



BRIDGE / MEMBER DATA

Structure I. D. HAM500

Material of Construction SS  
 Year of Construction 1959  
 Roadway Width 32.000  
 Center to Center Truss 38.833  
 Number of Spans 1  
 Live Load Distribution Factor 0.9370

Comments:

Truss I. D. 1 Truss Type: THROUGH

Span Length: Span 1  
 191.333

Number of Panels: 8 Symmetry:

Panel No.	Panel Code	Panel Length	Sub-Divided Panel Length	Vertical Height	Sub-Divided Vertical
1	7	23.917	0.000	28.000	0.000
2	2	23.917	0.000	33.250	0.000
3	2	23.917	0.000	35.000	0.000
4	4	23.917	0.000	35.000	0.000
5	3	23.917	0.000	35.000	0.000
6	1	23.917	0.000	33.250	0.000
7	1	23.917	0.000	28.000	0.000
8	5	23.917	0.000	0.000	0.000

Superimposed Dead Load:

Uniform Dead Load (kips/ft)	
Loaded Chord	Unloaded Chord
0.355	0.000

Superimposed Dead Load:

Loaded Chord Dist.	Loaded Chord Load	Unloaded Chord Dist.	Unloaded Chord Load
0.000	28.160	0.000	0.000
23.917	62.790	0.000	0.000
47.833	52.440	0.000	0.000
71.750	54.970	0.000	0.000
95.667	53.790	0.000	0.000

119.583	54.970	0.000	0.000
143.500	52.440	0.000	0.000
167.417	62.790	0.000	0.000

Truss Members Selected:

L 0L 1  
L 0U 1  
U 1L 1  
U 1U 2  
L 1L 2  
U 1L 2  
U 2L 2  
U 2U 3  
L 2L 3  
U 2L 3  
U 3L 3  
L 3L 4  
U 3U 4  
U 3L 4  
L 3U 4  
U 4L 4  
L 4L 5  
U 4U 5  
L 4U 5  
U 4L 5  
U 5L 5  
L 5L 6  
U 5U 6  
L 5U 6  
U 6L 6  
L 6L 7  
U 6U 7  
L 6U 7  
U 7L 7  
L 7L 8  
U 7L 8

NOTE: All distances are shown in decimal feet, moments are shown in foot-kips, and shears are shown in kips. Section and section properties are shown as: in., in.\*\*2, in.\*\*3, and in.\*\*4. Axial loads are shown in kips.

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. L 0L 1

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	14057.	17530.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
23.917	23.917	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
15.00	22.50	421.86	743.54	7.50	4.33	5.75

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
21.38	507.10	595.25	8.68

Truss influence line - loaded chord:

X ordinates:	0.000	23.917	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.747	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	23.917	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.747	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

INV.	OPER	POST	SPEC
HS20	5C1		

Truss I. D.	1
Truss Member I. D.	L 0L 1

Axial Dead Load	
Tension	Compression

210.6	0.0
-------	-----

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	325.6	263.0	199.2	389.4
OPER	542.6	438.4	332.0	649.1

## Live Load Effect

Impact Factors: ten - .158 comp - .000

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	27.57 R	23.81		51.92	32.13	27.74		23.92
		0.00 R	0.00		0.00	0.00	0.00		0.00
OPER	5C1	27.75 R	23.96		74.92	0.00	0.00		0.00
		0.00 R	0.00		0.00	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	6.20	HS123.99	223.2
5C1	11.96	0.00	478.6

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. L 0U 1

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	14277.	17804.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
36.823	36.823	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
25.78	41.21	2775.48	2144.43	21.40	8.21	7.21

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
41.21	2775.48	2144.43	21.40

Truss influence line - loaded chord:

X ordinates:	0.000	23.917	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.151	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	23.917	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.151	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

		INV.	OPER	POST	SPEC
		HS20	5C1		
Truss I. D.	1				
Truss Member I. D.	L 0U 1				

Axial Dead Load	
Tension	Compression
0.0	324.3

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	627.7	489.3	822.3	294.7
OPER	1046.1	815.6	1370.4	491.2

## Live Load Effect

Impact Factors: ten - .000 comp - .158

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane Live Load w/imp.	Load Force w/o imp.	Loc. of Conc. Load
INV.	HS20	0.00 R	0.00		0.00	0.00	0.00	0.00
		-42.45 R	-36.65		51.92	-54.46	-47.03	23.92
OPER	5C1	0.00 R	0.00		0.00	0.00	0.00	0.00
		-42.72 R	-36.89		74.92	0.00	0.00	0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	5.41	HS108.24	194.8
5C1	11.50	0.00	460.0

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 1L 1

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	5702.	7111.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
28.000	28.000	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
11.94	10.25	106.54	37.41	-1.51	3.22	1.91

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
9.73	199.74	24.71	-0.96

Truss influence line - loaded chord:

X ordinates:	0.000	0.000	23.917	47.833	191.333	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	191.333	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						



## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

INV.	OPER	POST	SPEC
HS20	5C1		

Truss I. D.	1
Truss Member I. D.	U 1L 1

Axial Dead Load	
Tension	Compression

71.3	0.0
------	-----

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	148.1	48.6	105.4	91.4
OPER	246.9	81.0	175.6	152.3

## Live Load Effect

Impact Factors: ten - .289 comp - .000

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	29.35	R	22.76	37.92	24.95	19.35	23.92	
		0.00	R	0.00	0.00	0.00	0.00	0.00	
OPER	5C1	22.43	R	17.40	35.92	0.00	0.00	0.00	
		0.00	R	0.00	0.00	0.00	0.00	0.00	

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	3.59	HS 71.80	129.2
5C1	7.83	0.00	313.1

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 1U 2

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	15011.	18720.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
24.486	24.486	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
25.75	34.10	2388.22	1822.35	21.05	8.37	7.31

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
34.10	2388.22	1822.35	21.05

Truss influence line - loaded chord:

X ordinates:	0.000	47.833	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.105	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	47.833	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.105	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

		INV.	OPER	POST	SPEC
		HS20	5C1		
Truss I. D.	1				
Truss Member I. D.	U 1U 2				

Axial Dead Load	
Tension	Compression
0.0	306.6

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	519.4	425.7	703.3	241.8
OPER	865.6	709.5	1172.2	403.0

## Live Load Effect

Impact Factors: ten - .000 comp - .158

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	0.00	R	0.00	0.00	0.00	0.00	0.00	0.00
		-40.34	R	-34.84	75.83	-47.48	-41.00	47.83	
OPER	5C1	0.00	R	0.00	0.00	0.00	0.00	0.00	0.00
		-40.60	L	-35.06	35.83	0.00	0.00	0.00	

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	5.09	HS101.84	183.3
5C1	9.93	0.00	397.0

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. L 1L 2

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	14057.	17530.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
23.917	23.917	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
15.00	22.50	421.86	743.54	7.50	4.33	5.75

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
21.38	507.10	595.25	8.68

Truss influence line - loaded chord:

X ordinates:	0.000	23.917	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.747	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	23.917	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.747	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

	INV.	OPER	POST	SPEC
Truss I. D.	HS20	5C1		
Truss Member I. D.				

Axial Dead Load	
Tension	Compression
210.6	0.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	325.6	263.0	199.2	389.4
OPER	542.6	438.4	332.0	649.1

## Live Load Effect

Impact Factors: ten - .158 comp - .000

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	27.57 R	23.81		51.92	32.13	27.74		23.92
		0.00 R	0.00		0.00	0.00	0.00		0.00
OPER	5C1	27.75 R	23.96		74.92	0.00	0.00		0.00
		0.00 R	0.00		0.00	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	6.20	HS123.99	223.2
5C1	11.96	0.00	478.6

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 1L 2

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	5543.	6913.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
36.824	36.824	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
12.19	16.25	359.50	99.75	-0.56	4.70	2.48

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
16.13	544.70	68.60	0.31

Truss influence line - loaded chord:

X ordinates:	0.000	23.917	47.833	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-0.320	0.675	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	23.917	47.833	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-0.320	0.675	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

		INV.	OPER	POST	SPEC
		HS20	5C1		
Truss I. D.	1				
Truss Member I. D.	U 1L 2				

Axial Dead Load	
Tension	Compression
136.7	0.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	245.6	74.9	163.6	156.9
OPER	409.4	124.9	272.7	261.6

## Live Load Effect

Impact Factors: ten - .176 comp - .300

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	25.02	R	21.28	75.83	28.66	24.38	47.83	
		-8.83	L	-6.79	-4.08	-7.04	-5.42	23.92	
OPER	5C1	24.72	R	21.02	98.83	0.00	0.00	0.00	
		-6.07	L	-4.67	-27.08	0.00	0.00	0.00	

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	5.71	HS114.17	205.5
5C1	11.03	0.00	441.3

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 2L 2

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	9798.	12219.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
33.250	33.250	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
12.12	17.79	351.74	168.66	-0.83	4.45	3.08

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
17.79	550.73	130.14	-0.01

Truss influence line - loaded chord:

X ordinates:	0.000	47.833	71.750	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.487	-0.428	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	23.917	47.833	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.243	-0.513	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						



## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

	INV.	OPER	POST	SPEC
Truss I. D.	HS20	5C1		
Truss Member I. D.			U 2L 2	1

Axial Dead Load	
Tension	Compression
0.0	43.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	270.9	145.0	296.7	119.1
OPER	451.5	241.6	494.6	198.6

