



SWISS

Version 1.2.3

Span Wire Signal Support Design

PROJECT DETAIL

SR 435 & SB 71 Ramp

Project Date: 01/30/2024

Author: MJH

Last Revision Date: 01/30/2024

Filename: 1 - SR 435 & I-71 SB Ramps_BOX.xml

Comments: Box with tails configuration (using 42psf for wind pressure)



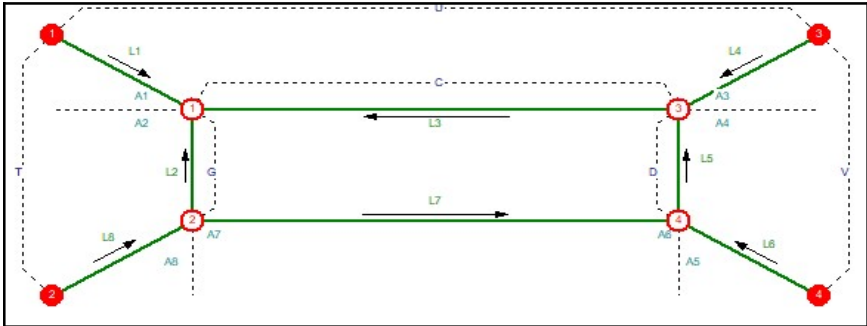
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INPUT VALUES

Sequence #: 1
 Configuration Type: Box
 Problem Identification: Box



Angles (Degrees)							
[A 1]	[A 2]	[A 3]	[A 4]	[A 5]	[A 6]	[A 7]	[A 8]
52.00	90.00	50.00	92.00	40.00	92.00	86.00	41.00

Elevation Differences (ft)		
[C]	[D]	[G]
0.00	0.00	0.00

Span Lengths (ft)							
[L 1]	[L 2]	[L 3]	[L 4]	[L 5]	[L 6]	[L 7]	[L 8]
14.00	114.00	97.00	16.00	121.00	13.00	92.00	19.00

Base Elevations (ft)				
[Pavement]	[Pole 1]	[Pole 2]	[Pole 3]	[Pole 4]
1051.51	1050.43	1050.50	1050.71	1048.55

Signals and Signs	
{Distance (ft) / Weight (lbs)}	
Span 1	No signals or signs attached at this span.
Span 2	(65.00/49.30), (77.00/49.30), (89.00/49.30), [96.00/20.80], (101.00/49.30)
Span 3	[3.00/11.80]
Span 4	No signals or signs attached at this span.
Span 5	(23.00/49.30), [30.00/20.80], (35.00/49.30), [58.00/11.80]
Span 6	No signals or signs attached at this span.
Span 7	(6.00/49.30), (19.00/49.30), (27.00/49.30), (39.00/49.30)
Span 8	No signals or signs attached at this span.

Wire Weights (lbs)	
(Assumed)	
21.00	Span 1
171.00	Span 2
145.50	Span 3
24.00	Span 4
181.50	Span 5
19.50	Span 6
138.00	Span 7
28.50	Span 8

Design Data					
Min. SAG (ft):	5.52	Max. SAG (ft):	9.20	Minimum Clearance (ft):	22.00
Sum of Loads (lbs):	558.20	Sum of Areas (ft):	45.80	Wire Weight (lbs/ft):	1.50
				Wind Pressure (psf):	42.00
				Box Warp Enabled:	Yes



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RESULT OF FINAL CALCULATION [MAX SAG]

Sequence #: 1 Configuration Type: Box Problem Identification: Box

Span Results

	[SPAN 1]	[SPAN 2]	[SPAN 3]	[SPAN 4]	[SPAN 5]	[SPAN 6]	[SPAN 7]	[SPAN 8]
Tension Relations: _____	1.62427	1.27994	1.00000	1.62328	1.24426	1.67330	1.07623	1.61380
Elevation Differences (ft) _____	2.86	0.00	0.00	2.19	0.00	2.46	0.00	4.42
Reaction at the end of the span (lbs) _____	319.71	-246.59	-73.11	209.38	-125.19	305.27	-117.76	359.84
Distance from end to low point (ft) _____	0.00	49.00	48.74	0.00	75.60	0.00	53.00	0.00
SAG below end of span (ft) _____	0.00	4.78	1.79	0.00	4.06	0.00	3.86	0.00

Pole Results

	[POLE 1]	[POLE 2]	[POLE 3]	[POLE 4]
Stringing Tension (lbs): _____	1617.33	1606.91	1616.35	1666.16
Attachment Height above pole base (ft) _____	30.72	32.21	29.77	32.19
Attachment Elevation (ft) _____	1081.15	1082.71	1080.48	1080.74
Base Moment (ft/lbs) _____	196076.	204293.	189915.	211725.

Other information

Calculated Design Factor : 3.95

System is in balance

Distance between Highest and Lowest Point (ft) : 9.20

Max. Wire Load (lbs): 6700.19

_____ Height of each signal or sign attachment point above the lowest (ft) _____

- Span 1 No signals or signs attached at this span.
- Span 2 (0.00), (0.13), (0.89), [1.68], (2.36)
- Span 3 [4.53]
- Span 4 No signals or signs attached at this span.
- Span 5 (1.62), [1.06], (0.78), [0.81]
- Span 6 No signals or signs attached at this span.
- Span 7 (3.58), (1.77), (1.14), (0.92)
- Span 8 No signals or signs attached at this span.



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RESULT OF FINAL CALCULATION [MIN SAG]

Sequence #: 1 Configuration Type: Box Problem Identification: Box

Span Results

	[SPAN 1]	[SPAN 2]	[SPAN 3]	[SPAN 4]	[SPAN 5]	[SPAN 6]	[SPAN 7]	[SPAN 8]
Tension Relations: _____	1.62427	1.27994	1.00000	1.62328	1.24426	1.67330	1.07623	1.61380
Elevation Differences (ft) _____	1.72	0.00	0.00	1.31	0.00	1.47	0.00	2.65
Reaction at the end of the span (lbs) _____	319.71	-246.59	-73.11	209.38	-125.19	305.27	-117.76	359.84
Distance from end to low point (ft) _____	0.00	49.00	48.74	0.00	75.60	0.00	53.00	0.00
SAG below end of span (ft) _____	0.00	2.87	1.07	0.00	2.44	0.00	2.32	0.00

Pole Results

	[POLE 1]	[POLE 2]	[POLE 3]	[POLE 4]
Stringing Tension (lbs): _____	2695.56	2678.18	2693.91	2776.93
Attachment Height above pole base (ft) _____	27.66	28.53	26.98	29.30
Attachment Elevation (ft) _____	1078.09	1079.03	1077.69	1077.85
Base Moment (ft/lbs) _____	294300.	301588.	286888.	321156.

Other information

Calculated Design Factor :	3.95
System is in balance	
Distance between Highest and Lowest Point (ft) :	5.52
Max. Wire Load (lbs):	11035.40

Height of each signal or sign attachment point above the lowest (ft) _____

- Span 1 No signals or signs attached at this span.
- Span 2 (0.00), (0.08), (0.53), [1.01], (1.42)
- Span 3 [2.72]
- Span 4 No signals or signs attached at this span.
- Span 5 (0.97), [0.64], (0.47), [0.49]
- Span 6 No signals or signs attached at this span.
- Span 7 (2.15), (1.06), (0.69), (0.55)
- Span 8 No signals or signs attached at this span.