CITY OF VALDOSTA

MANUAL OF CROSS-CONNECTION CONTROL

PREPARED BY:

CITY OF VALDOSTA
UTILITIES DEPARTMENT

2009

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SECTION I - CROSS-CONNECTION CONTROL

1.1. INTRODUCTION

1.1.1. The intent of this Manual is to implement the City of Valdosta Cross-Connection Control and Backflow Prevention Ordinance, to protect the city's water quality, and to comply with all applicable state and federal regulations.

1.1.2. The procedures described herein are designed to insure the full cooperation of all cross-connection regulatory departments including the Community Development Department, the Lowndes County Health Department, and the City Utilities Department.

1.1.3. Upon discovery of a prohibited cross-connection, the Utilities Director shall require an appropriate backflow assembly or terminate the water service until the contaminant source is eliminated.

1.1.4. Direct connections between potable and non-potable systems, between potable and reclaimed water systems, and between potable and private wells are prohibited.

1.2. GENERAL DESCRIPTION OF BACKFLOW AND BACKFLOW PREVENTION

1.2.1. Water distribution systems are designed with the intention of the water flowing in a certain direction from the distribution system to the customer. However, hydraulic conditions within the system may deviate from the "normal" conditions, causing the water to flow in the opposite direction. Therefore, it is possible (and common) for the water to flow in the opposite direction in an unprotected system. This is called "backflow."

1.2.2. Backflow occurs when the pressure in the distribution system drops, siphoning water from the customer's system into the distribution system. This would also siphon any substance which may be in contact with the water system through a cross-connection. This type of backflow is called "backsiphonage" and may occur when there is an unusually high use of water or undersized piping in an area. For example, during fire fighting, or when a main water line breaks, water is "sucked" to the point of high usage, possibly drawing non-potable substances with it, filling the water line with these substances. Backsiphonage may occur through cross-connection such as a hose from a maintenance sink in a mop bucket, or a below-the-rim water inlet to a tank containing a toxic solution.

1.2.3. Some water customers have non-potable materials on the premises under pressure. When an unprotected water line is attached to the container or pipes holding the pressurized material, the material may be "pumped"

back into the potable water system. This type of backflow is called "backpressure." Backpressure may occur through a cross-connection such as a make-up water line, which is connected, to a recirculating system containing soap, acid, antifreeze or any other non-potable substance.

1.2.4. Because of these potential dangers to the water consumer, it is necessary to control cross-connections. There are several types of mechanical assemblies which serve as backflow preventers. Different types of backflow preventers are designed to work under backsiphonage or backpressure conditions. Some are acceptable for low-hazard (or non-health hazard) conditions.

1.2.5. This Manual provides guidelines for the proper use of backflow prevention devices and assemblies.

1.3. RESPONSIBILITY

1.3.1. The Director of the City Utilities Department has the primary responsibility for protecting the public water systems against backflow. This responsibility begins at the water supply source, includes all of the public water distribution system, and generally ends at the point of water delivery to the customer's premises or system. The Utilities Department is not responsible for abatement of cross-connection within a customer's premises but rather undertakes reasonable precautions to protect the public water system from backflow through such cross-connections. Taking reasonable precautions includes ensuring that proper backflow preventers are installed and maintained at service connections where appropriate.

1.3.2. The installation of a backflow preventer at a service connection in accordance with this section does not negate the need for backflow preventers at points of water use within the customer's potable water system.

1.4. DEFINITIONS

1.4.1. *Approved:* Accepted by the City Utilities Department

1.4.2. *Assembly:* A mechanical backflow preventer (e.g., PVB, DC, RP, etc.), used to prevent the backward flow of contaminants or pollutants into a potable water distribution system. An assembly has a resilient seated, full-flow shut-off valve before and after the backflow preventer making it testable in-line. (The assembly is shipped with the shut-off valves attached to the backflow preventer). An assembly is labeled with the manufacturer's symbol, the size and model number, the working pressure and the direction of flow. Parts for the approved assembly are provided for a minimum of seven years after sale of the assembly. The Foundation for

Cross-Connection Control and Hydraulic Research at the University of Southern California approves backflow prevention assemblies.

1.4.3. *Auxiliary Water Supply:* Any water supply on or available to the premises other than the City's public water system. These auxiliary waters may include water from another purveyor's public potable water or any natural source (s) such as well, spring, river, stream, harbor, etc., or "used waters" or "industrial fluids". These waters may be polluted or contaminated or they may be objectionable and constitute an unacceptable water source over which the City does not have sanitary control.

1.4.4. *Backflow:* The undesirable reversal of flow of water or other substances through a cross-connection and into the piping of a public water system or customer's potable water system. This includes backflow from backsiphonage or backpressure.

1.4.5. *Backflow Preventer:* A device assembly, or means designed to prevent backflow, including:

1.4.5.1. Air-Gap (AG): The unobstructed vertical distance through the free atmosphere between: the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, or other device; and the flood level rim of such vessel. An approved AG shall be at least double the diameter of the supply pipe, measured vertically, above the top of the rim of the vessel; and, in no case less than one inch. When an AG is used at the service connection to prevent the contamination or pollution of the public potable water system, an emergency by-pass shall be installed around the AG system and an approved reduced pressure principle device shall be installed on the by-pass system.

1.4.5.2. Reduced Pressure Principle Assembly (RP): An assembly of two independently operating approved check valves with an automatically operating differential relief valve between the two check valves, tightly closing shut-off valves on either side of the check valves, plus properly located test cocks for the testing of the check and relief valves. The entire assembly shall meet the design and performance specifications and approval of a recognized and City approved testing agency for backflow prevention assemblies. The device shall operate to maintain the pressure in the zone between the two check valves at a level less than the pressure on the public water supply side of the device. At cessation of normal flow, the pressure between the two check valves shall be less than the pressure on the public water supply side of the device. In

case of leakage of either of the check valves, the differential relief valve shall operate to maintain the reduced pressure in the zone between the check valves by discharging to the atmosphere. When the inlet pressure is two pound per square inch or less, the relief valve shall open to the atmosphere. To be approved, these devices must be readily accessible for in-line maintenance and testing and be installed in a location where no part of the device will be submerged.

1.4.5.3. Double Check Valve Assembly (DC): An assembly of two independently operating approved check valves with tightly shut off valves on each side of the check valves, plus properly located test cocks for the testing of each check valve. The entire assembly shall meet the design and performance specifications and approval of a recognized and City approved testing agency for backflow prevention devices. To be approved, these devices must be readily accessible for in-line maintenance and testing.

1.4.5.4. Pressure Vacuum Breaker Assembly (PVB): An assembly consisting of one independently operating spring loaded check valve, an independently operating, spring loaded air-inlet valve, 2 test cocks and 2 shut off valves. This assembly is designed to prevent backsiphonage. It cannot be used where it may be subjected to back pressure. It can be operated under continuous pressure.

1.4.5.5. Spill-Resistant Pressure Vacuum Breaker Assembly (SVB): An assembly containing an independently operating internally loaded check valve and independently operating loaded air inlet valve located on the discharge side of the check valve. The assembly is to be equipped with a properly located resilient seated test cock, a properly located bleed/vent valve, and tightly closing resilient seated shutoff valves attached at each end of the assembly. This assembly is designed to protect against a non-health hazard (i.e., pollutant) or a health hazard (i.e., contaminant) under a backsiphonage condition only.

1.4.5.6. Atmospheric Vacuum Breaker (AVB): A mechanical backflow prevention device consisting of a float check valve and an air inlet port designed to prevent backsiphonage by allowing air to enter the downstream water line. This unit does not provide protection against backpressure or continuous pressure. (A shut-off valve is

not allowed down stream from the device to prevent the device from being subjected to continuous pressure).

1.4.5.7. Residential Dual Check (RDC): A compact unit manufactured with two independent spring actuated check valves. The residential dual check is acceptable only: as added back-flow prevention in areas served by reuse systems.

1.4.6. *Backflow Prevention Inspector:* Tasked by the Utilities Director to inspect and test back flow preventers.

1.4.7. *City:* Any and all persons or Departments affiliated with the City.

1.4.8. *Contamination:* An impairment of the quality of the potable water by sewage, industrial fluids or waste liquids, compounds or other materials to a degree which creates an actual or potential hazard to the public health through poisoning or through the spread of disease.

1.4.9. *Cross-Connection:* Any physical arrangement whereby a public water supply is connected, directly or indirectly, with any other water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other device which contains or may contain contaminated water, sewage or other waste, or liquid of unknown or unsafe quality which may be capable of imparting contamination to the public water supply as the result of backflow. By-pass arrangements, jumper connections, removable sections, swivel or changeable devices, and other temporary or permanent devices through which or because of which backflow could occur are considered to be cross-connections.

1.4.10. *Cross-Connections-Controlled:* A connection between a potable water system and a non-potable water system with an approved backflow prevention assembly properly installed that will continuously afford the protection commensurate with the degree of hazard.

1.4.11. *Device:* A mechanical backflow preventer without the shut-off valves. An atmospheric vacuum breaker is a device. It does not have shut-off valves on either side of the backflow prevention mechanism. In addition, any backflow prevention assembly without the shut off valves is called a device. The American Water Works Association (AWWA) and the American Society of Sanitary Engineers (ASSE) approve backflow prevention devices.

1.4.12. *Director:* The City's Utilities Department Director.

1.4.13. *Industrial Fluids System:* Any system containing fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in

a form or concentration such as would constitute a health system, polytonal or plumbing hazard if introduced into an approved water supply. This may include, but not be limited to: polluted or contaminated waters; all types of process waters and "used waters" originating from the public potable water system which may have deteriorated in sanitary quality; chemicals in fluid form; plating acids and alkalis; circulated cooling waters connected to an open treated or stabilized with toxic substances; contaminated natural waters such as from: wells, springs, streams, rivers, bays, harbors, seas, irrigation canals or systems, etc.; oils, gases, glycerin, paraffin's, caustic and acid solutions and other liquids and gaseous fluids used in industrial or other purposes or for fire fighting purposes.

