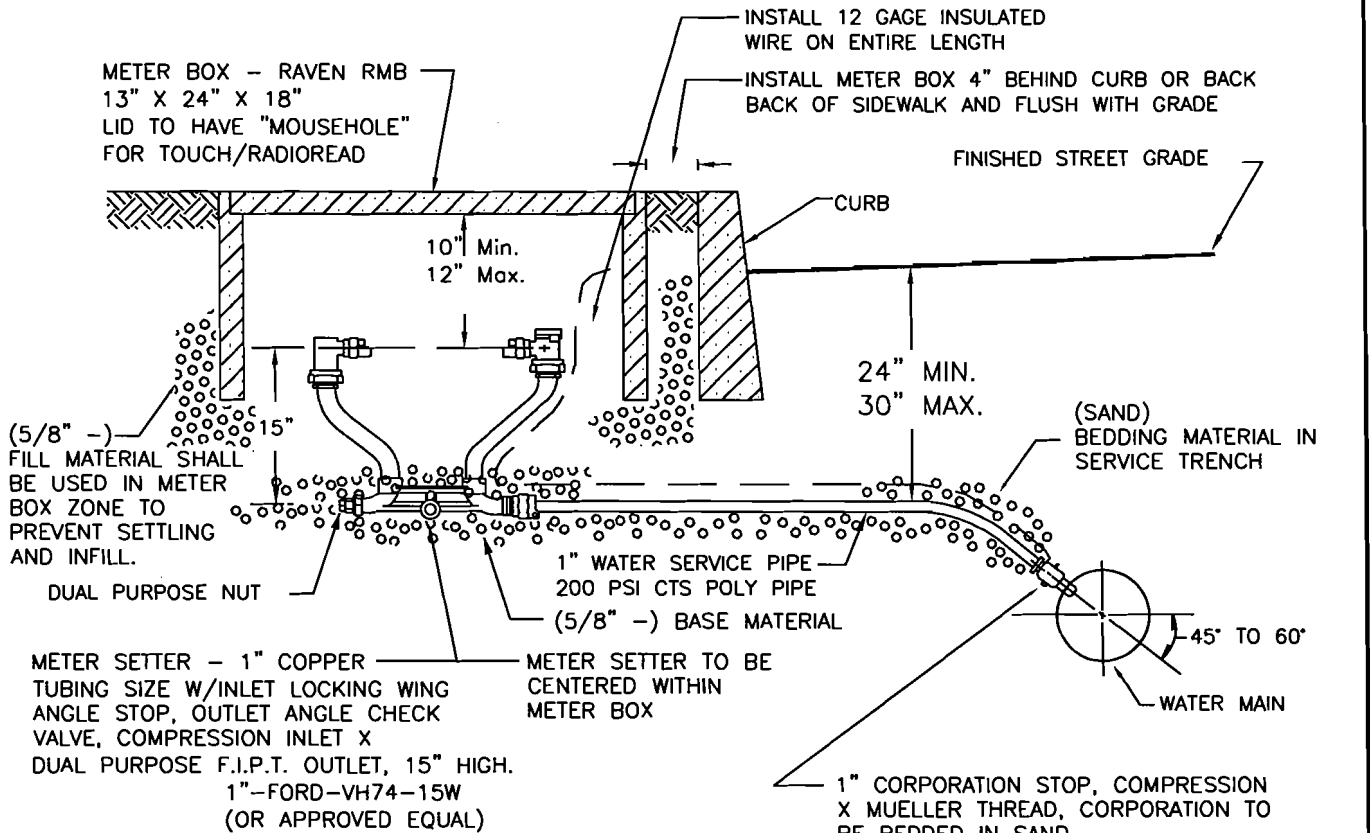


## STANDARD DETAIL LIST

(Continued)

### Water Details

<b>Dwg.</b>	<b>Title</b>
W-1.1	Blank
W-1.2	Standard Water Service – 1”
W-1.3	Standard Water Service – 1 ½” and 2”
W-1.4	Standard Water Service – 3” and Larger
W-1.5	Standard Thrust Block
W-1.6	Vertical Anchor Block
W-2.1	Standard Fire Hydrant Assembly
W-2.2	Standard Valve Box and Cover
W-2.3	Blank
W-2.4	Combination Air Release Valve
W-2.5	Standard Blow-off Assembly
W-2.6	Standard Temporary Blow-off Assembly
W-2.7	Standard Manual Air Release Valve
W-2.8	Pipe and Casing Detail
W-2.9	Fire Hydrant Guard Post
W-2.10	Water Sampling Station
W-3.1	Double Check Valve Assembly – 2” and Smaller
W-3.2	Blank
W-3.3	Double Check Valve Assembly – 2 ½” and Larger
W-3.4	Reduce Pressure Principle Backflow Assembly – 2 ½” and Larger
W-3.5	Reduce Pressure Principle Backflow Assembly – 2” and Smaller
W-3.6	Fire Protection Service, Backflow Prevention & Irrigation Deduct Meter Locations



NOTES:

1. ALL METERS SHALL BE INSTALLED BY THE CITY OF RIDGEFIELD.
2. PRIOR TO CITY INSTALLATION OF METERS, ALL SERVICE APPLICATIONS MUST BE COMPLETED AND APPROVED, SERVICE FEES PAID IN FULL AND AS BUILTS SUBMITTED AND APPROVED.
3. CONTRACTOR SHALL CONTACT CITY PUBLIC WORKS OFFICE (887-8251) 48 HRS. PRIOR TO INSTALLING ANY WATER SERVICE CONNECTIONS.
4. METERS WILL NOT BE SET BY THE CITY PRIOR TO DISINFECTION OF THE MAIN AND SERVICES, AND A SUCCESSFUL BACTERIOLOGICAL TEST.
5. WATER SERVICES UP TO AND INCLUDING THE SETTER SHALL BE PRESSURE TESTED ALONG WITH THE MAIN.
6. DURING THE PRESSURE TEST, THE MAIN SHALL BE OPEN TO INSPECTION AT ALL CORPORATIONS.
7. METER BOX IS NOT ALLOWED IN HARD SURFACE AREAS WITHOUT PRIOR APPROVAL. IF APPROVED THE METER BOX AND LID IN HARD SURFACE AREAS MUST BE AMORCAST H-20 TRAFFIC RATED BOX WITH MOUSEHOLE FOR TOUCH/RADIOREAD AND HAVE MASTIC INSTALLED BETWEEN THE METER BOX AND HARD SURFACE.
8. CUSTOMER SIDE OF METER MUST BE CONNECTED PER PLUMBING CODE BEFORE METER CAN BE INSTALLED.
9. METER BOX AND SETTER MUST MEET PUBLIC WORKS INSTALLATION REQUIREMENTS AT TIME OF METER INSTALLATION.
10. BACKFILL MUST BE PLACE AROUND METER BOX AND THE BOX SET TO FINISHED GRADE BEFORE CITY WILL APPROVE.

N.T.S

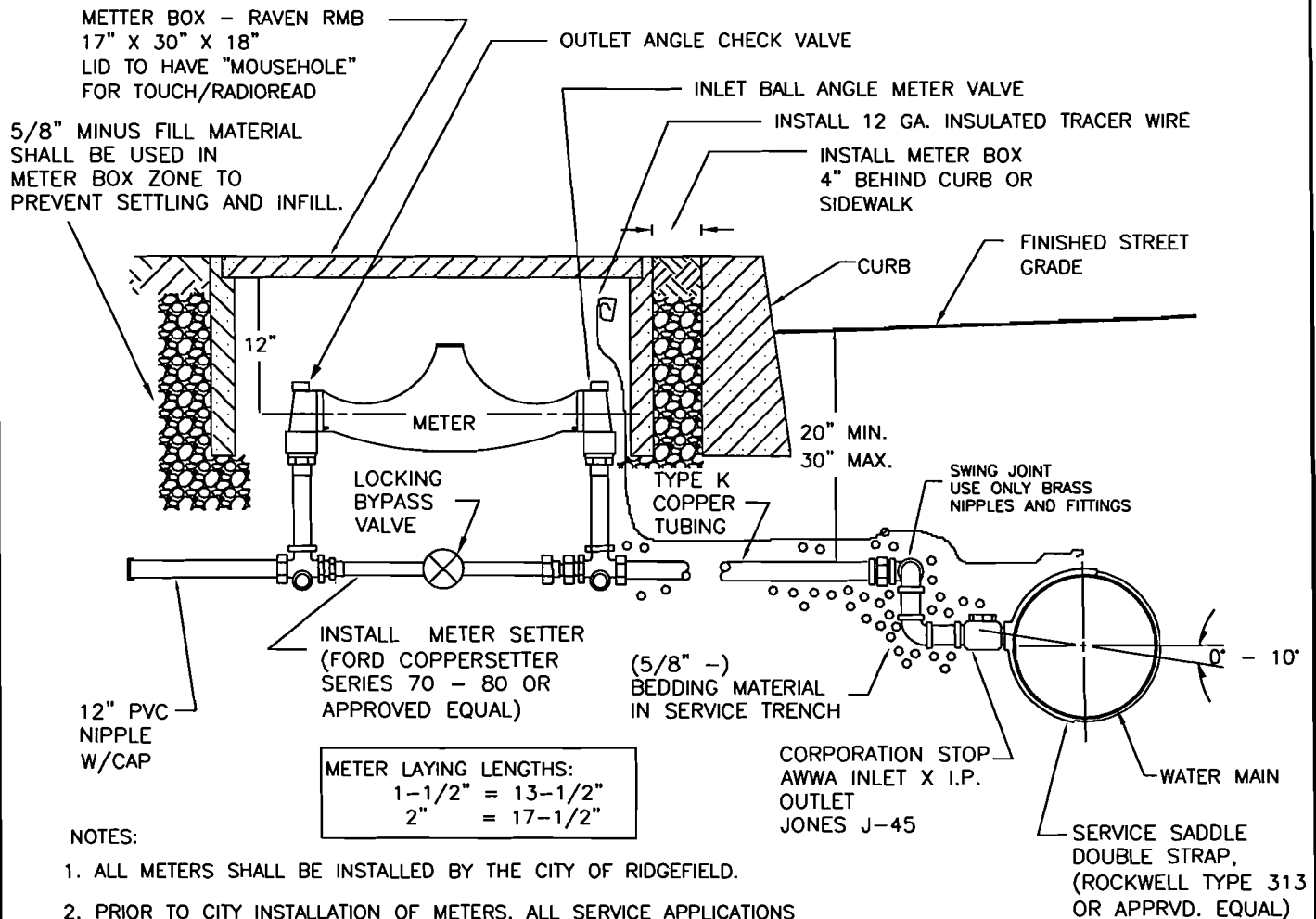
REV. 4/15/08 SCH

STANDARD WATER SERVICE - 1"

