

**NOTE:**  
Precast manhole sections and base shall be per ASTM C-478

All inlets, outlets, and joints shall be grouted inside and out.

All manholes must be fully water tight. Manholes shall be vacuum tested in the field per ASTM C1244 Standard Test Methods for Concrete Sewer Manholes by the Negative Air Pressure Test Prior to Backfill.

External joint wrap is recommended to assist in passing negative air pressure test.

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



**MAMMOTH COMMUNITY  
WATER DISTRICT**  
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**SD-50  
Sewer Manhole  
Elevation**

DATE:	02/21/2023
DRAWN:	FTC/DDH/DEC
APPROVED:	JFP
SCALE:	NTS

SD-51  
MANHOLE GRADE

DETAIL NO LONGER USED. SEE SD-50.



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SD-51  
Sewer Manhole  
Grade

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

NOT USED



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WATER DISTRICT

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SD-52  
Sewer Manhole  
Plan

DATE: 05/11/2020

DRAWN: FTC/DDH/DEC

APPROVED: JFP

SCALE: NTS

# SD-53 Sewer Main & Lateral Construction Notes

1. Minimum cover on sewer mains shall be 4' - 6". Minimum cover on sewer laterals shall be 4'.
2. Minimum horizontal separation of water mains and sanitary sewer lines shall be 10 feet. Minimum vertical separation shall be 1 foot at all water main and sanitary sewer line crossings. If local conditions do not allow for the above Basic Separation Standards, then alternate construction criteria specified in the California State Water Resources Control Board "California Regulations Related to Drinking Water" shall be employed.
3. 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.
4. 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.
5. Contractor shall maintain records of all as-built pipeline and appurtenance locations and shall furnish all such records to Mammoth Community Water District upon completion of the work. All location changes must be approved by the District.
6. Work within the Town of Mammoth Lakes right-of-way shall comply with the encroachment permit. All such work shall be performed in accordance with Title 12, Chapter 12.04 (Encroachments and Excavations) of the Town of Mammoth Lakes.
7. All sewer pipeline material will be P.V.C. per ASTM-D3034 (SDR 35) unless otherwise specified. Pipeline shall be installed per ASTM D2321. All revisions and modifications of details or substitutions of materials shall be approved by the District.
8. Existing utilities information shown is approximate only; additional utilities may exist. The actual existence, location, and size of existing utilities shall be determined by the contractor. This includes, but is not limited to, contacting Underground Services Alert of Northern California and Nevada at 811, or 1-800-642-2444 for a location request.
9. All property lines and rights of way shown for reference only. Line locations are not deemed accurate by MCWD and should be considered approximate.
10. Lines shall be tested by low pressure air method per ASTM F 1417.
11. Manholes shall be tested by negative air pressure method per ASTM C 1244.
12. In some cases sewer laterals may be used as double sewer laterals. The following requirements must be met, the lateral must be 6" or larger, a cleanout shall be installed, at the property line, on the new addition to the lateral, or both sides during new construction and District permission shall be obtained.

