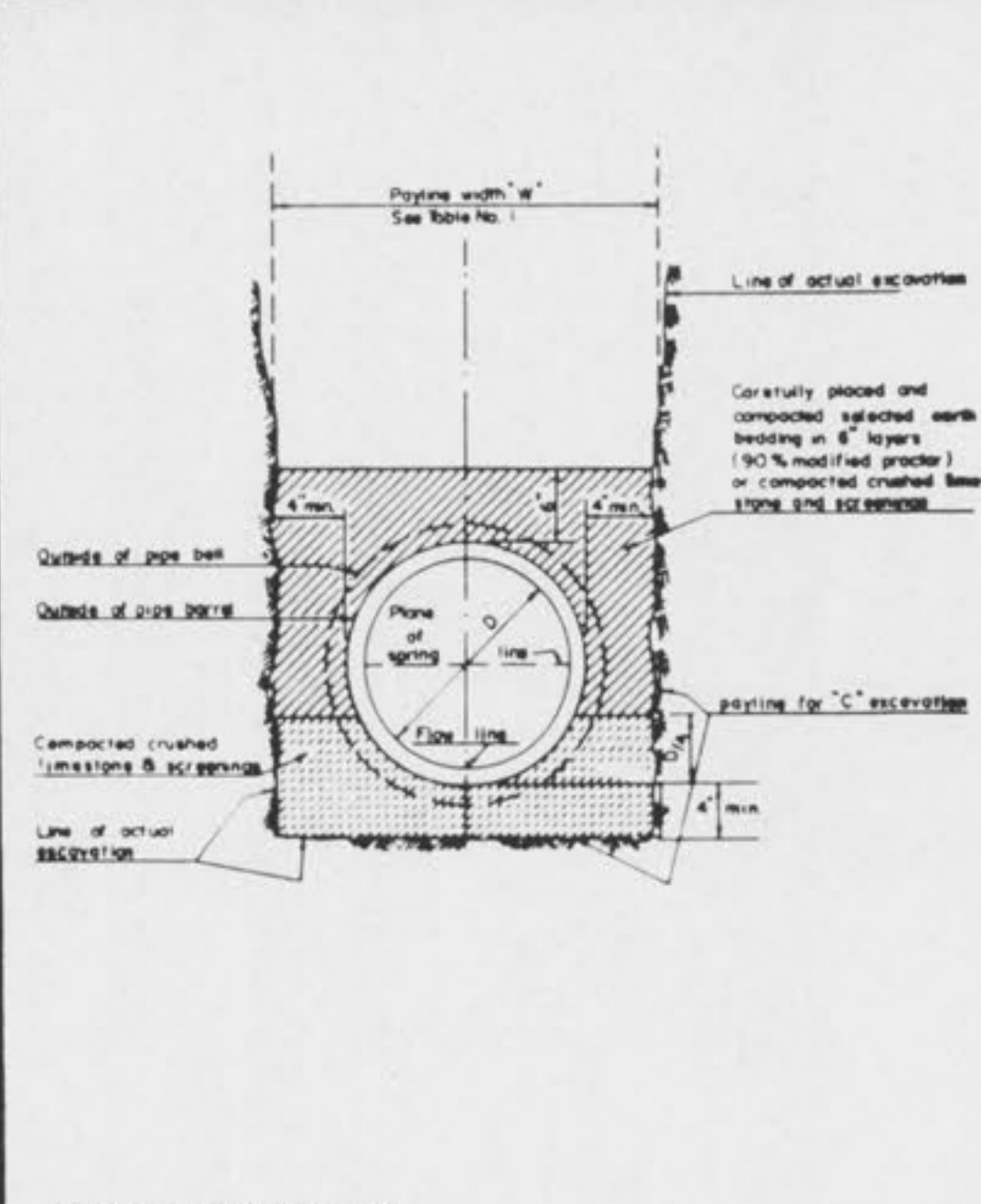
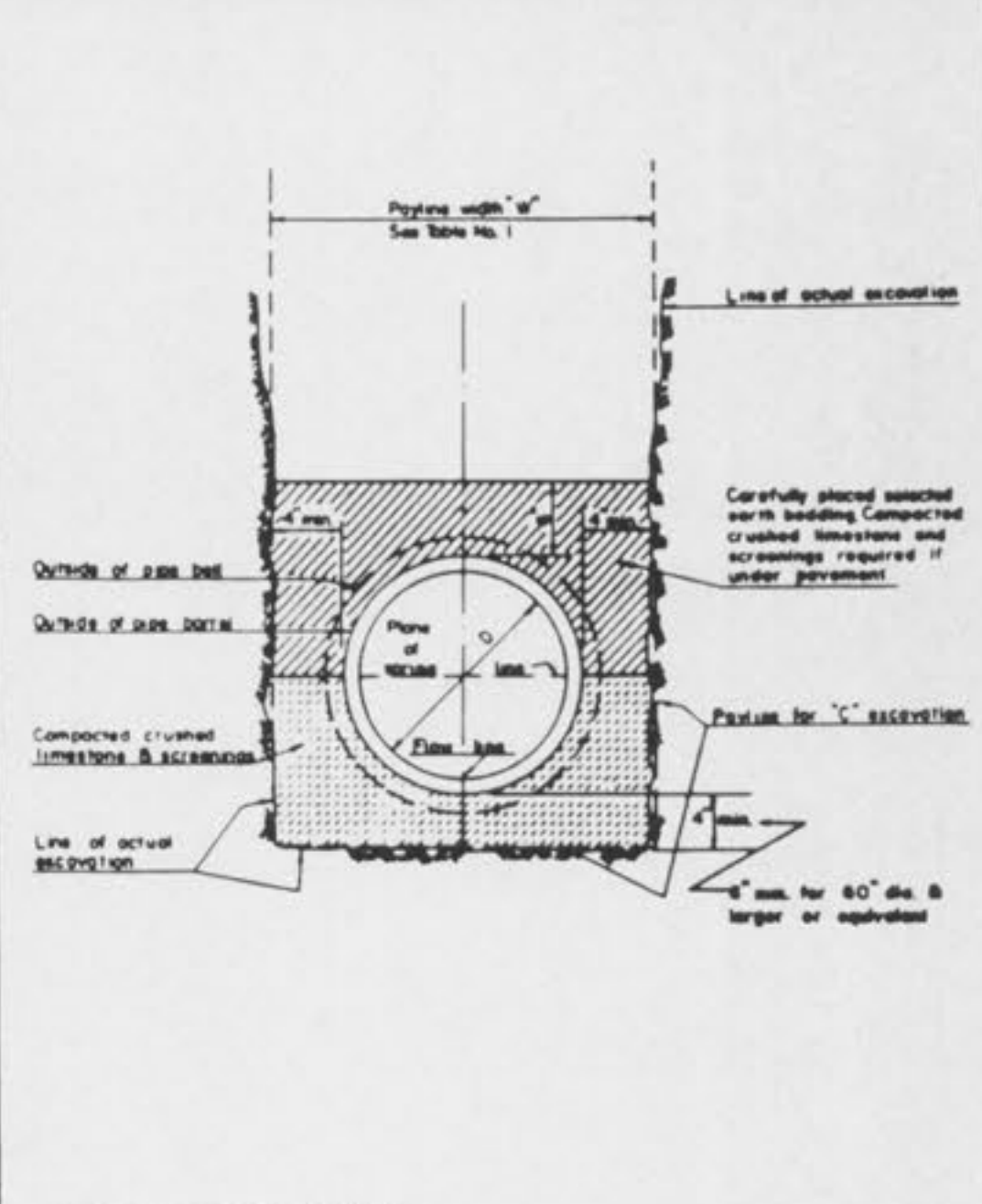


ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
Inches Diameter of Pipe (Inches)	Payline Width of Trench (Feet)	Payline Width of Trench (Feet)	Pay-volume cu ft per ft of Pipe	Inches Diameter of Pipe (Inches)	Payline Width of Trench (Feet)	Payline Width of Trench (Feet)	Pay-volume cu ft per ft of Pipe
4	2.8	2.33	3.20				
6	2.8	2.33	3.46				
8	2.8	2.33	3.70				
10	2.8	2.33	3.96				
12	2.8	2.33	3.98				
15	3.2	2.67	4.88				
18	3.5	2.92	5.63	14 x 23	41	3.42	5.84
21	3.9	3.25	6.81				
24	4.2	3.50	7.39	19 x 30	49	4.08	7.68
27	4.5	3.75	8.18	22 x 34	53	4.42	8.81
30	4.9	4.08	9.30	24 x 38	58	4.83	9.70
33	5.3	4.42	10.33	27 x 42	62	5.17	10.71
36	5.6	4.67	11.43	29 x 45	66	5.50	11.72
39	DISCONTINUED			32 x 49	71	5.82	13.14
42	6.3	5.25	13.38	34 x 53	75	6.25	14.05
48	7.0	5.83	15.67	38 x 60	83	6.92	16.18
54	7.7	6.42	18.15	43 x 68	92	7.67	18.81
60	8.4	7.00	20.73	48 x 76	101	8.42	21.56
66	9.1	7.58	23.45	53 x 83	109	9.08	24.30
72	9.8	8.17	26.37	58 x 91	118	9.83	27.45
78	10.5	8.75	29.39	63 x 98	126	10.50	30.50
84	11.2	9.33	32.57	68 x 106	135	11.25	33.91
90	11.9	9.92	35.90	72 x 113	143	11.92	36.99
96	12.6	10.50	39.37	77 x 121	152	12.67	40.88
102	13.3	11.08	42.99	82 x 128	160	13.33	44.40
108	14.0	11.67	46.75	87 x 136	168	14.00	47.79
114	14.7	12.25	50.66	92 x 143	176	14.67	51.70
120	15.4	12.83	54.72	97 x 151	185	15.42	56.01
126	16.1	13.42	58.92				
132	16.8	14.00	63.27	106 x 166	202	16.83	64.48
144	18.2	15.17	72.40	116 x 180	218	18.17	73.58

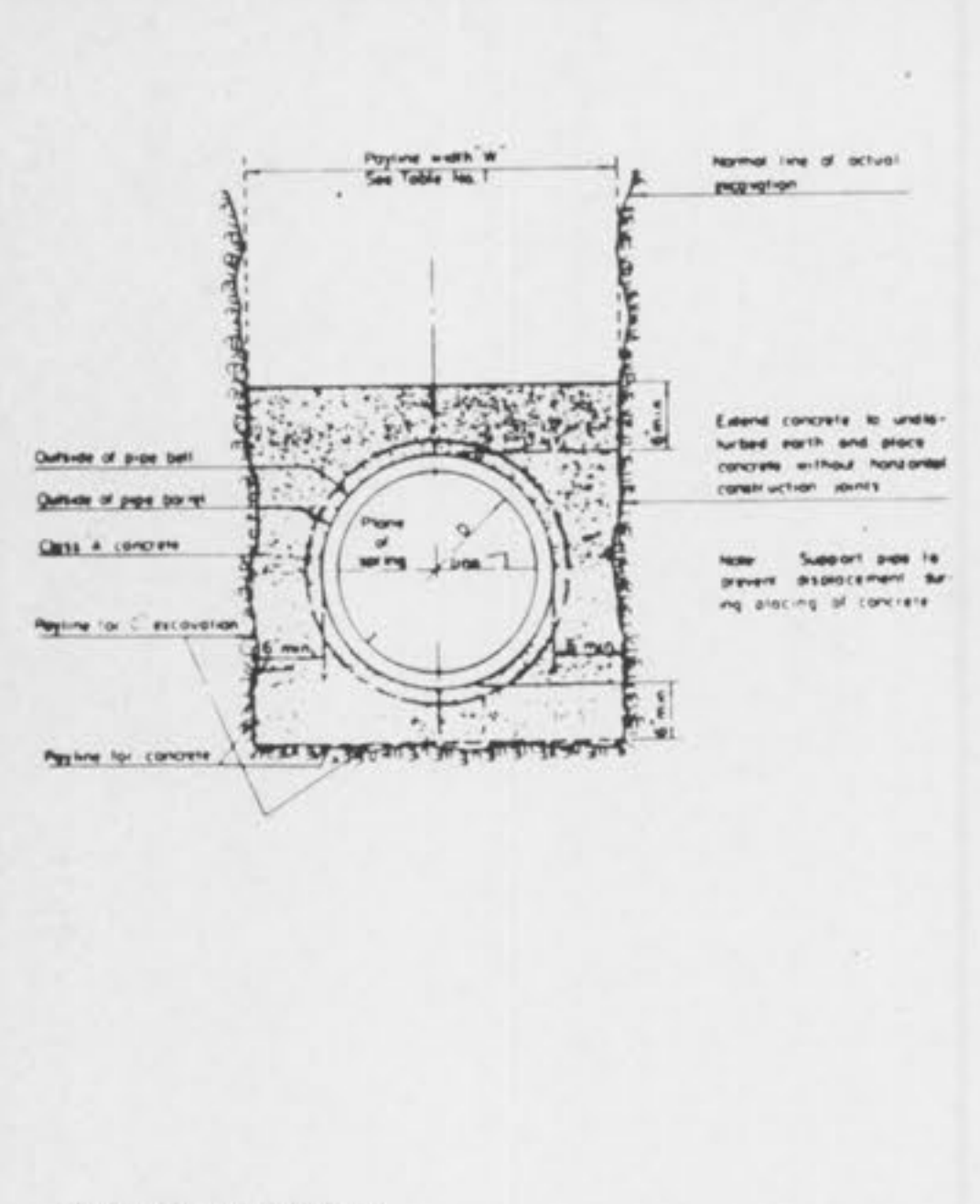
TABLE NO. 1  
PAYLINE WIDTHS OF TRENCH AND PAY-QUANTITIES OF CONCRETE



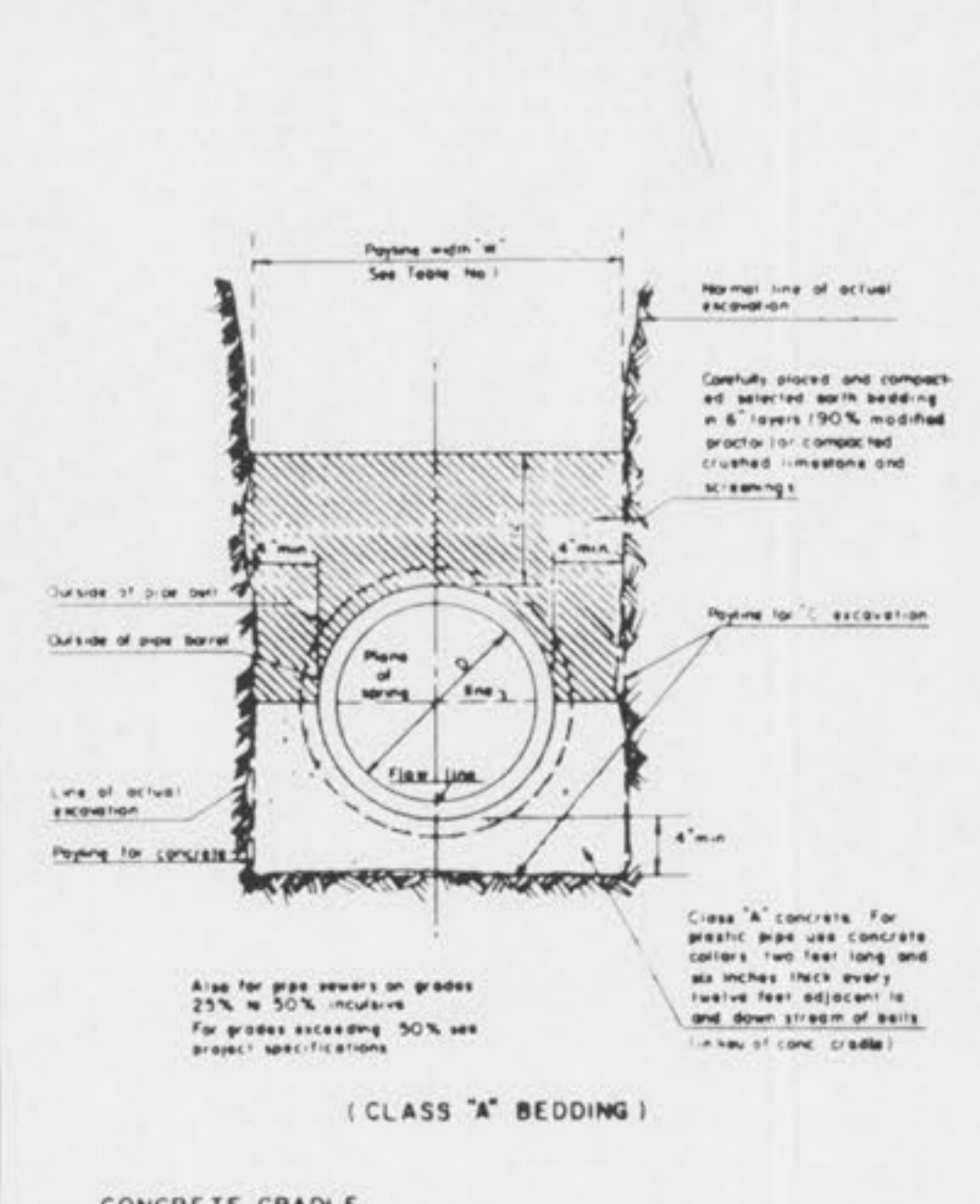
PIPE BEDDING CLASS 'C'  
(FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)



