



# DISTRICT DRAWINGS



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## **TITLE**

Typical Trench Detail  
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Approved Material List

## **DRAWINGS NO.**

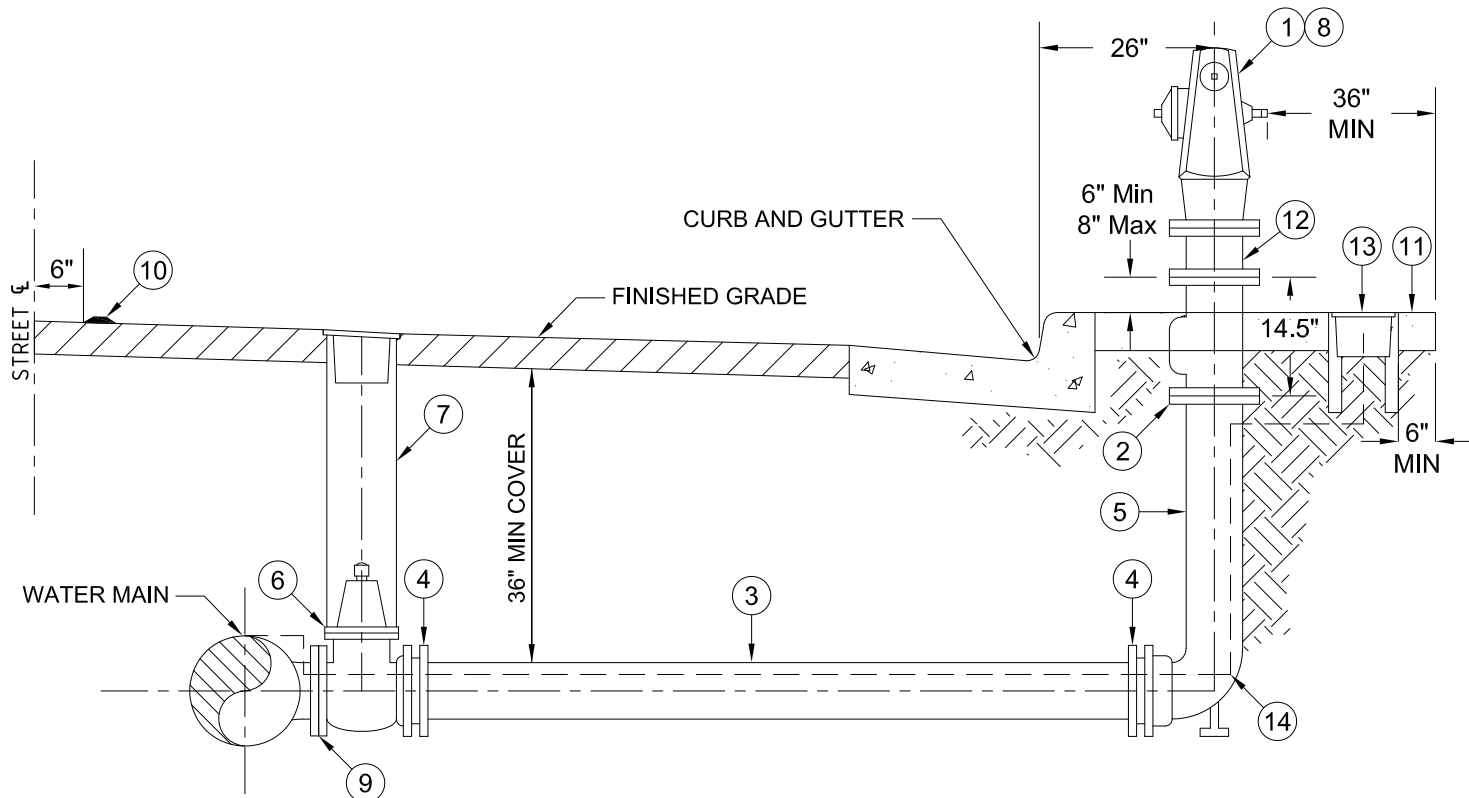
BW-00  
BW-01  
BW-02  
BW-03  
BW-04  
BW-05  
BW-06  
BW-07  
BW-08  
BW-09

## **TITLE**

### **WVWD - DDW Blanket Waiver Details**

Typical Separation Requirements for Potable & Non-Potable  
Water Main Separation with Material Upgrade  
New Sanitary Sewer or Storm Drain Installation Parallel to Water Main  
New Water Main Installation Parallel to Sanitary Sewer or Storm Drain  
Water Main Crossing Over or Under Sanitary Sewer Pipe  
Water Main Crossing Over or Under Storm Drain Pipe  
Water Main Inverted Siphon  
Water Main Siphon  
Sewer Force Main Over Water Main  
Sanitary Sewer Main Lateral Over Water Main





# ITEM DESCRIPTION:

- ① CLOW VALVE CO. MODEL F850 WET BARREL FIRE HYDRANT WITH 6" FLG INLET, 4" PUMPER OUTLET AND ONE 2-1/2" HOSE OUTLET. INSTALLED WITH 8-HOLE PATTERN BASE FLG. CLOW VALVE CO. MODEL F860 CAN BE USED WHEN APPROVED BY THE DISTRICT.
- ② CLOW VALVE CO. MODEL LBI 400A BREAK OFF CHECK VALVE WITH 8-HOLE DRILL PATTERN. (SEE NOTE 7 FOR REPAIRS)
- ③ 6" D.I PIPE, PRESSURE CLASS 350.
- ④ RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
- ⑤ 6" X REQUIRED LENGTH, D.I HYDRANT BURY WITH M.J INLET AND FLG. OUTLET
- ⑥ 6" RESILIENT-SEATED GATE VALVE (FLG. X M.J.) PER DISTRICT STANDARD W-11. OR FLG VALVE WITH M.J ADAPTER.
- ⑦ VALVE RISER AND COVER. PER DISTRICT STANDARD W-11
- ⑧ PAINT HYDRANT SAFETY YELLOW PER DISTRICT SPECIFICATIONS.
- ⑨ D.I. TEE, MAIN SIZE X 6" (M.J. X M.J. X FLG), FOR EXISTING MAIN SEE DISTRICT STANDARD W-19 OR W-28.
- ⑩ INSTALL BLUE DOT PAVEMENT MARKER 6" FROM EDGE OF PAINTED CENTER LINE ON THE SIDE NEAREST THE HYDRANT. BLUE DOT REFLECTOR PER CALTRANS 85-105 WITH STIMSONITE 88AB EPOXY.
- ⑪ 3' X 3' X 6" CLASS IV CONCRETE PAD. (EXTENT OF FULL WIDTH PARKWAY)
- ⑫ 6" BREAK OFF SPOOL.
- ⑬ J&R CONCRETE VALVE BOX AND LID, MODELS V1-R AND V1-RT. FLUSH WITH CONCRETE PAD. PLACED EVERY 1,000 FT PER INSPECTORS DIRECTION. PLACE EXCESS LOCATOR WIRE IN BOX.
- ⑭ LOCATING WIRE (PLACE EXCESS WIRE IN VALVE CAN).

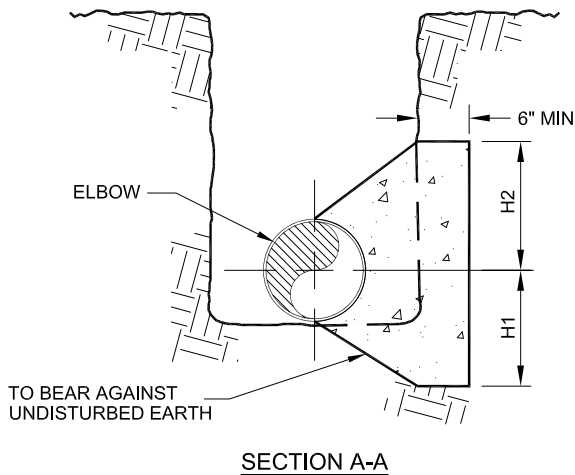
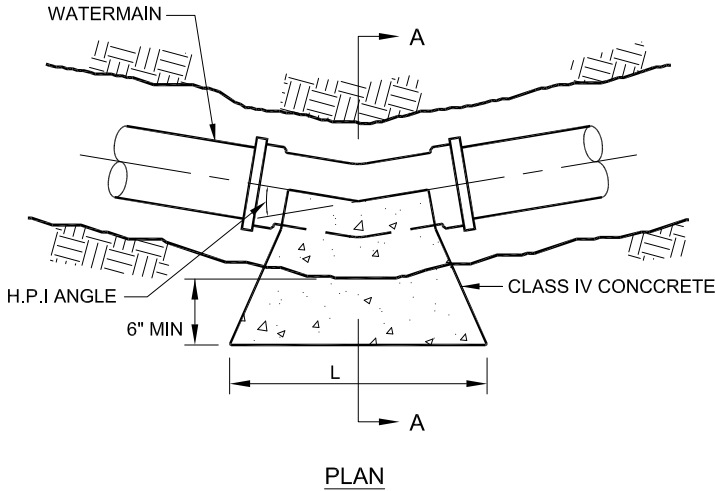
## NOTES:

1. BLEED VALVE ON CHECK VALVE MUST BE 2" ABOVE CONCRETE PAD.
2. TYP. LOCATION FOR HYDRANT IS 18" BEHIND CURB FACE OR 12" BEHIND SIDEWALK. IF THERE IS NO CURB OR SIDEWALK, LOCATE HYDRANT 24" BEHIND PROPERTY LINE. HYDRANT OR LATERAL CAN NOT BE PLACED IN BCR, DRIVEWAYS OR RAMPS.
3. IF 3' CLEAR IS NOT POSSIBLE BEHIND HYDRANT, PLACE HYDRANT BEHIND SIDEWALK IN PARKWAY
4. IF THERE IS NO CURB, EACH HYDRANT SHALL HAVE TWO GUARD POSTS PER DISTRICT STANDARD W-12.
5. 4" PUMPER OUTLET SHALL BE PLACED PERPENDICULAR TO CURB AND GUTTER, FACING THE STREET.
6. ALL ABOVE GROUND FLANGES SHALL HAVE 1/16" RING TYPE GASKETS.
7. WHEN APPROVED BY DISTRICT OR FOR EMERGENCY REPAIRS, USE OF HYDRANT GUARD HG2 OR CLOW LP619 IS ALLOWED.

REVISIONS		WEST VALLEY WATER DISTRICT	FIRE HYDRANT ASSEMBLY	DRAWING NUMBER
DATE	BY			
09-2019	DG	APPROVED: 		W-2
07-2025	DG			
SCALE: NONE		Director of Engineering	July 2025	



# HORIZONTAL THRUST BLOCK



PIPE DIA.	H1	H2	L	H.P.I. ANGLE
6" & LESS	1/2 O.D.	1/2 O.D.	2'-0"	≤11.25°
6" & LESS	6"	6"	4'-0"	≤22.50°
6" & LESS	9"	9"	4'-0"	≤45°
6" & LESS	12"	12"	4'-0"	≤67.50°
6" & LESS	1'-3"	1'-3"	4'-0"	≤90°
8"	1/2 O.D.	1/2 O.D.	2'-0"	≤11.25°
8"	8"	8"	4'-0"	≤22.50°
8"	1'-2"	1'-2"	4'-0"	≤45°
8"	1'-8"	1'-8"	4'-0"	≤67.50°
8"	2'-0"	2'-0"	4'-0"	≤90°
10"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
10"	10"	10"	4'-0"	≤22.50°
10"	1'-8"	1'-8"	4'-0"	≤45°
10"	2'-2"	2'-2"	4'-0"	≤67.50°
10"	2'-2"	2'-2"	6'-0"	≤90°
12"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
12"	12"	12"	4'-0"	≤22.50°
12"	2'-0"	2'-0"	4'-0"	≤45°
12"	2'-3"	2'-3"	4'-0"	≤67.50°
12"	2'-3"	2'-3"	6'-0"	≤90°
16"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
16"	1'-6"	1'-6"	4'-0"	≤22.50°
16"	2'-8"	2'-8"	6'-0"	≤45°
16"	2'-8"	2'-8"	8'-0"	≤67.50°
16"	2'-8"	2'-8"	10'-0"	≤90°
18"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
18"	1'-6"	1'-6"	5'-0"	≤22.50°
18"	3'-0"	3'-0"	8'-0"	≤45°
18"	3'-0"	3'-0"	10'-0"	≤67.50°
18"	3'-0"	3'-0"	12'-0"	≤90°
20"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
20"	2'-0"	2'-0"	5'-0"	≤22.50°
20"	3'-0"	3'-0"	9'-0"	≤45°
20"	3'-0"	3'-0"	11'-0"	≤67.50°
20"	3'-0"	3'-0"	13'-0"	≤90°
24"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
24"	2'-0"	2'-0"	5'-0"	≤22.50°
24"	3'-0"	3'-0"	10'-0"	≤45°
24"	3'-0"	3'-0"	16'-0"	≤67.50°
24"	3'-0"	3'-0"	18'-0"	≤90°
30"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
30"	3'-6"	3'-3"	8'-0"	≤22.50°
30"	3'-6"	3'-3"	12'-0"	≤45°
30"	3'-9"	3'-9"	18'-0"	≤67.50°
30"	3'-9"	3'-9"	21'-0"	≤90°
36"	1/2 O.D.	1/2 O.D.	4'-0"	≤11.25°
36"	3'-9"	3'-9"	8'-0"	≤22.50°
36"	3'-9"	3'-9"	14'-0"	≤45°
36"	3'-9"	3'-9"	20'-0"	≤67.50°
36"	4'-2"	4'-2"	22'-0"	≤90°

## REVISIONS

DATE	BY
09-2019	DG
07-2025	DG

WEST VALLEY WATER DISTRICT

APPROVED:

*Roddy Walker*

Director of Engineering

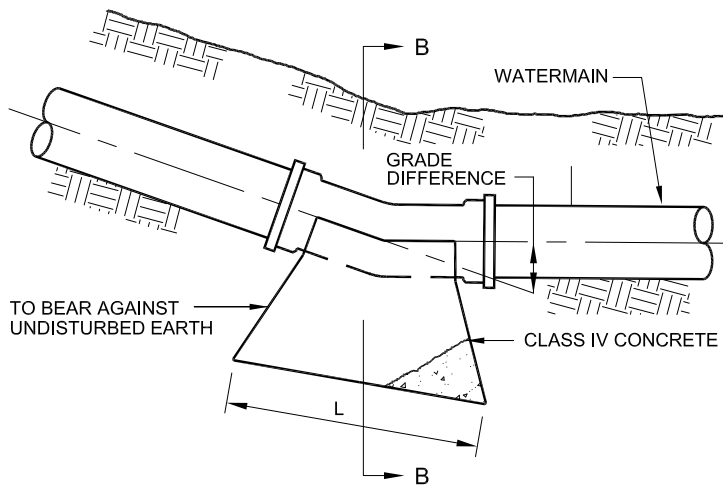
July 2025

HORIZONTAL THRUST BLOCK  
FOR PIPELINES, CLASS 200 PSI MAX

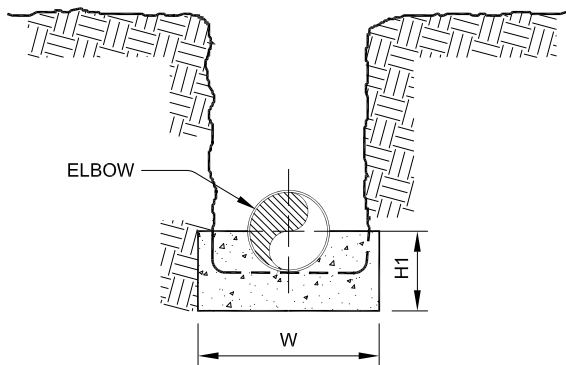
DRAWING NUMBER

W-3A

SCALE: NONE



ELEVATION



SECTION B-B

VERTICAL BEARER BLOCK

PIPE DIA.	W	H1	L	GRADE % DIFF.
8" & LESS	2'-6"	1'-0"	1'-6"	5 TO 15
8" & LESS	2'-6"	1'-0"	1'-6"	16 TO 25
8" & LESS	2'-6"	1'-0"	1'-6"	26 TO 35
8" & LESS	2'-6"	1'-0"	1'-6"	36 TO 45
8" & LESS	2'-6"	1'-0"	2'-0"	46 TO 55
10"	2'-6"	1'-0"	2'-0"	5 TO 15
10"	2'-6"	1'-0"	2'-0"	16 TO 25
10"	2'-6"	1'-0"	2'-0"	26 TO 35
10"	2'-6"	1'-0"	2'-0"	36 TO 45
10"	2'-6"	1'-0"	2'-0"	46 TO 55
12"	2'-6"	1'-3"	2'-0"	5 TO 15
12"	2'-6"	1'-3"	2'-0"	16 TO 25
12"	2'-6"	1'-3"	2'-0"	26 TO 35
12"	2'-6"	1'-3"	2'-0"	36 TO 45
12"	2'-6"	1'-3"	2'-6"	46 TO 55
16"	3'-0"	1'-6"	2'-0"	5 TO 15
16"	3'-0"	1'-6"	2'-0"	16 TO 25
16"	3'-0"	1'-6"	2'-0"	26 TO 35
16"	3'-0"	1'-6"	2'-0"	36 TO 45
16"	3'-0"	1'-6"	3'-0"	46 TO 55
18"	3'-0"	1'-6"	2'-0"	5 TO 15
18"	3'-0"	1'-6"	2'-0"	16 TO 25
18"	3'-0"	1'-6"	2'-6"	26 TO 35
18"	3'-0"	1'-6"	3'-0"	36 TO 45
18"	3'-0"	1'-6"	5'-0"	46 TO 55
20"	3'-6"	1'-6"	2'-0"	5 TO 15
20"	3'-6"	1'-6"	2'-0"	16 TO 25
20"	3'-6"	1'-6"	2'-6"	26 TO 35
20"	3'-6"	1'-6"	3'-0"	36 TO 45
20"	3'-6"	1'-6"	5'-0"	46 TO 55
24"	4'-0"	1'-8"	2'-0"	5 TO 15
24"	4'-0"	1'-8"	2'-6"	16 TO 25
24"	4'-0"	1'-8"	3'-0"	26 TO 35
24"	4'-0"	1'-8"	3'-6"	36 TO 45
24"	4'-0"	1'-8"	5'-0"	46 TO 55
30"	4'-6"	2'-0"	2'-0"	5 TO 15
30"	4'-6"	2'-0"	3'-0"	16 TO 25
30"	4'-6"	2'-0"	4'-0"	26 TO 35
30"	4'-6"	2'-0"	5'-0"	36 TO 45
30"	4'-6"	2'-0"	6'-6"	46 TO 55
36"	5'-6"	2'-0"	2'-0"	5 TO 15
36"	5'-6"	2'-0"	3'-6"	16 TO 25
36"	5'-6"	2'-0"	5'-0"	26 TO 35
36"	5'-6"	2'-0"	6'-6"	36 TO 45
36"	5'-6"	2'-0"	8'-0"	46 TO 55

REVISIONS	
DATE	BY
09-2019	DG
07-2025	DG
SCALE: NONE	

WEST VALLEY WATER DISTRICT

APPROVED:

*Roddy Walker*

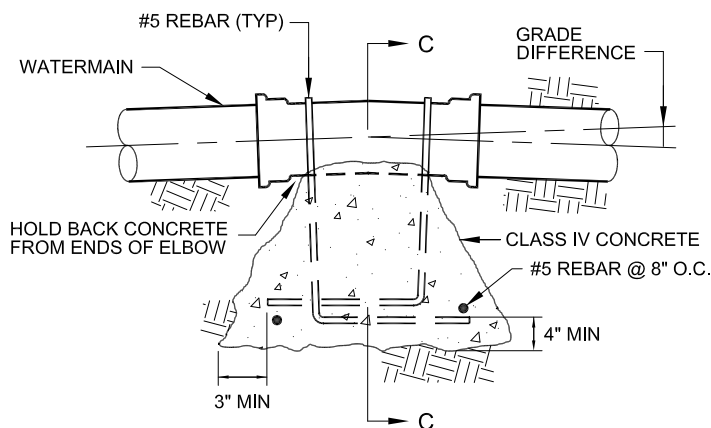
Director of Engineering

July 2025

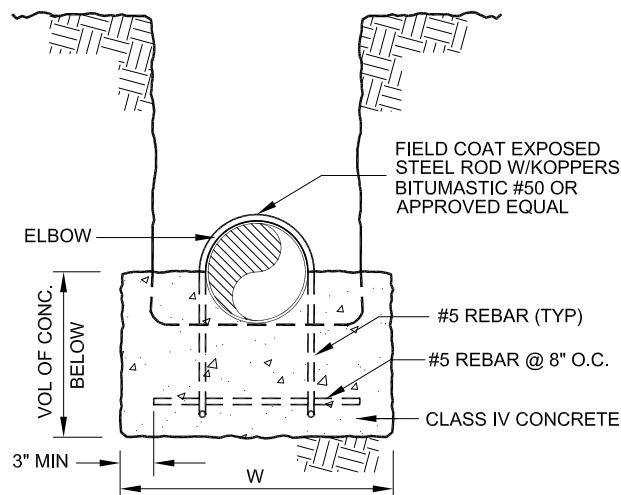
VERTICAL BEARER THRUST BLOCK  
FOR PIPELINES, CLASS 200 PSI MAX

DRAWING NUMBER

W-3B



SECTIONAL ELEVATION



SECTION C-C

# VERTICAL ANCHOR BLOCK

PIPE DIA.	W	VOLUME OF CONC (cu ft)	GRADE % DIFF.
6" & LESS	2'-6"	7.6	5 TO 15
6" & LESS	2'-6"	11.4	16 TO 25
6" & LESS	2'-6"	15.2	26 TO 35
6" & LESS	2'-6"	22.8	36 TO 45
6" & LESS	2'-6"	31.0	46 TO 55
8"	2'-6"	10.3	5 TO 15
8"	2'-6"	15.5	16 TO 25
8"	2'-6"	20.6	26 TO 35
8"	2'-6"	31.0	36 TO 45
8"	2'-6"	41.3	46 TO 55
10"	3'-0"	27.6	5 TO 15
10"	3'-0"	36.8	16 TO 25
10"	3'-0"	55.3	26 TO 35
10"	3'-0"	73.7	36 TO 45
10"	3'-0"	92.1	46 TO 55
12"	3'-6"	30.0	5 TO 15
12"	3'-6"	45.0	16 TO 25
12"	3'-6"	67.5	26 TO 35
12"	3'-6"	75.0	36 TO 45
12"	3'-6"	97.5	46 TO 55
16"	4'-0"	48.0	5 TO 15
16"	4'-0"	72.0	16 TO 25
16"	4'-0"	84.0	26 TO 35
16"	4'-0"	130.0	36 TO 45
16"	4'-0"	168.0	46 TO 55
18"	4'-0"	81.0	5 TO 15
18"	4'-0"	108.0	16 TO 25
18"	4'-0"	135.0	26 TO 35
18"	4'-0"	192.5	36 TO 45
18"	4'-0"	270.0	46 TO 55
20"	4'-3"	108.0	5 TO 15
20"	4'-3"	162.0	16 TO 25
20"	4'-3"	189.0	26 TO 35
20"	4'-3"	216.0	36 TO 45
20"	4'-3"	297.0	46 TO 55
24"	4'-6"	120.0	5 TO 15
24"	4'-6"	150.0	16 TO 25
24"	4'-6"	210.0	26 TO 35
24"	4'-6"	270.0	36 TO 45
24"	4'-6"	330.0	46 TO 55
30"	5'-0"	168.0	5 TO 15
30"	5'-0"	294.0	16 TO 25
30"	5'-0"	378.0	26 TO 35
30"	5'-0"	462.0	36 TO 45
30"	5'-0"	546.0	46 TO 55
36"	5'-6"	196.0	5 TO 15
36"	5'-6"	a	16 TO 25
36"	a	490.0	26 TO 35
36"	5'-6"	637.0	36 TO 45
36"	5'-6"	784.0	46 TO 55

REVISIONS	
DATE	BY
09-2019	DG
07-2025	DG
SCALE: NONE	

WEST VALLEY WATER DISTRICT

APPROVED:

*Roddy Walker*

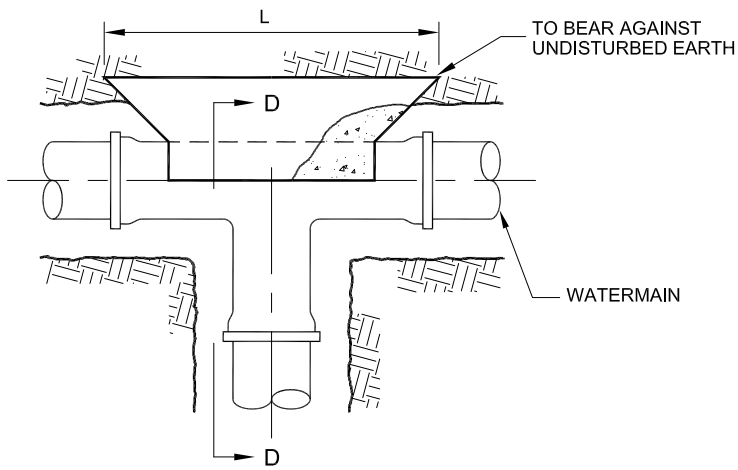
Director of Engineering

July 2025

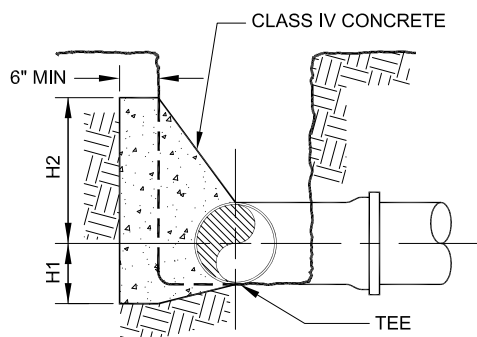
VERTICAL ANCHOR THRUST BLOCK  
FOR PIPELINES, CLASS 200 PSI MAX

DRAWING NUMBER

W-3C



PLAN

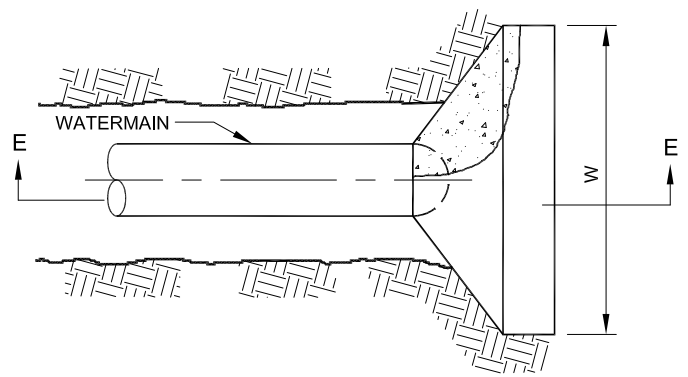


SECTION D-D

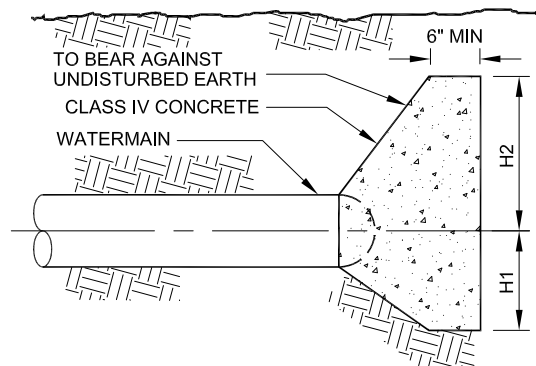
*PIPE DIA.	H1	H2	L
4"	1'-0"	1'-0"	3'-6"
6"	1'-0"	1'-0"	4'-0"
8"	1'-0"	2'-3"	4'-0"
10"	1'-0"	2'-6"	4'-0"
12"	1'-0"	3'-0"	5'-0"
16"	1'-4"	3'-0"	4'-0"
18"	1'-6"	3'-0"	4'-0"
20"	1'-8"	3'-6"	4'-0"
24"	2'-0"	4'-0"	5'-0"
30"	2'-6"	4'-6"	4'-0"
36"	3'-0"	5'-0"	4'-0"

\* USE OUTLET PIPE DIAMETER

TEE THRUST BLOCK



PLAN



SECTION E-E

PIPE DIA.	H1	H2	L
4"	1'-0"	1'-0"	3'-6"
6"	1'-0"	1'-0"	4'-0"
8"	1'-0"	2'-3"	4'-0"
10"	1'-0"	2'-6"	4'-0"
12"	1'-0"	3'-0"	5'-0"
16"	1'-4"	3'-0"	4'-0"
18"	1'-6"	3'-0"	4'-0"
20"	1'-8"	3'-6"	4'-0"
24"	2'-0"	4'-0"	5'-0"
30"	2'-6"	4'-6"	4'-0"
36"	3'-0"	5'-0"	4'-0"

END THRUST BLOCK

REVISIONS	
DATE	BY
09-2019	DG
07-2025	DG
SCALE: NONE	

WEST VALLEY WATER DISTRICT

APPROVED:

*Rody Walker*

Director of Engineering

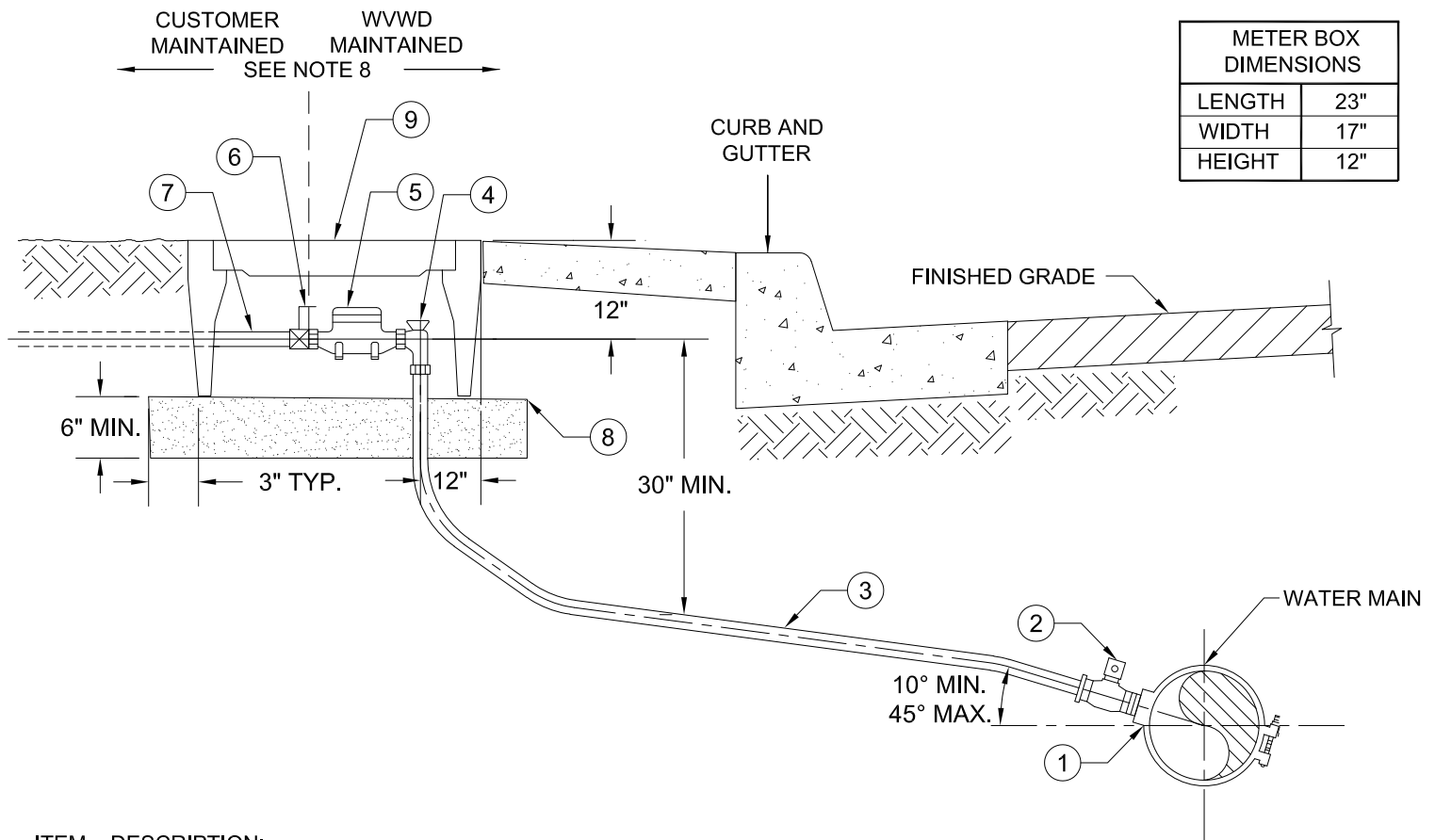
July 2025

TEE AND END THRUST BLOCKS  
FOR PIPELINES, CLASS 200 PSI MAX

DRAWING NUMBER

W-3D





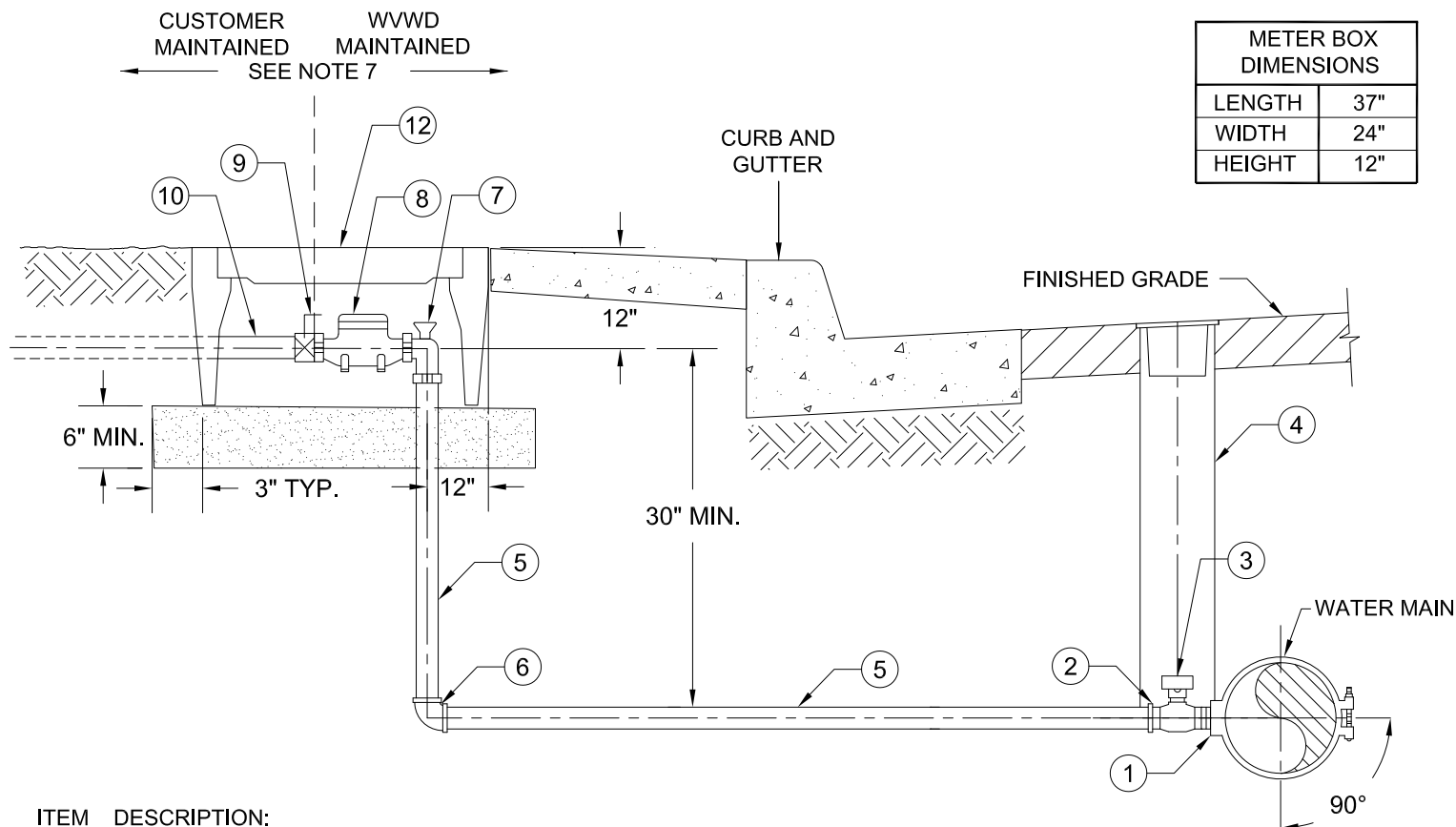
#### ITEM DESCRIPTION:

- ① STAINLESS STEEL DOUBLE STRAP SERVICE SADDLE WITH 1" I.P.T OUTLET. FORD FC202, MUELLER DR2S, ROMAC 202S, AND SMITH BLAIR 317. WHERE STEEL PIPE IS INSTALLED, USE TAPPING OUTLET PER DISTRICT STANDARD W-18.
- ② 1" CORPORATION STOP (I.P.T X P.J.). FORD B84-444-NL-R OR MUELLER P25028N-3 (OPERATING NUT NOT REQUIRED).
- ③ 1" COPPER WATER SERVICE, TYPE "K", SOFT TEMPER, PER ASTM B-88.
- ④ 1" ANGLE METER VALVE (P.J X METER SWIVEL NUT). FORD BA43-444WR-NL OR MUELLER P24258N-3. (1" X 3/4" BUSHING MAY BE INSTALLED FOR 3/4" METER INSTALLATION).
- ⑤ 1" OR 3/4" METER (SUPPLIED BY DISTRICT).
- ⑥ 1" OR 3/4" CUSTOMER BALL VALVE WITH HANDLE (SUPPLIED BY DISTRICT). FORD B13-444WR-NL OR MUELLER B24351-3. (1" X 3/4" BUSHING MAY BE INSTALLED FOR 3/4" METER INSTALLATION).
- ⑦ 1" OR 3/4" THREADED PIPE (MALE). INSTALLED BY PRIVATE CONTRACTOR PER NOTE 8.
- ⑧ IMPORTED SAND BASE OR 1" ROCK.
- ⑨ METER BOX (SUPPLIED BY DISTRICT). OLDCASTLE PRECAST FL12 BOX.