STANDARD  
DETAILS

CITY OF RIDGEFIELD

SHEET  
W - 1.2



NOTES:

1. ALL METERS SHALL BE INSTALLED BY THE CITY OF RIDGEFIELD.
2. PRIOR TO CITY INSTALLATION OF METERS, ALL SERVICE APPLICATIONS MUST BE COMPLETED AND APPROVED, SERVICE FEES PAID IN FULL AND AS BUILTS SUBMITTED AND APPROVED.
3. CONTRACTOR SHALL CONTACT CITY PUBLIC WORKS OFFICE (887-8251) 48 HRS. PRIOR TO INSTALLING ANY WATER SERVICE CONNECTIONS.
4. METERS WILL NOT BE SET BY THE CITY PRIOR TO DISINFECTION OF THE MAIN AND SERVICES, AND A SUCCESSFUL BACTERIOLOGICAL TEST.
5. WATER SERVICES UP TO AND INCLUDING THE SETTER SHALL BE PRESSURE TESTED ALONG WITH THE MAIN.
6. DURING THE PRESSURE TEST, THE MAIN SHALL BE OPEN TO INSPECTION AT ALL CORPORATIONS.
7. METER BOX IS NOT ALLOWED IN HARD SURFACE AREAS WITHOUT PRIOR APPROVAL. IF APPROVED THE METER BOX AND LID IN HARD SURFACE AREAS MUST BE AMORCAST H-20 TRAFFIC RATED BOX WITH MOUSEHOLE FOR TOUCH/RADIOREAD AND HAVE MASTIC INSTALLED BETWEEN THE METER BOX AND HARD SURFACE.
8. CUSTOMER SIDE OF METER MUST BE CONNECTED PER PLUMBING CODE BEFORE METER CAN BE INSTALLED.
9. METER BOX AND SETTER MUST MEET PUBLIC WORKS INSTALLATION REQUIREMENTS AT TIME OF METER INSTALLATION.
10. USE 1-7/8" BIT FOR ALL 2" SADDLE TAPS AND 1-3/8" BIT FOR 1-1/2" SADDLE TAPS.
11. BACKFILL MUST BE PLACED AROUND METER BOX AND THE BOX SET TO FINISHED GRADE BEFORE CITY WILL APPROVE.

N.T.S

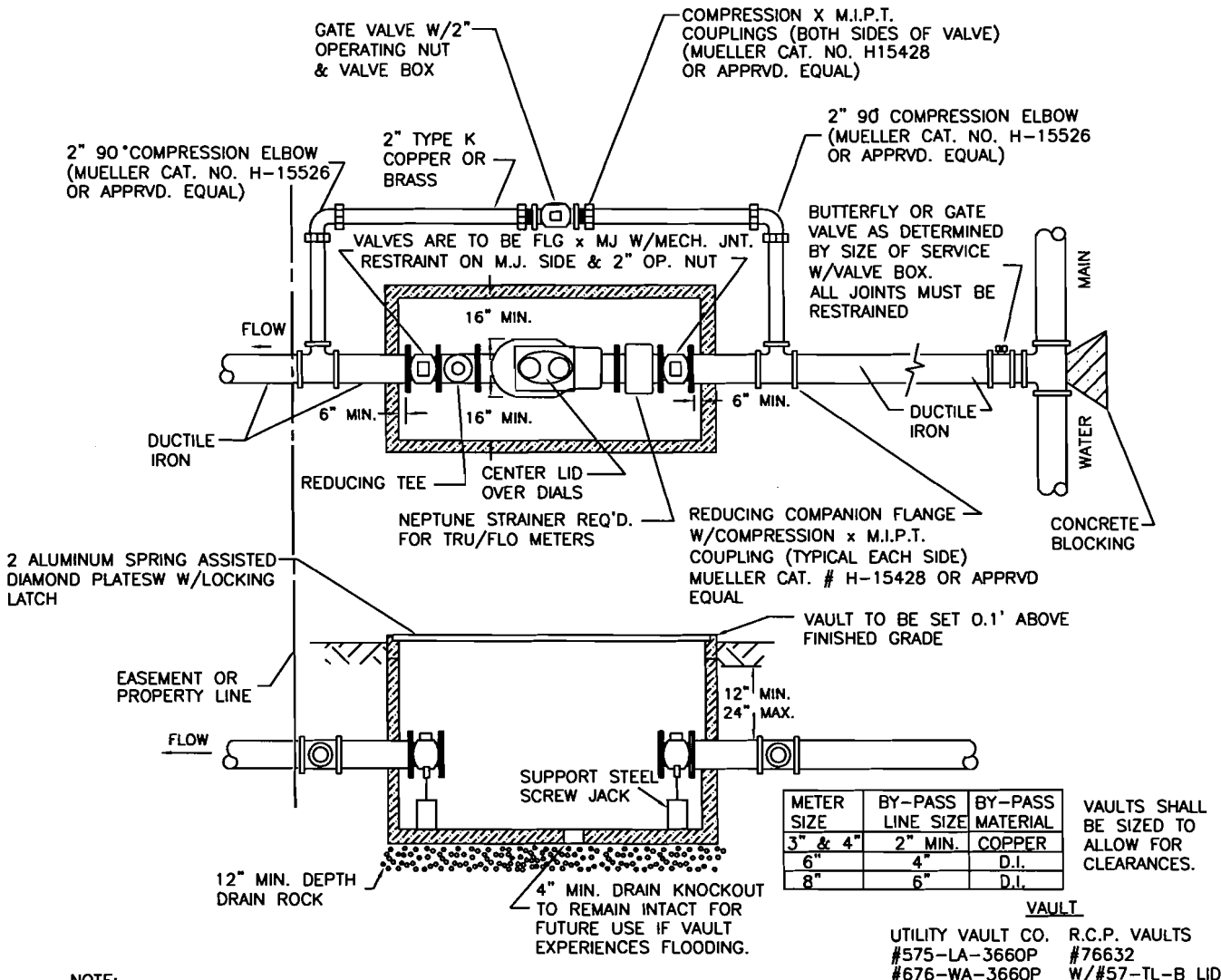
REV. 4/15/08 SCH

STANDARD WATER SERVICE - 1 1/2" & 2"

STANDARD  
DETAILS

CITY OF RIDGEFIELD

SHEET  
W-1.3



**NOTE:**

1. TEN PIPE DIAMETERS OF STRAIGHT PIPE REQ'D. IN & OUT OF METER. (IF USING 6" PIPE, NO BENDS ALLOWED WITHIN 5' OF THE METER IN EITHER DIRECTION. IE: 6" x 10 = 60")
2. CONTRACTOR SHALL USE APPROPRIATE METHODS TO ENSURE COPPER PIPE, FITTINGS AND JOINTS WILL REMAIN LEAK-TIGHT.
3. ALL METERS 3" AND LARGER SHALL BE INSTALLED BY THE CONTRACTOR.
4. METER BOX IS NOT ALLOWED WITHOUT PRIOR APPROVAL.
5. VAULT LID DRAINS TO BE PIPED TO CURB OR STORM SEWER.
6. VAULT TO SEALED AND WATER TIGHT

REV. 4/15/08 SCH

STANDARD WATER SERVICE - 3" AND LARGER

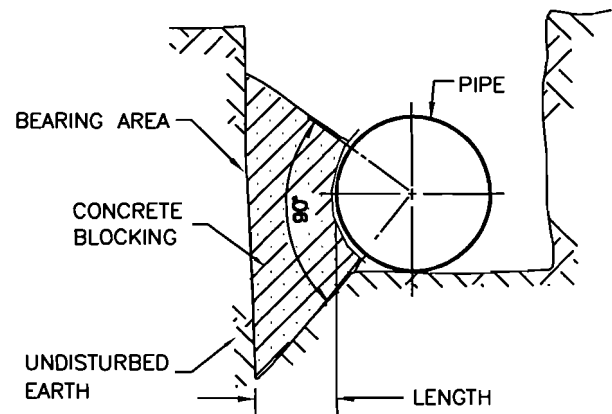
STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET W - 1.4
---------------------	--------------------	------------------

SOIL BEARING = 2000 LB/FT<sup>2</sup>

PIPE SIZE	HORIZ. BENDS	BEARING AREA S.F.	VOL. OF BLOCKING C.F.	LENGTH OF BLOCKING
4"	TEE	2.3	0.8	0.86
	90°	3.2	1.4	1.06
	45°	1.7	0.5	0.73
	22-1/2°	0.9	0.2	0.46
	11-1/4°	-	-	-
6"	TEE	4.7	2.4	1.24
	90°	6.6	4.0	1.53
	45°	3.6	1.6	1.05
	22-1/2°	1.8	0.6	0.66
	11-1/4°	0.9	0.2	0.39
8"	TEE	8.0	5.4	1.63
	90°	11.4	9.0	2.00
	45°	6.2	3.6	1.37
	22-1/2°	3.1	1.3	0.87
	11-1/4°	1.6	0.5	0.51
10"	TEE	12.1	9.9	2.00
	90°	17.1	16.7	2.46
	45°	9.3	6.6	1.69
	22-1/2°	4.7	2.4	1.08
	11-1/4°	2.4	0.9	0.63
12"	TEE	17.1	16.7	2.37
	90°	24.2	28.0	2.93
	45°	13.1	11.2	2.01
	22-1/2°	6.7	4.1	1.28
	11-1/4°	3.4	1.5	0.74
16"	TEE	23.8	27.3	2.73
	90°	33.6	46.0	3.37
	45°	18.2	18.3	2.29
	22-1/2°	9.3	6.7	1.42
	11-1/4°	4.7	2.4	0.80
18"	TEE	29.9	38.5	3.05
	90°	42.2	64.7	3.79
	45°	22.9	25.8	2.57
	22-1/2°	11.7	9.4	1.60
	11-1/4°	5.9	3.3	0.90
24"	TEE	52.3	89.1	4.03
	90°	74.0	149.8	5.00
	45°	40.0	59.7	3.55
	22-1/2°	20.4	21.7	2.11
	11-1/4°	10.3	7.7	1.18

**NOTES:**

1. ALL BLOCKING SHALL BE POURED AGAINST FIRM UNDISTURBED SOIL.
2. ALL CONCRETE BLOCKING SHALL BE POURED IN PLACE WITHOUT DIRECT CONTACT TO PIPE, FITTINGS OR FLANGES. 15 LB. ASPHALT-IMPREGNATED FELT, OR EQUIVALENT AS APPROVED BY THE INSPECTOR, SHALL BE PLACED BETWEEN THE CONCRETE AND PIPE, FITTINGS OR FLANGES.
3. LAYOUT TO BE APPROVED BY THE INSPECTOR PRIOR TO AND AFTER CONCRETE POUR.
4. CONCRETE FOR ALL BLOCKING SHALL HAVE A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 2,500 P.S.I.
5. THIS CHART IS NOT APPLICABLE TO VERTICAL BENDS. LOCATION SPECIFIC DESIGN IS REQUIRED FOR SUCH INSTALLATIONS.
6. WHERE THE TRENCH SOIL HAS A BEARING PRESSURE LESS THAN 2000 POUNDS PER SQUARE FOOT, LOCATION SPECIFIC DESIGN IS REQUIRED.



