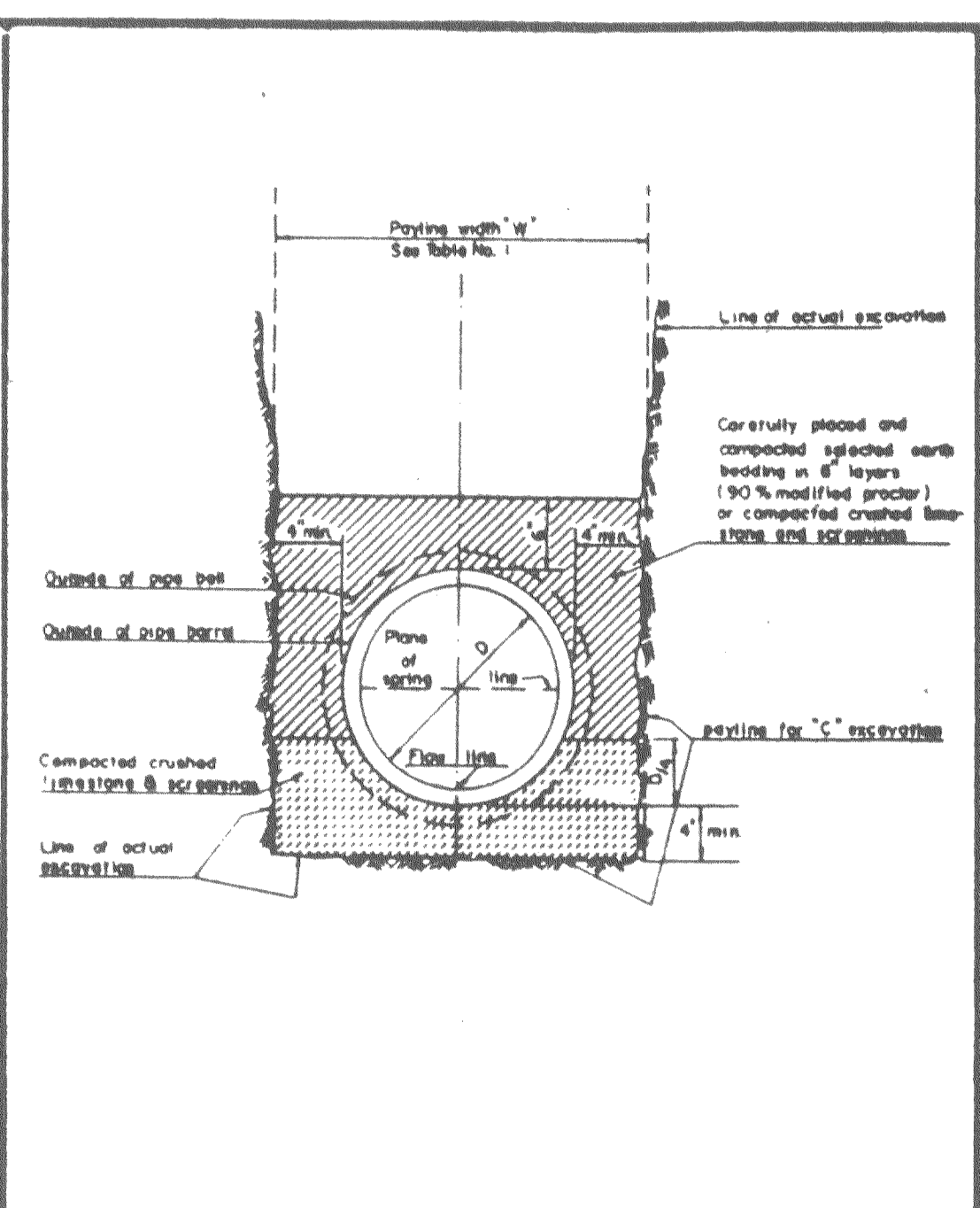
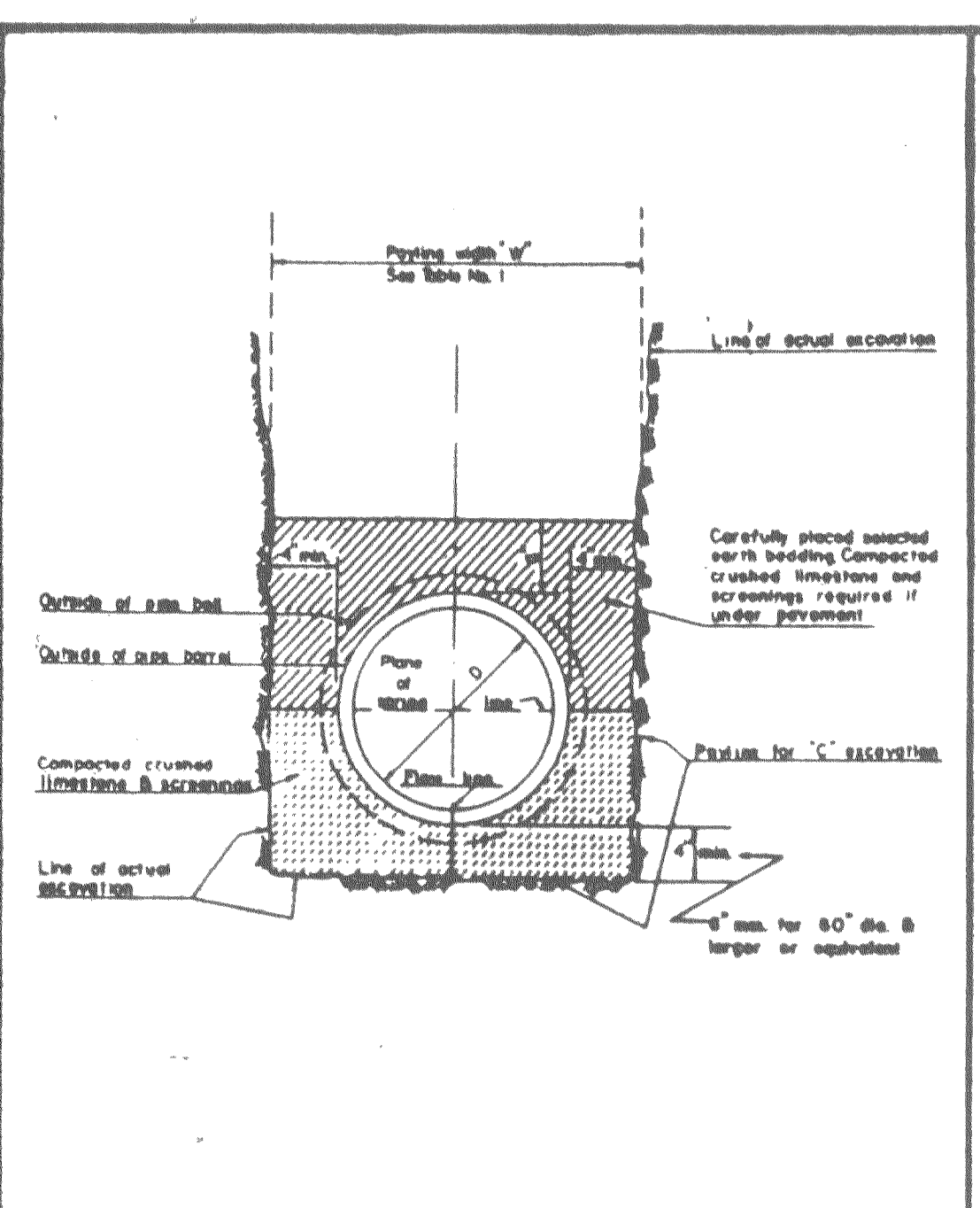


ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
Inside Diameter of Pipe (Inches)	"w" Payline Width of Trench (Inches)	"p" Payline Width of Trench (Feet)	Pay-volume cu ft per ft of Trench Excavation	Inside Diameter of Pipe (Inches)	"w" Payline Width of Trench (Inches)	"p" Payline Width of Trench (Feet)	Pay-volume cu ft per ft of Trench Excavation
4	20	2.33	3.20				
6	20	2.33	3.46				
8	20	2.33	3.70				
10	20	2.33	3.86				
12	20	2.33	3.98				
16	32	2.67	4.89				
18	32	2.67	5.63	14 x 23	41	3.42	5.84
21	39	3.25	6.61				
24	42	3.50	7.39	19 x 30	49	4.08	7.68
27	45	3.75	8.18	22 x 34	53	4.42	8.81
30	49	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	56	4.67	11.43	29 x 45	66	5.50	11.72
39	DISCONTINUED			32 x 49	71	5.82	13.14
42	63	5.25	13.38	34 x 53	75	6.25	14.08
48	70	5.83	15.67	38 x 60	83	6.82	16.18
54	77	6.42	18.15	43 x 68	92	7.47	18.81
60	84	7.00	20.73	48 x 76	101	8.12	21.50
66	91	7.58	23.45	53 x 83	109	8.80	24.30
72	98	8.17	26.37	58 x 91	118	9.53	27.48
78	105	8.75	29.39	63 x 98	126	10.50	30.50
84	112	9.33	32.57	68 x 108	135	11.25	33.91
90	119	9.92	35.80	72 x 113	143	11.82	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	44.48
108	140	11.67	46.75	87 x 136	168	14.00	47.79
114	147	12.25	50.66	92 x 143	176	14.87	51.70
120	154	12.83	54.72	97 x 151	185	15.42	54.01
126	161	13.42	58.92				
132	168	14.00	63.27	106 x 166	208	16.83	64.48
144	182	15.17	72.40	116 x 180	218	18.17	73.58

