

**NOTE:**  
**FOR DOMESTIC AND IRRIGATION SERVICE**

#### NOTES:

1. ALLOWED BACKFLOW ASSEMBLIES AND THEIR ORIENTATIONS SHALL BE LIMITED TO THOSE SPECIFIED ON THE "LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES" BY THE UNIVERSITY OF SOUTHERN CALIFORNIA'S FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH, 2010 OR LATEST REVISION.
2. THE BACKFLOW DEVICE SHALL BE LOCATED: ON PRIVATE PROPERTY AND A MAXIMUM OF 5' FROM BACK OF SIDEWALK (TYP); OR AT A LOCATION DETERMINED BY THE WATER DISTRIBUTION CROSS CONNECTION PERSONNEL IN THE FIELD.
3. CONCRETE PAD SHALL BE CLASS B CONCRETE, 4" MINIMUM THICKNESS, REINFORCED WITH WELDED WIRE MESH.
4. WHERE SERVICE LINES SMALLER THAN 4" PASS UNDER A SIDEWALK, THEY SHALL BE INSTALLED IN A PVC CASING/SLEEVE AT LEAST 1" LARGER THAN THE SERVICE LINE AND EXTENDS AT LEAST 6" BEYOND THE EDGES OF THE SIDEWALK.
5. METAL PIPES EXPOSED TO SOIL OR CONCRETE SHALL BE COATED WITH 3M SCOTCHWRAP PIPE PRIMER AND WRAPPED WITH 3M SCOTCHWRAP 20ML NO.51 BLACK PVC TAPE (1/2" OVERLAP).
6. THE PORTION OF THE TRENCH FROM BACK OF METER TO THE DEVICE SHALL REMAIN OPEN UNTIL WATER DISTRIBUTION CROSS CONNECTION PERSONNEL HAVE INSPECTED AND APPROVED THE INSTALLATION. CALL 669-600-7322.
7. THE TESTING SIDE OF THE DEVICE SHALL HAVE A MINIMUM 24" OF CLEARANCE FROM OBSTRUCTIONS (NON-TRIMMABLE LANDSCAPING, BUILDINGS, UTILITIES, ETC). MULTIPLE BACKFLOW DEVICES SHALL BE SEPARATED BY A MINIMUM OF 18" AND BE OF EQUAL HEIGHT.
8. BOLLARDS MAY BE REQUIRED BY CITY TO PROVIDE ADDITIONAL PROTECTION.
9. BACKFLOW ASSEMBLIES INSTALLED ON POTABLE WATER SERVICES SHALL BE LEAD FREE.
10. BACKFLOW ASSEMBLIES SHALL BE THE SAME SIZE OF THE WATER METER.
11. NO GALVANIZED PIPE OR DISSIMILAR METAL PIPE MAY BE INSTALLED.
12. A BACKFLOW PREVENTER ENCLOSURE IS OPTIONAL, IF INSTALLED FOLLOW DETAIL 19B.

