**NOTES:**

1. CLASS A CONCRETE SHALL BE USED FOR SSMH BASE.
2. PIPE SHALL STOP AT INSIDE FACE OF MANHOLE.
3. JOINTS IN PRECAST SSMH (BARREL, CONE, BASE, ETC.) SHALL BE TONGUE AND GROOVE. ALL JOINT GASKETS SHALL BE RAMMEK JOINT SEALANT, Sika Swell Stop, OR APPROVED EQUAL.
4. CONNECTION OF PIPE TO MANHOLE SHALL BE FACTORY INSTALLED INFLOW AND OUTFLOW CAST IN TO MATCH PIPE SLOPE, ANGLE, ETC. AS DESIGNED BY THE DESIGN ENGINEER.
5. INTERIOR OF ALL MANHOLES, EXCLUDING BELOW THE FLOW LINE, SHALL BE EPOXY COATED DURA-PLATE 6100 HIGH PERFORMANCE EPOXY-ONE COAT, 125 MILS DFT OR EQUAL. INTERIOR EPOXY LINED COATING SHALL APPLY IN THE FOLLOWING SCENARIOS:
   - INLET, UPSTREAM PIPE SLOPE IS 8% OR GREATER MORE THAN OUTLET, DOWNSTREAM PIPE SLOPE
   - ANY SSJM THAT COULD CAUSE TURBULENT FLOW CONDITIONS INSIDE THE SSJM
   - ANY CONDITION THAT COULD CAUSE TURBULENT FLOW CONDITIONS INSIDE THE SSJM.
6. EXTERIOR OF ALL MANHOLES SHALL HAVE AN ASPHALT BITUMINIC COATING APPLIED. IN ADDITION THE EXTERIOR OF THE SSJM SHALL BE CONSTRUCTED WITH INF-Shield Gaskets and ConSeal Polyolefin Backed Exterior Joint Wrap OR APPROVED EQUAL.
8. FLAT TOP FRAME & COVERS ARE ONLY ALLOWED/REQUIRED WHEN THE MANHOLE LOCATION IS LOCATED IN A LANDSCAPE OR OPEN SPACE AREA WHERE MANHOLE IS LOCATED ABOVE FINISH GRADE (I.E. HILLSIDE, ETC.)
9. A 60” SSJM IS REQUIRED IF THE SSJM DEPTH EXCEEDS 15’ (MEASURED FROM RIM TO THE DEEPEST INVERT), SIZE OF INSIDE DROP IS 10” OR GREATER, TWO OR MORE INSIDE DROP CONNECTIONS ARE PLACED IN THE SSJM, OR IF ANY INLET OR OUTLET PIPE DIAMETER IS 15” OR LARGER.
10. FOR NON THROUGH-AND-THROUGH BASE CONFIGURATIONS, DESIGNER/CONTRACTOR TO CONTACT PRECASTER FOR CONSTRUCTABILITY AND SIZING.

