

ORDINANCE NO. 401

AN ORDINANCE FIXING MONTHLY WATER RATES FOR THE USE OR WITHDRAWAL OF WATER FROM THE WATER SYSTEM OF THE CITY OF AUMSVILLE; PROVIDING FOR THE FREQUENCY OF WATER METER READING; ESTABLISHING CUSTOMER DEPOSIT FEES FOR THE USE OF THE WATER SYSTEM; PROVIDING SPECIAL WATER DEPOSITS FOR SENIOR CITIZENS; REQUIRING APPLICATION TO BE MADE AND PRESCRIBING REGULATIONS; SETTING FORTH WHEN MUNICIPAL WATER CHARGES BECOME DUE; PROVIDING FOR THE DISCONTINUATION OF MUNICIPAL WATER AND SEWER SERVICES FOR FAILURE TO PAY FEES; PROVIDING FOR THE RESPONSIBLE PERSON; ASSESSING ADMINISTRATIVE COSTS; SETTING FORTH A PROCEDURE TO CORRECT METER READING; PROVIDING FOR APPEAL THE AMOUNT OF A WATER BILL; REGULATING CROSS CONNECTIONS TO THE WATER SYSTEM AND ESTABLISHING STANDARDS THEREFORE; PROVIDING FOR BACK-FLOW PREVENTION, MEANS OF CONTROL AND STANDARDS THEREFORE; REPEALING ORDINANCE 390; PROVIDING PENALTIES AND DECLARING AN EMERGENCY.

The City of Aumsville, Oregon, ordains as follows:

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ARTICLE I

Monthly Water Rates

Section 1. On and after the effective date of this Ordinance, the minimum monthly charge for use of water from the water system of the City of Aumsville for users thereof shall be;

- A. The minimum monthly charge for use or withdrawal of water by users residing within the corporate limits of the City and using not more than nine thousand (9,000) gallons of water during the calendar month according to the users water meter, shall be fifteen dollars (\$15.00).
- B. The minimum monthly charge for use or withdrawal of water from the water system by users thereof residing outside said corporate limits, and using not more than nine thousand (9,000) gallons of water during the calendar month according to the users water meter shall be double the current fee charged to persons residing within the City of Aumsville.
- C. The monthly charge for use or withdrawal of water by the Aumsville Elementary School shall be at the monthly use rate of twenty-eight (28) water permits at fifteen dollars (\$15.00) per unit per calendar month.
- D. Those commercial and industrial users who average fifty thousand (50,000) gallons per month over a six month period as shown by the monthly meter reading shall pay twenty (\$20.00) per calendar month for the first nine thousand (9,000) gallons and one dollar and twenty- six cents (\$1.26) for each 1000 gallons or major fraction thereof over the first nine thousand (9,000) gallons.
- E. The charge for water used by any user or users of residential property in excess of nine thousand (9,000) gallons during the calendar month as shown by the water meter shall be One dollar and seventy six cents (\$1.76) for each 1,000 gallons or major fraction thereof over the initial nine thousand (9,000) gallons. If water consumption of more than one user is measured by a single meter, the owner of the land upon which the user is located shall pay fifteen dollars (\$15.00) per calendar month, for each user as a fee for the use of such meter. If water consumption of one or more users is measured through a single meter and consumption

during the calendar month exceeds nine thousand (9,000) gallons per user, the owner of the land upon which the users are located shall be responsible for any additional charges.

## ARTICLE II

### Hookup of property outside the City limits

Section 1. A person requesting water services to a property outside the city limits of Aumsville shall make application to the Aumsville City Council. The applicant shall have the burden of proving to the City Council the following:

- A. That the proposed connection is compatible with projected future growth of the City of Aumsville and that the property that will be served will logically and harmoniously become incorporated into the city at a later date.
- B. That the proposed connection will not unduly burden the existing ability of the city to provide water service to the citizens of Aumsville.
- C. That the applicant has acquired all necessary licenses, permits and easements to put in the connecting line to the city's main line.
- D. That the proposed line connecting the property to the city's main line will meet or exceed city specifications.

Section 2. Regardless if the applicant meets the requirements set forth above, each application shall be decided on a case by case basis and approval of the application is at the sole discretion of the Council.

Section 3. Upon approval of the application the following are the sole and exclusive responsibility of the applicant:

- A. All construction and costs associated with the installation of the line or lines from the applicant's property to and including the connection to the city's main line.
- B. That the connection will be a single hookup and serve only one household or business.
- C. Maintenance and repair of the connection line from the property to and including the connection to the city's main line shall be the sole and exclusive responsibility of the property owner to be served.
- D. All lines that are to be connected to the city system shall be approved and inspected by the City Public Works Department prior to connection.
- E. All costs of water meter and accessories necessary for the installation of a water meter shall be the sole responsibility of the property owner.

Section 4. The City Council, at its sole discretion, may allow a hookup to property that is not directly adjacent to the existing city limits. If an application is made for such property the city may impose additional criteria including but not limited to requiring a connecting line that would be sufficient to serve other users that may hook up to the city system at a later date.

Section 5. If for any reason whatsoever the city is required to maintain or make repairs upon connecting lines outside the city limits, the owners of the property shall be responsible for all costs and materials plus 25% and shall pay said amount within 30 days of being presented a bill by the City. Any bill not paid after 30 days shall automatically become a lien upon said property and may be enforced pursuant to existing state laws and city ordinances.

Section 6. The monthly water fee shall be double the monthly fees charged for single hookups inside the city, for all connections outside the city limits.

### ARTICLE III

#### Frequency of Reading Water Meters

Section 1. The reading of water meters of the City shall take place monthly in months May through September, with the exceptions set forth in Article I, Section I-D.

### ARTICLE IV

#### Customer's Deposit Fee

Section 1. On and after the effective date of this ordinance, the fee for customer water deposit, within the corporate limits of the City of Aumsville shall be forty-five (\$45.00) dollars.

The fee for customer water and sewer deposit outside the corporate limits of the City of Aumsville shall be double the deposit fee for customers residing within the city limits.

Section 2. Since the customer deposit fee is based on a billing for three months use, this section may be changed by the passage of a resolution by a majority of the members of the City Council present at a council meeting.

Section 3. The customer's water deposit shall be refunded:

A. Upon discontinuation of service, any amount of excess of the unpaid bills for water furnished by the city.

B. Owners of property connected to the water system of the City of Aumsville are eligible for a refund of the deposit fee after bills for water have been paid for twelve (12) consecutive billings without having had water disconnected for non-payment of bill, or had more than two (2) occasions in which payment for water billings was more than fifteen (15) days late.

C. Renters of property connected to the water system of the City of Aumsville shall have the deposit refunded upon vacation of the premises. Any amount due and owed the city shall be deducted before a refund check is authorized.

### ARTICLE V

#### Senior Citizen Water and Sewer Rates

Section 1. Any citizen sixty-five years of age or over, residing within the city limits of Aumsville and acting as the head of a household, is entitled to special rates for water and sewer services for his/her residence, as follows:

A. One-half the monthly charge for the use or withdrawal of water from the water system of the City of Aumsville and not using more than nine thousand (9,000) gallons during the calendar month.

B. One-half the monthly charge for sewer service.

C. Monthly charges for water in excess of nine thousand (9,000) gallons during the calendar month will remain the same as that charged other users.

D. One-half the water and sewer deposit fee charged to owners of private property.

Section 2. Application for senior citizen special rates must be made with the City Recorder and approved by the Water and Sewer Commissioner(s).

#### ARTICLE VI

##### Payment of Water and Sewer Billings

###### Section 1. Responsible Party.

A. All water and sewer services provided by the City will be billed to the premises where the service is provided, unless the property owner requests, in writing, that the bill be submitted to him at another address.

B. Where more than a single dwelling unit or business is served by a single meter, the bill for water and sewer service shall be sent to the owner of the premises, who shall be responsible among his tenants for collecting amounts owing from such tenants.

###### Section 2. Assessments Due.

A. Charges assessed for municipal water and sewer services shall become due when the City of Aumsville requests payment by mailing a bill to a responsible party.

B. Charges assessed for municipal water and sewer services provided by the City of Aumsville shall become delinquent if said assessment is not paid within fifteen (15) days from when the city requests payment as set forth in this ordinance.

###### Section 3. Automatic Shut Off

A. In the event a city water and sewer assessment becomes delinquent, the City Recorder shall send a written notice to the responsible party setting forth a date certain for automatic water and sewer shut off.

B. Such notice shall provide an automatic shut-off date not less than seventy-two (72) hours from the date the notice is mailed to the responsible party.

###### Section 4. Reinstatement of Services

A. After city water and sewer services have been discontinued pursuant to this ordinance, the same shall not be reinstated until the entire delinquency, together with all accrued service fees, plus an administrative fee of Thirty Dollars (\$30.00) has been paid in full.

###### Section 5. Meter Error

A customer may request the city to test the meter serving his or her premises.

A. The customer shall deposit an amount to cover the reasonable cost of the test. This deposit will not be returned if the meter is found to register less than 3% fast. The deposit required by a customer requesting a meter test shall be set by resolution by the City Council.

B. The customer or his/her representative shall have the right to be present when the test is made, and a customer who requests a meter test will be notified not less than two (2) days in advance of the time and place of the tests.

C. A written report giving the results of the test shall be available to the customer within ten (10) days after completion of the test.

D. When, upon testing, a meter is found to be registering more than 3% fast under conditions of normal operation the city shall refund the customer the full amount of the overcharge based on corrected meter reading for a period not to exceed three (3) months.

#### Section 7. Hardship

A. In cases of extreme hardship the City Recorder shall have the discretion to decide not to discontinue service or to renew services to a delinquent account upon acceptance of a valid plan for the payment of past due amounts in installments.

#### Section 8. Appeal of Council

A. A responsible person may appeal the notice to disconnect to the City Council if the responsible person believes the bill for water and sewer services was incorrect.

B. To file a notice of appeal under this ordinance, the responsible party must post with the city, monies in the amount of the bill being appealed.

C. If the Council finds that the bill was incorrect, the bill shall be adjusted and the difference between the adjusted bill and the monies posted shall be returned to the responsible party.

D. All appeals must be filed within thirty (30) days from the time the monies are posted to appeal a notice to disconnect.

### SECTION VII

#### Change of Rate Structure

Section 1. Any change of rate structure shall be done by two readings of an ordinance approved by the majority of the council present at the meeting.

