

Made By CTY Date 5/27/2009  
 Checked By DMP Date 6/1/2009

Job No. P410-07-0010

Calculations For:

**HAM-50-0376L Rating Factors for Legal Loads on center truss verticals**

Span	Loads*	Operating				
		2F1	3F1	4F1	5C1	5C1 Train
1 or 4	Max Load (k)	22.31	33.54	38.52	46.03	
	Min Load (k)	-16.91	-25.25	-28.76	-31.33	
2 or 3	Max Load (k)	22.06	33.32	38.47	48.72	48.72
	Min Load (k)	-17.85	-26.87	-32.21	-37.32	-37.32

\*Loads from SSM influence lines

**AS BUILT SPANS 1 AND 4**

Axial Tension Capacity from LARS= 266.3  
 Axial Compression Capacity from LARS= -135.7  
 Dead Load from Lars= -5.7

Rating Factors						
Span	Member	2F1	3F1	4F1	5C1	
Tension	1	U4-L4	12.2	8.1	7.1	5.9
Compression	1	U4-L4	7.7	5.1	4.5	4.1
Controlling Rating Factors		7.7	5.1	4.5	4.1	0
Load (Tons)		115.5	117.3	121.5	164	0

**AS BUILT SPANS 2 AND 3**

Axial Tension Capacity from LARS= 299.5  
 Axial Compression Capacity from LARS= -168  
 Dead Load from Lars= -7.4

Rating Factors						
Span	Member	2F1	3F1	4F1	5C1	5C1 Train
Tension	2	U5-L5	13.9	9.2	8	6.3
Compression	2	U5-L5	9	6	5	4.3
Controlling Rating Factors		9	6	5	4.3	4.3
Load (Tons)		135	138	135	172	172

**AS INSPECTED SPAN 1 NORTH TRUSS**

Axial Tension Capacity from LARS= 234  
 Axial Compression Capacity from LARS= -131.2  
 Dead Load from Lars= -5.7

Rating Factors						
Span	Member	2F1	3F1	4F1	5C1	
Tension	1	U4-L4	10.7	7.1	6.2	5.2
Compression	1	U4-L4	7.4	5	4.4	4
Controlling Rating Factors		7.4	5	4.4	4	0
Load (Tons)		111	115	118.8	160	0

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**AS INSPECTED SPAN 1 SOUTH TRUSS**

Axial Tension Capacity from LARS= 251.5  
 Axial Compression Capacity from LARS= -135.7  
 Dead Load from Lars= -5.7

		<u>Rating Factors</u>				
Span	Member	2F1	3F1	4F1	5C1	
Tension	1	U4-L4	11.5	7.7	6.7	5.6
Compression	1	U4-L4	7.7	5.1	4.5	4.1
Controlling Rating Factors			7.7	5.1	4.5	4.1
Load (Tons)		115.5	117.3	121.5	164	0

**AS INSPECTED SPAN 2 NORTH TRUSS**

Axial Tension Capacity from LARS= 292.2  
 Axial Compression Capacity from LARS= -168  
 Dead Load from Lars= -7.4

		<u>Rating Factors</u>				
Span	Member	2F1	3F1	4F1	5C1	5C1 Train
Tension	2	U5-L5	13.6	9	7.8	6.1
Compression	2	U5-L5	9	6	5	4.3
Controlling Rating Factors			9	6	5	4.3
Load (Tons)		135	138	135	172	172

**AS INSPECTED SPAN 2 SOUTH TRUSS**

Axial Tension Capacity from LARS= 292.2  
 Axial Compression Capacity from LARS= -168  
 Dead Load from Lars= -7.4

		<u>Rating Factors</u>				
Span	Member	2F1	3F1	4F1	5C1	5C1 Train
Tension	2	U5-L5	13.6	9	7.8	6.1
Compression	2	U5-L5	9	6	5	4.3
Controlling Rating Factors			9	6	5	4.3
Load (Tons)		135	138	135	172	172

**AS INSPECTED SPAN 3 NORTH TRUSS**

Axial Tension Capacity from LARS= 253.9  
 Axial Compression Capacity from LARS= -113.8  
 Dead Load from Lars= -7.4

		<u>Rating Factors</u>				
Span	Member	2F1	3F1	4F1	5C1	5C1 Train
Tension	3	U5-L5	11.8	7.8	6.8	5.4
Compression	3	U5-L5	6	4	3.3	2.9
Controlling Rating Factors			6	4	3.3	2.9
Load (Tons)		90	92	89.1	116	116

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**AS INSPECTED SPAN 3 SOUTH TRUSS**

Axial Tension Capacity from LARS= 292.2  
 Axial Compression Capacity from LARS= -168  
 Dead Load from Lars= -7.4

**Rating Factors**

Span	Member	2F1	3F1	4F1	5C1	5C1 Train
Tension 3	U5-L5	13.6	9	7.8	6.1	6.1
Compression 3	U5-L5	9	6	5	4.3	4.3
Controlling Rating Factors		9	6	5	4.3	4.3
Load (Tons)		135	138	135	172	172

**AS INSPECTED SPAN 4 NORTH TRUSS**

Axial Tension Capacity from LARS= 229.4  
 Axial Compression Capacity from LARS= -128.3  
 Dead Load from Lars= -5.7

**Rating Factors**

Span	Member	2F1	3F1	4F1	5C1
Tension 4	U4-L4	10.5	7	6.1	5.1
Compression 4	U4-L4	7.3	4.9	4.3	3.9
Controlling Rating Factors		7.3	4.9	4.3	3.9
Load (Tons)		109.5	112.7	116.1	156
					0

**AS INSPECTED SPAN 4 SOUTH TRUSS**

Axial Tension Capacity from LARS= 215.5  
 Axial Compression Capacity from LARS= -114.3  
 Dead Load from Lars= -5.7

**Rating Factors**

Span	Member	2F1	3F1	4F1	5C1
Tension 4	U4-L4	9.9	6.6	5.7	4.8
Compression 4	U4-L4	6.4	4.3	3.8	3.5
Controlling Rating Factors		6.4	4.3	3.8	3.5
Load (Tons)		96	98.9	102.6	140
					0