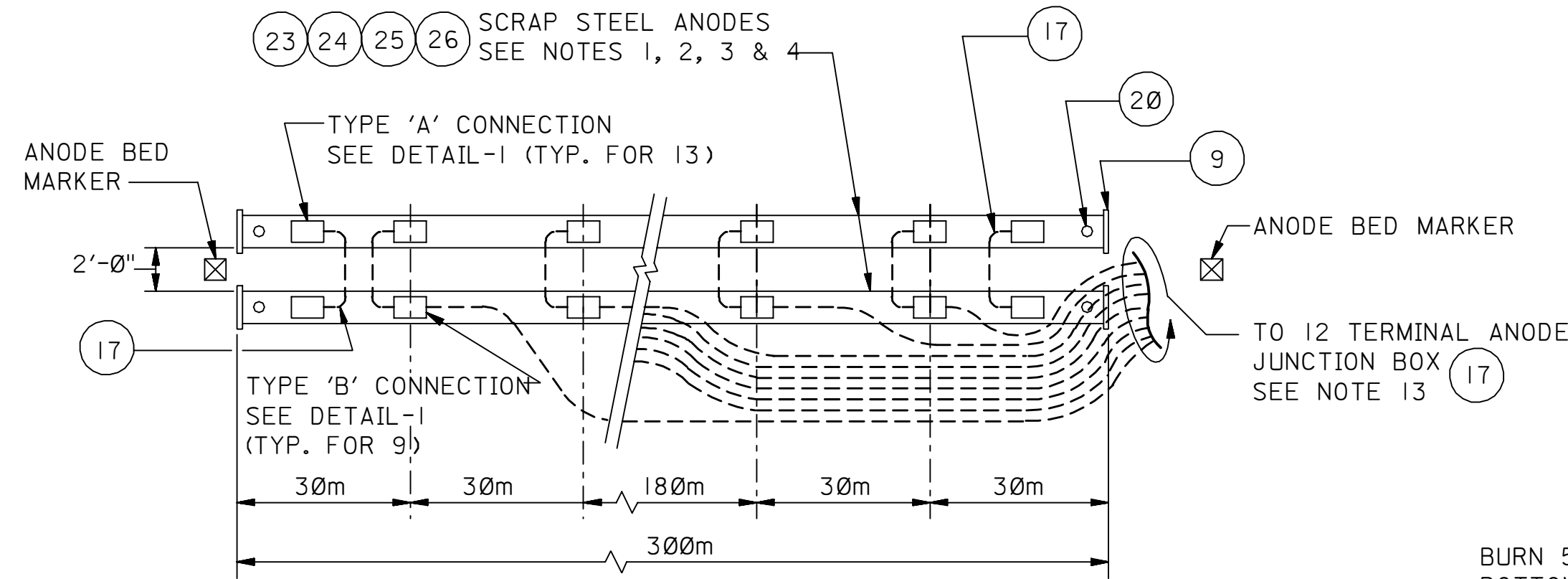
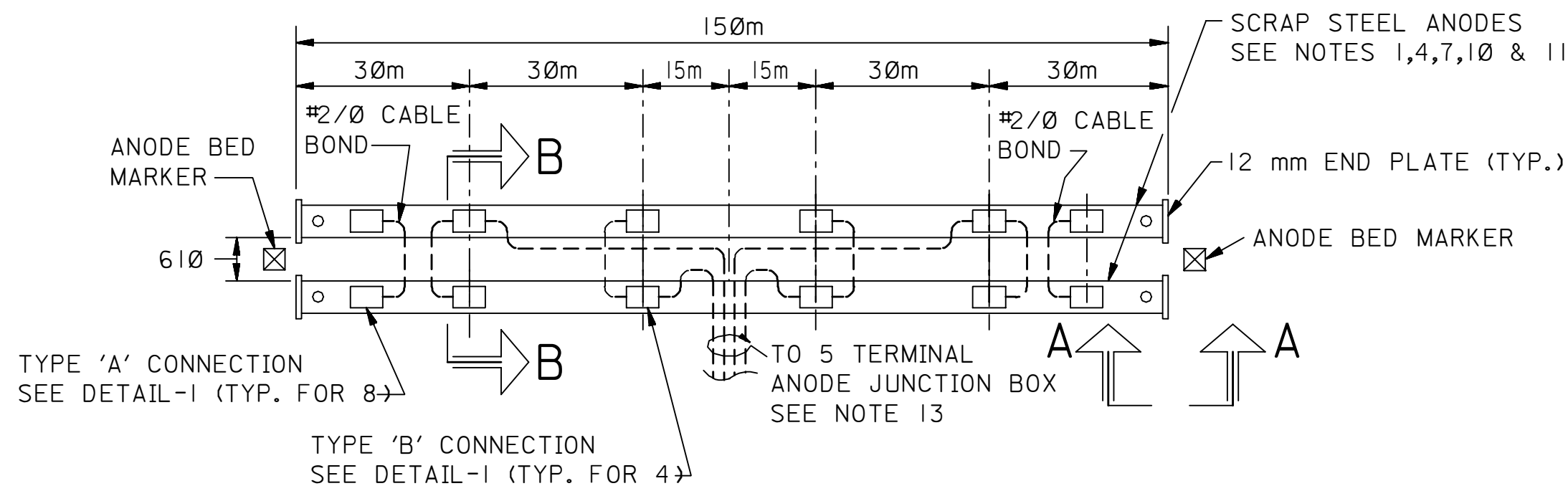