1.4.14. *Pollution:* Means the presence of any foreign substance (organic, inorganic, or biological) in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably affect such waters for domestic use.

1.4.15. *Water, Potable:* Any water that, according to recognized standards is safe for human consumption.

1.4.16. *Water, Nonpotable:* Water that is not safe for human consumption or which is of questionable potability.

1.4.17. *Water, Service Connections:* The terminal end of a service connection from the public potable water system; i.e., where the City loses jurisdiction and sanitary control over the water at its point of delivery to the customer's water system. If a meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the meter. There should be no unprotected takeoffs from the service line ahead of any meter or backflow prevention device located at the point of delivery to the customer's water system. Service connections shall also include water service connections from a fire hydrant and all other temporary or emergency water service connections from the public potable water systems.

1.4.18. *Water, Used:* Any water supplied by a City from a public potable water system to a customer's water system after it has passed through the point of delivery and is no longer under the sanitary control of the City.

2. SECTION II - ADMINISTRATIVE COMPONENTS OF PROGRAM

2.1. LEGAL AUTHORITY

2.1.1. The City Council of the City of Valdosta has adopted Ordinance No. _____ dated _____, the City of Valdosta Cross Connection Control

and Backflow Prevention Ordinance. This ordinance is the local legal authority for the program described herein and incorporates this Manual by reference. A copy of this ordinance is contained in Appendix B of this Manual.

2.2. GUIDANCE DOCUMENTS FOR PUBLIC WATER SYSTEMS

The following publications are adopted as Technical Guidance to assist the City. Specific portions of a publication that contains enforceable criteria may be referenced in this Manual. Information in the publication does not supersede the specific requirements detailed in this Manual. Copies of the publication may be obtained from the source indicated below.

2.2.1. "American Society of Sanitary Engineering Professional Qualification Standards. Backflow Prevention Assemblies -- Series 5000, 1991," American Society of Sanitary Engineering, 28901 Clemens Road, Westlake, Ohio 44145.

2.2.2. "Cross Connections and Backflow Prevention," 2nd Edition, American Water Works Association, 1974, American Water Works Association, 6666 W. Quincy Avenue, Denver, Colorado 80235.

2.2.3. "Cross-Connection Control Manual," 1989, EPA 570/9-89-007, U.S. Environmental Protection Agency, Office of Water (WH-550A), Office of Drinking Water, Washington, D.C. 20460.

2.2.4. "Manual of Cross-Connection Control," Ninth Edition, 1993, Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, KAP-200 University Park MC-2531, Los Angeles, California 90089-2531.

2.2.5. "Recommended Practice for Backflow Prevention and Cross-Connection Control. AWWA Manual M14," Second Edition, 1990, American Water Works Association, 6666 West Quincy Avenue, Denver, Colorado 80235.

2.2.6. "Recommended Standards for Water Works," 1997 Edition, A Report of the Committee of the Great Lakes-Upper Mississippi River Board of State Public Health and Environmental Managers, Published by Health Research, Inc., Health Education Services Division, P.O. Box 7126, Albany, N.Y. 12224.

2.2.7. "Standards of the American Water Works Association", in effect on June 1, 1992, American Water Works Association, 6666 W. Quincy Avenue, Denver, Colorado 80235.

2.2.8. "Water Fluoridation -- A Manual for Engineers and Technicians," Thomas G. Reeves, P.E., National Fluoridation Engineer, Published by the U.S. Department of Health and Human Services, Public Health Service Centers for Disease Control, Dental Disease Prevention Services, Atlanta, Georgia 30333, September 1986.

2.2.9. "Water Treatment Plant Design," 2nd Edition, 1990, American Society of Civil Engineers and American Water Works Association, Published by McGraw-Hill Publishing Company, 1221 Avenue of the Americas, New York, New York 10020.

2.2.10. "Water Quality and Treatment: A Handbook of Community Water Supplies," American Water Works Association, 4th Edition, 1990, McGraw-Hill Publishing Company, 1221 Avenue of the Americas, New York, New York 10020.

2.3. PROCEDURE TO REVIEW NEW SERVICE CONNECTIONS

2.3.1. Each non-residential applicant desiring water service will be required to complete a cross-connection control questionnaire. (See Appendix L)

2.3.2. Site plans for new construction, additions, or renovations shall be reviewed by the Director and recommendations for change or installation of an approved device shall be noted and attached and reviewed by the City's Site Plan Committee for recommendations.

2.3.3. Based on the risk assessment, the City Utilities Department shall recommend or require appropriate backflow prevention devices. The devices shall be installed by the person requesting service before the City Utilities Department making a water service connection.

2.3.4. Upon receipt of service order for non-residential water meter installation, the Director shall make inquiries as to the type of facilities and equipment to be attached to the water service. (If site plans have not already been reviewed.)

2.4. PROCEDURE TO REVIEW EXISTING SERVICE CONNECTIONS

The following schedule and procedures for evaluating existing service connections and ensuring that they are equipped or are being retrofitted, with a proper backflow preventer where required by Subsection 2.3. The Utilities Department shall evaluate each service connection at least once by December 31, 2010, and shall re-evaluate each service connection at least once every ten years thereafter and whenever there is a switch in the customer of record. The details of the schedule and procedure is outlined as follows:

2.4.1. Properties where cross-connections are suspected shall be surveyed by the City Utilities Department to determine if a cross-connection exists.

2.4.2. The customers receiving service at the suspected properties shall be contacted in advance to secure an appointment for inspection of the premises and will be requested to accompany the Backflow Prevention Inspector during the tour of the premises.

2.4.3. An inspection form will be completed by the inspector. The customer shall be made aware of any corrective measures that may be required.

2.4.4. All official letters of notification shall be sent to the customer indicating what corrective measures must be taken.

2.4.5. Upon conformance of the requirements in the notification letter, the customer shall immediately notify the City Utilities Department to schedule a date for re-inspection.

2.5. PROCEDURES FOR KEEPING CROSS-CONNECTION RECORDS

The Utilities Department shall keep backflow incident reports, and records of test, repairs, inspections, or water quality. Additionally the Utilities Department shall maintain a current inventory of all backflow preventers that are in place. This inventory shall include the location, type, manufacturer, model, size, and installation date of each backflow preventer.

2.6. PROCEDURES FOR EDUCATING THE PUBLIC ABOUT CROSS-CONNECTION CONTROL

At least once every two years the Valdosta Utilities Department shall conduct a public education activity aimed at improving the general customer's awareness about cross-connection control through methods such as: bill inserts, pamphlets or booklets, posters or billboards, public service announcements, articles or stories in the news media, seminars or workshops, or school lectures or presentations. Whenever a new service connection is made, or there is a switch in the customer of record, the Utilities Department shall deliver to the new customer of record an educational pamphlet addressing the importance of the customer installing and/or maintaining anti-siphon toilet tank valves and hose bib vacuum breakers that conform to the State Plumbing Code.

2.7. PROCEDURES FOR DEALING WITH BACKFLOW COMPLAINTS AND BACKFLOW INCIDENTS

2.7.1. Upon discovery of contamination of the public water supply from a cross-connection the inspector shall notify the following within 24 hours:

2.7.1.1. City Water Treatment Plant

2.7.1.2. Lowndes County Health Department

2.7.1.3. Georgia Environmental Protection Division

2.7.2. The responding individuals shall determine the extent of contamination, by having a person from the City Water Treatment Plant take samples for testing, and shall take appropriate measures to clear the contamination from the public water supply. After clearing the contaminate from the public water supply, the City Utilities Department shall perform a survey of the customer's lines to determine and eliminate the cause. A boiled water notice will be issued if necessary based upon identified contaminates from sample test results, if any or lack of chlorine residual. The City retains the right to require a backflow preventer to be installed at the customer's' cost to prevent further occurrences.

3. SECTION III - BACKFLOW PREVENTION ASSEMBLY APPLICATIONS

3.1. CITY WATER CONNECTIONS TO OTHER WATER SYSTEMS, PUMPING STATIONS AND WATER LOADING STATIONS

3.1.1. Cross-connections are prohibited.

3.1.2. If a public water system is used to supplement a reclaimed water system or to flush a stormwater or wastewater system, or if a public water system is drained to a stormwater or wastewater, an air gap shall be maintained between the two systems at all times

3.1.3. The City shall equip each of its in-line booster pumping stations with an automatic low-pressure cutoff or controller to prevent operation of the pumping station if pressure in the pumping station suction line drops below 20 psi.

3.1.4. The City shall install an AG, RP, or DC at each travel trailer water loading station owned or operated by the Utilities Department, and shall install an AG or RP at every other temporary or permanent water loading station owned or operated by the Department. The phrase "other temporary or permanent water loading station" includes any station or hydrant used to fill tank trucks.

3.2. FIRE PROTECTION CUSTOMERS

In cases where the operation of a preexisting fire protection system will be adversely affected by the installation of a backflow preventer, the customer will also install a pressure booster pump to correct those adverse conditions.

3.3. RESIDENTIAL CUSTOMERS

Residential water services require backflow prevention devices when the following conditions arise:

3.3.1. A residence utilizes an irrigation system outfitted with a chemical feed device.

3.3.2. A residence is provided with reclaimed water for irrigation purposes.

3.3.3. A residence is using a well for irrigation purposes, physically separated from the public water service (which is used for domestic purposes).

3.3.4. Operations are being conducted at the residences which are similar to the non-residential listings of Table 1, Appendix A.

