

NOTE: METER SHALL BE SAME SIZE AS CITY-OWNED WATER SERVICE LINE (SAME SIZE AS CORPORATION STOP).

WATER SERVICE PIPE SIZE MAY BE INCREASED AFTER THE METER TO MEET DEMAND FOR DOMESTIC AND FIRE SERVICES IN THE FOLLOWING AREAS:

- LOW PRESSURE AREAS WITHIN WATER ZONES
- HILLSIDE SUBDIVISIONS
- CUSTOM HOME SUBDIVISIONS

IF WATER SERVICE PIPE IS INCREASED AFTER THE METER, THE INCREASE MUST OCCUR A MINIMUM OF THREE PIPE DIAMETER LENGTHS AFTER THE METER.

NOTES:

1. CORPORATION STOP SHALL BE M.I.P. BY COMPRESSION.
2. ANGLE METER STOP SHALL HAVE SWIVEL NUT AND LOCK WINGS AND BE VERTICALLY PLUMBED.
3. CORPORATION STOP, CURB STOP, ANGLE METER STOPS, METER, AND SERVICE LINE TO BE SAME SIZE.
4. ALL FITTINGS, VALVES, AND CORPORATION STOPS SHALL BE BRONZE; SERVICE SADDLES SHALL BE BRONZE OR STAINLESS STEEL. ALL BRASS PIPES AND FITTINGS SHALL BE IDENTIFIED AS "LEAD FREE".
5. METER BOX SHALL BE 24" MINIMUM FROM BACK OF WALK, INCREASED TO 36" WHERE SERVICE LINE CROSSES UNDER ROADWAY WITH 80' OR GREATER RIGHT-OF-WAY.
6. POLYETHYLENE SERVICE LINE SHALL BE LAID CONTINUOUS FROM SERVICE SADDLE TO ANGLE METER STOP.
7. SERVICE SADDLES SHALL NOT BE INSTALLED WITHIN 24" OF A VALVE, JOINT, FITTING OR OTHER SERVICE SADDLE.
8. #10 INSULATED COPPER TRACING WIRE SHALL BE ATTACHED TO THE PVC SLEEVE FROM THE MAIN TO THE METER BOX (SEE WR-12), SECURED TO 2" SLEEVE BACK. NO SPLICE IS ALLOWED IN POLYETHYLENE SERVICE LINE OR WIRE. ALL PIPE AND FITTINGS IN EACH SERVICE ASSEMBLY SHALL BE SAME SIZE.
9. SIZE OF SERVICE PIPE AFTER THE METER/BACKFLOW SHALL BE DETERMINED BY HYDRAULIC CALCULATIONS.
10. 2" SCH 40 PVC SLEEVE REQUIRED FOR 1" SERVICES AND 3" SCH 40 PVC FOR 2" SERVICES. WRAP BOTH ENDS OF PVC SLEEVE WITH 10 MIL TAPE.
11. IF WATER SERVICE IS REQUIRED AT A NEW BUSINESS OR TENANT IMPROVEMENT BUSINESS 24 HOURS/DAY, 7 DAYS/WEEK UNINTERRUPTED, A METER BYPASS WITH PARALLEL BACKFLOW ASSEMBLY IS REQUIRED. AT LARGE COMMERCIAL ESTABLISHMENTS THAT HAVE A 1" OR 2" SERVICE, A METER BYPASS MAY BE REQUIRED BY THE CITY.
12. FOR RESIDENTIAL: BRASS COUPLER WITH SCHEDULE 80 TOE NIPPLE. FOR COMMERCIAL: BRASS COUPLER AND BRASS PIPING/FITTINGS TO EXTEND PAST METER BOX UP TO BACKFLOW PREVENTER.

CITY OF FOLSOM	
METERED WATER SERVICE 1" THRU 2"	
SCALE: NONE	WR-01A
DATE: JANUARY 2024	

NOTES:

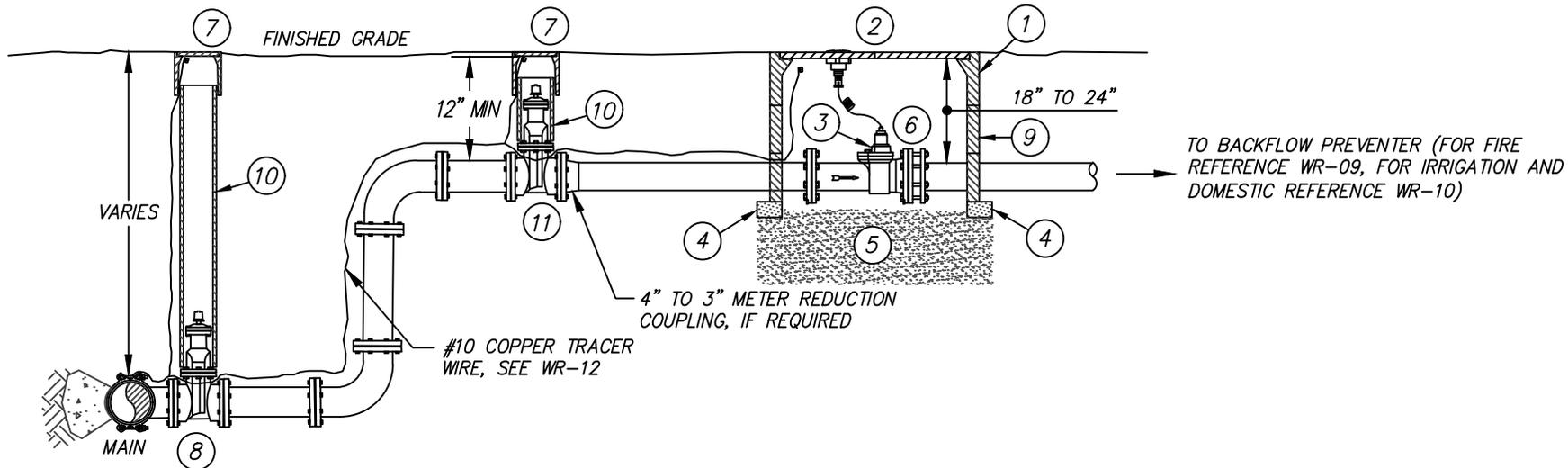
1. ALL METERS (RESIDENTIAL AND IRRIGATION) SHALL BE PURCHASED FROM THE CITY OF FOLSOM AND INSTALLED BY THE IMPROVEMENT PLAN CONTRACTOR.
2. WATER METERS WILL HAVE FACTORY POTTED NICOR WIRES. THE POTTED NICOR WIRES SHALL HAVE A PROTECTIVE END CAP AND SHALL ONLY BE REMOVED BY THE CITY OF FOLSOM.
3. IF THE NICOR WIRE END CAP IS NOT IN PLACE, THE CITY RESERVES THE RIGHT TO REJECT THE METER AND REQUIRE A NEW METER TO BE PURCHASED AND INSTALLED AT THE CONTRACTOR'S EXPENSE.
4. METER ENDS SHALL BE SEALED TO PREVENT ENTRY OF FOREIGN MATTER INTO THE METER BODY AND THE METER SHALL BE PROTECTED AND ENCLOSED IN THE BO OR CRATE TO PROTECT THE METER ASSEMBLIES. IF THE WATER METER HAS NOT BEEN MAINTAINED IN A CLOSED AND SEALED SYSTEM OR IF THERE IS VISIBLE OPERATIONAL DAMAGE, THE CONTRACTOR WILL BE REQUIRED TO PURCHASE AND INSTALL A NEW METER.
5. ALL METERS WILL BE SET TO ZERO FROM THE FACTORY.
6. THE IMPROVEMENT PLAN CONTRACTOR SHALL PROVIDE AN ELECTRONIC SUBMITTAL (IN EXCEL) TO THE CITY. THE METER ID AND REGISTER ID NEEDS TO BE LISTED WITH THE SPECIFIC LOT THAT IS ASSIGNED TO WITHIN EACH VILLAGE PRIOR TO IMPROVEMENT ACCEPTANCE.
7. WHEN THE BUILDER PULLS THE BUILDING PERMIT, THE LOT NUMBER, ADDRESS AND THE ADDRESS SPECIFIC METER ID AND REGISTER ID SHALL BE PROVIDED TO THE CITY AND SHALL MATCH THE APPROVED SUBMITTAL PROVIDED AT IMPROVEMENT CONSTRUCTION PHASE.
8. IF THERE IS A MISSING METER OR THE METER NUMBERS DO NOT MATCH THE SUBMITTAL DESCRIBED IN NOTE 7, THE BUILDER SHALL BE REQUIRED TO PAY THE CITY TO FURNISH AND INSTALL A NEW METER.
9. WHEN THE HOME BUILDER PULLS THE BUILDING PERMIT, A METERED ACCOUNT WILL BE SET UP FOR UTILITY SERVICE AND SERVICE CHARGES WILL BEGIN. THE BUILDER SHALL BE RESPONSIBLE FOR WATER BASE CHARGE AND ALL WATER CONSUMPTION UP TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
10. A METER PERMIT SHALL BE OBTAINED PRIOR TO OR IN CONJUNCTION WITH THE BUILDING PERMIT. THE WATER METER PERMIT FEE HAS BEEN REVISED TO EXCLUDE THE METER COST.
11. THE BUILDER SHALL E-MAIL THE CITY AT METERINSTALLS@FOLSOM.CA.US WITH A PDF SHOWING THAT THE BUILDING PERMIT/WATER PERMIT FEES HAVE BEEN PAID AND THAT THE WATER METER HAS BEEN INSTALLED TO INITIATE FIXED NETWORK ENDPOINT INSTALLATION.
12. THE BUILDER SHALL GIVE THE CITY 10 BUSINESS DAYS NOTICE TO INSTALL THE FIXED NETWORK ENDPOINT, AT METERINSTALLS@FOLSOM.CA.US
13. AT THIS TIME A FIXED NETWORK ENDPOINT WILL BE INSTALLED BY THE CITY AND A FINAL WATER CONSUMPTION READ WILL BE OBTAINED.
14. PAYMENT OF THE WATER BASE CHARGES AND CONSUMPTION SHALL BE PAID BY THE BUILDER PRECEDENT TO RECEIVING A CERTIFICATE OF OCCUPANCY.
15. THE NEW METER PERMIT FEE WILL INCLUDE THE COST FOR THE FIXED NETWORK ENDPOINT AND INSTALLATION, PER FMC 13.24.050. THESE COSTS MAY CHANGE IN THE FUTURE BASED ON MATERIAL OR INSTALLATION COSTS. (THESE COSTS EXCLUDE THE COST OF THE WATER METER.)
16. METERS ARE ONLY TO BE LOCATED IN DRIVEWAYS WITH EWR APPROVAL. IF A METER IS APPROVED TO BE LOCATED IN A DRIVEWAY, METER LID SHALL BE OLD CASTLE PRECAST MODEL B16-61GP OR APPROVED EQUAL.

CITY OF FOLSOM

METERED WATER
SERVICE 1" THRU 2"
NOTES

SCALE: NONE
DATE: JANUARY 2024

WR-01B

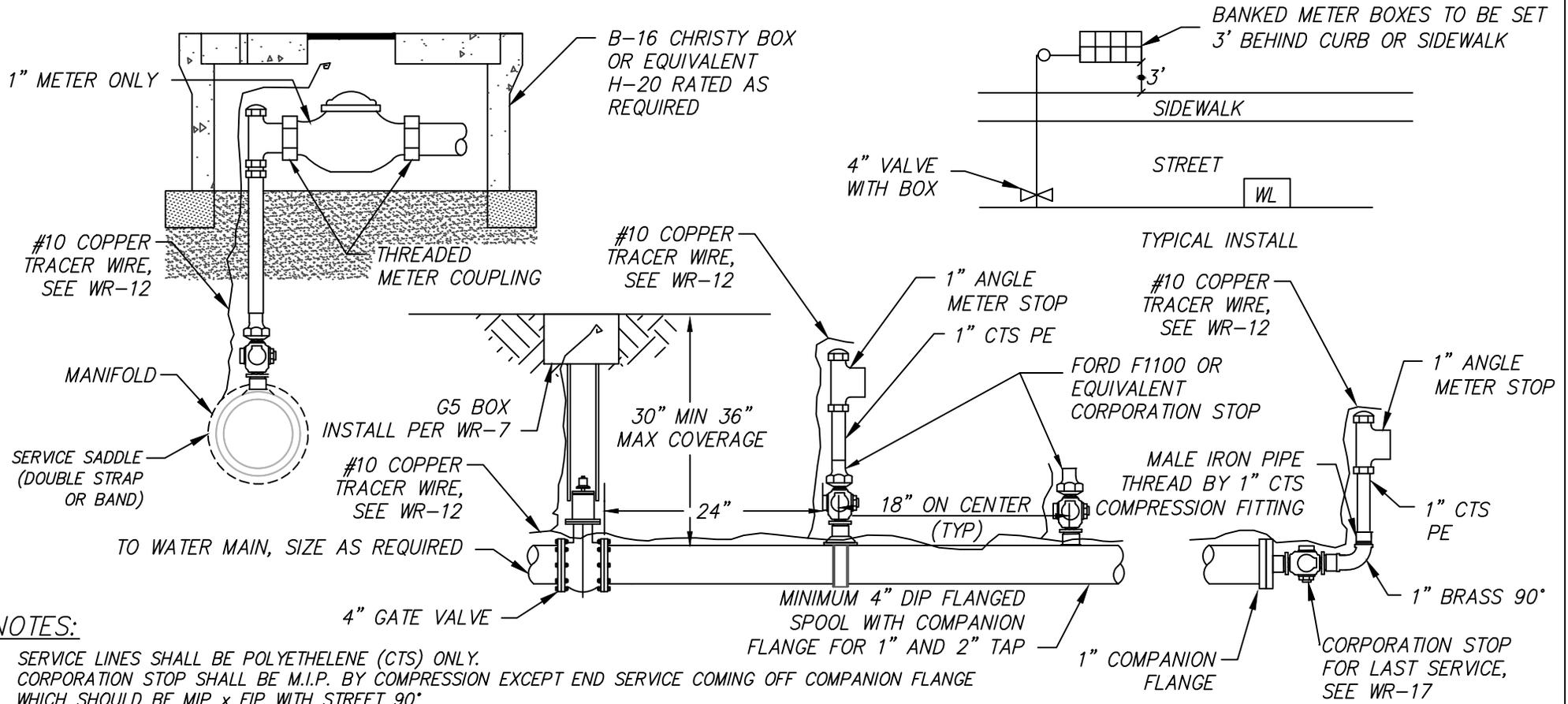


- ① REINFORCED CONCRETE UTILITY BOX (SEE CITY CONSTRUCTION SPECIFICATIONS, SECTION 4 FOR BOX AND LID SIZE).
- ② 2 PC. STEEL CHECKER PLATE WITH TWO(2) 10" ROUND SELF-CLOSING READING LIDS AND 1 3/4" HOLE FOR TOUCH READ MODULE IN ONE (1) READING LID (CHRISTY B48-62G COVER OR APPROVED EQUAL).
- ③ NEW METER INSTALLATION REQUIRES CONTRACTOR TO INSTALL CITY APPROVED WATER METER WITH METER BOX CLEARANCES SHOWN ON THIS SHEET. FIXED NETWORK ENDPOINT IS TO BE INSTALLED BY THE CITY OF FOLSOM AFTER THE PAYMENT TO THE CITY OF ASSOCIATED METER FEES.
- ④ INSTALL COMMON BRICK (4"x2"x8") UNDER ENTIRE UTILITY BOX PERIMETER, FLUSH TO THE INSIDE OF THE METER BOX, AND TIGHT TO BOTTOM OF BOX WITH NO GAPS.
- ⑤ SAND BACKFILL, 12" TO 18" DEEP. SAND TO BE FILLED 1" BELOW TOP OF BRICK.
- ⑥ FLANGED COUPLING ADAPTOR.
- ⑦ VALVE BOX AND LID PER CITY STANDARDS.
- ⑧ GATE VALVE.
- ⑨ UTILITY BOX EXTENSION.
- ⑩ VALVE BOX RISER (FOR REFERENCE SEE WR-07).
- ⑪ GATE VALVE. (NEEDED IF METER IS MORE THAN 20' FROM MAIN)

NOTES

- A. METER BOX SIZES SHALL ALLOW FOR METER TO BE REPLACED WITHOUT REMOVING THE BOX AND PROVIDE A MINIMUM 12" CLEARANCE AROUND FLANGES.
- B. CUT OUT PORTIONS OF THE METER BOX SHALL BE PACKED FROM THE OUTSIDE WITH STIFF CONCRETE, INSIDE SMOOTH FINISH.
- C. ALL STEEL OR DUCTILE IRON JOINTS BETWEEN MAIN AND METER SHALL BE FLANGE CONNECTED.
- D. ALL PIPING TO BE FULLY RESTRAINED PVC OR DIP. THRUST BLOCKS WILL BE ALLOWED WITH APPROVAL FROM THE EWR DEPARTMENT. THRUST BLOCKS ARE TO BE CONSTRUCTED PER STANDARD DRAWING WR-04.
- E. INSTALL TRACER WIRE PER THE STANDARD SPECIFICATIONS & WR-12.
- F. THIS IS A TYPICAL DRAWING, ACTUAL INSTALLATION WILL VARY WITH FIELD CONDITIONS.
- G. 3" METERED SERVICE REQUIRES 4" TAP ONTO MAIN; 4" PIPE TO METER WITH REDUCTION COUPLING.
- H. LATERAL SHALL HAVE A MINIMUM 5X DIAMETER LENGTH OF STRAIGHT PIPE BEFORE METER AND 3X DIAMETER STRAIGHT PIPE AFTER METER.
- I. PRIVATE WATER SERVICE LINE OWNERSHIP AND RESPONSIBILITY BEGINS AFTER THE WATER METER GASKET.
- J. IF WATER SERVICE IS REQUIRED AT A NEW BUSINESS OR TENANT IMPROVEMENT BUSINESS 24 HOURS/DAY, 7 DAYS/WEEK UNINTERRUPTED, A METER BYPASS WITH PARALLEL BACKFLOW ASSEMBLY IS REQUIRED.

