



P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

SD-10 Water Line Trench Detail

DATE: 05/11/2020

DRAWN: GDT/FTC/DEC

APPROVED: JFP

SCALE: NTS

INSULATION REQUIRED WHEN TOP OF PIPE IS LESS THAN 4.5' TO FINISHED GRADE, MUST OBTAIN DISTRICT PERMISSION. SEE SD-10 FOR COMPLETE TRENCH AND FINISHED SURFACE REQUIREMENTS



MAMMOTH COMMUNITY WATER DISTRICT

P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

SD-11 Water Line Trench Insulation Detail

DATE: 05/11/2020

DRAWN: GDT/FTC/DEC

APPROVED: JFP

SCALE: NTS

SD-12 Construction Notes

- All water pipelines 4" or greater in diameter shall be constructed of ductile iron pipe conforming with ANSI/AWWA C151/A21.51 and use ductile iron fittings per ANSI/AWWA C110/A21.10 or C153/A21.53
- Minimum cover on water pipelines shall be 4'-6'.
- Thrust restraint shall be installed at all pipeline bends, tees, crosses, valves, and dead ends in accordance with SD-20, and the details shown on plans.
- Minimum horizontal separation of water mains and sanitary sewer lines shall be 10 feet. Minimum vertica the above Basic Separation Standards, then alternate construction criteria specified in the California State Water separation shall be 1 foot at all water main and sanitary sewer line crossings. Control Board "California Regulations Related to Drinking Water" shall be employed If local conditions do not allow for
- ù Minimum horizontal separation of water mains and storm drains, recycled water, or raw water shall be 4 feet Minimum vertical separation shall be 1 foot.
- All water pipelines shall be hydrostatically pressure tested per AWWA C600. All leaks or defective pipe shall be replaced or repaired prior to placing any water pipeline in service.
- Water pipelines shall be disinfected in accordance with the requirements of AWWA C651 and any additional the Mammoth Community Water District prior to placing any water pipeline in service
- All trenching, pipeline installation and backfill shall conform with the design standards and regulations of the Mammoth Community Water District and are subject to District inspection and approval
- Contractor shall notify Mammoth Community Water District two working days before work begins, and one working day before the time inspection is to be made
- 10. Contractor shall maintain records of all as-built pipeline and appurtenance locations and shall furnish all such approved by the District records to Mammoth Community Water District upon completion of the work. All location changes must be
- All revisions and modifications of details or substitutions of materials for pipelines and appurtenances shall be approved by the District.
- . Work within the Town of Mammoth Lakes right-of-way shall comply with the encroachment permit. shall be performed in accordance with Title 12, chapter 12.04 (Encroachments and Excavations) of the
- Existing utilities information shown is approximate only; additional utilities may exist. contacting Underground Services Alert of Northern California and Nevada at 811, or 1-800-642-2444 for a location location, and size of existing utilities shall be determined by the contractor. This includes, but is not limited to
- 14. All property lines and rights of way shown for reference only. Line locations are not deemed accurate by MCWD and should be considered approximate

SD-12 Construction Notes

DATE: 05/11/2020

DRAWN: GDT/FTC/DEC

NTS

APPROVED: JFP

SCALE:

WATER DISTRICT P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

MAMMOTH COMMUNITY

- shall be 1 foot at all water line and sanitary sewer line crossings. If local conditions do not allow for the above Basic Control Board "California Regulations Related to Drinking Water" shall be employed Separation Standards, then alternate construction criteria specified in the California State Water Resources
- Once on private property, yard piping will adhere to most recent California Plumbing Code Standards
- All trenching, pipeline installation and backfill shall conform with the design standards and regulations of the Mammoth Community Water District and are subject to District inspection and approval
- shall be performed in accordance with Chapter 12.04 (Encroachments and Excavations) of the Town of
- All underground service line valves and fittings shall be in accordance with AWWA C800
- See separate Meter Specifications, SD-24 and SD-25, for complete details of meter installation
- Contractor must notify U.S.A. alert at 811, or (800) 642-2444, at least two working days prior to any digging or