3.3.5. In the Director's judgment, a customer's installation has the potential to contaminate the public water system.

3.3.6. The City Utilities Department shall make recommendations on backflow prevention devices with regard to residential water services not covered in Section 3.3.

3.4. COMMERCIAL AND INDUSTRIAL SERVICES REQUIRING BACKFLOW PREVENTION DEVICES

3.4.1. Backflow Prevention Assemblies shall be required for the types of facilities and plumbing fixtures listed in Appendix A. For facilities not listed, the City Utilities Department shall have the sole right to require backflow prevention assemblies where it deems necessary to protect the public water system from contamination.

3.4.2. All required backflow prevention assemblies shall be tested and maintained in accordance with the provisions herein. The City Utilities Department shall make recommendations concerning backflow assemblies for all non-residential irrigation systems.

4. SECTION IV - STANDARD FOR BACKFLOW PREVENTERS

4.1. AG. The Utilities Department shall require that each air gap required by Section III above or Section V below conforms to ANSI/ASME Standard A112.1.2-1991.

4.2. RP, PVB, DC or RDC. The Utilities Department shall require that each RP, PVB, DC or RDC required by Section III and installed on or after December 1, 2009, is a make, model, and size that has satisfactorily passed at least one of the following evaluation:

4.2.1. A laboratory and field evaluation in accordance with ANSI/AWWA Standard C510-92 or C511-92.

4.2.2. A laboratory evaluation in accordance with ANSI/ASSE Standard 1020-1990, 1024-1990, 1047-1995, or 1048-1995.

4.2.3. A laboratory and field evaluation in accordance with Section 10 of the University of Southern California's Manual of Cross-Connection Control.

4.3. APPROVED ASSEMBLY LIST

The City shall maintain an approved listing of backflow preventers' makes, models, and sizes within the City Standards and Specifications Manual.

4.4. RETROFITTING OLD ASSEMBLIES

The Utilities Department shall require that each RP, DC or RDC that is required by Section III but that was installed before November 1, 2009, and does not meet the standards in paragraph 4.2 above is replaced by a backflow preventer meeting the standards in paragraph 4.2 if or when any of the following conditions apply or occur:

4.4.1. The backflow preventer is other than a RDC and cannot be tested in-line.

4.4.2. The backflow preventer is a RDC that cannot be tested in-line and is removed for repair, replacement or overhauling.

4.4.3. The backflow preventer is relocated.

4.4.4. The water service pipe in which the backflow preventer is installed is altered.

5. SECTION V - INSTALLATION OF REQUIRED BACKFLOW PREVENTER

5.1. LOCATION REQUIREMENTS

The Utilities Department shall require that, in each case where a backflow preventer is required at a service connection, per Appendix A, the backflow preventer is installed in accordance with the following requirements:

5.1.1. The backflow preventer shall be located as close as practical to the customer's property line. Any variance will require inspection of the proposed location by the Backflow Prevention Inspector.

5.1.2. If the backflow preventer is on the customer's side of the property line, there shall be no takeoffs connected to the water service pipe between the property line and the backflow preventer.

5.1.3. If the backflow preventer is on the customer's side of the property line and is an AG, the water service pipe between the property line and the AG shall be entirely visible.

5.2. BYPASSING THE ASSEMBLY

The Utilities Department shall require that no bypass piping can be installed around any backflow preventer required by Appendix A, unless the bypass piping is equipped with a backflow preventer of the same type as that which is being bypassed. If water service cannot be interrupted for testing and repair of the mechanical backflow preventer, two or more mechanical backflow preventers of the same type must be installed in parallel.

5.3. BACKFLOW PREVENTER POSITIONING

The Utilities Department shall require that each AG, RP, PVB, DC, or RDC required by Appendix A and installed on or after the effective date of this Manual must be installed in accordance with the following requirements:

5.3.1. Each AG, RP, or PVB shall be installed in such a manner that it is not subject to flooding by a ten-year storm, or wherever practical, a 100-year storm.

5.3.2. Each RP, PVB, DC, or RDC shall be installed with adequate space to facilitate testing, if applicable, and maintenance.

5.3.3. Each RP, DC, or RDC shall be installed in a horizontal position unless it is a make, model, and size that has satisfactorily passed an evaluation as discussed in Section IV while installed in another position. Each PVB shall be installed in a vertical position unless it is a make, model, and size that has satisfactorily passed an evaluation as discussed in section IV while installed in another position

5.3.4. Each RP shall be installed with an air gap between the RP's relief valve port and the ground or floor.

5.3.5. RP's shall not be installed in pits that are entirely below ground level. If an RP is installed in a semi-buried pit or in an enclosure, the pit or enclosure shall have an above ground drain opening that discharges to a well-drained area and that is sized to accommodate the maximum discharge rate through the RP's relief valve. Furthermore, there shall be an air gap between the RP's relief valve port and the maximum flood level expected in the pit or enclosure as a result of discharge through the RP's relief valve.

5.3.6. If an RP is installed inside a building, the building shall have a gravity drainage system sized to accommodate the maximum discharge rate through the RP's relief valve, a sump pump that is sized to accommodate the maximum discharge rate through the RP's relief valve and that is

connected to emergency power, or an alarm system that detects flow through the RP's relief valve and that alerts maintenance or security personnel. In each case, there shall be an air gap between the RP's relief valve port and the maximum flood level expected in the building as a result of discharge through the RP's relief valve.

5.3.7. Each PVB shall be installed with its check valve at least 12 inches above all downstream piping and water outlets.

5.3.8. Each PVB shall be installed in a location where drainage is adequate to accommodate spillage through the PVB's air inlet valve.

5.3.9. If a DC or RDC is installed below ground level, adequate drainage shall be provided to maintain a normally dry location.

5.3.10. If a DC or RDC is installed in a location susceptible to flooding, the DC's or RDC's test cocks shall be plugged.

5.4. RETROFITTING OLD ASSEMBLIES POSITIONING

The Utilities Department shall require that each AG, RP, PVB, DC, or RDC that is required by Section III, but that was installed before the effective date of this Manual and does not meet the requirements in paragraph 5.3 above is reinstalled to meet the requirements in paragraph 5.3 if or when any of the following conditions apply or occur:

5.4.1. The backflow preventer is installed in such a manner that it cannot be tested, if applicable, or maintained.

5.4.2. The backflow preventer is a PVB, RP, or AG and is installed in such a manner that the PVB's air inlet port, the RP's relief valve port, or the supply pipe outlet at the AG could be submerged by a 10-year flood.

5.4.3. The backflow preventer is an RP and is installed in such a manner that the RP's relief valve port could be submerged as a result of discharge through the RP's relief valve.

5.4.4. The backflow preventer is a PVB and is installed with its check valve less than twelve inches above any downstream piping or water outlets.

5.5. POSSIBLE PRESSURE PROBLEMS

Before installing a backflow preventer at a service connection pursuant to Section V, or when requiring a customer to install a backflow preventer at a service connection pursuant to Appendix A, the City shall, if appropriate, advise the customer to do the following:

5.5.1. Conduct a thorough hydraulic analysis of any pre-existent fire protection system that will be downstream from the backflow preventer and notify the City if the operation of such a fire protection system will be adversely affected by the backflow preventer.

5.5.2. Install a device for the control of thermal expansion in the customer's potable water system if such system includes a water heater and will be made a closed-loop system by the backflow preventer.

5.6. FREEZING CONDITIONS

When installing a backflow preventer at a service connection pursuant to Section V when requiring a customer to install a backflow preventer at a service connection pursuant to Appendix A, the supplier of water shall, if appropriate, advise the customer to properly protect the backflow preventer and adjoining piping from freezing.

6. SECTION VI - TESTING, MAINTENANCE, AND CERTIFICATION OF REQUIRED BACKFLOW PREVENTERS

6.1. GENERAL REQUIREMENTS

6.1.1. A customer shall test each in-line testable backflow preventer required by Appendix A immediately after it is installed or repaired and before it is placed into operation. Also, beginning no later than October 1, 2010, a customer shall test each in-line testable backflow preventer required by Appendix A and installed at a single-family residential premises at least once every two years, and every other in-line testable backflow preventer required by Appendix A at least annually.

6.1.2. A customer shall have the tests required by paragraph 6.1.1 conducted only by persons who have proven their ability to the satisfaction of the City. At a minimum, each backflow preventer tester shall document that it has successfully completed at least a 32-hour training course concerning the principles of cross-connection control and including hands-on demonstrations of test procedures for RP, DC, and PVB assemblies.

6.1.3. For AG's, the tests required by paragraph 6.1.1 consist of a visual inspection to verify conformance with ANSI/ASME Standard A112.1.2-1991.

6.1.4. For RP's, PVB's, and DC's, the tests required by paragraph 6.1.1 shall be conducted in accordance with one of the following procedures:

6.1.4.1. The procedures in Chapter 8 of AWWA Manual M14.

6.1.4.2. The procedures in Section 9 of the University of Southern California's Manual of Cross-Connection Control.

6.1.4.3. The procedures in ASSE Standards 5010-1013-1: 5010-1015-1,3. and 4; 5010-1020-1; 5010-1047-1; and 5010-1048-1,3, and 4.

6.1.5. For in-line testable RDC's, the tests required by paragraph 6.1.1 shall be conducted in accordance with the same procedures as those listed in paragraph 6.1.4 for DC's.

6.1.6. A customer shall test each in-line testable backflow preventer required by Section III whenever it is repaired or replaced, fails a test required by paragraph 6.1.1 or is otherwise found defective.

6.2. TESTERS' RESPONSIBILITIES AND CERTIFICATION REQUIREMENTS

6.2.1. Each tester must submit to the Utilities Department a copy of its training certification to be placed on the Department's "Approved Tester List" which will be mailed with notification of test due to customers. No test performed by a person who has not complied with this shall be accepted by the Department. All testers shall have appropriate licenses (business and occupational) to conduct business in the City. All approved testers will receive written confirmation of being authorized to conduct testing or repairs of backflow assemblies.

