

GENERAL INFORMATION

ENGINEERING NOTES

SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	145		RAVEN INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		1/0 ACSR - Raven Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1346.	1273.	1198.	1121.	1043.	1003.	963.	923.	883.	842.	801.	760.	719.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7
50	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1
75	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2
100	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 4
120	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5
140	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 6
160	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7	0- 7	0- 8	0- 8
180	0- 6	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 8	0- 8	0- 9	0- 9	0-10	0-10
200	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-10	0-11	0-11	1- 0	1- 1
210	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-10	0-11	0-11	1- 0	1- 0	1- 1	1- 2
220	0- 8	0- 9	0- 9	0-10	0-11	0-11	0-11	1- 0	1- 0	1- 1	1- 2	1- 2	1- 3
230	0- 9	0-10	0-10	0-11	1- 0	1- 0	1- 0	1- 1	1- 2	1- 2	1- 3	1- 4	1- 5
240	0-10	0-10	0-11	1- 0	1- 1	1- 1	1- 2	1- 2	1- 3	1- 3	1- 4	1- 5	1- 6
250	0-11	0-11	1- 0	1- 1	1- 2	1- 2	1- 3	1- 3	1- 4	1- 5	1- 5	1- 6	1- 7
260	0-11	1- 0	1- 1	1- 2	1- 3	1- 3	1- 4	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9
270	1- 0	1- 1	1- 2	1- 3	1- 4	1- 4	1- 5	1- 6	1- 6	1- 7	1- 8	1- 9	1-11
280	1- 1	1- 2	1- 3	1- 4	1- 5	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0
290	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 7	1- 8	1- 9	1-10	1-11	2- 1	2- 2
300	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 2	2- 4
310	1- 4	1- 5	1- 6	1- 7	1- 9	1- 9	1-10	1-11	2- 0	2- 1	2- 3	2- 4	2- 6
320	1- 5	1- 6	1- 7	1- 8	1-10	1-11	2- 0	2- 1	2- 2	2- 3	2- 4	2- 6	2- 7
330	1- 6	1- 7	1- 8	1-10	1-11	2- 0	2- 1	2- 2	2- 3	2- 5	2- 6	2- 8	2- 9
340	1- 7	1- 8	1- 9	1-11	2- 1	2- 2	2- 3	2- 4	2- 5	2- 6	2- 8	2-10	2-11
350	1- 8	1- 9	1-11	2- 0	2- 2	2- 3	2- 4	2- 5	2- 7	2- 8	2-10	3- 0	3- 2

GENERAL INFORMATION
 ENGINEERING NOTES
 SAG & TENSION TABLES

Ruling Span (Feet)	145		RAVEN INITIAL		Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind									
					Conductor 1/0 AWG AAC - Raven Condition Initial Sag & Tension									
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100	
Tension (lbs)	1348.	1273.	1198.	1121.	1043.	1003.	963.	923.	883.	842.	801.	760.	719.	
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	
Ruling Span Sag	1.59	1.64	1.69	1.74	1.81	1.84	1.88	1.92	1.97	2.01	2.06	2.12	2.18	
50	.55	.56	.58	.60	.62	.64	.65	.66	.68	.69	.71	.73	.75	
75	.82	.85	.87	.90	.94	.95	.97	.99	1.02	1.04	1.07	1.10	1.13	
100	1.10	1.13	1.16	1.20	1.25	1.27	1.30	1.33	1.38	1.39	1.42	1.46	1.50	
120	1.32	1.35	1.40	1.44	1.50	1.53	1.56	1.59	1.63	1.67	1.71	1.75	1.80	
140	1.54	1.58	1.63	1.68	1.75	1.78	1.82	1.86	1.90	1.94	1.99	2.04	2.10	
160	1.76	1.81	1.86	1.92	1.99	2.03	2.08	2.12	2.17	2.22	2.28	2.34	2.40	
180	1.98	2.03	2.09	2.16	2.24	2.29	2.34	2.39	2.44	2.50	2.56	2.63	2.70	
200	2.19	2.26	2.33	2.40	2.49	2.54	2.59	2.65	2.71	2.78	2.85	2.92	3.00	
210	2.30	2.37	2.44	2.53	2.62	2.67	2.72	2.78	2.85	2.91	2.99	3.07	3.15	
220	2.41	2.48	2.56	2.65	2.74	2.80	2.85	2.92	2.98	3.05	3.13	3.21	3.30	
230	2.52	2.60	2.68	2.77	2.87	2.92	2.98	3.05	3.12	3.19	3.27	3.36	3.45	
240	2.63	2.71	2.79	2.89	2.99	3.05	3.11	3.18	3.25	3.33	3.41	3.51	3.60	
250	2.74	2.82	2.91	3.01	3.12	3.18	3.24	3.31	3.39	3.47	3.56	3.65	3.75	
260	2.85	2.93	3.02	3.13	3.24	3.31	3.37	3.45	3.52	3.61	3.70	3.80	3.90	
270	2.96	3.05	3.14	3.25	3.37	3.43	3.50	3.58	3.66	3.75	3.84	3.94	4.05	
280	3.07	3.16	3.26	3.37	3.49	3.56	3.63	3.71	3.79	3.89	3.98	4.09	4.20	
290	3.18	3.27	3.37	3.49	3.62	3.69	3.76	3.84	3.93	4.02	4.13	4.24	4.35	
300	3.29	3.39	3.49	3.61	3.74	3.81	3.89	3.98	4.07	4.16	4.27	4.38	4.50	
310	3.40	3.50	3.61	3.73	3.87	3.94	4.02	4.11	4.20	4.30	4.41	4.53	4.65	
320	3.51	3.61	3.72	3.85	3.99	4.07	4.15	4.24	4.34	4.44	4.55	4.67	4.81	
330	3.62	3.72	3.84	3.97	4.11	4.19	4.28	4.37	4.47	4.58	4.70	4.82	4.96	
340	3.73	3.84	3.96	4.09	4.24	4.32	4.41	4.51	4.61	4.72	4.84	4.97	5.11	
350	3.84	3.95	4.07	4.21	4.36	4.45	4.54	4.64	4.74	4.86	4.98	5.11	5.26	

GENERAL INFORMATION
 ENGINEERING NOTES
 SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	160		RAVEN INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		1/0 AWG ACSR - Raven Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1321.	1247.	1172.	1095.	1017.	977.	937.	897.	857.	817.	776.	736.	696.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8	0- 8	0- 8
50	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1
75	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2
100	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 4
120	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5
140	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7
160	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8	0- 8	0- 8
180	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-11
200	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-11	0-11	1- 0	1- 0	1- 1
210	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-11	0-11	1- 0	1- 0	1- 1	1- 2	1- 2
220	0- 8	0- 9	0- 9	0-10	0-11	0-11	1- 0	1- 0	1- 1	1- 1	1- 2	1- 3	1- 4
230	0- 9	0-10	0-10	0-11	1- 0	1- 0	1- 1	1- 1	1- 2	1- 3	1- 3	1- 4	1- 5
240	0-10	0-11	0-11	1- 0	1- 1	1- 1	1- 2	1- 2	1- 3	1- 4	1- 5	1- 6	1- 6
250	0-11	0-11	1- 0	1- 1	1- 2	1- 2	1- 3	1- 4	1- 4	1- 5	1- 6	1- 7	1- 8
260	1- 0	1- 0	1- 1	1- 2	1- 3	1- 4	1- 4	1- 5	1- 6	1- 7	1- 7	1- 8	1-10
270	1- 1	1- 1	1- 2	1- 3	1- 4	1- 5	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11
280	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 8	1- 9	1-10	2- 0	2- 1
290	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 3
300	1- 3	1- 4	1- 5	1- 6	1- 8	1- 9	1- 9	1-10	1-11	2- 0	2- 2	2- 3	2- 5
310	1- 4	1- 5	1- 6	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 2	2- 3	2- 5	2- 7
320	1- 5	1- 6	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 2	2- 4	2- 5	2- 7	2- 9
330	1- 6	1- 7	1- 9	1-10	2- 0	2- 1	2- 2	2- 3	2- 4	2- 5	2- 7	2- 9	2-11
340	1- 8	1- 9	1-10	1-11	2- 1	2- 2	2- 3	2- 5	2- 6	2- 7	2- 9	2-11	3- 1
350	1- 9	1-10	1-11	2- 1	2- 3	2- 4	2- 5	2- 6	2- 8	2- 9	2-11	3- 1	3- 3

Ruling Span (Feet)	160				RAVEN INITIAL								
					Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 1/0 AWG AAC - Raven								
					Condition Initial Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1321.	1247.	1172.	1095.	1017.	977.	937.	897.	857.	817.	776.	736.	696.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	1.77	1.82	1.88	1.95	2.02	2.06	2.10	2.15	2.20	2.25	2.31	2.37	2.44
50	.55	.57	.59	.61	.63	.64	.66	.67	.69	.70	.72	.74	.76
75	.83	.86	.88	.91	.95	.97	.99	1.01	1.03	1.06	1.08	1.11	1.14
100	1.11	1.14	1.18	1.22	1.26	1.29	1.32	1.34	1.38	1.41	1.44	1.48	1.53
120	1.33	1.37	1.41	1.46	1.52	1.55	1.58	1.61	1.65	1.69	1.73	1.78	1.83
140	1.55	1.60	1.65	1.70	1.77	1.80	1.84	1.88	1.93	1.97	2.02	2.08	2.14
160	1.77	1.82	1.88	1.95	2.02	2.06	2.10	2.15	2.20	2.25	2.31	2.37	2.44
180	1.99	2.05	2.12	2.19	2.27	2.32	2.37	2.42	2.48	2.54	2.60	2.67	2.75
200	2.22	2.28	2.35	2.43	2.53	2.58	2.63	2.69	2.75	2.82	2.89	2.97	3.05
210	2.33	2.39	2.47	2.56	2.65	2.70	2.76	2.82	2.89	2.96	3.03	3.12	3.20
220	2.44	2.51	2.59	2.68	2.78	2.83	2.89	2.96	3.03	3.10	3.18	3.26	3.36
230	2.55	2.62	2.71	2.80	2.90	2.96	3.02	3.09	3.16	3.24	3.32	3.41	3.51
240	2.66	2.74	2.82	2.92	3.03	3.09	3.16	3.23	3.30	3.38	3.47	3.56	3.66
250	2.77	2.85	2.94	3.04	3.16	3.22	3.29	3.36	3.44	3.52	3.61	3.71	3.82
260	2.88	2.96	3.06	3.16	3.28	3.35	3.42	3.49	3.58	3.66	3.76	3.86	3.97
270	2.99	3.08	3.18	3.29	3.41	3.48	3.55	3.63	3.71	3.80	3.90	4.01	4.12
280	3.10	3.19	3.29	3.41	3.54	3.61	3.68	3.76	3.85	3.94	4.05	4.16	4.27
290	3.21	3.31	3.41	3.53	3.66	3.74	3.81	3.90	3.99	4.09	4.19	4.30	4.43
300	3.32	3.42	3.53	3.65	3.79	3.86	3.95	4.03	4.13	4.23	4.33	4.45	4.58
310	3.43	3.53	3.65	3.77	3.91	3.99	4.08	4.17	4.26	4.37	4.48	4.60	4.73
320	3.55	3.65	3.76	3.89	4.04	4.12	4.21	4.30	4.40	4.51	4.62	4.75	4.88
330	3.66	3.76	3.88	4.02	4.17	4.25	4.34	4.44	4.54	4.65	4.77	4.90	5.04
340	3.77	3.88	4.00	4.14	4.29	4.38	4.47	4.57	4.68	4.79	4.91	5.05	5.19
350	3.88	3.99	4.12	4.26	4.42	4.51	4.60	4.70	4.81	4.93	5.06	5.19	5.34

GENERAL INFORMATION

ENGINEERING NOTES

SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	175		RAVEN INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		1/0 AWG ACSR - Raven Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1292.	1218.	1143.	1066.	988.	949.	909.	870.	830.	790.	750.	711.	672.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 6	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 8	0- 9	0- 9	0- 9	0-10	0-10
50	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1
75	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2
100	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4
120	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5
140	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 6	0- 7
160	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8	0- 8	0- 8	0- 9
180	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 8	0- 9	0- 9	0- 9	0-10	0-10	0-11
200	0- 7	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-11	0-11	1- 0	1- 0	1- 1	1- 1
210	0- 8	0- 8	0- 9	0- 9	0-10	0-11	0-11	1- 0	1- 0	1- 1	1- 1	1- 2	1- 3
220	0- 9	0- 9	0-10	0-10	0-11	1- 0	1- 0	1- 1	1- 1	1- 2	1- 3	1- 3	1- 4
230	0- 9	0-10	0-11	0-11	1- 0	1- 1	1- 1	1- 2	1- 2	1- 3	1- 4	1- 5	1- 6
240	0-10	0-11	0-11	1- 0	1- 1	1- 2	1- 2	1- 3	1- 4	1- 4	1- 5	1- 6	1- 7
250	0-11	1- 0	1- 0	1- 1	1- 2	1- 3	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9
260	1- 0	1- 1	1- 1	1- 2	1- 3	1- 4	1- 5	1- 5	1- 6	1- 7	1- 8	1- 9	1-10
270	1- 1	1- 2	1- 2	1- 3	1- 5	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0
280	1- 2	1- 2	1- 3	1- 4	1- 6	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 2
290	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 2	2- 4
300	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 3	2- 4	2- 6
310	1- 5	1- 6	1- 7	1- 8	1-10	1-11	1-11	2- 1	2- 2	2- 3	2- 4	2- 6	2- 8
320	1- 6	1- 7	1- 8	1- 9	1-11	2- 0	2- 1	2- 2	2- 3	2- 5	2- 6	2- 8	2-10
330	1- 7	1- 8	1- 9	1-11	2- 0	2- 1	2- 3	2- 4	2- 5	2- 6	2- 8	2-10	3- 0
340	1- 8	1- 9	1-10	2- 0	2- 2	2- 3	2- 4	2- 5	2- 7	2- 8	2-10	3- 0	3- 2
350	1- 9	1-10	2- 0	2- 1	2- 3	2- 5	2- 6	2- 7	2- 9	2-10	3- 0	3- 2	3- 4

Ruling Span (Feet)	175				RAVEN INITIAL		Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind							
							Conductor 1/0 AWG AAC - Raven Condition Initial Sag & Tension							
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100	
Tension (lbs)	1292.	1218.	1143.	1066.	988.	949.	909.	870.	830.	790.	750.	711.	672.	
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	
Ruling Span Sag	1.96	2.02	2.08	2.16	2.24	2.29	2.34	2.39	2.45	2.51	2.57	2.64	2.72	
50	.56	.58	.60	.62	.64	.65	.67	.68	.70	.72	.73	.75	.78	
75	.84	.87	.89	.92	.96	.98	1.00	1.02	1.05	1.07	1.10	1.13	1.16	
100	1.12	1.15	1.19	1.23	1.28	1.31	1.34	1.37	1.40	1.43	1.47	1.51	1.55	
120	1.34	1.38	1.43	1.48	1.54	1.57	1.60	1.64	1.68	1.72	1.76	1.81	1.86	
140	1.57	1.61	1.67	1.73	1.79	1.83	1.87	1.91	1.96	2.01	2.06	2.11	2.17	
160	1.79	1.85	1.91	1.97	2.05	2.09	2.14	2.18	2.24	2.29	2.35	2.42	2.49	
180	2.02	2.08	2.14	2.22	2.31	2.35	2.40	2.46	2.52	2.58	2.65	2.72	2.80	
200	2.24	2.31	2.38	2.47	2.56	2.61	2.67	2.73	2.80	2.86	2.94	3.02	3.11	
210	2.35	2.42	2.50	2.59	2.69	2.74	2.80	2.87	2.94	3.01	3.09	3.17	3.26	
220	2.46	2.54	2.62	2.71	2.82	2.88	2.94	3.00	3.07	3.15	3.23	3.32	3.42	
230	2.58	2.65	2.74	2.84	2.95	3.01	3.07	3.14	3.21	3.29	3.38	3.47	3.57	
240	2.69	2.77	2.86	2.96	3.07	3.14	3.20	3.28	3.35	3.44	3.53	3.62	3.73	
250	2.80	2.88	2.98	3.08	3.20	3.27	3.34	3.41	3.49	3.58	3.67	3.78	3.88	
260	2.91	3.00	3.10	3.21	3.33	3.40	3.47	3.55	3.63	3.72	3.82	3.93	4.04	
270	3.02	3.11	3.22	3.33	3.46	3.53	3.61	3.69	3.77	3.87	3.97	4.08	4.19	
280	3.14	3.23	3.33	3.45	3.59	3.66	3.74	3.82	3.91	4.01	4.12	4.23	4.35	
290	3.25	3.35	3.45	3.58	3.71	3.79	3.87	3.96	4.05	4.15	4.26	4.38	4.50	
300	3.36	3.46	3.57	3.70	3.84	3.92	4.01	4.10	4.19	4.30	4.41	4.53	4.66	
310	3.47	3.58	3.69	3.82	3.97	4.05	4.14	4.23	4.33	4.44	4.56	4.68	4.82	
320	3.58	3.69	3.81	3.95	4.10	4.18	4.27	4.37	4.47	4.58	4.70	4.83	4.97	
330	3.70	3.81	3.93	4.07	4.23	4.31	4.41	4.51	4.61	4.73	4.85	4.98	5.13	
340	3.81	3.92	4.05	4.19	4.35	4.44	4.54	4.64	4.75	4.87	5.00	5.13	5.28	
350	3.92	4.04	4.17	4.32	4.48	4.57	4.67	4.78	4.89	5.01	5.14	5.29	5.44	

Design Condition									Ruling Span (Feet)	190		RAVEN INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		1/0 AWG ACSR - Raven Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1281.	1187.	1112.	1035.	958.	919.	879.	840.	801.	762.	723.	685.	647.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9	0- 9	0-10	0-10	0-11	0-11	1- 0	1- 1
50	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1
75	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2
100	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4
120	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5
140	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 6	0- 7	0- 7
160	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9
180	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9	0- 9	0-10	0-10	0-11	0-11
200	0- 7	0- 8	0- 8	0- 9	0-10	0-10	0-10	0-11	0-11	1- 0	1- 1	1- 1	1- 2
210	0- 8	0- 9	0- 9	0-10	0-11	0-11	0-11	1- 0	1- 0	1- 1	1- 2	1- 3	1- 3
220	0- 9	0- 9	0-10	0-11	0-11	1- 0	1- 0	1- 1	1- 2	1- 2	1- 3	1- 4	1- 5
230	0-10	0-10	0-11	1- 0	1- 1	1- 1	1- 2	1- 2	1- 3	1- 4	1- 4	1- 5	1- 6
240	0-10	0-11	1- 0	1- 1	1- 2	1- 2	1- 3	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8
250	0-11	1- 0	1- 1	1- 2	1- 3	1- 3	1- 4	1- 5	1- 5	1- 6	1- 7	1- 8	1-10
260	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11
270	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 7	1- 8	1- 9	1-10	2- 0	2- 1
280	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 3
290	1- 3	1- 4	1- 5	1- 6	1- 8	1- 8	1- 9	1-10	1-11	2- 1	2- 2	2- 3	2- 5
300	1- 4	1- 5	1- 6	1- 7	1- 9	1-10	1-11	2- 0	2- 1	2- 2	2- 4	2- 5	2- 7
310	1- 5	1- 6	1- 7	1- 9	1-10	1-11	2- 0	2- 1	2- 3	2- 4	2- 5	2- 7	2- 9
320	1- 6	1- 7	1- 9	1-10	2- 0	2- 1	2- 2	2- 3	2- 4	2- 6	2- 7	2- 9	2-11
330	1- 7	1- 8	1-10	1-11	2- 1	2- 2	2- 3	2- 5	2- 6	2- 8	2- 9	2-11	3- 1
340	1- 8	1-10	1-11	2- 1	2- 3	2- 4	2- 5	2- 6	2- 8	2-10	2-11	3- 1	3- 3
350	1-10	1-11	2- 0	2- 2	2- 4	2- 6	2- 7	2- 8	2-10	2-11	3- 1	3- 3	3- 6

Ruling Span (Feet)	190				RAVEN INITIAL								
					Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 1/0 AWG AAC - Raven								
					Condition Initial Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1261.	1187.	1112.	1035.	958.	919.	879.	840.	801.	762.	723.	685.	647.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.15	2.22	2.29	2.38	2.47	2.52	2.58	2.64	2.70	2.77	2.84	2.92	3.01
50	.57	.58	.60	.63	.65	.66	.68	.69	.71	.73	.75	.77	.79
75	.85	.88	.91	.94	.98	1.00	1.02	1.04	1.07	1.09	1.12	1.15	1.19
100	1.13	1.17	1.21	1.25	1.30	1.33	1.36	1.39	1.42	1.46	1.50	1.54	1.58
120	1.36	1.40	1.45	1.50	1.56	1.59	1.63	1.67	1.71	1.75	1.80	1.85	1.90
140	1.59	1.64	1.69	1.75	1.82	1.86	1.90	1.94	1.99	2.04	2.10	2.15	2.22
160	1.81	1.87	1.93	2.00	2.08	2.13	2.17	2.22	2.28	2.33	2.40	2.46	2.53
180	2.04	2.10	2.17	2.25	2.34	2.39	2.44	2.50	2.56	2.63	2.69	2.77	2.85
200	2.27	2.34	2.41	2.50	2.60	2.66	2.72	2.78	2.85	2.92	2.99	3.08	3.17
210	2.38	2.45	2.54	2.63	2.73	2.79	2.85	2.92	2.99	3.06	3.14	3.23	3.32
220	2.49	2.57	2.66	2.75	2.86	2.92	2.99	3.06	3.13	3.21	3.29	3.38	3.48
230	2.61	2.69	2.78	2.88	2.99	3.06	3.12	3.19	3.27	3.35	3.44	3.54	3.64
240	2.72	2.80	2.90	3.00	3.12	3.19	3.26	3.33	3.41	3.50	3.59	3.69	3.80
250	2.83	2.92	3.02	3.13	3.25	3.32	3.39	3.47	3.56	3.65	3.74	3.85	3.96
260	2.95	3.04	3.14	3.25	3.38	3.45	3.53	3.61	3.70	3.79	3.89	4.00	4.12
270	3.06	3.15	3.26	3.38	3.51	3.59	3.67	3.75	3.84	3.94	4.04	4.15	4.27
280	3.17	3.27	3.38	3.50	3.64	3.72	3.80	3.89	3.98	4.08	4.19	4.31	4.43
290	3.29	3.39	3.50	3.63	3.77	3.85	3.94	4.03	4.13	4.23	4.34	4.46	4.59
300	3.40	3.51	3.62	3.75	3.90	3.99	4.07	4.17	4.27	4.38	4.49	4.62	4.75
310	3.51	3.62	3.74	3.88	4.03	4.12	4.21	4.31	4.41	4.52	4.64	4.77	4.91
320	3.63	3.74	3.86	4.00	4.16	4.25	4.34	4.45	4.55	4.67	4.79	4.92	5.07
330	3.74	3.86	3.98	4.13	4.29	4.38	4.48	4.58	4.69	4.81	4.94	5.08	5.22
340	3.85	3.97	4.11	4.25	4.42	4.52	4.62	4.72	4.84	4.96	5.09	5.23	5.38
350	3.97	4.09	4.23	4.38	4.55	4.65	4.75	4.86	4.98	5.11	5.24	5.39	5.54

Design Condition									Ruling Span (Feet)	205		RAVEN INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor 1/0 AWG ACSR - Raven Condition Initial Sag & Tension													
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1228.	1154.	1079.	1002.	925.	886.	848.	809.	771.	733.	695.	658.	622.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 8	0- 8	0- 9	0-10	0-10	0-11	0-11	1- 0	1- 0	1- 1	1- 2	1- 2	1- 3
50	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1
75	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2
100	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4
120	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 6
140	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7
160	0- 5	0- 5	0- 6	0- 6	0- 7	0- 7	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9	0- 9
180	0- 6	0- 7	0- 7	0- 8	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-11	0-11	1- 0
200	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-11	0-11	1- 0	1- 0	1- 1	1- 2	1- 2
210	0- 8	0- 9	0- 9	0-10	0-11	0-11	1- 0	1- 0	1- 1	1- 2	1- 2	1- 3	1- 4
220	0- 9	0-10	0-10	0-11	1- 0	1- 0	1- 1	1- 2	1- 2	1- 3	1- 4	1- 4	1- 5
230	0-10	0-10	0-11	1- 0	1- 1	1- 1	1- 2	1- 3	1- 3	1- 4	1- 5	1- 6	1- 7
240	0-11	0-11	1- 0	1- 1	1- 2	1- 3	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9
250	1- 0	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 5	1- 6	1- 7	1- 8	1- 9	1-10
260	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0
270	1- 1	1- 2	1- 3	1- 4	1- 6	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 1	2- 2
280	1- 2	1- 3	1- 4	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 2	2- 4
290	1- 3	1- 4	1- 5	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 3	2- 4	2- 6
300	1- 4	1- 5	1- 7	1- 8	1-10	1-11	2- 0	2- 1	2- 2	2- 3	2- 5	2- 6	2- 8
310	1- 6	1- 7	1- 8	1- 9	1-11	2- 0	2- 1	2- 2	2- 4	2- 5	2- 7	2- 8	2-10
320	1- 7	1- 8	1- 9	1-11	2- 1	2- 2	2- 3	2- 4	2- 5	2- 7	2- 9	2-10	3- 0
330	1- 8	1- 9	1-10	2- 0	2- 2	2- 3	2- 4	2- 6	2- 7	2- 9	2-11	3- 0	3- 3
340	1- 9	1-10	2- 0	2- 2	2- 4	2- 5	2- 6	2- 8	2- 9	2-11	3- 1	3- 3	3- 5
350	1-10	2- 0	2- 1	2- 3	2- 5	2- 7	2- 8	2- 9	2-11	3- 1	3- 3	3- 5	3- 7

Ruling Span (Feet)	205				RAVEN INITIAL								
					Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1228.	1154.	1079.	1002.	925.	886.	848.	809.	771.	733.	695.	658.	622.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.38	2.43	2.51	2.61	2.71	2.77	2.83	2.90	2.97	3.05	3.13	3.22	3.31
50	.57	.59	.61	.64	.66	.68	.69	.71	.73	.74	.76	.78	.81
75	.86	.89	.92	.95	.99	1.01	1.04	1.06	1.09	1.12	1.15	1.18	1.21
100	1.15	1.19	1.23	1.27	1.32	1.35	1.38	1.42	1.45	1.49	1.53	1.57	1.61
120	1.38	1.42	1.47	1.53	1.59	1.62	1.66	1.70	1.74	1.78	1.83	1.88	1.94
140	1.61	1.66	1.72	1.78	1.85	1.89	1.94	1.98	2.03	2.08	2.14	2.20	2.26
160	1.84	1.90	1.96	2.03	2.12	2.16	2.21	2.26	2.32	2.38	2.44	2.51	2.58
180	2.07	2.13	2.21	2.29	2.38	2.43	2.49	2.55	2.61	2.68	2.75	2.82	2.91
200	2.30	2.37	2.45	2.54	2.65	2.70	2.77	2.83	2.90	2.97	3.05	3.14	3.23
210	2.41	2.49	2.57	2.67	2.78	2.84	2.90	2.97	3.05	3.12	3.21	3.30	3.39
220	2.53	2.61	2.70	2.80	2.91	2.98	3.04	3.11	3.19	3.27	3.36	3.45	3.55
230	2.64	2.73	2.82	2.93	3.04	3.11	3.18	3.26	3.34	3.42	3.51	3.61	3.71
240	2.76	2.84	2.94	3.05	3.18	3.25	3.32	3.40	3.48	3.57	3.67	3.77	3.87
250	2.87	2.96	3.07	3.18	3.31	3.38	3.46	3.54	3.63	3.72	3.82	3.92	4.04
260	2.99	3.08	3.19	3.31	3.44	3.52	3.60	3.68	3.77	3.87	3.97	4.08	4.20
270	3.10	3.20	3.31	3.43	3.57	3.65	3.73	3.82	3.92	4.02	4.12	4.24	4.36
280	3.22	3.32	3.43	3.56	3.71	3.79	3.87	3.96	4.06	4.16	4.28	4.39	4.52
290	3.33	3.44	3.56	3.69	3.84	3.92	4.01	4.10	4.21	4.31	4.43	4.55	4.68
300	3.45	3.56	3.68	3.82	3.97	4.06	4.15	4.25	4.35	4.46	4.58	4.71	4.84
310	3.56	3.67	3.80	3.94	4.10	4.19	4.29	4.39	4.50	4.61	4.73	4.87	5.00
320	3.68	3.79	3.92	4.07	4.24	4.33	4.43	4.53	4.64	4.76	4.89	5.02	5.17
330	3.79	3.91	4.05	4.20	4.37	4.46	4.56	4.67	4.79	4.91	5.04	5.18	5.33
340	3.91	4.03	4.17	4.32	4.50	4.60	4.70	4.81	4.93	5.06	5.19	5.34	5.49
350	4.02	4.15	4.29	4.45	4.63	4.73	4.84	4.95	5.08	5.21	5.35	5.49	5.65

GENERAL INFORMATION
 ENGINEERING NOTES
 SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	220		RAVEN FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor 1/0 AWG ACSR - Raven Condition Initial Sag & Tension													
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1192.	1118.	1043.	967.	891.	853.	815.	777.	740.	703.	667.	632.	597.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 9	0-10	0-11	0-11	1- 0	1- 1	1- 1	1- 2	1- 3	1- 3	1- 4	1- 5	1- 6
50	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1
75	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3
100	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4
120	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 5	0- 6
140	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8
160	0- 5	0- 5	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8	0- 8	0- 8	0- 9	0- 9	0-10
180	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-11	0-11	1- 0	1- 0
200	0- 8	0- 8	0- 9	0- 9	0-10	0-11	0-11	1- 0	1- 0	1- 1	1- 2	1- 2	1- 3
210	0- 9	0- 9	0-10	0-10	0-11	1- 0	1- 0	1- 1	1- 1	1- 2	1- 3	1- 4	1- 5
220	0- 9	0-10	0-11	0-11	1- 0	1- 1	1- 1	1- 2	1- 3	1- 3	1- 4	1- 5	1- 6
230	0-10	0-11	1- 0	1- 0	1- 1	1- 2	1- 3	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8
240	0-11	1- 0	1- 1	1- 1	1- 3	1- 3	1- 4	1- 5	1- 5	1- 6	1- 7	1- 8	1- 9
250	1- 0	1- 1	1- 2	1- 3	1- 4	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11
260	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 7	1- 8	1- 9	1-11	2- 0	2- 1
270	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 2	2- 3
280	1- 3	1- 4	1- 5	1- 6	1- 8	1- 8	1- 9	1-10	2- 0	2- 1	2- 2	2- 3	2- 5
290	1- 4	1- 5	1- 6	1- 7	1- 9	1-10	1-11	2- 0	2- 1	2- 3	2- 4	2- 5	2- 7
300	1- 5	1- 6	1- 7	1- 9	1-10	1-11	2- 1	2- 2	2- 3	2- 4	2- 6	2- 7	2- 9
310	1- 6	1- 7	1- 9	1-10	2- 0	2- 1	2- 2	2- 3	2- 5	2- 6	2- 8	2-10	2-11
320	1- 7	1- 8	1-10	2- 0	2- 2	2- 3	2- 4	2- 5	2- 7	2- 8	2-10	3- 0	3- 2
330	1- 8	1-10	1-11	2- 1	2- 3	2- 4	2- 6	2- 7	2- 9	2-10	3- 0	3- 2	3- 4
340	1-10	1-11	2- 1	2- 2	2- 5	2- 6	2- 7	2- 9	2-10	3- 0	3- 2	3- 4	3- 7
350	1-11	2- 0	2- 2	2- 4	2- 6	2- 8	2- 9	2-11	3- 1	3- 2	3- 4	3- 7	3- 9

Ruling Span (Feet)	220		RAVEN - INITIAL		Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind									
					Conductor 1/0 AWG AAC - Raven Condition Initial Sag & Tension									
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100	
Tension (lbs)	1192.	1118.	1043.	967.	891.	853.	815.	777.	740.	703.	667.	632.	597.	
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	
Ruling Span Sag	2.57	2.65	2.74	2.85	2.97	3.03	3.10	3.18	3.26	3.34	3.43	3.52	3.62	
50	.58	.60	.62	.65	.67	.69	.71	.72	.74	.76	.78	.80	.82	
75	.87	.90	.94	.97	1.01	1.03	1.06	1.08	1.11	1.14	1.17	1.20	1.24	
100	1.17	1.20	1.25	1.29	1.35	1.38	1.41	1.44	1.48	1.52	1.56	1.60	1.65	
120	1.40	1.44	1.50	1.55	1.62	1.65	1.69	1.73	1.78	1.82	1.87	1.92	1.98	
140	1.63	1.69	1.75	1.81	1.89	1.93	1.97	2.02	2.07	2.13	2.18	2.24	2.31	
160	1.87	1.93	1.99	2.07	2.16	2.21	2.26	2.31	2.37	2.43	2.49	2.56	2.64	
180	2.10	2.17	2.24	2.33	2.43	2.48	2.54	2.60	2.66	2.73	2.81	2.88	2.97	
200	2.33	2.41	2.49	2.59	2.70	2.76	2.82	2.89	2.96	3.04	3.12	3.20	3.29	
210	2.45	2.53	2.62	2.72	2.83	2.90	2.96	3.03	3.11	3.19	3.27	3.36	3.46	
220	2.57	2.65	2.74	2.85	2.97	3.03	3.10	3.18	3.26	3.34	3.43	3.52	3.62	
230	2.68	2.77	2.87	2.98	3.10	3.17	3.24	3.32	3.40	3.49	3.59	3.68	3.79	
240	2.80	2.89	2.99	3.11	3.24	3.31	3.39	3.47	3.55	3.64	3.74	3.85	3.95	
250	2.91	3.01	3.12	3.24	3.37	3.45	3.53	3.61	3.70	3.80	3.90	4.01	4.12	
260	3.03	3.13	3.24	3.37	3.51	3.58	3.67	3.76	3.85	3.95	4.05	4.17	4.28	
270	3.15	3.25	3.37	3.50	3.64	3.72	3.81	3.90	4.00	4.10	4.21	4.33	4.45	
280	3.26	3.37	3.49	3.63	3.78	3.86	3.95	4.04	4.15	4.25	4.37	4.49	4.61	
290	3.38	3.49	3.62	3.75	3.91	4.00	4.09	4.19	4.29	4.40	4.52	4.65	4.78	
300	3.50	3.61	3.74	3.88	4.05	4.14	4.23	4.33	4.44	4.56	4.68	4.81	4.94	
310	3.61	3.73	3.86	4.01	4.18	4.27	4.37	4.48	4.59	4.71	4.83	4.97	5.11	
320	3.73	3.85	3.99	4.14	4.32	4.41	4.51	4.62	4.74	4.86	4.99	5.13	5.27	
330	3.85	3.97	4.11	4.27	4.45	4.55	4.65	4.77	4.89	5.01	5.15	5.29	5.44	
340	3.96	4.09	4.24	4.40	4.59	4.69	4.80	4.91	5.03	5.16	5.30	5.45	5.60	
350	4.08	4.21	4.36	4.53	4.72	4.83	4.94	5.06	5.18	5.32	5.46	5.61	5.77	

GENERAL INFORMATION

ENGINEERING NOTES

SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	235		RAVEN INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		1/0 AWG ACSR - Raven Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1154.	1080.	1006.	930.	855.	818.	781.	744.	708.	673.	639.	606.	573.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0-11	1-0	1-0	1-1	1-3	1-3	1-4	1-5	1-5	1-6	1-7	1-8	1-9
50	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
75	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-3	0-3
100	0-2	0-3	0-3	0-3	0-3	0-3	0-3	0-3	0-4	0-4	0-4	0-4	0-4
120	0-3	0-3	0-4	0-4	0-4	0-4	0-5	0-5	0-5	0-5	0-5	0-6	0-6
140	0-4	0-4	0-5	0-5	0-5	0-6	0-6	0-6	0-7	0-7	0-7	0-8	0-8
160	0-5	0-6	0-6	0-6	0-7	0-7	0-8	0-8	0-8	0-9	0-9	0-10	0-10
180	0-7	0-7	0-8	0-8	0-9	0-9	0-10	0-10	0-10	0-11	1-0	1-0	1-1
200	0-8	0-9	0-9	0-10	0-11	0-11	1-0	1-0	1-1	1-1	1-2	1-3	1-4
210	0-9	0-9	0-10	0-11	1-0	1-0	1-1	1-1	1-2	1-3	1-4	1-4	1-5
220	0-10	0-10	0-11	1-0	1-1	1-1	1-2	1-3	1-3	1-4	1-5	1-6	1-7
230	0-10	0-11	1-0	1-1	1-2	1-3	1-3	1-4	1-5	1-6	1-7	1-8	1-9
240	0-11	1-0	1-1	1-2	1-3	1-4	1-5	1-5	1-6	1-7	1-8	1-9	1-10
250	1-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	1-8	1-9	1-10	1-11	2-0
260	1-1	1-2	1-3	1-4	1-6	1-6	1-7	1-8	1-9	1-10	2-0	2-1	2-2
270	1-2	1-3	1-4	1-6	1-7	1-8	1-9	1-10	1-11	2-0	2-1	2-3	2-4
280	1-3	1-4	1-5	1-7	1-8	1-9	1-10	1-11	2-1	2-2	2-3	2-5	2-6
290	1-4	1-5	1-7	1-8	1-10	1-11	2-0	2-1	2-2	2-4	2-5	2-7	2-8
300	1-5	1-7	1-8	1-10	1-11	2-0	2-2	2-3	2-4	2-6	2-7	2-9	2-11
310	1-7	1-8	1-9	1-11	2-1	2-2	2-3	2-5	2-6	2-8	2-9	2-11	3-1
320	1-8	1-9	1-11	2-0	2-3	2-4	2-5	2-6	2-8	2-10	2-11	3-1	3-3
330	1-9	1-10	2-0	2-2	2-4	2-5	2-7	2-8	2-10	3-0	3-2	3-4	3-6
340	1-10	2-0	2-2	2-4	2-6	2-7	2-9	2-10	3-0	3-2	3-4	3-6	3-8
350	2-0	2-1	2-3	2-5	2-8	2-9	2-11	3-0	3-2	3-4	3-6	3-9	3-11

