WATER NOTES

1. SEE THE FOLLOWING DETAILS FOR WATER LINE CRITERIA: "CALIFORNIA REGULATIONS RELATED TO DRINKING WATER", TITLE 22, SECTION 64570

2. CRITERIA FOR THE SEPARATION OF WATER MAINS AND GRAVITY SANITARY SEWERS ARE PER THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH SERVICES STANDARDS.

3. THE "CALIFORNIA WATERWORKS STANDARDS" IS AVAILABLE ONLINE AT: WWW.WATERBOARDS.CA.GOV

APPROVED  3/8/23

DRAFT DATE

CITY OF PITTSBURG

NO.	DATE	REVISION
1	2019-01-11	NOTE 3

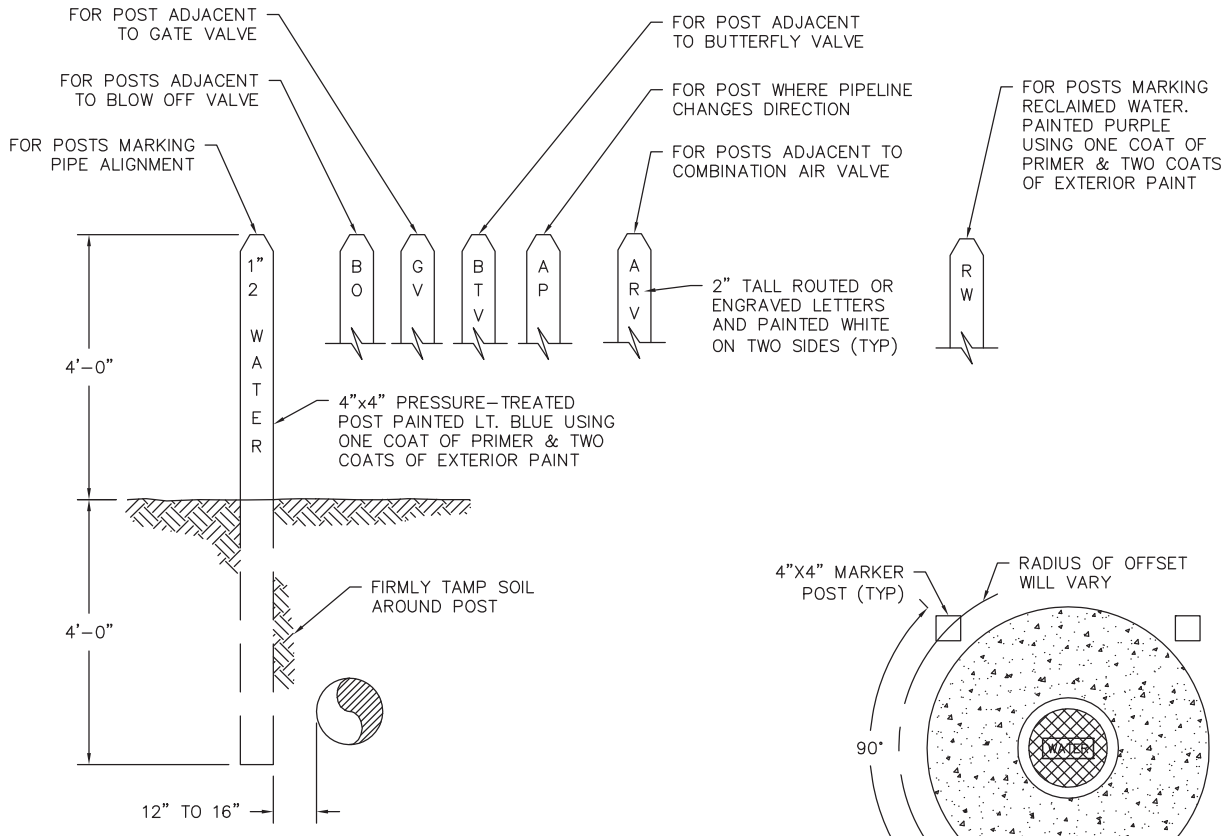
DRAWN BY:
CHECKED BY: MK
DATE: 2019-01-11
SCALE: NONE

STANDARD DETAIL

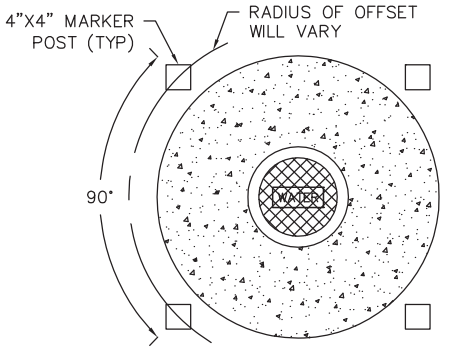
WATER NOTES

SHEET 1 OF 1

W-1



SECTION VIEW
SCALE: NTS



MARKER PLACEMENT
SCALE: NTS

NOTES

1. WHERE THE NEW PIPELINE IS LOCATED OUTSIDE OF AN EXISTING STREET:

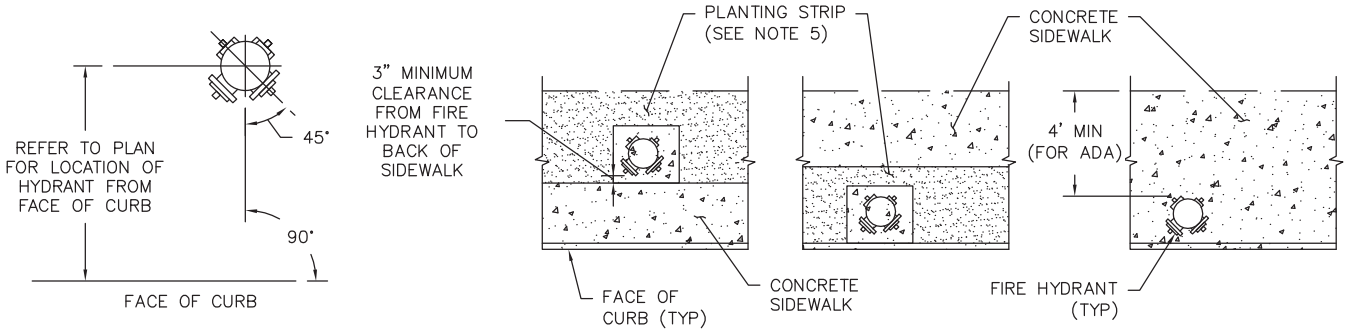
   A. FOUR MARKER POSTS SHALL BE INSTALLED AT EACH APPURTENANCE (I.E. VALVE, BLOW OFF, ARV, ETC.). THE MARKER POSTS SHALL BE UNIFORMLY SPACED ON THE ARC OF A CIRCLE ABOUT THE APPURTENANCE.

   B. A SINGLE MARKER POST SHALL BE INSTALLED AT 500' INTERVALS OR AT EACH POINT WHERE THERE IS A CHANGE IN HORIZONTAL DIRECTION.

APPROVED _____ 3/8/23
DATE

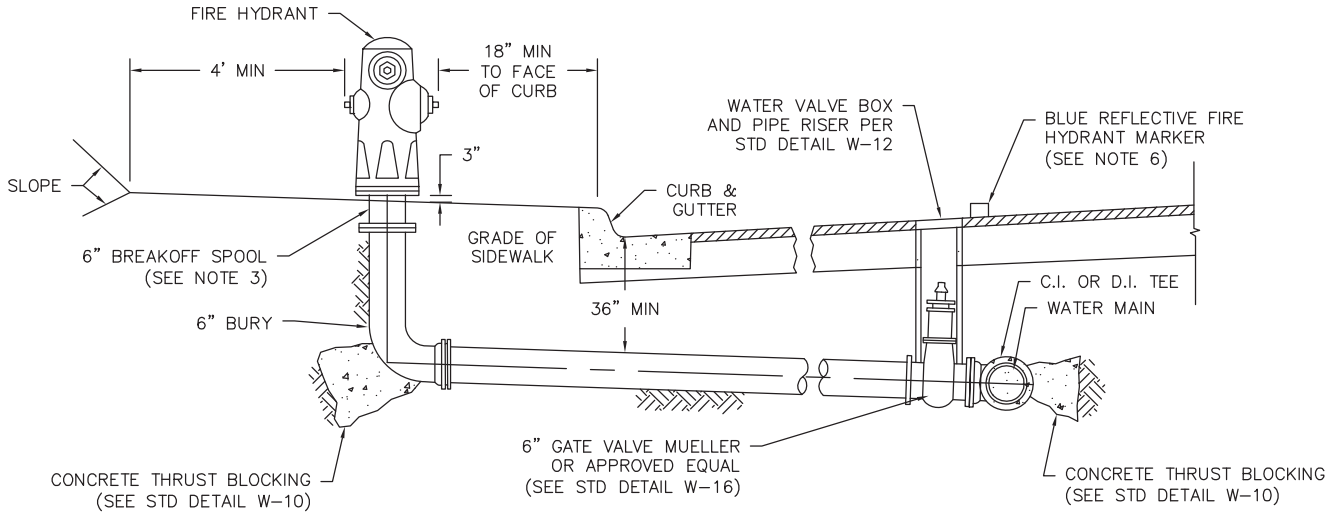
DRAFT

CITY OF PITTSBURG	NO.	DATE	REVISION	DRAWN BY: BJR CHECKED BY: MK DATE: 2019-01-11 SCALE: NTS	STANDARD DETAIL MARKER POSTS	SHEET 1 OF 1 W-2



TYPICAL PLANS

SCALE: NTS



SECTION VIEW

SCALE: NTS

NOTES

1. ALL HOSE OUTLET CAPS SHALL BE ATTACHED TO HYDRANT BY CHAIN.
2. HYDRANT SHALL BE IN ACCORDANCE WITH AWWA STANDARDS, TESTED AND APPROVED BY UNDERWRITERS LABORATORIES, OR EQUIVALENT.
3. FIRE HYDRANT AND EXPOSED BREAKOFF SPOOL SHALL BE PAINTED WITH DUPONT 30-10 WHITE ENAMEL PRIMER, FOLLOWED WITH A FINISH COAT OF NO. 612-00 WHITE FULLER O'BRIEN HEAVY DUTY, HIGH GLOSS PAINT.
4. ALL FIRE HYDRANTS TO BE SAME MAKE THROUGHOUT SUBDIVISION.
5. HYDRANTS SHALL BE CENTERED ON 2' SQUARE, 4" THICK CONCRETE PAD WHEN PLACED IN LANDSCAPE OR PLANTING STRIP.
6. BLUE REFLECTIVE FIRE HYDRANT MARKER SHALL BE LOCATED PER CA MUTCD (LATEST EDITION) FIGURE 3B-102 (CA).

HOSE OUTLETS: (1) 2-½" NOZZLE (1) 4-½" NOZZLE	
MAKE	MODEL
CLOW	950
OR APPROVED EQUAL	

APPROVED _____ 3/8/23

DATE

DRAFT

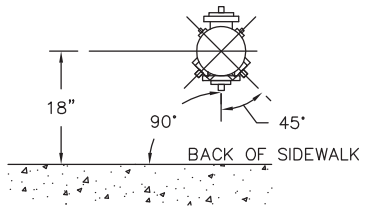
CITY OF PITTSBURG

NO.	DATE	REVISION
1	2019-01-11	NOTES 5&6

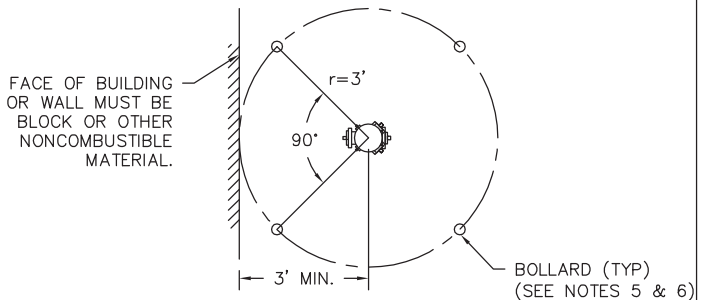
DRAWN BY: BJR
CHECKED BY: MK
DATE: 2019-01-11
SCALE: NTS

STANDARD DETAIL

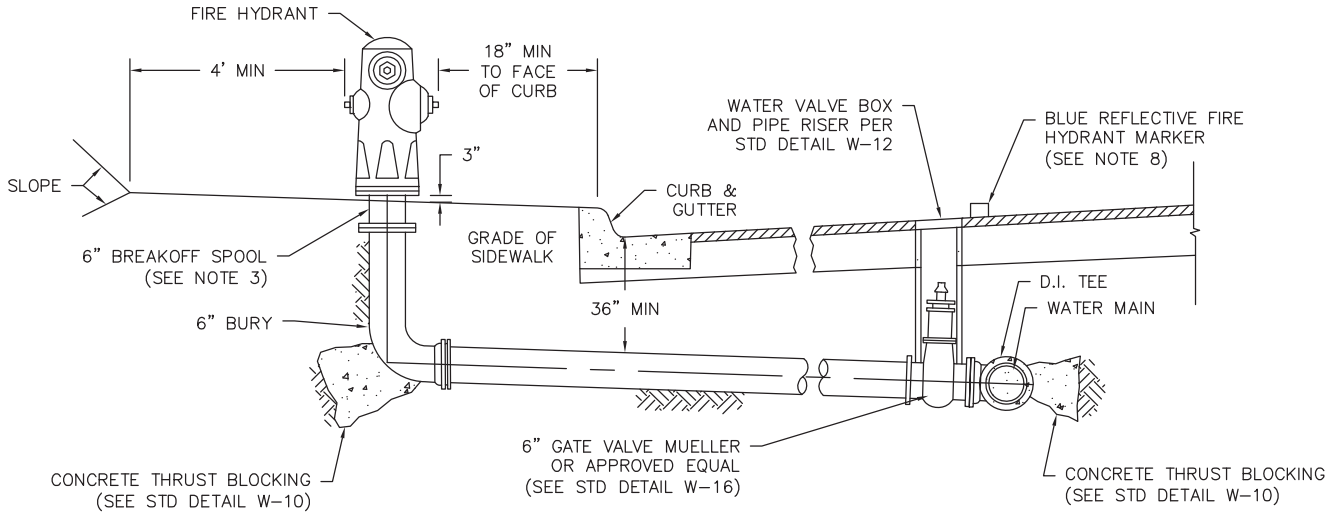
HYDRANT INSTALLATION - RESIDENTIAL



PLAN VIEW
SCALE: NTS



BOLLARD PLACEMENT
SCALE: NTS



SECTION VIEW
SCALE: NTS

NOTES

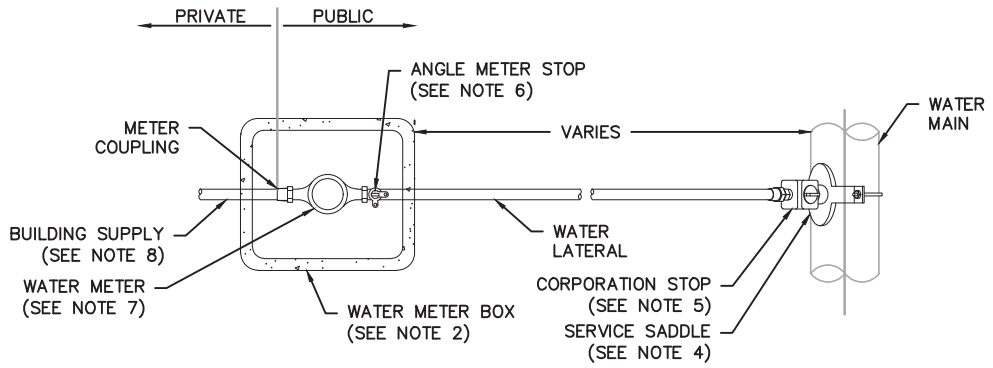
1. ALL HOSE OUTLET CAPS SHALL BE ATTACHED TO HYDRANT BY CHAIN.
2. HYDRANT SHALL BE IN ACCORDANCE WITH AWWA STANDARDS, TESTED AND APPROVED BY UNDERWRITERS LABORATORIES, OR EQUIVALENT.
3. FIRE HYDRANT AND EXPOSED BREAKOFF SPOOL SHALL BE PAINTED WITH DUPONT 30-10 WHITE ENAMEL PRIMER, FOLLOWED WITH A FINISH COAT OF NO. 612-00 WHITE FULLER O'BRIEN HEAVY DUTY, HIGH GLOSS PAINT.
4. HYDRANTS LOCATED IN PAVED OR TRAVELED WAY SHALL BE PROTECTED BY FOUR BOLLARDS AS SHOWN IN BOLLARD PLACEMENT DETAIL.
5. EACH BOLLARD SHALL BE PROFESSIONALLY CLEANED AND PAINTED WITH ONE COAT OF PRIMER AND ONE FINISH COAT OF YELLOW EXTERIOR GRADE LATEX PAINT.
6. BOLLARDS SHALL BE SET IN CONCRETE, SET VERTICALLY AND PLUMBED. SEE STD DETAIL L-8 FOR BOLLARD DETAILS.
7. HYDRANTS SHALL BE CENTERED ON 2' SQUARE, 4" THICK CONCRETE PAD WHEN PLACED IN LANDSCAPE OR PLANTING STRIP.
8. BLUE REFLECTIVE FIRE HYDRANT MARKER SHALL BE LOCATED PER CA MUTCD (LATEST EDITION) FIGURE 3B-102 (CA).

