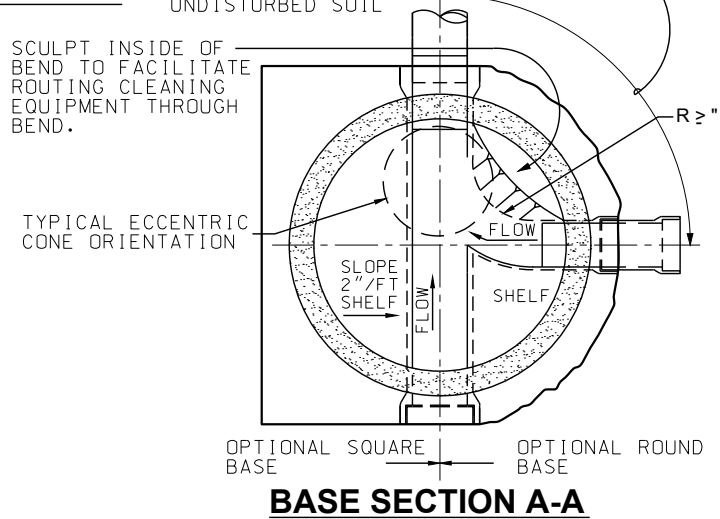
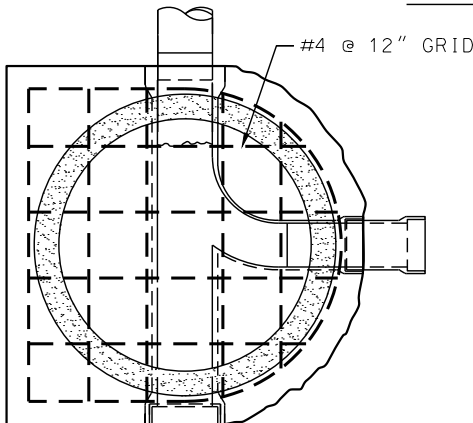
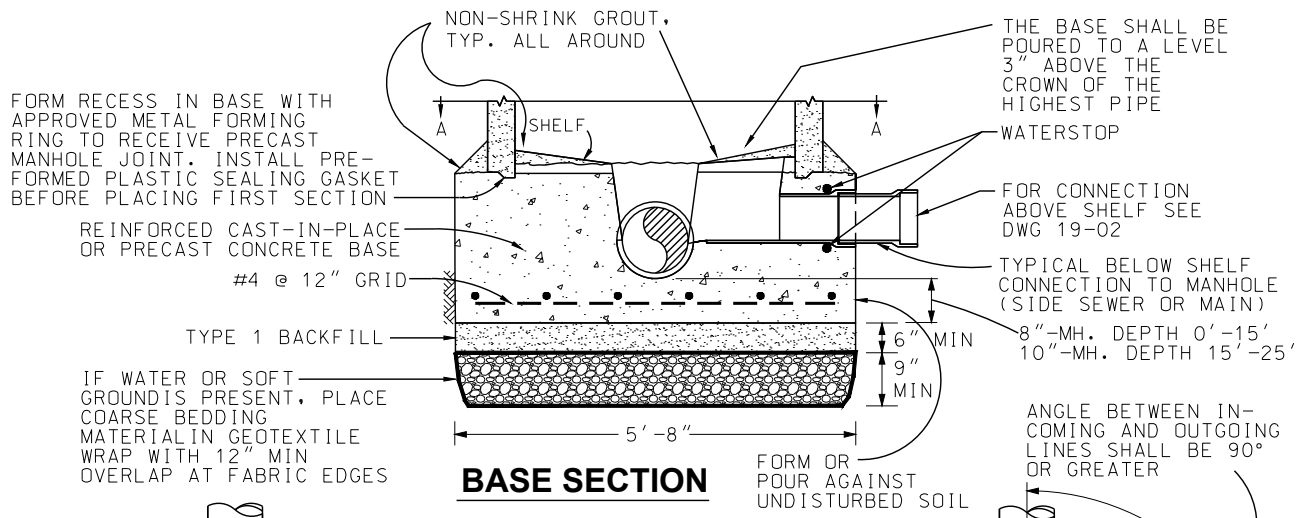
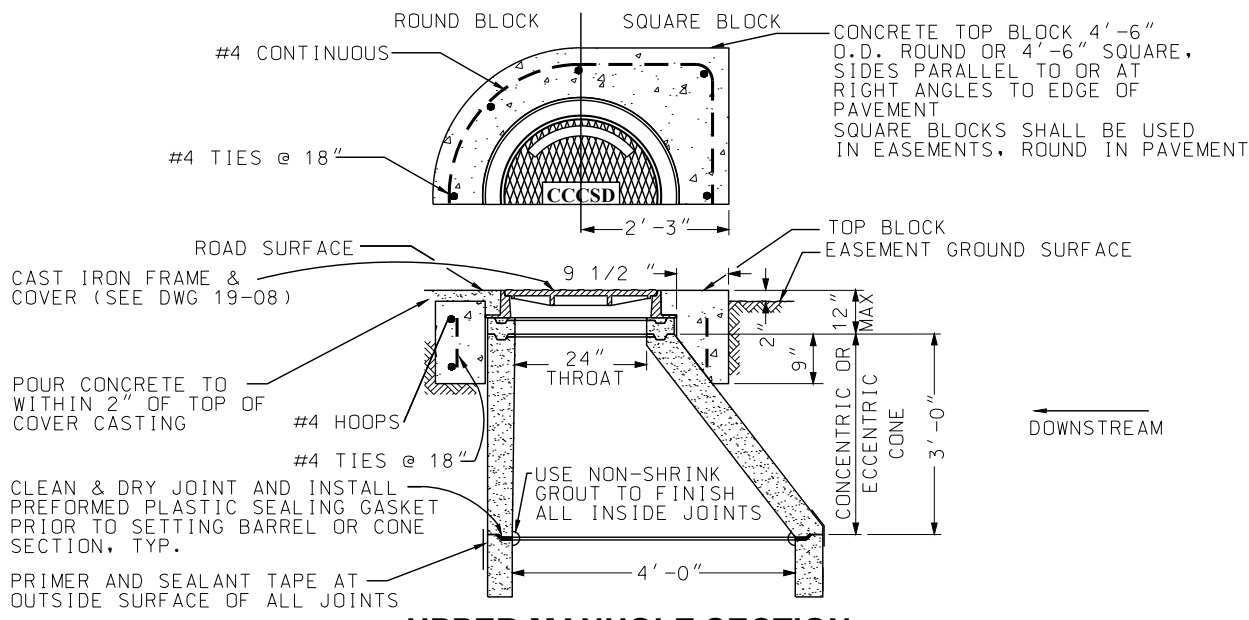


CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA

STANDARD MAIN MANHOLE



15-May-2020 K:\Projects\standardSpecs\colsys\19-01_StandardMainManhole.dwg

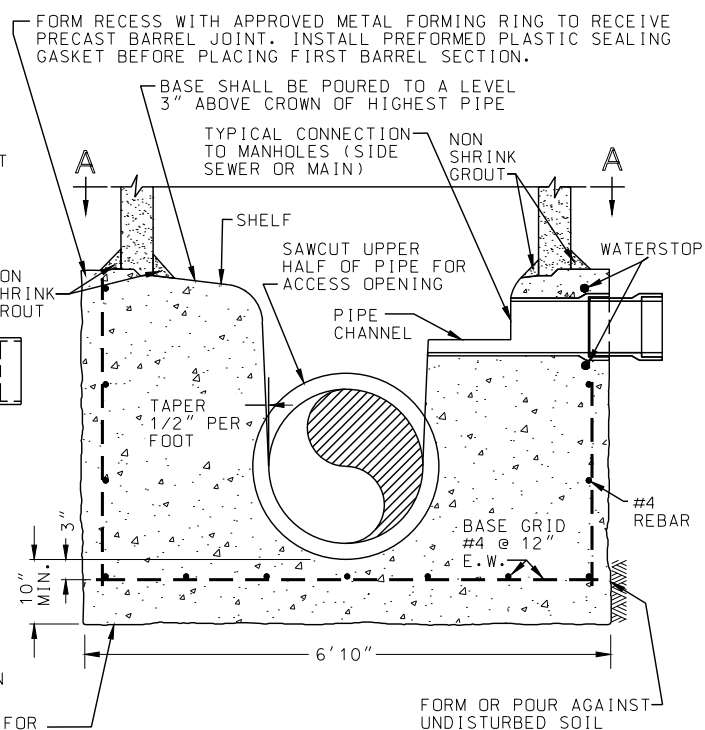
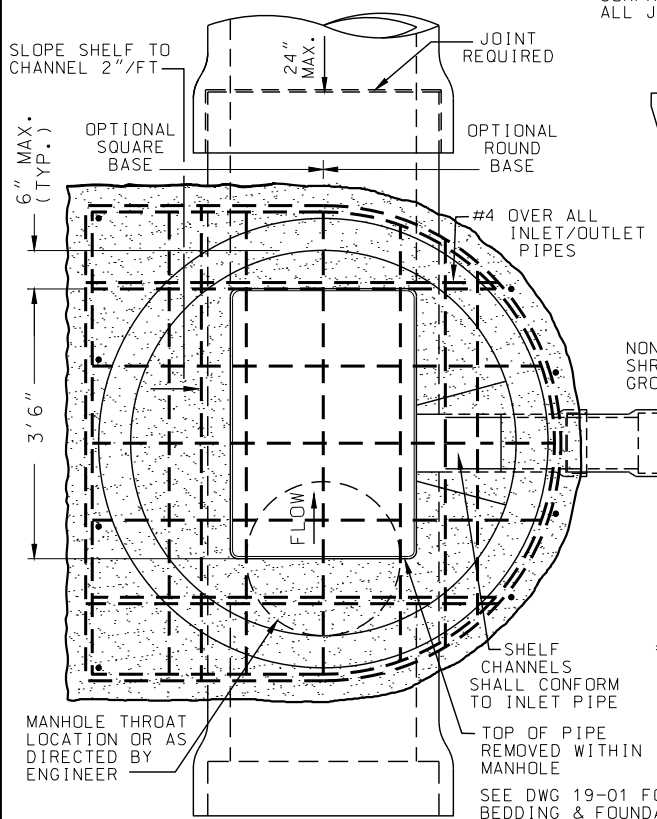
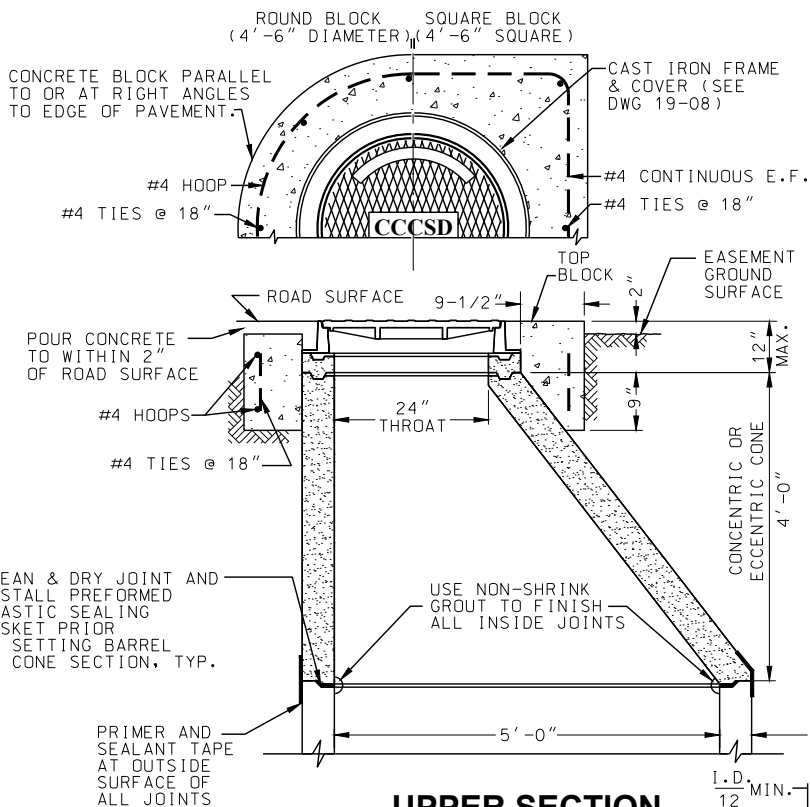
CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

STANDARD TRUNK MANHOLE

FOR 15" TO 45" LINES

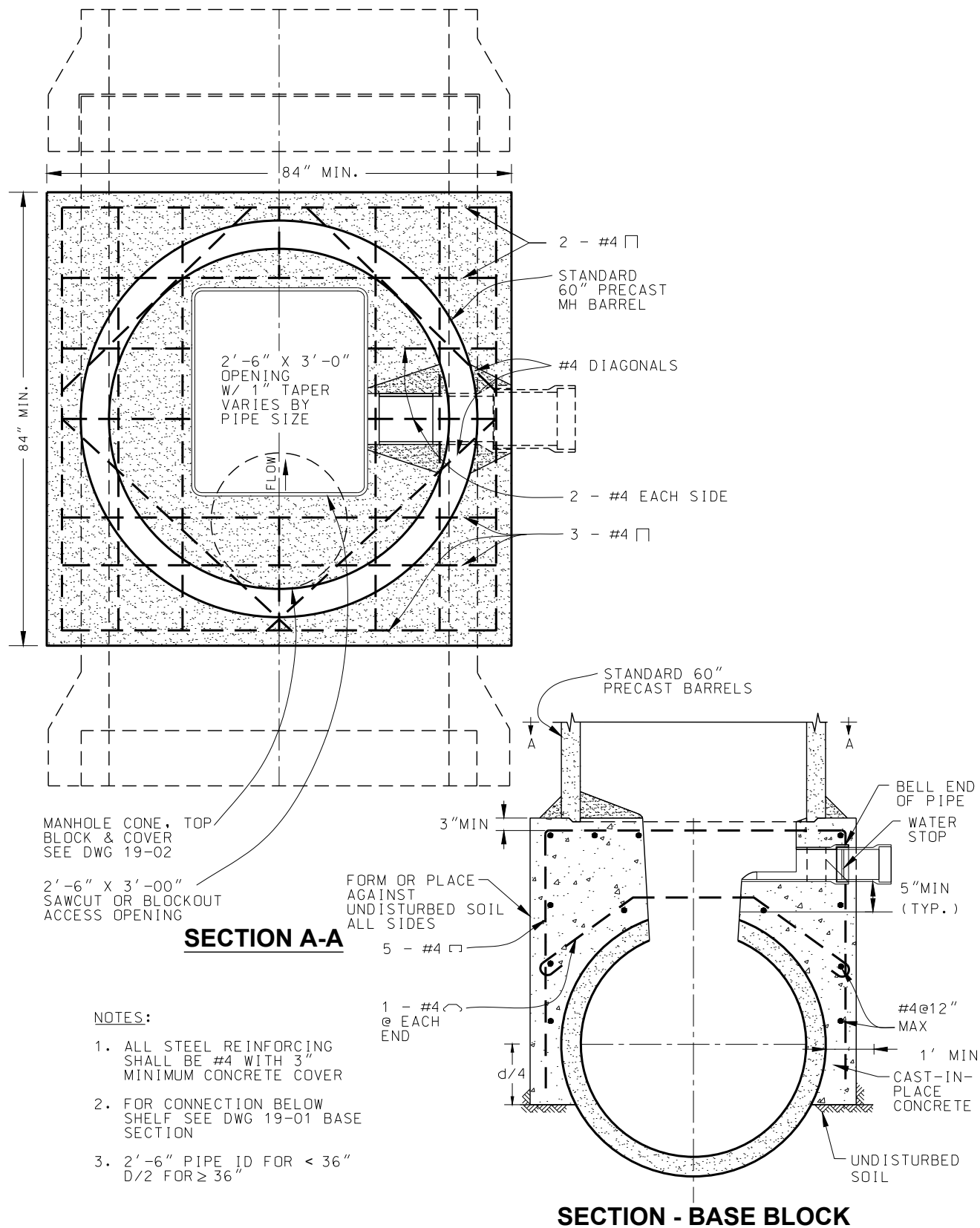
NOTES:

1. LAY PIPE THRU MH WHEN POSSIBLE OR FORM CHANNEL TO MAINTAIN PIPE SECTION. TRUNK SEWER PIPES ENTERING OR LEAVING THE MH BASE SHALL HAVE A STANDARD JOINT LOCATED 12" TO 24" FROM THE BASE.
2. ALL STEEL REINF. SHALL HAVE 3" MINIMUM CONCRETE COVER.
3. SQUARE TOP BLOCKS SHALL BE USED IN EASEMENTS.
4. ROUND TOP BLOCKS SHALL BE USED IN STREETS.
5. FOR CONNECTION OF MAIN OR SIDE SEWERS BELOW SHELF, SEE DWG-3.
6. MUST USE FOR SSMHs GREATER THEN 20' FROM RIM TO LOWEST INVERT ELEVATION OF OUTGOING SEWER PIPE.
7. MAXIMUM DEPTH IS 30' FROM RIM TO LOWEST INVERT ELEVATION OF OUTGOING SEWER PIPE.



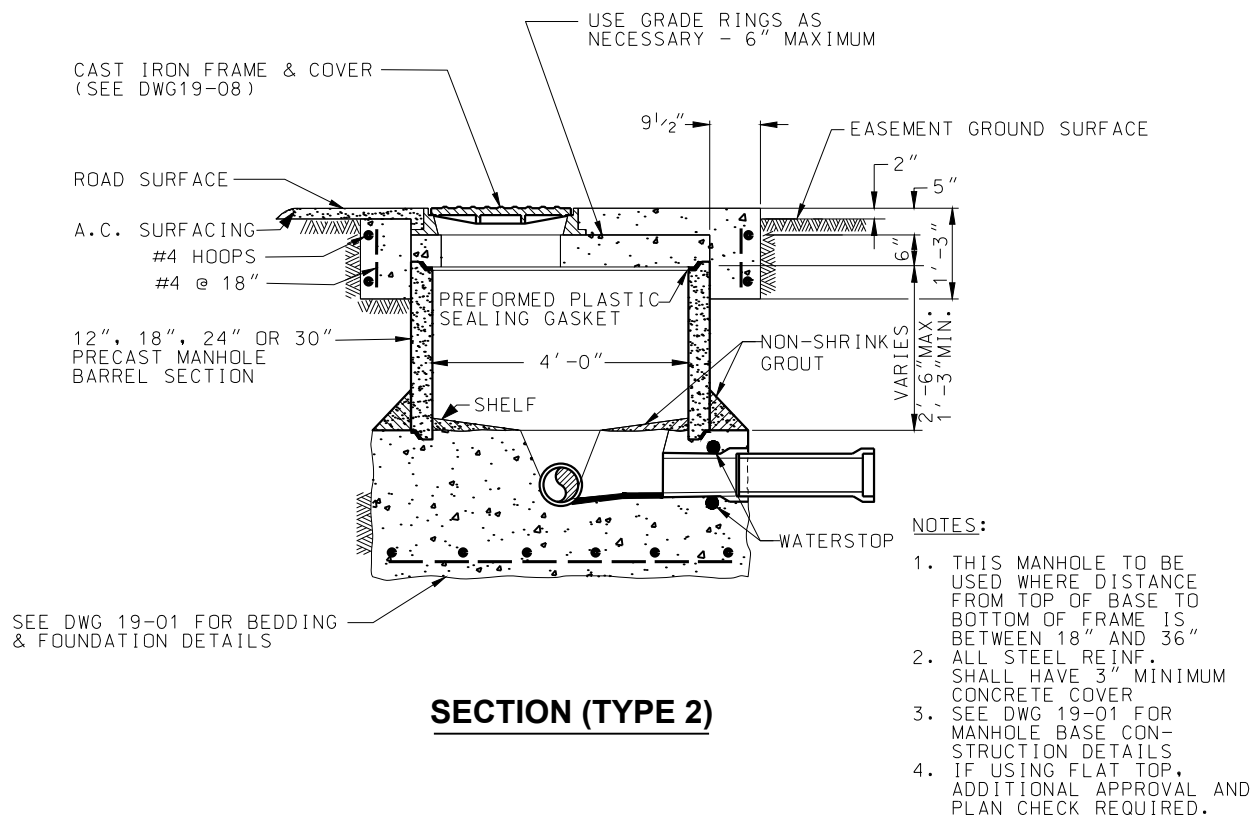
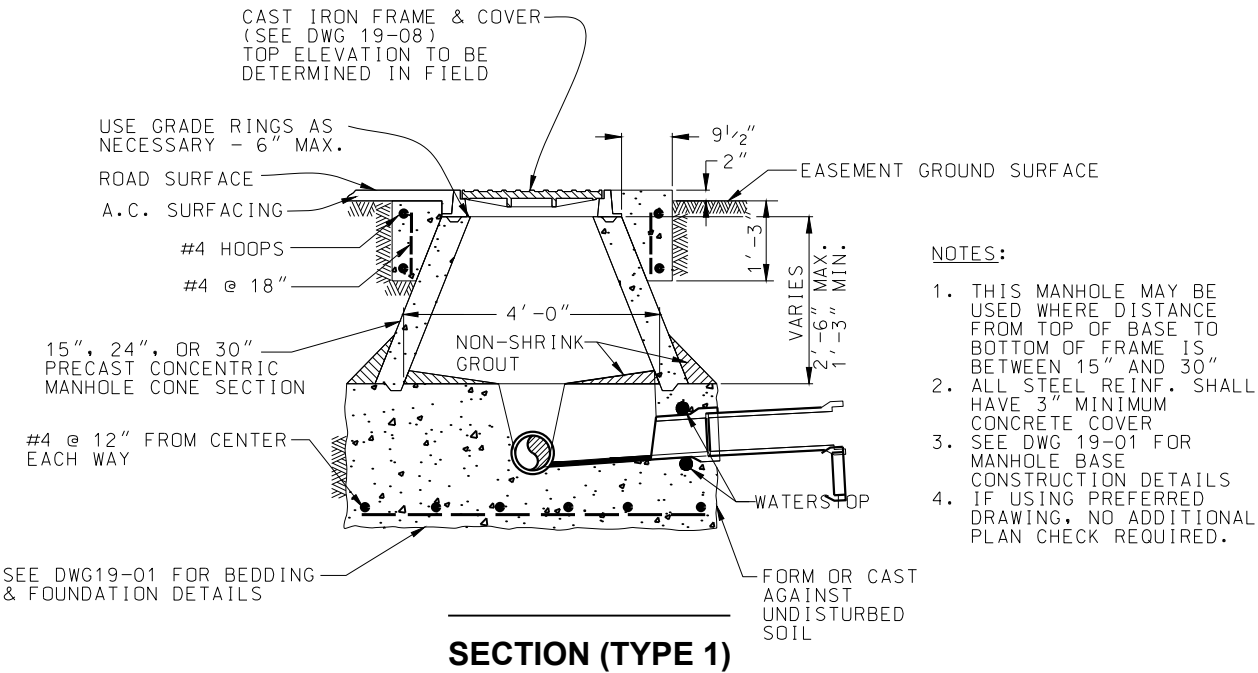
CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

SPECIAL TRUNK MANHOLE (VARIANCE REQUIRED)



CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA

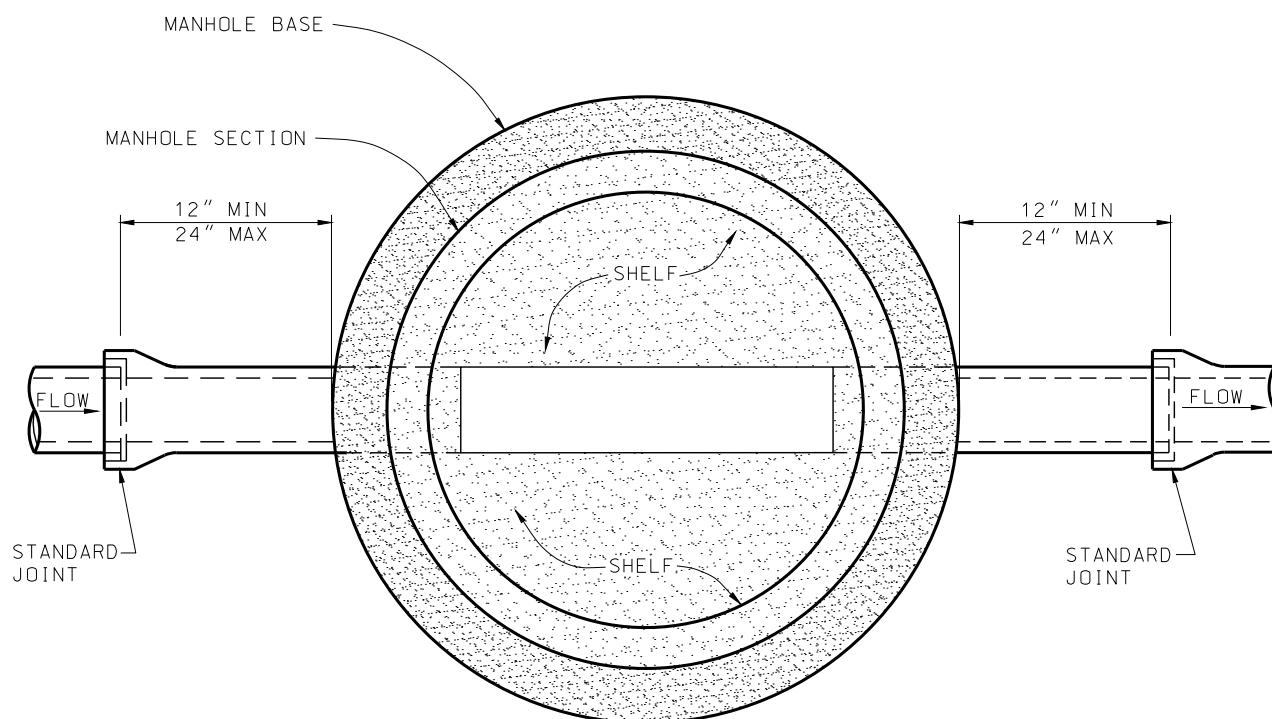
SHALLOW MANHOLE: TYPE 1 & 2
(VARIANCE REQUIRED)



CENTRAL CONTRA COSTA SANITARY DISTRICT

MARTINEZ, CALIFORNIA

MANHOLE BASE: PIPE JOINT REQUIREMENTS FOR THROUGH PIPES

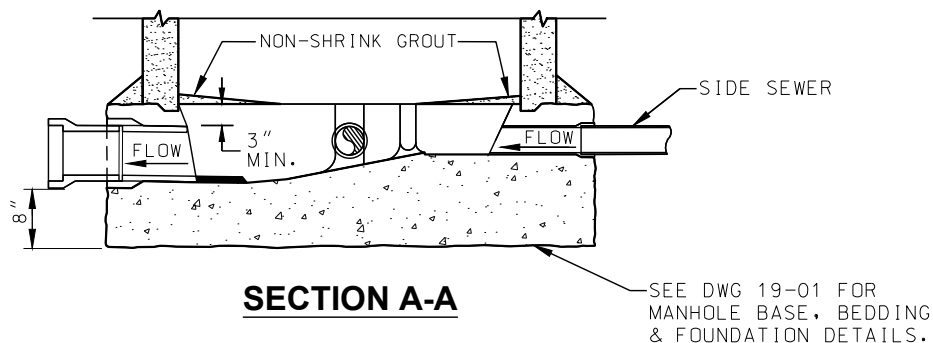
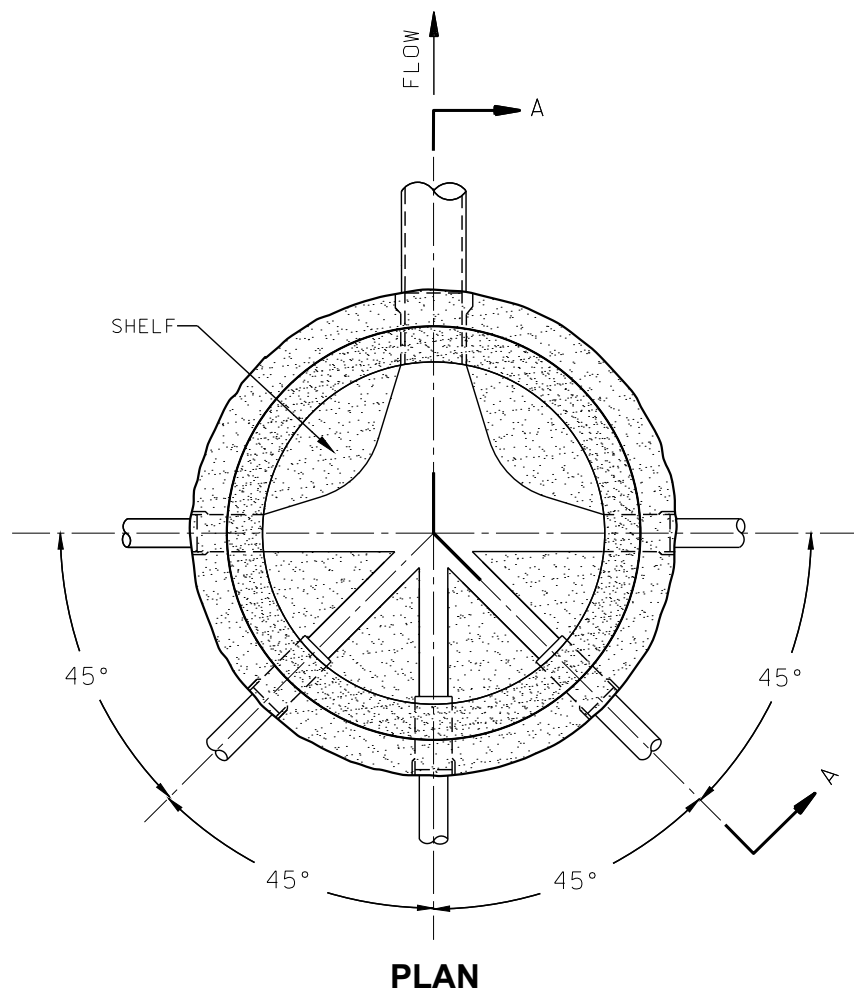


NOTE: 1. JOINT LOCATIONS APPLICABLE TO ALL INCOMING AND OUTGOING PIPELINES, EXCEPT THAT THE 24" MAXIMUM DIMENSION SHALL NOT APPLY TO PVC PIPE LAID THROUGH A MANHOLE.

