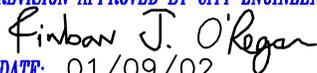


NOTES:

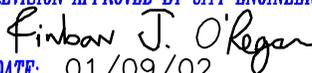
1. 6" MIN. PIPE SIZE IS ACCEPTABLE ONLY IN RESIDENTIAL CUL-DE-SACS LESS THAN 400 FEET IN LENGTH AND WITHOUT FIRE HYDRANTS. CUL-DE-SACS GREATER THAN 400'-0" SHALL REQUIRE A MINIMUM 8" DIAMETER PIPE SIZE. 8" MIN. PIPE SIZE IS REQUIRED IN ALL OTHER AREAS.
2. ALL WATER DISTRIBUTION SYSTEMS SHALL BE LOOPED IN ALL AREAS EXCEPT CUL-DE-SACS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. A NON-LOOPED WATER DISTRIBUTION SYSTEM MAY SERVE A MAXIMUM OF 25 RESIDENTIAL LOTS.
3. 10" AND 14" PIPES SHALL NOT BE ALLOWED. IF DESIGN CALCULATIONS RESULT IN DESIGNS USING 10" AND 14" PIPES, THEN 12" AND 16" PIPES, RESPECTIVELY, MUST BE USED.
4. 12" MIN. MAINS REQUIRED WHEN DISTANCE BETWEEN INTERCONNECTED LINES EXCEEDS 600'-0".
5. FIRE HYDRANT LOCATION AND PLACEMENT SHALL BE AT THE DIRECTION OF THE CITY OF STOCKTON FIRE DEPARTMENT.
6. AT ANY INTERCONNECTION OF THREE OR MORE PIPES, THE NUMBER OF VALVES REQUIRED SHALL EQUAL THE TOTAL NUMBER OF PIPES MINUS ONE.
7. VALVE SPACING ON TRANSMISSION LINES SHALL BE DETERMINED BY THE CITY ENGINEER. VALVES ON ALL OTHER LINES SHALL BE LOCATED SUCH THAT NO MORE THAN 600'-0" OF WATER LINE WILL BE SHUT DOWN AT ANY ONE TIME AND WILL NOT REQUIRE THE SHUT DOWN OF A PIPE SIZE 16" OR GREATER.
8. ALL WATER LINES, VALVES AND OTHER APPURTENANCES SHALL CONFORM TO A.W.W.A. AND CITY OF STOCKTON STANDARD SPECIFICATIONS AND DRAWINGS.

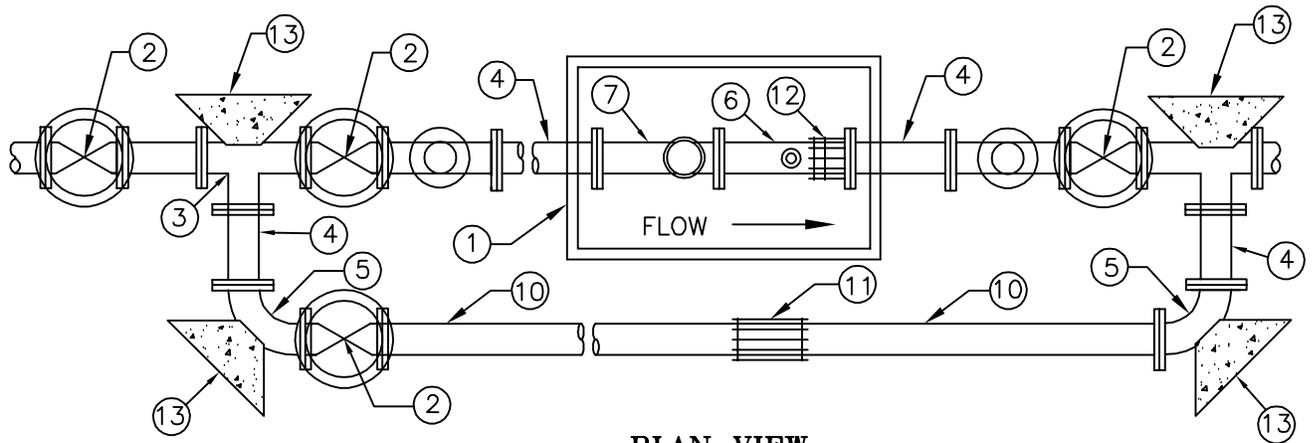
REV. NO.	REV. DATE	REV. BY	WATER DESIGN DATA	REVISION APPROVED BY CITY ENGINEER	
4	9/22/98	HLE/RH		 DATE: 01/09/02	
DIGITIZED		1/1/92	CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	SUPERCEDES DWC. DATED	DRAWING NO.
DWC. BY	RC	SCALE		11/8/80	90
CK. BY		NONE			

(CONT'D FROM DWG. 90)

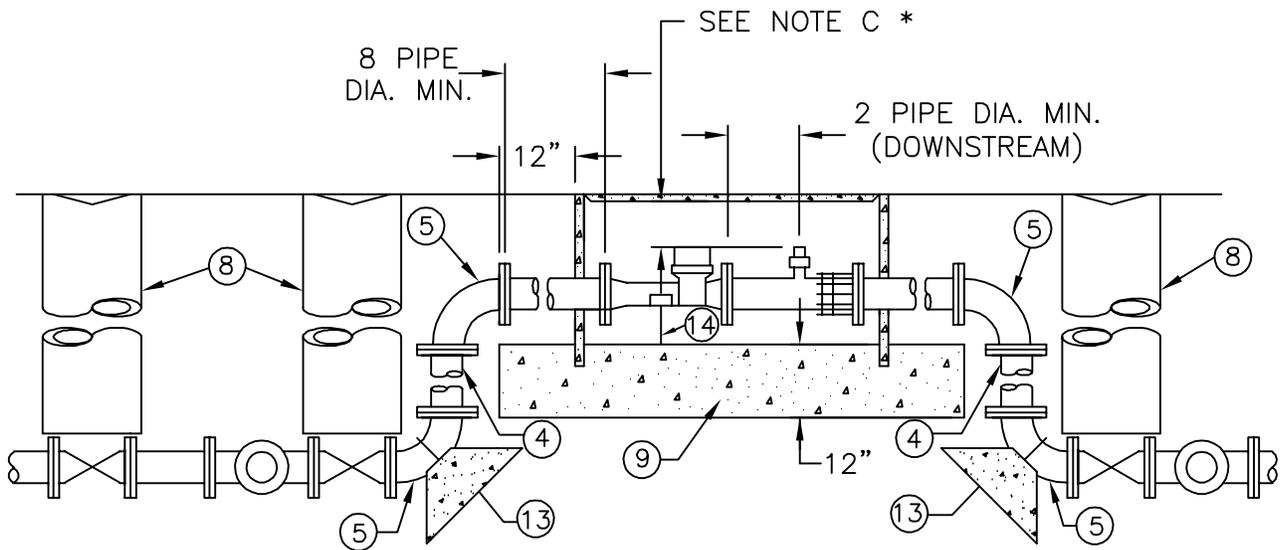
NOTES CONTINUED:

