

**County of San Mateo  
Sewer Inspection Guideline and Sequence**

The following is intended to be an inspection guideline provided to anyone obtaining a Sewer Inspection Permit (SIP) for any properties located within the ten County sewer maintenance and sanitation districts (Sewer District). The purpose of this document is to provide a reasonable understanding of when inspections occur, what is expected of the applicant and in what sequence work will be inspected.

A responsible person for the work is expected to be on site for all inspections, including the final inspection. The inspection time is a 30 – 60 minute window and may change depending on the needs of the Sewer District. **The applicant is responsible for ensuring that all work is completed in a timely fashion and as instructed by the Sewer District Inspector (Inspector). All work must meet the standard details and specifications of the Sewer District.**

If the new lateral will be subjected to traffic load, a minimum of three feet (3') of cover to top of pipe shall be maintained over the sewer lateral between the property line cleanout and sewer main at all times. The 3 feet of cover protects the sewer lateral from accidental exposure and/or damage. If 3 feet of cover cannot be maintained over the sewer lateral, then ductile iron pipe shall be used. It is the applicant's responsibility to verify depth information.

If the applicant wishes to use the pipe bursting method to replace the existing sewer lateral, the applicant must provide the Sewer District with closed circuit television (CCTV) inspection showing that the existing sewer lateral between the property line cleanout and sewer main is suitable for pipe bursting (i.e. no sags/bends, large joint offsets in the line). Otherwise, the applicant shall replace the existing sewer lateral using the open trench method.

If the applicant is approved to use HDPE material for the pipe bursting method, the applicant needs to ensure all connections and fittings are HDPE and fused in the section between property line cleanout and the Sewer District main. An appropriate coupler should be used for the transition from the Sewer District main to the new lateral.

**Step 1**

Obtain a SIP for any and all proposed sewer lateral work between the property/easement line cleanout and the Sewer District main, including the property/easement line cleanout and the wye connection at the main. Obtain all other required permits to conduct and complete work appropriately, such as building permit, encroachment permit, etc. A plumbing permit is required for sewer lateral work upstream of the property/easement line cleanout. An encroachment permit is required for the construction of the cleanout and lateral within the public right-of-way. The applicant shall contact the appropriate agencies regarding these permits. **If the SIP is obtained only for a property/easement line cleanout, go to Step 4.**

**Step 2**

Schedule inspection when all work on and around the Sewer District main is exposed and completed to the Sewer District's standard details and specifications. The work will be approved when pipe materials,

couplers and configuration on the Sewer District main connection and sewer lateral meet the Sewer District standards. Upon obtaining approval from the Inspector, the work on the Sewer District main shall be covered by appropriate backfill materials and methods. **The property line cleanout is to remain exposed and uninspected.** If the applicant would like to reuse the Sewer District main wye connection, it must be exposed and inspected for reuse. The inspector must be on site for all work performed on the Sewer District main. If changes and/or adjustments need to be made, as determined by the Inspector, the applicant shall contact the Sewer District at (650) 599-1403 to schedule another inspection after the changes and/or adjustments have been made. Please follow the instructions left on the voicemail for scheduling the inspection. Repeat Step 2.

### **Step 3**

A Closed Circuit Television (CCTV) video inspection of the Sewer District main (manhole to manhole) where the new lateral/wye connects to the Sewer District main and/or the existing connection is to be removed must be performed after backfill and compaction over the Sewer District main. The video inspection shall be performed in accordance with the requirements described in the Special Provisions for Closed Circuit Television Inspection of Sanitary Sewer Mains (a copy can be obtained from our website at <http://publicworks.smcgov.org/sewer-services>). Videos must clearly show the area surrounding the manhole before the camera enters the manhole, all lateral connections to the main, the newly installed connection, and the entire footage of the main from the upstream manhole to the downstream manhole. Videos must be submitted to and approved by the Sewer District, prior to scheduling inspection of the property/easement line cleanout (if no cleanout work, CCTV approval shall be the final step). The Sewer District will review the video inspection to determine whether the work performed is acceptable. CCTV inspection of the Sewer District main may also be done during the final inspection (after backfill, compaction, and placement of B-9 Christy Box). All unacceptable work shall be corrected to the Sewer District's satisfaction at the applicant's expense. Upon approval, the applicant shall schedule an inspection of the property/easement line cleanout.

### **Step 4**

Schedule inspection when all work on and around the property/easement line cleanout is exposed and completed to the Sewer District's standard details and specifications. The work will be approved when pipe materials, couplers and configuration on the property/easement line cleanout and sewer lateral meet the Sewer District's standards. Upon obtaining approval from the Inspector, the work on the property/easement line cleanout shall be covered by appropriate backfill materials and methods. If changes and/or adjustments need to be made, as determined by the Inspector, the applicant shall call (650) 599-1403 to schedule another inspection, after the changes and/or adjustments have been made. Repeat Step 4.

### **Step 5**

Schedule final inspection and have responsible person on site for final inspection. The B-9 Christy Box shall be properly placed for final inspection. If changes and/or adjustments need to be made, as determined by the Inspector, the applicant shall call (650) 599-1403 to schedule another inspection, after the changes and/or adjustments have been made. Repeat Step 5.



**County of San Mateo,  
Department of Public Works  
Utilities-Flood Control-Watershed Protection**

555 County Center, 5th Floor • Redwood City, CA 94063 • Phone (650) 363-4100

**Sanitary Sewer Inspection Checklist**

This checklist provides a summary of the sanitary sewer cleanout and lateral requirements that will be checked during sewer inspections on properties located within the 10 sewer/sanitation districts (Sewer Districts) operated and maintained by the County of San Mateo Department of Public Works. The Sewer Districts may modify these requirements and/or add other requirements as necessary.

**1. Property/Easement Line Cleanout**

- Location of cleanout. Cleanout must be near property/easement line and placed in a location that provides easy access for maintenance equipment and is outside of any enclosures. A minimum of 6 feet is required between the property line cleanout and obstruction. Obstructions may include but are not limited to fences, walls, bushes, landscaping, retaining walls, decorative rocks, and posts.
- Size (minimum 4-inch diameter for residential / minimum 6-inch diameter for non-residential)
- Size of cleanout shall match size of sewer lateral
- Standard Christy B-9 Box

**2. Sewer Lateral (section between property/easement line cleanout and Sewer District main)**

- Location of lateral
- Only one lateral allowed for each parcel or property
- Slope (minimum 2%)
- Size (minimum 4-inch diameter for residential / minimum 6-inch diameter for non-residential)
- Material - acceptable materials includes Polyvinyl Chloride Pipe (PVC, SDR-26 preferred), Vitrified Clay Pipe (VCP), Ductile Iron Pipe (DIP), and High-Density Polyethylene (HDPE). HDPE will only be allowed to be used for trenchless method and if pre-approved by Sewer District after review of CCTV.
- The cleanout wye material shall match the sewer lateral material.
- Minimum of 3 feet cover from ground surface to top of pipe is required if the new lateral will be subjected to traffic load. If 3 feet of cover cannot be maintained over the sewer lateral between property line cleanout to Sewer District main, then ductile iron pipe shall be used.
- All HDPE fittings shall be fused including wye, riser, and threaded housing.
- No horizontal and vertical bends are allowed between the property/easement line cleanout and Sewer District main unless approved by the Sewer District Inspector.
- The material of the wye connection on the Sewer District main must match the material of the main.
- Sewer District Inspector must be present when working on Sewer District mains and manholes.
- If the existing lateral from the property line cleanout to the Sewer District main is to be abandoned and a new lateral is to be installed at a new location, the existing lateral connection shall be removed and the Sewer District main must be repaired by the contractor. A minimum of 12 inches in length of the abandoned lateral upstream from the previous connection point shall be plugged with cement slurry.
- If a new lateral is to be connected to an existing manhole, the connection shall be made by core drilling a hole in the manhole wall appropriately sized for the sewer lateral pipe. The annular space between the wall and pipe shall be plugged with mortar cement. After the annular space has been plugged, the interior of the entire manhole shall be coated with an approved waterproofing material applied per the manufacturer's recommendations.
- If a new lateral is to be connected to an existing brick manhole, contractor shall remove appropriate amount of bricks to allow lateral to fit into manhole. The annular space between the wall and pipe shall be plugged with mortar cement.

