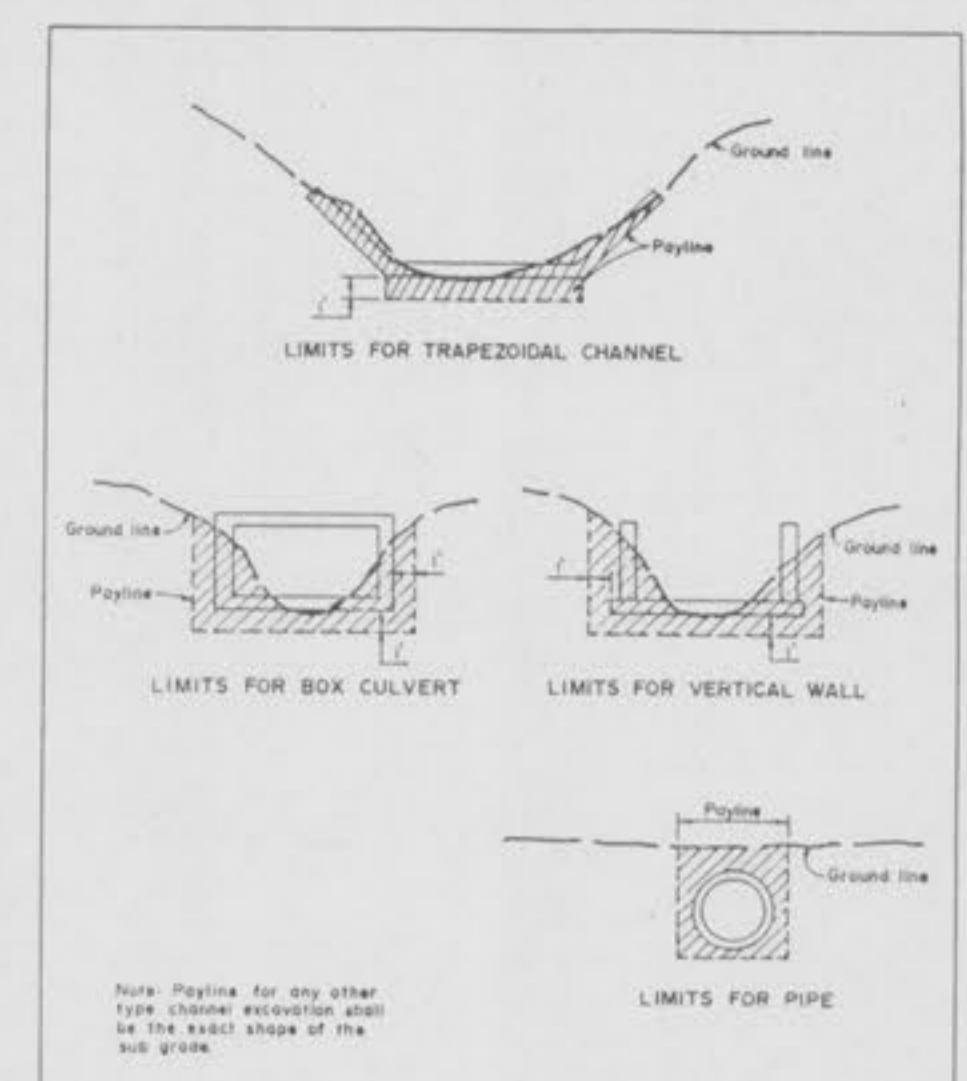
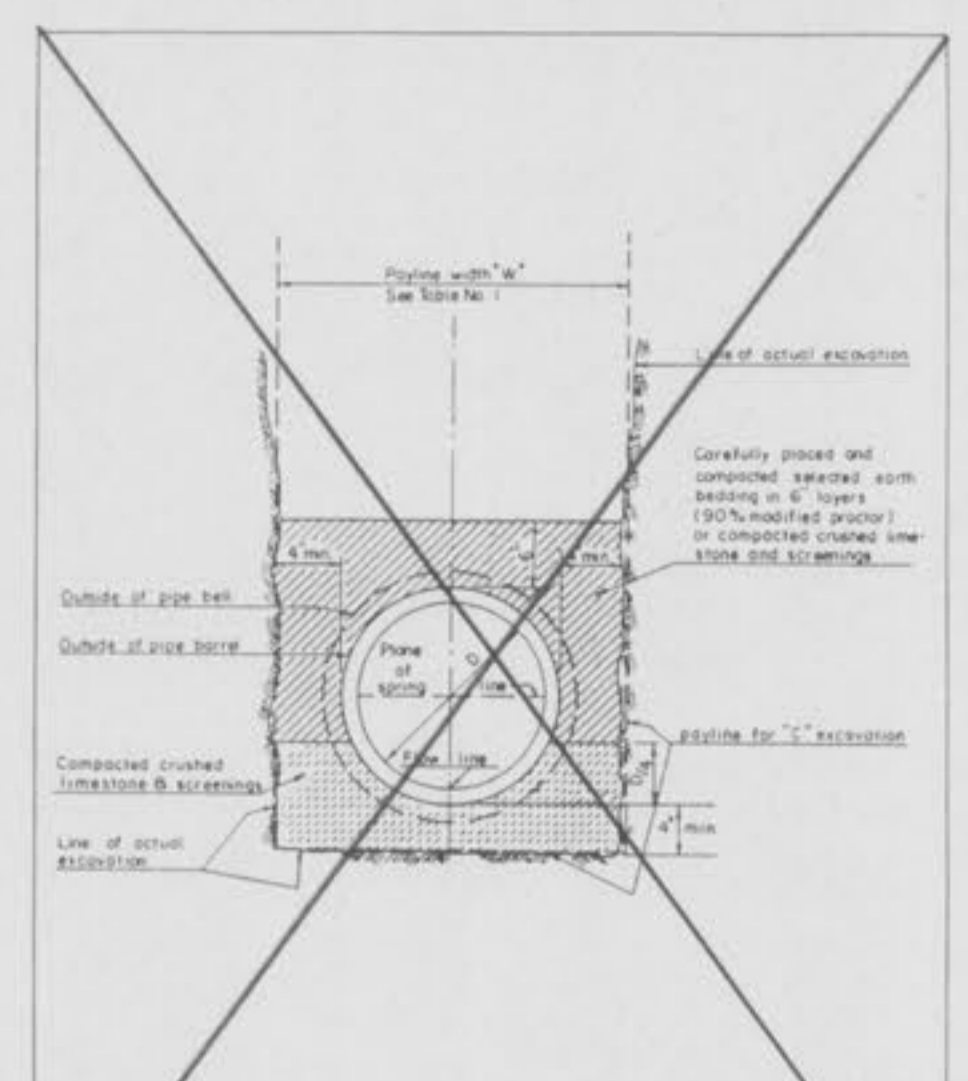


ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
Inside Diameter of Pipe (Inches)	"a" Payline Width of Trench (Feet)	"b" Payline Width of Trench (Feet)	Payline Volume (cu ft per ft)	Inside Dimensions of Pipe (Inches)	"a" Payline Width of Trench (Feet)	"b" Payline Width of Trench (Feet)	Payline Volume (cu ft per ft)
4	28	235	3.20				
6	28	235	3.46				
8	28	235	3.70				
10	28	235	3.88				
12	28	235	3.98				
15	32	267	4.89				
18	35	292	5.63	14 x 23	41	342	5.94
21	39	325	6.61				
24	42	350	7.39	18 x 30	49	408	7.68
27	45	375	8.16	22 x 34	53	442	8.41
30	49	408	9.30	24 x 38	58	483	9.70
33	53	442	10.53	27 x 42	62	517	10.71
36	56	467	11.43	29 x 45	66	550	11.72
DISCONTINUED							
42	63	525	13.38	34 x 53	75	625	14.05
48	70	583	15.67	38 x 60	83	692	16.18
54	77	642	18.15	43 x 68	92	767	18.81
60	84	700	20.73	48 x 76	101	842	21.59
66	91	758	23.45	53 x 83	109	908	24.35
72	98	817	26.37	58 x 91	118	983	27.45
78	105	875	29.39	63 x 98	126	1050	30.50
84	112	933	32.57	68 x 106	135	1125	33.91
90	119	992	35.90	72 x 113	143	1192	36.99
96	126	1050	39.37	77 x 121	152	1267	40.69
102	133	1108	42.98	82 x 128	160	1333	44.45
108	140	1167	46.75	87 x 136	168	1400	47.79
114	147	1225	50.66	92 x 143	176	1467	51.70
120	154	1283	54.72	97 x 151	185	1542	56.01
126	161	1342	58.92				
132	168	1400	63.27	106 x 166	202	1693	64.48
144	182	1517	72.40	116 x 180	218	1817	73.59

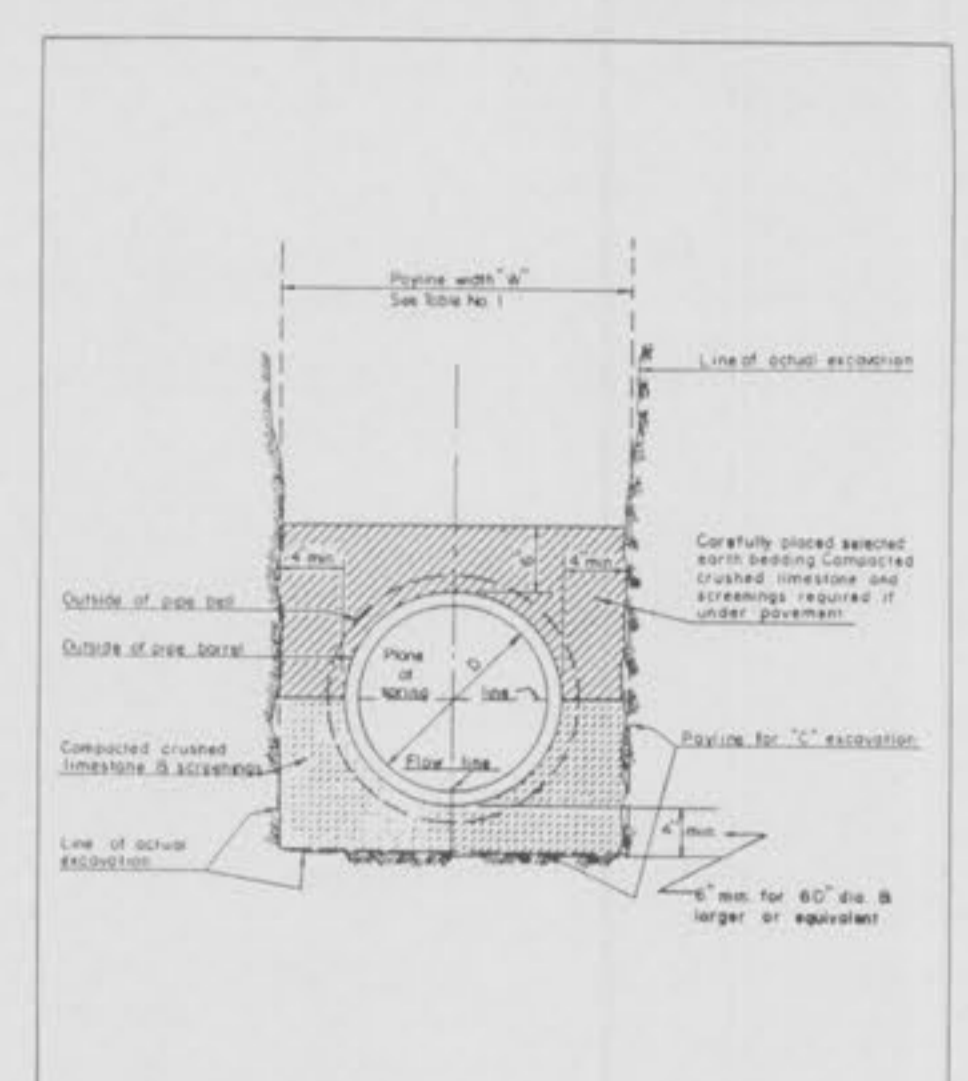
TABLE NO. 1
PAYLINE WIDTHS OF TRENCH AND PAY QUANTITIES OF CONCRETE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.N. Ch. J.C.K. April 1979 Sheet 1



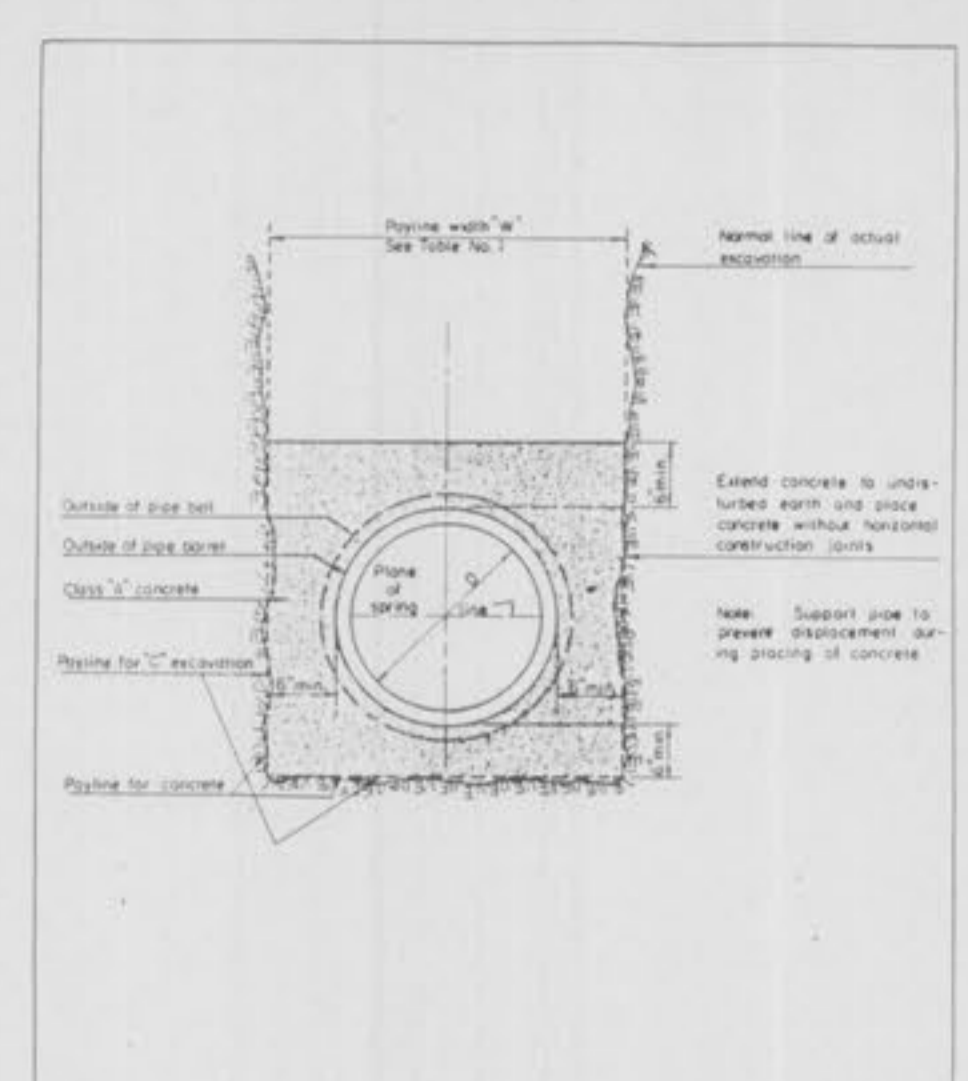
PAYLINE LIMITS FOR EXCAVATION
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.N. Ch. J.C.K. April 1979 Sheet 2