9. CONTRACTOR SHALL CALL CITY AND/OR PRIVATE WATER COMPANY IF ANY LINES ARE BROKEN. NO WATER VALVES SHALL BE SHUT OFF BY ANYONE UNLESS SO DIRECTED BY AN AUTHORIZED REPRESENTATIVE OF THE WATER COMPANY CONCERNED.
10. REFER TO THE RULES AND POLICIES OF THE OPERATING COMPANY OR CITY FOR METER CONNECTION.
11. MINIMUM CLEARANCE OF 4'-6" FROM THE GRADE AT BACK OF SIDEWALK TO WATER SERVICE. SEE DRAWING NO. 93.
12. WATER LINE ELEVATIONS TO BE SHOWN ON ALL PLAN AND PROFILE SHEETS.
13. WATER SYSTEM DESIGN SHALL CONFORM TO STATE HEALTH CODES. SEE STD. DWG NO. 47.
14. SERVICE TAPS SHALL NOT BE PERMITTED ON PIPE SIZES 16" AND GREATER.
15. SUBDIVISION WATER SYSTEMS SHALL BE DESIGNED USING AN ENGINEERING ANALYSIS THAT DEMONSTRATES:
 - A. FOR ULTIMATE DEVELOPMENT OF THE SUBDIVISION, WITH A GIVEN SYSTEM PRESSURE OF 45 PSI AT THE POINT OF CONNECTION TO THE CITY WATER SYSTEM AND NO WELLS ON WITHIN THE SUBDIVISION, THE WATER SYSTEM IMPROVEMENTS SHALL PROVIDE AT LEAST 40 PSI PRESSURE AT ANY LOCATION DURING THE PERIOD OF PEAK HOUR DEMAND.
 - B. FOR ULTIMATE BUILDOUT OF THE SUBDIVISION, WITH A GIVEN SYSTEM PRESSURE OF 45 PSI AT THE POINT OF CONNECTION TO THE CITY WATER SYSTEM AND NO WELLS ON WITHIN THE DEVELOPMENT, THE WATER SYSTEM IMPROVEMENTS SHALL PROVIDE AT LEAST 20 PSI PRESSURE AT ANY LOCATION DURING THE PERIOD OF MAXIMUM DAY DEMAND COMBINED WITH A FIRE FLOW OF 2000 GPM AT ANY LOCATION IN THE SUBDIVISION.
 - C. FOR ANY PERIOD OF TIME DURING THE INTERIM PHASES OF DEVELOPMENT OF THE SUBDIVISION, WITH A GIVEN SYSTEM PRESSURE OF 45 PSI AT THE POINT OF CONNECTION TO THE CITY WATER SYSTEM AND NO WELLS ON WITHIN THE DEVELOPMENT, THE WATER SYSTEM IMPROVEMENTS SHALL PROVIDE AT LEAST 20 PSI PRESSURE AT ANY LOCATION DURING THE PERIOD OF MAXIMUM DAY DEMAND COMBINED WITH ONE FIRE FLOW OF 1500 GPM OUT OF ANY FIRE HYDRANT IN THE SUBDIVISION.
16. DEPTH OF PIPE SHALL BE 3'-0" MIN. FROM FINISHED GRADE, 2'-6" MIN. FROM EXISTING SUBGRADE, OR 2'-0" FROM SUBGRADE IN NEW STREETS WHICHEVER IS GREATER.

REV. NO.	REV. DATE	REV. BY	WATER DESIGN DATA	REVISION APPROVED BY CITY ENGINEER	
4	6/1/2000	HLE/RH		 DATE: 01/09/02	
DIGITIZED		1/1/92	CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	DRAWING NO.	
DWG. BY	RC	SCALE		SUPERCEDES DWG. DATED	
CK. BY		NONE		2/23/95	
			90A		



PLAN VIEW



PROFILE VIEW

* FOR NOTES, SEE
DWG. NO. 92A.

REV. NO.	REV. DATE	REV. BY	LAYOUT FOR 3" OR LARGER METER BY-PASS INSTALLATION	REVISION APPROVED BY CITY ENGINEER <i>Finbar J. O'Regan</i> DATE: 11/25/03	
5	6/1/2003	HL/EA		CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	
DIGITIZED		7/1/91			
DWG. BY	RC	SCALE			
CK. BY		NONE			

(CONT'D FROM DWG. 92)

