

**VALVE BOX
WITH CAST IRON
TRAFFIC LID**

NOTES:

1. A.C. PAVEMENT TO COMPLY WITH STREET PAVEMENT REQUIREMENTS.
2. FOR VALVE BOXES INSTALLED IN NON-TRAFFIC AREAS, CONCRETE COLLAR SHALL BE EXTENDED TO FINISH GRADE. SLOPE COLLAR TO DRAIN AWAY FROM LID.
3. RISER PIPE TO BE ONE CONTINUOUS PIECE OF PVC.
4. VALVE BOX COVERS FOR RECYCLED WATER MAINS SHALL BE TRIANGULAR WITH "RW-DSRSD" INSCRIPTION CAST ON THE TOP SURFACE.
5. VALVE BOX COVERS FOR RW WATER MAINS SHALL BE POWDER COATED.

Dublin San Ramon Services District

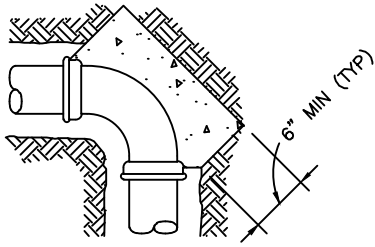
REVISION DATE
JUN 2020

VALVE BOX INSTALLATION

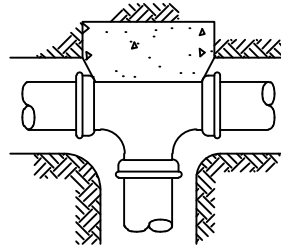
REVISED BY
BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

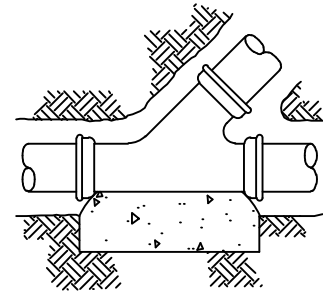
DRAWING
W-1



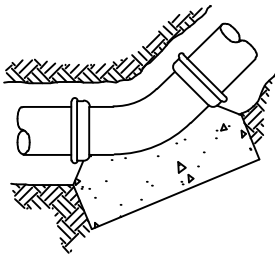
90° BEND



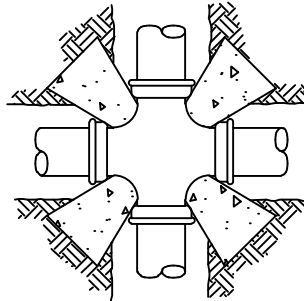
TEE



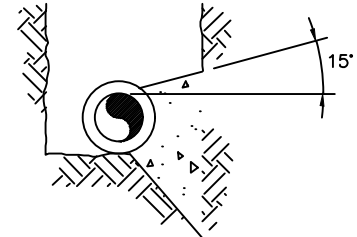
WYE



45° BEND

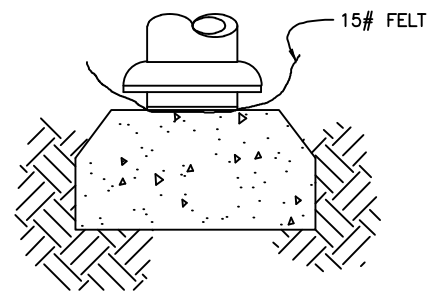


CROSS



TYPICAL SECTION

THROUGH THRUST BLOCK



PLUG

NOTES:

1. ALL THRUST BLOCKS TO BE PLACED AGAINST UNDISTURBED EARTH.
2. THRUST BLOCKS SHALL BE CLASS B CONCRETE.
3. 15# ROOFING FELT TO BE PLACED BETWEEN PLUG AND THRUST BLOCK CONCRETE.
4. SEVEN DAY CURE TIME REQUIRED PRIOR TO FILLING OR PRESSURING MAINS.
5. THRUST BLOCKS SHALL BE FORMED BEYOND UNDISTURBED EARTH.

REV. 09/06

REQUIRED AREA FOR THRUST BLOCK (SQ. FT.)
BASED ON ALLOW. SOIL BEARING VALUE OF 2000 psf

PIPE DIA.	90°	45° & WYE	22 1/2"	11 1/4"	B.O. & PLUG	TEE	CROSS
4	1.5	1.0	0.5	-	1.0	1.0	1.0
6	4.0	2.5	1.5	1.0	3.0	3.0	2.5
8	7.5	4.0	2.0	1.0	5.0	5.0	2.55
10	11.5	6.5	3.5	2.0	8.0	8.0	4.0
12	16.0	9.0	4.5	2.5	11.5	11.5	6.5
16	29.0	16.0	8.0	4.0	20.0	20.0	11.0
18	37.0	29.0	10.0	5.0	26.0	26.0	13.0

MULTIPLIERS FOR THRUST BLOCK AREAS

ACTUAL SOIL BEARING VALUE	MULTIPLIER
1000 psf	2.0
1500 psf	1.33
2000 psf	1.0
2500 psf	0.8
3000 psf	0.67

EXAMPLE

ACTUAL SOIL BEARING VALUE = 1000 psf
FOR 8" BLOW OFF
REQUIRED AREA IS (2.0)(5.0 SQ. FT.) = 10.0 SQ. FT.

Dublin San Ramon Services District

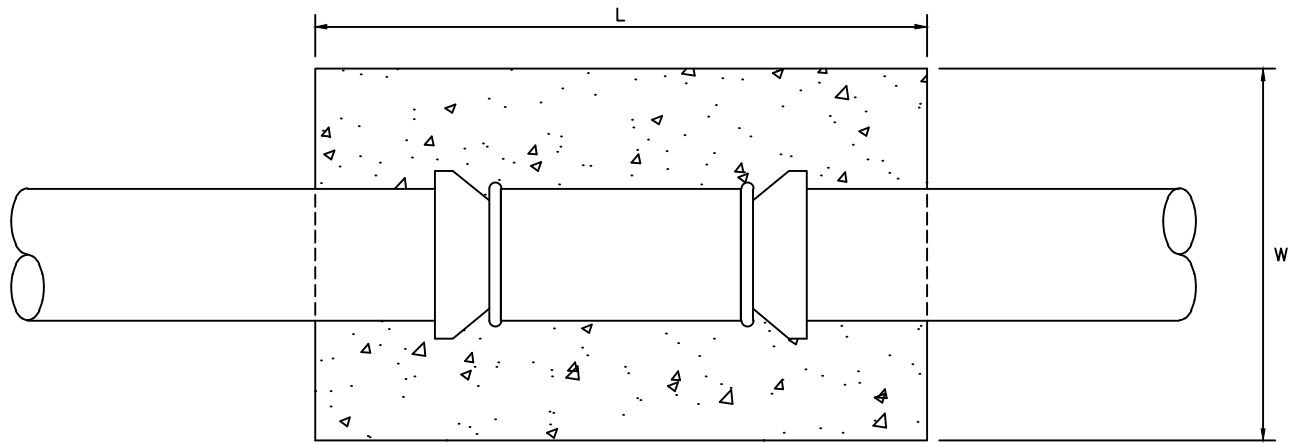
DATE
MAY 1987

CONCRETE THRUST BLOCKS

DESIGNED
RMR

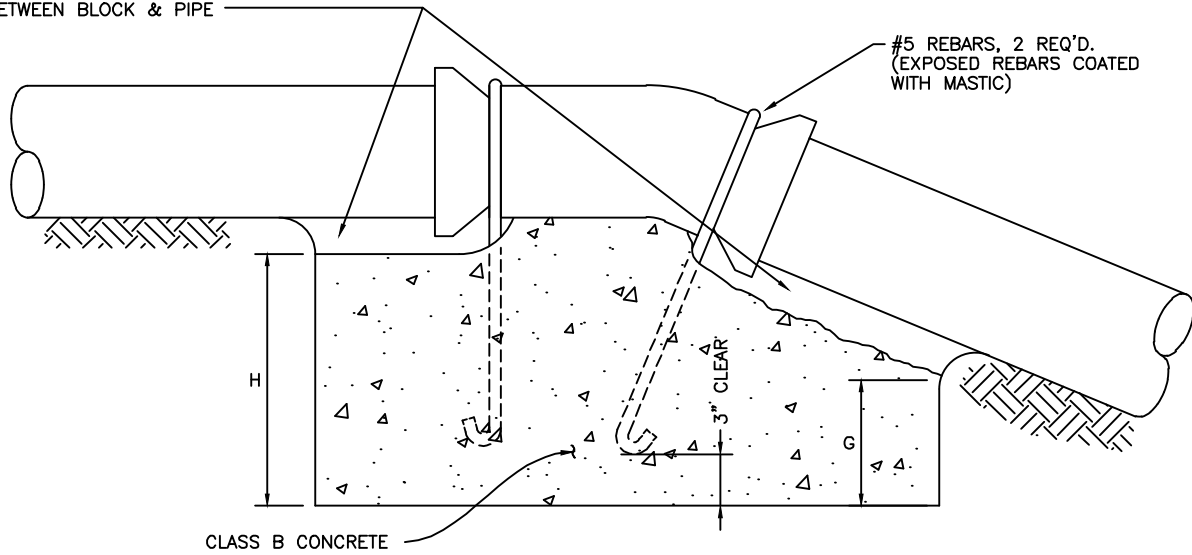
SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-2



PLAN

TAMP BACKFILL MATERIAL
BETWEEN BLOCK & PIPE



ELEVATION

THRUST BLOCK DIMENSIONS ~ UPWARD THRUST

PIPE SIZE	11-1/4° BEND				22 1/2° BEND				45° BEND			
	L	W	H	G	L	W	H	G	L	W	H	G
4"	2'-0"	2'-0"	1'-0"	9"	2'-0"	2'-0"	1'-0"	9"	2'-0"	2'-0"	2'-0"	6"
6"	2'-0"	2'-0"	1'-0"	9"	2'-0"	2'-0"	2'-0"	1'-0"	3'-0"	2'-0"	2'-0"	6"
8"	2'-0"	2'-0"	1'-0"	9"	3'-0"	2'-0"	2'-0"	1'-0"	4'-6"	2'-0"	3'-0"	6"
10"	3'-0"	2'-0"	2'-0"	1'-8"	5'-0"	3'-0"	2'-0"	1'-0"	6'-0"	2'-0"	3'-8"	8"
12"	3'-0"	2'-0"	2'-0"	1'-8"	5'-0"	3'-0"	2'-0"	1'-0"	7'-0"	2'-6"	4'-0"	8"

REV. 08/01

Dublin San Ramon Services District

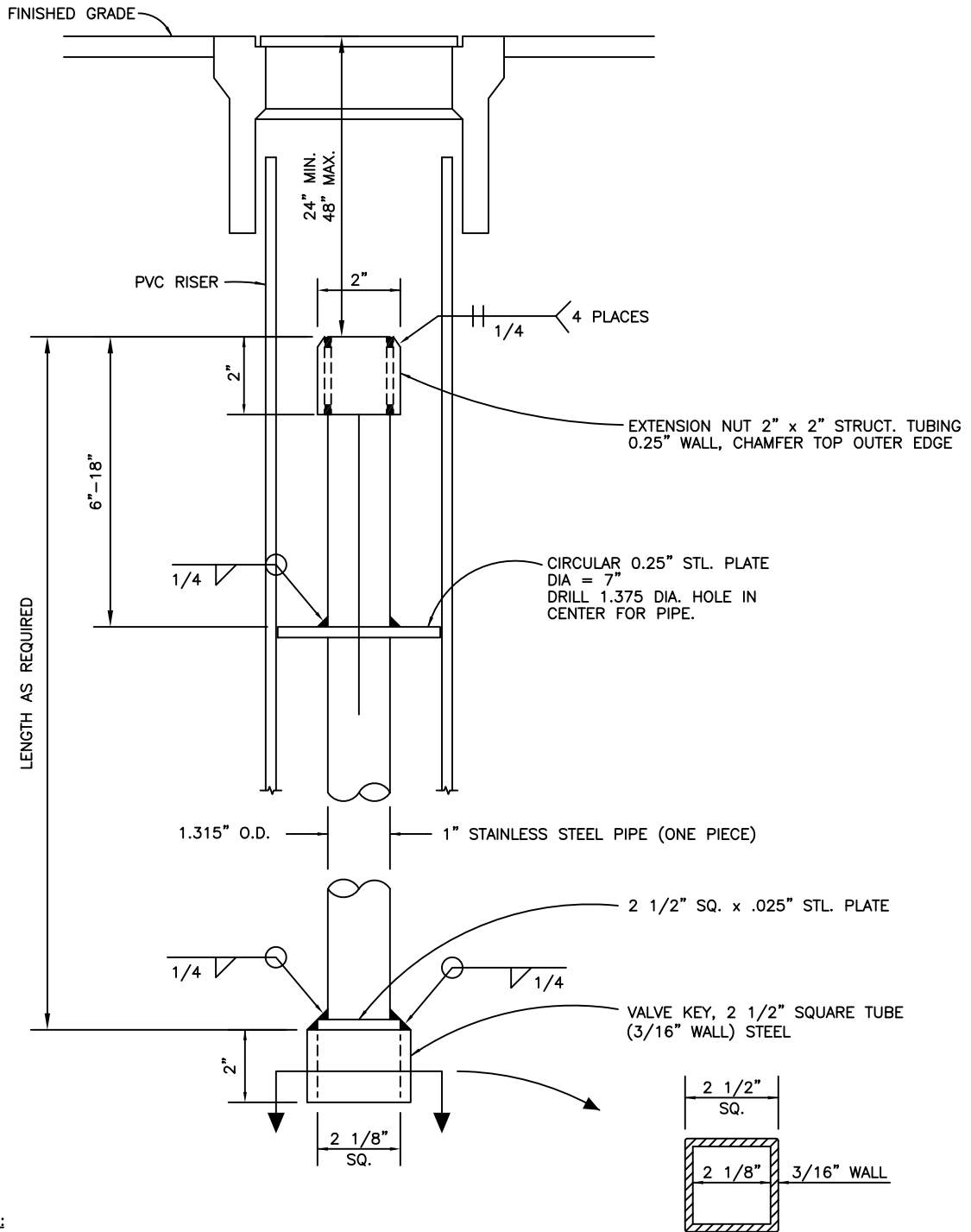
DATE
MAY 1987

CONCRETE THRUST BLOCKS FOR VERTICAL BENDS

DESIGNED
SAD

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-3



NOTES:

1. VALVE NUT EXTENSION SHALL BE PROVIDED WHERE DEPTH TO TOP OF VALVE IS 4' OR MORE.
2. LENGTH OF EXTENSION IN INCHES SHALL BE INSCRIBED WITH AN ARC WELD BEAD (MIN. OF 2" IN HEIGHT) ON TOP FACE OF CIRCULAR PLATE.
3. VALVE KEY SHALL FIT OVER STANDARD 2" VALVE OPERATING NUT.
4. EXTENSION NUT AND VALVE KEY TO BE IN ALIGNMENT WITH EACH OTHER.

Dublin San Ramon Services District

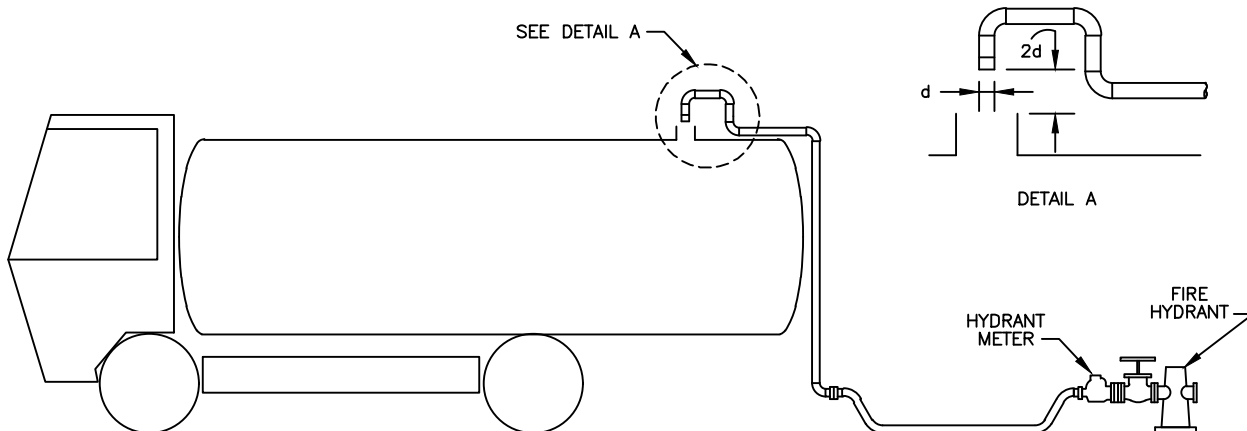
REVISION DATE
DEC 2019

VALVE NUT EXTENSION

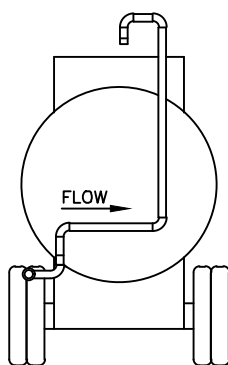
REVISED BY
KP

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-4



AIR GAP SEPARATION

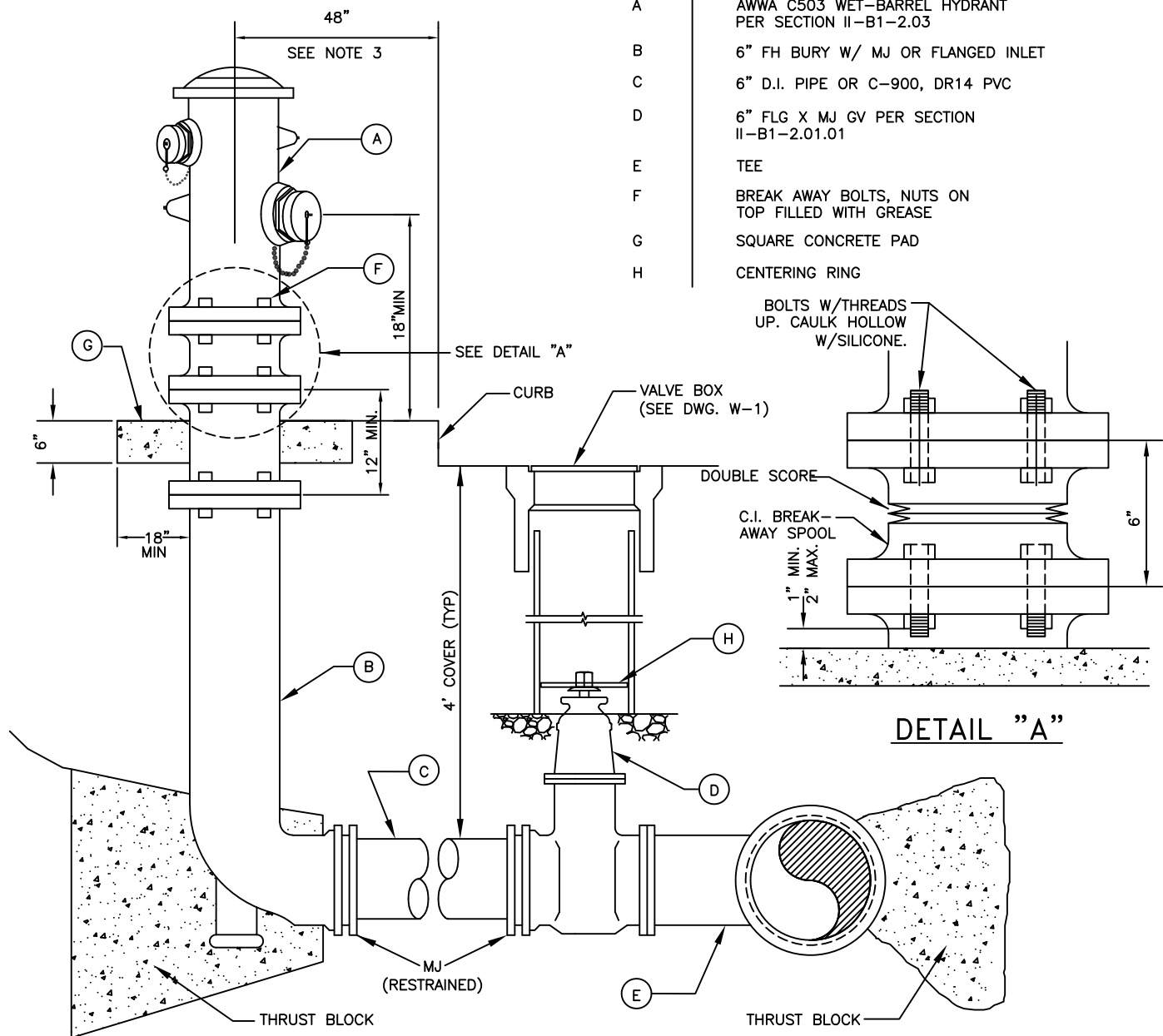


NOTES:

1. ALL PIPING PRIOR TO AIR GAP MUST BE MOUNTED PERMANENTLY TO THE EXTERIOR OF THE TANK, AND CLEARLY VISIBLE.
2. AIR GAP MUST BE AT LEAST (2) TIMES THE FILL PIPE DIAMETER FROM THE OVERFLOW RIM BUT IN NO CASE LESS THAN A (1) INCH MINIMUM GAP. (SEE DETAIL A)
3. NO INTERNALLY MOUNTED AIR GAP PIPING IS PERMITTED.
4. OBTAIN HYDRANT METER FROM DSRSD.