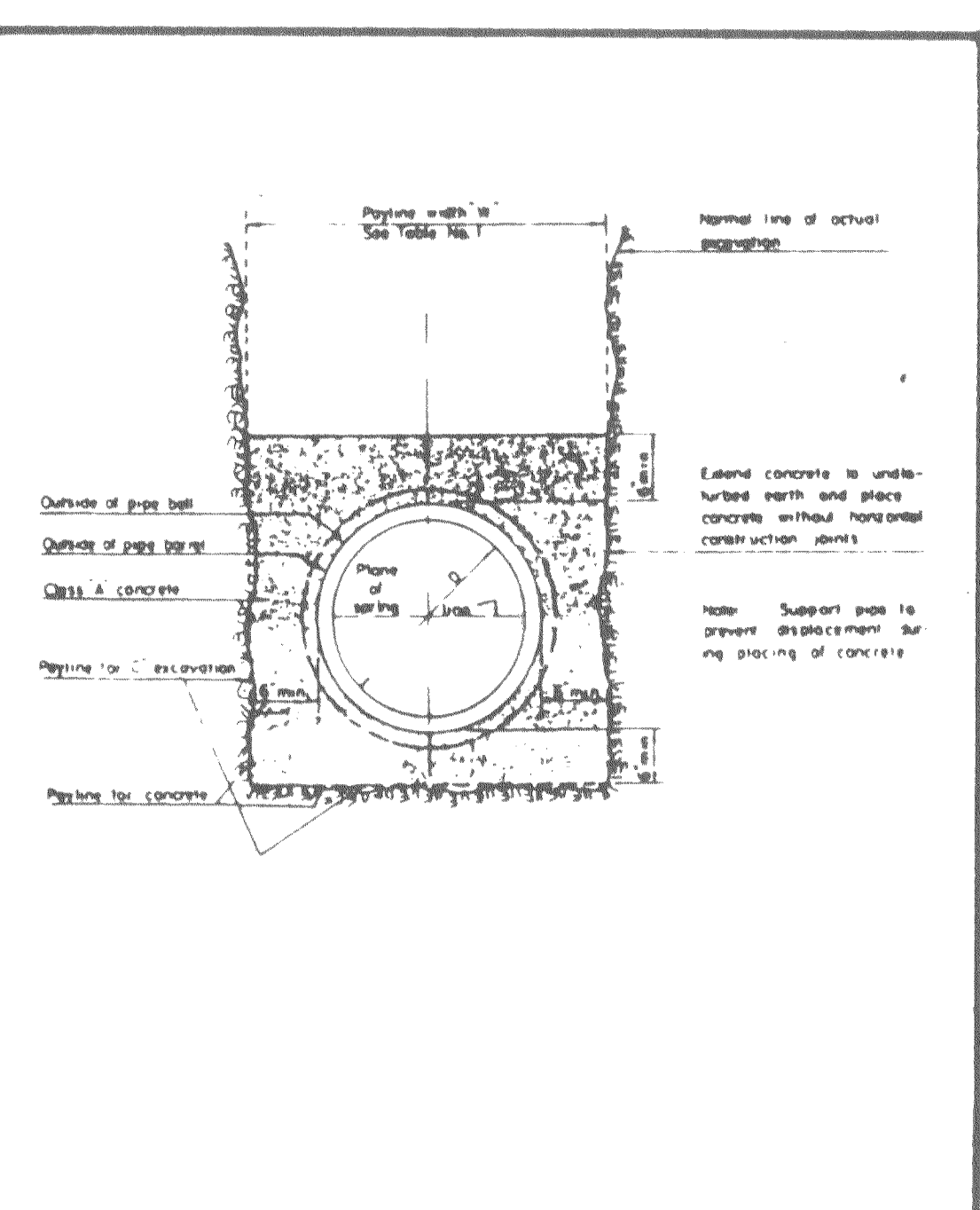
TABLE NO 1
PAYLINE WIDTHS OF TRENCH AND QUANTITIES OF CONCRETE
DETAIL 1



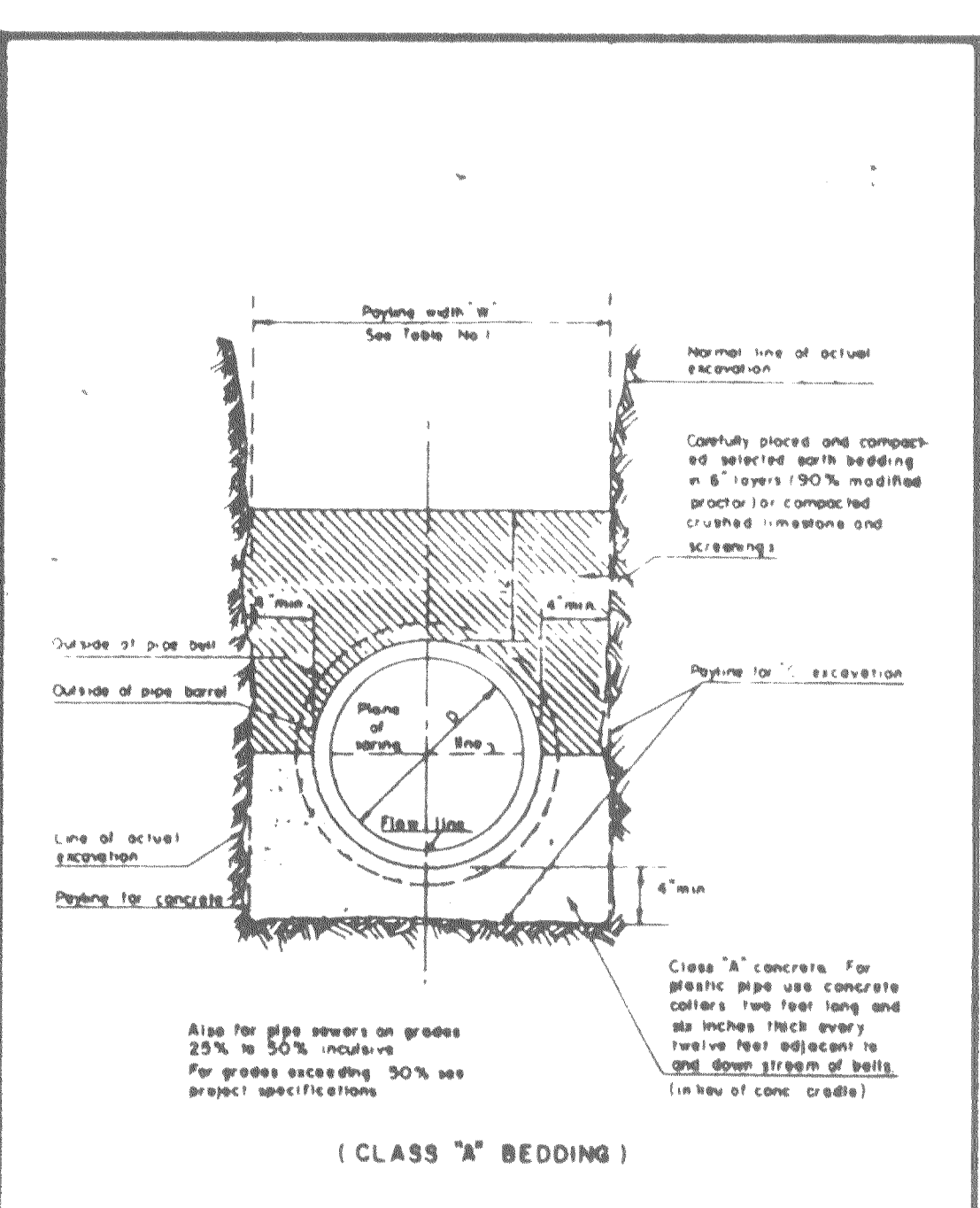
PIPE BEDDING CLASS "C" (FOR ALL PIPE EXCEPT REINFORCED CONCRETE PIPE)
DETAIL 2



