

WATER MAIN

WATER MAINS SHALL BE DUCTILE IRON PIPE, CLASS 52, CONFORMING WITH ANSI/AWWA SPECIFICATIONS C105/A21.5. CORROSION PROTECTION SHALL CONSIST OF THE FOLLOWING OR AN EQUAL SUBJECT TO THE APPROVAL OF THE CITY ENGINEER:

-PIPE SHALL HAVE ONE (1) MILLIMETER OF ZINC WELDED TO IT'S EXTERIOR IN ACCORDANCE WITH EN 545/ISO 2531. ZINC SHALL BE APPLIED TO ACHIEVE A MEAN MASS OF 130 GRAMS PER SQUARE METER.

-A THREE (3) MILLIMETER EPOXY COATING SHALL BE APPLIED OVER THE ZINC DEPOSIT TO PROVIDE MECHANICAL PROTECTION OF THE ZINC AND SHALL BE COLORED BLUE.

JOINTS ON THE PIPE SHALL BE TYTON OR APPROVED EQUAL RUBBER GASKET TYPE CONFORMING TO ANSI/AWWA SPECIFICATION C111/A21.11.

SANITARY SEWER- GRAVITY MAIN

SANITARY SEWER GRAVITY MAINS SHALL BE P.V.C. PIPE, SDR-26 OR LESS.

SANITARY SEWER - FORCE MAIN

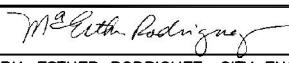
SANITARY SEWER FORCE MAINS SHALL BE C-900 CLASS 100 PVC WITH LOCATOR WIRE. THE WIRE SHALL BE A MINIMUM OF 12 GUAGE THW OR 12 GUAGE THWN, AND SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF PIPE LAID BETWEEN CLEANOUTS. THE WIRE SHALL BE SECURED TO PIPE BY TAPE WRAPPED COMPLETELY AROUND PIPE EVERY 12 FEET OR LESS. THE WIRE SHALL BE BROUGHT INTO CLEANOUT MANHOLES WITH 2 FEET OF WIRE MORE THAN IS NEEDED TO REACH THE SURFACE.

STORM SEWER

STORM SEWER MAINS SHALL BE:

- - CLASS III REINFORCED CONCRETE PIPE (RCP) WITH RUBBER ISOPRENE GASKETS
- PVC SDR-26 PIPE OR LESS.
- HIGH DENSITY POLYETEHYLENE (HDPE) CORRUGATED PIPE WITH SMOOTH INTERIOR WALLS (TYPE "S"), WITH RUBBER GASKETTED, WATER-TIGHT JOINTS MEETING THE REQUIREMENTS OF ASTM 3212 (ADS N12 OR APPROVED EQUAL).

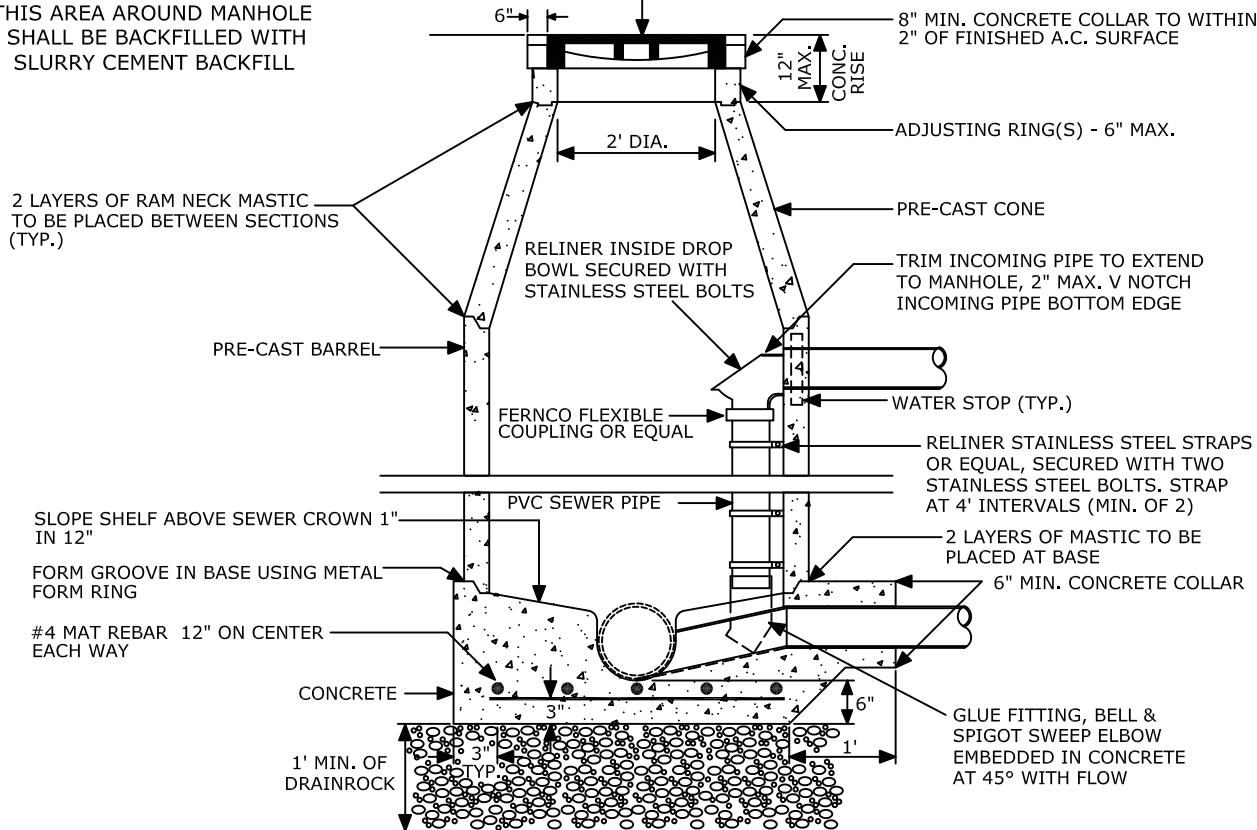
CITY OF WATSONVILLE PUBLIC WORKS & UTILITIES DEPARTMENT

NOT TO SCALE	 CITY OF WATSONVILLE	STANDARD DRAWING FOR WATER, SANITARY SEWER & STORM SEWER PIPING	DRAWN: 12/02	REV.: 09/15
DRAWN BY: P.A.C.			RESOLUTION: 76-13 (CM)	
CHECKED BY: T.S.		 MARIA ESTHER RODRIGUEZ, CITY ENGINEER	DRAWING No. S-201	