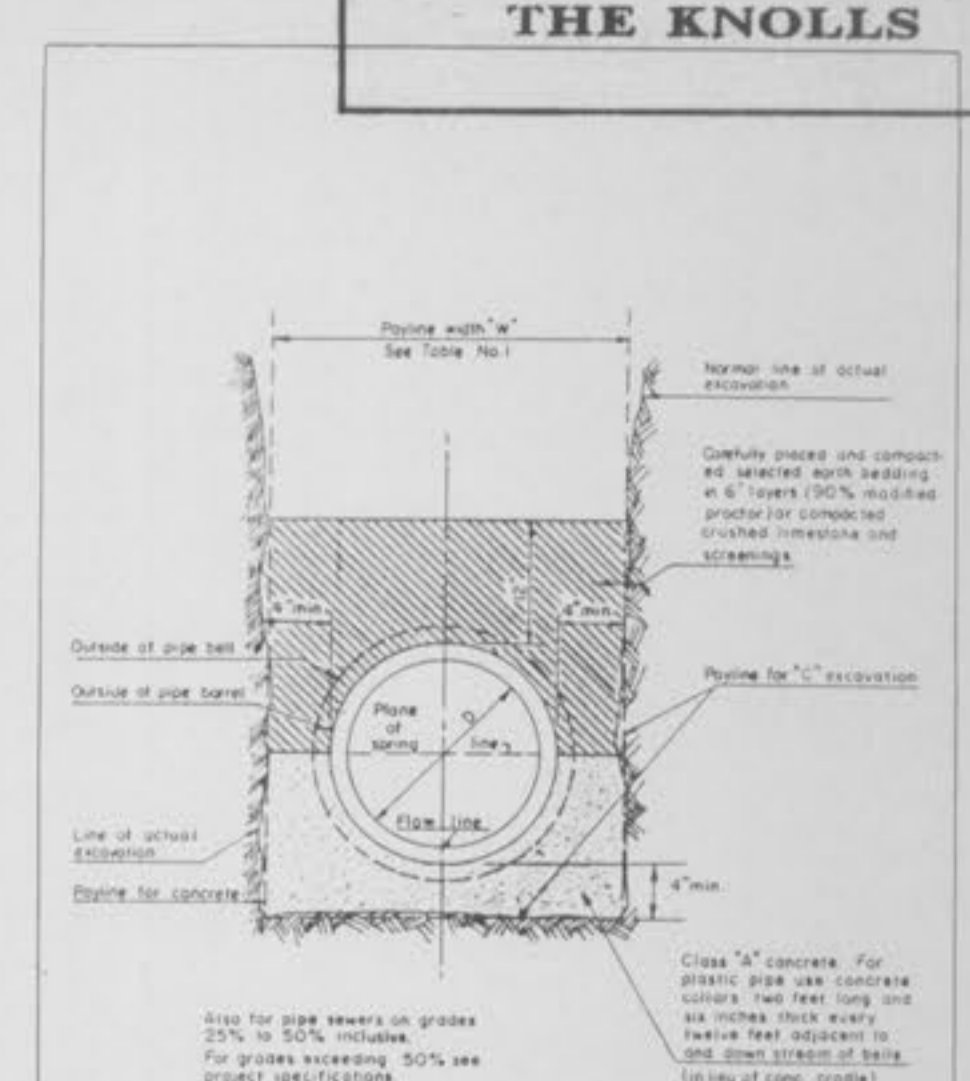
PIPE BEDDING CLASS "C"
FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.N. Ch. J.C.K. April 1979 Sheet 3



PIPE BEDDING CLASS "C"
MODIFIED FOR REINFORCED CONCRETE PIPE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.N. Ch. J.C.K. April 1984 Sheet 4



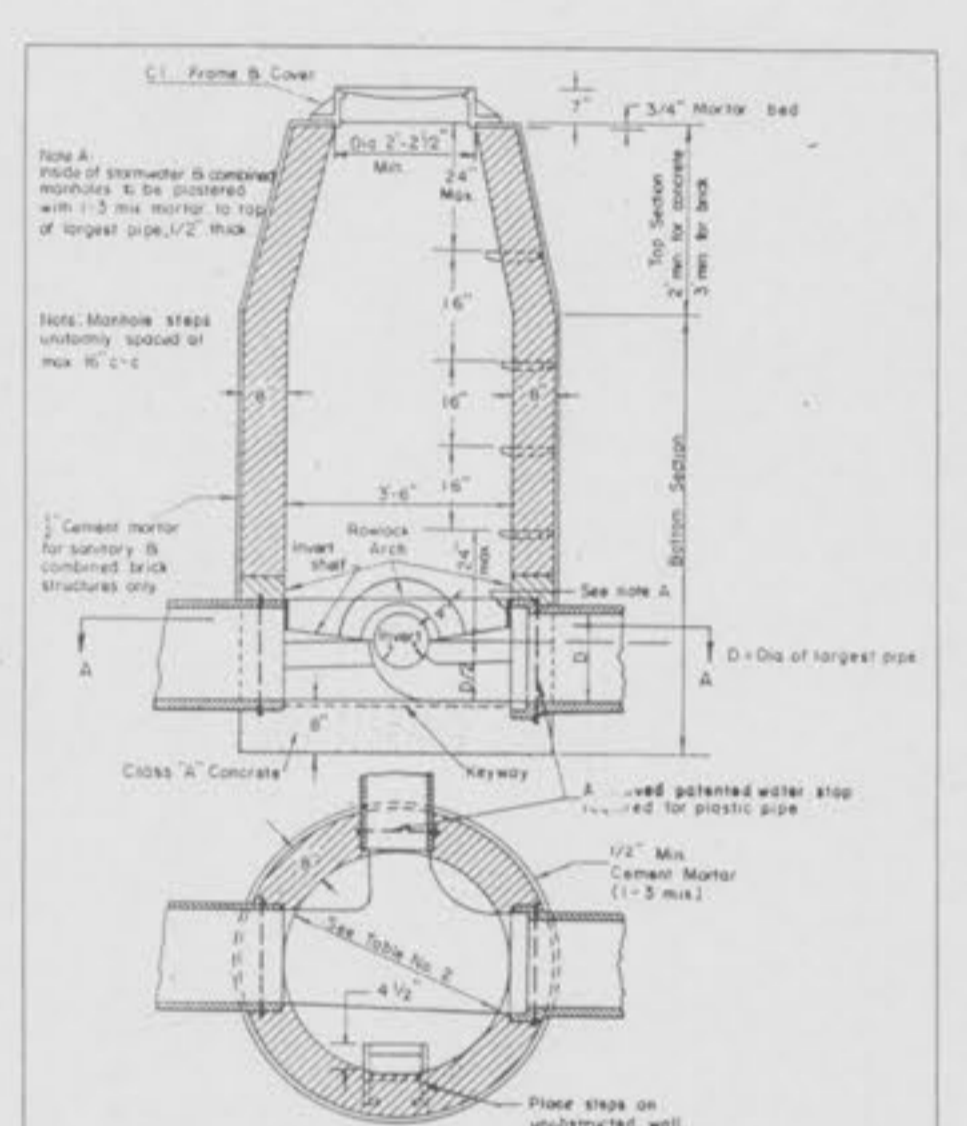
CONCRETE ENCASEMENT
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.N. Ch. J.C.K. April 1985 Sheet 5



