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FORMAL TECHNICAL OPINION (FTO) 7

Issued: December 1993 Code Ref. Update: February 2016
 Subject: Backflow Preventers for Fire Protection Installations
 Reference: N.J.A.C. 5:23-3.15, Plumbing Subcode, Section 10.5.9

The Department of Community Affairs previously had issued Interpretation #10, which addressed backflow prevention for fire sprinkler systems. The interpretation was withdrawn due to changes in the adopted subcodes, most notably the Plumbing Subcode. While the withdrawal of the interpretation has eliminated conflicts that it posed with the Plumbing Subcode, the Department still feels the following areas, with respect to fire sprinkler backflow prevention, need to be addressed.

APPLICABILITY OF THE PLUMBING SUBCODE – The Plumbing Subcode is only applicable to fire sprinkler systems where the water supply line from the public main serves as both the potable water supply for the building and the water supply for the fire sprinkler system. Where the water supply from the public main is dedicated to fire service, it is inspected by the fire subcode official only. Backflow prevention, in this case, is dictated by the water purveyor.

ANTIFREEZE/FOAM LOOP SYSTEMS – For systems that employ an antifreeze or foam loop system, the reduced pressure zone backflow preventer required may be located so that the entire system is isolated, or only the antifreeze or foam loop portion of the system is isolated. If only the antifreeze or foam loop portion of the system is isolated, the potable water supply to the entire system is still required to be protected with a double check-valve assembly.

FIRE DEPARTMENT CONNECTIONS (FDC) – Depending on the type of equipment used in the municipality, a system with FDC may require either a double check-valve assembly or a reduced-pressure principal backflow preventer. Municipalities where the FDC is supplied from a hydrant via a pumper require only a double check-valve assembly. Municipalities using tank vehicles as the supply to the system via a FDC require a reduced-pressure principal backflow preventer in accordance with the Plumbing Subcode when the water in the tank:

1. has come from a non-potable source;
2. has come from a source of questionable quality;
3. has been treated with antifreeze, corrosion inhibitors, or extinguishing agents.

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 Division of Codes and Standards

PURSUANT TO THE AUTHORITY OF N.J.S.A. 52:27D ET SEQ., AS AMENDED, THIS FORMAL TECHNICAL OPINION IS CONSIDERED TO BE BINDING UPON ALL CODE OFFICIALS.