#### NOTES:

1. CHISEL 1" HIGH "W" ON TOP OF CURB DIRECTLY OVER WATER SERVICE LATERAL.
2. ALL SERVICE VALVES SHALL BE 360° TURN (LESS STOP) FROM WATER MAIN TO CUSTOMER VALVE.
3. ANGLE VALVE SHALL BE LOCATED 12" BEHIND CURB IN A PARKWAY OR 12" BEHIND SIDEWALK.
4. METER BOXES SHALL NOT BE LOCATED IN DRIVEWAY APPROACHES OR DRIVE AISLES.
5. ALL SERVICE LATERALS SHALL EXTEND 90° PERPENDICULAR WITH THE WATER MAIN IN THE STREET.
6. SPLICING OF SERVICES WILL NOT BE ALLOWED.
7. WATER LATERAL SHALL NOT EXTEND OVER 3" ABOVE THE TOP OF MAIN AT POINT OF CONNECTION.
8. CONNECTION TO OR INSTALLATION OF CUSTOMER PIPING SHALL BE DONE BY PRIVATE CONTRACTOR, UNLESS SPECIFIED BY DISTRICT. CUSTOMER IS RESPONSIBLE FOR ALL PIPING, FITTINGS, BACKFLOWS AND APPURTENANCES AFTER CUSTOMER SHUT OFF VALVE.
9. WHERE STATIC WATER PRESSURES EXCEED 80PSI, AN APPROVED PRESSURE REGULATOR SHALL BE REQUIRED.
10. TAPPING SADDLES MUST BE 24" APART FROM EACH OTHER ON THE SAME PIPE WITH METER BOXES SPACED 6" APART.
11. A SLEEVE MAY BE REQUIRED ON SERVICE RUNS IN EXCESS OF 15FT, AS DETERMINED BY THE DISTRICT.
12. WHEN APPROVED BY THE DISTRICT, THE FOLLOWING (NON-360) CORPORATION STOP MAY BE USED: FORD FB1100-4-NL.

REVISIONS		WEST VALLEY WATER DISTRICT	WATER SERVICE DETAIL 3/4" & 1" METER	DRAWING NUMBER  W-4
DATE	BY			
09-2019	DG	APPROVED:  <i>Roddy Walker</i> Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		



METER BOX DIMENSIONS	
LENGTH	37"
WIDTH	24"
HEIGHT	12"

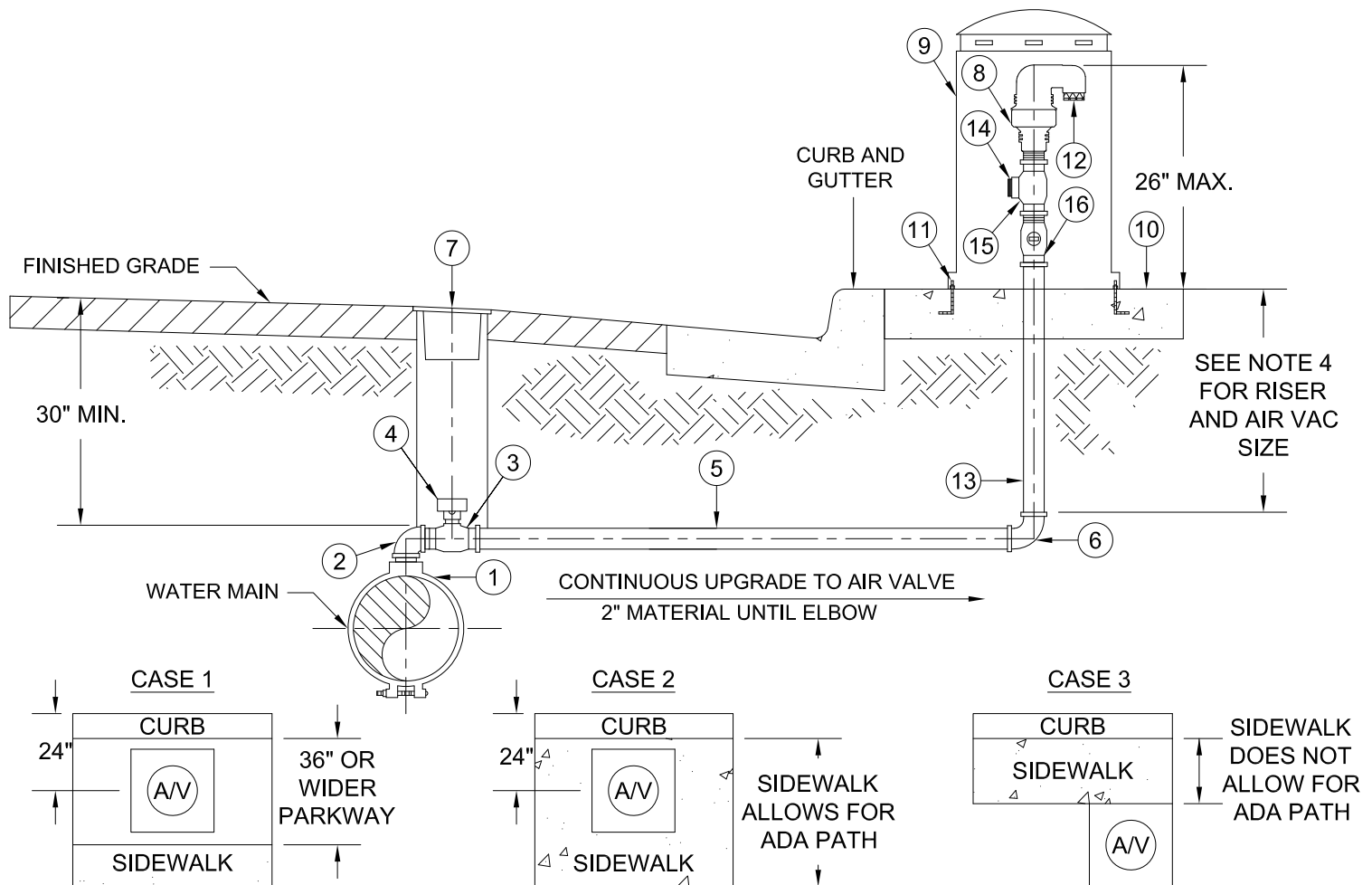
#### ITEM DESCRIPTION:

- ① STAINLESS STEEL DOUBLE STRAP SERVICE SADDLE WITH 2" I.P.T OUTLET. FORD FC202, MUELLER DR2S, ROMAC 202S, AND SMITH BLAIR 317. WHERE STEEL PIPE IS INSTALLED, USE TAPPING OUTLET PER DISTRICT STANDARD W-18.
- ② 2" CORPORATION STOP (I.P.T X P.J.). FORD B84-777-NL-R OR MUELLER P25122N-3.
- ③ 2" SQUARE OPERATING NUT ADAPTOR. FORD QT67 OR MUELLER B20299.
- ④ VALVE RISER AND COVER PER DISTRICT STANDARD W-11 (WITH REDWOOD BLOCKS FRAMING OPERATING NUT).
- ⑤ 2" COPPER WATER SERVICE, TYPE "L", HARD DRAWN TEMPER, PER ASTM B-88.
- ⑥ 2" SOLDERED ELBOW OR 90° COMPRESSION ELBOW (AS DIRECTED BY THE DISTRICT).
- ⑦ 2" ANGLE METER VALVE (P.J X METER FLANGE). FORD BFA43-777WR-NL OR MUELLER P24276N-3.
- ⑧ 2" OR 1-1/2" METER (SUPPLIED BY DISTRICT).
- ⑨ 2" CUSTOMER BALL VALVE WITH HANDLE (SUPPLIED BY DISTRICT). FORD B13-777WR-NL OR MUELLER B24337N-3.
- ⑩ 2" THREADED PIPE (MALE). INSTALLED BY PRIVATE CONTRACTOR PER NOTE 7.
- ⑪ IMPORTED SAND BASE OR 1" ROCK.
- ⑫ METER BOX (SUPPLIED BY DISTRICT). OLDCASTLE PRECAST FL36T BOX.

#### NOTES:

1. CHISEL 1" HIGH "W" ON TOP OF CURB DIRECTLY OVER WATER SERVICE LATERAL.
2. ALL SERVICE VALVES SHALL BE 360° TURN (LESS STOP) FROM WATER MAIN TO CUSTOMER VALVE.
3. ANGLE VALVE SHALL BE LOCATED 12" BEHIND CURB IN A PARKWAY OR 12" BEHIND SIDEWALK.
4. METER BOXES SHALL NOT BE LOCATED IN DRIVEWAY APPROACHES OR DRIVE AISLES.
5. ALL SERVICE LATERALS SHALL EXTEND 90° PERPENDICULAR WITH THE WATER MAIN IN THE STREET.
6. SPLICING OF SERVICES WILL NOT BE ALLOWED.
7. CONNECTION TO OR INSTALLATION OF CUSTOMER PIPING SHALL BE DONE BY PRIVATE CONTRACTOR, UNLESS SPECIFIED BY DISTRICT. CUSTOMER IS RESPONSIBLE FOR ALL PIPING, FITTINGS, BACKFLOWS AND APPURTENANCES AFTER CUSTOMER SHUT OFF VALVE.
8. WHERE STATIC WATER PRESSURES EXCEED 80PSI, AN APPROVED PRESSURE REGULATOR SHALL BE REQUIRED.
9. TAPPING SADDLES MUST BE 24" APART FROM EACH OTHER ON THE SAME PIPE WITH METER BOXES SPACED 6" APART.
11. A SLEEVE MAY BE REQUIRED ON SERVICE RUNS IN EXCESS OF 15FT, AS DETERMINED BY THE DISTRICT.

REVISIONS		WEST VALLEY WATER DISTRICT	WATER SERVICE DETAIL 1-1/2" & 2" METER	DRAWING NUMBER W-5
DATE	BY			
09-2019	DG	APPROVED:  Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		



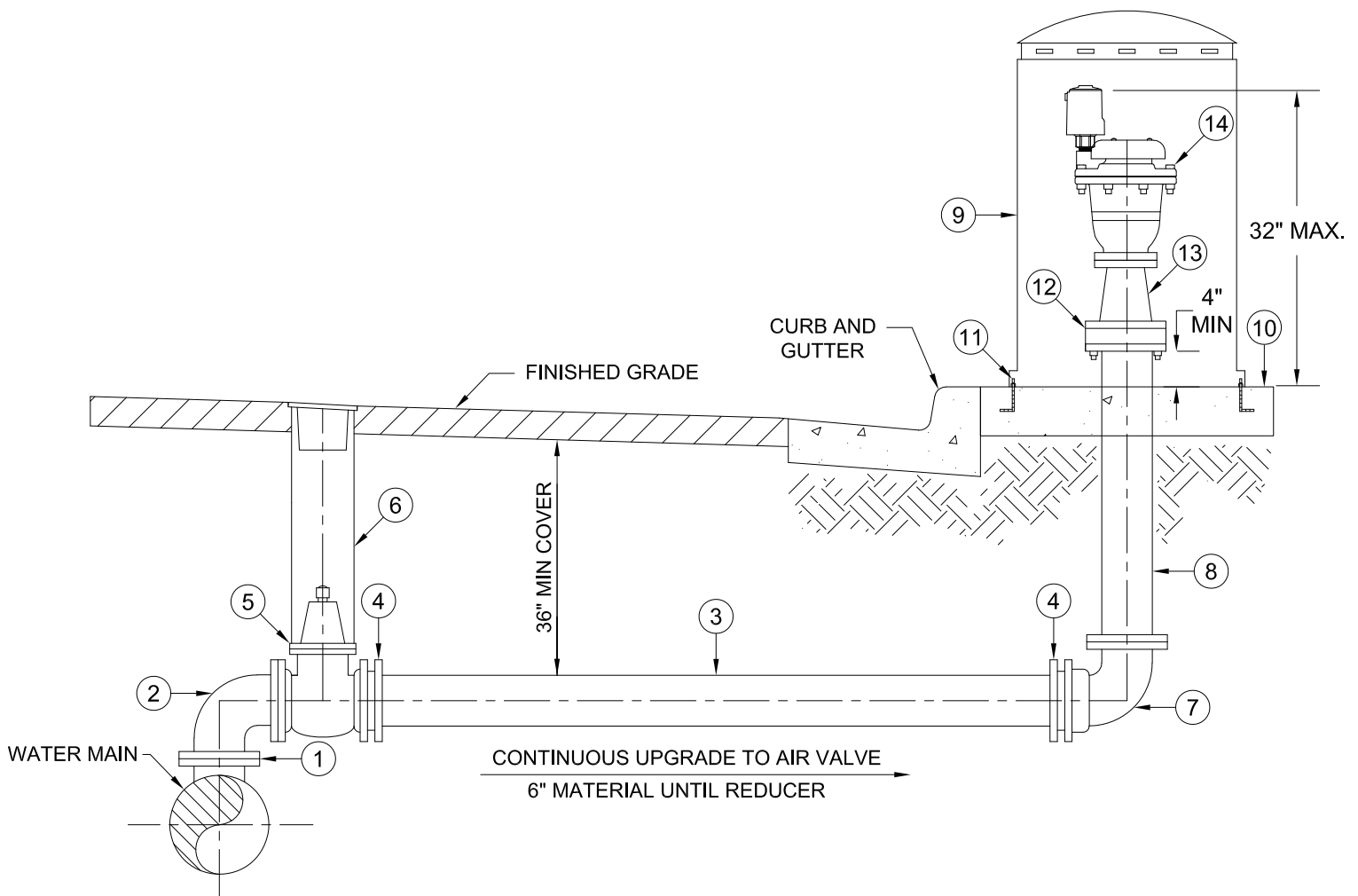
**ITEM DESCRIPTION:**

- ① PIPE SIZE, SERVICE SADDLE PER DISTRICT STANDARD W-5.
- ② 2" 90° ELBOW (M.I.P X F.I.P).
- ③ 2" CURB BALL VALVE PER DISTRICT STANDARD W-5.
- ④ 2" BRASS OPERATING NUT PER DISTRICT STANDARD W-5.
- ⑤ 2" TYPE "L", HARD DRAWN TEMPER, PER ASTM B-88.
- ⑥ 2" x 1" 90° REDUCING ELBOW OR 2" 90° ELBOW (P.J X F.I.P).
- ⑦ VALVE RISER AND COVER PER DISTRICT STANDARD W-11.
- ⑧ 1" A.R.I D-040-C OR 2" D-060-C COMBINATION AIR VALVE.
- ⑨ PIPELINE PRODUCTS, VCAS-1830 POLYETHYLENE ENCLOSURE (SANDSTONE COLOR).
- ⑩ 3' X 3' X 6" CLASS IV CONCRETE PAD. TOP OF PAD SHALL MATCH TOP OF CURB OR SIDEWALK.
- ⑪ 3 - 1/2" CONCRETE ANCHORS WITH STAINLESS FENDER WASHERS.
- ⑫ AIR VENT/EXHAUST SCREEN.
- ⑬ 1" OR 2" THREADED BRASS PIPE.
- ⑭ 1" OR 2" THREADED BRASS PLUG.
- ⑮ 1" OR 2" BRASS TEE (F.I.P).
- ⑯ 1" OR 2" BALL VALVE (F.I.P X M.I.P). FORD FB1700-NL SERIES OR MUELLER B-20285N.

**NOTES:**

1. AIR VALVES INSTALLED IN AREAS WITHOUT CURBS SHALL HAVE GUARD POSTS PER DISTRICT STANDARD W-12.
2. ASSEMBLY SHALL BE LOCATED IN EASEMENTS AND RIGHT-OF-WAYS AND 7' FROM BCR OR DRIVEWAY APPROACHES.
3. PIPE THREADS SHALL BE CLEAN AND SHARP AND SEALED WITH AN APPROVED JOINT COMPOUND.
4. 8" AND SMALLER PIPE REQUIRES - 1" AIR VALVE. 12" PIPE REQUIRES - 2" AIR VALVE. RISER SIZE TO MATCH AIR VALVE.

REVISIONS		WEST VALLEY WATER DISTRICT	1" AND 2" AIR VALVE INSTALLATION DETAIL	DRAWING NUMBER  W-6A
DATE	BY			
09-2019	DG	APPROVED:  <i>Rodney Walker</i> Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		



**ITEM DESCRIPTION:**

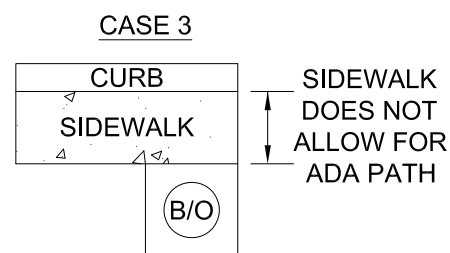
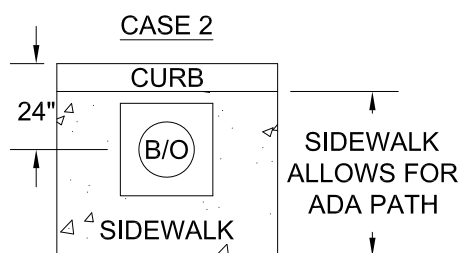
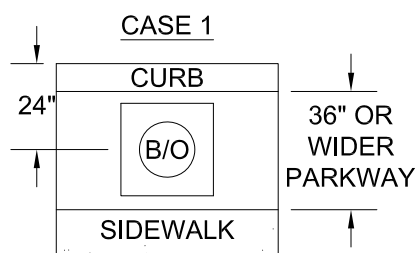
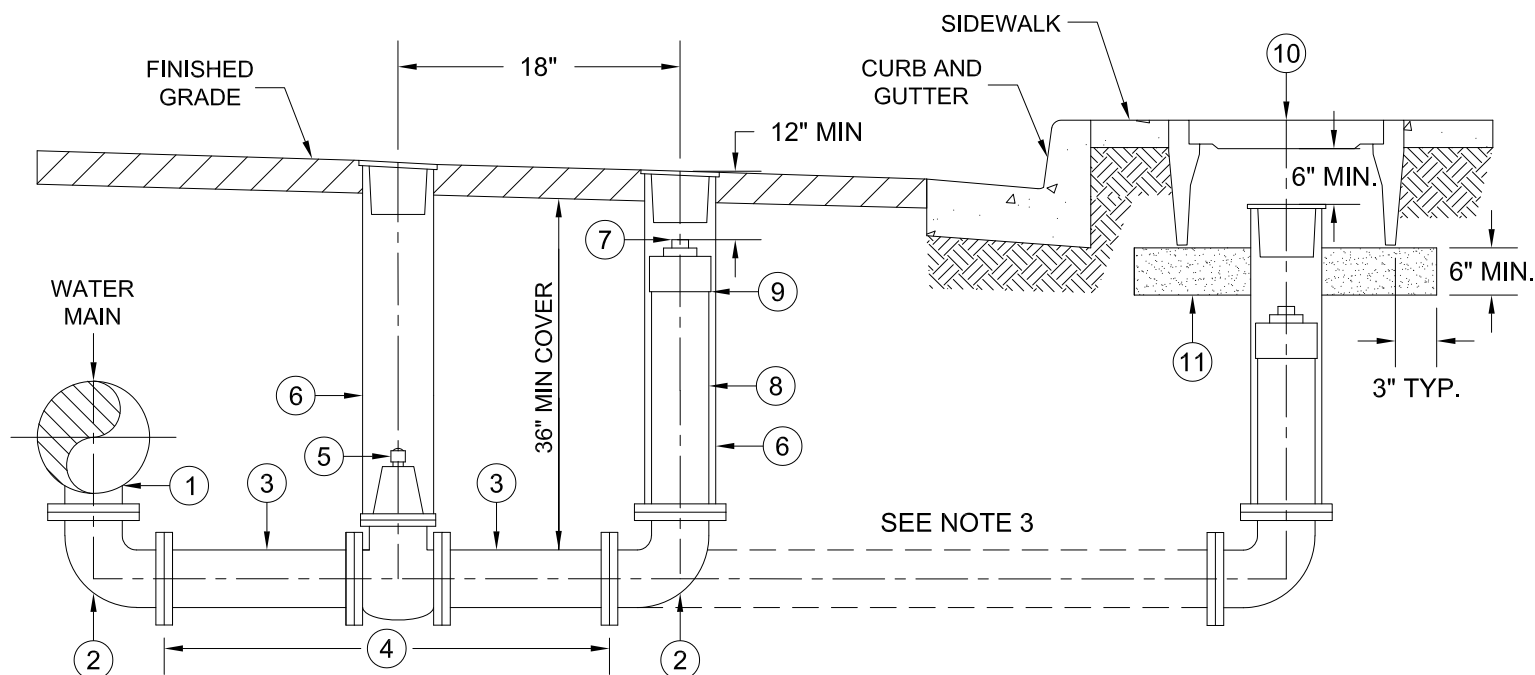
- ① D.I OR CMLC TEE, MAIN SIZE X 6" FLG.
- ② 6" D.I OR CMLC 90° ELBOW, FLG.
- ③ 6" D.I PIPE PRESSURE CLASS 350 OR CMLC PRESSURE CLASS 150, 18" MIN.
- ④ RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
- ⑤ 6" RESILIENT-SEATED GATE VALVE (FLG X M.J.), PER DISTRICT STANDARD W-11. OR FLG VALVE WITH M.J ADAPTER.
- ⑥ VALVE RISER AND COVER. PER DISTRICT STANDARD W-11
- ⑦ 6" D.I 90° ELBOW, (FLG X M.J.).
- ⑧ 6" D.I. or SCH. 40 STEEL SPOOL, FLG. ORDER TO FIT.
- ⑨ PIPELINE PRODUCTS, VCAS-2436 POLYETHYLENE ENCLOSURE (SANDSTONE COLOR).
- ⑩ 3' X 3' X 6" CLASS IV CONCRETE PAD. TOP OF PAD SHALL MATCH TOP OF CURB OR SIDEWALK.
- ⑪ 3 - 1/2" CONCRETE ANCHORS WITH STAINLESS FENDER WASHERS.
- ⑫ HYDRANT GUARD HG2 - 8 HOLE PATTERN.
- ⑬ 6" X 4" D.I REDUCER. (WHEN 4" AIR VALVE IS REQUIRED).
- ⑭ 4" OR 6" A.R.I D-060-C AIR VALVE (SCREEN COVER MODEL).

**NOTES:**

1. AIR VALVES INSTALLED IN AREAS WITHOUT CURBS SHALL HAVE GUARD POSTS PER DISTRICT STANDARD W-12.
2. ASSEMBLY SHALL BE LOCATED IN EASEMENTS AND RIGHT-OF-WAYS AND 7' FROM BCR OR DRIVEWAY APPROACHES.
3. SEE DISTRICT STANDARD W-6A FOR APPROVED LOCATIONS.
4. ALL ABOVE GROUND FLANGES SHALL HAVE 1/16" RING TYPE GASKETS.
5. 14" TO 24" PIPE REQUIRES - 4" AIR VAC. PIPE LARGER THAN 24" REQUIRES - 6" AIR VAC.

REVISIONS		WEST VALLEY WATER DISTRICT	4" AND 6" AIR VALVE INSTALLATION DETAIL	DRAWING NUMBER  W-6B
DATE	BY			
09-2019	DG	APPROVED:  <i>Roddy Walker</i> Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		






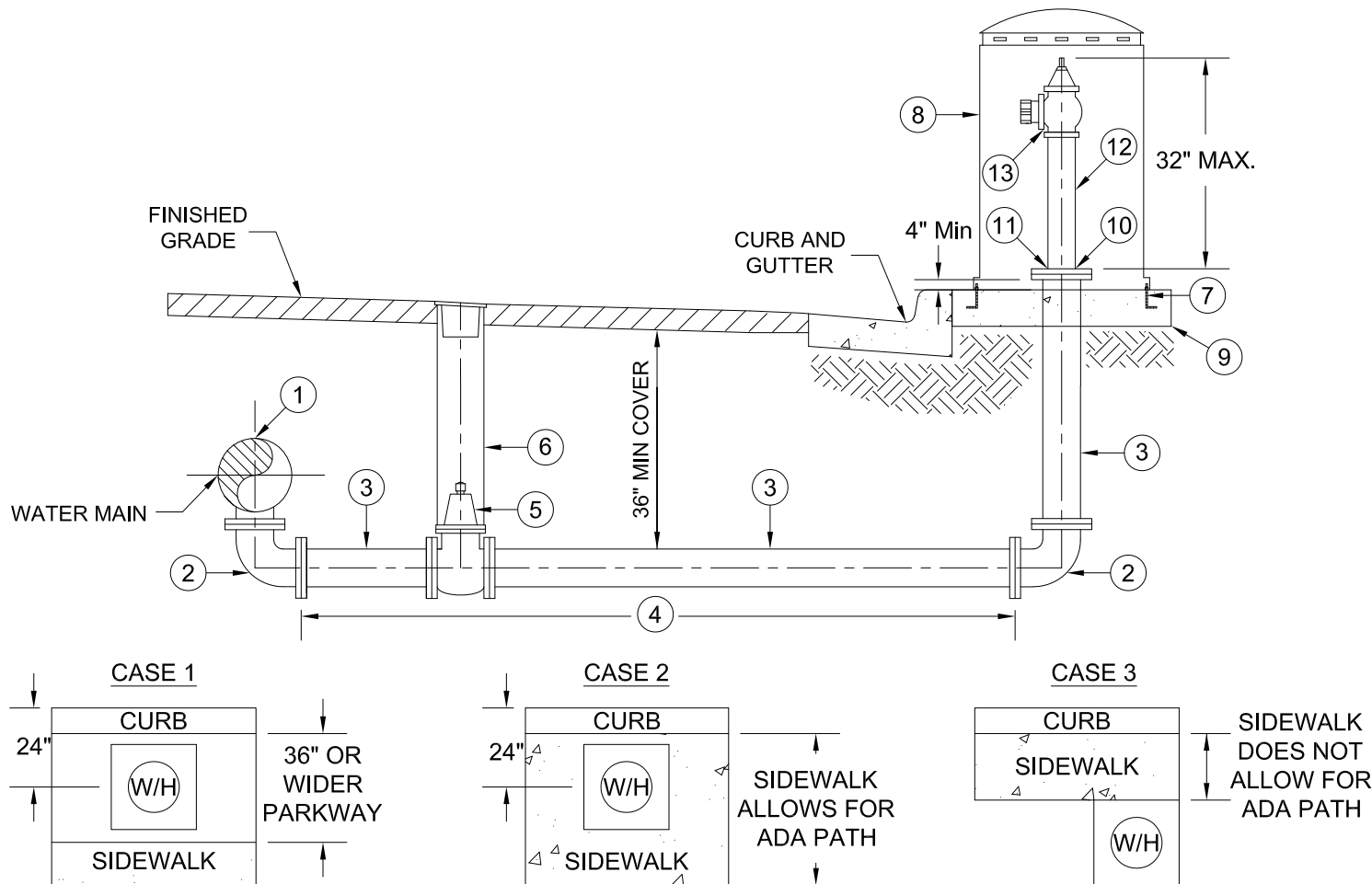
**ITEM DESCRIPTION:**

- ① D.I OR CMLC TEE, MAIN SIZE X 4" OR 6" FLG.
- ② 4" OR 6" SCH. 40 STEEL - 90° ELBOW (FLG. X FLG.). NO THREADED ADAPTORS ALLOWED.
- ③ 4" OR 6" D.I PIPE PRESSURE CLASS 350 OR CMLC PRESSURE CLASS 150, 18" MIN (FLG. X FLG.).
- ④ 8 MILL POLYWRAP AND LOCATING WIRE PER DISTRICT SPECIFICATIONS.
- ⑤ 4" OR 6" RESILIENT-SEATED GATE VALVE (FLG. X FLG.) PER DISTRICT STANDARD W-11. VALVE TO REMAIN IN CLOSED POSITION AFTER INSTALLATION.
- ⑥ VALVE RISER AND COVER. PER DISTRICT STANDARD W-11
- ⑦ MALE PVC PLUG, PER NSF 61.
- ⑧ 4" OR 6" SCH 40. STEEL PIPE, 18" MIN (FLG. X THREADED).
- ⑨ 4" OR 6" GALVANIZED IRON PIPE COUPLING WITH METAL THREADS. COUPLER SHALL BE WELDED TO RISER.
- ⑩ OLDCASTLE PRECAST HEAVY WALL 1416-18 WITH FLUSH SOLID LID.
- ⑪ IMPORTED SAND BASE.

**NOTES:**

1. 4" BLOW-OFF REQUIRED FOR 6" - 12" WATER MAIN AND 6" BLOW-OFF REQUIRED FOR 12" AND LARGER WATER MAIN.
2. SIZE OF PIPE, VALVE, AND FITTINGS SHALL CONFORM TO THE SIZE OF THE BLOW-OFF REQUIRED.
3. ALTERNATE PLACEMENT OF BLOW-OFF SHALL BE IN ACCORDANCE WITH CASE 1-3 AND APPROVED BY THE DISTRICT.

REVISIONS		WEST VALLEY WATER DISTRICT	4" AND 6" BLOW-OFF ASSEMBLY	DRAWING NUMBER  W-7A
DATE	BY			
09-2019	DG			
07-2025	DG			
SCALE: NONE		APPROVED:  Director of Engineering		
		July 2025		



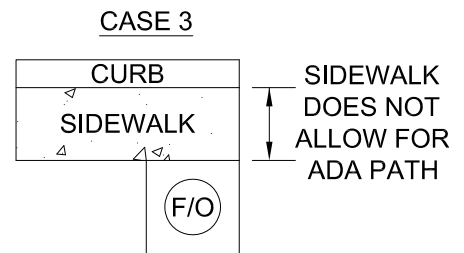
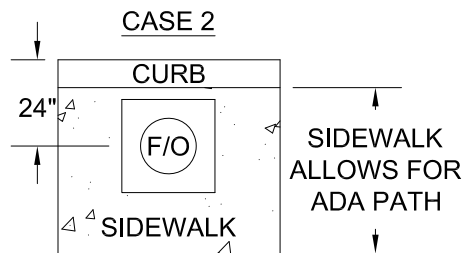
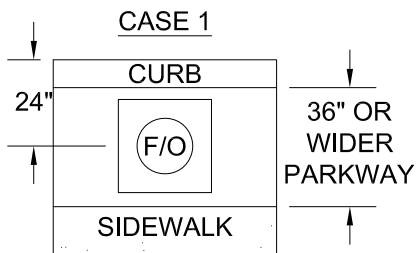
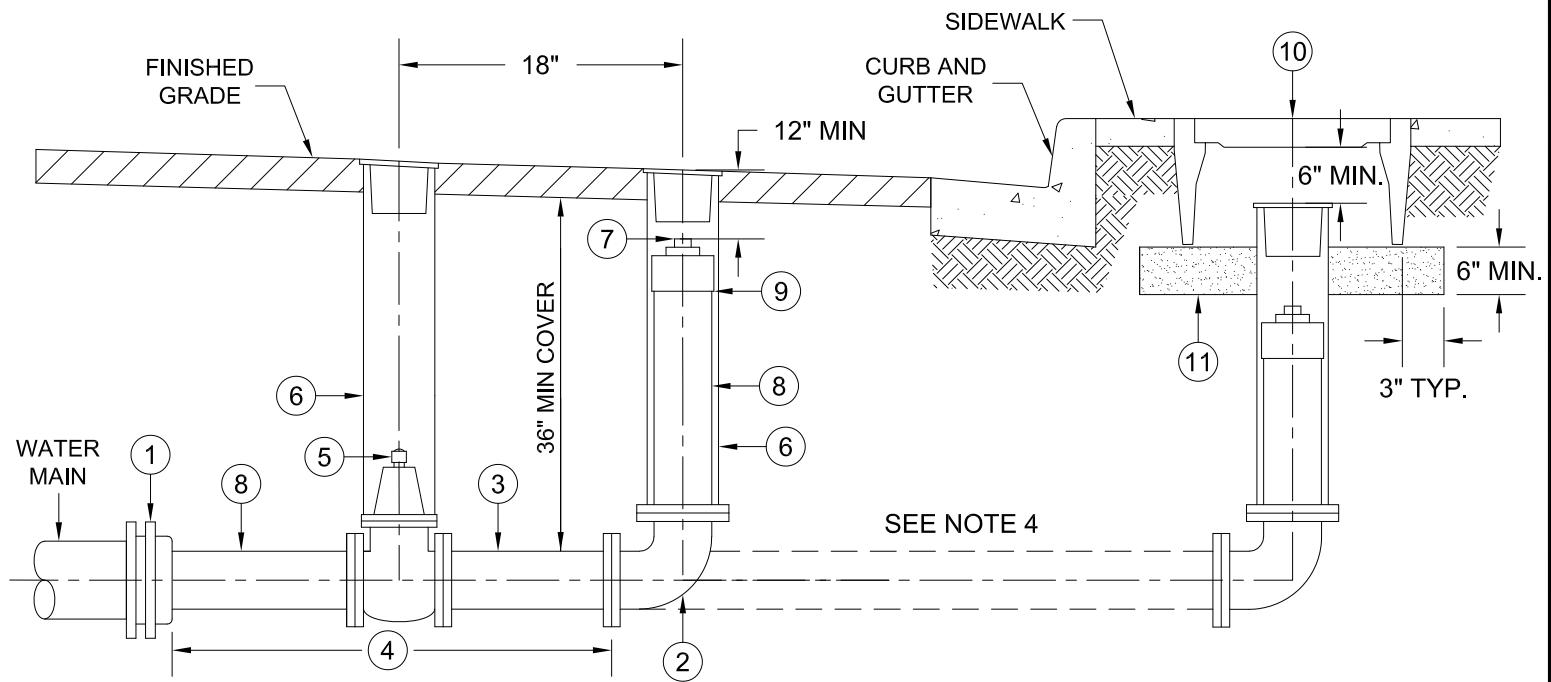
#### ITEM DESCRIPTION:

- ① D.I OR CMLC TEE, MAIN SIZE X 4" OR 6" FLG.
- ② 4" OR 6" D.I PIPE PRESSURE CLASS 350 OR CMLC PRESSURE CLASS 150 - 90° ELBOW (FLG. X FLG.).
- ③ 4" OR 6" D.I PIPE PRESSURE CLASS 350 OR CMLC PRESSURE CLASS 150, 18" MIN (FLG. X FLG.).
- ④ 8 MILL POLYWRAP AND LOCATING WIRE PER DISTRICT SPECIFICATIONS.
- ⑤ 4" OR 6" RESILIENT-SEATED GATE VALVE (FLG. X FLG.) PER DISTRICT STANDARD W-11. VALVE TO REMAIN IN CLOSED POSITION AFTER INSTALLATION.
- ⑥ VALVE RISER AND COVER. PER DISTRICT STANDARD W-11
- ⑦ 3 - 1/2" CONCRETE ANCHORS WITH STAINLESS FENDER WASHERS.
- ⑧ PIPELINE PRODUCTS, VCAS-2436 POLYETHYLENE ENCLOSURE (SANDSTONE COLOR).
- ⑨ 3' X 3' X 6" CLASS IV CONCRETE PAD.
- ⑩ 4" OR 6" COMPANION FLANGE WITH 4" THREADED OUTLET OR 4" SCH. 40 STEEL PIPE (FLG X THREADED).
- ⑪ 3/4" HEX HEAD BREAK OFF BOLTS, ZINC PLATED WITH 1/16" RING TYPE GASKET.
- ⑫ 4" SCH. 40 STEEL PIPE, 18" MIN (FLG X THREADED).
- ⑬ 4" X 2-1/2" JONES WHARF HEAD (J-344HP) WITH CAP AND CHAIN. SEE NOTES 3 THROUGH 7.

