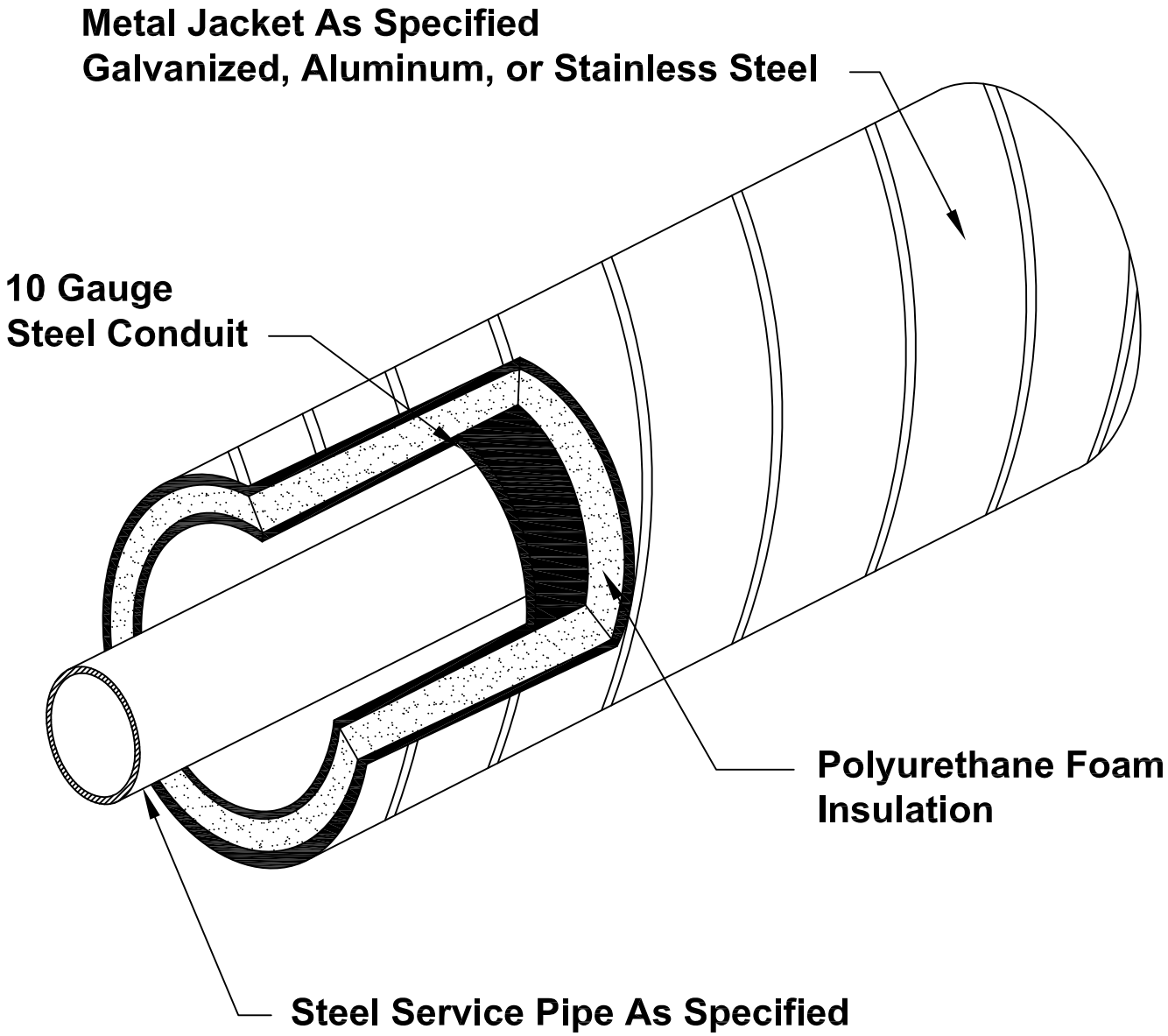
DOUBLE-CON PLUS PIPE SYSTEM

For Above Ground Containment Piping Systems

- ☐ Chemicals
- ☐ Petroleum Products



TRICON FORCE
PIPING SOLUTIONS
tfpiping.com

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Phone: 904-687-2874

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DOUBLE-CON PLUS

System Specifications

Iron Pipe Size	Steel Conduit O.D.	Steel Conduit Wall	Outer Insulation (IN)*	Alum./Stainless/Galv. Jacket O.D. (IN)	Metal Jacket Wall Thickness
1”	4.50”	.120”	1.75”	7.06’	.031”
2”	4.50”	.120”	1.75”	7.06”	.031”
2”	6.63”	.134”	1.69”	10.06”	.031”
2½”	6.63”	.134”	1.69”	10.06”	.031”
3”	6.63”	.134”	1.69”	10.06”	.031”
4”	8.63”	.188”	1.69”	12.06”	.031”
5”	8.63”	.188”	1.69”	12.06”	.031”
6”	10.75”	.188”	1.63”	14.06”	.031”
8”	12.75”	.188”	1.63”	16.06”	.031”

