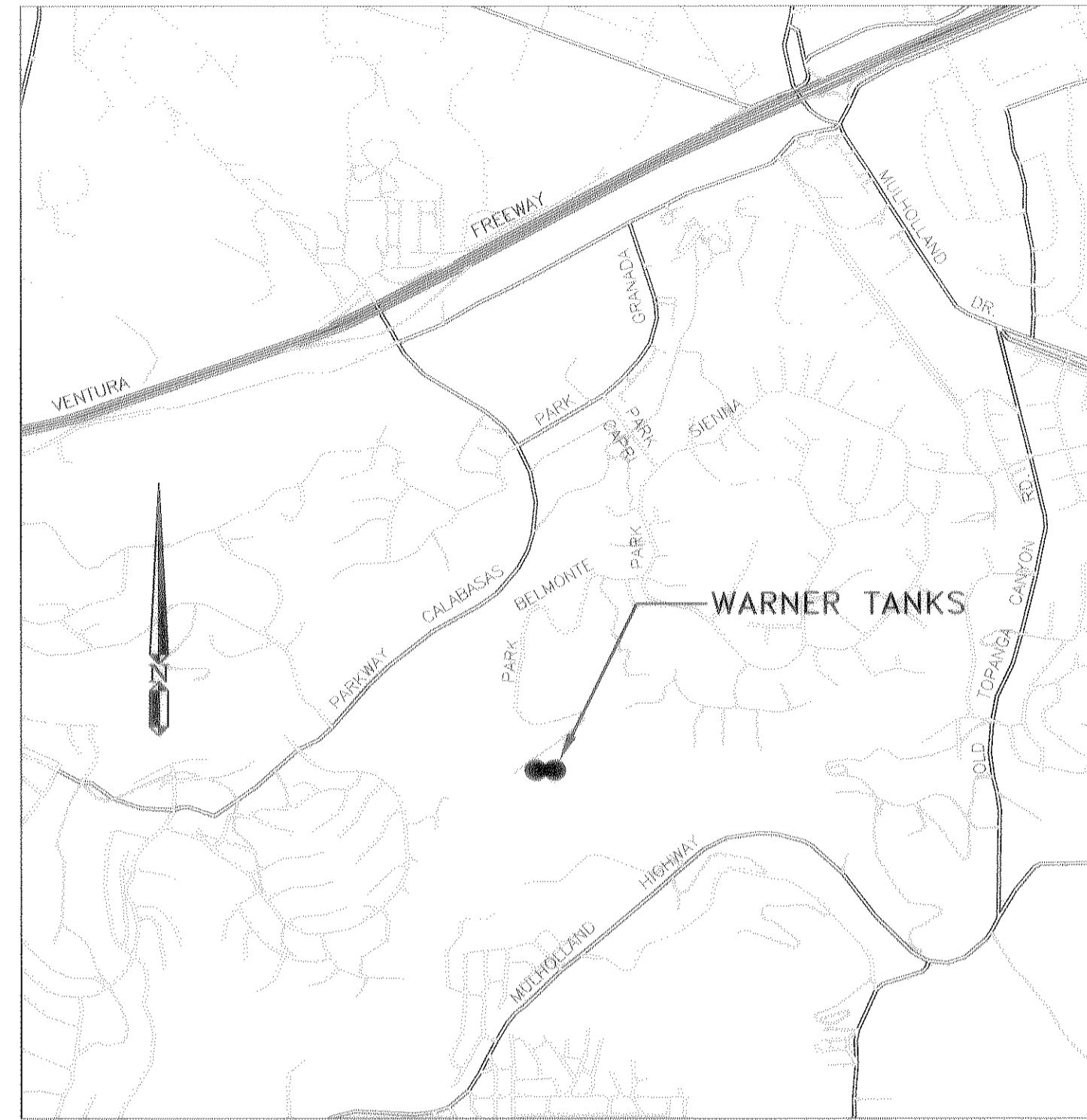


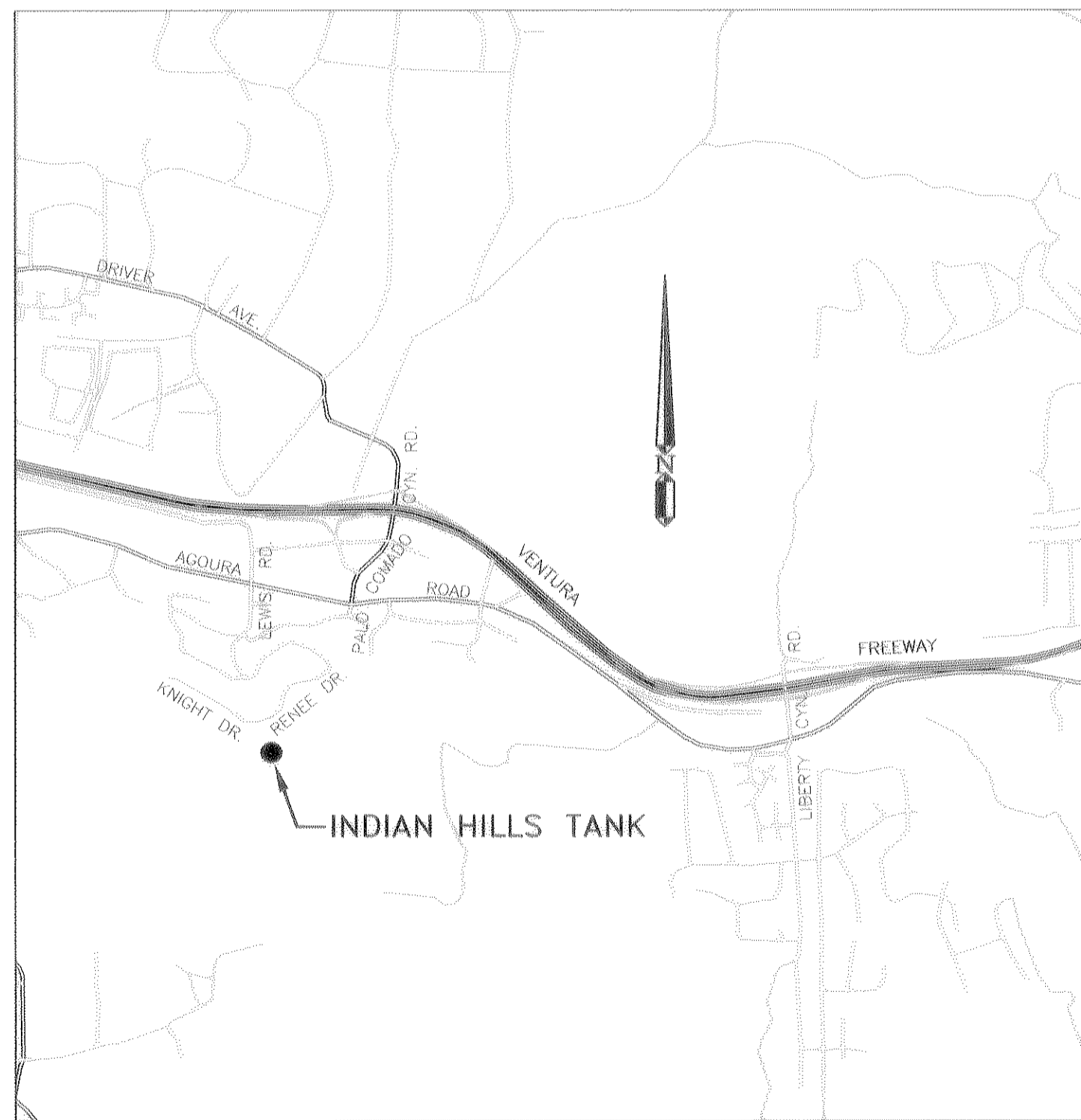
LOCATION PLAN - JED SMITH TANKS

SCALE: 1" = 1500'



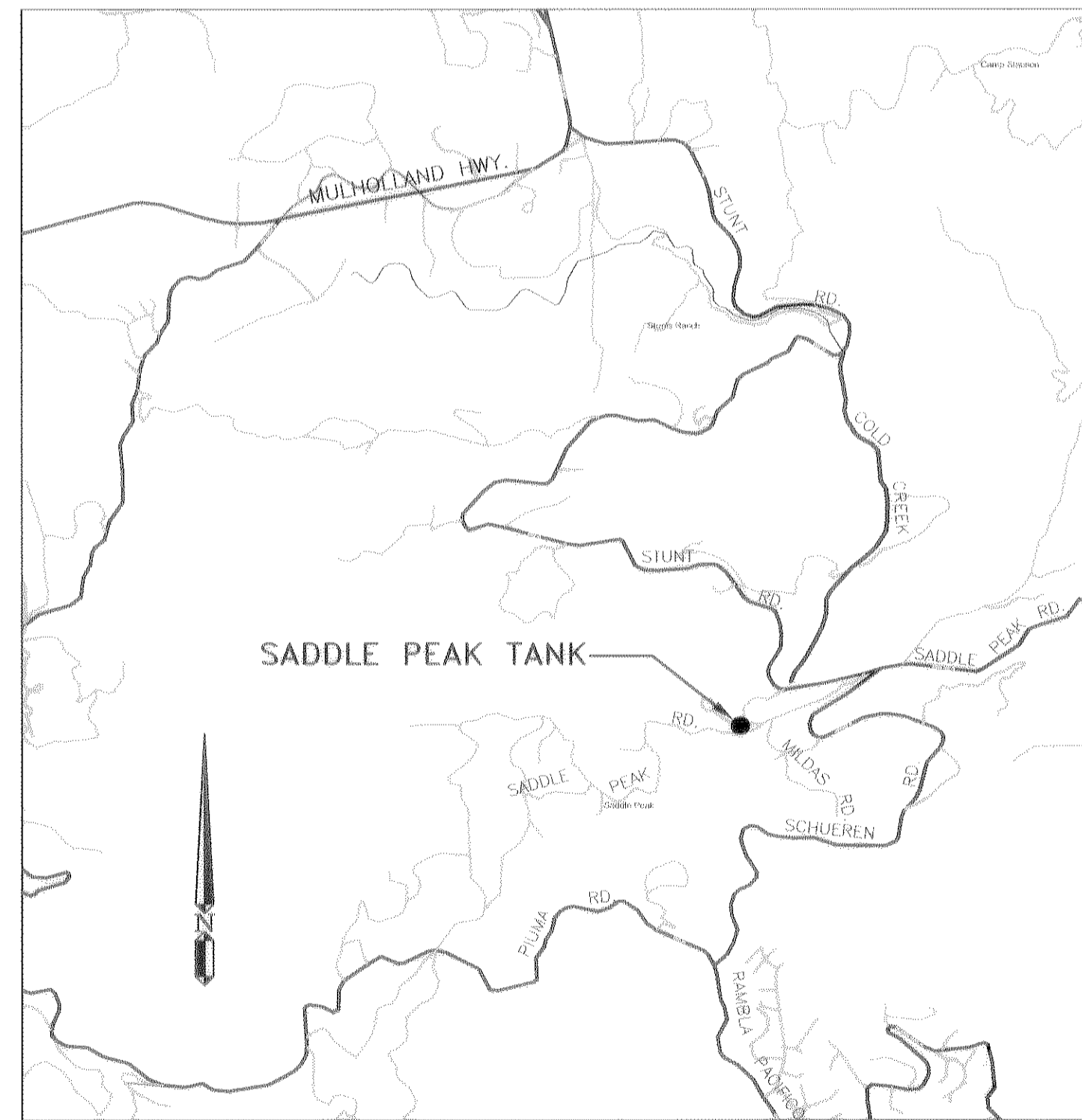
LOCATION PLAN - WARNER TANKS

SCALE: 1" = 1500'



LOCATION PLAN - INDIAN HILLS TANK

SCALE: 1" = 1500'



LOCATION PLAN - SADDLE PEAK TANK

SCALE: 1" = 2000'

SCOPE OF WORK

	SADDLE PEAK TANK	WARNER TANK 1	WARNER TANK 2	JED SMITH TANKS 1 AND 2	INDIAN HILLS TANK
INTERIOR COATING	REPAIR WITH COAL TAR OPTION FOR RECOAT SPEC: S09970, S09971	REMOVE COAL TAR. REPLACE WITH EPOXY COATING SPEC: S09972	REMOVE COAL TAR. REPLACE WITH EPOXY COATING SPEC: S09972	MAINTENANCE REPAIRS SPEC: S09970, S09971	NOT NEEDED
EXTERIOR COATING	SPOT REPAIRS AT VENTS AND INLET/OUTLET PIPING SPEC: S09974	REMOVE LEAD-BASED COATINGS. REPLACE WITH EPOXY/URETHANE. SPEC: S09972	REMOVE LEAD-BASED COATINGS. REPLACE WITH EPOXY/URETHANE. SPEC: S09972	SPOT REPAIRS AROUND INLET/OUTLET PIPING AND SAMPLING PORT PER SPEC S09974	NOT NEEDED
CATHODIC PROTECTION	NOT INCLUDED (PREVIOUSLY INSTALLED)	SACRIFICIAL SYSTEM	SACRIFICIAL SYSTEM	NOT INCLUDED (PREVIOUSLY INSTALLED)	REHAB EXISTING CP SYSTEM PER SPEC 13111
VENTILATION	ADD SIDE VENTS AND ROTARY TURBINE	ADD SIDE VENTS AND ROTARY TURBINE	ADD SIDE VENTS AND ROTARY TURBINE	NONE	NONE
INLET/OUTLET PIPING MODIFICATIONS	MODIFY TO PROMOTE CIRCULATION OF WATER ADD SEISMIC JOINT	MODIFY TO PROMOTE CIRCULATION OF WATER ADD SEISMIC JOINT	MODIFY TO PROMOTE CIRCULATION OF WATER	MODIFY TO PROMOTE CIRCULATION OF WATER	NONE
TEMPORARY STORAGE TANK	REPAIR EXISTING AND PREPARE FOR USE	NOT NEEDED	NOT NEEDED	NOT NEEDED	NOT NEEDED
STRUCTURAL REPAIRS	REPLACE OVERFLOW WEIR ENGINEER TO INSPECT AND DIRECT MINOR REPAIRS, IF NEEDED, DURING CONSTRUCTION CONTRACTOR TO PROVIDE WELDING/BOLT REPLACEMENT SERVICES FOR UNSPECIFIED REPAIRS*	REPLACE OVERFLOW WEIR ENGINEER TO INSPECT AND DIRECT MINOR REPAIRS, IF NEEDED, DURING CONSTRUCTION CONTRACTOR TO PROVIDE WELDING/BOLT REPLACEMENT SERVICES FOR UNSPECIFIED REPAIRS*	ENGINEER TO INSPECT AND DIRECT MINOR REPAIRS, IF NEEDED, DURING CONSTRUCTION CONTRACTOR TO PROVIDE WELDING/BOLT REPLACEMENT SERVICES FOR UNSPECIFIED REPAIRS*	NOT NEEDED	NOT NEEDED
FIBERGLASS LADDER	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED
SECURITY	CHAIN LINK FENCING	CHAIN LINK FENCING	CHAIN LINK FENCING	NOT NEEDED (ALREADY FENCED)	NOT NEEDED
PAVEMENT REPAIR	REMOVE AND REPLACE SITE PAVEMENT	REMOVE AND REPLACE SITE PAVEMENT	REMOVE AND REPLACE SITE PAVEMENT	CRACK SEALANT AND SLURRY SEAL	NONE
OTHER	REMOVE OLD STILLING WELL SAMPLING PORT	REMOVE OLD STILLING WELL SAMPLING PORT	SAMPLING PORT	SAMPLING PORT	NONE

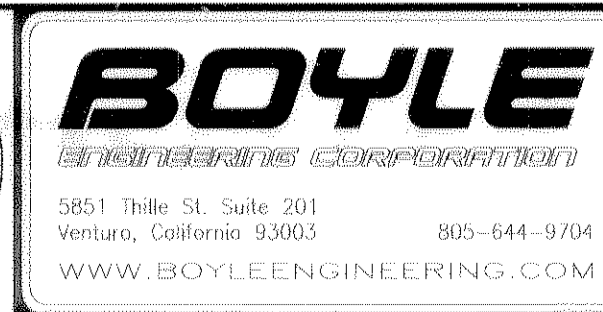
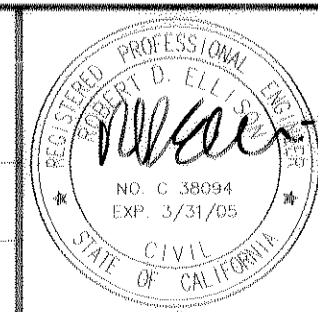
* TWO DAYS OF SERVICES FOR PROJECT, AS PER BID ITEM.