MANHOLE FRAME AND COVER SHALL BE No. P-1090 AS MANUFACTURED
BY PHONIX IRON WORKS OR EQUAL

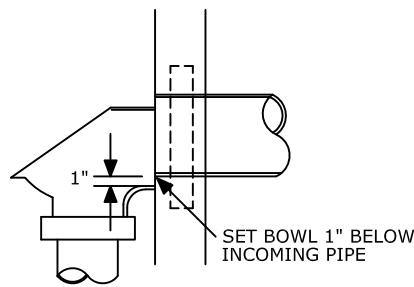
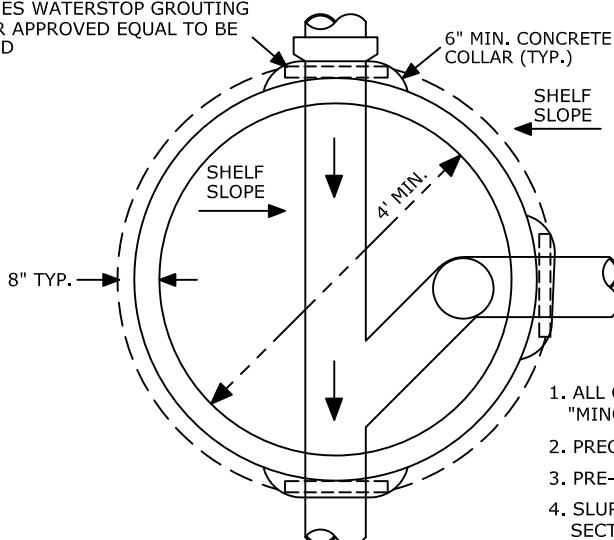
NOTE:

THIS AREA AROUND MANHOLE
SHALL BE BACKFILLED WITH
SLURRY CEMENT BACKFILL



WATER STOPS REQUIRED

WATERSTOP REQUIRED
PRESS SEAL GASKET CORPORATION,
W-S SERIES WATERSTOP GROUTING
RINGS OR APPROVED EQUAL TO BE
INSTALLED



NOTES.

1. ALL CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 90 - 2, "MINOR CONCRETE" OF THE CALTRANS STANDARD SPECIFICATIONS
2. PRECAST CONES, BARREL AND RINGS SHALL MEET ASTM C478.
3. PRE-CAST CONCRETE BASE SECTIONS ARE PROHIBITED.
4. SLURRY CEMENT BACKFILL SHALL BE IN ACCORDANCE WITH SECTION 19, "SLURRY CEMENT BACKFILL" OF THE CALTRANS STANDARD SPECIFICATIONS.
5. FOR SANITARY SEWERS, PROVIDE DROP INLET WHERE GRADE OF ENTERING LINE IS 24" OR MORE ABOVE THE FLOWLINE OF THE SEWER MANHOLE.

CITY OF WATSONVILLE PUBLIC WORKS & UTILITIES DEPARTMENT

NOT TO SCALE



**CITY OF
WATSONVILLE**

STANDARD DRAWING FOR

STANDARD MANHOLE

DRAWN: 11/10 REV.: 8/12

RESOLUTION:
76-13 (CM)

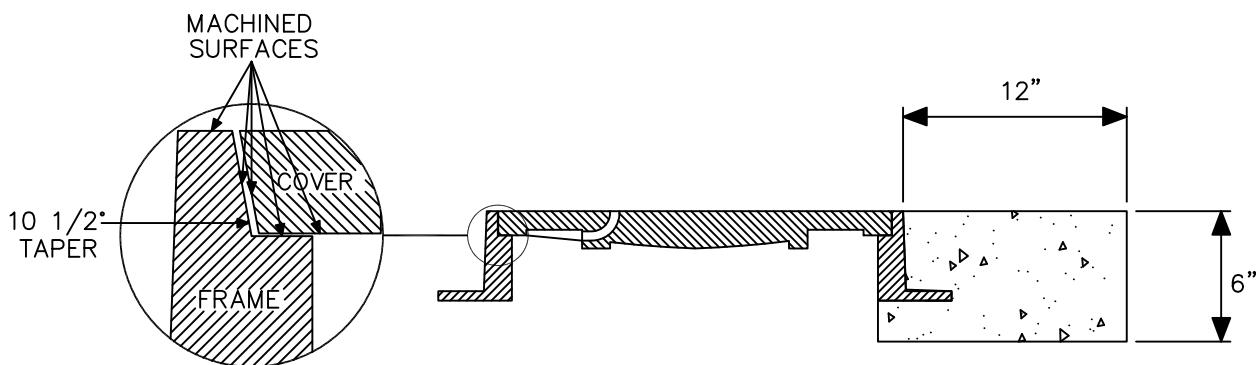
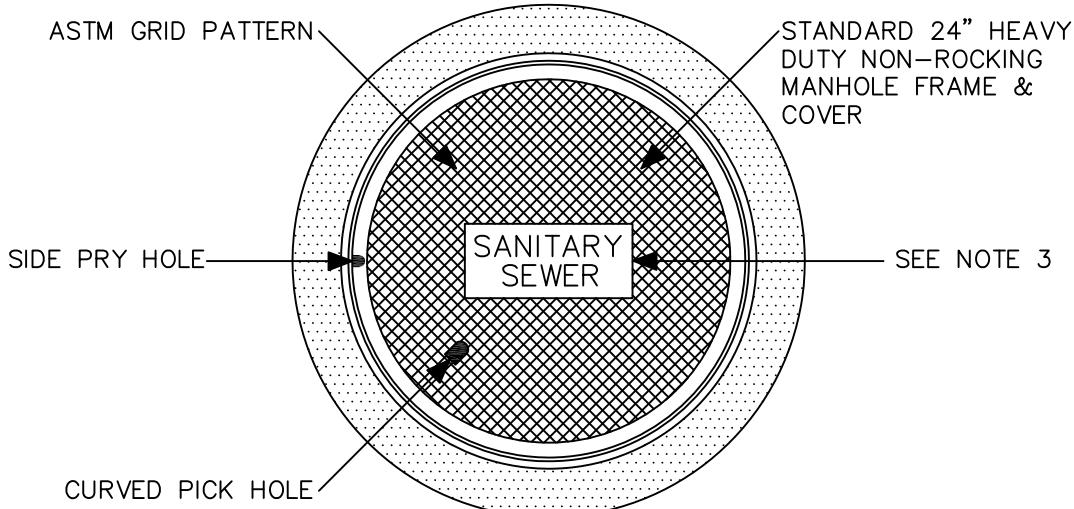
DRAWN BY:
P.A.C.

CHECKED BY:
T.S.