## BACKFLOW PREVENTION DEVICE SIZE UP TO 2"



Sunnyvale

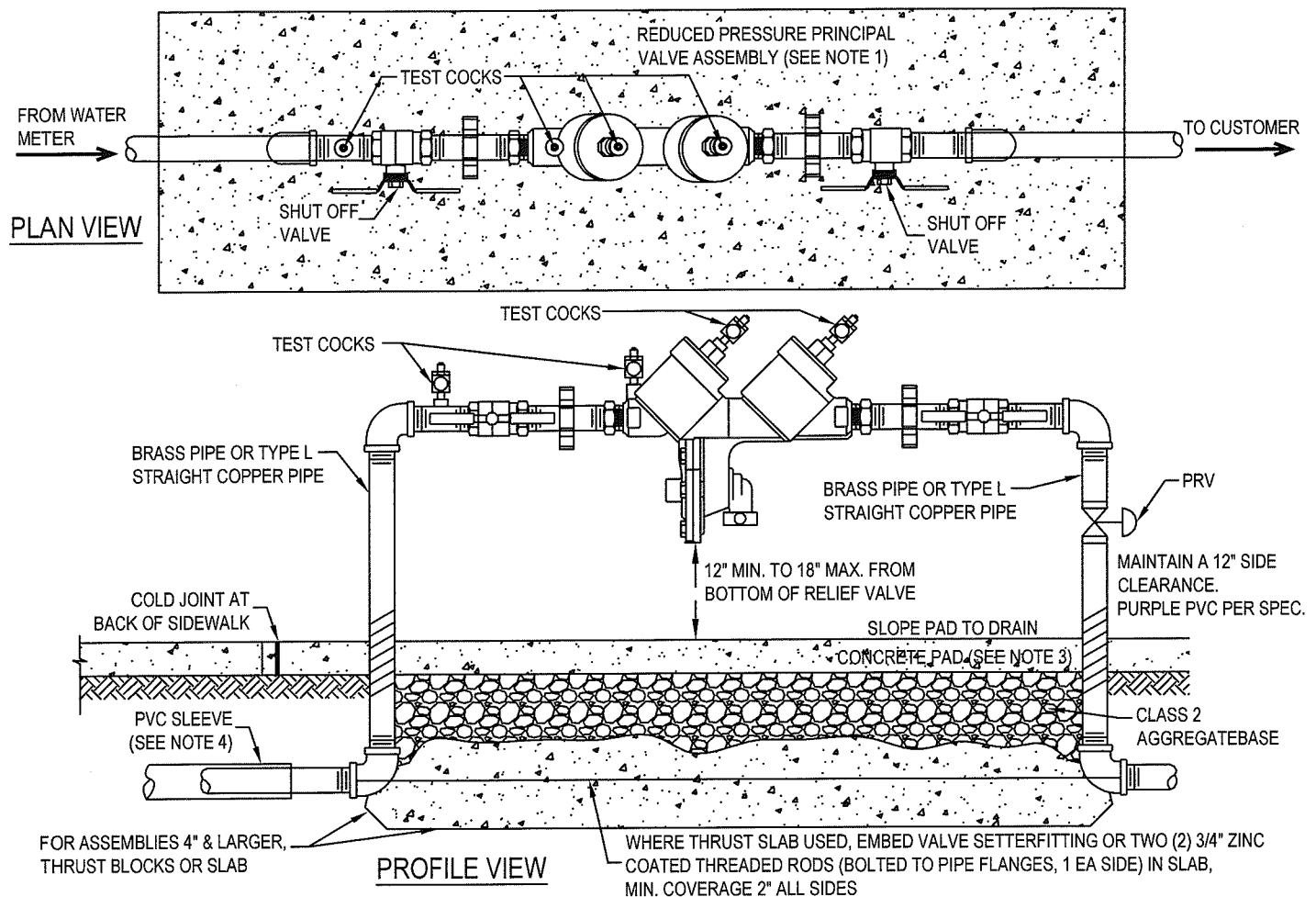
DATE: JUNE 30, 2006  
REVISED: JULY 2019

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APPROVED BY:

DWG.

18B



## NOTES:

1. ALLOWED REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLIES AND THEIR ORIENTATIONS SHALL BE LIMITED TO THOSE SPECIFIED ON THE "LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES" BY THE UNIVERSITY OF SOUTHERN CALIFORNIA'S FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH, 2010 OR LATEST REVISION.
2. THE BACKFLOW DEVICE SHALL BE LOCATED: ON PRIVATE PROPERTY AND A MAXIMUM OF 5' FROM BACK OF SIDEWALK(TYP); OR AT A LOCATION DETERMINED BY THE WATER DISTRIBUTION CROSS CONNECTION PERSONNEL IN THE FIELD.
3. CONCRETE PAD SHALL BE CLASS B CONCRETE, 4" MINIMUM THICKNESS, REINFORCED WITH WELDED WIRE MESH.
4. WHERE SERVICE LINES SMALLER THAN 4" PASS UNDER A SIDEWALK, THEY SHALL BE INSTALLED IN A PVC CASING/SLEEVE AT LEAST 1" LARGER THAN THE SERVICE LINE AND EXTENDS AT LEAST 6" BEYOND THE EDGES OF THE SIDEWALK.
5. METAL PIPES EXPOSED TO SOIL OR CONCRETE SHALL BE COATED WITH 3M SCOTCHWRAP PIPE PRIMER AND WRAPPED WITH 3M SCOTCHWRAP 20 MIL NO.51 BLACK PVC TAPE(1/2"OVERLAP).
6. THE PORTION OF THE TRENCH FROM BACK OF METER TO THE DEVICE SHALL REMAIN OPEN UNTIL WATER DISTRIBUTION CROSS CONNECTION PERSONNEL HAVE INSPECTED AND APPROVED THE INSTALLATION. CALL 669-600-7322.
7. THE TESTING SIDE OF THE DEVICE SHALL HAVE A MINIMUM 24" OF CLEARANCE FROM OBSTRUCTIONS(NON-TRIMMABLE LANDSCAPING, BUILDINGS, UTILITIES, ETC). MULTIPLE BACKFLOW DEVICES SHALL BE SEPARATED BY A MINIMUM OF 18" AND BE OF EQUAL HEIGHT.
8. BOLLARDS MAY BE REQUIRED BY CITY TO PROVIDE ADDITIONAL PROTECTION.
9. PRV TO BE MAINTAINED BY PROPERTY OWNER.
10. NO GALVANIZED PIPE OR DISSIMILAR METAL PIPE MAY BE INSTALLED.
11. A BACKFLOW PREVENTER ENCLOSURE IS OPTION, IF INSTALLED FOLLOW DETAIL 19B.
12. BACKFLOW PREVENTER TO BE PAINTED WITH PURPLE COLOR, NO BRASS TO BE PAINTED.

