

HYDRANT

3 WAY HYDRANT; MUELLER No. A-421, 1-1/2" OPERATING NUT, 2-1/2" NOZZLES, 4-1/2" PUMPER NOZZLE WITH MJ FITTING TO PIPE  
 OR  
 WATEROUS PACER WB 67 x MJ 2-1/2" NOZZLES, 4-1/2" PUMPER NOZZLE WITH MJ FITTING TO PIPE

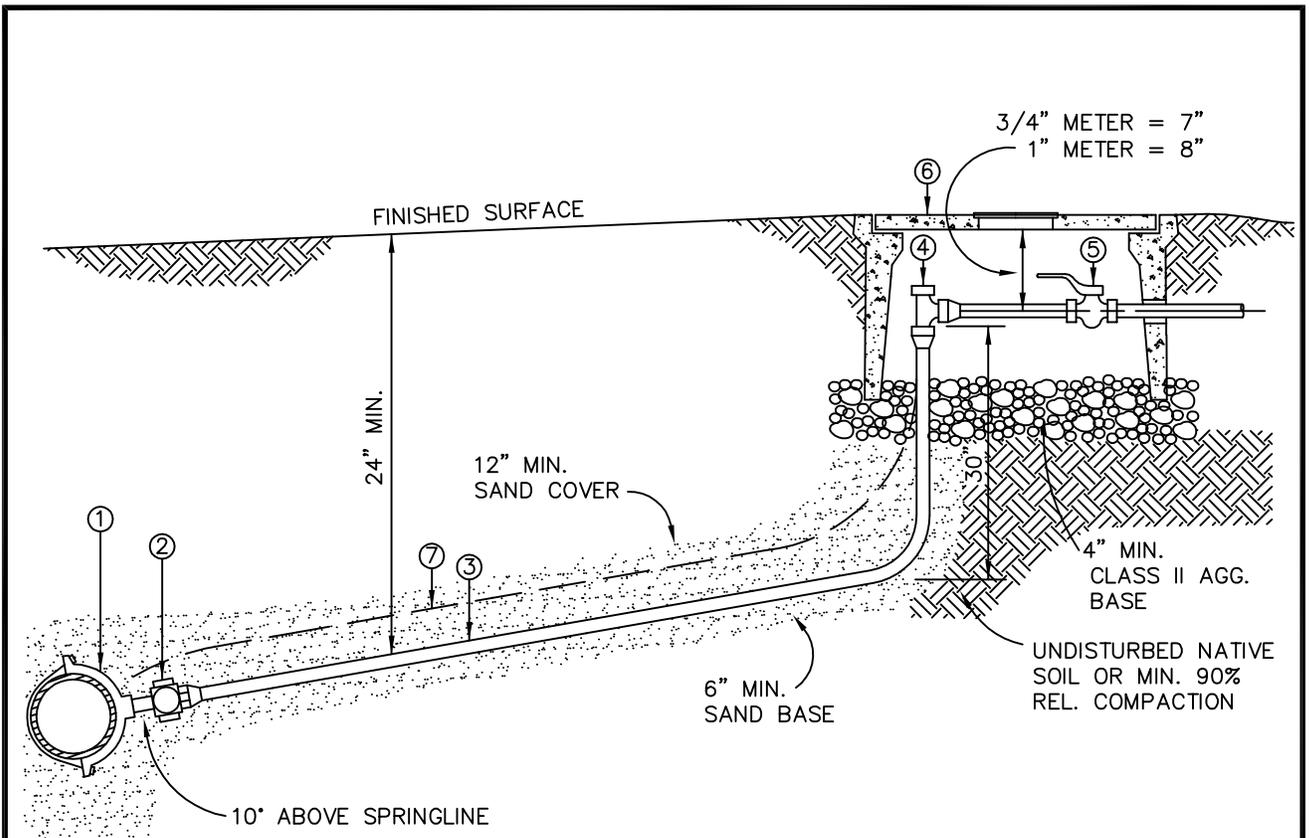
VALVES

WATEROUS 500 RESILIENT WEDGE TYPE VALVE FLANGE BY MJ OR EQUAL

NOTE:

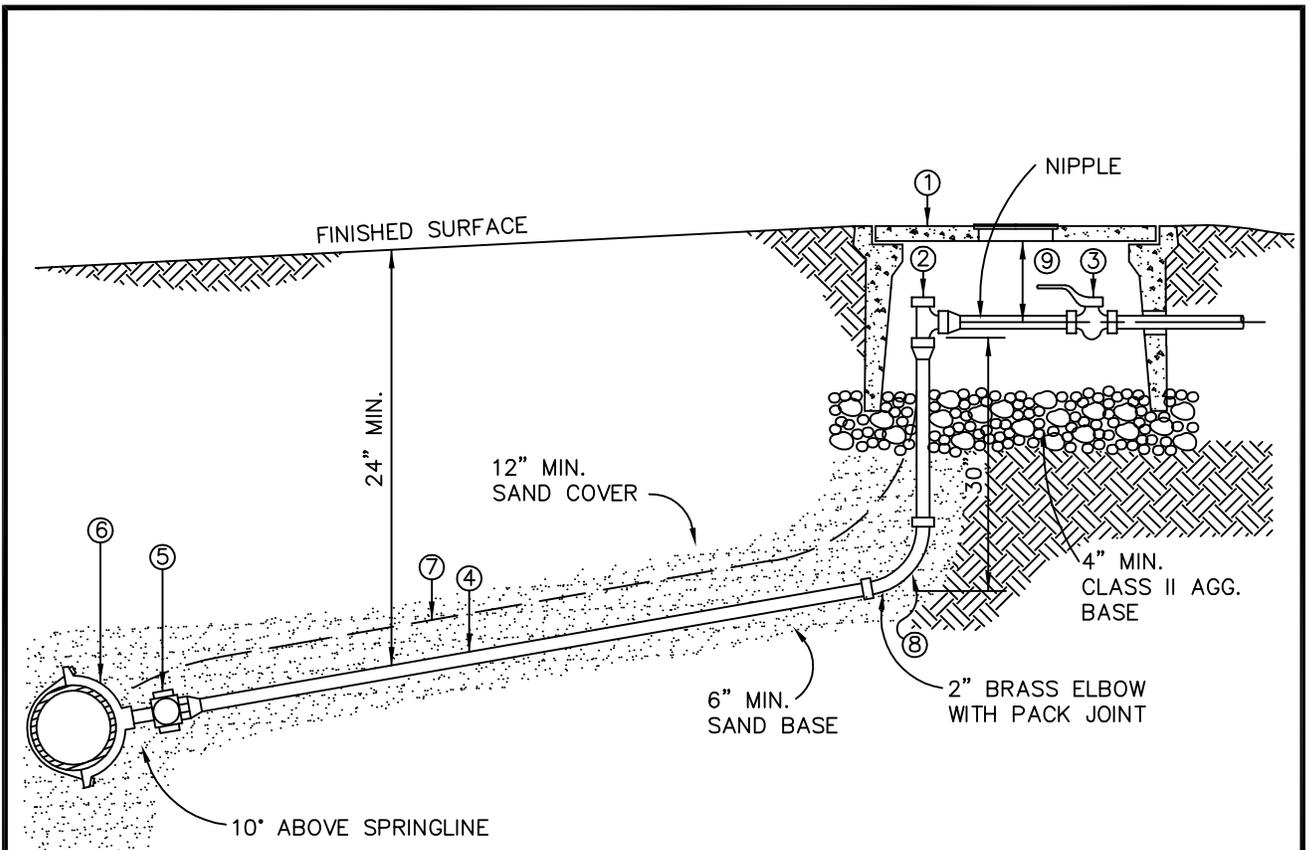
1. PLACE BLUE 2-WAY REFLECTORIZED RAISED ROADWAY MARKER(S) AS DIRECTED BY THE FIRE DEPT. AT EACH HYDRANT OR WARF HEAD (HAWKINS "RAY-O-LITE V16C-DB" OR APPROVED EQUAL).
2. ALL EXPOSED NUT AND BOLTS WHICH ARE BURIED SHALL BE COVERED WITH 30 MIL. PLASTIC.
3. SEE STANDARD DRAWING No. G-11 FOR LOCATION OF FIRE HYDRANT FROM CURB FACE.
4. SEE STD. DWG. G-6 FOR VALVE BOX DETAILS.
5. ALL JOINTS SHALL BE RESTRAINED.
6. OPERATING NUT SHALL BE EXTENDED TO WITHIN 18 INCHES OF SURFACE WHERE DEPTH OF VALVE EXCEEDS FOUR FEET, PIPELINE PRODUCTS FIBERPLAS OR EQUAL.