#### NOTES:

1. 4" BLOW-OFF REQUIRED FOR 6" - 12" WATER MAIN AND 6" BLOW-OFF REQUIRED FOR 12" AND LARGER WATER MAIN.
2. SIZE OF PIPE, VALVE, AND FITTINGS SHALL CONFORM TO THE SIZE OF THE BLOW-OFF REQUIRED.
3. WHARF HEAD ASSEMBLIES SHALL ONLY BE INSTALLED IN AREAS THAT ARE UNIMPROVED WITHOUT CURB, GUTTER, SIDEWALK. AS APPROVED BY THE DISTRICT.
4. USE CASE 1 - 3 WHEN LOCATION IS NOT SPECIFIED ON PLAN OR IN FIELD.
5. A WHARF HEAD SHALL NOT BE USED IN PLACE OF A FIRE HYDRANT FOR FIRE SUPPRESSION REQUIREMENTS.
6. IF THERE IS NO CURB, EACH WHARF HEAD ASSEMBLY SHALL HAVE TWO GUARD POSTS PER DISTRICT STANDARD W-12.

REVISIONS		WEST VALLEY WATER DISTRICT	4" AND 6" BLOW-OFF ASSEMBLY	DRAWING NUMBER  W-7B
DATE	BY			
09-2019	DG	APPROVED:  <i>Rodney Walker</i> Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		




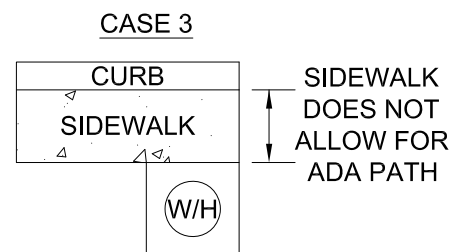
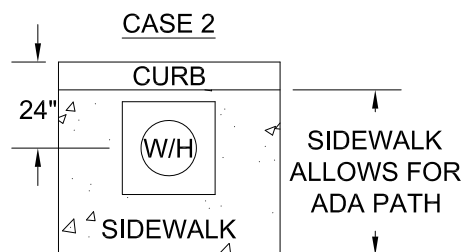
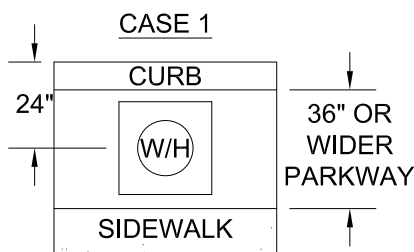
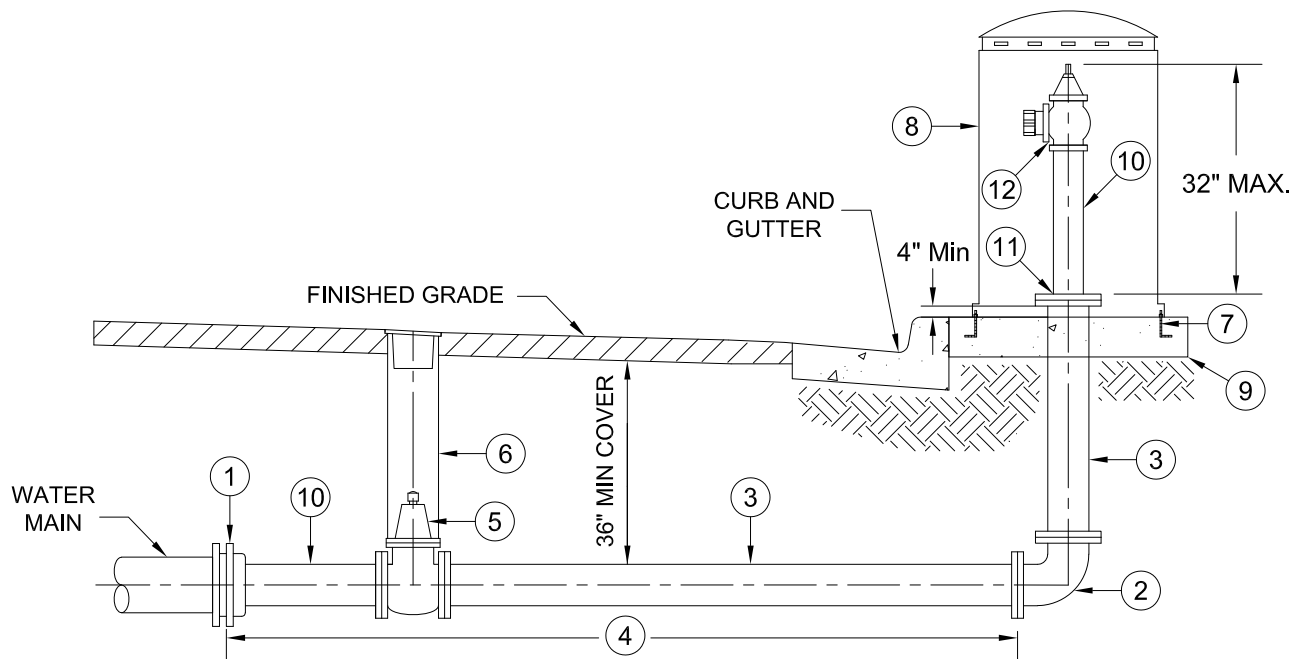
**ITEM DESCRIPTION:**

- ① D.I RESTRAINED M.J CAP OR FLANGED CAP WITH MAIN SIZE X 2" OR 4" THREADED OUTLET OR FLANGED REDUCER.
- ② 2" OR 4" D.I PIPE PRESSURE CLASS 350 OR CMLC PRESSURE CLASS 150 - 90° ELBOW (FLG. X FLG.).
- ③ 2" OR 4" D.I PIPE PRESSURE CLASS 350 OR CMLC PRESSURE CLASS 150E, 18" MIN (FLG. X FLG.).
- ④ 8 MILL POLYWRAP AND LOCATING WIRE PER DISTRICT SPECIFICATIONS.
- ⑤ 2" OR 4" RESILIENT-SEATED GATE VALVE (FLG. X FLG.), PER DISTRICT STANDARD W-11. VALVE TO REMAIN IN CLOSED POSITION AFTER INSTALLATION.
- ⑥ VALVE RISER AND COVER. PER DISTRICT STANDARD W-11
- ⑦ MALE PVC PLUG, PER NSF 61.
- ⑧ 2" OR 4" SCH 40. STEEL PIPE, 18" MIN (FLG. X THREADED) OR (FLG. X FLG.).
- ⑨ 2" OR 4" GALVANIZED IRON PIPE COUPLING WITH METAL THREADS. COUPLER SHALL BE WELDED TO RISER.
- ⑩ OLDCASTLE PRECAST HEAVY WALL 1416-18 WITH FLUSH SOLID LID.
- ⑪ IMPORTED SAND BASE.

**NOTES:**

1. 2" FLUSH-OUT REQUIRED FOR 6" AND SMALLER WATER MAIN.
2. 4" FLUSH-OUT REQUIRED FOR 8" AND LARGER WATER MAIN.
3. SIZE OF PIPE, VALVE, AND FITTINGS SHALL CONFORM TO THE SIZE OF THE FLUSH-OUT REQUIRED.
4. ALTERNATE PLACEMENT OF FLUSH-OUT SHALL BE IN ACCORDANCE WITH CASE 1-3 AND APPROVED BY THE DISTRICT.

REVISIONS		WEST VALLEY WATER DISTRICT	2" & 4" DEAD-END FLUSH-OUT	DRAWING NUMBER	
DATE	BY			APPROVED:  Director of Engineering	W-8A
09-2019	DG				
07-2025	DG				
SCALE: NONE		July 2025			



**ITEM DESCRIPTION:**

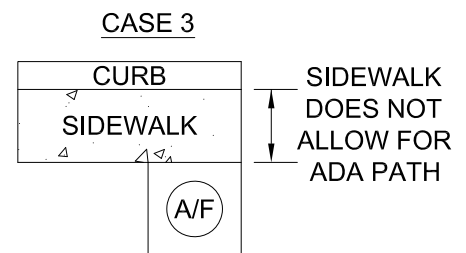
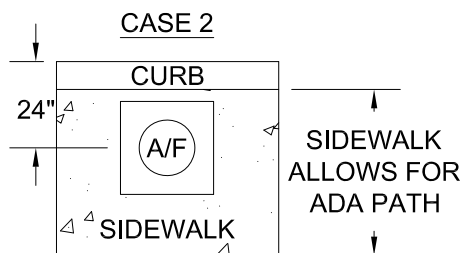
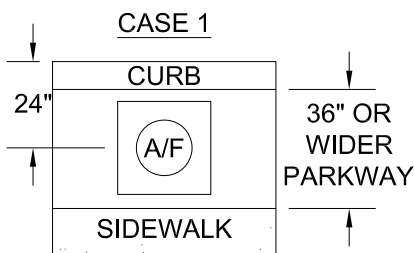
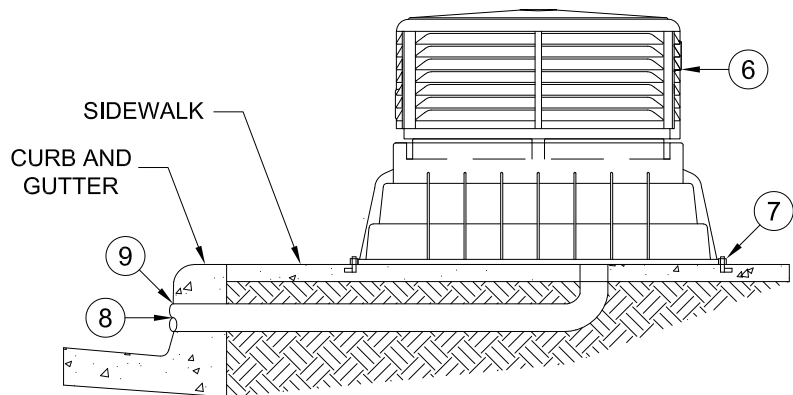
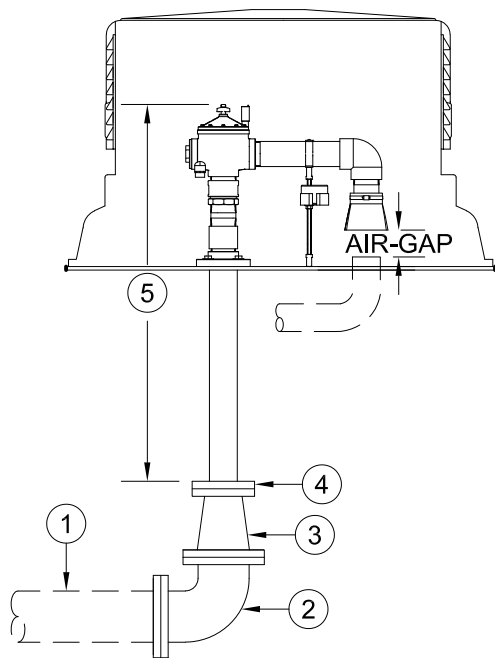
- ① D.I RESTRAINED M.J CAP OR FLANGED CAP WITH MAIN SIZE X 4" THREADED OUTLET OR FLANGED REDUCER.
- ② 4" D.I PIPE PRESSURE CLASS 350 OR CMLC PRESSURE CLASS 150 - 90° ELBOW (FLG. X FLG.).
- ③ 4" D.I PIPE PRESSURE CLASS 350 OR CMLC PRESSURE CLASS 150, 18" MIN (FLG. X FLG.).
- ④ 8 MILL POLYWRAP AND LOCATING WIRE PER DISTRICT SPECIFICATIONS.
- ⑤ 4" RESILIENT-SEATED GATE VALVE (FLG. X FLG.), PER DISTRICT STANDARD W-11. VALVE TO REMAIN IN CLOSED POSITION AFTER INSTALLATION.
- ⑥ VALVE RISER AND COVER. PER DISTRICT STANDARD W-11
- ⑦ 3 - 1/2" CONCRETE ANCHORS WITH STAINLESS FENDER WASHERS.
- ⑧ PIPELINE PRODUCTS, VCAS-2436 POLYETHYLENE ENCLOSURE (SANDSTONE COLOR).
- ⑨ 3' X 3' X 6" CLASS IV CONCRETE PAD.
- ⑩ 4" SCH 40. STEEL PIPE, 18" MIN (FLG. X THREADED).
- ⑪ 3/4" HEX HEAD BREAK OFF BOLTS, ZINC PLATED WITH 1/16" RING TYPE GASKET.
- ⑫ 4" X 2-1/2" JONES WHARF HEAD (J-344HP) WITH CAP AND CHAIN. SEE NOTES 3 THROUGH 7.

**NOTES:**

1. 4" FLUSH-OUT REQUIRED FOR 8" AND LARGER WATER MAIN.
2. SIZE OF PIPE, VALVE, AND FITTINGS SHALL CONFORM TO THE SIZE OF THE FLUSH-OUT REQUIRED.
3. WHARF HEAD ASSEMBLIES SHALL ONLY BE INSTALLED ON 4" FLUSH-OUTS WHEN APPROVED BY THE DISTRICT.
4. USE CASE 1 - 3 WHEN LOCATION IS NOT SPECIFIED ON PLAN OR IN FIELD.
5. A WHARF HEAD SHALL NOT BE USED IN PLACE OF A FIRE HYDRANT FOR FIRE SUPPRESSION REQUIREMENTS.
6. WHARF HEAD ASSEMBLIES SHALL BE PAINTED SAFETY YELLOW PER DISTRICT SPECIFICATIONS.
7. IF THERE IS NO CURB, EACH WHARF HEAD ASSEMBLY SHALL HAVE TWO GUARD POSTS PER DISTRICT STANDARD W-12.

REVISIONS		WEST VALLEY WATER DISTRICT	4" DEAD-END FLUSH-OUT	DRAWING NUMBER
DATE	BY			
09-2019	DG	APPROVED:  Director of Engineering		W-8B
07-2025	DG			
SCALE: NONE		July 2025		





**ITEM DESCRIPTION:**

- ① SEE DISTRICT STANDARD W-8A/B FOR LATERAL INSTALLATION.
- ② 2" OR 4" D.I PIPE PRESSURE CLASS 350 OR CMLC PRESSURE CLASS 150 - 90° ELBOW (FLG. X FLG.).
- ③ 4" X 3" D.I OR SCH. 40 STEEL - REDUCER, FLG WHEN INSTALLING 3" FLUSH VALVE.
- ④ 3" DUCTILE IRON COMPANION FLANGE WITH THREADED OUTLET.
- ⑤ KUPFERLE FOUNDRY AUTOMATIC FLUSHING ASSEMBLY. ECLIPSE MODEL 9800WC FOR 2" AND 9800WC-3 FOR 3".
- ⑥ KUPFERLE FOUNDRY COPOSITE UTILITY BOX AND LID.
- ⑦ 2 - 1/2" CONCRETE ANCHORS WITH STAINLESS FENDER WASHERS.
- ⑧ SCH. 80 PVC PIPE. 3" DIA, MAX.
- ⑨ CURB CORE PER CITY OR COUNTY SPECIFICATIONS.

**NOTES:**

1. 3" AUTOMATIC FLUSH VALVE REQUIRED FOR 8" AND LARGER WATER MAIN.
2. 1" AND 2" AUTOMATIC FLUSH VALVE SHALL BE INSTALLED ON 6" AND SMALLER WATER MAIN.
3. SIZE OF PIPE, VALVE, AND FITTINGS FOR LATERAL SHALL CONFORM TO THE SIZE OF THE FLUSH-OUT REQUIRED.
4. AUTOMATIC FLUSHING VALVE TO BE INSTALLED AT DEAD-ENDS AND CUL-DE-SACS WHEN SPECIFIED BY THE DISTRICT.
5. AUTOMATIC FLUSHING VALVE SHALL BE INSTALLED IN FLOW LINE OF NEAREST STORM DRAIN CATCH BASIN.
6. USE CASE 1 - 3 WHEN LOCATION IS NOT SPECIFIED ON PLAN OR IN FIELD.
7. AIR-GAP SHALL BE DOUBLE THE DIAMETER OF THE DISCHARGE PIPE.
8. ORDER THE KUPFERLE FOUNDRY AUTOMATIC FLUSHING ASSEMBLY AS ENTIRE UNIT FROM THREADED PIPE TO DUCKBILL.

**REVISIONS**

DATE	BY
09-2019	DG
07-2025	DG

**WEST VALLEY WATER DISTRICT**

APPROVED:

*Rody Wolter*

SCALE: NONE

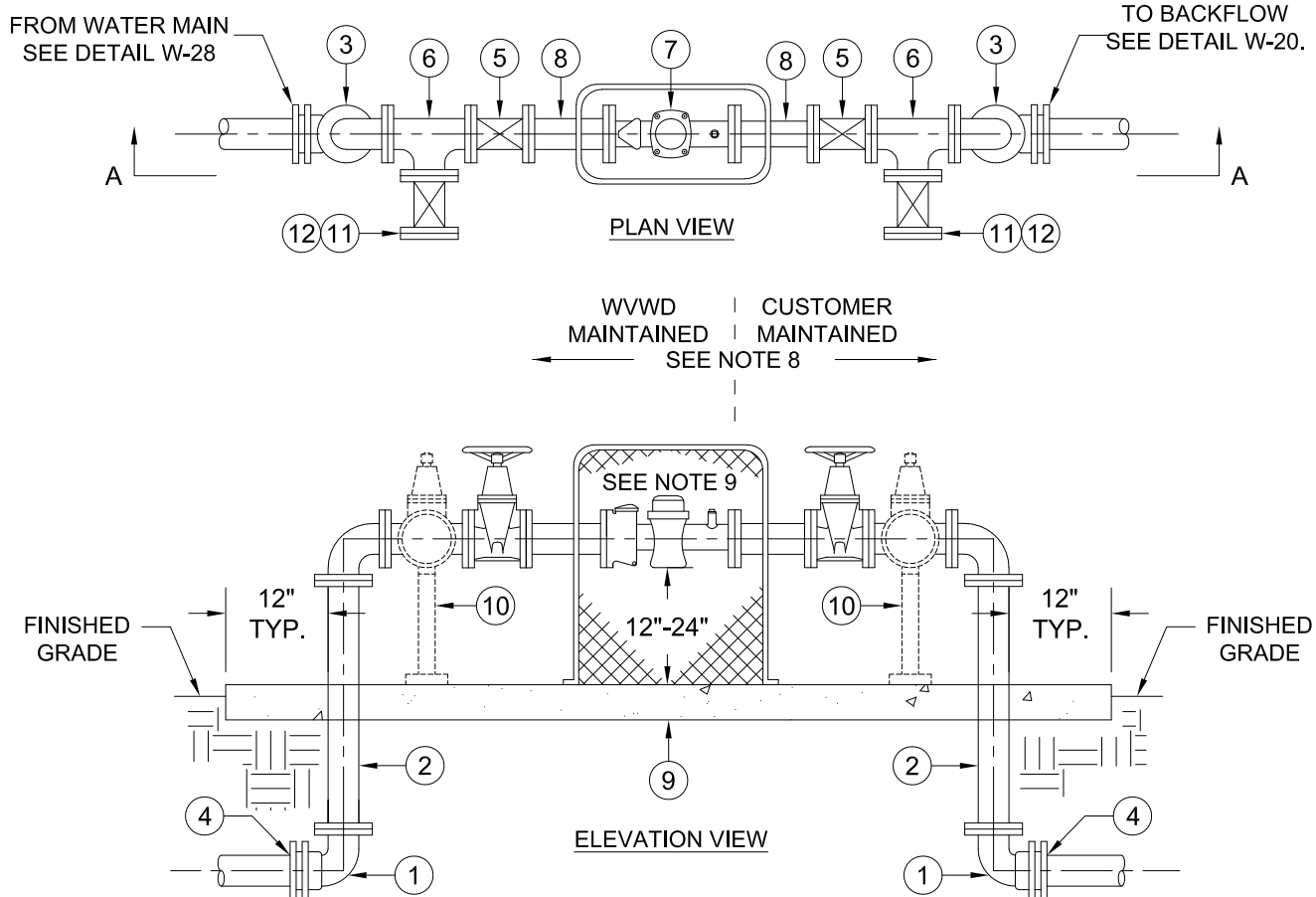
Director of Engineering

July 2025

**AUTOMATIC  
DEAD-END FLUSH-OUT**

**DRAWING NUMBER**

**W-8C**



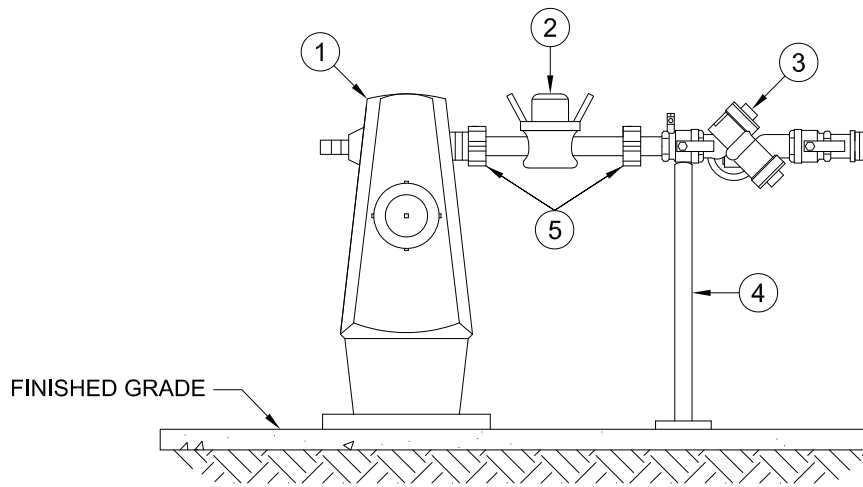
#### ITEM DESCRIPTION:

- ① D.I OR CMLC - 90° ELBOW (FLG. X M.J.).
- ② D.I PIPE PRESSURE CLASS 350 OR CMLC PRESSURE CLASS 150, FLG. ORDER TO FIT.
- ③ D.I OR SCH. 40 STEEL - 90° ELBOW, FLG.
- ④ RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
- ⑤ RESILIENT-SEATED GATE VALVE WITH HAND WHEEL AND NRS, FLG.
- ⑥ D.I OR SCH. 40 STEEL TEE, FLG.
- ⑦ COMPOUND OR TURBINE METER TO BE FURNISHED BY DISTRICT.
- ⑧ D.I OR SCH. 40 STEEL - SPOOL, FLG. 12" LENGTH. INSTALL UPSTREAM/DOWNSTREAM OF VALVES. WHEN 3" METER IS USED, INSTALL 4" X 3" D.I OR SCH. 40 STEEL - REDUCER, FLG IN PLACE OF SPOOLS.
- ⑨ 4" THICK CLASS IV CONCRETE PAD.
- ⑩ ADJUSTABLE PIPE SADDLE SUPPORT.
- ⑪ D.I BLIND FLANGE.
- ⑫ RESILIENT-SEATED GATE VALVE WITHOUT HAND WHEEL. KEEP VALVE IN CLOSED POSITION.

#### NOTES:

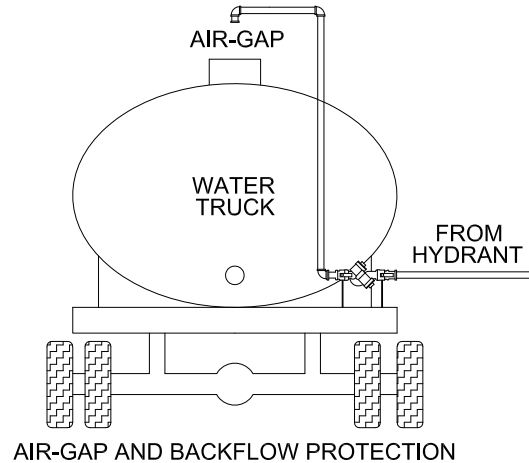
1. DIAMETER OF PIPING, FITTINGS AND VALVES, BELOW AND ABOVE GROUND MUST MATCH METER SIZE.
2. PAINT METER ASSEMBLY AND ENCLOSURE HUNTER GREEN PER DISTRICT SPECIFICATIONS.
3. 24" MINIMUM CLEARANCE REQUIRED AROUND METER ASSEMBLY.
4. METER ASSEMBLY SHALL BE INSTALLED ABOVE GROUND AND PARALLEL TO PROPERTY LINE.
5. METER ASSEMBLY SHALL BE INSTALLED AWAY FROM SIDEWALK AND NOT OBSTRUCT THE PATH OF TRAVEL.
6. METER ASSEMBLY SHALL BE INSTALLED WITHIN RIGHT-OF-WAY OR WITHIN AN EASEMENT DEDICATED TO WVWD.
7. ALL ABOVE GROUND FLANGES SHALL HAVE 1/16" RING TYPE GASKETS.
8. CONNECTION TO OR INSTALLATION OF CUSTOMER PIPING SHALL BE DONE BY PRIVATE CONTRACTOR, UNLESS SPECIFIED BY DISTRICT. CUSTOMER IS RESPONSIBLE FOR ALL PIPING, FITTINGS, BACKFLOWS AND APPURTENANCES AFTER METER.
9. WHEN SPECIFIED BY THE DISTRICT, METER ASSEMBLY SHALL BE ENCLOSED WITH CLAM SHELL TYPE ENCLOSURE AS MANUFACTURED BY ALL-SPEC OR GUARD SHACK.

REVISIONS		WEST VALLEY WATER DISTRICT	WATER SERVICE DETAIL 3" & LARGER METERS	DRAWING NUMBER  W-9
DATE	BY			
09-2019	DG	APPROVED:  <i>Randy Walker</i>		
07-2025	DG			
SCALE: NONE		Director of Engineering	July 2025	



**ITEM DESCRIPTION:**

- ① DISTRICT HYDRANT WITH 4" AND 2-1/2" OUTLETS.
- ② 4" OR 2-1/2" CONSTRUCTION METER WITH HYDRANT THREAD OUTLET (PROVIDED BY DISTRICT).
- ③ 4" OR 2-1/2" RP BACKFLOW DEVICE WITH HYDRANT THREAD OUTLET (PROVIDED BY DISTRICT IF AVAILABLE).
- ④ PIPE SUPPORT (PROVIDED BY DISTRICT IF AVAILABLE).
- ⑤ CLAM SHELL LOCKING DEVICE OR LOCKING CHAIN (PROVIDED BY DISTRICT).



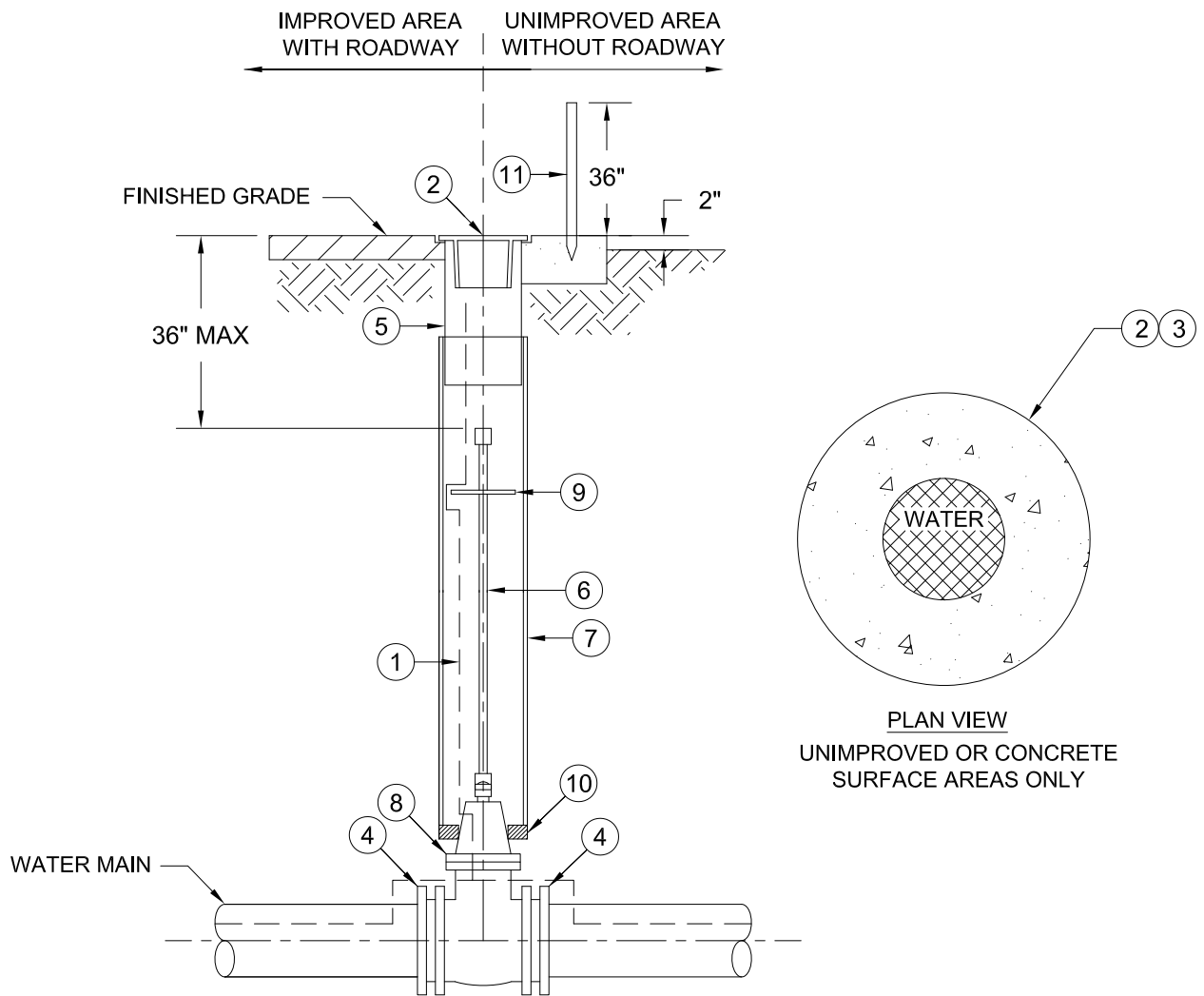
**WATER TRUCKS AND TANKS**

WATER TRUCKS AND TANKS WILL NOT BE ALLOWED TO OPERATE UNLESS THEY ARE FILLED FROM THE TOP WITH AN APPROPRIATE AIR-GAP SEPARATION AND PROPER PIPING MATERIALS AS APPROVED BY THE DISTRICT. THE AIR-GAP SEPARATION SHALL BE A MINIMUM OF TWICE (2X) THE DIAMETER OF THE WATER SUPPLY LINE ABOVE THE WATER TANK. WATER TANKS AND TRUCKS MAY ALSO BE REQUIRED TO HAVE A FLOW CONTROL VALVE OR ADDITIONAL BACKFLOW PROTECTION AT THE INLET CONNECTION AS REQUIRED BY THE DISTRICT.

**NOTES:**

- 1. INSTALLATION AND RELOCATION OF CONSTRUCTION METER SHALL BE DONE BY DISTRICT STAFF.
- 2. ANY CONNECTION TO A DISTRICT HYDRANT WITHOUT A METER IS NOT PERMITTED.
- 3. APPLICANTS WHO PROVIDE THEIR OWN BACKFLOW SHALL HAVE THE DISTRICT TEST AND CERTIFY THE DEVICE PRIOR TO BEGINNING WATER SERVICE. USE OF PRIVATE BACKFLOWS MUST BE APPROVED BY THE DISTRICT.
- 4. APPLICANT IS RESPONSIBLE FOR LOSS OR DAMAGE TO HYDRANT, METER, BACKFLOW AND/OR FITTINGS REGARDLESS OF CAUSE.