DATE: 05/11/2020

DRAWN: GCS/FTC/DDH/DEC

APPROVED: JFP

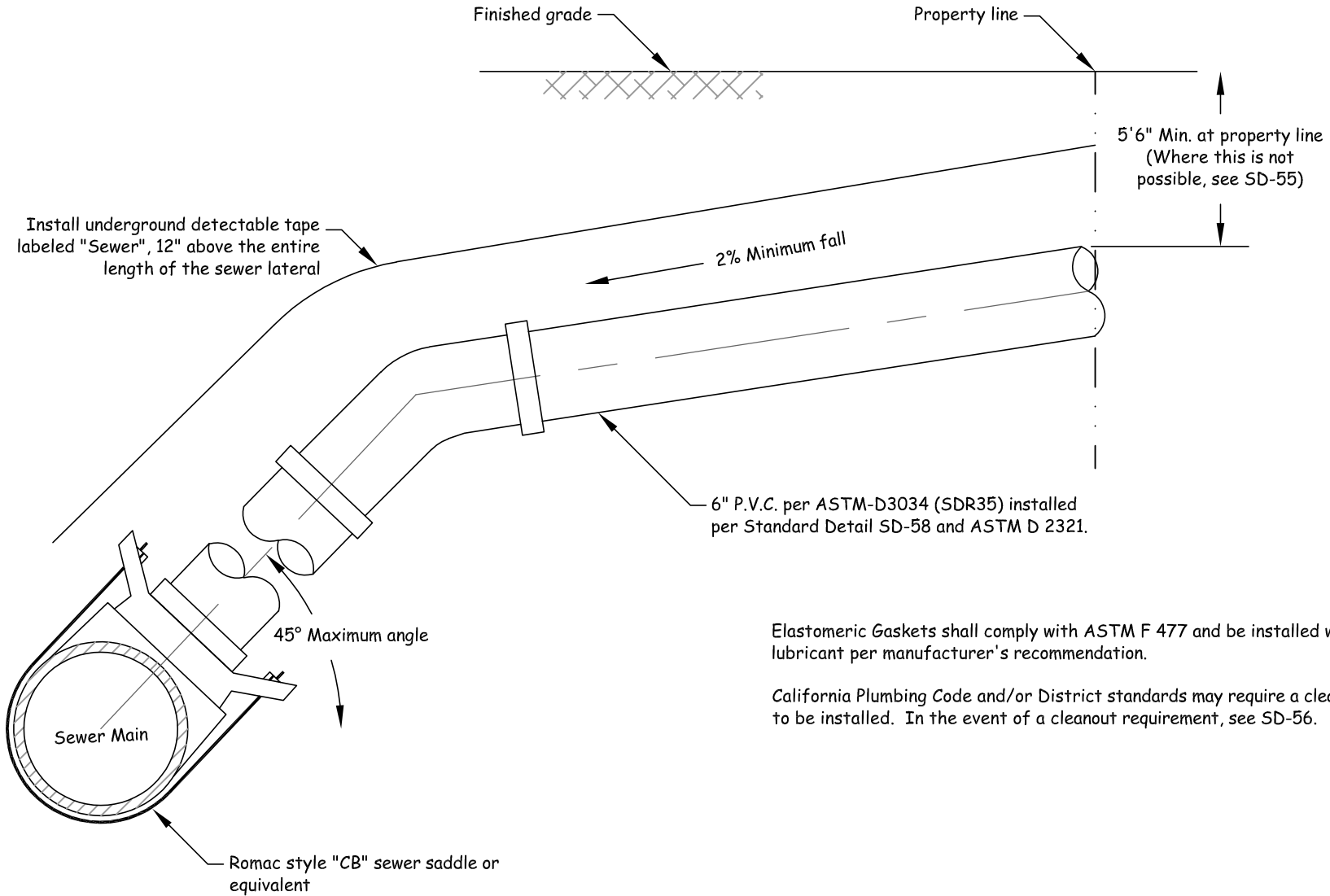
SCALE: NTS

## SD-53 Sewer Lateral Construction Notes

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Elastomeric Gaskets shall comply with ASTM F 477 and be installed with lubricant per manufacturer's recommendation.

California Plumbing Code and/or District standards may require a cleanout to be installed. In the event of a cleanout requirement, see SD-56.

