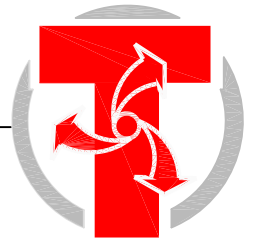


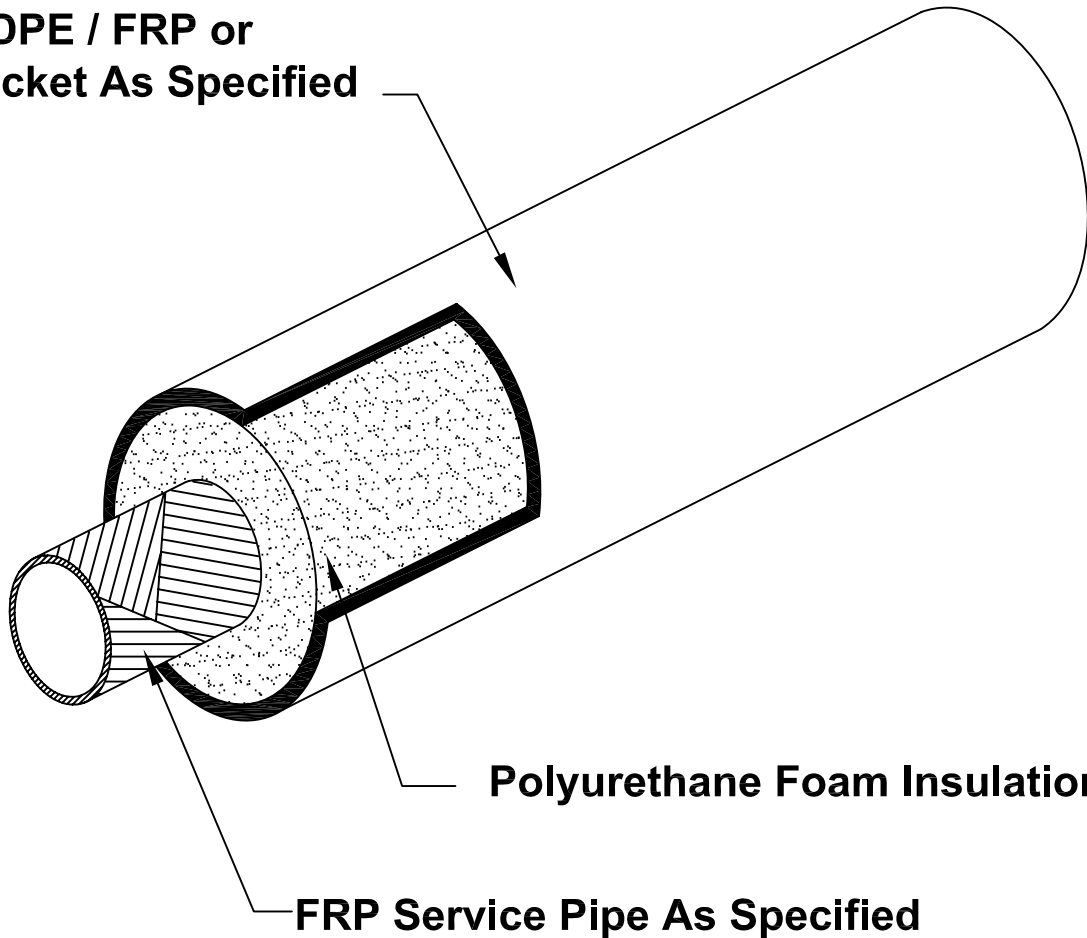
TRICON FRP PIPE SYSTEM



For Applications Up To 250° F Below And Above Ground

- Chilled Water
- Condensate
- Fuel Oil
- Heating Hot Water
- Potable Water
- Process Piping
- Waste Water

**PVC / HDPE / FRP or
Metal Jacket As Specified**



TRICON
Piping Systems, Inc. ®

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

TABLE 1

Pipe Size	Minimum Insulation Thickness	PVC Jacket O.D.	PVC Jacket Wall
2"	1.81"	6.14"	.070"
3"	1.25"	6.14"	.070"
4"	1.75"	8.16"	.080"
6"	1.69"	10.20"	.100"
8"	1.69"	12.24"	.120"
10"	1.63"	14.32"	.140"
12"	1.47"	16.00"	.160"

Service Pipe:

The service pipe can be filament wound fiberglass-reinforced epoxy, bell and spigot, designed to withstand up to 250°F. Pipe sizes 2" through 8" may be supplied in 20 Ft. random lengths. Pipe sizes 10" through 16" to be supplied in 40 Ft. lengths. Straight lengths of piping will be supplied with 6" of piping exposed at each end for field joint fabrication.

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.) 2.0	ASTM D-1621
"K" Factor BTU/Hr. sq. ft. °F/in. 147	ASTM C-177
90-95 % Closed Cell	ASTM D-2856

Exterior Casing:*

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

No polyethylene tape casings will be allowed.

