Spanmaster ® Release 3.1 Sag / Tension Computations

Sovernet Fiber Corporation 10/29/13 Mascoma River at Bank St
Mascoma River Crossing North side of Bank St. at Pumping Station St.

Selected Cables	X-SECT AREA (sq.in)	EFF MODULUS (psi)	NOMINAL DIAM (in)	EFF.EXP. COEFF. (1/F)	CABLE WEIGHT (lb/ft)	E*A LOAD BEARING CAPACITY (lbs)	MAX. RATED LOAD (lbs)
5/16"11.2mEHS	0.0595	2.60E+07	0.313	5.60E-06	0.2050	1545960	11200
ORF-2"D-072-LN	4.4300	1.20E+05	2.375	0.00E+00	1.0300	531600	2550
Bundle			2.688		1.2350		

NESC RESULTS

Loading Condition	Temp. (F)	Ice Load lb/ft	Ice Thick in	Wind Constant lb/ft	Horz Wind Load lb/sq ft	Result Load + Const lb/ft	Sag ft	Tension lb	% Len Chg From Input Conditions
Rule 251 - Heavy	0.0	1.982	.50	.3	4.0	3.744	2.19	3380	0.05
232A1	120.0	0.000	.00	.0	0.0	1.235	1.47	1661	0.01

Span Length = 126.00 ft
Span Sag = 1.26 ft (15.1 in)
Span Tension = 1,945 lb
Max Load = 11,200 lb
Usable load (60%) = 6,720 lb
Catenary Length = 126.034 ft
Stress Free Length @
Installed Temperature = 125.875 ft

Unloaded Strand
Sag = .26 ft (3.1 in) 0.21 %
Tension = 1,550 lb

Temp (F)	Midspan Sag (ft)	Tension (lb)	% Length Change	Clearance
-40.0	.91	2,692	-0.01	N/A
-30.0	.93	2,618	-0.01	N/A
-20.0	.96	2,545	-0.01	N/A
-10.0	.99	2,473	-0.01	N/A
.0	1.02	2,402	-0.01	N/A
10.0	1.05	2,332	-0.01	N/A
20.0	1.08	2,263	-0.01	N/A
30.0	1.11	2,196	-0.01	N/A
40.0	1.15	2,130	0.00	N/A
50.0	1.18	2,066	0.00	N/A
60.0	1.22	2,003	0.00	N/A
70.0	1.26	1,941	0.00	N/A
80.0	1.30	1,882	0.00	N/A
90.0	1.34	1,824	0.00	N/A
100.0	1.38	1,768	0.01	N/A
110.0	1.43	1,713	0.01	N/A
120.0	1.47	1,661	0.01	N/A
130.0	1.52	1,611	0.01	N/A
140.0	1.57	1,562	0.01	N/A