Service Pipe:
Carbon steel service pipe shall be standard weight or extra heavy, A53 ERW or A106 seamless beveled for welding. Stainless Steel piping shall be type 304L or 316L ASTM A312/A312M Copper piping to be Type K cleaned and capped for medical use or Type L. All joints for pipe 2 ½” and larger in size shall be butt-welded. Sizes 2” and smaller shall be socket welded. Straight lengths of piping will be supplied with 6” of piping exposed at each end for field joint fabrication. Pipe length to be supplied in 21-42 ft. lengths.

Containment Pipe:
The outer conduit shall be electric resistance welded steel pipe conforming to ASTM Specification A-135, or ASTM A53. Stainless Steel piping shall be Type 304L or 316L.

Service Pipe Supports:
The service pipe within the inner-conduit shall be supported at not more than 10 feet intervals. The supports shall be designed to allow for continuous airflow and draining of the containment system.

Insulation: (Outer Layer)*
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 with a 1” minimum thickness. Meets requirements for UL 94 HF-1 rating. The insulation shall have the following physical properties:

Minimum Density (lb./cu. Ft) 2.0	ASTM D-1622
90-95% Closed Cell	ASTM D-6556
“K” Factor BTU/Hr. sq. ft. ℉.in. .16	ASTM D-518
Compressive Strength	ASTM D-1621

Exterior Casing:**
Casing to be a minimum 22 GA. Spiral Lockseam
Aluminum with the following properties: ASTM B-209/Alloy 3003/Temper H14
(2) Galvanized with the following properties: ASTM A-527/G-60 Coating
(3) Stainless Steel with the following properties ASTM A-167

Field Joint Closures:
Conduit field joint closures shall consist of a cylindrical 10-gauge sleeve having two (2) horizontal splits, insulation outer layer of polyurethane foam and wrap around bolted cover of the specified metal.

Sub-Assemblies:
Fittings: All carrier pipe fittings to be factory fabricated and class 3000 per ASME B16.11. and to be factory fabricated and contained. Primary and secondary fittings to be 100% air-tested at the factory. Primary pipe to be welded to ANSI B31.3. All fittings 2-1/2’ and larger to be butt weld long radius conforming to ASME B16.9. Fittings 2” and smaller to be socket weld conforming to ASME B 16.11

Containment systems made near the installation site or by the installer or other organization not regularly engaged in manufacturing containment systems, will not be allowed.

Accessories:
- Heat Tracing
- Leak Detection

- Contact your Tricon representative for available sizes and system options.

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Installation For Below Grade Applications:

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 inner conduit shall be air tested at 15 psig. The test shall be maintained for a minimum time of 1 hour. ***EXERCISE DUE CARE WHEN INSTALLING AND TESTING THE PIPING SYSTEM***

Backfill

A 4-inch layer of sand or fine gravel, less than ½" in diameter, shall be placed and tamped in the trench to provide uniform bedding for the **Steel-Con Plus** system. Once the system is in place, the trenches shall be carefully backfilled with similar material and hand tamped in 6" layers until a minimum of 12" above the top of the preinsulated pipe has been achieved. The remainder of the backfill shall be void of rocks, frozen earth and foreign material. The trench shall be compacted to comply with H-20 Highway loading.

System Options:

* Insulation thickness will vary depending on the type of insulation specified and the operating temperature.

