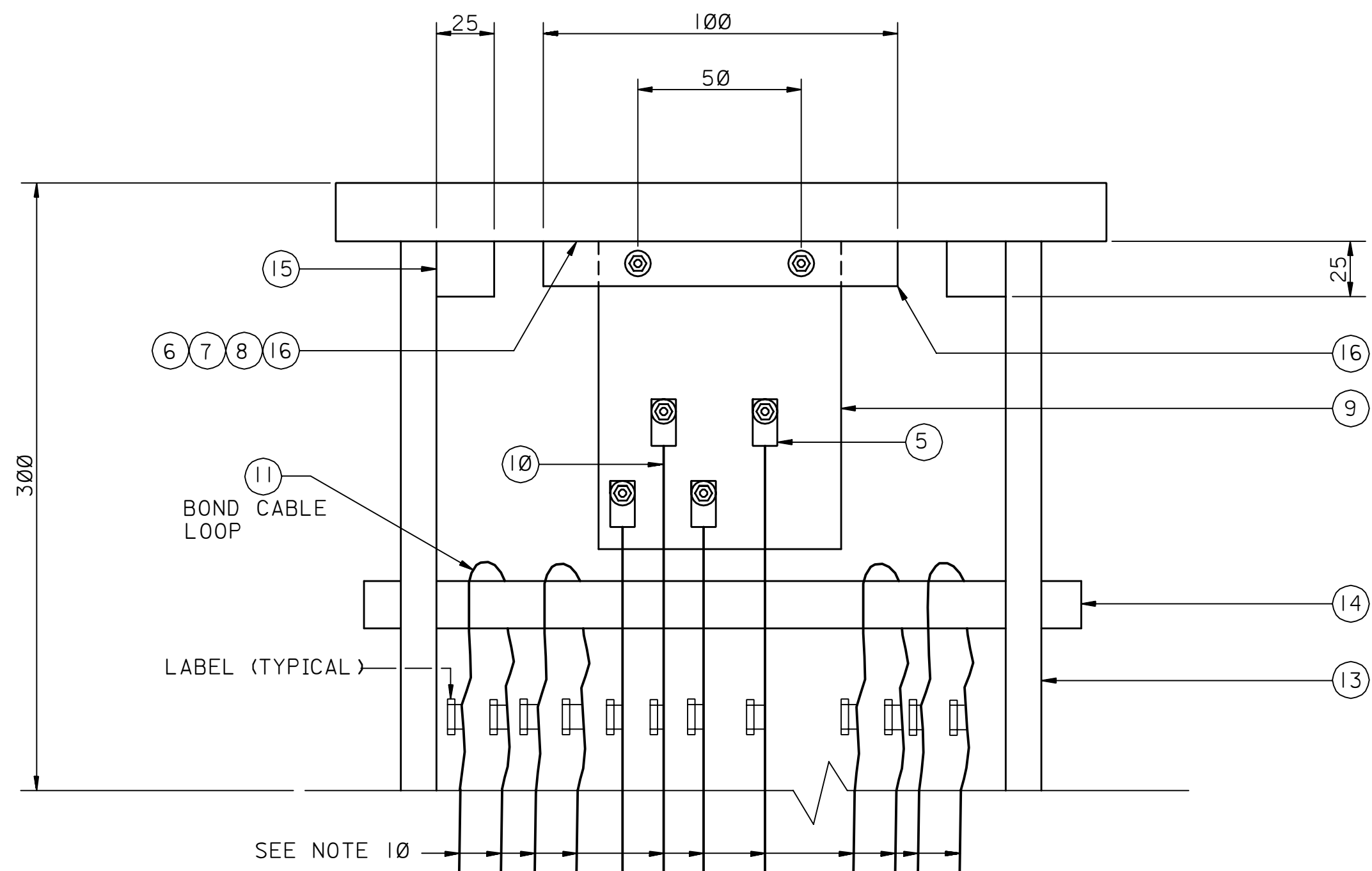