HOSE OUTLETS: (2) 2-½" NOZZLES (1) 4-½" NOZZLE	
MAKE	MODEL
CLOW	960
OR APPROVED EQUAL	

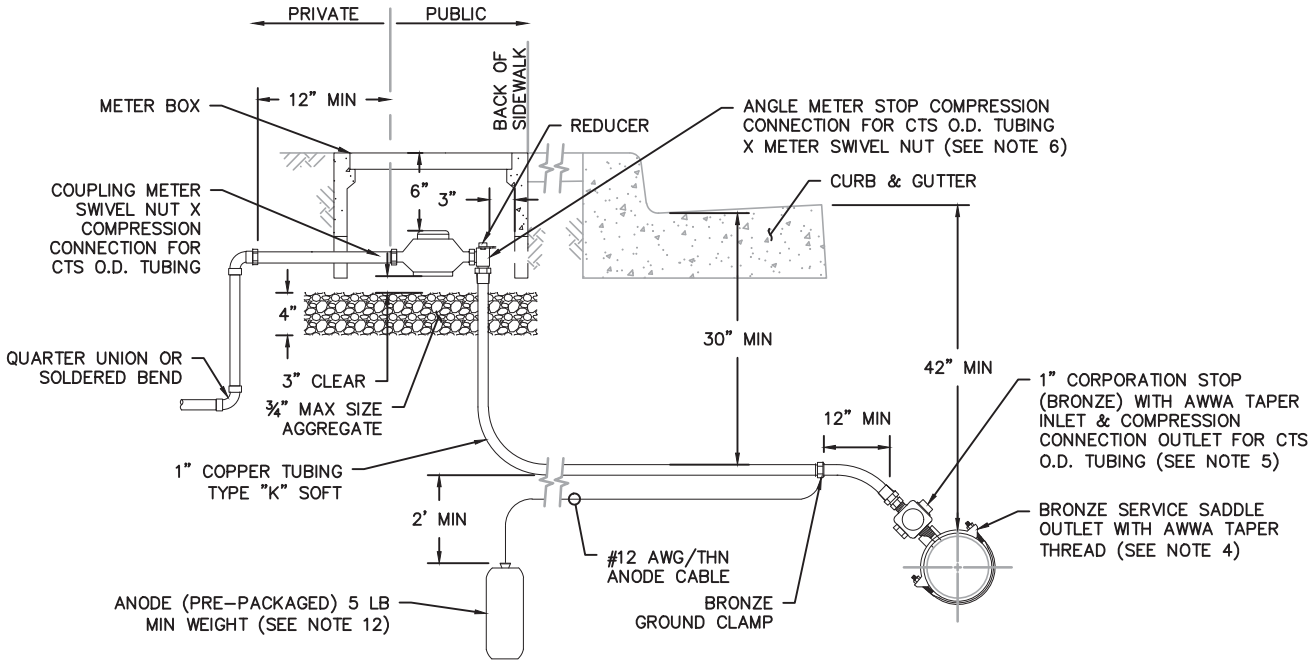
APPROVED _____ 3/8/23
DATE

DRAFT

CITY OF PITTSBURG	NO.	DATE	REVISION	DRAWN BY: BJR	STANDARD DETAIL	SHEET 2 OF 2
	1	2019-01-11	NOTES 7&8, HYDRANT MODELS, BOLLARDS	CHECKED BY: MK	HYDRANT INSTALLATION – COMMERCIAL AND INDUSTRIAL	W-4
				DATE: 2019-01-11		
				SCALE: NTS		



PLAN VIEW
SCALE: NTS



SECTION VIEW
SCALE: NTS

NOTES

1. AFTER PAYMENT OF FEES, WATER METER SHALL BE FURNISHED AND INSTALLED BY THE CITY FOR NEW SERVICES.
2. METER BOX SHALL BE CHRISTY B9X WITH FL9X LID FOR ¾-INCH AND SMALLER METERS, CHRISTY B16 WITH FL16D LID FOR 1-INCH METERS (OR APPROVED EQUALS).
3. WHERE METER BOX IS TO BE LOCATED IN AN AREA SUBJECT TO VEHICULAR TRAFFIC LOADING, THE PERMITTEE SHALL FURNISH A REGULAR BOX. TRAFFIC BOX COVER SHALL BE FL12BOX WITH FL12D LID FOR ⅝" X ¾" THROUGH 1-INCH METERS (OR APPROVED EQUAL).
4. FOR PIPES UP TO 12" IN DIAMETER, THE SERVICE SADDLE SHALL BE MUELLER H-13000 SERIES (OR APPROVED EQUAL). FOR PIPES LARGER THAN 12" IN DIAMETER, THE SERVICE SADDLE SHALL BE MUELLER BR2B OR BR2S SERIES (OR APPROVED EQUAL). SADDLES FOR PVC PIPE SHALL BE DOUBLE OR WIDE STRAP DESIGN.
5. CORPORATION STOP SHALL BE MUELLER B-25008N (OR APPROVED EQUAL).
6. ANGLE METER STOP SHALL BE MUELLER B-24258N (OR APPROVED EQUAL).
7. WATER METER SHALL BE LOCATED IN THE CENTER OF WATER METER BOX.
8. WATER LATERAL TO BE SIZED PER THE REQUIREMENTS OF THE LATEST VERSION OF CALIFORNIA PLUMBING CODE.
9. ALL WATER SERVICE FITTINGS SHALL BE LEAD-FREE.
10. WHERE THE MATERIAL FOR SERVICE FITTINGS IS SPECIFIED TO BE BRONZE, BRASS FITTINGS MAY BE USED.
11. 1" X ¾" BRASS REDUCER SHALL BE USED FOR ⅝" X ¾" METER.
12. 5 LB MINIMUM ANODE REQUIRED ON ALL COPPER SERVICE LINES 2" AND SMALLER UNLESS GEOTECHNICAL REPORT STIPULATES IT IS NOT NECESSARY. ADDITIONAL WEIGHT MAY BE REQUIRED BY GEOTECHNICAL REPORT. INSULATING COUPLING REQUIRED BETWEEN COPPER WATER LATERAL AND WATER MAIN IF MAIN IS METALLIC.

APPROVED _____ DATE 3/8/23

CITY OF PITTSBURG

NO.	DATE	REVISION
1	2019-01-11	ADDED ANODE

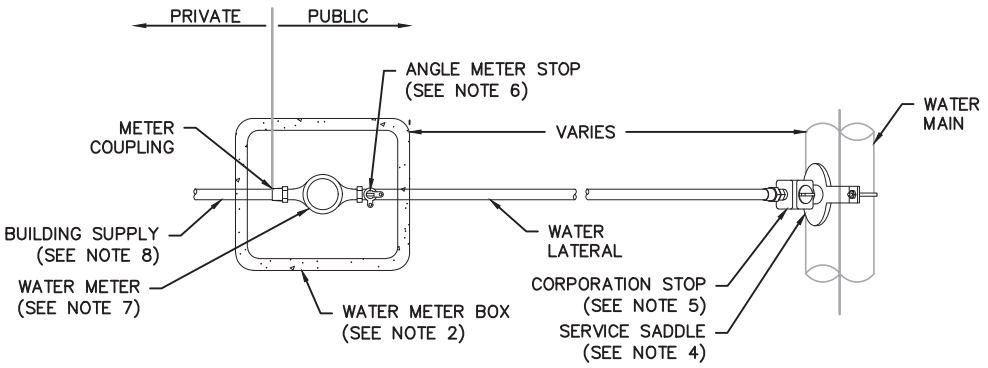
DRAWN BY:	BJR
CHECKED BY:	MK
DATE:	2019-01-11
SCALE:	NTS

STANDARD DETAIL

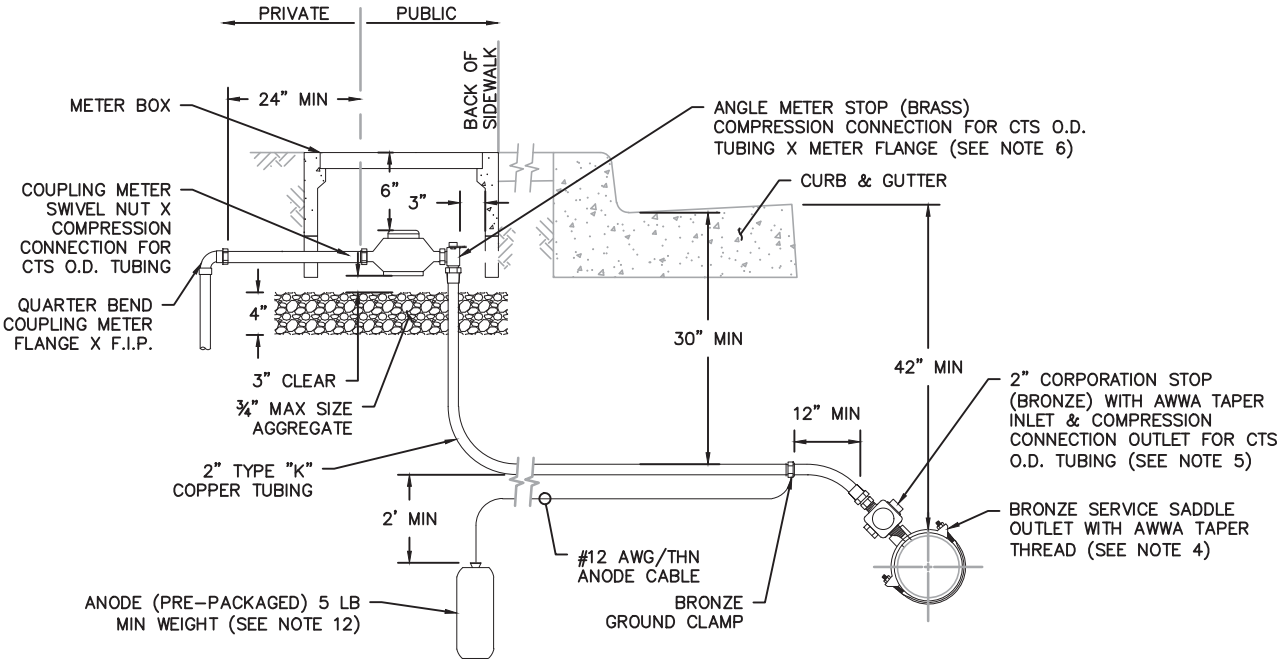
1" COPPER WATER SERVICE FOR 5/8"X3/4" & 1" WATER METERS

SHEET 1 OF 5

W-5



PLAN VIEW
SCALE: NTS



SECTION VIEW
SCALE: NTS

NOTES

1. AFTER PAYMENT OF FEES, WATER METER SHALL BE FURNISHED AND INSTALLED BY THE CITY FOR NEW SERVICES.
2. METER BOX SHALL BE CHRISTY B36 (17¼" x 30") WITH FL36E LID (OR APPROVED EQUAL).
3. WHERE METER BOX IS TO BE LOCATED IN AN AREA SUBJECT TO VEHICULAR TRAFFIC LOADING, THE PERMITTEE SHALL FURNISH A TRAFFIC BOX FOR H/20 LOADING. TRAFFIC BOX SHALL BE CHRISTY B10" X17" WITH B36-616 LID (OR APPROVED EQUAL).
4. FOR PIPES UP TO 12" IN DIAMETER, THE SERVICE SADDLE SHALL BE MUELLER H-13000 SERIES CC TAPERED THREAD (OR APPROVED EQUAL). FOR PIPES LARGER THAN 12" IN DIAMETER, THE SERVICE SADDLE SHALL BE MUELLER BR2B OR BR2S SERIES (OR APPROVED EQUAL). SADDLES FOR PVC PIPE SHALL BE DOUBLE OR WIDE STRAP DESIGN
5. CORPORATION STOP SHALL BE 2" MUELLER B-25008N (OR APPROVED EQUAL).
6. ANGLE METER STOP SHALL BE 2" MUELLER B-24276N (OR APPROVED EQUAL).
7. WATER METER SHALL BE LOCATED IN THE CENTER OF WATER METER BOX.
8. MINIMUM COVER OVER BUILDING SUPPLY (YARD PIPING) SHALL NOT BE LESS THAN THAT SPECIFIED IN THE UNIFORM PLUMBING CODE.
9. WATER SERVICES TO BE SIZED PER THE REQUIREMENTS OF THE LATEST VERSION OF CALIFORNIA PLUMBING CODE.
10. ALL WATER SERVICE FITTINGS SHALL BE LEAD-FREE.
11. THE METER BOX FOR A 1-½-IN TURBINE METER SHALL BE A CHRISTY B-30 BOX WITH B-30E LID (OR B-30-61G LID FOR TRAFFIC AREAS), OR APPROVED EQUALS. THE METER BOX FOR A 2-IN TURBINE METER SHALL BE A CHRISTY B-36 BOX WITH B-36E LID (OR B-36-61G LID FOR TRAFFIC AREAS), OR APPROVED EQUALS.
12. 5 LB MINIMUM ANODE REQUIRED ON ALL COPPER SERVICE LINES 2" AND LESS UNLESS GEOTECHNICAL REPORT STIPULATES IT IS NOT NECESSARY. ADDITIONAL WEIGHT MAY BE REQUIRED BY GEOTECHNICAL REPORT. INSULATING COUPLING REQUIRED BETWEEN COPPER WATER LATERAL AND WATER MAIN IF MAIN IS METALLIC.