## RECYCLED WATER BACKFLOW PREVENTION DEVICE SIZE UP TO 2 INCHES



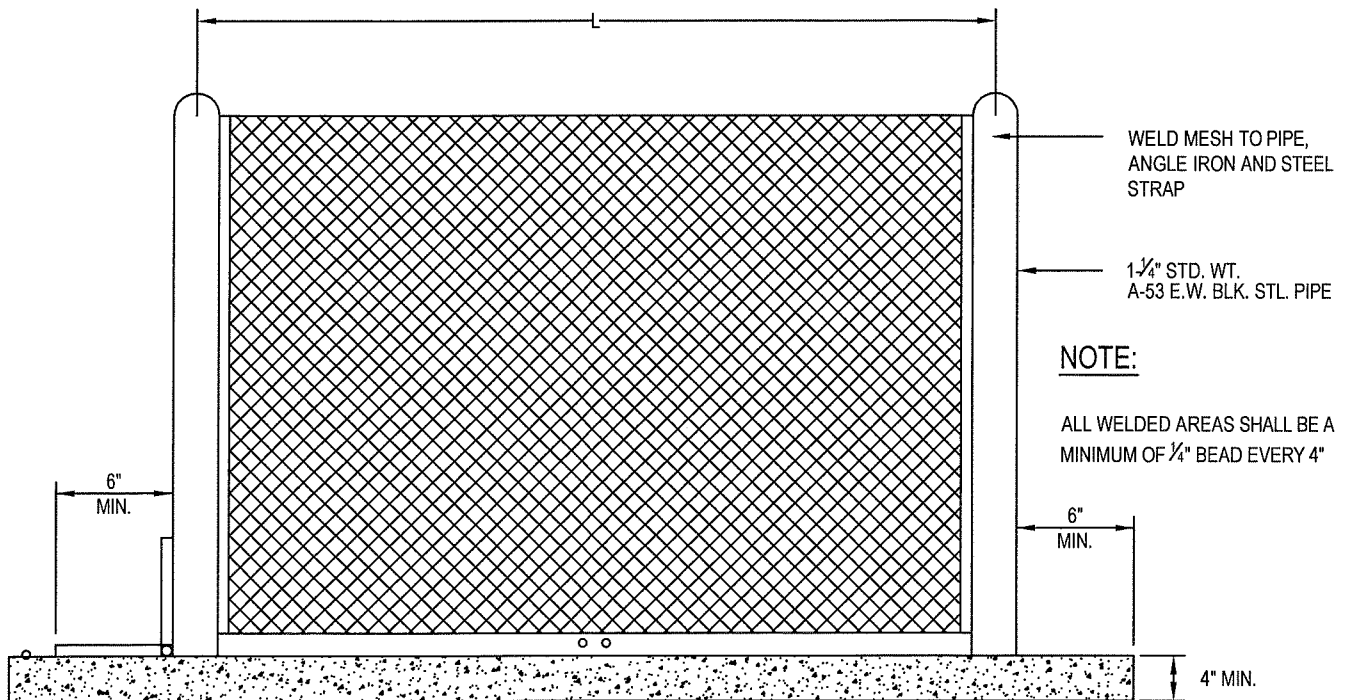
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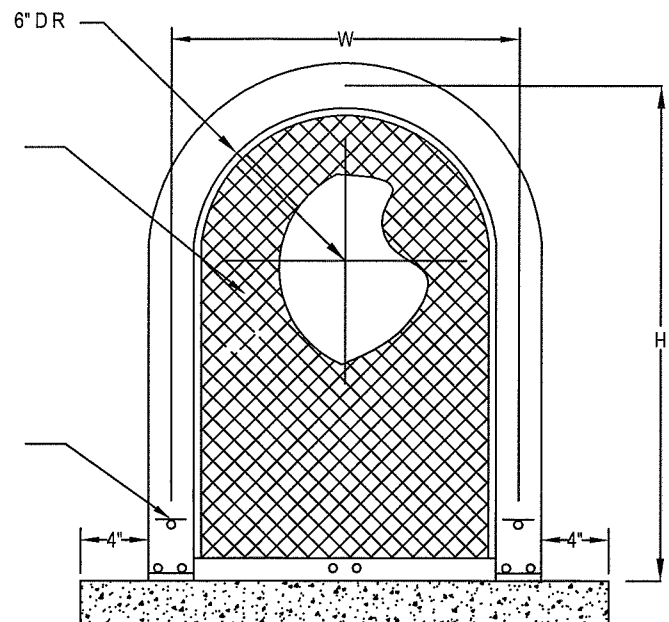
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1/2" NO. 13 FLATTENED DIAMOND PATTERN STEEL MESH

