

GENERAL NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE A MINIMUM OF 12" WIDER THAN THE UNDISTURBED SIDES OF THE TRENCH, SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. ANY CONCRETE PAVING SHALL BE SAW CUT 6" WIDER THAN UNDISTURBED SIDES OF EXCAVATION.
3. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX OR TEMPORARY HOT MIX.
4. ROAD BASE AND SURFACE MATERIALS IN THE TRENCH CUT SHALL BE REPLACED IN KIND OF EQUAL THICKNESS, OR MINIMUM BASE THICKNESS OF 10 INCHES, WHICHEVER IS GREATER.
5. ALL DAMAGED AREAS OF PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH MINIMUM OF 8 INCHES OF BASE OR MATCH EXISTING, WHICHEVER IS GREATER.
6. SURFACE PAVEMENT SHALL BE OF THE KIND AND THICKNESS AS EXISTING, OR MINIMUM 2 INCHES, WHICHEVER IS GREATER.
7. CLSM (FLOWABLE FILL) SHALL BE ACCEPTABLE IN LONG RUNS OF PIPE WHERE NO VALVES, AIR RELEASES OR ANY VAULTS ARE LOCATED. AE APPROVAL IS REQUIRED FOR THIS ALTERNATIVE.
8. THERE SHALL BE 3 FEET OF SEPARATION BETWEEN AE CHILLED WATER LINES AND ANY OTHER UTILITY UNLESS PRIOR APPROVAL BY AE OSER PERSONNEL.

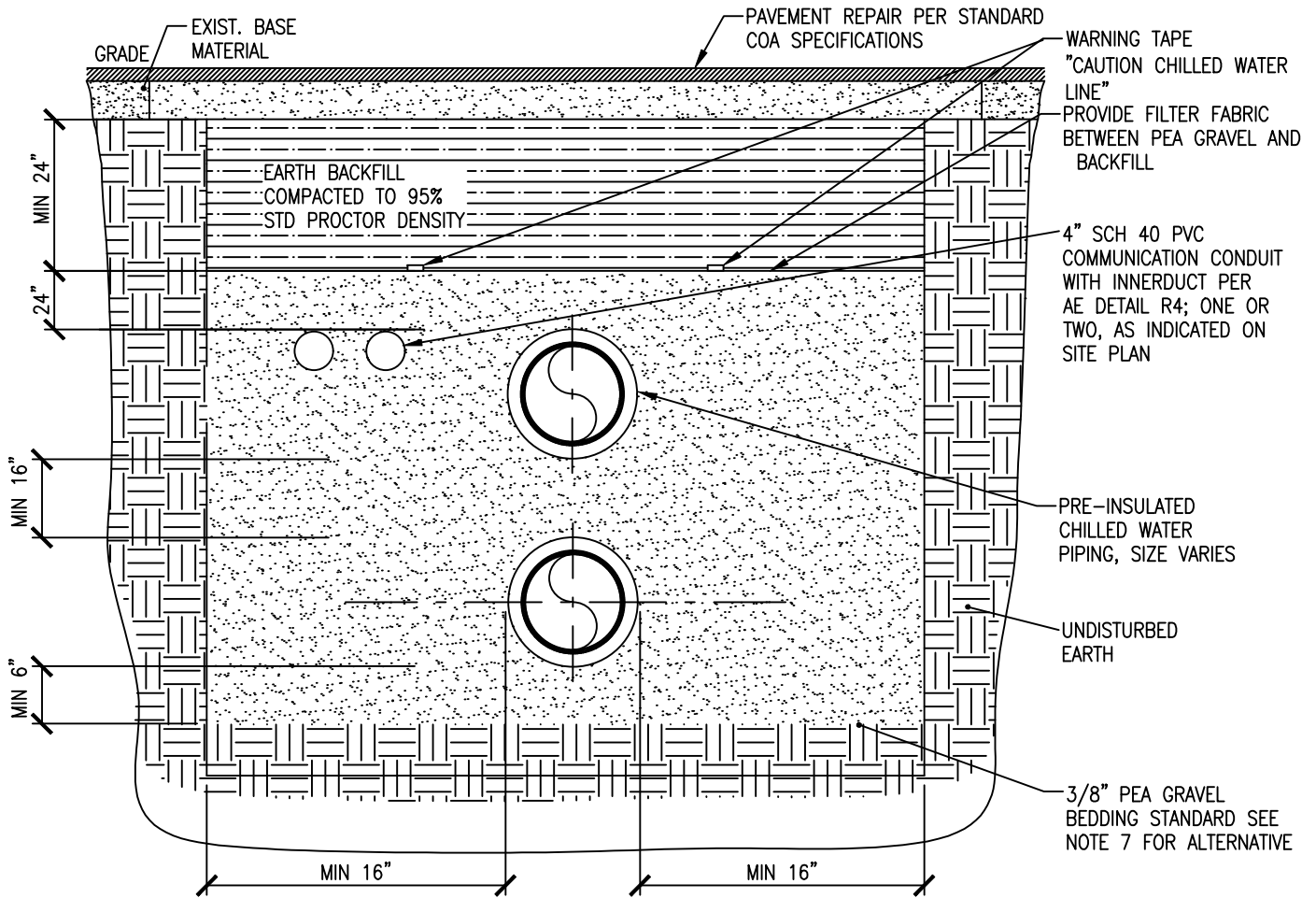
STANDARD TRENCH DETAIL

6/9/2021

SCALE:

(R1)

3/4"=1'-0"



GENERAL NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE A MINIMUM OF 12" WIDER THAN THE UNDISTURBED SIDES OF THE TRENCH, SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
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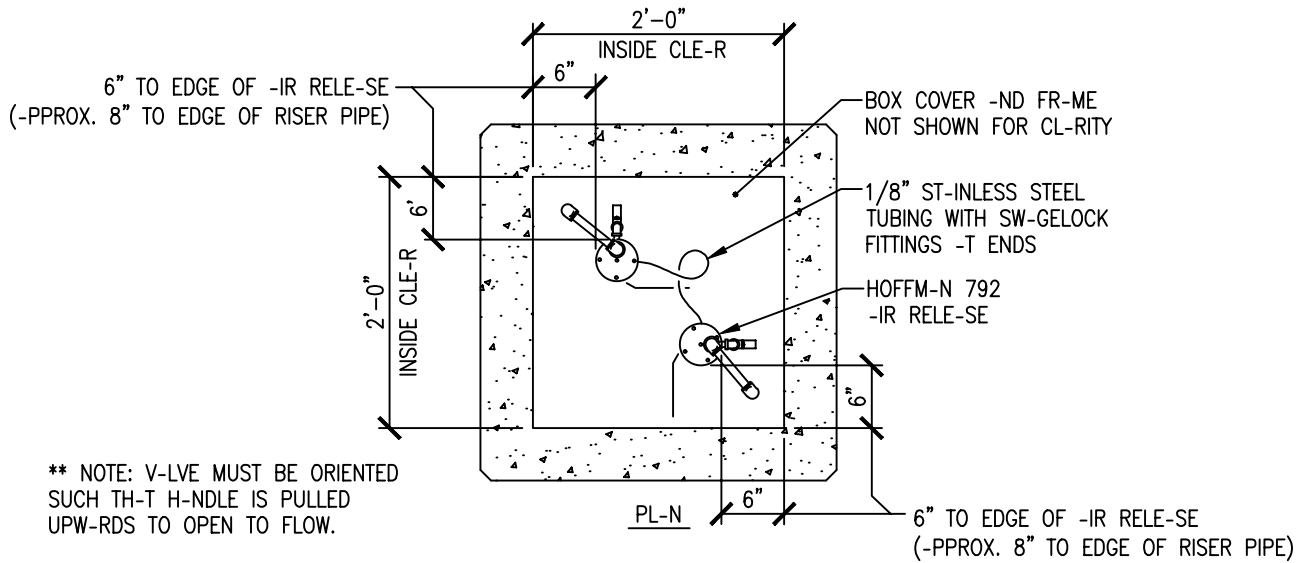
STANDARD TRENCH DETAIL

6/9/2021

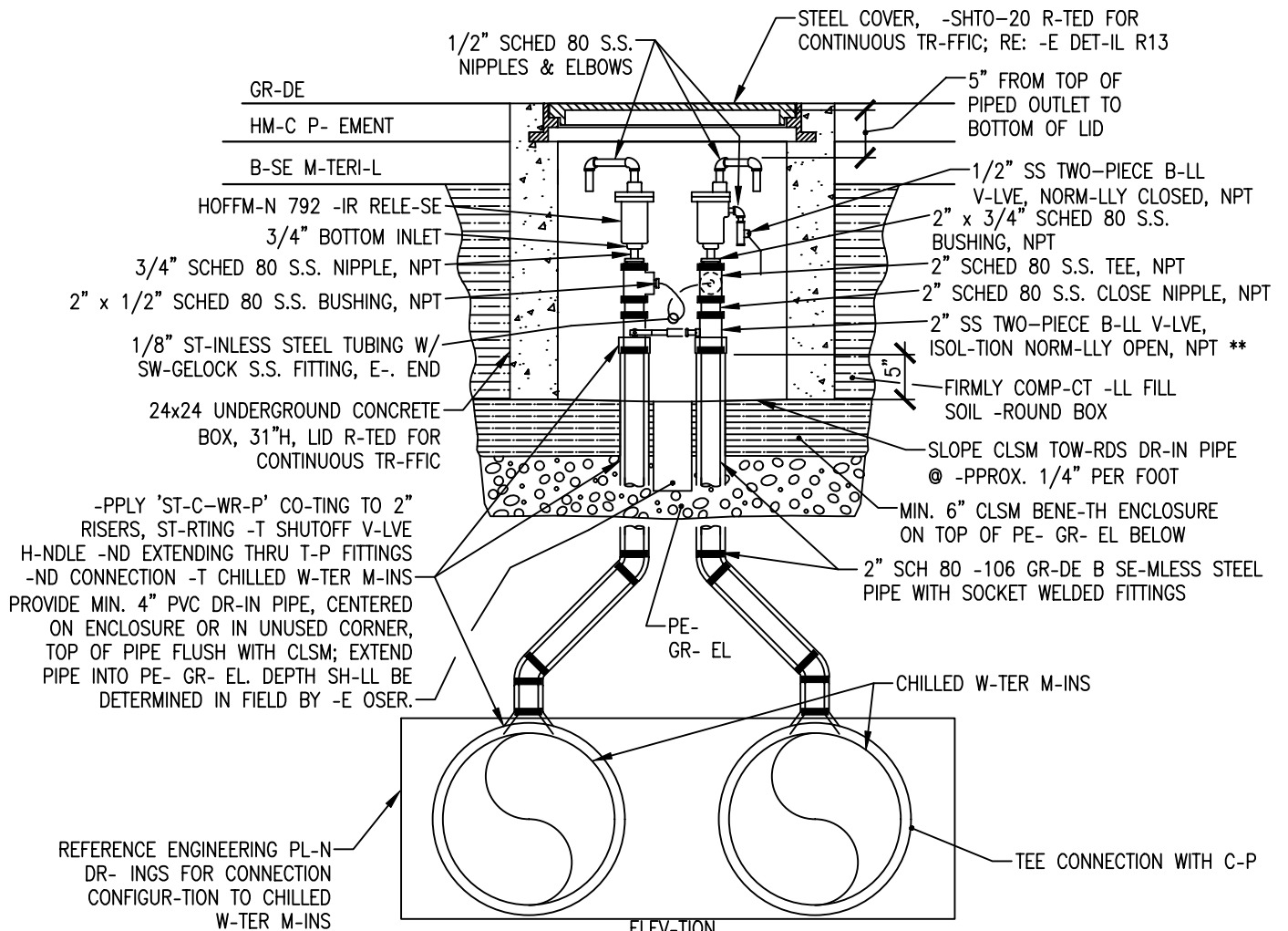
SCALE:

R1A

NTS



\*\* NOTE: V-LVE MUST BE ORIENTED SUCH TH-T H-NDLE IS PULLED UPW-RDS TO OPEN TO FLOW.