PIPE BEDDING CLASS "C" (MODIFIED FOR REINFORCED CONCRETE PIPE)
DETAIL 3



CONCRETE ENCASEMENT
DETAIL 4

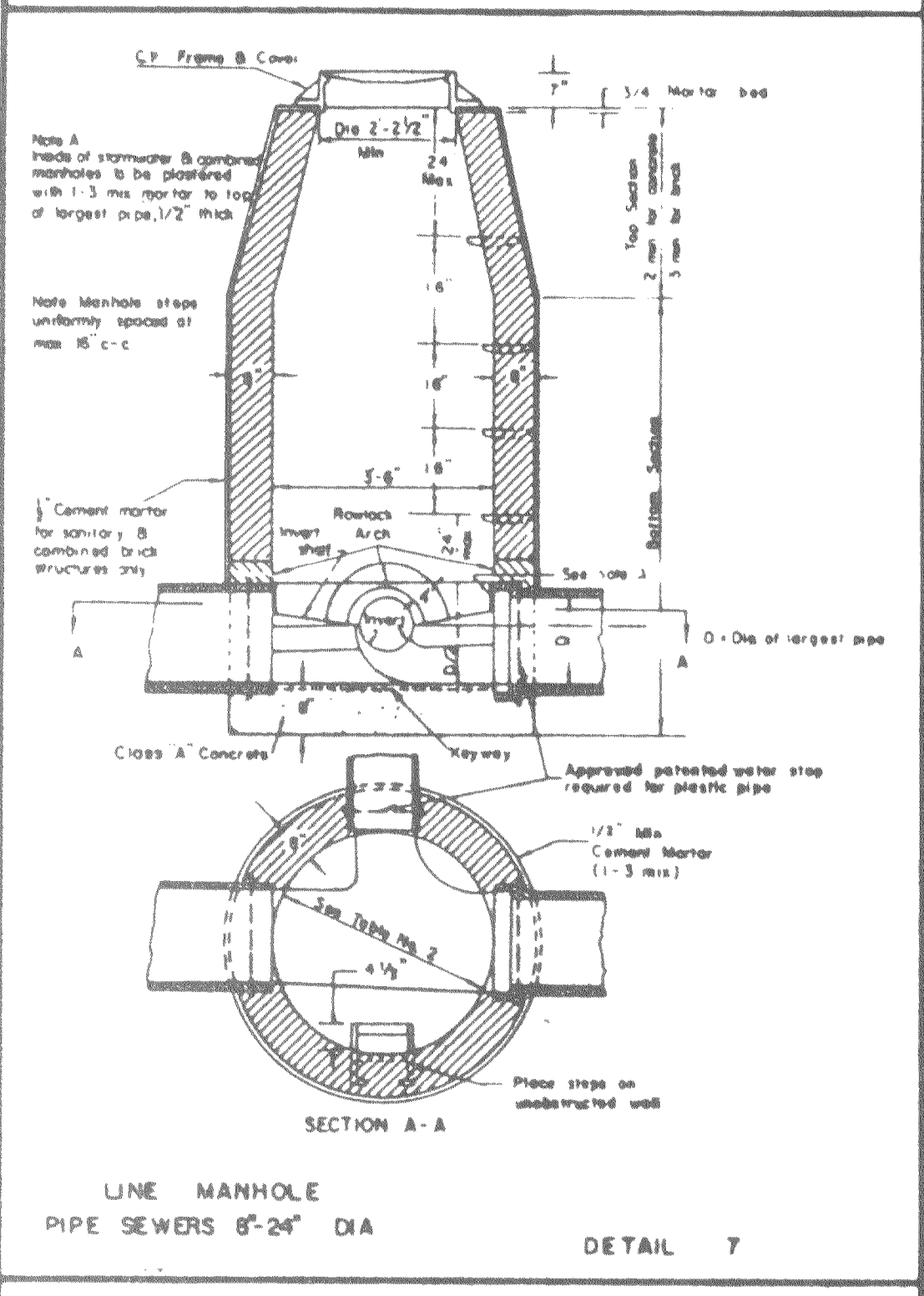


CONCRETE GRADE
DETAIL 5

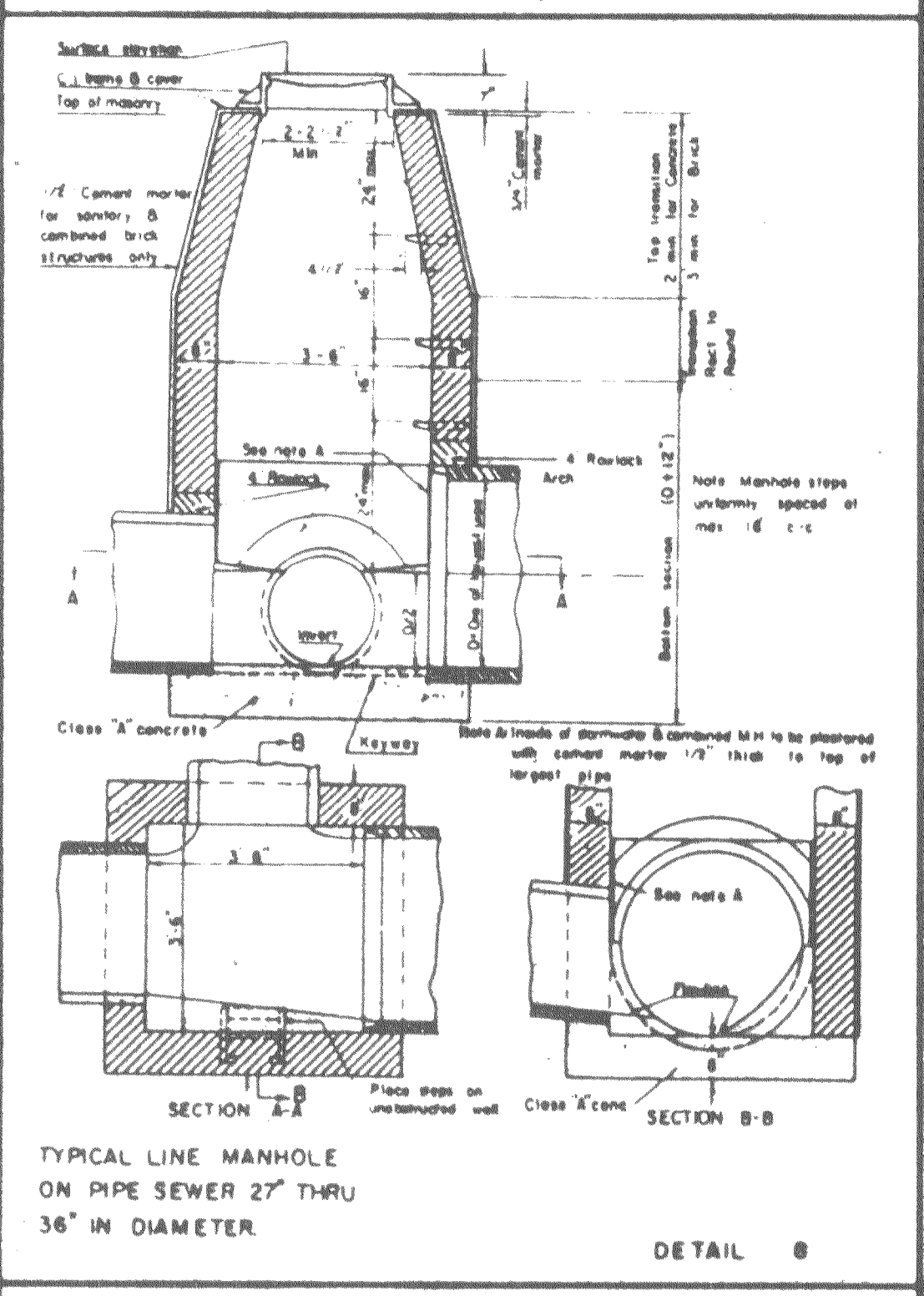
CONSTRUCTION DETAILS
WINDSONG
JULY 18, 1989 85-2084A