Ruling Span (Feet)	235				RAVEN INITIAL								
					Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1154.	1080.	1006.	930.	855.	818.	781.	744.	708.	673.	639.	606.	573.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.78	2.88	2.98	3.10	3.24	3.31	3.39	3.47	3.56	3.65	3.74	3.85	3.95
50	.59	.61	.63	.66	.69	.70	.72	.74	.76	.78	.80	.82	.84
75	.89	.92	.95	.99	1.03	1.06	1.08	1.11	1.13	1.16	1.19	1.23	1.26
100	1.18	1.22	1.27	1.32	1.38	1.41	1.44	1.48	1.51	1.55	1.59	1.64	1.68
120	1.42	1.47	1.52	1.58	1.65	1.69	1.73	1.77	1.82	1.86	1.91	1.96	2.02
140	1.66	1.71	1.78	1.85	1.93	1.97	2.02	2.07	2.12	2.17	2.23	2.29	2.35
160	1.90	1.96	2.03	2.11	2.20	2.25	2.31	2.36	2.42	2.48	2.55	2.62	2.69
180	2.13	2.20	2.29	2.38	2.48	2.53	2.59	2.66	2.72	2.79	2.87	2.95	3.03
200	2.37	2.45	2.54	2.64	2.75	2.82	2.88	2.95	3.03	3.10	3.19	3.27	3.36
210	2.49	2.57	2.67	2.77	2.89	2.96	3.03	3.10	3.18	3.26	3.35	3.44	3.53
220	2.61	2.69	2.79	2.90	3.03	3.10	3.17	3.25	3.33	3.41	3.50	3.60	3.70
230	2.73	2.82	2.92	3.04	3.17	3.24	3.31	3.39	3.48	3.57	3.66	3.76	3.87
240	2.84	2.94	3.05	3.17	3.30	3.38	3.46	3.54	3.63	3.72	3.82	3.93	4.04
250	2.96	3.06	3.17	3.30	3.44	3.52	3.60	3.69	3.78	3.88	3.98	4.09	4.20
260	3.08	3.18	3.30	3.43	3.58	3.66	3.75	3.84	3.93	4.03	4.14	4.25	4.37
270	3.20	3.31	3.43	3.56	3.72	3.80	3.89	3.98	4.08	4.19	4.30	4.42	4.54
280	3.32	3.43	3.56	3.70	3.85	3.94	4.03	4.13	4.24	4.35	4.46	4.58	4.71
290	3.44	3.55	3.68	3.83	3.99	4.08	4.18	4.28	4.39	4.50	4.62	4.75	4.88
300	3.56	3.67	3.81	3.96	4.13	4.22	4.32	4.43	4.54	4.66	4.78	4.91	5.04
310	3.67	3.80	3.94	4.09	4.27	4.36	4.47	4.57	4.69	4.81	4.94	5.07	5.21
320	3.79	3.92	4.06	4.22	4.41	4.51	4.61	4.72	4.84	4.97	5.10	5.24	5.38
330	3.91	4.04	4.19	4.36	4.54	4.65	4.75	4.87	4.99	5.12	5.26	5.40	5.55
340	4.03	4.16	4.32	4.49	4.68	4.79	4.90	5.02	5.14	5.28	5.42	5.56	5.72
350	4.15	4.29	4.44	4.62	4.82	4.93	5.04	5.17	5.29	5.43	5.58	5.73	5.89

GENERAL INFORMATION

ENGINEERING NOTES

SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	250		RAVEN INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		1/0 AWG ACSR - Raven Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1114.	1041.	966.	892.	819.	783.	747.	712.	677.	644.	611.	580.	551.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1
50	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1
75	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3
100	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 4	0- 4
120	0- 3	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6
140	0- 4	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8	0- 8
160	0- 5	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-11
180	0- 7	0- 7	0- 8	0- 8	0- 9	0-10	0-10	0-10	0-11	0-11	1- 0	1- 1	1- 1
200	0- 8	0- 9	0-10	0-10	0-11	1- 0	1- 0	1- 1	1- 1	1- 2	1- 3	1- 3	1- 4
210	0- 9	0-10	0-10	0-11	1- 0	1- 1	1- 1	1- 2	1- 3	1- 3	1- 4	1- 5	1- 6
220	0-10	0-11	0-11	1- 0	1- 1	1- 2	1- 3	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8
230	0-11	1- 0	1- 0	1- 1	1- 3	1- 3	1- 4	1- 5	1- 5	1- 6	1- 7	1- 8	1- 9
240	1- 0	1- 1	1- 1	1- 3	1- 4	1- 5	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11
250	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1
260	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 1	2- 2	2- 3
270	1- 3	1- 4	1- 5	1- 6	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 2	2- 4	2- 5
280	1- 4	1- 5	1- 6	1- 8	1- 9	1-10	1-11	2- 0	2- 2	2- 3	2- 4	2- 6	2- 7
290	1- 5	1- 6	1- 7	1- 9	1-11	2- 0	2- 1	2- 2	2- 4	2- 5	2- 6	2- 8	2-10
300	1- 6	1- 7	1- 9	1-10	2- 0	2- 2	2- 3	2- 4	2- 5	2- 7	2- 9	2-10	3- 0
310	1- 7	1- 9	1-10	2- 0	2- 2	2- 3	2- 4	2- 6	2- 7	2- 9	2-11	3- 1	3- 2
320	1- 8	1-10	2- 0	2- 1	2- 4	2- 5	2- 6	2- 8	2- 9	2-11	3- 1	3- 3	3- 5
330	1-10	1-11	2- 1	2- 3	2- 5	2- 7	2- 8	2-10	2-11	3- 1	3- 3	3- 5	3- 8
340	1-11	2- 1	2- 3	2- 5	2- 7	2- 9	2-10	3- 0	3- 2	3- 4	3- 6	3- 8	3-10
350	2- 0	2- 2	2- 4	2- 6	2- 9	2-11	3- 0	3- 2	3- 4	3- 6	3- 8	3-10	4- 1

Ruling Span (Feet)	250		RAVEN INITIAL		Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind									
					Conductor 1/0 AWG AAC - Raven Condition Initial Sag & Tension									
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100	
Tension (lbs)	1114.	1041.	966.	892.	819.	783.	747.	712.	677.	644.	611.	580.	551.	
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	
Ruling Span Sag	3.02	3.12	3.24	3.37	3.52	3.60	3.68	3.77	3.87	3.97	4.07	4.18	4.29	
50	.60	.62	.65	.67	.70	.72	.74	.75	.77	.79	.81	.84	.86	
75	.90	.94	.97	1.01	1.06	1.08	1.11	1.13	1.16	1.19	1.22	1.25	1.29	
100	1.21	1.25	1.30	1.35	1.41	1.44	1.47	1.51	1.55	1.59	1.63	1.67	1.72	
120	1.45	1.50	1.55	1.62	1.69	1.73	1.77	1.81	1.86	1.90	1.95	2.01	2.06	
140	1.69	1.75	1.81	1.89	1.97	2.02	2.06	2.11	2.17	2.22	2.28	2.34	2.40	
160	1.93	2.00	2.07	2.16	2.25	2.30	2.36	2.42	2.48	2.54	2.61	2.67	2.75	
180	2.17	2.25	2.33	2.43	2.53	2.59	2.65	2.72	2.78	2.86	2.93	3.01	3.09	
200	2.41	2.50	2.59	2.70	2.81	2.88	2.95	3.02	3.09	3.17	3.26	3.34	3.43	
210	2.53	2.62	2.72	2.83	2.95	3.02	3.09	3.17	3.25	3.33	3.42	3.51	3.60	
220	2.65	2.75	2.85	2.97	3.10	3.17	3.24	3.32	3.40	3.49	3.58	3.68	3.77	
230	2.77	2.87	2.98	3.10	3.24	3.31	3.39	3.47	3.56	3.65	3.75	3.84	3.95	
240	2.89	3.00	3.11	3.23	3.38	3.45	3.54	3.62	3.71	3.81	3.91	4.01	4.12	
250	3.02	3.12	3.24	3.37	3.52	3.60	3.68	3.77	3.87	3.97	4.07	4.18	4.29	
260	3.14	3.25	3.37	3.50	3.66	3.74	3.83	3.92	4.02	4.13	4.23	4.35	4.46	
270	3.26	3.37	3.50	3.64	3.80	3.89	3.98	4.08	4.18	4.28	4.40	4.51	4.63	
280	3.38	3.49	3.63	3.77	3.94	4.03	4.13	4.23	4.33	4.44	4.56	4.68	4.80	
290	3.50	3.62	3.76	3.91	4.08	4.17	4.27	4.38	4.49	4.60	4.72	4.85	4.98	
300	3.62	3.74	3.89	4.04	4.22	4.32	4.42	4.53	4.64	4.76	4.88	5.01	5.15	
310	3.74	3.87	4.01	4.18	4.36	4.46	4.57	4.68	4.80	4.92	5.05	5.18	5.32	
320	3.86	3.99	4.14	4.31	4.50	4.61	4.72	4.83	4.95	5.08	5.21	5.35	5.49	
330	3.98	4.12	4.27	4.45	4.64	4.75	4.86	4.98	5.11	5.24	5.37	5.52	5.66	
340	4.10	4.24	4.40	4.58	4.78	4.89	5.01	5.13	5.26	5.40	5.54	5.68	5.83	
350	4.22	4.37	4.53	4.72	4.93	5.04	5.16	5.28	5.42	5.55	5.70	5.85	6.01	

Design Condition									Ruling Span (Feet)	145		OXLIP - INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1226.	1089.	951.	812.	679.	616.	558.	505.	458.	417.	382.	351.	326.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 6	0- 6	0- 7	0- 8	0-10	0-11	1- 0	1- 1	1- 2	1- 4	1- 5	1- 6	1- 8
50	0- 1	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3
75	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6
100	0- 3	0- 3	0- 4	0- 4	0- 5	0- 5	0- 6	0- 6	0- 7	0- 8	0- 8	0- 9	0-10
120	0- 4	0- 4	0- 5	0- 6	0- 7	0- 7	0- 8	0- 9	0-10	0-11	1- 0	1- 1	1- 2
140	0- 5	0- 6	0- 7	0- 8	0- 9	0-10	0-11	1- 0	1- 1	1- 3	1- 4	1- 5	1- 6
160	0- 7	0- 8	0- 9	0-10	1- 0	1- 1	1- 2	1- 4	1- 5	1- 7	1- 9	1-10	2- 0
180	0- 8	0- 9	0-11	1- 0	1- 3	1- 4	1- 6	1- 8	1-10	2- 0	2- 2	2- 4	2- 6
200	0-10	0-11	1- 1	1- 3	1- 6	1- 8	1-10	2- 0	2- 3	2- 5	2- 8	2-10	3- 1
210	0-11	1- 1	1- 2	1- 5	1- 8	1-10	2- 0	2- 3	2- 5	2- 8	2-11	3- 2	3- 5
220	1- 0	1- 2	1- 4	1- 6	1-10	2- 0	2- 2	2- 5	2- 8	2-11	3- 2	3- 6	3- 9
230	1- 1	1- 3	1- 5	1- 8	2- 0	2- 2	2- 5	2- 8	2-11	3- 2	3- 6	3- 9	4- 1
240	1- 3	1- 4	1- 7	1-10	2- 2	2- 4	2- 7	2-10	3- 2	3- 6	3-10	4- 1	4- 5
250	1- 4	1- 6	1- 8	1-11	2- 4	2- 7	2-10	3- 1	3- 5	3- 9	4- 1	4- 6	4-10
260	1- 5	1- 7	1-10	2- 1	2- 6	2- 9	3- 1	3- 4	3- 9	4- 1	4- 5	4-10	5- 2
270	1- 6	1- 8	1-11	2- 3	2- 9	3- 0	3- 3	3- 8	4- 0	4- 5	4- 9	5- 2	5- 7
280	1- 8	1-10	2- 1	2- 5	2-11	3- 2	3- 6	3-11	4- 4	4- 9	5- 2	5- 7	6- 0
290	1- 9	2- 0	2- 3	2- 7	3- 1	3- 5	3- 9	4- 2	4- 7	5- 1	5- 6	6- 0	6- 6
300	1-10	2- 1	2- 5	2-10	3- 4	3- 8	4- 1	4- 6	4-11	5- 5	5-11	6- 5	6-11
310	2- 0	2- 3	2- 7	3- 0	3- 7	3-11	4- 4	4- 9	5- 3	5- 9	6- 4	6-10	7- 4
320	2- 1	2- 5	2- 9	3- 2	3- 9	4- 2	4- 7	5- 1	5- 7	6- 2	6- 9	7- 3	7-10
330	2- 3	2- 6	2-11	3- 4	4- 0	4- 5	4-11	5- 5	5-11	6- 6	7- 2	7- 9	8- 4
340	2- 5	2- 8	3- 1	3- 7	4- 3	4- 8	5- 2	5- 9	6- 4	6-11	7- 7	8- 3	8-10
350	2- 6	2-10	3- 3	3- 9	4- 6	5- 0	5- 6	6- 1	6- 8	7- 4	8- 0	8- 8	9- 5

Ruling Span (Feet)	145				Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 4/0 AWG AAC - Oxlip Condition Initial Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1226.	1089.	951.	812.	679.	616.	558.	505.	458.	417.	382.	351.	326.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	1.95	2.07	2.22	2.40	2.62	2.75	2.89	3.04	3.19	3.35	3.50	3.65	3.79
50	.67	.71	.76	.83	.90	.95	1.00	1.05	1.10	1.15	1.21	1.26	1.31
75	1.01	1.07	1.15	1.24	1.36	1.42	1.50	1.57	1.65	1.73	1.81	1.89	1.96
100	1.35	1.43	1.53	1.65	1.81	1.90	2.00	2.10	2.20	2.31	2.41	2.51	2.61
120	1.62	1.71	1.83	1.98	2.17	2.28	2.39	2.52	2.64	2.77	2.90	3.02	3.13
140	1.88	2.00	2.14	2.32	2.53	2.66	2.79	2.94	3.08	3.23	3.38	3.52	3.66
160	2.15	2.28	2.45	2.65	2.89	3.04	3.19	3.36	3.52	3.69	3.86	4.02	4.18
180	2.42	2.57	2.75	2.98	3.26	3.42	3.59	3.78	3.96	4.16	4.34	4.53	4.70
200	2.69	2.86	3.06	3.31	3.62	3.80	3.99	4.19	4.41	4.62	4.83	5.03	5.22
210	2.83	3.00	3.21	3.47	3.80	3.99	4.19	4.40	4.63	4.85	5.07	5.28	5.49
220	2.96	3.14	3.36	3.64	3.98	4.18	4.39	4.61	4.85	5.08	5.31	5.53	5.75
230	3.10	3.28	3.52	3.80	4.16	4.37	4.59	4.82	5.07	5.31	5.55	5.78	6.01
240	3.23	3.43	3.67	3.97	4.34	4.56	4.79	5.03	5.29	5.54	5.79	6.04	6.27
250	3.37	3.57	3.82	4.13	4.52	4.75	4.99	5.24	5.51	5.77	6.03	6.29	6.53
260	3.50	3.71	3.97	4.30	4.70	4.94	5.19	5.45	5.73	6.00	6.28	6.54	6.79
270	3.64	3.86	4.13	4.47	4.88	5.13	5.39	5.66	5.95	6.23	6.52	6.79	7.05
280	3.77	4.00	4.28	4.63	5.07	5.32	5.59	5.87	6.17	6.47	6.76	7.04	7.31
290	3.90	4.14	4.43	4.80	5.25	5.51	5.79	6.08	6.39	6.70	7.00	7.29	7.58
300	4.04	4.28	4.59	4.96	5.43	5.70	5.99	6.29	6.61	6.93	7.24	7.55	7.84
310	4.17	4.43	4.74	5.13	5.61	5.89	6.19	6.50	6.83	7.16	7.48	7.80	8.10
320	4.31	4.57	4.89	5.29	5.79	6.08	6.39	6.71	7.05	7.39	7.72	8.05	8.36
330	4.44	4.71	5.04	5.46	5.97	6.27	6.58	6.92	7.27	7.62	7.97	8.30	8.62
340	4.58	4.86	5.20	5.62	6.15	6.46	6.78	7.13	7.49	7.85	8.21	8.55	8.88
350	4.71	5.00	5.35	5.79	6.33	6.65	6.98	7.34	7.71	8.08	8.45	8.80	9.14

GENERAL INFORMATION

ENGINEERING NOTES

SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	160		OXLIP - INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1180.	1045.	908.	774.	649.	591.	539.	492.	450.	414.	383.	356.	333.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 7	0- 8	0- 9	0-10	1- 0	1- 1	1- 3	1- 4	1- 5	1- 7	1- 8	1-10	1-11
50	0- 1	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3
75	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6
100	0- 3	0- 3	0- 4	0- 4	0- 5	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9
120	0- 4	0- 5	0- 5	0- 6	0- 7	0- 8	0- 8	0- 9	0-10	0-11	1- 0	1- 1	1- 1
140	0- 5	0- 6	0- 7	0- 8	0-10	0-10	0-11	1- 0	1- 1	1- 3	1- 4	1- 5	1- 6
160	0- 7	0- 8	0- 9	0-10	1- 0	1- 1	1- 3	1- 4	1- 5	1- 7	1- 8	1-10	1-11
180	0- 9	0-10	0-11	1- 1	1- 3	1- 5	1- 6	1- 8	1-10	2- 0	2- 2	2- 4	2- 5
200	0-11	1- 0	1- 2	1- 4	1- 7	1- 9	1-11	2- 1	2- 3	2- 5	2- 8	2-10	3- 0
210	1- 0	1- 1	1- 3	1- 5	1- 9	1-11	2- 1	2- 3	2- 6	2- 8	2-11	3- 1	3- 4
220	1- 1	1- 2	1- 4	1- 7	1-11	2- 1	2- 3	2- 6	2- 9	2-11	3- 2	3- 5	3- 8
230	1- 2	1- 4	1- 6	1- 9	2- 1	2- 3	2- 6	2- 9	3- 0	3- 3	3- 6	3- 9	4- 0
240	1- 3	1- 5	1- 7	1-11	2- 3	2- 6	2- 8	2-11	3- 3	3- 6	3- 9	4- 1	4- 4
250	1- 4	1- 6	1- 9	2- 1	2- 5	2- 8	2-11	3- 2	3- 6	3- 9	4- 1	4- 5	4- 8
260	1- 6	1- 8	1-11	2- 3	2- 8	2-11	3- 2	3- 5	3- 9	4- 1	4- 5	4- 9	5- 1
270	1- 7	1- 9	2- 0	2- 5	2-10	3- 1	3- 5	3- 9	4- 1	4- 5	4- 9	5- 2	5- 6
280	1- 8	1-11	2- 2	2- 7	3- 1	3- 4	3- 8	4- 0	4- 4	4- 9	5- 2	5- 6	5-11
290	1-10	2- 0	2- 4	2- 9	3- 3	3- 7	3-11	4- 3	4- 8	5- 1	5- 6	5-11	6- 4
300	1-11	2- 2	2- 6	2-11	3- 6	3-10	4- 2	4- 7	5- 0	5- 5	5-11	6- 4	6- 9
310	2- 1	2- 4	2- 8	3- 2	3- 9	4- 1	4- 6	4-11	5- 4	5-10	6- 3	6- 9	7- 3
320	2- 2	2- 6	2-10	3- 4	4- 0	4- 4	4- 9	5- 3	5- 8	6- 2	6- 8	7- 2	7- 8
330	2- 4	2- 8	3- 0	3- 6	4- 3	4- 7	5- 1	5- 7	6- 1	6- 7	7- 1	7- 8	8- 2
340	2- 6	2- 9	3- 2	3- 9	4- 6	4-11	5- 4	5-11	6- 5	7- 0	7- 7	8- 1	8- 8
350	2- 7	2-11	3- 5	4- 0	4- 9	5- 2	5- 8	6- 3	6-10	7- 5	8- 0	8- 7	9- 2

Ruling Span (Feet)	160				Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor Condition 4/0 AWG AAC - Oxlip Initial Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1180.	1045.	908.	774.	649.	591.	539.	492.	450.	414.	383.	356.	333.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.20	2.33	2.50	2.71	2.96	3.10	3.25	3.40	3.55	3.71	3.85	4.00	4.13
50	.69	.73	.78	.85	.93	.97	1.02	1.06	1.11	1.16	1.20	1.25	1.29
75	1.03	1.09	1.17	1.27	1.39	1.45	1.52	1.59	1.67	1.74	1.81	1.87	1.94
100	1.37	1.46	1.56	1.69	1.85	1.94	2.03	2.13	2.22	2.32	2.41	2.50	2.58
120	1.65	1.75	1.88	2.03	2.22	2.33	2.44	2.55	2.67	2.78	2.89	3.00	3.10
140	1.92	2.04	2.19	2.37	2.59	2.71	2.84	2.98	3.11	3.24	3.37	3.50	3.62
160	2.20	2.33	2.50	2.71	2.96	3.10	3.25	3.40	3.55	3.71	3.85	4.00	4.13
180	2.47	2.63	2.82	3.05	3.33	3.49	3.66	3.83	4.00	4.17	4.34	4.50	4.65
200	2.74	2.92	3.13	3.39	3.70	3.88	4.06	4.25	4.44	4.63	4.82	5.00	5.17
210	2.88	3.06	3.28	3.56	3.89	4.07	4.26	4.46	4.67	4.86	5.06	5.25	5.42
220	3.02	3.21	3.44	3.73	4.07	4.26	4.47	4.68	4.89	5.10	5.30	5.50	5.68
230	3.16	3.35	3.60	3.90	4.26	4.46	4.67	4.89	5.11	5.33	5.54	5.75	5.94
240	3.29	3.50	3.75	4.07	4.44	4.65	4.87	5.10	5.33	5.56	5.78	5.99	6.20
250	3.43	3.65	3.91	4.24	4.63	4.85	5.08	5.31	5.55	5.79	6.02	6.24	6.46
260	3.57	3.79	4.07	4.41	4.81	5.04	5.28	5.53	5.78	6.02	6.26	6.49	6.72
270	3.70	3.94	4.22	4.57	5.00	5.23	5.48	5.74	6.00	6.25	6.50	6.74	6.97
280	3.84	4.08	4.38	4.74	5.18	5.43	5.69	5.95	6.22	6.49	6.75	6.99	7.23
290	3.98	4.23	4.54	4.91	5.37	5.62	5.89	6.16	6.44	6.72	6.99	7.24	7.49
300	4.12	4.38	4.69	5.08	5.55	5.82	6.09	6.38	6.66	6.95	7.23	7.49	7.75
310	4.25	4.52	4.85	5.25	5.74	6.01	6.30	6.59	6.89	7.18	7.47	7.74	8.01
320	4.39	4.67	5.01	5.42	5.92	6.20	6.50	6.80	7.11	7.41	7.71	7.99	8.27
330	4.53	4.81	5.16	5.59	6.11	6.40	6.70	7.02	7.33	7.64	7.95	8.24	8.53
340	4.66	4.96	5.32	5.76	6.29	6.59	6.90	7.23	7.55	7.88	8.19	8.49	8.78
350	4.80	5.10	5.48	5.93	6.48	6.79	7.11	7.44	7.78	8.11	8.43	8.74	9.04

Design Condition									Ruling Span (Feet)	175		OXLIP - INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1131.	997.	863.	736.	620.	568.	521.	480.	444.	412.	384.	360.	339.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 9	0-10	0-11	1- 1	1- 3	1- 5	1- 6	1- 8	1- 9	1-11	2- 0	2- 2	2- 3
50	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3
75	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5
100	0- 3	0- 3	0- 4	0- 5	0- 5	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9
120	0- 4	0- 5	0- 5	0- 6	0- 7	0- 8	0- 9	0- 9	0-10	0-11	1- 0	1- 0	1- 1
140	0- 6	0- 6	0- 7	0- 8	0-10	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6
160	0- 7	0- 8	0- 9	0-11	1- 1	1- 2	1- 3	1- 4	1- 6	1- 7	1- 8	1-10	1-11
180	0- 9	0-10	1- 0	1- 2	1- 4	1- 6	1- 7	1- 9	1-10	2- 0	2- 2	2- 3	2- 5
200	0-11	1- 0	1- 2	1- 5	1- 8	1- 9	1-11	2- 1	2- 3	2- 5	2- 8	2-10	3- 0
210	1- 0	1- 2	1- 4	1- 6	1-10	2- 0	2- 2	2- 4	2- 6	2- 8	2-11	3- 1	3- 3
220	1- 1	1- 3	1- 5	1- 8	2- 0	2- 2	2- 4	2- 7	2- 9	3- 0	3- 2	3- 5	3- 7
230	1- 2	1- 4	1- 7	1-10	2- 2	2- 4	2- 7	2- 9	3- 0	3- 3	3- 6	3- 8	3-11
240	1- 4	1- 6	1- 8	2- 0	2- 4	2- 7	2- 9	3- 0	3- 3	3- 6	3- 9	4- 0	4- 3
250	1- 5	1- 7	1-10	2- 2	2- 7	2- 9	3- 0	3- 3	3- 7	3-10	4- 1	4- 4	4- 7
260	1- 6	1- 9	2- 0	2- 4	2- 9	3- 0	3- 3	3- 6	3-10	4- 1	4- 5	4- 8	5- 0
270	1- 8	1-10	2- 2	2- 6	3- 0	3- 3	3- 6	3-10	4- 2	4- 5	4- 9	5- 1	5- 5
280	1- 9	2- 0	2- 4	2- 8	3- 2	3- 6	3- 9	4- 1	4- 5	4- 9	5- 1	5- 5	5- 9
290	1-11	2- 2	2- 6	2-11	3- 5	3- 9	4- 1	4- 5	4- 9	5- 1	5- 6	5-10	6- 2
300	2- 0	2- 3	2- 8	3- 1	3- 8	4- 0	4- 4	4- 8	5- 1	5- 6	5-10	6- 3	6- 8
310	2- 2	2- 5	2-10	3- 3	3-11	4- 3	4- 7	5- 0	5- 5	5-10	6- 3	6- 8	7- 1
320	2- 3	2- 7	3- 0	3- 6	4- 2	4- 6	4-11	5- 4	5- 9	6- 3	6- 8	7- 1	7- 6
330	2- 5	2- 9	3- 2	3- 9	4- 5	4-10	5- 3	5- 8	6- 2	6- 7	7- 1	7- 7	8- 0
340	2- 7	2-11	3- 4	3-11	4- 8	5- 1	5- 7	6- 0	6- 6	7- 0	7- 6	8- 0	8- 6
350	2- 9	3- 1	3- 7	4- 2	4-11	5- 5	5-11	6- 5	6-11	7- 5	8- 0	8- 6	9- 0

Ruling Span (Feet)	175				Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 4/0 AWG AAC - Oxlip Condition Initial Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1131.	997.	863.	736.	620.	568.	521.	480.	444.	412.	384.	360.	339.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.45	2.61	2.81	3.04	3.31	3.46	3.61	3.77	3.92	4.08	4.21	4.35	4.48
50	.70	.75	.80	.87	.95	.99	1.03	1.08	1.12	1.16	1.20	1.24	1.28
75	1.05	1.12	1.20	1.30	1.42	1.48	1.55	1.61	1.68	1.74	1.80	1.86	1.92
100	1.40	1.49	1.60	1.74	1.89	1.98	2.06	2.15	2.24	2.32	2.40	2.48	2.56
120	1.68	1.79	1.92	2.09	2.27	2.37	2.48	2.58	2.69	2.79	2.89	2.98	3.07
140	1.96	2.09	2.25	2.43	2.65	2.77	2.89	3.01	3.13	3.25	3.37	3.48	3.58
160	2.24	2.39	2.57	2.78	3.03	3.16	3.30	3.44	3.58	3.72	3.85	3.97	4.09
180	2.52	2.69	2.89	3.13	3.41	3.56	3.72	3.87	4.03	4.18	4.33	4.47	4.61
200	2.80	2.99	3.21	3.48	3.79	3.96	4.13	4.30	4.48	4.65	4.81	4.97	5.12
210	2.94	3.14	3.37	3.65	3.98	4.15	4.33	4.52	4.70	4.88	5.05	5.22	5.37
220	3.08	3.28	3.53	3.82	4.17	4.35	4.54	4.73	4.92	5.11	5.29	5.46	5.63
230	3.22	3.43	3.69	4.00	4.36	4.55	4.75	4.95	5.15	5.34	5.53	5.71	5.89
240	3.36	3.58	3.85	4.17	4.54	4.75	4.95	5.16	5.37	5.58	5.77	5.96	6.14
250	3.50	3.73	4.01	4.34	4.73	4.94	5.16	5.38	5.60	5.81	6.01	6.21	6.40
260	3.64	3.88	4.17	4.52	4.92	5.14	5.37	5.59	5.82	6.04	6.25	6.46	6.65
270	3.78	4.03	4.33	4.69	5.11	5.34	5.57	5.81	6.04	6.27	6.49	6.71	6.91
280	3.92	4.18	4.49	4.87	5.30	5.54	5.78	6.02	6.27	6.50	6.73	6.95	7.17
290	4.06	4.33	4.65	5.04	5.49	5.74	5.99	6.24	6.49	6.74	6.97	7.20	7.42
300	4.20	4.48	4.81	5.21	5.68	5.93	6.19	6.46	6.72	6.97	7.22	7.45	7.68
310	4.34	4.63	4.97	5.39	5.87	6.13	6.40	6.67	6.94	7.20	7.46	7.70	7.93
320	4.49	4.78	5.13	5.56	6.06	6.33	6.61	6.89	7.16	7.43	7.70	7.95	8.19
330	4.63	4.93	5.29	5.74	6.25	6.53	6.81	7.10	7.39	7.67	7.94	8.20	8.45
340	4.77	5.08	5.45	5.91	6.44	6.72	7.02	7.32	7.61	7.90	8.18	8.45	8.70
350	4.91	5.23	5.61	6.08	6.63	6.92	7.23	7.53	7.83	8.13	8.42	8.69	8.96

Design Condition									Ruling Span (Feet)	190		OXLIP - INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1078.	946.	818.	698.	593.	547.	506.	470.	438.	410.	385.	364.	345.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0-10	1-0	1-2	1-4	1-7	1-8	1-10	1-11	2-1	2-3	2-4	2-6	2-8
50	0-1	0-1	0-1	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-3	0-3
75	0-2	0-2	0-3	0-3	0-3	0-4	0-4	0-4	0-4	0-5	0-5	0-5	0-5
100	0-3	0-4	0-4	0-5	0-6	0-6	0-6	0-7	0-7	0-8	0-8	0-9	0-9
120	0-4	0-5	0-6	0-7	0-8	0-8	0-9	0-10	0-10	0-11	1-0	1-0	1-1
140	0-6	0-7	0-8	0-9	0-10	0-11	1-0	1-1	1-2	1-3	1-4	1-5	1-5
160	0-8	0-9	0-10	0-11	1-1	1-2	1-4	1-5	1-6	1-7	1-8	1-9	1-11
180	0-9	0-11	1-0	1-2	1-5	1-6	1-8	1-9	1-11	2-0	2-2	2-3	2-5
200	1-0	1-1	1-3	1-6	1-9	1-10	2-0	2-2	2-4	2-6	2-7	2-9	2-11
210	1-1	1-2	1-5	1-7	1-11	2-1	2-2	2-4	2-7	2-9	2-11	3-1	3-3
220	1-2	1-4	1-6	1-9	2-1	2-3	2-5	2-7	2-9	3-0	3-2	3-4	3-6
230	1-3	1-5	1-8	1-11	2-3	2-5	2-8	2-10	3-1	3-3	3-5	3-8	3-10
240	1-4	1-7	1-9	2-1	2-5	2-8	2-10	3-1	3-4	3-6	3-9	4-0	4-2
250	1-6	1-8	1-11	2-3	2-8	2-11	3-1	3-4	3-7	3-10	4-1	4-4	4-7
260	1-7	1-10	2-1	2-5	2-10	3-1	3-4	3-7	3-11	4-2	4-5	4-8	4-11
270	1-9	1-11	2-3	2-8	3-1	3-4	3-7	3-11	4-2	4-6	4-9	5-0	5-4
280	1-10	2-1	2-5	2-10	3-4	3-7	3-11	4-2	4-6	4-10	5-1	5-5	5-8
290	2-0	2-3	2-7	3-0	3-7	3-10	4-2	4-6	4-10	5-2	5-6	5-9	6-1
300	2-1	2-5	2-9	3-3	3-10	4-2	4-6	4-10	5-2	5-6	5-10	6-2	6-6
310	2-3	2-7	3-0	3-6	4-1	4-5	4-9	5-2	5-6	5-10	6-3	6-7	7-0
320	2-5	2-9	3-2	3-8	4-4	4-8	5-1	5-6	5-10	6-3	6-8	7-0	7-5
330	2-7	2-11	3-4	3-11	4-7	5-0	5-5	5-10	6-3	6-8	7-1	7-6	7-11
340	2-8	3-1	3-7	4-2	4-11	5-4	5-9	6-2	6-7	7-1	7-6	7-11	8-4
350	2-10	3-3	3-9	4-5	5-2	5-7	6-1	6-6	7-0	7-6	7-11	8-5	8-10

Ruling Span (Feet)	190				Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 4/0 AWG AAC - Oxlip Condition Initial Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1078.	946.	818.	698.	593.	547.	506.	470.	438.	410.	385.	364.	345.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.73	2.91	3.13	3.39	3.68	3.83	3.98	4.13	4.28	4.42	4.56	4.70	4.82
50	.72	.77	.82	.89	.97	1.01	1.05	1.09	1.13	1.16	1.20	1.24	1.27
75	1.08	1.15	1.24	1.34	1.45	1.51	1.57	1.63	1.69	1.75	1.80	1.85	1.90
100	1.44	1.53	1.65	1.78	1.94	2.02	2.10	2.17	2.25	2.33	2.40	2.47	2.54
120	1.72	1.84	1.98	2.14	2.32	2.42	2.51	2.61	2.70	2.79	2.88	2.97	3.05
140	2.01	2.15	2.31	2.50	2.71	2.82	2.93	3.04	3.15	3.26	3.36	3.46	3.55
160	2.30	2.45	2.64	2.85	3.10	3.22	3.35	3.48	3.60	3.73	3.84	3.95	4.08
180	2.58	2.76	2.97	3.21	3.48	3.63	3.77	3.91	4.06	4.19	4.32	4.45	4.57
200	2.87	3.06	3.30	3.57	3.87	4.03	4.19	4.35	4.51	4.66	4.80	4.94	5.08
210	3.01	3.22	3.46	3.75	4.07	4.23	4.40	4.57	4.73	4.89	5.04	5.19	5.33
220	3.16	3.37	3.63	3.92	4.26	4.43	4.61	4.78	4.96	5.12	5.28	5.44	5.58
230	3.30	3.52	3.79	4.10	4.45	4.64	4.82	5.00	5.18	5.36	5.52	5.68	5.84
240	3.44	3.68	3.96	4.28	4.65	4.84	5.03	5.22	5.41	5.59	5.76	5.93	6.09
250	3.59	3.83	4.12	4.46	4.84	5.04	5.24	5.44	5.63	5.82	6.00	6.18	6.35
260	3.73	3.98	4.29	4.64	5.03	5.24	5.45	5.66	5.86	6.05	6.24	6.43	6.60
270	3.88	4.14	4.45	4.82	5.23	5.44	5.66	5.87	6.08	6.29	6.48	6.67	6.85
280	4.02	4.29	4.61	4.99	5.42	5.64	5.87	6.09	6.31	6.52	6.72	6.92	7.11
290	4.16	4.44	4.78	5.17	5.61	5.84	6.08	6.31	6.53	6.75	6.97	7.17	7.36
300	4.31	4.60	4.94	5.35	5.81	6.05	6.29	6.53	6.76	6.99	7.21	7.42	7.62
310	4.45	4.75	5.11	5.53	6.00	6.25	6.50	6.74	6.98	7.22	7.45	7.66	7.87
320	4.59	4.90	5.27	5.71	6.20	6.45	6.71	6.96	7.21	7.45	7.69	7.91	8.12
330	4.74	5.06	5.44	5.89	6.39	6.65	6.92	7.18	7.44	7.69	7.93	8.16	8.38
340	4.88	5.21	5.60	6.07	6.58	6.85	7.13	7.40	7.66	7.92	8.17	8.40	8.63
350	5.02	5.36	5.77	6.24	6.78	7.05	7.33	7.61	7.89	8.15	8.41	8.65	8.89

Design Condition									Ruling Span (Feet)	205		OXLIP - INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1023.	895.	773.	663.	569.	529.	493.	461.	433.	408.	386.	367.	350.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 1	1- 2	1- 5	1- 7	1-11	2- 0	2- 2	2- 4	2- 5	2- 7	2- 9	2-11	3- 0
50	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3
75	0- 2	0- 2	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5
100	0- 3	0- 4	0- 4	0- 5	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9
120	0- 5	0- 5	0- 6	0- 7	0- 8	0- 9	0- 9	0-10	0-10	0-11	1- 0	1- 0	1- 1
140	0- 6	0- 7	0- 8	0- 9	0-11	1- 0	1- 0	1- 1	1- 2	1- 3	1- 4	1- 4	1- 5
160	0- 8	0- 9	0-10	1- 0	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10
180	0-10	0-11	1- 1	1- 3	1- 5	1- 7	1- 8	1- 9	1-11	2- 0	2- 2	2- 3	2- 4
200	1- 0	1- 2	1- 4	1- 6	1- 9	1-11	2- 1	2- 2	2- 4	2- 6	2- 7	2- 9	2-11
210	1- 1	1- 3	1- 6	1- 8	2- 0	2- 1	2- 3	2- 5	2- 7	2- 9	2-11	3- 0	3- 2
220	1- 3	1- 5	1- 7	1-10	2- 2	2- 4	2- 6	2- 8	2-10	3- 0	3- 2	3- 4	3- 6
230	1- 4	1- 6	1- 9	2- 0	2- 4	2- 6	2- 9	2-11	3- 1	3- 3	3- 5	3- 7	3-10
240	1- 5	1- 8	1-11	2- 2	2- 7	2- 9	2-11	3- 2	3- 4	3- 7	3- 9	3-11	4- 2
250	1- 7	1- 9	2- 1	2- 5	2- 9	3- 0	3- 2	3- 5	3- 8	3-10	4- 1	4- 3	4- 6
260	1- 8	1-11	2- 3	2- 7	3- 0	3- 3	3- 5	3- 8	3-11	4- 2	4- 5	4- 7	4-10
270	1-10	2- 1	2- 5	2- 9	3- 3	3- 6	3- 9	4- 0	4- 3	4- 6	4- 9	5- 0	5- 3
280	1-11	2- 3	2- 7	3- 0	3- 6	3- 9	4- 0	4- 3	4- 7	4-10	5- 1	5- 4	5- 7
290	2- 1	2- 5	2- 9	3- 2	3- 9	4- 0	4- 3	4- 7	4-10	5- 2	5- 5	5- 9	6- 0
300	2- 3	2- 6	2-11	3- 5	4- 0	4- 3	4- 7	4-11	5- 3	5- 6	5-10	6- 2	6- 5
310	2- 5	2- 9	3- 2	3- 8	4- 3	4- 7	4-11	5- 3	5- 7	5-11	6- 3	6- 7	6-10
320	2- 6	2-11	3- 4	3-11	4- 6	4-10	5- 2	5- 7	5-11	6- 3	6- 8	7- 0	7- 4
330	2- 8	3- 1	3- 6	4- 1	4-10	5- 2	5- 6	5-11	6- 4	6- 8	7- 1	7- 5	7- 9
340	2-10	3- 3	3- 9	4- 4	5- 1	5- 6	5-10	6- 3	6- 8	7- 1	7- 6	7-10	8- 3
350	3- 0	3- 5	4- 0	4- 8	5- 5	5-10	6- 3	6- 8	7- 1	7- 6	7-11	8- 4	8- 9