** Optional non-metallic casings for below grade offered include, Filament Wound FRP.

*** Optional Fusion Bonded Epoxy or Hot Dipped Galvanized coatings available for the 10-Ga. steel conduit

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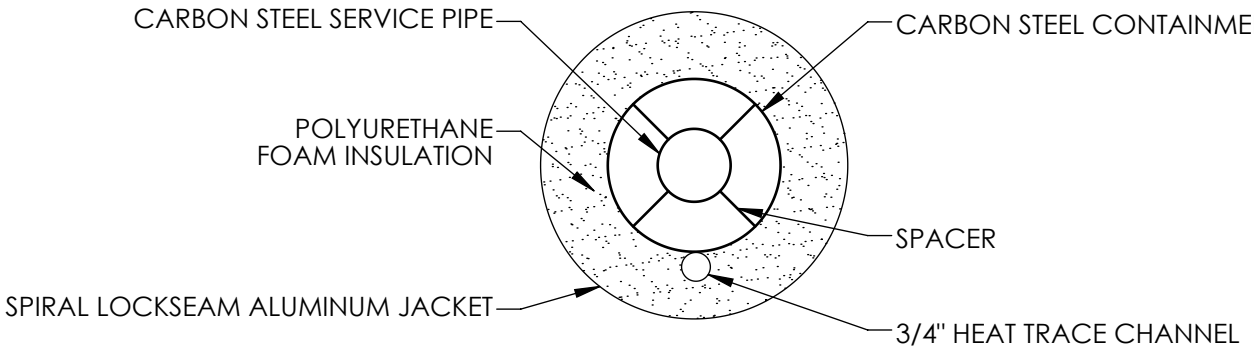
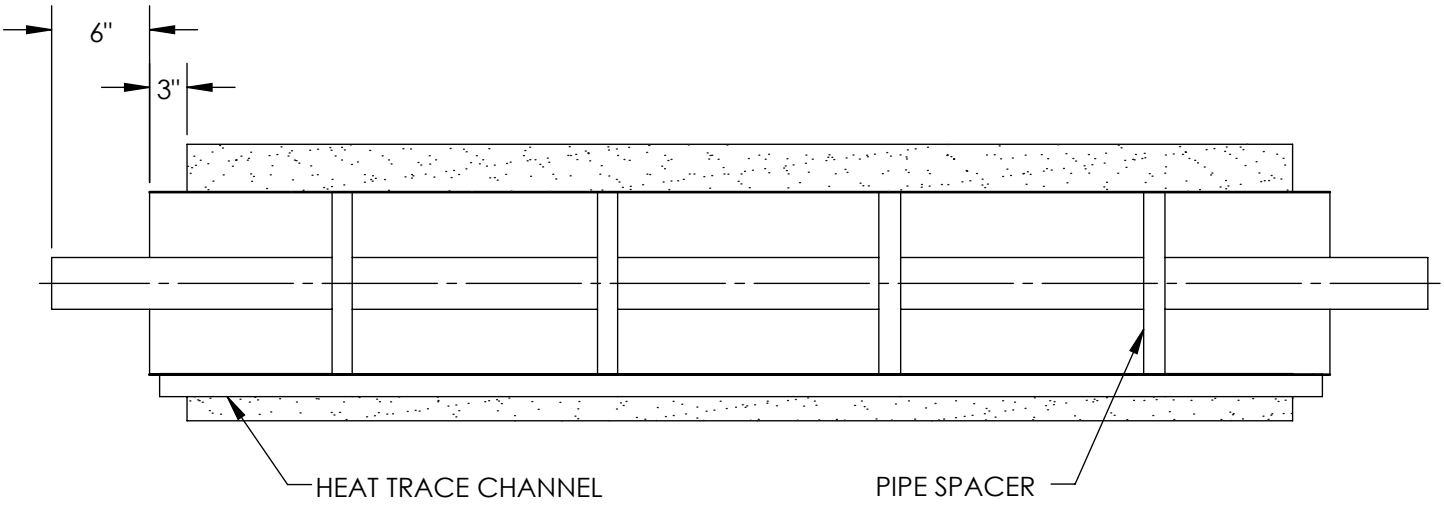