MODEL	CENTERLINE DIM.
GS - 1	12"W x 24"H x 24"L
GS - 2	12"W x 24"H x 32"L
GS - 3	12"W x 18"H x 42"L

WELD 4" STL. HINGES (2) ON GS-3



#### NOTES:

1. ENCLOSURE IS RECOMMEND TO REDUCE RISK OF THEFT OR TAMPER ON ALL NEW CONSTRUCTION BACKFLOW DEVICES FOR SIZES 3/4" TO 2".
2. "GUARDSHACK™ ENCLOSURE" MODEL GS OR APPROVED EQUAL, PHOENIX, ARIZONA 85032 (602-788-5411)
3. AFTER ALL WELDING, ELECTROSTATIC APPLICATION OF POWDER SHALL BE FUSION BONDED TO ENTIRE ENCLOSURE. (HUNTER GREEN)
4. ALL BOLTS SHALL BE ZINC PLATED.

## BACKFLOW PREVENTION DEVICE ENCLOSURE



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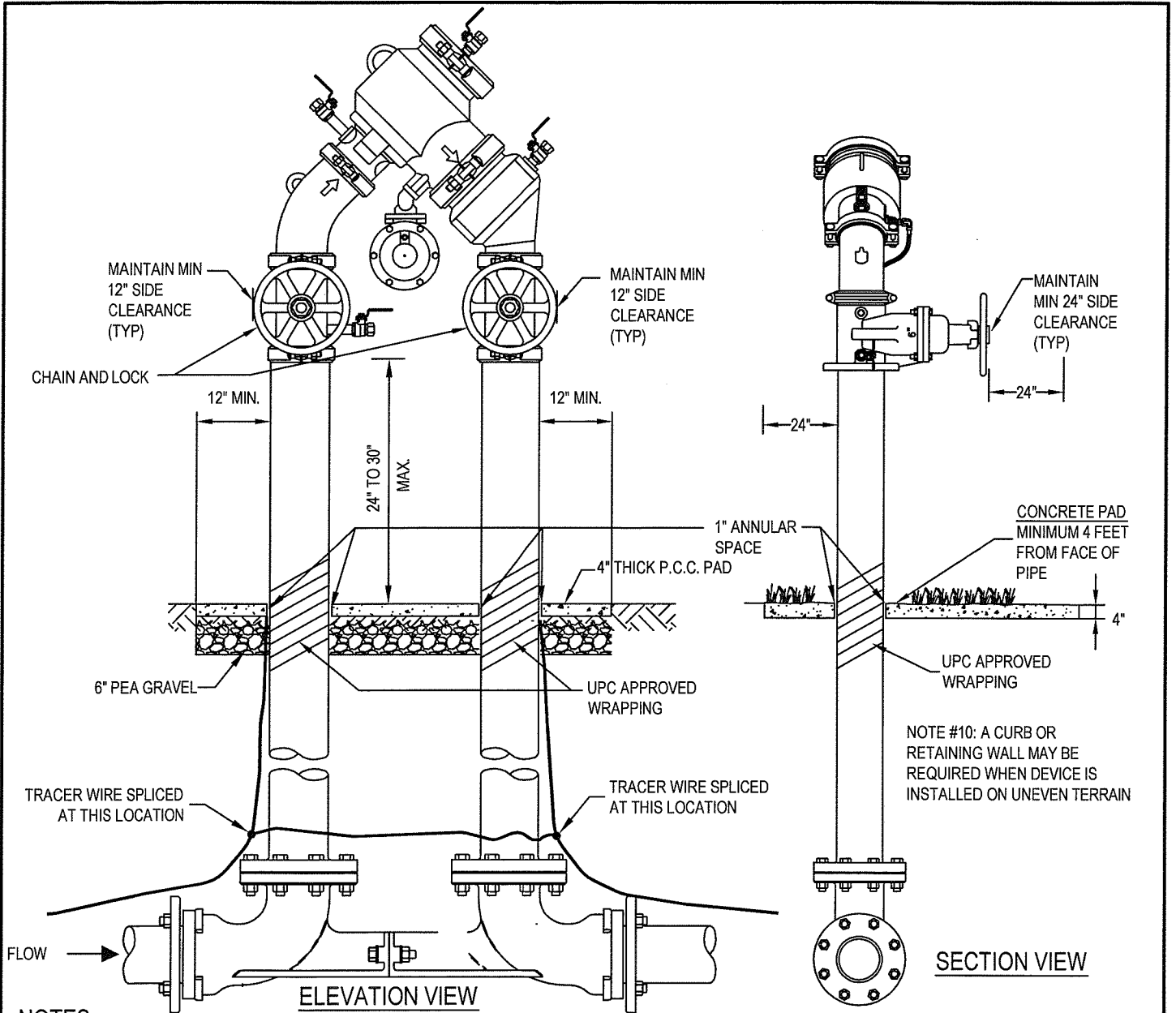
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19B