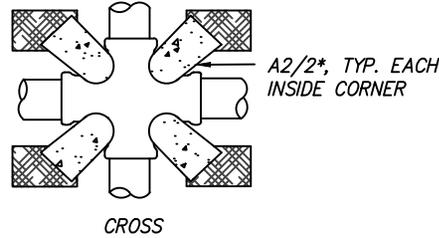
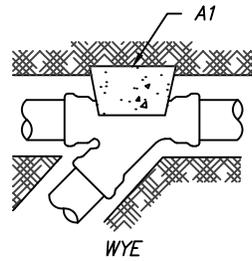
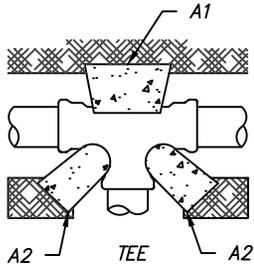
CITY OF FOLSOM	
3" OR LARGER IRRIGATION METER INSTALLATION	
SCALE: NONE DATE: JANUARY 2024	WR-02



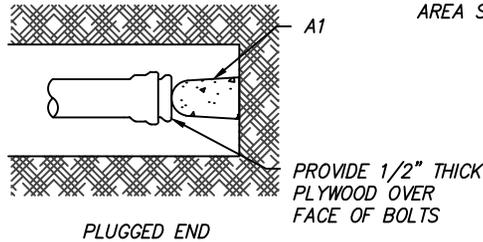
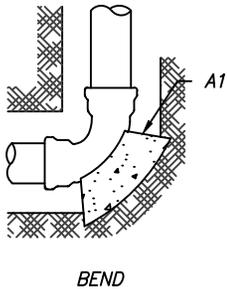
NOTES:

1. SERVICE LINES SHALL BE POLYETHYLENE (CTS) ONLY.
2. CORPORATION STOP SHALL BE M.I.P. BY COMPRESSION EXCEPT END SERVICE COMING OFF COMPANION FLANGE WHICH SHOULD BE MIP x FIP WITH STREET 90°
3. ANGLE METER STOP SHALL HAVE SWIVEL NUT AND LOCK WINGS AND BE VERTICALLY PLUMBED BY COMPRESSION.
4. BRASS PIPES AND FITTINGS SHALL BE IDENTIFIED AS "LEAD FREE".
5. CORPORATION STOP, ANGLE METER STOPS, SERVICE LINE TO BE SAME SIZE VALVES.
6. METER AND FIXED NETWORK FIREFLY SHALL BE PROVIDED BY CITY UPON PAYMENT OF FEES.
7. LOCKABLE ANGLE METER STOP WILL PRECEDE THE METER AND ENTIRE SETUP WILL BE IN THE CONFINES OF THE WATER BOX.
8. ALL FITTINGS, VALVES, AND CORPORATION STOPS SHALL BE BRONZE; SERVICE SADDLES SHALL BE BRONZE OR STAINLESS STEEL.
9. INCREASE MINIMUM CLEARANCE OF WATER SERVICE TO 36" WHERE SERVICE LINE CROSSES UNDER ROADWAY WITH 80' OR GREATER R/W.
10. SERVICE LINE SHALL BE LAID CONTINUOUS FROM SERVICE SADDLE TO METER STOP.
11. SERVICE SADDLES SHALL NOT BE INSTALLED WITHIN 2' OF A VALVE, JOINT.
12. POLYETHYLENE PIPE SHALL HAVE #10 INSULATED COPPER TRACING WIRE ATTACHED TO THE SERVICE LINE FROM THE MAIN TO THE METER BOX (SEE WR-12)
13. D.I.P. SHALL BE DOUBLE WRAPPED IN 8 MIL PLASTIC.
14. ALL BACKFILL SHALL BE WASHED SAND.
15. ALL CORP STOPS TO BE INSTALLED @ 45° OF HORIZONTAL.
16. PRIVATE WATER SERVICE LINE OWNERSHIP AND RESPONSIBILITY BEGINS AFTER THE WATER METER
17. METER BOXES TO BE PLACED IN LANDSCAPE AREA ONLY

CITY OF FOLSOM	
WATER SERVICE MANIFOLD FOR MULTIPLE 1" METERS	
SCALE: NONE	WR-03
DATE: JANUARY 2024	



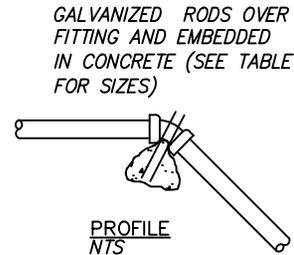
*EACH AREA (A/2) IS 1/2 OF TABULATED TOTAL A2 AREA SHOWN IN THE TABLE



BEARING AREA OF THRUST BLOCKS IN SQ FT (HORIZONTAL BENDS)					
FITTING SIZE	TEE, WYE, 90 DEGREE BEND, PLUGGED END, OR PLUGGED TEE/CROSS		BEND ANGLE (DEGREES)		
	A1	A2	45°	22 1/2°	11 1/4°
4	2.5	1.9	1.3	—	—
6	5.7	4.0	2.1	1.3	—
8	10.1	7.2	3.9	2.0	1.3
10	15.7	11.2	6.1	3.2	1.6
12	22.7	16.0	8.8	4.5	2.3
14	30.7	16.3	11.9	6.1	3.1
16	40.0	21.3	15.5	8.0	4.0
18	50.7	27.0	19.5	10.1	5.1
20	62.7	33.3	24.1	12.5	6.3
24	90.7	48.0	34.9	18.1	9.1

THRUST BLOCK NOTES

- REGARDLESS OF PLUGS, THROUGH RUNS, ETC., ALL TEES AND CROSSES ARE TO BE RESTRAINED AS SHOWN IN THIS DETAIL.
- THIS DETAIL TO BE USED FOR ALL CUT-IN TEES, CROSSES, ETC.
- THIS DETAIL SHALL BE USED WHERE RESTRAINT LENGTH REQUIRED FOR MECHANICAL JOINT RESTRAINT CANNOT BE ACHIEVED DUE TO INSUFFICIENT PIPE LENGTH.
- THRUST BLOCKS ARE TO BE CONSTRUCTED OF CLASS B CONCRETE. CONCRETE IS TO BE CLEAR OF JOINT AND JOINT ACCESSORIES.
- CONCRETE THRUST BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH OR ENGINEERED SOIL AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI.
- REQUIRED VOLUMES OR BEARING AREAS AT FITTINGS SHALL BE AS INDICATED, ADJUSTED, IF NECESSARY, TO CONFORM TO THE TEST PRESSURE(S) AND ALLOWABLE SOIL BEARING STRESS(ES) FOR SPECIFIC SITE CONDITIONS.
- THRUST BLOCK VOLUMES FOR VERTICAL BENDS HAVING UPWARD RESULTANT THRUSTS ARE BASED ON TEST PRESSURE OF 150 PSIG AND THE WEIGHT OF CONCRETE = 4050 LBS/CU YD. TO COMPUTE VOLUMES FOR DIFFERENT TEST PRESSURES, USE THE FOLLOWING EQUATION: VOLUME = (TEST PRESS./150) x (TABLE VALUE).
- BEARING AREAS FOR HORIZONTAL BEND THRUST BLOCKS ARE BASED ON TEST PRESSURE OF 150 PSIG AND AN ALLOWABLE SOIL BEARING STRESS OF 1,500 LBS/SQ FT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, USE THE FOLLOWING EQUATION: BEARING AREA = (TEST PRESSURE/150) x (1,500/SOIL BEARING STRESS) x (TABLE VALUE).
- THRUST BLOCKS FOR VERTICAL BENDS HAVING DOWNWARD RESULTANT THRUSTS SHALL BE THE SAME AS FOR HORIZONTAL BENDS.
- BEARING AREA OF THRUST BLOCK SHALL NOT BE LESS THAN 1.0 SQ FT.
- VERTICAL BENDS THAT REQUIRE A THRUST BLOCK VOLUME EXCEEDING 5 CUBIC YARDS REQUIRE SPECIAL BLOCKING DETAILS. SEE DRAWINGS FOR VOLUMES SHOWN TO LEFT OF SOLID LINE IN TABLE.
- THRUST BLOCKS MAY BE REQUIRED IN CASES NOT SHOWN ON THIS DETAIL.
- WHEN INLINE VALVES ARE INSTALLED TO EXISTING PIPING, THRUST RESTRAINT ON EACH SIDE OF THE VALVE MUST BE DETAILED AND CALCULATED BY THE DESIGNER.
- WHEN HOT-TAPS ARE INSTALLED ON EXISTING PIPING, THRUST RESTRAINT MUST BE CALCULATED AND DETAILED BY THE DESIGNER.



VOLUME OF THRUST BLOCK IN CUBIC YARDS (VERTICAL BENDS)			
FITTING SIZE	BEND ANGLE (DEGREES)		
	45°	22 1/2°	11 1/4°
4	1.1	0.4	0.2
6	2.7	1.0	0.4
8	4.0	1.5	0.6
10	6.0	2.3	0.9
12	8.5	3.2	1.3
14	11.5	4.3	1.8
16	14.8	5.6	2.3

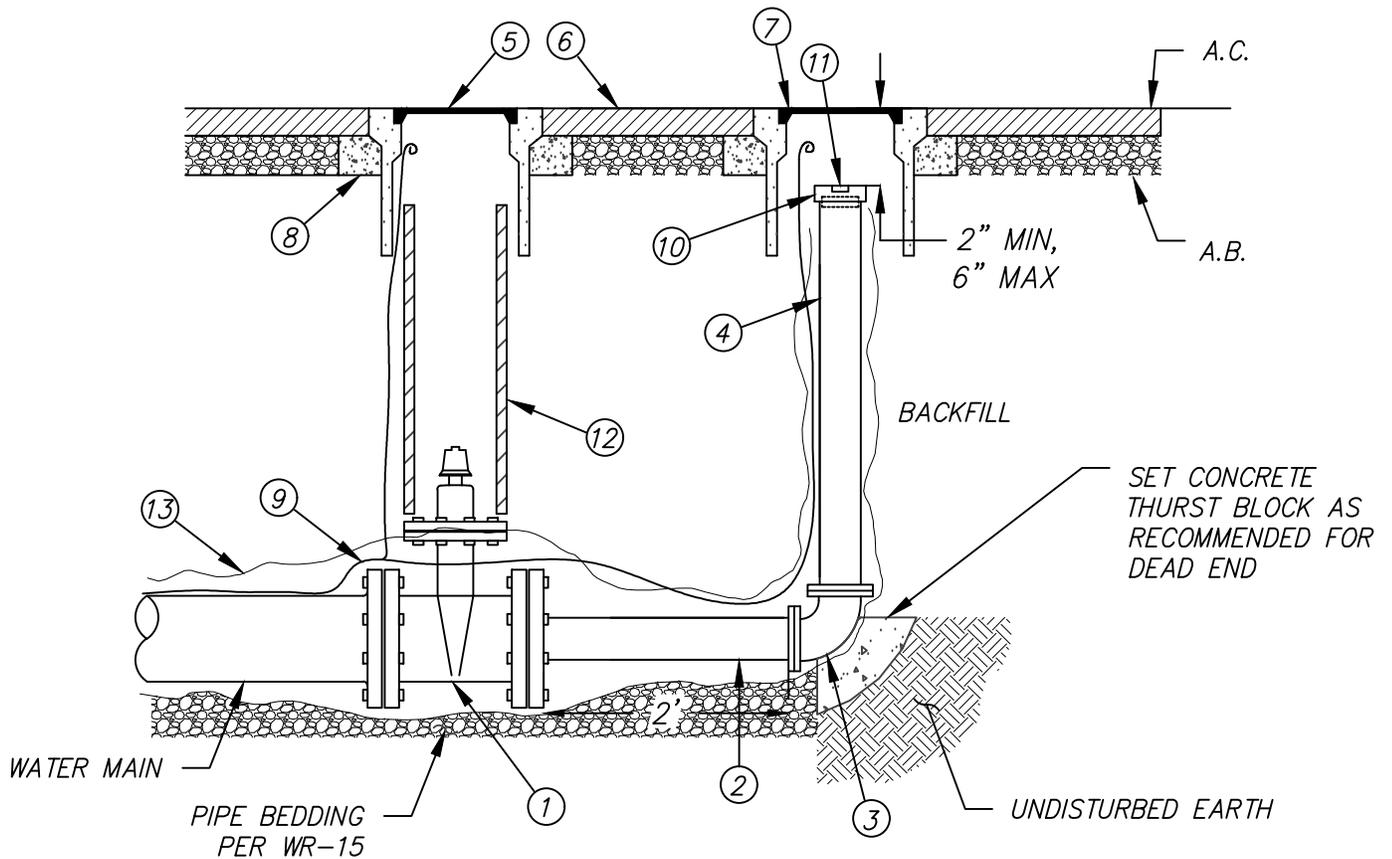
FITTING SIZE	ROD SIZE	EMBEDMENT
12" & LESS	#6	30"
14" - 16"	#8	36"

CITY OF FOLSOM

THRUST BLOCK BEARING AREA

SCALE: NONE
DATE: JANUARY 2024

WR-04

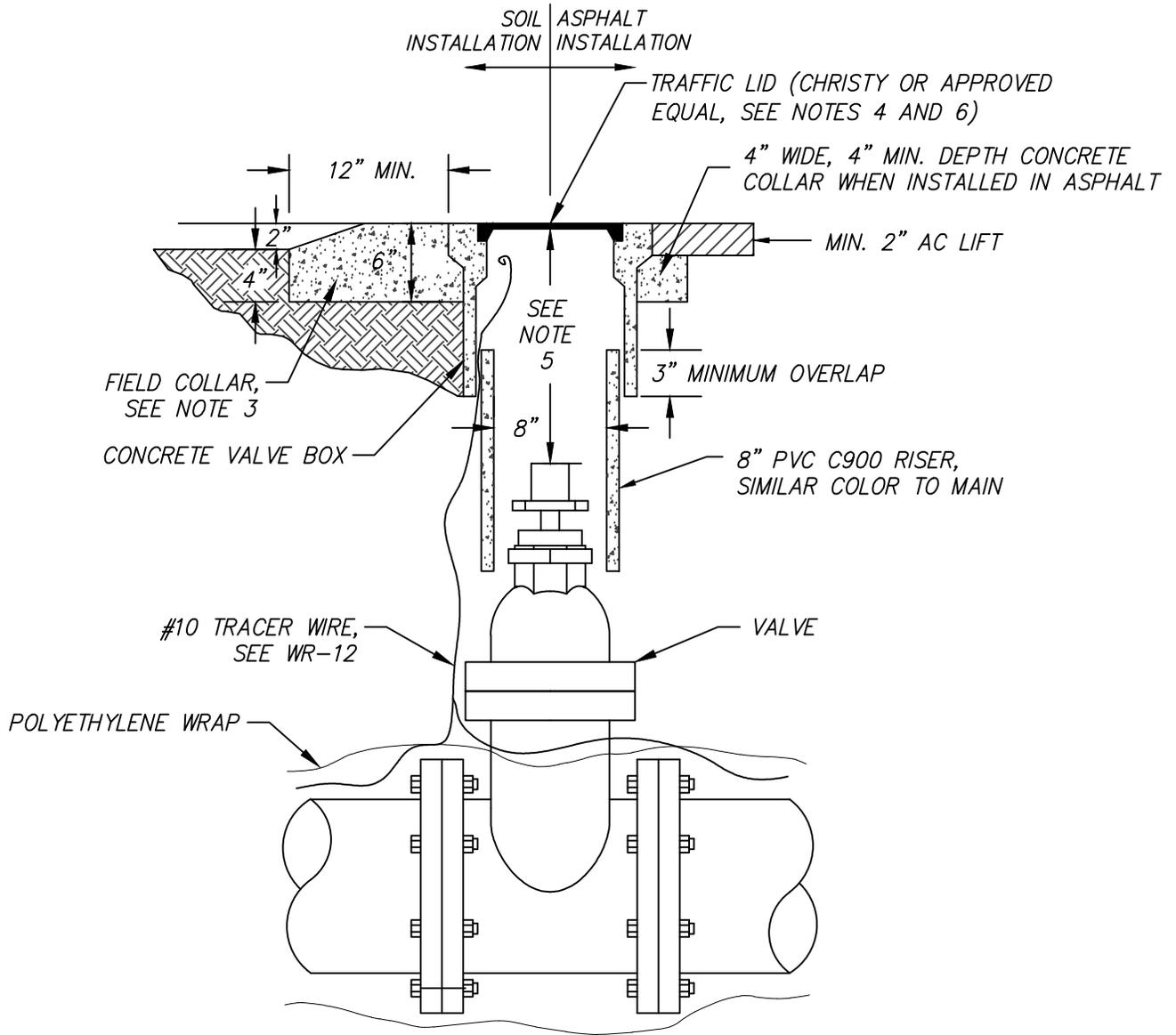


ELEVATION

NOTES:

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| <ul style="list-style-type: none"> ① GATE VALVE, TO MATCH MAIN SIZE ② 4" OR 6" FLANGED SPOOL ③ 4" OR 6" 90° ELBOW ④ 4" OR 6" FLANGED DIP SPOOL ⑤ TRAFFIC LID (CHRISTY G5 OR EQUAL) ⑥ 1.5" MIN AC ABOVE COLLAR ⑦ H2O TRAFFIC LID TO READ "BO" (CHRISTY G12 OR EQUAL) ⑧ 4"x4" CONCRETE COLLAR, TYP ⑨ #10 COPPER TRACER WIRE (SEE WR-12) ⑩ 4" OR 6" COMPANION FLANGE WITH FEMALE THREAD ⑪ 4" OR 6" BRASS PLUG WITH KEY SLOT ⑫ VALVE BOX RISER (FOR REFERENCE SEE WR-07) ⑬ POLYETHYLENE WRAP | <ul style="list-style-type: none"> 1. REQUIRED TO BE PLACED AT THE END OF 8" OR LARGER WATER MAINS. 2. BLOW OFF VALVE TO BE PLACED AT THE END OF MAIN LINE. 3. TEMPORARY BLOW OFF VALVES MAY BE 4" GALVANIZED. 4. PERMANENT BRASS BLOW OFF SHALL BE IDENTIFIED AS "LEAD FREE". 5. CUL-DE-SAC BLOW OFFS SHALL BE FIRE HYDRANT ONLY. REDUCE WATER MAIN TO 6" AFTER LAST WATER SERVICE. |
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CITY OF FOLSOM	
4" & 6" END OF LINE BLOW-OFF VALVE ASSEMBLY	
SCALE: NONE DATE: JANUARY 2023	WR-05



TRAFFIC
VALVE BOX

NOTES:

1. SET VALVE BOX TO FINAL FINISHED GRADE. WHERE THE FINISHED GRADE HAS NOT BEEN DEFINED, PLACE 4 x 4 LOCATING POST PAINTED BLUE, WITHIN 1' OF VALVE BOX. POST SHALL BE 6' IN LENGTH AND BURIED 3'.
2. VALVE BOX AND RISER TO BE SET PLUMB AND CENTERED OVER WATER VALVE NUT.
3. WHEN INSTALLED IN SOIL OR UNFINISHED AREAS, BOX SHALL HAVE A FIELD COLLAR AND SHALL BE 6" TOTAL DEPTH WITH 2" ABOVE GRADE AND EXTEND A MINIMUM 1' BEYOND THE OUTSIDE DIAMETER OF THE VALVE BOX.
4. POTABLE WATER VALVES SHALL USE CHRISTY G-05 OR APPROVED EQUAL, NON-POTABLE VALVES SHALL USE TRIANGULAR CHRISTY G-04 OR APPROVED EQUAL.
5. OPERATING NUT OF THE VALVE MUST BE SET FROM 18" MIN. TO 5' MAX. FROM THE TOP OF THE VALVE BOX. IF VALVE MUST BE SET SUCH THAT THE NUT IS LOWER THAN 5' FROM THE TOP OF BOX, OPERATOR EXTENSIONS WILL BE REQUIRED.
6. PRESSURE ZONE SHALL BE WELDED ONTO THE VALVE BOX FRAME. NAMEPLATE TAGS ARE NOT AN ACCEPTABLE ALTERNATIVE TO FRAME WELDS. PRESSURE ZONE SHALL BE LABELED AS FOLLOWS:

POTABLE PRESSURE ZONE LABELS: PZ-1,
PZ-2, PZ-3, PZ-4, PZ-5, PZ-6

NON-POTABLE PRESSURE ZONE LABELS:
NPZ-1, NPZ-2, NPZ-3, NPZ-4, NPZ-5, NPZ-6

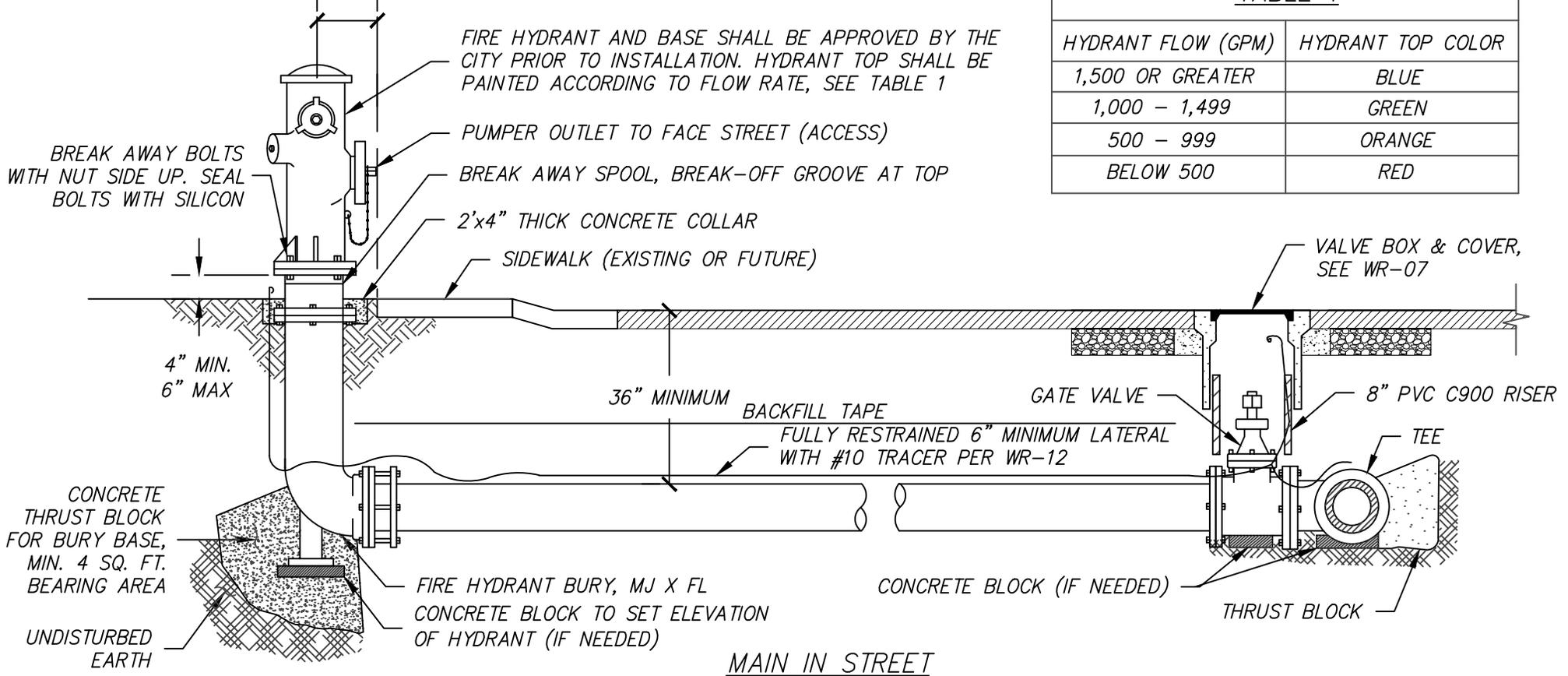
CITY OF FOLSOM

WATER VALVE RISER AND BOX

SCALE: NONE
DATE: JANUARY 2023

WR-07

HYDRANT DISTANCE FROM BACK OF WALK
TO CENTER OF HYDRANT PER NOTE 10



HYDRANT FLOW (GPM)	HYDRANT TOP COLOR
1,500 OR GREATER	BLUE
1,000 - 1,499	GREEN
500 - 999	ORANGE
BELOW 500	RED

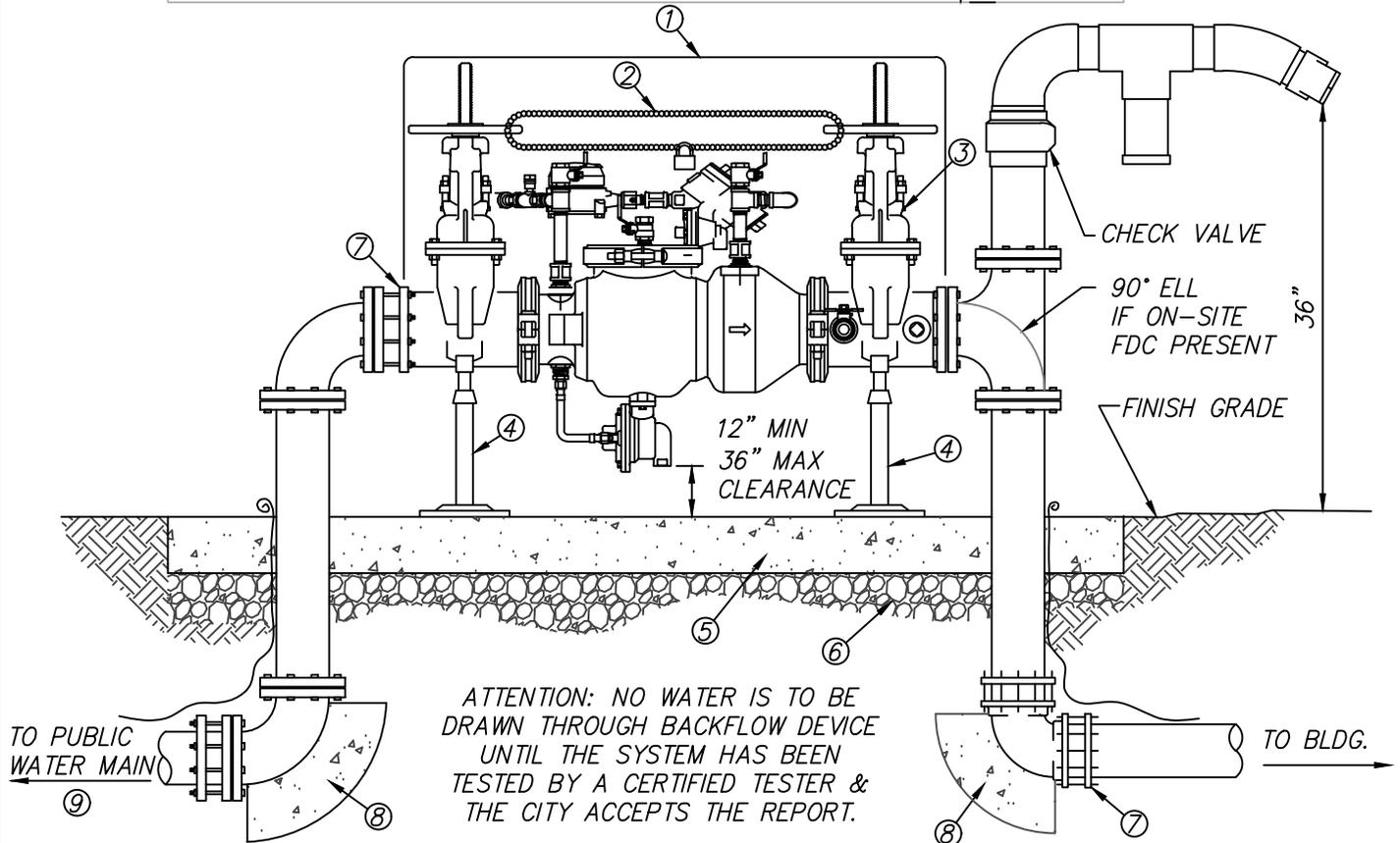
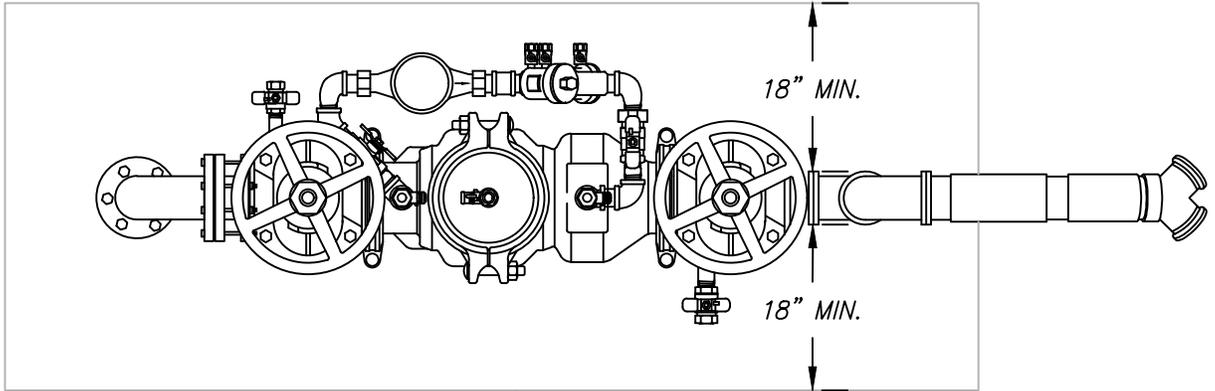
NOTES:

1. HYDRANT LATERALS OVER 50 LINEAR FEET SHALL BE 8" AND HYDRANTS SHALL BE ON LONG SIDE OF THE STREET RELATIVE TO MAIN WHEN POSSIBLE.
2. IN COMMERCIAL AREAS, FIRE HYDRANTS SHALL BE PROTECTED FROM VEHICULAR DAMAGE AND ACCESSIBLE TO FIRE PROTECTION EQUIPMENT PER CITY STANDARDS.
3. ALL FITTINGS AND HYDRANT LATERAL SHALL BE DUCTILE IRON OR PVC C900.
4. DETAILS SHOWN FOR VALVES ON HYDRANT LATERALS SHALL ALSO APPLY TO VALVES ON MAINS.
5. VALVES AND FITTINGS SHALL BE DOUBLE WRAPPED IN 8 MIL POLYETHYLENE.
6. MARK HYDRANT WITH BLUE PAVEMENT REFLECTOR, SEE SPECIFICATIONS.
7. TYPES SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY.
8. GATE VALVE SHALL BE FLANGE CONNECTED ADJACENT TO MAIN.
9. PAINT CITY HYDRANTS WITH TWO COATS OF SAFETY YELLOW AND PRIVATE HYDRANTS WHITE.
10. HYDRANT LOCATION SHALL BE 2' CENTERED FROM BACK OF SIDEWALK, 2' CENTERED FROM BACK OF CURB FOR DETACHED SIDEWALKS, OR 3' CENTERED FROM BACK OF CURB IF THERE IS NO SIDEWALK.
11. WHEN ADJACENT DRIVEWAYS ARE BOTH LOCATED ON THE SHORT SIDE OF A PROPERTY LINE, HYDRANT SHOULD NOT BE LOCATED BETWEEN DRIVEWAYS.

CITY OF FOLSOM	
FIRE HYDRANT AND VALVE INSTALLATION	
SCALE: NONE DATE: JANUARY 2024	WR-08

NOTES:

1. REDUCED PRESSURE DETECTOR ASSEMBLY SHALL BE USC APPROVED AND VERIFIED BY THE CITY.
2. ALL MATERIALS SHALL MEET APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS.
3. REDUCED PRESSURE PRINCIPLE ASSEMBLY SHOWN MAY NOT REFLECT MANUFACTURERS' CONFIGURATION.
4. PIPE PENETRATION SHALL BE FILLED WITH NON-SHRINK GROUT HAVING A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI. OPENING SHALL BE MINIMUM 2" LARGER THAN PIPE O.D.
5. INSTALL #10 TRACER WIRE PER WR-12 AND CITY STANDARDS.
6. ALL JOINTS BETWEEN MAIN AND DETECTOR CHECK SHALL BE FLANGED CONNECTED.
7. FOR RETROFITS, SUBMIT BACKFLOW PREVENTOR FOR CITY APPROVAL.
8. DISTANCE FROM P.O.C. SHALL BE 5' MAXIMUM UNLESS CONDITIONS DO NOT PERMIT. RPDA SHALL NOT BE LOCATED BETWEEN CURB AND DETACHED SIDEWALK. IF RPDA IS LOCATED AT A DETACHED SIDEWALK, RPDA SHALL BE 3'-5' FROM THE BACK OF WALK.

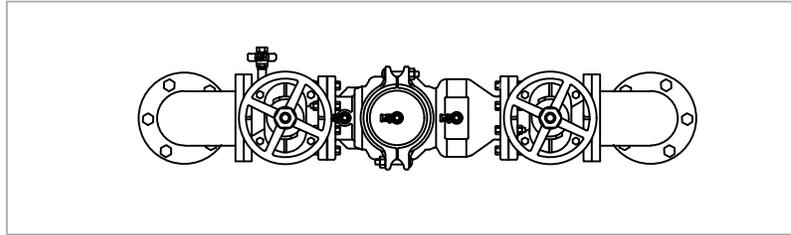


- ① APPROVED REDUCED PRESSURE DETECTOR ASSEMBLY (RPDA) WITH BYPASS METER PER CURRENT USC APPROVED LIST
- ② MIN 3/8" NON CASE HARDENED CHAIN WITH LOCK (KEY TO BE GIVEN TO FIRE DEPARTMENT)
- ③ AWWA C-509 RESILIENT SEAT GATE VALVE
- ④ PIPE SUPPORT, GRINNEL FIG. 264 OR APP. EQUAL
- ⑤ 4" CONCRETE SLAB - 36" WIDE, LENGTH TO EXTEND 6" MIN BEYOND PIPING ON ALL SIDES
- ⑥ 4" THICK AGGREGATE BASE
- ⑦ RESTRAINED FLANGED COUPLING ADAPTOR OR RESTRAINED MJ (TYP)
- ⑧ THRUST BLOCK PER WR-04 IF JOINTS ARE NOT RESTRAINED
- ⑨ INLINE VALVE WITHIN 5- FEET OF RPDA, SEE WR-07

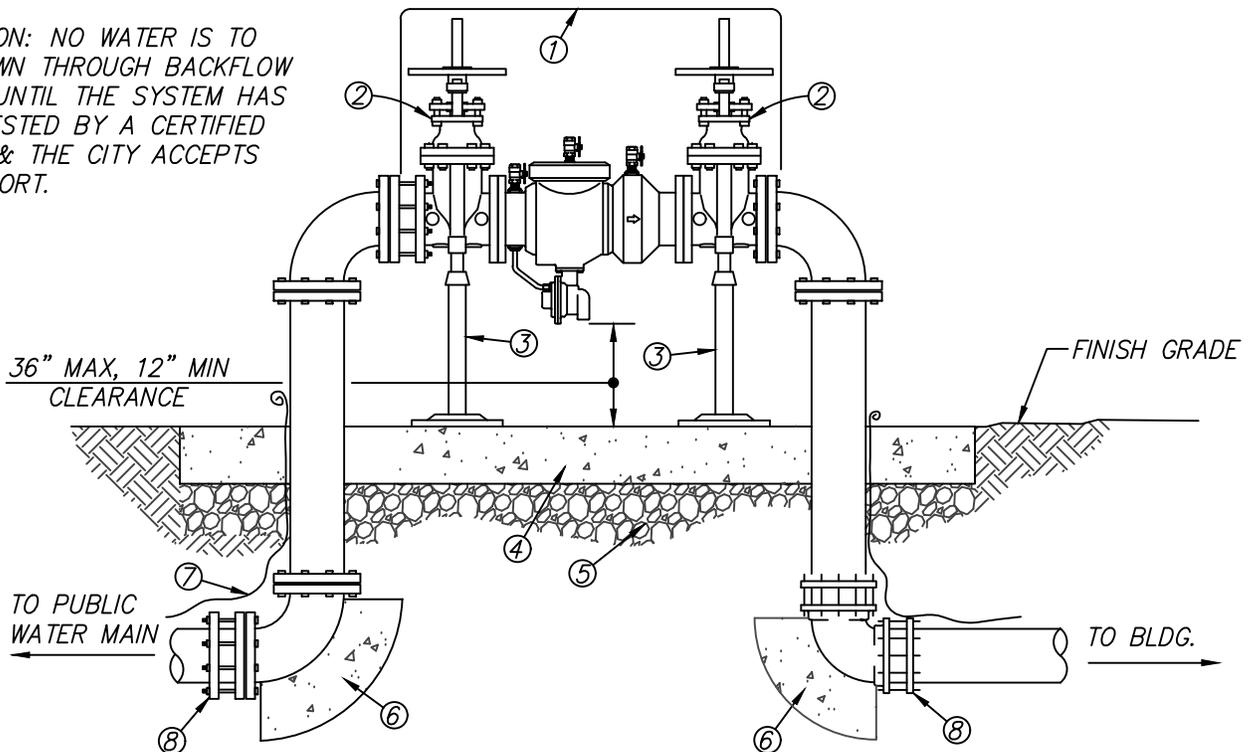
CITY OF FOLSOM	
FIRE PROTECTION BACKFLOW ASSEMBLY	
SCALE: NONE DATE: JANUARY 2024	WR-09

NOTES:

1. REDUCED PRESSURE PRINCIPLE ASSEMBLY TO BE APPROVED BY THE CITY.
2. ALL MATERIALS SHALL MEET APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS.
3. BACKFLOW PREVENTER SHOWN MAY NOT REFLECT MANUFACTURERS' CONFIGURATION FOR REDUCED PRESSURE DEVICES.
4. PIPE PENETRATION SHALL BE FILLED WITH NON-SHRINK GROUT HAVING A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI. OPENING SHALL BE MINIMUM 2" LARGER THAN PIPE O.D.
5. INSTALL TRACER WIRE PER WR-12 AND CITY STANDARDS.
6. ALL JOINTS BETWEEN MAIN AND BACKFLOW ASSEMBLY SHALL BE FLANGED CONNECTED.
7. FOR BACKFLOW PREVENTERS 3" AND LARGER, DUCTILE IRON PIPE REQUIRED FOR ALL PIPING.
8. PUBLICLY OWNED BACKFLOW PREVENTERS SHALL HAVE "STRONG-BOX" OR APPROVED EQUAL ENCLOSURE.
9. DISTANCE FROM P.O.C. SHALL BE 5' MAXIMUM UNLESS CONDITIONS DO NOT PERMIT. RPDA SHALL NOT BE LOCATED BETWEEN CURB AND DETACHED SIDEWALK. IF RPDA IS LOCATED AT A DETACHED SIDEWALK, RPDA SHALL BE 3'-5' FROM THE BACK OF WALK.



ATTENTION: NO WATER IS TO BE DRAWN THROUGH BACKFLOW DEVICE UNTIL THE SYSTEM HAS BEEN TESTED BY A CERTIFIED TESTER & THE CITY ACCEPTS THE REPORT.



- ① REDUCED PRESSURE PRINCIPLE ASSEMBLY (RPPA)
- ② AWWA C-509 RESILIENT SEAT GATE VALVE
- ③ PIPE SUPPORT, GRINNEL FIG. 264 OR APPROVED EQUAL
- ④ 4" CONCRETE SLAB - 36" WIDE, LENGTH TO EXTEND 6" MIN BEYOND PIPING ON ALL SIDES
- ⑤ 4" THICK AGGREGATE BASE
- ⑥ THRUST BLOCK PER WR-04 IF JOINTS ARE NOT RESTRAINED
- ⑦ #10 COPPER TRACER WIRE
- ⑧ RESTRAINED FLANGED COUPLING ADAPTOR OR RESTRAINED MJ (TYP)

CITY OF FOLSOM

**3" & LARGER
DOMESTIC BACKFLOW
PREVENTER ASSEMBLY**

**SCALE: NONE
DATE: JANUARY 2024**

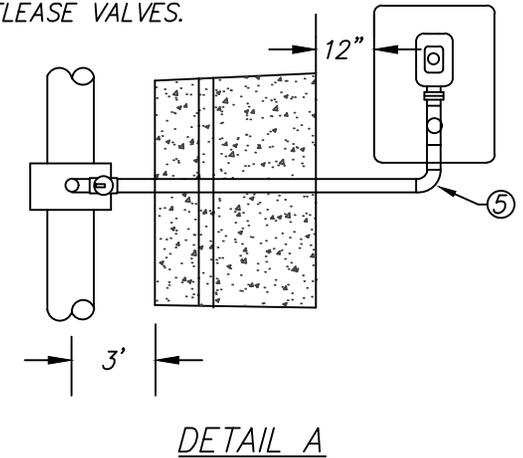
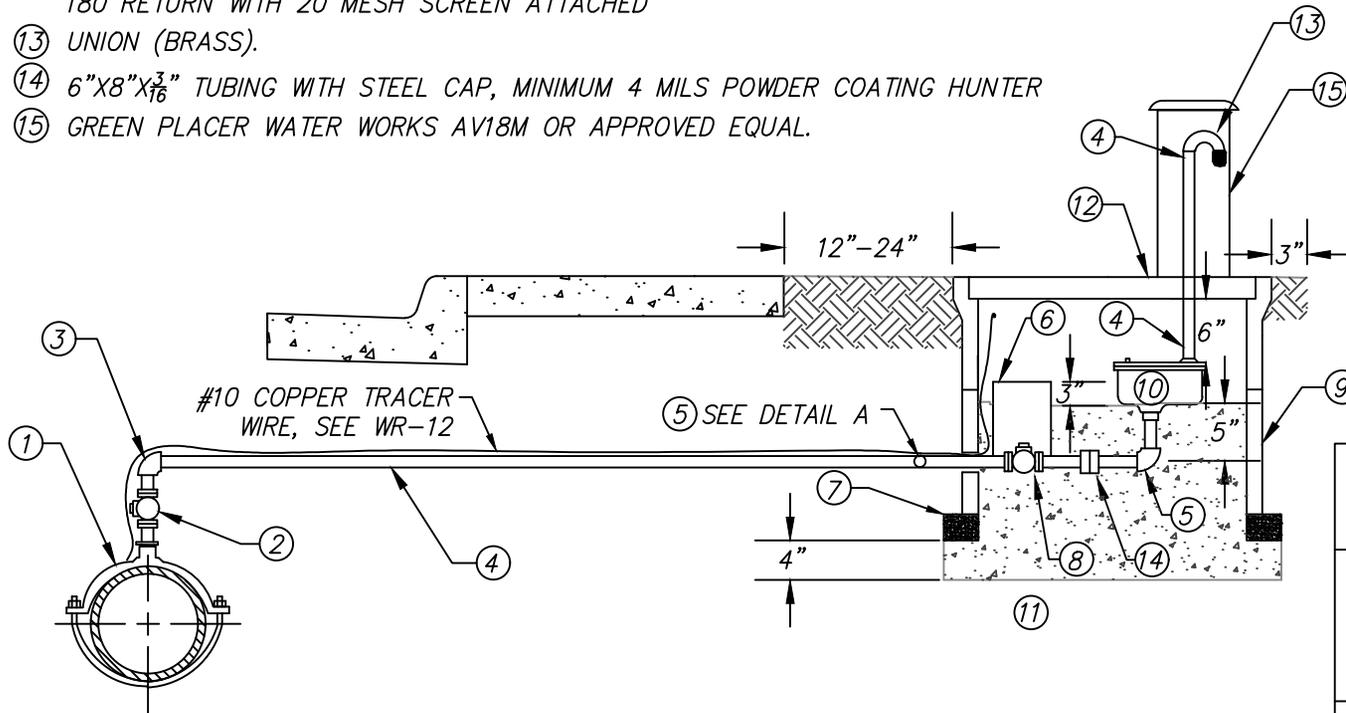
WR-10