## Live Load Effect

Impact Factors: ten - .269 comp - .195

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane Live Load w/imp.	Load Force w/o imp.	Loc. of Conc. Load
INV.	HS20	16.78 L	13.22		19.83	13.14	10.35	47.83
		-15.90 R	-13.30		99.75	-16.25	-13.59	71.75
OPER	5C1	11.86 R	9.34		59.83	0.00	0.00	0.00
		-15.28 R	-12.78		122.75	0.00	0.00	0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	7.33	HS146.64	264.0
5C1	13.00	0.00	519.9

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 2U 3

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	15016.	18726.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
23.981	23.981	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
25.84	38.03	2805.75	1967.05	20.02	8.59	7.19

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
38.03	2805.75	1967.05	20.02

Truss influence line - loaded chord:

X ordinates:	0.000	71.750	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.285	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	71.750	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.285	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

		INV.	OPER	POST	SPEC
		HS20	5C1		
Truss I. D.	1				
Truss Member I. D.	U 2U 3				

Axial Dead Load	
Tension	Compression
0.0	355.8

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	579.2	474.9	792.7	261.4
OPER	965.4	791.6	1321.2	435.7

## Live Load Effect

Impact Factors: ten - .000 comp - .158

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	0.00 R	0.00		0.00	0.00	0.00		0.00
		-46.49 L	-40.14		57.75	-55.22	-47.68		71.75
OPER	5C1	0.00 R	0.00		0.00	0.00	0.00		0.00
		-46.69 L	-40.32		55.75	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	4.73	HS 94.69	170.4
5C1	9.33	0.00	373.3

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. L 2L 3

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	14058.	17531.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
23.917	23.917	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
15.00	31.86	597.64	999.10	7.50	4.33	5.60

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
30.27	718.34	800.48	8.68

Truss influence line - loaded chord:

X ordinates:	0.000	47.833	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	1.079	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	47.833	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	1.079	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D.

HAM500

INV.	OPER	POST	SPEC
HS20	5C1		

Truss I. D.	1
Truss Member I. D.	L 2L 3

Axial Dead Load	
Tension	Compression

299.4	0.0
-------	-----

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	461.0	372.5	281.3	552.2
OPER	768.3	620.8	468.9	920.3

## Live Load Effect

Impact Factors: ten - .158 comp - .000

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	39.41 R	34.03		75.83	46.38	40.05		47.83
		0.00 R	0.00		0.00	0.00	0.00		0.00
OPER	5C1	39.66 L	34.25		35.83	0.00	0.00		0.00
		0.00 R	0.00		0.00	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	6.07	HS121.32	218.4
5C1	11.82	0.00	472.9

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 2L 3

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	4572.	5702.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
40.958	40.958	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
12.06	14.73	296.08	92.23	-0.70	4.48	2.50

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
14.63	464.19	78.04	0.17

Truss influence line - loaded chord:

X ordinates:	0.000	47.833	71.750	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-0.385	0.654	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	47.833	71.750	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-0.385	0.654	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

		INV.	OPER	POST	SPEC
		HS20	5C1		
Truss I. D.	1				
Truss Member I. D.	U 2L 3				

Axial Dead Load	
Tension	Compression
95.0	0.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	222.9	56.0	165.9	113.0
OPER	371.5	93.3	276.5	188.3

## Live Load Effect

Impact Factors: ten - .193 comp - .275

Rat. Typ.	Rat. Veh.	Truck Live Load Force w/imp.	Truck Live Load Force w/o imp.	Loc. of Front Wheel	Lane Live Load Force w/imp.	Lane Live Load Force w/o imp.	Loc. of Conc. Load
INV.	HS20	24.27 R	20.35	99.75	25.26	21.18	71.75
		-13.33 L	-10.45	19.83	-10.15	-7.96	47.83
OPER	5C1	23.32 R	19.56	122.75	0.00	0.00	0.00
		-9.26 L	-7.26	-3.17	0.00	0.00	0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	6.57	HS131.35	236.4
5C1	11.85	0.00	474.1

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 3L 3

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	8906.	11106.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
35.000	17.500	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
12.24	9.26	230.45	21.07	5.34	4.99	1.51

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
8.49	214.00	12.61	6.27

Truss influence line - loaded chord:

X ordinates:	0.000	71.750	95.667	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.469	-0.425	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	47.833	71.750	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.312	-0.531	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						



## RATING REPORT

## Rating Types and Vehicles

Structure I. D.