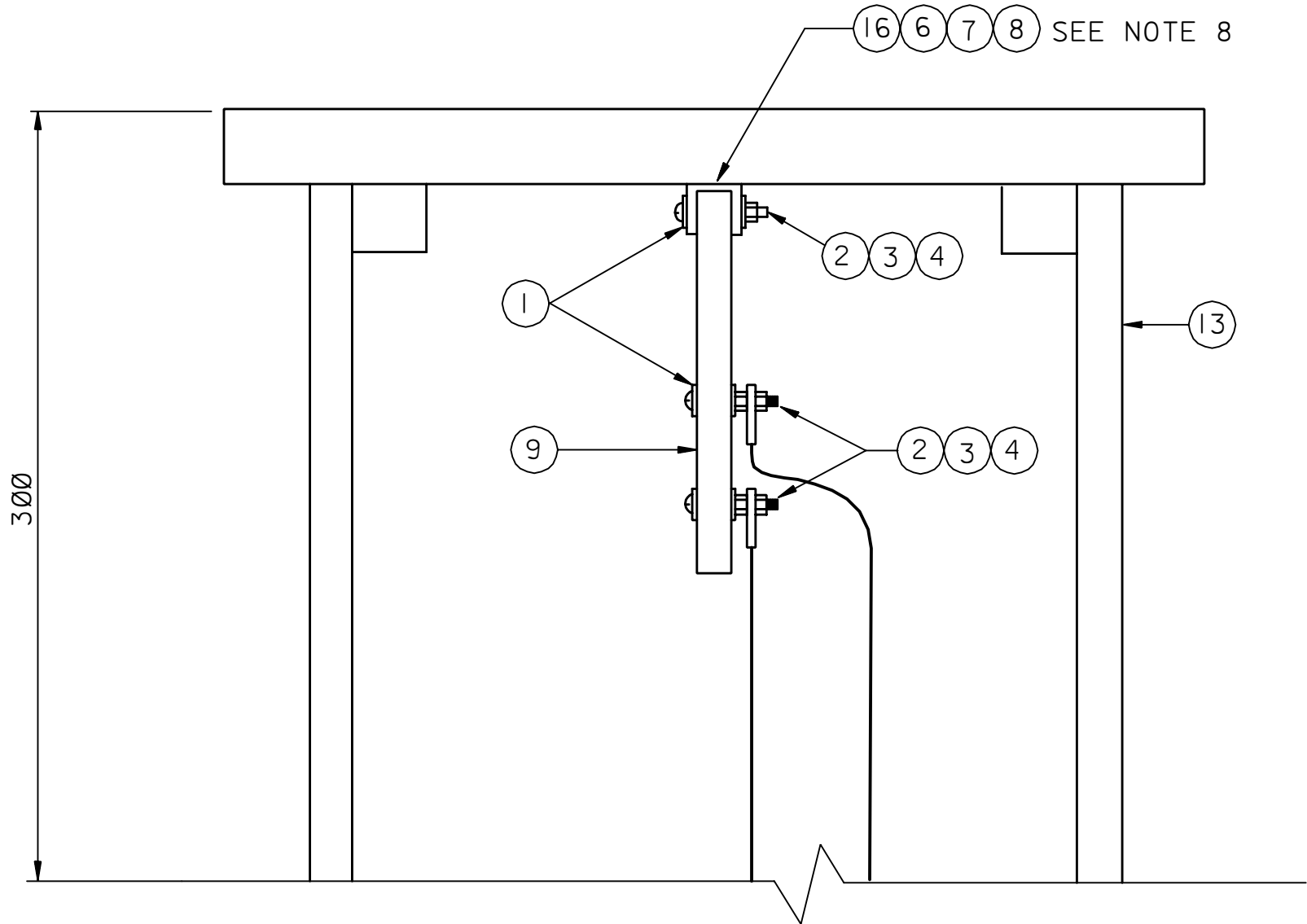


