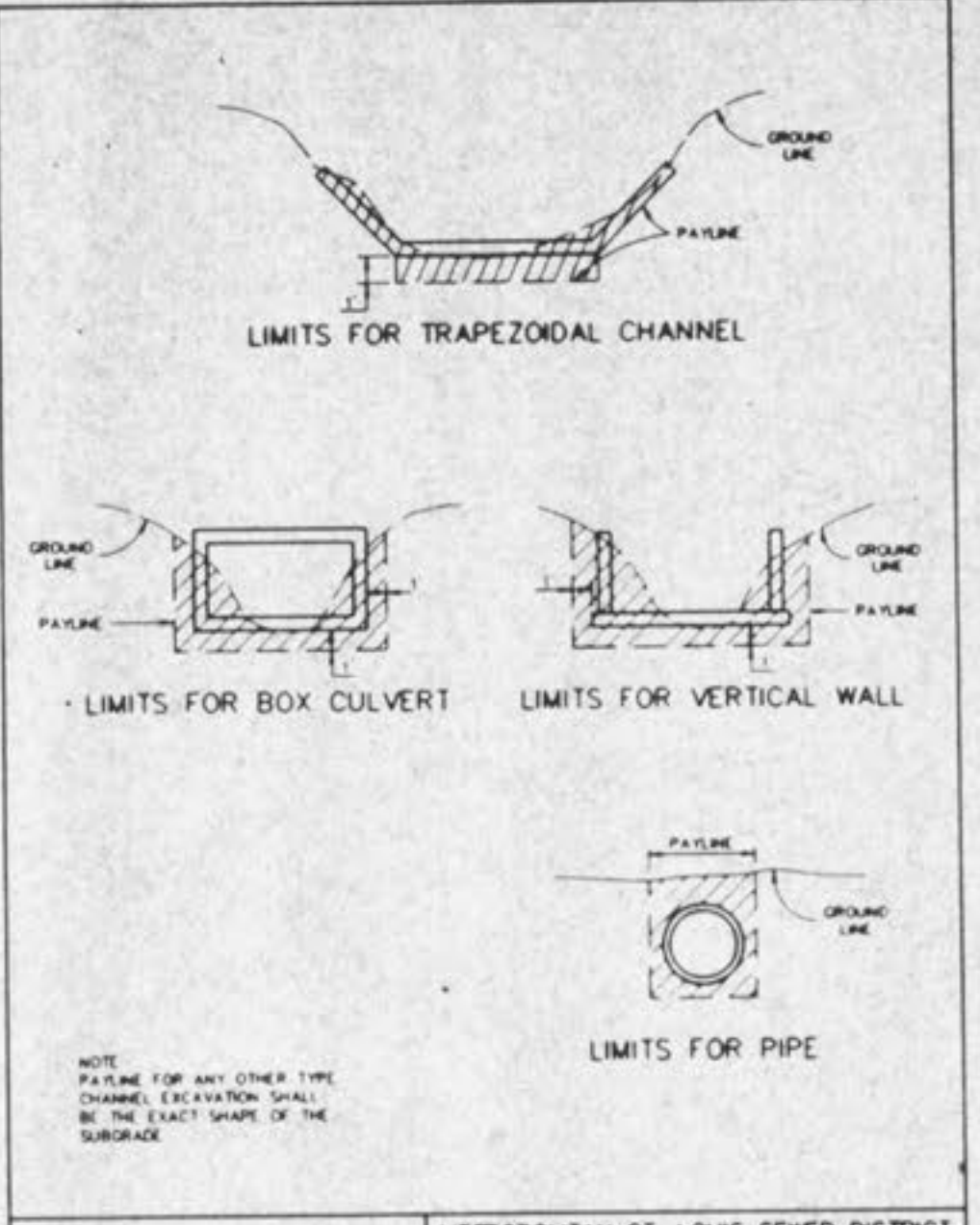
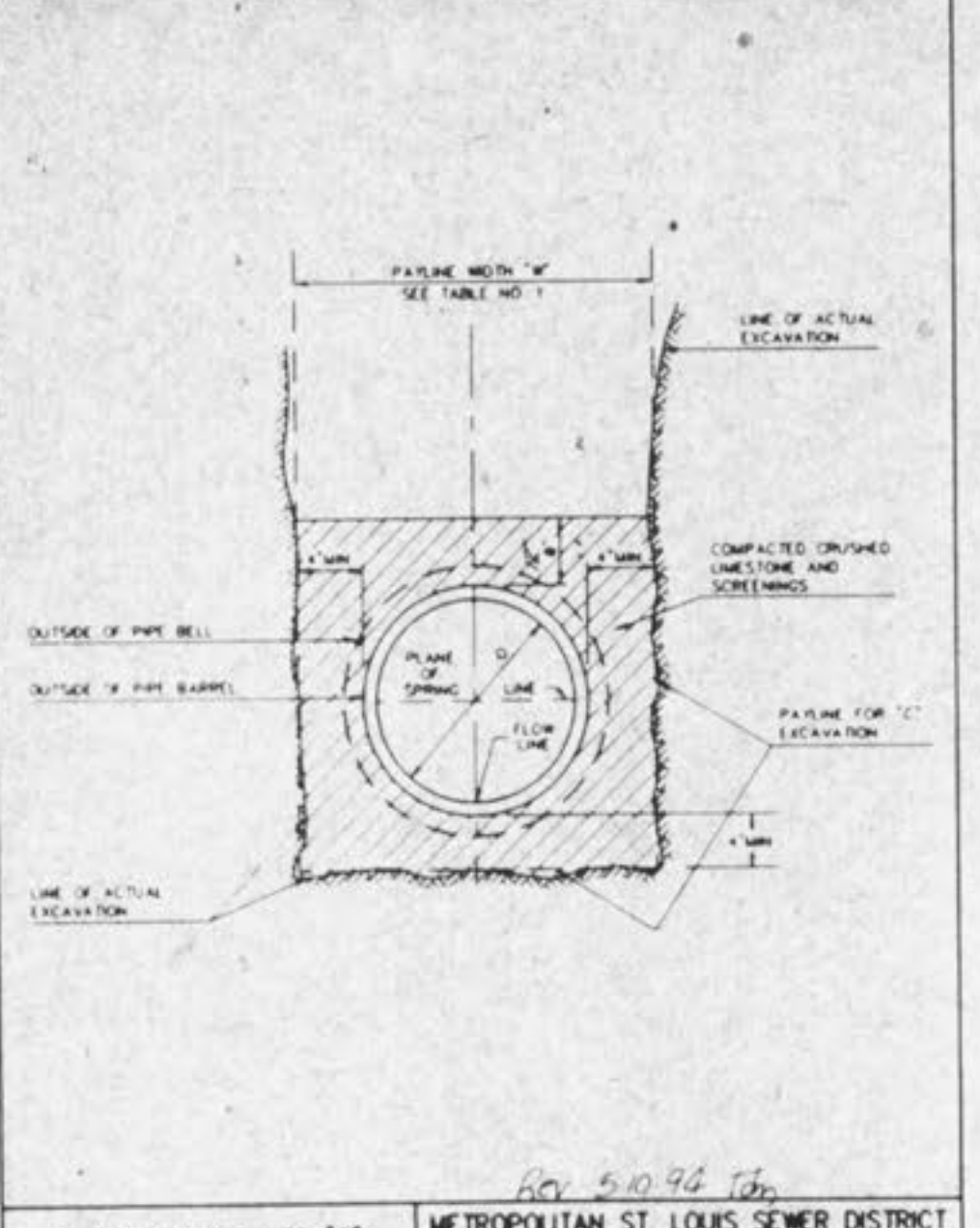


ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"C" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES (CU. FT. PER FT.)	INSIDE DIMENSIONS OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"C" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES (CU. FT. PER FT.)
4	30	2.50	3.28				
6	30	2.50	3.58				
8	30	2.50	3.87				
10	30	2.50	4.09				
12	30	2.50	4.28				
15	36	3.00	5.55				
18	36	3.00	5.77	14 x 23	41	3.42	5.94
24	36	3.00	6.81				
24	42	3.50	7.39	18 x 30	49	4.08	7.68
27	45	3.75	8.18	22 x 34	53	4.42	8.61
30	48	4.08	9.30	24 x 38	58	4.83	9.70
33	53	4.42	10.53	27 x 42	62	5.17	10.71
36	58	4.87	11.43	28 x 45	66	5.50	11.72
39	63	5.25	12.50	32 x 49	71	5.92	13.14
42	63	5.25	13.38	34 x 53	75	6.25	14.05
48	70	5.83	15.67	38 x 60	83	6.92	16.18
54	77	6.42	18.15	43 x 68	92	7.67	18.81
60	84	7.00	20.73	48 x 76	101	8.42	21.56
66	91	7.58	23.45	53 x 83	109	9.08	24.35
72	98	8.17	26.37	58 x 91	118	9.83	27.45
78	105	8.75	29.28	63 x 98	126	10.50	30.50
84	112	9.33	32.57	68 x 106	135	11.25	33.91
90	119	9.92	35.90	72 x 113	143	11.92	36.99
96	126	10.50	39.37	77 x 121	152	12.67	40.89
102	133	11.08	42.99	82 x 128	160	13.33	44.45
108	140	11.67	46.75	87 x 136	168	14.00	47.76
114	147	12.25	50.66	92 x 143	176	14.67	51.70
120	154	12.83	54.72	97 x 151	185	15.42	56.01
126	161	13.42	58.92				
132	168	14.00	63.27	106 x 166	202	16.83	64.48
144	182	15.17	72.40	116 x 180	218	18.17	73.56

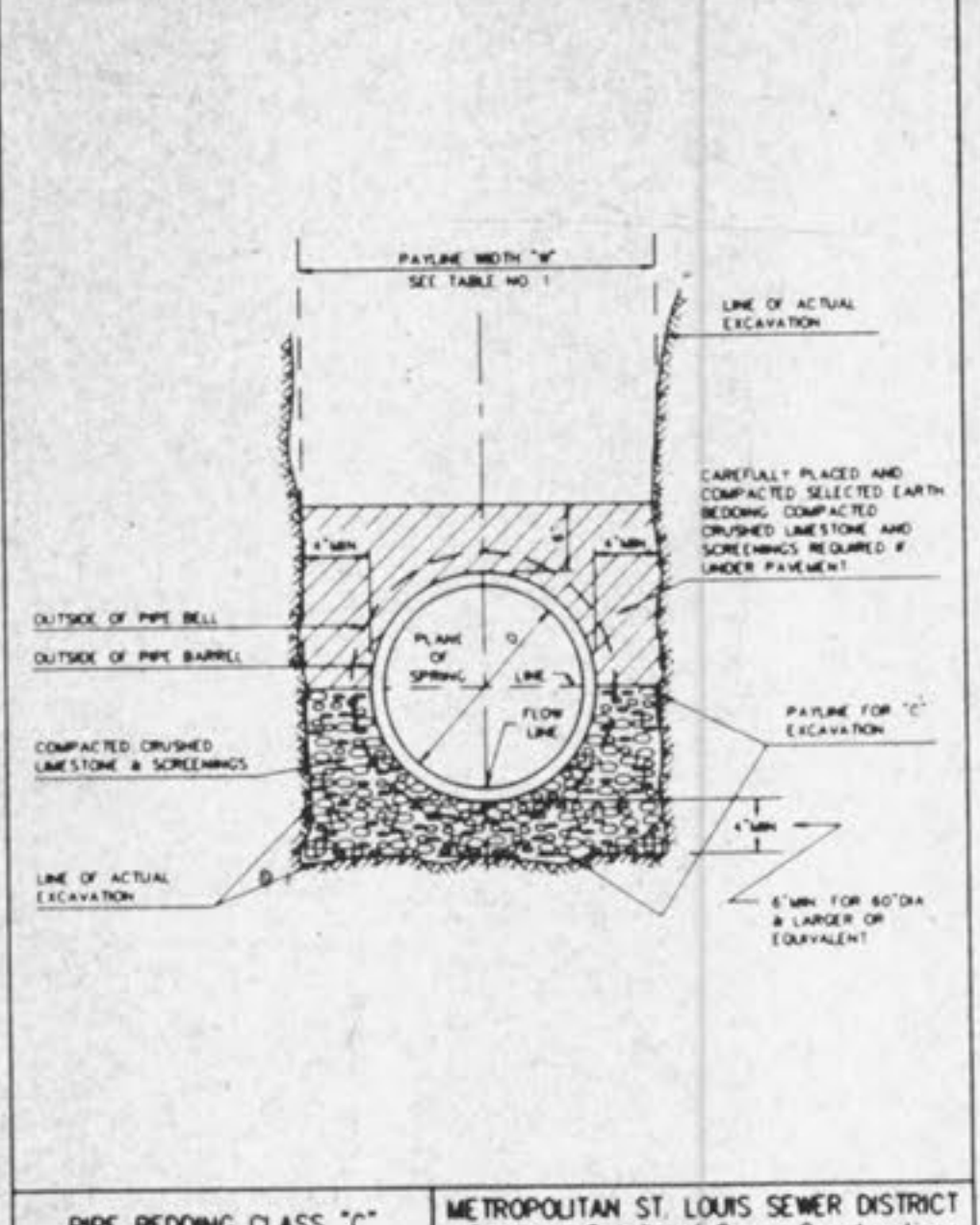
**TABLE 1**  
PAYLINE WIDTHS OF TRENCH AND PAY-VOLUMES OF CONCRETE  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 1



