Wing, Curtain Wall and Curb Data

Dimensions – Wings

Design no.	Clear Span	Clear Height	A1	A2	B1	B2	C1	C2	D	E1	E2	F
1	9'-6"	4'-6"	11'-10"	7'-11"	2'-11½"	3'-11¼"	3'-6"	2'-6¼"	5'-2"	17'-1¾"	9'-11"	31'-2⅝"
2	9'-6"	6'-6"	15'-1"	9'-10"	3'-9½"	4'-11¼"	4'-8"	3'-6¼"	5'-9"	20'-4¾"	11'-10"	31'-2⅝"
3	9'-6"	8'-0"	18'-5"	12'-2"	4'-7¼"	6'-1"	5'-4¼"	3'-10½"	6'-4"	23'-8¾"	14'-2"	31'-2⅝"
4	9'-6"	9'-6"	21'-8"	14'-5"	5'-5"	7'-2¾"	6'-0½"	4'-2¾"	6'-11"	26'-11¾"	16'-5"	31'-2⅝"
5	11'-0"	4'-6"	11'-10"	7'-11"	2'-11½"	3'-11¼"	3'-6½"	2'-6¾"	5'-2"	17'-1¾"	9'-11"	36'-5"
6	11'-0"	6'-6"	15'-1"	9'-10"	3'-9½"	4'-11¼"	4'-6½"	3'-6¾"	5'-9"	20'-4¾"	11'-10"	36'-5"
7	11'-0"	8'-0"	18'-5"	12'-2"	4'-7¼"	6'-1"	5'-4¾"	3'-11"	6'-4"	23'-8¾"	14'-2"	36'-5"
8	11'-0"	9'-6"	21'-8"	14'-5"	5'-5"	7'-2¾"	6'-1"	4'-3¼"	6'-11"	26'-11¾"	16'-5"	36'-5"
9	11'-0"	11'-0"	24'-11"	16'-5"	6'-3"	8'-2½"	6'-9"	4'-9½"	7'-6"	30'-2¾"	18'-5"	36'-5"
10	13'-0"	6'-6"	15'-1"	9'-10"	3'-9½"	4'-11¼"	4'-8¾"	3'-7"	5'-9"	20'-4¾"	11'-10"	43'-4⅛"
11	13'-0"	8'-0"	18'-5"	12'-2"	4'-7¼"	6'-1"	5'-5"	3'-11¼"	6'-4"	23'-8¾"	14'-2"	43'-4⅛"
12	13'-0"	9'-6"	21'-8"	14'-5"	5'-5"	7'-2¾"	6'-1¼"	4'-3½"	6'-11"	26'-11¾"	16'-5"	43'-4⅛"
13	13'-0"	11'-0"	24'-11"	16'-5"	6'-3"	8'-2½"	6'-9¼"	4'-9¾"	7'-6"	30'-2¾"	18'-5"	43'-4⅛"
14	13'-0"	13'-0"	28'-3"	18'-9"	7'-0¾"	9'-4½"	7'-11½"	5'-8"	8'-0"	33'-6¾"	20'-9"	43'-4⅛"
15	14'-6"	6'-6"	15'-1"	9'-10"	3'-9½"	4'-11¼"	4'-9¼"	3'-7½"	5'-9"	20'-4¾"	11'-10"	48'-6½"
16	14'-6"	8'-0"	18'-5"	12'-2"	4'-7¼"	6'-1"	5'-5½"	3'-11¾"	6'-4"	23'-8¾"	14'-2"	48'-6½"
17	14'-6"	9'-6"	21'-8"	14'-5"	5'-5"	7'-2¾"	6'-1¾"	4'-4"	6'-11"	26'-11¾"	16'-5"	48'-6½"
18	14'-6"	11'-0"	24'-11"	16'-5"	6'-3"	8'-2½"	6'-9¾"	4'-10¼"	7'-6"	30'-2¾"	18'-5"	48'-6½"
19	14'-6"	13'-0"	28'-3"	18'-9"	7'-0¾"	9'-4¼"	8'-0"	5'-8½"	8'-0"	33'-6¾"	20'-9"	48'-6½"
20	14'-6"	14'-6"	31'-6"	21'-0"	7'-10½"	10'-6"	8'-8¼"	6'-0¾"	8'-7"	36'-9¾"	23'-0"	48'-6½"