SD-13 Water Lateral Construction Notes DATE: 05/11/2020

DRAWN: GCS/FTC/DEC

NTS

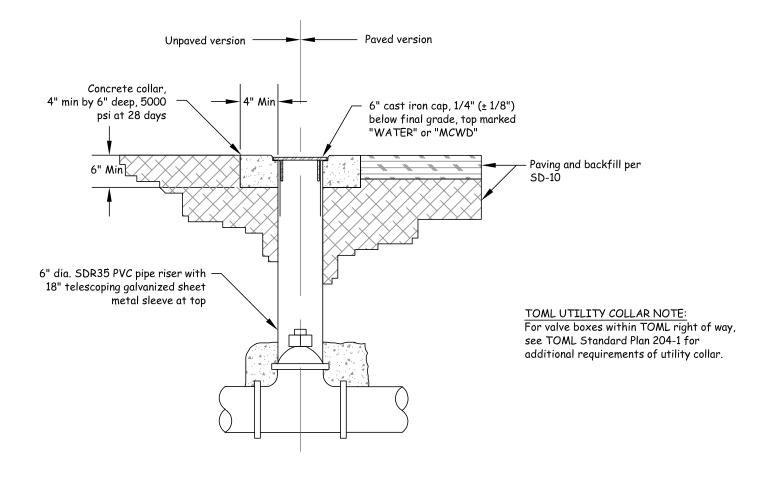
APPROVED: JFP

SCALE:

THE DISTRICT

MAMMOTH COMMUNITY WATER DISTRICT

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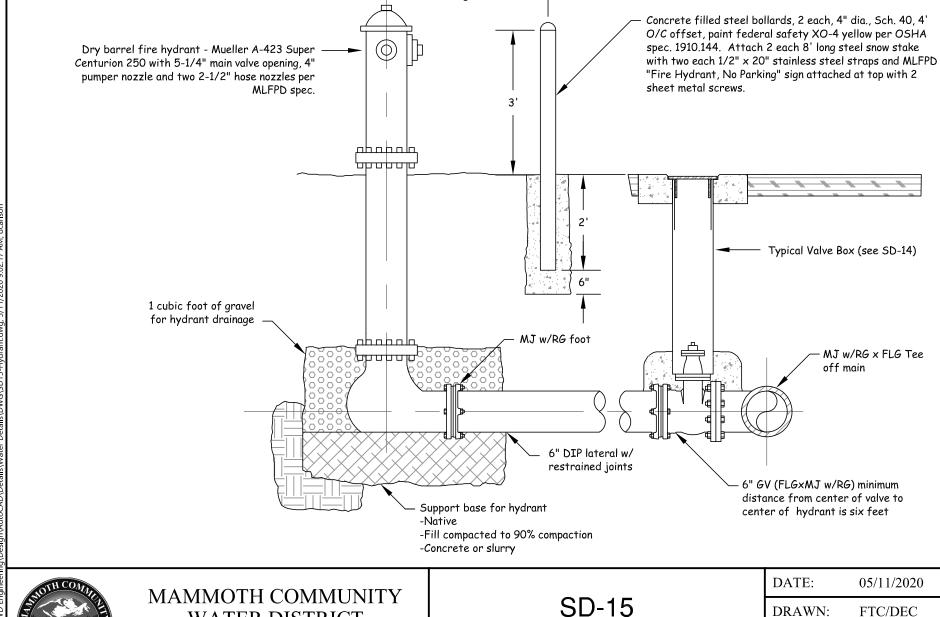




P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

SD-14 Typical Valve Box

DATE:	05/11/2020
DRAWN:	FTC/DEC
APPROVED:	JFP
SCALE:	NTS



Fire Hydrant

APPROVED: JFP

NTS

SCALE:

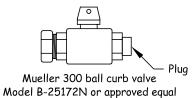
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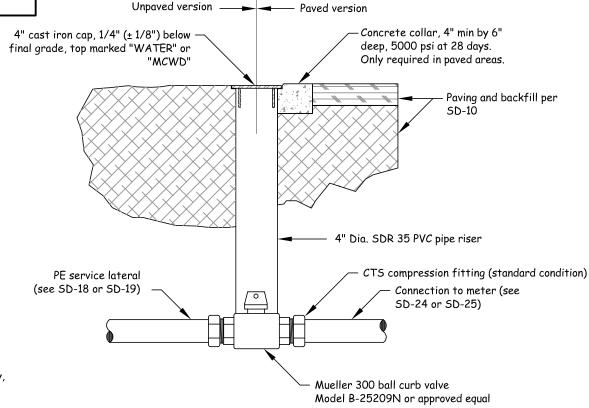
5' Max. to edge of pavement.





Note: Use compression x female curb valves in the following situations:

- Vacant lots with no meter, use plug on F.I.P. side
- All single water service laterals per SD-18



TOML UTILITY COLLAR NOTE:

For curb valves within TOML right of way, see TOML Standard Plan 204-1 for additional requirements of utility collar.