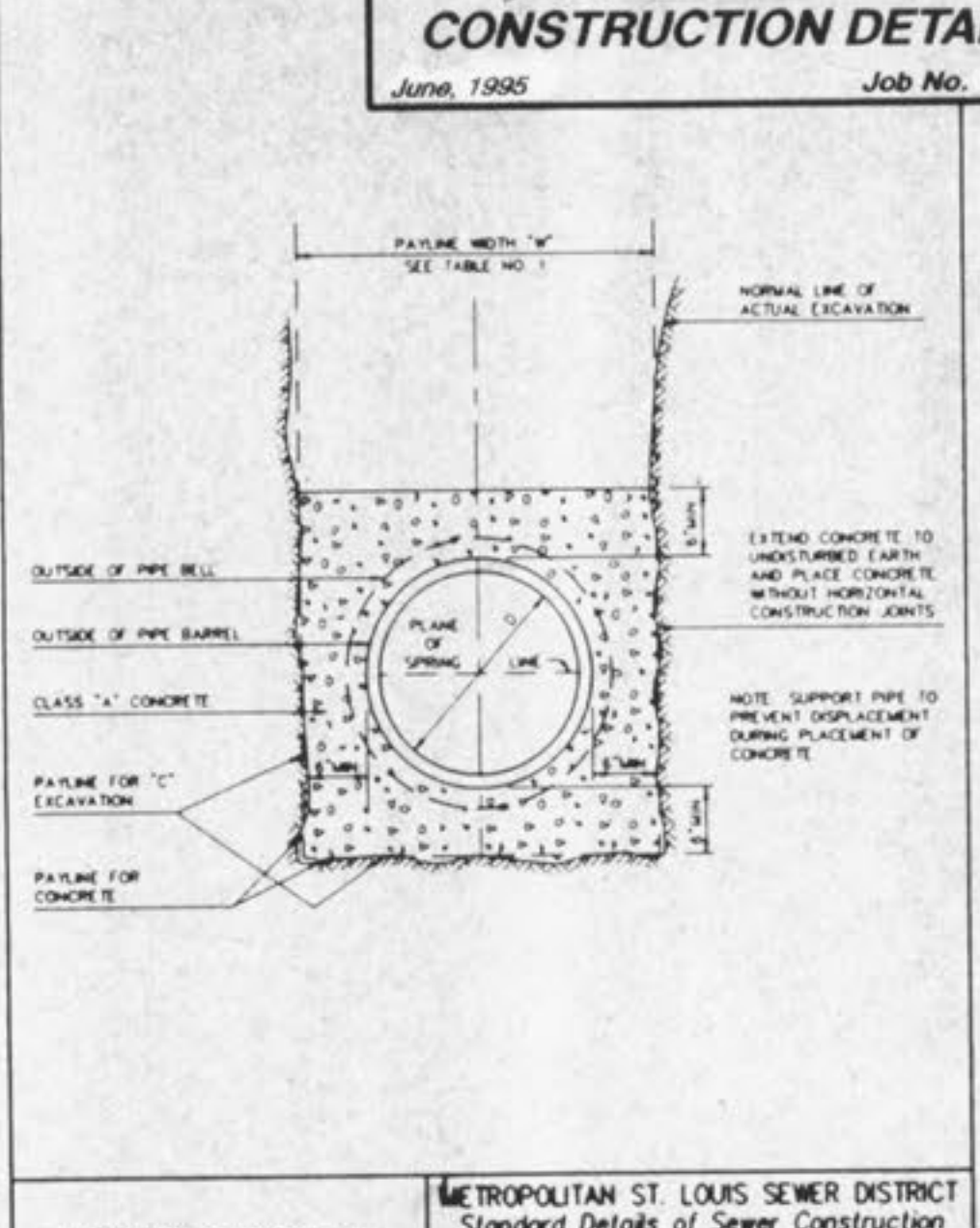
**PAYLINE LIMITS FOR EXCAVATION**  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 2



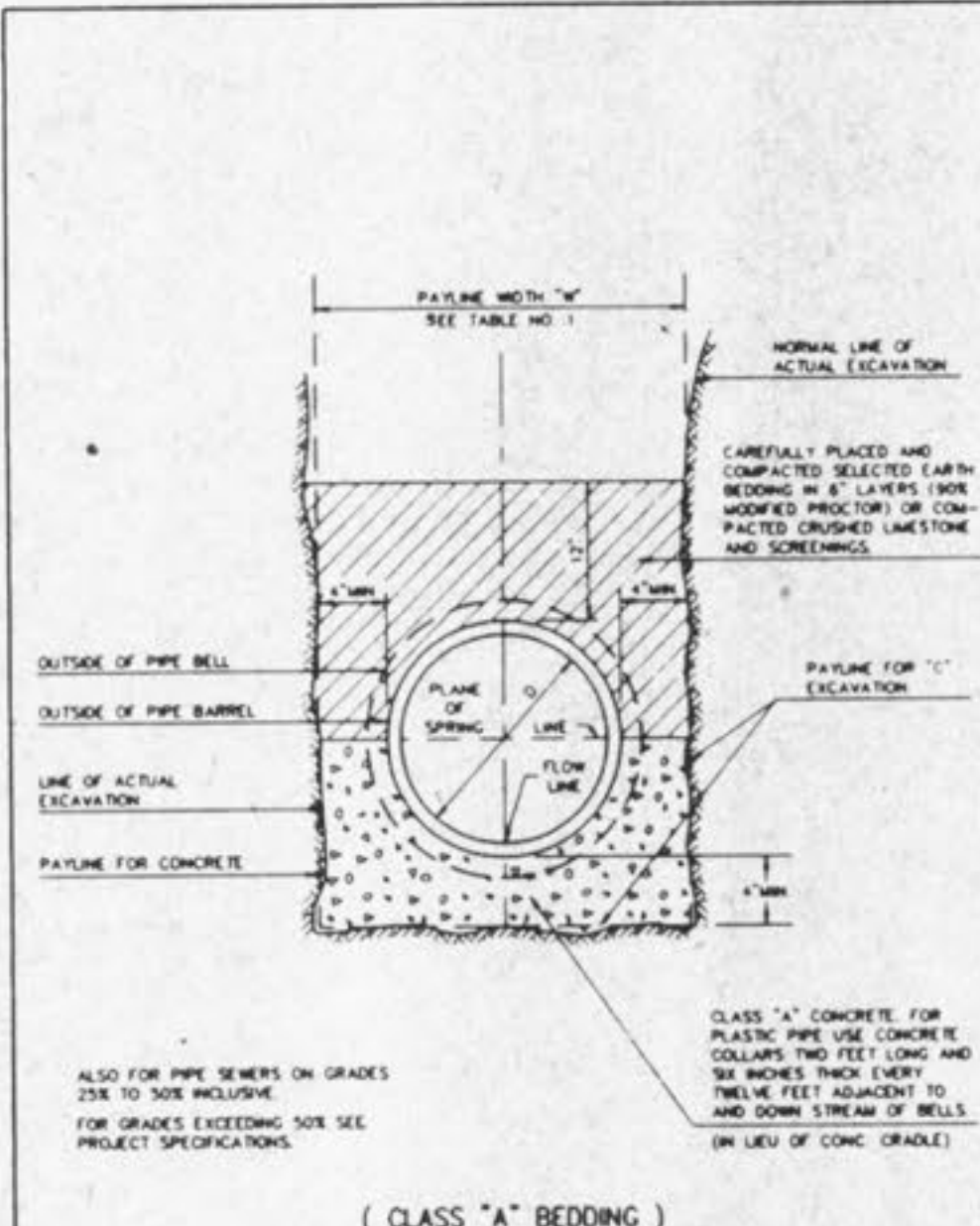
**PIPE BEDDING CLASS "C"**  
(FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 3