### SECTION VIII

#### Cross Connection and Back Flow Prevention

Section 1. Designation. This portion of this ordinance shall be referred to and may be designated and cited as the Aumsville Cross Connection Control Ordinance.

Section 2. Purpose. The purpose of this section of the Ordinance shall be to protect the water supply of the City of Aumsville from contamination or pollution due to existing or potential cross connection be establishing appropriate regulations and controls relating thereto including the installation and proper maintenance of approved backflow and/or siphonage devices.

#### Section 3. Definitions.

A. "Approved Backflow Prevention Device" means a device to counteract back pressures and/or prevent back siphonage. Such devices must be approved by the Oregon State Health Division.

B. "Auxiliary Supply" means any water source or system other than the City's water system that may be available to a particular building on the premises.

C. "Backflow" means a flow in other than the intended direction of flow of any substance, foreign liquid, gas or otherwise, other than potable water provided by the City, into the City's water system.

D. "Cross-Connection" shall mean any actual or potential connection or structural arrangement whereby the City's water system is connected directly or indirectly with any other water sources or system, public or private, through which it is possible to introduce into any part of the City's system, any other source of water, potable or otherwise, or an industrial fluid, gas or substance other than the city's potable water with which the system is supplied, including any connection with a sewer, drain, conduit, swimming pool, storage reservoir, plumbing fixture, swamp cooler or other device through which it is possible to introduce into any part of the water system contaminated water, sewage, or other materials of unknown or unsafe quality which may be capable of imparting contamination to the City's water system as a result of backflow or otherwise, bypass arrangements, jumper connections, removable sections, swivel or changeover devices or other temporary or permanent devices through which, or because of which, backflow may occur.

E. "City Water System" shall refer to and mean the Aumsville water system which shall include its wells, pumping stations, reservoirs, supply, trunk or feeder lines, service lines, meters and all other appurtenances, devices, lines and things necessary to the operation of the system and to supply water service to individual property or premise and shall include the City's potable water with which the system is supplied.

F. "Superintendent of Public Works" shall mean the person appointed by the City Council to be in charge of the City's water system.

Section 4. Application and Responsibility. This ordinance applies throughout the City of Aumsville and to every premise and property serviced by the city water system. It applies to any premise water system, public or private, regardless of date of installation. Every owner or occupant of any concerned premise is responsible for compliance with its terms and shall be responsible for any damages incurred as a result of failure to comply with the terms and provisions contained herein.

Section 5. Cross-Connections Prohibited. Unless provided specifically herein or specially approved in writing by the Aumsville City Council all cross-connections, whether or not they are controlled by automatic devices such as check valves or by hand operated mechanisms such as gate valves or cork stops are prohibited.

Section 6. Backflow Prevention Device Installation. The owner of each property or premises serviced and/or furnished water by the City of Aumsville shall be required to install a backflow prevention device under the following circumstances:

A. There is upon such premises an auxiliary water supply which is or can be connected to the City's service or supply system (including individual premises service plumbing),

B. There is piping or equipment for conveying other than potable City water and that piping or equipment is under pressure and installed and operated in a manner that could cause a cross-connection,

C. There is intricate plumbing which makes it impractical to ascertain whether or not cross-connections exist;

D. The concerned premises have restructured entry so that inspections for cross-connections cannot be made with sufficient frequency or with sufficient short notice, to assure that cross-connections do not exist;

E. There is a fire line or irrigation service or domestic service larger than two inches;

F. The premises have a repeated history of cross-connections being established or re-established;

G. The serviced premises from time to time may have materials of a toxic or hazardous nature which are handled so that if back siphonage should occur a serious health hazard may result;

H. Premises with the following or similar installation must have a backflow device installed; hot tubs, solar system, other uses specified by a Certified Cross-Connection specialist representing the City;

I. Premises on which any substance is handled under pressure so as to permit entry into the public water system, or where a cross-connection could be reasonably expected to occur; this includes the handling of processed water and cooling water. Such type of facilities include dry cleaners/laundromats, laboratories, car washes, petroleum processing or storage plants, food preparation facilities, other facilities specified by the City's Cross Connection specialist.

J. Backflow prevention devices shall be required on domestic services two inches or smaller if the building is two (2) stories or higher than thirty-two (32) feet above the water main. One (1) and two (2) story buildings which exceed thirty-two (32) feet in height may be exempted upon determination by the City that no backflow hazard exists.

K. Any other water system which receives water from the City of Aumsville water system and does not have a cross-connection program which has been approved by the City.

Section 7. Type of Backflow Prevention Devices Required and Location.

1. The type of backflow prevention device required shall be commensurate with the degree of hazard that exists and must meet at all times the standards of the Oregon State Health Division; All backflow prevention devices required under this section shall be a type and model approved by the Oregon State Health Division.

2. A reduced pressure principal backflow prevention device shall be installed where the water supply may be contaminated by a substance that could cause health or system hazard. This type of device will also be required in any premise where entry is restricted by the water user. A reduced pressure principle backflow will be required at the point of connection between the City water system and any other water system which does not have a cross-connection program.

3. A double-check valve assembly pressure vacuum breaker or a reduced pressure principle backflow device assembly shall be installed where it is possible to interject a substance that may be objectional, but not hazardous, into the water system.

Section 8. Location and Installation of Backflow Device:

1. The City may specify the location and method of installation of a backflow prevention device. The control or elimination of a cross-connection shall be in accordance with Manuals of Standard Practice pertaining to cross-connection control approved by the City, and any requirements set forth by the United States Environmental Protection Agency as authorized by the "Safe Drinking Water Act" PL93-523 and other applicable legislature, rules and regulations of the United States, the State of Oregon and concerned agencies.

2. Any installation, corrective measure, disconnection or other change to a backflow prevention device shall be at the sole expense of the owner. The costs of any change required in the City's system outside the property concerned, or between the meter and the supply line or distribution system, or any changes for cut-offs or disconnection, shall be paid in accordance with the City's practice and procedure, and may, if not paid, be collected through legal process or any other appropriate manner approved by law.

Section 9. Pre-existing Backflow Prevention Device: Any backflow prevention device installed before the effective date of this ordinance, not an approved device and hereinafter set forth shall be permitted to remain in service if:

- A. The device is property maintained; and
- B. The type of device is commensurate with the degree of hazard, such determination to be made by the City; and
- C. The device is tested annually as required herein; and
- D. The device performs satisfactorily.

If a backflow device does not meet the standards of the Oregon State Health Division as herein set forth, the device may be replaced if it is removed or requires more than minimum maintenance.

Section 10. Testing Requirements.

1. Any backflow prevention device which may be required to be installed under this ordinance for the protection of the City's water supply shall be tested before its use in the City and annually thereafter, unless a more frequent testing is required. All tests required to be performed under this section must be performed by a tester certified by the State of Oregon or otherwise approved by the City and written results of such test furnished the City.

2. Any backflow prevention device which may be required by the City or State to be installed on property for the protection of a water supply shall be tested at the time of installation

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and anytime the device is moved or relocated (immediately after relocating or moving). The property owner must forward the results of such testing to the City within ten (10) days of the date of installation or relocation.

3. The property owner must order and cause to be performed a test of each backflow prevention device annually on or within thirty (30) days after the anniversary date of the initial testing. The City may require more frequent testing in order to assure the device is functioning in those installations which represent a serious health hazard as determined by the City or the State Health Department.

4. If the City has not received the results of such test within thirty (30) days of the anniversary date for annual testing or within ten (10) days of the date of installation of the device as the case may be, or the date of the City's discovery that a device was installed without appropriate test as applicable, the City may order such test and bill the property owner for the cost thereof if the device is for protection of a fire service or for a commercial use; if the device is for protection of a domestic service, the City may deny or discontinue water service until satisfactory proof is furnished that the device has been tested and is functioning properly.

5. If the results of a test required by the City as herein set forth indicates that repairs are necessary, such repair must be undertaken and a new test taken, and the results thereof forwarded to the City within ten (10) days of the test, indicating the defect was repaired.

Section 11. General Provisions.

1. Any person operating any mobile apparatus which uses the city's water system or water from any premises within the City must provide for backflow prevention and the provisions herein set forth are applicable.

2. All plumbing within buildings served by the City shall be so installed and all plumbing fixtures so constructed as to prevent pollution of the City's water supply by back siphonage or cross-connections. Water service to any premises known or found to have such defects and hazards shall be disconnected and not restored until such defects and hazards have been eliminated.

Section 12. Enforcement.

1. The Public Works Superintendent of the City or his duly appointed representative or the State of Oregon Health Division shall have the right without being deemed guilty of trespass or an unlawful act to check the premises of customers for cross-connections (physical connections), physical connections with other water supplies, and the general condition of water lines and service facilities, at any reasonable time. Any such connection prohibited thereby shall be removed by the customer within the time specified

after written notice by the City, and if not so removed, the City shall remove or discontinue any connection it may have for servicing the property.

2. The Superintendent of Public Works shall designate City Cross-Connections Specialists, and institute, with the approval of the City Council, such additional rules or regulations necessary to carry out provisions of this ordinance.

Section 13. Repealing Ordinance.

Ordinance No. 390 is hereby repealed.

#### ARTICLE IX

##### Validity

Section 1. If any part or parts of this ordinance are for any reason held to be invalid, such decision shall not effect the validity of the remaining portions of the ordinance.

ARTICLE X

Penalties

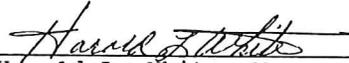
Section 1. Any violation of this ordinance is hereby declared to be a public nuisance and any person found guilty thereof shall be punishable by a fine of not more than \$250.00. A violation of this ordinance shall be considered a separate offense for each day the violation occurs.

ARTICLE XI

Section 1. Whereas, it is necessary for the immediate preservation of the public health, peace and safety of the citizens of the City of Aumsville that this ordinance become effective at the earliest time possible, and the additional monies are needed for the current budget process, which began July 1, 1993. Therefore, this ordinance shall become effective immediately upon it's passage by the Council and signature of the Mayor.

PASSED by the City Council this 13 day of September, 1993.

SIGNED by the Mayor this 14 day of September, 1993.

  
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Harold L. White, Mayor

ATTEST:

  
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Mary Sarvis, City Recorder

## Isolation

In addition to the mandatory premise isolation discussed, there are a number of fixtures, equipment, or areas common to many premises which are actual or potential backflow connections. These fixtures, equipment, or areas must be regularly inspected and analyzed to determine their potential risk to the system.

They must be provided with proper backflow protection either at the fixture, equipment, or area. Table 3-4 lists several examples and the minimum protection requirements.