PIPE BEDDING CLASS 'C'  
(MODIFIED FOR REINFORCED CONCRETE PIPE)



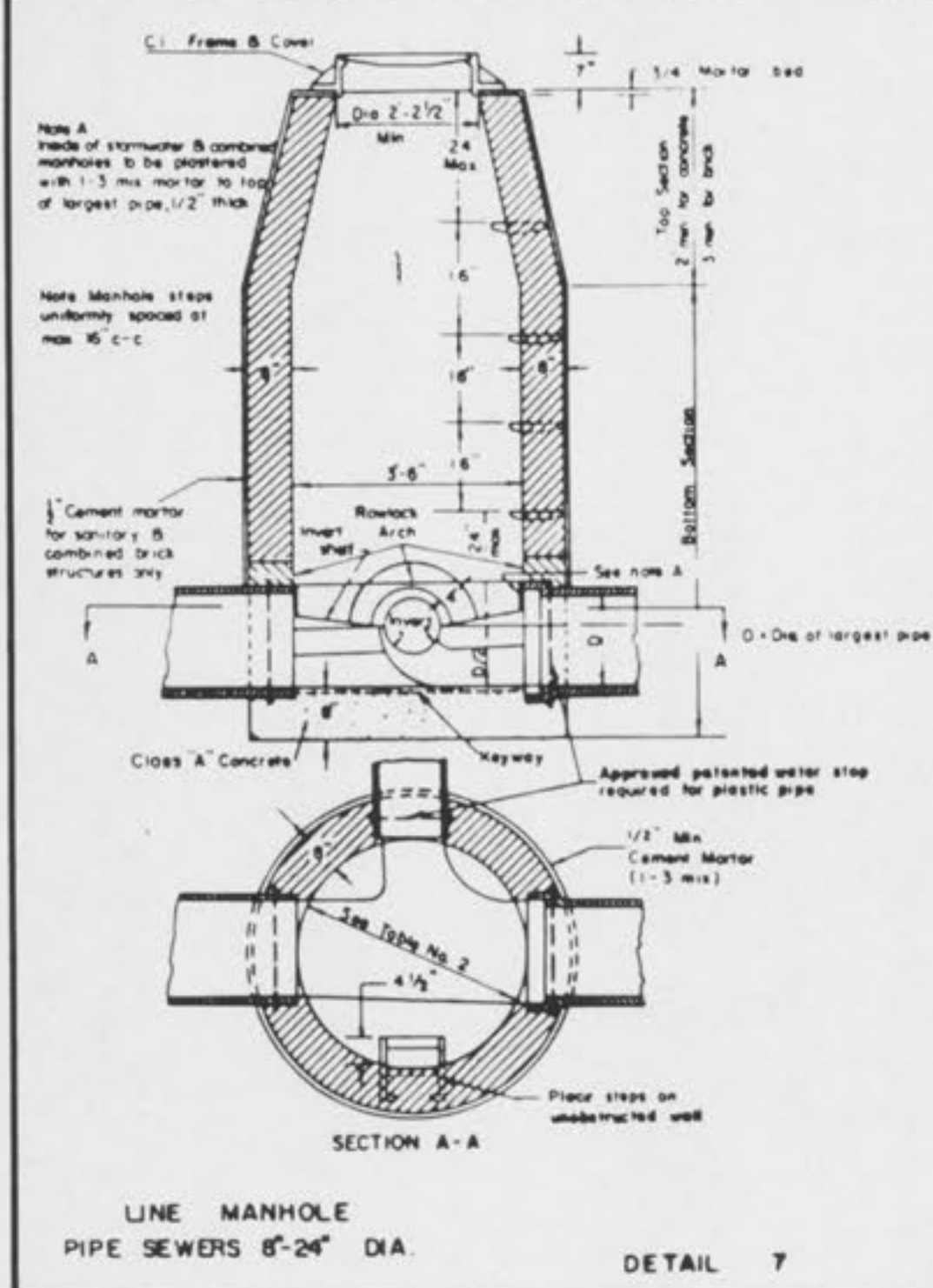
CONCRETE ENCASUREMENT



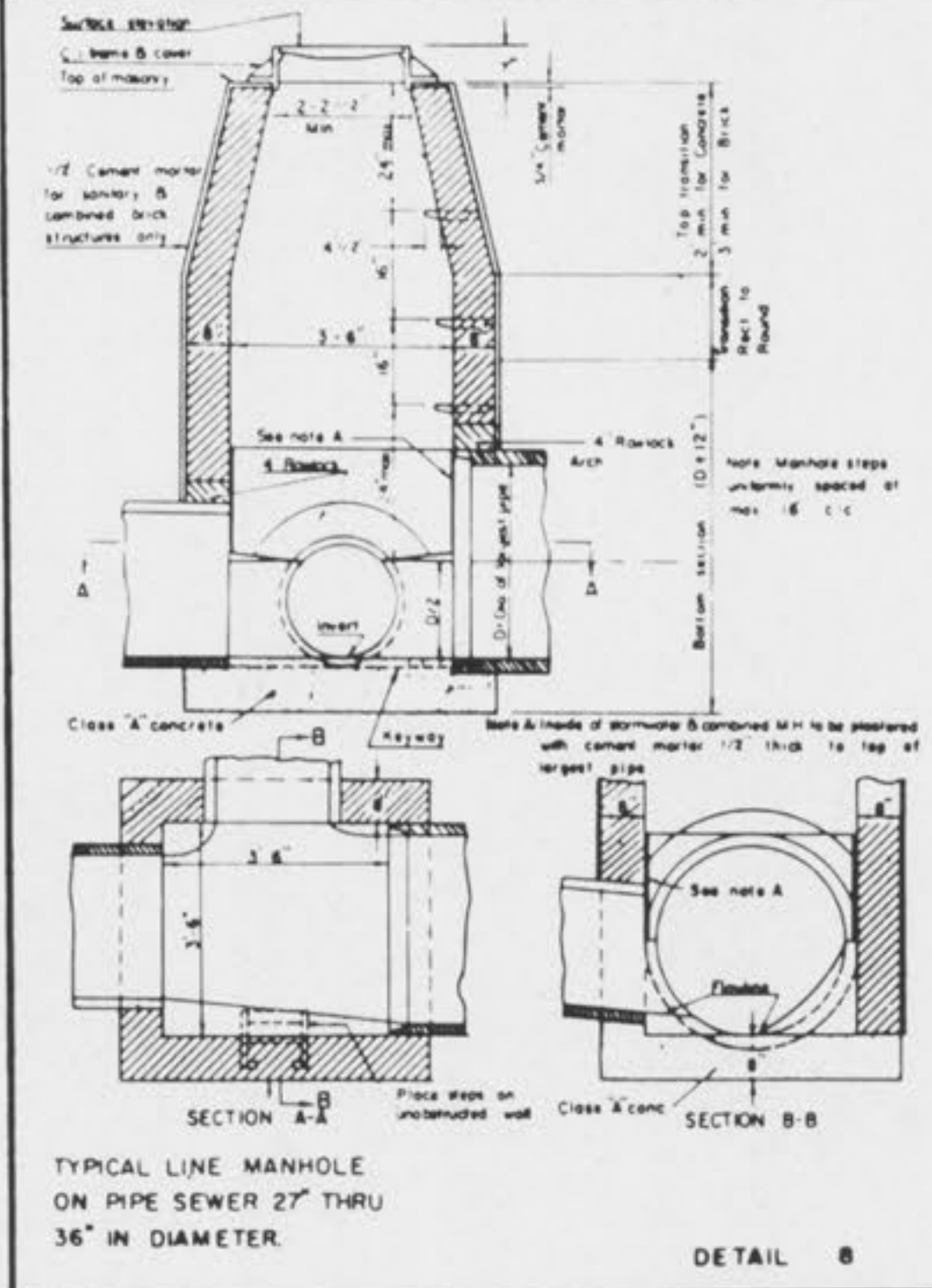
CONCRETE CRADLE

