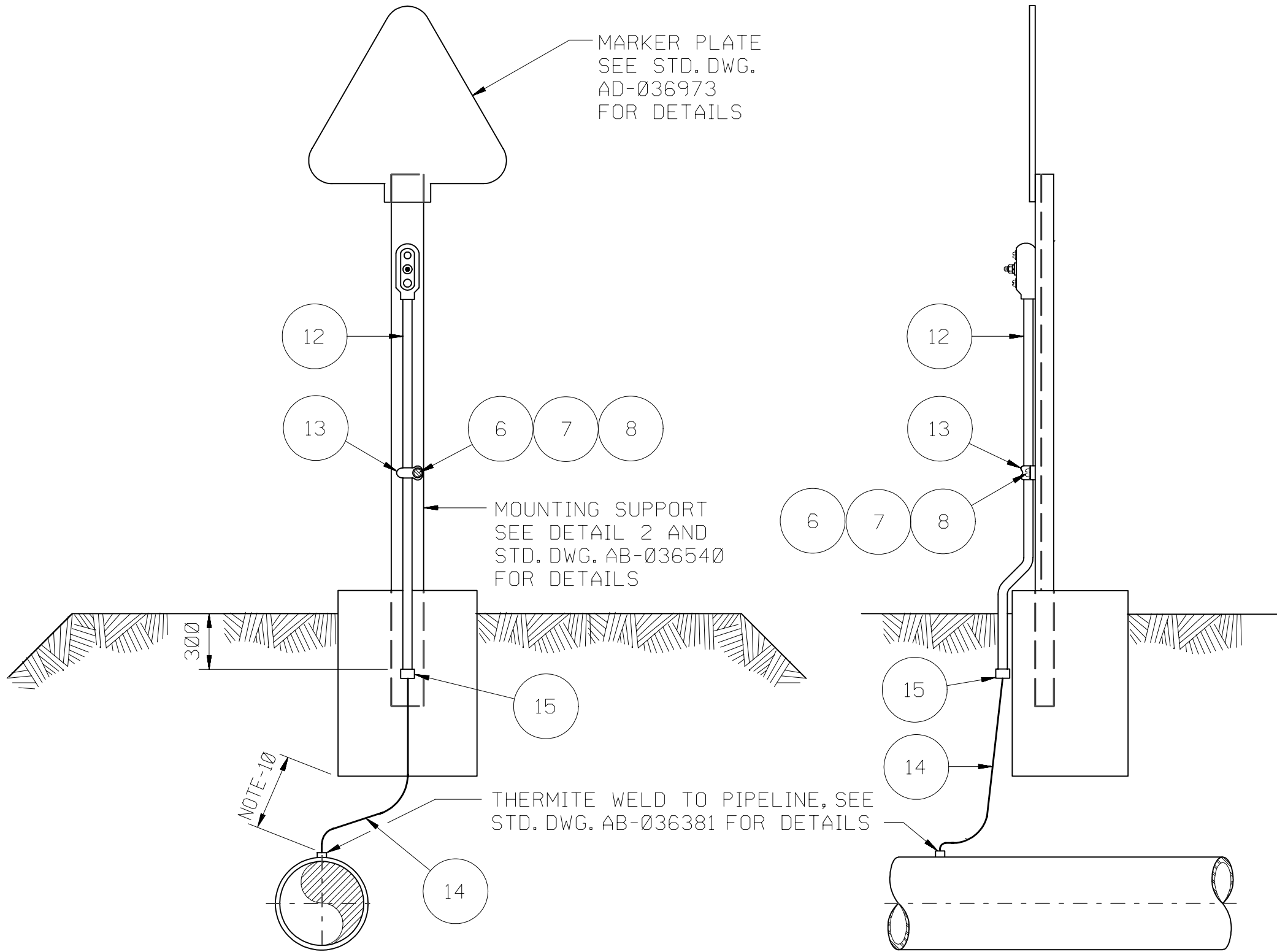
