

February 11, 2008

**TO:** All Concerned

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**SUBJECT:** CSST Piping Underground – Underslab

### **UNDERGROUND**

Corrugated Stainless Steel Tubing (CSST) used for transporting fuel gas may be installed underground, within the terms of its listing. It shall be protected from corrosion by a coating that is approved for use underground, and shall be installed per the manufacturer's instructions and all applicable Code Sections. All gas piping is to be protected by a minimum 18 inch cover, using clean fill material. When CSST gas piping passes through a footing or a wall structure below grade it shall pass through an opening that is no less than two pipe sizes larger than the size of the pipe passing through. The space between the pipe and the opening shall be sealed with a material that is sufficiently flexible to allow settlement or other structural movement without applying loads that might damage the CSST.

### **UNDERSLAB**

CSST shall not be installed directly in the soil beneath the floor slab of a building, whether coated or uncoated. In all cases a conduit shall be installed underslab prior to the cement pour, after which CSST may be pulled through the conduit to the island fixture served. Code does not require the void between an underslab conduit and the CSST within to be sealed at either end of the conduit, provided the conduit rises above the slab at both ends. [This exception applies ONLY to CSST piping when installed in an underground conduit.] The conduit shall be no less than two pipe sizes greater than the required CSST pipe size (minimum 2"), and all changes of direction shall be made using long sweeps.

Underslab piping is intended to serve a single fixture or point of use that is otherwise inaccessible. It is not intended as an alternative means of supplying an array of fuel fired fixtures or equipment. There must also be a structural anchor-point located at the island appliance, to which the required shut-off-valve shall be attached, a valve to which the CSST shall subsequently be connected. The CSST

**may not be directly connected to the appliance without a shut-off-valve, nor may a shut-off-valve be suspended from the CSST piping without an anchor-point.**

### **SUMMARY**

**Installation of listed CSST gas piping is not greatly different from installation of other gas piping materials. All gas pipe requires protection to prevent physical or environmental damage, and all pipe has limitations applied to its usage. Underslab CSST rules are less restrictive regarding sealing and testing of the surrounding conduit enclosure. The assumption is there will be no joints within the conduit, thus reducing the likelihood of a gas leak. The rules regarding mounting of shut-off-valves are more restrictive, in that a structure is required on which to mount the required valves. Most other differences relate to the manufacturer's installation instructions and product limitations.**