Maria Esther Rodriguez
MARIA ESTHER RODRIGUEZ, CITY ENGINEER

DRAWING No.
S-202

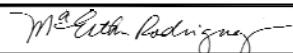
CAST IRON MANHOLE FRAME & COVER

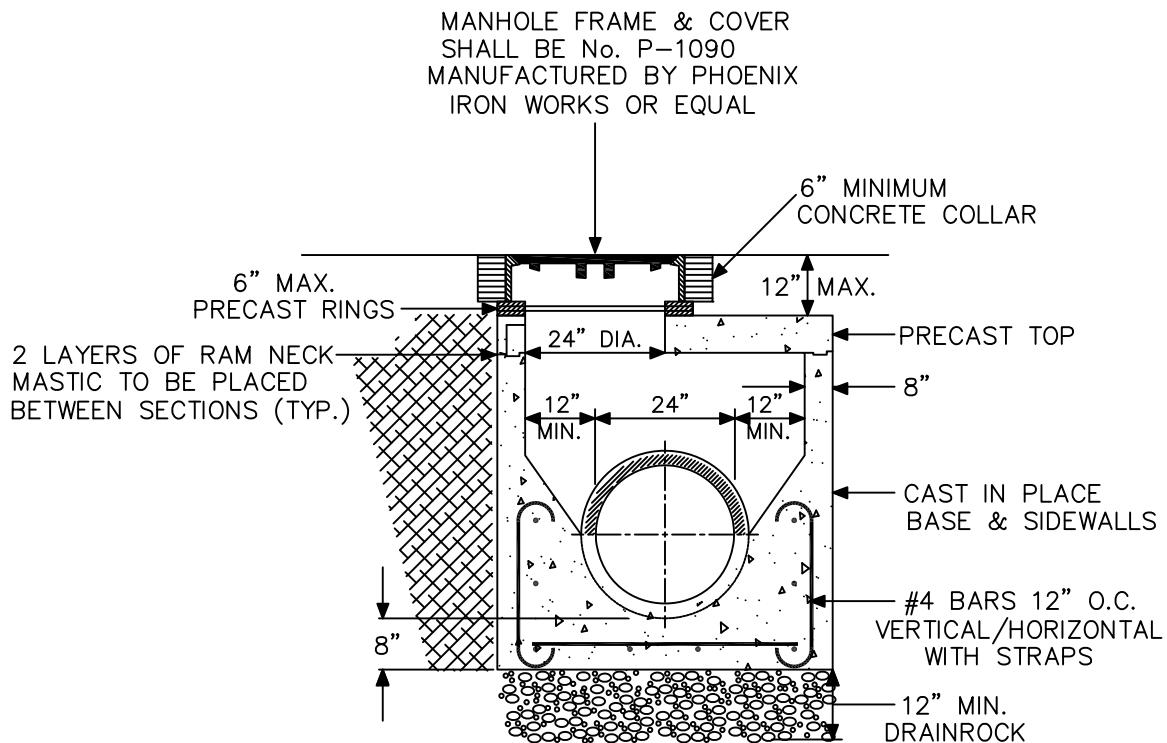


NOTES:

1. FRAME AND COVER SHALL BE BY THE SAME MANUFACTURER. FOUNDRY NAME SHALL BE STAMPED ON FRAME AND COVER. FRAME AND COVER TO BE PHOENIX IRON WORKS CAT. No. P-1090, OR D & L SUPPLY No. A-1024, OR APPROVED SUBMITTED EQUAL.
2. FRAMES AND COVERS SHALL BE FULLY MACHINED ON A TOTAL OF FIVE SURFACES TO ENSURE INTERCHANGABILITY AND A CLOSE, QUIET FIT. MACHINED VERTICAL SURFACES SHALL BE SLOPED.
3. COVER SHALL BE MARKED "SANITARY SEWER" OR "STORM DRAIN" AS APPROPRIATE.
4. COVER SURFACE SHALL BE SKID RESISTANT, PER ASTM SPECIAL PUBLICATION #362-1962.
5. ALL CASTINGS SHALL BE DIPPED IN ASPHALT PAINT.
6. ALL MATERIAL USED IN MANUFACTURING SHALL CONFORM TO ASTM SPECIFICATION A159-64T-G3000 OR OF UNITED STATES GOVERNMENT SPECIFICATION QQ1-653, MANUFACTURED UNDER U.S. PATENT No. 3289556.
7. APPROXIMATE WEIGHT COMPONENTS:
 COVER - 140 LBS.
 FRAME - 130 LBS.
 TOTAL - 270 LBS.

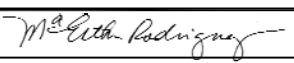
CITY OF WATSONVILLE PUBLIC WORKS & UTILITIES DEPARTMENT

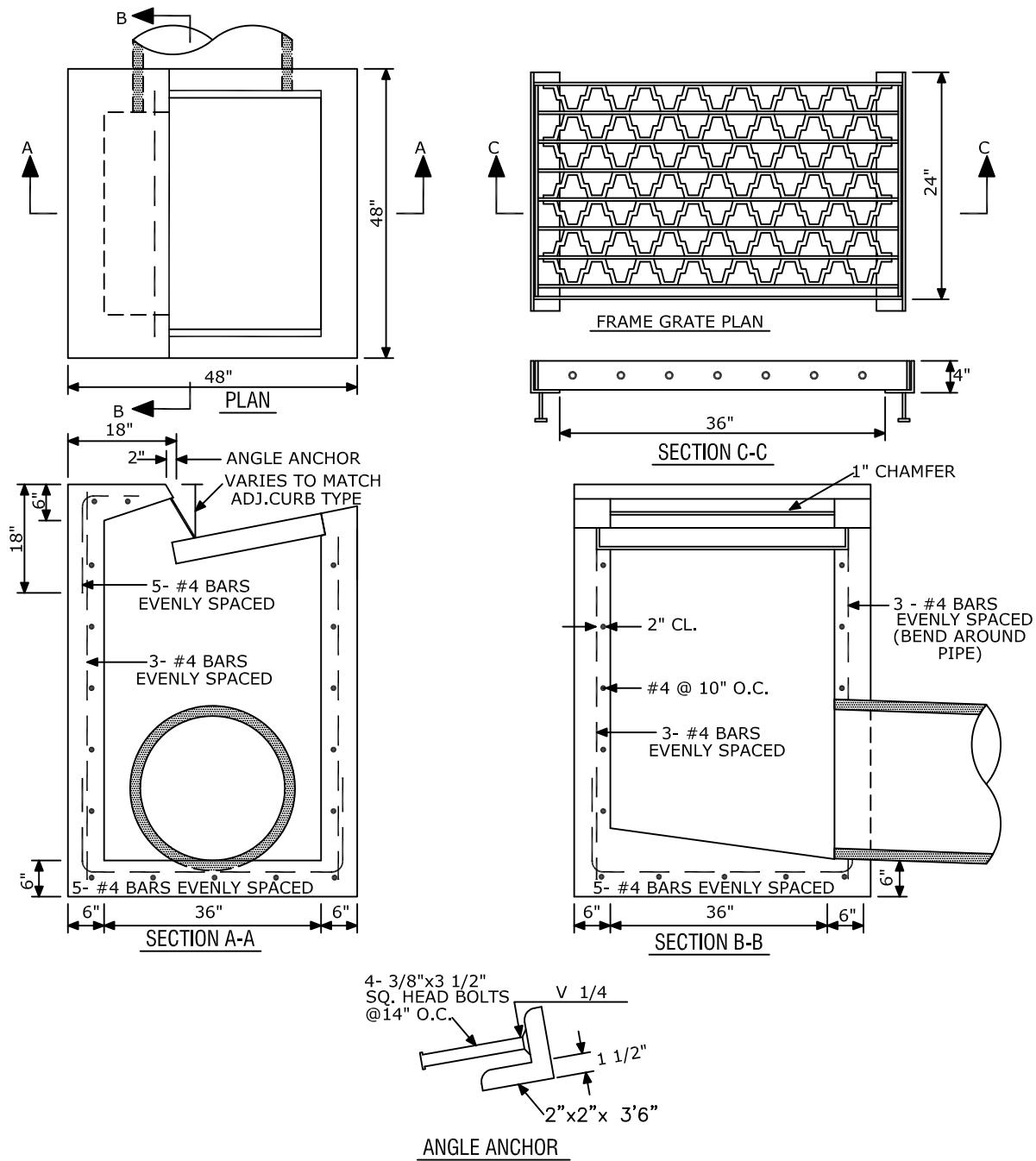
NOT TO SCALE	 CITY OF WATSONVILLE	STANDARD DRAWING FOR STANDARD MANHOLE FRAME & COVER	DRAWN: 10/98	REV.: 10/11
DRAWN BY: P.A.C.			RESOLUTION: 76-13 (CM)	
CHECKED BY: T.S.		 MARIA ESTHER RODRIGUEZ, CITY ENGINEER	DRAWING No. S-203	