Section of 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

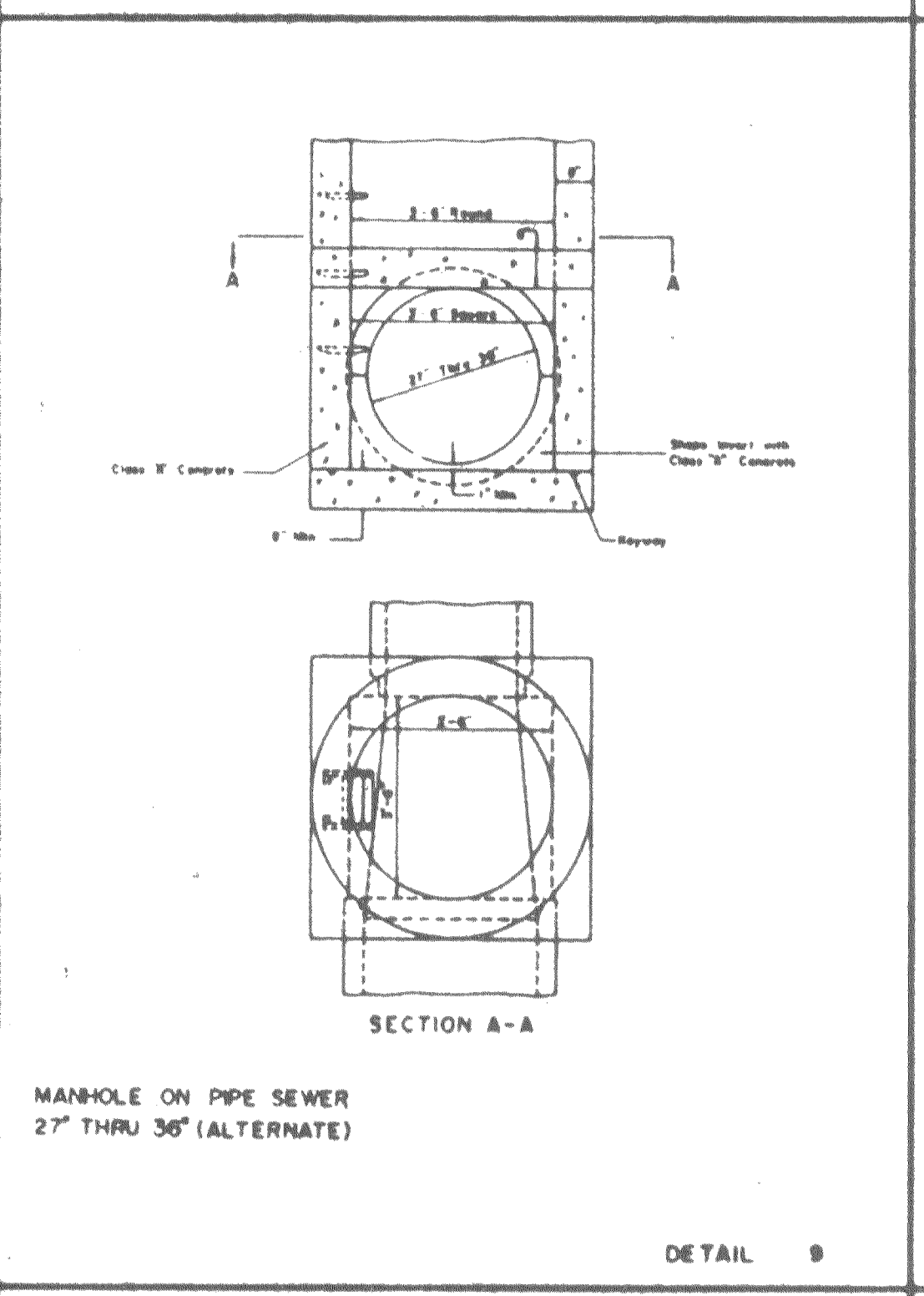
TABLE NO 2
STANDARD MANHOLE DIMENSIONS
DETAIL 6



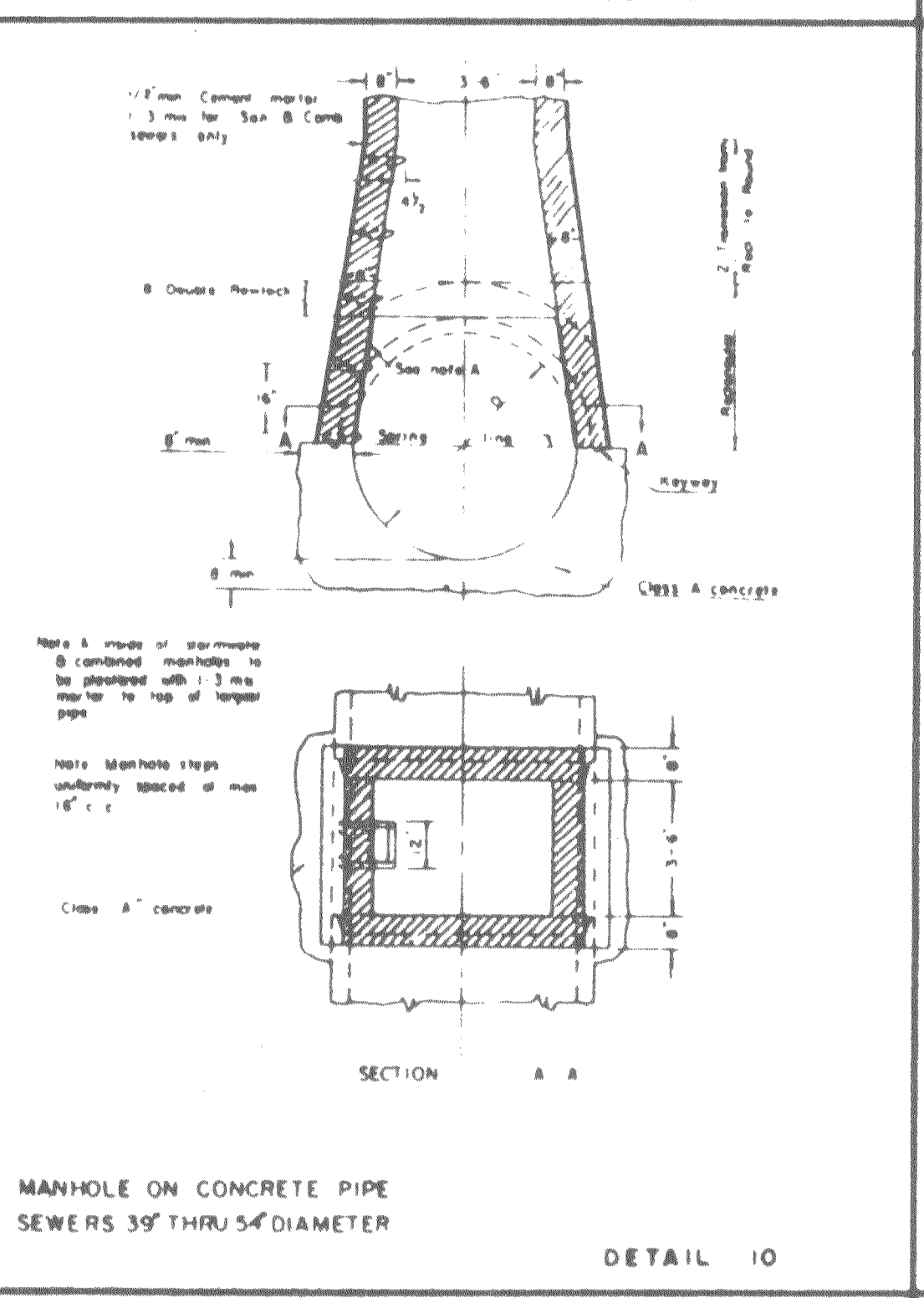
LINE MANHOLE
PIPE SEWERS 8"-24" DIA
DETAIL 7