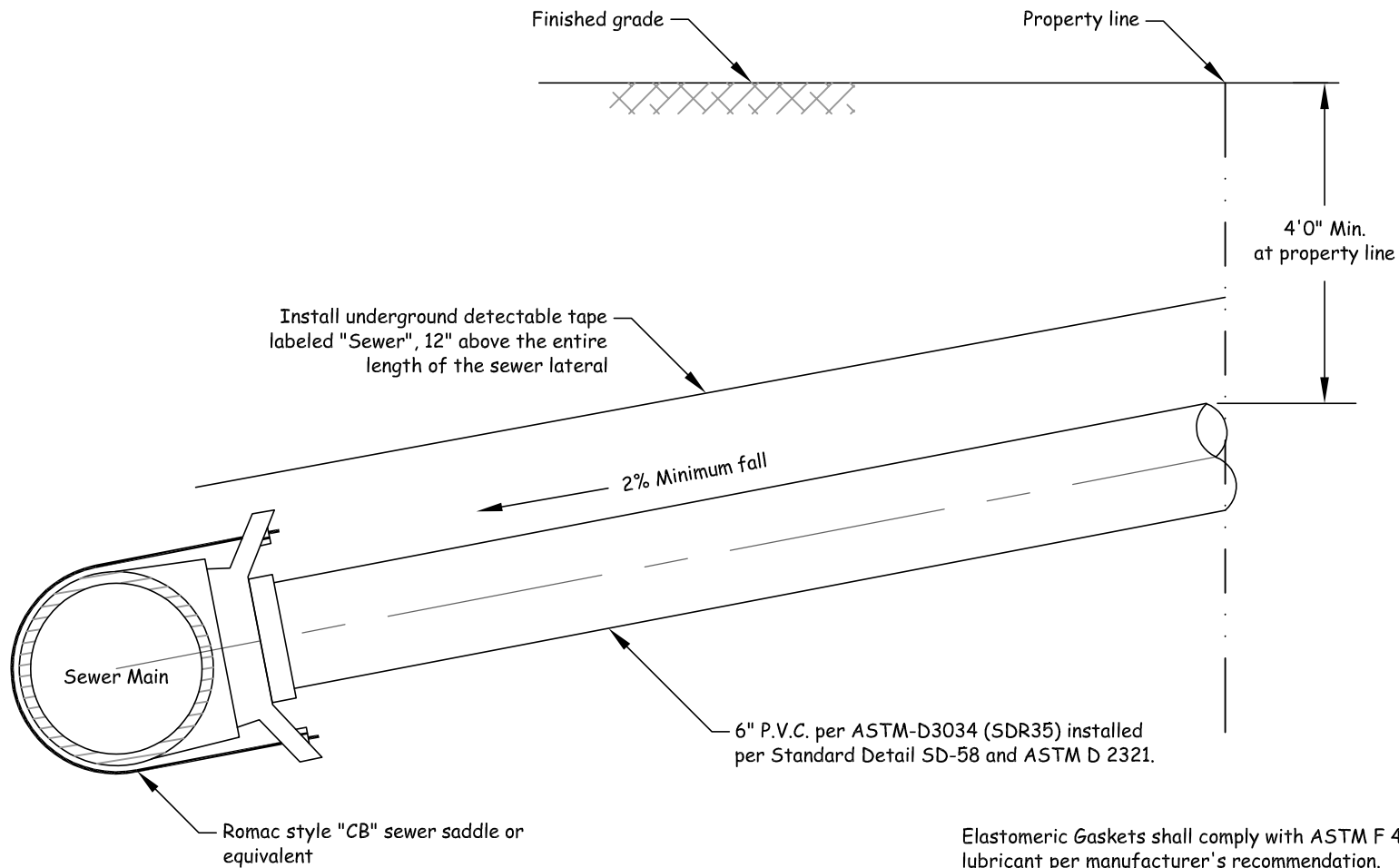


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**SD-54**  
**Typical Sewer  
 Lateral Connection**

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

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Elastomeric Gaskets shall comply with ASTM F 477 and be installed with lubricant per manufacturer's recommendation.

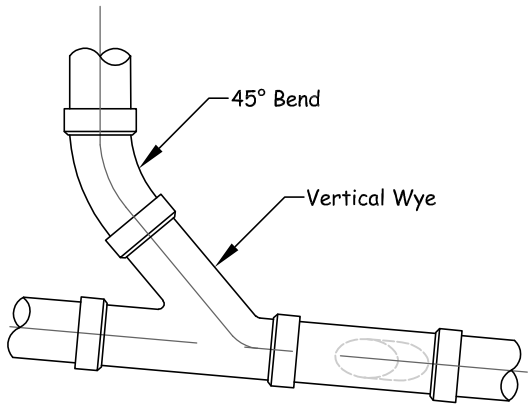
California Plumbing Code and/or District standards may require a cleanout to be installed. In the event of a cleanout requirement, see SD-56.



