



City of Harrisonburg, Virginia

Water and Sewer Operations Center

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Harrisonburg, Virginia 22801

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June 28, 2016

Development Community

Re: Harrisonburg Design and Construction Standards Revisions

At the request of the Virginia Department of Health, the City of Harrisonburg Department of Public Utilities has made several modifications to the Design and Construction Standards Manual (DCSM). The requested changes are related to the flushing and testing of potable water lines. The changes are found in Chapter 7, Page T-7 and were edited to match the latest version of AWWA C651.

Other edits to the standards include minor adjustments to Chapter 7 Detail Drawings 1 and 48. These are edits to the typical trench backfill design and the addition of a concrete pad where sewer cleanouts are located in gravel driveways or access roads.

The Department is also proposing a change to address a growing concern for corrosion of ferrous pipe and appurtenances. The water industry recognizes a design average service life of approximately 100 years for new ductile iron pipe. The City is not fully obtaining this design life, as we are experiencing pipe failures due to corrosion in as few as 40 years. To combat this premature failure in corrosive environments, the industry has developed a polyethylene encasement to insulate the pipeline from the surrounding soils. This approach has been widely successful. The City is proposing to join others in the industry who are utilizing this technology to protect and prolong the life of the water distribution system.

The City has been using the polyethylene encasement on City Capital Improvement Projects for over 5 years with success. At an estimate \$0.05 per inch diameter per foot of length, the cost of the encasement is minor compared to the cost of the pipeline and the added service life. To better explain this cost, polyethylene encasement of a 12" diameter pipe costs approximately \$0.60 per foot, whereas the pipeline costs \$30 - \$40 per foot. Public Utilities experience with the installation is that, once trained, the installation of polyethylene encasement adds only minutes per joint of pipe.

Please visit <http://beheardharrisonburg.org/> to review the proposed changes in the DCSM as mentioned above. You are invited to provide your comments and questions directly to Be Heard Harrisonburg to be reviewed by city staff, or you may also provide your comments to me in writing at the address above or by email at dave.gray@harrisonburgva.gov. Comments will be collected through Friday, July 8. This matter will be discussed in front of City Council on Tuesday, July 12, where the updated standards will be reviewed for approval.

Cordially,

David H. Gray, P.E.

Public Utilities Engineering Division Manager

The City With The Planned Future