DRAWN BY: KGE	CITY OF PASO ROBLES ENGINEERING DIVISION	DRAWING NO.
DESIGNED BY: JF		FIRE HYDRANT INSTALLATION
DATE: 05/12	G-1	
FILE NAME: PR-G-1.DWG		



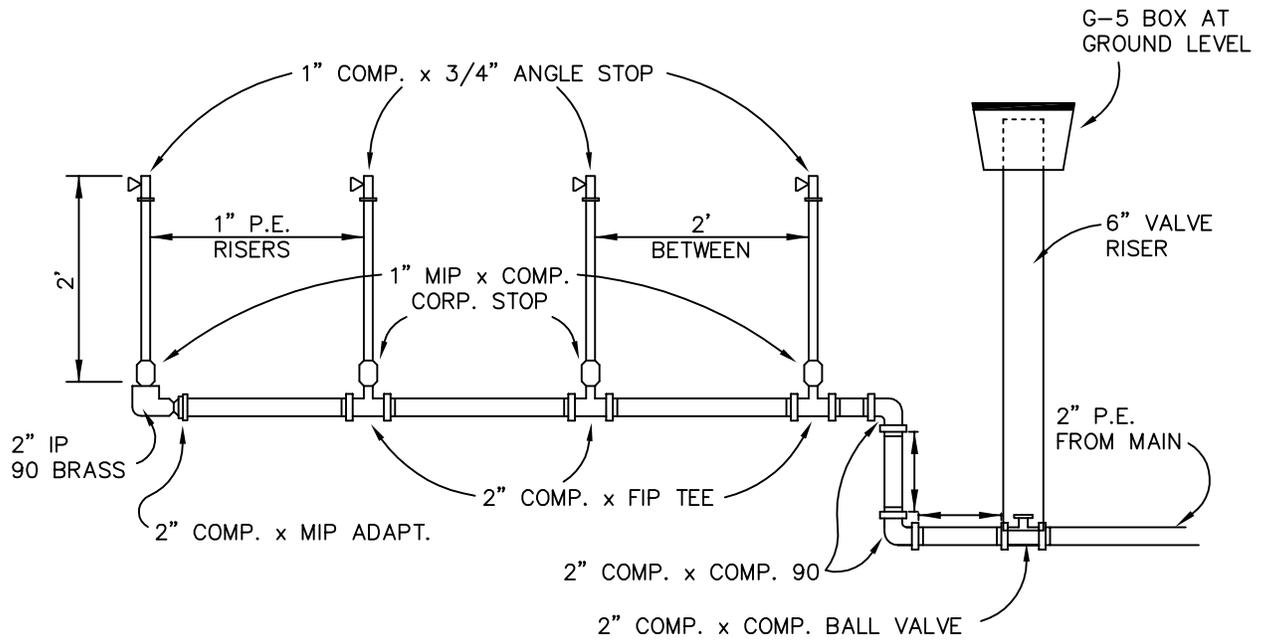
- ① SERVICE CLAMP: STAINLESS STEEL DOUBLE-STRAP (4 BOLTS) BRONZE SADDLE, FOR 1" TAP, AS LISTED OR EQUAL APPROVED BY THE WATER DIVISION MANAGER. MUELLER H-16100 SERIES OR JONES J-979 OR ROMAC 202 B5 FOR C-900 PVC
- ② CORPORATION STOP: 1" CORPORATION STOP, STRAIGHT COUPLING. MUELLER H-15050 OR FORD F-1000 OR JONES J-3401
- ③ SERVICE RISER: MIN. SERVICE TO METER IS 1" POLYETHYLENE (P.E.) COPPER TUBING SIZE.
- ④ ANGLE STOP VALVE: SHALL BE LOCKABLE IN OFF POSITION.  
 3/4" METER - 1"x3/4" FORD No. KV43-342W OR JONES J4201 OR EQUAL  
 1" METER - 1" FORD No. KV43-444W OR JONES 1963W OR APPROVED EQUAL
- ⑤ CUSTOMER SERVICE VALVE: INSTALL ON CUSTOMER SIDE.  
 3/4" - FORD BM - 13-242 OR JONES J1908, SIZE 3/4"x1" 1.P  
 1" - FORD BM - 13-444 OR JONES J1908
- ⑥ METER BOX: CHRISTY B-16G CONCRETE REINFORCED BOX AND COVER WITH CAST IRON READING LID, OR APPROVED EQUAL.  
 3/4" AND 1" METER - BROOKS No. 38H OR CHRISTY B-16G OR APPROVED EQUAL
- ⑦ LOCATOR WIRE: USE 12 GAUGE COPPER WIRE INSULATED FOR ALL SERVICE ASSEMBLIES. TIE TO LOCATER WIRE ON MAIN LINE FROM ANGLE STOP VALVE.

DRAWN BY: KGE	CITY OF PASO ROBLES ENGINEERING DIVISION	DRAWING NO.
DESIGNED BY: JF		
DATE: 10/10	1" WATER SERVICE ASSEMBLY	G-2
FILE NAME: PR-G-2.DWG		



- ① METER BOX: CONCRETE REINFORCED BOX AND COVER WITH CAST IRON READING LID, OR APPROVED EQUAL.  
2" - BROOKS No. 66H OR CHRISTY B36G
- ② ANGLE STOP VALVE: SHALL BE LOCKABLE IN OFF POSITION, AND SHALL ACCEPT 1-1/2" AND 2" METERS, AS LISTED OR APPROVED EQUAL  
2" - FORD No. FV 13-777 W OR JONES J-1975W
- ③ CUSTOMER SERVICE VALVE: INSTALL ON CUSTOMER SIDE, AS LISTED OR APPROVED EQUAL  
1-1/2" - FORD BF - 13676W OR JONES J-1913W  
2" FORD BF 13777W OR JONES J-1913W
- ④ SERVICE RISER: MIN. SERVICE TO METER IS 2" POLYETHYLENE (P.E.) TUBING COPPER TUBING SIZE. (CT)
- ⑤ CORPORATION STOP: 2" CORPORATION STOP, STRAIGHT COUPLING AS LISTED, FB400 OR J1944 OR APPROVED EQUAL.
- ⑥ SERVICE CLAMP: DOUBLE-STRAP BRONZE, AS LISTED C900 PVC BRONZE SADDLE WITH STAINLESS STEEL STRAPS ROMAC 202BS OR APPROVED EQUAL.
- ⑦ LOCATOR WIRE: USE 12 GAUGE COPPER INSULATED WIRE FOR ALL SERVICE ASSEMBLIES. TIE TO LOCATOR WIRE ON MAIN LINE FROM ANGLE STOP VALVE.
- ⑧ PIPE AND FITTINGS: PIPE - 2" POLYETHYLENE TUBING, COPPER TUBE SIZE. FITTING - BRASS PACK JOINT: 90° ELL J-2611 AND BRASS 45° I.P. AND J2605 OR APPROVED EQUAL.

