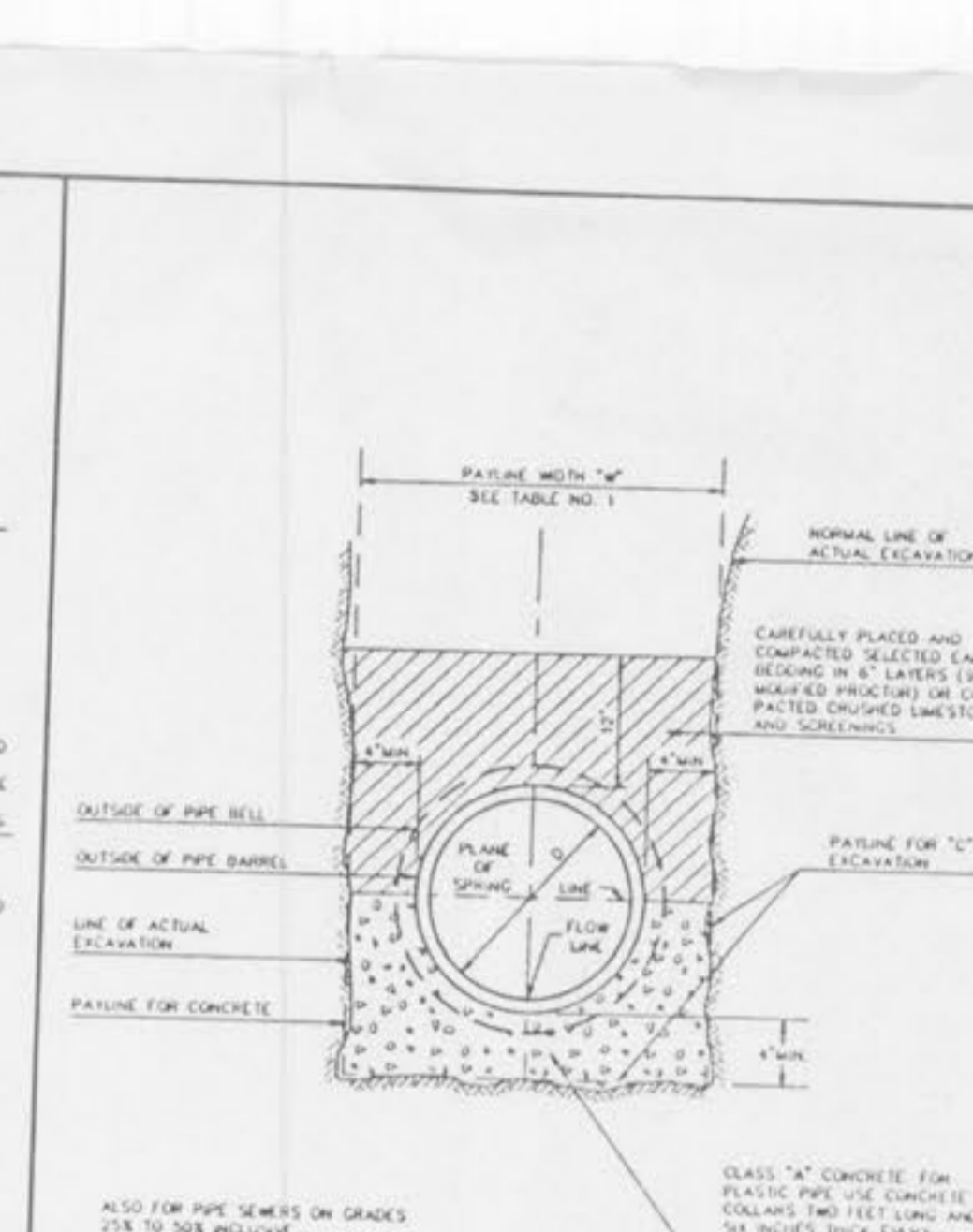
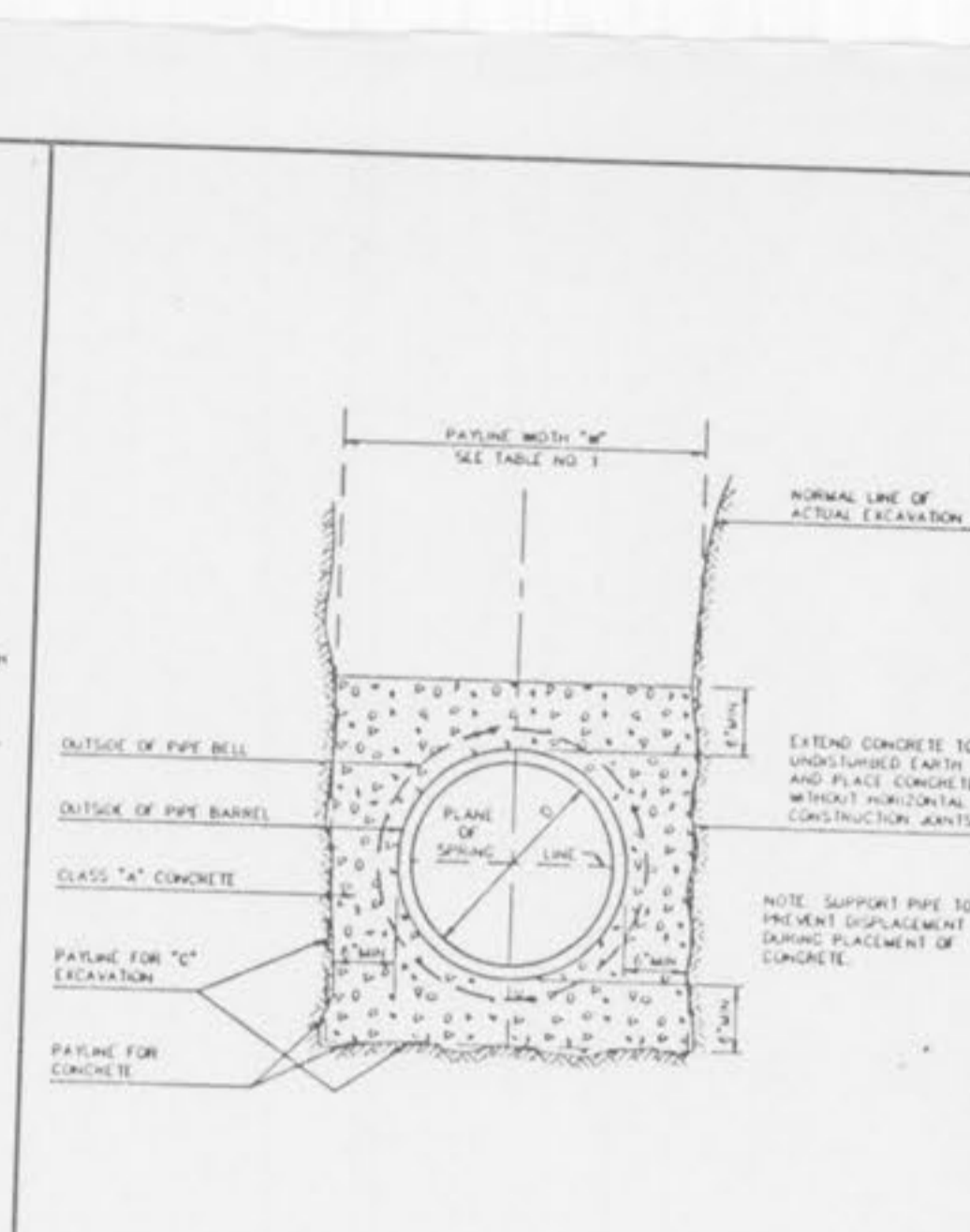
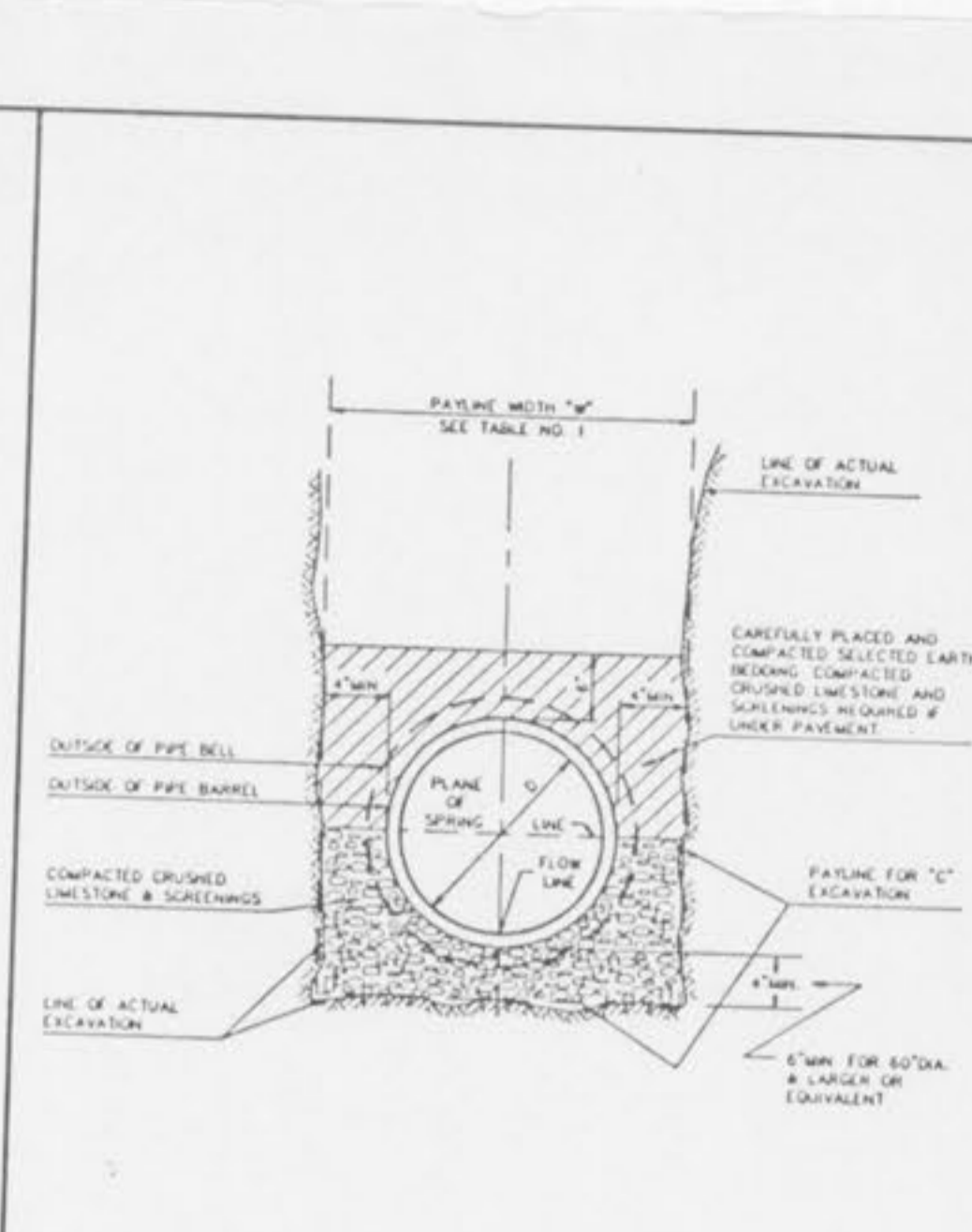