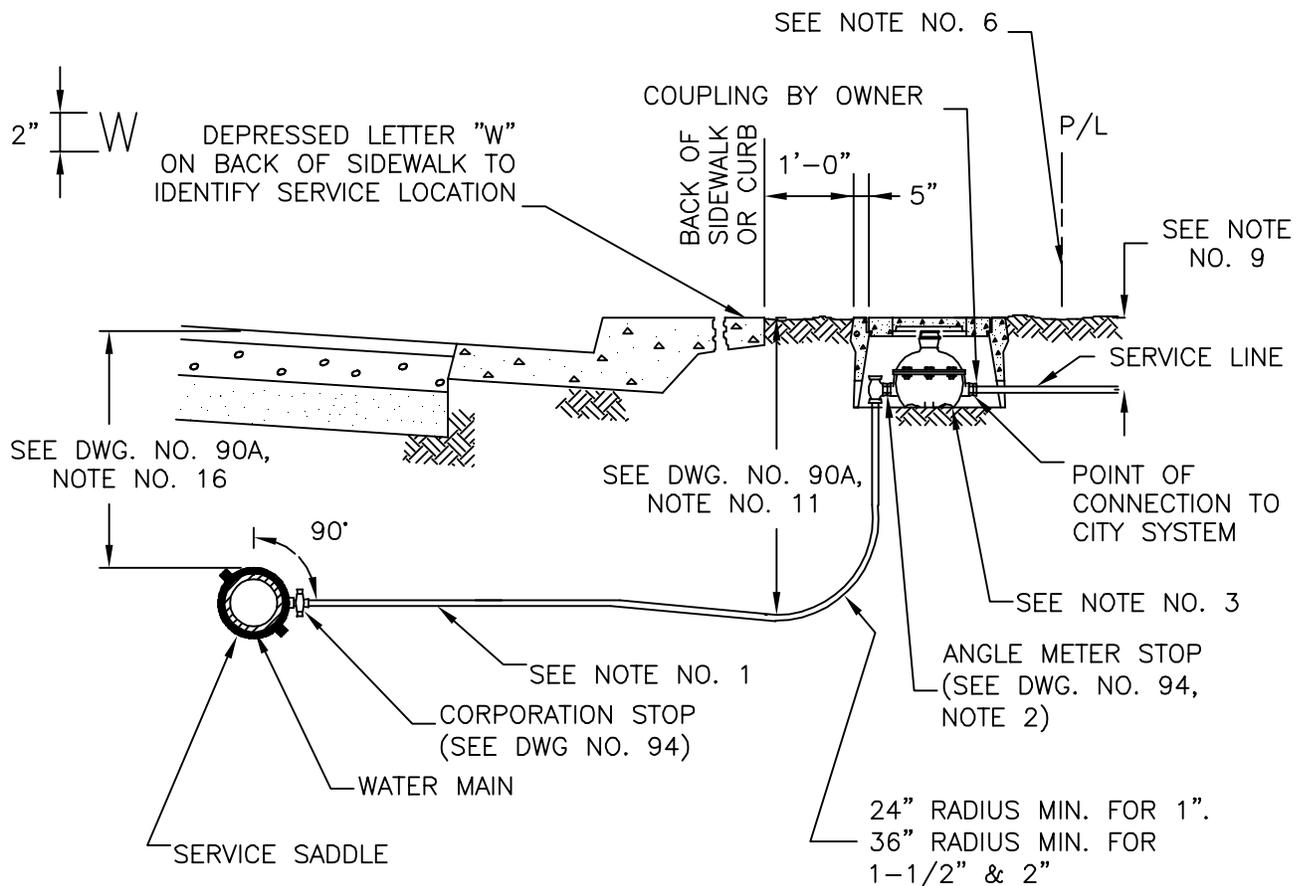
COMPONENTS:

1. SIZE OF METER VAULT SHALL BE DETERMINED BY METER SIZE. VAULT COVERS SHALL BE 2 OR 3 PIECE METAL WITH READING LID CUT-IN POSITIONED OVER REGISTER.
2. VALVE – SEE STANDARD SPECIFICATION 76–1.02D.
3. CLASS 125 DUCTILE IRON PIPE TEE.
4. CLASS 125 DUCTILE IRON PIPE SPOOL.
5. CLASS 125 DUCTILE IRON PIPE 90° LONG RADIUS ELBOW.
6. CAST IRON TAPPED SPOOL OR TEE, FLANGE BY PLAIN END, WITH 2” BLIND FLANGED ACCESS.
7. METER AS SPECIFIED BY CITY WATER DIVISION.
8. CHRISTY G–8 VALVE BOX OR BROOKS NO. 1–RT VALVE BOX. BOTH WITH DUCTILE IRON PIPE COVERS. SEE DWG. NO. 99.
9. GRAVEL BASE. 12” MIN. DEPTH.
10. FLANGED BY PLAIN END CAST IRON PIPE. SEE STANDARD SPECIFICATION NO. 76–1.02B.
11. FLEX COUPLING – ROCKWELL 411 STEEL COUPLING OR EQUAL.
12. FLANGED COUPLING ADAPTER – ROCKWELL 912 OR EQUAL.
13. THRUST BLOCKS – SEE STANDARD SPECIFICATION 76–1.02H AND DWG. NO. 100.
14. METER AND PIPE SUPPORTS AS REQUIRED.

NOTES:

- A. DETAILED DESIGN WILL BE REQUIRED AND SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO INSTALLATION.
- B. BY–PASS REQUIREMENTS WILL BE DETERMINED BY THE CITY ENGINEER OR DEPUTY MUNICIPAL UTILITIES DIRECTOR/WATER & COLLECTION SYSTEMS.
- C. DIMENSION SHALL VARY FROM 12” TO 24” DEPENDING ON METER AND SERVICE SIZE.

REV. NO.	REV. DATE	REV. BY	LAYOUT FOR 3” OR LARGER METER BY–PASS INSTALLATION	REVISION APPROVED BY CITY ENGINEER
4	6/1/2000	HLE/RH		DATE: 01/09/02
DIGITIZED		7/1/91	CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	DRAWING NO.
DWG. BY	RC	SCALE		SUPERCEDES DWG. DATED
CK. BY		NONE		2/23/95



**TYPICAL WATER SERVICE INSTALLATION
FOR CITY WATER SERVICE AREAS ONLY**

NOTES:

1. 1" DIA. MINIMUM LINE TO EACH LOT. PLASTIC SERVICE PIPE TO BE CONTINUOUS WITH NO SPLICING ALLOWED.
2. SEE DWG. NO. 94 AND 94A FOR FITTINGS AND BOX ASSEMBLY.
3. METERS SHALL BE FURNISHED AND INSTALLED BY CITY OF STOCKTON.
4. SERVICE CONNECTION AT THE METER SHALL BE A DEPTH OF 8" MIN. TO 12" MAX.
5. THE LOCATION OF THE TAP SHALL BE A MIN. OF 24" FROM ANOTHER TAP, BELL, SPIGOT, OR OTHER FITTING.
6. METER BOX MAY BE PLACED ADJACENT TO PROPERTY OR EASEMENT LINE WITH PRIOR APPROVAL OF THE CITY ENGINEER.
7. USE BROOKS NO. 37 METER BOX WITH NO. 37 TR/PL (TOUCH READ/PIT PROBE) COVER OR CHRISTY B-12 METER BOX WITH B12 TR/PL COVER. ALL BOXES LOCATED IN DRIVEWAY AREAS TO HAVE TRAFFIC COVERS MEET HS20 44 LOADING WITH TOUCH READ HOLE 1-3/4" DIA. HOLE FOR T/R METER IN UPPER RIGHT OR LOWER LEFT CORNER OF LID.
8. MAY REQUIRE INSTALLATION OF A BACKFLOW PREVENTION DEVICE PER CITY OF STOCKTON ORD. 93-0138, SECTION I.G OR AS UPDATED, AT THE DISCRETION OF MUNICIPAL UTILITY DEPARTMENT.
9. SERVICE LINES FROM ALL METERS TO PROPERTY LINES SHALL HAVE A MINIMUM OF 8" OF COVER FROM TOP OF SIDEWALK OR GROUND LINE.