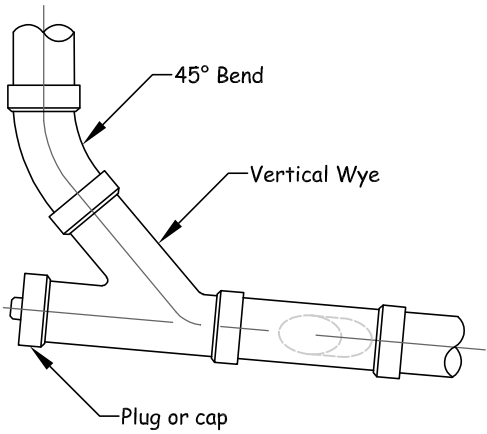
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**SD-55**  
**Shallow Sewer**  
**Lateral Connection**

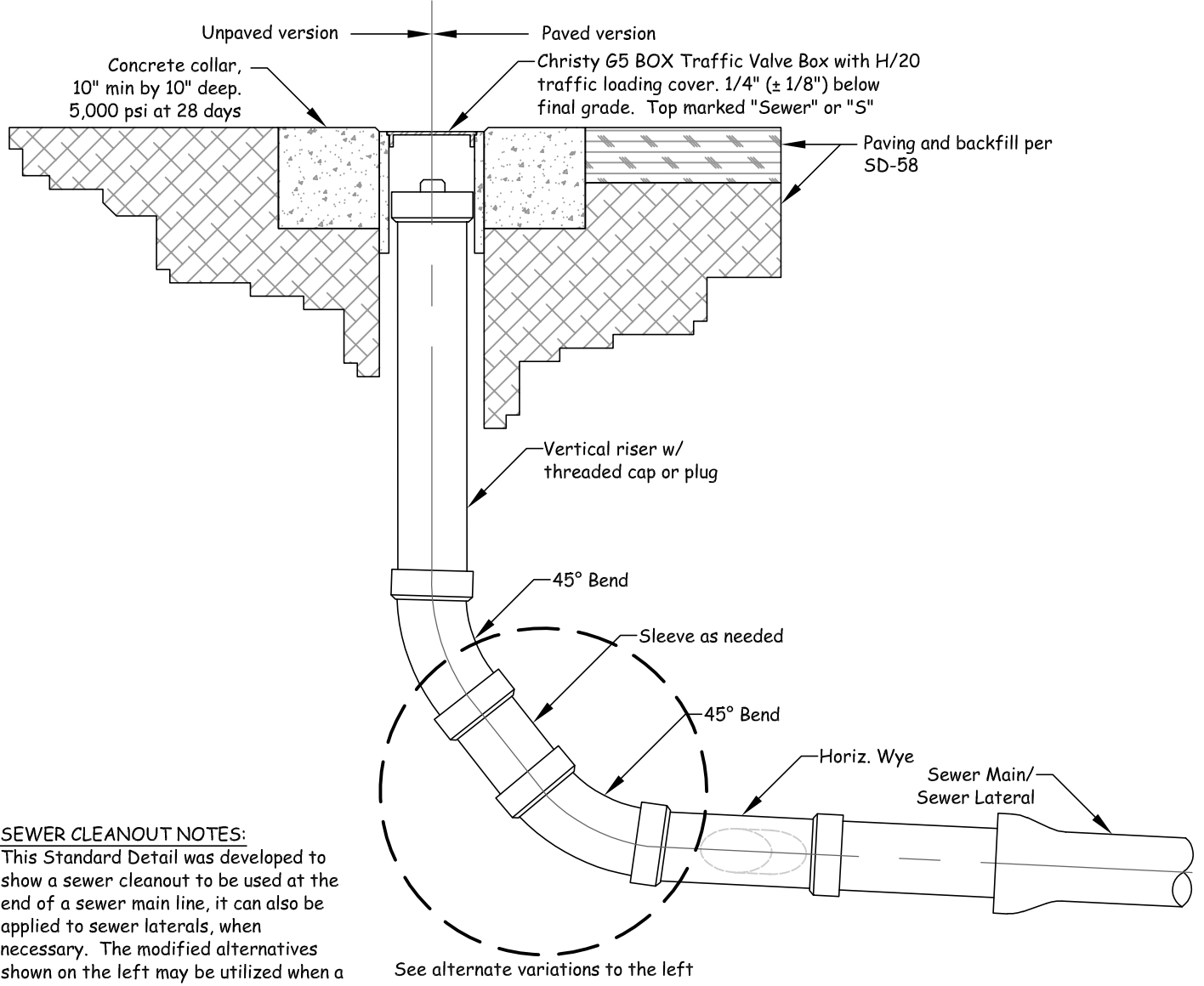
DATE:	05/11/2020
DRAWN:	GCS/FTC/DDH/DEC
APPROVED:	JFP
SCALE:	NTS



INTERMEDIATE LOCATION



END OF LINE -  
CAPPED FOR FUTURE EXTENSION



**SEWER CLEANOUT NOTES:**  
This Standard Detail was developed to show a sewer cleanout to be used