REVISIONS		WEST VALLEY WATER DISTRICT	TEMPORARY HYDRANT METER ASSEMBLY	DRAWING NUMBER  W-10
DATE	BY			
09-2019	DG	APPROVED:  <i>Rodney Walker</i> Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		



**ITEM DESCRIPTION:**

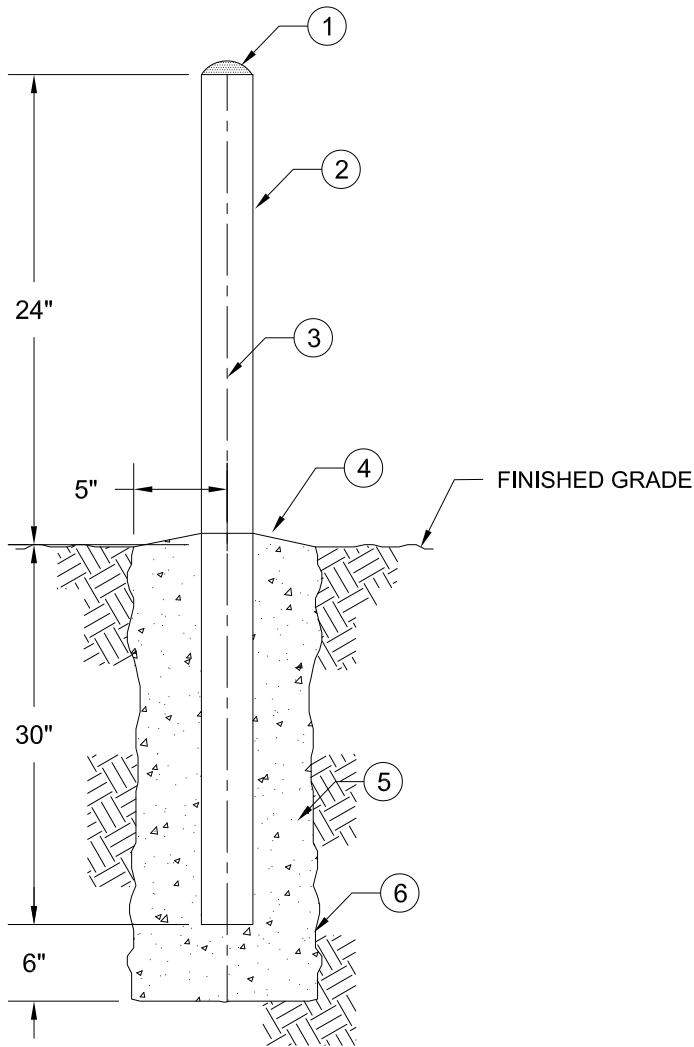
- ① LOCATING WIRE.
- ② 8" CAST IRON COVER MARKED "WATER". ALHAMBRA FOUNDRY NO-29608, OR APPROVED EQUAL.
- ③ 6" THICK X 20" DIAMETER CLASS IV CONCRETE COLLAR.
- ④ RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
- ⑤ 8" O.D. X 12 GA, GALVANIZED STEEL SLIP CAN. TOP SECTION SLIP CAN LENGTH IS 18" OR AS REQUIRED.
- ⑥ 1" DIAMETER BLACK PIPE ASTM-120 VALVE EXTENSION. WITH 2" SQ. OPERATING NUT.
- ⑦ 8" C900 OR SDR 35 PVC PIPE.
- ⑧ GATE VALVE OR BUTTERFLY VALVE PER AWWA C509 AND C504. TYPE, OUTLET, AND SIZE OF VALVE PER PLAN AND DISTRICT SPECIFICATIONS.
- ⑨ 6" X 1/4" STEEL DISK. TACK WELDED TO EXTENSION.
- ⑩ 2" X 4" X 1" REDWOOD BLOCK. (DO NOT REST ON VALVE).
- ⑪ BLUE "CARSONITE" MARKER PER DISTRICT STANDARD W-32.

**NOTES:**

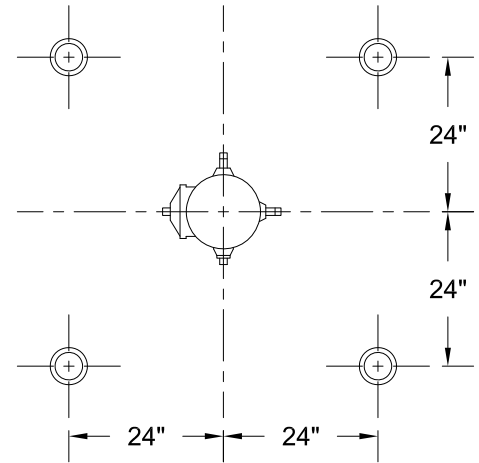
1. VALVE MARKER SHALL BE INSTALLED AS DIRECTED BY DISTRICT INSPECTOR IN UNIMPROVED AREAS.
2. VALVE EXTENSION REQUIRED WHERE DEPTH OF OPERATING NUT EXCEEDS 5-FEET.
3. FINAL RIM ELEVATION TO BE 1/8" TO 1/4" BELOW FINAL STREET GRADE.
4. VALVES SMALLER THAN 12" OR TAPPING VALVES SHALL BE GATE VALVES. VALVES 12" AND LARGER SHALL BE BUTTERFLY VALVES CLASS 150B.
5. BUTTERFLY VALVES SHALL BE INSTALLED WITH THE OPERATING NUT ORIENTED TO THE CLOSEST CURB OR IN A DIRECTION WHICH MINIMIZES TRAFFIC LANE CLOSURE.

REVISIONS		WEST VALLEY WATER DISTRICT	VALVE AND VALVE BOX INSTALLATION DETAIL	DRAWING NUMBER  W-11
DATE	BY			
09-2019	DG	APPROVED:  Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		





ELEVATION VIEW



PLAN VIEW

ITEM DESCRIPTION:

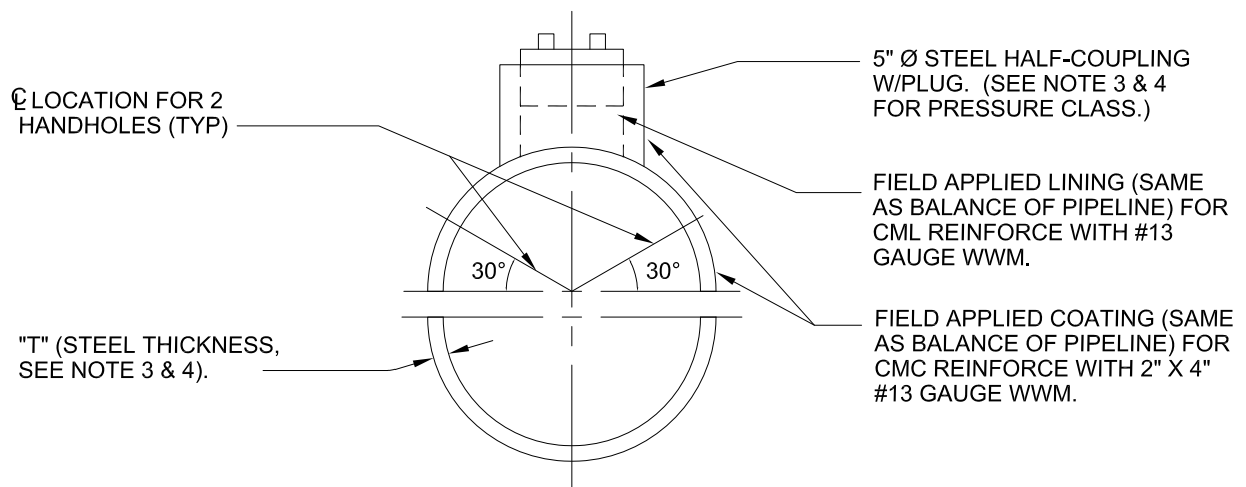
- ① ROUND OVER CONCRETE TO FORM CAP.
- ② 4" X 5'-6" LONG SCH. 40 STEEL PIPE PAINTED SAFETY YELLOW PER DISTRICT SPECIFICATIONS
- ③ #4 RE-BAR, FULL-LENGTH, CENTERED IN PIPE, AND FILLED WITH CLASS 1V CONCRETE
- ④ SLOPE 1" DOWN TO DRAIN
- ⑤ CLASS IV CONCRETE FOOTING, 10" DIA.
- ⑥ POUR AGAINST UNDISTURBED OR WELL COMPACTED EARTH, 90% MIN.

NOTES:

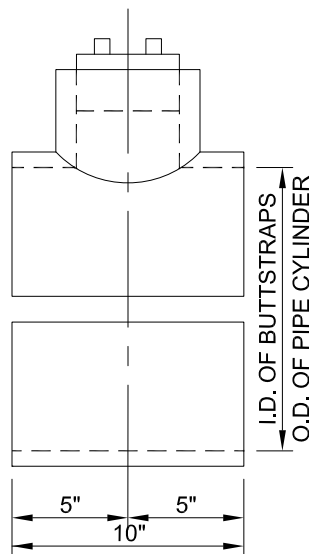
1. LOCATION SHALL BE PER PLAN, OR AS DIRECTED IN THE FIELD BY THE DISTRICT INSPECTOR OR ENGINEER.

REVISIONS		WEST VALLEY WATER DISTRICT	GUARD POST INSTALLATION DETAIL	DRAWING NUMBER  W-12
DATE	BY			
09-2019	DG	APPROVED:  <i>Roddy Walker</i> Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		





END VIEW

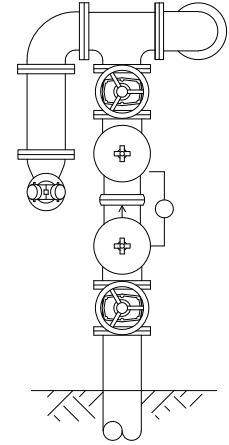
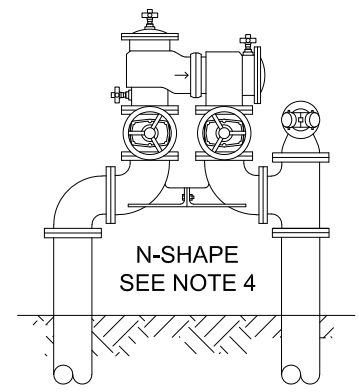
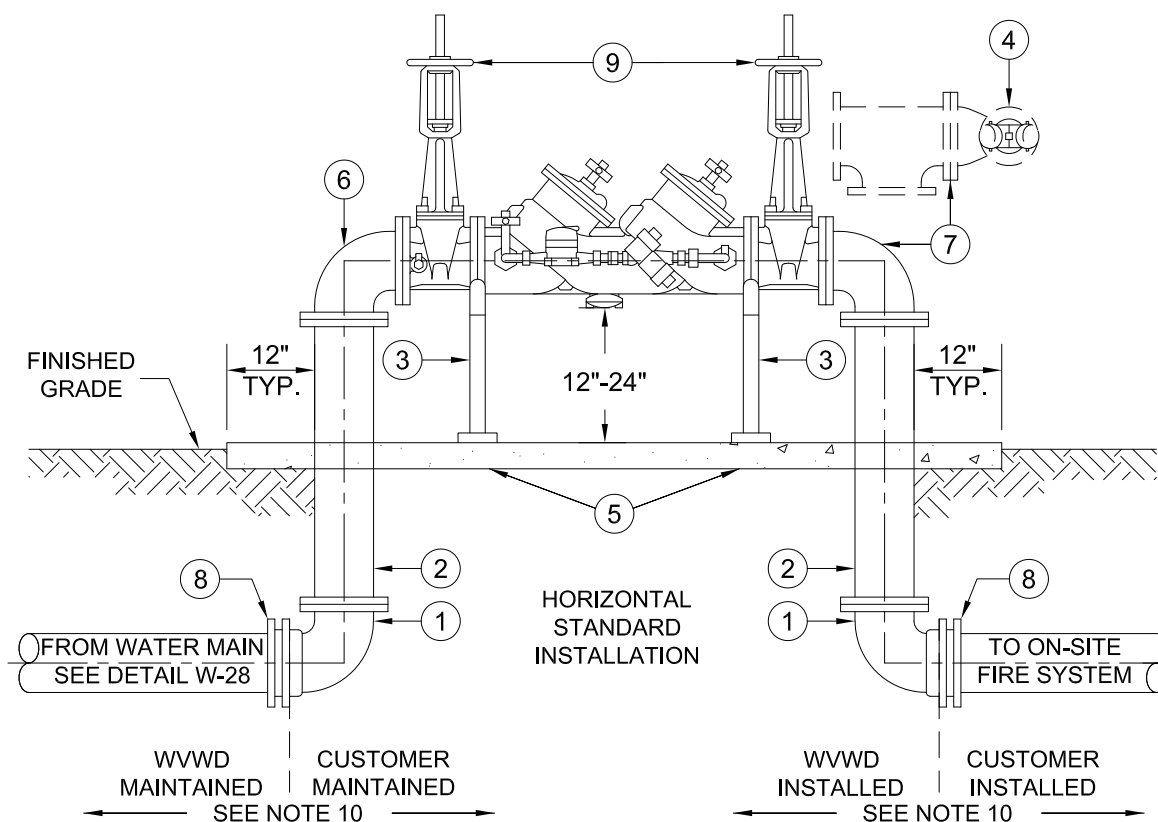


SIDE VIEW

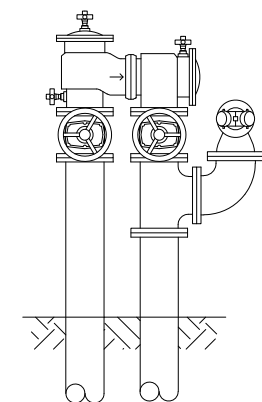
NOTES:

- 1 HANDHOLE REQUIRED FOR 4" Ø PIPE THROUGH 18" Ø PIPE.
- 2 HANDHOLES REQUIRED FOR 20" Ø PIPE THROUGH 30" Ø PIPE.
- UP TO CLASS 200 PIPELINES  
 "T"=3/16" FOR 4" Ø THROUGH 24" Ø.  
 "T"=1/4" FOR 30" Ø  
 5"-BLACK, HALF-COUPLING, CLASS 150, CRANE OR APPROVED EQUAL.  
 5"-BLACK, CORED, BAR PLUG, CLASS 150, CRANE OR APPROVED EQUAL.
- GREATER THAN CLASS 200 THROUGH CLASS 350 PIPELINES:  
 "T"=3/16" FOR 4" Ø THROUGH 14" Ø.  
 "T"=1/4" FOR 16" Ø THROUGH 20" Ø.  
 "T"=5/16" FOR 24" Ø.  
 "T"=3/8" FOR 30" Ø.  
 5"+BLACK, HALF-COUPLING, CLASS 300, CRANE OR APPROVED EQUAL  
 5"+BLACK, SOLID, BAR PLUG, CLASS 300, CRANE OR APPROVED EQUAL..
- SEAL THREADS WITH A NON-TOXIC COMPOUND.

REVISIONS		WEST VALLEY WATER DISTRICT	BUTT STRAP DETAIL	DRAWING NUMBER
DATE	BY			
09-2019	DG	APPROVED: 		W-14
07-2025	DG			
SCALE: NONE		Director of Engineering	July 2025	



VERTICAL  
SEE NOTE 4



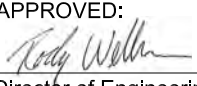
COMPACT  
SEE NOTE 4

ITEM DESCRIPTION:

- ① D.I 90° ELBOW (FLG. X M.J.).
- ② D.I OR SCH. 40 STEEL PIPE, FLG, ORDER TO FIT.
- ③ ADJUSTABLE PIPE SADDLE SUPPORT.
- ④ FIRE DEPARTMENT CONNECTION (FDC). AS APPROVED BY FIRE AUTHORITY.
- ⑤ 4" THICK CLASS IV CONCRETE PAD.
- ⑥ D.I OR SCH. 40 STEEL - 90° ELBOW, FLG.
- ⑦ D.I OR SCH. 40 STEEL - 90° ELBOW, FLG. OR TEE, FLG (WHEN FDC IS REQUIRED).
- ⑧ RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
- ⑨ DOUBLE CHECK DETECTOR ASSEMBLY (DCDA) OR REDUCED PRESSURE DETECTOR ASSEMBLY (RPDA) . SIZE AS INDICATED ON PLAN.

NOTES:

1. DCDA/RPDA MUST BE USC CROSS-CONNECTION CONTROL HYDRAULIC RESEARCH STANDARDS APPROVED.
2. PAINT DCDA/RPDA ASSEMBLY RED PER DISTRICT SPECIFICATIONS AND LOCAL FIRE AUTHORITY.
3. DEPENDING ON RIGHT-OF-WAY, ASSEMBLY MUST BE INSTALLED ABOVE GROUND AND PARALLEL TO PROPERTY LINE.
4. DCDA/RPDA CAN BE INSTALLED IN ALTERNATE CONFIGURATIONS PER MANUFACTURES SPECIFICATIONS WHEN APPROVED BY THE DISTRICT. MATERIALS, DESIGN AND LAYOUT MUST BE APPROVED PRIOR TO INSTALLATION.
5. 24" MINIMUM CLEARANCE REQUIRED AROUND ENTIRE ASSEMBLY.
6. DCDA/RPDA ASSEMBLY SHALL BE LOCATED 24" FROM PROPERTY LINE.
7. DCDA/RPDA MUST BE TESTED AND CERTIFIED BEFORE WATER SERVICE CAN BE TURNED ON.
8. IF A FIRE PUMP IS USED ON-SITE, A BREAK TANK SHALL BE REQUIRED PER ARTICLE 8 OF DISTRICT REGULATIONS.
9. ALL ABOVE GROUND FLANGES SHALL HAVE 1/16" RING TYPE GASKETS.
10. INSTALLATION OF FIRE SERVICE AND DCDA/RPDA SHALL BE DONE BY DISTRICT APPROVED CONTRACTOR. CUSTOMER IS RESPONSIBLE FOR ALL PIPING, FITTINGS, DCDA/RPDA AND APPURTENANCES AFTER BOTTOM 90° ELBOW.

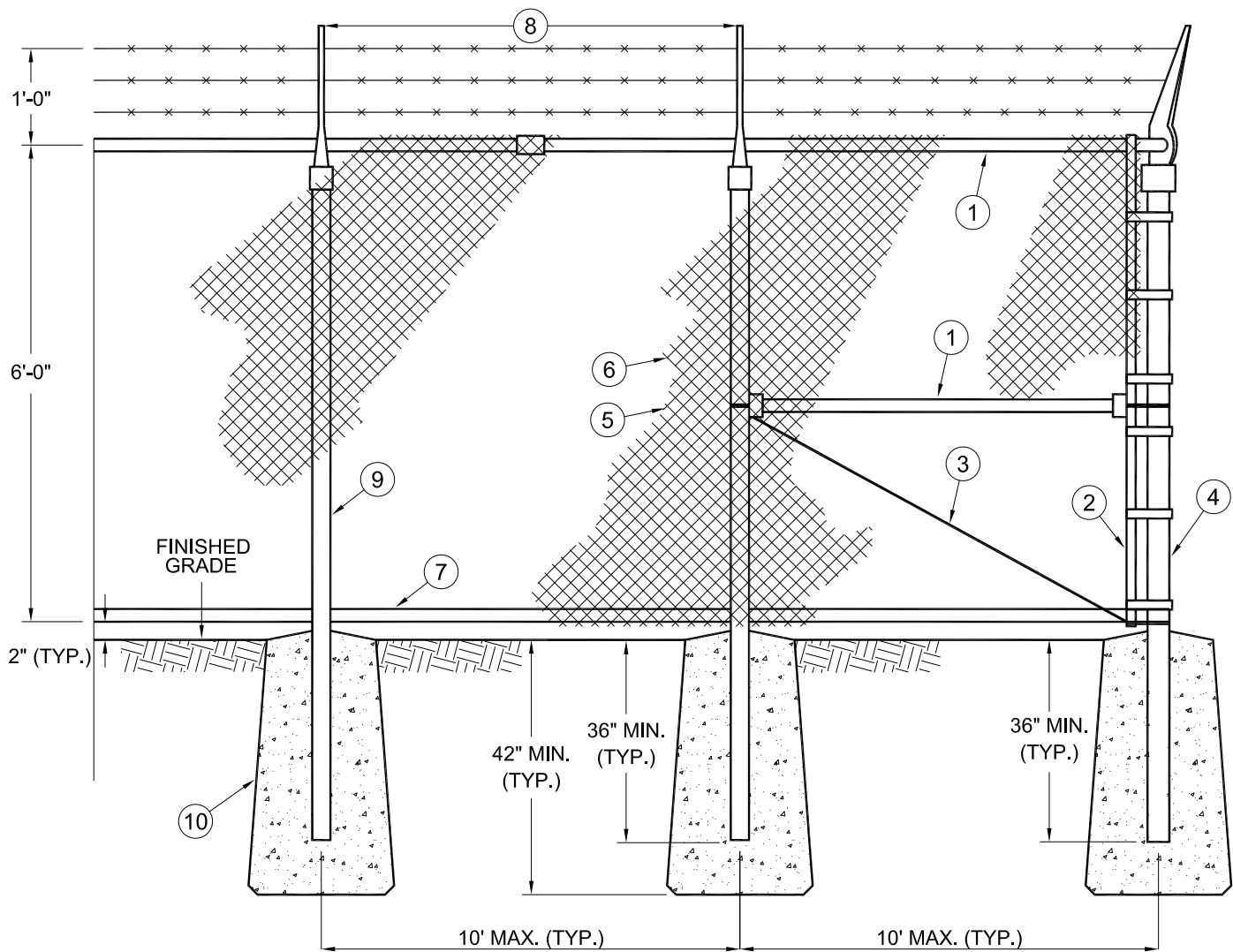
REVISIONS		WEST VALLEY WATER DISTRICT
DATE	BY	
09-2019	DG	
07-2025	DG	
SCALE: NONE		APPROVED:  Director of Engineering

July 2025

## FIRE SERVICE INSTALLATION DETAIL

DRAWING NUMBER

W-15



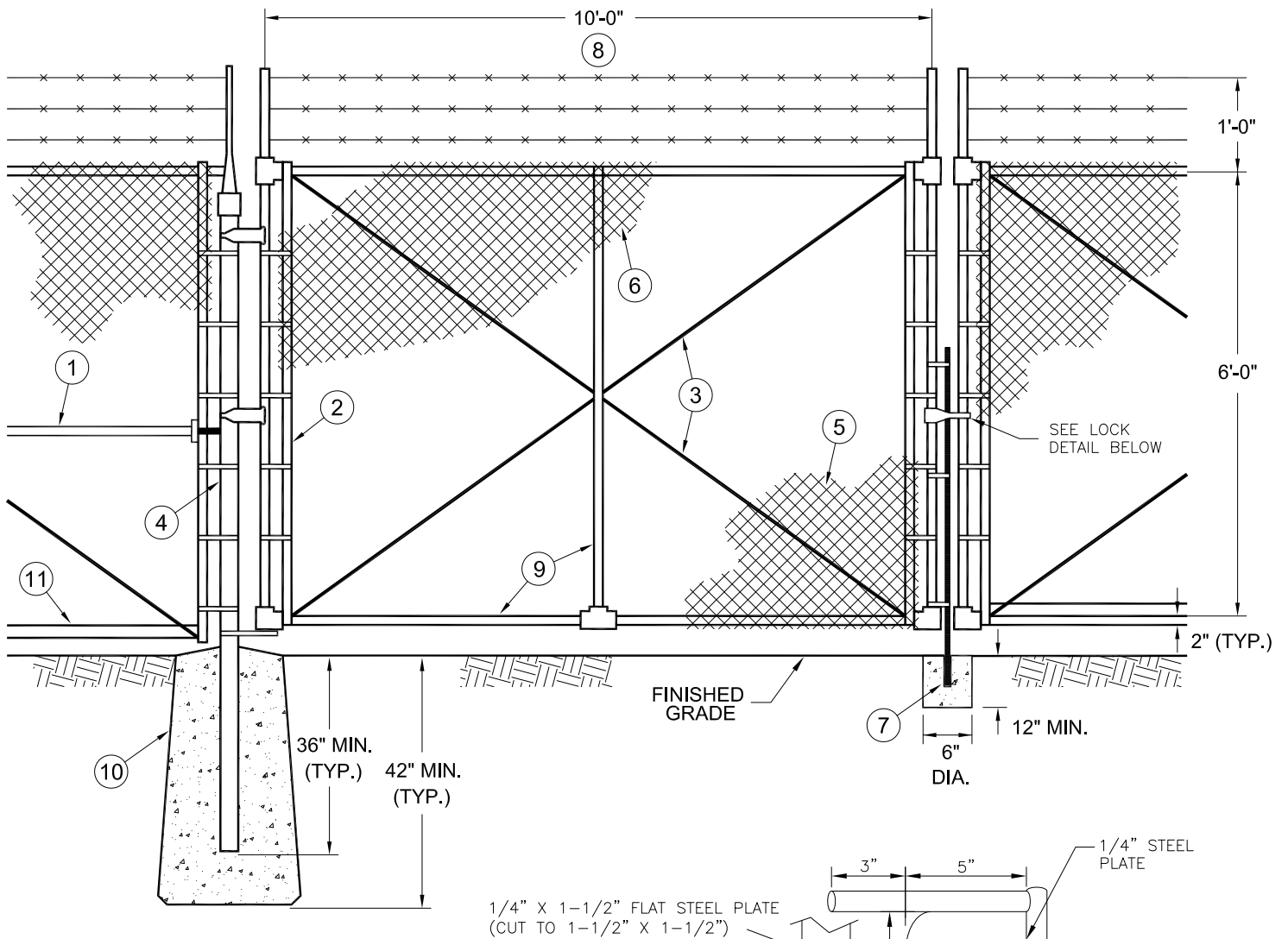
**ITEM DESCRIPTION:**

- ① 1-5/8" O.D. SCH. 40 GALVANIZED PIPE FOR TOP OF FENCE.
- ② 1/4" X 3/4" STRETCHER BAR.
- ③ 3/8" DIAMETER ADJUSTABLE TRUSS ROD.
- ④ CORNER POST 4" O.D. WITH SCH. 40 GALVANIZED PIPE.
- ⑤ REDWOOD SLATS, AS REQUIRED.
- ⑥ 9 GAUGE GALVANIZED FABRIC.
- ⑦ 7 GAUGE TENSION WIRE WITH 1-5/8" O.D. SCH. 40 GALVANIZED PIPE FOR BOTTOM OF FENCE.
- ⑧ GALVANIZED COMBINATION POST TOP AND BARBED WIRE SUPPORTING ARM.
- ⑨ 2-3/8" O.D. SCH. 40 GALVANIZED PIPE.
- ⑩ CLASS IV CONCRETE FOOTING (6 SACKS).

**NOTES:**

1. DIAMETER OF CONCRETE FOOTING SHALL BE 3 TIMES O.D. OF POST OR 8" MINIMUM.
2. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SHALL BE APPROVED BY THE DISTRICT.

REVISIONS		WEST VALLEY WATER DISTRICT	CHAIN LINK FENCE DETAIL	DRAWING NUMBER
DATE	BY			
09-2019	DG	APPROVED: 		W-16
07-2025	DG			
SCALE: NONE		Director of Engineering	July 2025	

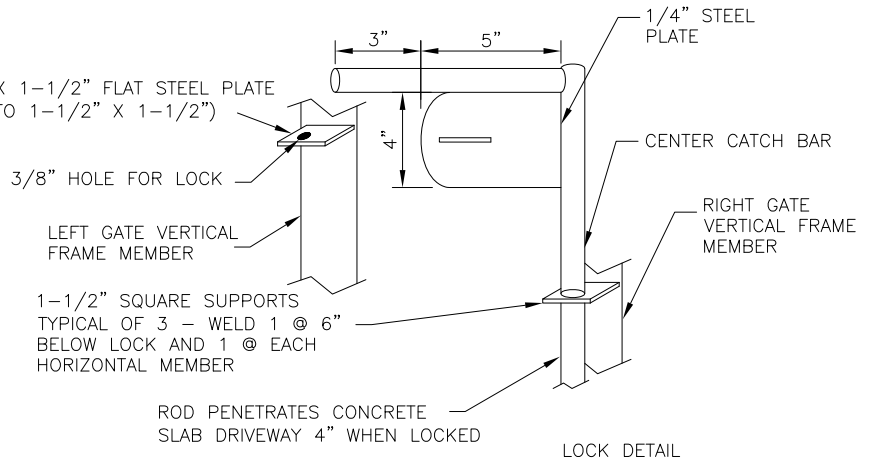


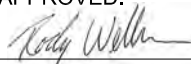
#### ITEM DESCRIPTION:

- ① 1-5/8" O.D. SCH. 40 GALVANIZED PIPE.
- ② 1/4" X 3/4" STRETCHER BAR.
- ③ 3/8" DIAMETER ADJUSTABLE TRUSS ROD.
- ④ 4" O.D. WITH SCH. 40 GALVANIZED PIPE.
- ⑤ REDWOOD SLATS, AS REQUIRED.
- ⑥ 9 GAUGE GALVANIZED FABRIC.
- ⑦ CENTER CATCH SET IN CONCRETE.
- ⑧ GALVANIZED COMBINATION POST TOP AND BARBED WIRE SUPPORTING ARM.
- ⑨ 1-9/10" O.D. SCH. 40 GALVANIZED PIPE.
- ⑩ CLASS IV CONCRETE FOOTING (6 SACKS).
- ⑪ 7 GAUGE TENSION WIRE WITH 1-5/8" O.D. SCH. 40 GALVANIZED PIPE FOR BOTTOM OF FENCE.

#### NOTES:

1. DIAMETER OF CONCRETE FOOTING SHALL BE 3 TIMES O.D. OF POST OR 8" MINIMUM.
2. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SHALL BE APPROVED BY THE DISTRICT.

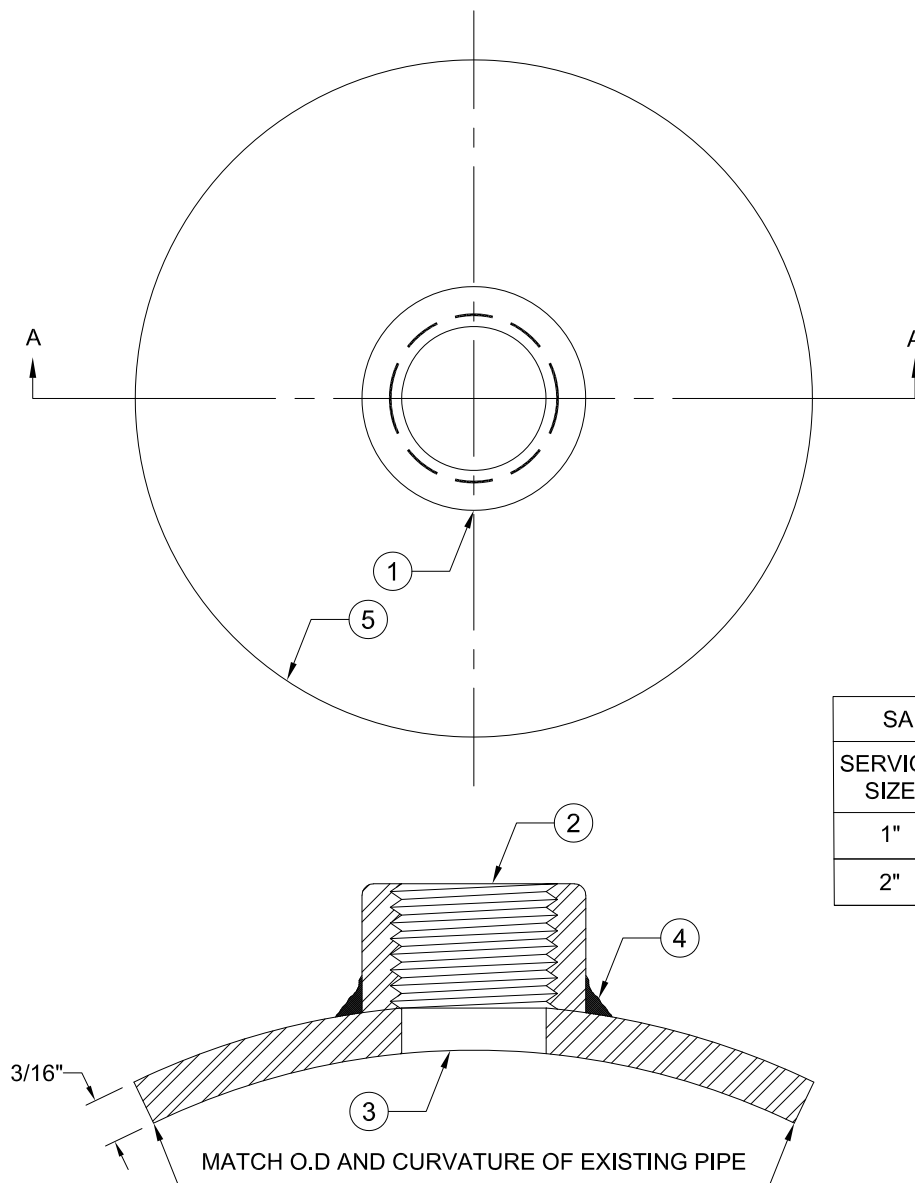


REVISIONS		WEST VALLEY WATER DISTRICT	
DATE	BY	APPROVED:  Director of Engineering	
09-2019	DG		
07-2025	DG		
SCALE: NONE		July 2025	

## CHAIN LINK FENCE GATE DETAIL

DRAWING NUMBER

W-17



SADDLE DIMENSIONS			
SERVICE SIZE	D1	D2	D3
1"	2"	5"	1"
2"	3"	7"	2"

SECTION A-A

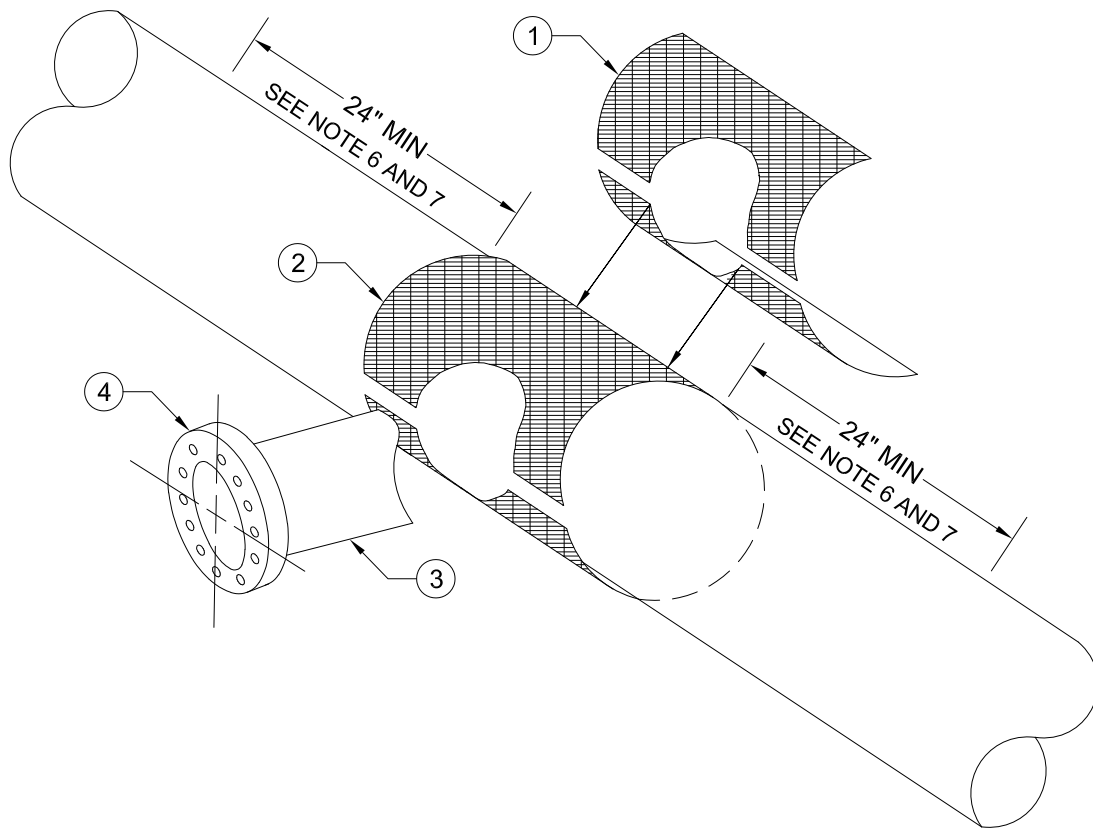
**ITEM DESCRIPTION:**

- ① SCHEDULE 80 STEEL EXTRA HEAVY HALF COUPLING. SEE D1 IN DIMENSION CHART.
- ② STANDARD I.P THREAD OUTLET. SEE D3 IN DIMENSION CHART.
- ③ DRILL HOLE. SEE SERVICE SIZE IN DIMENSION CHART.
- ④ 3/16" TAPER FROM SADDLE TO OUTLET.
- ⑤ REINFORCING STEEL TAPPING SADDLE. SEE D2 FOR O.D. IN DIMENSION CHART.

