

FIRE HYDRANTS SHALL BE FOR ORDINARY WATER WORKS SERVICES AS DESCRIBED IN AWWA C-502-54.

- A. EACH HYDRANT SHALL HAVE 5" MVO WITH "O" RING SEALS, A BREAKAWAY FLANGE, A 1 1/4" OPERATING NUT AND NOZZLE CAP NUTS THAT OPEN COUNTER CLOCKWISE. GASKETS AND NOZZLE CAP SHALL BE INCLUDED.
- B. SHUT-OFF TYPE: COMPRESSION OR GATE.

ENGINEER.

- C. INLET CONNECTION: 6" MECHANICAL JOINT (125#) INLET.
- D. CONNECTION PORTS:

 TWO (2)-2 1/2" I.D. HOSE NOZZLE PORTS WITH N.S.T. THREADS.

 ONE (1)-4" I.D. PUMPER OR STEAMER NOZZLE WITH P.C.T. THREADS AT SIX (6)

 THREADS PER INCH WITH AN O.D. OF 4.828" AND A THREAD BEVEL OF 60. THIS SHALL ALSO HAVE A STORTZ FITTING AS INDICATED ON THE DETAIL.

 STORTZ FITTING-4" STORTZ TYPE ADAPTER WITH CAP AND CHAIN AND PYROLITE RIGID FEMALE CONNECTOR WITH SET SCREW. THE THREAD CUT ON THE FITTING SHALL MATCH EXISTING STANDARDS.

 THE STORTS FITTING SHALL NOT EXTEND PAST THE BACK OF THE SIDEWALK AND SHALL BE ORIENTED TO FACE THE WATER MAIN, OR AS DIRECTED BY THE CITY
- E. DEPTH OF BURY SHALL BE 4 1/2" OR 5 1/2" DEPENDING ON THE CONDITIONS.
- F. ALL NOZZLES SHALL CONFORM TO CURRENT CITY OF WENATCHEE HYDRANTS.
- G. HYDRANT SHALL BE PAINTED YELLOW IN ACCORDANCE WITH AWWA C-502-54, SECTION 6.
- H. APPROVED MANUFACTURERS: MUELLER, M & H, CLOW F2500, OR KENNEDY GUARDIAN K-81. ONLY THESE BRANDS WILL BE ACCEPTED.
- I. ALL HYDRANTS SHALL BE EQUIPPED WITH TRAFFIC BREAKING FLANGES.
- J. ALL INSTALLATIONS WILL HAVE A RESILIENT SEAT AUXILIARY VALVE.
- K. ALL HYDRANTS SHALL HAVE MEGALUG RESTRAINED JOINTS.
- L. THE MINIMUM DISTANCE FROM THE BOTTOM OF THE LOWEST PORT TO FINISHED GRADE SHALL BE 18". THE DISTANCE FROM FINISHED GRADE TO THE BREAKING FLANGE SHALL BE A MINIMUM OF 2" AND A MAXIMUM OF 4".
- M. HYDRANT GUARD POST SHALL BE 8" DIAMETER x 6' LONG PRECAST CONCRETE POST EQUAL TO FOG-TITE METER SEAL CO,. PAINT WITH TWO COATS OSHA SAFETY YELLOW ENAMEL.

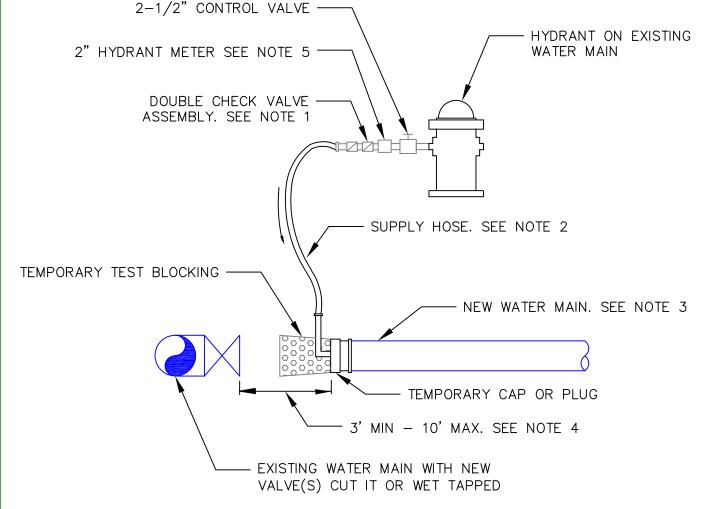
STANDARD DETAIL FIRE HYDRANT SPECIFICATIONS AND DETAIL

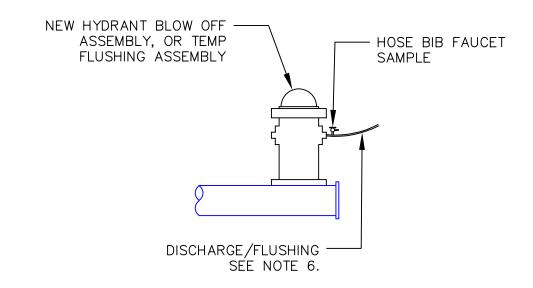


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NOTES:

- 1. AN APPROVED BACK FLOW ASSEMBLY SHALL BE INSTALLED BETWEEN THE NEW AND EXISTING WATERLINES DURING DISINFECTION AND FLUSHING OF NEW WATER MAIN.
- 2. THE BACK FLOW PREVENTION ASSEMBLY AND SUPPLY HOSE MUST BE DISCONNECTED DURING HYDROSTATIC PRESSURE TESTING OF THE NEW MAIN.
- 3. THE NEW WATER MAIN SHALL BE CONNECTED TO THE EXISTING SYSTEM ONLY AFTER THE NEW MAIN IS FLUSHED, DISINFECTED AND SATISFACTORY BACTERIOLOGICAL SAMPLE RESULTS ARE OBTAINED.
- 4. THE INTERIORS OF ALL PIPES AND FITTINGS TO BE USED IN FINAL CONNECTION MUST BE SWABBED OR SPRAYED WITH A 1% AVAILABLE CHLORINE SOLUTION.
- 5. 2" HYDRANT METER SHALL BE OBTAINED FROM THE CITY OF WENATCHEE PUBLIC WORKS DEPARTMENT OR CHELAN COUNTY PUD HYDRANT VALVE MAY BE USED UNDER SOME CIRCUMSTANCES.
- 6. DECHLORINATOR REQUIRED, CONTRACTOR MAY FLUSH TO SEWER OR STORM AFTER USING DECHLORINATOR. NOTIFY WENATCHEE WASTE WATER TREATMENT PLANT PRIOR TO FLUSH. CONTRACTOR MAY ALSO FLUSH TO WATER TRUCK AND DISPERSE APPROPRIATELY. PROVIDE AIR GAP AT DISCHARGE.

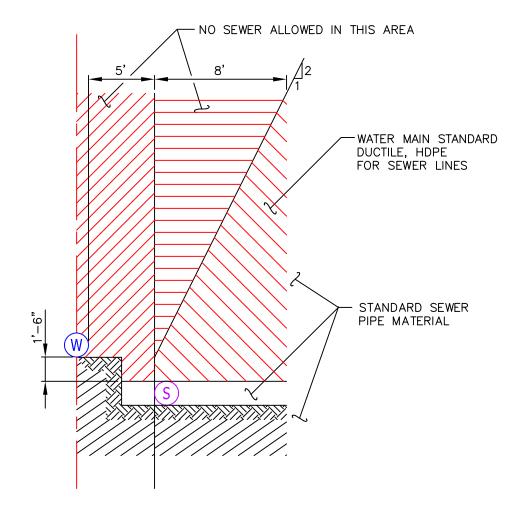
STANDARD DETAIL FILLING NEW WATER MAINS



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REVISIONS	DATE							
DATE DRAWN	11/04/2020	CHECKED		DATE APPROVED		ATIONS		
SHOWN		DRAWN	CAW	3.4		STANDARD SPECIFICATIONS		
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DETAIL NO.
W-110

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PARALLEL CONSTRUCTION

TABLE 1 WATER MAIN STANDARD PIPE MATERIAL

AWWA STANDARD								
TYPE OF PIPE	PIPE	JOINT	FITTINGS					
DUCTILE IRON	C 1.52	C 111	C 110					
CONCRETE CYLINDER	C 303							

NOTE:

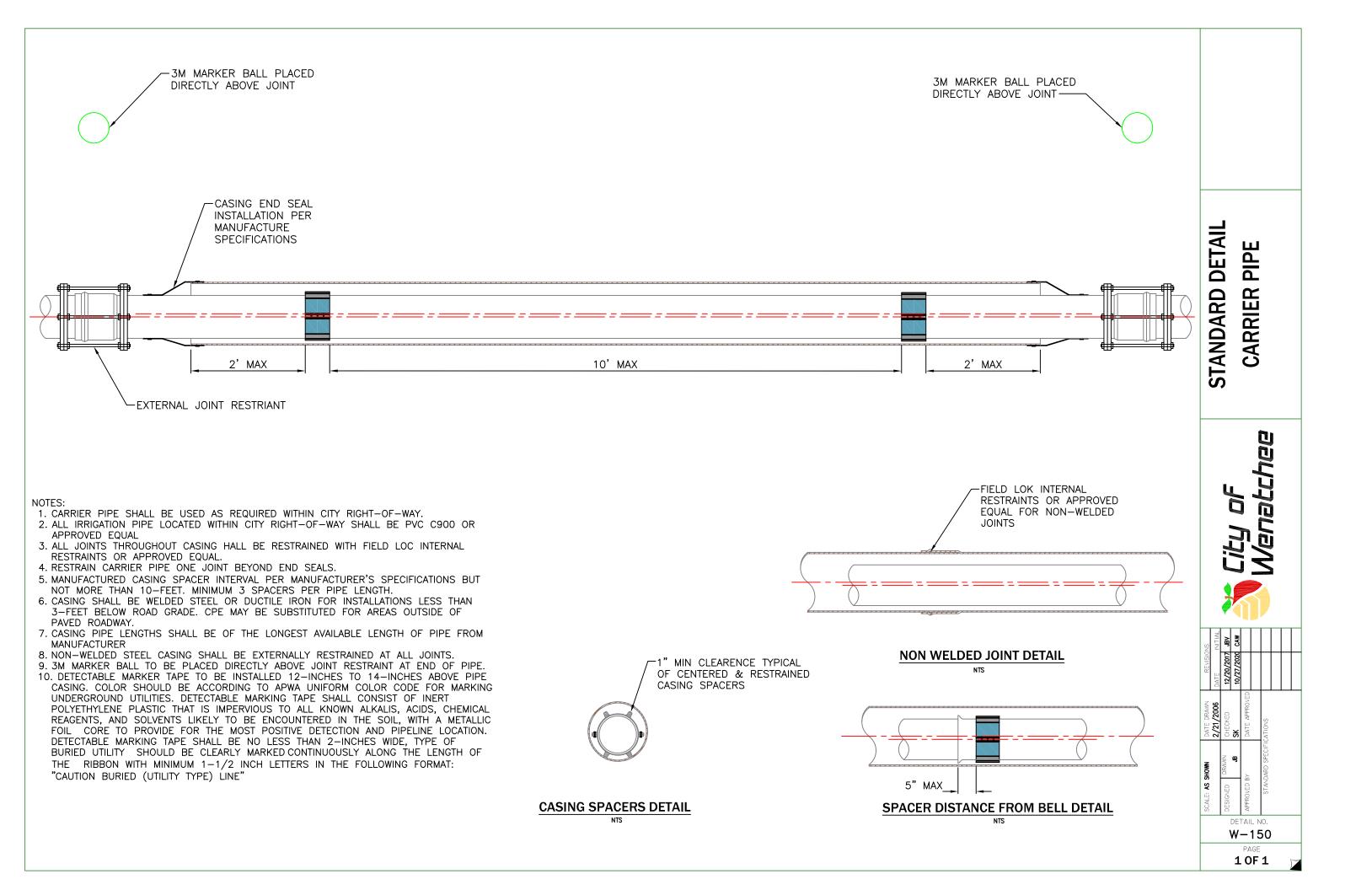
1. TO BE USED WHEN 10' MINIMUM SEPARATION CANNOT BE OBTAINED.