STANDARD THRUST BLOCK

N.T.S.

REV. 10/12/07 SCH

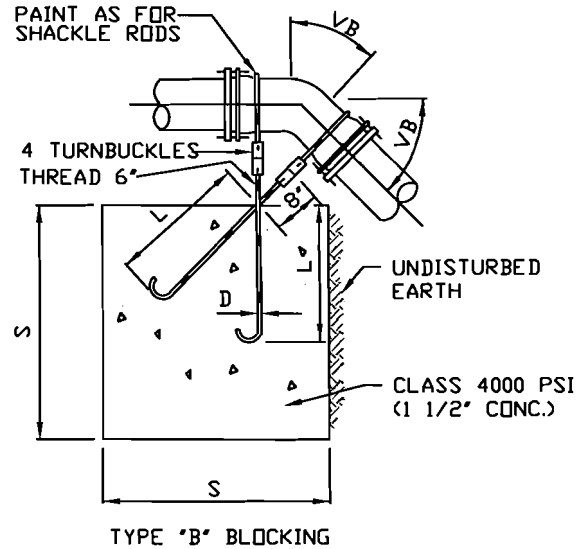
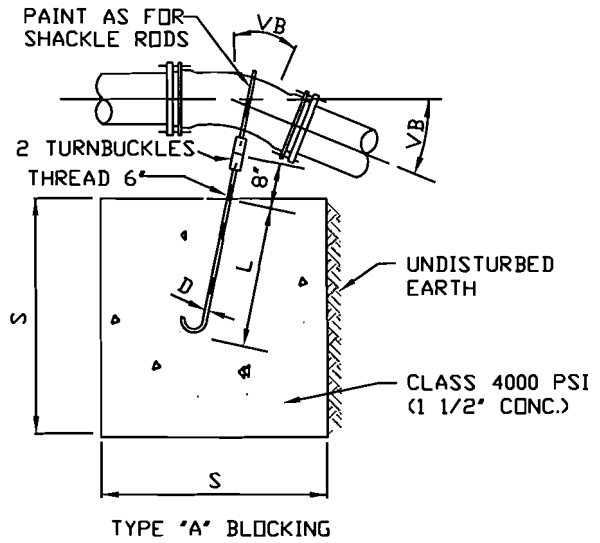
STANDARD THRUST BLOCK

STANDARD  
DETAILS

CITY OF RIDGEFIELD

SHEET  
W-1.5

TYPE "A" BLOCKING						
FOR 11 1/4°-22 1/2°-30° VERTICAL BENDS						
PIPE SIZE NOMINAL DIAMETER- INCHES	TEST PRESSURE PSI	VERTICAL BEND DEGREES	NO. OF CU. FT. OF CONC. BLOCKING	SIDE OF CUBE LIN. FT.	DIAM. OF SHACKLE RODS (2) INCHES	DEPTH OF RODS IN CONCRETE LIN. FT.
4"	300	11 1/4	8	2	5/8"	1.5
		22 1/2	11	2.2		2.0
		30	17	2.6		
6"	300	11 1/4	11	2.2	5/8"	2.0
		22 1/2	25	2.9		
		30	41	3.5		
8"	300	11 1/4	16	2.5	5/8"	2.0
		22 1/2	47	3.6		
		30	70	4.1	3/4"	2.5
12"	250	11 1/4	32	3.2	5/8"	2.0
		22 1/2	88	4.5	7/8"	3.0
		30	132	5.1		
16"	225	11 1/4	70	4.1	7/8"	3.0
		22 1/2	184	5.7	1 1/8"	4.0
		30	275	6.5	1 1/4"	
20"	200	11 1/4	91	4.5	7/8"	3.0
		22 1/2	225	6.1	1 1/4"	4.0
		30	330	6.9	1 3/8"	4.5
24"	200	11 1/4	128	5.0	1"	3.5
		22 1/2	320	6.8	1 3/8"	4.5
		30	480	7.9	1 7/8"	5.5
TYPE "B" BLOCKING						
FOR - 45° VERTICAL BENDS						
		VB		S	D	L
4"	300	45	30	3.1	5/8"	2.0
6"			68	4.1		
8"			123	5.0		
12"	250		232	6.1	3/4"	2.5
16"	225		478	7.8	1 1/8"	4.0
20"	200		560	8.2	1 1/4"	
24"			820	9.4	1 3/8"	4.5



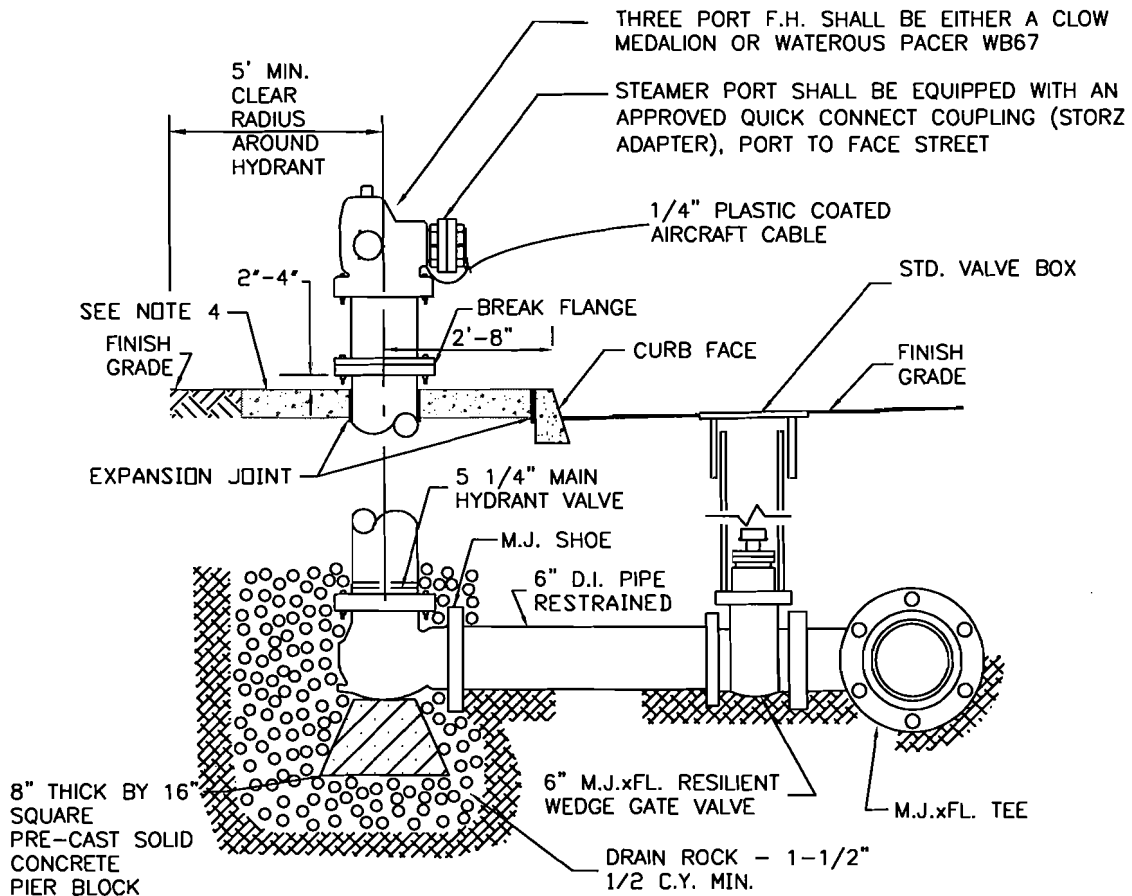
THIS TABLE REPRESENTS THE "MINIMUM" CONSTRUCTION STANDARD. THE DEVELOPER'S ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE APPROPRIATE SIZE OF ALL ANCHOR BLOCKS BASED ON EXISTING AND LOCAL CONDITIONS. FITTINGS SHALL ALSO BE RESTRAINED.

## VERTICAL ANCHOR BLOCK

STANDARD  
DETAILS

CITY OF RIDGEFIELD

SHEET  
W - 1.6



NOTES:

1. FIRE HYDRANT INSTALLATIONS SHALL BE APPROVED BY THE CITY INSPECTOR PRIOR TO BACKFILLING.
2. FIRE HYDRANT LOCATIONS SHALL BE AS SHOWN ON THE PLANS. FIRE HYDRANTS SHALL NOT BE SET UNTIL LOCATION AND DEPTH ARE APPROVED BY THE CITY.
3. FIRE HYDRANT STANDARD BURY IS 4' UNLESS OTHERWISE NOTED ON THE PLANS.
4. A 4'x4'x4" CONCRETE PAD SHALL BE CENTERED AROUND THE FIRE HYDRANT.
5. CONCRETE PAD SHALL BE PLACED FLUSH W/BACK OF CURB OR SIDEWALK. EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN THE CONCRETE PAD AND CURB/SIDEWALK.
6. ALL PIPING MUST BE RESTRAINED, WITHOUT EXCEPTION.
7. FIRE HYDRANTS SHALL BE FACTORY PAINTED WITH SAFETY YELLOW HIGH GLOSS EQUIPMENT ENAMEL. HYDRANT SHALL BE FRESHLY PAINTED PRIOR TO CITY ACCEPTANCE.
8. FIRE HYDRANT MAINS SHALL BE 8" MIN., A 6" MAIN CAN BE USED FOR A DEAD-END RUN OF LESS THAN 50' TO A HYDRANT SUBJECT TO ADEQUATE FIRE FLOW.
9. NO BENDS SHALL BE ALLOWED ON FIRE HYDRANT RUNS.