REV. NO.	REV. DATE	REV. BY	WATER SERVICE INSTALLATION 1", 1.5", AND 2" SERVICE	REVISION APPROVED BY CITY ENGINEER	
8	6/1/2003	HL/EA		Finbar J. O'Regan DATE: 11/25/03	
DIGITIZED				SUPERCEDES DWG. DATED	
DWG. BY	RC	SCALE	CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	DRAWING NO.	
CK. BY		NONE		01/09/02 93	

NOTE: SEE DWG'S. NO. 93 FOR DETAILS.

PLASTIC PIPE: (SEE SECTION OF SPECIFICATIONS REGARDING PLASTIC PIPE)

PLASTIC SERVICE PIPE SHALL BE ULTRA HIGH MOLECULAR WEIGHT (UHMW) P.E. 3406 CS 255-63, POLYETHYLENE (SEE COS 76-1.02J) AS MANUFACTURED BY WESTFLEX OR APPROVED EQUAL WITH MINIMUM PRESSURE RATING OF 160 P.S.I.

CONNECTION SHALL BE AS FOLLOWS:

1. CORPORATION STOPS

A. 6 INCH DIAMETER LINES

3/4" X 1" CORPORATION STOPS AS MANUFACTURED BY JAMES JONES (J-89 WITH J-2608 COMPRESSION ADAPTERS) COMPLETE WITH STAINLESS STEEL INSERTS FOR 1" I.D. PLASTIC PIPE.

B. 8 AND 12 INCH DIAMETER LINES

1" DIAMETER CORPORATION STOPS AS MANUFACTURED BY JAMES JONES (J-3402) COMPLETE WITH STAINLESS STEEL INSERTS FOR 1" I.D. PLASTIC PIPE.

C. ALTERNATE PRODUCT SUPPLIER

- (1) 1" CORPORATION STOP. FORD NO. 1001 WITH SS INSERTS.
- (2) 3/4" X 1" CORPORATION STOP. FORD NO. 800 PLUS A C-16-44 COMPRESSION ADAPTER WITH SS INSERTS.
- (3) 1-1/2" AND 2" CORPORATION STOPS. FORD NO. FB-1000.

2. ANGLE METER STOPS

A. 1 INCH DIAMETER ANGLE METER STOPS

1" I.D. ANGLE METER STOP AS MANUFACTURED BY JAMES JONES (J-4202) COMPLETE WITH LOCK WING AND STAINLESS STEEL INSERT FOR 1" I.D. PLASTIC PIPE.

B. 1-1/2 AND 2 INCH DIAMETER ANGLE METER STOPS

ANGLE METER STOPS AS MANUFACTURED BY JAMES JONES (J-4205) SHALL BE USED WITH STAINLESS STEEL INSERTS.

C. ALTERNATE PRODUCT SUPPLIER

- (1) 1" ANGLE METER STOP. FORD NO. KVP-3W WITH SS INSERT.
- (2) 1-1/2" ANGLE METER STOP. FORD FV 43-666 WITH SS INSERT.
- (3) 2" ANGLE METER STOP. FORD FV 43-777 WITH SS INSERT.

REV. NO.	REV. DATE	REV. BY	FITTINGS FOR WATER SERVICE	REVISION APPROVED BY CITY ENGINEER	
3	6/1/2000	HLE/RH		Finbar J. O'Regan	
DIGITIZED	1/1/92			DATE: 01/09/02	
DWG. BY	RC	SCALE	CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	SUPERCEDES DWG. DATED	DRAWING NO.
CK. BY		NONE		2/23/95	94

(CONT'D FROM DWG. 94)

CONNECTION SHALL BE AS FOLLOWS:

3. **SERVICE SADDLES**

ALL SERVICE SADDLES SHALL BE MANUFACTURED BY JAMES JONES (J-979) WITH DOUBLE FLAT BRONZE STRAPS AND BRONZE NUTS. SERVICE SADDLE FOR ALL SIZE C-900 MAINS SHALL BE MANUFACTURED BY JAMES JONES (J-996).

4. **WATER METER BOXES**

1" METER BOXES SHALL BE BROOKS NO. 37 OR CHRISTY B-12 BOX. FOR LIDS, SEE NOTE NO. 5.

1-1/2" AND 2" METER BOXES SHALL BE BROOKS NO. 66 OR CHRISTY B-36.

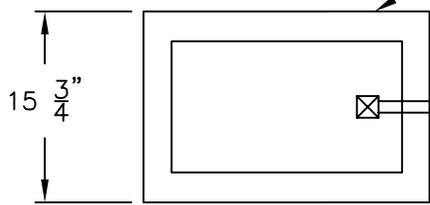
5. **WATER METER BOX COVER**

1" METER BOX COVER SHALL BE BROOKS NO. 37 TR/PL OR CHRISTY B-12 TR/PL COVER. ALL BOXES LOCATED IN DRIVEWAY AREAS TO HAVE TRAFFIC COVERS MEETING HS20 44 LOADING WITH TOUCH READ HOLE 1-3/4" DIA.

1-1/2" AND 2" METER BOXES SHALL HAVE BROOKS NO. 66 TR/PL OR CHRISTY B-36 TR/PL COVER. ALL BOXES LOCATED IN DRIVEWAY AREAS TO HAVE TRAFFIC COVERS MEETING HS20 44 LOADING WITH TOUCH READ HOLE 1-3/4" DIA.