APPROVED _____ DATE 3/8/23

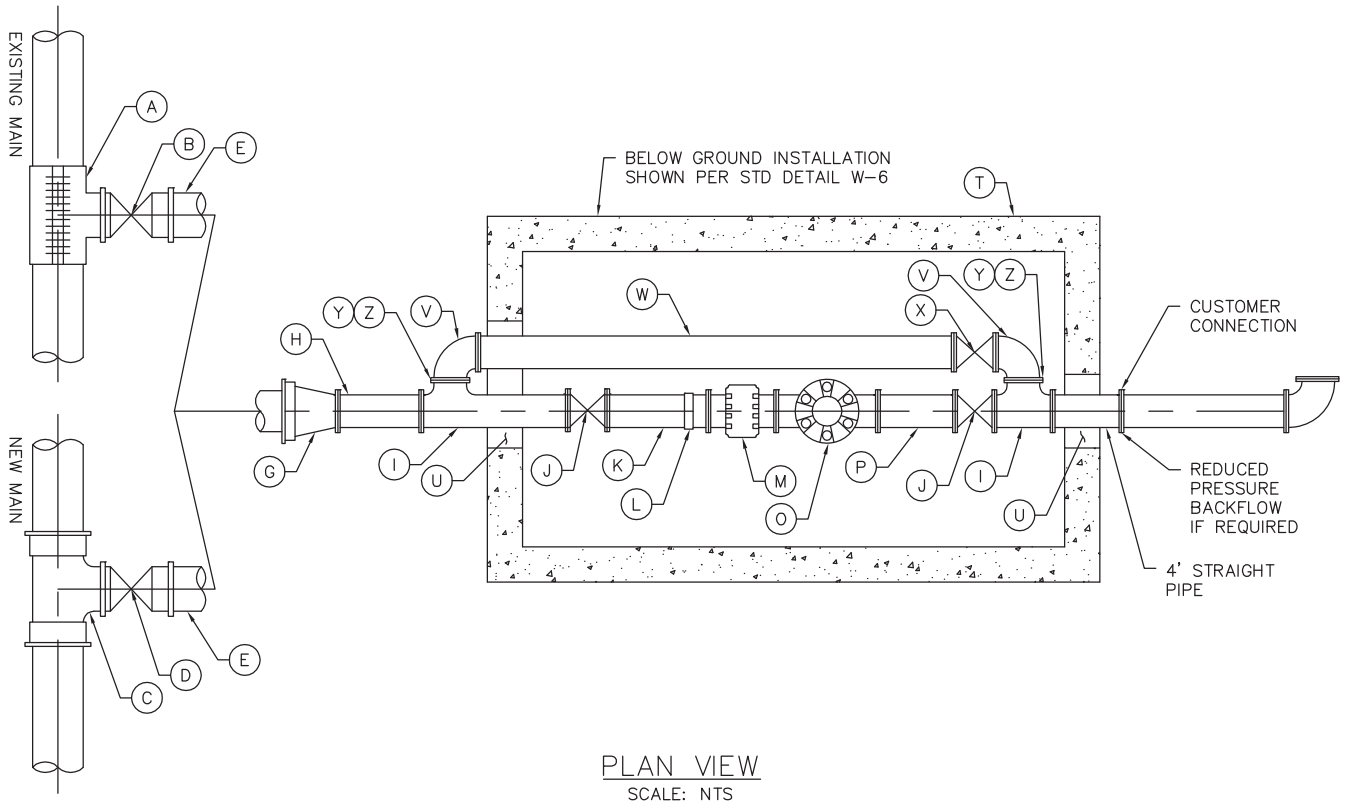
CITY OF PITTSBURG

NO.	DATE	REVISION
1	2019-01-11	ADDED ANODE

DRAWN BY:	BJR
CHECKED BY:	MK
DATE:	2019-01-11
SCALE:	NTS

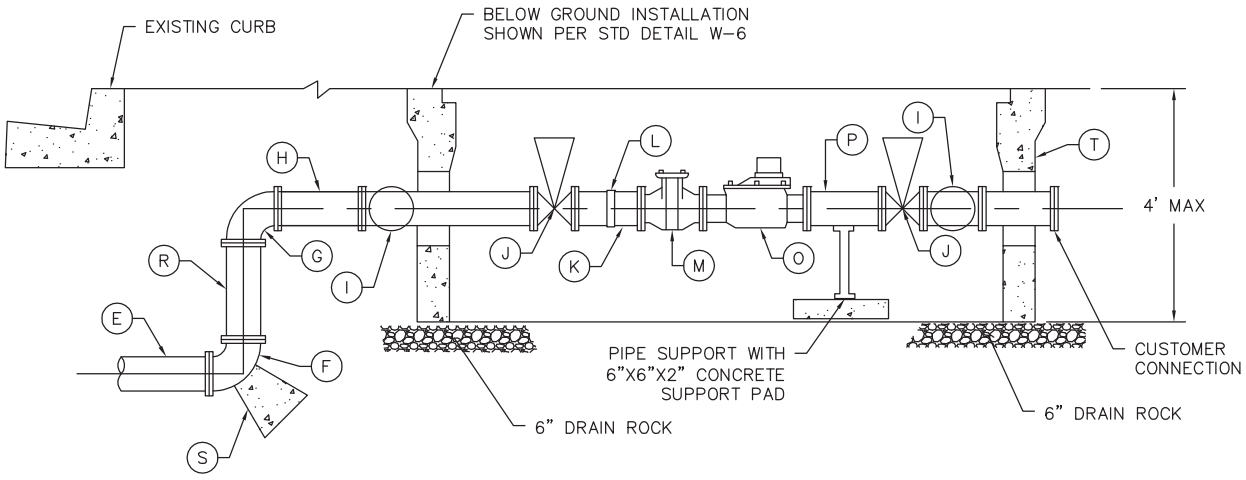
STANDARD DETAIL

2" COPPER WATER SERVICE FOR 1-1/2" & 2" WATER METERS



PLAN VIEW

SCALE: NTS



SECTION VIEW

SCALE: NTS

NOTES

1. SEE SHEET 5 FOR NOTES AND MATERIALS.

APPROVED _____ 3/8/23

DATE

DRAFT

NO.	DATE	REVISION
1	2019-01-11	REVISED MATERIALS

CITY OF PITTSBURG

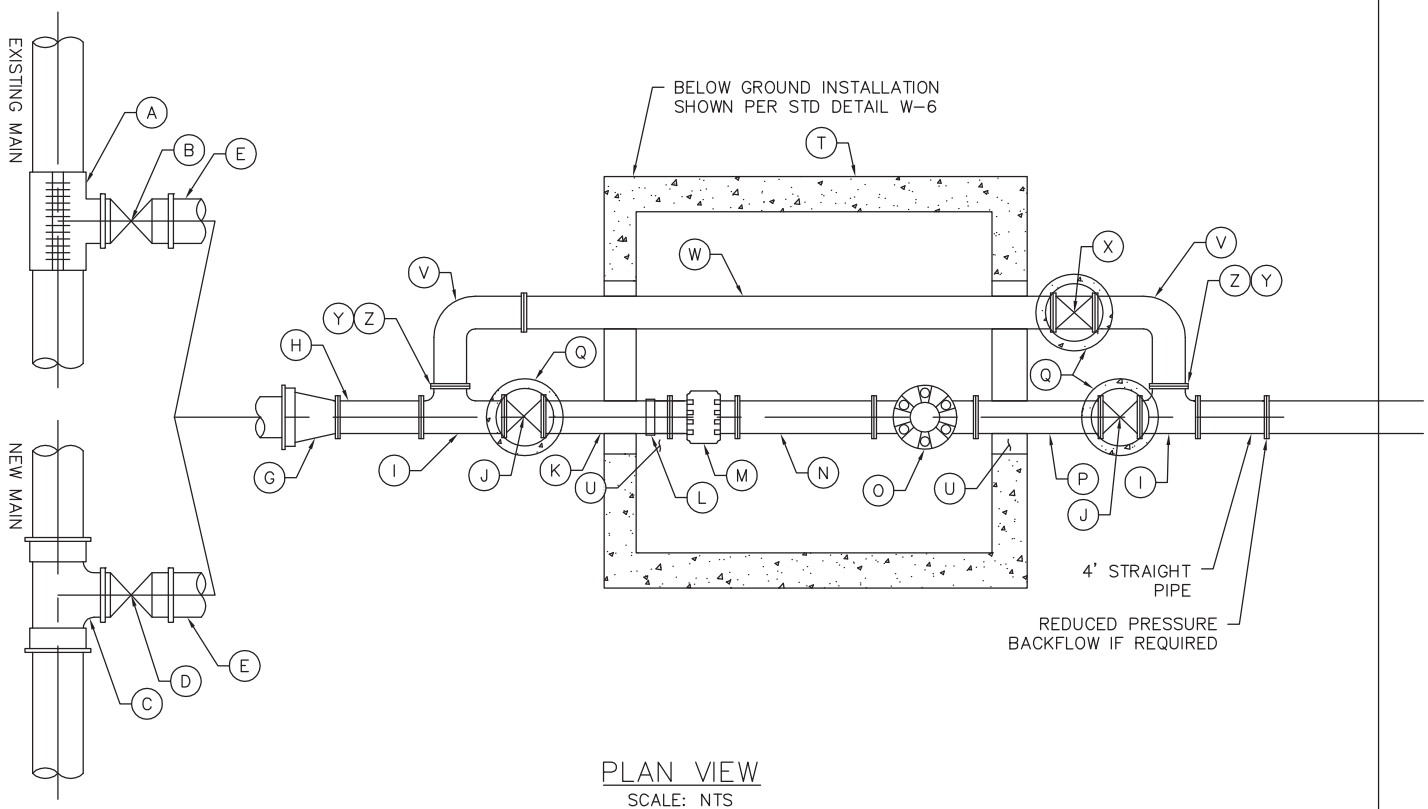
DRAWN BY:	BJR
CHECKED BY:	MK
DATE:	2019-01-11
SCALE:	NTS

STANDARD DETAIL

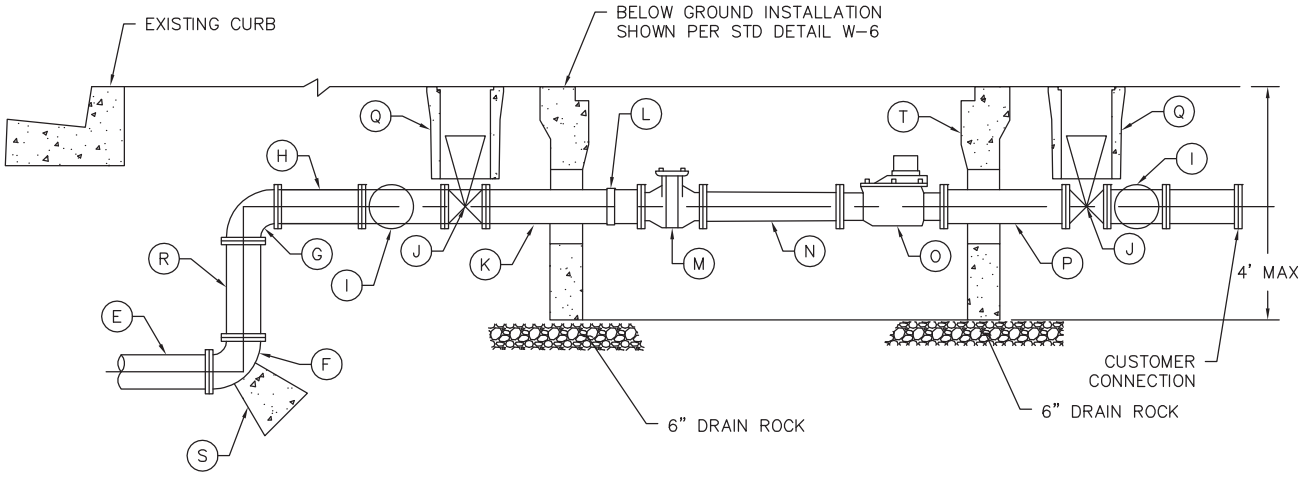
WATER SERVICE FOR 3" & 4" WATER METERS

SHEET 3 OF 5

W-5



PLAN VIEW
SCALE: NTS



SECTION VIEW
SCALE: NTS

NOTES

1. SEE SHEET 5 FOR NOTES AND MATERIALS.

APPROVED _____ 3/8/23
DATE

DRAFT

CITY OF PITTSBURG	NO.	DATE	REVISION	DRAWN BY: AW	STANDARD DETAIL	SHEET 4 OF 5
	1	2019-01-11	REVISED MATERIALS	CHECKED BY: MK	WATER SERVICE FOR 6" WATER METERS	W-5
				DATE: 2019-01-11		
				SCALE: NTS		

LIST OF MATERIALS				
ITEM	DESCRIPTION	3" METER	4" METER	6" METER
A	bolted tapping sleeve	Main size x 4"	Main size x 4"	Main size x 6"
B	Flg x M.J. tapping valve	4"	4"	6"
C	M.J. x M.J. x Flg tee	Main size x 4"	Main size x 4"	Main size x 6"
D	Flg x M.J. gate valve and box	4"	4"	6"
E	Class 52 D.I. pipe	4"	4"	6"
F	M.J. x Flg elbow	4"	4"	6"
G	M.J. x Flg reducer elbow	4" x 3"	---	---
	M.J. x Flg elbow	---	4"	6"
H	Flg D.I. spool (12" length min)	3"	4"	6"
I	Flg x Flg x Flg tee	3"	4"	6"
J	Flg gate valve	3"	4"	6"
K	Flg x Flg nipple (cut in half)	3" x 15"	4" x 20"	6" x 30"
L	flex coupling (Mueller or approved equal)	3"	4"	6"
M	water strainer (provided by City)	Badger Meter Recordall Turbo Series Meter, Model 450 with integral strainer**	Badger Meter Recordall Turbo Series Meter, Model 1000 with integral strainer**	Badger Meter 6" plate strainer**
N	Flg D.I. spool			6" x 30"
O	water meter (provided by City)			Badger Meter Recordall Turbo Series Meter, Model 2000**
P	Flg D.I. spool	3" x 12"	4" x 16"	6" x 24"
Q	valve box	---	---	Christy G05T box**
	valve lid	---	---	Christy G05CT lid**
R	Flg D.I. spool	4"	4"	6"
S	thrust block	See City Standard Detail W-10 for Concrete Thrust Blocking		
T	meter box	Christy R37 P36 Pit**	Christy R37 P36 Pit**	Christy R37 P36 Pit**
	meter lid (torsion-assisted, ADA-rated, steel-hinged, double leaf)	Christy R37-52HT**	Christy R37-52HT**	Christy R37-52HT**
U	8" opening and grout	---	---	---
	By-Pass	2"	2"	4"
V	MIPT x P.J. elbow	2"	2"	4"
W	Type K copper	2"	2"	4"
X	ball valve, MIPT x FIPT with locking ears	2"	2"	4"
Y	nylon bushing	2-1/2" x 2"	2-1/2" x 2"	4-1/2" x 4"
Z	FIPT reducing flange	3" x 2-1/2"	4" x 2-1/2"	6" x 4-1/2"
** or approved equal				

APPROVED _____ 3/8/23

DATE

DRAFT

CITY OF PITTSBURG

NO.	DATE	REVISION
1	2019-01-11	REVISED MATERIALS

DRAWN BY:

CHECKED BY: MK

DATE: 2019-01-11

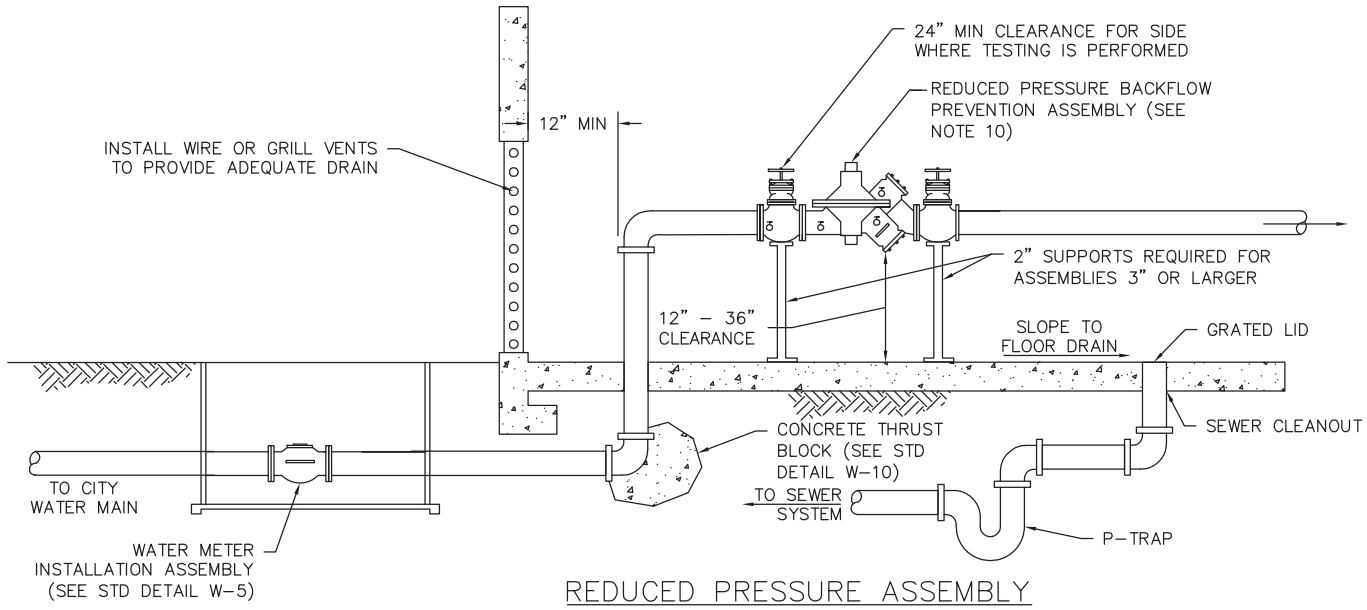
SCALE: NONE

STANDARD DETAIL

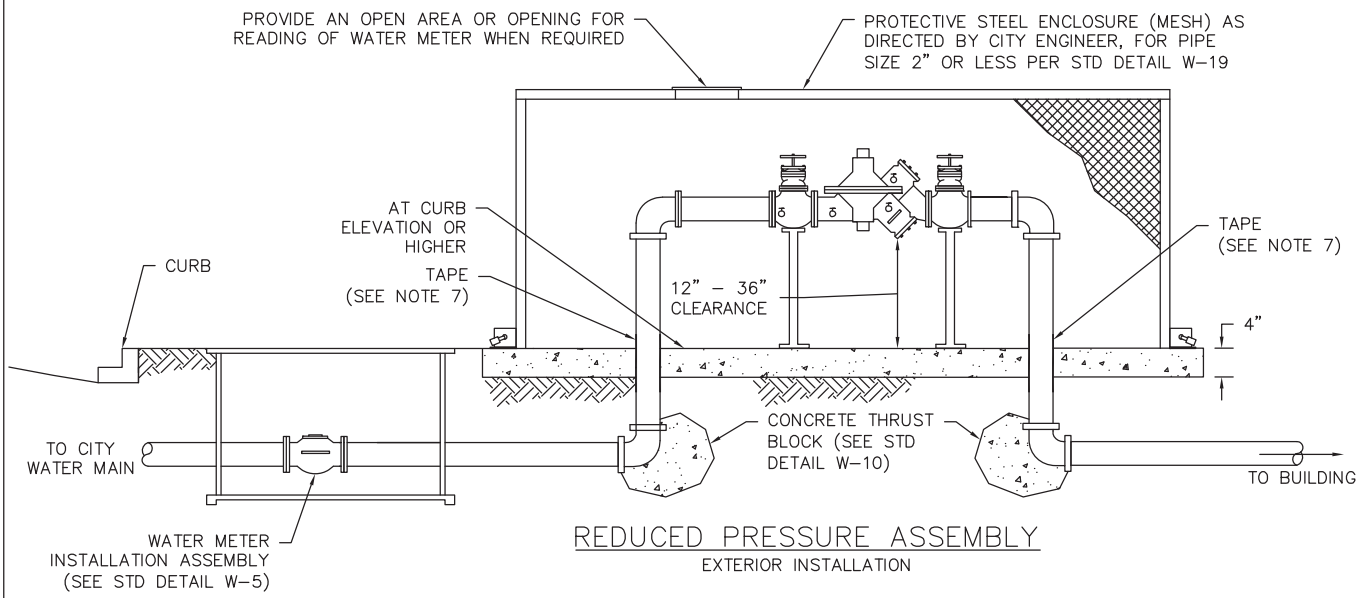
WATER SERVICE FOR 3" THRU 6" WATER METERS - NOTES AND MATERIALS

SHEET 5 OF 5

W-5



REDUCED PRESSURE ASSEMBLY
INTERIOR BUILDING INSTALLATION



REDUCED PRESSURE ASSEMBLY
EXTERIOR INSTALLATION

NOTES

1. POINT OF SERVICE:
   A. POINT OF SERVICE IS AT THE BACK OF CURB FOR ALL CITY STREETS WITH PLANTER STRIPS.
   B. POINT OF SERVICE IS AT THE BACK OF SIDEWALK FOR STREETS WITH COMBINED CURB AND SIDEWALK.
   C. POINT OF SERVICE IS AT THE RIGHT–OF–WAY LINE ON ALL UNIMPROVED STREETS AND ALLEYS.
2. LISTS OF APPROVED (BY STATE & CITY) BACKFLOW PREVENTION ASSEMBLIES AND CERTIFIED BACKFLOW PREVENTION ASSEMBLY TESTERS ARE AVAILABLE AT CITY OF PITTSBURG, PUBLIC WORKS DEPT. AT 357 E. 12TH ST. AND/OR AT THE ENGINEERING DEPARTMENT AT 65 CIVIC AVE.
3. THE BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED ABOVE GROUND, IN A HORIZONTAL AND LEVEL POSITION UNLESS OTHERWISE APPROVED BY THE ENGINEERING DEPARTMENT OR PUBLIC WORKS DEPARTMENT.
4. NO ADDITIONAL CONNECTIONS (OUTLET, TAP OR TEE) ARE PERMITTED BETWEEN THE WATER MAIN AND BACKFLOW PREVENTION ASSEMBLY.
5. BACKFLOW ASSEMBLIES SHALL NOT BE INSTALLED IN BASEMENTS OR VAULTS.
6. DETAILS OF METER SCHEMATIC ONLY. REFER TO W–5 FOR SPECIFIC LAYOUT REQUIRED.
7. PROVIDE 20 MIL TAPE BETWEEN COPPER SUPPLY LINE AND CONCRETE PAD 4" ABOVE AND BELOW CONCRETE.
8. ALL VISIBLE PORTIONS OF THE ASSEMBLY (LARGER THAN 2") SHALL BE PAINTED TO MATCH THE BUILDING AS APPROVED BY THE CITY ENGINEER.
9. PROVIDE A 2" MINIMUM BYPASS ON ALL BFDS (SEE STD DETAIL W–5, SHEET 3). PROVIDE A REDUCED PRESSURE BACKFLOW PREVENTION DETECTOR ON THE BYPASS 3" AND UP.
10. REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY PER UNIVERSITY OF SOUTHERN CALIFORNIA'S FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH'S LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.

APPROVED _____ 3/8/23
DATE

DRAFT

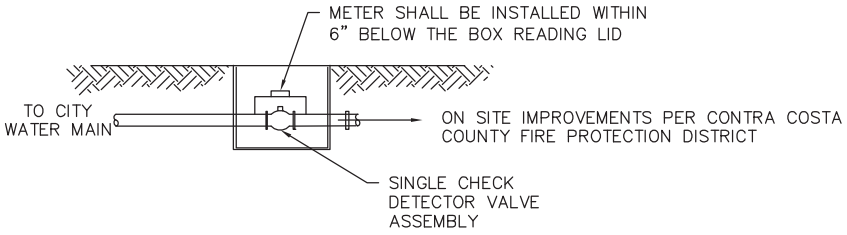
CITY OF PITTSBURG

NO.	DATE	REVISION
1	2019–01–11	NOTES 6–10, ADDED FLOOR DRAIN

DRAWN BY:	BJR
CHECKED BY:	MK
DATE:	2019–01–11
SCALE:	NTS

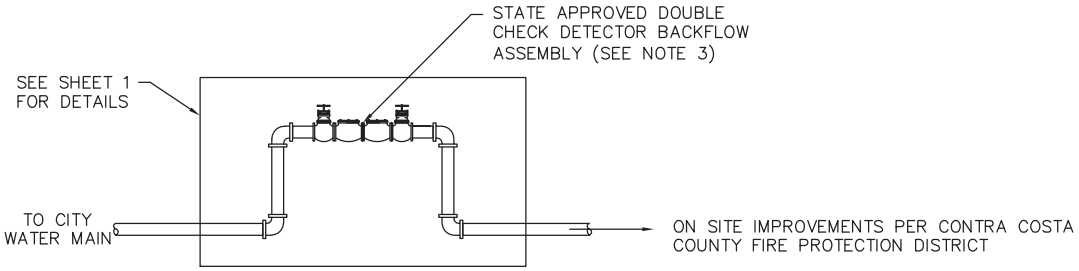
STANDARD DETAIL

REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLIES



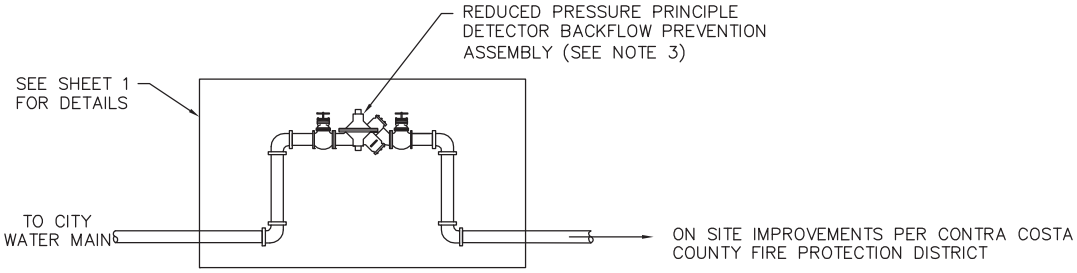
CLASS I & II FIRE PROTECTION SYSTEM

(NO HAZARD CONDITION)



CLASS III FIRE PROTECTION SYSTEM

(LOW HAZARD CONDITION)



CLASS IV & V FIRE PROTECTION SYSTEM

(LOW / HIGH HAZARD CONDITION)

NOTES

1. FIRE PROTECTION SYSTEMS

   CLASS I & II: DIRECT CONNECTIONS FROM PUBLIC WATER MAINS ONLY, NO PHYSICAL CONNECTION FROM OTHER WATER SUPPLIES (TANKS, RESERVOIRS) AND ALL SPRINKLER DRAINS DISCHARGE TO THE ATMOSPHERE OR OTHER SAFE OUTLETS. CLASS II SAME AS CLASS I EXCEPT THAT BOOSTER PUMPS MAY BE INSTALLED.

   CLASS III (LOW HAZARD): DIRECT CONNECTION FROM PUBLIC WATER SUPPLY MAIN PLUS ONE OR MORE OF THE FOLLOWING: ELEVATED STORAGE TANKS, FIRE PUMPS TAKING SUCTION FROM ABOVE GROUND, COVERED RESERVOIRS OR TANKS

   CLASS IV (LOW HAZARD): SIMILAR TO CLASS I & II BUT WHICH USES OR HAS AVAILABLE FOR USE AN UNAPPROVED AUXILIARY WATER SUPPLY.

   CLASS V (HIGH HAZARD): SUPPLIED FROM PUBLIC MAINS AND INTERCONNECTED WITH AN UNAPPROVED AUXILIARY WATER EXPOSED TO CONTAMINATION (HARBORS, RIVERS, PONDS, WELLS OR INDUSTRIAL FLUIDS). THE APPROPRIATE BACKFLOW PREVENTION ASSEMBLY SHALL BE DETERMINED AFTER THE FIRE MARSHAL AND THE ENGINEERING DEPARTMENT HAVE MADE A COMPLETE SURVEY OF THE FIRE PROTECTION REQUIREMENTS OF THE PREMISES.

2. ALL FIRE PROTECTION SYSTEMS HAVE DETECTOR METERS ONLY AND DO NOT REQUIRE SERVICE METERS.

3. REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY PER UNIVERSITY OF SOUTHERN CALIFORNIA'S FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH'S LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.

APPROVED _____ 3/8/23

DATE

DRAFT

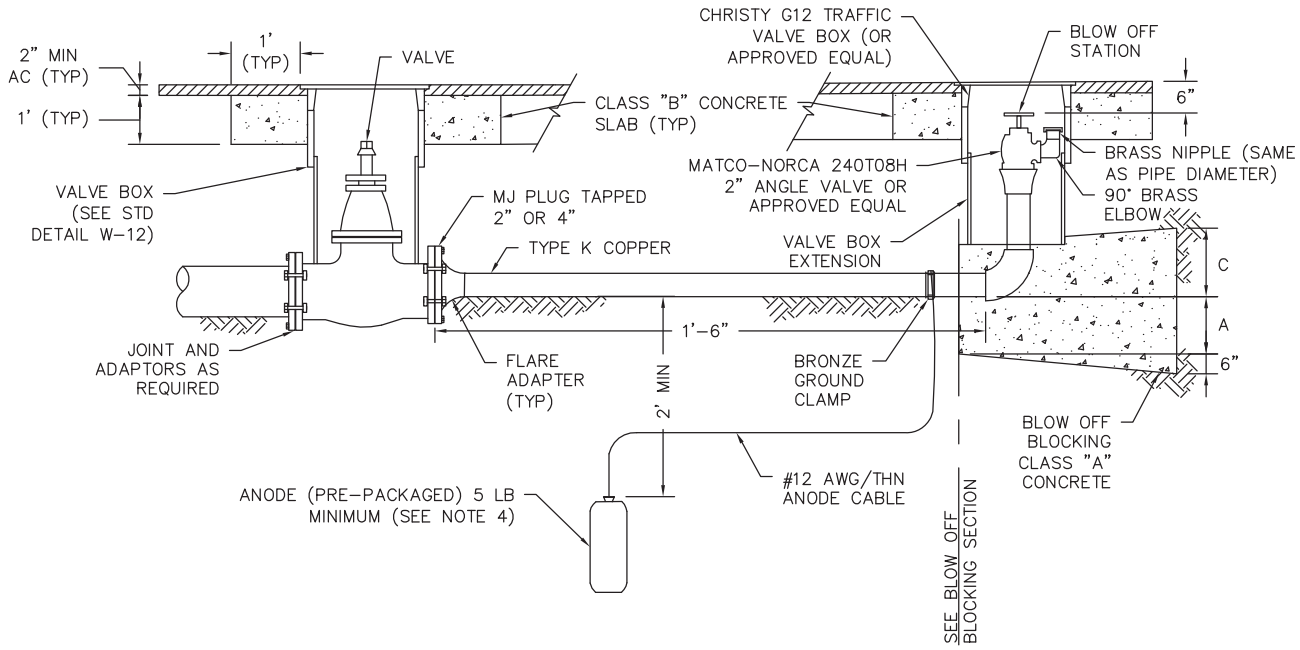
NO.	DATE	REVISION
1	2019-01-11	NOTES 2&3

CITY OF PITTSBURG

DRAWN BY:	BJR
CHECKED BY:	MK
DATE:	2019-01-11
SCALE:	NTS

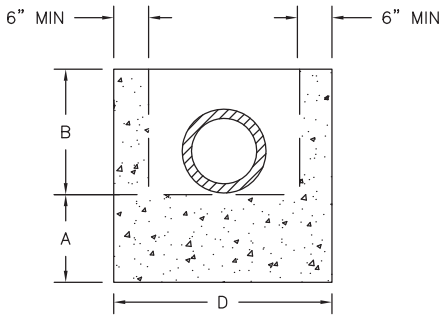
STANDARD DETAIL

BACKFLOW PREVENTION ASSEMBLIES FOR FIRE PREVENTION SYSTEMS



SECTION VIEW

SCALE: NTS



BLOW OFF BLOCKING

SECTION VIEW

NOTES

1. THE BLOW OFFS FOR FUTURE EXTENSION STUB SHALL BE PRESSURE TESTED AND CHLORINATED WITH THE REST OF THE MAIN BLOW OFF STATION. BACTERIOLOGICAL SAMPLING SHALL BE PERFORMED BY THE CITY.
2. BLOW OFF SHALL BE 2" PIPE (6" & 8" MAIN) OR 4" PIPE (10" & 12" MAIN),
3. REFER TO STD DETAIL W-12 FOR VALVE BOX INSTALLATION ASSEMBLY.
4. 5 LB MINIMUM ANODE REQUIRED ON ALL COPPER SERVICE LINES 2" AND LESS UNLESS GEOTECHNICAL REPORT STIPULATES IT IS NOT NECESSARY. ADDITIONAL WEIGHT MAY BE REQUIRED BY GEOTECHNICAL REPORT. INSULATING COUPLING REQUIRED BETWEEN COPPER WATER LATERAL AND WATER MAIN IF MAIN IS METALLIC.

TABLE 1: MINIMUM DIMENSIONS FOR THRUST BLOCKS

MAIN SIZE	A	B	C	D
6"	1'-0"	1'-0"	2'-0"	2'-0"
8"	1'-4"	1'-2"	2'-0"	2'-0"
10"	1'-9"	1'-6"	3'-0"	3'-0"
12"	2'-0"	1'-8"	3'-0"	3'-0"

APPROVED

3/8/23

DATE

DRAFT

CITY OF PITTSBURG

NO.	DATE	REVISION
1	2019-01-11	ADDED ANODE

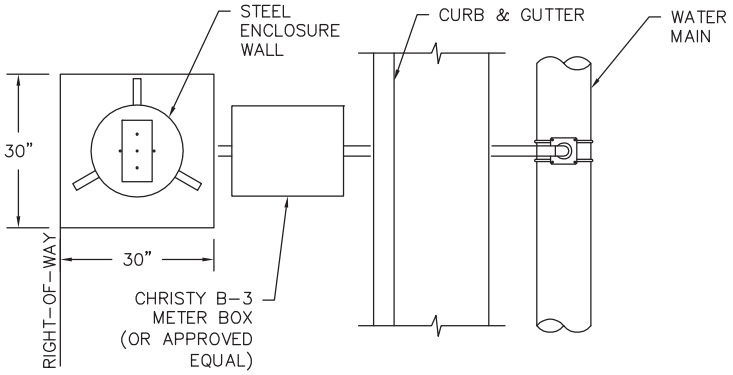
DRAWN BY: BJR
CHECKED BY: MK
DATE: 2019-01-11
SCALE: NTS

STANDARD DETAIL

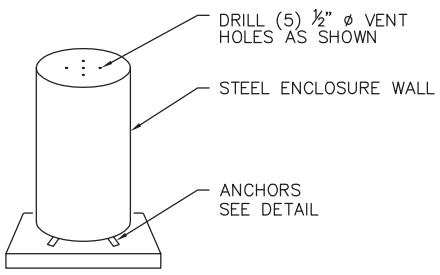
BLOW OFF

SHEET 1 OF 1

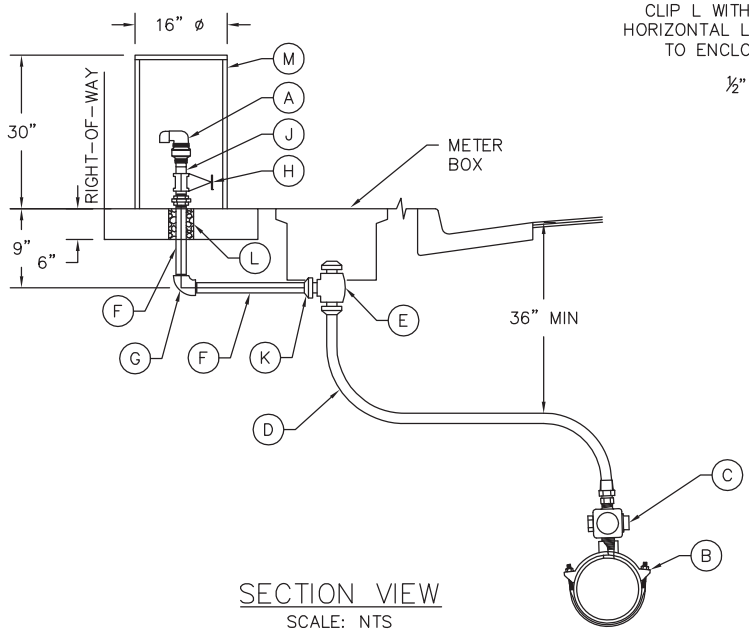
W-8



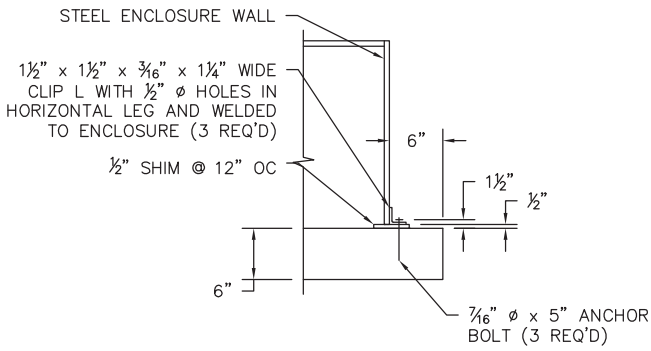
PLAN VIEW
SCALE: NTS



STEEL ENCLOSURE



SECTION VIEW
SCALE: NTS



ANCHOR DETAIL
SECTION VIEW

NOTES

1. WHERE SIDEWALKS ARE ADJACENT TO CURBS, PIPE COVERS SHALL BE CENTERED IN 2'-6" SQUARE CONCRETE PAD (4" THICK) AT BACK OF RIGHT-OF-WAY LINE. IF SIDEWALK IS NOT ADJACENT TO CURB, LOCATE 2'-6" CONCRETE PAD WITHIN PARKWAY BETWEEN SIDEWALK AND CURB FACE. FOR ASSEMBLY OUTSIDE OF AN EXIST STREET, LOCATE CENTER OF AIR VAC 5 FEET FROM CENTERLINE OF WATER MAIN.
2. ALL PIPE, FITTINGS AND VALVES SHALL BE RATED AT PRESSURE CLASS OF WATER MAIN.
3. INSTALL FOUR (4) MARKER POST PER STD DETAIL W-2 AT EACH AIR VAC ASSEMBLY OUTSIDE OF AN EXIST STREET.