LEGEND:

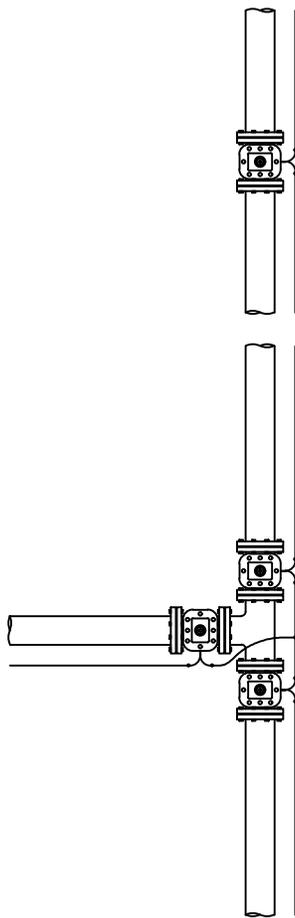
- ① BRONZE SERVICE SADDLE (DOUBLE STRAP)
- ② CORPORATION STOP – BALL VALVE
- ③ STREET ELL (BRASS)
- ④ BRASS PIPE, WRAPPED WITH 20 MIL TAPE
- ⑤ FITTINGS SAME AS PIPE MATERIAL
- ⑥ 6" PVC SLEEVE
- ⑦ INSTALL COMMON BRICK (4"x2"x8") UNDER ENTIRE UTILITY BOX PERIMETER, FLUSH TO THE INSIDE OF THE BOX, AND TIGHT TO BOTTOM OF BOX WITH NO GAPS
- ⑧ CURB STOP
- ⑨ CHRISTY B-36 BOX WITH 12" EXTENSIONS AS REQUIRED.
- ⑩ SINGLE BODY COMBINATION AIR/VACUUM RELEASE VALVE APCO MODEL 143 OR APPROVED EQUAL.
- ⑪ ¾" CRUSHED ROCK. FILL TO BOTTOM OF VALVE.
- ⑫ H2O TRAFFIC LOAD RATED STEEL COVER. MINIMUM 4 MILS POWDER COATING – HUNTER GREEN PLACER WATER WORKS AE218M OR APPROVED EQUAL. 180 RETURN WITH 20 MESH SCREEN ATTACHED
- ⑬ UNION (BRASS).
- ⑭ 6"x8"x $\frac{3}{16}$ " TUBING WITH STEEL CAP, MINIMUM 4 MILS POWDER COATING HUNTER
- ⑮ GREEN PLACER WATER WORKS AV18M OR APPROVED EQUAL.

NOTES:

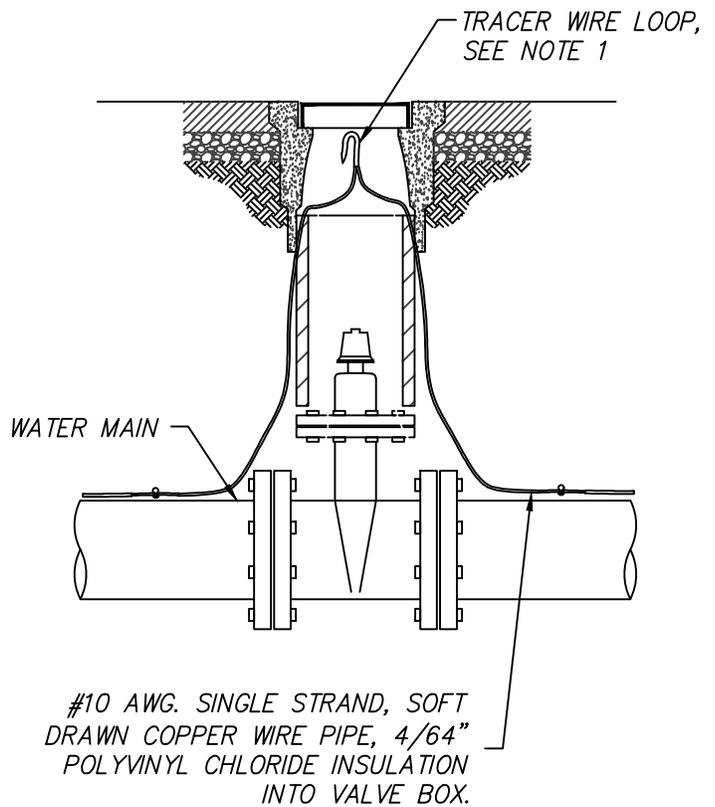
- 1. MAINTAIN A GRADE UPWARD FROM CORP. STOP TO AIR VALVE (NO TRAPS).
- 2. PIPING SIZED TO MATCH SIZE OF ARV.
- 3. ALL BRASS PIPES AND FITTINGS SHALL BE IDENTIFIED AS "LEAD FREE".
- 4. ALL AIR RELEASE VALVES ARE TO BE COMBINATION RELEASE VALVES.



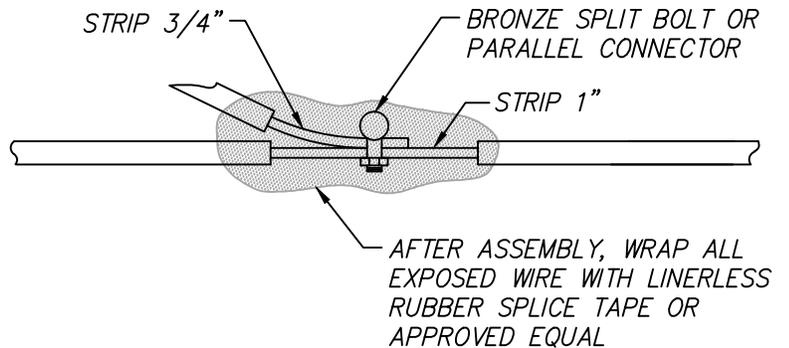
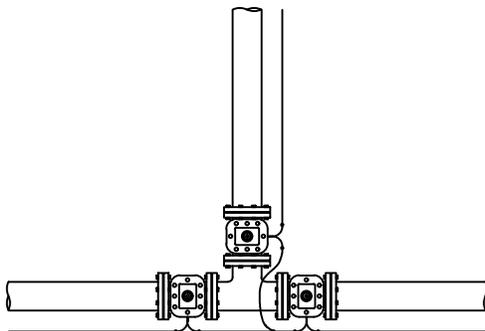
CITY OF FOLSOM	
1" AND 2" AIR & VACUUM RELEASE VALVE	
SCALE: NONE DATE: JANUARY 2024	WR-11



TYPICAL LAYOUT



VALVE DETAIL



SPLICE DETAIL

NOTES:

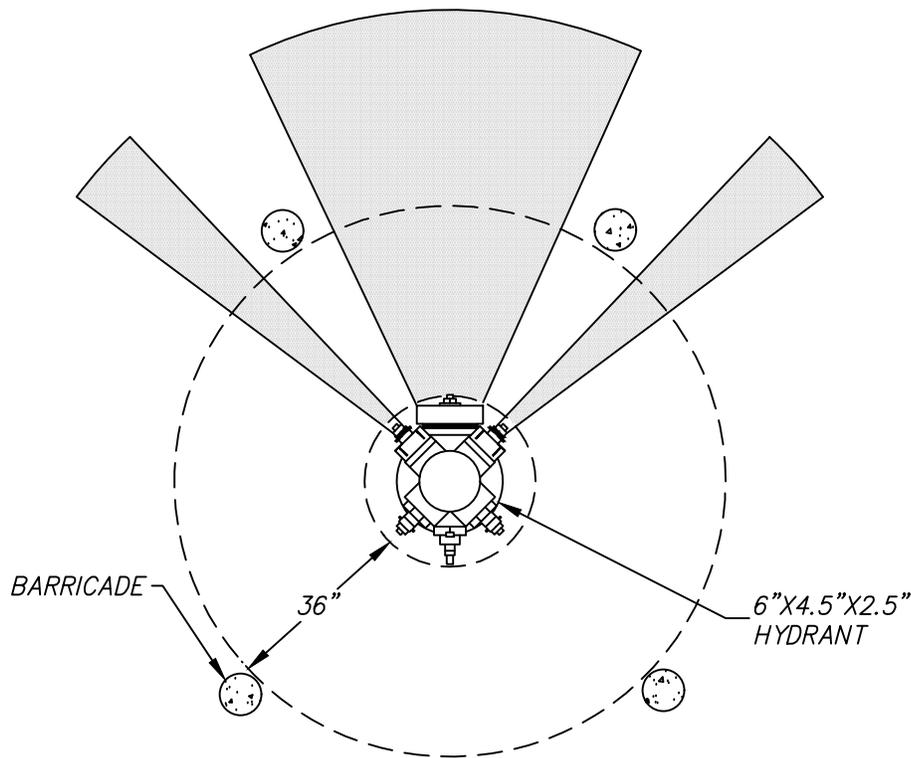
1. #10 INSULATED COPPER WIRE TO BE CONTINUOUS BETWEEN VALVE BOXES, EXCEPT AS NOTED. TRACER WIRE SHALL HAVE MIN. 12" EXCESS LOOP LOCATED INSIDE THE METER/VALVE BOX. CONTRACTOR SHALL CONDUCT A CONTINUITY TEST ON ALL SPLICES.
2. SITE INSPECTOR WILL PERFORM CONTINUITY TEST ON THE ENTIRE TRACER WIRE SYSTEM PRIOR TO ACCEPTANCE.
3. BARE WIRE MUST NOT TOUCH VALVES OR FITTINGS.
4. LOCATING WIRE TO BE PLACED ON TOP OF PIPE AND TAPED WITH 10 MIL VINYL TAPE EVERY 5'.
5. SOLDERING SHALL BE PERFORMED WHEN REQUESTED BY THE CITY ENGINEER.

CITY OF FOLSOM

LOCATING WIRE
FOR WATER MAINS

SCALE: NONE
DATE: JANUARY 2024

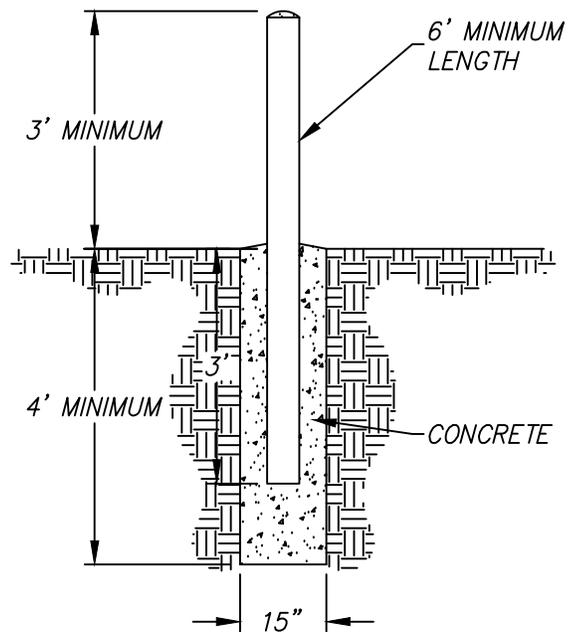
WR-12



PLAN
FIRE HYDRANT BARRICADES
(TYPICAL)

NOTES:

1. PLACEMENT OF BARRICADES SHALL BE APPROVED BY THE CITY PRIOR TO INSTALLATION.
2. THE EXACT LOCATION OF BARRICADES MAY BE MODIFIED BY THE FIRE CHIEF FOLLOWING A FIELD INSPECTION.
3. BARRICADES SHALL BE 4" STEEL PIPE POURED FULL OF CONCRETE WITH TOP OF PIPE FINISHED OFF.
4. BARRICADES SHALL BE 6" DIAMETER PIPE IF HEAVY TRUCK TRAFFIC IS ANTICIPATED. SCHEDULE 40 STEEL AND CONCRETE-FILLED.
5. POSTS, FENCES, VEHICLES, VEGETATION, STORAGE, AND OTHER MATERIALS OR THINGS SHALL NOT BE PLACED OR KEPT NEAR FIRE HYDRANTS IN A MANNER THAT WOULD PREVENT FIRE HYDRANTS FROM BEING IMMEDIATELY DISCERNABLE.
6. EXPOSED STEEL PIPE SHALL BE PAINTED WITH A MINIMUM OF TWO COATS OF PRIMER AND FINISHED WITH A MINIMUM OF TWO COATS OF "TRAFFIC SAFETY YELLOW" IN ACCORDANCE WITH AWWA C-502.
7. BURIED STEEL PIPE SHALL BE COAL-TAR COATED IN ACCORDANCE WITH AWWA C-2-5 OR COVERED WITH COLD-APPLIED TAPE IN ACCORDANCE WITH AWWA C-209.



BARRICADE DETAIL

CITY OF FOLSOM

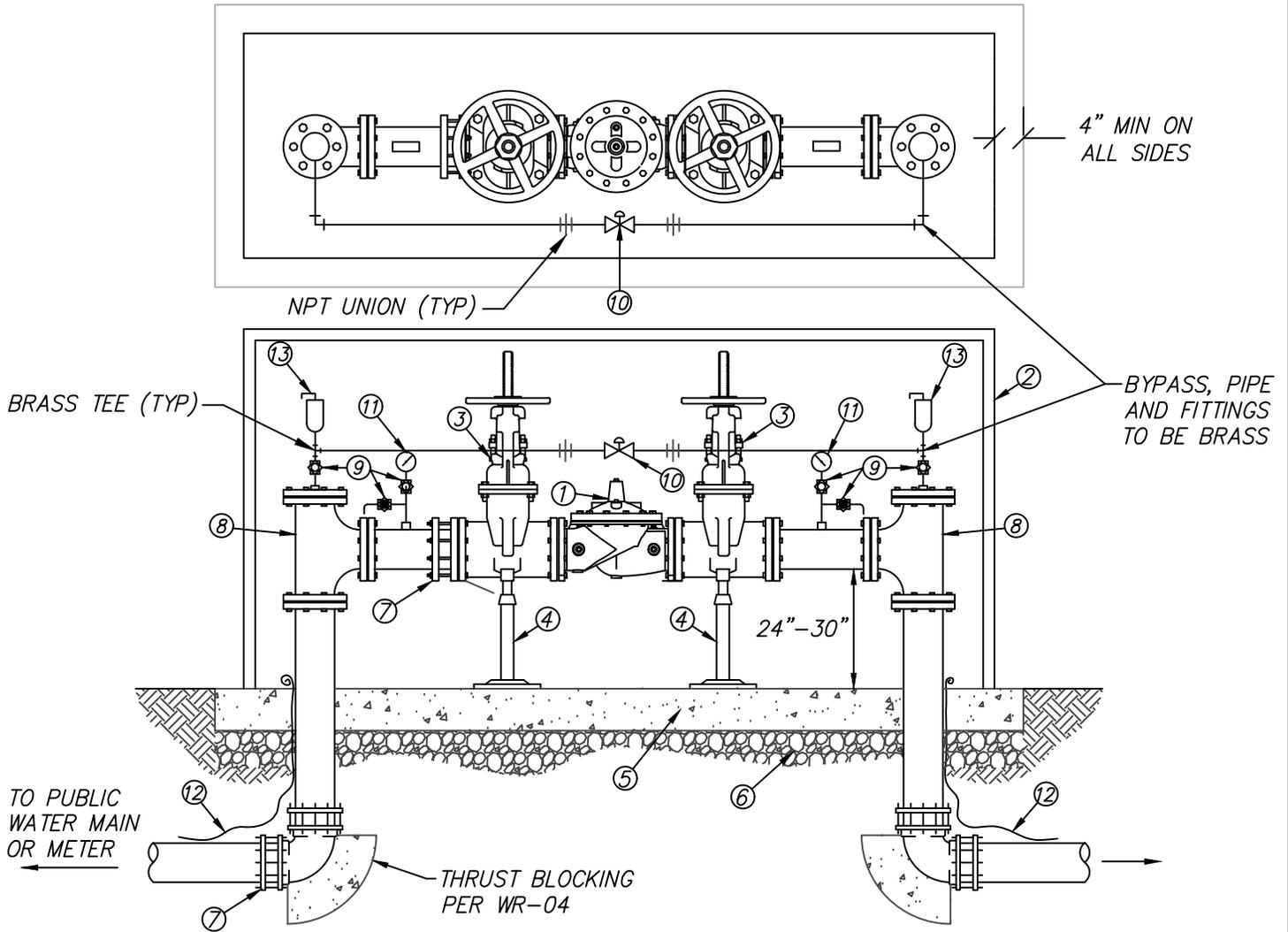
FIRE HYDRANT
PROTECTION

SCALE: NONE
DATE: JANUARY 2024

WR-13

NOTES:

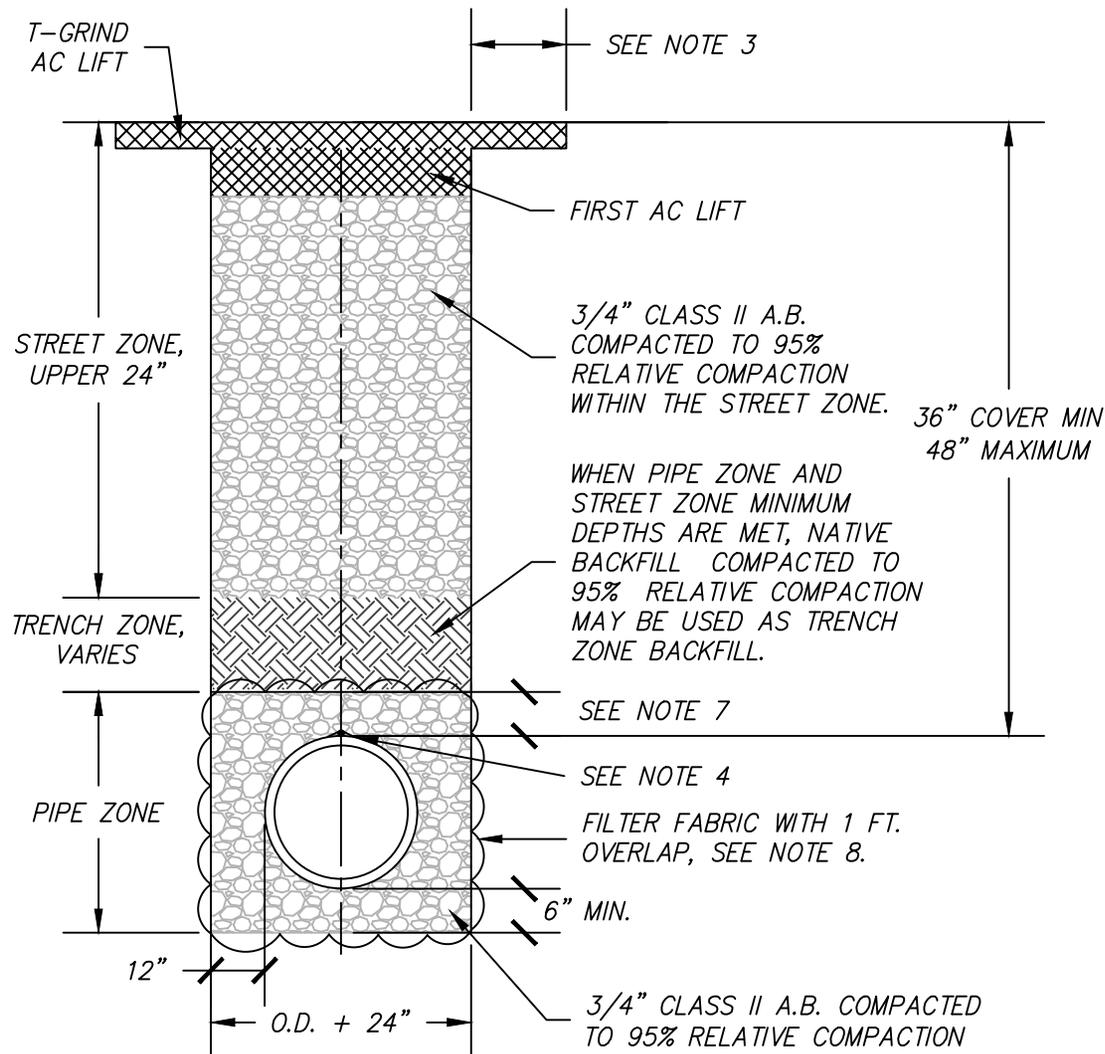
1. THIS DRAWING IS INTENDED TO ILLUSTRATE REQUIRED COMPONENTS. ACTUAL PRV STATION SHALL BE DESIGNED AND STAMPED BY A LICENSED ENGINEER AND BE EVALUATED FOR SPECIFIC PROJECT SITE AND CONDITIONS.
2. ALL MATERIALS SHALL MEET APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS.
3. PIPE PENETRATION SHALL BE FILLED WITH NON-SHRINK GROUT HAVING A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI. OPENING SHALL BE MINIMUM 2" LARGER THAN PIPE O.D.
4. LOCATION OF PRV STATION SHALL BE APPROVED BY THE COF ENVIRONMENTAL & WATER RESOURCES DIVISION.
5. PRV SHALL HAVE A PRESSURE RANGE OF 30 PSI TO 300 PSI, EPOXY COATED, WITH POSITION INDICATOR. PRV SHALL MEET THE FOLLOWING CRITERIA: BODY AND COVER TO BE DUCTILE IRON; DISC GUIDE, SEAT, PILOT, AND COVER BEARING TO BE STAINLESS STEEL; DISC TO BE BUNA-N RUBBER; DISC RETAINER AND COVER TO BE DUCTILE IRON; DIAPHRAGM TO BE NYLON REINFORCED BUNA-N RUBBER; STEM, NUT, AND SPRING TO BE STAINLESS STEEL.
6. ALL ABOVE GROUND PIPING AND FITTINGS, EXCEPT FOR VALVES, SHALL BE COATED PER CITY STANDARDS.
7. MIN 4" CLEARANCE FROM ENCLOSURE TO HANDWHEEL OR ARV



- ① CLA-VAL FULL PORT PRV OR APPROVED EQUAL
- ② SAFE-T-COVER ENCLOSURE OR APPROVED EQUAL. INSIDE DIMENSIONS SHALL ALLOW MIN. 4" CLEAR AROUND ALL EQUIPMENT. COVER SHALL BE ACCESSIBLE ON BOTH SIDES AND COLOR TO BE APPROVED BY THE CITY
- ③ AWWA C-509 RESILIENT SEAT GATE VALVE
- ④ PIPE SUPPORT, GRINNEL FIG. 264 OR APP. EQUAL
- ⑤ 4" CONCRETE SLAB - LENGTH TO EXTEND 4" MIN BEYOND ENCLOSURE ON ALL SIDES
- ⑥ 4" THICK AGGREGATE BASE
- ⑦ RESTRAINED FLANGED COUPLING ADAPTOR OR RESTRAINED MJ (TYP)
- ⑧ TEE WITH COMPANION FLANGE
- ⑨ BRASS BALL VALVE
- ⑩ BYPASS PRV, NPT X NPT OR FLANGED
- ⑪ GLYCERINE FILLED PRESSURE GAUGE, TO BE APPROVED BY THE CITY

- ⑫ #10 TRACER WIRE PER WR-12 AND CITY STANDARDS
- ⑬ ARV

CITY OF FOLSOM	
PRESSURE REDUCING STATION	
SCALE: NONE DATE: JANUARY 2024	WR-14



NOTES:

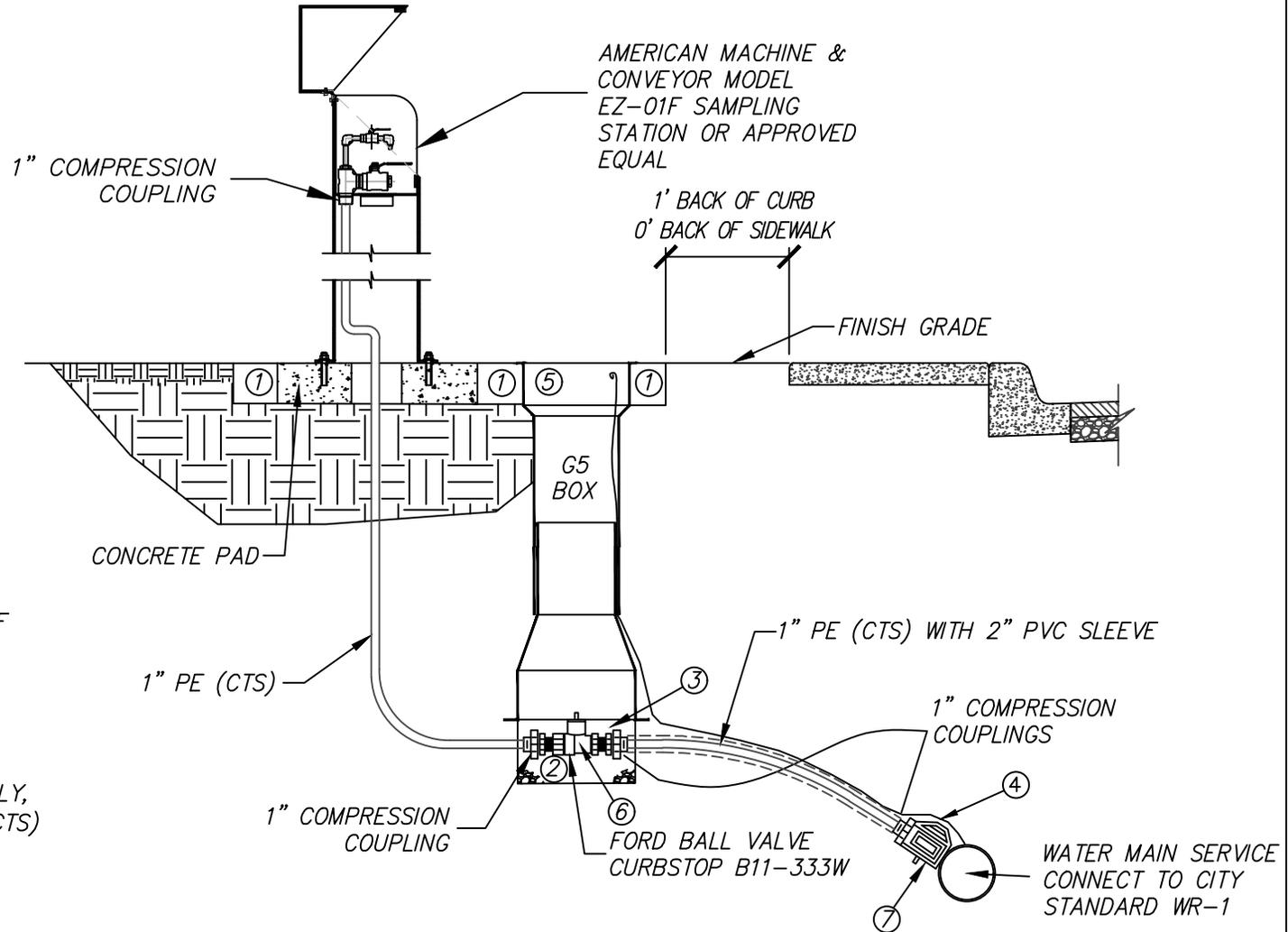
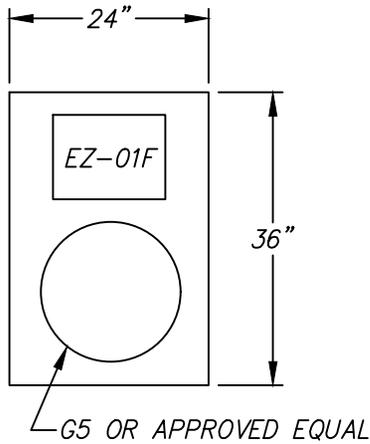
1. MATCH EXISTING A.C. THICKNESS: 4" MINIMUM.
2. SAW CUT 12" BEYOND THE WIDTH OF THE TRENCH.
3. T-GRIND REQUIRED FOR ALL PAVEMENTS (12" MINIMUM WIDTH). 1½" DEEP GRIND AND PAVE TO THE LIP OF GUTTER, LANE LINE, OR CENTER OF ADJACENT TRAFFIC LANE (WHICHEVER IS APPLICABLE).
4. #10 TRACER WIRE. CONNECT SERVICE LATERAL TRACER WIRE TO MAIN LINE TRACER WIRE PER WR-12 AND CITY STANDARDS.
5. BACKFILL SHALL BE MECHANICALLY CONSOLIDATED AND SHOVEL SLICED UNDER THE HAUNCHES OF THE PIPE. SEE CITY SPECIFICATIONS FOR BACKFILL AND COMPACTION REQUIREMENTS.
6. 6" WIDE (MINIMUM) BLUE MARKING TAPE, 12" ABOVE PIPE. TAPE SHOULD READ "BURIED WATER MAIN".
7. PIPE ZONE COVER OVER THE TOP OF WATER MAINS SHALL BE A MINIMUM OF 12".
8. IN AREAS OF FLOWING GROUNDWATER, FILTER FABRIC SHALL BE PLACED AROUND THE PIPE ZONE BEDDING AND SHADING IN ACCORDANCE WITH THE ON-SITE GEOTECHNICAL ENGINEER, AS WELL AS METHODS FOR COLLECTING AND CONVEYING GROUNDWATER AWAY FROM UNDERGROUND ROADWAY AND INFRASTRUCTURE PER GEOTECHNICAL ENGINEER.

CITY OF FOLSOM

**WATER SYSTEM
PIPE BEDDING FOR
MAINS AND SERVICES**

SCALE: NONE
DATE: JANUARY 2024

WR-15

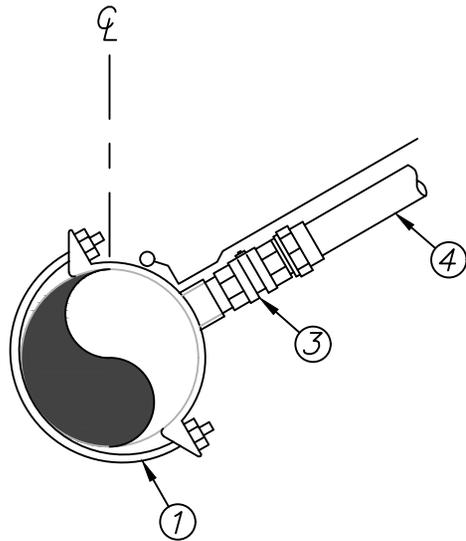


- ① 8" REINFORCED CONCRETE SLAB
- ② 3/4" x 6" DEPTH DRAIN ROCK
- ③ 8" PVC RISER NOTCHED OVER PIPE
- ④ #10 TRACER WIRE PER WR-12, OUTSIDE OF RISER, BUT IN BOX
- ⑤ TRAFFIC VALVE BOX W/METAL LID
- ⑥ 1" BALL VALVE, CURB STOP
- ⑦ LARGE STYLE TEE HANDLE CORP STOP ONLY, A.Y. McDONALD MODEL 74104BQ (MNPTxQCTS) OR APPROVED EQUAL

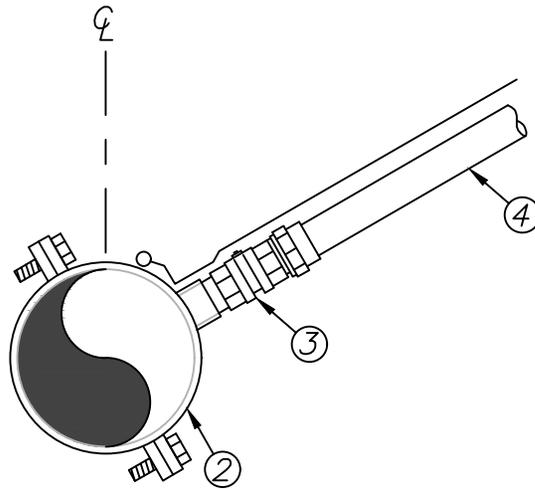
NOTES:

1. SAMPLING STATIONS SHALL BE 30" BURY, WITH A 1/4" BENT-NOSE SAMPLING BIBB WITH A SEPARATE SHUTOFF VALVE.
2. FLUSHING VALVE TUBE SHOULD BE 1" BRASS WITH A 1" MALE CAMLOCK FITTING FOR FLUSHING HOSE CONNECTION.
3. ALL STATIONS SHALL BE ENCLOSED IN A LOCKABLE, NON-REMOVABLE, ALUMINUM HOUSING.
4. WHEN OPENED, THE STATION SHALL REQUIRE NO KEY FOR OPERATION, AND THE WATER WILL FLOW IN AN ALL BRASS WATERWAY.
5. ALL WORKING PARTS WILL BE OF BRASS AND SERVICEABLE FROM ABOVE GROUND WITH NO DIGGING.
6. WATER SAMPLING STATION TO BE A MINIMUM HEIGHT OF 40".
7. ALL BRASS PIPES AND FITTINGS SHALL BE IDENTIFIED AS "LEAD FREE".
8. WHEN SAMPLING STATION IS INSTALLED 1' BACK OF CURB, THE ADDITIONAL 1' OFFSET TO BE CONCRETE.

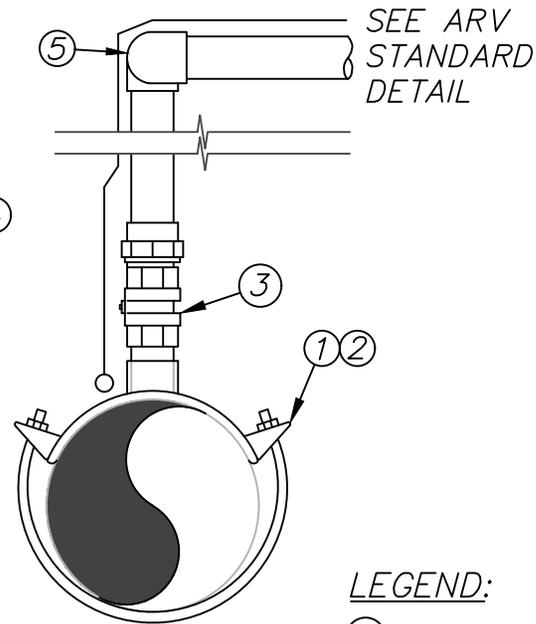
CITY OF FOLSOM	
WATER SAMPLING STATION	
SCALE: NONE DATE: JANUARY 2024	WR-16



DOUBLE STRAP DUCTILE
IRON PIPE SADDLE



PVC PIPE SADDLE



ARV SADDLE

LEGEND:

- ① DOUBLE STRAP BRONZE SADDLE FOR DUCTILE IRON MAIN, MUELLER SERIES BR2B OR APPROVED EQUAL
- ② BRONZE SADDLE FOR PVC MAIN, MUELLER SERIES H-13000 OR APPROVED EQUAL
- ③ LARGE STYLE TEE HANDLE CORP STOP ONLY, A.Y. McDONALD MODEL 74104BQ (MNPTxQ CTS) OR APPROVED EQUAL
- ④ PE SERVICE TUBING, CTS
- ⑤ SWING JOINT (2 - BRASS ELBOWS)

NOTES:

- A. ALL HARDWARE TO BE 304 SS OR APPROVED EQUAL.
- B. SADDLE AND CORP STOP SHALL BE DOUBLE WRAPPED IN 8 MIL POLYETHYLENE, TAPED, AND BACKFILLED WITH SAND.
- C. NO. 10 COPPER TRACING WIRE PER WR-12 IS REQUIRED ON ARV, HYDRANTS, BLOW OFFS, SERVICE LATERALS, AND OTHER MAJOR APPURENANCES.
- D. IF SERVICE IS NOT HOT TAPPED, DRILL SIZE FOR CORPORATION STOP/SADDLE SHALL BE SIZE ON SIZE.
- E. DRILL SIZE FOR CORPORATION STOP/SADDLE SHALL BE AS SHOWN ON THE DRILL SIZE TABLE.

CORPORATION STOP SIZE (IN.)	DRILL SIZE (IN.)	
	CORPORATION STOP WITH AWWA THREAD INLET (IN.)	CORPORATION STOP WITH NPT THREAD INLET (IN.)
1/2	7/16	7/16
5/8	9/16	--
3/4	1 1/16	1 1/16
1	1 5/16	7/8
1-1/4	1-3/16	1-1/8
1-1/2	1-7/16	1-7/16
2	1-7/8	1-3/4

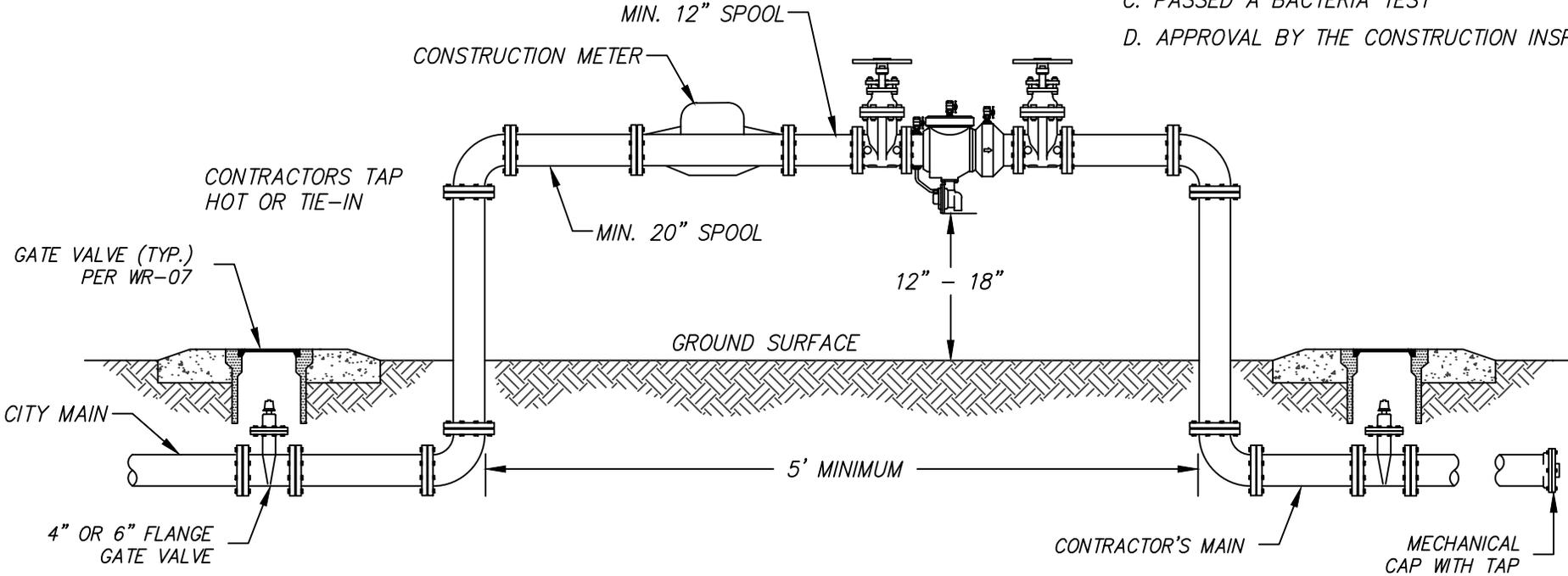
CITY OF FOLSOM

WATER SERVICE AND ARV SADDLE

SCALE: NONE
DATE: JANUARY 2024

WR-17

PRIOR TO CONNECTION TO THE CITY MAIN, THE FOLLOWING CONDITIONS SHALL BE MET:
 A. PASSED A PRESSURE TEST
 B. PASSED A CHLORINE TEST
 C. PASSED A BACTERIA TEST
 D. APPROVAL BY THE CONSTRUCTION INSPECTOR

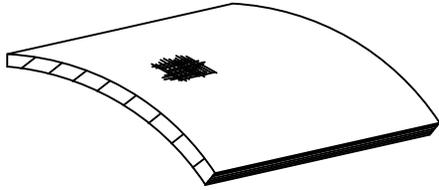


NOTES:

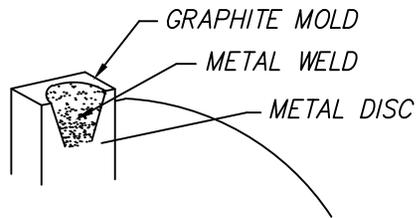
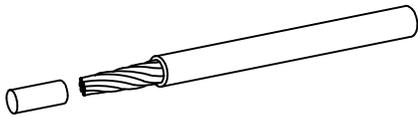
- A. WATER SHALL ONLY BE DRAWN INTO THE CONTRACTOR'S MAIN THROUGH A CONSTRUCTION METER AND A USC APPROVED RP TYPE BACKFLOW DEVICE THAT TESTED BY A CERTIFIED BACKFLOW TESTER AND VERIFIED BY THE ENVIRONMENTAL AND WATER RESOURCES DEPARTMENT.
- B. FINAL SYSTEM COMPONENTS NECESSARY FOR TIE-IN SHALL BE PRE-CHLORINATED AND PRE-FLUSHED IN THE PRESENCE OF THE CONSTRUCTION INSPECTOR.
- C. UPON COMPLETION OF THE CONDITIONS NOTED ABOVE AND WITH THE APPROVAL OF THE CONSTRUCTION INSPECTOR, CONNECTION TO THE CITY SYSTEM MAY BE MADE. THE CONSTRUCTION INSPECTOR SHALL BE NOTIFIED 48 HOURS PRIOR TO THE START OF WORK.
- D. ALL PIPING SHALL BE A MINIMUM 4" WITH 4" METER FOR FLUSHING.
- E. PLACE VALVE RISER AND BOX PER CITY STANDARDS.
- F. CONSTRUCTION METER AND PIPING SHALL BE 4-INCH MINIMUM FOR VELOCITY FLUSHING.
- G. CONTRACTOR TO PROVIDE THE NECESSARY EQUIPMENT FOR THE CHLORINE INJECTION.
- H. CONTRACTOR TO PROVIDE A SAMPLE TAP LOCATION PRIOR TO THE DOWNSTREAM VALVE.