Dublin San Ramon Services District	REVISION DATE MAR 2012
BACKFLOW PREVENTION METHOD FOR TANKER TRUCKS AND PORTABLE SPRAY RIGS	REVISED BY BCD
SIGNED COPY ON FILE AT DISTRICT OFFICE	DRAWING W-5

ITEM	DESCRIPTION
A	AWWA C503 WET-BARREL HYDRANT PER SECTION II-B1-2.03
B	6" FH BURY W/ MJ OR FLANGED INLET
C	6" D.I. PIPE OR C-900, DR14 PVC
D	6" FLG X MJ GV PER SECTION II-B1-2.01.01
E	TEE
F	BREAK AWAY BOLTS, NUTS ON TOP FILLED WITH GREASE
G	SQUARE CONCRETE PAD
H	CENTERING RING



NOTES:

1. ON MAINS WHERE VALVES ARE TO BE INSTALLED ADJACENT TO TEES OR CROSSES, THE VALVES SHALL BE FLANGED X MJ WITH FLANGED END BOLTED DIRECTLY TO THE TEE OR CROSS.
2. VALVE DISTANCE IN FEET TO BE MARKED ON CURB.
3. SEE PLANS AND SPECIFICATIONS FOR LOCATION OF HYDRANTS. REFER TO SECTION II-B2-5.01 FOR PLACEMENT OF FIRE HYDRANTS BEHIND CURBS AND SIDEWALKS.
4. REFER TO SECTION II-A7 FOR CLEARANCE BETWEEN HYDRANT AND FIXED OBJECTS.
5. REFER TO SECTION II-B1-2.03 FOR HYDRANT EXTERIOR PAINT REQUIREMENTS.
6. ALL BOLTS SHALL BE STAINLESS STEEL TYPE 316, ANTI-SEIZE LUBRICANT SHALL BE APPLIED TO BOLT THREADS. POLYWRAP ALL FERROUS PIPE AND FITTINGS.
7. TRACER WIRE SHALL BE INSTALLED ON ALL FIRE HYDRANT RUNS.

Dublin San Ramon Services District

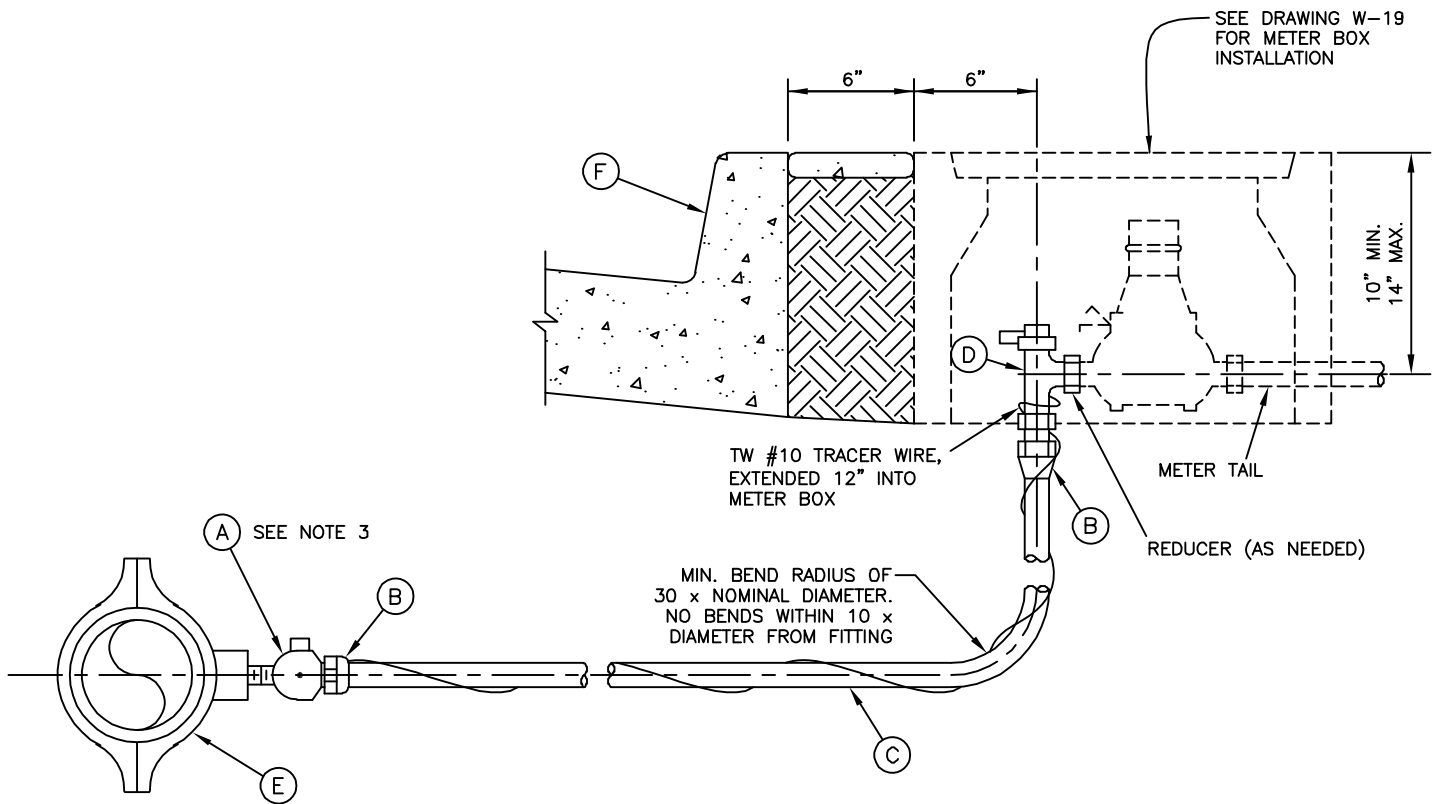
REVISION DATE
JUN 2020

FIRE HYDRANT INSTALLATION

REVISED BY
BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-6

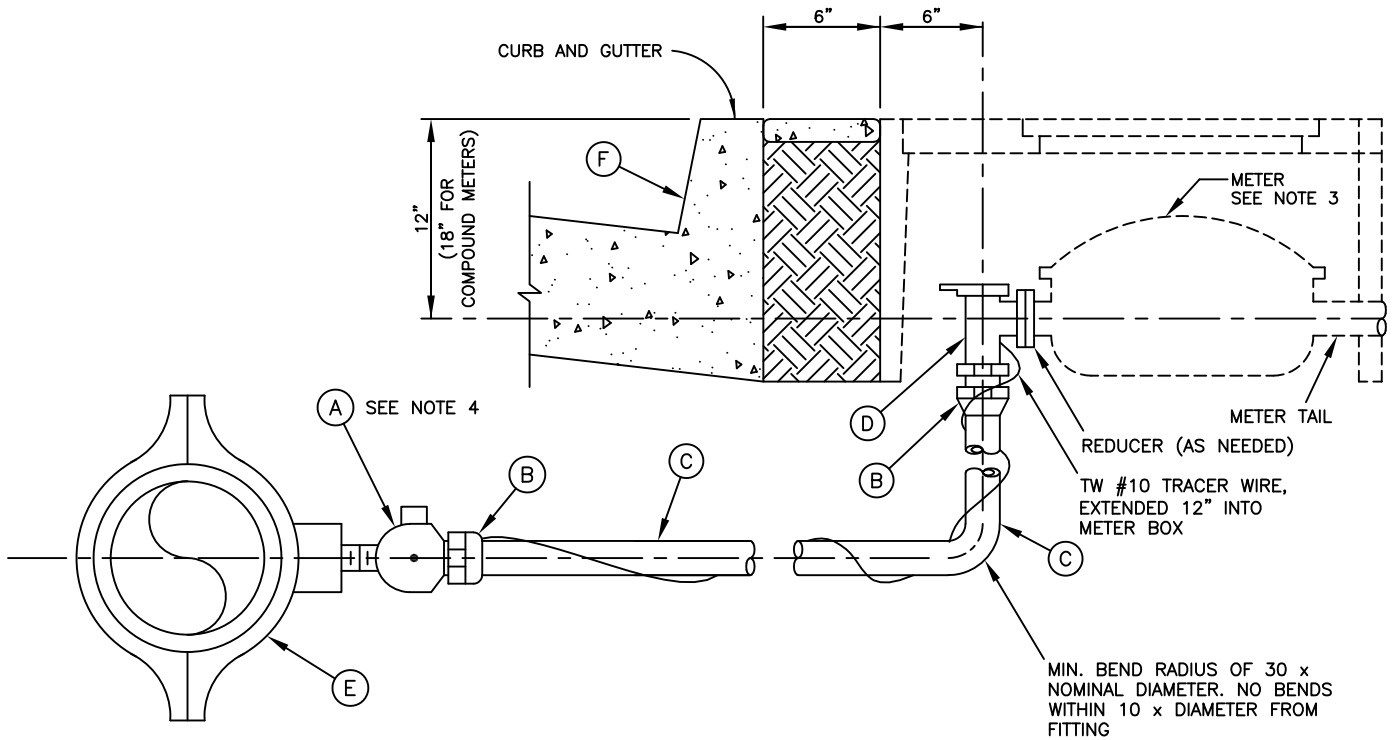


SERVICE WITH 90° TAP
W/ POLYETHYLENE

ITEM	DESCRIPTION
A	BRONZE CORPORATION STOP
B	BRONZE COMPRESSION JOINT
C	POLYETHYLENE TUBING WITH TRACER WIRE (BLUE HDPE FOR POTABLE AND PURPLE HDPE FOR RECYCLED WATER)
D	BRONZE ANGLE CURB STOP W/WING LOCK
E	BRONZE SERVICE SADDLE PER SECTION II-B1-2.08
F	FACE OF CURB MARKED "W" FOR POTABLE WATER AND "RW" FOR RECYCLED WATER.

- NOTES:
1. THE SERVICE LINE SHALL REST ON UNDISTURBED EARTH IN THE BOTTOM OF THE TRENCH WITH A 36" MINIMUM COVER IN THE RUN BETWEEN THE MAIN AND THE CURB.
 2. FOR METER BOX INSTALLATION SEE DWG W-19.
 3. STAINLESS STEEL INSERT STIFFENERS SHALL BE USED AT CORP. AND ANGLE STOPS IN POLYETHYLENE SERVICE LINES WHEN RECOMMENDED BY THE FITTING MANUFACTURER.
 4. COLOR OF POLYETHYLENE TUBING SHALL BE:
BLUE FOR POTABLE WATER SERVICE
PURPLE FOR RECYCLED WATER SERVICE

Dublin San Ramon Services District	REVISION DATE NOV 2019
1" SERVICE INSTALLATION	REVISED BY KP
SIGNED COPY ON FILE AT DISTRICT OFFICE	DRAWING W-7



SERVICE WITH 90° TAP

SERVICE ASSEMBLY

ITEM	DESCRIPTION
A	BRONZE CORP. STOP
B	BRONZE COMPRESSION JOINT
C	POLYETHYLENE TUBING WITH TRACER WIRE (BLUE HDPE FOR POTABLE AND PURPLE HDPE FOR RECYCLED WATER)
D	BRONZE ANGLE CURB STOP, FLANGE W/WING LOCK
E	BRONZE SADDLE PER SECTION II-B1-2.08
F	FACE OF CURB TO BE MARKED "W" FOR POTABLE WATER AND "RW" FOR RECYCLED WATER.

NOTES:

1. THE SERVICE LINE SHALL REST ON UNDISTURBED EARTH IN THE BOTTOM OF THE TRENCH WITH A 36" MINIMUM COVER IN THE RUN BETWEEN THE MAIN AND THE CURB.
2. FOR METER BOX INSTALLATION SEE DWG W-19.
3. STAINLESS STEEL INSERT STIFFENERS SHALL BE USED AT CORP. AND ANGLE STOPS IN POLYETHYLENE SERVICE LINES WHEN RECOMMENDED BY THE FITTING MANUFACTURER.
4. COLOR OF POLYETHYLENE TUBING SHALL BE:
BLUE FOR POTABLE WATER SERVICE
PURPLE FOR RECYCLED WATER SERVICE

Dublin San Ramon Services District

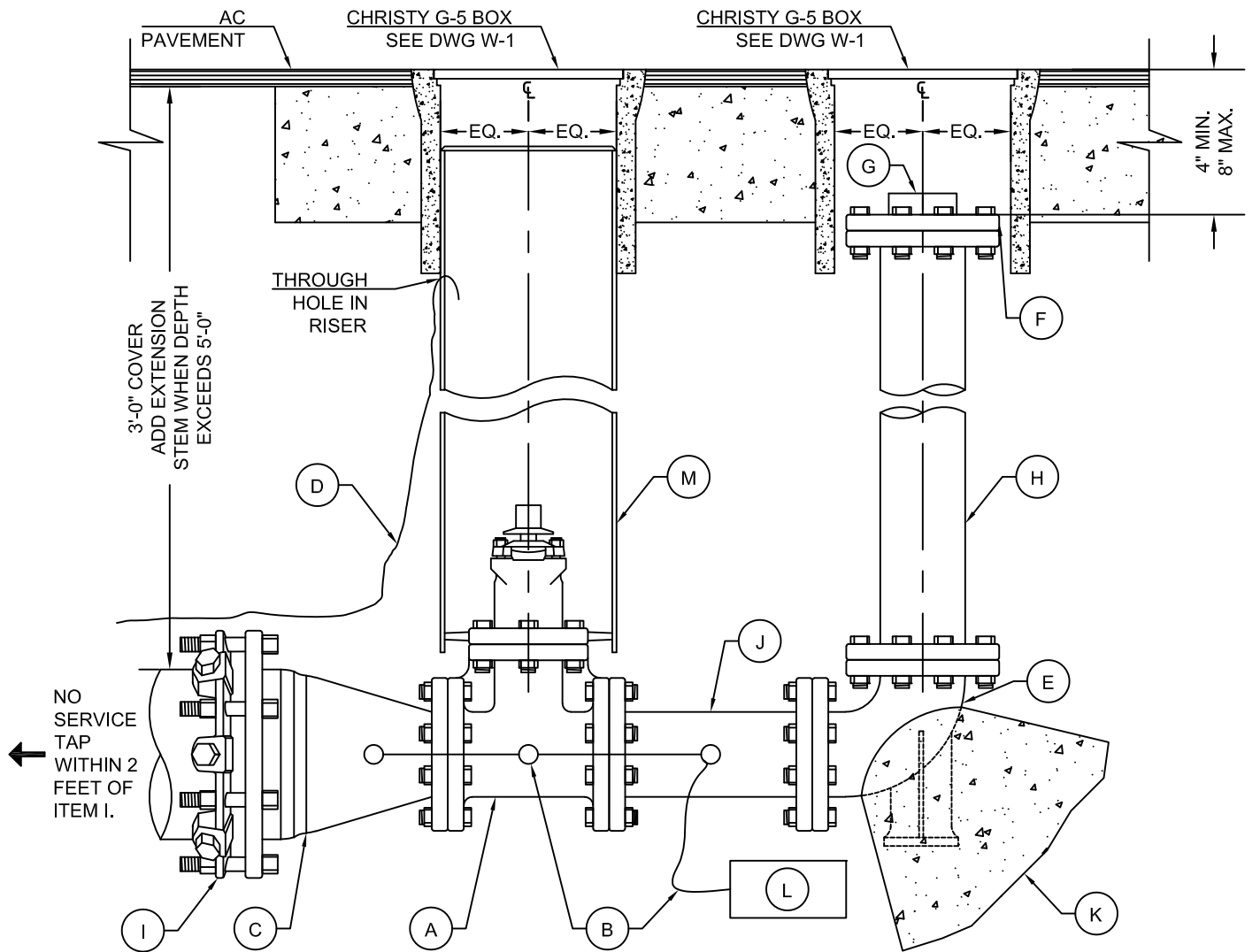
REVISION DATE
DEC 2019

1 1/2" - 2" SERVICE INSTALLATION

REVISED BY
BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-8



ITEM	DESCRIPTION
A	4" EPOXY-COATED FLG RESILIENT SEATING G.V. WITH 2" SQ. NUT, CLOSE CLOCKWISE
B	CATHODIC PROTECTION (INCLUDING VALVE) - (2 SETS) A.W.G. NO. 2 WIRES WITH EXOTHERMIC WELD AT 3 O' CLOCK AND 9 O' CLOCK POSITIONS WITH MASTIC AND PROTECTIVE CAP BONDED TO REDUCER, VALVE, AND SPOOL.
C	REDUCER - 4" X MAIN SIZE
D	TRACER WIRE FOR PVC PIPE ONLY, TW TYPE #10
E	4" FLANGE X FLANGE, TABBED DUCTILE IRON 90° ELL (BASE 90)
F	4" COMPANION FLANGE
G	4" ABS SCREWED PLUG WITH SQ. HEAD
H	4" DUCTILE IRON RISER (1 LENGTH TO PROPER HEIGHT)
I	RESTRAINED MECHANICAL JOINT
J	4" DUCTILE IRON PIPE - 12" SPOOL LENGTH
K	THRUST BLOCK
L	32# PREPACKAGED MAGNESIUM ANODE 8" - 12" FROM PIPE
M	8" RISER SDR 35

NOTES:

- FOR SIZE OF BLOW-OFF ON MAINS LARGER THAN 12", CONSULT DISTRICT ENGINEER.
- TO BE USED ONLY AT THE DIRECTION OF DISTRICT ENGINEER.
- RECYCLED WATER BLOW OFF ASSEMBLIES SHALL BE IDENTIFIED AS RECYCLED WATER FACILITIES AS PER SPECIFICATION SECTION IV-B1-2.06.
- ALL BOLTS SHALL BE STAINLESS STEEL, 3/16" - TYPE 316 OR APPROVED EQUAL. MASTIC COVER BOLTS AND ANTI-SEIZE LUBRICANT SHALL BE APPLIED TO BOLT THREADS.
- ALL BURIED DUCTILE IRON PIPE SHALL BE ENCASED IN EIGHT (8) MIL POLYETHYLENE WRAP. POLYETHYLENE WRAP SHALL BE MANUFACTURED AND INSTALLED IN CONFORMANCE WITH ANSI A 21.5. (SPECIFICATION SECTION II-B2-2.06)

Dublin San Ramon Services District

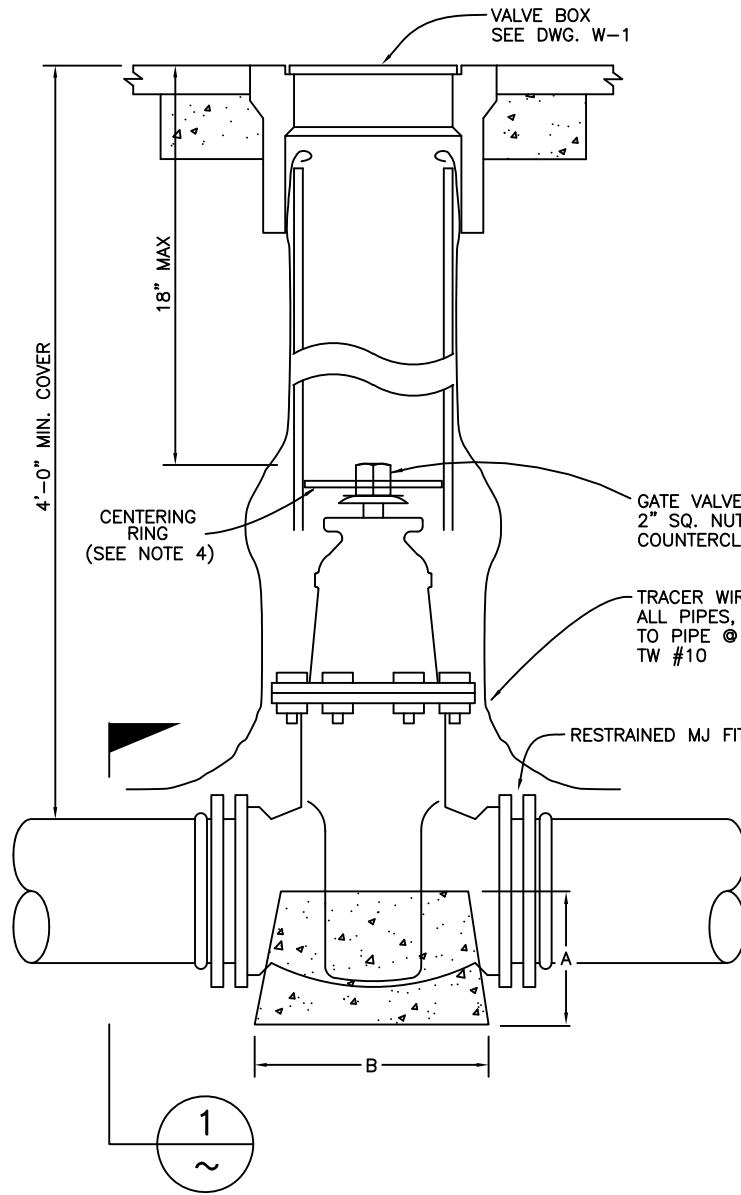
REVISION DATE
DEC 2019

4" BLOW-OFF ASSEMBLY
6", 8", 10" AND 12" MAINS

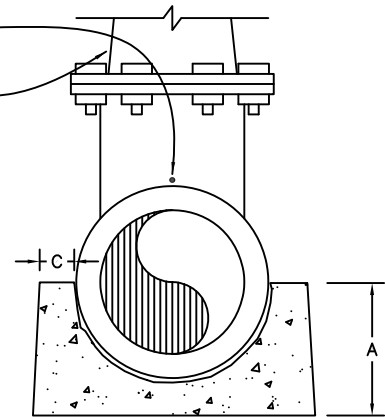
REVISED BY
RM/BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-9



CONCRETE CRADLE DIMENSIONS			
VALVE SIZE	A	B	C
6"	9"	4"	6"
8"	12"	6"	8"
10"	16"	8"	10"
12"	20"	10"	12"



NOTES:

1. COAT ALL BONNET BOLTS, GLAND, GLAND BOLTS AND STEM WITH BITUMINOUS PAINT, SEE SPECS.
2. ON MAINS WHERE VALVES ARE TO BE INSTALLED ADJACENT TO TEES OR CROSSES, THE VALVES SHALL BE FLG x MJ WITH FLANGED END BOLTED DIRECTLY TO THE TEE OR CROSS.
3. IN-LINE VALVES SHALL HAVE RESTRAINED MJ ENDS, WHERE NOT CONNECTING TO A FLANGED FITTING.
4. CENTERING RING PER SECTION II-B1-2.06 OF THESE STANDARDS.
5. ALL BOLTS SHALL BE STAINLESS STEEL TYPE 316, OR APPROVED EQUAL. ANTI-SEIZE LUBRICANT SHALL BE APPLIED TO BOLT THREADS. POLYWRAP ALL FERROUS PIPE AND FITTINGS.
6. CONCRETE CRADLE FOR VALVE SHALL BE FORMED AND NOT ENCASE FITTINGS.
7. CATHODIC PROTECTION IS REQUIRED.