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

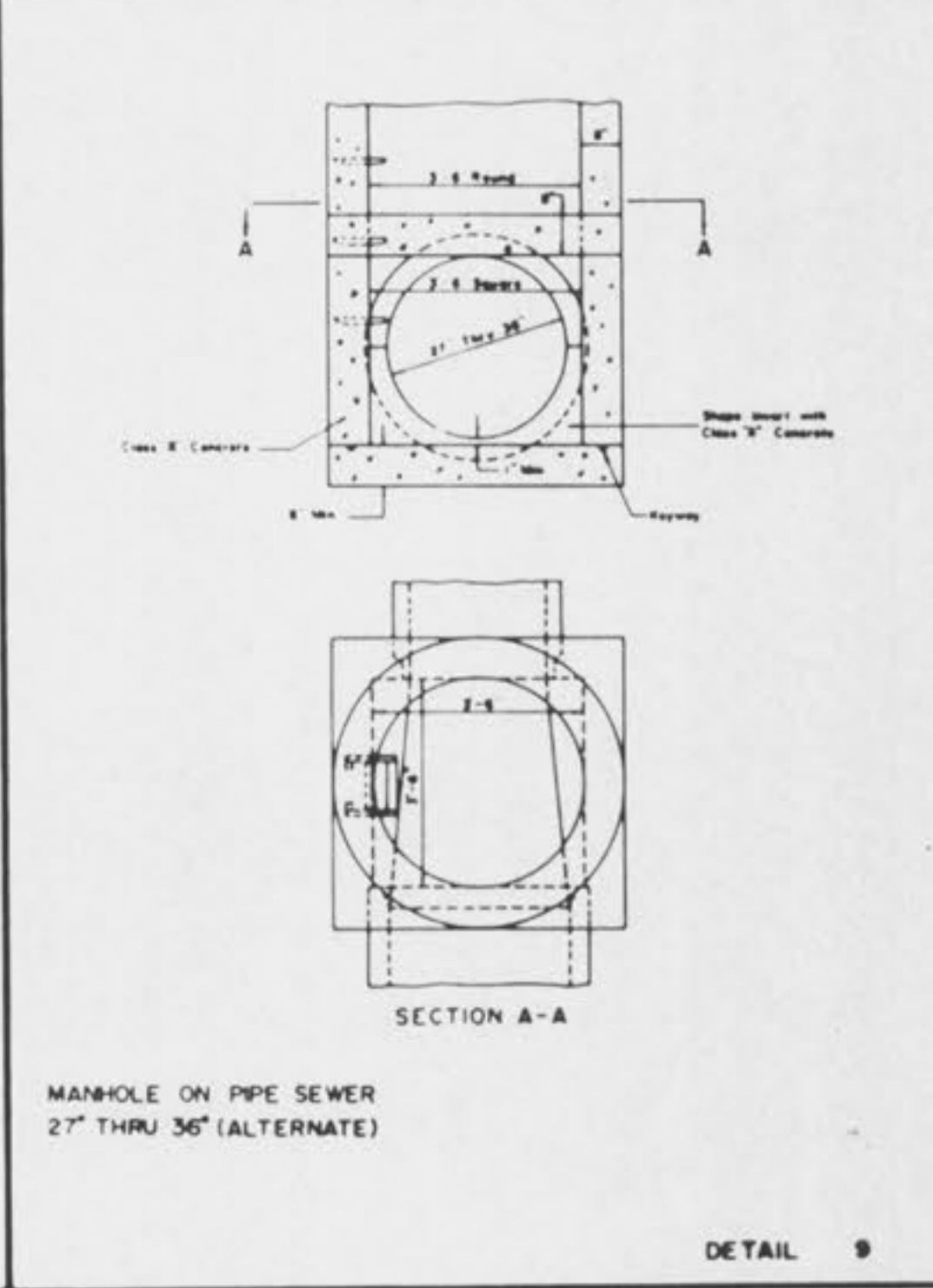
TABLE NO. 2  
STANDARD MANHOLE DIMENSIONS



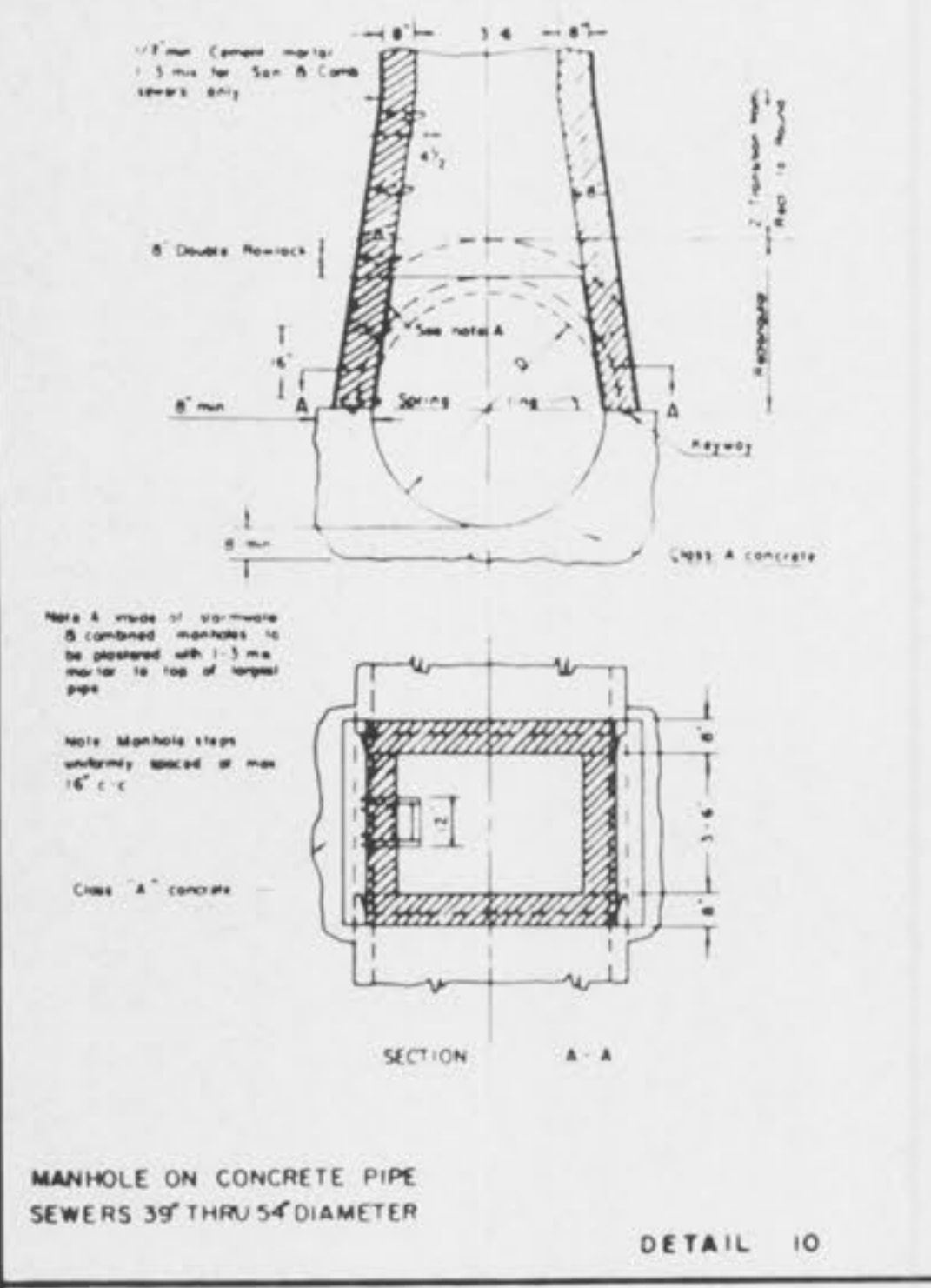
LINE MANHOLE  
PIPE SEWERS 8" - 24" DIA.