CITY OF FOLSOM	
TEMPORARY CONNECTION FOR LOADING AND TESTING	
SCALE: NONE DATE: JANUARY 2024	WR-18

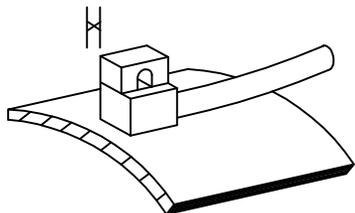
1) FILE TO BARE METAL & CLEAN OVER SURFACE



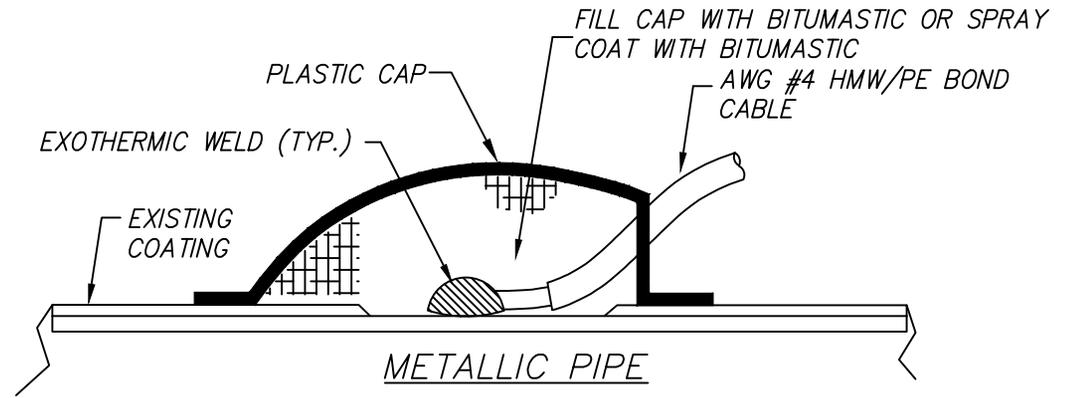
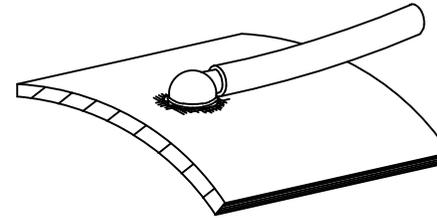
2) STRIP INSULATION FROM WIRE AND ATTACH SLEEVE



3) HOLD MOLD FIRMLY WITH OPENING AWAY FROM OPERATOR, IGNITE WITH FLINT GUN



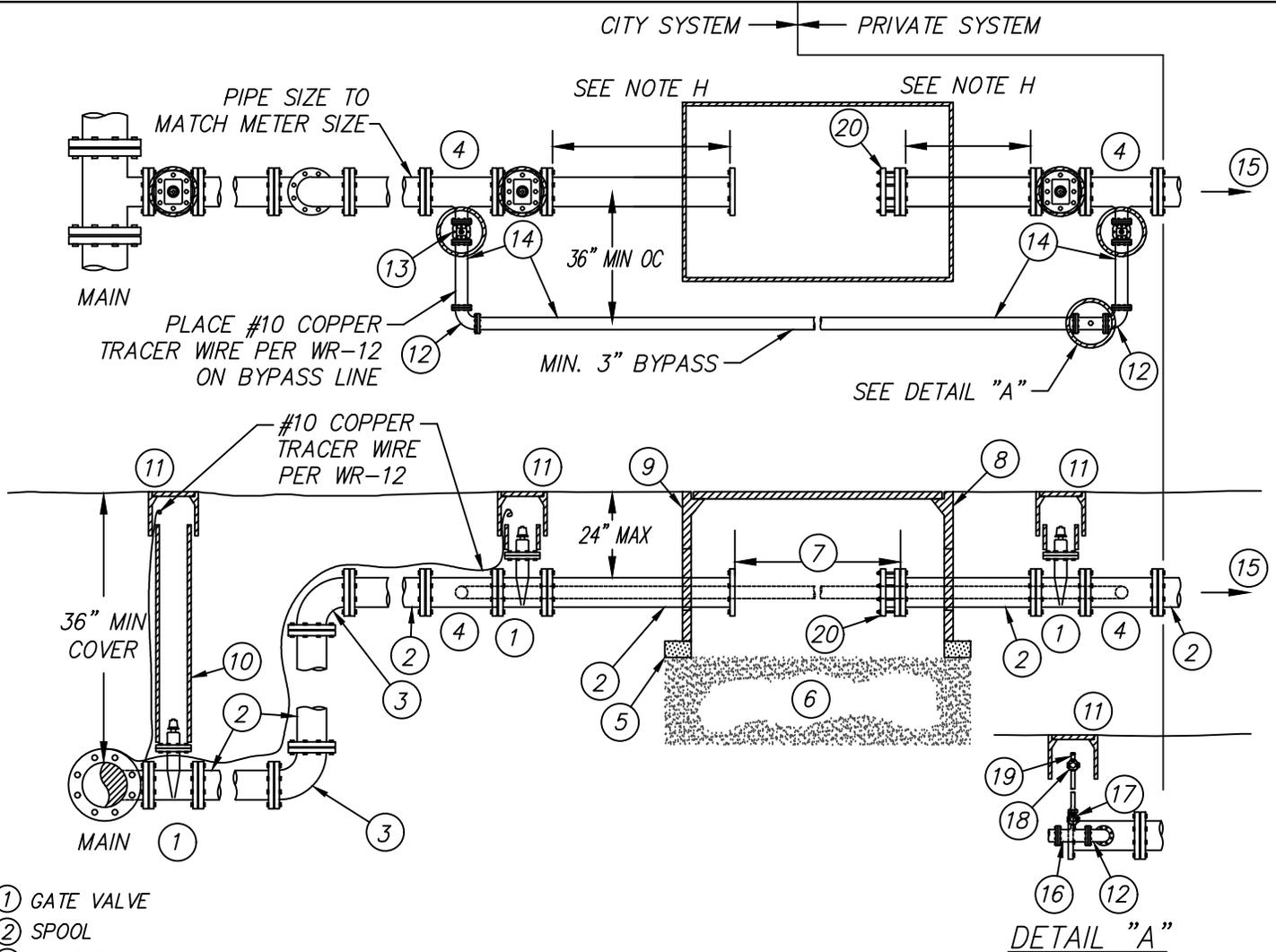
4) REMOVE SLAG FROM CONNECTION, COVER CONNECTION WITH COMPATIBLE COATING AND CAP OVER ALL EXPOSED METAL



NOTES:

A. EACH JOINT SHALL HAVE TWO SEPARATE WELD WIRES.

CITY OF FOLSOM	
EXOTHERMIC WELDS	
SCALE: NONE DATE: JANUARY 2024	WR-19



- ① GATE VALVE
- ② SPOOL
- ③ 90° ELBOW
- ④ REDUCING TEE
- ⑤ INSTALL COMMON BRICK (4"X2"X8") UNDER ENTIRE UTILITY BOX PERIMETER, FLUSH TO THE INSIDE OF THE METER BOX, AND TIGHT TO THE BOTTOM OF THE BOX WITH NO GAPS
- ⑥ SAND BACKFILL, 12" TO 18" DEEP. SAND TO BE FILLED 1" BELOW TOP OF BRICK
- ⑦ NEW METER INSTALLATION REQUIRES CONTRACTOR TO INSTALL CITY APPROVED WATER METER WITH METER BOX CLEARANCES SHOWN ON THIS SHEET. FIXED NETWORK ENDPOINT IS TO BE INSTALLED BY THE CITY OF FOLSOM AFTER THE PAYMENT TO THE CITY OF ASSOCIATED METER FEES
- ⑧ REINFORCED CONCRETE UTILITY BOX (SEE CITY CONSTRUCTION SPECIFICATIONS, SECTION 4 FOR BOX AND LID SIZE)
- ⑨ UTILITY BOX EXTENSION
- ⑩ VALVE BOX RISER (SEE WR-07 FOR DETAILS)
- ⑪ VALVE BOX AND LID PER CITY STANDARDS
- ⑫ 90° ELBOW
- ⑬ GATE VALVE
- ⑭ SPOOL
- ⑮ TO BACKFLOW PREVENTER (FOR FIRE REFERENCE WR-09, FOR IRRIGATION AND DOMESTIC REFERENCE WR-10)
- ⑯ TEE, MATCH BYPASS SIZE, WITH 1" OUTLET
- ⑰ CORPORATION STOP
- ⑱ 1" LOCKABLE CURB STOP
- ⑲ 1" FEMALE IRON PIPE
- ⑳ FLANGE COUPLING ADAPTER

NOTES

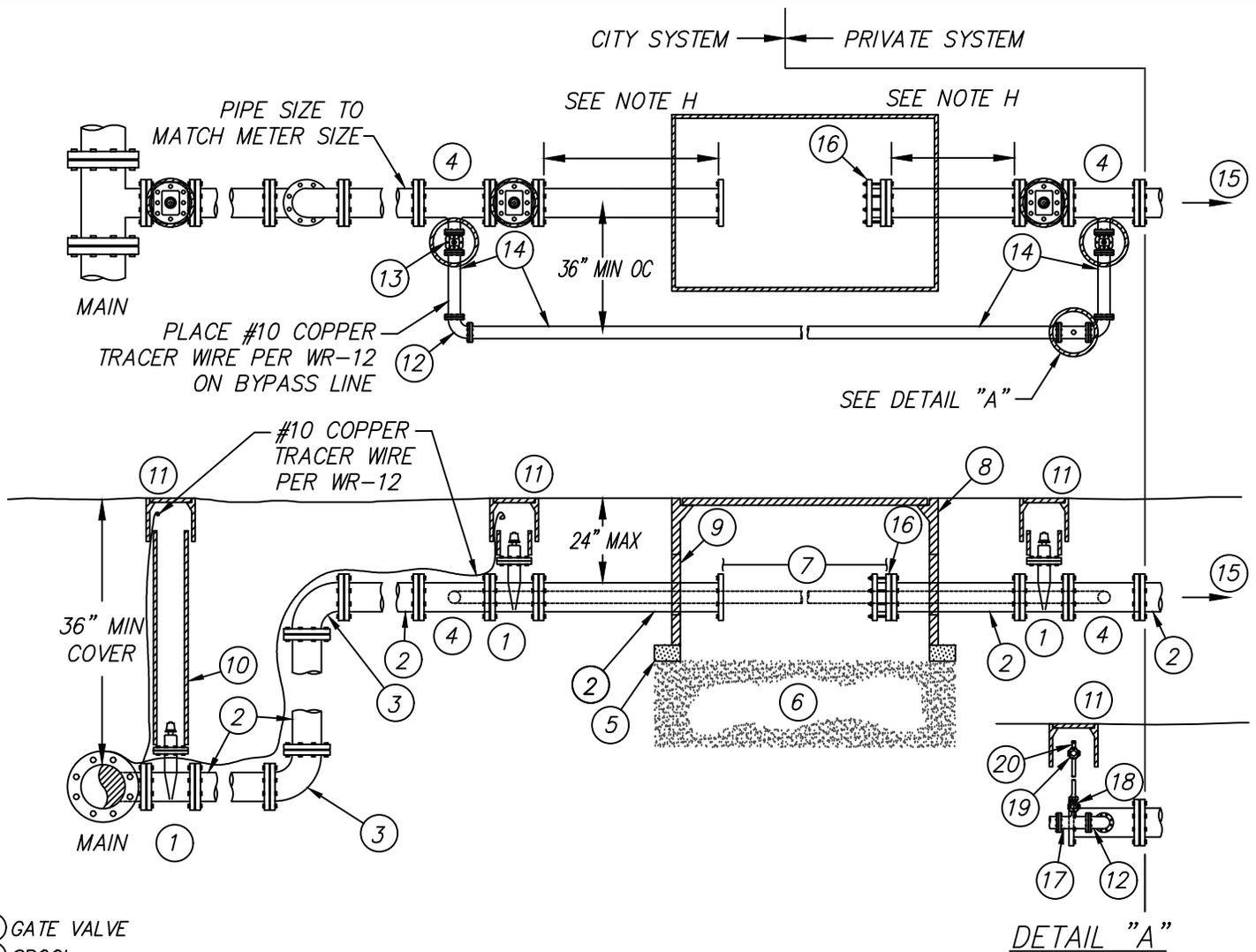
- A. SERVICE LINES AND MANIFOLDS 3" AND LARGER TO BE DIP.
- B. METER BOX SIZES SHALL ALLOW FOR METER TO BE REPLACED WITHOUT REMOVING THE BOX AND PROVIDE A MINIMUM 12" CLEARANCE AROUND FLANGES.
- C. CUT OUT PORTIONS OF THE METER BOX SHALL BE PACKED FROM THE OUTSIDE WITH STIFF CONCRETE, INSIDE SMOOTH FINISH.
- D. ALL STEEL OR DUCTILE IRON JOINTS BETWEEN MAIN AND METER SHALL BE FLANGE CONNECTED.
- E. THRUST BLOCKS ARE TO BE CONSTRUCTED PER STANDARD DRAWING WR-4.
- F. WHERE THRUST BLOCKS ARE NOT FEASIBLE, USE FULLY RESTRAINED DIP.
- G. INSTALL TRACER WIRE ON SERVICE AND BYPASS PIPING PER WR-12 AND THE STANDARD SPECIFICATIONS.
- H. THIS IS A TYPICAL DRAWING, ACTUAL INSTALLATION WILL VARY WITH FIELD CONDITIONS.
- I. LATERAL SHALL HAVE A MINIMUM 5X DIAMETER LENGTH OF STRAIGHT PIPE BEFORE METER AND 3X DIAMETER STRAIGHT PIPE AFTER METER.

CITY OF FOLSOM

TYPICAL 3" & 4" DOMESTIC
METER INSTALLATION

SCALE: NONE
DATE: JANUARY 2024

WR-20



- ① GATE VALVE
- ② SPOOL
- ③ 90° ELBOW
- ④ REDUCING TEE
- ⑤ INSTALL COMMON BRICK (4"x2"x8") UNDER ENTIRE UTILITY BOX PERIMETER, FLUSH TO THE INSIDE OF THE METER BOX, AND TIGHT TO THE BOTTOM OF THE BOX WITH NO GAPS
- ⑥ SAND BACKFILL, 12" TO 18" DEEP. SAND TO BE FILLED 1" BELOW TOP OF BRICK.
- ⑦ NEW METER INSTALLATION REQUIRES CONTRACTOR TO INSTALL CITY APPROVED WATER METER WITH METER BOX CLEARANCES SHOWN ON THIS SHEET. FIXED NETWORK ENDPOINT IS TO BE INSTALLED BY THE CITY OF FOLSOM AFTER THE PAYMENT TO THE CITY OF ASSOCIATED METER FEES.
- ⑧ REINFORCED CONCRETE UTILITY BOX (SEE CITY CONSTRUCTION SPECIFICATIONS, SECTION 4 FOR BOX AND LID SIZE).
- ⑨ UTILITY BOX EXTENSION, IF REQUIRED
- ⑩ VALVE BOX RISER (SEE WR-07 FOR DETAILS)
- ⑪ VALVE BOX AND LID PER CITY STANDARDS
- ⑫ 4" 90° ELBOW
- ⑬ 4" GATE VALVE
- ⑭ 4" SPOOL
- ⑮ TO BACKFLOW PREVENTER (FOR FIRE REFERENCE WR-09, FOR IRRIGATION AND DOMESTIC REFERENCE WR-10)
- ⑯ FLANGE COUPLING ADAPTER
- ⑰ 4"x1" SERVICE SADDLE
- ⑱ 1" CORPORATION STOP, MIDxFIP
- ⑲ 1" IPS BRASS
- ⑳ 1" LOCK WING CURB STOP, FIPxFIP

