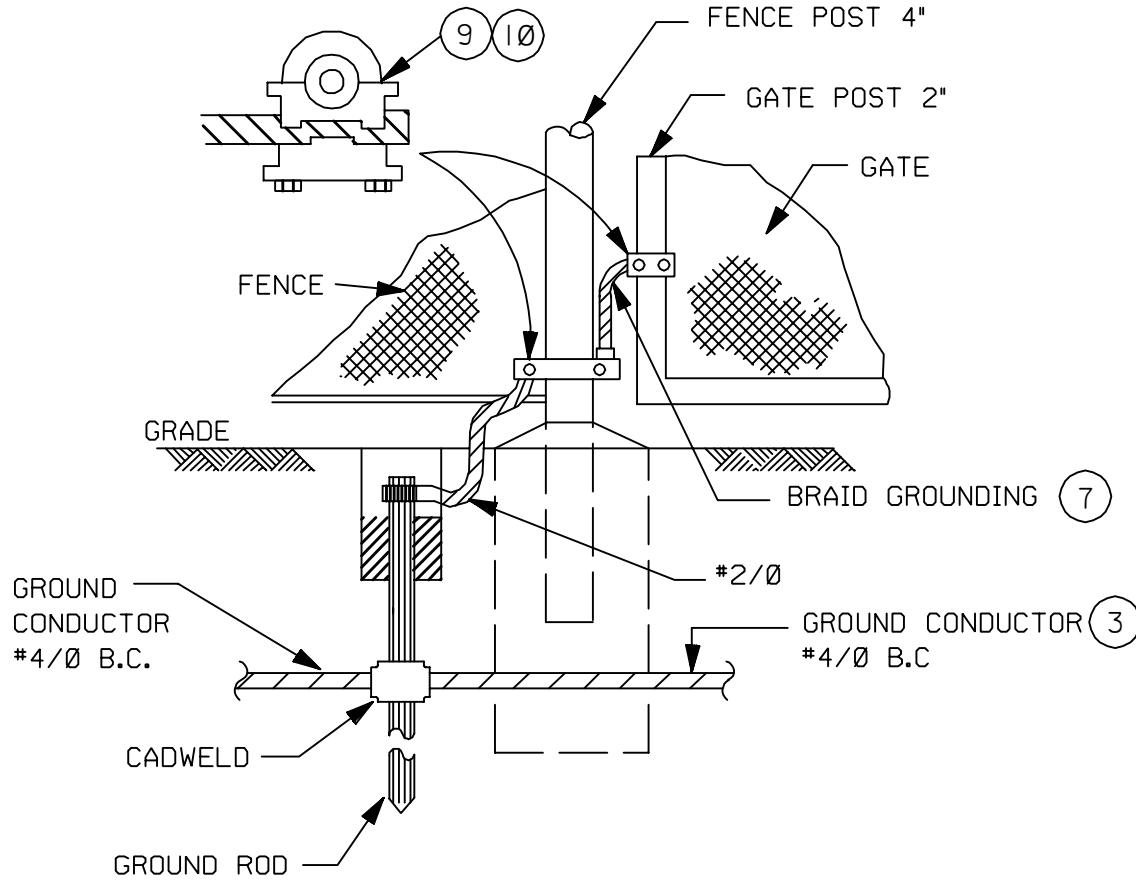
|                   |                |           |                    |     |
|-------------------|----------------|-----------|--------------------|-----|
| 03                | 100            | 991930-AA | 1                  | 066 |
| ON REV. SHEET NO. | ON DRAWING NO. | INDEX     | ON INVT. PLANT NO. |     |



