

KUBRICKY CONSTRUCTION CORP.  
269 BALLARD ROAD

WILTON, NY 12831  
518 792-5864



**KUBRICKY CONSTRUCTION CORP.**  
A PROUD MEMBER OF THE J.A. COLLINS™ COMPANIES  
*An Equal Opportunity Employer*

Issued 04/16/15  
Respond by 04/23/15

Rutland City BRF 3000 (2014036)  
SUBMITTAL 53

To

**Timothy Pockette, PE**

Topic	900.640 Insulation in casing and on bridge for 6" force main and 10" waterline.
Status	For Approval
Spec section	900.640
Responsibility	(16) River Street
Received from submitter	4/16/15
Sent to approver	4/16/15
Required from approver	4/23/15

From

**Volker H.D. Burkowski**

Signed by

Date

4/16/15

Proceed as Indicated

Owner Authorized Representative

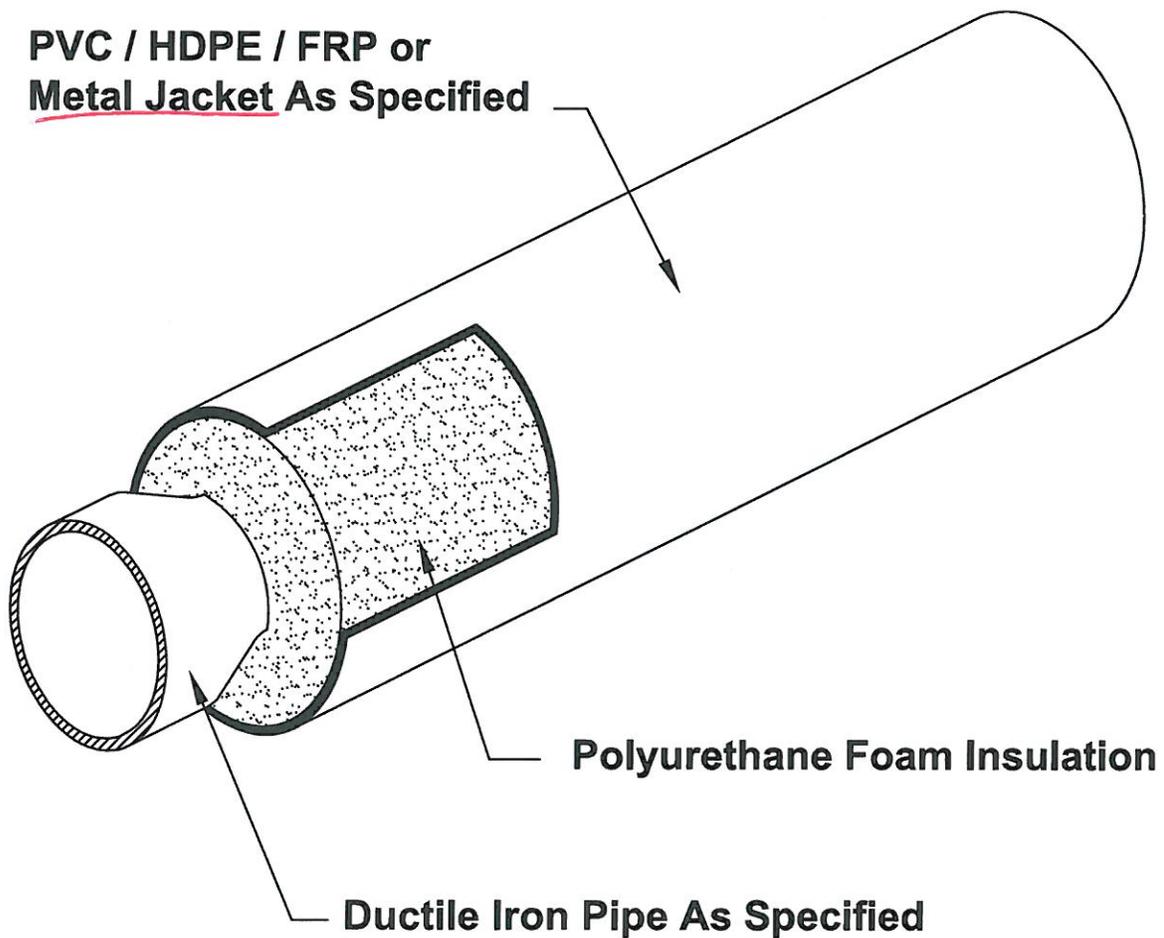
Date

# TRICON DUCTILE IRON PIPE SYSTEM



For Applications Up To 225° F Below And Above Ground

- Chilled Water
- Heating Hot Water
- Potable Water
- Waste Water



**TRICON**  
Piping Systems, Inc.®

P.O. Box 361, Canastota, New York 13032  
Tel: 315.697.8787 Fax: 315.697.8788

**TABLE 1**

Pipe Size	Nominal Insulation Thickness	HDPE Jacket O.D.	HDPE Jacket Wall
3"	1.85"	8.00"	.175"
4"	2.43"	10.00"	.175"
6"	2.55"	12.43"	.175"
8"	2.33"	14.06"	.175"
10"	2.21"	15.87"	.175"
12"	2.16"	17.83"	.200"
14"	2.05"	19.80"	.200"
16"	2.19"	22.17"	.200"
18"	2.02"	24.00"	.225"
20"	1.44"	24.92"	.225"
24"	1.83"	30.05"	.300"
30"	1.70"	36.00"	.300"

**TABLE 2**

Pipe Size	Nominal Insulation Thickness	PVC Jacket O.D.	PVC Jacket Wall
3"	2.02"	8.16"	.070"
4"	2.60"	10.20"	.080"
6"	2.55"	12.24"	.100"
8"	2.50"	14.32"	.120"
10"	2.29"	16.00"	.140"