**PLAN VIEW OF MANHOLE SHOWING INTERSECTING SEWERS**

**CITY OF FOLSOM**

**STANDARD 48” PRE-CAST SEWER MANHOLE**

**SCALE:** NONE

**DATE:** FEBRUARY 2020

**SS-01**
NOTES:

1. A CONCRETE SHALL BE USED FOR SSMH BASE.
2. PIPE SHALL STOP AT INSIDE FACE OF MANHOLE.
3. JOINTS IN PRECAST SSMH (BARREL, CONE, BASE, ETC.) SHALL BE TONGUE & GROOVE. ALL JOINT GASKETS SHALL BE RAMINEK JOINT SEALANT, SIKA SWELLSTOP, OR APPROVED EQUAL.
4. CONNECTION OF PIPE TO MANHOLE SHALL BE FACTORY INSTALLED INFLOW AND OUTFLOW SDR-26 BELL/COUPLING ONLY.
5. INTERIOR OF ALL MANHOLES, EXCLUDING BELOW THE FLOW LINE, SHALL BE EPOXY COATED DURA-PLATE 6100 HIGH PERFORMANCE EPOXY—ONE COAT, 125 MILS DFT OR EQUAL. INTERIOR EPOXY LINED COATING SHALL APPLY IN THE FOLLOWING SCENARIOS.
   A. INLET, UPSTREAM PIPE SLOPE IS 8% OR GREATER.
   B. ANY SSMH THAT COULD CAUSE TURBULENT FLOW CONDITIONS INSIDE THE SSMH.
   C. AS DETERMINED BY THE CITY.
6. EXTERIOR OF ALL MANHOLES SHALL HAVE AN ASPHALT BITUMASTIC COATING APPLIED. IN ADDITION THE EXTERIOR OF THE SSMH SHALL BE CONSTRUCTED WITH IN-FIT-SHIELD GASKETS AND CONSEAL POLYOLEFIN BACKED EXTERIOR JOINT WRAP OR APPROVED EQUAL.
8. FLAT TOP FRAME & COVERS ARE ONLY ALLOWED/REQUIRED WHEN THE MANHOLE LOCATION IS LOCATED IN A LANDSCAPE OR OPEN SPACE AREA WHERE MANHOLE IS LOCATED ABOVE FINISH GRADE (I.E. HILLSIDE, ETC.)
9. A 60" SSMH IS REQUIRED IF THE SSMH DEPTH EXCEEDS 15" (MEASURED FROM RIM TO DEEPEST INVERT), SIZE OF INSIDE DROP IS 10" OR GREATER, TWO OR MORE INSIDE DROP CONNECTIONS ARE PLACED WITH THE SSMH, OR IF EITHER THE INLET OR OUTLET PIPE DIAMETER IS 15" OR LARGER.
10. FOR NON THROUGH-AND—THROUGH BASE CONFIGURATIONS, DESIGNER/CONTRACTOR TO CONTACT PRECASTER FOR CONSTRUCTABILITY AND SIZING.

CITY OF FOLSOM

STANDARD 60"
PRE-CAST SEWER MANHOLE

SCALE: NONE
DATE: FEBRUARY 2020
SS-02
**LEGEND:**

1. MORTAR
2. CLASS A CONCRETE
3. INFLOW/OUTFLOW CAST IN SDR-26 BELL/COUPLING
4. ASTM C923 WATERSTOP (CHRISTY OR APPROVED EQUAL)
5. #4 GRADE 60 REBAR @ 12" GRID

**NOTES:**

1. CAST-IN-PLACE MANHOLES ARE ONLY ALLOWED WITH WRITTEN APPROVAL FROM THE CITY.
2. SLOPE SHELVES 1" PER 1'
3. FORM RECESS IN BASE WITH METAL FORMING RING TO PLACE BARREL SECTION. JOINTS SHALL HAVE RAMNEK JOINT SEALANT, SIKA SWELLSTOP, OR APPROVED EQUAL.
4. CHANNEL CONFIGURATION MUST ACCOMMODATE TRACTOR DRIVEN VIDEO CAMERA.
5. MANHOLE TO BE EPOXY LINED PER SS-01/SS-02.
6. WRAP EACH JOINT OF EXTERIOR SSMH JOINTS PER SS-01/SS-02.
7. ALL OTHER SSMH REQUIREMENTS OF SS-01/SS-02 APPLY TO SS-03 INCLUDING REQUIREMENTS REGARDING THE BARREL, FRAME AND LID.

**CITY OF FOLSOM**

**CAST-IN-PLACE CONCRETE MANHOLE BASE**

**SCALE:** NONE  
**DATE:** FEBRUARY 2020  
**SS-03**
NOTES:

1. Minimum 48" manhole. 60" manhole required if depth exceeds 15' (measured from rim to deepest invert). Size of inside drop is 10" or greater, two or more inside drop connections are placed within manhole, or if either the inlet or outlet pipe diameter is 15" or larger.