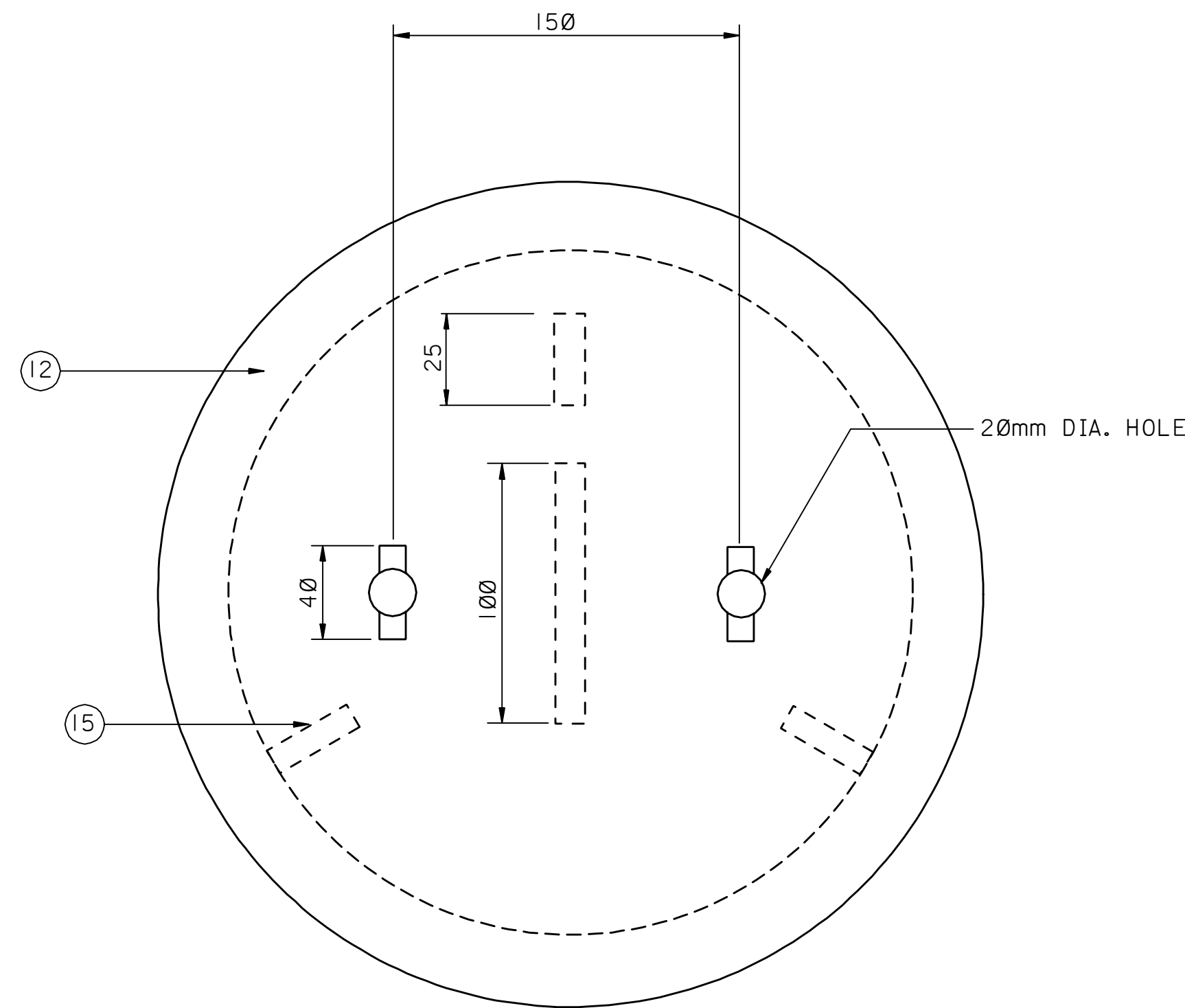
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