08931

REV	DATE	DESCRIPTION	APPR
10-19-04	100%	SUBMITTAL	

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

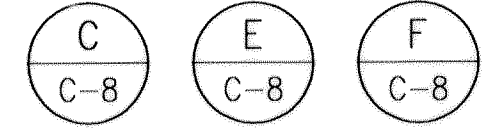
DESIGNED BY	RDE	PROJECT ENGINEER	ROBERT D. ELLISON
DRAWN BY	DHR	REG NUMBER	38094
CHECKED BY	RDE	EXP DATE	3-31-05
DATE	00/00/00	PROJECT NUMBER	VI-L02-175-05
		CADD STANDARDS	BOYLE

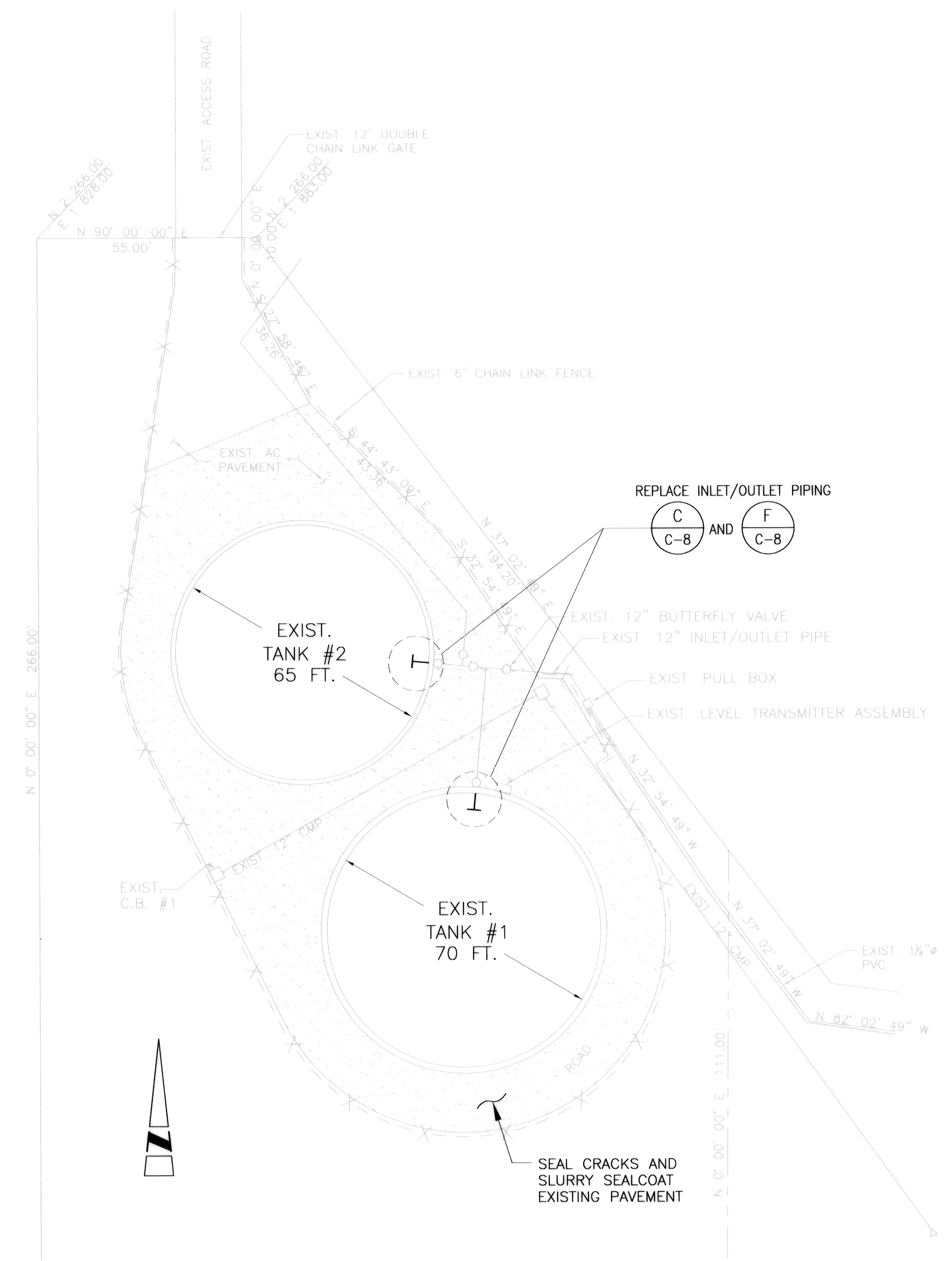


LAS VIRGENES MUNICIPAL WATER DISTRICT
TANK SITE IMPROVEMENT PROGRAM
LOCATION PLANS, SCOPE OF WORK,
& SADDLE PEAK NOTES

DRAWING	G-2
SHEET	2
OF SHEETS	

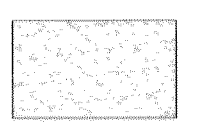
TANK RENOVATION NOTES: JED SMITH TANKS

1. MODIFY INLET/OUTLET PIPING PER ENCLOSED DETAILS.

2. ONE TANK SHALL REMAIN IN OPERATION AT ALL TIMES.
3. REPAIR EXTERIOR COATING WHERE DAMAGED BY INLET/OUTLET MODIFICATIONS AND INSTALLATION OF SAMPLING PORTS.



SITE PLAN - JED SMITH 1 AND JED SMITH 2 TANKS
 SCALE: 1" = 40'

LEGEND

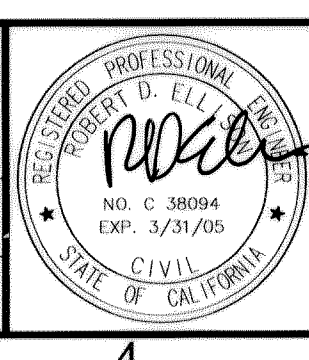


PAVEMENT REPAIR, CRACK SEALANT, AND SLURRY SEAL
 APPROXIMATE AREA - 8,840 SQ FT

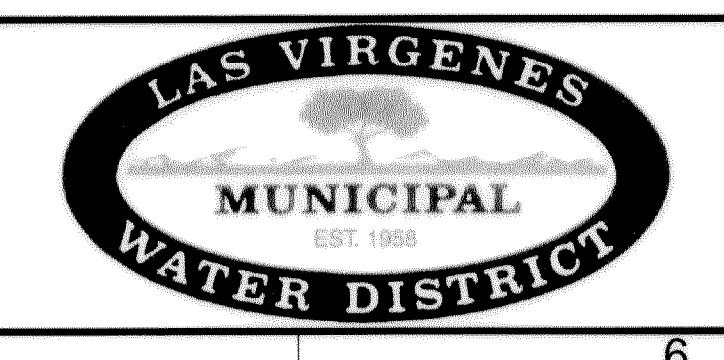
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 DATE: Aug 22, 2005 5:07pm
 USER: dhrines
 MISA-LOGO
 BACHAM BALL - STAMP
 WAGES: Tank Site Plan Jed Smith.dwg
 L:\MWD_grayscale.tif
 BECORGANS
 DAN-RE-Stamp

REV	DATE	DESCRIPTION	APPR
10-19-04		100% SUBMITTAL	

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DESIGNED BY RDE	PROJECT ENGINEER ROBERT D. ELLISON
DRAWN BY DHR	REG NUMBER 38094	EXP DATE 3-31-05
CHECKED BY RDE	PROJECT NUMBER VT-L02-175-05	
DATE 00/00/00	CADD STANDARDS BOYLE	

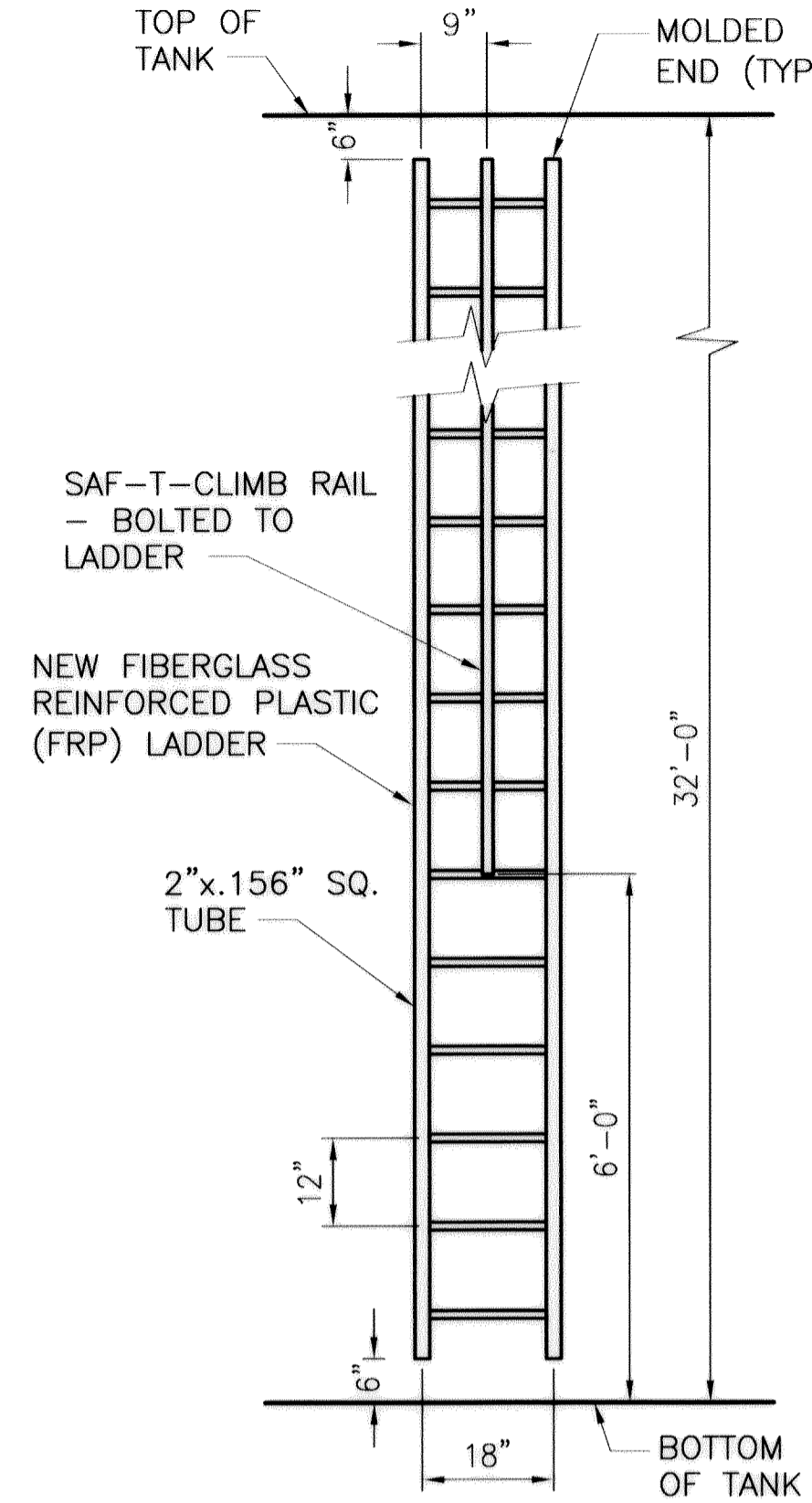


BOYLE ENGINEERING CORPORATION
 5851 Thille St. Suite 201
 Ventura, California 93003
 805-644-9704
 WWW.BOYLEENGINEERING.COM

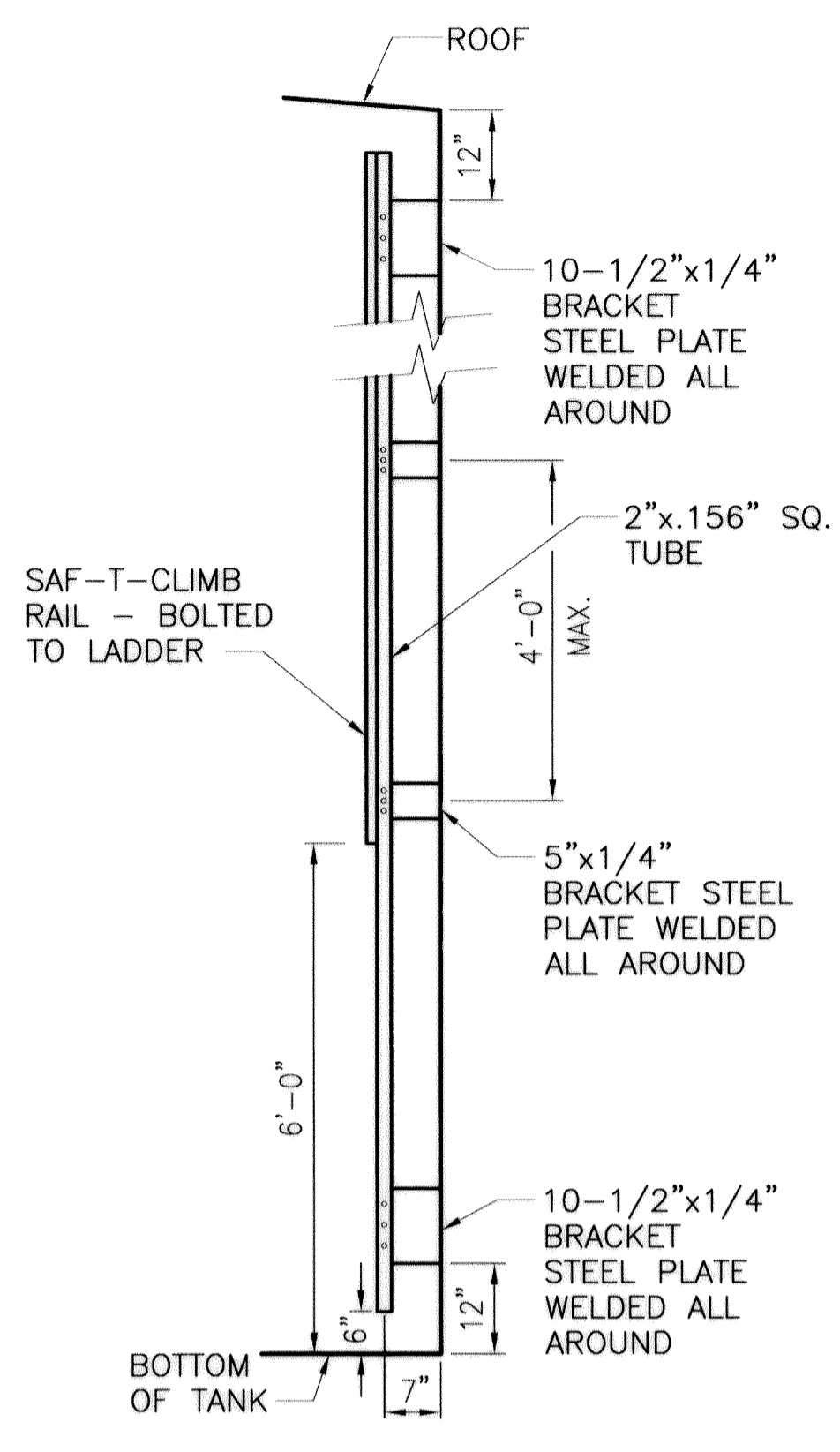
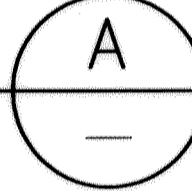


LAS VIRGENES MUNICIPAL WATER DISTRICT TANK SITE IMPROVEMENT PROGRAM		DRAWING C-3
JED SMITH TANKS 1 AND 2 SITE PLAN		SHEET 5 OF — SHEETS

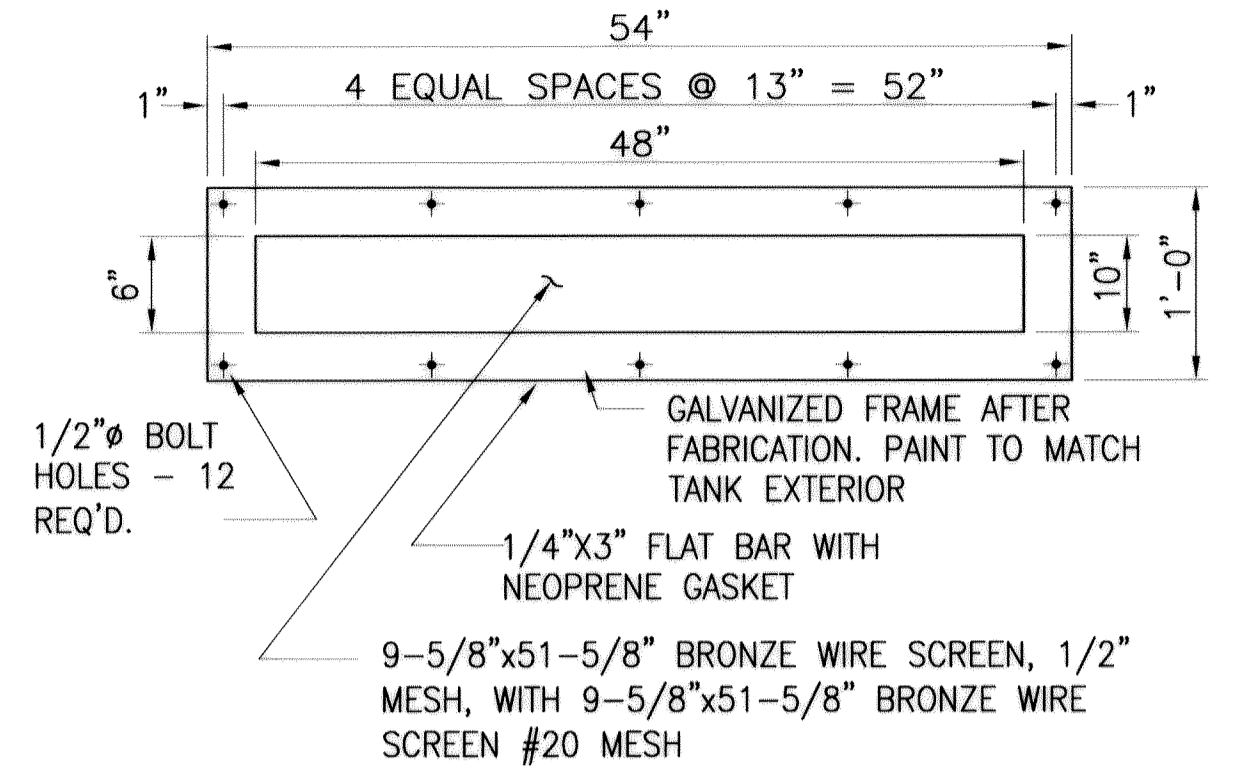
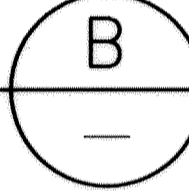
08933



LADDER DETAIL FRONT VIEW
N.T.S.

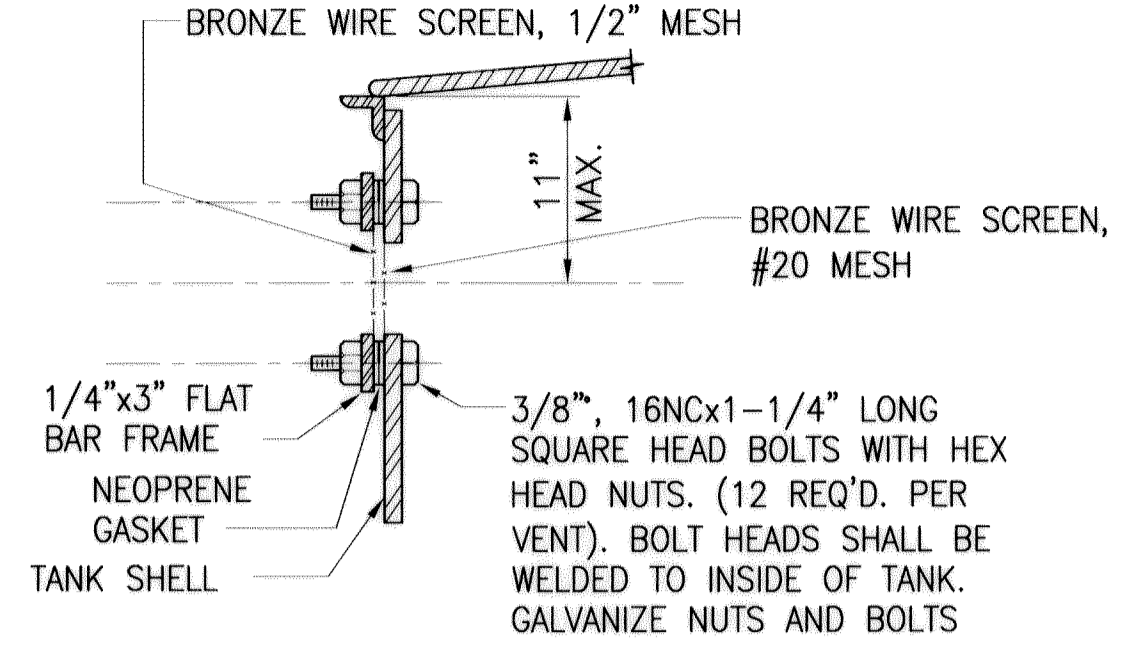
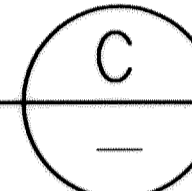


LADDER DETAIL SIDE VIEW
N.T.S.