HAM500

INV.	OPER	POST	SPEC
HS20	5C1		

Truss I. D.	1
Truss Member I. D.	U 3L 3

Axial Dead Load	
Tension	Compression

0.0	13.7
-----	------

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	129.3	68.6	137.5	60.4
OPER	215.5	114.3	229.2	100.7

## Live Load Effect

Impact Factors: ten - .239 comp - .215

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	17.04	L	13.76	43.75	14.41	11.63		71.75
		-15.73	R	-12.94	123.67	-14.58	-12.00		95.67
OPER	5C1	14.42	L	11.64	20.75	0.00	0.00		0.00
		-14.46	R	-11.90	146.67	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	3.84	HS 76.83	138.3
5C1	6.96	0.00	278.5

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. L 3L 4

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	14057.	17530.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
23.917	23.917	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
15.00	37.50	703.12	1139.26	7.50	4.33	5.51

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
35.62	845.19	913.36	8.68

Truss influence line - loaded chord:

X ordinates:	0.000	71.750	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	1.281	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	71.750	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	1.281	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

		INV.	OPER	POST	SPEC
		HS20	5C1		
Truss I. D.	1				
Truss Member I. D.	L 3L 4				

Axial Dead Load	
Tension	Compression
354.9	0.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	542.6	438.4	329.7	651.4
OPER	904.3	730.7	549.4	1085.6

## Live Load Effect

Impact Factors: ten - .158 comp - .000

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	46.36 L	40.03		57.75	55.07	47.56		71.75
		0.00 R	0.00		0.00	0.00	0.00		0.00
OPER	5C1	46.57 L	40.21		55.75	0.00	0.00		0.00
		0.00 R	0.00		0.00	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	5.99	HS119.71	215.5
5C1	11.80	0.00	471.9

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 3U 4

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	15022.	18734.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
23.917	23.917	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
25.78	41.21	2775.48	2144.43	21.40	8.21	7.21

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
41.21	2775.48	2144.43	21.40

Truss influence line - loaded chord:

X ordinates:	0.000	95.667	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.367	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	95.667	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.367	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

		INV.	OPER	POST	SPEC
		HS20	5C1		
Truss I. D.	1				
Truss Member I. D.	U 3U 4				

Axial Dead Load	
Tension	Compression
0.0	378.1

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	627.7	514.9	854.5	288.0
OPER	1046.1	858.1	1424.2	480.0

## Live Load Effect

Impact Factors: ten - .000 comp - .158

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	0.00 R	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		-49.05 R	-42.35	109.67		-58.75	-50.73		95.67
OPER	5C1	0.00 R	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		-48.61 R	-41.97	111.67		0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	4.90	HS 98.05	176.5
5C1	9.88	0.00	395.0

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 3L 4

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	6622.	8258.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
42.391	21.196	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
12.24	10.49	278.14	25.49	6.12	5.15	1.56

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
9.91	253.85	17.03	7.09

Truss influence line - loaded chord:

X ordinates:	0.000	71.750	95.667	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-0.454	0.606	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	71.750	95.667	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-0.454	0.606	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

RATING REPORT

Rating Types and Vehicles

Structure I. D. HAM500

INV. OPER POST SPEC  
 HS20 5C1

Truss I. D. 1  
 Truss Member I. D. U 3L 4

Axial Dead Load  
 Tension Compression  
 41.1 0.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	150.9	0.0	126.2	0.0
OPER	251.5	0.0	210.3	0.0

Live Load Effect

Impact Factors: ten - .213 comp - .000

Rat. Typ.	Rat. Veh.	Truck Live Load Force w/imp.	Truck Live Load Force w/o imp.	Loc. of Front Wheel	Lane Live Load Force w/imp.	Lane Live Load Force w/o imp.	Loc. of Conc. Load
INV.	HS20	22.37 R	18.43	123.67	20.99	17.30	95.67
		0.00 R	0.00	0.00	0.00	0.00	0.00
OPER	5C1	20.57 R	16.95	146.67	0.00	0.00	0.00
		0.00 R	0.00	0.00	0.00	0.00	0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	5.64	HS112.83	203.1
5C1	10.23	0.00	409.0

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. L 3U 4

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	6639.	8279.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
42.391	21.196	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
12.24	10.24	273.45	24.95	6.05	5.17	1.56

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
9.62	249.41	25.67	7.02

Truss influence line - loaded chord:

X ordinates:	0.000	71.750	95.667	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.454	-0.606	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	71.750	95.667	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.454	-0.606	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						



RATING REPORT

Rating Types and Vehicles

Structure I. D. HAM500

INV. OPER POST SPEC  
HS20 5C1

Truss I. D. 1  
Truss Member I. D. L 3U 4

Axial Dead Load  
Tension Compression  
0.0 0.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	146.5	0.0	146.5	0.0
OPER	244.2	0.0	244.2	0.0

Live Load Effect

Impact Factors: ten - .242 comp - .000

Rat. Typ.	Rat. Veh.	Truck Live Load Force w/imp.	Truck Live Load Force w/o imp.	Loc. of Front Wheel	Lane Live Load Force w/imp.	Lane Live Load Force w/o imp.	Loc. of Conc. Load
INV.	HS20	16.55 L	13.33	43.75	13.80	11.12	71.75
		0.00 R	0.00	0.00	0.00	0.00	0.00
OPER	5C1	14.00 L	11.28	20.75	0.00	0.00	0.00
		0.00 R	0.00	0.00	0.00	0.00	0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	8.85	HS177.06	318.7
5C1	17.44	0.00	697.6