AIR RELEASE VALVE ASSEMBLY

6/9/2021

ELEV-TION

SC-LE:

(R2)

3/4"=1'-0"

PROVIDE 20 FT SLACK IN FIBEROPTIC LINES WITHIN MANHOLE. PROVIDE MIN. 4" MANUFACTURED 3/16" THICK GALV METAL HOOK ON SIDE WALL OF MANHOLE; NEATLY LOOP SLACK FIBER ON HOOK

PROVIDE STAINLESS STEEL TAGS ON ALL NEW FIBER COMM LINES, BOTH WHERE THEY ENTER AND WHERE THEY LEAVE M.H. REF SPECIFICATIONS.

CUT FLUSH WITH WALL

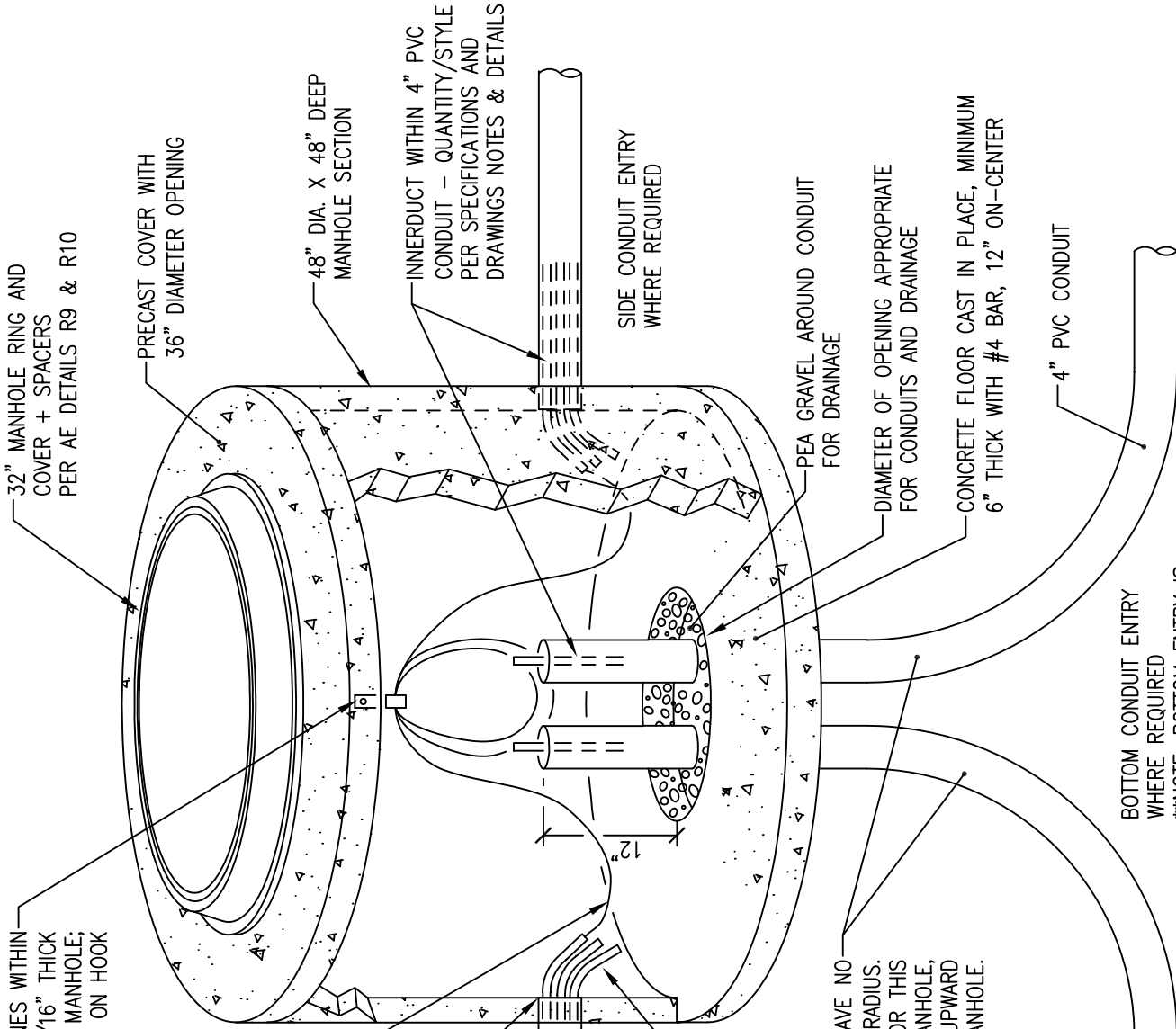
4" PVC CONDUIT

EXTEND INNERDUCT 6" INTO MANHOLE

PVC TELECOM CONDUIT TO HAVE NO ELBOWS LESS THAN 60" RADIUS. IF CONDITIONS DO NOT ALLOW FOR THIS AND FOR BOTTOM ENTRY INTO MANHOLE, CONDUIT MAY BE SLOPED GENTLY UPWARD AND ENTER IN THE SIDE OF MANHOLE.

4" PVC CONDUIT

BOTTOM CONDUIT ENTRY WHERE REQUIRED  
 \*\*NOTE: BOTTOM ENTRY IS PREFERRED OVER SIDE ENTRY.



6/9/2021

# COMMUNICATION VAULT

R3

SCALE:

NONE

PROVIDE MIN. 4" MANUFACTURED 3/16" THICK GALV METAL HOOK ON SIDE WALL OF MANHOLE FOR FIBER OPTIC LINES. NO FIBER OPTIC LINE IN CONTRACT.

32" MANHOLE RING AND COVER PER AE DETAILS 9 & 10. PROVIDE CONCRETE GRADE RINGS PER SECTION 506 (MIN. 6" THICKNESS). CONSTRUCT GRADE RINGS PER COA STANDARD DETAIL 506S-4

PRECAST COVER WITH 36" DIAMETER OPENING

PROVIDE STAINLESS STEEL TAGS ON ALL NEW FIBER COMM LINES, BOTH WHERE THEY ENTER AND WHERE THEY LEAVE M.H. REF SPECIFICATIONS.

48" DIA. X 48" DEEP MANHOLE SECTION

INNERDUCT WITHIN 4" PVC CONDUIT - QUANTITY/STYLE PER SPECIFICATIONS AND DRAWINGS NOTES & DETAILS

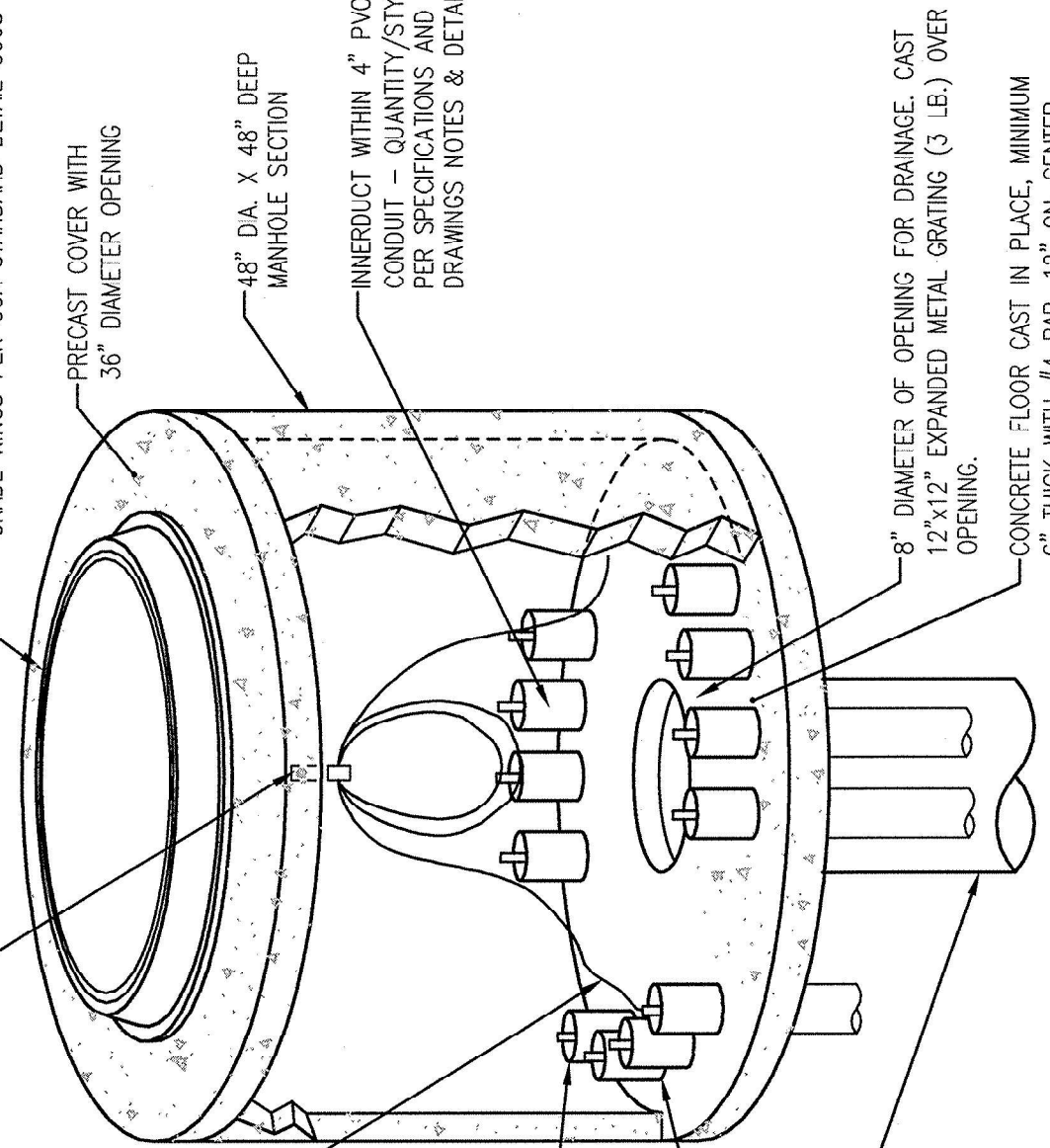
EXTEND PVC MINIMUM OF 4" INTO MANHOLE

EXTEND INNERDUCT 6" INTO MANHOLE

8" PVC SCH 40. EXTEND INTO PEA GRAVEL BEDDING AT LEAST 6"

8" DIAMETER OF OPENING FOR DRAINAGE. CAST 12"x12" EXPANDED METAL GRATING (3 LB.) OVER OPENING.