NOTES:

- 1) ALL CONCRETE SHALL BE ACCORDANCE WITH SECTION 90-2, "MINOR CONCRETE", OF THE CALTRANS STANDARD SPECIFICATIONS.
- 2) PRECAST CONES, BARREL, TOP AND RINGS SHALL MEET ASTM C478.
- 3) PRECAST CONCRETE BASE SECTIONS ARE PROHIBITED.
- 4) BACKFILL ANY VOIDS BETWEEN MANHOLE AND EXCAVATION WITH SLURRY CEMENT BACKFILL (SECTION 19, CALTRANS SPECS)

CITY OF WATSONVILLE PUBLIC WORKS & UTILITIES DEPARTMENT				
NOT TO SCALE	 CITY OF WATSONVILLE	STORM DRAIN MANHOLE <32" CLEARANCE	DRAWN: 9/12	REV.:
DRAWN BY: P.A.C.				RESOLUTION: 76-13 (CM)
CHECKED BY: T.S.		 MARIA ESTHER RODRIGUEZ, CITY ENGINEER		DRAWING No. S-204

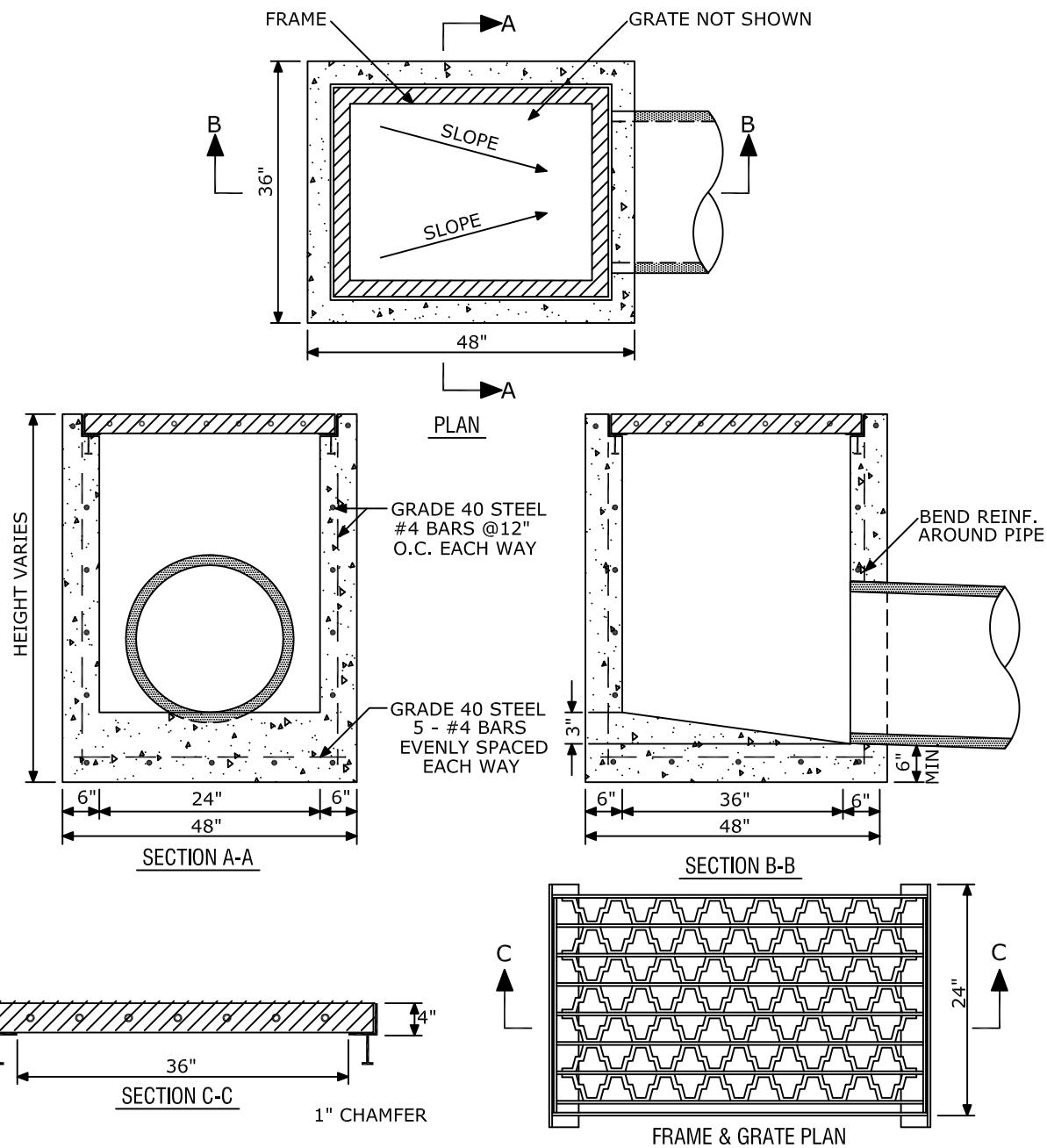


NOTES:

- 1) GRATE SHALL BE GRADE TYPE 24-10S AS DETAILED BY CALTRANS STANDARD PLAN D77B.
- 2) FRAME SHALL BE AS DETAILED BY CALTRANS STANDARD PLAN D77A.
- 3) CONCRETE SHALL CONFORM TO THE PROVISIONS OF SECTION 90-2, "MINOR CONCRETE", OF THE CALTRANS STANDARD SPECIFICATIONS.
- 4) PRE-CAST BASES ARE PROHIBITED.

CITY OF WATSONVILLE PUBLIC WORKS & UTILITIES DEPARTMENT

NOT TO SCALE	 CITY OF WATSONVILLE	STANDARD DRAWING FOR DROP INLET TYPE "D"	DRAWN: 9/11	REV.: 5/13
DRAWN BY: P.A.C.			RESOLUTION: 76-13 (CM)	
CHECKED BY: T.S.		<i>Maria Esther Rodriguez</i> MARIA ESTHER RODRIGUEZ, CITY ENGINEER	DRAWING No. S-205	