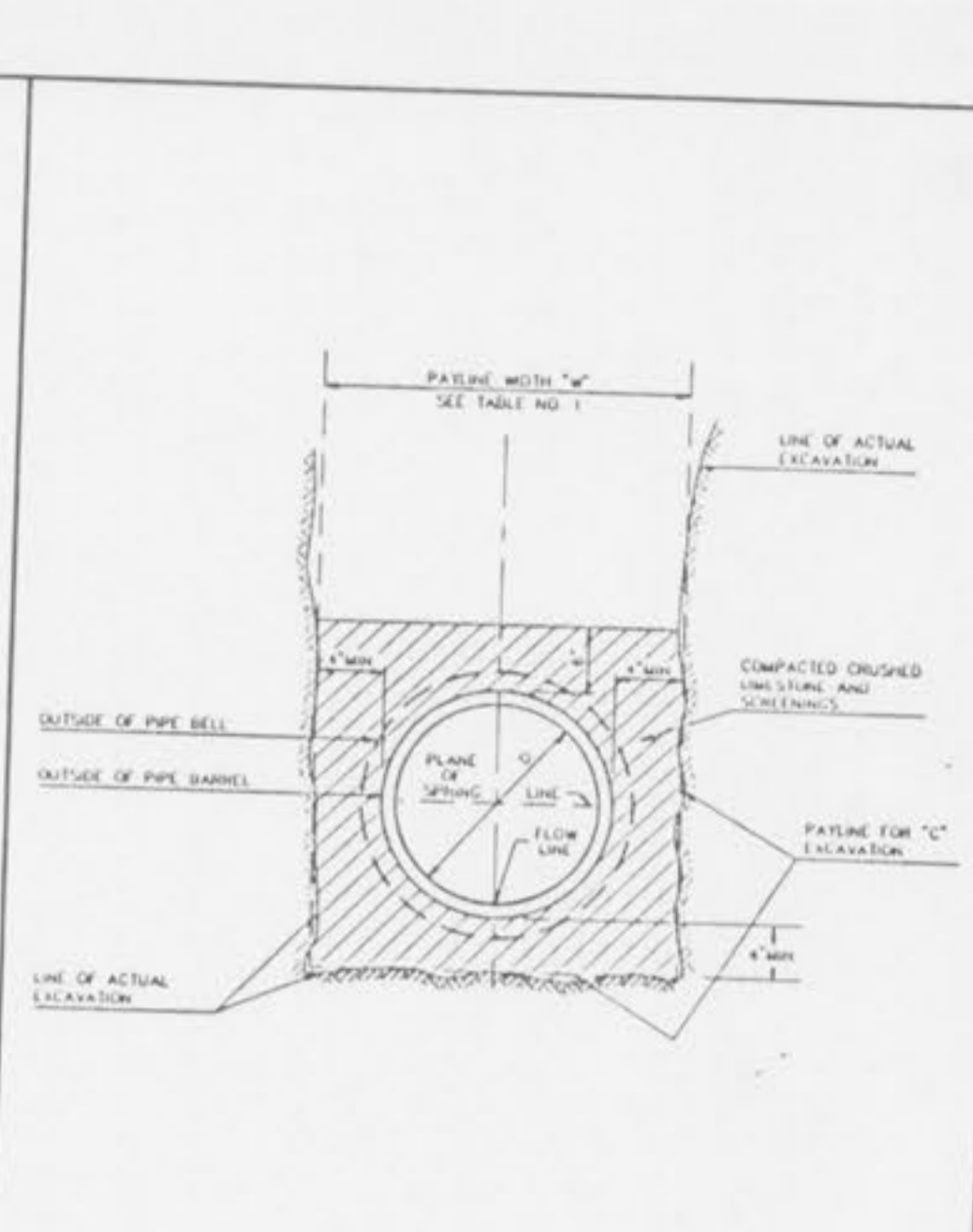
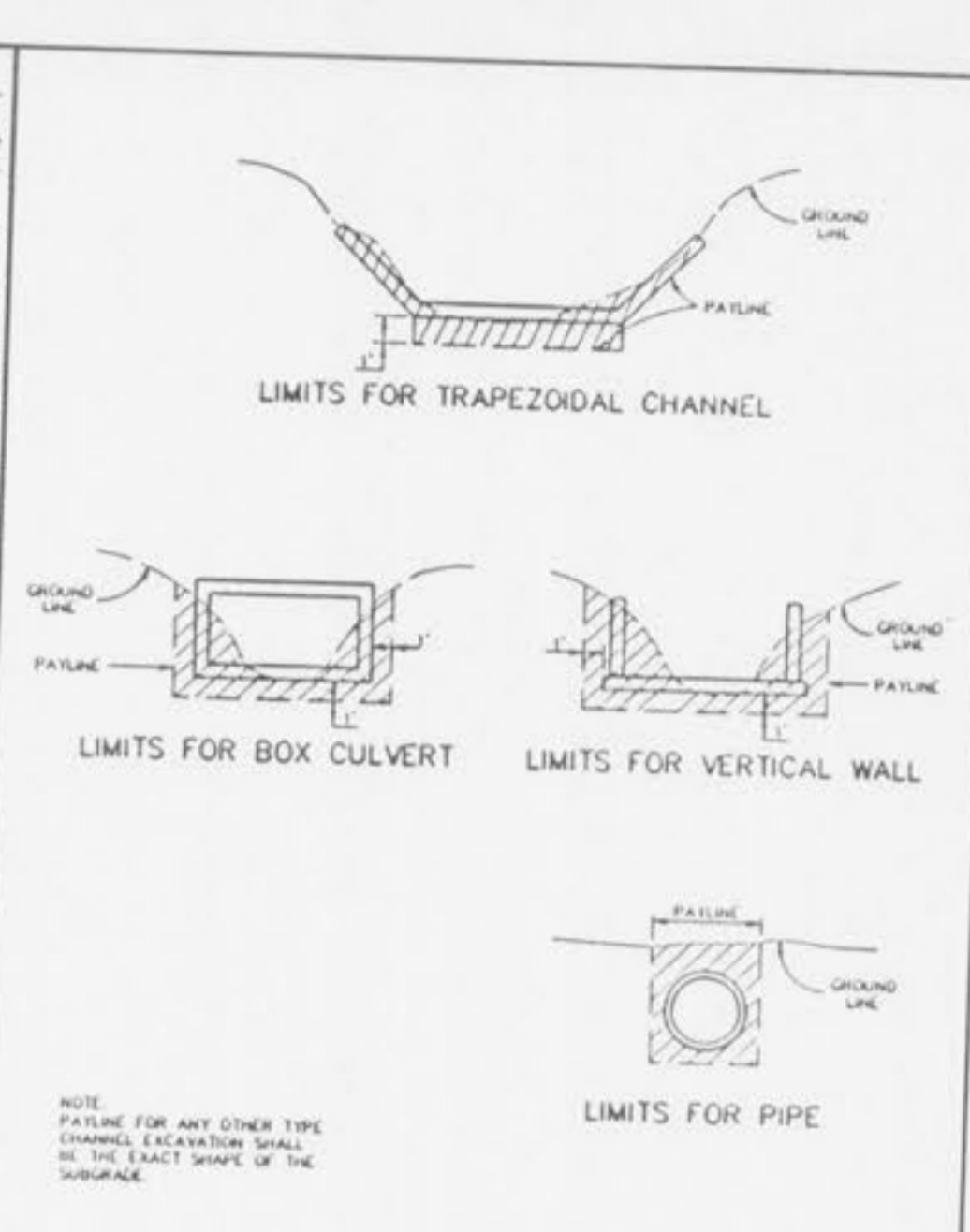