END VIEW
NOT TO SCALE



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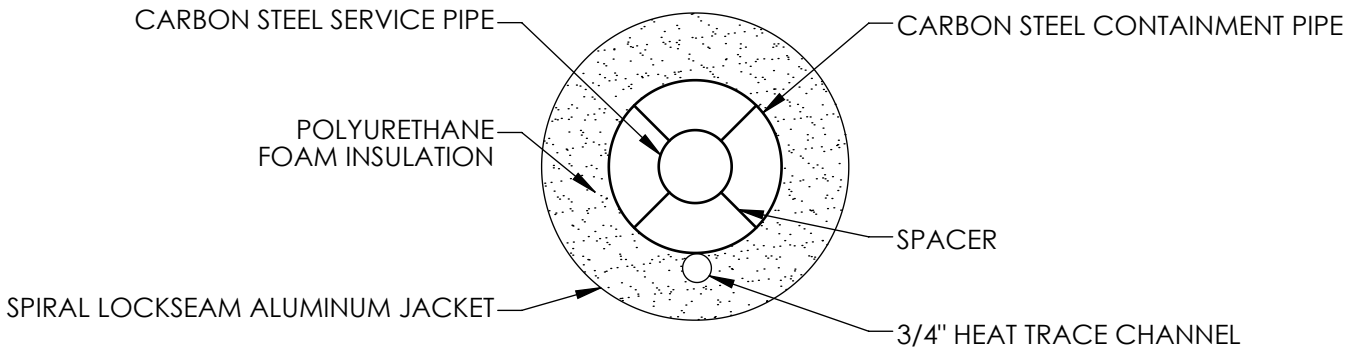
SHEET TITLE
DOUBLE CON PLUS STRAIGHT LENGTH DETAIL

PRODUCT	SIZE	SCALE	DATE
DOUBLE-CON PLUS	A	NTS	05/14/2015
	DWG. NO. 1		SHEET 1 OF 4



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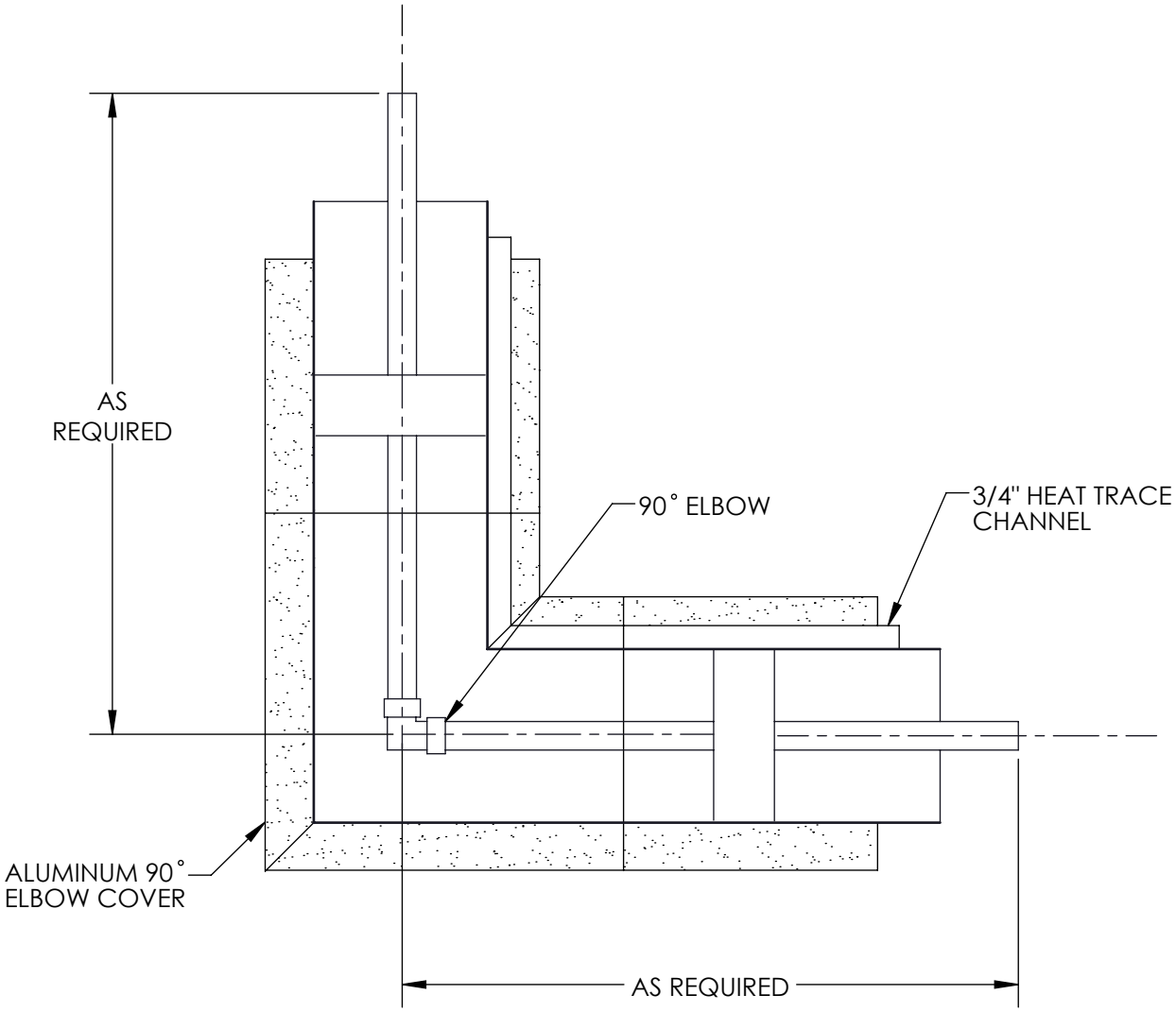