MAMMOTH COMMUNITY WATER DISTRICT

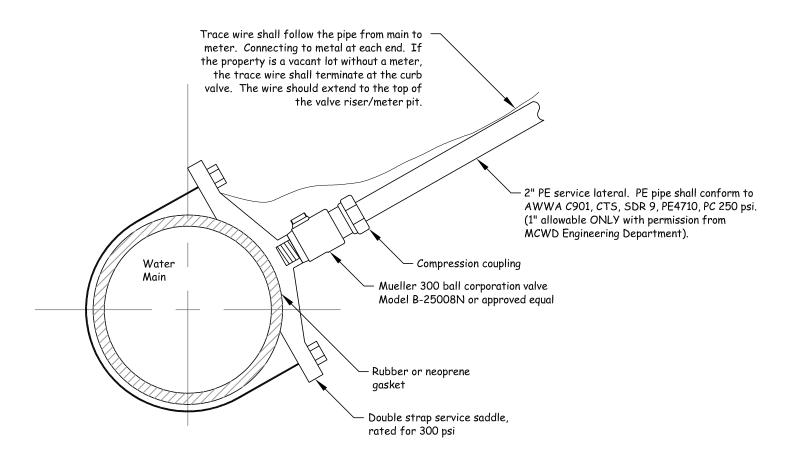
P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