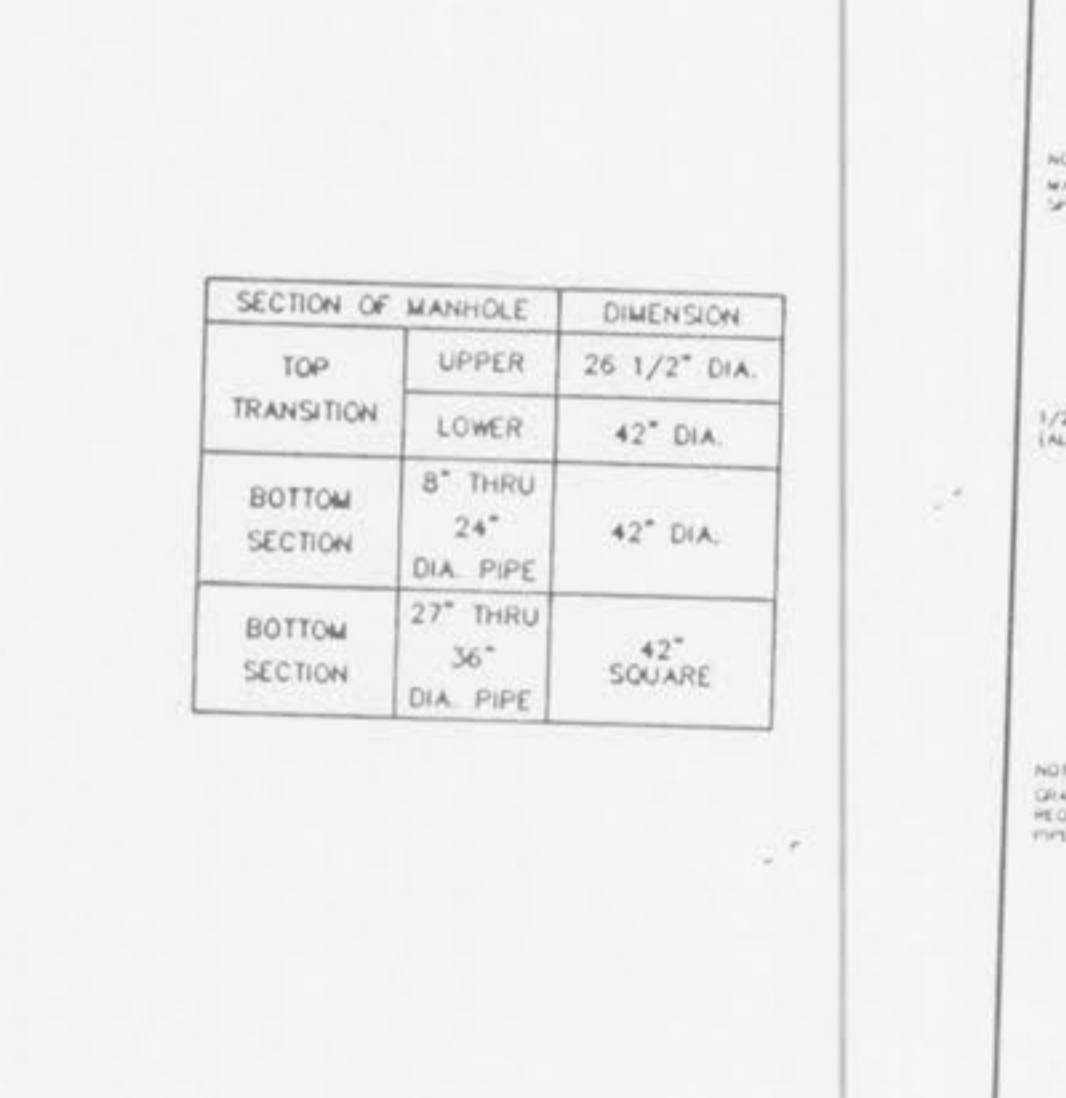
ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	"M" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES CU. FT. PER FT. OF PIPE	INSIDE DIMENSIONS (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	"M" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES CU. FT. PER FT. OF PIPE
4	3.0	2.50	3.38				
6	3.0	2.50	3.38				
8	3.0	2.50	3.38				
10	3.0	2.50	4.08				
12	3.0	2.50	4.25				
15	3.6	3.00	5.55				
18	3.6	3.00	5.77	14 x 23	81	3.42	5.94
21	3.6	3.25	6.61				
24	4.2	3.50	7.39	19 x 30	49	4.08	7.88
27	4.5	3.75	8.18	22 x 34	53	4.42	8.81
30	4.8	4.00	9.30	24 x 38	58	4.83	9.70
33	5.1	4.25	10.53	27 x 42	62	5.17	10.71
36	5.4	4.50	11.43	28 x 45	66	5.50	11.72
39	5.7	4.75	12.45	30 x 49	71	5.92	13.14
42	6.0	5.00	13.36	34 x 53	75	6.25	14.05
45	6.3	5.25	14.45	36 x 58	83	6.92	15.18
48	6.6	5.50	15.67	38 x 62	87	7.27	16.38
51	6.9	5.75	16.95	40 x 66	91	7.63	17.65
54	7.2	6.00	18.25	42 x 70	95	8.00	18.98
57	7.5	6.25	19.58	44 x 74	99	8.38	20.35
60	7.8	6.50	20.93	46 x 78	103	8.76	21.75
63	8.1	6.75	22.31	48 x 82	107	9.15	23.18
66	8.4	7.00	23.71	50 x 86	111	9.55	24.65
69	8.7	7.25	25.13	52 x 90	115	9.96	26.15
72	9.0	7.50	26.57	54 x 94	119	10.38	27.68
75	9.3	7.75	28.03	56 x 98	123	10.81	29.25
78	9.6	8.00	29.51	58 x 102	127	11.25	30.85
81	9.9	8.25	31.01	60 x 106	131	11.70	32.48
84	10.2	8.50	32.53	62 x 110	135	12.17	34.15
87	10.5	8.75	34.07	64 x 114	139	12.65	35.85
90	10.8	9.00	35.63	66 x 118	143	13.15	37.58
93	11.1	9.25	37.21	68 x 122	147	13.67	39.35
96	11.4	9.50	38.81	70 x 126	151	14.20	41.15
99	11.7	9.75	40.43	72 x 130	155	14.75	42.98
102	12.0	10.00	42.07	74 x 134	159	15.32	44.85
105	12.3	10.25	43.73	76 x 138	163	15.90	46.75
108	12.6	10.50	45.41	78 x 142	167	16.50	48.68
111	12.9	10.75	47.11	80 x 146	171	17.12	50.65
114	13.2	11.00	48.83	82 x 150	175	17.75	52.65
117	13.5	11.25	50.57	84 x 154	179	18.40	54.68
120	13.8	11.50	52.33	86 x 158	183	19.07	56.75
123	14.1	11.75	54.11	88 x 162	187	19.75	58.85
126	14.4	12.00	55.91	90 x 166	191	20.45	60.98
129	14.7	12.25	57.73	92 x 170	195	21.17	63.15
132	15.0	12.50	59.57	94 x 174	199	21.90	65.35
135	15.3	12.75	61.43	96 x 178	203	22.65	67.58
138	15.6	13.00	63.31	98 x 182	207	23.42	69.85
141	15.9	13.25	65.21	100 x 186	211	24.20	72.15