REV. 04/16/08 SCH

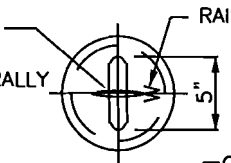
STANDARD FIRE HYDRANT ASSEMBLY

STANDARD  
DETAILS

CITY OF RIDGEFIELD

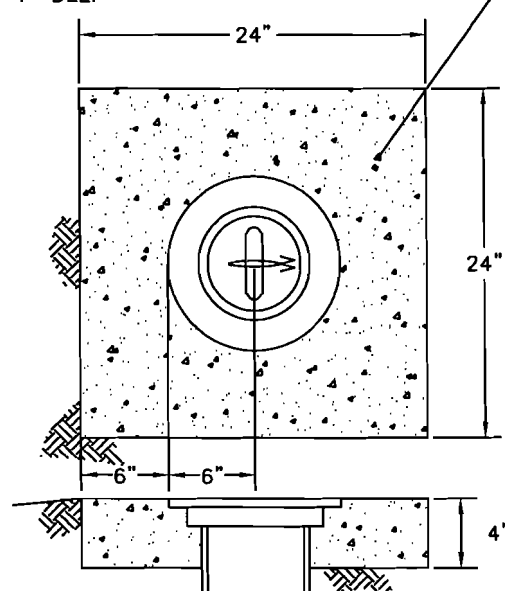
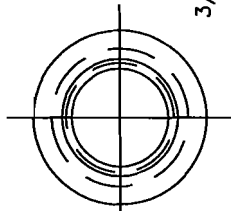
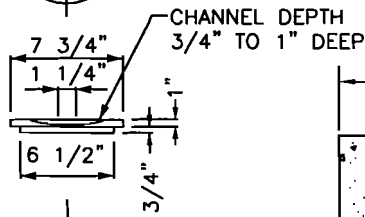
SHEET  
W - 2.1

LID AND 1/4" X 4"  
ROD STOCK  
TO BE CAST INTEGRALLY  
(NOT WELDED)

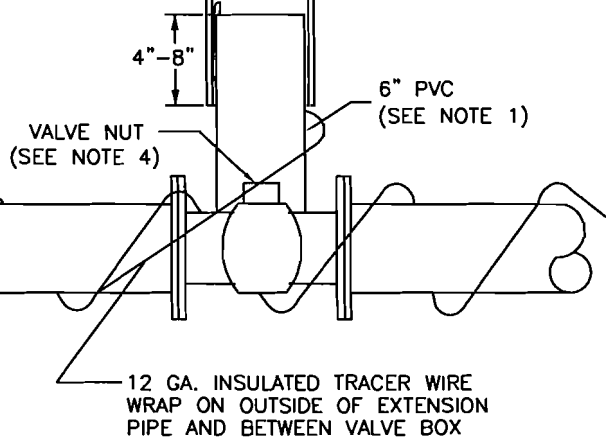
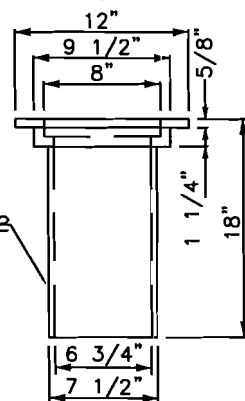


RAISED LETTER

CONCRETE OR ASPHALT PAD  
FOR VALVE BOXES NOT SET  
IN PAVED AREAS.  
(24" SQUARE, 4" THICK)



SEE NOTE #2



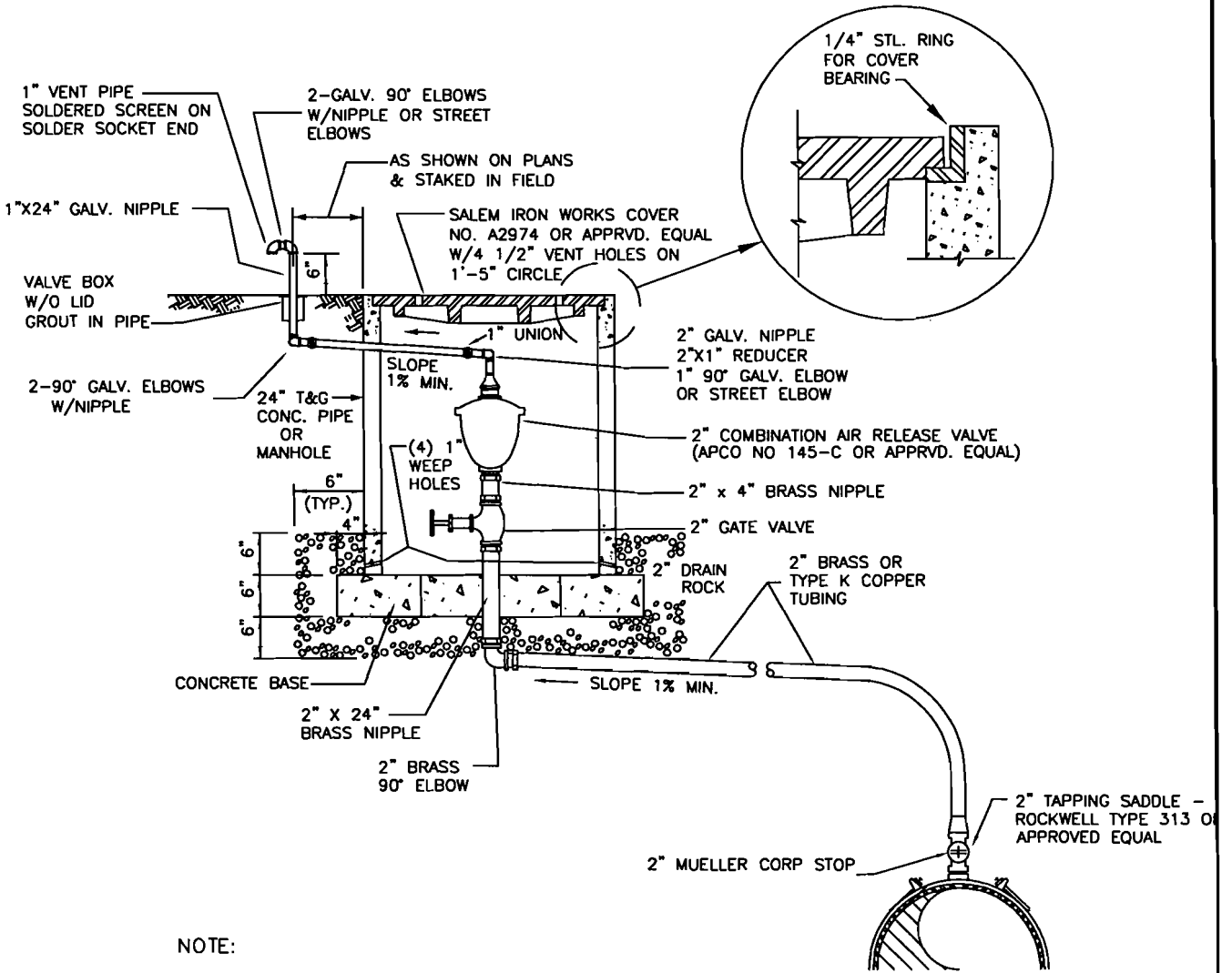
NOTES:

1. EXTENSION SHALL BE 6" ASTM D 3034 SDR 35 PVC PIPE (ONE PIECE).
2. U.S FILTER/PACIFIC WATER WORKS NO. 910 OR EQUAL.
3. THERE SHALL BE 1/2" CLEARANCE UNDER THE PIN CAST INTO THE LID.
4. VALVE OPERATOR EXTENSION AND ROCK GUARD SHALL BE INSTALLED WHEN VALVE IS DEEPER THAN 3 FEET.

REV. 4/15/07 SCH

STANDARD VALVE BOX AND COVER

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET W-2.2
---------------------	--------------------	----------------



NOTE:

- 1) PLACE VENT AND AIR RELEASE UNIT ASSEMBLY OUTSIDE OF HARD SURFACE AREA IN R.O.W. OR 15' EASEMENT DEDICATED TO THE CITY OF RIDGEFIELD.
- 2) MUST BE USED FOR ALL AIR RELEASE LOCATIONS UNLESS OTHERWISE APPROVED BY CITY ENGINEER.

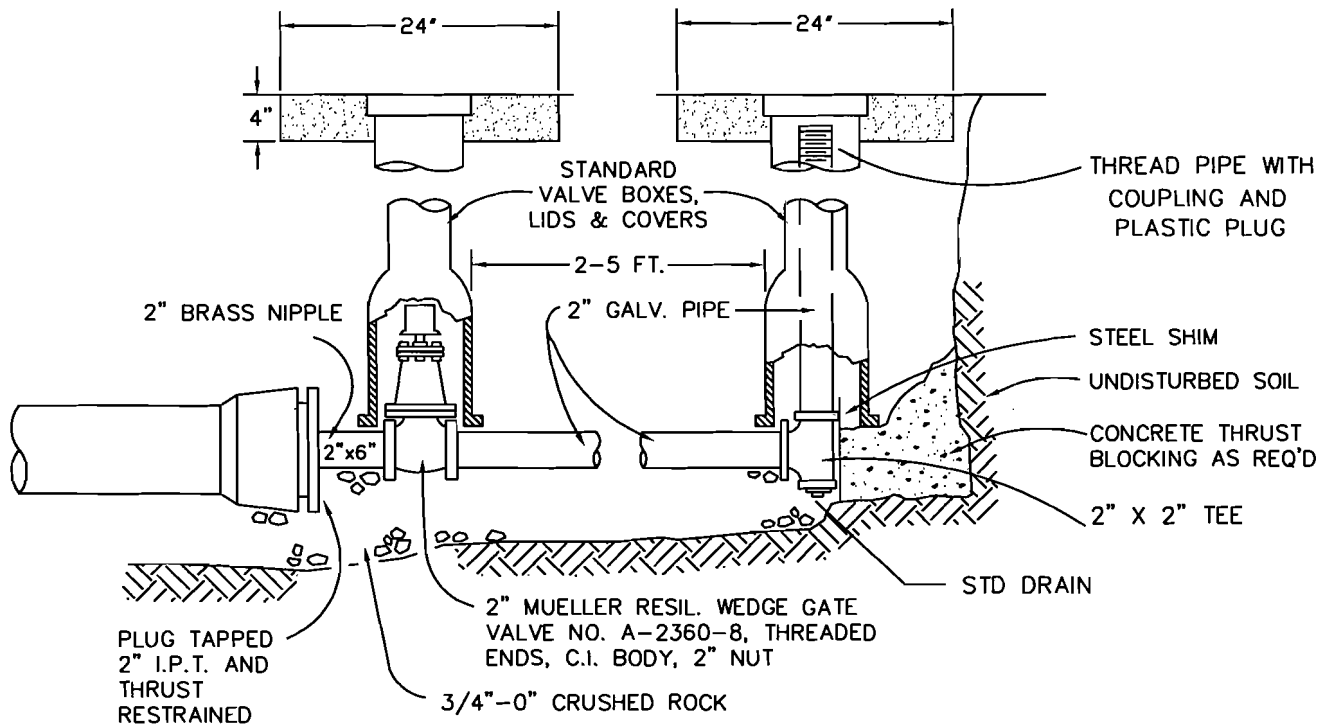
REV. 2/06/08 SCH

## COMBINATION AIR RELEASE VALVE

STANDARD  
DETAILS

CITY OF RIDGEFIELD

SHEET  
W - 2.4



NOTES:

1. VALVE BOX TO BE CONCRETE ENCASED AS SHOWN, IF NOT IN PAVED AREA.
2. BLOW-OFF UNIT SHALL BE BACKFILLED WITH 3/4"-0" CRUSHED ROCK AND COMPACTED TO 95% OF MAX. DENSITY DETERMINED BY AASHTO T-180.
3. PLACE BLOW-OFF STANDPIPE 3 FT. INSIDE R.O.W. LINE AT END OF STREET (2 FT. FROM BARRICADE).