Ruling Span (Feet)	205				Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 4/0 AWG AAC - Oxlip Condition Initial Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1023.	895.	773.	663.	569.	529.	493.	461.	433.	408.	386.	367.	350.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	3.02	3.23	3.48	3.75	4.05	4.20	4.35	4.50	4.64	4.78	4.92	5.05	5.17
50	.74	.79	.85	.92	.99	1.03	1.06	1.10	1.13	1.17	1.20	1.23	1.26
75	1.11	1.18	1.27	1.37	1.48	1.54	1.59	1.65	1.70	1.75	1.80	1.85	1.89
100	1.47	1.58	1.70	1.83	1.98	2.05	2.12	2.20	2.27	2.33	2.40	2.46	2.52
120	1.77	1.89	2.03	2.20	2.37	2.46	2.55	2.63	2.72	2.80	2.88	2.95	3.02
140	2.06	2.21	2.37	2.56	2.77	2.87	2.97	3.07	3.17	3.27	3.36	3.45	3.53
160	2.36	2.52	2.71	2.93	3.16	3.28	3.40	3.51	3.63	3.73	3.84	3.94	4.03
180	2.65	2.84	3.05	3.30	3.56	3.69	3.82	3.95	4.08	4.20	4.32	4.43	4.54
200	2.95	3.15	3.39	3.66	3.95	4.10	4.25	4.39	4.53	4.67	4.80	4.92	5.04
210	3.09	3.31	3.56	3.84	4.15	4.31	4.46	4.61	4.76	4.90	5.04	5.17	5.29
220	3.24	3.47	3.73	4.03	4.35	4.51	4.67	4.83	4.98	5.13	5.28	5.41	5.55
230	3.39	3.62	3.90	4.21	4.55	4.72	4.88	5.05	5.21	5.37	5.52	5.66	5.80
240	3.54	3.78	4.07	4.39	4.74	4.92	5.10	5.27	5.44	5.60	5.76	5.91	6.05
250	3.68	3.94	4.24	4.58	4.94	5.13	5.31	5.49	5.66	5.83	6.00	6.15	6.30
260	3.83	4.10	4.41	4.76	5.14	5.33	5.52	5.71	5.89	6.07	6.24	6.40	6.55
270	3.98	4.25	4.58	4.94	5.34	5.54	5.73	5.93	6.12	6.30	6.48	6.65	6.81
280	4.13	4.41	4.75	5.13	5.53	5.74	5.95	6.15	6.34	6.53	6.72	6.89	7.06
290	4.27	4.57	4.92	5.31	5.73	5.95	6.16	6.37	6.57	6.77	6.96	7.14	7.31
300	4.42	4.73	5.09	5.49	5.93	6.15	6.37	6.59	6.80	7.00	7.20	7.38	7.56
310	4.57	4.88	5.26	5.68	6.13	6.36	6.58	6.81	7.02	7.23	7.44	7.63	7.82
320	4.72	5.04	5.42	5.86	6.32	6.56	6.80	7.03	7.25	7.47	7.68	7.88	8.07
330	4.86	5.20	5.59	6.04	6.52	6.77	7.01	7.25	7.48	7.70	7.92	8.12	8.32
340	5.01	5.36	5.76	6.22	6.72	6.97	7.22	7.47	7.71	7.94	8.16	8.37	8.57
350	5.16	5.51	5.93	6.41	6.92	7.18	7.43	7.69	7.93	8.17	8.40	8.62	8.83

Design Condition									Ruling Span (Feet)	220		OXLIP - INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	968.	844.	730.	631.	548.	512.	481.	453.	429.	407.	387.	370.	354.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 3	1- 6	1- 8	1-11	2- 3	2- 5	2- 6	2- 8	2-10	3- 0	3- 2	3- 4	3- 5
50	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3
75	0- 2	0- 2	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5
100	0- 4	0- 4	0- 5	0- 5	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9
120	0- 5	0- 6	0- 6	0- 7	0- 8	0- 9	0- 9	0-10	0-11	0-11	1- 0	1- 0	1- 1
140	0- 7	0- 7	0- 9	0-10	0-11	1- 0	1- 1	1- 1	1- 2	1- 3	1- 4	1- 4	1- 5
160	0- 8	0-10	0-11	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10
180	0-10	1- 0	1- 2	1- 4	1- 6	1- 7	1- 9	1-10	1-11	2- 0	2- 1	2- 3	2- 4
200	1- 1	1- 3	1- 5	1- 7	1-10	2- 0	2- 1	2- 3	2- 4	2- 6	2- 7	2- 9	2-10
210	1- 2	1- 4	1- 7	1- 9	2- 1	2- 2	2- 4	2- 6	2- 7	2- 9	2-10	3- 0	3- 2
220	1- 3	1- 6	1- 8	1-11	2- 3	2- 5	2- 6	2- 8	2-10	3- 0	3- 2	3- 4	3- 5
230	1- 5	1- 7	1-10	2- 2	2- 5	2- 7	2- 9	2-11	3- 1	3- 3	3- 5	3- 7	3- 9
240	1- 6	1- 9	2- 0	2- 4	2- 8	2-10	3- 0	3- 2	3- 5	3- 7	3- 9	3-11	4- 1
250	1- 8	1-11	2- 2	2- 6	2-11	3- 1	3- 3	3- 6	3- 8	3-10	4- 1	4- 3	4- 5
260	1- 9	2- 0	2- 4	2- 8	3- 1	3- 4	3- 6	3- 9	4- 0	4- 2	4- 5	4- 7	4- 9
270	1-11	2- 2	2- 6	2-11	3- 4	3- 7	3-10	4- 0	4- 3	4- 6	4- 9	4-11	5- 2
280	2- 1	2- 4	2- 9	3- 2	3- 7	3-10	4- 1	4- 4	4- 7	4-10	5- 1	5- 4	5- 7
290	2- 2	2- 6	2-11	3- 4	3-10	4- 1	4- 5	4- 8	4-11	5- 2	5- 5	5- 8	5-11
300	2- 4	2- 8	3- 1	3- 7	4- 1	4- 5	4- 8	5- 0	5- 3	5- 7	5-10	6- 1	6- 4
310	2- 6	2-10	3- 4	3-10	4- 5	4- 8	5- 0	5- 4	5- 7	5-11	6- 3	6- 6	6-10
320	2- 8	3- 1	3- 6	4- 1	4- 8	5- 0	5- 4	5- 8	6- 0	6- 4	6- 7	6-11	7- 3
330	2-10	3- 3	3- 9	4- 4	5- 0	5- 4	5- 8	6- 0	6- 4	6- 8	7- 0	7- 4	7- 8
340	3- 0	3- 5	4- 0	4- 7	5- 3	5- 8	6- 0	6- 5	6- 9	7- 1	7- 6	7-10	8- 2
350	3- 2	3- 8	4- 3	4-10	5- 7	6- 0	6- 4	6- 9	7- 2	7- 6	7-11	8- 3	8- 8

Ruling Span (Feet)	220				Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 4/0 AWG AAC - Oxlip Condition Initial Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	966.	844.	730.	631.	548.	512.	481.	453.	429.	407.	387.	370.	354.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	3.34	3.57	3.84	4.13	4.43	4.58	4.73	4.87	5.01	5.14	5.27	5.40	5.51
50	.76	.81	.87	.94	1.01	1.04	1.07	1.11	1.14	1.17	1.20	1.23	1.25
75	1.14	1.22	1.31	1.41	1.51	1.56	1.61	1.66	1.71	1.75	1.80	1.84	1.88
100	1.52	1.62	1.74	1.88	2.01	2.08	2.15	2.21	2.28	2.34	2.40	2.45	2.51
120	1.82	1.95	2.09	2.25	2.42	2.50	2.58	2.66	2.73	2.81	2.88	2.94	3.01
140	2.12	2.27	2.44	2.63	2.82	2.91	3.01	3.10	3.19	3.27	3.35	3.43	3.51
160	2.43	2.60	2.79	3.00	3.22	3.33	3.44	3.54	3.64	3.74	3.83	3.92	4.01
180	2.73	2.92	3.14	3.38	3.63	3.75	3.87	3.99	4.10	4.21	4.31	4.41	4.51
200	3.03	3.25	3.49	3.75	4.03	4.16	4.30	4.43	4.55	4.68	4.79	4.90	5.01
210	3.18	3.41	3.66	3.94	4.23	4.37	4.51	4.65	4.78	4.91	5.03	5.15	5.26
220	3.34	3.57	3.84	4.13	4.43	4.58	4.73	4.87	5.01	5.14	5.27	5.40	5.51
230	3.49	3.73	4.01	4.32	4.63	4.79	4.94	5.09	5.24	5.38	5.51	5.64	5.76
240	3.64	3.89	4.19	4.50	4.83	5.00	5.16	5.31	5.47	5.61	5.75	5.89	6.01
250	3.79	4.06	4.36	4.69	5.04	5.21	5.37	5.54	5.69	5.84	5.99	6.13	6.27
260	3.94	4.22	4.54	4.88	5.24	5.41	5.59	5.76	5.92	6.08	6.23	6.38	6.52
270	4.09	4.38	4.71	5.07	5.44	5.62	5.80	5.98	6.15	6.31	6.47	6.62	6.77
280	4.25	4.54	4.88	5.26	5.64	5.83	6.02	6.20	6.38	6.55	6.71	6.87	7.02
290	4.40	4.71	5.06	5.44	5.84	6.04	6.23	6.42	6.60	6.78	6.95	7.11	7.27
300	4.55	4.87	5.23	5.63	6.04	6.25	6.45	6.64	6.83	7.01	7.19	7.36	7.52
310	4.70	5.03	5.41	5.82	6.24	6.46	6.66	6.86	7.06	7.25	7.43	7.60	7.77
320	4.85	5.19	5.58	6.01	6.45	6.68	6.88	7.09	7.29	7.48	7.67	7.85	8.02
330	5.00	5.36	5.76	6.19	6.65	6.87	7.09	7.31	7.52	7.72	7.91	8.09	8.27
340	5.16	5.52	5.93	6.38	6.85	7.08	7.31	7.53	7.74	7.95	8.15	8.34	8.52
350	5.31	5.68	6.11	6.57	7.05	7.29	7.52	7.75	7.97	8.18	8.39	8.58	8.77

Design Condition									Ruling Span (Feet)	235		OXLIP - INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	909.	794.	690.	602.	529.	499.	471.	447.	425.	405.	388.	372.	357.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 7	1- 9	2- 0	2- 4	2- 8	2-10	2-11	3- 1	3- 3	3- 5	3- 7	3- 9	3-11
50	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3
75	0- 2	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5
100	0- 4	0- 4	0- 5	0- 5	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 8	0- 9	0- 9
120	0- 5	0- 6	0- 7	0- 8	0- 9	0- 9	0-10	0-10	0-11	0-11	1- 0	1- 0	1- 1
140	0- 7	0- 8	0- 9	0-10	1- 0	1- 0	1- 1	1- 2	1- 2	1- 3	1- 4	1- 4	1- 5
160	0- 9	0-10	1- 0	1- 1	1- 3	1- 4	1- 5	1- 6	1- 6	1- 7	1- 8	1- 9	1-10
180	0-11	1- 1	1- 2	1- 5	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 2	2- 4
200	1- 2	1- 4	1- 6	1- 8	1-11	2- 0	2- 2	2- 3	2- 5	2- 6	2- 7	2- 9	2-10
210	1- 3	1- 5	1- 8	1-10	2- 1	2- 3	2- 4	2- 6	2- 7	2- 9	2-10	3- 0	3- 1
220	1- 4	1- 7	1- 9	2- 0	2- 4	2- 5	2- 7	2- 9	2-10	3- 0	3- 2	3- 3	3- 5
230	1- 6	1- 8	1-11	2- 3	2- 6	2- 8	2-10	3- 0	3- 2	3- 3	3- 5	3- 7	3- 9
240	1- 7	1-10	2- 1	2- 5	2- 9	2-11	3- 1	3- 3	3- 5	3- 7	3- 9	3-11	4- 1
250	1- 9	2- 0	2- 3	2- 7	3- 0	3- 2	3- 4	3- 6	3- 8	3-10	4- 1	4- 3	4- 5
260	1-11	2- 2	2- 6	2-10	3- 3	3- 5	3- 7	3-10	4- 0	4- 2	4- 4	4- 7	4- 9
270	2- 0	2- 4	2- 8	3- 1	3- 6	3- 8	3-11	4- 1	4- 4	4- 6	4- 9	4-11	5- 1
280	2- 2	2- 6	2-10	3- 3	3- 9	3-11	4- 2	4- 5	4- 8	4-10	5- 1	5- 3	5- 6
290	2- 4	2- 8	3- 1	3- 6	4- 0	4- 3	4- 6	4- 9	5- 0	5- 2	5- 5	5- 8	5-11
300	2- 6	2-10	3- 3	3- 9	4- 3	4- 6	4- 9	5- 1	5- 4	5- 7	5-10	6- 1	6- 4
310	2- 8	3- 1	3- 6	4- 0	4- 7	4-10	5- 1	5- 5	5- 8	5-11	6- 2	6- 6	6- 9
320	2-10	3- 3	3- 9	4- 3	4-10	5- 2	5- 5	5- 9	6- 0	6- 4	6- 7	6-11	7- 2
330	3- 0	3- 5	4- 0	4- 6	5- 2	5- 6	5- 9	6- 1	6- 5	6- 9	7- 0	7- 4	7- 7
340	3- 2	3- 8	4- 2	4-10	5- 6	5-10	6- 2	6- 6	6-10	7- 2	7- 5	7- 9	8- 1
350	3- 5	3-11	4- 5	5- 1	5- 9	6- 2	6- 6	6-10	7- 2	7- 7	7-11	8- 3	8- 7

Ruling Span (Feet)	235				Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 4/0 AWG AAC - Oxlip Condition Initial Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	909.	794.	690.	602.	529.	499.	471.	447.	425.	405.	388.	372.	357.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	3.67	3.93	4.22	4.51	4.81	4.96	5.10	5.24	5.37	5.50	5.63	5.75	5.86
50	.78	.84	.90	.96	1.02	1.06	1.09	1.12	1.14	1.17	1.20	1.22	1.25
75	1.17	1.25	1.35	1.44	1.54	1.58	1.63	1.67	1.72	1.76	1.80	1.83	1.87
100	1.56	1.67	1.79	1.92	2.05	2.11	2.17	2.23	2.29	2.34	2.39	2.44	2.49
120	1.88	2.01	2.15	2.31	2.46	2.53	2.61	2.68	2.74	2.81	2.87	2.93	2.99
140	2.19	2.34	2.51	2.69	2.87	2.96	3.04	3.12	3.20	3.28	3.35	3.42	3.49
160	2.50	2.68	2.87	3.07	3.28	3.38	3.47	3.57	3.66	3.75	3.83	3.91	3.99
180	2.81	3.01	3.23	3.46	3.69	3.80	3.91	4.01	4.12	4.21	4.31	4.40	4.49
200	3.13	3.35	3.59	3.84	4.10	4.22	4.34	4.46	4.57	4.68	4.79	4.89	4.99
210	3.28	3.51	3.77	4.03	4.30	4.43	4.56	4.68	4.80	4.92	5.03	5.13	5.24
220	3.44	3.68	3.95	4.23	4.51	4.64	4.78	4.91	5.03	5.15	5.27	5.38	5.49
230	3.60	3.85	4.13	4.42	4.71	4.85	4.99	5.13	5.26	5.39	5.51	5.62	5.73
240	3.75	4.02	4.31	4.61	4.92	5.07	5.21	5.35	5.49	5.62	5.75	5.87	5.98
250	3.91	4.18	4.48	4.80	5.12	5.28	5.43	5.58	5.72	5.85	5.99	6.11	6.23
260	4.06	4.35	4.66	5.00	5.33	5.49	5.65	5.80	5.95	6.09	6.23	6.36	6.48
270	4.22	4.52	4.84	5.19	5.53	5.70	5.86	6.02	6.18	6.32	6.46	6.60	6.73
280	4.38	4.68	5.02	5.38	5.74	5.91	6.08	6.25	6.40	6.56	6.70	6.85	6.98
290	4.53	4.85	5.20	5.57	5.94	6.12	6.30	6.47	6.63	6.79	6.94	7.09	7.23
300	4.69	5.02	5.38	5.76	6.15	6.33	6.51	6.69	6.86	7.03	7.18	7.34	7.48
310	4.85	5.19	5.56	5.96	6.35	6.54	6.73	6.91	7.09	7.26	7.42	7.58	7.73
320	5.00	5.35	5.74	6.15	6.56	6.76	6.95	7.14	7.32	7.49	7.66	7.82	7.98
330	5.16	5.52	5.92	6.34	6.76	6.97	7.17	7.36	7.55	7.73	7.90	8.07	8.23
340	5.32	5.69	6.10	6.53	6.97	7.18	7.38	7.58	7.78	7.96	8.14	8.31	8.48
350	5.47	5.86	6.28	6.72	7.17	7.39	7.60	7.81	8.01	8.20	8.38	8.56	8.73

Design Condition									Ruling Span (Feet)	250		OXLIP - INITIAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	853.	747.	654.	577.	514.	487.	463.	441.	422.	404.	388.	374.	361.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1-10	2- 1	2- 5	2- 9	3- 1	3- 3	3- 5	3- 7	3- 9	3-11	4- 0	4- 2	4- 4
50	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3
75	0- 2	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5
100	0- 4	0- 4	0- 5	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8	0- 8	0- 8	0- 8	0- 9
120	0- 6	0- 6	0- 7	0- 8	0- 9	0- 9	0-10	0-10	0-11	0-11	1- 0	1- 0	1- 0
140	0- 7	0- 8	0- 9	0-11	1- 0	1- 1	1- 1	1- 2	1- 2	1- 3	1- 4	1- 4	1- 5
160	0- 9	0-11	1- 0	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 7	1- 8	1- 9	1-10
180	1- 0	1- 1	1- 3	1- 5	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 2	2- 3
200	1- 2	1- 4	1- 7	1- 9	2- 0	2- 1	2- 2	2- 4	2- 5	2- 6	2- 7	2- 8	2-10
210	1- 4	1- 6	1- 9	1-11	2- 2	2- 4	2- 5	2- 6	2- 8	2- 9	2-10	3- 0	3- 1
220	1- 5	1- 8	1-11	2- 2	2- 5	2- 6	2- 8	2- 9	2-11	3- 0	3- 2	3- 3	3- 5
230	1- 7	1-10	2- 1	2- 4	2- 7	2- 9	2-11	3- 0	3- 2	3- 4	3- 5	3- 7	3- 8
240	1- 9	1-11	2- 3	2- 6	2-10	3- 0	3- 2	3- 3	3- 5	3- 7	3- 9	3-10	4- 0
250	1-10	2- 1	2- 5	2- 9	3- 1	3- 3	3- 5	3- 7	3- 9	3-11	4- 0	4- 2	4- 4
260	2- 0	2- 3	2- 7	2-11	3- 4	3- 6	3- 8	3-10	4- 0	4- 2	4- 4	4- 6	4- 8
270	2- 2	2- 6	2-10	3- 2	3- 7	3- 9	3-11	4- 2	4- 4	4- 6	4- 8	4-11	5- 1
280	2- 4	2- 8	3- 0	3- 5	3-10	4- 1	4- 3	4- 5	4- 8	4-10	5- 1	5- 3	5- 5
290	2- 6	2-10	3- 3	3- 8	4- 1	4- 4	4- 7	4- 9	5- 0	5- 3	5- 5	5- 8	5-10
300	2- 8	3- 0	3- 5	3-11	4- 5	4- 8	4-10	5- 1	5- 4	5- 7	5-10	6- 0	6- 3
310	2-10	3- 3	3- 8	4- 2	4- 8	4-11	5- 2	5- 5	5- 8	5-11	6- 2	6- 5	6- 8
320	3- 0	3- 5	3-11	4- 5	5- 0	5- 3	5- 6	5-10	6- 1	6- 4	6- 7	6-10	7- 1
330	3- 3	3- 8	4- 2	4- 9	5- 4	5- 7	5-11	6- 2	6- 6	6- 9	7- 0	7- 3	7- 7
340	3- 5	3-11	4- 5	5- 0	5- 8	5-11	6- 3	6- 7	6-10	7- 2	7- 5	7- 9	8- 0
350	3- 7	4- 1	4- 8	5- 4	6- 0	6- 4	6- 7	6-11	7- 3	7- 7	7-11	8- 2	8- 6

Ruling Span (Feet)	250				Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor Condition 4/0 AWG AAC - Oxlip Initial Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	853.	747.	654.	577.	514.	487.	463.	441.	422.	404.	388.	374.	361.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	4.03	4.31	4.61	4.91	5.20	5.34	5.48	5.61	5.74	5.88	5.98	6.10	6.21
50	.81	.86	.92	.98	1.04	1.07	1.10	1.12	1.15	1.17	1.20	1.22	1.24
75	1.21	1.29	1.38	1.47	1.56	1.60	1.64	1.68	1.72	1.76	1.79	1.83	1.88
100	1.61	1.72	1.84	1.96	2.08	2.14	2.19	2.24	2.30	2.34	2.39	2.44	2.48
120	1.94	2.07	2.21	2.35	2.50	2.56	2.63	2.69	2.75	2.81	2.87	2.93	2.98
140	2.26	2.41	2.58	2.75	2.91	2.99	3.07	3.14	3.21	3.28	3.35	3.41	3.47
160	2.58	2.76	2.95	3.14	3.33	3.42	3.51	3.59	3.67	3.75	3.83	3.90	3.97
180	2.90	3.10	3.32	3.53	3.74	3.85	3.94	4.04	4.13	4.22	4.31	4.39	4.47
200	3.23	3.45	3.68	3.92	4.16	4.27	4.38	4.49	4.59	4.69	4.78	4.88	4.98
210	3.39	3.62	3.87	4.12	4.37	4.49	4.60	4.71	4.82	4.92	5.02	5.12	5.21
220	3.55	3.79	4.05	4.32	4.58	4.70	4.82	4.94	5.05	5.16	5.26	5.36	5.46
230	3.71	3.97	4.24	4.51	4.78	4.91	5.04	5.16	5.28	5.39	5.50	5.61	5.71
240	3.87	4.14	4.42	4.71	4.99	5.13	5.26	5.39	5.51	5.63	5.74	5.85	5.96
250	4.03	4.31	4.61	4.91	5.20	5.34	5.48	5.61	5.74	5.88	5.98	6.10	6.21
260	4.20	4.48	4.79	5.10	5.41	5.55	5.70	5.84	5.97	6.10	6.22	6.34	6.45
270	4.36	4.66	4.97	5.30	5.62	5.77	5.92	6.06	6.20	6.33	6.46	6.58	6.70
280	4.52	4.83	5.16	5.50	5.82	5.98	6.14	6.28	6.43	6.57	6.70	6.83	6.95
290	4.68	5.00	5.34	5.69	6.03	6.20	6.36	6.51	6.66	6.80	6.94	7.07	7.20
300	4.84	5.17	5.53	5.89	6.24	6.41	6.57	6.73	6.89	7.04	7.18	7.32	7.45
310	5.00	5.35	5.71	6.08	6.45	6.62	6.79	6.96	7.12	7.27	7.42	7.56	7.70
320	5.16	5.52	5.90	6.28	6.66	6.84	7.01	7.18	7.35	7.50	7.66	7.80	7.94
330	5.33	5.69	6.08	6.48	6.86	7.05	7.23	7.41	7.58	7.74	7.90	8.05	8.19
340	5.49	5.86	6.26	6.67	7.07	7.26	7.45	7.63	7.81	7.97	8.14	8.29	8.44
350	5.65	6.04	6.45	6.87	7.28	7.48	7.67	7.86	8.04	8.21	8.38	8.54	8.69

GENERAL INFORMATION
 ENGINEERING NOTES
 SAG & TENSION TABLES

Design Condition								Ruling Span (Feet)	145		ARBUTUS - INITIAL		
4750 lb. max tension at 0°F													
Conductor Condition		795 kcmil AAC - Arbutus Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3850.	3393.	2940.	2503.	2101.	1920.	1756.	1608.	1478.	1365.	1267.	1182.	1109.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 7	0- 7	0- 9	0-10	1- 0	1- 1	1- 2	1- 3	1- 4	1- 6	1- 7	1- 8	1-10
50	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3
75	0- 2	0- 2	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6	0- 6
100	0- 3	0- 4	0- 4	0- 5	0- 6	0- 6	0- 7	0- 7	0- 8	0- 9	0- 9	0-10	0-11
120	0- 5	0- 5	0- 6	0- 7	0- 8	0- 9	0-10	0-11	0-11	1- 0	1- 1	1- 2	1- 3
140	0- 6	0- 7	0- 8	0- 9	0-11	1- 0	1- 1	1- 2	1- 3	1- 5	1- 6	1- 7	1- 8
160	0- 8	0- 9	0-10	1- 0	1- 2	1- 3	1- 5	1- 6	1- 8	1- 9	1-11	2- 1	2- 2
180	0-10	0-11	1- 1	1- 3	1- 6	1- 7	1- 9	1-11	2- 1	2- 3	2- 5	2- 7	2- 9
200	1- 0	1- 2	1- 4	1- 6	1-10	2- 0	2- 2	2- 4	2- 7	2- 9	3- 0	3- 2	3- 5
210	1- 1	1- 3	1- 5	1- 8	2- 0	2- 2	2- 5	2- 7	2-10	3- 1	3- 3	3- 6	3- 9
220	1- 3	1- 4	1- 7	1-10	2- 2	2- 5	2- 7	2-10	3- 1	3- 4	3- 7	3-10	4- 1
230	1- 4	1- 6	1- 9	2- 0	2- 5	2- 7	2-10	3- 1	3- 5	3- 8	3-11	4- 3	4- 6
240	1- 5	1- 8	1-10	2- 2	2- 7	2-10	3- 1	3- 5	3- 8	4- 0	4- 3	4- 7	4-11
250	1- 7	1- 9	2- 0	2- 4	2-10	3- 1	3- 4	3- 8	4- 0	4- 4	4- 8	5- 0	5- 4
260	1- 8	1-11	2- 2	2- 7	3- 1	3- 4	3- 8	4- 0	4- 4	4- 8	5- 0	5- 5	5- 9
270	1-10	2- 1	2- 4	2- 9	3- 3	3- 7	3-11	4- 3	4- 8	5- 0	5- 5	5-10	6- 2
280	1-11	2- 2	2- 6	3- 0	3- 6	3-10	4- 3	4- 7	5- 0	5- 5	5-10	6- 3	6- 8
290	2- 1	2- 4	2- 9	3- 2	3- 9	4- 2	4- 6	4-11	5- 4	5-10	6- 3	6- 8	7- 1
300	2- 3	2- 6	2-11	3- 5	4- 0	4- 5	4-10	5- 3	5- 9	6- 2	6- 8	7- 2	7- 7
310	2- 4	2- 8	3- 1	3- 7	4- 4	4- 9	5- 2	5- 7	6- 1	6- 7	7- 1	7- 8	8- 2
320	2- 6	2-10	3- 4	3-10	4- 7	5- 0	5- 6	6- 0	6- 6	7- 1	7- 7	8- 2	8- 8
330	2- 8	3- 0	3- 6	4- 1	4-11	5- 4	5-10	6- 4	6-11	7- 6	8- 1	8- 8	9- 3
340	2-10	3- 3	3- 9	4- 4	5- 2	5- 8	6- 2	6- 9	7- 4	7-11	8- 7	9- 2	9- 9
350	3- 0	3- 5	3-11	4- 7	5- 6	6- 0	6- 7	7- 2	7- 9	8- 5	9- 1	9- 9	10- 4

Ruling Span (Feet)	145		ARBUTUS - INITIAL			Design Condition 4750 lb. max tension at 0°F							
						Conductor Condition	795 kcmil AAC - Arbutus Initial Sag & Tension						
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3850.	3393.	2940.	2503.	2101.	1920.	1756.	1608.	1478.	1365.	1267.	1182.	1109.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.13	2.27	2.44	2.65	2.89	3.02	3.16	3.30	3.45	3.59	3.72	3.85	3.98
50	.74	.78	.84	.91	1.00	1.04	1.09	1.14	1.19	1.24	1.28	1.33	1.37
75	1.10	1.18	1.26	1.37	1.49	1.56	1.64	1.71	1.78	1.85	1.92	1.99	2.06
100	1.47	1.57	1.68	1.83	1.99	2.08	2.18	2.28	2.38	2.47	2.57	2.66	2.74
120	1.77	1.88	2.02	2.19	2.39	2.50	2.62	2.73	2.85	2.97	3.08	3.19	3.29
140	2.06	2.20	2.36	2.56	2.79	2.92	3.05	3.19	3.33	3.46	3.59	3.72	3.84
160	2.36	2.51	2.70	2.92	3.19	3.34	3.49	3.64	3.80	3.96	4.11	4.25	4.39
180	2.65	2.82	3.03	3.29	3.59	3.75	3.92	4.10	4.28	4.45	4.62	4.78	4.94
200	2.94	3.14	3.37	3.65	3.99	4.17	4.36	4.56	4.75	4.95	5.13	5.31	5.49
210	3.09	3.29	3.54	3.83	4.19	4.38	4.58	4.78	4.99	5.19	5.39	5.58	5.76
220	3.24	3.45	3.71	4.02	4.38	4.59	4.80	5.01	5.23	5.44	5.65	5.85	6.04
230	3.39	3.61	3.88	4.20	4.58	4.79	5.02	5.24	5.47	5.69	5.90	6.11	6.31
240	3.53	3.76	4.04	4.38	4.78	5.00	5.23	5.47	5.70	5.93	6.16	6.38	6.59
250	3.68	3.92	4.21	4.57	4.98	5.21	5.45	5.70	5.94	6.18	6.42	6.64	6.86
260	3.83	4.08	4.38	4.75	5.18	5.42	5.67	5.92	6.18	6.43	6.67	6.91	7.13
270	3.97	4.23	4.55	4.93	5.38	5.63	5.89	6.15	6.42	6.68	6.93	7.18	7.41
280	4.12	4.39	4.72	5.11	5.58	5.84	6.11	6.38	6.65	6.92	7.19	7.44	7.68
290	4.27	4.55	4.89	5.30	5.78	6.05	6.32	6.61	6.89	7.17	7.44	7.71	7.96
300	4.42	4.70	5.05	5.48	5.98	6.25	6.54	6.84	7.13	7.42	7.70	7.97	8.23
310	4.56	4.86	5.22	5.66	6.18	6.46	6.76	7.06	7.37	7.67	7.96	8.24	8.51
320	4.71	5.02	5.39	5.84	6.38	6.67	6.98	7.29	7.60	7.91	8.21	8.50	8.78
330	4.86	5.18	5.56	6.03	6.58	6.88	7.20	7.52	7.84	8.16	8.47	8.77	9.06
340	5.01	5.33	5.73	6.21	6.78	7.09	7.41	7.75	8.08	8.41	8.73	9.04	9.33
350	5.15	5.49	5.90	6.39	6.98	7.30	7.63	7.97	8.32	8.66	8.99	9.30	9.61

GENERAL INFORMATION
 ENGINEERING NOTES
SAG & TENSION TABLES

Design Condition								Ruling Span (Feet)	160		ARBUTUS - INITIAL		
4750 lb. max tension at 0°F													
Conductor Condition		795 kcmil AAC - Arbutus Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3859.	3409.	2965.	2542.	2155.	1982.	1824.	1682.	1556.	1445.	1348.	1264.	1190.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 8	0- 9	0-10	1- 0	1- 2	1- 3	1- 4	1- 6	1- 7	1- 8	1-10	1-11	2- 1
50	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3
75	0- 2	0- 2	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 6
100	0- 3	0- 4	0- 4	0- 5	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9	0-10
120	0- 5	0- 5	0- 6	0- 7	0- 8	0- 9	0- 9	0-10	0-11	1- 0	1- 0	1- 1	1- 2
140	0- 6	0- 7	0- 8	0- 9	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7
160	0- 8	0- 9	0-10	1- 0	1- 2	1- 3	1- 4	1- 6	1- 7	1- 8	1-10	1-11	2- 1
180	0-10	0-11	1- 1	1- 3	1- 5	1- 7	1- 8	1-10	2- 0	2- 2	2- 3	2- 5	2- 7
200	1- 0	1- 2	1- 4	1- 6	1- 9	1-11	2- 1	2- 3	2- 5	2- 7	2-10	3- 0	3- 2
210	1- 1	1- 3	1- 5	1- 8	1-11	2- 1	2- 4	2- 6	2- 8	2-11	3- 1	3- 4	3- 6
220	1- 3	1- 4	1- 7	1-10	2- 2	2- 4	2- 6	2- 9	2-11	3- 2	3- 5	3- 7	3-10
230	1- 4	1- 6	1- 8	2- 0	2- 4	2- 6	2- 9	3- 0	3- 3	3- 5	3- 8	3-11	4- 2
240	1- 5	1- 7	1-10	2- 2	2- 6	2- 9	3- 0	3- 3	3- 6	3- 9	4- 0	4- 4	4- 7
250	1- 7	1- 9	2- 0	2- 4	2- 9	3- 0	3- 3	3- 6	3- 9	4- 1	4- 4	4- 8	4-11
260	1- 8	1-11	2- 2	2- 6	3- 0	3- 3	3- 6	3-10	4- 1	4- 5	4- 9	5- 0	5- 4
270	1-10	2- 0	2- 4	2- 9	3- 2	3- 6	3- 9	4- 1	4- 5	4- 9	5- 1	5- 5	5- 9
280	1-11	2- 2	2- 6	2-11	3- 5	3- 9	4- 1	4- 5	4- 9	5- 1	5- 6	5-10	6- 2
290	2- 1	2- 4	2- 8	3- 2	3- 8	4- 0	4- 4	4- 9	5- 1	5- 6	5-10	6- 3	6- 8
300	2- 3	2- 6	2-10	3- 4	3-11	4- 3	4- 8	5- 0	5- 5	5-10	6- 3	6- 8	7- 1
310	2- 4	2- 8	3- 1	3- 7	4- 2	4- 7	5- 0	5- 5	5-10	6- 3	6- 8	7- 2	7- 7
320	2- 6	2-10	3- 3	3-10	4- 6	4-10	5- 3	5- 9	6- 2	6- 8	7- 2	7- 7	8- 1
330	2- 8	3- 0	3- 6	4- 0	4- 9	5- 2	5- 7	6- 1	6- 7	7- 1	7- 7	8- 1	8- 7
340	2-10	3- 2	3- 8	4- 3	5- 1	5- 6	6- 0	6- 6	7- 0	7- 6	8- 1	8- 7	9- 1
350	3- 0	3- 5	3-11	4- 6	5- 4	5-10	6- 4	6-10	7- 5	7-11	8- 6	9- 1	9- 8

Ruling Span (Feet)	160		ARBUTUS - INITIAL			Design Condition 4750 lb. max tension at 0°F							
						Conductor Condition	795 kcmil AAC - Arbutus Initial Sag & Tension						
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3859.	3409.	2965.	2542.	2155.	1982.	1824.	1682.	1556.	1445.	1348.	1264.	1190.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.35	2.50	2.68	2.90	3.15	3.28	3.42	3.56	3.71	3.85	3.98	4.11	4.24
50	.74	.78	.84	.91	.98	1.03	1.07	1.11	1.16	1.20	1.24	1.28	1.32
75	1.10	1.17	1.26	1.36	1.48	1.54	1.60	1.67	1.74	1.80	1.87	1.93	1.99
100	1.47	1.56	1.68	1.81	1.97	2.05	2.14	2.23	2.32	2.40	2.49	2.57	2.65
120	1.76	1.88	2.01	2.17	2.36	2.46	2.57	2.67	2.78	2.88	2.99	3.08	3.18
140	2.06	2.19	2.35	2.54	2.75	2.87	2.99	3.12	3.24	3.36	3.48	3.60	3.71
160	2.35	2.50	2.68	2.90	3.15	3.28	3.42	3.56	3.71	3.85	3.98	4.11	4.24
180	2.65	2.82	3.02	3.26	3.54	3.69	3.85	4.01	4.17	4.33	4.48	4.63	4.77
200	2.94	3.13	3.36	3.62	3.94	4.10	4.28	4.46	4.63	4.81	4.98	5.14	5.30
210	3.09	3.29	3.52	3.81	4.13	4.31	4.49	4.68	4.86	5.05	5.22	5.40	5.56
220	3.24	3.44	3.69	3.99	4.33	4.51	4.71	4.90	5.10	5.29	5.47	5.65	5.83
230	3.38	3.60	3.86	4.17	4.53	4.72	4.92	5.12	5.33	5.53	5.72	5.91	6.09
240	3.53	3.76	4.03	4.35	4.72	4.93	5.13	5.35	5.56	5.77	5.97	6.17	6.36
250	3.68	3.91	4.19	4.53	4.92	5.13	5.35	5.57	5.79	6.01	6.22	6.43	6.62
260	3.82	4.07	4.36	4.71	5.12	5.34	5.56	5.79	6.02	6.25	6.47	6.68	6.89
270	3.97	4.22	4.53	4.89	5.31	5.54	5.78	6.02	6.25	6.49	6.72	6.94	7.15
280	4.12	4.38	4.70	5.07	5.51	5.75	5.99	6.24	6.49	6.73	6.97	7.20	7.42
290	4.26	4.54	4.87	5.26	5.71	5.95	6.20	6.46	6.72	6.97	7.22	7.45	7.68
300	4.41	4.69	5.03	5.44	5.90	6.16	6.42	6.68	6.95	7.21	7.47	7.71	7.95
310	4.56	4.85	5.20	5.62	6.10	6.36	6.63	6.91	7.18	7.45	7.71	7.97	8.21
320	4.71	5.01	5.37	5.80	6.30	6.57	6.85	7.13	7.41	7.69	7.96	8.23	8.48
330	4.85	5.16	5.54	5.98	6.49	6.77	7.06	7.35	7.64	7.93	8.21	8.48	8.74
340	5.00	5.32	5.70	6.16	6.69	6.98	7.27	7.58	7.88	8.17	8.46	8.74	9.01
350	5.15	5.48	5.87	6.34	6.89	7.18	7.49	7.80	8.11	8.41	8.71	9.00	9.27