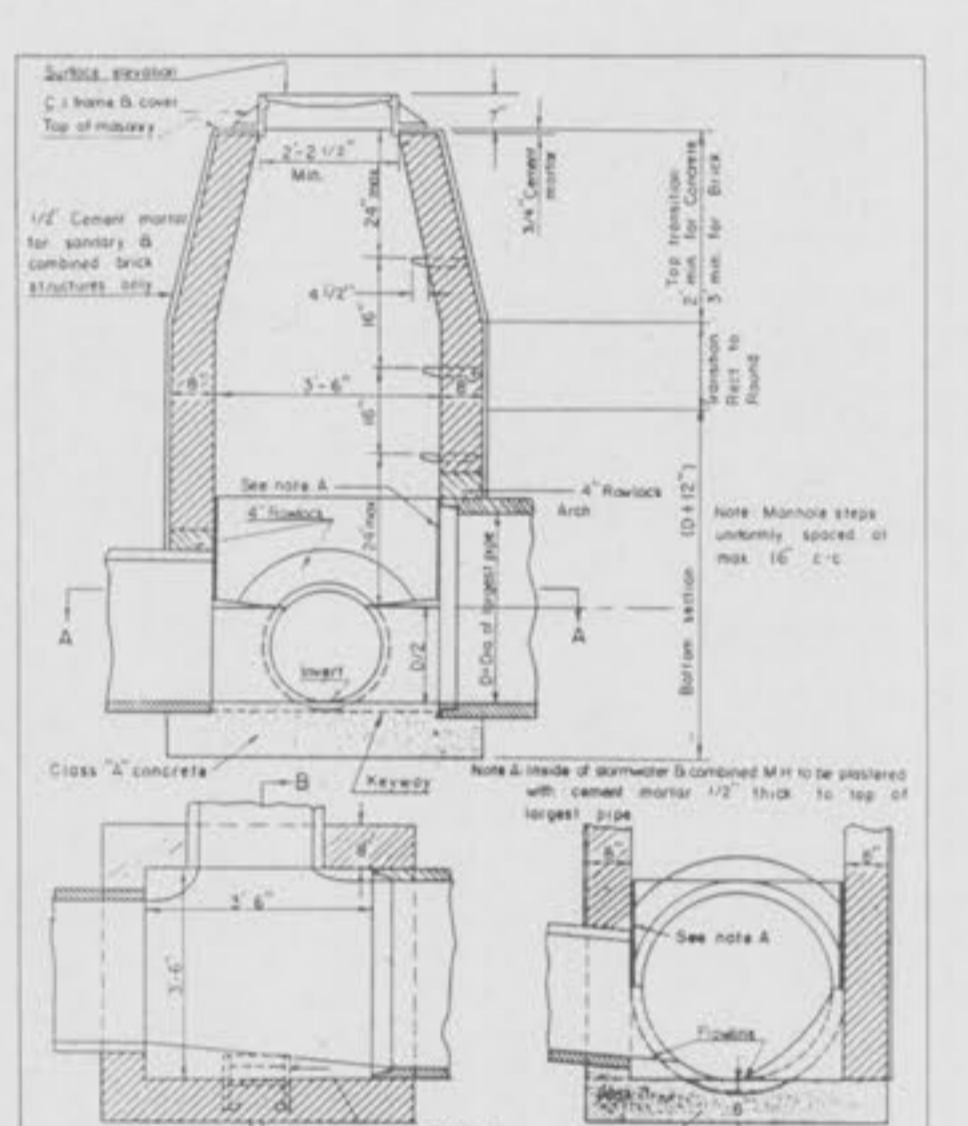
CONCRETE CRADLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.N. Ch. J.C.K. April 1985 Sheet 6

Section	Manhole	Dimension
Top Transition	Upper	2'-2 1/2" Dia.
	Lower	3'-6" Dia.
Bottom Section	8" thru 24" Dia. Pipe	3'-6" Dia.
Bottom Section	27" thru 36" Dia. Pipe	3'-6" Square

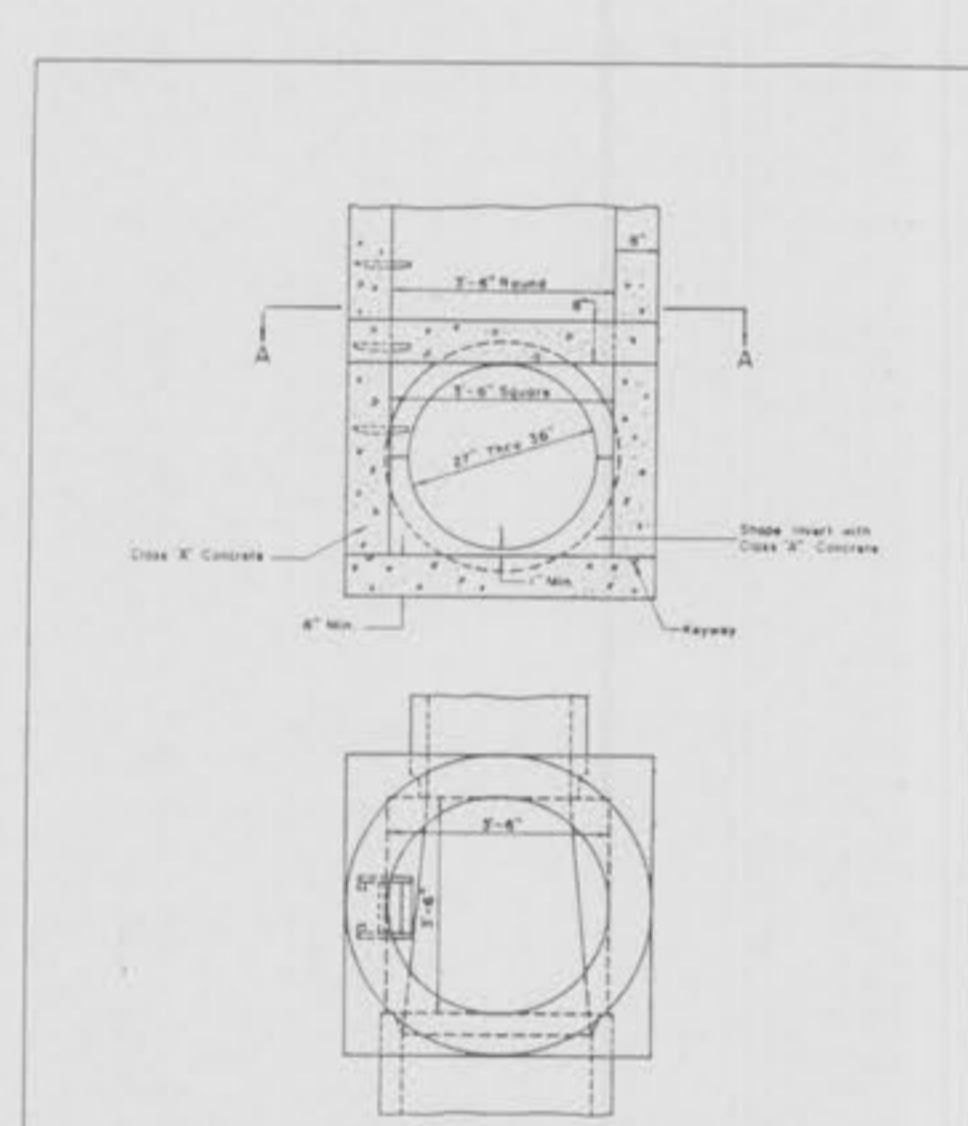
TABLE NO. 2
STANDARD MANHOLE DIMENSIONS
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. J.V.N. Ch. J.C.K. April 1973 Sheet 7