**PIPE BEDDING CLASS "C"**  
(MODIFIED FOR REINFORCED CONCRETE PIPE)  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 4



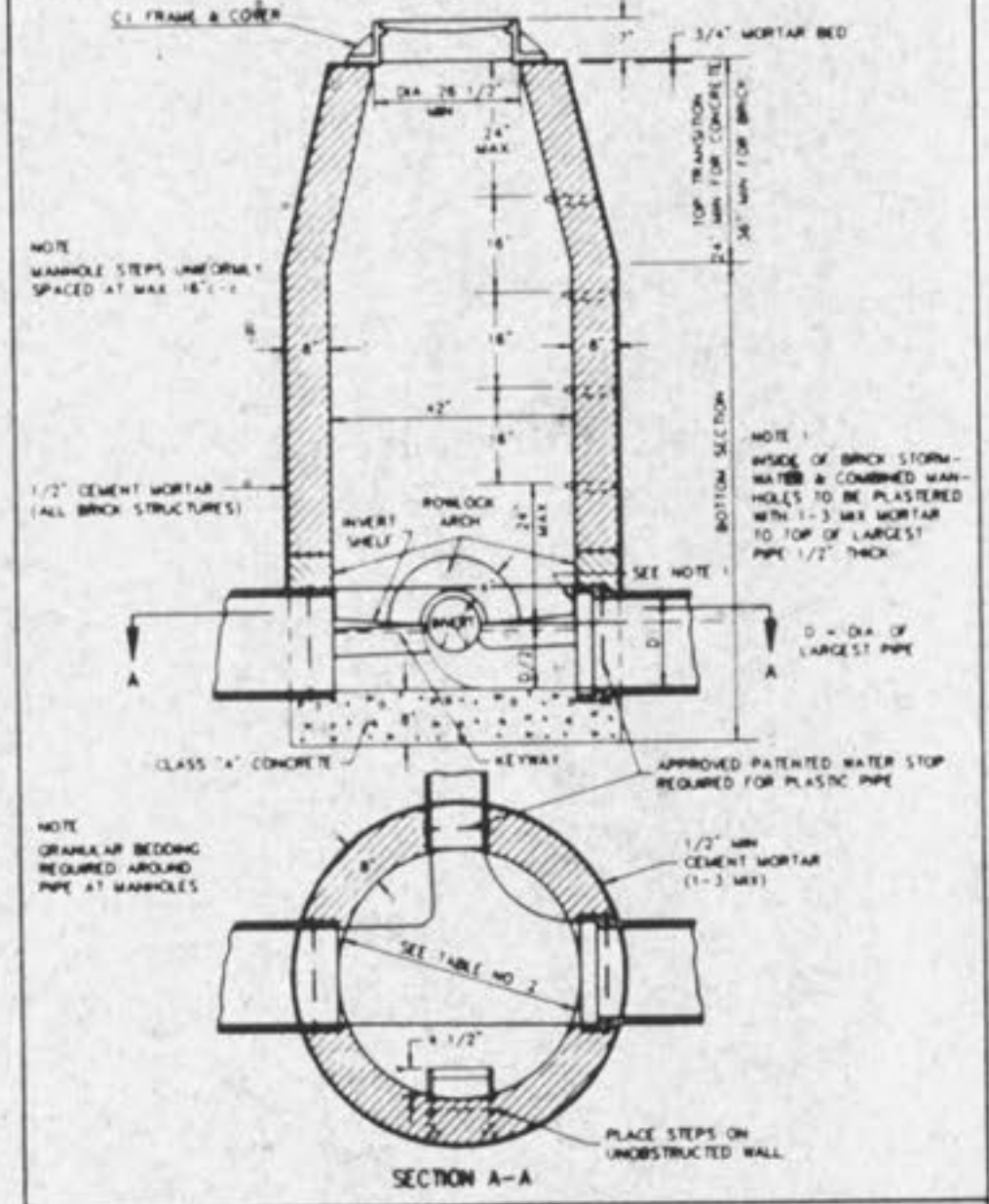
**CONCRETE ENCASEMENT**  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 5