## Sanitary Sewer Requirements Checklist

- If a new lateral is to be connected to a flushing inlet, the connection shall be made at a location downstream of the flushing inlet. A minimum of 12 inches separation between the new lateral wye on the Sewer District main and the flushing inlet structure is required.
- If the applicant wishes to change the construction method from open trench to trenchless, the applicant shall submit a video inspection of the existing sewer lateral for Sewer District review prior to construction.
- If a new lateral is connected to HDPE sewer main, the wye connection on the sewer main shall be fused.

### 3. Cap Lateral

- Location of the cap shall be downstream of the property line cleanout.
- Cap shall be placed at the furthest and deepest possible location and as near to the Sewer District main as possible.
- Cap must fit around the outside diameter of the lateral pipe and secured with circular band clamp. Plugs will not be accepted.

### 4. Backflow/Overflow Prevention Device

- The backflow/overflow prevention device if needed, shall be installed immediately upstream of the cleanout near the property line to prevent backflow of sewage into building/property.
- Permits for the backflow/overflow prevention device can be obtained at the Planning and Building Department.

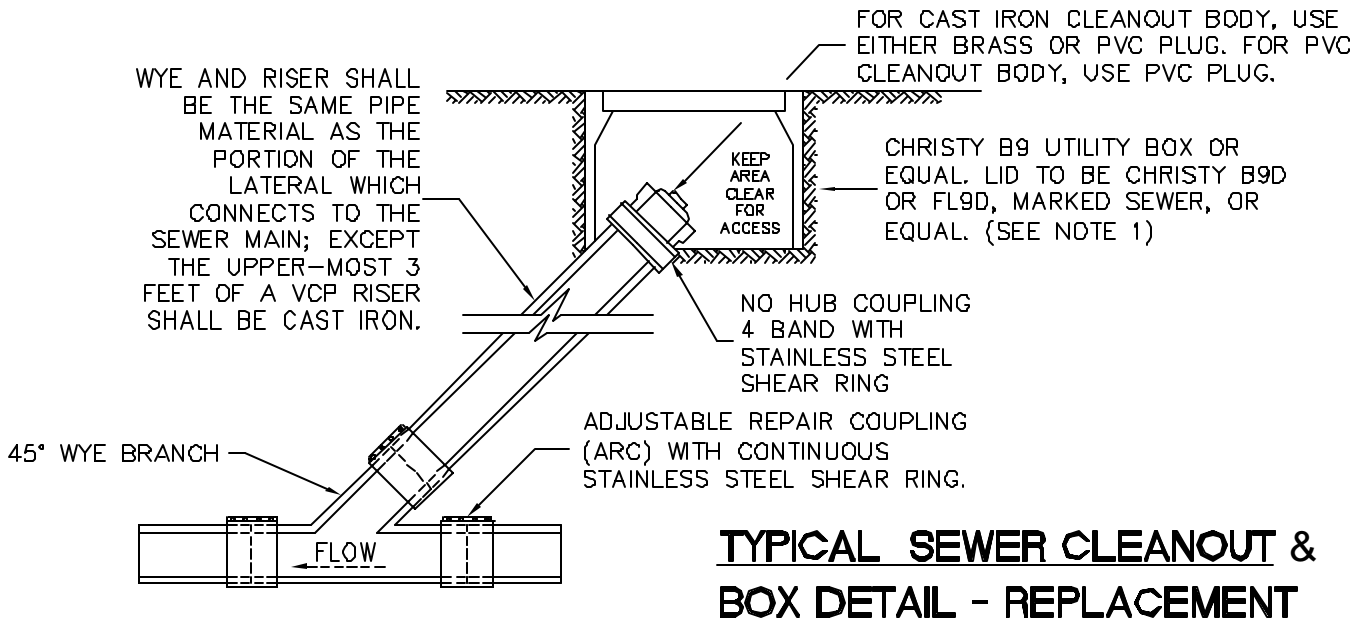
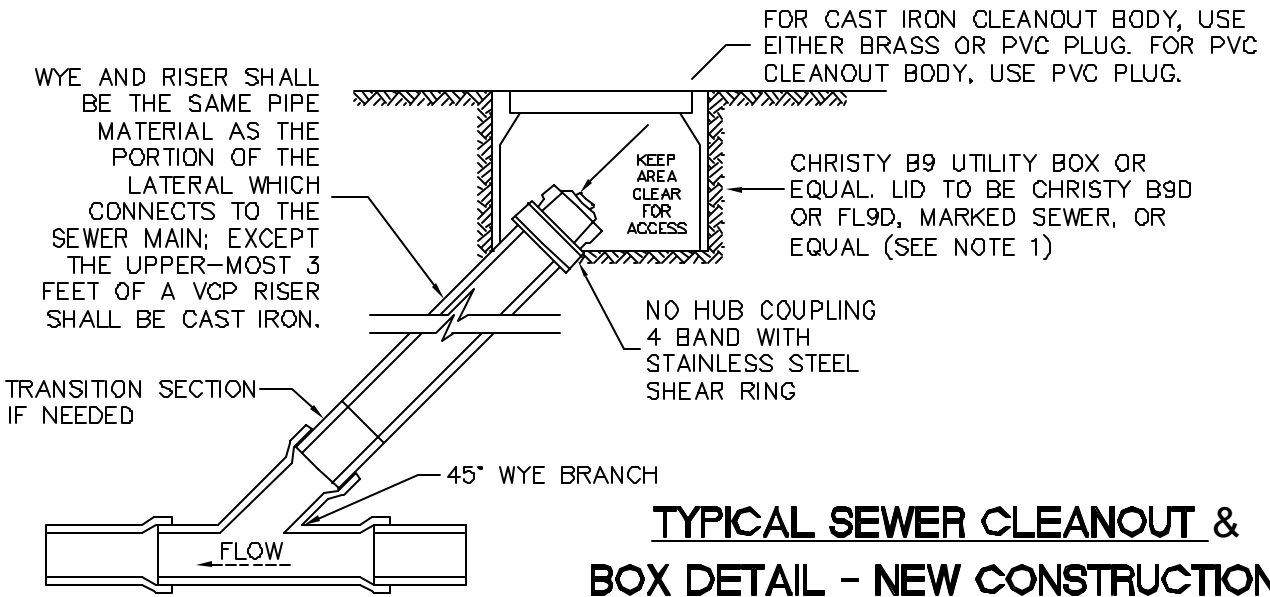
### 5. Other Requirements

- Sanitary sewer connection and testing must be made in the presence of a Sewer District representative.
- Care must be taken to protect the existing Sewer District facilities when a new sewer lateral and connection is installed. Any damage to the Sewer District facilities during the installation of this new lateral shall be repaired by the applicant per the Sewer District standard details and at the applicant's expense. The Sewer District must be notified of any damages to the sanitary sewer facilities and any repairs must be inspected by a Sewer District representative.
- A video inspection of the sewer main (manhole to manhole) where the new lateral connects to the Sewer District main or the existing connection is to be removed shall be performed by the applicant or contractor and submitted to the Sewer District for review after lateral connection has been made or the main repaired. The video inspection shall be performed in accordance with the requirements described in the Special Provisions for Closed Circuit Television Inspection of Sanitary Sewer Mains (a copy can be obtained from our website at [www.smcgov.org/sewers](http://www.smcgov.org/sewers)). The Sewer District will review the video inspection to determine whether the work performed is acceptable. All unacceptable work shall be corrected to the Sewer District's satisfaction at the applicant's expense.
- The contractor must remove and dispose of all construction debris in the manhole after the lateral connection has been made. Care must be taken to prevent construction debris from entering the sewer system during the installation of the new sewer lateral connection. If the Sewer District discovered that construction debris has entered the sewer system, the applicant will be responsible to clean and televise the downstream portions of the sewer mains as determined by the Sewer District to the Sewer District's satisfaction. Sanitary sewer service shall be maintained at all times. The contractor shall use whatever means necessary (e.g. pumps, etc.) to maintain this service during construction.