2. All inside drop piping shall be SDR-26.

3. All inside drop connections shall use the drop bowl as produced by: Reliner-Duran, Inc. or approved equal.

4. Drop connection pipe & fittings to be size as entering pipe.

5. Drop bowl model "A-4" shall be used for lines up through 6" inlets. Model "A-6" shall be used for 8" inlets. Model "B-8" shall be used for 10" inlets. Lines larger than 10" shall be as directed by the Environmental & Water Resources Department.

6. Prime and cement all joints as recommended by the manufacturer.

7. Clamps shall be 1-1/2" x 12 gauge stainless steel, anchored to M.H. wall with 2-1/2" stainless steel bolts.

8. The force line hood shall be attached on models "A-4" & "A-6" when the incoming line is from a force main or the slope is S=0.03 and greater or when incoming flows cannot be fully contained. See detail SS-04 for attachment details.

9. Inside drop connections shall be required for any pipe entering the SSMH 36 inches or more above the SSMH base.

10. Lateral invert elevations entering the SSMH barrel above 0 inches and less than 36 inches shall require approval by the EWR Director.

11. All SSMH troughs shall be finished with no irregularities. Ridges exceeding 1/8" need to be removed and refinished.
NOTES:
1. SECURE DROP PIPE TO MANHOLE WALL WITH STAINLESS STEEL ADJUSTABLE CLAMPING BRACKET AS MANUFACTURED BY RELINER-DURAN, INC. OR APPROVED EQUAL.

2. ATTACH THE DROP BOWL & EACH CLAMPING BRACKET TO THE MANHOLE WALL WITH 3/4" X 3/4" RAMSET/RED HEAD BOLTS, PRE-ROTO DRILL AND SET BOLTS IN PLACE WITH EPOXY PASTE. EPOXY SHALL MEET THE FOLLOWING REQUIREMENTS:
   A. EPOXY PASTE SHALL BE A TWO COMPONENT, 100% SOLID SYSTEM. EPOXY SHALL BE SIKADUR 31 HI-MOD GEL BY SIKA CORPORATION OR APPROVED EQUAL.
   B. THE EPOXY PASTE SHALL DEVELOP A MINIMUM COMpressive STRENGTH OF 5,000 PSI IN 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM D695 AT 73°C.
   C. THE EPOXY PASTE SHALL DEVELOP A MINIMUM TENSILE STRENGTH OF 3,000 PSI IN 14 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM D638.
   D. THE EPOXY PASTE SHALL DEVELOP A MINIMUM BOND STRENGTH OF 2,000 PSI IN 2 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C882 (HARDCENED CONCRETE TO HARDCENED CONCRETE).
   E. MANUFACTURER'S INSTRUCTIONS SHALL BE PRINTED ON EACH CONTAINER IN WHICH THE MATERIALS ARE PACKAGED.

3. ALL FORCE LINE HOODS SHALL BE AS PRODUCED BY RELINER-DURAN, INC. OR APPROVED EQUAL.

4. SILICON SEAL THE FORCE LINE HOOD TO MODELS "A-4" & "A-6" WHEN THE INCOMING LINE IS FROM A FORCE MAIN OR THE SLOPE IS S=0.03 AND GREATER OR WHEN INCOMING FLOWS CANNOT BE FULLY CONTAINED.

5. ATTACHING BOLTS, APPROPRIATE SIZE SELF LOCKING NUTS AND FLAT WASHERS SHALL BE TYPE 304 STAINLESS STEEL REGULAR THREAD AND HAVE THE FOLLOWING DIMENSIONS:
   EYE BOLTS SHALL BE 3/4" X 5"
   PIVOT BOLT SHALL BE 3/4" X 1 1/2"

CITY OF FOLSOM

INSIDE DROP CONNECTION
MANHOLE ATTACHMENTS

SCALE: NONE
DATE: FEBRUARY 2020
SS-05
NOTES:

1. MANHOLE LIDS AND CASTINGS FOR 48- INCH DIAMETER BARRELS SHALL BE 
   24-INCH DIAMETER. 24-INCH DIAMETER MANHOLE FRAMES AND COVERS SHALL BE 
   FIBER REINFORCED POLYMER, GMI COMPOSITE MANHOLE COVER AND FRAME SET 
   OR APPROVED EQUAL.