SD-16 Curb Valve DATE: 2/9/2023

DRAWN: DEC

APPROVED: GRH

SCALE: NTS

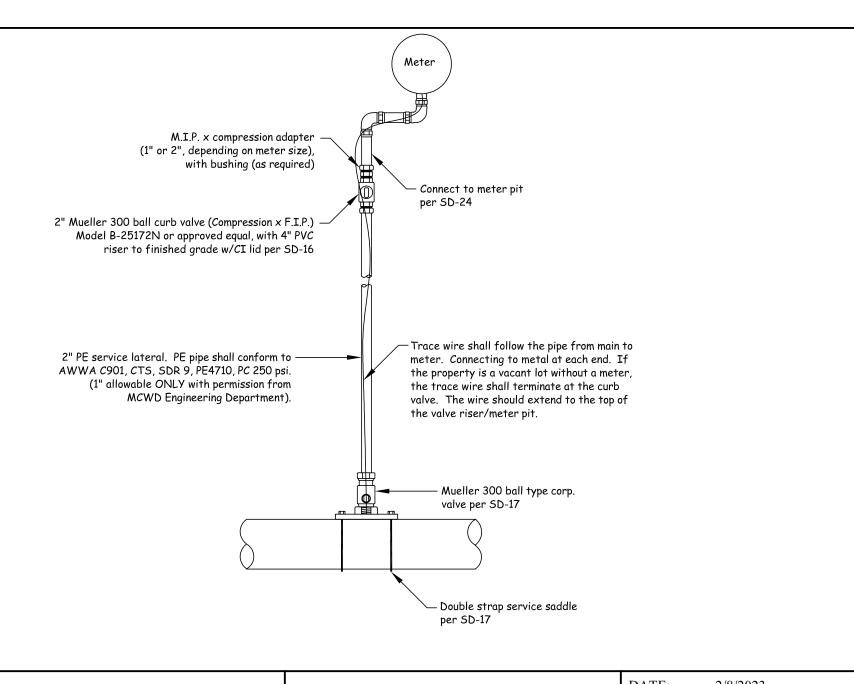




P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

SD-17 Water Service Connection To Main

DATE:	2/8/2023
DRAWN:	DEC
APPROVED:	GRH
SCALE:	NTS

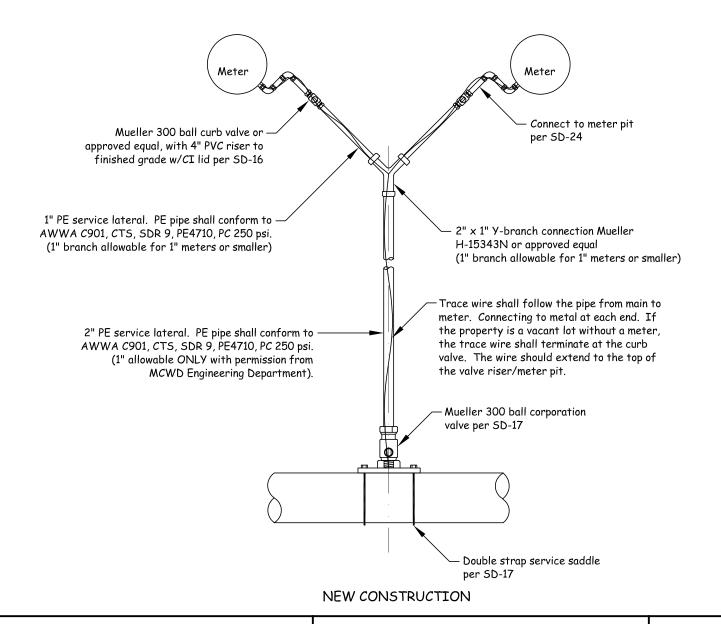




P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

SD-18 Single Water Service Lateral

DATE:	2/8/2023
DRAWN:	DEC
APPROVED:	GRH
SCALE:	NTS





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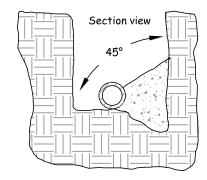
SD-19 Double Water Service Lateral

DATE:	2/9/2023
DRAWN:	DEC
APPROVED:	GRH
SCALE:	NTS

Type of Fitting	90° Bend	45° Bend	11 ½° o Be		Tee, Valve or Dead End	Cross
Typical Installation Plan View						
Pipe Dia.	Min. Bearing Are	ea in Square Feet	22½°	11 ¹ / ₄ °	Min. Bearing Are	ea in Square Feet
6 "	9 sq. ft.	5 sq. ft.	2 sq. ft.	1 sq. ft.	6 sq. ft.	3 sq. ft.
8"	16 sq. ft.	8 sq. ft.	4 sq. ft.	2 sq. ft.	11 sq. ft.	6 sq. ft.
10"	24 sq. ft.	13 sq. ft.	7 sq. ft.	3 sq. ft.	17 sq. ft.	9 sq. ft.
12"	34 sq. ft.	19 sq. ft.	10 sq. ft.	5 sq. ft.	24 sq. ft.	13 sq. ft.

Thrust Block Notes:

- 1. Thrust blocks shall be constructed of 2000 psi concrete.
- 2. Areas shown are for a test pressure of 200 psi with 1500 psf soil bearing capacity. Installation using different test pressure and/or soil type shall be adjusted accordingly, subject to review by the engineer.
- 3. Thrust blocks shall be poured against undisturbed soil.
- 4. Joints shall be kept clear of concrete.



Note: Thrust restraint shall be per SD-20.1, SD-20.2 and SD-20.3 OR SD-20.4 and SD-20.5.

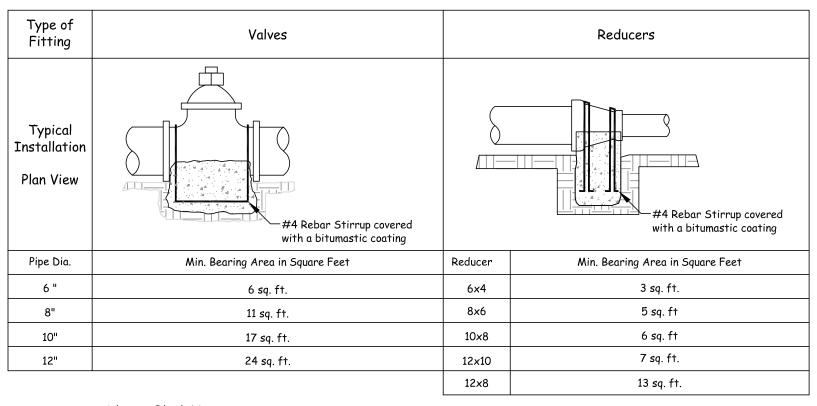


MAMMOTH COMMUNITY WATER DISTRICT

P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

SD-20.1 Concrete Thrust Restraints

DATE:	05/11/2020
DRAWN:	FTC/DEC
APPROVED:	JFP
SCALE:	NTS



Thrust Block Notes:

- 1. Thrust blocks shall be constructed of 2000 psi concrete.
- 2. Areas shown are for a test pressure of 200 psi with 1500 psf soil bearing capacity. Installation using different test pressure and/or soil type shall be adjusted accordingly, subject to review by the engineer.
- 3. Thrust blocks shall be poured against undisturbed soil.
- 4. Joints shall be kept clear of concrete.

Note: Thrust restraint shall be per SD-20.1, SD-20.2 and SD-20.3 OR SD-20.4 and SD-20.5.