DRAWN BY: KGE	CITY OF PASO ROBLES ENGINEERING DIVISION	DRAWING NO.
DESIGNED BY: JF		2" WATER SERVICE ASSEMBLY
DATE: 10/10		
FILE NAME: PR-G-3.DWG		

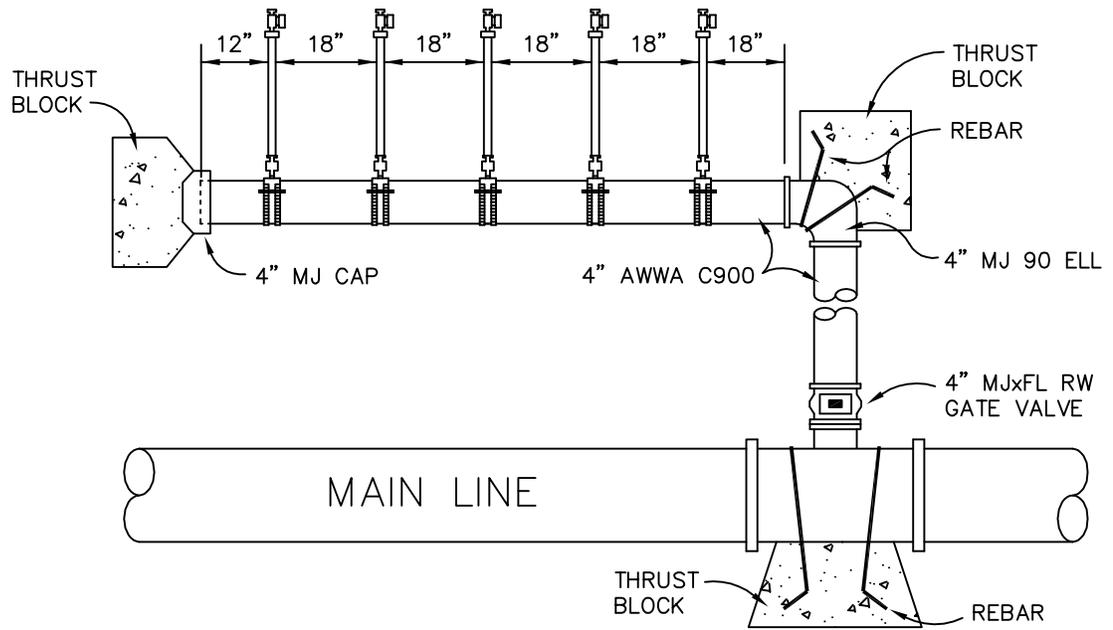


PARTS LIST			
QTY.	PART No.	SIZE	DESCRIPTION
4	K43-34-2W	1" x 3/4"	ANGLE STOP
4	F-1001	1"	CORP. STOPS
3	T441-774	2" x 1" FIP	COMP. x IP TEE
2	L44-77	2"	COMP. x COMP 90
1	B44-777	2"	BALL VALVE
1	C84-77	2"	MIP x COMP.
1	N/A	2"	BRASS IP 90 ELL
1	N/A	2" x 1"	BRASS BUSHING
		1"	PE TUBING
		2"	PE TUBING
	INSERT-55	2"	SS INSERT
	INSERT-52	1"	SS INSERT

NOTE:

1. ALL PART No. ARE FORD NUMBERS. ANY APPROVED EQUAL OR GREATER PART IS ACCEPTABLE.
2. ALL COMPRESSION JOINTS (PACK JOINTS) ARE CTS SIZE.
3. MAXIMUM OF 4 SERVICES. FOR MORE THAN 4, SEE STD. G-5.

DRAWN BY: KGE	CITY OF PASO ROBLES ENGINEERING DIVISION	DRAWING NO.
DESIGNED BY: JF		
DATE: 10/10	2" MANIFOLD SERVICE	G-4
FILE NAME: PR-G-4.DWG		



DRAWN BY:  
KGE

DESIGNED BY:  
JF

DATE:  
10/10

FILE NAME:  
PR-G-5.DWG

CITY OF PASO ROBLES  
ENGINEERING DIVISION

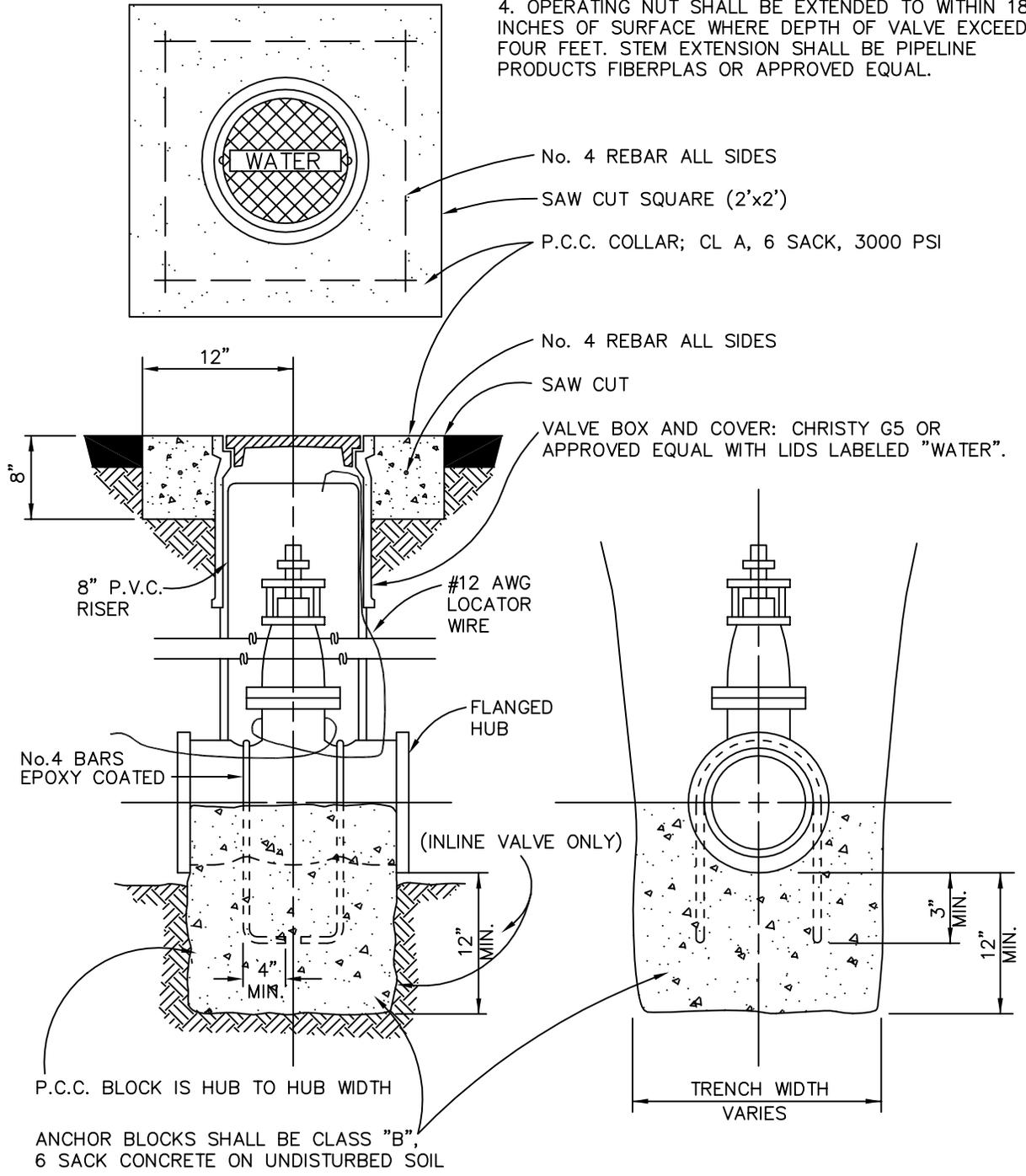
DRAWING NO.