6.2.2. Each approved tester shall submit to the Utilities Department a copy of it recertification certificate no later than 30 days after the expiration of annual certification.

6.2.3. Any tester found not complying with appropriate testing procedures shall be removed from the "Approved Tester List" by the Director.

6.2.4. Testers shall obtain from the City Utilities Department and attach to every device a tag (Appendix M) that indicates whether the device passed or failed.

6.2.5. Testers shall obtain test forms from the customer and return a copy of the completed form to the Utilities Department within 10 days of completion of testing a device.

6.3. CUSTOMER RESPONSIBILITIES

6.3.1. Responsibility for the testing and maintenance of required and recommended backflow prevention assemblies, including the payment of any testing fees, past the point of connection at the water meter, shall be the responsibility of the customer at no cost to the City.

6.3.2. For required backflow assemblies, the City Utilities Department will mail, 90 days before the test date, a Test Maintenance Form to customers to insure compliance. The completed and signed form shall be returned to the City Utilities Department. If not returned, a reminder notice, for testing of assemblies, will be mailed 30 days after initial notice was sent. Failure on the part of a customer to provide a completed form shall be treated as noncompliance.

6.3.3. Testing and maintenance on required assemblies shall be performed by a certified backflow prevention tester, or other individual with equivalent training acceptable to the City Utilities Department as approved in writing. These individuals will then be placed on the Approved Tester List.

6.3.4. Information concerning testing and maintenance of recommended backflow prevention assemblies shall be provided to customers as deemed appropriate by the City Utilities Department.

6.4. NOTIFICATION OF NONCOMPLIANCE

6.4.1. The City Utilities Department shall maintain records of testing and maintenance on required backflow prevention assemblies. Customers operating and maintaining such assemblies shall be notified as to the required testing frequency by the City Utilities Department. The customer shall have 30 days to complete the required testing.

6.4.2. Should a customer fail to test or maintain a required backflow prevention assembly within the specified time, the City Utilities Department shall issue, by certified mail, a noncompliance notice. The customer shall have 10 days to:

6.4.2.1. Provide the City Utilities Department with completed test results from which indicates acceptable performance of the backflow prevention unit.

6.4.2.2. Provide the City Utilities Department a written statement from an approved tester that the assembly is awaiting parts at which time the City Utilities Department will determine a course of action.

6.4.2.3. Provide the City Utilities Department with a written justification why the assembly has not been tested which is acceptable to the City Utilities Department.

6.4.2.4. Provide the City Utilities Department with confirmation that the customer will attend a Show Cause Hearing on the date specified in the noncompliance notice. The date of the

Notice of Appeal Hearing shall be scheduled to allow the City compliance with section 6.5.

6.5. SHOW CAUSE HEARING FOR SIGNIFICANT NONCOMPLIANCE

6.5.1. Should a customer in noncompliance fail to take satisfactory corrective measures under Section VI, the City Utilities Department shall notify the customer that the customer is required to attend a hearing before the Director, at the date and time specified in the notice, to show cause why the customer's service shall not be disconnected for causing or suffering violation of this Manual or other applicable law or regulation. The notice shall contain the nature of the violation and the dates at which such violation occurred to enable the customer to prepare its defense. Such notice shall be sent to the customer by certified mail, return receipt request, or personally delivered at least 10 days before the scheduled hearing date. Refusal of the customer to sign a certified mail receipt for the notice shall not affect the effectiveness of the notice.

6.5.2. Following the hearing, the Director may issue an order to the customer indicating a specified time, dependent on the severity of the violation, when water service may be discontinued unless and until satisfactory corrective action to permanently remove the offending connection from the public water system is taken by the customer.

6.6. EMERGENCY DISCONTINUATION OF SERVICE.

6.6.1. If, in the opinion of the Director, a customer's noncompliance with the provisions of this Manual or other applicable law or regulation presents an immediate threat to the public health, safety and welfare of the citizens of the City by contaminating or threatening to contaminate the public water supply, the Director is hereby authorized and empowered to immediately discontinue water service to the property without any prior notice.

6.6.2. In such event the Director shall notify the customer of such discontinuance and the reason therefore as soon as possible, and that the customer is required to attend a hearing before the Director, at the date and time specified in the notice, to show cause why the customer's service shall not continue to be disconnected for causing or suffering violation of this Manual or other applicable law or regulation. The notice shall conform to and be served as required by Section 6.5.2.

6.6.3. Following the hearing, the Director may issue an order to the customer continuing the disconnection of service unless and until satisfactory corrective action to permanently remove the offending connection from the public water system is taken by the customer.

6.7. LEGAL REVIEW

A customer may appeal an order of the Director to the Municipal Court. Such an appeal shall not be a hearing de novo but shall be limited to appellate review of the record created before the Director. An appeal shall be filed within 30 days of the Director's execution of the order to be appealed.

7. SECTION VII – ANNUAL CROSS-CONNECTION CONTROL PROGRAM STATUS REPORT FOR PUBLIC WATER SYSTEMS

7.1. The City shall maintain backflow prevention records for a minimum of 3 years. These records shall include the most current hazard assessment, location and types of backflow protection and associated hazards, results of all backflow prevention assembly field testing and AG inspections, and repairs made to, or replacement or relocation of, backflow protection.

Appendix A

TABLE 1

APPENDIX A

TABLE 1 CONTINUED

DESCRIPTION OF PREMISES OR SYSTEM	TYPE OF BACKFLOW PREVENTER[1]
oil--animal, mineral, or vegetable--or gas production, development, processing, blending, storage, refinery, transmission, or tank maintenance property; including any premises where an oil well is being drilled, developed, or operated, where a gas production or bottling plant is operated, where oil or gas tanks are repaired or tested, where a dehydration or refinery facility is operated, where water is used for slugging oil or gas through transmission lines, or where water is used for testing or purging oil or gas tanks or pipelines	AG or RP
paper or paper product plant (wet process)	AG or RP
plating--chemical, electrochemical, or mechanical--plant, including any plant with a chromium, cadmium, or other plating operation or a galvanizing, anodizing, stripping, oxidizing, etching, passivating, or pickling operation	AG or RP
poultry farm	AG or RP
power plant	AG or RP
premises exempt from the inspection provisions of the State Plumbing Code	AG, RP, or DC[2]
premises where a chemical that does not conform with the standards described in Rule 62-555.320(3), F.A.C., is added to the consumer's potable water system	AG or RP
premises where the consumer's potable water system supplies water to a cooling system, a space heating hot-water or steam boiler, a single-wall heat exchanger, or a double-wall heat exchanger with no leak detection capability	AG, RP, or none[14]
premises with an auxiliary water system[15]: a. industrial premises with an auxiliary water system b. nonindustrial premises with an auxiliary water system	 a. AG, RP, or DC[16] b. AG, RP, DC[17], or r
premises with a reclaimed water system: a. industrial premises with a reclaimed water system or nonindustrial premises with a reclaimed water system regulated under Part II, IV, V, or VI of Chapter 62-610, F.A.C. b. nonindustrial premises with a reclaimed water system regulated under Part III of Chapter 62-610, F.A.C.	 a. AG or RP b. AG, RP, DC[19], or r
premises where there is a repeated history of inadequately protected cross-connections being established	AG, RP, or DC[2]
premises with multiple interconnected water service connections	AG, RP, or DC
radioactive material processing or handling facility or nuclear reactor plant	AG or RP
restricted or classified facility or any facility that cannot be evaluated by the public water system	AG or RP
rubber--natural or synthetic--or rubber goods manufacturing plant, excluding any small molding or tire retreading plant	AG or RP
sand or gravel pit or sand or gravel classification or processing plant	AG or RP
travel trailer park	AG, RP, or DC
wastewater or storm water treatment plant or pumping station or any premises with a wastewater pump, excluding any nonindustrial premises with just a submersible wastewater pump	AG or RP

Appendix B

ORDINANCE NO. _____

AN ORDINANCE TO AMEND THE CODE OF THE CITY OF VALDOSTA, GEORGIA; AN ORDINANCE OF THE CITY OF VALDOSTA, GEORGIA CONCERNING CROSS CONNECTION CONTROL AND BACKFLOW PREVENTION; CONTAINING FINDINGS; ADDING A DIVISION 4 TO ARTICLE II OF CHAPTER 98 TO BE ENTITLED "CROSS CONNECTION CONTROL AND BACKFLOW PREVENTION"; ADDING A SECTION TO BE NUMBERED 98-121 PROVIDING A SHORT TITLE; ADDING A SECTION TO BE NUMBERED 98-122 PROVIDING DEFINITIONS; ADDING A SECTION TO BE NUMBERED 98-123 ADOPTING BY REFERENCE THE 2001 EDITION OF THE MANUAL OF CROSS CONNECTION CONTROL AND LISTING THE SUBJECTS OF THE MANUAL; PROVIDING FOR SEVERABILITY; PROVIDING FOR THE REPEAL OF CONFLICTING ORDINANCES; AND PROVIDING FOR AN EFFECTIVE DATE.

BE IT ORDAINED by the Mayor and Council of the City of Valdosta, Georgia, and it is hereby ordained by authority of same, as follows:

Section 1. The City Council of the City of Valdosta, Georgia finds as follows:

A. Preserving the integrity of public potable water supplies is essential to public health, safety and welfare; and

B. Connections to a public potable water supply system which are not sufficiently protected to prevent pollution or contamination from entering the public system through those connections are a potential hazard to public health, safety and welfare.