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 4L 4

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	9505.	11853.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
35.000	17.500	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
12.24	9.74	248.71	24.33	5.65	5.05	1.58

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
9.04	229.53	15.87	6.61

Truss influence line - loaded chord:

X ordinates:	0.000	191.333	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	71.750	1148.002	1435.002	2296.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.000	-1.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

INV.	OPER	POST	SPEC
HS20	5C1		

Truss I. D.	1
Truss Member I. D.	U 4L 4

Axial Dead Load	
Tension	Compression

-5.7	5.7
------	-----

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	137.6	77.0	141.0	73.6
OPER	229.4	128.3	235.0	122.6

## Live Load Effect

Impact Factors: ten - .289 comp - .000

Rat. Typ.	Rat. Veh.	Truck Live Load Force w/imp.	Truck Live Load Force w/o imp.	Loc. of Front Wheel	Lane Live Load Force w/imp.	Lane Live Load Force w/o imp.	Loc. of Conc. Load
INV.	HS20	29.35 R	22.76	109.67	24.95	19.35	95.67
		0.00 R	0.00	0.00	0.00	0.00	0.00
OPER	5C1	22.43 R	17.40	107.67	0.00	0.00	0.00
		0.00 R	0.00	0.00	0.00	0.00	0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	999.00	HS999.00	999.0
5C1	999.00	999.00	999.0

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. L 4L 5

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	14057.	17530.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
23.917	23.917	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
15.00	37.50	703.12	1139.26	7.50	4.33	5.51

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
35.62	845.19	913.36	8.68

Truss influence line - loaded chord:

X ordinates:	0.000	119.583	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	1.281	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	119.583	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	1.281	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

INV.	OPER	POST	SPEC
HS20	5C1		

Truss I. D.	1
Truss Member I. D.	L 4L 5

Axial Dead Load	
Tension	Compression
354.9	0.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	542.6	438.4	329.7	651.4
OPER	904.3	730.7	549.4	1085.6

## Live Load Effect

Impact Factors: ten - .158 comp - .000

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	46.36	R	40.03	133.58	55.07	47.56	119.58	
		0.00	R	0.00	0.00	0.00	0.00	0.00	0.00
OPER	5C1	46.57	R	40.21	135.58	0.00	0.00	0.00	0.00
		0.00	R	0.00	0.00	0.00	0.00	0.00	0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	5.99	HS119.71	215.5
5C1	11.80	0.00	471.9

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 4U 5

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	15022.	18734.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
23.917	23.917	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
25.78	41.21	2775.48	2144.43	21.40	8.21	7.21

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
41.21	2775.48	2144.43	21.40

Truss influence line - loaded chord:

X ordinates:	0.000	95.667	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.367	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	95.667	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.367	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

		INV.	OPER	POST	SPEC
		HS20	5C1		
Truss I. D.	1				
Truss Member I. D.	U 4U 5				

Axial Dead Load	
Tension	Compression
0.0	378.1

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	627.7	514.9	854.5	288.0
OPER	1046.1	858.1	1424.2	480.0

## Live Load Effect

Impact Factors: ten - .000 comp - .158

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	0.00	R	0.00	0.00	0.00	0.00	0.00	0.00
		-49.05	R	-42.35	109.67	-58.75	-50.73	95.67	
OPER	5C1	0.00	R	0.00	0.00	0.00	0.00	0.00	0.00
		-48.61	R	-41.97	111.67	0.00	0.00	0.00	

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	4.90	HS 98.05	176.5
5C1	9.88	0.00	395.0

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. L 4U 5

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	6622.	8258.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
42.391	21.196	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
12.24	10.49	278.14	25.49	6.12	5.15	1.56

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
9.91	253.85	17.03	7.09

Truss influence line - loaded chord:

X ordinates:	0.000	95.667	119.583	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.606	-0.454	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	95.667	119.583	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.606	-0.454	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						



## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

		INV.	OPER	POST	SPEC
		HS20	5C1		
Truss I. D.	1				
Truss Member I. D.	L 4U 5				

Axial Dead Load	
Tension	Compression
41.1	0.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	150.9	0.0	126.2	0.0
OPER	251.5	0.0	210.3	0.0

## Live Load Effect

Impact Factors: ten - .213 comp - .000

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	22.37 L	18.43		67.67	20.99	17.30		95.67
		0.00 R	0.00		0.00	0.00	0.00		0.00
OPER	5C1	20.57 L	16.95		44.67	0.00	0.00		0.00
		0.00 R	0.00		0.00	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	5.64	HS112.83	203.1
5C1	10.23	0.00	409.0

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 4L 5

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	6404.	7986.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
42.391	21.196	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
12.24	9.82	251.79	23.07	5.71	5.06	1.53

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
9.13	232.10	14.61	6.66

Truss influence line - loaded chord:

X ordinates:	0.000	95.667	119.583	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-0.606	0.454	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	95.667	119.583	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-0.606	0.454	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