**NOTES:**

1. USE DOUBLE-PASS WELDS FOR FABRICATION & FIELD WELDS.
2. SADDLE CURVATURE TO BE FORMED TO MEET DISTRICT PIPE DIAMETERS.
3. WHEN INSTALLED, OUTLET TO BE COATED WITH SAME COATING AS PIPE.
4. SEE DISTRICT STANDARD W-4 OR W-5 FOR CORPORATION STOP (I.P.T X P.J.).
5. THE CONDITION, MATERIAL AND USE OF PIPE MAY REQUIRE ADDITIONAL REINFORCEMENT FOR THE SERVICE TAP. THE DISTRICT SHALL DETERMINE IN FIELD THE TAPPING REQUIREMENTS OF THE PIPE.
6. TAPPING SADDLES MUST BE 24" APART FROM EACH OTHER ON THE SAME PIPE.

REVISIONS		WEST VALLEY WATER DISTRICT	TAPPING OUTLET FOR STEEL PIPE 1" AND 2"	DRAWING NUMBER  W-18
DATE	BY			
09-2019	DG	APPROVED:  <i>Roddy Walker</i> Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		



**ITEM DESCRIPTION:**

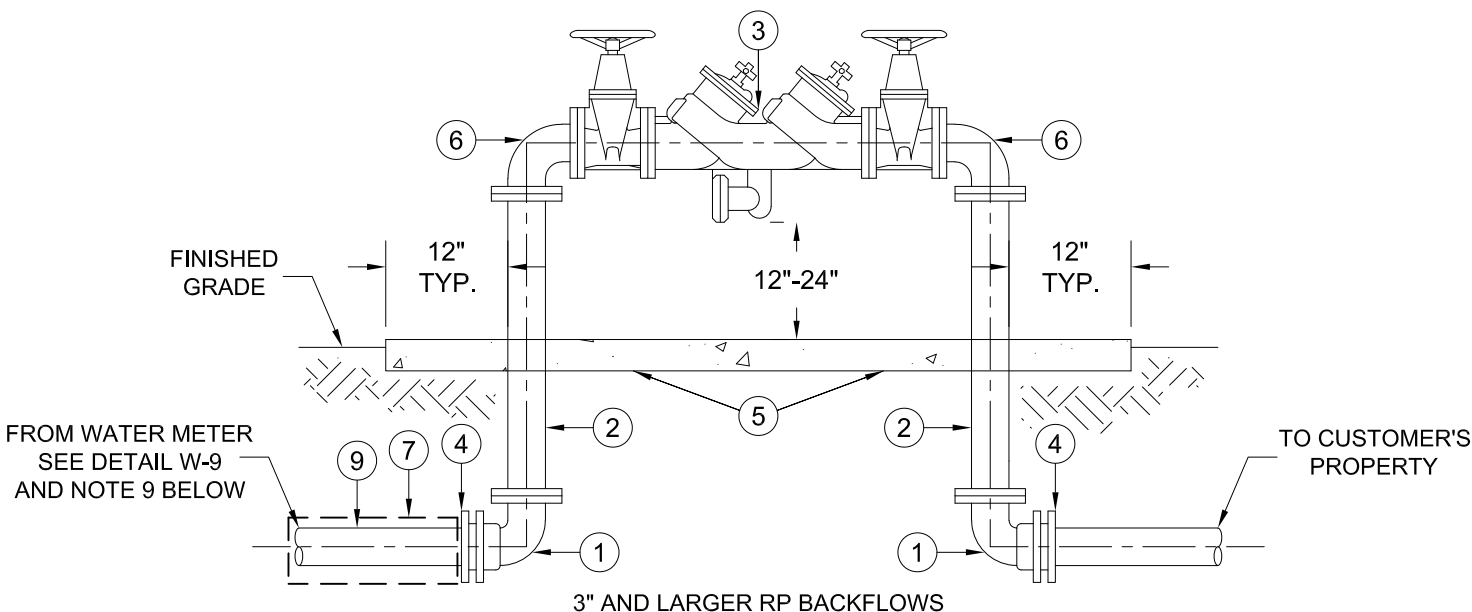
- ① PIPE COLLAR REINFORCEMENT/HALF WRAP (WHEN OUTLET TO MAIN RATIO IS 50% OR LESS). SEE NOTE 1.
- ② FULL PIPE WRAP REINFORCEMENT (WHEN OUTLET TO MAIN RATIO IS GREATER THAN 50%). SEE NOTE 1.
- ③ SCHEDULE 40 STEEL OUTLET NOZZLE (MAIN SIZE X LATERAL SIZE OUTLET).
- ④ FLANGE CONNECTION TO TAPPING VALVE. SEE DISTRICT STANDARD W-11 AND W-28 FOR NEW INSTALLATIONS.

**NOTES:**

1. REINFORCEMENT DESIGN IS BASED ON THE STEEL AREA REMOVED FROM THE MAIN LINE AND THE OPERATING PRESSURE OF THE SYSTEM. THE CONDITION, MATERIAL AND USE OF PIPE MAY REQUIRE ADDITIONAL REINFORCEMENT FOR THE SERVICE TAP. THE DISTRICT SHALL DETERMINE IN FIELD IF ADDITIONAL REINFORCEMENT IS REQUIRED.
2. JOB SPECIFICATIONS/DETAILS FOR REINFORCEMENT SHALL GOVERN IF IN EXCESS OF NOTES 1, 2 AND 3 ABOVE.
3. ALL METAL SURFACES SHALL BE PAINTED PER SPECIFICATIONS. OUTLET TO BE COATED WITH SAME COATING AS PIPE.
4. OUTLET NOZZLE SHOULD BE POSITIONED AND WELDED ON TO WATER MAIN PRIOR TO WELDING ON THE REQUIRED REINFORCEMENT AT A 90° PERPENDICULAR ANGLE TO THE WATER MAIN.
5. FLANGE SHALL BE ATTACHED WITH BOLT HOLES CENTERED ABOUT THE VERTICAL AXIS OF THE PIPE UNLESS OTHERWISE NOTED.
6. CONTRACTOR MUST EXPOSE 24" ON EITHER SIDE OF TAPPING SLEEVE TO ENSURE CLEARANCE FROM ADJACENT COLLARS AND PIPE JOINTS.
7. TAPPING SLEEVES MUST BE 24" APART FROM EACH OTHER ON THE SAME PIPE.

REVISIONS		WEST VALLEY WATER DISTRICT	TAPPING OUTLET FOR STEEL PIPE 3" AND LARGER	DRAWING NUMBER  W-19
DATE	BY			
09-2019	DG	APPROVED:  <i>Rodney Walker</i> Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		

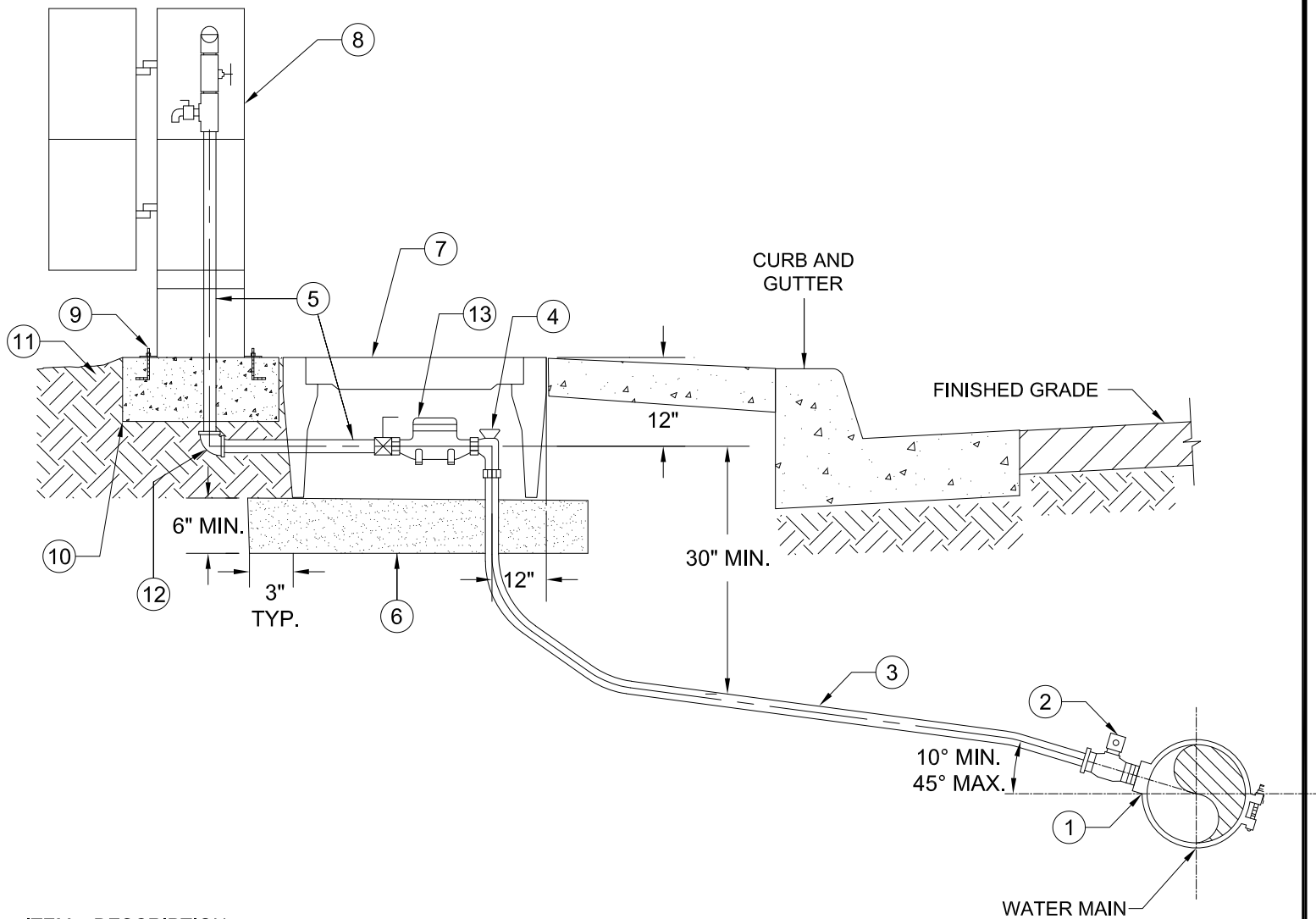




- ① D.I 90° ELBOW (FLG. X M.J.).
- ② D.I OR SCH. 40 STEEL PIPE, FLG, ORDER TO FIT.
- ③ RP BACKFLOW PREVENTER. SIZE AS INDICATED ON PLAN.
- ④ RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
- ⑤ 4" THICK CLASS IV CONCRETE PAD.
- ⑥ D.I OR SCH. 40 STEEL - 90° ELBOW, FLG.
- ⑦ SCH. 40 STEEL SLEEVE. (WHEN BACKFLOW IS NOT LOCATED WITHIN 18" OF WATER METER).
- ⑧ ALL FITTINGS, RISERS, AND PIPES SHALL BE BRASS FROM METER TO BOTTOM 90° ELBOW OF BACKFLOW.
- ⑨ D.I PIPE, SIZE TO MATCH METER ASSEMBLY.
- ⑩ BRASS UNION.
- ⑪ HINGED TYPE PROTECTIVE ENCLOSURE AS MANUFACTURED BY ALL-SPEC OR GUARDSHACK.

1. BACKFLOW MUST BE USC CROSS-CONNECTION CONTROL HYDRAULIC RESEARCH STANDARDS APPROVED.
2. NO CONNECTIONS, HOSE BIBS, STRAINERS, PRVS, OR TEES ARE ALLOWED BETWEEN METER AND BACKFLOW DEVICE
3. PAINT BACKFLOW ASSEMBLY AND ENCLOSURE HUNTER GREEN PER DISTRICT SPECIFICATIONS.
4. BACKFLOW MUST BE INSTALLED ABOVE GROUND, AND DEPENDING ON RIGHT-OF-WAY, PARALLEL TO PROPERTY LINE.
5. 24" MINIMUM CLEARANCE REQUIRED AROUND ENTIRE ASSEMBLY. DISTRICT SHALL APPROVE FINAL LOCATION.
6. BACKFLOW MUST BE TESTED AND CERTIFIED BEFORE WATER SERVICE CAN BE TURNED ON.
7. R.P DEVICES SHALL HAVE TEST COCKS SIZED AS FOLLOWS: 2" & SMALLER (1/4"), 2" TO 4" (1/2"), 6" & LARGER (3/4").
8. ALL ABOVE GROUND FLANGES SHALL HAVE 1/16" RING TYPE GASKETS.
9. INSTALLATION OF BACKFLOW SHALL BE DONE BY PRIVATE CONTRACTOR UNLESS SPECIFIED BY DISTRICT. CUSTOMER IS RESPONSIBLE FOR ALL PIPING, FITTINGS, BACKFLOWS AND OTHER APPURTENANCES AFTER METER ASSEMBLY.

REVISIONS		WEST VALLEY WATER DISTRICT	BACKFLOW PREVENTER (RP) INSTALLATION DETAIL	DRAWING NUMBER
DATE	BY			APPROVED:  Director of Engineering July 2025
09-2019	DG			
07-2025	DG			
SCALE: NONE				



**ITEM DESCRIPTION:**

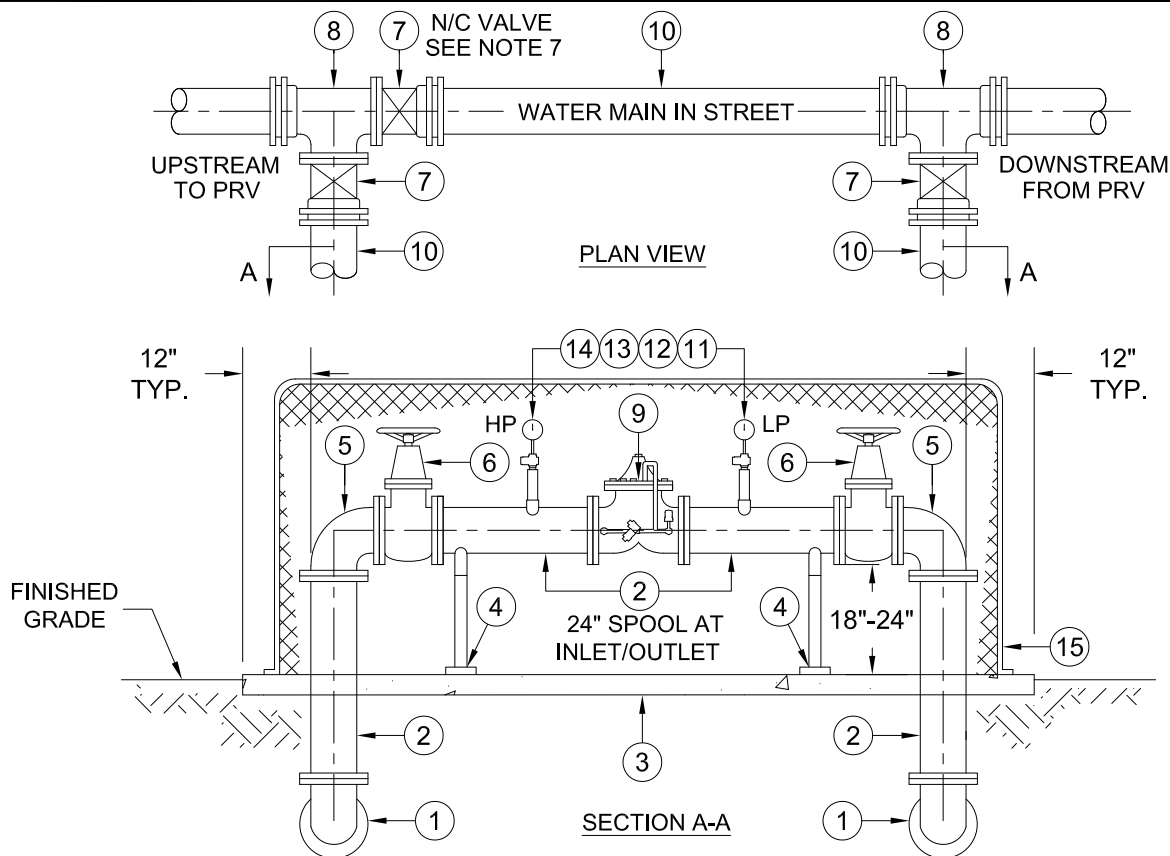
- ① DOUBLE STRAP SERVICE SADDLE WITH 1" I.P.T OUTLET. FORD FS202, MUELLER DR2A, ROMAC 202S, AND SMITH BLAIR 313. WHERE STEEL PIPE IS INSTALLED, USE TAPPING OUTLET PER DISTRICT STANDARD W-18.
- ② 1" CORPORATION STOP (I.P.T X P.J.). FORD B84-444-NL-R OR MUELLER P25028N-3.
- ③ 1" COPPER WATER SERVICE, TYPE "K", SOFT TEMPER, PER ASTM B-88.
- ④ 1" ANGLE METER VALVE (C.T.S x F.I.T). FORD BA43-444WR-NL OR MUELLER P24258N-3.
- ⑤ 1" BRASS THREADED PIPE (MALE).
- ⑥ IMPORTED SAND BASE OR 1" ROCK.
- ⑦ METER BOX (SUPPLIED BY DISTRICT). OLDCASTLE PRECAST FL12 BOX.
- ⑧ AMERICAN-MC SAMPLE STATION (EZ-01 - 44" MODEL) COLOR RAL6017.
- ⑨ 4 - 304L STAINLESS STEEL #6 AND #10 FASTENERS.
- ⑩ 3' X 3' X 6" CLASS IV CONCRETE PAD. TOP OF PAD SHALL MATCH TOP OF CURB OR SIDEWALK.
- ⑪ COMPACTED BASE MATERIAL
- ⑫ 1" ELBOW (P.J X F.I.T).
- ⑬ 1" METER (SUPPLIED BY DISTRICT).

**NOTES:**

1. WATER SERVICE INSTALLATION FROM MAIN TO ANGLE METER VALVE SHALL BE PER DISTRICT STANDARD W-4.

REVISIONS		WEST VALLEY WATER DISTRICT	DRAWING NUMBER
DATE	BY		
09-2019	DG	APPROVED: 	W-21
07-2025	DG		
SCALE: NONE		Director of Engineering	July 2025

**SAMPLE STATION DETAIL**



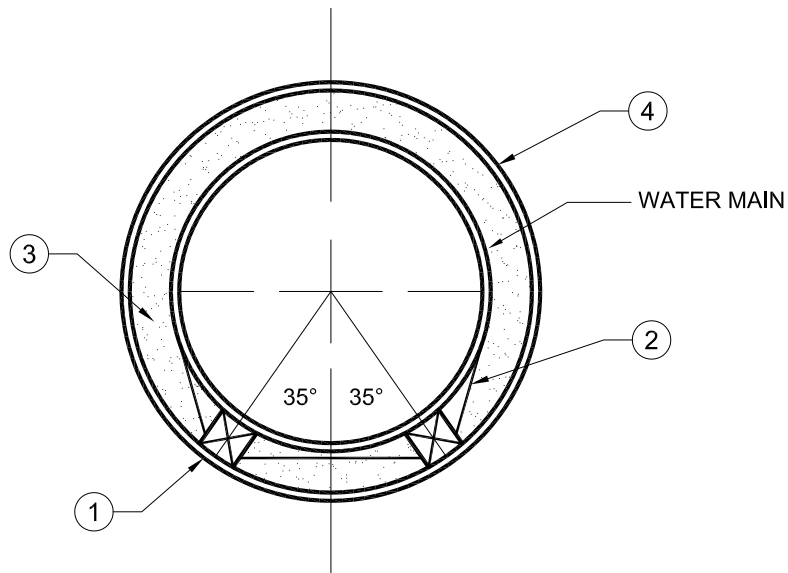
#### ITEM DESCRIPTION:

- ① D.I 90° ELBOW (FLG. X M.J.).
- ② D.I OR SCH. 40 STEEL PIPE, FLG, ORDER TO FIT. (24" PRV SPOOLS SHALL BE SCH. 40 STEEL FOR INLET/OUTLET)
- ③ 4" THICK CLASS IV CONCRETE PAD.
- ④ ADJUSTABLE PIPE SADDLE SUPPORT.
- ⑤ D.I OR SCH 40 STEEL - 90° ELBOW, FLG.
- ⑥ RESILIENT-SEATED GATE VALVE WITHOUT HAND WHEEL AND NRS, FLG.
- ⑦ RESILIENT-SEATED GATE VALVE (FLG. X M.J.) PER DISTRICT STANDARD W-11.
- ⑧ D.I TEE (FLG. X M.J. X M.J.) OR (FLG. X M.J X FLG.).
- ⑨ PRESSURE REDUCING VALVE WITH FLANGED CONNECTIONS. (CLA-VAL 90-01 OR 690-01). ORDER WITH STAINLESS STEEL PILOTING PIPE TRIM AND TEFLON ORIFICE RESTRICTOR FITTING. ANTI-CAVITATION TRIM AS REQUESTED BY DISTRICT.
- ⑩ D.I PIPE, PER DISTRICT STANDARD W-28. SIZE INDICATED ON PLAN.
- ⑪ 1" X 4" LONG GALVANIZED NIPPLE THREADED AT BOTH ENDS.
- ⑫ 1" BALL VALVE - F.I.T. WITH 360° TURN. FORD B11-444M-NL OR MUELLER B-20200-3N.
- ⑬ 1" SCH. 40 STEEL COUPLING WELDED TO PIPE.
- ⑭ 1" X 1/4" BRASS BUSHING WITH PRESSURE GAUGE (CLA-VAL X141)
- ⑮ CLAM SHELL TYPE PROTECTIVE ENCLOSURE AS MANUFACTURED BY ALL-SPEC OR GUARDSHACK.

#### NOTES:

1. ALL PIPING AND FITTINGS SHALL MATCH THE SIZE OF THE PRV.
2. PRV STATION MUST BE 24" BEHIND SIDEWALK AND ABOVE GROUND.
3. PAINT PRV ASSEMBLY AND ENCLOSURE HUNTER GREEN PER DISTRICT SPECIFICATIONS.
4. 30" MINIMUM CLEARANCE REQUIRED AROUND ENTIRE ASSEMBLY.
5. ALL JOINTS, BENDS AND FITTINGS SHALL BE RESTRAINED WITH APPROVED RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
6. ALL ABOVE GROUND FLANGES SHALL HAVE 1/16" RING TYPE GASKETS.
7. N/C VALVE TO REMAIN IN OFF POSITION WITH VALVE CAP PAINTED PER DISTRICT SPECIFICATIONS.

REVISIONS		WEST VALLEY WATER DISTRICT	PRESSURE REGULATION VALVE INSTALLATION DETAIL	DRAWING NUMBER  W-22
DATE	BY			
09-2019	DG	APPROVED:  <i>Randy Weller</i> Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		



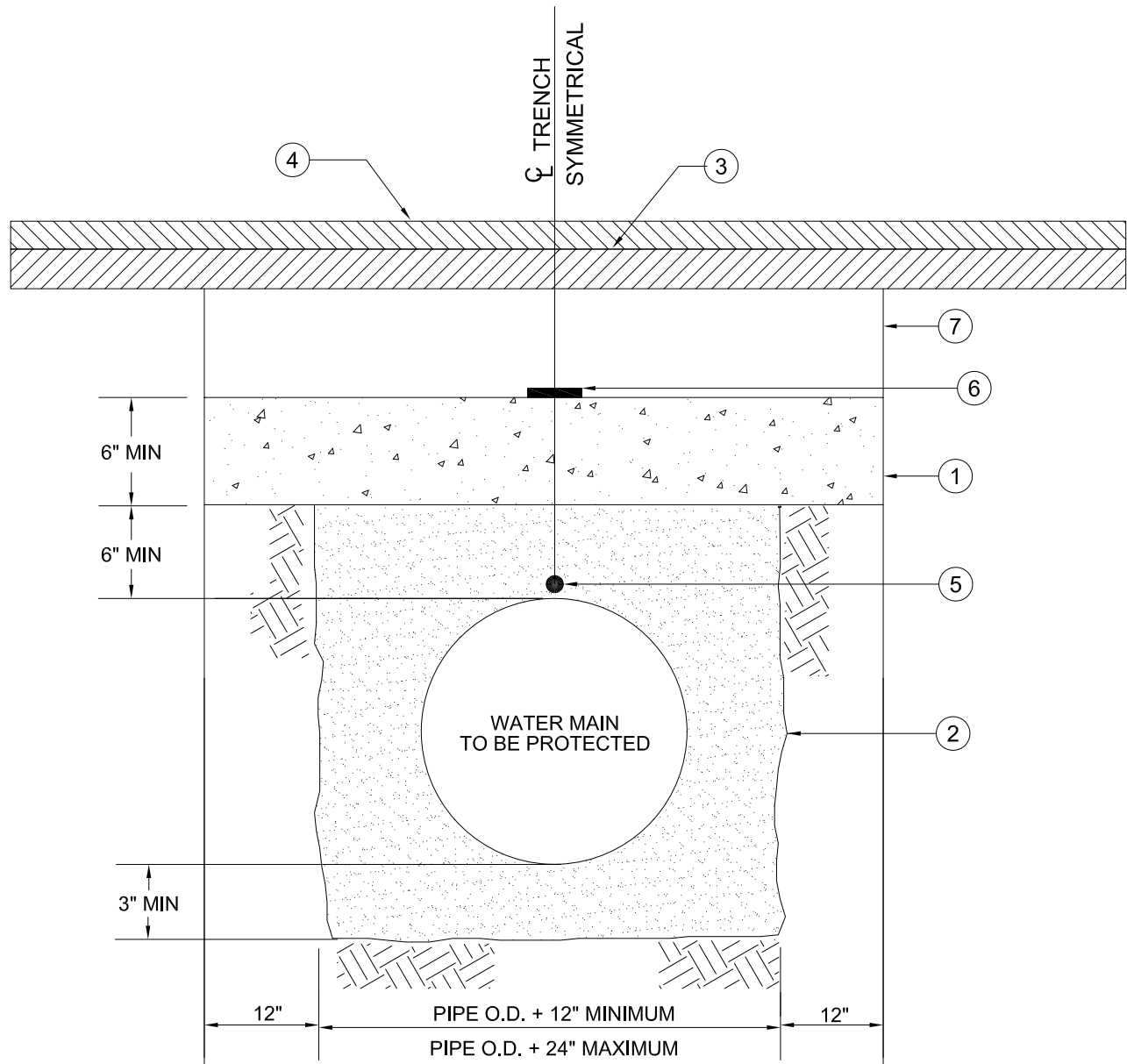
**ITEM DESCRIPTION:**

- |                                     |   |
|-------------------------------------|---|
| <p>①</p> <p>②</p> <p>③</p> <p>④</p> | <p>4" X 4" ROUGH REDWOOD SKID, CUT TO BEAR ON CONDUCTOR TUBE</p> <p>3/4" WIDE X 0.045" THICK STAINLESS STEEL BAND</p> <p>BLOWN SAND</p> <p>STEEL CONDUCTOR TUBE (SEE DISTRICT SPECIFICATIONS AND NOTES FOR SIZING).</p> |
|-------------------------------------|---|

**NOTES:**

1. MINIMUM 4" CLEARANCE IS REQUIRED BETWEEN INNER WALL OF CONDUCTOR TUBE AND OUTER WALL OF WATER MAIN.
2. THE INSIDE DIAMETER OF THE CONDUCTOR TUBE SHALL BE THE OUTER DIAMETER OF WATER MAIN PLUS 12" MINIMUM.
3. THE MINIMUM WALL THICKNESS OF THE CONDUCTOR TUBE SHALL BE 1/4" FOR PIPE DIAMETERS 28" AND SMALLER; 1/2" FOR PIPE DIAMETERS 30" TO 38"; AND 3/4" FOR PIPE DIAMETERS 40" TO 72".
4. CONDUCTOR TUBE SHALL EXTEND 5' OUTSIDE OF SUBJECT BEING PENETRATED OR CROSSED.

REVISIONS		WEST VALLEY WATER DISTRICT	CONDUCTOR TUBE DETAIL	DRAWING NUMBER
DATE	BY			
09-2019	DG	APPROVED:  Director of Engineering		W-23
07-2025	DG			
SCALE: NONE		July 2025		



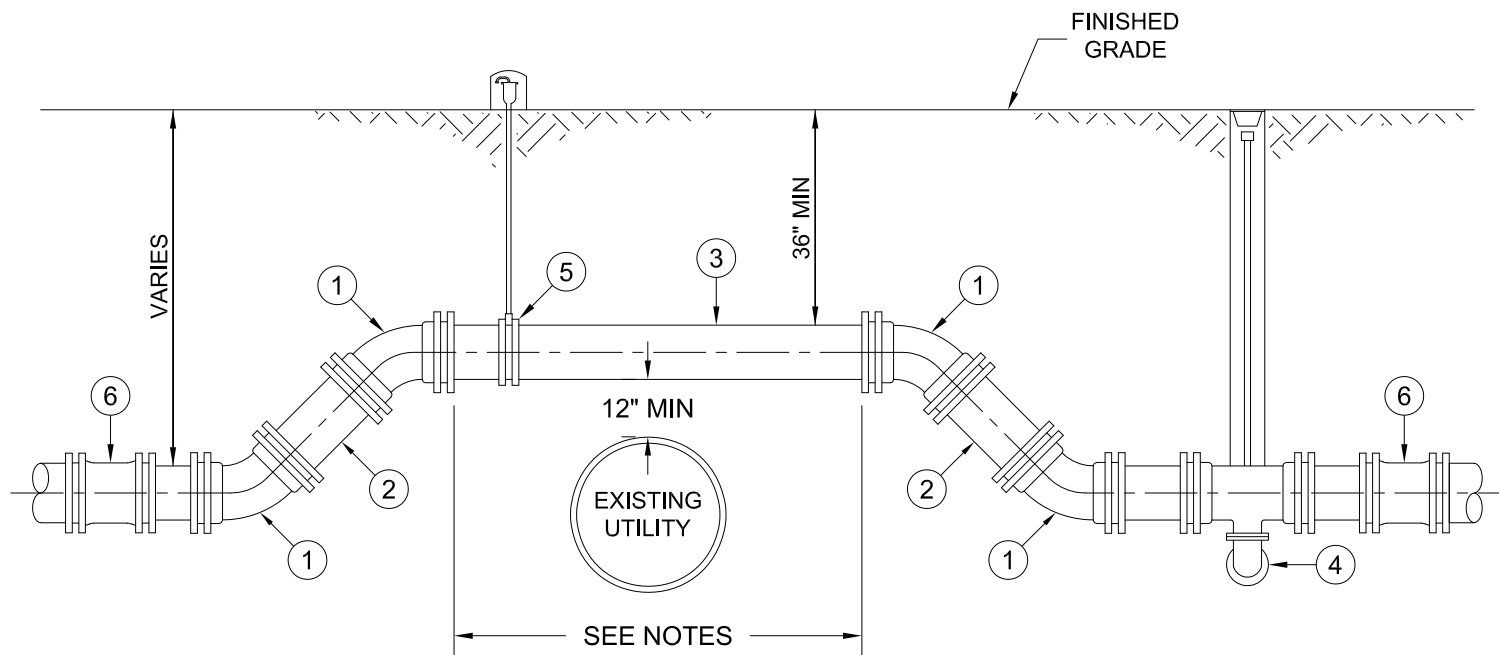
**ITEM DESCRIPTION:**

- ① TYPE IV CONCRETE BLANKET OR 1-SACK SLURRY BACKFILL (WHEN APPROVED BY THE DISTRICT).
- ② PIPE SAND BEDDING.
- ③ 3" AC BASE PAVEMENT.
- ④ 1" TO 1/2" AC CAP PAVEMENT.
- ⑤ LOCATOR WIRE
- ⑥ 6" WIDE BLUE WARNING TAPE ("CAUTION WATER LINE BELOW").
- ⑦ SEE DISTRICT STANDARD W-1 FOR BACKFILL REQUIREMENTS.

**NOTES:**

1. CONCRETE BLANKET SHALL ONLY BE USED WHEN APPROVED BY THE DISTRICT.
2. CONCRETE BLANKET SHALL BE INSTALLED AT LOCATIONS WHERE PIPE LINE HAS LESS THAN 30 INCHES OF COVER, AND EXTEND THE ENTIRE SHALLOW LENGTH OF PIPE.
3. REFER TO DISTRICT STANDARD W-1 FOR ALL TRENCH CONSTRUCTION AND BACKFILL REQUIREMENTS.
4. WHEN SPECIFIED BY DISTRICT, CONDUCTOR TUBE MAY BE REQUIRED FOR LENGTH OF CONCRETE BLANKET PER W-23.