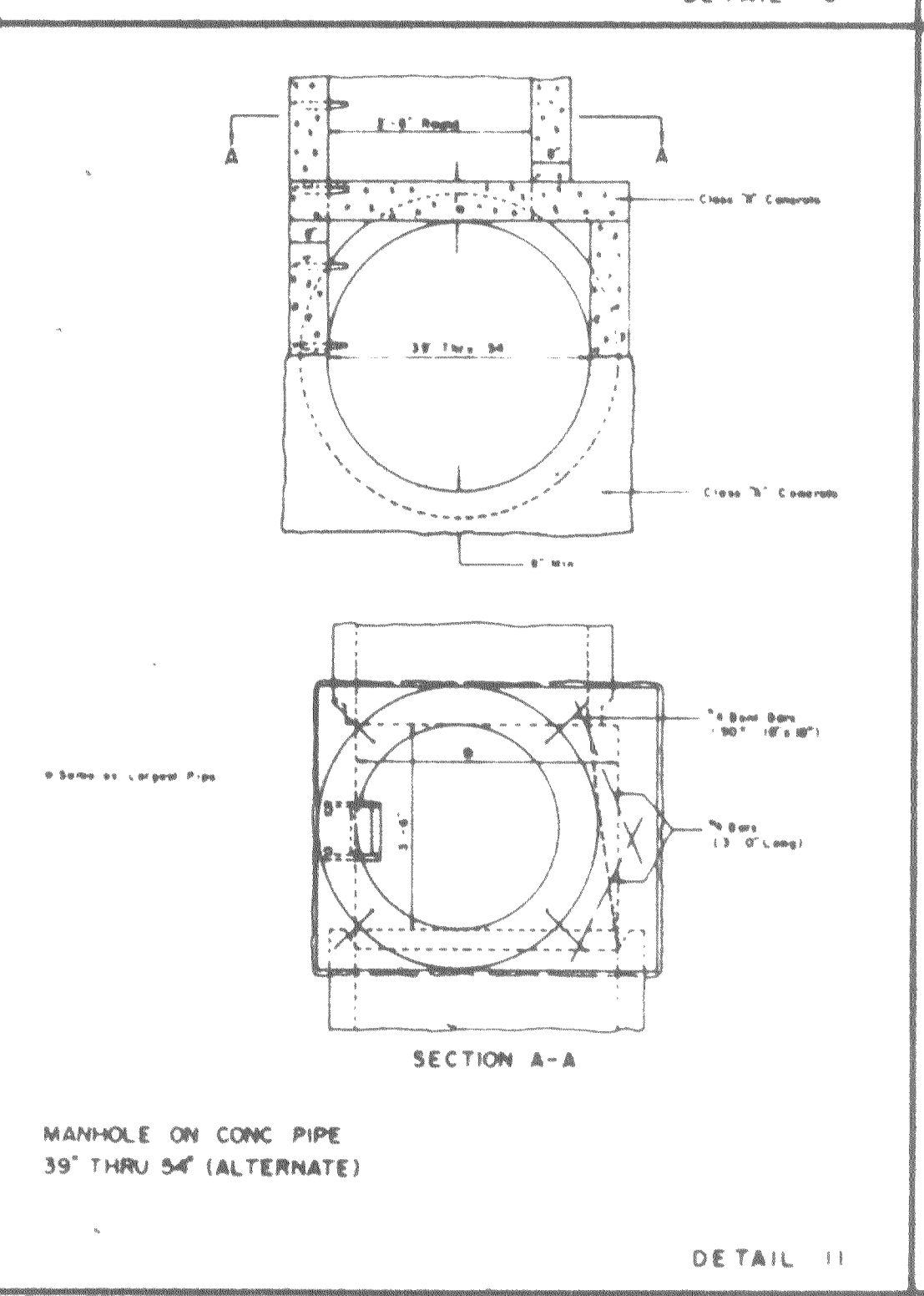
TYPICAL LINE MANHOLE ON PIPE SEWER 27" THRU 36" IN DIAMETER
DETAIL 8



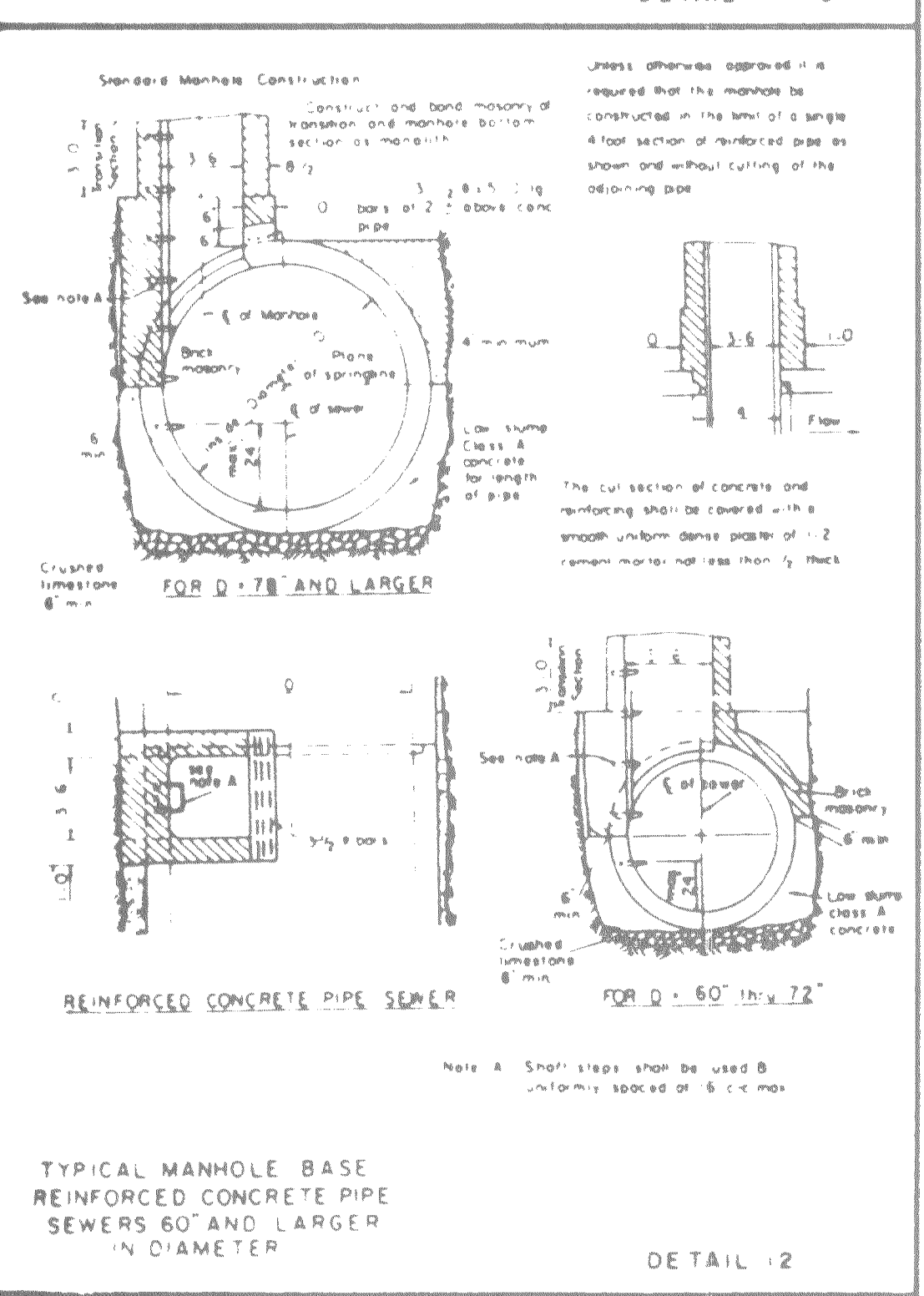
MANHOLE ON PIPE SEWER 27" THRU 36" (ALTERNATE)
DETAIL 9