**Service Pipe:**

The service pipe shall be Ductile Iron manufactured in accordance with ANSI/AWWA C151/A21-51. Push-on joints and mechanical joints shall be in accordance with ANSI/AWWA C111/A21.11

**Insulation:**

The insulation shall be a foamed in place closed cell polyurethane which completely fills the annular space between the carrier pipe and the exterior casing. The insulation shall have the following physical properties:

- Minimum Density (lb./cu. ft.) 2.1                   ASTM D-1622
- "K" Factor BTU/Hr. sq. ft. °F/in. .147           ASTM C-518
- 90-95 % Closed Cell                               ASTM D-2856

**Exterior Casing: \***

The exterior casing shall be

- (1) Seamless, extruded white PVC Type 1, Grade 1, Class 12454-B per ASTM D-1784 or
- (2) Seamless, High Density Polyethylene (H.D.P.E.) ASTM D-1248 with the following physical properties:  
 ASTM D-638.....Ultimate Elongation 850%  
 ASTM D-638.....Tensile Yield Strength 3300 psi  
 ASTM D-3350.....Resin Type III, Grade P34  
 ASTM D-790.....Tangent Flexural Modules 175,000 psi

**No tape casings will be allowed.**

**Fittings:**

All fittings shall be mechanical joint and restrained with a mechanical retainer gland or a concrete poured thrust block. Fittings shall be in accordance with AWWA C110 and AWWA C111.

**Field Joints:**

If required, all straight joints with an HDPE jacket shall be covered with a wrap of Polyken Tape and covered with a HDPE rockshield. PVC jackets shall be covered with a PVC sleeve and a wrap of Polyken Tape.