REVISIONS		WEST VALLEY WATER DISTRICT	CONCRETE BLANKET DETAIL	DRAWING NUMBER
DATE	BY			
09-2019	DG	APPROVED:  Director of Engineering		W-24
07-2025	DG			
SCALE: NONE		July 2025		



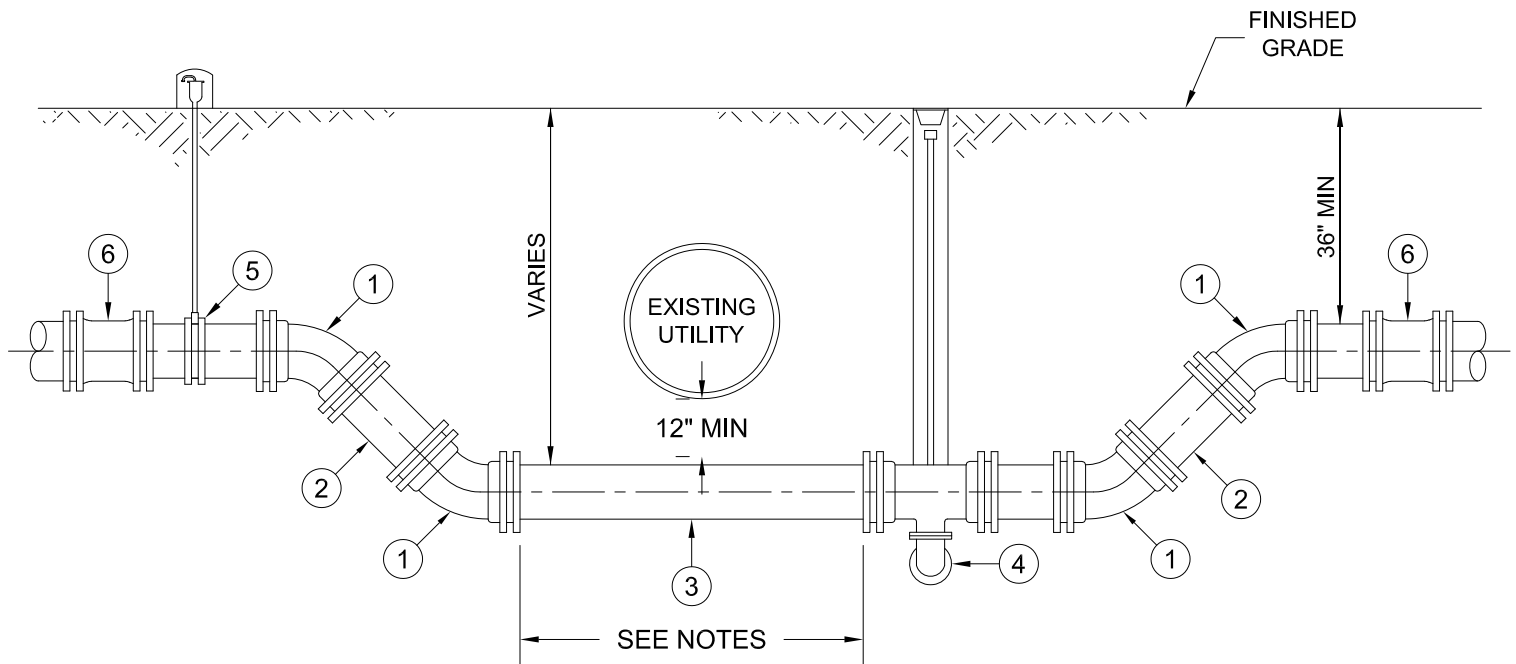
# ITEM DESCRIPTION:

- ① D.I 45° ELBOW, M.J.
- ② D.I PIPE, 18" MIN.
- ③ D.I PIPE, SEE NOTES 2 AND 3 FOR LENGTH REQUIREMENTS.
- ④ BLOW-OFF ASSEMBLY PER DISTRICT STANDARD W-7 AT LOWEST POINT.
- ⑤ COMBINATION AIR VALVE ASSEMBLY PER DISTRICT STANDARD W-6 AT HIGHEST POINT.
- ⑥ PIPE SIZE, RESTRAINED FLEX COUPLING (WHEN CUTTING INTO EXISTING PIPE).

# NOTES:

1. USE OF SIPHON MUST BE APPROVED BY WVWD AND IN COMPLIANCE WITH DDW STANDARDS AND SPECIFICATIONS.
2. FOR CROSSING SEWER AND STORM DRAINS, MINIMUM PIPE LENGTH IS 9' CENTERED ON THE UTILITY, WITH A 12" VERTICAL CLEARANCE AND NO JOINTS WITHIN 8FT OF CROSSING. IF THESE PARAMETERS CAN NOT BE ACHIEVED, THEN A SEPARATE DDW APPLICATION AND PERMIT MUST BE SUBMITTED AND REVIEWED BY DISTRICT.
3. FOR ALL OTHER UTILITIES, MINIMUM PIPE LENGTH IS 4' CENTERED ON THE UTILITY WITH NO JOINTS IN THE PIPE.
4. ALL JOINTS, BENDS AND FITTINGS SHALL BE RESTRAINED WITH APPROVED RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
5. MINIMUM 12" CLEARANCE IS REQUIRED BETWEEN OUTER WALL OF WATER MAIN AND OUTER WALL OF CONFLICTING UTILITY.
6. SEE DISTRICT STANDARD W-24 FOR CONCRETE BLANKETS WHEN 36" COVER CANNOT BE OBTAINED ON TOP OF PIPE OR WHEN 12" CLEARANCE CANNOT BE OBTAINED BETWEEN CONFLICTING UTILITY. CONCRETE BLANKETS CAN ONLY BE USED WHEN APPROVED BY DISTRICT ENGINEER.
7. FULLY WELDED CMLC SIPHON CAN BE USED WITH APPROVAL FROM DISTRICT ENGINEER.

REVISIONS		WEST VALLEY WATER DISTRICT	SIPHON DETAIL	DRAWING NUMBER
DATE	BY			
09-2019	DG	APPROVED: 		W-25
07-2025	DG			
		Director of Engineering		
SCALE: NONE		July 2025		



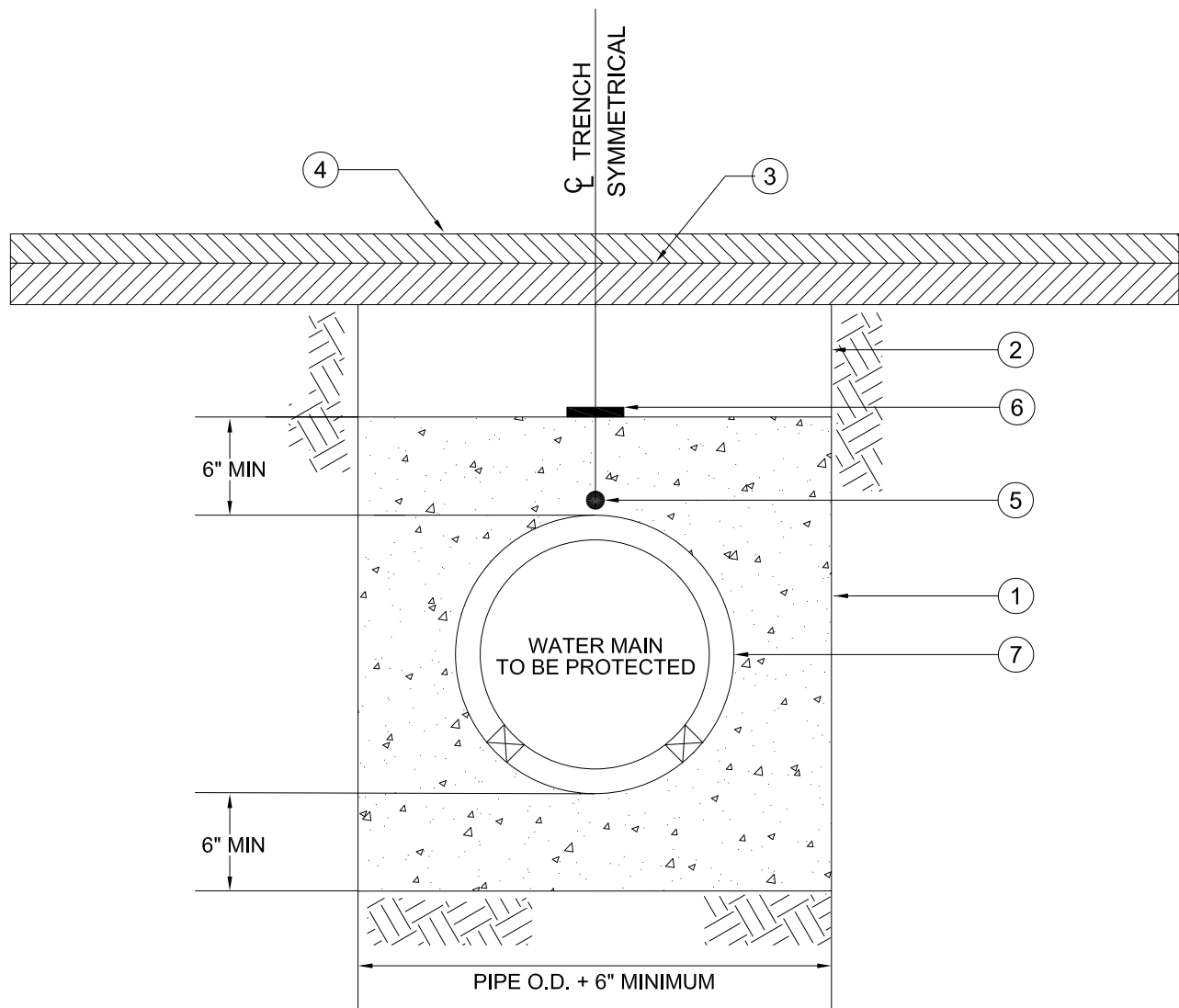
**ITEM DESCRIPTION:**

- ① D.I 45° ELBOW, M.J.
- ② D.I PIPE, 18" MIN.
- ③ D.I PIPE, SEE NOTES 2 AND 3 FOR LENGTH REQUIREMENTS.
- ④ BLOW-OFF ASSEMBLY PER DISTRICT STANDARD W-7 AT LOWEST POINT.
- ⑤ COMBINATION AIR VALVE ASSEMBLY PER DISTRICT STANDARD W-6 AT HIGHEST POINT.
- ⑥ PIPE SIZE, RESTRAINED FLEX COUPLING (WHEN CUTTING INTO EXISTING PIPE).

**NOTES:**

- 1. USE OF SIPHON MUST BE APPROVED BY WVWD AND IN COMPLIANCE WITH DDW STANDARDS AND SPECIFICATIONS.
- 2. FOR ANY CROSSING UNDER SEWER AND STORM DRAINS, A SEPARATE DDW APPLICATION AND PERMIT MUST BE SUBMITTED AND REVIEWED BY DISTRICT.
- 3. FOR ALL OTHER UTILITIES, MINIMUM PIPE LENGTH IS 4' CENTERED ON THE UTILITY. NO JOINTS IN PIPE.
- 4. ALL JOINTS, BENDS AND FITTINGS SHALL BE RESTRAINED WITH APPROVED RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
- 5. MINIMUM 12" CLEARANCE IS REQUIRED BETWEEN OUTER WALL OF WATER MAIN AND OUTER WALL OF CONFLICTING UTILITY.
- 6. SEE DISTRICT STANDARD W-24 FOR CONCRETE BLANKETS WHEN 36" COVER CANNOT BE OBTAINED ON TOP OF PIPE OR WHEN 12" CLEARANCE CANNOT BE OBTAINED BETWEEN CONFLICTING UTILITY. CONCRETE BLANKETS CAN ONLY BE USED WHEN APPROVED BY DISTRICT ENGINEER.
- 7. FULLY WELDED CMLC SIPHON CAN BE USED WITH APPROVAL FROM DISTRICT ENGINEER.

REVISIONS		WEST VALLEY WATER DISTRICT	DRAWING NUMBER
DATE	BY		
09-2019	DG	APPROVED:  Director of Engineering	W-26
07-2025	DG		
		July 2025	INVERTED SIPHON DETAIL
SCALE: NONE			

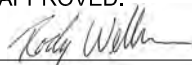


**ITEM DESCRIPTION:**

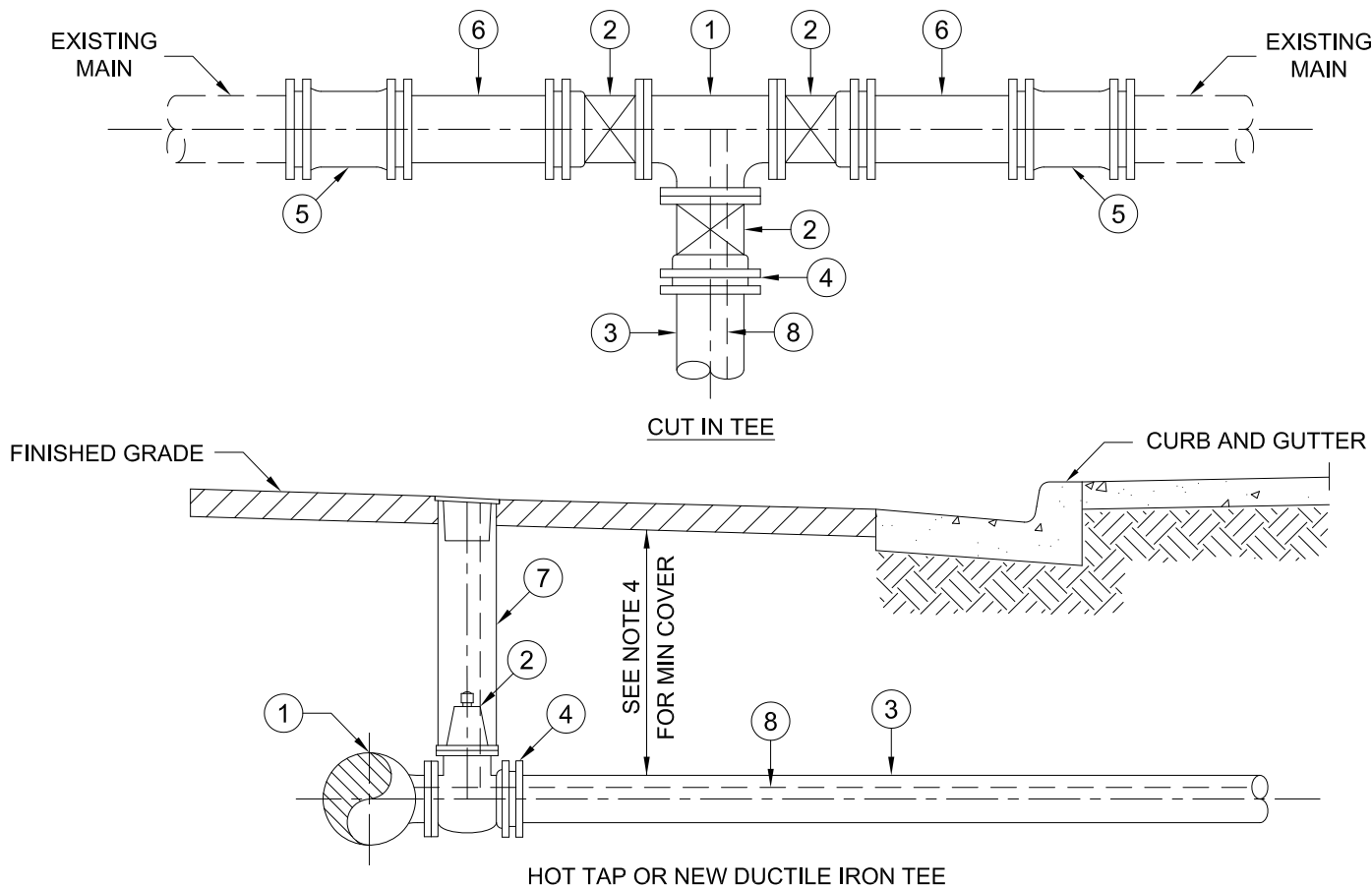
- ① TYPE IV CONCRETE ENCASEMENT.
- ② SEE DISTRICT STANDARD W-1 FOR BACKFILL REQUIREMENTS.
- ③ 3" AC BASE PAVEMENT.
- ④ 1" TO 1/2" AC CAP PAVEMENT.
- ⑤ LOCATOR WIRE
- ⑥ 6" WIDE BLUE WARNING TAPE ("CAUTION WATER LINE BELOW").
- ⑦ CONDUCTOR TUBE PER DISTRICT STANDARD W-23.

**NOTES:**

1. CONCRETE ENCASEMENT SHALL ONLY BE USED WHEN APPROVED BY THE DISTRICT.
2. CONCRETE ENCASED PIPE SHALL BE FULLY WELDED STEEL WITH NO JOINTS OR FITTINGS WITHIN THE ENCASEMENT. DUCTILE IRON MAY BE USED IF ENCASEMENT IS NOT USED ON BELL AND SPIGOT SECTION OR ON JOINTS AND FITTINGS.
3. CONCRETE ENCASEMENT SHALL BE INSTALLED AT LOCATIONS WHERE PIPE LINE HAS LESS THAN 30 INCHES OF COVER, AND EXTEND THE ENTIRE SHALLOW LENGTH OF PIPE.
4. REFER TO DISTRICT STANDARD W-1 FOR ALL TRENCH CONSTRUCTION AND BACKFILL REQUIREMENTS.

REVISIONS		WEST VALLEY WATER DISTRICT	CONCRETE ENCASEMENT	DRAWING NUMBER
DATE	BY			
09-2019	DG	APPROVED:  Director of Engineering		W-27
07-2025	DG			
SCALE: NONE		July 2025		





**ITEM DESCRIPTION:**

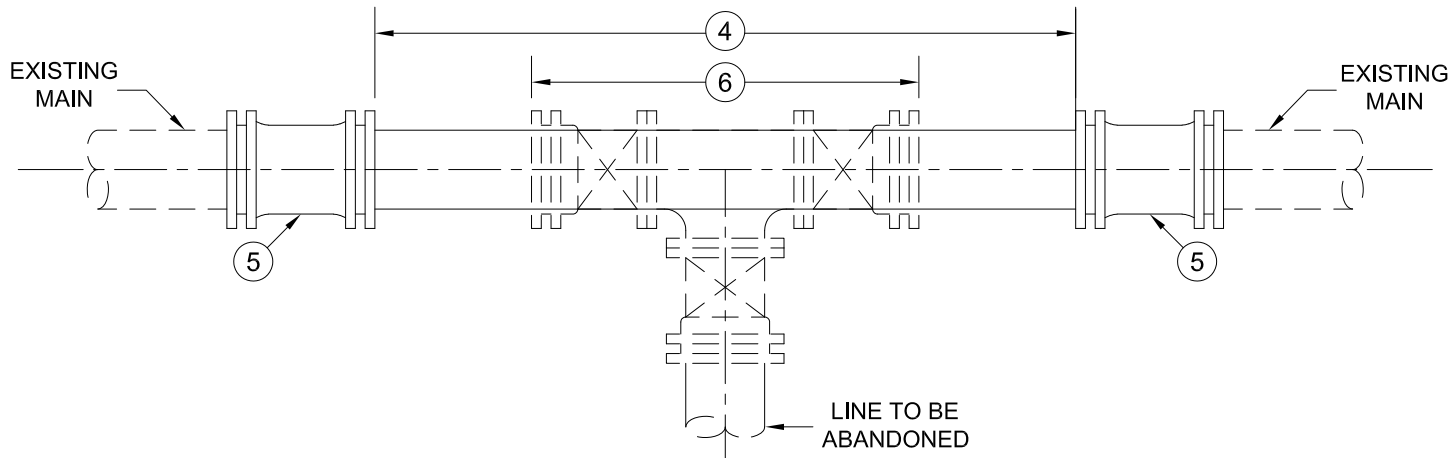
- ① FLG. D.I. TEE, MAIN SIZE X LATERAL SIZE FOR NEW MAIN INSTALLATION. SEE CHART FOR HOT TAPPING EXISTING MAIN.
- ② RESILIENT-SEATED GATE VALVE (FLG. X M.J.) PER DISTRICT STANDARD W-11.
- ③ D.I PIPE FOR NEW LATERAL OR MAIN. SEE NOTE 3 FOR PRESSURE AND THICKNESS CLASS.
- ④ RESTRAINT DEVICE. SEE DISTRICT STANDARD W-30 AND DISTRICT SPECIFICATIONS FOR REQUIREMENTS.
- ⑤ RESTRAINED FLEX COUPLING FOR DIP, ACP AND CIP. FIELD WELD FLANGE JOINT OR WELDED WEDDING BAND FOR STEEL AND CMLC
- ⑥ D.I PIPE, 18" MIN. SEE NOTE 3 FOR PRESSURE AND THICKNESS CLASS.
- ⑦ VALVE RISER AND COVER. PER DISTRICT STANDARD W-11.
- ⑧ LOCATING WIRE.

PIPE MATERIAL	HOT TAP METHOD
DUCTILE, CAST PVC*	FORD FTSS, MUELLER H-304SS, ROMAC SSTIII, SMITH-BLAIR 665
ACP*	MUELLER H-619, JCM 432, ROMAC SSTIII
STEEL	SEE DISTRICT STANDARD W-19
*SIZE X SIZE IS NOT PERMITTED ON ACP OR PVC*	

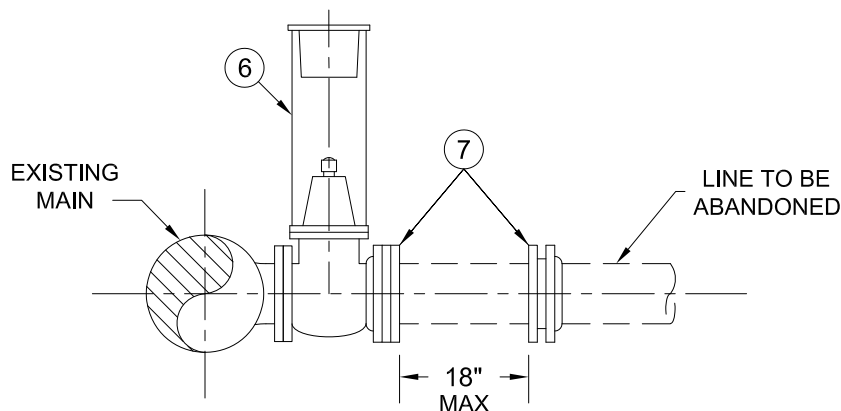
**NOTES:**

1. ALL D.I PIPE SHALL HAVE 8 MILL POLYWRAP PER DISTRICT SPECIFICATIONS.
2. A MINIMUM OF 24" OF PIPE SHALL BE BETWEEN EACH HOT TAP AND TEE FOR NEW AND EXISTING SERVICES.
3. PIPE 20" AND SMALLER SHALL BE CLASS 350 DUCTILE IRON PIPE. PIPE 24" AND LARGER SHALL BE THICKNESS CLASS 150, 10 GA CEMENT MORTAR LINED STEEL.
4. DEPTH OF COVER FOR WATER LATERALS SHALL BE 30" MIN. DEPTH OF COVER FOR 10" MAINS AND SMALLER SHALL BE 36" MIN. DEPTH OF COVER FOR 12" MAINS AND LARGER SHALL BE 42" MIN.
5. ALL WATER MAINS AND LATERALS SHALL BE INSTALLED IN PUBLIC RIGHT-OF-WAYS OR DEDICATED EASEMENTS APPROVED BY THE DISTRICT WITH A 7' OFFSET FROM CURB FACE.
6. ALL NEWLY INSTALLED LATERALS AND MAINS SHALL HAVE LOCATING WIRE INSTALLED AND TIED INTO EXISTING.
7. CONTRACTOR MUST EXPOSE 24" ON EITHER SIDE OF TAPPING SLEEVE TO ENSURE CLEARANCE FROM ADJACENT COLLARS AND PIPE JOINTS.
8. NEW MAINS AND LATERALS MUST HAVE A 10' HORIZONTAL SEPARATION FROM SEWER, 4' HORIZONTAL SEPARATION FROM STORM DRAIN AND 1' VERTICAL CLEARANCE FOR BOTH.

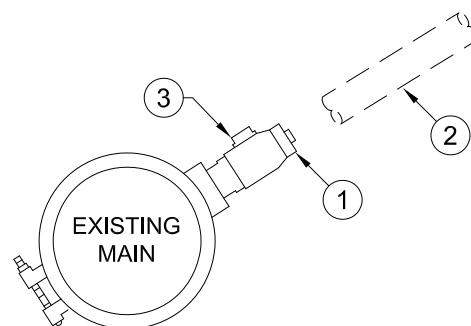
REVISIONS		WEST VALLEY WATER DISTRICT	NEW LATERAL INSTALLATION 3" AND LARGER	DRAWING NUMBER  W-28
DATE	BY			
09-2019	DG	APPROVED:  Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		



3" AND LARGER WATER SERVICE AND FITTING ABANDONMENT



3" AND LARGER ABANDONMENT AT VALVE



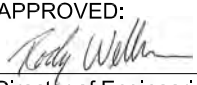
3/4" THROUGH 2" WATER SERVICE ABANDONMENT

**ITEM DESCRIPTION:**

- ① THREADED BRONZE CAP ON CORP STOP, FEMALE OR SOLDERED CAP.
- ② CUT AND REMOVE 12" OF SERVICE LATERAL. WHEN APPROVED BY DISTRICT, SERVICE CAN BE PLUGGED AND CRIMPED OVER.
- ③ CLOSE EXISTING CORP STOP.
- ④ INSTALL D.I PIPE, CUT TO FIT. (PIPE SIZE).
- ⑤ RESTRAINED FLEX COUPLING (PIPE SIZE).
- ⑥ CUT AND REMOVE EXISTING PIPE, VALVE, VALVE CAN, LID AND THRUST BLOCK AS REQUIRED.
- ⑦ D.I BLIND FLANGE AT VALVE OR M.J CAP ON 18" MAX PUB. SEE NOTE 6 FOR INSTRUCTIONS.

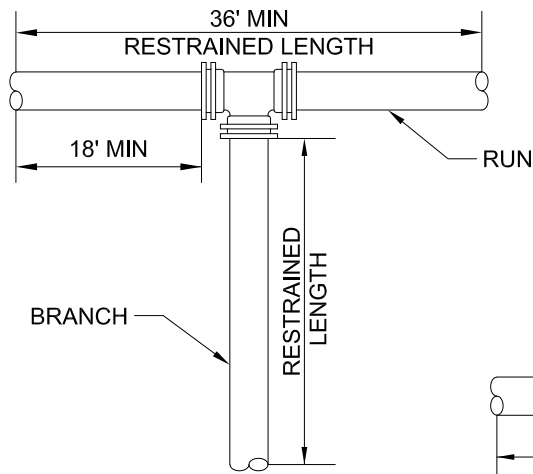
**NOTES:**

1. REMOVE APPURTENANCES AND RETURN METER AND BOX TO DISTRICT. FOR METERS REMOVED IN PARKWAY, BACKFILL WITH SELECT MATERIAL AND COMPACT TO = 85% DENSITY. FOR METERS REMOVED IN SIDEWALK, REPLACE SIDEWALK PER JURISDICTION'S STANDARDS TO NEAREST CONSTRUCTION JOINT.
2. DISTRICT ENGINEER OR INSPECTOR TO MAKE DETERMINATION OF APPROPRIATE MATERIALS TO USE AND HOW APPURTENANCES ARE ABANDONED.
3. IF EXISTING PIPE AND TEE ARE STEEL, USE FLEX COUPLINGS FOR RECONNECTION. IF EXISTING PIPE AND TEE ARE CAST OR DUCTILE IRON, USE D.I. M.J. SLEEVES OR RESTRAINED FLEX COUPLINGS.
4. THIS STANDARD DRAWING MAY BE USED FOR IN-LINE VALVE REMOVAL OR OTHER IN-LINE APPURTENANCES AS DIRECTED BY THE DISTRICT.
5. POT HOLE EXISTING WATER SERVICES AND TEE CONNECTIONS PRIOR TO CUTTING PIPE.
6. AN EXISTING FLANGE VALVE MAY BE REMOVED AND A BLIND FLANGE INSTALLED IF APPROVED BY THE ENGINEER. WHEN EXISTING FLANGE BOLTS ARE IN POOR CONDITION AND/OR THE EXISTING TEE JOINTS ARE CAULKED, THEN REMOVAL OF TEE AND VALVE IS REQUIRED PER W-29.
7. REPAIR OR REPLACE A.C PAVEMENT AND ROAD BASE IN ACCORDANCE WITH EXCAVATION PERMIT. BACKFILL AND COMPACT PER DISTRICT STANDARD W-1.

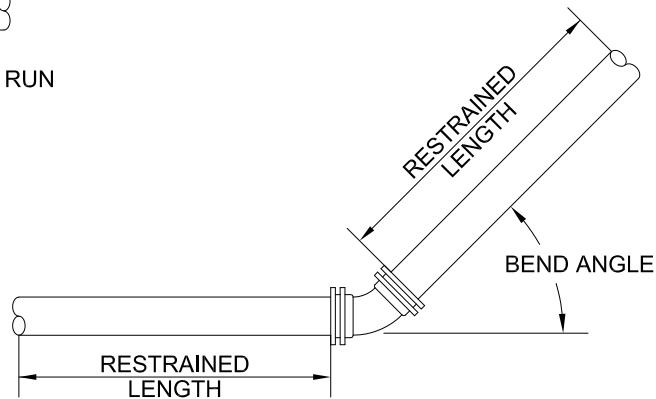
REVISIONS		WEST VALLEY WATER DISTRICT	
DATE	BY	APPROVED:	
09-2019	DG	 Director of Engineering	
07-2025	DG		
SCALE: NONE		July 2025	

## WATER SERVICE ABANDONMENT

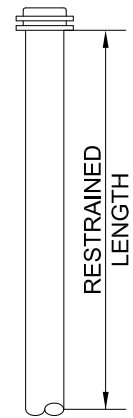
DRAWING NUMBER  
**W-29**



TEE



BEND



DEAD END

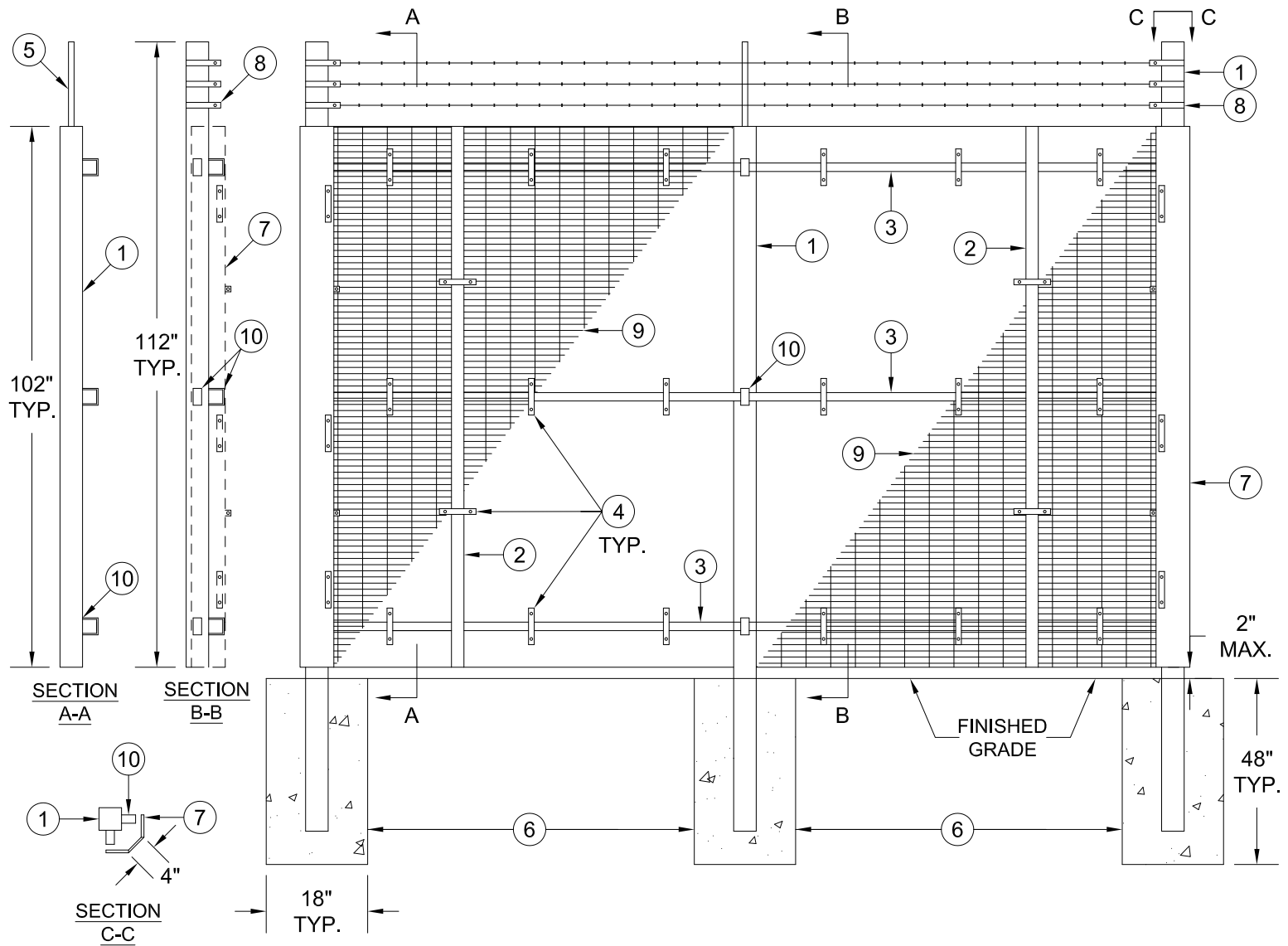
PIPE SIZE	11 1/4° BEND	22 1/2° BEND	45° BEND	90° BEND	TEE*	DEAD END
4"	2'	5'	10'	24'	11'	50'
6"	3'	7'	14'	34'	31'	70'
8"	4'	9'	18'	43'	51'	90'
10"	5'	10'	21'	52'	69'	109'
12"	6'	12'	25'	60'	86'	127'
16"	7'	15'	31'	75'	120'	161'

\*BRANCH LENGTH

NOTES:

- ALL DUCTILE IRON PIPE JOINTS, FITTINGS AND VALVES SHALL BE MECHANICALLY RETRAINED EXTERNALLY.
- DUCTILE IRON PIPE SHALL BE INTERNALLY RESTRAINED WITH PUSH-ON TYPE LOCKING GASKETS AS REQUIRED IN THE CHART ABOVE.
- USE THE FOLLOWING GUIDELINES WHEN OTHER PIPE JOINTS ARE WITHIN 10 FEET OF THE JOINT BEING RESTRAINED:
  - USE THE "DEAD END" LENGTH FOR CONNECTIONS TO ANY MATERIAL EXCEPT DUCTILE IRON AND CAST IRON.
  - USE THE "DEAD END" LENGTH WHEN ANOTHER PIPE JOINT IS WITHIN 10 FEET OF A BEND BEING RESTRAINED.
  - USE THE "90° BEND" LENGTH WHEN ANOTHER PIPE JOINT IS WITHIN 10 FEET OF A TEE BEING RESTRAINED.
- DIVIDE RESTRAINED LENGTH BY 0.85 FOR SILTY SOIL.
- THIS TABLE IS BASED ON THE ASSUMPTION THAT THE TRENCH IS BACKFILLED TO A MINIMUM DEPTH OF 2.5 FEET WITH A SILTY SAND WHICH HAS BEEN LIGHTLY COMPACTED.
- FOR PIPE DIAMETERS LARGER THAN 16", OR FOR CONDITIONS OTHER THAN THOSE DESCRIBED ABOVE, PLEASE REFER TO DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) GUIDELINES FOR CALCULATING RESTRAINED LENGTH. CALCULATIONS MUST BE SUBMITTED FOR APPROVAL.
- RESTRAINED LENGTH ON TEES ASSUMES THE SAME SIZE BRANCH AND RUN. TEES WHICH HAVE BRANCH DIAMETERS LESS THAN THE DIAMETER OF THE RUN MAY REQUIRE A SHORTER RESTRAINED LENGTH. CALCULATIONS MUST BE SUBMITTED JUSTIFYING A SHORTER RESTRAINED LENGTH.
- ALL PIPELINES LARGER THAN 16" DIAMETER REQUIRE RESTRAINED LENGTH CALCULATIONS INCLUDING SOILS REPORT.
- INSPECTOR SHALL DETERMINE IN THE FIELD IF ADDITIONAL RESTRAINTS, GASKETS OR THRUST BLOCKS WILL BE REQUIRED.