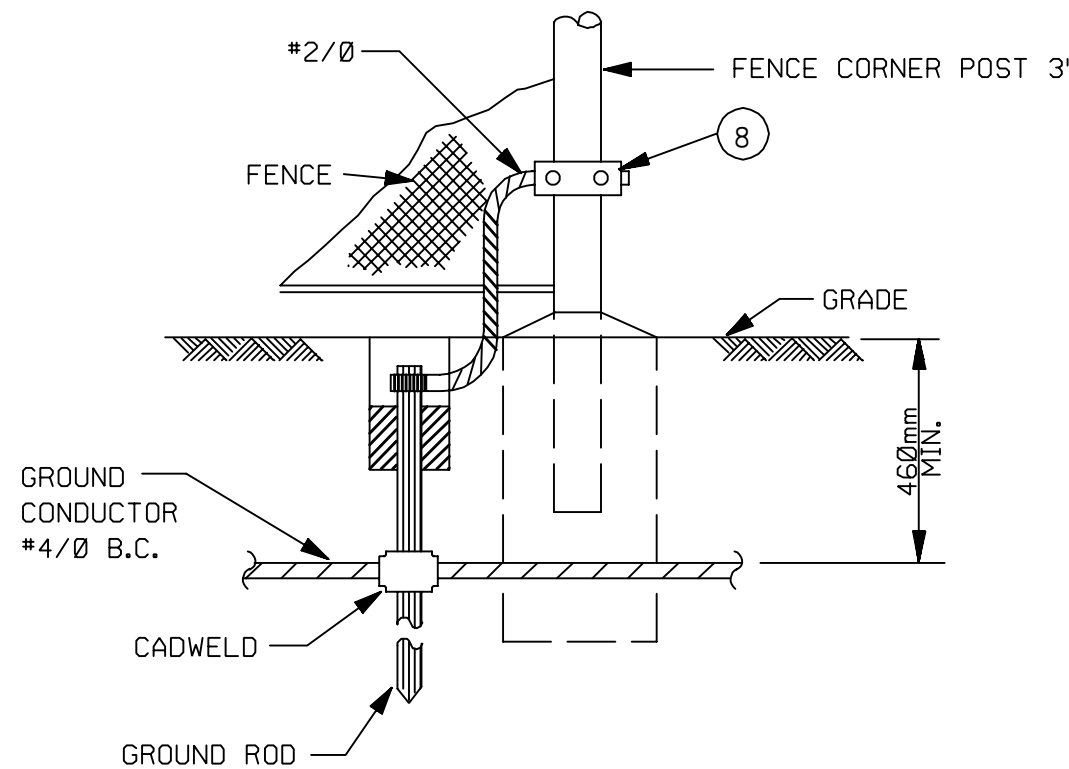
LAYOUT PLAN



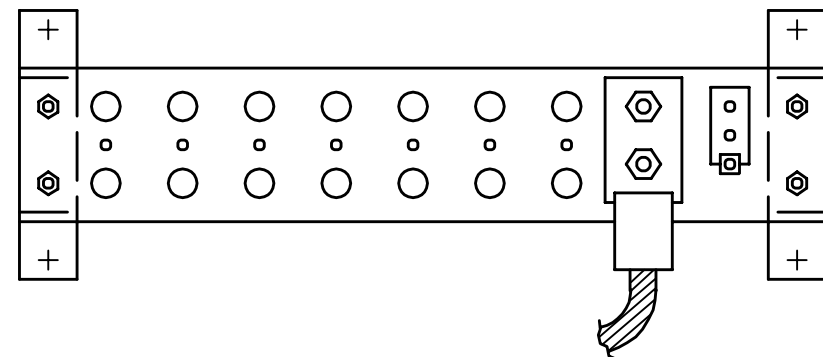
DETAIL - 5  
FENCE H POST



