

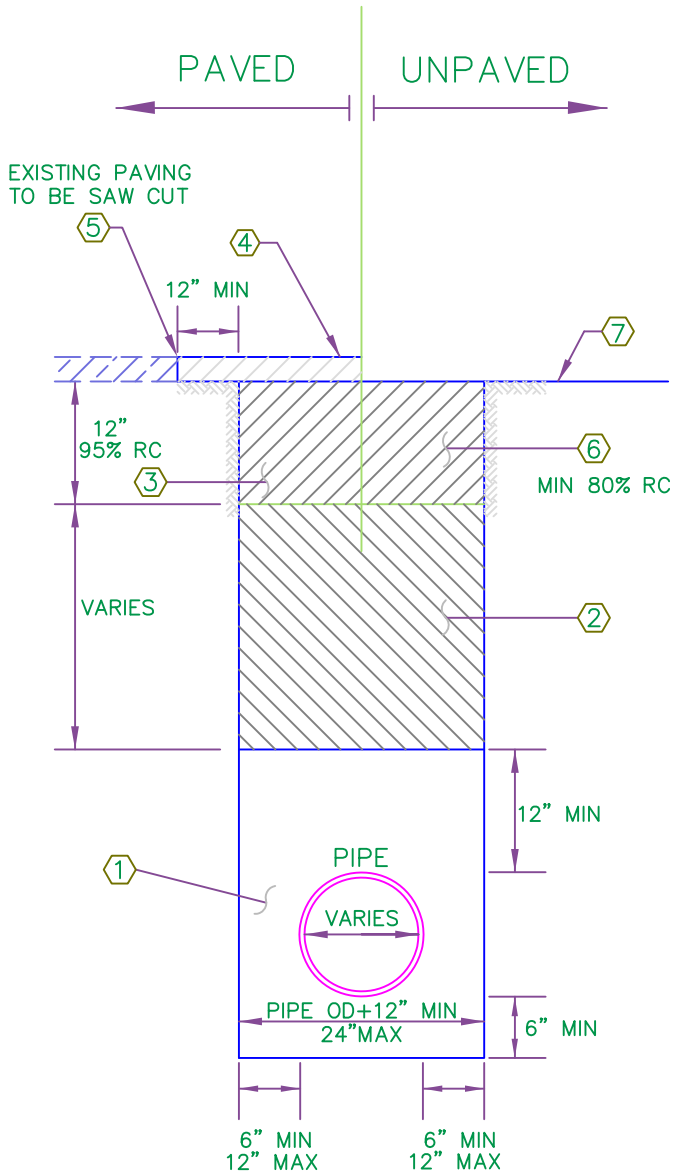
## SECTION V

### STANDARD CONSTRUCTION DETAILS

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# CUPERTINO SANITARY DISTRICT



## LEGEND:

- ① BEDDING MATERIAL PER CUSD STANDARD SPECIFICATIONS
- ② IN UNPAVED AREA, USE NATIVE BACKFILL COMPACTED TO 90% MINIMUM. IN PAVED AREA, USE CLASS 2 AGGREGATE BASE (3/4" MAXIMUM GRADATION) COMPACTED TO 95% MINIMUM. IF REQUIRED BY LOCAL AGENCY OR DISTRICT ENGINEER, USE 2 SACK SLURRY MIX CONCRETE BACKFILL. NATIVE MATERIAL MAY BE USED WITH DESIGNER OF RECORD RECOMMENDATION AND IF APPROVED BY THE DISTRICT ENGINEER.
- ③ CLASS 2 AGGREGATE BASE, 3/4" MAX.
- ④ 4" ASPHALT CONCRETE OR MATCH EXISTING DEPTH WHICHEVER IS GREATER.
- ⑤ APPLY TACK COAT ON SAW CUT EDGES PER SECTION 94 OF STATE SPECIFICATIONS.
- ⑥ TOPSOIL- MATCH EXISTING MINIMUM 90% RC (NATIVE MATERIAL)
- ⑦ GROUND COVER- MATCH EXISTING

## NOTES:

1. RELATIVE COMPACTION (RC) SHALL MEAN COMPACTION AS DETERMINED BY CALIFORNIA COMPACTION TEST METHOD OR BY ASTM METHODS.
2. ASPHALT CONCRETE TO BE HMA (TYPE A) 1/2" MAX AGGREGATE PER SECTION 39 OF STATE STANDARD SPECIFICATIONS.
3. ALL BACKFILL SHALL BE PLACED AND COMPACTED IN 6" MAXIMUM LIFTS.
4. CLASS 2 AGGREGATE BASE PER SECTION 26 AND ASPHALT CONCRETE (HMA) PER SECTION 39 OF THE STATE STANDARD SPECIFICATIONS AND DISTRICT STANDARD SPECIFICATIONS.
5. EXISTING AC PAVEMENT SHALL BE REPLACED TO THE EDGE OF PAVEMENT WHEN THE EDGE OF THE TRENCH IS 2' OR LESS FROM THE EDGE OF PAVEMENT.
6. WIDTH OF THE OPEN TRENCH WHEN INSTALLING THE MAIN LINE SHALL TYPICALLY BE TWICE THE DIAMETER OF THE PIPE BUT NOT LESS THAN 24".
7. THIS DETAIL DESCRIBES THE MINIMUM REQUIREMENTS FOR CUPERTINO SANITARY DISTRICT ONLY. ALL LOCAL AND COUNTY STANDARD SPECIFICATIONS MUST ALSO BE MET.

