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

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.
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.
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 
   LOCATER 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.
PARTS LIST

<table>
<thead>
<tr>
<th>QTY.</th>
<th>PART No.</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
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<td>K43−34−2W</td>
<td>1&quot; x 3/4&quot;</td>
<td>ANGLE STOP</td>
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<tr>
<td>4</td>
<td>F−1001</td>
<td>1&quot;</td>
<td>CORP. STOPS</td>
</tr>
<tr>
<td>3</td>
<td>T441−774</td>
<td>2&quot; x 1&quot; FIP</td>
<td>COMP. x IP TEE</td>
</tr>
<tr>
<td>2</td>
<td>L44−77</td>
<td>2&quot;</td>
<td>COMP. x COMP 90</td>
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<tr>
<td>1</td>
<td>B44−777</td>
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<td>BALL VALVE</td>
</tr>
<tr>
<td>1</td>
<td>C84−77</td>
<td>2&quot;</td>
<td>MIP x COMP.</td>
</tr>
<tr>
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<td>N/A</td>
<td>2&quot;</td>
<td>BRASS IP 90 ELL</td>
</tr>
<tr>
<td>1</td>
<td>N/A</td>
<td>2&quot; x 1&quot;</td>
<td>BRASS BUSHING</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1&quot; PE TUBING</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>2&quot; PE TUBING</td>
</tr>
<tr>
<td>1</td>
<td>INSERT−55</td>
<td>2&quot;</td>
<td>SS INSERT</td>
</tr>
<tr>
<td>1</td>
<td>INSERT−52</td>
<td>1&quot;</td>
<td>SS INSERT</td>
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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.
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 TAPE.
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.

No. 4 REBAR ALL SIDES
SAW CUT SQUARE (2'x2')
P.C.C. COLLAR; CL A, 6 SACK, 3000 PSI

No. 4 REBAR ALL SIDES
SAW CUT

VALVE BOX AND COVER: CHRISTY G5 OR APPROVED EQUAL WITH LIDS LABELED "WATER".

8" P.V.C. RISER

#12 AWG LOCATOR WIRE

FLANGED HUB

(INLINE VALVE ONLY)

P.C.C. BLOCK IS HUB TO HUB WIDTH

ANCHOR BLOCKS SHALL BE CLASS "B", 6 SACK CONCRETE ON UNDISTURBED SOIL

TRENCH WIDTH VARIES

8" MIN. 12" MIN.
**THRUST BLOCK DETAILS**

**CITY OF PASO ROBLES ENGINEERING DIVISION**

**DRAWN BY:**
KGE

**DESIGNED BY:**
JF

**DATE:**
11/10

**FILE NAME:**
PR-G-7.1.DWG

---

**DEAD ENDS & TEES**

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<tr>
<th>PIPE SIZE</th>
<th>BEARING SIZE</th>
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<tbody>
<tr>
<td>12&quot;</td>
<td>23 S.F.</td>
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<tr>
<td>10&quot;</td>
<td>16 S.F.</td>
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<tr>
<td>8&quot;</td>
<td>11 S.F.</td>
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<tr>
<td>6&quot;</td>
<td>6 S.F.</td>
</tr>
<tr>
<td>4&quot;</td>
<td>3 S.F.</td>
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**REDUCERS (COLLARS)**

<table>
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<tr>
<th>REDUCER SIZE</th>
<th>LARGE END</th>
<th>SMALL END</th>
<th>BEARING AREA</th>
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<td>10&quot;</td>
<td>7 S.F.</td>
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<tr>
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<tr>
<td>8&quot;</td>
<td>6&quot;</td>
<td>5 S.F.</td>
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**BENDS**

<table>
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<tr>
<th>PIPE SIZE</th>
<th>11–1/4° BEND</th>
<th>22–1/2° BEND</th>
<th>45° BEND</th>
<th>90° BEND</th>
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<td>5 S.F.</td>
<td>9 S.F.</td>
<td>18 S.F.</td>
<td>32 S.F.</td>
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<tr>
<td>10&quot;</td>
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<td>7 S.F.</td>
<td>13 S.F.</td>
<td>23 S.F.</td>
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<tr>
<td>8&quot;</td>
<td>2 S.F.</td>
<td>4 S.F.</td>
<td>8 S.F.</td>
<td>15 S.F.</td>
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<td>5 S.F.</td>
<td>8 S.F.</td>
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<tr>
<td>4&quot;</td>
<td>1 S.F.</td>
<td>1 S.F.</td>
<td>2 S.F.</td>
<td>4 S.F.</td>
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VERTICAL BLOCKS