LIST OF MATERIALS	
ITEM	DESCRIPTION
A	2" COMBINATION AIR AND VACUUM CAV RELEASE VALVE – A.R.I. D-040**
B	2" BRONZE STRAP SERVICE SADDLE – MUELLER H-13000 SERIES**
C	2" BRONZE CORPORATION STOP – MUELLER B-25008N** W/ DIELECTRIC INSULATING FITTING
D	2" TYPE "K" COPPER TUBING
E	2" BRONZE ANGLE METER VALVE – MUELLER B-24276N**
F	2" BRASS NIPPLE
G	2" 90° BRASS ELBOW
H	2" GATE VALVE WITH BRONZE HANDWHEEL – JONES J-372, CLOW R/W, MUELLER A-2360**
J	2" BRASS SHORT NIPPLE
K	BRONZE WATER METER FLANGE x FIP.
L	8" PVC SLEEVE – PACK WITH GRAVEL.
M	ENCLOSURE – 16" ø HOT DIP 10 GAUGE STEEL GALVANIZED, 30" TALL – PIPELINE VC-216**
** or approved equal	

APPROVED _____ 3/8/23
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CITY OF PITTSBURG

NO.	DATE	REVISION
1	2019-01-11	REVISED MATERIALS

DRAWN BY:	BJR
CHECKED BY:	MK
DATE:	2019-01-11
SCALE:	NTS

STANDARD DETAIL

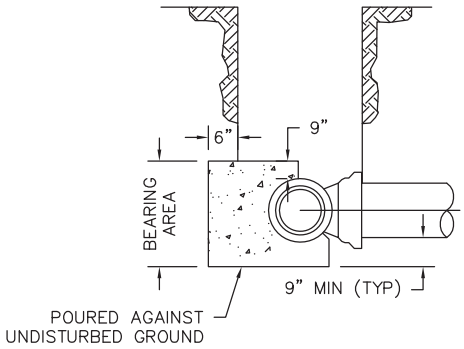
COMBINATION AIR VALVE ASSEMBLY

SHEET 1 OF 1

W-9

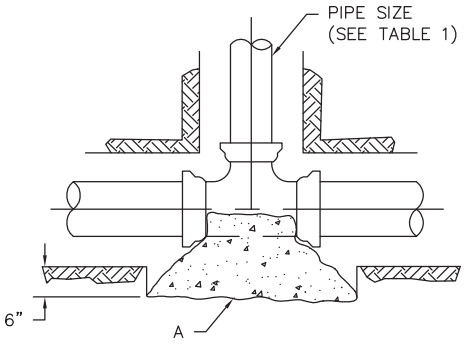
NOTES

1. ALL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4,000 PSI @ MIN 28–DAYS.
2. THRUST BLOCKS SHALL BE PLACED SYMMETRICALLY ABOUT THE FITTING.
3. ALL CONCRETE BLOCKS TO BE KEPT CLEAR OF BALLS, LUGS AND BOLTS.
4. UNSUPPORTED SURFACES TO BE FORMED.
5. BASED ON 200 PSI TOTAL TEST, 2000 PSF SOIL BEARING, AND SAFETY FACTOR 1.0.
6. INCREASE ALL BEARING AREAS FOR SOFT MATERIALS, AS APPROVED BY THE CITY ENGINEER.
7. ALL FITTINGS AND VALVES SHALL BE COATED WITH MASTIC PRIOR TO POURING OF THRUST BLOCKS.
8. C1=11¼° DEFLECTION. C2=22½° DEFLECTION. C3=45° DEFLECTION. A=TEE / PLUGGED TEE / PLUGGED END / PLUGGED CROSS / PLUGGED WYE.
9. SEE SHEET 3 FOR UPWARD FORCE VERTICAL BENDS.

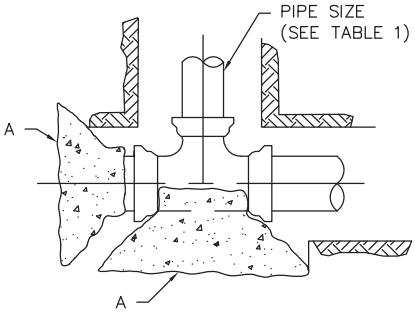


TYPICAL SECTION

TABLE 1: CONCRETE THRUST BLOCKS						
MINIMUM REQUIRED BEARING AREAS (SQUARE FEET)						
		DEFLECTION				
		A (TEE/PLUGGED)	B (90°)	C1 (11¼°)	C2 (22½°)	C3 (45°)
PIPE SIZE	4"	1.81	2.56	0.36	0.71	1.39
	6"	3.74	5.29	0.73	1.46	2.86
	8"	6.43	9.10	1.26	2.51	4.92
	10"	9.68	13.69	1.90	3.78	7.41
	12"	13.69	19.35	2.68	5.34	10.47



TEE
PLAN VIEW



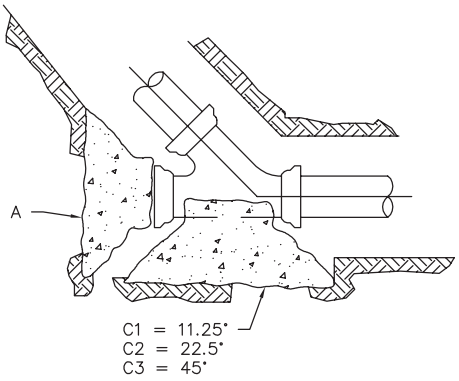
PLUGGED TEE
PLAN VIEW

APPROVED

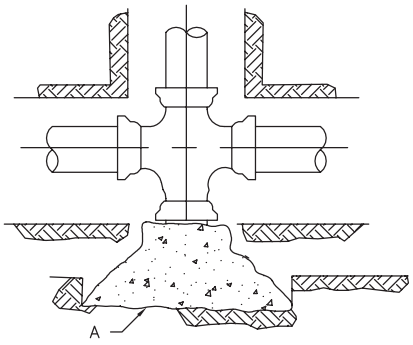
3/8/23
DATE

DRAFT

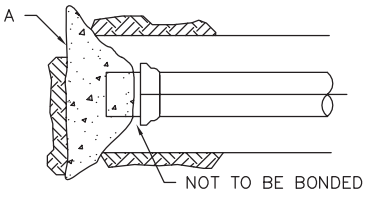
CITY OF PITTSBURG	NO.	DATE	REVISION	DRAWN BY: BJR	STANDARD DETAIL	SHEET 1 OF 3
				CHECKED BY: MK	CONCRETE THRUST BLOCKING	W–10
				DATE: 2019–01–11		
				SCALE: NTS		



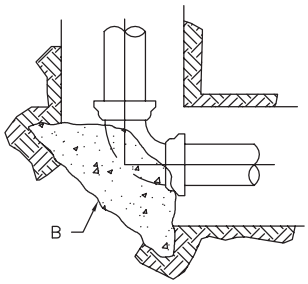
PLUGGED WYE
PLAN VIEW



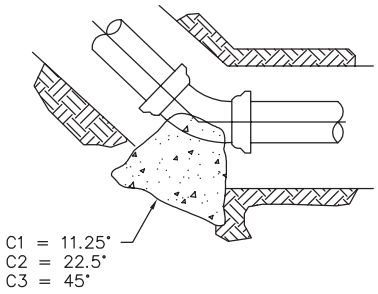
PLUGGED CROSS
PLAN VIEW



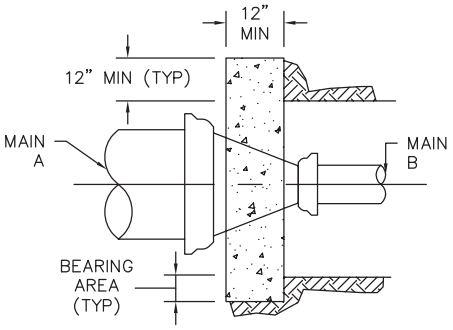
PLUGGED END
PLAN VIEW



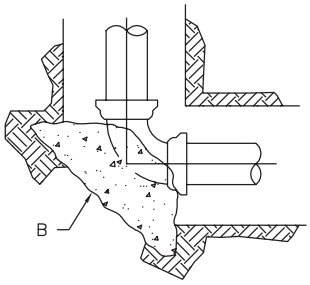
HORIZONTAL 90° (ELBOW)
PLAN VIEW



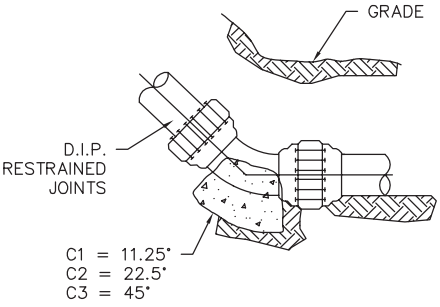
HORIZONTAL (ELBOW)
PLAN VIEW



REDUCER
PLAN VIEW



VERTICAL 90° (ELBOW)
PROFILE VIEW



VERTICAL UNDERBEND
PROFILE VIEW

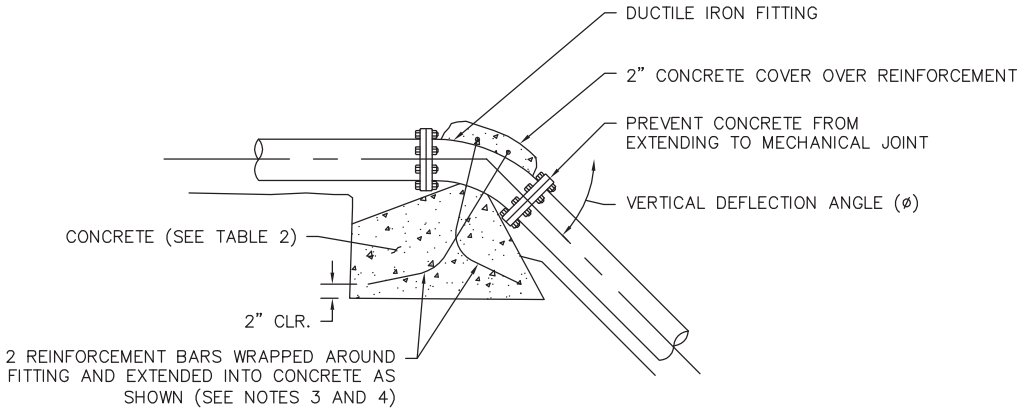
NOTES

1. FOR GENERAL NOTES AND THRUST BLOCK TABLES, SEE SHEET 1.

APPROVED _____ 3/8/23
DATE

DRAFT

CITY OF PITTSBURG	NO.	DATE	REVISION	DRAWN BY: BJR CHECKED BY: MK DATE: 2019-01-11 SCALE: NTS	STANDARD DETAIL CONCRETE THRUST BLOCKING	SHEET 2 OF 3 W-10



UPWARD FORCE VERTICAL BEND

PROFILE VIEW

TABLE 2: TOTAL VOLUME OF THRUST BLOCKS (C.Y.)				
PIPE SIZE	VERTICAL DEFLECTION ANGLE (ø)			
	$11\frac{1}{4}^{\circ}$	$22\frac{1}{2}^{\circ}$	45°	90°
6"	0.31	0.60	1.11	1.57
8"	0.54	1.07	1.97	2.79
12"	1.23	2.40	4.44	6.28
VOLUMES GIVEN ARE FOR A MAXIMUM TEST PRESSURE OF 150 PSI. VOLUMES SHOULD BE ADJUSTED FOR HIGHER PRESSURES SUBJECT TO APPROVAL OF THE DIRECTOR OF PUBLIC WORKS.				

NOTES

1. THRUST BLOCKS TO BE POURED AGAINST UNDISTURBED SOIL.
2. VOLUME OF THRUST BLOCKS IN TABLE 2 FROM FORMULA:

$$V = \frac{1.5\ PA\ (SIN\ \phi)}{4050}$$

WHERE: P = 150 PSI
A = CROSS SECTIONAL AREA (SQUARE INCHES) OF THE PIPE USING THE OUTSIDE DIAMETER OF THE PIPE

3. REINFORCEMENT BAR SIZE SHALL BE:
#4 FOR VOLUME OF THRUST BLOCK < 2.4 C.Y.
#5 FOR VOLUME OF THRUST BLOCK BETWEEN 2.4 & 4.4 C.Y.
#6 FOR VOLUME OF THRUST BLOCK BETWEEN 4.4 & 6.8 C.Y.
4. REINFORCEMENT BARS SHALL BE PLACED TO HAVE A 2" CLEARANCE FROM OUTSIDE EDGE OF CONCRETE.
5. THRUST BLOCKS SHALL BE ELIMINATED IF A RESTRAINED JOINT DESIGN IS INCLUDED FOR THE PIPING, JOINTS, AND FITTINGS.
6. CONCRETE SHALL BE PORTLAND CEMENT CONCRETE WITH A MINIMUM STRENGTH OF 4,000 PSI.