FILE NO.  
SP-248

## STANDARD TRENCH

DETAIL  $\frac{1}{12}$

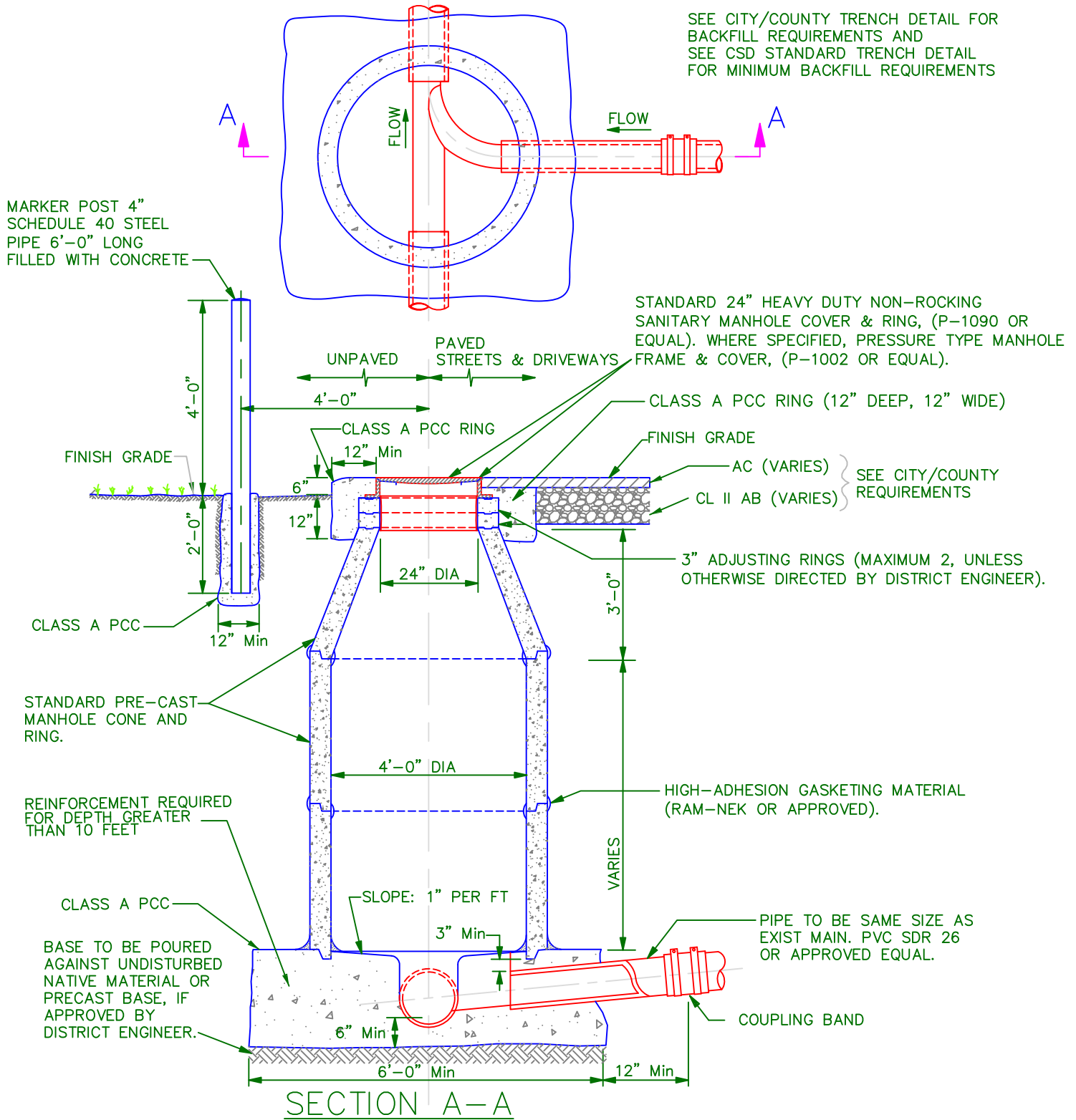
DR. BY: TN DATE: 06/01/14

CK. BY: JC DATE: 06/03/14

APPROVED BY:  DATE: 06/04/14



# CUPERTINO SANITARY DISTRICT



### NOTES:

- COUPLING BAND SHALL BE MISSION Banded STAINLESS STEEL "ARC SHIELD", FERNCO STAINLESS STEEL "SHEAR RING", OR APPROVED EQUAL. COUPLING BAND IS REQUIRED FOR ALL CONNECTIONS TO THE MANHOLE.
- ALL CONCRETE TO BE SIX (6) SACK.
- ALL GROUT SHALL CONTAIN "HYDROPEL" EXCEPT WHEN DIRECTED OTHERWISE BY DISTRICT ENGINEER.

FILE NO.  
SP-248

## STANDARD MANHOLE

DETAIL  $\frac{2}{12}$

DR. BY:  
TN

DATE:  
06/01/14

CK. BY:  
JC

DATE:  
06/03/14

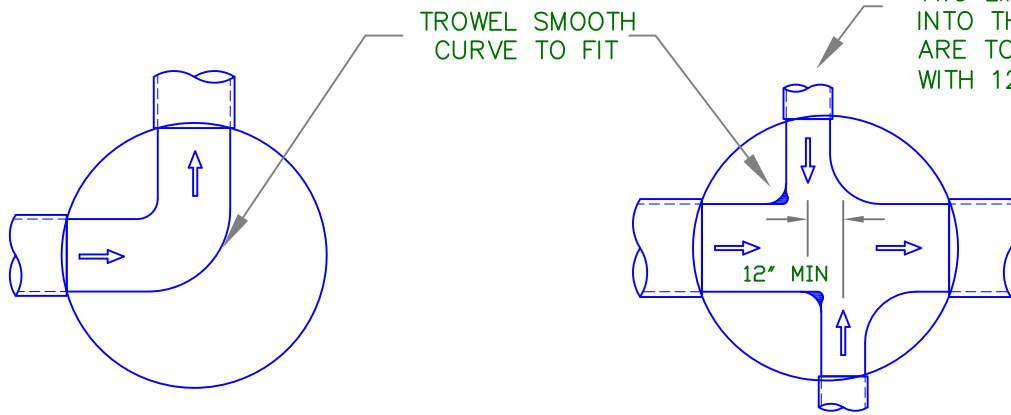
APPROVED. BY:

DATE: 06/04/14



# CUPERTINO SANITARY DISTRICT

WHEN FOUR (4) LINES COME INTO A MANHOLE, THE TWO LINES WHICH EMPTY INTO THE MAIN CHANNEL ARE TO BE STAGGERED WITH 12" MIN.

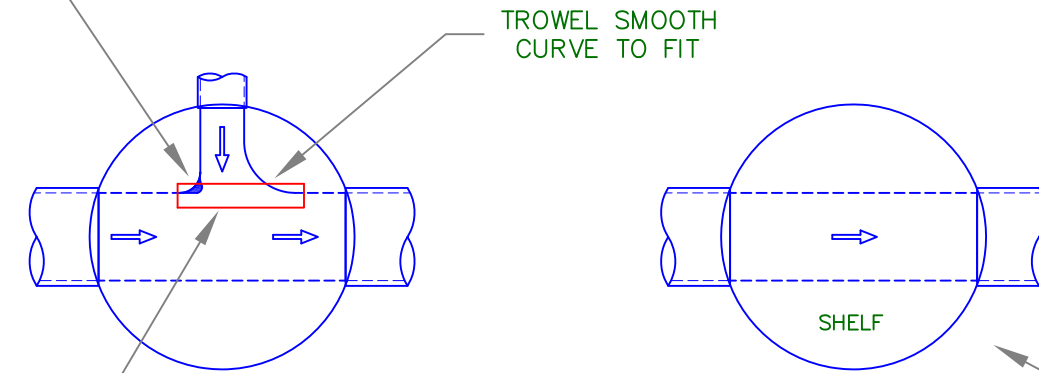


TYPICAL CURVED MANHOLE

TYPICAL MANHOLE WITH 2 BRANCHES

NOTE:  
 CHANNELS TO BE FORMED TO APPROXIMATE WIDTH, SIZE AND SHAPE, OF PIPE AND FINISHED WITH GROUT. THICKNESS OF GROUT TO BE APPROXIMATELY ONE HALF INCH (1/2")

CHANNELIZE IN DIRECTION OF FLOW (DO NOT INTRUDE MORE THAN 20% OF PIPE DIAMETER) (TYP)



TYPICAL MANHOLE WITH 1 BRANCH

TYPICAL STRAIGHT THROUGH MANHOLE

REMOVE THIS PORTION OF PIPE FIRST. THEN LAY PIPE THRU THE BOTTOM OF MANHOLE. AFTER CONCRETE HAS SET, REMOVE UPPER PORTION OF PIPE AS SHOWN IN DETAIL.