STANDARD DETAIL WATER AND SEWER SPACING & CLEARANCE

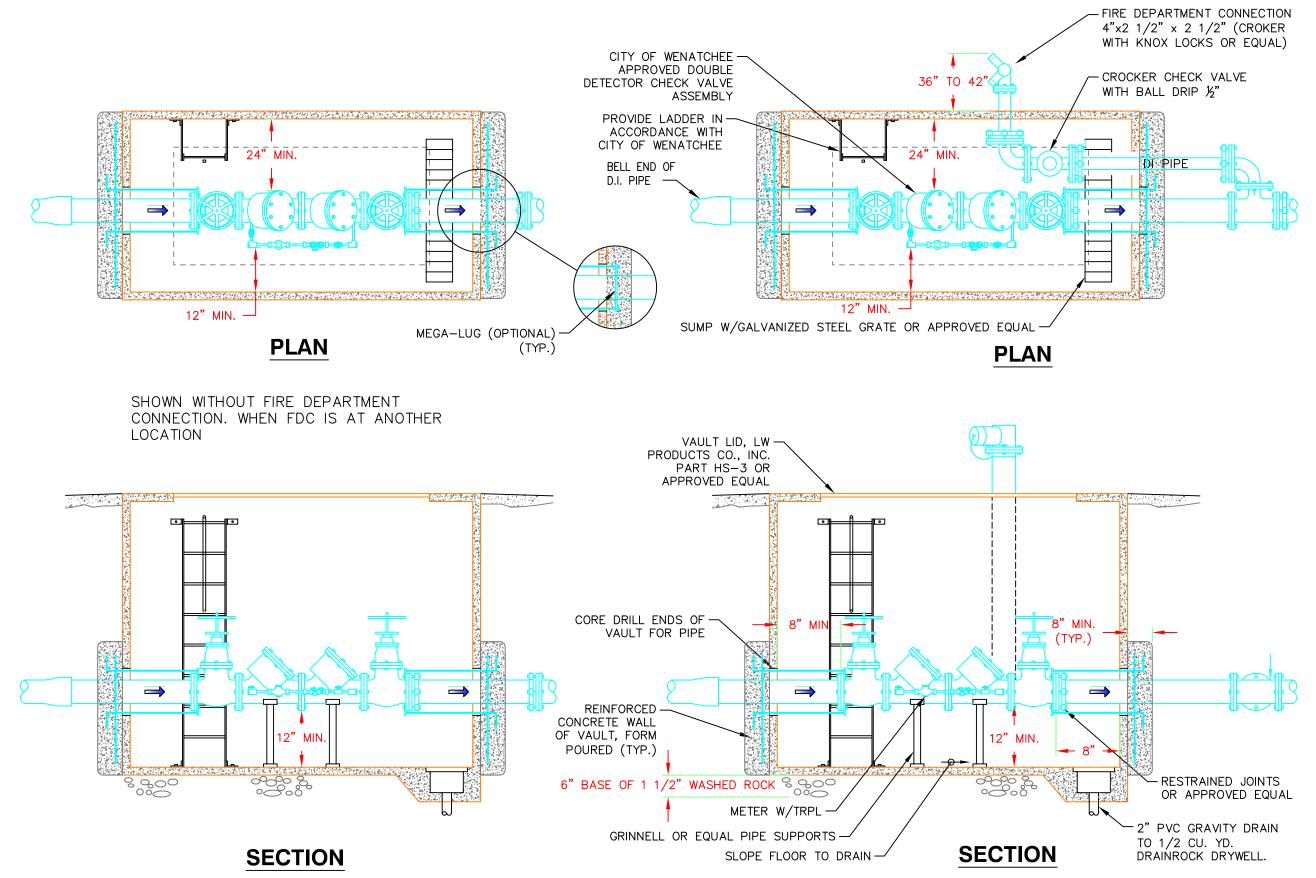


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- 1. COVER SHALL NOT EXTEND MORE THAN 2" ABOVE GRADE WHEN VAULT IS NOT IN TRAFFIC AREA.
- 2. SLOPE PAVEMENT AWAY FROM COVER.
- 3. VAULT LID SHALL BE OF ADEQUATE HEIGHT TO PROVIDE MIN. 6" CLEARANCE TO O, S & Y VALVE WHEN VALVE IS FULLY OPEN.
- 4. 5/8" BY-PASS METER SHALL BE SENSUS SR II OR NEPTUNE T-10.
- 5. VAULTS SHALL BE AS MANUFACTURED BY UTILITY VAULT OR APPROVED EQUAL AND SHALL BE STRUCTURALLY DESIGNED FOR THE PROPOSED INSTALLATION.
- 6. BACK-FLOW VALVE AND ASSEMBLY MUST APPEAR ON CURRENT DEPT. OF HEALTH'S APPROVED VALVE LISTING.
- 7. ASSEMBLY SHALL BE MAINTAINED BY OWNER WITH A TEST DONE UPON INSTALLATION AND ANNUALLY THEREAFTER BY A CERTIFIED BACK-FLOW ASSEMBLY TESTER (BAT.) A COPY OF EACH ANNUAL TEST REPORT MUST BE SENT TO THE CITY OF WENATCHEE.
- 8. WATER MAIN SHALL NOT BE PLACED IN SERVICE UNTIL AFTER DOUBLE CHECK DETECTOR ASSEMBLY IS INSPECTED. TESTED AND APPROVED BY CITY REPRESENTATIVE.
- 9. RESTRAIN CHECK DETECTOR WITH MEGA-LUGS. RESTRAINED JOINT PIPE, OR SHACKLE RODS BACK TO WATER MAIN AS REQUIRED.



STANDARD DETAIL
DOUBLE CHECK
DETECTOR ASSEMBLY

ACTION OF THE MAINS

TO ACTION

6-02 7-09 7-12 7-15

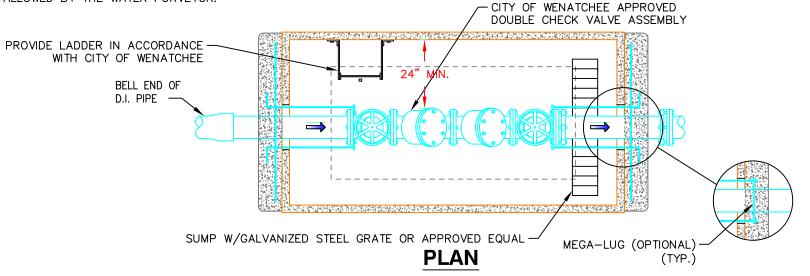
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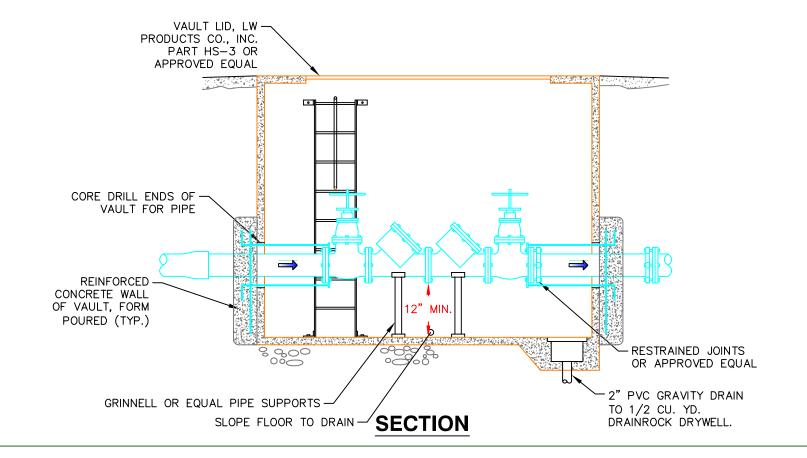