4" MANIFOLD

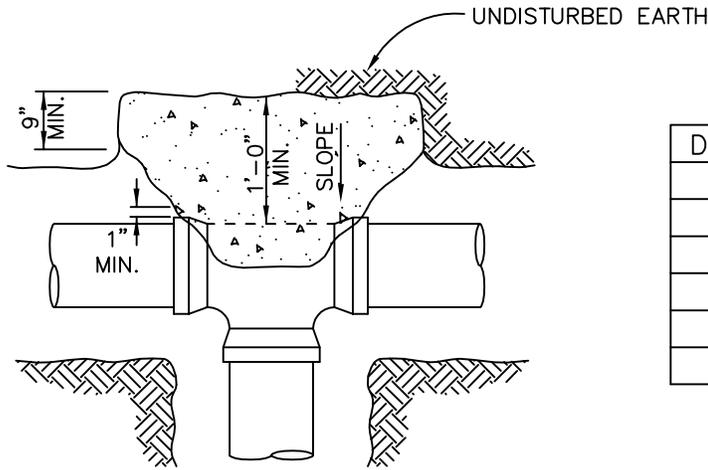
G-5

NOTE:

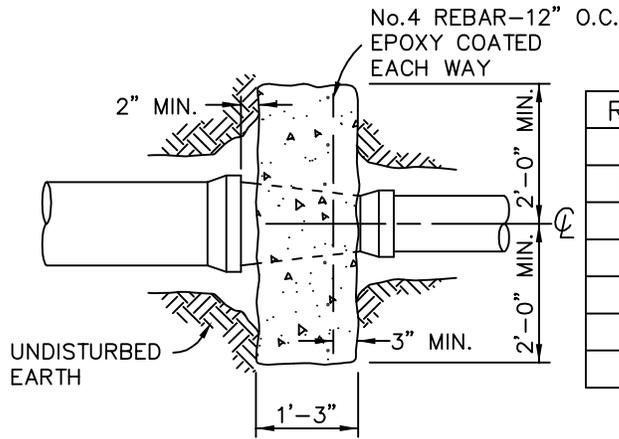
1. GATE VALVES SHALL BE RESILIENT WEDGE VALVES OR APPROVED EQUAL.
2. ALL BOLTS AND NUTS SHALL BE STAINLESS STEEL.
3. ALL VALVES SHALL BE WRAPPED WITH 30 MIL. PLASTIC AND TAPED
4. OPERATING NUT SHALL BE EXTENDED TO WITHIN 18 INCHES OF SURFACE WHERE DEPTH OF VALVE EXCEEDS FOUR FEET. STEM EXTENSION SHALL BE PIPELINE PRODUCTS FIBERPLAS OR APPROVED EQUAL.



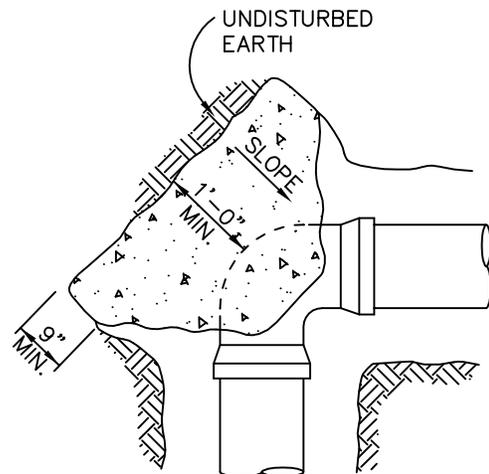
DRAWN BY: KGE DESIGNED BY: JF DATE: 12/10 FILE NAME: PR-G-6.DWG	CITY OF PASO ROBLES ENGINEERING DIVISION	DRAWING NO.
	GATE VALVE BOX & ANCHOR	
	G-6	



DEAD ENDS & TEES	
PIPE SIZE	BEARING SIZE
12"	23 S.F.
10"	16 S.F.
8"	11 S.F.
6"	6 S.F.
4"	3 S.F.

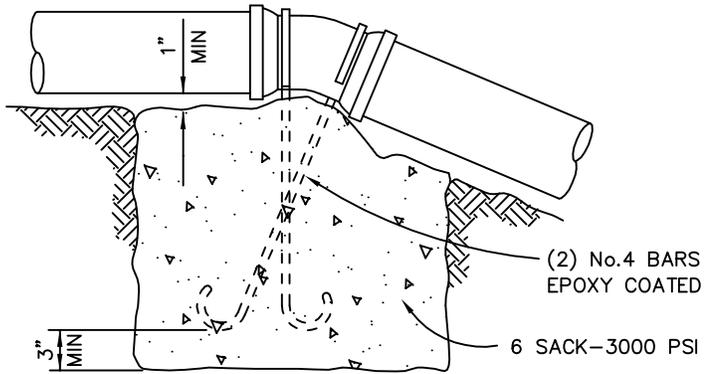


REDUCERS (COLLARS)		
REDUCER SIZE		
LARGE END	SMALL END	BEARING AREA
12"	10"	7 S.F.
12"	8"	13 S.F.
10"	8"	6 S.F.
10"	6"	11 S.F.
8"	6"	5 S.F.

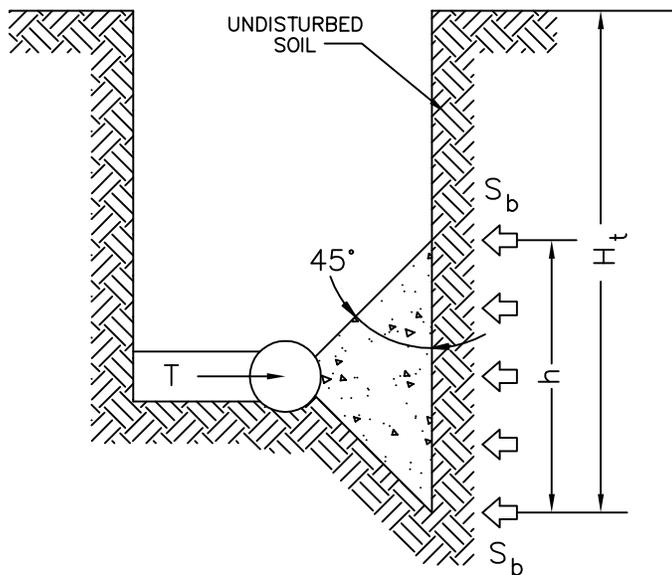
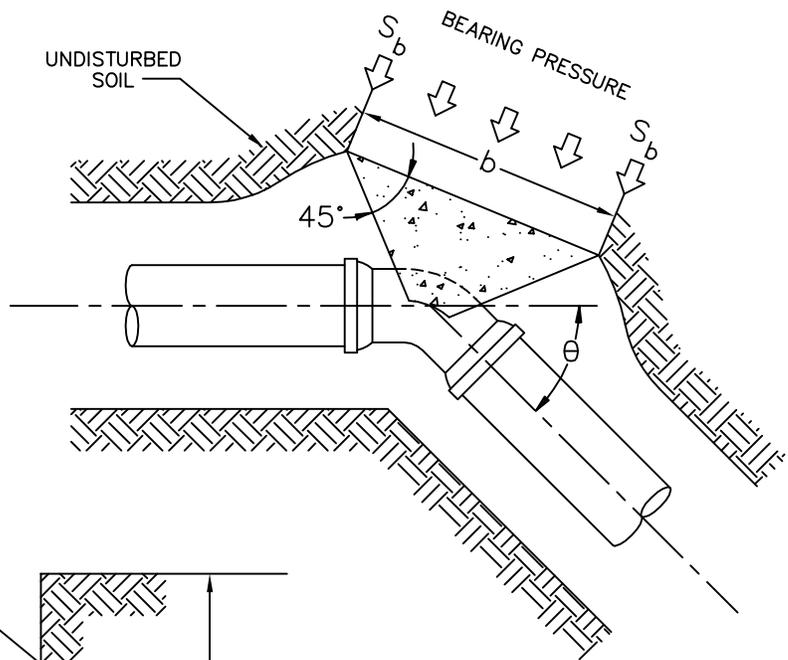


PIPE SIZE	BEARING AREA			
	11-1/4° BEND	22-1/2° BEND	45° BEND	90° BEND
12"	5 S.F.	9 S.F.	18 S.F.	32 S.F.
10"	4 S.F.	7 S.F.	13 S.F.	23 S.F.
8"	2 S.F.	4 S.F.	8 S.F.	15 S.F.
6"	2 S.F.	3 S.F.	5 S.F.	8 S.F.
4"	1 S.F.	1 S.F.	2 S.F.	4 S.F.

