SEWER LATERAL STANDARD DETAILS

FINAL
May 2017

ABBREVIATIONS

CART: CARTER
CL: CLAY LATERAL
HC: HIGH CLAY LATERAL
HCN: HIGH CLAY LATERAL INSULATION
IPT: IRON PIPE
MAX: MAXIMUM
MIN: MINIMUM
PC: PIG RACE PIPE
PCP: PIGEON PIPE
PST: LASER-PRO"CLAY PIPE
PSTP: LASER-PRO"CLAY PIPE
PCIC: PIGEON INSULATION PIPE
SIP: SCHEDULE INSULATION PIPE
SPC: SCHEDULE PIPE
SCP: SCHEDULE PIPE CEMENT
SPF: SCHEDULE PIPE FLEXIBLE
SDPC: SCHEDULE PIPE CEMENT
STPB: SCHEDULE PIPE BURIED
SPCP: SCHEDULE PIPE CEMENT FLEXIBLE
SEPB: SCHEDULE PIPE BURIED
STEP: SCHEDULE PIPE EXPOSED
SIPF: SCHEDULE PIPE FLEXIBLE
SPFH: SCHEDULE PIPE FLEXIBLE INSULATION
SIPC: SCHEDULE PIPE CEMENT
SEPC: SCHEDULE PIPE CEMENT
STPC: SCHEDULE PIPE CEMENT BURIED
SPP: SCHEDULE PIPE
SPBH: SCHEDULE PIPE BURIED
SPPC: SCHEDULE PIPE CEMENT
STPC: SCHEDULE PIPE CEMENT BURIED
SPPF: SCHEDULE PIPE FLEXIBLE
STPP: SCHEDULE PIPE EXPOSED
SPPH: SCHEDULE PIPE FLEXIBLE INSULATION
SPPC: SCHEDULE PIPE CEMENT
STPPC: SCHEDULE PIPE CEMENT BURIED
TYPICAL: TYPICAL
TCP: TYPICAL CLAY PIPE

GENERAL NOTE:
The property owner is responsible for construction, inspection and maintenance of the private lateral sewer line. The public utility is responsible for repair and replacement only for the lateral sewer.
**TYPICAL SEWER LATERAL CONFIGURATION**

**IN STANDARD CITY STREET**

NOT TO SCALE

1. THE CLEANOUT IS THE PROPERTY OWNER'S RESPONSIBILITY.
2. THE CLEANOUT IN THE COMBINED SEWER SYSTEM AND SANITARY SEWER SYSTEM CONSISTS OF A R-ISOLATION VISOR AND VENT.
3. THE CLEANOUT IN THE STORM SEWER SYSTEM CONSISTS OF A R-ISOLATION VISOR AND VENT.
4. PROPERTY OWNER SHALL SUBMIT SEWER CONNECTION PERMIT APPLICATION TO SFPPUC FOR WORK THAT INCLUDES A CONNECTION TO THE EXISTING SEWER MAIN.
5. A MANHOLE IS REQUIRED AT POINT OF CONNECTION BETWEEN LATERAL AND SEWER MAIN FOR LATERALS 10 IN DIAMETER AND GREATER, UNLESS THE DRAIN IS 42 IN DIAMETER OR GREATER.

**APPLICABLE TO BOTH COMBINED AND SANITARY SEWER SYSTEMS**
SPECIAL SEWER LATERAL
CONFIGURATION - COMMERCIAL
BUILDINGS WITH SUB-SIDWALK
BASEMENTS IN STANDARD CITY STREET

NOT TO SCALE

SPECIAL SEWER LATERAL CONFIGURATION IN
PUBLIC STAIRS (I.E. NON-STANDARD CITY STREET)

NOT TO SCALE

APPLICABLE TO BOTH
COMBINED AND SANITARY
SEWER SYSTEMS

SPECIAL SEWER LATERAL CONFIGURATIONS
ALLOWABLE SEWER LATERAL ALIGNMENT DEVIATION FROM PERPENDICULAR

NOT TO SCALE

MINIMUM CLEARANCE BETWEEN TREE AND SEWER LATERAL ALIGNMENT IN PUBLIC RIGHT-OF-WAY

NOT TO SCALE

APPLICABLE TO BOTH COMBINED AND SANITARY SEWER SYSTEMS
NOTES:
1. Place a minimum of 12" backfill all around the outside diameter of the pipe. Backfill shall be in accordance with State Plumbing Specifications.
2. Cleanout Riser shall not be less than 8" square pipe with type 304 stainless steel strainer and approved cover. Cleanout Riser shall not be more than 12" above the finished grade.
3. Clear area adjacent to the existing sewer line to accommodate the new cleanout riser.
4. The cleanout in the storm sewer system is a part of the main sewer and vent.