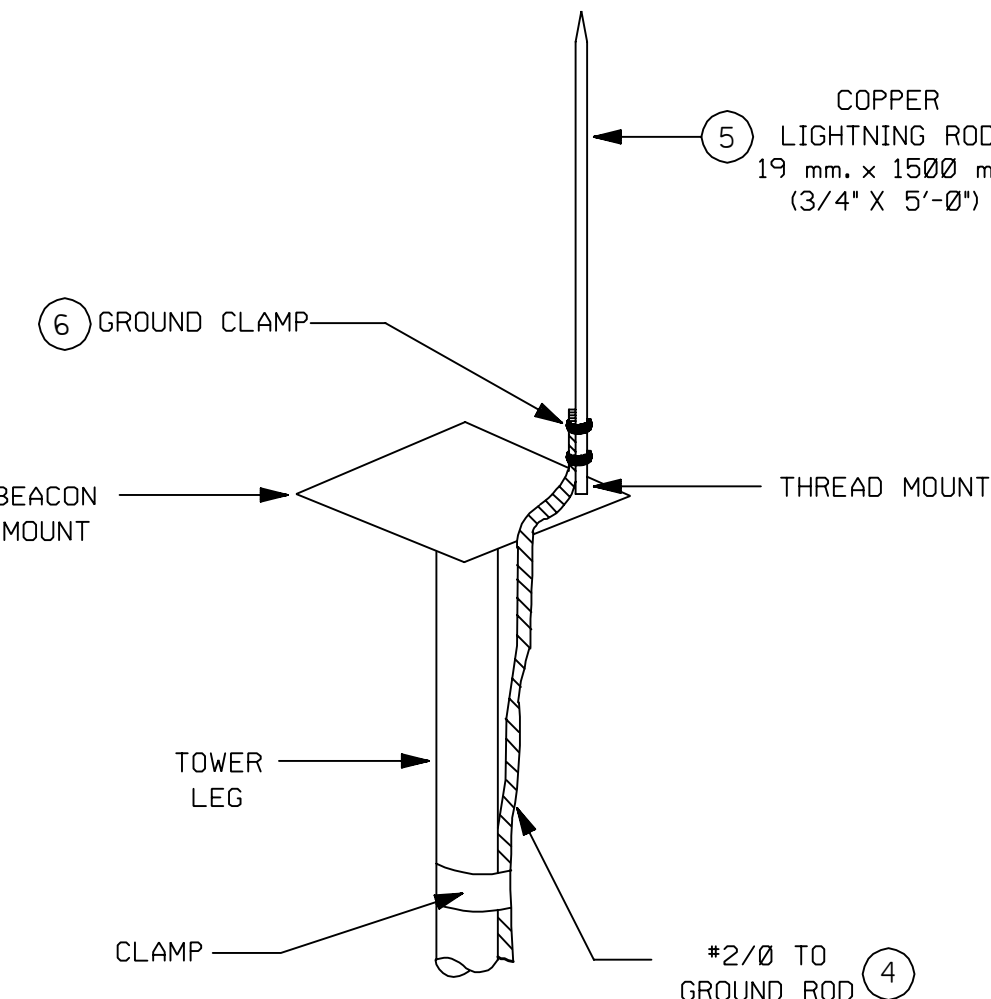
DETAIL - 6  
SHOWING TYPICAL GROUND  
CONNECTION AT GATE



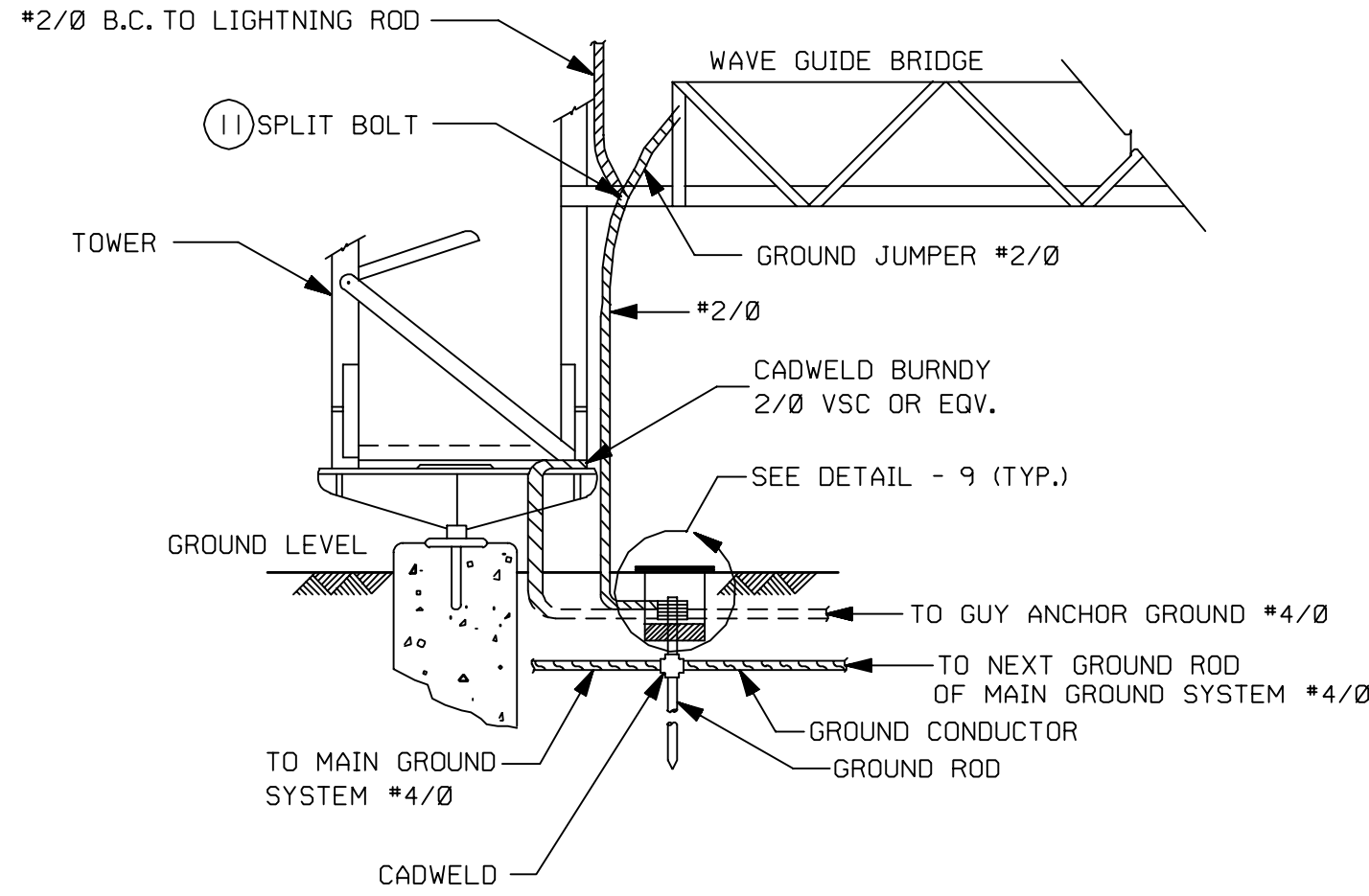
DETAIL - 7  