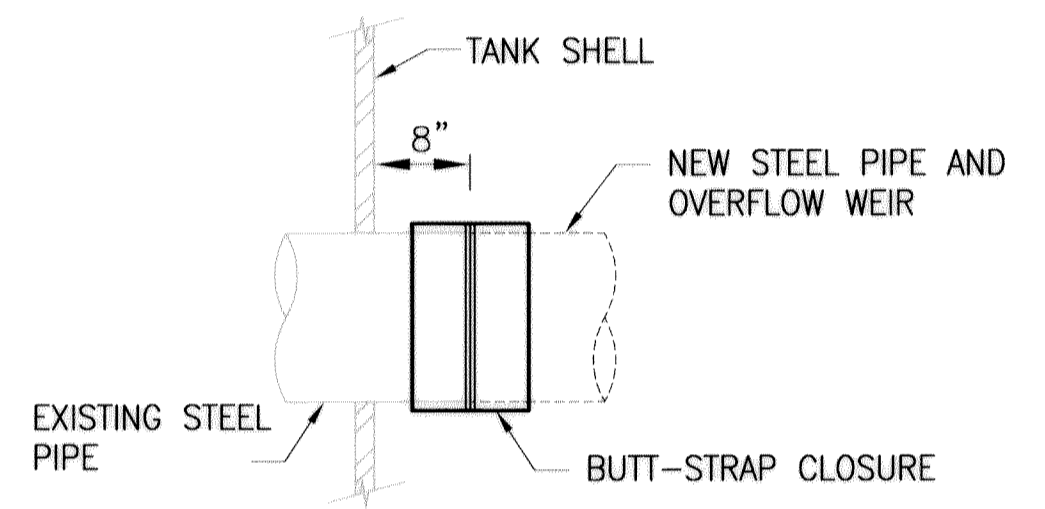


ELEVATION

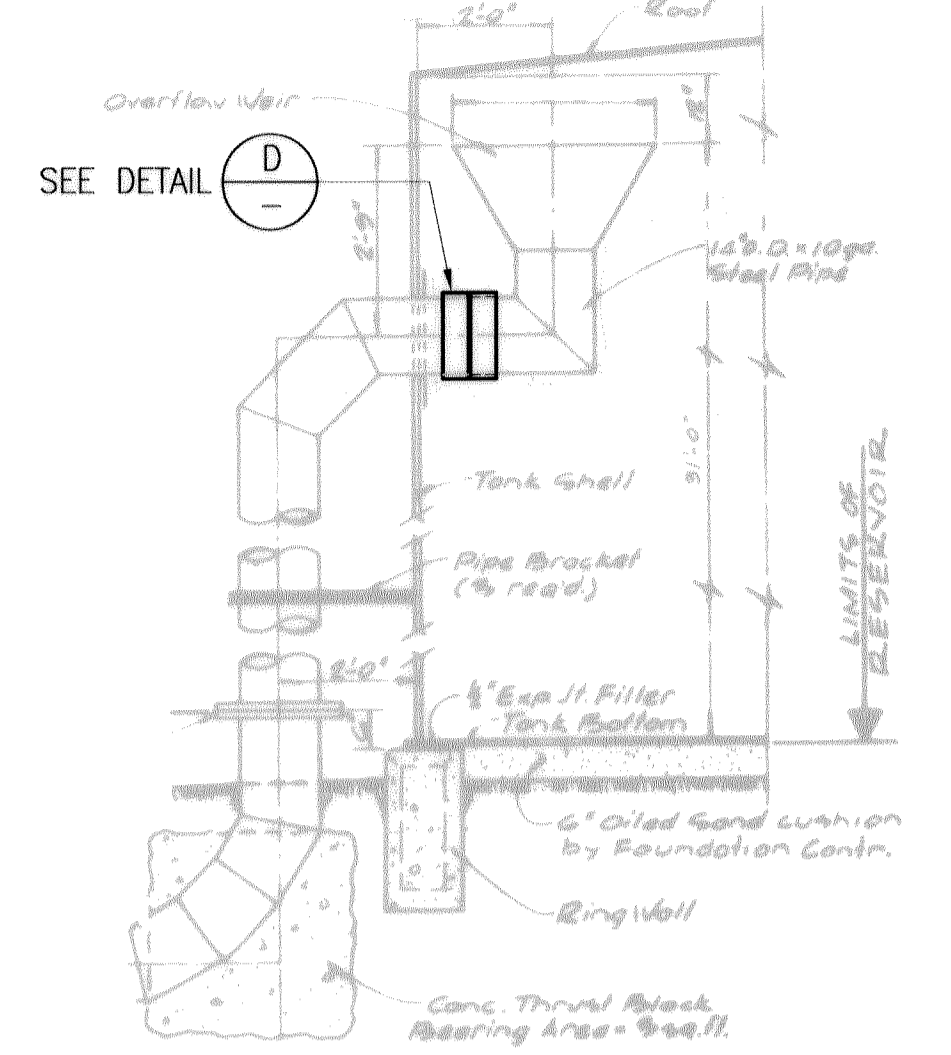
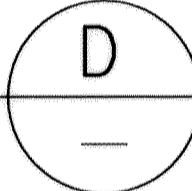
SIDE VENT DETAIL
N.T.S.



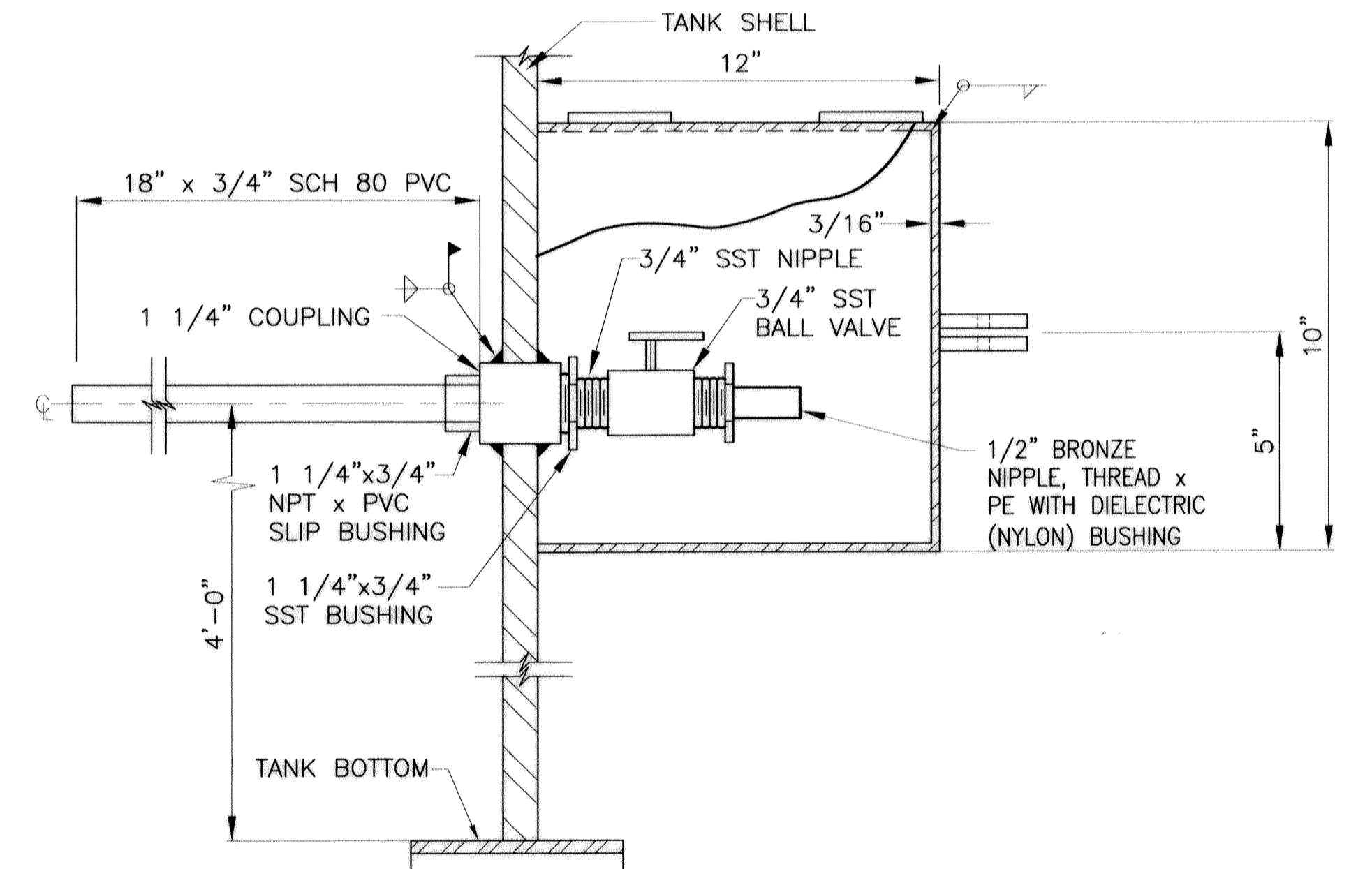
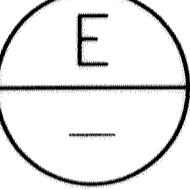
SECTION



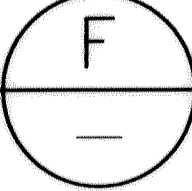
BUTT-STRAP DETAIL
N.T.S.



TANK OVERFLOW REPLACEMENT
N.T.S.



SAMPLING PORT
N.T.S.



FRP INTERNAL LADDER, ALL TANKS EXCEPT INDIAN HILLS

- INTERNAL LADDER SHALL BE IN FIBERGLASS MANUFACTURED BY STRONGWELL OR EQUAL, AND SHALL MEET THE REQUIREMENTS OF OSHA 1910.27. LADDER SHALL BE FABRICATED WITH ALLOWANCE FOR FIELD CUTTING TO FIT.
- REMOVE EXISTING LADDER AND SUPPORTS BEFORE ENTIRE WALL REPAIR IS CONDUCTED. AT THE LOCATION OF THE OLD SUPPORTS, THE WALL SHALL BE SANDBLASTED, SPOT-CLEANED, PRIMER-COATED AND RECOATED WITH COAL TAR COATINGS, PER SPECIFICATIONS.
- NEW SUPPORT BRACKETS SHALL BE INSTALLED AND COATED PRIOR TO INSTALLING FRP LADDER.
- CONNECTION BOLTS AND NUTS SHALL BE TYPE 316 SST AND SHALL BE ELECTRICALLY INSULATED FROM TANK USING APPROVED BUSHINGS AND WASHERS.
- IF FIELD MODIFICATION OR REPAIR OF THE FRP LADDER IS REQUIRED, FOLLOW MANUFACTURER RECOMMENDATIONS.

FRP INTERNAL LADDER, INDIAN HILLS

- FABRICATE LADDER TO FIT EXISTING SUPPORTS. CONTRACTOR TO FIELD DETERMINE DIMENSIONS.
- SCHEDULE A ONE-DAY OUTAGE NOT LESS THAN 7 DAYS IN ADVANCE FOR LADDER INSTALLATION.
- TOUCH-UP PAINT ON EXISTING SUPPORT BRACKETS WITH FAST CURING EPOXY PAINT.
- COMPLY WITH NOTES 4 AND 5 ABOVE.

TANK OVERFLOW WEIR

- FABRICATE A REPLACEMENT WEIR/ELBOW ASSEMBLY MATCHING EXISTING. LINE WITH EPOXY PER CONSTRUCTION SPECIFICATIONS.
- NEW PIPE SHALL BE BUTT-STRAPPED.
- THE BUTT STRAP SHALL BE THE SAME THICKNESS AS THE PIPE WALL BUT NOT LESS THAN 10-GAUGE, AT LEAST 10- INCHES WIDE WITH LONGITUDINAL SEAM, AND ROLLED TO FIT THE OUTSIDE DIAMETER, AND SHALL BE CENTERED OVER THE END OF THE PIPE SECTIONS IT JOINS.
- STEEL PIPE AND WELD REPAIRS SHALL CONFORM TO THE CURRENT AND LATEST AWWA D100 SPECIFICATIONS

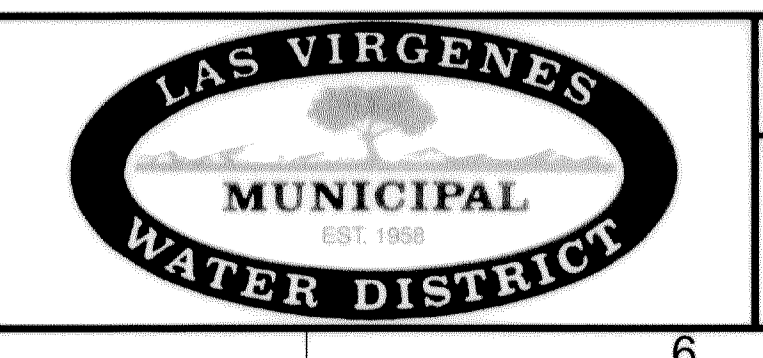
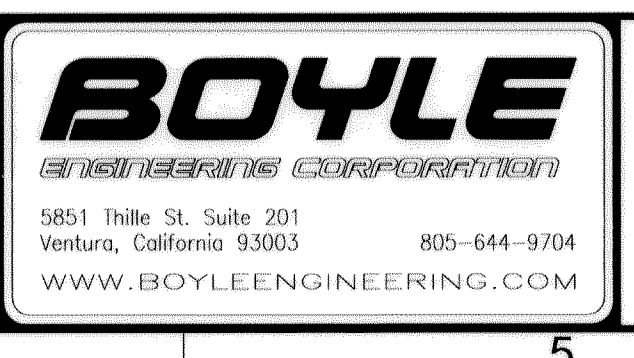
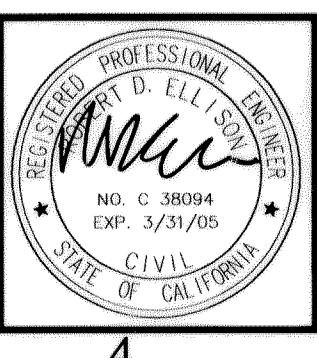
VENTILATOR REPLACEMENT

- VERIFY SIZE OF EXISTING VENTILATOR OUTLET PRIOR TO FABRICATION.
- VENTILATOR SHALL BE BY GILBERT METAL PRODUCTS, EL MONTE, CA.

DWG: F:\elison\0217505 - Tank Program 2 (Warner & Shea)\CAD\Format\0-007.dwg
 DATE: Aug 22, 2002 3:02pm
 USER: draines
 MGR: L-LOGO
 G:\chem Bell - STAMP
 IMAGES: FILED\001.F
 L:\MWD_gproject.dwg

