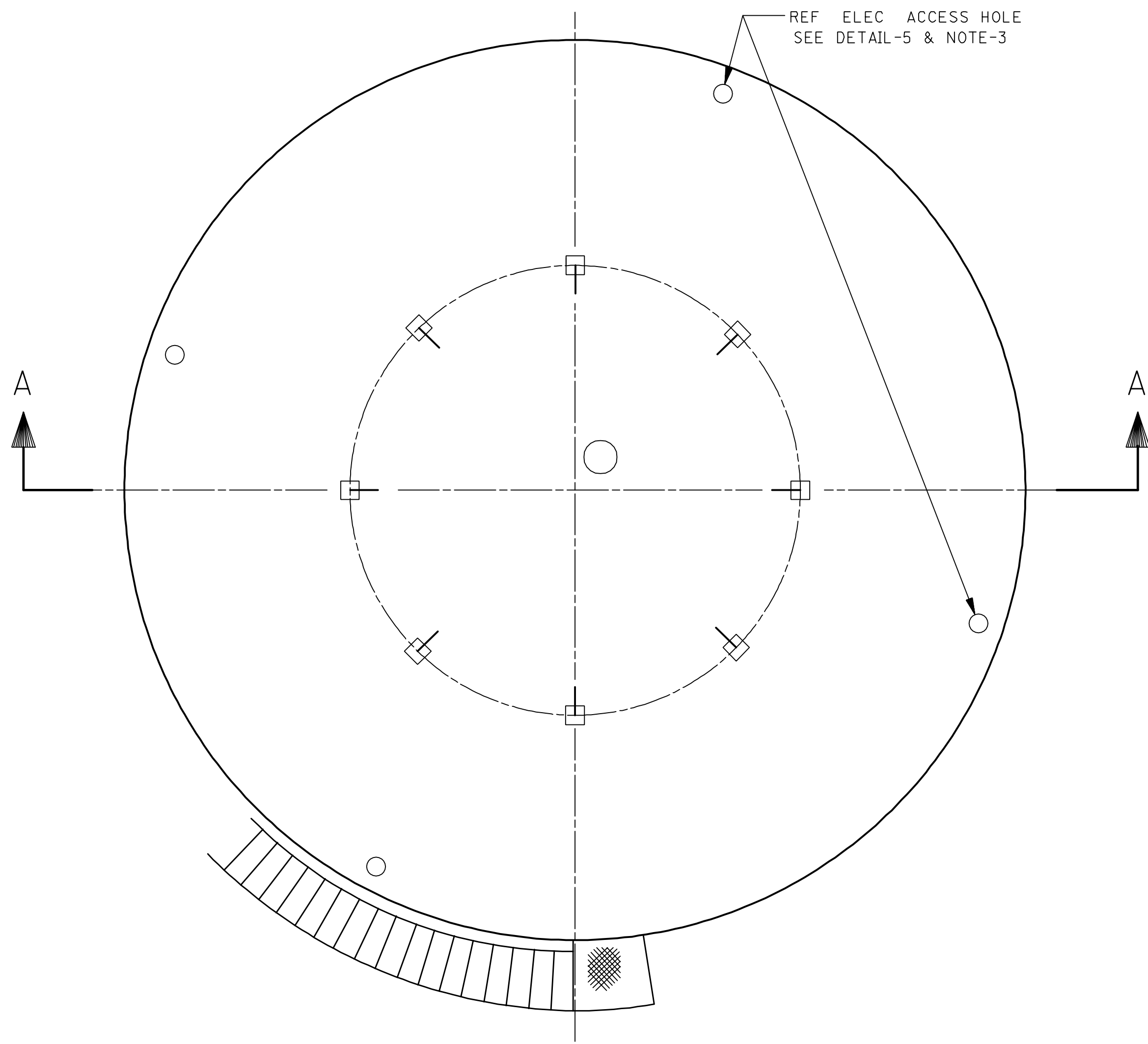
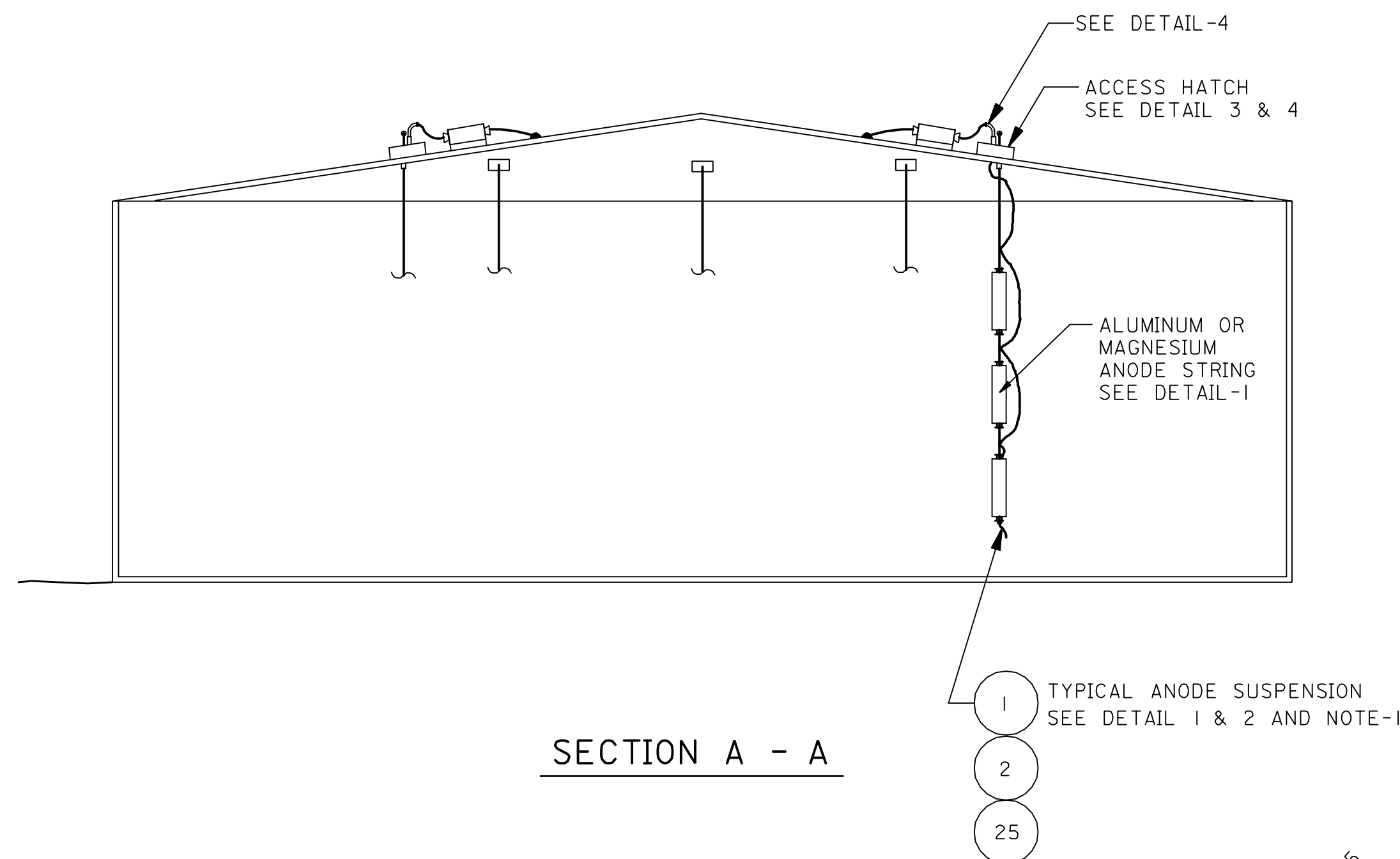