**Table 3-4: Fixtures, Equipment, and Areas Requiring Backflow Protection**

Fixtures, Equipment, and Areas	Protection	Fixtures, Equipment, and Areas	Protection
Refrigerators.	DCVA	Computer cooling lines.	AG/RPBA
Boiling systems.	RPBA	Condensate tanks.	AG/RPBA
Stoves.	RPBA	Cooking kettles.	AG/AVB
Boiler make-up water.	AG/RPBA	Cooling towers.	AG/RPBA
Medical equipment.	AVB	Decorative ponds.	AG/RPBA
Use of weedicide, herbicide, or insecticide.	AVB	Degreasing equipment.	RPBA
Water softeners.	RPBA	Demineralized water systems.	RPBA
Urinals.	RPBA	Dental cuspidors.	RPBA
Fountains.	AG/AVB	Detergent dispensers (dishwasher).	AVB
Below rim filler.	Not Allowed	Dialysis equipment.	RPBA
Dishwashers.	AVB	Dishwashers.	AVB
Drinking dispensers using CO <sub>2</sub> .	RPBA	Drinking fountains.	AG
	AVB	Dye vats and tanks.	AG/RPBA
	RPBA	Dynamometers.	DCVA
Water lines.	AG/RPBA	Emergency generators.	RPBA
Etching equipment.	RPBA	Etching tanks.	AG/RPBA
Fermenting tanks.	PVBA/DCVA	Fermenting tanks.	AG/RPBA
Fertilizer injection equipment.	AG/DCVA	Fertilizer injection equipment.	RPBA
Film processing equipment.	AVB/PVBA	Film processors.	RPBA
Fire department tanks.	AG/RPBA	Fire department connections.	DCVA
Fire sprinkler systems.	RPBA	Fire sprinkler systems (see Section 4).	DCVA
Floor drains.	RPBA	Floor drains.	AG
Flushing floor drains.	AG/AVB	Flushing floor drains.	AVB

RESOLUTION NO. 2-96

A RESOLUTION ADOPTING A CROSS CONNECTION CONTROL PROGRAM

WHEREAS, the Federal Safe Drinking Water Act of 1974 and the statutes of the State of Oregon, Administrative Rules #333-61-070, #333-61-071 state that the water supplier has the primary responsibility for the preventing of water from unapproved sources, or any other substances, from entering the public potable water system; and,

WHEREAS, the City of Aumsville has an ordinance outlining cross connection and backflow regulations; and,

WHEREAS, a program is needed to administer cross-connection regulations; and,

WHEREAS, the City of Aumsville has employed a certified, cross-control inspector who shall carry out the cross-connection program; now, therefore;

BE IT RESOLVED, that the Aumsville City Council adopts the following program for controlling and eliminating cross-connections.

I. DEFINITIONS

A. Approved -- Accepted by the City of Aumsville as meeting an applicable specification stated or cited in this regulation, or as suitable for the proposed use.

B. Auxiliary Water Supply -- Any water supply, on or available, to the premises other than the supplier approved public potable water supply.

C. Backflow -- The flow of water or other liquids, mixtures or substances, under the positive or reduced pressure in the distribution pipes of potable water supply from any source other than its intended source.

D. Backflow Prevention Device -- A device or means designed to prevent backflow or backsiphonage. Most commonly categorized as air gap, reduced pressure principle device, double check valve assembly, pressure vacuum breaker, atmospheric vacuum breaker, hose bibb vacuum breaker.

- (1) Air Gap -- A physical separation sufficient to prevent backflow between the free-flowing discharge end of the potable water system and any other system. Physically defined as a distance equal to twice the diameter of the supply side pipe diameter but never less than one inch.
- (2) Atmospheric Vacuum Breaker (AVB) -- A device which prevents backsiphonage by creating an atmospheric vent when there is either a negative pressure or sub-atmospheric pressure on a water system. Not a testable device.
- (3) Double Check Valve Assembly (DCVA) -- An assembly of two independently operating spring-loaded check valves with tightly closing shut-off valves on each side of the check valves; plus properly located test cocks for the testing of each check valve.

- (4) Reduced Pressure Back-Flow Assembly (RPBA) -- An assembly consisting of two independently-operating, approved check valves with an automatically-operating, differential relief valve located between the two check valves, tightly closing shut-off valves on each side of the check valves, plus properly located test cocks for the testing of the check valve and the valves.
- (5) Hose Bibb Vacuum Breaker -- A device which is permanently attached to a hose bibb and which acts as an atmospheric vacuum breaker.
- (6) Pressure Vacuum Breaker (PVB) -- A device containing one or two independently-operating, approved check valves and an independently-operating, spring-loaded, air-inlet valve located on the discharge side of the check or checks. Device includes tightly closing shut-off valves on each side of the check valves and properly located test cocks for the testing or the check valve(s).

Any device must be classified as an approved backflow device by the Oregon Health Division.

E. Back pressure -- A condition in which the Owner's system pressure is greater than the supplier's system pressure.

F. Backsiphonage -- The flow of water or other liquids, mixtures or substances into the distribution pipe of a potable-water supply system from any source other than its intended source caused by the sudden reduction of the pressure in the potable-water supply system.

G. Containment -- A method of backflow prevention which requires a backflow preventer at the water-supply service entrance.

H. Contaminant -- Any substance that will impair the quality of the water to a degree that it creates a serious health hazard to the public leading to poisoning or the spread of disease.

I. Cross Connection -- Any actual or potential connection between the public water supply and a source of contamination or pollution.

J. Division -- The State of Oregon Health Division.

K. Fixture Isolation -- A method of backflow prevention in which a backflow preventer is located to correct a cross connection at an in-plant location rather than at a water-service entrance.

L. Inspector -- The certified cross-connection inspector of the City of Aumsville Water Department is invested with the authority and responsibility for the implementation of this cross-connection control program and for the enforcement of the provisions of the City of Aumsville cross connection and backflow regulations.

M. Owner -- Any person who has legal title or license to, operate or habitats in a property upon which a cross-connection inspection is to be made or upon which a cross connection is present.

N. Person -- Any individual, partnership, company, public, or private corporation, political subdivision or agency of the State, agency or instrumentality or the United States or any other legal entity.

O. Pollutant -- A foreign substance that, if permitted to get into the public water system, will degrade its quality so as to constitute a moderate 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 water for domestic use.

P. Utility -- City of Aumsville Water Department.

Q. Water Service Entrance -- That point in the Owner's water system beyond the control of the City of Aumsville; generally considered to be the outlet end of the water meter and always before any unprotected branch.

## II. UTILITY REQUIREMENTS

### A. Type of Backflow Prevention

- (1) Identify Potential Cross Connections -- The Inspector shall begin initial premise inspections to determine the nature of existing or potential hazards and inspect new construction. Initial focus will be on high-hazard industries and commercial premises. The Inspector will determine the degree of hazard, type of backflow prevention device to be installed at the service connection and establish a deadline for installation.
- (2) Degree of Hazard -- The type of backflow prevention required under this program shall be fit for the degree of hazard which exists. The degree of hazards are categorized into three areas, as follows:
  - (a) Where the substance which could backflow is hazardous to health, an approved air gap of at least twice the inside diameter, but not less than one inch of the incoming supply line measured vertically above the top rim of the vessel, or an approved reduced pressure backflow (RPBD) device assembly shall be installed.
  - (b) Where the substance which could backflow is objectionable, but does not pose an unreasonable risk to health, an approved double-check valve assembly (DCVA) shall be installed.
  - (c) Where the substance which could backflow is objectionable, but does not pose an unreasonable risk to health and where there is no possibility of back pressure in the downstream piping, an approved pressure vacuum breaker or an atmospheric vacuum breaker shall be installed. A shutoff valve may be installed on the line downstream of a pressure vacuum breaker, but shall not be installed downstream of an atmospheric vacuum breaker. The atmospheric vacuum breaker shall not be used unless specifically designated by the Inspector.

B. Installation Deadline -- The Utility shall notify potential cross-connection customers of deadline requirement to install listed type of backflow prevention device; and that water service will be disconnected if required backflow prevention device is not installed by the deadline, or until the hazard has been eliminated.

C. Testing -- The Utility shall notify the Owner of the premises where backflow prevention devices have been installed that they shall have the device tested: immediately after installation, within 30 day of the anniversary date annually, and if they are moved. Backflow prevention devices found not to be functioning properly shall be promptly repaired by the Owner or the Utility may deny or discontinue service. Reports on the tests shall be prepared by a certified backflow tester, and a copy of the report shall be provided to the Utility. Testing shall be performed within ten days of the date of installation, and, within thirty days of the anniversary date for annual testing.

D. State Report -- The Inspector shall prepare a summary of the tests performed and shall submit that summary annually to the Division.

E. Failure to Comply -- The Utility shall inform the Owner by letter of any failure to comply with these regulations within ten days of the first inspection. The Utility will allow fifteen days for the correction. In the event the Owner fails to comply with necessary correction within fifteen days, the Utility will inform the Owner by letter that the water service to the Owner's property will be terminated within a period not to exceed five days. In the event the Owner informs the Utility of extenuating circumstances as to why the correction has not been made, a time extension may be granted by the Utility, but in no case will exceed an additional thirty days.

F. Water Use Termination -- If the Utility determines at any time that a serious threat to the public health exists, the water service will be terminated immediately.

G. Contractors -- The Utility shall have, on file, a list of private contractors who are certified backflow testers. All charges for these tests will be paid by the Owner of the building or property.

H. Parts Specifications List -- The Utility shall have on file a list of approved backflow prevention devices or assemblies approved for use by the Division.

I. Records -- The Utility will initiate and maintain the following:

- (1) Master files on Owner's cross-connection inspections, plumbing permit and tests.
- (2) Copies of lists and summaries supplied to the Division.
- (3) Initial listing of low-hazard cross connections.
- (4) Initial listing of high-hazard cross connections.

### III. OWNER REQUIREMENTS

The Owner, after having been informed by letter from the Utility, shall comply with the following requirements:

A. General Responsibility -- The Owner shall be responsible for the elimination or isolation of all cross connections at the Owner's premises.

B. Malfunctions -- The Owner shall correct any malfunctions of the backflow prevention device revealed by periodic testing.

C. Modifications -- The Owner shall inform the Utility of any proposed or modified cross connection and also any existing cross connections of which the Owner is aware but has not been identified by the Utility.

