TABLE OF REINFORCEMENT REQUIREMENTS

NOMINAL SPAN	EQUIVALENT DIAMETER (A)	f'c (ksi)									As, ADDITIONAL REINFORCEMENT										
					INNER CAGE			OUTER CAGE			U - INNER CAGE							V - OUTER CAGE			
		CLASS										TOP			BOTTOM						
IN.	IN.	IIA	IIIA	IVA	IIA	IIIA	IVA	IIA	IIIA	IVA	DIM.	IIA	IIIA	IVA	IIA	IIIA	IVA	DIM.	IIA	IIIA	IVA
22	18	4			.42																
28	24	4			.42																
36	30	4			.22			.17			1' 2"	.22			.06			2' 9"	.17		
44	36	4			.21			.17			1' 5"	.21			.08			3' 3"	.17		
51	42	4			.26			.19			1' 7"	.26			.08			3' 6"	.19		
58	48	4			.24			.19			1' 10"	.24			.09			4' 0"	.19		
65	54	4			.24			.19			2' 0"	.24			.09			4' 6"	.19		
73	60	5	5	5	.24	.35	.54	.18	.35	.53	2' 4"	.24	.11	.15	.11	.35	.54	5' 0"	.18	.35	.53
88	72	5	5	5	.23	.43	.63	.21	.42	.61	2' 9"	.23	.12	.17	.19	.43	.63	6' 0"	.21	.42	.61
102	84	5	5	5	.23	.50	.73	.23	.49	.71	3' 3"	.23	.13	.19	.23	.49	.73	7' 0"	.23	.48	.71
115	90	5	5	5	.28	.54	.88	.28	.54	.85	3' 7"	.19	.16	.21	.28	.54	.88	8' 0"	.28	.54	.85
122	96	5	5	5	.30	.54	.90	.30	.54	.89	3' 10'	.18	.16	.22	.30	.54	.90	8' 6"	.30	.54	.89
138	108	5	5	5	.35	.63	1.03	.36	.62	1.00	4' 4"	.12	.18	.28	.35	.62	1.03	9' 6"	.36	.61	1.00
154	120	5	5	5	.39	.66	1.06	.38	.66	1.02	4' 10'	.08	.18	.27	.39	.66	1.06	10' 6'	.38	.65	1.02
169	132	5	5		.50	.90		.49	.90		5' 2"	.07	.23		.50	.90		11' 0'	.49	.87	

TABLE OF DIMENSIONS

NOMINAL SPAN	EQUIVALENT DIAMETER (A)	WATER AREA	RISE	SPAN	DIMENSION REQUIREMENTS IN INCHES											APPROX. WT./FT.
IN.	IN.	S.F.	IN.	IN.	t	a	b	c	j	e	f	g	R_1	R_2	R_3	LB.
22	18	1.7	13-1/2	22	2-1/2	1-3/8	3/8	3/4	2	1-1/8	3/8	1	27-1/2	13-3/4	5-1/4	175
28	24	2.8	18	28-1/2	3-1/2	1-5/8	1/2	1-3/8	3	1-3/8	1/2	1-5/8	40-11/16	14-3/4	4-5/8	320
36	30	4.4	22-1/2	36-1/4	4	1-13/16	5/8	1-9/16	3-1/2	1-9/16	5/8	1-13/16	51	18-3/4	6-1/8	455
44	36	6.4	26-5/8	43-3/4	4-1/2	2	3/4	1-3/4	4	1-3/4	3/4	2	62	22-1/2	6-1/2	610
51	42	8.8	31-5/16	51-1/8	4-1/2	2	3/4	1-3/4	4	1-3/4	3/4	2	73	26-1/4	7-3/4	740
58	48	11.4	36	58-1/2	5	2-1/4	3/4	2	5	2	3/4	2-1/4	84	30	8-7/8	895
65	54	14.0	40	65	5-1/2	2-1/2	3/4	2-1/4	5	2-1/4	3/4	2-1/2	92-1/2	33-3/8	10	1095
73	60	17.7	45	73	6	3-5/16	3/4	1-15/16	5	2-3/4	3/4	2-1/2	105	37-1/2	11	1345
88	72	25.6	54	88	7	3-13/16	1	2-3/16	6	3-1/4	1	2-3/4	126	45	13-5/16	1885
102	84	34.6	62	102	8	4-1/8	1	2-7/8	6	3-1/2	1	3-1/2	162-1/2	52	14-1/2	2490
115	90	44.5	72	115-1/2	8-1/2	4-1/4	1	3-1/4	7	3-3/4	1	3-3/4	183	59	18	2900
122	96	51.7	77-1/2	122-3/8	9	4-1/2	1	3-1/2	7	4	1	4	218	62	20	3510
138	108	66.0	87-1/8	138-1/2	10	5	1	4	7	4-1/2	1	4-1/2	269	70	22	4400
154	120	81.8	96-7/8	154	11	5-1/2	1	4-1/2	7	5	1	5	301-3/8	78	24	5400
169	132	99.1	106-1/2	168-3/4	10	5	1	4	7	4-1/2	1	4-1/2	329	85-5/8	26-7/8	5390

(A) EQUIVALENT DIAMETER EQUALS DIAMETER OF CIRCULAR PIPE WITH APPROXIMATELY EQUIVALENT CROSS SECTION AREA.

MNDOT SPEC. REF. 2501
MNDOT 3014J1, 3014J2
3 OF 3
NOT TO SCALE

MINNEAPOLIS
DEPARTMENT OF PUBLIC WORKS

DRAWN: CXD	DATE: 4/03
APPROVED: HRS	DATE: 12/06

RC PIPE-ARCH

STANDARD PLATE NO. SEWR-4006