SHOWING TYPICAL GROUND  
CONNECTION AT CORNER POST



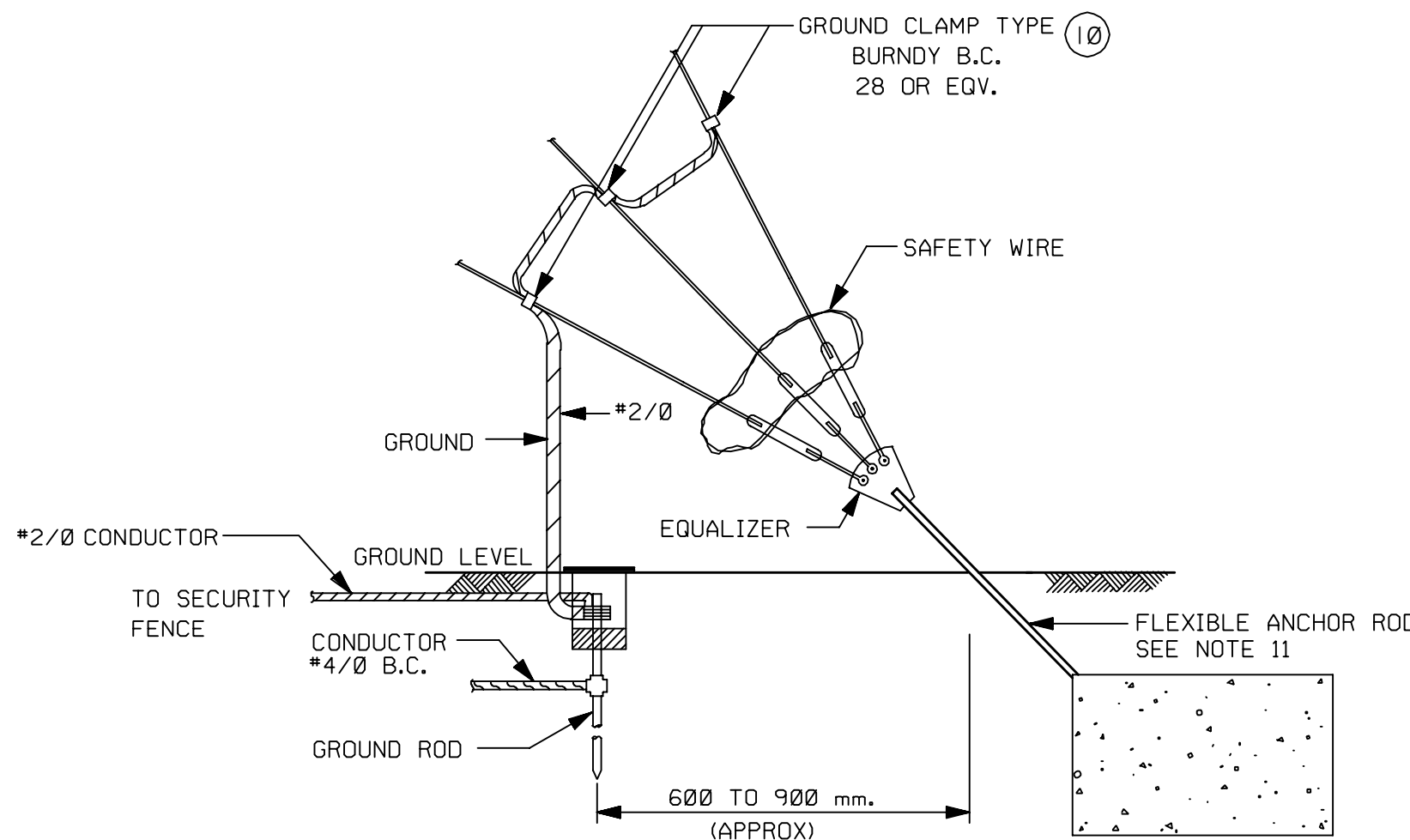
DETAIL - 3  
BUILDING MASTER GROUND BAR (MGB)