#### NOTES:

1. REDUCED PRESSURE PRINCIPLE TYPE BACKFLOW DEVICES SHALL BE WILKINS, FEBCO APPROVAL EQUAL PER USC LIST OF APPROVED BACKFLOWS.
2. REDUCED PRESSURE PRINCIPLE TYPE BACKFLOW DEVICES SHALL BE REQUIRED FOR THE PROTECTION OF THE PUBLIC WATER SUPPLY. (NO DOUBLE CHECK VALVE ASSEMBLIES, SEE AIR GAP)
3. BACKFLOW DEVICES SHALL BE INSTALLED ADJACENT TO AND ON PROPERTY SIDE OF SIDEWALK WHERE APPLICABLE. THE ASSEMBLY SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE WATER METER AS APPROVED BY THE CITY'S CROSS CONNECTION PERSONNEL.
4. ALL DEVICES WILL HAVE RESILIENT SEATED SHUT - OFF VALVES. TEST COCKS WILL HAVE THREADED ENDS.
5. PRESS. DIFFERENTIAL VALVE OPENING TO BE 24" MINIMUM ABOVE GRADE
6. ALL PIPES AND SPOOLS SHALL BE DUCTILE IRON WITH NO EXCEPTIONS AND ALL JOINTS FLANGED.
7. ALL BOLTS/NUTS SHALL BE STAINLESS STEEL COMPONENTS WITH NO EXCEPTIONS.
8. DO NOT PAINT BRASS FITTINGS.
9. VALVE CONFIGURATION DECIDED ON JOB SITE.
10. ON SLOPING SURFACES, CONTRACTOR SHALL INSTALL A CONCRETE CURB/ WALL OR EQUIVALENT AROUND THE BACKFLOW.
11. THE PORTION OF THE TRENCH FROM BACK OF METER SHALL REMAIN OPEN UNTIL WATER DISTRIBUTION PERSONNEL HAVE INSPECTED AND APPROVED THE INSTALLATION, CALL 669-600-7322.
12. THE VALVE HANDWHEELS SHALL BE DOUBLE-LOCKED USING GALVANIZED STRAIGHT LINK CHAIN THAT LOCKS THE VALVE HANDWHEELS IN THE OPEN POSITION AND EITHER LOCK WILL RELEASE THE CHAIN.
13. BACKFLOW DEVICES SHALL BE LEAD FREE.
14. BACKFLOW ASSEMBLIES SHALL BE THE SAME SIZE AS THE METER.