LAY PIPE THRU THE BOTTOM OF MANHOLE. AFTER CONCRETE HAS SET, REMOVE UPPER PORTION OF PIPE AS SHOWN IN DETAIL.

FILE NO.  
SP-248

## SANITARY SEWER MANHOLE SECTIONS

DETAIL  $\frac{3}{12}$

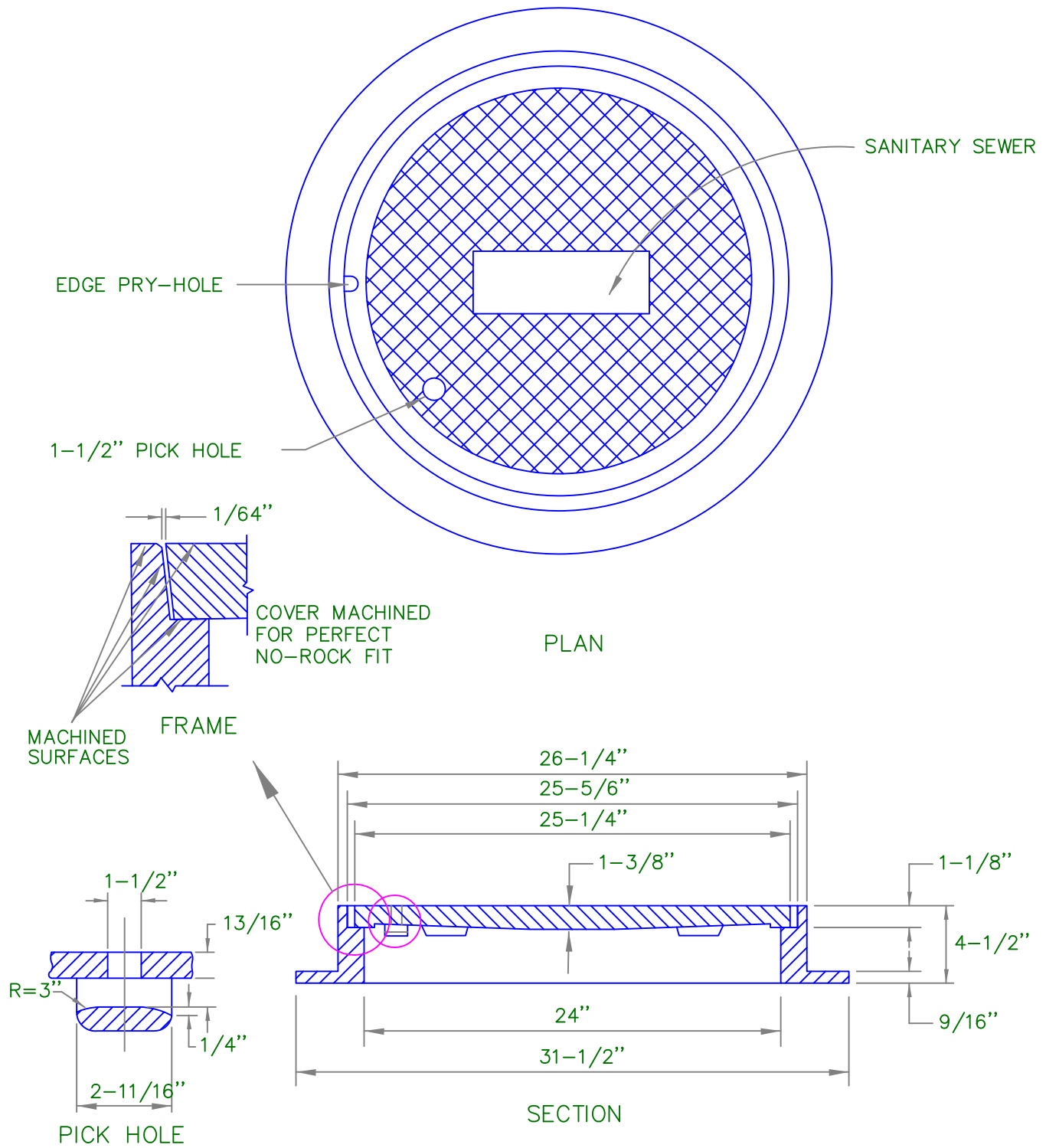
DR. BY: TN DATE: 06/01/14

CK. BY: JC DATE: 06/03/14

APPROVED BY:  DATE: 06/04/14



# CUPERTINO SANITARY DISTRICT



### NOTE:

1. WHEN THERE IS A NEED TO RAISE MANHOLE COVERS TO MEET NEW GRADE, ONLY ONE ADDITIONAL MANHOLE RING MAY BE ADDED.
2. FRAME AND COVER SHALL BE PHOENIX IRON WORKS #P-1090 OR APPROVED EQUAL.