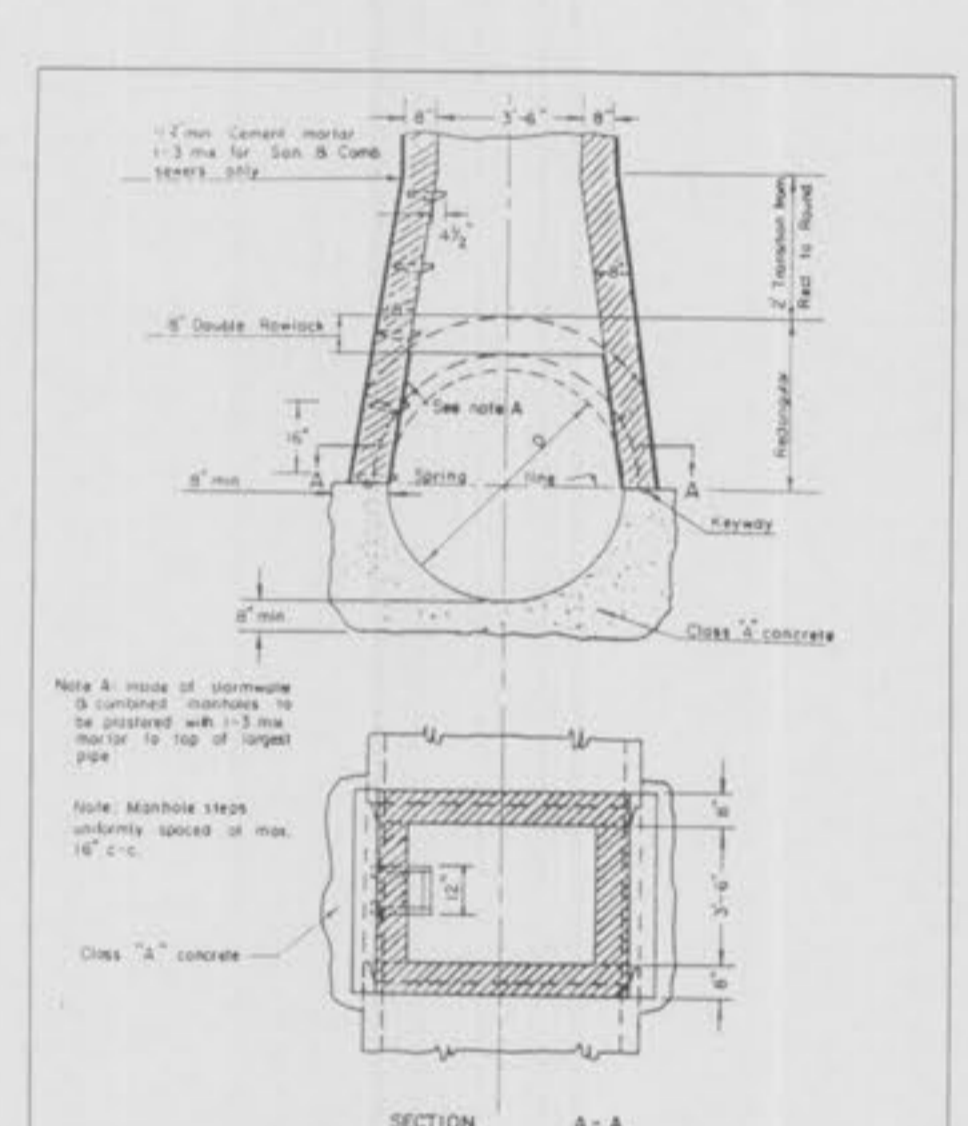
LINE MANHOLE
PIPE SEWERS 8"-24" DIA.
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. J.V.N. Ch. J.C.K. April 1985 Sheet 8



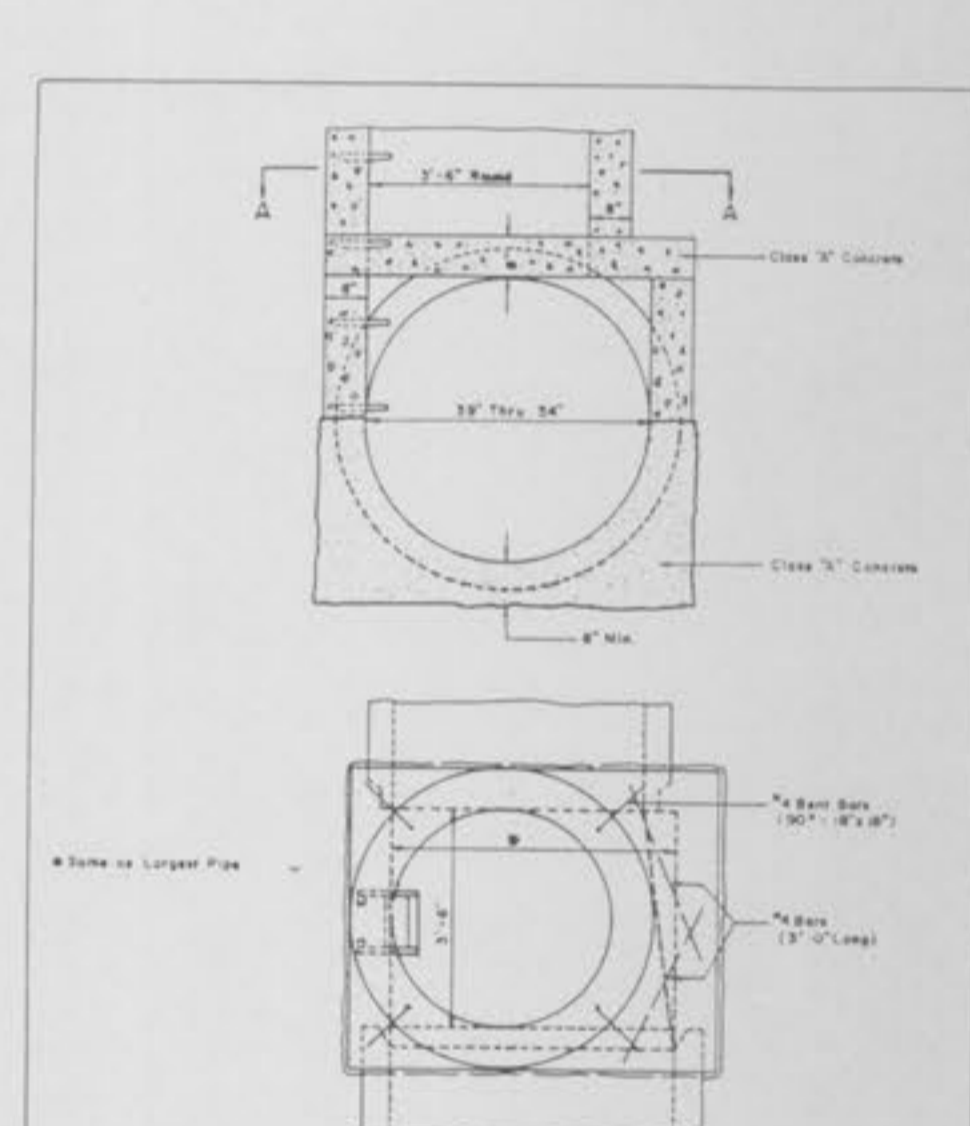
TYPICAL LINE MANHOLE
ON PIPE SEWER 27" THRU 36" IN DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. J.V.N. Ch. J.C.K. April 1985 Sheet 9