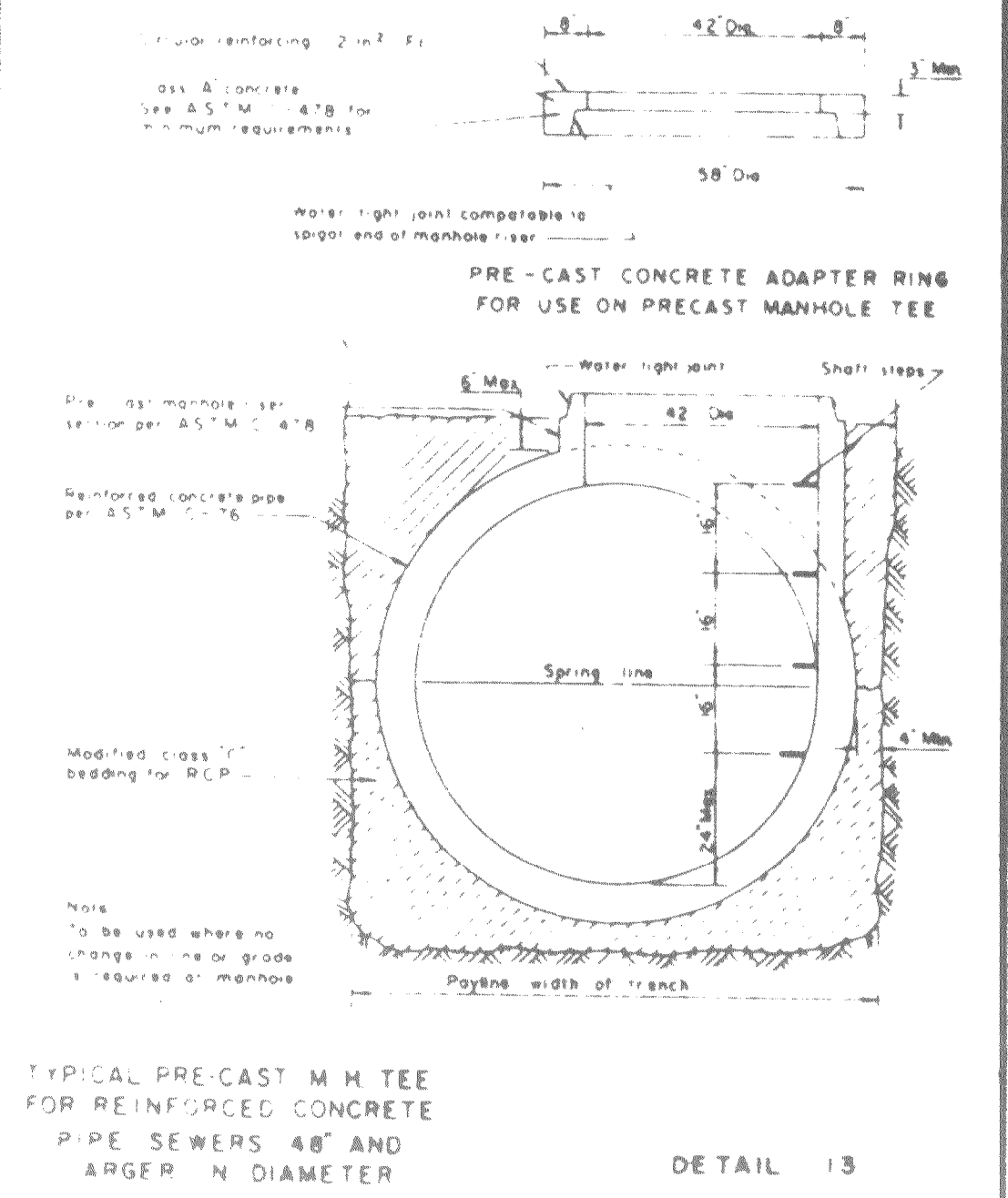
MANHOLE ON CONCRETE PIPE SEWERS 39" THRU 54" DIAMETER
DETAIL 10



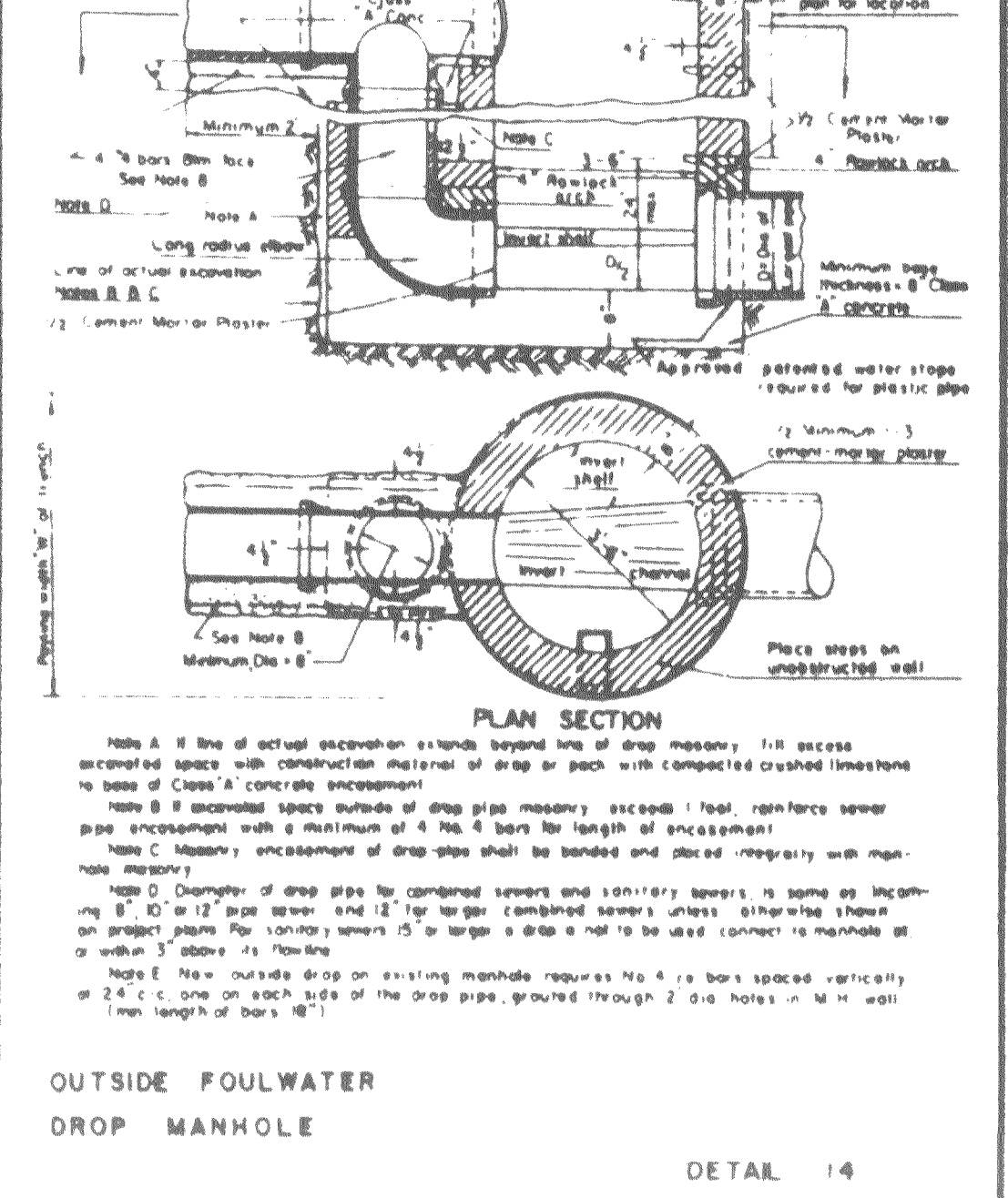
MANHOLE ON CONCRETE PIPE 39" THRU 54" (ALTERNATE)
DETAIL 11



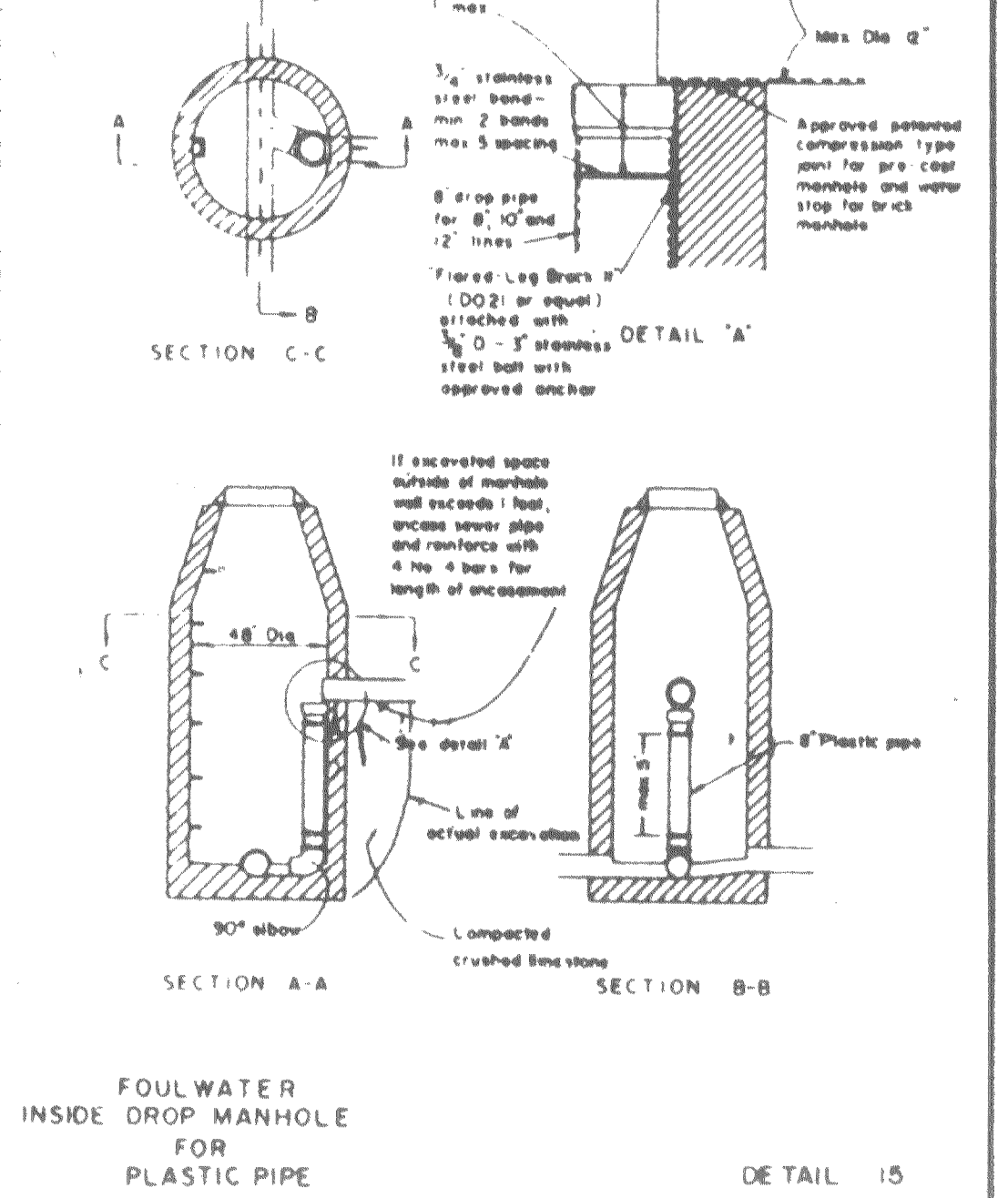
TYPICAL MANHOLE BASE REINFORCED CONCRETE PIPE SEWERS 60" AND LARGER IN DIAMETER
DETAIL 12



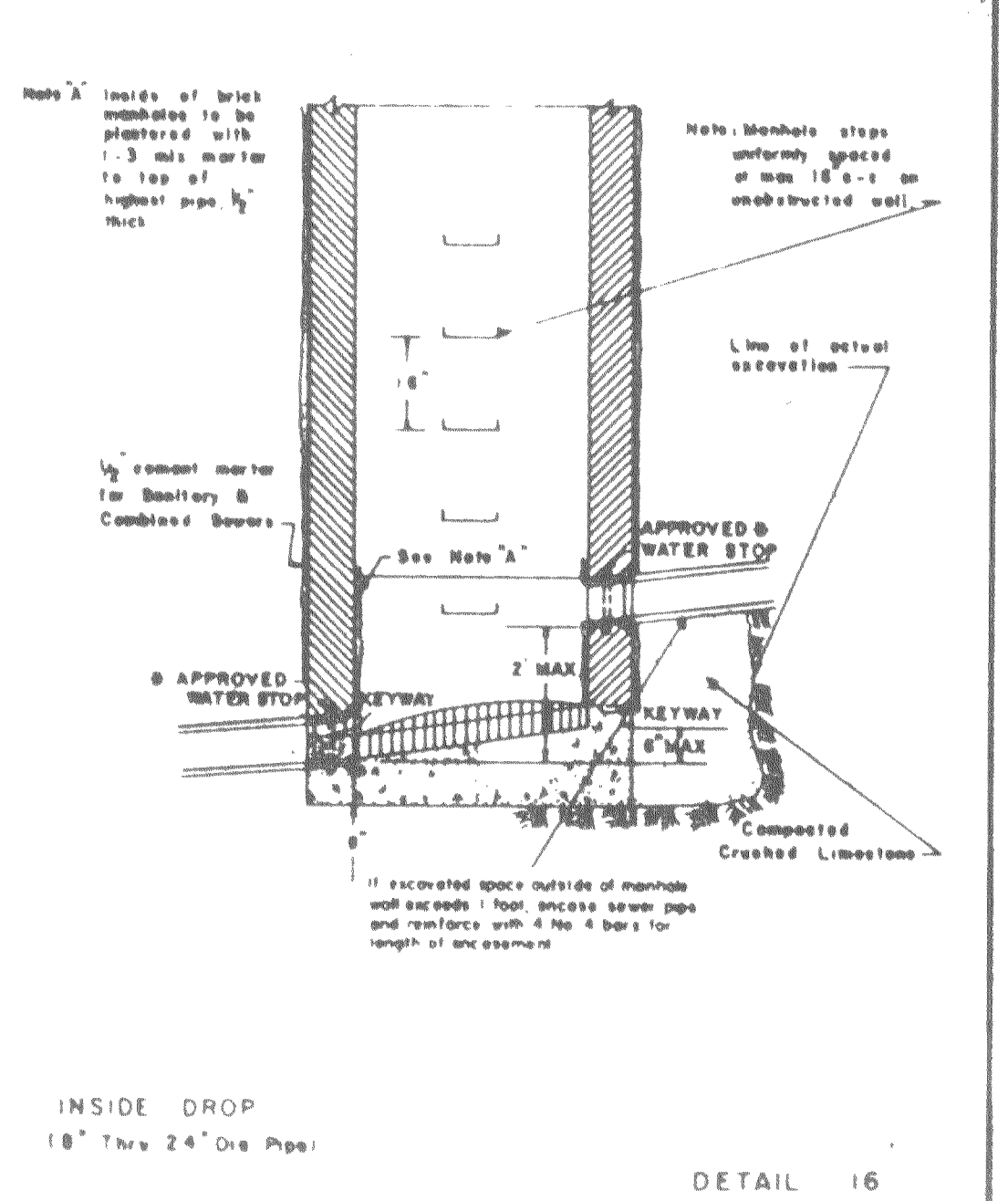
TYPICAL PRE-CAST M.H. TEE FOR REINFORCED CONCRETE PIPE SEWERS 48" AND LARGER IN DIAMETER
DETAIL 13