2. MANHOLE LIDS AND CASTINGS FOR 60- INCH BARRELS SHALL BE 36- INCH 
   DIAMETER CAST IRON FRAME AND COVER. 36-INCH MANHOLE LIDS SHALL HAVE AT 
   LEAST ONE PICK HOLE TO LIFT THE SSMH LID.

3. STAINLESS STEEL PICK HOLE REQUIRED FOR LID.

4. DATE OF MANUFACTURE SHALL BE CLEARLY CAST, STAMPED, ETCHED OR 
   ENGRAVED ON THE MANHOLE COVER.

5. (2) QUARTER TURN LOCKS WITH LOCKED/UNLOCKED INDICATOR, POSITIVE STOP, 
   AND SECURITY BOLT REQUIRED ON COMPOSITE COVER.

6. TWO (2) SSMH PADDLE LOCK HOOKS SHALL PROVIDED TO THE CITY PER 
   SUBDIVISION BUILT.

CITY OF FOLSOM

SEWER MANHOLE 
FRAME AND COVER

SCALE:  NONE
DATE:  FEBRUARY 2020

HÅLF PLAN OF HEAD AND COVER

SECTION A-A 
COMPOSITE FRAME
Installation Requirements for PVC Shelf Liner

1. 30 mil PVC shelf liner shall be precut and prepared above ground prior to installation with sand embedded non-skid surface 1" ± in from edge, according to PVC sheeting manufacturer’s recommendation.

2. Coat clean and dry concrete surface of manhole shelves with Linabond Primer EP30 and Linabond Polyurethane Mastic to a minimum thickness of 125 mil. Also coat contact side of the precut PVC sheeting with Linabond CLA-1 Activator all as manufactured by Allied Coatings Co. of Hollywood, CA. or equal (submittal will be required).

3. All materials shall be applied according to manufacturer’s recommendations.

General Notes:

1. Protective coating shall be A) Quantum as manufactured by Polymorphic Polymer’s Corp. of Miami Shores, FL. Minimum thickness of multilayered modified unsaturated polyester coating shall be 125 mil. B) Concresive 1305 as manufactured by Adhesive Engineering Co. of San Carlos, CA. Minimum thickness of multilayered, applied amine cured epoxy shall be 40 mils C) or equal.

2. Both PVC lining and protective coatings shall be spark tested for integrity after installation.

3. Protective coating shall be applied to manhole shelves, underside of cover slab, inside of grade rings and all other places where PVC is shown on detail above.
NOTES:
1. All service lines shall be 4" inside diameter PVC SDR-26 (ASTM F679).
2. Services shall have same bedding and backfill as sewer main.
3. Contractor shall use the most appropriate type connection (A, B, or C) for the particular situation encountered.
4. Service sewer shall have minimum 4' cover at property line, 5' maximum. Whenever lateral depth and service sewer slope of 1/4" per foot (minimum) permit.
5. When lateral sewer depth is such that minimum cover at property line cannot be met, the minimum slope of 1/4" per foot shall govern the cover.
6. When bedding material is used, place additional bedding material to top of bend, the full width of the trench.
7. Minimum specified cover at the property line shall be measured from existing ground surface or edge of adjacent roadway, whichever is lower.
8. A specific elevation at the property line, when shown on the plans or designated by the engineer, shall govern.
9. Miter fitting shall be max. 45°.
10. Sewer line up stream of the cleanout located in the public utility easement is private.
11. All 90 degree sewer bends shall be long radius.