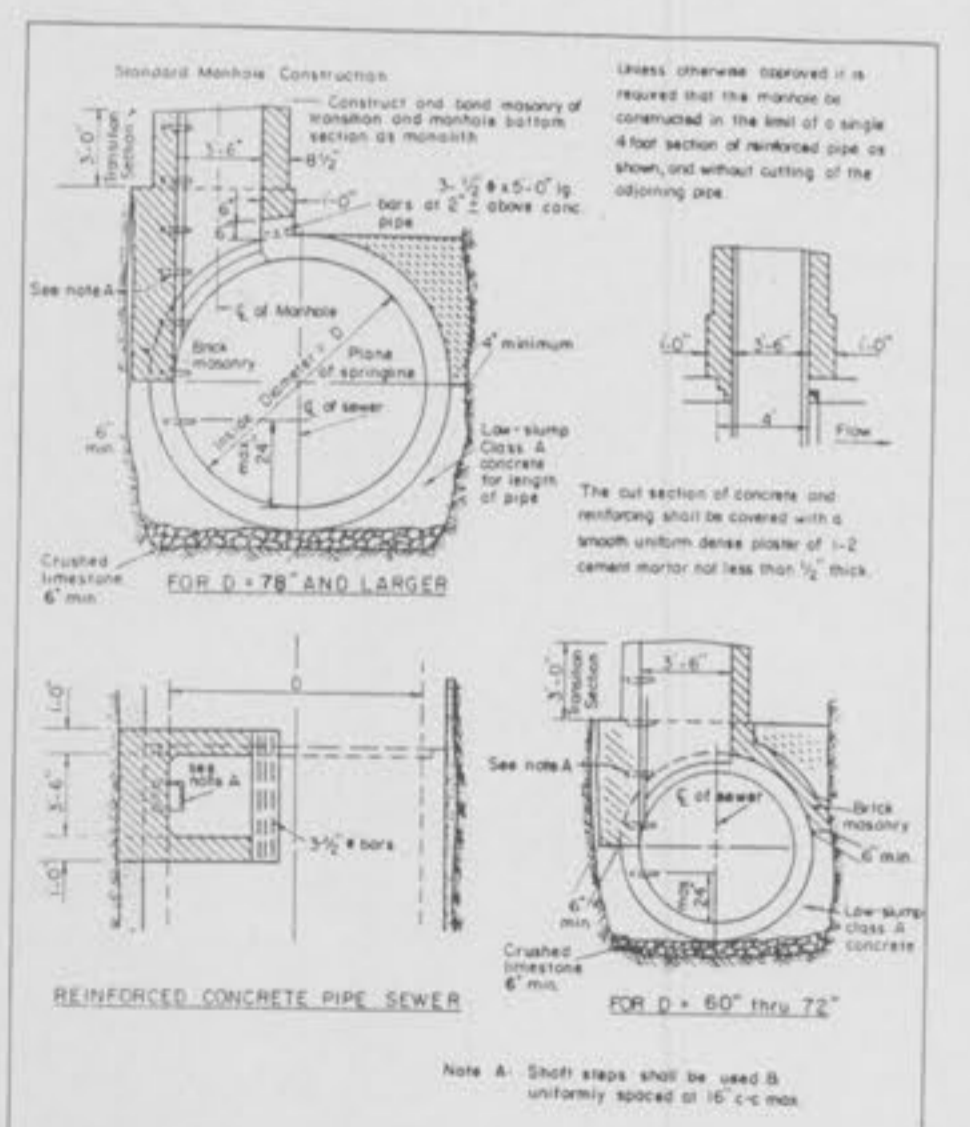
MANHOLE ON PIPE SEWER
27" THRU 36" (ALTERNATE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. J.V.N. Ch. J.C.K. April 1985 Sheet 10



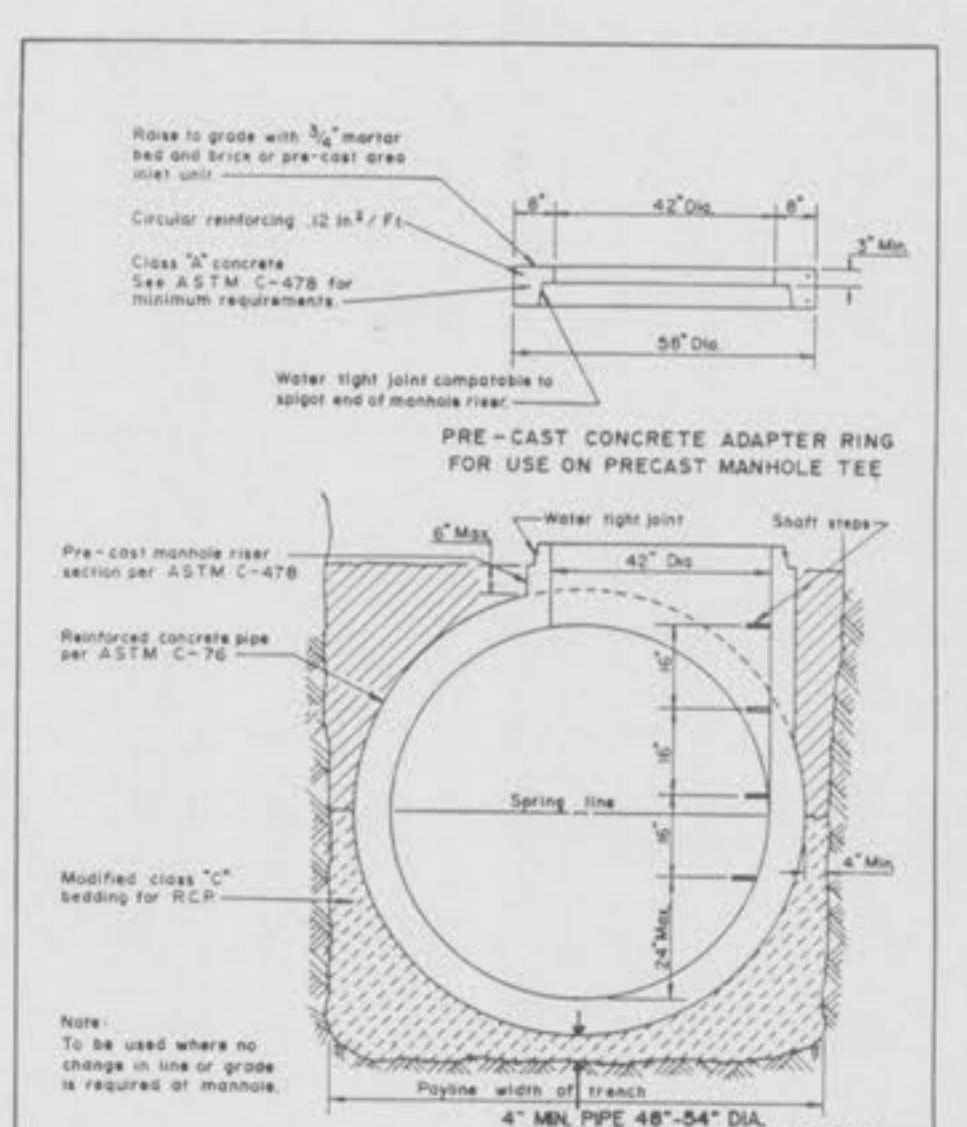
MANHOLE ON CONCRETE PIPE
SEWERS 39" THRU 54" DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. J.V.N. Ch. J.C.K. April 1985 Sheet 11



