Composite

Service Pipe:

Carbon steel service pipe shall be standard weight A53 ERW or A106 seamless, beveled for welding. Condensate return piping shall be Schedule 80. All joints for pipe 2 ½" and larger in size shall be buttwelded. 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. Where possible, piping lengths shall be supplied in 40-ft. random lengths.

Insulation: (Inner Layer) *

The inner layer of insulation will consist of cellular glass, calcium silicate or perlite.

Insulation: (Outer Layer) *

The outer conduit insulation shall be polyurethane foam with a minimum 1-inch thickness. The polyurethane foam shall have a minimum density of 2.0, and a closed cell content of 90% to 95% per ASTM D-2856, and shall have a "K" factor of .14 per ASTM C-177 @ 75° F.

Exterior Casing: **

The exterior casing shall be seamless, extruded High Density Polyethylene (H.D.P.E) ASTM-1248, with the following physical properties:

- ASTM D-3350…Resin Type III, Grade P34
- ASTM D-638…Ultimate Elongation 850%
- ASTM D-638…Tensile Yield Strength 3300 psi
- ASTM D-790…Tangent Flexural Modules 175,000 psi

No polyethylene tape casings will be allowed.

Sub-Assemblies:

All fittings, anchors, and end seals shall be factory-fabricated and insulated. No field fabrication of fittings, anchors, or end seals will be allowed.

Field Joints:

After welding and hydrostatic testing, all field joints shall be insulated with insulation materials as supplied by Tricon Piping Systems, Inc.

Expansion Compensation:

Expansion and contraction within the piping system shall be accommodated with factory-fabricated oversized elbows, z-bends, and loops.

Installation:

Trenches shall be maintained dry until final field closure is complete. Piping system not suitable for use in high water table.
The installation 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 WHEN 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 ½” 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:

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