

## APPENDIX D

### SEPARATION CRITERIA POTABLE WATER, WASTEWATER, AND RECLAIMED WATER LINES

When horizontal and vertical separations cannot be maintained per specifications 02080.1, 02081.1, 02081.2, 02081.3, and 02083.1, the requirements of the following shall be met. Prior approval by Water Resource Services Technical Design Team Leader is required before using the following criteria.

#### **Taken from 62-555.314 – Location of Public Water System Mains.**

For the purpose of the section, the phrase "water mains" shall mean mains, including treatment plant process piping, conveying either raw, partially treated, or finished drinking water; fire hydrant leads; and service lines that are under the control of a public water system and that have an inside diameter of three inches or greater.

- I. Horizontal Separation Between Underground Water Mains and Sanitary or Storm Sewers, Wastewater or Stormwater Force Mains, Reclaimed Water Pipelines, and On-Site Sewage Treatment and Disposal Systems.
  - A. New or relocated, underground water mains shall be laid to provide a horizontal distance of at least three feet between the outside of the water main and the outside of any existing or proposed storm sewer, stormwater force main, or pipeline conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C.
  - B. New or relocated, underground water mains shall be laid to provide a horizontal distance of at least three feet, and preferably ten feet, between the outside of the water main and the outside of any existing or proposed vacuum-type sanitary sewer.
  - C. New or relocated, underground water mains shall be laid to provide a horizontal distance of at least six feet, and preferably ten feet, between the outside of the water main and the outside of any existing or proposed gravity – or pressure-type sanitary sewer, wastewater force main, or pipeline conveying reclaimed water not regulated under Part III or Chapter 62-610, F.A.C. The minimum horizontal separation distance between water mains and gravity-type sanitary sewers shall be reduced to three feet where the bottom of the water main is laid at least six inches above the top of the sewer.
  - D. New or relocated, underground water mains shall be laid to provide a horizontal distance of at least ten feet between the outside of the water main

and all parts of any existing or proposed "on-site sewage treatment and disposal system" as defined in Mains, and Reclaimed Water Pipelines.

II. Vertical Separation Between Underground Water Mains and Sanitary or Storm Sewers, Wastewater or Stormwater Force Mains, and Reclaimed Water Pipelines.

- A. New or relocated, underground water mains crossing any existing or proposed gravity- or vacuum-type sanitary sewer or storm sewer shall be laid so the outside of the water main is at least six inches, and preferably 12 inches, above or at least 12 inches below the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline.
- B. New or relocated, underground water mains crossing any existing or proposed pressure-type sanitary sewer, wastewater or stormwater force main, or pipeline conveying reclaimed water shall be laid so the outside of the water main is at least 12 inches above or below the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline.
- C. At the utility crossings described in paragraphs (A) and (B) above, one full length of water main pipe shall be centered above or below the other pipeline so the water main joints will be as far as possible from the other pipeline. Alternatively, at such crossings, the pipes shall be arranged so that all water main joints are at least three feet from all joints in vacuum-type sanitary sewers, storm sewers, stormwater force mains, or pipelines conveying reclaimed water regulated under Part III of Chapter 62-610, F.C.A., and at least six feet from all joints in gravity- or pressure-type sanitary sewers, wastewater force mains, or pipelines conveying reclaimed water not regulated under Part III or Chapter 62-610, F.A.C.

III. Separation Between Water Mains and Sanitary or Storm Sewer Manholes.

- A. No water main shall pass through, or come into contact with, any part of a sanitary sewer manhole.
- B. Effective August 28, 2003, water mains shall not be constructed or altered to pass through, or come into contact with, any part of a storm sewer manhole or inlet structure. Where it is not technically feasible or economically sensible to comply with this requirement (i.e., where there is a conflict in the routing of a water main and a storm sewer and where alternative routing of the water main or the storm sewer is not technically feasible or is not economically sensible), the Department shall allow exceptions to this requirement (i.e., the Department shall allow construction of conflict manholes), but suppliers of water or persons proposing to construct conflict manholes must first obtain a specific permit from the Department in accordance with Part V of this chapter and must provide in the preliminary design report or drawings, specifications, and design data accompanying

their permit application the following information:

1. Technical or economic justification for each conflict manhole.
  2. A statement identifying the party responsible for maintaining each conflict manhole
  3. Assurance of compliance with the design and construction requirements in sub-subparagraphs a. through d. below.
    - a. Each water main passing through a conflict manhole shall have a flexible, watertight joint on each side of the manhole to accommodate differential settling between the main and the manhole.
    - b. Within each conflict manhole, the water main passing through the manhole shall be installed in a watertight casing pipe having high impact strength (i.e.; having an impact strength at least equal to that of 0.25 – inch-thick ductile iron pipe).
    - c. Each conflict manhole shall have an access opening, and shall be sized, to allow for easy cleaning of the manhole.
    - d. Gratings shall be installed at all storm sewer inlets upstream of each conflict manhole to prevent large objects from entering the manhole.
- IV. Separation Between Fire Hydrant Drains and Sanitary or Storm Sewers, Wastewater or Stormwater Force Mains, Reclaimed Water Pipelines, and On-Site Sewage Treatment and Disposal Systems. New or relocated fire hydrants with underground drains shall be located so that the drains are at least three feet from any existing or proposed storm sewer, stormwater force main, or pipeline conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C.; at least three feet, and preferably ten feet, from any existing or proposed vacuum-type sanitary sewer; at least six feet, and preferably ten feet, from any existing or proposed gravity- or pressure-type sanitary sewer, wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.; and at least ten feet from any existing or proposed "on-site sewage treatment and disposal system" as defined in Section 381.0065(2), F.S., and Rule 64E-6.002, F.A.C.
- V. Exceptions. Where it is not technically feasible or economically sensible to comply with the requirements in subsection (1) or (2) above, the Department shall allow exceptions to these requirements if suppliers or water or construction permit applicants provide technical or economic justification for each exception and provide alternative construction features that afford a similar level of reliability and public health protection. Acceptable alternative construction features include the following:

- A. Where an underground water main is being laid less than the required minimum horizontal distance from another pipeline and where an underground water main is crossing another pipeline and joints in the water main are being located less than the required minimum distance from joints in the other pipeline:
  - 1. Use of pressure-rated pipe conforming to the American Water Works Association standards incorporated into Rule 62-555.330, F.A.C., for the other pipeline if it is a gravity- or vacuum-type pipeline.
  - 2. Use of welded, fused, or otherwise restrained joints for either the water main or the other pipeline; or
  - 3. Use of watertight casing pipe or concrete shock pad, at least four inches thick, for either the water main or the other pipeline.
  
- B. Where an underground water main is being laid less than three feet horizontally from another pipeline and where an underground water main is crossing another pipeline and is being laid less than the required minimum vertical distance from the other pipeline.
  - 1. Use of pipe, or casing pipe, having high impact strength (i.e., having an impact strength at least equal to that of 0.25-inch-thick ductile iron pipe) or concrete encasement at least four inches thick for the water main; and
  - 2. Use of pipe, or casing pipe, having high impact strength (i.e., having an impact strength at least equal to that of 0.25-inch-thick ductile iron pipe) or concrete encasement at least four inches thick for the other pipeline if it is new and is conveying wastewater or reclaimed water.

*Specific Authority 403.861(9) FS. Law Implemented 403.853(3), 403.861(12)  
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