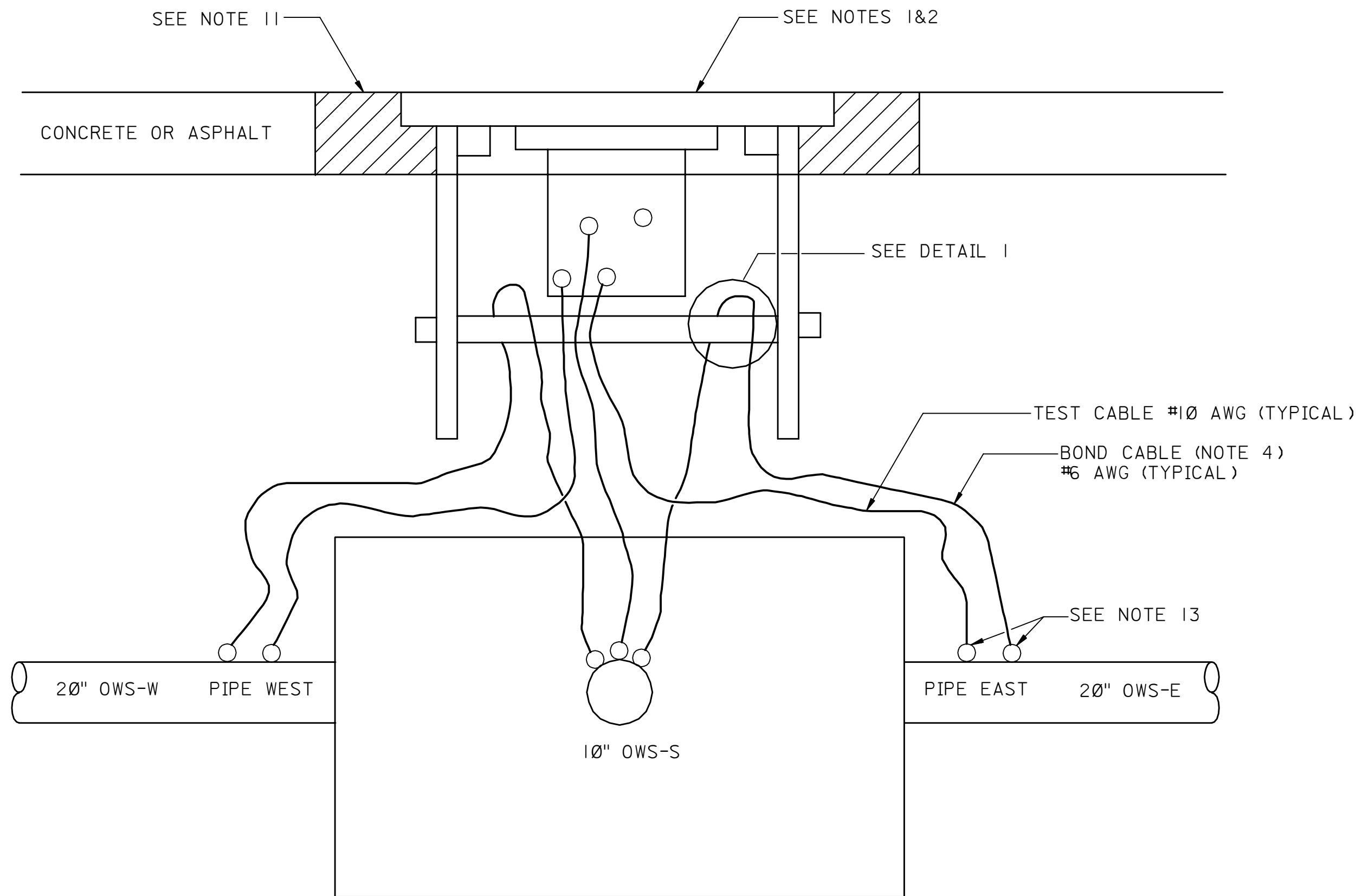
FLUSH MOUNTED TEST STATION