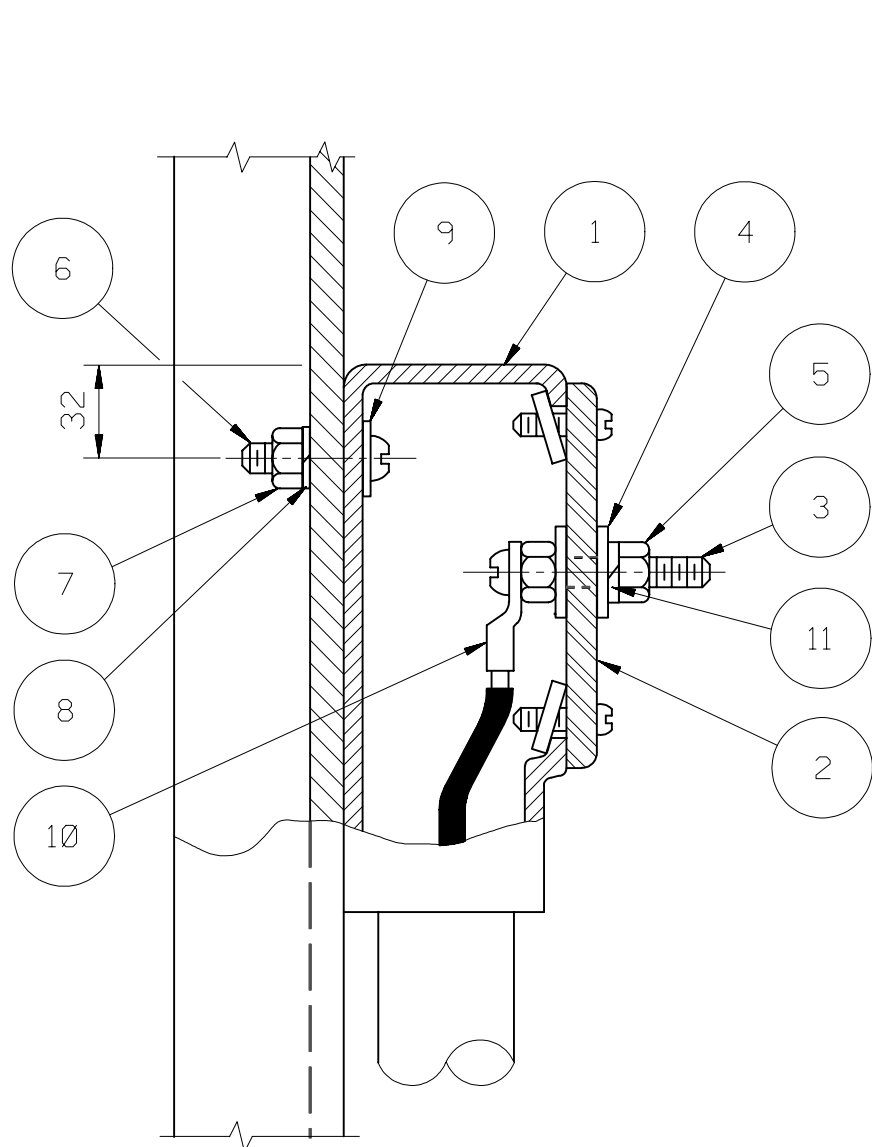