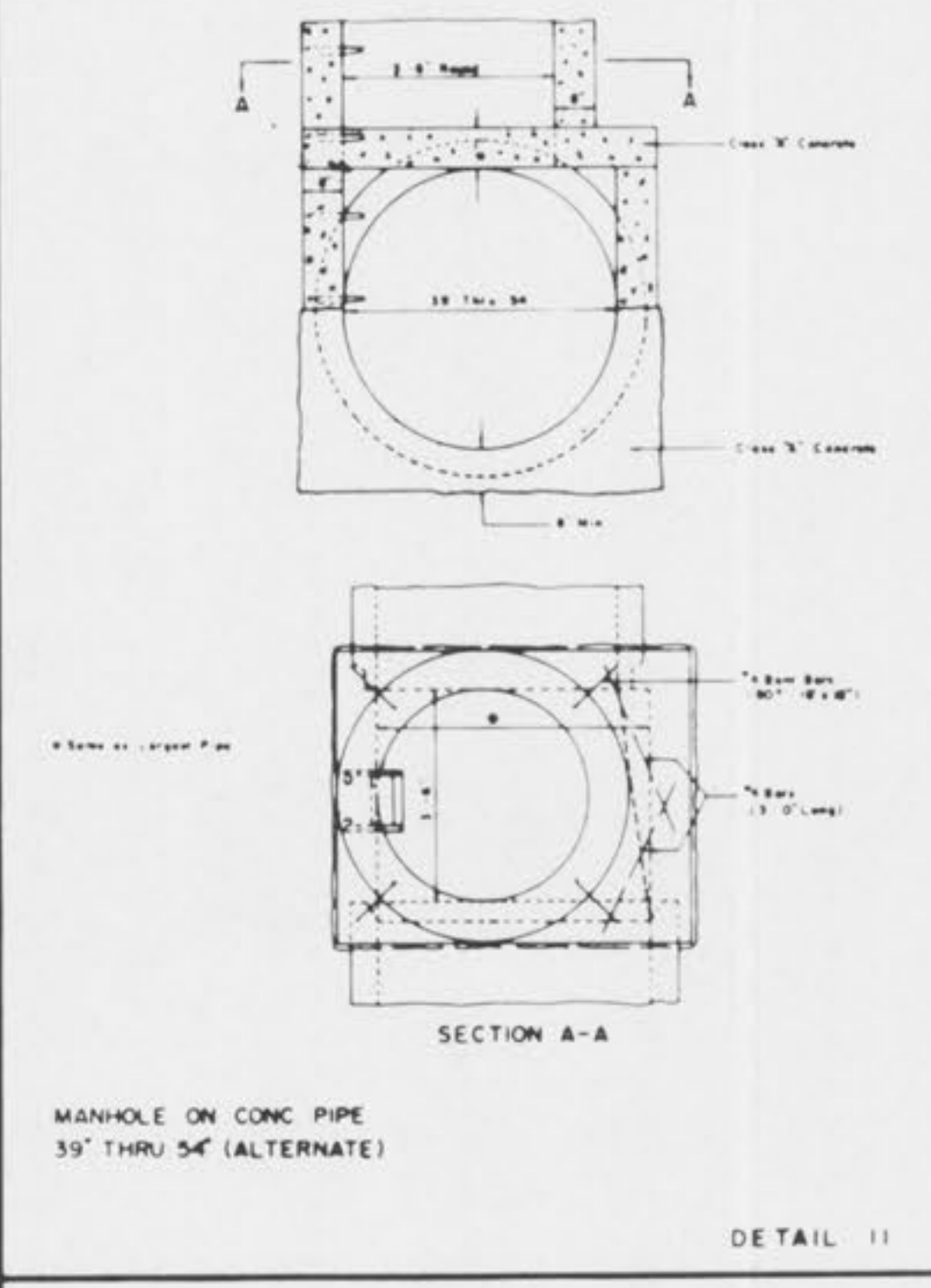
TYPICAL LINE MANHOLE  
ON PIPE SEWER 27" THRU 36" IN DIAMETER



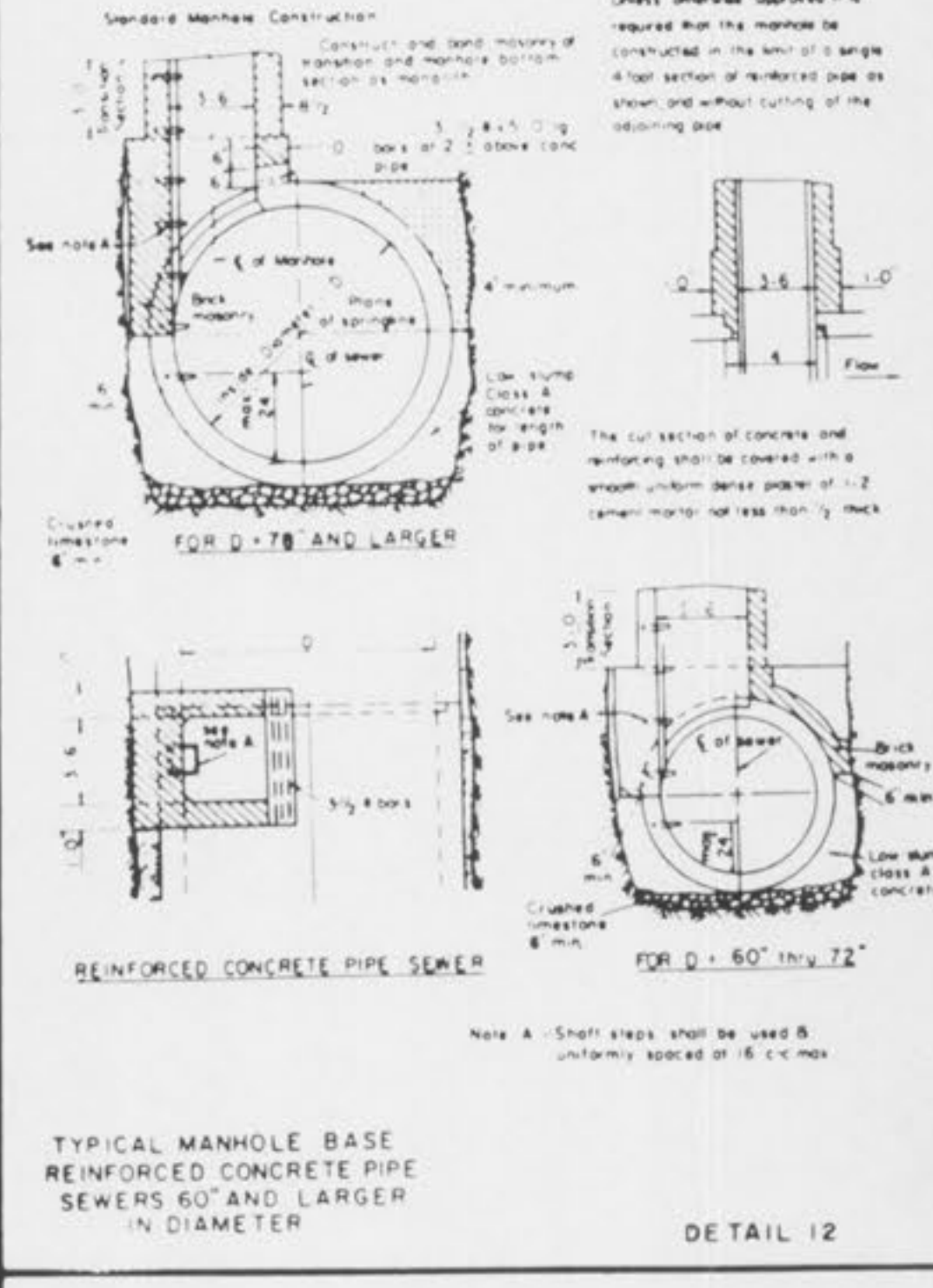
MANHOLE ON PIPE SEWER  
27" THRU 36" (ALTERNATE)