Two Long Wings – Reinforcing

Design no.	6 D1 Bars Length	D2 Bars No	D2 Bars Length	6 D3 Bars Size	6 D3 Bars Length	D4 Bars No	D4 Bars Size	D4 Bars Length	D5 Bars No	D5 Bars Size	D5 Bars Length	D6 Bars No	D6 Bars Size	D6 Bars Length	4 E1 Bars Length
1	6'-3"	24	3'-4" to 6'-1"	#4	6'-3"	24	#4	3'-4" to 6'-1"	28	#4	5'-11"	60	#4	3'-8"	13'-11"
2	8'-3"	30	4'-6" to 8'-0"	#4	8'-3"	30	#4	4'-6" to 8'-0"	34	#4	7'-1"	72	#4	3'-8"	17'-3"
3	9'-9"	38	5'-2" to 9'-8"	#4	9'-9"	38	#4	5'-2" to 9'-8"	42	#4	7'-9"	88	#4	3'-8"	20'-8"
4	11'-3"	44	5'-10" to 11'-1"	#5	11'-3"	44	#5	5'-10" to 11'-1"	48	#5	8'-5"	100	#5	4'-1"	24'-0"
5	6'-4"	24	3'-4" to 6'-1"	#4	6'-4"	24	#4	3'-4" to 6'-1"	28	#4	5'-11"	60	#4	3'-8"	13'-11"
6	8'-4"	30	4'-6" to 8'-1"	#4	8'-4"	30	#4	4'-6" to 8'-1"	34	#4	7'-1"	72	#4	3'-8"	17'-3"
7	9'-10"	38	5'-3" to 9'-9"	#4	9'-10"	38	#4	5'-3" to 9'-9"	42	#4	7'-9"	88	#4	3'-8"	20'-8"
8	11'-4"	44	5'-11" to 11'-2"	#5	11'-4"	44	#5	5'-11" to 11'-2"	48	#5	8'-6"	100	#5	4'-1"	24'-0"
9	12'-10"	50	6'-7" to 12'-7"	#6	12'-10"	50	#6	6'-7" to 12'-7"	54	#6	9'-2"	112	#6	4'-7"	27'-5"
10	8'-4"	30	4'-7" to 8'-1"	#4	8'-4"	30	#4	4'-7" to 8'-1"	34	#4	7'-1"	72	#4	3'-8"	17'-3"
11	9'-10"	38	5'-3" to 9'-9"	#4	9'-10"	38	#4	5'-3" to 9'-9"	42	#4	7'-10"	88	#4	3'-8"	20'-8"
12	11'-4"	44	5'-11" to 11'-2"	#5	11'-4"	44	#5	5'-11" to 11'-2"	48	#5	8'-6"	100	#5	4'-1"	24'-0"
13	12'-10"	50	6'-7" to 12'-7"	#6	12'-10"	50	#6	6'-7" to 12'-7"	54	#6	9'-2"	112	#6	4'-7"	27'-5"
14	14'-10"	58	7'-9" to 14'-9"	#7	14'-10"	58	#7	7'-9" to 14'-9"	62	#7	10'-4"	128	#7	5'-4"	30'-10"
15	8'-4"	30	4'-7" to 8'-1"	#4	8'-4"	30	#4	4'-7" to 8'-1"	34	#4	7'-2"	72	#4	3'-8"	17'-3"
16	9'-10"	38	5'-3" to 9'-9"	#4	9'-10"	38	#4	5'-3" to 9'-9"	42	#4	7'-10"	88	#4	3'-8"	20'-8"
17	11'-4"	44	6'-0" to 11'-3"	#5	11'-4"	44	#5	6'-0" to 11'-3"	48	#5	8'-6"	100	#5	4'-1"	24'-0"
18	12'-10"	50	6'-8" to 12'-8"	#6	12'-10"	50	#6	6'-8" to 12'-8"	54	#6	9'-2"	112	#6	4'-7"	27'-5"
19	14'-10"	58	7'-10" to 14'-10"	#7	14'-10"	58	#7	7'-10" to 14'-10"	62	#7	10'-5"	128	#7	5'-4"	30'-10"
20	16'-4"	64	8'-6" to 16'-3"	#8	16'-4"	64	#8	8'-6" to 16'-3"	68	#8	11'-1"	140	#8	6'-3"	34'-2"

