

BUILDING OFFICIAL DEPARTMENT

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MEMORANDUM

DATE: October 19, 2009
TO: Staff and Contractors
FROM: W. Travis Luter Sr., Building Official
SUBJECT: Gas pipe bonding

Gas pipe bonding: The Virginia Uniform Statewide Building Code (USBC) amended the 2006 edition of International Fuel Gas Code; Section 310.1 as follows:

310.1 Gas pipe bonding. Each above-ground portion of a gas piping system that is likely to become energized shall be electrically continuous and bonded to an effective ground-fault current path. Gas piping shall be considered to be bonded where it is connected to appliances that are connected to the equipment grounding conductor of the circuit supplying that appliance.

CSST gas piping systems shall be bonded to the electrical service grounding electrode system at the point where the gas service piping enters the building. the bonding conductor size shall be not less than #6 AWG copper wire or equivalent.

The underlined portion represents a USBC amendment. This provision requires each above-ground portion of a gas piping system that is likely to become energized be electrically continuous and bonded to an effective ground-fault current path. Listed Corrugated Stainless Steel Tubing (CSST) gas piping systems have specific requirements for bonding with the requirements set forth in this section and in the manufacturer's installation standards. The bonding of CSST and all other metallic piping systems will be addressed separately in this policy.

1. Bonding of CSST systems: CSST systems are considered adequately bonded by attaching a UL listed outdoor-type bonding clamp to the CSST fitting as close in proximity to the meter as possible or to a steel pipe section close in proximity to the CSST transition fitting. The minimum size of the bonding conductor must be #6 AWG. This bonding conductor is to be connected to the main electrical service grounding electrode system by one of the following methods:

- a. To the bonding lug of the main electrical panel of the structure provided the main electrical service has an approved grounding electrode system.
- b. To the existing grounding electrode conductor using a UL listed split bolt connector.
- c. To the existing grounding electrode with its own UL listed bonding clamp.

2. Bonding of all other metallic gas piping systems: All metallic gas piping systems are required to be bonded to the main electrical service grounding system in the methods provided above with the following exception:

- a. Any gas piping system which is connected to an appliance that is electrically connected to the main electrical service grounding system is considered effectively bonded and needs no additional bond.

Commentary

All electrical work outside the scope of this policy, i.e. installation of grounding electrodes, work inside electrical panels, etc. will require a separate electrical permit and electrical inspection.