FILE NO.  
SP-248

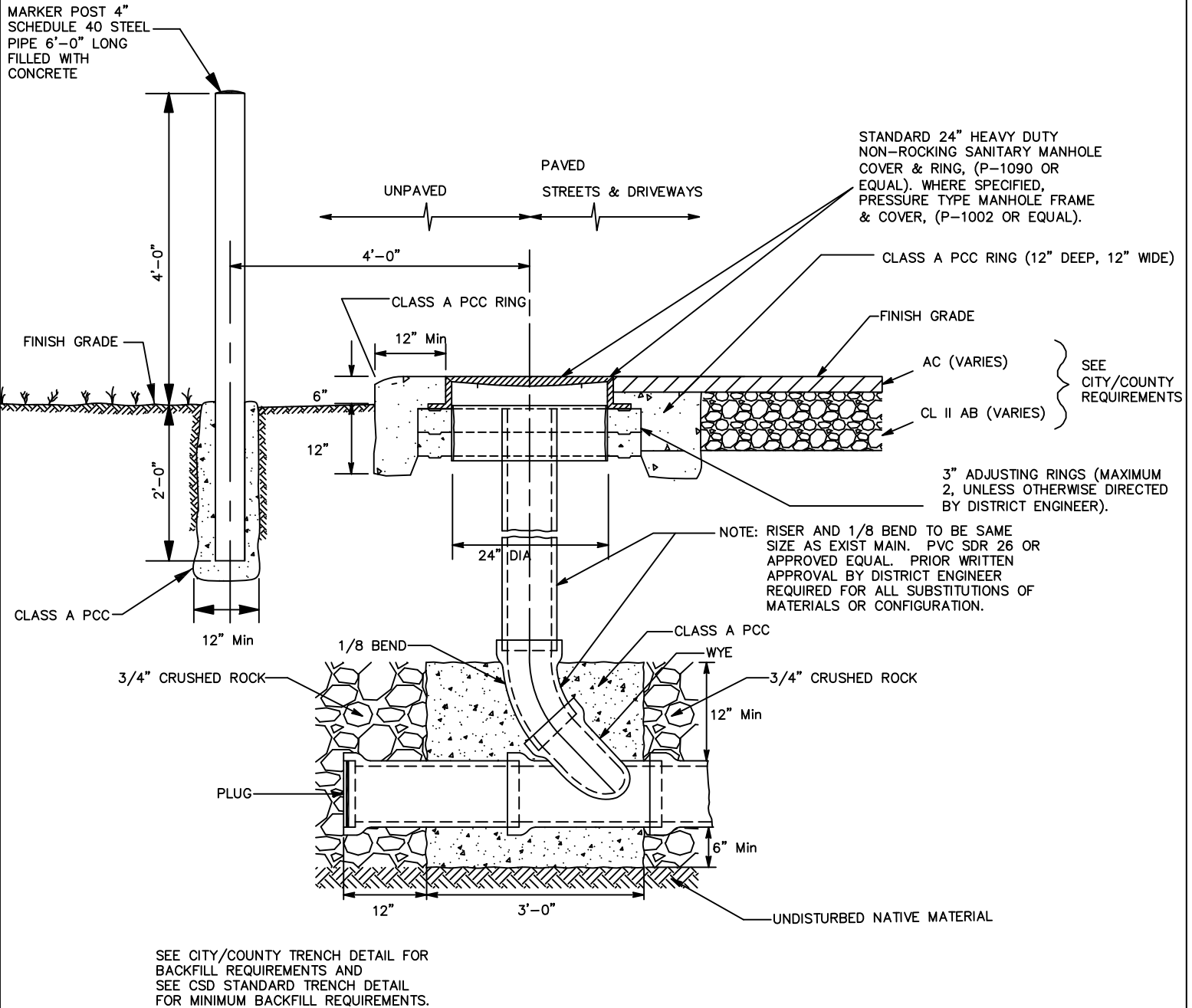
## SANITARY SEWER MANHOLE FRAME & COVER

DETAIL  $\frac{4}{12}$

DR. BY: TN	DATE: 06/01/14	CK. BY: JC	DATE: 06/03/14	APPROVED. BY:	DATE: 06/04/14
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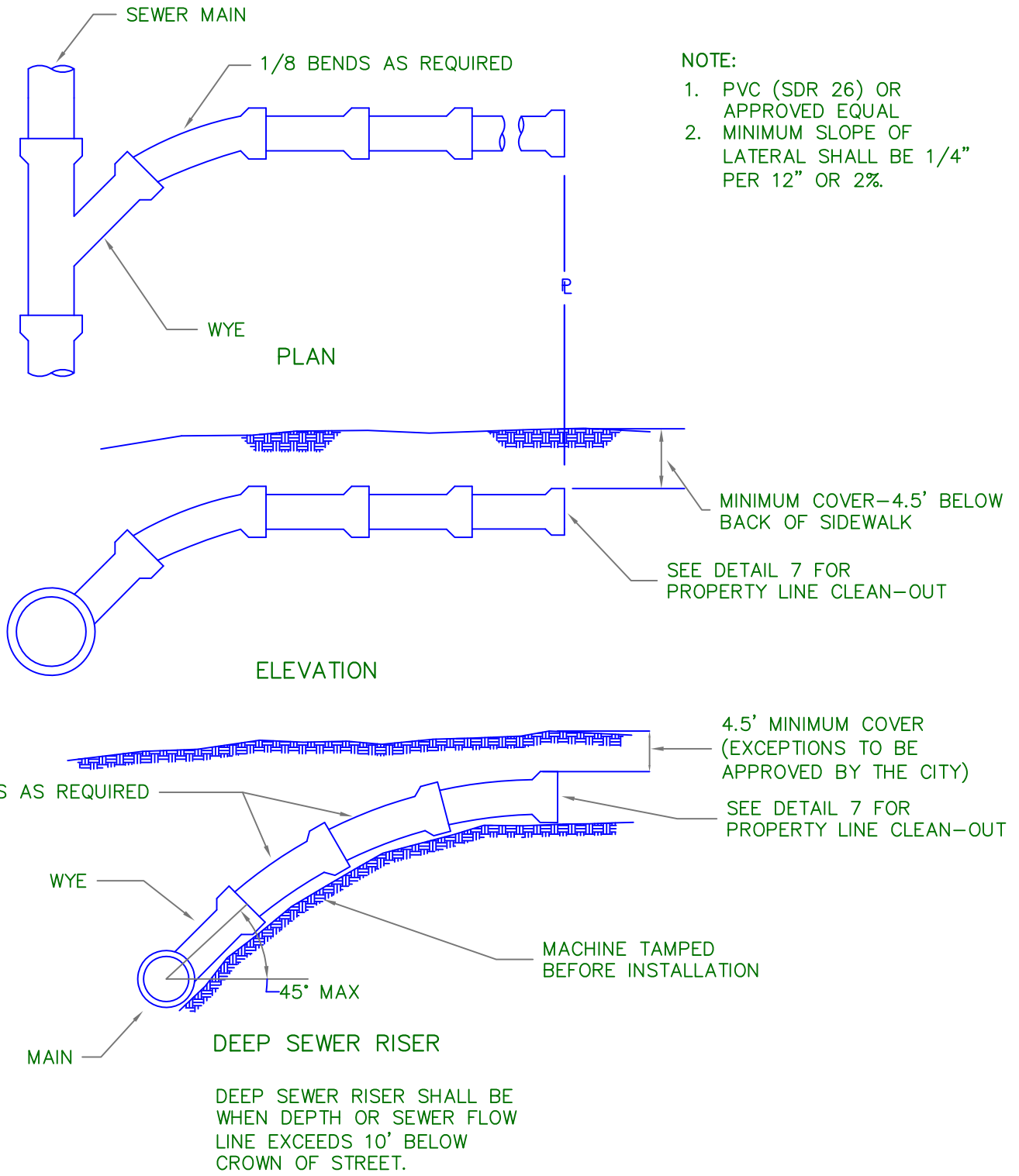
# CUPERTINO SANITARY DISTRICT



FILE NO. SP-248	STANDARD FLUSHING INLET				DETAIL $\frac{5}{12}$
DR. BY: TN	DATE: 06/01/14	CK. BY: JC	DATE: 06/03/14	APPROVED. BY: 	DATE: 06/04/14