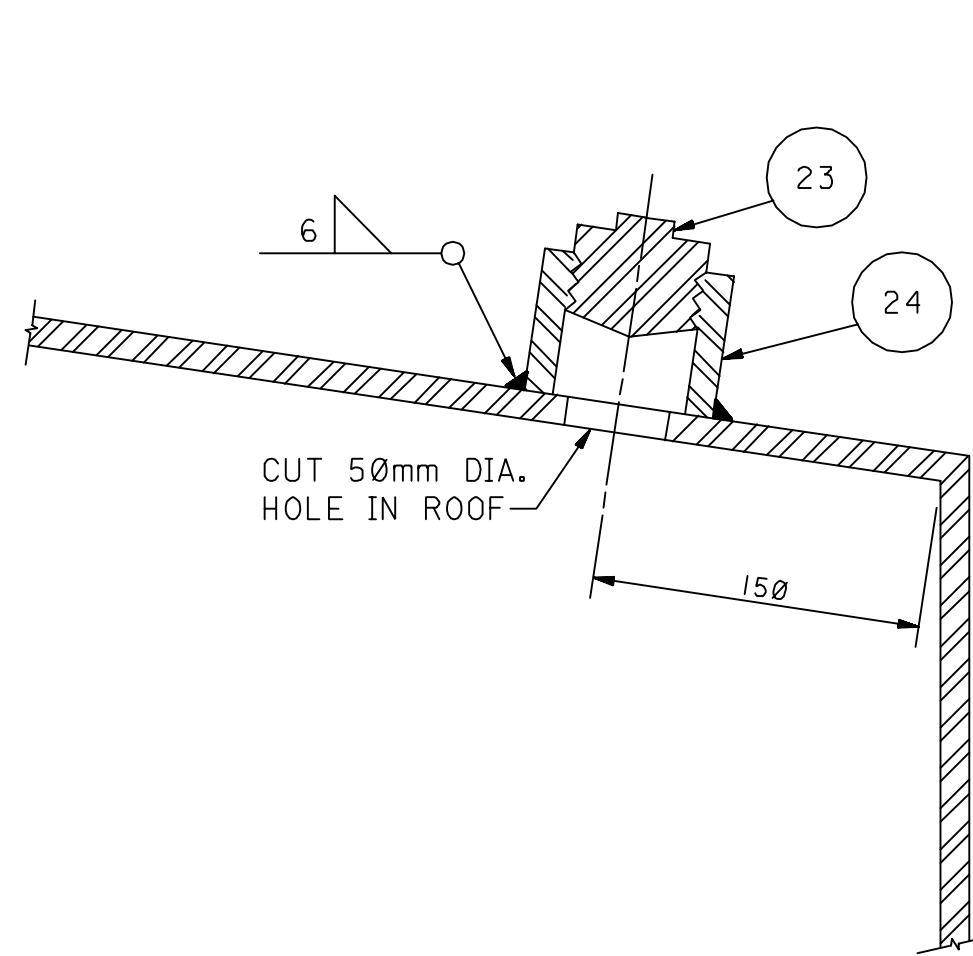