RATING REPORT

Rating Types and Vehicles

Structure I. D. HAM500

INV. OPER POST SPEC  
HS20 5C1

Truss I. D. 1  
Truss Member I. D. U 4L 5

Axial Dead Load  
Tension Compression  
0.0 0.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	139.1	0.0	139.1	0.0
OPER	231.8	0.0	231.8	0.0

Live Load Effect

Impact Factors: ten - .242 comp - .000

Rat. Typ.	Rat. Veh.	Truck Live Load Force w/imp.	Truck Live Load Force w/o imp.	Loc. of Front Wheel	Lane Live Load Force w/imp.	Lane Live Load Force w/o imp.	Loc. of Conc. Load
INV.	HS20	16.55 R	13.33	147.58	13.80	11.12	119.58
		0.00 R	0.00	0.00	0.00	0.00	0.00
OPER	5C1	14.00 R	11.28	170.58	0.00	0.00	0.00
		0.00 R	0.00	0.00	0.00	0.00	0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	8.41	HS168.13	302.6
5C1	16.56	0.00	662.4

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 5L 5

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	8966.	11182.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
35.000	17.500	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
12.24	9.41	236.80	21.60	5.45	5.02	1.52

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
8.66	219.45	13.14	6.39

Truss influence line - loaded chord:

X ordinates:	0.000	95.667	119.583	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-0.425	0.469	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	119.583	143.500	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-0.531	0.312	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

	INV.	OPER	POST	SPEC
Truss I. D.	HS20	5C1		
Truss Member I. D.				

Axial Dead Load	
Tension	Compression
0.0	13.7

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	131.9	70.2	140.1	62.0
OPER	219.8	116.9	233.5	103.3

## Live Load Effect

Impact Factors: ten - .239 comp - .215

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	17.04	R	13.76	147.58	14.41	11.63		119.58
		-15.73	L	-12.94	67.67	-14.58	-12.00		95.67
OPER	5C1	14.42	R	11.64	170.58	0.00	0.00		0.00
		-14.46	L	-11.90	44.67	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	3.94	HS 78.82	141.9
5C1	7.14	0.00	285.7

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. L 5L 6

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	14058.	17531.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
23.917	23.917	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
15.00	31.86	597.64	999.10	7.50	4.33	5.60

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
30.27	718.34	800.48	8.68

Truss influence line - loaded chord:

X ordinates:	0.000	143.500	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	1.079	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	143.500	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	1.079	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

RATING REPORT

Rating Types and Vehicles

Structure I. D. HAM500

INV. OPER POST SPEC  
HS20 5C1

Truss I. D. 1  
Truss Member I. D. L 5L 6

Axial Dead Load  
Tension Compression  
299.4 0.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	461.0	372.5	281.3	552.2
OPER	768.3	620.8	468.9	920.3

Live Load Effect

Impact Factors: ten - .158 comp - .000

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	39.41 L	34.03		115.50	46.38	40.05		143.50
		0.00 R	0.00		0.00	0.00	0.00		0.00
OPER	5C1	39.66 R	34.25		155.50	0.00	0.00		0.00
		0.00 R	0.00		0.00	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	6.07	HS121.32	218.4
5C1	11.82	0.00	472.9

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 5U 6

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	15016.	18726.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
23.981	23.981	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
25.84	38.03	2805.75	1967.05	20.02	8.59	7.19

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
38.03	2805.75	1967.05	20.02

Truss influence line - loaded chord:

X ordinates:	0.000	119.583	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.285	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	119.583	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.285	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						



## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

		INV.	OPER	POST	SPEC
		HS20	5C1		
Truss I. D.	1				
Truss Member I. D.	U 5U 6				

Axial Dead Load	
Tension	Compression
0.0	355.8

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	579.2	474.9	792.7	261.4
OPER	965.4	791.6	1321.2	435.7

## Live Load Effect

Impact Factors: ten - .000 comp - .158

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	0.00 R	0.00		0.00	0.00	0.00		0.00
		-46.48 R	-40.14		133.58	-55.22	-47.68		119.58
OPER	5C1	0.00 R	0.00		0.00	0.00	0.00		0.00
		-46.69 R	-40.32		135.58	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	4.73	HS 94.69	170.4
5C1	9.33	0.00	373.3

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. L 5U 6

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	4489.	5598.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
40.958	40.958	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
12.06	15.48	424.99	95.17	0.00	5.24	2.48

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
15.48	587.19	67.19	0.89

Truss influence line - loaded chord:

X ordinates:	0.000	119.583	143.500	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.654	-0.385	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	119.583	143.500	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.654	-0.385	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

INV.	OPER	POST	SPEC
HS20	5C1		

Truss I. D.	1
Truss Member I. D.	L 5U 6

Axial Dead Load	
Tension	Compression
95.0	0.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	235.7	57.8	178.7	114.8
OPER	392.8	96.3	297.8	191.3

