

Attachment A
Cross Connection Control
Fire Sprinkler System Backflow Prevention Corrective Options

NON-CONFORMING FIRE SPRINKLER BACKFLOW PREVENTION ASSEMBLY/DEVICE

General Information:

Some existing assemblies/devices, such as single checks, swing checks, wafer check, detector checks, single checks in a series, etc., are considered non-conforming and no longer considered adequate to protect the drinking water supply. These devices are mechanical in nature, subject to failure and rarely are subjected to routine maintenance. Single checks are not testable pursuant to American Society of Sanitary Engineer (ASSE) standards listed within the Michigan Plumbing Code (MPC). **Ames model DCVA/DCDA and RPZ assemblies which were previously approved by the manufacture** to be installed in a vertical position but no longer maintain this approval through the third party testing agency are no longer considered adequate to protect the drinking water supply and must be replaced or reinstalled accordingly.

The corrective option available is described in Item #1 and #4 below.

Item #1 **Fire Sprinkler Option**

Backflow prevention on the existing fire sprinkler system must be upgraded to current MPC requirements. Application and the presence of chemicals must be considered in selecting the appropriate complete ASSE approved assembly, which includes two new shutoff valves and backflow preventer. Required plan submittals and hydraulic calculations shall be as required by the City of Novi or State Fire Marshalls office. At minimum, a specification sheet shall be submitted to the Fire Marshall, Plumbing Inspector and Cross Connection Specialist for approvals. A plumbing permit shall be required.

Understanding the time and costs associated with these upgrades, please see the request for time extension letter located on the City of Novi website cityofnovi.org. Complete all areas, print out on company letter head, sign and submit to the Water & Sewer Division for approval. Please see the following link;

Note: Time extensions are not permitted for fire sprinkler systems with chemical additives classified as a high hazard and limited area fire systems are considered on a case-by-case basis.

<http://cityofnovi.org/Services/Public-Services/Cross-Connection-Control/RequestForTimeExtension.aspx>

Item #2 **Improper application backflow prevention assembly chemical additive**

The existing backflow prevention device on the main fire line is for a low hazard application (no chemical additives) and the fire system has been identified as having chemical additives and therefore classified as a high hazard system. Replace the existing low hazard backflow prevention device/assembly on the main fire line with an American Society of Sanitary Engineers (ASSE) approved complete listed Reduced Pressure Zone Assembly (RPZ) inclusive of two new shutoff valves and backflow prevention device. Submit drawings, specifications and hydraulic calculations as required by the City of Novi Fire Marshall (State Fire Marshall if applicable) and Community Development Department (State Plumbing Official if applicable). Additionally, submit new backflow assembly specifications to the Cross Connection Specialist (Water & Sewer Division) for approval prior to installation. Proper drainage of the existing system may be required.

Item #3 **Improper application backflow prevention assembly non-isolated glycol loop**

The existing backflow prevention device on the glycol/anti-freeze fire sprinkler loop line is for a low hazard application (no chemical additives) or has not been isolated from the main fire system protected with a low hazard device/assembly. Replace the existing low hazard backflow prevention device/assembly on the main fire line with an American Society of Sanitary Engineers (ASSE) approved complete listed Reduced Pressure Zone Assembly (RPZ) inclusive of two new shutoff valves and backflow prevention device or isolate the glycol/anti-freeze loop with the same. Submit drawings, specifications and hydraulic calculations as required by the City of Novi Fire Marshall (State Fire Marshall if applicable) and Community Development Department (State Plumbing Official if applicable). Additionally, submit new backflow assembly specifications to the Cross Connection Specialist (Water & Sewer Division) for approval prior to installation. Proper drainage of the existing system may be required.

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Item #4	Limited area fire sprinkler systems
<p>Limited area fire sprinkler systems (20 heads or less) are not required to be protected with backflow protective assemblies <u>if</u> the piping system and joints are made up of materials designed for potable water and the current installation does not promote stagnation of water and corrosion. If the existing piping system does not appear to be that of a material approved for potable water use and testing standards are unknown or an approved backflow preventer is not provided, the system must be protected with an American Society of Sanitary Engineers (ASSE)#1015 approved Double Check Valve Assembly (DCVA) in accordance with the Michigan Plumbing Code (MPC), ASSE third party approvals and manufacture installation requirements. Fire sprinkler systems with chemical additives must be isolated from the public water supply with a Reduced Pressure Zone Assembly (RPZ).</p>	
<p><u>Note:</u> All forms including (attachment A) can be found at cityofnovi.org by clicking on the quick access link at the top of the home page, click cross connection, click commercial.</p>	