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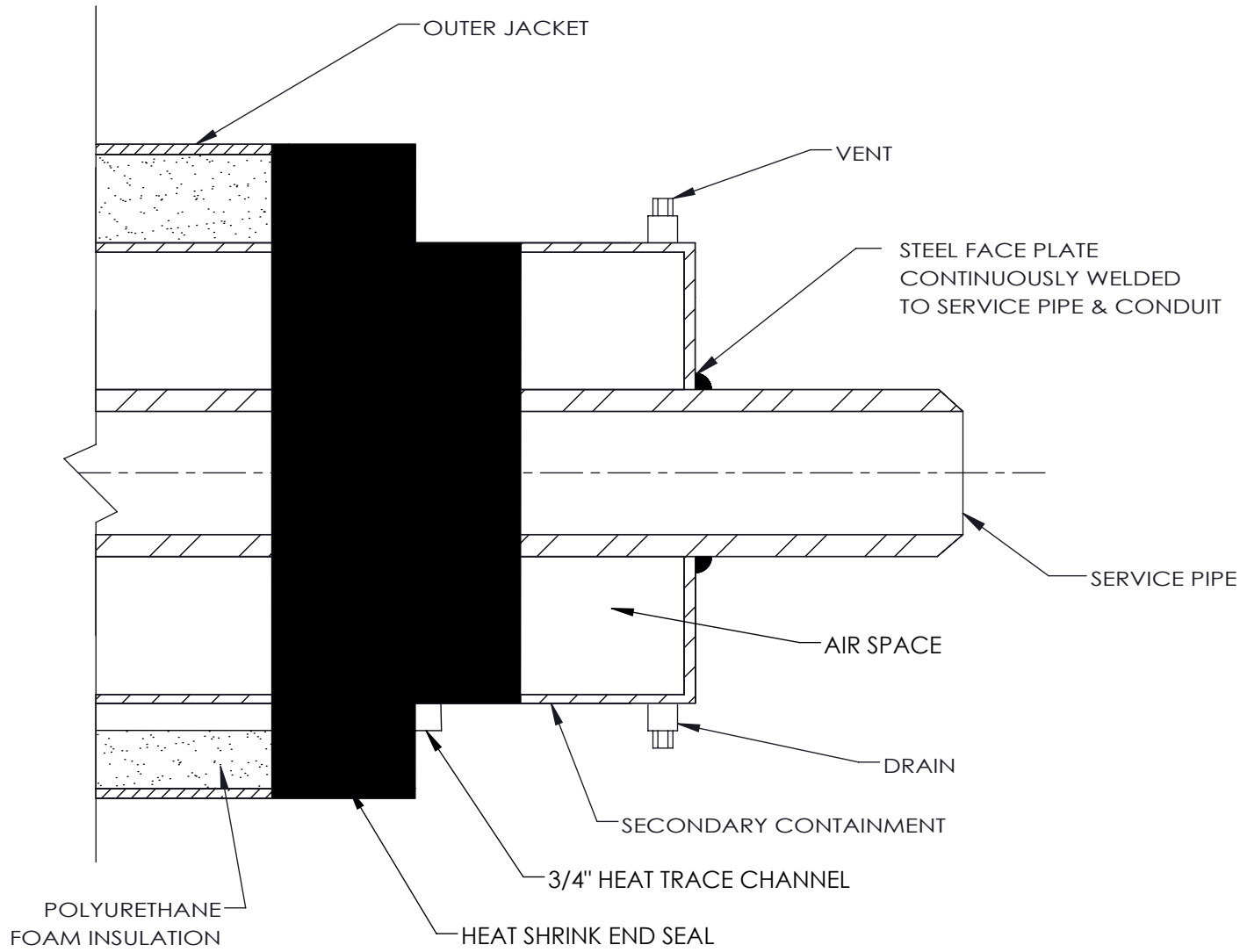
SHEET TITLE
DOUBLE CON PLUS ELBOW DETAIL