DRAWN BY: KGE DESIGNED BY: JF DATE: 11/10 FILE NAME: PR-G-7.1.DWG	CITY OF PASO ROBLES ENGINEERING DIVISION  THRUST BLOCK DETAILS	DRAWING NO.  G-7.1
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PIPE SIZE	CONCRETE VOLUMES		
	11-1/4" BEND	22-1/2" BEND	45" BEND
12"	1 YD	3 YRDS	6 YDS
10"	1 YD	2 YRDS	4 YDS
8"	0.5 YD	1 YD	2 YDS



NOTES:

1. BEARING SURFACE SHOULD BE PLACED AGAINST UNDISTURBED GROUND. IF THIS IS NOT POSSIBLE THE FILL BETWEEN THE BEARING SURFACE AND UNDISTURBED GROUND SHALL BE FILL SAND, COMPACTED TO AT LEAST 90% RELATIVE COMPACTION AND REQUIRES APPROVAL OF THE CITY ENGINEER.
2. BLOCK HEIGHT "h" SHOULD BE LESS THAN HALF OF THE TOTAL DEPTH "H" TO THE BOTTOM OF THE THRUST BLOCK BUT NOT LESS THAN PIPE DIAMETER.
3. BLOCK WIDTH "b" SHOULD BE ONE TO TWO TIMES THE BLOCK HEIGHT.
4. ALL BOLTS AND FITTINGS SHALL BE COVERED AND TAPED WITH PLASTIC WRAP, 30 MIL.
5. CONCRETE SHALL BE 6-SACK, 3000 PSI.