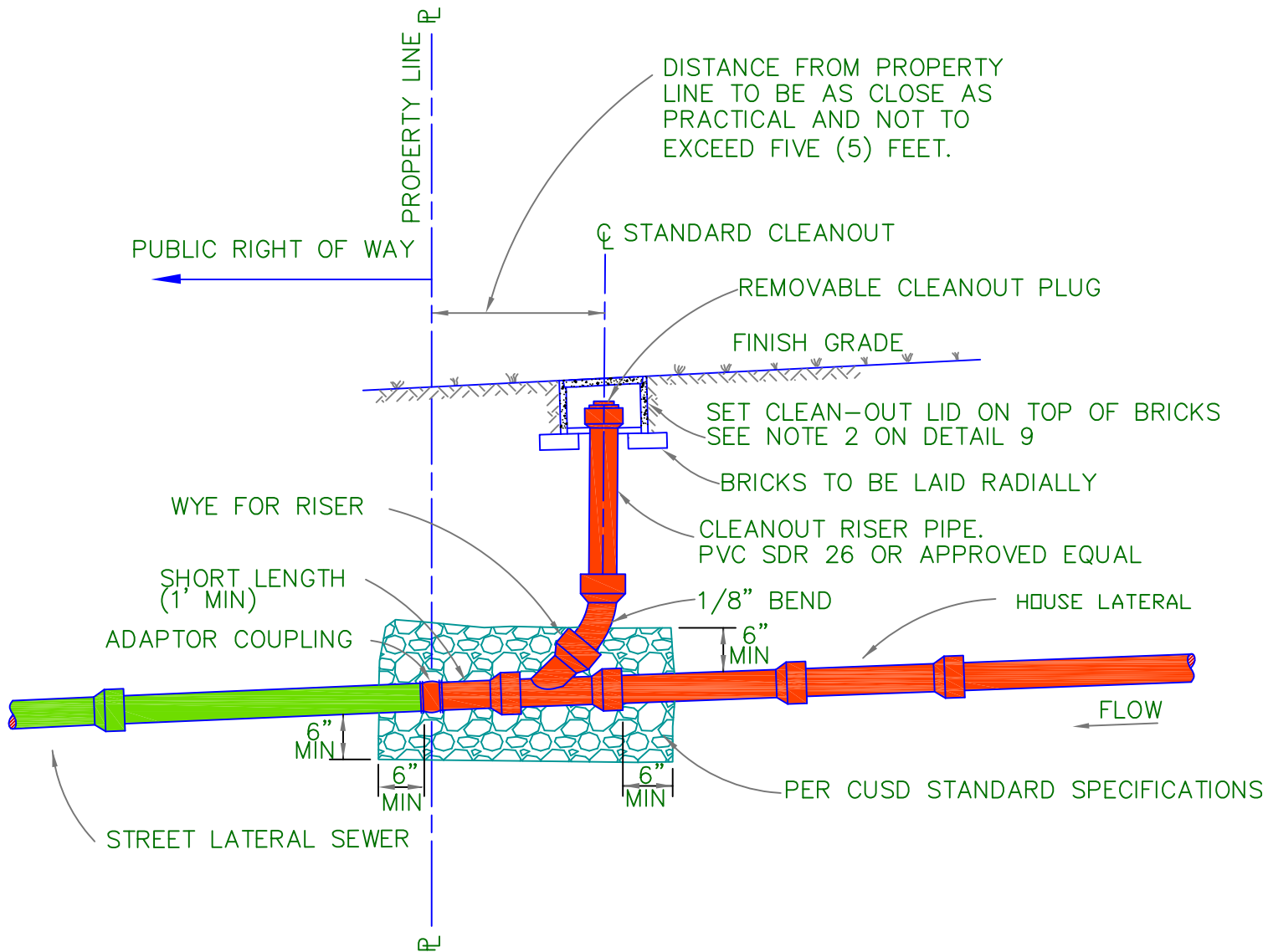
# CUPERTINO SANITARY DISTRICT



FILE NO. SP-248	<b>SEWER LATERAL AND DEEP SEWER RISER</b>				DETAIL $\frac{6}{12}$
DR. BY: TN	DATE: 06/01/14	CK. BY: JC	DATE: 06/03/14	APPROVED. BY:	DATE: 06/04/14



# CUPERTINO SANITARY DISTRICT



### NOTES:

1. 2% MINIMUM PIPE SLOPE (TYP).
2. LATERAL SEWER CLEANOUT TO BE SAME SIZE AS LATERAL SEWER.
3. AT LEAST 6-INCH CLEARANCE BETWEEN VALVE CAP AND INSIDE OF BOX.
4. CONNECT HOUSE LATERAL TO EXISTING STREET LATERAL WITH MISSION CLAY OR FERNCO "SHEAR-RING", "ARC SHIELDED" OR APPROVED EQUAL (TYP)
5. a. CONTACT DISTRICT OFFICE FOR LATERAL/CLEANOUT LOCATION AT (408)253-7071.  
 b. NOTIFY DISTRICT INSPECTOR 48 HOURS PRIOR TO CONSTRUCTION.  
 c. CONTACT DISTRICT INSPECTOR FOR VISUAL INSPECTION PRIOR TO BACKFILLING FOR FINAL APPROVAL.  
 d. FINAL INSPECTION CONSISTS OF CLOSED CIRCUIT VIDEO INSPECTION OF POINT OF CONNECTION AND LOWER LATERAL TO CONFIRM DEBRIS HAVE NOT ENTERED.