D. Previously Installed Devices --

- (1) Backflow prevention devices which were approved at the time they were installed, but are not on the current list of approved device assemblies maintained by the Division, shall be permitted to remain in service provided they are properly maintained, are fit for the degree of hazard, are tested at least annually and perform satisfactorily.
- (2) Moving or Modifying Previously Installed Devices -- When backflow prevention devices of this type are moved by the Owner, or require more than minimal maintenance, or are on services that are modified, (changed size or remodeled) they shall be replaced with device assemblies which are on the Division list of approved device

E. Installation -- The Owner shall install backflow prevention devices in a manner approved by the Utility by the deadline, or water service will be discontinued.

F. Installed Parts -- The Owner shall install only backflow prevention devices approved by the Division.

G. Water Termination -- Backflow prevention devices found not to be functioning property shall be promptly repaired by the Owner, or the Utility may deny or discontinue service if this requirement is not met.

H. Tests and Reports -- Reports on the tests shall be prepared by a certified backflow tester, and a copy of the report shall be provided to the Utility within ten days of the date of installation and within thirty days of the anniversary date for annual testing. All charges for these tests will be paid by the Owner of the building or property.

- (1) All backflow devices installed with the territory served by the Utility shall be tested immediately upon installation, and annually tested thereafter by a certified backflow tester. All such devices found not functioning properly shall be promptly repaired or replaced by the Owner. If any such device is not promptly repaired or replaced, the Utility may deny or discontinue water to the premise.
- (2) Any backflow preventer which fails during a periodic test will be repaired and replaced at the Owner's expense. When necessary repairs are completed the device will be re-tested at the Owner's expense to insure correct operation.

- (3) Backflow prevention devices will be tested more frequently than annually if the Utility determines there is a history of test failures. Cost of additional testing will be borne by the Owner.

I. Plumbing Permit -- Owner shall obtain a plumbing permit for device installation. Upon completion of installation, the Owner shall have the backflow prevention device inspected by Marion County Building Inspection and tested by a certified backflow tester.

- J. Registration -- All backflow prevention devices must be registered with the Utility. Registration shall consist of the date of installation, the make, model, serial number of the backflow device, a copy of the plumbing permit and inspection report, and initial test report.

#### IV. **BACKFLOW PREVENTION DEVICE INSTALLATION PERFORMED BY OWNER**

To insure proper operation and accessibility of all backflow prevention devices, the following requirements shall apply to the installation of these devices.

##### A. Installation Requirements Applicable to All Devices

- (1) No part of the backflow prevention device shall be submerged in water or installed in a location subject to flooding, or if installed in a vault or basement, adequate drainage shall be provided.
- (2) The device must be protected from freezing and other severe weather conditions.
- (3) Only devices specifically approved by the Utility for vertical installation may be installed vertically.
- (4) The device shall be readily accessible with adequate room for maintenance and testing. Devices two inches and smaller shall have at least six inch clearance below and on both sides of the device, and if located in a vault, the bottom of the device shall be between twelve inches and twenty-four inches below grade. All devices larger than two inches shall have a minimum clearance of twelve inches on the back side, twenty-four inches on the test cock side, twelve inches below the device and thirty-six inches above the device. Headroom of six feet is required in vaults without a full opening top. Access to the device and to any vault or chamber shall remain unrestricted at all times.
- (5) Only approved open stem (OS) and yoke (Y) gate valves, or other indicator valves approved by the Utility, are allowed on all devices installed on services with fire line connections.
- (6) The owner assumes all responsibility for foundation or basement wall penetration, maintenance, leaks, and damage as set forth in the City of Aumsville's Cross Connection and Backflow regulations.
- (7) All pipe joints shall be restrained.

- (8) A location plan with an elevation view of the piping arrangement of the device shall be furnished to the Utility upon request.
- (9) All backflow prevention device assemblies shall be of a type and model approved by the Division and the Utility.
- (10) Devices must be installed at the point of delivery of the water supply on private property located just inside the property line. Alternate locations must be approved by the Utility prior to device installation.
- (11) If the device is installed inside a building;
  - (a) The device shall be readily accessible during regular working hours of 8:00 a.m. to 5:00 p.m., Monday through Friday.
  - (b) If the device is installed higher than four feet above the floor or slab, it must be equipped with a rigidly and permanently installed scaffolding acceptable to the Utility, and meeting the requirements of the United States Occupational Safety and Health Administration (OSHA) and the State of Oregon Occupational Safety and Health Codes.

#### B. Vault Installation - Additional Requirements

In addition to the installation requirements herein, if a double check valve or a detector, double check valve device is installed in a vault or chamber, the vault or chamber shall:

- (1) Be provided with adequate drainage. Gravity drainage to sewer of any kind is not permitted.
- (2) Have access through a standard twenty-four inch diameter manhole or a twenty-four inch (minimum size) frame and cover.
- (3) Be equipped with an approved ladder if the vault or chamber depth is five feet to seven feet and entry is through the vault or chamber roof. An approved extension ladder is required if the vault or chamber depth is eight feet or greater and entry is through the vault or chamber roof.
- (4) Be equipped with a moisture proof light fixture if adequate lighting is not available.
- (5) Have no other use, except for fire alarm connections.
- (6) In addition to Utility requirements, all vaults located on private property must meet all plumbing permit requirements.

#### C. Double Check Valve and Detector Double Check Valve Devices - Additional Installation Requirements

- (1) In addition to the installation requirements herein, all double check valve devices two inches and smaller which utilize a Y-pattern design shall be installed on their side with test cocks facing up.

A minimum clearance of four inches shall be maintained on all sides and six inches clearance below the device.

- (2) All metering devices must have a totalizer on the attached register. Unless the meter can be easily read through a small door, cover, or opening without leaving the public right-of-way, a remote reader shall also be installed. It shall be possible to read this remote reader from the right-of-way and the remote reader shall have the same number of dials to read as the metering device itself. All wires to the remote reader shall be enclosed in heavy plastic or metal conduit and all wiring shall be in conformance with appropriate sections of the National Electric Code.
- (3) Remote readers must be rigidly mounted in the following order of preference. Detailed drawings are available upon request.
  - (a) On an outside building wall, enclosed in a metal box with a slot opening which allows reading the remote without opening the box, at an elevation of two feet to six feet above the ground and within five feet of the center line of the service connection.
  - (b) Inside a street-facing window at an elevation of two feet to six feet above the ground and within five feet of the center line of the service connection. The remote reader must not be obscured by draperies, displays or other obstructions.
  - (c) On a pumper connection or other permanent facility which is located at or near the property line and owned and maintained by the Owner. The remote reader shall be enclosed in a metal box with a slotted opening, which allows reading the remote without opening the box at an elevation of two feet to six feet above the ground and within five feet of the center line of the service connection.

#### D. Reduced-Pressure Backflow Devices - Additional Installation Requirements

In addition to the installation requirements herein, if a reduced pressure device is installed:

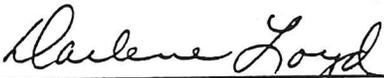
- (1) The device must be installed with the relief valve at a minimum elevation of twelve inches plus size of device. In areas diked to prevent flooding, the minimum elevation of the relief valve must be greater than the elevation of 100-year flood protection.
- (2) An approved air gap shall be located directly at the relief valve orifice. This air gap shall be at least twice the inside diameter of the incoming supply line as measured vertically above the top rim of the drain and in no case less than one inch.
- (3) If installed in a vault, the relief valve discharge must be drained to daylight. The drain shall be of adequate capacity to carry the full, rated flow of the device and shall be screened on both ends.

- (4) Installation of the device may alter the delivery pressure and flow of the service. It is the responsibility of the water user to insure that flow and pressure requirements downstream of the reduced-pressure device are adequate.

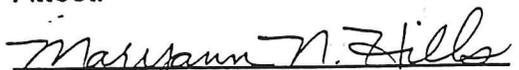
E. Figures (see attached exhibits)

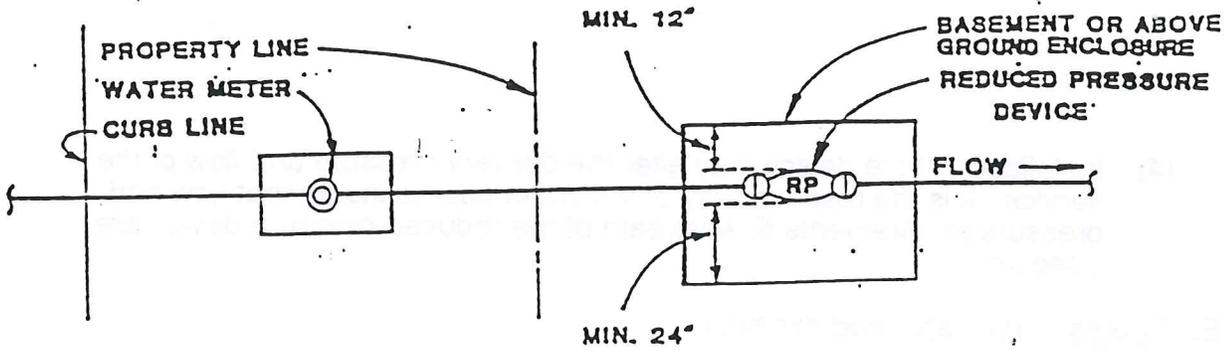
- (1) Typical Installation -- Reduced Pressure-Principle, Backflow Prevention Device
- (2) Typical Installation - Double Check Valve Backflow Prevention Device
- (3) Typical Installation - Approved Detector Double Check Assembly
- (4) Device Installation Guide
- (5) Premises Requiring Mandatory Service Protection  
Facilities Requiring Backflow Protection
- (6) In-Plant Isolation ---Fixtures, Equipment, and Areas Requiring Backflow Protection

ADOPTED by the Aumsville City Council on the 8th day of January, 1996.