Design no.	E2 Bars No	E2 Bars Length	E3 Bars No	E3 Bars Length	F1 Bars No	F1 Bars Length	24 F2 Bars Length	G Bars No	G Bars Length
1	8	4'-11" to 8'-11"	16	13'-6"	48	2'-10" to 4'-8"	4'-10"	20	14'-6"
2	12	4'-3" to 12'-3"	20	16'-9"	60	2'-10" to 5'-3"	5'-5"	20	17'-9"
3	16	3'-6" to 15'-6"	24	20'-1"	76	2'-10" to 5'-11"	6'-0"	20	21'-1"
4	20	2'-9" to 18'-9"	28	23'-4"	88	2'-10" to 6'-5"	6'-7"	24	24'-4"
5	8	4'-11" to 8'-11"	16	13'-6"	48	2'-10" to 4'-8"	4'-10"	20	14'-6"
6	12	4'-3" to 12'-3"	20	16'-9"	60	2'-10" to 5'-3"	5'-5"	20	17'-9"
7	16	3'-6" to 15'-6"	24	20'-1"	76	2'-10" to 5'-11"	6'-0"	20	21'-1"
8	20	2'-9" to 18'-9"	28	23'-4"	88	2'-10" to 6'-5"	6'-7"	24	24'-4"
9	24	2'-1" to 22'-0"	28	26'-7"	100	2'-10" to 7'-0"	7'-2"	24	27'-7"
10	12	4'-3" to 12'-3"	20	16'-9"	60	2'-10" to 5'-3"	5'-5"	20	17'-9"
11	16	3'-6" to 15'-6"	24	20'-1"	76	2'-10" to 5'-11"	6'-0"	20	21'-1"
12	20	2'-9" to 18'-9"	28	23'-4"	88	2'-10" to 6'-5"	6'-7"	24	24'-4"
13	24	2'-1" to 22'-0"	28	26'-7"	100	2'-10" to 7'-0"	7'-2"	24	27'-7"
14	24	5'-4" to 25'-4"	32	29'-11"	116	2'-10" to 7'-7"	7'-8"	28	30'-11"
15	12	4'-3" to 12'-3"	20	16'-9"	60	2'-10" to 5'-3"	5'-5"	20	17'-9"
16	16	3'-6" to 15'-6"	24	20'-1"	76	2'-10" to 5'-11"	6'-0"	20	21'-1"
17	20	2'-9" to 18'-9"	28	23'-4"	88	2'-10" to 6'-5"	6'-7"	24	24'-4"
18	24	2'-1" to 22'-0"	28	26'-7"	100	2'-10" to 7'-0"	7'-2"	24	27'-7"
19	24	5'-4" to 25'-4"	32	29'-11"	116	2'-10" to 7'-7"	7'-8"	28	30'-11"
20	28	4'-7" to 28'-7"	36	33'-2"	128	2'-10" to 8'-2"	8'-3"	28	34'-2"

Two Short Wings – Reinforcing

Design no.	6 D1 Bars Length	D2 Bars No	D2 Bars Length	6 D3 Bars Size	6 D3 Bars Length	D4 Bars No	D4 Bars Size	D4 Bars Length	D5 Bars No	D5 Bars Size	D5 Bars Length	D6 Bars No	D6 Bars Size	D6 Bars Length	4 E1 Bars Length
1	6'-3"	16	2'-5" to 5'-10"	#4	6'-3"	16	#4	2'-5" to 5'-10"	20	#4	4'-11"	44	#4	3'-8"	10'-6"
2	8'-3"	20	3'-5" to 7'-11"	#4	8'-3"	20	#4	3'-5" to 7'-11"	24	#4	5'-11"	52	#4	3'-8"	12'-8"
3	9'-9"	24	3'-9" to 9'-3"	#4	9'-9"	24	#4	3'-9" to 9'-3"	28	#4	6'-3"	60	#4	3'-8"	15'-3"
4	11'-3"	30	4'-1" to 11'-1"	#5	11'-3"	30	#5	4'-1" to 11'-1"	34	#5	6'-7"	72	#5	4'-1"	17'-9"
5	6'-4"	16	2'-5" to 5'-11"	#4	6'-4"	16	#4	2'-5" to 5'-11"	20	#4	4'-11"	44	#4	3'-8"	10'-6"
6	8'-4"	20	3'-5" to 7'-11"	#4	8'-4"	20	#4	3'-5" to 7'-11"	24	#4	5'-11"	52	#4	3'-8"	12'-8"
7	9'-10"	24	3'-9" to 9'-3"	#4	9'-10"	24	#4	3'-9" to 9'-3"	28	#4	6'-4"	60	#4	3'-8"	15'-3"
8	11'-4"	30	4'-2" to 11'-2"	#5	11'-4"	30	#5	4'-2" to 11'-2"	34	#5	6'-8"	72	#5	4'-1"	17'-10"
9	12'-10"	34	4'-8" to 12'-8"	#6	12'-10"	34	#6	4'-8" to 12'-8"	38	#6	7'-2"	80	#6	4'-7"	20'-1"
10	8'-4"	20	3'-5" to 7'-11"	#4	8'-4"	20	#4	3'-5" to 7'-11"	24	#4	6'-0"	52	#4	3'-8"	12'-8"
11	9'-10"	24	3'-10" to 9'-4"	#4	9'-10"	24	#4	3'-10" to 9'-4"	28	#4	6'-4"	60	#4	3'-8"	15'-3"
12	11'-4"	30	4'-2" to 11'-2"	#5	11'-4"	30	#5	4'-2" to 11'-2"	34	#5	6'-8"	72	#5	4'-1"	17'-10"
13	12'-10"	34	4'-8" to 12'-8"	#6	12'-10"	34	#6	4'-8" to 12'-8"	38	#6	7'-2"	80	#6	4'-7"	20'-1"
14	14'-10"	38	5'-6" to 14'-6"	#7	14'-10"	38	#7	5'-6" to 14'-6"	42	#7	8'-1"	88	#7	5'-4"	22'-8"
15	8'-4"	20	3'-6" to 8'-0"	#4	8'-4"	20	#4	3'-6" to 8'-0"	24	#4	6'-0"	52	#4	3'-8"	12'-8"
16	9'-10"	24	3'-10" to 9'-4"	#4	9'-10"	24	#4	3'-10" to 9'-4"	28	#4	6'-4"	60	#4	3'-8"	15'-3"
17	11'-4"	30	4'-2" to 11'-3"	#5	11'-4"	30	#5	4'-2" to 11'-3"	34	#5	6'-9"	72	#5	4'-1"	17'-10"
18	12'-10"	34	4'-9" to 12'-9"	#6	12'-10"	34	#6	4'-9" to 12'-9"	38	#6	7'-3"	80	#6	4'-7"	20'-1"
19	14'-10"	38	5'-7" to 14'-7"	#7	14'-10"	38	#7	5'-7" to 14'-7"	42	#7	8'-1"	88	#7	5'-4"	22'-8"
20	15'-4"	42	5'-11" to 15'-11"	#8	16'-4"	42	#8	5'-11" to 15'-11"	46	#8	8'-5"	96	#8	6'-3"	25'-2"