APPROVED _____ 3/8/23
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DRAFT

CITY OF PITTSBURG

NO.	DATE	REVISION

DRAWN BY: BJR
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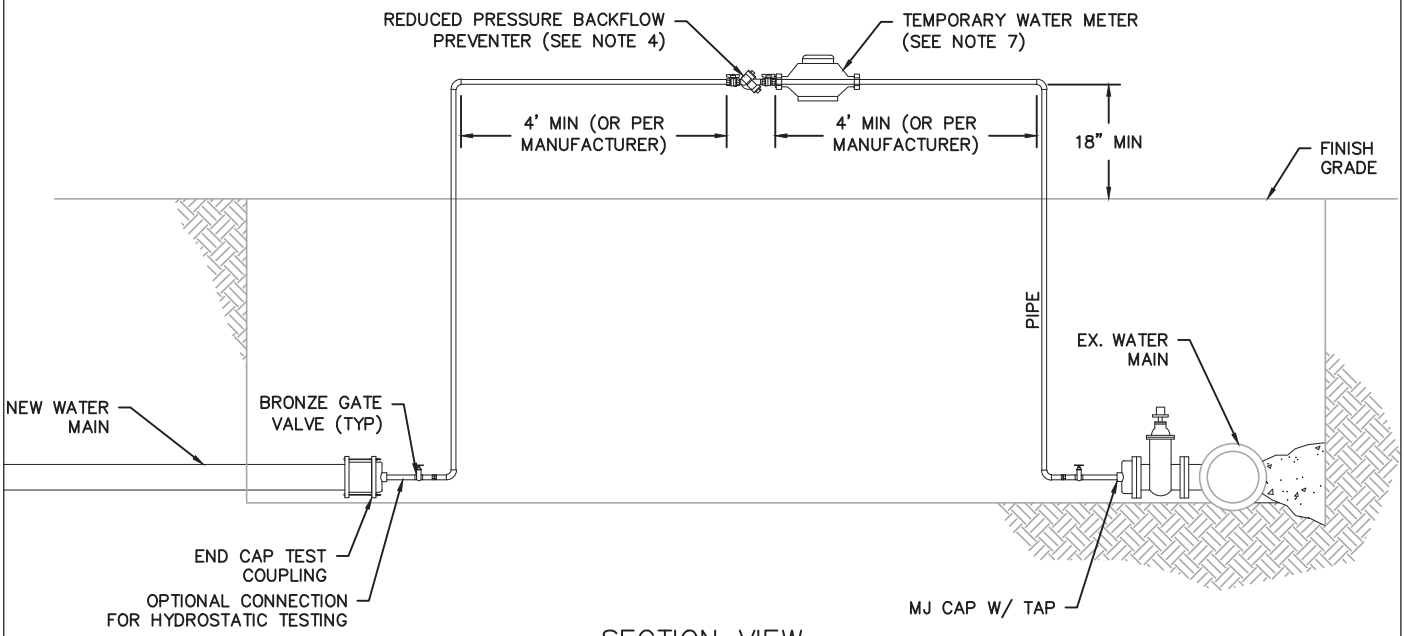
DATE: 2019-01-11
SCALE: NTS

STANDARD DETAIL

CONCRETE THRUST BLOCKING FOR UPWARD FORCE VERTICAL WATER LINE BENDS

SHEET 3 OF 3

W-10



SECTION VIEW

SCALE: NTS

NOTES:

1. THE TEMPORARY FLUSHING AND TESTING CONNECTION SHOWN HERE IS TO BE USED IN LIEU OF AWWA C-651, FIGURE 1. THE USE OF BACKFLOW PROTECTION IS MANDATORY. THE TEMPORARY CONNECTION SHALL BE ADEQUATELY SIZED TO PROVIDE THE REQUIRED FLOW PER AWWA C-651 TO FLUSH PIPE.
2. THE BACKFLOW PREVENTION DEVICE SHALL BE TESTED BY THE CITY OF PITTSBURG AFTER INSTALLATION AND PRIOR TO THE COMMENCING OF ANY FLUSHING OR TESTING OF THE NEW WATER MAIN.
3. THE NEW WATER MAIN SHALL BE KEPT ISOLATED FROM THE ACTIVE DISTRIBUTION SYSTEM UNTIL SATISFACTORY BACTERIOLOGICAL TESTING HAS BEEN COMPLETED AND DISINFECTANT WATER FLUSHED OUT.
4. WHEN BACKFLOW PREVENTER IS LOCATED IN THE ROADWAY, CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL; AS REQUIRED BY CITY, UNTIL COMPLETION OF ALL FLUSHING AND TESTING.
5. IF FOR ANY REASON, IT IS NECESSARY TO REMOVE THE TEMPORARY CONNECTION PRIOR TO THE SATISFACTORY COMPLETION OF FLUSHING AND TESTING, THEN PRIOR TO THE RESUMPTION OF FLUSHING AND TESTING THE CONNECTION ASSEMBLY SHALL BE DISINFECTED PER THE REQUIREMENTS OF AWWA C-651. CITY SHALL RETEST THE BACKFLOW PREVENTER.
6. PROTECT THE INSTALLATION OF THE BACKFLOW DEVICE TO PREVENT DAMAGE THAT MAY LEAD TO MALFUNCTION OF THE DEVICE. PROPER STORAGE AND HANDLING OF THE DEVICE WILL HELP PREVENT DIRT, ROCK OR OTHER DELETERIOUS MATERIAL FROM ENTERING OPEN ENDS OF THE BACKFLOW DEVICE.
7. CONTRACTOR SHALL INSTALL A TEMPORARY WATER METER UPSTREAM FROM THE BACKFLOW PREVENTION DEVICE. FOR SUBDIVISIONS, WATER METER SHALL BE ON BACKFLOW PREVENTION DEVICE. CITY TO PROVIDE WATER METER.
8. THE DESINFECTION OF A NEW POTABLE WATER PIPING SYSTEM SHALL BE AS SPECIFIED IN SECTION 33 13 00 – DISINFECTING OF WATER DISTRIBUTION, OF THE CITY OF PITTSBURG STANDARD SPECIFICATIONS.
9. NEW WATER MAINS AND NEW SUPPLY LINES SHALL NOT BE INSTALLED IN THE SAME TRENCH AS, AND SHALL BE AT LEAST 10 FEET HORIZONTALLY FROM AND ONE FOOT VERTICALLY ABOVE, ANY PARALLEL PIPELINE CONVEYING SANITARY SEWER RECYCLED WATER OR FUEL LINES
10. NEW WATER MAINS AND NEW SUPPLY LINES SHALL BE AT LEAST 4 FEET HORIZONTALLY FROM AND ONE FOOT VERTICALLY ABOVE, ANY PARALLEL PIPELINE CONVEYING STORM DRAINAGE AND DISINFECTED TERTIARY RECYCLED WATER
11. IF CROSSING A PIPELINE CONVEYING A FLUID LISTED IN SECTIONS 8 AND 9 ABOVE, A NEW WATER MAIN SHALL BE CONSTRUCTED NO LESS THAN 45-DEGREES TO AND AT LEAST ONE FOOT ABOVE THE PIPELINE.

APPROVED _____ DATE 3/8/23

CITY OF PITTSBURG

NO.	DATE	REVISION

DRAWN BY:	BJR
CHECKED BY:	MK
DATE:	2019-01-11
SCALE:	NTS

STANDARD DETAIL

TEMPORARY FLUSHING AND TESTING CONNECTIONS

PRESSURE TEST SHALL BE IN ACCORDANCE WITH AWWA C600 AND THE FOLLOWING:

1. TEST PRESSURE: NOT LESS THAN 200 PSIG OR 50 PSI IN EXCESS OF MAXIMUM STATIC PRESSURE, WHICHEVER IS GREATER. THE TESTS SHALL BE PERFORMED AT AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED.

2. PREPARATION OF TEST:

    a. VENTS SHALL BE AT THE HIGH POINTS OF THE SYSTEM AND DRAINS PROVIDED WHERE MEANS OF VENTING OR DRAINING DO NOT EXIST.
    b. REMOVE OR BLOCK OFF, ALL RELIEF VALVES, RUPTURE DISCS, ALARMS, CONTROL INSTRUMENTS, ETC. THAT SHALL NOT BE SUBJECTED TO THE TEST PRESSURE. ALL GAGES USED IN THE SYSTEM SHALL BE CALIBRATED GAGES.
    c. ALL DISCS, BALLS, OR PISTONS FROM CHECK VALVES SHALL BE REMOVED IF THEY INTERFERE WITH FILLING THE SYSTEM. OPEN ALL VALVES BETWEEN INLET AND OUTLET OF THE SECTION TO BE TESTED.
    d. CONNECT PUMP AND PROVIDE TEMPORARY CLOSURES FOR ALL THE EXTERNAL OPENINGS IN THE SYSTEM. USE CAUTION TO INSURE THAT THE CLOSURES ARE PROPERLY DESIGNED AND STRONG ENOUGH TO WITHSTAND THE TEST PRESSURE.
    e. A JOINT PREVIOUSLY TESTED IN ACCORDANCE WITH THIS SPECIFICATION MAY BE COVERED OR INSULATED.
    f. EXPANSION JOINTS SHALL BE PROVIDED WITH TEMPORARY RESTRAINT FOR ADDITIONAL PRESSURE UNDER TEST OR SHALL BE ISOLATED FROM THE TEST.
    g. FLANGED JOINTS, WHERE BLANKS ARE INSERTED TO ISOLATE EQUIPMENT DURING THE TEST, NEED NOT BE TESTED.
    h. ALL CONCRETE BLOCK SHALL BE ALLOWED TO CURE A SUFFICIENT TIME TO DEVELOP THE MINIMUM COMPRESSIVE STRENGTH BEFORE TESTING.
    i. PRESSURE TESTS ON EXPOSED AND ABOVE GROUND PIPING SHALL BE CONDUCTED ONLY AFTER THE ENTIRE PIPING SYSTEMS HAS BEEN INSTALLED AND ATTACHED TO THE PIPE SUPPORTS, HANGERS OR ANCHORS OR AS SHOWN ON THE PLANS.
    j. ANY CONNECTION BETWEEN THE NEW PIPELINE BEING INSTALLED AND THE EXISTING WATER SYSTEM SHALL INCLUDE A STATE APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLY INSTALLED TO PREVENT FLOW INTO THE EXISTING SYSTEM. THE BACKFLOW DEVICE ASSEMBLY SHALL BE REQUIRED UNTIL BACTERIOLOGICAL SAMPLING PROVES THE NEW PIPELINE IS PROPERLY DISINFECTED.
    k. CONTRACTOR SHALL DISCONNECT SYSTEM FROM THE PUMP PRIOR TO VERIFYING THE DROP IN PRESSURE.

3. THE CONTRACTOR SHALL PAY COSTS OF ALL WATER USED FOR CONSTRUCTION PURPOSES, INCLUDING FLUSHING AND TESTING. THE CITY, AT HIS EXPENSE, SHALL PROVIDE A METER APPROVED BY THE PROJECT MANAGER TO COMPLETE THE WORK.

4. THE CONTRACTOR SHALL FURNISH ALL REQUIRED EQUIPMENT, PUMPS, CALIBRATED GAGES AND MATERIALS, MAKE ALL CONNECTIONS AND PERFORM THE REQUIRED TESTS.

5. CONDUCT HYDROSTATIC TEST FOR AT LEAST TWO HOURS. APPLY THE HYDROSTATIC TEST PRESSURE IN INCREMENTS OF 25 PSIG, OR AS DIRECTED BY THE PROJECT MANAGER UNTIL THE MAXIMUM TEST PRESSURE IS REACHED. HOLD PRESSURE FOR 5 MINUTES AT EACH 25 PSIG INCREMENT AND INSPECT FOR LEAKS BEFORE ADDING MORE PRESSURE.

6. SLOWLY FILL SECTION TO BE TESTED WITH WATER; EXPEL AIR FROM PIPING AT HIGH POINTS USING THE VENTS. PRIOR TO BEGINNING HYDROSTATIC TESTING, THE PIPELINE SHALL HAVE BEEN FILLED WITH WATER AND ALLOWED TO STAND A MINIMUM OF FOUR (4) HOURS UNDER A SLIGHT PRESSURE. INSTALL CORPORATION COCKS AT HIGH POINTS. CLOSE AIR VENTS AND CORPORATION COCKS AFTER AIR IS EXPELLED. RAISE PRESSURE SLOWLY WITH THE PUMP TO SPECIFIED TEST PRESSURE.

7. MAINTAIN PRESSURE FOR FOUR (4) HOURS KEEPING PERSONNEL AT A SAFE DISTANCE.

8. OBSERVE JOINTS, FITTINGS, AND VALVES UNDER TEST. REMOVE AND RENEW CRACKED PIPES, JOINTS, FITTINGS, AND VALVES SHOWING VISIBLE LEAKAGE. RETEST.

9. CORRECT VISIBLE DEFICIENCIES BY RELEASING THE PRESSURE, DRAINING THE SYSTEM AND CONTINUE TESTING AT SAME TEST PRESSURE FOR ADDITIONAL TWO HOURS TO DETERMINE ANY LEAKAGE. MAINTAIN PRESSURE WITHIN PLUS OR MINUS 5 PSI OF TEST PRESSURE.

10. DURING HYDROSTATIC TESTING, THE CONTRACTOR SHALL PROVIDE FOR TEMPORARY BLOCKING OF THE PIPELINE AT THE TIE–IN POINTS OR AS DIRECTED BY THE PROJECT MANAGER. NO HYDROSTATIC TEST WILL BE ALLOWED AGAINST A CLOSED VALVE CONNECTED TO THE EXISTING SYSTEM EXCEPT UNDER SPECIFIC SUPERVISED CONDITIONS APPROVED BY THE PROJECT MANAGER.

11. NO LEAKAGE IS ALLOWED.

12. IF TEST OF PIPE INDICATES LEAKAGE, LOCATE SOURCE OF LEAKAGE, MAKE CORRECTIONS, AND RETEST UNTIL THERE IS NO LEAKAGE IN THE SYSTEM

13. AFTER HYDROSTATIC TEST IS COMPLETE, REMOVE THE PRESSURE WITH CAUTION TO AVOID ESCAPING FLUID AND DEBRIS.

APPROVED _____ 3/8/23
DATE

CITY OF PITTSBURG

NO.	DATE	REVISION

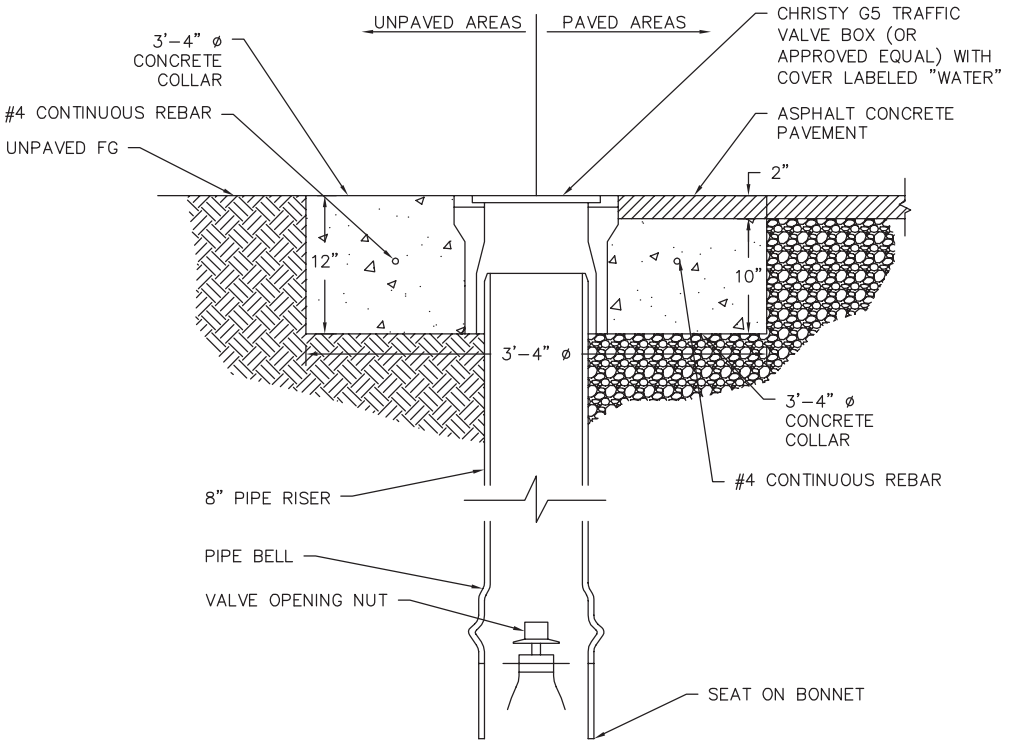
DRAWN BY:	BJR
CHECKED BY:	MK
DATE:	2019–01–11
SCALE:	NTS

STANDARD DETAIL

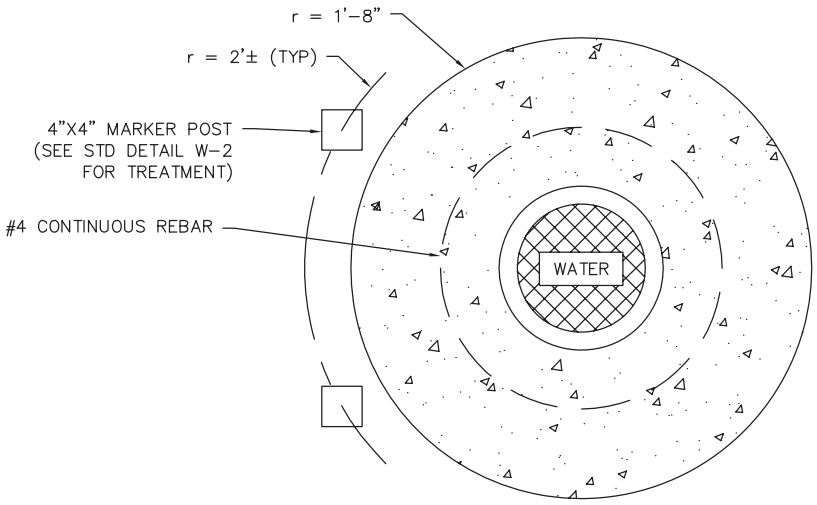
TEMPORARY FLUSHING AND TESTING CONNECTIONS