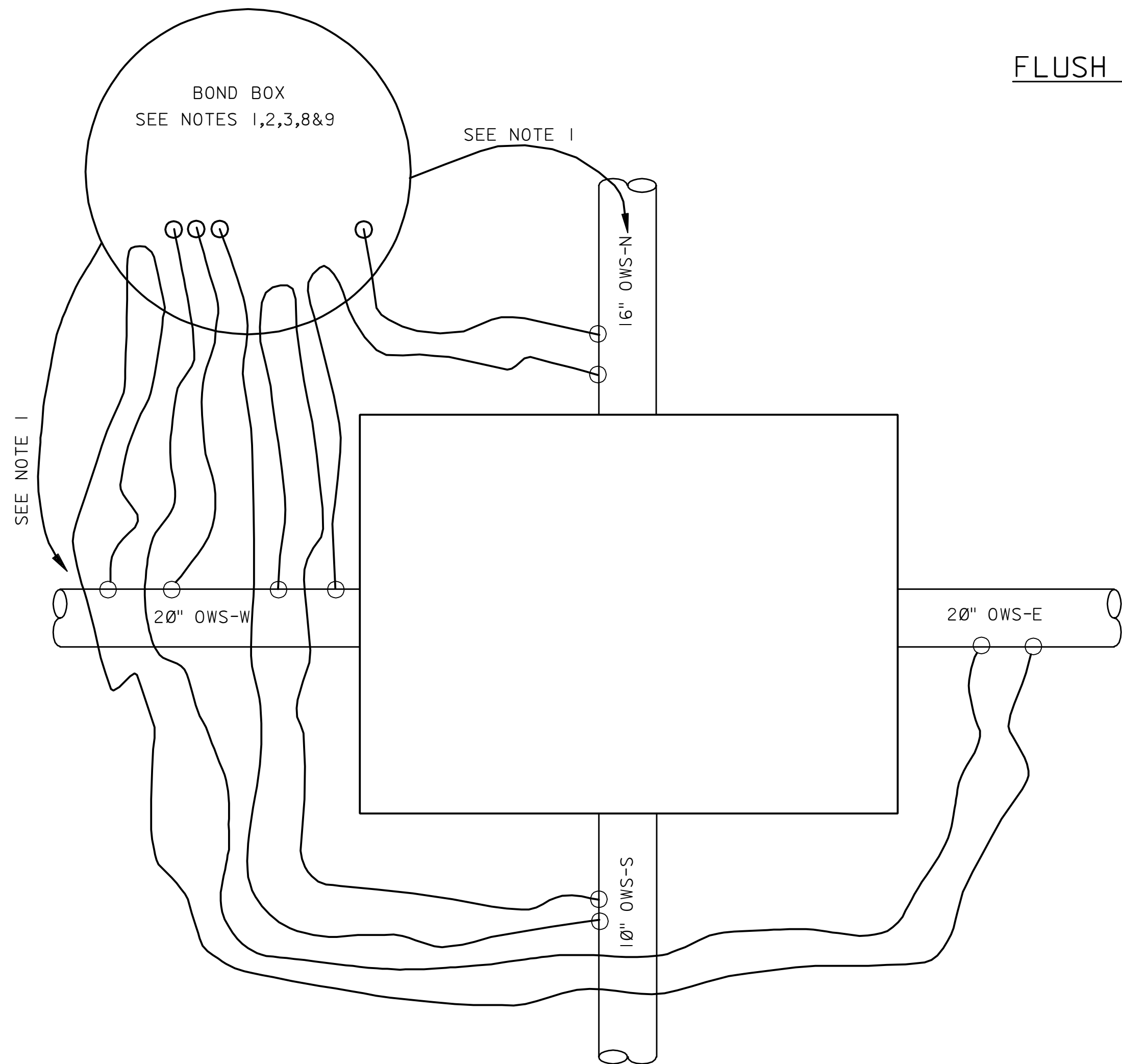
FLUSH MOUNTED TEST STATION SECTION A-A



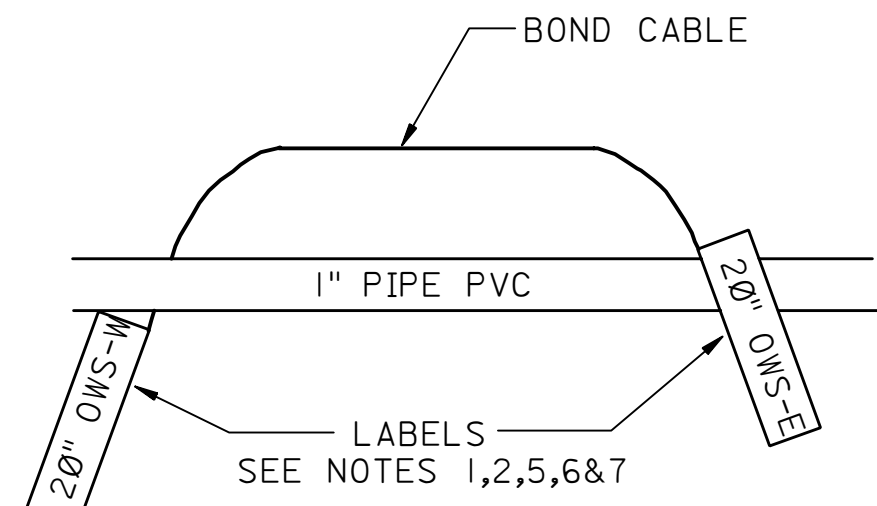
FLUSH MOUNTED TEST STATION TOP VIEW



TYPICAL INSTALLATION DETAILS
16" OWS-N OMITTED FOR CLARITY



TYPICAL WIRING (4 PIPES)



DETAIL 1

CODE	DESCRIPTION
1	SCREW: BRASS 1/4 "x20THDx1N. 1/4 " LG
2	WASHER: FLAT, BRASS, 1/4 "
3	NUT: BRASS, 1/4 " x 20 THD/IN
4	WASHER: LOCK, BRASS
5	CONNECTOR TERMINAL, CRIMP TYPE, 1-HOLE FOR #10 AWG CABLE
6	PRIMER: EPOXY
7	PAINT: EPOXY TOPCOAT
8	PAINT: EPOXY TOPCOAT
9	PHENOLIC PLATE 100x100x6 mm
10	WIRE: NO. 10 AWG, THWN
11	WIRE: NO. 6 AWG, THWN OR HMWPE
12	STEEL PLATE: 10" DIA. x 12mm THK
13	PIPE: PCV, 8" DIA. x500mm LG, SCH. 80
14	PIPE: PCV, 1" DIA. x250mm LG, SCH. 80
15	STEEL SPACERS: 1/2 " THK x 25mm LG
16	STEEL CONNECTOR PLATE WELDED TO BOND BOX LID