  
\_\_\_\_\_  
Darlene Loyd, Acting Mayor

Attest:

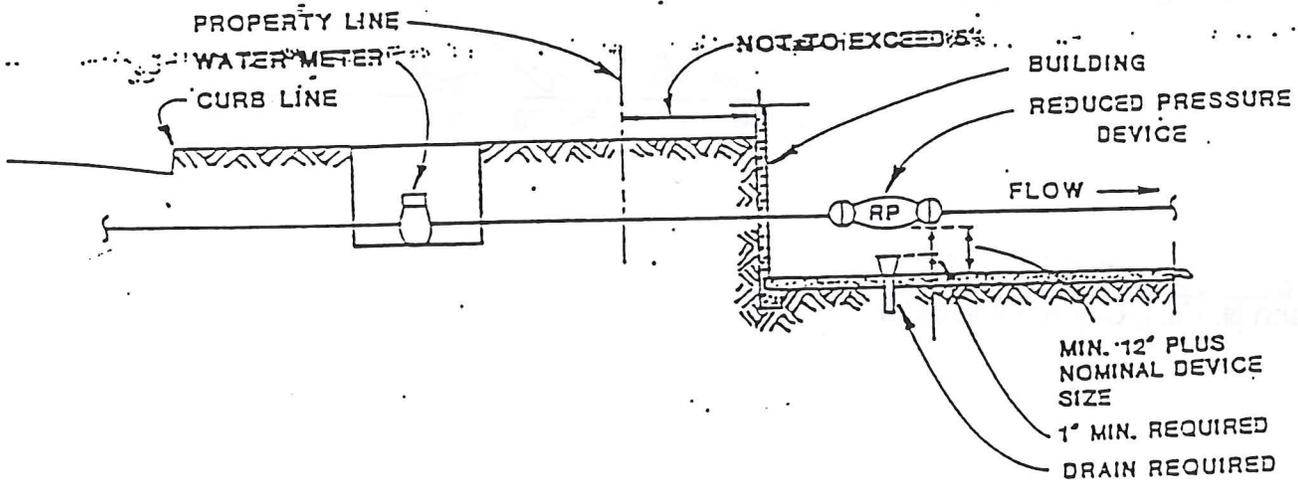
  
\_\_\_\_\_  
Maryann M. Hills, City Administrator



PLAN VIEW

NOTE: REDUCED PRESSURE DEVICES SHALL BE OF AN APPROVED TYPE AND SHALL BE INSTALLED IN SUCH A MANNER THAT THEY SHALL BE READILY ACCESSIBLE FOR REPAIR AND INSPECTION. WHEN INSTALLED INSIDE A BUILDING IT SHALL BE NECESSARY TO MAKE PROVISIONS FOR DRAINING DISCHARGE FROM THE RELIEF VALVE. MINIMUM RELIEF VALVE ELEVATION = 31.0 FT. CITY OF PORTLAND DATUM.

SEE BACKFLOW PREVENTION DEVICE INSTALLATION REQUIREMENTS FOR COMPLETE INSTALLATION DETAILS.



IN BASEMENT

CITY OF AUMSVILLE, OREGON

TITLE OF STANDARD PLAN  
 TYPICAL INSTALLATION  
 REDUCED PRESSURE PRINCIPLE (RP)  
 BACKFLOW PREVENTION DEVICE

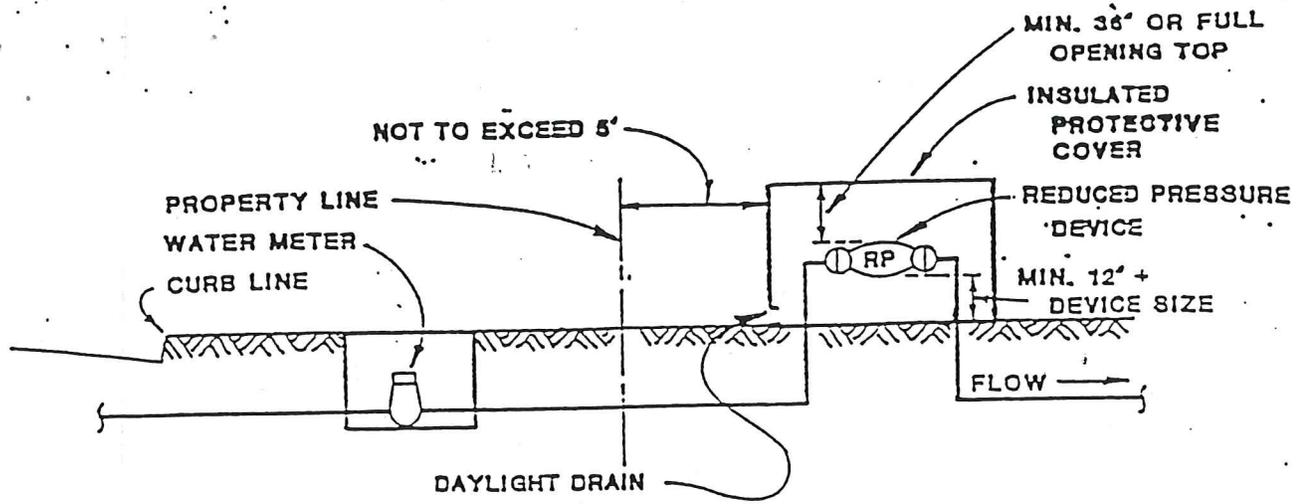
STANDARD PLAN NO.  
 SHEET

1  
 OF 3

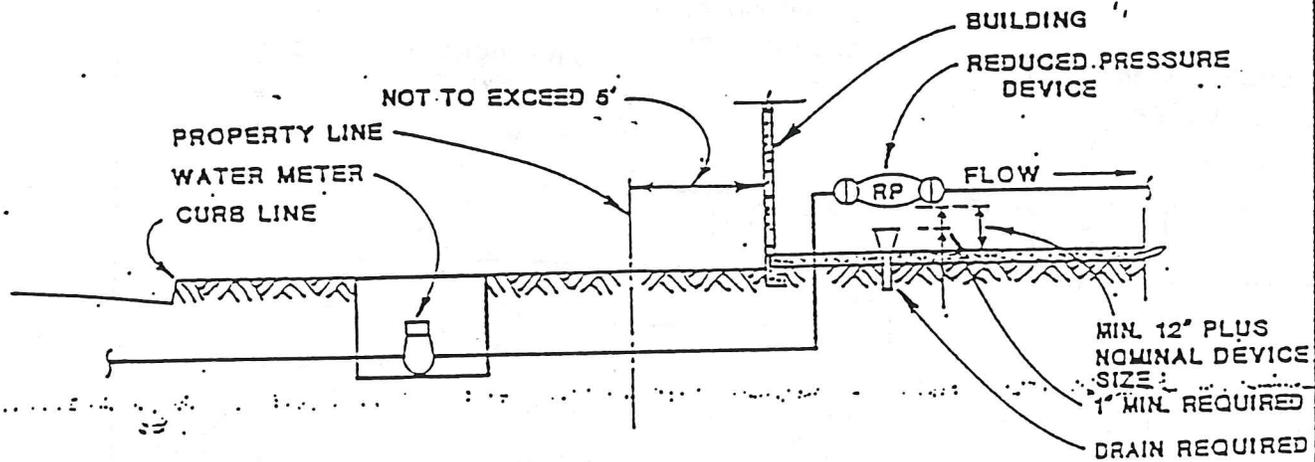
APPROVED

DATE

NO.	REVISIONS	DATE	BY



ABOVE GROUND



IN BUILDING

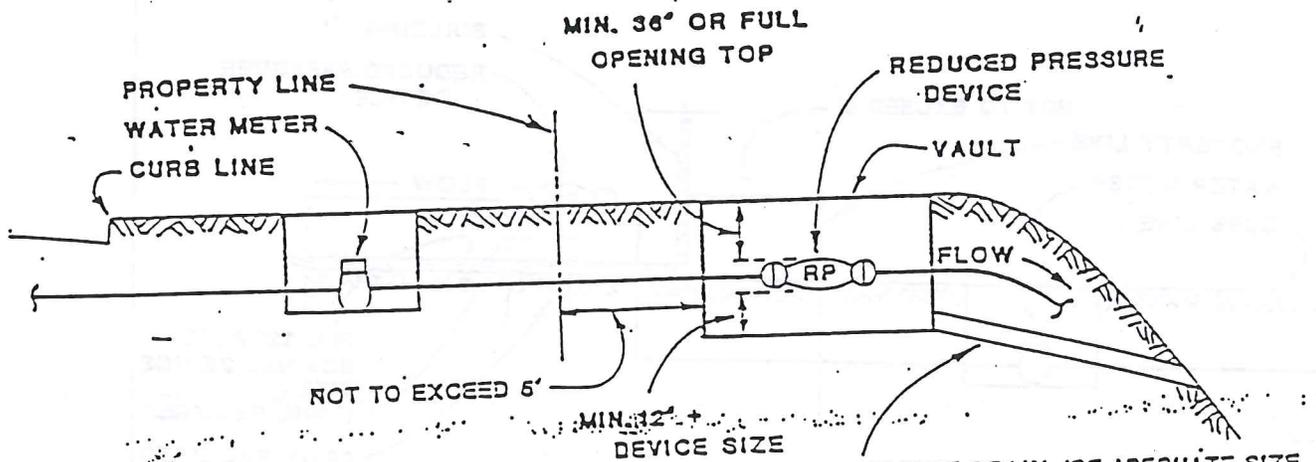
CITY OF AUMSVILLE, OREGON

TITLE OF STANDARD PLAN **TYPICAL INSTALLATION  
REDUCED PRESSURE PRINCIPLE (RP)  
BACKFLOW PREVENTION DEVICE**

STANDARD PLAN NO.  
SHEET

2  
OF 3

APPROVED	NO.	REVISIONS	DATE	BY



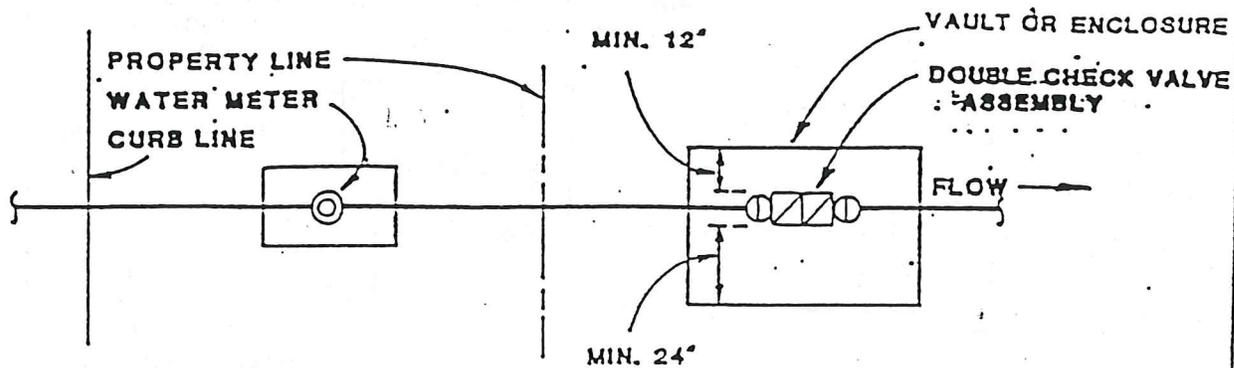
NOTE: INSTALL AN APPROVED LADDER IF VAULT DEPTH IS GREATER THAN 5' (SEE STD. PLAN NO. 5-507)