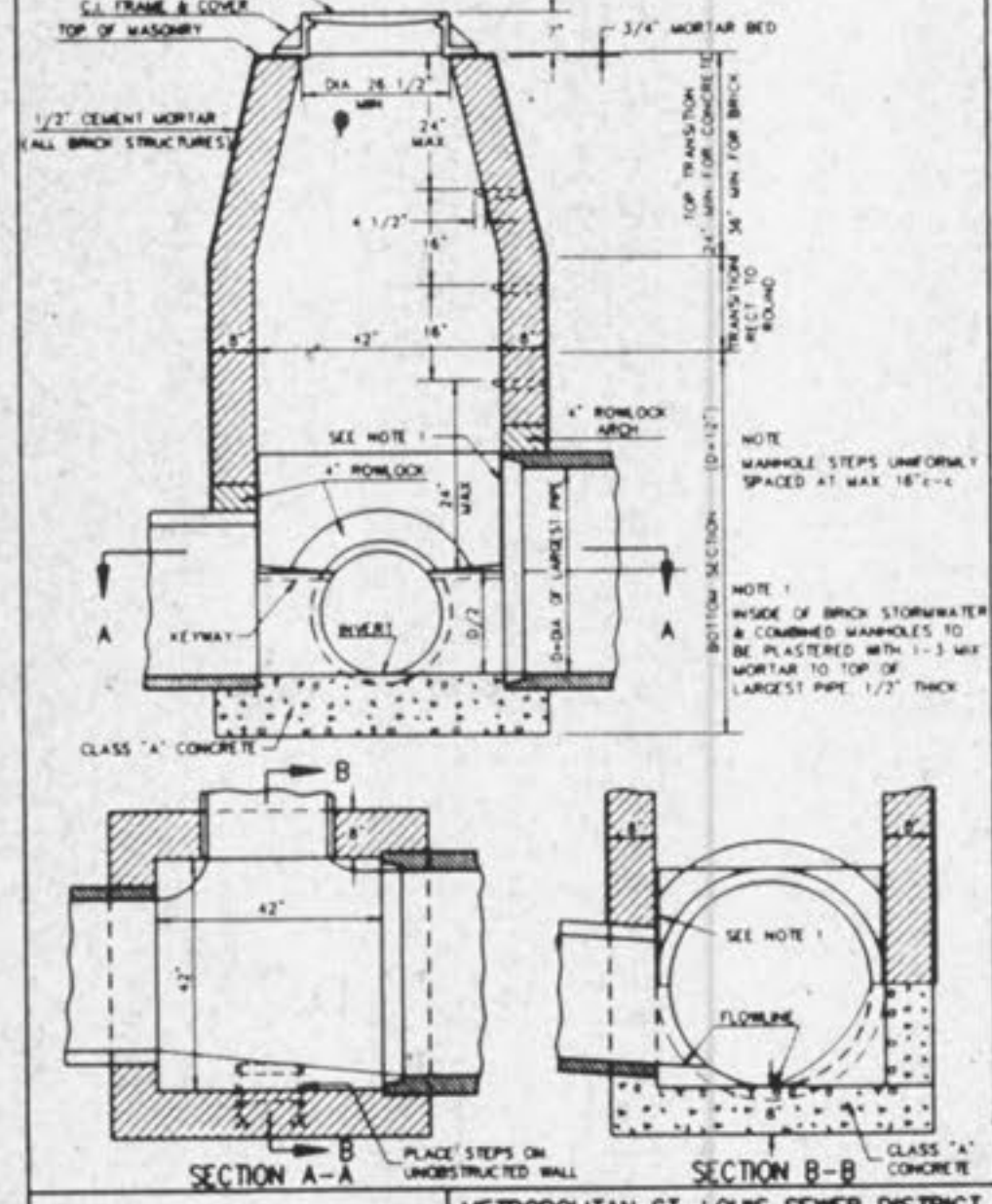
**CONCRETE CRADLE**  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 6

SECTION OF MANHOLE			DIMENSION		
TOP	UPPER	26 1/2" DIA.			
TRANSITION	LOWER	42" DIA.			
BOTTOM SECTION	8" THRU 24" DIA. PIPE	42" DIA.			
BOTTOM SECTION	27" THRU 36" DIA. PIPE	42" SQUARE			

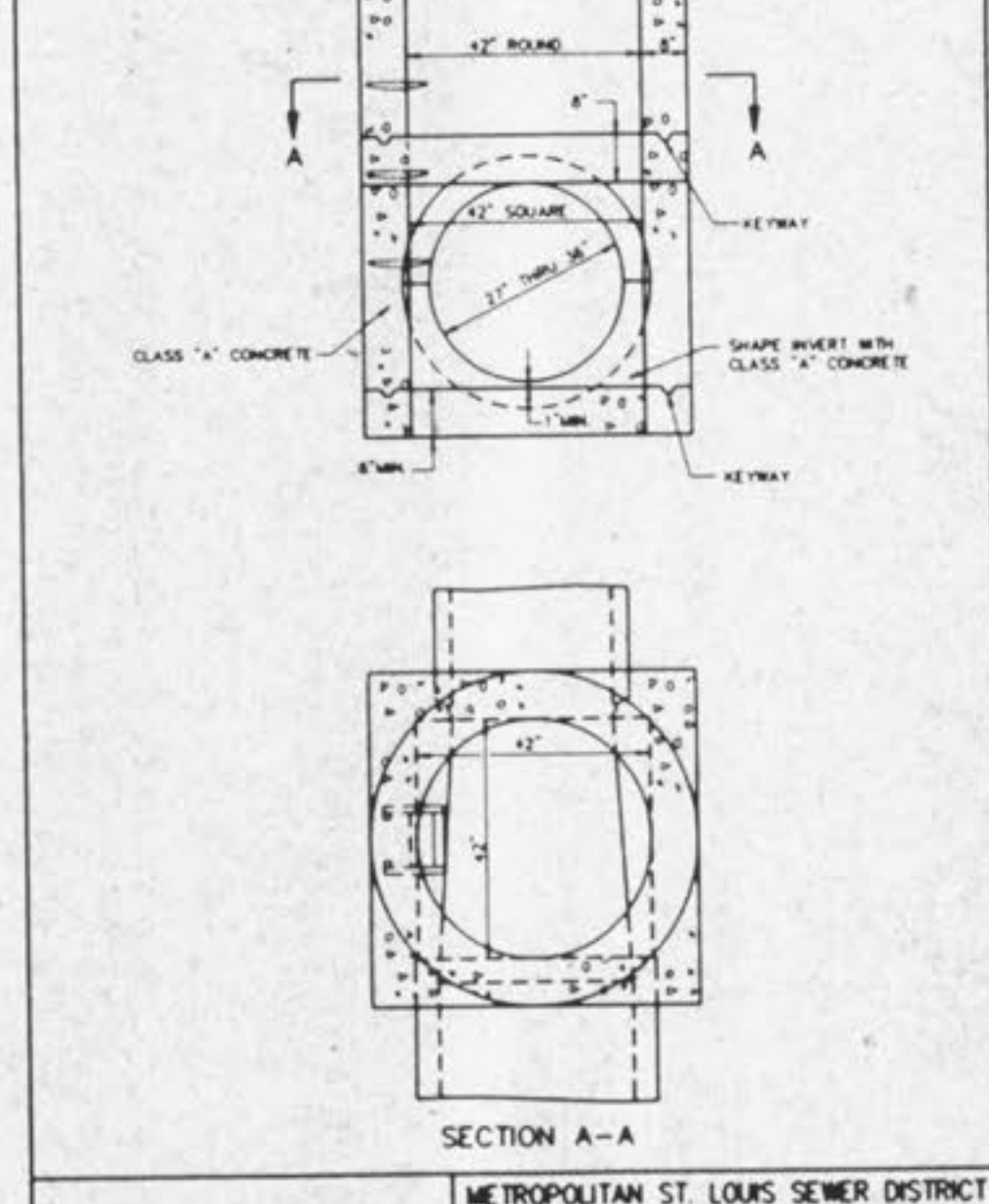
**TABLE NO. 2**  
STANDARD MANHOLE DIMENSIONS  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. R.G.W. Ch. J.C.K. 1992 SHEET 7