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

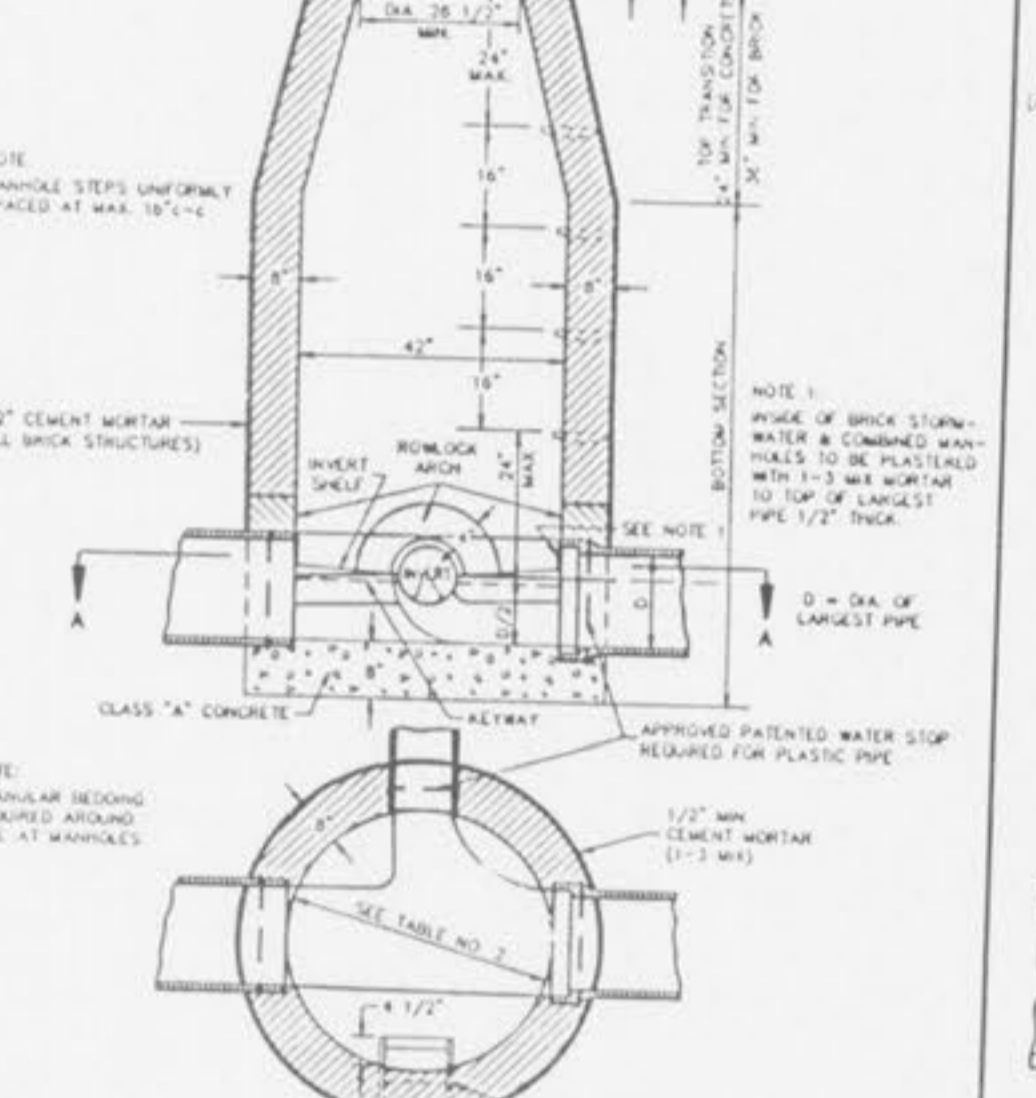


CONSTRUCTION DETAILS

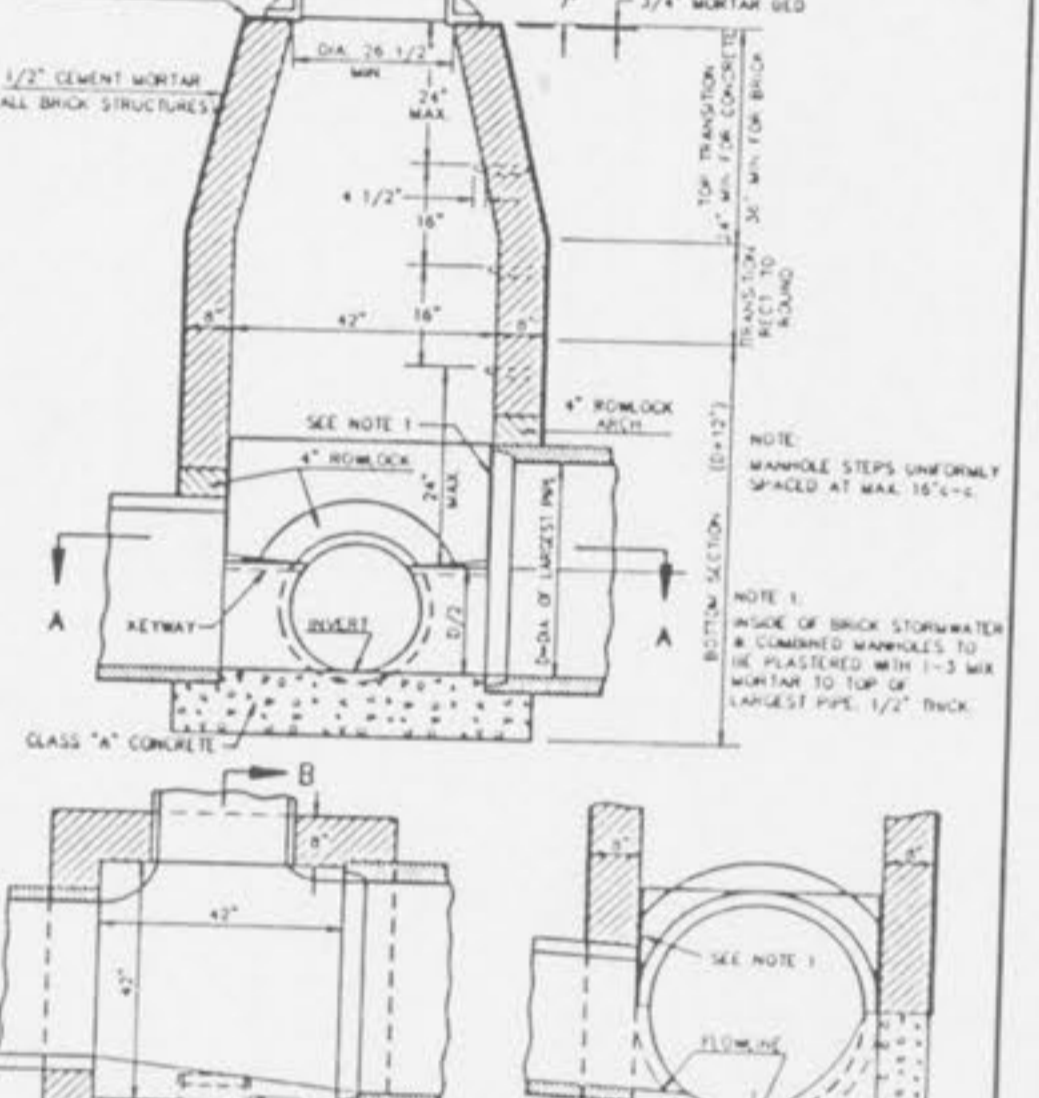
TABLE 2
STANDARD MANHOLE DIMENSIONS
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.C.W. Ch. J.C.K. 1992 SHEET 7



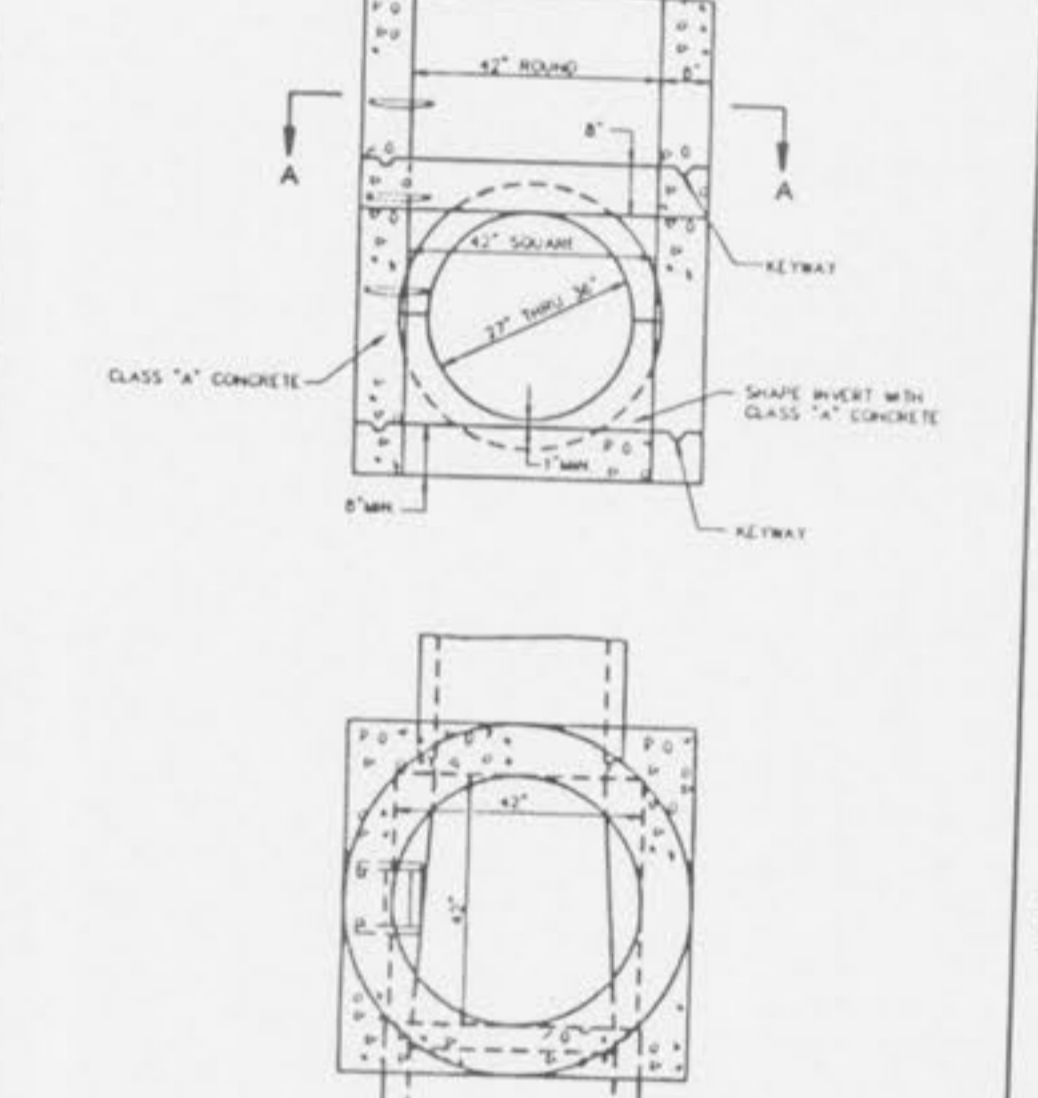
PAYLINE LIMITS FOR EXCAVATION
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 2