LIMIT OF BEDDING MATERIAL, WELL COMPACTED, FOR SERVICE

2" X 2" "S" STAMPED IN TOP FACE OF CURB TO IDENTIFY SERVICE SEWER.

EASEMENT OR PROPERTY LINE

UNLESS OTHERWISE NOTED, 4' MIN. TO 5' MAX.

REFER TO FOLSOM MUNICIPAL CODE 13.08 FOR PUBLIC & PRIVATE OWNERSHIP, OPERATION & MAINTENANCE RESPONSIBILITIES

CITY OF FOLSOM

SEWER SERVICE LATERAL

SCALE: NONE
DATE: FEBRUARY 2020

SS-08
OLDCASTLE PRECAST G08 TRAFFIC VALVE BOX OR APPROVED EQUAL

CONCRETE COLLAR FLUSH IN AREAS SIDEWALK

NOTE:

1. FLUSHING BRANCH SHALL BE A MINIMUM OF 8" PVC FOR 8" MAINS SDR-26 (ASTM F679) AND 6" PVC FOR 6" MAINS SDR-26 (ASTM F679).

2. ALL PIPE AND FITTINGS SHALL BE THE SAME SIZE AND MATERIAL AS THE HORIZONTAL PIPE TO WHICH THEY CONNECT. JOINT SHALL BE AS SPECIFIED FOR THE TYPE OF PIPE USED.

3. FOR FLUSHING BRANCH GREATER THAN 8" DIAMETER, USE OLDCASTLE PRECAST G12 TRAFFIC VALVE BOX OR APPROVED EQUAL.
NOTES:
1. CLEANOUT TO GRADE SHALL BE PVC SDR-26 (ASTM F679).
2. FOR ALL SERVICES, INSTALL ROUND, CONCRETE TRAFFIC TYPE OLDCASTLE PRECAST G05 BOX OR APPROVED EQUAL WITH CAST IRON COVER MARKED "SEWER".
3. IF WATER MAIN IS TO BE INSTALLED AT THE BACK OF THE SIDEWALK, SEWER CLEANOUT LOCATION TO BE DETERMINED IN THE FIELD BY THE CITY.
4. DEPTH AT PROPERTY LINE SHOULD BE 4' MINIMUM, 5' MAXIMUM, EXISTING CONDITIONS MAY VARY.
5. CLOSED CIRCUIT TELEVISION REQUIRED PRIOR TO BUILDING OCCUPANCY PERMUT. CONTRACTOR TO ARRANGE CCTV 48 HOURS OR MORE IN ADVANCE WITH CITY INSPECTOR.
6. REFER TO FOLSOM MUNICIPAL CODE 13.08 FOR PUBLIC & PRIVATE OWNERSHIP, OPERATION AND MAINTENANCE RESPONSIBILITIES.
NOTES:
1. CLEANOUT TO GRADE SHALL BE PVC SDR-26 (ASTM F679).
2. FOR ALL SERVICES, INSTALL ROUND, CONCRETE TRAFFIC TYPE OLDCASTLE PRECAST G05 BOX OR APPROVED EQUAL VALVE BOX WITH CAST IRON COVER MARKED "SEWER".
3. IF WATER MAIN IS TO BE INSTALLED AT THE BACK OF THE SIDEWALK, SEWER CLEANOUT LOCATION TO BE DETERMINED IN THE FIELD BY THE CITY.
4. DEPTH AT PROPERTY LINE SHOULD BE 4' MINIMUM, 5' MAXIMUM. EXISTING CONDITIONS MAY VARY.
5. USE OF THIS DETAIL REQUIRES PRIOR APPROVAL FROM THE CITY ENGINEER.
6. CLOSED CIRCUIT TELEVISION REQUIRED PRIOR TO BUILDING OCCUPANCY PERMIT. CONTRACTOR TO ARRANGE CCTV 48 HOURS OR MORE IN ADVANCE WITH CITY INSPECTOR.
7. REFER TO FOLSOM MUNICIPAL CODE 13.08 FOR PUBLIC & PRIVATE OWNERSHIP, OPERATION, AND MAINTENANCE RESPONSIBILITIES.