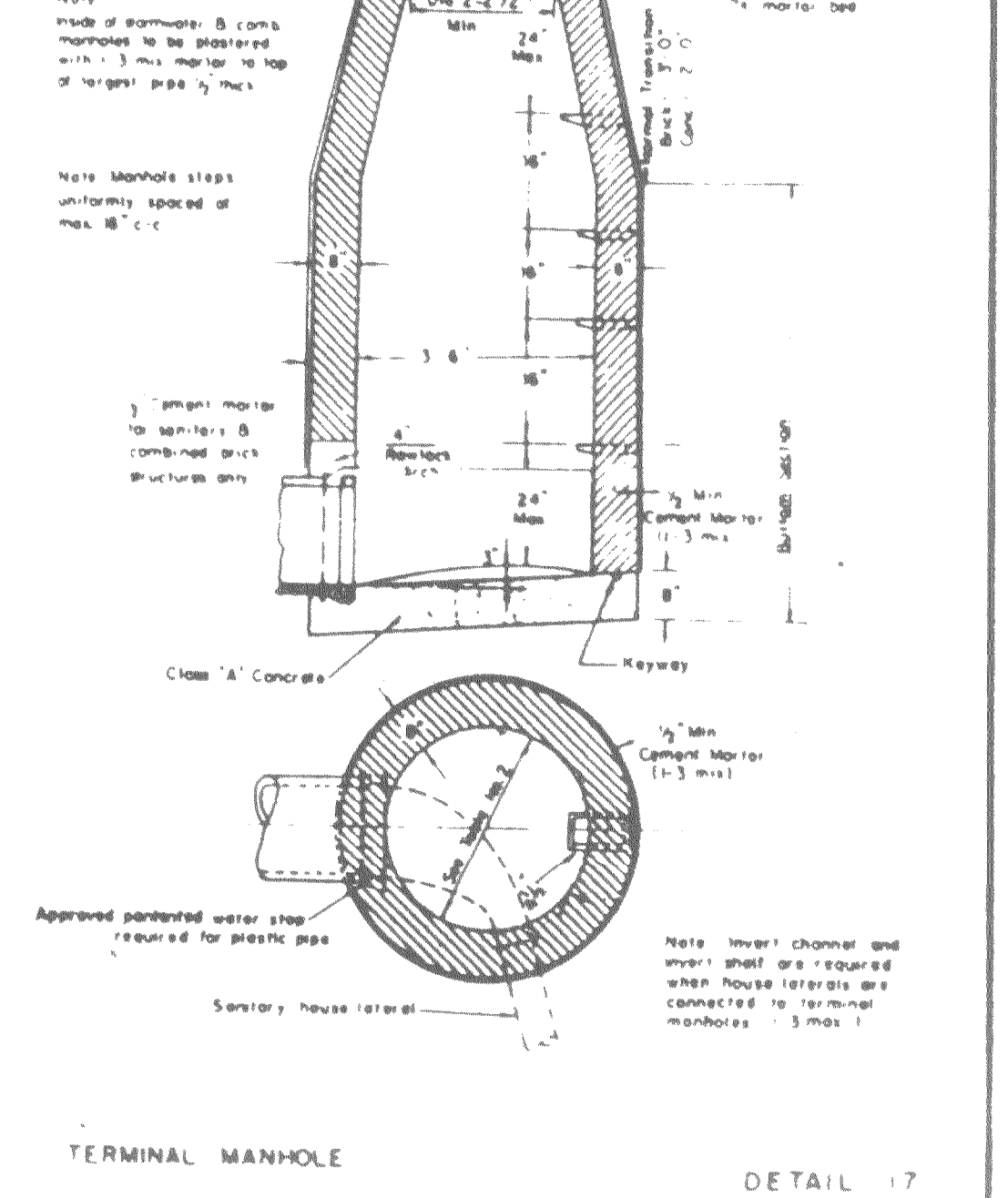
OUTSIDE FOULWATER DROP MANHOLE
DETAIL 14



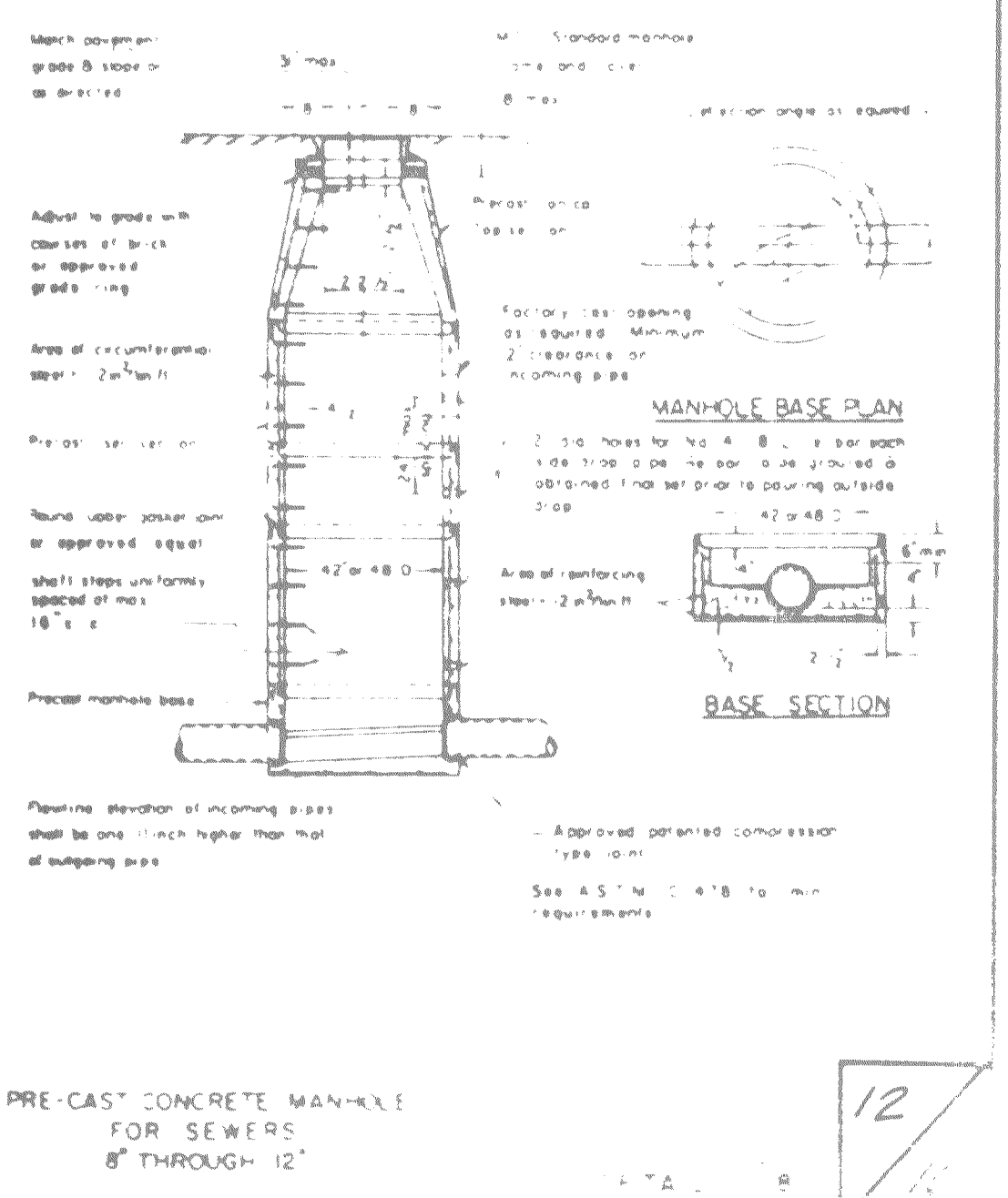
FOULWATER MANHOLE FOR PLASTIC PIPE
DETAIL 15



INSIDE DROP 18" THRU 24" DIA PIPE
DETAIL 16



TERMINAL MANHOLE
DETAIL 17



PRE-CAST CONCRETE MANHOLE FOR SEWERS 8" THROUGH 12" IN DIAMETER
DETAIL 18