Section 2. That the Code of Ordinances of the City of Valdosta, Georgia, is hereby amended by adding a Division 4 to Article II of Chapter 98 section to be located after Division 3 (which currently ends with Section 98-106) and to read as follows:

DIVISION 4. CROSS CONNECTION CONTROL AND BACKFLOW PREVENTION

Section 3. That the Code of Ordinances of the City of Valdosta, Georgia, is hereby amended by adding a section to be numbered 98-121 which shall read as follows:

Sec. 98-121 Title of Division

This division shall be known and may be cited as the "City of Valdosta Cross Connection Control and Backflow Prevention Ordinance."

Section 4. That the Code of Ordinances of the City of Valdosta, Georgia, is hereby amended by adding a section to be numbered 98-122 which shall read as follows:

Sec. 98-122 Cross-Connection Control – General Policy

(a). Purpose. The purpose of this ordinance is:

(1). To protect the public potable water supply of the City of Valdosta from the possibility of contamination or pollution by isolating within the customer's internal distribution system or the customer's private water system such contaminants or pollutants that could backflow into the public water system; and,

(2). To promote the elimination or control of existing cross connections, actual or potential, between the customer's in-plant potable water system and nonpotable water systems, plumbing fixtures, and industrial piping systems; and,

(3). To provide for the maintenance of a continuing program of cross-connection control that will systematically and effectively prevent the contamination or pollution of all potable water systems.

(b). Responsibility. The water and sewer director shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow of contaminants or pollutants through the water service connection.

Section 5. That the Code of Ordinances of the City of Valdosta, Georgia, is hereby amended by adding a section to be numbered 98-123 which shall read as follows:

Sec. 98-123 Definitions

(a) The following words, terms and phrases, when used in this division, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Backflow means the undesirable reversal of flow of water or other substances through a cross-connection and into the piping of a public water system or customer's potable water system. This includes backflow from backsiphonage or backpressure.

Cross-Connection means any physical arrangement whereby a public water supply is connected, directly or indirectly, with any other water supply system, sewer,

drain, conduit, pool, storage reservoir, plumbing fixture, or other device which contains or may contain contaminated water, sewage or other waste, or liquid of unknown or unsafe quality which may be capable of imparting contamination to the public water supply as the result of backflow. By-pass arrangements, jumper connections, removable sections, swivel or changeable devices, and other temporary or permanent devices through which or because of which backflow could occur are considered to be cross-connections.

Manual means the manual adopted pursuant to section 98-124.

Other terms defined in the Manual shall have the meanings ascribed to them in the Manual.

Section 6. That the Code of Ordinances of the City of Valdosta, Georgia, is hereby amended by adding a section to be numbered 98-124 which shall read as follows:

Sec. 98-124 Adoption of Manual of Cross Connection Control

(a). There is hereby adopted by reference the 2003 edition of the "Cross-Connection Control Manual" as prepared by the United States Environmental Protection Agency.

(b). The manual contains provisions concerning, without limitation, the following:

(1). Introductory comments, a general description of backflow and backflow prevention, allocation of responsibility for the program and definitions.

(2). Administrative components including: procedures to review new service connections; procedures to review existing service connections; procedures for keeping cross connection records; procedures for educating the public about cross connection control; and procedures for dealing with backflow complaints and backflow incidents.

(3). Backflow prevention assembly applications including provisions concerning: city water connections to other water systems; pumping stations and water loading stations; fire protection customers; residential customers; and commercial/industrial customers.

(4). Standards for backflow preventers.

(5). Installation of required backflow preventers including provisions concerning: location requirements; bypassing the assembly; backflow preventer positioning; retrofitting old assemblies positioning; possible pressure problems; and freezing conditions.

(6). Testing, maintenance and certification of required backflow preventers including provisions concerning: general requirements; testers' responsibilities and certification requirements; customer responsibilities; notification of noncompliance; show cause hearings for significant non-compliance; emergency discontinuation of service; and judicial review.

(7). Annual cross-connection control program status report for public water systems.

(8). Appendices including construction standards.

(c). One copy of such manual shall be maintained in the office of the water and sewer director and one copy in the office of the building official.

(d). It shall be unlawful for any person to violate any of the provisions of the manual adopted in subsection (a) of this section.

Section 7. Severability Clause: Should any provision or section of this ordinance be held by a court of competent jurisdiction to be unconstitutional or invalid, such decision shall not affect the validity of this ordinance as a whole, or any part thereof, other than the part so declared to be unconstitutional or invalid.

Section 8. All ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 9. This ordinance shall take effect upon approval by the mayor, or upon becoming law without such approval.

ATTEST: **CITY OF VALDOSTA**

_____ By: _____
Larry Hanson
City Clerk City Manager

Approved / Denied by me as Mayor of the City of Valdosta, Georgia, on _____, 2009.

By: _____
John Fretti
Mayor

Approved as to form and legality:

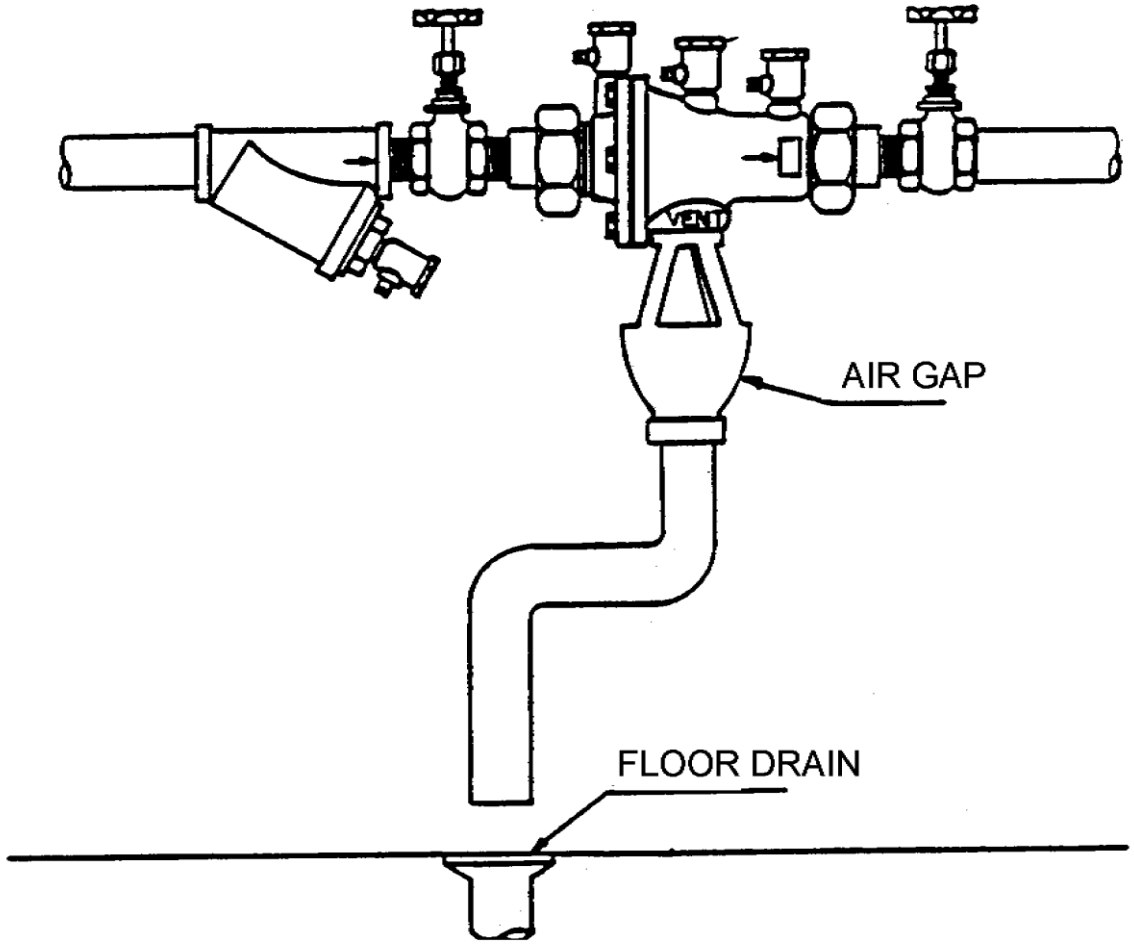
_____
George Talley
City Attorney

Appendix C

CONSTRUCTION STANDARDS

INDOOR RP

Backflow prevention assemblies installed indoors will vary in the method of installation based on location and configuration of the existing or proposed piping system.