Sub-Assemblies:

Any requirement for thrust blocking is the responsibility of the design engineer. Fittings that do not require restraint blocks should be field insulated. Fittings that require restraint blocks must have blocks designed by the design engineer. FRP pipe should be joined to steel systems with flanges. All steel systems should be anchored within five feet of connection point to eliminate any thrust, stress, or torque from being transferred to the FRP from the steel.

TABLE 2

Pipe Size	Minimum Insulation Thickness	HDPE Jacket O.D.	HDPE Jacket Wall
2"	2.00"	6.63"	.150"
3"	1.43"	6.63"	.150"
4"	1.58"	8.00"	.150"
6"	1.51"	10.00"	.175"
8"	1.73"	12.43"	.175"
10"	1.48"	14.06"	.175"
12"	1.39"	15.87"	.175"

Field Joints:

After joining and hydrostatic testing, PVC jacketed straight field joints shall be insulated with polyurethane foam to the thickness specified, PVC sleeve and pressure sensitive tape. HDPE jackets will use polyurethane foam and a heat shrinkable sleeve.

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 carrier piping shall be hydrostatically tested as specified in the contract documents.

EXERCISE DUE CARE WHEN INSTALLING AND TESTING THE PIPING SYSTEM. DO NOT TEST WITH AIR OR GAS.

Backfill:

A 4-inch layer of sand or fine gravel, less than 1/2" in diameter, shall be placed and tamped in the trench to provide uniform bedding for the **TRICON FRP** 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.

Accessories:

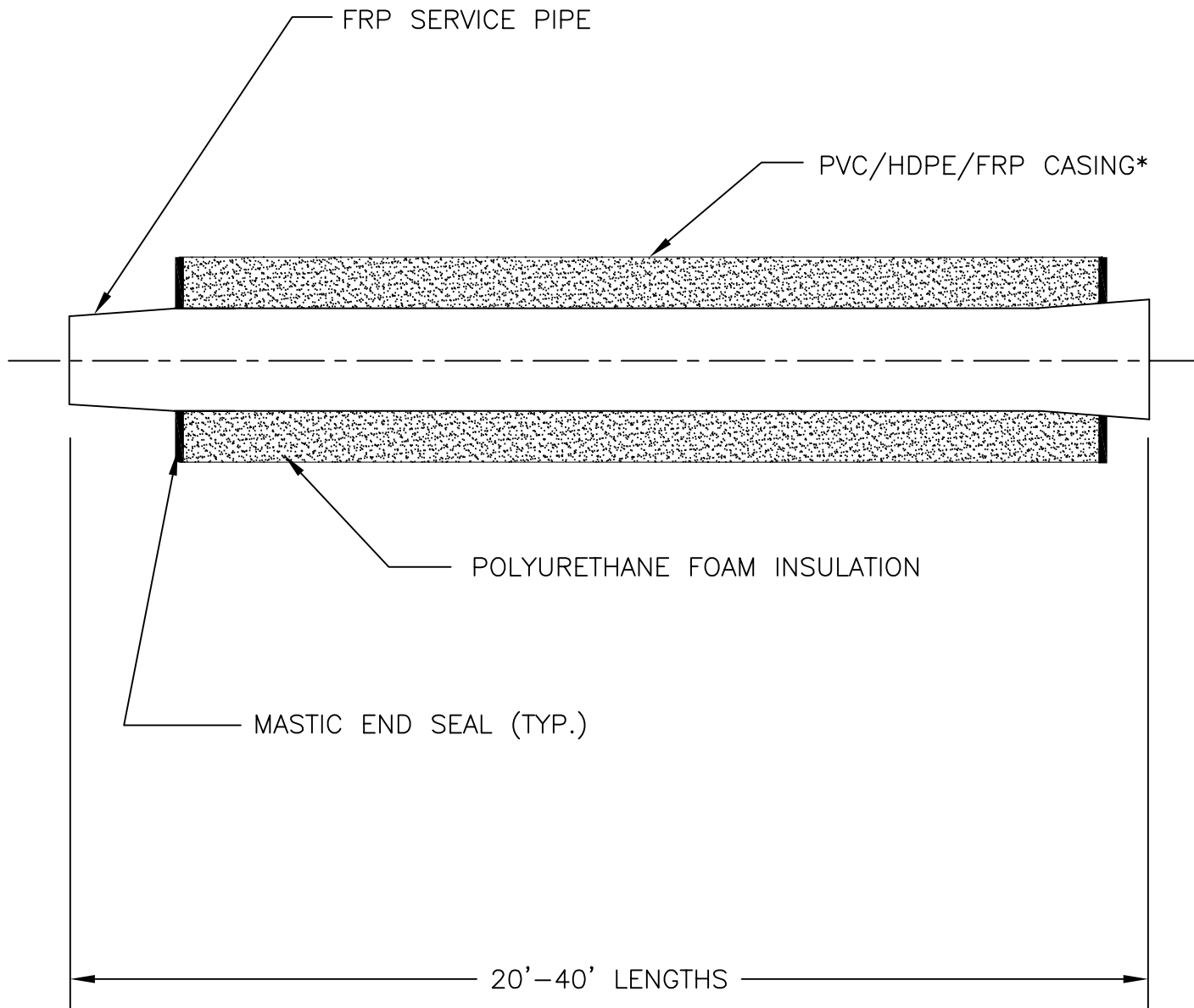
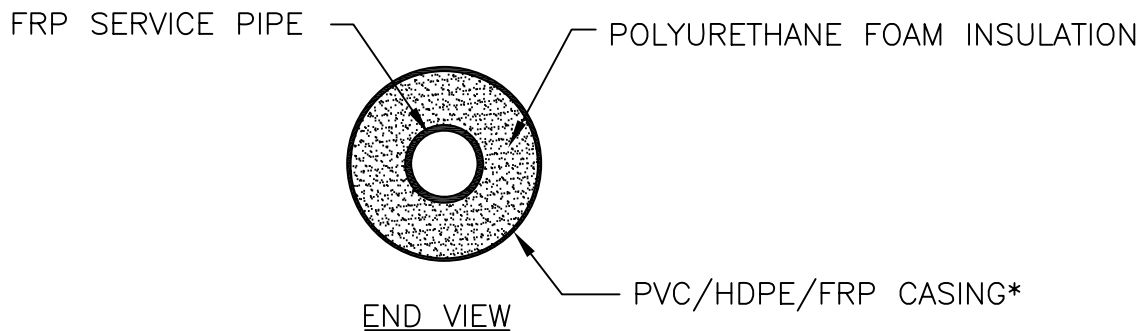
- Heat Tracing

