

FOUNDATION DATA FOR STEEL SUPPORTS

D-754-5

Foundation Diameter	Foundation			Vertical Reinforcing Steel				Horizontal Tie Bars		
	Depth	Conc. Vol. for 1 Post (CU YDS)	Conc. Vol. for 2 Posts (CU YDS)	Length of Each Bar	Size	No. Bars for 1 Post	No. Bars for 2 Posts	Size	No. Bars for 1 Post	No. Bars for 2 Posts
1'-4"	4'-6"	0.23	0.47	4'-2"	5	6	12	3	6	12
1'-4"	5'-0"	0.26	0.52	4'-8"	5	6	12	3	7	14
1'-4"	5'-6"	0.28	0.57	5'-2"	5	6	12	3	8	16
1'-4"	6'-0"	0.31	0.62	5'-8"	5	6	12	3	8	16
1'-4"	6'-6"	0.34	0.67	6'-2"	5	6	12	3	9	18
1'-4"	7'-0"	0.36	0.72	6'-8"	5	6	12	3	9	18
1'-4"	7'-6"	0.39	0.78	7'-2"	5	6	12	3	10	20
1'-4"	8'-0"	0.41	0.83	7'-8"	5	6	12	3	11	22
1'-4"	8'-6"	0.44	0.88	8'-2"	5	6	12	3	11	22
1'-4"	9'-0"	0.47	0.93	8'-8"	5	6	12	3	12	24
1'-4"	9'-6"	0.49	0.98	9'-2"	5	6	12	3	12	24
1'-4"	10'-0"	0.52	1.03	9'-8"	5	6	12	3	13	26
1'-4"	10'-6"	0.54	1.09	10'-2"	5	6	12	3	14	28
1'-4"	11'-0"	0.57	1.14	10'-8"	5	6	12	3	14	28
1'-4"	11'-6"	0.59	1.19	11'-2"	5	6	12	3	15	30
1'-4"	12'-0"	0.62	1.24	11'-8"	5	6	12	3	15	30

Foundation Diameter	Foundation			Vertical Reinforcing Steel				Horizontal Tie Bars		
	Depth	Conc. Vol. for 1 Post (CU YDS)	Conc. Vol. for 2 Posts (CU YDS)	Length of Each Bar	Size	No. Bars for 1 Post	No. Bars for 2 Posts	Size	No. Bars for 1 Post	No. Bars for 2 Posts
1'-9"	4'-6"	0.40	0.80	4'-2"	5	10	20	3	6	12
1'-9"	5'-0"	0.45	0.89	4'-8"	5	10	20	3	7	14
1'-9"	5'-6"	0.49	0.98	5'-2"	5	10	20	3	8	16
1'-9"	6'-0"	0.53	1.07	5'-8"	5	10	20	3	8	16
1'-9"	6'-6"	0.58	1.16	6'-2"	5	10	20	3	9	18
1'-9"	7'-0"	0.62	1.25	6'-8"	5	10	20	3	9	18
1'-9"	7'-6"	0.67	1.34	7'-2"	5	10	20	3	10	20
1'-9"	8'-0"	0.71	1.43	7'-8"	5	10	20	3	11	22
1'-9"	8'-6"	0.76	1.51	8'-2"	5	10	20	3	11	22
1'-9"	9'-0"	0.80	1.60	8'-8"	5	10	20	3	12	24
1'-9"	9'-6"	0.85	1.69	9'-2"	5	10	20	3	12	24
1'-9"	10'-0"	0.89	1.78	9'-8"	5	10	20	3	13	26
1'-9"	10'-6"	0.94	1.87	10'-2"	5	10	20	3	14	28
1'-9"	11'-0"	0.98	1.96	10'-8"	5	10	20	3	14	28
1'-9"	11'-6"	1.02	2.05	11'-2"	5	10	20	3	15	30
1'-9"	12'-0"	1.07	2.14	11'-8"	5	10	20	3	15	30