at the end of a sewer main line, it can also be applied to sewer laterals, when necessary. The modified alternatives shown on the left may be utilized when a cleanout is required, per plan or District request, at an intermediate location.

END OF LINE

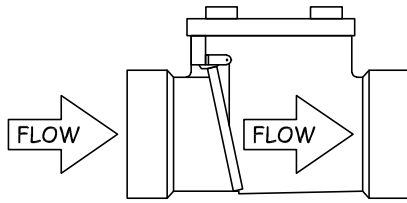


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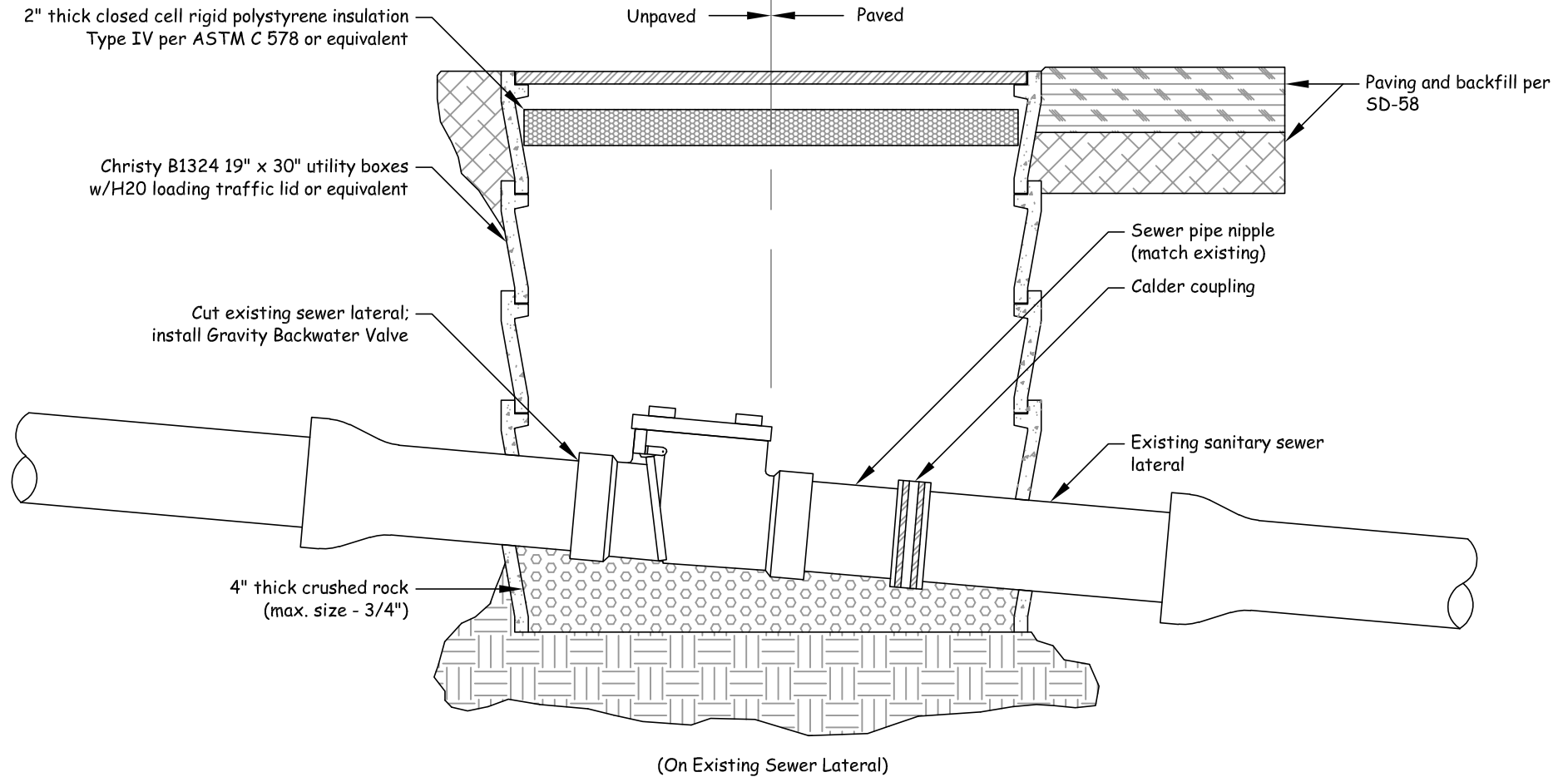
**SD-56  
Sewer Cleanout  
Installation**