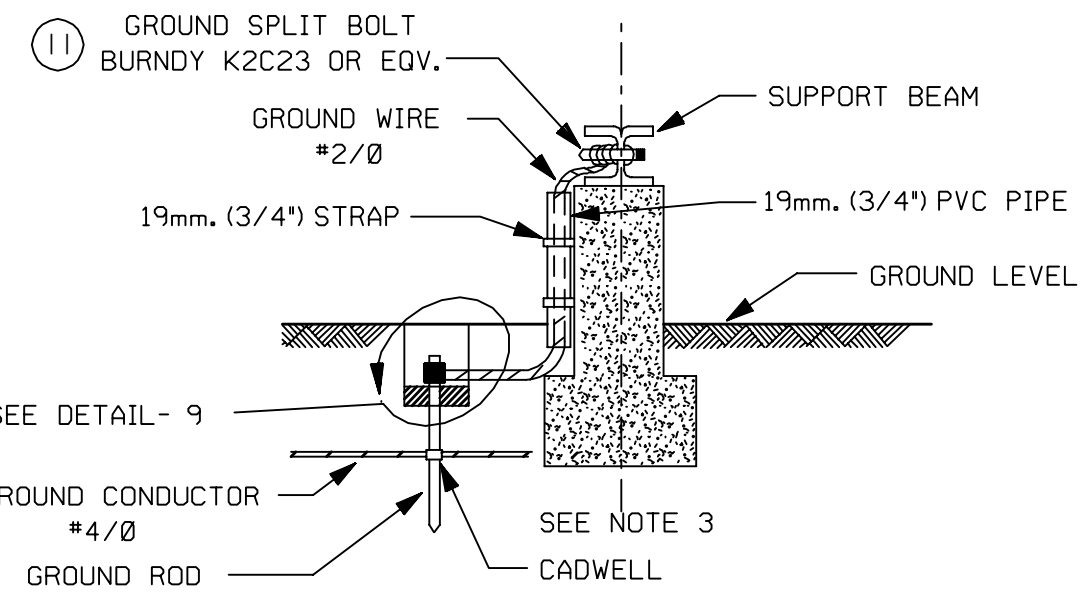
DETAIL - 8  
LIGHTNING ROD  
ATTACHMENT  
SEE NOTE 7