PRODUCT	SIZE	SCALE	DATE
DOUBLE-CON PLUS	A	NTS	05/14/2015
	DWG. NO. 2		SHEET 2 OF 4



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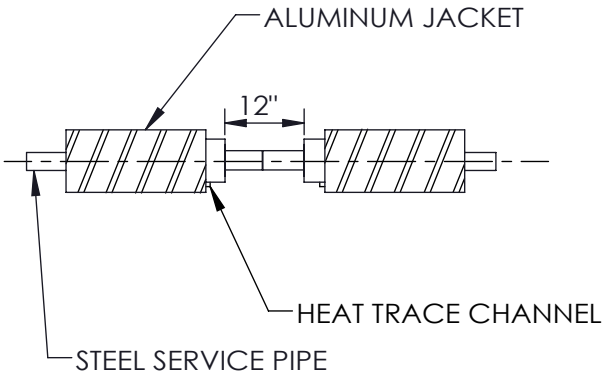
SHEET TITLE
DOUBLE CON PLUS WELD END SEAL DETAIL

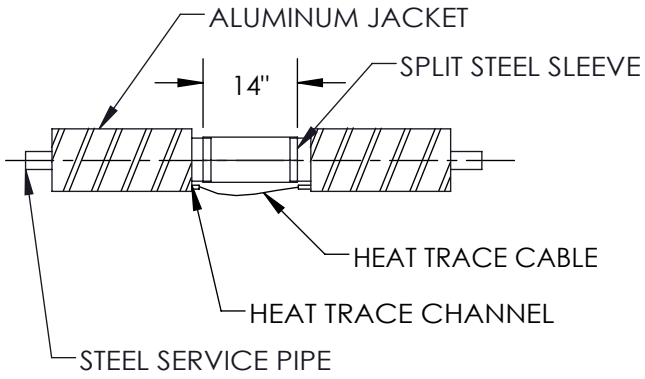
PRODUCT	SIZE	SCALE	DATE
DOUBLE-CON PLUS	A	NTS	05/14/2015
	DWG. NO. 3		SHEET 3 OF 4

STEP 1



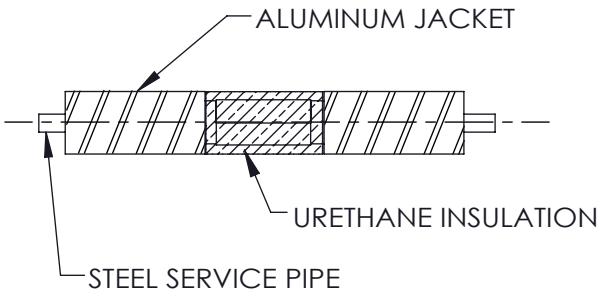
WELD AND TEST SERVICE PIPE AS REQUIRED.

STEP 2



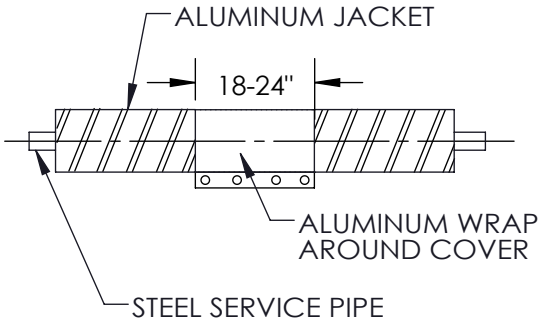
FIT 10 GA. SPLIT STEEL SLEEVE ONTO CONDUIT AND WELD IN PLACE WITH TWO CIRCUMFERENTIAL AND ONE HORIZONTAL WELD. AIR TEST TO 15 PSI. FEED HEAT TRACE CABLE THROUGH CHANNEL TO ADJOINING PIPE SECTION.

STEP 3



APPLY URETHANE FOAM INSULATION IN PLACE AND SECURE.

STEP 4



CENTER ALUMINUM WRAP AROUND COVER OVER FIELD JOINT AND TIGHTEN BOLTS.

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SHEET TITLE
DOUBLE CON PLUS FIELD JOINT KIT DETAIL

PRODUCT
DOUBLE-CON PLUS

SIZE	SCALE	DATE
A	NTS	05/14/2015

DWG. NO.	SHEET
4	4 OF 4