1 OF 2



NOTES FOR PREMISES ISOLATION WITH DOUBLE CHECK VALVE ASSEMBLY (DCVA)

- 1. TYPICAL LOCATION IS AT OR NEAR THE PROPERTY LINE, AT BACK OF WATER METER CHAMBER.
- 2. COVER SHALL NOT EXTEND MORE THAN 2" ABOVE GRADE WHEN VAULT IS NOT IN TRAFFIC AREA.
- 3. SLOPE PAVEMENT AWAY FROM COVER.
- 4. VAULT LID SHALL BE OF ADEQUATE HEIGHT TO PROVIDE MIN. 6" CLEARANCE TO O, S & Y VALVE WHEN VALVE IS FULLY OPEN.
- 5. VAULTS SHALL BE AS MANUFACTURED BY UTILITY VAULT OR APPROVED EQUAL AND SHALL BE STRUCTURALLY DESIGNED FOR THE PROPOSED INSTALLATION.
- 6. BACK-FLOW VALVE AND ASSEMBLY MUST APPEAR ON CURRENT DEPT. OF HEALTH'S APPROVED VALVE LISTING.
- 7. RESTRAIN CHECK DETECTOR WITH MEGA-LUGS. RESTRAINED JOINT PIPE, OR SHACKLE RODS BACK TO WATER MAIN AS REQUIRED.
- 8. BOTTOMLESS VAULTS MUST PROVIDE CONCRETE SUPPORT FOUNDATIONS FOR PIPE SUPPORTS.
- 9. ASSEMBLY SHALL BE MAINTAINED BY OWNER WITH A TEST DONE UPON INSTALLATION AND ANNUALLY THEREAFTER BY A CERTIFIED BACK-FLOW ASSEMBLY TESTER (BAT.) A COPY OF EACH ANNUAL TEST REPORT MUST BE SENT TO THE CITY OF WENATCHEE.
- 10. WATER SERVICE SHALL NOT BE PLACED IN SERVICE UNTIL AFTER DOUBLE CHECK DETECTOR ASSEMBLY IS INSPECTED. TESTED AND APPROVED BY CITY REPRESENTATIVE.
- 11. ACCOUNT FOR THERMAL EXPANSION WITHIN THE PREMISES.
- 12. AN ALTERNATE LOCATION MAY BE ALLOWED BY THE WATER PURVEYOR.





