PART ONE CONSTRUCTION PROCEDURES AND MATERIALS

CONTRACTOR’S GUIDELINE FOR INSTALLATION OF BURIED WATER AND SEWER UTILITIES

7.1 Contractor Responsibilities

(7.1.1) Miss Utility
(7.1.2) Permits
(7.1.3) Standards for Water and Sewer Utilities

7.2 Water and Sewer Main Construction

(7.2.1) Parallel Installation
(7.2.2) Crossings
(7.2.3) General
(7.2.4) Corrosion Control

7.3 Water and Sewer Main Testing

(7.3.1) Testing and Disinfection Protocol for Mains

7.4 Special Conditions for Tapping Active Utilities

(7.4.1) Prohibit the Tapping of Mains

7.5 Water and Sewer Service Construction

(7.5.1) Existing and Active Public Mains
(7.5.2) Reference to Manuals
(7.5.3) New Public Water Main
(7.5.4) Depth and Backfill
(7.5.5) Angle Valve Location
(7.5.6) New Public Sewer Main
(7.5.7) Sewer Service Laterals
(7.5.8) Water and Sewer Laterals in the Same Ditch
2. Adequate structural support for the sewers to prevent excessive deflection of the joints and the settling on and breaking of the water line; and

3. That the length of the water and sewer lines be centered at the point of the crossing so that joints shall be equidistant and separated as far as possible.

(7.2.2.3) No water pipes shall pass through or come in contact with any part of a sewer manhole.

(7.2.3) General

(7.2.3.1) Minimum cover for new water pipe installation shall be three (3) feet.

(7.2.3.2) Existing water pipe shall be lowered or raised when proposed grading shall alter cover over the pipe to less than two and one-half (2 ½) feet or to greater than eight (8) feet.

(7.2.3.3) Maximum cover for water pipe shall be eight (8) feet.

(7.2.4) Corrosion Control

(7.2.4.1) All buried water systems and ferrous sewer pipes shall be field wrapped in polyethylene encasement. The encasement shall include all buried pipe, valves, fittings, hydrant bases and copper water service lines within 3 feet of the main. Encasement shall be installed, protected and repaired per Ductile Iron Pipe Research Association (DIPRA) Polyethylene Encasement Installation Guide and manufacturer’s installation instructions. Polyethylene encasement materials shall be per the City’s Product Manual.

(7.2.4.2) Exceptions to polyethylene encasement are defined in Chapter 4, Section 4.4.13 of the DCSM.

7.3 Water and Sewer Main Testing

(7.3.1) The City of Harrisonburg has established a protocol for testing and disinfection of mains, which shall be the responsibility of the Contractor to ascertain “on-site” approval by the Office of Community Development Inspection personnel. The protocol includes:

(7.3.1.1) Hydrostatic testing of all water mains
(7.3.1.2) Disinfection and Bacteriological sampling of all water mains

(7.3.1.3) Flushing of new water mains

(7.3.1.4) Final Inspection Operations test for all watermain valves and hydrants

(7.3.1.45) Low Pressure Air Test of sanitary sewer pipe

(7.3.1.56) PVC Sewer requires pulling of 5% mandrel

(7.3.1.67) Exfiltration or Air Vacuum testing of manholes

The applicable charts and specifications may be found following this section.