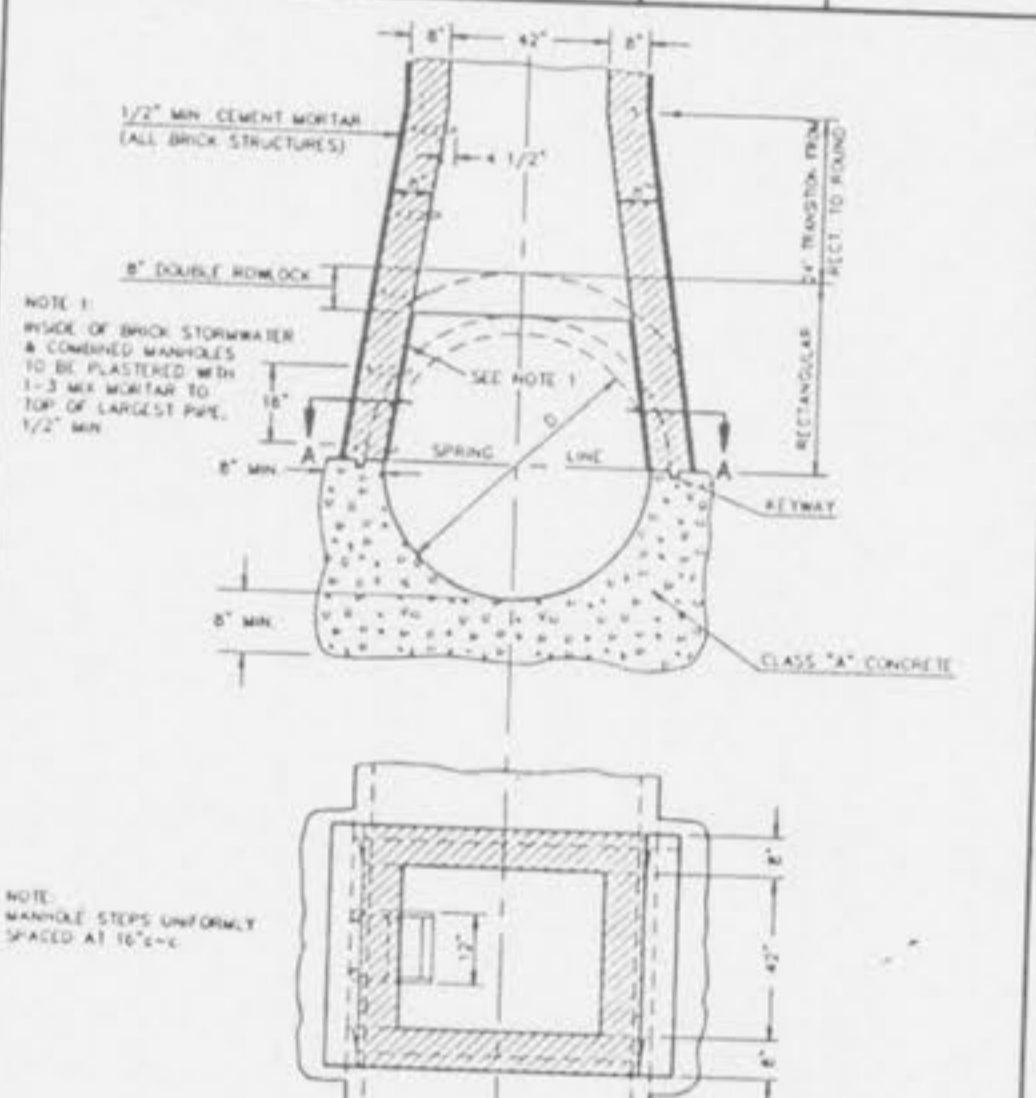
PIPE BEDDING CLASS "C" (FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 3



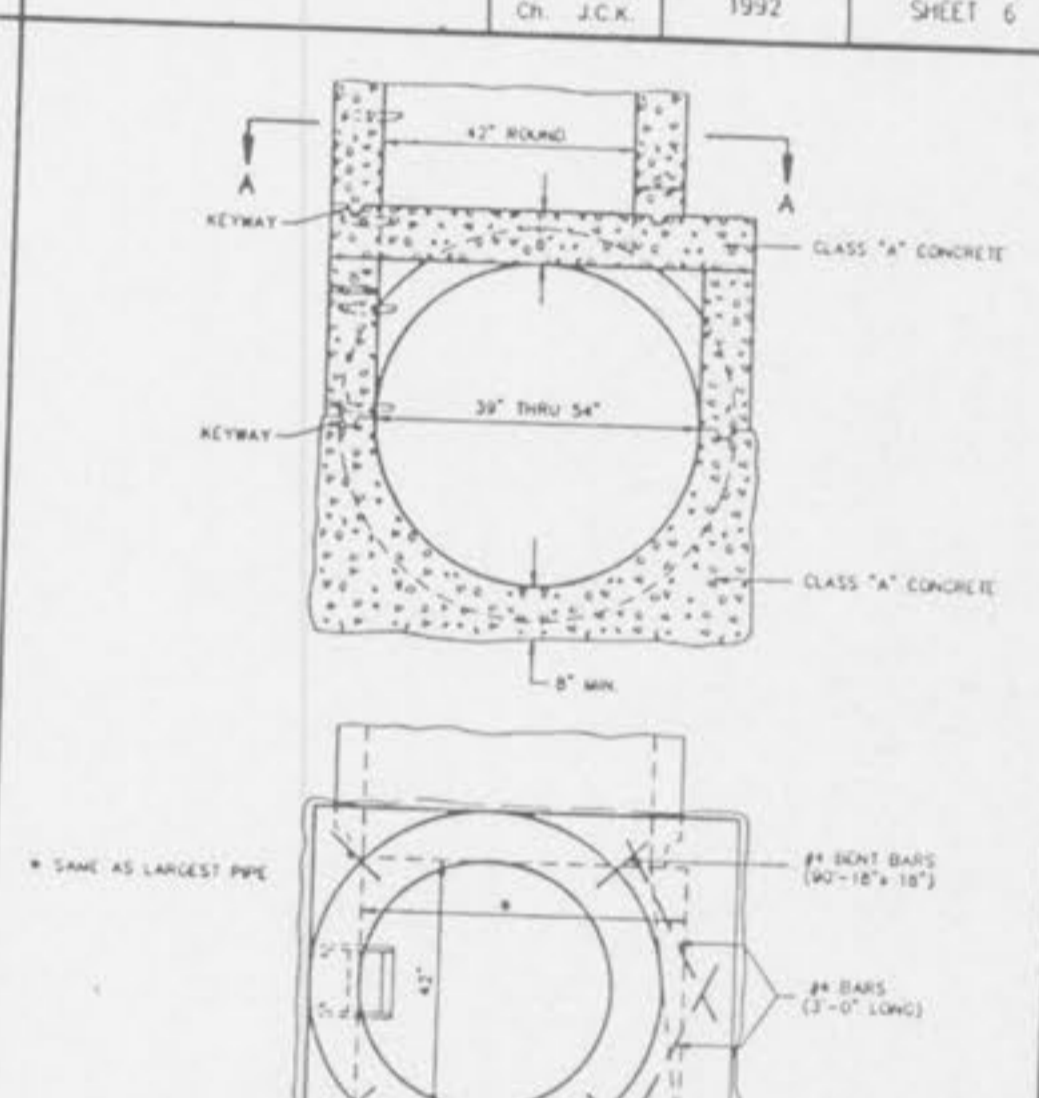
PIPE BEDDING CLASS "C" (MODIFIED FOR REINFORCED CONCRETE PIPE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 4