NOTES

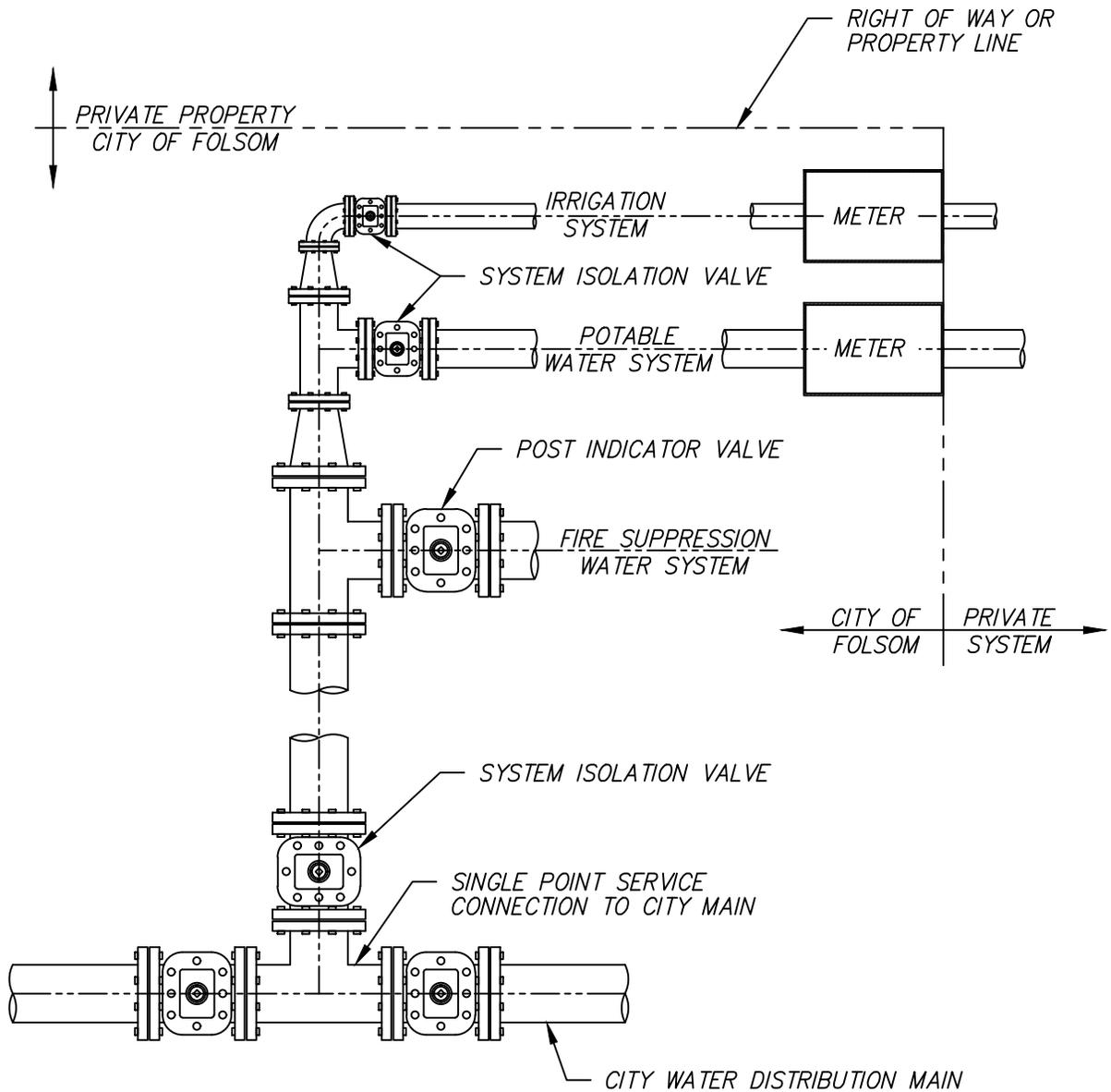
- A. SERVICE LINES AND MANIFOLDS 3" AND LARGER TO BE DIP.
- B. METER BOX SIZES SHALL ALLOW FOR METER TO BE REPLACED WITHOUT REMOVING THE BOX AND PROVIDE A MINIMUM 12" CLEARANCE AROUND FLANGES.
- C. CUT OUT PORTIONS OF THE METER BOX SHALL BE PACKED FROM THE OUTSIDE WITH STIFF CONCRETE, INSIDE SMOOTH FINISH.
- D. ALL STEEL OR DUCTILE IRON JOINTS BETWEEN MAIN AND METER SHALL BE FLANGE CONNECTED.
- E. THRUST BLOCKS ARE TO BE CONSTRUCTED PER STANDARD DRAWING WR-4.
- F. WHERE THRUST BLOCKS ARE NOT FEASIBLE, USE FULLY RESTRAINED DIP.
- G. INSTALL TRACER WIRE ON SERVICE AND BYPASS PIPING PER WR-12 AND THE STANDARD SPECIFICATIONS.
- H. THIS IS A TYPICAL DRAWING, ACTUAL INSTALLATION WILL VARY WITH FIELD CONDITIONS.
- I. LATERAL SHALL HAVE A MINIMUM 5X DIAMETER LENGTH OF STRAIGHT PIPE BEFORE METER AND 3X DIAMETER STRAIGHT PIPE AFTER METER.

CITY OF FOLSOM

**TYPICAL 6" & 8" DOMESTIC
METER INSTALLATION**

**SCALE: NONE
DATE: JANUARY 2024**

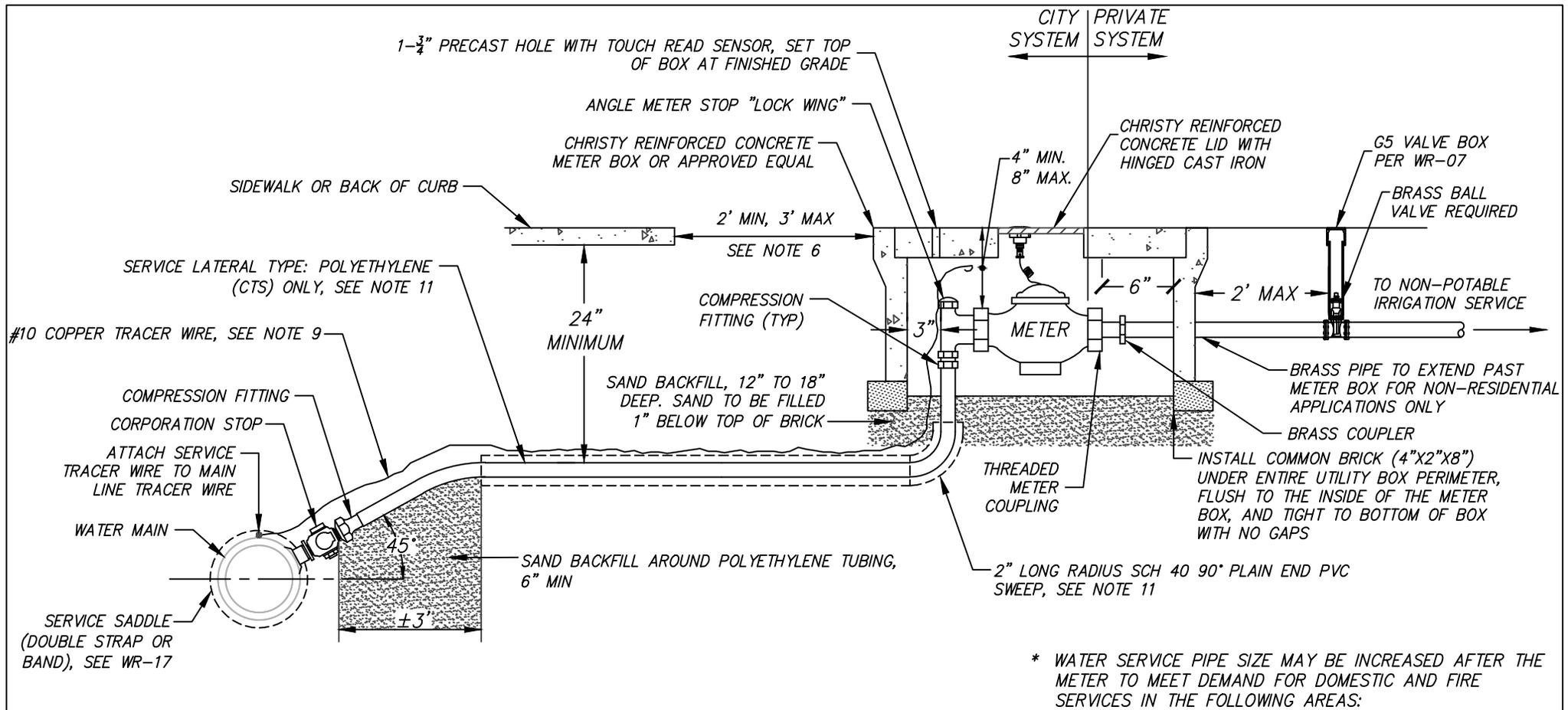
WR-21



NOTES

1. WATER SERVICE CONNECTIONS FOR DEVELOPMENTS SHALL BE DESIGNED SUCH THAT ONLY ONE SYSTEM TAP IS REQUIRED. MULTIPLE CONNECTION POINTS TO THE CITY'S WATER DISTRIBUTION MAIN FOR A SINGLE DEVELOPMENT WILL NOT BE ALLOWED.
2. BACKFLOW PREVENTION DEVICES ARE NOT SHOWN. THE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE LOCATION AND DETAILS OF THE WATER METERS AND BACKFLOW PREVENTION DEVICES FOR APPROVAL BY THE CITY. ALL METERS SHALL BE INSTALLED WITHIN THE CITY OF FOLSOM RIGHT OF WAY OR EASEMENT.
3. THE TYPE OF TIE-IN CONNECTION ("HOT TAP" OR "CUT-IN") TO BE INSTALLED WILL BE MADE BY THE CITY UPON REVIEW OF THE WATER AND/OR IMPROVEMENT PLANS.

CITY OF FOLSOM	
WATER SERVICE MULTI-CONNECTION	
SCALE: NONE	DATE: JANUARY 2024
WR-23	



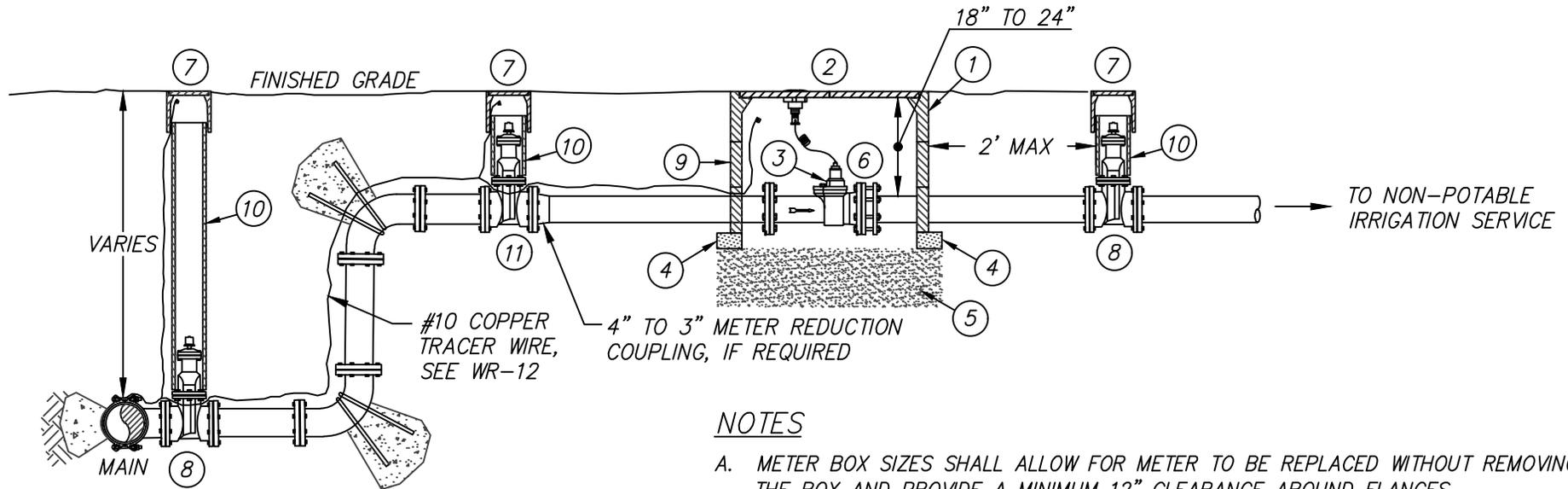
* WATER SERVICE PIPE SIZE MAY BE INCREASED AFTER THE METER TO MEET DEMAND FOR DOMESTIC AND FIRE SERVICES IN THE FOLLOWING AREAS:

- LOW PRESSURE AREAS WITHIN WATER ZONES
- HILLSIDE SUBDIVISIONS
- CUSTOM HOME SUBDIVISIONS

NOTES:

1. CORPORATION STOP SHALL BE M.I.P. BY COMPRESSION.
2. ANGLE METER STOP SHALL HAVE SWIVEL NUT AND LOCK WINGS AND BE VERTICALLY PLUMBED.
3. CORPORATION STOP, CURB STOP, ANGLE METER STOPS, METER, AND SERVICE LINE TO BE SAME SIZE.
4. NEW METER INSTALLATION REQUIRES CONTRACTOR TO INSTALL BADGER MODEL M55:PN 102-3499, M120:PN 101-3357, M170:PN 101-3359, M160:PN 102-3909, M200:PN 103-3911, OR APPROVED EQUAL WITH METER BOX CLEARANCES SHOWN ON THIS SHEET. FIXED NETWORK ENDPOINT IS TO BE INSTALLED BY THE CITY OF FOLSOM AFTER THE PAYMENT TO THE CITY OF ASSOCIATED METER FEES.
5. ALL FITTINGS, VALVES, AND CORPORATION STOPS SHALL BE BRONZE; SERVICE SADDLES SHALL BE BRONZE OR STAINLESS STEEL. ALL BRASS PIPES AND FITTINGS SHALL BE IDENTIFIED AS "LEAD FREE".
6. METER BOX SHALL BE 24" MINIMUM FROM BACK OF WALK, INCREASED TO 36" WHERE SERVICE LINE CROSSES UNDER ROADWAY WITH 80' OR GREATER RIGHT-OF-WAY.
7. POLYETHYLENE SERVICE LINE SHALL BE LAID CONTINUOUS FROM SERVICE SADDLE TO ANGLE METER STOP.
8. SERVICE SADDLES SHALL NOT BE INSTALLED WITHIN 24" OF A VALVE, JOINT, FITTING OR OTHER SERVICE SADDLE.
9. #10 INSULATED COPPER TRACING WIRE SHALL BE ATTACHED TO THE PVC SLEEVE FROM THE MAIN TO THE METER BOX (SEE WR-12), SECURED TO 2" SLEEVE BACK. NO SPLICE IS ALLOWED IN POLYETHYLENE SERVICE LINE OR WIRE. ALL PIPE AND FITTINGS IN EACH SERVICE ASSEMBLY SHALL BE SAME SIZE.
10. SIZE OF SERVICE PIPE AFTER THE METER/BACKFLOW SHALL BE DETERMINED BY HYDRAULIC CALCULATIONS.
11. 2" SCH 40 PVC SLEEVE REQUIRED FOR 1" SERVICES AND 3" SCH 40 PVC FOR 2" SERVICES. WRAP BOTH ENDS OF PVC SLEEVE WITH 10 MIL TAPE.

CITY OF FOLSOM	
1" THRU 2" NON-POTABLE METERED WATER SERVICE	
SCALE: NONE DATE: JANUARY 2024	WR-24



NOTES

- A. METER BOX SIZES SHALL ALLOW FOR METER TO BE REPLACED WITHOUT REMOVING THE BOX AND PROVIDE A MINIMUM 12" CLEARANCE AROUND FLANGES.
- B. CUT OUT PORTIONS OF THE METER BOX SHALL BE PACKED FROM THE OUTSIDE WITH STIFF CONCRETE, INSIDE SMOOTH FINISH.
- C. ALL STEEL OR DUCTILE IRON JOINTS BETWEEN MAIN AND METER SHALL BE FLANGE CONNECTED.
- D. THRUST BLOCKS ARE TO BE CONSTRUCTED PER STANDARD DRAWING WR-4.
- E. WHERE THRUST BLOCKS ARE NOT FEASIBLE, USE FULLY RESTRAINED PVC OR FLANGED DIP.
- F. INSTALL TRACER WIRE PER WR-12 AND THE STANDARD SPECIFICATIONS.
- G. THIS IS A TYPICAL DRAWING, ACTUAL INSTALLATION WILL VARY WITH FIELD CONDITIONS.
- H. 3" METERED SERVICE REQUIRES 4" TAP ONTO MAIN; 4" PIPE TO METER WITH REDUCTION COUPLING.
- I. LATERAL SHALL HAVE A MINIMUM 5X DIAMETER LENGTH OF STRAIGHT PIPE BEFORE METER AND 3X DIAMETER STRAIGHT PIPE AFTER METER.
- J. PRIVATE WATER SERVICE LINE OWNERSHIP AND RESPONSIBILITY BEGINS AFTER THE WATER METER GASKET.

- ① REINFORCED CONCRETE UTILITY BOX (CHRISTY B48 OR APPROVED EQUAL).
- ② 2 PC. STEEL CHECKER PLATE WITH TWO(2) 10" ROUND SELF-CLOSING READING LIDS AND 1 3/4" HOLE FOR TOUCH READ MODULE IN ONE (1) READING LID (CHRISTY B48-62G COVER OR APPROVED EQUAL).
- ③ NEW METER INSTALLATION REQUIRES CONTRACTOR TO INSTALL CITY APPROVED WATER METER WITH METER BOX CLEARANCES SHOWN ON THIS SHEET. FIXED NETWORK ENDPOINT IS TO BE INSTALLED BY THE CITY OF FOLSOM AFTER THE PAYMENT TO THE CITY OF ASSOCIATED METER FEES.
- ④ INSTALL COMMON BRICK (4"x2"x8") UNDER ENTIRE UTILITY BOX PERIMETER, FLUSH TO THE INSIDE OF THE METER BOX, AND TIGHT TO BOTTOM OF BOX WITH NO GAPS.
- ⑤ SAND BACKFILL, 12" TO 18" DEEP. SAND TO BE FILLED 1" BELOW TOP OF BRICK.
- ⑥ FLANGED COUPLING ADAPTOR.
- ⑦ VALVE BOX AND LID PER CITY STANDARDS. SEE WR-07 FOR BOX COLLAR AND EXTENSION REQUIREMENTS.
- ⑧ GATE VALVE
- ⑨ UTILITY BOX EXTENSION
- ⑩ VALVE BOX RISER SHALL BE 8" PIPE
- ⑪ GATE VALVE. (NEEDED IF METER IS MORE THAN 20' FROM MAIN)

CITY OF FOLSOM

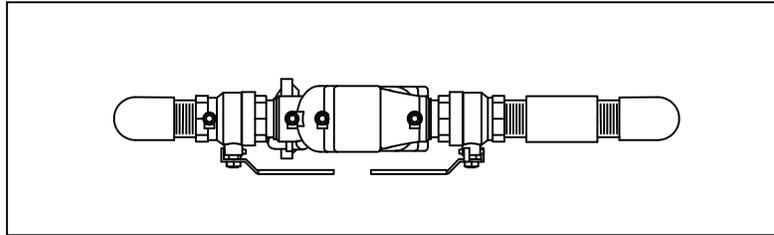
3" OR LARGER NON-POTABLE
METERED WATER SERVICE

SCALE: NONE
DATE: JANUARY 2024

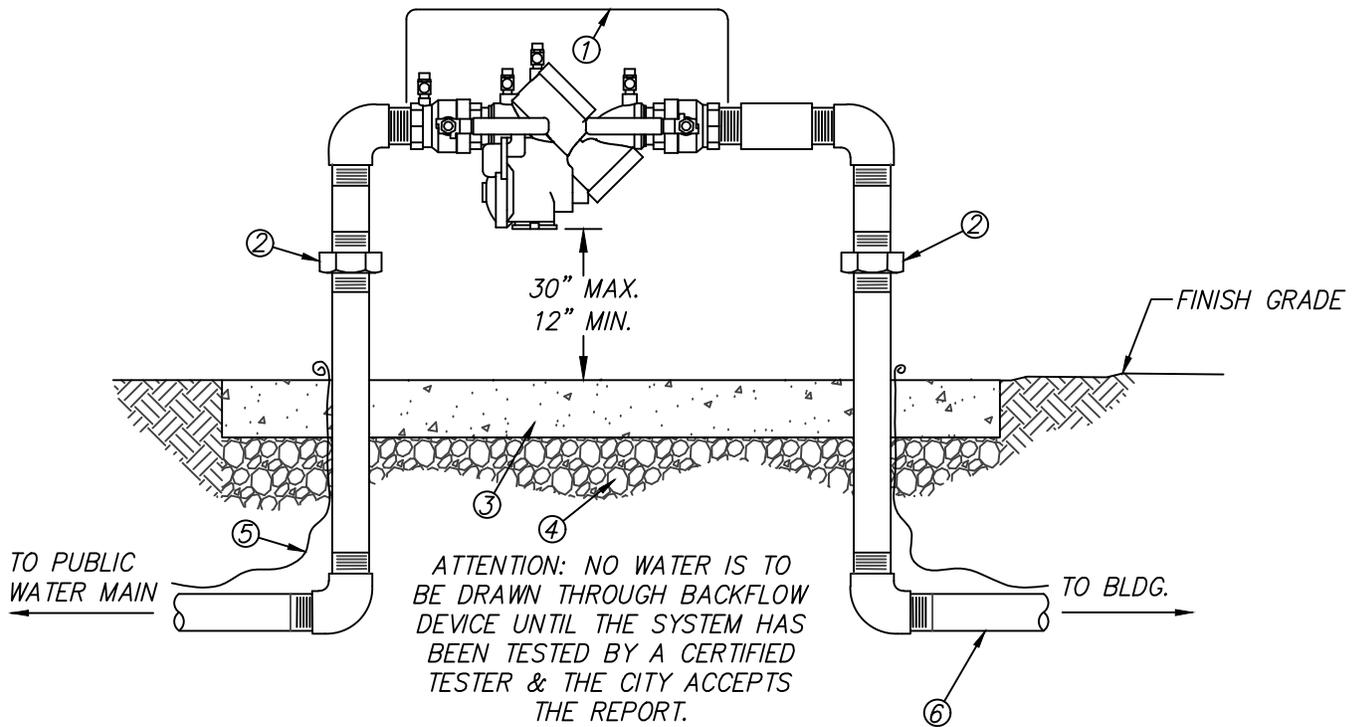
WR-25

NOTES:

1. REDUCED PRESSURE PRINCIPLE ASSEMBLY TO BE LEAD FREE AND APPROVED BY THE CITY.
2. ALL MATERIALS SHALL MEET APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS.
3. BACKFLOW PREVENTER SHOWN MAY NOT REFLECT MANUFACTURERS' CONFIGURATION FOR REDUCED PRESSURE DEVICES.
4. INSTALL TRACER WIRE PER CITY STANDARDS. ALL PIPING FROM METER TO BACKFLOW SHALL BE COPPER OR BRASS.
5. FOR BACKFLOW PREVENTERS 2" AND SMALLER, PIPE SUPPORTS ARE NOT REQUIRED.
6. THRUST BLOCKS NOT REQUIRED FOR BACKFLOW PREVENTERS 2" AND SMALLER.
7. PUBLICLY OWNED IRRIGATION BACKFLOW PREVENTERS SHALL HAVE "STRONG-BOX" OR APPROVED EQUAL ENCLOSURE.
8. BACKFLOW PREVENTER ANNUAL TESTING, MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.