Design no.	E2 Bars No	E2 Bars Length	E3 Bars No	E3 Bars Length	F1 Bars No	F1 Bars Length	16 F2 Length	G Bars No	G Bars Length
1	12	3'-4" to 7'-4"	12	9'-7"	32	2'-10" to 4'-7"	4'-10"	20	9'-7"
2	16	3'-3" to 9'-3"	16	11'-6"	40	2'-10" to 5'-2"	5'-5"	20	11'-6"
3	20	3'-7" to 11'-7"	16	13'-10"	48	2'-10" to 5'-8"	6'-0"	20	13'-10"
4	28	1'-11" to 13'-10"	20	16'-1"	60	2'-10" to 6'-6"	6'-6"	24	16'-1"
5	12	3'-4" to 7'-4"	12	9'-7"	32	2'-10" to 4'-7"	4'-10"	20	9'-7"
6	16	3'-3" to 9'-3"	16	11'-6"	40	2'-10" to 5'-2"	5'-5"	20	11'-6"
7	20	3'-7" to 11'-7"	16	13'-10"	48	2'-10" to 5'-8"	6'-0"	20	13'-10"
8	28	1'-11" to 13'-10"	20	16'-1"	60	2'-10" to 6'-6"	6'-6"	24	16'-1"
9	32	1'-10" to 15'-10"	20	18'-1"	68	2'-10" to 7'-1"	7'-2"	24	18'-1"
10	16	3'-3" to 9'-3"	16	11'-6"	40	2'-10" to 5'-2"	5'-5"	20	11'-6"
11	20	3'-7" to 11'-7"	16	13'-10"	48	2'-10" to 5'-8"	6'-0"	20	13'-10"
12	28	1'-11" to 13'-10"	20	16'-1"	60	2'-10" to 6'-6"	6'-6"	24	16'-1"
13	32	1'-10" to 15'-10"	20	18'-1"	68	2'-10" to 7'-1"	7'-2"	24	18'-1"
14	36	2'-2" to 18'-2"	24	20'-5"	76	2'-10" to 7'-6"	7'-8"	28	20'-5"
15	16	3'-3" to 9'-3"	16	11'-6"	40	2'-10" to 5'-2"	5'-5"	20	11'-6"
16	20	3'-7" to 11'-7"	16	13'-10"	48	2'-10" to 5'-8"	6'-0"	20	13'-10"
17	28	1'-11" to 13'-10"	20	16'-1"	60	2'-10" to 6'-6"	6'-6"	24	16'-1"
18	32	1'-10" to 15'-10"	20	18'-1"	68	2'-10" to 7'-1"	7'-2"	24	18'-1"
19	36	2'-2" to 18'-2"	24	20'-5"	76	2'-10" to 7'-6"	7'-8"	28	20'-5"
20	40	2'-5" to 20'-5"	28	22'-8"	84	2'-10" to 8'-0"	8'-3"	28	22'-8"

