

Addendum II to Request for Bid for Richland Creek Trunk Sewer Upgrades Contractor Project

Posting Date: December 31, 2015

In published Request for Bid (RFB), please note the following updates:

Technical Specifications

1. Project Manual Section 02530, Gravity Sewers, Force Mains, and Accessories, Paragraph 2.01, Sanitary Sewer Pipe and Fittings, A, Ductile Iron Pipe (DIP); REVISE Paragraph 8 to the following: “Push-on and mechanical joint pipe shall be as manufactured by the American Cast Iron Pipe Company, United States Pipe and Foundry Company, or equal.”
2. Project Manual Section 02530, Gravity Sewers, Force Mains, and Accessories, Paragraph 2.01, Sanitary Sewer Pipe and Fittings; ADD the paragraph:
“G. FIBERGLASS REINFORCED POLYMER PIPE
 1. Manufacture and testing of pipe and fittings for gravity sewer application shall conform to ASTM D3262, ASTM D4161, ASTM D2412, ASTM D3681, and ASTM 638.
 2. MATERIALS:
 - a. Resin Systems: The manufacturer shall use only polyester resin systems with a proven history of performance in this particular application. The historical data shall have been acquired from a composite material of similar construction and composition as the proposed product.
 - b. Glass Reinforcements: The reinforcing glass fibers used to manufacture the components shall be of highest quality commercial grade E-glass filaments with binder and sizing compatible with impregnating resins.
 - c. Silica Sand: Sand shall be minimum 98% silica with a maximum moisture content of 0.2%.
 - d. Additives: Resin additives, such as curing agents, pigments, dyes, fillers, thixotropic agents, etc., when used, shall not detrimentally effect the performance of the product.
 - e. Elastomeric Gaskets: Gaskets shall meet ASTM F477 and be supplied by qualified gasket manufacturers and be suitable for the service intended.
3. MANUFACTURE AND CONSTRUCTION
 - a. Pipes: Manufacture pipe in accordance with ASTM D3262 to provide a dense, nonporous, corrosion-resistant, and consistent composite structure. The interior surface of the pipes exposed to sewer flow shall provide crack resistance and abrasion resistance. The exterior surface of the pipes shall be comprised of a sand and resin layer which provides UV protection to the exterior. Pipes shall be Type 1, Liner 2, Grade 3 per ASTM D3262
 - b. Joints: Unless otherwise specified, the pipe shall be field connected with fiberglass sleeve couplings that utilize elastomeric sealing gaskets as the sole means to maintain joint water tightness. The joints must meet the performance requirements of ASTM

- D4161. Tie-ins, when needed, may utilize gasket-sealed mechanical couplings.
- c. Fittings: Flanges, elbows, reducers, tees, wyes, laterals and other fittings shall be capable of withstanding all operating conditions when installed. They may be contact molded or manufactured from mitered sections of pipe joined by glass-fiber-reinforced overlays. Lined ductile iron or stainless steel fittings may also be used.
 - d. Candidate Manufacturer for pipe, joints and fittings is HOBAS Pipe USA, or approved equal.

4. DIMENSIONS

- a. Diameters: The actual outside diameter (18" to 48") of the pipes shall be in accordance with ASTM D3262. For other diameters, OD's shall be per manufacturer's literature.
- b. Lengths: Pipe shall be supplied in nominal lengths of 20 feet. Actual laying length shall be nominal +1, -4 inches. At least 90% of the total footage of each size and class of pipe, excluding special order lengths, shall be furnished in nominal length sections.
- c. Wall Thickness: The minimum wall thickness shall provide a pipe stiffness of SN72.
- d. End Squareness: Pipe ends shall be square to the pipe axis with a maximum tolerance of 1/8".

5. TESTING

- a. Pipes: Pipes shall be manufactured and tested in accordance with ASTM D3262.
- b. Joints: Coupling joints shall meet the requirements of ASTM D4161.
- c. Stiffness: Minimum pipe stiffness when tested in accordance with ASTM D2412 shall normally be 46 psi.
- d. Stain Corrosion: The extrapolated 50-year strain corrosion value shall not be less than 0.9% as determined in accordance with ASTM D3681 and ASTM D3262.
- e. Deflection: The maximum allowable long-term deflection shall not exceed 5% of the initial diameter.

6. INSTALLATION

- a. The installation of pipe and fittings shall be in accordance with the project plans and specifications and the manufacturer's requirements.
- b. Pipe Handling: Use textile slings, other suitable materials or a forklift. Use of chains or cables is not allowed.
- c. Jointing:
 1. Clean ends of pipe and coupling components.
 2. Apply joint lubricant to pipe ends and the elastomeric seals of coupling. Use only lubricants approved by the pipe manufacturer.
 3. Use suitable equipment and end protection to push or pull the pipes together.
 4. Do not exceed forces recommended by the manufacturer for coupling pipe.

Join pipes in straight alignment then deflect to required angle. Do not allow the deflection angle to exceed the deflection permitted by the manufacturer."

7. Project Manual Section 02530, Gravity Sewers, Force Mains, and Accessories, Paragraph 3.13, Inspection and Testing; ADD the following paragraph:

"D. DEFLECTION TESTING

A deflection test shall be required for all gravity sewer piping installed. A Go-No-Go Mandrel shall be pulled through the pipe no less than 30 days after the final placement of backfill. The deflection of the sewer pipe shall not exceed 5.0 percent when tested with a mandrel specifically designed for the type and size of pipe installed. Pipe segments failing the Mandrel test shall be removed and replaced."

8. Project Manual Section 02603, Rehabilitation of Sanitary Sewer Manholes, Paragraph 2.04, Spray Applied Cementitious Liner; REVISE the second paragraph to the following:

"The lining material shall be Strong-Seal® MS-2C, Quadex® Aluminaliner, Lafarge® Sewpercoat P.G., Madewell Mainstay ML-CA or ML-PF, A.W. Cook Cement Products Cement Silatec CAM, Protective Liner

Systems PerpetuCrete 508 CA, or approved equal and shall meet the following physical properties:"

9. Project Manual Section 02530, Gravity Sewers, Force Mains, and Accessories, Paragraph 2.01, Sanitary Sewer Pipe and Fittings, A, Ductile Iron Pipe (DIP); REVISE the table in Paragraph 4 to the following:

Pipe Sizes (inches)	Pressure Class (psi)
4 - 12	350
14 – 20	250
24	200
30 - 54	150

Drawings

1. Drawing Number 000-C-003, Detail 12, Gravity Pipe Bedding Conditions, ADD the detail included in Attachment 1 of this Addendum.

Note: Fiberglass Reinforced Polymer Pipe has been accepted as an approved equal with the exception of the following line segments, where the pipe material shown on the plans will be provided:

MH400A-596 to MH400A-597
MH400A-608 to MH400A-609
MH400A-620 to MH400A-621
MH400A-621 to MH400A-622
MH400A-632 to MH400A-624
MH400A-626 to MH400A-627
MH400A-633 to MH400A-634
MH400A-636 to MH400A-637
MH400A-643 to MH400A-644
MH400A-647 to MH400A-648
MH400A-648 to MH400A-649
MH400A-649 to MH400A-650

2. Drawing Number 000-C-001, Detail 5, Misc. Manhole Details, REPLACE the Manhole Frame & Cover detail with the one included in Attachment 2 of this Addendum.

If you have any questions and/or concerns, please do not hesitate to contact Julie Dacus at julied@re-wa.org or Stephanie Selman at stephanies@re-wa.org.