REVISIONS		WEST VALLEY WATER DISTRICT	RESTRAINED JOINT DETAIL	DRAWING NUMBER
DATE	BY			
09-2019	DG	APPROVED: 		W-30
07-2025	DG			
SCALE: NONE		Director of Engineering	July 2025	



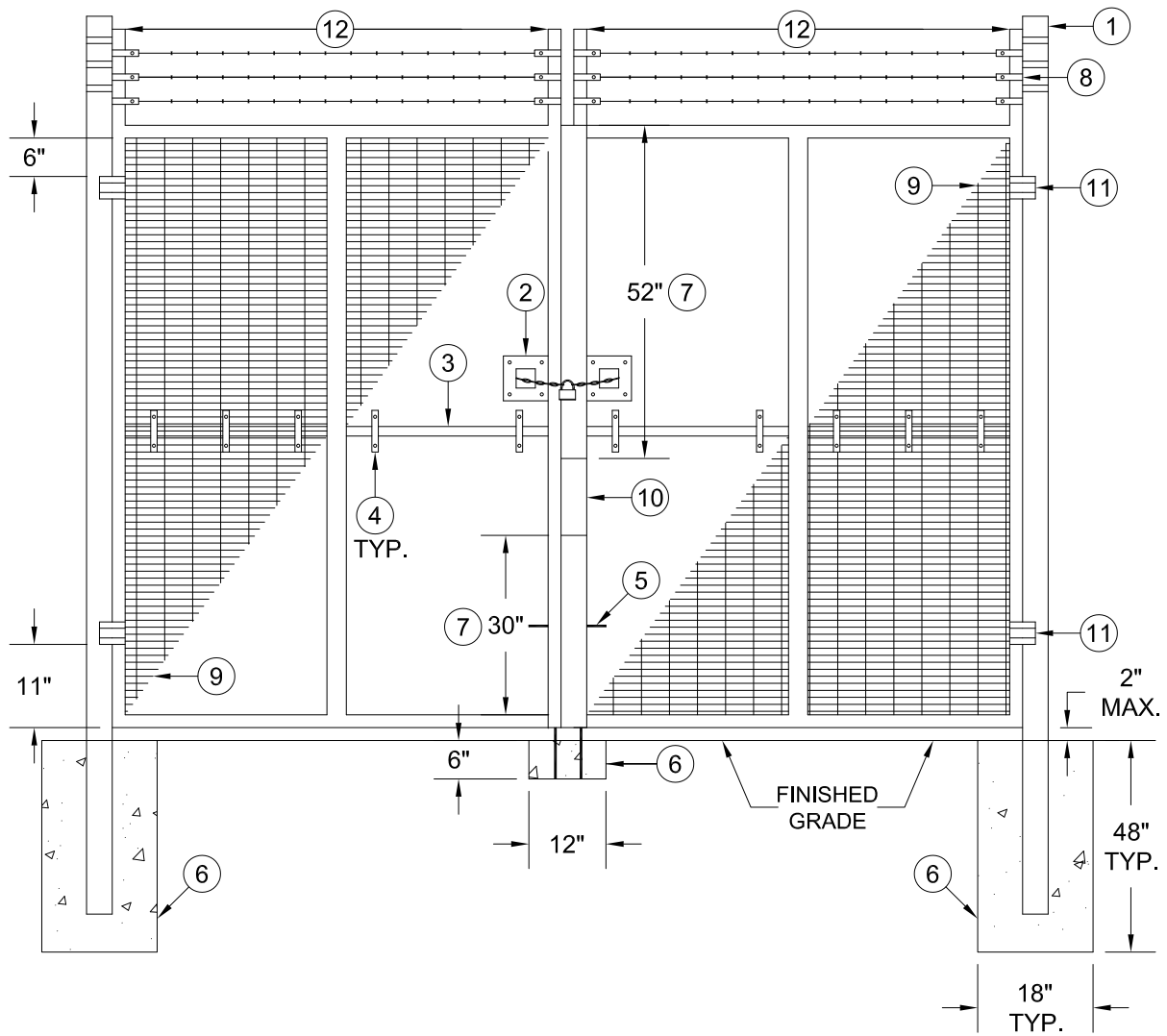
#### ITEM DESCRIPTION:

- ① GATE POST - 4" SQUARE TUBING WITH 1/4" WALL THICKNESS.
- ② VERTICAL SUPPORT MEMBER - 2-1/4" X 1/4" WALL THICKNESS.
- ③ HORIZONTAL RAIL 1-1/2" DIAMETER TUBING WITH 1/4" WALL THICKNESS.
- ④ WELDED WIRE MESH BRACKET - 6-1/2" X 1" WITH (2) SLOTS FOR 2" X 1/4" THREADED BOLTS.
- ⑤ COMBINATION POST TOP AND BARBED WIRE SUPPORTING ARM.
- ⑥ 5 - SACK CONCRETE (3/4" ROCK).
- ⑦ PROTECTIVE CORNER GUARD - 4" METAL PANEL WITH 1/4" WALL THICKNESS.
- ⑧ BRACE BAND FOR BARBED WIRE.
- ⑨ ANTI-CLIMB WELDED WIRE MESH FENCING PANELS WITH 3" X 1/2" OPENINGS.
- ⑩ HORIZONTAL SUPPORT BRACKET 2-1/2" X 1-1/2" X 2-1/2" WITH 1/4" WALL THICKNESS.

#### NOTES:

1. COATING - ALL METAL SURFACES SHALL BE POWDER COATED SEMI-GLOSS BLACK FINISH.
2. CORNER GUARD TO BE PLACED AT ALL (4) CORNERS OF GATE POSTS ON-SITE.

REVISIONS		WEST VALLEY WATER DISTRICT	WROUGHT IRON FENCE SECTION DETAIL	DRAWING NUMBER  W-31A
DATE	BY			
09-2019	DG	APPROVED:  <i>Rody Walker</i> Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		



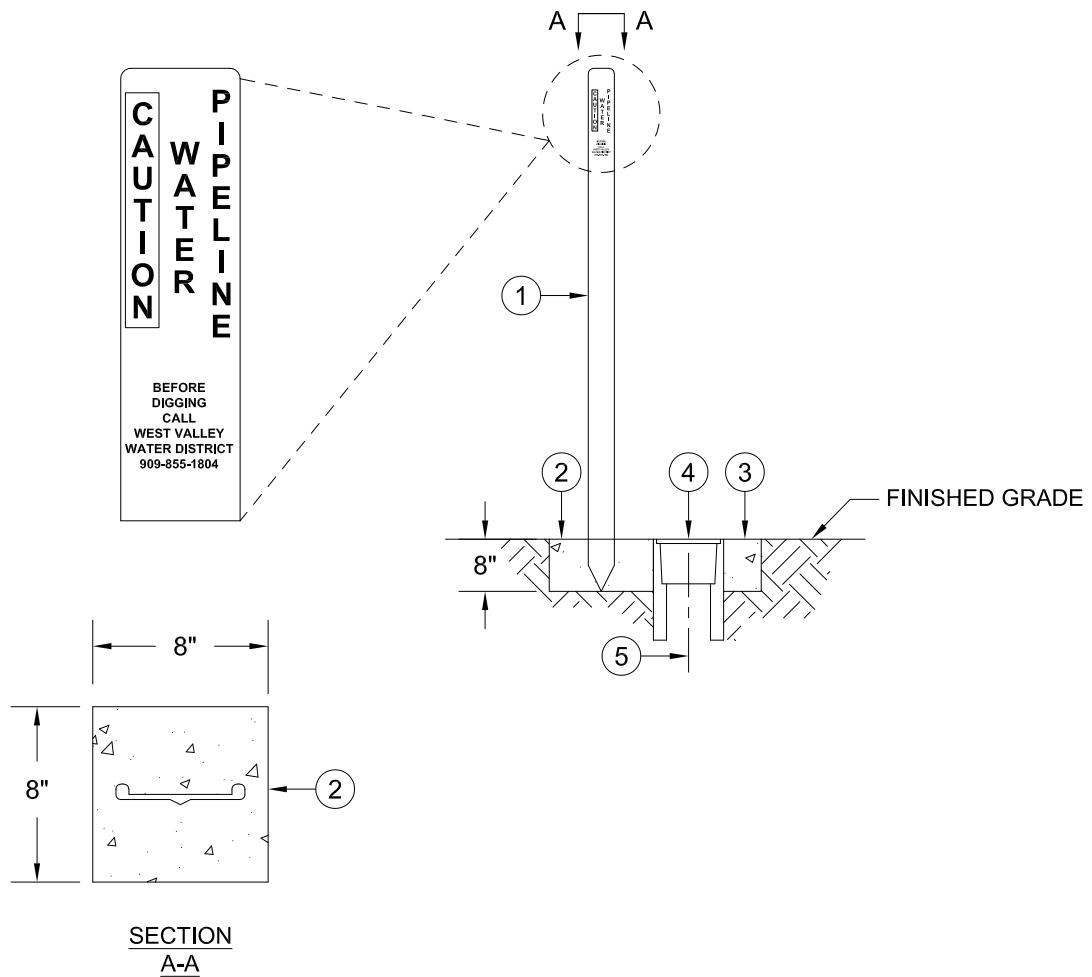
**ITEM DESCRIPTION:**

- ① GATE POST - 4" SQUARE TUBING WITH 1/4" WALL THICKNESS.
- ② 7" X 7" PANEL WITH 2" X 2" SQUARE OPENING FOR CHAIN LOCK COMBO.
- ③ HORIZONTAL RAIL 1-1/2" DIAMETER TUBING WITH 1/4" WALL THICKNESS.
- ④ WELDED WIRE MESH BRACKET - 6-1/2" X 1" WITH (2) SLOTS FOR 2" X 1/4" THREADED BOLTS.
- ⑤ 3/4" CENTER CATCH ROD SET IN CONCRETE (ON EACH SWING GATE).
- ⑥ 5 - SACK CONCRETE (3/4" ROCK).
- ⑦ (2) - 4" X 3" "L" SHAPED METAL PANEL WITH 1/4" WALL THICKNESS WELDED TO LEFT DOOR.
- ⑧ BRACE BAND FOR BARBED WIRE.
- ⑨ ANTI-CLIMB WELDED WIRE MESH FENCING PANELS WITH 3" X 1/2" OPENINGS.
- ⑩ HANDHOLE FOR CATCH ROD ACCESS
- ⑪ 3-1/2" BARREL HINGE WITH GREASE ZIRK - 2 PER GATE.
- ⑫ WROUGHT IRON DOOR PANEL - 70" WIDTH X 94" HEIGHT WITH 2" X 2" VERTICAL AND HORIZONTAL FRAMING MEMBERS AND 3" WIDTH VERTICAL CENTER SUPPORT MEMBER. (2) 15" POST TOPS ON EACH DOOR TO MOUNT BARBED WIRE. ALL WITH 1/4" WALL THICKNESS.

**NOTES:**

1. COATING - ALL METAL SURFACES SHALL BE POWDER COATED SEMI-GLOSS BLACK FINISH.
2. CORNER GUARD TO BE PLACED AT ALL (4) CORNERS OF GATE POSTS ON-SITE.

REVISIONS		WEST VALLEY WATER DISTRICT	WROUGHT IRON SWING GATE DETAIL	DRAWING NUMBER  W-31B
DATE	BY			
09-2019	DG	APPROVED:  <i>Rody Walker</i> Director of Engineering		
07-2025	DG			
SCALE: NONE		July 2025		



**ITEM DESCRIPTION:**

- ① CARSONITE UTILITY MARKER (CRM). MODEL 08-BLUE 66.
- ② 8" THICK X 8" X 8" CONCRETE FOOTING.
- ③ EXTEND CONCRETE FOOTING TO INCLUDE VALVE BOX WHEN APPLICABLE.
- ④ J&R CONCRETE VALVE BOX AND LID, MODELS V1-R AND V1-RT. PLACED EVERY 1,000 FT PER INSPECTORS DIRECTION WITH LOCATOR WIRE IN BOX.
- ⑤ LOCATOR WIRE.

**NOTES:**

1. ORDER CUSTOM UTILITY MARKER WITH DISTRICT CONTACT INFORMATION SHOWN CLEARLY. "BEFORE DIGGING CALL WEST VALLEY WATER DISTRICT 909-855-1804".
2. UTILITY MARKERS TO BE PLACED EVERY 200' CENTERED ALONG THE PIPE ALIGNMENT OR AS DIRECTED BY THE DISTRICT.
3. UTILITY MARKER TO BE SET AT DEPTH LINE SHOWN ON LOWER BASE OF MARKER.

REVISIONS		WEST VALLEY WATER DISTRICT	UTILITY MARKERS	DRAWING NUMBER
DATE	BY			
09-2019	DG	APPROVED:  Director of Engineering		W-32
07-2025	DG			
SCALE: NONE		July 2025		

W-2	Item/Description	Manufacturer	Part Number
FIRE HYDRANT ASSEMBLY	Fire Hydrant	Clow	F850 (Residential)
	Wet Barrel fire hydrant with 6" flange, 4" hose outlet and one 2-1/2" outlet	Clow	F860 (Commercial) Fontana, Jurupa, Rialto
	Break-Off Check Valve With 8-Hole drill pattern	Clow	LBI 400A
	Hydrant Bury	SIP	MJx Flg
	Mechanical Joint Inlet x Flange Outlet	South Bay Foundry	MJx Flg
	Valve Box and Lid for Locator Wire	J&R Concrete	V1-R - Box V1-RT - Lid
	Flange Hydrant Extensions 6" Break-Off Spool	SIP	Flg
	Braek Away Unit (For Repairs Only)	Hydrant Guard Clow	HG-2 (8-Hole) LP619

W-4 / W-5	Item/Description	Manufacturer	Part Number
Water Services 1" and 2"	Service Saddle Double strap service saddle with I.P.T outlet	Ford	FC202
		Mueller	DR2S
		Romac	202S
		Smith Blair	317
		For CMLC / Steel	See W-18
	Corp Stop I.P.T x P.J. All valves must be 360 turn less stop	Ford	1" - B84-444-NL-R 2" - B84-777-NL-R
		Mueller	1" - P25028N-3 2" - P25122N-3
	2" Square Operating Nut Adaptor	Ford	QT67
		Mueller	B20299
	Copper Water Service Per ASTM B-88	Type K	1" and 2"
	Angle Meter Valve PJ x Meter Swivel Nut for 1" PJ x Meter Flange for 2" All valves must be 360 turn less stop	Ford	1" - BA43-444WR-NL 2" - BFA43-777WR-NL
		Mueller	1" - P24258N-3 2" - P24276N-3
		Ford	1" - B13-444WR-NL 2" - B13-777WR-NL
	Customer Ball Valve with Handle Supplied by District	Mueller	1" - B24351-3 2" - B24337N-3
		Oldcastle Precast	1" - FL 12 Box 2" - FL 36T Box
	Meter Box Supplied by District	Oldcastle Precast	1" - FL 12 Box 2" - FL 36T Box

W-6A/B	Item/Description	Manufacturer	Part Number
Air Valve 1", 2", 4", 6"	Air Valve Assembly 1" and 2"	A.R.I	D040-6
	Air Valve Assembly 4" and 6"	A.R.I	D-060 - Screen Model
	Polyethylene Enclosure Sandstone Color	Pipeline Products	1" and 2" - VCAS-1830 4" and 6" - VCAS-2436
	Break-Away Unit	Hydrant Guard	HG-2 (8-Hole)
	Ball Valve (F.I.P x M.I.P) 1" and 2"	Ford Mueller	FB1700-NL B-20285N

W-7A	Item/Description	Manufacturer	Part Number
4" and 6" Blow-Off Assembly	Blow-Off Enclosure	Oldcastle Precast	Heavy Wall 1416-18 with Flush Solid Lid

W-7B / W-8B	Item/Description	Manufacturer	Part Number
Blow-Off and Dead-End Wharf Head	Wharf Head With Cap and Chain 4" x 2-1/2"	Jones	J-344HP
	Polyethylene Enclosure Sandstone Color	Pipeline Products	VCAS-2436

W-8C	Item/Description	Manufacturer	Part Number
Automatic Dead-End Flush-Out	Automatic Flushing Valve	Kupferle	1" - Eclipse 9400WCA 2" - Eclipse 9400WC 3" - Eclipse 9400WC-3

W-9	Item/Description	Manufacturer	Part Number
Water Services 3" and Larger	Resilient-Seated Gate Valve with Hand Wheel and NRS	Clow Mueller	F-6102 A-2362
	Adjustable Pipe Saddle	Pipeline Products	PS-100-S
	Meter Cage	ALL-Spec or Guard Shack	Clam Shell Type

W-11	Item/Description	Manufacturer	Part Number
Valve and Valve Box Material	Locating Wire	Copper Head	1430-HS (Blue)
	8" Cast Iron Cover	Alhambra Foundry	29608
		South Bay Foundry	8" Gate Cap
	Galvanized Steel Slip Can 8" OD x 12GA x 18" Length	R.K Industries	Steel Slip Can
	Resilient Wedge Gate Valve CS09	Mueller	A-2362
	FlgxFig, FlgXMJ, MJxMJ	Clow	2639
	Butterfly Valve CS04 - Class 150B & 250B FlgxFig, FlgXMJ, MJxMJ	Mueller	Linesal III
	Utility Marker for unimproved areas	Clow	4500
		Carsonite	CRM 08-Blue 66
	Valve Stem Extension	Pipeline Products	SK-900
	Riser Pipe	C900 or SDR 35	8" PVC

REVISIONS		WEST VALLEY WATER DISTRICT	APPROVED:	APPROVED MATERIAL LIST	DRAWING NUMBER  W-33A
DATE	BY				
07-2025	AN				
SCALE: NONE		Director of Engineering	July 2025		



W-15	Item/Description	Manufacturer	Part Number
Fire Service	Double Check Detector Assembly (DCDA)	Wilkins, Febco, Apollo, Ames	AWWA and USC approved Device
	Reduced Pressure Detector Assembly (RPDA) (Type II Devices Prohibited)		
	Adjustable Pipe Support	Pipeline Products	PS-100-S
	Paint and Primer	Rust-oleum	Red
W-20	Item/Description	Manufacturer	Part Number
Backflow Preventer	Reduced Pressure Principle Assembly (RP)	Wilkins, Febco, Apollo, Ames	AWWA and USC approved Device
	Paint and Primer	Rust-oleum	Hunter Green
	Backflow Cage	ALL-Spec or Guard Shack	Hinged Type
W-21	Item/Description	Manufacturer	Part Number
Sample Station	Sample Station (See Standard W-4 for service connection material)	American - MC Sample Station	EZ-01 - 44" Model Color RAL 6017
W-22	Item/Description	Manufacturer	Part Number
Pressure Regulation Valve	Pressure Reducing Valve with anti-cavitation trim (Flp/Fig)	Cla-Val	690-01
	Adjustable Pipe Support	Pipeline Products	PS-100-S
	Paint and Primer	Rust-oleum	Hunter Green
	1" Ball Valve	Ford	B11-444M-NL
	with 360 degree turn less stop	Mueller	B-20200-3N
	Pressure Gauge	Cla-Val	X141
	Cage/Enclosure	All-Spec or Guard Shack	Clam Shell Type
	Resilient-Seated Gate Valve with Hand Wheel and NRS	Clow Mueller	F-6102 A-2362
W-28	Item/Description	Manufacturer	Part Number
New Lateral Installation 3" and Larger	Ductile Iron, Cast Iron, PVC (size x size is not permitted on ACP or PVC)	Ford	FT55
		Mueller	H-30455
		Romac	SSTIII
		Smith-Blair	665
	ACP	Mueller	H-619
		JCM	432
		Romac	SSTIII
		Tapping Outlet	See W-18 or W-19
W-32	Item/Description	Manufacturer	Part Number
Utility Marker	Utility Marker for unimproved areas	Carsonite	CRM 08-Blue 66
	Valve Box and Lid for Locator Wire	J&R Concrete	V1-R - Box V1-RT - Lid

Item/Description	Manufacturer	Specifications
Ductile Iron Fittings Flanged	Star Pipe	Material: ASTM A536
	Sigma	Testing: ANSI/AWWA C110/A21.10 - 250 PSI Rating
	Tyler/Union	Drilling: ANSI/AWWA C153/A21.53 ANSI B16.1 Class 125 Flange
	SIP Industries	Coating/Lining: ANSI/AWWA C104/A21.4

Item/Description	Manufacturer	Specifications
Ductile Iron Fittings Mechanical Joint	Star Pipe	Material: ASTM A536
	Sigma	Testing: ANSI/AWWA C153/A21.53 - 350 PSI Rating
	Tyler/Union	Flanges: ANSI/AWA C115/A21.15 and ANSI B16.1 Class 125 Flange
	SIP Industries	Coating/Lining: ANSI/AWWA C104/A21.4 and ANSI C153/A21.53

Item/Description	Manufacturer	Product
Ductile Iron Fittings Mechanical Joint Restraint Systems	EBAA Iron, Inc	Megalug Series 1100
	SIP Industries	EZ-Grip
	Star Pipe	Stargrip

Item/Description	Manufacturer	Product
Polywrap 8-Mil Minimum	Christy's	Clear
	Northtown Company	Clear

Item/Description	Manufacturer	Product
Ring Gaskets Pipe 18" and Smaller 1/16" and 1/8" for Larger	Tripac Teadit	NA1001
	ITP	NA1006

Item/Description	Manufacturer	Product
Tracer Wire	Copper Head	HS 1230

Item/Description	Manufacturer	Product
Hex Bolts and Nuts (Hexagon Head Bolts/Nuts ANSI B1.1) Grade A with Low Carbon Steel	Tripac	A 307 - Zinc Plated
	Pacific Coast Bolt	316 SS - Stainless Steel
	ITP	A 307 - Zinc Plated

Item/Description	Manufacturer	Restraint Gasket
Ductile Iron Pipe Class 350 for 4" to 12" and Class 250 for 14" to 20" Class 200 for 24" and Class 150 for 30"	US Pipe	Field Lok
	Mc Wane	Sure Stop
	American Ductile Iron	Fast Grip

Item/Description	Manufacturer	Product
CMLC Pipe AWWA C200 10 Guage Pipe	West Coast Pipe	Cement Mortar
	Southland Pipe	Coating C205

Item/Description	Manufacturer	Product
Blue Warning Tape	Christy's	6" Wide 4.5 Mil
	Northtown Company	6" Wide 5 Mil

Item/Description	Manufacturer	Product
Restrained Couplings	Hymax	Grip Restrained
	Romac	Alpha or 501
	Smith Blair	442

Item/Description	Manufacturer	Product
Flange Coupling Adaptors	Ford	FC2W
	Romac	FCA501
	Smith Blair	912

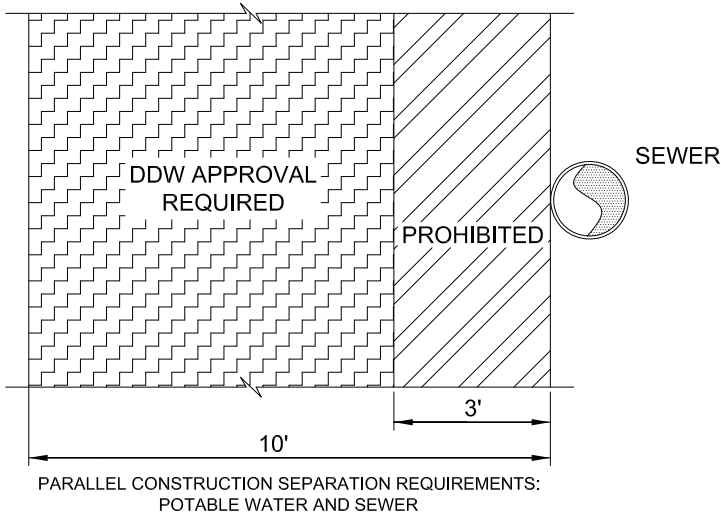
REVISIONS		WEST VALLEY WATER DISTRICT	APPROVED:	APPROVED MATERIAL LIST	DRAWING NUMBER
DATE	BY				
07-2025	AN				
SCALE: NONE		Director of Engineering	July 2025		W-33B





# DDW BLANKET WAIVERS

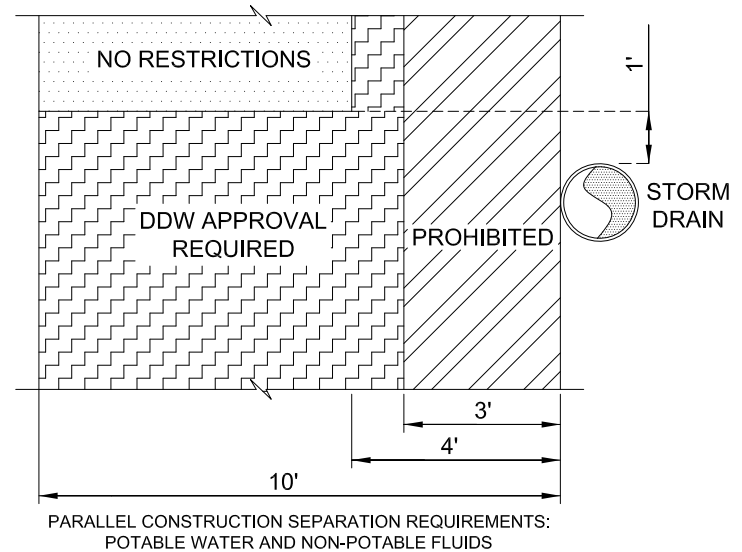
### CASE A FINISHED SURFACE



#### NOTES

- PORTABLE WATER MAINS SHALL NOT BE INSTALLED IN THE SAME TRENCH AS, AND SHALL BE AT LEAST 10 FEET HORIZONTALLY FROM AND ONE FOOT VERTICALLY ABOVE, ANY PARALLEL PIPELINE CONVEYING:
  - UNTREATED SEWAGE.
  - PRIMARY OR SECONDARY TREATED SEWAGE.
  - DISINFECTED SECONDARY RECYCLED WATER.
  - HAZARDOUS FLUIDS SUCH AS FUELS, INDUSTRIAL WASTES AND WASTEWATER SLUDGE.

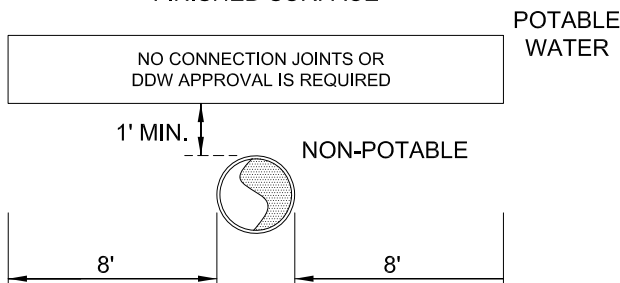
### CASE B FINISHED SURFACE



#### NOTES

- PORTABLE WATER MAINS SHALL NOT BE INSTALLED IN THE SAME TRENCH AS, AND SHALL BE AT LEAST 4 FEET HORIZONTALLY FROM AND ONE FOOT VERTICALLY ABOVE, ANY PARALLEL PIPELINE CONVEYING:
  - STORM DRAIN.
  - RAW WATER TO BE TREATED FOR DRINKING PURPOSES.
  - DISINFECTED TERTIARY RECYCLED WATER.
- VERTICAL SEPARATION IN CASE B IS REQUIRED WHEN THE HORIZONTAL SEPARATION IS LESS THAN 10 FEET.

### CASE C FINISHED SURFACE



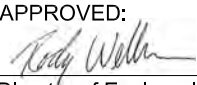
PERPENDICULAR (CROSSING) CONSTRUCTION SEPARATION  
REQUIREMENTS: POTABLE WATER AND SEWER/NON-POTABLE FLUIDS

#### NOTES

- IF A POTABLE WATER MAIN CROSSES A PIPELINE CONVEYING A FLUID LISTED IN CASE A OR CASE B, THE POTABLE WATER MAIN SHALL BE CONSTRUCTED NO LESS THAN 45-DEGREES TO AND AT 1-FOOT ABOVE THAT PIPELINE.
- NO CONNECTION JOINTS SHALL BE MADE IN THE POTABLE WATER MAIN WITHIN 8 HORIZONTAL FEET ON EITHER SIDE OF THE NON-POTABLE FLUID PIPELINE (OUTSIDE WALL-TO-OUTSIDE WALL MEASUREMENT).

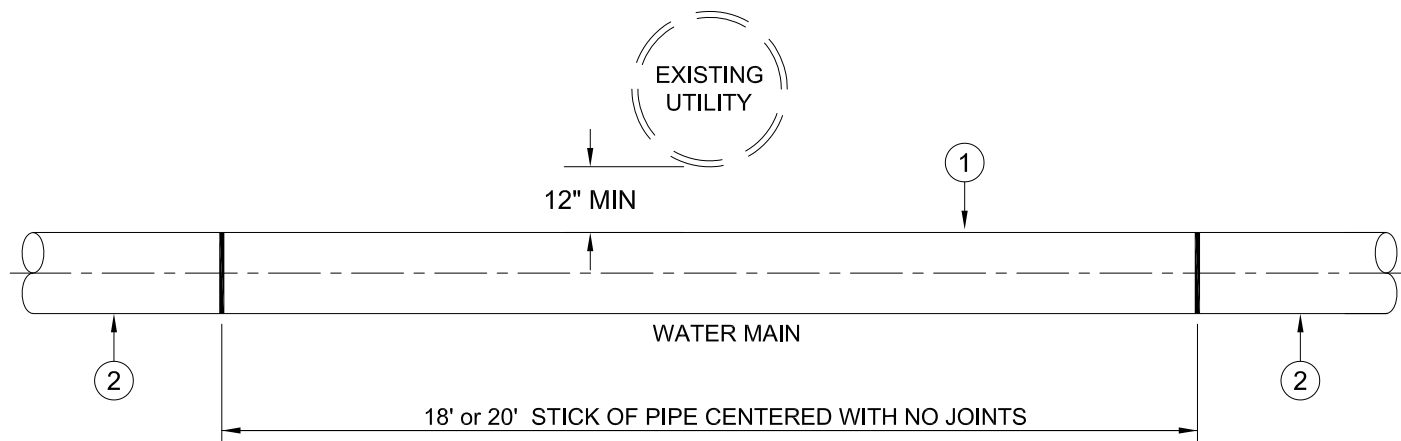
#### NOTES:

- APPLICATION OF THIS STANDARD DRAWING SHALL COMPLY WITH THE CALIFORNIA WATERWORKS STANDARDS (CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 22, DIVISION 4, CHAPTER 16, SECTION 64572), WHICH ESTABLISH CRITERIA FOR THE SEPARATION OF WATER MAIN FROM NON-POTABLE PIPELINES.
- ANY PROPOSED ALTERNATIVE TO THESE MINIMUM SEPARATION STANDARDS REQUIRE CALIFORNIA STATE BOARD DIVISION OF DRINKING WATER (DDW) AND A WRITTEN WAIVER/APPROVAL SHALL BE OBTAINED AS DIRECTED BY THE STATE BOARD PRIOR TO IMPLEMENTATION OF ANY ALTERNATIVE.
- THE MINIMUM SEPARATION DISTANCE SET FORTH IN THESE STANDARDS SHALL BE MEASURED FROM THE NEAREST OUTSIDE EDGE OF EACH PIPE BARREL.
- POTABLE WATER MAINS SHALL NOT BE INSTALLED WITHIN 100 HORIZONTAL FEET OF THE NEAREST EDGE OF ANY SANITARY LANDFILL, WASTEWATER DISPOSAL POND, OR HAZARDOUS WASTE DISPOSAL SITE, OR WITHIN 25 FEET HORIZONTAL FEET OF THE NEAREST EDGE OF CESSPOOL, SEPTIC TANK, SEWAGE LEACH FIELD, SEEPAGE PIT, UNDERGROUND HAZARDOUS METAL STORAGE TANK, OF GROUNDWATER RECHARGE PROJECT SITE.
- NON-POTABLE FLUIDS AND SEWER LATERALS SHALL CROSS BELOW ALL POTABLE WATER MAINS.

REVISIONS		WEST VALLEY WATER DISTRICT	
DATE	BY	APPROVED:	
07-2025	RMG		
		Director of Engineering	
SCALE: NONE		July 2025	

## TYPICAL SEPARATION POTABLE & NON-POTABLE

DRAWING NUMBER  
**BW-00**



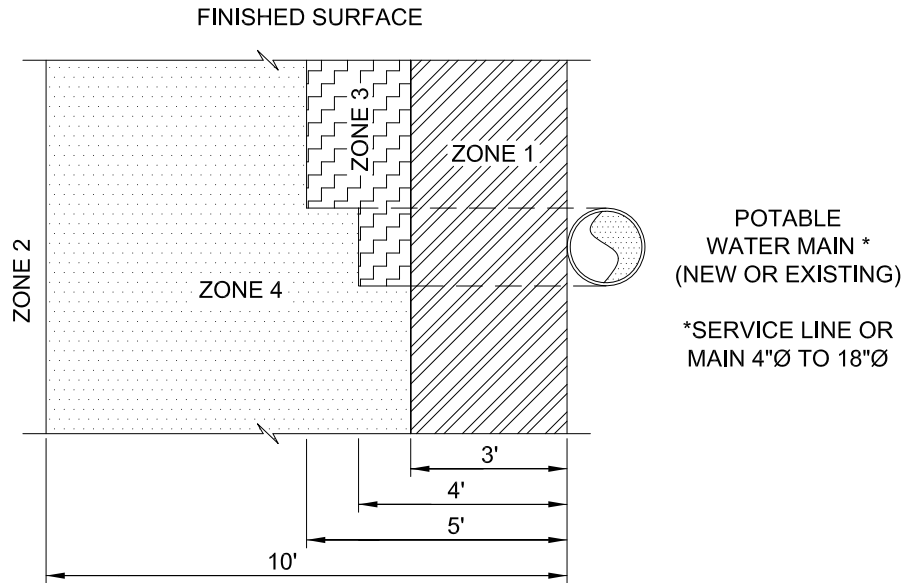
**ITEM DESCRIPTION:**

- ① CEMENT MORTAR LINE AND COATED STEEL PIPE, 10 GA, CLASS 150, FULLY WELDED. UPGRADED PIPE MATERIAL.
- ② DUCTILE IRON PIPE. STANDARD PIPE MATERIAL.

**NOTES:**

1. ONLY TO BE USED UPON APPROVAL BY THE GENERAL MANAGER OR DISTRICT ENGINEER OF WEST VALLEY WATER DISTRICT, OR DESIGNEE, AND WHERE CONDITIONS DO NOT ALLOW FOR THE MINIMUM VERTICAL SEPARATION AS SPECIFIED IN THE CALIFORNIA WATERWORKS STANDARDS, TITLE 22, DIVISION 4, CHAPTER 16, SECTION 64572 WATER MAIN SEPARATIONS.
2. MINIMUM 12" CLEARANCE IS REQUIRED BETWEEN OUTER WALL OF WATER MAIN AND OUTER WALL OF CONFLICTING UTILITY. PIPES SHALL BE INSTALLED WITH AS MUCH SEPARATION AS FIELD CONDITIONS ALLOW.
3. USE OF AN INSULATING FLANGE KIT GASKET SHALL BE REQUIRED FOR USE OF DISSIMILAR METALS. THE GASKET SHALL BE FULL FACED TYPE "E" WITH PHENOLIC O-RING.
4. A DDW WAIVER WILL BE REQUIRED FOR THE USE OF BW - 01. REFER TO ALTERNATIVE BLANKET WAIVERS BW - 02 THROUGH BW - 09 WHERE CONDITIONS DO NOT ALLOW TO ACHIEVE THE WATER MAIN SEPARATION CRITERIA IN ACCORDANCE WITH THE WATERWORKS STANDARDS.