Two Curtain Walls – Reinforcing, Two Curbs Reinf., Quantities*

Design no.	8 CW1 Bars Length	8 CW2 Bars Length	CW3 Bars No.	CW4 Bars No.	4 H1 Bars Length	H2 Bars No.	Conc. (CY)	Reinf. (LBS)
1	67'-5"	66'-7"	132	130	38'-7"	80	41.5	3920
2	72'-7"	71'-9"	142	140	38'-7"	80	52.0	4720
3	78'-3"	77'-5"	152	152	38'-7"	80	63.4	5600
4	83'-9"	82'-11"	164	162	38'-7"	80	75.8	7540
5	72'-7"	71'-9"	142	140	43'-9"	90	43.4	4100
6	77'-9"	76'-11"	152	150	43'-9"	90	53.9	4910
7	83'-5"	82'-7"	164	162	43'-9"	90	65.3	5800
8	88'-11"	88'-1"	174	172	43'-9"	90	77.7	7740
9	94'-2"	93'-4"	184	184	43'-9"	90	91.2	10090
10	84'-8"	83'-10"	166	164	50'-8"	104	56.3	5160
11	90'-4"	89'-6"	178	176	50'-8"	104	67.7	6060
12	95'-10"	95'-0"	188	186	50'-8"	104	80.2	7980
13	101'-1"	100'-3"	198	196	50'-8"	104	93.6	10330
14	106'-9"	105'-11"	210	208	50'-8"	104	110.4	14350
15	89'-11"	89'-1"	176	174	55'-11"	114	58.2	5350
16	95'-7"	94'-9"	188	186	55'-11"	114	69.6	6240
17	101'-1"	100'-3"	198	196	55'-11"	114	82.1	8190
18	106'-4"	105'-6"	210	208	55'-11"	114	95.6	10560
19	112'-0"	111'-2"	220	218	55'-11"	114	112.4	14570
20	117'-6"	116'-8"	232	230	55'-11"	114	128.6	19480

* Wing Quantities include Wing footings, Curtain walls and Curbs.

DESIGN DATA

Class'AA'Concrete f'c = 4000 psi
Reinforcing Steel (Grade 60) fy = 60000 psi
Loading: HS 20
Design: Load Factor Design

