



MEMORANDUM

DATE: February 19, 2010
TO: Owners, Agents and Contractors
FROM: W. Travis Luter Sr., Building Official
SUBJECT: Water and Sewer Inspections

The Building Department inspects all plumbing within a structure and up to the point in which it exits the foundation wall. Structures connecting to a private septic systems and/or private wells are regulated by the Virginia Department of Health who perform all inspections from the foundation wall to the appropriate private septic system or private well. Once the Virginia Department of Health has inspected and approved private well and sewer systems they issue an Operations Permit. This Operations Permit is required by the Building Department prior to the issuance of the Certificate of Occupancy.

Structures that are connected to a public water and/or sewer system are regulated up to the connection to the service provider by the Building Department. Over the years there has been some inconsistency in these requirements and inspections.

Therefore, effective March 1, 2010, a water and sewer inspection will be required for all structures connecting to a public water and sewer provider. Below is a list of requirements that will apply depending on the type of system required for the project to reach the service provider and the area of the system you tap (forced main or gravity portion of the system).

Sewer

- If a gravity system will suffice to reach the service provider and that section of the public sewer system is gravity (not forced main) :
 1. The Building Sewer must be a minimum of 18" below grade per 2006 International Residential Code section 2603.6.1. The trench must be left open for inspection.
 2. A test of the Building Sewer must be performed and inspected as a part of the Water and Sewer inspection. The test must be as follows:
 - a. 2006 International Residential Code section 2503.4 states "*The building sewer shall be tested by insertion of a test plug at the point of connection with the public sewer and filling the building sewer with water, testing with not less than 10-foot head of water be able to maintain such pressure for 15 minutes*".
 - or
 - b. 2006 International Plumbing Code section 312.6 both state "*Gravity sewer tests shall consist of plugging the end of the building sewer at the point of connection with public sewer, filling the building sewer with water, testing with not less than 10-foot head of water and maintaining such pressure for 15 minutes*"

- If a gravity system will **not** suffice to reach the service provider and a pump and forced sewer line has to be installed or if a pump and forced sewer line is required due to the fact that you are tapping to the Forced Main portion of the public sewer system :
 1. The forced sewer system design must be designed and sealed by a design professional to include the option for generator hookup if necessary.
 2. The forced sewer system design must be submitted as a part of the building plans for plan review.
 3. A test of the Building Sewer must be performed and inspected as a part of the Water and Sewer inspection. The test must be as follows:
 - a. 2006 International Residential Code section 2601.1 states *“The provisions of this chapter shall govern the installation of plumbing not specifically covered in other chapter applicable to plumbing systems. The installation of the plumbing, appliances, equipment and systems not addressed by this code shall comply with applicable provisions of the International Plumbing Code”.*
Therefore section 312.7 of the International Plumbing Code shall apply.
 - b. 2006 International Plumbing Code section 312.7 states *“Forced sewer tests shall consist of plugging the end of the building sewer at the point of connections with the public sewer and applying a pressure of 5 psi greater than the pump rating, and maintaining such pressure for 15 minutes”*
 4. The final inspection of the forced sewer system must be performed by a design professional (preferably the design professional that designed the system). A copy of his field inspection report and letter of certification for the system must be forwarded to the Building Department prior to the issuance of the Certificate of Occupancy.

Water

- Water supply piping connecting the water distribution piping to the public water service shall be tested and inspected as follows:
 1. 2006 International Residential Code section 2603.6 states *“In localities having a winter design temperature of 32 degrees F or lower as shown in Table R301.2(1) of this code, a water, soil or waste pipe shall not be installed outside of a building, in exterior walls, in attics or crawl spaces, or in any other place subjected to freezing temperature unless adequate provision is made to protect it from freezing by insulation of heat or both. Water service pipe shall be installed not less than 12 inches deep and not less than 6 inches below the frost line”.* The frost in Sussex County has been designated to be 18”, therefore all water service lines shall be buried a minimum of 24”.
 2. 2006 International Residential Code section 2503.6 states *“Upon completion of the water-supply system or a section of it, the system or portions complete shall be tested and proved tight under a water pressure of not less than the working pressure of the system or, for piping systems other than plastic, by an air test of not less than 50 psi. The pressure shall be held for not less than 15 minutes. The water shall be obtained from a potable water source”.*
 - a. Keep in mind for piping such as PEX the manufacturer has specific test requirement and in these instances the manufacturer specification or requirement will prevail.