DRAWN BY:  
KGE

DESIGNED BY:  
JF

DATE:  
12/10

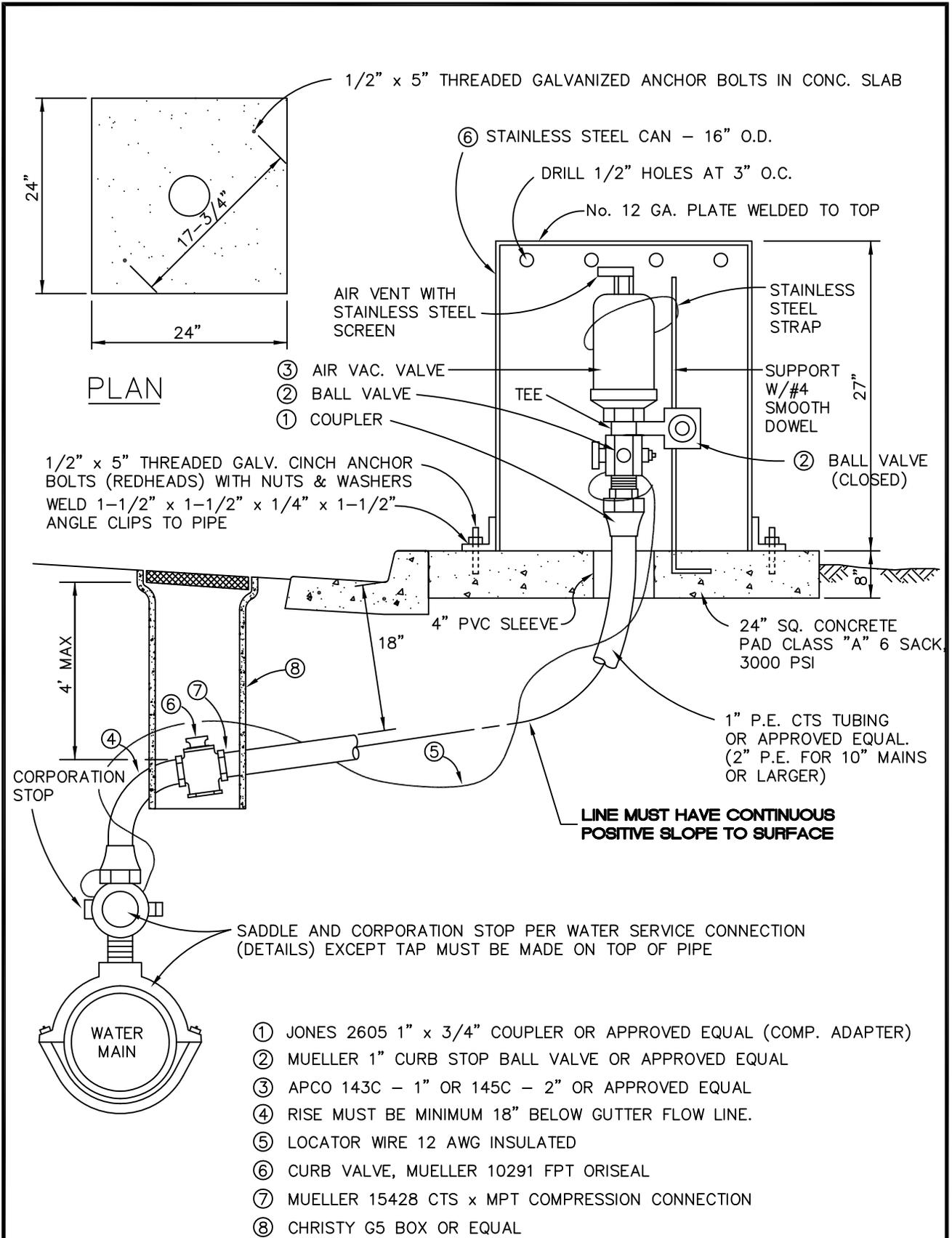
FILE NAME:  
PR-G-7.2.DWG

CITY OF PASO ROBLES  
ENGINEERING DIVISION

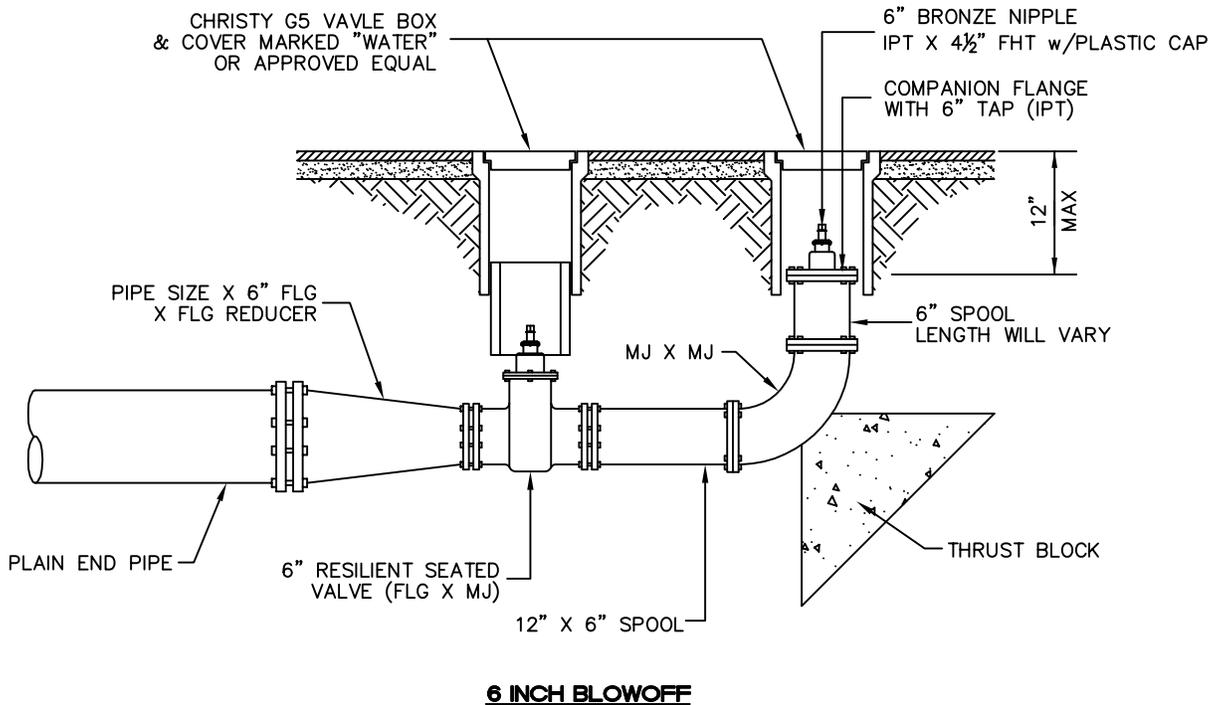
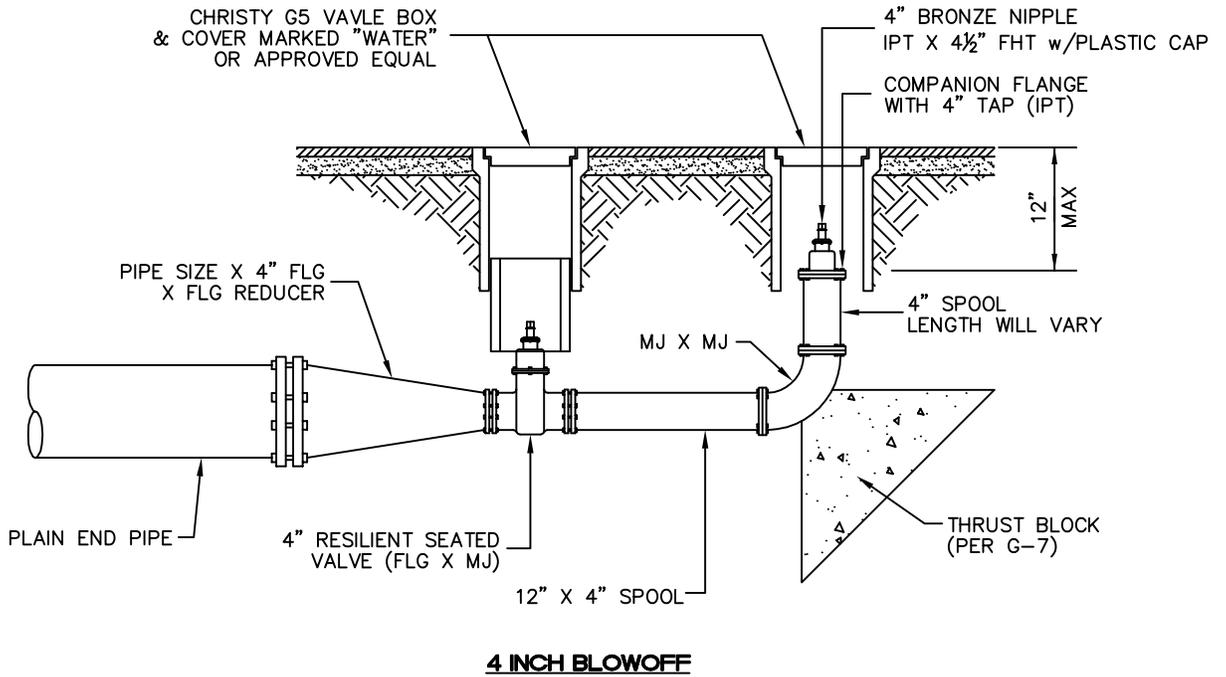
DRAWING NO.

ANCHOR & THRUST BLOCK  
DETAILS

G-7.2



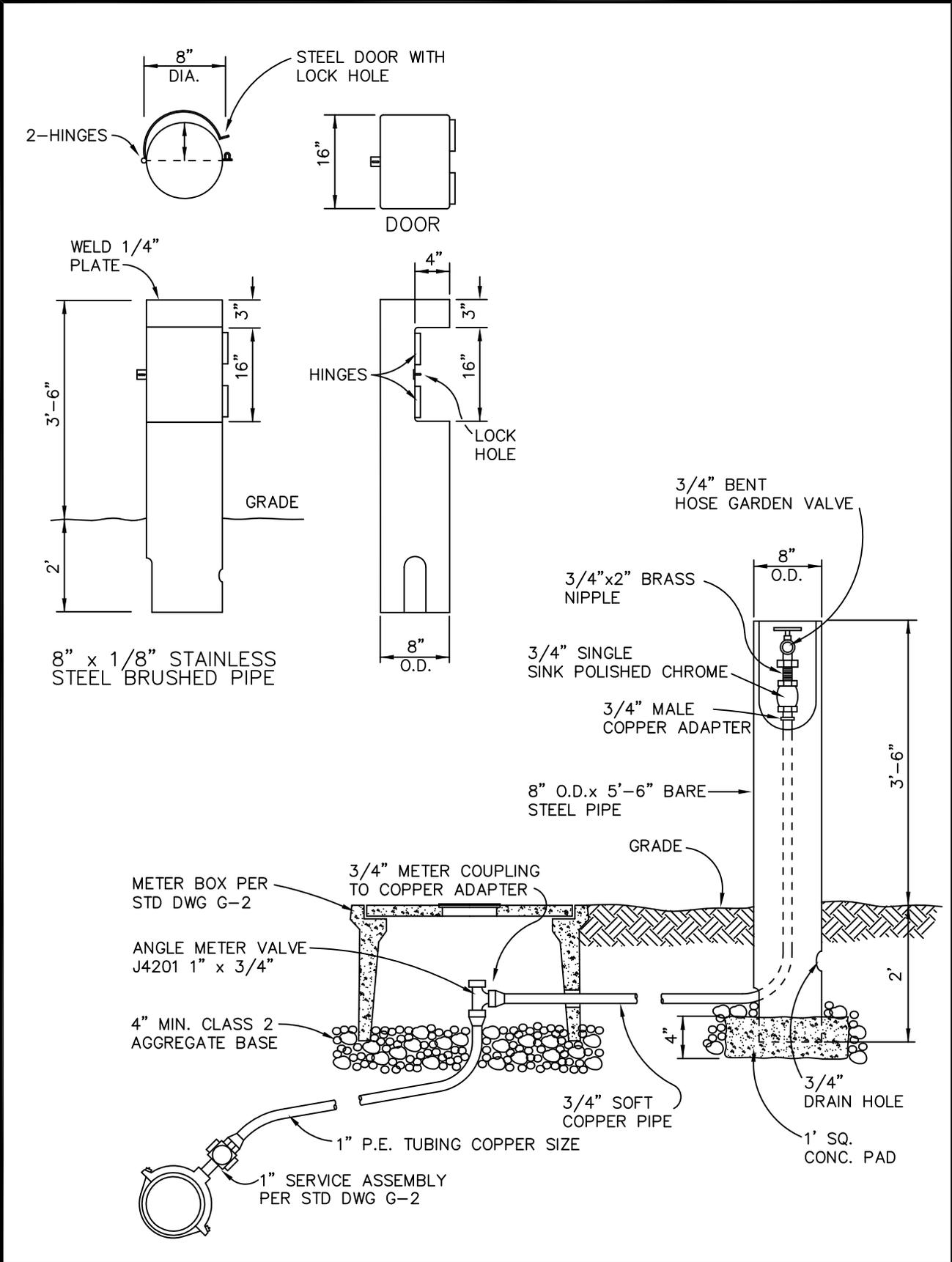
DRAWN BY: KGE	CITY OF PASO ROBLES ENGINEERING DIVISION	DRAWING NO.
DESIGNED BY: JF		
DATE: 09/11	AIR AND VACUUM RELEASE VALVE	G-8
FILE NAME: PR-G-8.DWG		