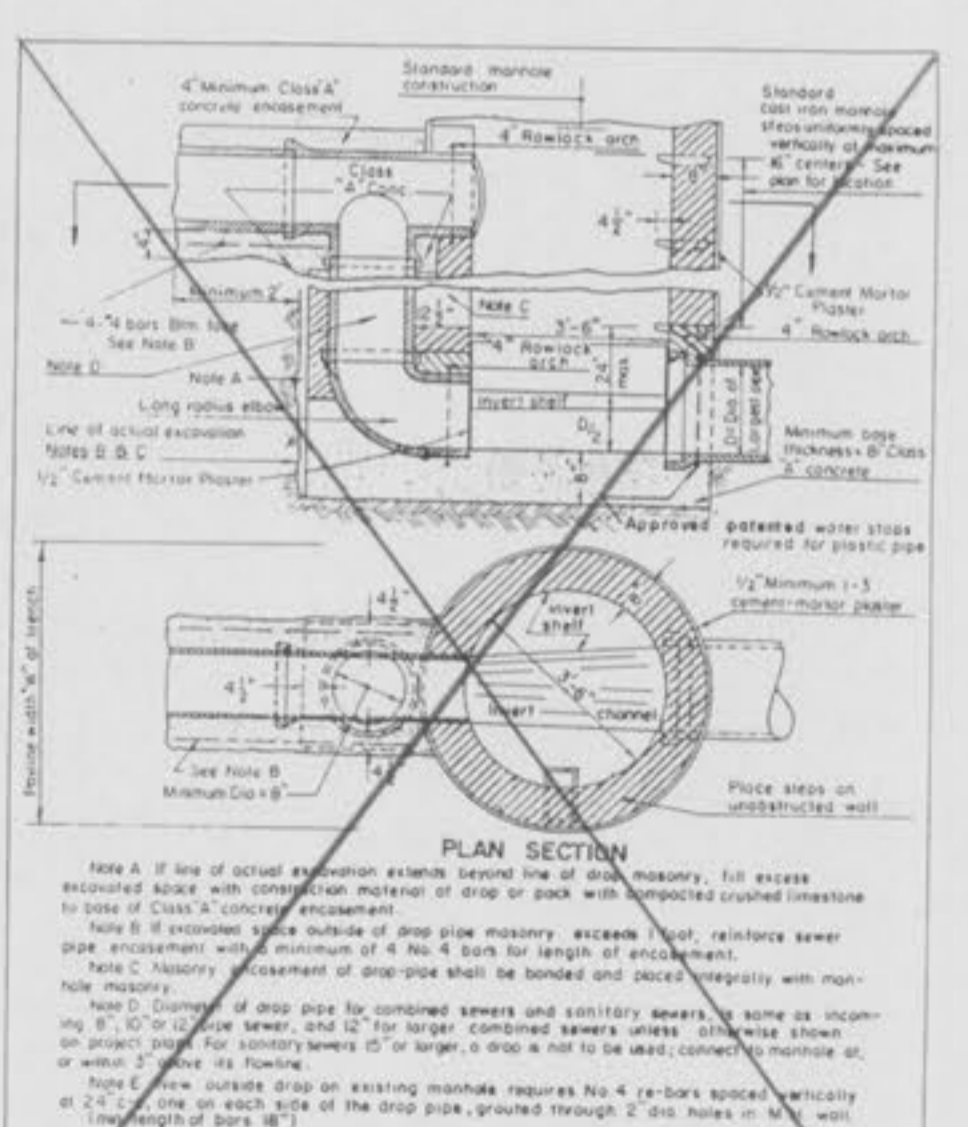
MANHOLE ON CONCRETE PIPE
39" THRU 54" (ALTERNATE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. J.V.N. Ch. J.C.K. April 1985 Sheet 12



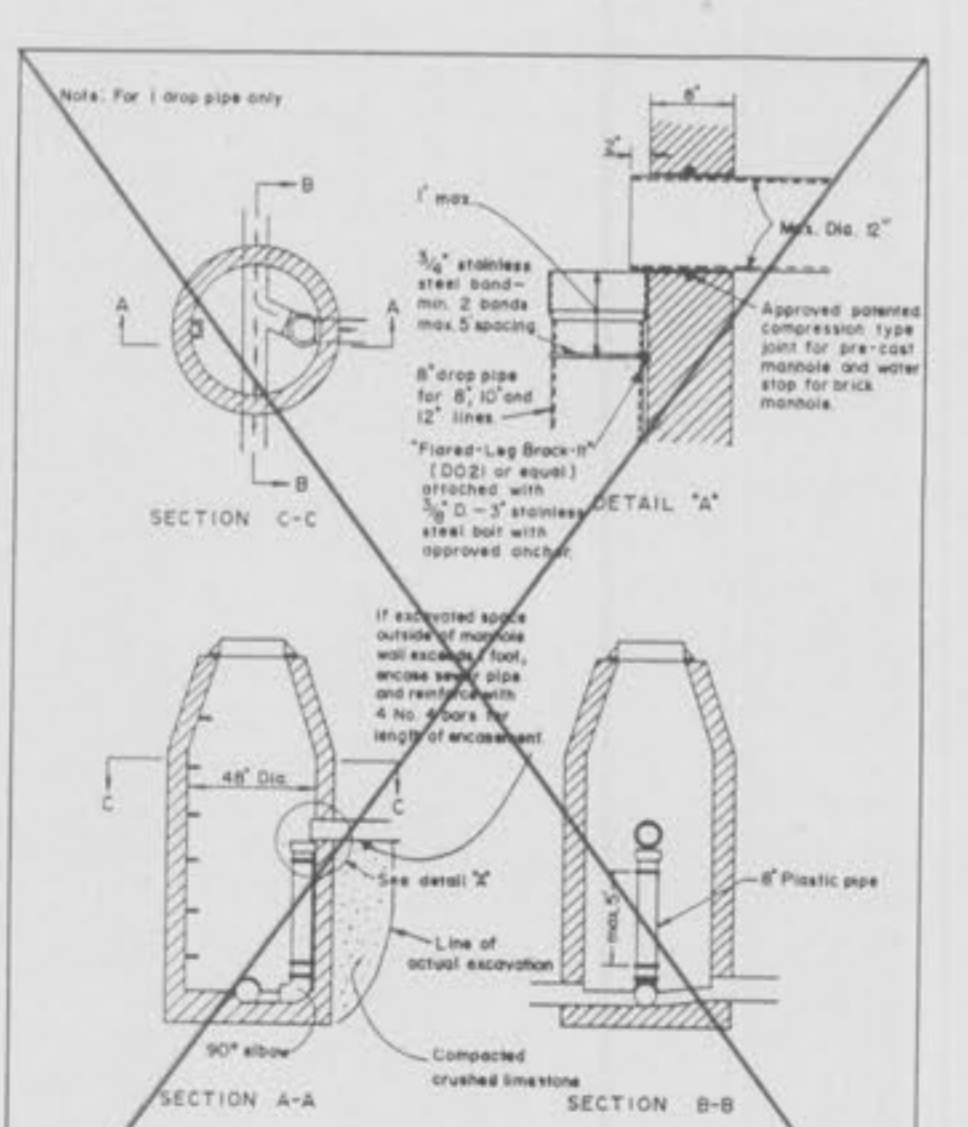
TYPICAL MANHOLE BASE
REINFORCED CONCRETE PIPE
SEWERS 60" AND LARGER
IN DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.N. Ch. J.C.K. April 1984 Sheet 13