SAN MATEO COUNTY DEPARTMENT  
OF  
PUBLIC WORKS  
-----  
REDWOOD CITY  
CALIFORNIA

DRAWN BY:     N.M.      
CHECK BY:     A.M.S.      
APPROVED BY:     N.R.C.    

SCALE:     NONE      
DATE:     8/06      
REVISED:             



**NOTES:**

1. WHEN BOX IS SUBJECT TO TRAFFIC LOADING, PROVIDE CAST IRON LID.
2. BOX TO BE PLACED SUCH THAT CLEANOUT CAP CAN BE EASILY REMOVED, SEE ILLUSTRATION.
3. PROPERTY OWNER IS RESPONSIBLE FOR MAINTAINING LATERAL FROM THE PROPERTY STRUCTURE TO DISTRICT MAIN. DISTRICT PROVIDES COURTESY SERVICE FROM DISTRICT STANDARD PROPERTY LINE CLEANOUT TO THE MAIN.
4. SDR-26 WYE, RISER, CLEANOUT BODY AND CAP CAN BE USED ONLY WHEN LATERAL FROM PROPERTY LINE TO MAIN LINE IS REPLACED WITH SDR-26.
5. WHEN ENTIRE LATERAL IS REPLACED, LATERAL FROM PROPERTY LINE CLEANOUT TO MAIN LINE SHALL HAVE A 14-1-UF GAUGE MINIMUM SINGLE CONDUCTOR TRACER WIRE TAPED TO THE ENTIRE LENGTH OF THE PIPE.

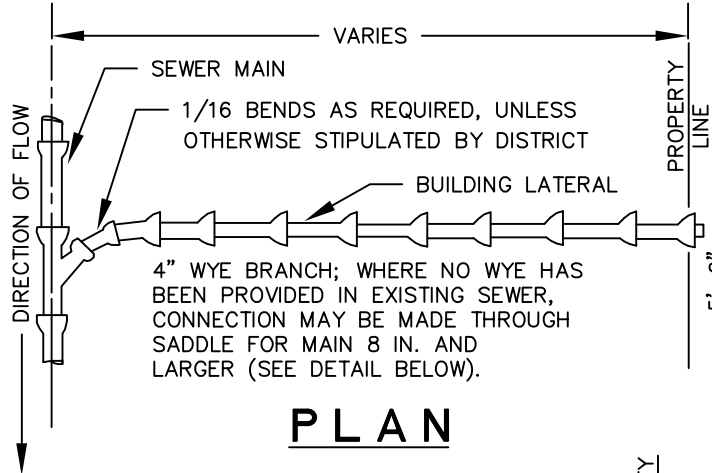
CONSTRUCTION OF A STANDARD CLEANOUT REQUIRES MULTIPLE INSPECTIONS BY DISTRICT PERSONEL:

1. FIRST INSPECTION - TO INSPECT WYE AND RISER, WYE AND RISER MUST BE EXPOSED.
2. SECOND INSPECTION - TO INSPECT PLACEMENT OF BOX, LID AND LOCATION OF CLEANOUT WITHIN BOX .

SAN MATEO COUNTY DEPARTMENT  
OF  
PUBLIC WORKS  
.....  
REDWOOD CITY  
CALIFORNIA

DRAWN BY: N.M.A.  
CHECK BY: R.O.  
APPROVED BY: N.R.C.

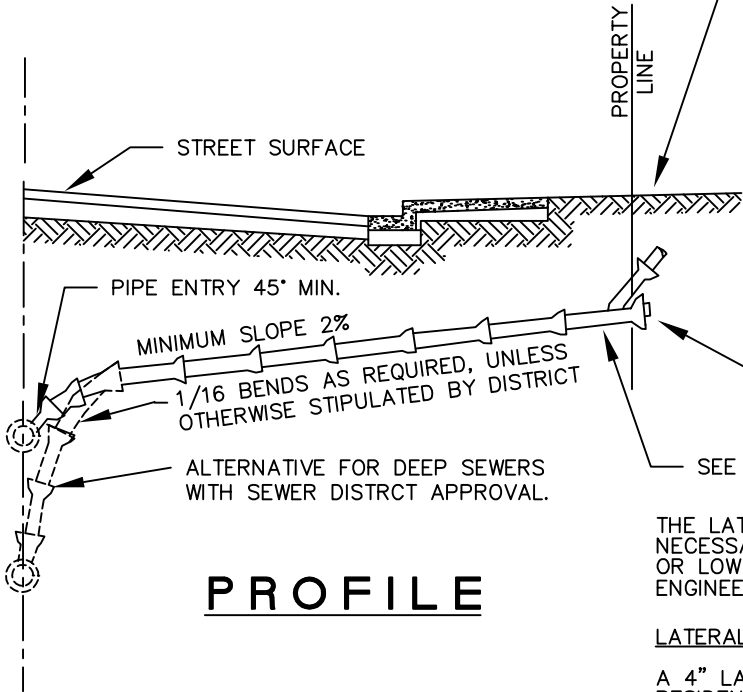
SCALE: NONE  
DATE: 6/95  
REVISED: \_\_\_\_\_



ON NEW CONSTRUCTION—LATERAL TO BE PLACED 5' ABOVE LOWER LOT LINE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE WYE LATERAL AND PROPERTY LINE CLEAN OUT SHALL BE OF THE SAME MATERIAL

LOWER LOT LINE IN RELATION TO SEWER FLOW

NOTE: (1) SEE DETAIL SHEET NO. C-3 FOR SAN MATEO COUNTY STANDARD CLEANOUT DETAIL.  
(2) BEDDING AND BACKFILL MATERIAL SEE DETAILS C-6 (TYPE A OR B) OR C-7

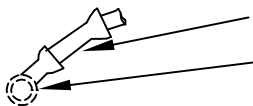


THE LATERAL SHALL BE LOWER WHERE NECESSARY TO SERVE EXISTING PLUMBING OR LOW LOTS OR WHEN DIRECTED BY THE ENGINEER.

LATERAL SIZES

A 4" LATERAL CAN BE USED FOR A SINGLE FAMILY RESIDENCE OR A SFR WITH A SECOND UNIT. A MINIMUM 6" LATERAL SHALL BE USED FOR ALL OTHER DEVELOPMENTS.