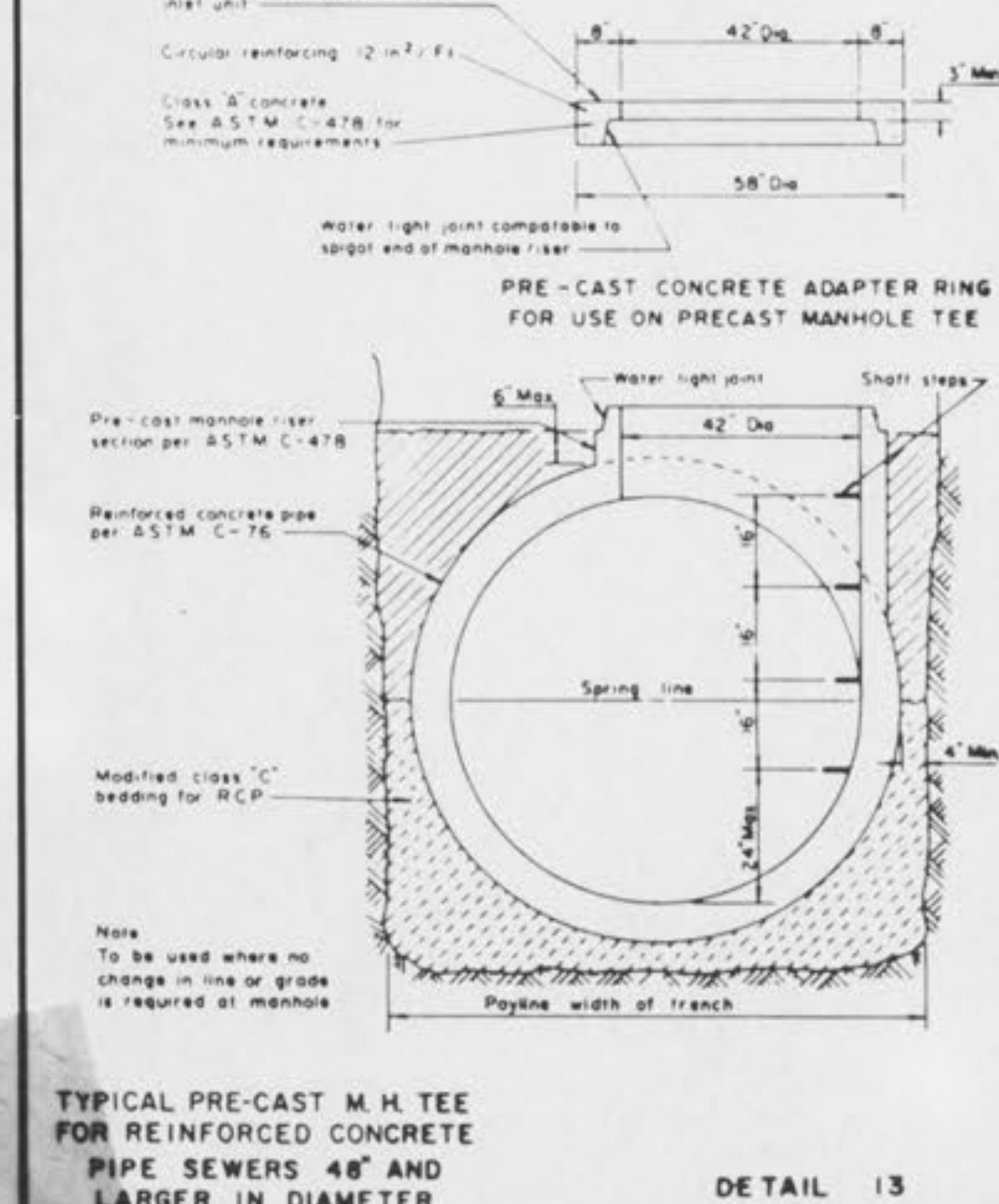
MANHOLE ON CONCRETE PIPE  
SEWERS 39" THRU 54" DIAMETER



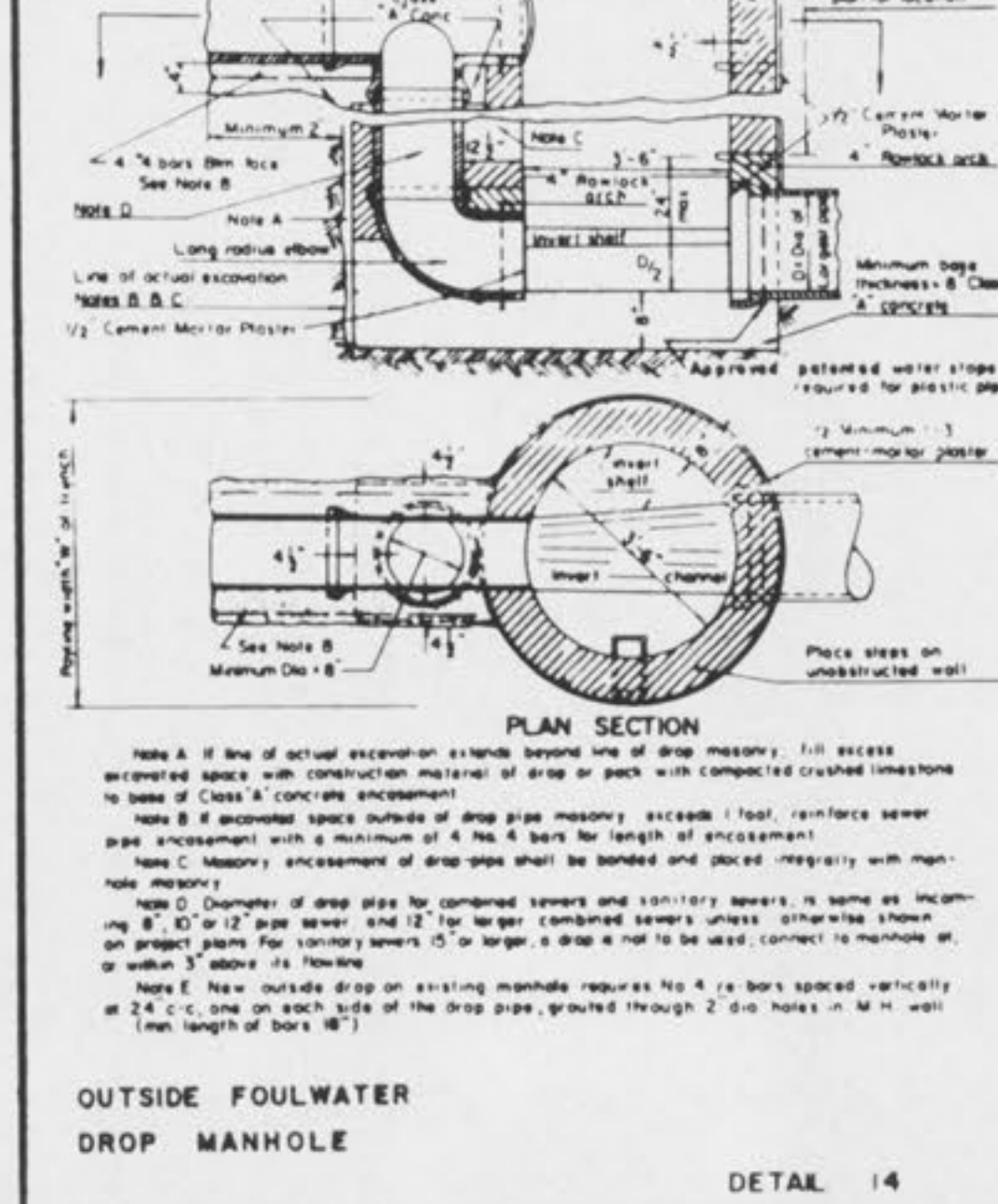
MANHOLE ON CONC PIPE  
39" THRU 54" (ALTERNATE)