## Live Load Effect

Impact Factors: ten - .193 comp - .275

Rat. Typ.	Rat. Veh.	Truck Live Load Force w/imp.	Truck Live Load Force w/o imp.	Loc. of Front Wheel	Lane Live Load Force w/imp.	Lane Live Load Force w/o imp.	Loc. of Conc. Load
INV.	HS20	24.27 L	20.35	91.58	25.26	21.18	119.58
		-13.33 R	-10.45	171.50	-10.15	-7.96	143.50
OPER	5C1	23.32 L	19.56	68.58	0.00	0.00	0.00
		-9.26 R	-7.26	194.50	0.00	0.00	0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	7.07	HS141.49	254.7
5C1	12.77	0.00	510.8

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 6L 6

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	9677.	12068.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
33.250	33.250	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
12.12	18.11	439.12	168.21	-0.42	4.92	3.05

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
18.11	626.22	129.69	0.39

Truss influence line - loaded chord:

X ordinates:	0.000	119.583	143.500	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-0.428	0.487	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	143.500	167.417	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-0.513	0.243	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

INV.	OPER	POST	SPEC
HS20	5C1		

Truss I. D.	1
Truss Member I. D.	U 6L 6

Axial Dead Load	
Tension	Compression
0.0	43.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	275.9	145.8	301.7	120.0
OPER	459.8	243.0	502.8	199.9

## Live Load Effect

Impact Factors: ten - .269 comp - .195

Rat. Typ.	Rat. Veh.	Truck Live Load Force w/imp.	Truck Live Load Force w/o imp.	Loc. of Front Wheel	Lane Live Load Force w/imp.	Lane Live Load Force w/o imp.	Loc. of Conc. Load
INV.	HS20	16.78 R	13.22	171.50	10.82	8.53	143.50
		-15.90 L	-13.30	91.58	-14.33	-11.99	119.58
OPER	5C1	11.86 L	9.34	131.50	0.00	0.00	0.00
		-15.28 L	-12.78	68.58	0.00	0.00	0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	7.55	HS150.92	271.6
5C1	13.09	0.00	523.4

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. L 6L 7

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	14057.	17530.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
23.917	23.917	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
15.00	22.50	421.86	743.54	7.50	4.33	5.75

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
21.38	507.10	595.25	8.68

Truss influence line - loaded chord:

X ordinates:	0.000	167.417	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.747	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	167.417	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.747	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

		INV.	OPER	POST	SPEC
		HS20	5C1		
Truss I. D.	1				
Truss Member I. D.	L 6L 7				

Axial Dead Load	
Tension	Compression
210.6	0.0

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	325.6	263.0	199.2	389.4
OPER	542.6	438.4	332.0	649.1

## Live Load Effect

Impact Factors: ten - .158 comp - .000

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	27.57	L	23.81	139.42	32.13	27.74	167.42	
		0.00	R	0.00	0.00	0.00	0.00	0.00	0.00
OPER	5C1	27.75	L	23.96	116.42	0.00	0.00	0.00	0.00
		0.00	R	0.00	0.00	0.00	0.00	0.00	0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	6.20	HS123.99	223.2
5C1	11.96	0.00	478.6

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 6U 7

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	15011.	18720.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
24.486	24.486	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
25.75	34.10	2388.22	1822.35	21.05	8.37	7.31

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
34.10	2388.22	1822.35	21.05

Truss influence line - loaded chord:

X ordinates:	0.000	143.500	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.105	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	143.500	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.105	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						



## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

		INV.	OPER	POST	SPEC
		HS20	5C1		
Truss I. D.	1				
Truss Member I. D.	U 6U 7				

Axial Dead Load	
Tension	Compression
0.0	306.6

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	519.4	425.7	703.3	241.8
OPER	865.6	709.5	1172.2	403.0

## Live Load Effect

Impact Factors: ten - .000 comp - .158

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	0.00 R	0.00		0.00	0.00	0.00		0.00
		-40.34 L	-34.84		115.50	-47.48	-41.00		143.50
OPER	5C1	0.00 R	0.00		0.00	0.00	0.00		0.00
		-40.60 R	-35.06		155.50	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	5.09	HS101.85	183.3
5C1	9.93	0.00	397.0

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. L 6U 7

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	5543.	6913.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
36.824	36.824	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
12.19	16.25	364.36	99.75	-0.55	4.74	2.48

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
16.13	549.22	68.60	0.32

Truss influence line - loaded chord:

X ordinates:	0.000	143.500	167.417	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.675	-0.320	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	143.500	167.417	191.333	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.675	-0.320	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D.