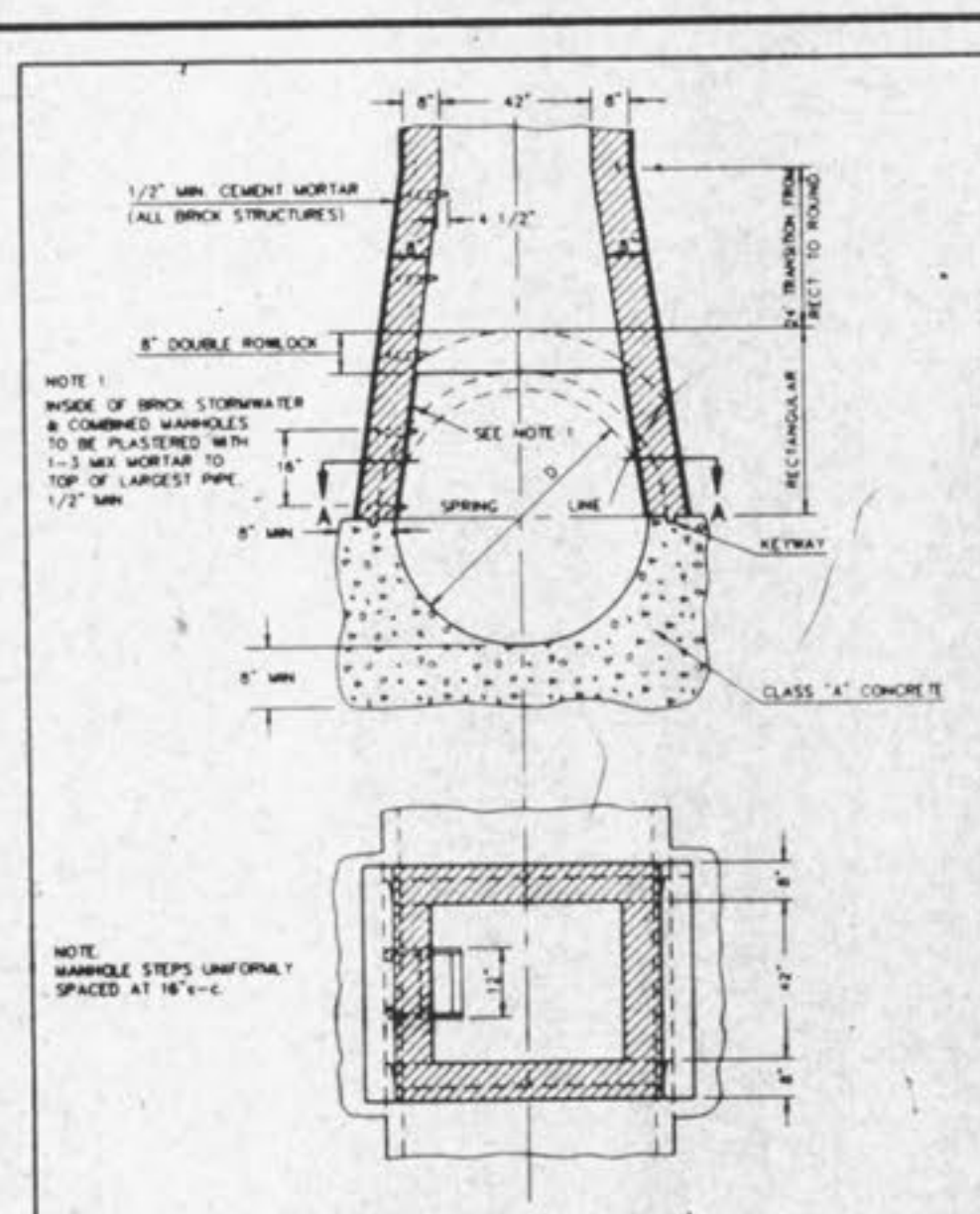
**LINE MANHOLE**  
ON PIPE SEWERS 8"-24" DIA.  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 8



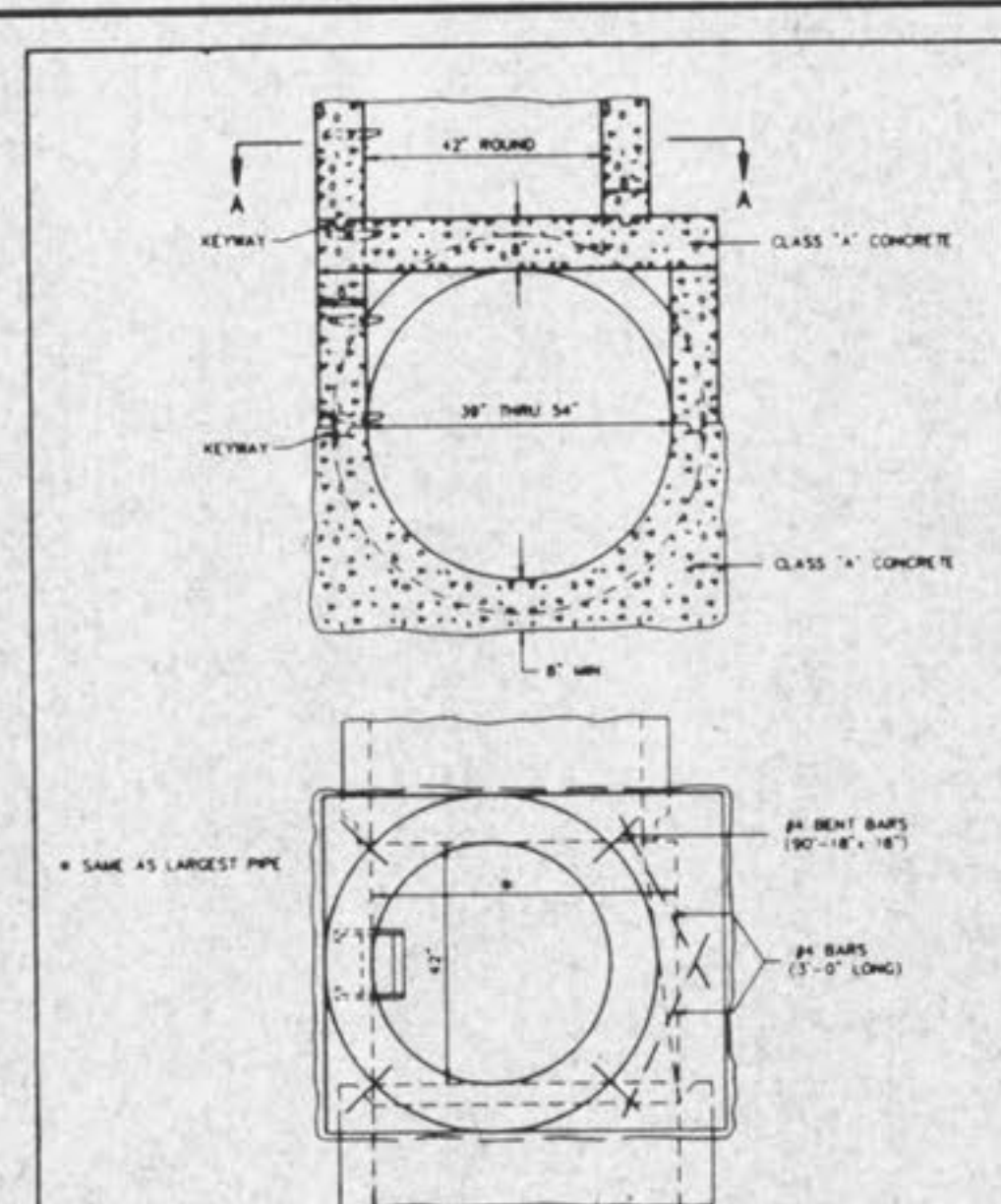
**TYPICAL LINE MANHOLE**  
ON PIPE SEWER 27" THRU 36" IN DIAMETER  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 9