REV. NO.	REV. DATE	REV. BY	FITTINGS FOR WATER SERVICE	REVISION APPROVED BY CITY ENGINEER	
3	6/1/2000	HLE/RH		Finbar J. O'Regan	
DIGITIZED		1/1/92	CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	DATE:	01/09/02
DWG. BY	RC	SCALE		SUPERCEDES DWG. DATED	DRAWING NO.
CK. BY		NONE		2/23/95	94A

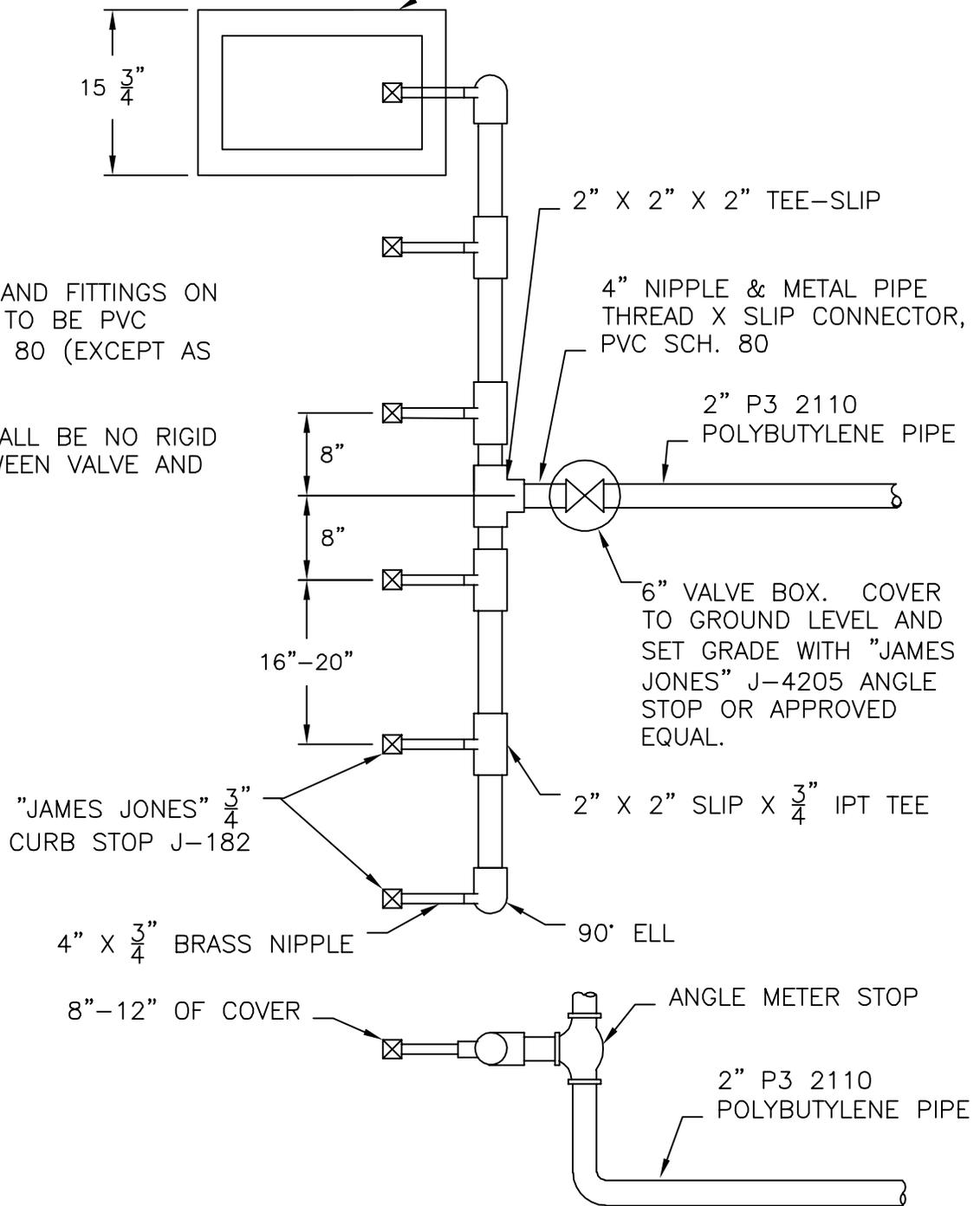
"BROOKS" NO. 37 BOX WITH NO. 37-S LID COVER DEPENDANT ON BOX LOCATION. ONE PER METER LOCATION.