CONCRETE FLOOR CAST IN PLACE, MINIMUM 6" THICK WITH #4 BAR, 12" ON-CENTER



REFERENCE DETAIL 3B FOR ORIENTATION OF CONDUITS IN VAULT #1

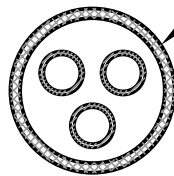
6/9/2021

# COMMUNICATION VAULT

R3A

SCALE: NONE

**OPTION 1:**  
4" PVC CONDUIT WITH THREE  
SINGLE RACEWAY INNERDUCTS

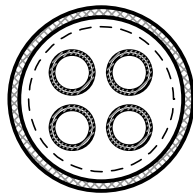


COMMUNICATION CONDUIT  
SCHEDULE 40 PVC,  
4.5" OD x 3.998" ID

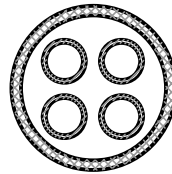
3 - 1" HDPE CORRUGATED  
INNERDUCT PER CONDUIT

NOTE: OWNER TO FURNISH  
INNERDUCT, CONTRACTOR  
TO INSTALL.

**OPTION 2:**  
4-CELL COMBINATION CONDUIT/  
MULTI-DUCT SYSTEM



FEMALE COUPLING



MALE COUPLING

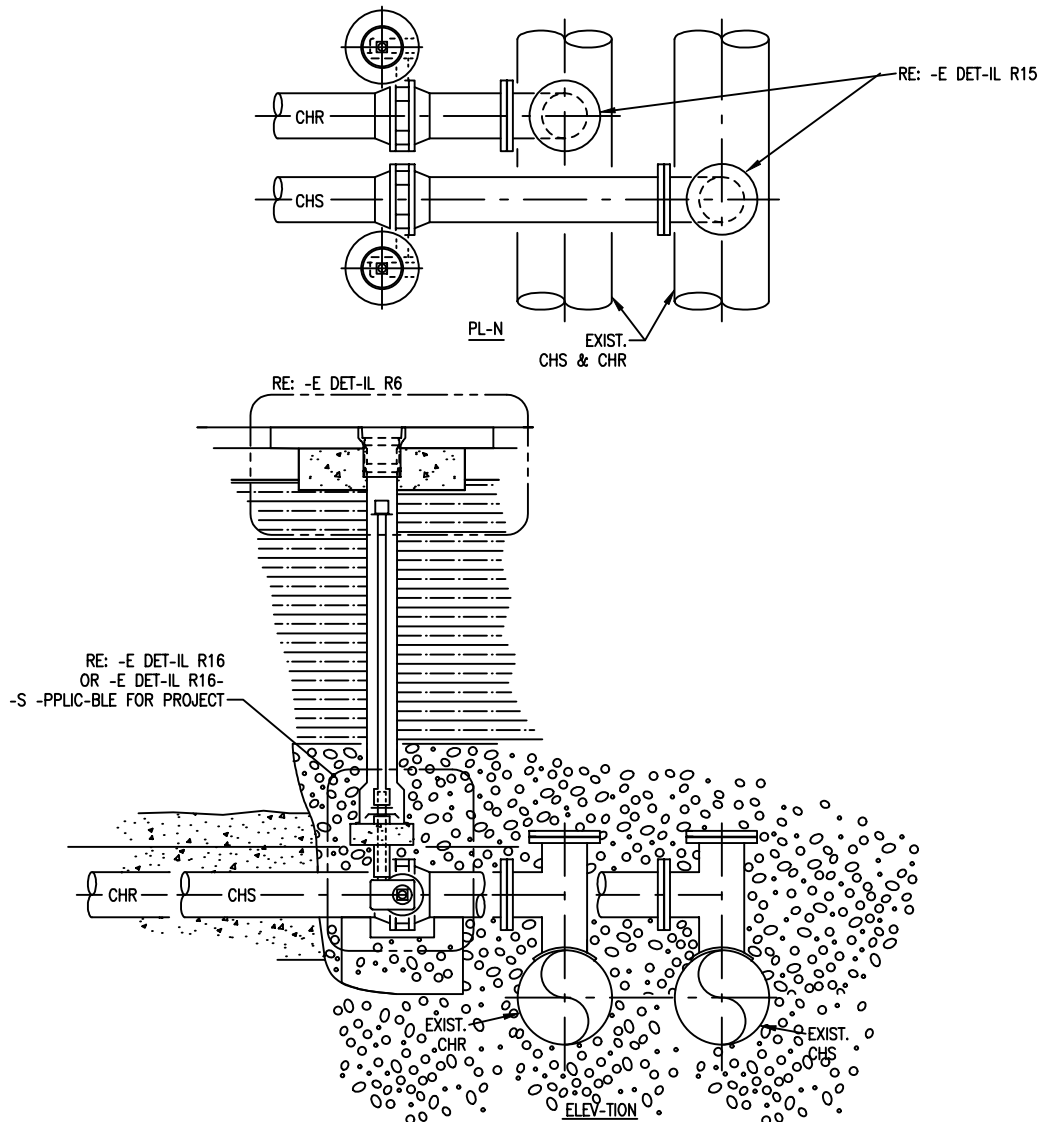
# COMMUNICATION CONDUIT INNERDUCT

6/9/2021

SCALE:

R4

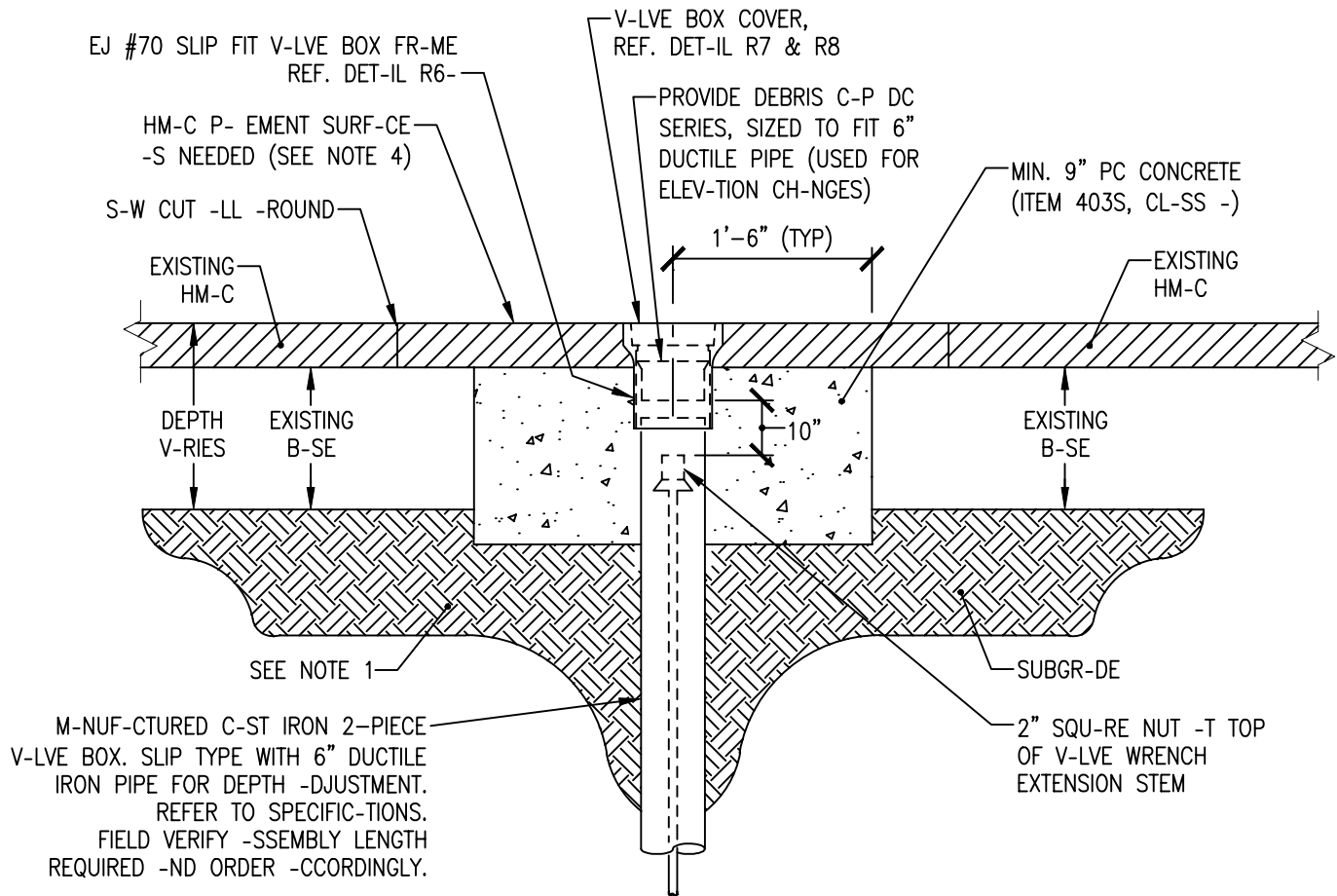
NONE



CHILLED WATER CONNECTION  
 GENERAL LAYOUT  
 SEE AE DETAIL AND ENGR DRAWINGS

6/9/2021

SC-LE: (R5) NONE

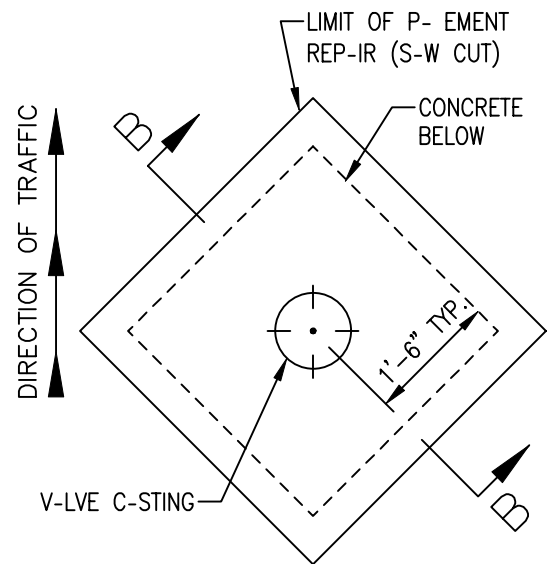


SECTION B-B

NOTES:

1. SUBGR-DE SH-LL BE COMP-CTED -S PER ITEM 201, SUBGR-DE PREP-R-TION.
2. V-LVE C-STINGS SH-LL BE -DJUSTED TO GR-DE DETERMINED BY ENGINEER.
3. CLE-N C-STINGS OF -LL DEBRIS DOWN TO V-LVE GE-R OPER-TOR.
4. REPL-EMENT HM-C SURF-CE L-YER SH-LL BE OF THE TYPE -ND THICKNESS B-SED ON FUNCTION-L CL-SSIFIC-TION.
  - a) MIN. 2" HM-C TYPE "D" FOR TRENCH REP-IR IN LOC-L/RESIDENTI-L STREETS.
  - b) MIN. 3" HM-C TYPE "C" FOR TRENCH REP-IR IN COLLECTOR/-RTERI-L STREETS. SEE ITEM 340S, SECTION 340S.4.
5. SET P-TCH ELEV-TION TO LEVEL OF NEW OVERL-Y -S DIRECTED BY ENGINEER.