Foundation Diameter	Foundation			Vertical Reinforcing Steel				Horizontal Tie Bars		
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2'-0"	4'-6"	0.52	1.05	4'-2"	6	10	20	3	6	12
2'-0"	5'-0"	0.58	1.16	4'-8"	6	10	20	3	7	14
2'-0"	5'-6"	0.64	1.28	5'-2"	6	10	20	3	8	16
2'-0"	6'-0"	0.70	1.40	5'-8"	6	10	20	3	8	16
2'-0"	6'-6"	0.76	1.51	6'-2"	6	10	20	3	9	18
2'-0"	7'-0"	0.81	1.63	6'-8"	6	10	20	3	9	18
2'-0"	7'-6"	0.87	1.75	7'-2"	6	10	20	3	10	20
2'-0"	8'-0"	0.93	1.86	7'-8"	6	10	20	3	11	22
2'-0"	8'-6"	0.99	1.98	8'-2"	6	10	20	3	11	22
2'-0"	9'-0"	1.05	2.09	8'-8"	6	10	20	3	12	24
2'-0"	9'-6"	1.11	2.21	9'-2"	6	10	20	3	12	24
2'-0"	10'-0"	1.16	2.33	9'-8"	6	10	20	3	13	26
2'-0"	10'-6"	1.22	2.44	10'-2"	6	10	20	3	14	28
2'-0"	11'-0"	1.28	2.56	10'-8"	6	10	20	3	14	28
2'-0"	11'-6"	1.34	2.68	11'-2"	6	10	20	3	15	30
2'-0"	12'-0"	1.40	2.79	11'-8"	6	10	20	3	15	30
2'-0"	12'-6"	1.45	2.91	12'-2"	6	10	20	3	16	32
2'-0"	13'-0"	1.51	3.03	12'-8"	6	10	20	3	17	34
2'-0"	13'-6"	1.57	3.14	13'-2"	6	10	20	3	17	34
2'-0"	14'-0"	1.63	3.26	13'-8"	6	10	20	3	18	36
2'-0"	14'-6"	1.69	3.37	14'-2"	6	10	20	3	18	36
2'-0"	15'-0"	1.75	3.49	14'-8"	6	10	20	3	19	38

Foundation Diameter	Foundation			Vertical Reinforcing Steel				Horizontal Tie Bars		
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2'-4"	4'-6"	0.71	1.43	4'-2"	6	14	28	3	6	12
2'-4"	5'-0"	0.79	1.58	4'-8"	6	14	28	3	7	14
2'-4"	5'-6"	0.87	1.74	5'-2"	6	14	28	3	8	16
2'-4"	6'-0"	0.95	1.90	5'-8"	6	14	28	3	8	16
2'-4"	6'-6"	1.03	2.06	6'-2"	6	14	28	3	9	18
2'-4"	7'-0"	1.11	2.22	6'-8"	6	14	28	3	9	18
2'-4"	7'-6"	1.19	2.38	7'-2"	6	14	28	3	10	20
2'-4"	8'-0"	1.27	2.53	7'-8"	6	14	28	3	11	22
2'-4"	8'-6"	1.35	2.69	8'-2"	6	14	28	3	11	22
2'-4"	9'-0"	1.43	2.85	8'-8"	6	14	28	3	12	24
2'-4"	9'-6"	1.50	3.01	9'-2"	6	14	28	3	12	24
2'-4"	10'-0"	1.58	3.17	9'-8"	6	14	28	3	13	26
2'-4"	10'-6"	1.66	3.33	10'-2"	6	14	28	3	14	28
2'-4"	11'-0"	1.74	3.48	10'-8"	6	14	28	3	14	28
2'-4"	11'-6"	1.82	3.64	11'-2"	6	14	28	3	15	30
2'-4"	12'-0"	1.90	3.80	11'-8"	6	14	28	3	15	30
2'-4"	12'-6"	1.98	3.96	12'-2"	6	14	28	3	16	32
2'-4"	13'-0"	2.06	4.12	12'-8"	6	14	28	3	17	34
2'-4"	13'-6"	2.14	4.28	13'-2"	6	14	28	3	17	34
2'-4"	14'-0"	2.22	4.43	13'-8"	6	14	28	3	18	36
2'-4"	14'-6"	2.30	4.59	14'-2"	6	14	28	3	18	36
2'-4"	15'-0"	2.38	4.75	14'-8"	6	14	28	3	19	38
2'-4"	15'-6"	2.45	4.91	15'-2"	6	14	28	3	20	40
2'-4"	16'-0"	2.53	5.07	15'-8"	6	14	28	3	20	40
2'-4"	16'-6"	2.61	5.23	16'-2"	6	14	28	3	21	42
2'-4"	17'-0"	2.69	5.38	16'-8"	6	14	28	3	21	42
2'-4"	17'-6"	2.77	5.54	17'-2"	6	14	28	3	22	44
2'-4"	18'-0"	2.85	5.70	17'-8"	6	14	28	3	23	46