Barrel Data

** Per Linear foot along ℄ interior wall

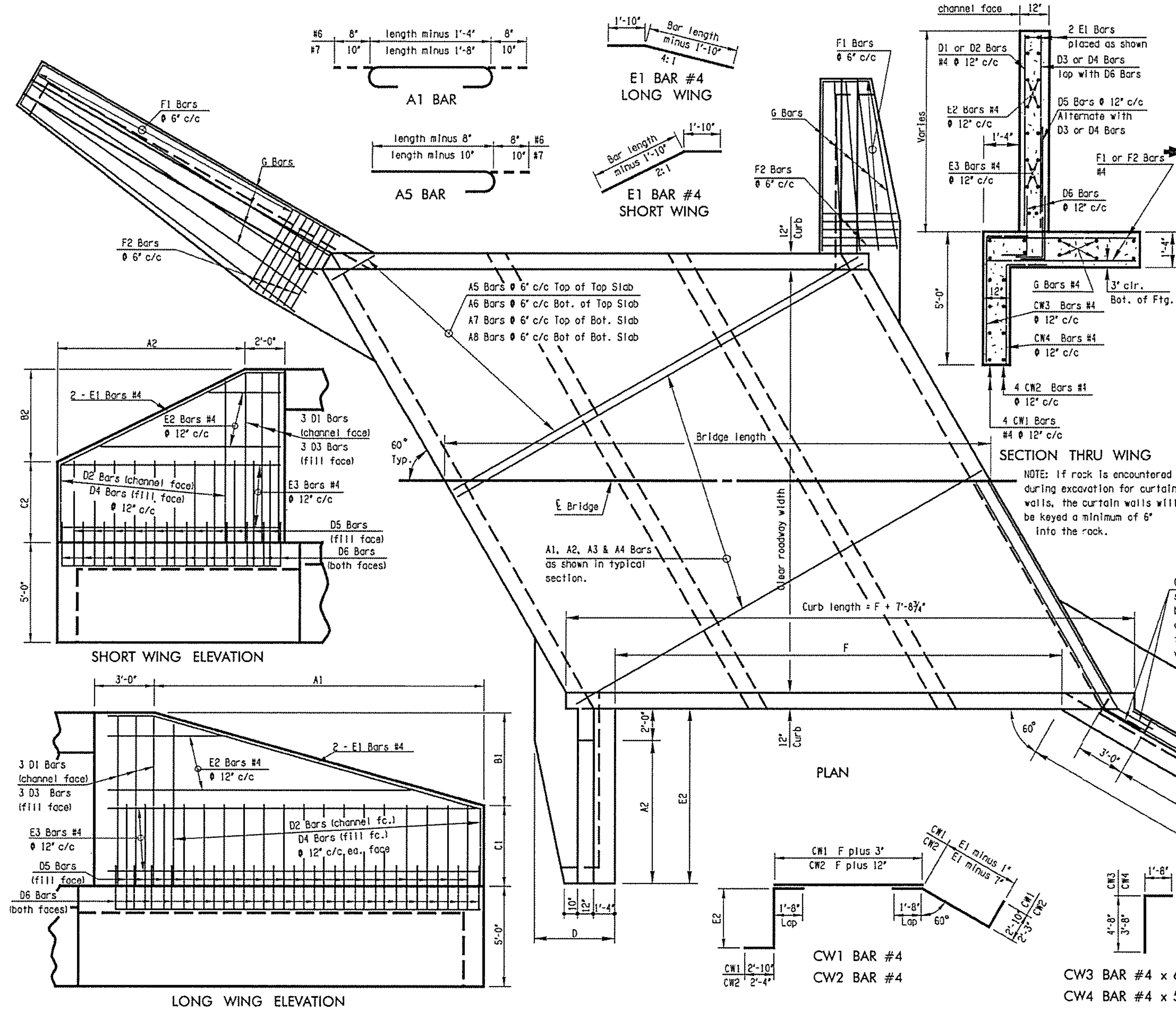
Dimensions – Barrel

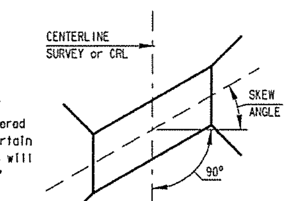
Design no.	Clear Span	Clear Height	Bridge Length	T1	T2	T3	V
1	9'-6"	4'-6"	37'-6½"	11½"	1'-0¾"	1'-0"	6'-6¼"
2	9'-6"	6'-6"	37'-6½"	11½"	1'-0¾"	1'-0"	8'-6¼"
3	9'-6"	8'-0"	37'-6½"	11½"	1'-0¾"	1'-0"	10'-0¼"
4	9'-6"	9'-6"	37'-6½"	11½"	1'-0¾"	1'-0"	11'-6¼"
5	11'-0"	4'-6"	42'-8¾"	1'-0"	1'-1"	1'-0"	6'-7"
6	11'-0"	6'-6"	42'-8¾"	1'-0"	1'-1"	1'-0"	8'-7"
7	11'-0"	8'-0"	42'-8¾"	1'-0"	1'-1"	1'-0"	10'-1"
8	11'-0"	9'-6"	42'-8¾"	1'-0"	1'-1"	1'-0"	11'-7"
9	11'-0"	11'-0"	42'-8¾"	1'-0"	1'-1"	1'-0"	13'-1"
10	13'-0"	6'-6"	49'-8"	1'-0¼"	1'-1½"	1'-0"	8'-7¾"
11	13'-0"	8'-0"	49'-8"	1'-0¼"	1'-1½"	1'-0"	10'-1¾"
12	13'-0"	9'-6"	49'-8"	1'-0¼"	1'-1½"	1'-0"	11'-7¾"
13	13'-0"	11'-0"	49'-8"	1'-0¼"	1'-1½"	1'-0"	13'-1¾"
14	13'-0"	13'-0"	49'-8"	1'-0¼"	1'-1½"	1'-0"	15'-1¾"
15	14'-6"	6'-6"	54'-10¼"	1'-0¾"	1'-2"	1'-0"	8'-8¾"
16	14'-6"	8'-0"	54'-10¼"	1'-0¾"	1'-2"	1'-0"	10'-2¾"
17	14'-6"	9'-6"	54'-10¼"	1'-0¾"	1'-2"	1'-0"	11'-8¾"
18	14'-6"	11'-0"	54'-10¼"	1'-0¾"	1'-2"	1'-0"	13'-2¾"
19	14'-6"	13'-0"	54'-10¼"	1'-0¾"	1'-2"	1'-0"	15'-2¾"
20	14'-6"	14'-6"	54'-10¼"	1'-0¾"	1'-2"	1'-0"	16'-8¾"