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

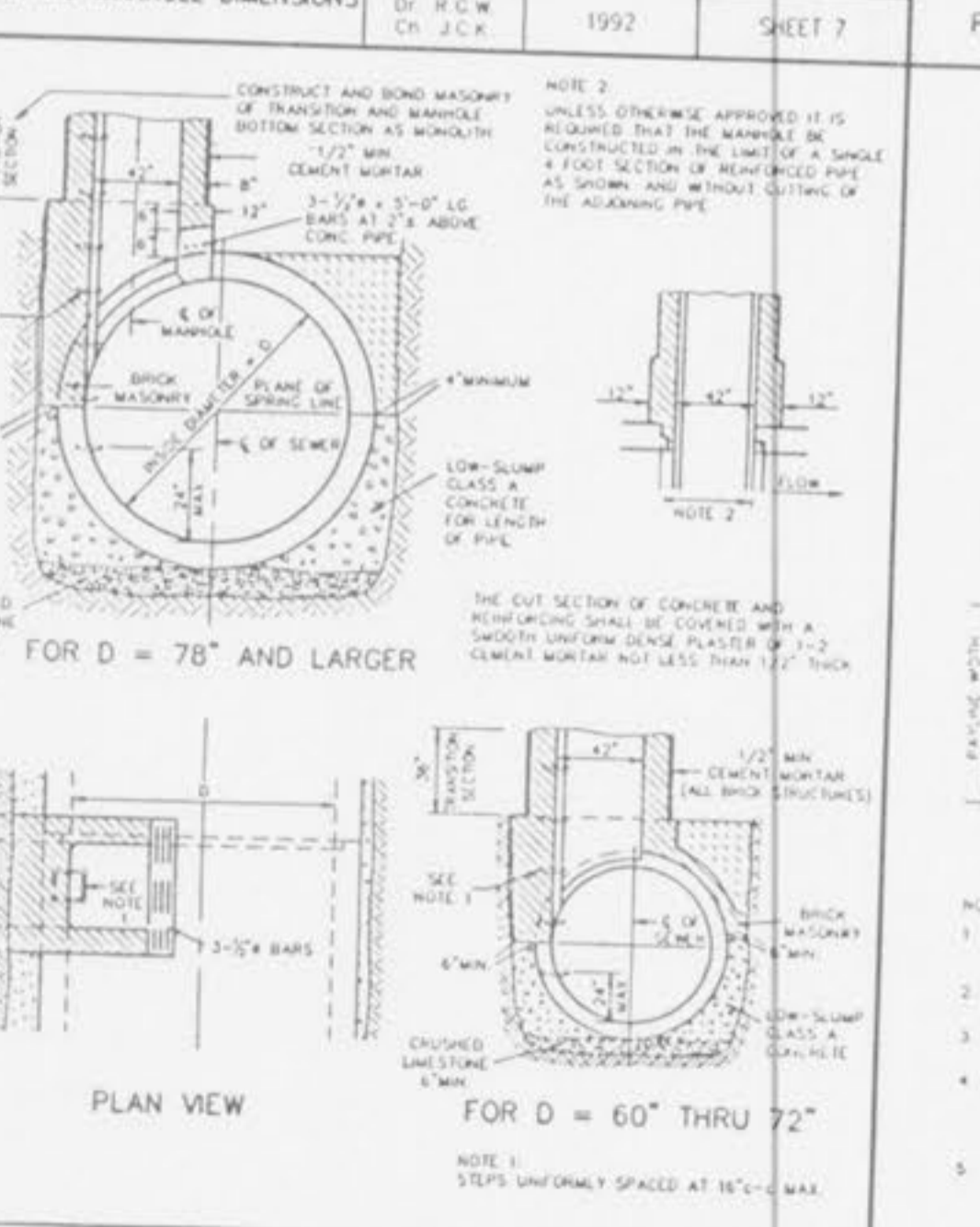


CONCRETE CRADLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 6

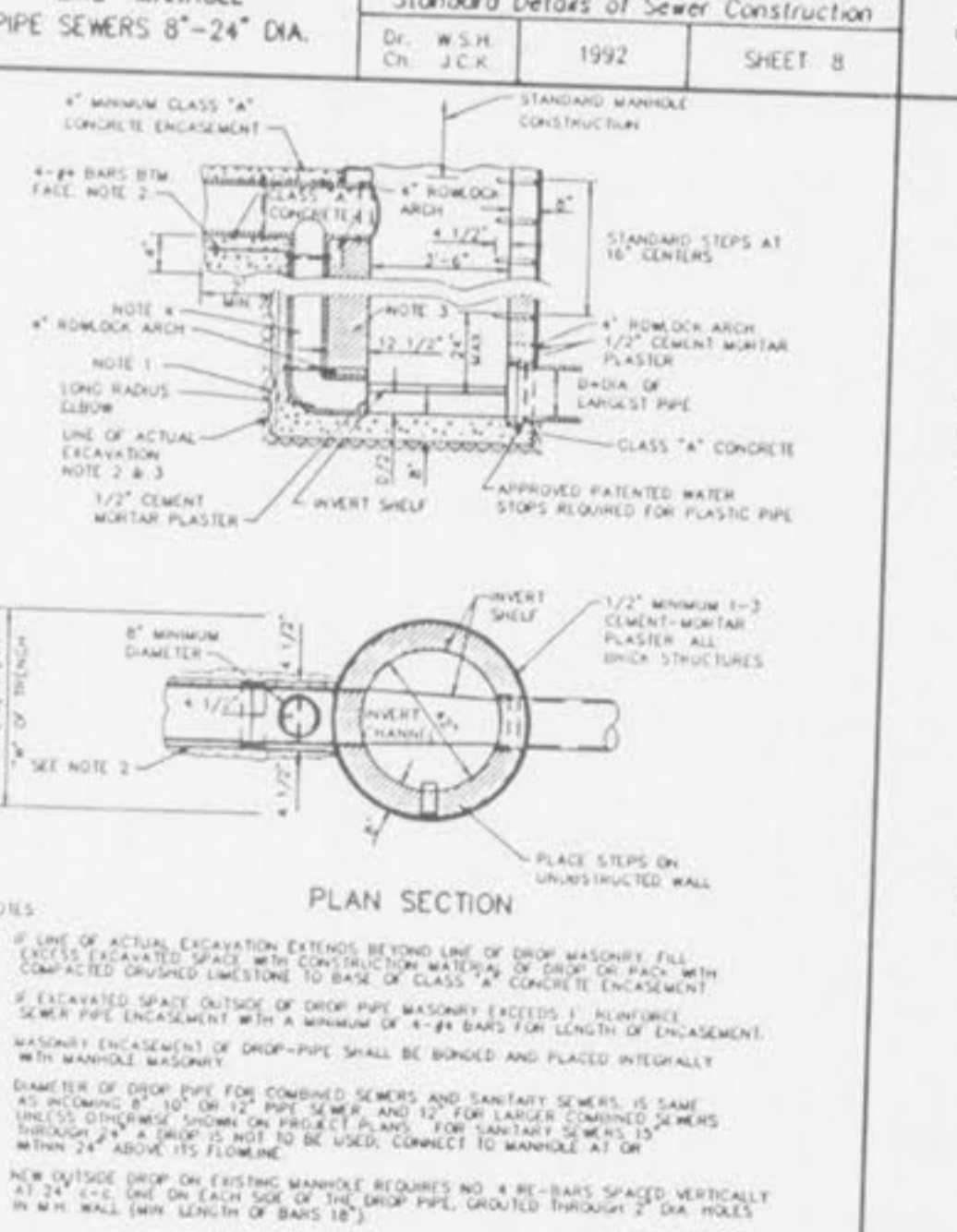


CONSTRUCTION DETAILS

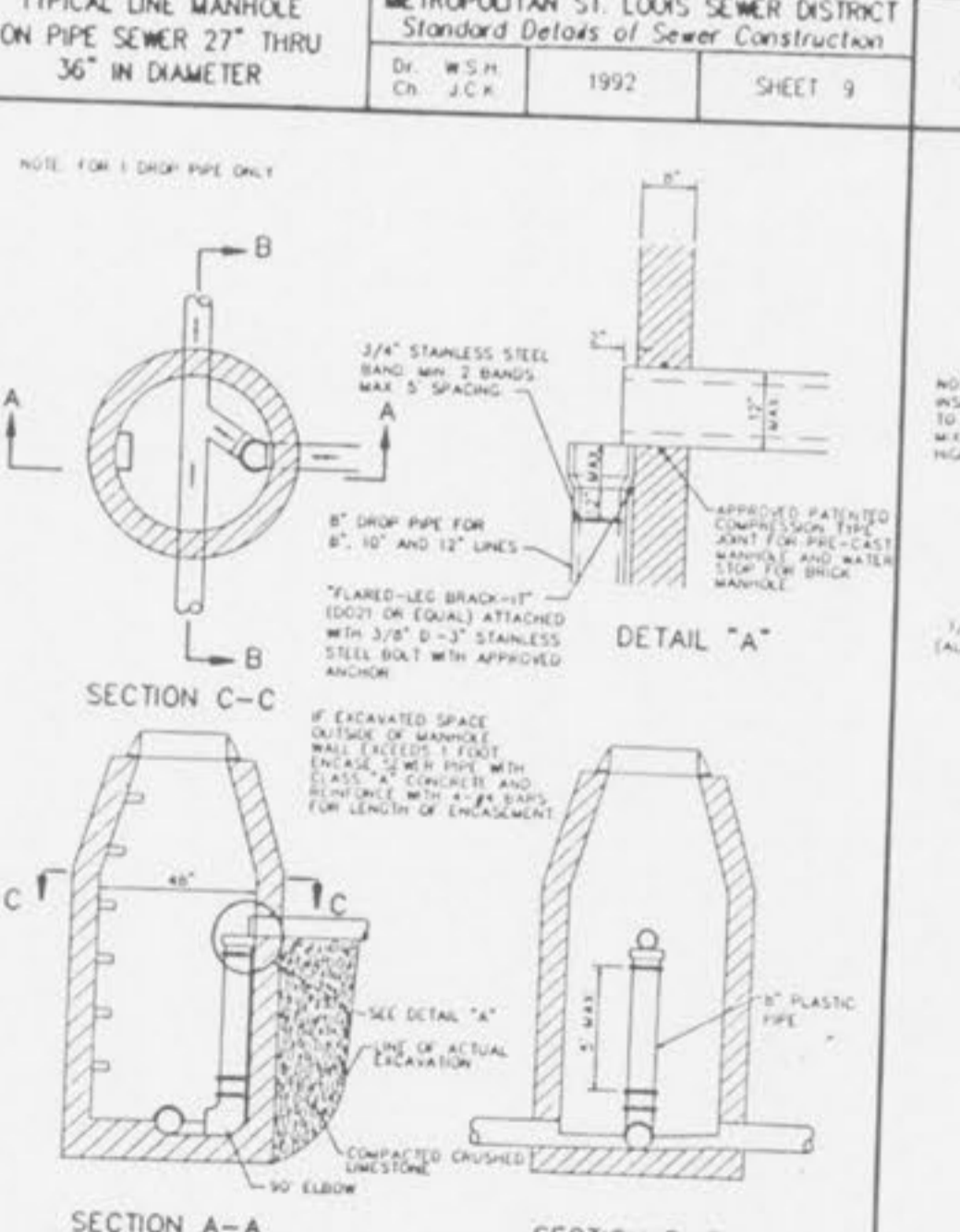
TABLE NO. 2
STANDARD MANHOLE DIMENSIONS