BLOW-OFF SIZES REQUIRED

MAIN SIZE	BLOW-OFF SIZE
<12"	2"
≥12"	4"

STANDARD BLOWOFF ASSEMBLY

STANDARD  
DETAILS

CITY OF RIDGEFIELD

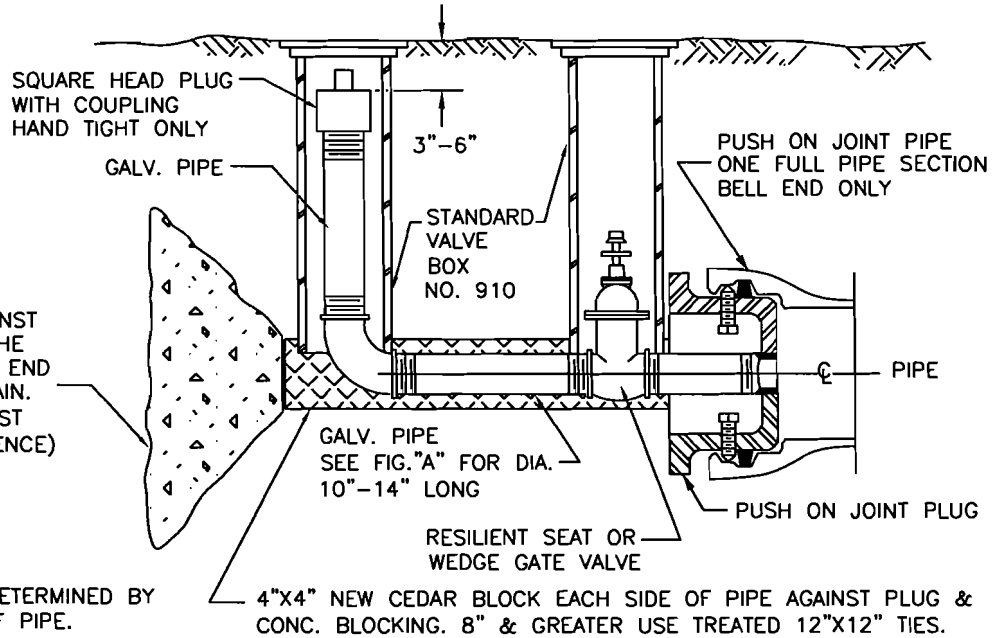
SHEET  
W-2.5

FIGURE "A"

MAIN DIAMETER	BLOW-OFF DIAMETER
<12"	2" MINIMUM
≥12"	4" MINIMUM

POUR THRUST BLOCK AGAINST UNDISTURBED SOIL. USE THE BEARING AREA OF A DEAD END MATCHING THE SIZE OF MAIN. (USE THE STANDARD THRUST BLOCK DETAIL FOR REFERENCE)

NOTE:  
 SIZE OF BLOWOFF DETERMINED BY SIZE AND LENGTH OF PIPE.



STANDARD TEMPORARY BLOWOFF ASSEMBLY

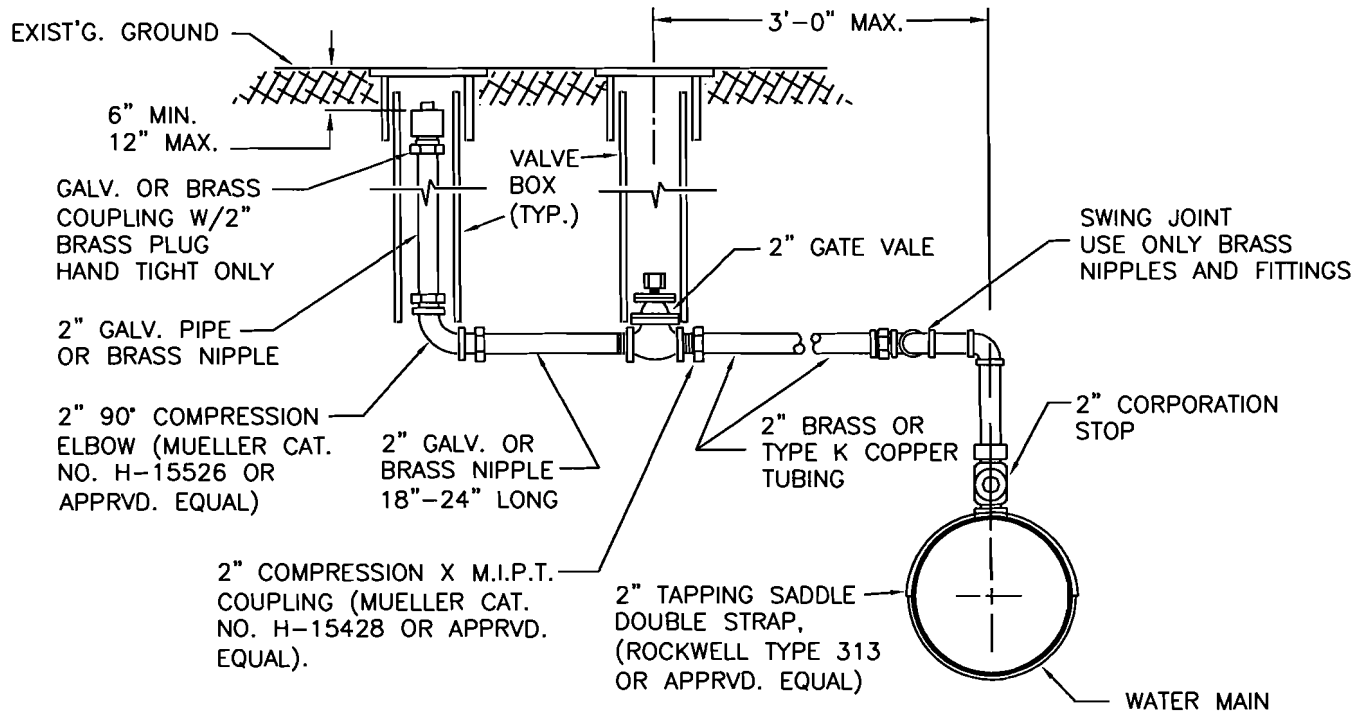
N.T.S.

STANDARD TEMPORARY BLOWOFF ASSEMBLY

STANDARD  
 DETAILS

CITY OF RIDGEFIELD

SHEET  
 W-2.6



NOTES:

1. MAY ONLY BE USED FOR TEMPORARY PUPOSES UNLESS OTHERWISE APPROVED.

STANDARD MANUAL AIR RELEASE VALVE

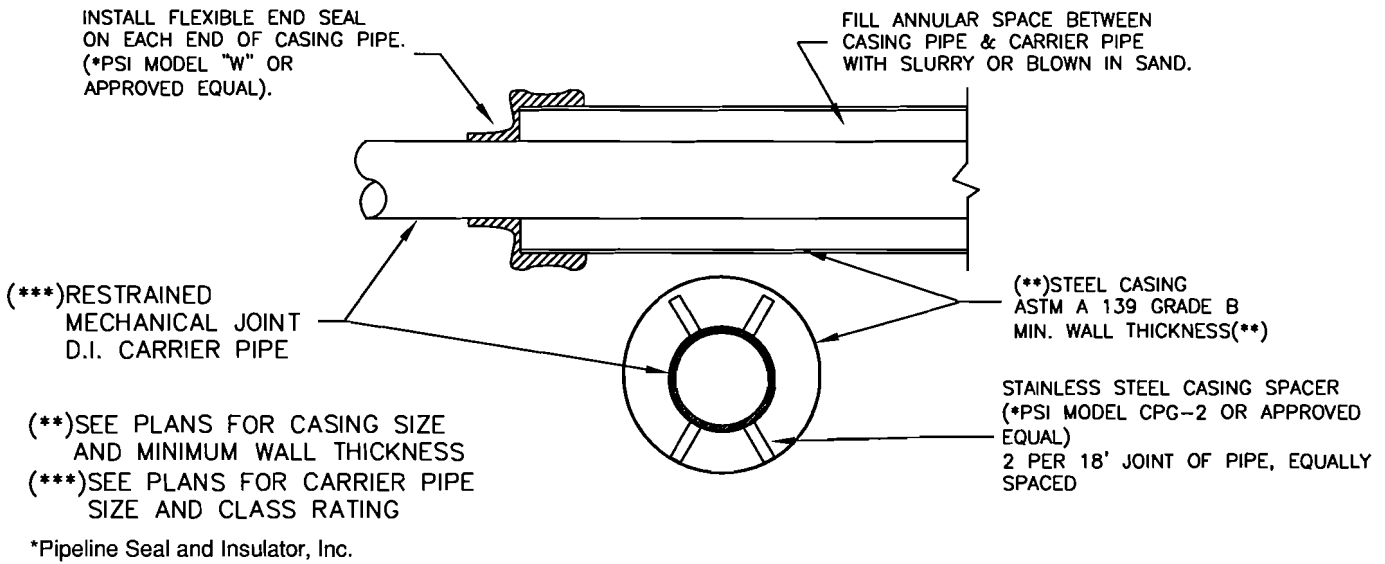
N.T.S.

