Connecticut
DAS
Division of
Construction Services

Memorandum

Date:	June 5, 2015
To:	**Municipal Building Officials and Fire Marshals**
From:	Joseph V. Cassidy, P.E., Acting State Building Inspector William Abbott, State Fire Marshal
Subject:	Bonding of Corrugated Stainless Steel Tubing (CSST)

The purpose of this memorandum is to clarify the requirements for bonding Corrugated Stainless Steel Tubing (CSST) gas piping systems. The recent adoption of the 2015 Fire Prevention Code and amendment to the State Building Code have led to much confusion what standards apply to which building types.

Until recently Connecticut General Statute (CGS) 29-329 provided the requirements for installation of gas equipment and gas piping in all buildings. This statute was changed to mandate that the State Fire Marshal adopt regulations within the Fire Prevention Code to regulate these installations. Similar changes were made in CGS 29-331 relating to liquefied petroleum gas installations.

The 2015 Connecticut Fire Prevention Code (CFPC) was adopted on May 7, 2015 and includes NFPA 54 National Fuel Gas Code as the standard for installation of gas equipment and piping. The scope of the CFPC excludes one and two family homes and townhouses, meaning the NFPA 54 standard in the CFPC cannot be enforced in these building types. The enforceable code for **one and two family homes and townhouses** is the 2009 International Residential Code (IRC) portion of the State Building Code.

For all installations **other than one and two family homes and townhouses** the bonding requirement is NFPA 54-2012 section 7.13.2, which states:

> *CSST gas piping systems shall be bonded to the electrical service grounding electrode system. The bonding jumper shall connect to a metallic pipe or fitting between the point of delivery and the first downstream CSST fitting. The bonding jumper shall not be smaller than 6 AWG copper wire or equivalent. Gas piping systems that contain one or more segments of CSST shall be bonded in accordance with this section.*

For installations in **one and two family homes and townhouses** the CSST bonding requirement is found in the 2009 IRC section G2411.1.1 as amended, which states:

> *Corrugated stainless steel tubing (CSST). CSST gas piping shall be bonded in accordance with manufacturer's installation instructions.*

Most manufacturer's instructions we have reviewed do point to NFPA 54 as the standard for installation of their product, so the NFPA 54 bonding configuration will be the norm. However, there may be manufacturers that provide specific bonding instructions or refer to other standards, such as the National Electrical Code (NFPA 70). Having and understanding the manufacturer's installation instruction will be critical in properly inspecting residential CSST installations.

In the near future we will be adopting the 2012 IRC as part of the State Building Code. The bonding requirement in the 2012 IRC is the same as the section 7.13.2 NFPA 54-2012 requirement. Once the 2012 IRC is adopted into the State Building Code, all installations will be required to be bonded in this manner.