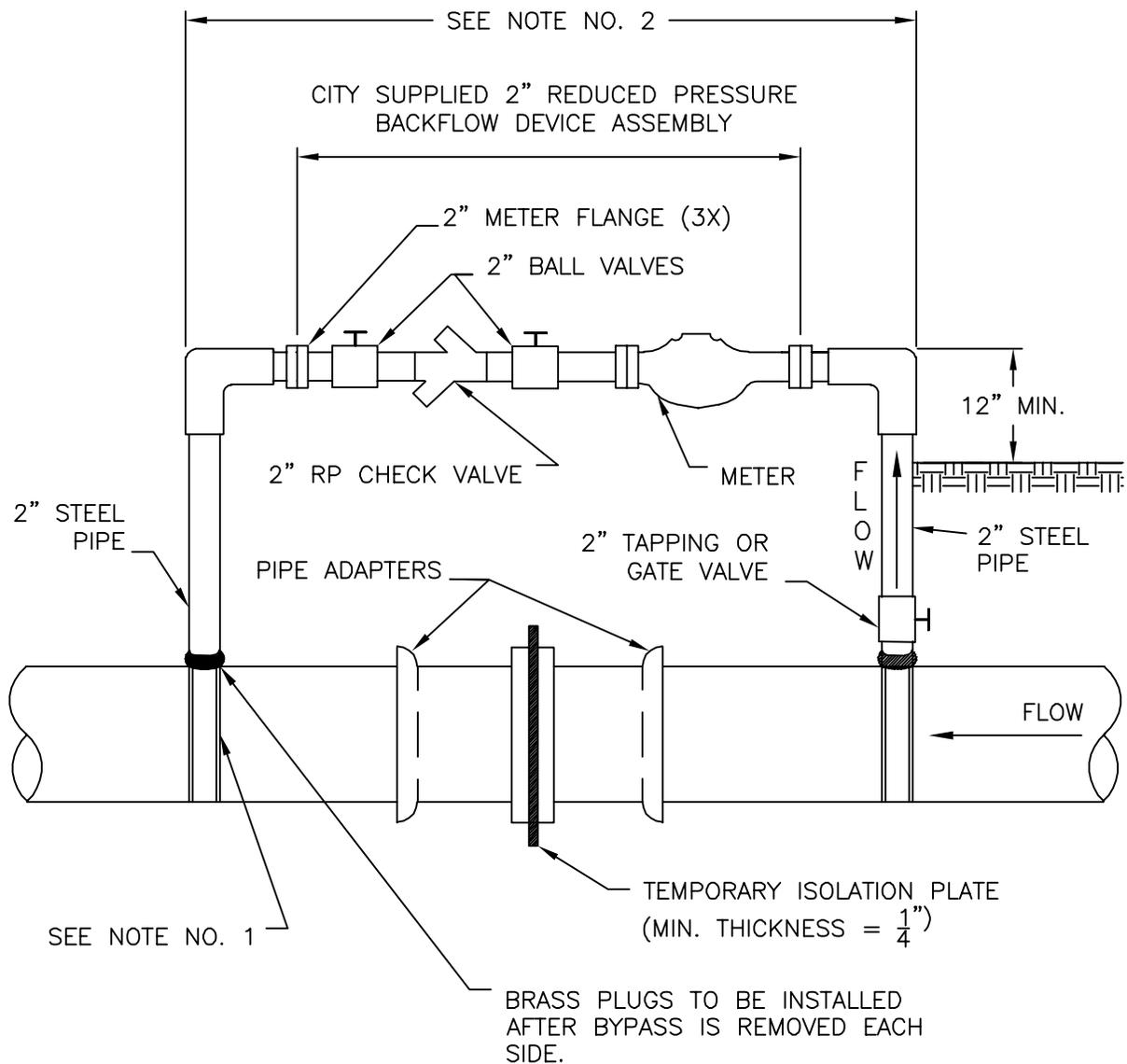
NOTES:

ALL PIPE AND FITTINGS ON MANIFOLD TO BE PVC SCHEDULE 80 (EXCEPT AS NOTED).

THERE SHALL BE NO RIGID PIPE BETWEEN VALVE AND MAIN.



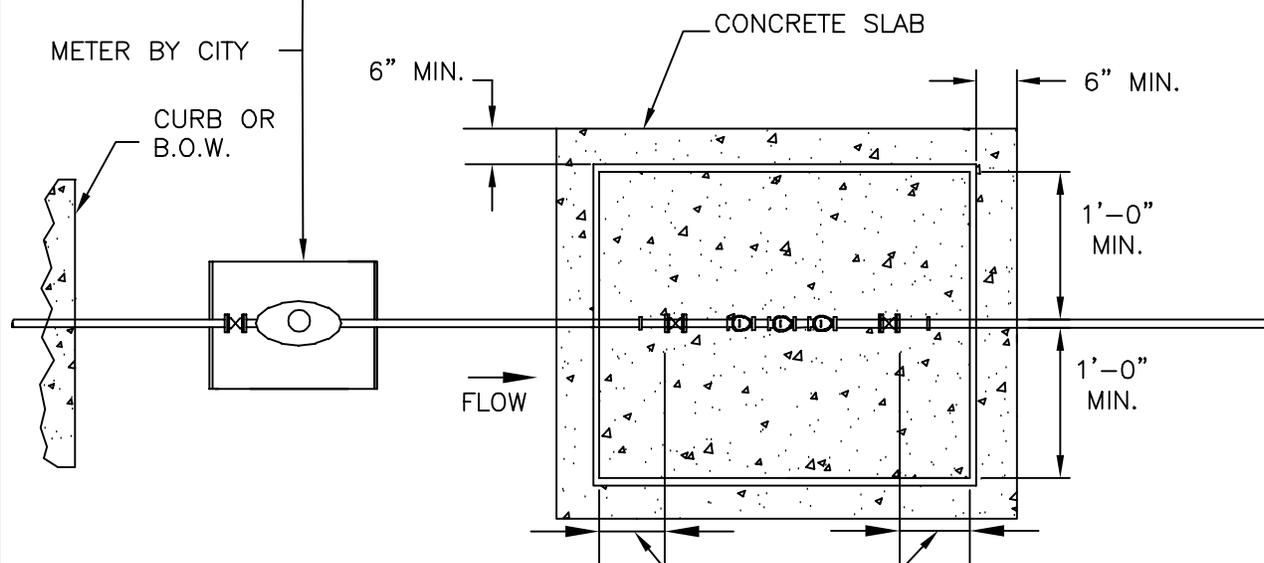
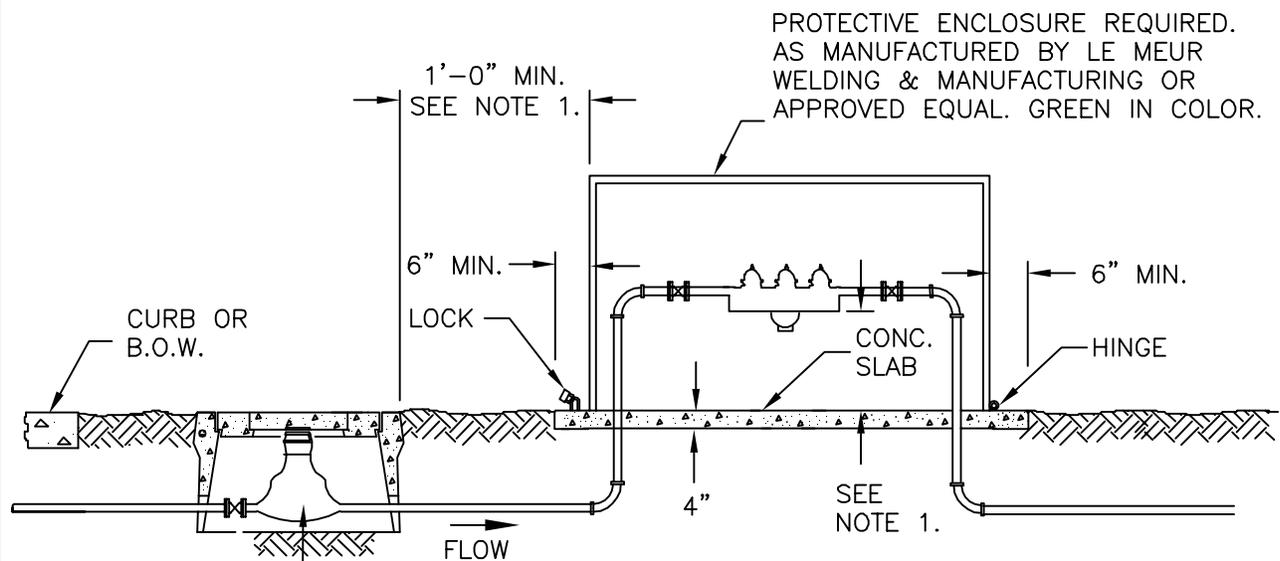
REV. NO.	REV. DATE	REV. BY	MULTIPLE UNIT METER SERVICE	REVISION APPROVED BY CITY ENGINEER	
5	6/1/2000	HLE/RH		Finbar J. O'Regan	
DIGITIZED		1/1/92	CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	DATE:	01/09/02
DWG. BY	RC	SCALE		SUPERCEDES DWG. DATED	DRAWING NO.
CK. BY		NONE		6/1/94	95