STANDARD MANUAL AIR RELEASE VALVE

STANDARD  
DETAILS

CITY OF RIDGEFIELD

SHEET  
W-2.7



### CASING SIZING REQUIREMENTS

CARRIER PIPE	MINIMUM CASING REQUIREMENTS	WALL THICKNESS
4"	16" A36 STEEL	3/8"
6"	16" A36 STEEL	3/8"
8"	24" A36 STEEL	3/8"
10"	24" A36 STEEL	3/8"
12"	24" A36 STEEL	3/8"
16"	36" A36 STEEL	5/8"
24"	48" A36 STEEL	5/8"

#### NOTES

1. CASING TO BE EXTENDED 5' BEYOND ANY CURB, WALLS, STRUCTURES OR FOOTINGS
2. PUBLIC AND PRIVATE MAINS SHALL BE PLACED IN SEPARATE CASINGS.
3. WRITTEN PERMISSION FROM THE OWNER OF THE RAILROAD TRACKS IS REQUIRED PRIOR TO OBTAINING CITY OF RIDGEFIELD PERMITS TO PROCEED.
4. NO PRIVATE UTILITIES SHALL BE ALLOWED IN CITY OF RIDGEFIELD CASINGS.

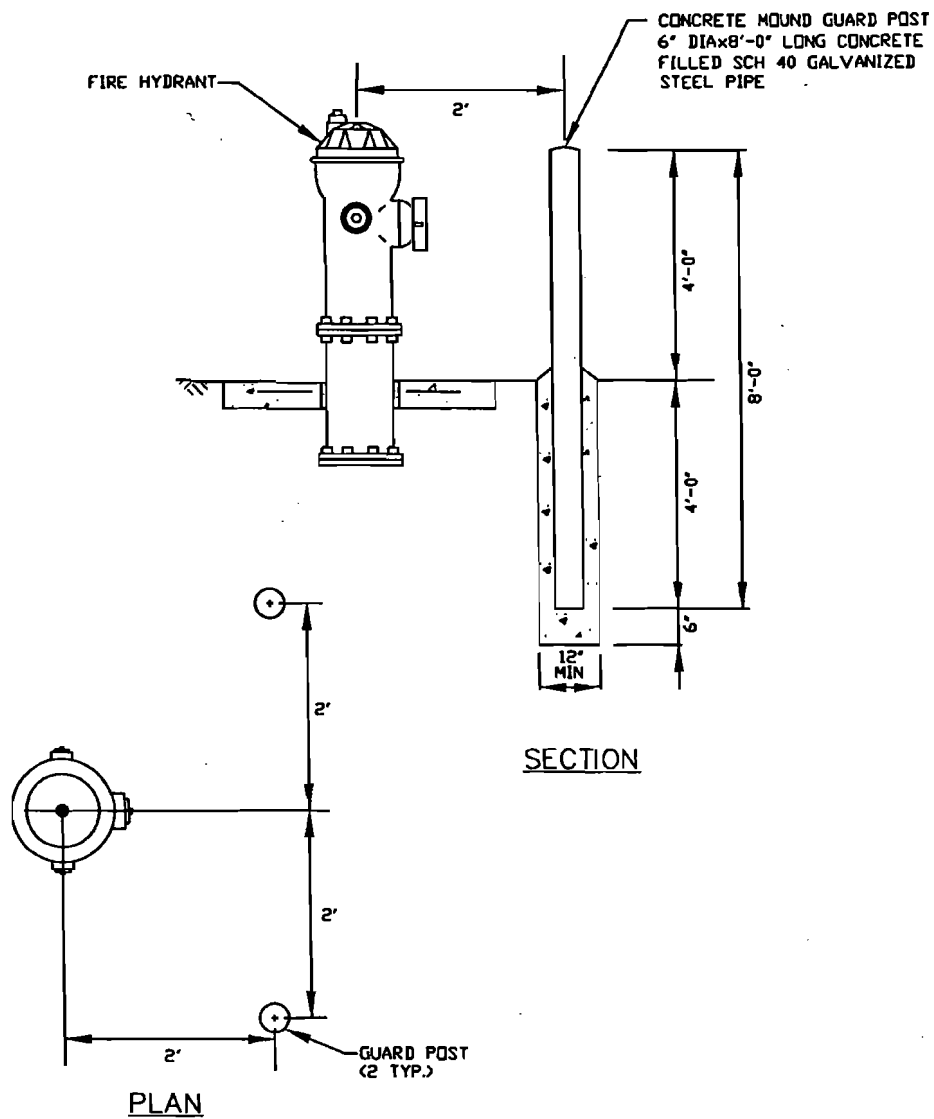
REV. 2/06/08 SCH

## PIPE AND CASING DETAIL

STANDARD  
DETAILS

CITY OF RIDGEFIELD

SHEET  
W-2.8



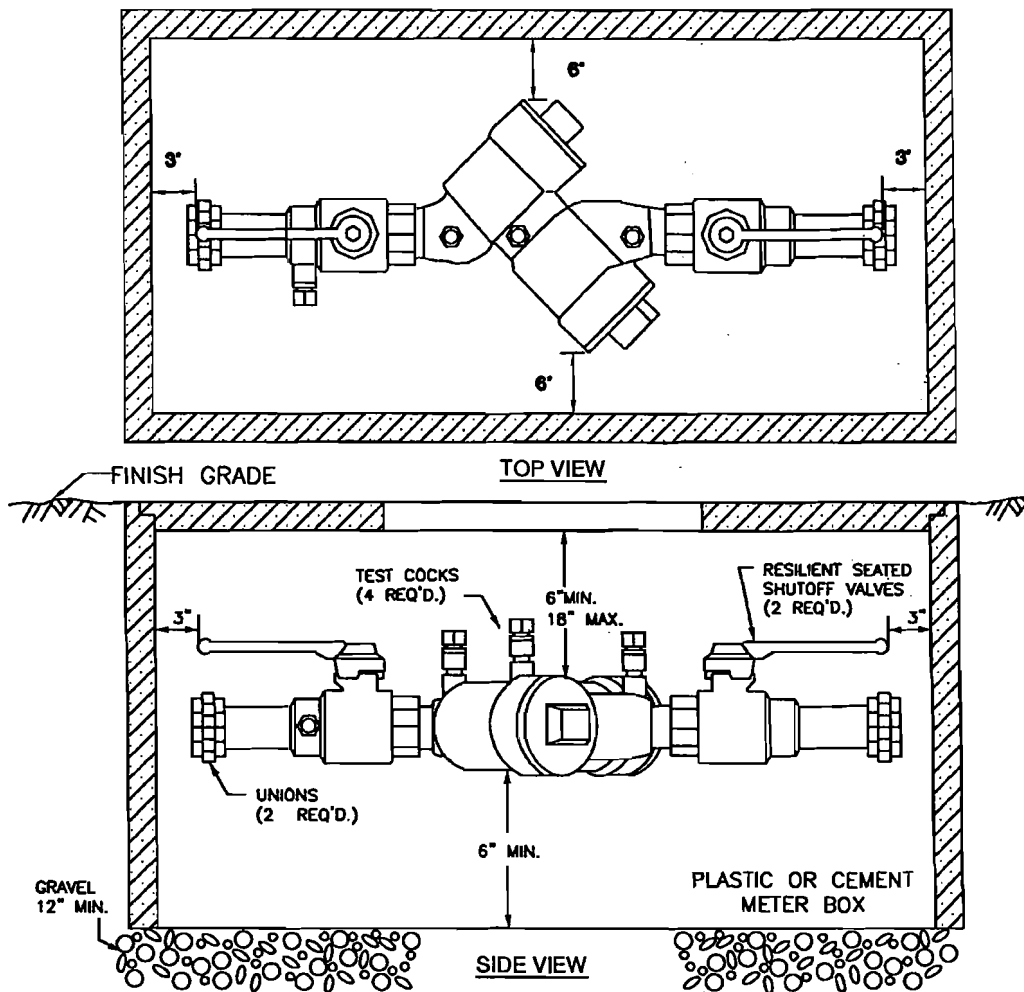
\* PAINT GUARD POST RUSTOLEUM SAFETY YELLOW  
 BASE No. 288-14, COLOR CODE  
 AX-6732, T-4432, OR EQUAL.

**NOTE:**  
 CONCRETE GUARD POSTS SHALL BE INSTALLED  
 WHEN REQUIRED BY CITY ENGINEER

FIRE HYDRANT GUARD POST

STANDARD DETAILS	CITY OF RIDGEFIELD	SHEET W - 2.9
---------------------	--------------------	------------------





**NOTES:**

1. APPROVED DOUBLE CHECK VALVE ASSEMBLY (DCVA) TO LAY HORIZONTAL WITH GROUND. (VERTICAL ALLOWED IF APPROVED BY WA. DEPT. OF HEALTH)
2. DCVA MAY BE INSTALLED ABOVE OR BELOW GROUND PROVIDED ALL CLEARANCES ARE MET.
3. DESIGN FOR BACK SIPHONAGE AND BACK PRESSURE.
4. TEST COCKS TO EITHER FACE OUTWARDS OR UPWARDS FROM ASSEMBLY.
5. THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
6. DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
7. DCVA MUST BE ACCESSIBLE.
8. PROTECT DCVA FROM FREEZING.
9. DCVA SHALL BE APPROVED BY THE STATE OF WASHINGTON DEPARTMENT OF HEALTH.
10. A PLUMBING PERMIT IS REQUIRED-CONTACT THE CITY PERMITS COUNTER
11. DCVA MUST BE TESTED AFTER INSTALLATION, THEN ANNUALLY BY A WA. STATE CERTIFIED BACKFLOW TESTER. RESULTS SHALL BE SENT TO THE CITY PUBLIC WORKS OFFICE.