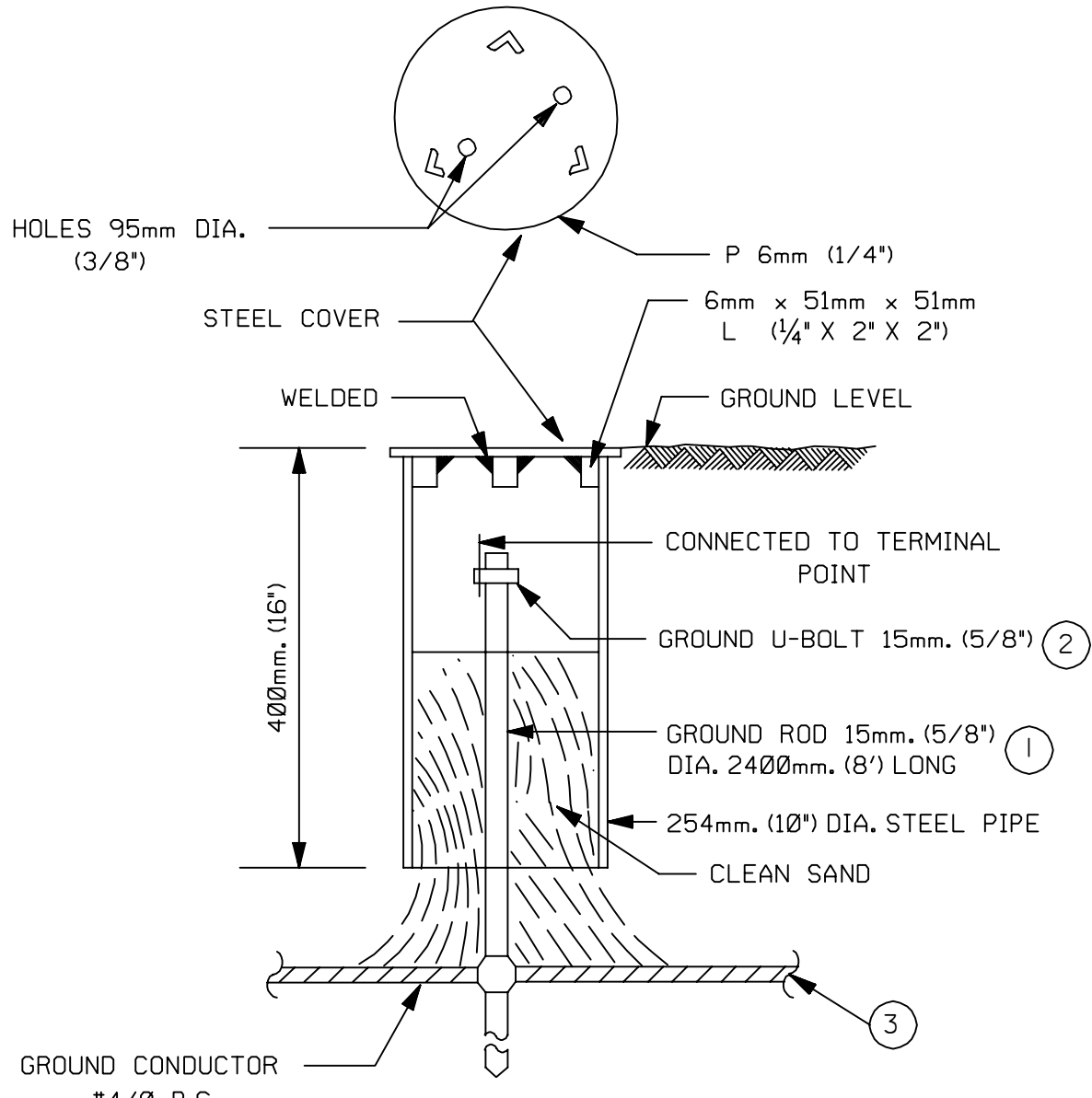
DETAIL - 1  
TOWER BASE



DETAIL - 2  
GUY ANCHOR



DETAIL - 4  
SHELTER



DETAIL - 9  
INSPECTION STATION  
WITH GROUND ROD

LIST OF MATERIAL

| ITEM NO. | AMS NUMBER | DESCRIPTION                                |
|----------|------------|--------------------------------------------|
| 1        | 14-246-542 | GROUND ROD 15mm DIA. x 2400mm (8 FT.) LG.  |
| 2        | 14-118-241 | CONNECTOR; GROUNDING; U-BOLT 15mm          |
| 3        | 15-007-858 | WIRE; BARE COPPER; #4/0                    |
| 4        | 15-007-846 | WIRE; BARE COPPER; #2/0                    |
| 5        | XX-XXX-XXX | ROD; COPPER LIGHTNING; 19mm x 1500mm       |
| 6        | 14-118-241 | CONNECTOR; GROUNDING; U-BOLT FOR 3/4" ROD  |
| 7        | 18-012-435 | BRAID GROUNDING; 13mm WIDE x 3/8 IN. THICK |
| 8        | 14-118-430 | CONNECTOR; GROUNDING; U-BOLT FOR 3" PIPE   |
| 9        | 14-118-435 | CONNECTOR; GROUNDING; U-BOLT FOR 4" PIPE   |
| 10       | 14-118-420 | CONNECTOR; GROUNDING; U-BOLT FOR 2" PIPE   |
| 11       | 14-114-472 | CONNECTOR; GROUNDING; SPLIT BOLT           |

NOTES

- ENSURE THAT THE GROUND RESISTANCE IS WITHIN ACCEPTED RANGE FOR COMMUNICATION EQUIPMENT 5 OHMS OR LESS.
- ALL STEEL STRUCTURES ARE TO BE THOROUGHLY CLEANED TO ENSURE PROPER CONTACT BEFORE CONNECTIONS ARE MADE.
- THE GROUND CABLE SHALL NOT BE INTERRUPTED THROUGHOUT ITS ENTIRE LENGTH.
- GROUND ROD CONNECTIONS AT GROUND INSPECTION STATIONS SHALL BE CLEARLY VISIBLE.
- IN CORROSIVE AREA (70 OHM - METER OR LESS), TINNED COPPER STRANDED CONDUCTORS SHALL BE USED. CONDUCTORS LINKING EQUIPMENT WITH GROUND GRID SHALL BE PVC INSULATED OR TINNED.
- REFER TO DRAWING AD-036383 SHEETS 1 THRU 13.
- DETAIL - 8 TYPICAL INSTALLATION FOR REFERENCE ONLY.
