

## **GENERAL NOTES ON PLANS FOR 4" THROUGH 12" WATER MAINS**

1. All pipe, appurtenances and work shall conform to the City of Seattle Standard Plans and Specifications, 2011 or latest edition, unless otherwise noted on the approved plans.
2. All materials for water distribution shall be new. *SPU will* provide any required hydrants. Project owner shall provide the connecting pipe and fittings.
3. Pipe (W) 4" and larger shall be *D. I. P. CL. 52* conforming to *AWWA C-151* with cement mortar lining conforming to *AWWA C-104*. Unless otherwise noted, joints shall be mechanical or slip joint.
4. Unless provided by a pre-approved manufacturer, pipe (W) 4" and larger shall be subject to SPU taste testing procedures prior to installation.
5. All fittings shall be ductile Iron conforming to *AWWA C-110* and *C-111*, or *AWWA C-153*, and shall be cement mortar lined conforming to *AWWA C-104*.
6. All connections to existing water mains shall be made by **SPU Standard Plan #300**.
7. Prior to laying pipe the contractor shall:
  - A. In the presence of the SPU Resident Engineer, expose the existing water main to determine its elevation and alignment. (SPU to obtain O. D. at the same time.)
  - B. Provide all control Surveys required to define the alignment and elevations of the water main in conformance with **the approved** plan. The Surveys shall be performed by a surveyor licensed by the State of Washington. All reference marks shall be preserved during construction. A grade sheet, in acceptable format, shall be provided prior to beginning work.
8. Contractor shall notify owners (minimum of 48 hours in advance) of all affected underground utilities for field locating their facilities. The one call notification number is *1-800-424-5555*.
9. Care shall be exercised when excavating near existing charged water mains.
10. Locations shown for existing underground utilities are approximate. Utilities having no recorded depth are shown at their standard depth. Utilities that appear close to the proposed water main shall be exposed by the contractor prior to laying the water main to determine if changes are needed. Water/sewer separation shall be per Standard Plan #286. It shall be the contractor's responsibility to install ductile iron pipe in place of any other sanitary sewer pipe material where sanitary sewers are located above and closer than 10 feet, or cross over any water line. See special provisions for minimum clearances, Section *I- I 07.17(2)B* regarding crossing of gas mains.
11. All water mains shall be pressure tested (300 psi) and disinfected in accordance with Section 7-11.3(12) of the Standard Specifications. All pressure testing shall be done in the presence of the construction engineer. The contractor is to provide plugs and temporary blowoff assemblies for pressure testing and disinfection. See Standard Plan #300 for flushing connection details.
12. The contractor shall comply with all requirements of the permits issued for this project.
13. Horizontal angle points & vertical grade points shall be constructed by deflecting pipe joints, unless otherwise specified.
14. Concrete water main thrust blocking for horizontal fittings shall be per Standard Plan

#331.1.

15. Hydrant installation shall be per Standard Plan #311.1a

16. Restraint Joint Pipe is required in those area where the terrain is greater than 15% or the soil is subject to liquefaction or the area is defined as sensitive or where space is confined (no room for Mechanical Joint or Concrete Blocking) or where required by SPU.

17. Hydrant connection shall be 6" DIP CL 52 conforming to AWWA C-151 with cement mortar lining conforming to AWWA C-104.

18. Valve Box and operating nut extensions shall be per standard plan # 315.1a.

19. Pipe shall be wrapped with 8 ML polyethylene, conforming to AWWA C-105.

20. Water main trench shall be as shown on standard plan 350.21.

21. All fittings shall be restrained per section 9-30.2(6) of City of Seattle 2011 Standard Specifications or latest edition.