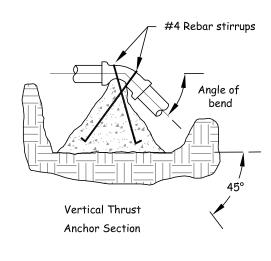


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P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

SD-20.2 Concrete Thrust Restraints

DATE:	05/11/2020
DRAWN:	PWC/DEC
APPROVED:	JFP
SCALE:	NTS



Anchor Volume (Cubic Feet)

Pipe Dia.	Angle of Vertical Bend			
	11 ¹ / ₄ °	22½°	45°	90°
6"	12 cu. ft.	24 cu. ft.	44 cu. ft.	62 cu. ft.
8"	22 cu. ft.	42 cu. ft.	78 cu. ft.	111 cu. ft.
10"	33 cu. ft.	65 cu. ft.	120 cu. ft.	170 cu. ft.
12"	48 cu. ft.	94 cu. ft.	173 cu. ft.	245 cu.ft.

Vertical Thrust Anchor Notes:

- 1. Vertical thrust anchors shall be constructed of 2000 psi concrete with a density of at least 150 lbs/cu ft.
- 2. Areas shown are for a test pressure of 200 psi. Installation using different test pressure shall be adjusted accordingly subject to review by the engineer.
- 3. Vertical thrust anchors shall be poured against undisturbed soil.
- 4. Joints shall be kept clear of concrete.

Note: Thrust restraint shall be per SD-20.1, SD-20.2 and SD-20.3 OR SD-20.4 and SD-20.5.



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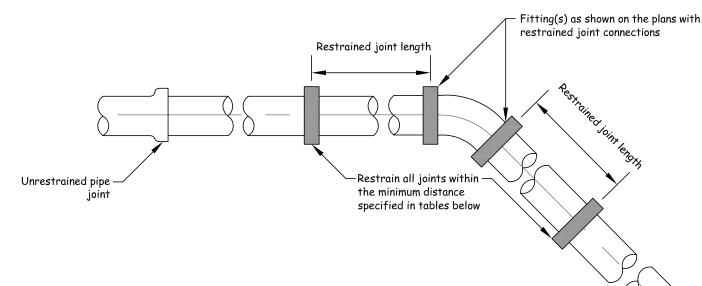
SD-20.3 Concrete Thrust Restraints

DATE: 05/11/2020

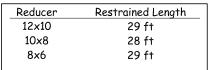
DRAWN: FTC/DEC

APPROVED: JFP

SCALE: NTS



Minimum Restrained Joint Lengths						
Horizontal & Vertical Up Bend Angle				Tee* (branch	Valves** &	
Pipe Size	90°	45°	22½°	11 ¹ / ₄ °	no valve) Dead End	
4"	11ft.	4 ft.	2 ft.	1 ft.	2 ft.	37 ft.
6"	15 ft.	6 ft.	3 ft.	1 ft.	18 ft.	53 ft.
8"	20 ft.	8 ft.	4 ft.	2 ft.	34 ft.	69 ft.
10"	24 ft.	10 ft.	5 ft.	2 ft.	48 ft.	84 ft.
12"	28 ft.	11 ft.	5 ft.	3 ft.	63 ft.	99 ft.



Note: Restraint only required on the side with larger diameter.

Note: Thrust restraint shall be per SD-20.1, SD-20.2 and SD-20.3 OR SD-20.4 and SD-20.5.



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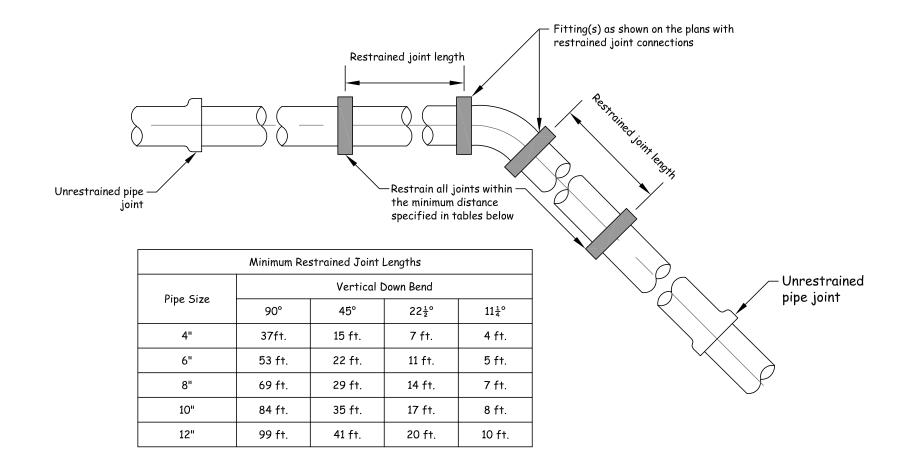
SD-20.4 Mechanical Thrust Restraints

DATE:	05/11/2020
DRAWN:	FTC/DEC
APPROVED:	JFP
SCALE:	NTS

Unrestrained pipe joint

^{*}The joints on the runs of the Tee shall be restrained for 7 ft. min.