FILE NO.  
SP-248

## STANDARD PROPERTY LINE CLEANOUT

DETAIL  $\frac{7}{12}$

DR. BY: TN      DATE: 06/01/14

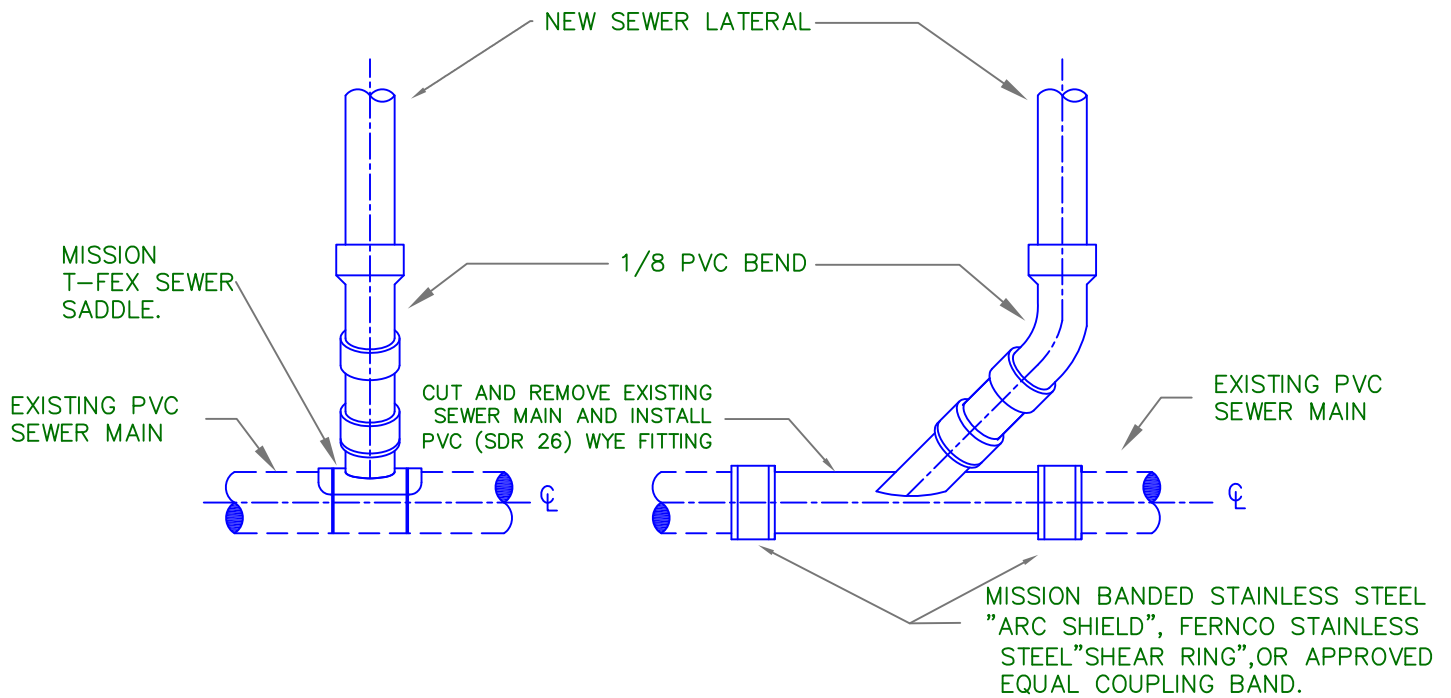
CK. BY: JC      DATE: 06/03/14

APPROVED. BY:       DATE: 06/04/14





# CUPERTINO SANITARY DISTRICT



DETAIL A:  
 NEW LATERAL INTO EXIST. PVC  
 SEWER MAIN ONLY. DETAIL B MAY  
 ALSO BE USED WITH PVC MAIN.

DETAIL B:  
 NEW LATERAL INTO EXIST. VCP  
 SEWER MAIN ONLY

FILE NO.  
 SP-248

## SEWER LATERAL CONNECTIONS TO SEWER MAINS

DETAIL  $\frac{8}{12}$

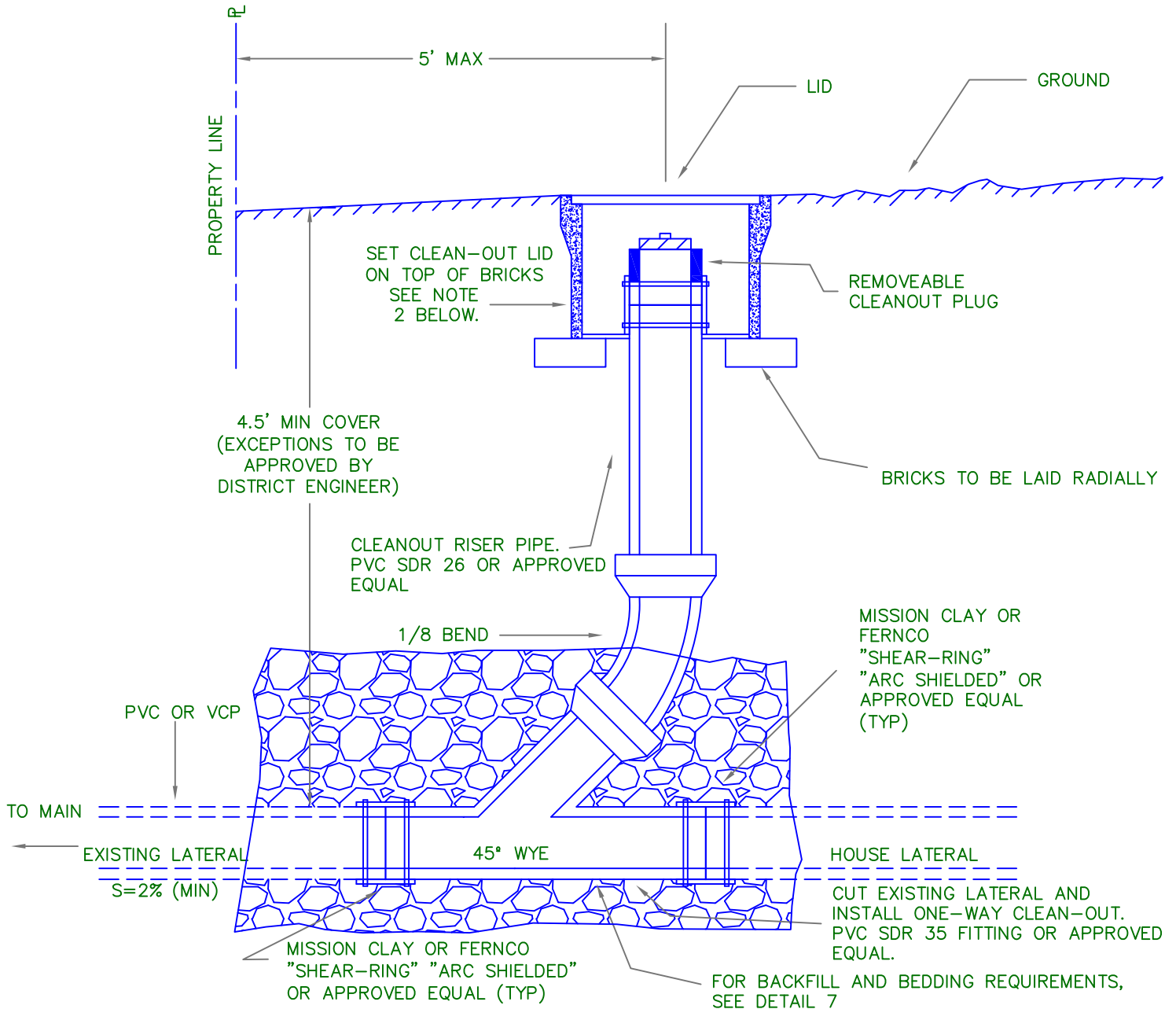
DR. BY: TN DATE: 06/01/14

CK. BY: JC DATE: 06/03/14

APPROVED. BY:  DATE: 06/04/14



# CUPERTINO SANITARY DISTRICT



**NOTE:**

1. ALL NEW PIPING SHALL BE PVC SDR 26, OR APPROVED EQUAL UNLESS OTHERWISE NOTED.
2. ALL CLEAN-OUT BOXES SHALL BE CHRISTY CONCRETE PRODUCTS MANUFACTURED BY OLDCASTLE PRECAST, INC. WITH THE FOLLOWING MODEL NUMBERS:

	4" RISER		6" RISER	
	NON-TRAFFIC	TRAFFIC	NON-TRAFFIC	TRAFFIC
BOX	F08	G05T	F08	G08T
LID	F08C	G05CT	F08C	G05CT

3. LIDS SHALL BE MARKED "SEWER"
4. STAMP OR GRIND FACE OF CURB WITH "S" WHERE LATERAL PASSES UNDER CURB, IF NOT PRESENT.
5. 1/8 BEND MAY BE PART OF 45° WYE IF APPROVED BY CITY.