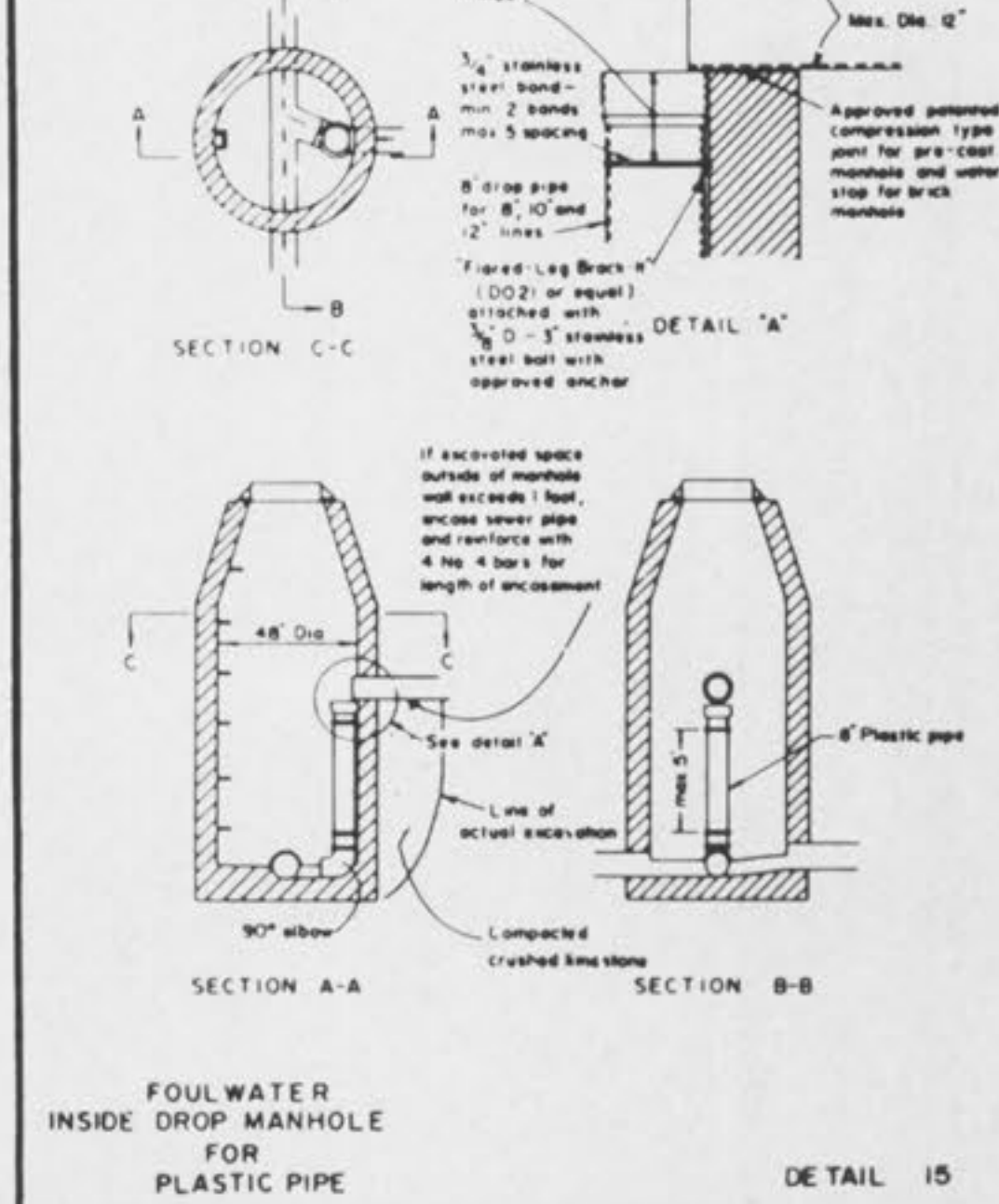
TYPICAL MANHOLE BASE  
REINFORCED CONCRETE PIPE  
SEWERS 60" AND LARGER  
IN DIAMETER



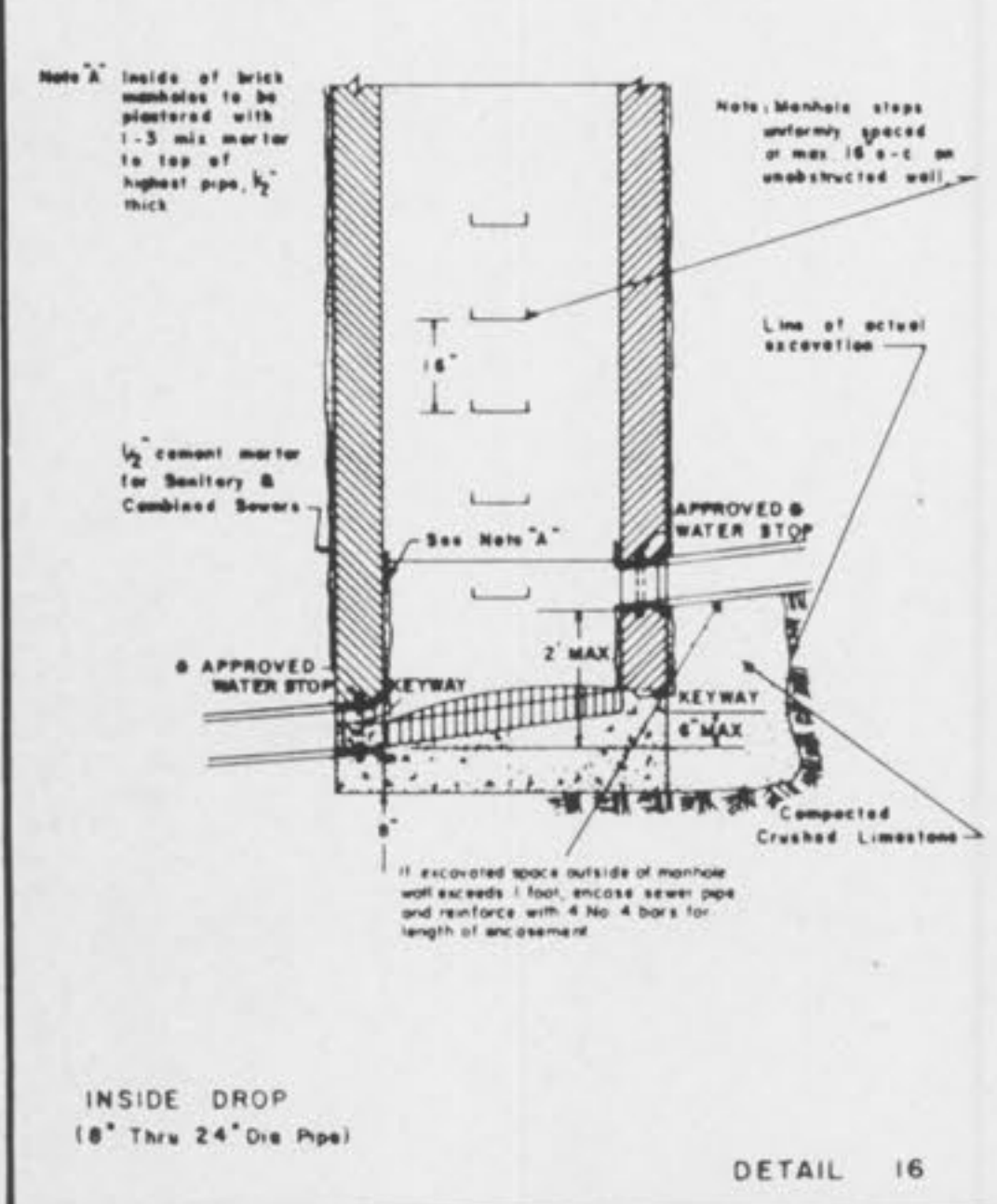
TYPICAL PRE-CAST M.H. TEE  
FOR REINFORCED CONCRETE  
PIPE SEWERS 48" AND  
LARGER IN DIAMETER