REV	DATE	DESCRIPTION	APPR
10-19-04		100% SUBMITTAL	

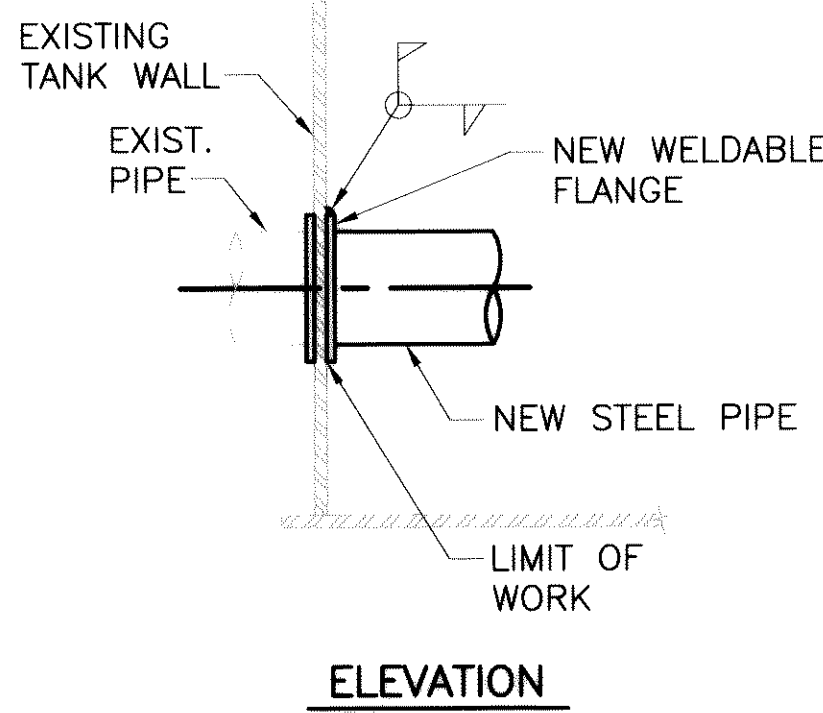
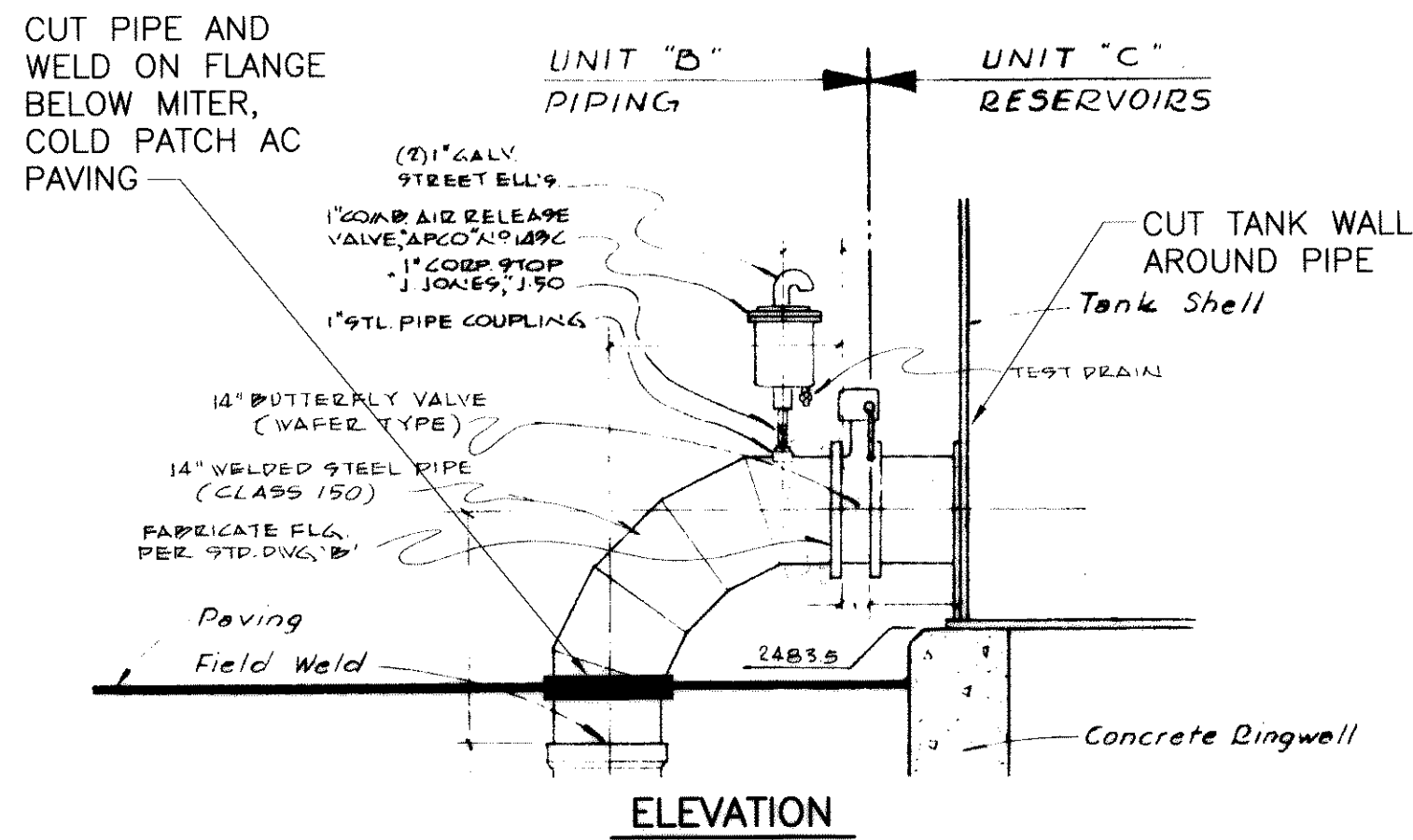
DESIGNED BY RDE	PROJECT ENGINEER ROBERT D. ELLISON
DRAWN BY DHR	REG NUMBER 38094
CHECKED BY RDE	EXP DATE 3-31-05
DATE 00/00/00	PROJECT NUMBER VT-L02-175-05
	CADD STANDARDS BOYLE



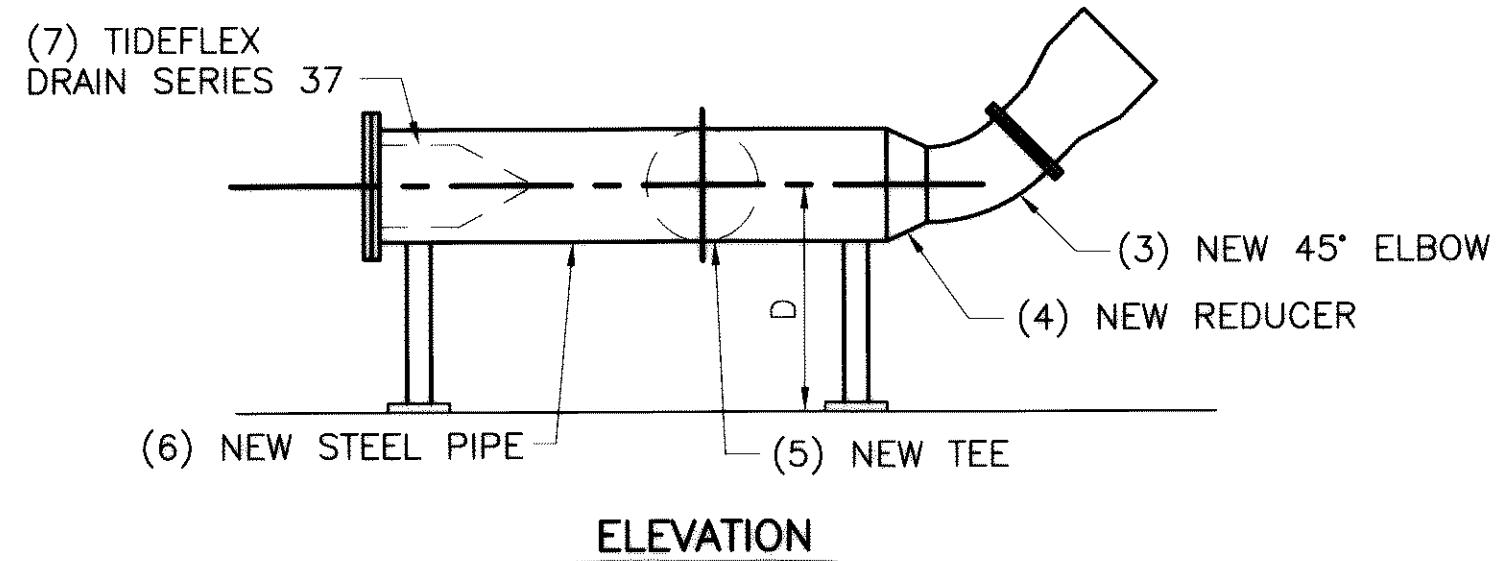
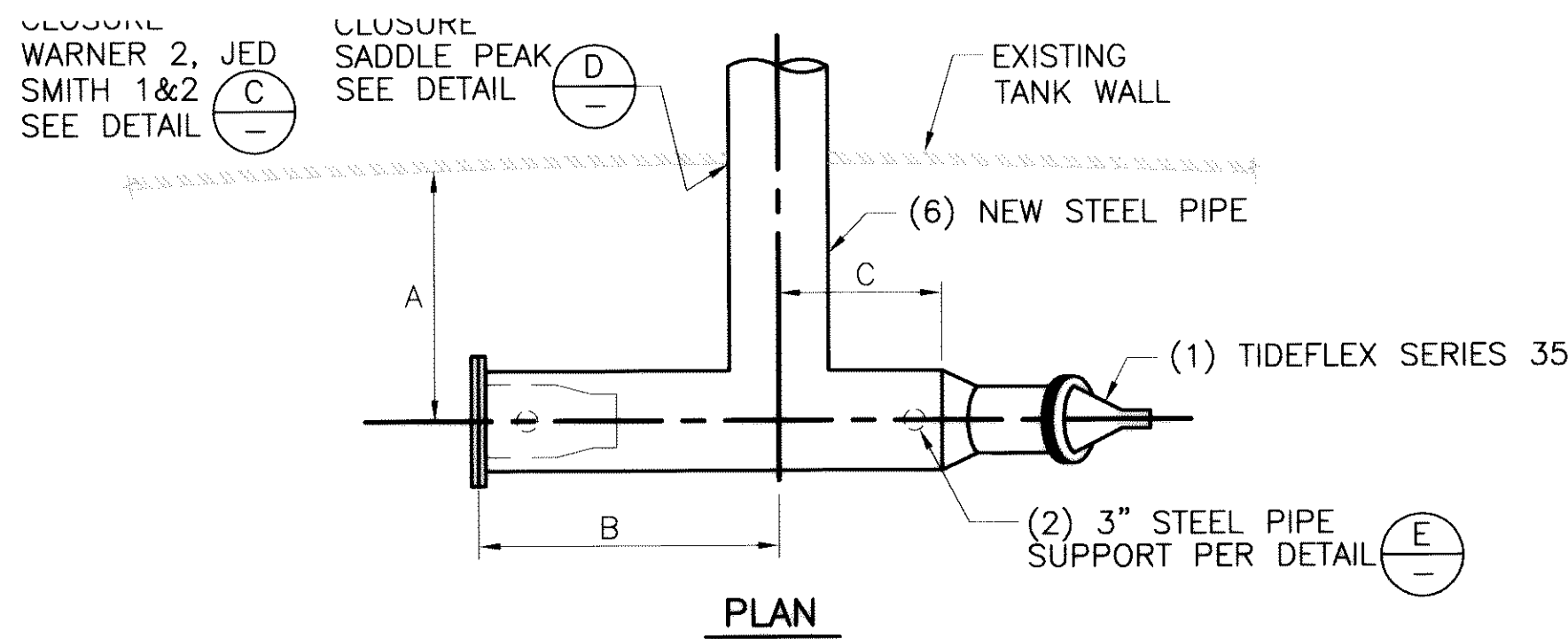
LAS VIRGENES MUNICIPAL WATER DISTRICT TANK SITE IMPROVEMENT PROGRAM	
MISCELLANEOUS DETAILS	

DRAWING C-7
SHEET 9
OF — SHEETS

08936



**INLET/OUTLET PIPE DETAIL
WARNER 2, JED SMITH 1,
AND JED SMITH 2 TANK**
N.T.S.

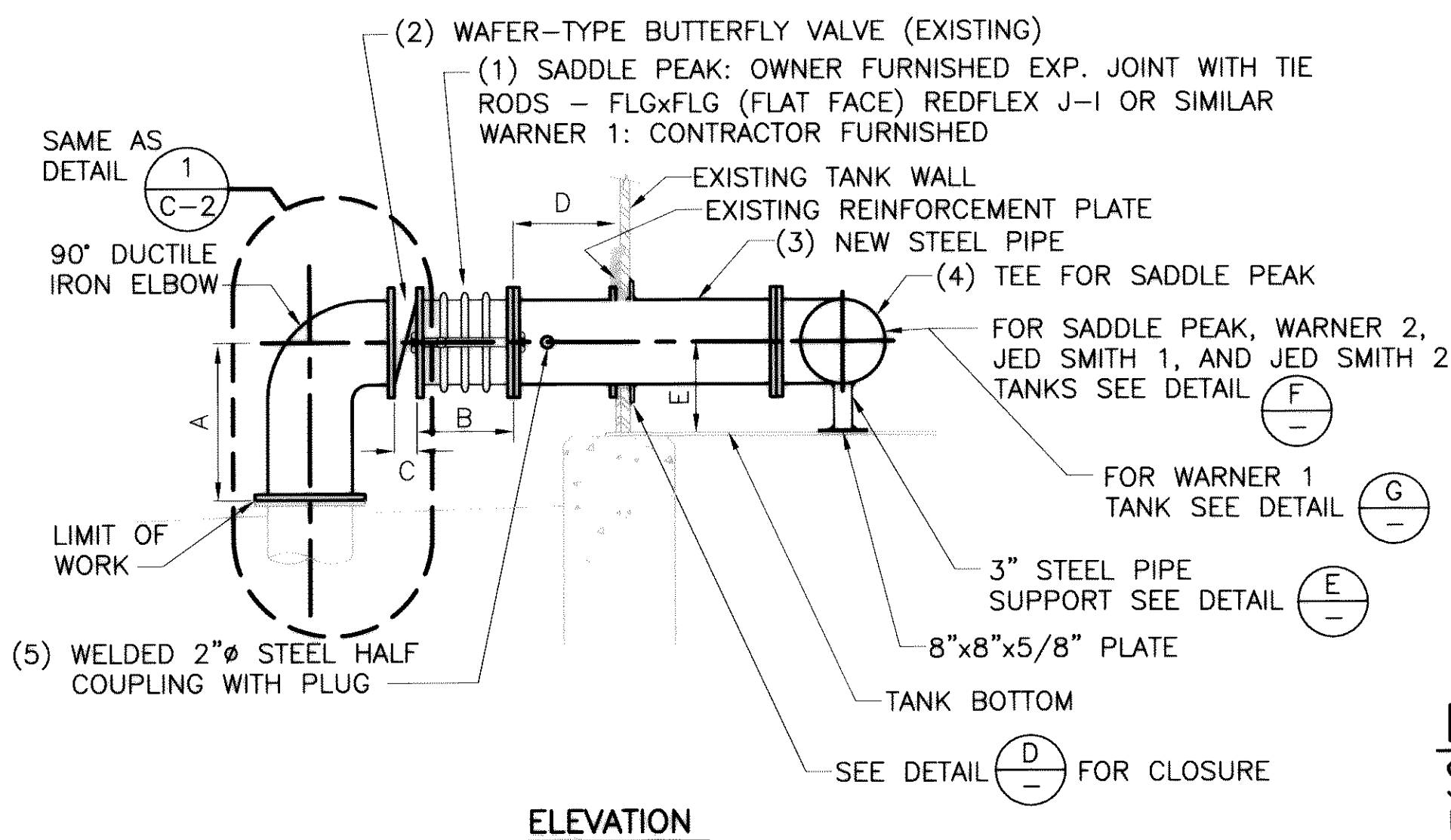


**NEW INLET/OUTLET PIPING DETAIL
SADDLE PEAK, JED SMITH AND WARNER 2 TANKS**
N.T.S.

NOTES:	SADDLE PEAK	WARNER 2	JED SMITH 1	JED SMITH 2
A	4'-0"	4'-6"	4'-6"	4'-6"
B	5'-0"	5'-0"	5'-0"	5'-0"
C	2'-0"	2'-0"	2'-0"	2'-0"
D	1'-3"	1'-8"	1'-6 1/2"	1'-6 1/2"
1	8"Ø	10"Ø	8"Ø	8"Ø
2	3"Ø	3"Ø	3"Ø	3"Ø
3	8"Ø	10"Ø	8"Ø	8"Ø
4	14"-8"	16"-10"	12"-8"	12"-8"
5	14"	16"	12"	12"
6	14"Ø	16"Ø	12"Ø	12"Ø
7	14"Ø	16"Ø	12"Ø	12"Ø

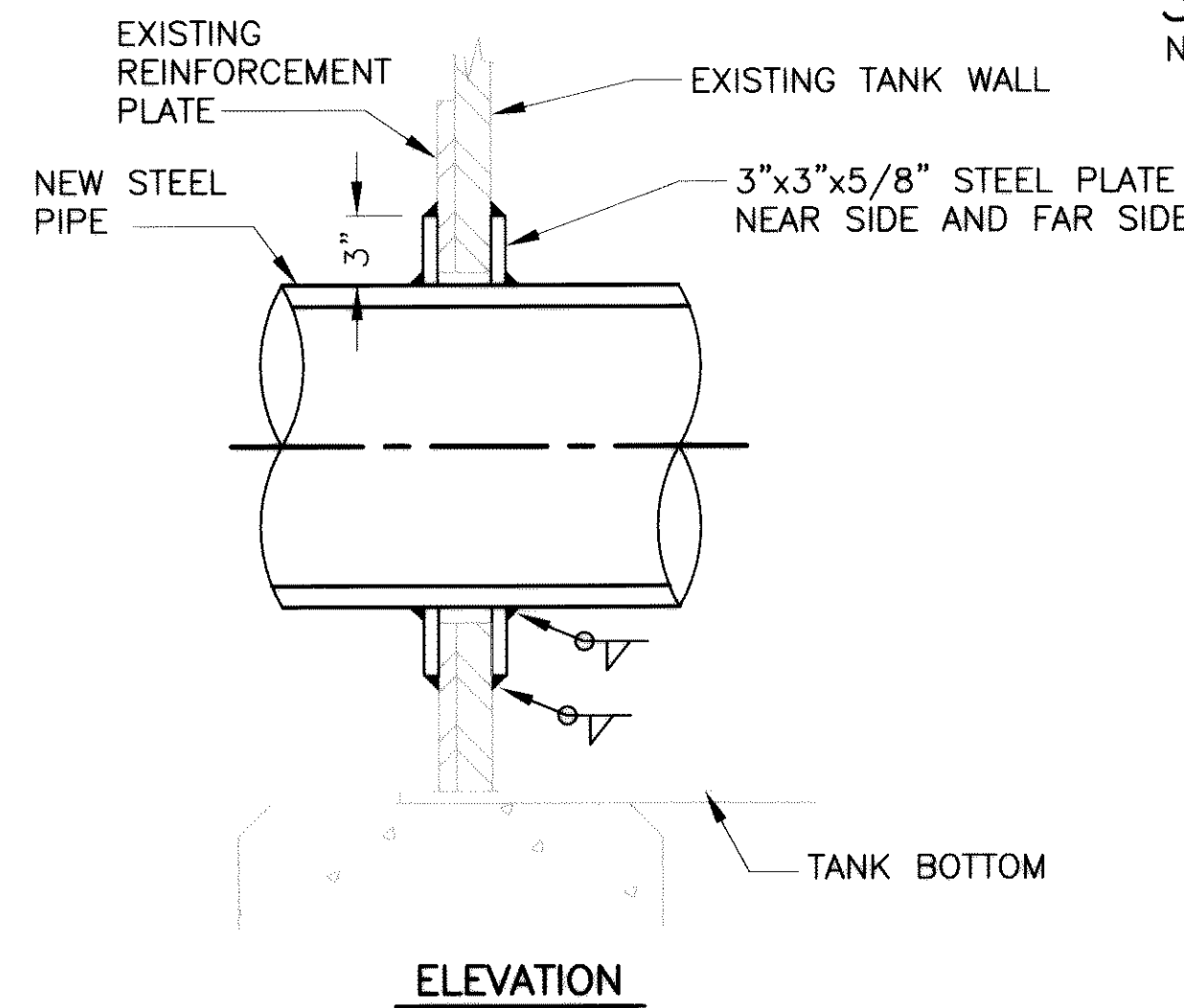
NOTES:	SADDLE PEAK	WARNER 1 16" INLET	WARNER 1 14" OUTLET
A	2'-7"	4'-7"	4'-7"
B	1'-3"	2'-0"	2'-0"
C	12"	12"	12"
D	3 3/4"	4 1/4"	4 1/4"
E	6"	10"	10"
F	2'-7"	3'-11"	3'-11"