**DOUBLE CHECK VALVE ASSEMBLY - 2" & SMALLER**

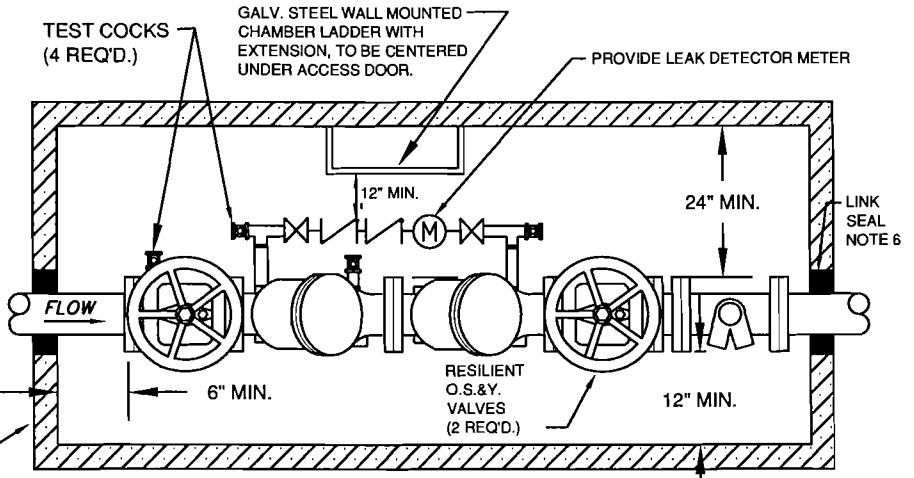
STANDARD  
DETAILS

CITY OF RIDGEFIELD

SHEET  
W - 3.1

**UTILITY VAULT SIZING CHART  
(OR APPROVED EQUAL)**

DEPTH OF PIPE UP TO	DCVA SIZE	FDC TEE INSIDE VAULT	FDC TEE OUTSIDE VAULT
4'	4"	675-WA W/2-332P	575-WA W/2
6'	4"	676-WA	577-WA
4'	6"	687-WA	675-WA W/2
6'	6"		676-WA
6'	8"	5106-WA	687-WA
6'	10"	5106-WA	5106-WA



PRE-CAST CONC. VAULT  
H-20 LOADING  
W/LADDER

VAULT SHALL BE EQUIPPED W/36"X36" SPRING ASSISTED, ALUMINUM DIAMOND PLATE DOOR. UTILITY VAULT #332P

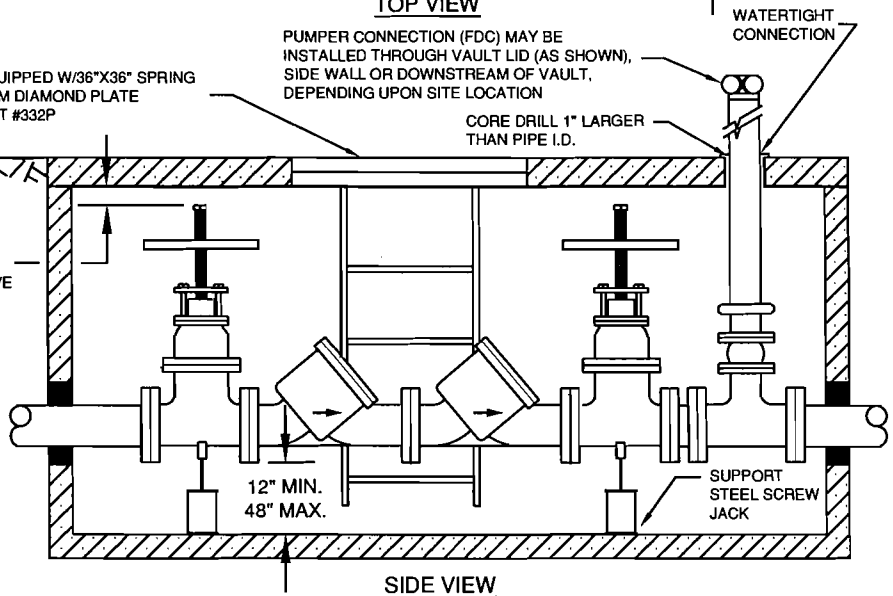
PUMPER CONNECTION (FDC) MAY BE INSTALLED THROUGH VAULT LID (AS SHOWN), SIDE WALL OR DOWNSTREAM OF VAULT, DEPENDING UPON SITE LOCATION

CORE DRILL 1" LARGER THAN PIPE I.D.

FINISH GRADE

3" MIN. W/FULLY OPEN VALVE

A CITY APPROVED ISOLATION VALVE IS REQ'D. BETWEEN THE SUPPLY MAIN AND THE VAULT



**NOTES:**

1. THE DCVA MAY BE INSTALLED ABOVE OR BELOW GROUND PROVIDED ALL CLEARANCES ARE MET.
2. APPROVED DCVA TO LAY HORIZONTAL WITH THE GROUND. (VERTICAL IF APPROVED BY DEPT. OF HEALTH)
3. DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
4. THE WATER LINE SHALL BE DISINFECTED, FLUSHED AND PRESSURE TESTED PRIOR TO INSTALLING THE BACKFLOW ASSEMBLY. THE DCVA SHALL BE PROTECTED FROM FREEZING AND FLOODING.
5. ALL PIPE, VALVE AND FITTING JOINTS, FROM SUPPLY MAIN, SHALL BE FLANGED OR RESTRAINED.
6. PIPE ENTRANCE AND EXIT TO BE PROVIDED WITH LINK SEAL APPROVED EQUAL MECHANICAL SEAL.
7. ALL VAULTS SHALL BE PRE-APPROVED PRIOR TO INSTALLATION.
8. DCVA SHALL BE INSTALLED AT THE PROPERTY LINE OR EASEMENT LINE AND ON OWNER'S PROPERTY.
9. DCVA SHALL HAVE A MINIMUM OF 3' CLEARANCE FROM ALL STRUCTURES.
10. DCVA SHALL BE TESTED AFTER INSTALLATION AND PRIOR TO ACCEPTANCE AND ALSO YEARLY THEREAFTER BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY PUBLIC WORKS OFFICE.

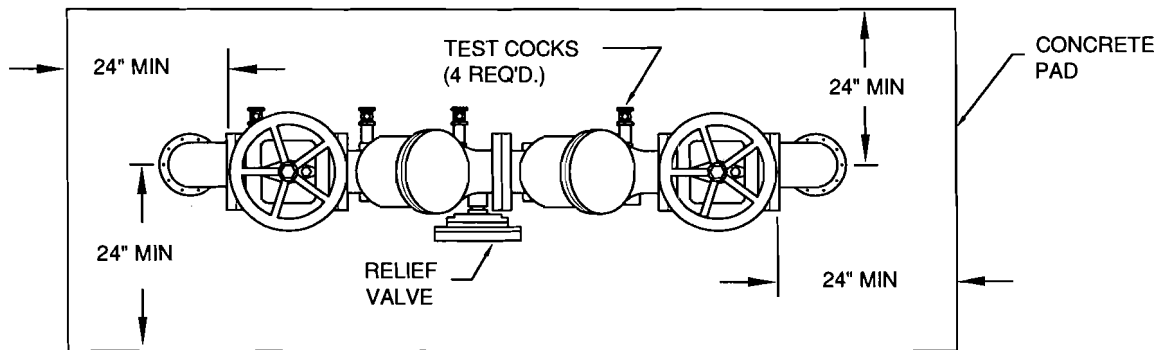
REV. 3/07/08 SCH

**DOUBLE CHECK VALVE ASSEMBLY - 2 1/2" & LARGER**

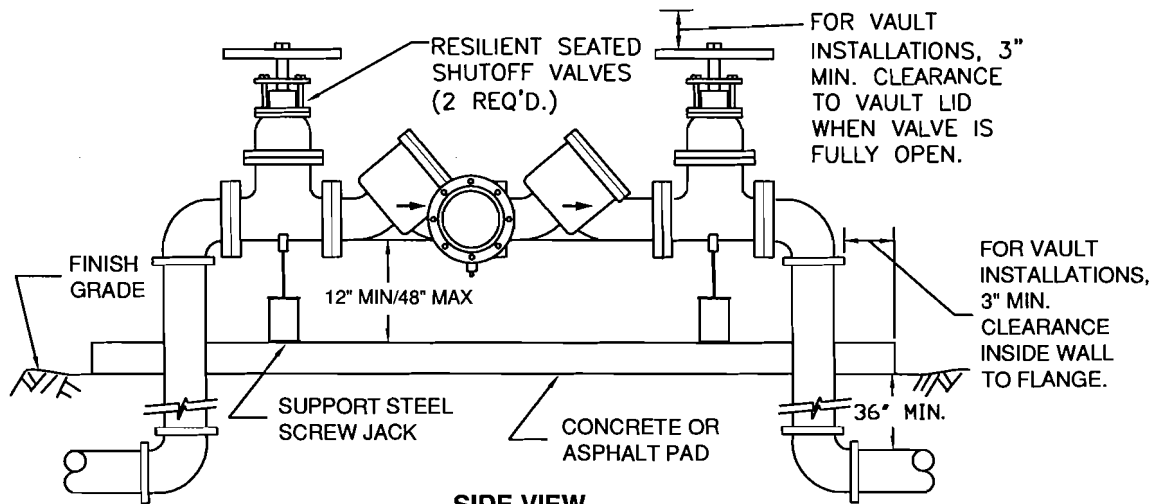
STANDARD  
DETAILS

CITY OF RIDGEFIELD

SHEET  
W - 3.3



**TOP VIEW**



**SIDE VIEW**

**NOTE:**

1. APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) TO LAY HORIZONTAL ONLY. (VERTICAL IF APPROVED BY DEPT. OF HEALTH)
2. DESIGNED FOR BACK SIPHONAGE AND BACK PRESSURE.
3. THE WATER LINE SHALL BE DISINFECTED, FLUSHED AND PRESSURE TESTED PRIOR TO INSTALLING THE RPBA. THE RPBA SHALL BE PROTECTED FROM FREEZING AND FLOODING.
4. ALL PIPE, VALVES AND FITTING JOINTS FROM SUPPLY MAIN, SHALL BE FLANGED AND RESTRAINED.
5. PIPE ENTRANCE AND EXIT PROVIDED WITH LINK SEAL, OR APPROVED EQUAL MECHANICAL SEAL.
6. ALL ENCLOSURES SHALL BE PRE-APPROVED PRIOR TO INSTALLATION.
7. RPBA SHALL BE INSTALLED AT PROPERTY LINE OR EASEMENT LINE AND ON OWNER'S PROPERTY.
8. ADEQUATE GRAVITY DRAINAGE SYSTEM REQUIRED WITH APPROVED AIR GAP.
9. MINIMUM 24" CLEARANCE ON ALL SIDES AROUND RPBA.
10. THE RPBA SHALL BE TESTED AFTER INSTALLATION AND PRIOR TO ACCEPTANCE, ALSO YEARLY THEREAFTER BY A CERTIFIED BACKFLOW ASSEMBLY TESTER. TEST RESULTS SHALL BE SENT TO THE CITY PUBLIC WORKS OFFICE.
11. A CITY APPROVED VALVE IS REQUIRED BETWEEN THE SUPPLY MAIN AND THE R.P.B.A.
12. PROVIDE HEAT AND/OR INSULATION TO PREVENT FREEZING.
13. SUPPORT PIPE AND FITTINGS TO BE SCHEDULE 80 OR AS APPROVED BY CITY ENGINEER.