^{**}When a valve is present, it shall be treated as a dead end in all cases. Inline valves treated as dead end. both sides.



Note: Thrust restraint shall be per SD-20.1, SD-20.2 and SD-20.3 OR SD-20.4 and SD-20.5.



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P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

SD-20.5 Mechanical Thrust Restraints

DATE.	03/11/2020
DRAWN:	FTC/DEC
APPROVED:	JFP
SCALE:	NTS

05/11/2020

DATE:

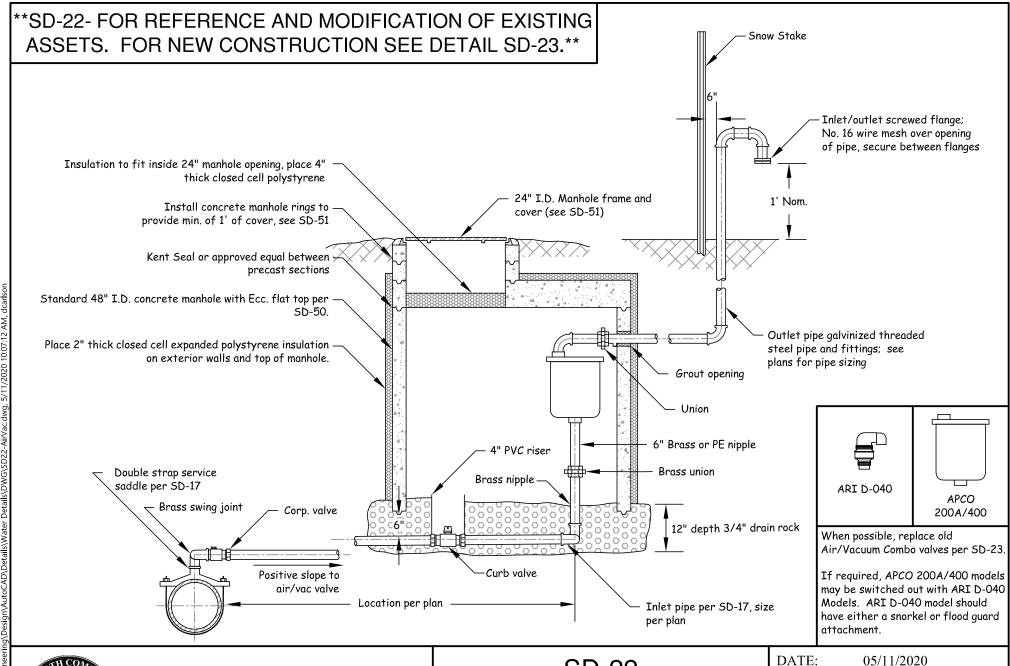


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P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

Blowoff Assembly

DATE:	05/11/2020
ORAWN:	FTC/PWC/DEC
APPROVED:	
SCALE:	NTS





P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

SD-22 Air/Vacuum Release Assembly

DATE: 05/11/2020

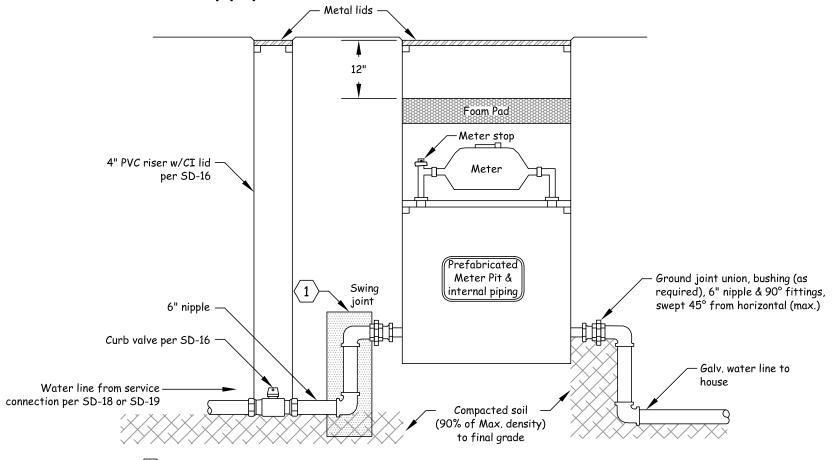
DRAWN: FTC/DEC

APPROVED: JFP

SCALE: NTS

SD-25- FOR REFERENCE AND MODIFICATION OF EXISTING ASSETS. FOR NEW CONSTRUCTION SEE DETAIL SD-24.