SHEET 2 OF 2

W–11



SECTION VIEW
SCALE: NTS



PLAN VIEW
SCALE: NTS

APPROVED _____ 3/8/23
DATE

DRAFT

CITY OF PITTSBURG

NO.	DATE	REVISION
1	2019-01-11	SEAT ON BONNET

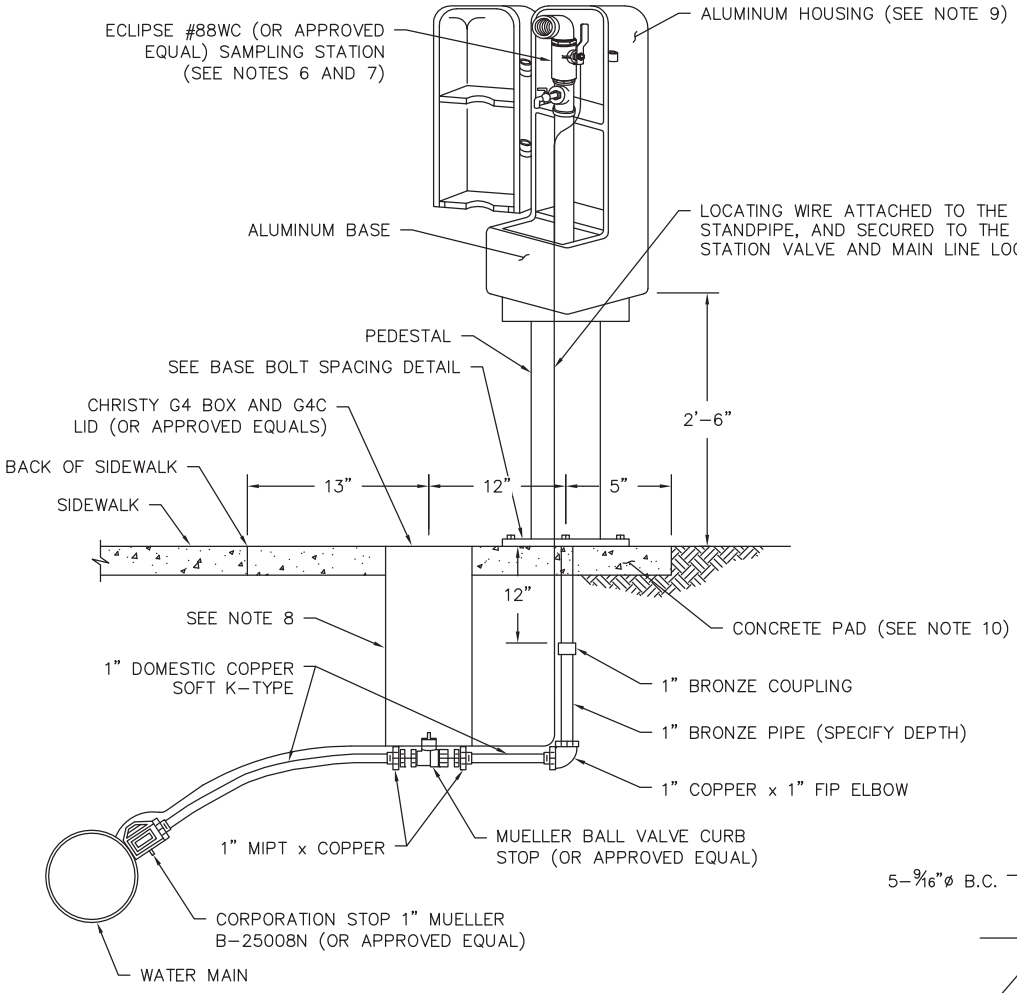
DRAWN BY:	BJR
CHECKED BY:	MK
DATE:	2019-01-11
SCALE:	NTS

STANDARD DETAIL

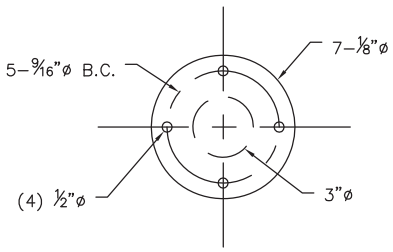
WATER VALVE BOX INSTALLATION

SHEET 1 OF 1

W-12



SECTION VIEW
SCALE: NTS



BASE BOLT SPACING
PLAN VIEW

NOTES

1. SAMPLING STATIONS SHALL BE 1' BURY, WITH A 1" MIP INLET, AND A 1" FIP DISCHARGE. A ¼" BENT-NOSE SAMPLING BIB SHALL BE LOCATED BEFORE THE DISCHARGE.
2. ALL STATIONS SHALL BE ENCLOSED IN A LOCKABLE, NON-REMOVABLE, ALUMINUM-CAST HOUSING. HOUSING SHALL BE ON A 2'-6" PEDESTAL WITH A 7-⅛" MOUNTING FLANGE.
3. WHEN OPENED, THE STATION SHALL REQUIRE NO KEY FOR OPERATION, AND THE WATER WILL FLOW IN AN ALL BRASS WATERWAY.
4. ALL WORKING PARTS WILL BE OF BRONZE AND SERVICEABLE FROM ABOVE GROUND WITH NO DIGGING.
5. A 1" BALL VALVE WILL CONTROL THE WATER FLOW, AND BE LOCATED BEFORE (OR AFTER) THE SAMPLING BBB, AS MANUFACTURED BY KUPFERLE FOUNDRY, ST. LOUIS, MO 63102 (OR APPROVED EQUAL).
6. LOCATE SAMPLING STATION ASSEMBLY AT BACK OF SIDEWALK AND ALUMINUM HOUSING DOOR FACING THE SIDEWALK.
7. ECLIPSE #88WC SAMPLING STATION IS FROM KUPFERLE FOUNDRY, ST. LOUIS, MO. 63102 (OR APPROVED EQUAL).
8. NOTCH BOTTOM OF VALVE RISER MATERIAL TO ACCOMMODATE THE SERVICE LINE AND LOCATING WIRE.
9. CAST CITY OF PITTSBURG LOGO INTO SAMPLING STATION HOUSING DOOR.
10. PAD SHALL BE PORTLAND CEMENT CONCRETE, 4,000 PSI MINIMUM, 2'-6" x 2' x 4" THICK SLOPING AT ¼" PER FOOT TOWARDS SIDEWALK.

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CITY OF PITTSBURG

NO.	DATE	REVISION

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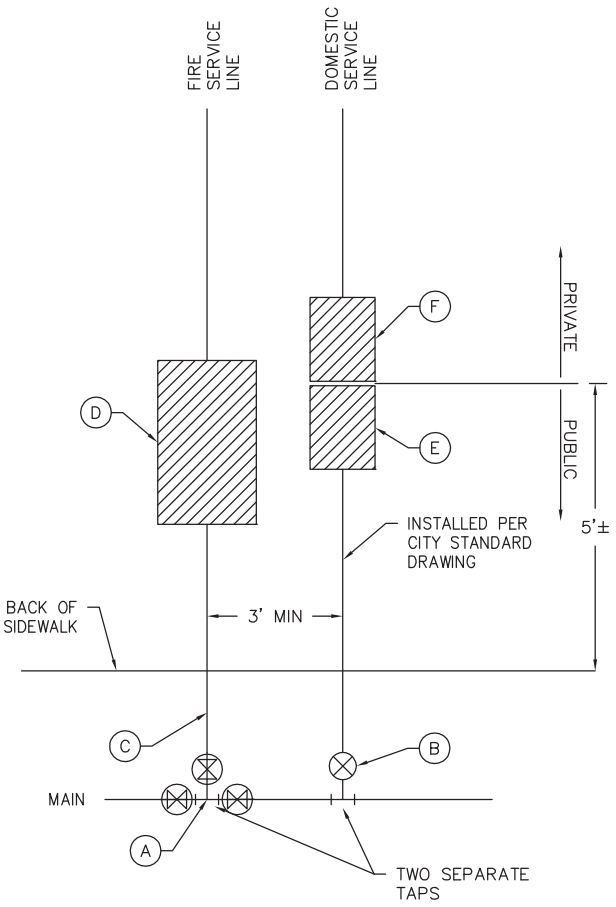
SCALE:	NTS

STANDARD DETAIL

WATER QUALITY SAMPLING STATION

SHEET 1 OF 1

W-13



PLAN VIEW

SCALE: NTS

NOTES

1. ALL MATERIALS LISTED OR SHOWN SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
2. DOUBLE CHECK DETECTOR VALVE ASSEMBLY AND WATER METER SHALL BE INSTALLED AS CLOSE TO BACK OF SIDEWALK AS POSSIBLE.
3. SEE CONTRA COSTA COUNTY FIRE DEPARTMENT FOR ADDITIONAL REQUIREMENTS. DESIGN AND INSTALLATION SUBJECT TO APPROVAL OF FIRE DEPARTMENT.

(A) STAINLESS STEEL TAPPING SLEEVE: MUELLER, JCM, ROMAC, SMITH–BLAIR OR FLANGED TEE WITH 3 FLANGED VALVES. THE REQUIREMENT FOR CUTTING IN A TEE WILL BE DETERMINED ON AN INDIVIDUAL BASIS. INSTALLATION OF ADDITIONAL MAIN LINE VALVES WILL BE DETERMINED BY THE CITY.

(B) MUELLER VALVE FLANGED BY MECHANICAL JOINT WITH OPERATING NUT (OR APPROVED EQUAL).

(C) PRESSURE CLASS 350 D.I.P. SIZE TO BE DETERMINED BY THE DESIGN ENGINEER FROM FIRE AND DOMESTIC REQUIREMENTS. THE SIZE SHALL BE DESIGNATED ON THE CONSTRUCTION PLANS FOR APPROVAL BY THE CITY.

(D) CITY APPROVED DOUBLE CHECK DETECTOR VALVE ASSEMBLY. SEE APPLICABLE STANDARD DRAWINGS.

(E) WATER METER AND STRAINER FURNISHED AND MAINTAINED BY THE CITY.

(F) REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY. PRIVATELY MAINTAINED. SEE STD DETAIL W–6.

APPROVED _____ 3/8/23

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CITY OF PITTSBURG

NO.	DATE	REVISION
1	2019–01–11	NOTE 3

DRAWN BY: BJR
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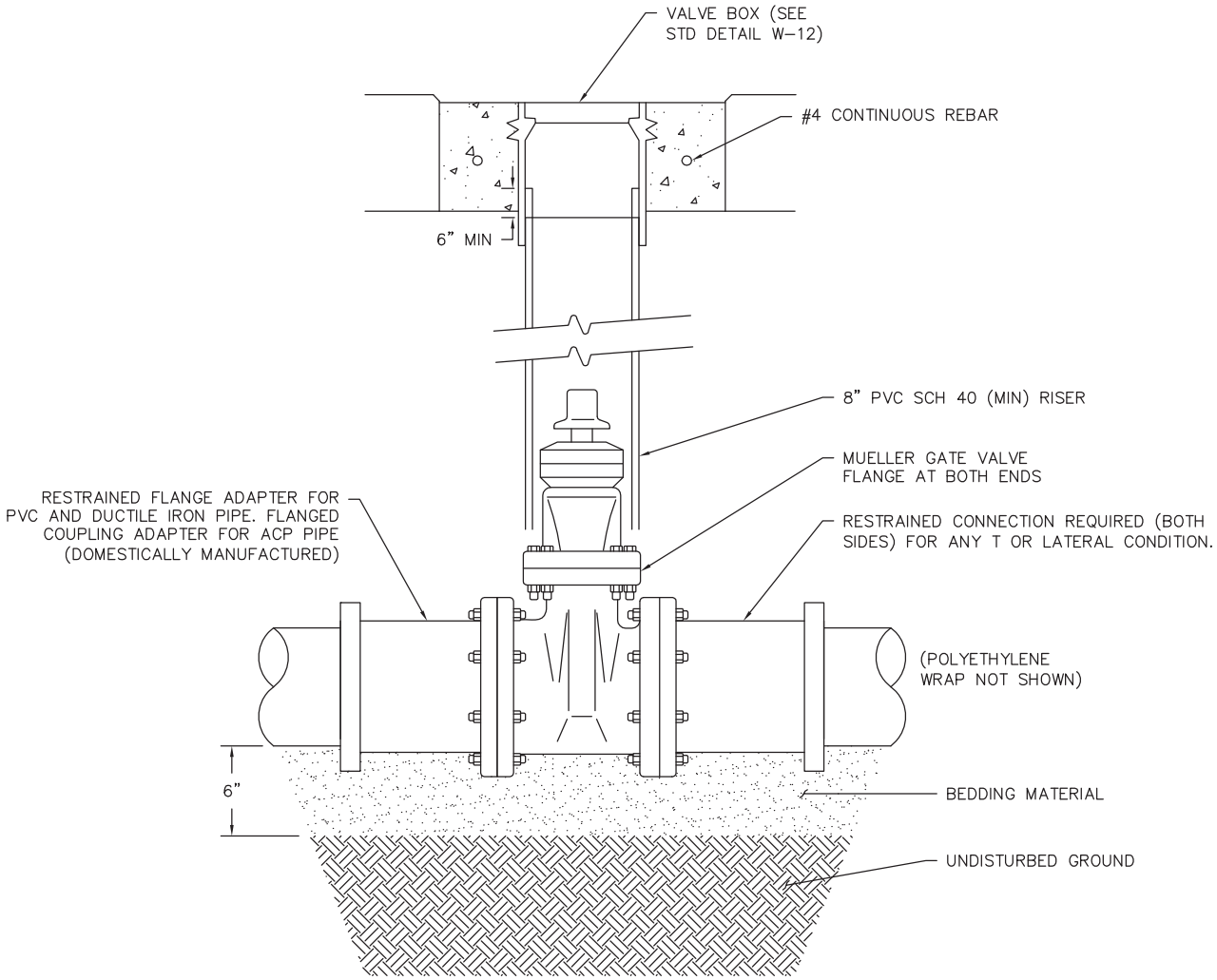
DATE: 2019–01–11
SCALE: NTS

STANDARD DETAIL

COMBINATION FIRE AND DOMESTIC WATER SERVICE

SHEET 1 OF 1

W–14



SECTION VIEW

SCALE: NTS

NOTES

1. GATE VALVES SHALL BE INSTALLED ON WATER MAINS OF 10" DIAMETER OR LESS. BUTTERFLY VALVES WILL BE INSTALLED ON WATER MAINS OF 12" OR LARGER.
2. INSTALL LOCATING WIRE AT THE VALVE LOCATION IN ACCORDANCE WITH STANDARD DETAIL W-17.
3. "CONCRETE" SHALL BE PORTLAND CEMENT CONCRETE WITH A MINIMUM STRENGTH OF 4,000 PSI.
4. ALL UNDERGROUND FLANGE BOLT ASSEMBLIES SHALL BE TYPE 316 STAINLESS STEEL WITH TEFLON ANTI-SEIZE COMPOUND.
5. MECHANICAL JOINT OKAY WITH MEGALUG.

APPROVED _____ 3/8/23

DRAFT DATE

CITY OF PITTSBURG

NO.	DATE	REVISION
1	2019-01-11	NOTE 5

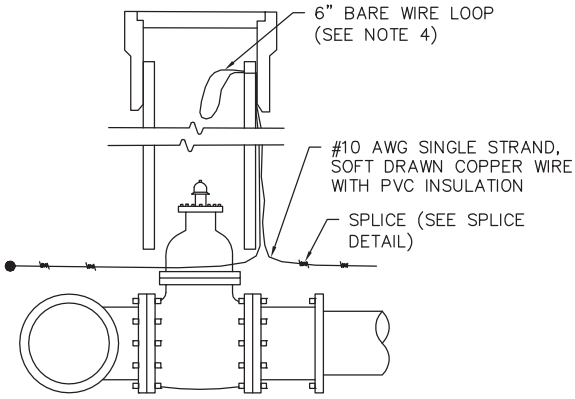
DRAWN BY: BJR
CHECKED BY: MK
DATE: 2019-01-11
SCALE: NTS

STANDARD DETAIL

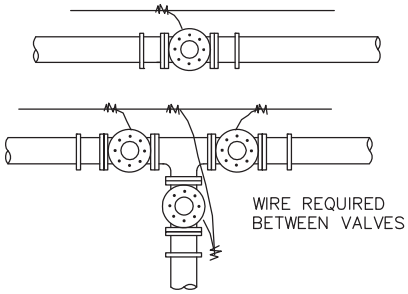
GATE WATER VALVE INSTALLATION

SHEET 1 OF 1

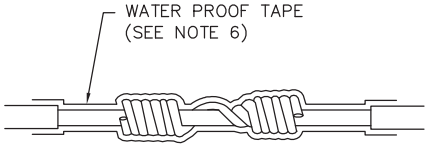
W-16



SECTION VIEW
SCALE: NTS



MAIN INTERSECTIONS
PLAN VIEW



SPLICE DETAIL

NOTES

1. WIRE SHALL BE CONTINUOUS BETWEEN VALVE BOXES ALONG THE MAIN LINE.
2. WIRE SHALL BE CONTINUOUS BETWEEN THE MAIN AND METER VALVE OR AIR RELEASE VALVE ON THE RELATED SERVICE LINE.
3. LOCATING WIRE TO BE LAID OVER TOP OF PIPE AND SECURED WITH TAPE AT EVERY 10' INTERVAL AND AT ELBOWS AND VALVES.
4. WIRE TO BE EXTENDED THROUGH NOTCH IN RISER AND WITHIN 6" MIN. OF VALVE BOX LID.
5. CONTRACTOR SHALL CONDUCT A CONTINUITY TEST ON ALL LOCATING WIRE SPLICES.
6. REMOVE INSULATION AT SPLICE. INSURE CONTINUITY. WRAP SPLICE WITH WATER–PROOF TAPE (SCOTCHKOTE ELECTRICAL COATING OR APPROVED EQUAL).