METHOD OF ATTACHING LATERAL TO EXISTING SEWER WHERE NO WYE HAS BEEN PROVIDED



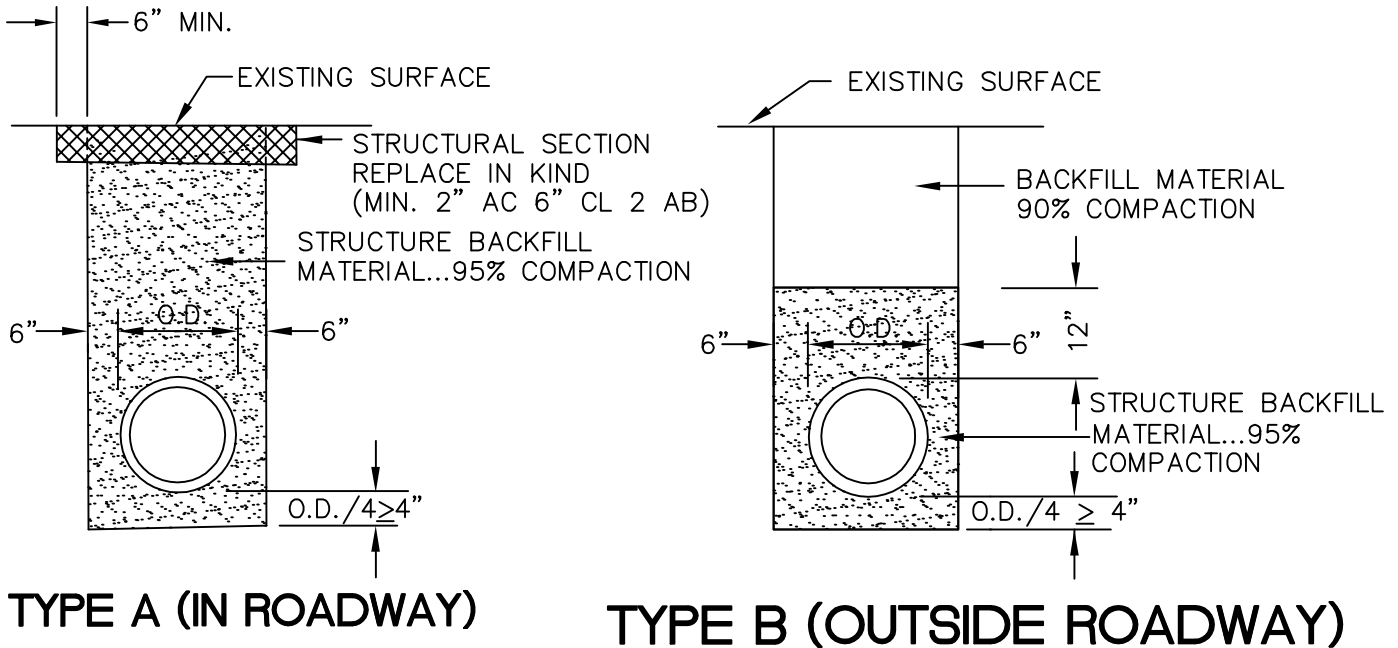
1. EXISTING MAIN  $\leq$  8": FOR MEANS BY WHICH CONNECTION IS TO BE MADE TO MAIN LINE SEE DETAIL C-8.
2. EXISTING MAIN 10"-18": CONNECTION BY MEANS OF AN APPROVED SADDLE "TEE"
3. EXISTING MAIN  $>$ 18": CONNECTION SHALL BE AT A MANHOLE UNLESS OTHERWISE APPROVED BY THE SEWER DISTRICT.

**SEWER LATERAL DETAIL**

SAN MATEO COUNTY DEPARTMENT  
OF  
PUBLIC WORKS  
.....  
REDWOOD CITY  
CALIFORNIA

DRAWN BY: N.M.A.  
CHECK BY: R.O.  
APPROVED BY: N.R.C.

SCALE: NONE  
DATE: 6/95  
REVISED: 7/97



1. STRUCTURE BACKFILL MATERIAL....MATERIAL WITH SAND EQUIVALENT NOT LESS THAN 20 AND SIEVE GRADATION BY WEIGHT AS FOLLOWS:

<u>SIEVE SIZE</u>	<u>% PASSING SIEVE</u>
3"	100
No. 4	35-100
No. 30	20-100

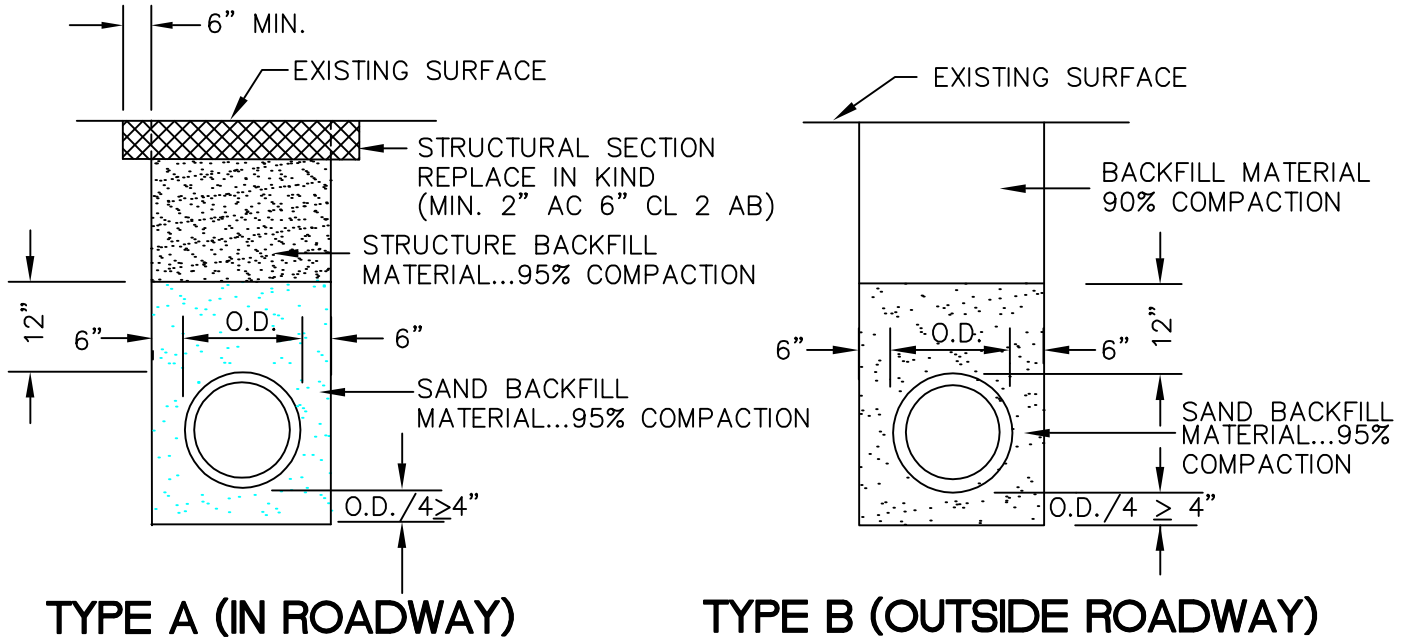
2. BACKFILL MATERIAL.... MATERIAL FROM EXCAVATION, FREE FROM STONES OR LUMPS EXCEEDING 3 INCHES GREATEST DIMENSION, ORGANIC MATTER, OR OTHER UNSATISFACTORY MATERIAL

**STANDARD TRENCH BACKFILL**  
**AND BEDDING DETAIL FOR VITRIFIED CLAY**  
**AND DUCTILE IRON SEWER PIPE**

SAN MATEO COUNTY DEPARTMENT  
OF  
PUBLIC WORKS  
.....  
REDWOOD CITY  
CALIFORNIA

DRAWN BY:    N.M.A.     
CHECK BY:    R.O.     
APPROVED BY:    N.R.C.   