DAYLIGHT DRAIN OF ADEQUATE SIZE TO HANDLE RELIEF VALVE DISCHARGE MIN. SIZE IS 4\"/>

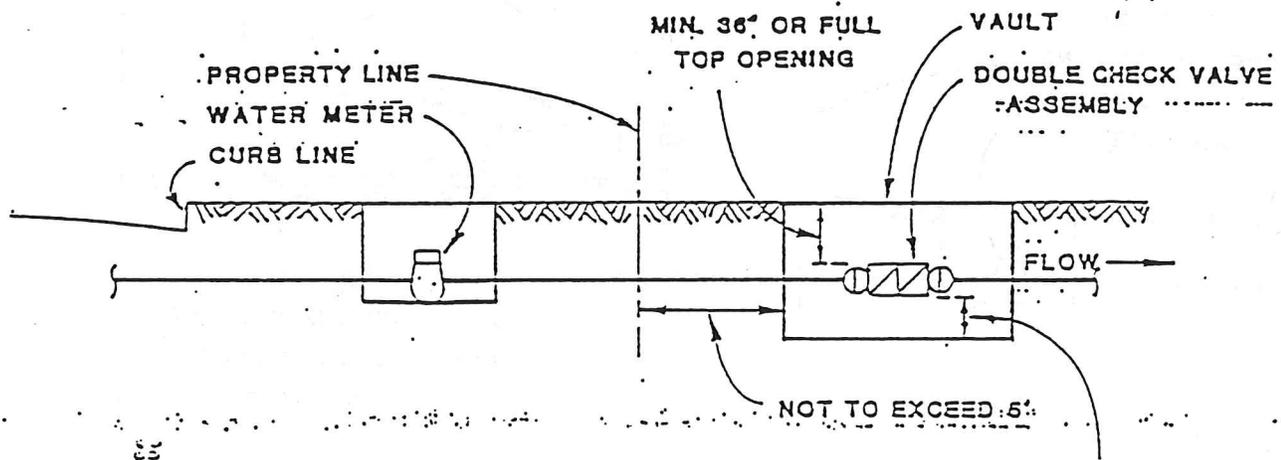
HILLSIDE OR PARTIALLY BURIED VAULT

CITY OF AUMSVILLE, OREGON				
TITLE OF STANDARD PLAN	TYPICAL INSTALLATION REDUCED PRESSURE PRINCIPLE (RP) BACKFLOW PREVENTION DEVICE			STANDARD PLAN NO.
				3.
APPROVED	NO.	REVISIONS	DATE	BY
DATE				

OF 3



**PLAN VIEW  
(TYPICAL)**



**IN VAULT**

SEE BACKFLOW PREVENTION DEVICE INSTALLATION REQUIREMENTS FOR COMPLETE INSTALLATION DETAILS.

NOTE: INSTALL AN APPROVED LADDER IF VAULT DEPTH IS GREATER THAN 5' (SEE STANDARD PLAN NO. 6-501).

DOUBLE CHECK VALVE ASSEMBLIES SHALL BE OF AN APPROVED TYPE AND SHALL BE INSTALLED IN SUCH A MANNER THAT THEY SHALL BE READILY ACCESSIBLE FOR REPAIR AND INSPECTION.

CITY OF AUMSVILLE, OREGON

TITLE OF STANDARD PLAN

TYPICAL INSTALLATION

STANDARD PLAN NO.

DOUBLE CHECK VALVE BACKFLOW PREVENTION DEVICE

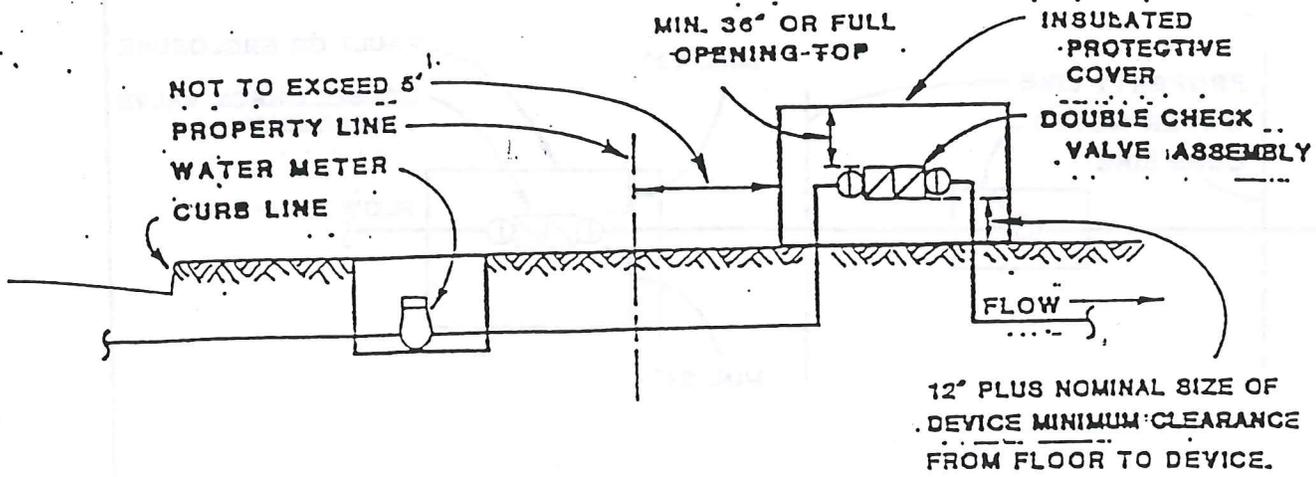
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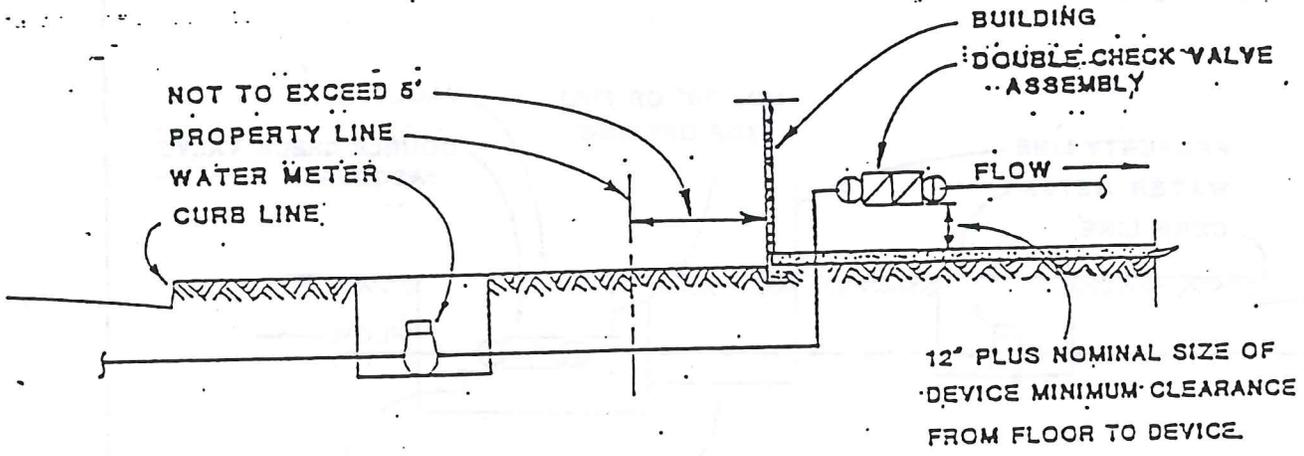
NO.	REVISIONS	DATE	BY

1 OF 2

DATE



ABOVE GROUND



IN BUILDING

NOTE: DOUBLE CHECK VALVE ASSEMBLIES SHALL BE OF AN APPROVED TYPE AND SHALL BE INSTALLED IN SUCH A MANNER THAT THEY SHALL BE READILY ACCESSIBLE FOR REPAIR AND INSPECTION.

CITY OF AUMSVILLE, OREGON

TITLE OF STANDARD PLAN

TYPICAL INSTALLATION

STANDARD PLAN NO.

DOUBLE CHECK VALVE BACKFLOW PREVENTION DEVICE

SHEET

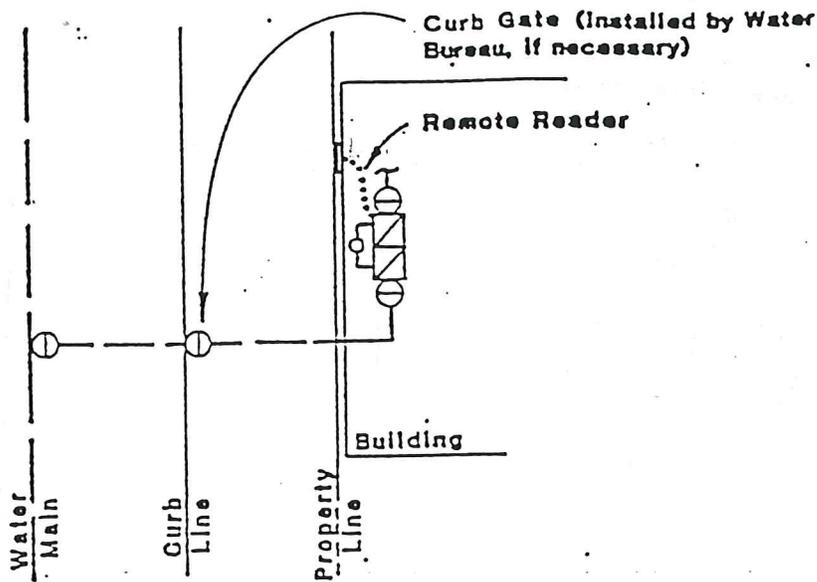
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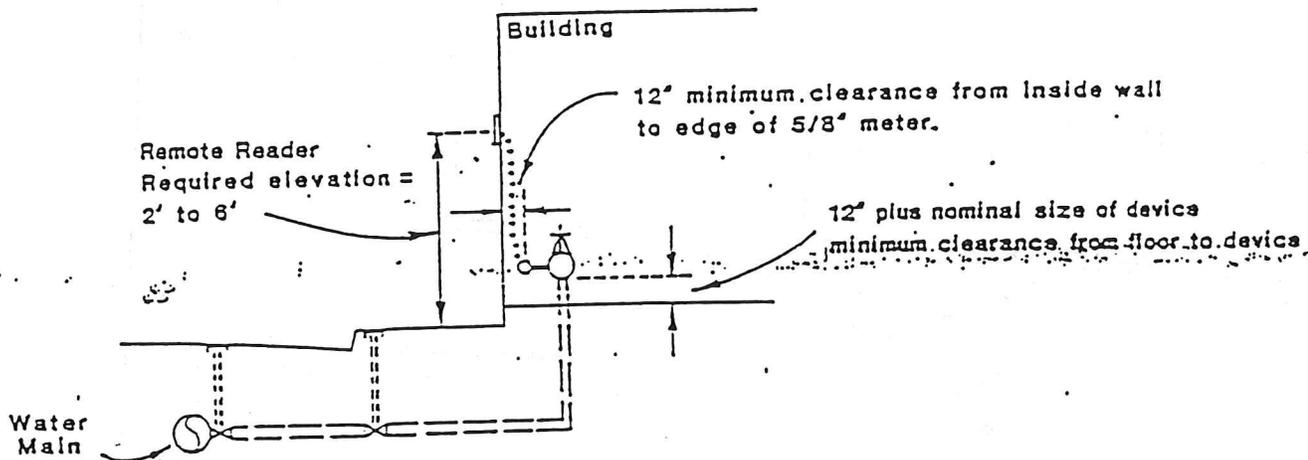
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PLAN VIEW