NOTES:

1. TAP NOT TO BE MADE CLOSER THAN 18" FROM END OF PIPE.
2. LENGTH TO BE AS NEEDED TO ACCOMMODATE SPECIFIED FITTINGS.
(THE CITY SUPPLIED ASSEMBLY IS APPROXIMATELY 34" TO 36").

REV. NO.	REV. DATE	REV. BY	ISOLATION OF NEW MAINS (18" AND SMALLER)	NEWDRAWING APPROVED BY CITY ENGINEER	
1	6/1/2000	HLE/RH		<i>Finbar J. O'Regan</i>	
DIGITIZED		6/1/94	CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	DATE: 01/09/02	
DWG. BY	HD	SCALE		SUPERCEDES DWG. DATED	DRAWING NO.
CK. BY		NONE		6/1/94	96



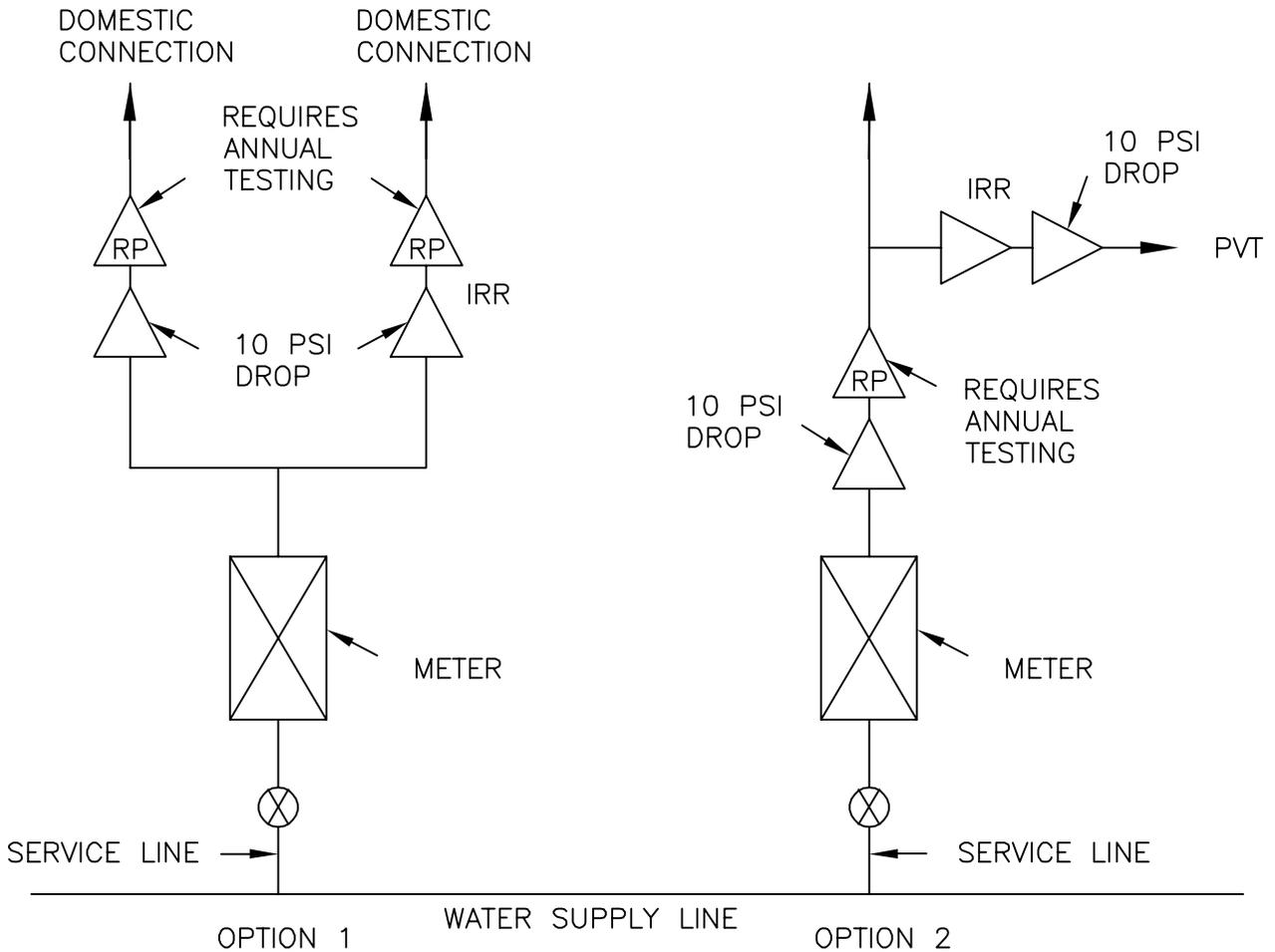
PLAN VIEW

NOTES:

1. A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION DEVICE SHALL BE LOCATED AS CLOSE AS PRACTICAL TO THE USER'S CONNECTION AND SHALL BE INSTALLED A MINIMUM OF TWELVE INCHES (12") ABOVE GRADE AND NOT MORE THAN THIRTY-SIX INCHES (36") ABOVE GRADE, MEASURED FROM THE BOTTOM OF THE DEVICE, AND WITH A MINIMUM OF TWELVE INCHES (12") SIDE CLEARANCE.
2. INSTALLATIONS SHALL MEET ALL REQUIREMENTS OF THE STATE CODE TITLE 17.