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.C.W. Ch. J.C.K. 1992 SHEET 7



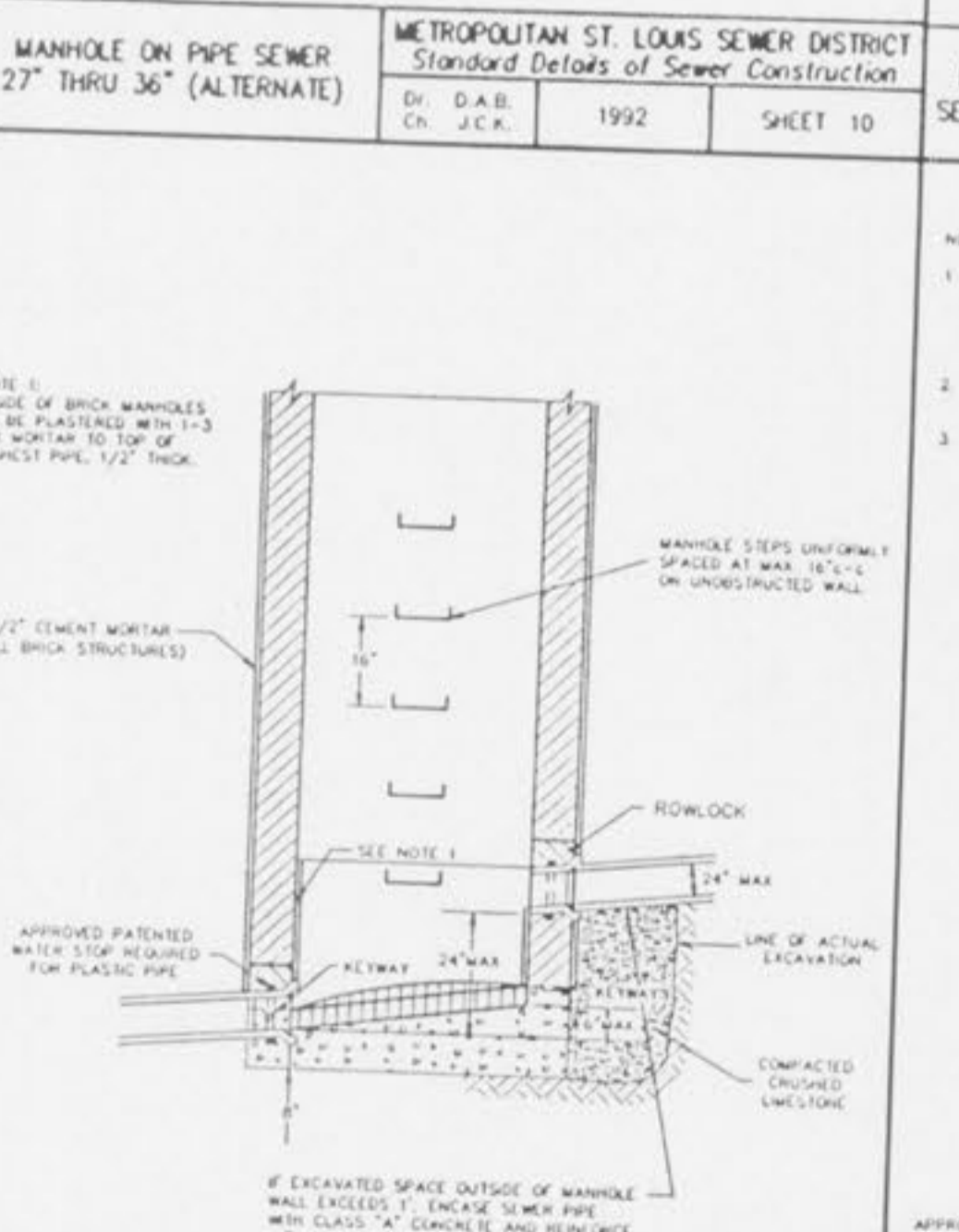
LINE MANHOLE PIPE SEWERS 8"-24" DIA.
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 8



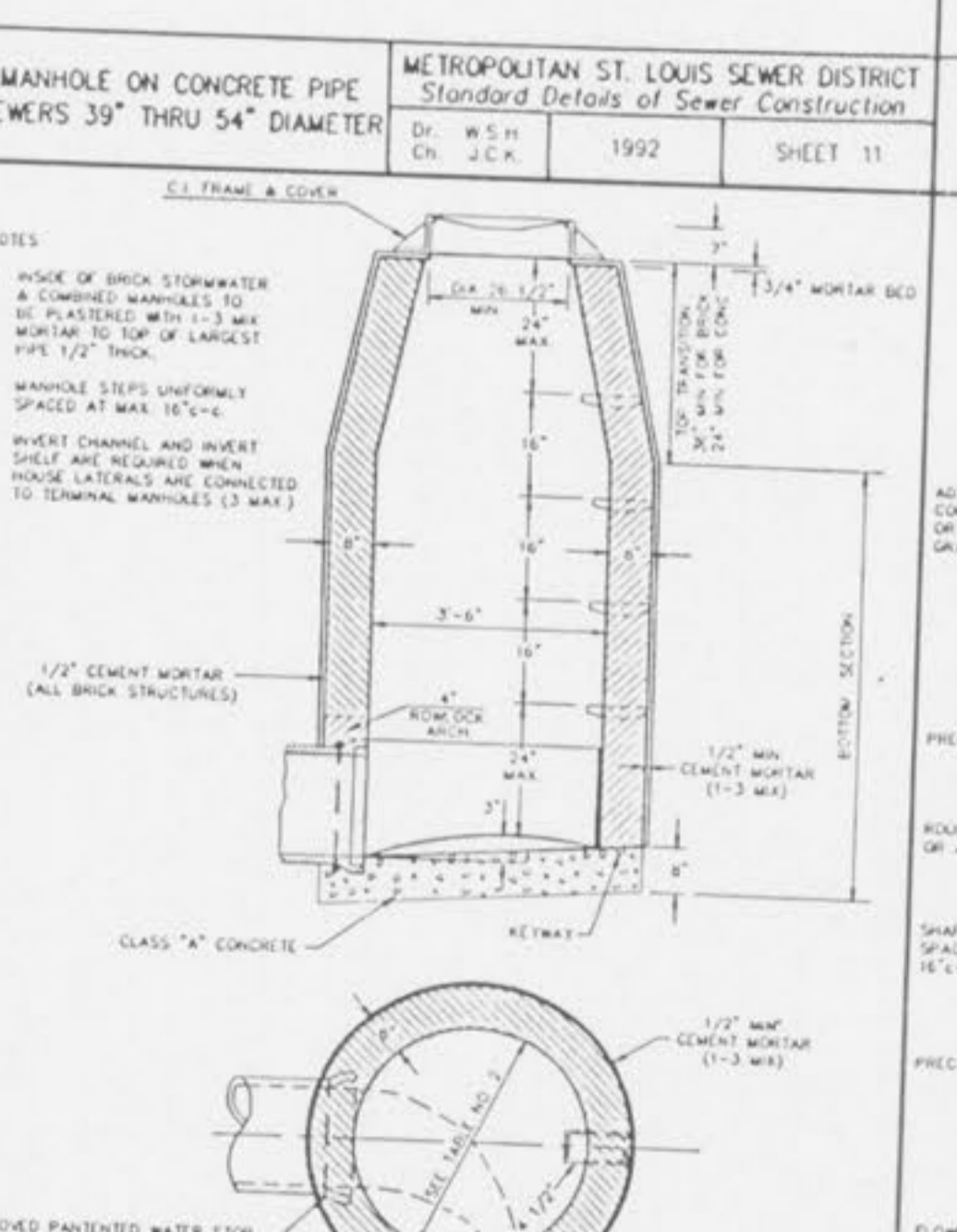
PIPE BEDDING CLASS "C" (FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 3