GENERAL INFORMATION
 ENGINEERING NOTES
SAG & TENSION TABLES

Design Condition								Ruling Span (Feet)	175		ARBUTUS - INITIAL		
4750 lb. max tension at 0°F													
Conductor Condition		795 kcmil AAC - Arbutus Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3888.	3426.	2992.	2581.	2209.	2042.	1889.	1752.	1630.	1522.	1426.	1342.	1288.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 9	0-11	1- 0	1- 2	1- 4	1- 5	1- 7	1- 8	1-10	1-11	2- 1	2- 2	2- 4
50	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3
75	0- 2	0- 2	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5
100	0- 3	0- 4	0- 4	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9
120	0- 5	0- 5	0- 6	0- 7	0- 8	0- 8	0- 9	0-10	0-10	0-11	1- 0	1- 1	1- 1
140	0- 6	0- 7	0- 8	0- 9	0-10	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6
160	0- 8	0- 9	0-10	1- 0	1- 1	1- 3	1- 4	1- 5	1- 6	1- 7	1- 9	1-10	1-11
180	0-10	0-11	1- 1	1- 3	1- 5	1- 6	1- 8	1- 9	1-11	2- 0	2- 2	2- 4	2- 5
200	1- 0	1- 2	1- 3	1- 6	1- 9	1-10	2- 0	2- 2	2- 4	2- 6	2- 8	2-10	3- 0
210	1- 1	1- 3	1- 5	1- 8	1-11	2- 1	2- 3	2- 5	2- 7	2- 9	2-11	3- 1	3- 3
220	1- 3	1- 4	1- 7	1- 9	2- 1	2- 3	2- 5	2- 7	2-10	3- 0	3- 3	3- 5	3- 7
230	1- 4	1- 6	1- 8	1-11	2- 3	2- 6	2- 8	2-10	3- 1	3- 3	3- 6	3- 9	3-11
240	1- 5	1- 7	1-10	2- 1	2- 6	2- 8	2-11	3- 1	3- 4	3- 7	3-10	4- 1	4- 3
250	1- 7	1- 9	2- 0	2- 4	2- 8	2-11	3- 2	3- 4	3- 7	3-10	4- 2	4- 5	4- 8
260	1- 8	1-11	2- 2	2- 6	2-11	3- 2	3- 5	3- 8	3-11	4- 2	4- 6	4- 9	5- 0
270	1-10	2- 0	2- 4	2- 8	3- 1	3- 4	3- 8	3-11	4- 3	4- 6	4-10	5- 1	5- 5
280	1-11	2- 2	2- 6	2-11	3- 4	3- 7	3-11	4- 3	4- 6	4-10	5- 2	5- 6	5-10
290	2- 1	2- 4	2- 8	3- 1	3- 7	3-11	4- 2	4- 6	4-10	5- 2	5- 7	5-11	6- 3
300	2- 3	2- 6	2-10	3- 4	3-10	4- 2	4- 6	4-10	5- 2	5- 7	5-11	6- 4	6- 8
310	2- 4	2- 8	3- 0	3- 6	4- 1	4- 5	4- 9	5- 2	5- 7	5-11	6- 4	6- 9	7- 1
320	2- 6	2-10	3- 3	3- 9	4- 4	4- 9	5- 1	5- 6	5-11	6- 4	6- 9	7- 2	7- 7
330	2- 8	3- 0	3- 5	4- 0	4- 8	5- 0	5- 5	5-10	6- 3	6- 9	7- 2	7- 7	8- 1
340	2-10	3- 2	3- 8	4- 3	4-11	5- 4	5- 9	6- 2	6- 8	7- 2	7- 7	8- 1	8- 7
350	3- 0	3- 5	3-10	4- 6	5- 3	5- 8	6- 1	6- 7	7- 1	7- 7	8- 1	8- 7	9- 1

Ruling Span (Feet)	175		ARBUTUS - INITIAL			Design Condition 4750 lb. max tension at 0°F							
						Conductor 795 kcmil AAC - Arbutus Condition Initial Sag & Tension							
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3888.	3426.	2992.	2581.	2209.	2042.	1889.	1752.	1630.	1522.	1426.	1342.	1268.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.57	2.73	2.92	3.15	3.40	3.54	3.68	3.82	3.96	4.10	4.23	4.36	4.49
50	.73	.78	.83	.90	.97	1.01	1.05	1.09	1.13	1.17	1.21	1.25	1.28
75	1.10	1.17	1.25	1.35	1.46	1.52	1.58	1.64	1.70	1.76	1.81	1.87	1.92
100	1.47	1.56	1.67	1.80	1.94	2.02	2.10	2.18	2.26	2.34	2.42	2.49	2.57
120	1.76	1.87	2.00	2.16	2.33	2.43	2.52	2.62	2.72	2.81	2.90	2.99	3.08
140	2.06	2.19	2.34	2.52	2.72	2.83	2.94	3.06	3.17	3.28	3.39	3.49	3.59
160	2.35	2.50	2.67	2.88	3.11	3.23	3.36	3.49	3.62	3.75	3.87	3.99	4.10
180	2.64	2.81	3.01	3.24	3.50	3.64	3.78	3.93	4.07	4.22	4.35	4.49	4.62
200	2.94	3.12	3.34	3.60	3.89	4.04	4.20	4.36	4.53	4.68	4.84	4.99	5.13
210	3.08	3.28	3.51	3.78	4.08	4.25	4.41	4.58	4.75	4.92	5.08	5.24	5.39
220	3.23	3.43	3.67	3.96	4.28	4.45	4.62	4.80	4.98	5.15	5.32	5.49	5.64
230	3.38	3.59	3.84	4.14	4.47	4.65	4.83	5.02	5.20	5.39	5.56	5.74	5.90
240	3.53	3.75	4.01	4.32	4.67	4.85	5.04	5.24	5.43	5.62	5.81	5.99	6.16
250	3.67	3.90	4.18	4.50	4.86	5.05	5.25	5.46	5.66	5.86	6.05	6.23	6.41
260	3.82	4.06	4.34	4.68	5.05	5.26	5.46	5.67	5.88	6.09	6.29	6.48	6.67
270	3.97	4.21	4.51	4.85	5.25	5.46	5.67	5.89	6.11	6.32	6.53	6.73	6.93
280	4.11	4.37	4.68	5.03	5.44	5.66	5.89	6.11	6.34	6.56	6.77	6.98	7.18
290	4.26	4.53	4.84	5.21	5.64	5.86	6.10	6.33	6.56	6.79	7.02	7.23	7.44
300	4.41	4.68	5.01	5.39	5.83	6.07	6.31	6.55	6.79	7.03	7.26	7.48	7.70
310	4.55	4.84	5.18	5.57	6.03	6.27	6.52	6.77	7.02	7.26	7.50	7.73	7.96
320	4.70	4.99	5.34	5.75	6.22	6.47	6.73	6.98	7.24	7.50	7.74	7.98	8.21
330	4.85	5.15	5.51	5.93	6.42	6.67	6.94	7.20	7.47	7.73	7.98	8.23	8.47
340	4.99	5.31	5.68	6.11	6.61	6.87	7.15	7.42	7.69	7.96	8.23	8.48	8.73
350	5.14	5.46	5.85	6.29	6.80	7.08	7.36	7.64	7.92	8.20	8.47	8.73	8.98

Design Condition								Ruling Span (Feet)	190		ARBUTUS - INITIAL		
4750 lb. max tension at 0°F													
Conductor Condition		795 kcmil AAC - Arbutus Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3878.	3443.	3020.	2621.	2261.	2101.	1953.	1820.	1701.	1595.	1501.	1417.	1343.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0-11	1-0	1-2	1-4	1-6	1-8	1-9	1-11	2-0	2-2	2-3	2-5	2-7
50	0-1	0-1	0-1	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-3
75	0-2	0-2	0-3	0-3	0-3	0-3	0-4	0-4	0-4	0-4	0-5	0-5	0-5
100	0-3	0-4	0-4	0-5	0-5	0-6	0-6	0-7	0-7	0-8	0-8	0-8	0-9
120	0-5	0-5	0-6	0-7	0-8	0-8	0-9	0-9	0-10	0-11	0-11	1-0	1-1
140	0-6	0-7	0-8	0-9	0-10	0-11	1-0	1-1	1-1	1-2	1-3	1-4	1-5
160	0-8	0-9	0-10	0-11	1-1	1-2	1-3	1-4	1-5	1-6	1-8	1-9	1-10
180	0-10	0-11	1-1	1-2	1-5	1-6	1-7	1-8	1-10	1-11	2-1	2-2	2-4
200	1-0	1-2	1-3	1-6	1-8	1-10	1-11	2-1	2-3	2-5	2-6	2-8	2-10
210	1-1	1-3	1-5	1-7	1-10	2-0	2-2	2-4	2-6	2-7	2-9	2-11	3-1
220	1-2	1-4	1-6	1-9	2-0	2-2	2-4	2-6	2-8	2-10	3-1	3-3	3-5
230	1-4	1-6	1-8	1-11	2-3	2-5	2-7	2-9	2-11	3-2	3-4	3-6	3-9
240	1-5	1-7	1-10	2-1	2-5	2-7	2-10	3-0	3-2	3-5	3-7	3-10	4-1
250	1-7	1-9	2-0	2-3	2-7	2-10	3-0	3-3	3-6	3-8	3-11	4-2	4-5
260	1-8	1-10	2-2	2-5	2-10	3-1	3-3	3-6	3-9	4-0	4-3	4-6	4-9
270	1-10	2-0	2-4	2-8	3-1	3-3	3-6	3-9	4-0	4-4	4-7	4-10	5-1
280	1-11	2-2	2-6	2-10	3-3	3-6	3-9	4-1	4-4	4-8	4-11	5-2	5-6
290	2-1	2-4	2-8	3-0	3-6	3-9	4-1	4-4	4-8	5-0	5-3	5-7	5-11
300	2-2	2-6	2-10	3-3	3-9	4-0	4-4	4-8	5-0	5-4	5-8	6-0	6-4
310	2-4	2-8	3-0	3-6	4-0	4-4	4-8	5-0	5-4	5-8	6-0	6-4	6-9
320	2-6	2-10	3-2	3-8	4-3	4-7	4-11	5-3	5-8	6-0	6-5	6-9	7-2
330	2-8	3-0	3-5	3-11	4-6	4-11	5-3	5-7	6-0	6-5	6-10	7-3	7-7
340	2-10	3-2	3-7	4-2	4-10	5-2	5-7	6-0	6-5	6-10	7-3	7-8	8-1
350	3-0	3-4	3-10	4-5	5-1	5-6	5-11	6-4	6-9	7-3	7-8	8-1	8-7

Ruling Span (Feet)	190		ARBUTUS - INITIAL			Design Condition 4750 lb. max tension at 0°F							
						Conductor 795 kcmil AAC - Arbutus Condition Initial Sag & Tension							
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3878.	3443.	3020.	2621.	2261.	2101.	1953.	1820.	1701.	1595.	1501.	1417.	1343.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.79	2.96	3.16	3.39	3.65	3.79	3.93	4.07	4.21	4.35	4.48	4.61	4.74
50	.73	.78	.83	.89	.96	1.00	1.03	1.07	1.11	1.14	1.18	1.21	1.25
75	1.10	1.17	1.25	1.34	1.44	1.49	1.55	1.61	1.66	1.72	1.77	1.82	1.87
100	1.47	1.56	1.66	1.78	1.92	1.99	2.07	2.14	2.21	2.29	2.36	2.43	2.49
120	1.76	1.87	1.99	2.14	2.31	2.39	2.48	2.57	2.66	2.74	2.83	2.91	2.99
140	2.05	2.18	2.33	2.50	2.69	2.79	2.89	3.00	3.10	3.20	3.30	3.40	3.49
160	2.35	2.49	2.66	2.85	3.07	3.19	3.31	3.43	3.54	3.66	3.77	3.88	3.99
180	2.64	2.80	2.99	3.21	3.46	3.59	3.72	3.85	3.99	4.12	4.24	4.37	4.49
200	2.93	3.11	3.32	3.57	3.84	3.99	4.13	4.28	4.43	4.57	4.72	4.85	4.99
210	3.08	3.27	3.49	3.75	4.03	4.19	4.34	4.50	4.65	4.80	4.95	5.10	5.24
220	3.23	3.43	3.66	3.93	4.23	4.39	4.55	4.71	4.87	5.03	5.19	5.34	5.48
230	3.37	3.58	3.82	4.10	4.42	4.58	4.75	4.92	5.09	5.26	5.42	5.58	5.73
240	3.52	3.74	3.99	4.28	4.61	4.78	4.96	5.14	5.32	5.49	5.66	5.82	5.98
250	3.67	3.89	4.16	4.46	4.80	4.98	5.17	5.35	5.54	5.72	5.90	6.07	6.23
260	3.81	4.05	4.32	4.64	4.99	5.18	5.37	5.57	5.76	5.95	6.13	6.31	6.48
270	3.96	4.20	4.49	4.82	5.19	5.38	5.58	5.78	5.98	6.18	6.37	6.55	6.73
280	4.11	4.36	4.65	5.00	5.38	5.58	5.79	6.00	6.20	6.41	6.60	6.80	6.98
290	4.25	4.52	4.82	5.17	5.57	5.78	5.99	6.21	6.42	6.63	6.84	7.04	7.23
300	4.40	4.67	4.99	5.35	5.76	5.98	6.20	6.42	6.65	6.86	7.08	7.28	7.48
310	4.55	4.83	5.15	5.53	5.96	6.18	6.41	6.64	6.87	7.09	7.31	7.52	7.73
320	4.69	4.98	5.32	5.71	6.15	6.38	6.61	6.85	7.09	7.32	7.55	7.77	7.98
330	4.84	5.14	5.49	5.89	6.34	6.58	6.82	7.07	7.31	7.55	7.78	8.01	8.23
340	4.99	5.29	5.65	6.07	6.53	6.78	7.03	7.28	7.53	7.78	8.02	8.25	8.48
350	5.13	5.45	5.82	6.25	6.72	6.98	7.24	7.50	7.75	8.01	8.26	8.50	8.73

Design Condition								Ruling Span (Feet)	205		ARBUTUS - INITIAL		
4750 lb. max tension at 0°F													
Conductor		795 kcmil AAC - Arbutus											
Condition		Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3888.	3461.	3048.	2661.	2313.	2158.	2015.	1886.	1770.	1666.	1573.	1490.	1416.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 1	1- 2	1- 4	1- 6	1- 9	1-10	2- 0	2- 1	2- 3	2- 5	2- 6	2- 8	2-10
50	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2
75	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5
100	0- 3	0- 4	0- 4	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 8
120	0- 5	0- 5	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0-10	0-10	0-11	0-11	1- 0
140	0- 6	0- 7	0- 8	0- 9	0-10	0-11	0-11	1- 0	1- 1	1- 2	1- 2	1- 3	1- 4
160	0- 8	0- 9	0-10	0-11	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9
180	0-10	0-11	1- 0	1- 2	1- 4	1- 5	1- 7	1- 8	1- 9	1-10	2- 0	2- 1	2- 2
200	1- 0	1- 1	1- 3	1- 5	1- 8	1- 9	1-11	2- 0	2- 2	2- 3	2- 5	2- 7	2- 8
210	1- 1	1- 3	1- 5	1- 7	1-10	1-11	2- 1	2- 3	2- 4	2- 6	2- 8	2-10	2-11
220	1- 2	1- 4	1- 6	1- 9	2- 0	2- 2	2- 3	2- 5	2- 7	2- 9	2-11	3- 1	3- 3
230	1- 4	1- 6	1- 8	1-11	2- 2	2- 4	2- 6	2- 8	2-10	3- 0	3- 2	3- 4	3- 6
240	1- 5	1- 7	1-10	2- 1	2- 4	2- 6	2- 9	2-11	3- 1	3- 3	3- 6	3- 8	3-10
250	1- 6	1- 9	1-11	2- 3	2- 7	2- 9	2-11	3- 2	3- 4	3- 7	3- 9	3-11	4- 2
260	1- 8	1-10	2- 1	2- 5	2- 9	3- 0	3- 2	3- 5	3- 7	3-10	4- 1	4- 3	4- 6
270	1- 9	2- 0	2- 3	2- 7	3- 0	3- 2	3- 5	3- 8	3-11	4- 2	4- 4	4- 7	4-10
280	1-11	2- 2	2- 5	2- 9	3- 2	3- 5	3- 8	3-11	4- 2	4- 5	4- 8	4-11	5- 3
290	2- 1	2- 4	2- 7	3- 0	3- 5	3- 8	3-11	4- 2	4- 6	4- 9	5- 0	5- 4	5- 7
300	2- 2	2- 6	2-10	3- 2	3- 8	3-11	4- 3	4- 6	4- 9	5- 1	5- 5	5- 8	6- 0
310	2- 4	2- 8	3- 0	3- 5	3-11	4- 2	4- 6	4-10	5- 1	5- 5	5- 9	6- 1	6- 5
320	2- 6	2-10	3- 2	3- 8	4- 2	4- 6	4- 9	5- 1	5- 5	5- 9	6- 1	6- 5	6-10
330	2- 8	3- 0	3- 5	3-10	4- 5	4- 9	5- 1	5- 5	5- 9	6- 2	6- 6	6-10	7- 3
340	2-10	3- 2	3- 7	4- 1	4- 8	5- 0	5- 5	5- 9	6- 2	6- 6	6-11	7- 3	7- 8
350	3- 0	3- 4	3-10	4- 4	5- 0	5- 4	5- 9	6- 1	6- 6	6-11	7- 4	7- 9	8- 1

Ruling Span (Feet)	205		ARBUTUS - INITIAL			Design Condition 4750 lb. max tension at 0°F							
						Conductor Condition	795 kcmil AAC - Arbutus Initial Sag & Tension						
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3888.	3461.	3048.	2661.	2313.	2158.	2015.	1886.	1770.	1666.	1573.	1490.	1416.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	3.00	3.18	3.39	3.63	3.89	4.03	4.17	4.31	4.45	4.59	4.72	4.85	4.98
50	.73	.78	.83	.89	.95	.98	1.02	1.05	1.09	1.12	1.15	1.18	1.21
75	1.10	1.16	1.24	1.33	1.42	1.47	1.53	1.58	1.63	1.68	1.73	1.78	1.82
100	1.47	1.55	1.65	1.77	1.90	1.97	2.03	2.10	2.17	2.24	2.30	2.37	2.43
120	1.76	1.86	1.99	2.13	2.28	2.36	2.44	2.52	2.61	2.69	2.76	2.84	2.91
140	2.05	2.17	2.32	2.48	2.66	2.75	2.85	2.94	3.04	3.13	3.22	3.31	3.40
160	2.34	2.48	2.65	2.83	3.04	3.15	3.26	3.37	3.47	3.58	3.69	3.79	3.89
180	2.64	2.80	2.98	3.19	3.42	3.54	3.66	3.79	3.91	4.03	4.15	4.26	4.37
200	2.93	3.11	3.31	3.54	3.80	3.93	4.07	4.21	4.34	4.48	4.61	4.73	4.86
210	3.08	3.26	3.47	3.72	3.99	4.13	4.27	4.42	4.56	4.70	4.84	4.97	5.10
220	3.22	3.42	3.64	3.90	4.18	4.33	4.48	4.63	4.78	4.92	5.07	5.21	5.34
230	3.37	3.57	3.81	4.07	4.37	4.52	4.68	4.84	4.99	5.15	5.30	5.44	5.59
240	3.52	3.73	3.97	4.25	4.56	4.72	4.88	5.05	5.21	5.37	5.53	5.68	5.83
250	3.66	3.88	4.14	4.43	4.75	4.92	5.09	5.26	5.43	5.60	5.76	5.92	6.07
260	3.81	4.04	4.30	4.60	4.94	5.11	5.29	5.47	5.65	5.82	5.99	6.15	6.31
270	3.96	4.19	4.47	4.78	5.13	5.31	5.49	5.68	5.86	6.04	6.22	6.39	6.56
280	4.10	4.35	4.63	4.96	5.32	5.51	5.70	5.89	6.08	6.27	6.45	6.63	6.80
290	4.25	4.50	4.80	5.14	5.51	5.70	5.90	6.10	6.30	6.49	6.68	6.87	7.04
300	4.40	4.66	4.98	5.31	5.70	5.90	6.11	6.31	6.51	6.72	6.91	7.10	7.29
310	4.54	4.81	5.13	5.49	5.89	6.10	6.31	6.52	6.73	6.94	7.14	7.34	7.53
320	4.69	4.97	5.30	5.67	6.08	6.29	6.51	6.73	6.95	7.16	7.37	7.58	7.77
330	4.83	5.12	5.46	5.84	6.27	6.49	6.72	6.94	7.17	7.39	7.60	7.81	8.01
340	4.98	5.28	5.63	6.02	6.46	6.69	6.92	7.15	7.38	7.61	7.83	8.05	8.26
350	5.13	5.43	5.79	6.20	6.65	6.88	7.12	7.36	7.60	7.84	8.06	8.29	8.50

Design Condition								Ruling Span (Feet)	220		ARBUTUS - INITIAL		
4750 lb. max tension at 0°F													
Conductor 795 kcmil AAC - Arbutus Condition Initial Sag & Tension													
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3899.	3480.	3076.	2701.	2384.	2214.	2076.	1950.	1836.	1734.	1642.	1560.	1485.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 2	1- 4	1- 6	1- 9	1-11	2- 1	2- 3	2- 4	2- 6	2- 8	2-10	2-11	3- 1
50	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2
75	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5
100	0- 3	0- 4	0- 4	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8	0- 8
120	0- 5	0- 5	0- 6	0- 6	0- 7	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-11	0-11
140	0- 6	0- 7	0- 8	0- 9	0-10	0-10	0-11	1- 0	1- 0	1- 1	1- 2	1- 3	1- 3
160	0- 8	0- 9	0-10	0-11	1- 1	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8
180	0-10	0-11	1- 0	1- 2	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-11	2- 0	2- 1
200	1- 0	1- 1	1- 3	1- 5	1- 7	1- 9	1-10	1-11	2- 1	2- 2	2- 4	2- 5	2- 7
210	1- 1	1- 3	1- 5	1- 7	1- 9	1-11	2- 0	2- 2	2- 3	2- 5	2- 7	2- 8	2-10
220	1- 2	1- 4	1- 6	1- 9	1-11	2- 1	2- 3	2- 4	2- 6	2- 8	2-10	2-11	3- 1
230	1- 4	1- 6	1- 8	1-10	2- 2	2- 3	2- 5	2- 7	2- 9	2-11	3- 1	3- 2	3- 4
240	1- 5	1- 7	1- 9	2- 0	2- 4	2- 6	2- 8	2-10	3- 0	3- 2	3- 4	3- 6	3- 8
250	1- 6	1- 9	1-11	2- 2	2- 6	2- 8	2-10	3- 0	3- 3	3- 5	3- 7	3- 9	4- 0
260	1- 8	1-10	2- 1	2- 5	2- 9	2-11	3- 1	3- 3	3- 6	3- 8	3-11	4- 1	4- 3
270	1- 9	2- 0	2- 3	2- 7	2-11	3- 1	3- 4	3- 6	3- 9	4- 0	4- 2	4- 5	4- 7
280	1-11	2- 2	2- 5	2- 9	3- 2	3- 4	3- 7	3-10	4- 0	4- 3	4- 6	4- 9	5- 0
290	2- 1	2- 4	2- 7	2-11	3- 4	3- 7	3-10	4- 1	4- 4	4- 7	4-10	5- 1	5- 4
300	2- 2	2- 5	2- 9	3- 2	3- 7	3-10	4- 1	4- 4	4- 7	4-11	5- 2	5- 5	5- 8
310	2- 4	2- 7	2-11	3- 4	3-10	4- 1	4- 4	4- 8	4-11	5- 3	5- 6	5-10	6- 1
320	2- 6	2- 9	3- 2	3- 7	4- 1	4- 4	4- 8	4-11	5- 3	5- 7	5-10	6- 2	6- 6
330	2- 8	3- 0	3- 4	3-10	4- 4	4- 8	4-11	5- 3	5- 7	5-11	6- 3	6- 7	6-11
340	2-10	3- 2	3- 7	4- 0	4- 7	4-11	5- 3	5- 7	5-11	6- 3	6- 7	7- 0	7- 4
350	3- 0	3- 4	3- 9	4- 3	4-11	5- 2	5- 7	5-11	6- 3	6- 8	7- 0	7- 4	7- 9

Ruling Span (Feet)	220		ARBUTUS - INITIAL			Design Condition 4750 lb. i				
						Conductor Condition	795 kcmil AAC - Arbutus Initial Sag & Tension			
Temp (°F)	20	30	40	50	60	65	70	75	80	85
Tension (lbs)	3899.	3480.	3076.	2701.	2364.	2214.	2076.	1950.	1836.	1734.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	3.22	3.41	3.62	3.87	4.13	4.27	4.41	4.55	4.69	4.83
50	.73	.77	.82	.88	.94	.97	1.00	1.03	1.07	1.10
75	1.10	1.16	1.24	1.32	1.41	1.46	1.50	1.55	1.60	1.65
100	1.46	1.55	1.65	1.76	1.88	1.94	2.01	2.07	2.13	2.19
120	1.76	1.86	1.98	2.11	2.25	2.33	2.41	2.48	2.56	2.63
140	2.05	2.17	2.31	2.46	2.63	2.72	2.81	2.90	2.98	3.07
160	2.34	2.48	2.64	2.81	3.01	3.11	3.21	3.31	3.41	3.51
180	2.63	2.79	2.96	3.16	3.38	3.49	3.61	3.72	3.84	3.95
200	2.93	3.10	3.29	3.52	3.76	3.88	4.01	4.14	4.26	4.39
210	3.07	3.25	3.46	3.69	3.95	4.08	4.21	4.34	4.48	4.61
220	3.22	3.41	3.62	3.87	4.13	4.27	4.41	4.55	4.69	4.83
230	3.36	3.56	3.79	4.04	4.32	4.47	4.61	4.76	4.90	5.05
240	3.51	3.72	3.95	4.22	4.51	4.66	4.81	4.97	5.12	5.27
250	3.66	3.87	4.12	4.39	4.70	4.85	5.01	5.17	5.33	5.49
260	3.80	4.03	4.28	4.57	4.88	5.05	5.21	5.38	5.54	5.70
270	3.95	4.18	4.45	4.75	5.07	5.24	5.41	5.59	5.76	5.92
280	4.10	4.34	4.61	4.92	5.26	5.44	5.61	5.79	5.97	6.14
290	4.24	4.49	4.78	5.10	5.45	5.63	5.82	6.00	6.18	6.36
300	4.39	4.65	4.94	5.27	5.64	5.83	6.02	6.21	6.40	6.58
310	4.54	4.80	5.11	5.45	5.82	6.02	6.22	6.41	6.61	6.80
320	4.68	4.96	5.27	5.63	6.01	6.21	6.42	6.62	6.82	7.02
330	4.83	5.11	5.44	5.80	6.20	6.41	6.62	6.83	7.04	7.24
340	4.97	5.27	5.60	5.98	6.39	6.60	6.82	7.03	7.25	7.46
350	5.12	5.42	5.76	6.15	6.58	6.80	7.02	7.24	7.46	7.68

Design Condition								Ruling Span (Feet)	235		ARBUTUS - INITIAL		
4750 lb. max tension at 0°F													
Conductor Condition		795 kcmil AAC - Arbutus Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3910.	3499.	3105.	2740.	2414.	2268.	2134.	2011.	1900.	1800.	1709.	1627.	1553.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 4	1- 6	1- 8	1-11	2- 2	2- 4	2- 5	2- 7	2- 9	2-11	3- 1	3- 3	3- 4
50	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2
75	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 4	0- 5
100	0- 3	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8
120	0- 5	0- 5	0- 6	0- 6	0- 7	0- 8	0- 8	0- 9	0- 9	0- 9	0-10	0-10	0-11
140	0- 6	0- 7	0- 8	0- 9	0-10	0-10	0-11	0-11	1- 0	1- 1	1- 1	1- 2	1- 3
160	0- 8	0- 9	0-10	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 4	1- 5	1- 6	1- 7
180	0-10	0-11	1- 0	1- 2	1- 4	1- 4	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0
200	1- 0	1- 1	1- 3	1- 5	1- 7	1- 8	1- 9	1-11	2- 0	2- 1	2- 3	2- 4	2- 5
210	1- 1	1- 3	1- 4	1- 7	1- 9	1-10	2- 0	2- 1	2- 2	2- 4	2- 5	2- 7	2- 8
220	1- 2	1- 4	1- 6	1- 8	1-11	2- 0	2- 2	2- 3	2- 5	2- 7	2- 8	2-10	2-11
230	1- 4	1- 5	1- 8	1-10	2- 1	2- 3	2- 4	2- 6	2- 8	2- 9	2-11	3- 1	3- 3
240	1- 5	1- 7	1- 9	2- 0	2- 3	2- 5	2- 7	2- 9	2-10	3- 0	3- 2	3- 4	3- 6
250	1- 6	1- 9	1-11	2- 2	2- 5	2- 7	2- 9	2-11	3- 1	3- 3	3- 5	3- 8	3-10
260	1- 8	1-10	2- 1	2- 4	2- 8	2-10	3- 0	3- 2	3- 4	3- 7	3- 9	3-11	4- 1
270	1- 9	2- 0	2- 3	2- 6	2-10	3- 0	3- 3	3- 5	3- 7	3-10	4- 0	4- 3	4- 5
280	1-11	2- 2	2- 5	2- 9	3- 1	3- 3	3- 6	3- 8	3-11	4- 1	4- 4	4- 6	4- 9
290	2- 1	2- 3	2- 7	2-11	3- 4	3- 6	3- 9	3-11	4- 2	4- 5	4- 8	4-10	5- 1
300	2- 2	2- 5	2- 9	3- 1	3- 6	3- 9	4- 0	4- 3	4- 6	4- 9	4-11	5- 2	5- 5
310	2- 4	2- 7	2-11	3- 4	3- 9	4- 0	4- 3	4- 6	4- 9	5- 0	5- 3	5- 7	5-10
320	2- 6	2- 9	3- 1	3- 6	4- 0	4- 3	4- 6	4-10	5- 1	5- 4	5- 8	5-11	6- 2
330	2- 8	2-11	3- 4	3- 9	4- 3	4- 6	4-10	5- 1	5- 5	5- 8	6- 0	6- 3	6- 7
340	2-10	3- 1	3- 6	4- 0	4- 6	4-10	5- 1	5- 5	5- 9	6- 0	6- 4	6- 8	7- 0
350	3- 0	3- 4	3- 9	4- 3	4- 9	5- 1	5- 5	5- 9	6- 1	6- 5	6- 9	7- 1	7- 5

Ruling Span (Feet)	235		ARBUTUS - INITIAL			Design Condition 4750 lb. max tension at 0°F							
						Conductor 795 kcmil AAC - Arbutus Condition Initial Sag & Tension							
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3910.	3499.	3105.	2740.	2414.	2268.	2134.	2011.	1900.	1800.	1709.	1627.	1553.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	3.43	3.63	3.85	4.10	4.37	4.51	4.65	4.79	4.93	5.08	5.19	5.32	5.45
50	.73	.77	.82	.87	.93	.96	.99	1.02	1.05	1.08	1.10	1.13	1.16
75	1.10	1.16	1.23	1.31	1.39	1.44	1.48	1.53	1.57	1.62	1.66	1.70	1.74
100	1.46	1.54	1.64	1.75	1.86	1.92	1.98	2.04	2.10	2.15	2.21	2.26	2.32
120	1.75	1.85	1.97	2.09	2.23	2.30	2.37	2.44	2.51	2.58	2.65	2.72	2.78
140	2.05	2.16	2.30	2.44	2.60	2.69	2.77	2.85	2.93	3.01	3.09	3.17	3.25
160	2.34	2.47	2.62	2.79	2.97	3.07	3.16	3.26	3.35	3.45	3.54	3.62	3.71
180	2.63	2.78	2.95	3.14	3.35	3.45	3.56	3.67	3.77	3.88	3.98	4.08	4.17
200	2.92	3.09	3.28	3.49	3.72	3.84	3.96	4.07	4.19	4.31	4.42	4.53	4.64
210	3.07	3.24	3.44	3.66	3.90	4.03	4.15	4.28	4.40	4.52	4.64	4.76	4.87
220	3.21	3.40	3.61	3.84	4.09	4.22	4.35	4.48	4.61	4.74	4.86	4.98	5.10
230	3.36	3.55	3.77	4.01	4.28	4.41	4.55	4.69	4.82	4.95	5.08	5.21	5.33
240	3.51	3.71	3.93	4.19	4.46	4.60	4.75	4.89	5.03	5.17	5.30	5.44	5.58
250	3.65	3.86	4.10	4.36	4.65	4.80	4.94	5.09	5.24	5.38	5.53	5.66	5.80
260	3.80	4.02	4.26	4.54	4.83	4.99	5.14	5.30	5.45	5.60	5.75	5.89	6.03
270	3.94	4.17	4.43	4.71	5.02	5.18	5.34	5.50	5.66	5.81	5.97	6.12	6.26
280	4.09	4.32	4.59	4.89	5.21	5.37	5.54	5.70	5.87	6.03	6.19	6.34	6.49
290	4.24	4.48	4.75	5.06	5.39	5.56	5.74	5.91	6.08	6.25	6.41	6.57	6.72
300	4.38	4.63	4.92	5.24	5.58	5.75	5.93	6.11	6.29	6.46	6.63	6.80	6.96
310	4.53	4.79	5.08	5.41	5.76	5.95	6.13	6.32	6.50	6.68	6.85	7.02	7.19
320	4.68	4.94	5.25	5.58	5.95	6.14	6.33	6.52	6.71	6.89	7.07	7.25	7.42
330	4.82	5.10	5.41	5.76	6.14	6.33	6.53	6.72	6.92	7.11	7.29	7.48	7.65
340	4.97	5.25	5.57	5.93	6.32	6.52	6.72	6.93	7.13	7.32	7.52	7.70	7.88
350	5.11	5.41	5.74	6.11	6.51	6.71	6.92	7.13	7.34	7.54	7.74	7.93	8.12

Design Condition								Ruling Span (Feet)	250		ARBUTUS - INITIAL		
4750 lb. max tension at 0°F													
Conductor Condition		795 kcmil AAC - Arbutus Initial Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3921.	3518.	3134.	2779.	2463.	2321.	2191.	2071.	1962.	1863.	1773.	1692.	1618.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 6	1- 8	1-11	2- 2	2- 5	2- 7	2- 8	2-10	3- 0	3- 2	3- 4	3- 6	3- 8
50	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2
75	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 4	0- 4
100	0- 3	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7	0- 7
120	0- 5	0- 5	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-10
140	0- 6	0- 7	0- 8	0- 8	0- 9	0-10	0-11	0-11	1- 0	1- 0	1- 1	1- 1	1- 2
160	0- 8	0- 9	0-10	0-11	1- 0	1- 1	1- 2	1- 2	1- 3	1- 4	1- 5	1- 5	1- 6
180	0-10	0-11	1- 0	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11
200	1- 0	1- 1	1- 3	1- 5	1- 7	1- 8	1- 9	1-10	1-11	2- 1	2- 2	2- 3	2- 4
210	1- 1	1- 3	1- 4	1- 6	1- 9	1-10	1-11	2- 0	2- 2	2- 3	2- 4	2- 6	2- 7
220	1- 2	1- 4	1- 6	1- 8	1-11	2- 0	2- 1	2- 3	2- 4	2- 6	2- 7	2- 9	2-10
230	1- 4	1- 5	1- 7	1-10	2- 1	2- 2	2- 4	2- 5	2- 7	2- 8	2-10	3- 0	3- 1
240	1- 5	1- 7	1- 9	2- 0	2- 3	2- 4	2- 6	2- 8	2- 9	2-11	3- 1	3- 3	3- 4
250	1- 6	1- 8	1-11	2- 2	2- 5	2- 7	2- 8	2-10	3- 0	3- 2	3- 4	3- 6	3- 8
260	1- 8	1-10	2- 1	2- 4	2- 7	2- 9	2-11	3- 1	3- 3	3- 5	3- 7	3- 9	3-11
270	1- 9	2- 0	2- 3	2- 6	2-10	3- 0	3- 2	3- 4	3- 6	3- 8	3-11	4- 1	4- 3
280	1-11	2- 1	2- 5	2- 8	3- 0	3- 2	3- 5	3- 7	3- 9	4- 0	4- 2	4- 4	4- 7
290	2- 1	2- 3	2- 7	2-10	3- 3	3- 5	3- 7	3-10	4- 1	4- 3	4- 6	4- 8	4-11
300	2- 2	2- 5	2- 9	3- 1	3- 5	3- 8	3-11	4- 1	4- 4	4- 7	4- 9	5- 0	5- 3
310	2- 4	2- 7	2-11	3- 3	3- 8	3-11	4- 2	4- 4	4- 7	4-10	5- 1	5- 4	5- 7
320	2- 6	2- 9	3- 1	3- 6	3-11	4- 2	4- 5	4- 8	4-11	5- 2	5- 5	5- 8	5-11
330	2- 8	2-11	3- 3	3- 8	4- 2	4- 5	4- 8	4-11	5- 3	5- 6	5- 9	6- 1	6- 4
340	2-10	3- 1	3- 6	3-11	4- 5	4- 8	5- 0	5- 3	5- 6	5-10	6- 2	6- 5	6- 9
350	2-11	3- 3	3- 8	4- 2	4- 8	5- 0	5- 3	5- 7	5-10	6- 2	6- 6	6-10	7- 1