- NOTES:
1. PLACE THE BOND BOX DIRECTLY OVER THE PIPE THAT IS ELECTRICALLY CLOSEST TO THE RECTIFIER NEGATIVE.
 2. A BOND BOX MAY BE USED FOR UP TO 4 BONDS. FOR MORE THAN 4 BONDS USE MORE BOND BOXES AND PLACE THE SUBSEQUENT BOXES OVER A DIFFERENT PIPE FOR EACH BOX.
 3. THE BOND BOXES SHALL ALSO SERVE AS SOIL ACCESS BOXES.
 4. SIZE THE BOND CABLES SO THAT THE VOLTAGE DROP ACROSS THE BOND CABLE SHALL BE LESS THAN 50 MILLIVOLTS; HOWEVER, THE MINIMUM SIZE BOND CABLE IS #6 AWG.
 5. LOOP THE BOND CABLES OVER A 1" DIAMETER SCHEDULE 80 PVC PIPE AND ALLOW ENOUGH SLACK TO PUT AMP CLAMP AROUND EACH CABLE.
 6. LABEL THE BOND CABLE SO THAT EACH END OF THE CABLE IDENTIFIES THE PIPE IT IS CONNECTED. FOR EXAMPLE " 20" OWS-E" AND "20" OWS-W " FOR A BOND CABLE BETWEEN THE 20 INCH OILY WATER SEWER ON THE EAST SIDE OF THE MANHOLE TO THE 20 INCH OILY WATER SEWER ON THE WEST SIDE OF THE MANHOLE.
 7. CONSTRUCT AND ATTACH THE CABLE LABELS ACCORDING TO STANDARD DRAWING NUMBER AD-036132.
 8. COAT ALL METAL PARTS OF THE TEST BOX WITH THE APCS-IB COATING SYSTEM, EXCEPT FOR THE TEST LEAD TERMINALS. THE TEST LEAD TERMINAL SHALL BE MADE OF BRASS.
 9. LABEL EACH TEST LEAD WITH THE TYPE AND SIZE PIPE TO WHICH IT IS CONNECTED. IDENTIFY NORTH, EAST, SOUTH OR WEST, IF THEY ARE THE SAME SIZE PIPE. FOR EXAMPLE 20" ØWS-E FOR 20 INCH OILY WATER SEWER EAST PIPE AND 20" OWS-N FOR 20 INCH OILY WATER SEWER NORTH PIPE.
 10. TEST LEADS SHALL HAVE SUFFICIENT SLACK TO ALLOW THE LID OF THE BOX TO BE RAISED 300 mm ABOVE THE SURFACE WITHOUT DAMAGE TO ANY CABLES.
 11. POUR A 100 mm WIDE 150 mm THICK CONCRETE RING AROUND THE OUTSIDE OF THE 8 INCH PVC BOX, IF A CONCRETE SLAB IS NOT POURED AROUND THE WHOLE AREA.
 12. LABEL THE BOND BOX NUMBER USING A WELDING BEAD OR A STAINLESS STEEL TAG ATTACHED TO THE TOP OF THE LID WITH BRASS BOLTS.
 13. THERMITE WELD BOND CABLES AND TEST LEADS TO THE PIPE ACCORDING TO STANDARD DRAWING NUMBER AB-036381.
 14. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

REFERENCE DRAWINGS	
THERMITE WELDING OF CABLES	AB-036381
TERMINATION DETAILS CABLE IDENTIFICATION	AD-036132

DRAWING RESPONSIBILITY:
CATHODIC PROTECTION STANDARD COMMITTEE

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

DRAWN BY: WED/AIR CHECKED BY: MNL SCALE: _____

DATE STARTED: 11/14/98 DATE COMPLETED: 12/23/98

OPRG. DEPT. _____ ENG. DEPT. _____

APPD. FOR CONST. _____

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

CERTIFIED BY: _____ DATE: _____

CATHODIC PROTECTION
FLUSH MOUNTED BOND BOX
DETAILS FOR MANHOLES

STD. DWG.

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