For $\frac{3}{4}$ " to 2" Meters, Galvanized Building Supply and Galvanized Service Lateral



1. The pipe and fittings provided shall be installed as shown except for the optional bushings. If more adjustment to grade is required than can be made with the pipe and fittings provided, additional pipe may be added to swing joint to make the adjustment to grade.



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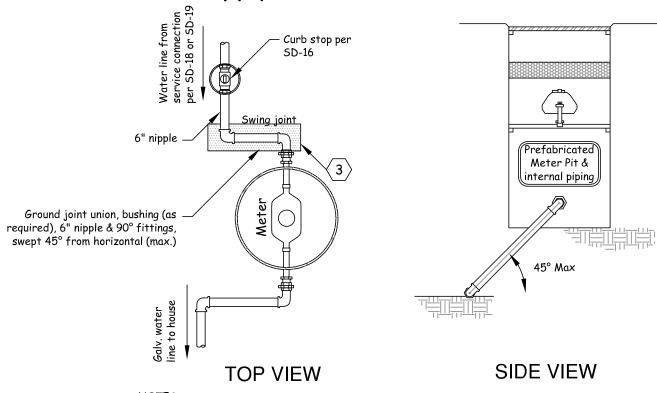
SD-25.1 Meter Installation Galvanized

DITTE.	03/11/2020
DRAWN:	FTC/DEC
APPROVED:	JFP
SCALE:	NTS

05/11/2020

DATE:

For $\frac{3}{4}$ " to 2" Meters, Galvanized Building Supply and Galvanized Service Lateral



NOTES:

- 1. Meter to be placed at the property line, flush with finish grade in an unpaved area that is not plowed in winter.
- 2. The foam pad shall be placed 12" below the meter pit lid. The pad creates a pocket of warm air rising from the ___ ground below. Never fill the pit with insulation below the pad.
- 3. The pipe and fittings provided shall be installed as shown except for the optional bushings. If more adjustment to grade is required than can be made with the pipe and fittings provided, additional pipe may be added to swing joint to make the adjustment to grade.

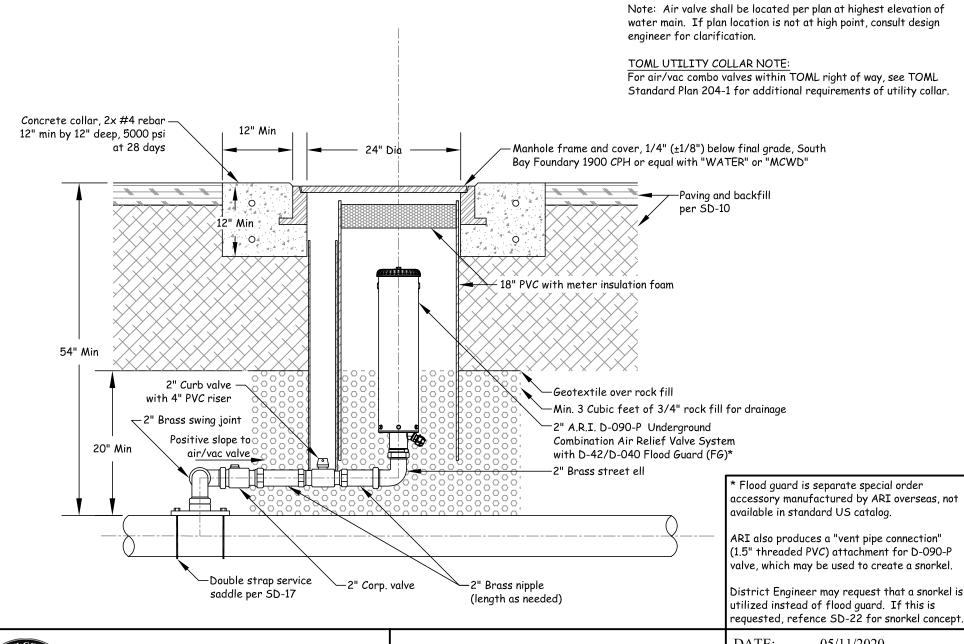


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P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