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 below grade offered include, Filament Wound FRP.



* OPTIONAL METAL JACKET AVAILABLE FOR ABOVE GRADE APPLICATION.

FRP STRAIGHT LENGTH DETAIL - BELL x PLAIN END



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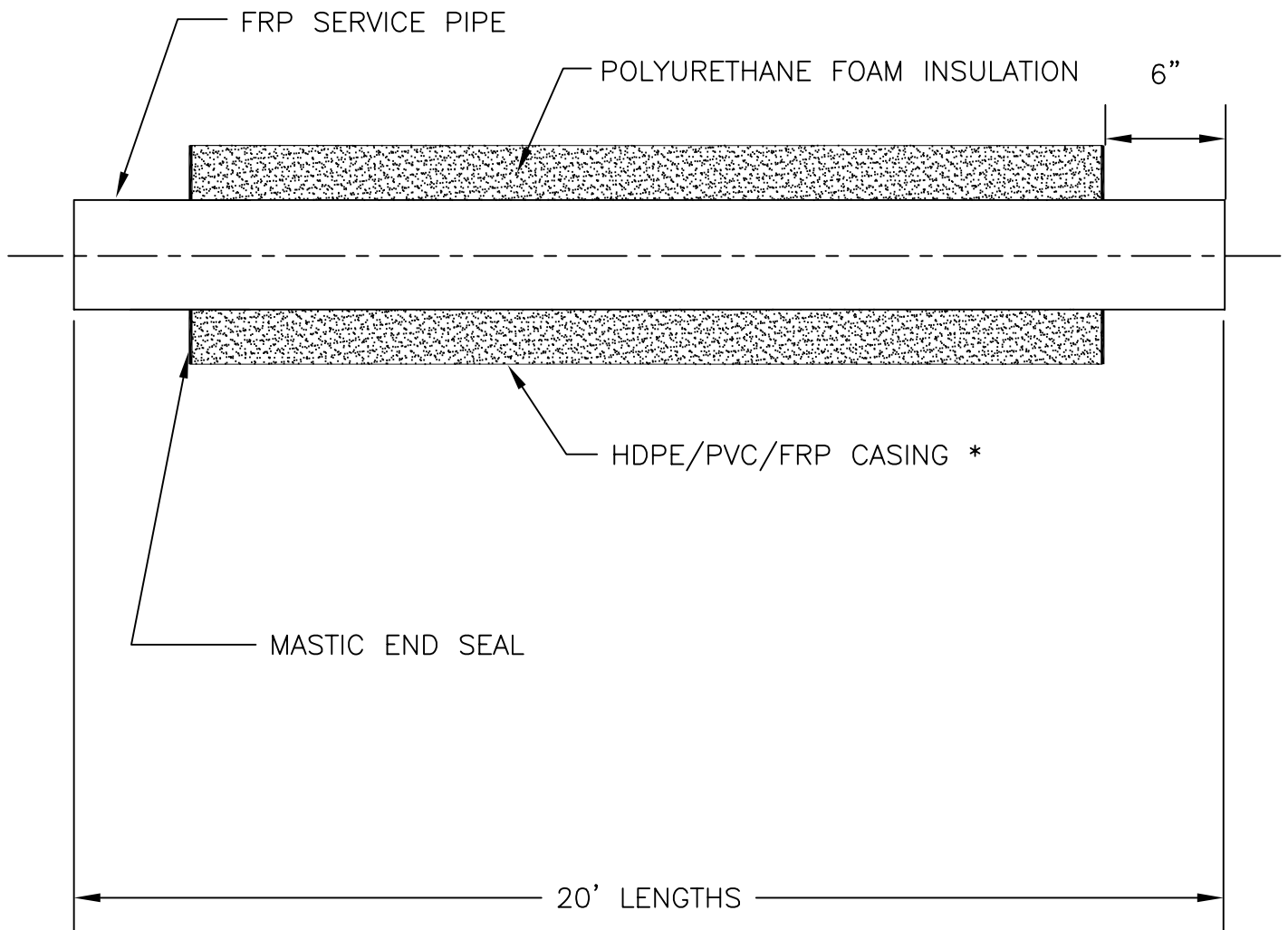
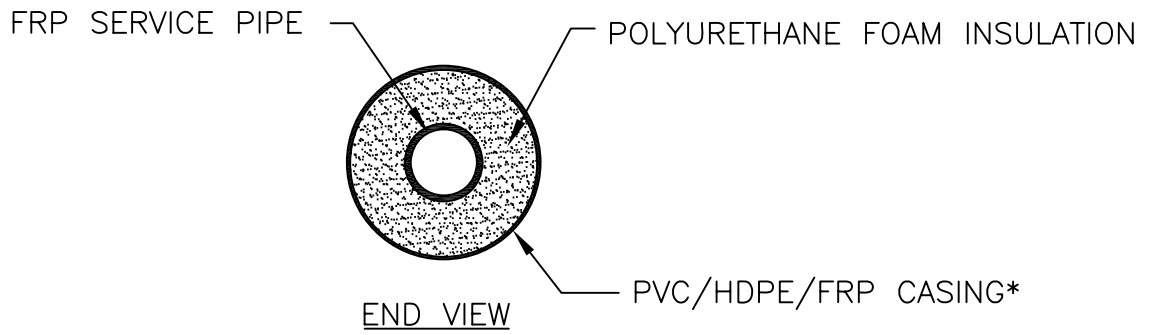
TRICON FRP