REV. NO.	REV. DATE	REV. BY	TYPICAL INSTALLATIONS FOR BACK FLOW PREVENTION DEVICES (IRRIGATION INSTALLATION)	NEW DRAWING APPROVED BY CITY ENGINEER	
3	6/1/2003	HL/EA		Finbar J. O'Regan	
DIGITIZED	6/9/93			DATE: 11/25/03	
DWG. BY	SA	SCALE	CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	SUPERCEDES DWG. DATED	DRAWING NO.
CK. BY		NONE		01/09/02	97

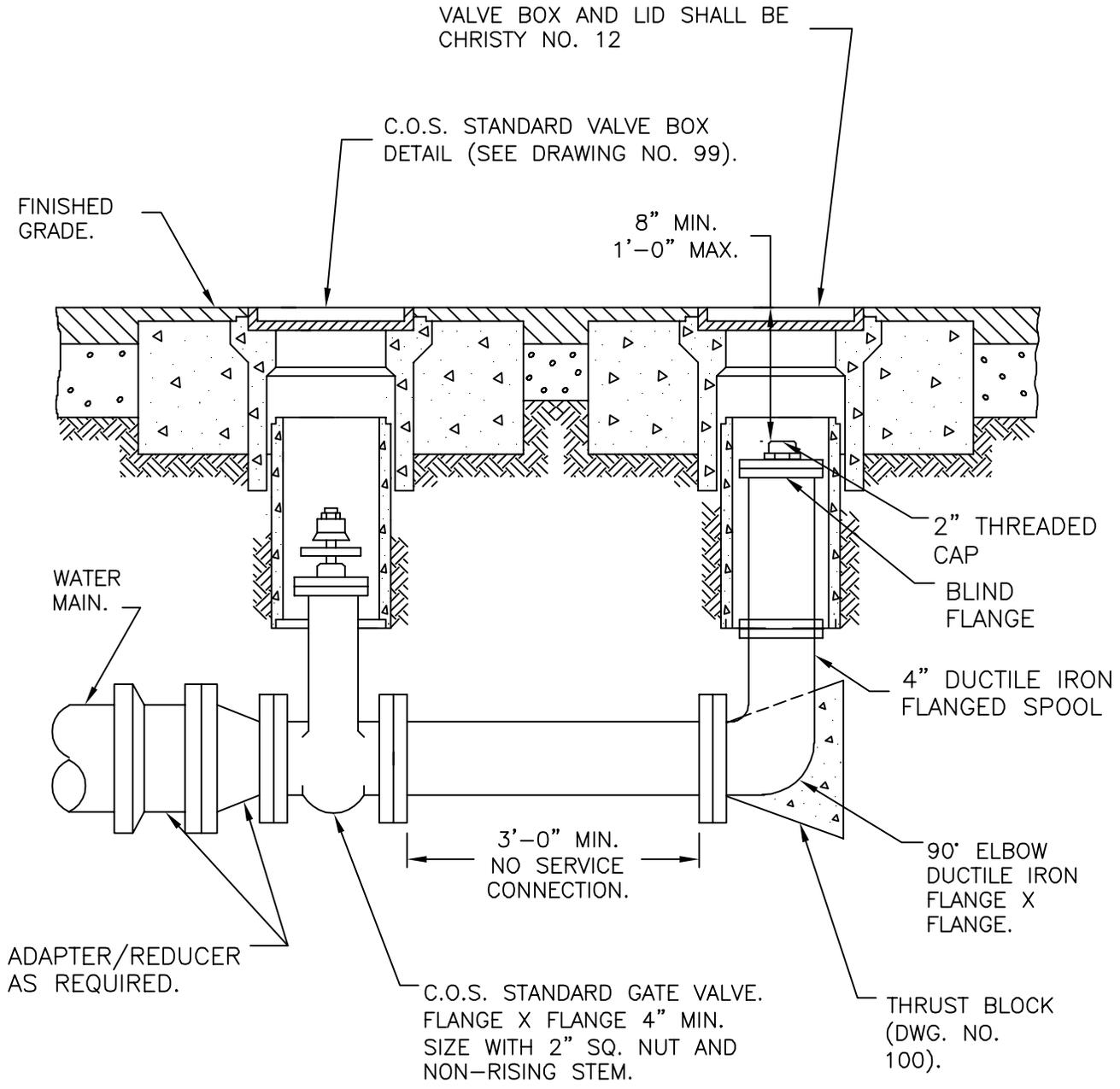
STANDARDS FOR BACKFLOW INSTALLATION



NOTES:

- 1) OPTION 2 IS ALLOWED ONLY WITH THE APPROVAL OF THE CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT.

<i>REV. NO.</i>	<i>REV. DATE</i>	<i>REV. BY</i>	BACKFLOW INSTALLATION	<i>REVISION APPROVED BY CITY ENGINEER</i>	
				<i>Finbar J. O'Regan</i>	
<i>DIGITIZED 3/20/2003</i>			CITY OF STOCKTON <i>DEPARTMENT OF PUBLIC WORKS</i>	<i>DATE: 11/25/03</i>	
<i>DWG. BY</i>	<i>AST</i>	<i>SCALE</i>		<i>SUPERCEDES</i>	<i>DRAWING NO.</i>
<i>CK. BY</i>		<i>NONE</i>		<i>DWG. DATED</i>	97A



REV. NO.	REV. DATE	REV. BY
5	6/1/2003	HL/EA
DIGITIZED		7/1/90
DWG. BY	RC	SCALE
CK. BY		NONE

BLOW-OFF

CITY OF STOCKTON
 DEPARTMENT OF PUBLIC WORKS

REVISION APPROVED BY CITY ENGINEER
Finbar J. O'Regan
 DATE: 11/25/03
 SUPERCEDES
 DWG. DATED 01/09/02
 DRAWING NO. 98