**Installation:**

**No Piping shall be installed in standing water. Trenches shall be maintained dry until final field closure is complete.**

The installing contractor shall handle the piping system in accordance with the directions furnished by the manufacturer and as approved by the architect and engineer. The service piping shall be hydrostatically tested to 1-1/2 times the operating pressure, or as specified in the contract documents. The test shall be maintained for a minimum time of 1 hour. **EXERCISE DUE CARE IN INSTALLING AND TESTING THE PIPING SYSTEM.**

**Backfill:**

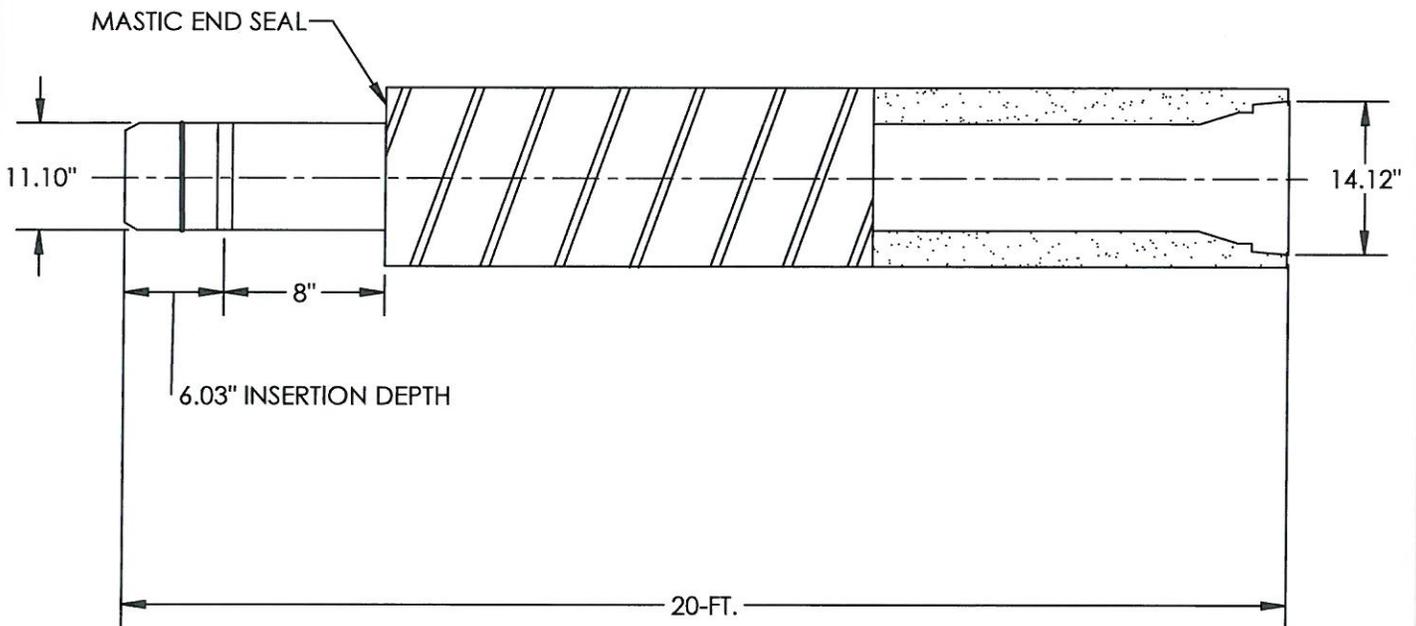