Date: 03/09/06

Dwg. No. FRP-1A

Rev.:

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* OPTIONAL METAL JACKET AVAILABLE FOR ABOVE GRADE APPLICATION.

FRP STRAIGHT LENGTH DETAIL - PLAIN END x PLAIN END

TRICON FRP

Date: 03/09/06

Dwg. No. FRP-1B

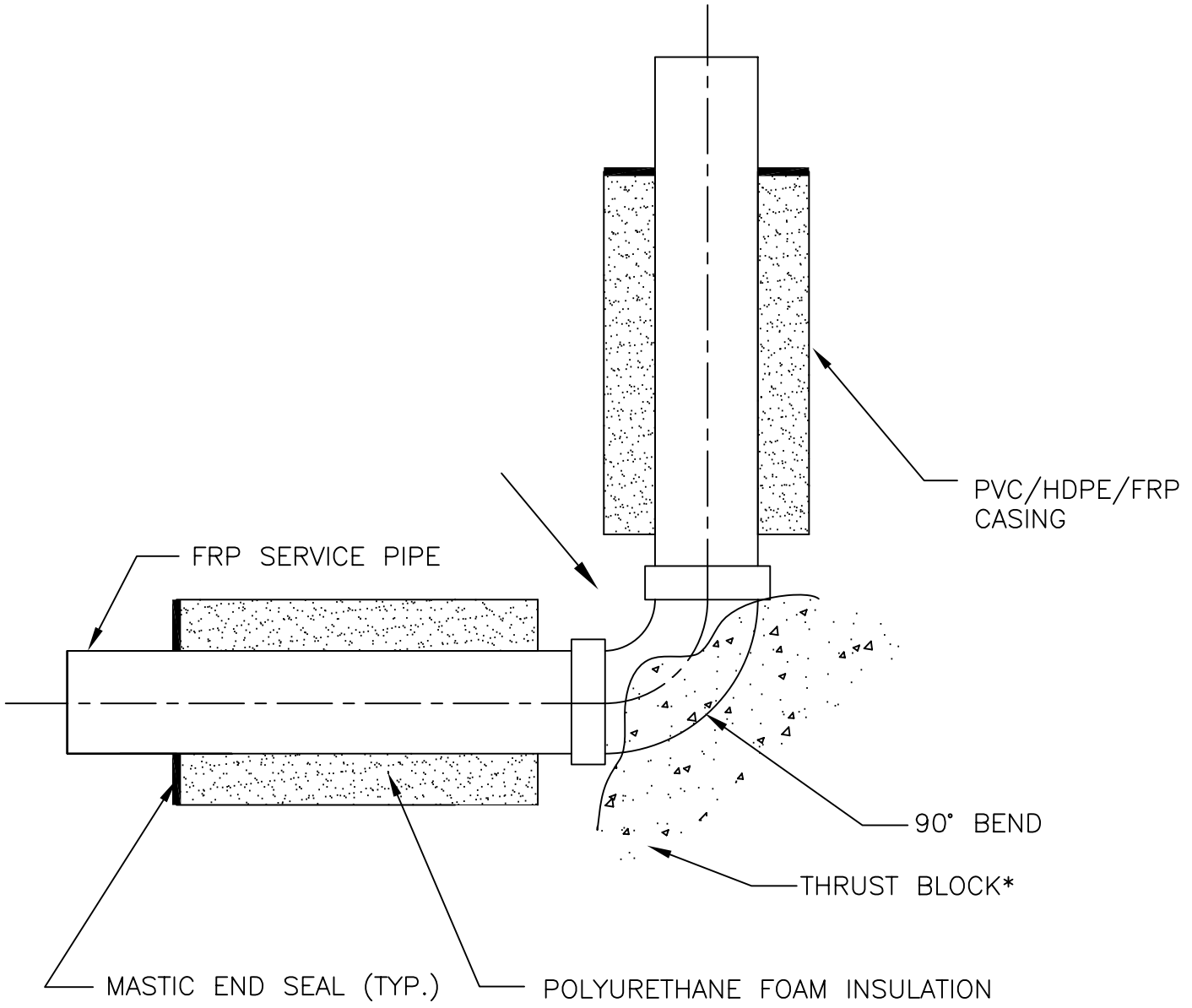
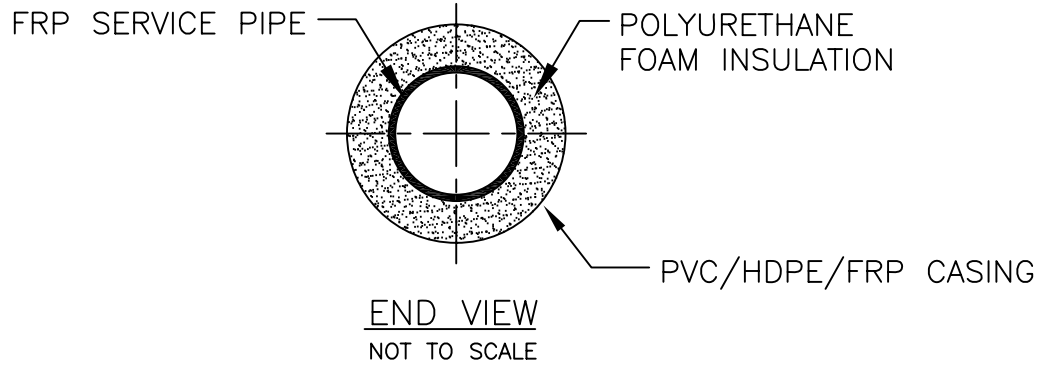
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* THRUST BLOCKING MAY BE REQUIRED FOR HOT WATER SYSTEMS
CONTACT DESIGN ENGINEER FOR THRUST BLOCK DESIGN, SIZING,
AND SOIL CONDITIONS.