**INLET/OUTLET PIPING REMOVAL
SADDLE PEAK AND WARNER 1 TANK**
N.T.S.

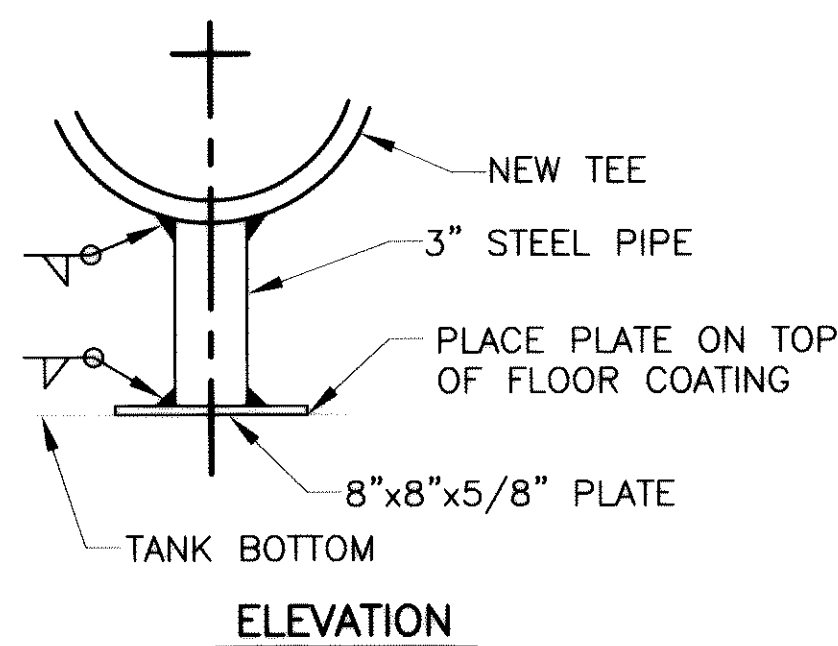


NOTES:	SADDLE PEAK	WARNER 1 16" INLET	WARNER 1 14" OUTLET
A	26"	35"	33"
B	16"	16"	16"
C	3 3/4"	4 1/4"	4 1/4"
D	13"±	27"±	27"±
E	1'-3"	2'-0"	2'-0"
1	14"Ø	16"Ø	14"Ø
2	14"Ø	16"Ø	14"Ø
3	14"Ø	16"Ø	14"Ø
4	14"Ø	NONE	NONE
5	2"Ø	2"Ø	2"Ø

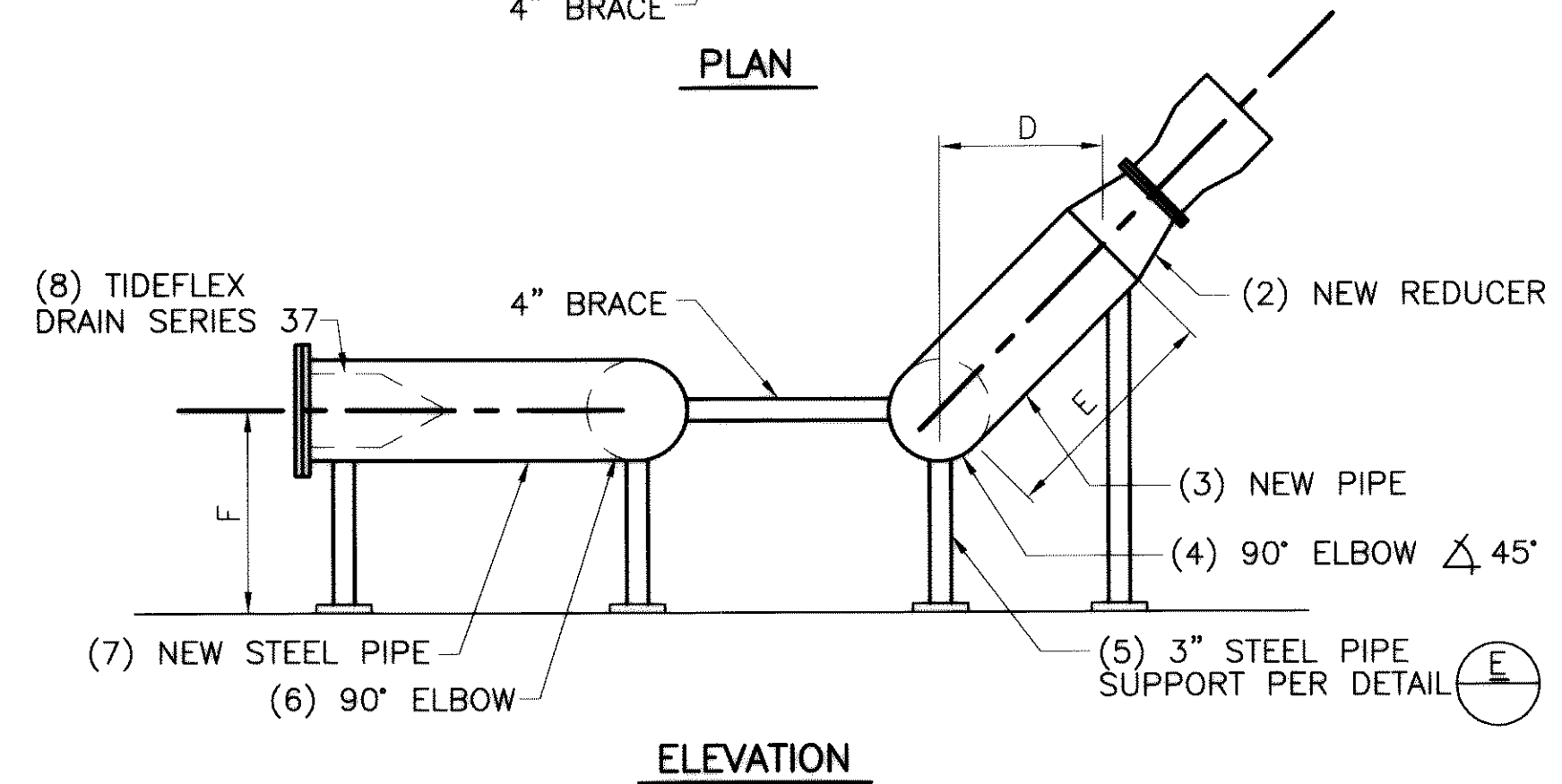
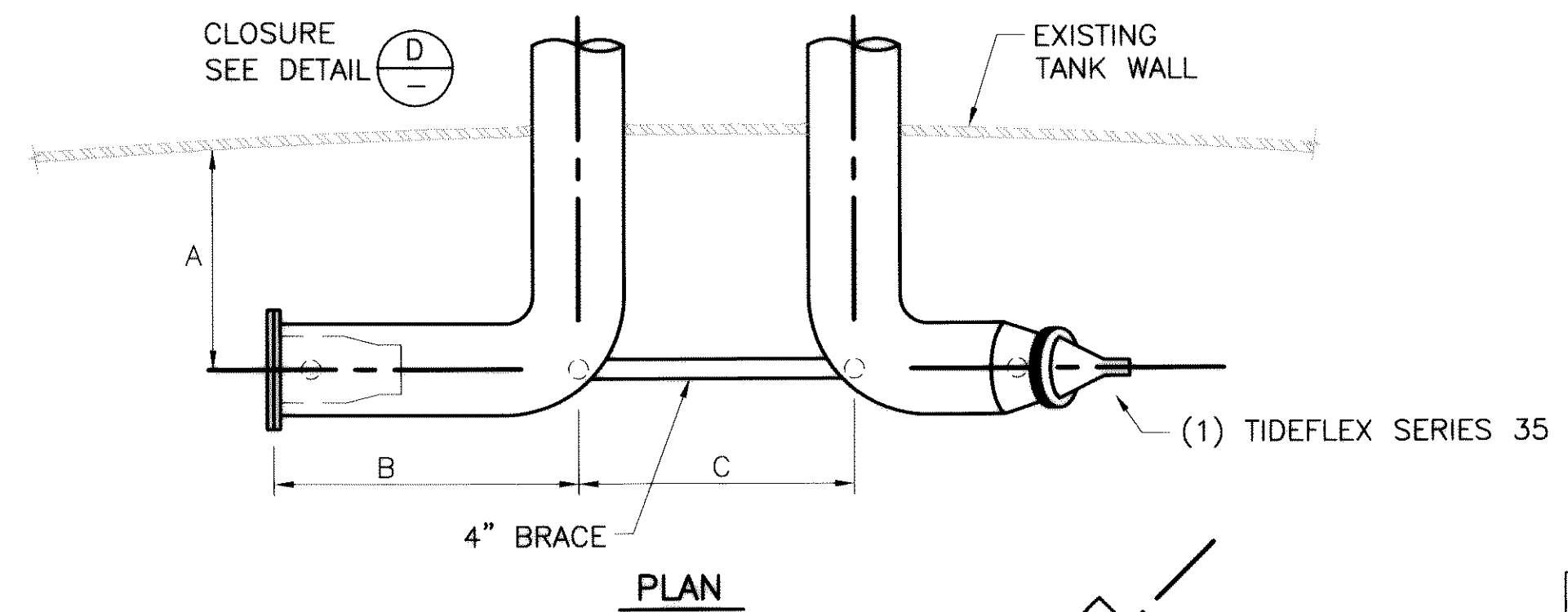
**NEW INLET/OUTLET PIPING DETAIL
SADDLE PEAK AND WARNER 1 TANK**
N.T.S.



**INLET/OUTLET PIPE DETAIL
SADDLE PEAK & WARNER 1 TANK**
N.T.S.



PIPE SUPPORT
N.T.S.



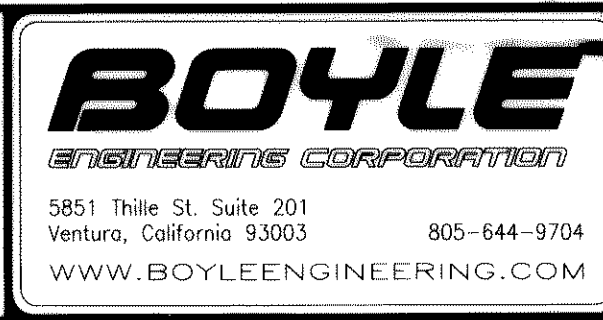
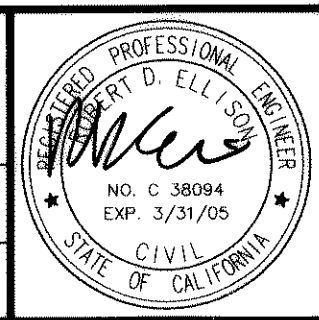
**NEW INLET/OUTLET PIPING DETAIL
WARNER 1 TANK**
N.T.S.

NOTES:	WARNER 1
A	6'-6"
B	4'-6"
C	59"
D	1'-5"
E	2'-0"
F	2'-0"
1	6"Ø
2	16"-6"
3	16"Ø
4	16"Ø
5	3"Ø
6	14"Ø
7	14"Ø
8	14"Ø

08937

REV	DATE	DESCRIPTION	APPR
10-19-04	100%	SUBMITTAL	

DESIGNED BY RDE ROBERT D. ELLISON	PROJECT ENGINEER ROBERT D. ELLISON
DRAWN BY DHR 38094	EXP. DATE 3-31-05
CHECKED BY RDE VT-L02-175-05	PROJECT NUMBER VT-L02-175-05
DATE 00/00/00	CADD STANDARDS BOYLE



LAS VIRGENES MUNICIPAL WATER DISTRICT TANK SITE IMPROVEMENT PROGRAM	DRAWING C-8
PIPING DETAILS	SHEET 10 OF SHEETS

D

C

B

A

D

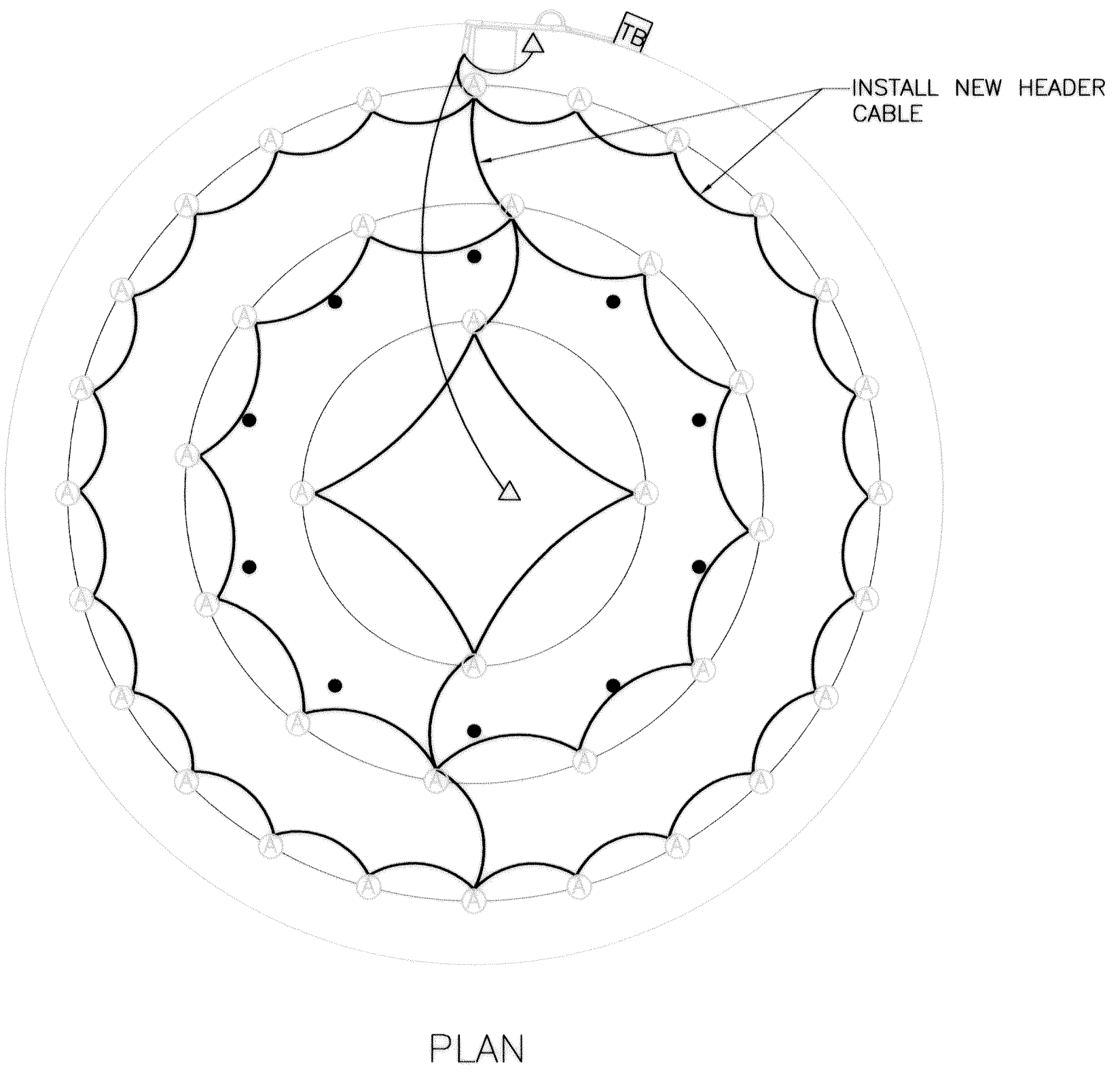
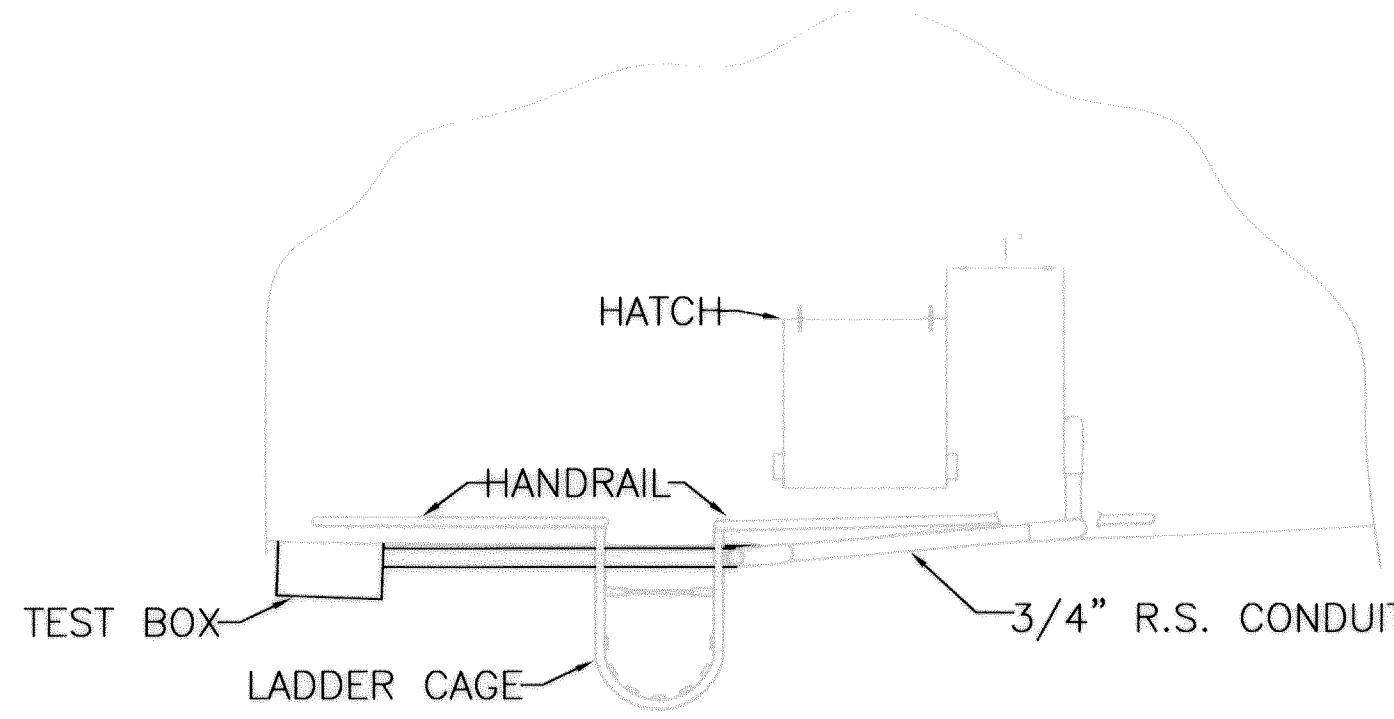
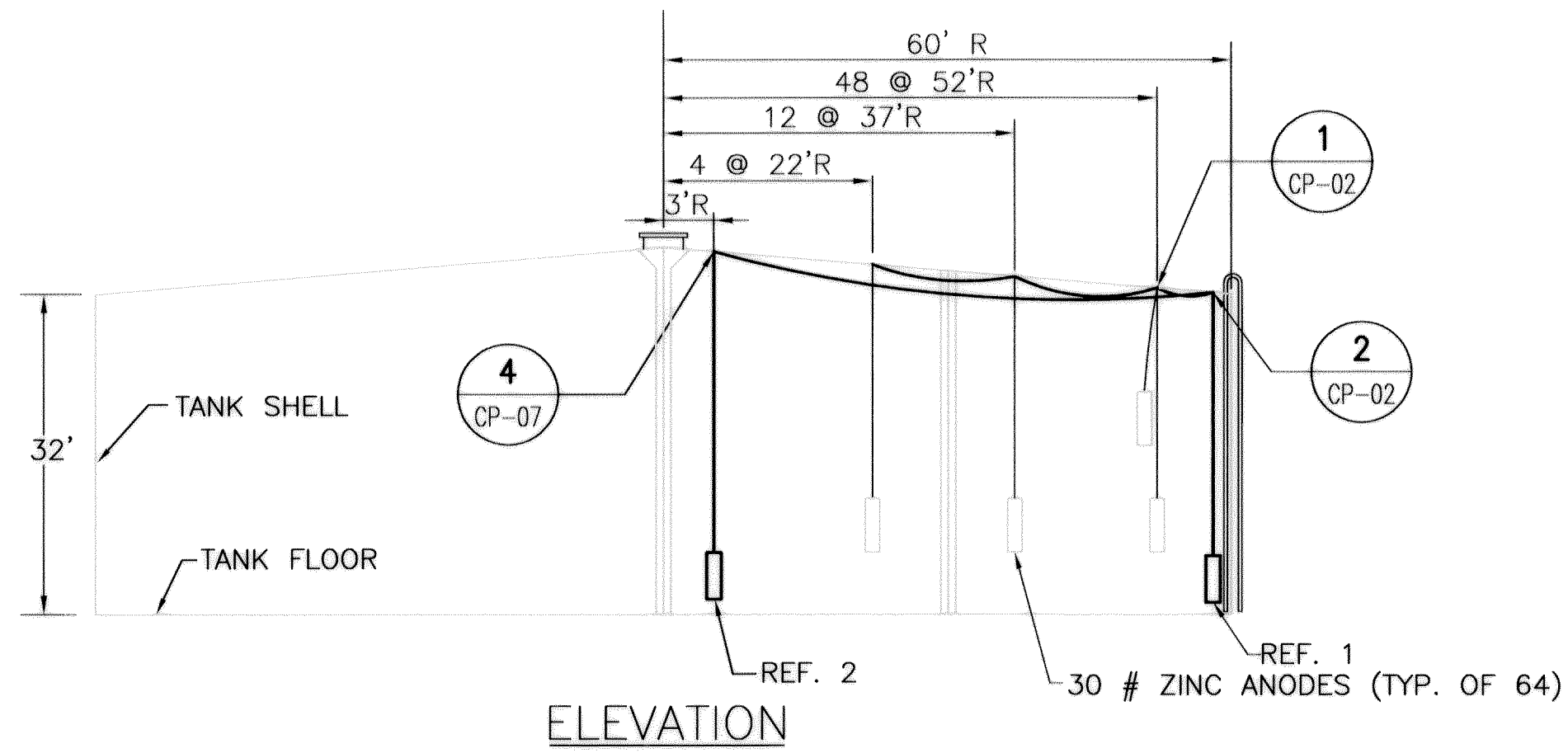
C