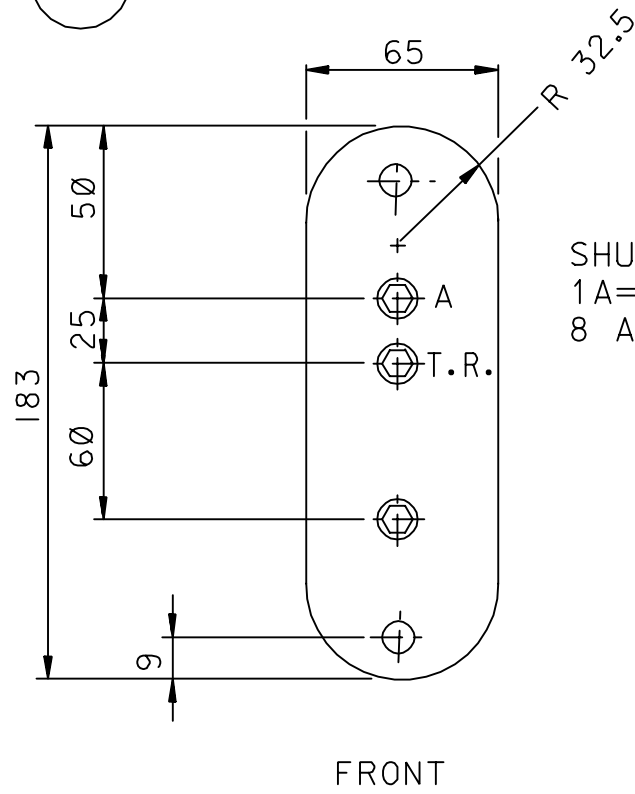
TYPICAL ANODE ARRANGEMENT ON STORAGE TANK
(TYPICAL FOR 8 ANODE STRINGS)
SEE NOTE 1