CENTRAL CONTRA COSTA SANITARY DISTRICT

MARTINEZ, CALIFORNIA

MANHOLE BASE: SPECIAL DETAIL FOR LINES TERMINATING IN A CUL-DE-SAC

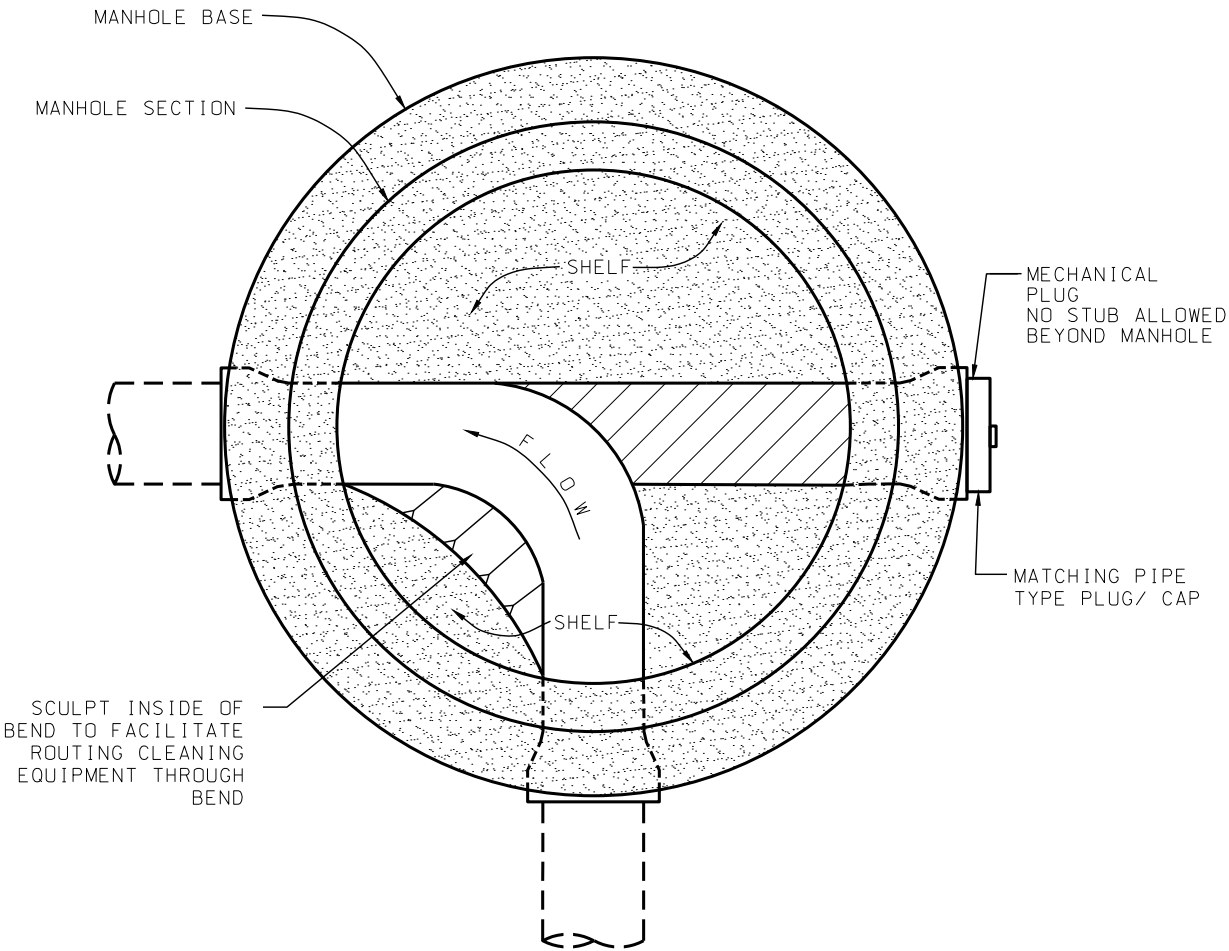


NOTES:

1. NO LATERAL CONNECTIONS SHALL BE MADE IN DOWNSTREAM HALF OF MANHOLE.
2. MAXIMUM NUMBER OF SIDE SEWERS ALLOWED = 5.
3. TOP OF SIDE SEWERS SHALL BE NO LOWER THAN TOP OF OUTLET PIPE.
4. SEE DWG 20-05 FOR REQUIRED JOINT LOCATIONS.
5. PIPE CONNECTION INTEGRALLY CAST INTO THE PRECAST BASE BY THE MANUFACTURE.

CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA

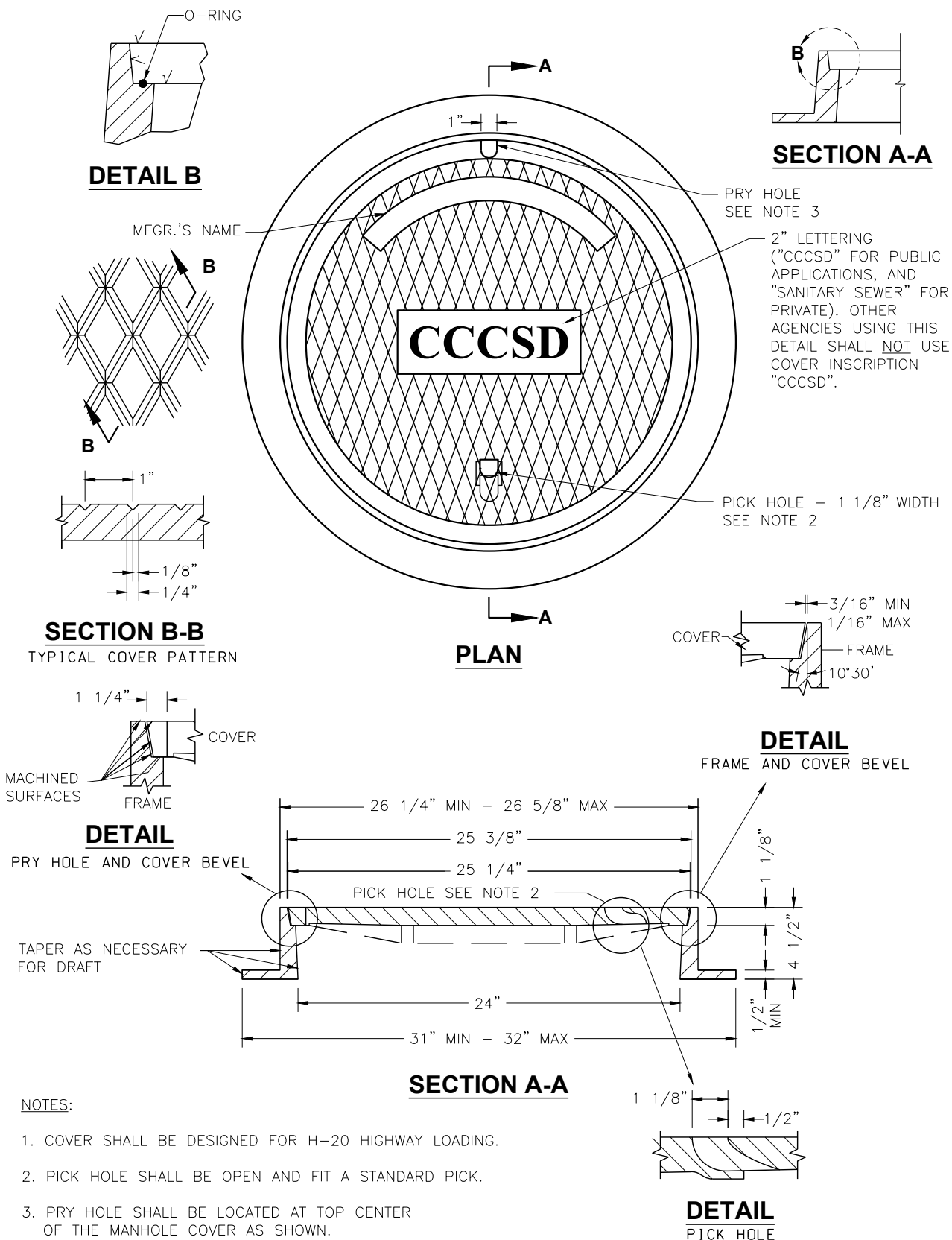
MANHOLE BASE: FUTURE CONNECTION



MANHOLE BASE DETAIL

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

STANDARD MANHOLE FRAME & COVER



CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

BOLT - DOWN MANHOLE FRAME & COVER

SCORE TOP EDGE OF FRAME RADIALLY
IN LINE WITH TAPPED HOLES IN FRAME

PRY HOLE
SEE DWG 19-15 FOR DETAILS

**UNDERSIDE
OF COVER**

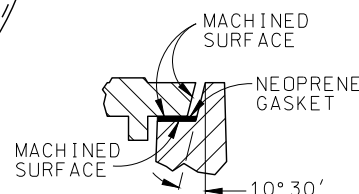
**TOP OF FRAME
& COVER**

SEE DWG-8 FOR LETTERING
REQUIREMENTS

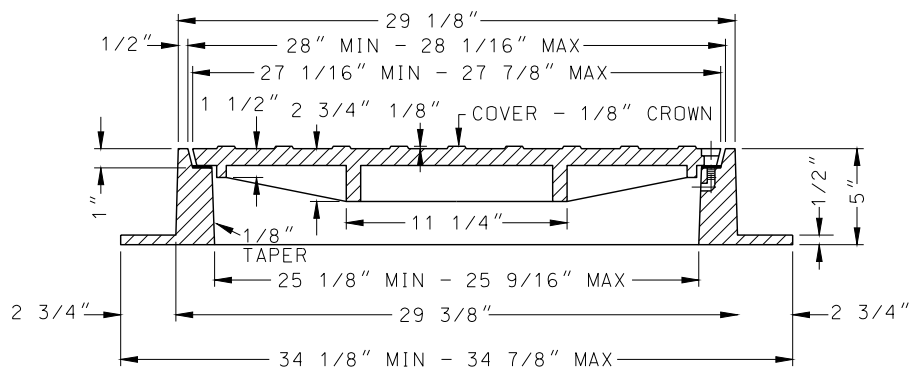
NOTES:

1. 2" LETTERING ("CCCS" FOR PUBLIC APPLICATIONS, AND "SANITARY SEWER" FOR PRIVATE). OTHER AGENCIES USING THIS DETAIL SHALL NOT USE COVER INSCRIPTION "CCCS".
2. 4-7/16" X 1-1/4" STAINLESS STEEL MACHINE BOLTS WITH 1-1/4" 13 GA. FLAT WASHERS, AT 1/4 POINTS. INSTALL WITH ANTISEIZE COMPOUND.

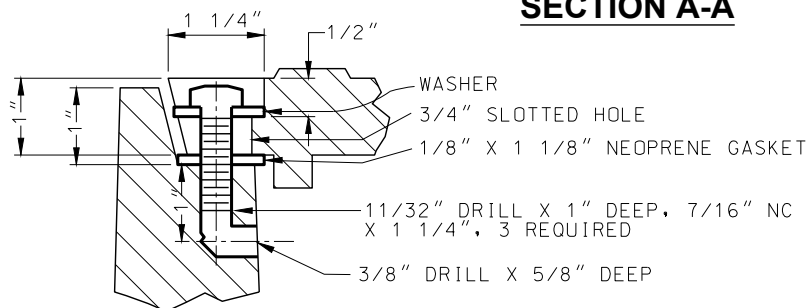
PLAN



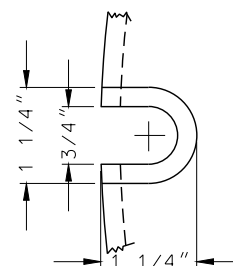
**DETAIL
MACHINED SURFACE
AND BEVEL**



SECTION A-A



**DETAIL OF TAPPED &
SLOTTED HOLES**

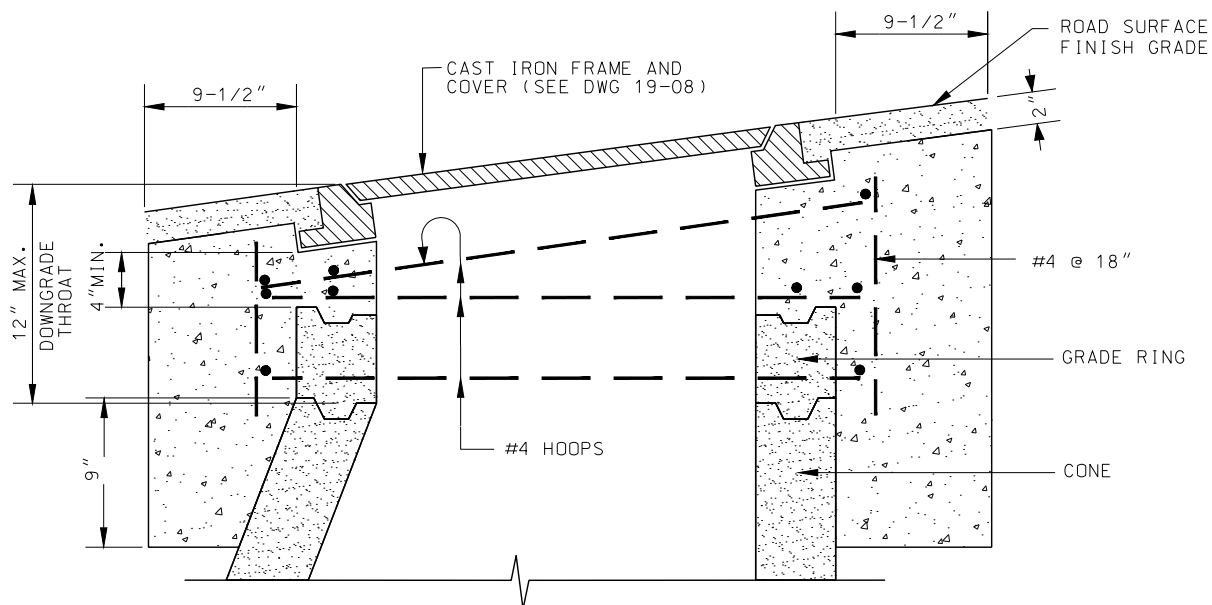


**PLAN
SLOTTED HOLES IN COVER**

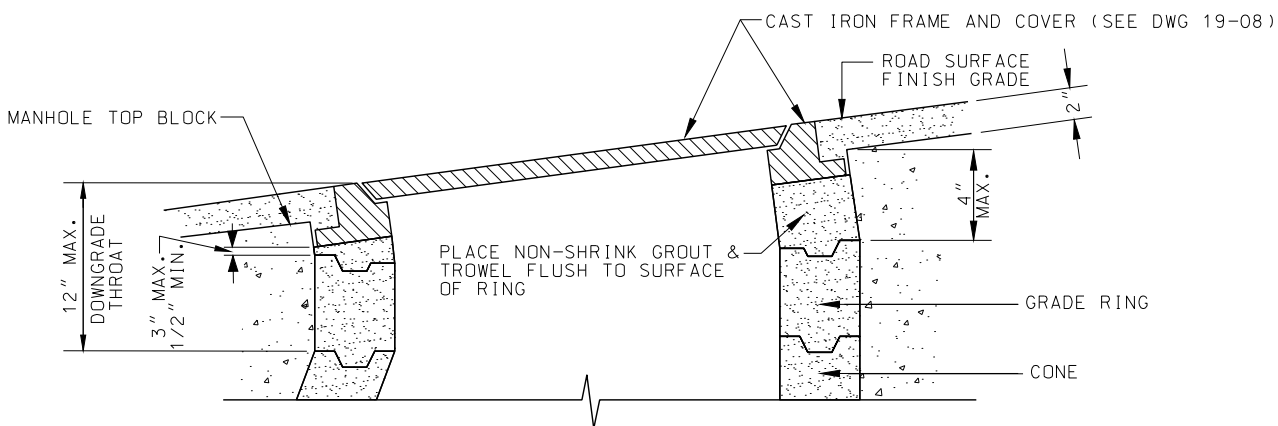
CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

MANHOLE ADJUSTMENT TO FINISH GRADE

PAVED AREAS



GREATER THAN 13% GRADE



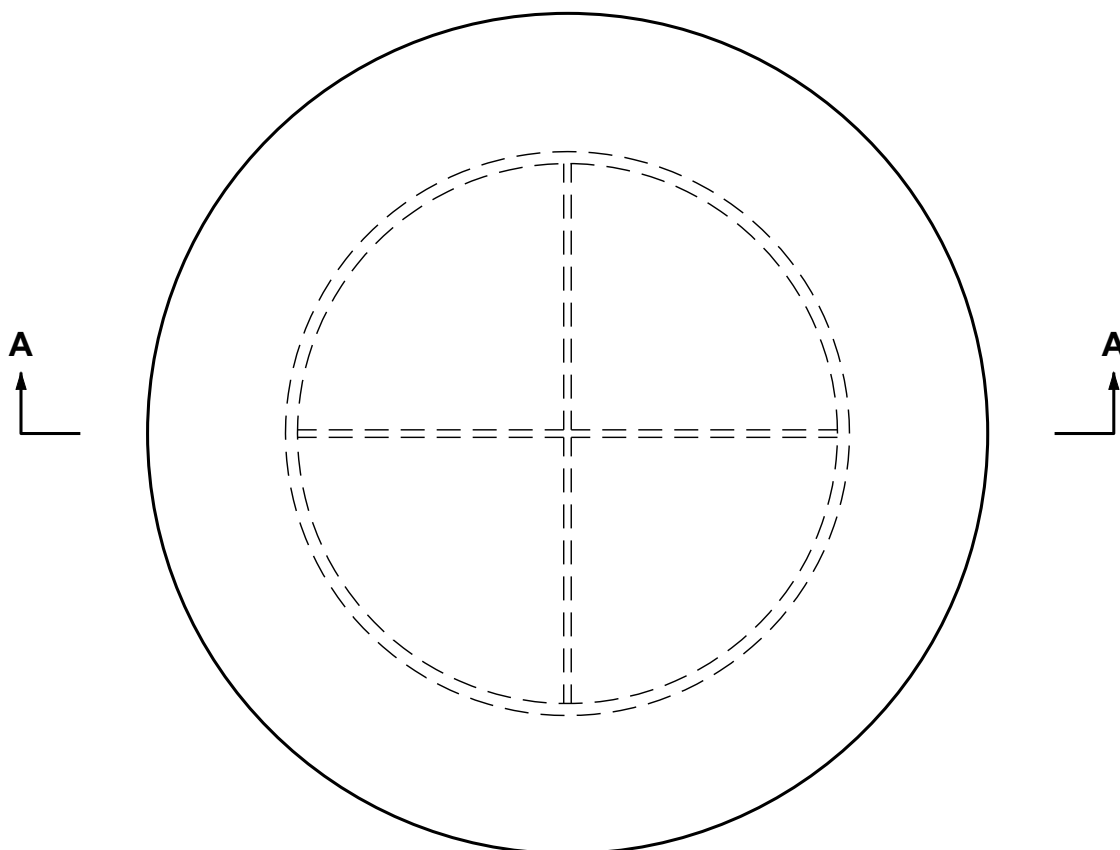
NOTE:

1. SEE DWG 19-01 FOR TOP BLOCK DETAILS

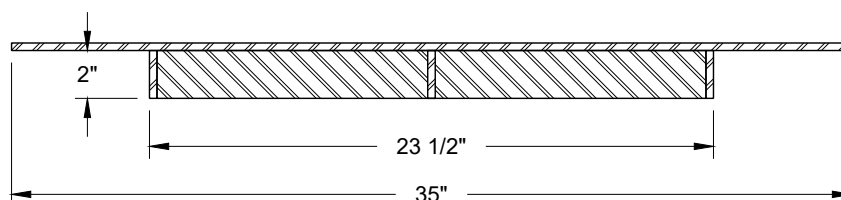
13% GRADE OR LESS

CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA

TEMPORARY: MANHOLE COVER



PLAN



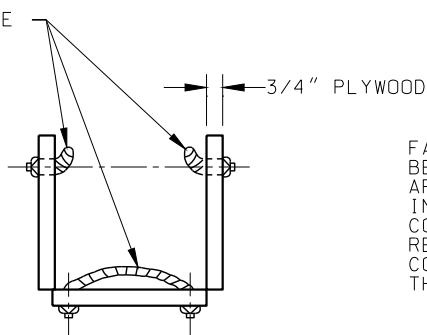
SECTION A-A

NOTE:

1. FABRICATE FROM 5/16" STEEL PLATE USING 1/4" FILLET WELDS TO BOTH SIDES OF EACH JOINT.

INSTALLATION

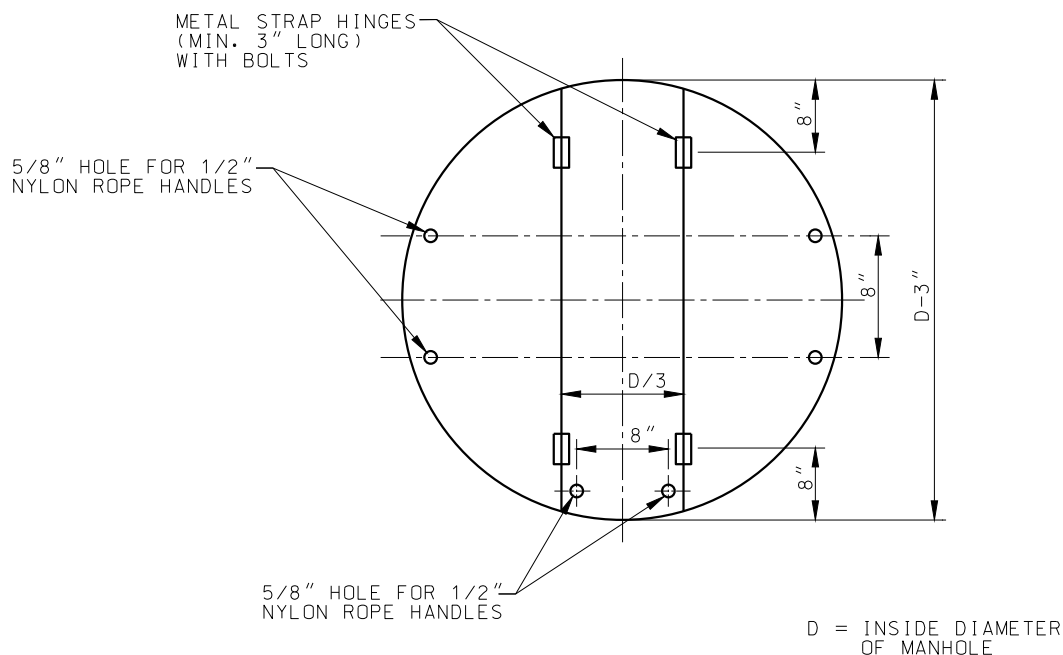
NYLON ROPE HANDLES



REMOVAL

FALSE MANHOLE BOTTOM SHALL BE REMOVED AFTER THE FINAL APPURTENANCE ADJUSTMENT INSPECTION. THE PAVING CONTRACTOR AND OWNER'S REPRESENTATIVE WILL COORDINATE THE REMOVAL OF THE FALSE MANHOLE BOTTOMS.