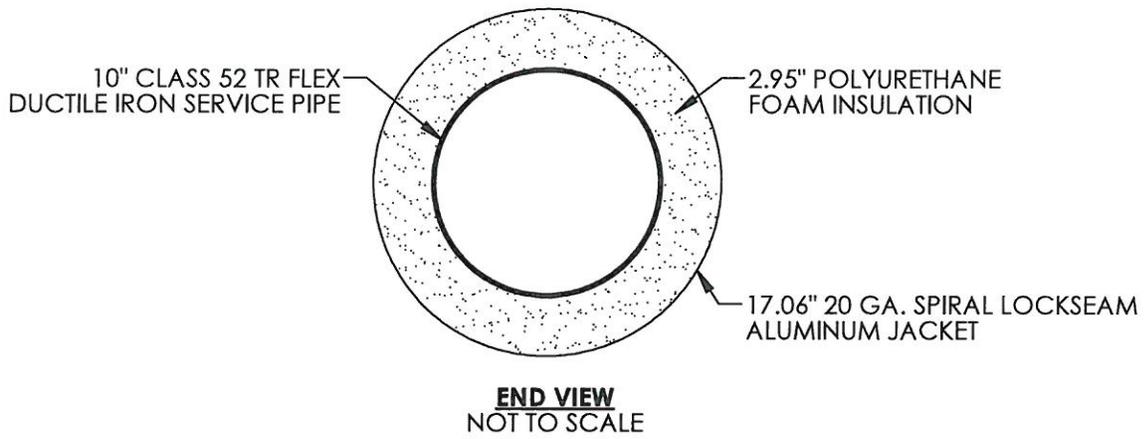
A 4-inch layer of sand or fine gravel shall be placed and tamped in the trench to provide stable and uniform bedding for the piping system. Once the system is in place, the trenches shall be carefully backfilled and hand tamped in 6" layers until a cover of at least 24" from the top of the pipe has been achieved. The first 12" of backfill shall be sand or fine gravel less than 1/2" in diameter. The remainder of the backfill shall be void of rocks, frozen earth and foreign material over 6" in diameter. The trench shall be compacted to comply with H-20 Highway loading.