### VERTICAL ORIENTATION DOMESTIC RP ASSEMBLY BACKFLOW PREVENTION DEVICE SIZE 3" AND LARGER



Sunnyvale

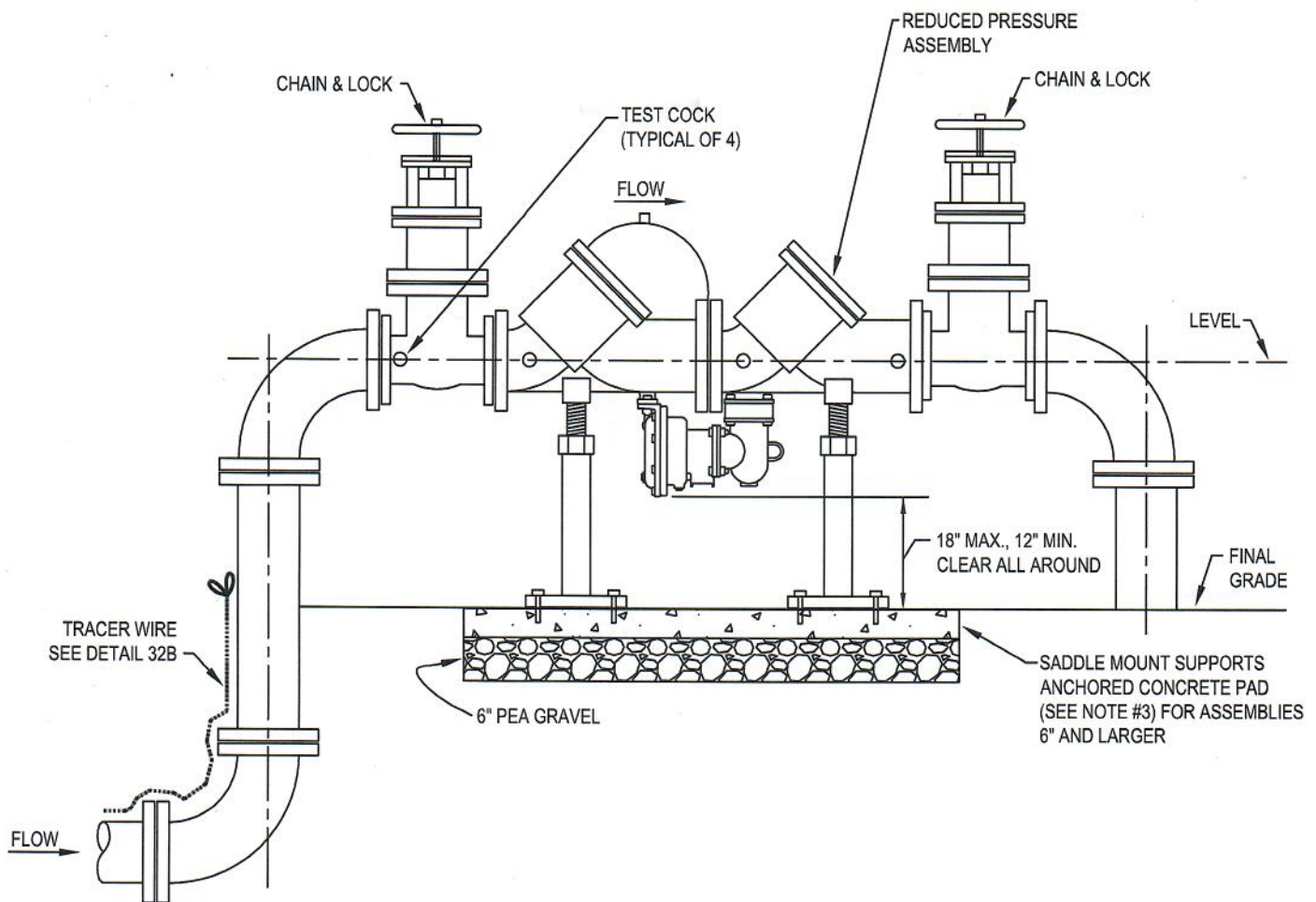
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20B