REVISIONS		WEST VALLEY WATER DISTRICT		DRAWING NUMBER	
DATE	BY	APPROVED:		BW-01	
07-2025	RMG				
		 Director of Engineering		<b>WATER MAIN SEPARATION WITH MATERIAL UPGRADE</b>	
SCALE: NONE		July 2025			



#### NEW SANITARY SEWER OR STORM DRAIN ALTERNATE INSTALLATION ZONES

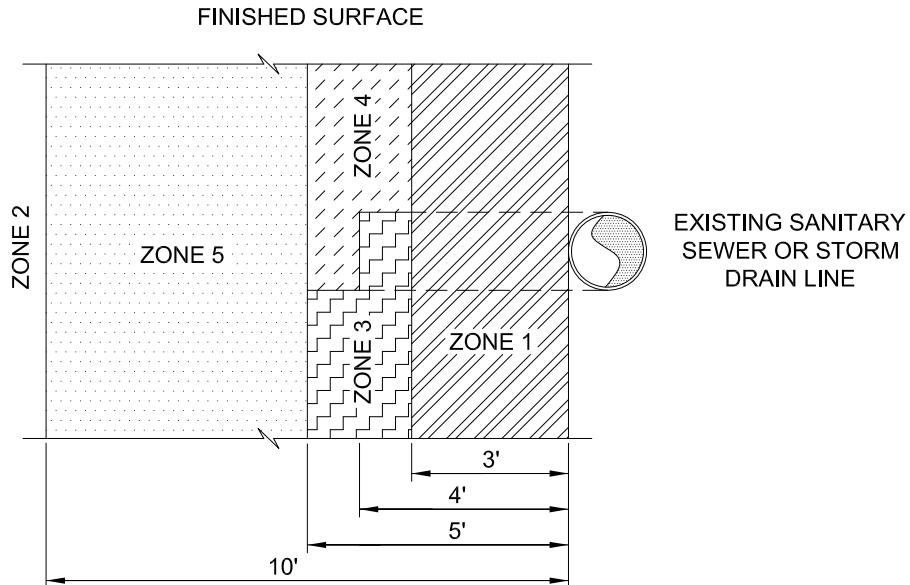
- ZONE 1: PROHIBITED ZONE, NO INSTALLATION ALLOWED.
- ZONE 2: NO SPECIAL REQUIREMENTS FOR INSTALLATION.
- ZONE 3: STORM DRAIN LINES ALLOWED PER THE FOLLOWING REQUIREMENTS: PIPE SHALL BE BELL AND SPIGOT RESTRAINED JOINT SYSTEM; CLASS III, IV OR V REINFORCED CONCRETE (RCP) OR TYPE S SMOOTH INTERIOR WALL, CORRUGATED EXTERIOR WALL HIGH DENSITY POLYETHYLENE (HDPE). ALL JOINTS SHALL BE WATERTIGHT RUBBER GASKETED TYPE UNLESS OTHERWISE APPROVED BY WEST VALLEY WATER DISTRICT. WHERE OTHER JOINT TYPES ARE APPROVED, A WATERTIGHT SEAL SHALL STILL BE REQUIRED. RCP CLASS SHALL BE DETERMINED BY WEST VALLEY WATER DISTRICT FOR EACH SPECIFIC INSTALLATION. JOINTS SHALL BE MINIMIZED AS MUCH AS POSSIBLE.
- ZONE 4: SANITARY SEWER LINES ALLOWED PER THE FOLLOWING REQUIREMENTS: SANITARY SEWER PIPE SHALL BE BELL AND SPIGOT; ASTM D3034 COMPLIANT SDR26 PVC; AWWA C900 PVC; RCP AWWA C302-74; DUCTILE IRON PIPE (DIP) WITH AN APPROVED EPOXY LINING. MATERIAL USES SHALL ALSO COMPLY WITH ALL APPLICABLE WEST VALLEY WATER DISTRICT STANDARDS. NO SPECIAL REQUIREMENTS FOR STORM DRAIN INSTALLATION.

#### NOTES:

- ONLY TO BE USED UPON APPROVAL BY THE GENERAL MANAGER OR DISTRICT ENGINEER OF WEST VALLEY WATER DISTRICT, OR DESIGNEE, AND WHERE CONDITIONS DO NOT ALLOW FOR THE MINIMUM VERTICAL SEPARATION AS SPECIFIED IN THE CALIFORNIA WATERWORKS STANDARDS, TITLE 22, DIVISION 4, CHAPTER 16, SECTION 64572 WATER MAIN SEPARATIONS.
- DIMENSIONS SHOWN ARE MINIMUMS, PIPES SHALL BE INSTALLED WITH AS MUCH SEPARATION AS FIELD CONDITIONS ALLOW.
- ALL FITTINGS AND/OR CONNECTIONS TO PIPES SHALL COMPLY WITH WEST VALLEY WATER DISTRICT STANDARDS AND THIS ALTERNATIVE BLANKET WAIVER.

REVISIONS		WEST VALLEY WATER DISTRICT	NEW SEWER/STORM DRAIN PARALLEL TO WATER MAIN	DRAWING NUMBER
DATE	BY			APPROVED:  Director of Engineering
07-2025	RMG			
SCALE: NONE		July 2025		

## NEW SEWER/STORM DRAIN PARALLEL TO WATER MAIN



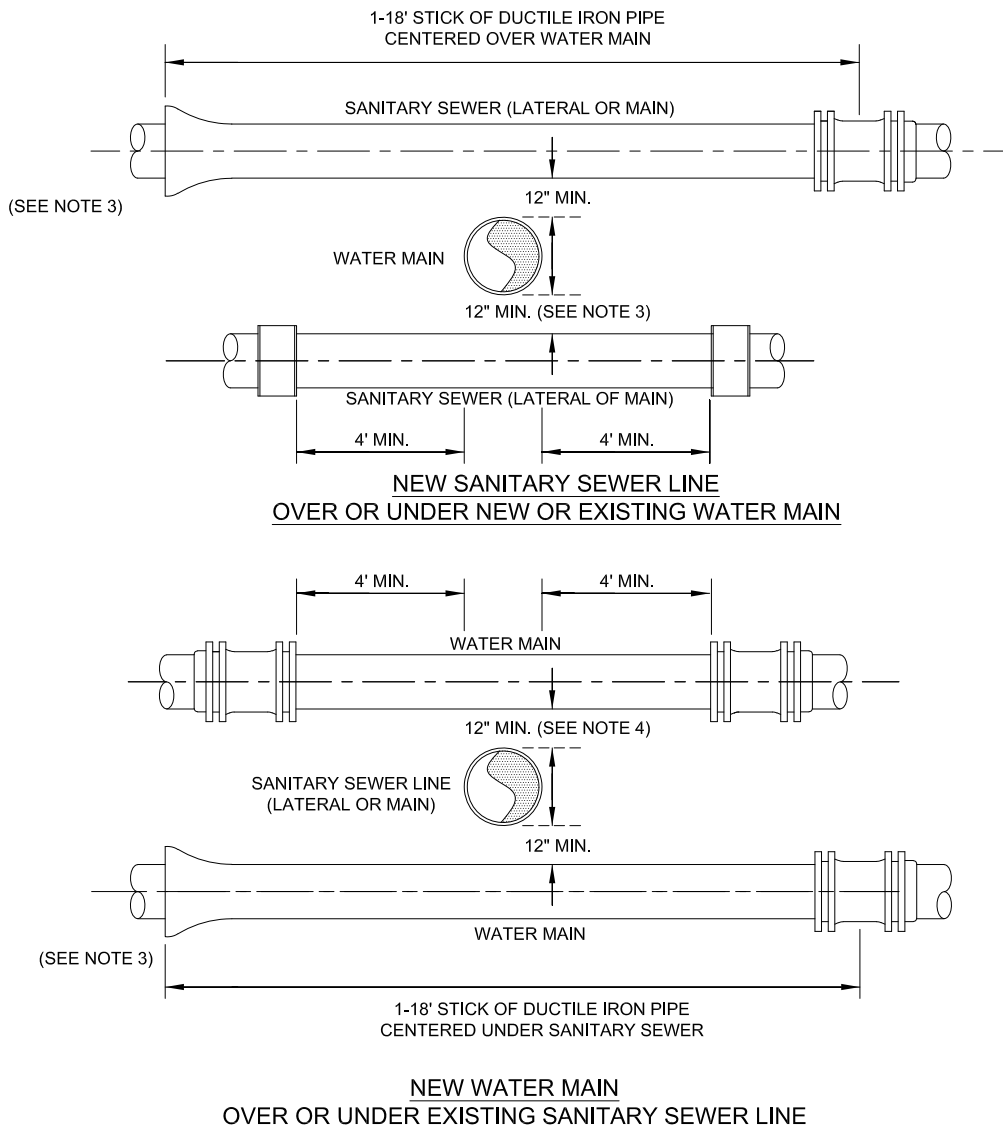
**NEW POTABLE WATER MAIN\* ALTERNATE INSTALLATION ZONES**  
**SERVICE LINE OR MAIN 4"Ø TO 18"Ø**

- ZONE 1: PROHIBITED ZONE, NO INSTALLATION ALLOWED.
- ZONE 2: NO SPECIAL REQUIREMENTS FOR INSTALLATION. NEW WATER MAIN SHALL BE DUCTILE IRON PIPE (DIP).
- ZONE 3: WATER MAIN ONLY ALLOWED IF EXISTING LINE IS STORM DRAIN. NEW WATER MAIN SHALL BE; CEMENT-MORTAR LINED AND COATED (CML&C) STEEL PIPE 10 GAUGE; OR WITH SPECIAL APPROVAL BY WEST VALLEY WATER DISTRICT.
- ZONE 4: NEW WATER MAIN SHALL BE; CEMENT-MORTAR LINED AND COATED (CML&C) STEEL PIPE 10 GAUGE; OR WITH SPECIAL APPROVAL BY WEST VALLEY WATER DISTRICT.
- ZONE 5: NEW WATER MAIN SHALL BE; CEMENT-MORTAR LINED AND COATED (CML&C) STEEL PIPE 10 GAUGE; OR WITH SPECIAL APPROVAL BY WEST VALLEY WATER DISTRICT.

**NOTES:**

- ONLY TO BE USED UPON APPROVAL BY THE GENERAL MANAGER OR DISTRICT ENGINEER OF WEST VALLEY WATER DISTRICT, OR DESIGNEE, AND WHERE CONDITIONS DO NOT ALLOW FOR THE MINIMUM VERTICAL SEPARATION AS SPECIFIED IN THE CALIFORNIA WATERWORKS STANDARDS, TITLE 22, DIVISION 4, SECTION 64572 WATER MAIN SEPARATIONS.
- DIMENSIONS SHOWN ARE MINIMUMS, PIPES SHALL BE INSTALLED WITH AS MUCH SEPARATION AS FIELD CONDITIONS ALLOW.
- ALL FITTINGS AND/OR CONNECTIONS TO WATER MAIN SHALL BE RESTRAINED JOINT OR WELDED JOINTS WITH A MINIMUM PRESSURE RATING OF 250 PSI, AND SHALL OTHERWISE COMPLY WITH WEST VALLEY WATER DISTRICT STANDARDS, AND THIS ALTERNATIVE BLANKET WAIVER.

REVISIONS		WEST VALLEY WATER DISTRICT	NEW WATER MAIN PARALLEL TO SEWER/STORM DRAIN	DRAWING NUMBER
DATE	BY			APPROVED:  Director of Engineering
07-2025	RMG			
SCALE: NONE		July 2025		



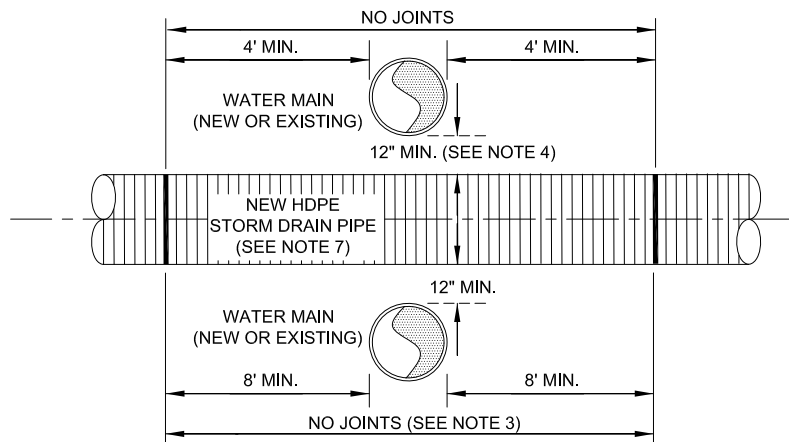
**NOTES:**

1. ONLY TO BE USED UPON APPROVAL BY THE GENERAL MANAGER OR DISTRICT ENGINEER OF WEST VALLEY WATER DISTRICT, OR DESIGNEE, AND WHERE CONDITIONS DO NOT ALLOW FOR THE MINIMUM VERTICAL SEPARATION AS SPECIFIED IN THE CALIFORNIA WATERWORKS STANDARDS, TITLE 22, DIVISION 4, CHAPTER 16, SECTION 64572 WATER MAIN SEPARATIONS.
2. THIS ALTERNATE INSTALLATION APPLIES ONLY TO WATER MAINS LESS THAN 24"Ø. ALL CROSSINGS OF 24"Ø AND LARGER WATER MAINS MUST BE APPROVED BY WEST VALLEY WATER DISTRICT.
3. WHERE THE SANITARY SEWER LINE CROSSES BELOW THE WATER AND THERE IS 1' OR MORE VERTICAL CLEARANCE NO SPECIAL INSTALLATION IS REQUIRED.
4. TRANSITIONS BETWEEN PIPES SHALL BE MADE WITH ADOPTERS. WHERE MATERIAL ALLOWS, ALL CONNECTIONS SHALL BE MADE WITH RIGID COUPLINGS OR TRANSITION ADAPTERS. WHERE FLEXIBLE COUPLERS ARE ALLOWED TO COUPLE SEWER PIPE, THEY SHALL BE EQUIPPED WITH CONTINUOUS SLEEVES AND TIGHTENING BONDS. MATERIAL SUBMITTAL REQUIRED FOR ALL COUPLERS.
5. ALL NEW DUCTILE IRON SHALL BE WRAPPED IN POLYETHYLENE PER WEST VALLEY WATER DISTRICT SPECIFICATIONS.

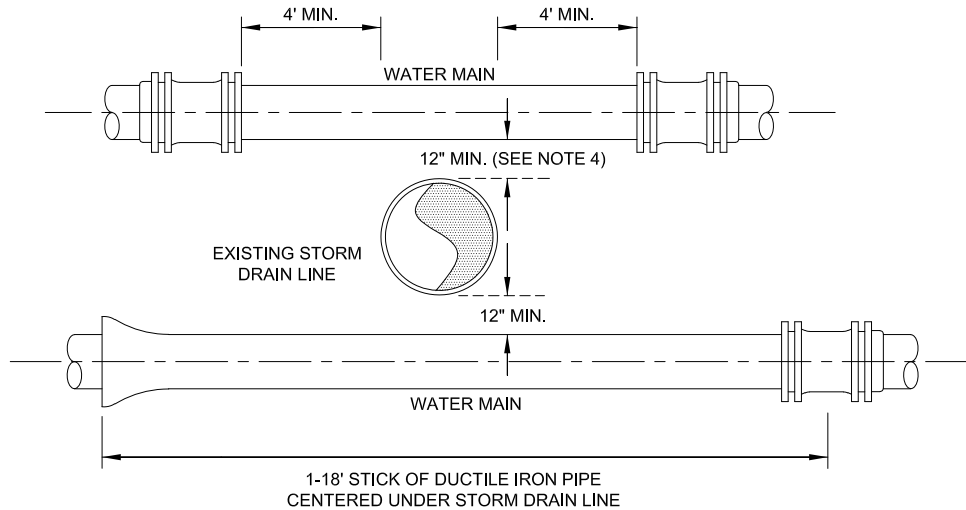
REVISIONS		WEST VALLEY WATER DISTRICT	
DATE	BY	APPROVED:	
07-2025	RMG		
		<i>Rody Walker</i>	
SCALE: NONE		Director of Engineering	July 2025

## WATER MAIN CROSSING OVER/UNDER SEWER PIPE

DRAWING NUMBER  
**BW-04**



**NEW STORM DRAIN LINE  
OVER OR UNDER NEW OR EXISTING WATER MAIN**



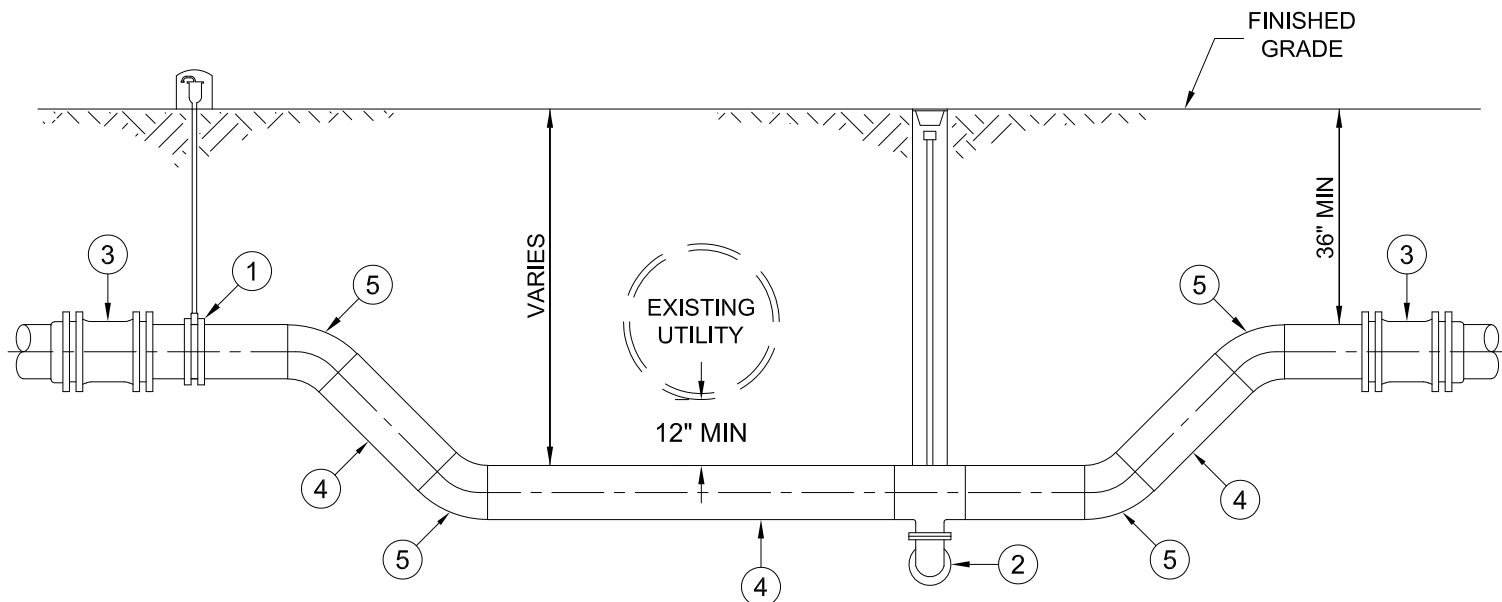
**NEW WATER MAIN  
OVER OR UNDER EXISTING STORM DRAIN LINE**

**NOTES:**

1. ONLY TO BE USED UPON APPROVAL BY THE GENERAL MANAGER OR DISTRICT ENGINEER OF WEST VALLEY WATER DISTRICT, OR DESIGNEE, AND WHERE CONDITIONS DO NOT ALLOW FOR THE MINIMUM VERTICAL SEPARATION AS SPECIFIED IN THE CALIFORNIA WATERWORKS STANDARDS, TITLE 22, DIVISION 4, CHAPTER 16, SECTION 64572 WATER MAIN SEPARATIONS.
2. THIS ALTERNATE INSTALLATION APPLIES ONLY TO WATER MAINS LESS THAN 24"Ø. ALL CROSSINGS OF 24"Ø AND LARGER WATER MAINS MUST BE APPROVED BY WEST VALLEY WATER DISTRICT.
3. TRANSITION FROM OTHER MATERIAL TO HDPE MAY BE REQUIRED TO MEET JOINT SEPARATION AS SHOWN.
4. WHERE THE STORM DRAIN LINE CROSSES BELOW THE WATER AND THERE IS 1' OR MORE VERTICAL CLEARANCE NO SPECIAL INSTALLATION IS REQUIRED.
5. WHERE, DUE TO FIELD CONDITIONS, NEW STORM DRAIN PIPE IS REQUIRED TO BE REINFORCED CONCRETE PIPE (RCP) AND MUST BE INSTALLED OVER THE WATER MAIN, STORM DRAIN PIPE SHALL BE CENTERED OVER WATER MAIN AND ANY JOINTS WITH IN LIMITS SPECIFIED ABOVE WRAPPED PER WEST VALLEY WATER DISTRICT SPECIFICATIONS, OR SLEEVED IN A MINIMUM 8MM POLYETHYLENE WRAP TO BEYOND THE LIMITS SPECIFIED. METHOD USED SHALL BE DIRECTED BY WEST VALLEY WATER DISTRICT OR DESIGNEE.
6. ALL NEW DUCTILE IRON SHALL BE SLEEVED WITH POLYETHYLENE PER WEST VALLEY WATER DISTRICT SPECIFICATIONS.

REVISIONS		WEST VALLEY WATER DISTRICT	WATER MAIN CROSSING OVER/UNDER STORM DRAIN	DRAWING NUMBER	
DATE	BY			APPROVED:  Director of Engineering	BW-05
07-2025	RMG				
SCALE: NONE		July 2025			

## WATER MAIN CROSSING OVER/UNDER STORM DRAIN



# ITEM DESCRIPTION:

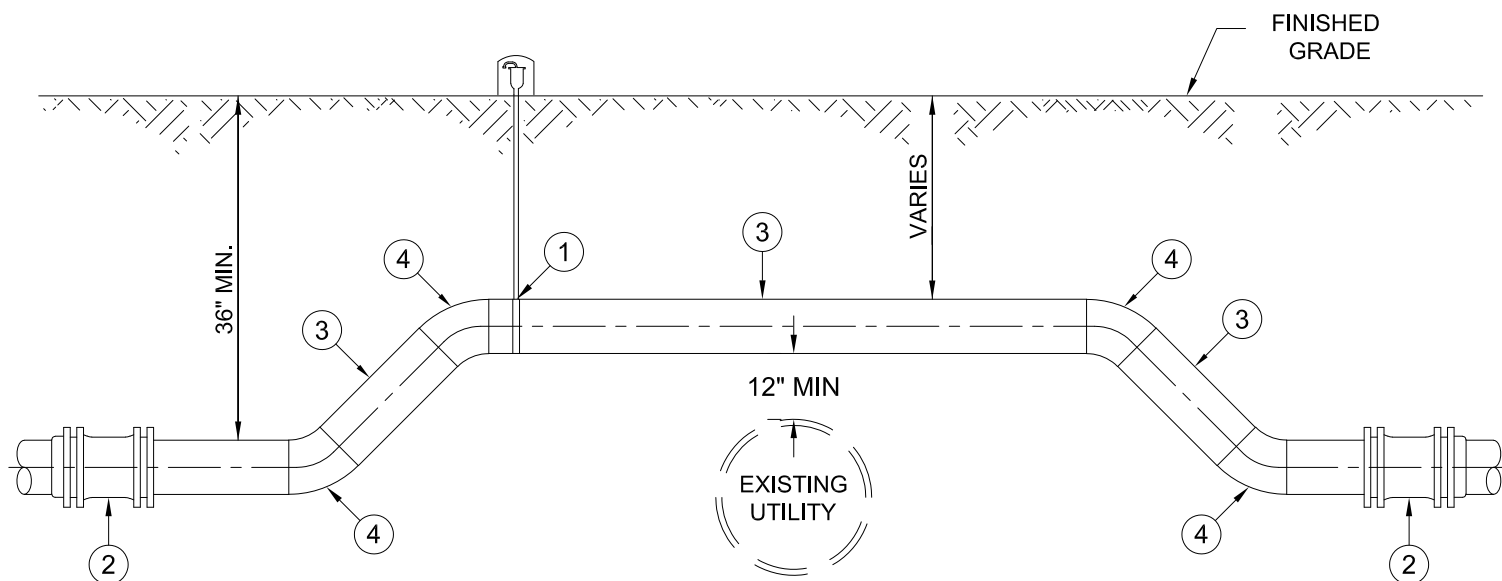
- 1 COMBINATION AIR VALVE ASSEMBLY PER DISTRICT STANDARD W-6A OR W-6B AT HIGHEST POINT.
- 2 BLOW-OFF ASSEMBLY PER DISTRICT STANDARD W-7A OR W-7B AT LOWEST POINT.
- 3 RESTRAINED ADAPTOR, MJ x FLG PER WVWD STD. DWG. NO. W-30.
- 4 CEMENT MORTAR LINE AND COATED STEEL PIPE, 10 GA, CLASS 150, FULLY WELDED.
- 5 45° ELBOW.

## NOTES:

1. ONLY TO BE USED UPON APPROVAL BY THE GENERAL MANAGER OR DISTRICT ENGINEER OF WEST VALLEY WATER DISTRICT, OR DESIGNEE, AND WHERE CONDITIONS DO NOT ALLOW FOR THE MINIMUM VERTICAL SEPARATION AS SPECIFIED IN THE CALIFORNIA WATERWORKS STANDARDS, TITLE 22, DIVISION 4, CHAPTER 16, SECTION 64572 WATER MAIN SEPARATIONS.
2. INVERT SIPHON SHALL BE ONE-PIECE CONSTRUCTION.
3. THIS INSTALLATION APPLIES ONLY TO WATER MAINS LESS THAN 24"Ø. ALL WATER MAIN INSTALLATIONS OF 24"Ø AND LARGER MUST BE APPROVED BY THE CALIFORNIA STATE WATER BOARD AND WEST VALLEY WATER DISTRICT ON A CASE BY CASE BASES.
4. WHERE WATER MAIN LOWERING IS PART OF A LARGER INSTALLATION, AND WHEN OTHERWISE PRACTICAL, THE NEW SYSTEM SHALL BE DESIGNED AS A "RESTRAINED JOINT SYSTEM", IN LIEU OF OR IN ADDITION TO THRUST BLOCKS, AND PER WEST VALLEY WATER DISTRICT STANDARDS.
5. WHEN CONNECTING TO AN EXISTING MAIN, CONNECTIONS TO CAST IRON, DUCTILE IRON OR PVC PIPE SHALL BE MADE WITH MECHANICAL JOINT SOLID SLEEVES WITH RESTRAINT GLANDS. APPROVED WIDE RANGE COUPLINGS SHALL BE USED WHEN CONNECTING TO OVERSIZED CAST IRON OR ASBESTOS CEMENT PIPE. WHEN NOT CONNECTING TO AN EXISTING MAIN COUPLINGS, AS SHOWN, ARE NOT REQUIRED.

REVISIONS		WEST VALLEY WATER DISTRICT	WATER MAIN INVERTED SIPHON	DRAWING NUMBER
DATE	BY			
07-2025	RMG	APPROVED:		BW-06
		<i>Rody Weller</i>		
SCALE: NONE		Director of Engineering	July 2025	





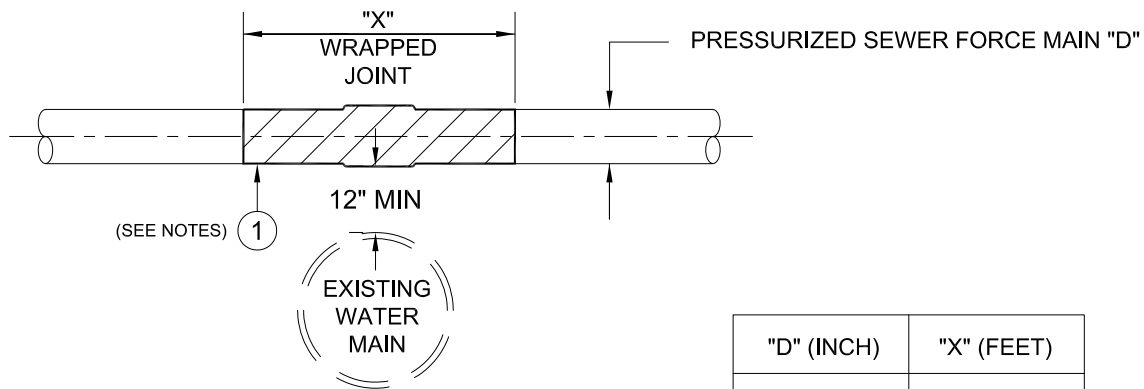
**ITEM DESCRIPTION:**

- ① COMBINATION AIR VALVE ASSEMBLY PER DISTRICT STANDARD W-6A OR W-6B AT HIGHEST POINT.
- ② RESTRAINED ADAPTOR, MJ x FLG PER WVWD STD. DWG. NO. W-30.
- ③ CEMENT MORTAR LINE AND COATED STEEL PIPE, 10 GA, CLASS 150, FULLY WELDED.
- ④ 45° ELBOW.

**NOTES:**

1. ONLY TO BE USED UPON APPROVAL BY THE GENERAL MANAGER OR DISTRICT ENGINEER OF WEST VALLEY WATER DISTRICT, OR DESIGNEE, AND WHERE CONDITIONS DO NOT ALLOW FOR THE MINIMUM VERTICAL SEPARATION AS SPECIFIED IN THE CALIFORNIA WATERWORKS STANDARDS, TITLE 22, DIVISION 4, CHAPTER 16, SECTION 64572 WATER MAIN SEPARATIONS.
2. INVERT SIPHON SHALL BE ONE-PIECE CONSTRUCTION.
3. SEE DISTRICT STANDARD W-24 FOR CONCRETE BLANKETS WHEN 36" COVER CANNOT BE OBTAINED ON TOP OF PIPE OR WHEN 12" CLEARANCE CANNOT BE OBTAINED BETWEEN CONFLICTING UTILITY. CONCRETE BLANKETS CAN ONLY BE USED WHEN APPROVED BY DISTRICT ENGINEER.
4. THIS INSTALLATION APPLIES ONLY TO WATER MAINS LESS THEN 24"Ø. ALL WATER MAIN INSTALLATIONS OF 24"Ø AND LARGER MUST BE APPROVED BY THE CALIFORNIA STATE WATER BOARD AND WEST VALLEY WATER DISTRICT ON A CASE BY CASE BASES.
5. WHERE WATER MAIN OVER-STRUCTURE IS PART OF A LARGER INSTALLATION, AND WHEN OTHERWISE PRACTICAL, THE NEW SYSTEM SHALL BE DESIGNED AS A "RESTRAINED JOINT SYSTEM", IN LIEU OF OR IN ADDITION TO THRUST BLOCKS, AND PER WEST VALLEY WATER DISTRICT STANDARDS.
6. WHEN CONNECTING TO ON EXISTING MAIN, CONNECTIONS TO COST IRON, DUCTILE IRON OR PVC PIPE SHALL BE MADE WITH MECHANICAL JOINT SOLID SLEEVES WITH RESTRAINT GLANDS. APPROVED WIDE RANGE COUPLINGS SHELL BE USED WHEN CONNECTING TO OVERSIZED COST IRON OR ASBESTOS CEMENT PIPE. WHEN NOT CONNECTING TO ON EXISTING MAIN COUPLINGS, AS SHOWN, ARE NOT REQUIRED.

REVISIONS		WEST VALLEY WATER DISTRICT	WATER MAIN SIPHON	DRAWING NUMBER	
DATE	BY			APPROVED:    Director of Engineering	BW-07
07-2025	RMG				
SCALE: NONE		July 2025			



"D" (INCH)	"X" (FEET)
4 TO 6	3
8 TO 12	5
15 TO 18	8

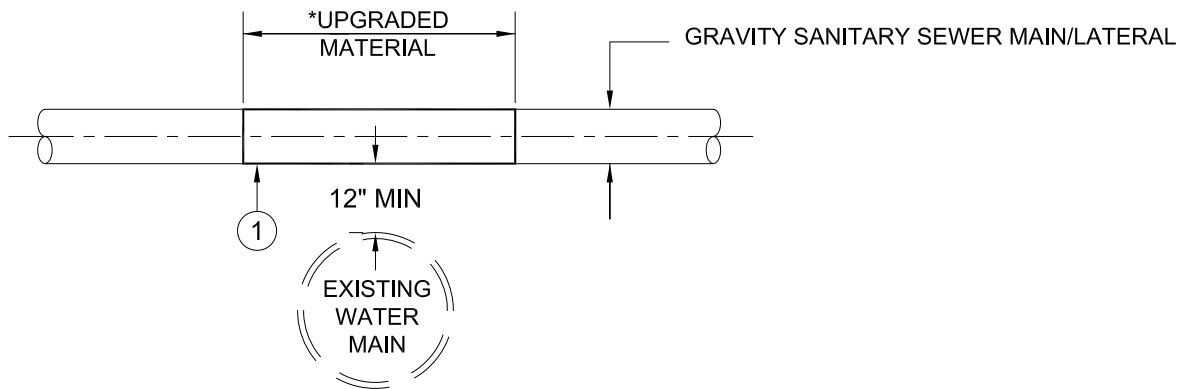
**ITEM DESCRIPTION:**

- ① PIPE WRAP TAPE.

**NOTES:**

- ONLY TO BE USED UPON APPROVAL BY THE GENERAL MANAGER OR DISTRICT ENGINEER OF WEST VALLEY WATER DISTRICT, OR DESIGNEE, AND WHERE CONDITIONS DO NOT ALLOW FOR THE MINIMUM VERTICAL SEPARATION AS SPECIFIED IN THE CALIFORNIA WATERWORKS STANDARDS, TITLE 22, DIVISION 4, CHAPTER 16, SECTION 64572 WATER MAIN SEPARATIONS.
- UTILIZE ONLY FOR PRESSURIZED SEWER FORCE MAIN CROSSING A WATER MAIN WHERE A JOINT CANNOT BE LOCATED OUTSIDE OF WATER MAIN DUE TO CONSTRAINTS.
- PIPE WRAP TAPE SHALL BE "CHRISTY'S TA-33-PW21," "PASCO 9052R" OR AN APPROVED EQUIVALENT AND INSTALL PER MANUFACTURER'S DIRECTION.
- THE SECOND LAYER OF PIPE WRAP SHALL BE APPLIED IN THE OPPOSITE DIRECTION AS THE FIRST.
- VISIBLE GAPS IN TAPE WILL NOT BE ALLOWED.

REVISIONS		WEST VALLEY WATER DISTRICT	SEWER FORCE MAIN OVER WATER MAIN	DRAWING NUMBER  BW-08
DATE	BY			
07-2025	RMG	APPROVED: 		
		Director of Engineering		
SCALE: NONE		July 2025		



**ITEM DESCRIPTION:**

- ① UPGRADE GRAVITY SANITARY SEWER PIPE. SEE APPENDIX "C" FOR MATERIAL UPGRADE.

**NOTES:**

- ONLY TO BE USED UPON APPROVAL BY THE GENERAL MANAGER OR DISTRICT ENGINEER OF WEST VALLEY WATER DISTRICT, OR DESIGNEE, AND WHERE CONDITIONS DO NOT ALLOW FOR THE MINIMUM VERTICAL SEPARATION AS SPECIFIED IN THE CALIFORNIA WATERWORKS STANDARDS, TITLE 22, DIVISION 4, CHAPTER 16, SECTION 64572 WATER MAIN SEPARATIONS.
- UTILIZE ONLY FOR GRAVITY SANITARY SEWER MAIN/LATERAL CROSSING A WATER MAIN.
- MINIMUM OF 12" CLEARANCE AND UPGRADED SEWER MATERIAL IS REQUIRED.

REVISIONS		WEST VALLEY WATER DISTRICT		SEWER MAIN/LATERAL OVER WATER MAIN	DRAWING NUMBER  BW-09
DATE	BY	APPROVED:  Director of Engineering July 2025			
07-2025	RMG				
SCALE: NONE					