STANDARD DETAIL DOUBLE CHECK VALVE PREMISES ISOLATION



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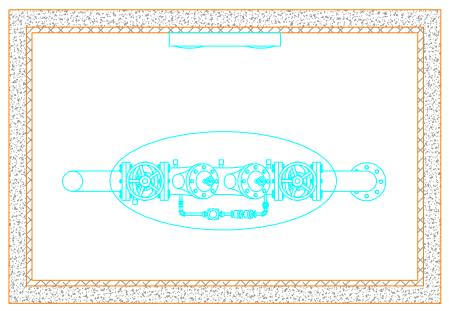
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DETAIL NO. W-230

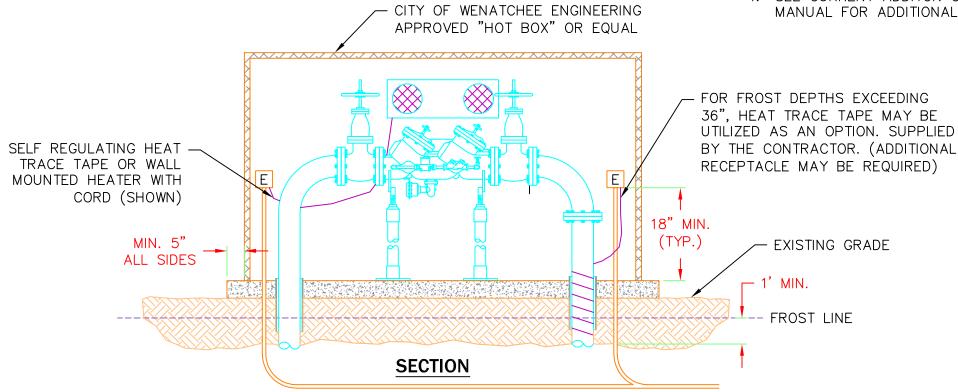
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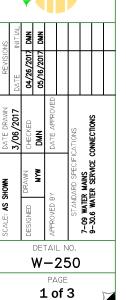
- 1. ASSEMBLY SHALL BE MAINTAINED BY OWNER, TESTING IS REQUIRED BY A CERTIFIED BACKFLOW ASSEMBLY TESTER (BAT) AFTER INSTALLATION, THEN ANNUALLY THEREAFTER. A COPY OF TEST REPORT SHALL BE SENT TO THE CITY OF WENATCHEE.
- 2. WATER MAIN SHALL NOT BE PLACED IN SERVICE UNTIL AFTER REDUCED PRESUURE BACKFLOW ASSEMBLY IS INSPECTED AND APPROVED BY THE CITY OF WENATCHEE.
- 3. RESTRAIN ASSEMBLY WITH, MEGA-LUGS, RESTRAINED JOINT PIPE OR SHACKLE RODS BACK TO WATER MAIN AS REQUIRED
- 4. SEE CURRENT ADDITION OF AWWA CROSS CONNECTION CONTROL MANUAL FOR ADDITIONAL DETAILS.