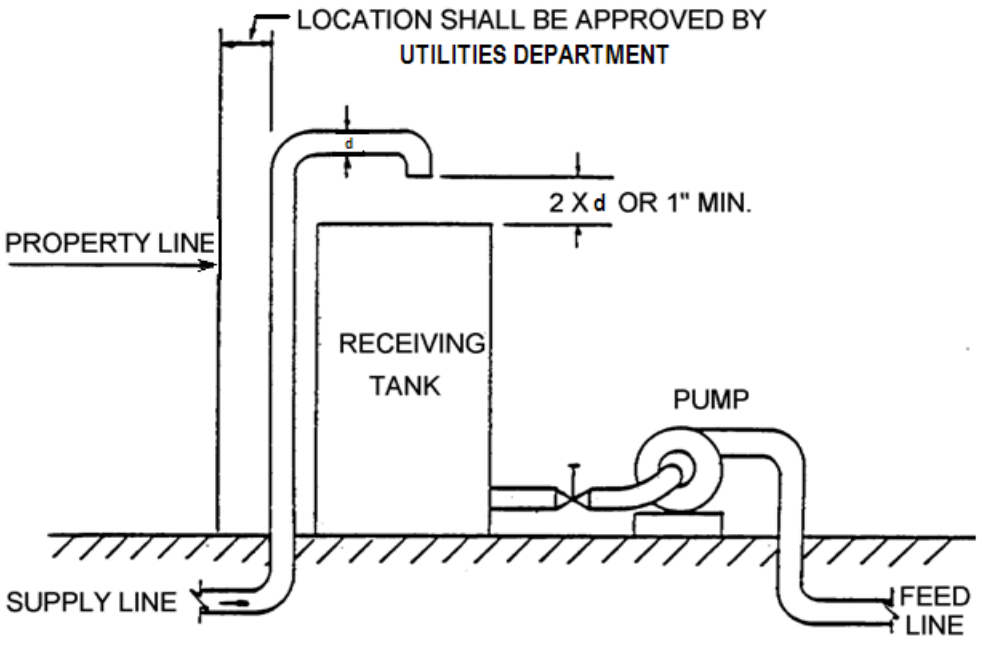


TYPICAL INDOOR REDUCED PRESSURE BACKFLOW PREVENTER INSTALLATION

Appendix D

CONSTRUCTION STANDARDS

AIR GAP SEPARATION



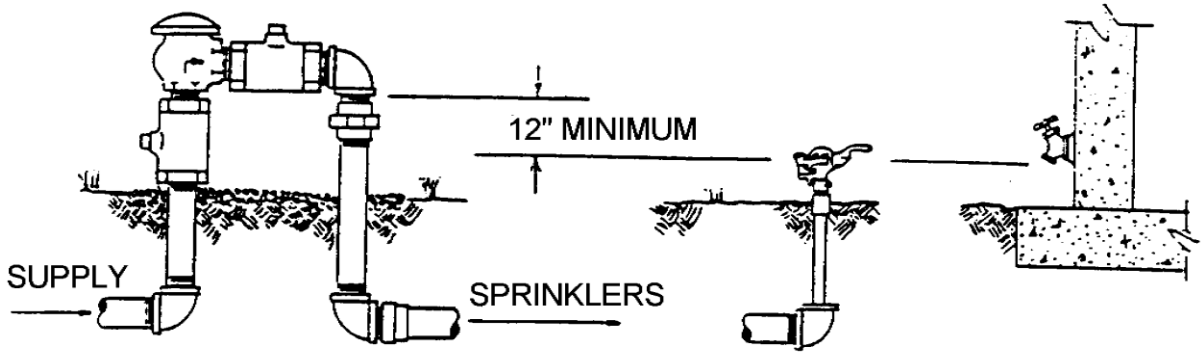
NOTE: 1. An air gap separation means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture or other device and the flood level or overflow rim of the receptacle.

2. The "Approved Air Gap Separation" shall be at least double the diameter of the supply pipe measured vertically above the overflow rim of the vessel and in no case shall the gap be less than one (1) inch in diameter.

Appendix E

CONSTRUCTION STANDARDS

PRESSURE-TYPE
VACUUM BREAKER (PVB)



NOTE: 1. The Pressure Vacuum Breaker (PVB) cannot be installed where it will be subjected to backpressure. It provides protection against back-siphonage of both pollutants and contaminants.

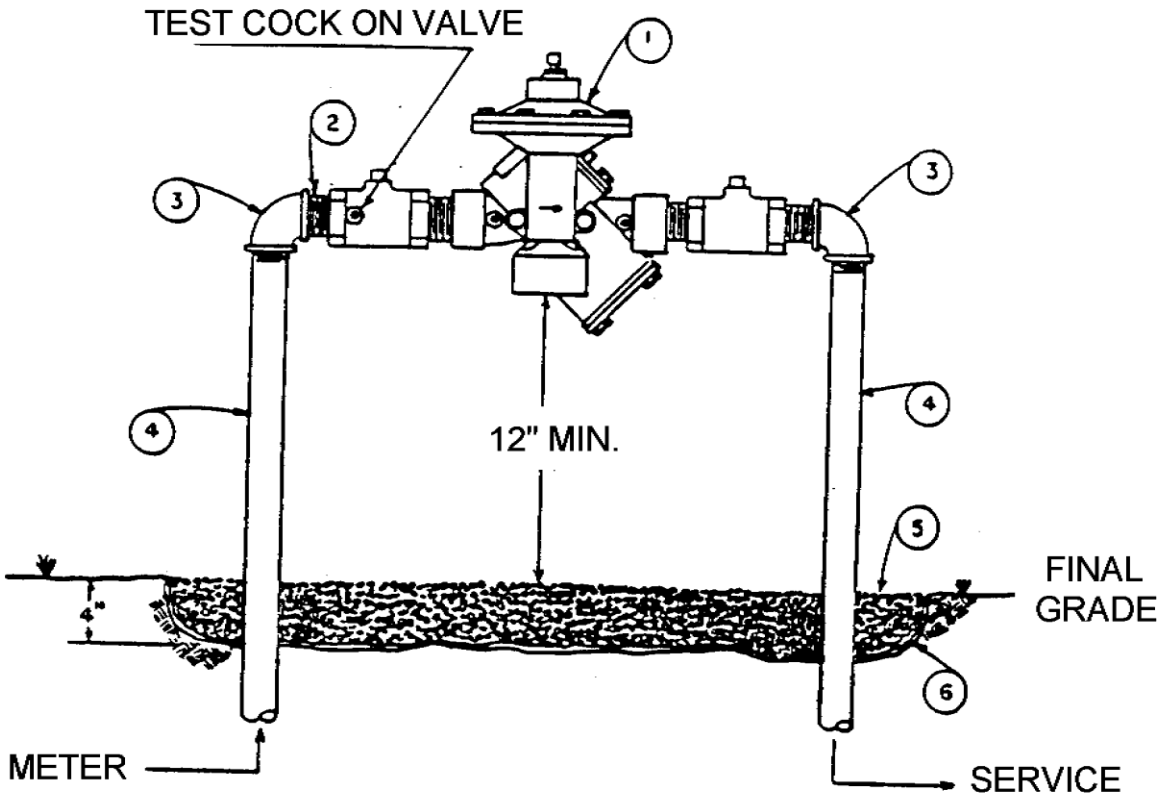
2. Each PVB shall be installed in an accessible location to facilitate inspection and servicing.

3. Each PVB shall be installed on the main line to the irrigation system and at least 12 inches above the highest sprinkler head or outlet. (Valves may be located downstream from the device).

Appendix F

CONSTRUCTION STANDARDS

DOUBLE CHECK OR REDUCED PRESSURE
BACKFLOW PREVENTER
SINGLE SERVICE: 3/4", 1", 1-1/2", 2"



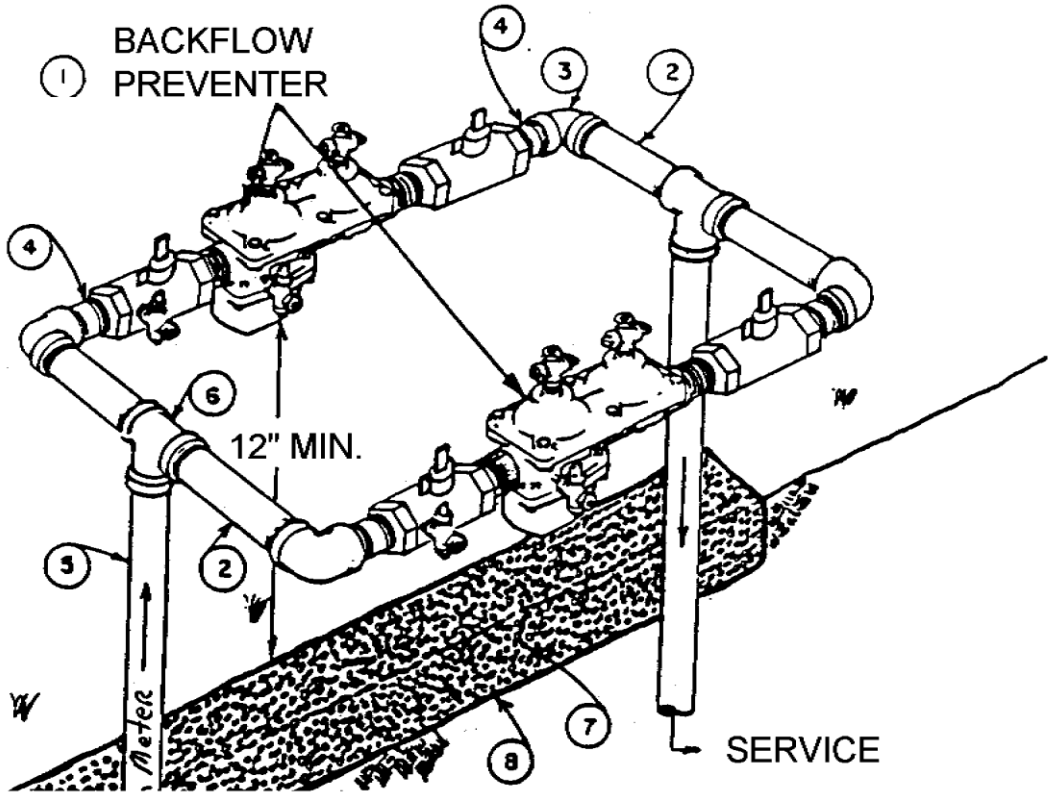
ITEM	MATERIALS QUANT.	DESCRIPTION
1	1	2" Backflow Preventer Assembly
2	2	2" x Nom. Nipples-Brass or PVC
3	2	2" x 90 degree Elbows - Galvanized or PVC
4	2	2" x Varies Riser - Galvanized or PVC
5	*	Pea Gravel
6	*	Plastic Liner

NOTE: Installation shown above is for a 2" service. Change piping materials accordingly of service size.