Foundation Diameter	Foundation			Vertical Reinforcing Steel				Horizontal Tie Bars		
	Depth	Conc. Vol. for 1 Post (CU YDS)	Conc. Vol. for 2 Posts (CU YDS)	Length of Each Bar	Size	No. Bars for 1 Post	No. Bars for 2 Posts	Size	No. Bars for 1 Post	No. Bars for 2 Posts
2'-6"	4'-6"	0.82	1.64	4'-2"	6	16	32	3	6	12
2'-6"	5'-0"	0.91	1.82	4'-8"	6	16	32	3	7	14
2'-6"	5'-6"	1.00	2.00	5'-2"	6	16	32	3	8	16
2'-6"	6'-0"	1.09	2.18	5'-8"	6	16	32	3	8	16
2'-6"	6'-6"	1.18	2.36	6'-2"	6	16	32	3	9	18
2'-6"	7'-0"	1.27	2.55	6'-8"	6	16	32	3	9	18
2'-6"	7'-6"	1.36	2.73	7'-2"	6	16	32	3	10	20
2'-6"	8'-0"	1.45	2.91	7'-8"	6	16	32	3	11	22
2'-6"	8'-6"	1.55	3.09	8'-2"	6	16	32	3	11	22
2'-6"	9'-0"	1.64	3.27	8'-8"	6	16	32	3	12	24
2'-6"	9'-6"	1.73	3.45	9'-2"	6	16	32	3	12	24
2'-6"	10'-0"	1.82	3.64	9'-8"	6	16	32	3	13	26
2'-6"	10'-6"	1.91	3.82	10'-2"	6	16	32	3	14	28
2'-6"	11'-0"	2.00	4.00	10'-8"	6	16	32	3	14	28
2'-6"	11'-6"	2.09	4.18	11'-2"	6	16	32	3	15	30
2'-6"	12'-0"	2.18	4.36	11'-8"	6	16	32	3	15	30
2'-6"	12'-6"	2.27	4.55	12'-2"	6	16	32	3	16	32
2'-6"	13'-0"	2.36	4.73	12'-8"	6	16	32	3	17	34
2'-6"	13'-6"	2.45	4.91	13'-2"	6	16	32	3	17	34
2'-6"	14'-0"	2.55	5.09	13'-8"	6	16	32	3	18	36
2'-6"	14'-6"	2.64	5.27	14'-2"	6	16	32	3	18	36
2'-6"	15'-0"	2.73	5.45	14'-8"	6	16	32	3	19	38
2'-6"	15'-6"	2.82	5.64	15'-2"	6	16	32	3	20	40
2'-6"	16'-0"	2.91	5.82	15'-8"	6	16	32	3	20	40
2'-6"	16'-6"	3.00	6.00	16'-2"	6	16	32	3	21	42
2'-6"	17'-0"	3.09	6.18	16'-8"	6	16	32	3	21	42
2'-6"	17'-6"	3.18	6.36	17'-2"	6	16	32	3	22	44
2'-6"	18'-0"	3.27	6.54	17'-8"	6	16	32	3	23	46
2'-6"	18'-6"	3.36	6.73	18'-2"	6	16	32	3	23	46
2'-6"	19'-0"	3.45	6.91	18'-8"	6	16	32	3	24	48
2'-6"	19'-6"	3.55	7.09	19'-2"	6	16	32	3	24	48
2'-6"	20'-0"	3.64	7.27	19'-8"	6	16	32	3	25	50

NOTES:

- Use Grade 60 reinforcing steel.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
10-3-13	
REVISIONS	
DATE	CHANGE
8-30-18	Updated notes to active voice.
8-29-19	New Design Engineer PE Stamp.
8-05-24	Electronic Stamp/Signature.



08/05/24