PLAN



REDUCED PRESSURE BACKFLOW ASSEMBLIES RPBA's & RDDA's

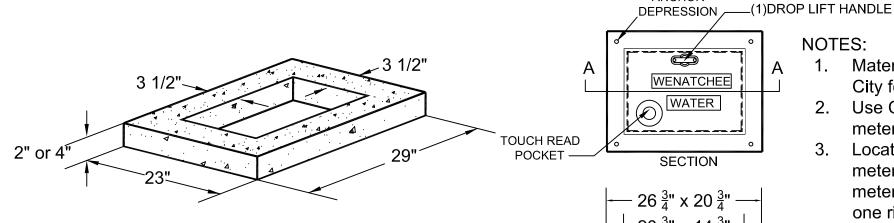


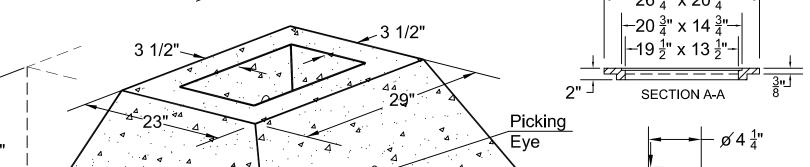


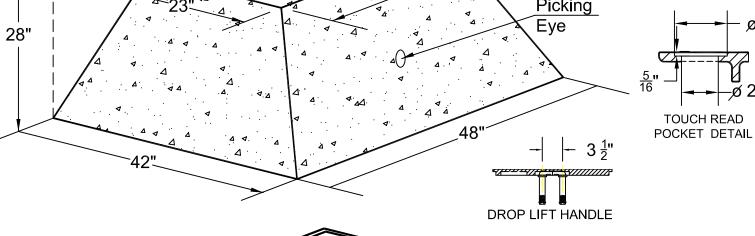
ANCHOR

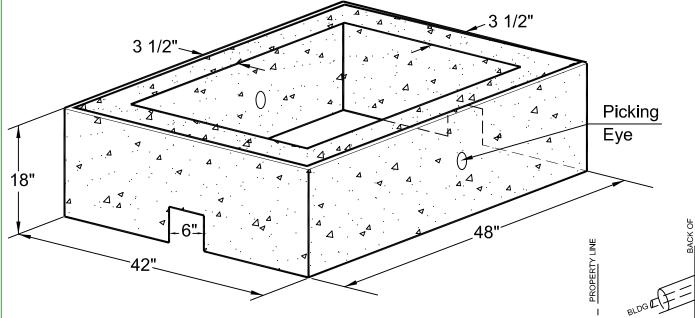
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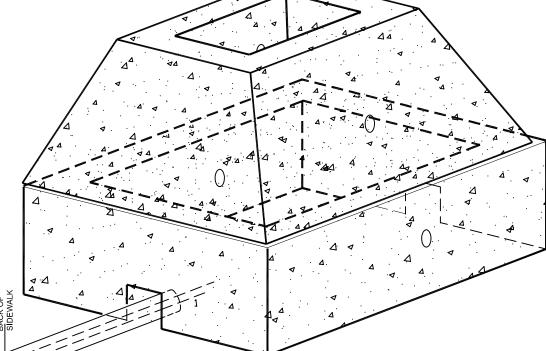
- Materials shall be submitted to the City for approval prior to installation.
- 2. Use City sidewalk detail for sidewalk surfacing over water meter chambers.
- Locate water meter chamber under sidewalk, set water meter chamber lid flush with final sidewalk grade. Water meter chamber shall be set at a depth to include at least one riser and a maximum depth of 4-inch riser.
- Water chamber cast iron frame shall have a depression for pre-approved 'Fastenal $\frac{1}{4}$ in x 2 $\frac{1}{2}$ in drive anchors part number 50608' or as approved by the City Engineer.
- Service to property shall be in a casing. The casing shall be a minimum diameter of 2 inch PVC pipe, or 50% greater than the service pipe whichever is larger. The casing pipe shall be grouted flush with inside edge of chamber and extended to within 1-ft of the property line or Utility easement line

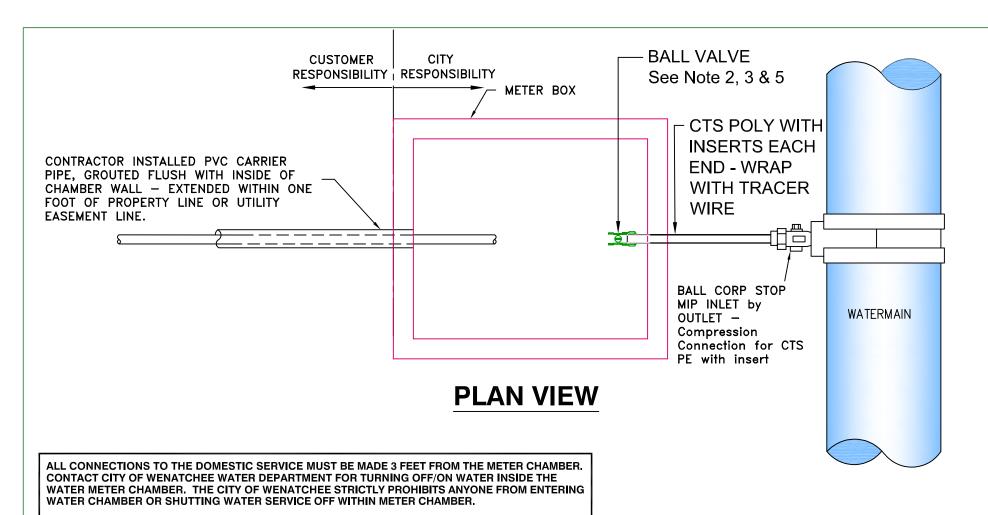












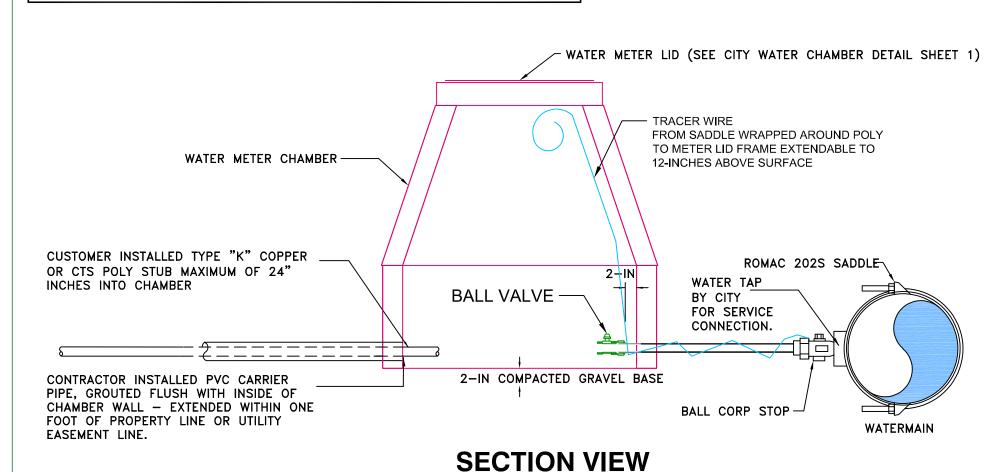
NOTES:

- 1. Materials shall be submitted for City approval prior to installation.
- 2. Material shall be non-lead, suppliers are typically: Ford, Meuller, and AY McDonald.
- 3. Match ball valve size to CTS Poly, minimum pipe diameter is 1 ½—inch for all single services from water main.
- 4. Downstream water service pipe diameter shall be the same as the water meter for ten (10) feet.
- 5. Ball valve's compression coupling to the CTS PE water service pipe shall have insert and be a maximum of 2—inches from inside of chamber wall.
- 6. ALL TAPS SHALL BE BY CITY CREWS.