**Accessories:**

- Heat Tracing

**System Options:**

- Contact your Tricon representative for available sizes and system options.
- \* Optional metallic casings for above ground applications include, Spiral Lockseam in Galvanized, Aluminum or Stainless Steel.
- \* Optional non-metallic casings for both above and below grade offered include, Filament Wound FRP.



**RUTLAND - RUTLAND, VT**

TRICON DUCTILE IRON  
10" CLASS 52 TR FLEX  
STRAIGHT LENGTH DETAIL

DATE  
4/3/2015  
REV.  
0

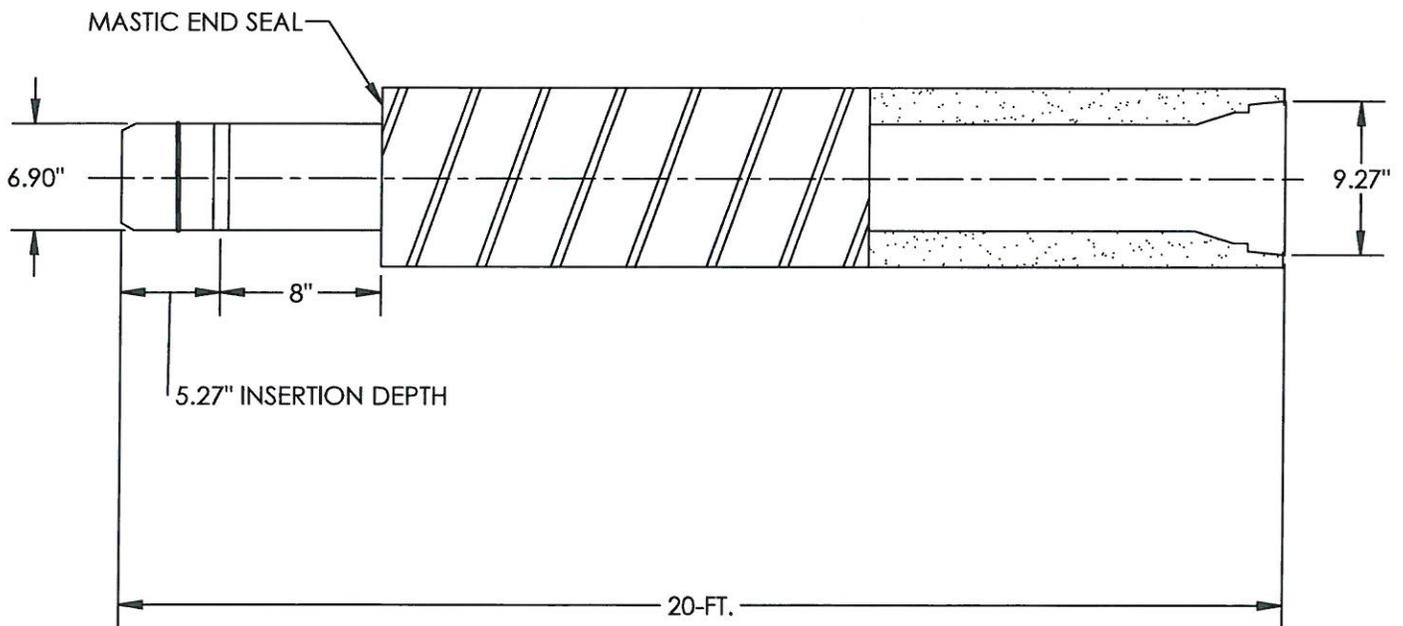
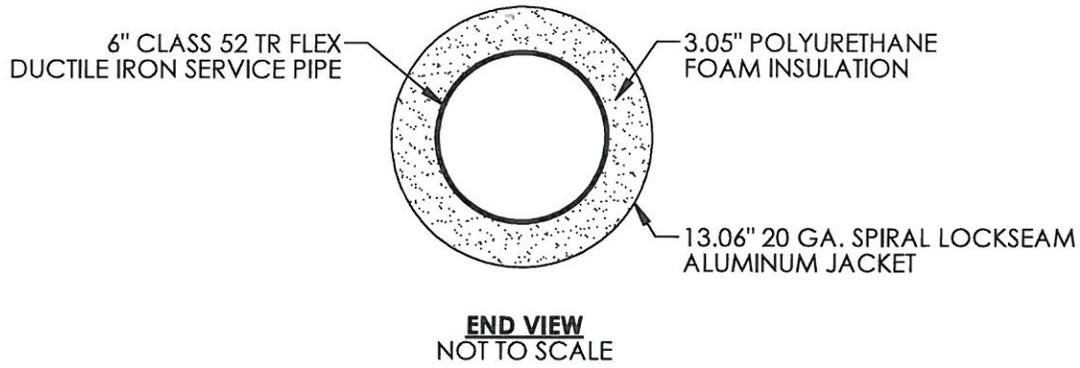
DWG. NO.  
DI-1  
SHEET  
**1 OF 4**