SCALE:    NONE     
DATE:    6/95     
REVISED:    7/97   



**TYPE A (IN ROADWAY)**

**TYPE B (OUTSIDE ROADWAY)**

**NOTES:**

1. SAND.... MATERIAL FREE FROM ORGANIC MATTER AND CLAY WITH A SIEVE GRADATION BY WEIGHT AS FOLLOWS:

<u>SIEVE SIZE</u>	<u>% PASSING SIEVE</u>
No. 4	100
No. 200	0-5

2. STRUCTURE BACKFILL MATERIAL.... MATERIAL WITH SAND EQUIVALENT NOT LESS THAN 20 AND SIEVE GRADATION BY WEIGHT AS FOLLOWS:

<u>SIEVE SIZE</u>	<u>% PASSING SIEVE</u>
3"	100
No. 4	35-100
No. 30	20-100

3. BACKFILL MATERIAL.... MATERIAL FROM EXCAVATION, FREE FROM STONES OR LUMPS EXCEEDING 3 INCHES GREATEST DIMENSION, ORGANIC MATTER, OR OTHER UNSATISFACTORY MATERIAL.

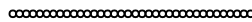
**STANDARD TRENCH BACKFILL**  
**AND BEDDING DETAIL FOR PVC**  
**SEWER PIPE**



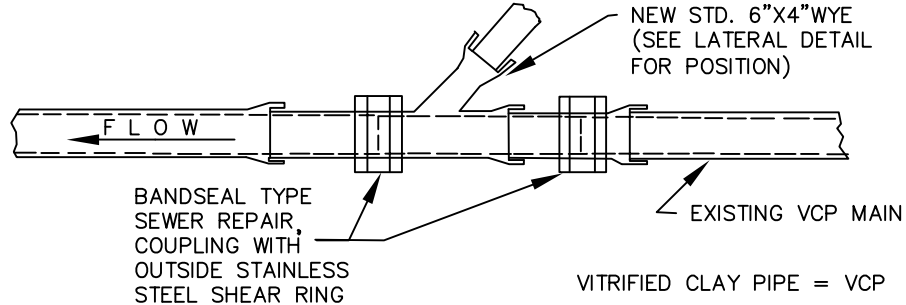
SAN MATEO COUNTY DEPARTMENT  
OF  
PUBLIC WORKS

DRAWN BY: N.M.A.  
CHECK BY: R.O.  
APPROVED BY: N.R.C.

SCALE: NONE  
DATE: 6/95  
REVISED: \_\_\_\_\_

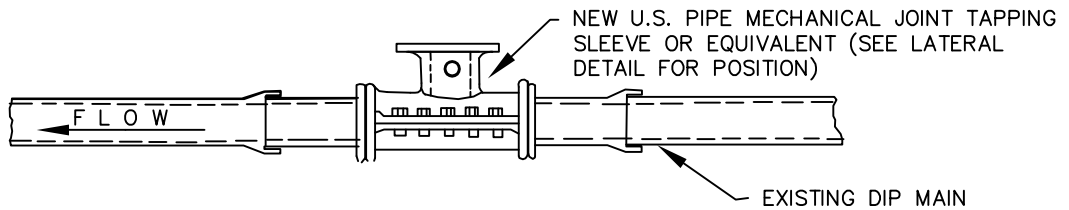


REDWOOD CITY  
CALIFORNIA



**NOTE:** (1) THE NEWLY INSTALLED WYE SHALL BE OF THE SAME MATERIAL AS THE EXISTING MAIN.

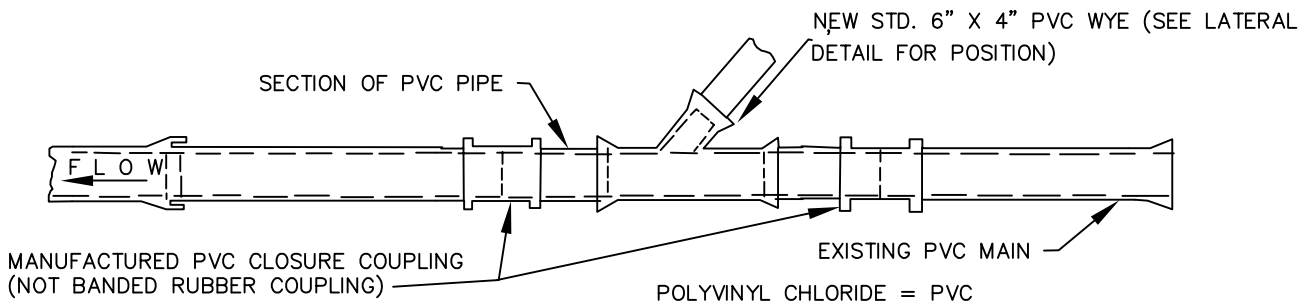
**PLAN**  
**VITRIFIED CLAY**



**NOTES:** HORIZONTAL PIPE ENTRY ANGLE WILL BE 90°, INSTEAD OF 45°  
(SEE LATERAL DETAIL, PLAN VIEW)

VERTICAL PIPE ENTRY ANGLE SHALL BE 45° MINIMUM (SEE LATERAL DETAIL PROFILE VIEW)

**PLAN**  
**DUCTILE IRON PIPE**



**NOTE:** ALL PVC, PIPE AND FITTINGS SHALL BE SDR 35 35 AND SHALL HAVE RUBBER GASKETED JOINTS.  
SOLVENT WELDED JOINTS SHALL NOT BE ALLOWED.

**PLAN**  
**POLYVINYL CHLORIDE PIPE**

**LATERAL CONNECTION INSTALLATION DETAIL ON EXISTING PIPE**

**NOTE:** LATERAL CONNECTION INSTALLATION ON NEWLY INSTALLED PIPE WILL BE AS DIRECTED  
BY THE DEPARTMENT OF PUBLIC WORKS.

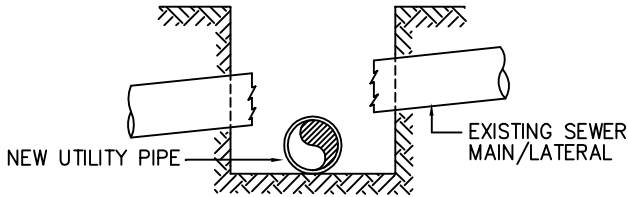
SAN MATEO COUNTY DEPARTMENT  
OF  
PUBLIC WORKS  
.....  
REDWOOD CITY  
CALIFORNIA

DRAWN BY:     M.L.      
CHECK BY:     R.O.      
APPROVED BY:   N.R.C.  

SCALE:     NONE      
DATE:     6/95      
REVISED:           

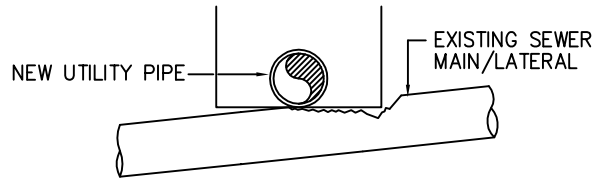
**NOTICE:**

CALL SANITARY DISTRICT ( 363-4765 OR 363-4100 ) BEFORE MAKING ANY SEWER REPAIRS. ALL REPAIRS MUST BE DONE IN THE PRESENCE OF A DISTRICT INSPECTOR.