Barrel Reinforcing

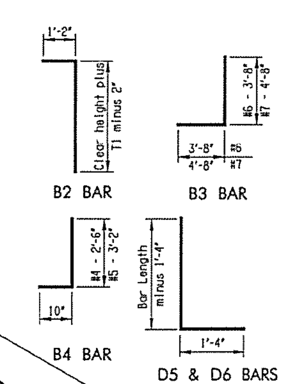
Design no.	A1 Size	A1 Length	A2 Size	A2 Length	A3 Size	A3 Length	A4 Size	A4 Length	A5 No	A5 Size	A5 Length	A6 No	A6 Size	A6 Length
1	#6	33'-6"	#5	32'-2"	#4	32'-2"	#6	32'-2"	35	#6	2'-4" to 31'-9"	35	#5	1'-8" to 31'-1"
2	#6	33'-6"	#5	32'-2"	#4	32'-2"	#6	32'-2"	35	#6	2'-4" to 31'-9"	35	#5	1'-8" to 31'-1"
3	#6	33'-6"	#5	32'-2"	#4	32'-2"	#6	32'-2"	35	#6	2'-4" to 31'-9"	35	#5	1'-8" to 31'-1"
4	#6	33'-6"	#5	32'-2"	#4	32'-2"	#6	32'-2"	35	#6	2'-4" to 31'-9"	35	#5	1'-8" to 31'-1"
5	#6	38'-0"	#6	36'-8"	#5	36'-8"	#6	36'-8"	40	#6	2'-6" to 36'-3"	40	#6	1'-10" to 35'-7"
6	#6	38'-0"	#6	36'-8"	#6	36'-8"	#6	36'-8"	40	#6	2'-6" to 36'-3"	40	#6	1'-10" to 35'-7"
7	#6	38'-0"	#6	36'-8"	#6	36'-8"	#6	36'-8"	40	#6	2'-6" to 36'-3"	40	#6	1'-10" to 35'-7"
8	#5	38'-0"	#6	36'-8"	#5	36'-8"	#6	36'-8"	40	#5	2'-6" to 36'-3"	40	#6	1'-10" to 35'-7"
9	#6	38'-0"	#6	36'-8"	#6	36'-8"	#6	36'-8"	40	#6	2'-6" to 36'-3"	40	#6	1'-10" to 35'-7"
10	#7	44'-4"	#6	42'-8"	#6	42'-8"	#7	42'-8"	47	#7	2'-7" to 42'-5"	47	#6	1'-9" to 41'-7"
11	#7	44'-4"	#6	42'-8"	#6	42'-8"	#7	42'-8"	47	#7	2'-7" to 42'-5"	47	#6	1'-9" to 41'-7"
12	#7	44'-4"	#6	42'-8"	#6	42'-8"	#7	42'-8"	47	#7	2'-7" to 42'-5"	47	#6	1'-9" to 41'-7"
13	#7	44'-4"	#6	42'-8"	#6	42'-8"	#7	42'-8"	47	#7	2'-7" to 42'-5"	47	#6	1'-9" to 41'-7"
14	#7	44'-4"	#6	42'-8"	#6	42'-8"	#7	42'-8"	47	#7	2'-7" to 42'-5"	47	#6	1'-9" to 41'-7"
15	#7	48'-10"	#7	47'-2"	#6	47'-2"	#7	47'-2"	52	#7	2'-9" to 46'-11"	52	#7	1'-11" to 46'-1"
16	#7	48'-10"	#7	47'-2"	#6	47'-2"	#7	47'-2"	52	#7	2'-9" to 46'-11"	52	#7	1'-11" to 46'-1"
17	#7	48'-10"	#7	47'-2"	#6	47'-2"	#7	47'-2"	52	#7	2'-9" to 46'-11"	52	#7	1'-11" to 46'-1"
18	#7	48'-10"	#7	47'-2"	#6	47'-2"	#7	47'-2"	52	#7	2'-9" to 46'-11"	52	#7	1'-11" to 46'-1"
19	#7	48'-10"	#7	47'-2"	#6	47'-2"	#7	47'-2"	52	#7	2'-9" to 46'-11"	52	#7	1'-11" to 46'-1"
20	#7	48'-10"	#7	47'-2"	#6	47'-2"	#7	47'-2"	52	#7	2'-9" to 46'-11"	52	#7	1'-11" to 46'-1"