RELATION OF CLEANOUT AND BIORETENTION PLANTER CONSTRUCTION

APPLICABLE TO STORM SEWER SYSTEM ONLY

1. The cleanout materials located under bioretention planters shall be protected in accordance with State Plumbing Specifications.
2. The wall penetration shall be suitable and made in the space adjacent to the bioretention planter.
CATCH BASIN/SAND TRAP
WITH CLEANOUT DETAIL

NOT TO SCALE

CAST IRON PIPE AND FITTINGS

CONCRETE BASE

MORTAR (TYP.)

FOOTING-IN-PLACE OR PRE-CUT CONCRETE EXTENDING AS REQUIRED.

COMPACTED SURFACE

SHANK PIPE

GATE IN SCHEDULED PIPE FOR GATE
1 1/2" x 1 1/2" ANGLE IRON WITH ANCHOR LUGS

EXIT OUT WITH BROWN SCREEN COVER

FINISHED GRADE

VARIES

VARIES

VARIES
<table>
<thead>
<tr>
<th>Connector Type</th>
<th>Standard Width</th>
<th>Minimum Distance</th>
<th>Code Requirement</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>300 mm</td>
<td>0.5 m</td>
<td>8.016</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>400 mm</td>
<td>0.7 m</td>
<td>8.017</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>500 mm</td>
<td>0.9 m</td>
<td>8.018</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>600 mm</td>
<td>1.1 m</td>
<td>8.019</td>
<td></td>
</tr>
</tbody>
</table>

**SEWER LATERAL CONNECTION SCHEDULE**
SECTION 7 - VCP PLAIN END STUB AND APPROVED COUPLING CONNECTION (CONNECTION TO NEW OR EXISTING SEWER MAIN)  

1. REMOVE SEWER AS NECESSARY TO ACCOMMODATE NEW SEWER LATERAL CONNECTION AND FILL MINIMUM SPACED BETWEEN EXISTING SEWER AND NEW SEWER CONNECTION NON-SHRINK GROUT.  

2. ALL CONNECTIONS ARE REQUIRED TO BE BETWEEN THE 2 O'LOCK AND 4 O'LOCK OR 8 O'LOCK AND 10 O'LOCK POSITION ON THE SEWER MAIN. IN NO CASE SHALL CONNECTION BE WITHIN 18 INCHES OF THE MAIN.  

TYPE 7 - VCP PLAIN END STUB AND APPROVED COUPLING CONNECTION (CONNECTION TO NEW OR EXISTING SEWER MAIN)  

SECTION 8 - VCP BELT STUB CONNECTION (CONNECTION TO NEW OR EXISTING RCP/RC SEWER MAIN)  

1. SEWER LATERAL OVER 1/2 INCH TO NO MORE THAN 1/2 INCH DIAMETER CONNECTING DIRECT TO SEWER MAIN SHALL USE TYPE 8 - VCP CONCRETE COLLAR CONNECTION.  

2. ALL CONNECTIONS ARE REQUIRED TO BE BETWEEN THE 8 O'LOCK AND 10 O'LOCK POSITION ON THE SEWER MAIN.  

SECTION 9 - VCP CONCRETE COLLAR CONNECTION (CONNECTION TO NEW OR EXISTING SEWER MAIN)  

1. CONNECTING SEWER LATERAL OVER 1/2 INCH TO NO MORE THAN 1/2 INCH DIAMETER CONNECTING DIRECT TO SEWER MAIN SHALL USE TYPE 9 - VCP CONCRETE COLLAR CONNECTION.  