FRP 90° BEND DETAIL



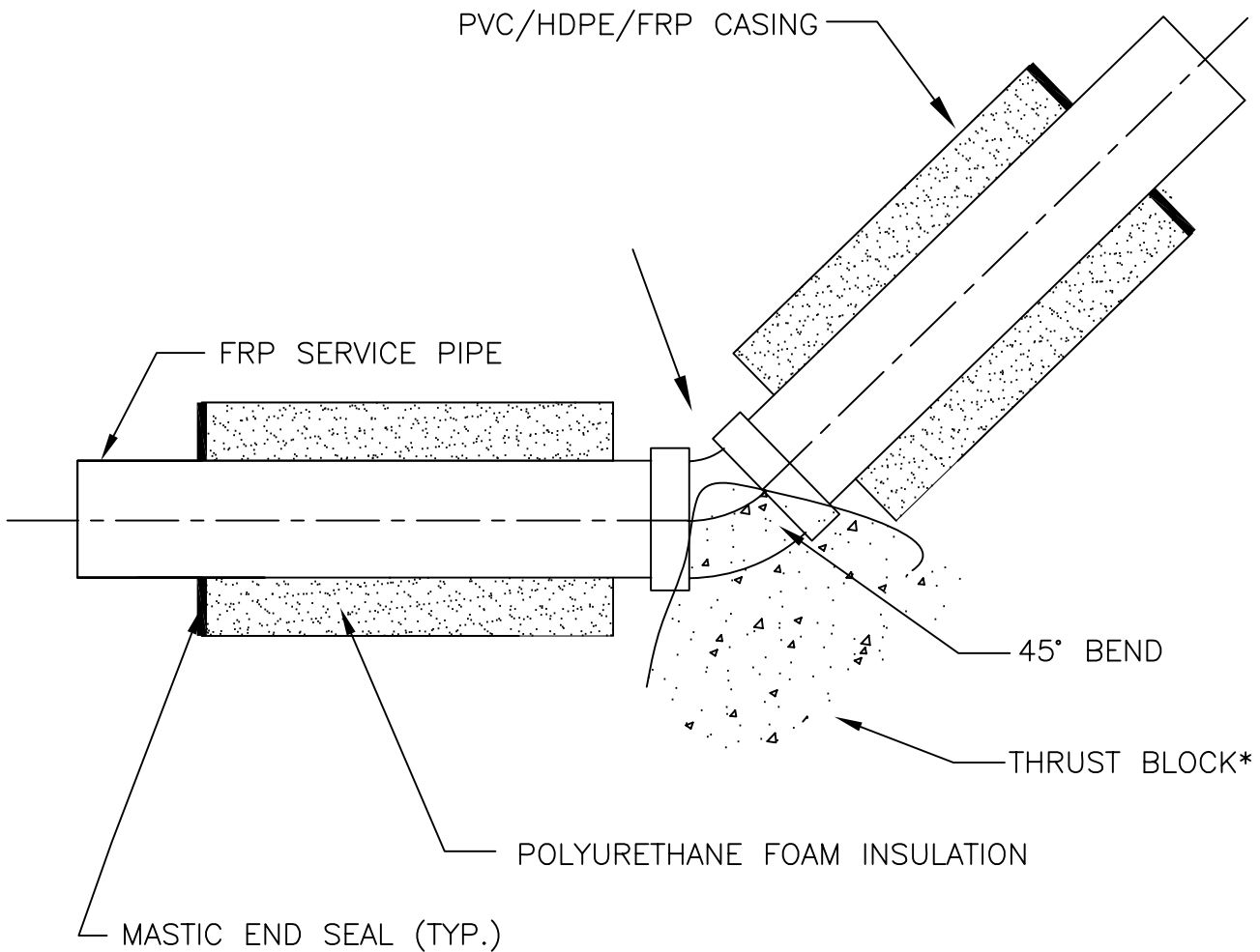
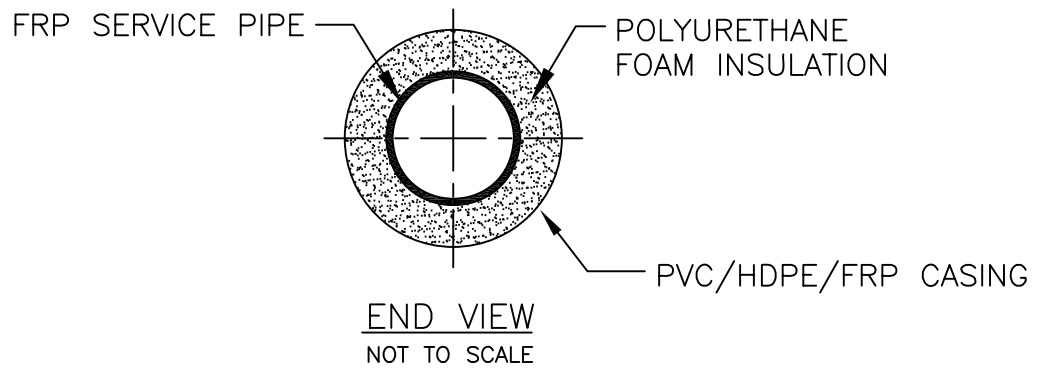
TRICON FRP

Date: 03/09/06

Dwg. No.: FRP-2

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AND SOIL CONDITIONS.