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**RUTLAND - RUTLAND, VT**

TRICON DUCTILE IRON  
6" CLASS 52 TR FLEX  
STRAIGHT LENGTH DETAIL

DATE  
4/3/2015  
REV.  
0

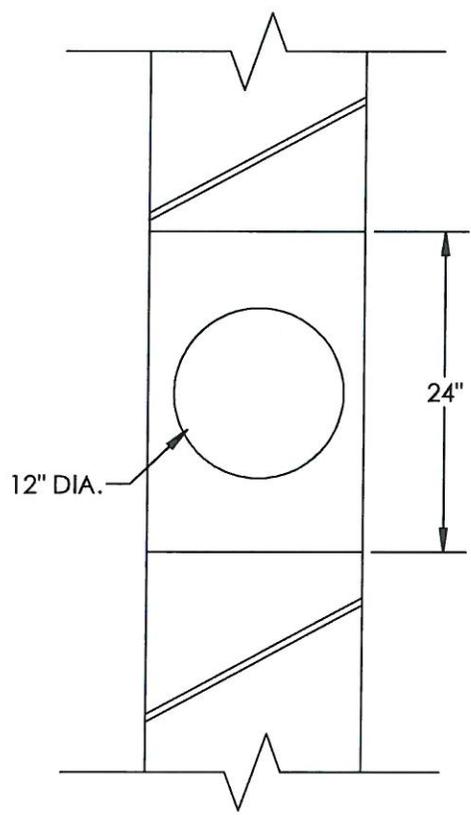
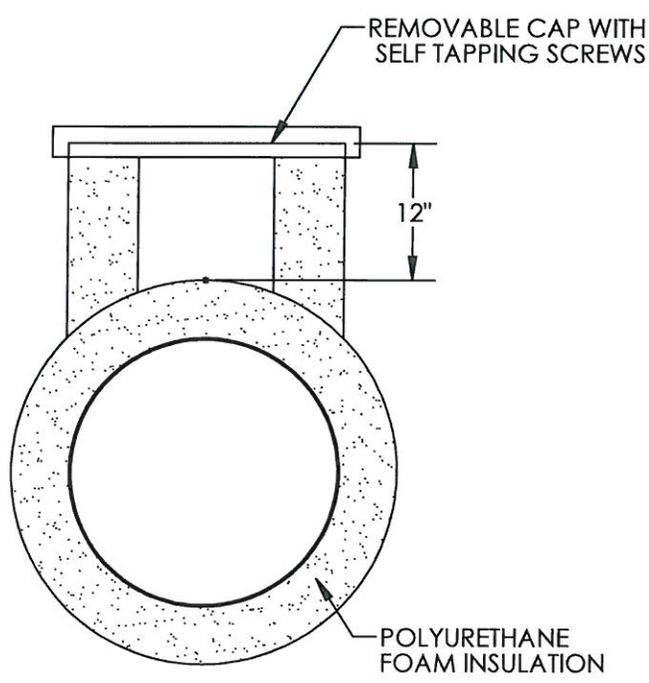
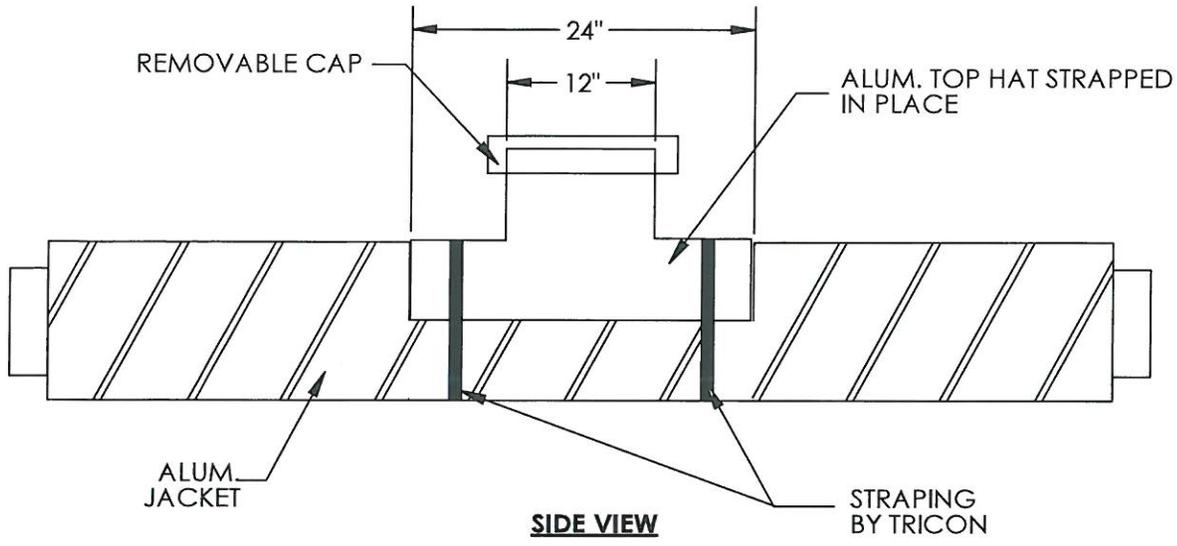
DWG. NO.  
DI-2  
SHEET  
**2 OF 4**