2. ALL CONNECTIONS ARE REQUIRED TO BE BETWEEN THE 8 O'LOCK AND 10 O'LOCK POSITION ON THE SEWER MAIN.
SEWER LATERAL CONNECTION TO MANHOLE

1. Seper lateral connections shall be flush with inside face of manhole wall.
2. Seper lateral connections shall be minimum 6" from nearest manhole cover section joint.
3. Note that these lateral connections into a manhole will require review and approval by Engineer.

NOTE

APPLICABLE TO BOTH COMBINED AND SANITARY SEWER SYSTEMS

SEWER LATERAL STANDARD DETAILS

SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MAY 2017
TRENCH DETAIL FOR RIGID PIPE

NOT TO SCALE

TRENCH DETAIL FOR FLEXIBLE PIPE

NOT TO SCALE

NOTES:
1. TRENCH SHALL HAVE VERTICAL WALLS IN PIPE ZONE UNLESS NOTED OTHERWISE.
2. BACKFILL SHALL BE COMPOSED OF MATERIAL DETERMINED BY CONTRACTOR.
3. FOR ADDITIONAL INFORMATION ON SAWDUST LATERALS, SEE ASTM C1373 STANDARD PRACTICE FOR INSTALLING INSULATED STEEL PIPE LATERALS.
4. FOR ADDITIONAL INFORMATION ON SEWAGE SEWER SYSTEMS, SEE ASTM C2277 STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF TRENCH LATERAL PIPE FOR SEWERS AND OTHER GROUND-FLOW APPLICATIONS.

APPLICABLE TO BOTH COMBINED AND SANITARY SEWER SYSTEMS

SEWER LATERAL STANDARD DETAILS

WATER POWER SEWER

SEWER LATERAL TRENCH

MAY 2017

15
1. Replacement sewer lateral size and material shall match that of existing sewer lateral. If size or material do not match, provide a coupling that will accommodate variations in the pipe.

2. The full length of the defective pipe must be replaced to avoid injection of new joint.

NOTE:

1. For all other repair information see detail 1 on this sheet.
EXISTING SEWER LATERAL RELOCATION
BELOW NEW UTILITY CONSTRUCTION

NOT TO SCALE

APPLICATION TO BOTH
COMBINED AND SANITARY
SEWER SYSTEMS

NOTES:
1. UTILITY LOCATION SHALL BE DESIGNED KEEPING SEWER LATERALS IN MIND. THE
   RELOCATION OF SEWER LATERALS SHALL BE IMPERATIVE.
2. FOR EASEMENT IN COMBINED SEWER SYSTEM AND SEWER SEWER SYSTEM, SEE
   DRAWING NO. 5. ILLUSTRATION 5.
3. JOINTS ON RELOCATED SEWER LATERAL SHALL NOT BE ALLOWED ALONG THE LIMITS
   OF THE NEW UTILITY REQUIRED FOR CONSTRUCTION OR THE NEW UTILITY. IF
   JOINTS MUST BE LEFT ON THE LATERAL, WITHIN THE LIMITS OF THE NEW UTILITY,
   JOINING SECTION, THE RELOCATED LATERAL SHALL BE ENCASED IN CONCRETE
4. ALTERNATIVELY, CONTRACTOR MAY DEFLUCT JUICT WITHIN THE MANUFACTURER'S
   ACCEPTED TOLERANCES.
RELOCATION OF SEWER LATERAL CLEANOUT DUE TO SIDEWALK WIDENING (2"
NOT TO SCALE

NOTES:
1. FOR TYPICAL INSTALLATION OF SEWER LATERAL IN COMBINED SEWER SYSTEM AND SANITARY SEWER SYSTEM SEE DRAWING NO. 5 AND NO. 7, RESPECTIVELY.
2. FOR CLEANOUT ASSEMBLIES THAT ARE LOCATED IN THE VORDER OF THE FLOATING GUN, SEE DRAWING NO. 5 AND NO. 7.

APPLICABLE TO BOTH COMBINED AND SANITARY SEWER SYSTEMS
1. All plugs shall be concrete or brick and mortar.
2. Sewer laterals larger than 17" in diameter shall be plugged and backfilled with clay as specified in Opera Standards Specifications Chapter 5.
3. Sewer laterals smaller than 17" in diameter shall be plugged as specified in Opera Standards Specifications Chapter 5.
4. Plug sewer lateral at locations "A", "B", "C", and "D".

Applicable to both Combined and Sanitary Sewer Systems