SIMPLE SEWER MAIN/LATERAL BREAK  
( NO CONFLICT IN GRADE )

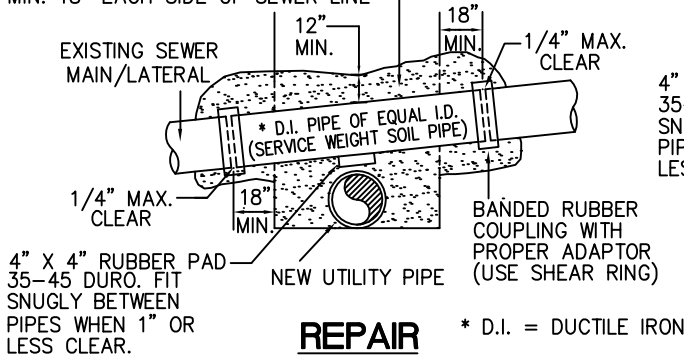
**BREAK**



SIMPLE SEWER MAIN/LATERAL BREAK  
( NO CONFLICT IN GRADE )

**BREAK**

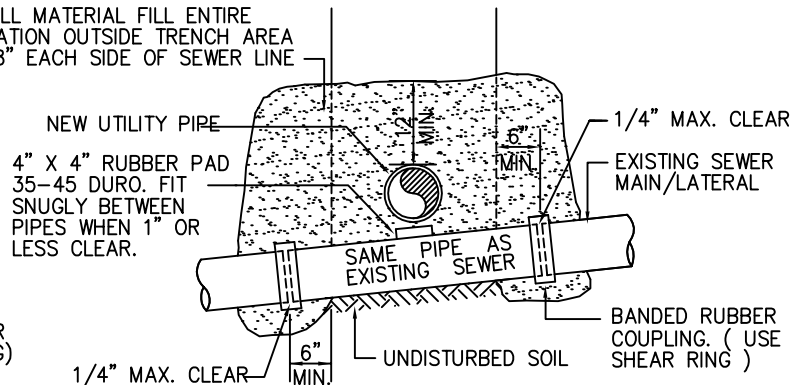
BACKFILL MATERIAL FILL ENTIRE EXCAVATION OUTSIDE TRENCH AREA MIN. 18" EACH SIDE OF SEWER LINE



**REPAIR**

\* D.I. = DUCTILE IRON

BACKFILL MATERIAL FILL ENTIRE EXCAVATION OUTSIDE TRENCH AREA MIN. 18" EACH SIDE OF SEWER LINE



**REPAIR**

**PROCEDURE:**

1. NOTIFY SANITARY DISTRICT ( 363-4765 OR 363-4100 )
2. TRIM SEWER PIPE TO A CLEAN CUT UNDATED END, A MINIMUM OF 18" INTO TRENCH WALL. CUT PIECE OF NEW DUCTILE IRON PIPE ( D.I.P. ) OF EQUAL DIAMETER TO FIT SPACE BETWEEN TRIMMED ENDS WITH A MAXIMUM CLEARANCE OF 1/4 INCH AT EACH END. ALIGN PIPES AT UPSTREAM END AND SLIDE COUPLING DOWNSTREAM, CENTERING IT OVER THE JOINT, TIGHTEN COUPLING BANDS. WHEN O.D. OF PIPES ARE WITHIN 1" OF EACH OTHER, THERE SHALL BE A 4"X4" PAD OF 35-45 DUROMETER RUBBER PLACED SNUGLY BETWEEN THE PIPES.
3. CONCRETE ENCASEMENT SHALL BE REQUIRED IN THE EVENT THE ADJACENT SOIL IS DISTURBED. LIMITS SHALL BE DETERMINED BY THE DISTRICT.

**PROCEDURE:**

1. NOTIFY SANITARY DISTRICT ( 363-4765 OR 363-4100 )
2. REPAIR SHALL BE MADE AS SHOWN ABOVE WHEN CLEARANCE BETWEEN SEWER PIPE AND UTILITY PIPE IS 6" OR MORE, REPAIR MAY BE MADE WITH THE SAME TYPE OF PIPE AS THE EXISTING SEWER. WHEN O.D. OF PIPES ARE WITHIN 1" OF EACH OTHER, THERE SHALL BE A 4" X 4" PAD OF 35-45 DUROMETER RUBBER PLACED SNUGLY BETWEEN THE PIPES.
3. IF EXISTING SEWER PIPE IS PVC OR ABS, USE MANUFACTURED COUPLINGS AND NOT BANDED RUBBER COUPLINGS.
4. CONCRETE ENCASEMENT SHALL BE REQUIRED IN THE EVENT THE ADJACENT SOIL IS DISTURBED. LIMITS SHALL BE DETERMINED BY THE DISTRICT.

**STANDARD DRAWING**  
**VITRIFIED CLAY AND DUCTILE IRON SEWER PIPE**  
**PIPE CROSSING REPAIR**

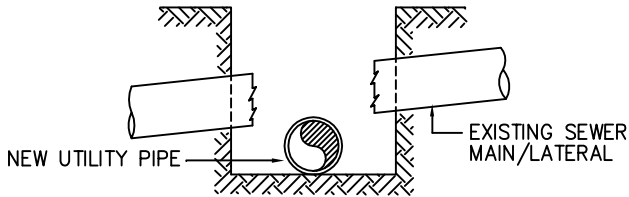
SAN MATEO COUNTY DEPARTMENT  
OF  
PUBLIC WORKS  
.....  
REDWOOD CITY  
CALIFORNIA

DRAWN BY:     M.L.      
CHECK BY:     R.O.      
APPROVED BY:   N.R.C.  

SCALE:     NONE      
DATE:   6/95    
REVISED:           

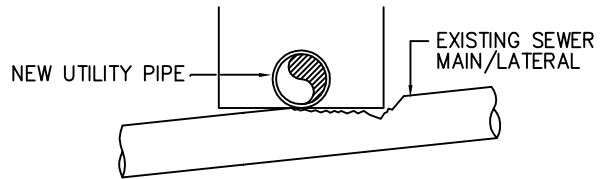
NOTICE:

CALL SANITARY DISTRICT ( 363-4765 OR 363-4100 ) BEFORE MAKING ANY SEWER REPAIRS. ALL REPAIRS MUST BE DONE IN THE PRESENCE OF A DISTRICT INSPECTOR.



SIMPLE SEWER MAIN/LATERAL BREAK  
( NO CONFLICT IN GRADE )

**BREAK**

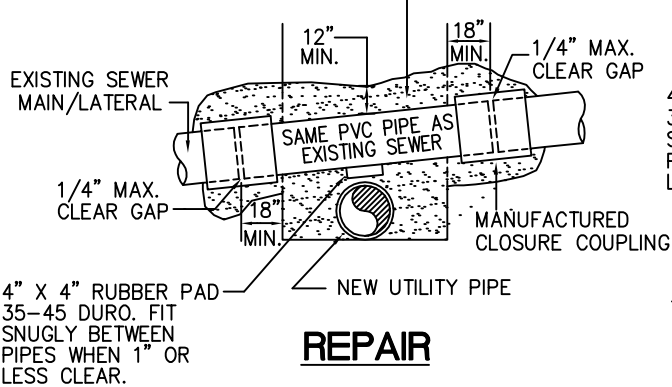


SIMPLE SEWER MAIN/LATERAL BREAK  
( NO CONFLICT IN GRADE )