Appendix G

CONSTRUCTION STANDARDS

DOUBLE CHECK OR REDUCED PRESSURE
BACKFLOW PREVENTER
DUAL SERVICE: 3/4", 1", 1-1/2", 2"



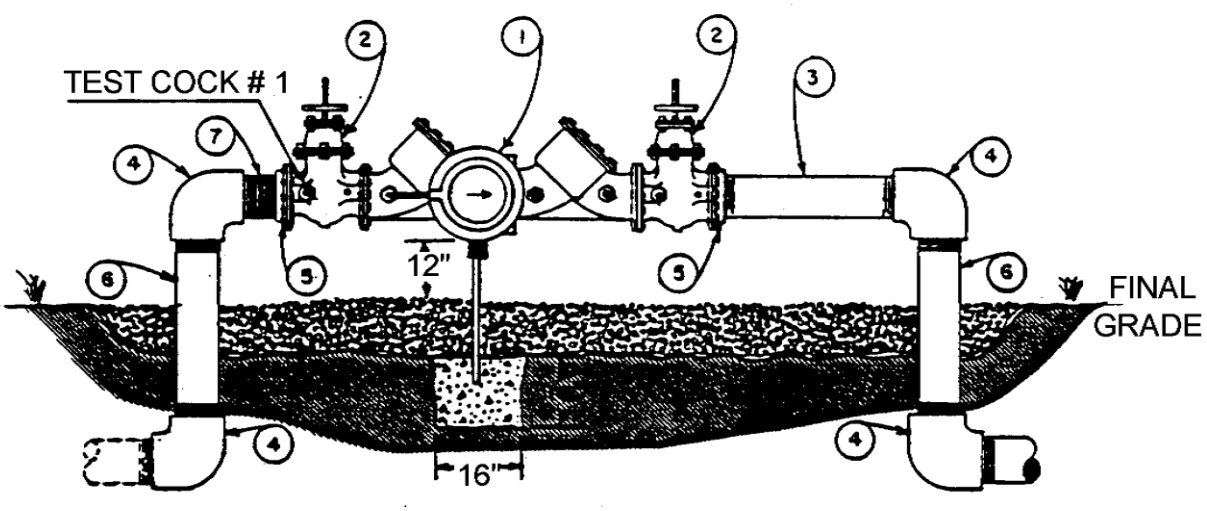
ITEM	MATERIALS QUANT.	DESCRIPTION
1	2	2" Backflow Preventer Assembly
2	4	2" x 6" Nipples- Galvanized or PVC
3	4	2" x 90º Elbows- Galvanized PVC
4	6	2" x 4" Nipples- Galvanized or PVC
5	2	2" Riser- Galvanized
6	2	2" Tees- Galvanized
7	*	Pea Gravel
8	*	Plastic Liner

NOTE Installation shown above is for a 2" service. Change piping materials accordingly for service size.

Appendix H

CONSTRUCTION STANDARDS

REDUCED PRESSURE
BACKFLOW PREVENTER
SINGLE SERVICE: 3",4"



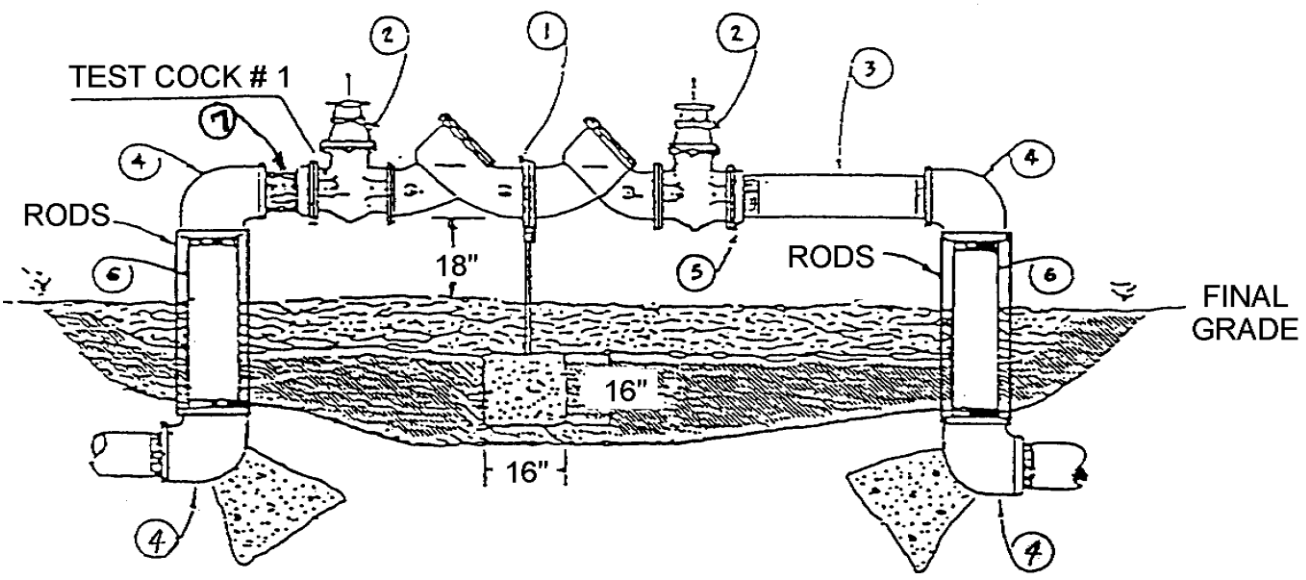
ITEM	MATERIALS QUANT.	DESCRIPTION
1	1	3", 4" Valve, Reduced Pressure
2	2	3", 4" Valve, Gate, C.l., F-F
3	1	3" , 4" Nipple Galv. (12" long) (opt.)
4	4	3", 4" Elbow, Galv. - 90º
5	2	3", 4" Flange, Steel Pipe, Screw-Type
6	2	3",4" Pipe, Galv. (42" long)
7	1	3", 4" Nipple, Galv. (6" long)

NOTE: Field adjust and cut item 6 to the proper length.

Appendix I

CONSTRUCTION STANDARDS

DOUBLE CHECK
BACKFLOW PREVENTER
SINGLE SERVICE: 3",4"



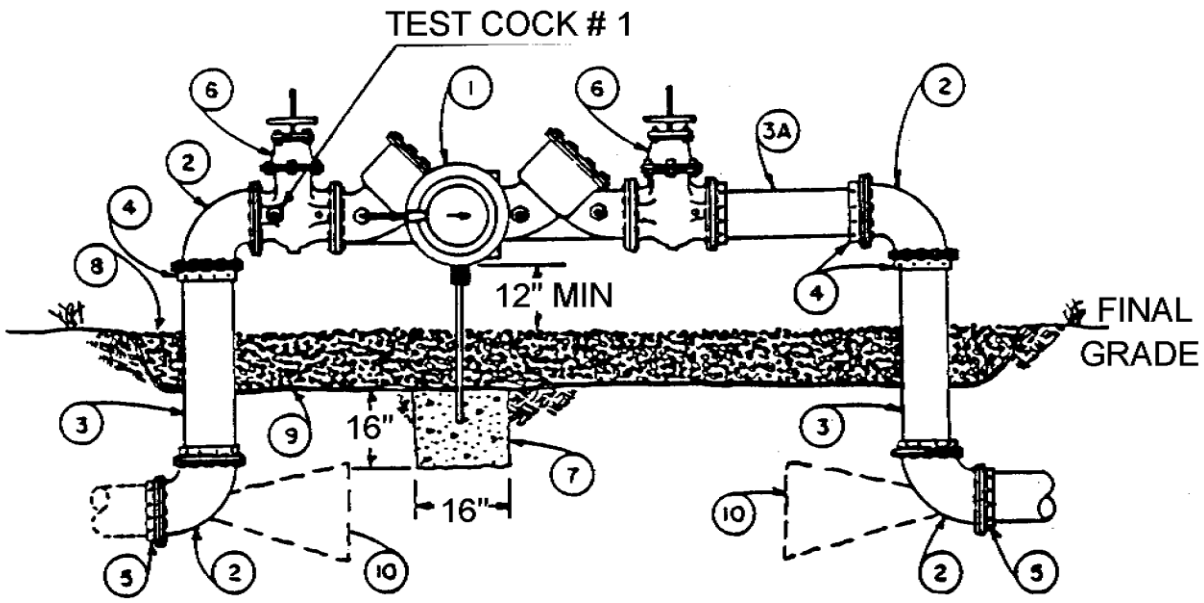
ITEM	MATERIALS QUANT.	DESCRIPTION
1	1	3", 4" Valve, Double Check
2	2	3", 4" Valve, Gate, C.l., F-F
3	1	3" , 4" Nipple Galv. (12" long) (opt.)
4	4	3", 4" Elbow, Galv. - 90º
5	2	3", 4" Flange, Steel Pipe, Screw-Type
6	2	3",4" Pipe, Galv. (42" long)
7	1	3", 4" Nipple, Galv. (6" long)

NOTE: Field adjust and cut item 6 to the proper length.