Ruling Span (Feet)	250		ARBUTUS - FINAL			Design Condition 4750 lb. max tension at 0°F							
						Conductor Condition	795 kcmil AAC - Arbutus Final Sag & Tension						
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3134.	2718.	2370.	2089.	1864.	1769.	1684.	1608.	1540.	1478.	1422.	1371.	1325.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	4.08	4.38	4.69	5.00	5.29	5.43	5.57	5.70	5.82	5.94	6.06	6.17	6.28
50	.82	.88	.94	1.00	1.06	1.09	1.11	1.14	1.16	1.19	1.21	1.23	1.25
75	1.22	1.31	1.41	1.50	1.59	1.63	1.67	1.71	1.75	1.78	1.82	1.85	1.88
100	1.63	1.75	1.88	2.00	2.12	2.17	2.23	2.28	2.33	2.38	2.42	2.47	2.51
120	1.96	2.10	2.25	2.40	2.54	2.61	2.67	2.73	2.79	2.85	2.91	2.96	3.01
140	2.28	2.45	2.63	2.80	2.96	3.04	3.12	3.19	3.26	3.33	3.39	3.45	3.51
160	2.61	2.80	3.00	3.20	3.39	3.48	3.56	3.64	3.73	3.80	3.88	3.95	4.02
180	2.94	3.15	3.38	3.60	3.81	3.91	4.01	4.10	4.19	4.28	4.36	4.44	4.52
200	3.26	3.50	3.75	4.00	4.23	4.34	4.45	4.56	4.66	4.75	4.85	4.93	5.02
210	3.43	3.68	3.94	4.20	4.44	4.56	4.67	4.78	4.89	4.99	5.09	5.18	5.27
220	3.59	3.86	4.13	4.40	4.66	4.78	4.90	5.01	5.12	5.23	5.33	5.43	5.52
230	3.75	4.03	4.32	4.60	4.87	5.00	5.12	5.24	5.36	5.47	5.57	5.68	5.77
240	3.92	4.21	4.50	4.80	5.08	5.21	5.34	5.47	5.59	5.70	5.81	5.92	6.03
250	4.08	4.38	4.69	5.00	5.29	5.43	5.57	5.70	5.82	5.94	6.06	6.17	6.28
260	4.24	4.56	4.88	5.20	5.50	5.65	5.79	5.92	6.05	6.18	6.30	6.42	6.53
270	4.41	4.73	5.07	5.40	5.71	5.87	6.01	6.15	6.29	6.42	6.54	6.66	6.78
280	4.57	4.91	5.25	5.60	5.93	6.08	6.23	6.38	6.52	6.65	6.78	6.91	7.03
290	4.73	5.08	5.44	5.80	6.14	6.30	6.46	6.61	6.75	6.89	7.03	7.16	7.28
300	4.90	5.26	5.63	6.00	6.35	6.52	6.68	6.84	6.99	7.13	7.27	7.40	7.53
310	5.06	5.43	5.82	6.20	6.56	6.73	6.90	7.06	7.22	7.37	7.51	7.65	7.78
320	5.22	5.61	6.00	6.40	6.77	6.95	7.12	7.29	7.45	7.61	7.75	7.90	8.03
330	5.39	5.78	6.19	6.60	6.98	7.17	7.35	7.52	7.68	7.84	8.00	8.14	8.29
340	5.55	5.96	6.38	6.80	7.20	7.39	7.57	7.75	7.92	8.08	8.24	8.39	8.54
350	5.71	6.13	6.57	7.00	7.41	7.60	7.79	7.97	8.15	8.32	8.48	8.64	8.79

Ruling Span (Feet)	250		ARBUTUS - INITIAL			Design Condition 4750 lb. max tension at 0°F							
						Conductor 795 kcmil AAC - Arbutus Condition Initial Sag & Tension							
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3921.	3518.	3134.	2779.	2463.	2321.	2191.	2071.	1962.	1863.	1773.	1692.	1618.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	3.65	3.85	4.08	4.33	4.60	4.74	4.88	5.02	5.16	5.29	5.42	5.55	5.68
50	.73	.77	.82	.87	.92	.95	.98	1.00	1.03	1.06	1.08	1.11	1.14
75	1.09	1.16	1.22	1.30	1.38	1.42	1.46	1.51	1.55	1.59	1.63	1.67	1.70
100	1.46	1.54	1.63	1.73	1.84	1.90	1.95	2.01	2.06	2.12	2.17	2.22	2.27
120	1.75	1.85	1.96	2.08	2.21	2.28	2.34	2.41	2.47	2.54	2.60	2.66	2.72
140	2.04	2.16	2.28	2.43	2.58	2.65	2.73	2.81	2.89	2.96	3.04	3.11	3.18
160	2.33	2.46	2.61	2.77	2.95	3.03	3.12	3.21	3.30	3.39	3.47	3.55	3.63
180	2.63	2.77	2.94	3.12	3.31	3.41	3.51	3.61	3.71	3.81	3.90	4.00	4.09
200	2.92	3.08	3.26	3.47	3.68	3.79	3.90	4.01	4.12	4.23	4.34	4.44	4.54
210	3.06	3.23	3.43	3.64	3.87	3.98	4.10	4.22	4.33	4.44	4.56	4.66	4.77
220	3.21	3.39	3.59	3.81	4.05	4.17	4.29	4.42	4.54	4.66	4.77	4.89	5.00
230	3.36	3.54	3.75	3.99	4.23	4.36	4.49	4.62	4.74	4.87	4.99	5.11	5.22
240	3.50	3.70	3.92	4.16	4.42	4.55	4.68	4.82	4.95	5.08	5.21	5.33	5.45
250	3.65	3.85	4.08	4.33	4.60	4.74	4.88	5.02	5.16	5.29	5.42	5.55	5.68
260	3.79	4.00	4.24	4.51	4.79	4.93	5.08	5.22	5.36	5.50	5.64	5.77	5.90
270	3.94	4.16	4.41	4.68	4.97	5.12	5.27	5.42	5.57	5.71	5.86	6.00	6.13
280	4.08	4.31	4.57	4.85	5.15	5.31	5.47	5.62	5.78	5.93	6.07	6.22	6.36
290	4.23	4.47	4.73	5.03	5.34	5.50	5.66	5.82	5.98	6.14	6.29	6.44	6.59
300	4.38	4.62	4.90	5.20	5.52	5.69	5.86	6.02	6.19	6.35	6.51	6.66	6.81
310	4.52	4.77	5.06	5.37	5.71	5.88	6.05	6.22	6.39	6.56	6.73	6.89	7.04
320	4.67	4.93	5.22	5.55	5.89	6.07	6.25	6.42	6.60	6.77	6.94	7.11	7.27
330	4.81	5.08	5.39	5.72	6.07	6.26	6.44	6.63	6.81	6.99	7.16	7.33	7.50
340	4.96	5.24	5.55	5.89	6.26	6.45	6.64	6.83	7.01	7.20	7.38	7.55	7.72
350	5.11	5.39	5.71	6.07	6.44	6.64	6.83	7.03	7.22	7.41	7.59	7.77	7.95

Design Condition									Ruling Span (Feet)	145		RAVEN FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor 1/0 AWG ACSR - Raven Condition Final Sag & Tension													
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1287.	1174.	1062.	951.	841.	787.	734.	682.	632.	583.	536.	491.	450.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 4	0- 4	0- 5	0- 5	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0-10	0-11
50	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2
75	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3
100	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5
120	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6	0- 6	0- 7	0- 7
140	0- 4	0- 4	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0-10
160	0- 5	0- 5	0- 6	0- 6	0- 7	0- 8	0- 8	0- 9	0- 9	0-10	0-11	1- 0	1- 1
180	0- 6	0- 7	0- 7	0- 8	0- 9	0- 9	0-10	0-11	1- 0	1- 1	1- 2	1- 3	1- 4
200	0- 7	0- 8	0- 9	0-10	0-11	1- 0	1- 0	1- 1	1- 2	1- 3	1- 5	1- 6	1- 8
210	0- 8	0- 9	0-10	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 8	1-10
220	0- 9	0- 9	0-10	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 7	1- 8	1-10	2- 0
230	0- 9	0-10	0-11	1- 1	1- 2	1- 3	1- 4	1- 5	1- 7	1- 8	1-10	2- 0	2- 2
240	0-10	0-11	1- 0	1- 2	1- 3	1- 4	1- 6	1- 7	1- 8	1-10	2- 0	2- 2	2- 4
250	0-11	1- 0	1- 1	1- 3	1- 5	1- 6	1- 7	1- 8	1-10	2- 0	2- 2	2- 4	2- 7
260	1- 0	1- 1	1- 2	1- 4	1- 6	1- 7	1- 9	1-10	2- 0	2- 2	2- 4	2- 6	2- 9
270	1- 1	1- 2	1- 3	1- 5	1- 7	1- 9	1-10	2- 0	2- 2	2- 4	2- 6	2- 9	3- 0
280	1- 2	1- 3	1- 5	1- 6	1- 9	1-10	2- 0	2- 1	2- 3	2- 6	2- 8	2-11	3- 2
290	1- 3	1- 4	1- 6	1- 8	1-10	2- 0	2- 1	2- 3	2- 5	2- 8	2-11	3- 2	3- 5
300	1- 4	1- 5	1- 7	1- 9	2- 0	2- 1	2- 3	2- 5	2- 7	2-10	3- 1	3- 4	3- 8
310	1- 5	1- 6	1- 8	1-10	2- 1	2- 3	2- 5	2- 7	2-10	3- 0	3- 4	3- 7	3-11
320	1- 6	1- 7	1- 9	2- 0	2- 3	2- 5	2- 7	2- 9	3- 0	3- 3	3- 6	3-10	4- 2
330	1- 7	1- 9	1-11	2- 1	2- 5	2- 7	2- 9	2-11	3- 2	3- 5	3- 9	4- 1	4- 5
340	1- 8	1-10	2- 0	2- 3	2- 6	2- 8	2-11	3- 1	3- 4	3- 8	3-11	4- 4	4- 8
350	1- 9	1-11	2- 2	2- 5	2- 8	2-10	3- 1	3- 4	3- 7	3-10	4- 2	4- 7	5- 0

Ruling Span (Feet)	145		RAVEN FINAL		Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind									
					Conductor 1/0 AWG ACSR - Raven Condition Final Sag & Tension									
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100	
Tension (lbs)	1287.	1174.	1062.	951.	841.	787.	734.	682.	632.	583.	536.	491.	450.	
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	
Ruling Span Sag	1.63	1.70	1.79	1.89	2.01	2.08	2.15	2.23	2.32	2.42	2.52	2.63	2.75	
50	.56	.59	.62	.65	.69	.72	.74	.77	.80	.83	.87	.91	.95	
75	.84	.88	.93	.98	1.04	1.08	1.11	1.16	1.20	1.25	1.30	1.36	1.42	
100	1.12	1.17	1.24	1.31	1.39	1.43	1.49	1.54	1.60	1.67	1.74	1.82	1.90	
120	1.35	1.41	1.48	1.57	1.67	1.72	1.78	1.85	1.92	2.00	2.09	2.18	2.28	
140	1.57	1.64	1.73	1.83	1.94	2.01	2.08	2.16	2.24	2.33	2.43	2.54	2.66	
160	1.80	1.88	1.98	2.09	2.22	2.30	2.38	2.47	2.56	2.67	2.78	2.91	3.04	
180	2.02	2.11	2.22	2.35	2.50	2.58	2.67	2.77	2.88	3.00	3.13	3.27	3.42	
200	2.24	2.35	2.47	2.61	2.78	2.87	2.97	3.08	3.20	3.34	3.48	3.63	3.80	
210	2.36	2.47	2.59	2.74	2.92	3.01	3.12	3.24	3.36	3.50	3.65	3.81	3.99	
220	2.47	2.58	2.72	2.87	3.05	3.16	3.27	3.39	3.52	3.67	3.83	4.00	4.18	
230	2.58	2.70	2.84	3.00	3.19	3.30	3.42	3.54	3.68	3.84	4.00	4.18	4.37	
240	2.69	2.82	2.97	3.13	3.33	3.44	3.57	3.70	3.84	4.00	4.17	4.36	4.56	
250	2.81	2.94	3.09	3.26	3.47	3.59	3.71	3.85	4.00	4.17	4.35	4.54	4.75	
260	2.92	3.05	3.21	3.40	3.61	3.73	3.86	4.01	4.16	4.34	4.52	4.72	4.94	
270	3.03	3.17	3.34	3.53	3.75	3.87	4.01	4.16	4.32	4.50	4.70	4.90	5.13	
280	3.14	3.29	3.46	3.66	3.89	4.02	4.16	4.32	4.49	4.67	4.87	5.09	5.32	
290	3.25	3.41	3.58	3.79	4.03	4.16	4.31	4.47	4.65	4.84	5.04	5.27	5.51	
300	3.37	3.53	3.71	3.92	4.16	4.30	4.46	4.62	4.81	5.00	5.22	5.45	5.70	
310	3.48	3.64	3.83	4.05	4.30	4.45	4.61	4.78	4.97	5.17	5.39	5.63	5.89	
320	3.59	3.76	3.95	4.18	4.44	4.59	4.75	4.93	5.13	5.34	5.57	5.81	6.08	
330	3.70	3.88	4.08	4.31	4.58	4.74	4.90	5.09	5.29	5.50	5.74	5.99	6.27	
340	3.82	4.00	4.20	4.44	4.72	4.88	5.05	5.24	5.45	5.67	5.91	6.18	6.46	
350	3.93	4.11	4.32	4.57	4.86	5.02	5.20	5.39	5.61	5.84	6.09	6.36	6.64	

GENERAL INFORMATION

ENGINEERING NOTES

SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	160		RAVEN FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor 1/0 AWG ACSR - Raven Condition Final Sag & Tension													
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1262.	1149.	1038.	928.	820.	768.	716.	666.	617.	570.	526.	484.	445.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 5	0- 5	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0-10	0-10	0-11	1- 0	1- 1
50	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2
75	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3
100	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5
120	0- 3	0- 3	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 8
140	0- 4	0- 4	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 8	0- 9	0- 9	0-10
160	0- 5	0- 5	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0-10	0-10	0-11	1- 0	1- 1
180	0- 6	0- 7	0- 7	0- 8	0- 9	0-10	0-10	0-11	1- 0	1- 1	1- 2	1- 3	1- 4
200	0- 7	0- 8	0- 9	0-10	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 8
210	0- 8	0- 9	0-10	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 7	1- 8	1-10
220	0- 9	0-10	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 6	1- 7	1- 9	1-10	2- 0
230	0-10	0-11	1- 0	1- 1	1- 3	1- 3	1- 5	1- 6	1- 7	1- 9	1-10	2- 0	2- 2
240	0-10	0-11	1- 1	1- 2	1- 4	1- 5	1- 6	1- 7	1- 9	1-10	2- 0	2- 2	2- 5
250	0-11	1- 0	1- 2	1- 3	1- 5	1- 6	1- 7	1- 9	1-11	2- 0	2- 2	2- 5	2- 7
260	1- 0	1- 1	1- 3	1- 4	1- 6	1- 8	1- 9	1-11	2- 0	2- 2	2- 4	2- 7	2-10
270	1- 1	1- 2	1- 4	1- 6	1- 8	1- 9	1-11	2- 0	2- 2	2- 4	2- 7	2- 9	3- 0
280	1- 2	1- 3	1- 5	1- 7	1- 9	1-11	2- 0	2- 2	2- 4	2- 6	2- 9	3- 0	3- 3
290	1- 3	1- 4	1- 6	1- 8	1-11	2- 0	2- 2	2- 4	2- 6	2- 9	2-11	3- 2	3- 6
300	1- 4	1- 6	1- 7	1-10	2- 0	2- 2	2- 4	2- 6	2- 8	2-11	3- 2	3- 5	3- 8
310	1- 5	1- 7	1- 9	1-11	2- 2	2- 4	2- 6	2- 8	2-10	3- 1	3- 4	3- 8	3-11
320	1- 6	1- 8	1-10	2- 1	2- 4	2- 6	2- 8	2-10	3- 1	3- 4	3- 7	3-11	4- 3
330	1- 7	1- 9	1-11	2- 2	2- 5	2- 7	2-10	3- 0	3- 3	3- 6	3-10	4- 1	4- 6
340	1- 8	1-10	2- 1	2- 4	2- 7	2- 9	3- 0	3- 2	3- 5	3- 9	4- 0	4- 4	4- 9
350	1-10	2- 0	2- 2	2- 5	2- 9	2-11	3- 2	3- 5	3- 8	3-11	4- 3	4- 8	5- 0

Ruling Span (Feet)	160		RAVEN FINAL		Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind									
					Conductor 1/0 AWG ACSR - Raven Condition Final Sag & Tension									
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100	
Tension (lbs)	1262.	1149.	1038.	928.	820.	768.	716.	666.	617.	570.	526.	484.	445.	
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	
Ruling Span Sag	1.81	1.90	2.00	2.11	2.25	2.33	2.41	2.50	2.59	2.70	2.81	2.93	3.05	
50	.57	.59	.62	.66	.70	.73	.75	.78	.81	.84	.88	.92	.95	
75	.85	.89	.94	.99	1.05	1.09	1.13	1.17	1.22	1.26	1.32	1.37	1.43	
100	1.13	1.19	1.25	1.32	1.41	1.45	1.50	1.56	1.62	1.69	1.76	1.83	1.91	
120	1.36	1.43	1.50	1.59	1.69	1.74	1.81	1.87	1.95	2.02	2.11	2.20	2.29	
140	1.59	1.66	1.75	1.85	1.97	2.03	2.11	2.18	2.27	2.36	2.46	2.56	2.67	
160	1.81	1.90	2.00	2.11	2.25	2.33	2.41	2.50	2.59	2.70	2.81	2.93	3.05	
180	2.04	2.14	2.25	2.38	2.53	2.62	2.71	2.81	2.92	3.04	3.16	3.29	3.43	
200	2.27	2.38	2.50	2.64	2.81	2.91	3.01	3.12	3.24	3.37	3.51	3.66	3.82	
210	2.38	2.49	2.62	2.78	2.95	3.05	3.16	3.28	3.40	3.54	3.69	3.84	4.01	
220	2.49	2.61	2.75	2.91	3.09	3.20	3.31	3.43	3.57	3.71	3.86	4.03	4.20	
230	2.61	2.73	2.87	3.04	3.23	3.34	3.46	3.59	3.73	3.88	4.04	4.21	4.39	
240	2.72	2.85	3.00	3.17	3.37	3.49	3.61	3.75	3.89	4.05	4.21	4.39	4.58	
250	2.83	2.97	3.12	3.30	3.51	3.63	3.76	3.90	4.05	4.22	4.39	4.58	4.77	
260	2.95	3.09	3.25	3.44	3.66	3.78	3.91	4.06	4.21	4.38	4.57	4.76	4.96	
270	3.06	3.21	3.37	3.57	3.80	3.92	4.06	4.21	4.38	4.55	4.74	4.94	5.15	
280	3.17	3.33	3.50	3.70	3.94	4.07	4.21	4.37	4.54	4.72	4.92	5.13	5.34	
290	3.29	3.44	3.62	3.83	4.08	4.21	4.36	4.53	4.70	4.89	5.09	5.31	5.53	
300	3.40	3.56	3.75	3.97	4.22	4.36	4.51	4.68	4.86	5.06	5.27	5.49	5.73	
310	3.51	3.68	3.87	4.10	4.36	4.51	4.66	4.84	5.03	5.23	5.44	5.67	5.92	
320	3.63	3.80	4.00	4.23	4.50	4.65	4.82	4.99	5.19	5.40	5.62	5.86	6.11	
330	3.74	3.92	4.12	4.36	4.64	4.80	4.97	5.15	5.35	5.56	5.80	6.04	6.30	
340	3.85	4.04	4.25	4.49	4.78	4.94	5.12	5.31	5.51	5.73	5.97	6.22	6.49	
350	3.97	4.16	4.37	4.63	4.92	5.09	5.27	5.46	5.67	5.90	6.15	6.41	6.68	

GENERAL INFORMATION

ENGINEERING NOTES

SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	175		RAVEN FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor 1/0 AWG ACSR - Raven Condition Final Sag & Tension													
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1233.	1122.	1011.	903.	797.	746.	696.	648.	601.	557.	515.	476.	440.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 6	0- 6	0- 7	0- 8	0- 9	0- 9	0-10	0-11	1- 0	1- 0	1- 1	1- 2	1- 4
50	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2
75	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3
100	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5
120	0- 3	0- 3	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6	0- 6	0- 7	0- 7	0- 8
140	0- 4	0- 4	0- 5	0- 5	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9	0-10
160	0- 5	0- 5	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0-10	0-10	0-11	1- 0	1- 1
180	0- 6	0- 7	0- 7	0- 8	0- 9	0-10	0-11	0-11	1- 0	1- 1	1- 2	1- 3	1- 5
200	0- 8	0- 8	0- 9	0-10	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 7	1- 8
210	0- 8	0- 9	0-10	0-11	1- 1	1- 1	1- 2	1- 3	1- 4	1- 6	1- 7	1- 9	1-10
220	0- 9	0-10	0-11	1- 0	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 9	1-11	2- 0
230	0-10	0-11	1- 0	1- 1	1- 3	1- 4	1- 5	1- 6	1- 8	1- 9	1-11	2- 1	2- 3
240	0-11	1- 0	1- 1	1- 2	1- 4	1- 5	1- 6	1- 8	1- 9	1-11	2- 1	2- 3	2- 5
250	1- 0	1- 1	1- 2	1- 4	1- 6	1- 7	1- 8	1- 9	1-11	2- 1	2- 3	2- 5	2- 7
260	1- 0	1- 2	1- 3	1- 5	1- 7	1- 8	1-10	1-11	2- 1	2- 3	2- 5	2- 7	2-10
270	1- 1	1- 3	1- 4	1- 6	1- 8	1-10	1-11	2- 1	2- 3	2- 5	2- 7	2-10	3- 1
280	1- 2	1- 4	1- 5	1- 7	1-10	1-11	2- 1	2- 3	2- 5	2- 7	2-10	3- 0	3- 3
290	1- 3	1- 5	1- 7	1- 9	1-11	2- 1	2- 3	2- 5	2- 7	2- 9	3- 0	3- 3	3- 6
300	1- 4	1- 6	1- 8	1-10	2- 1	2- 3	2- 5	2- 7	2- 9	3- 0	3- 3	3- 6	3- 9
310	1- 5	1- 7	1- 9	2- 0	2- 3	2- 5	2- 7	2- 9	2-11	3- 2	3- 5	3- 8	4- 0
320	1- 7	1- 8	1-11	2- 1	2- 4	2- 6	2- 8	2-11	3- 2	3- 4	3- 8	3-11	4- 3
330	1- 8	1-10	2- 0	2- 3	2- 6	2- 8	2-11	3- 1	3- 4	3- 7	3-10	4- 2	4- 6
340	1- 9	1-11	2- 1	2- 4	2- 8	2-10	3- 1	3- 3	3- 6	3-10	4- 1	4- 5	4-10
350	1-10	2- 0	2- 3	2- 6	2-10	3- 0	3- 3	3- 6	3- 9	4- 0	4- 4	4- 8	5- 1

Ruling Span (Feet)	175				RAVEN FINAL								
					Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 1/0 AWG ACSR - Raven								
					Condition Final Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1233.	1122.	1011.	903.	797.	746.	696.	648.	601.	557.	515.	476.	440.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.01	2.10	2.22	2.34	2.50	2.58	2.67	2.77	2.87	2.99	3.10	3.23	3.36
50	.57	.60	.63	.67	.71	.74	.76	.79	.82	.85	.89	.92	.96
75	.86	.90	.95	1.00	1.07	1.11	1.14	1.19	1.23	1.28	1.33	1.38	1.44
100	1.15	1.20	1.27	1.34	1.43	1.47	1.53	1.58	1.64	1.71	1.77	1.84	1.92
120	1.38	1.44	1.52	1.61	1.71	1.77	1.83	1.90	1.97	2.05	2.13	2.21	2.30
140	1.61	1.68	1.77	1.88	2.00	2.06	2.14	2.21	2.30	2.39	2.48	2.58	2.69
160	1.83	1.92	2.03	2.14	2.28	2.36	2.44	2.53	2.63	2.73	2.84	2.95	3.07
180	2.06	2.16	2.28	2.41	2.57	2.65	2.75	2.85	2.96	3.07	3.19	3.32	3.45
200	2.29	2.40	2.53	2.68	2.85	2.95	3.05	3.16	3.28	3.41	3.55	3.69	3.84
210	2.41	2.52	2.66	2.81	2.99	3.10	3.20	3.32	3.45	3.58	3.73	3.87	4.03
220	2.52	2.64	2.79	2.95	3.14	3.24	3.36	3.48	3.61	3.75	3.90	4.06	4.22
230	2.64	2.77	2.91	3.08	3.28	3.39	3.51	3.64	3.78	3.92	4.08	4.24	4.41
240	2.75	2.89	3.04	3.22	3.42	3.54	3.66	3.80	3.94	4.09	4.26	4.43	4.60
250	2.87	3.01	3.17	3.35	3.56	3.68	3.81	3.95	4.10	4.27	4.43	4.61	4.80
260	2.98	3.13	3.29	3.48	3.71	3.83	3.97	4.11	4.27	4.44	4.61	4.80	4.99
270	3.10	3.25	3.42	3.62	3.85	3.98	4.12	4.27	4.43	4.61	4.79	4.98	5.18
280	3.21	3.37	3.55	3.75	3.99	4.13	4.27	4.43	4.60	4.78	4.97	5.17	5.37
290	3.33	3.49	3.67	3.89	4.13	4.27	4.43	4.59	4.76	4.95	5.14	5.35	5.56
300	3.44	3.61	3.80	4.02	4.28	4.42	4.58	4.75	4.93	5.12	5.32	5.54	5.76
310	3.55	3.73	3.92	4.15	4.42	4.57	4.73	4.90	5.09	5.29	5.50	5.72	5.95
320	3.67	3.85	4.05	4.29	4.56	4.72	4.88	5.06	5.25	5.46	5.68	5.90	6.14
330	3.78	3.97	4.18	4.42	4.71	4.86	5.04	5.22	5.42	5.63	5.85	6.09	6.33
340	3.90	4.09	4.30	4.56	4.85	5.01	5.19	5.38	5.58	5.80	6.03	6.27	6.52
350	4.01	4.21	4.43	4.69	4.99	5.16	5.34	5.54	5.75	5.97	6.21	6.46	6.72

Design Condition									Ruling Span (Feet)	190		RAVEN FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor 1/0 AWG ACSR - Raven Condition Final Sag & Tension													
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1197.	1087.	978.	872.	769.	720.	672.	626.	582.	540.	501.	466.	433.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 7	0- 8	0- 9	0-10	0-11	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 7
50	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2
75	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3
100	0- 2	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6
120	0- 3	0- 3	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 8
140	0- 4	0- 4	0- 5	0- 5	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0-10	0-10
160	0- 5	0- 6	0- 6	0- 7	0- 8	0- 8	0- 9	0- 9	0-10	0-11	1- 0	1- 0	1- 1
180	0- 6	0- 7	0- 8	0- 9	0-10	0-10	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5
200	0- 8	0- 9	0- 9	0-10	1- 0	1- 1	1- 1	1- 2	1- 3	1- 5	1- 6	1- 7	1- 9
210	0- 9	0- 9	0-10	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 8	1- 9	1-11
220	0- 9	0-10	0-11	1- 1	1- 2	1- 3	1- 4	1- 5	1- 7	1- 8	1- 9	1-11	2- 1
230	0-10	0-11	1- 0	1- 2	1- 3	1- 4	1- 6	1- 7	1- 8	1-10	1-11	2- 1	2- 3
240	0-11	1- 0	1- 1	1- 3	1- 5	1- 6	1- 7	1- 9	1-10	2- 0	2- 1	2- 3	2- 5
250	1- 0	1- 1	1- 2	1- 4	1- 6	1- 7	1- 9	1-10	2- 0	2- 2	2- 4	2- 6	2- 8
260	1- 1	1- 2	1- 4	1- 5	1- 8	1- 9	1-10	2- 0	2- 2	2- 4	2- 6	2- 8	2-10
270	1- 2	1- 3	1- 5	1- 7	1- 9	1-11	2- 0	2- 2	2- 4	2- 6	2- 8	2-11	3- 1
280	1- 3	1- 4	1- 6	1- 8	1-11	2- 0	2- 2	2- 4	2- 6	2- 8	2-11	3- 1	3- 4
290	1- 4	1- 5	1- 7	1- 9	2- 0	2- 2	2- 4	2- 6	2- 8	2-10	3- 1	3- 4	3- 7
300	1- 5	1- 7	1- 9	1-11	2- 2	2- 4	2- 6	2- 8	2-10	3- 1	3- 4	3- 7	3-10
310	1- 6	1- 8	1-10	2- 0	2- 4	2- 6	2- 8	2-10	3- 0	3- 3	3- 6	3- 9	4- 1
320	1- 7	1- 9	1-11	2- 2	2- 5	2- 7	2-10	3- 0	3- 3	3- 6	3- 9	4- 0	4- 4
330	1- 8	1-10	2- 1	2- 4	2- 7	2- 9	3- 0	3- 2	3- 5	3- 8	4- 0	4- 3	4- 7
340	1-10	2- 0	2- 2	2- 5	2- 9	2-11	3- 2	3- 5	3- 8	3-11	4- 3	4- 7	4-11
350	1-11	2- 1	2- 4	2- 7	2-11	3- 2	3- 4	3- 7	3-10	4- 2	4- 6	4-10	5- 2

Ruling Span (Feet)	190		RAVEN FINAL		Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind									
					Conductor 1/0 AWG ACSR - Raven Condition Final Sag & Tension									
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100	
Tension (lbs)	1197.	1087.	978.	872.	769.	720.	672.	626.	582.	540.	501.	466.	433.	
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	
Ruling Span Sag	2.21	2.32	2.45	2.59	2.76	2.85	2.95	3.06	3.17	3.29	3.42	3.55	3.68	
50	.58	.61	.64	.68	.73	.75	.78	.80	.83	.87	.90	.93	.97	
75	.87	.92	.97	1.02	1.09	1.13	1.17	1.21	1.25	1.30	1.35	1.40	1.45	
100	1.16	1.22	1.29	1.36	1.45	1.50	1.55	1.61	1.67	1.73	1.80	1.87	1.93	
120	1.40	1.47	1.54	1.64	1.74	1.80	1.86	1.93	2.00	2.08	2.16	2.24	2.32	
140	1.63	1.71	1.80	1.91	2.03	2.10	2.17	2.25	2.34	2.43	2.52	2.61	2.71	
160	1.86	1.95	2.06	2.18	2.32	2.40	2.49	2.58	2.67	2.77	2.88	2.99	3.10	
180	2.09	2.20	2.32	2.45	2.61	2.70	2.80	2.90	3.01	3.12	3.24	3.36	3.48	
200	2.33	2.44	2.57	2.73	2.90	3.00	3.11	3.22	3.34	3.46	3.60	3.73	3.87	
210	2.44	2.56	2.70	2.86	3.05	3.15	3.26	3.38	3.51	3.64	3.78	3.92	4.06	
220	2.56	2.69	2.83	3.00	3.19	3.30	3.42	3.54	3.67	3.81	3.96	4.10	4.26	
230	2.68	2.81	2.96	3.14	3.34	3.45	3.57	3.70	3.84	3.98	4.14	4.29	4.45	
240	2.79	2.93	3.09	3.27	3.48	3.60	3.73	3.86	4.01	4.16	4.32	4.48	4.64	
250	2.91	3.05	3.22	3.41	3.63	3.75	3.88	4.02	4.17	4.33	4.50	4.66	4.84	
260	3.03	3.18	3.35	3.55	3.77	3.90	4.04	4.19	4.34	4.50	4.67	4.85	5.03	
270	3.14	3.30	3.48	3.68	3.92	4.05	4.19	4.35	4.51	4.68	4.85	5.04	5.22	
280	3.26	3.42	3.60	3.82	4.07	4.20	4.35	4.51	4.67	4.85	5.03	5.22	5.42	
290	3.37	3.54	3.73	3.95	4.21	4.35	4.51	4.67	4.84	5.02	5.21	5.41	5.61	
300	3.49	3.66	3.86	4.09	4.36	4.50	4.66	4.83	5.01	5.20	5.39	5.60	5.81	
310	3.61	3.79	3.99	4.23	4.50	4.65	4.82	4.99	5.18	5.37	5.57	5.78	6.00	
320	3.72	3.91	4.12	4.36	4.65	4.80	4.97	5.15	5.34	5.54	5.75	5.97	6.19	
330	3.84	4.03	4.25	4.50	4.79	4.95	5.13	5.31	5.51	5.72	5.93	6.16	6.39	
340	3.96	4.15	4.38	4.64	4.94	5.10	5.28	5.47	5.68	5.89	6.11	6.34	6.58	
350	4.07	4.27	4.51	4.77	5.08	5.25	5.44	5.63	5.84	6.06	6.29	6.53	6.77	

Design Condition									Ruling Span (Feet)	205		RAVEN FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor 1/0 AWG ACSR - Raven Condition Final Sag & Tension													
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1148.	1040.	933.	830.	731.	684.	639.	596.	555.	517.	482.	450.	421.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 8	0- 9	0-10	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 9	1-10
50	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2
75	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3
100	0- 2	0- 3	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6
120	0- 3	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8
140	0- 4	0- 5	0- 5	0- 6	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9	0-10	0-11
160	0- 5	0- 6	0- 6	0- 7	0- 8	0- 9	0- 9	0-10	0-11	0-11	1- 0	1- 1	1- 2
180	0- 7	0- 7	0- 8	0- 9	0-10	0-11	1- 0	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5
200	0- 8	0- 9	0-10	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 7	1- 8	1- 9
210	0- 9	0-10	0-11	1- 0	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1-10	1-11
220	0-10	0-11	1- 0	1- 1	1- 3	1- 4	1- 5	1- 6	1- 7	1- 9	1-10	2- 0	2- 2
230	0-11	1- 0	1- 1	1- 2	1- 4	1- 5	1- 7	1- 8	1- 9	1-11	2- 0	2- 2	2- 4
240	0-11	1- 1	1- 2	1- 4	1- 6	1- 7	1- 8	1-10	1-11	2- 1	2- 2	2- 4	2- 6
250	1- 0	1- 2	1- 3	1- 5	1- 7	1- 8	1-10	1-11	2- 1	2- 3	2- 5	2- 7	2- 9
260	1- 1	1- 3	1- 4	1- 6	1- 9	1-10	2- 0	2- 1	2- 3	2- 5	2- 7	2- 9	2-11
270	1- 2	1- 4	1- 5	1- 8	1-10	2- 0	2- 1	2- 3	2- 5	2- 7	2- 9	3- 0	3- 2
280	1- 3	1- 5	1- 7	1- 9	2- 0	2- 1	2- 3	2- 5	2- 7	2- 9	3- 0	3- 2	3- 5
290	1- 4	1- 6	1- 8	1-11	2- 2	2- 3	2- 5	2- 7	2- 9	3- 0	3- 2	3- 5	3- 8
300	1- 6	1- 7	1- 9	2- 0	2- 3	2- 5	2- 7	2- 9	3- 0	3- 2	3- 5	3- 8	3-11
310	1- 7	1- 9	1-11	2- 2	2- 5	2- 7	2- 9	3- 0	3- 2	3- 5	3- 8	3-11	4- 2
320	1- 8	1-10	2- 0	2- 3	2- 7	2- 9	2-11	3- 2	3- 5	3- 8	3-11	4- 2	4- 5
330	1- 9	1-11	2- 2	2- 5	2- 9	2-11	3- 2	3- 4	3- 7	3-10	4- 2	4- 5	4- 9
340	1-10	2- 1	2- 3	2- 7	2-11	3- 1	3- 4	3- 7	3-10	4- 1	4- 5	4- 8	5- 0
350	2- 0	2- 2	2- 5	2- 9	3- 1	3- 3	3- 6	3- 9	4- 1	4- 4	4- 8	5- 0	5- 4

Ruling Span (Feet)	205		RAVEN FINAL		Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind									
					Conductor 1/0 AWG ACSR - Raven Condition Final Sag & Tension									
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100	
Tension (lbs)	1148.	1040.	933.	830.	731.	684.	639.	596.	555.	517.	482.	450.	421.	
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	
Ruling Span Sag	2.44	2.56	2.70	2.87	3.05	3.16	3.27	3.38	3.50	3.63	3.76	3.89	4.02	
50	.59	.62	.66	.70	.74	.77	.80	.82	.85	.89	.92	.95	.98	
75	.89	.94	.99	1.05	1.12	1.15	1.19	1.24	1.28	1.33	1.38	1.42	1.47	
100	1.19	1.25	1.32	1.40	1.49	1.54	1.59	1.65	1.71	1.77	1.83	1.90	1.96	
120	1.43	1.50	1.58	1.68	1.79	1.85	1.91	1.98	2.05	2.12	2.20	2.28	2.36	
140	1.66	1.75	1.85	1.96	2.09	2.16	2.23	2.31	2.39	2.48	2.57	2.66	2.75	
160	1.90	2.00	2.11	2.24	2.38	2.46	2.55	2.64	2.73	2.83	2.93	3.04	3.14	
180	2.14	2.25	2.37	2.52	2.68	2.77	2.87	2.97	3.08	3.19	3.30	3.42	3.53	
200	2.38	2.50	2.64	2.80	2.98	3.08	3.19	3.30	3.42	3.54	3.67	3.80	3.93	
210	2.50	2.62	2.77	2.94	3.13	3.23	3.35	3.46	3.59	3.72	3.85	3.99	4.12	
220	2.61	2.75	2.90	3.08	3.28	3.39	3.51	3.63	3.76	3.90	4.03	4.18	4.32	
230	2.73	2.87	3.03	3.22	3.43	3.54	3.66	3.79	3.93	4.07	4.22	4.37	4.51	
240	2.85	3.00	3.16	3.36	3.57	3.70	3.82	3.96	4.10	4.25	4.40	4.56	4.71	
250	2.97	3.12	3.30	3.49	3.72	3.85	3.98	4.12	4.27	4.43	4.58	4.75	4.91	
260	3.09	3.25	3.43	3.63	3.87	4.00	4.14	4.29	4.44	4.60	4.77	4.94	5.10	
270	3.21	3.37	3.56	3.77	4.02	4.16	4.30	4.45	4.61	4.78	4.95	5.13	5.30	
280	3.33	3.50	3.69	3.91	4.17	4.31	4.46	4.62	4.79	4.96	5.13	5.32	5.50	
290	3.45	3.62	3.82	4.05	4.32	4.47	4.62	4.78	4.96	5.13	5.32	5.50	5.69	
300	3.56	3.75	3.95	4.19	4.47	4.62	4.78	4.95	5.13	5.31	5.50	5.69	5.89	
310	3.68	3.87	4.09	4.33	4.62	4.77	4.94	5.11	5.30	5.49	5.69	5.88	6.09	
320	3.80	4.00	4.22	4.47	4.77	4.93	5.10	5.28	5.47	5.67	5.87	6.07	6.28	
330	3.92	4.12	4.35	4.61	4.92	5.08	5.26	5.44	5.64	5.84	6.05	6.26	6.48	
340	4.04	4.25	4.48	4.75	5.06	5.24	5.42	5.61	5.81	6.02	6.24	6.45	6.67	
350	4.16	4.37	4.61	4.89	5.21	5.39	5.58	5.77	5.98	6.20	6.42	6.64	6.87	