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**END VIEW**

**TOP VIEW**

**RUTLAND - RUTLAND, VT**

TRICON DUCTILE IRON  
CLASS 52 TR FLEX  
AIR RELEASE COVER DETAIL

DATE 4/3/2015  
REV. 0

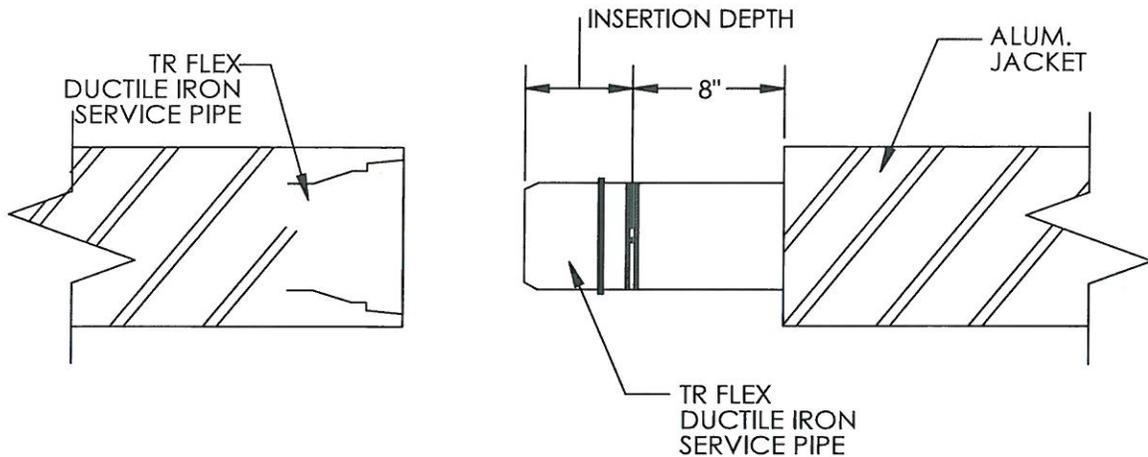
DWG. NO. DI-3  
SHEET 3 OF 4



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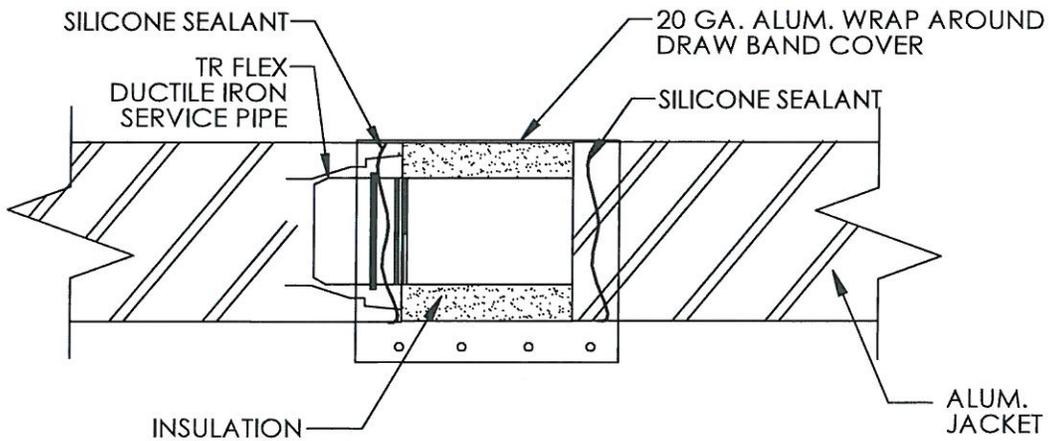
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PHASE 1



REMOVE ALL FOREIGN MATTER IN SOCKET. THE GASKET SEAT SHOULD BE THOROUGHLY INSPECTED TO BE CERTAIN IT IS CLEAN. FOREIGN MATTER IN THE GASKET SEAT MAY CAUSE A LEAK. LUBRICATE PIPE ENDS AND GASKET. LUBRICATE PIPE ENDS AS DIRECTED BY US PIPE.

PHASE 2



APPLY PRECUT INSULATION IN PLACE OVER JOINT. SOME TRIMMING MAY BE NECESSARY FOR A CLOSE FIT. PUT A BEAD OF SILICONE SEALANT (SUPPLIED BY OTHERS) AROUND CASING 2" FROM END OF CASING. PLACE WRAP AROUND DRAW BAND OVER JOINT AND TIGHTEN BOLTS.

**RUTLAND - RUTLAND, VT**

TRICON DUCTILE IRON  
CLASS 52 TR FLEX  
FIELD JOINT DETAIL

DATE  
4/3/2015  
REV.  
0

DWG. NO.  
DI-4  
SHEET  
**4 OF 4**



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