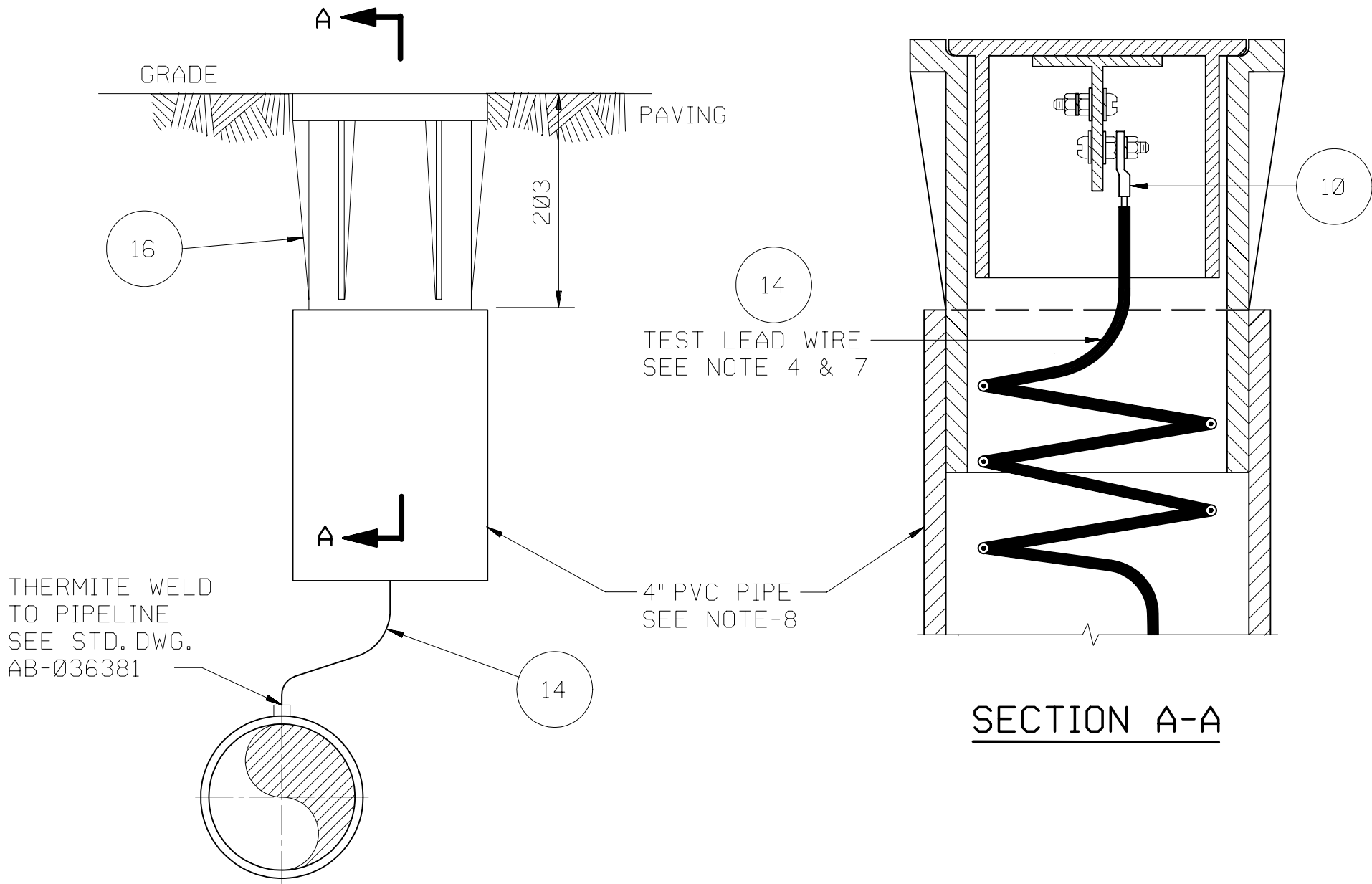
990	X	AB-036907	100	15
PLANT NO.	INDEX	DRAWING NUMBER	SHT. NO.	REV. NO.