SD-25.2 Meter Installation Galvanized

DATE:	05/11/2020
DRAWN:	FTC/DEC
APPROVED:	JFP
SCALE:	NTS





P.O.Box 597 Mammoth Lakes, CA 93546 (760) 934-2596 FAX: (760) 934-2143

SD-23 Combination Air Valve Installation

DATE: 05/11/2020

DRAWN: JRN/PWC/DEC

APPROVED: JFP

SCALE: NTS

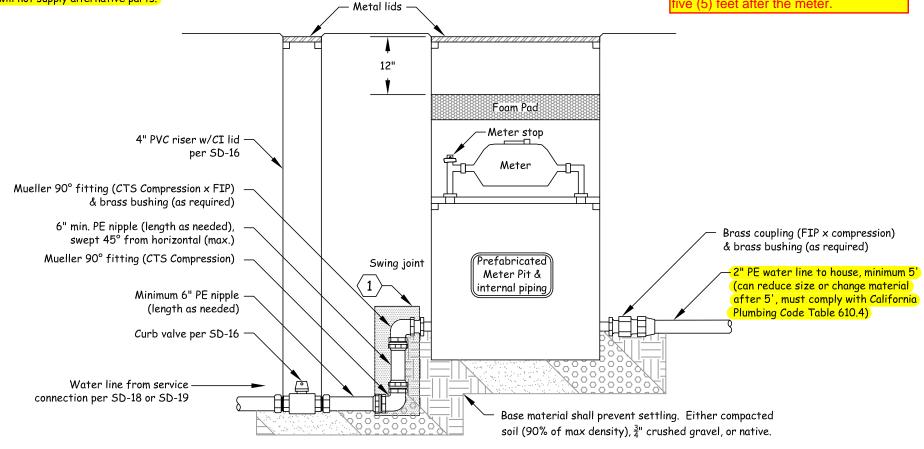
Material Note:

The fittings and pipe specified are included in meter costs for MCWD Connection Permits. Owner/Contractor can use alternative parts, provided installation meets checklist requirements. MCWD will not supply alternative parts.

For $\frac{3}{4}$ " to 2" Meters, PE Building Supply and

Service Lateral

New requirements as of 2023. Please note all service lines on the customer side of meter must be 2" PE for the first five (5) feet after the meter.



1. The pipe and fittings provided shall be installed as shown except for the optional bushings. If more adjustment to grade is required than can be made with the pipe and fittings provided, additional pipe may be added to swing joint to make the adjustment to grade.



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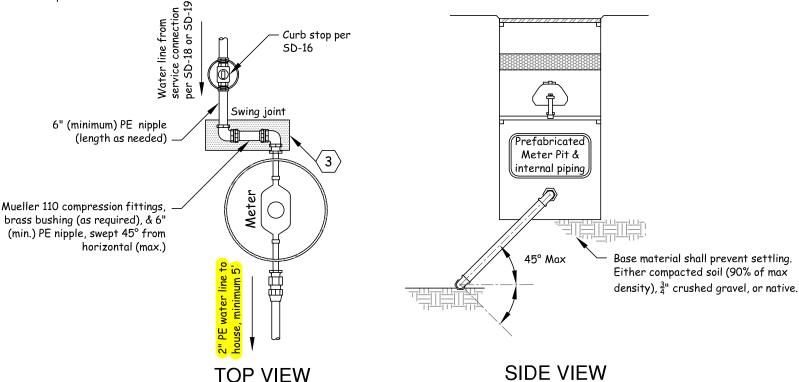
SD-24.1 Meter Installation PE Lateral

DATE:	7/19/2023
DRAWN:	DEC
APPROVED:	GRH
SCALE:	NTS

Material Note:

The fittings and pipe specified are included in meter costs for MCWD Connection Permits. Owner/Contractor can use alternative parts, provided installation meets checklist requirements. MCWD will not supply alternative parts.

For $\frac{3}{4}$ " to 2" Meters, PE Building Supply and Service Lateral



NOTES:

- 1. Meter to be placed at the property line, flush with finish grade in an unpaved area that is not plowed in winter.
- 2. The foam pad shall be placed 12" below the meter pit lid. The pad creates a pocket of warm air rising from the ground below. Never fill the pit with insulation below the pad.
- 3. The pipe and fittings provided shall be installed as shown except for the optional bushings. If more adjustment to grade is required than can be made with the pipe and fittings provided, additional pipe may be added to swing joint to make the adjustment to grade.



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SD-24.2 Meter Installation PE Lateral

DATE.	21912023
DRAWN:	DEC
APPROVED:	GRH
SCALE:	NTS

2/0/2022

DATE.