"ITEMS" REFER TO REFERENCE ITEM NUMBERS FROM THE "ST-ND-RD SPECIFIC-TION -ND ST-ND-RD DET-ILS -DOPTED BY THE CITY OF -USTIN, DEP-RTMENT OF PUBLIC WORKS"



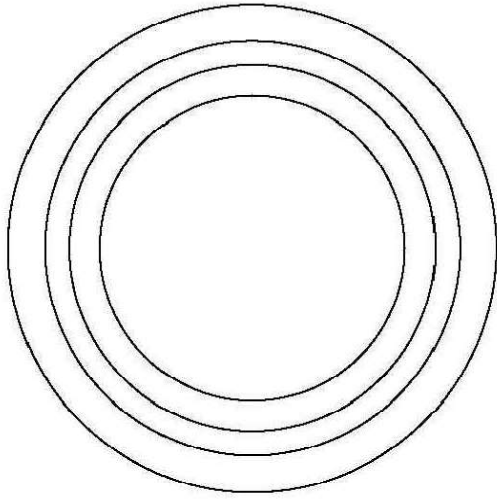
PLAN VIEW

VALVE BOX DETAIL

6/9/2021

SC-LE: (R6) NONE

# #70 Valve Box Frame BF



**Product Number**

33470000

**Design Features**

- Materials Gray Iron (CL35)
- Design Load Non-Traffic
- Open Area n/a
- Coating n/a
- Dipped
- ✓ Designates Machined Surface

**Certification**

- ASTM A48
- Country of Origin: USA

**Drawing Revision**

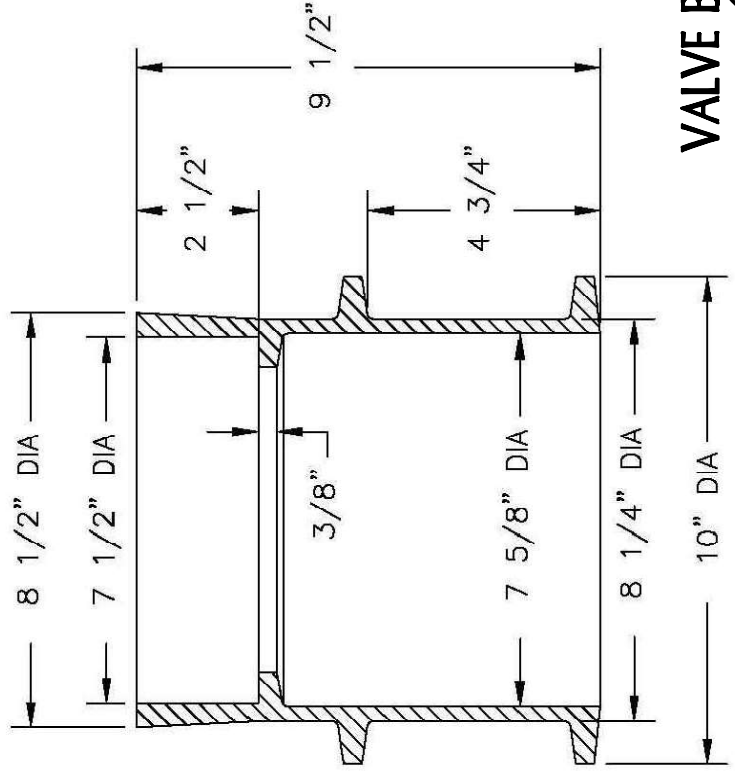
10/16/2000 Designer: SMH  
2/1/2012 Revised By: DAL

**Disclaimer**

Weights (lbs./kg) dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.  
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**Contact**

800 626 4653  
ejco.com



**VALVE BOX FRAME**

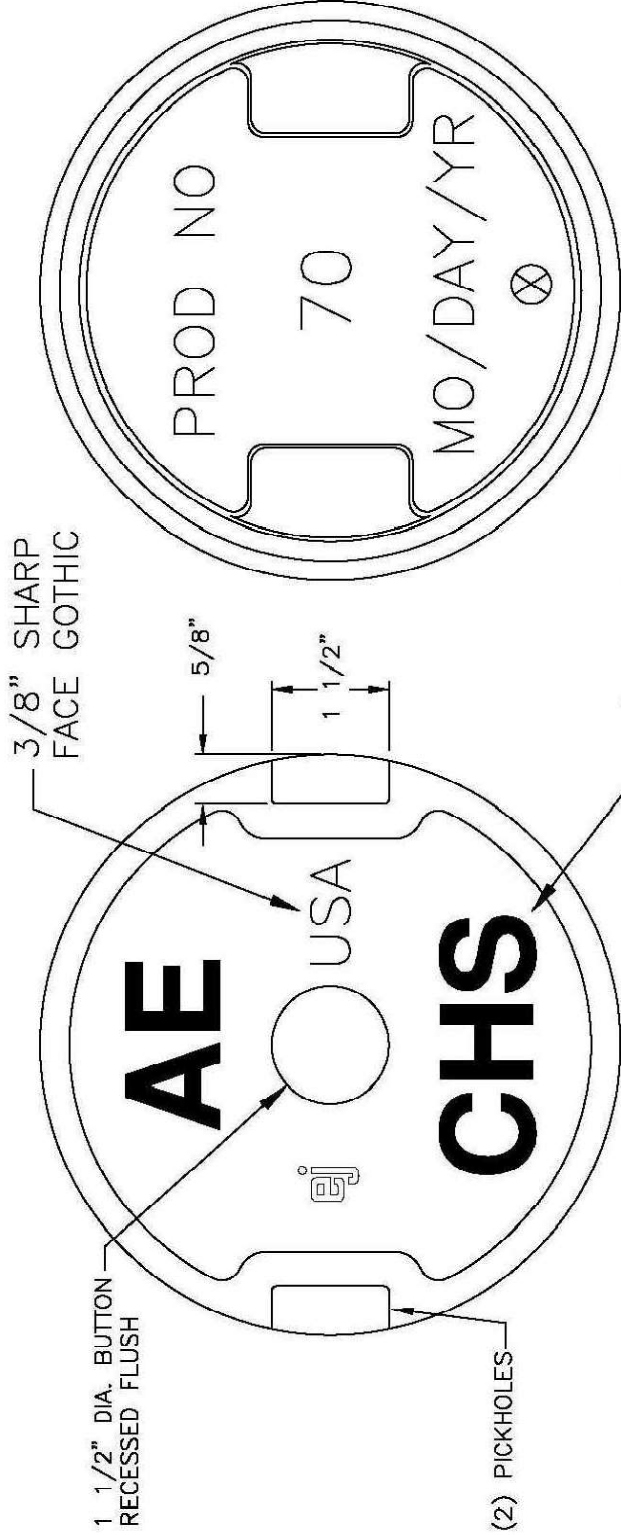
**VALVE BOX SECTION**

**R6A**

SC-LE: NONE

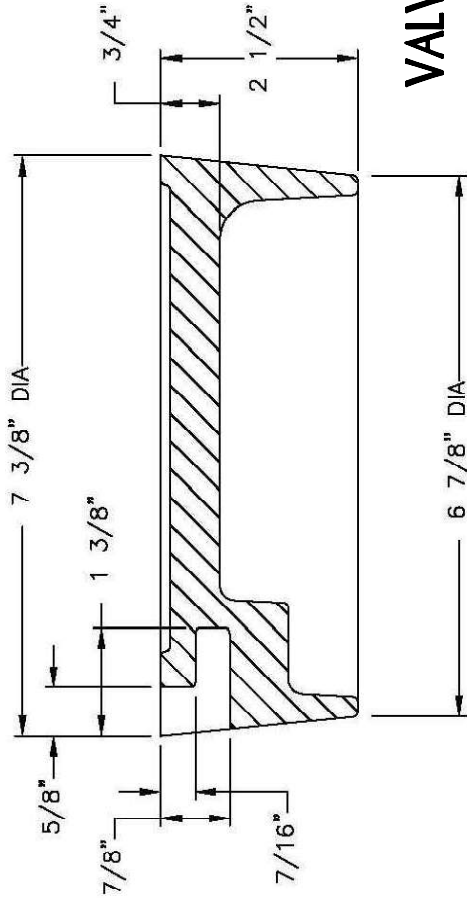
6/9/2021

# 70 Valve Box Cover



**COVER TOP VIEW**

**COVER BACK VIEW**



**COVER SECTION**

**Product Number**

33170048

**Design Features**

- Materials Gray Iron (CL35B)
- Design Load Heavy Duty
- Open Area n/a
- Coating Unclipped
- ✓ Designates Machined Surface