FRP 45° BEND DETAIL

TRICON FRP

Date: 03/09/06

Dwg. No.: FRP-3

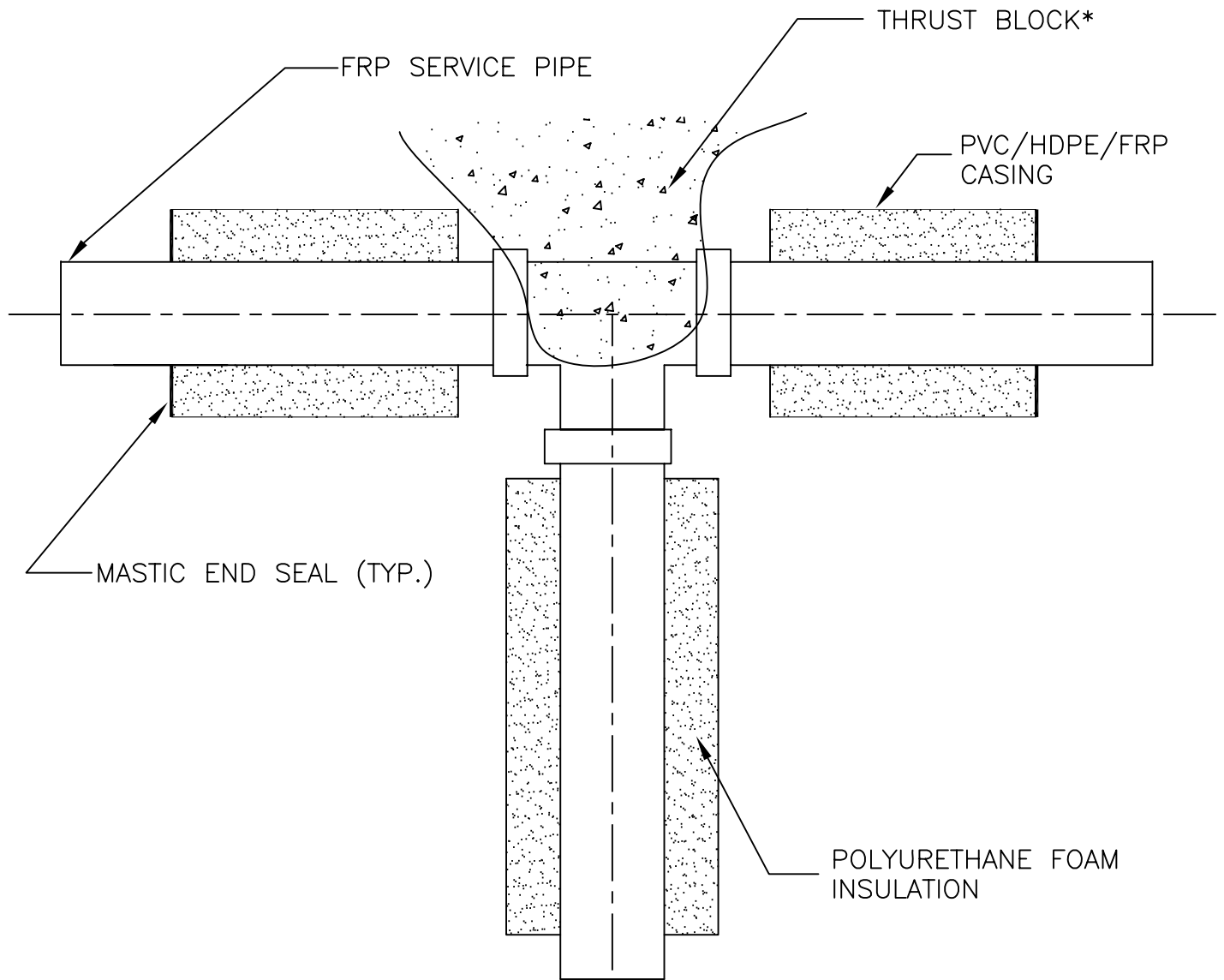
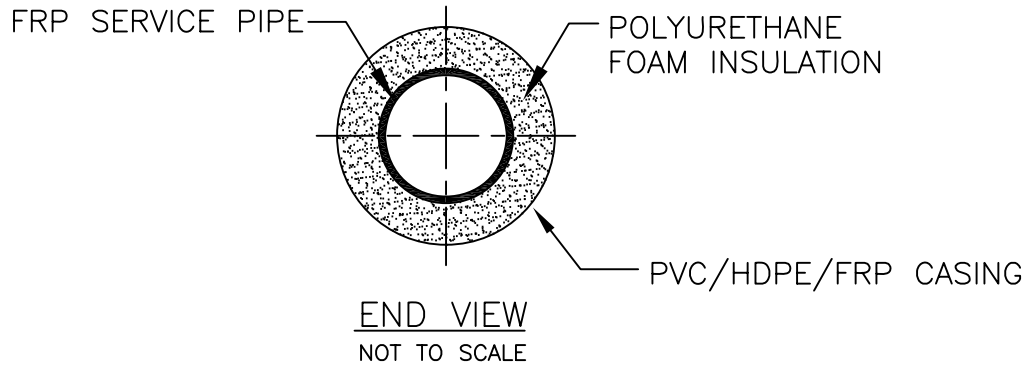
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FRP TEE DETAIL