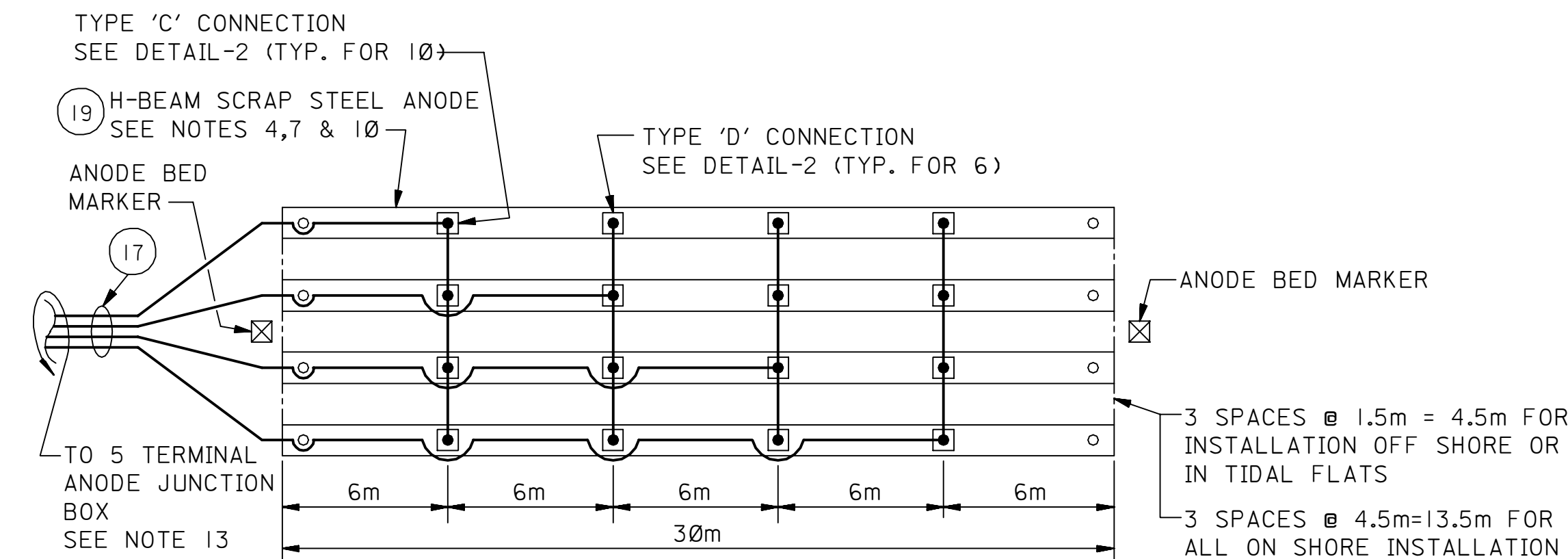
Σ0	100	812930-VA	X	066
REV. NO.	SHT. NO.	DRAWING NUMBER	INDEX	PLANT NO.