**Certification**

- ASTM A48
- Country of Origin: USA

**Drawing Revision**

7/2/2012 Designer: SDC  
7/20/2012 Revised By: DJH

**Disclaimer**

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6/9/2021

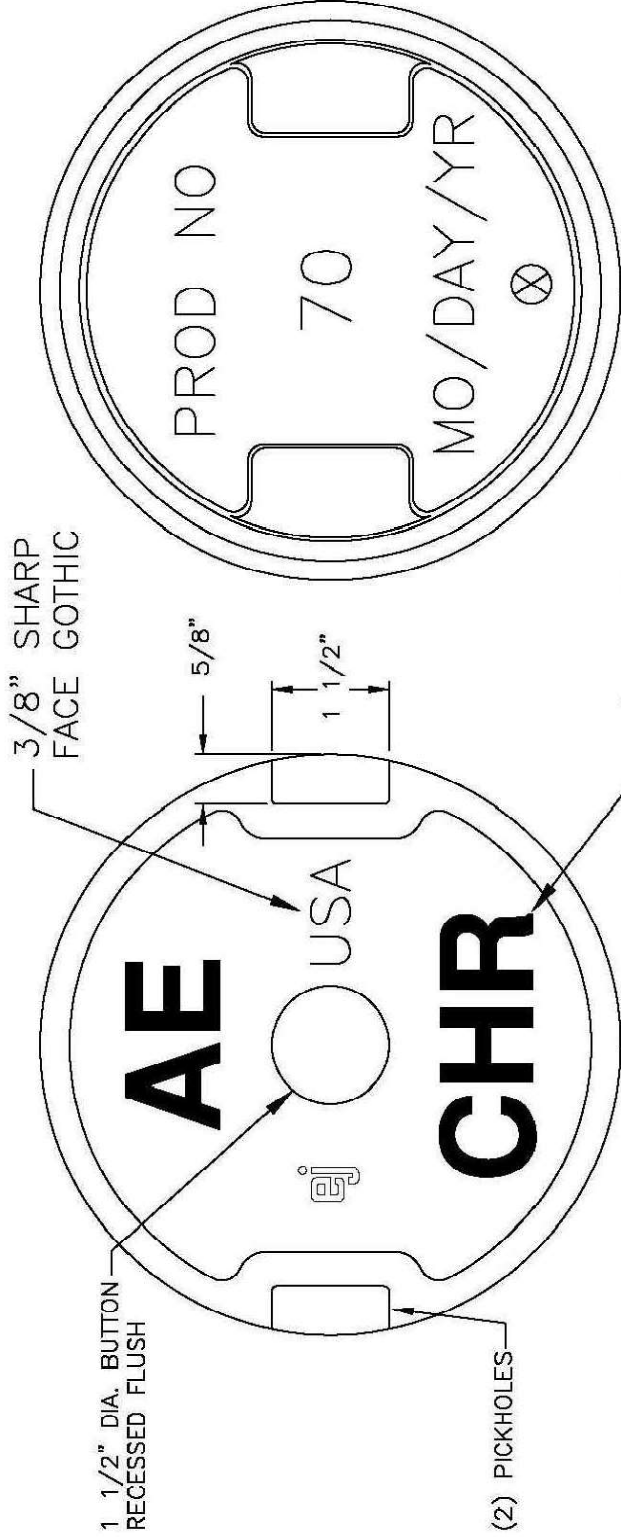
**VALVE BOX COVER - SUPPLY**

**R7**

NONE

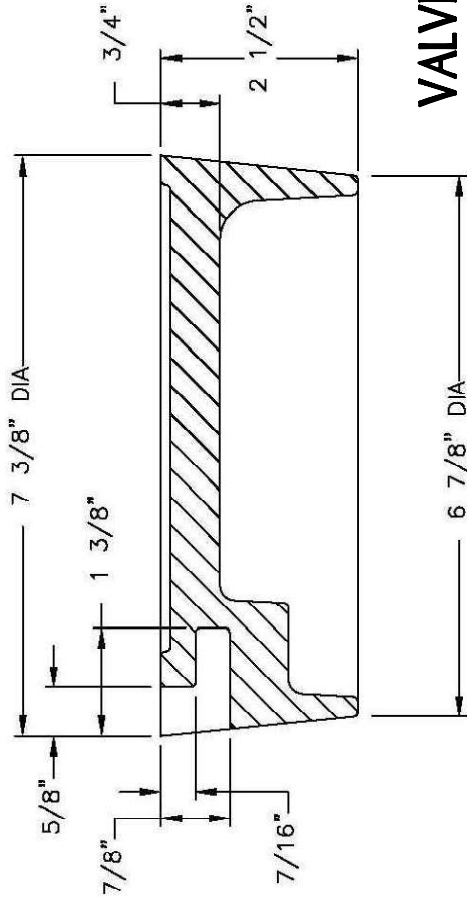
SC-LE:

# 70 Valve Box Cover



**COVER TOP VIEW**

**COVER BACK VIEW**



**COVER SECTION**

**Product Number**  
33170047

**Design Features**

- Materials  
Gray Iron (CL35B)
- Design Load  
Heavy Duty
- Open Area  
n/a
- Coating  
Unclipped
- ✓ Designates Machined Surface

**Certification**

- ASTM A48
- Country of Origin: USA

**Drawing Revision**

7/2/2012 Designer: SDC  
7/20/2012 Revised By: DJH

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**Contact**

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**VALVE BOX COVER - RETURN**

6/9/2021

**R8**

SC-LE: \_\_\_\_\_ NONE

**EJW EAST JORDAN**  
 IRON WORKS EST. 1883  
 800-626-4653  
 www.ejiw.com  
 MADE IN USA

PRODUCT NUMBER  
**41420012**

CATALOG NUMBER  
**V-1420\1480Z1**

**V-1420\1480Z1**  
**FRAME WITHOUT**  
**MUD RING**

LOAD RATING  
**HEAVY DUTY**

COATING  
**UNDIPPED**

ESTIMATED WEIGHT  
 FRAME: 174 LBS 79kg

MATERIAL SPECIFICATION  
 FRAME - GRAY IRON  
 ASTM A48 CL35B

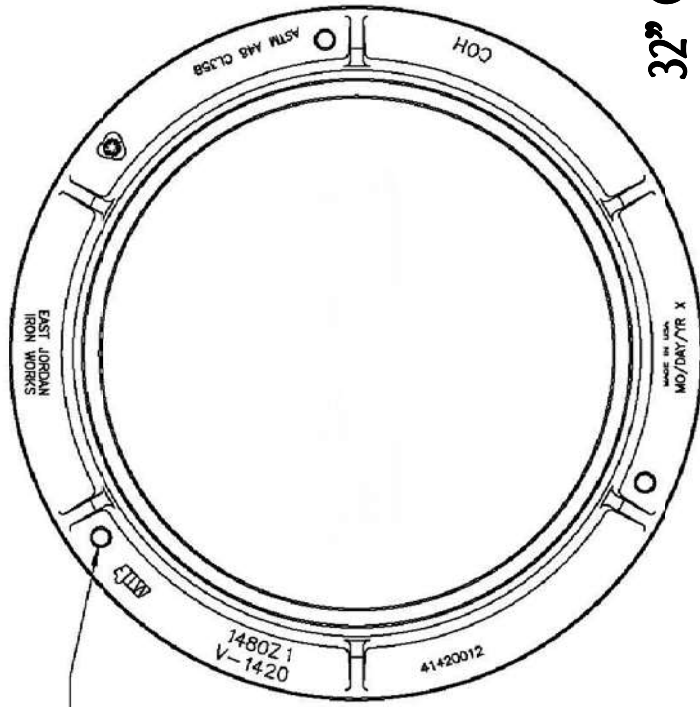
OPEN AREA

DESIGNATES MACHINED SURFACE

DRAWN SBB DATE  
 10/07/06

LAST REVISED DAL DATE  
 06/20/07

REFERENCE INFORMATION  
**41420012.2C**  
**41420012.1D**

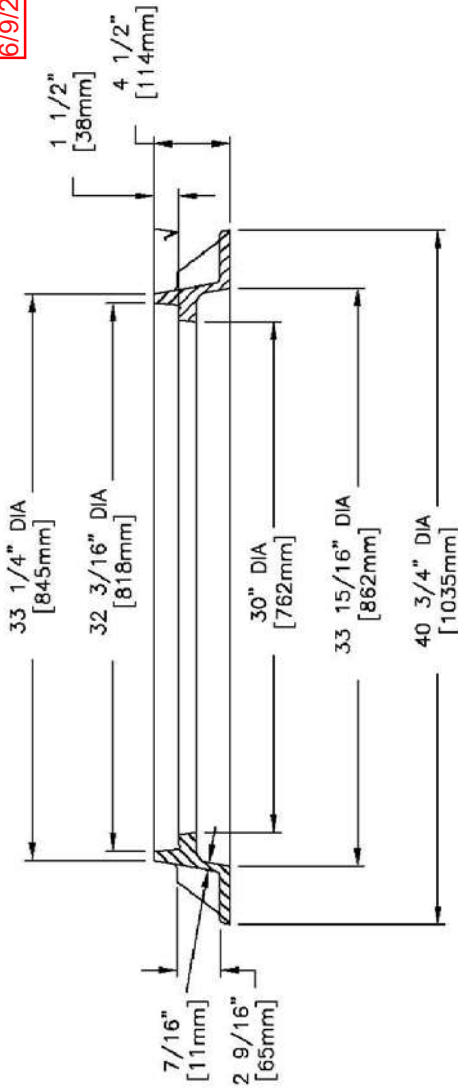


(3) 1" [25mm] DIA  
 HANDLING HOLES

### 32" CI RING DETAIL

SCALE: **R9** NONE

6/9/2021



### FRAME SECTION

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Or Approved Equal

**EAST JORDAN  
IRON WORKS, INC.**  
P.O. BOX 439  
EAST JORDAN, MI. 49727  
1-800-874-4100  
FAX 231-536-4458

DRAWN DATE  
DEW 01/16/04

APPROVED DATE

**SPECIAL LETTERED  
COVER**

PRODUCT NO.

**00148066**

CATALOG NO.

**1480A**

REF. PRODUCT DRAWING

**148134**

EST. WT.

COVER: 215 LBS 98kg

OPEN AREA

N/A

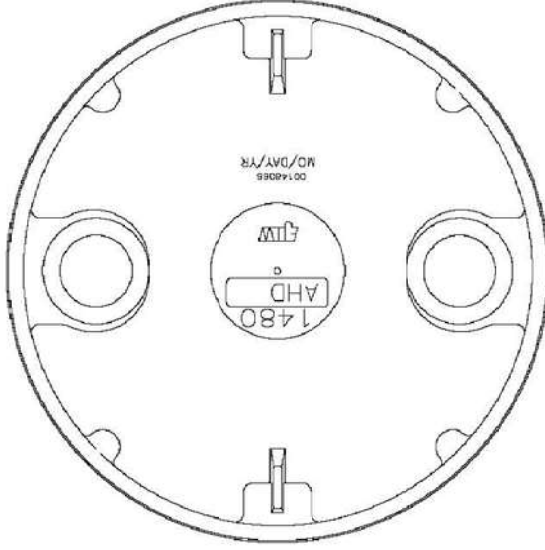
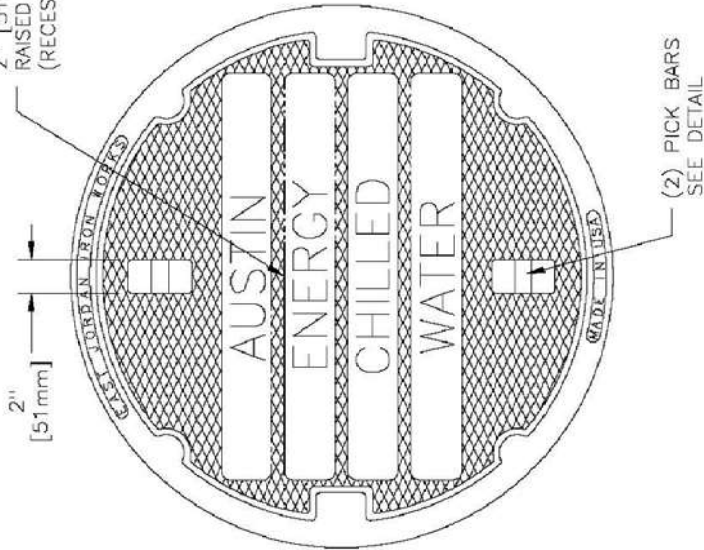
MAT'L SPEC.