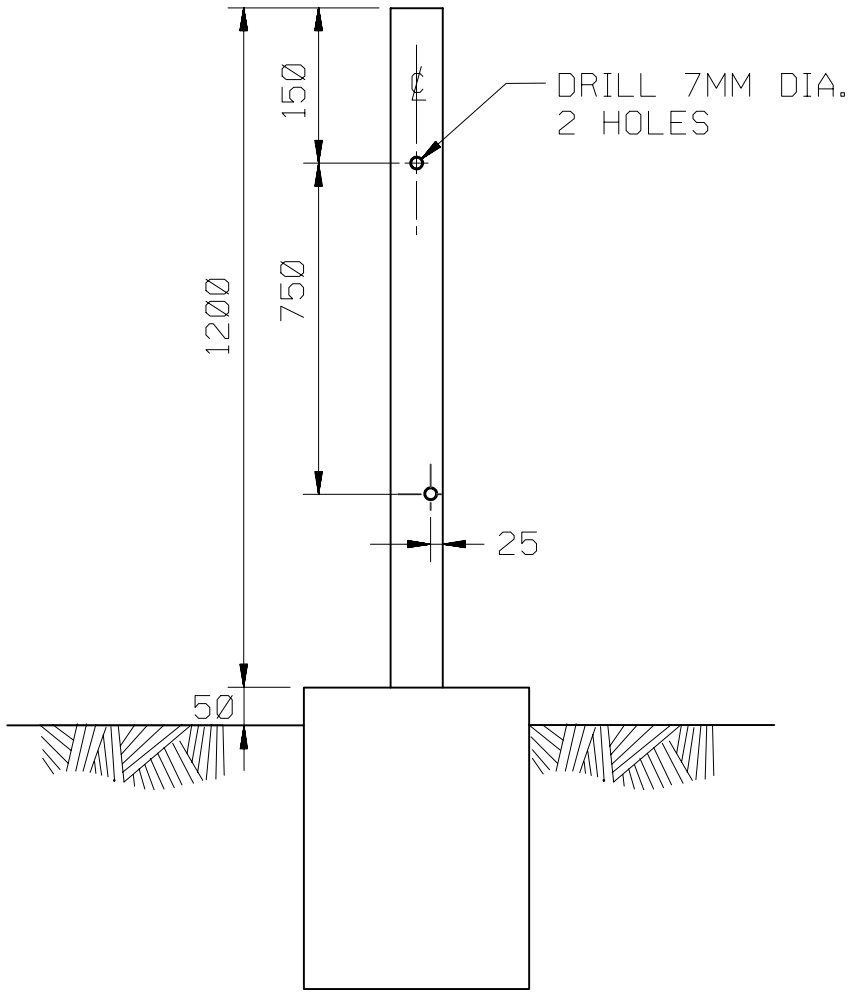
KILOMETER MARKER COMBINED WITH
CATHODIC PROTECTION TEST STATION
FOR POTENTIAL MEASUREMENT