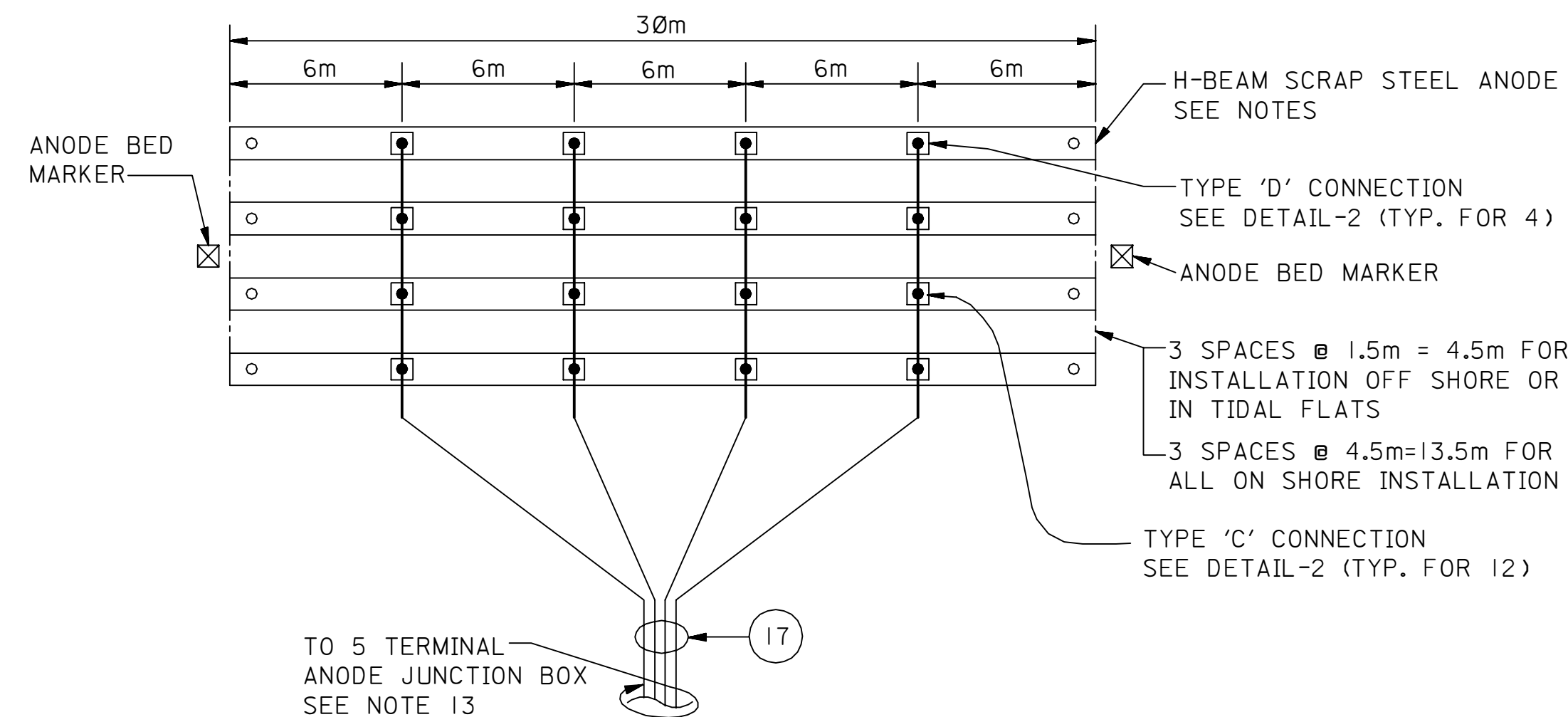
CASE - 1



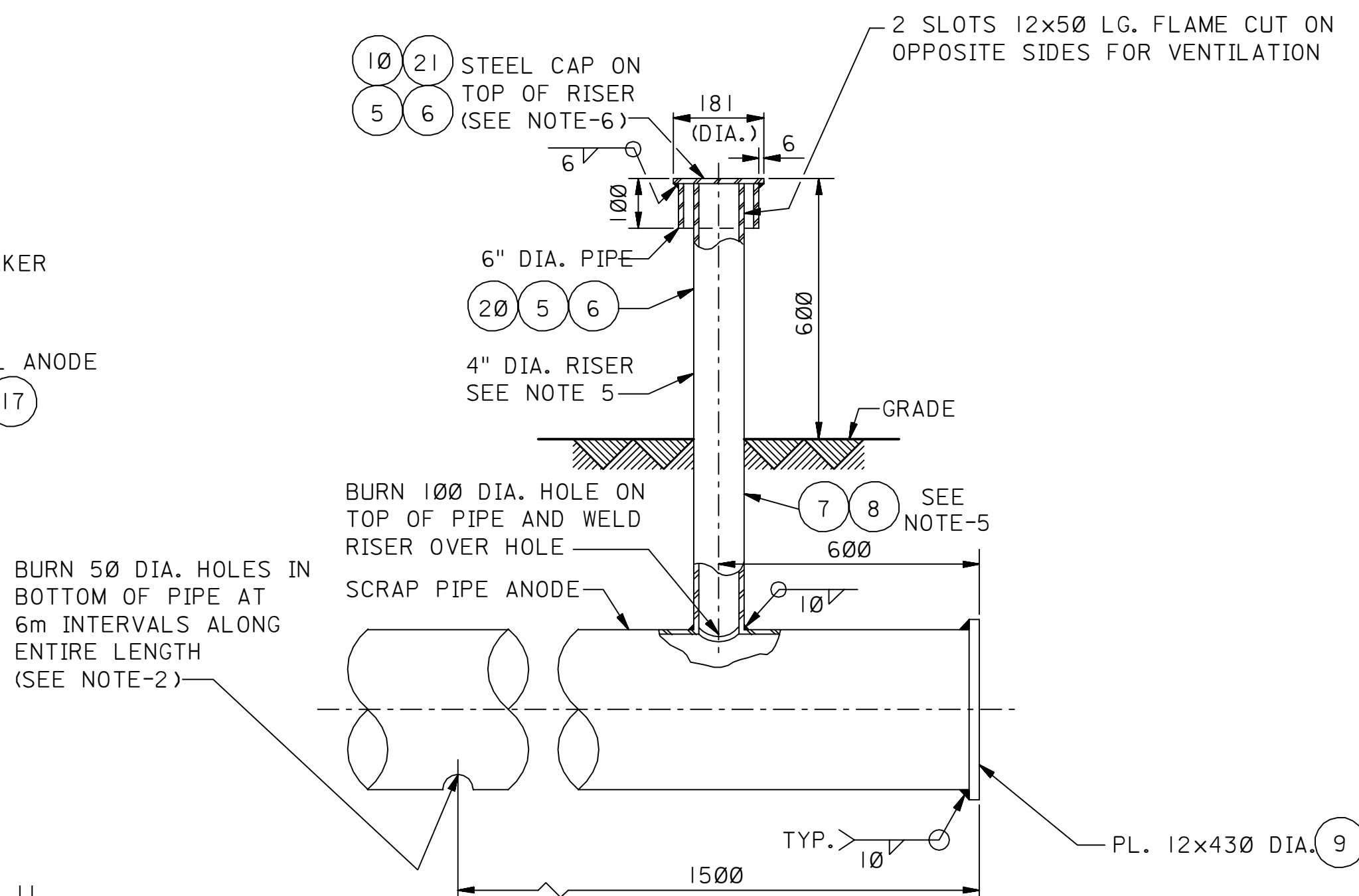