COVER - GRAY IRON  
ASTM A48 CL35B

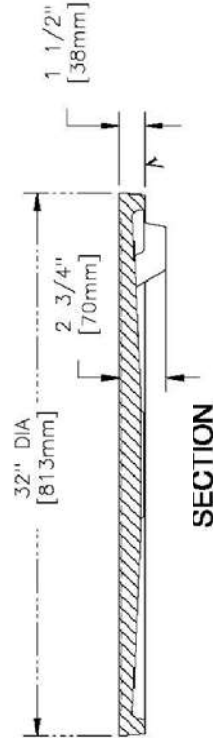
LOAD RATING

**HEAVY DUTY**

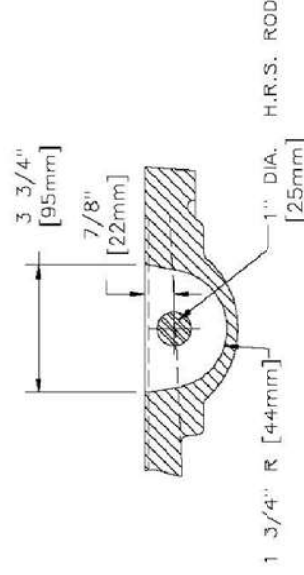
2" [51mm]  
RAISED LETTERING TYP  
(RECESSED)



**BOTTOM VIEW  
OF COVER**



**SECTION**



**PICKBAR DETAIL**

**32" CI COVER DETAIL**

6/9/2021

**R10**

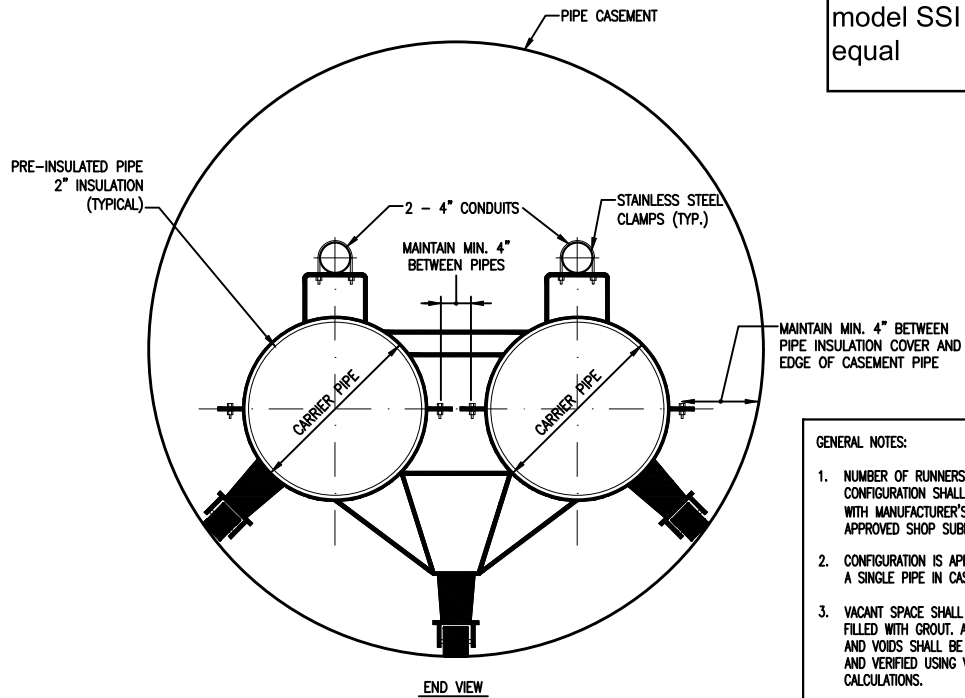
SCALE:

NONE

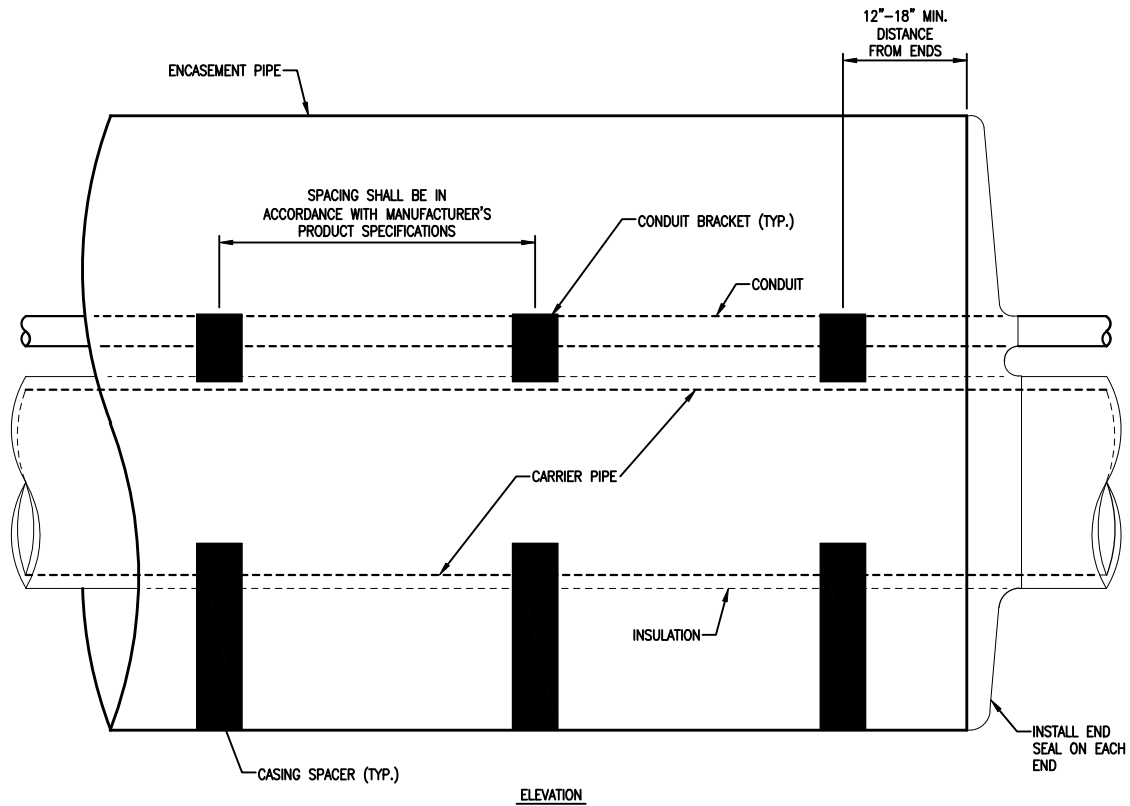
✓ MACHINED SURFACE

Or Approved Equal

Advanced Products &  
Systems Casing Spacer  
model SSI or AE approved  
equal



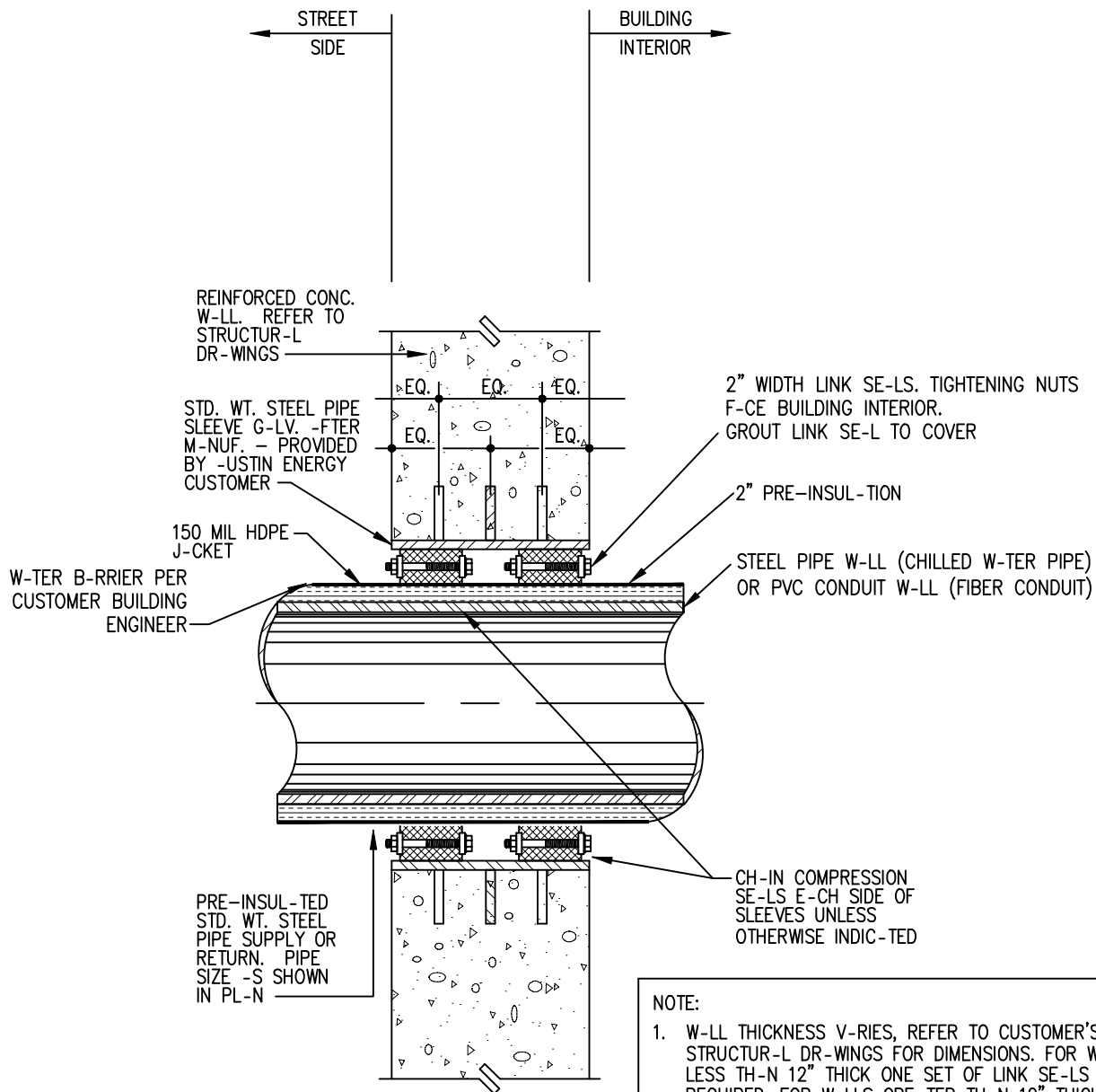
- GENERAL NOTES:
1. NUMBER OF RUNNERS AND CONFIGURATION SHALL COMPLY WITH MANUFACTURER'S APPROVED SHOP SUBMITTAL.
  2. CONFIGURATION IS APPLICABLE TO A SINGLE PIPE IN CASING
  3. VACANT SPACE SHALL BE FILLED WITH GROUT. ALL GAPS AND VOIDS SHALL BE ELIMINATED AND VERIFIED USING VOLUME CALCULATIONS.