Dublin San Ramon Services District

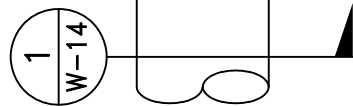
GATE VALVE INSTALLATION
12" GATE VALVE AND SMALLER

SIGNED COPY ON FILE AT DISTRICT OFFICE

REVISION DATE
DEC 2019

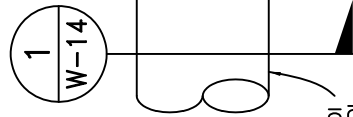
REVISED BY
KP/BD

DRAWING
W-13



FLANGED OR MEGALUG CONNECTION

16" OR 18" DI
14" PVC OR DI



FLANGED OR MEGALUG CONNECTION

16" OR 18" DI
14" PVC OR DI

FLANGED TEE OR CROSS

IN-LINE BFV

NTS

FIN GRADE

VALVE BOX
SEE DWG. W-1

BFV AT TEE OR CROSS

NTS

(SEE NOTE 1.)

2'-0" MAX.

CENTERING BLOCK
SEE NOTE 2.

#6 REBAR, 1/2" BEND TO MATCH ADAPTER O.D.

CONCRETE CLASS B

1'-6" MIN.

1'-6" MIN.

3'-0" MIN.

3'-0" MIN.

3" CLEAR (TYP)

#4 REBAR 8" ON CENTER EACH WAY



SECTION

NTS

NOTES:

1. ADD EXTENSION SLEEVE WHEN DEPTH EXCEEDS 2'0".
2. CENTERING RING PER SECTION II-B1-2.06 OF THESE STANDARDS.
3. ALL BOLTS SHALL BE STAINLESS STEEL TYPE 316, OR APPROVED EQUAL. ANTI-SEIZE LUBRICANT SHALL BE APPLIED TO BOLT THREADS. POLYWRAP ALL FERROUS PIPE AND FITTINGS.
4. USE OF THIS DETAIL REQUIRES DISTRICT ENGINEER APPROVAL.

Dublin San Ramon Services District

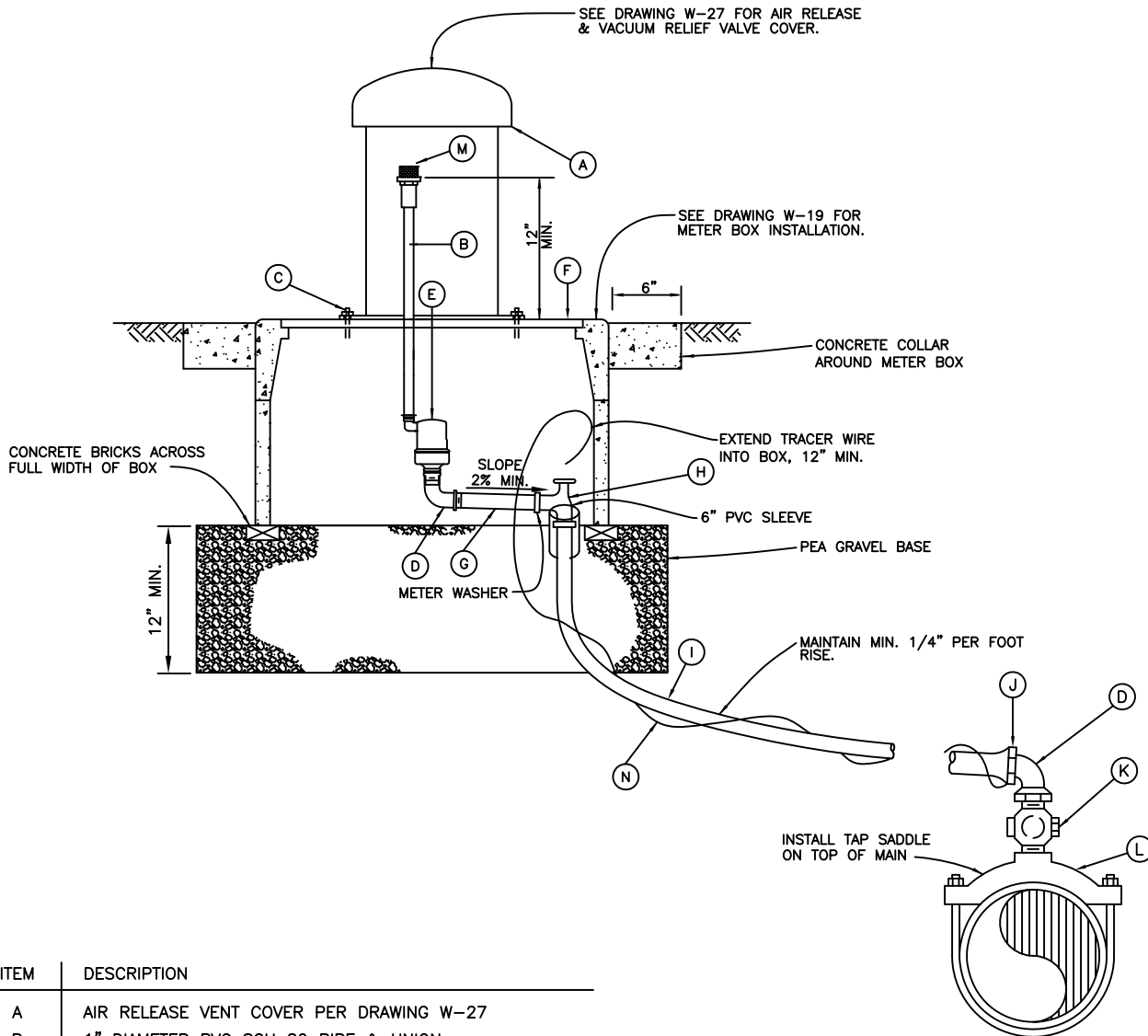
BUTTERFLY VALVE INSTALLATION
14" TO 18" BFV

SIGNED COPY ON FILE AT DISTRICT OFFICE

REVISION DATE
DEC 2019

REVISED BY
BD

DRAWING
W-14



- NOTES:**
1. FOR RECYCLED WATER, COMPONENTS SHALL BE PURPLE.
 2. TW#10 TRACER WIRE SHALL BE SPIRALED AROUND POLYETHYLENE TUBING FROM CORP STOP TO THE METER BOX.
 3. SEE DRAWING W-19 FOR METER BOX INSTALLATION.
 4. ITEM SHALL BE ON APPROVED MATERIAL LIST, OR AN APPROVED EQUAL.

ITEM	DESCRIPTION
A	AIR RELEASE VENT COVER PER DRAWING W-27
B	1" DIAMETER PVC SCH 80 PIPE & UNION
C	ANCHOR BOLT
D	1" BRONZE STREET ELL
E	1" COMBINATION AIR VALVE. SEE NOTE 4.
F	24" TRAFFIC-RATED METER BOX. SEE NOTE 4.
G	1" BRONZE NIPPLE
H	ANGLE METER STOP FLARE OR COMPRESSION. SEE NOTE 4.
I	1" POLYETHYLENE TUBING (BLUE COLOR FOR POTABLE OR PURPLE FOR RECYCLED WATER)
J	1" BRONZE COMPRESSION JOINT
K	1" CORP. STOP. SEE NOTE 4
L	ALL BRONZE DOUBLE STRAP SADDLE. SEE NOTE 4
M	THREADED AIR VENT CAP WITH STAINLESS STEEL SCREEN. SEE NOTE 4.
N	TW#10 TRACER WIRE

Dublin San Ramon Services District

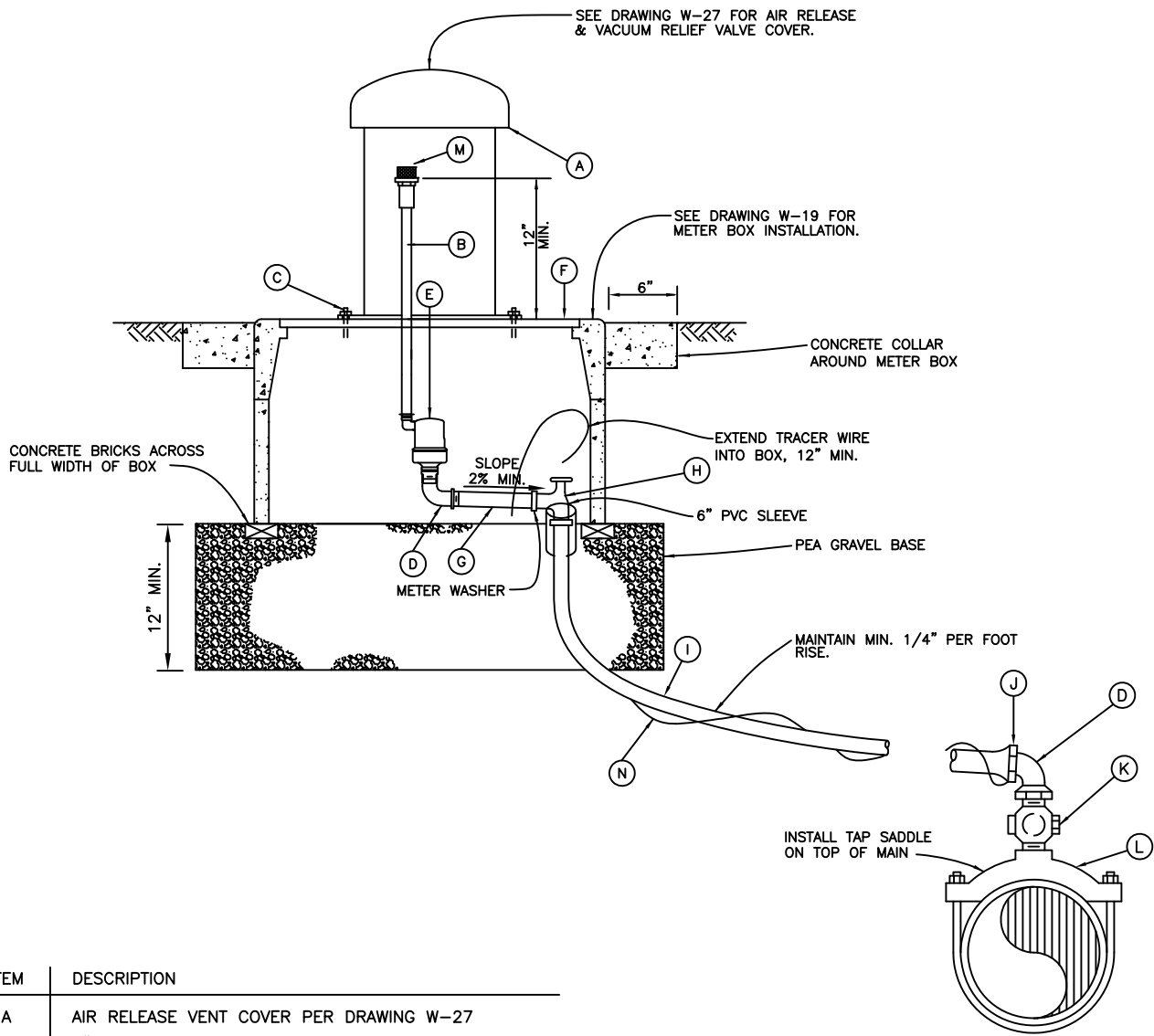
REVISION DATE
JUN 2020

1" AIR RELEASE & VACUUM RELIEF VALVE INSTALLATION
6"-10" POTABLE WATER AND RECYCLED WATER MAINS

REVISED BY
BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-15



ITEM	DESCRIPTION
A	AIR RELEASE VENT COVER PER DRAWING W-27
B	2" DIAMETER PVC SCH 80 PIPE & FITTINGS
C	ANCHOR BOLT
D	2" BRONZE STREET ELL
E	2" COMBINATION AIR VALVE. SEE NOTE 4.
F	24" TRAFFIC-RATED METER BOX. SEE NOTE 4.
G	2" BRONZE NIPPLE
H	2" ANGLE METER STOP. SEE NOTE 4.
I	2" POLYETHYLENE TUBING (BLUE COLOR FOR POTABLE OR PURPLE FOR RECYCLED WATER)
J	2" BRONZE COMPRESSION JOINT
K	2" CORP. STOP. SEE NOTE 4
L	ALL BRONZE DOUBLE STRAP SADDLE. SEE NOTE 4
M	THREADED AIR VENT CAP WITH STAINLESS STEEL SCREEN. SEE NOTE 4.
N	TW#10 TRACER WIRE
P	2" METER FLANGE ADAPTER AND GASKET. SEE NOTE 4.

NOTES:

1. FOR RECYCLED WATER, COMPONENTS SHALL BE PURPLE.
2. TW#10 TRACER WIRE SHALL BE SPIRALED AROUND POLYETHYLENE TUBING FROM CORP STOP TO THE METER BOX.
3. SEE DRAWING W-19 FOR METER BOX INSTALLATION.
4. ITEM SHALL BE ON APPROVED MATERIAL LIST, OR AN APPROVED EQUAL.

Dublin San Ramon Services District

REVISION DATE
JUN 2020

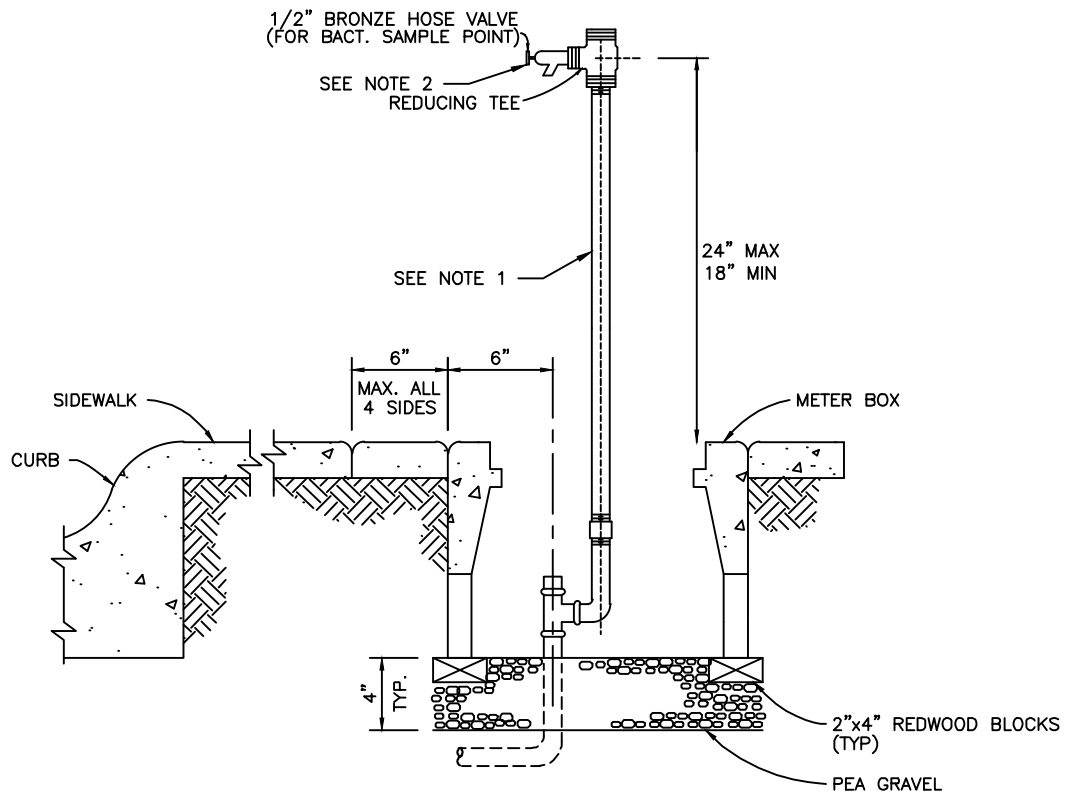
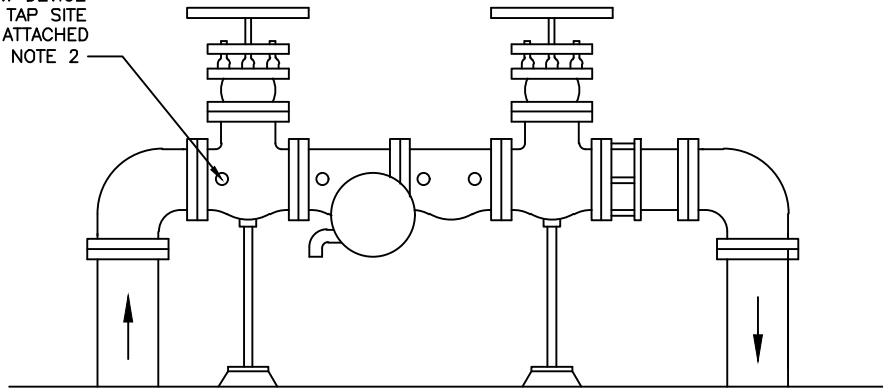
2" AIR RELEASE & VACUUM RELIEF VALVE
12" POTABLE WATER MAIN OR LARGER INSTALLATION

REVISED BY
BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-16

#1 TESTCOCK OF A BACKFLOW DEVICE
MAY BE USED AS A SAMPLE TAP SITE
WITH A BRONZE HOSE BIB ATTACHED
SEE NOTE 2



NOTES:

1. PIPING MUST BE RIGID.
2. HOSE BIB SPOUT MUST FACE BELOW HORIZONTAL AND FACE STREET.

Dublin San Ramon Services District

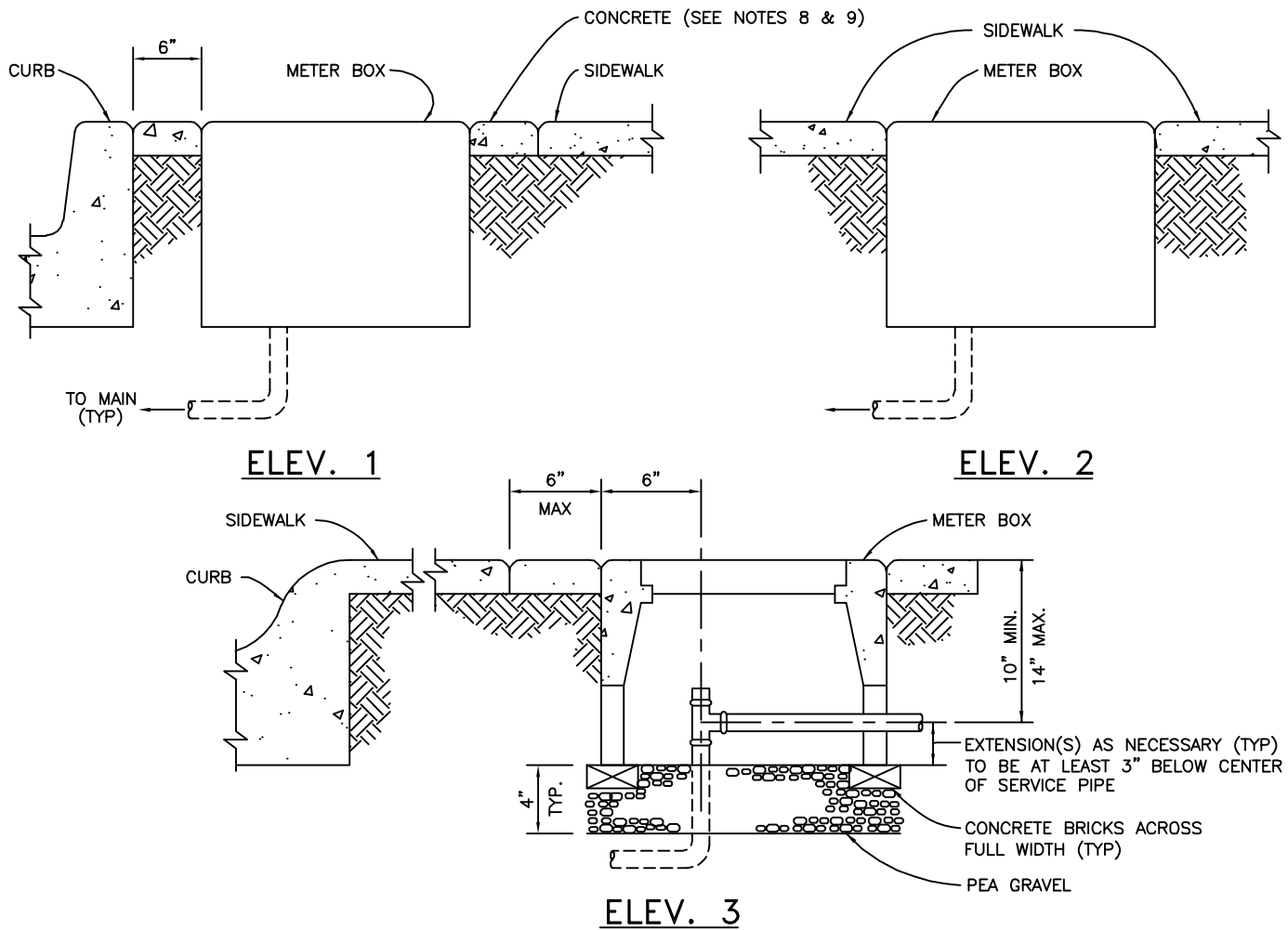
DATE
DEC 2005

TEMPORARY SAMPLE TAPS FOR
NEW CONSTRUCTION

DESIGNED
ATJ

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-18



NOTES:

1. SEE THE APPROVED MATERIAL LIST FOR METER BOX SCHEDULE
2. H20 TRAFFIC LOAD RATED BOXES & LIDS TO BE USED IN TRAFFIC AREAS.
3. ALL METER BOXES MUST BE SET TRUE, PERPENDICULAR TO STREET, AND FLUSH WITH SIDEWALK.
4. SPACE BETWEEN BOXES IN MULTIPLE METER INSTALLATIONS SHALL BE 2".
5. DO NOT SET METER BOXES ON PRIVATE PROPERTY.
6. LID TO BE ONE PIECE, MARKED WATER, AND TOUCH-READ READY WITH 2" PROBE HOLE.
7. IN SLOPED AREA METER BOX MAY REQUIRE REDWOOD RETAINING WALLS.
8. METER BOXES AND LIDS IN TRAFFIC AREAS SHALL BE H-20 TRAFFIC RATED. INSTALL 6" CONCRETE COLLAR (6" DEEP) AROUND TRAFFIC-RATED METER BOXES.
9. METER BOXES OUTSIDE OF TRAFFIC AREAS AND NOT IN SIDEWALK SHALL HAVE 6" WIDE COLLAR (4" DEEP).
10. RECYCLED WATER METER BOX INSTALLATION SHALL BE IDENTIFIED AS RECYCLED WATER FACILITIES PER SECTION IV-B1-2.04.

Dublin San Ramon Services District

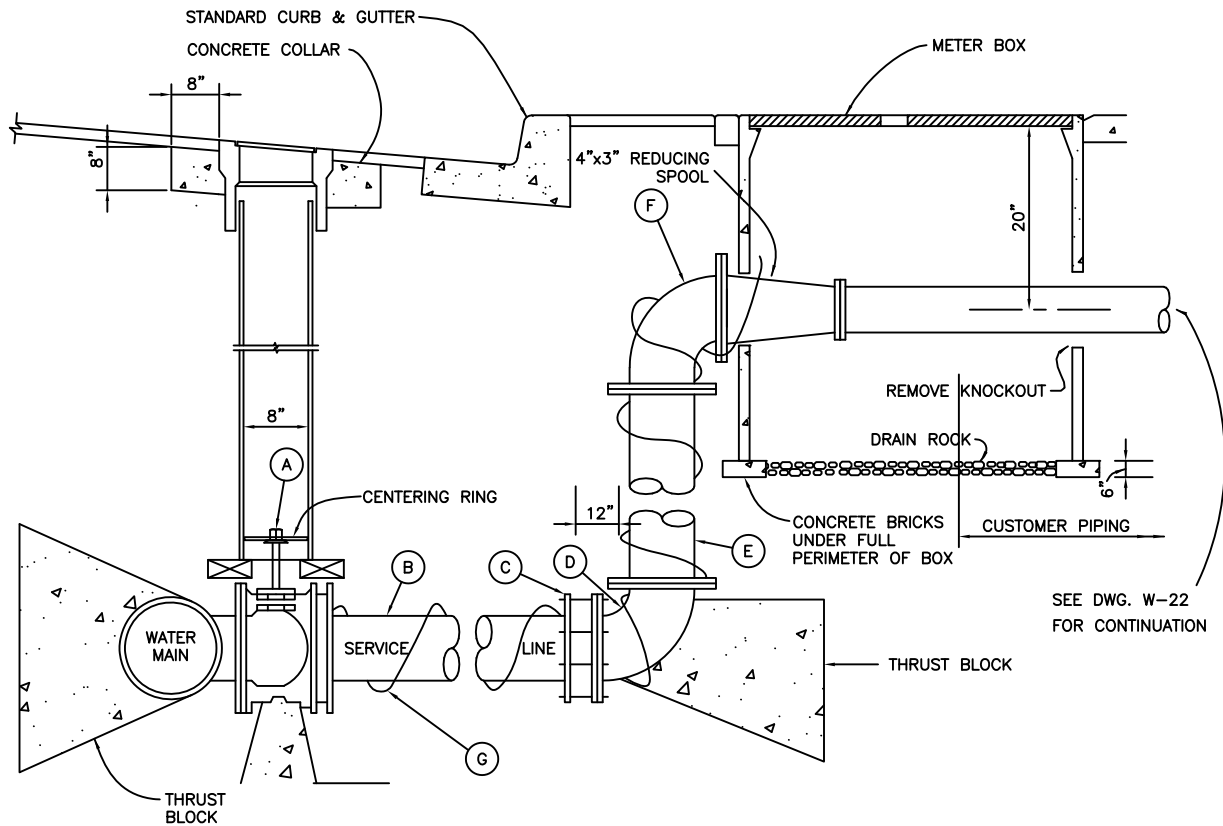
REVISION DATE
NOV 2019

METER BOX INSTALLATIONS
5/8 INCH TO 2 INCH

REVISED BY
KP

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-19



KEY	QTY	MATERIALS
A	1	4" GATE VALVE, FLANGE BY RESTRAINED MJ PER SECTION II-B1-2.02
B	1	4" DIP OR PVC
C	1	4" FLANGED COUPLING ADAPTER
D	1	4"x4" DIP ELL, FLG. x RESTRAINED MJ
E	1	4" DIP SPOOL, FLG. x FLG.
F	1	4"x4" DIP ELL, FLG. x FLG.
G	1	TW#10 TRACER WIRE, EXTEND INTO VALVE BOX

NOTES:

1. ALL THRUST BLOCKS SHALL CONFORM TO STANDARD DRAWINGS W-2 AND W-3.
2. ALL BOLTS SHALL BE STAINLESS STEEL TYPE 316, ANTI-SEIZE LUBRICANT SHALL BE APPLIED TO BOLT THREADS. POLYWRAP ALL FERROUS PIPE AND FITTINGS.
3. METER TO BE INSTALLED BY DSRSD.

Dublin San Ramon Services District

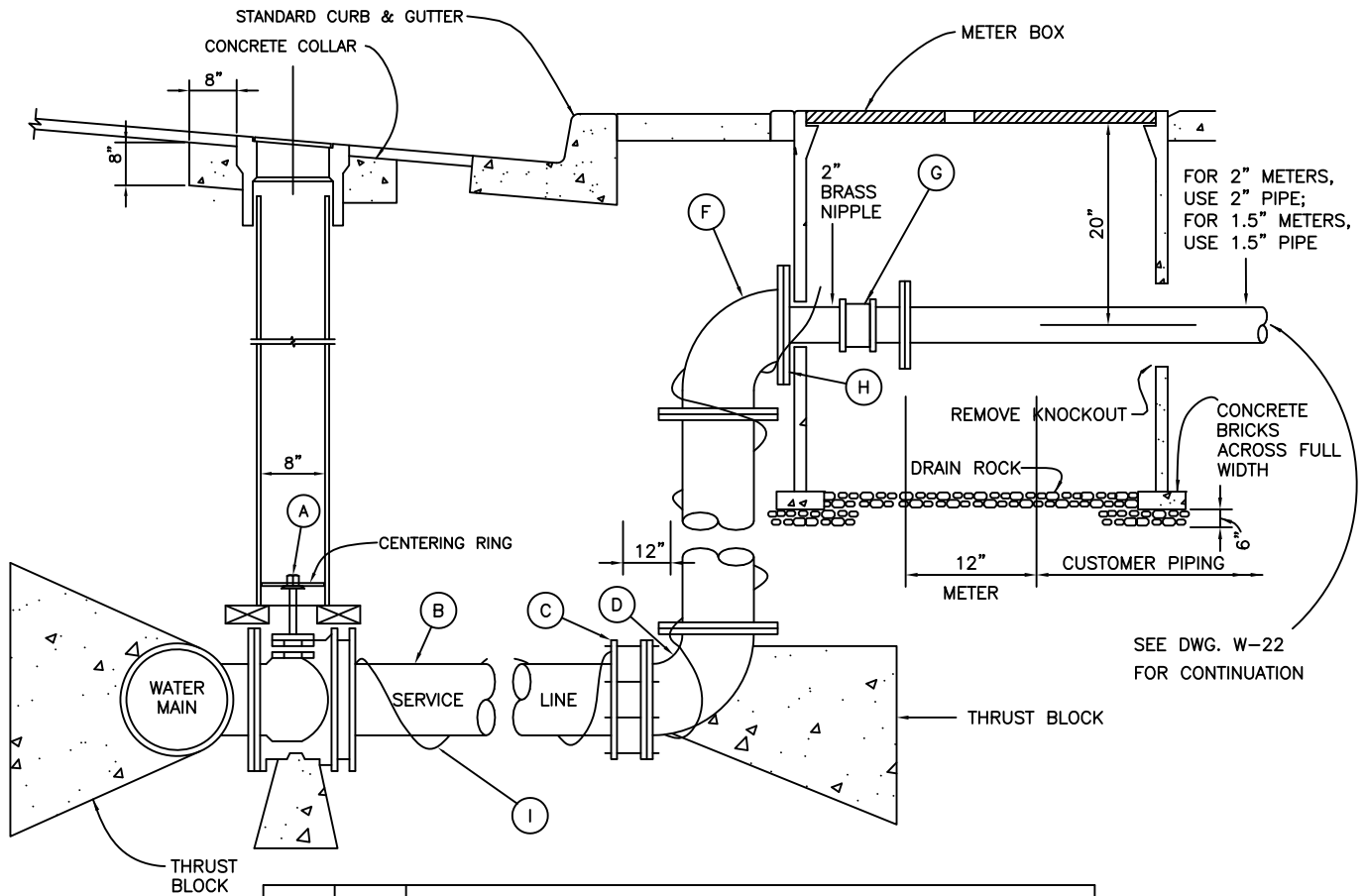
REVISION DATE
JAN 2021

3" METER INSTALLATION

REVISED BY
RM

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-20



KEY	QTY	MATERIALS
A	1	4" GATE VALVE, FLANGE BY RESTRAINED MJ PER SECTION II-B1-2.02
B	1	4" DIP OR PVC
C	1	4" FLANGED COUPLING ADAPTER
D	1	4"x4" DIP ELL, FLG. x RESTRAINED MJ
E	1	4" DIP SPOOL, FLG. x FLG.
F	1	4"x4" DIP ELL, FLG. x FLG.
G	1	2" ANGLE STOP ADAPTER
H	1	4"x2" COMPANION FLANGE
I	1	TW#10 TRACER WIRE, EXTEND INTO VALVE BOX

NOTES:

1. ALL THRUST BLOCKS SHALL CONFORM TO STANDARD DRAWINGS W-2 AND W-3.
2. ALL BOLTS SHALL BE STAINLESS STEEL TYPE 316, ANTI-SEIZE LUBRICANT SHALL BE APPLIED TO BOLT THREADS. POLYWRAP ALL FERROUS PIPE AND FITTINGS.
3. USE OF THIS DETAIL REQUIRES DISTRICT ENGINEER APPROVAL.
4. METER TO BE INSTALLED BY DSRSD.

Dublin San Ramon Services District

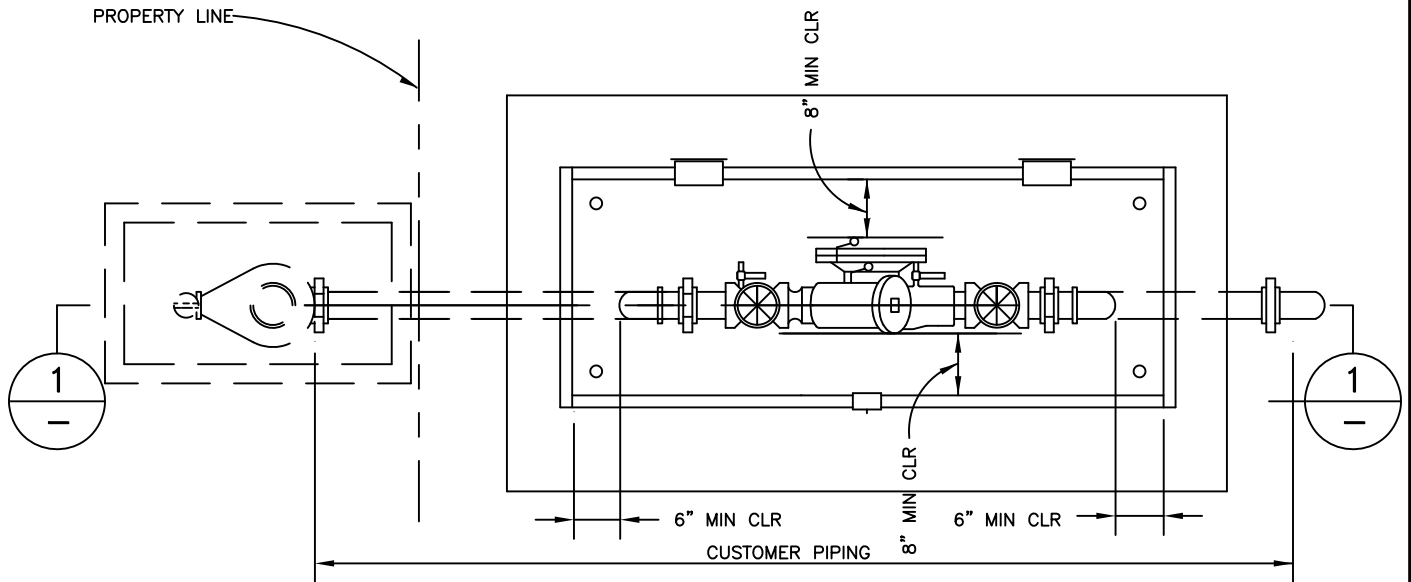
REVISION DATE
JAN 2021

4-INCH SERVICE W/ 2-INCH METER INSTALLATION

REVISED BY
RM

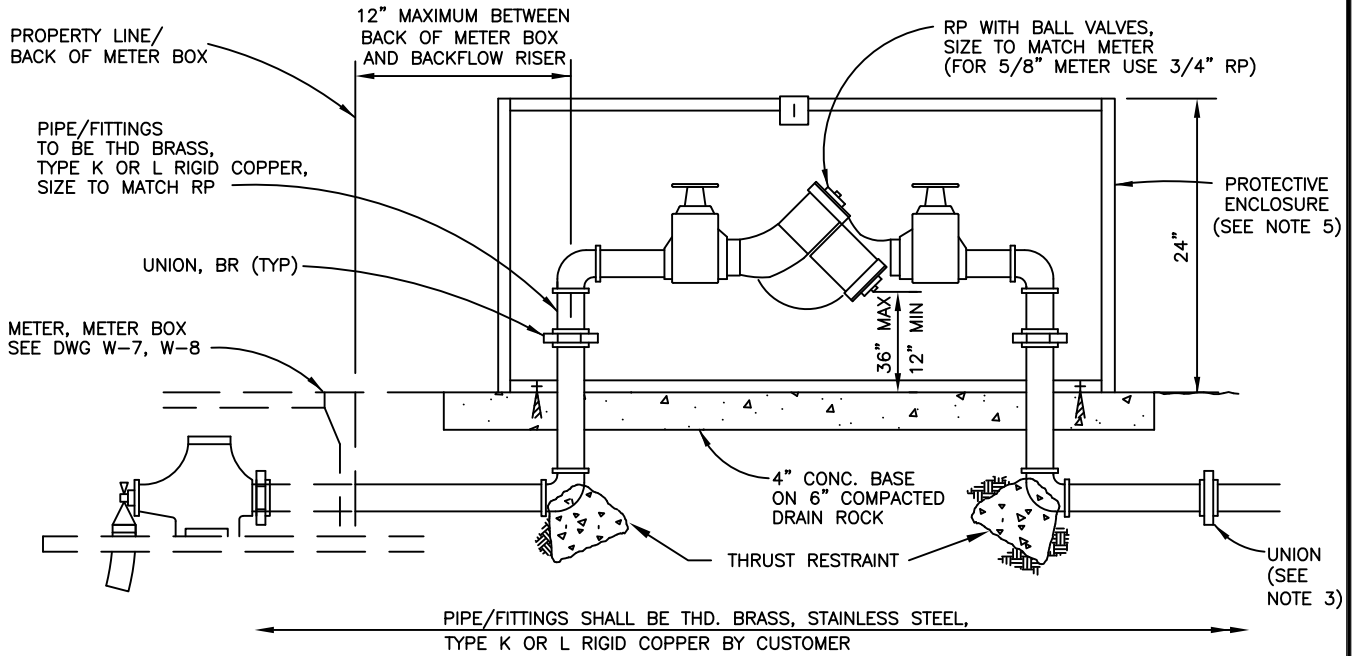
SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-20A



PLAN

NTS



SECTION

NTS

NOTES:

1. SET RP ON PRIVATE PROPERTY.
2. IF RP IS LOCATED NEAR TRAFFIC AREA, A MIN. OF TWO 4" GALVANIZED STEEL GUARD POSTS SHALL BE PROVIDED. POSTS SHALL BE 42" HIGH, EMBEDDED 36" BELOW GROUND IN CONCRETE, AND FILLED WITH CONCRETE.
3. FITTING SHALL BE DIELECTRIC WHERE JOINING DISSIMILAR METALS.
4. 3/4" TO 2" MUST HAVE BALL VALVE SHUT OFF VALVES.
5. PROVIDE LOCKABLE ENCLOSURE WITH FOAM INSULATION LINING, OR BLANKET (SEE DRAWING W-25).
6. DIMENSION OF CONCRETE PAD TO BE AS RECOMMENDED BY ENCLOSURE MANUFACTURER.
7. DEVICE SHALL BE TESTED BY CERTIFIED TESTER. TEST REPORT SHALL BE SUBMITTED TO DSRSD.
8. THE CONCRETE PAD SHALL ACCOMODATE ENCLOSURES. SEE W-25 FOR ENCLOSURE DETAILS.