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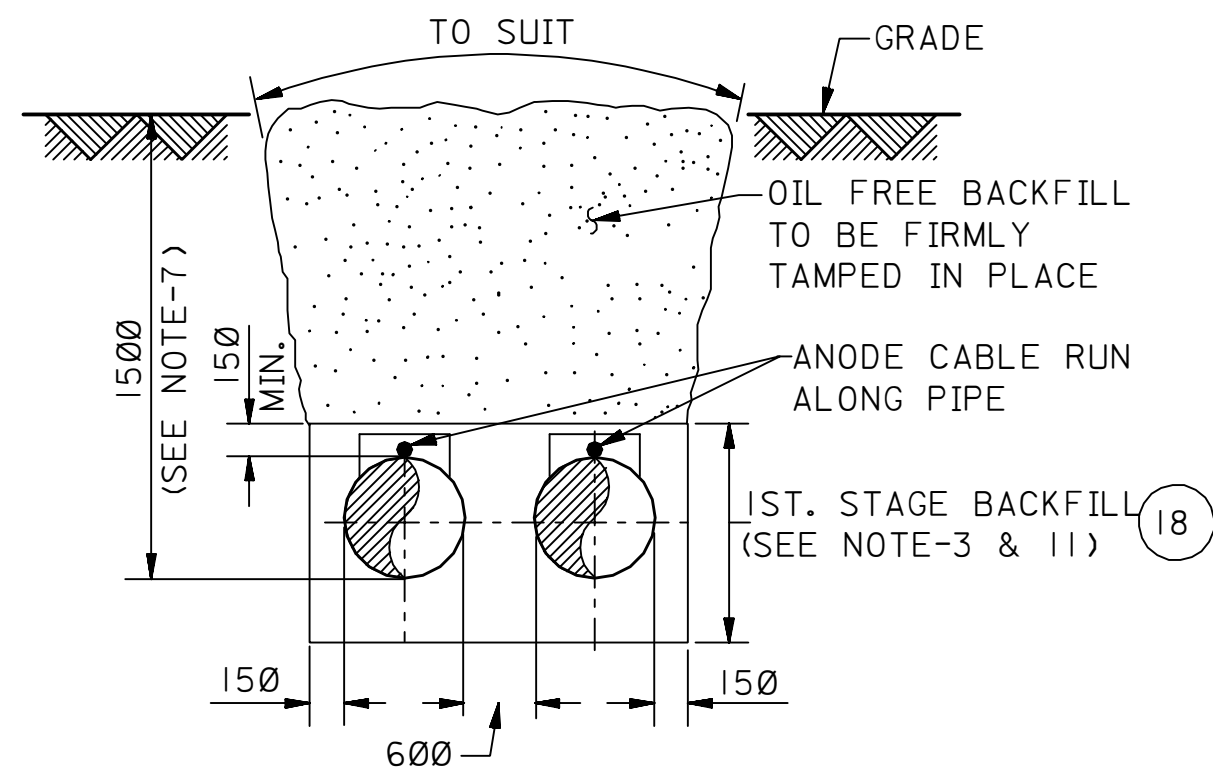
CASE - 3