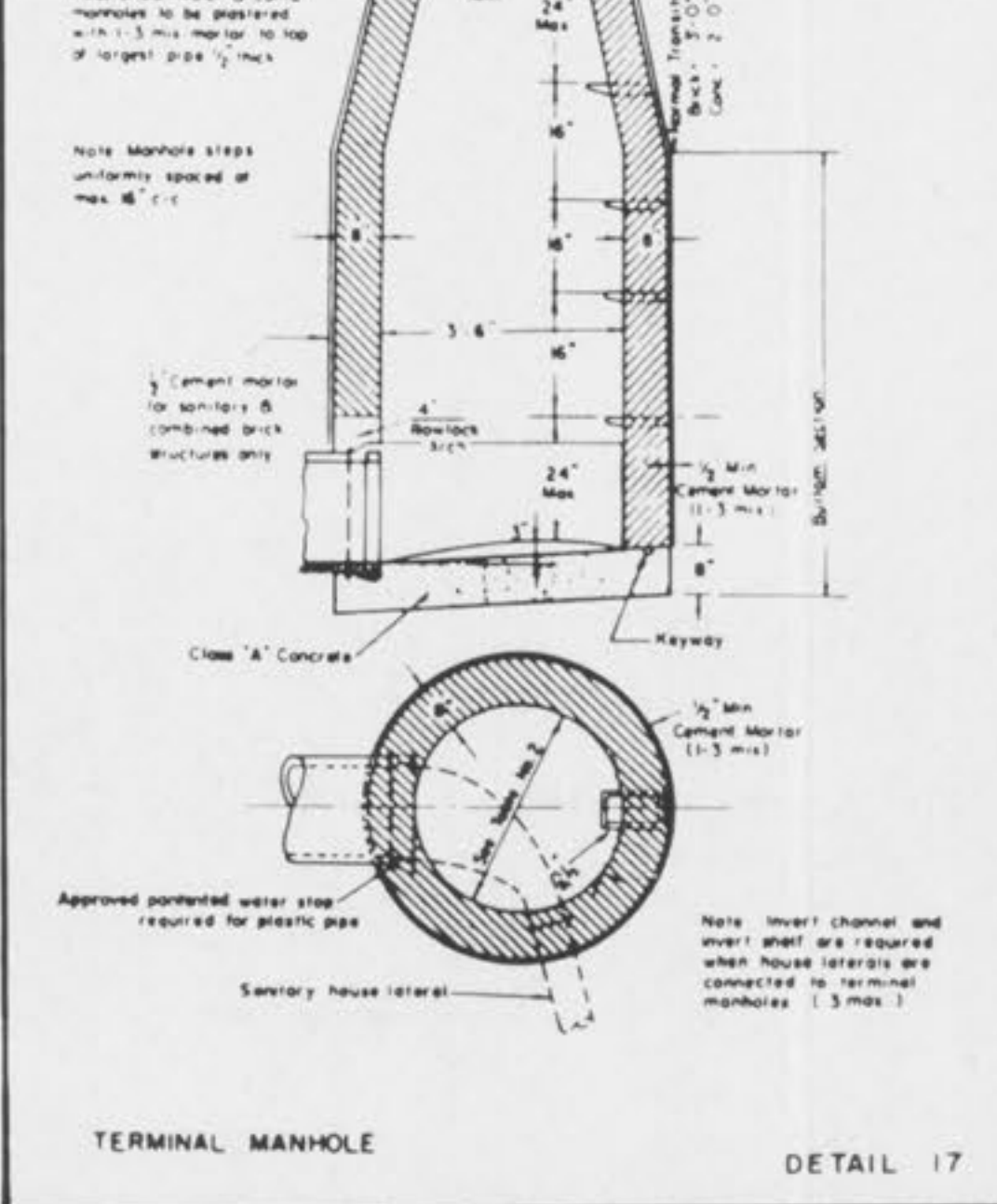
OUTSIDE FOULWATER  
DROP MANHOLE



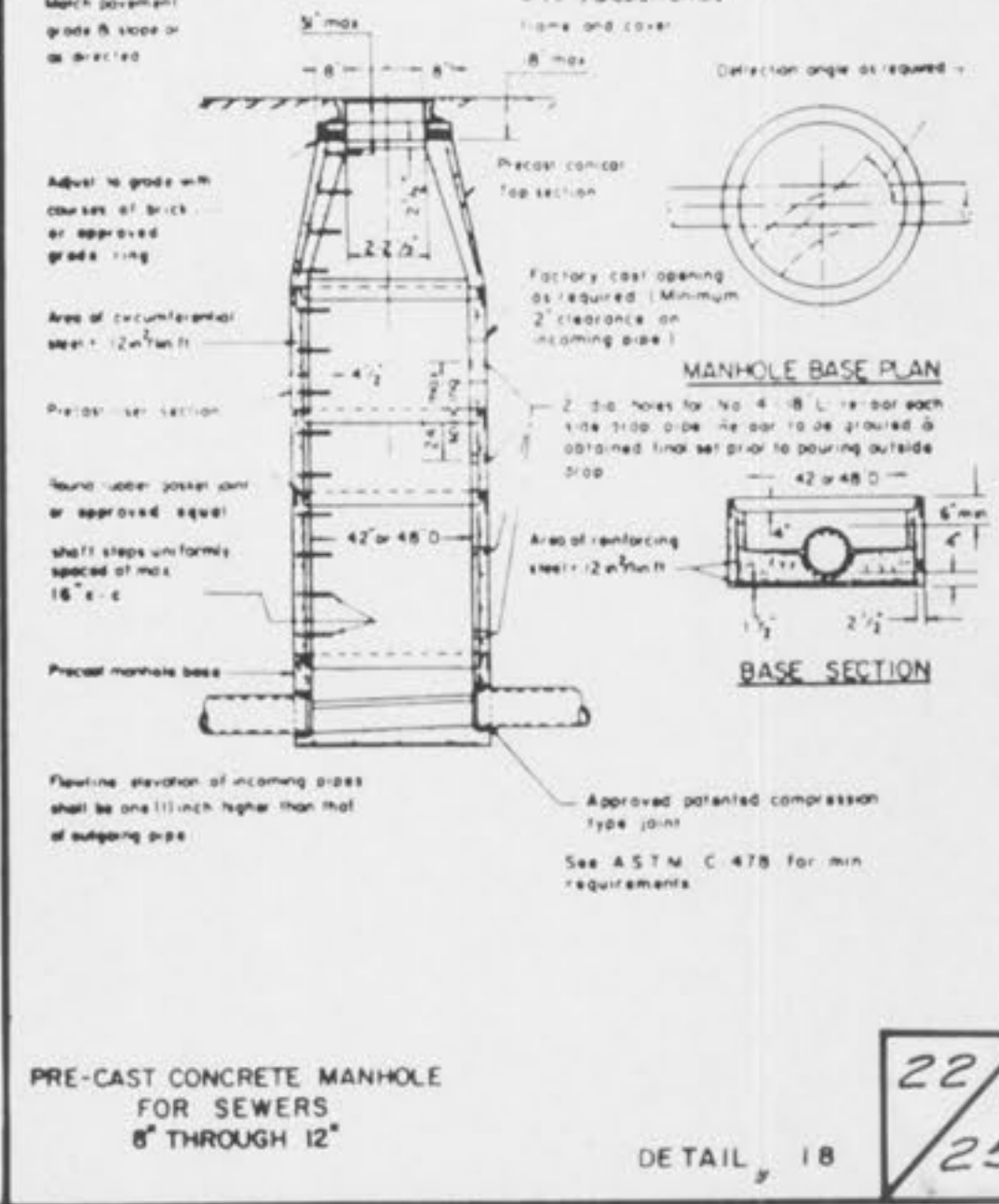
FOULWATER  
INSIDE DROP MANHOLE  
FOR PLASTIC PIPE



INSIDE DROP  
(18" Thru 24" Dia. Pipe)



TERMINAL MANHOLE



PRE-CAST CONCRETE MANHOLE  
FOR SEWERS 8" THROUGH 12"