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

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Typical Sanitary Sewer Service Gravity Backwater Valve NDS No. 475, 675 or equal



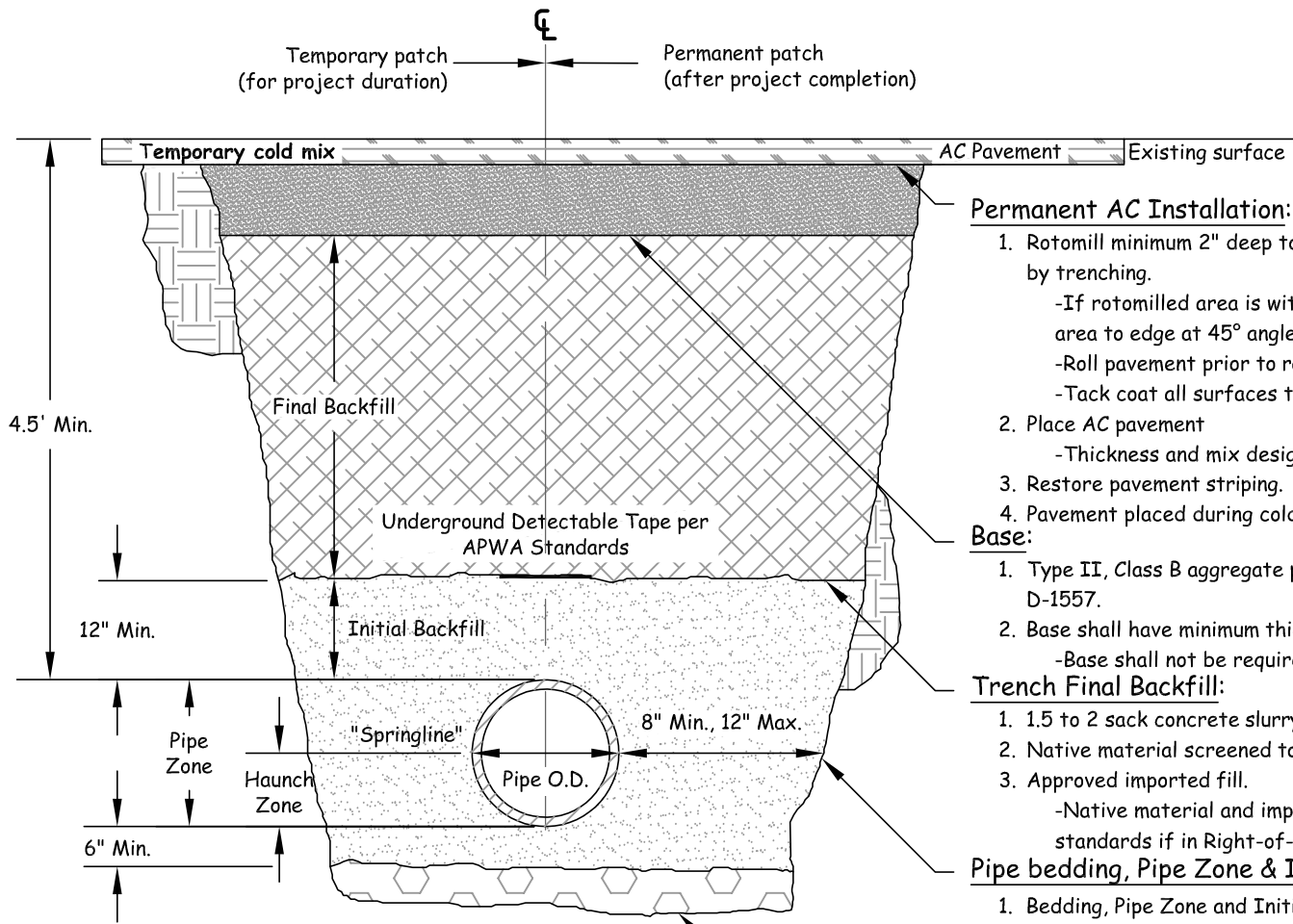
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**SD-57  
Gravity Backwater  
Valve Installation**