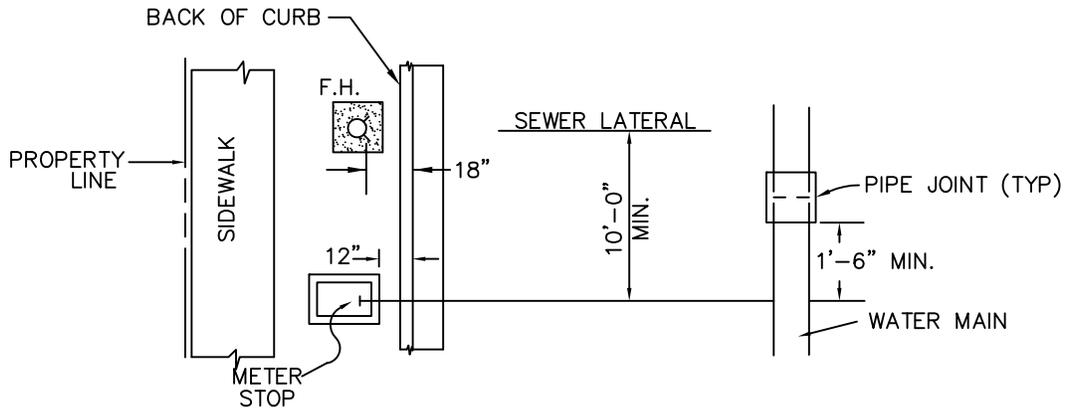
NOTES:

1. FIRE HYDRANTS TO BE INSTALLED PER DETAIL G-1 ON ALL DEAD END LINES.
2. PROTECT ALL FITTINGS WITH POLYETHYLENE SHEETING.
3. THRUST BLOCK PER DETAIL G-7, FULLY RESTRAINED JOINTS MAY BE USED IN LIEU OF THRUST BLOCKS. RESTRAINED LENGTHS MUST BE SHOWN ON PLANS DETERMINED BY AN ENGINEER.

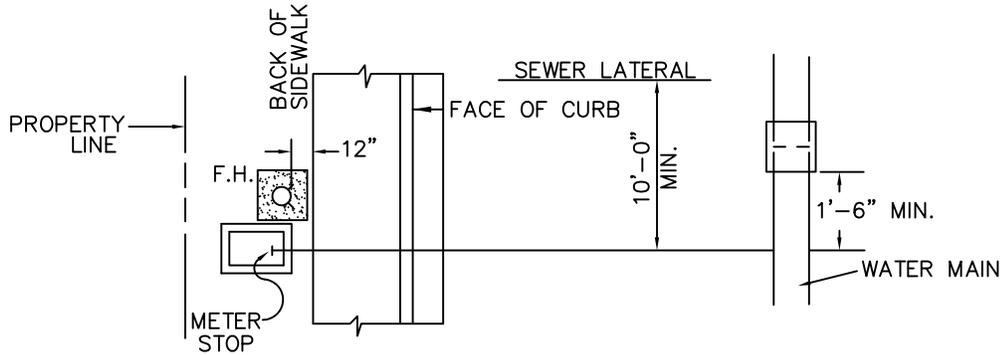
DRAWN BY: KGE	CITY OF PASO ROBLES ENGINEERING DIVISION	DRAWING NO.
DESIGNED BY: JF		BLOWOFF ASSEMBLY
DATE: 12/10		
FILE NAME: PR-G-9.DWG		



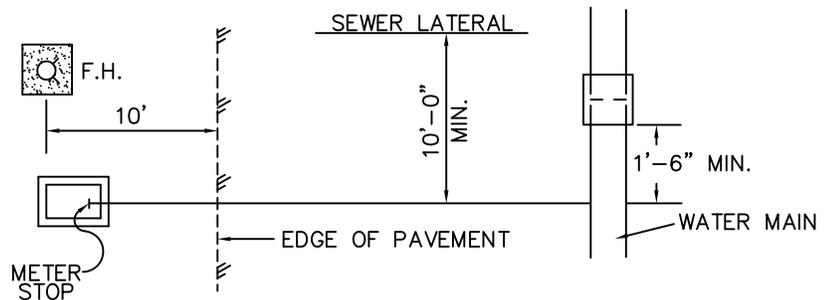
DRAWN BY: KGE	CITY OF PASO ROBLES ENGINEERING DIVISION	DRAWING NO.
DESIGNED BY: JF		G-10
DATE: 08/11	WATER SAMPLING STATION	
FILE NAME: PR-G-10.DWG		



