Chapter 3-8

CROSS CONNECTION CONTROL PROGRAM

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3-8-1: PURPOSE AND APPLICATION

This Chapter is promulgated to implement the City's program for control of cross connections and requirements for containment devices which include, but are not limited to, double check and reduced pressure assemblies and Approved Backflow Prevention Assemblies, and to meet requirements of state regulations found in Article 12 of 5 C.C.R. 1003-1.

3-8-2: REQUIREMENTS

(A) The City shall take steps to identify potentially uncontrolled hazardous service cross connections.

(B) All water system customers shall install, maintain, and replace City approved containment devices on any uncontrolled hazardous service connection consistent with the degree of hazard imposed by the uncontrolled cross connection in accordance with guidelines established by the Colorado Department of Public Health and Environment.

(C) The installation of all containment devices shall be approved by the City following installation, prior to use.

(D) Containment devices shall be properly inspected or tested and maintained by the customer, at the customer's expense at installation and at least annually by a certified cross connection control technician. Test results shall be submitted to the City.

(E) The City shall retain maintenance and inspection records of containment devices for three (3) years, which shall be available for inspection by Colorado Department of Public Health and Environment personnel.

(F) The City shall notify Colorado Department of Public Health and Environment of any cross connections discovered by the City, as defined by Section 1.22(12) of the State regulations, and require correction of the problem with due diligence.

(G) City customers shall comply with applicable City ordinances, and Section 6 of the State Plumbing Code, to properly install and maintain containment devices, and to perform annual inspections and tests, provide the City with inspections and test reports, and maintain a copy of their inspections and test reports.

3-8-3: COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT CROSS CONNECTION CONTROL MANUAL

The City may utilize provisions of the Colorado Department of Public Health and Environment's Cross Connection Control Manual to identify hazardous service connections, determine required containment devices for various types of installation, and assist in administration and interpretation of the program and interpretation.

3-8-4: METER YOKES

Residential service lines are generally considered to be low-hazard connections, unless a hazardous activity is present. Meter yokes with a dual check valve assembly will be installed on all new taps and service upgrades. Additional protection is required for irrigation systems or other hazardous situations.

3-8-5: GENERAL REQUIREMENTS

(A) Plumbing plans must be submitted to the City and approved, prior to the activation of water service. PLANS MUST SHOW:

(1) Water services type, size and location

(2) Meter size and location

(3) Backflow prevention assembly size, type and location

(4) Fire sprinkling system(s) service line, size and type of backflow prevention assembly if applicable

(B) Backflow prevention assemblies are to be installed in an accessible location to facilitate maintenance, testing and repair. Drawings must show various installations.

(C) All backflow prevention assemblies shall be installed immediately downstream of the water meter.

(D) Before installing a backflow prevention assembly, pipelines should be thoroughly flushed to remove foreign material.

(E) In no case will it be permissible to have connections or tees between the meter and service line backflow prevention assembly.

(F) Backflow prevention valves are not to be used as the inlet or outlet valve of the water meter. Test cocks are not to be used as supply connections. (Not applied to residential dual check installations.)

(G) In order to insure that backflow prevention assemblies continue to operate satisfactorily, it will be necessary that they be tested at the time of installation and on an annual schedule thereafter. Such tests will be conducted in accordance with A.S.S.E. and / or U.S.C.-C.C.C. and H.R. performance standards and field test procedures as directed by the Colorado Department of Public Health and Environment. (Not applied to residential dual check installations. Dual checks will be tested at intervals set by the Board.)

(H) The City will require inspection of all containment system installations.

(I) All costs for design, installation, maintenance, repair, and testing are to be borne by the customer.

(J) No grandfather clause exists. All laws and regulations apply regardless of the age of the facility.

(K) All fire sprinkling lines shall have a minimum protection of an approved double check valve for containment of the system.

(1) All glycol, ethylene, propylene, and other chemical antifreeze systems shall have an approved Reduced Pressure Zone assembly for containment.

(2) Dry fire systems shall have an approved Double Check Valve installed upstream of the air pressure valve.

(3) Single-family residence with a fire sprinkler system and domestic water combined shall have a double check valve when no chemicals are used.

(L) All fire sprinkler systems shall conform to the following sections of the National Fire Protection Association Pamphlets Number Thirteen and Twenty-Four: Pamphlet Number Thirteen, section 1-11.2 Hydrostatic Testing, and section 1-1.2.2 Allowable Leakage and Pamphlet Number Twenty-Four, "Private Fire Service Mains and Their Appurtenances", Section 8.4.