Appendix J

CONSTRUCTION STANDARDS

REDUCED PRESSURE
BACKFLOW PREVENTER
SINGLE SERVICE: 6” 8”



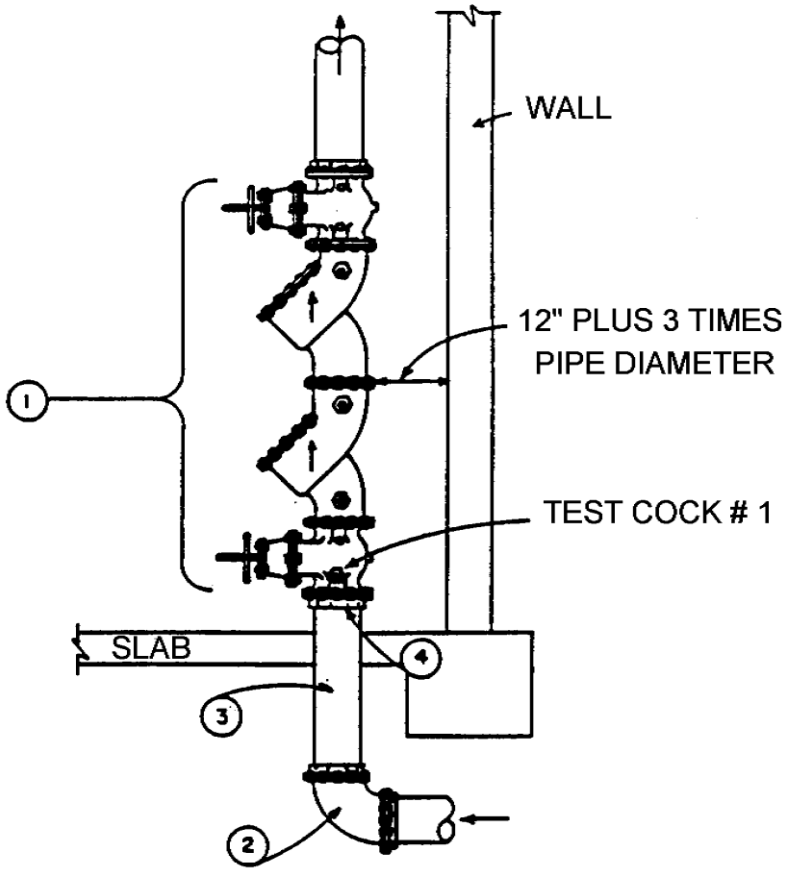
ITEM	MATERIALS QUANT.	DESCRIPTION
1	1	6”, 8” Valve, Reduced Pressure Principle
2	4	6”, 8”, Bend - 45º F-F
3	2	6”, 8” Adapter, C.I. (96” long) F-PE
3A	1	6” , 8” Adapter C.I. (24” long) F-PE (opt.)
4	3	6” , 8” Adapter Flange D.I.P.
5	2	6”, 8” Adapter, Flange, P.V.C. (DR-18)
6	2	6” , 8” Valve, Gate, C.I., F-F
7	1 or 2	2” Iron Pipe/ Concrete Foundation
8	*	Pea Gravel
9	*	Plastic Liner
10	2	Reaction Block

NOTE: Field adjust and cut item 3 to the proper length.
Do not interchange items 4 & 5.

Appendix K

CONSTRUCTION STANDARDS

DOUBLE CHECK BACKFLOW PREVENTER SINGLE SERVICE: 4", 6", 8" VERTICAL INSTALLATION



ITEM	MATERIALS QUANT.	DESCRIPTION
1	1	4", 6", 8" Double Check Valve Assembly
2	1	4", 6", 8" Bend - 90º Flange- Flange
3	*	4", 6", 8" Pipe, Ductile Iron
4	1	4", 6", 8" Adapter, Flange, D.I.P.

NOTE: Min. Clearance around device - 12" + 3 times pipe diameter.
This type of construction is designed for limited working area. (Fire Sprinkler Systems)

Appendix L

City of Valdosta

UTILITIES DEPARTMENT
P.O. BOX 1125, VALDOSTA, GEORGIA 31603-1125
(259) 229-3592
Fax (229) 333-1899

CROSS-CONNECTION SURVEY FORM

Place: _____ Date: _____

Location: _____ Investigator(s): _____

Building Representative(s) and Title(s): _____

_____

_____

Water Source(s): _____

_____

Piping System(s): _____

_____

Points of Interconnection: _____

_____

Special Equipment Supplied with Water and Source: _____

_____

_____

Remarks or Recommendations: _____

_____

Note: If necessary for clarity of description, attach sketches of cross-connections and their locations.

Inspected by: _____ Owner: _____

Appendix M

TEST TAG

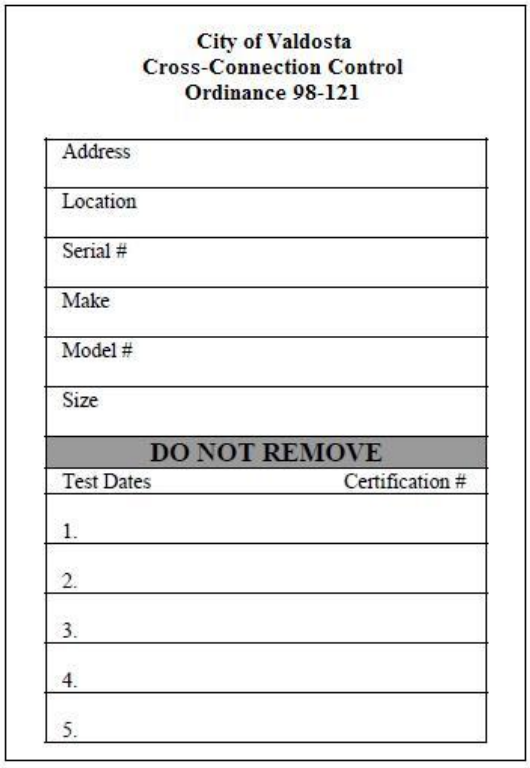
WARNING

DO NOT REMOVE!
Tampering with a backflow prevention device is a direct violation of the City of Valdosta Ordinance 98-121.

This backflow prevention device remains the sole property and responsibility of the owner/ consumer. The owner/consumer is responsible for damage to the backflow prevention device caused by frost, hot water, blows, injury or damage from any cause to the device.

In case of a backflow incident (back pressure/backsiphonage), you must call this department at 229.259.3592 or 229.333.1832 IMMEDIATELY.

City of Valdosta
Utilities Department



City of Valdosta
Cross-Connection Control
Ordinance 98-121

Address
Location
Serial #
Make
Model #
Size

DO NOT REMOVE

Test Dates	Certification #
1.	
2.	
3.	
4.	
5.	

Appendix N

ASSEMBLY TEST REPORT

City Of Valdosta Utilities Department
Office:(229) 259-3592 Fax:(229) 333-1899

"A Community Environmental/Health Protection Program"

ASSEMBLY TEST DATA and MAINTENANCE REPORT

ACCOUNT NAME:			ACCOUNT NO.:	FILE NO.:
MAILING ADDRESS:				METER READING:
SERVICE ADDRESS:				METER NO.:
LOCATION OF ASSEMBLY:				INSTALLATION DATE:
TYPE OF ASSEMBLY:	MANUFACTURER:	MODEL NO.:	SIZE:	SERIAL NO.:
DATE:	TIME:	TEST: ☐ INITIAL ☐ SEMI-ANNUAL ☐ ANNUAL ☐ OTHER - LIST		
SERVICE TYPE: ☐ DOMESTIC ☐ FIRE ☐ COMBINATION ☐ IRRIGATION ☐ OTHER			LINE PRESSURE AT TIME OF TEST: PSI	PRESSURE DROP ACROSS FIRST CHECK VALVE PSID

	CHECK VALVE NO. 1	CHECK VALVE NO. 2	DIFFERENTIAL PRESSURE RELIEF VALVE	PRESSURE VACUUM BREAKER
INITIAL TEST	1. Leaked ☐ 2. Closed at _____ PSID ☐	1. Leaked ☐ 2. Closed at _____ PSID ☐	1. Opened at _____ PSID ☐ 2. Did not open ☐	1. Air inlet opened at _____ PSID ☐ 2. Did not open ☐
REPAIRS	Cleaned ☐ Replaced Disc ☐ Spring ☐ Guide ☐ Pin Retainer ☐ Hinge Pin ☐ Seal ☐ Diaphragm ☐ "O" Rings ☐ Complete Repair Kit ☐ Other, Describe ☐	Cleaned ☐ Replaced Disc ☐ Spring ☐ Guide ☐ Pin Retainer ☐ Hinge Pin ☐ Seal ☐ Diaphragm ☐ "O" Rings ☐ Complete Repair Kit ☐ Other, Describe ☐	Cleaned ☐ Replaced Disc Upper ☐ Lower ☐ Spring ☐ Diaphragm, Large Upper ☐ Lower ☐ Diaphragm, Smal Upper ☐ Lower ☐ Spacer, Lower ☐ "O" Rings ☐ Complete Repair Kit ☐ Other, Describe ☐	Check Valve Leaked ☐ Closed at _____ PSID ☐ Cleaned ☐ Replaced CV Assembly ☐ Disc Air Inlet ☐ Disc CV ☐ Spring ☐ Retainer ☐ Guide ☐ "O" Rings ☐ Complete Repair Kit ☐ Other, Describe ☐
FINAL TEST	1. Leaked ☐ 2. Closed at _____ PSID ☐	1. Leaked ☐ 2. Closed at _____ PSID ☐	1. Opened at _____ PSID ☐ 2. Did not open ☐	1. Air inlet opened at _____ PSID ☐ 2. Did not open ☐

BFP TEST KIT MANUFACTURER:	KIT MODEL NO.:	KIT SERIAL NO.:	KIT CALIBRATION DATE CALIBRATED:	COMPANY:

REMARKS:

I HEREBY CERTIFY THAT THIS DATA IS ACCURATE (TRUE) AND REFLECTS THE PROPER OPERATION, TEST, AND/OR MAINTENANCE OF THIS ASSEMBLY.

RETURN REPORT TO:	THIS BACKFLOW ASSEMBLY HAS ☐ PASSED ☐ FAILED TESTING.	
City Of Valdosta Utilities Department 407 E. Alden Avenue Valdosta, GA 31601 Phone: 229-259-3592 Attn: Roger Colton	TESTED BY: (SIGNATURE)	TESTED BY: (NAME AND FIRM)
	REPAIRED BY: (SIGNATURE)	REPAIRED BY: (NAME AND FIRM)
	FINAL TEST BY: (SIGNATURE	FINAL TEST BY: (NAME AND FIRM)
	TRAINING CERTIFICATE NO.	CERTIFICATE EXPIRATION DATE