Dublin San Ramon Services District

REVISION DATE

JUN 2020

BACKFLOW PREVENTER
INSTALLATION 3/4" TO 2"

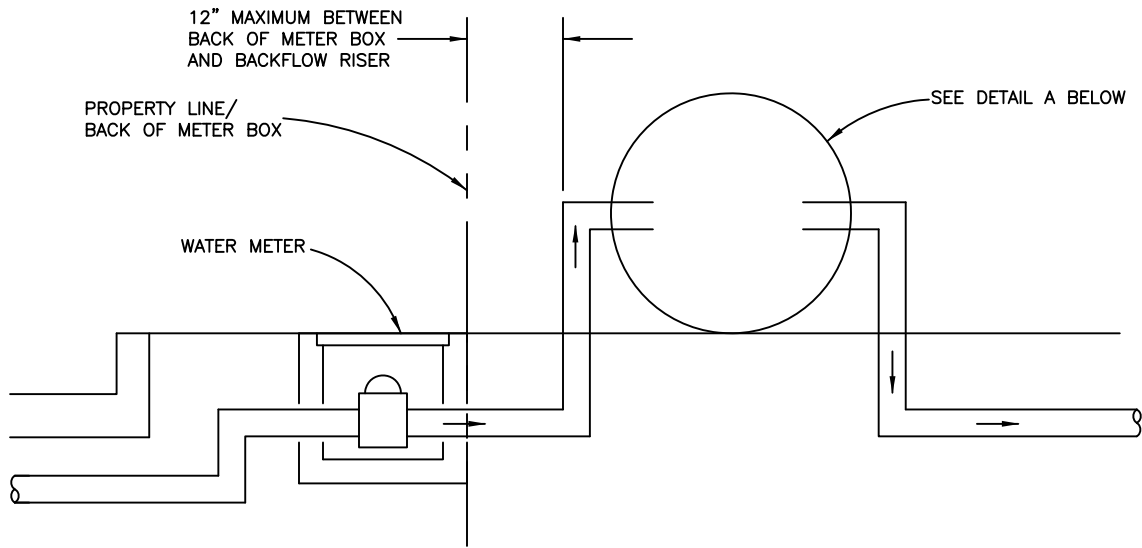
REVISED BY

BD

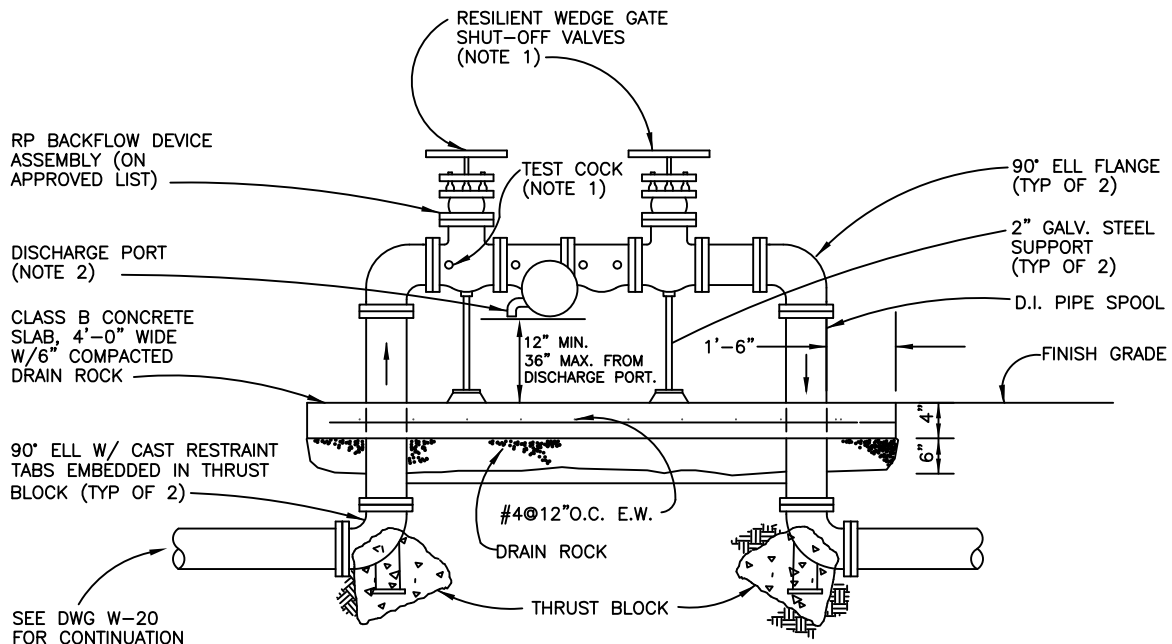
SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING

W-21



ELEVATION



DETAIL A

NOTES:

1. TEST COCKS AND SHUT-OFF VALVES MUST BE SUPPLIED AS SHOWN.
2. DISCHARGE PORT MUST BE KEPT CLEAR OF OBSTRUCTION AT ALL TIMES.
3. 2 1/2 THR 10" MUST HAVE RESILIENT SEAT WEDGE SHUT-OFF VALVES.
4. DEVICE SHALL BE TESTED BY CERTIFIED TESTER. TEST REPORT SHALL BE SUBMITTED TO DSRSD.
5. PROTECTIVE ENCLOSURE NOT SHOWN. REFER TO SECTION II-B2-7 AND DRAWING W-25 FOR ENCLOSURE REQUIREMENTS.
6. ALL BOLTS SHALL BE STAINLESS STEEL TYPE 316, ANTI-SEIZE LUBRICANT SHALL BE APPLIED TO BOLT THREADS. POLYWRAP ALL FERROUS PIPE AND FITTINGS.

Dublin San Ramon Services District

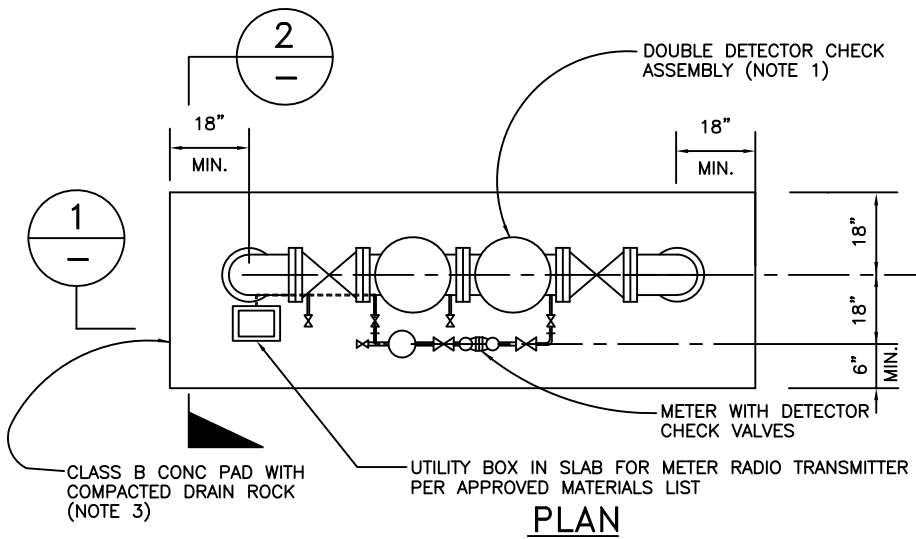
REVISION DATE
DEC 2020

2 1/2" TO 10" REDUCED PRESSURE BACKFLOW
PREVENTION DEVICE

REVISED BY
RM

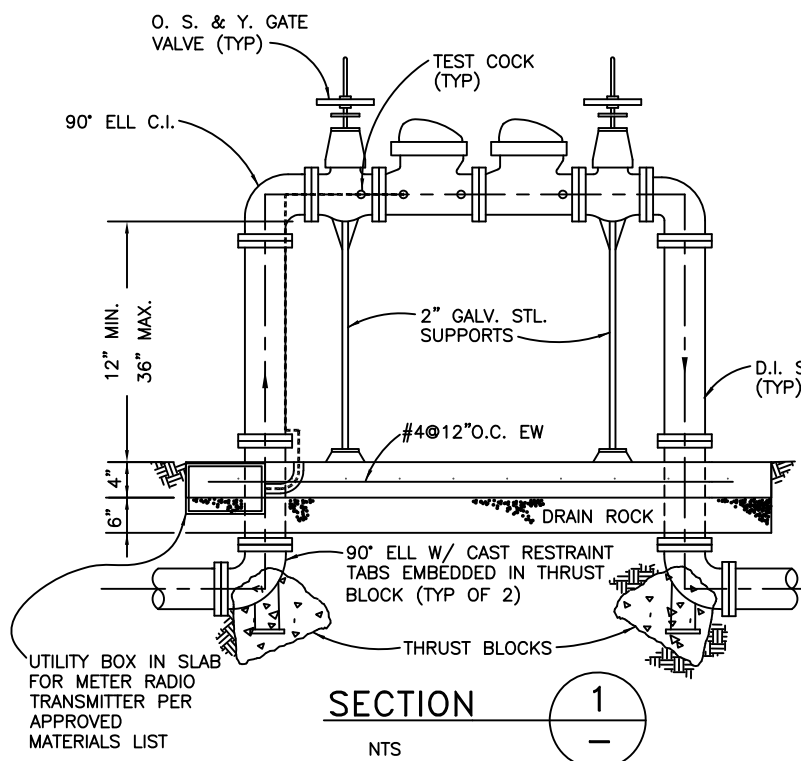
SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-22



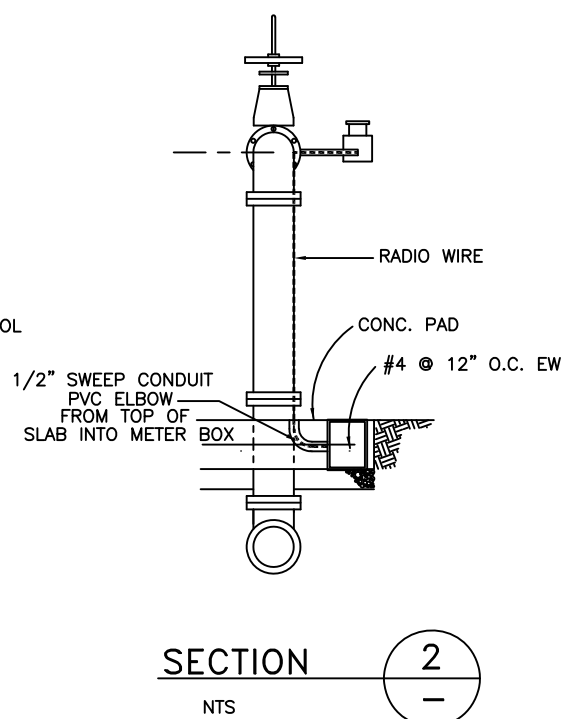
PLAN

NTS



SECTION 1

NTS



SECTION 2

NTS

NOTES:

1. DOUBLE DETECTOR CHECK ASSEMBLY SHALL BE FACTORY ASSEMBLED COMPLETE, WITH METER AND DETECTOR CHECKS AND SHALL BE ON DISTRICT APPROVED LIST. THE DETECTOR METER SHALL BE SUPPLIED WITH A RADIO-READ NEPTUNE OR SENSUS METER. THE METER INTERFACE UNITS SHALL BE DATAMATIC FIREFLY METER INTERFACE UNITS FOR AMR SYSTEMS USING ENCODED REGISTERS WITH PROFILE PLUS LOAD PROFILING CAPABILITY.
2. INSTALL AS REQUIRED.
3. RADIO WIRE TO BE FIRMLY AFFIXED TO PIPING WITH WIRE TIES.
4. TRANSMITTER TO BE SPLICED TO INCOMING WIRES WITH WATER PROOF CONNECTORS.
5. METER SHALL BE SET TO READ IN CUBIC FEET.
6. DEVICE SHALL BE TESTED BY CERTIFIED TESTER. TEST REPORT SHALL BE SUBMITTED TO DSRSD.
7. PROTECTIVE ENCLOSURE NOT SHOWN. REFER TO SECTION II-B2-7 AND DRAWING W-25 FOR ENCLOSURE REQS.
8. ALL BOLTS SHALL BE STAINLESS STEEL TYPE 316, ANTI-SEIZE LUBRICANT SHALL BE APPLIED TO BOLT THREADS. POLYWRAP ALL FERROUS PIPE AND FITTINGS.

Dublin San Ramon Services District

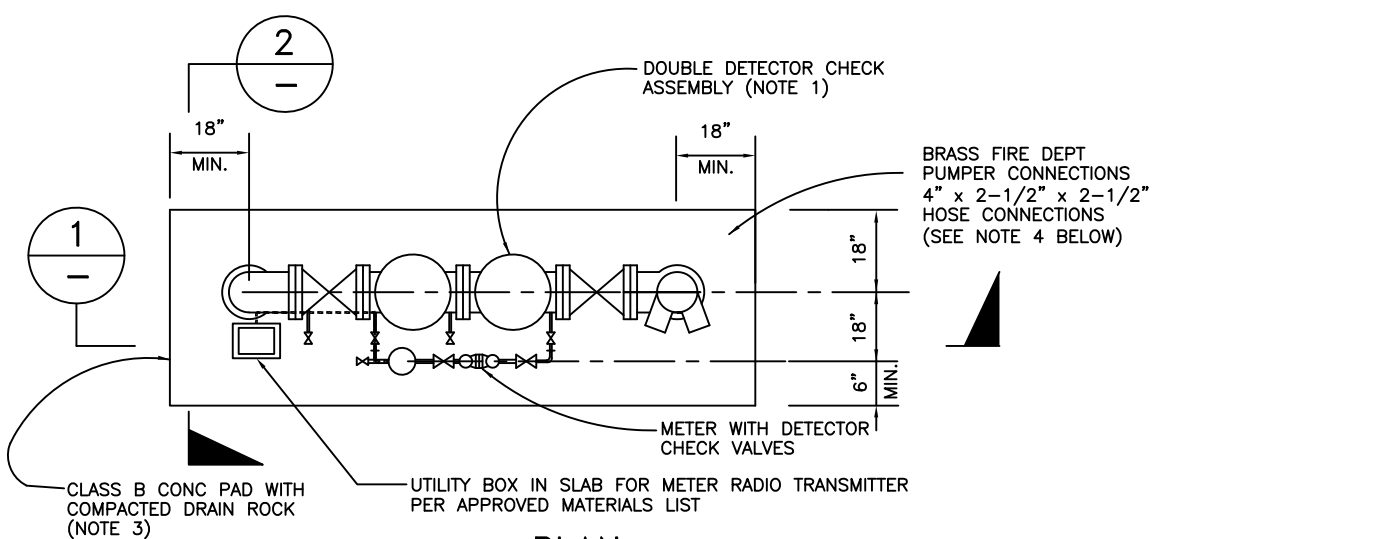
REVISION DATE
DEC 2020

DOUBLE DETECTOR CHECK FOR 2" - 10" FIRE LINES
ABOVE GROUND INSTALLATION

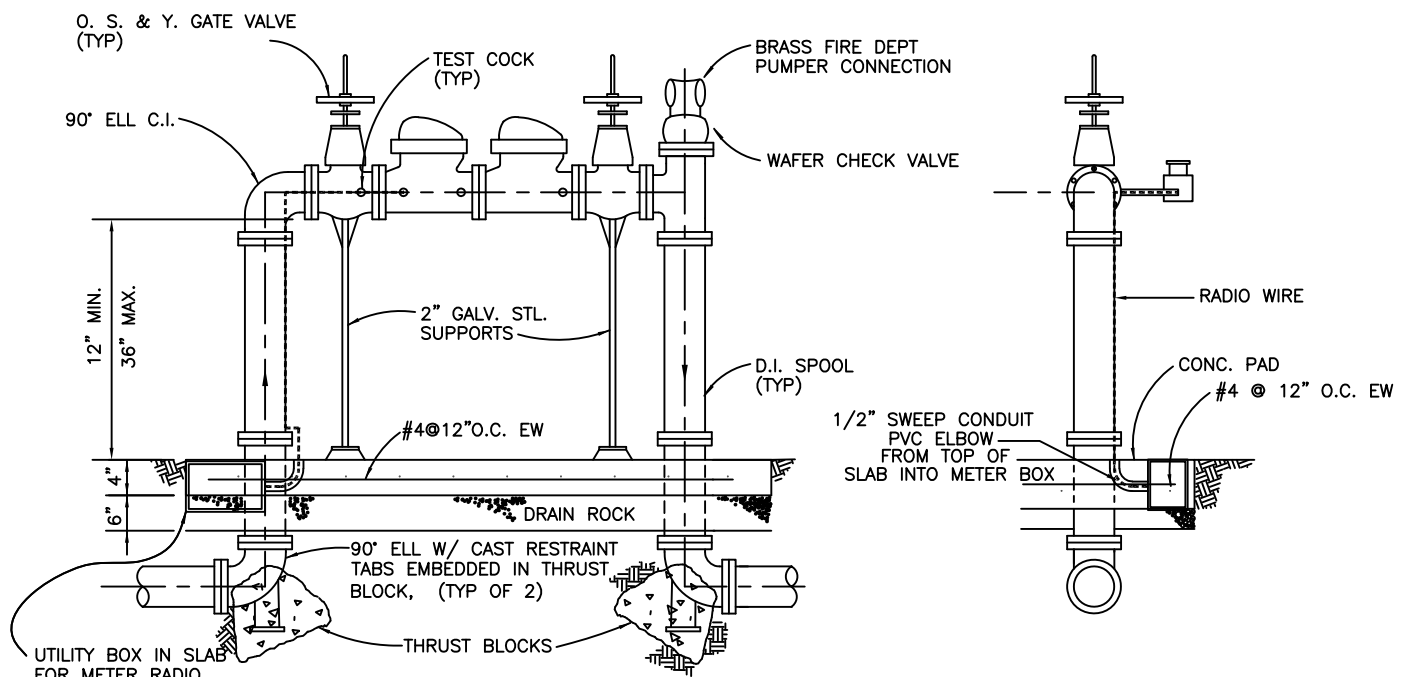
REVISED BY
RM

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-23



PLAN
NTS

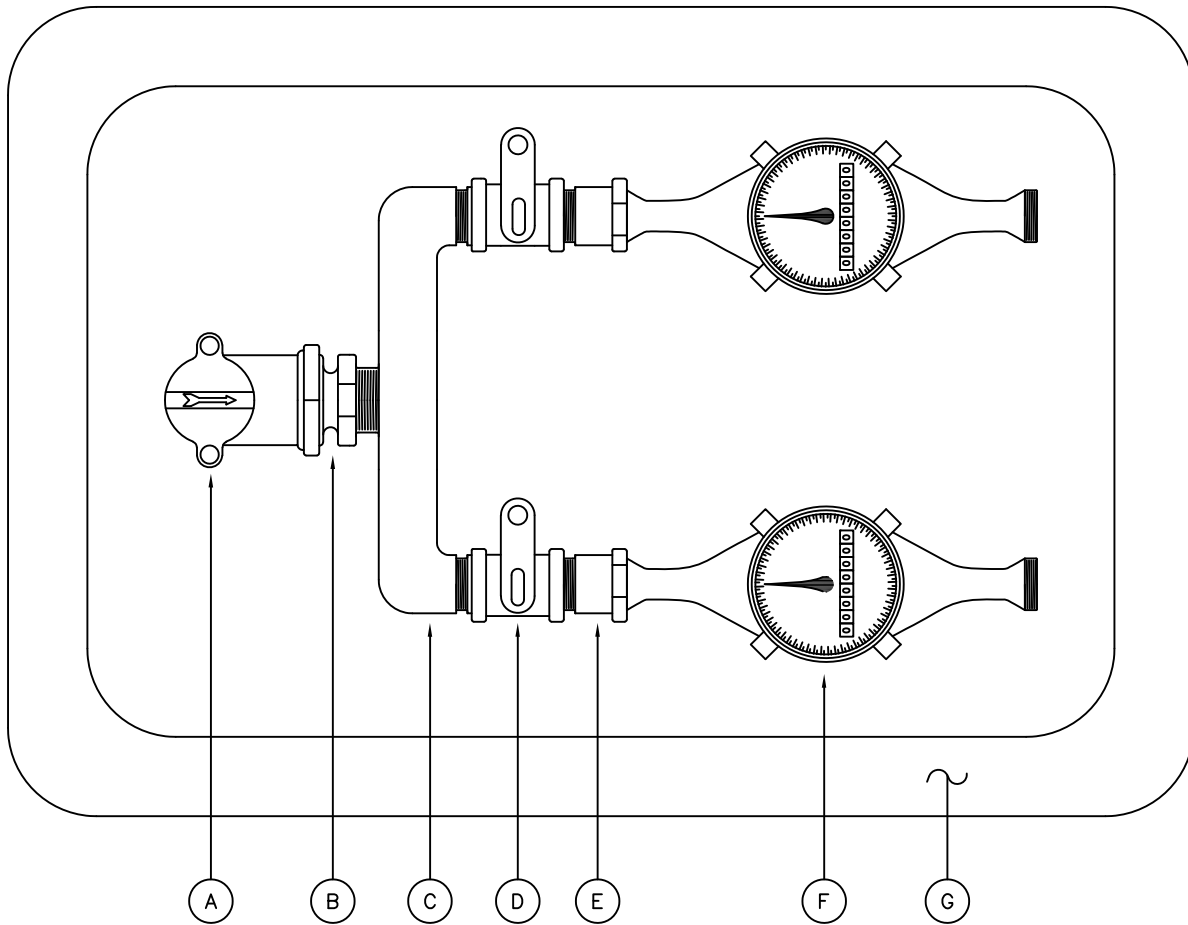


SECTION 1
NTS

SECTION 2
NTS

- NOTES:**
- DOUBLE DETECTOR CHECK ASSEMBLY SHALL BE FACTORY ASSEMBLED COMPLETE, WITH METER AND DETECTOR CHECKS AND SHALL BE ON APPROVED MATERIALS LIST. THE DETECTOR METER SHALL BE SUPPLIED WITH A RADIO-READ METER. THE METER INTERFACE UNITS SHALL FOR AMR SYSTEMS USING ENCODED REGISTERS WITH PROFILE PLUS LOAD PROFILING CAPABILITY AND SHALL BE ON APPROVED MATERIALS LIST OR APPROVED EQUAL.
 - HOSE THREADS SHALL MATCH FIRE DEPT HOSE CONNECTORS (NST/NH).
 - INSTALL AS REQUIRED.
 - PUMPER CONNECTION MUST BE INSTALLED FACING STREET WITHOUT OBSTRUCTION.
 - THIS ARRANGEMENT REQUIRES FIRE DEPT APPROVAL.
 - RADIO WIRE TO BE FIRMLY AFFIXED TO PIPING WITH WIRE TIES.
 - TRANSMITTER TO BE SPLICED TO INCOMING WIRES WITH WATER PROOF CONNECTORS.
 - METER SHALL BE SET TO READ IN CUBIC FEET.
 - DEVICE SHALL BE TESTED BY CERTIFIED TESTER. TEST REPORT SHALL BE SUBMITTED TO DSRSD.
 - ALL BOLTS SHALL BE STAINLESS STEEL TYPE 316, ANTI-SEIZE LUBRICANT SHALL BE APPLIED TO BOLT THREADS. POLYWRAP ALL FERROUS PIPE AND FITTINGS.