DETAIL 1
SEE NOTE-3

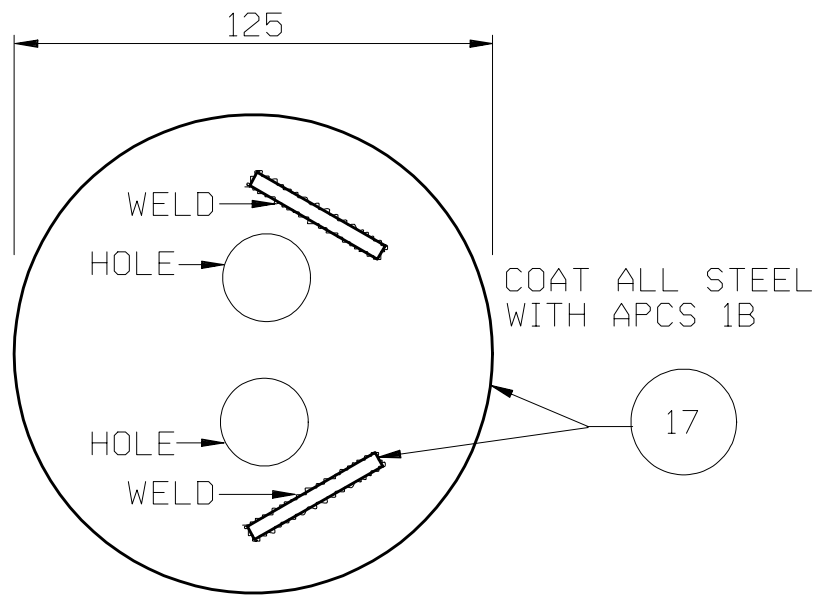


CATHODIC PROTECTION
FLUSH MOUNT TEST STATION
SEE NOTES 6, 7, 8, 11 & 12

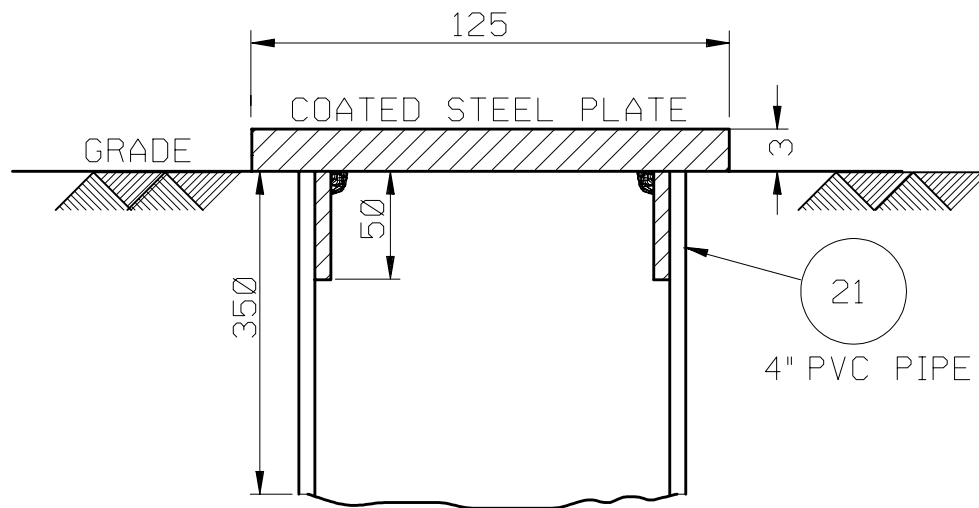


DETAIL 2

MATERIAL LIST		
CODE	SAMS NO.	DESCRIPTION
1	15-601-807	BODY: CONDUIT; TYPE "E", * "
2	15-613-635	COVER: COMPOSITION; * "
3	11-291-525	SCREW: BRASS; * "-20 THD/IN. X 1" LG.
4	10-883-219	WASHER: FLAT; BRASS, * "
5	10-611-580	NUT: BRASS; * "X20 THD/IN.
6	11-173-008	SCREW: CADMIUM PLATED; * "X20 THD/IN. X 19MM LG.
7	10-565-211	NUT: CADMIUM PLATED; * "X20 THD/IN.
8	10-829-407	WASHER: LOCK; CADMIUM PLATED, * "
9	47-820-094	WASHER: FLAT; CADMIUM PLATED, * "
10	14-198-111	CONNECTOR: TERMINAL, CRIMP TYPE, 1-HOLE FOR #8 AWG (8.34MM) CABLE
11	14-188-834	WASHER: LOCK; BRASS, * "
12	15-314-912	CONDUIT: RIGID; * " PVC COATED
13	15-510-903	CLAMP: CONDUIT; PVC COATED STEEL; * "
14	15-194-380	WIRE: THWN; BLACK, NO. 8AWG.
15	15-290-848	BUSHING: END; * "
16	17-890-500	TEST STATION: FLUSH MOUNTED MULTI-TERMINAL
17	12-066-120	STEEL PLATE; 3MM THK
18	09-612-362	PRIMER; EPOXY
19	09-612-375	PAINT; EPOXY TOPCOAT
20	09-612-369	PAINT; EPOXY TOPCOAT
21	01-515-470	PIPE; PVC 4"