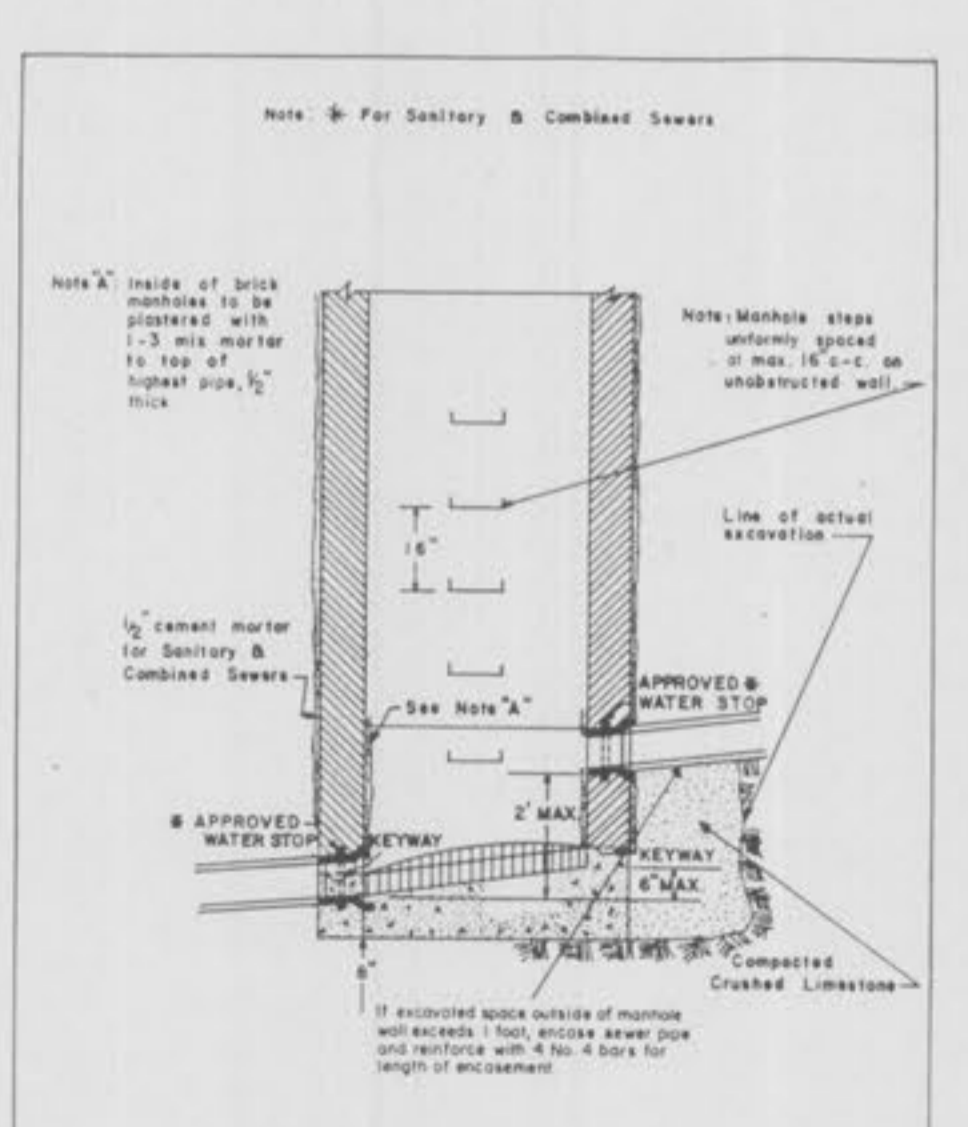
TYPICAL PRE-CAST M. H. TEE
FOR REINFORCED CONCRETE
PIPE SEWERS 48" AND
LARGER IN DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.N. Ch. J.C.K. April 1985 Sheet 14



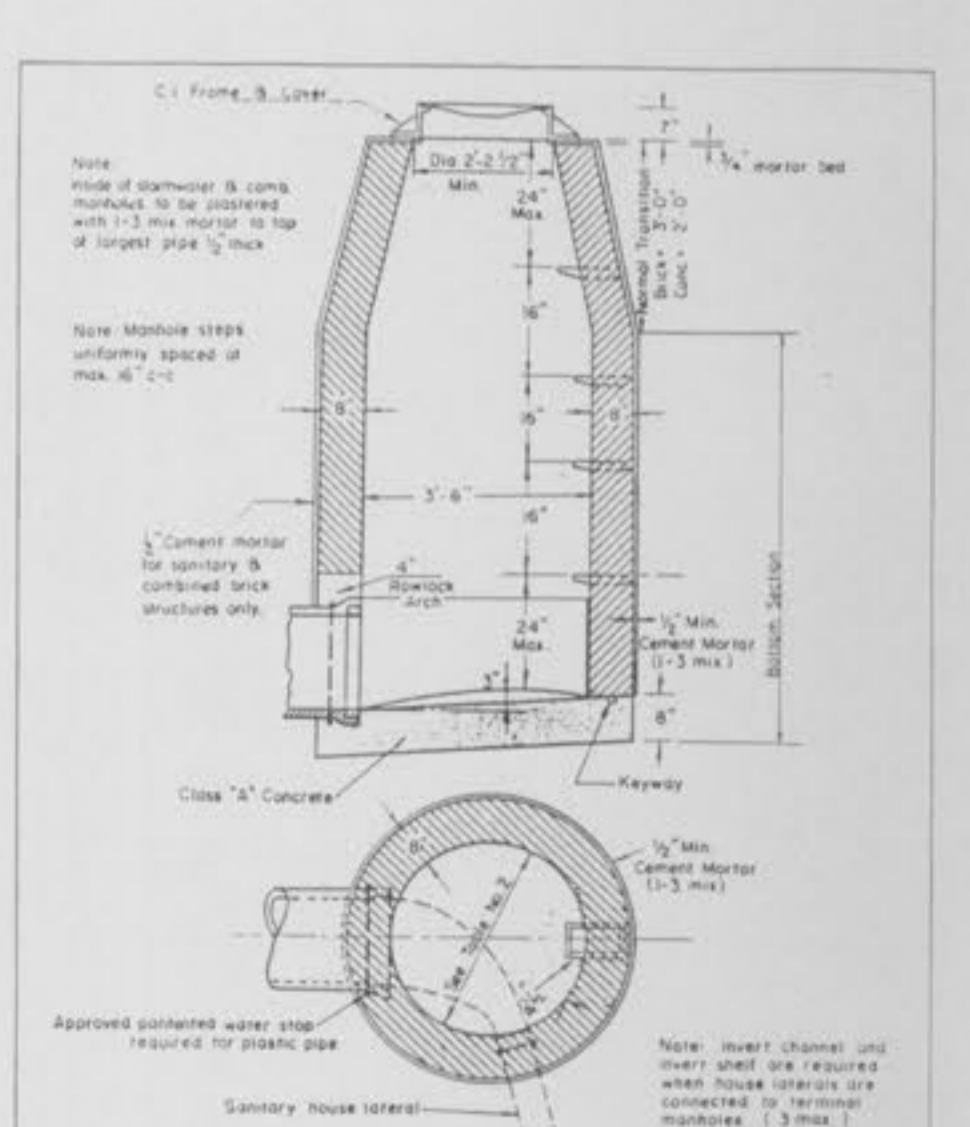
OUTSIDE FOUL WATER
PIPE MANHOLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.N. Ch. J.C.K. April 1985 Sheet 15



FOUL WATER
INSIDE DROP MANHOLE
FOR PLASTIC PIPE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.N. Ch. J.C.K. FEB 1985 Sheet 16



INSIDE DROP
(6" THRU 24" DIA. PIPE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.N. Ch. J.C.K. JUNE 1984 Sheet 17



TERMINAL MANHOLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. J.V.N. Ch. J.C.K. FEB 1985 Sheet 18