

Backflow & Cross Connection Control

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A backflow preventer is there to help protect people from a fatal injury. It may never be used, but it is there in case something should go wrong.

As a building and plumbing inspector for the City of Bloomington, Minnesota, I've seen many plumbing installations that do not meet our plumbing code. I would like to give you a few examples of how a building or home owner can inadvertently modify their plumbing system, through either repairing a fixture or renovating an existing space, that can compromise the safety and functionality of the system.

I have seen situations in construction where a tenant in a commercial building has an interior wall removed that has plumbing fixtures attached to it, and the fixtures are then reinstalled on a new wall. By some plumbing codes, any used plumbing material or equipment must conform to the standards and rules of the current code before it can be reinstalled. This rule also applies even if the plumbing fixture was removed to allow for cosmetic work or repair to the wall or floor supporting the fixture, *technically*, the issue of "Approved by the Administrative Authority" for reinstallation of the used plumbing fixture or equipment applies.

What does this mean? It means that although the product conformed to the plumbing code when it was installed, they may not conform to the new standards or codes.

Why don't these used fixture comply? Two problems I've seen is that (1) some of the older fixtures don't have their original equipment, and (2) some of the older fixtures do not function the same as the new fixtures.

A prime example of a product that frequently does not have its original equipment is water closets. One problem with installing used water closets is that the water usage may not be same as current code and Federal law require. The average water usage for new residential water closets is 1.6 GPM; however, older water closets may use up to 4.5 GPM depending on their age. Another, and more serious, problem with installing used water closets is the fill valve (or ballcock). Depending on the age of the water closet, the ballcock could have been changed several times to where the backflow protection has been compromised or even eliminated.

Another example are commercial hair shampoo sinks with an atmospheric vacuum breaker. Again, after several years of service, will the atmospheric vacuum breaker provide the required backflow protection? Will the atmospheric vacuum breaker be installed correctly and per the code?

All backflow prevention devices should be verified that they still function and that their protection fits the application. All mechanical devices have a life expectancy; the problem is how long? Depending on the use and conditions, the product could be short lived. And if replaced, will it be restored to its original design? Or will it be value repaired or even removed?

I think of a backflow preventer as having the same role as the air bag in a vehicle. It is there to help protect people from a fatal injury. It may never be used, but it is there in case something should go wrong. ●