NOT TO SCALE



PLAN VIEW

NOT TO SCALE

Diagram illustrating the cross-section of a manhole assembly, showing the following components and dimensions:

- RODDING INLET FRAME AND COVER.** (SEE DWG 19-15)
- WHEN IN OTHER THAN ROADWAY**
- 6" MIN** (Dimension for the width of the frame/cover area)
- 23"** (Overall width dimension)
- 6" MIN** (Dimension for the width of the frame/cover area)
- ROAD SURFACE**
- 18" MIN** (Dimension for the height of the manhole structure)
- NON-SHRINK GROUT**
- UNDISTURBED EARTH**
- 3'-0" MIN.** (Dimension for the diameter of the manhole opening)
- TRENCH**
- 6" MIN. TYP.** (Dimension for the width of the trench)

NOTES:

1. NO SIDE SEWER WYE OR TAP CONNECTIONS WILL BE PERMITTED IN RISER PIPE.
2. RISER PIPE SHALL BE THE SAME MATERIAL AS THE REST OF THE LINE & SHALL BE IN A VERTICAL PLANE.
3. NO LATERALS SHALL BE INSTALLED WITHIN 24" OF THE 45° FITTING.
4. SEE SECTION 10-05 FOR STATIONING OF A RODDING INLET
5. ALL STEEL REINFORCEMENT SHALL HAVE A MIN. OF 3" CONCRETE COVER.

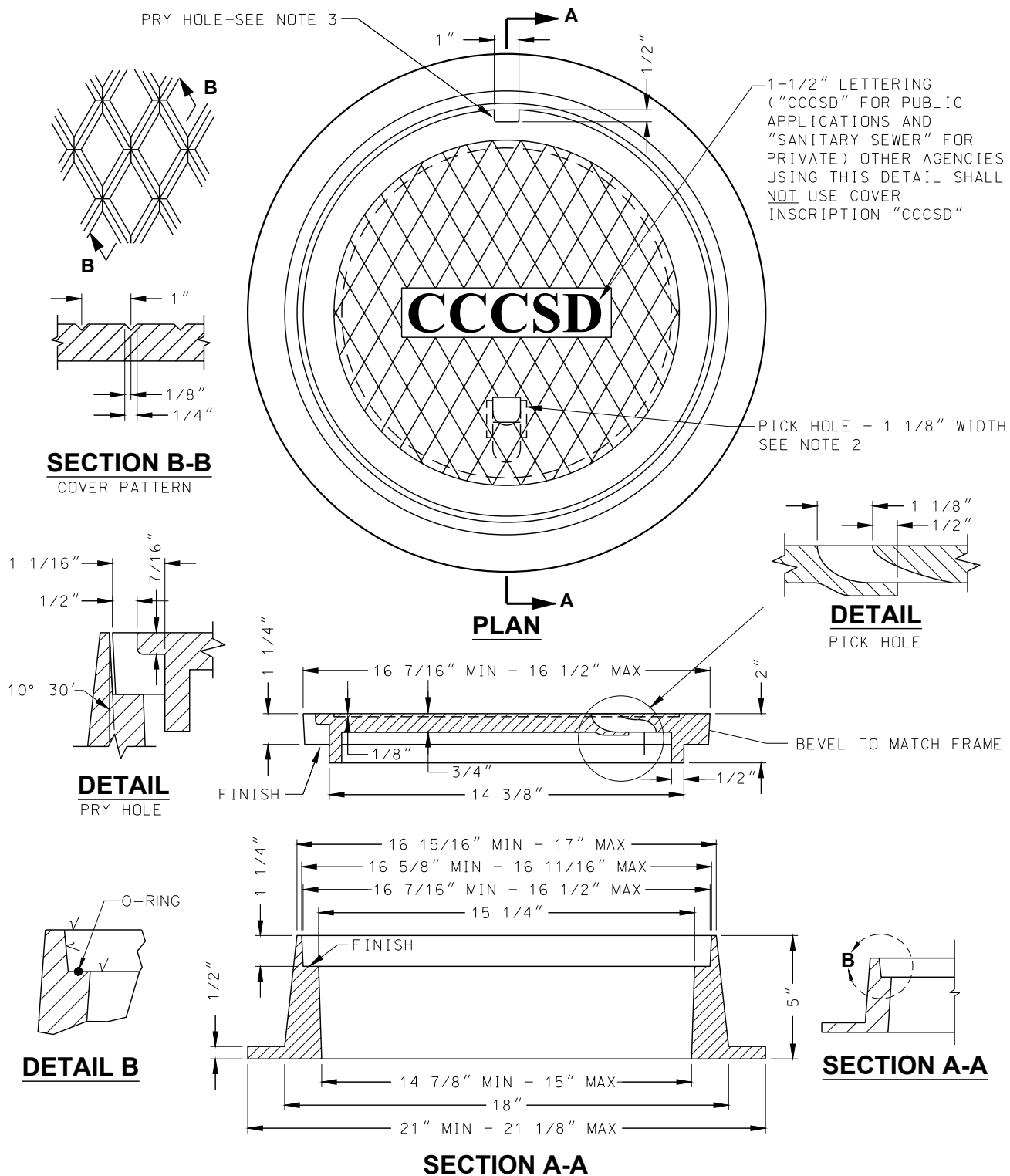
ALL LATERALS SHALL BE
 INSTALLED WITHIN 24" OF
 THE 45° FITTING.
 SEE SECTION 10-05 FOR STATIONING
 OF A RODDING INLET
 ALL STEEL REINFORCEMENT
 SHALL HAVE A MIN. OF 3"
 CONCRETE COVER.

4'-0" MIN
 6" MIN
 23"
 ROAD SURFACE
 NON-SHRINK GROUT
 #4 @ TOP & BOTTOM
 ON ALL SIDES
 3 #4 EA SIDE
 UNDISTURBED
 EARTH
 2"
 4"
 18" MIN
 2" MIN
 CONCRETE BLOCK FULL
 WIDTH OF TRENCH
 6" MIN
 12"
 45°
 6" MIN
 UNDISTURBED
 EARTH
 CONTACTED
 L.
 STATIONING OF RODDING INLET
 30" MIN
 RODDING INLET
 STRUCTURE
 C. OF
 STRUCTURE
 A

VERTICAL SECTION

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

RODDING INLET FRAME & COVER

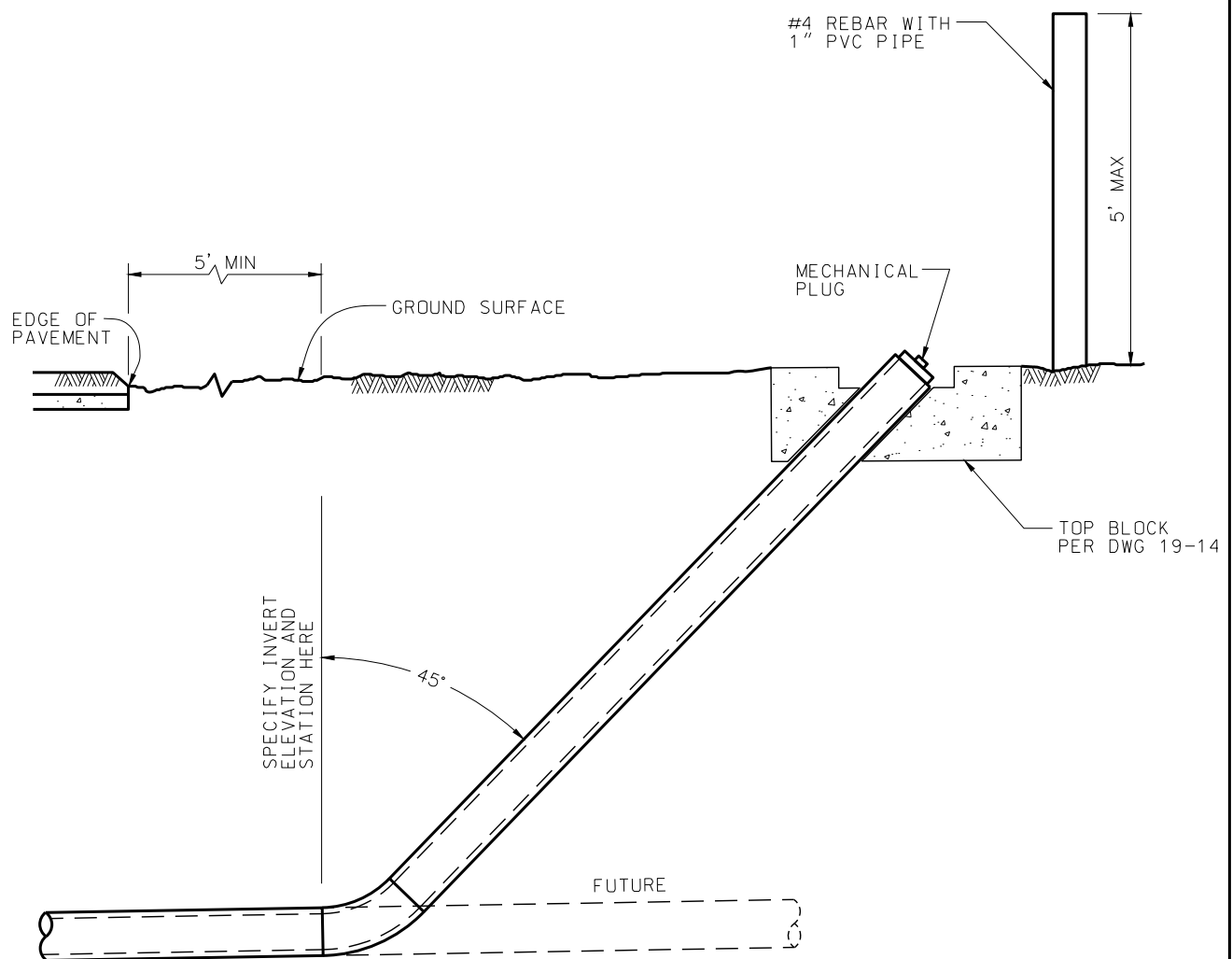


NOTES:

1. COVER SHALL BE DESIGNED FOR H-20 HIGHWAY LOADING.
2. PICK HOLE SHALL BE OPEN AND FIT A STANDARD PICK.
3. PRY HOLE SHALL BE LOCATED AT TOP CENTER OF THE RODDING INLET COVER AS SHOWN.

CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA

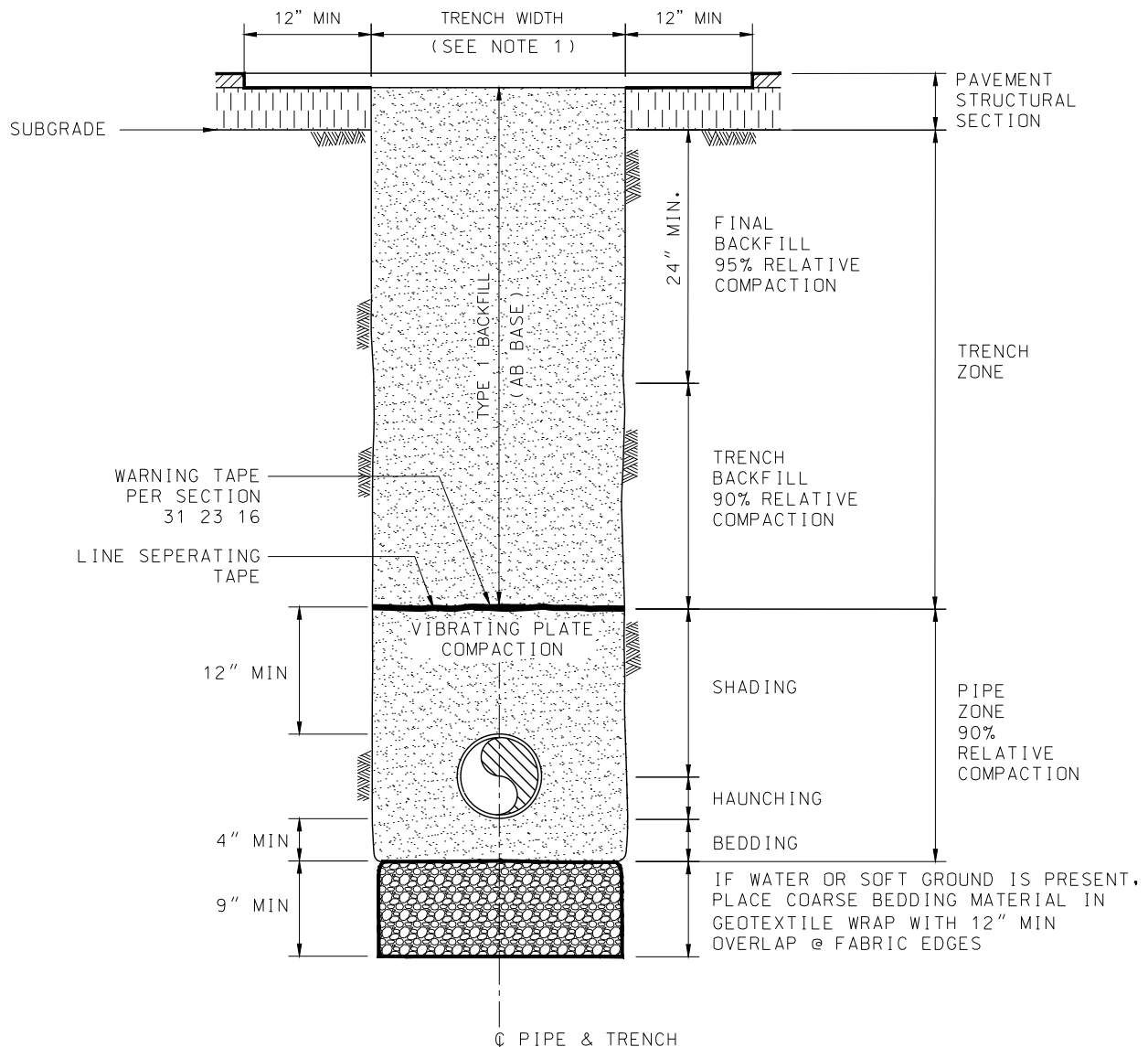
TEMPORARY: ACCESS STRUCTURE
(FOR CLEANING AND TESTING OF SANITARY SEWER
MAINS TO BE EXTENDED IN THE FUTURE)



CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

TRENCH STRUCTURAL DETAIL 1 FOR EXISTING PAVED STREET AND PARKING AREA

TRENCH SECTION IN EXISTING PAVED STREETS & PARKING AREAS (PUBLIC & PRIVATE)



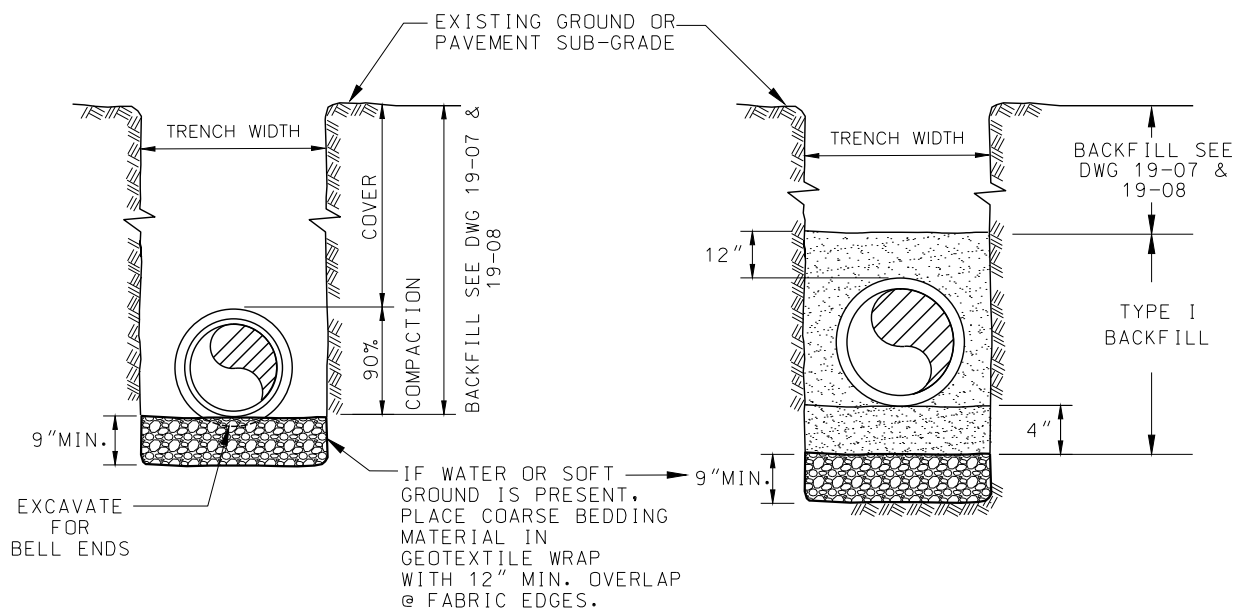
NOTES:

1. TRENCH WIDTH, PIPE BEDDING & BACKFILL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS AND PROVISIONS OF SECTION 32 23 16 OF THESE SPECIFICATIONS.
2. THESE ARE MINIMUM REQUIREMENTS. IF OTHER JURISDICTIONAL AGENCY REQUIREMENTS EXCEED THOSE SHOWN, THE GREATER REQUIREMENTS SHALL BE MET.
3. 100% AB REQUIRED FOR SIDEWALK OR DRIVEWAY.

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

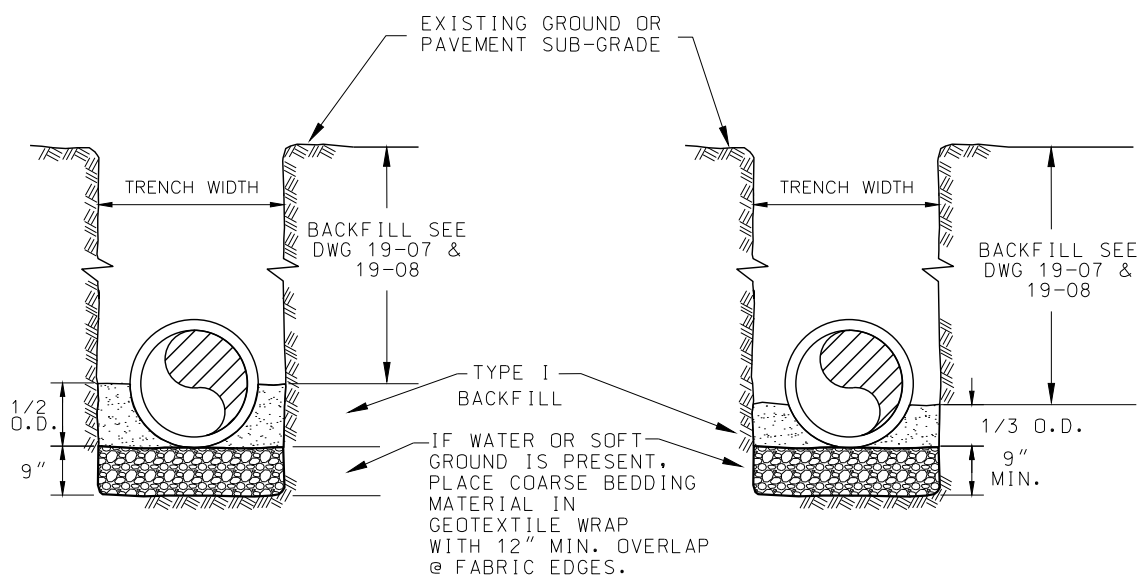
STANDARD TRUNK SEWER TRENCH DETAILS

FOR 12" AND LARGER PIPE



**FOR D.I. PIPE
INSTALLATIONS ONLY**
(N.T.S.)

**FOR ALL V.C., P.V.C.
PIPE INSTALLATIONS**
(N.T.S.)



**FOR R.C. AND STEEL PIPE
INSTALLATIONS
UP TO 42"**
(N.T.S.)

**FOR R.C. PIPE
INSTALLATIONS
48" AND LARGER**
(N.T.S.)

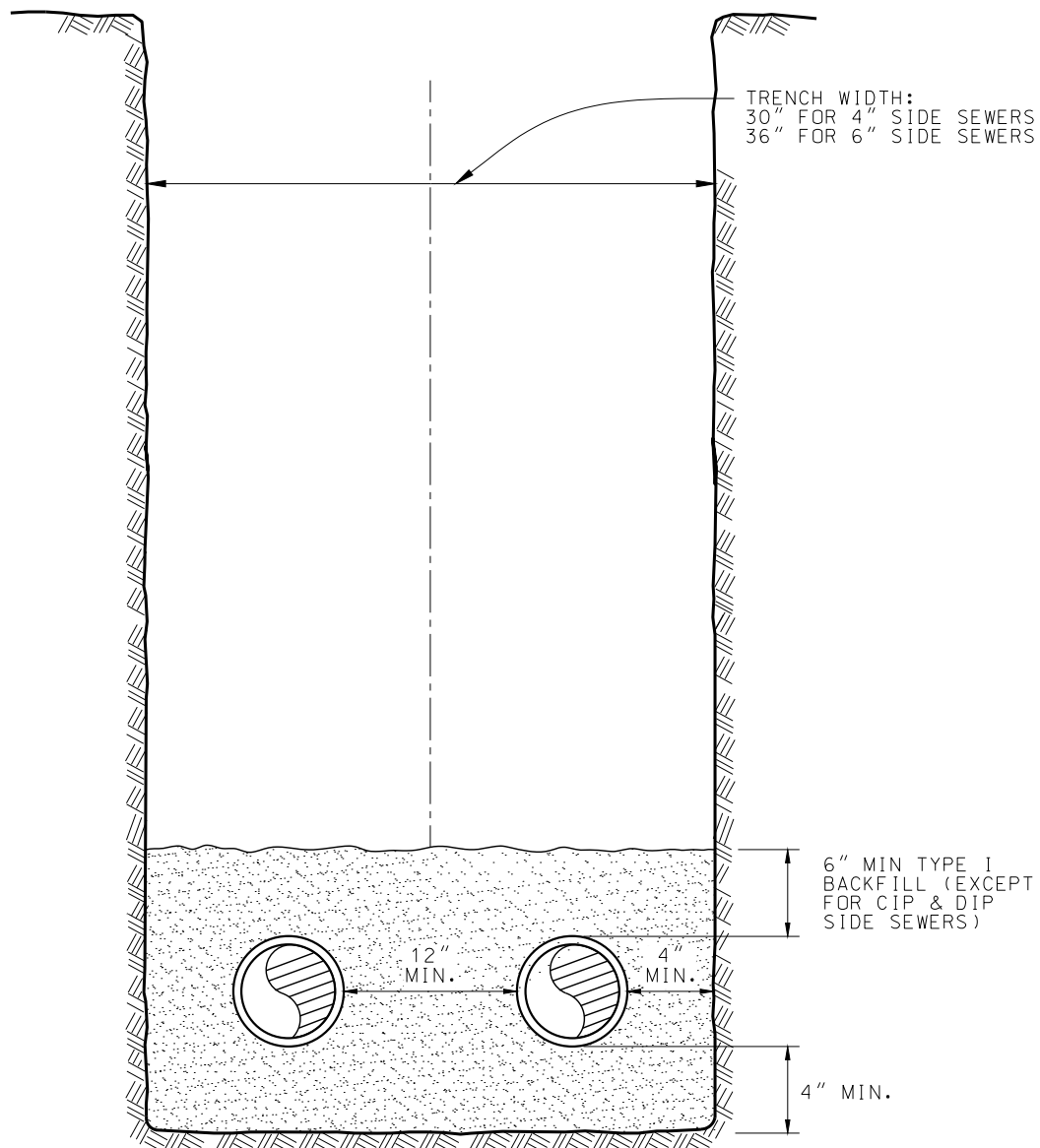
NOTES: 1. PIPE BEDDING AND BACKFILL SHALL CONFORM TO THE REQUIREMENTS OF SECTION 31 23 16.
2. WARNING TAPE REQUIRED AT TOP OF THE PIPE ZONE.

CENTRAL CONTRA COSTA SANITARY DISTRICT

MARTINEZ, CALIFORNIA

SHARED TRENCH DETAIL FOR SIDE SEWERS

**TWO SIDE SEWERS IN ONE TRENCH
(SPECIAL APPROVAL REQUIRED)**



NOTES:

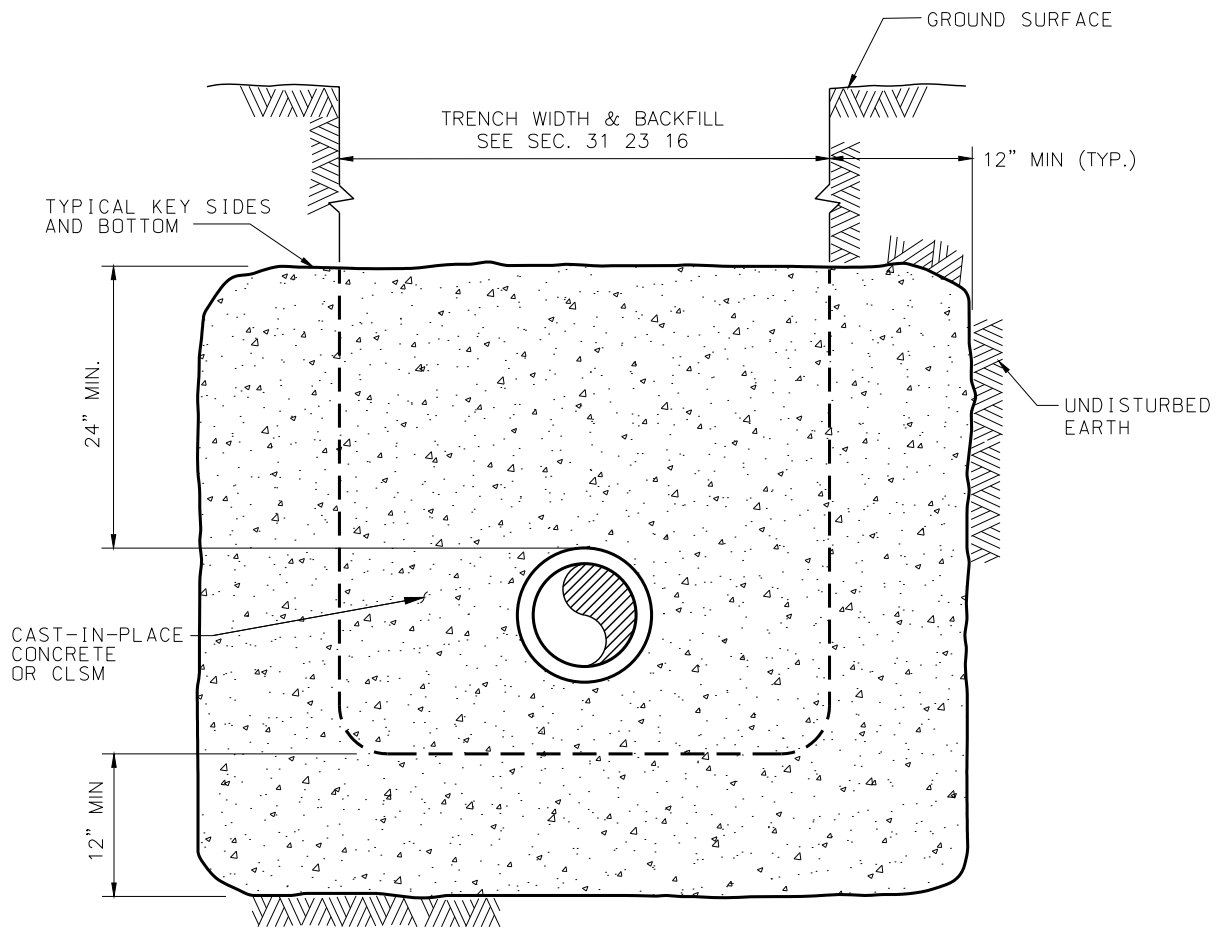
1. TRENCH WIDTH, PIPE BEDDING AND BACKFILL SHALL CONFORM TO THE REQUIREMENTS OF SECTION 31 23 16.
2. IN THE EVENT THAT SIDE SEWERS ARE TO BE CONNECTED TO A VC MAIN BY TAPPING, SUCH TAPS SHALL BE BE SPACED A MINIMUM OF 5 FEET APART.