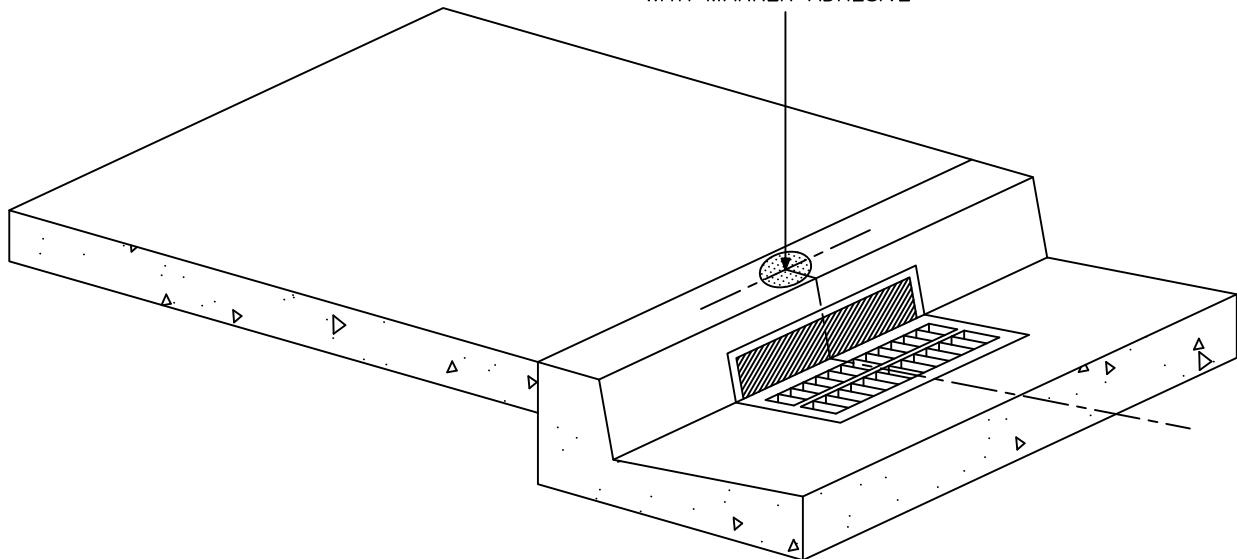
NOTES:

- 1) CONCRETE SHALL CONFORM TO THE PROVISIONS OF SECTION 90-2, "MINOR CONCRETE", OF THE CALTRANS STANDARD SPECIFICATIONS.
- 2) GRATE SHALL BE TYPE 24 -10S AS DETAILED BY CALTRANS STANDARD PLAN D77B.
- 3) FRAME SHALL BE AS DETAILED BY CALTRANS STANDARD PLAN D77A.
- 4) PRE-CAST BASES ARE PROHIBITED.

CITY OF WATSONVILLE PUBLIC WORKS & UTILITIES DEPARTMENT

NOT TO SCALE	 CITY OF WATSONVILLE	STANDARD DRAWING FOR DROP INLET TYPE "F"	DRAWN:	REV.:
DRAWN BY: P.A.C.			9/11	5/13
CHECKED BY: T.S.			RESOLUTION: 76-13 (CM)	
			DRAWING No. S-206	

Maria Esther Rodriguez
 MARIA ESTHER RODRIGUEZ, CITY ENGINEER

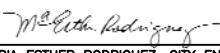


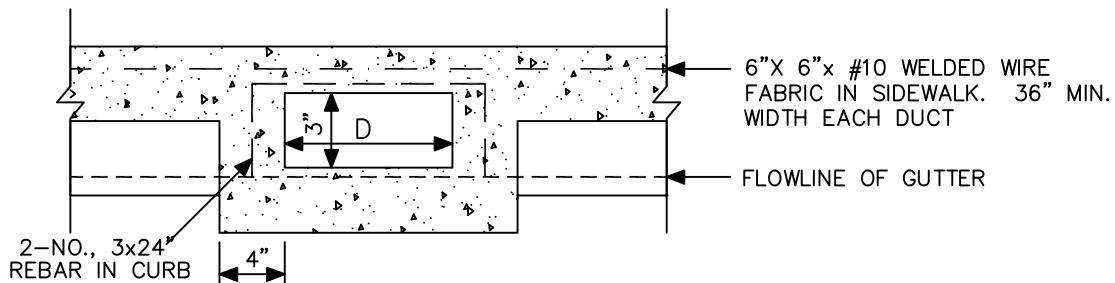
STORM DRAIN MARKER DETAIL

NOTES:

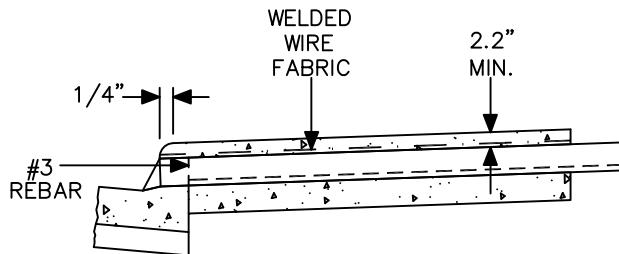
- 1) THE STORM DRAIN MARKER SHALL BE CENTERED ABOVE THE STORM DRAIN CATCH BASIN AS SHOWN.
- 2) STAINLESS STEEL STORM DRAIN MARKER SHALL BE ALMETEK STORM DRAIN MARKER, WITH FISH READING "DRAINS TO WATERWAY".

CITY OF WATSONVILLE PUBLIC WORKS & UTILITIES DEPARTMENT

NOT TO SCALE	 CITY OF WATSONVILLE	WATER DIVISION STANDARD DRAWING	DATE DRAWN: 5/10
DRAWN BY: P.A.C.		STORM DRAIN MARKER INSTALLATION	
CHECKED BY: T.S.	 MARIA ESTHER RODRIGUEZ, CITY ENGINEER	DRAWING No. S-207	DATE REVISED: 76-13 (CM)



METAL DUCT SECTION



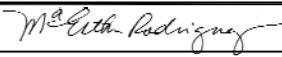
THE CONCRETE AND COVER FOR METALLIC DRAINS SHALL EXTEND CONTINUOUSLY FROM PROPERTY LINE TO THE FACE OF CURB.