TYPICAL CASING SPACER DETAIL

6/9/2021

SCALE: (R11) NONE



NOTE:

1. W-LL THICKNESS V-RIES, REFER TO CUSTOMER'S STRUCTUR-L DR-WINGS FOR DIMENSIONS. FOR W-LLS LESS TH-N 12" THICK ONE SET OF LINK SE-LS IS REQUIRED. FOR W-LLS GRE-TER TH-N 12" THICK TWO SETS OF LINK SE-LS -RE REQUIRED.
2. SLEEVE I.D. SIZE SH-LL FOLLOW EQU-TIONS:  
 PIPE SLEEVE SIZE = PIPE O.D. + 3/8" THICK J-CKET + 4" FOR INSUL-TION + LINK SE-L WIDTH.  
 FIBER CONDUIT SLEEVE I.D. SIZE = CONDUIT O.D. + LINK SE-L WIDTH

# PIPE PENETRATION THROUGH EXTERIOR WALL

6/9/2021

SC-LE: R12 NONE

# 8208A Cover



## PRELIMINARY

**Submital Number**

NPR13-4022

### Design Features

- Materials  
Gray Iron (CL35B)
- Design Load  
Heavy Duty
- Open Area  
n/a
- Coating  
Dipped
- √ Designates Machined Surface

**Or Approved Equal**

### Certification

- ASTM A48
- 
- Country of Origin: USA

### Drawing Revision

9/13/2013 Designer: MAH  
Revised By:

### Disclaimer

Weights (lbs/kg), dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

### Contact

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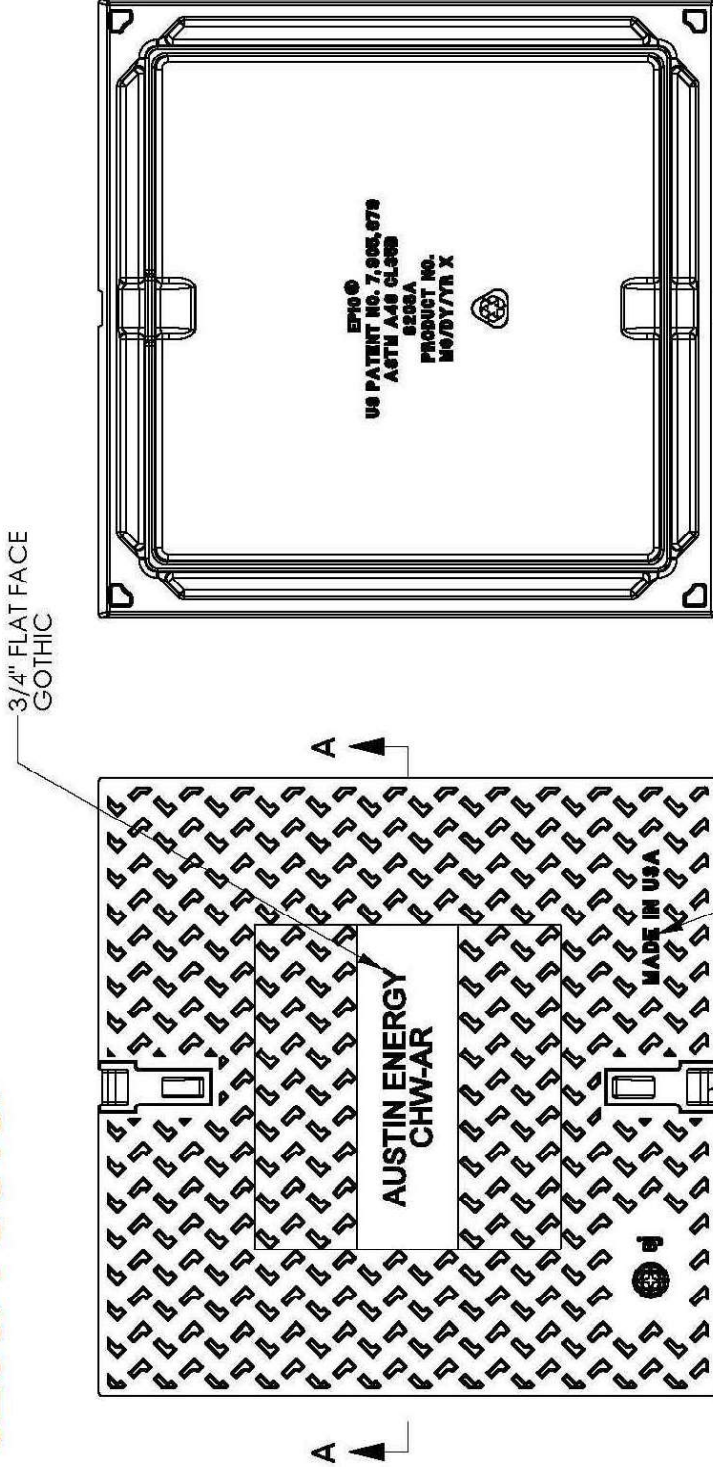
6/9/2021

# AIR RELEASE VALVE ASSEMBLY LID AND FRAME

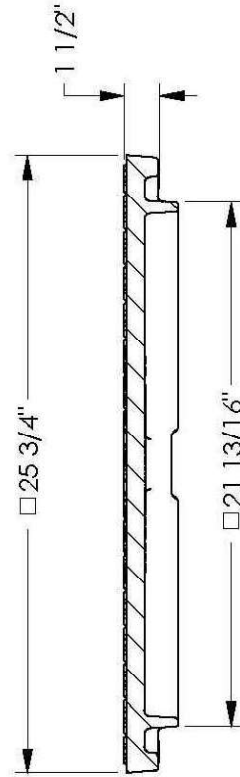
R13

NONE

SCALE:



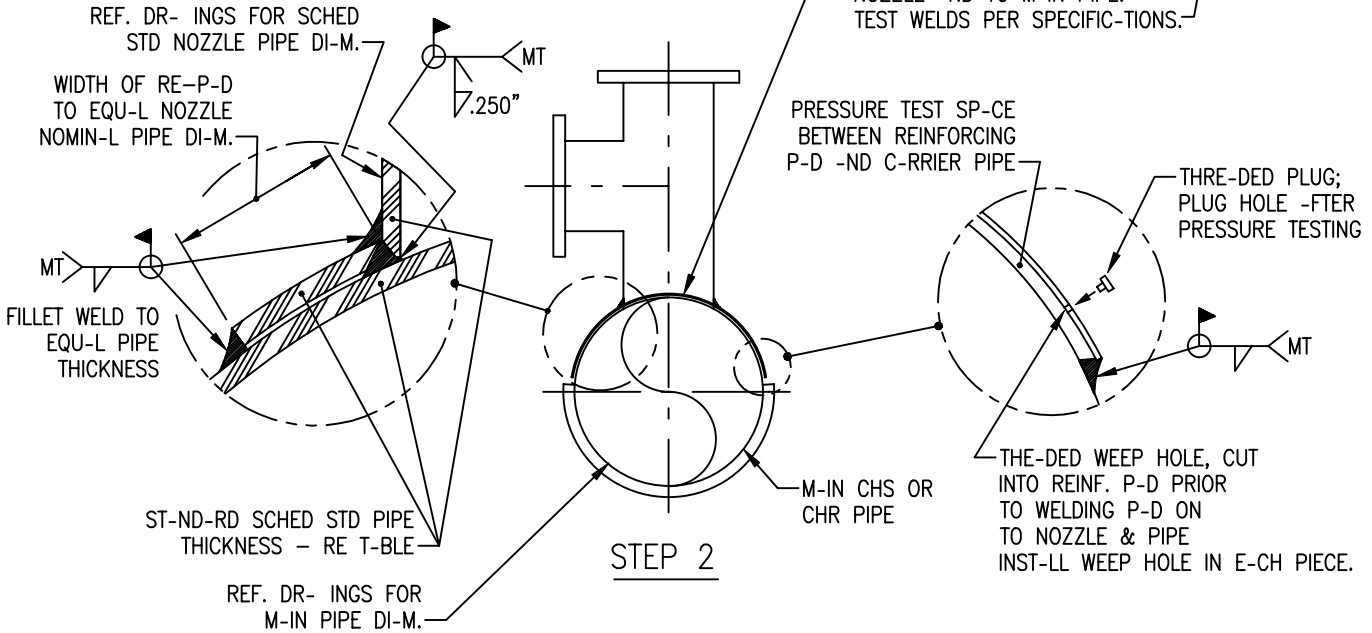
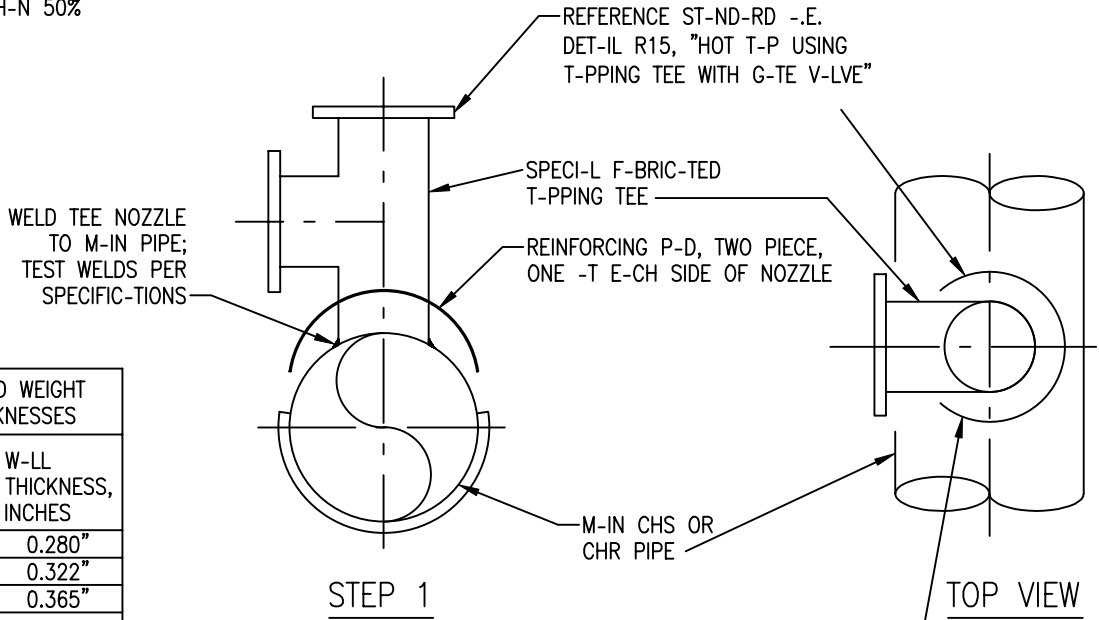
BOTTOM VIEW



SECTION A-A

THIS DET-IL IS USED WHEN TEE DI-METER IS LESS TH-N 50% OF THE M-IN PIPE.