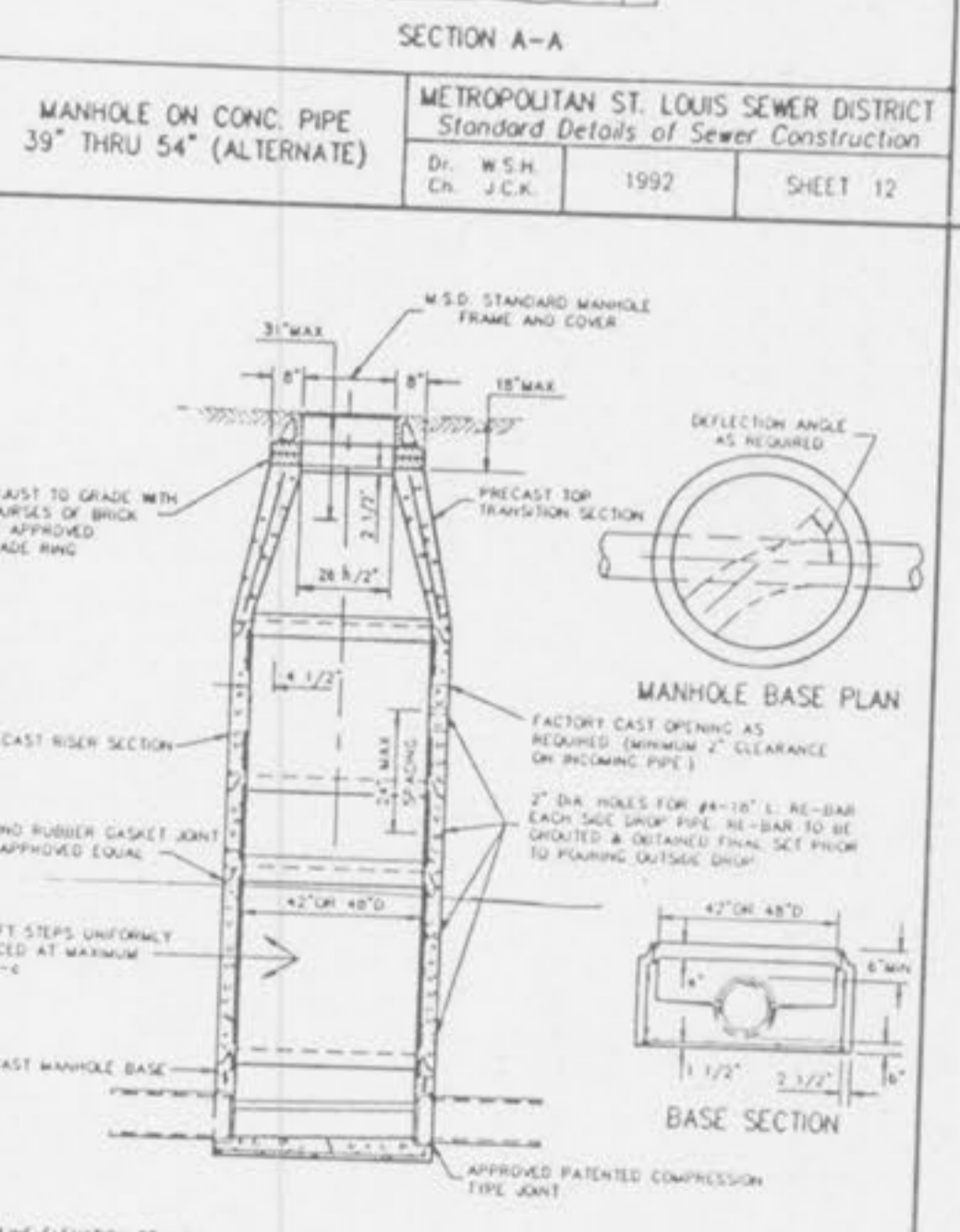
PIPE BEDDING CLASS "C" (MODIFIED FOR REINFORCED CONCRETE PIPE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 4



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

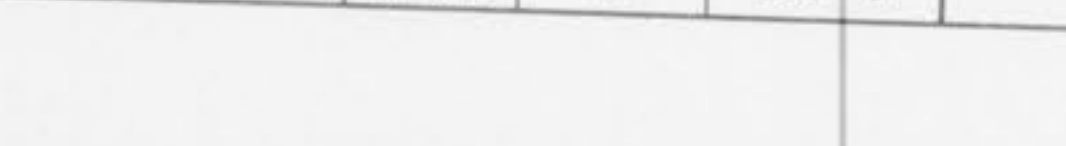


CONCRETE CRADLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 6

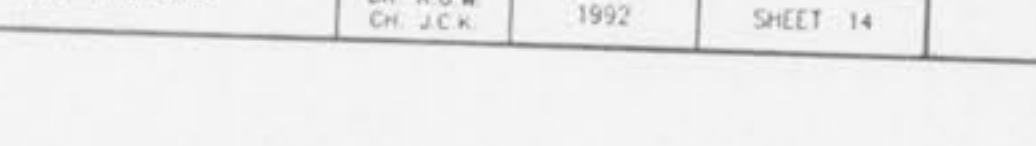


CONSTRUCTION DETAILS

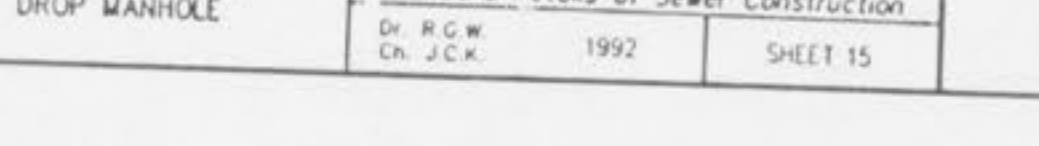
TYPICAL MANHOLE BASE REINFORCED CONCRETE PIPE SEWERS 60" AND LARGER IN DIAMETER
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 13



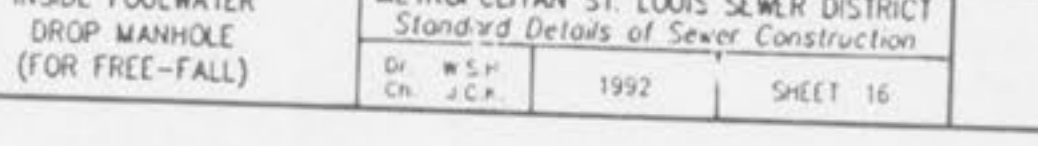
OUTSIDE FOULWATER DROP MANHOLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. R.C.W. Ch. J.C.K. 1992 SHEET 14



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



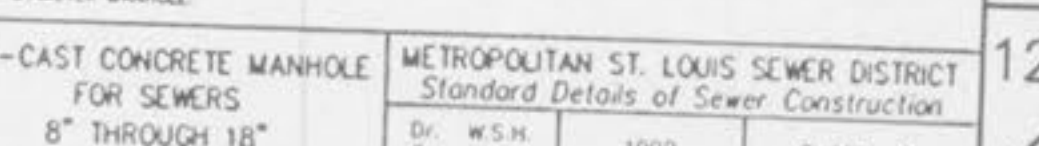
INSIDE FOULWATER DROP MANHOLE (FOR FREE-FALL)
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 16



TERMINAL MANHOLE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 17



PRE-CAST CONCRETE MANHOLE FOR SEWERS 8" THROUGH 18"
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. W.S.H. Ch. J.C.K. 1992 SHEET 18



CONSTRUCTION DETAILS