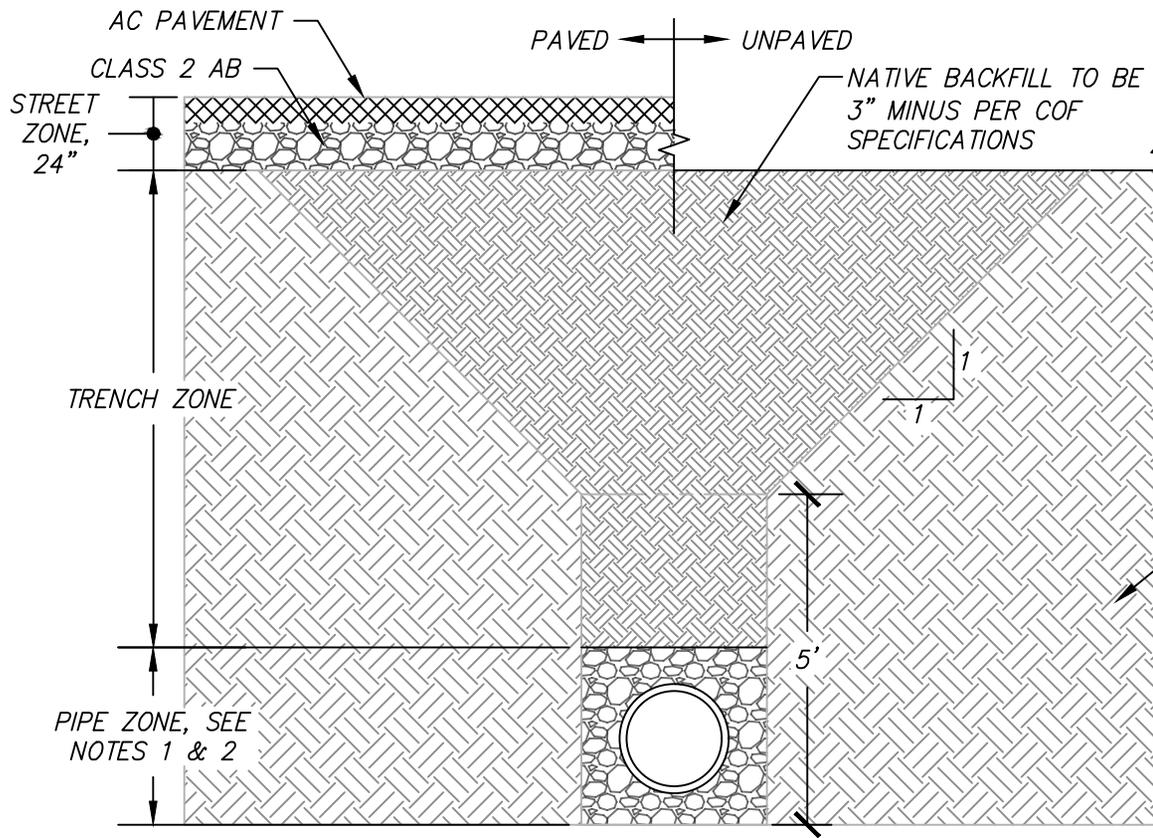


NOTE: DISTANCE FROM P.O.C. SHALL BE 5' MAXIMUM UNLESS CONDITIONS DO NOT PERMIT.

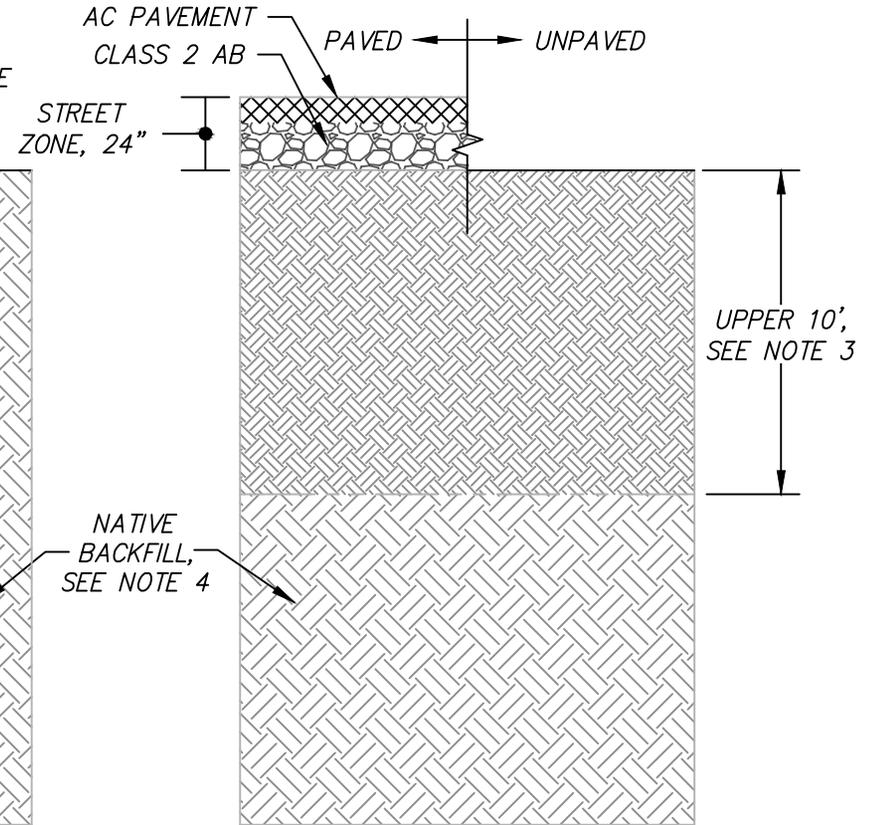


- ① REDUCED PRESSURE PRINCIPLE ASSEMBLY (RPPA)
- ② ALL ABOVE GROUND PIPING TO BE COPPER OR BRONZE WITH UNIONS ON BOTH LEGS
- ③ 4" CONCRETE SLAB - 36" WIDE, LENGTH TO EXTEND 6" MIN BEYOND PIPING ON ALL SIDES
- ④ 4" THICK AGGREGATE BASE
- ⑤ #10 COPPER TRACER WIRE, SEE WR-12
- ⑥ MAY TRANSITION TO PVC

CITY OF FOLSOM	
2" & SMALLER DOMESTIC BACKFLOW PREVENTER ASSEMBLY	
SCALE: NONE DATE: JANUARY 2024	WR-26



DEEP FILL WITH UTILITIES



DEEP FILL WITHOUT UTILITIES

NOTES:

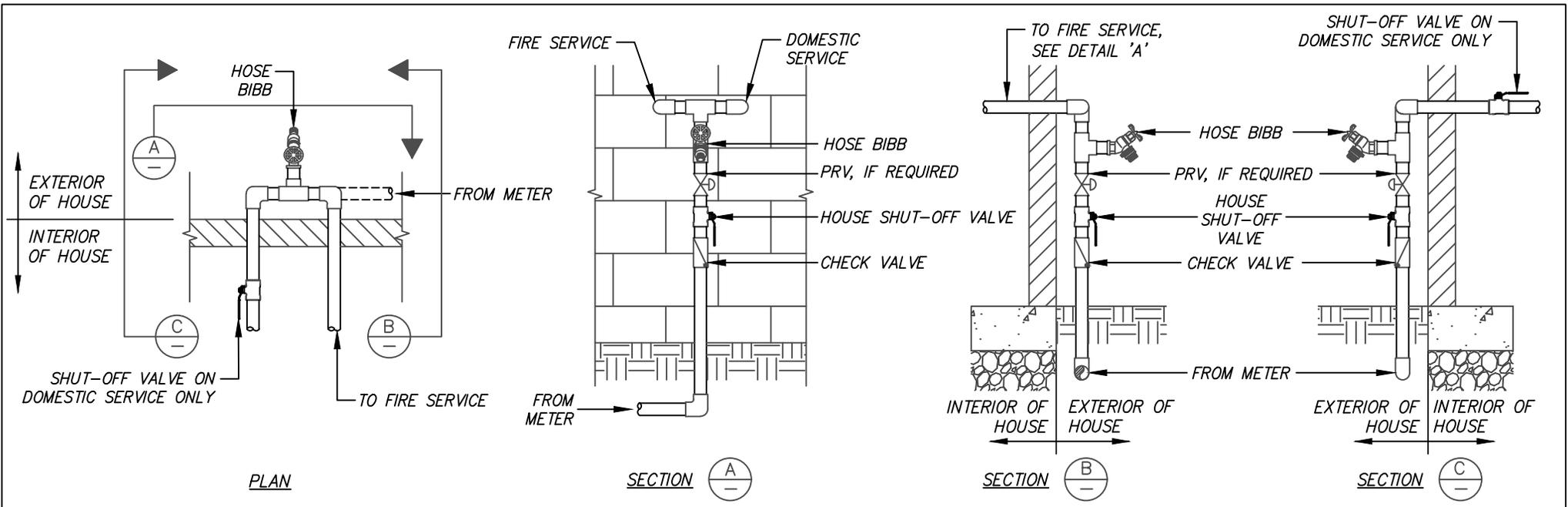
1. BACKFILL SHALL BE MECHANICALLY CONSOLIDATED UNDER THE HAUNCHES OF THE PIPE. SEE CITY SPECIFICATIONS 4.6.8 AND 6.7.8 FOR BACKFILL AND COMPACTION REQUIREMENTS.
2. PIPE ZONE COVER OVER THE TOP OF UTILITY WATER OR SEWER MAINS SHALL BE A MINIMUM OF 12". RELATIVE COMPACTION SHALL OCCUR IN MAXIMUM 8 INCH LOOSE HEIGHTS. PIPE BEDDING AND INTERMEDIATE BACKFILL SHALL BE IN ACCORDANCE WITH STANDARD DETAILS SS-15 AND WR-15.
3. UPPER 10' OF DEEP FILL WITH NO UTILITIES SHALL BE IN ACCORDANCE WITH TRENCH ZONE BACKFILL. FILL SHALL BE 3" MINUS AND COMPACTED PER CITY SPECIFICATIONS 4.6.8 AND 6.7.8.
4. NATIVE BACKFILL TO BE PLACED AND COMPACTED TO 90% RELATIVE COMPACTION.

CITY OF FOLSOM

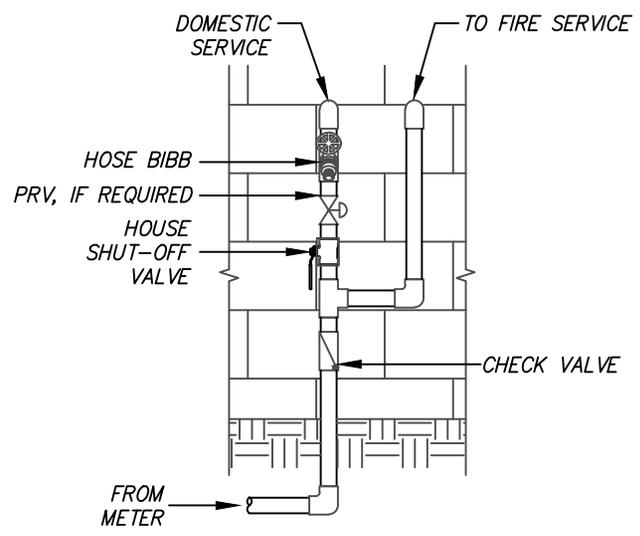
DEEP FILL
TRENCH BACKFILL

SCALE: NONE
DATE: JANUARY 2024

WR-27



MULTI-PURPOSE DOMESTIC/FIRE SYSTEM



STAND-ALONE FIRE SYSTEM

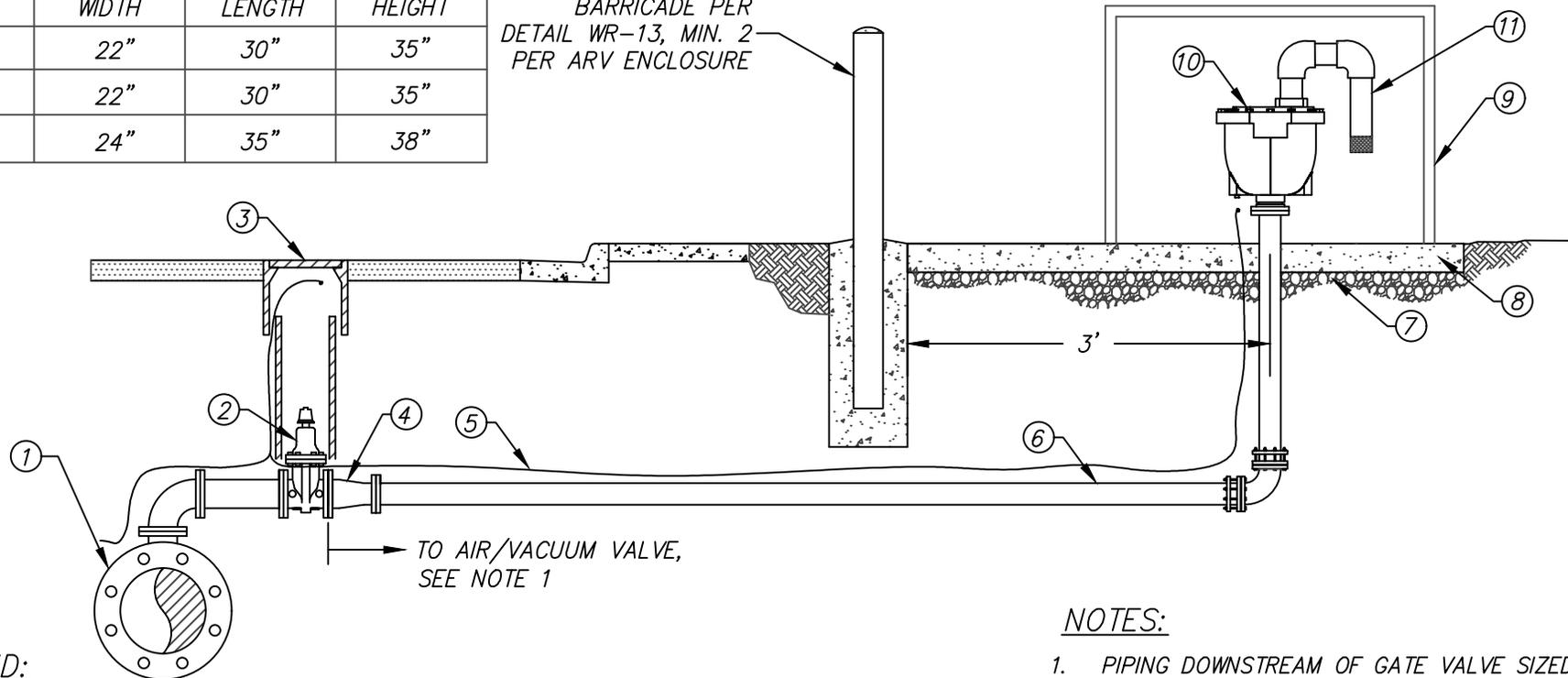
NOTES:

1. HOUSE SHUT-OFF VALVE, GAUGES, ETC. MUST BE LOCATED ON EXTERIOR OF HOUSE.
2. SHUT-OFF VALVE SHALL BE PLACED IN AN ACCESSIBLE LOCATION AND MUST PROVIDE PROPER DRAINAGE. VALVE SHALL NOT BE PLACED BEHIND FENCES OR LOCKED AREAS.
3. NO SHUT-OFF VALVE IS TO BE INSTALLED ON THE FIRE SERVICE.
4. STANDALONE FIRE SYSTEM IS TO BE USED IN LOW PRESSURE AREAS ONLY AND SHALL BE APPROVED BY THE CITY.
5. ALL SHUT-OFF VALVES TO BE CLEARLY LABELED.

CITY OF FOLSOM	
FIRE AND DOMESTIC SERVICE DETAIL	
SCALE: NONE DATE: JANUARY 2024	WR-28

ARV SIZE	MIN. OUTSIDE ENCLOSURE DIMENSIONS		
	WIDTH	LENGTH	HEIGHT
3"	22"	30"	35"
4"	22"	30"	35"
6"	24"	35"	38"

BARRICADE PER
DETAIL WR-13, MIN. 2
PER ARV ENCLOSURE



LEGEND:

- ① FLGxFLG DI TEE WITH 4" BRANCH FOR 3" OR 4" CAV, 6" BRANCH FOR 6" CAV. RUN SIZE TO MATCH WATER MAIN
- ② 4" GATE VALVE FOR 3" OR 4" CAV. 6" GATE VALVE FOR 6" CAV PER WR-07
- ③ TRAFFIC LID (CHRISTY G5 OR EQUAL) PER WR-07
- ④ 4"x3" REDUCER. SEE NOTE 1
- ⑤ #10 COPPER TRACER WIRE, SEE WR-12
- ⑥ DIP TO AIR VALVE, MAINTAIN A GRADE UPWARD FROM GATE VALVE TO AIR VALVE (NO TRAPS)
- ⑦ 4" THICK AGGREGATE BASE
- ⑧ 4" CONCRETE SLAB, TO EXTEND FROM CURB TO 6" BEYOND ENCLOSURE ON SIDES AND BACK
- ⑨ ABOVE GROUND LOCKABLE VALVE ENCLOSURE, INSULATED PLACER WATERWORKS R-MODEL OR APPROVED EQUAL SIZED PER TABLE ON THIS SHEET. COLOR TO BE HUNTER GREEN OR BEIGE
- ⑩ SINGLE BODY COMBINATION AIR/VACUUM RELEASE VALVE. APCO 140C SERIES W/ FLANGE INLET CONNECTION OR APPROVED EQUAL. NARROW SIDE OF VALVE BODY AND ENCLOSURE TO BE PARALLEL WITH THE STREET/WATER MAIN
- ⑪ GALVANIZED OUTLET PIPE OR LEAD FREE BRASS WITH 20 MESH SCREEN

NOTES:

1. PIPING DOWNSTREAM OF GATE VALVE SIZED TO MATCH SIZE OF ARV. FOR 3" ARV, INSTALL 4"x3" REDUCER AND 3" DIP. FOR 4" ARV, USE 4" DIP. ALL DIP TO BE DOUBLE WRAPPED PER CITY STANDARDS.
2. ALL BRASS PIPES AND FITTINGS SHALL BE IDENTIFIED AS "LEAD FREE".
3. ALL AIR RELEASE VALVES ARE TO BE COMBINATION RELEASE VALVES.
4. ALL HARDWARE SHALL BE 304 STAINLESS STEEL

CITY OF FOLSOM

3" TO 6"
AIR & VACUUM
RELEASE VALVE

SCALE: NONE
DATE: JANUARY 2024

WR-29