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<tr>
<th>PIPE SIZE</th>
<th>CONCRETE VOLUMES</th>
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<td>11-1/4&quot; BEND</td>
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<tr>
<td>12&quot;</td>
<td>1 YD</td>
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<tr>
<td>8&quot;</td>
<td>0.5 YD</td>
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</table>

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 COMPACTATION 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.
1/2" x 5" threaded galvanized anchor bolts in conc. slab

1/2" x 5" threaded galv. cinch anchor bolts (redheads) with nuts & washers
Weld 1-1/2" x 1-1/2" x 1/4" x 1-1/2" angle clips to pipe

18"
4" PVC sleeve
24" sq. concrete pad class "A" 6 sack
3000 psi

27"

1" P.E.CTS tubing or approved equal
(2" P.E. FOR 10" MAINS OR LARGER)

LINE MUST HAVE CONTINUOUS
POSITIVE SLOPE TO SURFACE

SADDLE AND CORPORATION STOP PER WATER SERVICE CONNECTION
(DETAILS) EXCEPT TAP MUST BE MADE ON TOP OF PIPE

① JONES 2605 1" x 3/4" coupler or approved equal (comp. adapter)
② MUELLER 1" curb stop ball valve or approved equal
③ APCO 143C - 1" OR 145C - 2" OR APPROVED EQUAL
④ RISE MUST BE MINIMUM 18" BELOW GUTTER FLOW LINE.
⑤ LOCATOR WIRE 12 AWG INSULATED
⑥ CURB VALVE, MUELLER 10291 FPT ORISEAL
⑦ MUELLER 15428 CTS x MPT COMPRESSION CONNECTION
⑧ CHRISTY G5 BOX OR EQUAL

PLAN

① COUPLER
② BALL VALVE
③ AIR VAC. VALVE
④ TEE
⑤ SUPPORT W/ SMOOTH DOWEL
⑥ STAINLESS STEEL CAN - 16" O.D.
⑦ DRILL 1/2" HOLES AT 3" O.C.
⑧ NO. 12 GA. PLATE WELDED TO TOP

1/2" x 5" threaded stainless steel screen

CORPORATION STOP

WATER MAIN

CITY OF PASO ROBLES
ENGINEERING DIVISION

DRAWN BY:
KGE

DESIGNED BY:
JF

DATE:
09/11

FILE NAME:
PR-G-8.DWG

DRAWING NO.
G-8
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.
BACK OF CURB

PROPERTY LINE

SIDEWALK

METER STOP

18"

10'-0" MIN.

1'-6" MIN.

WATER MAIN

SEWER LATERAL

PIPE JOINT (TYP)

WIDE OR DETACHED SIDEWALK OR CURB ONLY

PROPERTY LINE

F.H.

FACE OF CURB

12"

10'-0" MIN.

1'-6" MIN.

WATER MAIN

SEWER LATERAL

CURB AND FIVE FOOT SIDEWALK CONTIGUOUS

F.H.

METER STOP

10'

10'-0" MIN.

1'-6" MIN.

WATER MAIN

EDGE OF PAVEMENT

WITHOUT CURB AND SIDEWALK

CITY OF PASO ROBLES ENGINEERING DIVISION

METER SERVICE AND HYDRANT LOCATIONS

DRAWN BY: KGE

DESIGNED BY: JF

DATE: 08/11

FILE NAME: PR-G-11.DWG

DRAWING NO. G-11
BACKFLOW PROTECTION SHALL BE RP DEVICES AND SHALL BE INSTALLED ON ALL LANDSCAPE, COMMERCIAL, INDUSTRIAL AND MULTI-STORIED SERVICES.
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

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<th>CITY OF PASO ROBLES ENGINEERING DIVISION</th>
<th>DRAWING NO.</th>
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<td>CALIFORNIA HEALTH DEPARTMENT REQUIREMENTS</td>
<td>G-13</td>
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