BOTTOM VIEW OF SOIL ACCESS
TEST STATION LID
DETAIL -3



SECTIONAL VIEW OF SOIL
ACCESS TEST STATION
DETAIL -4

CATHODIC PROTECTION
SOIL ACCESS TEST STATION
SEE NOTES 6, 8, 11 & 12

- NOTES:
- PLACE MARKER SO TEXT IS READ WHEN FACING IN DIRECTION OF INCREASING STATIONS.
 - KILOMETER MARKERS COMBINED WITH CATHODIC PROTECTION TEST STATIONS ARE REQUIRED AS PER SAES-X-400.
 - THE ONE PIN TEST STATION, CONSISTING OF ITEMS 1 THROUGH 11, IS AVAILABLE THROUGH SAMS S/N 17-856-050 AS A COMPLETE ASSEMBLY.
 - COIL THE TEST LEAD WIRE IN THE CONDUIT TO ALLOW THE COVER TO BE LIFTED A SHORT DISTANCE WHEN TAKING A PIPE-TO-SOIL POTENTIAL READING.
 - ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
 - REQUIRED IN PAVED AREAS WHERE SOIL IS NOT ACCESSIBLE.
 - TEST LEAD WIRE NOT REQUIRED WHEN TEST STATION UTILIZED AS SOIL ACCESS TEST STATION.
 - TO ENSURE ACCESS TO SOIL BELOW PAVING OR CONCRETE, TEST STATION MAY BE LENGTHENED BY ADDING 4" PVC PIPE TO BOTTOM OF TEST STATION.
 - KILOMETER MARKERS WITHOUT A ONE-PIN TEST STATION ARE REQUIRED AS PER SAES-L-020.
 - MINIMUM CLEARANCE BETWEEN MARKER AND PIPELINE SHALL BE 500MM.
 - WHEN USED AS ANODE VENT, DRILL THREE (3) 13MM HOLES IN COVER TO ALLOW ADEQUATE VENTILATION.
 - THIS BOX MAY ALSO BE USED AS A FLUSH MOUNT GALVANIC ANODE TEST STATION. USE SHUNT 17-889-543 TO ALLOW FOR CURRENT MEASUREMENT.

REFERENCE DRAWING

MARKER PLATE DETAILS CATHODIC PROTECTION	AA-036351
THERMITE WELDING OF CABLES TO PIPELINES AND STRUCTURES	AB-036381
MARKER PLATES STD. DETAILS	AD-036973
MOUNTING INSTALLATION DETAILS	AB-036540

MANDATORY DRAWING

14	FEB98	MYG	REVISED DRAWING TITLE, NOTE-9 & DELETED NOTE-10.			
13	OCT94	ESSD CAB	REVISED L/M & ADDED NOTE-13.			
12	DEC93	ESSD RCR	ADDED NOTE 10, 12 AND REVISED TITLE.	ORIG. SIGNED	ORIG. SIGNED	ORIG. SIGNED
15	AUG99	EDSD MHJ	ADDED DETAILS 3 AND 4			
REV. NO.	DATE	BY	JO/EWO	DESCRIPTION	CHKD.	CERT.

SAUDI ARABIAN OIL COMPANY

DRAWN BY	RCR	CHECKED BY	SCALE	NONE
DATE STARTED		DATE COMPLETED		
ORIG. DEPT.		ENG. DEPT.		
APP'D FOR CONSTR.				

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED	CERTIFIED	DATE
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CATHODIC PROTECTION
KILOMETER MARKER & CP TEST STATIONS
FOR BURIED PIPELINES

STD. DWG.			METRIC	
PLANT NO.	INDEX	DRAWING NUMBER	SHT. NO.	REV. NO.
990	X	AB-036907	001	15