Dublin San Ramon Services District	REVISION DATE DEC 2019
DOUBLE DETECTOR CHECK FOR 2" - 10" FIRE LINES ABOVE GROUND INSTALLATION (OPTIONAL)	REVISED BY BD
SIGNED COPY ON FILE AT DISTRICT OFFICE	DRAWING W-23A



KEY	QTY	MATERIALS
A	1	1" BRONZE ANGLE METER STOP WITH WING-LOCK
B	1	1" BRONZE METER COUPLING BUSHING (1" MALE METER x 1" F.I.P.)
C	1	METER BRANCH WITH 1" M.I.P. INLET & 3/4" M.I.P. OUTLETS
D	2	3/4" BRONZE STRAIGHT CURB STOP BALL VALVE WITH WING-LOCK
E	2	3/4" BRONZE STRAIGHT METER COUPLING (M.I.P. x METER NUT)
F	2	5/8" METER (SUPPLIED BY DISTRICT)
G	1	METER BOX AND LID

NOTE: SEE W-7 FOR SERVICE INSTALLATION. SEE W-29 FOR ADDRESS TAGS.

Dublin San Ramon Services District

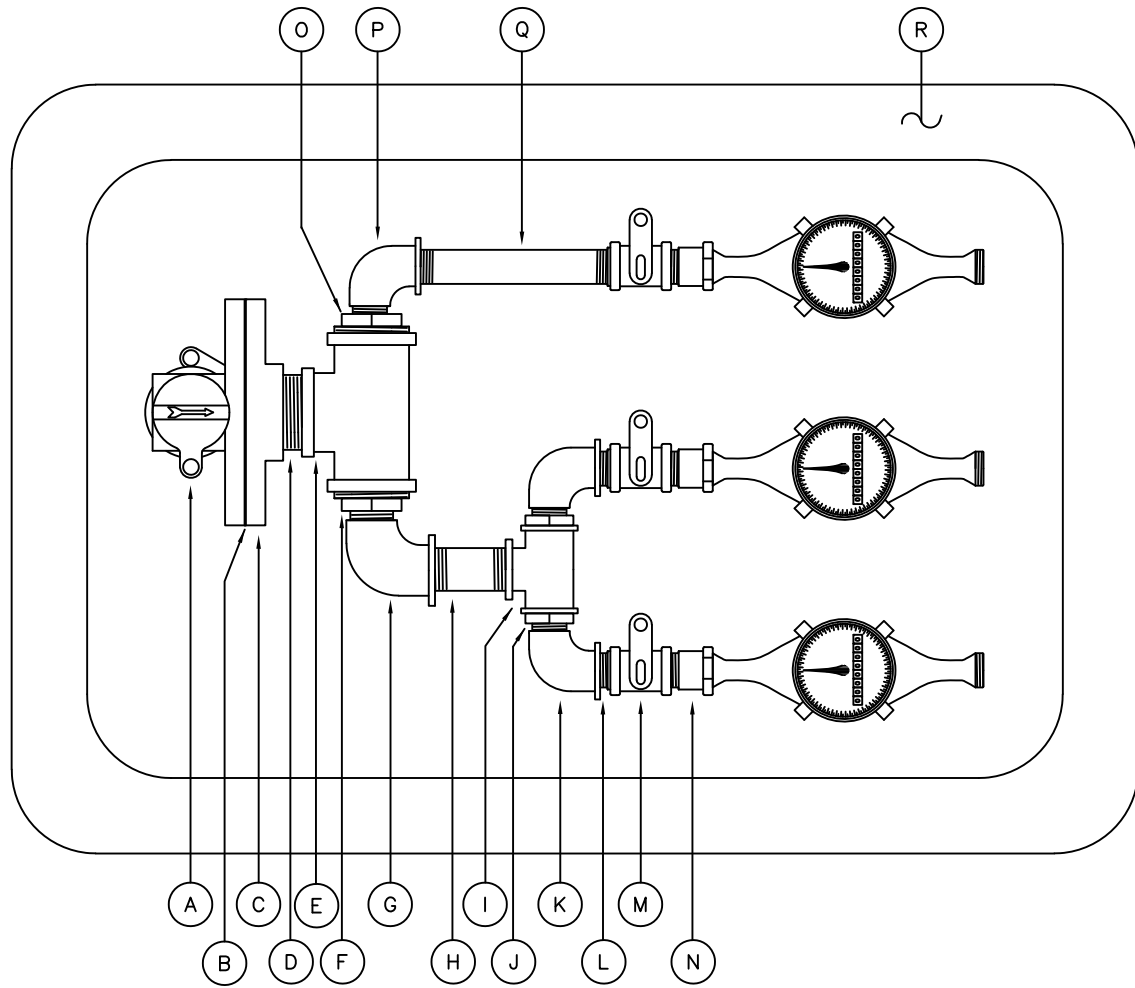
REVISION DATE
DEC 2019

1" WATER SERVICE WITH TWO 5/8" METER MANIFOLD

REVISED BY
BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-24A



KEY	QTY	MATERIALS	KEY	QTY	MATERIALS
A	1	2" BRONZE ANGLE METER STOP WITH WING-LOCK	J	2	1" TO 3/4" BRASS BUSHINGS
B	1	2" RUBBER METER GASKET	K	3	3/4 BRASS STREET ELLS
C	1	2" BRONZE METER FLANGE WITH 2" FEMALE THREADS 4"x4" DIP ELL, FLG. x FLG.	L	2	3/4" BRASS CLOSE NIPPLES
D	1	2" BRASS NIPPLE - 2" LONG	M	3	3/4 BRONZE BALL VALVE CURBS STOPS - STRAIGHT
E	1	2" BRASS TEE	N	3	3/4" BRONZE STRAIGHT METER COUPLINGS
F	1	2" TO 1" BRASS BUSHING	O	1	2" TO 3/4" BRASS BUSHING
G	1	1" BRASS STREET ELL	P	1	3/4" STREET ELL
H	1	1" BRASS NIPPLE - 3" LONG	Q	1	3/4" BRASS NIPPLE 6" LONG
I	1	1" BRASS TEE	R	1	METER BOX AND LID

- NOTES: 1. SEE W-8 FOR SERVICE INSTALLATION.
 2. SEE W-29 FOR ADDRESS TAGS.
 3. USE OF THIS DETAIL REQUIRES DISTRICT ENGINEER APPROVAL

Dublin San Ramon Services District

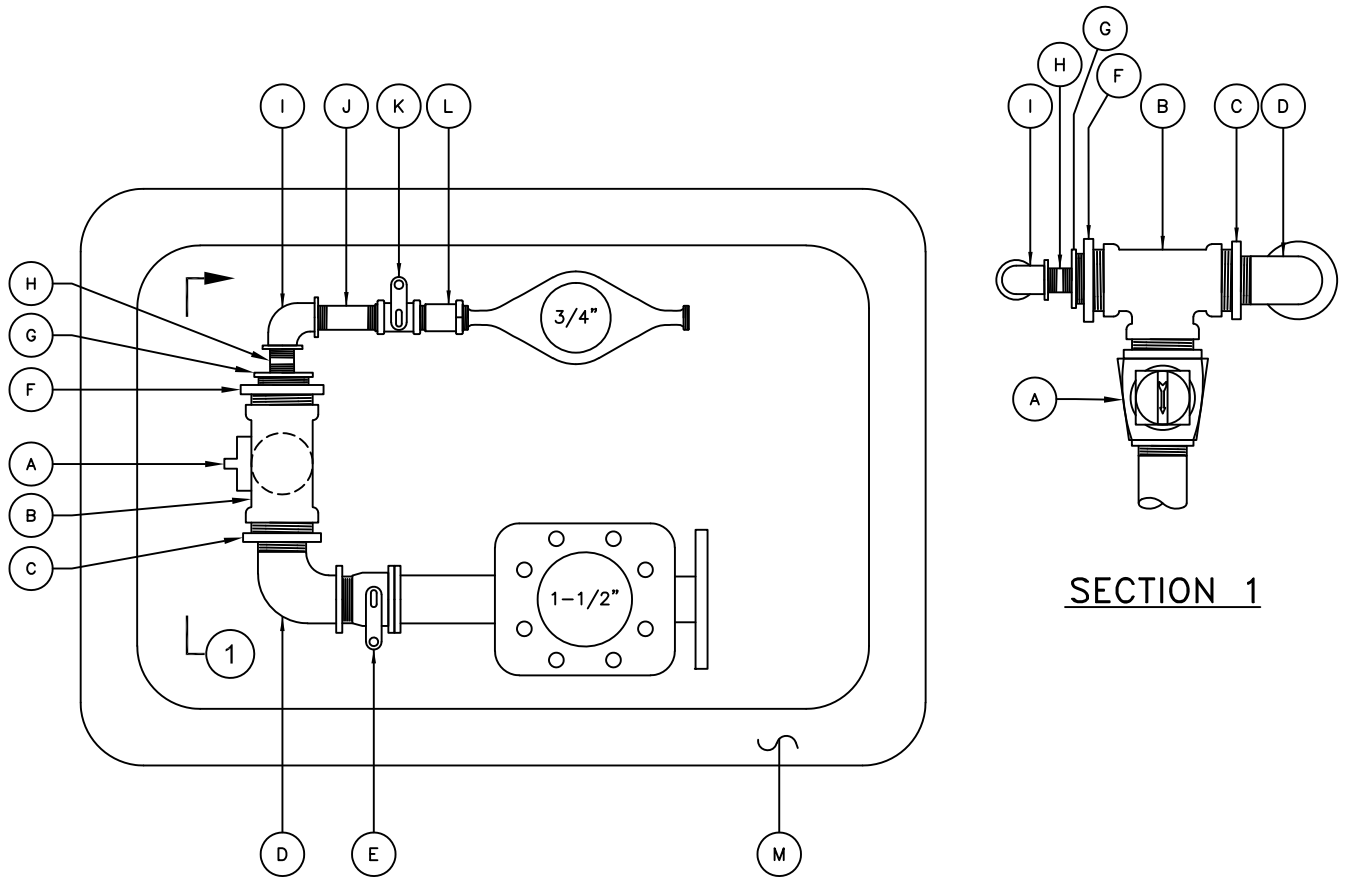
REVISION DATE
JUN 2020

2" WATER SERVICE WITH THREE 5/8" METER MANIFOLD

REVISED BY
BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-24B



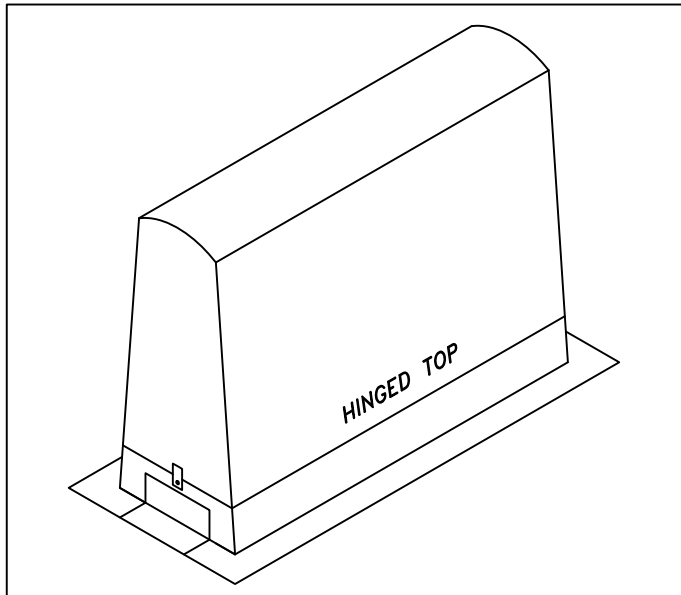
PLAN

SECTION 1

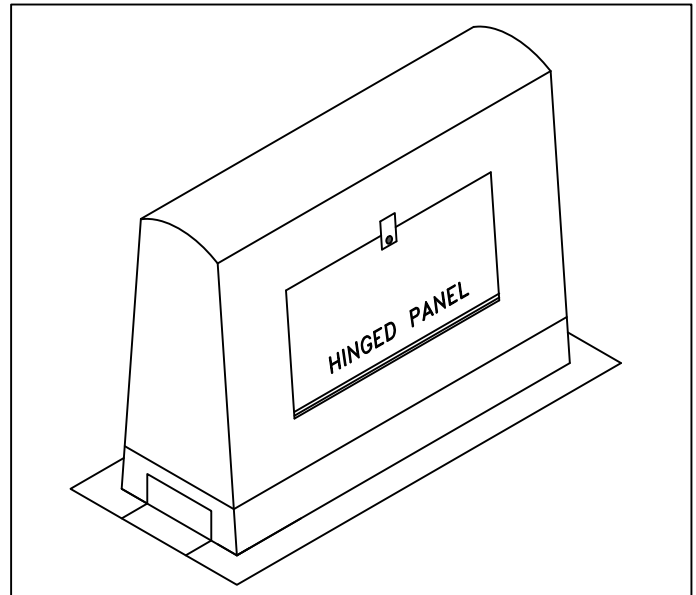
KEY	QTY	MATERIALS	KEY	QTY	MATERIALS
A	1	2" BRONZE STRAIGHT CURB STOP BALL VALVE WITH WING-LOCK	G	1	BRASS BUSHING 3/4" FIP X 1-1/2" MIP
B	1	2" BRASS TEE	H	1	3/4" BRASS NIPPLE 2" LONG
C	2	BRASS BUSHING 1-1/2" FIP X 2" MIP	I	1	3/4" BRASS ELBOW
D	1	1-1/2" BRASS STREET ELL	J	1	3/4" BRASS NIPPLE 1-3/4" LONG
E	1	1-1/2" STRAIGHT METER STOP BALL VALVE (MIP X METER FLANGE) WITH RUBBER METER GASKET	K	1	3/4" BRONZE STRAIGHT CURB STOP BALL VALVE WITH WING-LOCK
F	1	BRASS BUSHING 1-1/2" FIP X 2" MIP	L	1	3/4" BRONZE STRAIGHT METER COUPLING
			M	1	METER BOX AND LID

NOTE: SEE W-8 FOR SERVICE INSTALLATION. SEE W-29 FOR ADDRESS TAGS.

Dublin San Ramon Services District	DATE DEC 2019
2" WATER SERVICE WITH ONE 3/4" METER & ONE 1-1/2" METER MANIFOLD INSTALLATIONS	DESIGNED RM
SIGNED COPY ON FILE AT DISTRICT OFFICE	DRAWING W-24C



FOR PIPE SIZE \leq 2-INCH



FOR PIPE SIZES $>$ 2-INCH

PIPE SIZE	INSIDE DIMENSIONS		
	W	L	H
3/4"-1"	8	25	19
3/4"-1"	9	26	19
1 1/4"-2"	11	35	24
1 1/4"-2"	12	37	30
1 1/4"-2"	12	46	30
1 1/4"-2"	12	46	31
2 1/2"-3"	24	67	45
4"	29	65	50
6"	28	104	49
8"-10"	40	157	74

NOTES:

1. ENCLOSURE SHALL BE AS SPECIFIED ON APPROVED MATERIALS LIST, OR EQUAL.
2. CONCRETE PAD SHALL EXTEND 4 INCHES BEYOND THE EDGE OF THE ENCLOSURE.

REV. 11/19

Dublin San Ramon Services District

DATE
DEC 2019

FIBERGLASS ENCLOSURE FOR BACKFLOW PREVENTER

DESIGNED
RM

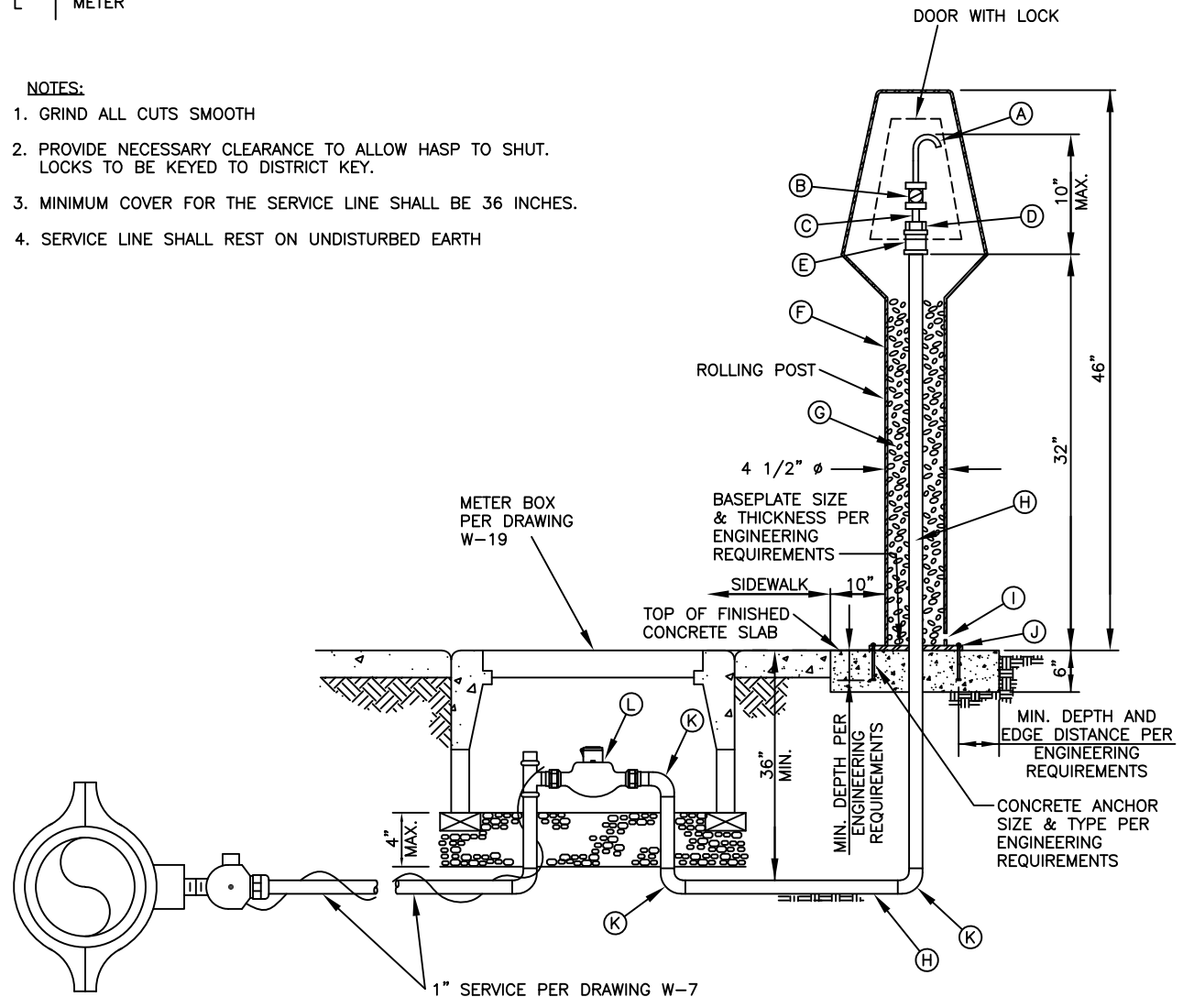
SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-25

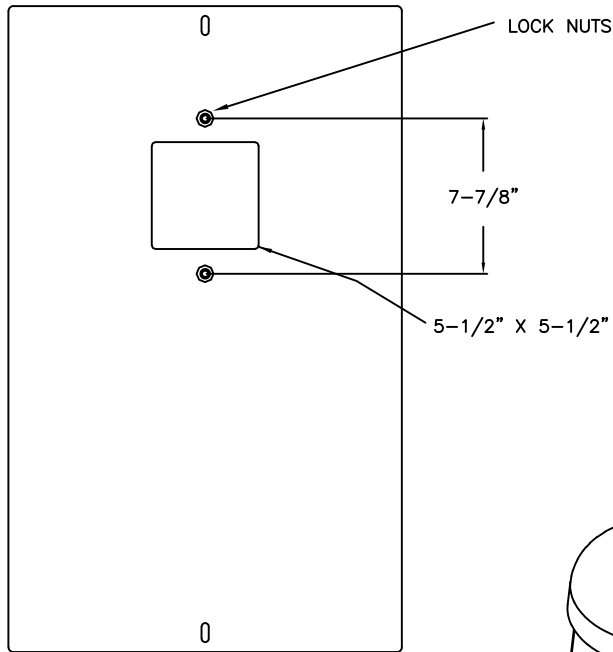
ITEM	DESCRIPTION
A	3/8" STAINLESS GOOSE NECK
B	1/2" x 3/8" BRASS OR STAINLESS VALVE
C	1/2" POLYETHYLENE TUBING
D	1" x 1/2" BRASS BUSHING
E	1" STRAIGHT BRASS COUPLING
F	POWDER COATED EPOXY STEEL HOUSING
G	PEA GRAVEL
H	1" POLYETHYLENE TUBING (BLUE)
I	1/2"Ø WEEP HOLE
J	ANCHOR BOLT
K	FLARE FITTING OR COMPRESSION JOINT
L	METER