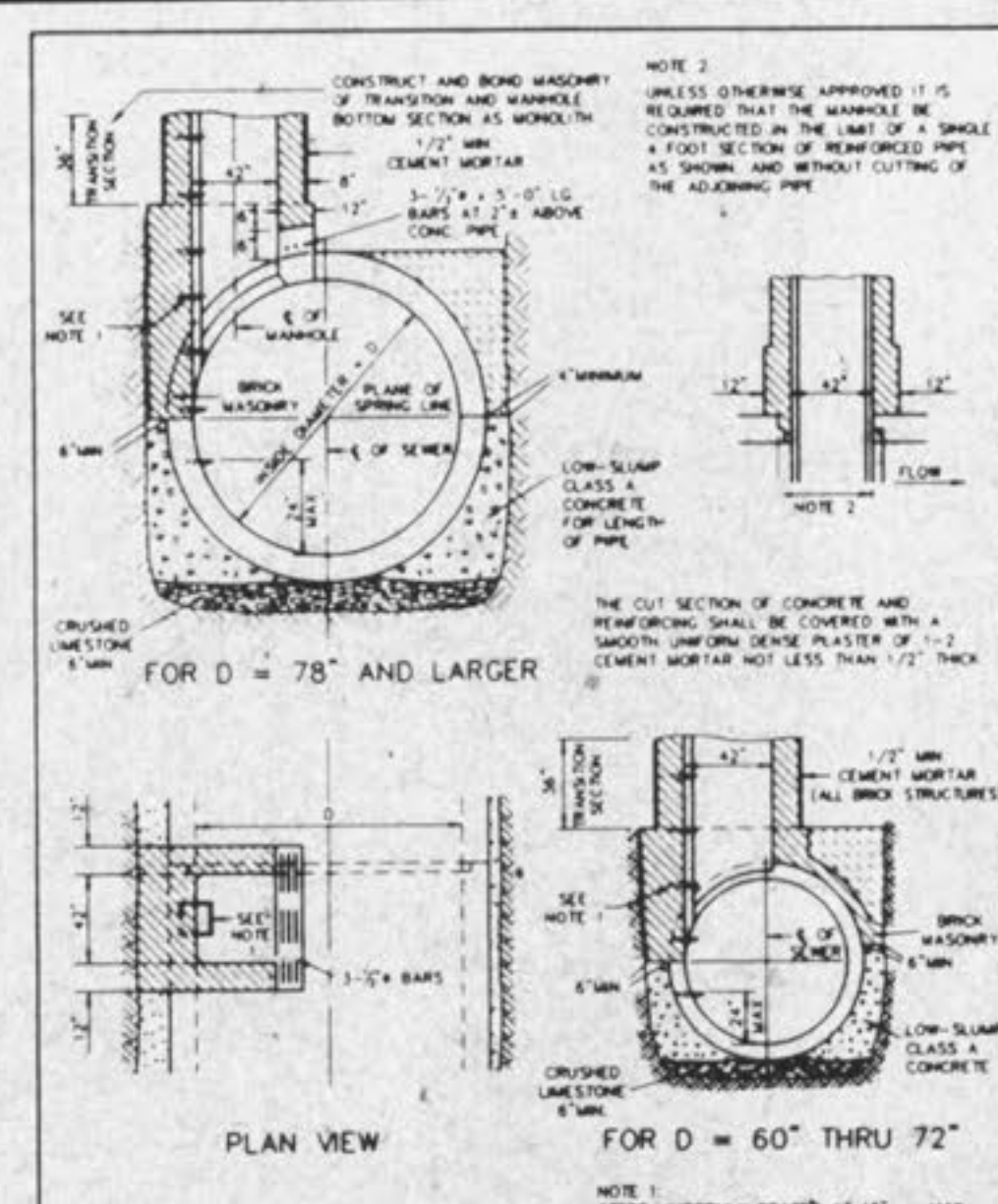
**MANHOLE ON PIPE SEWER**  
27" THRU 36" (ALTERNATE)  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. D.A.B. Ch. J.C.K. 1992 SHEET 10