CENTRAL CONTRA COSTA SANITARY DISTRICT

MARTINEZ, CALIFORNIA

TRENCH DAMS

LOCATED AS SHOWN ON THE PLANS
OR AS DIRECTED BY THE ENGINEER



SECTION

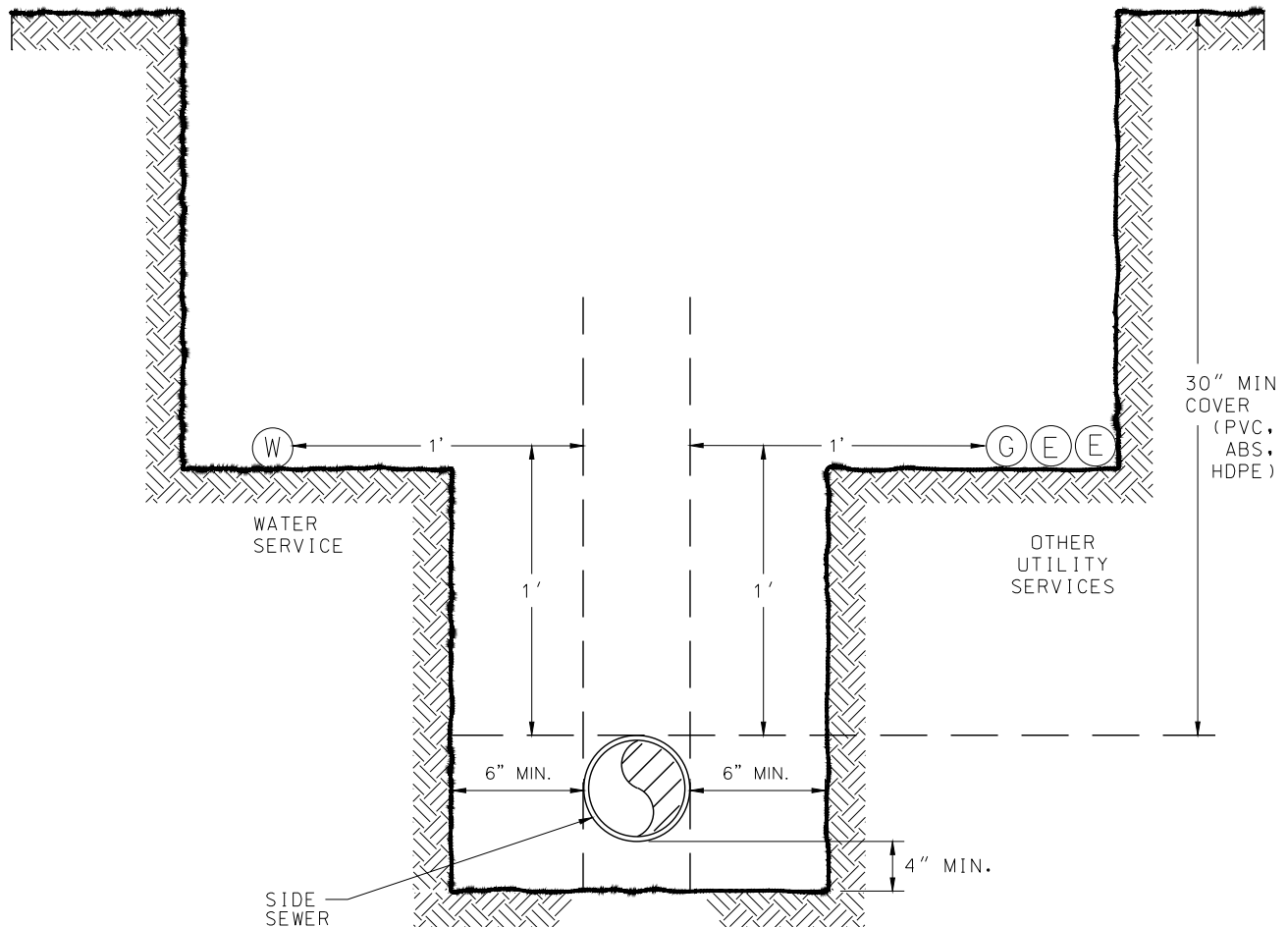
NOTES:

1. SEE SECTIONS 03 30 00 AND 03 34 13 FOR CAST-IN-PLACE CONCRETE & CLSM REQUIREMENTS.
2. TRENCH DAM TO HAVE 12" MIN. THICKNESS (ALONG TRENCH).

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

JOINT UTILITY TRENCH SEPARATION DETAIL

SIDE SEWER AND OTHER UTILITIES IN SAME TRENCH



NOTES:

1. PIPE BEDDING AND BACKFILL SHALL CONFORM TO THE REQUIREMENTS OF SECTION 31 23 16.
2. REFER TO SECTION 4-08 FOR PIPE COVER REQUIREMENTS.
3. THESE ARE MINIMUM REQUIREMENTS. CONTRACTOR SHALL CONTACT UTILITY AGENCIES TO CONFIRM REQUIRED SEPARATION REQUIREMENTS.

CENTRAL CONTRA COSTA SANITARY DISTRICT

MARTINEZ, CALIFORNIA

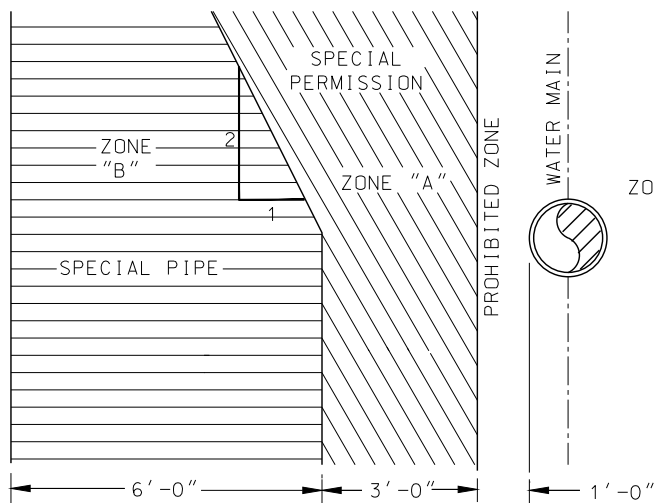
CRITERIA FOR THE SEPARATION OF WATER MAIN AND SANITARY SEWERS

(REFERENCE: CALIFORNIA DOHS GUIDANCE
MEMO NO. 2003-02)

ZONE "A": SEWER LINES NOT PERMITTED
WITHOUT APPROVAL OF WATER AGENCY

ZONE "B": PERMITTED MATERIALS
-VC PIPE WITH COMPRESSION JOINTS
-PVC PIPE WITH RUBBER RING JOINTS
(ATSM 3034)
-CI OR DI PIPE WITH COMP. JOINTS
-RC PRESSURE PIPE WITH COMP. JOINTS
-HDPE PIPE WITH FUSION WELDED
JOINTS (AWWA C906-99)
-SPIRALLY-REINFORCED HDPE PIPE WITH
GASKETED JOINTS (ASTM F-984)

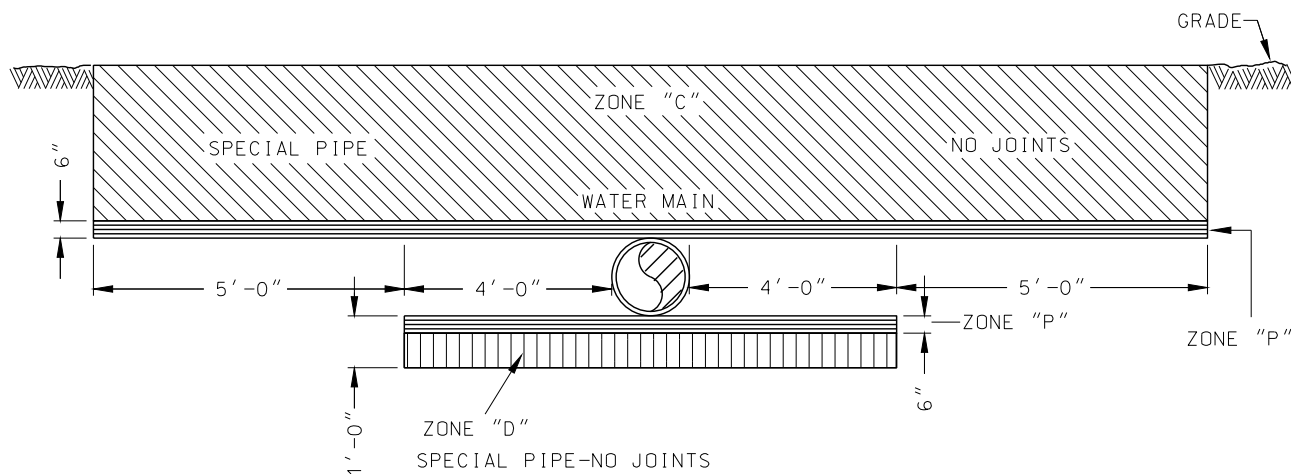
ZONE "C": PERMITTED MATERIALS
-DI PIPE WITH HOT DIP BITUMINOUS
COATING
-C-900 PVC (DR 14). CONTINUOUS SECTION
CENTERED OVER PIPE BEING CROSSED
-RC PRESSURE PIPE. CONTINUOUS
SECTION CENTERED OVER PIPE BEING
CROSSED
-ANY SEWER PIPE WITHIN A CONTINUOUS
SLEEVE
-HDPE PIPE WITH FUSION WELDED
JOINTS (AWWA C906-99)



PARALLEL CONSTRUCTION

ZONE "D": PERMITTED MATERIALS
-DI PIPE WITH HOT DIP BITUMINOUS
COATING AND MECHANICAL JOINTS
-HDPE PIPE WITH FUSION-WELDED
JOINTS (AWWA C906-99)
-C-900 PVC (DR 14) CONTINUOUS SECTION
CENTERED OVER PIPE BEING CROSSED
-RC PRESSURE PIPE CONTINUOUS SECTION
CENTERED OVER PIPE BEING CROSSED
-ANY SEWER PIPE WITHIN A CONTINUOUS
SLEEVE

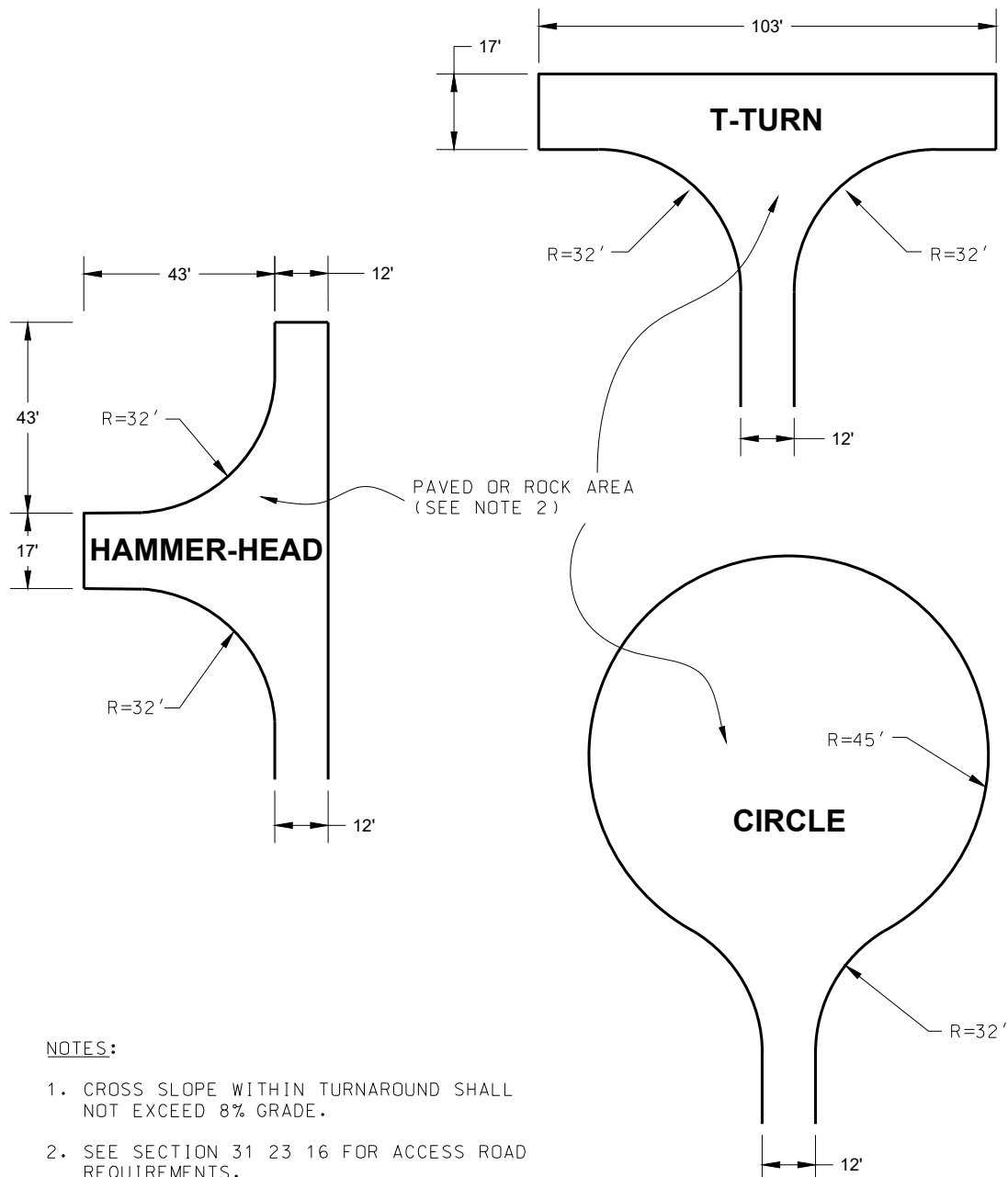
ZONE "P": NOT PERMITTED



CROSSING

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

ALL-WEATHER ACCESS ROAD TURNAROUNDS



NOTES:

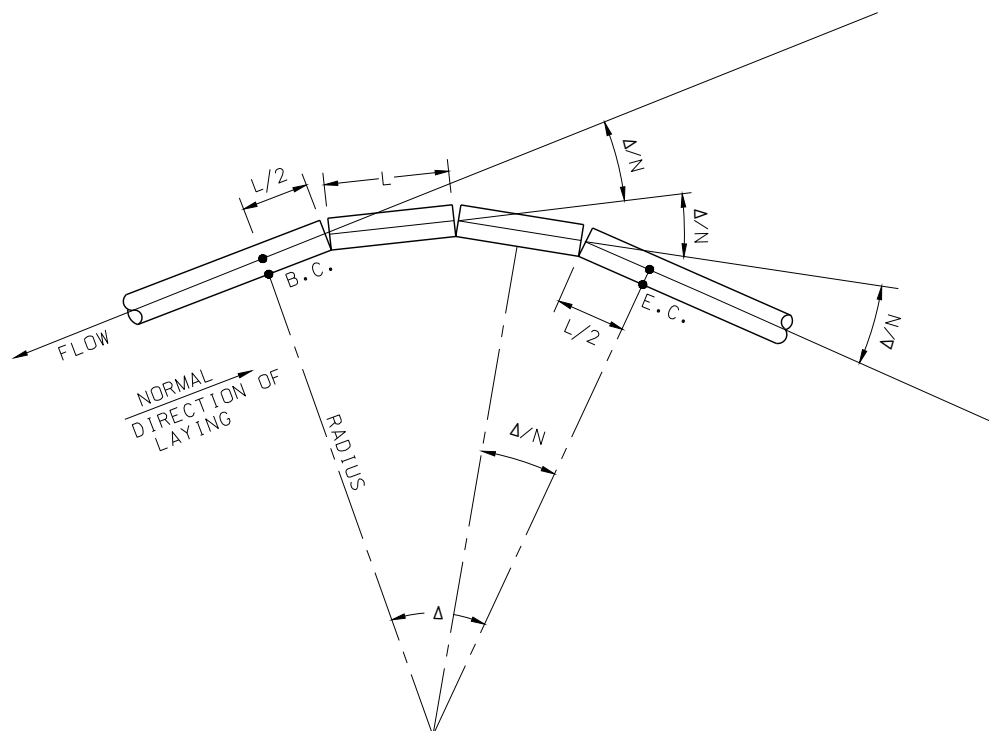
1. CROSS SLOPE WITHIN TURNAROUND SHALL NOT EXCEED 8% GRADE.
2. SEE SECTION 31 23 16 FOR ACCESS ROAD REQUIREMENTS.
3. ALL DIMENSIONS ARE MINIMUM REQUIREMENTS.

CENTRAL CONTRA COSTA SANITARY DISTRICT

MARTINEZ, CALIFORNIA

LAYOUT OF CURVED ALIGNMENT

USING STRAIGHT PIPE SEGMENTS WITH JOINT DEFLECTIONS OR FITTINGS



PLAN

(FITTINGS REMOVED FOR CLARITY)

THE LAYING LENGTH (L), RADIUS (R), AND INCLUDED ANGLE (Δ) ARE COMPUTED BY THE EQUATIONS:

$$L = 2 \times R \times \tan(\Delta/2N)$$

$$R = L / (2 \times \tan(\Delta/2N))$$

$$\Delta = 2 \times N \times \tan^{-1}(L/2R)$$

WHERE:

R = RADIUS OF CURVATURE, FEET

L = LAID LENGTH OF EACH PIPE SEGMENT
MEASURED ALONG THE CENTERLINE, FEET

Δ = TOTAL DEFLECTION ANGLE OF CURVE, DEGREES

N = NUMBER OF DEFLECTED JOINTS

Δ/N = TOTAL DEFLECTION AT EACH JOINT, DEGREES

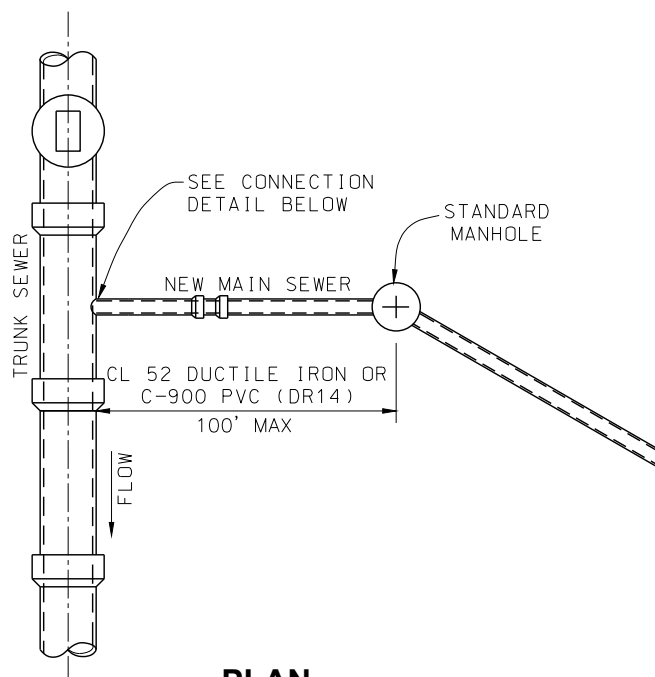
NOTE: "L" SHALL BE EQUAL TO OR GREATER THAN 5 FEET.

CENTRAL CONTRA COSTA SANITARY DISTRICT

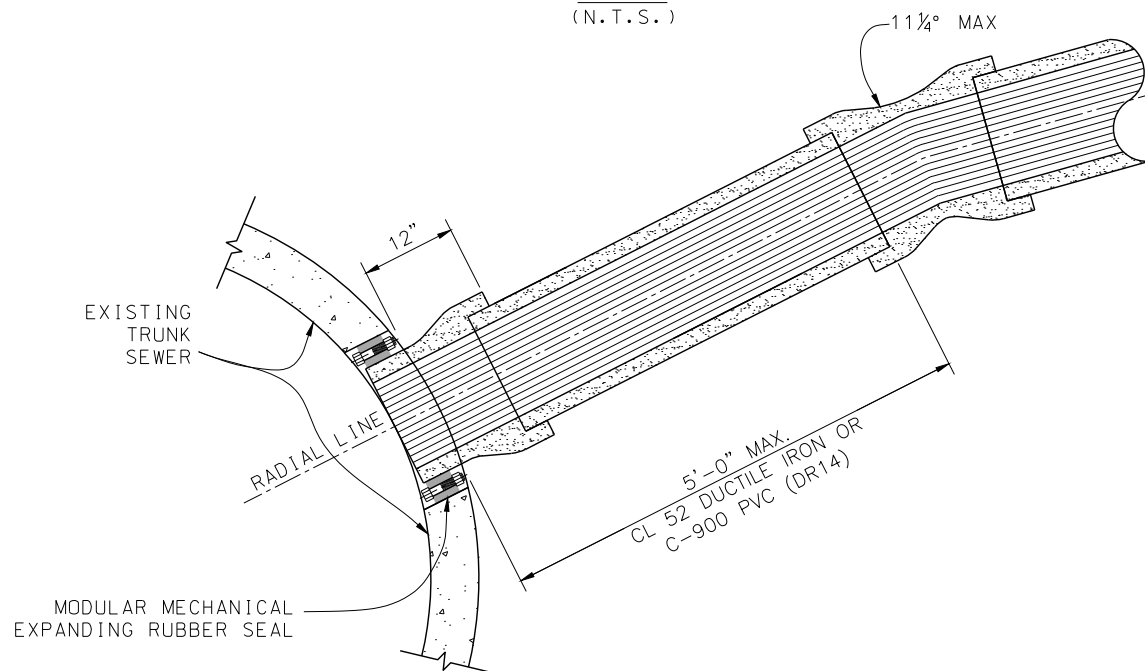
MARTINEZ, CALIFORNIA

MAIN SEWER CONNECTION TO TRUNK SEWERS

**48" AND LARGER
(SPECIAL APPROVAL REQUIRED)**



PLAN
(N.T.S.)



NOTES:

1. TAP SHALL BE CORE DRILLED,
RECOVER CORED PLUG.
2. USE CLSM BACKFILL WITHIN
5' OF TRUNK.

CONNECTION DETAIL

The diagram shows a cross-section of a pipe with four rectangular anchors spaced along its length. A dashed circle highlights the first anchor, with a callout pointing to 'SEE DETAIL A BELOW'. The ground surface is shown as a sloped line above the pipe, with a callout pointing to 'SURFACE OVER PIPE'. A dimension line at the bottom indicates a maximum horizontal spacing of '40' MAX' between anchors.

SEE DETAIL A BELOW

SURFACE OVER PIPE

PIPE

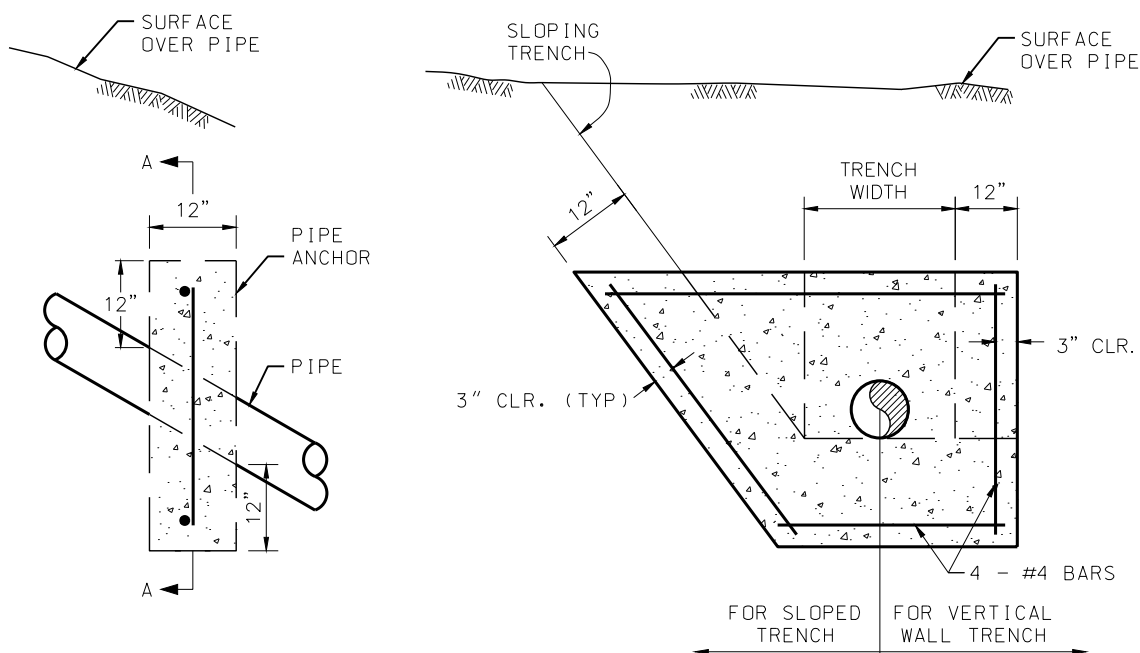
40' MAX

NOTES:

1. PIPE ANCHORS SHALL BE CONSTRUCTED AT 40' HORIZONTAL INTERVALS ON ALL SLOPES $\geq 30\%$.
2. REINFORCING STEEL SHALL BE AS SPECIFIED IN SECTION 03 20 00

NOTES:

1. PIPE ANCHORS SHALL BE CONSTRUCTED AT 40' HORIZONTAL INTERVALS ON ALL SLOPES $\geq 30\%$.
2. REINFORCING STEEL SHALL BE AS SPECIFIED IN SECTION 03 20 00.
3. ANCHORS SHALL BE CAST-IN-PLACE CONCRETE PER SECTION 03 30 00.