ELEVATION

BUILDING AT PROPERTY LINE

- NOTES: 1. PROVIDE 36" MINIMUM CLEARANCE ON TOP OF DEVICE OR A FULL OPENING TOP.  
 2. PROVIDE 24" MINIMUM CLEARANCE DOWNSTREAM AND UPSTREAM OF DEVICE.  
 3. INSTALL ELECTRICAL WIRES IN APPROVED CONDUITS.

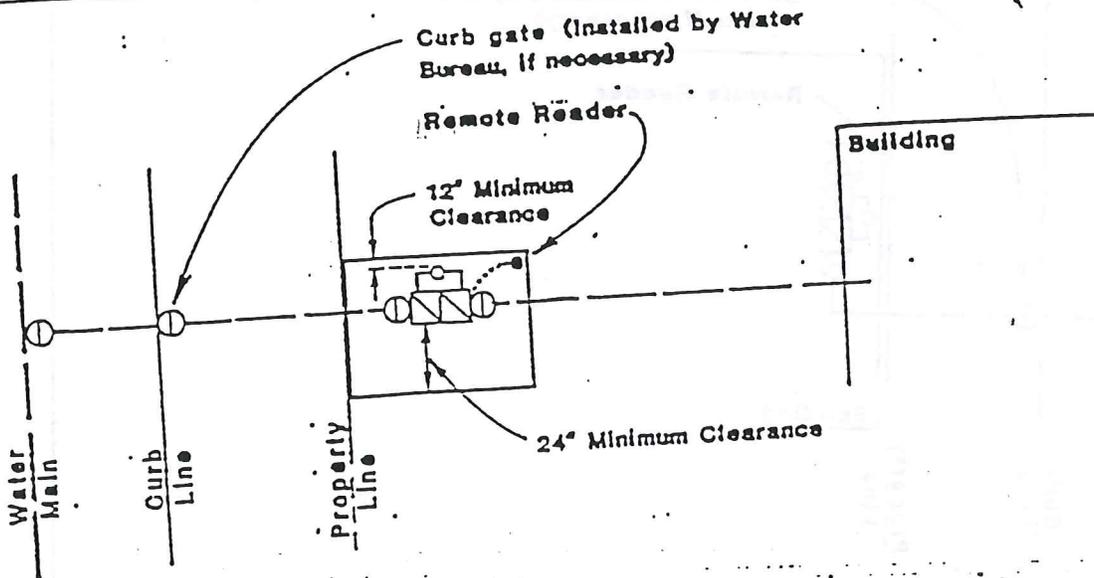
See Backflow Prevention Device Installation Requirements for complete installation details.

CITY OF AUMSVILLE, OREGON

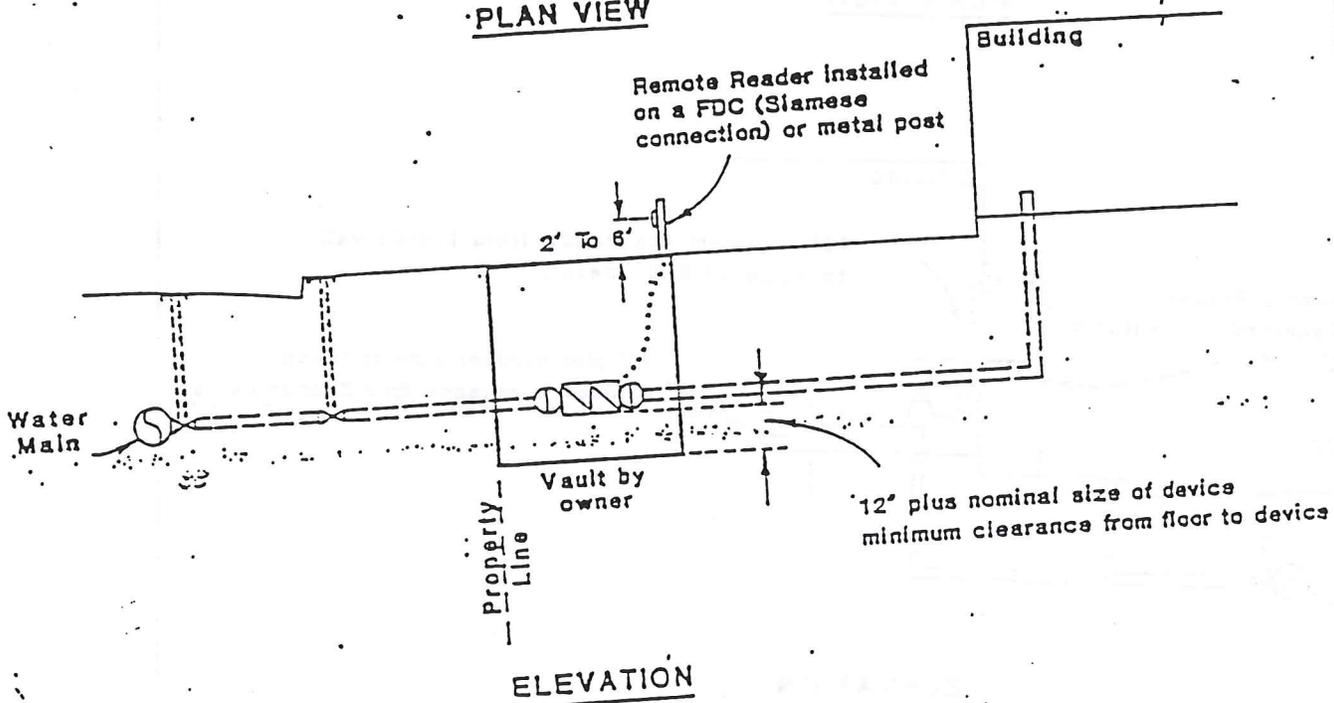
TITLE OF STANDARD PLAN **TYPICAL INSTALLATION**  
**APPROVED DETECTOR DOUBLE CHECK ASSEMBLY**

SHEET  
 1  
 OF 4

APPROVED	NO.	REVISIONS	DATE	BY



**PLAN VIEW**



**ELEVATION**

**BUILDING SET BACK GREATER THAN LENGTH OF DEVICE**

- NOTES: 1. PROVIDE 36" MINIMUM CLEARANCE ON TOP OF DEVICE OR A FULL OPENING TOP.  
 2. PROVIDE 24" MINIMUM CLEARANCE DOWNSTREAM AND UPSTREAM OF DEVICE.  
 3. INSTALL ELECTRICAL WIRES IN APPROVED CONDUITS.

See Backflow Prevention Device Installation Requirements for complete installation details.

CITY OF AUMSVILLE, OREGON

TITLE OF STANDARD PLAN

**TYPICAL INSTALLATION  
 APPROVED DETECTOR DOUBLE CHECK ASSEMBLY**

STANDARD PLAN NO.