GENERAL INFORMATION

ENGINEERING NOTES

SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	220		RAVEN FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor 1/0 ACSR - Raven Condition Final Sag & Tension													
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1097.	990.	886.	787.	693.	649.	607.	567.	530.	496.	465.	436.	410.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0-10	0-11	1-0	1-2	1-4	1-5	1-6	1-7	1-8	1-10	1-11	2-1	2-2
50	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-2	0-2	0-2	0-2	0-2
75	0-2	0-2	0-2	0-2	0-2	0-2	0-3	0-3	0-3	0-3	0-3	0-3	0-3
100	0-2	0-3	0-3	0-3	0-4	0-4	0-4	0-4	0-5	0-5	0-5	0-5	0-6
120	0-3	0-4	0-4	0-4	0-5	0-5	0-6	0-6	0-6	0-7	0-7	0-8	0-8
140	0-4	0-5	0-5	0-6	0-7	0-7	0-8	0-8	0-9	0-9	0-10	0-10	0-11
160	0-6	0-6	0-7	0-8	0-9	0-9	0-10	0-10	0-11	1-0	1-0	1-1	1-2
180	0-7	0-8	0-8	0-9	0-11	0-11	1-0	1-1	1-2	1-3	1-4	1-5	1-6
200	0-8	0-9	0-10	1-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	1-8	1-10
210	0-9	0-10	0-11	1-1	1-2	1-3	1-4	1-5	1-7	1-8	1-9	1-11	2-0
220	0-10	0-11	1-0	1-2	1-4	1-5	1-6	1-7	1-8	1-10	1-11	2-1	2-2
230	0-11	1-0	1-1	1-3	1-5	1-6	1-7	1-9	1-10	2-0	2-1	2-3	2-5
240	1-0	1-1	1-3	1-4	1-7	1-8	1-9	1-11	2-0	2-2	2-3	2-5	2-7
250	1-1	1-2	1-4	1-6	1-8	1-9	1-11	2-0	2-2	2-4	2-6	2-8	2-10
260	1-2	1-3	1-5	1-7	1-10	1-11	2-1	2-2	2-4	2-6	2-8	2-10	3-0
270	1-3	1-5	1-6	1-9	1-11	2-1	2-3	2-4	2-6	2-8	2-11	3-1	3-3
280	1-4	1-6	1-8	1-10	2-1	2-3	2-5	2-7	2-9	2-11	3-1	3-4	3-6
290	1-5	1-7	1-9	2-0	2-3	2-5	2-7	2-9	2-11	3-1	3-4	3-6	3-9
300	1-6	1-8	1-11	2-1	2-5	2-7	2-9	2-11	3-1	3-4	3-7	3-9	4-0
310	1-8	1-10	2-0	2-3	2-7	2-9	2-11	3-1	3-4	3-7	3-9	4-0	4-3
320	1-9	1-11	2-2	2-5	2-9	2-11	3-1	3-4	3-7	3-9	4-0	4-4	4-7
330	1-10	2-0	2-3	2-7	2-11	3-1	3-4	3-6	3-9	4-0	4-3	4-7	4-10
340	1-11	2-2	2-5	2-8	3-1	3-3	3-6	3-9	4-0	4-3	4-7	4-10	5-2
350	2-1	2-3	2-7	2-10	3-3	3-6	3-8	3-11	4-3	4-6	4-10	5-2	5-5

Ruling Span (Feet)	220		RAVEN FINAL		Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind									
					Conductor 1/0 AWG ACSR - Raven Condition Final Sag & Tension									
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100	
Tension (lbs)	1044.	940.	839.	744.	656.	615.	577.	541.	508.	477.	449.	424.	401.	
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	
Ruling Span Sag	2.74	2.89	3.06	3.25	3.46	3.57	3.69	3.81	3.93	4.06	4.18	4.30	4.42	
50	.62	.66	.69	.74	.79	.81	.84	.87	.89	.92	.95	.98	1.01	
75	.93	.99	1.04	1.11	1.18	1.22	1.26	1.30	1.34	1.38	1.42	1.47	1.51	
100	1.25	1.31	1.39	1.48	1.57	1.62	1.68	1.73	1.79	1.84	1.90	1.96	2.01	
120	1.50	1.58	1.67	1.77	1.89	1.95	2.01	2.08	2.14	2.21	2.28	2.35	2.41	
140	1.74	1.84	1.95	2.07	2.20	2.27	2.35	2.42	2.50	2.58	2.66	2.74	2.82	
160	1.99	2.10	2.22	2.36	2.52	2.60	2.68	2.77	2.86	2.95	3.04	3.13	3.22	
180	2.24	2.36	2.50	2.66	2.83	2.92	3.02	3.12	3.22	3.32	3.42	3.52	3.62	
200	2.49	2.63	2.78	2.95	3.14	3.25	3.35	3.46	3.57	3.69	3.80	3.91	4.02	
210	2.62	2.76	2.92	3.10	3.30	3.41	3.52	3.64	3.75	3.87	3.99	4.11	4.22	
220	2.74	2.89	3.06	3.25	3.46	3.57	3.69	3.81	3.93	4.06	4.18	4.30	4.42	
230	2.87	3.02	3.20	3.39	3.62	3.73	3.86	3.98	4.11	4.24	4.37	4.50	4.63	
240	2.99	3.15	3.34	3.54	3.77	3.90	4.02	4.16	4.29	4.42	4.56	4.69	4.83	
250	3.12	3.28	3.47	3.69	3.93	4.06	4.19	4.33	4.47	4.61	4.75	4.89	5.03	
260	3.24	3.41	3.61	3.84	4.09	4.22	4.36	4.50	4.65	4.79	4.94	5.09	5.23	
270	3.36	3.55	3.75	3.98	4.24	4.38	4.53	4.67	4.83	4.98	5.13	5.28	5.43	
280	3.49	3.68	3.89	4.13	4.40	4.55	4.69	4.85	5.00	5.16	5.32	5.48	5.63	
290	3.61	3.81	4.03	4.28	4.56	4.71	4.86	5.02	5.18	5.35	5.51	5.67	5.83	
300	3.74	3.94	4.17	4.43	4.72	4.87	5.03	5.19	5.36	5.53	5.70	5.87	6.03	
310	3.86	4.07	4.31	4.58	4.87	5.03	5.20	5.37	5.54	5.72	5.89	6.06	6.24	
320	3.99	4.20	4.45	4.72	5.03	5.19	5.37	5.54	5.72	5.90	6.08	6.26	6.44	
330	4.11	4.33	4.59	4.87	5.19	5.36	5.53	5.71	5.90	6.08	6.27	6.46	6.64	
340	4.24	4.47	4.73	5.02	5.34	5.52	5.70	5.89	6.08	6.27	6.46	6.65	6.84	
350	4.36	4.60	4.86	5.17	5.50	5.68	5.87	6.06	6.26	6.45	6.65	6.85	7.04	

Design Condition									Ruling Span (Feet)	235		RAVEN FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor 1/0 ACSR - Raven Condition Final Sag & Tension													
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	1044.	940.	839.	744.	656.	615.	577.	541.	508.	477.	449.	424.	401.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1-0	1-1	1-3	1-5	1-7	1-8	1-9	1-11	2-0	2-2	2-3	2-5	2-6
50	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-2	0-2	0-2	0-2	0-2	0-2
75	0-2	0-2	0-2	0-2	0-2	0-2	0-3	0-3	0-3	0-3	0-3	0-3	0-4
100	0-3	0-3	0-3	0-3	0-4	0-4	0-4	0-5	0-5	0-5	0-5	0-6	0-6
120	0-3	0-4	0-4	0-5	0-5	0-6	0-6	0-6	0-7	0-7	0-7	0-8	0-8
140	0-5	0-5	0-6	0-6	0-7	0-7	0-8	0-8	0-9	0-9	0-10	0-11	0-11
160	0-6	0-6	0-7	0-8	0-9	0-10	0-10	0-11	0-11	1-0	1-1	1-2	1-2
180	0-7	0-8	0-9	0-10	0-11	1-0	1-1	1-2	1-2	1-3	1-4	1-5	1-6
200	0-9	0-10	0-11	1-0	1-2	1-3	1-4	1-5	1-6	1-7	1-8	1-9	1-10
210	0-10	0-11	1-0	1-1	1-3	1-4	1-5	1-6	1-7	1-9	1-10	1-11	2-0
220	0-11	1-0	1-1	1-3	1-5	1-6	1-7	1-8	1-9	1-11	2-0	2-1	2-3
230	1-0	1-1	1-2	1-4	1-6	1-7	1-8	1-10	1-11	2-1	2-2	2-4	2-5
240	1-0	1-2	1-3	1-5	1-8	1-9	1-10	2-0	2-1	2-3	2-4	2-6	2-8
250	1-2	1-3	1-5	1-7	1-9	1-11	2-0	2-2	2-3	2-5	2-7	2-9	2-10
260	1-3	1-4	1-6	1-8	1-11	2-0	2-2	2-4	2-5	2-7	2-9	2-11	3-1
270	1-4	1-5	1-7	1-10	2-1	2-2	2-4	2-6	2-8	2-10	3-0	3-2	3-4
280	1-5	1-7	1-9	1-11	2-2	2-4	2-6	2-8	2-10	3-0	3-2	3-5	3-7
290	1-6	1-8	1-10	2-1	2-4	2-6	2-8	2-10	3-1	3-3	3-5	3-8	3-10
300	1-7	1-9	2-0	2-3	2-6	2-8	2-10	3-1	3-3	3-6	3-8	3-11	4-1
310	1-9	1-11	2-1	2-5	2-8	2-10	3-1	3-3	3-6	3-8	3-11	4-2	4-5
320	1-10	2-0	2-3	2-6	2-10	3-1	3-3	3-6	3-8	3-11	4-2	4-5	4-8
330	1-11	2-2	2-5	2-8	3-1	3-3	3-6	3-8	3-11	4-2	4-5	4-8	5-0
340	2-1	2-3	2-6	2-10	3-3	3-5	3-8	3-11	4-2	4-5	4-8	5-0	5-3
350	2-2	2-5	2-8	3-0	3-5	3-8	3-11	4-2	4-5	4-8	5-0	5-3	5-7

Ruling Span (Feet)	235		RAVEN FINAL		Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind									
					Conductor 1/0 AWG ACSR - Raven Condition Final Sag & Tension									
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100	
Tension (lbs)	1044.	940.	839.	744.	656.	615.	577.	541.	508.	477.	449.	424.	401.	
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	
Ruling Span Sag	2.93	3.09	3.27	3.47	3.69	3.81	3.94	4.07	4.20	4.33	4.46	4.60	4.73	
50	.62	.66	.69	.74	.79	.81	.84	.87	.89	.92	.95	.98	1.01	
75	.93	.99	1.04	1.11	1.18	1.22	1.26	1.30	1.34	1.38	1.42	1.47	1.51	
100	1.25	1.31	1.39	1.48	1.57	1.62	1.68	1.73	1.79	1.84	1.90	1.96	2.01	
120	1.50	1.58	1.67	1.77	1.89	1.95	2.01	2.08	2.14	2.21	2.28	2.35	2.41	
140	1.74	1.84	1.95	2.07	2.20	2.27	2.35	2.42	2.50	2.58	2.66	2.74	2.82	
160	1.99	2.10	2.22	2.36	2.52	2.60	2.68	2.77	2.86	2.95	3.04	3.13	3.22	
180	2.24	2.36	2.50	2.66	2.83	2.92	3.02	3.12	3.22	3.32	3.42	3.52	3.62	
200	2.49	2.63	2.78	2.95	3.14	3.25	3.35	3.46	3.57	3.69	3.80	3.91	4.02	
210	2.62	2.76	2.92	3.10	3.30	3.41	3.52	3.64	3.75	3.87	3.99	4.11	4.22	
220	2.74	2.89	3.06	3.25	3.46	3.57	3.69	3.81	3.93	4.06	4.18	4.30	4.42	
230	2.87	3.02	3.20	3.39	3.62	3.73	3.86	3.98	4.11	4.24	4.37	4.50	4.63	
240	2.99	3.15	3.34	3.54	3.77	3.90	4.02	4.16	4.29	4.42	4.56	4.69	4.83	
250	3.12	3.28	3.47	3.69	3.93	4.06	4.19	4.33	4.47	4.61	4.75	4.89	5.03	
260	3.24	3.41	3.61	3.84	4.09	4.22	4.36	4.50	4.65	4.79	4.94	5.09	5.23	
270	3.36	3.55	3.75	3.98	4.24	4.38	4.53	4.67	4.83	4.98	5.13	5.28	5.43	
280	3.49	3.68	3.89	4.13	4.40	4.55	4.69	4.85	5.00	5.16	5.32	5.48	5.63	
290	3.61	3.81	4.03	4.28	4.56	4.71	4.86	5.02	5.18	5.35	5.51	5.67	5.83	
300	3.74	3.94	4.17	4.43	4.72	4.87	5.03	5.19	5.36	5.53	5.70	5.87	6.03	
310	3.86	4.07	4.31	4.58	4.87	5.03	5.20	5.37	5.54	5.72	5.89	6.06	6.24	
320	3.99	4.20	4.45	4.72	5.03	5.19	5.37	5.54	5.72	5.90	6.08	6.26	6.44	
330	4.11	4.33	4.59	4.87	5.19	5.36	5.53	5.71	5.90	6.08	6.27	6.46	6.64	
340	4.24	4.47	4.73	5.02	5.34	5.52	5.70	5.89	6.08	6.27	6.46	6.65	6.84	
350	4.36	4.60	4.86	5.17	5.50	5.68	5.87	6.06	6.26	6.45	6.65	6.85	7.04	

GENERAL INFORMATION

ENGINEERING NOTES

SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	250		RAVEN FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor 1/0 AWG ACSR - Raven Condition Final Sag & Tension													
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	990.	889.	793.	703.	621.	584.	549.	517.	487.	460.	436.	413.	393.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 2	1- 4	1- 6	1- 8	1-10	2- 0	2- 1	2- 3	2- 4	2- 6	2- 8	2- 9	2-11
50	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2
75	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 4
100	0- 3	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6
120	0- 4	0- 4	0- 4	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7	0- 8	0- 8	0- 8
140	0- 5	0- 5	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-11	0-11
160	0- 6	0- 7	0- 8	0- 8	0- 9	0-10	0-11	0-11	1- 0	1- 1	1- 1	1- 2	1- 3
180	0- 8	0- 8	0- 9	0-11	1- 0	1- 1	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6	1- 6
200	0- 9	0-10	0-11	1- 1	1- 3	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1-10	1-11
210	0-10	0-11	1- 1	1- 2	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-11	2- 0	2- 1
220	0-11	1- 0	1- 2	1- 3	1- 5	1- 7	1- 8	1- 9	1-10	1-11	2- 1	2- 2	2- 3
230	1- 0	1- 1	1- 3	1- 5	1- 7	1- 8	1- 9	1-11	2- 0	2- 2	2- 3	2- 4	2- 6
240	1- 1	1- 3	1- 4	1- 6	1- 9	1-10	1-11	2- 1	2- 2	2- 4	2- 5	2- 7	2- 8
250	1- 2	1- 4	1- 6	1- 8	1-10	2- 0	2- 1	2- 3	2- 4	2- 6	2- 8	2- 9	2-11
260	1- 3	1- 5	1- 7	1- 9	2- 0	2- 2	2- 3	2- 5	2- 7	2- 8	2-10	3- 0	3- 2
270	1- 5	1- 6	1- 9	1-11	2- 2	2- 4	2- 5	2- 7	2- 9	2-11	3- 1	3- 3	3- 5
280	1- 6	1- 8	1-10	2- 1	2- 4	2- 6	2- 8	2- 9	2-11	3- 2	3- 4	3- 6	3- 8
290	1- 7	1- 9	2- 0	2- 3	2- 6	2- 8	2-10	3- 0	3- 2	3- 4	3- 7	3- 9	3-11
300	1- 8	1-11	2- 1	2- 4	2- 8	2-10	3- 0	3- 2	3- 5	3- 7	3- 9	4- 0	4- 2
310	1-10	2- 0	2- 3	2- 6	2-10	3- 0	3- 3	3- 5	3- 7	3-10	4- 0	4- 3	4- 6
320	1-11	2- 2	2- 5	2- 8	3- 0	3- 3	3- 5	3- 8	3-10	4- 1	4- 4	4- 6	4- 9
330	2- 0	2- 3	2- 6	2-10	3- 3	3- 5	3- 8	3-10	4- 1	4- 4	4- 7	4-10	5- 1
340	2- 2	2- 5	2- 8	3- 0	3- 5	3- 8	3-10	4- 1	4- 4	4- 7	4-10	5- 1	5- 5
350	2- 3	2- 6	2-10	3- 2	3- 7	3-10	4- 1	4- 4	4- 7	4-10	5- 2	5- 5	5- 8

Ruling Span (Feet)	250		RAVEN FINAL		Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind									
					Conductor 1/0 AWG ACSR - Raven Condition Final Sag & Tension									
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100	
Tension (lbs)	990.	889.	793.	703.	621.	584.	549.	517.	487.	460.	436.	413.	393.	
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	
Ruling Span Sag	3.20	3.38	3.58	3.80	4.04	4.17	4.30	4.43	4.56	4.69	4.82	4.95	5.08	
50	.64	.68	.72	.76	.81	.83	.86	.89	.91	.94	.96	.99	1.02	
75	.96	1.01	1.07	1.14	1.21	1.25	1.29	1.33	1.37	1.41	1.45	1.49	1.52	
100	1.28	1.35	1.43	1.52	1.62	1.67	1.72	1.77	1.82	1.88	1.93	1.98	2.03	
120	1.54	1.62	1.72	1.82	1.94	2.00	2.06	2.12	2.19	2.25	2.32	2.38	2.44	
140	1.79	1.89	2.00	2.13	2.26	2.33	2.41	2.48	2.55	2.63	2.70	2.77	2.84	
160	2.05	2.16	2.29	2.43	2.58	2.67	2.75	2.83	2.92	3.00	3.09	3.17	3.25	
180	2.30	2.43	2.57	2.73	2.91	3.00	3.09	3.19	3.28	3.38	3.47	3.57	3.66	
200	2.56	2.70	2.86	3.04	3.23	3.33	3.44	3.54	3.65	3.75	3.86	3.96	4.06	
210	2.69	2.84	3.00	3.19	3.39	3.50	3.61	3.72	3.83	3.94	4.05	4.16	4.27	
220	2.82	2.97	3.15	3.34	3.55	3.67	3.78	3.90	4.01	4.13	4.24	4.36	4.47	
230	2.94	3.11	3.29	3.49	3.72	3.83	3.95	4.07	4.19	4.32	4.44	4.56	4.67	
240	3.07	3.24	3.43	3.64	3.88	4.00	4.12	4.25	4.38	4.50	4.63	4.75	4.88	
250	3.20	3.38	3.58	3.80	4.04	4.17	4.30	4.43	4.56	4.69	4.82	4.95	5.08	
260	3.33	3.51	3.72	3.95	4.20	4.33	4.47	4.60	4.74	4.88	5.02	5.15	5.28	
270	3.46	3.65	3.86	4.10	4.36	4.50	4.64	4.78	4.92	5.07	5.21	5.35	5.49	
280	3.58	3.78	4.00	4.25	4.52	4.67	4.81	4.96	5.11	5.26	5.40	5.55	5.69	
290	3.71	3.92	4.15	4.40	4.68	4.83	4.98	5.14	5.29	5.44	5.60	5.75	5.89	
300	3.84	4.05	4.29	4.56	4.85	5.00	5.15	5.31	5.47	5.63	5.79	5.94	6.10	
310	3.97	4.19	4.43	4.71	5.01	5.17	5.33	5.49	5.65	5.82	5.98	6.14	6.30	
320	4.10	4.32	4.58	4.86	5.17	5.33	5.50	5.67	5.84	6.01	6.17	6.34	6.50	
330	4.22	4.46	4.72	5.01	5.33	5.50	5.67	5.84	6.02	6.19	6.37	6.54	6.71	
340	4.35	4.59	4.86	5.16	5.49	5.67	5.84	6.02	6.20	6.38	6.56	6.74	6.91	
350	4.48	4.73	5.01	5.32	5.65	5.83	6.01	6.20	6.38	6.57	6.75	6.93	7.11	

Design Condition									Ruling Span (Feet)	145		OXLIP - FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Final Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	994.	821.	665.	533.	433.	394.	361.	333.	310.	290.	273.	258.	245.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 7	0- 8	0-10	1- 0	1- 3	1- 4	1- 6	1- 7	1- 9	1-10	1-11	2- 1	2- 2
50	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 4
75	0- 2	0- 3	0- 3	0- 4	0- 4	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7
100	0- 3	0- 4	0- 5	0- 6	0- 7	0- 8	0- 9	0- 9	0-10	0-11	0-11	1- 0	1- 1
120	0- 5	0- 6	0- 7	0- 9	0-10	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 6
140	0- 6	0- 8	0- 9	0-11	1- 2	1- 3	1- 5	1- 6	1- 7	1- 9	1-10	1-11	2- 0
160	0- 8	0-10	1- 0	1- 3	1- 6	1- 8	1-10	1-11	2- 1	2- 3	2- 4	2- 6	2- 8
180	0-10	1- 0	1- 3	1- 7	1-11	2- 1	2- 3	2- 6	2- 8	2-10	3- 0	3- 2	3- 4
200	1- 0	1- 3	1- 6	1-11	2- 4	2- 7	2-10	3- 0	3- 3	3- 6	3- 8	3-11	4- 1
210	1- 2	1- 5	1- 8	2- 1	2- 7	2-10	3- 1	3- 4	3- 7	3-10	4- 1	4- 3	4- 6
220	1- 3	1- 6	1-10	2- 4	2-10	3- 1	3- 5	3- 8	3-11	4- 2	4- 5	4- 8	4-11
230	1- 4	1- 8	2- 0	2- 6	3- 1	3- 5	3- 8	4- 0	4- 3	4- 7	4-10	5- 2	5- 5
240	1- 6	1- 9	2- 2	2- 9	3- 4	3- 8	4- 0	4- 4	4- 8	5- 0	5- 3	5- 7	5-11
250	1- 7	1-11	2- 5	2-11	3- 8	4- 0	4- 4	4- 8	5- 1	5- 5	5- 9	6- 1	6- 5
260	1- 9	2- 1	2- 7	3- 2	3-11	4- 4	4- 8	5- 1	5- 6	5-10	6- 2	6- 7	6-11
270	1-10	2- 3	2- 9	3- 5	4- 3	4- 8	5- 1	5- 6	5-11	6- 4	6- 8	7- 1	7- 5
280	2- 0	2- 5	3- 0	3- 8	4- 6	5- 0	5- 5	5-11	6- 4	6- 9	7- 2	7- 7	8- 0
290	2- 2	2- 7	3- 2	3-11	4-10	5- 4	5-10	6- 4	6-10	7- 3	7- 8	8- 2	8- 7
300	2- 3	2- 9	3- 5	4- 3	5- 2	5- 9	6- 3	6- 9	7- 3	7- 9	8- 3	8- 9	9- 2
310	2- 5	2-11	3- 8	4- 6	5- 7	6- 1	6- 8	7- 3	7- 9	8- 3	8-10	9- 4	9- 9
320	2- 7	3- 2	3-10	4-10	5-11	6- 6	7- 1	7- 8	8- 3	8-10	9- 5	9-11	10- 5
330	2- 9	3- 4	4- 1	5- 1	6- 4	6-11	7- 7	8- 2	8- 9	9- 5	10- 0	10- 6	11- 1
340	2-11	3- 6	4- 4	5- 5	6- 8	7- 4	8- 0	8- 8	9- 4	10- 0	10- 7	11- 2	11- 9
350	3- 1	3- 9	4- 7	5- 9	7- 1	7- 9	8- 6	9- 2	9-11	10- 7	11- 3	11-10	12- 6

Ruling Span (Feet)	145				Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 4/0 AWG AAC - Oxlip Condition Final Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	994.	821.	665.	533.	433.	394.	361.	333.	310.	290.	273.	258.	245.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.17	2.39	2.65	2.96	3.28	3.44	3.60	3.75	3.88	4.02	4.14	4.26	4.36
50	.75	.82	.91	1.02	1.13	1.19	1.24	1.29	1.34	1.38	1.43	1.47	1.50
75	1.12	1.23	1.37	1.53	1.70	1.78	1.86	1.94	2.01	2.08	2.14	2.20	2.26
100	1.50	1.65	1.83	2.04	2.27	2.38	2.48	2.58	2.68	2.77	2.85	2.93	3.01
120	1.79	1.97	2.19	2.45	2.72	2.85	2.98	3.10	3.21	3.32	3.43	3.52	3.61
140	2.09	2.30	2.56	2.86	3.17	3.33	3.47	3.62	3.75	3.88	4.00	4.11	4.21
160	2.39	2.63	2.93	3.27	3.62	3.80	3.97	4.13	4.29	4.43	4.57	4.70	4.82
180	2.69	2.96	3.29	3.67	4.08	4.28	4.47	4.65	4.82	4.98	5.14	5.28	5.42
200	2.99	3.29	3.66	4.08	4.53	4.75	4.96	5.17	5.36	5.54	5.71	5.87	6.02
210	3.14	3.45	3.84	4.29	4.76	4.99	5.21	5.42	5.63	5.82	5.99	6.16	6.32
220	3.29	3.62	4.02	4.49	4.98	5.23	5.46	5.68	5.89	6.09	6.28	6.46	6.62
230	3.44	3.78	4.21	4.69	5.21	5.46	5.71	5.94	6.16	6.37	6.57	6.75	6.93
240	3.59	3.95	4.39	4.90	5.44	5.70	5.96	6.20	6.43	6.65	6.85	7.04	7.23
250	3.74	4.11	4.57	5.10	5.66	5.94	6.21	6.46	6.70	6.92	7.14	7.34	7.53
260	3.89	4.28	4.75	5.31	5.89	6.18	6.45	6.72	6.97	7.20	7.42	7.63	7.83
270	4.04	4.44	4.94	5.51	6.12	6.42	6.70	6.98	7.23	7.48	7.71	7.93	8.13
280	4.19	4.61	5.12	5.71	6.34	6.65	6.95	7.23	7.50	7.76	7.99	8.22	8.43
290	4.34	4.77	5.30	5.92	6.57	6.89	7.20	7.49	7.77	8.03	8.28	8.51	8.73
300	4.49	4.94	5.49	6.12	6.80	7.13	7.45	7.75	8.04	8.31	8.57	8.81	9.03
310	4.64	5.10	5.67	6.33	7.02	7.37	7.70	8.01	8.31	8.59	8.85	9.10	9.34
320	4.79	5.26	5.85	6.53	7.25	7.60	7.94	8.27	8.58	8.86	9.14	9.40	9.64
330	4.93	5.43	6.03	6.74	7.48	7.84	8.19	8.53	8.84	9.14	9.42	9.69	9.94
340	5.08	5.59	6.22	6.94	7.70	8.08	8.44	8.79	9.11	9.42	9.71	9.98	10.24
350	5.23	5.76	6.40	7.14	7.93	8.32	8.69	9.04	9.38	9.70	10.00	10.28	10.54

Design Condition									Ruling Span (Feet)	160		OXLIP - FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Final Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	931.	769.	626.	511.	425.	391.	362.	338.	317.	299.	283.	269.	257.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 9	0-10	1- 1	1- 3	1- 6	1- 8	1-10	1-11	2- 1	2- 2	2- 3	2- 5	2- 6
50	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3
75	0- 2	0- 3	0- 3	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7
100	0- 4	0- 4	0- 5	0- 6	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-11	1- 0	1- 0
120	0- 5	0- 6	0- 7	0- 9	0-11	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 4	1- 5
140	0- 7	0- 8	0-10	1- 0	1- 2	1- 3	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11
160	0- 9	0-10	1- 1	1- 3	1- 6	1- 8	1-10	1-11	2- 1	2- 2	2- 3	2- 5	2- 6
180	0-11	1- 1	1- 4	1- 7	1-11	2- 1	2- 3	2- 5	2- 7	2- 9	2-11	3- 0	3- 2
200	1- 1	1- 4	1- 8	2- 0	2- 5	2- 7	2- 9	3- 0	3- 2	3- 4	3- 7	3- 9	3-11
210	1- 3	1- 6	1- 9	2- 2	2- 7	2-10	3- 1	3- 3	3- 6	3- 9	3-11	4- 1	4- 4
220	1- 4	1- 7	2- 0	2- 5	2-10	3- 1	3- 4	3- 7	3-10	4- 1	4- 3	4- 6	4- 9
230	1- 5	1- 9	2- 2	2- 7	3- 2	3- 5	3- 8	3-11	4- 2	4- 5	4- 8	4-11	5- 2
240	1- 7	1-11	2- 4	2-10	3- 5	3- 8	4- 0	4- 3	4- 7	4-10	5- 1	5- 4	5- 7
250	1- 9	2- 1	2- 6	3- 1	3- 8	4- 0	4- 4	4- 8	4-11	5- 3	5- 6	5-10	6- 1
260	1-10	2- 3	2- 9	3- 4	4- 0	4- 4	4- 8	5- 0	5- 4	5- 8	6- 0	6- 3	6- 7
270	2- 0	2- 5	2-11	3- 7	4- 4	4- 8	5- 0	5- 5	5- 9	6- 1	6- 5	6- 9	7- 1
280	2- 2	2- 7	3- 2	3-10	4- 8	5- 0	5- 5	5-10	6- 2	6- 7	6-11	7- 3	7- 7
290	2- 3	2- 9	3- 5	4- 2	5- 0	5- 5	5-10	6- 3	6- 8	7- 0	7- 5	7-10	8- 2
300	2- 5	2-11	3- 7	4- 5	5- 4	5- 9	6- 3	6- 8	7- 1	7- 6	7-11	8- 4	8- 9
310	2- 7	3- 2	3-10	4- 9	5- 8	6- 2	6- 8	7- 1	7- 7	8- 0	8- 6	8-11	9- 4
320	2- 9	3- 4	4- 1	5- 0	6- 0	6- 7	7- 1	7- 7	8- 1	8- 7	9- 0	9- 6	9-11
330	2-11	3- 7	4- 4	5- 4	6- 5	7- 0	7- 6	8- 1	8- 7	9- 1	9- 7	10- 1	10- 7
340	3- 1	3- 9	4- 8	5- 8	6-10	7- 5	8- 0	8- 7	9- 1	9- 8	10- 2	10- 9	11- 3
350	3- 4	4- 0	4-11	6- 0	7- 2	7-10	8- 5	9- 1	9- 8	10- 3	10-10	11- 4	11-11

Ruling Span (Feet)	160				Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 4/0 AWG AAC - Oxlip Condition Final Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	931.	769.	626.	511.	425.	391.	362.	338.	317.	299.	283.	269.	257.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.47	2.72	3.01	3.33	3.66	3.81	3.96	4.10	4.24	4.38	4.48	4.60	4.70
50	.77	.85	.94	1.04	1.14	1.19	1.24	1.28	1.32	1.36	1.40	1.44	1.47
75	1.16	1.28	1.41	1.56	1.71	1.79	1.86	1.92	1.99	2.04	2.10	2.15	2.20
100	1.54	1.70	1.88	2.08	2.29	2.38	2.48	2.56	2.65	2.73	2.80	2.87	2.94
120	1.85	2.04	2.26	2.50	2.74	2.86	2.97	3.08	3.18	3.27	3.36	3.45	3.53
140	2.16	2.38	2.64	2.92	3.20	3.34	3.47	3.59	3.71	3.82	3.92	4.02	4.11
160	2.47	2.72	3.01	3.33	3.66	3.81	3.96	4.10	4.24	4.38	4.48	4.60	4.70
180	2.78	3.06	3.39	3.75	4.12	4.29	4.46	4.62	4.77	4.91	5.04	5.17	5.29
200	3.09	3.40	3.77	4.17	4.57	4.77	4.95	5.13	5.30	5.45	5.60	5.75	5.88
210	3.24	3.57	3.96	4.38	4.80	5.01	5.20	5.39	5.56	5.73	5.88	6.03	6.17
220	3.40	3.74	4.14	4.59	5.03	5.24	5.45	5.64	5.83	6.00	6.16	6.32	6.47
230	3.55	3.91	4.33	4.79	5.26	5.48	5.70	5.90	6.09	6.27	6.44	6.61	6.76
240	3.71	4.08	4.52	5.00	5.49	5.72	5.94	6.16	6.36	6.55	6.72	6.89	7.06
250	3.86	4.25	4.71	5.21	5.72	5.96	6.19	6.41	6.62	6.82	7.01	7.18	7.35
260	4.02	4.42	4.90	5.42	5.95	6.20	6.44	6.67	6.89	7.09	7.29	7.47	7.64
270	4.17	4.59	5.09	5.63	6.17	6.44	6.69	6.92	7.15	7.36	7.57	7.76	7.94
280	4.32	4.76	5.27	5.84	6.40	6.67	6.93	7.18	7.42	7.64	7.85	8.04	8.23
290	4.48	4.93	5.46	6.04	6.63	6.91	7.18	7.44	7.68	7.91	8.13	8.33	8.53
300	4.63	5.10	5.65	6.25	6.86	7.15	7.43	7.69	7.95	8.18	8.41	8.62	8.82
310	4.79	5.27	5.84	6.46	7.09	7.39	7.68	7.95	8.21	8.46	8.69	8.91	9.12
320	4.94	5.44	6.03	6.67	7.32	7.63	7.93	8.21	8.48	8.73	8.97	9.20	9.41
330	5.10	5.61	6.22	6.88	7.55	7.87	8.17	8.46	8.74	9.00	9.25	9.48	9.70
340	5.25	5.78	6.40	7.09	7.78	8.11	8.42	8.72	9.01	9.28	9.53	9.77	10.00
350	5.41	5.95	6.59	7.30	8.00	8.34	8.67	8.98	9.27	9.55	9.81	10.06	10.29

Design Condition									Ruling Span (Feet)	175		OXLIP - FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor 4/0 AWG AAC - Oxlip Condition Final Sag & Tension													
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	870.	719.	593.	493.	419.	389.	364.	342.	323.	307.	292.	279.	268.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0-11	1- 1	1- 4	1- 7	1-10	2- 0	2- 2	2- 3	2- 5	2- 6	2- 8	2- 9	2-11
50	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3
75	0- 2	0- 3	0- 3	0- 4	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 6	0- 7
100	0- 4	0- 5	0- 6	0- 7	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-11	0-11	1- 0
120	0- 5	0- 6	0- 8	0- 9	0-11	1- 0	1- 0	1- 1	1- 2	1- 2	1- 3	1- 4	1- 5
140	0- 7	0- 9	0-10	1- 0	1- 2	1- 4	1- 5	1- 6	1- 7	1- 8	1- 8	1- 9	1-10
160	0- 9	0-11	1- 1	1- 4	1- 7	1- 8	1- 9	1-11	2- 0	2- 1	2- 3	2- 4	2- 5
180	1- 0	1- 2	1- 5	1- 8	2- 0	2- 1	2- 3	2- 5	2- 6	2- 8	2-10	2-11	3- 1
200	1- 2	1- 5	1- 9	2- 1	2- 5	2- 7	2- 9	2-11	3- 1	3- 3	3- 5	3- 7	3- 9
210	1- 4	1- 7	1-11	2- 3	2- 8	2-10	3- 1	3- 3	3- 5	3- 7	3- 9	4- 0	4- 2
220	1- 5	1- 9	2- 1	2- 6	2-11	3- 2	3- 4	3- 7	3- 9	4- 0	4- 2	4- 4	4- 6
230	1- 7	1-10	2- 3	2- 8	3- 2	3- 5	3- 8	3-11	4- 1	4- 4	4- 6	4- 9	4-11
240	1- 8	2- 0	2- 5	2-11	3- 5	3- 9	4- 0	4- 3	4- 6	4- 8	4-11	5- 2	5- 5
250	1-10	2- 2	2- 8	3- 2	3- 9	4- 0	4- 4	4- 7	4-10	5- 1	5- 4	5- 7	5-10
260	2- 0	2- 5	2-11	3- 5	4- 1	4- 4	4- 8	4-11	5- 3	5- 6	5- 9	6- 1	6- 4
270	2- 1	2- 7	3- 1	3- 9	4- 4	4- 8	5- 0	5- 4	5- 8	5-11	6- 3	6- 6	6-10
280	2- 3	2- 9	3- 4	4- 0	4- 8	5- 1	5- 5	5- 9	6- 1	6- 5	6- 8	7- 0	7- 4
290	2- 5	2-11	3- 7	4- 3	5- 0	5- 5	5- 9	6- 2	6- 6	6-10	7- 2	7- 6	7-10
300	2- 7	3- 2	3-10	4- 7	5- 5	5- 9	6- 2	6- 7	6-11	7- 4	7- 8	8- 1	8- 5
310	2- 9	3- 4	4- 1	4-11	5- 9	6- 2	6- 7	7- 0	7- 5	7-10	8- 3	8- 7	9- 0
320	3- 0	3- 7	4- 4	5- 2	6- 1	6- 7	7- 0	7- 6	7-11	8- 4	8- 9	9- 2	9- 7
330	3- 2	3-10	4- 7	5- 6	6- 6	7- 0	7- 6	7-11	8- 5	8-10	9- 4	9- 9	10- 2
340	3- 4	4- 0	4-11	5-10	6-11	7- 5	7-11	8- 5	8-11	9- 5	9-10	10- 4	10- 9
350	3- 6	4- 3	5- 2	6- 3	7- 4	7-10	8- 5	8-11	9- 5	10- 0	10- 6	10-11	11- 5