Design no.	A7 No	A7 Size	A7 Length	A8 No	A8 Size	A8 Length	B1 Size	B1 Length	B2 Size	B2 Length	B3 Size	B3 Length	B4 Size	B4 Length	C Bars No	Conc. (CY)**	Reinf. (LBS)**
1	35	#4	1'-8" to 31'-1"	35	#6	1'-8" to 31'-1"	#4	5'-1"	#5	6'-5"	#6	7'-4"	#4	3'-4"	137	3.10	537.150
2	35	#4	1'-8" to 31'-1"	35	#6	1'-8" to 31'-1"	#4	7'-1"	#5	8'-5"	#6	7'-4"	#4	3'-4"	145	3.40	566.870
3	35	#4	1'-8" to 31'-1"	35	#6	1'-8" to 31'-1"	#4	8'-7"	#5	9'-11"	#6	7'-4"	#4	3'-4"	153	3.62	590.496
4	35	#4	1'-8" to 31'-1"	35	#6	1'-8" to 31'-1"	#4	10'-1"	#5	11'-5"	#6	7'-4"	#4	3'-4"	161	3.84	614.122
5	40	#5	1'-10" to 35'-7"	40	#6	1'-10" to 35'-7"	#4	5'-2"	#5	6'-6"	#6	7'-4"	#4	3'-4"	152	3.53	651.781
6	40	#6	1'-10" to 35'-7"	40	#6	1'-10" to 35'-7"	#4	7'-2"	#5	8'-6"	#6	7'-4"	#4	3'-4"	160	3.82	715.161
7	40	#6	1'-10" to 35'-7"	40	#6	1'-10" to 35'-7"	#4	8'-8"	#5	10'-0"	#6	7'-4"	#4	3'-4"	168	4.05	738.787
8	40	#5	1'-10" to 35'-7"	40	#6	1'-10" to 35'-7"	#4	10'-2"	#5	11'-6"	#6	7'-4"	#4	3'-4"	176	4.27	762.413
9	40	#6	1'-10" to 35'-7"	40	#6	1'-10" to 35'-7"	#5	11'-8"	#5	13'-0"	#6	7'-4"	#4	3'-4"	184	4.49	836.450
10	47	#6	1'-9" to 41'-7"	47	#7	1'-9" to 41'-7"	#4	7'-2"	#6	8'-6"	#6	7'-4"	#4	3'-4"	175	4.39	908.152
11	47	#6	1'-9" to 41'-7"	47	#7	1'-9" to 41'-7"	#4	8'-8"	#6	10'-0"	#6	7'-4"	#4	3'-4"	183	4.61	934.572
12	47	#6	1'-9" to 41'-7"	47	#7	1'-9" to 41'-7"	#4	10'-2"	#6	11'-6"	#6	7'-4"	#4	3'-4"	191	4.83	960.952
13	47	#6	1'-9" to 41'-7"	47	#7	1'-9" to 41'-7"	#4	11'-8"	#6	13'-0"	#6	7'-4"	#4	3'-4"	199	5.05	987.332
14	47	#6	1'-9" to 41'-7"	47	#7	1'-9" to 41'-7"	#5	13'-8"	#6	15'-0"	#6	7'-4"	#4	3'-4"	207	5.35	1082.224
15	52	#6	1'-11" to 46'-1"	52	#7	1'-11" to 46'-1"	#5	7'-2"	#6	8'-6"	#6	7'-4"	#5	4'-0"	187	4.89	1086.759
16	52	#5	1'-11" to 46'-1"	52	#7	1'-11" to 46'-1"	#5	8'-8"	#6	10'-0"	#5	7'-4"	#5	4'-0"	195	5.11	1119.889
17	52	#6	1'-11" to 46'-1"	52	#7	1'-11" to 46'-1"	#5	10'-2"	#6	11'-6"	#6	7'-4"	#5	4'-0"	203	5.33	1153.019
18	52	#5	1'-11" to 46'-1"	52	#7	1'-11" to 46'-1"	#5	11'-8"	#6	13'-0"	#6	7'-4"	#5	4'-0"	211	5.56	1186.149
19	52	#6	1'-11" to 46'-1"	52	#7	1'-11" to 46'-1"	#5	13'-8"	#7	15'-0"	#7	9'-4"	#5	4'-0"	219	5.85	1293.312
20	52	#6	1'-11" to 46'-1"	52	#7	1'-11" to 46'-1"	#5	15'-2"	#7	16'-6"	#7	9'-4"	#5	4'-0"	227	6.07	1329.694





The skew angle is defined as the angle between the line of the structure crossing feature and a line perpendicular to the centerline survey or the CRL (Stationing Line) measured at the centerline station of the structure.

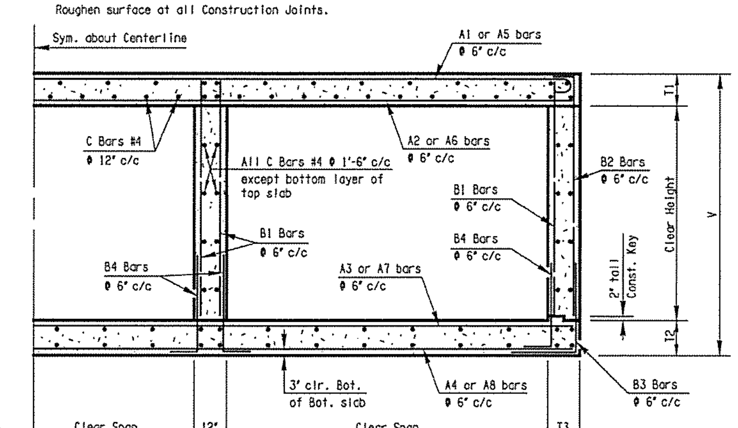


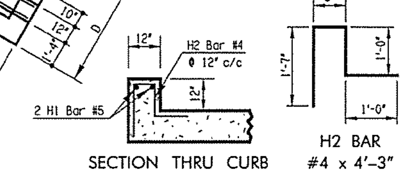
NOTES:
All construction and materials shall be in accordance with the current Oklahoma Standard Specifications.

All concrete edges shall have a 1½" chamfer unless otherwise shown or noted. All chamfer strips shall be sized lumber.

All reinforcing steel shall have 2" clearance unless otherwise shown or noted.

Roughen surface at all Construction Joints.





BLAINE COUNTY — OTTER CREEK

BOX CULVERT DETAILS

Design	J.S.N.	09/15
Drawn	J.R.J.	12/15
Checked	M.W.G.	04/16
Approved	J.S.N.	04/16
Consultant	CED #7	

STATE/JOB No. 31659(04) Sheet No. 7