CITY OF FOLSOM
CLEANOUT TO GRADE
(LESS THAN 4 FOOT DEPTH)

SCALE: NONE
DATE: FEBRUARY 2020
SS-11
NOTES:
1. THIS DETAIL SHALL BE USED WHEN THE SEWER MAIN IS SIGNIFICANTLY DEEPER THAN THE SERVICE LATERAL.
2. CLEANOUT TO GRADE SHALL BE PVC SDR-26 (ASTM F679).
3. FOR ALL SERVICES, INSTALL ROUND, CONCRETE TRAFFIC TYPE OLDCASTLE PRECAST G05 BOX OR APPROVED EQUAL VALVE BOX WITH CAST IRON COVER MARKED “SEWER”.
4. IF WATER MAIN IS TO BE INSTALLED AT THE BACK OF THE SIDEWALK, SEWER CLEANOUT LOCATION TO BE DETERMINED IN THE FIELD BY THE CITY.
5. DEPTH AT PROPERTY LINE SHALL BE A 4' MINIMUM AND 5' MAXIMUM UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
6. CLOSED CIRCUIT TELEVISION REQUIRED PRIOR TO BUILDING OCCUPANCY PERMIT. CONTRACTOR TO ARRANGE CCTV 48 HOURS OR MORE IN ADVANCE WITH CITY INSPECTOR.
NOTES:
1. CLEAN OUT GRADE SHALL BE PVC SDR-26 (ASTM F679).
2. FOR ALL SERVICES, INSTALL ROUND, CONCRETE TRAFFIC TYPE OLDCASTLE PRECAST G05 BOX OR APPROVED EQUAL VALVE BOX WITH CAST IRON COVER MARKED "SEWER".
3. IF WATER MAIN IS TO BE INSTALLED AT THE BACK OF THE SIDEWALK, SEWER CLEANOUT LOCATION TO BE DETERMINED IN THE FIELD BY THE CITY.
4. DEPTH AT PROPERTY LINE SHOULD BE 4' MINIMUM, 5' MAXIMUM. EXISTING CONDITIONS MAY VARY.
5. STAND PIPE CAULDERED TO BACKFLOW VALVE AND BROUGHT TO GRADE WITH BOX ON ALL VALVES DEEPER THAN 30".
6. BACKFLOW VALVE TO BE CLEAN CHECK BACKWATER VALVE OR APPROVED EQUAL.
7. REFER TO FOLSOM MUNICIPAL CODE 13.08 FOR PUBLIC & PRIVATE OWNERSHIP, OPERATION AND MAINTENANCE RESPONSIBILITIES.
1. ARV TO BE STAINLESS STEEL, INCLUDING ALL INTERNAL PARTS.
2. OUTLET TO HAVE 1-1/2" THREADED DISCHARGE OUTLET FOR THE CONNECTION OF A VENT HOSE/PIPE.
3. ARV TO BE MANUFACTURED WITH A FLANGED END.
4. SSMH BARREL TO BE MINIMUM OF 72" DIAMETER WITH 36" CONCENTRIC FLAT TOP.
5. ALL FITTINGS ARE TO BE THE SAME AS PIPE MATERIAL.
6. MAINTAIN A GRADE UPWARD FROM CORP. STOP TO AIR VALVE (NO TRAPS).
7. PIPING SIZED TO MATCH SIZE OF ARV.
8. ALL AIR RELEASE VALVES ARE TO BE COMBINATION RELEASE VALVES.
NOTES:
1. MATCH EXISTING A.C. THICKNESS: 4" MINIMUM.
2. SAW CUT 12" OUTSIDE OF NEW TRENCH 12 MINIMUM.
3. T-CUT REQUIRED FOR ALL PAVEMENTS AND SHALL BE 1½'' DEEP BY GRINDING AND PAVING (12'' MINIMUM WIDTH). GRIND AND PAVE TO THE TOP OF GUTTER, LANE LINE, OR CENTER OF ADJACENT TRAFFIC LANE.
4. TRACER WIRE REQUIRED FOR SEWER FORCE MAINS PER SPECIFICATIONS.
5. BACKFILL SHALL BE MECHANICALLY CONSOLIDATED AND SHOVEL SIZED UNDER THE HAUNCHES OF THE PIPE. SEE CITY SPECIFICATIONS FOR BACKFILL AND COMPACTION REQUIREMENTS.
6. 6'' WIDE (MINIMUM) NON-DETECTING GREEN MARKING TAPE, 18'' ABOVE PIPE. TAPE SHOULD READ "BURIED SEWER MAIN".
7. PIPE ZONE COVER OVER THE TOP OF SEWER MAINS SHALL BE A MINIMUM OF 12''. RELATIVE COMPACTION SHALL OCCUR IN MAXIMUM 8 INCH LOOSE HEIGHTS.
8. WHEN INSTALLING SEWER MAINS INTO EXISTING STREETS TRENCHES SHALL CONSIST OF 3/4'' CLASS II A.B. THROUGH THE ENTIRE DEPTH.
9. IN AREAS OF FLOWING GROUNDWATER, FILTER FABRIC SHALL BE PLACED AROUND THE PIPE ZONE BEDDING AND SHADING IN ACCORDANCE WITH THE ON-SITE GEOTECHNICAL ENGINEER, AS WELL AS METHODS FOR COLLECTING AND CONVEYING GROUNDWATER AWAY FROM UNDERGROUND ROADWAY AND INFRASTRUCTURE PER GEOTECHNICAL ENGINEER.
10. PIPE ZONE MATERIAL:
10.1. 3'' CLASS II A.B. COMPACTED TO 95% RELATIVE COMPACTION FOR STANDARD TRENCH DEPTH (3'-15') WITH NO GROUNDWATER CONCERN AND NATIVE SOIL TRENCH BASE.
10.2. 3'' CLASS II A.B. PLACED ON FILTER FABRIC COMPACTED TO 95% RELATIVE COMPACTION FOR STANDARD TRENCH DEPTH (3'-15') WITH NO GROUNDWATER CONCERN AND FRACURED OR COBBLE TRENCH BASE.
10.3. MIXED AGGREGATE (MA) IS ALLOWED IN THE PIPE ZONE WHEN GROUNDWATER IS PRESENT. THE MA MUST BE WRAPPED IN FILTER FABRIC WITH CUT-OFF WALLS AND SUB-DRAIN ROUTING TO PREVENT INFLOW/INfiltrATION AT SEWER MANHOLE. TRANSITION FROM MA TO 3'' CLASS II A.B. SHALL OCCUR WITHIN THE PIPE ZONE ONCE GROUNDWATER IS NO LONGER PRESENT AND 95% COMPACTION OF THE 3'' CLASS II A.B. CAN BE ACHIEVED.
10.4. ALL DEEP SEWERS GREATER THAN 15' OF VERTICAL TRENCH EXCAVATION WILL USE MA WRAPPED IN FILTER FABRIC.
NOTE:

1. In lieu of 3-2" redwood planks, headwall may be redwood plywood and of a thickness approved by the engineer.

2. Pipe inside casing shall be ductile iron with protecto 401 coating. Casing shall be double wrapped in 8-mil polyethylene film per city specifications.

3. There shall be no pipe joints within the length of the casing. Additionally, the pipe must extend 12" beyond the casing at each end of the casing.

City of Folsom

Pipe Encasement

Scale: None
Date: February 2020
NOTES:
1. INSIDE DIAMETER OF UTILITY CROSSING PIPE TO BE THE SAME AS THE PIPE TO WHICH IT CONNECTS.
2. THIS DETAIL SHALL APPLY WHENEVER THE LATERAL OR SERVICE SEWER IS CUT OR DAMAGED.
3. THIS DETAIL IS APPLICABLE WHENEVER CONSTRUCTION PASSES BENEATH THE LATERAL OR SERVICE SEWER.
4. ALTERATION OF SEWER GRADES SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO CONSTRUCTION.
5. WHENEVER THE SPAN, WHETHER CAUSED BY TRENCH WIDTH OR CROSSING ANGLE OF THE UTILITY CROSSING PIPE EXCEEDS 5', PLACE TYPE II BEDDING TO 6" ABOVE THE PIPE AND 18" EACH SIDE OF ITS CENTER LINE.
6. SEWER CROSSING PIPE TO BE DUCTILE IRON PIPE LINED WITH PROTECTO 401 OR APPROVED EQUAL. CASING SHALL BE DOUBLE WRAPPED IN 8-MIL POLYETHYLENE FILM PER CITY SPECIFICATIONS.
NOTES:

1. REQUIRED MINIMUM VERTICAL CLEARANCE:
   6" FOR STORM DRAINS, 12" FOR SANITARY SEWERS &
   RECYCLED WATER.

2. THRUST BLOCKS OR JOINT HARNESSES FOR RESTRAINING
   JOINTS NOT SHOWN.

3. NO WATER SERVICES ALLOWED ALONG THE RAISED OR
   LOWERED LENGTH OF WATER MAIN.

4. NO JOINTS IN SEWER OR RECYCLED WATER MAINS WITHIN 10
   FEET OF CENTERLINE OF WATER MAIN ON NEW SEWER OR
   RECYCLED WATER INSTALLATION.

5. FOR ADDITIONAL INFORMATION ON UTILITIES THAT CROSS
   POTABLE WATER LINES, REFER TO STATE OF CALIFORNIA,
   DEPT. OF HEALTH SERVICES.

6. SEWER CROSSING TO BE DUCTILE IRON PIPE LINED WITH
   PROTECTO 401 OR APPROVED EQUAL. DIP SHALL BE DOUBLE
   WRAPPED IN 8-MIL POLYETHYLENE FILM PER CITY
   SPECIFICATIONS.
NOTES:

1. ALL UTILITY CROSSINGS OF EXISTING STREAMS SHALL BE AT LEAST 30" BELOW EXISTING
   CHANNEL SIDES AND BOTTOMS. DEEPER PLACEMENT MAY BE REQUIRED IF FUTURE CHANNEL
   IMPROVEMENTS ARE ANTICIPATED.
2. THE CUT SHALL BE SEALED AS SHOWN WITH GROUTED ROCK SLOPE PROTECTION (RSP) OR
   CLASS 'B' CONCRETE TO A WIDTH 1' EACH SIDE OF THE UTILITY TRENCH. TRENCH BACKFILL
   SHALL BE CONTROLLED DENSITY FILL PER CITY SPECIFICATIONS.
3. CONSTRUCTION IS TO CONFORM TO THE STANDARD CONSTRUCTION SPECIFICATIONS WITH CUT
   OFF WALLS CONFORMING TO CITY STANDARDS.
4. PIPE USED FOR CROSSING SHALL BE DUCTILE IRON PIPE LINED WITH PROTECTO 401 OR
   APPROVED EQUAL AND DOUBLE WRAPPED IN 8-MIL POLYETHYLENE FILM PER CITY
   SPECIFICATIONS.
5. CONCRETE ENCASMENT SHALL BE CLASS B.
6. PIPE JOINTS SHALL BE RESTRAINED AND CONCRETE BLOCKED OR COMPLETELY ENCASED IN
   CONCRETE SLURRY AS SHOWN.