## NOTES:

1. ALLOWED BACKFLOW ASSEMBLIES AND THEIR ORIENTATIONS SHALL BE LIMITED TO THOSE SPECIFIED ON THE "LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES" BY THE UNIVERSITY OF SOUTHERN CALIFORNIA'S FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH, LATEST VERSION.
2. THE BACKFLOW DEVICE SHALL BE LOCATED ON PRIVATE PROPERTY: AS CLOSE AS PRACTICAL TO THE USER'S CONNECTION AND SHALL BE INSTALLED A MINIMUM OF TWELVE INCHES (12") ABOVE GRADE AND NOT MORE THAN EIGHTEEN INCHES (18") ABOVE GRADE MEASURED TO THE BOTTOM OF THE DEVICE AND WITH A MINIMUM OF TWELVE INCHES (12") SIDE CLEARANCE.
3. CONCRETE PAD SHALL BE CLASS B CONCRETE, 4" MINIMUM THICKNESS, REINFORCED WITH WELDED WIRE MESH.
4. WHERE SERVICE LINES SMALLER THAN 4" PASS UNDER A SIDEWALK, THEY SHALL BE INSTALLED IN A PVC CASING / SLEEVE AT LEAST 1" LARGER THAN THE SERVICE LINE AND EXTENDS AT LEAST 6" BEYOND THE EDGES OF THE SIDEWALK.
5. METAL PIPES EXPOSED TO SOIL OR CONCRETE SHALL BE POLY WRAPPED AND TAPED.
6. THE PORTION OF THE TRENCH FROM BACK OF METER TO THE DEVICE SHALL REMAIN OPEN UNTIL WATER DISTRIBUTION CROSS-CONNECTION PERSONNEL HAVE INSPECTED AND APPROVED THE INSTALLATION. CALL 669-600-7322.
7. THE TESTING SIDE OF THE DEVICE SHALL HAVE A MINIMUM 24" OF CLEARANCE FROM OBSTRUCTION (NON-TRIMMABLE LANDSCAPING, BUILDINGS, UTILITIES, ETC.) MULTIPLE BACKFLOW DEVICES SHALL BE SEPARATED BY A MINIMUM OF 18" AND BE OF EQUAL HEIGHT.
8. BOLLARDS MAY BE REQUIRED BY CITY TO PROVIDE ADDITIONAL PROTECTION.
9. BACKFLOW ASSEMBLIES INSTALLED ON PORTABLE WATER SERVICES SHALL BE LEAD FREE.
10. BACKFLOW ASSEMBLIES SHALL BE THE SAME SIZE OF THE WATER METER.
11. NO GALVANIZED PIPE OR DISSIMILAR METAL PIPE MAY BE USED.
12. ALL PIPES AND SPOOLS SHALL BE DUCTILE IRON PIPE WITH NO EXCEPTIONS AND ALL JOINTS FLANGED.
13. ALL BOLTS / NUTS SHALL BE STAINLESS STEEL COMPONENTS WITH NO EXCEPTIONS.