SECTION A - A

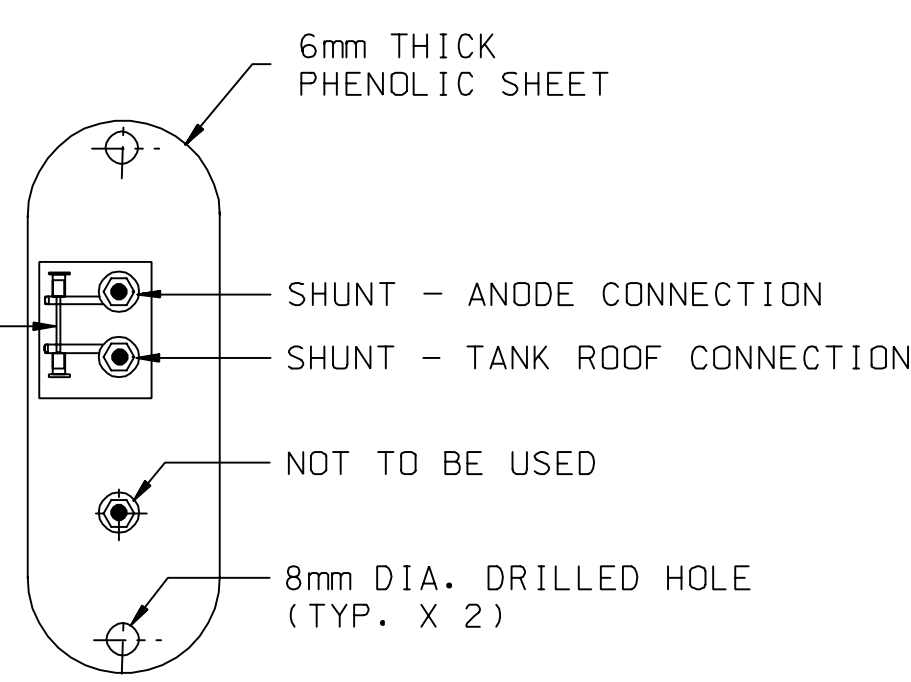


DETAIL-5
ACCESS HOLE
SEE NOTE-3



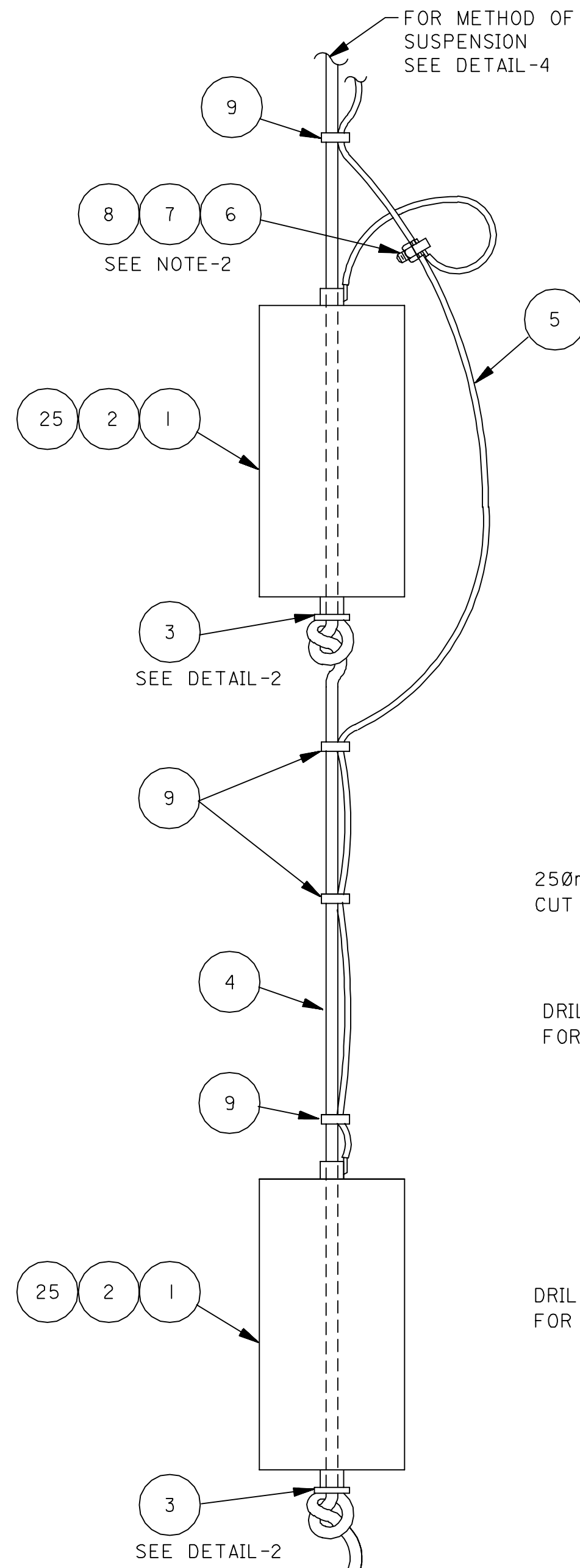
FRONT

SHUNT COTT 0.01 OHM
1A=0.01 V DROP
8 AMP CAPACITY

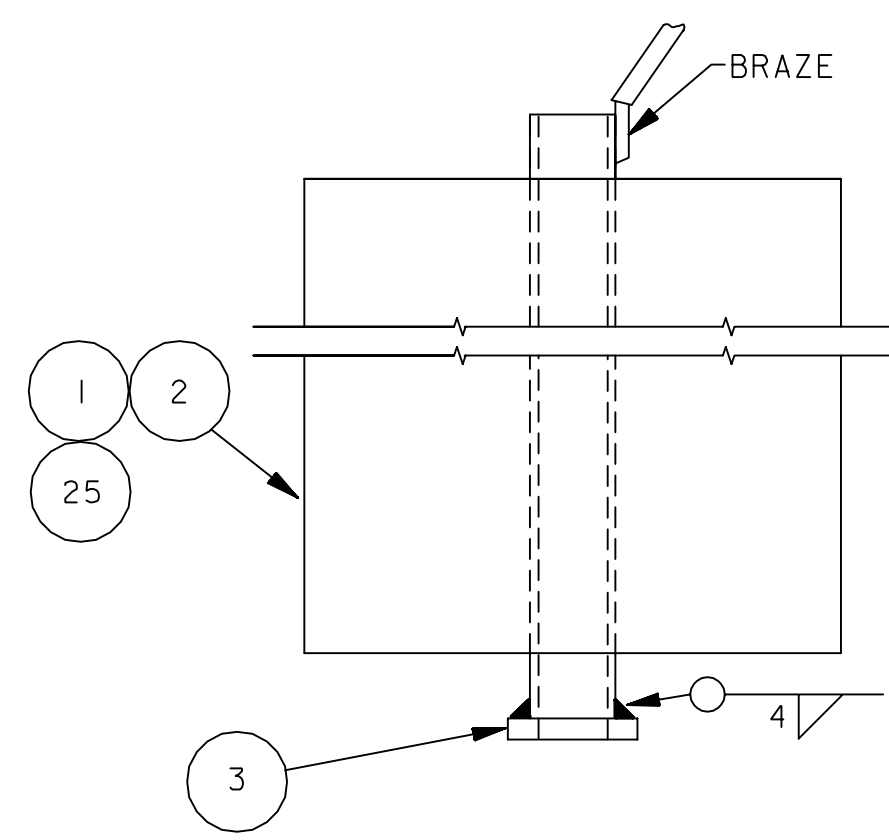


BACK SIDE

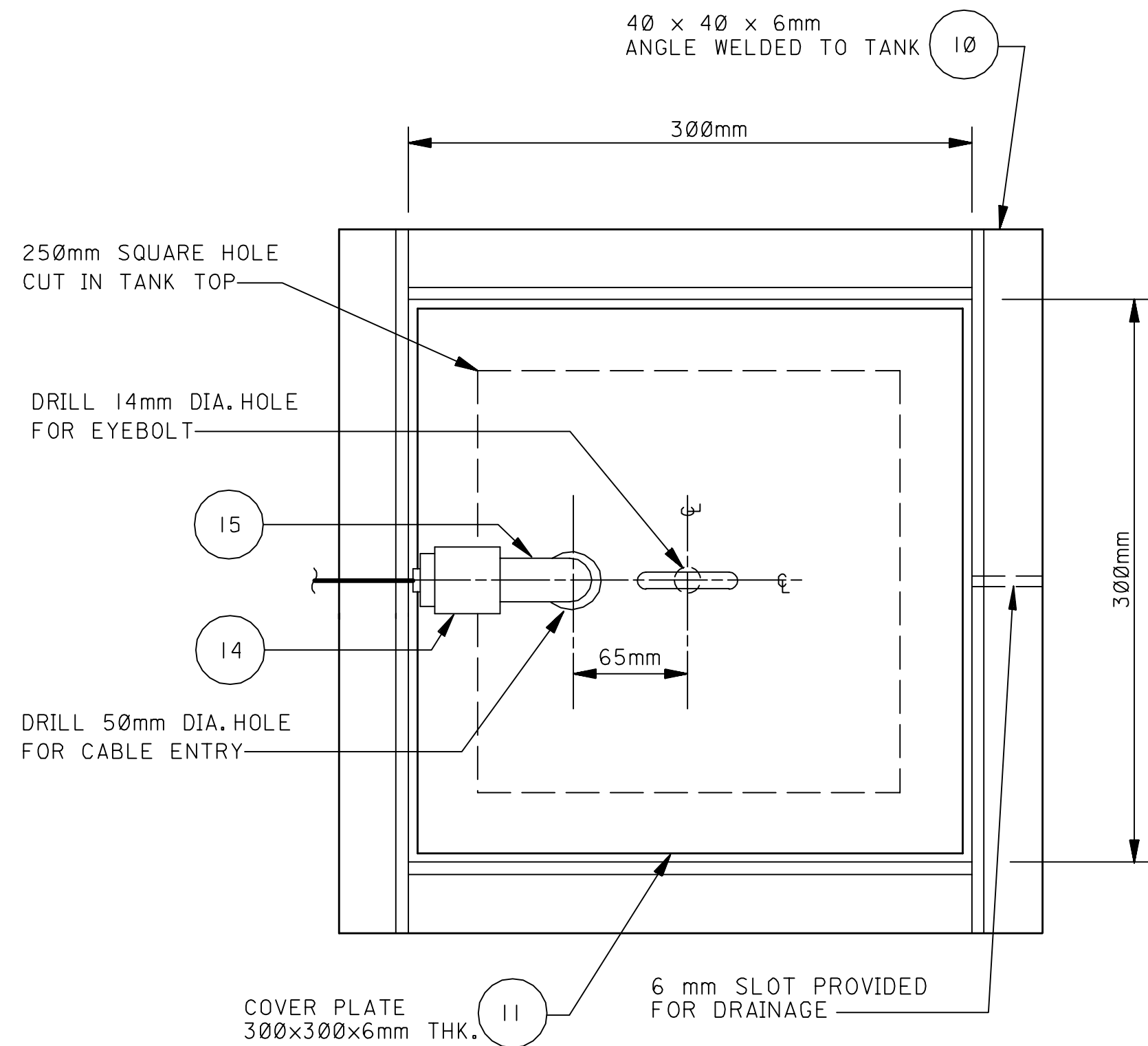
DETAIL-6
PHENOLIC COVER



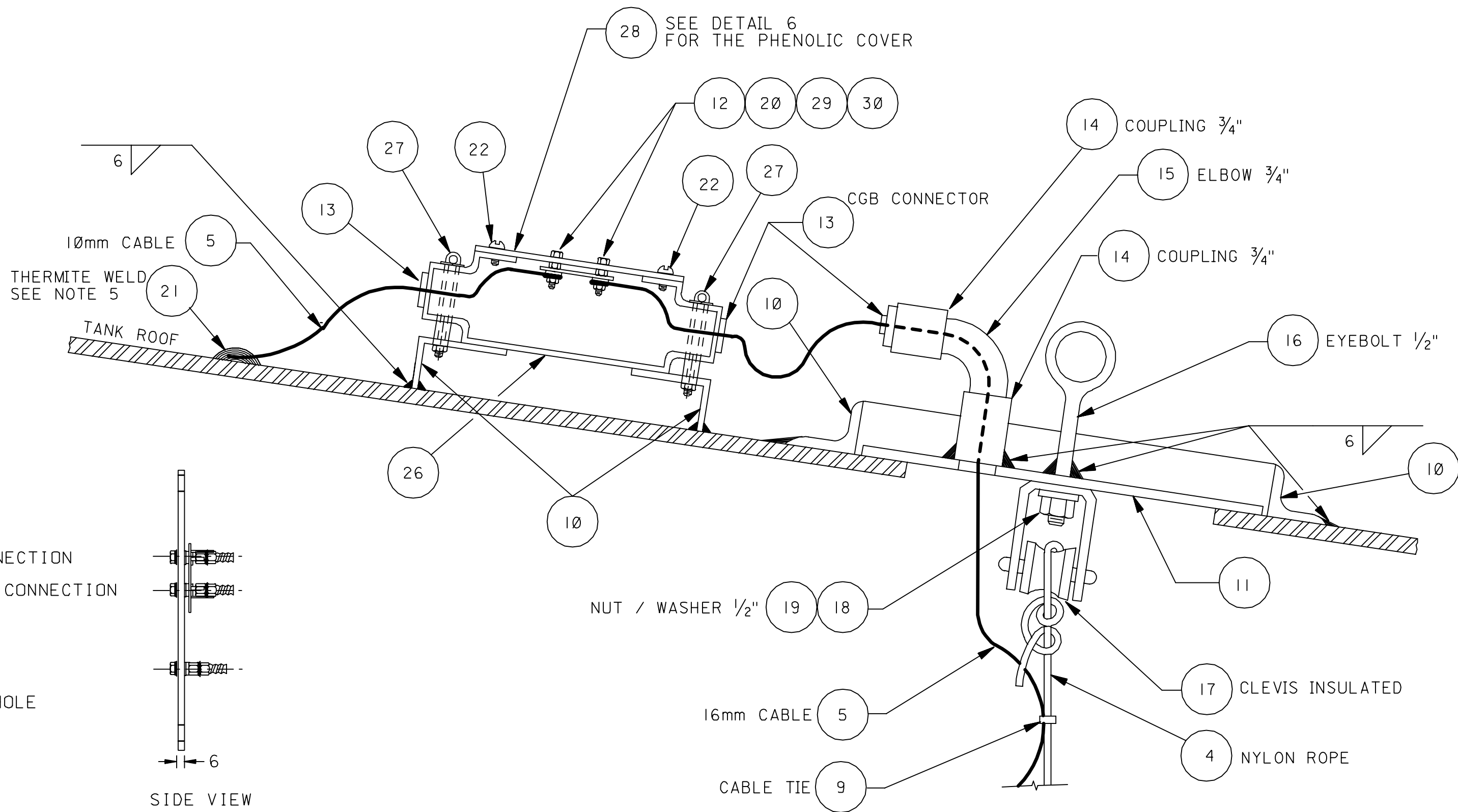
DETAIL-1
ANODE INSTALLATION



DETAIL-2
ALUMINUM OR MAGNESIUM
ANODE STRING



DETAIL-3
PLAN ON ANODE
ACCESS HATCH



DETAIL 4
ANODE INSTALLATION
AND ACCESS HATCH

MATERIAL LIST

CODE	SAMS MAT NO.	DESCRIPTION
1	1000073307	ANODE: ALUMINUM ALLOY; 50 x 50 x 1524mm LG; 24 LBS.
2	1000073348	ANODE: MAGNESIUM ALLOY; 8" DIA. x 406mm LG; 50 LBS.