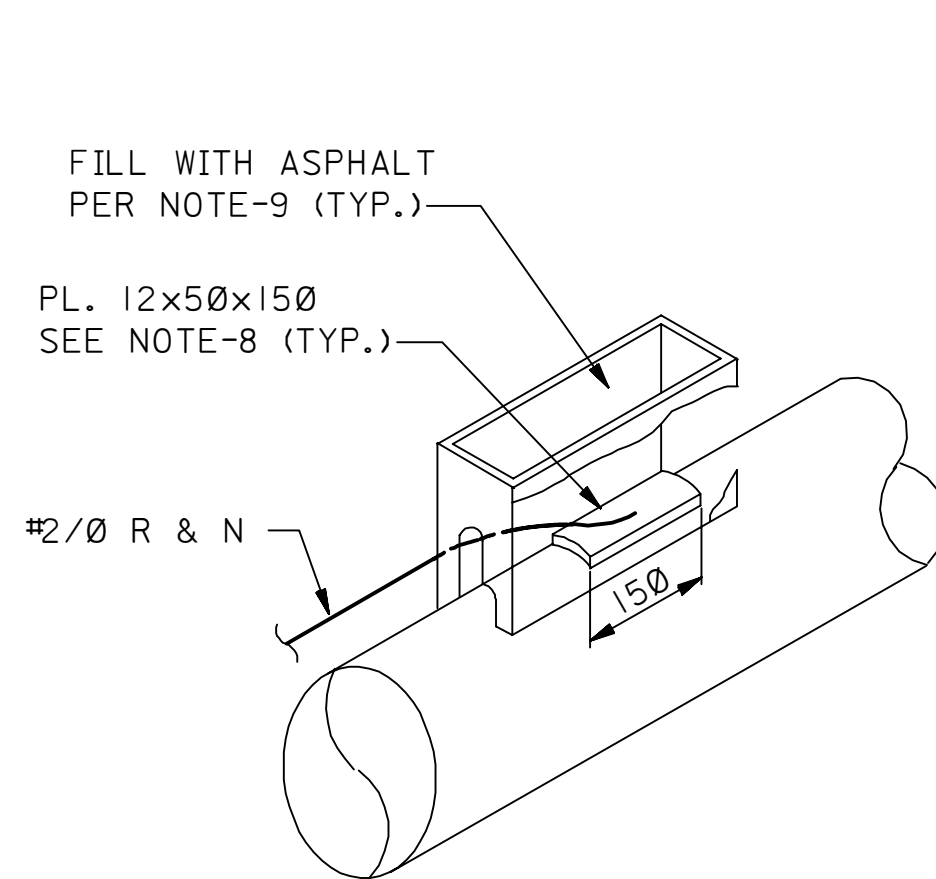
CASE - 4



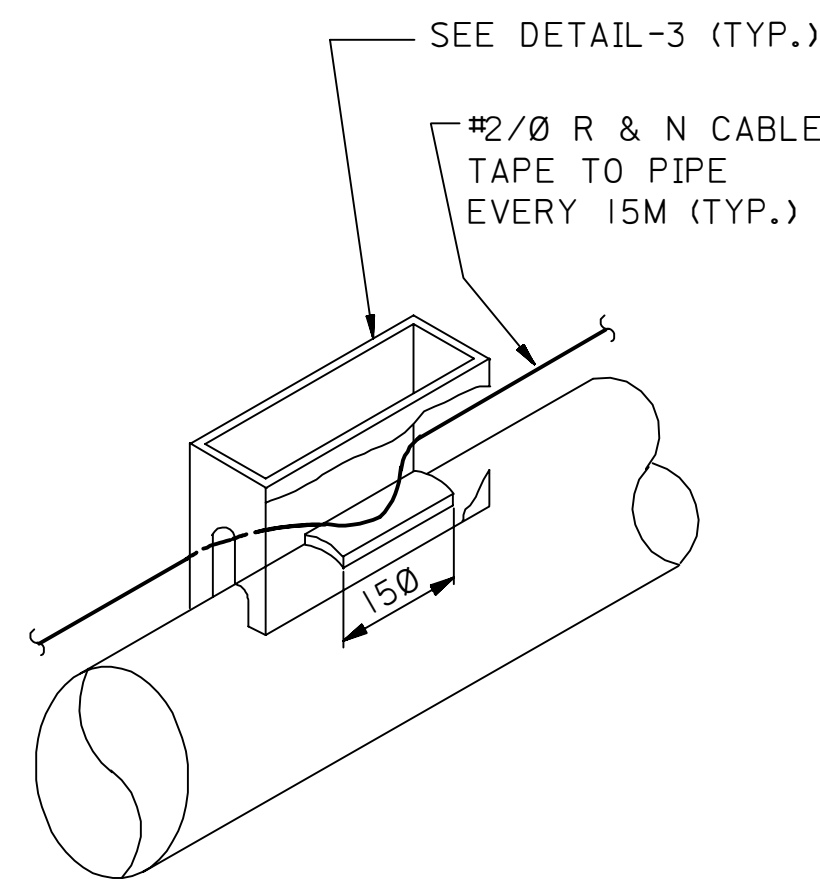
SECTION A-A
PIPE RISER



SECTION B-B

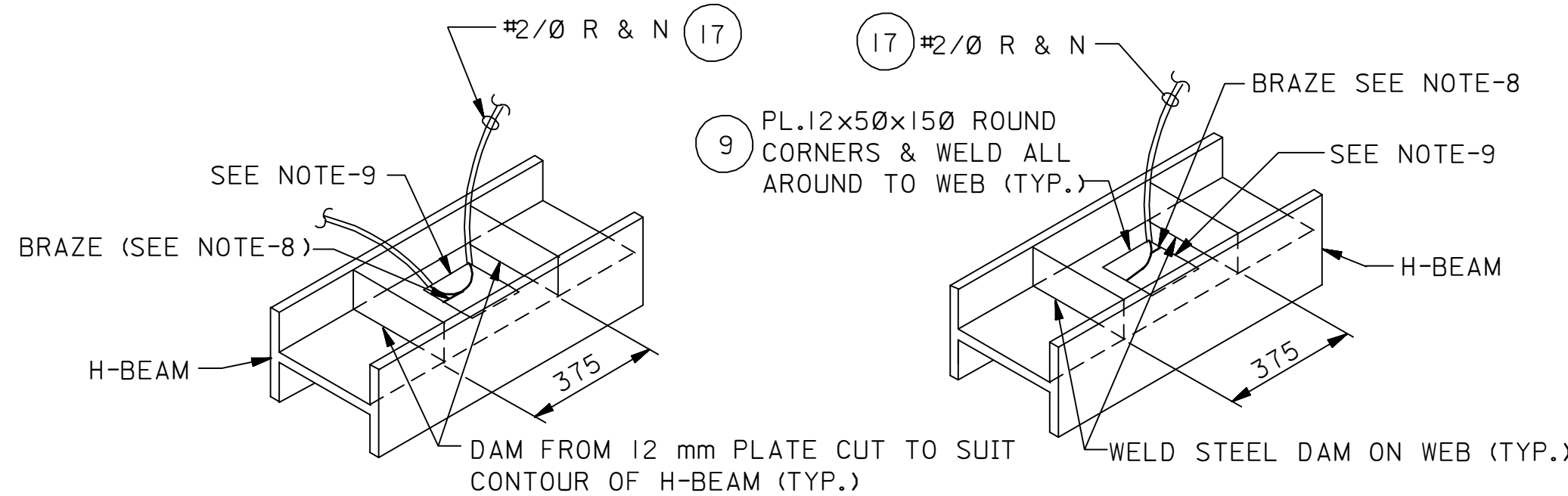


TYPE 'A' CONNECTION

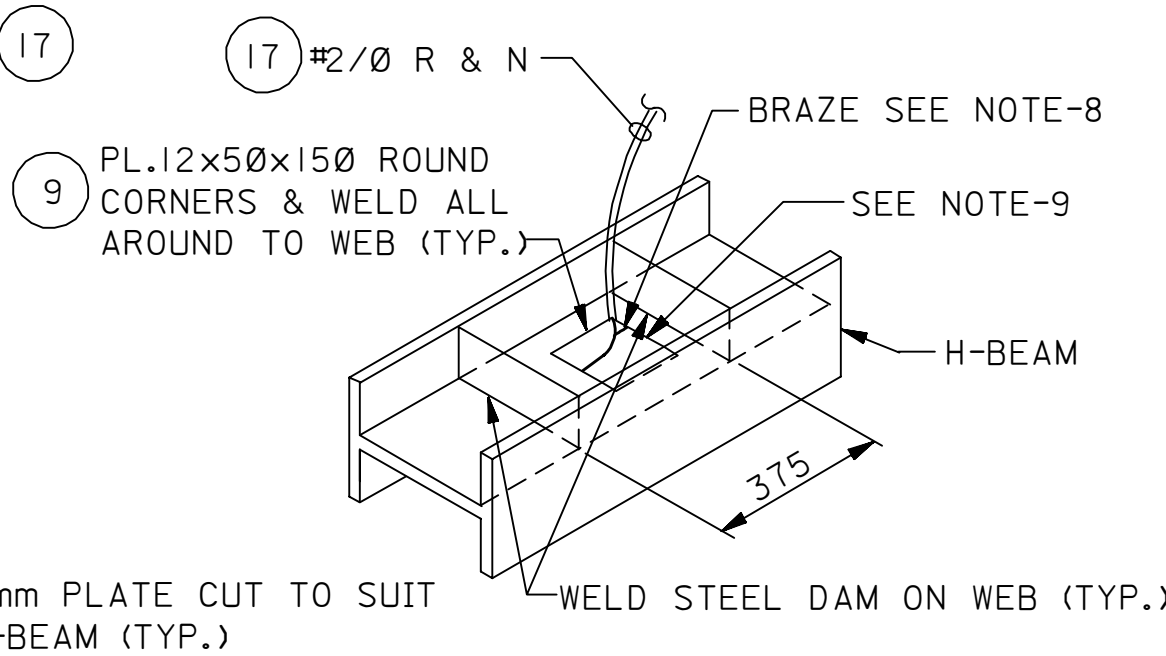


TYPE 'B' CONNECTION

DETAIL - 1

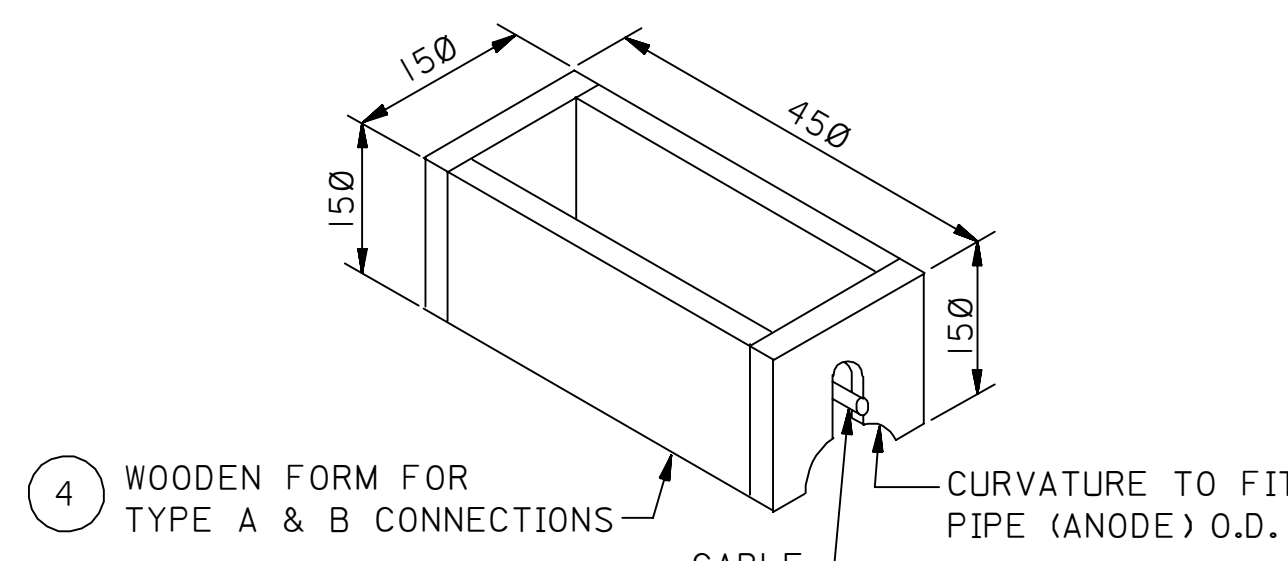


TYPE 'C' CONNECTION



TYPE 'D' CONNECTION

DETAIL - 2
N.T.S.



DETAIL - 3

LIST OF MATERIAL				
CODE	AMS NUMBER	QTY.	UNIT	DESCRIPTION
3	09-611-725	1	RR	COATING: ANTI-CORROSIVE, BITUMINUS MASTIC
4	09-538-986	16	PC	LUMBER: REDWOOD; 1x6x16 FT. LG.
5	09-630-794	1	CN	ENAMEL: EXTERIOR; YELLOW; COLOR NO. 309