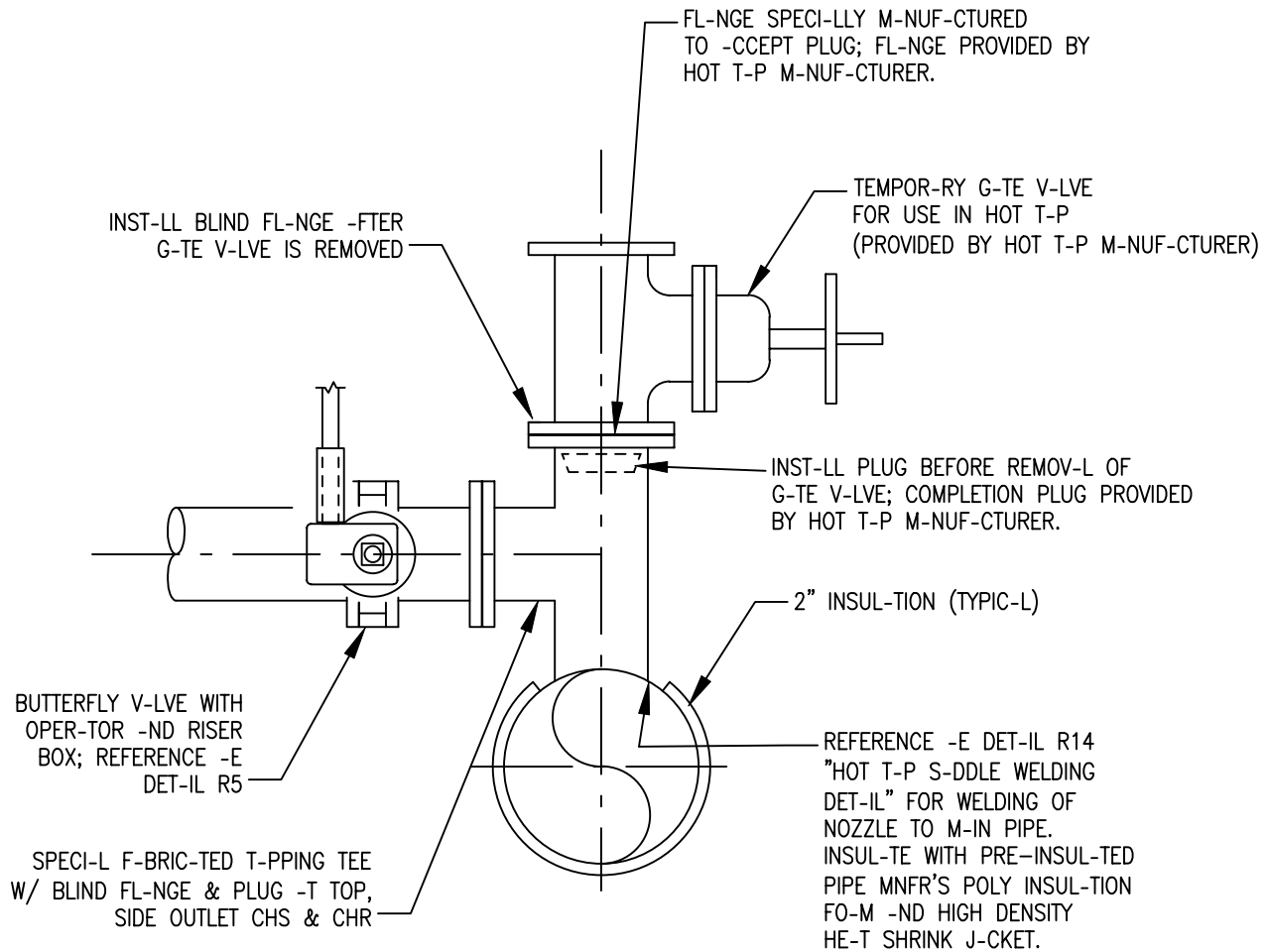
SCHD STD WEIGHT PIPE THICKNESSES	
NOM PIPE DI-M	W-LL THICKNESS, INCHES
6"	0.280"
8"	0.322"
10"	0.365"
12" & L-RGER	0.375"



### HOT TAP SADDLE WELDING DETAIL USING REINFORCING PAD

6/9/2021

SC-LE: (R14) NONE



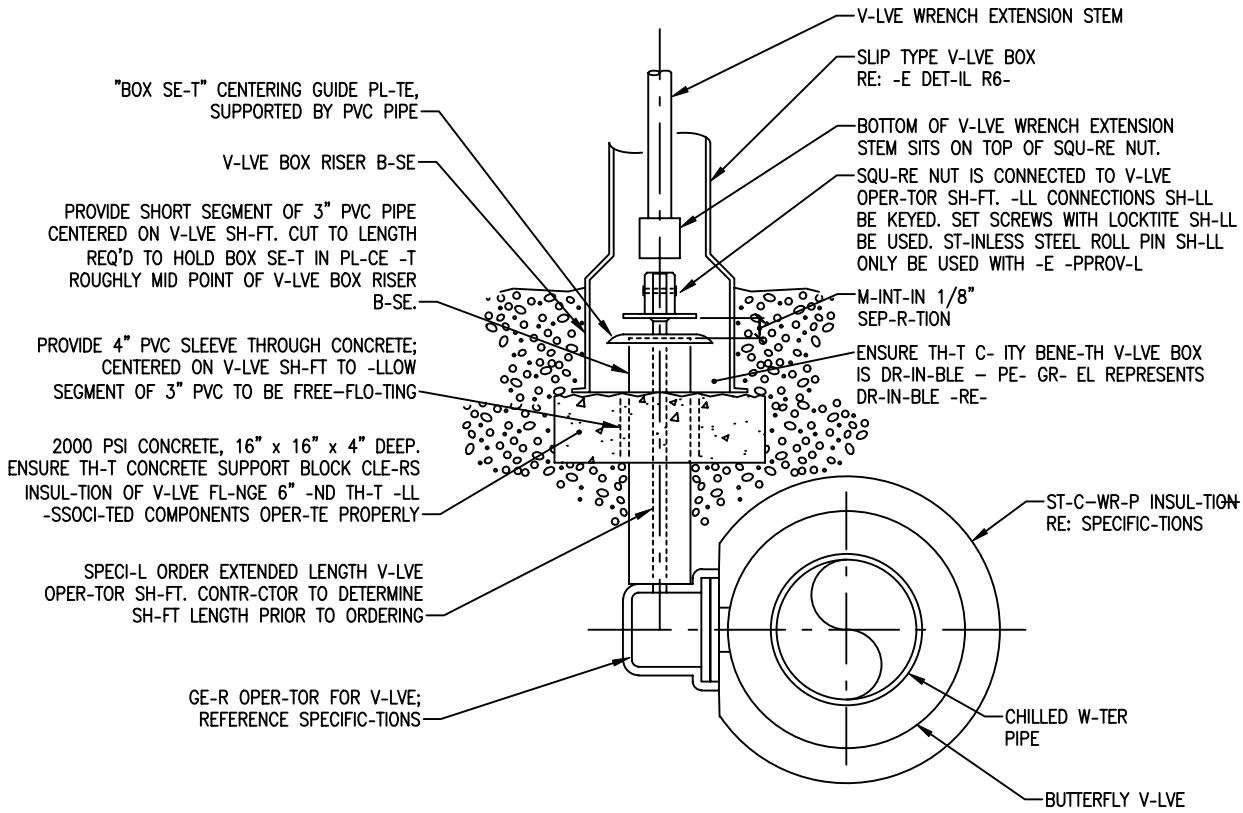
NOTE:

1. CONTR-CTOR SH-LL PERFORM - NDE TEST ON PIPE BEFORE HOT WELDING IS ST-RTED TO VERIFY PIPE W-LL THICKNESS. TEST SH-LL CONFIRM THICKNESS OF PIPE IS S-ME -S SCHEDULE WEIGHT OF PIPE. IF NOT, PRIOR -E -PPROV-L SH-LL BE GIVEN BEFORE HOT T-P IS PERFORMED.

# HOT TAP USING TAPPING TEE WITH GATE VALVE

6/9/2021

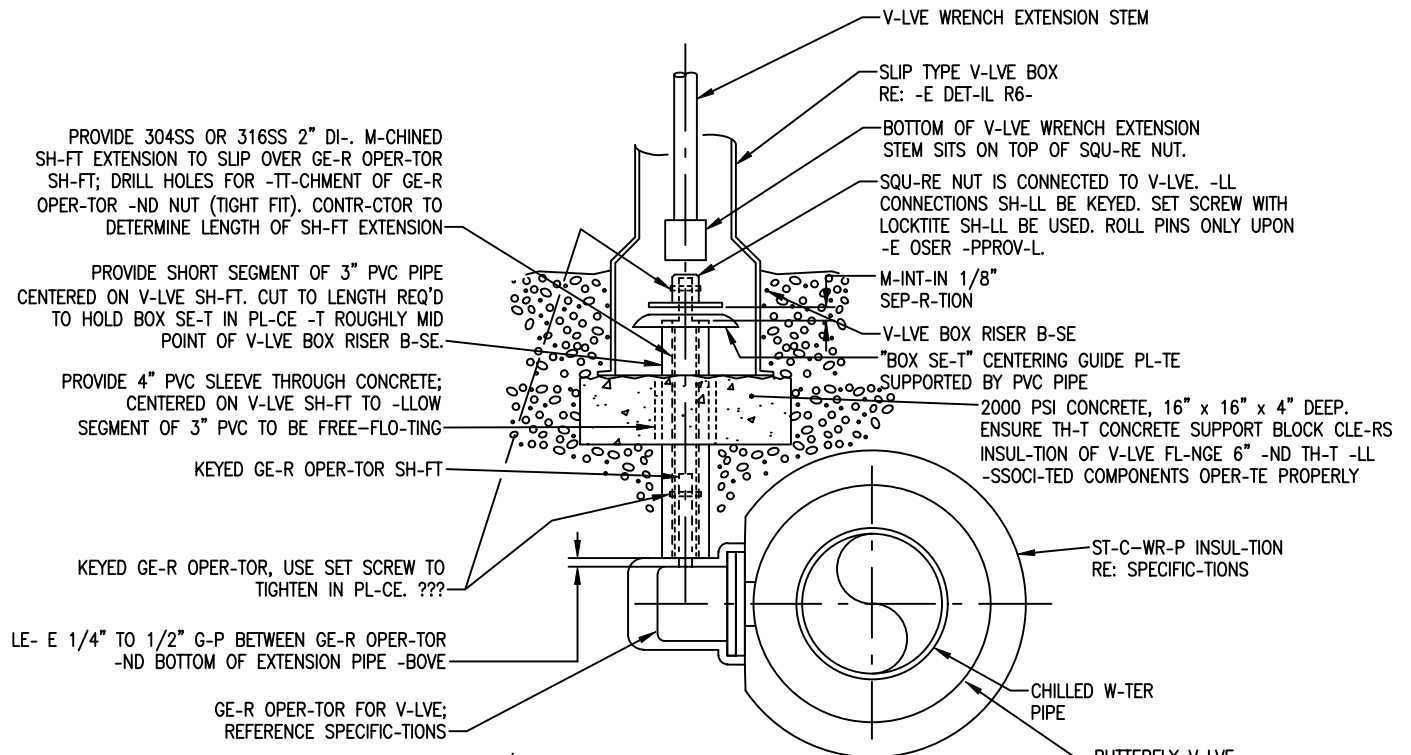
SC-LE: R15 NONE



## GEAR OPERATOR/VALVE BOX CONNECTION DETAIL FACTORY EXTENSION SHAFT

6/9/2021

SC-LE: R16 NONE



GEAR OPERATOR/VALVE BOX CONNECTION DETAIL  
 MANUFACTURED STEM EXTENSION  
 (not for existing construction)

6/9/2021

SC-LE: R16A NONE