- SYMBOL REPRESENTS CADWELD. SEE DETAIL - 5.
- ⊙ SYMBOL REPRESENTS CADWELD AND GROUND INSPECTION STATION. SEE DETAIL - 9.
- RELATED ARAMCO ENGINEERING STANDARDS AND DRAWINGS:  
AES-T-152  
AES-T-744  
AES-P-111  
AD-036383 SH. 1 THROUGH 13
- TO MINIMIZE CORROSION OF ANCHOR RODS/BARS, COPPER COATED OR COPPER WELDED ANCHOR RODS/BARS SHALL BE USED AS A FIRST CHOICE. IF NO COPPER COATED ROD/BAR IS AVAILABLE, A STEEL ANCHOR ROD/BAR COATED WITH A HEAT SHRINKABLE SLEEVE SHALL BE USED. COPPER COATED ANCHOR RODS/BARS CAN BE ENCAPSULATED BY HEAT SHRINKABLE SLEEVES FOR MORE CORROSION PROTECTION. REFER TO AES-T-744, "DESIGN CRITERIA FOR COMMUNICATION TOWERS".

TYPICAL INSTALLATION DRAWING

| 03       | 03-26-90 | RLO | REVISED DETAIL 2 AND CHANGED NOTE 11. |        |       |       |
|----------|----------|-----|---------------------------------------|--------|-------|-------|
| 02       | 06-12-89 | RLO | REVISED AND ADDED LIST OF MATERIAL.   |        |       |       |
| 01       | 6.8.85   | MNL | REDRAWN FOR CLARITY.                  |        |       |       |
| REV. NO. | DATE     | BY  | DESCRIPTION                           | CH'K'D | CERT. | APP'D |

SAUDI ARABIAN OIL COMPANY

DRAWN BY A.B.M.S. CHECKED BY N.J.F. 5.29.84 SCALE N.T.S.  
DATE STARTED \_\_\_\_\_ DATE COMPLETED \_\_\_\_\_  
OPR'G DEPT. \_\_\_\_\_ ENG. DEPT. \_\_\_\_\_  
FIRE & SAFETY \_\_\_\_\_

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED

CONTR. CERT DATE  
GROUNDING FOR REMOTE COMMUNICATIONS

SITES

| STD. DWG.                                     | METRIC |
|-----------------------------------------------|--------|
| PLANT NO. INDEX DRAWING NO. SHEET NO. REV NO. |        |
| 990 T AA-036765 001 03                        |        |