3-8-6: STANDARDS FOR BACKFLOW PREVENTION ASSEMBLIES

(A) Any backflow prevention assembly required for containment under this Chapter shall be of a model and size approved by the City. The term "Approved Backflow Prevention Assembly" shall mean an assembly that has been manufactured in full conformance with the standards established by the latest version of the Colorado Department of Public Health and Environment Cross Connection Control Manual and by the City. Final approval shall be evidenced by a "Certificate of Approval" issued by an approved testing laboratory certifying full compliance with Colorado Department of Public Health and Environment standards and A.S.S.E. and/or USC FCCC & HR specifications. Provided however, containment within a residential meter pit may be accomplished with an assembly not approved by the Foundation for Cross Connection Control and Hydraulic Research, but approved by the American Society of Sanitary and

Mechanical Engineers as designated by the City. The following testing laboratory is qualified to test and certify backflow prevention assemblies. A backflow prevention assembly being listed on their periodic approved list shall be deemed to meet all of the above requirements:

A.S.S.E. American Society of Sanitary Engineering, 28901 Clemens Road, Suite 100, Westlake, Ohio 44145.

USC Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, OHE 430-D University Park-MC 1453 Los Angeles, California 90089-14534.2

(1) Only Approved Backflow Prevention Assemblies shall be used.

(B) Containment devices and backflow prevention assemblies currently installed, which are not approved, shall be replaced with an approved device at the time they are discovered.

(C) Backflow prevention assemblies used on fire lines shall have O.S. & Y. (outside stem & yoke) valves and be listed by the National Fire Protection Association.

3-8-7: INSTALLATION OF CONTAINMENT DEVICES

(A) All backflow prevention assemblies shall be installed in accordance with the City requirement.

(B) All backflow prevention assembly installations shall be inspected and approved for use by the City.

(C) All backflow prevention assemblies shall be installed in the horizontal position. Vertical installation shall be acceptable when approved by A.S.S.E. and / or USC FCCC & HR specifications.

(D) A pressure vacuum breaker shall be used where the backflow prevention assembly is never subject to backpressure if installed a minimum of twelve (12) inches above the highest piping or outlet downstream of the assembly in a manner to preclude back pressure.

(E) Atmospheric vacuum breakers are not allowed.

(F) A single check valve is not considered to be a backflow prevention assembly, and must be replaced with an approved containment device.

(G) Double check valve assemblies may be installed in below grade vaults only if the vault is properly constructed and insulated to prevent freezing.

(H) Reduced pressure backflow prevention assemblies must be installed above ground. The device should be placed at least twelve inches (12) above the finish grade to allow clearance for the repair work. A concrete slab at finish grade is recommended. Proper drainage should be provided for the relief valve and may be piped away from the location provided it is readily visible from above grade and provided the relief valve is separated from the drain line by a minimum of double the diameter of the supply line. A modified vault installation may be used if constructed with ample side clearances and adequate drainage.

3-8-8: TESTING AND MAINTENANCE

(A) At least once per year, it will be the duty of the customer where any containment device is installed to have a certified inspection or test made of those devices. In those specific instances where the City deems the hazard to be great enough, certified inspections or tests at more frequent intervals may be required. These inspections or tests shall be at the expense of the customer and shall be performed by a certified technician approved by the Colorado Department of Public Health and Environment.

(B) As necessary, the containment devices shall be repaired or replaced at the expense of the customer whenever the containment devices are found to be defective. Records of all such inspections, tests, repairs or replacement shall be kept by customer and the City.

(C) Existing containment devices shall be sealed by the technician performing the inspection or test at the completion of the inspection or test.

(D) All testing equipment used in testing of containment devices shall be checked for accuracy at least annually, and proof of compliance shall be submitted to the City upon request.

(E) The City retains the right to inspect or test the installation and operation of any containment device at anytime to assure proper operation.

3-8-9: ENFORCEMENT AND PENALTY

This Program shall be enforced and administered pursuant to applicable provisions of the City Code, City Building Code and the State Plumbing Code, including but not limited to, rights of entry and inspection, water shut-off, abatement of nuisances, and prosecution in municipal court. It shall be unlawful for any person to violate any of the provisions of this Chapter. Any person convicted of such violation may be punished as provided in Section 1-2-3 of the Official City Code of the City of Montrose. Each separate day on which a violation is committed or continues shall constitute a separate offense.