



BUILDING SEWER PIPE INSTALLATION

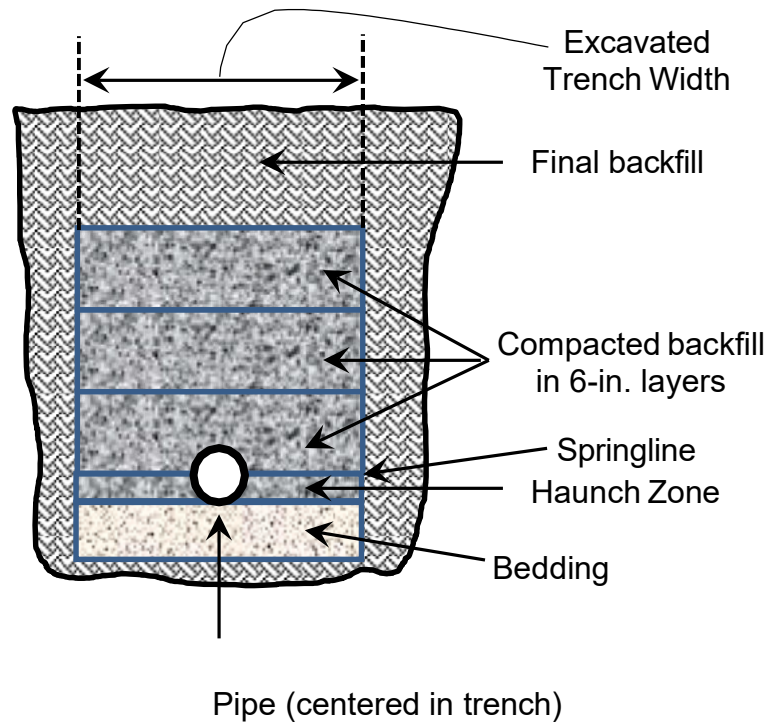
- **Building sewer** shall be kept at least 12 inches below the surface of the ground. [CPC 312.3]
- **Slope** of the building sewer shall be run in practical alignment and at a uniform slope of not less than min of 1/4" per foot (2%) toward the point of disposal.
- Exception: Where approved by the Authority Having Jurisdiction and where impractical, due to the depth of the street sewer, piping 4" through 6" shall be permitted to have a slope 1/8" per foot (1%) [CPC 718.1]
- **Gravity Drainage Required** where practicable, plumbing fixtures shall be drained to the public sewer or private sewage disposal system by gravity. [CPC 709.0]
- **Property line cleanout** shall be installed on private property within 2' of the property line. Where property line cleanout is required, property line shall be identified by dimensions from FOC (face of curb)
- **Example:** If "Face of Curb" has been specified as "FOC 10 feet" then the property line cleanout shall be installed not less than 10 feet from FOC and not exceeding 12 feet from FOC.
- **Building cleanout** shall be installed between the building sewer and the building drain (within 2' from the building foundation). Where no end of the line clean-out is presented a 2-way fitting shall be installed for the building clean-out. Additional sewer cleanouts shall be installed at intervals not to exceed 100 feet in total developed length and for each aggregate horizontal change in direction exceeding 135 degrees. [CPC 715.1 and 719.1]
- **Cleanouts** must be accessible. [CPC 719.5]
- **Shielded couplings** shall be used for underground installation to avoid displacement.
- **Transition couplings** shall be listed and labeled. When joining different types of piping together, use approved transition couplings.
- **Building Sewer Test** shall be performed by plugging the building sewer at the property line clean-out and completely filling with water from the lowest to the highest point or approved equivalent low-pressure air test. Plastic DWV piping system **shall not** be tested by the air test method. [CPC 723.0]
- **Excavations** shall be completely backfilled as soon after inspection as practicable. Precaution shall be taken to ensure compactness of backfill around piping without damage to such piping. Trenches shall be backfilled in thin layers to 12 in. above the top of the piping with clean earth, which shall not contain stones, boulders, cinderfill, frozen earth, construction debris, or other materials that will damage or break the piping or cause corrosive action. Mechanical devices such as bulldozers, graders, etc., shall be permitted to then be used to complete backfill to grade. Fill shall be properly compacted. Precautions shall be taken to ensure permanent stability for pipe laid in filled or made ground. [CPC 314.4]
- **Trenchless sewer line** installation requires video inspection and shall comply with CPC 715.3
- **Sewage Ejector and Pumps** shall be approved by the Authority Having Jurisdiction prior to the installation and installed in accordance with CPC 710.0

- Thermoplastic pipe and fittings for sewers and other gravity flow applications shall comply with the following: The excavated trench minimum width shall be 1.25 times the outside diameter of the piping plus 12 inches, but no larger than the outside diameter of the piping plus 16 inches. Thermoplastic piping shall be bedded in not less than 4 inches of granular fill supporting the piping. The backfill for thermoplastic piping shall be compacted along the sides of the piping in 6 inch layers and continue to not less than 12 inches above the piping. Compaction shall be not less than 85 percent standard proctor density.

Procedures: The bedding material can be sand or granular rock (not smooth river rock or pea gravel). Per ASTM D2321, the maximum size granule should not exceed 10% of the pipe diameter. The bell of the pipe joint should be embedded.

The first layer of backfill should be only to the springline (midpoint) of the piping. Work and tamp the haunching material in the area between the bedding and the bottom of the pipe. Do not allow compaction equipment to contact the pipe. **Do not backfill above the springline prior to inspection.**

Subsequent backfill must be compacted in layers not exceeding 6 inches to a minimum cover of 12 inches above the pipe.



Piping must also be installed in accordance with applicable ASTM standards, resulting in an installation as shown in the illustration above.