STANDARD DETAIL 11/2" OR 2" SINGLE METER SERVICE



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REVISIONS	DATE	04/26/2017 DMN							
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DETAIL NO. W-251									
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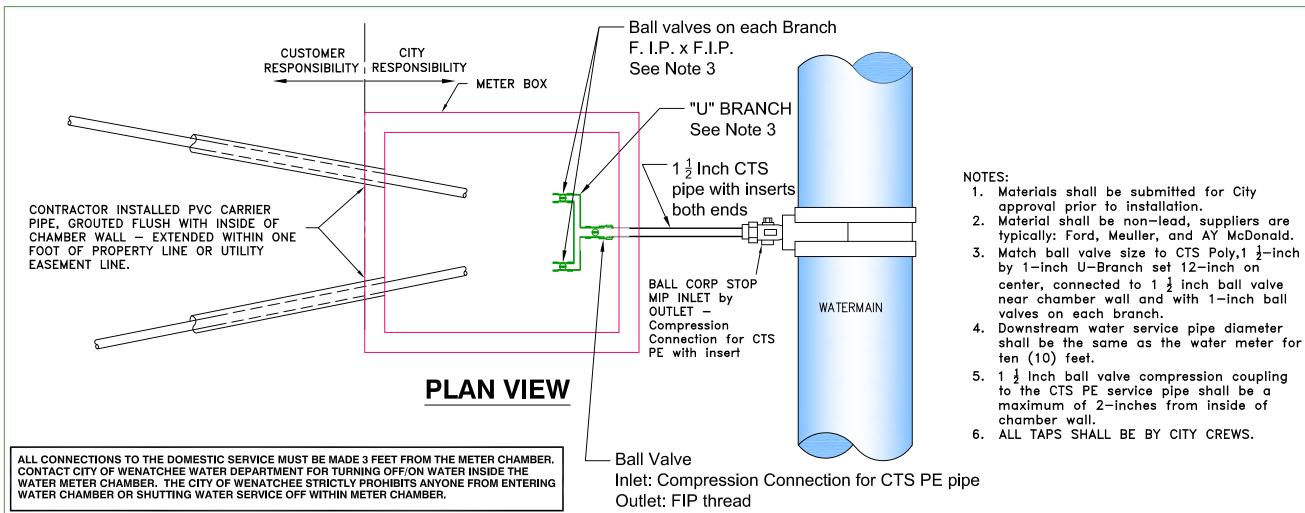
DOUBLE METER SERVICE



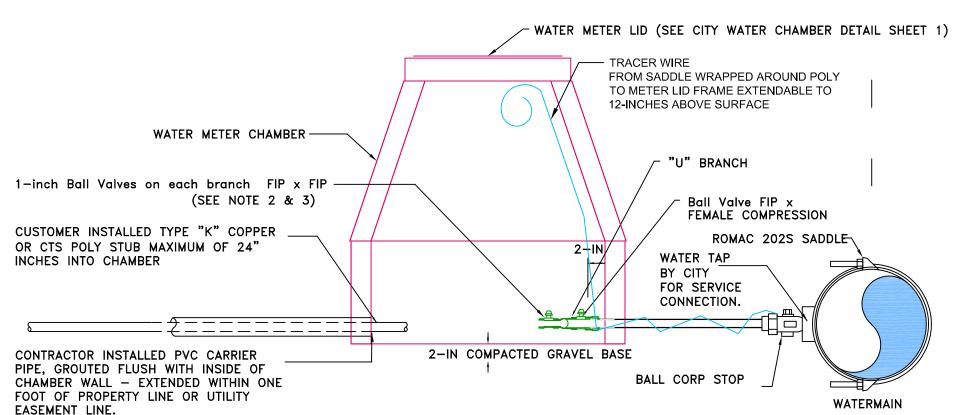




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(2-inches MAX from Chamber wall)

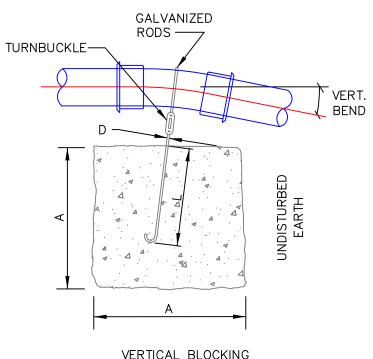


SECTION VIEW

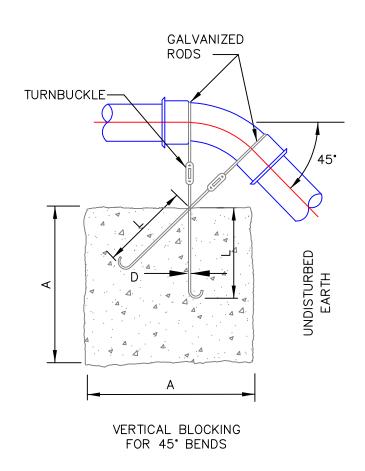
VERTICAL BLOCKING									
FOR	11 1/4°-	-22 1,	/2°-3	o, BEI	NDS				
PIPE SIZE	VВ	CU FT	А	D	L				
4"	11 1/4°	8	2.0'	5/8"	1.5'				
	22 1/2°	11	2.2'		2.0'				
	30°	17	2.6						
6"	11 1/4°	11	2.2'	5/8"	2.0'				
	22 1/2°	25	2.9'						
	30°	41	3.5'						
8"	11 1/4°	16	2.5'	5/8"	2.0'				
	22 1/2°	47	3.6'						
	30°	70	4.1'	3/4"	2.5'				
12"	11 1/4°	32	3.2'	3/4"	2.0'				
	22 1/2°	88	4.5'	7/8"	3.0'				
	30°	132	5.1'						
16"	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"	11 1/4°	91	4.5'	7/8"	3.0'				
	22 1/2°	225		1 1/4"	4.0'				
	30°	330	6.9	1 3/8"	4.5'				
24"	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 5/8"	5.5'				
VERTIC	CAL BLOC	CKING	FOR		NDS				
4"	45°	30	3.1'	5/8"	2.0'				
6"		68	4.1'						
8"		123	5.0'						
12"		232	6.1'	3/4"	2.5 [']				
16"		478	7.8	1 1/8"	4.0'				
20" 24"		560	8.2'	1 1/4"					
24"		820	9.4'	1 3/8"	4.5				