NOTES:

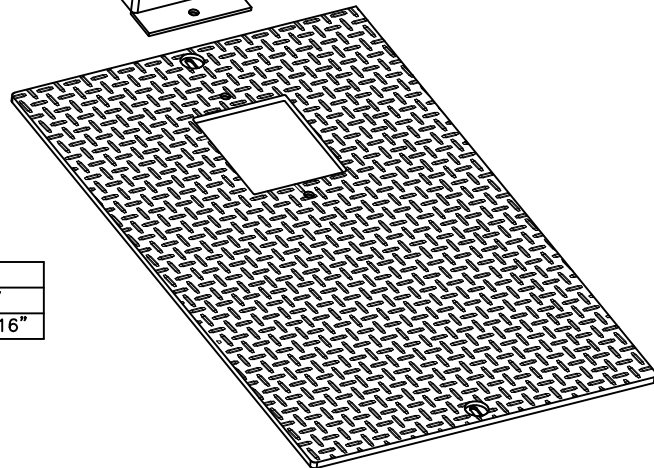
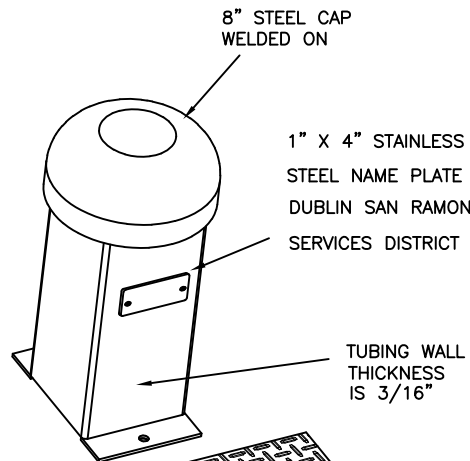
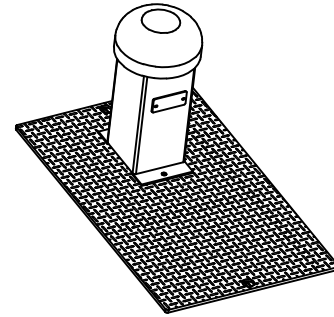
1. GRIND ALL CUTS SMOOTH
2. PROVIDE NECESSARY CLEARANCE TO ALLOW HASP TO SHUT. LOCKS TO BE KEYED TO DISTRICT KEY.
3. MINIMUM COVER FOR THE SERVICE LINE SHALL BE 36 INCHES.
4. SERVICE LINE SHALL REST ON UNDISTURBED EARTH



Dublin San Ramon Services District	REVISION DATE DEC 2019
STANDARD SAMPLING STATION	REVISED BY BD
SIGNED COPY ON FILE AT DISTRICT OFFICE	DRAWING W-26



(BOTTOM SIDE OF PLATE)



	LID / PLATE SIZE
FOR 1" CAV	16-1/4" X 27" X 3/16"
FOR 2" CAV	20-1/4" X 33-1/4" X 3/16"

NOTES:

1. VALVE COVER TO BE ON APPROVED MATERIALS LIST, OR APPROVED EQUAL.
2. CLEAN INTERIOR AND EXTERIOR OF STEEL WITH A WATER-BASED CLEANER.
3. APPLY PRIMER 2-3 MILLS THICK WITH TWO PART CATALYZED POLYAMID EPOXY PRIMER (HUNTER GREEN FOR POTABLE WATER OR PURPLE FOR RECYCLED WATER), OR APPROVED EQUAL PRIMER.
4. APPLY ALIPHATIC URETHANE FINISH TOP COAT.
5. VALVE VENT COVER AND LID TO BE PAINTED HUNTER GREEN FOR POTABLE WATER OR PURPLE FOR RECYCLED WATER.

Dublin San Ramon Services District

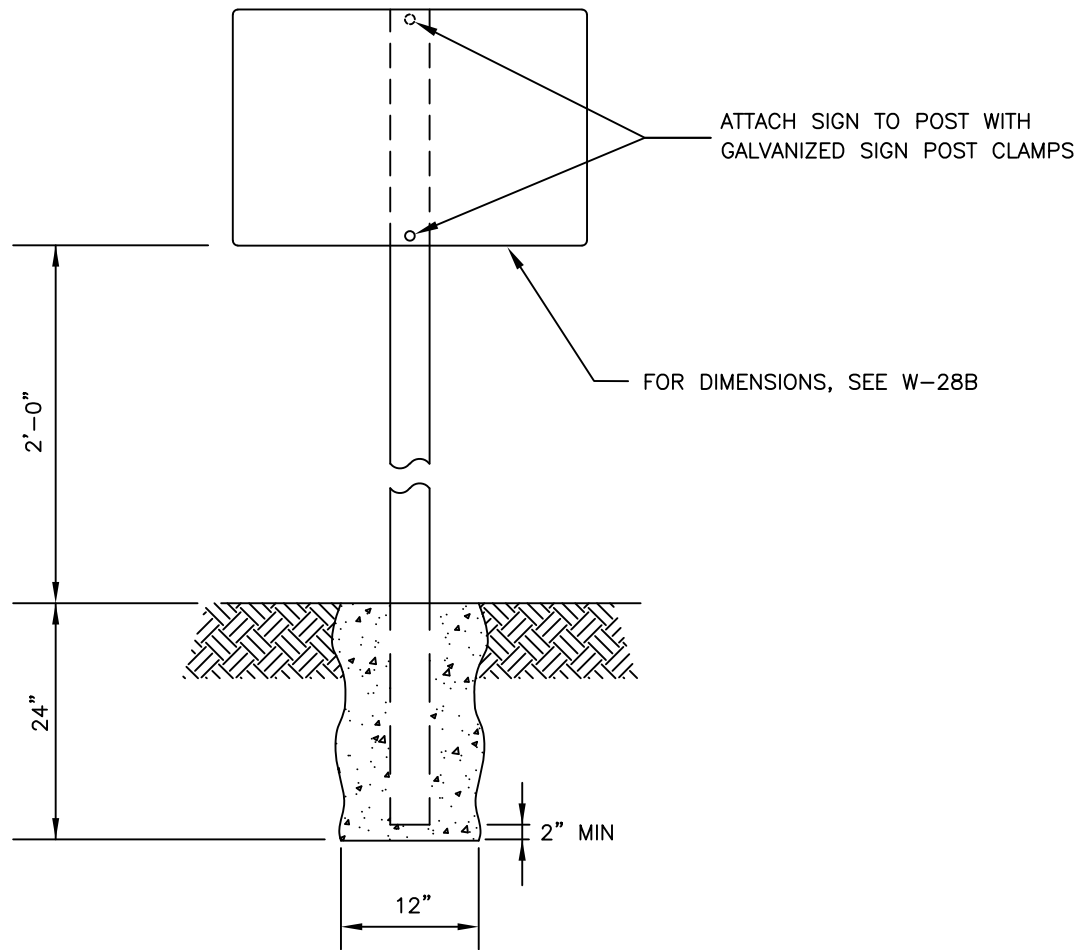
REVISION DATE
JUN 2020

AIR RELEASE & VACUUM RELIEF
VALVE VENT COVER

REVISED BY
RM/BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-27



NOTES:

1. RECYCLED WATER NOTIFICATION SIGN POST TO BE PROVIDED BY DEVELOPER.
2. POST SHALL BE 2" DIAMETER GALVANIZED STEEL.
3. FOOTING SHALL BE 24' IN DEPTH, IN CONCRETE.

Dublin San Ramon Services District

REVISION DATE
JUN 2020

RECYCLED WATER SIGN POST DETAIL

REVISED BY
KP/BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-28

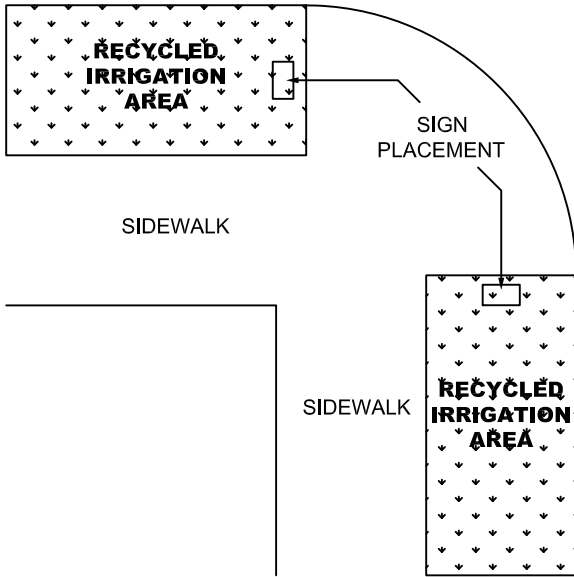


Fig. 1 Corner Pedestrian Crossing

Fig. 2 MID-STREET PEDESTRIAN CROSSING

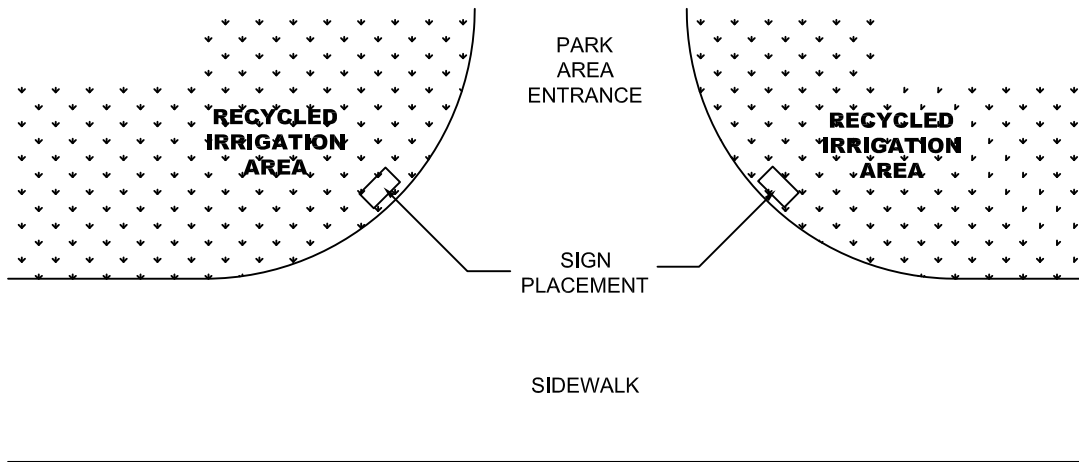
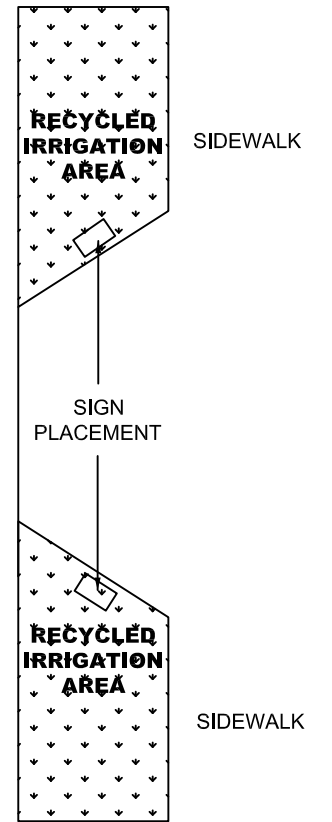


Fig. 3 PARK AREA ENTRANCE PLACEMENT

Dublin San Ramon Services District

DATE
JAN 2020

STANDARD DETAILS FOR PLACEMENT
OF RECYCLED WATER IRRIGATION SIGNS

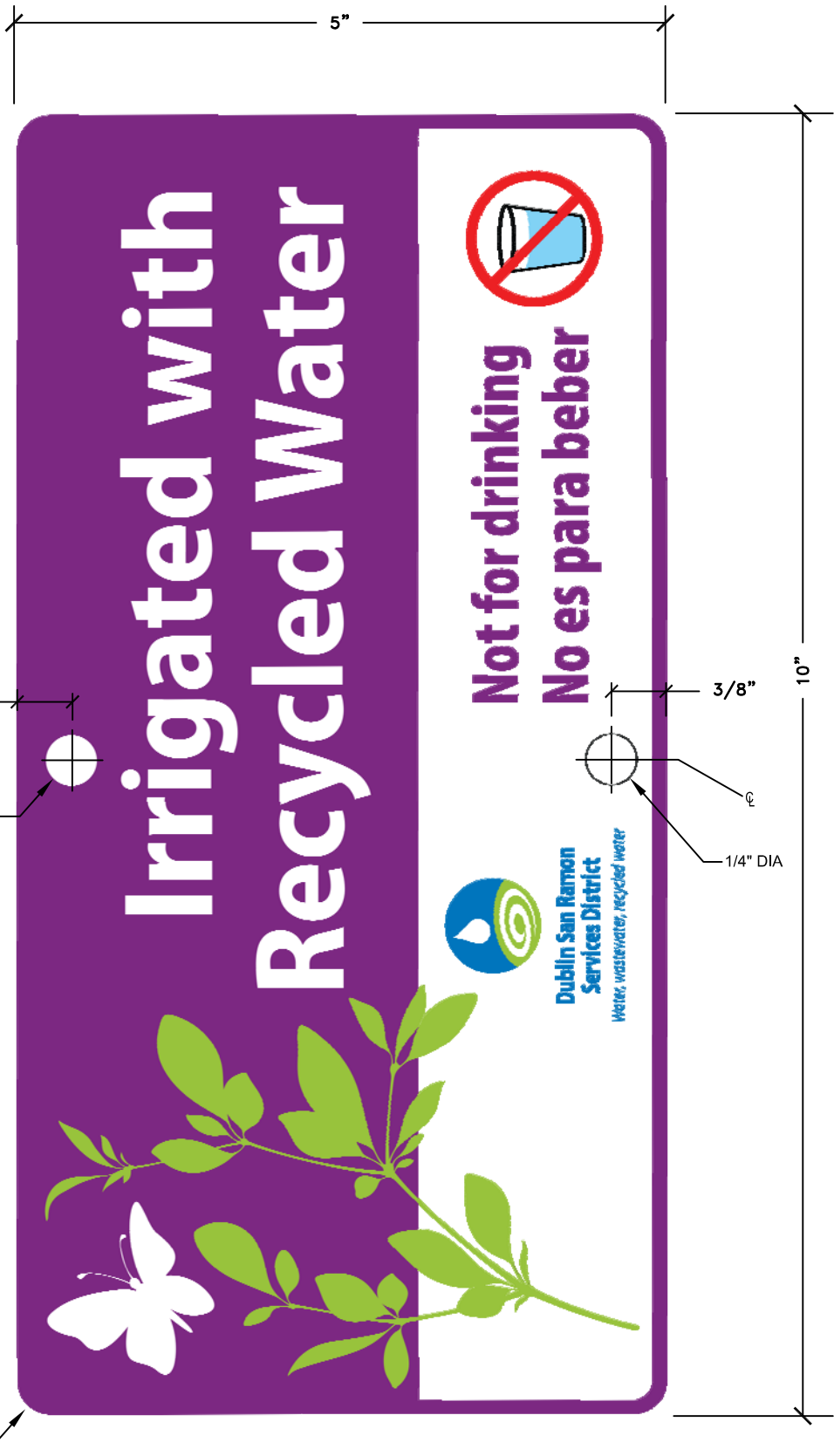
REVISED
BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

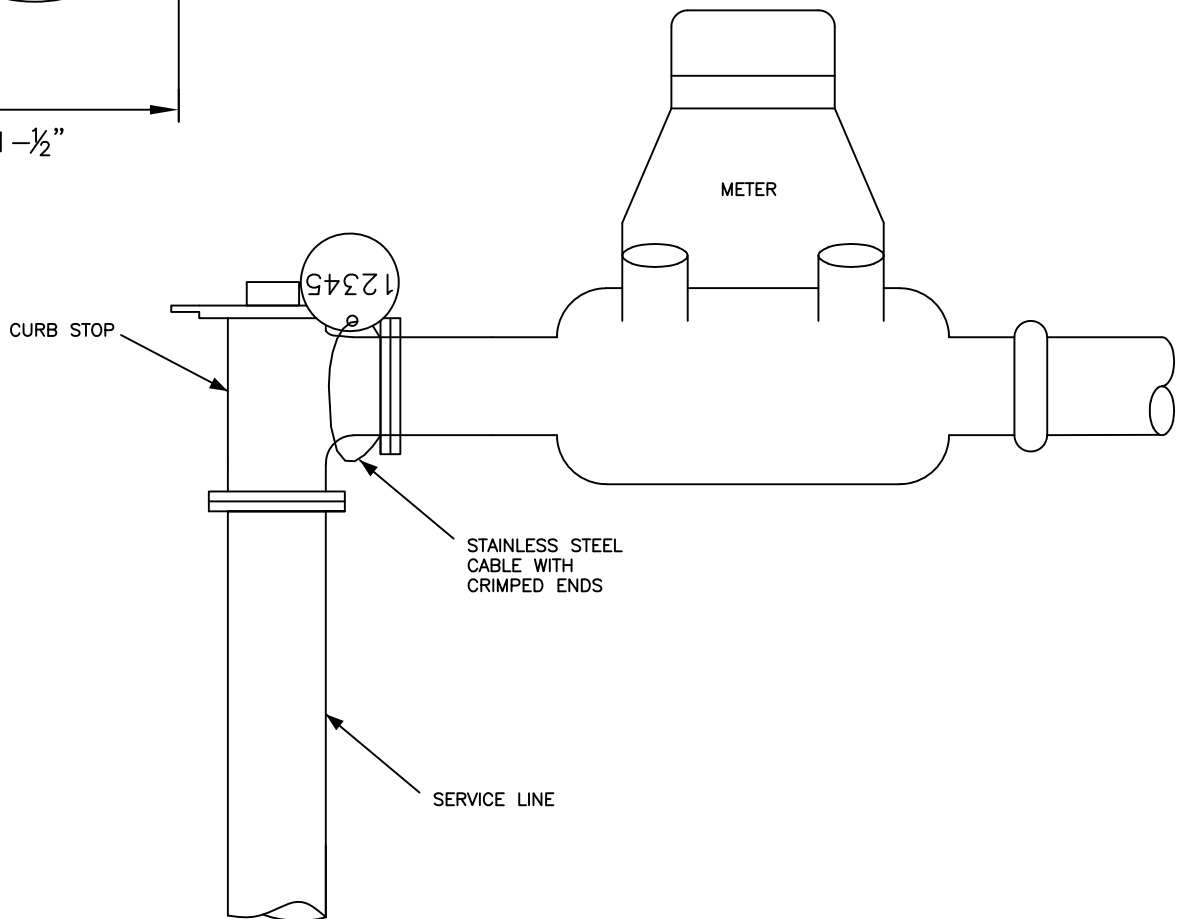
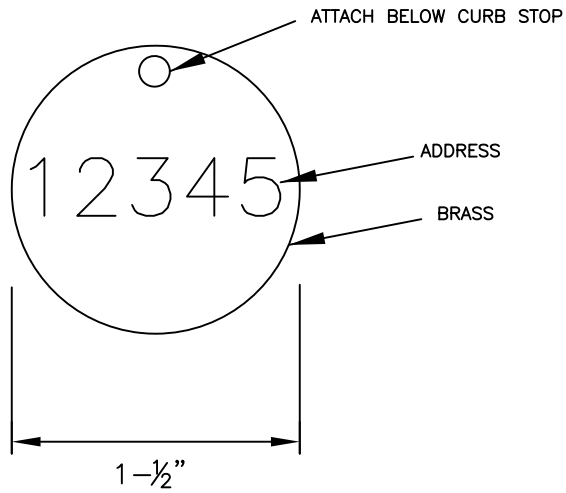
DRAWING
W-28A

NOTES

1. RECYCLED WATER NOTIFICATION SIGN TO BE OBTAINED BY DEVELOPER. SIGN AVAILABLE FOR SALE AT DSRSD OFFICE.
2. WARNING SIGN SHALL BE 0.63 GAUGE ALUMINUM PURPLE (PMS #2587) IN COLOR WITH WHITE TEXT AND SHALL BE AFFIXED TO THE GROUND BY A WOODEN POST
3. SEE W-28 FOR RECYCLED WATER SIGN POST DETAIL.
4. SIGN SHALL STATE "RECYCLED WATER DO NOT DRINK" ACCORDING TO TITLE 22, ARTICLE 4, SECTION 60310(G) OF THE STATEWIDE REGULATION.
5. 1/4" MOUNTING HOLES SHALL BE DRILLED ON CENTER LINE AS SHOWN.
6. EDGES SHALL BE ROUNDED WITH 1/2" RADIUS.
7. SEE W-28A FOR SIGN PLACEMENT.