HAM500

INV.	OPER	POST	SPEC
HS20	5C1		

Truss I. D.	1
Truss Member I. D.	L 6U 7

Axial Dead Load	
Tension	Compression

136.7	0.0
-------	-----

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	245.6	74.9	163.6	156.9
OPER	409.4	124.9	272.7	261.6

## Live Load Effect

Impact Factors: ten - .176 comp - .300

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	25.02 L	21.28		115.50	28.66	24.38		143.50
		-8.83 R	-6.79		195.42	-7.04	-5.42		167.42
OPER	5C1	24.72 L	21.02		92.50	0.00	0.00		0.00
		-6.07 R	-4.67		218.42	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	5.71	HS114.17	205.5
5C1	11.03	0.00	441.3

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 7L 7

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	5690.	7096.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
28.000	28.000	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
13.78	10.56	156.02	38.47	0.71	3.84	1.91

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
10.08	252.29	25.76	1.32

Truss influence line - loaded chord:

X ordinates:	0.000	143.500	167.417	191.334	191.333	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	191.333	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

INV.	OPER	POST	SPEC
HS20	5C1		

Truss I. D.	1
Truss Member I. D.	U 7L 7

Axial Dead Load	
Tension	Compression

71.3	0.0
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Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	153.6	50.0	110.8	92.7
OPER	255.9	83.3	184.7	154.6

## Live Load Effect

Impact Factors: ten - .289 comp - .000

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	29.35 R	22.76		181.42	20.12	15.60		167.42
		0.00 R	0.00		0.00	0.00	0.00		0.00
OPER	5C1	22.43 R	17.40		179.42	0.00	0.00		0.00
		0.00 R	0.00		0.00	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	3.78	HS 75.51	135.9
5C1	8.23	0.00	329.3

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. L 7L 8

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	14057.	17530.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
23.917	23.917	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
15.00	22.50	421.86	743.54	7.50	4.33	5.75

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
21.38	507.10	595.25	8.68

Truss influence line - loaded chord:

X ordinates:	0.000	167.417	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.747	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	167.417	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	0.747	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

INV.	OPER	POST	SPEC
HS20	5C1		

Truss I. D.	1
Truss Member I. D.	L 7L 8

Axial Dead Load	
Tension	Compression

210.6	0.0
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Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	325.6	263.0	199.2	389.4
OPER	542.6	438.4	332.0	649.1

## Live Load Effect

Impact Factors: ten - .158 comp - .000

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	27.57 L	23.81		139.42	32.13	27.74		167.42
		0.00 R	0.00		0.00	0.00	0.00		0.00
OPER	5C1	27.75 L	23.96		116.42	0.00	0.00		0.00
		0.00 R	0.00		0.00	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	6.20	HS123.99	223.2
5C1	11.96	0.00	478.6

SECTION DATA ( ASD/LFD )

Structure I. D. HAM500

Truss I. D. 1  
 Truss Member I. D. U 7L 8

RATIO/Inv.	Allowable stress (fs) (psi)			
	Inventory	Operating	Posting	Special
Fy (tension)	18150.	24750.	0.	0.
Fy (compression)	14277.	17804.	0.	0.
Fy (ultimate)	33000.			

Member Properties:

Effective Length X (ft)	Effective Length Y (ft)	Eccentricity Y (in)	End Cond.	Batton
36.823	36.823	0.00	P	1.0

Gross Section Properties:

Height	Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy	Rx	Ry
25.78	41.21	2775.48	2144.43	21.40	8.21	7.21

Net Section Properties:

Area	Moment of Inertia Ix	Moment of Inertia Iy	Dy
41.21	2775.48	2144.43	21.40

Truss influence line - loaded chord:

X ordinates:	0.000	167.417	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.151	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						

Truss influence line - unloaded chord:

X ordinates:	0.000	167.417	191.333	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						
Y ordinates:	0.000	-1.151	0.000	0.000	0.000	0.000	0.000	0
.000	0.000	0.000						



## RATING REPORT

## Rating Types and Vehicles

Structure I. D. HAM500

INV.	OPER	POST	SPEC
HS20	5C1		

Truss I. D.	1
Truss Member I. D.	U 7L 8

Axial Dead Load	
Tension	Compression
0.0	324.3

Veh.	Axial Load Capacity		Available Capacity for LL+I	
	Tension	Compression	Tension	Compression
INV.	627.7	489.3	822.3	294.7
OPER	1046.1	815.6	1370.4	491.2

## Live Load Effect

Impact Factors: ten - .000 comp - .158

Rat. Typ.	Rat. Veh.	Truck w/imp.	Live Load w/o imp.	Force	Loc. of Front Wheel	Lane w/imp.	Live Load w/o imp.	Force	Loc. of Conc. Load
INV.	HS20	0.00 R	0.00		0.00	0.00	0.00		0.00
		-42.45 L	-36.65		139.42	-54.46	-47.03		167.42
OPER	5C1	0.00 R	0.00		0.00	0.00	0.00		0.00
		-42.72 L	-36.89		116.42	0.00	0.00		0.00

Veh.	Rating Factor	Axial Rating Value	Load Capacity (tons)
HS20	5.41	HS108.24	194.8
5C1	11.50	0.00	460.0