6	09-708-133	1	CN	PRIMER: STRUCTURAL METAL; ZINC CHROMATE
7	09-937-901	1	CN	PRIMER: FOR POLYKEN PIPE WRAPPING.
8	09-966-260	4	RO	WRAPPING: PIPE; ROLL,POLYTHYLENE,9" WD. x 100 FT. LG.
9	12-061-060	-	SF	PLATE: STEEL; CARBON; 1/2 " TH. x 96 " WD. x 240 " LG.
10	12-066-545	2	SF	PLATE: STEEL; STRUCT. 1/4 " TH. x 96 " WD. x 240 " LG.
11	12-435-605	6	FT	CHANNEL: STRUCT. STEEL; 3" x 4.1 LB/FT.
12	14-084-679	1	FT	BAR: COPPER; 1/4 " TH. x 4 " WD.
13	14-114-379	6	EA	CONNECTOR: TAP; SPLIT BOLT; # 500 MCM
14	14-114-472	5	EA	CONNECTOR: TAP; SPLIT BOLT; 3/0 SOLID; 2/0 STRANDED
15	14-256-389	3	EA	SCREW: CAP: HEX HEAD; 1/4 " DIA. x 1" LG.
16	14-885-362	1	SH	SHEET: INSULATING; PHENOLIC; 1/4 " TH. ; 48 IN. SQ.
17	15-085-302	-	FT	CABLE: D.B.& N. # 2/0 AWG, 19 STRANDS, 600V.
18	ABO. SALT MINE	50	CU.YD.	ROCK SALT; (SEE NOTE 13)
19	RECLAMATION	-	M	H-BEAM: SCRAP (AS REQUIRED)
20	RECLAMATION	-	M	PIPE: SCRAP; 4" DIA. (AS REQUIRED)
21	RECLAMATION	0.30	M	PIPE: SCRAP; 6" DIA.
22	RECLAMATION	0.60	M	PIPE: SCRAP; 12" O.D.
23	RECLAMATION	-	M	PIPE: SCRAP 14" O.D. (AS REQUIRED)
24	RECLAMATION	-	M	PIPE: SCRAP 16" O.D. (AS REQUIRED)
25	RECLAMATION	-	M	PIPE: SCRAP 18" O.D. (AS REQUIRED)
26	RECLAMATION	-	M	PIPE: SCRAP 20" O.D. (AS REQUIRED)