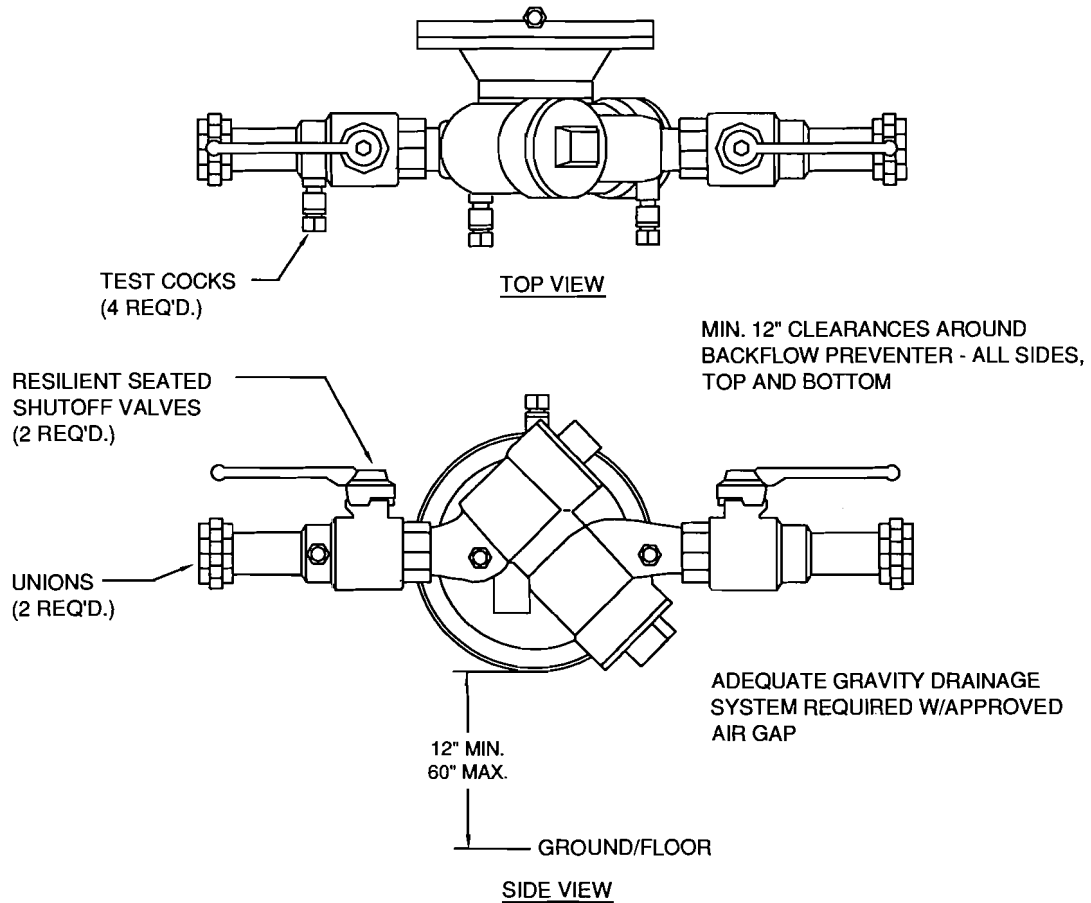
(ABOVE GROUND INSTALLATION ONLY)

**REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY  
2-1/2" & LARGER**

STANDARD  
DETAILS

CITY OF RIDGEFIELD

SHEET  
W - 3.4



**NOTES:**

1. APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) TO LAY HORIZONTAL WITH GROUND. (VERTICAL ALLOWED IF APPROVED BY WA. DEPT. OF HEALTH)
2. DESIGN RPBA FOR BACK SIPHONAGE AND BACK PRESSURE.
3. THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION OF BACKFLOW PREVENTER.
4. DO NOT INSTALL IN AN AREA SUBJECT TO FLOODING.
5. RPBA MUST BE ACCESSIBLE.
6. PROTECT RPBA FROM FREEZING.
7. A PLUMBING PERMIT IS REQUIRED-CONTACT THE APPROPRIATE JURISDICTION'S PERMITS COUNTER
8. RPBA MUST BE TESTED AFTER INSTALLATION, THEN ANNUALLY BY A WA. STATE CERTIFIED BACKFLOW TESTER. RESULTS SHALL BE SENT TO THE CITY PUBLIC WORKS OFFICE.
9. RPBA SHALL BE APPROVED BY THE STATE OF WASHINGTON. A LIST OF THE APPROVED DEVICES IS AVAILABLE FROM THE DEPARTMENT OF HEALTH.
10. A CITY APPROVED VAULT AND LID REQUIRED. PROVIDE HEAT AND/OR INSULATION TO PREVENT FREEZING,
11. SUPPORT PIPES AND FITTINGS TO BE SCHEDULE 80 PVC OR, AS APPROVED BY THE CITY ENGINEER.

(ABOVE GROUND INSTALLATION ONLY)

REV. 4/15/08 SCH

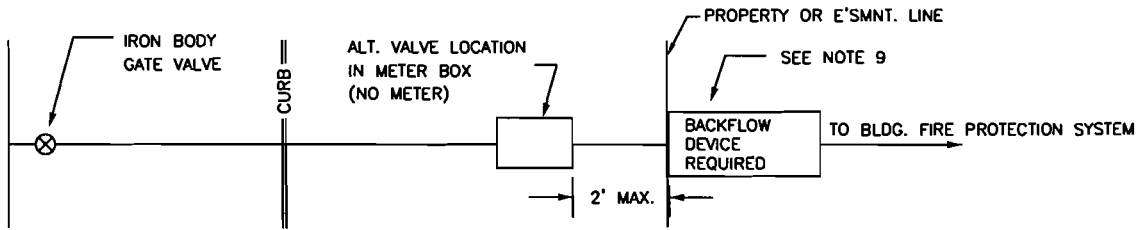
REDUCE PRESSURE PRINCIPLE BACKFLOW ASSEMBLY - 2" & SMALLER

STANDARD  
DETAILS

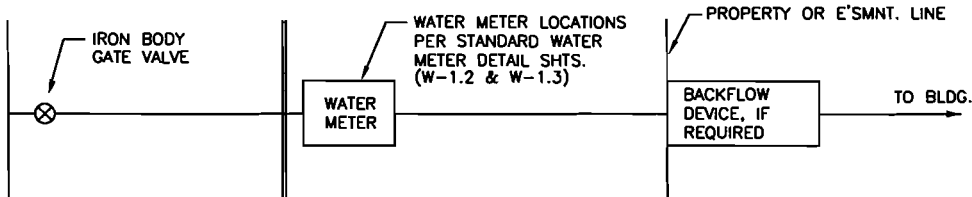
CITY OF RIDGEFIELD

SHEET  
W - 3.5

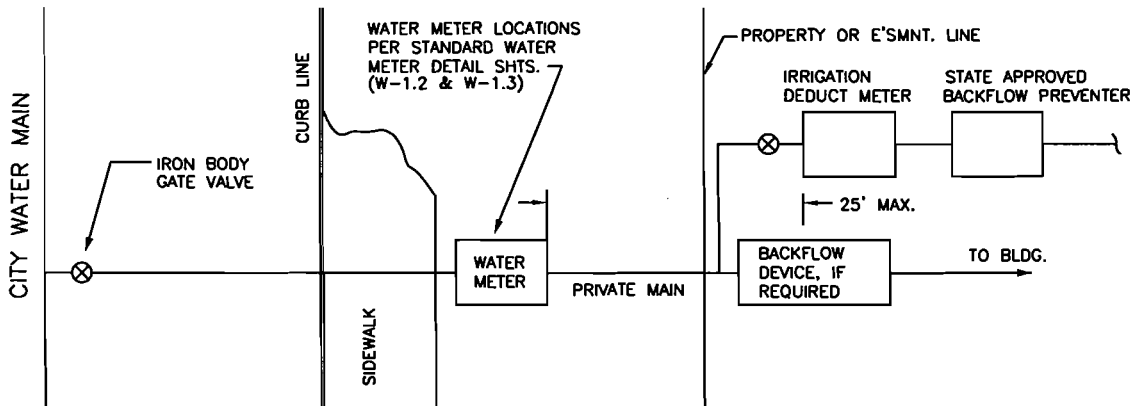
### STANDARD FIRE CONNECTION



### STANDARD CONNECTION WITHOUT IRRIGATION



### STANDARD CONNECTION WITH IRRIGATION



#### NOTES:

1. ALL FIRE PROTECTION SERVICES SHALL HAVE AN IRON BODY GATE VALVE WITH A 2" SQ. OPERATING NUT AS DESCRIBED ON SHEET 2 OF THE STANDARD WATER LINE DETAILS. WATER METERS NOT NEEDED ON FIRE PROTECTION SERVICES.
2. FOR FIRE PROTECTION SERVICES 2" AND SMALLER, WHEEL VALVES MAY BE INSTALLED WITHIN 2' OF THE UPSTREAM SIDE OF THE BACKFLOW VAULT IN LIEU OF THE GATE VALVE.
3. ALL DEDUCT METERS SHALL BE PER APPROVED PLAN.
4. ALL DEDUCT METERS MUST HAVE ODOMETER STYLE, SEALED REGISTERS, AND READ IN CUBIC FEET.
5. DEDUCT METERS SHALL MEET THE APPROPRIATE STANDARD OF THE C700 SERIES, AMERICAN WATER WORKS ASSOCIATION. ON THE NUMERAL WHEELS, THE TWO NUMBERS ON THE RIGHT-HAND SIDE SHALL BE BLACK NUMBERS ON A WHITE BACKGROUND; THE LEFT-SIDE NUMBERS SHALL BE WHITE NUMBERS ON A BLACK BACKGROUND.
6. DEDUCT METERS SHALL BE PLACED IN A STANDARD METER BOX WITH READER LID ACCORDING TO METER SIZE.
7. IRRIGATION DEDUCT METERS WILL BE READ DURING THE BILLING CYCLES FROM APRIL THROUGH OCTOBER.
8. DEDUCT METERS ARE PRIVATELY OWNED AND MAINTAINED INCLUDING ANY BATTERY REPLACEMENTS.
9. SEPARATE FIRE LINE SYSTEM WILL REQUIRE A LEAK DETECTION METER.

REV. 4/16/08 SCH

## FIRE PROTECTION SERVICE, BACKFLOW PREVENTION & IRRIGATION DEDUCT METER LOCATIONS

STANDARD  
DETAILS

CITY OF RIDGEFIELD

SHEET  
W - 3.6