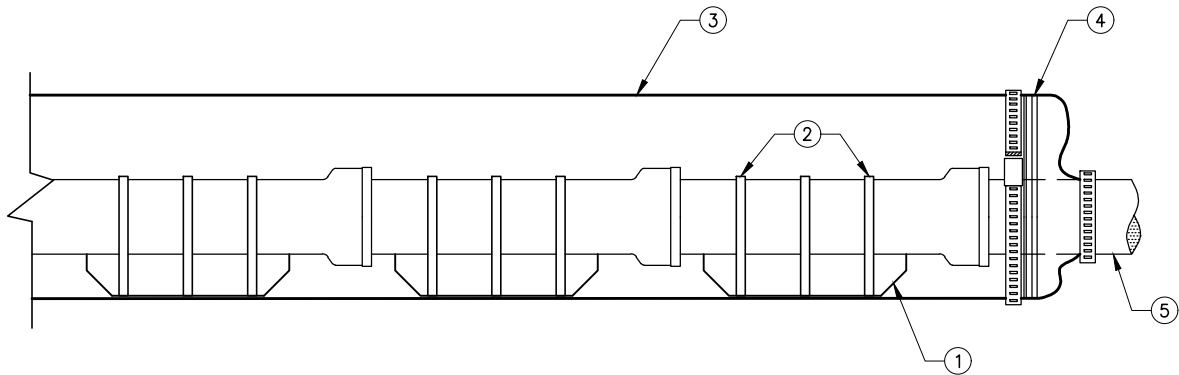
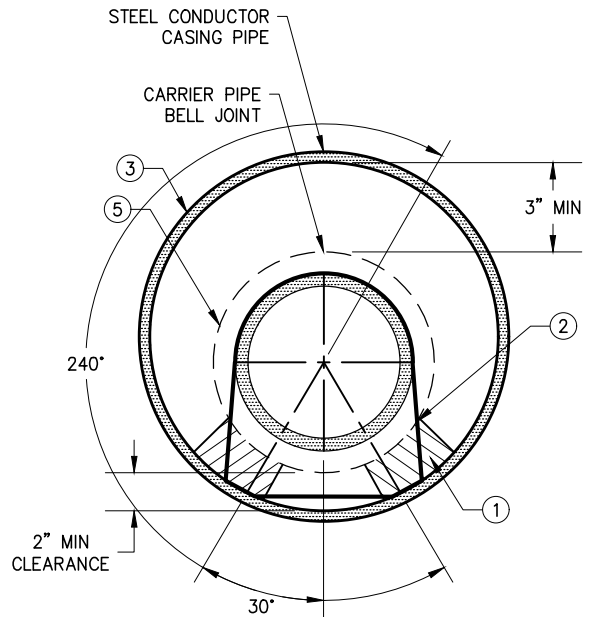


FOR VITRIFIED CLAY PIPE (VCP)					
CARRIER PIPE			CASING PIPE		
NOMINAL SIZE	OUTER DIAMETER	BELL DIAMETER	NOMINAL SIZE	MIN WALL THICKNESS	NOMINAL SIZE
8"	10.0"	12.5"	18"	1/4"	3" X 3"
10"	12.7"	15.9"	20"	5/16"	3" X 3"
12"	15.2"	18.8"	24"	5/16"	4" X 4"
15"	18.7"	23.1"	30"	3/8"	4" X 4"

FOR POLYVINYLCHLORIDE PIPE (PVC)					
CARRIER PIPE			CASING PIPE		
NOMINAL SIZE	OUTER DIAMETER	COUPLE DIAMETER	NOMINAL SIZE	MIN WALL THICKNESS	NOMINAL SIZE
8"	8.625"	10.19"	16"	1/4"	3" X 3"
10"	10.750"	12.44"	18"	5/16"	3" X 3"
12"	12.750"	14.65"	20"	5/16"	4" X 4"
16"	16.000"	17.40"	24"	3/8"	4" X 6"



**CONSTRUCTION NOTES:**

- ① UNFINISHED REDWOOD SKIDS 3 FEET LONG, BEVELED AT BOTH ENDS. NOTCH SKIDS TO SEAT STRAPS. SIZE PER TABLE.
- ② STAINLESS STEEL BAND STRAPS. 8 GAUGE BY 3/4" WIDE. INSTALL 3 STRAPS PER SKID.
- ③ STEEL CASING PIPE. MINIMUM THICKNESS PER TABLE.
- ④ SYNTHETIC RUBBER CASING END SEAL. 1/8" THICK, MODEL "C" END SEAL AS MANUFACTURED BY PIPE SEAL INSULATOR, INC.
- ⑤ CARRIER PIPE. EXTRA STRENGTH VCP OR SDR-35 PVC GASKETED RESTRAINED-JOINT YELOMINE SEWER PIPE AS MANUFACTURED BY CERTAINTED CORPORATION.

**GENERAL NOTES:**

- 1. CASING SHALL BE INSTALLED BY THE BORE, JACK AND/OR TUNNEL METHOD.
- 2. SIZE AND THICKNESS OF CASING SHALL BE AS SHOWN IN SCHEDULE. THICKNESSES ARE MINIMUMS.
- 3. ALL STEEL CASING PIPE FIELD JOINTS SHALL BE BUTT-WELDED FULL-CIRCUMFERENCE.
- 4. SKIDS SHALL BE UNFINISHED REDWOOD. STEEL CASING INSULATORS MAY BE SUBSTITUTED BY SPECIAL PERMISSION.
- 5. FOR PVC CARRIER PIPE, SKIDS SHALL BE WITHIN 1 FOOT OF EACH PIPE END & AT MID-SPAN.
- 6. EACH END OF CASING SHALL BE SEALED AS INDICATED.
- 7. BACKFILL FOR CASING IN OPEN CUT SHALL BE IN ACCORD WITH STD 323.
- 8. CASING VOIDS SHALL NOT BE FILLED WITH SAND OR GROUT WITHOUT SPECIAL PERMISSION. SEAL ENDS ONLY.

FORMER CITY STANDARD PLAN NUMBER (2004 EDITION): STD 410-L

APP. *James M. Hinkle* 51568 11/24/2020  
 CITY ENGINEER RCE DATE

NO.	DATE	DESCRIPTION OF REVISIONS

**CITY OF NEWPORT BEACH DEPARTMENT OF PUBLIC WORKS**

DRAWN: P. KHARAZMI  
 DATE: 11/3/2020

**CASED SEWER MAIN FOR HIGHWAY CROSSINGS**

STANDARD DRAWING NO.  
**411**  
 SHEET 1 OF 1