WIDE OR DETACHED SIDEWALK OR CURB ONLY



CURB AND FIVE FOOT SIDEWALK CONTIGUOUS



WITHOUT CURB AND SIDEWALK

DRAWN BY:  
KGE

DESIGNED BY:  
JF

DATE:  
08/11

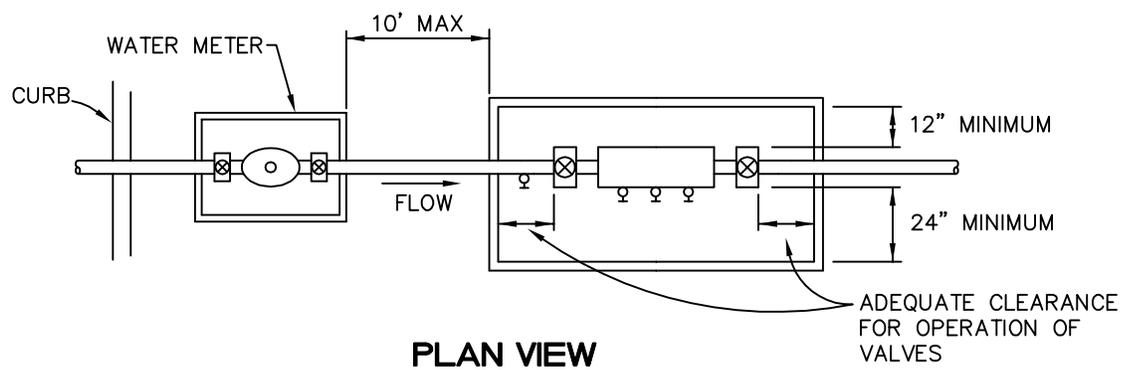
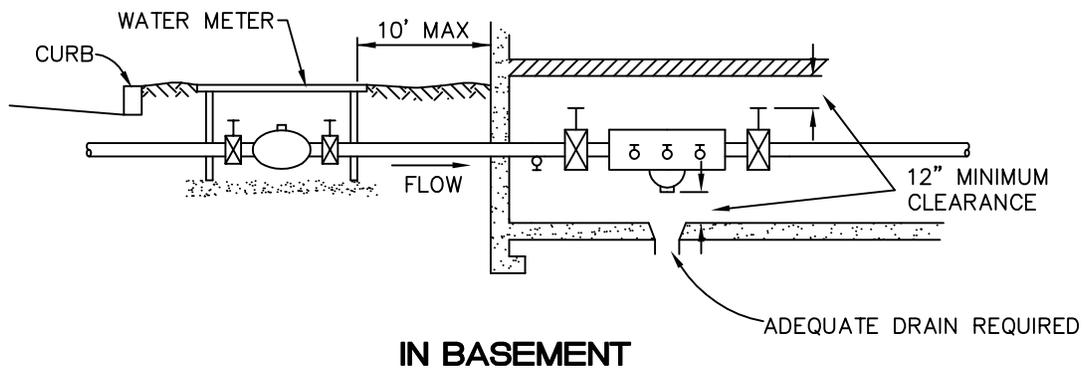
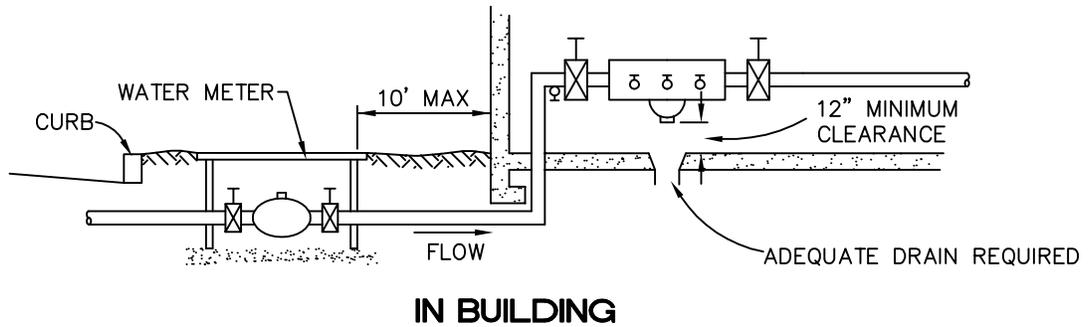
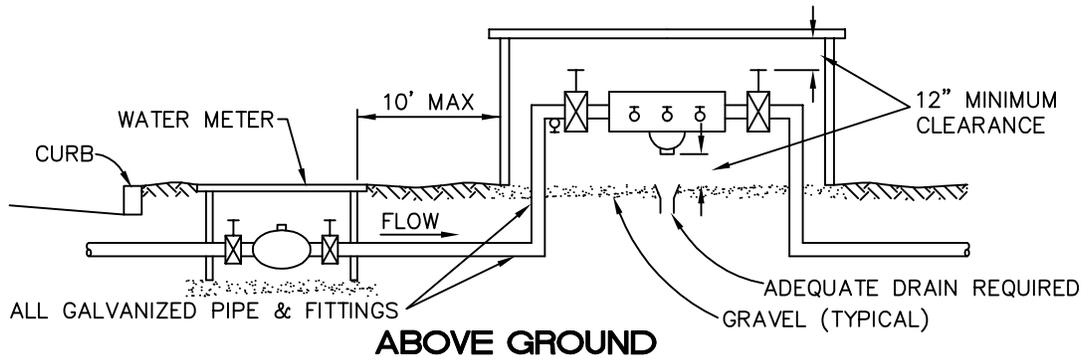
FILE NAME:  
PR-G-11.DWG

CITY OF PASO ROBLES  
ENGINEERING DIVISION

METER SERVICE AND HYDRANT  
LOCATIONS

DRAWING NO.

G-11



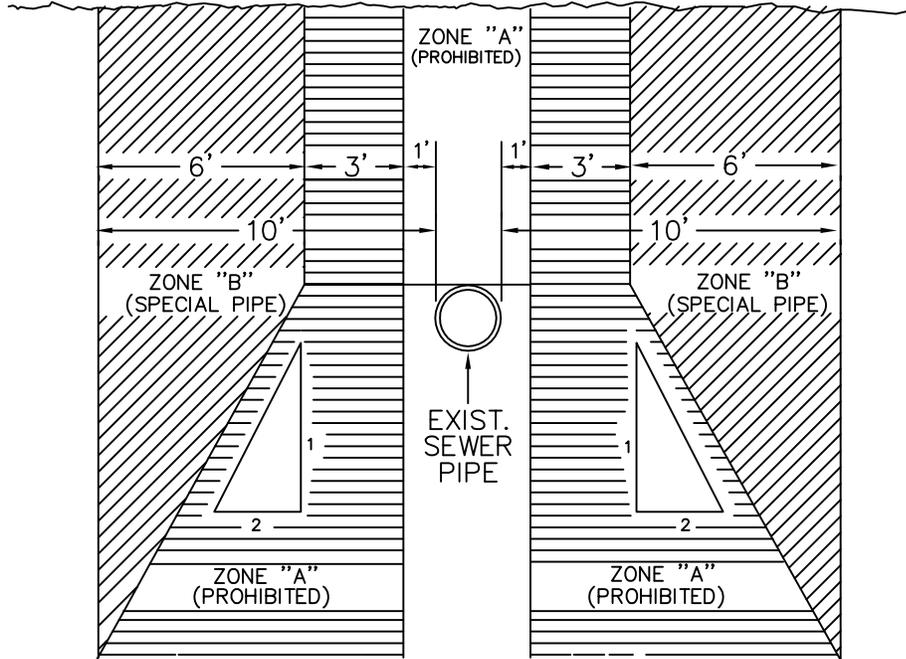
BACKFLOW PROTECTION SHALL BE RP DEVICES AND SHALL BE INSTALLED ON ALL LANDSCAPE, COMMERCIAL, INDUSTRIAL AND MULTI-STORIED SERVICES.

DRAWN BY: KGE DESIGNED BY: JF DATE: 05/12 FILE NAME: PR-G-12.DWG	CITY OF PASO ROBLES ENGINEERING DIVISION  RP DEVICE INSTALLATION	DRAWING NO.  G-12
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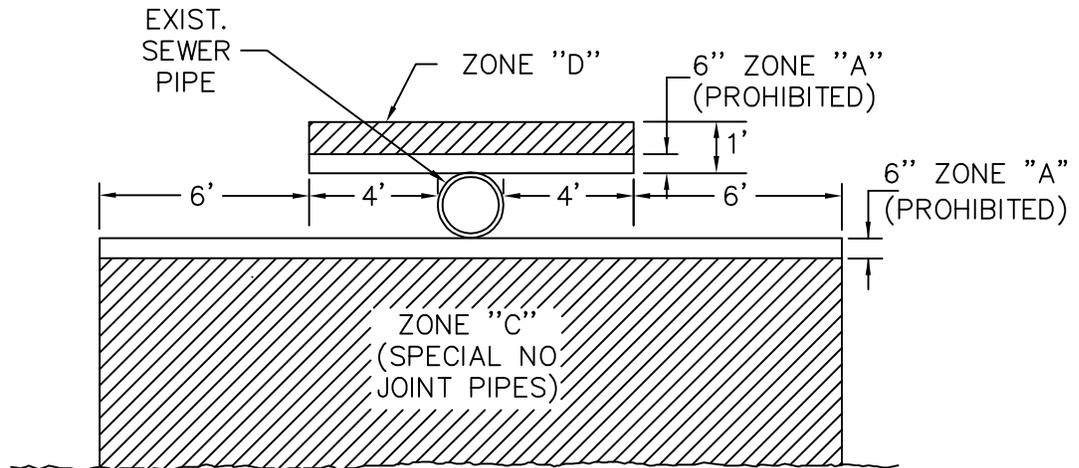
# SPECIAL CONSTRUCTION REQUIREMENTS

(FOR WATER MAINS PLACED IN CLOSE PROXIMITY TO SEWER MAINS)

THIS DESIGN CRITERIA MAY BE USED ONLY IN CASES WHERE NO REASONABLE OPTIONS FOR STANDARD SEPARATION OF WATER AND SEWER LINES CAN BE FOUND AS DETERMINED BY THE WATER DIVISION MANAGER AND THE CITY ENGINEER.



## PARALLEL CONSTRUCTION



## PERPENDICULAR CONSTRUCTION

DRAWN BY: KGE	CITY OF PASO ROBLES ENGINEERING DIVISION	DRAWING NO.
DESIGNED BY: JF	CALIFORNIA HEALTH DEPARTMENT REQUIREMENTS	G-13
DATE: 12/10		
FILE NAME: PR-G-13.DWG		