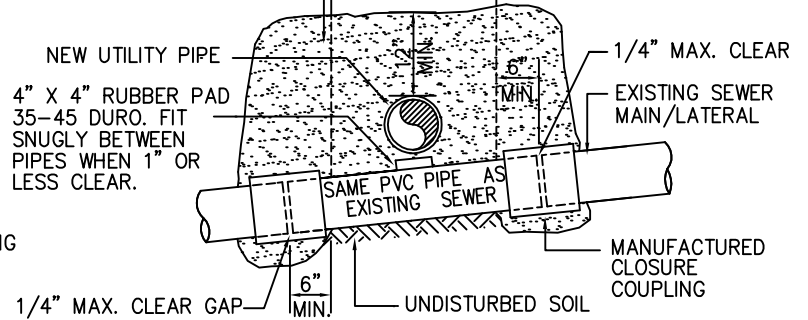
**BREAK**

BACKFILL MATERIAL ( SEE NOTE 1 ), FILL ENTIRE EXCAVATION OUTSIDE TRENCH AREA MIN. 18" EACH SIDE OF SEWER LINE

BACKFILL MATERIAL ( SEE NOTE 1 ), FILL ENTIRE EXCAVATION OUTSIDE TRENCH AREA MIN. 18" EACH SIDE OF SEWER LINE



**REPAIR**



**REPAIR**

- NOTES:
1. BACKFILL MATERIAL SHALL BE SAND AS SPECIFIED IN STANDARD TRENCH BACKFILL AND BEDDING DETAIL FOR P.V.C. SEWER PIPE ( C-7 ) OR OTHER MATERIAL APPROVED EQUAL BY THE SEWER DIVISION.
  2. THE USE OF BANDED RUBBER COUPLINGS IS PROHIBITED.

PROCEDURE:

PROCEDURE:

1. NOTIFY SANITARY DISTRICT ( 363-4765 OR 363-4100 )
2. TRIM SEWER MAIN/LATERAL TO A CLEAN-CUT, UNDATED END, A MINIMUM OF 18" INTO TRENCH WALL. INSTALL NEW PVC PIPE WITH MANUFACTURED CLOSURE COUPLINGS ( IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS ).
3. WHEN OUTSIDE DIAMETER OF THE CROSSING PIPES ARE WITHIN 1" OF EACH OTHER, THERE SHALL BE A 4" X 4" PAD OF 35-45 DUROMETER RUBBER PLACED SNUGLY BETWEEN THE PIPES.

1. NOTIFY SANITARY DISTRICT ( 363-4765 OR 363-4100 )
2. WHEN O.D. OF PIPES ARE WITHIN 1" OF EACH OTHER, THERE SHALL BE A 4" X 4" PAD OF 35-45 DUROMETER RUBBER PLACED SNUGLY BETWEEN THE PIPES.

**STANDARD DRAWING**  
**POLYVINYL CHLORIDE ( PVC ) SEWER PIPE**  
**PIPE CROSSING REPAIR**

SAN MATEO COUNTY DEPARTMENT  
OF

DRAWN BY: N.M.A.  
CHECK BY: R.O.  
APPROVED BY: N.R.C.

PUBLIC WORKS  
.....  
REDWOOD CITY  
CALIFORNIA

SCALE: NONE  
DATE: 6/95  
REVISED: \_\_\_\_\_

**SAN MATEO COUNTY SEWER AND SANITATION DISTRICTS  
STANDARD SPECIFICATIONS**

**GENERAL NOTES**

1. ALL REFERENCES TO "DISTRICT" IN THESE GENERAL NOTES SHALL MEAN THE APPROPRIATE COUNTY SEWER OR SANITATION DISTRICT.
2. THE APPROVAL OF THESE PLANS BY THE DISTRICT SHALL BE INTERPRETED TO MEAN THAT THE SANITARY SEWER DESIGN SHOWN ON THESE PLANS MEETS THE DISTRICT'S STANDARDS. THE DISTRICT'S APPROVAL IN NO WAY GUARANTEES ANY OTHER ASPECT OF THIS PLAN OR ITS ACCURACY RELATIVE TO ACTUAL FIELD CONDITIONS.
3. THE CONTRACTOR SHALL CONTACT THE DISTRICT AT 363-4765 OR 363-4100 TWO (2) WORKING DAYS IN ADVANCE OF BEGINNING ANY SANITARY SEWER WORK. THE CONTRACTOR SHALL THEREAFTER KEEP THE INSPECTOR FOR THE DISTRICT INFORMED OF HIS SCHEDULE FOR SANITARY SEWER WORK.
4. ALL SANITARY SEWER WORK CONSTRUCTED WITHOUT INSPECTION BY THE DISTRICT SHALL BE REMOVED AND RECONSTRUCTED WITH INSPECTION.
5. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT FORTY-EIGHT (48) HOURS IN ADVANCE OF BEGINNING ANY WORK.
6. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UTILITIES BEFORE BEGINNING ANY EXCAVATING.
7. THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY THE COUNTY OR CITY BEFORE BEGINNING ANY SANITARY SEWER WORK.
8. UPON THE COMPLETION OF CONSTRUCTION A COMPLETE SET OF REPRODUCIBLE "AS-CONSTRUCTED" PLANS SHALL BE PROVIDED TO THE DISTRICT.
9. SANITARY SEWER SERVICE SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL USE WHATEVER MEANS ARE NECESSARY (E.G. PUMPS, ETC.) TO MAINTAIN THIS SERVICE DURING CONSTRUCTION.
10. PRIOR TO COMMENCING ANY SANITARY SEWER WORK IN OFF-SITE EASEMENTS THE CONTRACTOR SHALL PROVIDE THE DISTRICT WITH ADEQUATE EVIDENCE THAT ALL AFFECTED PROPERTY OWNERS (AND TENANTS WHERE APPLICABLE) WERE NOTIFIED WELL IN ADVANCE OF THE DATE WORK IN THESE EASEMENTS WAS TO BEGIN AND THAT THEY HAVE UPDATED THAT NOTICE IN A TIMELY MANNER WHEN THOSE DATES HAVE CHANGED.

SAN MATEO COUNTY DEPARTMENT  
OF

DRAWN BY: N.M.A.  
CHECK BY: R.O.  
APPROVED BY: N.R.C.

PUBLIC WORKS  
.....  
REDWOOD CITY  
CALIFORNIA

SCALE: NONE  
DATE: 6/95  
REVISED: 4/97

**SAN MATEO COUNTY SEWER AND SANITATION DISTRICTS  
STANDARD SPECIFICATIONS**

**PIPE AND FITTINGS**

**POLYVINYL CHLORIDE PIPE (PVC)**

1. ALL PIPE AND FITTINGS SHALL CONFORM TO ASTM SPECIFICATIONS D3034, SDR 35.
2. ALL JOINTS SHALL BE A BELL AND SPIGOT ASSEMBLY WITH ELASTOMERIC SEALING GASKETS. SEALING GASKETS SHALL MEET THE REQUIREMENTS OF ASTM SPECIFICATION D1869. SOLVENT CEMENT JOINTS ARE NOT PERMITTED.
3. ALL PIPE ENTERING OR LEAVING A CONCRETE STRUCTURE SHALL HAVE A RUBBER WATERSTOP GASKET ATTACHED TO IT. THE WATERSTOP GASKET SHALL CONFORM TO THE PIPE MANUFACTURER'S SPECIFICATIONS. THE WATERSTOP GASKET SHALL BE SEATED FIRMLY AROUND THE PIPE EXTERIOR AND BE CAST INTO THE CONCRETE STRUCTURE.
4. ALL PIPE JOINTS SHALL BE MADE USING MANUFACTURED PVC COUPLINGS. BAND TYPE COMPRESSION COUPLINGS ARE NOT PERMITTED.