B

A

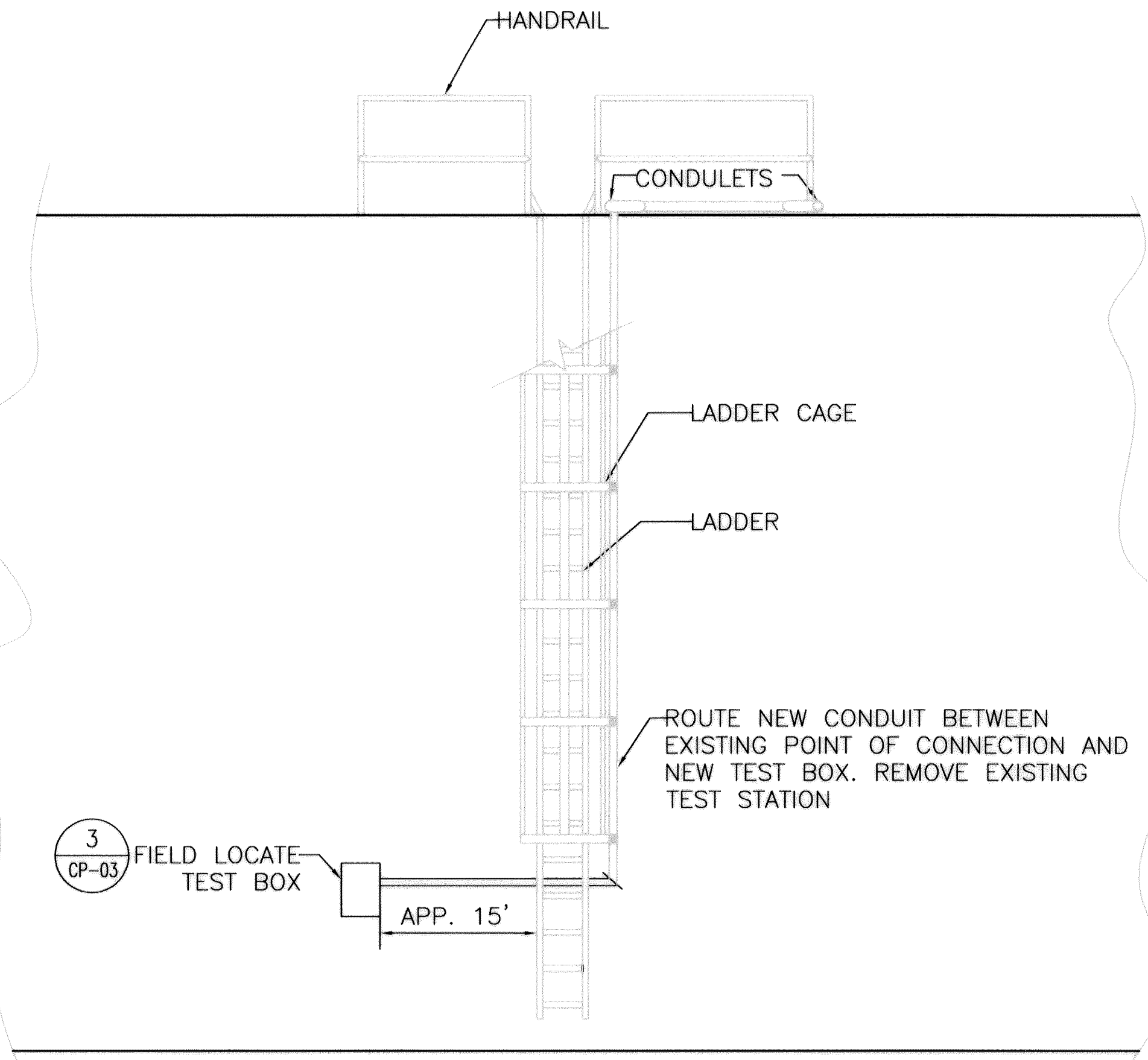
NOTES

1. INSTALL NEW REFERENCE ELECTRODE R1 NEAR INTERIOR LADDER, 6" OFF WALL, 6" OFF FLOOR.
2. INSTALL NEW REFERENCE ELECTRODE R2 NEAR CENTER COLUMN APPROXIMATELY 12" OFF FLOOR. SUPPORT WIRE FROM PIN INSULATORS.
3. ANODE HEADER CABLE TO BE #8 HMWPE. REFERENCE ELECTRODE WIRE MINIMUM #14 HMWPE.
4. SEE SHEET CP-5 FOR WIRING SCHEMATICS.



120' x 32' H
INDIAN HILLS
N.T.S.

1



LEGEND

- ▢ CP TEST BOX. SEE 3 CP-3
- TANK HATCH, 2'x2'
- ⌒ LADDER AND CAGE
- △ ACCESS HOLE AND REFERENCE ELECTRODE SIMILAR TO 2 CP-3
- ⊗ ANODE LOCATION SIMILAR TO 1 CP-3
- COLUMN

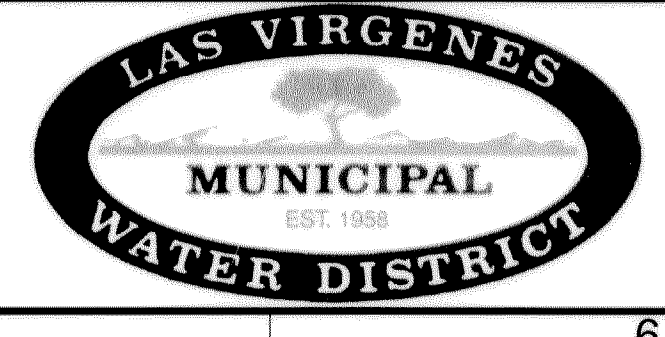
08938

REV	DATE	DESCRIPTION	APPR
10-19-04		100% SUBMITTAL	

DESIGNED BY GB	PROJECT ENGINEER GRAHAM E. C. BELL
DRAWN BY DHR	REG NUMBER CR 1064
CHECKED BY RDE	EXP DATE 9-30-06
DATE 00/00/00	PROJECT NUMBER VT-L02-175-05
	CAED STANDARDS BOYLE

REGISTERED PROFESSIONAL ENGINEER
GRAHAM E. C. BELL
No. 01 1004
Exp. 9/30/06
CORROSION
STATE OF CALIFORNIA

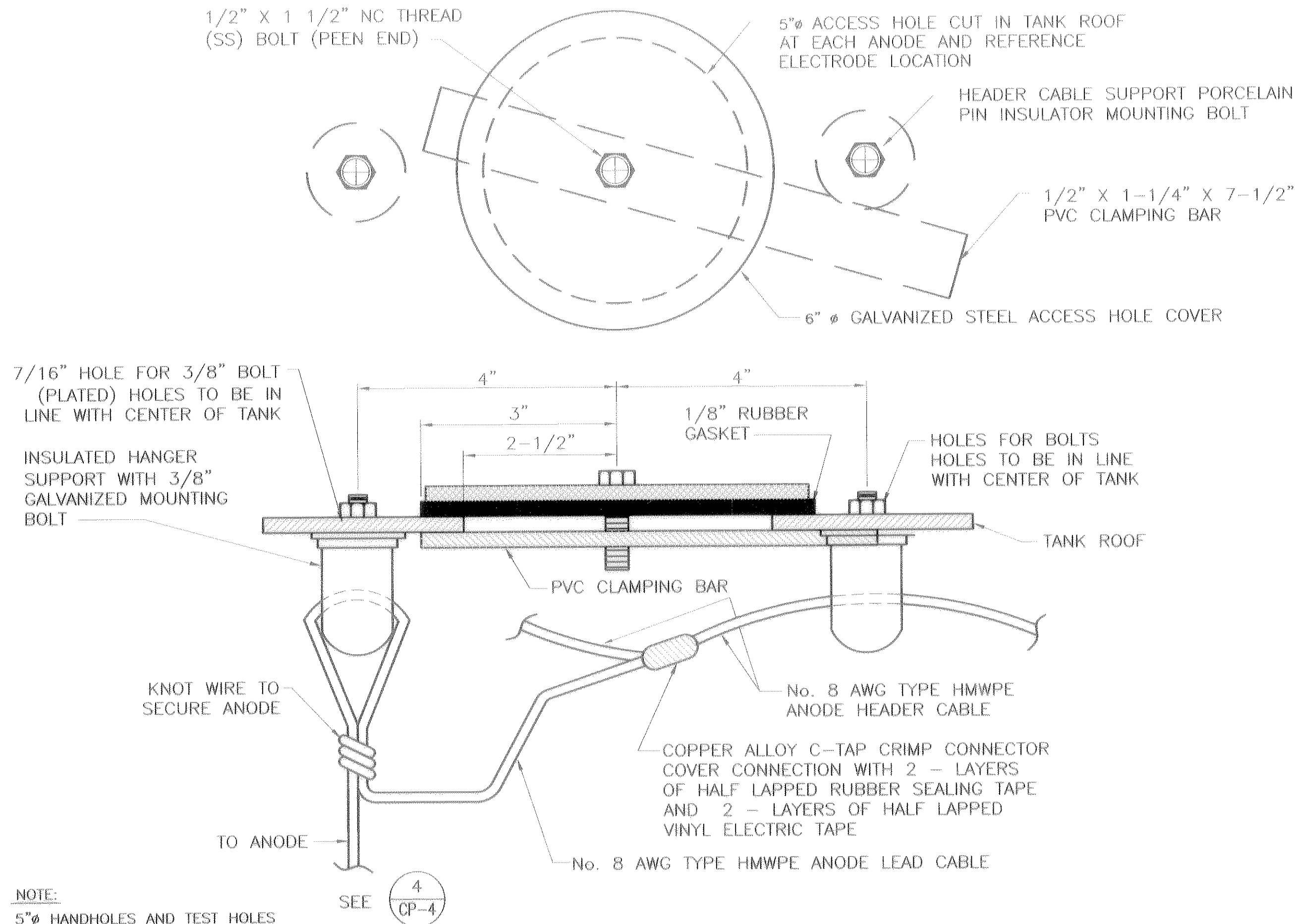
MJS&A
Consulting Corrosion Engineers - Since 1959



LAS VIRGENES MUNICIPAL WATER DISTRICT
TANK SITE IMPROVEMENT PROGRAM

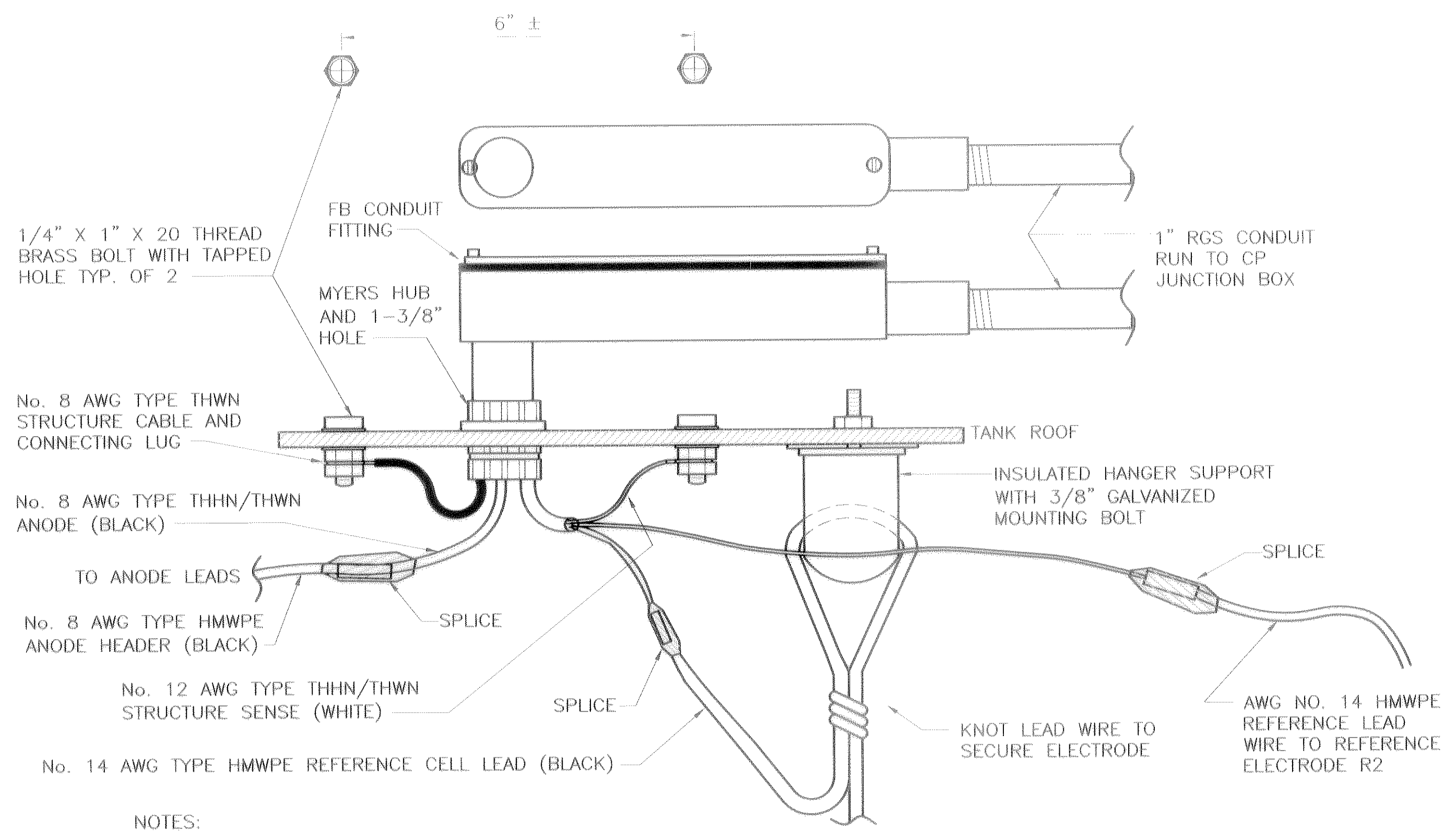
**INDIAN HILLS TANK
CATHODIC PROTECTION**