3	1000232413	WASHER: PLAIN; 3/4"
4	1000154275	ROPE: NYLON; 1/2"
5	1000415495	CABLE: 10 Sq. mm
6	1000366263	CONNECTOR: SPLIT-BOLT (6-2AWG)
7	1000408332	TAPE: INSULATING; PLASTIC
8	1000408140	TAPE: INSULATING; RUBBER
9	1000429921	TIE: CABLE; NYLON 1.6-19.1mm
10	1000279745	ANGLE: STEEL; 40 x 40 x 6mm
11	1000271973	PLATE: STEEL; 6mm THICK
12	1000087514	WASHER: CADMIUM PLATED; 1/4"
13	1000423095	CONNECTOR: CABLE TO DEVICE; CGB
14	1000424226	COUPLING: CONDUIT; STEEL; 3/4" DIA.
15	1000425338	ELBOW: CONDUIT; STEEL; 3/4" DIA.
16	1000224533	EYE BOLT: ROUND EYE; 1/2" DIA.
17	1000386072	CLEVIS: INSULATED 44.5 x 57.2mm
18	1000225779	NUT: HEX. HEAD; 1/2" x 13 UNC
19	1000228659	WASHER: LOCK; 1/2"
20	1000228581	LOCK WASHER: CADMIUM PLATED; 1/4"
21	1000112646	CARTRIDGE: CADWELD; CA-15
22	1000259337	SCREW: PAN HEAD; 1/4" 20 UNC
23	D/C	PLUG: 2 1/2" PVC, SQUARE HEAD
24	1000030896	WELDING BOSS: 2"
25	1000073370	ANODE MAGNESIUM ALLOY, 8" DIA. X 32" LONG, 100 LBS.
26	D/C	BODY: CONDUIT, TYPE C GALVANIZED 1 1/2"
27	D/C	STRAP: CONDUIT; 2 HOLES 1 1/2"
28	D/C	COVER: PHENOLIC FOR 1 1/2" CONDUIT BODY
29	1000224931	NUT: MACHING SCREW; CADMIUM PLATED 1/4"-20 THD./IN
30	1000248655	SCREW: CAP. CADMIUM PLATED; 1/4"-20 x 1 1/4"

NOTES:

1. CP DESIGNER SHALL DETERMINE THE NUMBER, LOCATION AND DEPTH OF ANODES BASED ON TANK SIZE, WATER LEVEL VARIATION AND WATER CONDUCTIVITY AND AS REQUIRED BY SAES-X-500.