NOTES:

1. CONCRETE BLOCKING BASED ON 200 PSI PRESSURE AND 3000 PSI CONCRETE.

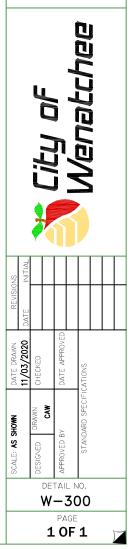


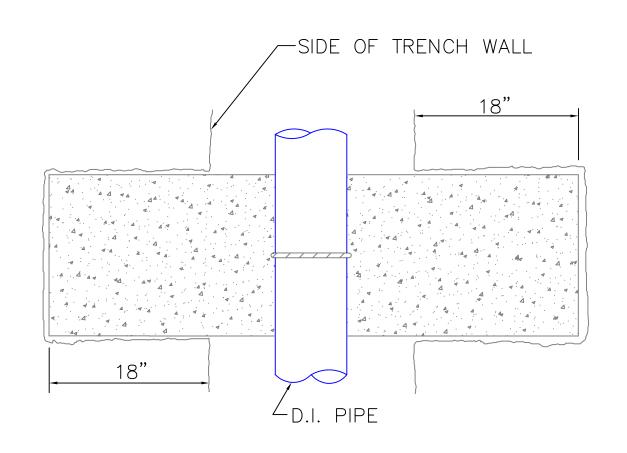
VERTICAL BLOCKING FOR 11 1/4°, 22 1/2°, & 30° BENDS

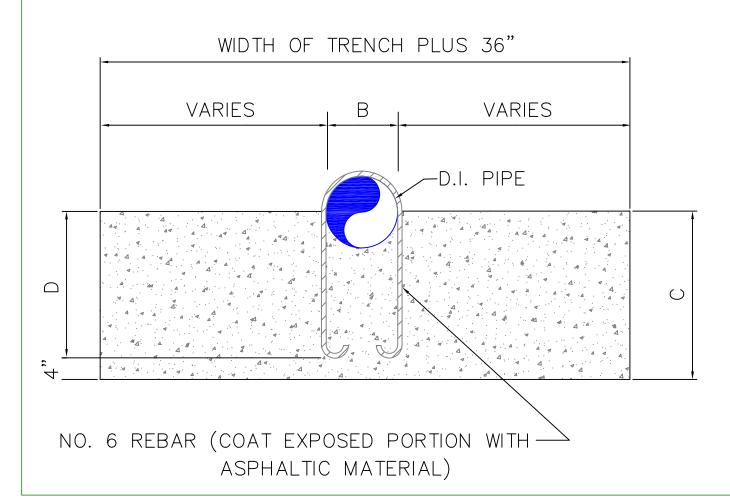


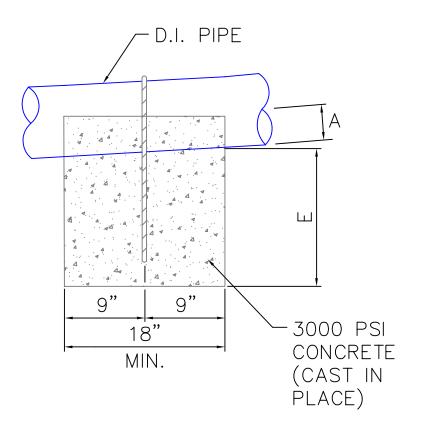
STANDARD DETAIL VERTICAL THRUST

BLOCK





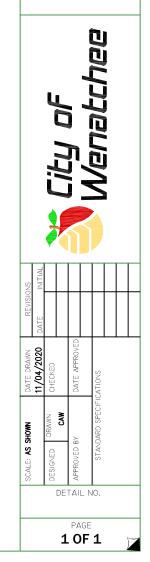




PIPE SIZE	DIMENSIONS (INCHES)							
	А	В	С	D	Ε			
4"	2.4	4.8	17	13	14.6			
6"	3.5	6.9	18	14	14.5			
8"	4.5	9.1	19	15	14.5			
10"	5.6	11.1	20	16	14.4			
12"	6.6	13.2	21	17	14.4			
14"	7.7	15.3	22	18	14.3			
16"	8.7	17.4	23	19	14.3			
18"	9.8	19.5	24	20	14.2			

SLOPES > 20% - PROVIDE CONCRETE SLOPE ANCHORS (20' TO 25' ON CNTR.)

STANDARD DETAIL CONCRETE SLOPE ANCHOR



COMBINATION AIR VALVE

N.T.S.

STANDARD DETAIL COMBINATION AIR VALVE



	NS	INITIAL	CAW						
	REVISIONS	DATE	12/21/2020 CAW						
	DATE DRAWN	08/03/2006	CHECKED	SK	DATE APPROVED		SATIONS		
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