Dublin San Ramon Services District	DATE DEC 2019
RECYCLED WATER ALUMINUM SIGN DETAIL	DESIGNED BCD/SO
SIGNED COPY ON FILE AT DISTRICT OFFICE	DRAWING W-28B



Dublin San Ramon Services District

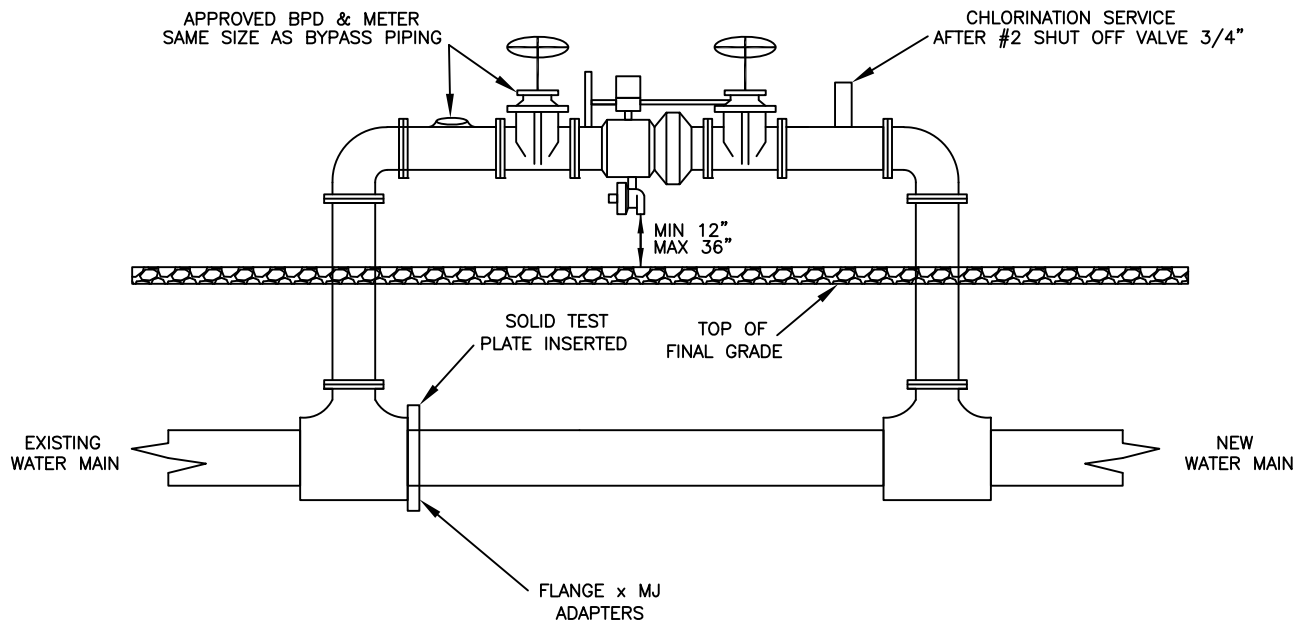
REVISION DATE
JUN 2020

BRASS ADDRESS TAGS FOR MANIFOLDED METERS

REVISED BY
BD

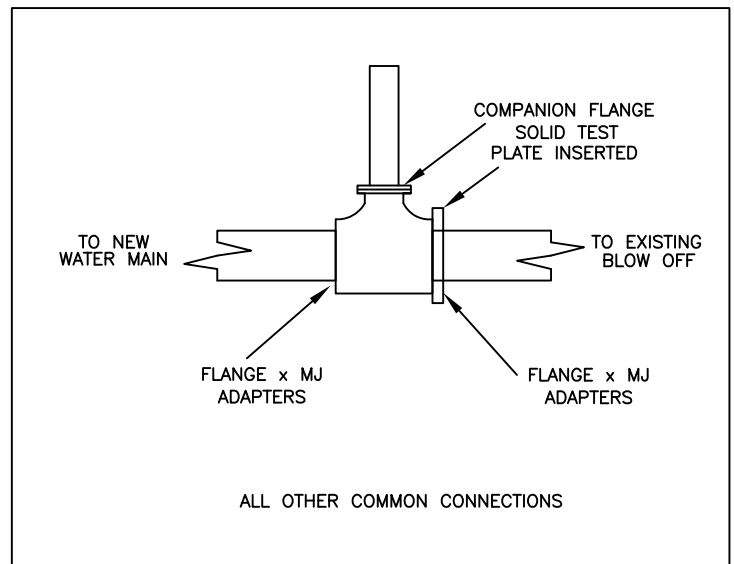
SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-29



NOTES:

1. RP SHALL BE SIZED BY CONTRACTOR TO MEET AWWA STANDARD FOR FLUSHING.
2. CONSTRUCTION JUMPER TO BE REMOVED ONCE TESTING IS COMPLETED.
3. AFTER TESTING IS COMPLETED, ALL PIECES OF CONSTRUCTION JUMPER (INCLUDING THE TEES) SHALL BE REMOVED AND A STRAIGHT PIPE TO COMPLETE THE WATER MAIN SHALL BE INSTALLED.



Dublin San Ramon Services District

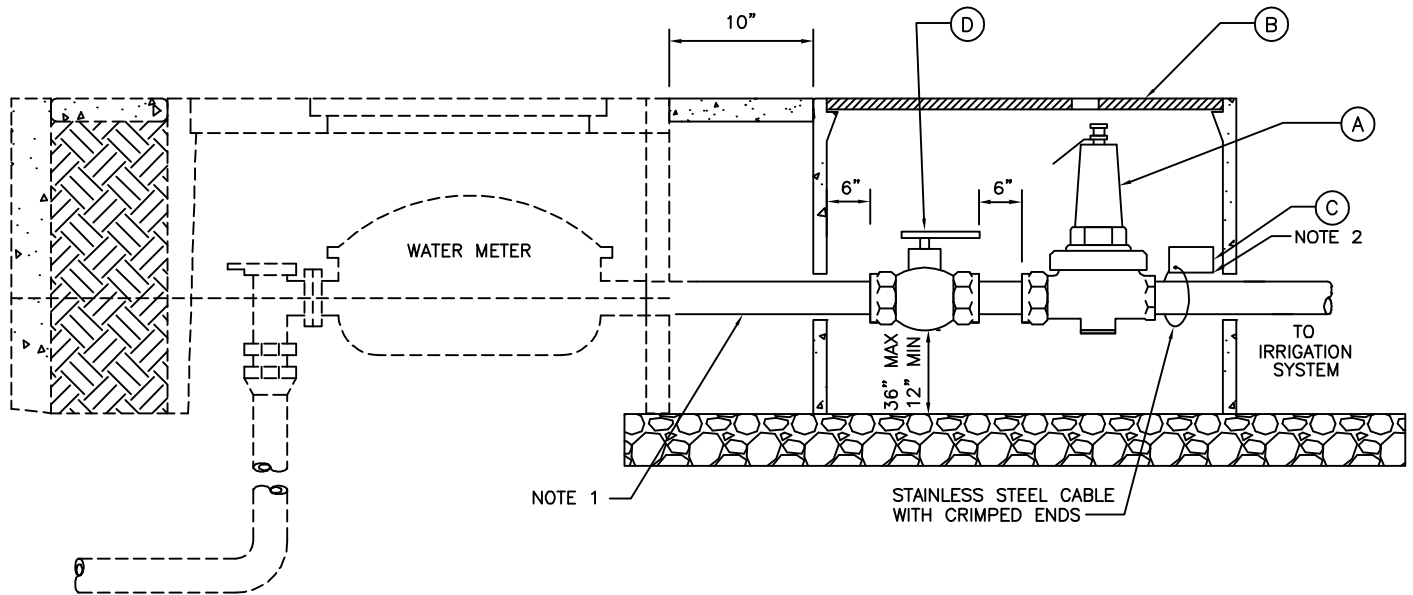
REVISION DATE
JAN 2021

CONSTRUCTION JUMPER

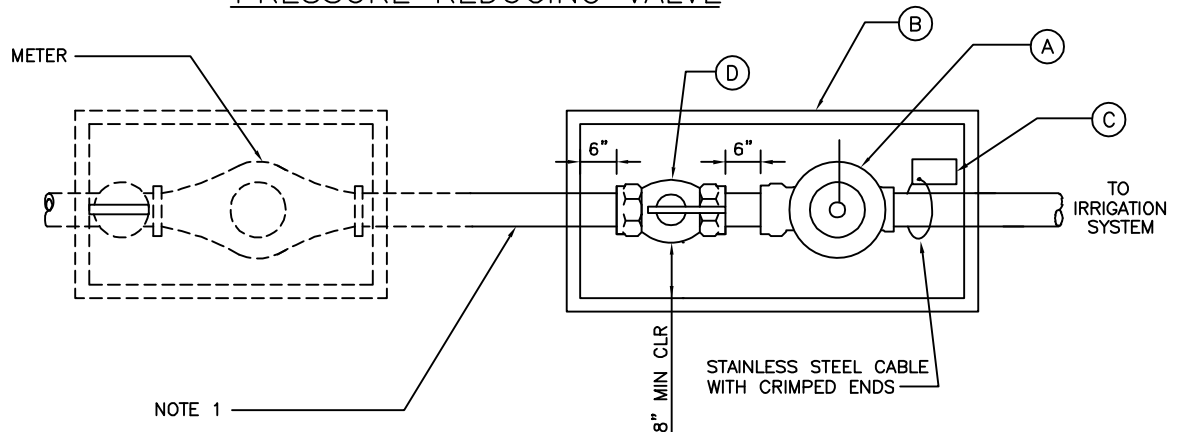
REVISED BY
RM

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-30



PRESSURE REDUCING VALVE



ITEM	DESCRIPTION
A	PRESSURE REDUCING VALVE
B	METER BOX AND LID (PURPLE COLOR)
C	RECYCLED WATER WARNING TAG
D	BALL VALVE

NOTES:

1. NO LINE CONNECTIONS BETWEEN METER & PRV.
2. RECYCLED WATER I.D. TAG/LABEL.
3. PRV SIZE SHALL BE EQUAL TO METER SIZE.
4. FLOW SENSOR AND MASTER SHUT OFF VALVES SHALL BE INSTALLED IN ACCORDANCE WITH SPEC. SEC IV-A4-5.01

Dublin San Ramon Services District

DATE
JAN 2020

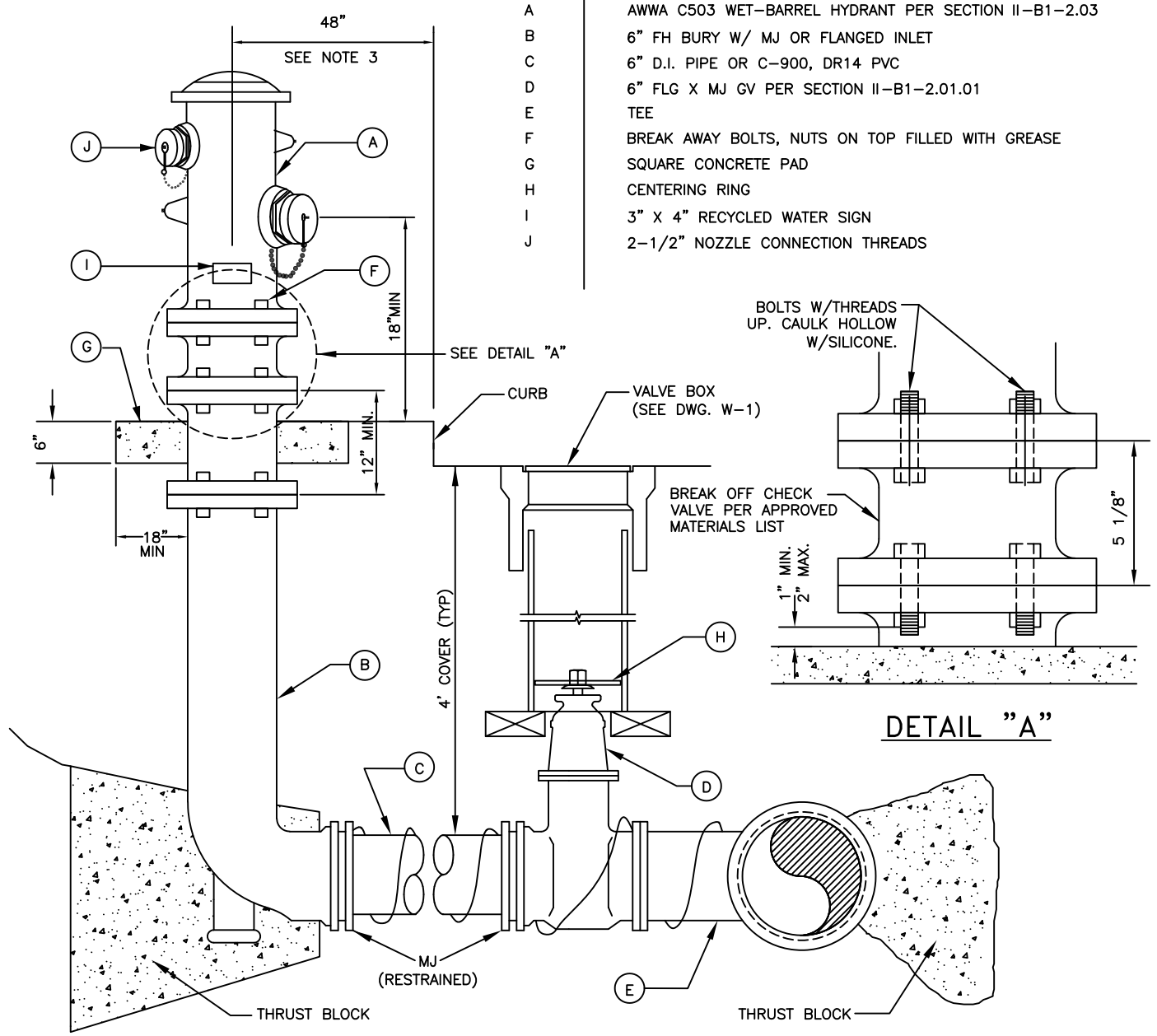
3/4" - 3" PRV INSTALLATION
FOR RECYCLED WATER IRRIGATION SYSTEM

DESIGNED
BD

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING
W-31

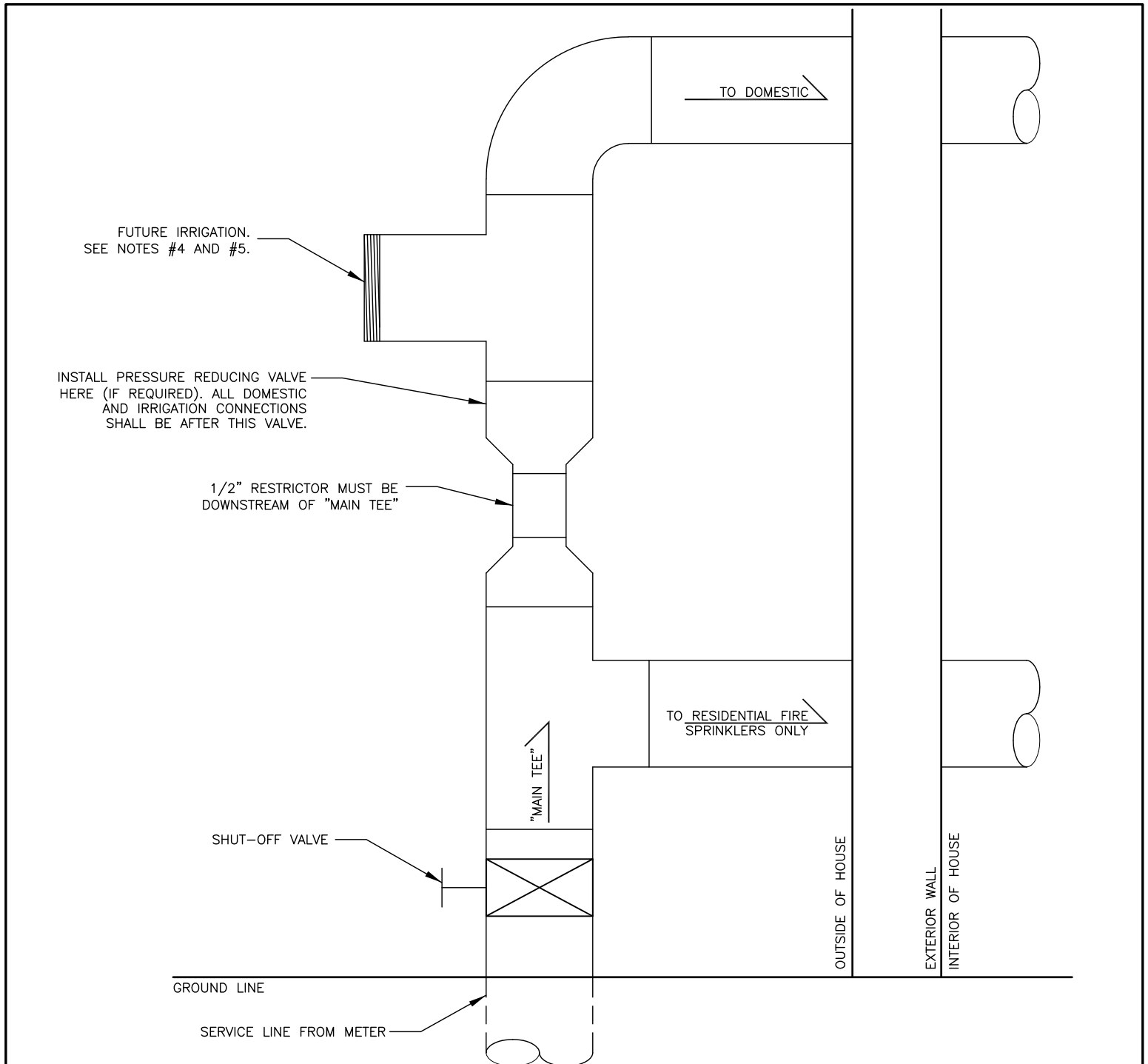
ITEM	DESCRIPTION
A	AWWA C503 WET-BARREL HYDRANT PER SECTION II-B1-2.03
B	6" FH BURY W/ MJ OR FLANGED INLET
C	6" D.I. PIPE OR C-900, DR14 PVC
D	6" FLG X MJ GV PER SECTION II-B1-2.01.01
E	TEE
F	BREAK AWAY BOLTS, NUTS ON TOP FILLED WITH GREASE
G	SQUARE CONCRETE PAD
H	CENTERING RING
I	3" X 4" RECYCLED WATER SIGN
J	2-1/2" NOZZLE CONNECTION THREADS



NOTES:

1. ON MAINS WHERE VALVES ARE TO BE INSTALLED ADJACENT TO TEES OR CROSSES, THE VALVES SHALL BE FLANGED X MJ WITH FLANGED END BOLTED DIRECTLY TO THE TEE OR CROSS.
2. VALVE DISTANCE IN FEET TO BE MARKED ON CURB.
3. SEE PLANS AND SPECIFICATIONS FOR LOCATION OF HYDRANTS. REFER TO SECTION II-B2-5.01 FOR PLACEMENT OF FIRE HYDRANTS BEHIND CURBS AND SIDEWALKS.
4. HYDRANT EXTERIOR PAINT SHALL BE PURPLE IN CONFORMANCE WITH SECTION IV-B1-2.11.
5. ALL BOLTS SHALL BE STAINLESS STEEL TYPE 316, ANTI-SEIZE LUBRICANT SHALL BE APPLIED TO BOLT THREADS. POLYWRAP ALL FERROUS PIPE AND FITTINGS.
7. TRACER WIRE SHALL BE INSTALLED ON ALL FIRE HYDRANT RUNS.

Dublin San Ramon Services District	REVISION DATE JAN 2021
RECYCLED WATER FIRE HYDRANT INSTALLATION	REVISED BY RM
SIGNED COPY ON FILE AT DISTRICT OFFICE	DRAWING W-32



NOTES:

1. ALL SERVICE CONNECTIONS (EXCEPT FIRE SERVICE CONNECTIONS) SHALL BE MADE DOWNSTREAM OF THE RESTRICTION IN THE DOMESTIC SERVICE LINE.
2. THE ONE-HALF INCH RESTRICTOR AND BOTH TEES SHOWN ON THIS DRAWINGS SHALL BE ON THE OUTSIDE OF THE HOUSE AND SHALL BE VISIBLE FROM THE STREET UNLESS A LETTER OF EXEMPTION IS ON FILE WITH DSRSD.
3. SIZES OF PIPING MAY VARY PER PLANS. SIZE OF RESTRICTOR SHALL ALWAYS BE ONE-HALF (1/2) INCH.
4. MATERIAL SHALL CONFORM TO THE LATEST UNIFORM PLUMBING CODE.
5. INSTALLATION OF A HOSE BIB AT THE EXTERIOR OF THE HOME IS PERMISSIBLE.

SCALE: N.T.S.

Dublin San Ramon Services District

REVISION DATE
MAY 2022

OUTDOOR PLUMBING SCHEMATIC (SINGLE FAMILY RESIDENTIAL ONLY)

REVISED BY
RM

SIGNED COPY ON FILE AT DISTRICT OFFICE

DRAWING

W-33