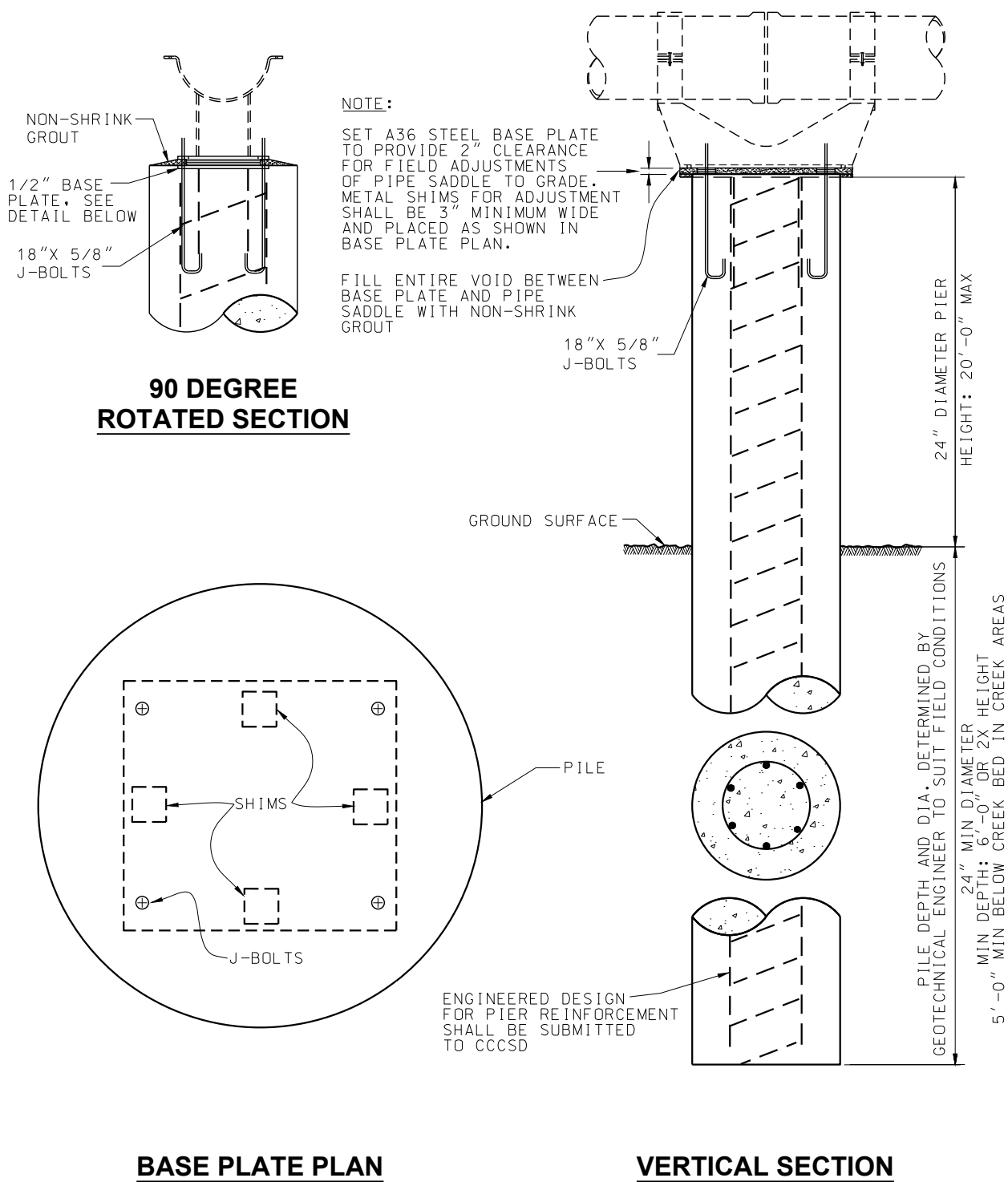


DETAIL A

SECTION A-A

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

CONCRETE PIER SUPPORT FOR USE WHERE HEIGHT IS 1 TO 20 FEET (SPECIAL APPROVAL REQUIRED)

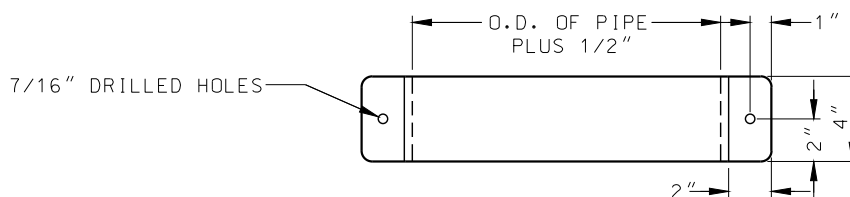


CENTRAL CONTRA COSTA SANITARY DISTRICT

MARTINEZ, CALIFORNIA

PIPE SADDLE

FOR USE ON CONCRETE PIER SUPPORT AND TRESTLE BENT



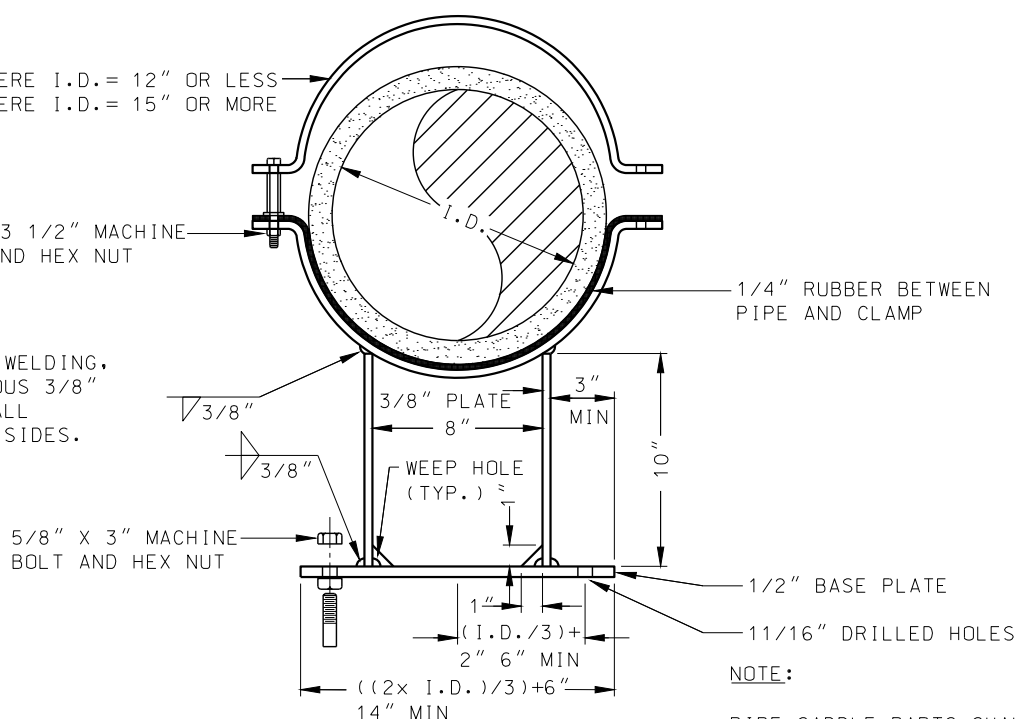
TOP VIEW OF CLAMP

3/8" PLATE WHERE I.D. = 12" OR LESS
1/2" PLATE WHERE I.D. = 15" OR MORE

3/8" X 3 1/2" MACHINE
SCREW AND HEX NUT

NOTE:

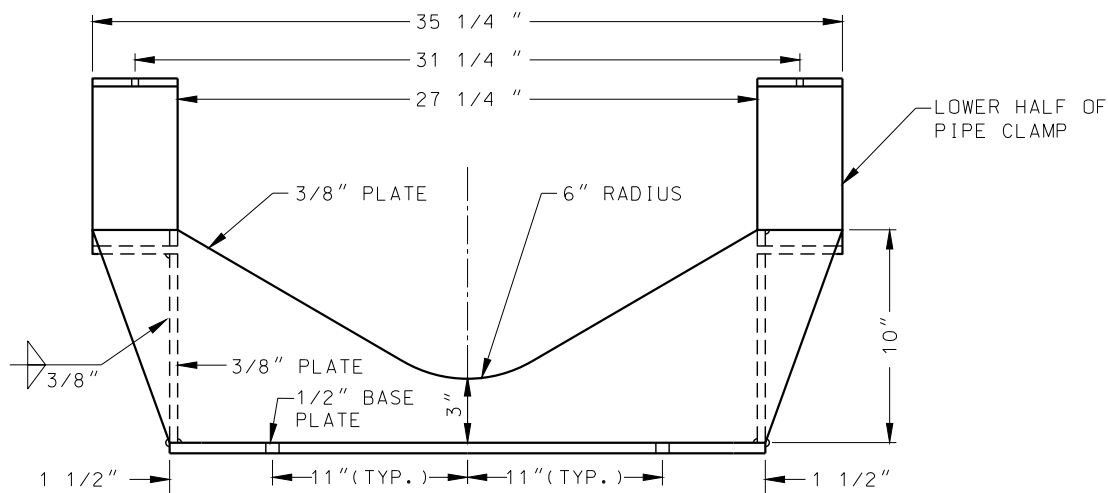
FABRICATE BY WELDING,
WITH CONTINUOUS 3/8"
FILLET WELD, ALL
JOINTS, BOTH SIDES.



NOTE:

PIPE SADDLE PARTS SHALL
BE A36 STEEL, HOT-DIP
GALVANIZED AFTER FABRICATION.

END VIEW



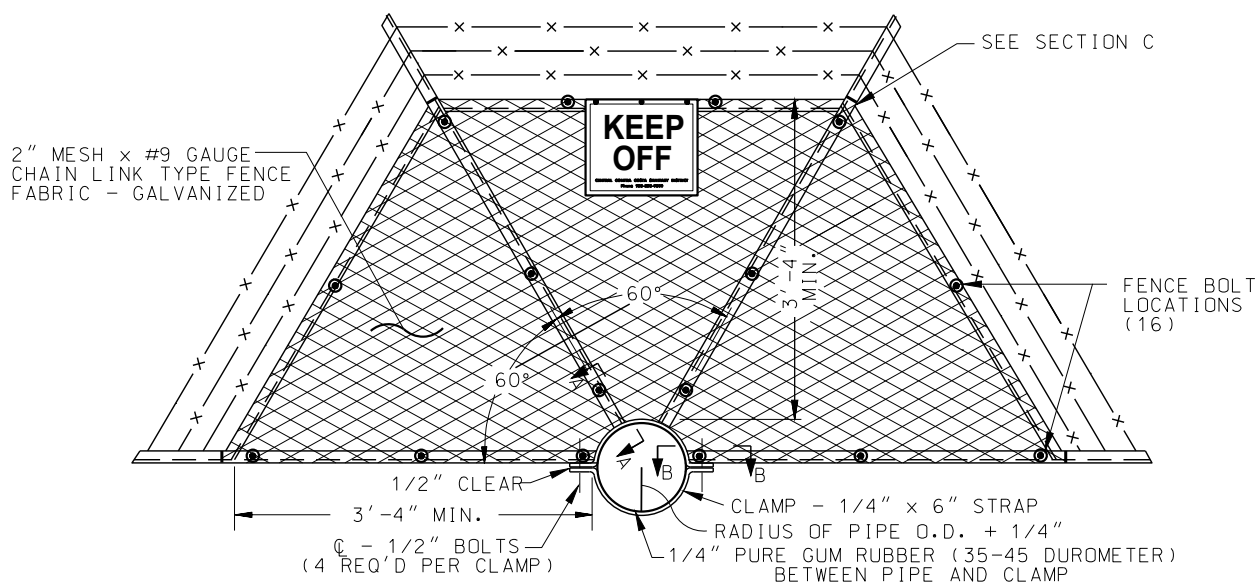
SIDE VIEW

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

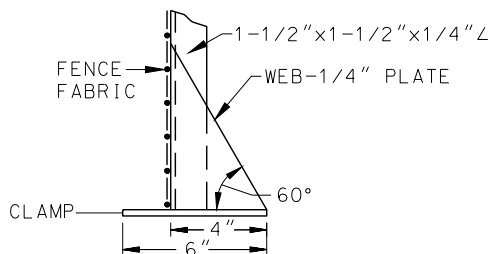
GUARD FENCE FOR CREEK CROSSING

NOTES:

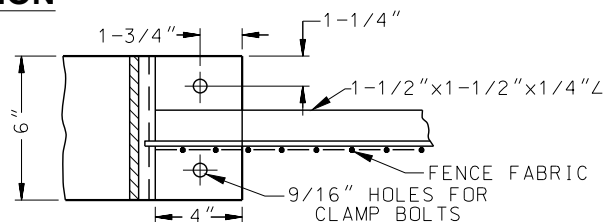
1. ALL GUARD FENCE PARTS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION.
2. EACH GUARD FENCE SHALL HAVE A 12" x 14" 20 GAUGE MINIMUM SIGN PERMANENTLY ATTACHED IN LOCATION SHOWN (FURNISHED BY CCCSD).



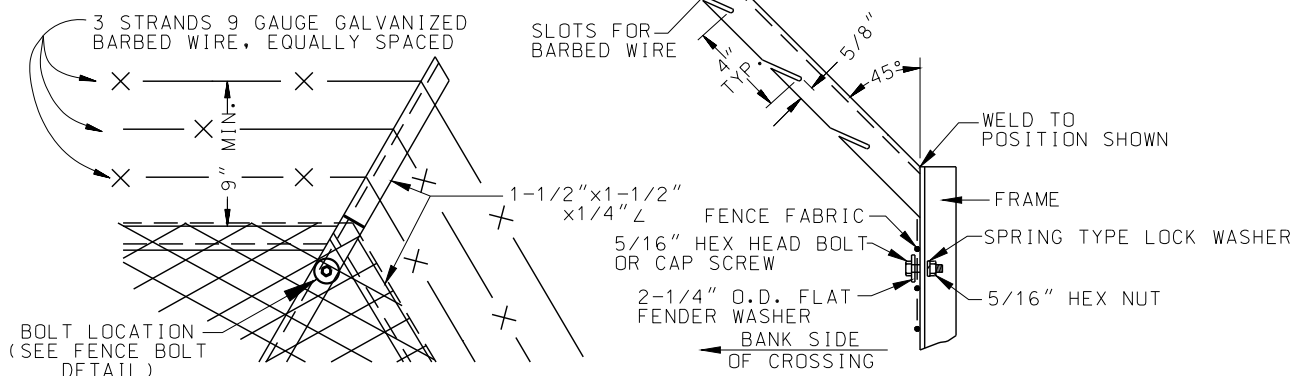
ELEVATION



SECTION A-A



SECTION B-B



SECTION C

FENCE BOLT & WIRE ATTACHMENT DETAIL

(16 MIN. BOLT ASSEMBLIES REQUIRED)
PLACED AS SHOWN

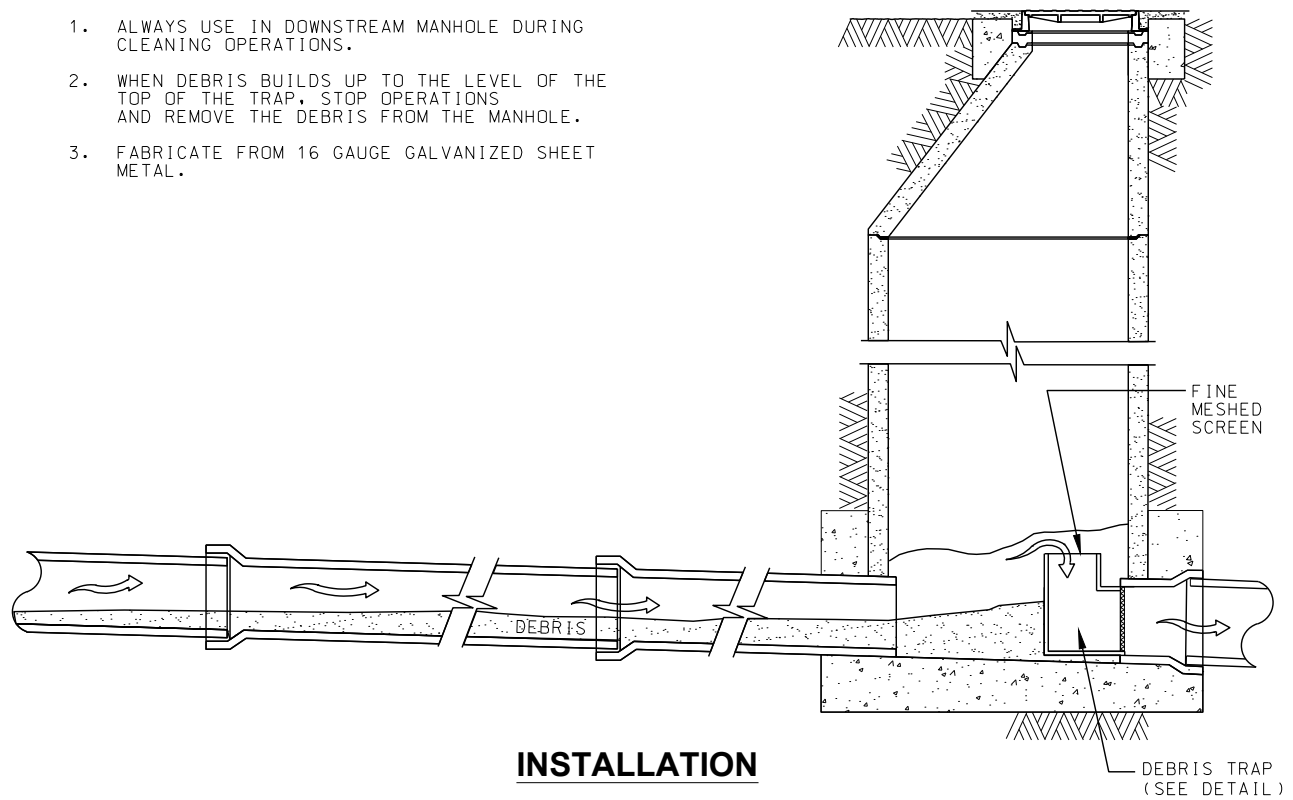
CENTRAL CONTRA COSTA SANITARY DISTRICT

MARTINEZ, CALIFORNIA

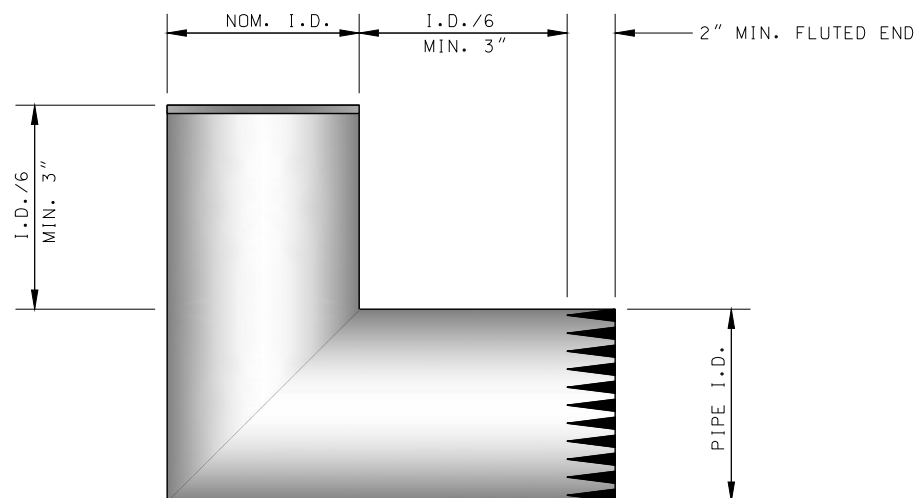
DEBRIS TRAP FOR CLEANING PURPOSES

NOTES:

1. ALWAYS USE IN DOWNSTREAM MANHOLE DURING CLEANING OPERATIONS.
2. WHEN DEBRIS BUILDS UP TO THE LEVEL OF THE TOP OF THE TRAP, STOP OPERATIONS AND REMOVE THE DEBRIS FROM THE MANHOLE.
3. FABRICATE FROM 16 GAUGE GALVANIZED SHEET METAL.



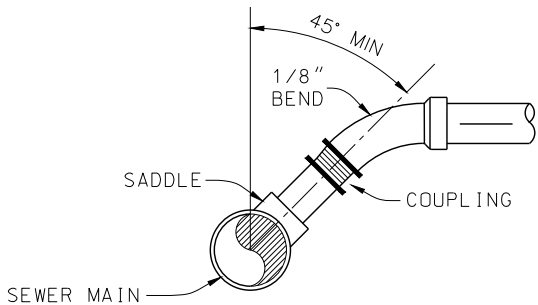
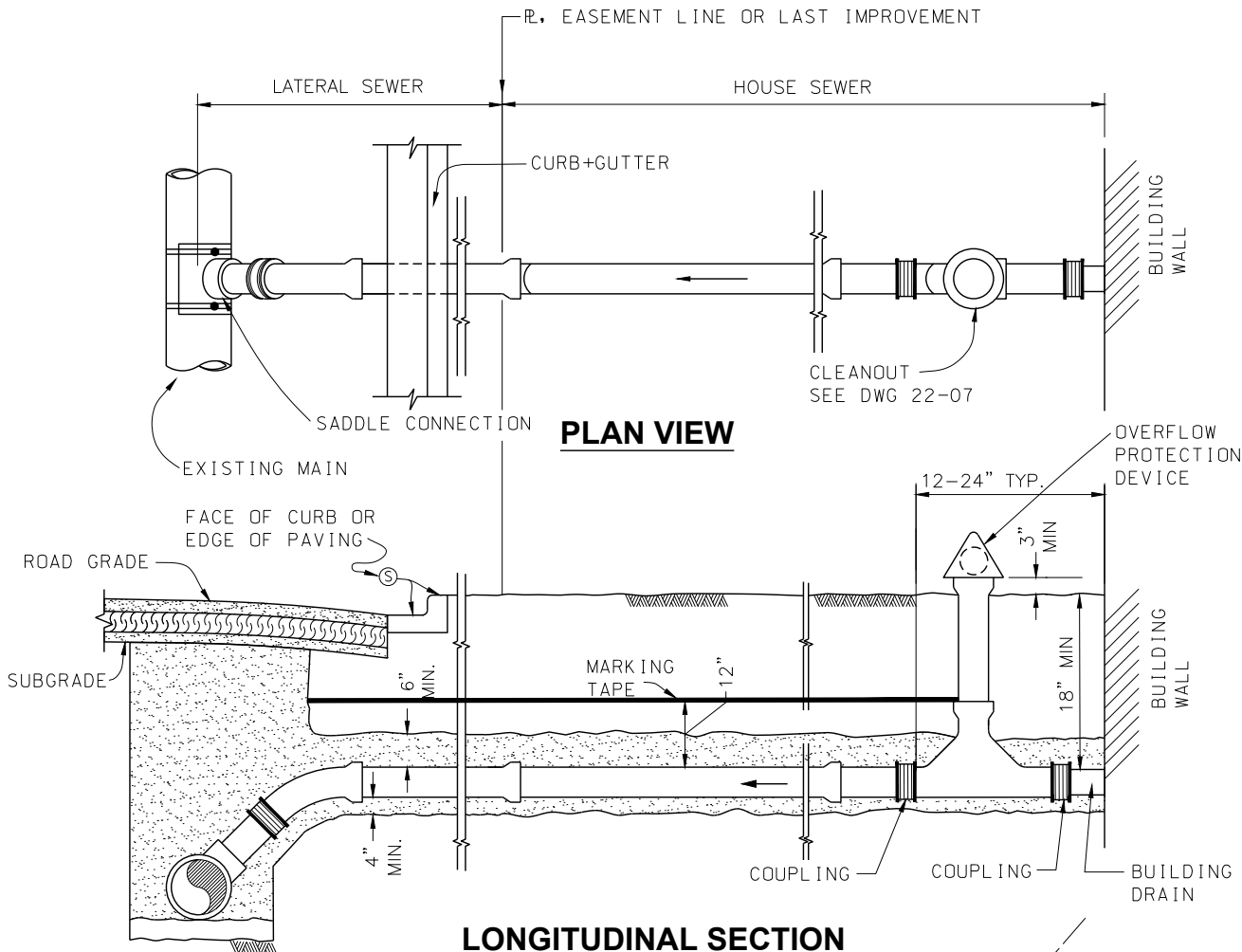
INSTALLATION



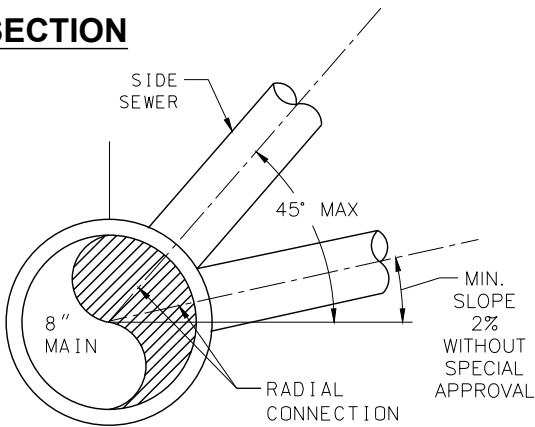
DETAIL

CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA

SIDE SEWER LAYOUT
(CONNECTION TO EXISTING MAIN)