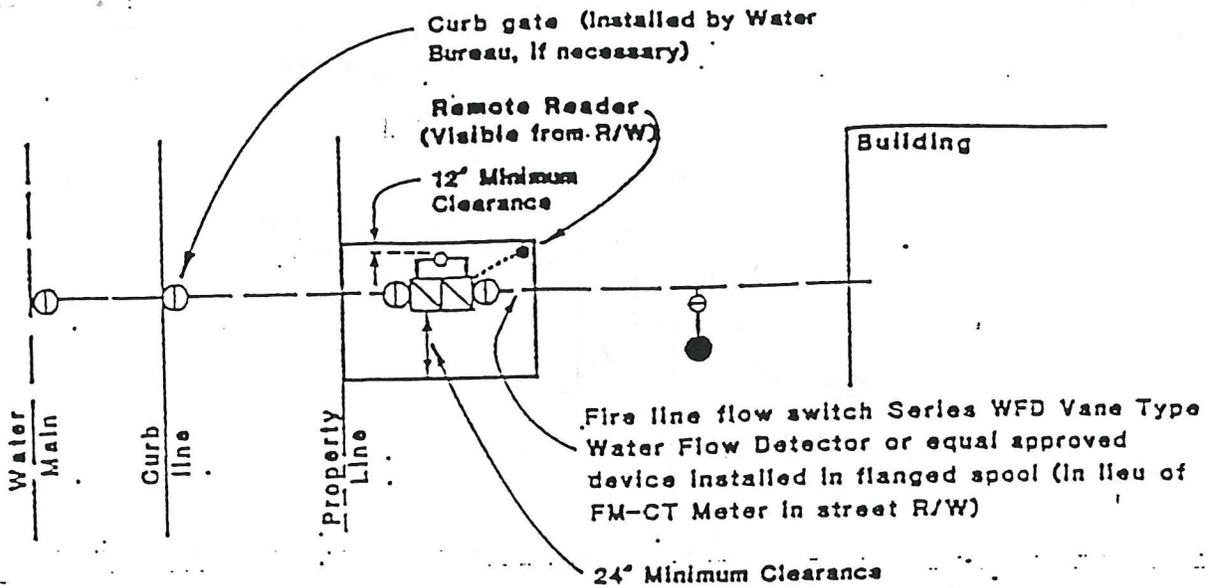
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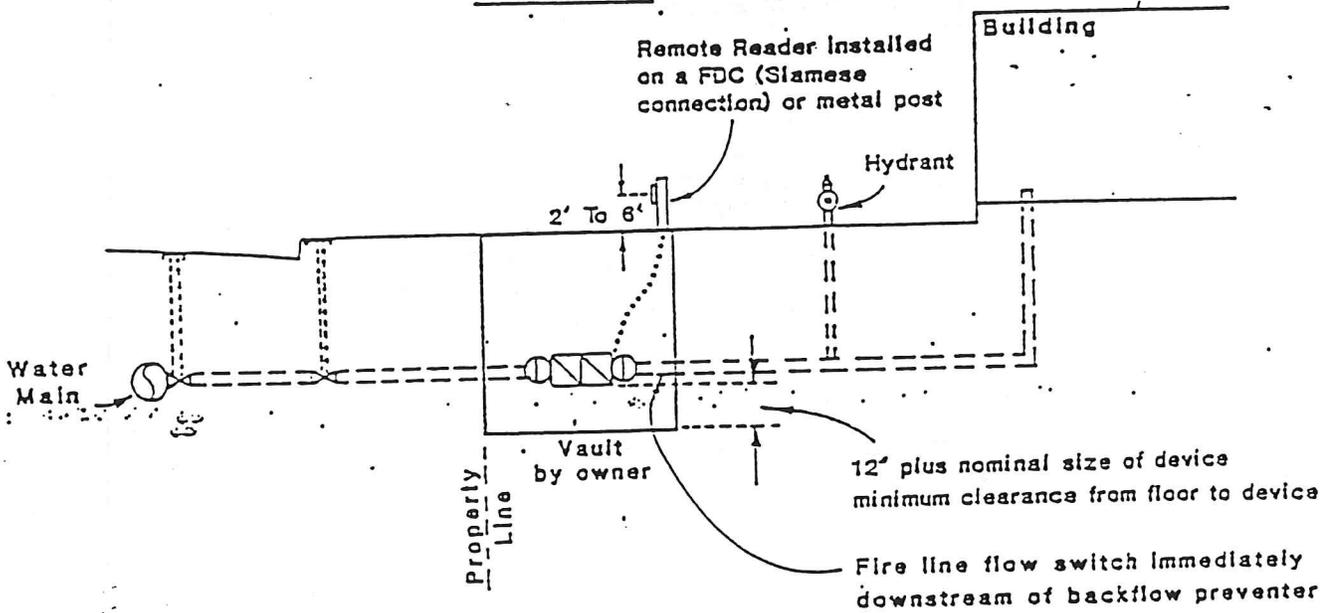
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**PLAN VIEW**



**ELEVATION**

**BUILDING WITH PRIVATE ONSITE HYDRANTS REQUIRED**

- NOTES: 1. PROVIDE 36" MINIMUM CLEARANCE ON TOP OF DEVICE OR A FULL OPENING TOP.  
 2. PROVIDE 24" MINIMUM CLEARANCE DOWNSTREAM AND UPSTREAM OF DEVICE.  
 3. INSTALL ELECTRICAL WIRES IN APPROVED CONDUITS.

See Backflow Prevention Device Installation Requirements for complete installation details.

CITY OF AUMSVILLE, OREGON

TITLE OF STANDARD PLAN

TYPICAL INSTALLATION

APPROVED DETECTOR DOUBLE CHECK ASSEMBLY

SHEET

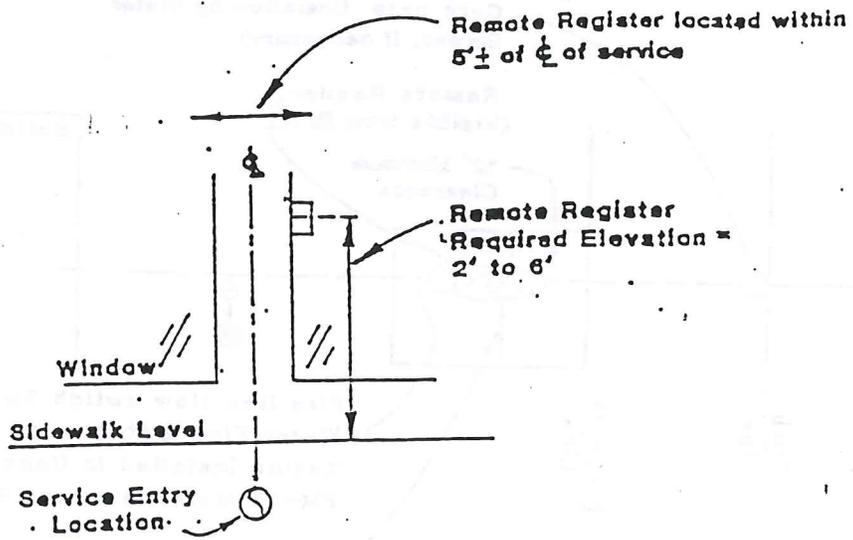
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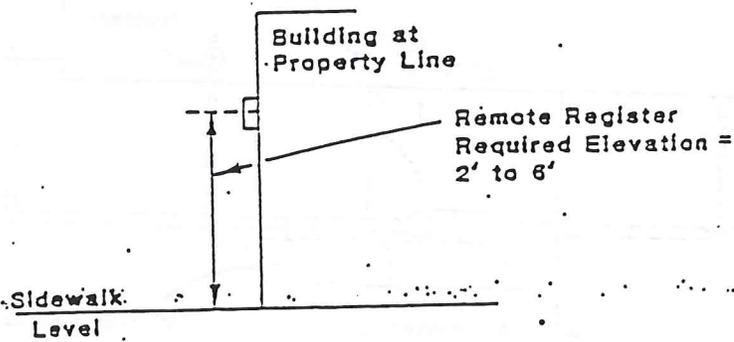
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**I. IN ANY ACCESSIBLE WINDOW  
FRONT-VIEW ELEVATION**



**II. ON WALL  
SIDE VIEW ELEVATION**

See Backflow Prevention Device Installation Requirements for complete installation details.

CITY OF AUMSVILLE OREGON

TITLE OF STANDARD PLAN

TYPICAL INSTALLATION  
APPROVED REMOTE REGISTER

SHEET

4

OF 4

APPROVED

NO.	REVISIONS	DATE	BY

DATE

DEVICE INSTALLATION GUIDE

CROSS CONNECTION CONTROL, INT 39  
LUNDY

DEVICE	COMPONENT PARTS	DEGREE OF HAZARD		TYPE OF BACKFLOW		INSTALLATION	REMARKS
		HEALTH	NON-HEALTH	BACK-PRESSURE	BACK-SIPHONAGE		
A/G	supply line(s) and receiving vessel	XX	XX	XX	XX	-twice the diameter, but never less than 1" separation between the supply line outlet and the overflow rim of the receiving vessel -adequate space for maintenance and testing (12" + nominal diameter of device). -install above ground or floor -proper A/G between relief valve and drain line	-system pressure is lost -usually by-passed
R/P	two spring loaded approved check valves separated by a pressure differential relief valve installed between two shut off valves	XX	XX	XX	XX	-adequate space for maintenance and testing (12" + nominal diameter of device)	-size the device hydraulically
DCVA	two spring loaded or weighted approved check valves installed between two shut off valves		XX		XX	-12" above highest use or manufacturer's instructions -adequate space for maintenance -6" above highest use -110 shut off valves allowed downstream of device	-PVDs larger than 2" consist of two check valves and an atmospheric vent -can be installed in limited health hazard situations -must not be subjected to back-pressure
PVD	one spring loaded check valve and an atmospheric vent		XX		XX		
AVD	one atmospheric vent valve		XX		XX		

A/G-Air Gap; R/P-Reduced Pressure Backflow Preventer; DCVA-Double Check Valve Assembly; PVD-Pressure Vacuum Breaker; AVD-Atmospheric Vacuum Breaker; DL-Diaphragmatic Loop

Notes: Use only approved devices  
Supply lines must be thoroughly flushed before installing devices  
Devices must be adequately protected from freezing and installed in areas where they will not be subjected to flooding

## n-plant Isolation

In addition to the mandatory premise isolation previously discussed, there are a number of fixtures, equipment, or areas common to many customer's premises which are actual or potential cross connections. These fixtures, equipment, or areas must be regularly inspected and analyzed to determine their potential risk to the system.

They must be provided with proper backflow protection either at the fixture, equipment, or area. Table 3-4 lists several examples and the minimum protection requirements.

**Table 3-4: Fixtures, Equipment, and Areas Requiring Backflow Protection**

Fixtures, Equipment, and Areas	Protection	Fixtures, Equipment, and Areas	Protection
Air compressors.	DCVA	Computer cooling lines.	AG/RPBA
Air conditioning systems.	RPBA	Condensate tanks.	AG/RPBA
Air washers.	RPBA	Cooking kettles.	AG/AVB
Aquarium make-up water.	AG/RPBA	Cooling towers.	AG/RPBA
Aspirators, medical.	AVB	Decorative ponds.	AG/RPBA
Aspirators, weedicide, herbicide and pesticide.	AVB	Degreasing equipment.	RPBA
Autoclaves.	RPBA	Demineralized water systems.	RPBA
Autopsy tables.	RPBA	Dental cuspidors.	RPBA
Baptismal founts.	AG/AVB	Detergent dispensers (dishwasher).	AVB
Bathtub, below rim filler.	Not Allowed	Dialysis equipment.	RPBA
Bedpan washers.	AVB	Dishwashers.	AVB
Beverage dispensers using CO <sub>2</sub> .	RPBA	Drinking fountains.	AG
Bidets.	AVB	Dye vats and tanks.	AG/RPBA
Boat lifts.	RPBA	Dynamometers.	DCVA
Boiler feed lines.	AG/RPBA	Emergency generators.	RPBA
Bottle washing equipment.	RPBA	Etching tanks.	AG/RPBA
Box hydrants.	PVBA/DCVA	Fermenting tanks.	AG/RPBA
Brine tanks.	AG/DCVA	Fertilizer injection equipment.	RPBA
Can washing equipment.	AVB/PVBA	Film processors.	RPBA
Chemical feeder tanks.	AG/RPBA	Fire department connections.	DCVA
Chilled water systems.	RPBA	Fire sprinkler systems (see Section 4).	DCVA
Chlorinators.	RPBA	Floor drains.	AG
Coffee urns.	AG/AVB	Flushing floor drains.	AVB