**DUCTILE IRON PIPE (DIP)**

1. ALL PIPE SHALL BE THICKNESS CLASS 50 (FOUR INCH PIPE SHALL BE THICKNESS CLASS 51) IN ACCORDANCE WITH ANSI SPECIFICATIONS A21.51. FITTINGS SHALL BE IN ACCORDANCE WITH ANSI SPECIFICATION A21.10.
2. JOINTS SHALL BE PUSH-ON TYPE OR MECHANICAL JOINT TYPE IN ACCORDANCE WITH ANSI SPECIFICATION A21.11. RUBBER GASKETS FOR PUSH-ON JOINTS SHALL BE IN ACCORDANCE WITH ANSI SPECIFICATIONS HEREIN.
3. PIPE AND FITTINGS SHALL HAVE A BITUMINOUS COATING OUTSIDE IN ACCORDANCE WITH ASTM SPECIFICATION A746-86, UNLESS OTHERWISE SPECIFIED HEREIN.
4. PIPE AND FITTINGS SHALL HAVE A 1/16" (ONE-SIXTEENTH INCH) CEMENT-MORTAR LINING WITH AN ASPHALTIC SEAL COAT.

**VITRIFIED CLAY PIPE (VCP)**

1. PIPE AND FITTINGS SHALL BE EXTRA STRENGTH, UNGLAZED, BELL AND SPIGOT, CONFORMING TO THE LATEST REVISION OF ASTM SPECIFICATION C700.
2. JOINTS SHALL BE A BELL AND SPIGOT ASSEMBLY WITH FACTORY INSTALLED FLEXIBLE COMPRESSION TYPE GASKETS MADE OF PLASTICIZED POLYVINYL OR POLYURETHANE CONFORMING TO THE LATEST REVISION OF ASTM SPECIFICATIONS C425. BAND TYPE COUPLINGS ARE NOT ALLOW.

**COUNTY OF SAN MATEO**

**COUNTY SANITATION/SEWER MAINTENANCE DISTRICTS**

**SPECIAL PROVISIONS FOR  
CLOSED CIRCUIT TELEVISION INSPECTION OF  
PRIVATE SANITARY SEWER LATERALS**

A video inspection shall be performed by the applicant/contractor of private sewer laterals as specified by the District. A USB thumb drive or DVD shall be made of the inspection and delivered along with a typed log of the inspection to the District for review and acceptance. The inspection video shall be either configured for viewing using the latest version of Windows Media Player, or the appropriate viewing software must be submitted on each USB thumb drive or DVD. Prior to performing the video inspection, all debris or foreign objects inside the sewer lateral shall be cleaned and removed. If the video inspection shows any debris still exists inside the sewer lateral, it shall be removed by the Contractor, at the Contractor's expense. After the removal of all debris, the Contractor must provide a video of the re-inspected sewer lateral.

Immediately prior to televising the sewer laterals, an amount of water acceptable to the District's representative shall be introduced into the sewer lateral being inspected. Videos must clearly show the area surrounding the lateral or the physical house address number on the building before the camera enters the cleanout. Submitted USB thumb drives or DVDs shall include a continuous on-screen display, which contains, at a minimum, the date of the video inspection and location of the sewer lateral inspection by indicating address, and footage. Video equipment shall include a television camera in color format specifically designed and constructed for operation in connection with sewer inspection and for operation in sewers under 100% humidity conditions. Lighting and camera quality shall produce a clear, in-focus picture of the entire periphery of the pipe for a minimum distance of six (6) feet. The camera shall be moved through the line, in a smooth fashion, preferably in the direction of the sewage flow, at a moderate rate, stopping when necessary to permit proper documentation of the sewer laterals condition. In no case shall the television camera be operated at a speed greater than 30 feet per minute.

If, in the opinion of the District, the submitted USB thumb drives or DVDs are of poor quality such that the District is unable to evaluate the condition of the sewer lateral, the District may reject the USB thumb drives or DVDs and require the video inspection to be repeated and new USB thumb drives or DVDs submitted to the District for review and acceptance. All USB thumb drives and DVDs shall become the property of the County.

The applicant/contractor is responsible for all work listed in the preceding paragraphs

**COUNTY OF SAN MATEO**

**COUNTY SANITATION/SEWER MAINTENANCE DISTRICTS**

**SPECIAL PROVISIONS FOR**

**CLOSED CIRCUIT TELEVISION INSPECTION OF SANITARY SEWER MAINS**

Closed circuit television (CCTV) inspection of the sanitary sewer mains shall be performed by the Applicant/Contractor in conformance with the following provisions and the directions of the District.

1. CCTV inspection shall be from manhole-to-manhole, and sanitary sewer service shall be maintained at all times during cleaning and CCTV inspection of the sewer lines.
2. Prior to CCTV inspection, the Contractor shall remove all debris and foreign objects inside the sanitary sewer lines and manholes where work was performed, and then flush and clean all parts of the system, and remove all accumulated construction debris, gravel, silt and other foreign material from the sanitary sewer system at or near the closest downstream manhole using mechanical rodding, flushing, or bucketing equipment, if necessary.
3. The Contractor shall furnish all materials, tools, equipment and labor required to perform CCTV inspection; and CCTV inspection equipment shall be approved by the District.
4. Videos must clearly show the area surrounding the manhole before the camera enters the manhole.
5. Video equipment shall include a television camera in color format specifically designed and constructed for operation in connection with sewer inspection and for operation in sewers under 100% humidity conditions. The camera shall have a minimum capability of 350 lines of resolution and should be of the “articulating head” type to allow laterals and defects to be viewed directly. Lighting and camera quality shall produce a clear, in-focus picture of the entire periphery of the pipe for a minimum distance of six feet (6’). The camera shall be moved through the line, preferably in the direction of the sewage flow, at a moderate rate, stopping at joints, lateral connections and when necessary to permit proper documentation of the sewer’s condition. In no case shall the television camera be operated at a speed greater than 30 feet per minute. Manual winches, power winches, TV cable, and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line.
6. The CCTV inspection shall be continuous color digital recording in MPEG 4 format for each pipe segment inspected. The inspection video shall be either configured for viewing using the latest version of Windows Media Player, or the appropriate viewing software must be submitted on each USB thumb drive or DVD. USB thumb drives or DVDs shall

be submitted to the District with a typed log of the inspection for review and acceptance. All USB thumb drives or DVDs shall become the property of the County. If, in the opinion of the District, the submitted USB thumb drives or DVDs are of poor quality such the District is unable to evaluate the condition of the sewer lines, the District may reject the USB thumb drives or DVDs and require the CCTV inspection to be repeated and new USB thumb drives or DVDs submitted to the District for review and acceptance.

7. Submitted USB thumb drives or DVDs, when replayed on a monitor, shall be clear and in-focus, and shall include a continuous on-screen display containing, at a minimum, the date of video inspection and identification of the sanitary sewer line and segment (street location, upstream and downstream manhole numbers) of the line being viewed, and footage. The number designations for existing sanitary sewer manholes shall be as shown on the District maps.
8. If, upon the District's review of the CCTV inspection, any debris or foreign matter is still present in the sanitary sewer system, the Contractor shall re-flush and clean, and re-CCTV inspect those sections and portions of the sanitary sewer lines and manholes, as required and as directed by the District. This process shall be repeated until CCTV inspection indicates that the sanitary sewer lines have been satisfactorily cleaned.
9. Any damage to the existing sanitary sewer main caused by the Contractor's operations shall be repaired by the Contractor, to the satisfaction of the District.
10. Any damage to either public or private facilities (due to, for example, a sanitary sewer mainline backup) as a result of the Contractor's CCTV inspection operations, as described above, shall be repaired or corrected by the Contractor to the satisfaction of the District.