



# SWISS

Version 1.2.3  
Span Wire Signal Support Design

## PROJECT DETAIL

### SR 435 & Allen Road

**Project Date:** 01/30/2024

**Author:** MJH

**Last Revision Date:** 01/30/2024

**Filename:** 3 - SR 435 & Allen Road\_BOX.xml

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



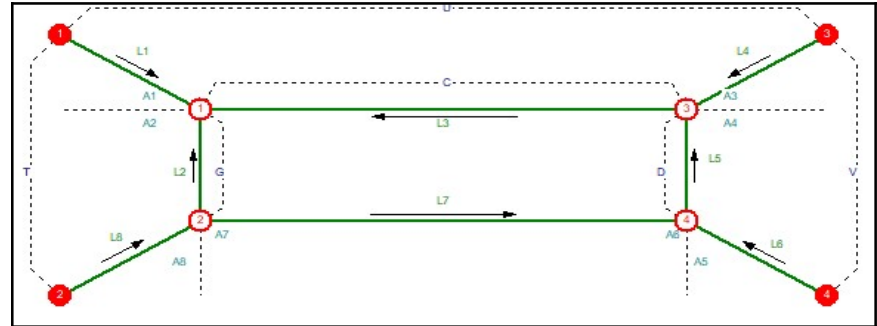
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### INPUT VALUES

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 ]
49.00	90.00	51.00	89.00	40.00	86.00	95.00	38.00

Span Lengths (ft)							
[ L 1 ]	[ L 2 ]	[ L 3 ]	[ L 4 ]	[ L 5 ]	[ L 6 ]	[ L 7 ]	[ L 8 ]
23.00	132.00	105.00	9.00	124.00	49.00	108.00	14.00

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

Base Elevations (ft)				
[ Pavement ]	[ Pole 1 ]	[ Pole 2 ]	[ Pole 3 ]	[ Pole 4 ]
1057.22	1056.17	1054.93	1056.47	1054.61

Signals and Signs	
{Distance (ft) / Weight (lbs)}	
Span 1	No signals or signs attached at this span.
Span 2	(68.00/67.50), [81.00/11.80], (89.00/49.30), (101.00/49.30), (113.00/49.30)
Span 3	(19.00/49.30), (32.00/73.00)
Span 4	No signals or signs attached at this span.
Span 5	(7.00/49.30), (19.00/49.30), [31.00/11.80], (53.00/73.00)
Span 6	No signals or signs attached at this span.
Span 7	(40.00/49.30), (56.00/49.30)
Span 8	No signals or signs attached at this span.

Wire Weights (lbs)	
(Assumed)	
34.50	Span 1
198.00	Span 2
157.50	Span 3
13.50	Span 4
186.00	Span 5
73.50	Span 6
162.00	Span 7
21.00	Span 8

Design Data			
Min. SAG (ft):	7.11	Max. SAG (ft):	11.85
Sum of Loads (lbs):	631.50	Sum of Areas (ft):	55.10
Minimum Clearance (ft):	22.00	Wire Weight (lbs/ft):	1.50
Wind Pressure (psf):	42.00	Box Warp Enabled:	Yes



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## Span Wire Signal Support Design

### RESULT OF FINAL CALCULATION [MAX SAG]

Sequence #:	1	Configuration Type:	Box	Problem Identification:	Box						
<b>Span Results</b>											
				[ SPAN 1 ]	[ SPAN 2 ]	[ SPAN 3 ]	[ SPAN 4 ]	[ SPAN 5 ]	[ SPAN 6 ]	[ SPAN 7 ]	[ SPAN 8 ]
<b>Tension Relations:</b>	_____			1.52425	1.15037	1.00000	1.55549	1.20902	1.49080	0.96061	1.56164
<b>Elevation Differences (ft)</b>	_____			3.40	0.00	0.00	1.08	0.00	7.65	0.00	1.68
<b>Reaction at the end of the span (lbs)</b>	_____			364.10	-254.18	-109.92	307.37	-137.49	356.73	-124.82	306.80
<b>Distance from end to low point (ft)</b>	_____			0.00	62.99	73.00	0.00	71.00	0.00	52.00	0.00
<b>SAG below end of span (ft)</b>	_____			0.00	4.20	2.38	0.00	2.93	0.00	2.75	0.00
<b>Pole Results</b>						<b>Other information</b>					
				[ POLE 1 ]	[ POLE 2 ]	[ POLE 3 ]	[ POLE 4 ]				
<b>Stringing Tension (lbs):</b>	_____			2576.23	2639.43	2629.02	2519.69	<b>Calculated Design Factor :</b> 4.18			
<b>Attachment Height above pole base (ft)</b>	_____			30.65	30.17	28.02	36.46	<b>System is in balance</b>			
<b>Attachment Elevation (ft)</b>	_____			1086.82	1085.10	1084.49	1091.07				
<b>Base Moment (ft/lbs)</b>	_____			329965.	332748.	307843.	383865.	<b>Distance between Highest and Lowest Point (ft) :</b> 11.85			
								<b>Max. Wire Load (lbs):</b> 11113.48			
<b>Height of each signal or sign attachment point above the lowest (ft)</b>											

- Span 1** No signals or signs attached at this span.
- Span 2** (0.00), [0.06], (0.20), (0.82), (1.85)
- Span 3** (2.45), (1.81)
- Span 4** No signals or signs attached at this span.
- Span 5** (3.42), (2.46), [1.90], (1.27)
- Span 6** No signals or signs attached at this span.
- Span 7** (1.59), (1.45)
- 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:	_____	1.52425	1.15037	1.00000	1.55549	1.20902	1.49080	0.96061	1.56164	
Elevation Differences (ft)	_____	2.04	0.00	0.00	0.65	0.00	4.59	0.00	1.01	
Reaction at the end of the span (lbs)	_____	364.10	-254.18	-109.92	307.37	-137.49	356.73	-124.82	306.80	
Distance from end to low point (ft)	_____	0.00	62.99	73.00	0.00	71.00	0.00	52.00	0.00	
SAG below end of span (ft)	_____	0.00	2.52	1.43	0.00	1.76	0.00	1.65	0.00	
Pole Results										
		[ POLE 1 ]	[ POLE 2 ]	[ POLE 3 ]	[ POLE 4 ]	Other information				
Stringing Tension (lbs):	_____	4293.72	4399.05	4381.71	4199.48	Calculated Design Factor : 4.18				
Attachment Height above pole base (ft)	_____	27.61	27.82	25.91	31.72	System is in balance				
Attachment Elevation (ft)	_____	1083.78	1082.75	1082.38	1086.33	Distance between Highest and Lowest Point (ft) : 7.11				
Base Moment (ft/lbs)	_____	495382.	511340.	474453.	556601.	Max. Wire Load (lbs): 18432.21				
_____ 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), [0.03], (0.12), (0.49), (1.11)
- Span 3 (1.47), (1.09)
- Span 4 No signals or signs attached at this span.
- Span 5 (2.05), (1.48), [1.14], (0.76)
- Span 6 No signals or signs attached at this span.
- Span 7 (0.95), (0.87)
- Span 8 No signals or signs attached at this span.