DRAWING CP-2
SHEET 12
OF SHEETS



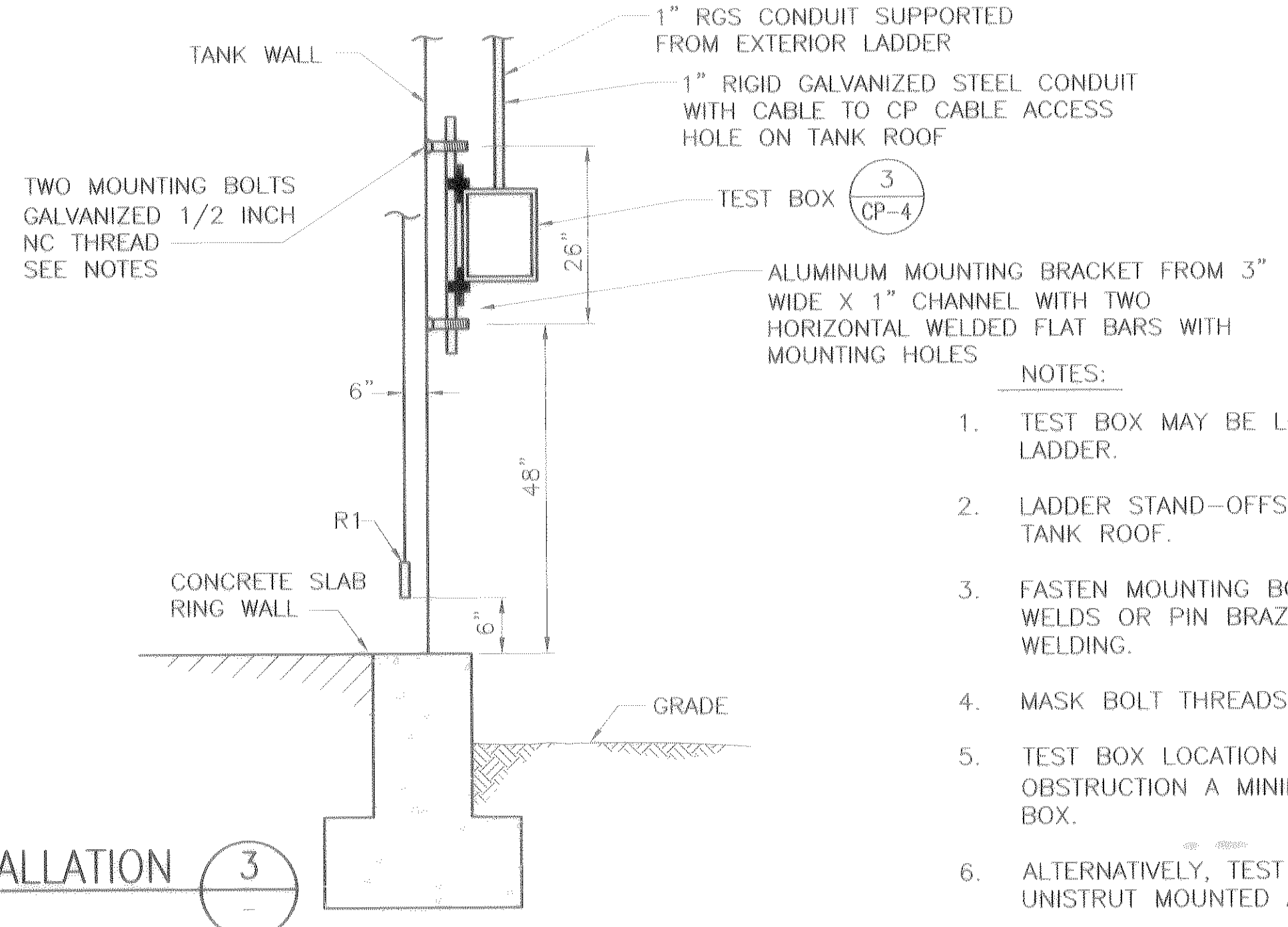
NOTE:
5" HANDHOLES AND TEST HOLES
CUT, GROUND SMOOTH AND COATED.

SUPPORT HANGER AND HANDHOLE (1)
N.T.S.



- NOTES:
- USE WIRE CONNECTORS FOR ALL SPLICES.
 - COVER WIRE CONNECTIONS WITH 2 - LAYERS OF HALF LAPPED RUBBER SEALING TAPE AND 2 - LAYERS OF HALF LAPPED VINYL ELECTRIC TAPE.
 - PROVIDE 1-3/8" HOLE FOR MYERS HUB.
 - PROVIDE A HANDHOLE AND COVER AT EACH REFERENCE ELECTRODE HANGER AS PER (1) CP-4

WIRE AND CONDUIT ENTRANCE CABLE (2)
N.T.S.



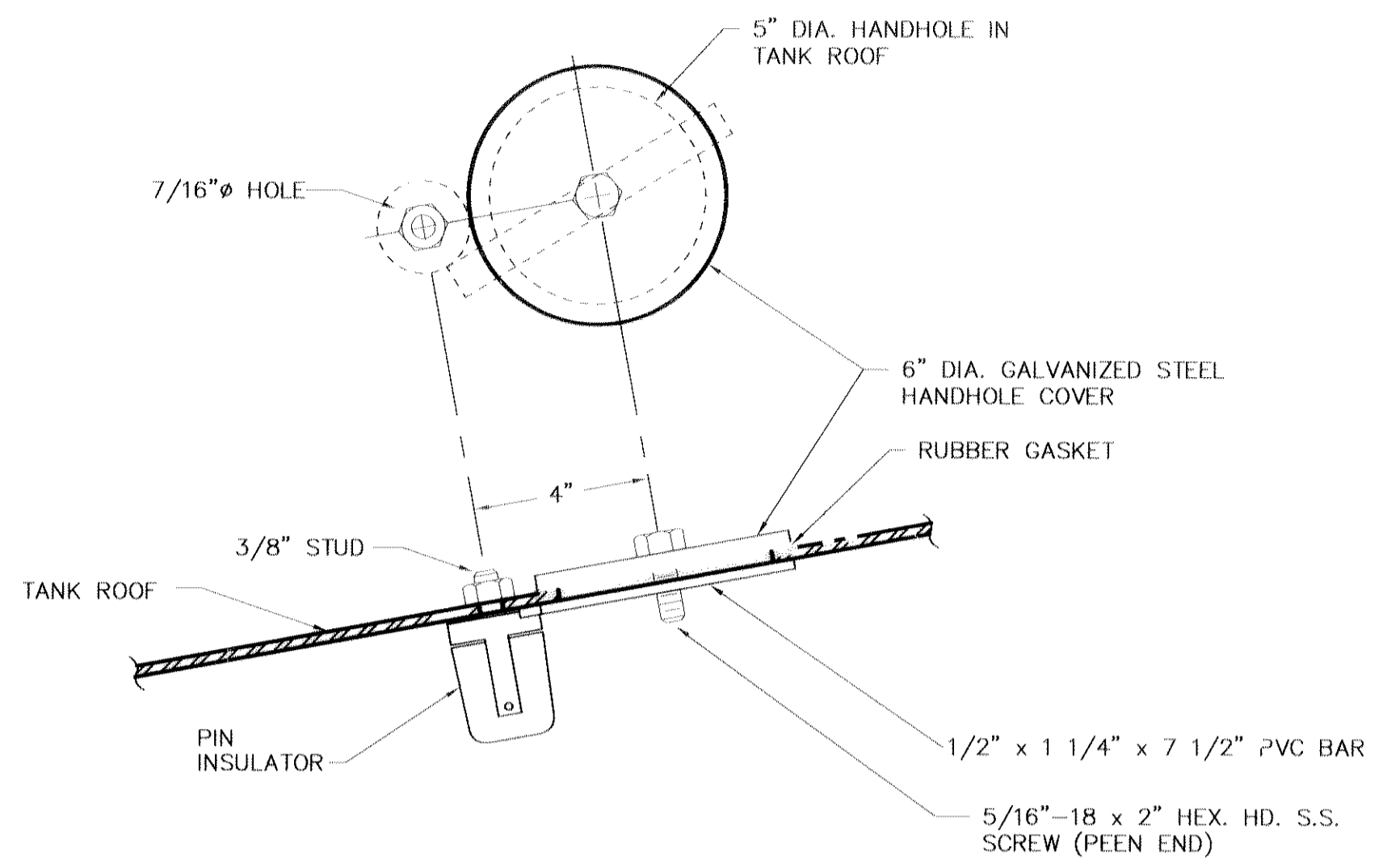
- NOTES:
- TEST BOX MAY BE LOCATED ON EITHER SIDE OF THE LADDER.
 - LADDER STAND-OFFS USED TO SUPPORT CONDUIT TO TANK ROOF.
 - FASTEN MOUNTING BOLTS TO TANK WALL WITH FILLET WELDS OR PIN BRAZING. REPAIR COATING AFTER WELDING.
 - MASK BOLT THREADS.
 - TEST BOX LOCATION SHOULD BE FREE OF OBSTRUCTION A MINIMUM OF 20" ON EACH SIDE OF BOX.
 - ALTERNATIVELY, TEST BOX MAY BE INSTALLED ON UNISTRUT MOUNTED AGAINST RING WALL.

TEST BOX INSTALLATION (3)
N.T.S.

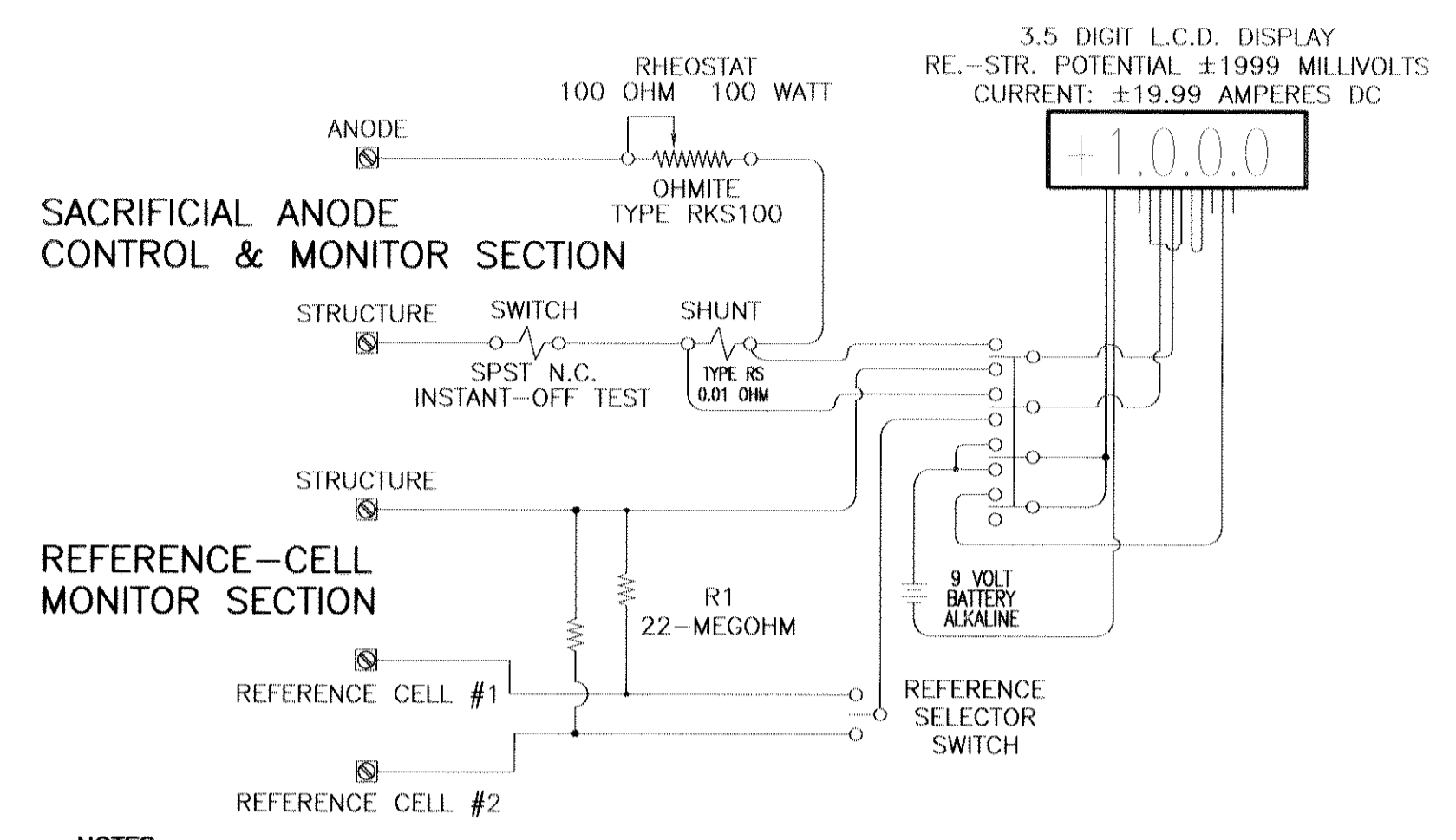
08939

DESIGNED BY GB	PROJECT ENGINEER GRAHAM E. C. BELL				LAS VIRGENES MUNICIPAL WATER DISTRICT TANK SITE IMPROVEMENT PROGRAM	DRAWING CP-3
DRAWN BY DHR	REC NUMBER CR 1064				EXP DATE 9-30-06	CATHODIC PROTECTION DETAILS
CHECKED BY RDE	PROJECT NUMBER VT-L02-175-05	CADD STANDARDS BOYLE				
DATE 00/00/00						

DWG: F:\village\0217505 - Tank Program 3 (Waters & Shops) CAD_Planet\CP-003.dwg
 DATE: Aug 22, 2005 4:07pm
 USER: graham
 XREFS: g-bb
 DWN: RCE-STAMP
 GRONOM: Bell - STAMP
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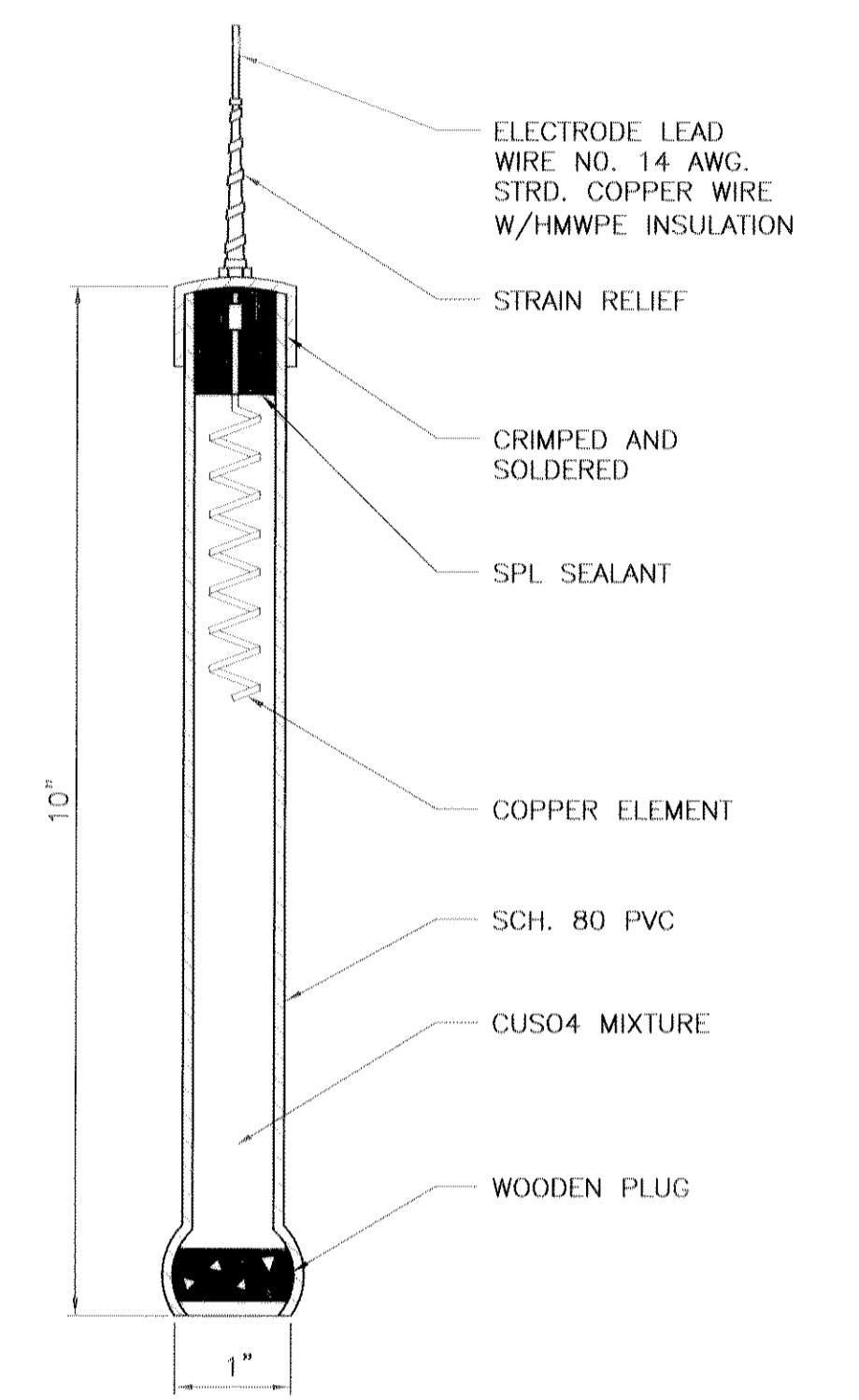


CP TEST LOCATION HANDHOLE DETAIL (1)
N.T.S.