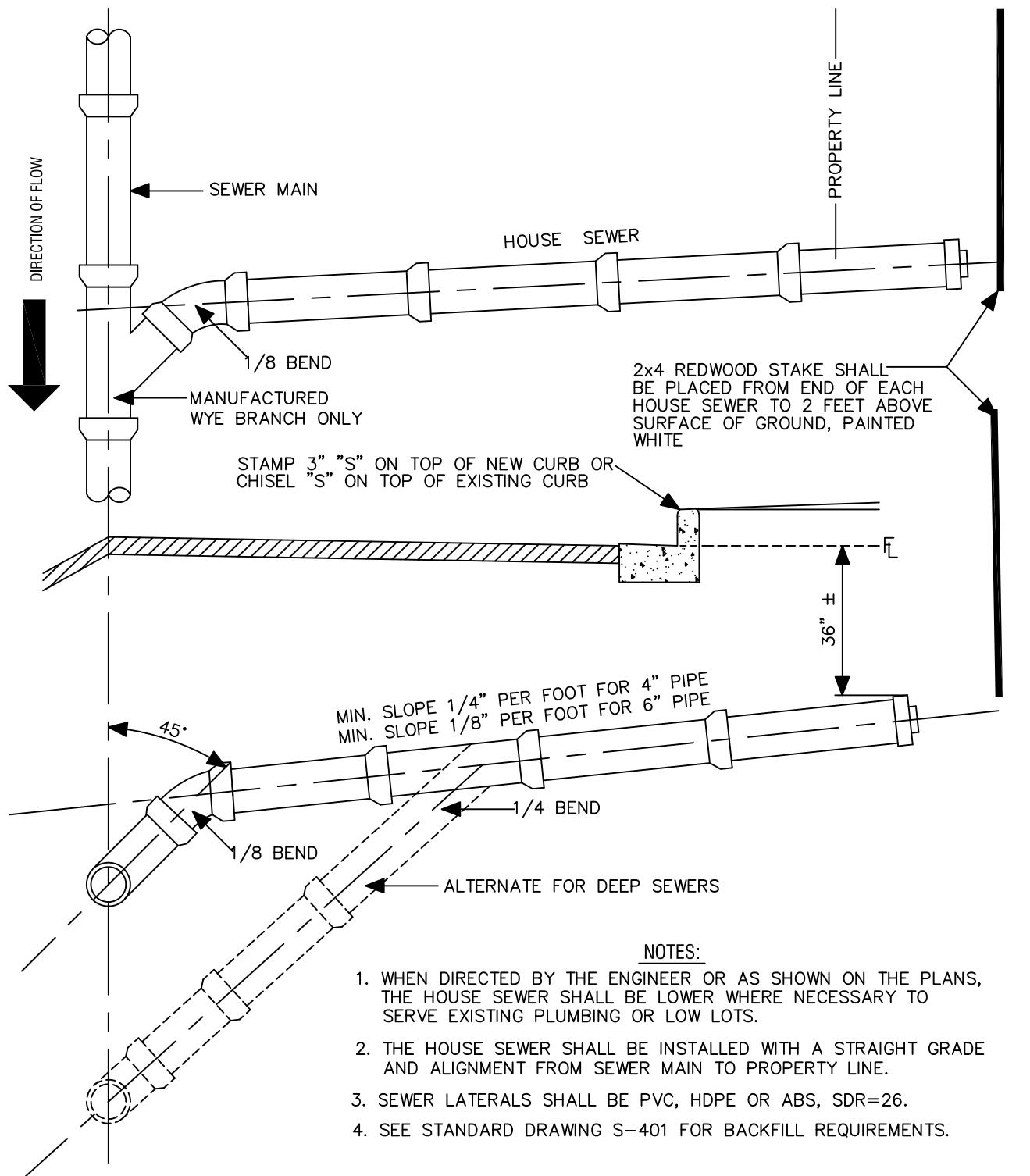
TYP. METALLIC DUCT: LONGITUDINAL SECTION

NOTES:

1. CURB DRAINS MAY BE 3" SCHEDULE 80 PVC PIPE, 3" CAST IRON PIPE, 3" X ____" RECTANGULAR CAST IRON PIPE OR 3" X ____" RECTANGULAR 18 GUAGE GALVANIZED STEEL DUCT.
2. CONCRETE SHALL CONFORM TO THE PROVISIONS OF SECTION 73, "CONCRETE CURBS AND SIDEWALKS", OF THE CALTRANS STANDARD SPECIFICATIONS.
3. CURB DRAINS SHALL BE CONTINUOUS BETWEEN THE FACE OF CURB AND BACK OF WALK.
4. METAL DUCT FORM SHALL BE SUPPORTED FROM DISTORTION DURING POUR OF CONCRETE BY FILLING WITH SAND, TEMPORARY SUPPORT WEDGED IN PLACE OR OTHER SUITABLE MEANS.

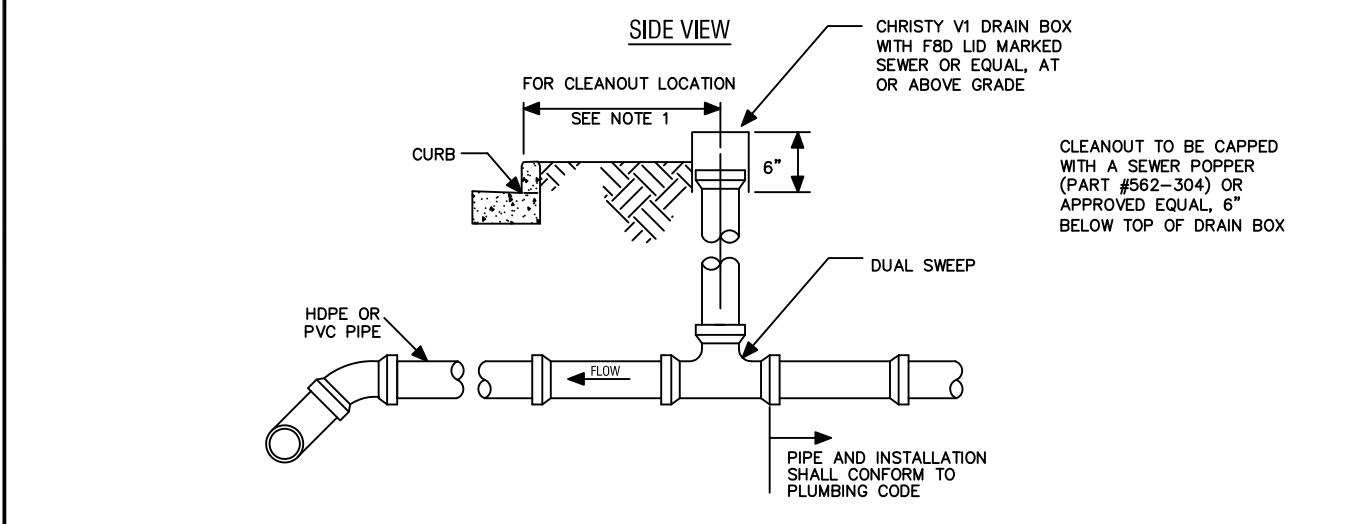
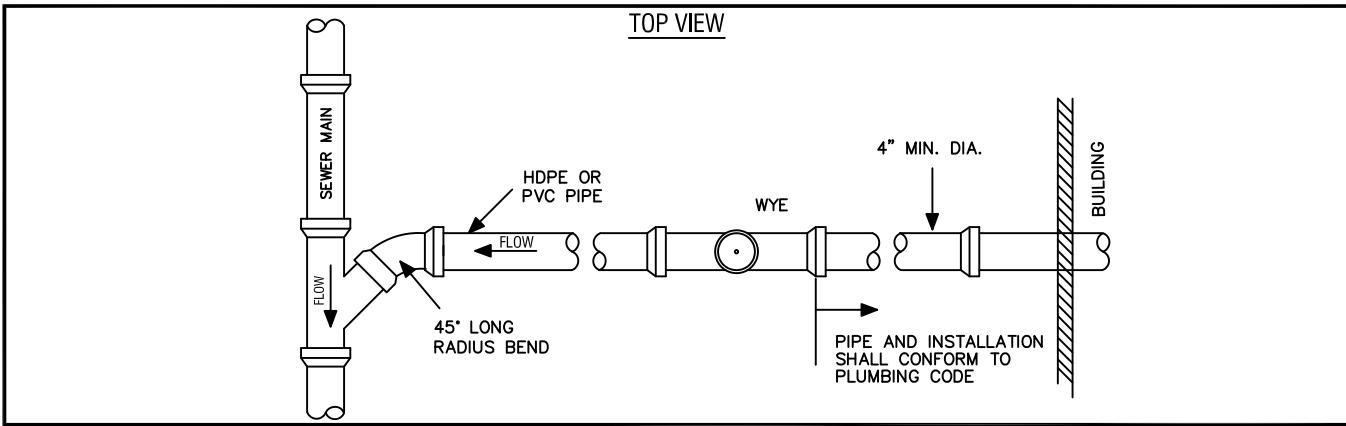
CITY OF WATSONVILLE PUBLIC WORKS & UTILITIES DEPARTMENT