SADDLE CONNECTION DETAIL



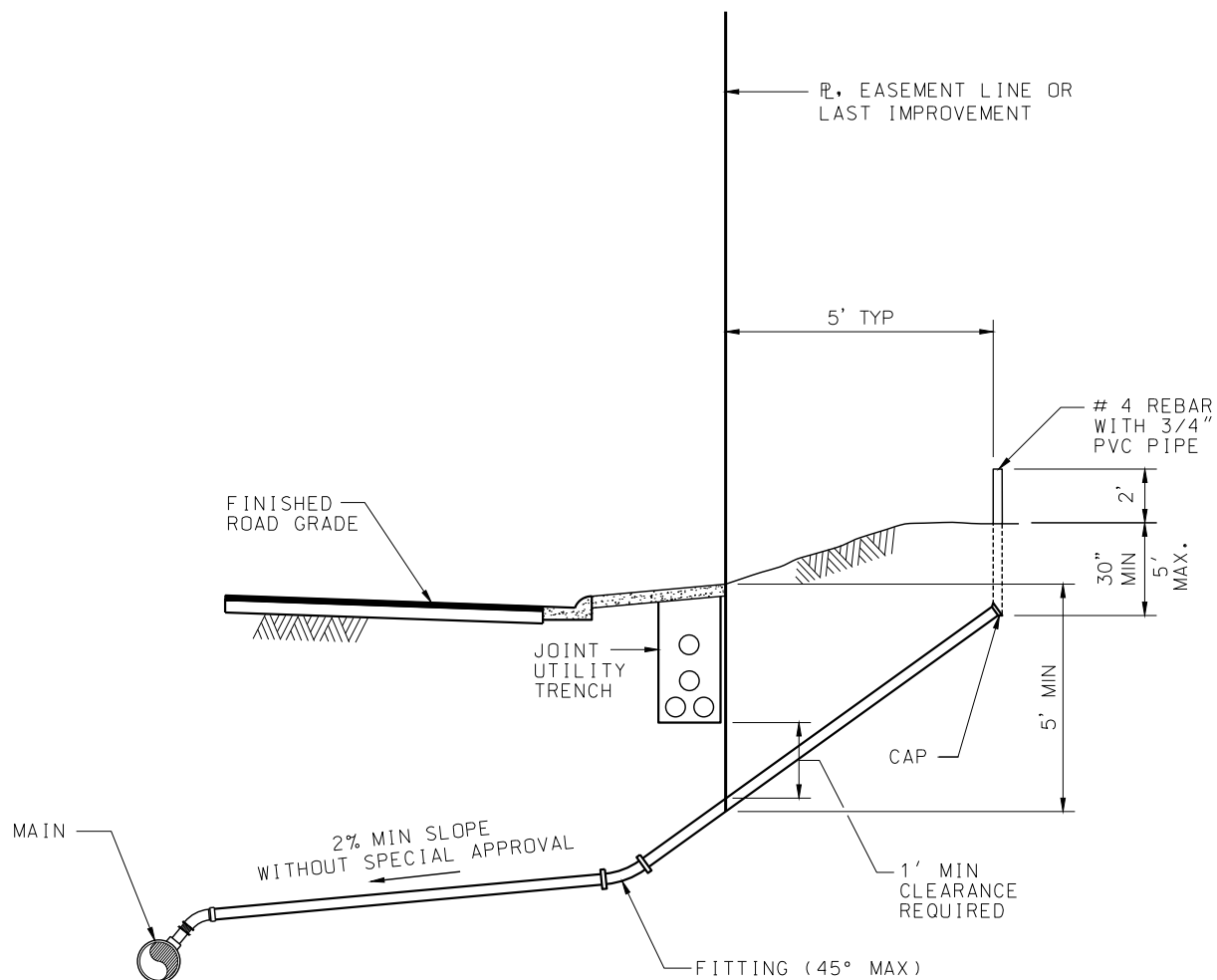
CONNECTION AT MAIN

NOTES:

1. WHEN A LATERAL SEWER IS INSTALLED IN ADVANCE OF THE BUILDING SEWER, IT SHALL BE TERMINATED WITH A CAP OR PLUG 5' PAST THE PROPERTY LINE, EASEMENT LINE OR LAST IMPROVEMENT AND THE CONTRACTOR SHALL MARK THE LOCATION OF THE CAPPED/PLUGGED END WITH A 2X4 PRESSURE TREATED STAKE PAINTED GREEN.
2. REFER TO SECTION 31 23 16 FOR BEDDING AND BACKFILL REQUIREMENTS.

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

SIDE SEWER LAYOUT (CONNECTION TO NEW MAIN)



NOTES:

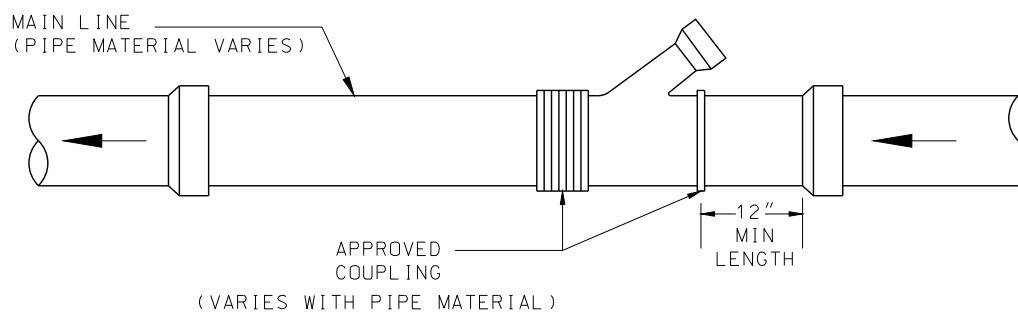
1. REFER TO SECTION 31 23 16 FOR BEDDING AND BACKFILL REQUIREMENTS.
2. MINIMUM COVER FROM THE POINT OF CONNECTION TO THE BUILDING WASTE PLUMBING (WITHIN TWO FEET OF THE FOUNDATION) SHALL BE 18 INCHES. COVER REQUIREMENTS FROM THE PROPERTY LINE TO A POINT WITHIN 8 FEET OF THE BUILDING WASTE SHALL BE IN CONFORMANCE WITH SECTION 4.

CENTRAL CONTRA COSTA SANITARY DISTRICT

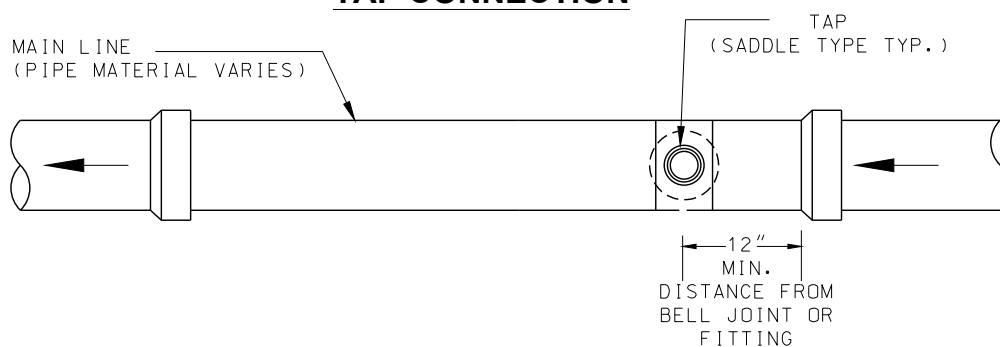
MARTINEZ, CALIFORNIA

TAP AND WYE CONNECTION TO EXISTING MAIN

WYE CONNECTION



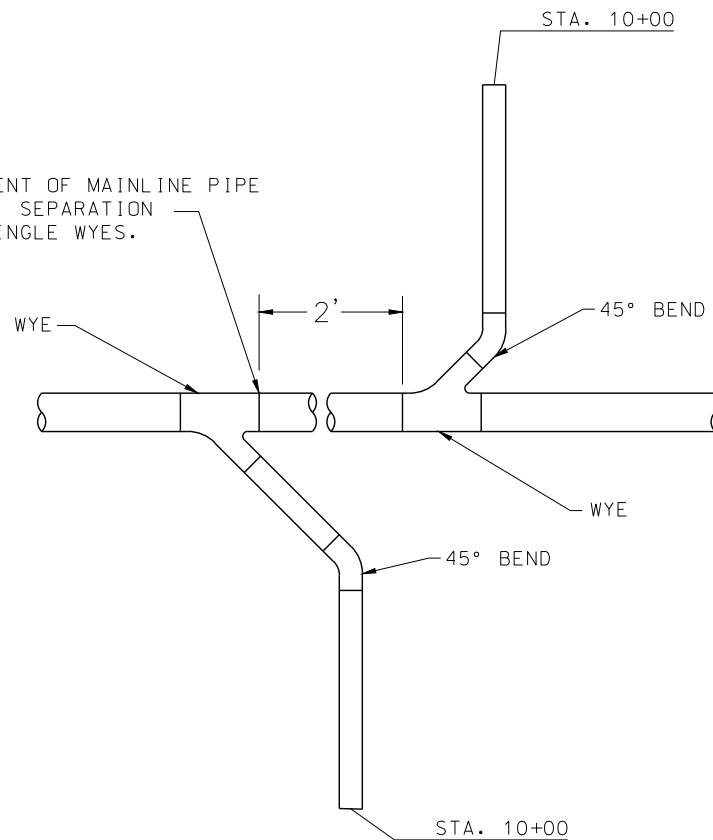
TAP CONNECTION



CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA

MINIMUM LAYOUT OF WYES ALONG MAIN

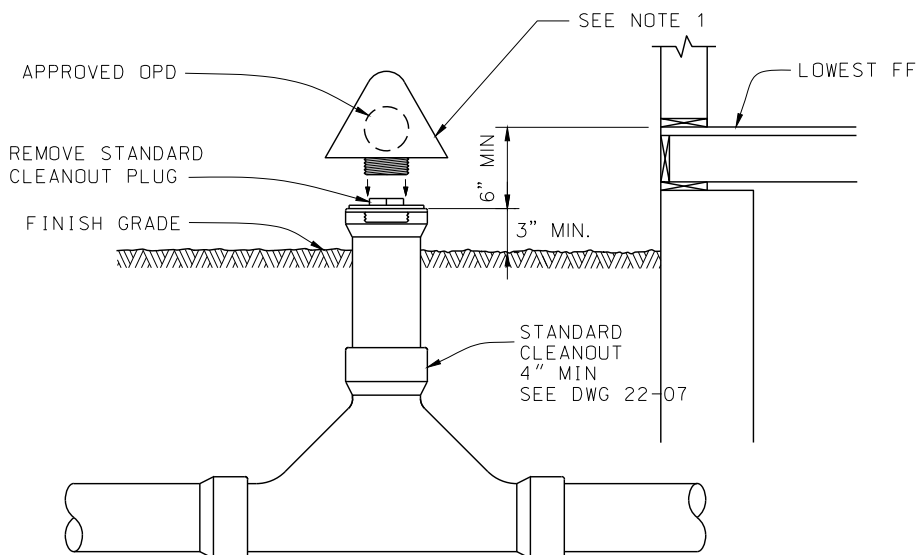
PROVIDE STRAIGHT SEGMENT OF MAINLINE PIPE
TO ACHIEVE, MINIMUM 2' SEPARATION
REQUIRED IN-BETWEEN SINGLE WYES.



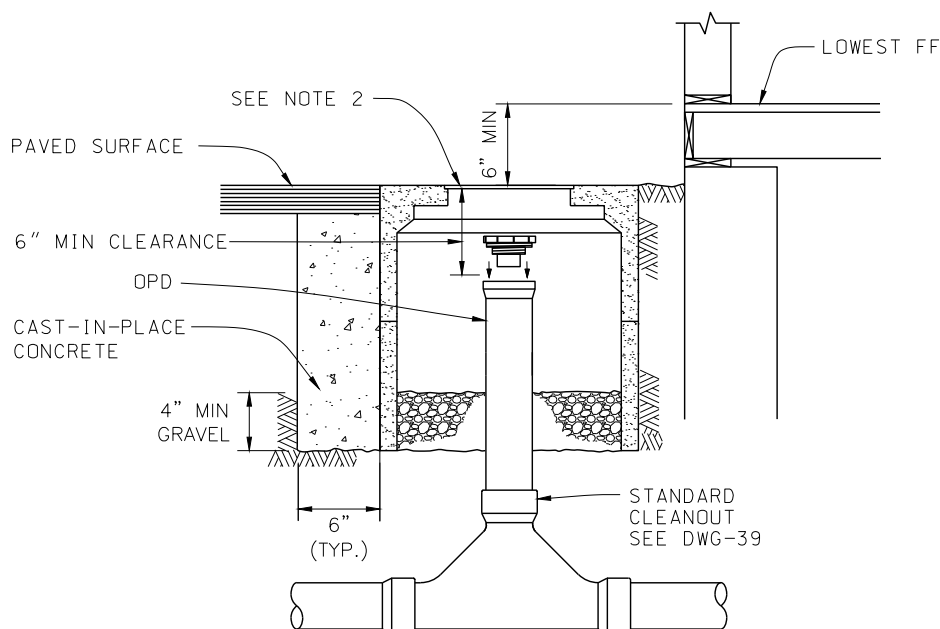
SINGLE WYE CONNECTION
NTS

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

OVERFLOW PROTECTION DEVICES



(TYPE 1)



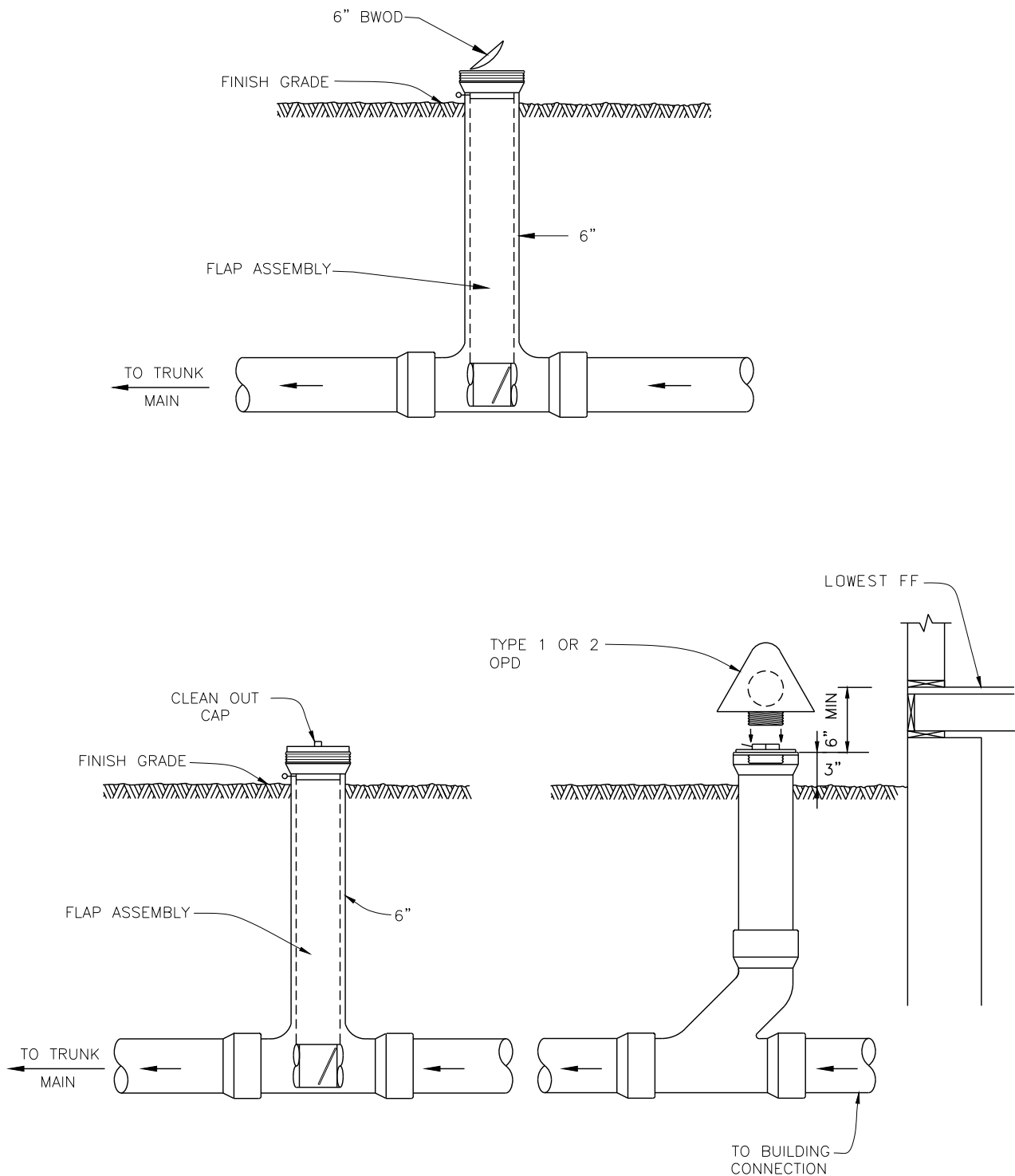
(TYPE 2)

NOTES:

1. AN OVERFLOW PROTECTION DEVICE, PER CCCSD'S APPROVED MATERIALS LIST, IS REQUIRED ON ALL SIDE SEWERS. SPECIFIC LOCATION SHALL BE DETERMINED BY THE CONTRACTOR AND THE PROPERTY OWNER.
2. SEE APPROVED MATERIALS LIST FOR TRAFFIC AND NON-TRAFFIC AREA PRECAST UTILITY BOXES AND GRATED LIDS.

CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA

CLEAN CHECK PROTECTION DEVICE



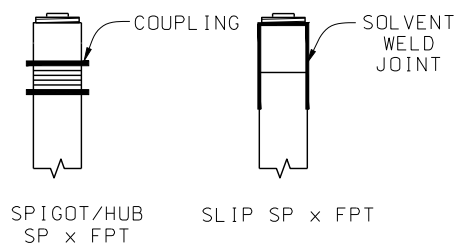
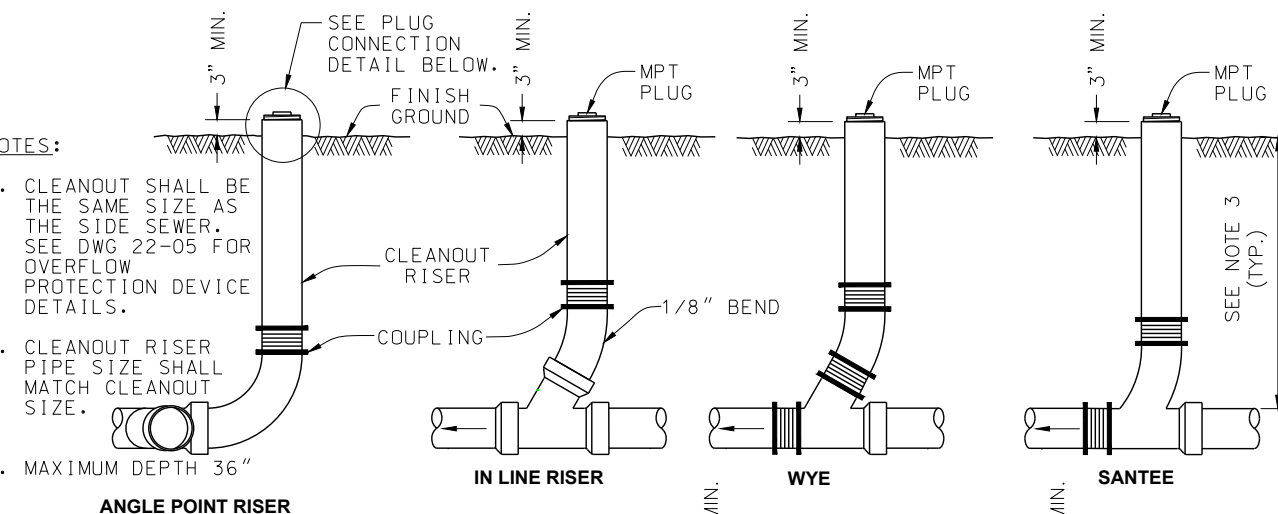
CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

CLEANOUT RISERS

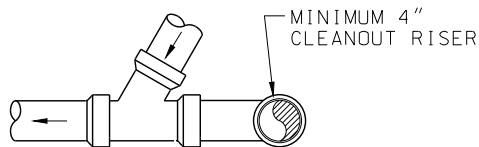
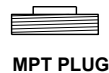
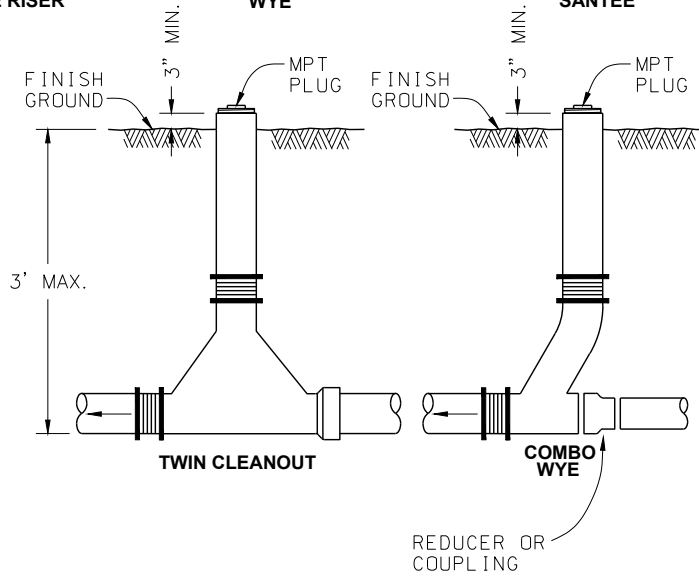
NOTES:

1. CLEANOUT SHALL BE THE SAME SIZE AS THE SIDE SEWER. SEE DWG 22-05 FOR OVERFLOW PROTECTION DEVICE DETAILS.
2. CLEANOUT RISER PIPE SIZE SHALL MATCH CLEANOUT SIZE.
3. MAXIMUM DEPTH 36"

ANGLE POINT RISER



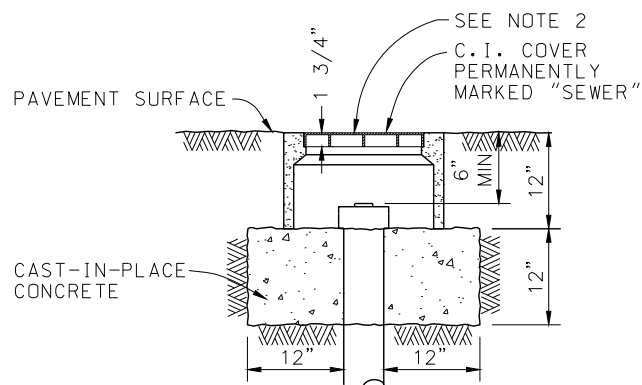
PLUG CONNECTION DETAIL



PLAN VIEW

NOTES:

1. ANGLE POINT CLEANOUT REQUIRED IF SIDE SEWER DEFLECTIONS EQUALS OR EXCEEDS 90°.
2. SEE APPROVED MATERIALS LIST FOR TRAFFIC AND NON-TRAFFIC AREA PRECAST UTILITY BOXES AND GRATED LIDS.
3. 6" SEWER LINES REQUIRE 6" CLEANOUTS

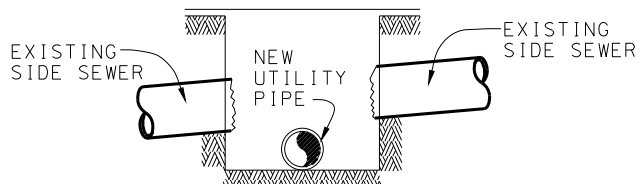


CLEANOUT RISER IN PAVED AREA

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

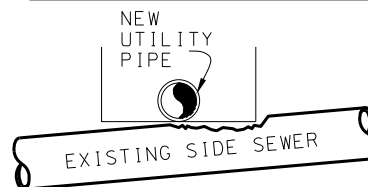
SIDE SEWER REPAIRS

SIDE SEWER BREAK NO CONFLICT IN GRADE



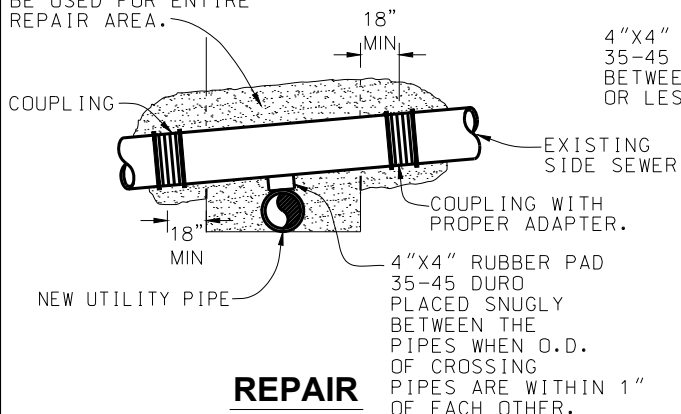
BREAK

SIDE SEWER BREAK NO CONFLICT IN GRADE



BREAK

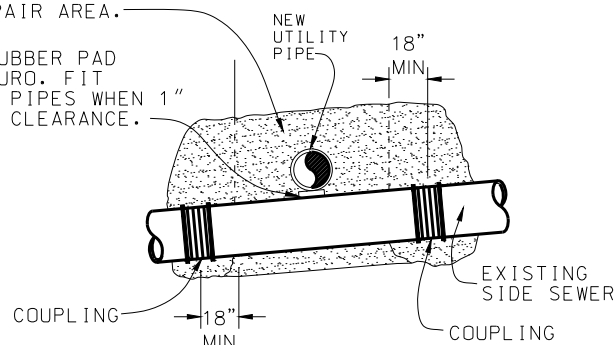
TYPE 1 BACKFILL SHALL
BE USED FOR ENTIRE
REPAIR AREA.



REPAIR

TYPE 1 BACKFILL SHALL
BE USED FOR ENTIRE
REPAIR AREA.