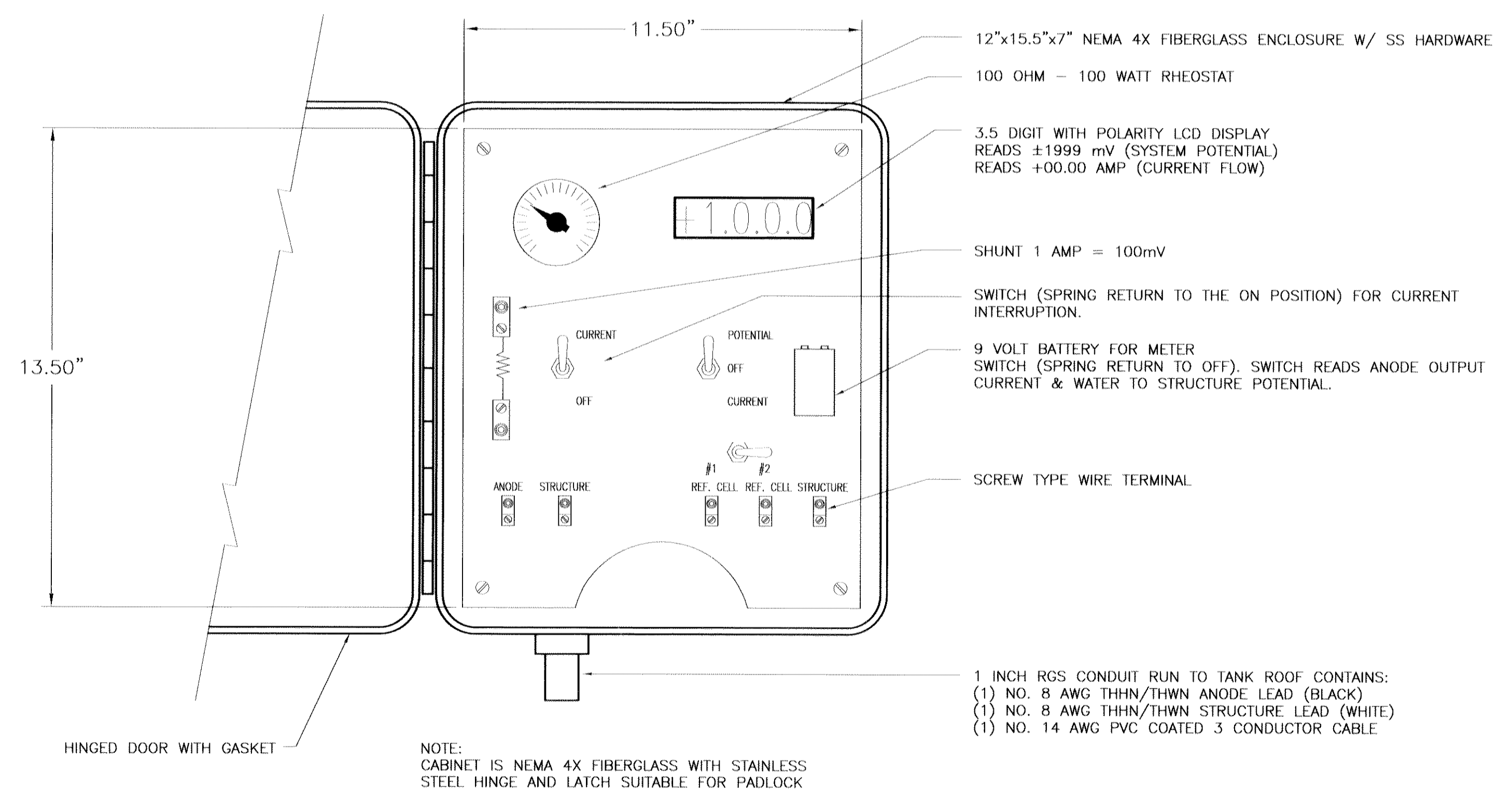


- NOTES:**
- CONTROL PANEL HOUSED IN 12 x 15.5 x 7 FIBERGLASS (FRP) NEMA 4X ENCLOSURE. SS HINGE & 2 LOCKABLE BUTTERFLY DRAW TYPE LATCHES.
 - METER INPUT RESISTANCE >10 MEGOHM/VOLT

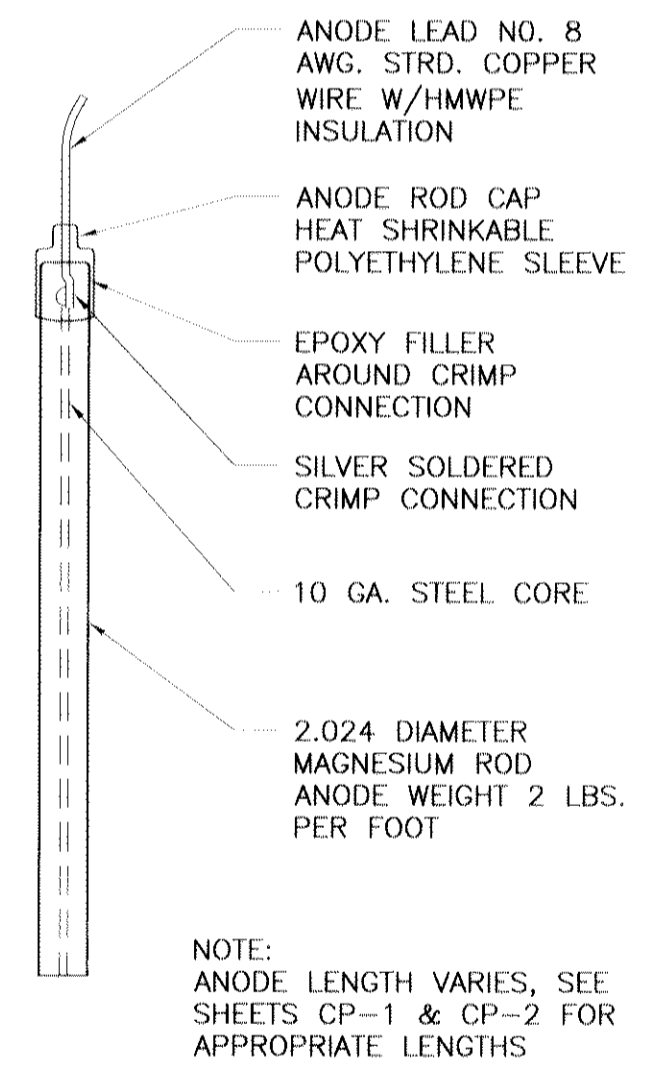
TEST STATION DETAIL (2)
N.T.S.



REFERENCE ELECTRODE (5)
N.T.S.



CABINET DETAIL (3)
N.T.S.



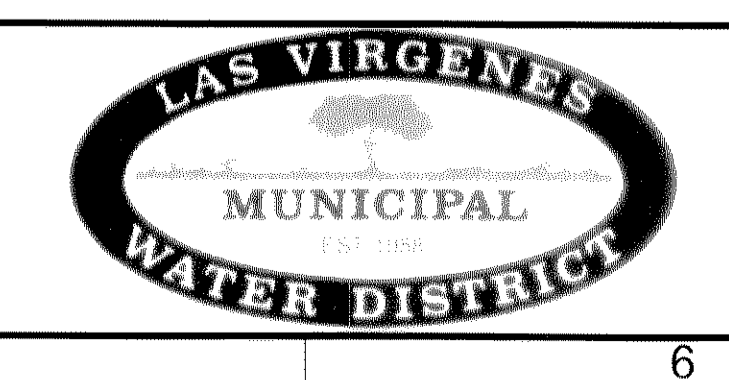
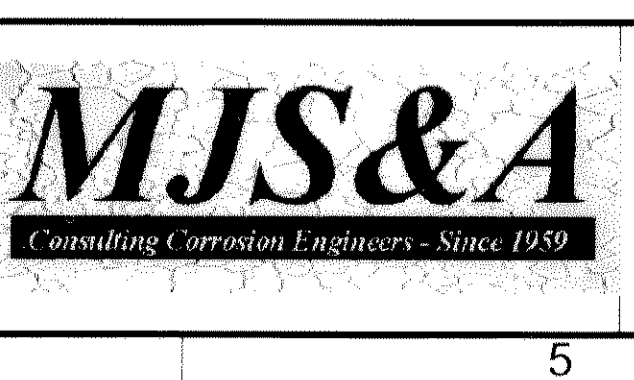
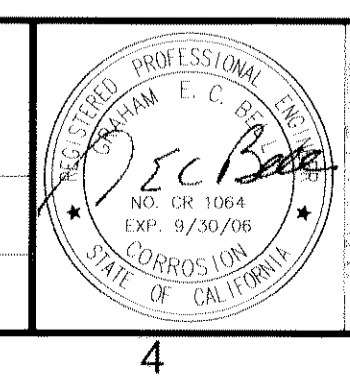
MAGNESIUM ANODE (4)
N.T.S.

ELEMENT	CONTENT %
AL	0.010% MAX.
Mn	0.5 - 1.3%
Cu	0.02% MAX.
Ni	0.001% MAX.
Fe	0.30 MAX.
Other	0.30 MAX.
MAGNESIUM	REMAINDER

NOTE:
ANODE LENGTH VARIES, SEE SHEETS CP-1 & CP-2 FOR APPROPRIATE LENGTHS

REV	DATE	DESCRIPTION	APPR
10-19-04		100% SUBMITTAL	

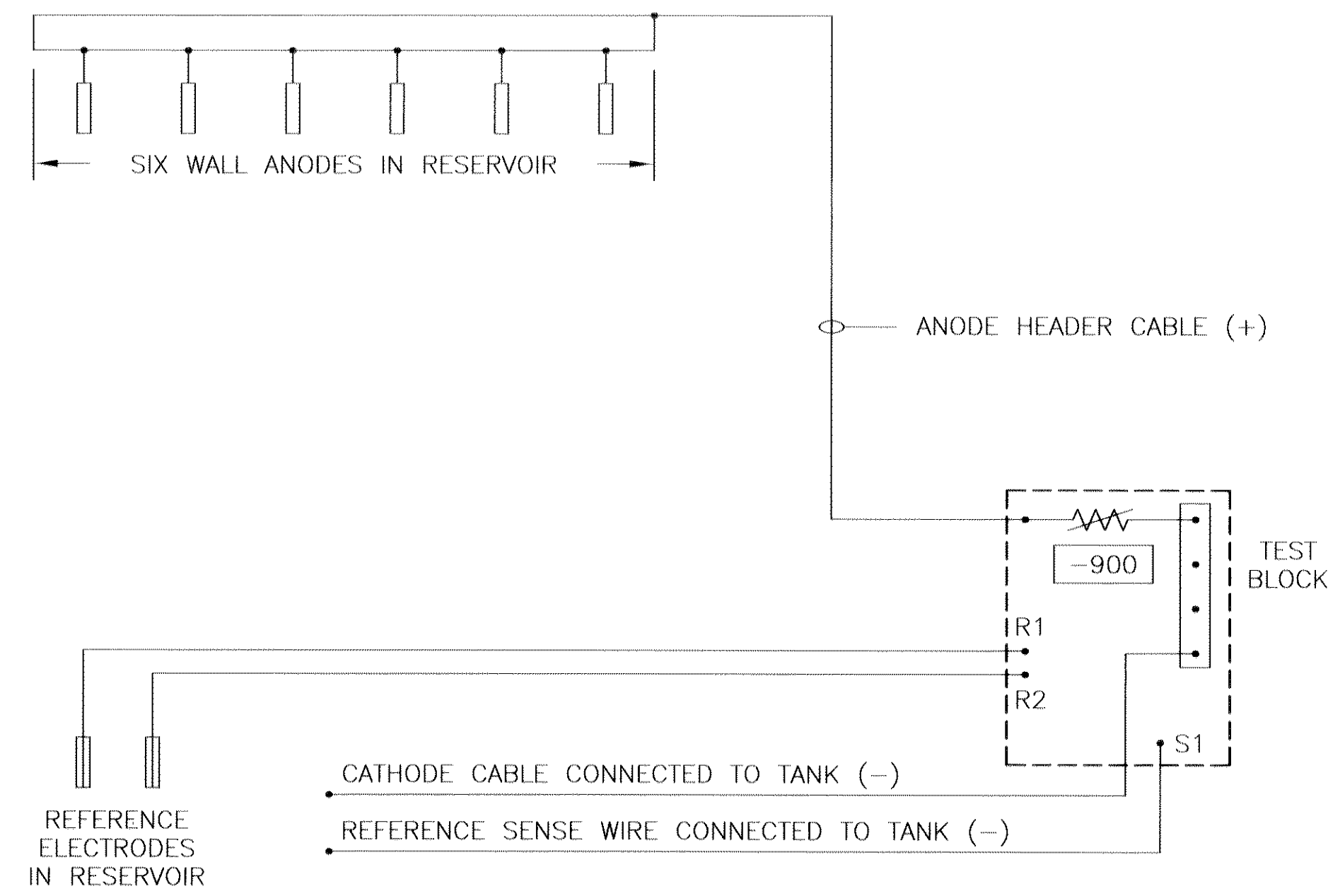
DESIGNED BY GB	PROJECT ENGINEER GRAHAM E. C. BELL
DRAWN BY DHR	REG NUMBER CR 1064
CHECKED BY RDE	EXP DATE 9-30-06
DATE 00/00/00	PROJECT NUMBER VT-L02-175-05
	CADD STANDARDS BOYLE



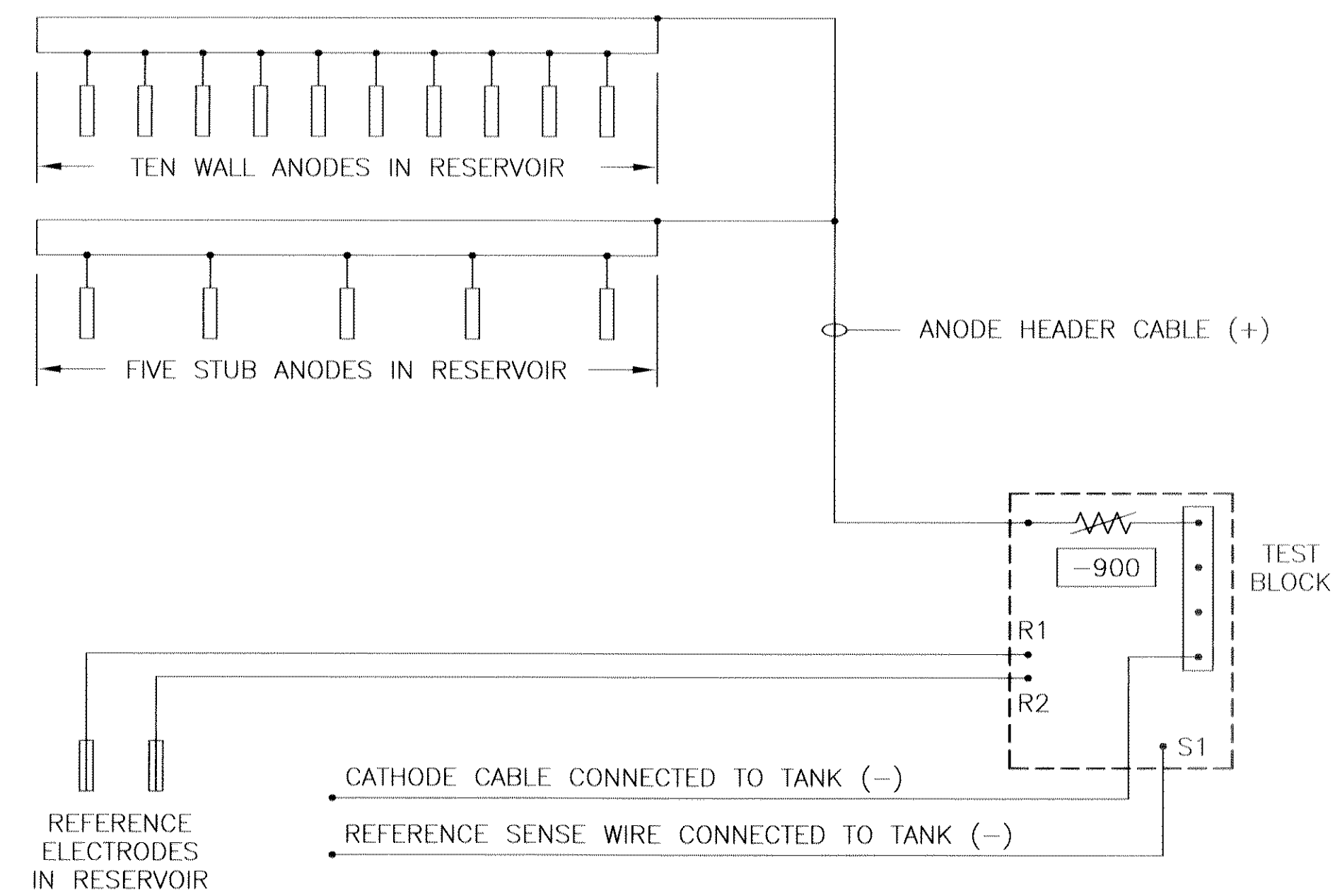
LAS VIRGENES MUNICIPAL WATER DISTRICT TANK SITE IMPROVEMENT PROGRAM		DRAWING CP-4
CATHODIC PROTECTION DETAILS		SHEET 14
		OF SHEETS

08940

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 BCSG: TIF
 MGS-LOGO3.JPG
 IMAGES: LVMW_Proj\Bldg - Stamp
 Graham Bell - Stamp
 Program 3 (Morrison & Speck)\CAD\Drawings\CP-004.dwg
 BCSG: TIF
 MGS-LOGO



SCHMATIC DIAGRAM OF WARNER 1 SYSTEM (2)
N.T.S.

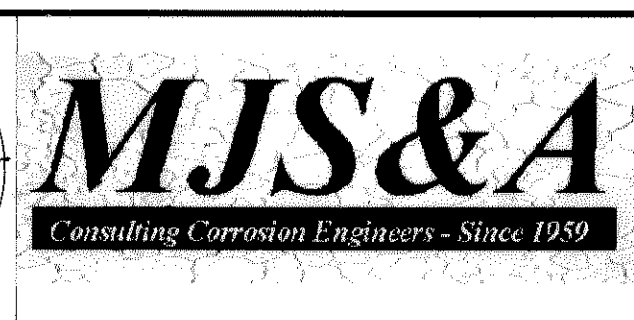
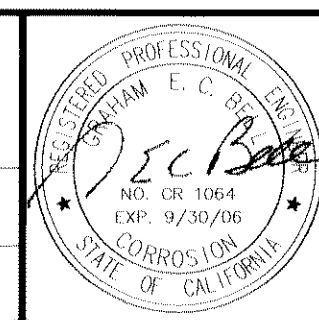


SCHMATIC DIAGRAM OF WARNER 2 SYSTEM (3)
N.T.S.

08941

REV	DATE	DESCRIPTION	APPR
10-19-04	100%	SUMBITTAL	

DESIGNED BY	GB	PROJECT ENGINEER	GRAHAM E. C. BELL
DRAWN BY	DHR	REG. NUMBER	CR 1064
		EXP. DATE	9-30-06
CHECKED BY	RDE	PROJECT NUMBER	VT-L02-175-05
DATE	00/00/00	CADD STANDARDS	BOYLE



LAS VIRGENES MUNICIPAL WATER DISTRICT TANK SITE IMPROVEMENT PROGRAM	
CATHODIC PROTECTION SCHEMATIC DIAGRAMS	

DRAWING	CP-5
SHEET	15
OF SHEETS	