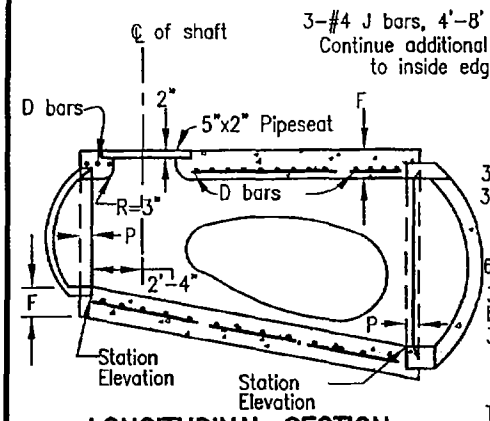
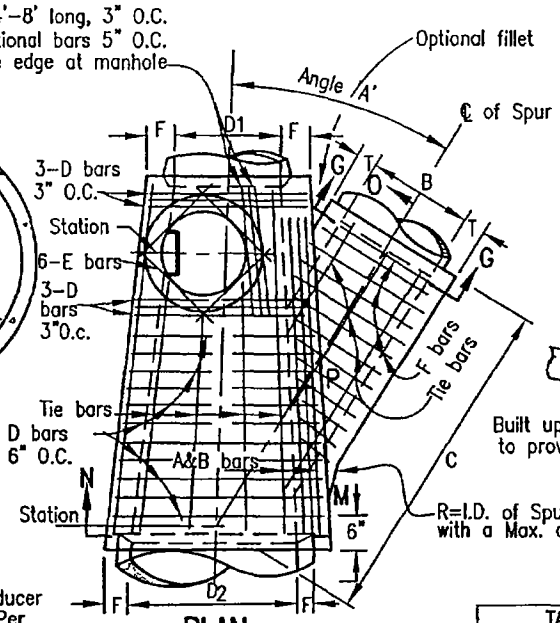
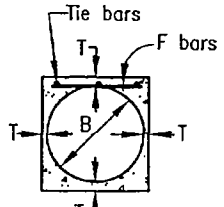


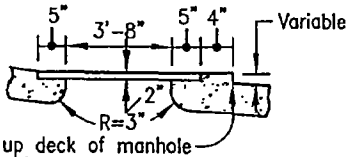
LONGITUDINAL SECTION



PLAN
(Shaft not shown)

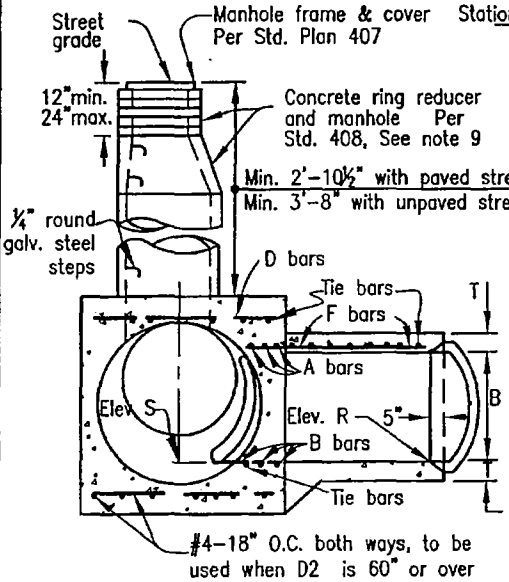


SECTION G-G



Built up deck of manhole to provide level pipe seat

SEAT FOR SHAFT WHEN TOP IS NOT LEVEL



SECTION N-M-P-O

TABLE OF BAR SIZES PROJECTED ON P.P.O.		
D_2 or B	A&B Bars	DorF Bars
24"-39"	#5 at 3"	#4 at 6"
42"-84"	#6 at 3"	#5 at 6"
90'-96"	#7 at 3"	#6 at 6"

TABLE OF VALUES FOR F AND T			
D_2	F	B	T
36"	8"	24"	5¼"
39"	8"	27"	5½"
42"	8"	30"	6"
45"	8"	33"	6¼"
48"	8"	36"	6½"
51"	8½"	39"	7"
54"	9"	42"	7½"
57"	9¼"	45"	7¾"
60"	9½"	48"	8"
63"	10"	51"	8½"
66"	10¼"	54"	9"
69"	10¾"	57"	9¼"
72"	11"	60"	9½"
78"	11¾"	63"	10"
84"	12½"	66"	10½"
90"	13¼"	69"	10¾"
96"	14"	72"	11"

NOTES:

1. Values for A,B,C,D1,D2, Elevation R and Elevation S are shown on plan. Table of values for R and T hereon.
2. Laterals: If laterals enter both sides of junction structure, access shaft shall be located on side receiving the smaller lateral.
3. Center of Manhole Shaft: shall be located over center line of Storm Drain when D is 48" of less, in this case place 4-E bars symmetrically around shaft 45 degrees with centerline.
4. Length of junction structure may be increased at option to meet pipe ends, but any change in location of spur must be approved by the City Engineer.
5. Detail M, (see Std. Plan 314): When depth of manhole from street to top of junction structure is less than 2'-10½" for paved streets or 3'-6" for unpaved streets, construct monolithic shaft per Detail M. Construction of shaft as per Detail M for any depth of manhole is optional. When D1 is 48" or less, center of shaft shall be located as per Note 3.
6. Reinforcing steel: Straight bars 1½" clear of face of concrete unless shown otherwise. Tie bars shall be #3 spaced 18" O.C. or closer. Steel schedule detailed on plan.
7. Embedment "P" shall be 5" for D2=96" or less and 8" for D2 over 96"
8. Steps shall be ¾" round galvanized steel, and anchored not less than 6" in the walls of the structure. Unless otherwise shown the spacing shall be 16" or 17" on center. The lowest step shall not be more than 2 feet above the invert.
9. Rings, Reducers, and Pipe for access shaft shall be seated in 1:2 mix mortar and neatly pointed or wiped inside shaft. Also see Std. Plan 407.
10. Floor of junction structure shall be steel toweled to spring line.
11. Body of junction structure, including spur, shall be constructed in one continuous operation, except that a construction joint at the spring line, with longitudinal keyway, is permitted.
12. Elevation "S" applies at center of main line on prolongation of invert spur.
13. Raise m.h. frames and cover 18" above finished surface when in unpaved areas.

REGISTERED PROFESSIONAL ENGINEER HARRY W. THOMAS No. 18542 Exp. 6-30-05 CIVIL STATE OF CALIFORNIA

4-2-04
DATE APPROVED

PUBLIC WORKS DIRECTOR/C.E.

ASSISTANT CITY ENGINEER

CITY OF ORANGE PUBLIC WORKS DEPARTMENT

JUNCTION STRUCTURE TYPE III

STANDARD PLAN No. 315