

This information is provided to assist the contractor in the installation of a gravity side sewer stub and/or building sewer. Any work performed on private or public sewer facilities must be performed by a registered sewer contractor in accordance with Section 13.04.060 B of the Pierce County Code. For further clarification, please see Standard Detail 4001, Building Sewer Layout, or contact the Pierce County Sewer Engineering at (253) 798-2737.

If gravity service cannot be achieved in accordance with these construction standards, the applicant must submit engineered pump system plans for review and approval. See Handout H2, Sewer Permit Application Fees, for additional fees.

Definitions:

“Building Sewer”—that portion of a sewer pipe connecting one or more structures from the plumbing outlets to a sewer main. The building sewer, including that portion called the “side sewer stub”, may include devices and/or pump systems and is constructed in accordance with Pierce County Sewer Standards and is not part of the public sewer facilities. Building sewers shall be maintained by the property owner.

“Sewer Main”—a collector line or interceptor line. Sewer mains generally begin and end with a manhole.

“Sewer Tap”—the addition of a new side sewer stub to a private or public sewer main. A wet tap must be performed by a registered sewer contractor. Please see Standard Detail 3008, Wet Tap for Gravity Side Sewer Stub,

“Side Sewer Stub”—that portion of a building sewer constructed from a sewer main to a property line or the edge of a perpetual easement of a property being served. The side sewer stub shall be considered part of the building sewer and shall be maintained by the property owner.

Side Sewer Stub Locations

You can find the existing sewer stub (or “bubble”) information by researching the sewer main as-built plan drawings at <https://matterhornwab.co.pierce.wa.us/publicgis/>, or by contacting Sewer Division Engineering at (253) 798-2737.

Building Sewer Materials

Pipe Material: PVC ASTM D-3034*, D-2241, or ductile iron class 52, HDPE DR17 (for pre-approved pipe bursting projects only). *Note that solvent weld joints are not allowed on pipe larger than 6 inches in diameter.

Cleanouts: Cleanouts must be installed within two (2) feet of the structure, at all bends totaling 90° or more, at 100 foot intervals, and as directed by the Inspector. Combination (double-sweep) tees are required for all in-line cleanouts. Oneway cleanouts may be used at bends. Cleanouts in driving areas must be brought to the surface with a cleanout ring & cover designed for HS-20 loading.

Test Tees: A double-sweep tee shall be located at the property/easement line and brought to within one foot of finished grade.

Couplings: Rigid (e.g., Romac or Specified Fittings) couplings must be used for side sewer repairs and at all transitions in pipe size or pipe material. Flexible couplings (e.g., Fernco) will not be allowed except at the transition from the house plumbing to the building sewer.

Pipe Size: In no event shall the inside diameter be less than four (4) inches for a single-family residence nor less than six (6) inches diameter for duplexes, multi-family dwellings, and commercial buildings.

Slope/Cover/Alignment

Slope: Building sewers shall be installed on a 2% slope or greater.

Cover: In public right of way and public sanitary sewer easements, minimum cover over the pipe shall be 5 feet. In private property that is not within a public sanitary sewer easement the minimum cover over the pipe shall be 3 feet.

Alignment: The building sewer shall be laid at uniform grade and in straight alignment between fittings. Changes in only be made with proper pipe fittings. 90-degree fittings are not allowed.

Fill and Ground Conditions

Bedding Material: Pea gravel must be placed from 6 inches below the invert to 12 inches above the top of pipe. No other bedding material is acceptable.

Trench Backfill: Native material can be used provided it is free of organic material and contains no rock larger than 6 inches in diameter on private property. Trench backfill in the County or City right-of-way must conform to the most current adopted County or City standards, respectively.

Trench Dams: The Contractor shall install trench dams wherever shown on the approved plans, and wherever the trench crosses wetlands, drainage ditches, percolation trenches, storm water detention ponds, etc., or as directed by the Inspector.

Utility Crossings

Sewer and Water Crossings: The standard minimum vertical separation for water lines is 1.5 feet above the sanitary sewer line. Separation shall be measured from the outer walls of the pipes. If concrete encasement of the sanitary sewer is provided, then a reduced minimum vertical separation of 0.75 feet will be allowed. The concrete encasement shall extend 10 feet on each side of the crossing. Class 52 ductile iron pipe may be used for sanitary sewer in lieu of concrete encasement provided that there is not transiting to other pipe materials between manholes. Contact the Sewer Division for unusual circumstances for the Sewer Division to determine if a reduced minimum vertical separation will be allowed. Additional provisions will be required.

Sewer and Other Utility Crossings: There must be a minimum of 1.5 feet vertical separation between sewer and other utility lines, otherwise, alternate piping and/or concrete encasement will be required if less than 1.5 feet but no closer than 9 inches. Sewer warning tape must be installed at all crossings with less than 1.5 feet of separation. Separation is measured from the outer walls of the pipes.

Inspection

Testing: Airtest at 4 PSI or water exfiltration tests are required on all building sewer lines including dry lines.

Scheduling Inspections: Login to [www.co.pierce.wa.us/3478/Forms-Plans-Residential-and-Commercial](#) to schedule an inspection. Development Engineering requires a minimum of 24-hour advance notice for site inspections. If the work is not completed and/or acceptable at the scheduled inspection time, a \$100 re-inspection fee may be assessed prior to any additional inspections.

Sewer Division Standard Plans and Forms can be downloaded in PDF format from the following webpage:
<http://www.co.pierce.wa.us/3478/Forms-Plans-Residential-and-Commercial>.

If you have any questions, please contact a Sewer Division Engineer at (253) 798-2737.