Ruling Span (Feet)	175				Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 4/0 AWG AAC - Oxlip Condition Final Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	870.	719.	593.	493.	419.	389.	364.	342.	323.	307.	292.	279.	268.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.80	3.08	3.39	3.71	4.03	4.18	4.32	4.46	4.59	4.71	4.82	4.93	5.04
50	.80	.88	.97	1.06	1.15	1.19	1.23	1.27	1.31	1.35	1.38	1.41	1.44
75	1.20	1.32	1.45	1.59	1.73	1.79	1.85	1.91	1.97	2.02	2.07	2.11	2.16
100	1.60	1.76	1.94	2.12	2.30	2.39	2.47	2.55	2.62	2.69	2.76	2.82	2.88
120	1.92	2.11	2.32	2.55	2.78	2.87	2.96	3.06	3.14	3.23	3.31	3.38	3.46
140	2.24	2.46	2.71	2.97	3.22	3.34	3.46	3.57	3.67	3.77	3.86	3.95	4.03
160	2.56	2.81	3.10	3.40	3.69	3.82	3.95	4.08	4.19	4.30	4.41	4.51	4.61
180	2.88	3.16	3.49	3.82	4.15	4.30	4.45	4.59	4.72	4.84	4.96	5.08	5.18
200	3.20	3.51	3.87	4.25	4.61	4.78	4.94	5.10	5.24	5.38	5.51	5.64	5.76
210	3.36	3.69	4.07	4.46	4.84	5.02	5.19	5.35	5.50	5.65	5.79	5.92	6.05
220	3.52	3.87	4.26	4.67	5.07	5.26	5.43	5.60	5.77	5.92	6.07	6.20	6.34
230	3.68	4.04	4.45	4.88	5.30	5.49	5.68	5.86	6.03	6.19	6.34	6.49	6.62
240	3.84	4.22	4.65	5.09	5.53	5.73	5.93	6.11	6.29	6.46	6.62	6.77	6.91
250	4.00	4.39	4.84	5.31	5.76	5.97	6.18	6.37	6.55	6.73	6.89	7.05	7.20
260	4.16	4.57	5.03	5.52	5.99	6.21	6.42	6.62	6.82	7.00	7.17	7.33	7.49
270	4.32	4.75	5.23	5.73	6.22	6.45	6.67	6.88	7.08	7.27	7.45	7.62	7.78
280	4.48	4.92	5.42	5.94	6.45	6.69	6.92	7.13	7.34	7.54	7.72	7.90	8.07
290	4.64	5.10	5.62	6.16	6.68	6.93	7.16	7.39	7.60	7.80	8.00	8.18	8.35
300	4.80	5.27	5.81	6.37	6.91	7.17	7.41	7.64	7.86	8.07	8.27	8.46	8.64
310	4.95	5.45	6.00	6.58	7.14	7.41	7.66	7.90	8.13	8.34	8.55	8.74	8.93
320	5.11	5.62	6.20	6.79	7.37	7.64	7.91	8.15	8.39	8.61	8.83	9.03	9.22
330	5.27	5.80	6.39	7.01	7.60	7.88	8.15	8.41	8.65	8.88	9.10	9.31	9.51
340	5.43	5.98	6.58	7.22	7.83	8.12	8.40	8.66	8.91	9.15	9.38	9.59	9.80
350	5.59	6.15	6.78	7.43	8.06	8.36	8.65	8.92	9.18	9.42	9.65	9.87	10.08

GENERAL INFORMATION

ENGINEERING NOTES

SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	190		OXLIP - FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Final Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	810.	674.	564.	478.	414.	388.	366.	346.	329.	314.	301.	289.	278.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 2	1- 4	1- 8	1-11	2- 2	2- 4	2- 6	2- 8	2- 9	2-11	3- 0	3- 2	3- 3
50	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3
75	0- 3	0- 3	0- 3	0- 4	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 6	0- 7
100	0- 4	0- 5	0- 6	0- 7	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-10	0-11	0-11
120	0- 6	0- 7	0- 8	0- 9	0-11	1- 0	1- 0	1- 1	1- 2	1- 2	1- 3	1- 3	1- 4
140	0- 8	0- 9	0-11	1- 1	1- 3	1- 4	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1-10
160	0-10	1- 0	1- 2	1- 4	1- 7	1- 8	1- 9	1-11	2- 0	2- 1	2- 2	2- 3	2- 4
180	1- 0	1- 3	1- 6	1- 9	2- 0	2- 1	2- 3	2- 4	2- 6	2- 7	2- 9	2-10	2-11
200	1- 3	1- 6	1-10	2- 1	2- 5	2- 7	2- 9	2-11	3- 1	3- 2	3- 4	3- 6	3- 7
210	1- 5	1- 8	2- 0	2- 4	2- 8	2-10	3- 0	3- 2	3- 4	3- 6	3- 8	3-10	4- 0
220	1- 6	1-10	2- 2	2- 7	2-11	3- 2	3- 4	3- 6	3- 8	3-10	4- 1	4- 3	4- 4
230	1- 8	2- 0	2- 4	2- 9	3- 3	3- 5	3- 8	3-10	4- 0	4- 3	4- 5	4- 7	4- 9
240	1-10	2- 2	2- 7	3- 0	3- 6	3- 9	3-11	4- 2	4- 5	4- 7	4-10	5- 0	5- 2
250	1-11	2- 4	2-10	3- 3	3-10	4- 0	4- 3	4- 6	4- 9	5- 0	5- 2	5- 5	5- 8
260	2- 1	2- 6	3- 0	3- 7	4- 1	4- 4	4- 8	4-11	5- 2	5- 5	5- 8	5-10	6- 1
270	2- 3	2- 9	3- 3	3-10	4- 5	4- 8	5- 0	5- 3	5- 7	5-10	6- 1	6- 4	6- 7
280	2- 5	2-11	3- 6	4- 1	4- 9	5- 1	5- 4	5- 8	5-11	6- 3	6- 6	6-10	7- 1
290	2- 7	3- 2	3- 9	4- 5	5- 1	5- 5	5- 9	6- 1	6- 5	6- 8	7- 0	7- 3	7- 7
300	2-10	3- 4	4- 0	4- 9	5- 5	5-10	6- 2	6- 6	6-10	7- 2	7- 6	7-10	8- 1
310	3- 0	3- 7	4- 3	5- 0	5-10	6- 2	6- 7	6-11	7- 4	7- 8	8- 0	8- 4	8- 8
320	3- 2	3-10	4- 7	5- 4	6- 2	6- 7	7- 0	7- 5	7- 9	8- 2	8- 6	8-10	9- 3
330	3- 5	4- 1	4-10	5- 8	6- 7	7- 0	7- 5	7-10	8- 3	8- 8	9- 1	9- 5	9-10
340	3- 7	4- 4	5- 2	6- 1	7- 0	7- 5	7-11	8- 4	8- 9	9- 2	9- 7	10- 0	10- 5
350	3-10	4- 7	5- 5	6- 5	7- 5	7-11	8- 4	8-10	9- 3	9- 9	10- 2	10- 7	11- 0

Ruling Span (Feet)	190				Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 4/0 AWG AAC - Oxlip Condition Final Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	810.	674.	564.	478.	414.	388.	366.	346.	329.	314.	301.	289.	278.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	3.15	3.45	3.77	4.10	4.40	4.54	4.68	4.81	4.94	5.05	5.17	5.27	5.37
50	.83	.91	.99	1.08	1.16	1.20	1.23	1.27	1.30	1.33	1.36	1.39	1.41
75	1.24	1.36	1.49	1.62	1.74	1.79	1.85	1.90	1.95	1.99	2.04	2.08	2.12
100	1.66	1.82	1.99	2.16	2.32	2.39	2.46	2.53	2.60	2.66	2.72	2.77	2.83
120	1.99	2.18	2.38	2.59	2.78	2.87	2.96	3.04	3.12	3.19	3.26	3.33	3.39
140	2.32	2.54	2.78	3.02	3.24	3.35	3.45	3.55	3.64	3.72	3.81	3.88	3.96
160	2.65	2.90	3.18	3.45	3.71	3.83	3.94	4.05	4.16	4.26	4.35	4.44	4.53
180	2.98	3.27	3.57	3.88	4.17	4.31	4.43	4.56	4.68	4.79	4.89	5.00	5.09
200	3.31	3.63	3.97	4.31	4.63	4.78	4.93	5.06	5.20	5.32	5.44	5.55	5.66
210	3.48	3.81	4.17	4.53	4.86	5.02	5.17	5.32	5.46	5.59	5.71	5.83	5.94
220	3.64	3.99	4.37	4.74	5.10	5.26	5.42	5.57	5.71	5.85	5.98	6.11	6.22
230	3.81	4.17	4.57	4.96	5.33	5.50	5.67	5.82	5.97	6.12	6.25	6.38	6.51
240	3.97	4.36	4.77	5.17	5.56	5.74	5.91	6.08	6.23	6.38	6.53	6.66	6.79
250	4.14	4.54	4.96	5.39	5.79	5.98	6.16	6.33	6.49	6.65	6.80	6.94	7.07
260	4.31	4.72	5.16	5.61	6.02	6.22	6.41	6.58	6.75	6.92	7.07	7.22	7.36
270	4.47	4.90	5.36	5.82	6.25	6.46	6.65	6.84	7.01	7.18	7.34	7.49	7.64
280	4.64	5.08	5.56	6.04	6.49	6.70	6.90	7.09	7.27	7.45	7.61	7.77	7.92
290	4.80	5.26	5.76	6.25	6.72	6.94	7.15	7.35	7.53	7.71	7.89	8.05	8.21
300	4.97	5.45	5.96	6.47	6.95	7.18	7.39	7.60	7.79	7.98	8.16	8.33	8.49
310	5.13	5.63	6.16	6.68	7.18	7.42	7.64	7.85	8.05	8.25	8.43	8.61	8.77
320	5.30	5.81	6.35	6.90	7.41	7.66	7.89	8.11	8.31	8.51	8.70	8.88	9.06
330	5.46	5.99	6.55	7.11	7.65	7.89	8.13	8.36	8.57	8.78	8.97	9.16	9.34
340	5.63	6.17	6.75	7.33	7.88	8.13	8.38	8.61	8.83	9.05	9.25	9.44	9.62
350	5.80	6.35	6.95	7.55	8.11	8.37	8.63	8.87	9.09	9.31	9.52	9.72	9.91

GENERAL INFORMATION

ENGINEERING NOTES

SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	205		OXLIP - FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Final Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	755.	635.	539.	466.	410.	388.	368.	350.	335.	321.	308.	297.	286.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 5	1- 8	2- 0	2- 3	2- 7	2- 9	2-11	3- 0	3- 2	3- 4	3- 5	3- 7	3- 8
50	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3
75	0- 3	0- 3	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 6	0- 6
100	0- 4	0- 5	0- 6	0- 7	0- 8	0- 8	0- 9	0- 9	0- 9	0-10	0-10	0-11	0-11
120	0- 6	0- 7	0- 8	0-10	0-11	1- 0	1- 0	1- 1	1- 1	1- 2	1- 2	1- 3	1- 3
140	0- 8	0-10	0-11	1- 1	1- 3	1- 4	1- 4	1- 5	1- 6	1- 7	1- 7	1- 8	1- 9
160	0-11	1- 1	1- 3	1- 5	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 2	2- 3
180	1- 1	1- 4	1- 6	1- 9	2- 0	2- 1	2- 3	2- 4	2- 5	2- 7	2- 8	2- 9	2-10
200	1- 4	1- 7	1-11	2- 2	2- 6	2- 7	2- 9	2-11	3- 0	3- 2	3- 3	3- 5	3- 6
210	1- 6	1- 9	2- 1	2- 5	2- 9	2-10	3- 0	3- 2	3- 4	3- 6	3- 7	3- 9	3-10
220	1- 8	1-11	2- 3	2- 7	3- 0	3- 2	3- 4	3- 6	3- 8	3-10	3-11	4- 1	4- 3
230	1- 9	2- 1	2- 6	2-10	3- 3	3- 5	3- 7	3-10	4- 0	4- 2	4- 4	4- 6	4- 8
240	1-11	2- 4	2- 8	3- 1	3- 6	3- 9	3-11	4- 2	4- 4	4- 6	4- 8	4-10	5- 0
250	2- 1	2- 6	2-11	3- 4	3-10	4- 1	4- 3	4- 6	4- 8	4-11	5- 1	5- 3	5- 6
260	2- 3	2- 8	3- 2	3- 8	4- 2	4- 4	4- 7	4-10	5- 1	5- 3	5- 6	5- 8	5-11
270	2- 5	2-11	3- 5	3-11	4- 5	4- 9	5- 0	5- 3	5- 5	5- 8	5-11	6- 2	6- 4
280	2- 7	3- 1	3- 8	4- 3	4- 9	5- 1	5- 4	5- 7	5-10	6- 1	6- 4	6- 7	6-10
290	2-10	3- 4	3-11	4- 6	5- 2	5- 5	5- 9	6- 0	6- 3	6- 7	6-10	7- 1	7- 4
300	3- 0	3- 7	4- 2	4-10	5- 6	5-10	6- 1	6- 5	6- 9	7- 0	7- 4	7- 7	7-10
310	3- 2	3-10	4- 6	5- 2	5-10	6- 2	6- 6	6-10	7- 2	7- 6	7-10	8- 1	8- 5
320	3- 5	4- 1	4- 9	5- 6	6- 3	6- 7	7- 0	7- 4	7- 8	8- 0	8- 4	8- 7	8-11
330	3- 8	4- 4	5- 1	5-10	6- 8	7- 0	7- 5	7- 9	8- 2	8- 6	8-10	9- 2	9- 6
340	3-10	4- 7	5- 4	6- 2	7- 1	7- 5	7-10	8- 3	8- 8	9- 0	9- 4	9- 9	10- 1
350	4- 1	4-10	5- 8	6- 7	7- 6	7-11	8- 4	8- 9	9- 2	9- 6	9-11	10- 4	10- 8

Ruling Span (Feet)	205		OXLIP - FINAL		Design Condition 1500 lb. max tension & 4 lbs/ft					
					Conductor Condition 4/0 AWG AAC - Oxlip Final Sag & Tension					
Temp (°F)	20	30	40	50	60	65	70	75	80	85
Tension (lbs)	755.	635.	539.	466.	410.	388.	368.	350.	335.	321.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	3.52	3.84	4.16	4.48	4.77	4.91	5.04	5.16	5.28	5.40
50	.86	.94	1.01	1.09	1.16	1.20	1.23	1.26	1.29	1.32
75	1.29	1.40	1.52	1.64	1.75	1.80	1.84	1.89	1.93	1.97
100	1.72	1.87	2.03	2.18	2.33	2.39	2.46	2.52	2.58	2.63
120	2.06	2.25	2.44	2.62	2.79	2.87	2.95	3.02	3.09	3.16
140	2.40	2.62	2.84	3.06	3.26	3.35	3.44	3.53	3.61	3.69
160	2.74	2.99	3.25	3.49	3.72	3.83	3.93	4.03	4.12	4.21
180	3.09	3.37	3.65	3.93	4.19	4.31	4.42	4.53	4.64	4.74
200	3.43	3.74	4.06	4.37	4.65	4.79	4.92	5.04	5.15	5.27
210	3.60	3.93	4.26	4.59	4.89	5.03	5.16	5.29	5.41	5.53
220	3.77	4.12	4.47	4.80	5.12	5.27	5.41	5.54	5.67	5.79
230	3.95	4.30	4.67	5.02	5.35	5.51	5.65	5.79	5.93	6.06
240	4.12	4.49	4.87	5.24	5.59	5.75	5.90	6.05	6.19	6.32
250	4.29	4.68	5.08	5.46	5.82	5.99	6.15	6.30	6.44	6.58
260	4.46	4.86	5.28	5.68	6.05	6.22	6.39	6.55	6.70	6.85
270	4.63	5.05	5.48	5.90	6.28	6.46	6.64	6.80	6.96	7.11
280	4.80	5.24	5.68	6.12	6.52	6.70	6.88	7.05	7.22	7.37
290	4.98	5.43	5.89	6.33	6.75	6.94	7.13	7.31	7.47	7.64
300	5.15	5.61	6.09	6.55	6.98	7.18	7.38	7.56	7.73	7.90
310	5.32	5.80	6.29	6.77	7.21	7.42	7.62	7.81	7.99	8.16
320	5.49	5.99	6.50	6.99	7.45	7.66	7.87	8.06	8.25	8.43
330	5.66	6.17	6.70	7.21	7.68	7.90	8.11	8.31	8.51	8.69
340	5.83	6.36	6.90	7.43	7.91	8.14	8.36	8.57	8.76	8.95
350	6.00	6.55	7.11	7.64	8.15	8.38	8.61	8.82	9.02	9.22

Design Condition									Ruling Span (Feet)	220		OXLIP - FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Final Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	705.	601.	519.	456.	407.	387.	369.	354.	339.	326.	315.	304.	294.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 9	2- 1	2- 4	2- 8	3- 0	3- 2	3- 4	3- 5	3- 7	3- 9	3-10	4- 0	4- 2
50	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3
75	0- 3	0- 3	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 6
100	0- 5	0- 5	0- 6	0- 7	0- 8	0- 8	0- 9	0- 9	0- 9	0-10	0-10	0-10	0-11
120	0- 7	0- 8	0- 9	0-10	0-11	1- 0	1- 0	1- 1	1- 1	1- 2	1- 2	1- 3	1- 3
140	0- 9	0-10	1- 0	1- 1	1- 3	1- 4	1- 4	1- 5	1- 6	1- 6	1- 7	1- 8	1- 8
160	0-11	1- 1	1- 3	1- 5	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1	2- 2	2- 2
180	1- 2	1- 5	1- 7	1-10	2- 0	2- 1	2- 3	2- 4	2- 5	2- 6	2- 7	2- 8	2- 9
200	1- 5	1- 8	1-11	2- 3	2- 6	2- 7	2- 9	2-10	3- 0	3- 1	3- 2	3- 4	3- 5
210	1- 7	1-10	2- 2	2- 5	2- 9	2-10	3- 0	3- 2	3- 3	3- 5	3- 6	3- 8	3- 9
220	1- 9	2- 1	2- 4	2- 8	3- 0	3- 2	3- 4	3- 5	3- 7	3- 9	3-10	4- 0	4- 2
230	1-11	2- 3	2- 7	2-11	3- 3	3- 5	3- 7	3- 9	3-11	4- 1	4- 3	4- 4	4- 6
240	2- 1	2- 5	2-10	3- 2	3- 7	3- 9	3-11	4- 1	4- 3	4- 5	4- 7	4- 9	4-11
250	2- 3	2- 8	3- 0	3- 5	3-10	4- 1	4- 3	4- 5	4- 7	4-10	5- 0	5- 2	5- 4
260	2- 5	2-10	3- 3	3- 9	4- 2	4- 5	4- 7	4-10	5- 0	5- 2	5- 5	5- 7	5- 9
270	2- 7	3- 1	3- 6	4- 0	4- 6	4- 9	4-11	5- 2	5- 5	5- 7	5-10	6- 0	6- 2
280	2-10	3- 3	3-10	4- 4	4-10	5- 1	5- 4	5- 7	5- 9	6- 0	6- 3	6- 5	6- 8
290	3- 0	3- 6	4- 1	4- 8	5- 2	5- 5	5- 8	5-11	6- 2	6- 5	6- 8	6-11	7- 2
300	3- 3	3- 9	4- 4	4-11	5- 6	5-10	6- 1	6- 4	6- 8	6-11	7- 2	7- 5	7- 8
310	3- 5	4- 0	4- 8	5- 3	5-11	6- 2	6- 6	6-10	7- 1	7- 4	7- 8	7-11	8- 2
320	3- 8	4- 3	4-11	5- 7	6- 3	6- 7	6-11	7- 3	7- 7	7-10	8- 2	8- 5	8- 8
330	3-11	4- 7	5- 3	6- 0	6- 8	7- 0	7- 4	7- 8	8- 0	8- 4	8- 8	8-11	9- 3
340	4- 1	4-10	5- 7	6- 4	7- 1	7- 6	7-10	8- 2	8- 6	8-10	9- 2	9- 6	9-10
350	4- 4	5- 1	5-11	6- 9	7- 6	7-11	8- 3	8- 8	9- 0	9- 4	9- 9	10- 1	10- 5

Ruling Span (Feet)	220				Design Condition 1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind								
					Conductor 4/0 AWG AAC - Oxlip Condition Final Sag & Tension								
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	705.	601.	519.	456.	407.	387.	369.	354.	339.	326.	315.	304.	294.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	3.91	4.23	4.55	4.86	5.14	5.27	5.40	5.52	5.63	5.74	5.85	5.95	6.04
50	.89	.96	1.03	1.10	1.17	1.20	1.23	1.25	1.28	1.30	1.33	1.35	1.37
75	1.33	1.44	1.55	1.66	1.75	1.80	1.84	1.88	1.92	1.96	1.99	2.03	2.06
100	1.78	1.92	2.07	2.21	2.34	2.40	2.45	2.51	2.56	2.61	2.66	2.70	2.75
120	2.13	2.31	2.48	2.65	2.80	2.87	2.94	3.01	3.07	3.13	3.19	3.24	3.30
140	2.49	2.69	2.90	3.09	3.27	3.35	3.43	3.51	3.58	3.65	3.72	3.78	3.85
160	2.84	3.08	3.31	3.53	3.74	3.83	3.92	4.01	4.09	4.17	4.25	4.32	4.40
180	3.20	3.46	3.72	3.97	4.20	4.31	4.41	4.51	4.61	4.70	4.78	4.87	4.95
200	3.55	3.85	4.14	4.42	4.67	4.79	4.90	5.01	5.12	5.22	5.31	5.41	5.49
210	3.73	4.04	4.35	4.64	4.90	5.03	5.15	5.26	5.37	5.48	5.58	5.68	5.77
220	3.91	4.23	4.55	4.86	5.14	5.27	5.40	5.52	5.63	5.74	5.85	5.95	6.04
230	4.08	4.42	4.76	5.08	5.37	5.51	5.64	5.77	5.89	6.00	6.11	6.22	6.32
240	4.26	4.62	4.97	5.30	5.61	5.75	5.89	6.02	6.14	6.26	6.38	6.49	6.59
250	4.44	4.81	5.17	5.52	5.84	5.99	6.13	6.27	6.40	6.52	6.64	6.76	6.87
260	4.62	5.00	5.38	5.74	6.07	6.23	6.38	6.52	6.65	6.78	6.91	7.03	7.14
270	4.79	5.19	5.59	5.96	6.31	6.47	6.62	6.77	6.91	7.05	7.18	7.30	7.42
280	4.97	5.39	5.79	6.18	6.54	6.71	6.87	7.02	7.17	7.31	7.44	7.57	7.69
290	5.15	5.58	6.00	6.40	6.77	6.95	7.11	7.27	7.42	7.57	7.71	7.84	7.97
300	5.33	5.77	6.21	6.62	7.01	7.19	7.36	7.52	7.68	7.83	7.97	8.11	8.24
310	5.50	5.96	6.42	6.84	7.24	7.43	7.60	7.77	7.94	8.09	8.24	8.38	8.52
320	5.68	6.15	6.62	7.07	7.47	7.67	7.85	8.02	8.19	8.35	8.51	8.65	8.79
330	5.86	6.35	6.83	7.29	7.71	7.91	8.09	8.27	8.45	8.61	8.77	8.92	9.07
340	6.04	6.54	7.04	7.51	7.94	8.15	8.34	8.53	8.70	8.87	9.04	9.19	9.34
350	6.21	6.73	7.24	7.73	8.18	8.39	8.59	8.78	8.96	9.14	9.30	9.46	9.62

GENERAL INFORMATION

ENGINEERING NOTES

SAG & TENSION TABLES

Design Condition									Ruling Span (Feet)	250		OXLIP - FINAL	
1500 lb. max tension at 15°F with .25" ice and 4 lbs/ft ² wind													
Conductor Condition		4/0 AWG AAC - Oxlip Final Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	624.	548.	488.	441.	403.	387.	373.	359.	347.	336.	326.	317.	308.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	2- 6	2-10	3- 3	3- 7	3-11	4- 1	4- 3	4- 4	4- 6	4- 8	4-10	4-11	5- 1
50	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3
75	0- 3	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6
100	0- 5	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9	0- 9	0- 9	0-10	0-10	0-10
120	0- 7	0- 8	0- 9	0-10	0-11	1- 0	1- 0	1- 0	1- 1	1- 1	1- 2	1- 2	1- 2
140	0-10	0-11	1- 0	1- 2	1- 3	1- 4	1- 4	1- 5	1- 5	1- 6	1- 6	1- 7	1- 7
160	1- 1	1- 2	1- 4	1- 6	1- 7	1- 8	1- 9	1-10	1-10	1-11	2- 0	2- 1	2- 1
180	1- 4	1- 6	1- 8	1-10	2- 0	2- 1	2- 2	2- 3	2- 4	2- 5	2- 6	2- 7	2- 8
200	1- 8	1-10	2- 1	2- 4	2- 6	2- 7	2- 9	2-10	2-11	3- 0	3- 1	3- 2	3- 3
210	1-10	2- 0	2- 3	2- 6	2- 9	2-10	3- 0	3- 1	3- 2	3- 4	3- 5	3- 6	3- 7
220	2- 0	2- 3	2- 6	2- 9	3- 0	3- 2	3- 3	3- 5	3- 6	3- 7	3- 9	3-10	3-11
230	2- 2	2- 5	2- 9	3- 0	3- 4	3- 5	3- 7	3- 8	3-10	3-11	4- 1	4- 2	4- 4
240	2- 4	2- 8	3- 0	3- 3	3- 7	3- 9	3-11	4- 0	4- 2	4- 4	4- 5	4- 7	4- 8
250	2- 6	2-10	3- 3	3- 7	3-11	4- 1	4- 3	4- 4	4- 6	4- 8	4-10	4-11	5- 1
260	2- 9	3- 1	3- 6	3-10	4- 2	4- 5	4- 7	4- 9	4-11	5- 0	5- 2	5- 4	5- 6
270	2-11	3- 4	3- 9	4- 2	4- 6	4- 9	4-11	5- 1	5- 3	5- 5	5- 7	5- 9	5-11
280	3- 2	3- 7	4- 0	4- 6	4-10	5- 1	5- 3	5- 6	5- 8	5-10	6- 0	6- 2	6- 4
290	3- 5	3-10	4- 4	4- 9	5- 3	5- 5	5- 8	5-10	6- 1	6- 3	6- 5	6- 8	6-10
300	3- 7	4- 1	4- 7	5- 1	5- 7	5-10	6- 1	6- 3	6- 6	6- 8	6-11	7- 1	7- 4
310	3-10	4- 5	4-11	5- 5	6- 0	6- 3	6- 5	6- 8	6-11	7- 2	7- 4	7- 7	7-10
320	4- 1	4- 8	5- 3	5-10	6- 4	6- 7	6-10	7- 1	7- 4	7- 7	7-10	8- 1	8- 4
330	4- 4	5- 0	5- 7	6- 2	6- 9	7- 0	7- 4	7- 7	7-10	8- 1	8- 4	8- 7	8-10
340	4- 8	5- 3	5-11	6- 7	7- 2	7- 6	7- 9	8- 0	8- 4	8- 7	8-10	9- 1	9- 4
350	4-11	5- 7	6- 3	6-11	7- 7	7-11	8- 3	8- 6	8-10	9- 1	9- 5	9- 8	9-11

Ruling Span (Feet)	250		OXLIP - FINAL		Design Condition 1500 lb. max tension & 4 lbs/ft					
					Conductor Condition 4/0 AWG AAC - Oxlip Final Sag & Tension					
Temp (°F)	20	30	40	50	60	65	70	75	80	85
Tension (lbs)	624.	548.	488.	441.	403.	387.	373.	359.	347.	336.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	4.72	5.03	5.33	5.61	5.87	5.99	6.11	6.22	6.32	6.43
50	.94	1.01	1.07	1.12	1.17	1.20	1.22	1.24	1.26	1.29
75	1.41	1.51	1.60	1.68	1.76	1.80	1.83	1.86	1.90	1.93
100	1.89	2.01	2.13	2.24	2.35	2.40	2.44	2.49	2.53	2.57
120	2.26	2.42	2.56	2.69	2.82	2.87	2.93	2.98	3.04	3.08
140	2.64	2.82	2.99	3.14	3.29	3.35	3.42	3.48	3.54	3.60
160	3.02	3.22	3.41	3.59	3.76	3.83	3.91	3.98	4.05	4.11
180	3.40	3.62	3.84	4.04	4.23	4.31	4.40	4.48	4.55	4.63
200	3.77	4.03	4.27	4.49	4.70	4.79	4.88	4.97	5.06	5.14
210	3.96	4.23	4.48	4.71	4.93	5.03	5.13	5.22	5.31	5.40
220	4.15	4.43	4.69	4.94	5.16	5.27	5.37	5.47	5.57	5.66
230	4.34	4.63	4.91	5.16	5.40	5.51	5.62	5.72	5.82	5.91
240	4.53	4.83	5.12	5.39	5.63	5.75	5.86	5.97	6.07	6.17
250	4.72	5.03	5.33	5.61	5.87	5.99	6.11	6.22	6.32	6.43
260	4.90	5.24	5.55	5.84	6.10	6.23	6.35	6.47	6.58	6.68
270	5.09	5.44	5.76	6.06	6.34	6.47	6.59	6.71	6.83	6.94
280	5.28	5.64	5.97	6.29	6.57	6.71	6.84	6.96	7.08	7.20
290	5.47	5.84	6.19	6.51	6.81	6.95	7.08	7.21	7.34	7.46
300	5.66	6.04	6.40	6.74	7.04	7.19	7.33	7.46	7.59	7.71
310	5.85	6.24	6.61	6.96	7.28	7.43	7.57	7.71	7.84	7.97
320	6.04	6.44	6.83	7.18	7.51	7.67	7.82	7.96	8.10	8.23
330	6.23	6.64	7.04	7.41	7.75	7.91	8.06	8.21	8.35	8.49
340	6.41	6.85	7.25	7.63	7.98	8.15	8.31	8.46	8.60	8.74
350	6.60	7.05	7.47	7.86	8.22	8.39	8.55	8.71	8.86	9.00

Design Condition								Ruling Span (Feet)	145		ARBUTUS - FINAL		
4750 lb. max tension at 0°F													
Conductor		795 kcmil AAC - Arbutus											
Condition		Final Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3377.	2806.	2295.	1870.	1542.	1413.	1303.	1209.	1130.	1061.	1002.	950.	905.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 7	0- 9	0-11	1- 1	1- 4	1- 5	1- 7	1- 8	1- 9	1-11	2- 0	2- 1	2- 3
50	0- 1	0- 1	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 4
75	0- 2	0- 3	0- 3	0- 4	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7	0- 7
100	0- 4	0- 4	0- 5	0- 6	0- 8	0- 8	0- 9	0-10	0-10	0-11	1- 0	1- 0	1- 1
120	0- 5	0- 6	0- 8	0- 9	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 5	1- 5	1- 6
140	0- 7	0- 8	0-10	1- 0	1- 3	1- 4	1- 5	1- 7	1- 8	1- 9	1-10	2- 0	2- 1
160	0- 9	0-11	1- 1	1- 4	1- 7	1- 9	1-11	2- 0	2- 2	2- 4	2- 5	2- 7	2- 8
180	0-11	1- 1	1- 4	1- 8	2- 0	2- 2	2- 4	2- 7	2- 9	2-11	3- 1	3- 3	3- 5
200	1- 2	1- 4	1- 8	2- 0	2- 6	2- 8	2-11	3- 2	3- 4	3- 7	3- 9	4- 0	4- 2
210	1- 3	1- 6	1-10	2- 3	2- 9	2-11	3- 2	3- 5	3- 8	3-11	4- 2	4- 4	4- 7
220	1- 5	1- 8	2- 0	2- 5	3- 0	3- 3	3- 6	3- 9	4- 0	4- 4	4- 7	4-10	5- 0
230	1- 6	1-10	2- 2	2- 8	3- 3	3- 6	3-10	4- 1	4- 5	4- 8	5- 0	5- 3	5- 6
240	1- 8	1-11	2- 5	2-11	3- 6	3-10	4- 2	4- 6	4-10	5- 1	5- 5	5- 8	6- 0
250	1- 9	2- 1	2- 7	3- 2	3-10	4- 2	4- 6	4-10	5- 2	5- 6	5-10	6- 2	6- 6
260	1-11	2- 3	2- 9	3- 5	4- 2	4- 6	4-11	5- 3	5- 8	6- 0	6- 4	6- 8	7- 0
270	2- 1	2- 6	3- 0	3- 8	4- 5	4-10	5- 3	5- 8	6- 1	6- 5	6-10	7- 2	7- 7
280	2- 2	2- 8	3- 3	3-11	4- 9	5- 3	5- 8	6- 1	6- 6	6-11	7- 4	7- 9	8- 2
290	2- 4	2-10	3- 6	4- 3	5- 2	5- 7	6- 1	6- 6	7- 0	7- 5	7-11	8- 4	8- 9
300	2- 6	3- 0	3- 8	4- 6	5- 6	6- 0	6- 6	7- 0	7- 6	8- 0	8- 5	8-11	9- 4
310	2- 8	3- 3	3-11	4-10	5-10	6- 5	6-11	7- 6	8- 0	8- 6	9- 0	9- 6	10- 0
320	2-10	3- 5	4- 2	5- 2	6- 3	6-10	7- 5	7-11	8- 6	9- 1	9- 7	10- 1	10- 7
330	3- 1	3- 8	4- 6	5- 6	6- 8	7- 3	7-10	8- 5	9- 1	9- 8	10- 2	10- 9	11- 3
340	3- 3	3-11	4- 9	5-10	7- 0	7- 8	8- 4	9- 0	9- 7	10- 3	10-10	11- 5	12- 0
350	3- 5	4- 1	5- 0	6- 2	7- 5	8- 2	8-10	9- 6	10- 2	10-10	11- 6	12- 1	12- 8

Ruling Span (Feet)	145		ARBUTUS - FINAL			Design Condition 4750 lb. max tension at 0°F							
						Conductor 795 kcmil AAC - Arbutus Condition Final Sag & Tension							
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3377.	2806.	2295.	1870.	1542.	1413.	1303.	1209.	1130.	1061.	1002.	950.	905.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.28	2.50	2.76	3.06	3.37	3.52	3.67	3.81	3.94	4.07	4.19	4.30	4.40
50	.79	.86	.95	1.06	1.16	1.22	1.27	1.31	1.36	1.40	1.44	1.48	1.52
75	1.18	1.29	1.43	1.58	1.74	1.82	1.90	1.97	2.04	2.10	2.16	2.22	2.28
100	1.57	1.72	1.91	2.11	2.33	2.43	2.53	2.63	2.72	2.80	2.89	2.96	3.04
120	1.89	2.07	2.29	2.54	2.79	2.92	3.04	3.15	3.26	3.37	3.46	3.56	3.64
140	2.20	2.41	2.67	2.96	3.26	3.40	3.54	3.68	3.81	3.93	4.04	4.15	4.25
160	2.52	2.76	3.05	3.38	3.72	3.89	4.05	4.20	4.35	4.49	4.62	4.74	4.86
180	2.83	3.10	3.43	3.80	4.19	4.37	4.56	4.73	4.89	5.05	5.20	5.33	5.47
200	3.14	3.45	3.81	4.23	4.65	4.86	5.06	5.25	5.44	5.61	5.77	5.93	6.07
210	3.30	3.62	4.00	4.44	4.89	5.10	5.32	5.52	5.71	5.89	6.06	6.22	6.38
220	3.46	3.79	4.20	4.65	5.12	5.35	5.57	5.78	5.98	6.17	6.35	6.52	6.68
230	3.62	3.97	4.39	4.86	5.35	5.59	5.82	6.04	6.25	6.45	6.64	6.82	6.99
240	3.77	4.14	4.58	5.07	5.58	5.83	6.08	6.31	6.52	6.73	6.93	7.11	7.29
250	3.93	4.31	4.77	5.28	5.82	6.08	6.33	6.57	6.80	7.01	7.22	7.41	7.59
260	4.09	4.48	4.96	5.49	6.05	6.32	6.58	6.83	7.07	7.29	7.51	7.71	7.90
270	4.24	4.66	5.15	5.70	6.28	6.56	6.83	7.09	7.34	7.57	7.80	8.00	8.20
280	4.40	4.83	5.34	5.92	6.51	6.81	7.09	7.36	7.61	7.86	8.08	8.30	8.51
290	4.56	5.00	5.53	6.13	6.75	7.05	7.34	7.62	7.89	8.14	8.37	8.60	8.81
300	4.72	5.17	5.72	6.34	6.98	7.29	7.59	7.88	8.16	8.42	8.66	8.89	9.11
310	4.87	5.35	5.91	6.55	7.21	7.54	7.85	8.15	8.43	8.70	8.95	9.19	9.42
320	5.03	5.52	6.10	6.76	7.45	7.78	8.10	8.41	8.70	8.98	9.24	9.49	9.72
330	5.19	5.69	6.29	6.97	7.68	8.02	8.35	8.67	8.97	9.26	9.53	9.79	10.03
340	5.35	5.86	6.48	7.18	7.91	8.27	8.61	8.94	9.25	9.54	9.82	10.08	10.33
350	5.50	6.04	6.67	7.40	8.14	8.51	8.86	9.20	9.52	9.82	10.11	10.38	10.64