NOT TO SCALE	 CITY OF WATSONVILLE	STANDARD DRAWING FOR STANDARD CURB DRAINS	DRAWN:	REV.:
DRAWN BY: P.A.C.			6/99	4/13
CHECKED BY: T.S.	 MARIA ESTHER RODRIGUEZ, CITY ENGINEER	STANDARD DRAWING FOR STANDARD CURB DRAINS	RESOLUTION:	DRAWING No.
			76-13 (CM)	S-208



CITY OF WATSONVILLE PUBLIC WORKS & UTILITIES DEPARTMENT

NOT TO SCALE	 CITY OF WATSONVILLE	STANDARD DRAWING FOR SEWER LATERAL: NEW DEVELOPMENT	DRAWN:	REV.:
DRAWN BY: P.A.C.			6/98	12/11
CHECKED BY: T.S.			RESOLUTION: 76-13 (CM)	DRAWING No. S-209a
			MARIA ESTHER RODRIGUEZ <i>Maria Esther Rodriguez</i>	

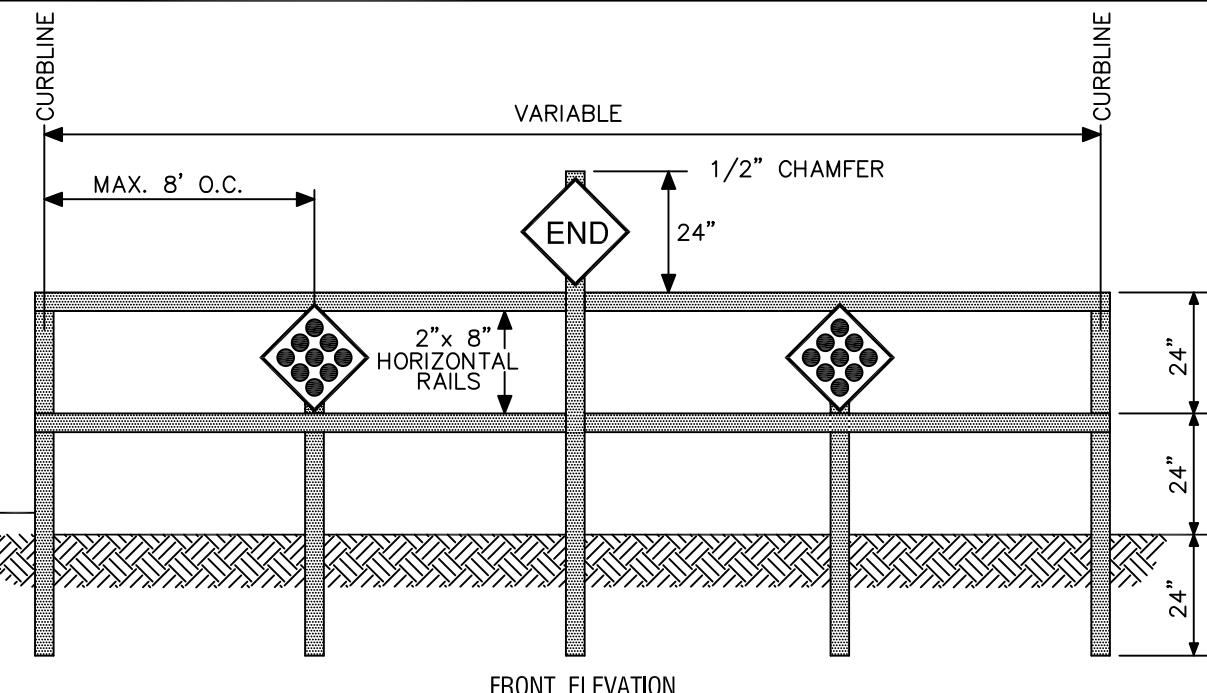


NOTES

1. LOCATE CLEANOUT BOX IN SIDEWALK OR DRIVEWAY, IF THERE IS NO SIDEWALK. LOCATE CLEANOUT 10" TO 12" BEHIND FACE OF CURB. IF LOCATED IN A DRIVEWAY, BOX SHALL HAVE A TRAFFIC RATED LID.
2. LATERAL CONNECTIONS:
 - A) LATERAL CONNECTION TO 6" PIPELINE: REPLACE A PORTION OF MAIN WITH A MANUFACTURED WYE.
 - B) LATERAL CONNECTION TO 8" & 10" PIPELINE: CORE DRILL AND USE A ROMAC "CB" SEWER SADDLE OR USE AN NDS FLEXIBLE SADDLE WHEN RECONNECTING AT EXISTING LATERAL CONNECTION LOCATION.
3. PIPE COUPLING SHALL BE FERNCO SHEER BAND WITH 24 GAUGE STAINLESS STEEL BANDS AND SHEAR BAND OR APPROVED EQUAL.
4. PIPE:
 - A) HDPE - SOLID WALL SDR 26 OR
 - B) PVC SDR26 GASKET SEWER PIPE ASTM 3034, OR C) ABS SDR 26.
5. PROVIDE THREE FEET OF COVER UNLESS PROPER SLOPE TO SEWER DICTATES LESS COVER.
6. LATERALS 8' DEEP OR GREATER SHALL CONNECT WITH A CHIMNEY CONNECTION 3' FROM THE MAIN AND BACKFILLED WITH CEMENT SLURRY BACKFILL.
7. SLOPE SHALL NOT BE LESS THAN 1/4" PER FOOT.
8. BEDDING AND BACKFILL SHALL BE IN ACCORDANCE WITH PUBLIC IMPROVEMENT STANDARD S-401.
9. IF THE FINISH FLOOR ELEVATION OF THE BUILDING IS BELOW THE ELEVATION OF THE NEXT UPSTREAM SEWER MANHOLE RIM ELEVATION. A BACKWATER VALVE IS REQUIRED. THE VALVE SHALL BE LOCATED BETWEEN THE BUILDING AND THE CLEANOUT. USE "CLEAN CHECK" BACKFLOW PREVENTION DEVICE OR APPROVED EQUAL.
10. ALL PIPES REHABILITATED WITH THE LINING PROCESS SHALL BE TELEvised TO SHOW THE FULL LENGTH OF LINING AND THE CONNECTION AT THE MAIN. INSPECTION SHALL BE PERFORMED WHILE THE PUBLIC WORKS INSPECTOR IS ON-SITE, OR A TAPE OR DVD SHALL BE PROVIDED TO THE INSPECTOR FOR REVIEW