- NOTES:
- CASE 1 SHOWS TWO 300 M LENGTHS OF SCRAP PIPE ANODE TO BE LAID SIDE BY SIDE IN A SINGLE TRENCH. WHEN HEAVY WEIGHT SCRAP PIPE IS AVAIL-ABLE ONLY ONE 300 M LENGTH MAY BE SPECIFIED WITH ONE # 2/0 R & N CABLE, EXTENDING FROM THE JUNCTION BOX. SEE INDIVIDUAL INSPECTION WORK SHEETS AND PLOT PLANS ISSUED FOR EACH JOB TO DETERMINE TYPE OF ANODE TO BE INST-ALLED.
 - 50 mm DIA. HOLES IN BOTTOM OF PIPE ARE NOT REQ'D. IF ANODE BED IS INSTALLED IN PERMANENTLY MOIST SOIL OR SUBKHA.
 - ANODE BED TO BE BACKFILLED TO A MINIMUM DEPTH OF 150 mm ABOVE PIPE AND TRENCH TO BE FLOODED WITH WATER. NATURAL PERCOLATION OF THIS WATER IS TO TAKE PLACE BEFORE COMPLETING BACKFILL.
 - PAINT 50 mm WIDE STRIP OF COATING ALONG TOP OF ANODE TO ENSURE ELECTRICAL CONTINUITY. REMAINING STEEL EXCEPT CABLE CONNECTIONS & RISERS MUST BE BARE.
 - CLEAN RISER TO BARE STEEL, PRIMER (6) & PAINT (5) PER SAES-H-001, SAPCS-6 WHERE ABOVE GRADE. PRIME (7) & WRAP WITH DOUBLE LAYER OF TAPE (8) WHERE BURIED.
 - CLEAN STEEL CAP & CHANNEL SUPPORT TO BARE STEEL. APPLY TWO COATS OF PRIMER (6) FOLLOWED BY TWO COATS OF ENAMEL (5) PER SAES-H-001, SAPCS-6.
 - BOTTOM OF ANODE SHALL BE A MINIMUM OF 1.5 M BELOW EXISTING GRADE UNLESS OTHERWISE STATED.
 - BRAZE 75 mm MINIMUM LENGTH BARE CABLE TO 12 mm TH. x 50 mm x 150 mm STEEL PLATE WELD PLATE TO TOP OF PIPE OR H-BEAM.
 - FILL TO TOP WITH MASTIC SO THAT A MINIMUM OF 75 mm CABLE INSULATION IS BELOW SURFACE OF MASTIC.
 - SCRAP PIPE OR BEAMS SHALL BE FREE OF SURFACE COATINGS EXCEPT FOR 50 mm WIDE STRIP (NOTE 4) AND ASPHALT POURED CONNECTIONS (NOTE 9)
 - IN DRY SOILS, PACK IN A 150 mm LAYER OF ROCK SALT. APPROXIMATELY ONE CU. YD. IS REQUIRED FOR COVERAGE OF ONE LINEAR FOOT. NOT REQUIRED FOR SUBKHA OR MOIST SOILS.
 - MAXIMUM BURIED CABLE RUN OF 350 MCM SHALL NOT EXCEED 150 M INSTALL ABOVE GRADE SPLICE BOX EVERY 150 M IF THIS LENGTH IS EXCEEDED. FOR DETAILS OF ANODE SPLICE BOX SEE DRAWING AA-036276 AND AB-036540.
 - FOR DETAILS OF ANODE JUNCTION BOX SEE DRAWING AB-036274 (5 TERMINAL) OR AB-036275 (12 TERMINAL)
 - ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

REFERENCE DRAWINGS

CATHODIC PROTECTION MARKER PLATE DETAILS	AA-036351
CATHODIC PROTECTION 5 TERMINAL JUNCTION BOX	AB-036274
CATHODIC PROTECTION 12 TERMINAL JUNCTION BOX	AB-036275
CATHODIC PROTECTION MULTI-PURPOSE JUNCTION BOX DETAILS, SPLICE TERMINAL	AA-036276
CATHODIC PROTECTION MOUNTING SUPPORT DETAILS FOR JUNCTION BOXES	AB-036540

REVISION NOTE-1:
REDRAWN, REVISED, CHANGED INDEX FROM P TO X,
ADDED TYP. INSTALL'N. DWG. NON MANDATORY & NOTED

MANDATORY DRAWING

03 MAY94	ESSD RCR	REVISED NOTES 4, 5, 6, 9 & MATERIAL LIST.			
02 AUG92	ESSD DTT	REVISED AS PER MARKUP	ORIG. SIGNED	ORIG. SIGNED	ORIG. SIGNED
01 JUN88	MNL	SEE REVISION NOTE-1.	ORIG. SIGNED	ORIG. SIGNED	ORIG. SIGNED
REV. NO.	DATE	BY JO/EWO	DESCRIPTION	CHKD.	CERT. APPD.

SAUDI ARABIAN OIL COMPANY

DRAWN BY DANIELIAN/RL CHECKED BY RE 4/79 SCALE: NONE
DATE STARTED DATE COMPLETED 04-11-79
OPR'G. DEPT. ENG. DEPT.
APP'D. FOR CONST.

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

CATHODIC PROTECTION
SCRAP STEEL ANODE BED

STD. DWG.		METRIC	
PLANT NO.	INDEX	DRAWING NUMBER	SHT. NO. REV. NO.
990	X	AA-036278	001 03