APPROVED _____ 3/8/23
DATE

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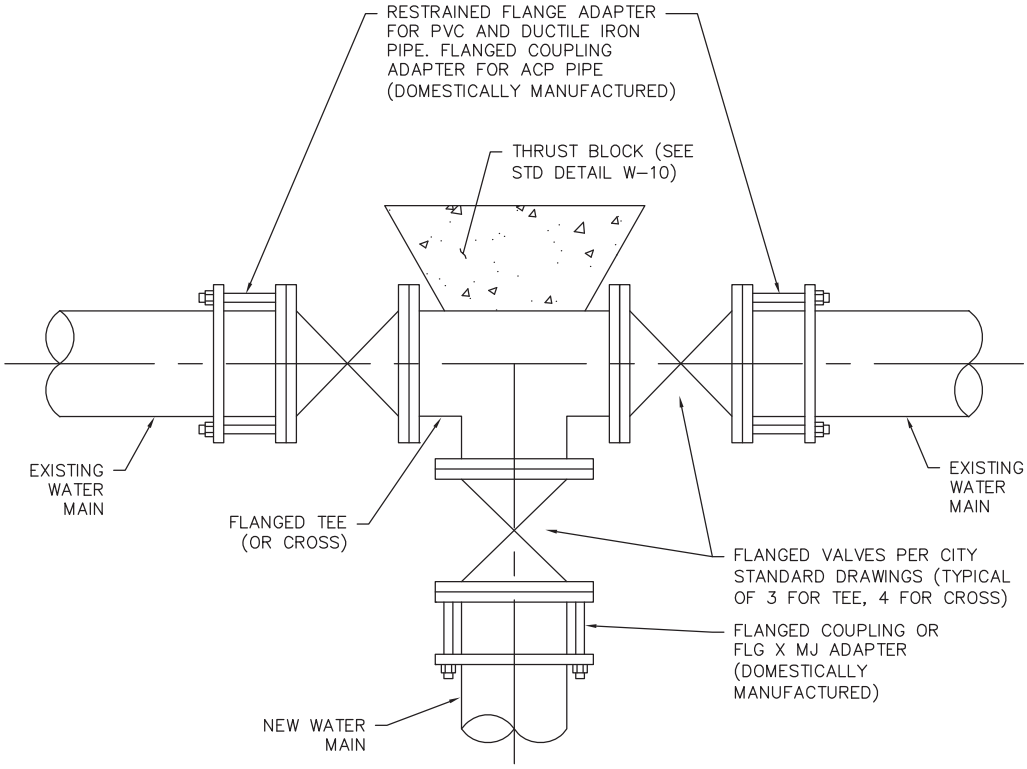
CITY OF PITTSBURG	NO.	DATE	REVISION	DRAWN BY: BJR CHECKED BY: MK DATE: 2019–01–11 SCALE: NTS	STANDARD DETAIL LOCATING WIRE INSTALLATION	SHEET 1 OF 1 W–17



PLAN VIEW

SCALE: NTS

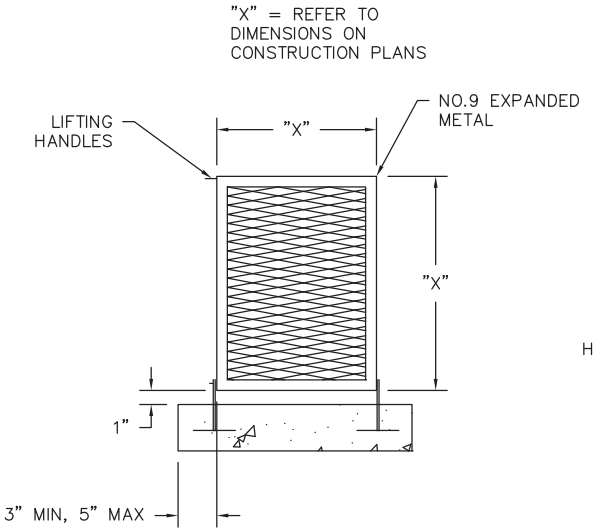
NOTES

1. EXISTING WATER MAIN MUST BE SHUT DOWN BY THE CITY AND DEWATERED BY THE CONTRACTOR. NOTIFICATION OF AFFECTED CUSTOMERS IS THE RESPONSIBILITY OF THE CONTRACTOR.
2. A GATE VALVE (OR BUTTERFLY VALVE FOR VALVES 12" OR LARGER) MUST BE INSTALLED ON EACH BRANCH OR RUN OF NEW TEE OR CROSS.
3. LOCATE ALL BUTTERFLY VALVE OPERATORS ON NORTH OR EAST SIDE OF PIPE.
4. PROVIDE THRUST BLOCK RESTRAINT PER STD DETAIL W-10.
5. INSTALL LOCATING WIRE AT VALVE LOCATIONS IN ACCORDANCE WITH STD DETAIL W-17.

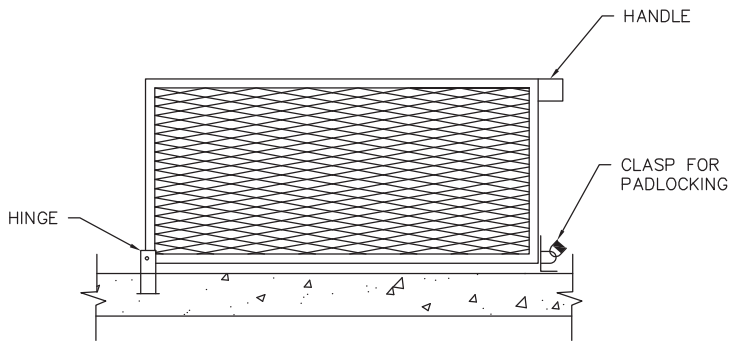
APPROVED _____ 3/8/23

DRAFT DATE

CITY OF PITTSBURG	NO.	DATE	REVISION	DRAWN BY: BJR	STANDARD DETAIL	SHEET 1 OF 1
				CHECKED BY: MK	WATER MAIN CUT-IN	W-18
				DATE: 2019-01-11		
				SCALE: NTS		



FRONT VIEW



SIDE VIEW
¾" TO 2" DEVICE

NOTES

1. REFER TO MANUFACTURER'S CATALOG FOR CORRECT DIMENSIONS TO FIT SIZE OF SPECIFIED BACKFLOW DEVICE.
2. CONCRETE FOUNDATION DIMENSIONS TO SUIT EACH INDIVIDUAL INSTALLATION, MINIMUM 4" THICK, OR AS PER MANUFACTURER'S RECOMMENDATION.
3. CONCRETE SHALL HAVE MINIMUM 28–DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
4. PAINT ALL METAL SURFACES WITH RUST RESISTANT GLOSS ENAMEL PAINT (FOREST GREEN COLOR).

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CITY OF PITTSBURG

NO.	DATE	REVISION

DRAWN BY:	BJR
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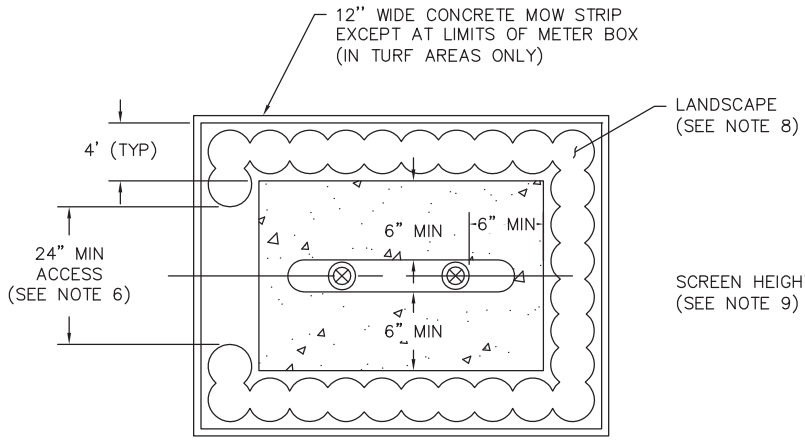
DATE:	2019–01–11
SCALE:	NTS

STANDARD DETAIL

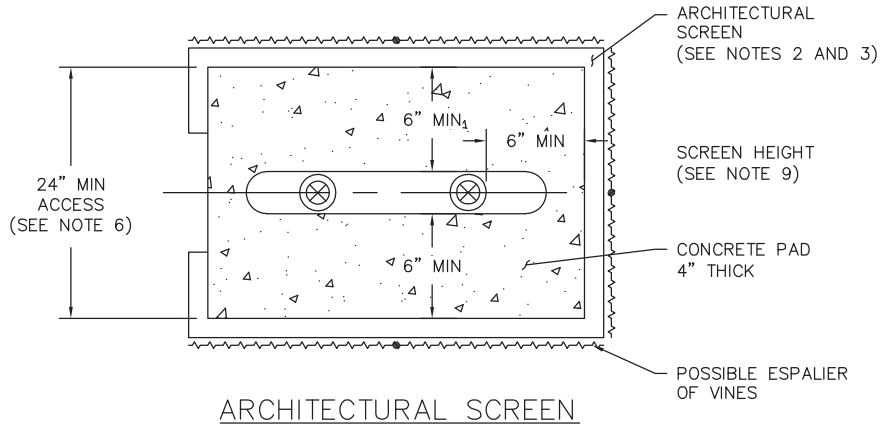
BACKFLOW ASSEMBLY CAGE

SHEET 1 OF 1

W–19



LANDSCAPE
PLAN VIEW



ARCHITECTURAL SCREEN
PLAN VIEW

NOTES

1. LANDSCAPING IS THE PREFERRED METHOD FOR SCREENING. ARCHITECTURAL SCREENING MATERIAL MAY BE USED ONLY IF THERE IS NOT ADEQUATE ROOM FOR LANDSCAPING AND IRRIGATION.
2. ARCHITECTURAL SCREENING, IF USED, SHALL BE MASONRY OR WOOD, AND SHALL MATCH ADJACENT ARCHITECTURE DESIGN, MATERIALS AND COLOR SHALL BE SUBJECT TO CITY APPROVAL.
3. IF A RETAINING WALL IS REQUIRED IN ORDER TO MEET MINIMUM CLEARANCE REQUIREMENTS AROUND DEVICE, LANDSCAPE SCREENING SHALL BE INCORPORATED ADJACENT TO THE WALL.
4. SIGHT DISTANCE CRITERIA MUST BE MET. FOR CRITERIA, SEE STANDARD DRAWINGS FOR "INTERSECTION STOPPING SIGHT DISTANCE".
5. SCREEN MAINTENANCE IS THE RESPONSIBILITY OF THE PROPERTY OWNER.
6. PROVIDE 24" MINIMUM VISUAL ACCESS FROM STREET FOR INSPECTION.
7. SCREENING MATERIAL (LANDSCAPE/ARCHITECTURAL) SHALL MAINTAIN A MINIMUM 6" CLEARANCE FROM ANY PART OF THE DEVICE TO LANDSCAPE OR SCREENING.
8. PLANT MATERIAL SHALL BE SELECTED FROM THE CITY'S APPROVED PLANT LIST (STD DETAIL L-4) AND AS APPROVED BY THE CITY ENGINEER.
9. MAXIMUM SCREEN HEIGHT OF 4' UNLESS SIGHT DISTANCE CRITERIA SPECIFIES OTHERWISE.

APPROVED _____ 3/8/23
DATE

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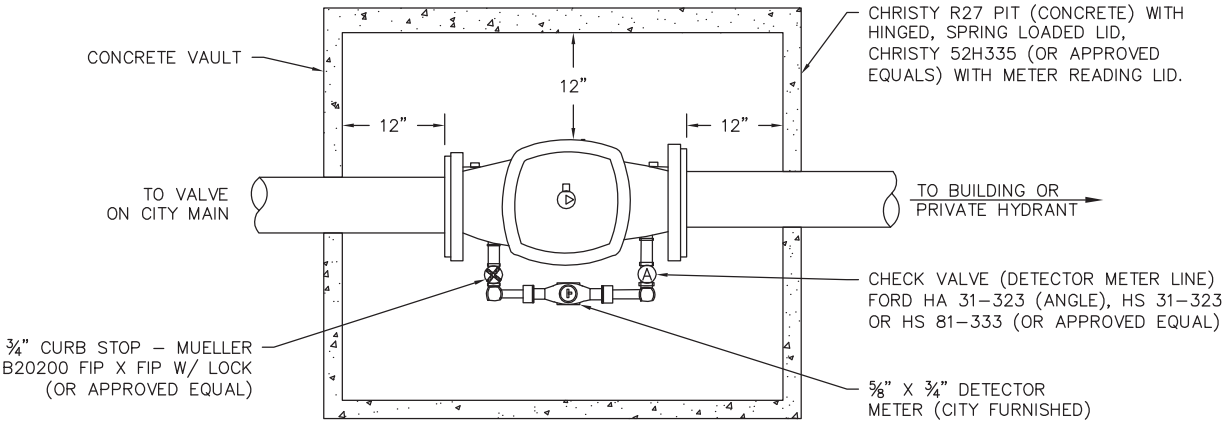
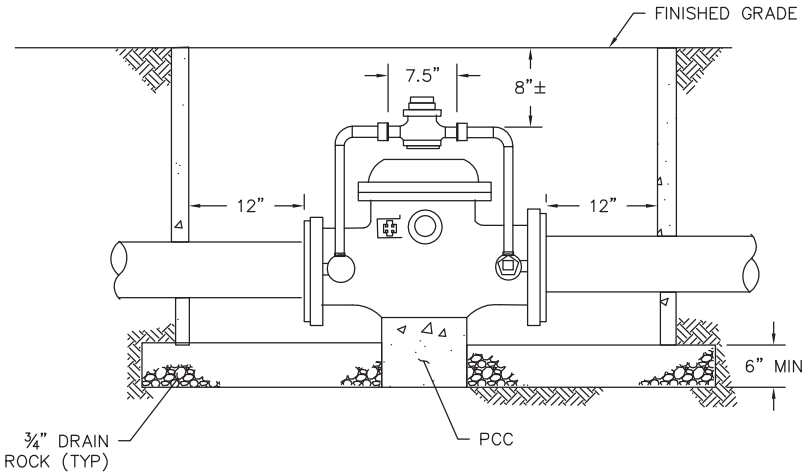
CITY OF PITTSBURG	NO.	DATE	REVISION	DRAWN BY: BJR	STANDARD DETAIL	SHEET 1 OF 1
				CHECKED BY: MK	SCREENING OF BACKFLOW PREVENTER, DETECTOR CHECK VALVE, AND BACKFLOW DEVICES	W-20
				DATE: 2019-01-11		
				SCALE: NTS		



PLAN VIEW
SCALE: NTS



SECTION VIEW
SCALE: NTS

NOTES

1. SINGLE CHECK VALVE DETECTOR CHECK ASSEMBLY SHALL BE INSTALLED ON CLASS I AND II FIRE SERVICE AND PRIVATE FIRE HYDRANT LINE.
2. DETECTOR CHECK TO BE LOCATED WITHIN RIGHT OF WAY OR CITY EASEMENT.
3. VAULTS WILL NOT BE ALLOWED IN AREAS WHERE VAULT MIGHT BE SUBJECT TO VEHICULAR TRAFFIC.
4. DETECTOR METER, ONLY, TO BE FURNISHED BY CITY.
5. ALL TRIM MATERIALS TO BE BRASS/COPPER.

APPROVED _____ 3/8/23
DATE

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CITY OF PITTSBURG	NO.	DATE	REVISION	DRAWN BY: BJR CHECKED BY: MK DATE: 2019-01-11 SCALE: NTS	STANDARD DETAIL SINGLE CHECK VALVE–DETECTOR CHECK ASSEMBLY – INDUSTRIAL & COMMERCIAL	SHEET 1 OF 1 W–22