2. AFTER TIGHTENING SPLIT BOLT, SOLDER WIRE TO SPLIT BOLT TO ASSURE LONG TERM ELECTRICAL CONTINUITY. APPLY TWO LAYERS OF RUBBER TAPE AND TWO LAYERS OF PLASTIC TAPE.
3. INSTALL REFERENCE ELECTRODE ACCESS HOLES (MINIMUM OF 4) MIDWAY BETWEEN ANODE STRINGS ON TANK ROOF.
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
5. THERMITE WELD AS PER STD. DWG. AB-036381.

REFERENCE DRAWINGS

DWG. CONTROL FOR J.O.	N/A
THERMITE WELDING	AA-036381

DRAWING RESPONSIBILITY:
CATHODIC PROTECTION STANDARDS COMMITTEE

SCALE: NONE

REVISION VALIDATION

THIS REVISION NO. IS COVERED, FOR ALL APPROVAL AND CERTIFICATION REQUIREMENTS, PER SAEP-334, UNDER DRAWING COMPLETION CERTIFICATE NO:

714120-0504-01

DESIGN CERTIFICATION	REVIEW FOR KEY DRAWINGS	OTHER
DESIGN AGENCY	REVIEWED BY	SAUDI ARAMCO
ENGG./DATE	CERTIFIED BY/DATE	CONST.AGENCY/DATE
	OPERATIONS/DATE	BY/DATE

REV. NO.	DATE	REVISION DESCRIPTION
10	APR04	REVISED SECTION A-A AND MATERIAL LIST.
JOB ORDER/WORK NO.		THIS REVISION IS NOT TO BE USED FOR CONSTRUCTION UNTIL CERTIFIED AND DATED

SAUDI ARABIAN OIL COMPANY				
CATHODIC PROTECTION				DRAWING TYPE
WATER STORAGE TANK INTERIOR				STD
GALVANIC ANODE INSTALLATION				
STD. DWG.		SAUDI ARABIA		
PLANT NO.	INDEX	DRAWING NUMBER	SHT. NO.	REV. NO.
990	X	AA-036354	001	10