Design Condition								Ruling Span (Feet)	160		ARBUTUS - FINAL		
4750 lb. max tension at 0°F													
Conductor Condition		795 kcmil AAC - Arbutus Final Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3323.	2774.	2291.	1894.	1589.	1467.	1382.	1272.	1195.	1128.	1069.	1017.	971.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	0- 9	0-11	1- 1	1- 4	1- 7	1- 8	1-10	1-11	2- 0	2- 2	2- 3	2- 5	2- 6
50	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3
75	0- 2	0- 3	0- 3	0- 4	0- 4	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 7	0- 7
100	0- 4	0- 5	0- 5	0- 6	0- 8	0- 8	0- 9	0- 9	0-10	0-10	0-11	1- 0	1- 0
120	0- 5	0- 6	0- 8	0- 9	0-11	0-11	1- 0	1- 1	1- 2	1- 3	1- 4	1- 4	1- 5
140	0- 7	0- 8	0-10	1- 0	1- 2	1- 3	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11
160	0- 9	0-11	1- 1	1- 4	1- 7	1- 8	1-10	1-11	2- 0	2- 2	2- 3	2- 5	2- 6
180	0-11	1- 2	1- 4	1- 8	1-11	2- 1	2- 3	2- 5	2- 7	2- 9	2-10	3- 0	3- 2
200	1- 2	1- 5	1- 8	2- 0	2- 5	2- 7	2- 9	3- 0	3- 2	3- 4	3- 6	3- 9	3-11
210	1- 3	1- 6	1-10	2- 3	2- 8	2-10	3- 1	3- 3	3- 6	3- 8	3-11	4- 1	4- 3
220	1- 5	1- 8	2- 0	2- 5	2-11	3- 1	3- 4	3- 7	3-10	4- 1	4- 3	4- 6	4- 8
230	1- 6	1-10	2- 2	2- 8	3- 2	3- 5	3- 8	3-11	4- 2	4- 5	4- 8	4-11	5- 2
240	1- 8	2- 0	2- 5	2-11	3- 5	3- 8	4- 0	4- 3	4- 6	4-10	5- 1	5- 4	5- 7
250	1-10	2- 2	2- 7	3- 1	3- 9	4- 0	4- 4	4- 8	4-11	5- 3	5- 6	5- 9	6- 1
260	1-11	2- 4	2-10	3- 4	4- 0	4- 4	4- 8	5- 0	5- 4	5- 8	5-11	6- 3	6- 6
270	2- 1	2- 6	3- 0	3- 8	4- 4	4- 8	5- 0	5- 5	5- 9	6- 1	6- 5	6- 9	7- 1
280	2- 3	2- 8	3- 3	3-11	4- 8	5- 0	5- 5	5-10	6- 2	6- 6	6-11	7- 3	7- 7
290	2- 5	2-10	3- 6	4- 2	5- 0	5- 5	5-10	6- 3	6- 7	7- 0	7- 5	7- 9	8- 2
300	2- 7	3- 1	3- 8	4- 6	5- 4	5- 9	6- 3	6- 8	7- 1	7- 6	7-11	8- 4	8- 8
310	2- 9	3- 3	3-11	4- 9	5- 8	6- 2	6- 8	7- 1	7- 7	8- 0	8- 5	8-10	9- 3
320	2-11	3- 6	4- 3	5- 1	6- 1	6- 7	7- 1	7- 7	8- 1	8- 6	9- 0	9- 5	9-11
330	3- 1	3- 8	4- 6	5- 5	6- 5	7- 0	7- 6	8- 0	8- 7	9- 1	9- 7	10- 1	10- 6
340	3- 3	3-11	4- 9	5- 9	6-10	7- 5	8- 0	8- 6	9- 1	9- 7	10- 2	10- 8	11- 2
350	3- 6	4- 2	5- 0	6- 1	7- 3	7-10	8- 5	9- 0	9- 7	10- 2	10- 9	11- 4	11-10

Ruling Span (Feet)	160					Design Condition							
						4750 lb. max tension at 0°F							
	ARBUS - FINAL					Conductor 795 kcmil AAC - Arbutus Condition Final Sag & Tension							
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3323.	2774.	2291.	1894.	1589.	1467.	1362.	1272.	1195.	1128.	1069.	1017.	971.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.54	2.78	3.05	3.36	3.67	3.82	3.96	4.10	4.23	4.35	4.47	4.58	4.69
50	.79	.87	.95	1.05	1.15	1.19	1.24	1.28	1.32	1.36	1.40	1.43	1.47
75	1.19	1.30	1.43	1.57	1.72	1.79	1.86	1.92	1.98	2.04	2.10	2.15	2.20
100	1.58	1.73	1.91	2.10	2.29	2.39	2.48	2.56	2.64	2.72	2.79	2.86	2.93
120	1.90	2.08	2.29	2.52	2.75	2.86	2.97	3.07	3.17	3.26	3.35	3.44	3.52
140	2.22	2.43	2.67	2.94	3.21	3.34	3.47	3.59	3.70	3.81	3.91	4.01	4.10
160	2.54	2.78	3.05	3.36	3.67	3.82	3.96	4.10	4.23	4.35	4.47	4.58	4.69
180	2.85	3.12	3.44	3.78	4.13	4.29	4.46	4.61	4.76	4.90	5.03	5.16	5.28
200	3.17	3.47	3.82	4.20	4.58	4.77	4.95	5.12	5.29	5.44	5.59	5.73	5.86
210	3.33	3.64	4.01	4.41	4.81	5.01	5.20	5.38	5.55	5.71	5.87	6.02	6.16
220	3.49	3.82	4.20	4.62	5.04	5.25	5.45	5.64	5.82	5.99	6.15	6.30	6.45
230	3.65	3.99	4.39	4.83	5.27	5.49	5.69	5.89	6.08	6.26	6.43	6.59	6.74
240	3.80	4.16	4.58	5.04	5.50	5.73	5.94	6.15	6.34	6.53	6.71	6.88	7.04
250	3.96	4.34	4.77	5.25	5.73	5.96	6.19	6.40	6.61	6.80	6.99	7.16	7.33
260	4.12	4.51	4.96	5.46	5.96	6.20	6.44	6.66	6.87	7.08	7.27	7.45	7.62
270	4.28	4.68	5.15	5.67	6.19	6.44	6.68	6.92	7.14	7.35	7.55	7.74	7.92
280	4.44	4.86	5.34	5.88	6.42	6.68	6.93	7.17	7.40	7.62	7.83	8.02	8.21
290	4.60	5.03	5.54	6.09	6.65	6.92	7.18	7.43	7.67	7.89	8.11	8.31	8.50
300	4.75	5.20	5.73	6.30	6.88	7.16	7.43	7.69	7.93	8.16	8.39	8.60	8.80
310	4.91	5.38	5.92	6.51	7.11	7.40	7.67	7.94	8.20	8.44	8.67	8.88	9.09
320	5.07	5.55	6.11	6.72	7.34	7.63	7.92	8.20	8.46	8.71	8.95	9.17	9.38
330	5.23	5.72	6.30	6.93	7.56	7.87	8.17	8.45	8.72	8.98	9.23	9.46	9.68
340	5.39	5.90	6.49	7.14	7.79	8.11	8.42	8.71	8.99	9.25	9.51	9.74	9.97
350	5.55	6.07	6.68	7.35	8.02	8.35	8.67	8.97	9.25	9.53	9.79	10.03	10.27

Ruling Span (Feet)	175		ARBUTUS - FINAL			Design Condition 4750 lb. max tension at 0°F							
						Conductor 795 kcmil AAC - Arbutus Condition Final Sag & Tension							
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3276.	2750.	2294.	1923.	1636.	1520.	1420.	1333.	1257.	1191.	1133.	1081.	1035.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	2.79	3.05	3.34	3.65	3.95	4.10	4.24	4.38	4.51	4.63	4.75	4.86	4.97
50	.80	.87	.95	1.04	1.13	1.17	1.21	1.25	1.29	1.32	1.36	1.39	1.42
75	1.20	1.31	1.43	1.56	1.69	1.76	1.82	1.88	1.93	1.99	2.04	2.08	2.13
100	1.60	1.74	1.91	2.08	2.26	2.34	2.42	2.50	2.58	2.65	2.71	2.78	2.84
120	1.92	2.09	2.29	2.50	2.71	2.81	2.91	3.00	3.09	3.18	3.26	3.33	3.41
140	2.23	2.44	2.67	2.92	3.16	3.28	3.39	3.50	3.61	3.71	3.80	3.89	3.98
160	2.55	2.79	3.05	3.33	3.61	3.75	3.88	4.00	4.12	4.24	4.34	4.45	4.54
180	2.87	3.14	3.43	3.75	4.07	4.22	4.36	4.50	4.64	4.76	4.89	5.00	5.11
200	3.19	3.48	3.81	4.17	4.52	4.69	4.85	5.00	5.15	5.29	5.43	5.56	5.68
210	3.35	3.66	4.01	4.38	4.74	4.92	5.09	5.25	5.41	5.56	5.70	5.84	5.96
220	3.51	3.83	4.20	4.58	4.97	5.16	5.33	5.51	5.67	5.82	5.97	6.11	6.25
230	3.67	4.01	4.39	4.79	5.20	5.39	5.58	5.76	5.93	6.09	6.24	6.39	6.53
240	3.83	4.18	4.58	5.00	5.42	5.62	5.82	6.01	6.18	6.35	6.52	6.67	6.82
250	3.99	4.36	4.77	5.21	5.65	5.86	6.06	6.26	6.44	6.62	6.79	6.95	7.10
260	4.15	4.53	4.96	5.42	5.87	6.09	6.30	6.51	6.70	6.88	7.06	7.23	7.38
270	4.31	4.70	5.15	5.63	6.10	6.33	6.55	6.76	6.96	7.15	7.33	7.50	7.67
280	4.47	4.88	5.34	5.83	6.33	6.56	6.79	7.01	7.22	7.41	7.60	7.78	7.95
290	4.63	5.05	5.53	6.04	6.55	6.80	7.03	7.26	7.47	7.68	7.87	8.06	8.24
300	4.79	5.23	5.72	6.25	6.78	7.03	7.27	7.51	7.73	7.94	8.15	8.34	8.52
310	4.95	5.40	5.91	6.46	7.00	7.27	7.52	7.76	7.99	8.21	8.42	8.62	8.81
320	5.11	5.57	6.10	6.67	7.23	7.50	7.76	8.01	8.25	8.47	8.69	8.89	9.09
330	5.27	5.75	6.30	6.88	7.46	7.73	8.00	8.26	8.50	8.74	8.96	9.17	9.37
340	5.43	5.92	6.49	7.08	7.68	7.97	8.24	8.51	8.76	9.00	9.23	9.45	9.66
350	5.59	6.10	6.68	7.29	7.91	8.20	8.49	8.76	9.02	9.27	9.50	9.73	9.94

Design Condition								Ruling Span (Feet)	190		ARBUTUS - FINAL		
4750 lb. max tension at 0°F													
Conductor		795 kcmil AAC - Arbutus											
Condition		Final Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3236.	2733.	2302.	1953.	1682.	1572.	1476.	1392.	1318.	1253.	1195.	1143.	1097.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 1	1- 3	1- 6	1- 9	2- 1	2- 2	2- 4	2- 6	2- 7	2- 9	2-10	3- 0	3- 1
50	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3	0- 3
75	0- 2	0- 3	0- 3	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6	0- 6
100	0- 4	0- 5	0- 5	0- 6	0- 7	0- 8	0- 8	0- 9	0- 9	0- 9	0-10	0-10	0-11
120	0- 5	0- 6	0- 8	0- 9	0-10	0-11	0-11	1- 0	1- 1	1- 1	1- 2	1- 3	1- 3
140	0- 7	0- 9	0-10	1- 0	1- 2	1- 2	1- 3	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9
160	0- 9	0-11	1- 1	1- 3	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 2	2- 3
180	1- 0	1- 2	1- 4	1- 7	1-10	2- 0	2- 1	2- 3	2- 4	2- 5	2- 7	2- 8	2-10
200	1- 2	1- 5	1- 8	1-11	2- 3	2- 5	2- 7	2- 9	2-10	3- 0	3- 2	3- 4	3- 5
210	1- 4	1- 7	1-10	2- 2	2- 6	2- 8	2-10	3- 0	3- 2	3- 4	3- 6	3- 8	3-10
220	1- 5	1- 8	2- 0	2- 4	2- 9	2-11	3- 1	3- 3	3- 6	3- 8	3-10	4- 0	4- 2
230	1- 7	1-10	2- 2	2- 7	3- 0	3- 2	3- 5	3- 7	3- 9	4- 0	4- 2	4- 4	4- 7
240	1- 8	2- 0	2- 5	2-10	3- 3	3- 6	3- 8	3-11	4- 1	4- 4	4- 7	4- 9	4-11
250	1-10	2- 2	2- 7	3- 0	3- 6	3- 9	4- 0	4- 3	4- 6	4- 8	4-11	5- 2	5- 4
260	2- 0	2- 4	2- 9	3- 3	3- 9	4- 1	4- 4	4- 7	4-10	5- 1	5- 4	5- 7	5-10
270	2- 2	2- 6	3- 0	3- 6	4- 1	4- 4	4- 8	4-11	5- 2	5- 6	5- 9	6- 0	6- 3
280	2- 4	2- 9	3- 3	3- 9	4- 5	4- 8	5- 0	5- 4	5- 7	5-11	6- 2	6- 5	6- 9
290	2- 6	2-11	3- 5	4- 1	4- 8	5- 0	5- 4	5- 8	6- 0	6- 4	6- 7	6-11	7- 2
300	2- 8	3- 1	3- 8	4- 4	5- 0	5- 5	5- 9	6- 1	6- 5	6- 9	7- 1	7- 5	7- 8
310	2-10	3- 4	3-11	4- 8	5- 4	5- 9	6- 1	6- 6	6-10	7- 2	7- 7	7-11	8- 3
320	3- 0	3- 6	4- 2	4-11	5- 9	6- 1	6- 6	6-11	7- 4	7- 8	8- 1	8- 5	8- 9
330	3- 2	3- 9	4- 5	5- 3	6- 1	6- 6	6-11	7- 4	7- 9	8- 2	8- 7	8-11	9- 4
340	3- 5	4- 0	4- 9	5- 7	6- 5	6-11	7- 4	7-10	8- 3	8- 8	9- 1	9- 6	9-11
350	3- 7	4- 3	5- 0	5-11	6-10	7- 4	7- 9	8- 3	8- 9	9- 2	9- 7	10- 1	10- 6

Ruling Span (Feet)	190		ARBUTUS - FINAL			Design Condition 4750 lb. max tension at 0°F							
						Conductor 795 kcmil AAC - Arbutus Condition Final Sag & Tension							
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3236.	2733.	2302.	1953.	1682.	1572.	1476.	1392.	1318.	1253.	1195.	1143.	1097.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	3.05	3.32	3.62	3.93	4.23	4.38	4.52	4.65	4.78	4.90	5.02	5.13	5.24
50	.80	.87	.95	1.03	1.11	1.15	1.19	1.22	1.26	1.29	1.32	1.35	1.38
75	1.20	1.31	1.43	1.55	1.67	1.73	1.78	1.84	1.89	1.94	1.98	2.03	2.07
100	1.61	1.75	1.90	2.07	2.23	2.30	2.38	2.45	2.52	2.58	2.64	2.70	2.76
120	1.93	2.10	2.28	2.48	2.67	2.76	2.85	2.94	3.02	3.10	3.17	3.24	3.31
140	2.25	2.45	2.67	2.89	3.12	3.23	3.33	3.43	3.52	3.61	3.70	3.78	3.86
160	2.57	2.80	3.05	3.31	3.56	3.69	3.80	3.92	4.03	4.13	4.23	4.32	4.41
180	2.89	3.15	3.43	3.72	4.01	4.15	4.28	4.41	4.53	4.65	4.76	4.86	4.97
200	3.21	3.50	3.81	4.13	4.45	4.61	4.76	4.90	5.03	5.16	5.29	5.40	5.52
210	3.37	3.67	4.00	4.34	4.68	4.84	4.99	5.14	5.29	5.42	5.55	5.67	5.79
220	3.53	3.84	4.19	4.55	4.90	5.07	5.23	5.39	5.54	5.68	5.82	5.95	6.07
230	3.69	4.02	4.38	4.75	5.12	5.30	5.47	5.63	5.79	5.94	6.08	6.22	6.35
240	3.85	4.19	4.57	4.96	5.35	5.53	5.71	5.88	6.04	6.20	6.34	6.49	6.62
250	4.02	4.37	4.76	5.17	5.57	5.76	5.95	6.12	6.29	6.45	6.61	6.76	6.90
260	4.18	4.54	4.95	5.37	5.79	5.99	6.18	6.37	6.54	6.71	6.87	7.03	7.17
270	4.34	4.72	5.14	5.58	6.01	6.22	6.42	6.61	6.80	6.97	7.14	7.30	7.45
280	4.50	4.89	5.33	5.79	6.24	6.45	6.66	6.86	7.05	7.23	7.40	7.57	7.73
290	4.66	5.07	5.52	5.99	6.46	6.68	6.90	7.10	7.30	7.49	7.67	7.84	8.00
300	4.82	5.24	5.71	6.20	6.68	6.91	7.14	7.35	7.55	7.75	7.93	8.11	8.28
310	4.98	5.42	5.90	6.41	6.91	7.14	7.37	7.59	7.80	8.00	8.20	8.38	8.55
320	5.14	5.59	6.09	6.62	7.13	7.37	7.61	7.84	8.06	8.26	8.46	8.65	8.83
330	5.30	5.77	6.28	6.82	7.35	7.60	7.85	8.08	8.31	8.52	8.73	8.92	9.11
340	5.46	5.94	6.47	7.03	7.57	7.84	8.09	8.33	8.56	8.78	8.99	9.19	9.38
350	5.62	6.12	6.66	7.24	7.80	8.07	8.32	8.57	8.81	9.04	9.25	9.46	9.66

Design Condition								Ruling Span (Feet)	205		ARBUTUS - FINAL		
4750 lb. max tension at 0°F													
Conductor Condition		795 kcmil AAC - Arbutus Final Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3202.	2722.	2315.	1986.	1729.	1623.	1530.	1448.	1376.	1312.	1254.	1203.	1157.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 3	1- 6	1- 9	2- 0	2- 4	2- 5	2- 7	2- 9	2-11	3- 0	3- 2	3- 4	3- 5
50	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3	0- 3
75	0- 2	0- 3	0- 3	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 6	0- 6	0- 6
100	0- 4	0- 5	0- 5	0- 6	0- 7	0- 7	0- 8	0- 8	0- 9	0- 9	0- 9	0-10	0-10
120	0- 6	0- 6	0- 7	0- 9	0-10	0-10	0-11	1- 0	1- 0	1- 1	1- 1	1- 2	1- 2
140	0- 7	0- 9	0-10	1- 0	1- 1	1- 2	1- 3	1- 4	1- 4	1- 5	1- 6	1- 7	1- 7
160	0- 9	0-11	1- 1	1- 3	1- 5	1- 6	1- 7	1- 8	1- 9	1-10	1-11	2- 0	2- 1
180	1- 0	1- 2	1- 4	1- 7	1- 9	1-11	2- 0	2- 2	2- 3	2- 4	2- 5	2- 7	2- 8
200	1- 2	1- 5	1- 8	1-11	2- 2	2- 4	2- 6	2- 7	2- 9	2-11	3- 0	3- 2	3- 3
210	1- 4	1- 7	1-10	2- 1	2- 5	2- 7	2- 9	2-11	3- 0	3- 2	3- 4	3- 6	3- 7
220	1- 5	1- 8	2- 0	2- 4	2- 8	2-10	3- 0	3- 2	3- 4	3- 6	3- 8	3-10	3-11
230	1- 7	1-10	2- 2	2- 6	2-11	3- 1	3- 3	3- 5	3- 8	3-10	4- 0	4- 2	4- 4
240	1- 9	2- 0	2- 4	2- 9	3- 2	3- 4	3- 7	3- 9	3-11	4- 2	4- 4	4- 6	4- 8
250	1-10	2- 2	2- 7	3- 0	3- 5	3- 8	3-10	4- 1	4- 3	4- 6	4- 8	4-11	5- 1
260	2- 0	2- 4	2- 9	3- 3	3- 8	3-11	4- 2	4- 5	4- 8	4-10	5- 1	5- 3	5- 6
270	2- 2	2- 6	3- 0	3- 6	4- 0	4- 3	4- 6	4- 9	5- 0	5- 3	5- 6	5- 8	5-11
280	2- 4	2- 9	3- 2	3- 9	4- 3	4- 7	4-10	5- 1	5- 4	5- 7	5-11	6- 2	6- 4
290	2- 6	2-11	3- 5	4- 0	4- 7	4-11	5- 2	5- 6	5- 9	6- 0	6- 4	6- 7	6-10
300	2- 8	3- 2	3- 8	4- 3	4-11	5- 3	5- 6	5-10	6- 2	6- 5	6- 9	7- 0	7- 4
310	2-10	3- 4	3-11	4- 7	5- 3	5- 7	5-11	6- 3	6- 7	6-11	7- 2	7- 6	7-10
320	3- 0	3- 7	4- 2	4-10	5- 7	5-11	6- 3	6- 8	7- 0	7- 4	7- 8	8- 0	8- 4
330	3- 3	3- 9	4- 5	5- 2	5-11	6- 4	6- 8	7- 1	7- 5	7-10	8- 2	8- 6	8-10
340	3- 5	4- 0	4- 8	5- 6	6- 3	6- 8	7- 1	7- 6	7-11	8- 3	8- 8	9- 0	9- 5
350	3- 7	4- 3	5- 0	5-10	6- 8	7- 1	7- 6	7-11	8- 4	8- 9	9- 2	9- 7	9-11

Ruling Span (Feet)	205		ARBUTUS - FINAL			Design Condition 4750 lb. max tension at 0°F							
						Conductor 795 kcmil AAC - Arbutus Condition Final Sag & Tension							
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3202.	2722.	2315.	1986.	1729.	1623.	1530.	1448.	1376.	1312.	1254.	1203.	1157.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	3.31	3.59	3.89	4.20	4.50	4.65	4.79	4.92	5.05	5.17	5.29	5.40	5.51
50	.81	.88	.95	1.02	1.10	1.13	1.17	1.20	1.23	1.26	1.29	1.32	1.34
75	1.21	1.31	1.42	1.54	1.65	1.70	1.75	1.80	1.85	1.89	1.93	1.98	2.01
100	1.61	1.75	1.90	2.05	2.20	2.27	2.34	2.40	2.46	2.52	2.58	2.63	2.69
120	1.94	2.10	2.28	2.46	2.64	2.72	2.80	2.88	2.96	3.03	3.10	3.16	3.22
140	2.26	2.45	2.66	2.87	3.08	3.17	3.27	3.36	3.45	3.53	3.61	3.69	3.76
160	2.58	2.80	3.04	3.28	3.52	3.63	3.74	3.84	3.94	4.04	4.13	4.21	4.30
180	2.91	3.15	3.42	3.69	3.95	4.08	4.20	4.32	4.43	4.54	4.64	4.74	4.84
200	3.23	3.50	3.80	4.10	4.39	4.54	4.67	4.80	4.93	5.05	5.16	5.27	5.37
210	3.39	3.68	3.99	4.31	4.61	4.76	4.90	5.04	5.17	5.30	5.42	5.53	5.64
220	3.55	3.85	4.18	4.51	4.83	4.99	5.14	5.28	5.42	5.55	5.68	5.80	5.91
230	3.71	4.03	4.37	4.72	5.05	5.22	5.37	5.52	5.66	5.80	5.93	6.06	6.18
240	3.87	4.20	4.56	4.92	5.27	5.44	5.61	5.78	5.91	6.05	6.19	6.32	6.45
250	4.04	4.38	4.75	5.13	5.49	5.67	5.84	6.00	6.16	6.31	6.45	6.59	6.72
260	4.20	4.55	4.94	5.33	5.71	5.90	6.07	6.24	6.40	6.56	6.71	6.85	6.99
270	4.36	4.73	5.13	5.54	5.93	6.12	6.31	6.48	6.65	6.81	6.97	7.11	7.25
280	4.52	4.90	5.32	5.74	6.15	6.35	6.54	6.72	6.90	7.06	7.22	7.38	7.52
290	4.68	5.08	5.51	5.95	6.37	6.58	6.77	6.96	7.14	7.32	7.48	7.64	7.79
300	4.84	5.25	5.70	6.15	6.59	6.80	7.01	7.20	7.39	7.57	7.74	7.90	8.06
310	5.00	5.43	5.89	6.36	6.81	7.03	7.24	7.44	7.64	7.82	8.00	8.17	8.33
320	5.17	5.60	6.08	6.56	7.03	7.26	7.47	7.68	7.88	8.07	8.26	8.43	8.60
330	5.33	5.78	6.27	6.77	7.25	7.48	7.71	7.92	8.13	8.33	8.51	8.70	8.87
340	5.49	5.95	6.46	6.97	7.47	7.71	7.94	8.16	8.38	8.58	8.77	8.96	9.14
350	5.65	6.13	6.65	7.18	7.69	7.94	8.18	8.40	8.62	8.83	9.03	9.22	9.41

Design Condition								Ruling Span (Feet)	220		ARBUTUS - FINAL		
4750 lb. max tension at 0°F													
Conductor Condition		795 kcmil AAC - Arbutus Final Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3174.	2716.	2331.	2019.	1774.	1673.	1583.	1503.	1432.	1369.	1312.	1261.	1214.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 6	1- 8	2- 0	2- 3	2- 7	2- 9	2-11	3- 1	3- 2	3- 4	3- 6	3- 7	3- 9
50	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3	0- 3
75	0- 2	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 5	0- 6
100	0- 4	0- 5	0- 5	0- 6	0- 7	0- 7	0- 8	0- 8	0- 8	0- 9	0- 9	0- 9	0-10
120	0- 6	0- 6	0- 7	0- 8	0-10	0-10	0-11	0-11	1- 0	1- 0	1- 1	1- 1	1- 2
140	0- 7	0- 9	0-10	0-11	1- 1	1- 2	1- 2	1- 3	1- 4	1- 5	1- 5	1- 6	1- 7
160	0-10	0-11	1- 1	1- 3	1- 5	1- 6	1- 7	1- 8	1- 9	1- 9	1-10	1-11	2- 0
180	1- 0	1- 2	1- 4	1- 6	1- 9	1-10	1-11	2- 1	2- 2	2- 3	2- 4	2- 5	2- 6
200	1- 3	1- 5	1- 8	1-11	2- 2	2- 3	2- 5	2- 6	2- 8	2- 9	2-11	3- 0	3- 1
210	1- 4	1- 7	1-10	2- 1	2- 4	2- 6	2- 8	2- 9	2-11	3- 1	3- 2	3- 4	3- 5
220	1- 6	1- 8	2- 0	2- 3	2- 7	2- 9	2-11	3- 1	3- 2	3- 4	3- 6	3- 7	3- 9
230	1- 7	1-10	2- 2	2- 6	2-10	3- 0	3- 2	3- 4	3- 6	3- 8	3-10	3-11	4- 1
240	1- 9	2- 0	2- 4	2- 8	3- 1	3- 3	3- 5	3- 7	3-10	4- 0	4- 2	4- 4	4- 6
250	1-11	2- 2	2- 7	2-11	3- 4	3- 6	3- 9	3-11	4- 1	4- 4	4- 6	4- 8	4-10
260	2- 0	2- 4	2- 9	3- 2	3- 7	3-10	4- 0	4- 3	4- 5	4- 8	4-10	5- 1	5- 3
270	2- 2	2- 7	3- 0	3- 5	3-11	4- 1	4- 4	4- 7	4-10	5- 0	5- 3	5- 5	5- 8
280	2- 4	2- 9	3- 2	3- 8	4- 2	4- 5	4- 8	4-11	5- 2	5- 5	5- 7	5-10	6- 1
290	2- 6	2-11	3- 5	3-11	4- 6	4- 9	5- 0	5- 3	5- 6	5- 9	6- 0	6- 3	6- 6
300	2- 8	3- 2	3- 8	4- 2	4- 9	5- 1	5- 4	5- 8	5-11	6- 2	6- 5	6- 8	7- 0
310	2-10	3- 4	3-11	4- 6	5- 1	5- 5	5- 8	6- 0	6- 4	6- 7	6-11	7- 2	7- 5
320	3- 1	3- 7	4- 2	4- 9	5- 5	5- 9	6- 1	6- 5	6- 9	7- 0	7- 4	7- 8	7-11
330	3- 3	3- 9	4- 5	5- 1	5- 9	6- 1	6- 6	6-10	7- 2	7- 6	7- 9	8- 1	8- 5
340	3- 5	4- 0	4- 8	5- 5	6- 1	6- 6	6-10	7- 3	7- 7	7-11	8- 3	8- 7	8-11
350	3- 8	4- 3	4-11	5- 8	6- 6	6-11	7- 3	7- 8	8- 0	8- 5	8- 9	9- 1	9- 6

Ruling Span (Feet)	220		ARBUTUS - FINAL			Design Condition 4750 lb. max tension at 0°F							
						Conductor 795 kcmil AAC - Arbutus Condition Final Sag & Tension							
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3174.	2716.	2331.	2019.	1774.	1673.	1583.	1503.	1432.	1369.	1312.	1261.	1214.
Span	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.	3rd Wave Sec.
Ruling Span Sag	3.57	3.86	4.16	4.47	4.77	4.91	5.05	5.18	5.31	5.43	5.55	5.66	5.77
50	.81	.88	.95	1.02	1.08	1.12	1.15	1.18	1.21	1.23	1.26	1.29	1.31
75	1.22	1.31	1.42	1.52	1.63	1.68	1.72	1.77	1.81	1.85	1.89	1.93	1.97
100	1.62	1.75	1.89	2.03	2.17	2.23	2.30	2.36	2.41	2.47	2.52	2.57	2.62
120	1.95	2.10	2.27	2.44	2.60	2.68	2.76	2.83	2.90	2.96	3.03	3.09	3.15
140	2.27	2.45	2.65	2.85	3.04	3.13	3.21	3.30	3.38	3.46	3.53	3.60	3.67
160	2.59	2.80	3.03	3.25	3.47	3.57	3.67	3.77	3.86	3.95	4.04	4.12	4.19
180	2.92	3.16	3.41	3.66	3.90	4.02	4.13	4.24	4.35	4.44	4.54	4.63	4.72
200	3.24	3.51	3.78	4.07	4.34	4.47	4.59	4.71	4.83	4.94	5.04	5.15	5.24
210	3.41	3.68	3.97	4.27	4.55	4.69	4.82	4.95	5.07	5.19	5.30	5.40	5.51
220	3.57	3.86	4.16	4.47	4.77	4.91	5.05	5.18	5.31	5.43	5.55	5.66	5.77
230	3.73	4.03	4.35	4.68	4.99	5.14	5.28	5.42	5.55	5.68	5.80	5.92	6.03
240	3.89	4.21	4.54	4.88	5.21	5.36	5.51	5.66	5.79	5.93	6.05	6.18	6.29
250	4.05	4.38	4.73	5.08	5.42	5.58	5.74	5.89	6.04	6.17	6.31	6.43	6.56
260	4.22	4.56	4.92	5.29	5.64	5.81	5.97	6.13	6.28	6.42	6.56	6.69	6.82
270	4.38	4.73	5.11	5.49	5.86	6.03	6.20	6.36	6.52	6.67	6.81	6.95	7.08
280	4.54	4.91	5.30	5.69	6.07	6.25	6.43	6.60	6.76	6.91	7.06	7.21	7.34
290	4.70	5.08	5.49	5.90	6.29	6.48	6.66	6.83	7.00	7.16	7.32	7.46	7.60
300	4.86	5.26	5.68	6.10	6.51	6.70	6.89	7.07	7.24	7.41	7.57	7.72	7.87
310	5.03	5.43	5.87	6.30	6.72	6.93	7.12	7.31	7.48	7.66	7.82	7.98	8.13
320	5.19	5.61	6.06	6.51	6.94	7.15	7.35	7.54	7.73	7.90	8.07	8.24	8.39
330	5.35	5.78	6.24	6.71	7.16	7.37	7.58	7.78	7.97	8.15	8.33	8.49	8.65
340	5.51	5.96	6.43	6.91	7.37	7.60	7.81	8.01	8.21	8.40	8.58	8.75	8.92
350	5.68	6.14	6.62	7.12	7.59	7.82	8.04	8.25	8.45	8.64	8.83	9.01	9.18

GENERAL INFORMATION
 ENGINEERING NOTES
 SAG & TENSION TABLES

Design Condition								Ruling Span (Feet)	235		ARBUTUS - FINAL		
4750 lb. max tension at 0°F													
Conductor Condition		795 kcmil AAC - Arbutus Final Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3151.	2715.	2349.	2054.	1819.	1722.	1634.	1557.	1487.	1424.	1388.	1317.	1270.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1- 8	1-11	2- 3	2- 7	2-10	3- 0	3- 2	3- 4	3- 6	3- 8	3-10	3-11	4- 1
50	0- 1	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 2	0- 3	0- 3	0- 3
75	0- 2	0- 3	0- 3	0- 4	0- 4	0- 4	0- 4	0- 5	0- 5	0- 5	0- 5	0- 5	0- 5
100	0- 4	0- 5	0- 5	0- 6	0- 7	0- 7	0- 7	0- 8	0- 8	0- 8	0- 9	0- 9	0- 9
120	0- 6	0- 6	0- 7	0- 8	0- 9	0-10	0-10	0-11	0-11	1- 0	1- 0	1- 1	1- 1
140	0- 7	0- 9	0-10	0-11	1- 1	1- 1	1- 2	1- 3	1- 3	1- 4	1- 5	1- 5	1- 6
160	0-10	0-11	1- 1	1- 2	1- 4	1- 5	1- 6	1- 7	1- 8	1- 9	1- 9	1-10	1-11
180	1- 0	1- 2	1- 4	1- 6	1- 8	1-10	1-11	2- 0	2- 1	2- 2	2- 3	2- 4	2- 5
200	1- 3	1- 5	1- 8	1-10	2- 1	2- 3	2- 4	2- 5	2- 7	2- 8	2- 9	2-11	3- 0
210	1- 4	1- 7	1-10	2- 1	2- 4	2- 5	2- 7	2- 8	2-10	2-11	3- 1	3- 2	3- 3
220	1- 6	1- 8	2- 0	2- 3	2- 6	2- 8	2-10	2-11	3- 1	3- 3	3- 4	3- 6	3- 7
230	1- 7	1-10	2- 2	2- 5	2- 9	2-11	3- 1	3- 3	3- 4	3- 6	3- 8	3- 9	3-11
240	1- 9	2- 0	2- 4	2- 8	3- 0	3- 2	3- 4	3- 6	3- 8	3-10	4- 0	4- 1	4- 3
250	1-11	2- 2	2- 6	2-11	3- 3	3- 5	3- 7	3- 9	4- 0	4- 2	4- 4	4- 6	4- 8
260	2- 1	2- 4	2- 9	3- 1	3- 6	3- 8	3-11	4- 1	4- 3	4- 6	4- 8	4-10	5- 0
270	2- 2	2- 7	2-11	3- 4	3- 9	4- 0	4- 2	4- 5	4- 7	4-10	5- 0	5- 3	5- 5
280	2- 4	2- 9	3- 2	3- 7	4- 1	4- 4	4- 6	4- 9	5- 0	5- 2	5- 5	5- 7	5-10
290	2- 6	2-11	3- 5	3-10	4- 4	4- 7	4-10	5- 1	5- 4	5- 7	5- 9	6- 0	6- 3
300	2- 8	3- 2	3- 7	4- 2	4- 8	4-11	5- 2	5- 5	5- 8	5-11	6- 2	6- 5	6- 8
310	2-11	3- 4	3-10	4- 5	5- 0	5- 3	5- 6	5-10	6- 1	6- 4	6- 7	6-10	7- 1
320	3- 1	3- 7	4- 1	4- 8	5- 4	5- 7	5-11	6- 2	6- 6	6- 9	7- 0	7- 4	7- 7
330	3- 3	3- 9	4- 4	5- 0	5- 8	5-11	6- 3	6- 7	6-11	7- 2	7- 6	7- 9	8- 1
340	3- 6	4- 0	4- 8	5- 4	6- 0	6- 4	6- 8	7- 0	7- 4	7- 7	7-11	8- 3	8- 6
350	3- 8	4- 3	4-11	5- 7	6- 4	6- 8	7- 0	7- 5	7- 9	8- 1	8- 5	8- 9	9- 1

Design Condition								Ruling Span (Feet)	250		ARBUTUS - FINAL		
4750 lb. max tension at 0°F													
Conductor Condition		795 kcmil AAC - Arbutus Final Sag & Tension											
Temp (°F)	20	30	40	50	60	65	70	75	80	85	90	95	100
Tension (lbs)	3134.	2718.	2370.	2089.	1864.	1769.	1684.	1608.	1540.	1478.	1422.	1371.	1325.
Span	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)	(Ft-In)
Ruling Span Sag	1-11	2-2	2-6	2-10	3-2	3-4	3-6	3-8	3-10	4-0	4-2	4-4	4-5
50	0-1	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-3	0-3
75	0-3	0-3	0-3	0-4	0-4	0-4	0-4	0-4	0-5	0-5	0-5	0-5	0-5
100	0-4	0-5	0-5	0-6	0-7	0-7	0-7	0-7	0-8	0-8	0-8	0-9	0-9
120	0-6	0-6	0-7	0-8	0-9	0-10	0-10	0-11	0-11	0-11	1-0	1-0	1-1
140	0-8	0-9	0-10	0-11	1-0	1-1	1-2	1-2	1-3	1-3	1-4	1-5	1-5
160	0-10	0-11	1-1	1-2	1-4	1-5	1-6	1-6	1-7	1-8	1-9	1-9	1-10
180	1-0	1-2	1-4	1-6	1-8	1-9	1-10	1-11	2-0	2-1	2-2	2-3	2-4
200	1-3	1-5	1-7	1-10	2-1	2-2	2-3	2-4	2-6	2-7	2-8	2-9	2-10
210	1-4	1-7	1-9	2-0	2-3	2-4	2-6	2-7	2-9	2-10	2-11	3-1	3-2
220	1-6	1-8	1-11	2-2	2-6	2-7	2-9	2-10	3-0	3-1	3-3	3-4	3-5
230	1-7	1-10	2-1	2-5	2-8	2-10	3-0	3-1	3-3	3-5	3-6	3-8	3-9
240	1-9	2-0	2-4	2-7	2-11	3-1	3-3	3-5	3-6	3-8	3-10	4-0	4-1
250	1-11	2-2	2-6	2-10	3-2	3-4	3-6	3-8	3-10	4-0	4-2	4-4	4-5
260	2-1	2-4	2-8	3-1	3-5	3-7	3-9	4-0	4-2	4-4	4-6	4-8	4-10
270	2-3	2-7	2-11	3-4	3-8	3-11	4-1	4-3	4-6	4-8	4-10	5-0	5-2
280	2-5	2-9	3-2	3-7	4-0	4-2	4-5	4-7	4-10	5-0	5-2	5-5	5-7
290	2-7	2-11	3-4	3-10	4-3	4-6	4-8	4-11	5-2	5-4	5-7	5-9	6-0
300	2-9	3-2	3-7	4-1	4-7	4-9	5-0	5-3	5-6	5-9	5-11	6-2	6-5
310	2-11	3-4	3-10	4-4	4-10	5-1	5-4	5-7	5-10	6-1	6-4	6-7	6-10
320	3-1	3-7	4-1	4-7	5-2	5-5	5-9	6-0	6-3	6-6	6-9	7-0	7-3
330	3-3	3-9	4-4	4-11	5-6	5-9	6-1	6-4	6-8	6-11	7-2	7-5	7-9
340	3-6	4-0	4-7	5-2	5-10	6-2	6-5	6-9	7-1	7-4	7-8	7-11	8-2
350	3-8	4-3	4-10	5-6	6-2	6-6	6-10	7-2	7-6	7-9	8-1	8-5	8-8