CITY OF WATSONVILLE PUBLIC WORKS & UTILITIES DEPARTMENT

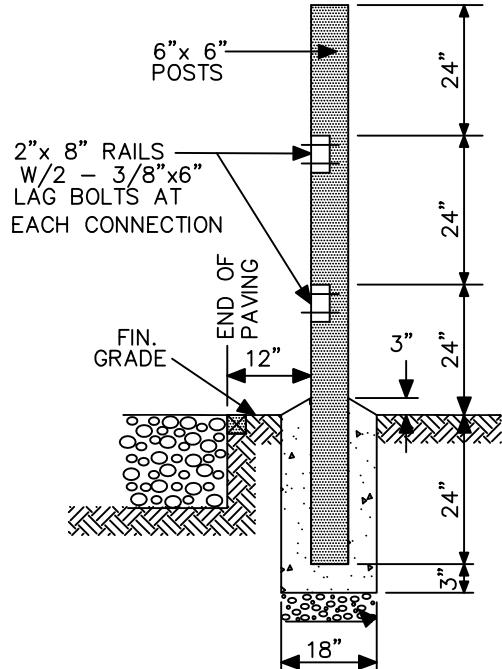
NOT TO SCALE	 CITY OF WATSONVILLE	STANDARD DRAWING FOR SEWER LATERAL: RETROFIT & REPAIR <i>Maria Esther Rodriguez</i> MARIA ESTHER RODRIGUEZ, CITY ENGINEER	DRAWN:	REV.:
DRAWN BY: P.A.C.			1/12	RESOLUTION: 76-13 (CM)
CHECKED BY: T.S.				DRAWING No. S-209b



FRONT ELEVATION

NOTES:

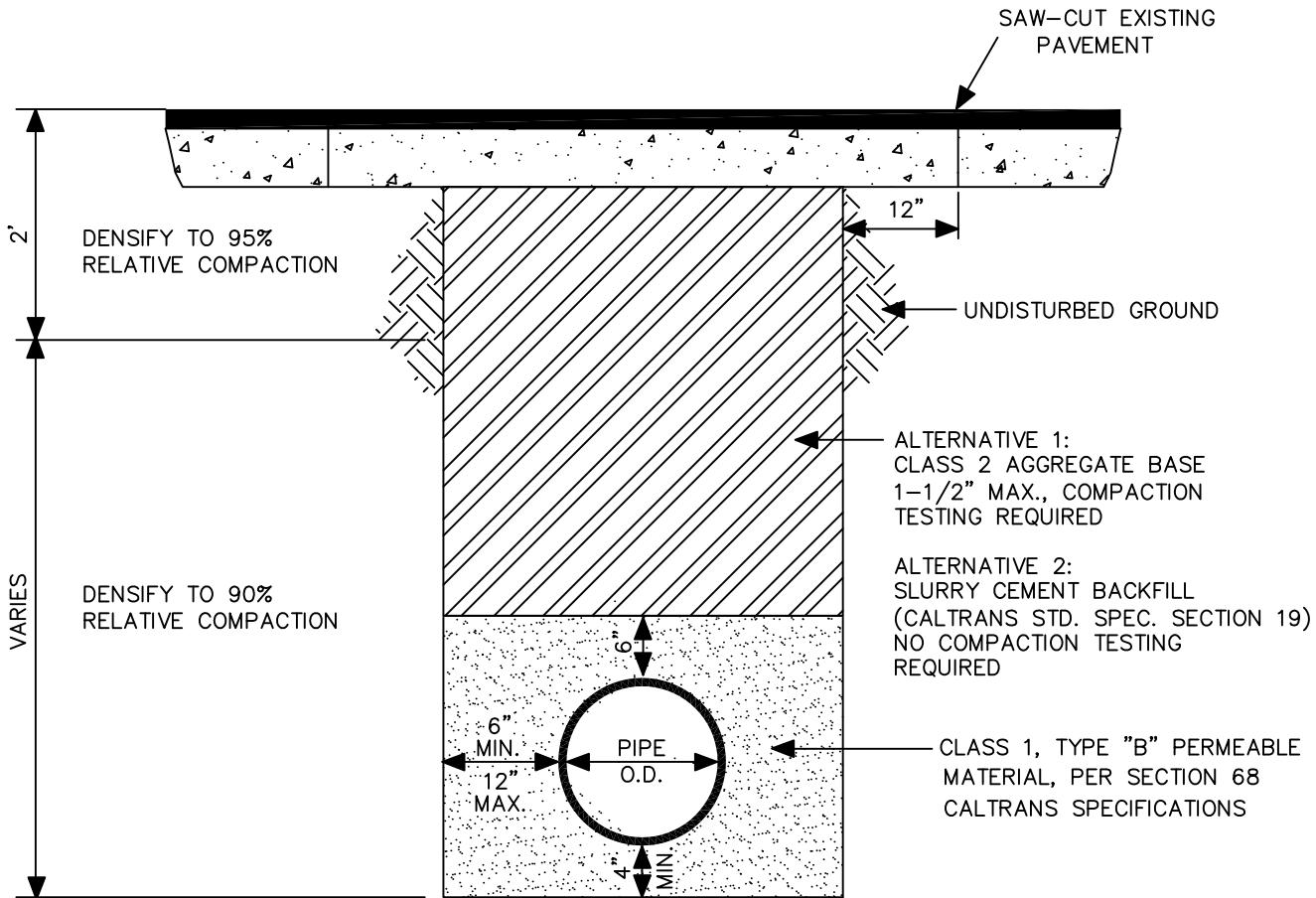
1. POSTS SHALL BE 6"x6" PRESSURE TREATED DOUGLAS FIR (40 ACZA) AND BE SET IN 2' CONCRETE.
2. POSTS SHALL BE SET ADJACENT TO PAVED AREA.
3. RAILS SHALL BE S4S D.F. AND DOUBLE-NAILED AT ENDS AND POSTS. SPLICE ONLY AT POSTS.
4. BARRICADE SHALL BE PAINTED WITH ONE COAT OF PRIMER AND ONE COAT OF WHITE ENAMEL FULLERS OR EQUAL.
5. TWO 18"x 18" W21R CAL. STD. REFLECTOR SIGNS. EACH SHALL BE MOUNTED ON A 6"x6"x6' POST WITH THE SIGN CENTERED BETWEEN THE HORIZONTAL RAILS.
6. A 24"x24" W 31 R YELLOW DIAMOND "END" SIGN SHALL BE MOUNTED ON A 6"x 6"x 8' S4S POST WITH THE BOTTOM OF THE SIGN AT THE LEVEL OF THE HORIZONTAL RAIL.



SIDE ELEVATION

CITY OF WATSONVILLE PUBLIC WORKS & UTILITIES DEPARTMENT

NOT TO SCALE	 CITY OF WATSONVILLE	STANDARD DRAWING FOR STANDARD STREET BARRACADE <i>Maria E. Rodriguez</i> MARIA ESTHER RODRIGUEZ, CITY ENGINEER	DRAWN: 9/97	REV.: 7/12
DRAWN BY: P.A.C.			RESOLUTION: 76-13 (CM)	
CHECKED BY: T.S.			DRAWING No. S-301	



CITY OF WATSONVILLE PUBLIC WORKS & UTILITIES DEPARTMENT

NOT TO SCALE	 CITY OF WATSONVILLE	STANDARD TRENCH BACKFILL SECTION	DRAWN:	REV.:
DRAWN BY: P.A.C.			9/12	5/13
CHECKED BY: T.S.		Maria Esther Rodriguez Signature	RESOLUTION: 76-13 (CM)	DRAWING NO. S-401
		Maria Esther Rodriguez Signature		