## HORIZONTAL ORIENTATION DOMESTIC RP ASSEMBLY BACKFLOW PREVENTION DEVICE SIZE 3" AND LARGER



Sunnyvale

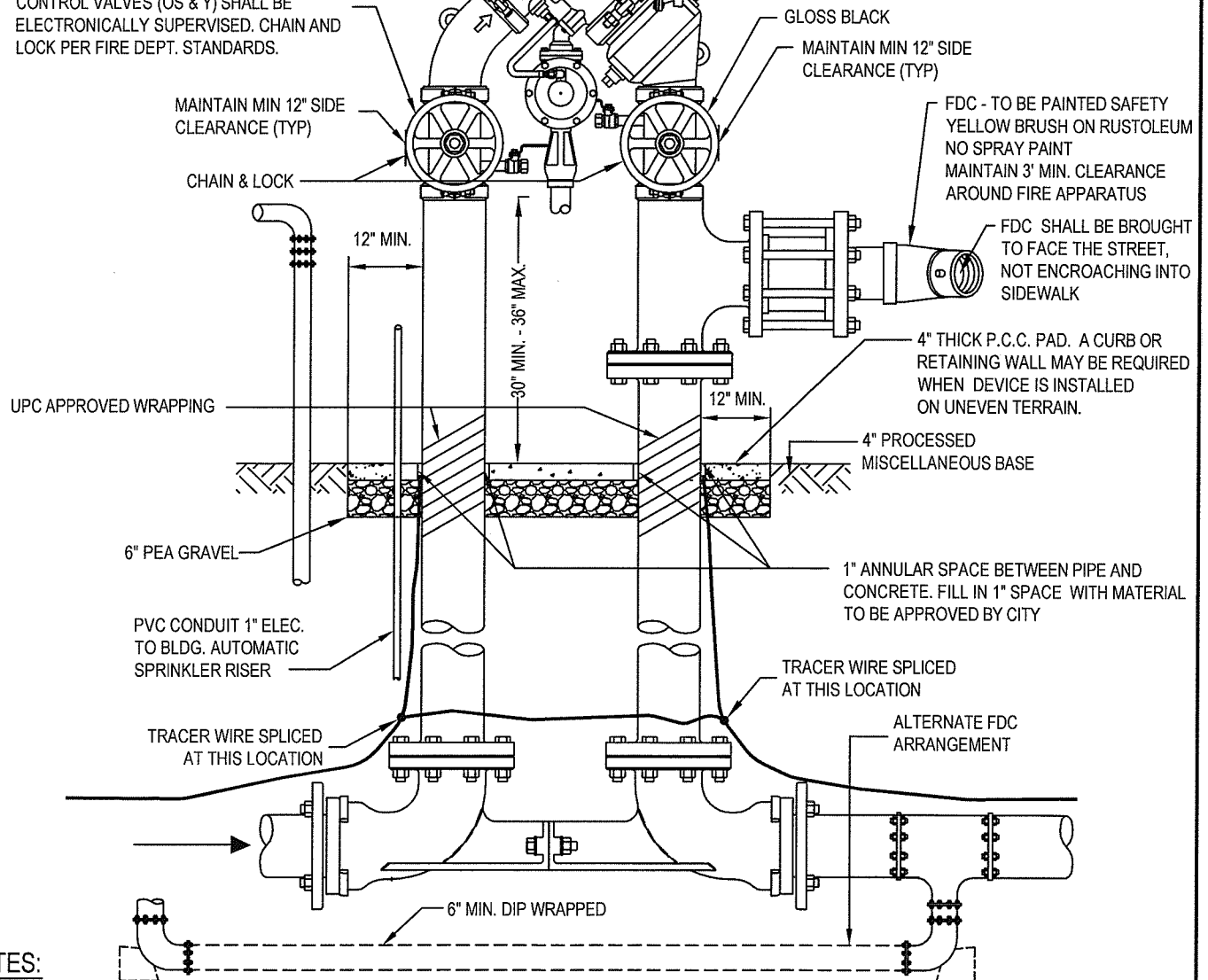
DATE: SEPTEMBER 2020

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20B-1

SHUT OFF VALVES (RESILIENT SEATED). ALL CONTROL VALVES (OS & Y) SHALL BE ELECTRONICALLY SUPERVISED. CHAIN AND LOCK PER FIRE DEPT. STANDARDS.



#### NOTES:

1. REDUCED PRESSURE DETECTOR ASSEMBLY SHALL BE WILKINS 475DA OR PRIOR APPROVED EQUAL (RPDA REQUIRED IF CHEMICALS ARE INTRODUCED TO SYSTEM).
2. FDC TO BE PAINTED SAFETY YELLOW AND REMAIN VISIBLE AND ACCESSIBLE.
3. ALL PIPES AND SPOOLS SHALL BE DUCTILE IRON WITH NO EXCEPTIONS AND ALL JOINTS FLANGED. DIP TO BE PROTECTED WRAP CA-1200 POLYGUARD CA-14 MASTIC OR APPROVED EQUAL. NO GALVANIZED PIPE IS TO BE INSTALLED.
4. ALL TRIM HARDWARE TO BE BRASS OR BRONZE WITH NO EXCEPTIONS.
5. RADIO READ METER FEE TO BE PAID AT TIME OF PERMIT APPLICATION (METER TO BE INSTALLED BY CITY).
6. UNDERGROUND FITTINGS TO BE FUSION EPOXY COATED, CONNECTIONS TO BE FLANGED OR MEGALUG WITH FLUOROPOLYMER (TRIPAC) COATED BOLTS AND NUTS OR 316 STAINLESS STEEL BOLTS AND NUTS OR A COMBINATION OF THE TWO.
7. FOR SECTION VIEW PLEASE SEE 20B.
8. THE PORTION OF THE TRENCH FROM BACK OF METER SHALL REMAIN OPEN UNTIL WATER DISTRIBUTION PERSONNEL HAVE INSPECTED AND APPROVED THE INSTALLATION, CALL 669-600-7322.
9. BACKFLOW DEVICES SHALL BE LEAD FREE.

### FIRE SERVICE - REDUCED PRESSURE DETECTOR ASSEMBLY (RPDA)



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