TRICON FRP

Date: 03/09/06

Dwg. No.: FRP-4

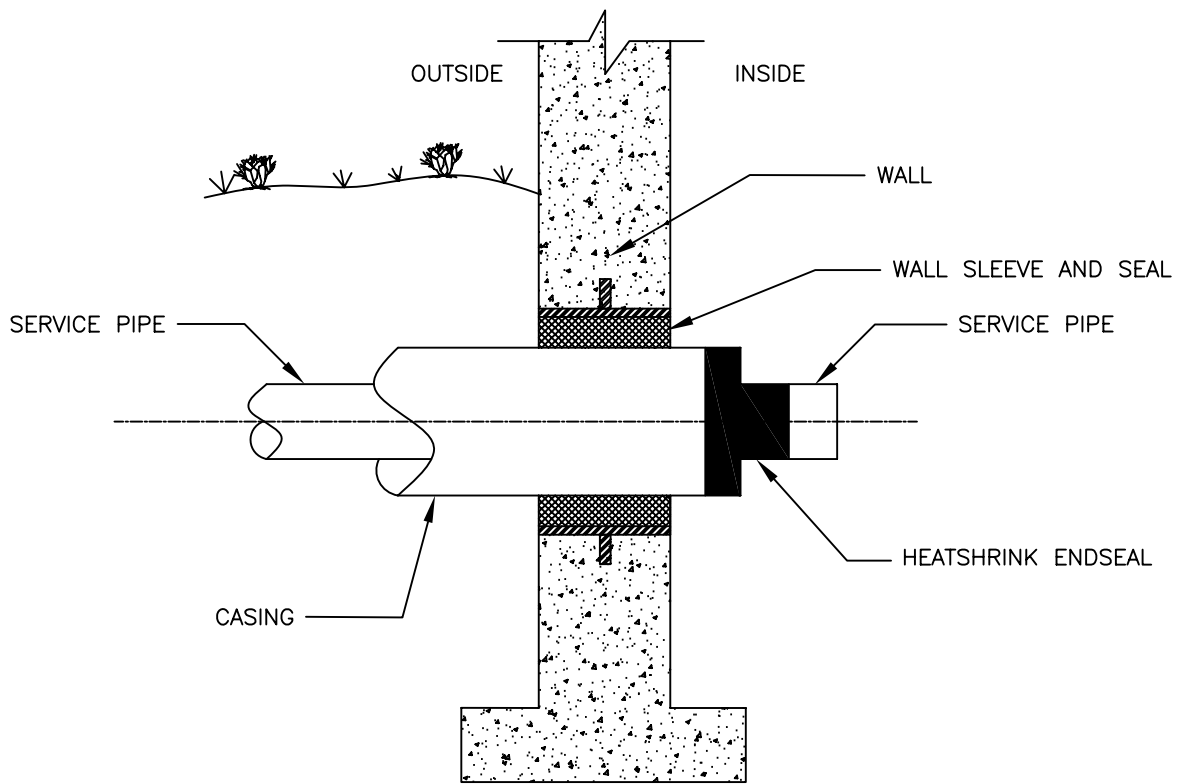
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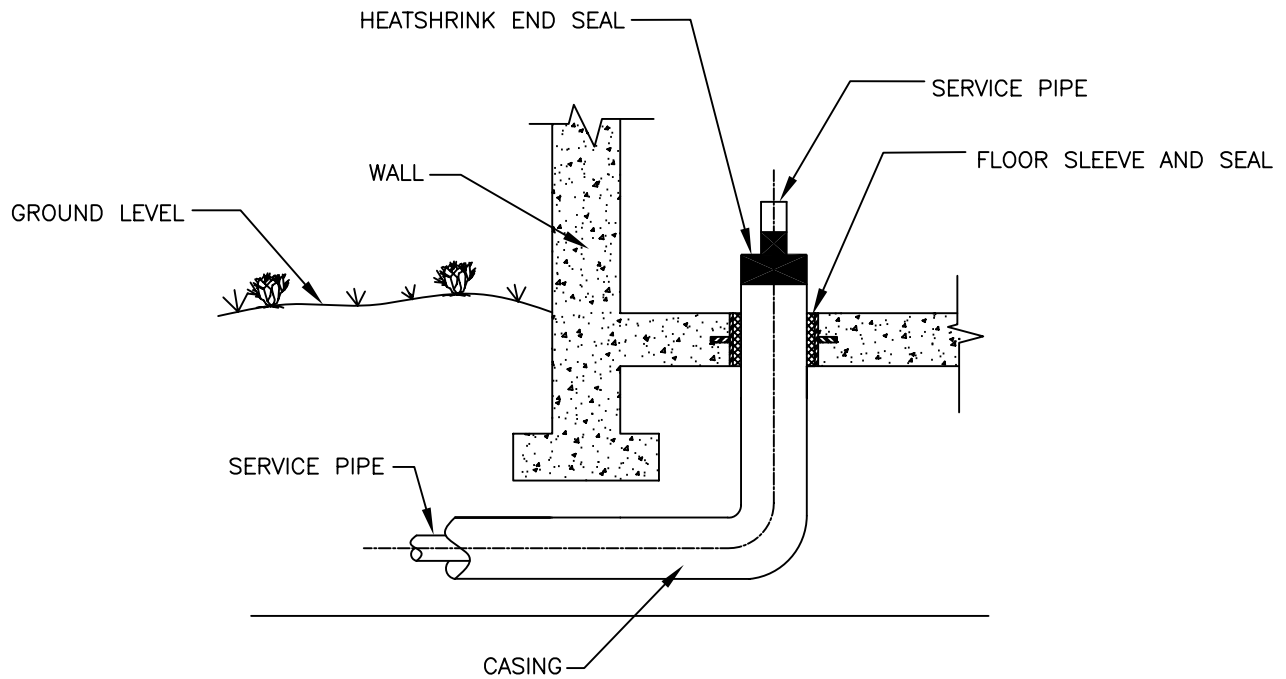
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WALL PENETRATION DETAIL



BUILDING RISER DETAIL

HEATSHRINK END SEAL DETAIL

TRICON FRP

Date: 03/09/06

Dwg. No.: FRP-5

Rev.:



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