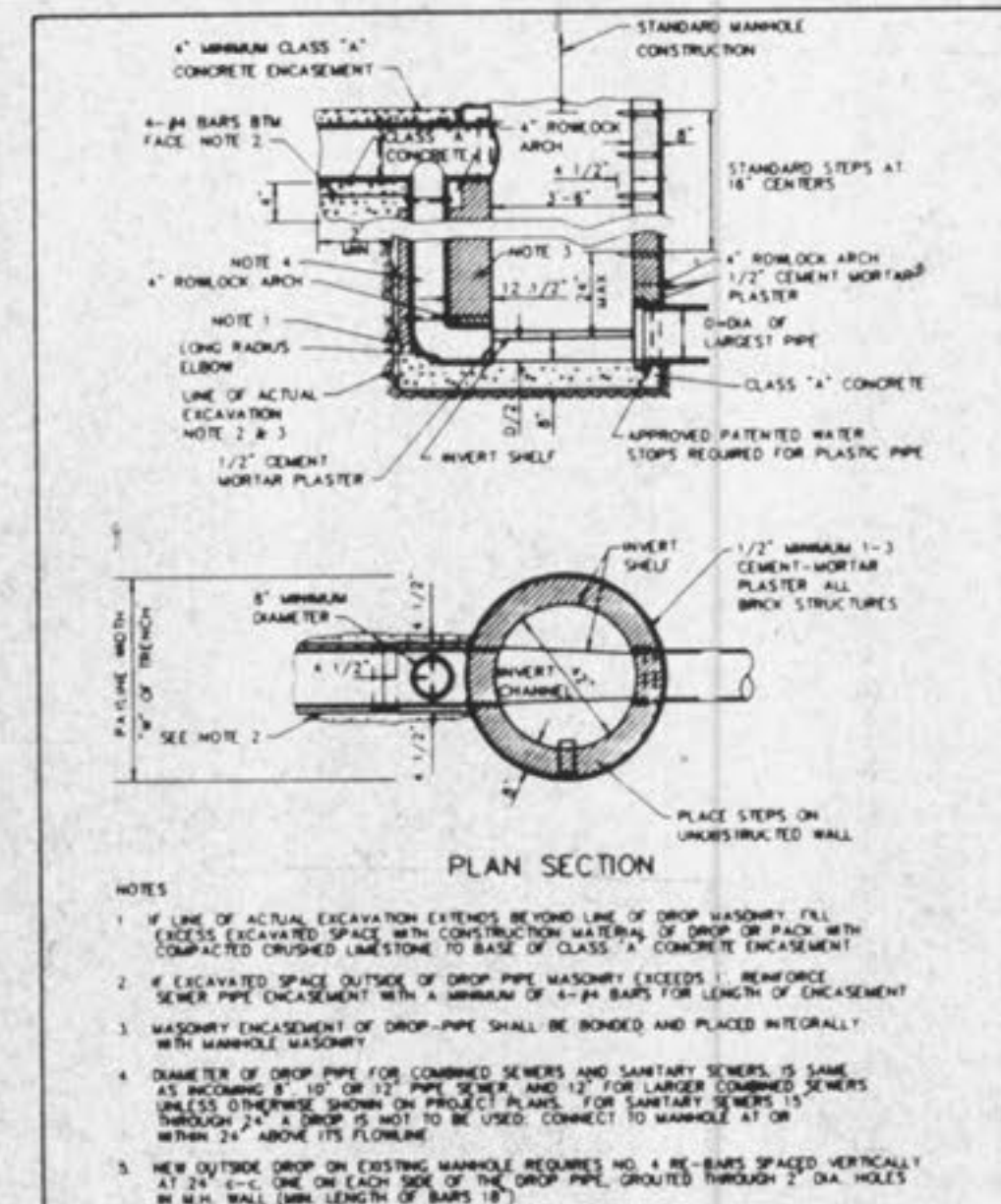
**MANHOLE ON CONCRETE PIPE**  
SEWERS 39" THRU 54" DIAMETER  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 11



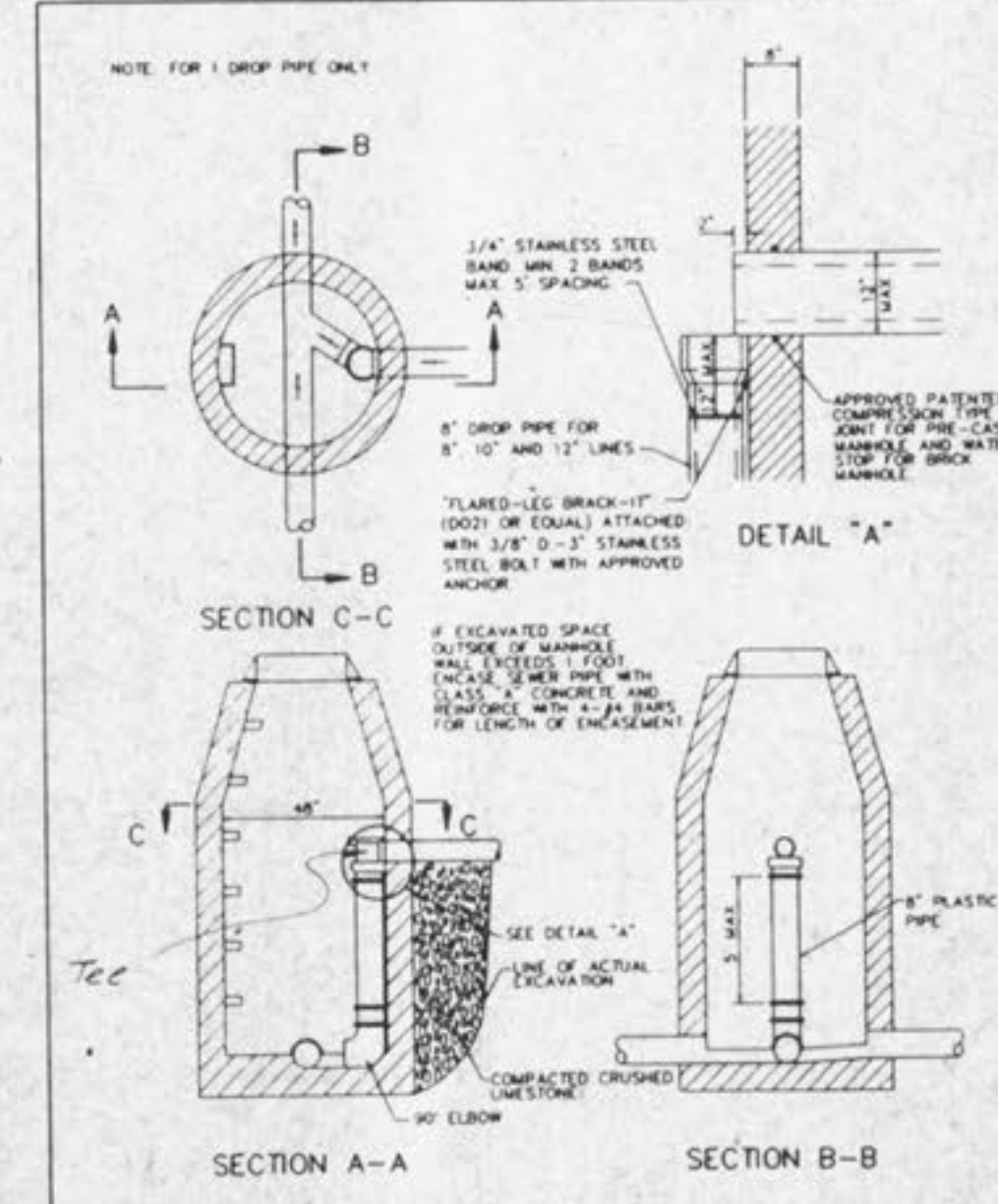
**MANHOLE ON CONCRETE PIPE**  
39" THRU 54" (ALTERNATE)  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 12



**TYPICAL MANHOLE BASE**  
REINFORCED CONCRETE PIPE  
SEWERS 60" AND LARGER  
IN DIAMETER  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 13



**OUTSIDE FOULWATER**  
DROP MANHOLE  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. R.G.W. Ch. J.C.K. 1992 SHEET 14



**INSIDE FOULWATER**  
DROP MANHOLE  
METROPOLITAN ST. LOUIS SEWER DISTRICT  
Standard Details of Sewer Construction  
Dr. R.G.W. Ch. J.C.K. 1992 SHEET 15