FILE NO.  
SP-248

SEWER LATERAL CLEAN-OUT INSTALLATION ON EXISTING SEWER LATERAL

DETAIL  $\frac{9}{12}$

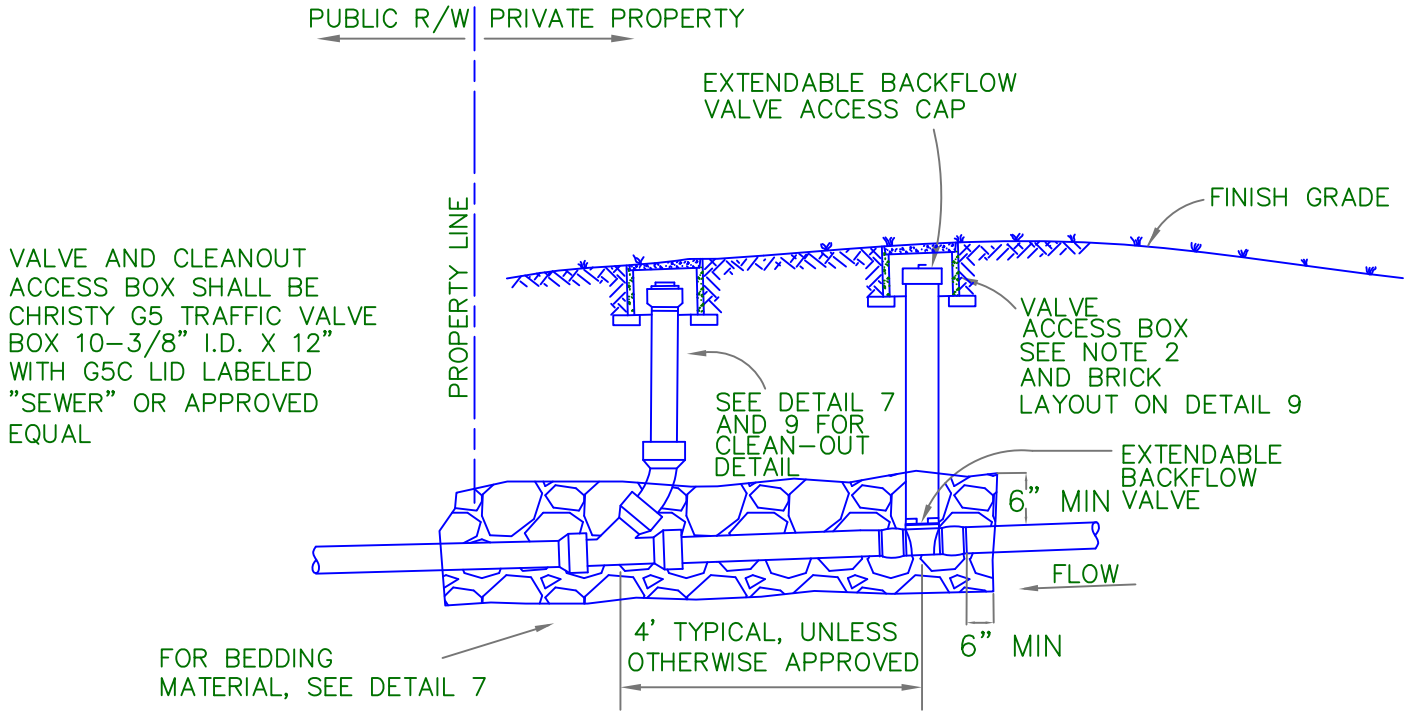
DR. BY: TN  
DATE: 06/01/14

CK. BY: JC  
DATE: 06/03/14

APPROVED BY:  DATE: 06/04/14



# CUPERTINO SANITARY DISTRICT



### NOTES:

1. A BACKFLOW PREVENTER DEVICE IS REQUIRED WHEN THE ELEVATION OF THE LOWEST FINISHED FLOOR WITH PLUMBING IS LESS THAN 12" ABOVE THE NEAREST UPSTREAM MANHOLE OR FLUSHING INLET.
2. ALL CLEANOUTS AND BACKFLOW DEVICES ARE TO BE MAINTAINED BY PROPERTY OWNER.
3. ALL BACKFLOW DEVICES ARE TO BE ACCESSIBLE FOR LATERAL SEWER MAINTENANCE.
4. PLACARD SHALL BE PLACED IN THE UPSTREAM CLEANOUT BOX CLOSEST TO THE HOUSE WARNING THE PLUMBER OF THE EXTENDABLE BACKWATER VALVE.

FILE NO.  
SP-248

## STANDARD BACKFLOW PREVENTER DEVICE INSTALLATION

DETAIL  $\frac{10}{12}$

DR. BY:  
TN

DATE:  
06/01/14

CK. BY:  
JC

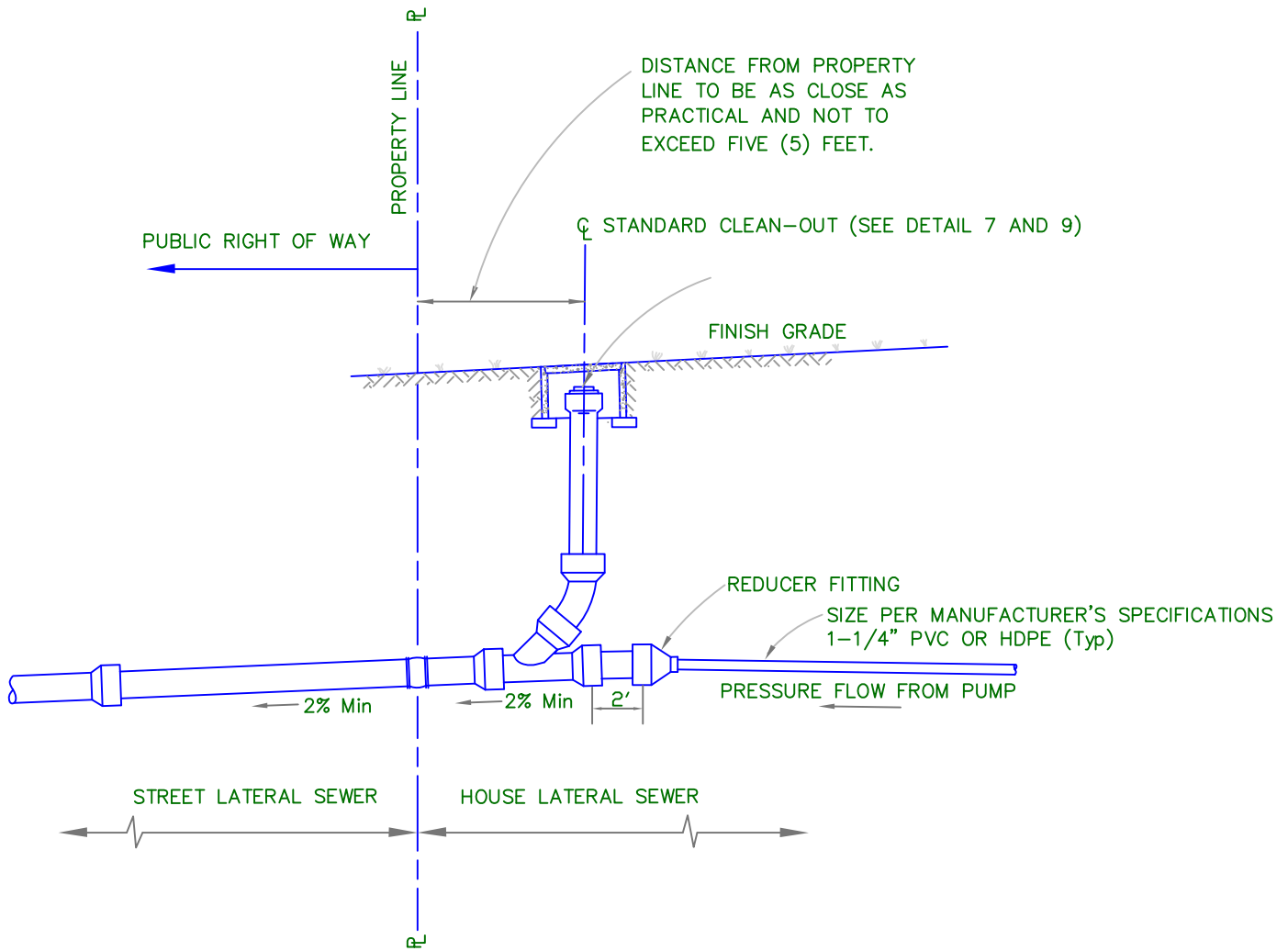
DATE:  
06/03/14

APPROVED. BY:

DATE: 06/04/14



# CUPERTINO SANITARY DISTRICT



### NOTES:

1. ALL ON-SITE PLUMBING, IN ACCORDANCE WITH LOCAL JURISDICTION BUILDING DEPARTMENT REQUIREMENTS.
2. LATERAL SEWER CLEANOUT TO BE SAME SIZE AS STREET LATERAL SEWER.
3. 6-INCH MINIMUM CLEARANCE BETWEEN REMOVABLE CLEANOUT PLUG AND INSIDE OF BOX REQUIRED.
4. REFER TO PUMP MANUFACTURER'S RECOMMENDATIONS FOR ANY ADDITIONAL EQUIPMENT REQUIRED FOR THE PRESSURE LINE AND CONNECTION TO GRAVITY SEWER. PUMP SHALL BE EQUIPPED WITH BACKFLOW PREVENTER DEVICE.

FILE NO.  
SP-248

## STANDARD CLEANOUT W/ PUMP CONNECTION

DETAIL  $\frac{11}{12}$

DR. BY: TN  
DATE: 06/01/14

CK. BY: JC  
DATE: 06/03/14

APPROVED. BY:  DATE: 06/04/14



# CUPERTINO SANITARY DISTRICT

## CUPERTINO SANITARY DISTRICT SANITARY SEWER NOTES

1. All work shall be constructed in accordance with these plans, the current Cupertino Sanitary District Standard Specifications and Construction Details, and be installed in accordance with Manufacturers' requirements and specifications.
2. All work shall comply with all current local, state and federal requirements.
3. All excavation, backfill, and pavement section within street right-of-way shall be done in accordance with the requirements of the Engineer of the Public Agency having jurisdiction and District Standard Specifications and Details. In case of conflict between Public Agency and District, Agency's requirements shall take precedence.
4. Agency's Encroachment Permits shall be obtained and a copy shall be on the job during construction.
5. Fill material shall be compacted to a minimum of two and one half (2.5) feet above the top of pipe elevation by methods that will not damage the pipe or two (2) slurry mix. Fill material must attain a minimum of ninety five percent (95%) relative compaction in pavement areas in accordance with the State of California Standard Specifications.
6. The District Engineer shall be notified two (2) working days in advance of starting construction, 20863 Stevens Creek Boulevard, Suite 100, Cupertino, CA 95014 (408) 253-7071. At that time, traffic plans, encroachment permits and the sewer diversion plans shall be submitted to the District Engineer. Sewer diversion plans shall include sewage bypass and emergency plans. Work shall not begin until the District Engineer has provided written acceptance of these plans.
7. One (1) sanitary sewer lateral shall be installed for each lot, residential unit or building with a clean-out. Location of lateral and property corners to be staked in field at the same time the sewer main is staked for construction. Laterals shall not be laid on less than two percent (2%) grade and shall have a minimum cover of four and one half (4.5) feet at property line or edge of sanitary sewer easement. Laterals shall be deeper than four and one half (4.5) feet when directed by District Engineer. Laterals shall not be extended beyond the street right-of-way line or sanitary sewer easement line until the main has been tested. Lateral sewers constructed outside of the public street or Cupertino Sanitary District Easement shall be constructed in accordance with the requirements of, and shall be inspected by the City Building Department.
8. Existing laterals to be abandoned (or not used) shall be removed to the wye, capped and concrete collar minimum of 6" all around.
9. The Contractor performing work on the sanitary sewers shall be required to register with the District and provide insurance as specified in Sections 1.39 and 1.40 of the District's Standard Specifications.
10. The Developer and General Contractor shall be responsible for protection of all existing improvements including existing sanitary sewer facilities that are to remain and if damaged during construction of the proposed improvements, shall be repaired to the satisfaction of the Cupertino Sanitary District and other affected agencies.
11. Channels of all District manholes within the construction area shall be protected by plywood covers, placed in the manholes and manhole castings shall be adjusted to final grade in accordance with the Standard Specifications of the Cupertino Sanitary District or as directed by the District Engineer.

FILE NO.  
SP-248

## SANITARY SEWER NOTES

DETAIL 12A  
12

DR. BY:           DATE:  
TN                   06/01/14

CK. BY:           DATE:  
JC                   06/03/14

APPROVED. BY:  DATE: 06/04/14



# CUPERTINO SANITARY DISTRICT

12. The Developer and General Contractor shall be responsible for the prevention of construction debris entering the existing sanitary sewer system due to the construction activities associated with this project and the Developer and Contractor shall pay all costs associated with the release of construction debris into the existing sanitary sewer system due to the construction activities associated with this project.
13. The Developer and General Contractor shall be responsible for the prevention of a sewage spill associated the Contractors activities and shall pay all costs associated with the release of sewage into surface drainage system and downstream surface waters.
14. Utility Notification:
  - a. Underground Service Alert 800-227-2600
  - b. Storm Drains - City
  - c. Sanitary Sewers - Cupertino Sanitary District
14. Contractor shall pothole and verify location and depth of all existing utilities crossing new sewer main or lateral construction.
15. All Sanitary Sewer Pipes shall be PVC-SDR26 or approved equal, unless otherwise specified by the District Engineer.
16. Access for pedestrians and vehicles shall be provided at all times unless approved in writing by the District Engineer.
17. Sanitary Sewer Manholes, Flushing Inlets and Cleanouts shall be marked with "SANITARY" or "SANITARY SEWER".
18. At the Developer/General Contractor's expense, Closed Circuit Video Inspection of mains, laterals and property line clean-outs is required. When the use of an existing lateral is proposed, an additional video inspection is required prior to construction to verify that it meets the current District Standards.

Approval of these plans by Cupertino Sanitary District does not relieve the Developer/General Contractor of the responsibility for the correction of mistakes, errors, or omissions. If, during the course of construction of the sanitary sewers the public interest requires a modification of, or a departure from the District Specifications and/or Details, the District Engineer shall have the authority to require such modifications or departure and to specify the manner in which the modifications or departure is to be done.

FILE NO.  
SP-248

## SANITARY SEWER NOTES

DETAIL  $\frac{12B}{12}$

DR. BY: TN      DATE: 06/01/14

CK. BY: JC      DATE: 06/03/14

APPROVED. BY:       DATE: 06/04/14