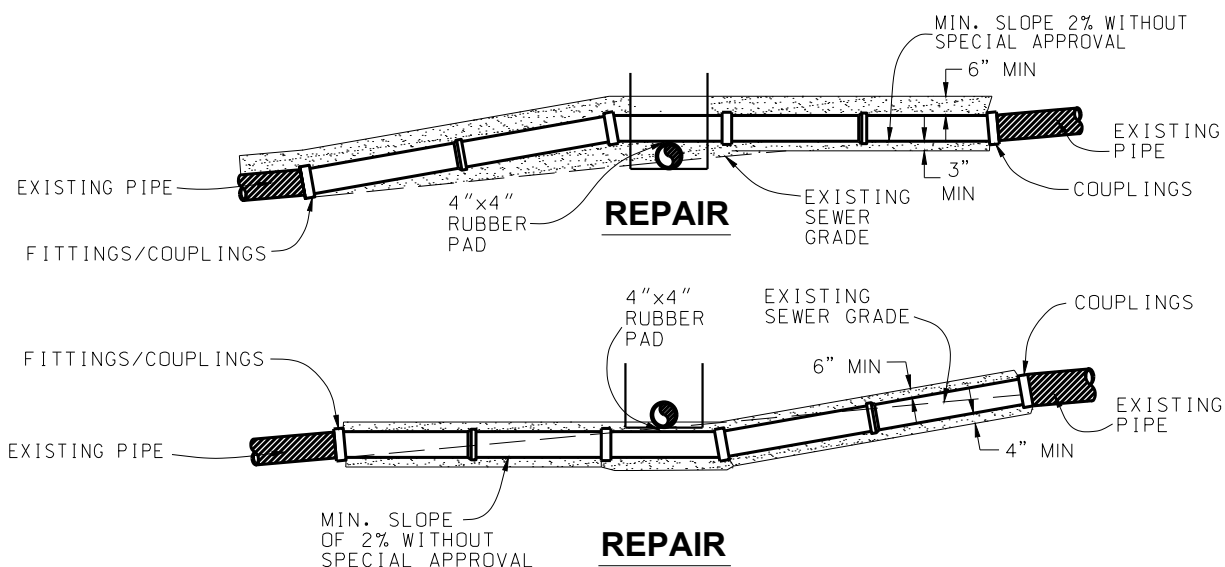
4"x4" RUBBER PAD
35-45 DURO. FIT
BETWEEN PIPES WHEN 1"
OR LESS CLEARANCE.



REPAIR

- NOTES:** 1. REFER TO SECTION 33 31 16 LATERALS AND BUILDING SEWERS FOR SIDE SEWER DETAILS.
2. ALL EXCAVATIONS FOR REPAIRS SHALL BE EQUAL TO THE REQUIRED TRENCH WIDTH PLUS 18" ON EACH SIDE.

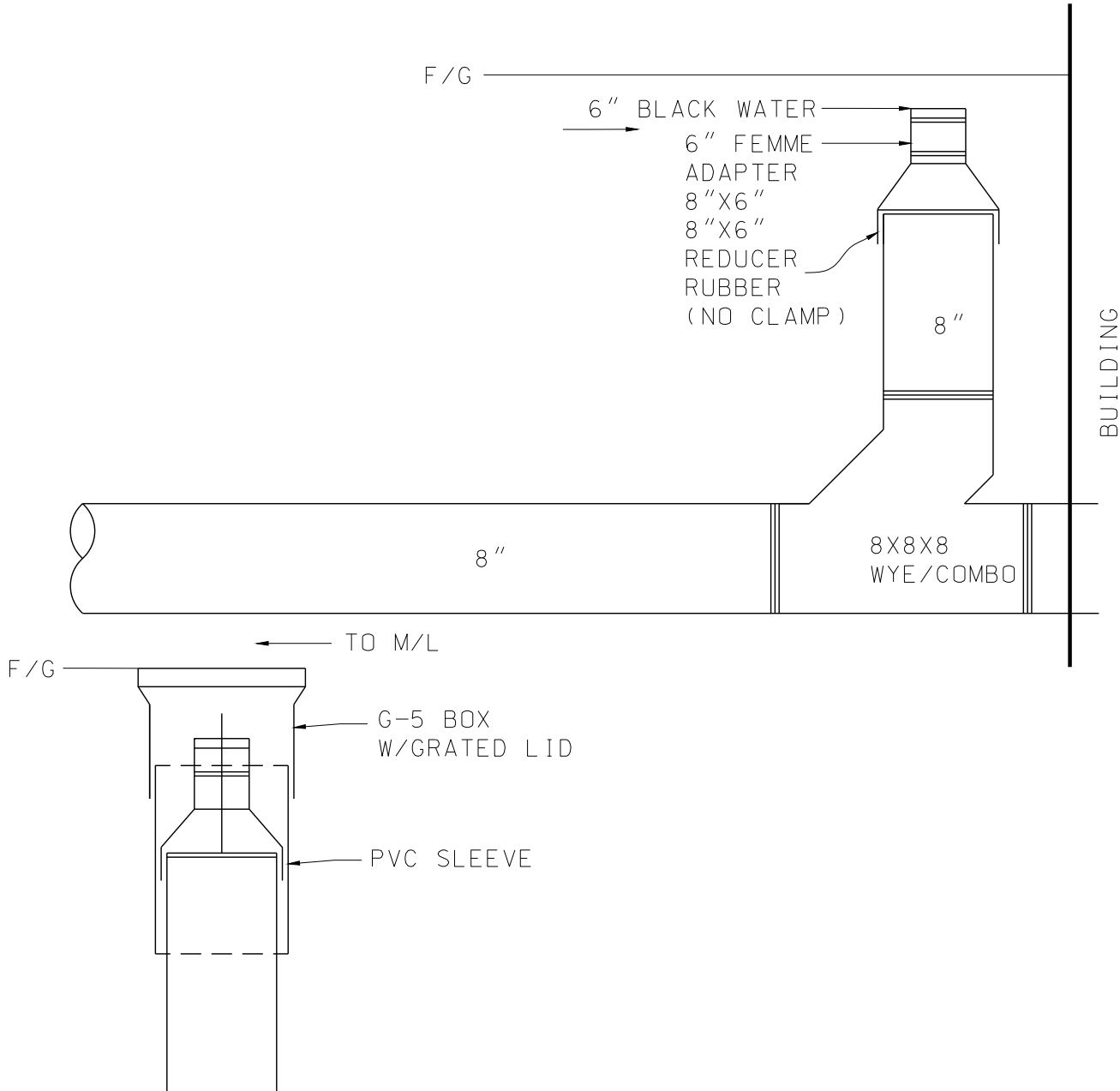
SIDE SEWER WITH CONFLICT IN GRADE



REPAIR

CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA

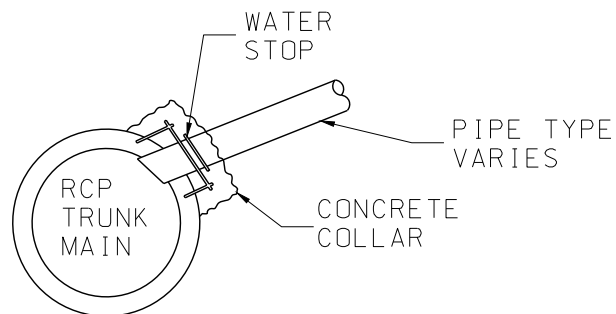
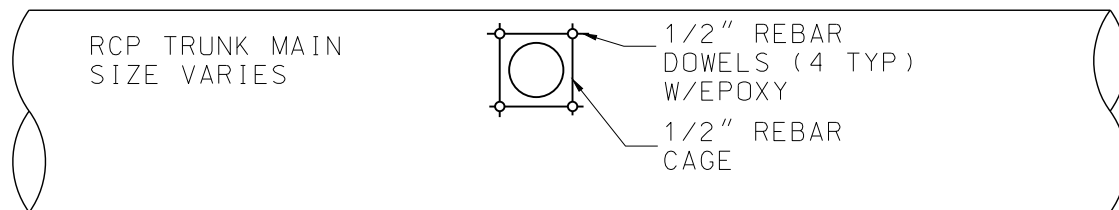
CLEANOUT MODIFICATION FOR 8" LATERAL



CENTRAL CONTRA COSTA SANITARY DISTRICT

MARTINEZ, CALIFORNIA

SIDE SEWER TAP TO RCP TRUNK SEWER (VARIANCE REQUIRED)

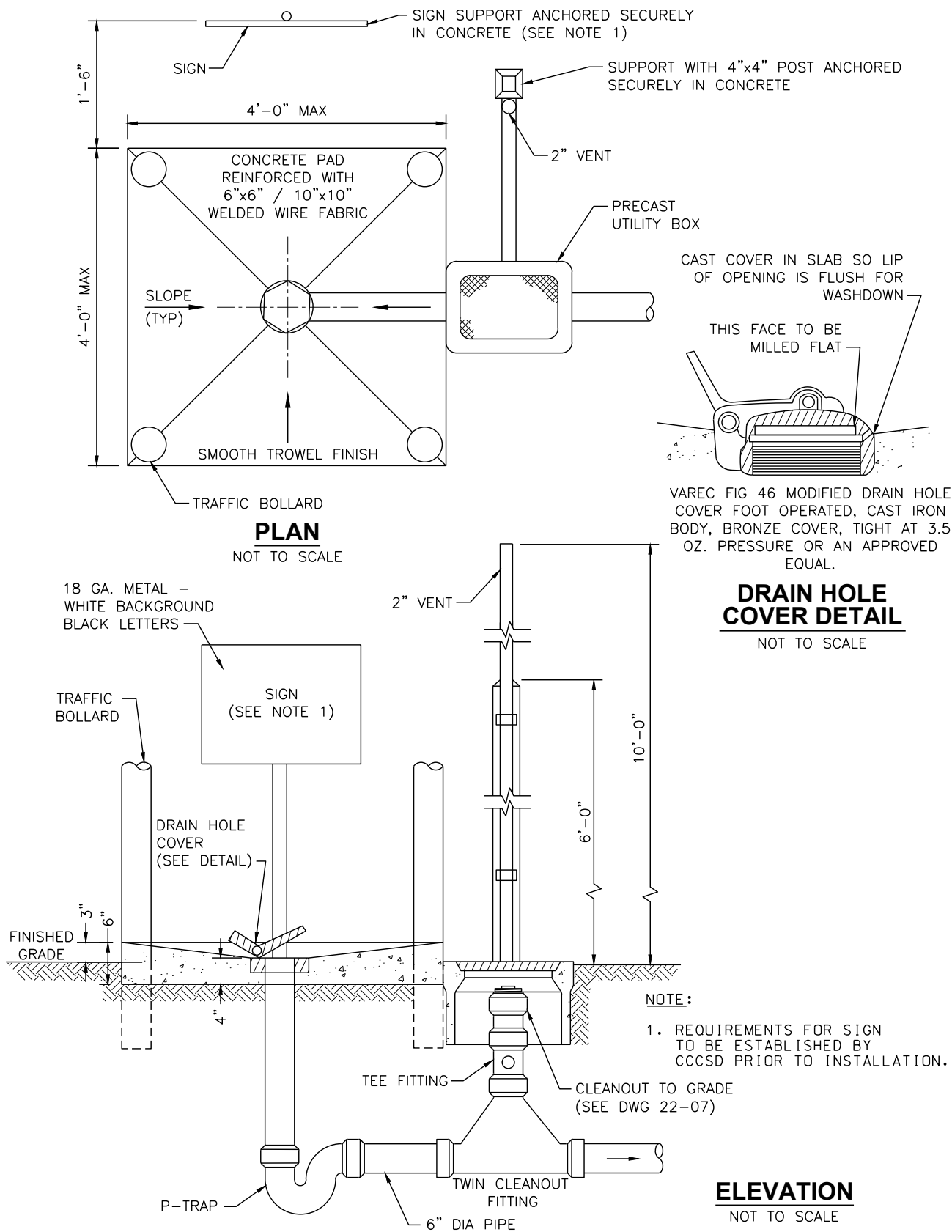


NOTES:

- CORE DRILL ONLY
- EPOXY REBAR DOWELS INTO PIPE
- WATER STOP IS REQUIRED

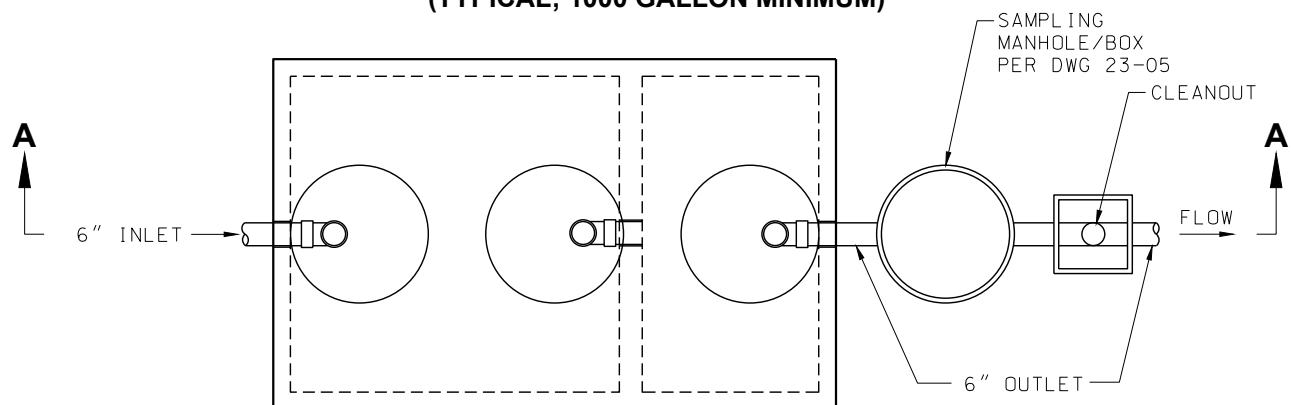
CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA

RV/TRAILER HOLDING TANK DISPOSAL FACILITY

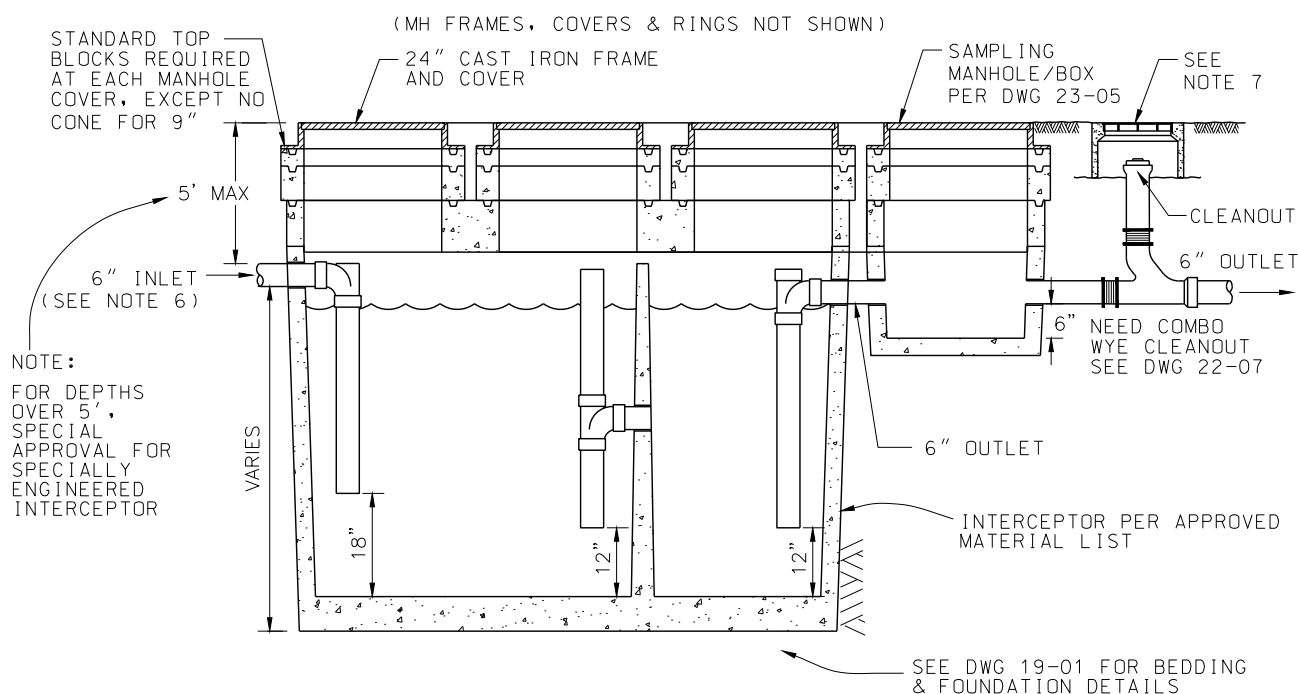


CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

GREASE INTERCEPTOR (TYPICAL; 1000 GALLON MINIMUM)



PLAN VIEW



SECTION A-A

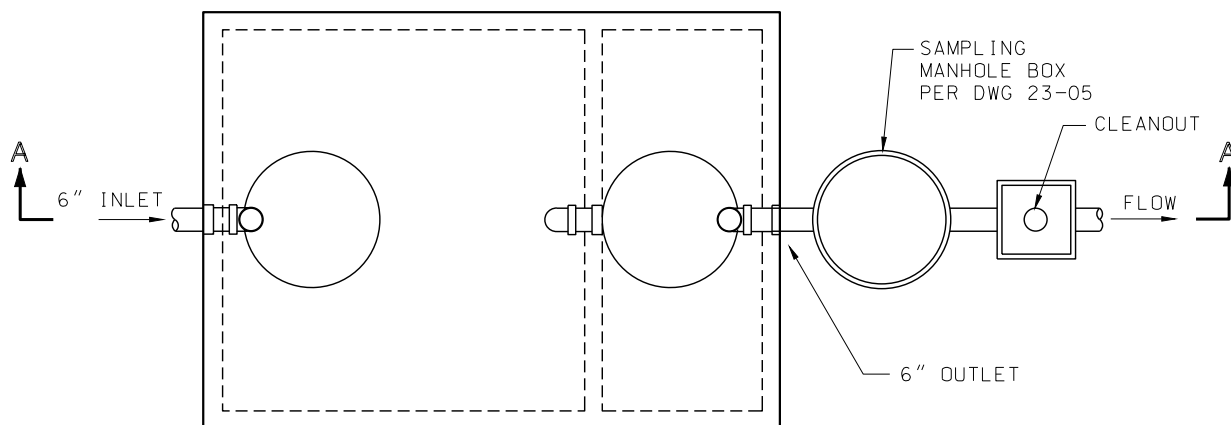
NOTES:

1. INTERCEPTOR SHALL BE PLACED ON A MINIMUM OF 6" TYPE I BEDDING MATERIAL, COMPACTED TO 95% RC.
2. ALL ELEVATIONS SHALL BE APPROVED BY CCCSD PRIOR TO INSTALLATION.
3. GREASE INTERCEPTORS ARE NOT INTENDED FOR THE INTRODUCTION OF DOMESTIC SEWAGE. LOCATION AND TRIBUTARY DISCHARGE SOURCES SHALL BE APPROVED BY CCCSD PRIOR TO INSTALLATION.
4. INTERCEPTOR LOCATED IN AN AREA SUBJECT TO TRAFFIC MUST BE H-20 TRAFFIC RATED. NON-PRECAST INTERCEPTORS ACCEPTED UPON SPECIAL APPROVAL.
5. ALL INLET AND OUTLET PIPES SHALL BE 6" DIAMETER.
6. THE USE OF CAST IRON SOIL PIPE FOR GREASE INTERCEPTOR APPLICATIONS IS PROHIBITED.
7. SEE APPROVED MATERIALS LIST FOR TRAFFIC AND NON-TRAFFIC AREA PRECAST UTILITY BOXES AND GRATED LIDS. SEE DWG 19-08 & 19-09 FOR COVER REQUIREMENTS.

CENTRAL CONTRA COSTA SANITARY DISTRICT

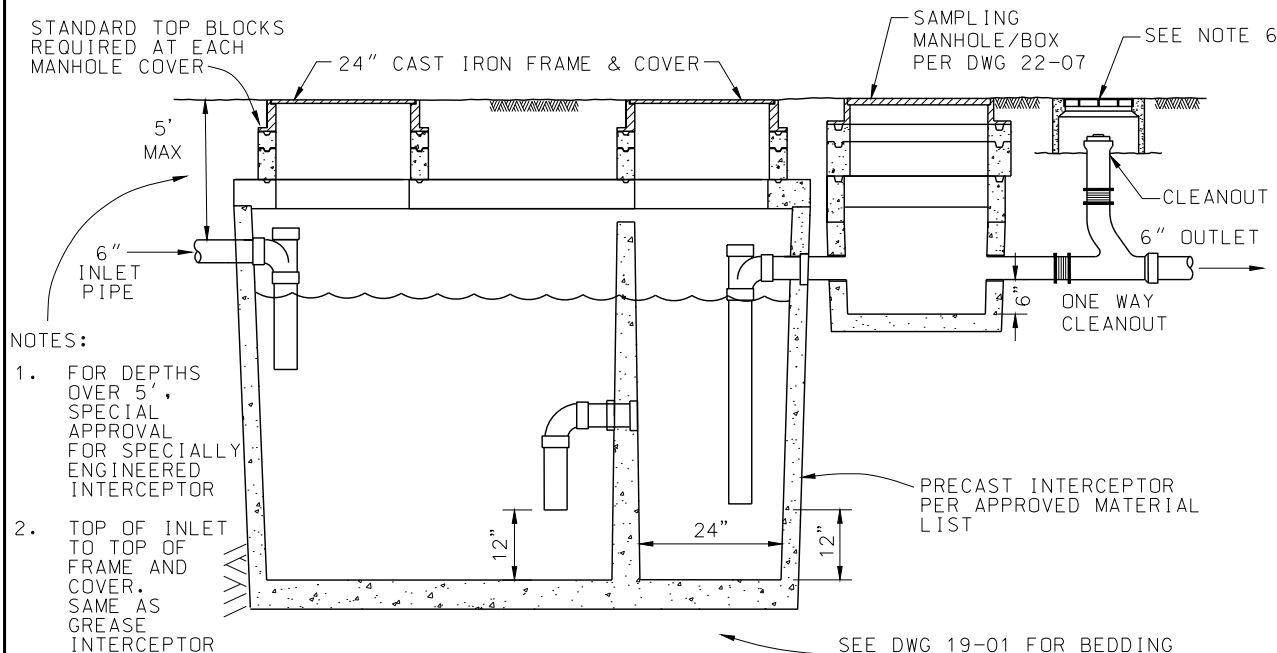
MARTINEZ, CALIFORNIA

SAND-OIL INTERCEPTOR (TYPICAL; 320 GALLON MINIMUM)



PLAN VIEW

(MH FRAMES, COVERS & RINGS NOT SHOWN)



SECTION A-A

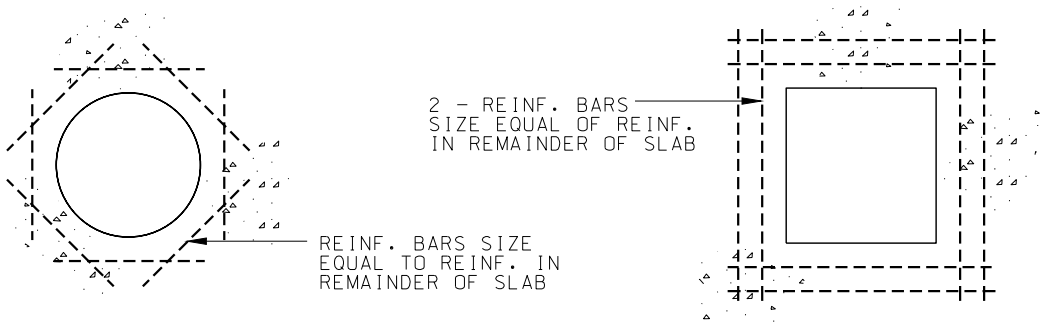
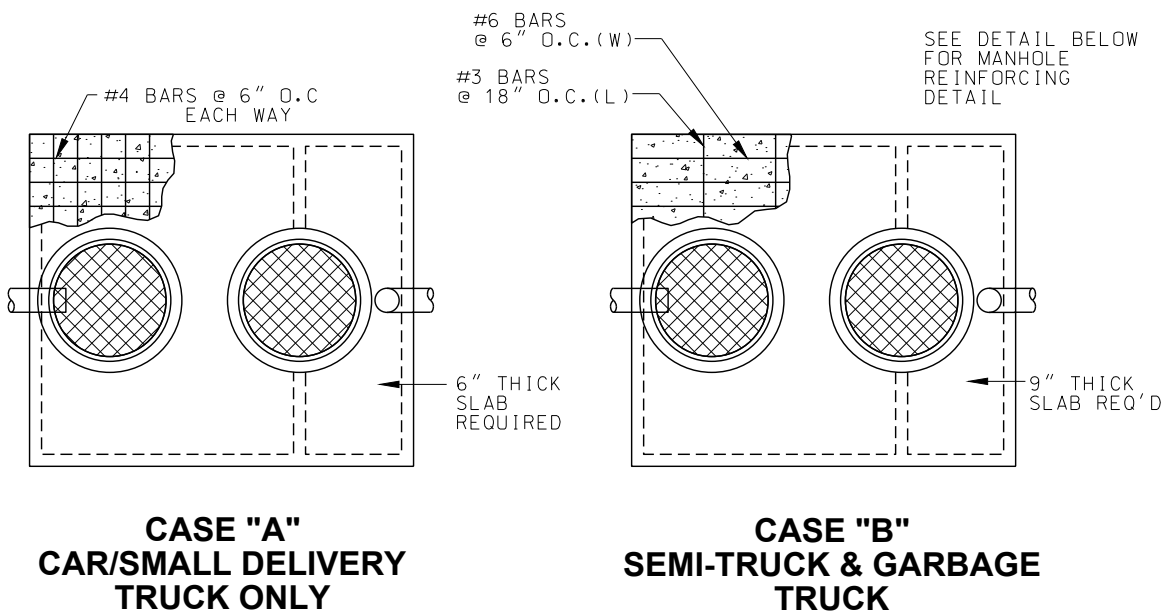
NOTES:

- INTERCEPTOR SHALL BE PLACED ON A MINIMUM OF 6" TYPE I BEDDING MATERIAL, COMPACTED TO 95% RC.
- ALL ELEVATIONS SHALL BE APPROVED BY CCCSD PRIOR TO INSTALLATION.
- SAND-OIL INTERCEPTORS ARE NOT INTENDED FOR THE INTRODUCTION OF DOMESTIC SEWAGE. LOCATION AND TRIBUTARY DISCHARGE SOURCES SHALL BE APPROVED BY CCCSD PRIOR TO INSTALLATION.
- INTERCEPTOR LOCATED IN AN AREA SUBJECT TO TRAFFIC MUST BE H-20 TRAFFIC RATED. NON-PRECAST INTERCEPTORS ACCEPTED UPON SPECIAL APPROVAL.
- ALL INLET AND OUTLET PIPES SHALL BE 6" DIAMETER.
- SEE APPROVED MATERIALS LIST FOR TRAFFIC AND NON-TRAFFIC AREA PRECAST UTILITY BOXES AND GRATED LIDS. SEE DWG 19-08 & 19-09 FOR COVER REQUIREMENTS.

CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA

**CONCRETE TRAFFIC SLABS FOR GREASE INTERCEPTORS OR
SAND - OIL INTERCEPTORS**

(REQUIRED FOR NON-TRAFFIC RATED INTERCEPTORS)

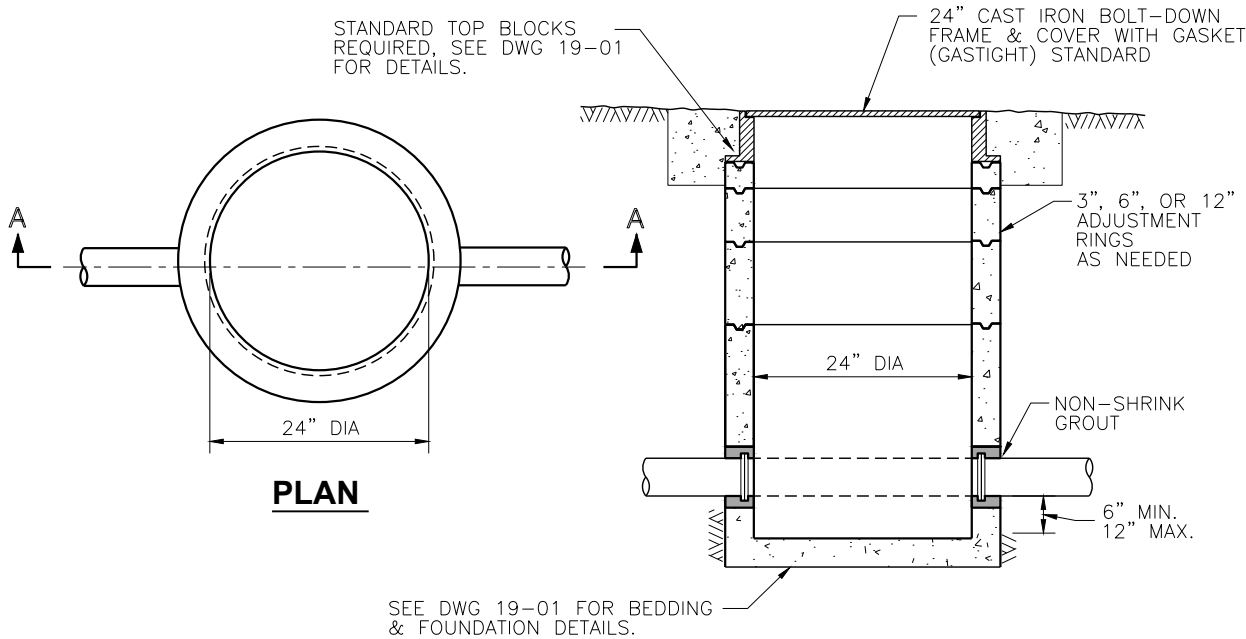


MANHOLE AREA REINFORCING DETAILS

CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CALIFORNIA

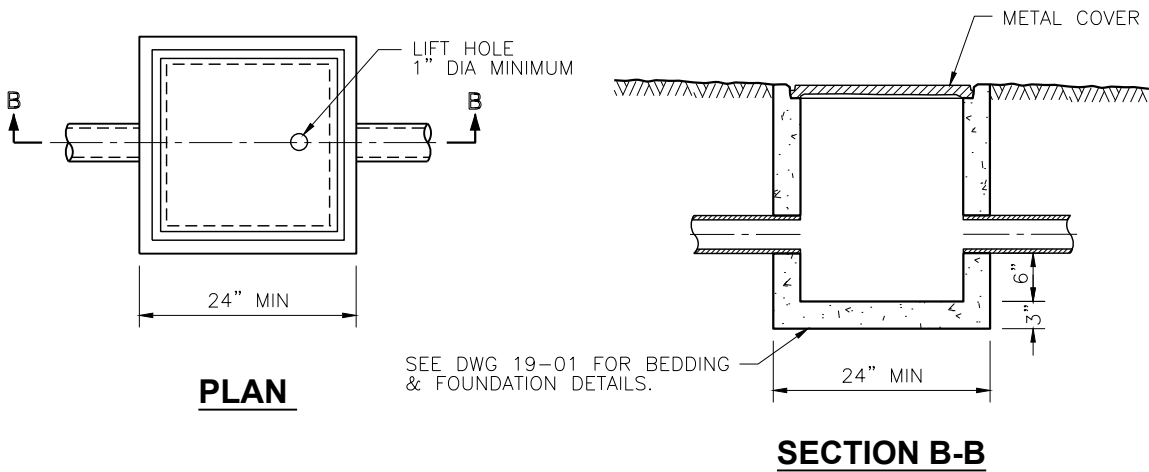
PRECAST SAMPLING STRUCTURES
(SEE APPROVED MATERIALS LIST)

SAMPLING MANHOLE
(OUTSIDE)



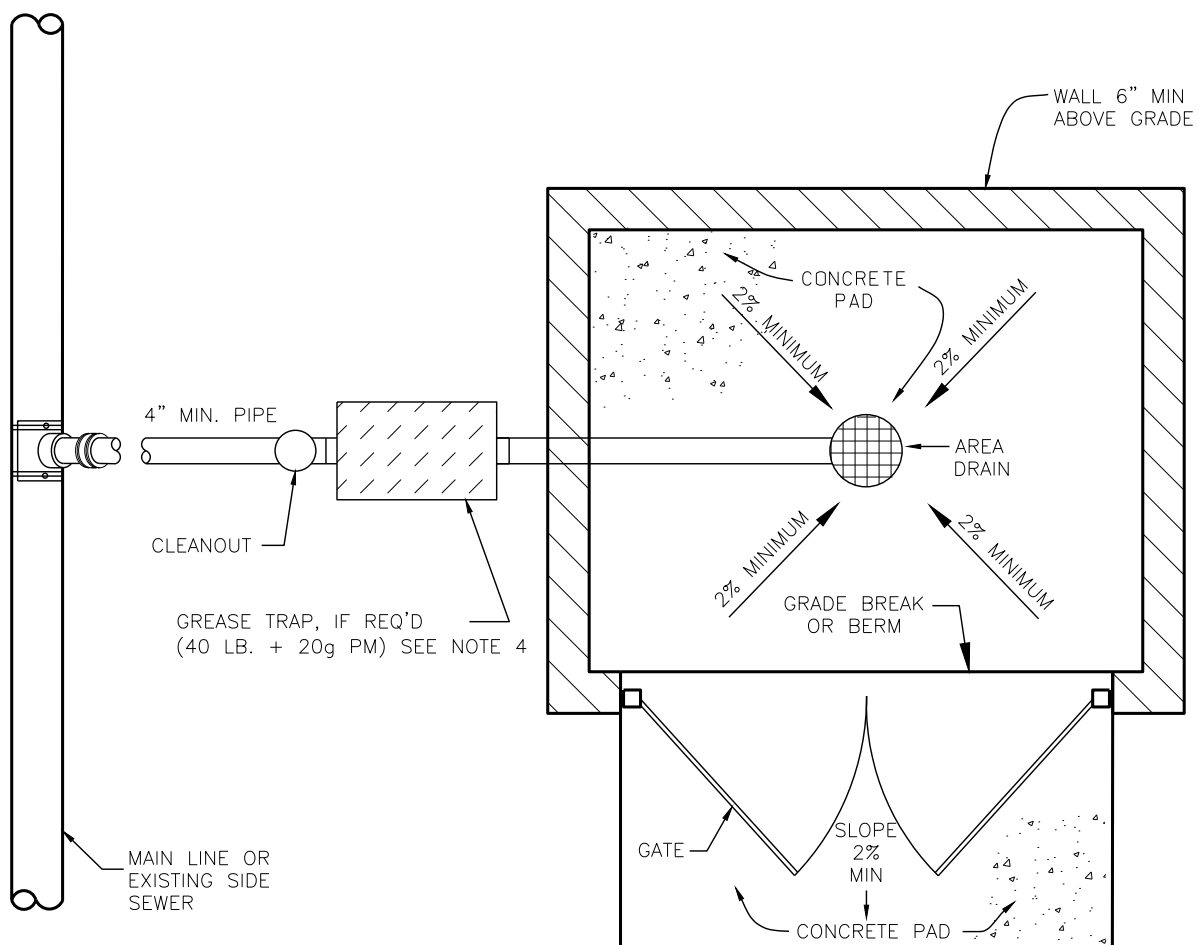
NOTE: 1. CAST IRON COVER SHALL READ "SANITARY SEWER".

SAMPLING BOX
(INSIDE ONLY)



CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

TRASH ENCLOSURE DETAIL (TYPICAL)

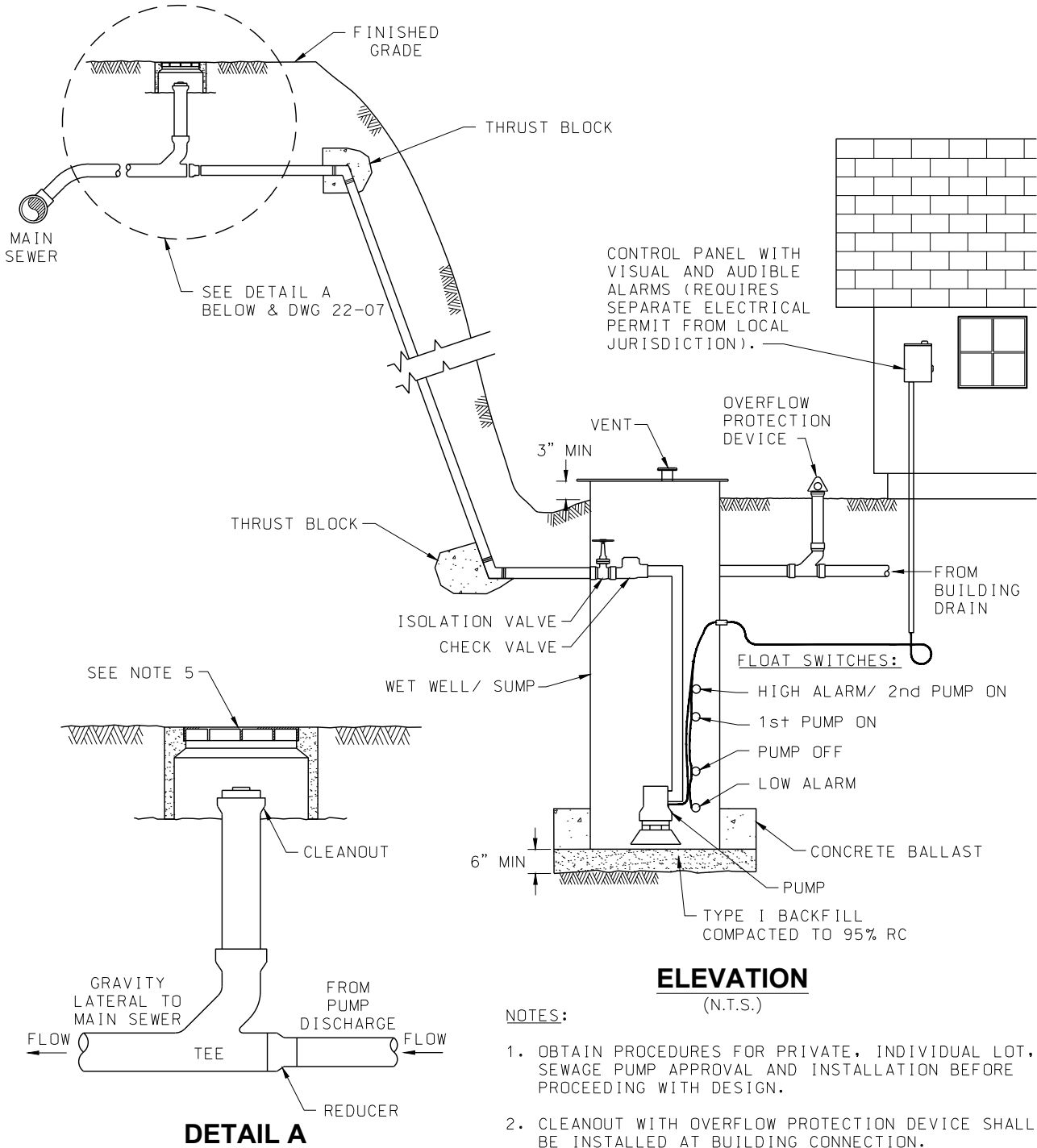


NOTES:

1. ROOF REQUIRED OVER ENTIRE ENCLOSURE WITH DOWNSPOUTS DIRECTED AWAY FROM ENCLOSURE.
2. A P-TRAP SHALL BE INSTALLED IMMEDIATELY DOWNSTREAM OF AREA DRAIN IF NO GREASE TRAP REQUIRED.
3. GREASE TRAP SHALL BE INSTALLED IF TRASH ENCLOSURE SERVES ANY COMMERCIAL FOOD SERVICE USE & AS DETERMINED BY SOURCE CONTROL FOR ALL OTHER APPLICATIONS.
4. ALL PIPING TO BE 4" MIN. SIZE INCLUDING INLET/OUTLET OF GREASE TRAP.
5. LOCATION OF GREASE TRAP & C/O VARIES WITH APPLICATION.
6. IF INSTALLED OUTSIDE PF ENCLOSURE, TRAFFIC RATED LID IS REQUIRED.
7. MAY ALSO BE CONNECTED TO GREASE INTERCEPTOR

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

INDIVIDUAL LOT PUMPING SYSTEM (CCCSD REVIEW AND APPROVAL REQUIRED)



NOTES:

1. TEE SHALL BE WYE, SANITARY TEE , OR COMBO WYE.
2. FOR COMMERCIAL PROPERTIES, 6-INCH TEE, CLEANOUT, AND GRAVITY LINE IS REQUIRED.
3. SOLVENT WELD TYPE JOINTS SHALL BE USED FOR PVC PIPES.

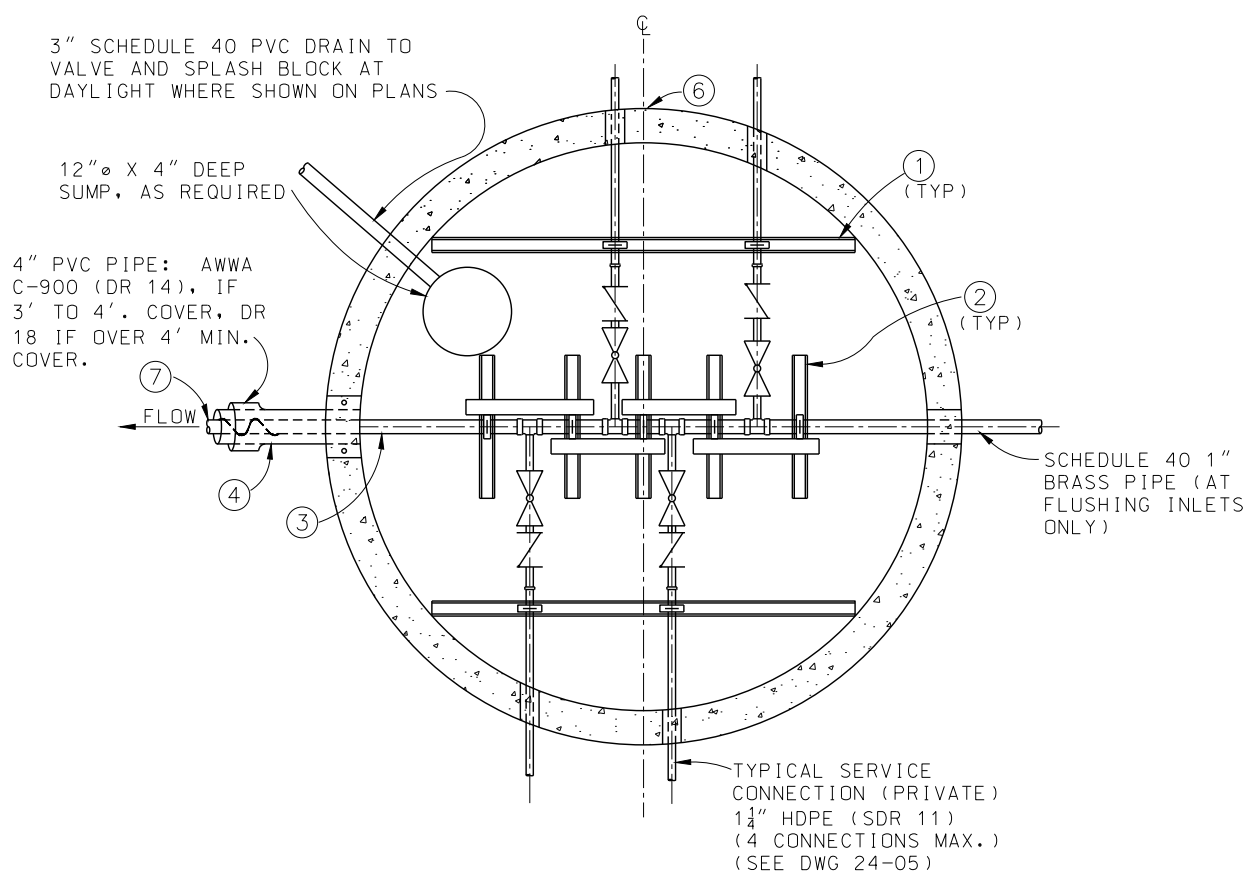
NOTES:

1. OBTAIN PROCEDURES FOR PRIVATE, INDIVIDUAL LOT, SEWAGE PUMP APPROVAL AND INSTALLATION BEFORE PROCEEDING WITH DESIGN.
2. CLEANOUT WITH OVERFLOW PROTECTION DEVICE SHALL BE INSTALLED AT BUILDING CONNECTION.
3. PUMP INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 33 32 26.
4. SEE SECTION 31 23 16 FOR BEDDING AND BACKFILL REQUIREMENTS.
5. SEE APPROVED MATERIALS LIST FOR TRAFFIC AND NON-TRAFFIC AREA PRECAST UTILITY BOXES AND GRATED LIDS.

CENTRAL CONTRA COSTA SANITARY DISTRICT

MARTINEZ, CALIFORNIA

MULTIPLE-USER, LOW-PRESSURE SEWER SYSTEM MANHOLE



PLAN

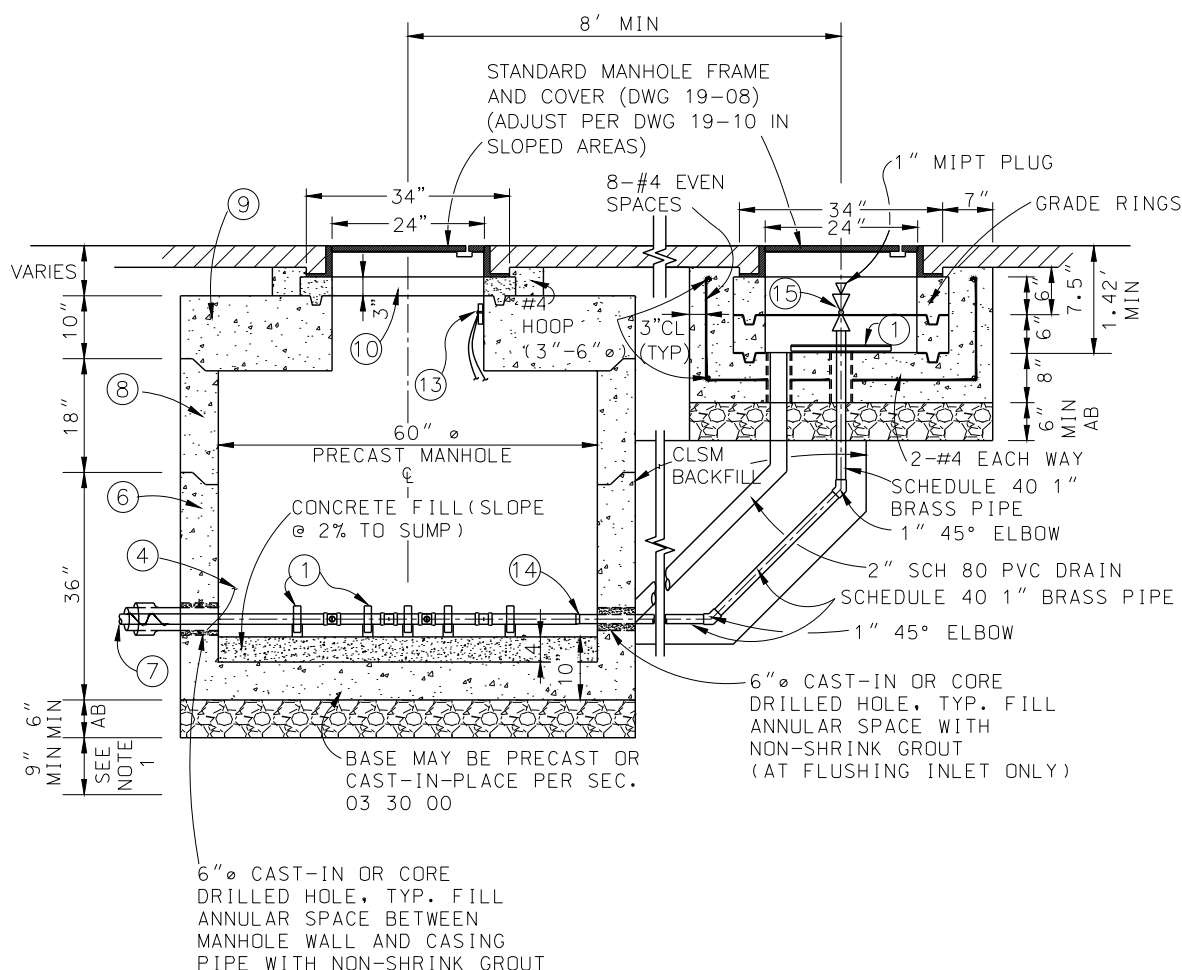
NOT TO SCALE

NOTE:

1. (XX) REFERS TO SPEC 33 31 26 MATERIAL LIST

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

MULTIPLE-USER, LOW-PRESSURE SEWER SYSTEM FLUSHING INLET



SANITARY SEWER FORCE MANHOLE AND FLUSHING MANHOLE

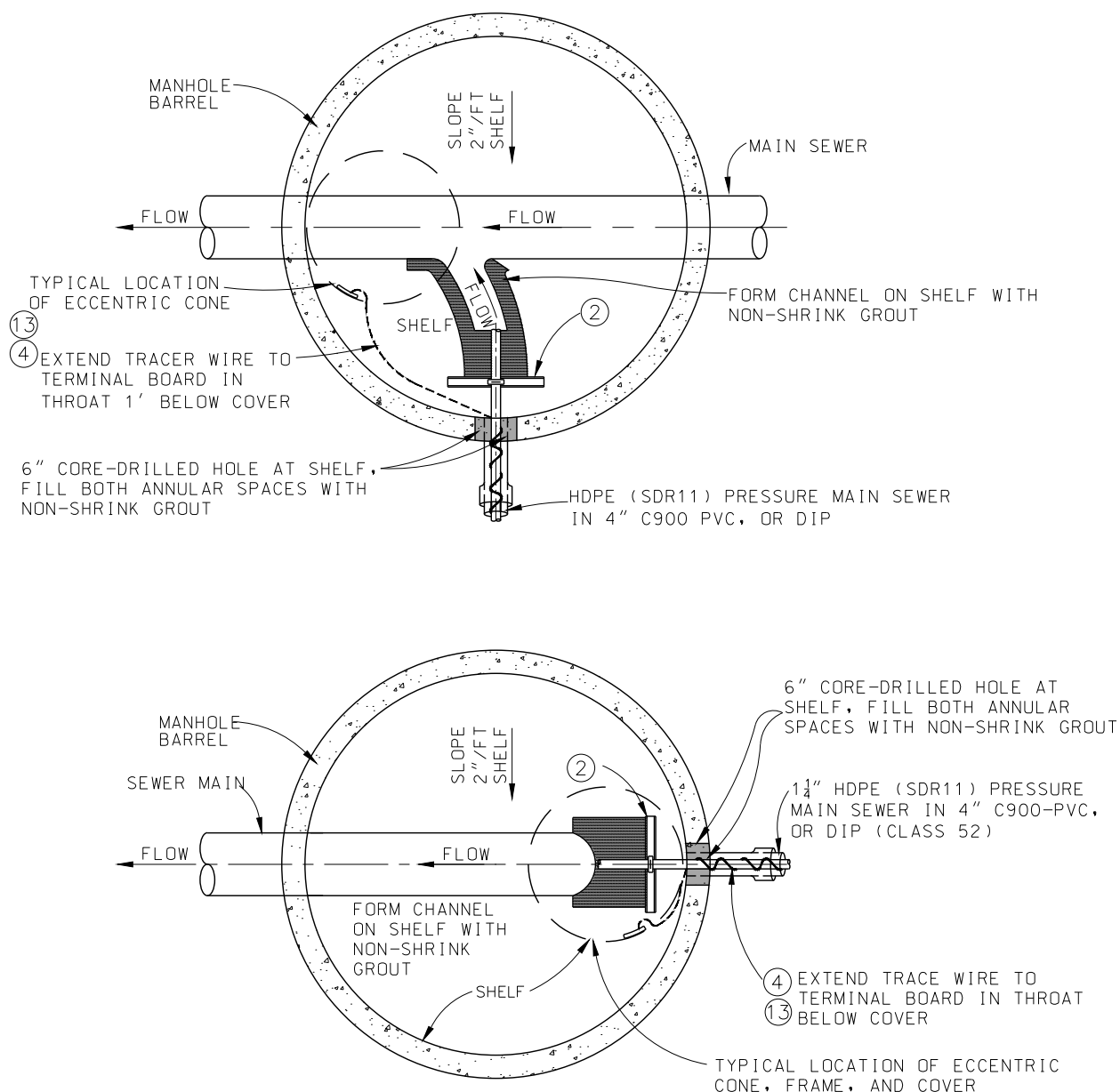
NOT TO SCALE

NOTES:

1. IF WATER OR SOFT GROUND IS PRESENT, PLACE COARSE BEDDING MATERIAL IN GEOTEXTILE WRAP (12" OVERLAP AT FABRIC ENDS)
2. (XX) REFERS TO SPEC 33 31 26 MATERIAL LIST

CENTRAL CONTRA COSTA SANITARY DISTRICT MARTINEZ, CALIFORNIA

MULTIPLE-USER, LOW-PRESSURE SEWER SYSTEM CONNECTION AT GRAVITY MANHOLE



NOTES:

1. STANDARD MANHOLE DETAILS ARE SHOWN ON DWG 19-01
2. (XX) REFERS TO SPEC 33 31 26 MATERIAL LIST

CONNECTION MANHOLE

NOT TO SCALE

MULTIPLE-USER, LOW-PRESSURE SEWER SYSTEM MISCELLANEOUS DETAILS



NOT TO SCALE