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



**Permanent AC Installation:**

1. Rotomill minimum 2" deep to cover all areas of cracked or ravelled surfaces disturbed by trenching.
  - If rotomilled area is within 2' of edge of pavement or edge of travel lane, extend area to edge at 45° angles.
  - Roll pavement prior to rotomill.
  - Tack coat all surfaces that conditions warrant.
2. Place AC pavement
  - Thickness and mix design per Town of Mammoth Lakes Standard Plan 006.
3. Restore pavement striping.
4. Pavement placed during cold weather shall be considered temporary.

**Base:**

1. Type II, Class B aggregate per Caltrans standard spec. compacted to 95% per ASTM D-1557.
2. Base shall have minimum thickness of 8"
  - Base shall not be required when concrete slurry is used for trench backfill.

**Trench Final Backfill:**

1. 1.5 to 2 sack concrete slurry, or
2. Native material screened to 6" max size, or
3. Approved imported fill.
  - Native material and imported fill shall be compacted per Town of Mammoth Lakes standards if in Right-of-Way, otherwise to 90% per ASTM-D1557.

**Pipe bedding, Pipe Zone & Initial Backfill:**

1. Bedding, Pipe Zone and Initial Backfill shall be  $\frac{3}{4}$ " crushed rock per 'Greenbook Standard Specifications for Public Works Construction specification 200-1.2 (A).
2. Wrap Bedding, Pipe Zone and Initial Backfill in non-woven Class 3 (AASHTO M288-96) geotextile on all sides. Geotextile shall overlap 12".
3. Bedding: Install in max 6" lifts, level final grade by hand.
4. Haunching: Install in max 6" lifts, work in around pipe by hand to provide uniform support.
5. Initial Backfill: Install and compact to a minimum of 12" above pipe crown.

If subgrade is saturated or contains rocks over 6", overexcavate trench bottom and replace with  $\frac{3}{4}$ " crushed rock.

**NOTES:**

- Trench Installation shall comply with ASTM D2321.
- Sewer lines shall be tested by Low Pressure Air method per ASTM F1417.



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**SD-58**  
**Sewer Main**  
**Trench Detail**

DATE:	02/22/2023
DRAWN:	DDH/DEC
APPROVED:	GRH
SCALE:	NTS

